



HILLSBOROUGH COUNTY
AVIATION AUTHORITY

PROJECT MANUAL

(Containing Bidding and Contract Requirements, and Specifications)

FOR

**NORTH AIR CARGO PARKING EXPANSION,
TRUCK COURT REPAIRS, SERVICE ROAD
RELOCATION, AND APRON
REHABILITATION**

AUTHORITY PROJECT NUMBER 6530 18

TAMPA INTERNATIONAL AIRPORT
TAMPA, FLORIDA

Prepared By: Procurement Department

POST DATE: JANUARY 18, 2023



Hillsborough County Aviation Authority
Solicitation Addendum

Addendum No.: 1
Solicitation Title: North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation
Addendum Date: February 22, 2023
Procurement Agent: James Hanney

NOTE: The due date for submission of the Response remains on **March 1, 2023, no later than 2:00 p.m. E.T.**

THE FOLLOWING ITEMS ARE MADE AND HEREBY BECOME A PART OF THIS SOLICITATION AS PREPARED BY PROCUREMENT:

Remove and Replace:

REMOVE Section 01025 - FIELD OFFICES.
REPLACE WITH The attached revised Section 01025 – FIELD OFFICES, in its entirety.

REMOVE Plan Sheet C105.
REPLACE WITH The attached revised Plan Sheet C105, in its entirety.

REMOVE Plan Sheet C106.
REPLACE WITH The attached revised Plan Sheet C106, in its entirety.

Questions and Responses:

Q.1 Are there any cross sections available to complete Excavation & Embankment takeoffs?

R.1 Yes, see Plan Sheets CX101 and CX102.

Q.2 Can Limerock or Crushed Concrete be used in lieu of 12" Stabilized Subgrade?

R.2 Yes, see Specification Section FL-160.

Q.3 The specs for the asphalt paving on this project require stringline for the placement of the asphalt. Can we see if this can be waived? This seems archaic and unnecessary, especially for this application. All of our pavers are equipment with automatic grade controls, I don't even think we can run off of stringline anymore with these new pavers.

R.3 Yes.

Q.4 Please provide the space and number of office requirements for the Owner's Temporary Field Office.

R.4 Owner's Temporary Field Office will not be required for this project. See revised Specification 01025 - Field Offices

Q.5 Are labels required on the lids of the replacement Meter and Fiber Boxes?

R.5 Yes.

Q.6 Please identify the location of Performance Turf (Sodding) in Vol.1 that should be included in FL-570-1.

R.6 FL-570-1 is intended to be placed in the disturbed regions in the parking expansion area. See attached revised Plan Sheets C105 and C106.

Q.7 Is there an onsite location that excess suitable embankment material can be stockpiled and become property of TIA/HCAA for future use?

R.7 All excess concrete to be removed may be disposed of in the Authority's concrete stockpile located adjacent to the North Air Cargo Building if disposed of prior to July 15, 2023. All other excess concrete and other material should be hauled offsite and legally disposed of offsite

Q.8 Can you confirm there is no joint repair that will require a joint depth greater than 2"? The table on 10/C112 does not provide minimum joint depths for joints over 1".

R.8 Contractor shall field verify the existing conditions and notify the Authority of any joints deeper than 1".

Q.9 Is there a location on the Airport site that concrete slurry from the saw and seal operation can be disposed?

R.9 There is no wash out pit available for disposal of concrete slurry.

**Q.10 Can the 1" conduit that is being used to extend the existing lighting circuit be;
a.) SCH-40 PVC?
b.) Direct Buried?**

R.10 Yes.

Q.11 Can the "cable" feeder be XHHW single conductor wire?

R.11 Yes.

Q.12 What is the Line Item 6 - FL-120-1: Excavation and Embankment Units for Payment? Is this a Lump Sum Item or measured by the CY.

R.12 Per Cubic Yard.

Q.13 Is equipment permitted to be left inside the construction limits overnight if not within the AOA limits or must all equipment be stored at the Contractor's staging area only?

R.13 Equipment outside of the AOA limits may remain overnight in Contractor work areas, provided there is no disruption to any airport or tenant operation outside of the Contractor's work area and it is coordinated with airport operations.

Q.14 Are Bidders able to submit an Updated Version of their Bid, as long as the Bids are received prior to the published Bid Date/Time ?

R.14 A Bidder may withdraw and resubmit a Bid in the Authority's e-Procurement Portal before the time and date for submittal of Bids.

Q.15 The Bid Documents reference 'Good Faith' efforts towards M/WBE requirements, but we understand from past experience that the Goal is hard and fast , and the 'Good Faith Efforts' are not substitute for actually meeting the published M/WBE Goals. Please clarify if not meeting the published M/WBE Goal is a basis for disqualification of that Bidder's proposal.

R.15 Failure of the Bidder to submit the required W/MBE information in the Bid may render the Bid non-responsive. See Item 1.13 in Section 00100 – INSTRUCTIONS TO BIDDERS, Paragraph 5 where it lists some of the factors the Authority will consider in determining if a Bidder's Good Faith Efforts documentation is sufficient.

Q.16 Bid Item FL-120-1, Excavation and Embankment shows a Bid Quantity of 925 LS/CY. In Specification section 120 , the last paragraph of that section states " Payment will be made under : Per Cubic Yard. Please clarify if payment will be made by Cubic Yards, or is it a Lump Sum pay item.

R.16 Per Cubic Yard.

Q.17 During the Site walk-through inspection, after the Pre-Bid, we visited a large Apron area with a large amount of random Paint Markings (a " Test area" for the striping machines ?). Please clarify the extent of the work at this marked-up Apron, and what Pay Items will apply.

R.17 The intent for this area is to route, clean, and seal all joints within the work limits as shown on Sheet C205. Stockpiles of materials observed during the field visit will be removed by others prior to the start of work.

Q.18 Please expand upon the Schedule/Phasing requirements for the Concrete/ Joint Sealing work at the North Air Cargo Building . We understand the need to keep the Building operational, but are we able to proceed “Left-to-right” from one bay to the next , and will we able to keep a continuous area to work in, without having to Mobilize a Crew in and Out of this area ?

R.18 The phasing sheets have been coordinated with the building tenants and are to be used for reference. The Contractor shall submit a fully coordinated schedule/phasing plan upon project award and Notice to Proceed. The intent is to continuously move from area to area with no need to remobilize.

End of Addendum

INSTRUCTIONS:

Respondent must acknowledge receipt of this Addendum as instructed in the solicitation document. Failure to acknowledge receipt of this Addendum may result in the disqualification of Respondent’s response.

DIVISION 0

BIDDING AND CONTRACT REQUIREMENTS

TABLE OF CONTENTS

North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Location, and Apron Rehabilitation

Authority Project No. 6530 18

TAMPA INTERNATIONAL AIRPORT Tampa, Florida

SECTION	TITLE	PAGES
DIVISION 0 -BIDDING AND CONTRACT REQUIREMENTS		
00020	INVITATION TO BID	1 - 3
00100	INSTRUCTIONS TO BIDDERS.....	1 - 24
00300	BID FORM.....	1 - 7
00350	BID AFFIDAVIT	1
00400-1	BID BOND	1
00400-2	SURETY BOND AFFIDAVIT	1
00415	TRENCH SAFETY CERTIFICATION	1
00417	WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE ASSURANCE AND PARTICIPATION	1 - 7
00418	CERTIFICATE OF NON-SEGREGATED FACILITIES.....	1
00420	BIDDER'S GENERAL BUSINESS INFORMATION	1 - 8
00421	SCRUTINIZED COMPANY CERTIFICATION	1
00422	E-VERIFY CERTIFICATION.....	1
00423	NON-COLLUSION CERTIFICATION.....	1
00430	SUBCONTRACTORS LIST	1 - 3
00440	BIDDER'S SELECTION OF PAYMENT METHOD.....	1 - 2
00500	AWARD OF CONTRACT AND EXECUTION OF CONTRACT BONDS	1 - 3
00510	CONTRACT.....	1 - 12
00610	COMMON LAW PERFORMANCE BOND	1 - 2

TABLE OF CONTENTS

SECTION	TITLE	PAGES
00620	STATUTORY PAYMENT BOND SURETY PAYMENT AND PERFORMANCE BOND AFFIDAVIT	1 - 3
00650	INSURANCE REQUIREMENTS	1 - 5
00700	GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION.....	1 - 67
00820	WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE	1
00850	DRAWING INDEX.....	1
DIVISION 01 - GENERAL REQUIREMENTS		
01010	SUMMARY OF WORK	1 - 4
01015	MOBILIZATION	1
01020	OWNER’S ALLOWANCES	1 - 2
01025	FIELD OFFICES	1 - 4
01040	PROJECT COORDINATION	1 - 3
01045	CUTTING AND PATCHING.....	1 - 5
01050	FIELD ENGINEERING.....	1 - 3
01095	DEFINITIONS AND STANDARDS.....	1 - 16
01110	AIRPORT PROJECT PROCEDURES	1 - 16
01150	MEASUREMENT AND PAYMENT	1 - 4
01315	SCHEDULES, PHASING	1 - 12
01340	SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES	1 - 13
01370	SCHEDULE OF VALUES	1 - 2
01390	CONTROL OF WORK.....	1 - 5
01400	QUALITY CONTROL SERVICES.....	1 - 9
01400	CONTRACTOR QUALITY CONTROL SERVICES	1 - 9
01410	TESTING LABORATORY SERVICES	1 - 25
01505	TEMPORARY FACILITIES	1 - 26

TABLE OF CONTENTS

SECTION	TITLE	PAGES
01540	CONSTRUCTION SAFETY AND SECURITY REQUIREMENTS.....	1 - 13
01545	UTILITIES	1 - 5
01560	PREVENTION, CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION.....	1 - 3
01561	CONSTRUCTION CLEANING.....	1 - 3
01600	MATERIALS AND EQUIPMENT.....	1 - 4
01605	PRODUCTS AND SUBSTITUTIONS.....	1 - 11
01610	CONTROL OF MATERIALS.....	1 - 4
01640	PRODUCT HANDLING.....	1 - 2
01650	CONSTRUCTION SALVAGE AND WASTE MANAGEMENT	1 - 6
01700	PROJECT CLOSEOUT	1 - 12
01740	WARRANTIES.....	1 - 4

TECHNICAL SPECIFICATIONS

TOC	TABLE OF CONTENTS	2
C-103-1	SAFETY AND SECURITY	5
C-104-1	PROJECT STAKEOUT AND AS-BUILT SURVEY.....	11
C-105-1	MOBILIZATION AND GENERAL CONDITIONS	16
C-106-1	MAINTENANCE OF TRAFFIC AND TEMPORARY CONSTRUCTION ITEMS	18
FL-104-1	PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION	22
FL-110-1	CLEARING & GRUBBING	29
FL-120-1	EXCAVATION AND EMBANKMENT.....	37
FL-160-1	STABILIZED SUBGRADE (12 IN) (LBR 40)	54
FL-285-1/2	6 IN / 8 IN RECYCLED CONCRETE AGGREGATE (RCA) BASE COURSE	60
FL-300-1	PRIME AND TACK COATS	65
FL-320-1	HOT MIX ASPHALT – PLANT METHODS AND EQUIPMENT	70
FL-327-1	2 IN BITUMINOUS PAVEMENT MILLING	79

TABLE OF CONTENTS

SECTION	TITLE	PAGES
FL-330-1	HOT MIX ASPHALT – GENERAL CONSTRUCTION REQUIREMENTS	83
FL-334-1	2 IN BITUMINOUS SURFACE COURSE (FDOT TYPE SP-12.5)	95
FL-350-1	SPALL REPAIR – CONCRETE PAVEMENT (VARIABLE DEPTH).....	117
FL-350-2/3	CLEANING & SEALING JOINTS – CONCRETE PAVEMENT.....	117
FL-350-4/5	CLEANING & SEALING CRACKS – CONCRETE PAVEMENT	117
FL 353-1	CONCRETE PAVEMENT SLAB REPLACEMENT (6 IN THICK)	128
FL 520-1	CONCRETE GUTTER, CURB ELEMENTS, AND TRAFFIC SEPARATOR	133
FL 570-1	PERFORMANCE TURF	137
FL-635-1	PULL, SPLICE, AND JUNCTION BOXES	141
FL-700-1	SIGN REMOVAL & RELOCATION.....	144
FL-700-2	HIGHWAY SIGNING	144
FL-710-1	PAINTED PAVEMENT MARKINGS	147
P-101	PREPARATION OF EXISTING PAVEMENTS	152
P-101-1	ROUTE AND SEAL JOINT AND ASPHALT SURFACE CRACKING.....	152
P-108-1	REMOVAL OF PAVEMENT MARKINGS	157
P-109-1	SAWCUTTING	159
P-631-1	REFINED COAL TAR EMUL. WITH ADDITIVES FOR SLURRY COAT (2 COATS SAND)	161
260501-1	BASIC ELECTRICAL REQUIREMENTS	168
260519-1	LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES	176
260543-1	UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS.....	180

EXHIBIT A – AVIATION AUTHORITY APPLICATION FOR PAYMENT

EXHIBIT B – CHANGE ORDER FORM

EXHIBIT C – WAIVER OF RIGHT TO CLAIM AGAINST PAYMENT BOND UPON FINAL PAYMENT

END OF SECTION

HILLSBOROUGH COUNTY AVIATION AUTHORITY

INVITATION TO BID

Sealed Bids will be received no later than **2:00 p.m., March 1, 2023** via the Owner’s e-Procurement Portal located at <https://procurement.opengov.com/portal/tampaairport>. The Owner’s e-Procurement Portal Clock is the official clock for determination of all deadline dates and times. Without exception, Bids will not be accepted after the submission deadline regardless of any technical difficulties such as poor internet connections. The Owner strongly recommends completing and submitting Bids well ahead of the deadline. All bids received will be publicly opened and read aloud thereafter at 2:00 p.m. in the Rental Car Center at 5409 Airport Service Rd, Tampa, FL 33607, Tampa International Airport and via Microsoft Teams video and audio. No bid will be considered unless received on or before the time and at the place designated above.

The Bidder must supply all information required by the Solicitation Documents, to include the Bid Form and required attachments (Contract Documents) through the Owner’s e-Procurement Portal located at <https://procurement.opengov.com/portal/tampaairport> by the Bid Submittal Time and Date.

In Addition to providing the a scanned copy of the Bid Bonds, Surety Bond Affidavit, Power of Attorney, and Cashier’s Check (if applicable) through the Owner’s e-Procurement Portal located at <https://procurement.opengov.com/portal/tampaairport> by the Bid Submittal Time and Date, Bidders will also submit such documents to the Owner within seven days after the date of the Bid Opening as an original hardcopy with corporate seals for Bidder and Surety.

Bidders are invited to submit Bids for the work on the bid forms provided in the Contract Documents. Other bid forms will not be accepted.

Scheduled Item	Significant Dates
Contract Documents posted on Owner’s e-Procurement Portal	January 18, 2023 after 1:30 p.m.
Deadline for Microsoft Teams attendance registration for the Mandatory Pre-Bid Conference	January 31, 2023 by 1:30 p.m.
Mandatory Pre-Bid Conference	February 1, 2023 at 10:00 a.m.
Request for Clarification Deadline	February 15, 2023 by 2:00 p.m.
Addendum posted on Owner’s e-Procurement Portal website	February 22, 2023 by 5:00 p.m.
Bid Submittal Time and Date	March 1, 2023 by 2:00 p.m.
Award by Authority’s Board	April 6, 2023 at 9:00 a.m.

A **MANDATORY** Pre-Bid Conference for all Bidders will be held in the SkyCenter Boardroom, which is located on the fourth floor of the SkyCenter One Office Building at 5411 SkyCenter Dr, Tampa, FL 33607 on **February 1, 2023 at 10:00 a.m.** Questions relating to the Contract and Contract Documents will be answered at that time. Attendance by all prospective Bidders is mandatory. Bids submitted by Bidders not in attendance at this scheduled **MANDATORY** Pre-Bid Conference will be rejected. **Attendance may be in person or via Microsoft Teams.** To be considered as attending in person, Bidder must have signed

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

in on one of the sign-in sheets. Attendees are warned that the sign-in sheets will be collected once the Pre-Bid Conference begins. Any attendees arriving late after the sign-in sheets are collected will not be considered to have attended the Pre-Bid Conference as required. **Contact the Procurement Agent listed below (Page 00020-3) via email to register as an on-line attendee by Microsoft Teams. To be considered as attending via Microsoft Teams, the attendee must be identified by the Procurement Agent at the start of the Pre-Bid Conference and must stay on-line through the end of the Pre-Bid Conference. The on-line attendance registration deadline is listed above. Pre-registration is not required for in person attendees.**

A **NON-MANDATORY** site inspection of the Project areas at Tampa International Airport will occur as a part of the scheduled Pre-Bid Conference. Details will be announced during the Pre-Bid Conference.

IMPORTANT NOTICE

All Bidders are hereby notified that they must comply with the Woman and Minority Business Enterprise (W/MBE) Program requirements as defined in the Owner's W/MBE Policy.

W/MBE – This Project has no federal funding and has a W/MBE Goal of 15%.

Complete examination and understanding of the Contract Documents, including the bidding documents, general conditions of the Contract, specifications, construction drawings and the site of the proposed work, are necessary to properly submit a Bid.

A cashier's check on any national or state bank or a bid bond on the form contained in the Contract Documents in an amount not less than 5% of the total amount bid, made payable to the Hillsborough County Aviation Authority, must accompany each bid as a guarantee that the Bidder will not withdraw its Bid for a period of 85 calendar days (or 115 calendar days if federal funds are applicable) after opening of the Bids, and as a guarantee that, in the event the Contract is awarded to the Bidder, Bidder will, within seven days after the date of award of the Contract, enter into a Contract with the Owner and furnish the required and executed contracts, insurance policy endorsements, certificates of insurance and performance and payment bonds. If Bidder fails to do this, Bidder will forfeit the amount of the cashier's check or bid bond as liquidated damages. By submitting its Bid, the Bidder agrees that these liquidated damages are not a penalty. The bid bond and performance and payment bonds are required to be secured by an agency of the surety, which agency will have an established place of business in the State of Florida and will be duly licensed to conduct business therein.

The Owner reserves the right to waive any formalities, technicalities, or irregularities, and reject any or all bids, re-advertise for bids and avoid or refrain from awarding the contract for the work.

Bidders shall submit all inquiries regarding this bid via the Owner's e-Procurement Portal, located at <https://procurement.opengov.com/portal/tampaairport>. Please note the deadline for submitting inquiries. All answers to inquiries will be posted on the Owner's e-Procurement Portal. Bidders may also click "Follow" on this Project to receive an email notification when answers are posted. It is the responsibility of the Bidder to check the website for answers to inquiries.

If you have any questions pertaining to this Project, please contact the Procurement Agent, James Hanney, at (813) 870-8779 or email at JHanney@TampaAirport.com.

END OF SECTION

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

SECTION 00100 - INSTRUCTIONS TO BIDDERS

1.01 GENERAL

- A. This Contract is to be financed solely by the Hillsborough County Aviation Authority (Owner). Award of Contract is subject to the approval of the Owner.
- B. Owner, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises and airport concession disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.
- C. Non-Discrimination and Non-Segregated Facilities:
 - 1. Each Bidder will complete, sign and include in their Bid the Certification of Non-Segregated Facilities. If not submitted with the Bid, the Bid may be considered irregular and may be rejected. When a determination has been made to award a Contract to a specific Contractor, such Contractor will, prior to award, furnish such other pertinent information regarding compliance with Federal Regulation and the Contractor's own employment policies and practices as the FAA, the Owner, and/or the Secretary of the Labor, Office of Federal Contract Compliance (OFCC) may require. Contractor will require similar compliance with its subcontractors. Where the Contract Price is \$10,000.00 or greater, the Contractor will comply with Part 152 of the Federal Aviation Regulations as amended and specifically FAR 152.411 (c) and (d), incorporated herein by this reference. All such information required of a Subcontractor will be furnished by the Contractor.
 - 2. The Equal Employment Opportunity Report Statement, Certificate of Non-Segregated Facilities, Equal Opportunity Clause, and all other EEO requirements will be included in all non-exempt subcontracts entered into by the Contractor. Subcontracts entered into by the Contractor will also include all other applicable labor provisions. No subcontract will be awarded to a non-complying Subcontractor.
 - 3. Affirmative Action: If the Contract is an Aviation Related Activity as defined in 14 CFR Part 152, and is a Construction Contract of \$10,000.00 or more, the Contractor assures that it will undertake an Affirmative Action Program as required by 14 CFR Part 152 Subpart E, to insure that no person will, on the grounds of race, creed, color, national origin, or sex, be excluded from participating in or receiving the services or benefits of any program or activity covered by this Subpart. Contractor assures that it will require that its covered suborganizations provide assurances to the Contractor that they similarly will undertake Affirmative Action Programs and that they will require assurances from their suborganizations, as required by 14 CFR Part 152, Subpart E to the same effect.

4. In addition, the Bidder will also insert in each of Bidder's subcontracts a clause requiring the Subcontractor to include these provisions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

D. Compliance with Governmental Requirements:

1. The Bidder covenants and agrees that Bidder and Bidder's agents and employees will comply fully with all applicable federal, state, county, municipal or other governmental laws, executive orders, wage, hour and labor, equal employment opportunity, Woman and Minority Owned Business Enterprises (W/MBE), pollution control, and environmental regulations, applicable national and local codes, and Hillsborough County Aviation Authority Rules, Regulations and Manuals, and that Bidder will obtain all necessary permits, pay all required fees and taxes, and otherwise perform these services in a legal manner. To the maximum extent permitted by applicable law, the Bidder will indemnify and hold harmless the Owner, its Board members, officers, employees, agents, and volunteers from any fees, damages, fines or costs of any kind arising out of Bidder's or any of the Bidder's consultants, subcontractors, suppliers or agents of any tier or their respective employees' failure to comply with such governmental regulations. This obligation to indemnify and hold harmless will be construed separately and independently. If this clause is found to be in conflict with applicable law, the clause will be considered modified by such laws to the extent necessary to remedy the conflict.
2. Bidder certifies that all materials, equipment, etc. contained in their Bid meets all Occupational Safety and Health Administration (OSHA) requirements.
3. Bidders must comply with applicable provisions of Title VI of the Civil Rights Act of 1964, the Davis-Bacon Act, the Fair Labor Standards Act, the Anti-Kickback Act, and the Contract Work hours and Safety Standard Act.
4. It is the Authority's policy to promptly take any measures necessary to ensure that no person in the United States shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in any activity conducted with, or benefiting from, funds received from this Procurement. Bidder agrees to abide by this Policy.

Using the definitions of activity, facility and program as found and defined in §§21.23 (b) and 21.23 (e) of 49 CFR §21, the Authority and Bidder will facilitate all programs, operate all facilities, or conduct all programs in compliance with all non-discrimination requirements imposed by, or pursuant to FAA Grant Assurance 30.

E. Procurement Protest Policy:

Failure to follow the procurement protest policy set out in the Owner's policies constitutes a waiver of Bidder's protest and resulting claims. A copy of the Policy P512, Procurement Policy may be obtained by contacting the Owner via telephone at 813-870-

8700 or via mail to Hillsborough County Aviation Authority, Post Office Box 22287, Tampa, Florida 33622. The policy is also available on the Owner's website: www.TampaAirport.com > Learn about TPA > Airport Business > Procurement > Solicitations and Contracts > Additional Resources > Procurement Protest Policy. The Authority will post on its website, and make available for public access, any and all formal protest documents received on this solicitation.

F. Restricted Vendor Lists:

1. By submitting a Bid, Bidder represents that it is not precluded from submitting a Bid under Section 287.133 (2)(a), Florida Statutes, which provides as follows: a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.
2. A person or affiliate who has been placed on the discriminatory vendor list kept by the Florida Department of Management Services may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a Contractor, supplier, subcontractor, or consultant under a contract with any public entity and may not transact business with any public entity as provided in Section 287.134 of the Florida Statutes.
3. An entity or affiliate who has had its Certificate of Qualification suspended, revoked, denied, or have further been determined by FDOT to be a non-responsible contractor, may not perform work under this Contract.

G. General Bond Requirements:

1. The bid security will be as specified; only the Bid Bond and Surety's Bond Affidavit as bound within these documents or a Cashier's Check is acceptable. Each separate Bid will be accompanied by a Cashier's Check or Bid Bond on the form provided in the Contract Documents herein in an amount of not less than 5% of the total amount Bid, made payable to the Hillsborough County Aviation Authority. If a Bid Bond is provided in lieu of a Cashier's Check, it must be accompanied by a valid Power of Attorney indicating that the person signing the Bond on behalf of the surety has full legal authority to do so. Failure to provide the Bid Bond or Cashier's check will result in a Bid being found as non-responsive. If the Power of Attorney is not provided with the Bid Bond, the Bid may be considered irregular and may be rejected.

2. The amount of such Bid Bond or the Cashier's check of the Bidder whose Bid is accepted will be forfeited and paid to the Owner as liquidated damages if said Bidder fails to enter into a Contract with the Owner and fails to furnish the required and executed contracts, certificates of insurance and performance and payment bonds within seven days after the date of the Award of the Contract or such other time as provided in writing by the Owner. The Bidder agrees that the liquidated damages are not a penalty and 5% of the total bid amount is reasonable.
3. Contract Payment and Performance Bonds will be as specified; only the Payment and Performance Bonds and Surety's Bond Affidavits as bound within these Contract Documents are acceptable.
4. The Surety of the Bid Bonds will be a corporate Surety authorized under the laws of Florida the State in which the Project is located to do business in Florida said State, and authorized to write that type of bond through a licensed agent of the Surety corporation(s) located in Florida said State. The agent authorized to represent the Surety on the Bid Bond must be listed on the State website: www.myfloridacfo.com. If the agent is not listed on the state website as an authorized representative of the Surety, the Bid may be considered irregular and may be rejected.
5. PERFORMANCE BOND AND PAYMENT BOND
 - a. The Contractor will furnish a Statutory Payment Bond and a Common Law Performance Bond (Bonds) for the full and faithful performance of the Work, meeting the standards specified herein, on the bond forms attached to this Contract as Sections 00610 and 00620, with a certified Power of Attorney Affidavit attached, each in the full amount of the Contract Sum.
 - b. All Bonds required under this Contract will be written through a reputable and responsible surety bond agent, licensed to do business in the State of Florida and with an acceptable Surety company which holds a Certificate of Authority authorizing it to write surety bonds in Florida. Bonds will be furnished to the Owner not later than seven days after Notice of Award. Prior to the commencement of any of the Work, but not later than 30 days from the date of Notice of Award, the Contractor will record the Bonds in the public records of Hillsborough County, Florida.
 - c. An acceptable Surety company must meet all of the following requirements:
 - i. Hold a Certificate of Authority authorizing it to write surety bonds in Florida.
 - ii. Have been in business and have a record of successful continuous operations for the last five years.

- iii. Be listed and maintain a current Certificate of Authority as acceptable surety on federal bonds and as acceptable reinsuring companies in accordance with U.S. Department of Treasury Circular 570, current revision. The amount of Bonds issued pursuant to this Contract will not exceed the underlying limitation in the Federal Register for that Surety.
 - iv. Have a current rating by A.M. Best Company of "A-" or higher.
 - v. Be a responsible Surety company at the time of the Bond execution.
- d. Should the Surety lose its Certificate of Authority according to the current Federal Register published by the U.S. Department of the Treasury and/or should its Best rating be reduced below the rating required in Paragraph c. iv, the Owner will have the right to require the Contractor to change the Surety to an acceptable Surety company, all at the Contractor's expense without reimbursement from the Owner.
 - e. The Surety company will have a Florida licensed agent who is authorized to execute bonds for the Surety company and whose name is listed in the prescribed space on the bond forms and affidavit for all Bonds required by the Owner.
 - f. Upon the request of any person or entity appearing to be a potential beneficiary of the Bonds covering payment of obligations arising under this Contract, the Contractor will promptly furnish a copy of the Bonds or will permit a copy to be made.
 - g. If the Surety on any Bond furnished by the Contractor under this Contract is declared bankrupt, becomes insolvent, has its right to do business in the State of Florida terminated, ceases to be licensed to conduct business in the State of Florida, if the Owner deems the Surety upon any Bond to be unsatisfactory, or if for any reason such Bond ceases to be adequate, the Contractor will, at its expense, within five days after such occurrence, furnish additional or replacement Bond or Bonds in such form, amount, and with such Surety or Sureties as will be acceptable to the Owner. In such event, no further payment to the Contractor will be deemed to be due under this Contract until such new or additional security for the faithful performance of the Work is furnished in a manner and form acceptable to the Owner.
 - h. In the event the Bonds required in this Article are not provided, the Owner will have the right to terminate this Contract for cause.
 - i. Bond coverage shall be adjusted during the term of this Contract to reflect additions or deductions made by Change Orders or Work Orders.
 - j. The Owner is entitled to receive any refunded bond premiums resulting from Bond coverage adjustments.

H. Insurance Requirements:

1. Insurance requirements will be as specified herein in Section 00650 - INSURANCE REQUIREMENTS.

1.02 EXAMINATION OF CONDITIONS AFFECTING WORK

- A. Prior to submitting a Bid, each Bidder will examine and thoroughly familiarize itself with all existing conditions, including all applicable laws, codes, ordinances, rules and regulations that will affect their Work. Bidders will visit the Project Site, examine the grounds and all existing buildings, utilities, pavements and systems and will ascertain all conditions that will in any manner affect the Work. Bidders will make a request to the Owner, in writing, for any additional information deemed necessary for Bidder to be fully informed as to exactly what is to be expected prior to submitting a Bid.
- B. The Owner will make available during normal business hours, at its offices, Record Documents and Drawings pertaining to the existing Site and Facilities at the Airport listed on Section 00020 - INVITATION TO BID, Page 00020-1. These Record Documents and Drawings will not be considered a part of the Contract Documents but are provided by the Owner for information only to assist Bidders in ascertaining conditions that may affect the Work. Record Documents and Drawings have been maintained by the Owner solely for the Owner's own benefit, and do not necessarily indicate all existing conditions fully or accurately. Bidders will be solely responsible for all assumptions made in reliance upon Record Documents and Drawings.
- C. The Contract Documents describe the Work to be performed under this Contract and include, but are not limited to, the Bidding Documents, Bonds, Affidavits, Compliance Forms, Statements, Insurance Requirements and Documents, the Contract between the Owner and Contractor (Contract), Conditions of the Contract (General Conditions), General Requirements and other Requirements, Reports, and Specifications.
- D. Bidders shall be responsible for obtaining any and all information that they consider necessary for the purpose of preparing and submitting their Bid.
- E. By submitting a Bid, Bidder certifies that it has carefully examined the site of the proposed Work and Contract Documents. Bidder will satisfy itself to the character, quality, and quantities of the Work to be performed, materials to be furnished, and to the requirements of the Contract. The submission of the Bid shall be prima facie evidence that the Bidder has made such examination and is satisfied to the conditions to be encountered in performing the Work and the requirements of the Contract Documents.

Boring logs and other records of subsurface investigations and tests (to the extent that they exist) are available for inspection by the Bidder. It is understood and agreed that such subsurface information, whether included in the Contract Documents, or otherwise made available to the Bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all Bidders. It is further understood and agreed that each Bidder is solely responsible for all assumptions, deductions, or conclusions which each Bidder may make

or obtain from its own examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

1.03 CONE OF SILENCE

The Owner has established a cone of silence applicable to all competitive procurement processes, including this Bid. The cone of silence will be imposed on this Solicitation beginning on the date the Solicitation documents are posted on the Owner's website and ending with Board award.

- A. The cone of silence prohibits any communications regarding this Invitation to Bid between:
 - 1. A potential respondent (which includes vendors, service providers, bidders, proposers, lobbyists and consultants) and their representative(s) and Owner's staff, or Owner consultants engaged to assist the Owner on a specific Invitation to Bid, except for communications with the Owner's procurement agent or other supporting procurement staff responsible for administering the procurement, provided the communication is strictly limited to procedural matters; and
 - 2. A potential respondent (which includes vendors, service providers, bidders, proposers, lobbyists and consultants) and their representative(s) and a Board member.
- B. Unless specifically provided otherwise, in addition to the exceptions set forth above, the cone of silence does not apply to:
 - 1. Communications with the Owner's Legal Affairs Department; and
 - 2. Oral communications at the Pre-Bid Conference; and
 - 3. Oral communications during any duly noticed Board meeting; and
 - 4. Communications relating to protests made in accordance with the Owner's Procurement Protest Policy.
- C. Any communications regarding matters of process or procedure from a potential Bidder must be referred to the Procurement Agent listed in the Contact Information Section on the Owner's e-Procurement Portal. Please refer to the Owner's e-Procurement Portal for updated information pertaining to any addenda or revisions to the Bid Schedule.
- D. No oral interpretation or clarification of the Contract Documents will be made to any Bidder. If the Bidder requires clarification or finds any ambiguities, discrepancies, omissions, or there is doubt as to the true meaning of any part of the Contract Documents, the Bidder shall submit all inquiries regarding this Solicitation via the Owner's e-Procurement Portal. Please note the deadline for submitting inquiries. All answers to inquiries will be posted on the Owner's e-Procurement Portal.
- E. All such interpretations and any supplemental instructions will be in the form of a

written addendum posted on the Owner's e-Procurement Portal. It is the responsibility of the Bidder to verify that the Owner has received its request by contacting the Procurement Agent listed in Owner's e-Procurement Portal, located at <https://procurement.opengov.com/portal/tampaairport>. Failure of any Bidder to review any addendum will not relieve it from any obligation contained therein.

- F. Bidders are required to register for an account via the Owner's e-Procurement Portal. Once Bidder has completed registration, Bidder will receive addenda notifications to Bidder's email by clicking "Follow" on this Solicitation. It is the sole responsibility of each Bidder to periodically check the website for any addenda at the Owner's e-Procurement Portal.
- G. Any violation of the cone of silence will render the Bid voidable, as well as the awarded Contract.

1.04 SUBSTITUTIONS

- A. The materials, products and equipment described in the Contract Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. The Bidder is responsible for assuring that all suppliers, subcontractors and vendors conform to the Contract requirements.
- B. No substitution will be considered prior to the specified Bid submittal time and date unless written request for approval has been submitted via the Owner's e-Procurement Portal. The burden of proof on the merit for the proposed substitution is solely upon the Bidder. The Owner's decision to approve or disapprove a proposed substitution is final.
 - 1. In making requests for substitutions, the Bidder will list the particular system, product, or material the Bidder wishes to substitute, and the justification for the substitution. Requests submitted will include any and all resulting adjustments of that and any other Work affected thereby.
- C. If the Owner approves any proposed substitution prior to the specified Bid submittal time and date, such approval will be set forth in an Addenda. Bidders will not rely on approvals made in any other manner.
- D. No substitutions will be considered after the Bid submittal time and date except as specifically provided for in the Contract Documents.

1.05 ADDENDA

- A. Any Addenda issued by the Owner prior to the Bid submittal time and date for the purpose of changing the intent of the Contract Documents or clarifying the meaning of same, will be binding in the same way as if written in the Contract Documents. Since all Addenda are available to Bidders on the Owner's e-Procurement Portal, it is the sole responsibility of each Bidder to periodically check the website for any addenda at the Owner's e-Procurement Portal before submitting Bids. Each Bidder will acknowledge receipt of each and every Addendum directly in the Owner's e-Procurement Portal. If acknowledgment is not given, the Bid may be considered irregular and may be rejected.

- B. Bidders shall submit all inquiries regarding this Solicitation via the Owner's e-Procurement Portal. Please note the deadline for submitting inquiries. All answers to inquiries will be posted on the Owner's e-Procurement Portal. Bidders may also click "Follow" on this Solicitation to receive an email notification when answers are posted. It is the responsibility of the Bidder to check the Owner's website for answers to inquiries.
- C. Any issue that may affect Bidder's ability to bid or to construct the Project may be submitted to the Procurement Agent after the Request for Clarification Deadline. The Owner will determine if the issue affects the Bidder's ability to bid or construct the Project and, if it substantially does so, will issue an Addendum addressing the issue.

1.06 CONTRACT DOCUMENTS

- A. Complete sets of the Contract Documents are available on the Owner's e-Procurement portal located at <https://procurement.opengov.com/portal/tampaairport>.
- B. Bidders are expected to use complete sets of Contract Documents in preparing Bids. Bidder shall be solely responsible and liable for errors or misinterpretations resulting from the use of incomplete sets of Contract Documents.
- C. A Bidder who discovers discrepancies or omissions with the Contract Documents will immediately notify the Owner of the matter. A Bidder that has doubt as to the true meaning of a Project requirement may submit to the Owner a written request for interpretation no later than the Request for Clarification Deadline.

Any interpretation of the Contract Documents by the Owner will be by written Addendum issued by the Owner. The Contractor will not consider any instructions, clarifications or interpretations of the Contract Documents in any manner other than written Addendum.

- D. By submitting a Bid, the Bidder certifies that it has thoroughly and fully examined the Contract Documents and that it has informed the Owner of any questions, ambiguities, discrepancies in, or omissions from the Contract Documents.

1.07 RESPONSIVE AND RESPONSIBLE BIDDER

- A. A responsive Bid conforms to all significant terms and conditions contained in the Owner's Invitation to Bid. It is the Owner's responsibility to decide if the exceptions taken by a Bidder to the Invitation to Bid are material or not and the extent of deviation the Owner is willing to accept.
- B. The Owner reserves the right to investigate and determine the responsibility of the Bidders. The Owner will not award the Contract to any Bidder determined by the Owner to be non-responsible. Among the criteria which the Owner may use in making such determination are the following:
 - 1. Failure to comply with any minimum qualification requirements of the Owner, as specified for this Solicitation on the Owner's e-Procurement Portal.

2. Failure to supply such accurate information as the Owner may require in evaluating the responsibility of Bidders or failure to supply the Owner with such documents or information as the Owner may request to assist the Owner in evaluating the responsibility of prospective Bidders.
3. Failure of the Bidder to obtain proper license (if any is required) prior to bidding, i.e. the Bidder is not certified and licensed in accordance with the appropriate State of Florida Statutes and appropriate State of Florida construction or professional licensing boards, including but not limited, to the requirements of Chapters 255 and 287 of the Florida Statutes. In addition, applicable licenses must be current and active throughout the life of the Project.
4. Past performance of the Bidder, one or more of the listed Subcontractors or any affiliated or related entity.
5. Failure of the Bidder or any affiliated related entity to pay or satisfactorily settle all bills for labor and materials on any former contract with Owner.
6. The outstanding obligations of the Bidder, whether previously assumed or to be assumed in the future.
7. Unsatisfactory, defective, or non-conforming work on any previous contract with the Owner by the Bidder, one or more of the listed subcontractors, or any affiliated or related entity.
8. The present relationship between the Owner and the Bidder (or any affiliated or related entity), including the existence of any unresolved disputes arising out of past projects.
9. The financial condition of the Bidder. The Bidder shall furnish the Owner satisfactory evidence of the Bidder's financial responsibility. Such evidence of financial responsibility will consist of a confidential statement or report of the Bidder's financial resources and liabilities as of the last calendar year or the Bidder's last fiscal year. If the Project is financed in whole or in part by an AIP Grant, then such statements or reports will be certified by a Certified Public Accountant or Public Accountant. At the time of submitting such financial statements or reports, the Bidder will further certify whether their financial responsibility is approximately the same as stated or reported by the Certified Public Accountant or Public Accountant. If the Bidder's financial responsibility has changed, the Bidder will qualify the Certified Public Accountant's or Public Accountant's statement or report to reflect the (Bidder's) true financial condition at the time such qualified statement or report is submitted to the Owner. Evidence that the Bidder is prequalified with FDOT and is on the current Bidder's list for FDOT is sufficient evidence of financial responsibility in lieu of the certified statements or reports specified above.
10. Experience of the Bidder and its listed subcontractors in performing Work of this nature.
11. Submission of appropriate Disadvantaged Business Enterprise (DBE) or Woman

and Minority Business Enterprise (W/MBE) information.

12. Past compliance with the Owner's DBE Policy and Program on Owner projects only.
13. Submission, upon request, of the Bid Documents.
14. Lack of Competency of Bidder. The Contract will be awarded only to a Bidder considered to be capable of performing the Work as required by the Contract Documents. The Owner may declare any Bidder ineligible at any time during the process of receiving bids or awarding the Contract where developments arise which, in the opinion of the Owner, adversely affect the Bidder's competency to perform the Work and to discharge its responsibilities under the Contract.

1.08 PREPARATION AND SUBMISSION OF BID

- A. Sealed Bids for the construction of the Work generally described will be received until the time and date stated in the Section 00020 - INVITATION TO BID.
- B. Bids received without Section 00300 – BID FORM will be found non-responsive.
- C. Bids received without completion of the Bid Schedule found in the Owner's e-Procurement Portal will be found non-responsive. The Bidder shall submit their Bid on the Bid forms furnished by the Owner. All blank spaces in the Bid forms, unless explicitly stated otherwise, must be correctly filled in where indicated for each and every item for which a quantity is given. The Bidder shall enter the price in numerals which they propose for each pay item furnished in the Bid. Prices should generally be written in whole dollars and cents. The extended total amount of each item should not be rounded.

The Bidder shall scan a copy of its signed Section 00300 - BID FORM and upload it into the Owner's e-Procurement Portal. If the Bid is made by an individual, the individual's name and post office address must be shown. If the Bid is made by a partnership, the name and post office address of each member of the partnership must be shown and the Bid will be signed in the partnership name by one of the partners of the partnership. If the Bid is made by a corporation, the person signing the Bid shall be the President, Vice President or other person authorized by an attached corporate resolution, and shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. If the Bid is made by a limited liability company, the name of each of the managing members will be shown and the Bid will be signed in the limited liability company name by one of the managing members. Anyone signing a Bid as an agent shall attach evidence of his or her authority to do so and that the signature is binding upon the firm or corporation.

- D. Due to the allocation of funds, successful Bidders will be required to provide a Schedule of Values in a manner acceptable to the Owner, and in accordance with the Contract Documents.
- E. Each Bid and any attachments submitted will be submitted through the Owner's e-Procurement Portal.

No Bid will be considered unless received through the Owner's e-Procurement Portal before the Bid submittal time and date specified for opening all Bids. Bids will not be accepted after the specified Bid submittal time and date.

Bidder will submit the following as a response to the Invitation to Bid:

1. All required documents as specified for this Solicitation in the Owner's e-Procurement Portal.
2. File Uploads: All electronic files submitted must be in a common format accessible by software programs the Owner uses. Such common formats are generally described as Microsoft® Word (.doc or .docx), Microsoft® Excel (.xls or .xlsx), JPEG, or Adobe Portable Document Format (.pdf).

Bidder will not secure, password protect or lock uploaded files. The Owner must be able to open and view the contents of uploaded files. Bidder will not disable or restrict the ability of the Owner to print the contents of an uploaded file.

Scanned documents or images must be of sufficient quality, no less than 150 dpi, to allow for reading and interpreting the words, drawings, images or sketches.

It is the Bidder's responsibility to ensure the files uploaded to the Owner's software programs are not corrupt.

- F. The Bidder will have downloaded Contract Documents from the Owner's website and must submit their Bid on the forms furnished by the Owner in the Owner's e-Procurement Portal. Bids submitted by Bidders who have not downloaded Contract Documents from the Owner's e-Procurement Portal may be rejected.
- G. Bids will be submitted as indicated in the Bid Schedule located in the Owner's e-Procurement Portal. If the Bid Schedule located in the Owner's e-Procurement Portal is not submitted with the Bid, the Bid will be found non-responsive.
- H. Bids containing reservations, conditions, exceptions, omissions, unexplained erasures or alterations, items not required in the Bid or irregularities of any kind may be rejected by the Owner.
- I. Each Bid will indicate the full business name and address of the Bidder and will be signed by the Bidder with the Bidder's usual signature.
- J. A Bid submitted by a partnership will list the names of all partners and will be signed in the partnership name by one of the members of the partnership.
- K. A Bid submitted by a limited liability company will list the names of all managing members and will be signed in the limited liability company name by one of the managing members.
- L. A Bid submitted by a corporation will be executed in the legal name of the corporation. If the Bid Affidavit is signed by a person other than the President or Vice President of

the corporation, such person must furnish a corporate resolution showing their authority to bind the corporation. The name of each person signing the Bid will be typed or printed below the signature.

- M. Notwithstanding any of the foregoing, when requested by the Owner, a Power of Attorney, corporate resolution or other satisfactory evidence of the authority of the officer signing in behalf of the corporation will be furnished for the Owner's records.
- N. The Bid will be accompanied by a Bid Bond and Surety's Bond Affidavit executed on the forms provided, or a Cashier's Check payable to the Owner, in an amount not less than 5% of the bid amount. If a Bidder withdraws its Bid within 85 calendar days (or 115 calendar days if the Project is funded in whole or in part by Federal funds) from the date on which Bids are opened, or if a Bidder is awarded the Contract but fails, refuses or neglects to execute and return the Contract or to furnish acceptable Insurance Documents, and the required Certificates of Insurance, and/or Payment and Performance Bonds within seven days after the date of Award of the Contract, then the amount of the Bid Bond or cashier's check will be paid to, or retained by, the Owner as liquidated damages. The Bidder agrees that the liquidated damages are not a penalty and 5% of the total bid amount is reasonable.
- O. The Bidder will supply all information required by the Bid Form and Contract Documents.

1.09 MODIFICATIONS OR WITHDRAWAL OF BIDS

- A. A Bidder may withdraw and resubmit a Bid, provided that Bidder's request for withdrawal is received by the Owner in writing before the time specified for submittal of Bids. Revised Bids must be received at the place specified in the Invitation to Bid before the time and date specified for submittal of Bids. Modifications will not reveal original amount of bids. Bid Bonds must reflect modifications.
- B. Negligence on the part of the Bidder in the preparation of their Bid will not be grounds for modification or withdrawal of the Bid after the Bid Submittal Time and Date.

1.10 PUBLIC OPENING OF BIDS

- A. Bids will be opened and read publicly at the time and place specified in the Contract Documents. Bidders, their authorized agents, and other interested persons are invited to attend.
- B. The Owner reserves the right to correct, in all Bids, obvious mathematical or transposition errors within the Bid Prices or Total Bid Price, as long as the intent of the Bidder is reasonably clear from the Bid. Such intent shall be determined in the Owner's sole and absolute discretion.
- C. All Bids and other materials or documents submitted by a Bidder for this Project will become property of the Owner. The Owner is subject to the public records requirements of Florida State Statute Chapter 119, and as such, all materials submitted by the Bidder to the Owner are subject to public disclosure. The Bidder specifically waives any claims against the Owner related to the disclosure of any materials if made

under a public records request.

1.11 REJECTION OF BIDS

- A. Bids containing any omission, alterations of form, additions or conditions not called for, conditional or alternate bids unless called for, incomplete bids, or Bids otherwise regular which are not accompanied by a Cashier's Check or Bid Bond may be considered irregular and may be rejected.
- B. The Owner reserves the right, in Owner's judgment and sole discretion, to reject any or all Bids, to waive any formalities, technicalities or irregularities therein, to avoid or refrain from awarding a contract for Work, and to re-advertise for Bids.
- C. Bids shall be considered irregular for the following reasons:
 - 1. If Section 00300 – BID FORM is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the Bid Form is deleted.
 - 2. If there are unauthorized additions, conditional or alternative pay items, or irregularities of any kind which made the Bid incomplete, indefinite or otherwise ambiguous.
 - 3. If the Bid does not contain a unit price for each pay item listed in the Bid, except in the case of authorized pay items for which the Bidder is not required to furnish a unit price.
 - 4. If the Bid contains unit prices that are obviously unbalanced, as determined in the sole and absolute discretion of the Owner.
 - 5. If the Bid is not accompanied by all the documents listed in the Respondent Questionnaire Section on the Owner's e-Procurement Portal, including but not limited to, Bid Guaranty and Section 00417 – WOMAN AND MINORITY BUSINESS ENTERPRISE (W/MBE) ASSURANCE AND PARTICIPATION.
 - 6. Submitting more than one Bid from the same partnership, firm or corporation under the same or different name.
 - 7. Evidence of collusion among Bidders. Bidders participating or previously participating in such collusion will be disqualified as Bidders for this and any future work of the Owner until any such participating Bidder has been reinstated by the Owner as a qualified Bidder.
 - 8. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the Bid as a requirement for bidding.
 - 9. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner posts the Invitation to Bid in the Owner's e-Procurement Portal.

10. Documented record of Contractor default under previous contracts with the Owner.
11. Documented record of unsatisfactory work on previous contracts with the Owner.
12. Evidence that Bidder has a financial interest in the firm of another Bidder for the same Work.
13. If the Bidder, employee or agent of the Bidder has a Conflict of Interest as determined by the Vice President of Procurement in his or her sole discretion.
14. If Bidder is considered to be "non-responsible" for any reason specified in Section 1.07 - RESPONSIVE AND RESPONSIBLE BIDDER.

The Owner reserves the right to reject any irregular Bid and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to laws, rules and ordinances pertaining to the letting of constructions contracts.

- D. Bids will be considered non-responsive for the following reasons:
1. If the bid is not accompanied by the Bid Schedule or Section 00400-1 BID BOND.
 2. Bids received that do not meet the requirements specified in Section 1.13 WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE (W/MBE) POLICY AND PROGRAM.
 3. If Bidder cannot demonstrate ability to obtain Contract required insurance specified in Section 00650 – INSURANCE REQUIREMENTS.
- E. The Owner reserves the right to reject any and all Bids for any reason including but not limited to that the Bid is higher than the Owner approved budget or estimated project cost.

1.12 ESCROW OF BID DOCUMENTS

- A. Each Bidder agrees that all documents relied upon in making or supporting their Bid will be retained in escrow, in a manner satisfactory to the Owner, prior to the date the Contract is awarded and preserved and maintained during the course of the Work until Final Payment is made. The Owner will have the right to inspect any and all such Bid Documents and to verify that such Bid Documents are properly escrowed prior to the time of the Award of the Contract, or at any time thereafter during the course of the Work.

1.13 WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE (W/MBE) POLICY AND PROGRAM

- A. If the Project is not funded in whole or in part by Federal Funds.
1. Policy: It is the policy of the Owner that W/MBE as defined herein will have full

and fair opportunities to compete for and participate in the performance of all non-federally funded contracts or in the purchase of goods and services procured by the Owner and the Bidder will take all necessary and reasonable steps to ensure that W/MBEs have full and fair opportunities to compete for and perform subcontracts. Bidders will demonstrate that they will subcontract with certified W/MBEs, or clearly demonstrate in a manner acceptable to the Owner its good faith efforts to obtain W/MBE subcontractors. The successful bidder's W/MBE commitment as stated on their Letter(s) of Intent will be enforceable under the terms of the Contract.

A business certified as a W/MBE by Hillsborough County, City of Tampa, State of Florida Office of Supplier Diversity (OSD) or as a DBE certified under the FLUCP program, will be eligible to participate on Owner funded contracts as a W/MBE firm pursuant to the Owner's W/MBE Policy and Program.

Bidders are encouraged to refer to the Owner's W/MBE Policy and Program which is posted on the Owner's website: www.TampaAirport.com. Links to the various websites that have directories of certified W/MBE firms are also available on the Owner's website.

2. W/MBE Obligation: Each contract the Owner executes with the Bidder and each subcontract the Bidder executes with a subcontractor, must include the following clause:

"The bidder/proposer, contractor, supplier/vendor and subcontractor will not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The bidder/proposer, contractor, supplier/vendor or subcontractor will carry out applicable requirements in the Owner's W/MBE policies and programs in the award and administration of Owner contracts. Failure of bidder/proposer, contractor, supplier/vendor or subcontractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the Owner deems appropriate which may include, but not limited to:

 - (1) Withholding monthly progress payments;
 - (2) Assessing sanctions;
 - (3) Assessing liquidated damages; and/or
 - (4) Disqualifying the bidder/proposer, contractor, supplier/vendor or subcontractor from future bidding as non-responsible."
3. Certification of Eligible W/MBEs: To ensure the eligibility of W/MBEs proposed to participate on the Contract, all W/MBEs must be certified by the FLUCP, City of Tampa, Hillsborough County or the State of Florida Office OSD. ***W/MBEs must be certified with the appropriate agencies at the time bids are received and Letters of Certification must be included in the sealed bid envelope when submitted to the Owner.***
4. W/MBE Goals: W/MBE Goals may be established for contracts with subcontracting opportunities. The Bidder will subcontract with certified W/MBEs at least 15% of the dollar value of the Contract. Only certified W/MBEs will count toward the Contract Goal.

The Bidder will be required to submit a W/MBE Assurance and Participation Form and Letter of Intent for each W/MBE that Bidder proposes to participate in this Contract at the time the Bid is submitted to the Owner. If Bidder is a W/MBE, Bidder must submit a Letter of Intent for work the Bidder proposes to self-perform and count toward the Goal. Failure of the Bidder to submit the required W/MBE information in the Bid may render the Bid non-responsive. If the Bidder fails to achieve the Goal stated herein, the Bidder will be required to provide documentation demonstrating that the Bidder made "Good Faith Efforts" in attempting to do so.

5. Bidder Efforts to Meet W/MBE Subcontract Goals:

- a. The Bidder will satisfy the Owner that it has made "Good Faith Efforts" to utilize W/MBEs in meeting the established Goal. "Good Faith Efforts" are those efforts that could reasonably be expected to result in W/MBE Goal attainment by a Bidder who aggressively and actively seeks to obtain W/MBE participation. Efforts that are merely "Pro Forma" are not "Good Faith Efforts" to meet W/MBE Goals. In determining whether or not the apparent successful Bidder has made such "Good Faith Efforts" to meet the Goal, some of the factors the Owner will consider are the following:
 - i. Whether the Bidder advertised in newspapers of general circulation, websites, trade association, and minority-focus media concerning the subcontracting opportunities prior to bid opening;
 - ii. Whether the Bidder provided written notice by certified mail, facsimile or electronic mail prior to the bid submission date to a reasonable number of W/MBEs that their interest in the Contract was being solicited and giving W/MBE sufficient time to prepare a response to the request;
 - iii. Whether the Bidder followed up initial solicitations of interest by contacting W/MBEs to determine with certainty whether the W/MBEs were interested;
 - iv. Whether the Bidder selected portions of the Work to be performed by W/MBEs in order to increase the likelihood of meeting the W/MBE Goals including, where appropriate, breaking down contracts into economically feasible units to facilitate W/MBE participation;
 - v. Whether the Bidder provided interested W/MBEs with adequate information about the Drawings, Specifications or requirements of the Contract;
 - vi. Whether the Bidder negotiated in good faith with interested W/MBEs, not rejecting W/MBEs as unqualified without sound

- reasons based on a thorough investigation of their capabilities;
- vii. Whether the Bidder made efforts to assist interested W/MBEs in obtaining bonding, lines of credit, or insurance required by the Owner or Contractor;
 - viii. Whether the Bidder effectively used the services of available minority community organizations, minority trade or business groups, local, state and federal minority business assistance offices, and other organizations that provide assistance in the recruitment and placement of W/MBEs;
 - ix. Whether the Scope of Work submitted by the Bidder to any W/MBE contractor, W/MBE subcontractor, W/MBE sub-subcontractor, W/MBE supplier, W/MBE sub-supplier or W/MBE sub-sub-supplier, and so on, either directly or indirectly, was intended to achieve, in whole or in part, the specified W/MBE participation;
 - x. Whether the replies or quotes from W/MBEs in response to Scopes of Work provided to them by contractors, either directly or indirectly, were fair and responsive;
 - xi. Whether the Bidder fairly represented W/MBE quotations in the formulation of the Bidder's bid as shown on the Contractor's bid tabulation or other work documents supporting the Bidder's bid; and
 - xii. Whether all other bidders met the W/MBE Goal but the apparent low bidder or most qualified bidder did not.
- b. Bidders who do not meet the W/MBE Goal may satisfy the Good Faith Efforts requirement by documenting their efforts to do so. If the Owner subsequently determines that the Bidder did not satisfy the Good Faith Efforts, the Bidder is entitled, at their option, to the administrative reconsideration process as outlined in the Owner's W/MBE policy.
 - c. Any Bidder who meets the W/MBE Goal will be deemed to have made the necessary "Good Faith Efforts" without the need for further proof. Failure to meet the Goal or satisfy the Good Faith Efforts requirements, may cause the Bid to be determined to be non-responsive.
 - d. The Owner reserves the right to require such additional and supplemental information solely for the purpose of clarifying the W/MBE information submitted by the Bidder. The determination of whether Bidder's efforts were made in "good faith" will be made by Owner.

1.14 BUY AMERICAN - STEEL AND MANUFACTURED PRODUCTS FOR CONSTRUCTION CONTRACTS

Not Used.

1.15 SUSTAINABLE PROCUREMENT

When deemed appropriate by the Bidder and not in conflict with the Contract Documents, Bidders are encouraged to reduce use of products and materials that negatively impact human health and/or the environment.

1.16 TRENCH SAFETY ACT/STANDARDS

- A. Section 553.62, Florida Statutes incorporates the Occupational Safety and Health Administration's (OSHA) Safety Standards, 29 CFR, Section 1926.650 Subpart P, as the State standard.
- B. All trench excavation performed in excess of 5-feet in depth will comply with Florida Statutes, Sections 553.63(1)(a), 553.63(1)(b), and 553.63(1)(c).
- C. The cost of trench excavation in excess of 5-feet in depth will be identified in Section 00415 - TRENCH SAFETY CERTIFICATION. All costs to comply with trench safety standards will be incidental to the Project or various related Pay Items.
- D. Bids received without Section 00415 – TRENCH SAFETY CERTIFICATION may be considered irregular and may be rejected.

END OF SECTION

SECTION 00300 - BID FORM

TO: **HILLSBOROUGH COUNTY AVIATION AUTHORITY**
OWNER
Tampa International Airport
Post Office Box 22287
Tampa, Florida 33622

FROM:

BIDDER NAME Gosalia Concrete Constructors Inc
STREET ADDRESS 4607 N 56th Street
CITY, STATE, ZIP Tampa, FL 33610
DATE 03/01/2023 PHONE 813-443-0984
E-MAIL estimating@gosaliaco.com
(Person to receive recommendation of award notification)

- 1.01 The undersigned Bidder hereby certifies the following: (1) it has accurately identified all persons required by the applicable signature block; (2) the Bid Prices are fair, in all respects, and made in good faith, without collusion or fraud; (3) no officer, employee or agent of the Owner and no spouse or child of an officer, employee, or agent of the Owner, has, or will have during the performance of the Contract, any material interest in the business of the Bidder, and (4) Bidder has no knowledge of any potential conflict of interest.

The Bidder further represents that it has carefully examined the site of the Work, the Contract Documents, the Addenda furnished prior to the opening of the Bids and existing Owner records for the Work contemplated during the Bid submittal period. By submitting a Bid, the Bidder represents to the Owner that the Bid and the Contract are inclusive of sufficient compensation for performing adequate investigations of existing site conditions, the Contract Documents, and existing records to sufficiently support the design. The Bidder further acknowledges that any information provided by the Owner was to assist the Bidder in completing adequate investigations. In addition, the Bidder represents that it has investigated and is fully informed of the conditions to be encountered, of the character, quality and quantities of Work to be performed and materials to be furnished and has included in the Bid and Contract all items necessary for the proper execution and completion of the Work in accordance with the requisite time frame, applicable laws, statutes, building codes, regulations, or as otherwise required by the Contract Documents.

The undersigned, as Bidder, does hereby declare that, having familiarized itself with the local conditions affecting the cost of the Work, Owner's policies, procedures, rules, regulations and manuals affecting the cost of the Work, Contract Documents including the Project Manual (consisting of Bidding and Contract Requirements, and the Specifications), Drawings, and other related Contract Documents prepared by the Owner and titled: North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation.

Airport Name: Tampa International Airport

Authority Project No.: 6530 18

Project Description: The intent of this Project is summarized in three distinct tasks:

- A. Relocate the perimeter service road, adjacent to the North Air Cargo building.
- B. Rehabilitate the Truck court and provide additional parking.
- C. Crack and Joint sealing areas of joint seal replacement as identified by the Authority.

Project Title: North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

Dated: January 18, 2023

Place, Date and Time of Bid Opening: Refer to Section 00020 – INVITATION TO BID.

Pre-Bid Conference: Refer to Section 00020 – INVITATION TO BID.

together with all Addenda to such Contract Documents as acknowledged in the Owner’s e-Procurement Portal, it proposes to furnish all materials and labor specified and perform all Work required in strict accordance with the provisions of Contract Documents noted above for the consideration of the prices quoted in Bid Schedule in the Owner’s e-Procurement Portal, titled the same as written above, attached hereto and incorporated by reference.

The undersigned understands that the estimated quantities shown in the Bid Schedule are approximate only and are intended principally to serve as a guide in evaluating Bids and are subject to either increase or decrease.

- 1.02 The undersigned affirms that in making such Bid, neither Bidder nor any company that Bidder may represent, nor anyone on behalf of Bidder or Bidder’s company, directly or indirectly, has entered into any combination, collusion, undertaking or agreement with any other Bidder or Bidders to control the prices of said Work, or any compact to prevent any other Bidder or Bidders from bidding on said Contract or Work, and further affirms that such Bid is made without regard or reference to any other Bidder or Bid and without any agreement or understanding or combination, either directly or indirectly, with any other person or persons with reference to such bidding in any way or manner whatsoever. The undersigned acknowledges that the Owner is relying on the statements made herein.
- 1.03 Each Bidder agrees that all documents relied upon in making or supporting their Bid will be retained in escrow prior to the date the Contract is awarded and will be preserved and maintained during the course of the Work until Final Payment is made. The Owner will have the right to inspect any and all such Bid Documents and to verify that such Bid Documents are properly escrowed, in a manner satisfactory to the Owner, prior to the time of the award of the Contract, or at any time thereafter during the course of the Work.

- 1.04 The undersigned, when notified of the acceptance of this Bid, does hereby agree to enter into a Contract and return such signed (executed) Contract to the Owner along with the fully executed Performance Bond and Payment Bond with good and sufficient Surety and furnish the required Certificates of Insurance and Insurance Policy endorsements, within seven days after the date of award of the Contract or such other time as provided in writing by the Owner.

A preliminary Construction Schedule (based on major items) as required by Section 01315 - SCHEDULES, PHASING will be provided to the Owner by the undersigned within 15 days from the date of the award of the Contract, and will be in accordance with the provisions of the Contract Documents.

The undersigned further agrees that if awarded the Contract, Bidder will commence the Work within ten days after the date of Notice to Proceed and that Bidder will achieve Substantial Completion within 165 days after Notice to Proceed.

The Owner may issue a Notice to Proceed seven days after the date of award of the Contract or later. However, the Contractor will not use or occupy Owner's premises in connection with the Contract until all documentation required by the Contract Documents has been submitted, accepted and executed by the Owner. Refer to Section 00500 - AWARD OF CONTRACT AND EXECUTION OF CONTRACT BONDS and Section 00650 – INSURANCE REQUIREMENTS.

Should the undersigned fail to achieve Substantial Completion within the time(s) specified in the Contract and the Contract Documents, the Owner may retain the sum specified in the Contract for each day that the Work remains incomplete beyond the time limit(s), which sum will represent not a penalty but liquidation of a reasonable portion of the damages that will be incurred by the Owner by failure of the undersigned to complete the Work within the days stipulated. The undersigned agrees that the assessment of actual damages at the time the Contract is entered into is uncertain. By bidding on the project, the undersigned signifies that it agrees that the sum specified in the Contract for the liquidated damages is reasonable. The undersigned agrees that the liquidated damages in the Contract are solely for delay and loss of use.

- 1.05 In submitting this Bid, it is understood that the right is reserved by the Owner to waive formalities, technicalities and irregularities and to reject all Bids. It is agreed that this Bid may not be withdrawn for a period of 85 calendar days (or 115 calendar days if Federal funds are applicable) after the opening thereof.
- 1.06 The Bidder attaches hereto a Cashier's Check or Bid Bond payable to the Hillsborough County Aviation Authority, as required under Section 00020 – INVITATION TO BID, and the Bidder agrees that in case Bidder fails to fulfill obligations under the Bid, the Owner, may, at its option, determine that the Bidder has abandoned Bidder's rights and interest in such Bid and that the Cashier's Check or Bid Bond accompanying their Bid has been forfeited to the Owner as liquidated damages. Otherwise, the Cashier's Check or Bid Bond will be returned to the Bidder upon the execution and return of the Contract and the acceptance of the Bonds and Insurance, or upon rejection of the Bid. The Bidder agrees that the liquidated damages referenced in the paragraph are not a penalty and 5% of the total bid amount is reasonable.
- 1.07 The undersigned affirms that Bidder has completed, signed and included in its Bid submission all documents as specified in the Minimum Qualifications on the Owner's e-Procurement Portal.

When a determination has been made to award a Contract to a specific Bidder, such Bidder will, prior to award, furnish such other pertinent information and assurances regarding Bidder's proposed subcontractors, as the Owner, the FAA, the Secretary of Labor, FDOT, and/or the Office of Federal Contract Compliance (OFCC) may require. The Bidder will furnish similar statements executed by each of Bidder's first-tier and second-tier subcontractors whose contracts equal \$10,000 or more and will obtain similar compliance by such subcontractors before awarding such subcontracts. No subcontract will be awarded to any non-complying Subcontractor.

It is understood and agreed that all workmanship and materials under all items of work are guaranteed for one year from the date of Substantial Completion, unless otherwise specified within the Contract Documents.

The undersigned agrees that the Contract Sum will be decreased or increased where planned quantities shown on the Drawings are decreased or increased, and that such increases or decreases will be determined by use of the applicable Unit Price shown on the Unit Price "Bid Schedule."

The undersigned agrees that Mobilization is limited to 10% of the total Project cost.

1.08 The legal status of the undersigned is: (The Bidder will complete A. and the appropriate portion of B. or C. and strike out the other one.)

A. Federal Employer Identification (FEI) number: 27-3534317

B. Corporation:

1. A corporation, duly organized and doing business under the laws of the State of Florida, for whom, bearing official title of President, whose signature is affixed to this bid, is duly authorized to execute contracts.

Date of Incorporation: 09/16/2010

Name and address of Florida registered agent for service of process:

Corporate Creations Network Inc
801 US Highway 1
North Palm Beach FL 33408

2. If Foreign Corporation (non-Florida):
Date of Certificate of Authority to transact business in Florida: _____

Name and address of Florida registered agent for service of process:

C. Partnership:

A partnership, all of the members of which, with addresses are: (Designate general partners as such).

continue if required . . .

If all partners are non-residents of Florida: Designate name and address of Florida registered agent required for service of process.

Name and address of Florida registered agent for service of process:

D. Limited Liability Company:

Limited Liability Company, all of the managing members of which, with addresses are:

continue if required . . .

If all managing members are non-residents of Florida: Designate name and address of Florida registered agent required for service of process.

Name and address of Florida registered agent for service of process:

E. Other Entity

A _____, duly organized and duly doing business under the laws of the State of _____, for whom, bearing the title of _____, whose signature is affixed to this bid, is duly authorized to execute contracts.

Name and address of Florida registered agent for service of process:

F. Individual

Name and address of Florida registered agent for service of process:

- 1.09 The undersigned affirms that in making such Bid, Bidder and/or Bidder's subcontractors have required licenses, sufficient staffing, equipment, material and resources to perform the Work in the quality and quantities of Work to be performed and materials to be furnished, and have included in the Bid and Contract all items necessary for the proper execution and completion of the Work in accordance with the requisite time frame, applicable laws, statutes, building codes, regulations, or as otherwise required by the Contract Documents.**

ALL BIDDERS MUST SIGN AND EXECUTE THE FOLLOWING:

Dated and signed at 4607 N. 56th St. Tampa FL 33610
on this 1st day of March, 2023

NAME OF BIDDER Gosalia Concrete Constructors Inc

By: [Signature]
(Signature)

TITLE President

BUSINESS ADDRESS 4607 N 56th Street
Tampa, FL 33610

WITNESSES:

By: [Signature]
(Signature)

By: [Signature]
(Signature)

END OF SECTION

SECTION 00350 - BID AFFIDAVIT

The following affidavit will be executed in order that your Bid may be considered:

STATE OF Florida
COUNTY OF Hillsborough

Jay Gosalia, of lawful age, being first duly sworn, deposes and says: That it executed the accompanying Bid on behalf of the Contractor named herein, and that it had lawful authority so to do, and said Contractor has not directly or indirectly entered into any agreement, express or implied, with any contractor or contractors, having for its object the controlling of the price or amount of such Bid or any Bids, the limiting of the Bid of contractors, the parceling or farming out to any contractor or contractors or to other persons of any part of the Contract or any of the subject matter of the Bids, or of the profits thereof, and that it has not and will not divulge the sealed Bid to any person whomsoever, except those having a partnership or other financial interest with them in said Bid or Bids, until after the sealed Bid or Bids are opened.

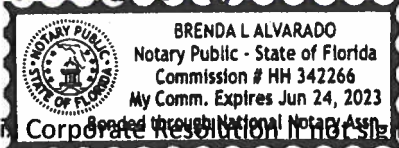
Signed By: [Signature]

Subscribed and sworn to before me this 1st day of March, 2023

My Commission Expires:

June 24, 2023

By: [Signature]
Notary Public (Signature)



[Affidavit Corporate Resolution Form Signed by the President or Vice President of the Company]

END OF SECTION

(NOT TO BE FILLED OUT IF A CASHIER'S CHECK IS SUBMITTED)

KNOW ALL MEN BY THESE PRESENTS: That the undersigned Gosalia Concrete Constructors, Inc as Principal, and Travelers Casualty and Surety Company of America as Surety, are held and firmly bound unto the Hillsborough County Aviation Authority in the sum of 5% of the bid amount shown on Bid Schedule for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THIS OBLIGATION is such that if Principal:

- 1. Does not withdraw the attached Bid Amount shown on Bid Schedule for the Authority Project No. 6530 18 entitled North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation at Tampa International Airport for a period of 85 calendar days (or 115 calendar days if the Project is funded in whole or in part by Federal funds) after the date on which the Bids are opened; and
2. Enters into a written Contract and furnishes the required Insurance, Certificates of Insurance and Payment and Performance Bonds with surety or sureties acceptable to the Hillsborough County Aviation Authority within seven days after the date of award of the Contract, then this obligation will be void; Otherwise the same will be in full force and the full amount of this Bid Bond will be paid to the Hillsborough County Aviation Authority as stipulated herein.

Signed this 1st day of March, 2023.

CONTRACTOR MUST INDICATE WHETHER CORPORATION, PARTNERSHIP, COMPANY, (OR INDIVIDUAL). THE PERSON SIGNING FOR THE CONTRACTOR WILL SIGN HIS/HER OWN NAME AND SIGN CORPORATE TITLE. WHEN THE PERSON SIGNING FOR A CORPORATION IS OTHER THAN THE PRESIDENT OR VICE PRESIDENT, HE/SHE MUST FURNISH A CORPORATE RESOLUTION SHOWING HIS/HER AUTHORITY TO BIND THE CORPORATION
(Affix Contractor's Corporate Seal)
Gosalia Concrete Constructors, Inc
Name of Contractor
Type Name and Title Below: Jay Gosalia, President
By: [Signature]
Address: 4607 N. 56th Street, Tampa, FL 33610
Telephone Number Fax Number

(Affix Surety's Corporate Seal)
Travelers Casualty and Surety Company of America
Name of Surety
By: [Signature]
Attorney in Fact for Surety (Signature)
Type name of Attorney in Fact: Kevin Wojtowicz
Attorney in Fact Address: 220 Congress Park Drive, Suite 100, Delray Beach, FL 33445
Telephone Number 561-454-8202 Fax Number n/a
By: [Signature]
Florida Licensed Agent (Signature)
Type name of Fla. Licensed Agent: Kevin Wojtowicz
License Number: A289006
Agent Address: 220 Congress Park Drive, Suite 100, Delray Beach, FL 33445
Telephone Number 561-454-8202 Fax Number n/a

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

SECTION 00400 2-SURETY BOND AFFIDAVIT

STATE OF FL
COUNTY OF Palm Beach

BEFORE ME, THE UNDERSIGNED AUTHORITY, PERSONALLY APPEARED Kevin Wojtowicz (AGENT), WHO, BEING DULY SWORN, DEPOSES AND SAYS THAT THEY ARE A DULY AUTHORIZED FLORIDA LICENSED INSURANCE AGENT, PROPERLY LICENSED UNDER THE LAWS OF THE STATE OF FL, TO REPRESENT Travelers Casualty and Surety Company of America OF Hartford, CT, A COMPANY AUTHORIZED TO MAKE CORPORATE SURETY BONDS UNDER THE LAWS OF THE STATE OF FL (THE "SURETY").

AGENT AS FURTHER CERTIFIES THAT
HE OR SHE HAS SIGNED THE ATTACHED BOND AS A LICENSED AGENT, IN THE SUM OF 5% OF THE BID AMOUNT SHOWN ON BID SCHEDULE, ON BEHALF OF Travelers Casualty and Surety Company of America TO THE **HILLSBOROUGH COUNTY AVIATION AUTHORITY COVERING PROJECT NO. 6530 18, NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION** at TAMPA INTERNATIONAL AIRPORT, TAMPA, FLORIDA.

AGENT FURTHER CERTIFIES THAT:

- i. SURETY HOLDS A CERTIFICATE OF AUTHORITY AUTHORIZING IT TO WRITE SURETY BONDS IN FLORIDA.
- ii. SURETY HAS BEEN IN BUSINESS AND HAS A RECORD OF SUCCESSFUL CONTINUOUS OPERATIONS FOR THE LAST FIVE YEARS.
- iii. SURETY IS LISTED AND MAINTAINS A CURRENT CERTIFICATE OF AUTHORITY AS AN ACCEPTABLE SURETY ON FEDERAL BONDS AND AS ACCEPTABLE REINSURING COMPANIES IN ACCORDANCE WITH U.S. DEPARTMENT OF TREASURY CIRCULAR 570, CURRENT REVISION. THE AMOUNT OF BONDS ISSUED PURSANT TO THIS CONTRACT WILL NOT EXCEED THE UNDERLYING LIMITATION IN THE FEDERAL REGISTER FOR THAT SURETY.
- iv. SURETY HAS A CURRENT RATING BY A.M. BEST COMPANY OF "A-" OR HIGHER.

AGENT:
By: [Signature]
Florida Licensed Insurance Agent (Signature)

220 Congress Park Dr., Ste 100, Delray Beach, FL 33445
Address Of Agent

561-454-8202
Phone Number of Agent

Fax Number of Agent n/a

One Tower Square, Hartford, CT 06183
Address Of Surety

n/a
Phone Number of Agent

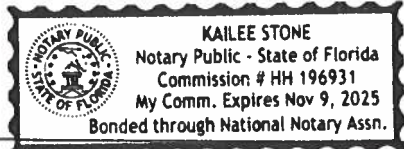
n/a
Fax Number of Agent

SURETY:
By: [Signature]
Attorney-In-Fact (Signature)
Kevin Wojtowicz

Acknowledgment For
Attorney-In-Fact

The foregoing instrument was acknowledged
before me by means of physical presence or
 online notarization this 1st day of March
2023, by Kevin Wojtowicz
(name of person)
as Attorney-In-Fact

By: [Signature]
(Signature of Notary Public)



Print, Type, or Stamp Commissioned Name of Notary

Personally Known OR Produced Identification
Type of Identification Produced

END OF SECTION



**Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company**

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Kevin Wojtowicz** of **SAINT PETERSBURG Florida**, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **3rd** day of **February**, 2017.



State of Connecticut

City of Hartford ss.

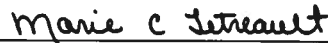
By: 
Robert L. Raney, Senior Vice President

On this the **3rd** day of **February**, 2017, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, 2021




Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

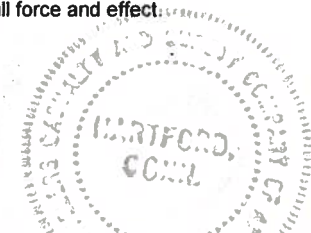
FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **1st** day of **March**, 2023




Kevin E. Hughes, Assistant Secretary

**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-in-Fact and the details of the bond to which the power is attached.**

SECTION 00415- TRENCH SAFETY CERTIFICATION

Section 553.62, Florida Statutes incorporates the Occupational Safety and Health Administration’s (OSHA) safety standards, 29 CFR Section 1926.650 Subpart P, as the State standard. The Department of Labor and Employment Security may adopt updated or revised versions by rule. Other State or political subdivisions may also have standards that are applicable.

If trench excavation is required on the Project in excess of 5-feet in depth, the Bidder will identify the cost of compliance with the applicable trench safety standards in the table below. If there is no trench excavation on the Project in excess of 5-feet in depth, write “not applicable” below. All costs to comply with trench safety standards will be incidental to the Project or various related Pay Items.

Trench Safety Measure (Description)	Units of Measure	Quantity	Unit Cost	Extended Cost
1. <u>NA</u>	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____

(Attach Separate Sheet if Necessary)

If applicable, this certifies that all trench excavation performed within the control of the Contractor will be in accordance with all applicable standards and with the Specifications, and with all requirements of Florida Statute, Sections 553.63(1)(a), 553.63(1)(b), and 553.63(1)(c).

Gosalia Concrete Constructors, Inc.

(Name of Bidder)

By:



(Signature*)

Title:

President

Date:

03/01/2023

* Must be same signature on Bid Form.

END OF SECTION

SECTION 00417 - WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE (W/MBE) ASSURANCE AND PARTICIPATION

NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION
AUTHORITY PROJECT NO. 6530 18
TAMPA INTERNATIONAL AIRPORT

Letter of Intent

NOTE: Failure to complete this statement may be grounds for rejection of the Bid.

Name of Bidder's firm: Gosalia Concrete Constructors Inc
Address: 4607 N 56th Street
City: Tampa State: FL Zip Code: 33610
Phone: 813-443-0984 Fax number: 813-354-2374
E-mail: estimating@gosaliaco.com

Name of W/MBE firm: Gosalia Concrete Constructors Inc
Address: 4607 N 56th Street
City: Tampa State: FL Zip Code: 33610
Phone: 813-443-0984 Fax number: 813-354-2374
E-mail: estimating@gosaliaco.com

Description of work to be performed by W/MBE firm: joint+seal, crack seal
Amount of the W/MBE firm's subcontract \$ 326,495.00

Commitment

The Bidder is committed to utilizing the above-named W/MBE firm for the work described above.

By: Name of Bidder: Gosalia Concrete Constructors Inc Date: 03/01/2023

Bidder Representative's Name: Jay Gosalia Title: President



(Bidder Representative's Signature)

Affirmation

By: Name of W/MBE Firm: Gosalia Concrete Constructors Inc Date: 03/01/2023

W/MBE Representative's Name: Jay Gosalia Title: President



TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

(W/MBE Representative's Signature)

SECTION 00417 - WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE (W/MBE) ASSURANCE AND PARTICIPATION

NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION
AUTHORITY PROJECT NO. 6530 18
TAMPA INTERNATIONAL AIRPORT

Letter of Intent

If the Bidder does not receive award of the Contract, any and all representations in this Letter of Intent will be null and void.

NOTE: The cost of materials and/or supplies obtained and/or equipment leased by the W/MBE to perform the subcontract work (except supplies and equipment the W/MBE subcontractor purchases or leases from the prime contractor or its affiliate) may be included in the subcontract amount. In addition, the Owner will count 100% of the expenditures on materials and/or supplies obtained from a W/MBE manufacturer or regular dealer. With respect to materials or supplies purchased from a W/MBE which is neither a manufacturer nor a regular dealer, the Owner will count only the amount of fees or commissions charged for assistance with the procurement of the material or supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site.

SECTION 00417 - WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE (W/MBE) ASSURANCE AND PARTICIPATION

NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION
 AUTHORITY PROJECT NO. 6530 18
 TAMPA INTERNATIONAL AIRPORT

W/MBE GOOD FAITH EFFORT WORKSHEET

Name of Bidder:

W/MBE

In determining if the Bidder made sufficient good faith efforts to meet the prescribed W/MBE contract Goal, the Owner will consider the factors listed in the W/MBE Policy and Program. If the Bidder is unable to meet the prescribed W/MBE contract Goal, this Worksheet must be completed and submitted with the Bid. Bidders must attach to this form sufficient documentation to enable the Owner to verify the information provided. Failure to complete this Worksheet form or provide sufficient supporting documentation may be grounds for rejection of the Bid. The Owner reserves the right to conduct further investigation concerning the Good Faith Efforts indicated and reserves the right to find that the Bidder did not make a Good Faith Effort even if this form is filled out. The Bidder may, although it is not required, document any other good faith efforts on separate sheets.

NOTE: Thorough written backup documentation in addition to this worksheet is required to substantiate the good faith effort.

Name of W/MBE Firm	Date of contact with W/MBE Firm	How W/MBE Firm contacted	Follow-Up (Telephone calls, e-mails, other contact)	Response to Follow-Up	Did W/MBE Firm submit a quote?		Explain
					Yes	No	
Gosalia Concrete Constructors Inc	PRIME	PRIME	PRIME	NA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/>	<input type="checkbox"/>	

SECTION 00417 - WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE (W/MBE) ASSURANCE AND PARTICIPATION

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION
 AUTHORITY PROJECT NO. 6530 18
 TAMPA INTERNATIONAL AIRPORT

The following is a list of types of actions which the Owner will consider as part of the Bidder's good faith efforts to obtain W/MBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases. The Owner reserves the right to conduct further investigation concerning the Good Faith Efforts indicated and reserves the right to find that the Bidder did not make a Good Faith Effort even if this form is filled out. The Bidder may, although it is not required, document any other good faith efforts on separate sheets.

Good Faith Efforts: (Check Yes or No for each statement below)	Yes	No	Explain
1. Advertised in newspapers of general circulation, websites, trade associations, and minority-focus media concerning subcontracting opportunities prior to the Bid Due Date.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Prime is DBE
2. Selected portions of the work to be performed by W/MBEs in order to increase the likelihood of meeting the prescribed W/MBE Goal including, where appropriate, breaking down contracts into economically feasible units to facilitate W/MBE participation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DBE met with Prime
3. Provided interested W/MBEs with adequate information about the plans, specifications or requirements of the Contract.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Information provided to vendors
4. Negotiated in good faith with interested W/MBEs, not rejecting W/MBEs as unqualified without sound reasons after a thorough investigation of their capabilities.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	We maintain good working relations with DBE vendors
5. Made efforts to assist interested W/MBEs in obtaining bonding, lines of credit, or insurance required by the Owner or the Bidder.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	We maintain good working relations with DBE vendors
6. Effectively used the services of available minority community organizations; minority trade or business groups; local, state and federal minority business assistance offices; and other organizations that provide assistance in the recruitment and placement of W/MBEs.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	We maintain good working relations with DBE vendors
7. Submitted a scope of work to W/MBE subcontractors, W/MBE sub-subcontractors, W/MBE suppliers, W/MBE sub-suppliers and so on, either directly or indirectly, with the intention of achieving, in whole or in part, the specified W/MBE Goal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Information provided to vendors
8. Fairly represented the W/MBE quotations in the formulation of its Bid.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Prime is DBE as well as maintain good working relations with DBE Vendors
9. Conducted Outreach Meeting(s). NA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

END OF SECTION

SECTION 00417 - WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE (W/MBE) ASSURANCE AND PARTICIPATION

NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION
AUTHORITY PROJECT NO. 6530 18
TAMPA INTERNATIONAL AIRPORT

Select one of the responses below. Failure to complete this section may be grounds for rejection of the Bid.

Yes - Bidder Assures Prescribed W/MBE Goal.

The Bidder assures that it will meet the W/MBE requirements stated in this Solicitation and the Hillsborough County Aviation Authority's W/MBE Policy and Program, and will subcontract with W/MBE firms certified as a woman-owned or minority-owned business by the City of Tampa, Hillsborough County, State of Florida Department of Management Services, Office of Supplier Diversity (OSD), or as a Disadvantaged Business Enterprise (DBE) under the Florida Unified Certification Program (FLUCP), in an amount equal to at least 15% of the total dollar amount of the awarded Contract. The W/MBE Goal stated above is the minimum prescribed Goal; however, additional W/MBE participation is encouraged. The Bidder is required to submit a Letter of Intent for each W/MBE that will participate in the awarded Contract at the time the Bid is submitted to the Owner. The actual W/MBE contractual commitment will be the total amount of participation shown on the validated Letter(s) of Intent submitted by the Bidder. It is understood that the amounts shown on the Letter(s) of Intent are estimates and that actual amounts paid to W/MBE subcontractors may vary depending on the final adjustments of the estimated quantities; however, the Bidder's W/MBE contractual commitment can only be modified by an amendment or change order.

OR

No - Bidder Does NOT Assure Prescribed W/MBE Goal.

The Bidder is unable to assure W/MBE participation of the prescribed Goal of 15%, but will subcontract with W/MBE firms in an amount equal to at least ____% of the total dollar amount of the awarded Contract. The Bidder must submit with its Bid a completed W/MBE Good Faith Effort Worksheet documenting Bidder's good faith efforts to meet the prescribed Goal. In determining whether or not the Bidder made sufficient good faith efforts to meet the Goal, the Owner will consider the factors listed in the W/MBE Policy and Program. The Bidder is required to submit a Letter of Intent for each W/MBE that will participate in the awarded Contract at the time the Bid is submitted to the Owner. The actual W/MBE contractual commitment will be the total amount of participation shown on the validated Letter(s) of Intent submitted by the Bidder. It is understood that the amounts shown on the Letter(s) of Intent are estimates and that actual amounts paid to W/MBE subcontractors may vary depending on the final adjustments of the estimated quantities; however, the Bidder's W/MBE contractual commitment can only be modified by an amendment or change order.

By: Name of Bidder: Gosalia Concrete Constructors, Inc

Date: 03/01/2023

Bidder Representative's Name:

Jay Gosalia

Title: President



(Bidder Representative's Signature)

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

SECTION 00417 - WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE (W/MBE) ASSURANCE AND PARTICIPATION

NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON
REHABILITATION
AUTHORITY PROJECT NO. 6530 18
TAMPA INTERNATIONAL AIRPORT

Letter of Intent Instructions Checklist

Follow this checklist when completing the Letter of Intent.

- A separate Letter of Intent has been completed for each proposed W/MBE firm.
- The Bidder's name, address, telephone number, FAX number and e-mail address has been entered.
- The proposed W/MBE firm's name, address, telephone number, FAX number and e-mail address has been entered.
- The description of the work to be performed by the W/MBE firm has been entered.
- The amount of the proposed W/MBE firm's subcontract has been entered.
- The Bidder has completed and signed the Commitment section.
- The W/MBE firm has completed and signed the Affirmation section.
- A copy of the W/MBE firm's certification letter by the City of Tampa, Hillsborough County, State of Florida Department of Management Services, Office of Supplier Diversity (OSD) or DBE certification letter under the Florida Unified Certification Program (FLUCP) is attached to the Letter of Intent. W/MBE firm should be certified in the NAICS code and/or description of work that Bidder has indicated as scope of services W/MBE will perform under the Contract.



Disadvantaged Business Enterprise
Certificate of Eligibility

Granted to

GOSALIA CONCRETE CONSTRUCTORS INC

It has been determined that the firm listed above has met the federal requirements in accordance with the Code of Federal Regulations (49 CFR Part 26) and is thereby eligible to participate in the Disadvantaged Business Enterprise Program in the State of Florida.

NAICS CODES:

237310

238120

237990

Issue Date: October 4, 2013

A handwritten signature in black ink, appearing to read "Victoria V. Smith", is written over a horizontal line. The signature is stylized and cursive.

VICTORIA V. SMITH

Disadvantaged Business Enterprise Certification Manager

SECTION 00418 - CERTIFICATE OF NON-SEGREGATED FACILITIES

CERTIFICATION TO BE SUBMITTED BY CONSTRUCTION CONTRACTORS OF APPLICANTS AND THEIR SUBCONTRACTORS (APPLICABLE TO CONSTRUCTION CONTRACTS AND RELATED SUBCONTRACTS EXCEEDING TEN THOUSAND DOLLARS (US \$10,000.00) WHICH ARE NOT EXEMPT FROM THE EQUAL OPPORTUNITY CLAUSE)

The construction Contractor certifies that it does not maintain or provide, for its employees, any segregated facilities at any of its establishments and that construction Contractor does not permit its employees to perform their services at any location, under construction Contractor's control, where segregated facilities are maintained. The construction Contractor certifies that it will not maintain or provide, for its employees, segregated facilities at any of its establishments and that construction Contractor will not permit its employees to perform their services at any location, under construction Contractor's control, where segregated facilities are maintained. The construction Contractor agrees that a breach of this certification is a violation of the equal opportunity clause in this Contract. As used in this certification, the term "segregated facilities" means any waiting room, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, and transportation and housing facilities provided for employees which are segregated by explicit directives or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The construction Contractor agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding ten thousand dollars (US \$10,000.00) which are not exempt from the provisions of the equal opportunity clause and that construction Contractor will retain such certifications in its files.

Gosalia Concrete Constructors Inc

(Name of Bidder)

By: 

(Signature*)

Title: President

Date: 03/01/2023

* Must be same signature on Bid Form.

END OF SECTION

SECTION 00420 - BIDDER'S GENERAL BUSINESS INFORMATION

(Bidders will fully respond to all items)

Each Bidder will furnish with their Bid the following completed and signed statement pertaining to the Bidder's general business information. In addition, the Owner reserves the right to conduct additional investigations into the Bidder's financial viability, work experience and available assets as the Owner may deem necessary to facilitate administration of the Contract in accordance with the Contract Documents. Each Bidder will fully cooperate with all such investigations.

FIRM: Gosalia Concrete Constructors Inc

ADDRESS: 4607 N 56th Street
Tampa, FL 33610

PHONE: 813-443-0984

Contact in your firm for inquiries: estimating@gosaliaco.com

Years in business under present name: 10

Date of Incorporation: 09/16/2010

Place of Incorporation: Florida

Contracting specialties: Concrete Structures, Reinforcing Steel, Pavement Repairs, Saw/Seal

Years performing work specialties: 10

Geographic areas of business operation: Southeast Region US

List all Projects presently under contract:

Attached, Contracts On Hand

(Attach additional sheet(s) if necessary)

Work performed in last two years:

Attached

(Attach additional sheet(s) if necessary)

Contract value of work presently under construction:

\$ Attached

Average annual contract value of construction work last three years:

\$ 25,000,000

Total bonding capacity:

\$ 80,000,000

Value of work presently bonded:

\$ Attached

Bonding Company:

Nielson Rosenhaus & Associates

Address:

220 Congress Park Dr., Suite 100, Delray Beach FL 33445

Insurance Agent:

Gerard Fiacco

Address:

4380 St Johns Parkway Suite 110, Sanford FL 32771

Phone:

321-832-7575

What types of work are generally performed by your own forces?

Bascule bridge rehab, drainage, curved steel girders, portland cement concrete, pcc roadway paving rehab, soundwalls, slab replacements
sawing and sealing joints, gutters, epoxy injection, joint rehabilitation, pile jackets, noise walls, retaining walls, barrier walls.

(Attach additional sheet(s) if necessary)

What work will be performed by your own forces on this Project?

PCC Spall Repair, PCC Joint Seal, PCC Joint Seal Petroleum, PCC Crack Seal, PCC Crack Seal Petroleum, PCC Slab Replacement
FDOT Type D Curb, Base, Earthwork, Stabilization

(Attach additional sheet(s) if necessary)

Total employees employed by firm: 200

Engineers & Design Professionals	<u>10</u>	Estimators	<u>5</u>
CPM Schedulers	<u>0</u>	Tradesmen	<u>160</u>
Project Managers	<u>10</u>	Purchasing Agents	<u> </u>
Superintendents	<u>15</u>	Other(Describe)	<u> </u>

In-House Engineering or fabrication capability: N/A

Fabricating floor area (square feet): N/A

Value of capital equipment owned by firm: \$ 10,000,000

Bank references and addresses:

Bank of Tampa
4600 W. Cypress Street Suite 100
Tampa, FL 33607
Terry McFatter 813-998-2701

Does the firm have experience with projects of a similar nature and scope within the past ten years? If yes, describe:

Project and Location	Design Professional	Contract with (Firm, Address, Person, Phone)	Amount	Date Completed
<u>MCO BP-486 Runway</u> <u>Orlando, FL</u>	<u>GAI Consultant</u>	<u>Hubbard Construction</u> <u>Chris Hodge 407-645-5500</u>	<u>\$2,927,031.27</u>	<u>2020</u>
<u>SR 400 GA-1932</u> <u>Forsyth County, GA</u>	<u>GDOT - Inhouse</u>	<u>GDOT</u> <u>Glen Gosnell, 706-968-7366</u>	<u>\$1,025,849.84</u>	<u>2020</u>
<u>SR 204</u> <u>Savannah, GA</u>	<u>GDOT - Inhouse</u>	<u>GDOT</u> <u>Dustin Branum, 912-651-2144</u>	<u>\$3,933,626.60</u>	<u>2020</u>
<u>TPA Main Terminal</u> <u>Tampa, FL</u>	<u>HNTB Corporation</u>	<u>Superior Construction</u> <u>Victoria Retana, 941-586-0918</u>	<u>\$1,421,048.75</u>	<u>2021</u>

(Attach additional sheet(s) if necessary)

Has the firm failed to complete a contract within the past ten years? If yes, describe:

No

(Attach additional sheet(s) if necessary)

Has the firm been debarred, suspended or prohibited from contracting or bidding with a Federal, State or local Government entity during the past ten years? If yes, describe:

No

(Attach additional sheet(s) if necessary)

Has the firm been involved in a bankruptcy or reorganization within the past ten years? If yes, describe:

No

(Attach additional sheet(s) if necessary)

Does the firm have any pending claims or suits by others against firm? If yes, describe:

No

(Attach additional sheet(s) if necessary)

Does the firm have any pending claims or suits against others? If yes, describe:

No

(Attach additional sheet(s) if necessary)

Has the firm filed written claims or suits against others within the past two years? If yes, describe:

No

(Attach additional sheet(s) if necessary)

Has the firm been assessed liquidated damages within the past five years? If yes, describe:

No

(Attach additional sheet(s) if necessary)

Has the firm been refused a bond within the past five years? If yes, describe:

No

(Attach additional sheet(s) if necessary)

Is the firm in compliance with all EEO requirements? Yes

List three most significant projects presently under construction:

Project and Location	Design Professional	Contract with (Firm, Address, Person, Phone)	Amount	Date Completed
<u>E7002</u> <u>Dale Mabry, Tampa FL</u>	<u>Graham Smith 850-219-8400</u> <u>2073 Summit Lake Dr. #155, Tallahassee FL</u>	<u>FDOT, Farhad Zafarian 813-652-3200</u> <u>11201 N. Malcolm McKinley Drive Tampa, Florid</u>	<u>\$4,958,331.00</u>	<u>2023</u>
<u>0012757</u> <u>I-16 @ I-95 Savannah, GA</u>	<u>Jacobs Engineering 404-631-1990</u> <u>6000 W Peachstreet NW, Atlanta GA</u>	<u>Savannah Mobility, Thomas Hill 407-702-8579</u> <u>20 Martin Court, Savannah GA 31419</u>	<u>\$6,872,276.00</u>	<u>2024</u>
<u>C204633</u> <u>Wintson Salem Beltway, NC</u>	<u>HDR Engineering, 919-232-6600</u> <u>555 Fayetteville St Suite 900 Raleigh NC</u>	<u>Webber, 281-987-8787</u> <u>270 Carpenter Dr St 350, Atlanta GA</u>	<u>\$6,103,162.00</u>	<u>TBD</u>

(Attach additional sheet(s) if necessary)

List of equipment available for the Work:

Attached

Key Personnel available for the Work:

Name	Title	Experience in this type of Work (years)	Area of Responsibility
<u>Misael Alvarado</u>	<u>General Superintendent</u>	<u>21</u>	<u>Structures/Paving</u>
<u>Todd Lee</u>	<u>Concrete Superintendent</u>	<u>26</u>	<u>Flatwork</u>
<u>Adalberto Villasenor</u>	<u>Concrete Foreman</u>	<u>14</u>	<u>Structures/Paving</u>
<u>Rob Bellows</u>	<u>General Superintendent</u>	<u>17</u>	<u>Grading/MOT</u>
<u>Raul Valencia</u>	<u>Saw & Seal Foreman</u>	<u>9</u>	<u>Saw/Seal</u>
<u>Darrow Ottey</u>	<u>Saw & Seal Foreman</u>	<u>25</u>	<u>Saw/Seal</u>

Name of individual with direct managerial responsibility for this entire Project:

Elton Fowler

List the name, title, experience, and area of responsibility of each Project Manager and Field Supervisor, which Bidder will use on this Project:

Name	Title	Experience in this type of work (years)	Area of Responsibility
Elton Fowler	Project Manager	18	Concrete Paving
Dana Gillespie	Project Superintendent Saw & Seal	25	Saw/Seal
Mike Stanley	Project Manager	35	Estimator/PM

(Attach additional sheet(s) if necessary)

ENCLOSE A COPY OF LATEST FINANCIAL STATEMENT.

This form will be signed by an Officer of the firm or an individual so authorized by an Officer of the firm.

Type of firm:

Corporation: X
Partnership: _____
Individual: _____
Company: _____

Name: Gosalia Concrete Constructors, Inc

Signature 

Title: President

Date: 03/01/2023

END OF SECTION

STATUS OF CONTRACTS ON HAND

Give

full information about all of your contracts, whether prime or subcontracts, whether in progress or awarded but not yet begun, and regardless of its location and with whom contracted.

1	2	3	4	5	6	7
CLASSES OF WORK	DOT PROJECTS AND LOCATION OF WORK YOU ARE PERFORMING	CONTRACT (OR SUBCONTRACT) AMOUNT	AMOUNT SUBLET TO OTHERS	BALANCE OF CONTRACT AMOUNT	UNCOMPLETED AMOUNT TO BE DONE BY APPLICANT	
					AS PRIME CONTRACTOR	AS SUBCONTRACTOR
Concrete Repair	FL-E8S90 TURNPIKE RESURFACING ORANGE CO. (HUBBARD)	\$698,146	\$710	\$697,436		\$608,982
Slipform Barrier Walls	FL-T5597 I-75/CR484 PIER PROTECTION (ANDERSON COLUMBIA)	\$283,015	\$0	\$283,015		\$283,015
Slipform Barrier Walls	FL-E5Y47 - Wekiva Parkway Section 6 (Superior)	\$2,414,311		\$2,414,311		\$141,833
Concrete Repair	FL-T5743 BARRACUDA BLVD & BR#795700 (FDOT)	\$4,408,667	\$903,419	\$3,505,248	\$1,982,739	
Slipform Barrier Walls	FL-8018169 TPA-RED SIDE TERMINAL CURB EXPANSION (MIDDLESEX)	\$800,866		\$800,866		\$778,718
Slipform Barrier Walls	FL-T2724 SR23 First Coast Expressway Clay Co. (Superior)	\$1,405,733	\$0	\$1,405,733		\$719,058
Slipform Barrier Walls	FL-E7R39 SR60 Westbound (Cone & Graham)	\$3,410,269	\$0	\$3,410,269		\$3,410,269
Slipform Barrier Walls	FL-E2Z23 SR 100 STARKE RR OVERPASS (JB COXWELL)	\$277,658		\$277,658		\$75,881
Slipform Barrier Walls	FL-T2737 SR115 Arlington Expressway (JB Coxwell)	\$75,145		\$75,145		\$75,145
Slipform Barrier Walls	FL-CSWYCOM CAUSEWAY COMMONS (DALLAS 1)	\$185,875	\$0	\$185,875		\$185,875
Slipform Barrier Walls	FL-417151 SR 417 WIDENING BOGGY CREEK RD (VECELLIO & GROGAN)	\$40,754		\$40,754		\$40,152
Slipform Barrier Walls	FL-212215 FIRST COAST CONNECTOR SR23 (SUPERIOR)	\$154,330	\$0	\$154,330		\$154,330
Slipform Barrier Walls	FL-21807 N SUNLAKE BLVD PHASE 1 PASCO CO (SUPERIOR)	\$783,398	\$0	\$783,398		\$125,784
Slipform Barrier Walls	FL-D21912A HART EXPRESSWAY RAMP (JB COXWELL)	\$959,104		\$959,104		\$87,691
Concrete Repair	FL-E7002 Dale Mabry Drainage Improvements (FDOT)	\$4,958,331	\$1,575,278	\$3,383,053	\$1,768,528	
Saw & Seal	FL-BP496 GOAA EAST AIRFLD PHASE 2 (IPC PAVING)	\$60,425	\$0	\$60,425		\$60,425
Saw & Seal	FL-T7433 SR52 SUNCOAST PKWY TO US41 (PCS CIVIL)	\$123,437		\$123,437		\$123,437
		\$0		\$0		\$0
		\$0	\$0	\$0		
			DOT WORK	\$18,560,057		
				(Col. 5 Subtotal)	\$3,751,267	\$6,870,595
CLASSES OF WORK	DOT PROJECTS AND LOCATION OF WORK YOU ARE PERFORMING	CONTRACT (OR SUBCONTRACT) AMOUNT	AMOUNT SUBLET TO OTHERS	BALANCE OF CONTRACT AMOUNT	UNCOMPLETED AMOUNT TO BE DONE BY APPLICANT	
					AS PRIME CONTRACTOR	AS SUBCONTRACTOR
Structure Sub	FL-G1X06 FORTUNE LAKESHORE TRAIL (SOUTHERN DEVELOPMENT)	\$1,034,038	\$1,515	\$1,032,523		\$803,638
Slipform Barrier Walls	FL-O02520 EAST SELMON SLIP RAMPS (MIDDLESEX)	\$2,215,332	\$44,560	\$2,170,772		\$1,266,887
Saw & Seal	FL-T1844 SR555 (US17) FROM SPIRIT LAKE RD BOMBER RD (PRINCE)	\$78,281		\$78,281		\$77,125
Saw & Seal	FL-T1825 SR25 & SR70 HIGHLANDS COUNTY (IPC PAVING)	\$69,211		\$69,211		\$69,211
Saw & Seal	FL-SANDLK SR435 SAND LAKE RD ENTRANCES (IPC PAVING)	\$19,640		\$19,640		\$19,640
Saw & Seal	FL-2021005 LOX FACILITY AT USCG (AJAX PAVING)	\$17,219		\$17,219		\$17,219
Slipform Barrier Walls	FL-T2814 SR 212 BEACH BLVD (WATSON CIVIL)	\$563,704		\$563,704		\$562,268
Saw & Seal	FL-SRM MIDDLESEX ASPHALT PLANT CONCRETE (IPC PAVING LLC DBA IPC)	\$46,550		\$46,550		\$46,550
Slipform Barrier Walls	FL-T2853 SR202 J TURNER BUTLER BLVD (JB COXWELL)	\$707,070		\$707,070		\$707,070
Concrete Repair	FL-E7P02 BRIDGE PRESERVATION REHAB BUDGET (FDOT)	\$2,561,346	\$608,315	\$1,953,031	\$1,888,531	
Slipform Barrier Walls	FL-4134 MOSIAC HORSE CREEK CROSSING VEH BRDG (CONE & GRAHAM)	\$47,064		\$47,064		\$47,064
Saw & Seal	FL-E8T93 TURNPIKE MAINLINE LAKE COUNTY (CW ROBERTS)	\$70,666		\$70,666		\$70,666
Saw & Seal	FL-T2881 SR228 NORMANDY BLVD DUVAL COUNTY (REEVES CONSTR)	\$30,150		\$30,150		\$30,150
		\$0		\$0		
		\$0		\$0		
		\$0		\$0		
		\$0		\$0		
		\$0		\$0		
		\$0		\$0		
		\$0		\$0		
			DOT WORK	\$6,805,881		
				(Col. 5 Subtotal)	\$1,888,531	\$3,717,488
CLASSES OF WORK	OTHER (Non-DOT) PROJECTS, OWNER, AND LOCATION OF WORK YOU ARE PERFORMING	CONTRACT (OR SUBCONTRACT) AMOUNT	AMOUNT SUBLET TO OTHERS	BALANCE OF CONTRACT AMOUNT		
Slipform Barrier Walls	GA-0011730 INTERSECTION IMPRV US84/SR (APAC-ATLANTIC)	\$171,314		\$171,314		\$171,314
Slipform Barrier Walls	GA-0012577 I-285/SR411 Buena Vista Rd Muscogee Co. (CW Matthews)	\$61,506		\$61,506		\$61,506
Slipform Barrier Walls	GA-006328 BRAMPTON ROAD CONNECTOR (SCOTT BRIDGE)	\$494,844		\$494,844		\$494,844
Slipform Barrier Walls	GA-000975 SR403-SR18 Troup County (CW Matthews)	\$69,805		\$69,805		\$44,341
Slipform Barrier Walls	GA-10077 Spring St Viaduct Phase II, Atlanta GA (CW Matthews)	\$282,926		\$282,926		\$163,146
Slipform Barrier Walls	GA-0013741 SR 25 BRIDGE REPL OVER SAVANNAH RIVER (SCOTT BRIDGE)	\$656,250		\$656,250		\$656,250

Saw & Seal	GA-0008431 SR316 @ SR53 Barrow County (ER Snell)	\$307,038		\$307,038		\$302,500
Slipform Barrier Walls	GA-0017418 BRDG & APPROACH OLD WAYNESBORO (PALMETTO INFRA)	\$51,448		\$51,448		\$51,448
Slipform Barrier Walls	GA-0210327 I-20 @ Savannah River Bridge (Superior)	\$2,205,315		\$2,205,315		\$2,032,337
Slipform Barrier Walls	GA-0013604 SR4 US1 @ SOUTH PRONG CREEK (UIG)	\$37,192		\$37,192		\$19,413
Slipform Barrier Walls	GA-0012757 I-16 @ I-95 (SAVANNAH MOBILITY CONTRACTORS)	\$6,872,276		\$6,872,276		\$6,636,699
Slipform Barrier Walls	GA-0001757 SR400 PHASE 2 DB FULTON CO. (CW MATTHEWS)	\$1,099,605		\$1,099,605		\$1,099,605
Slipform Barrier Walls	GA-0014896 BRIDGE ON BASS RD OVR NORFOLK (CLEARWATER CONST)	\$313,320		\$313,320		\$313,320
Slipform Barrier Walls	GA-0013925 US278 SWEETWATER CRK (CLEARWATER CONSTRUCTION)	\$22,655		\$22,655		\$22,655
Slipform Barrier Walls	GA-0015537 US27/SR1 BRIDGE REPLACEMENT (WRIGHT BROS)	\$73,848		\$73,848		\$73,848
Slipform Barrier Walls	GA-0015563 SR41 OVER BARGE CR (SOUTHEASTERN SITE DEVELOPMNT)	\$30,744		\$30,744		\$30,744
Slipform Barrier Walls	GA-0014073 BRIDGE OVER ALAPAHOOCHEE RIVER (CLEARWATER CONST)	\$63,690		\$63,690		\$63,690
Slipform Barrier Walls	GA-0013373 BRIDGE AND INTERCHANGE ON SR 22 MUSCOGEE (C W Matthews Contracting)	\$516,600		\$516,600		\$516,600
		\$0		\$0		\$0
			OTHER WORK	\$13,330,376		
				(Col. 5 Subtotal)	\$0	\$12,754,260
CLASSES OF WORK	OTHER (Non-DOT) PROJECTS, OWNER, AND LOCATION OF WORK YOU ARE PERFORMING	CONTRACT (OR SUBCONTRACT) AMOUNT	AMOUNT SUBLET TO OTHERS	BALANCE OF CONTRACT AMOUNT		
Slipform Barrier Walls	GA-0015561 BRDG SR101 EUHARLEE CRK (CW MATTHEWS)	\$248,276		\$248,276		\$248,276
Slipform Barrier Walls	GA-0016985 SR25 YACHT RD (SOUTHEASTERN DEVELOPMENT)	\$74,745		\$74,745		\$74,745
Slipform Barrier Walls	GA-0015097 CR511 BROWN BRDG RD SNAPPING SHOALS (C&S CONTR)	\$29,058		\$29,058		\$29,058
Slipform Barrier Walls	GA-0017423 BRDG US27 OVER LIL TALLAPOOSA RVR (GREGORY BRIDGE)	\$33,792		\$33,792		\$33,792
Slipform Barrier Walls	NC-C204110 I495 CUMBERLAND COUNTY (SANFORD CONTRACTORS)	\$292,908		\$292,908		\$292,908
Slipform Barrier Walls	NC-C204536 Bridge #47 Over SCL RR on US117 (WC English)	\$27,945		\$27,945		\$27,526
Slipform Barrier Walls	NC-C203980 Military Cutoff Road Extension (Balfour Beatty)	\$247,059		\$247,059		\$173,833
Slipform Barrier Walls	NC-C204682 NC-1994 BRIDGE IN WARRENSVILLE (JAMES R VANNOY)	\$100,292		\$100,292		\$100,292
Slipform Barrier Walls	NC-C204397 US221 WIDENING RUTHERFORD CO. (WRIGHT BROS)	\$224,598		\$224,598		\$221,279
Slipform Barrier Walls	NC-C204123 NC211 BRUNSWICK CO. (CATON CONSTRUCTION)	\$182,360		\$182,360		\$182,360
Slipform Barrier Walls	NC-C204150 BRIDGE 147/I-85 GUILFORD CO (BOGGS CONTRACTING)	\$171,674		\$171,674		\$171,674
Slipform Barrier Walls	NC-C204507 REPLACE BRIDGE OVER LITTLE ROCKFISH (WC ENGLISH)	\$97,947		\$97,947		\$96,500
Slipform Barrier Walls	NC-C204633 WINSTON SALEM NORTHERN BELTWAY (WEBBER)	\$6,103,162		\$6,103,162		\$6,012,968
Slipform Barrier Walls	NC-C204672 BRIDGE OVER I-40 MCDOWELL CO. (IPC PAVING)	\$37,844		\$37,844		\$37,844
Slipform Barrier Walls	NC-C204739 GRAHM GRDG ON NC143 (CHARLES BLALOCK & SONS)	\$436,751		\$436,751		\$430,200
Slipform Barrier Walls	NC-C204108 NC42 JOHNSTON COUNTY (WC ENGLISH)	\$282,397		\$282,397		\$194,304
Saw & Seal	NC-C204027 I-277 FR BRIDGE DECK OVER 10TH ST (AMERICAN CIVIL)	\$1,727,920	\$403,290	\$1,324,630		\$1,159,771
		\$0.00		\$0		\$0
		\$0		\$0		\$0
			OTHER WORK	\$9,915,438		
				(Col. 5 Subtotal)	\$0	\$9,487,330
CLASSES OF WORK	OTHER (Non-DOT) PROJECTS, OWNER, AND LOCATION OF WORK YOU ARE PERFORMING	CONTRACT (OR SUBCONTRACT) AMOUNT	AMOUNT SUBLET TO OTHERS	BALANCE OF CONTRACT AMOUNT		
Slipform Barrier Walls	NC-DA00519 BRIDGE 3 MEXICO RD (DELLINGER, INC)	\$36,421		\$36,421		\$36,421
Slipform Barrier Walls	NC-C204341 SR1001 FR I40 RAMPS MCDOWELL CO (UNITED INFRAS)	\$29,230		\$29,230		\$29,230
Slipform Barrier Walls	NC-C203754 I-26 INTERCHANGE BUNCOMBE (BLYTHE DEVELOPMENT)	\$1,106,223		\$1,106,223		\$1,028,175
Slipform Barrier Walls	NC-C204043 I-295 FAYETTEVILLE OUTER LOOP (BALFOUR BEATTY)	\$2,951,454		\$2,951,454		\$2,539,108
Slipform Barrier Walls	NC-C204355 NC-105 BRIDGE REPLACEMENT WATAUGA (WRIGHT BROS)	\$47,951		\$47,951		\$47,951
Slipform Barrier Walls	NC-AVIA OLD DOWN RD RELOCATION (CROWDER CONSTRUCTION)	\$145,249		\$145,249		\$145,249
Slipform Barrier Walls	NC-DG00599 SUILFORD COUNTY BRIDGE 584 (RE BURNS)	\$32,200		\$32,200	\$0	\$32,200
Slipform Barrier Walls	NC-C204712 BRIDGE IN GUILFORD CO. (CONTI)	\$109,944		\$109,944		\$108,295
Slipform Barrier Walls	NC-DE00344 BRIDGE #216 OVER BUFFALO CREEK (CONTI)	\$39,926		\$39,926		\$39,926
Slipform Barrier Walls	NC-DJ00390 STANLY COUNTY BRIDGE 35 (NJR GROUP)	\$38,560		\$38,560		\$38,560
Slipform Barrier Walls	NC-C204350 Bridge Over I-95 Nash County (United Contractors)	\$102,029		\$102,029		\$70,171
Slipform Barrier Walls	SC-0414150 BRIDGE REPLACEMENT OVER US29 (IPC PAVING)	\$25,927		\$25,927		\$25,927
Slipform Barrier Walls	SC-P038282 SC901 ROCKY CREEK BRIDGE (BOGGS CONTRACTING)	\$48,972		\$48,972		\$48,972
Slipform Barrier Walls	SC-0042321 ALLIGATOR RD FLORENCE CO. (UIG)	\$44,576		\$44,576		\$22,288
Slipform Barrier Walls	SC-P03462 US76 OVER WATEREE BRIDGE (ZACHARY)	\$312,550		\$312,550		\$312,550

Slipform Barrier Walls	SC-P037693 BRIDGE REPLACEMENT PICKEN CO. (CLEARWATER CONSTR)	\$47,320		\$47,320		\$24,511
Concrete Repair	SC-0024447 BARRIER WALL BRIDGE ABBEVILLE COUNTY (SCDOT)	\$38,600		\$38,600	\$38,600	\$0
Saw & Seal	SC-APRON RECON SUMETER AIRPORT (IPC PAVING)	\$94,730		\$94,730		\$94,730
		\$0		\$0		\$0
		\$0	\$0	\$0		\$0
			OTHER WORK	\$5,251,862		
				(Col. 5 Subtotal)	\$38,600	\$4,644,264
CLASSES OF WORK	OTHER (Non-DOT) PROJECTS, OWNER, AND LOCATION OF WORK YOU ARE PERFORMING	CONTRACT (OR SUBCONTRACT) AMOUNT	AMOUNT SUBLET TO OTHERS	BALANCE OF CONTRACT AMOUNT		
Slipform Barrier Walls	SC-P029700 I-95 REHAB DILLON/FLORENCE COUNTY (UNITED INFRASTR)	\$120,448		\$120,448		\$120,448
Saw & Seal	SC-GSP GREENVILLE SPARTANBURG AIRPORT (HI WAY PAVING)	\$1,575,187		\$1,575,187		\$544,730
Slipform Barrier Walls	SC-P028423 S FORK EDISTO RIVER US301 (UNITED INFRASTRUCTURE)	\$109,392		\$109,392		\$109,392
Slipform Barrier Walls	SC-0023349 SC91 BERLIN MYERS PKWY PHASE 3 (UNITED INFRASTR)	\$323,865		\$323,865		\$323,865
Slipform Barrier Walls	SC-P030484 S-47 CORRIDOR IMPR SPARTANBURG CO (IPC PAVING)	\$29,437		\$29,437		\$29,437
Slipform Barrier Walls	SC-P029263 BERKELEY COUNTY I26 (UIG)	\$226,835		\$226,835		\$226,835
Slipform Barrier Walls	SC-SCSPA RIDGEVILLE ACCESS RD (CAPE ROMAIN CONTRACTORS)	\$41,917		\$41,917		\$41,917
Slipform Barrier Walls	SC-5456570 DB SCDOT DISTRICT 4 CLRB PKG 2021 (REEVES CONST)	\$213,640		\$213,640		\$213,640
Slipform Barrier Walls	SC-P027379 SC290 & I85 SPARTANBURG CO. (ZACHRY CONSTRUCTION)	\$170,247		\$170,247		\$167,693
Slipform Barrier Walls	SC-P038235 BRIDGE REPL S-669 MAPLE SWAMP (CAPE ROMAIN CONT)	\$38,400		\$38,400		\$38,400
Slipform Barrier Walls	SC-P037784 S-300 BRIDGE OVER SHELL CREEK (PALMETTO INFRASTRUCT)	\$23,241		\$23,241		\$23,241
Slipform Barrier Walls	SC-0426100 US29 BRIDGE REPLACEMENT (NHM Constructors)	\$39,380		\$39,380		\$39,380
Slipform Barrier Walls	SC-P032634 SC34 OVER NSF RR BRIDGE REPL (ZACHRY CONSTRUCTION)	\$44,656		\$44,656		\$44,656
Slipform Barrier Walls	SC-373458 TIDEWATER ROAD (CAPE ROMAIN CONTRACTORS)	\$316,254		\$316,254		\$121,144
Slipform Barrier Walls	SC-P030167 US521 BRIDGE REPLACEMENT (UIG)	\$60,320		\$60,320		\$28,652
Slipform Barrier Walls	SC-4214160 BRIDGE REPL BUS 85 SPARTANBURG CO (ES WAGNER CO)	\$159,145	\$12,086	\$147,059		\$144,708
Slipform Barrier Walls	TN-CNW181 I-40 DONELSON PIKE INTERCHANGE (SUPERIOR)	\$2,144,525		\$2,144,525		\$2,144,525
Saw & Seal	TN-1804B TERM APRON & TAXILANE EXPANSION PH II (SUPERIOR)	\$247,497		\$247,497		\$247,497
Structure Sub	TN-CNW055 I-55 INTERCHANGE SHELBY CO (BELL & ASSOCIATES)	\$6,241,431		\$6,241,431		\$6,241,431
		\$0		\$0		\$0
			OTHER WORK	\$12,113,731		
				(Col. 5 Subtotal)	\$0	\$10,851,591
PLEASE ENTER ATTACHMENT TOTALS ON THIS LINE						
TOTAL UNCOMPLETED WORK ON HAND TO BE DONE BY YOU					\$5,678,398	\$48,325,528
GRAND TOTAL						\$54,003,926
NOTE: Columns 3 and 4 to show total contract (or subcontract) amounts. Column 5 to be difference between columns 3 and 4. Amount in columns 6 or 7 to be uncompleted portion of amount in column 5. All amounts to be shown to nearest \$100.00. The Contractor may consolidate and list as a single item all contracts which individually do not exceed 3% of the total, and which, in the aggregate, amount to less than 20% of the total.						Total of Columns 6 and 7 Must Be Filled In and Must Agree with Related Attachment(s), if furnished.

Gosalia Concrete Constructors, Inc.
Equipment List

Equipment Code	Make	Model	Year	Category Desc
0050	FORD	EXPLORER LIMITED	2013	SEDANS & VANS
0101	FORD	F150 XL	2006	F150 PICKUP
0102	FORD	F150 XL	2006	F150 PICKUP
0103	FORD	F150 XL	2006	F150 PICKUP
0104	FORD	F150 XL	2014	F150 PICKUP
0105	FORD	F150 XL	2014	F150 PICKUP
0106	FORD	F150 XL	2014	F150 PICKUP
0107	FORD	F150 XL	2013	F150 PICKUP
0108	FORD	F150 XL	2014	F150 PICKUP
0109	FORD	F150 XLT	2017	F150 PICKUP
0110	FORD	F150 XLT	2017	F150 PICKUP
0111	FORD	F150 XLT	2017	F150 PICKUP
0112	FORD	F150 XLT 4X4	2016	F150 PICKUP
0113	FORD	F150 XLT 4X4	2016	F150 PICKUP
0114	FORD	F150 XLT 4X4	2017	F150 PICKUP
0115	FORD	F150 XLT 4X4	2018	F150 PICKUP
0116	FORD	F150 XLT 4X4	2018	F150 PICKUP
0117	FORD	F150 XL 4X4	2017	F150 PICKUP
0118	FORD	F150 XL	2019	F150 PICKUP
0119	FORD	F150 XLT 4X4	2018	F150 PICKUP
0120	FORD	F150 XLT 4X4	2018	F150 PICKUP
0121	FORD	F150 XL	2019	F150 PICKUP
0122	FORD	F150 XLT 4X4	2021	F150 PICKUP
0123	FORD	F150 XL 4X4	2021	F150 PICKUP
0201	FORD	F250 XL	2007	F250 PICKUP
0203	FORD	F250 XL	2008	F250 PICKUP
0204	FORD	F250 XL	2006	F250 PICKUP
0205	FORD	F250 XL	2009	F250 PICKUP
0206	FORD	F250 XL	2006	F250 PICKUP
0207	FORD	F250 XL	2016	F250 PICKUP

Gosalia Concrete Constructors, Inc.
Equipment List

0208	FORD	F250 XL	2016	F250 PICKUP
0209	FORD	F250 XLT	2016	F250 PICKUP
0210	FORD	F250 XLT	2016	F250 PICKUP
0211	FORD	F250 XLT	2016	F250 PICKUP
0212	FORD	F250 XL 4X4	2016	F250 PICKUP
0213	FORD	F250 XLT	2016	F250 PICKUP
0214	FORD	F250 XLT	2016	F250 PICKUP
0215	FORD	F250 XLT	2017	F250 PICKUP
0216	FORD	F250 XL	2017	F250 PICKUP
0217	FORD	F250 XL	2017	F250 PICKUP
0218	FORD	F250 XL 4X4	2016	F250 PICKUP
0219	FORD	F250 XL 4x4	2016	F250 PICKUP
0220	FORD	F250 XL 4X4	2017	F250 PICKUP
0221	FORD	F250 XL	2013	F250 PICKUP
0222	FORD	F250 XL 4X4	2017	F250 PICKUP
0223	FORD	F250 XL 4X4	2017	F250 PICKUP
0224	FORD	F250 XL 4X4	2019	F250 PICKUP
0225	FORD	F250 XLT 4X4	2019	F250 PICKUP
0301	FORD	F350 XL	2003	F350 PICKUP
0302	FORD	F350 XL	2003	F350 PICKUP
0303	FORD	F350 XL	2004	F350 PICKUP
0304	FORD	F350 XL	2010	F350 PICKUP
0305	FORD	F350 XL	2010	F350 PICKUP
0307	FORD	F350 XL	2008	F350 PICKUP
0308	FORD	F350 XL	2016	F350 PICKUP
0309	FORD	F350 XL	2016	F350 PICKUP
0310	FORD	F350 XL	2010	F350 PICKUP
0311	FORD	F350 XL	2010	F350 PICKUP
0312	FORD	F350 XL	2010	F350 PICKUP
0313	FORD	F350 XL	2011	F350 PICKUP
0314	FORD	F350 XL	2014	F350 PICKUP

Gosalia Concrete Constructors, Inc.
Equipment List

0315	FORD	F350 XL	2011	F350 PICKUP
0316	FORD	F350 XL 4x4	2009	F350 PICKUP
0317	FORD	F350 XL 4X4	2015	F350 PICKUP
0318	FORD	F350 XL 4x4	2008	F350 PICKUP
0319	FORD	F350 XL 4x4	2019	F350 PICKUP
0320	FORD	F350 XL 4x4	2019	F350 PICKUP
0321	FORD	F350 XL 4x4	2018	F350 PICKUP
0322	FORD	F350 XL 4x4	2017	F350 PICKUP
0323	FORD	F350 XL 4X4	2018	F350 PICKUP
0401	CHEVY	G3500 LT	2016	SEDANS & VANS
0402	CHEVY	G3500 LT	2016	SEDANS & VANS
0403	CHEVY	G3500 LT	2017	SEDANS & VANS
0404	FORD	F450 XL	2016	F450 PICKUP
0405	FORD	F450 XL	2009	F450 PICKUP
0501	FORD	F550 XL	2016	F550 PICKUP
0502	MIT	FUZU CABOVER	2005	MOT TRUCK
0503	ISUZU	NPR CABOVER	2006	MOT TRUCK
0504	FORD	LCF CABOVER	2007	SAW & SEAL TRUCK
0505	ISUZU	NPR CABOVER	2006	2 MG WATER TRUCK
0506	GMC	W4500 CABOVER	2007	SAW & SEAL TRUCK
0507	INTERNATIONAL	4300	2002	2 MG WATER TRUCK
0508	CHEVROLET	W5500 W/DST4 SWEEPER	2007	SWEEPER TRUCK
0509	GMC	C7500	2006	2 MG WATER TRUCK
0510	MIT	FUSO CABOVER	2019	SAW & SEAL TRUCK
0511	MIT	FUSO CABOVER	2019	SAW & SEAL TRUCK
0512	ISUZU	NRR CABOVER	2010	2 MG WATER TRUCK
0513	ISUZU	DST-4	2006	SWEEPER TRUCK
0514	FORD	F550	2015	F550 PICKUP
0700	PETERBILT	379	1996	TRANSPORT TRACTOR
0701	INTER	PROSTAR	2010	TRANSPORT TRACTOR
0702	PETERBILT	385	2003	TRANSPORT TRACTOR

Gosalia Concrete Constructors, Inc.
Equipment List

0703	PETERBILT	378 DAY CAB	2007	TRANSPORT TRACTOR
0750	DYNA	70X	1996	LOW BOY
0751	LANDOLL	440B	2003	LOW BOY
0752	DYNAWELD	70XHBT	2000	LOW BOY
0753	TRAIL EZE	RS35H44	1987	LOW BOY
E1007	VOLVO	EW180B	2004	WHEELED EXCAVATOR
E1014	VOLVO	EW180C	2011	WHEELED EXCAVATOR
E1084	VOLVO	EW180C	2007	WHEELED EXCAVATOR
E1503	TEREX	RT780-1	2011	80 TON RT CRANE
E2021	ATLAS	0400-15014	2014	400 CFM COMPRESSOR
E2024	ATLAS	XAS185JD	2011	400 CFM COMPRESSOR
E2029	INGERSOL RAND	185	1999	LIGHT TOWER
E2062	ATLAS	XAS185JD7TBV	2012	400 CFM COMPRESSOR
E2096	ATLAS	XAS185JD	2011	400 CFM COMPRESSOR
E2221			2019	ARROW BOARDS
E2226	WANCO	WTSP165LSA	2001	ARROW BOARDS
E2233			2019	ARROW BOARDS
E2239			2019	ARROW BOARDS
E2282			2019	ARROW BOARDS
E2284			2019	ARROW BOARDS
E2294			2019	ARROW BOARDS
E2338			2019	MEDSSAGE BOARDS
E2382			2019	MEDSSAGE BOARDS
E2384			2019	MEDSSAGE BOARDS
E2385			2019	MEDSSAGE BOARDS
E2505	TEREX	RL4000	2011	LIGHT TOWER
E2917	DOOSAN	AIR COMPRESSOR	2010	400 CFM COMPRESSOR
E2946	DOOSAN	P185WDOU-T4F	2019	400 CFM COMPRESSOR
E2947	DOOSAN	P185WDOU-T4F	2019	400 CFM COMPRESSOR
E2957	ATLAS COPCO	XAS185JD	2014	400 CFM COMPRESSOR
E2963	DOOSAN	185CFM	2013	400 CFM COMPRESSOR

Gosalia Concrete Constructors, Inc.
Equipment List

E3500	MILLER			SLIP FORM PAVER
E3509	WIRTGEN	SP15I	2019	SLIP FORM PAVER
E3552	MILLER	8800	2014	SLIP FORM PAVER
E3554	MILLER	8800	2015	SLIP FORM PAVER
E3560	MILLER	8800	2016	SLIP FORM PAVER
E3561	MILLER PE4045N003088	8800	2017	SLIP FORM PAVER
E3564	MILLER	8800	2018	SLIP FORM PAVER
E3565	MILLER	8800	2018	SLIP FORM PAVER
E3566	MILLER	8800	2018	SLIP FORM PAVER
E3567	MILLER	8800	2018	SLIP FORM PAVER
E3710	VOLVO	L90G	2014	WHEELED LOADER
E3712	BOBCAT	T750	2012	SKID STEER LOADERS
E3741	BOBCAT	S66 T4	2021	SKID STEER LOADERS
E3742	CAT	279D	2015	SKID STEER LOADERS
E3752	CAT	938G	2006	WHEELED LOADER
E3761	BOBCAT	T590	2013	SKID STEER LOADERS
E3765	CAT	289D	2014	SKID STEER LOADERS
E3766	CAT	PC306B	2019	SKID STEER LOADERS
E3796	CAT	287D	2014	SKID STEER LOADERS
E3904	HUSQVARNA	RS7400D	2020	WALK BEHIND SAW
E3953	HUSQVARNA	RS7400D	2019	WALK BEHIND SAW
E3964	HUSQVARNA	RS7400D	2020	WALK BEHIND SAW
E3983	HUSQVARNA	RS7400D	2019	WALK BEHIND SAW
E3990	HUSQVARNA	RS8500D	2018	WALK BEHIND SAW
E3993	HUSQVARNA	RS8500D	2018	WALK BEHIND SAW
E4206	GENIE	Z60 4X4	2007	GENIE MANLIFT
E4210	GENIE	Z45 4X4	2013	GENIE MANLIFT
E4220	GENIE	Z45 4X4	2013	GENIE MANLIFT
E4228	GENIE	Z60 4X4	2007	GENIE MANLIFT
E4235	GENIE	Z45/25RTJ 4X4	2015	GENIE MANLIFT
E4237	GENIE	Z45/25 4X4	2008	GENIE MANLIFT

Gosalia Concrete Constructors, Inc.
Equipment List

E4249	GENIE	Z34/22 4x4	2005	GENIE MANLIFT
E4257	GENIE	Z34/22 4X4	2005	GENIE MANLIFT
E4261	GENIE	Z45/25 4X4	2008	GENIE MANLIFT
E4263	GENIE	Z45/25 4X4	2015	GENIE MANLIFT
E4279	GENIE	Z45/25 4X4	2012	GENIE MANLIFT
E4812	HYSTER	H280XL	1991	FORKLIFT
E4825	LULL	1044C-54	2004	FORKLIFT
E4854	GENIE	GTH5519	2012	FORKLIFT
E4862	CAT	TL943	2007	FORKLIFT
E8089	CRAFCO	SS250DC	2017	HOT POUR CATTLE
T000				OPEN TRAILER
T001	ARNI	ENCL TRAILER	2013	HORSE TRAILER
T002	TRIPT	OPEN TRAILER	2014	OPEN TRAILER
T003	ANDS	OPEN TRAILER	2014	OPEN TRAILER
T004	PROH	OPEN TRAILER	2006	OPEN TRAILER
T005	CORN	OPEN TRAILER	1991	OPEN TRAILER
T006	RORI	OPEN TRAILER	2001	OPEN TRAILER
T008	BEND	ENCL TRAILER	2015	HORSE TRAILER
T009	LOTR	TILT UTILITY	2005	TILT TRAILERS
T010	TOTM	OPEN TRAILER	2015	OPEN TRAILER
T011	LARK	ENCL TRAILER	2015	HORSE TRAILER
T012	BIGT	DUMP TRAILER	2015	TILT TRAILERS
T013	TORINO	CURE TRAILER	2015	OPEN TRAILER
T014	GATR	OPEN TRAILER	2015	OPEN TRAILER
T015	CONT	BOAT TRAILER	2004	BOAT TRAILERS
T016	EZLO	BOAT TRAILER	2009	BOAT TRAILERS
T017	BIGT	OPEN TRAILER	2012	OPEN TRAILER
T018	IMPE	TAG ALONG TL	2005	OPEN TRAILER
T019	PERM	BOAT TRAILER	2003	BOAT TRAILERS
T020	DAUG	GOOSENECK ENCLOSED	2004	HORSE TRAILER
T021	PACE	JOURNEY ENCLOSED	2016	HORSE TRAILER

Gosalia Concrete Constructors, Inc.
Equipment List

T022	TRIPT	TRIPPLE TOWN OPEN TL	2016	OPEN TRAILER
T023	EMES	OPEN?	2015	OPEN TRAILER
T024	SUTR	SUTR	2007	OPEN TRAILER
T025	ARNG	ENCL TRAILER	2017	HORSE TRAILER
T026	BIGT	DUMP TRAILER	2017	TILT TRAILERS
T027	ARNG	ENCL TRAILER	2017	HORSE TRAILER
T028	BIGT	OPEN TRAILER	2017	FLATBED TRAILER
T029	ARNG	ENCLOSED TRAILER	2018	HORSE TRAILER
T030	BIGTEX	GOOSENECK	2016	FLATBED TRAILER
T031	ARNI	ENCL TRAILER	2018	HORSE TRAILER
T032	BIGT	OPEN TRAILER	2018	FLATBED TRAILER
T033	BIGT	OPEN TRAILER	2017	FLATBED TRAILER
T034	BIGT	DECKOVER TRAILER	2017	FLATBED TRAILER
T035	ARNI	ENCL TRAILER	2018	HORSE TRAILER
T036	BIGT	EQUIPMENT TRAILER	2019	FLATBED TRAILER
T037	ARNG	ENCL TRAILER	2018	HORSE TRAILER
T038	TRIPT	OPEN TRAILER	2017	OPEN TRAILER
T039	TRIPT	OPEN TRAILER	2018	OPEN TRAILER
T040	BIGT	TRANSPORT TRAILER	2016	FLATBED TRAILER
T041	BIGT	UTILITY TRAILER	2018	FLATBED TRAILER
T042	METR	EQUIPMENT TRAILER	2011	FLATBED TRAILER
T043	ARNI	ENCLOSED T RAILER	2018	HORSE TRAILER
T044	LOADTRAIL	EQUIPMENT TRAILER	2018	FLATBED TRAILER
T045	BIG TEX	EQUIPMENT TRAILER	2019	FLATBED TRAILER
T046	LOAD TRAIL	EQ83-20T7-KR	2018	FLATBED TRAILER
T047	SINGLE RAM	DUMP TRAILER	2019	TILT TRAILERS
T048	ECONOLINE	LP0517TE	2014	FLATBED TRAILER
T049	ARNG	ENCL TRAILER	2019	HORSE TRAILER
T050	BIG TEX	EQUIPMENT TRAILER	2019	FLATBED TRAILER
T051	BIG TEX	LOW PROFILE	2019	LOW BOY
T052	LOAD TRAIL	EQ83-20T7-KR	2019	FLATBED TRAILER

Gosalia Concrete Constructors, Inc.
Equipment List

T053	DECK OVER	P-DLX	2020	FLATBED TRAILER
T054	KAUFMAN	FSST	2020	TILT TRAILERS
T055	OQUI	PRESSURE WASHER	2015	FLATBED TRAILER
T056	BIG TEX	DUMP TRAILER	2020	TILT TRAILERS
T057	TILT	TILT TRAILER	2020	TILT TRAILERS
T058	CHAMPION	OPEN TRAILER	2020	OPEN TRAILER
T059	BIG TEX	UTILITY TRAILER	2020	OPEN TRAILER
T061	BIG TEXT	EQUIPMENT TRAILER	2020	OPEN TRAILER
T062	BIG TEX	UTILITY TRAILER	2020	OPEN TRAILER
T063	ELITE	UTILITY TRAILER	2017	OPEN TRAILER
T064	BIG TEX	UTILITY TRAILER	2020	OPEN TRAILER
T065	KAUFMAN	P-DLX	2021	OPEN TRAILER
T066	KAUFMAN	P-DLX	2021	OPEN TRAILER
T067	ARISING	ENCL TRAILER	2021	HORSE TRAILER
T068	ARISING	ENCL TRAILER	2021	HORSE TRAILER
T069	BIG TEX	DUMP TRAILER	2021	FLATBED TRAILER
T070	ARNG	ENCLOSED	2021	HORSE TRAILER
T071	BIG TEX	UTILITY TRAILER	2021	OPEN TRAILER
T072	ARISING	ENCLOSED	2021	HORSE TRAILER
T073	KAUFMAN	DELUXE	2021	OPEN TRAILER
T074	CHAMPION	TILT TRAILER	2021	TILT TRAILERS
T075	ARISING	ENCLOSED	2021	HORSE TRAILER



Ron DeSantis, Governor

Melanie S. Griffin, Secretary



STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

STANLEY, MICHAEL KEITH

GOSALIA CONCRETE CONSTRUCTORS, INC.
4607 N 56TH STREET
TAMPA FL 33610

LICENSE NUMBER: CGC057465

EXPIRATION DATE: AUGUST 31, 2024

Always verify licenses online at MyFloridaLicense.com



Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

SECTION 00421 - SCRUTINIZED COMPANY CERTIFICATION

This certification is required pursuant to Florida Statute Section 287.135.

As of July 1, 2018, a company that, at the time of bidding or submitting a bid/response for a new contract/agreement or when entering into or renewing a contract/agreement for goods or services, is on the Scrutinized Companies that Boycott Israel List, created pursuant to Florida Statute Section 215.4725, or is engaged in a boycott of Israel, is ineligible for, and may not bid on, submit a proposal/response for, or enter into or renew a contract/agreement with an agency or local governmental entity for goods or services of any amount.

Additionally, as of July 1, 2018, a company that, at the time of bidding or submitting a bid/response for a new contract/agreement or when entering into or renewing a contract/agreement for goods or services, is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to Florida Statute Section 215.473, or has been engaged in business operations in Cuba or Syria, is ineligible for, and may not bid on, submit a proposal/response for, or enter into or renew a contract/agreement with an agency or local governmental entity for goods or services of \$1 million or more.

Each Bidder and any subcontractor(s) it proposes for contracts/agreements of \$1 million or more, or for any amount if on the Scrutinized Companies that Boycott Israel List or if engaged in a boycott of Israel, must submit a fully executed copy of this form. If the Bidder is found to have submitted a false certification, been placed on the Scrutinized Companies that Boycott Israel List, is engaged in a boycott of Israel, or for any contract for goods or services of \$1 million or more, has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or is found to have been engaged in business operations in Cuba or Syria, the Owner may terminate any resulting contract.


Company: Gosalia Concrete Constructors Inc FID or EIN No.: 27-3534317
Address: 4607 N 56th Street City/State/Zip: Tampa, FL 33610

I, Jay Gosalia, as a representative of _____

Gosalia Concrete Constructors Inc

certify and affirm that this company, nor any of its wholly owned subsidiaries, majority-owned subsidiaries, parent companies, or affiliates of such entities or business associations, is not on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and is not engaged in business operations in Cuba or Syria if the resulting contract/agreement is for goods or services of \$1 million or more, and certify and affirm that this company, nor any of its wholly owned subsidiaries, majority-owned subsidiaries, parent companies, or affiliates of such entities or business associations, is not on the Scrutinized Companies that Boycott Israel List and is not engaged in a boycott of Israel if the resulting contract/agreement is for goods or services of any amount.

I understand and agree that the Owner may immediately terminate any contract resulting from this solicitation upon written notice if the undersigned entity (or any of those related entities as set out above) are found to have submitted a false certification or any of the following occur with respect to the company or a related entity: (i) it has been placed on the Scrutinized Companies that Boycott Israel List, or is engaged in a boycott of Israel, or (ii) for any contract for goods or services of \$1 million or more, it has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or it is found to have been engaged in business operations in Cuba or Syria.



Signature
Jay Gosalia

Printed Name

President

Title
03/01/2023

Date

END OF SECTION

SECTION 00422 - E-VERIFY CERTIFICATION

This certification is required in accordance with the State of Florida, Office of the Governor, Executive Order Number 11-116 (Verification of Employment Status) and Fla. Stat. Section 448.095.

The State of Florida, Office of the Governor, Executive Order Number 11-116 (Verification of Employment Status), and any projects with Florida Department of Transportation (FDOT) funding as part of a Joint Participation Agreement between FDOT and the Authority, require, as a condition of all contracts for the provision of goods or services, an express requirement that contractors utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the contractor during the term of the contract, and an express requirement that contractors include in subcontracts the requirement that subcontractors performing work or providing services pursuant to the contract utilize the E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

Company: Gosalia Concrete Constructors Inc FID or EIN No.: 27-3534317
Address: 4607 N 56th St City/State/Zip: Tampa FL 33610

I, Jay Gosalia, as a representative of Gosalia Concrete Constructors Inc certify and affirm that this company will comply with the E-Verification requirements of Executive Order Number 11-116 and Fla. Stat. Section 448.095.


Signature
Jay Gosalia
Printed Name

President
Title
03/01/2023
Date

[Affix Corporate Resolution if not signed by the President or Vice President of the Company]


END OF SECTION

SECTION 00423 - NON-COLLUSION CERTIFICATION

The essence of competitive bidding is that the Owner shall receive bona fide competitive Bids from all those bidding. In recognition of this principle, the undersigned certifies that this is a bona fide Bid, intended to be competitive, and that Bidder has not fixed or adjusted the amount of the Bid price by, or under, or in accordance with any agreement or arrangement with any other person or entity. The undersigned, who has Authority to make the following representation on behalf of the Bidder, also certifies that Bidder has not done and will not do at any time before the hour and date specified for the submission of the Bid any of the following acts:

- (a) communicate to a person other than the person soliciting for these Bids the amount or approximate amount of the Bid price, except where the disclosure, in confidence, of the approximate amount of the Bid price is necessary to obtain insurance premium and/or bond quotations required for the preparation of the Bid;
- (b) enter into any agreement or arrangement with any other person or entity that such person or entity shall refrain from bidding or as to the amount of any Bid price to be submitted;
- (c) offer, pay, give or agree to pay, offer or give any sum of money or valuable consideration directly or indirectly to any person or entity for doing or having done or having caused to be done in relation to any other Bid or Bid price for the said work, act or thing of the sort described above.

In this certificate, the word "person" includes any persons or any body or association, corporate or unincorporated; and any agreement or arrangement includes any such transaction, formal or informal and whether legally binding or not.

Signed: 
Name: Jay Gosalia

Witnessed By: 

Date: 03/01/2023

For and on behalf of : Gosalia Concrete Constructors Inc
[Bidder's Name]

END OF SECTION

SECTION 00430 - SUBCONTRACTORS LIST

THIS SUBCONTRACTORS LIST IS REQUIRED FOR SUBMISSION WITH BID DOCUMENTS.

This list is attached to and is made an integral part of Bid submitted by: (Bidder to insert full name and address)

Gosalia Concrete Constructors Inc
4607 N 56th Street
Tampa, FL 33610

For the construction of:

**NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND
APRON REHABILITATION
AUTHORITY NO. 6530 18**

**TAMPA INTERNATIONAL AIRPORT
Tampa, Florida**

The undersigned, hereinafter called "Bidder", lists below the names of the subcontractors who will perform the portions of the Work indicated. If Bidder, instead of a subcontractor, will perform the portions of the Work indicated, Bidder will insert its own name on the appropriate lines. All blank lines will be filled in with the name of the Bidder or a subcontractor. Subcontractor will meet the experience requirements of the appropriate specification section.

SUBCONTRACT	NAME, ADDRESS AND PHONE NUMBER OF SUBCONTRACTOR
<u>Survey</u>	<u>AA Surface Pro Inc.</u> <u>4409 S.E. 16th Place, Unit #6, Cape Coral, FL 33904</u> <u>239-471-2668</u>
<u>Erosion Control</u>	<u>C & C Silt Fencing Corporation</u> <u>2013 Live Oak Blvd., Suite J, Saint Cloud FL 34771</u> <u>407-891-0629</u>
<u>Pavement Demolition</u>	<u>Gosalia Concrete Constructors, Inc</u> <u>4607 N 56th Street, Tampa FL 33610</u> <u>813-443-0984</u>

SUBCONTRACT

NAME, ADDRESS AND PHONE
NUMBER OF SUBCONTRACTOR

Asphalt Milling

Hubbard Construction Company

1936 Lee Rd, Suite 300, Winter Park FL 32789
407-645-5500

Asphalt Paving

Hubbard Construction Company

1936 Lee Rd, Suite 300, Winter Park FL 32789
407-645-5500

PCC Paving

Gosalia Concrete Constructors, Inc

4607 N 56th Street, Tampa FL 33610
813-443-0984

Electrical Site Work

H.L. Pruitt Corp

501 Wage Street, Winter Springs FL 32708
407-327-3848

Pavement Marking Removal and Installation

Traffic Control Products of Florida Inc

5514 Carmack Rd. Tampa FL 33610
813-621-8484

Sodding

Sunbelt Sod

301 W Shell Point Road, Ruskin FL 33570
813-641-9855

OTHERS

Earthwork/Basework

Civil Site Contractors Inc

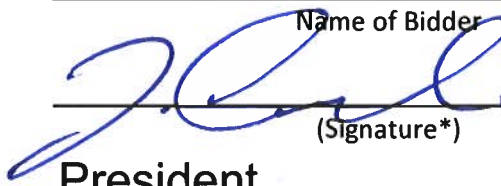
7281 Sunshine Grove Rd, Suite 134, Brooksville FL 34613

813-267-7475

The Bidder declares that it has fully investigated each subcontractor listed, has received and has in it's files evidence that each subcontractor maintains a fully equipped organization capable, technically and financially, of performing the pertinent Work, and that Bidder has performed similar installations in a satisfactory manner. The Bidder further declares that it will not change any of these designated subcontractors for Work under this Contract without Owner's written permission.

Gosalia Concrete Constructors Inc

By:


Name of Bidder
(Signature*)

Title:

President

* Must be same signature on Bid Form.

END OF SECTION

SECTION 00440 - BIDDER'S SELECTION OF PAYMENT METHOD

The Authority offers suppliers the option of receiving payments via ePayables or via Automated Clearing House (ACH).

A. Bidder has the option to receive payments utilizing an ePayables solution during the entire term of this Contract either by utilizing ePayables with Authority's Reverse Discount or ePayables under the Large Ticket Vendor Program. Payment will be processed by Accounts Payable using the ePayable system upon Account Payable's receipt of a Pay Application. After the payment is processed, the Pay Application will be reviewed and verified by the Authority Project Manager. Bidder retains the right to request a review of the rejected or corrected Pay Application. Any further adjustment to the Pay Application resulting from the review will be made in the next billing period. Merchant services fees will apply and are determined by Bidder's agreement with its bank or financial institution that processes credit or debit card payments on behalf of Bidder (Merchant Acquirer). The Authority is not responsible for any agreed upon terms between Bidder and Bidder's Merchant Acquirer. Bidder will receive a reverse discount of 75 basis points from Authority if Bidder does not utilize the Large Ticket Vendor program with its Merchant Acquirer. The Authority's reverse discount is whereby the Authority will give back to the Bidder .75% of the Merchant services fees to the Bidder for not utilizing the Large Ticket Vendor Program. The Authority reserves the right to suspend or discontinue the reverse discount in the event Bidder consistently overcharges Authority.

OR

B. Bidder also has the option to receive payments via Automated Clearing House (ACH). Payment will be issued within 20 days after Authority's verification and approval of a Pay Application. Authority may reject a Pay Application or correct the Pay Application when errors are found. Bidder retains the right to request a review of the rejected or corrected Pay Application. Any further adjustment to the Pay Application resulting from the review will be made in the next billing period.

Bidder may at any time during the term of this Contract elect to change its payment method to ePayables upon written notice to the Vice President of Planning and Development and the completion of Authority's ePayables application process. If the payment method is changed to ePayables, the information and process described above in Paragraph A, ePayables, will apply.

Please select one of the following electronic payment methods based on the information provided above:

1. ePayables: (Choose only one on this category)

ePayables with Authority Reverse Discount.

ePayables under the Large Ticket Vendor Program.

OR

2. ACH:

Bidder would like to receive payments via ACH.

Please provide name and contact information for Bidder's Accounts Receivable Representative that will be responsible for invoicing the Authority during the term of this Contract.

Name: Debi Meinhardt

Title: Assistant Controller

Office Mailing Address: 4607 N 56th Street

City: Tampa

State: FL

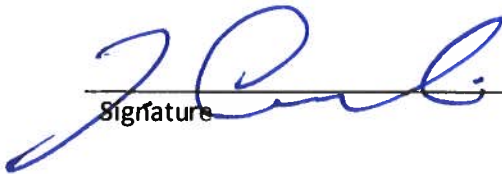
Zip Code: 33610

Phone: 813-443-0984

Ext: _____

Fax: 813-354-2374

Email: dmeinhardt@gosaliaco.com



Signature

President

Title

Jay Gosalia

Printed Name

03/01/2023

Date

END OF SECTION

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

Authority No. 6530 18

PAYMENT METHOD

00440-2

SECTION 00500 - AWARD OF CONTRACT AND EXECUTION OF CONTRACT BONDS

1.01 CONSIDERATION OF BIDS

- A. After the Bids are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the Bid Schedule by the Unit Bid Prices shown in the Bid Schedule.
1. An estimate of quantities of Work to be performed and materials to be furnished under these Specifications is given in the Bid Schedule of the Bids. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of Bids and the award of the Contract. The Owner does not expressly or impliedly agree that the actual quantities involved will correspond exactly therewith; nor will the Bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the Work. Payment to the Contractor will be made only for the actual quantities of Work performed or materials furnished in accordance with the Drawings and Specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in SECTION 00700, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, Paragraph 7.01, without in any way invalidating the Unit Bid Prices.
- B. Until the award of a Contract is made, the Owner reserves the right to reject a Bidder's Bid if the Bid is irregular as specified in Subsection 1.11 entitled REJECTION OF BIDS of Section 00100.
- C. In addition, until the award of Contract is made, the Owner reserves the right to reject any or all Bids including but not limited to any and all Bids that are higher than the Owner approved budget or estimated project cost, waive technicalities if such waiver is in the best interest of the Owner and is in conformance with applicable State and local laws or regulations pertaining to the letting of construction contracts, advertise for new Bids, or proceed with the Work otherwise. All such actions will promote the Owner's best interests.

1.02 AWARD OF CONTRACT

- A. The award of the Contract, if it is awarded, will be to the lowest responsible Bidder whose qualifications indicate the award will be in the best interest of the Owner and whose Bid complies with all the prescribed requirements. No award will be made until the Owner has concluded such investigations as it deems necessary to establish the responsibility, qualifications and financial ability of the Bidder to do the Work in accordance with the Contract Documents to the satisfaction of the Owner within the time prescribed. The Owner reserves the right to reject the Bid of any Bidder who does not pass such investigation to the Owner's satisfaction. If the Contract is awarded, the Owner will give the successful Bidder written notice of the award within 85 calendar days (or 115 calendar days if Project is funded in whole or in part by Federal funds) after the opening of the Bids. Until the final award of the Contract, the Owner reserves the right to reject any or all Bids, to waive technicalities and to advertise for new Bids, or to proceed to do the Work otherwise when the best interests of the Owner will be promoted thereby.

- B. The date of the award of the Contract will be the date that the Contract is awarded by the Owner.

1.03 CANCELLATION OF AWARD

Owner reserves the right to cancel the award without liability to the Bidder, except return of Bid security, at any time before a Contract has been fully executed by all parties and is approved by the Owner in accordance with Subsection 1.07 entitled APPROVAL OF CONTRACT of this Section 00500.

1.04 RETURN OF BID SECURITY

As soon as the Bids have been compared and all required original documents have been received, the Owner will attempt to return the Cashier's Checks or other collateral accompanying those Bids which, in its judgment, would not be considered in making the award. When award is made, the successful Bidder's security and that of the next low Bidder will be retained until the Contract and Bonds have been executed, and all required original documents have been received, after which it will be returned to the Bidders. Should the award be delayed more than 85 calendar days (or 115 calendar days if Project is funded in whole or in part by Federal funds) after opening of Bids, all Bidders' security will be returned, unless such delay is from causes beyond the control of the Owner.

1.05 REQUIREMENTS OF CONTRACT BONDS

- A. A separate Common Law Performance Bond and a separate Statutory Payment Bond in the forms contained herein, each in the sum of not less than 100% of the Contract Sum, with a surety company satisfactory to the Owner and licensed to conduct business in the State of Florida, will be required of the Contractor, guaranteeing that the Contract, including the various guarantee periods thereunder, will be faithfully performed and that no later than 10 calendar days from receipt of each payment the Contractor receives from the Owner, the Contractor will make payment to and release retainage to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Contractor with labor, materials, or supplies, used directly or indirectly by the Contractor in the prosecution of the Work provided for in the Contract.
- B. The Bonds, along with appropriate Power of Attorney, will be executed and delivered to Owner, not later than seven days from the date of award of the Contract. Prior to commencing any Work under the Contract, the Contractor will record the Payment and Performance Bonds in the public records of Hillsborough County, Florida. If, at any time after the execution of the Contract and the Contract Bonds as required, the Owner reasonably deems the surety or sureties of such Bond or Bonds to be unsatisfactory, or if, for any reasons, such Bond or Bonds cease to be adequate to cover the performance of the Work or prompt payment as above specified, Contractor will, at its own expense and within five days after written notice from the Owner to do so, furnish additional Bond or Bonds in such form and amount and with such surety or sureties as will be satisfactory to the Owner. In such event, no further payment to the Contractor will be deemed due under the Contract until such new or additional Bond or Bonds are furnished in a manner and form satisfactory to the Owner.

1.06 EXECUTION OF CONTRACT

The successful Bidder will sign (execute) the necessary agreements for entering into the Contract and return such signed Contract to the Owner, along with the fully executed Surety Bond or Bonds specified and along with required Insurance Certificates and Endorsements, within seven days after the date of award of the Contract. If the Contract is mailed, special handling is recommended.

1.07 APPROVAL OF CONTRACT

The Owner will review, accept and complete the execution of the Contract in accordance with local laws or ordinances, and will return the fully executed Contract to the Contractor. Delivery of the fully executed Contract to the Contractor shall constitute the Owner's approval to be bound by the successful Bidder's Bid and the terms of the Contract.

1.08 FAILURE TO EXECUTE CONTRACT

Failure of the successful Bidder to execute the Contract and furnish acceptable Insurance Certificates, and Endorsements, and Surety Bond or Bonds within seven days after the date of award of the Contract will be just cause for cancellation of the Contract and forfeiture of the Bid guaranty, not as a penalty, but as liquidation of damages to the Owner. The Bidder agrees that the liquidated damages are not a penalty and 5% of the total bid amount is reasonable. Award of the Contract may then be made to the next best responsive and responsible Bidder, or the Work re-advertised, or handled as the Owner may elect.

END OF SECTION

SECTION 00510 - CONTRACT

This **CONTRACT** is made and entered into this 6th day of April, 2023, by and between Gosalia Concrete Constructors, Inc., hereinafter designated as the **Contractor**, and the **Hillsborough County Aviation Authority**, Tampa, Florida, hereinafter referred to as the **Owner**.

WITNESSETH:

CONTRACTOR, agrees with the Owner to the following:

1. THAT THE CONTRACTOR will provide the materials and labor specified and perform, in a first class manner, all Work in connection with the **NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION, AT TAMPA INTERNATIONAL AIRPORT**, in the manner and form as provided by the following Contract Documents, which are incorporated by reference and made a part hereof, as if fully contained herein:

PROJECT MANUAL entitled, **NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION** and dated **January 18, 2023**.

DRAWINGS entitled **VOLUME 1: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS AND VOLUME II: NORTH AIR CARGO (NAC) SERVICE ROAD RELOCATION AND APRON REHABILITATION** and dated **DECEMBER 16, 2022**.

ADDENDUM numbered 1, inclusive.

2. THAT THE CONTRACTOR will commence the Work within ten calendar days of the date set by the Owner in a written Notice to Proceed, or at such other time as specified, and will achieve Substantial Completion of all Work under this Contract within 165 calendar days after issuance of the Notice to Proceed.

3. The Owner hereby enters into this Contract with the Contractor in the Contract Sum amount of One Million Six Hundred Eight Thousand Two Hundred Forty Eight and Sixty One Hundredth Dollars (U. S.) (\$1,608,248.60) for the Work in accordance with the Contractor's listed unit prices and lump sums specified for the various items in the bid tabulation, acknowledged by the Contractor, and included as Attachment 1. Payments will be based solely on the unit prices and lump sums listed in Attachment 1 for the Work actually performed rather than the sums for the items specified in Attachment 1 which are based upon estimated quantities. Payments will be made upon presentation of the proper certificates to the Owner and upon terms set forth in the Contract Documents.

4. It is mutually agreed between the parties hereto that time is of the essence of this Contract, and in the event the Work has not achieved Substantial Completion by the completion date(s) or within the calendar days herein specified, it is agreed that from any money due or to become due the Contractor or its surety, the Owner may retain the sum of One Thousand Six Hundred and No One Hundredth Dollars (\$1,600) per day, for each day thereafter, Sundays and holidays included, that the Work remains incomplete, not as a penalty but as liquidation of a reasonable portion of damages that will be incurred by the Owner by failure of the Contractor to complete the Work within the time(s) stipulated. The Parties agree that assessment of actual damages at the time this Contract is made is uncertain. The parties agree that the sum of \$1,600 per day is reasonable. The parties agree that the liquidated damages described in this paragraph are solely for delay and loss of use.

5. It is further mutually agreed between the parties hereto that if, at any time after the execution of this Contract (including the various guarantee periods thereunder) and the Bonds hereto attached, the Owner will reasonably deem the surety or sureties of such Bond or Bonds to be unsatisfactory, or if, for any reason, such Bond or Bonds cease to be adequate to cover the performance of the work or the prompt payment for said labor, materials, supplies and services, the Contractor will, at its own expense within five calendar days from the date of written notice from the Owner to do so, furnish additional Bond or Bonds in such form and amount, and with such surety or sureties, as will be satisfactory to the Owner. In such event, no further payment to the Contractor will be deemed due under this Contract until such new or additional Bond or Bonds are furnished in a manner and form satisfactory to the Owner.

6. Indemnity

A. To the maximum extent permitted by Florida law, in addition to Contractor's obligation to provide pay for and maintain insurance as set forth elsewhere in this Contract, Contractor will indemnify and hold harmless the Owner, its members, officers, agents, employees, and volunteers from any and all liabilities, suits, claims, procedures, liens, expenses, losses, costs, royalties, fines and damages (including but not limited to claims for attorney's fees and court costs) caused in whole or in part from:

1. The presence on, use or occupancy of Owner property;
2. acts, omissions, negligence (including professional negligence and malpractice), errors, recklessness, intentional wrongful conduct, activities, or operations;
3. any breach of the terms of this Contract;
4. performance, non-performance or purported performance of this Contract;
5. violation of any law, regulation, rule, order, decree, ordinance, Federal directive or Federal circular;
6. infringement of any patent, copyright, trademark, trade dress or trade secret rights; and/or
7. contamination of the soil, groundwater, surface water, storm water, air or the environment by fuel, gas, chemicals or any other substance deemed by the Environmental Protection Agency or other regulatory agency to be an environmental contaminant;

by the Contractor or the Contractor's officers, employees, agents, volunteers, subcontractors, invitees, or any other person directly or indirectly employed or utilized by the Contractor, regardless of whether the liability, suit, claim, lien, expense, loss, cost, fine or damages is caused in part by the Owner, its members, officers, agents, employees or volunteers or any other indemnified party. This indemnity obligation expressly applies, and shall be construed to include, any and all claim(s) caused in part by the negligence, acts of omissions of the Owner, its members, officers, agents, employees, and volunteers.

B. In addition to the duty to indemnify and hold harmless, the Contractor will have the separate and independent duty to defend the Owner, its members, officers, agents, employees, and volunteers from all suits, claims, proceedings or actions of any nature seeking damages,

equitable or injunctive relief, liens, expenses, losses, costs, royalties, fines, attorney's fees or any other relief in the event the suit, claim, or action of any nature arises in whole or in part from:

1. the presence on, use or occupancy of Owner property;
2. acts, omissions, negligence (including professional negligence and malpractice), errors, recklessness, intentional wrongful conduct, activities, or operations;
3. any breach of the terms of this Contract;
4. performance, non-performance or purported performance of this Contract;
5. violation of any law, regulation, rule, order, decree, ordinance, Federal directive, or Federal circular;
6. infringement of any patent, copyright, trademark, trade dress or trade secret rights; and/or
7. contamination of the soil, groundwater, surface water, storm water, air or the environment by fuel, gas, chemicals or any other substance deemed by the Environmental Protection Agency or other regulatory agency to be an environmental contaminant

by the Contractor or the Contractor's officers, employees, agents, volunteers, subcontractors, invitees, or any other person directly or indirectly employed or utilized by the Contractor regardless of whether it is caused in part by the Owner, its members, officers, agents, employees, or volunteers or any other indemnified party. This duty to defend exists immediately upon presentation of written notice of a suit, claim or action of any nature to the Contractor by a party entitled to a defense hereunder. This defense obligation expressly applies, and shall be construed to include, any and all claim(s) caused in part by the negligence, acts or omissions of the Owner, its members, officers, agents, employees, and volunteers.

C. If the above indemnity or defense provisions or any part of the above indemnity or defense provisions are limited by Fla. Stat. § 725.06(2)-(3) or Fla. Stat. § 725.08, then with respect to the part so limited, the Contractor agrees to the following: To the maximum extent permitted by Florida law, the Contractor will indemnify and hold harmless the Owner, its members, officers, agents, employees, and volunteers from any and all liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Contractor and persons employed or utilized by the Contractor in the performance of this Contract.

D. If the above indemnity or defense provisions or any part of the above indemnity or defense provisions are limited by Florida Statute § 725.06 (1), or any other applicable law, then with respect to the part so limited, the monetary limitation on the extent of the indemnification shall be the greater of the (i) monetary value of this Contract, (ii) coverage amount of Commercial General Liability Insurance required under the Contract or (iii) \$1,000,000.00. Otherwise, the obligations of this Article will not be limited by the amount of any insurance required to be obtained or maintained under this Contract.

E. In addition to the requirements stated above, to the extent required by FDOT Public Transportation Grant Agreement and to the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the State of Florida, FDOT, including the FDOT's officers and employees,

from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness or intentional wrongful misconduct of the Contractor and persons employed or utilized by the Contractor in the performance of this Contract. This indemnification in this paragraph shall survive the termination of this Contract. Nothing contained in this paragraph is intended to nor shall it constitute a waiver of the State of Florida's and FDOT's sovereign immunity.

F. The Contractor's obligations to defend and indemnify as described in this Contract will survive the expiration or earlier termination of this Contract until it is determined by final judgment that any suit, claim or other action against the Owner, its members, officers, agents, employees, and volunteers is fully and finally barred by the applicable statute of limitations or repose.

G. Nothing in this Contract will be construed as a waiver of any immunity from or limitation of liability the Owner, or its members, officers, agents, employees, and volunteers may have under the doctrine of sovereign immunity under common law or statute.

H. The Owner and its members, officers, agents, employees, and volunteers reserve the right, at their option, to participate in the defense of any suit, without relieving the Contractor of any of its obligations under this Article.

I. If Paragraphs 7A-7H or any part of Paragraphs 7A-7H is deemed to conflict in any way with any law, the Paragraph or part of the Paragraph will be considered modified by such law to remedy the conflict.

8. It is specifically agreed between the parties executing the Contract that it is not intended by any of the provisions of any part of the Contract to create in the public or any member thereof any rights as a third party beneficiary or to authorize anyone not a party to the Contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the Contract.

9. This Contract will be terminated in accordance with Florida Statute Section 287.135 if it is found that the Contractor submitted a false Scrutinized Company Certification as provided in Florida Statute Section 287.135(5) or has been placed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, the Scrutinized Companies that Boycott Israel List, is engaged in a boycott of Israel, or is engaged in business operations in Cuba or Syria. The termination will be subject to the dollar amount limitations included in the respective Florida Statute.

10.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

(813) 870-8721, ADMCENTRALRECORDS@TAMPAAIRPORT.COM, HILLSBOROUGH COUNTY AVIATION AUTHORITY, P.O. BOX 22287, TAMPA FL 33622.

The Contractor agrees in accordance with Florida Statute Section 119.0701 to comply with public records laws including the following:

- A. Keep and maintain public records required by the Owner in order to perform the Work contemplated by this Contract.
- B. Upon request from the Owner's custodian of public records, provide the Owner with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Fla. Stat. or as otherwise provided by law.
- C. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Contract Term and following completion of the Contract.
- D. Upon completion of this Contract, keep and maintain public records required by the Owner to perform the Work. The Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the Owner, upon request from the Owner's custodian of public records, in a format that is compatible with the information technology systems of the Owner.

The Owner maintains its records in electronic form in accordance with the State of Florida records retention schedules. As a result, the paper original version of this document (to the extent it exists) will be scanned and stored electronically as the authoritative record copy as part of the Owner's record management process. Once that occurs, the paper original version of this document will be destroyed. Notwithstanding the foregoing, to the extent the contract documents include any bonds or other security, those bonds or other security will be maintained in their original form and not destroyed.

11. Press releases or other specialized publicity documents, including the Contractor's advertising news bulletins, which are related to this Contract and are intended by the Contractor for the press, broadcasting, or television, will be drawn up in consultation with the Owner. Except as otherwise required by law or regulation, the Contractor will not release or distribute any materials or information relating to this Contract or containing the name of the Owner or any of its employees or Board Members without prior written approval by an authorized representative of the Owner. The Contractor shall require all consultants, subcontractors and suppliers of any tier to comply with this paragraph.

12.

The Contractor represents that, in connection with this Contract or any property included or planned to be included in this Contract, it has not entered into a contract or arrangement with any officer, director or employee of the Owner, or any business entity of which the officer, director or employee of the officer's, director's or employee's spouse or child is an officer, partner, director, or proprietor or in which such officer, director or employee or the officer's, director's or employee's spouse or child, or any combination of them, has a material interest.

"Material Interest" means direct or indirect ownership of more than 5 percent of the total assets or capital stock of any business entity.

The Contractor represents that, in connection with this Contract or any property included or planned to be included in this Contract, it has not entered into a contract or arrangement with any person or entity who at any time during the immediately preceding two years was an officer, director or employee of the Owner.

The provisions of this subsection shall not be applicable to any agreement between the Owner and its fiscal depositories, any agreements for utility services the rates for which are fixed or controlled by the government, or any agreement between the Owner and an agency of state government.

The following provision is made a part of this Contract and will be inserted in each of the Contractor's subcontracts:

"No member, officer, or employee of the Hillsborough County Aviation Authority during their tenure or for two years thereafter will have any interest, direct or indirect, in this Contract or the proceeds thereof."

13.

- A. Compliance with Nondiscrimination Provisions: During the performance of this Agreement, Contractor, for itself, its assignees, and successors in interest (hereinafter collectively referred to as "Contractor") agrees as follows:
1. Compliance with Regulations: Contractor will comply with the Title VI List of Pertinent Nondiscrimination Acts And Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this Agreement.
 2. Non-discrimination: Contractor, with regard to the work performed by it during the term of this Agreement, will not discriminate on the grounds of race, color, or national origin in the selection and retention of Contractors, including procurements of materials and leases of equipment. Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
 3. Solicitations for Agreements, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential Contractor or supplier will be notified by Contractor of Contractor's obligations under this Agreement and the Nondiscrimination Acts And Authorities on the grounds of race, color, or national origin.
 4. Information and Reports: Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the FAA to be pertinent to ascertain compliance with such Nondiscrimination Acts And Authorities and instructions. Where any information required of Contractor is in the exclusive possession of another who fails or refuses to furnish the information, Contractor will so certify to Authority or the FAA, as appropriate, and will set forth what efforts it has made to obtain the information.
 5. Sanctions for Noncompliance: In the event of Contractor's noncompliance with the Non-discrimination provisions of this contract, Authority will impose such sanctions as it or the FAA may determine to be appropriate, including, but not limited to: withholding payments of the Contractor under the Contract until the Contractor complies and/or cancelling, terminating, or suspending the Agreement, in whole or in part.

6. Incorporation of Provisions: Contractor will include the provisions of paragraphs 1 through 6 of this Section in every contract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. Contractor will take action with respect to any contract or procurement as Authority or the FAA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if Contractor becomes involved in, or is threatened with litigation by a Contractor, or supplier because of such direction, Contractor may request Authority to enter into any litigation to protect the interests of Authority. In addition, Contractor may request the United States to enter into the litigation to protect the interests of the United States.
- B. Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program: Contractor for itself, its heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree that (1) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, and (2) that Contractor will furnish its services in compliance with all other requirements imposed by or pursuant to the List of Nondiscrimination Acts And Authorities.
- C. Title VI List of Pertinent Nondiscrimination Acts and Authorities: During the performance of this Agreement, Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:
1. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
 2. 49 CFR Part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);
 3. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
 4. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
 5. The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
 6. Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
 7. The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the

programs or activities of the Federal-aid recipients, sub-recipients and Contractors, whether such programs or activities are Federally funded or not);

8. Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR Parts 37 and 38;
 9. The FAA's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
 10. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
 11. Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, Contractor must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100); and
 12. Title IX of the Education Amendments of 1972, as amended, which prohibits Contractors from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).
- D. General Civil Rights Provision: Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance. If Contractor transfers its obligation to another, the transferee is obligated in the same manner as Contractor. This provision obligates Contractor for the period during which the property is owned, used or possessed by Contractor and the airport remains obligated to the FAA. This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.
- E. Subcontracts: Contractor agrees that it shall insert the above four provisions (Section (A) through Section (D)) in any agreement by which Contractor grants a right or privilege to any person, firm, or corporation to render accommodations and/or services to the public under this Agreement.

14. Federal Participation

The United States Government may have agreed to reimburse the Owner for some portion of the Contract costs. The Contract Work may be subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this Contract shall be construed as making the United States a party to the Contract nor will any such requirement interfere, in any way, with the rights of either party to the Contract.

IN WITNESS WHEREOF, the parties hereto have set their hands and corporate seals by their proper officers, duly authorized to do so;

By the Contractor this _____ day of _____, 202__.

ATTEST:

GOSALIA CONCRETE CONSTRUCTORS, INC.

By: _____

Title: _____

Print Name

Print Address

Signed, sealed, and delivered
in the presence of:

Witness

Print Name

Witness

Print Name

Notary for Gosalia Concrete Constructors, Inc.

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of physical presence or online notarization, this ____ day of _____, 202__, by _____ as
(Name of person)

_____, for _____.
(type of authority) (name of party on behalf of whom contract was executed)

Signature of Notary

Print, Type, or Stamp Commissioned Name of Notary

Personally Known OR Produced Identification
Type of Identification Produced

By the Owner this _____ day of _____, 202__.

HILLSBOROUGH COUNTY AVIATION AUTHORITY

(Affix Corporate Seal)

By: _____
Gary Harrod, Chairman

ATTEST:

Jane Castor, Secretary

Signed, sealed, and delivered
in the presence of:

Witness

Print Name

Witness

Print Name

**LEGAL FORM APPROVED AS TO FORM FOR
LEGAL SUFFICIENCY:**

By: _____
Michael T. Kamprath, Assistant General Counsel

Notary for Hillsborough County Aviation Authority

**STATE OF FLORIDA
COUNTY OF HILLSBOROUGH**

The foregoing instrument was acknowledged before me by means of physical presence or online authorization, this ____ day of _____, 202__, by Gary Harrod, in the capacity of Chairman, and by Jane Castor in the capacity of Secretary, for Hillsborough County Aviation Authority, a public body corporate under the laws of the State of Florida, on its behalf.

Signature of Notary

Print, Type, or Stamp Commissioned Name of Notary

Personally Known OR Produced Identification
Type of Identification Produced

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

END OF SECTION

North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

Attachment 1

HCAA Project No. 6530 18

**Tampa International Airport
Tampa, Florida**

Hillsborough County Aviation Authority

Bid Item Number	Item Description and Bid Price Per Unit <i>(In Words)</i>	Bid Price Per Unit <i>(In Numbers)</i>	Est Qty	Unit	Total Amount Per Item <i>Unit Price Times Est Qty</i>
C-103-1	Safety and Security				
	Fifty Thousand	Dollars	Zero	Cents	\$ 50,000.00
	<i>Bid Price Per Unit In Words</i>				<i>In Numbers</i>
			1	LS	\$ 50,000.00
C-104-1	Project Survey and Stakeout				
	Twenty Five Thousand Two Hundred Fifty	Dollars	Zero	Cents	\$ 25,250.00
	<i>Bid Price Per Unit In Words</i>				<i>In Numbers</i>
			1	LS	\$ 25,250.00
C-105-1	Mobilization (Limited to 10% of the Total Project Cost)				
	One Hundred Five Thousand	Dollars	Zero	Cents	\$ 105,000.00
	<i>Bid Price Per Unit In Words</i>				<i>In Numbers</i>
			1	LS	\$ 105,000.00
C-106-1	Maintenance of Traffic and Temporary Construction Items				
	Sixty Thousand	Dollars	Zero	Cents	\$ 60,000.00
	<i>Bid Price Per Unit In Words</i>				<i>In Numbers</i>
			1	LS	\$ 60,000.00
FL-104-1	Temporary Erosion and Sedimentation Control				
	Fifty Thousand	Dollars	Zero	Cents	\$ 50,000.00
	<i>Bid Price Per Unit In Words</i>				<i>In Numbers</i>
			1	LS	\$ 50,000.00
FL-120-1	Excavation and Embankment				
	Fifty	Dollars	Zero	Cents	\$ 50.00
	<i>Bid Price Per Unit In Words</i>				<i>In Numbers</i>
			925	CY	\$ 46,250.00

FL-160-1	Stabilized Subgrade, 12" Thick (LBR 40)								
	Twelve	Dollars	Fifty	Cents	\$ 12.50	3,200	SY	\$	40,000.00
	<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-285-1	6" Recycled Concrete Aggregate (RCA) Base Course								
	Twenty Five	Dollars	Zero	Cents	\$ 25.00	2,400	SY	\$	60,000.00
	<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-285-2	8" Recycled Concrete Aggregate (RCA) Base Course								
	Thirty Five	Dollars	Zero	Cents	\$ 35.00	800	SY	\$	28,000.00
	<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-327-1	2" Bituminous Pavement Milling								
	Eight	Dollars	Fifty	Cents	\$ 8.50	2,100	SY	\$	17,850.00
	<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-334-1	2" Bituminous Surface Course (FDOT Type SP-12.5)								
	One Hundred Seventy Five	Dollars	Fifty Eight	Cents	\$ 175.58	570	TON	\$	100,080.60
	<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-350-1	Spall Repair - Concrete Pavement (Variable Depth)								
	One Thousand Six Hundred Fifty	Dollars	Zero	Cents	\$ 1,650.00	50	CF	\$	82,500.00
	<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-350-2	Cleaning & Sealing Joints - Concrete Pavement								
	Three	Dollars	Seventy	Cents	\$ 3.70	54,350	LF	\$	201,095.00
	<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-350-3	Cleaning & Sealing Joints - Concrete Pavement (Petroleum Resistant)								
	Three	Dollars	Seventy	Cents	\$ 3.70	1,200	LF	\$	4,440.00
	<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						

FL-350-4	Cleaning & Sealing Cracks - Concrete Pavement									
		Eight	Dollars	Twenty Five	Cents	\$ 8.25	15,200	LF	\$	125,400.00
		<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-350-5	Cleaning & Sealing Cracks - Concrete Pavement (Petroleum Resistant)									
		Eight	Dollars	Twenty Five	Cents	\$ 8.25	250	LF	\$	2,062.50
		<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-353-1	Concrete Pavement Slab Replacement (6" Thick)									
		Five Thousand Five Hundred	Dollars	Zero	Cents	\$ 5,500.00	35	CY	\$	192,500.00
		<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-520-1	FDOT Type D Curb									
		One Hundred Ninety Nine	Dollars	Zero	Cents	\$ 199.00	1,000	LF	\$	199,000.00
		<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-570-1	Sodding									
		Three	Dollars	Forty Two	Cents	\$ 3.42	2,000	SY	\$	6,840.00
		<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-700-1	Sign Removal & Relocate									
		Four Hundred Fifty	Dollars	Zero	Cents	\$ 450.00	4	EA	\$	1,800.00
		<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-700-2	Sign Panel Installation									
		Four Thousand Seven Hundred Fifty	Dollars	Zero	Cents	\$ 4,750.00	2	EA	\$	9,500.00
		<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						
FL-710-1	Painted Pavement Markings									
		One	Dollars	Ninety Five	Cents	\$ 1.95	8,700	SF	\$	16,965.00
		<i>Bid Price Per Unit In Words</i>		<i>In Numbers</i>						

P-101-1	Route and Seal Joint and Asphalt Surface Cracking									
		Six	Dollars	Sixty Five	Cents	\$	6.65	1,500	LF	\$ 9,975.00
		<i>Bid Price Per Unit In Words</i>			<i>In Numbers</i>					
P-108-1	Pavement Marking Removal									
		Two	Dollars	Five	Cents	\$	2.05	3,570	SF	\$ 7,318.50
		<i>Bid Price Per Unit In Words</i>			<i>In Numbers</i>					
P-631-1	Refined Coal Tar Emulsion with Additives for Slurry Coat (Two Coats with Sand)									
		Five	Dollars	Ninety Five	Cents	\$	5.95	1,760	GAL	\$ 10,472.00
		<i>Bid Price Per Unit In Words</i>			<i>In Numbers</i>					
260501-1	Site Lighting (Including Light Pole, LED Fixture, and Foundation)									
		Nine Thousand Five Hundred	Dollars	Zero	Cents	\$	9,500.00	7	EA	\$ 66,500.00
		<i>Bid Price Per Unit In Words</i>			<i>In Numbers</i>					
260519-1	No. 10 and 10G, Type XHHN Cable, Installed in Conduit									
		Two	Dollars	Seventy	Cents	\$	2.70	1,500	LF	\$ 4,050.00
		<i>Bid Price Per Unit In Words</i>			<i>In Numbers</i>					
260543-1	Direct Buired Electrical Conduit 1-Way, 1-Inch Schedule 40 PVC Installed in Turf									
		Eight	Dollars	Zero	Cents	\$	8.00	1,250	LF	\$ 10,000.00
		<i>Bid Price Per Unit In Words</i>			<i>In Numbers</i>					
U-100-1	Vehicle Rated Meter & Fiber Boxes (Remove & Replace)									
		Two Thousand Six Hundred	Dollars	Zero	Cents	\$	2,600.00	4	EA	\$ 10,400.00
		<i>Bid Price Per Unit In Words</i>			<i>In Numbers</i>					

Sixty Five Thousand

Dollars

Zero

Cents

\$ 65,000.00

1

Allow \$

65,000.00

Bid Price Per Unit In Words

In Numbers

NOTE: Basis of payment will be in accordance with the technical specifications applicable to each Bid Item Number.

Bid Tabulation Total Amount \$1,608,248.60

W/MBE Participation Commitment		
	A	B
Total W/MBE Commitment Amount from Validated Letter of Intent	\$326,495.00	
Total Bid Amount		\$1,608,248.60
W/MBE Commitment Percentage (equals A/B)	20.3%	

The undersigned accepts as true and correct the Total Bid Amount and W/MBE Commitment Percentage calculation contained in this Bid Tabulation.

Name of Contractor: _____

Signature of Contractor: _____

Title: _____

Date: _____

NOTE:

The W/MBE Commitment percentage is established in accordance with the Owner's W/MBE Policy as stated in Section 00100 INSTRUCTIONS TO BIDDERS and supported by the Letter(s) of Intent submitted by the Contractor with the bid. The Total W/MBE Commitment Percentage may only be modified by Change Order.

SECTION 00610
COMMON LAW PERFORMANCE BOND



BOND NO. _____

STATE OF _____

COUNTY OF _____

BY THIS BOND, Gosalia Concrete Constructors, Inc., whose principal business address is _____, business phone number is _____ as Principal, hereinafter "Contractor", and _____, whose principal business address is _____, business phone number is _____ as Surety, hereinafter "Surety", are held and firmly bound to the Hillsborough County Aviation Authority, whose principal address is P.O. Box 22287, Tampa, Florida 33622, business phone number is (813) 870-8700, as Obligee, hereinafter "Owner", in the amount of One Million Six Hundred Eight Thousand Two Hundred Forty Eight and Sixty One Hundredth Dollars (U.S.) (\$1,608,248.60) for the payment of which Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, as provided herein.

WHEREAS, Contractor has by written Contract dated April 6, 2023 entered into an agreement with Owner for **AUTHORITY PROJECT NUMBER 6530 18, NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION at TAMPA INTERNATIONAL AIRPORT** to perform in accordance with the Contract, and the Contract Documents incorporated by reference in the Contract or otherwise. The Contract is incorporated by reference into this Performance Bond, hereinafter "Bond".

It is the condition of this Bond that if the Contractor performs its Contract obligations (the "Work"), then the Surety's obligations under this Bond are null and void; otherwise the Surety's obligations will remain in full force and effect.

The Contractor will perform, carry out and abide by all the terms, conditions and provisions of the Contract and complete the Work in accordance with its terms. If the Contractor fails to perform its Contract obligations, it will be the duty of the Surety to promptly assume responsibility for performance of the Contract including but not limited to completion of the Work. The Surety must and does hereby agree to indemnify the Owner and hold it harmless of, from and against any and all liability, loss, cost, damage, expense, attorney fees, including appellate proceedings, engineering and architectural fees or other professional services which the Owner may incur or which may accrue or be imposed upon the Owner by reason of any negligence, default, breach or misconduct on the part of the Contractor, Contractor's agents, servants, subcontractors or employees, in, about, or on account of the Work or performance of the Contract. Surety will be required to repay and reimburse the Owner, promptly upon demand, all sums of money including, but not limited to, attorney, architect, engineer and any other professional fees reasonably paid out or expended by the Owner on account of the failure or refusal of the Contractor to carry out, perform, or comply with any of the terms, conditions or provisions of the Contract including, but not limited to, the guarantee of the Work and materials furnished under the Contract for the time specified in the Contract.

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

The Surety hereby stipulates and agrees that any modification, omission, or addition, in or to the terms of the Contract, including the Contract Documents, will not affect the obligation of the Surety under this Bond.

Signed and sealed this _____ day of _____, 20__.

CONTRACTOR MUST INDICATE WHETHER CORPORATION, PARTNERSHIP, COMPANY, (OR INDIVIDUAL). THE PERSON SIGNING FOR THE CONTRACTOR WILL SIGN HIS/HER OWN NAME AND SIGN CORPORATE TITLE. WHEN THE PERSON SIGNING FOR A CORPORATION IS OTHER THAN THE PRESIDENT OR VICE PRESIDENT, HE/SHE MUST FURNISH A CORPORATE RESOLUTION SHOWING HIS/HER AUTHORITY TO BIND THE CORPORATION.

(Affix Contractor's Corporate Seal)

_____	By: _____
Name of Contractor	(Signature)
Type Name and Title Below:	Address: _____
_____	_____
_____	Telephone Number Fax Number

(Affix Surety's Corporate Seal)

_____	_____
Name of Surety	
By: _____	By: _____
Attorney in Fact for Surety (Signature)	Florida Licensed Agent (Signature)
Type name of Attorney in Fact: _____	Type name of Fla. Licensed Agent: _____
Attorney in Fact Address: _____	License Number _____
Attorney in Fact Address: _____	Agent Address: _____
_____	_____
_____	_____
Telephone Number Fax Number	Telephone Number Fax Number

(ATTACH "SURETY'S BOND AFFIDAVIT" ON COPY OF FORM BOUND IN THESE SPECIFICATIONS).
(ATTACH "POWER OF ATTORNEY" FOR SURETY COMPANY REPRESENTATIVE).

Hillsborough County Aviation Authority

THE FOREGOING BOND IS HEREBY APPROVED FOR LEGAL SUFFICIENCY:

By: _____ By: _____

Michael Kamprath, Assistant General Counsel

THIS BOND MUST BE RECORDED IN THE PUBLIC RECORDS OF HILLSBOROUGH COUNTY FLORIDA PRIOR TO COMMENCING ANY WORK UNDER THE CONTRACT.

SECTION 00620
STATUTORY PAYMENT BOND

BOND NO. _____

STATE OF _____

COUNTY OF _____

BY THIS BOND, Gosalia Concrete Constructors, Inc., whose principal business address is _____, business phone number is _____ as Principal, hereinafter "Contractor", and _____, whose principal business address is _____, business phone number is _____ as Surety, hereinafter "Surety", are held and firmly bound to the Hillsborough County Aviation Authority, whose principal business address is P.O. Box 22287, Tampa, Florida 33622, business phone number is (813) 870-8700, as Obligee, hereinafter "Owner", in the amount of One Million Six Hundred Eight Thousand Two Hundred Forty Eight and Sixty One Hundredth Dollars (U.S.) (\$1,608,248.60) for the payment of which Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, as provided herein.

THE CONDITION OF THIS BOND is that if Contractor:

1. Performs the Contract dated April 6, 2023, between Contractor and Owner for **AUTHORITY PROJECT NUMBER 6530 18, NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION at TAMPA INTERNATIONAL AIRPORT**, the Contract being made a part of this Bond by reference, at the times and in the manner prescribed in the Contract; and
2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Contractor with labor, materials, or supplies, used directly or indirectly by Contractor in the prosecution of the work provided for in the Contract; and
3. Pays Owner all losses, damages, expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of a default by Contractor under the Contract; and
4. Performs the guarantee of all work and materials furnished under the Contract for the time specified in the Contract, then this Bond is void; otherwise it remains in full force.

Any action instituted by claimant under this Bond for payment must be in accordance with the notice and time limitation provisions in Sections 255.05(2) and (10), Florida Statutes.

SECTION 00620
STATUTORY PAYMENT BOND

Any changes in or under the Contract Documents and compliance or non-compliance with any formalities connected with the Contract or the changes does not affect Surety's obligation under this Bond.

Signed and sealed this _____ day of _____, 201__.

CONTRACTOR MUST INDICATE WHETHER CORPORATION, PARTNERSHIP, COMPANY, (OR INDIVIDUAL). THE PERSON SIGNING FOR THE CONTRACTOR WILL SIGN HIS/HER OWN NAME AND SIGN CORPORATE TITLE. WHEN THE PERSON SIGNING FOR A CORPORATION IS OTHER THAN THE PRESIDENT OR VICE PRESIDENT, HE/SHE MUST FURNISH A CORPORATE RESOLUTION SHOWING HIS/HER AUTHORITY TO BIND THE CORPORATION.

(Affix Contractor's Corporate Seal)

_____	By: _____
Name of Contractor	(Signature)
Type Name and Title Below: _____	Address: _____
_____	_____
_____	_____
Telephone Number	Fax Number

(Affix Surety's Corporate Seal)

_____	_____
Name of Surety	
By: _____	By: _____
Attorney in Fact for Surety (Signature)	Florida Licensed Agent (Signature)
Type name of Attorney in Fact: _____	Type name of Fla. Licensed Agent: _____
Attorney in Fact Address: _____	License Number: _____
_____	Agent Address: _____
_____	_____
Telephone Number	Fax Number
_____	_____
Telephone Number	Fax Number

(ATTACH "SURETY'S BOND AFFIDAVIT" ON COPY OF FORM BOUND IN THESE SPECIFICATIONS).
(ATTACH "POWER OF ATTORNEY" FOR SURETY COMPANY REPRESENTATIVE).

Hillsborough County Aviation Authority

By: _____

THE FOREGOING BOND IS HEREBY APPROVED FOR LEGAL SUFFICIENCY:

By: _____
Michael Kamprath, Assistant General Counsel

THIS BOND MUST BE RECORDED IN THE PUBLIC RECORDS OF HILLSBOROUGH COUNTY FLORIDA PRIOR TO COMMENCING ANY WORK UNDER THE CONTRACT.

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

SECTION 00620
STATUTORY PAYMENT BOND

STATE OF _____
COUNTY OF _____

BEFORE ME, the undersigned authority, personally appeared _____,
who being duly sworn, deposes and says that they are a duly authorized Florida agent, properly licensed
under the laws of the State of Florida, to represent _____,
a company authorized to make corporate surety bonds under the laws of the State of Florida (the "Surety").

Said _____ further certifies that as agent for the said Surety,
they have countersigned the attached Bond as the Florida Licensed Agent in the sum of One Million Six
Hundred Eight Thousand Two Hundred Forty Eight and Sixty One Hundredth Dollars (U.S.) (\$1,608,248.60) on
behalf of _____ to the **HILLSBOROUGH COUNTY AVIATION AUTHORITY** covering **the
PROJECT NUMBER 6530 18, NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE
ROAD RELOCATION, AND APRON REHABILITATION at TAMPA INTERNATIONAL AIRPORT.**

Said _____ further certifies that the premium on the said Bonds is
_____, which will be paid in full directly to
them as agent and included in their regular accounts to the said Surety, and that they will receive their
regular commission as agent for the execution of said Bond and that their commission will not be divided
with anyone except to _____, who is a duly authorized insurance agent properly
licensed under the laws of the State of Florida.

SIGNED:

By: _____
Florida Licensed Insurance Agent (Signature)

Type Name or Agent Below:

Address of Agent: _____

Telephone Number: _____

FAX Number: _____

Florida License Number: _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of physical presence or online
notarization, this ____ day of _____, 2023, by _____ as
(Name of person)

_____, for _____
(type of authority) (name of party on behalf of whom contract was executed)

Signature of Notary

Print, Type, or Stamp Commissioned Name of Notary

Personally Known OR Produced Identification
Type of Identification Produced

END OF SECTION

SECTION 00650 - INSURANCE REQUIREMENTS

PART 1 - GENERAL CONDITIONS

1.01 INSURANCE COVERAGE AND LIMITS

A. Contractor agrees to provide its full limits for every policy specified herein, without restriction or reduction, and to the extent required by Florida Department of Transportation Public Transportation Grant Agreement, shall require the same of all of its contractors, subcontractors, suppliers, consultants, and subconsultants at each tier. To the extent that there is any exclusion, deficiency, reduction, or gap in a policy, which makes the insurance more restrictive than the coverage required, the Contractor agrees to remain responsible and obligated to make the Owner whole as if the Contractor and all of its contractors, subcontractors, suppliers, consultants, and subconsultants at each tier fully met the insurance requirements of the contract. Every policy shall be maintained without interruption or amendment throughout the life of this Contract, including but not limited to any warranty or limitation periods, and for any period of extension described herein. In the event the Contractor becomes in default of any requirements the Owner reserves the right to take whatever actions deemed necessary to protect its interests. The Contractor shall require every policy, other than Workers' Compensation, Employer's Liability and Professional Liability, to be endorsed to include the Owner, members of the Owner's governing body, and the Owner's officers, volunteers, agents, and its employees as additional insureds. To the extent required by Florida Department of Transportation Public Transportation Grant Agreement, Contractor shall also ensure that the Florida Department of Transportation is added as an additional insured on the Commercial General Liability policy of the Contractor. There shall be no language in any policy, endorsement, or exclusion that reduces or limits recovery to any amount less than the full policy limits. The Contractor will submit evidence that it, and to the extent required by the Florida Department of Transportation Public Grant Agreement, all subcontractors, suppliers, consultants, and subconsultants at each tier has complied with this provision to the Owner before any work or service commences under this contract. Such evidence shall describe the full policy limits along with any deductible, retentions, attachment point, and any deviation from a fully insured program.

1. Workers' Compensation/Employer's Liability:

The Contractor shall not allow its coverage, or that of any of its contractors, subcontractors, suppliers, consultants, or subconsultants at each tier, to drop below or become encumbered below the following minimum limits of insurance:

Part One:	"Statutory"
Part Two:	
Each Accident	\$1,000,000
Disease - Policy Limit	\$1,000,000
Disease - Each Employee	\$1,000,000

It is the responsibility of the Contractor to ensure that all entities and person(s) working for or behalf of itself or any contractor, subcontractor, supplier, subconsultant, independent contractor, sole proprietorship, partner, "leased employee", person obtained through a professional employer organization ("PEO's"), operator, and any personnel obtained under an agreement, including

equipment rental agreements have Workers' Compensation Insurance in accordance with Florida's Workers' Compensation law.

2. Commercial General Liability:

The Contractor will maintain and ensure that all contractors, subcontractors, suppliers, consultants, and subconsultants at each tier has Commercial General Liability insurance providing continuous coverage for all liability resulting out of, or in connection with, any ongoing operations performed by, including the use or occupancy of Owner premises, or on behalf of the Contractor under this Contract. The insurance required under this contract shall be the full policy limits without reduction or limitation.

The limits of coverage required shall apply fully to the work or operations performed under this Contract and may not be shared with or diminished by claims unrelated to this Contract. The coverage cannot contain any deductible, retention or self-insurance without prior approval of the Owner and must clearly identify any such deductible, retention or other than a fully insured plan. Any deductible, retention, or self-insurance will be the responsibility of and paid by the First Named Insured and not by the Owner. To the extent required by the Florida Department of Transportation Public Transportation Grant Agreement, the Commercial General Liability insurance of Contractor may not contain or be subject to any self-insured retentions.

Such coverage shall be primary as to any other available insurance and shall not be more restrictive than the coverage afforded to the Named Insured. It is to be written on an "occurrence" basis on a form no more restrictive than ISO Form CG 00 01 10 01 and shall include Products/Completed Operations coverage. Additional insured coverage shall be provided on a form no more restrictive than ISO Form CG 20 10 10 01 and CG 20 37 10 01. The policy or policies shall not include a Contractual Liability Limitation (ISO CG 21 39), a Limitation of Coverage to Designated Premises or Project (CG 21 44), or any endorsement that similarly restricts or limits coverage to the Owner. The Contractor shall not allow its coverage to drop below or become encumbered below the following minimum limits of insurance:

	Contract Specific
General Aggregate	\$10,000,000
Each Occurrence	\$10,000,000
Personal and Advertising Injury Each Occurrence	\$10,000,000
Products/Completed Operations Aggregate	\$10,000,000

To the extent required by Florida Department of Transportation Public Transportation Grant Agreement, Contractor shall ensure that all of its contractors, subcontractors, suppliers, consultants, or subconsultants at each tier procure and maintain Commercial Liability Insurance with the following minimum limits of insurance:

General Aggregate	\$5,000,000
-------------------	-------------

Each Occurrence

\$1,000,000

Products and Completed operations coverage will be maintained for a period of three (3) years from the date of termination of this Contract.

3. Business Auto Liability:

The Contractor agrees to provide its full policy limits for commercial auto coverage, without restriction or reduction, on all owned, hired and non-owned vehicles. Coverage shall be provided on a form no more restrictive than ISO Form CA 00 01. The Contractor shall not allow its coverage to drop below or become encumbered below the following minimum limits of insurance:

Each Occurrence – Bodily Injury and
Property Damage Combined

\$10,000,000

4. Builders Risk Coverage:

Not Used.

5. Environmental Impairment (Pollution) Liability:

Not Used.

Utility and Railroad Protective Liability

When work performed under this Contract is on or in the vicinity of utility-owned property or facilities the utility shall also be listed as an additional insured along with the Owner and State of Florida, Department of Transportation in the manner as described herein.

If the work performed is on or in the vicinity of a railroad right-of-way, including any encroachments thereon from such work or operations, the entities and persons involved shall require, procure, and maintain Railroad Protective Liability Coverage. Such coverage shall be no more restrictive than that provided by the latest occurrence form edition of the Railroad Protective Liability Coverage (ISO Form CG 00 35) as filed for use in the State of Florida.

Contractor agrees to provide its full policy limits for any Utility or Railroad, without restriction or reduction, and shall require the same of all of its contractors, subcontractors, consultants, and subconsultants at each tier. The Contractor shall not allow its coverage or that of any of its contractors, subcontractors, consultants, or subconsultants at each tier required to have this coverage to drop below or become encumbered below \$2,000,000 combined single limit for bodily injury and/or property damage for each occurrence or have an annual aggregate of less than a \$6,000,000, inclusive of amounts provided by an umbrella or excess policy.

The coverage shall include the railroad and utility along with the Owner and State of Florida, Department of Transportation as additional insureds in the manner as described herein.

CONTRACTUAL INSURANCE TERMS AND CONDITIONS

This Section incorporates the Owner's Standard Procedure S250.06 and establishes the insurance terms and conditions associated with contractual insurance requirements. This Section is applicable to all Contractors with Owner contracts, and to the extent required by the Florida Department of Transportation Public Transportation Grant Agreement, includes every contractor, subcontractor, consultant, and subconsultant at each tier. Unless otherwise provided herein, any exceptions to the following conditions or changes to required coverages or coverage limits must have prior written approval from the Owner.

INSURANCE COVERAGE:

A. Procurement of Coverage:

With respect to each of the required coverages, the Contractor will, at the Contractor's expense, procure, maintain and keep in force the types and amounts of insurance conforming to the minimum requirements set forth in the applicable contract. In addition to the extent required by Florida Department of Transportation Public Transportation Grant Agreement, the Contractor shall further require that all contractors, subcontractors, suppliers, consultants, and sub-consultants at each tier satisfy and meet all the requirements of the applicable Grant Agreement, including the terms and conditions of this Standard Procedure. Coverage will be provided by insurance companies eligible to do business in the State of Florida and having an AM Best rating of A- or better and a financial size category of VII or better. Utilization of non-rated companies, companies with AM Best ratings lower than A-, or companies with a financial size category lower than VII must be submitted by the company to the Owner Director of Risk Management for approval prior to use. The Owner retains the right to approve or disapprove the use of any insurer, policy, risk pooling or self-insurance program.

B. Term of Coverage:

Except as otherwise specified in the contract, the insurance will commence on or prior to the effective date of the contract and will be maintained in force throughout the duration of the contract, including but not limited to any warranty or limitation periods and for any period of extended coverage required in the contract. If a policy is written on a claims-made form, the retroactive date must be shown and this date must be before the earlier of the date of the execution of the contract or the beginning of contract work, and the coverage must respond to all claims reported within three years following the period for which coverage is required unless a longer period of time is otherwise stated in the contract.

C. Reduction of Aggregate Limits:

Each insurance policy will be specifically endorsed to require the insurer to provide written notice to the Owner at least 30 days (or 10 days prior notice for non-payment of premium) prior to any cancellation, non-renewal or adverse change, initiated by the insurer, and applicable to any policy or coverage described in the contract or in this Standard Procedure. The endorsement will specify that such notice will be sent to:

Hillsborough County Aviation Authority
Attn.: Chief Executive Officer
Tampa International Airport
Post Office Box 22287
Tampa, Florida 33622

Additionally, to the extent required by Florida Department of Transportation Public Transportation Grant Agreement, the workers' compensation, commercial general liability and railroad protective insurance of every contractor, subcontractor, consultant, and sub-consultant at each tier shall be specifically endorsed to require the insurer to provide the Florida Department of Transportation notice within 10 days of any cancellation, notice of cancellation, lapse, renewal, or proposed change to any policy or coverage described in the contract or this Standard Procedure.

D. No waiver by approval/disapproval:

The Owner accepts no responsibility for determining whether the company or any contractor, subcontractor, consultant, or sub-consultant at each tier is in full compliance with the insurance coverage required by the contract. The Owner's approval or failure to disapprove any policy, endorsement coverage, or Certificate of Insurance does not relieve or excuse the company of any obligation to procure and maintain the insurance required in the contract or in this Standard Procedure, nor does it serve as a waiver of any rights or defenses the Owner may have.

E. Future Modifications – Changes in Circumstances:

1. Changes in Coverage and Required Limits of Insurance

The coverages and minimum limits of insurance required by the contract are based on circumstances in effect at the inception of the contract. If, in the opinion of the Owner, circumstances merit a change in such coverage or minimum limits of insurance required by the contract, the Owner may change the coverage and the minimum limits of insurance required, and the Contractor will, within 60 days of receipt of written notice of a change in the coverage and/or the minimum limits required, comply with such change and provide evidence of such compliance in the manner required by the contract. Provided, however, that no change in the coverages or minimum limits of insurance required will be made by the Owner until at least two years after inception of the contract. Subsequent changes in the coverage or minimum limits of insurance required will not be made by the Owner until at least two years after any prior change by the Owner unless extreme conditions warrant such change and are agreeable to both parties. To the extent required by Florida Department of Transportation Public Transportation Grant Agreement, any such change or modification in coverage or limits shall also apply to the contractors, subcontractors, suppliers, consultants, and sub-consultants at each tier.

If, in the opinion of the Owner, compliance with the insurance requirements is not commercially practicable for the Contractor, contractors, subcontractors, suppliers, consultants or subconsultants at any tier, at the written request of the Contractor, the Owner may, at its sole discretion and subject to any conditions it deems appropriate, relax or temporarily suspend, in whole or in part, the insurance requirements which would otherwise apply to the Contractor, contractors, subcontractors, suppliers, consultants, and sub-consultants at any tier. Any such modification will be subject to the prior written approval of the Owner's General Counsel and Executive Vice President of Legal Affairs or designee, and subject to the conditions of such approval.

F. Proof of Insurance – Insurance Certificate:

1. Prior to Work, Use or Occupancy of Owner's Premises

The Contractor and, to the extent required by Florida Department of Transportation Public Transportation Grant Agreement, the Contractor's contractors, subcontractors, suppliers, consultants, and sub-consultants at each tier will not commence work, or use or occupy Owner's premises in

connection with the contract until the required insurance is in force, preliminary evidence of insurance acceptable to the Owner has been provided to the Owner, and the Owner has granted permission to the company to commence work or use or occupy the premises in connection with the contract.

2. Proof of Insurance Coverage

As preliminary evidence of compliance with the insurance required by the contract, the Contractor will furnish the Owner with an ACORD Certificate of Liability Insurance (Certificate) reflecting the required coverage described in the contract and this Standard Procedure.

The Certificate must:

- a. Be signed by an authorized representative of the insurer. Contractor will furnish the Owner with endorsements effecting coverage required by the contract. The endorsements are to be signed by a person authorized by insurer to bind the coverage on the insurer's behalf;
- b. State that: "Hillsborough County Aviation Authority, members of the Authority's governing body and the Authority's officers, volunteers, agents, and its employees are additional insureds for all policies described above other than workers' compensation employer's liability and professional liability";
- c. To the extent required by Florida Department of Transportation Public Transportation Grant Agreement, state that the Florida Department of Transportation is an additional insured for commercial general liability;
- d. The insurers for all policies shown on the Certificate have waived their subrogation rights against the Authority;
- e. Indicate that the Certificate has been issued in connection with the contract;
- f. Indicate the amount of any deductible or self-insured retention applicable to all coverages;
- g. State that the deductible or self-insured retention is the responsibility of the Contractor; and
- h. Identify the name and address of the Certificate holder as:

Hillsborough County Aviation Authority
Attn.: Chief Executive Officer
Tampa International Airport
Post Office Box 22287
Tampa, Florida 33622;

If requested by the Owner, the Contractor will, within 15 days after receipt of written request from the Owner, provide the Owner, or make available for review, a certified complete copy of the policies of insurance. The Contractor may redact those portions of the insurance policies that are not relevant to the coverage required by the contract. The Contractor will provide the Owner with renewal or replacement evidence of insurance, acceptable to the Owner, prior to expiration or termination of such insurance.

G. Deductibles, Self-Insurance, Alternative Risk or Insurance Programs:

1. All deductibles, as well as all self-insured retentions and any alternative risk or insurance programs (including, but not limited to, the use of captives, trusts, pooled programs, risk retention groups, or investment-linked insurance products), must be approved by the

Owner's General Counsel and Executive Vice President of Legal Affairs or designee. The Contractor agrees to provide all documentation necessary for the Owner to review the deductible, self-insurance or alternative risk or insurance program.

2. The Contractor will pay on behalf of the Owner, members of the Owner's governing body, the Owner's officers, volunteers, agents and its employees and to the extent required by the Florida Department of Transportation Grant Agreement, any deductible, self-insured retention (SIR), or difference from a fully insured program which, with respect to the required insurance, is applicable to any claim by or against the Owner, or any member of the Owner's governing body, or any officer or employee of the Owner.
3. The contract by the Owner to allow the use of a deductible, self-insurance or alternative risk or insurance program will be subject to periodic review by the Director of Risk Management. If, at any time, the Owner deems that the continued use of a deductible, self-insurance, or alternative risk or insurance program by the Contractor should not be permitted, the Owner may, upon 60 days' written notice to the company, require the Contractor to replace or modify the deductible, self-insurance, or alternative risk or insurance program in a manner satisfactory to the Owner.
4. Any deductible amount, self-insurance, or alternative risk or insurance program's retention will be included and clearly described on the Certificate prior to any approval by the Owner. This is to include fully insured programs as to a zero deductible per the policy. Owner reserves the right to deny any Certificate not in compliance with this requirement.
5. To the extent required by Florida Department of Transportation Public Transportation Grant Agreement, the commercial general liability may not be subject to a self-insured retention. Subject to approval by the Owner under sub-paragraphs 1-4 above, the commercial general liability may contain a deductible, provided that such deductible shall be paid by the named insured.

H. Contractor's Insurance Primary:

The insurance required by the contract will apply on a primary and non-contributory basis. Any insurance or self-insurance maintained by the Owner will be excess and will not contribute to the insurance provided by or on behalf of the Contractor.

To the extent required by Florida Department of Transportation Public Transportation Grant Agreement, the coverage afforded to the Florida Department of Transportation as an additional insured under the Commercial General Liability policy shall be primary coverage.

I. Incident Notification:

In accordance with the requirements of Standard Procedure S250.02, the Contractor will promptly notify the Airport Operations Center (AOC) of all incidents involving bodily injury or property damage occurring on Authority-owned property, tenant owned property or third party property.

J. Customer Claims, Issues, or Complaints:

In addition to complying with all terms outlined in Standard Procedure S250.02, all customer claims, issues, or complaints involving property damage or bodily injury related to the Contractor will be promptly handled, addressed and resolved by the Contractor.

The Contractor will track all customer claims, issues, or complaints involving property damage or bodily injury and their status on a Claims Log available for review, as needed, by Risk Management. The Claims Log should include a detailed report of the incident along with the response and/or resolution. Risk Management has the option to monitor all incidents, claims, issues or complaints where the Owner could be held liable for injury or damages.

K. Applicable Law:

With respect to any contract entered into by the Owner with a value exceeding \$10,000,000, if any required policy or program is: (i) issued to a policyholder outside of Florida or (ii) contains a “choice of law” or similar provision stating that the law of any state other than Florida shall govern disputes concerning the policy, then such policy or program must be endorsed so that Florida law (including but not limited to Part II of Chapter 627 of the Florida Statutes) will govern any and all disputes concerning the policy or program in connection with claims arising out of work performed pursuant to the Contract. The Contractor will ensure that all contractors, subcontractors, suppliers, consultants, and subconsultants at each tier are contractually bound and remain in compliance with this provision.

L. Waiver of Subrogation:

The Contractor, for itself and on behalf of its insurers, to the fullest extent permitted by law without voiding the insurance required by the Contract, waives all rights against the Owner, members of the Owner’s governing body and the Owner’s officers, volunteers, agents and its employees, as well as the State of Florida, Department of Transportation, including the Department’s officers and its employees for damages or loss to the extent covered and paid for by any insurance maintained by the Contractor. The Contractor shall require all contractors, subcontractors, suppliers, consultants and subconsultants at each tier for themselves and their insurers, to the fullest extent permitted by law without voiding the insurance required by the Contract, to waive all rights against the Owner, members of the Owner’s governing body and the Owner’s officers, volunteers, agents and its employees, as well as the State of Florida, Department of Transportation, including the Department’s officers and its employees for damages or loss to the extent covered and paid for by any insurance maintained by the Contractor to the extent covered and paid for by any insurance maintained by the Contractor’s contractors, subcontractors, suppliers, consultants and subconsultants at each tier. The Contractor shall further require that all contractors, subcontractors, suppliers, consultants, and subconsultants at each tier include the following in every contract and on each policy the following:

“Hillsborough County Aviation Authority, members of the Authority’s governing body and the Authority’s officers, volunteers, agents, and its employees, as well as the State of Florida, Department of Transportation, including the Department’s officers and its employees are additional insureds for the coverages required by all policies as described above other than workers compensation and professional liability.”

M. Contractor’s Failure to Comply with Insurance Requirements:

1. Owner's Right to Procure Replacement Insurance

If, after the inception of this Contract, the Contractor or any of its contractors, subcontractors, suppliers, consultants, or subconsultants fails to fully comply with the insurance requirements of the Contract, in addition to and not in lieu of any other remedy available to the Owner provided by the Contract, the Owner may, at its sole discretion, procure and maintain on behalf of the Contractor, insurance which provides, in whole or in part, the required insurance coverage.

2. Replacement Coverage at Sole Expense of Contractor

The entire cost of any insurance procured by the Owner pursuant to this Attachment will be paid by the Contractor. At the option of the Owner, the Contractor will either directly pay the entire cost of the insurance or immediately reimburse the Owner for any costs incurred by the Owner, including all premiums, fees, taxes, and 15% for the cost of administration.

a. Contractor to Remain Fully Liable

The Contractor agrees to remain fully liable for full compliance with the insurance requirements in the Contract and shall require the same of all of its contractors, subcontractors, suppliers, consultants, and subconsultants at each tier. To the extent that there is any exclusion, deficiency, reduction, or gap in a policy which makes the insurance more restrictive than the coverage required, the Contractor agrees to remain responsible and obligated to make the Owner whole as if the Contractor and all of its contractors, subcontractors, suppliers, consultants, and subconsultants at each tier fully met the insurance requirements of the contract.

b. Owner's Right to Terminate, Modify, or Not Procure

Any insurance procured by the Owner is solely for the Owner's benefit and is not intended to replace or supplement any insurance coverage which otherwise would have been maintained by the Contractor or by any of its contractors, subcontractors, suppliers, consultants, or sub-consultants at each tier. Owner is not obligated to procure any insurance pursuant to these requirements and retains the right, at its sole discretion, to terminate or modify any such insurance which might be procured by the Owner pursuant to this Attachment.

END OF SECTION

SECTION 00700 – GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

PART 1 – GENERAL CONDITIONS

1.01 BASIC DEFINITIONS

A. THE CONTRACT DOCUMENTS

The Contract Documents consist of:

1. The Project Manual containing the Bidding Documents, Bonds, Affidavits, Compliance Forms, Statements, Insurance Requirements and Documents, the Contract between the Owner and Contractor (herein referred to as the Contract), Conditions of the Contract (General Conditions), General Requirements and other Requirements, Reports, and Specifications.
2. The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, to the extent approved by Owner, showing the design, location and dimensions of the Work, and generally include plans, elevations, sections, details, models, electronic data, Building Information Modeling (BIM) schedules and diagrams.
3. All Addenda issued prior to, and all Modifications issued after, execution of the Contract.
 - a. A Modification is a written amendment to the Contract signed by both parties including but not limited to a Supplemental Agreement. A Modification is also a Change Order, Work Order or written order for a change in the Work issued by the Owner.

B. THE CONTRACT

1. The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The parties will not be bound by or be liable for any statement, representation, promise, inducement or understanding of any kind or nature not set forth herein.
2. No changes, amendments or modifications of any of the terms or conditions of the Contract will be valid unless reduced to writing and signed by both parties. The Contract may be amended or modified only by a Modification. Except as provided in Section 00510 – CONTRACT, paragraph 5, A, nothing contained in the Contract Documents will be construed to create any contractual relationship (1) between the Design Professional and the Contractor, (2) between the Owner or the Design Professional and a Subcontractor or Sub-Subcontractor, (3) between the Owner and the Design Professional, or (4) between any persons or entities other than the Owner and the Contractor. The Contract will be construed in accordance with the laws of the State of Florida. In any action

initiated by one party against the other, venue will lie in Hillsborough County, Florida. The Design Professional will, however, be entitled to performance and enforcement or obligations under the Contract intended to facilitate performance of the Design Professional's duties.

- a. The Contractor will not assign, transfer, convey or otherwise dispose of the Contract or its right, title or interest in it without previous consent of the Owner which consent will not be unreasonably withheld. Owner's consent to any assignment will not relieve the Contractor of any of its agreements, responsibilities, or obligations under this Contract, and the Contractor will be and remain as fully responsible and liable for the defaults, acts, and omissions of the Contractor's assignees and Subcontractors arising in connection with the performance of this Contract.
- b. Subject to the limitations upon assignment and transfer herein contained, this Contract will be binding upon and inure to the benefit of the parties hereto, their respective successors and assigns.
- c. The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

C. THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

D. THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

E. THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.

F. THE PROJECT MANUAL

The Project Manual is the volume(s) usually assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.

1.02 EXECUTION, CORRELATION AND INTENT

- A. The Contract Documents must be signed by the Owner and Contractor as provided in the Contract Documents.

- B. Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.
- C. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary and what is required by one will be as binding as if required by all. Performance by the Contractor will be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.
- D. Organization of the Specifications into divisions, sections and parts, and arrangement of Drawings, will not control the Contractor in dividing the Work among subcontractors or in establishing the extent of Work to be performed by any trade.
 - 1. The Contractor and all Subcontractors will refer to all of the Drawings, including those showing primarily the Work of the mechanical, electrical and other specialized trades, and to all of the Sections of the Specifications, and will perform all Work reasonably inferable therefrom as being necessary to produce the indicated results.
- E. Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.
- F. If Work is required by the Drawings and Specifications in a manner which makes it impossible to produce first class Work, or should discrepancies appear among the Contract Documents, the Contractor will request an interpretation before proceeding with the Work. If the Contractor fails to make such a request, no excuse will thereafter be entertained for failure to carry out the Work in a satisfactory manner. Should conflict occur in or between the Drawings and Specifications, the Contractor is deemed to have estimated the more expensive way of doing the Work unless the Contractor will have asked for and obtained a written decision before submission of Contractor's Bid as to which method or materials will be required.
- G. All Work mentioned or indicated in the Contract Documents will be performed by the Contractor as part of this Contract unless it is specifically indicated in the Contract Documents that such construction is not in the Contract. In the event of any conflict(s) among the Contract Documents, the precedence in resolving such conflict(s) will be as follows:
 - 1. General Requirements will govern over General Conditions.
 - 2. General Conditions will govern over Technical Specifications.
 - 3. Technical Specifications will govern over Drawings.
 - 4. Schedules will govern over Drawings.
 - 5. Large-scale Drawings will govern over smaller scale Drawings.
 - 6. Greater quantities will govern over lesser.

7. Higher quality, as adjudged by the Owner, will govern over lesser.

(The above precedence are in numerical order and they will be construed to mean the order of precedence.)

- H. All indications or notations which apply to one of a number of similar situations, materials or processes will be deemed to apply to all such situations, materials or processes wherever they appear in the Work, except where a contrary result is clearly indicated by the Contract Documents.
- I. Where codes, standards, requirements and publications of public and private bodies are referred to in the Contract Documents, references will be understood to be the latest edition, including all amendments thereto, in effect on the date of receiving bids, except where otherwise indicated.
- J. Where no explicit quality or standards for materials or workmanship are established for Work, such Work is to be of first class quality for the intended use and consistent with the quality of the surrounding Work and of the construction of the Project generally.
- K. All manufactured articles, materials, and equipment will be applied, installed, connected, erected, started up, commissioned, tested, cleaned, and conditioned in accordance with the manufacturer's written or printed directions and instructions unless otherwise indicated in the Contract Documents.
- L. The Mechanical, Electrical and Fire Protection Drawings are diagrammatic only and are not intended to show the alignment, exact physical locations or configurations of such Work. Such Work will be installed, without additional cost to the Owner, to clear all obstructions, permit proper clearances for the Work of other trades, and present an orderly appearance where exposed. Prior to beginning such Work, the Contractor will prepare coordination drawings and complete detailed layout drawings showing the exact alignment, physical location and configuration of the mechanical, electrical and fire protection installations and demonstrating to the Owner's satisfaction that the installations will comply with the preceding sentence. Coordination drawings and complete detailed layout drawings will be submitted to the for Owner's review prior to the commencement of the Work.
- M. Exact locations of fixtures and outlets will be obtained from the Owner as provided in Subparagraph 3.02 E. before the Work is roughed in. Work installed without such information from the Owner will be relocated at the Contractor's expense.
- N. Test boring or soil test information included with the Contract Documents or otherwise made available to the Contractor was obtained by the Owner in the design of the Project or Work. The Owner does not warrant such information to the Contractor as an accurate (an exact) indication but is an approximate indication of subsurface conditions, and no claim for extra cost or extension of time resulting from reliance by the Contractor on such information will be allowed.
- O. Where the Work is to fit with existing conditions or construction not included in this Contract, the Contractor will fully and completely join the Work with such conditions or construction, unless otherwise specified.

1.03 OWNERSHIP AND USE OF DESIGN PROFESSIONAL'S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

All Drawings, Specifications and other documents furnished by the Design Professional or Owner are and will remain the property of the Owner. The Drawings, Specifications and other documents prepared by the Design Professional or Owner are instruments of the Design Professional's or Owner's service through which the work to be executed by the Contractor is described. The Contractor may retain one contract record set. Neither the Contractor nor any Subcontractor, Sub-Subcontractor or material or equipment supplier will own or claim a copyright in the Drawings, Specifications and other documents prepared by the Design Professional or Owner, and unless otherwise indicated, the Design Professional or Owner will be deemed the author of them and will retain all common law, statutory, copyright and other reserved rights. All copies of them, except the Contractor's record set, will be returned or suitably accounted for to the Design Professional or Owner, on request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Design Professional or Owner, and copies thereof furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-Subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the work without the specific written consent of the Owner. The Contractor, Subcontractors, Sub-Subcontractors and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Design Professional or owner appropriate to and for use in the execution of their work under the Contract Documents. All copies made under this license will bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Design Professional or Owner. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Design Professional's or Owner's copyright or other reserved rights.

1.04 CAPITALIZATION

Terms capitalized in these general conditions include those which are (1) specifically defined, (2) the titles of numbered Parts and identified references to paragraphs, subparagraphs and clauses in the document or (3) the titles of other documents published.

1.05 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

PART 2 – OWNER

2.01 DEFINITION

The Owner is the Hillsborough County Aviation Authority (Authority) and is referred to throughout the Contract Documents as if singular in number. The term "Owner" means Authority or the Owner's authorized representative.

2.02 INFORMATION AND SERVICES REQUIRED OF THE OWNER

- A. The Owner will make available Record Documents and Drawings pertaining to the existing buildings and/or facilities relative to this Project. The Owner does not warrant

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

the accuracy and completeness of such Record Documents and Drawings and they are not a part of the Contract Documents.

- B. Information or services required of the Owner will be furnished by the Owner with reasonable promptness after receipt from the Contractor of a written request for such information or services.
- C. The Contractor will be furnished free of charge, one copy of the Drawings and conformed Project Manuals. Additional sets can be made from the CD provided with the conformed set.
- D. The foregoing are in addition to other duties and responsibilities of the Owner enumerated in Section 00700 –GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION.

2.03 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Paragraph 11.02 or persistently fails to carry out Work in accordance with the Contract Documents, the Owner, the Design Professional, or other authorized representatives, by written order signed personally, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work will not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Subparagraph 6.01 C.

2.04 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven day period after receipt of written Notice from the Owner to begin and prosecute correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate change order will be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Design Professional's or Owner's additional services and expenses made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor will pay the difference to the Owner.

2.05 PERSONAL LIABILITY OF PUBLIC OFFICIALS

In carrying out any of the Contract provisions or in exercising any power or authority granted to it by this Contract, there will be no liability upon the Design Professional or Owner, its authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner. The Contractor agrees to waive any personal claims it may have against the Design Professional, its authorized representative or any officials of the Owner including its Board members, officers, employees, agents and volunteers.

2.06 OWNER DIRECT PURCHASES

Not Used.

2.07 FURNISHING RIGHTS-OF-WAY

The Owner will be responsible for furnishing all rights-of-way upon which the Work is to be constructed in advance of the Contractor's operations.

PART 3 – CONTRACTOR

3.01 DEFINITION

The Contractor is the person or entity identified as such in the Contract and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative.

3.02 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

- A. Prior to starting the Work, and at frequent intervals during the process thereof, the Contractor will carefully study and compare the Contract Documents with each other and with the information furnished by the Owner pursuant to Paragraph 2.02 B and will at once report to the Owner, any error, inconsistency or omission the Contractor may discover. Any necessary change will be ordered as provided in Part 7, CHANGES IN THE WORK, subject to the requirements of Paragraph 1.02 and other provisions of the Contract Documents.
 - 1. If the Contractor proceeds with the Work without such notice to the Owner, having discovered such errors, inconsistencies or omissions, or if by reasonable study of the Contract Documents, the Contractor could have discovered such, the Contractor will bear all costs arising therefrom.
- B. The Contractor will take field measurements and verify field conditions and will carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered will be reported to the Owner at once.
- C. The Contractor will perform the work in accordance with the Contract Documents and submittals approved pursuant to Paragraph 3.12.
- D. The Contractor will give the Owner timely notice of all additional Drawings, Specifications, or instructions required to define the Work in greater detail, or to permit the progress of the Work.
- E. The Contractor will not proceed with any Work not clearly and consistently defined in detail in the Contract Documents, but will request additional Drawings or instructions from the Owner as provided in Subparagraph 3.02 D. If the Contractor proceeds with such Work without obtaining further Drawings, Specifications or instructions, the Contractor will correct Work incorrectly done at the Contractor's own expense.

3.03 SUPERVISION AND CONSTRUCTION PROCEDURES

- A. The Contractor will supervise and direct the Work, using the Contractor's best skill and attention. The Contractor will be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

- B. The Contractor will be responsible to the Owner for the acts and omissions of all entities or persons performing or supplying the Work under the Contract.
- C. The Contractor will not be relieved of obligations for performing the Work in accordance with the Contract Documents either by activities or duties of the Owner in the administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.
- D. The Contractor will be responsible for inspection of portions of Work already performed under the Contract to determine that such portions are in proper condition to receive subsequent work.
- E. All Work by the Contractor will be performed in a workmanlike manner, satisfactory to the Owner. The Contractor will provide adequate supervision and inspections to assure competent performance of the Work.

3.04 LABOR AND MATERIALS

- A. Unless otherwise provided in the Contract Documents, the Contractor will provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The word "provide" will mean furnish and install complete, including connections, unless otherwise specified.
- B. The Contractor will enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor will not permit employment of unfit persons or persons not skilled in tasks assigned to them.

3.05 WARRANTY

- A. In addition to any other warranties in this Contract, the Contractor warrants that Work performed under this Contract conforms to the Contract requirements and is free of any fault or defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier. Furthermore, the warranty provided in this Paragraph 3.05 will be in addition to and not in limitation of any other warranty provided by the Contract Documents or otherwise prescribed by Law.
- B. The Contractor warrants that the materials and equipment furnished under the Contract will be new and of recent manufacture unless otherwise specified, and that all work will be of good quality.

Work not conforming to the requirements of Paragraph 3.05, including substitutions not properly approved and authorized, may be considered defective.
- C. All defective Work or Work found not to be in compliance with the requirements of the Contract, or applicable law, building codes, rules or regulations, appearing within one year of the date of Substantial Completion of the whole Work will be promptly corrected by the Contractor at the Contractor's own cost.

The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of the Contractor's failure to conform to Contract requirements; or any defect of equipment, material, workmanship, or design furnished by the Contractor.

- D. The Contractor will be responsible for determining that all materials furnished for the Work meet all requirements of the Contract Documents. The Owner may require the Contractor to produce reasonable evidence that a material meets such requirements, such as certified reports of past tests by qualified testing laboratories, report of studies by qualified experts, or other evidence which in the opinion of the Owner would lead to a reasonable certainty that any material used, or proposed to be used, in the Work meets the requirements of the Contract Documents.
1. All such data will be furnished at the Contractor's expense. This provision will not require the Contractor to pay for periodic testing of different batches of the same material, unless such testing is specifically required by the Contract Documents to be performed at the Contractor's expense.
- E. In all cases in which a manufacturer's name, trade name or other proprietary designation is used in connection with materials or articles to be furnished under this Contract, whether or not the phrase "or equal" is used after such name, the Contractor will furnish the product of the named manufacturer(s) without substitution, unless a written request for a substitution has been submitted by the Contractor and approved by the Design Professional as provided in Subparagraph 3.05 D. Refer to Section 01605 – PRODUCTS AND SUBSTITUTIONS for additional requirements.
- F. If the Contractor proposes to use a material which, while suitable for the intended use, deviates in any way from the detailed requirements of the Contract Documents, the Contractor will inform the Owner in writing of the nature of such deviation at the time the material is submitted for approval and will request written approval of the deviation from the requirements of the Contract Documents.
- G. In requesting approval of deviations or substitutions, the Contractor will provide, upon request, evidence leading to a reasonable certainty that the proposed substitution or deviation will provide a quality or result at least equal to that otherwise attainable. If, in the opinion of the Owner, the evidence presented by the Contractor does not provide a sufficient basis for such reasonable certainty, the Owner may eject such substitution or deviation without further investigation.
- H. The Contract Documents are intended to produce a structure of consistent character and quality of design. All components of the structure including visible items of mechanical and electrical equipment have been selected to have a coordinated design in relation to the overall appearance and function of the Project. The Design Professional or Owner will judge the design and appearance of proposed substitutes on the basis of their suitability in relation to the overall design of the Project, as well as for their intrinsic merits. The Design Professional or Owner will not approve as equal to the materials specified, proposed substitutes which, in the Design Professional's or Owner's opinion, would be out of character, obtrusive, or otherwise inconsistent with the character or quality of design of the Project. In order to permit coordinated design of color and finishes, the Contractor will, if required by the Design Professional or Owner,

furnish the substituted material in any color, finish, texture, or pattern which would have been available from the manufacturer originally specified, at no additional cost to the Owner.

- I. Any additional cost, or any loss or damage arising from the substitution of any material or any method from those originally specified, will be borne by the Contractor, notwithstanding approval or acceptance of such substitution by the Owner or the Design Professional, unless such substitution was made at the written request or direction of the Owner or the Design Professional.
- J. The Contractor will procure and deliver to the Owner, prior to Final Payment, all special warranties required by the Contract Documents. Delivery by the Contractor will constitute the Contractor's guarantee to the Owner that the warranty will be performed in accordance with its terms and conditions. Refer to Sections 01700 – PROJECT CLOSEOUT and 01740 – WARRANTIES for additional requirements.
- K. The warranties set out herein are not in lieu of any other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular purpose. The warranties set out herein are not in lieu of any other contractual, legal or equitable remedies available to the Owner. If the Contractor fails to correct any defective Work or Work found not to be in compliance with the requirements of the Contract Documents, or applicable laws, building codes, rules or regulations, within a reasonable time after receipt of written notice from the Owner, the Owner may correct it in accordance with Owner's right to carry out the Work. If such case occurs prior to final payment, an appropriate Change Order shall be issued deducting the cost of correcting such deficiencies from payments then or thereafter due to the Contractor. If payments then or thereafter due Contractor are not sufficient, the Contractor shall pay the difference to the Owner. All claims, costs, losses, and damages arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work by others) will be paid by Contractor.
- L. If the Contractor's correction or removal of defective Work causes damage to or destroys other completed or partially completed construction, the Contractor shall be responsible for the cost of correcting the destroyed or damaged construction.
- M. Nothing contained in Article 3.05 shall be construed to establish a period of limitations with respect to other obligations the Contractor has under this Contract. Establishment of the one-year, or other, period for correction of Work as described in this Article relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than to specifically correct the Work.
- N. If after the one year, or other, correction period, but before the applicable limitations period, the Owner discovers any defective Work or Work found not to be in compliance with the requirements of the Contract Documents, or applicable laws, building codes, rules or regulations, the Owner shall, unless the defective Work or Work found not to be in compliance with the requirements of the Contract Documents, or applicable laws, building codes, rules or regulations requires emergency correction, notify the Contractor. If the Contractor elects to correct the Work, it shall provide written notice of

such intent within fourteen (14) days of its receipt of notice from the Owner. The Contractor shall complete the correction of Work within a mutually agreed time frame. If the Contractor does not elect to correct the Work, the Owner may correct the Work by itself or others and charge the Contractor for the reasonable costs of the correction. Owner shall provide Contractor an accounting of such correction costs incurred.

- O. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of the Work that is not in accordance with the Contract Documents or release the Contractor's obligation to perform the Work in accordance with the Contract Documents: (1) observations by the Owner or the Owner's agents; (2) recommendations for payment made to the Owner or payment by the Owner (whether progress or final); (3) issuance of Certificates of Substantial or Final Completion; (4) use or occupancy of the Work or any part thereof by the Owner; (5) any review and approval of a Shop Drawing or sample submittal; (6) any inspection, test or approval by others; or (7) any correction of defective Work by the Owner.
- P. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for Work performed and materials furnished under this Contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.
- Q. None of these warranties shall limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

3.06 TAXES

- A. The Contractor will pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor which are legally enacted when Bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.
- B. Pursuant to Sales and Use Tax Law, Chapter 212, Florida Statutes, the Hillsborough County Aviation Authority is exempt from the payment of sales tax. The Hillsborough County Aviation Authority Certificate Number is 85-8013883484C-4. Unless otherwise indicated in the Contract Documents, all goods and services performed by Subcontractor (Sub-Subcontractors) or by suppliers are not exempt from State Sales Tax. All work performed by subcontractors for the Contractor and all supplies provided to the Subcontractor or Contractor are not exempt from State Sales Tax. All questions regarding the State of Florida Sales and Use Tax Law should be referred to the State of Florida Department of Revenue, Tallahassee, Florida.

3.07 PERMITS, FEES AND NOTICES

- A. The Contractor will secure and pay for all necessary and required permits and licenses including, but not limited to, batch plant permit(s), building permit(s), and all other permits, as well as all other fees, charges, taxes, licenses and inspections necessary for proper execution of the Contract and which are legally required when Bids are received.

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

The Contractor will secure and pay for all Certificates of Inspection and of Occupancy that may be required by authorities having jurisdiction over Work. No extension of time for completion will be granted. All appropriate sites, building and electrical permits, etc. shall be obtained and paid for by the Contractor. In addition, jurisdiction over this Work, and all required Certificates of Inspection and Occupancy, will be obtained from the appropriate jurisdiction as listed below:

Tampa International Airport (TPA)	Hillsborough County Board of County Commissioners (BOCC) and/or City of Tampa
Peter O. Knight Airport (TPF)	City of Tampa
Plant City Airport (PCM)	City of Plant City
Tampa Executive Airport (VDF)	BOCC

- B. The Contractor will comply fully with all applicable federal, state, county, municipal and other governmental laws, executive orders, wage, hour and labor, equal employment opportunity, disadvantaged business enterprises, pollution control and environmental regulations, applicable national and local codes, Florida Department of Transportation (FDOT) Policies, Guidelines, Standards, Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Commonly referred to as the “Florida Green Book”), Manual on Uniform Traffic Control Devices and requirements, FAA Advisory Circulars, and Owner’s Rules and Regulations. Any projects with FDOT funding require the Contractor to comply with all applicable provisions of the FDOT Public Transportation Grant Agreement. The Contractor will obtain all necessary permits, pay all required charges, fees and taxes and otherwise perform these services in a legal manner. In the event that any construction occurs on FDOT right of way, the Contractor shall comply with all FDOT requirements contained in Exhibit C of the FDOT Public Transportation Grant Agreement. The Contractor will obtain all necessary permits, pay all required fees and taxes, and otherwise perform these services in a legal manner. The Contractor will give all notices necessary and incidental to the due and lawful prosecution of the Work so as not to delay the completion of the Work.
- C. If the Contractor observes that portions of the Contract Documents are at variance with applicable laws, statutes, ordinances, building codes, and rules and regulations, the Contractor will promptly notify the Owner in writing, and necessary changes will be accomplished by appropriate Modification.
- D. If the Contractor performs Work that it knew or should have known to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Owner and Design Professional, the Contractor will assume full responsibility for such Work and will bear all attributable costs.
- E. The Contractor will keep fully informed of all Federal and State Laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the Work, or which in any way affect the conduct of the Work. To the maximum extent permitted by law, the Contractor will at all times observe and comply with all such laws, ordinances, regulations, orders and decrees.

3.08 ALLOWANCES

- A. The Contractor will include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances will be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor will not be required to employ persons or entities against which the Contractor makes reasonable objection.
- B. Unless otherwise provided in the Contract Documents:
 - 1. Allowances will cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
 - 2. Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts will be included in the allowances;
 - 3. Whenever costs are more than or less than allowances, the Contract Sum will be adjusted accordingly by Change Order. The amount of the Change Order will reflect (1) the difference between actual costs and the allowances under Subparagraph 3.08 B.1. and (2) changes in the Contractor's costs under Subparagraph 3.08 B.2.

3.09 CONTRACTOR'S MANAGEMENT TEAM

- A. The Contractor will employ a competent, full-time Project Management Team (Team) reasonably acceptable to the Owner and the Design Professional, consisting of at least one Field Supervisor and necessary representatives who will be in attendance at the Project site full time during the progress of the Work until the date of Substantial Completion of the whole Work, or for such additional time thereafter as the Owner may determine to be necessary for the expeditious completion of the Work.
 - 1. The names and qualifications of this Team for this Work will be submitted as part of Section 00420 – BIDDER'S GENERAL BUSINESS INFORMATION. They will have a minimum of five years of experience on similar projects of equal difficulty.
 - 2. The Owner will not recognize any subcontractor on the Work. The Contractor will at all times when Work is in progress be represented either in person by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Owner or the Design Professional.
 - 3. The Team will each have full authority to act on the Contractor's behalf. It is agreed and understood that, if requested in writing by the Owner or the Design Professional, the Contractor will replace any member of the Team with another individual meeting the required qualifications within three days of the receipt of the request if the Team member is found to be unsatisfactory to the Owner or the Design Professional for whatever reason. The Team will represent the Contractor and communications given to the Team will be as binding as if given to the Contractor. Important communications will be similarly confirmed on written request for each case. Should the Owner or the Design Professional find

any person(s) employed on the Project to be incompetent, unfit, or otherwise objectionable for its duties, the Contractor will immediately cause the employee to be dismissed and said employee will not be re-employed on this Project without written consent of the Owner or the Design Professional.

3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

- A. The Contractor will submit a preliminary and CPM (or bar chart) Construction Schedule in accordance with requirements under Section 01315 – SCHEDULES, PHASING. The schedule will not exceed time limits current under the Contract Documents. The schedule will be revised at appropriate intervals as required by the conditions of the Work and Project, will be related to the entire Project to the extent required by the Contract Documents, and will provide for expeditious and practicable execution of the Work.
- B. The Contractor will prepare and keep current, for the Design Professional's and Owner's approval, a schedule of submittals which is coordinated with the Contractor's Construction Schedule and allows the Design Professional and Owner reasonable time to review submittals.
- C. The Contractor's performance will conform to the most recent schedules.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor will maintain at the site for the Owner one as-built set of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record changes and selections made during construction, as well as approved Shop Drawings, Product Data, Samples and similar required submittals. These will be available to the Owner and Design Professional and will be delivered to the Design Professional for submittal to the Owner upon completion of the work. As-Built drawings will be reviewed monthly as part of the pay application process.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- A. Shop Drawings are drawings, diagrams, schedules, models and other data (including electronic data) specifically prepared for the work by the Contractor or a Subcontractor, Sub-Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
- B. Product data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- C. Samples are physical examples which illustrate materials, equipment or workmanship and established standards by which the Work will be judged.
- D. Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of its submittal is to demonstrate for those portions of the Work for which submittals are required the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Design Professional or Owner is subject to the limitations of Subparagraph 4.02 G.

- E. The Contractor will review, approve and submit to the Design Professional Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals made by the Contractor which are not required by the Contract Documents may be returned without action.
- F. The Contractor will perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Design Professional. Such work will be in accordance with approved submittals.
- G. By approving and submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor thereby represents that the Contractor has determined and verified all dimensions, qualities, field dimensions, relations to existing work, coordination with work to be installed later, coordination with information on previously accepted Shop Drawings, Product Data, Samples, or similar submittals and verification of compliance with all the requirements of the Contract Documents. The accuracy of such information is the responsibility of the Contractor. In reviewing Shop Drawings, Product Data, Samples, and similar submittals, the Owner will be entitled to rely upon the Contractor's representation that such information is correct and accurate.
- H. The Contractor will not be relieved of responsibility for deviations from requirements of the Contract Documents by the Owner's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Owner in writing of such deviation at the time of submittal and the Owner has given written approval to the specific deviation. The Contractor will not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Owner's approval thereof.
- I. The Contractor will direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Design Professional or Owner on previous submittals. Unless such written notice has been given, the Design Professional's or Owner's approval of a resubmitted Shop Drawing, Product Data, Sample, or similar submittal will not constitute approval of any changes not requested on the prior submittal.
- J. Informational submittals upon which the Owner is not expected to take responsive action may be so identified in the Contract Documents.
- K. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the Design Professional or Owner will be entitled to rely upon such certifications, and the Design Professional or Owner will not be required to make any independent examination with respect thereto.
- L. The Contractor will keep one clean copy of each submittal brochure and each Shop Drawing, bearing the Design Professional's or Owner's review stamp, at the Job Site.
- M. The Design Professional's or Owner's review is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Contractor is responsible for dimensions to be confirmed and

correlated at the Job Site, for information processes or techniques of construction, and for coordination of the Work of all trades.

- N. Burden-of-proof that products, materials, Shop Drawings, samples and submittals comply with the Contract Documents in every respect and that any substitutions, variations, deviations or modifications do exactly what is specified and will, in fact, work well in coordination and harmony and will serve the intended purpose will rest entirely with the Contractor. It will not be the Design Professional's or Owner's responsibility to have the burden-of-proof to prove the contrary.
- O. Submittals, requisitions, requests for interpretation, Shop Drawings and other items received by the Design Professional or Owner on Friday, Saturday, Sunday, on any normally recognized holiday, or on a day preceding such a holiday, will be considered received on the first working day (except Friday) which follows.
- P. Owner's date stamp of receipt will evidence date of receipt, modified per Paragraph 3.12 O. above. Date indicated on Owner's transmittal letter or transmittal form will be considered as date returned to Contractor.
- Q. Refer to Section 01340 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES for additional requirements.

3.13 USE OF SITE

- A. The right of possession of the premises and the improvements made thereon by the Contractor will remain at all times with the Owner. The Contractor's right to entry and use thereof arises solely from the permission granted by the Owner under the Contract Documents.
 - 1. The Contractor will confine the Contractor's apparatus, the storage of materials and the operations of the Contractor's personnel to limits indicated by law, ordinances, the Contract Documents and permits and/or directions of the Design Professional and will not unreasonably encumber the premises with the Contractor's materials. The Owner will not be liable to the Contractor, the Subcontractors, their employees or anyone else with respect to the conditions of the premises.
 - 2. Material will be arranged and maintained in an orderly manner with use of walks, drives, roads and entrances unencumbered. Store, place and handle material and equipment delivered to the Project Site so as to preclude inclusion of foreign substances or causing of discoloration. Pile neatly and compactly and barricade to protect public from injury. Protect material as required to prevent damage from weather or ground. Should it be necessary to move material at any time, or move sheds or storage platforms, the Contractor will move them as and when required at no additional cost to the Owner.
 - 3. The Owner assumes no responsibility for materials stored in buildings or on the Project site. The Contractor will assume full responsibility for damage due to storing of materials. Repairing of areas used for placing of sheds, offices and storage of materials will be performed by the Contractor.

- B. The Contractor shall obtain approval from the Owner prior to beginning any of the Work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate Work in accordance with the approved Construction Safety and Phasing Plan (CSPP) and Safety Plan Compliance Document (SPCD).

3.14 CUTTING AND PATCHING

- A. The Contractor will be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.
- B. The Contractor will not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor will not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent will not be unreasonably withheld. The Contractor will not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.
- C. Refer to Section 01045 – CUTTING AND PATCHING for additional requirements.

3.15 CLEAN UP

- A. The Contractor will keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor will remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials.
- B. If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof will be charged to the Contractor.
- C. Daily Clean-Up: The Contractor will keep the premises free from accumulation of waste materials or rubbish caused by Contractor's operations on a daily basis. In areas used by the public or exposed to public view, the Contractor will keep these areas in such a state of cleanliness so as not to reflect unfavorably upon the image of the Owner or any other entity at the Airport. In areas near airport operations, the Contractor will keep areas free from materials or Foreign Object Debris ("FOO") which could possibly be ingested into an aircraft engine or which could cause damage by being blown by aircraft engine blast effects.
- D. Refer to Sections 01110 – AIRPORT PROJECT PROCEDURES and 01700 – PROJECT CLOSEOUT for additional requirements.

3.16 ACCESS TO WORK

The Contractor will provide the Owner and Design Professional access to the Work in preparation and progress wherever located.

3.17 ROYALTIES AND PATENTS

The Contractor will pay all royalties and license fees. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. If the Contractor has reason to believe that the required design, process or product is an infringement of a patent; the Contractor will be responsible for such loss unless such information is promptly furnished to the Owner.

3.18 RECORDS AND DOCUMENTS

The Contractor will maintain all records and documents relating to the Contract during the course of the Work and for a period of at least seven years after the date of Final Acceptance. This includes all books and other evidence (including but not limited to subcontracts, subcontract change orders, purchase orders, bid tabulations, proposals, and other documents associated with the Contract) bearing on the Contractor's costs and expenses under this Contract. The Contractor will make these records and documents available for inspection by the Owner at the Contractor's office at all reasonable times, without direct charge, and will provide electronic copies of all requested documents including but not limited to subcontracts, subcontract change orders, purchase orders, bid tabulations, proposals, and all other documents associated with the project at no cost to the Owner. If approved by the Owner, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents. If the Contractor fails to make the records and documents available, the Owner may, after written notice to the Contractor, take such action as may be necessary including the withholding of any further payment. Furthermore, failure to make such records and documents available may be grounds for termination pursuant to Paragraph 13.01 or grounds for Owner to seek damages from Contractor.

3.19 SANITARY, HEALTH, AND SAFETY PROVISIONS

The Contractor's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.

3.20 ENVIRONMENTAL PROTECTION

The Contractor will comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor will take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

3.21 SUBCONTRACTS

With the Contractor's payment applications, the Contractor shall provide copies of all new subcontracts to the Owner along with the new Subcontractor's initial payment application. At a minimum, the information shall include the following:

- A. Subcontractor's legal company name.
- B. Subcontractor's legal company address, including County name.
- C. Principal contact person's name and telephone number.
- D. Complete narrative description, and dollar value of the work to be performed by the subcontractor.

- E. Copies of required insurance certificates in accordance with the Contract Documents.
- F. DBE or W/MBE status.
- G. All exhibits to the subcontract.
- H. Any applicable licenses required to perform the Work.

The Contractor shall provide copies of all subcontract change orders no later than seven (7) days following its execution.

PART 4 – ADMINISTRATION OF THE CONTRACT

4.01 Design Professional

- A. The Design Professional is referred to throughout the Contract Documents as if singular.
 - 1. Wherever the term “Design Professional” appears in the Contract Documents, it will mean the Design Professional on record for the project or Owner’s other authorized representative(s).
 - 2. Wherever the term “Owner’s authorized representative(s)” appears in the Contract Documents, it will include Owner, or Owner’s other authorized representative(s).
- B. In case of termination of employment of the Design Professional, the Owner will appoint a Design Professional against whom the Contractor makes no reasonable objection and whose status under the Contract Documents will be that of the former Design Professional.

4.02 DESIGN PROFESSIONAL’S ADMINISTRATION OF THE CONTRACT

- A. The Design Professional will provide administration of the Contract as described in the Contract Documents, and will be the Owner’s representative (1) during construction, (2) until final payment is due and (3) with the Owner’s concurrence, from time to time during the correction period described in Paragraph 11.02. The Design Professional will advise and consult with the Owner. The Design Professional will have authority to act on behalf of the Owner.
- B. The Design Professional will visit the site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the completed Work and to determine in general if the Work is being performed in a manner indicating that the Work, when completed, will be in accordance with the Contract Documents. However, the Design Professional will not be required to make exhaustive or continuous on-site inspections to check quality or quantity of the Work. On the basis of on-site observations, the Design Professional will keep the Owner informed of the progress of the Work and will endeavor to guard the Owner against defects and deficiencies in the Work.
- C. The Design Professional will not have control over or charge of, and will not be responsible for, construction means, methods, techniques, sequences or procedures, or

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility as provided in Paragraph 3.03. The Design Professional will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Design Professional will not have control over or charge of, and will not be responsible for, acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

- D. Communications Facilitating Contract Administration. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor will endeavor to communicate through the Design Professional. Communications by and with the Design Professional's consultants will be through the Design Professional. Communications by and with subcontractors and material suppliers will be through the Contractor. Communications by and with separate contractors will be through the Owner.
- E. Based on the Design Professional's observations and evaluations of the Contractor's Applications for Payment, the Design Professional will review and certify the amounts due the Contractor and will approve or disapprove the Application for Payment.
- F. The Owner and Design Professional will have authority to reject Work which does not conform to the Contract Documents. Whenever the Owner or Design Professional considers it necessary or advisable for implementation of the intent of the Contract Documents, the Owner or Design Professional will have authority to require additional inspection or testing of the Work in accordance with Subparagraphs 12.05 B. and 12.05 C., whether or not such work is fabricated, installed or completed. However, neither this authority of the Owner or Design Professional nor a decision made in good faith either to exercise or not to exercise such authority will give rise to a duty or responsibility of the Owner or Design Professional to the Contractor, subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.
- G. The Design Professional will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents and only to the extent which the Owner or Design Professional believes desirable to protect the Owner's interests. The Design Professional's action will be taken with reasonable promptness, while allowing sufficient time in the Design Professional's professional judgment to permit adequate review, taking into account the time periods set forth in the latest recognized Construction Schedule prepared by the Contractor and reviewed by the Design Professional. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Design Professional's review of the Contractor's submittals will not relieve the Contractor of the obligations under Paragraphs 3.03, 3.05 and 3.12. The Design Professional's review will not constitute approval of safety precautions or of any construction means, methods, techniques, sequences or procedures. The Design

Professional's approval of a specific item will not indicate approval of an assembly of which the item is a component.

- H. The Design Professional or Owner will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Paragraph 7.04.
- I. The Design Professional will conduct inspections in conjunction with the Owner to determine the date or dates of Substantial Completion and the date of Final Acceptance, will receive and forward to the Owner for the Owner's review and records written warranties and related documents required by the Contract and assembled by the Contractor, and will review and certify a final Application for Payment upon compliance with the requirements of the Contract Documents.
- J. The Design Professional, in conjunction with the Owner, will interpret and decide matters concerning performance under and requirements of the Contract Documents on written request of the Contractor. The Design Professional's response to such requests will be made with reasonable promptness and within time limits agreed upon. The Design Professional may, as the Design Professional judges desirable, issue additional drawings or instructions indicating in greater detail the construction or design of the various parts of the Work. Such drawings or instructions may be affected by other supplemental instruction or other notice to the Contractor and, provided such drawings or instructions are reasonably consistent with the previously existing Contract Documents, the Work will be executed in accordance with such additional drawings or instructions without additional cost or extension of the Contract Time.
- K. Interpretations and decisions of the Design Professional, in conjunction with the Owner, will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Design Professional will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions so rendered in good faith.
- L. The Design Professional's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.
- M. When the Contractor considers that the Work included in the Contract, or a portion thereof designated in the Contract documents for separate completion, is complete, the Contractor will notify the Owner and Design Professional in writing of the completion of the portion or the whole of the construction; and for all design work that originally required certification by a Professional Engineer, the Design Professional shall provide an Engineer's Certification of Compliance, signed and sealed by a Professional Engineer, the form of which is attached to the FDOT Public Transportation Grant Agreement to the Owner and Contractor in a timely manner. The certification shall state that work has been completed in compliance with the Project construction plans and specifications. If any deviations are found from the approved plans or specifications, the certification shall include a list of all deviations along with an explanation that justifies the reason to accept each deviation.

4.03 CLAIMS AND DISPUTES

- A. Definition. A Claim is a written demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, or an extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims must be made by written notice. The responsibility to substantiate claims will rest with the party making the claim.
1. If for any reason the Contractor deems that additional cost or Contract Time is due to the Contractor for Work not clearly provided for in the Contract Documents or previously authorized changes in the Work, the Contractor will notify the Owner in writing of its intention to claim such additional cost or Contract Time before the Contractor begins the Work on which the Contractor bases the claim. If such notification is not given or the Owner is not afforded proper opportunity by the Contractor for keeping strict account of actual cost or time as required, then the Contractor hereby agrees to waive any claim for such additional cost or Contract Time.
 2. Such notice by the Contractor and the fact that the Owner or Design Professional has kept account of the cost or time of the Work will not in any way be construed as proving or substantiating the validity of the Claim. When the Work on which the Claim for additional cost or Contract Time is based has been completed, the Contractor will, within 21 calendar days, submit Contractor's written Claim to the Owner. The failure to give notice as required herein will constitute a waiver of said Claim. Claims arising prior to Final Payment or the earlier termination of the Contract will be referred initially to the Owner for action as provided in Paragraph 4.04.
 3. Nothing in this subsection 4.03 shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.
- B. Claims must be made within 21 calendar days after occurrence of the event giving rise to such Claim or within 21 calendar days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. If the Contractor wishes to reserve its rights under this Paragraph, written notice of any event that may give rise to a Claim must be given within 21 calendar days of the event, whether or not any impact in money or time has been determined. Claims must be made by written notice. Any change or addition to a previously made Claim will be made by timely written notice in accordance with this Paragraph. The failure to give notice as required herein will constitute a waiver of said Claim.
- C. Continuing Contract Performance. Pending final resolution of a Claim, unless otherwise agreed in writing, the Contractor will proceed diligently with performance of the Contract. Owner, however, will be under no obligation to make payments on or against such disputed claims, disputes or other matters in question during the pendency of any proceedings to resolve such disputed claims, disputes or other matters in question.
- D. Non-Waiver of Claims by Owner for Final Payment. The making of final payment will not constitute a waiver of claims by the Owner.

- E. Claims For Concealed or Unknown Conditions. Owner may make available to the Contractor prior to the bid opening and during the performance of the Work, Record Documents and Drawings pertaining to the existing structures and/or facilities relative to this Project. Record Documents and Drawings will not be considered a part of the Contract Documents. Owner does not warrant the accuracy of such Record Documents and Drawings to the Contractor and the Contractor will be solely responsible for all assumptions made in reliance thereupon. Record Documents and Drawings are not warranted or intended to be complete depictions of existing conditions, nor do they necessarily indicate concealed conditions. The locations of electrical conduit, telephone lines and conduit, computer cables, FAA cables, storm lines, sanitary lines, irrigation lines, gas lines, mechanical apparatus and appurtenances, HVAC piping/ductwork, and plumbing may only appear schematically, if at all, and the actual location of such equipment is in many cases unknown. Contractor will take the foregoing into consideration when preparing its bid, and will not be entitled to any additional compensation on account of concealed conditions except as specifically set forth below.
1. Should the Contractor encounter concealed conditions in an existing structure or below the surface of the ground, not discoverable by a careful inspection and differing materially from conditions ordinarily encountered and generally recognized in or about a site of this type, the Contractor will stop work at the location where the concealed condition was discovered and give immediate written notice of the condition to the Owner. The Owner and Design Professional shall investigate and adjust the Contract Sum and/or time by Change Order upon claim by either party, if made before conditions are disturbed and in no event later than 21 days after the first observance of the conditions. Nothing herein is intended to limit or modify the obligations of the Contractor set forth in Section 01545 – UTILITIES. Contractor shall not be entitled to a Change Order for the Contract Sum and/or time if the Contractor knew of the existence of such conditions at the time Contractor bid, or the existence of such conditions could have been reasonably discovered or revealed as a result of any examination, investigation, exploration, test, or study of the site and contiguous areas as required by the Contract, or if Contractor failed to give written notice as required by this Article.
 2. There will be no adjustment of the Contract Sum on account of other costs resulting from topsoil or water conditions including, without limitation, costs on account of delay, administration, operations, temporary construction, cave-in or collapse of excavations, or pumping.
- F. Claims for additional cost. If the Contractor wishes to make claim for an increase in the Contract Sum, written notice as provided herein will be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under paragraph 10.03. Claim will be filed in accordance with the procedure established herein. Anticipated, unanticipated, abnormal or adverse weather conditions will not be the basis of a claim for additional cost. The Contract Sum will not be increased for any weather related conditions.
- G. CLAIMS FOR ADDITIONAL TIME

1. If the Contractor wishes to make claim for an increase in the Contract Time, written notice as provided herein will be given. The Contractor will have the burden of demonstrating the effect of the claimed delay on the Contract Time, and will furnish the Owner with such documentation relating thereto as the Owner will reasonably require. In the case of a continuing delay only one claim is necessary.
2. The Contract Time will not be increased for any reasonably anticipated weather related delay. The Owner may consider adverse weather conditions not reasonably anticipated as a basis of a claim for additional time.

H. ESCROW OF BID DOCUMENTS

1. The Contractor agrees that all documents relied upon in making or supporting its Bid will be retained in escrow prior to the date the Contract is awarded and preserved and updated during the course of the Work until Final Payment is made. The Owner will have the right to inspect any and all such Bid Documents and to verify that such Bid Documents are properly escrowed prior to the time of the Award of the Contract, or at any time thereafter during the course of the Work.
 - a. If any Claim is made pursuant to the Contract, the Contractor will provide for the Owner's review, at the Owner's request, all escrowed Bid Documents. If the Owner requests to review the escrowed Bid Documents and the Contractor fails to timely provide them or has failed to preserve them, no claim by the Contractor will be honored by the Owner.
 - b. If the Contractor contends that such Bid Documents are proprietary or otherwise confidential, the Contractor will so state as to any such documents, will provide them to the Owner as part of the Claim process, and will identify all such documents as exempted from disclosure under Florida Statute Chapter 119.
 - c. Said escrowed Bid Documents referred to in this Part will be subject to review in the event of any audit. The Owner may require that an appropriate audit be conducted. In the event the audit supports the Contractor's claim, the Owner will pay for the audit. In the event the audit does not support the Contractor's claim, the Contractor will pay for the audit.
 - d. The Contractor will provide all information and reports requested by the Owner, or any of its duly authorized representatives, or directives issued pursuant thereto, and will permit access, for the purpose of audit and examination to the Contractor's books, records, accounts, documents, papers or other sources of information and its facilities, as may be determined by the Owner to be pertinent to ascertain compliance with this Part. The Contractor will keep all Project accounts and records which fully disclose the amount of the Bid. The accounts and records will be kept in accordance with an accounting system that

will facilitate an effective audit in accordance with the Single Audit Act of 1984.

4.04 RESOLUTION OF CLAIMS AND DISPUTES

- A. The failure of the Owner to enforce at any time or for any period of time any one or more provisions of this Contract will not be construed to be and will not be a waiver of any such provision or provisional or of its right thereafter to enforce each and every provision.
- B. The following shall occur as a condition precedent to the Owner's review of a claim unless waived in writing by the Owner:

Field Representatives' Meeting: Within five days (5) after a dispute occurs, the Contractor's senior project management personnel who have authority to resolve the dispute shall meet with the Design Professional and Owner's project representative who have authority to resolve the dispute, in a good faith attempt to resolve the dispute. If a party intends to be accompanied at a meeting by legal counsel, the other party shall be given notice at least three (3) business days and also may be accompanied by legal counsel. All negotiations pursuant to this clause are confidential and shall be treated as compromise and settlement negotiations for purposes of rules of evidence.

Management Representatives' Meeting: If the Field Representatives' Meeting fails to resolve the dispute, a senior executive for the Contractor and for the Owner, neither of which have day to day Project management responsibilities, shall meet, within ten days (10) after a dispute occurs, in an attempt to resolve the dispute and any other identified disputes or any unresolved issues that may lead to dispute. The Owner may invite the Design Professional to this meeting. If a party intends to be accompanied at a meeting by legal counsel, the other party shall be given notice at least three (3) business days and also may be accompanied by legal counsel. All negotiations pursuant to this clause are confidential and shall be treated as compromise and settlement negotiations for purposes of rules or evidence.

Following the Field Representatives' Meeting and the Management Representatives' Meeting, the Owner will review the Contractor's claims and may (1) request additional information from the Contractor which will be immediately provided to Owner, or (2) render a decision on all or part of the claim. The Owner will endeavor to notify the Contractor in writing of the disposition of the claim within 21 days following the receipt of such claim or receipt of additional information requested.

- 1. If the Owner decides that the Work relating to such Claim should proceed regardless of the Owner's disposition of such Claim, the Owner will issue to the Contractor a written directive to proceed. The Contractor will proceed as instructed.
- 2. Any action initiated by either party associated with a claim or dispute will be brought in the Circuit Court in and for Hillsborough County, Florida, such Court having sole and exclusive jurisdiction. Mediation with a mediator approved by the Owner shall be a condition precedent to litigation. Any such mediation will be subject to Rule 1.700 et seq, Florida Rules of Civil Procedure and Chapter 44 Fla. Statutes.

PART 5 – SUBCONTRACTORS

5.01 DEFINITIONS

- A. A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work. The term “Subcontractor” is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term “Subcontractor” does not include a separate Contractor or subcontractors of a separate Contractor.
- B. A Sub-Subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work. The term “Sub-Subcontractor” is referred to throughout the Contract Documents as if singular in number and means a Sub-Subcontractor or an authorized representative of the Sub-Subcontractor.
- C. The Owner or Design Professional will not recognize any Subcontractor or Sub-Subcontractor on the Work. The Contractor will at all times, when Work is in progress, be represented either in person by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Owner or Design Professional.

5.02 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

- A. Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, will furnish in writing to the Owner, the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. After due investigation, the Owner will promptly reply to the Contractor in writing stating whether or not the Owner has reasonable objection to any such proposed person or entity. Failure of the Owner to reply will constitute notice of no reasonable objection.
- B. The Owner reserves the right to investigate the prequalification and qualifications and responsibility of proposed or actual Subcontractors, and to prohibit same from performing Work on the Project where such investigation, in the judgment of the Owner, reveals that such Subcontractors are unqualified and/or non-responsible. The Owner’s criteria for such determination may include, without limitation: financial condition, experience, character of workers and equipment, and past performance. The Contractor will not contract with a proposed person or entity to which the Owner has made reasonable and timely objection. The Contractor will not be required to contract with anyone to whom the Contractor has made reasonable objection.
- C. If the Owner has reasonable objection to any such proposed person or entity, the Contractor will submit a substitute to whom the Owner have no reasonable objection.
- D. The Contractor will not change a Subcontractor, person or entity listed in Section 00430 – SUBCONTRACTOR’S LIST without permission of the Owner.
- E. The Owner reserves the right but does not assume the obligation to pay any and all Subcontractors, Sub-Subcontractors and Suppliers directly or by joint check if a dispute

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

arises with the Contractor. The Contractor agrees that any such payment would not be an interference with contractual relations.

5.03 SUBCONTRACTUAL RELATIONS

By appropriate contract, written where legally required for validity, the Contractor will require each Subcontractor, to the extent of the work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by the Contract Documents, assumes toward the Owner and Design Professional. Each subcontract agreement will preserve and protect the rights of the Owner and Design Professional under the Contract Documents with respect to the work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and will allow to the Subcontractor, unless specifically provided otherwise in the subcontract, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor will require each Subcontractor to enter into similar contracts with Sub-Subcontractors. The Contractor will make available to each proposed Subcontractor, prior to the execution of the subcontract, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract which may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-Subcontractors. The Contractor will include a provision providing the Owner the same rights to audit at the subcontractor level in all of its subcontracts executed related to this Contract.

PART 6 – CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.01 OWNER’S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

- A. The Owner reserves the right to perform construction or operations related to the Project with the Owner’s own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation.
- B. When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term “Contractor” in the Contract Documents in each case will mean the Contractor who executes each separate Owner-Contractor contract.
- C. The Contractor, with the Owner’s assistance, will coordinate each separate contractor with the Work of the Contractor, who will cooperate with them. The Owner will provide for the coordination of the Owner’s own forces with the Work of the Contractor, who will cooperate with them. The Contractor will coordinate with other separate contractors and the Owner in reviewing construction schedules. The Contractor will make any revisions to the Construction Schedule deemed necessary after a joint review and mutual agreement. The construction schedules will then constitute the schedule to be used by the Contractor, separate contractors and the Owner until subsequently revised.

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

6.02 MUTUAL RESPONSIBILITY

- A. The Contractor will afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities and will connect and coordinate the separate contractors' construction and operations with the contractors' construction and operation as required by the Contract Documents.
- B. If any part of the Contractor's Work depends, for proper execution or operation, upon the Work or any applicable portion thereof, of any other separate contractor, the Owner will give the Contractor written notice of the date when the other contractor will have completed its construction or any applicable portion thereof and the Contractor will have 15 days from the date so specified within which to inspect the other contractor's construction or any applicable portion thereof and to accept said construction or to reject in a written statement to the Owner reciting all discrepancies or defects which affect Contractor's work and, therefore, must be remedied. Upon receipt of such statement, the Design Professional will see that necessary corrections are made and will notify the Contractor when such corrective work is to be complete. The Contractor will have 15 days from the date so specified within which to inspect and report again, in order to determine that discrepancies or defects have been corrected.
 - 1. Failure of the Contractor to inspect and report, as set forth above, will constitute an acceptance of the other contractor's construction or any applicable portion thereof as fit and proper to receive Contractor's Work, except as to latent defects which may develop in the separate contractor's construction or any applicable portion thereof after the execution of the Contractor's work.
 - 2. Upon completion of the other contractor's construction or any applicable portion thereof, the area will be turned over to the Contractor.
- C. Costs caused by delays or defective construction will be borne by the party responsible therefore.
- D. The Contractor will promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in Subparagraph 10.02 E.
- E. Should the Contractor cause damage to the work or property of any separate contractor on the Project, the Contractor will, upon due notice by the Owner, settle with such other contractor by contract if other contractor will so settle. If such separate contractor sues the Owner on account of any damage alleged to have been so sustained, the Owner will notify the Contractor who will defend such proceedings with the cooperation of the Owner and, if any judgment against the Owner arises therefrom, the Contractor will pay or satisfy same and will reimburse the Owner for all reasonable attorneys' fees and court costs which the Owner has incurred.
- F. The Owner and each separate contractor will have the same responsibilities for cutting and patching as are described for the Contractor in Paragraph 3.14.

6.03 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Paragraph 3.15, the Owner may clean up and allocate the cost among those responsible as the Owner, in its sole discretion, determines to be just.

PART 7 – CHANGES IN THE WORK

7.01 CHANGES

- A. Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, only by Modification, subject to the limitations stated in this Part and elsewhere in the Contract Document.
 - 1. Any Claim for payment for changes in the Work that is not covered by written Modification will be rejected by the Owner. The Contractor, by submitting the Bid, acknowledges and agrees that the Contractor will not be entitled to payment for changes in the Work unless such Work is specifically authorized in writing by the Owner in advance. The terms of this Part may not be waived by the Owner unless such waiver is in writing and makes specific reference to this Part.
- B. A Change Order will be based upon contract among the Owner and Contractor. A Construction Change Directive requires a contract by the Owner and may or may not be agreed to by the Contractor. Work Order or written order for a change in the Work may be issued by the Owner alone.
- C. Changes in the Work will be performed under applicable provisions of the Contract Documents, and the Contractor will proceed promptly, unless otherwise provided in the Modification.
- D. If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are so changed in a proposed Modification that application of such unit prices to quantities of Work proposed will cause substantial unfairness to the Owner or Contractor, the applicable unit prices will be adjusted.
- E. ALTERATION OF WORK AND QUANTITIES.
 - 1. The Owner reserves the right to make such changes in quantities and Work as may be necessary or desirable to complete, in a satisfactory manner, the original intended Work. Unless otherwise specified in the Contract, the Owner shall be and is hereby authorized to make, in writing, such in-scope alterations in the Work and variation of quantities as may be necessary to complete the Work, provided such action does not represent a significant change in the character of the Work.
 - 2. For purpose of this Section, a significant change in character of Work means: any change (increase or decrease) in the total Contract cost by more than 25%; or any change in the total cost of a major Contract item by more than 25%. A major Contract item is defined as any item that is listed in the Bid, the total cost

of which is equal to or greater than 20% of the total amount of the awarded Contract.

3. Work alterations and quantity variances that do not meet the definition of significant change in character of Work shall not invalidate the Contract nor release the surety. The Contractor agrees to accept payment for such Work alterations and quantity variances.
4. Should the value of altered work or quantity variance meet the criteria for significant change in character of Work, such altered work and quantity variance shall be covered by a Supplemental Agreement. Supplemental Agreements shall also require consent of the Contractor's surety and separate performance and payment bonds. If the Owner and the Contractor are unable to agree on a unit adjustment for any Contract item that requires a Supplemental Agreement, the Owner reserves the right to terminate the Contract with respect to the item and make other arrangements for its completion.

7.02 CHANGE ORDERS

- A. A Change Order is a written instrument prepared by the Owner and signed by the Owner, Contractor and Design Professional, stating their agreement upon all of the following:
 1. a change in the Work;
 2. the amount of the adjustment in the Contract Sum, if any;
 3. the extent of the adjustment in the Contract Time, if any; and
 4. changes to the terms and conditions of this Contract including the W/MBE or DBE percentage, if any.
- B. Methods used in determining adjustments to the Contract Sum will include those listed in Paragraph 7.03 B.1.
- C. Supplemental Agreement is a written agreement between the Contractor and the Owner covering (1) work that would increase or decrease the total amount of the awarded Contract, or any major Contract item, by more than 25%, such increased or decreased Work being within the scope of the originally awarded Contract; or (2) Work that is not within the scope of the originally awarded Contract.

7.03 CONSTRUCTION CHANGE DIRECTIVES

- A. A Construction Change Directive is a written order prepared by the Owner or Design Professional and signed by the Owner, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum, Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

- B. A Construction Change Directive will be used in order to expedite the Work and avoid or minimize delays in the Work which may affect the Contract Sum or Contract Time. When determined by the Owner to be in the Owner's best interest, the Owner may, with or without the Contractor's agreement, direct or order the Contractor to proceed with changes in the Work by the issuance of a Construction Change Directive.
1. If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment will be based on one of the following methods:
 - a. Mutual acceptance of a lump sum, properly itemized and supported by sufficient substantiating data to permit evaluation;
 - b. By unit prices stated in the Contract Documents or otherwise mutually agreed upon;
 - c. By the cost estimated method as described in Paragraph 7.03 C., plus the accepted percentage, if applicable. The Contractor's estimate will become a fixed price which will not be changed by any variation in the actual cost of executing the Work covered by the change;
 - d. Cost to be determined in a manner agreed upon by the parties, plus, if applicable, percentage; or
 - e. As provided in Paragraph 7.03 F., by actual cost determined after the Work covered by the change is completed, plus, if applicable, percentage.
 2. As used in this Paragraph 7.03, Construction Change Directive's "cost" will mean the estimated or actual net increase in cost to the Contractor or Subcontractor for performing the Work covered by the change, including actual payments for materials, equipment rentals, expendable items, wages and associated benefits to workers and to supervisors employed full time at the site where the Work is performed, insurance, bonds, and other provable direct costs, but not including any administrative, accounting or expediting costs, or other indirect or overhead costs, or any wages or benefits of supervisory personnel not assigned full time to the site, or any amount for profit or fee to the Contractor, Subcontractor, or Sub-Subcontractor. Rates for the Contractor and Subcontractor owned equipment will not exceed the rates listed in the Associated Equipment Distributors rental rate book as adjusted to the regional area of the Work under this Contract.
 3. "Percentage" will mean an amount to be added to the cost for overhead and profit and any other expense which is not included in the cost of the Work covered by the change, as defined above. The maximum percentage for total overhead and profit and any other expense which is not included in the cost of the Work will be as follows:
 - a. For the Contractor, 15% of any net increase of costs of any Work performed by the Contractor's own forces on-site only.

- b. For the Subcontractor, 10% of any net increase of cost of any Work performed by the Subcontractor's own forces on-site only, plus 5% of any net increase in the cost of the Work for the Contractor on-site only.
 - c. Per the Contract negotiations and as noted in the exhibit(s).
 - 4. When in the reasonable judgment of the Owner a series of Construction Change Directives or Change Orders affect a single change, the percentage will be calculated on the cumulative net increase in cost, if any.
 - 5. Overhead will include the following:
 - a. Supervision wages, timekeepers, watchmen and clerks, hand tools, incidentals, general office expense, and all other expenses not included in "cost."
- C. Upon request of the Owner, the Contractor will, without cost to the Owner, submit to the Owner, in such form as the Owner may require an accurate written estimate of the cost of any proposed extra work or change. The estimate will indicate the quantity and unit cost of each item of materials, and the number of hours of work and hourly rate for each class of labor, as well as the description and amounts of all other costs chargeable under the terms of this Part. Unit labor costs for the installation of each item of materials will be shown if required by the Owner. The Contractor will promptly revise and resubmit such estimate if the Owner determines that it is not in compliance with the requirements of this Part, or that it contains errors of fact or mathematical errors.
 - 1. If required by the Owner, in order to establish the exact cost of new Work added or of previously required Work omitted, the Contractor will obtain and furnish to the Owner bona fide proposals from recognized suppliers for furnishing any material included in such Work. Such estimates will be furnished promptly so as to occasion no delay in the Work and will be furnished at the Contractor's expense. The Contractor will state in the estimate any extension of time required for the completion of the Work if the change or extra work is ordered.
- D. Upon receipt of a Construction Change Directive, the Contractor will promptly proceed with the change in the Work involved and advise the Owner of the Contractor's agreement or disagreement with the method provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum and/or Contract Time.
- E. A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including the adjustment in Contract Sum and/or Contract Time or the method for determining them. Such agreement will be effective immediately and will be subsequently recorded in/as a Change Order.
- F. If the Contractor does not respond promptly or disagrees with the method for adjustment of the Contract Sum, the method and the adjustment will be determined by the Owner on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, a percentage for overhead and profit. In such case, and also under Paragraph 7.03 B.1.(e),

the Contractor will keep and present, in such form as the Owner may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Subparagraph will be limited to the following:

1. Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
 2. Costs of materials, supplies and equipment, including costs of transportation, whether incorporated or consumed;
 3. Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others; and
 4. Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work.
- G. The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum will be actual net cost as confirmed by the Owner. When both additions and credits covering related Work or substitutions are involved in a change, the percentage for overhead and profit will be figured on the basis of net increase, if any, with respect to that change.
- H. If the Owner and Contractor do not agree with the adjustment in Contract Time or the method for determining it, the adjustment or the method will be referred to the Design Professional for determination.
- I. When the Owner and Contractor agree with the determination made by the Design Professional concerning the adjustments in the Contract Sum and/or Contract Time, or otherwise reach agreement upon the adjustments, such agreement will be effective immediately and will be subsequently recorded in preparation and execution of an appropriate Change Order.

7.04 CHANGES IN THE WORK

The Owner will have authority to order minor changes in the Work not involving adjustment to the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order and will be binding on the Owner and Contractor. The Contractor will carry out such written orders promptly.

7.05 EXTRA WORK

Should acceptable completion of the Contract require the Contractor to perform an item of Work not provided for in the awarded Contract as previously modified by Change Order or Supplemental Agreement, Owner may issue a Change Order to cover the necessary extra work. Change Orders for extra work shall contain agreed unit prices for performing the Change Order work in accordance with the requirements specified in the order, and shall contain any adjustment to the Contract Time that, in the Owner's opinion, is necessary for completion of the extra work.

When determined to be in the Owner's best interest, the Owner may order the Contractor to proceed with extra work. Extra work that is necessary for acceptable completion of the Project, but is not within the general scope of the Work covered by the original Contract shall be covered by a Supplemental Agreement.

If extra work is essential to maintaining the Project critical path, the Owner may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available to establish the level of effort necessary for the extra work, the Owner shall initiate a Change Order, Work Order or Supplemental Agreement to cover the extra work.

Any claim for payment of extra work that is not covered by written agreement (Change Order, Work Order or Supplemental Agreement) shall be rejected by the Owner.

PART 8 – TIME

8.01 DEFINITIONS

- A. Unless otherwise provided, the Contract Time(s) is the period of time allotted in the Contract Documents for Substantial Completion of the Work or designated portion thereof as defined in Paragraph 8.01 C., including adjustments thereto.
- B. The date of commencement of the Work is the date established in a written Notice to Proceed. The Contractor will not commence any actual operations prior to the date on which the Notice to Proceed is issued by the Owner. Notwithstanding the previous sentence, preliminary work such as procuring Insurance Policy Endorsements, Certificates of Insurance and Payment and Performance Bonds can proceed after the Contract is signed and prior to the Notice to Proceed. The Contractor will begin the work to be performed under the Contract within ten days of the date set by the Owner in a written Notice to Proceed but, in any event, the Contractor will notify the Owner at least 48 hours in advance of the time actual construction operations will begin. The date will not be postponed by the failure to act of the Contractor or of persons or entities for whom the Contractor is responsible.
- C. The date of Substantial Completion is the date certified by the Owner in accordance with Paragraph 9.07.
- D. The term "day" as used in the Contract Documents will mean calendar day unless otherwise specifically defined.
- E. The Contractor's plea that insufficient Contract Time was specified will not be a valid reason for extension of Contract Time. No extension of Contract Time for completion will be granted.

8.02 PROGRESS AND COMPLETION

- A. Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Contract the Contractor confirms that the Contract Time is a reasonable period for performing the Work. In the event the Contractor fails to promptly complete

the Work herein within the Contract Time(s) provided, liquidated damages will accrue in the amount(s) and manner specified in the Contract.

Should a review indicate the Work has fallen behind the recognized Construction Schedule, at the sole discretion of the Owner, funds equal to the established liquidated damages for the number of days behind schedule may be withheld until the Work is brought back on schedule.

- B. The Contractor will furnish sufficient forces, construction plant and equipment, and will work such hours, including night shifts and other overtime operations, as may be necessary to insure prosecution of the Work in accordance with the Construction Schedule and the time limit set forth in the Contract. The Contractor will take such steps as may be necessary or as may be directed by the Owner to improve Contractor's progress by increasing the number of shifts, overtime operations, days of work, and amount of construction plant, as may be required, at no additional cost to the Owner.
- C. Maintenance of Schedule: The Contractor will prosecute the Work with sufficient forces, materials, and equipment to maintain progress in accordance with the Construction Schedule. Should the Work in whole or in part fall behind the Construction Schedule, or should the progress of the Work appear to the Owner to be inadequate to assure completion on the completion date(s) specified in the Contract, the Contractor will, upon written notice from the Owner, take appropriate steps within seven days of such notice to put the Work back on schedule and meet the specified completion date(s).
1. Should the Contractor fail to institute appropriate measures within seven days, or should the measures taken fail to put the Work back on schedule within 14 days of such notice, the Owner may, but will not be required to, supplement the Contractor's forces, materials and/or equipment with other forces, materials and/or equipment. The cost of such other forces, materials and/or equipment will be deducted by the Owner from sums otherwise owing to the Contractor. The Owner's use of such supplemental forces, materials and/or equipment will not excuse the Contractor from performing all of its obligations under the Contract Documents or relieve the Contractor from liquidated damages. The Contractor will coordinate and work together with such supplemental forces, materials and/or equipment.
 2. Failure of the Contractor to comply with the requirements under this Paragraph will be grounds for determination that the Contractor is not prosecuting the Work with such diligence as will insure completion within the time(s) specified and such failure constitutes a material breach of the Contract Documents. Upon such determination, the Owner may terminate the Contractor's right to proceed with the Work, or any separate part thereof, in accordance with Part 13, TERMINATION OR SUSPENSION OF THE CONTRACT.
- D. The Contractor will proceed expeditiously with adequate forces and will achieve Substantial Completion within the Contract Time(s).

- E. Should the execution of the Work be discontinued for any reason, the Contractor will notify the Owner at least 24 hours in advance of resuming operations.

8.03 DELAYS AND EXTENSIONS OF TIME

- A. No claim for damages or any claim other than for an extension of time will be made or asserted against the Owner by reason of any Delay, whether such Delay is related to (i) late or early completion, (ii) delay in the commencement, prosecution or completion of the Work, (iii) hindrance or obstruction in the performance of the Work, (iv) loss of productivity, or (v) other similar claims (collectively "Delay"), whether or not such Delay is foreseeable, unless the Delay is caused by acts of the Owner constituting fraud or active interference with the Contractor's performance of the Work, and only to the extent such acts continue after the Contractor furnishes the Owner with notice of such fraud or active interference. The Contractor will not be entitled to an increase in the Contract Sum or payment or compensation of any kind from the Owner for direct, indirect, consequential, impact or other costs, expenses or damages, including but not limited to: damages related to loss of business, loss of opportunity, impact damages, loss of financing, principal office overhead and expenses, loss of profits, loss of bonding capacity and loss of reputation; costs of acceleration or inefficiency, arising because of Delay, disruption, interference or hindrance from any cause whatsoever; provided, however, that this provision will not preclude recovery of direct and actual damages by the Contractor for hindrances or Delays due solely to fraud or active interference on the part of the Owner. Otherwise, the Contractor may be entitled only to extensions of the Contract Time as the sole and exclusive remedy for such resulting Delay, in accordance with and to the extent specifically provided above. The Owner's exercise of any of its rights or remedies under the Contract Documents (including but not limited to, order changes in the Work, directing suspension, rescheduling or correction of the Work), regardless of the extent or frequency of Owner's exercise of such rights or remedies, shall not be construed as active interference with the Contractor's performance of the Work.
- B. Claims relating to time will be made in accordance with applicable provisions of Paragraph 4.03. Contractor's plea that insufficient time was specified will not be a valid reason for extension of the Contract time. Contract time will not be extended for a weather related Delay except as provided in Paragraph 4.03.
 - 1. Permitting the Contractor to continue and finish the Work or any part of it after the time fixed for its completion, or after that date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the Contract.

PART 9 – PAYMENTS AND COMPLETION

9.01 CONTRACT SUM

The Contract Sum is stated in the Contract and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

9.02 SCHEDULE OF VALUES

- A. Before submitting the first Application for Payment, the Contractor will submit to the Owner and the Design Professional a Schedule of Values. Refer to Section 01370 – SCHEDULE OF VALUES for additional information.
1. The Schedule of Values will be approved by the Owner and the Design Professional prior to submitting the initial Application for Payment.
 2. The Schedule of Values will be in a form as required by the Owner and the Design Professional to adequately establish costs of the Work.
 3. This Schedule of Values will be prepared in such a form and supported by such data to substantiate its accuracy in reflecting the above breakdown for administrative and payment purposes as the Owner or Design Professional may require and will be revised later if found by the Design Professional to be inaccurate. If the Contract involves multiple projects and/or airports, project and/or airport sub-totals will be required.
 4. This Schedule of Values, unless objected to by either the Owner or the Design Professional, will be used only as a basis for the Contractor's Application for Payment.
 5. The Schedule of Values must be sent electronically in Microsoft Excel format along with the Application for Payment.
 6. Initial Payment Application: The principal administrative actions and submittals which will precede or coincide with submittal of the Contractor's first Application for Payment are as follows, but not necessarily by way of limitation:
 - a. Listing of Subcontractors and principal suppliers and fabricators.
 - b. Schedule of Values.
 - c. Initial recognized CPM (or Bar Chart) Construction Schedule.
 - d. Schedule of submittals.
 - e. Stored Material spreadsheet and verification form.
 - f. Subcontractor signed agreements.
 - g. E-Verify compliance plans for Contractor and Subcontractors per Article 12.06, E-Verify Requirement.
 - h. E-Verify Certifications for Subcontractors. Subsequent applications for payment will include E-Verify Certifications for Subcontractors not included with the initial application for payment.
 - i. E-Verify reports for any new employees hired by the Contractor and Subcontractors since the start of the Contract Term. Subsequent applications for payment will include E-Verify reports for any new employees hired by the Contractor and Subcontractors not included with the initial application for payment. E-Verify reports will only be

required when the Contractor and Subcontractors hire new employees and will not be required if the Contractor and Subcontractors do not hire any new employees.

9.03 APPLICATIONS FOR PAYMENT

- A. The Contractor will, as a condition precedent to the right to receive any monthly payment, submit to the Owner, an Application for Payment, sample attached herein and identified as Exhibit A – Aviation Authority Application for Payment.
1. Scope of Payment: For performance of this Contract, the Owner will make payments in U.S. Dollars to the Contractor in accordance with the Owner approved Schedule of Values, which will be based on the Contract Sum amount established by the Contractor in. It is understood that the Contract Sum amount to be paid to the Contractor will be totally based on the said amount contained in Section and made a part of this Contract for the Work actually complete.
 - a. The Contractor will receive and accept compensation provided for in the Contract as full payment for furnishing all materials, for performing all Work under the Contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the Work or the prosecution thereof, subject to the provisions of Paragraph 11.02 G., herein.
 - b. When the “basis of payment” subsection of a technical specification requires that the Contract price (price bid) include compensation for certain Work or material essential to the item, this same Work or material will not also be measured for payment under any other Contract item which may appear elsewhere in the Contract Documents. For the purposes of clarification, this certain Work or material essential to the item is incidental and included in the basis of payment.
 2. With the exception of the month of September, all notarized Applications for Payment will be submitted to the Owner by the third of each month. In the event that the third of the month falls on a Saturday, Sunday, or non-working day, Applications for Payment are due the prior business day. Payment will be made on the twenty fifth of the month. If the twenty fifth of the subsequent month falls on a Saturday, Sunday or non-working day, then payment will be made on the next business day. Applications for Payment submitted more than 25 days prior to the third of the month will be rejected and returned. Due to the end of fiscal year financial closeout, September Applications for Payment will be required to be submitted by September 12th, and in the event that the 12th falls on a Saturday, Sunday, or non-working day, Applications for Payment are due the next business day and a subsequent payment will be made the second Friday of October. The Owner requires the Contractor to have a pencil copy review and approval of all Applications for Payment with the Owner’s Construction Project Manager prior to its submittals.
 3. The Contractor will submit to the Owner via email to AppforPayment@TampaAirport.com, one electronic copy of an executed and

notarized original of an itemized Application for Payment prepared on a form supplied by the Owner at the pre-construction meeting and based on the agreed Schedule of Values and copy (pdf) of all submitted backup documents, supported by such data substantiating the Contractor's right to payment as the Owner or Design Professional may require and reflecting retainage for all Work performed through the last day of each month or agreed upon date. The Application for Payment will be certified by a person duly authorized in writing to execute contractual instruments on behalf of the Contractor.

- a. Each Application for Payment will include the Contractor's signed notarized statement, based on the agreed Schedule of Values of the value of the Work. The total payment for each month will be broken down according to the specific items from the Schedule of Values that have been completed/delivered for which payment is requested. All such payments will be commensurate with the actual progress of the Work which must be substantiated and itemized in the Monthly Construction Schedule. Payment will not be made for any Work which cannot be so substantiated. Refer to Section 01315 – SCHEDULES, PHASING.
 - b. All progress payments will be subject to correction following the discovery of an error, misrepresentation, or unallowable cost in any previous Application for Payment. Approval of such erroneous Application for Payment will not in any respect be taken as an admission by the Owner of the amount of Work completed, or the release of the Contractor from any of its responsibility under the Contract.
4. The Contractor's design and Construction Schedule will be updated on a monthly basis and a copy thereof submitted with each of the Contractor's Applications for Payment. This schedule update shall include a minimum thirty (30) day "look-ahead schedule", projected variances and calculation of the number of days difference between the as-built critical path and the Construction Schedule critical path. The Contractor shall, with each Application for Payment, provide completed monthly updated information for the previous month on the Construction Schedule and updated information on manpower indicated as-built and as-planned conditions. The updated information in the Construction Schedule shall not modify any milestone dates in the Construction Schedule that Owner has previously approved. The Owner will not approve for payment an Application for Payment not containing the Contractor's submission of an approved monthly design and Construction Schedule update. Refer to General Requirements Section 1315 – SCHEDULES, PHASING. Submission of the design and Construction Schedule will not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all Work to comply with the requirements of the Contract Documents.
 5. In addition to the schedule updates required above, with each Application for Payment, Contractor shall, in addition to documentation required under the Contract, submit the following information which is required to process any Application for Payment including a monthly status report concisely but

completely describing in narrative form, the current status of the Work including, without limitation:

- a. A review of actual progress during the month in comparison to the Construction Schedule and, if actual progress is behind schedule, discussion of any “work around” or “catch up plan” that Contractor has employed or will employ to recover the original Construction Schedule;
 - b. A concise statement of the outlook for meeting future Construction Schedule dates, and the reasons for any change in outlook from a previous report;
 - c. A concise statement of significant progress on major items of Work during the report period, with progress photographs as necessary to document the current status of the Work;
 - d. A review of any significant technical problems encountered during the pay application period and the resolution or plan for resolution of the problems;
 - e. An explanation of any corrective action taken or proposed;
 - f. A complete review of the status of Change Orders, including a review of any changes in the critical path for the Construction Schedule which result from Change Orders approved by Owner during the month, as well as a review of the schedule impact of Change Order requests then pending;
 - g. A summary of any claims anticipated by the Contractor with respect to the Work, including the anticipated cost and schedule impacts of any such claims;
 - h. A cumulative summary of the number of days of, and the extent to which the progress of the Work was delayed by, any of the causes for which Contractor could be entitled to an extensions of the Contract Time; and
 - i. An updated material purchase log.
6. Further, the Design Professional will not recommend for payment by the Owner an Application for Payment without satisfactory documentation of material and services purchases scheduled to have been issued during the period of time covered by the Application for Payment. Copies of issued Purchase Orders and Contract (subcontracts) will be considered satisfactory documentation. Refer to Section 01315 – SCHEDULES, PHASING.
- a. Entries will match current data of the Schedule of Values and Construction Schedule. Listing will include amounts of fully executed Change Orders per project approved by the Owner prior to the last day of the “period of work” covered by the Application for Payment. Incomplete Applications for Payment will be returned by the Owner without action.

- b. For Contracts with a prescribed DBE or W/MBE goal or participation, the Contractor will submit via email to AppforPayment@TampaAirport.com with each Application for Payment the completed Commitment Form showing the detailed accounting for all DBE or W/MBE participation as applicable. Contractor will submit one (1) in electronic format.

This accounting will include:

- (1) the names and addresses of DBE or W/MBE firms that have participated on the Contract;
- (2) a description of the Work each named DBE or W/MBE firm has performed;
- (3) the value of Work performed by each named DBE or W/MBE firm;
- (4) addition or replacement of approved DBE or W/MBE firms;
- (5) at 50% completion – a plan of action properly reflecting anticipated DBE or W/MBE achievement of commitment; and

- c. Not Used.

7. The Contractor will submit with each Application for Payment a detailed accounting of the value of Work performed to date by its Subcontractors. Submission detail will be organized identifying the supporting information.

This accounting will include:

- a. the names and addresses of its Subcontractors that have participated on the Contract;
- b. a description of the Work each of its Subcontractors has performed;
- c. the value of Work performed by each of its Subcontractors;
- d. fully signed and complete Subcontractor agreements;
- e. copies of Waivers of Right to Claim against the Payment Bond given by each Subcontractor, supplier, and Sub-Contractor and supplier for Sub-Contractor for the period up to the date of the Application for Payment; and
- f. equipment purchased for and paid by the Owner must be identified when invoiced so that an asset tag can be attached to that equipment. A detailed listing in Excel format must be submitted with the invoice when equipment is purchased. Final accounting for all assets will be performed at the completion of the project. Any assets unaccounted for will be reimbursed to the Owner.

8. The Design Professional will not recommend for payment by the Owner an Application for Payment without the Contractor's submission of the detailed DBE or W/MBE accounting.

9. The Design Professional will approve or disapprove the Contractor's Application for Payment within seven days after the receipt thereof and, upon approval, promptly issue to the Owner an Application for Payment recommending payment to the Contractor. Upon receipt by the Owner of the approved Application for Payment, the Owner will make payment according to the Owner's standard payment procedures following the month in which the Application for Payment was submitted. The Contractor agrees to pay each Subcontractor for satisfactory performance of its subcontract within 10 days after the Contractor's receipt of payment from the Owner. The Contractor agrees further to release retainage payments to each Subcontractor within 10 days upon receipt from Owner and after the Subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written notice to the Owner. This clause applies to both DBE or W/MBE and non-DBE or W/MBE Subcontractors.
10. The Owner will pay to the Contractor 95% of the amount of all Applications for Payment submitted by Contractor. The Applications for Payment will represent the actual value, based on the Contract amount, of the Work satisfactorily performed on the Schedule of Values, less the aggregate of all previous payments, and will reflect a retainage of 5% of the total amount payable for Work satisfactorily completed to date. Upon written request from the Contractor, retainage may be released to the Contractor, in the sole discretion of the Owner, for the Work or designated portions thereof upon reaching Substantial Completion, as defined in Section 9.07, Substantial Completion. Any amounts that are the subject of a good-faith dispute, the subject of a claim brought pursuant to F.S. § 255.05, or are otherwise the subject of a claim or demand, will not be released. Retainage will not be withheld on design and construction administration fees, if any.

The Contractor is required to pay all Subcontractors for satisfactory performance of their contracts no later than 10 days after the Contractor has received a partial payment. The Contractor is required to fully pay retainage to the Subcontractor within 10 days after the subcontractor's work is satisfactorily completed. A Subcontractor's work is satisfactorily completed when (1) all the tasks called for in the subcontract have been accomplished and documented as required by the Owner, (2) the Work or a designated portion of the Work which the Subcontractor worked on has reached Substantial Completion (incremental acceptance) and (3) no good-faith disputes or claims involving the Subcontractor have manifested.

Notwithstanding the foregoing, at the Owner's sole option, when at least 95% of the Work has been completed, the Engineer shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the Contract value and the cost of the remaining Work to be done. Subject to Fla. Stat. Section 255.078 (if applicable), the Owner may retain an amount not less than twice the Contract value or estimated cost, whichever is greater, of the Work remaining to be done. Upon written request from the Contractor, the remainder (if any) may be released to the Contractor.

Notwithstanding the foregoing, at the Contractor's option, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

- a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.
- b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.
- c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.
- d. The Contractor shall obtain the written consent of the surety to such agreement.

11. In addition, the Owner may withhold or suspend additional payments or portions thereof to such extent as may be necessary to protect itself from loss on account of:

- a. Work or execution thereof not performed or not in accordance with the Contract Documents.
- b. The cost of the Work performed by the Owner, or contracted to others by the Owner, on behalf of the Contractor where said Work or the costs thereof are identified in the Contract Documents as the responsibility of the Contractor.
- c. Whether items of Work remain to be corrected or completed following Substantial Completion or Final Acceptance.
- d. Non-compliance with the Owner's DBE or W/MBE Policy or failure to meet the prescribed DBE goal or W/MBE expectancy set forth in this Contract, or to establish good faith efforts to do so.
 - (1) Failure of the Contractor to make a good faith efforts to achieve the DBE goal or W/MBE goal may be a material breach of this Contract. The determination of whether the Contractor's efforts were made in "good faith" will be made by the Owner.
 - (2) Unless otherwise provided in the Contract Documents, payment will only be for Work in place.
- e. Other non-compliance with the Contract, Owner Policies or Procedures.

B. The Owner will have the right to omit or order non-performance of a portion of the Work in the best interest of the Owner.

1. Should the Owner omit or order non-performance of a portion of the Work, the Contract Sum will be reduced accordingly. However, the Contractor will be paid for any such work actually completed and acceptable prior to the order to omit or non-perform.
 2. Should the Owner omit or order non-performance of a portion of the Work, acceptable materials ordered by the Contractor or delivered to the Work prior to the date of the Owner's order will be paid for at the actual cost to the Contractor and will become the property of the Owner.
 3. In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted Contract item prior to the date of the Owner's order. Such additional costs incurred by the Contractor must be directly related to the deleted Contract item and will be supported by certified statements by the Contractor as to the nature the amount of such costs.
- C. Payments may be made on account of non-perishable materials or equipment not incorporated in the Work but delivered and suitably stored at the site, upon the following conditions being met:
1. The Materials have been stored or stockpiled in a manner acceptable to the Owner and Design Professional.
 2. The Contractor has furnished the Design Professional with satisfactory evidence that the materials and transportation costs have been paid.
 3. The Contractor has furnished the Design Professional with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
 4. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to materials so stored or stockpiled.
 5. The Contractor has furnished to the Owner and Design Professional copies of paid invoices of all stored materials and all stored material listed in Excel format and as a hard copy and a stored material verification form. All supporting backup must be labeled with the Schedule of Values item number and calculation of item number listed on the Schedule of Values.
 6. Documentation that all material meets specification requirements.
 7. The Contractor will be responsible for all loss or damage of any type to such materials or equipment and will make suitable replacement or repair as necessary at the Contractor's own expense.
 8. The Contractor will be responsible for security with respect to all such stored materials and equipment.
 9. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the Work.

10. Payments for material on hand for delivered material to be used in one item of Work must exceed \$3,000.00, and not scheduled to be incorporated into the work within sixty days after delivery.
11. It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials will in no way relieve the Contractor of its responsibility for furnishing and placing such materials in accordance with the requirements of the Contract Documents.
12. No partial payment will be made for stored or stockpiled living or perishable plant materials.
13. The Contractor will bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.
14. In no case will the amount of payments for materials on hand exceed the Contract Price for such materials or the Contract Price for the Contract Item in which the material is intended to be used.

Notwithstanding the foregoing, the Owner may in its sole and absolute discretion, in special circumstances approve in writing in advance the waiver or one or more of the above conditions for payment of non-perishable materials or equipment not incorporated in the Work.

- D. The Contractor warrants that title to all work covered by an Application for Payment will pass to the Owner upon receipt of payment by the Contractor. The Contractor further warrants that upon submittal of an Application for Payment, all work for which certificates for payment have been previously issued and payments received from the Owner will, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances (hereinafter referred to in this Part as liens) in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials or equipment relating to the Work.
- E. When the accepted quantities of Work vary from the quantities in the Bid, the Contractor shall accept as payment in full, so far as Contract items are concerned, payment at the original Contract price for the accepted quantities of Work actually completed and accepted. No allowance will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from its own unbalanced allocation of overhead and profit among the Contract items, or from any other cause.
- F. Extra work, performed in accordance with Part 7, Changes in the Work, will be paid for at the Contract prices or agreed prices specified in the Modification or Work Order authorizing the extra Work.

9.04 CERTIFICATES FOR PAYMENT

- A. The Design Professional will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

copy to the Contractor, for such amount as the Design Professional determines is properly due, or notify the Contractor and Owner in writing of the Design Professional's reasons for withholding certification in whole or in part as provided in Subparagraph 9.05 A.

- B. The issuance of a Certificate for Payment will constitute a representation by the Design Professional to the Owner, based on the Design Professional's observations at the site and review of the data comprising the Application for Payment, that the Work has progressed to the point indicated and that, to the best of the Design Professional's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the Design Professional. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Design Professional has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the work, (2) reviewed construction means, methods, techniques, sequences or procedures, or (3) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.
- C. In taking action on the Contractor's Applications for Payment, the Design Professional will be entitled to rely on the accuracy and completeness of the information furnished by the Contractor and will not be deemed to represent that the Design Professional has made a detailed examination, audit or arithmetic verification of the documentation submitted in accordance with Subparagraph 9.04 B. or other supporting data, that the Design Professional has made exhaustive or continuous on-site inspection or that the Design Professional has made examinations to ascertain how or for what purposes the Contractor has used amounts previously paid on account of the Contract. Such examinations, audits and verifications, if required by the Owner will be performed by the Owner, acting in the sole interest of the Owner.

9.05 DECISIONS TO WITHHOLD CERTIFICATION

- A. The Design Professional may decide not to certify the Application for Payment and may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Design Professional's opinion the representations to the Owner required by Subparagraph 9.04 B. cannot be made. If the Design Professional is unable to certify payment in the amount of the Application for Payment, the Design Professional will notify the Contractor and Owner as provided in Subparagraph 9.04 A. If the Contractor and Design Professional cannot agree on a revised amount, the Design Professional will promptly issue an Application for Payment for the amount for which the Design Professional is able to make such representations to the Owner. The Design Professional may also decide not to certify payment, or because of subsequently discovered evidence or subsequent observations may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Design Professional's opinion to protect the Owner from loss because of:

1. defective Work not remedied;
 2. third party claims filed or reasonable evidence indicating probable filing of such claims;
 3. failure of the Contractor to make payment properly to Subcontractors or for labor, materials or equipment;
 4. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
 5. damage to the Owner or another Contractor;
 6. reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to complete the Work and to cover actual or liquidated damages for the anticipated delay;
 7. persistent failure to carry out the Work in accordance with the Contract Documents; and/or
 8. failure of the Contractor to provide satisfactory documentation of material and services purchased in accordance with the Construction Schedule.
 9. other failure of the Contractor to comply with the Contract, Owner Policies or Procedures.
- B. When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

9.06 PROGRESS PAYMENTS

- A. After the Design Professional has certified the Application for Payment, the Owner will endeavor to make payment according to the Owner's standard payment procedures. If deficiencies are found, a standard deficiency e-mail will be sent to the Contractor to resolve within 24 hours. If the deficiency is not resolved within that time, the Application will be returned.
- B. Prompt Payment Clause. The Contractor agrees to pay each Subcontractor under the Contract for satisfactory performance of its contract no later than 10 days from the receipt of each payment the Contractor receives from the Owner. The Contractor agrees further to release retainage payments to each Subcontractor upon receipt from Owner and within 10 days after the Subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above-referenced time frame may occur only for good cause following written notice to the Owner. This clause applies to both D/W/MBE and non-D/W/MBE Subcontractors.
- C. Neither the Owner nor the Design Professional will have an obligation to pay or to see to the payment of money to a Subcontractor, Sub-Subcontractor or material supplier.

- D. The payment of any Application for Payment prior to Final Acceptance of the Work by the Owner will in no way constitute an acknowledgement of the acceptance of the Work, or in any way prejudice or affect the obligation of the Contractor to repair, correct, renew, or replace, at the Contractor's expense, any defects, imperfections or design errors or omission in the design, construction, or in the strength or quality of the equipment or materials used in or about the construction of the Work under Contract and its appurtenances, or any damage due or attributed to such defects The Contractor will be liable to the Owner for failure to correct same as provided herein.
- E. An Application for Payment, a certified progress payment, or partial or entire use or occupancy of the Project by the Owner will not constitute acceptance of Work not in accordance with the Contract Documents.
- F. The Owner may deduct from the balance due the Contractor under the provisions of the Contract Documents any liquidated damages which may have accrued.
- G. Provision for assessment of liquidated damages for delay will in no manner affect the Owner's right to terminate the Contract as provided in Part 13, TERMINATION OR SUSPENSION OF THE CONTRACT or elsewhere in the Contract Documents. The Owner's exercise of the right to terminate will not release the Contractor from its obligation to pay said liquidated damages in the amounts set out in the Contract.

9.07 SUBSTANTIAL COMPLETION

- A. Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.
- B. When the Contractor considers that the whole Work, or a portion thereof designated in the Contract Documents for separate completion, is substantially complete and the premises comply with Paragraph 3.13 A., the Contractor will submit to the Design Professional: (1) the permits and certificates referred to in Paragraph 12.05 D., and (2) the Contractor's request for inspection by the Owner and Design Professional.
 - 1. The Owner and Design Professional will then make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the inspection discloses any item which is not in accordance with the requirements of the Contract Documents, the Design Professional will then prepare and submit to the Contractor a comprehensive list of items to be completed and/or corrected. The Contractor will proceed promptly to complete and correct items on the list before issuance of the Certificate of Substantial Completion by the Owner. The Contractor will then submit a request for another inspection to determine Substantial Completion. Repeat inspections will be performed prior to issuance of the Certificate of Substantial Completion by the Owner.
 - 2. All Work items or Contract requirements which remain incomplete/unsatisfied at the Date of Substantial Completion will become part of the Final Acceptance punch list. For projects with a value under \$10 million, within 30 days after Substantial Completion, the Owner will develop the Final Acceptance punch list

and will provide it to the Contractor within five days after its completion. The Contractor will be allowed a minimum of 30 days after delivery of the Final Acceptance punch list to complete the items listed on the Final Acceptance punch list. However, for projects with a value over \$10 million, within 60 days after Substantial Completion, the Owner will develop the Final Acceptance punch list and will provide it to the Contractor within five days after its completion. The Contractor will be allowed a minimum of 30 days after delivery of the Final Acceptance punch list to complete the items listed on the Final Acceptance punch list.

3. When the Work or designated portion thereof is substantially complete, the Owner will prepare a Certificate of Substantial Completion which will establish: the date of Substantial Completion; responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work; and insurance. All Warranties required by the Contract Documents will commence on the date of Substantial Completion. The Certificate of Substantial Completion will be submitted to the Design Professional and Contractor for their written acceptance of responsibilities assigned to them in such Certificate.
- C. Upon Substantial Completion of the whole Work and upon application by the Contractor and certification by the Design Professional, the Owner will make payment, reflecting adjustment in retainage, if any, for such Work as provided in the Contract Documents.
- D. After Substantial Completion of the whole Work, the Design Professional may, at the Design Professional's discretion and with the consent of the Contractor's Surety, approve an Application for Payment from which will be retained an amount not less than 1.5 times the Contract value or 1.5 times the estimated cost, whichever is greater, of the Work remaining to be done. Remaining retainage will be released with Final Payment after Final Acceptance of the whole Work.
- E. After Substantial Completion, closeout documents as required in Section 01700, Project Closeout, can be submitted to the Owner. The Owner will provide a detailed list of the closeout documents required after receipt and acceptance of the Final Acceptance punch list.

9.08 PARTIAL OCCUPANCY OR USE

- A. The Owner or separate contractors may occupy or use any completed or partially completed portion of the Work at any stage. Such partial occupancy or use may commence whether or not the portion is substantially complete.
- B. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the Owner to make final inspection of that unit and the Contractor will prepare and submit the comprehensive list of items to be completed and/or corrected to the Design Professional as provided under Subparagraph 9.07 B.
- C. Immediately prior to such partial occupancy or use, the Owner, Contractor and Design Professional will jointly inspect the area to be occupied or portion of the Work to be

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

used in order to determine and record the condition of the Work. If the Owner finds upon inspection that the unit has been satisfactorily completed in compliance with the Contract, the Owner may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit.

- D. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the Contract. Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work will not constitute acceptance of the Work not complying with the requirements of the Contract Documents.

9.09 FINAL COMPLETION AND FINAL PAYMENT

- A. Upon due notice from the Contractor of presumptive completion of the entire Project, the Owner will make an inspection. If all construction provided for and contemplated by the Contract is found to be complete in accordance with the Contract Documents, such inspection shall constitute the final inspection. When the Owner and Design Professional find the Work acceptable under the Contract Documents and the Contract fully performed, the Owner will promptly issue a Certificate of Final Acceptance stating that to the best of the Owner's and Design Professional's knowledge, information and belief, and on the basis of the Owner's and Design Professional's observations and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents. The Owner shall notify the Contractor in writing of final acceptance as of the date of the final inspection. The Design Professional's Certification of the Final Application for Payment will constitute a further representation that conditions listed in Paragraph 9.09 B. as precedent to the Contractor's being entitled to Final Application for Payment have been fulfilled. In the Final Certificate for Payment, the Design Professional will state the date on which the whole Work was fully complete and acceptable, which date will be the date of Final Acceptance.

If, however, the inspection discloses any Work, in whole or in part, as being unsatisfactory, the Owner will notify the Contractor and the Contractor shall correct the unsatisfactory Work. Upon correction of the Work, another inspection will be made which shall constitute the final inspection, provided the Work has been satisfactorily completed. In such event, the Owner will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

- B. Neither final payment nor any remaining retained percentage will become due until the Contractor submits to the Design Professional:
 - 1. an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied,
 - 2. a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be cancelled or allowed to expire until at least 30 days' prior written notice has been given to the Owner,

3. a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents,
4. consent of surety, if any, to final payment,
5. Provide weekly payroll records (not previously received) from the Contractor and all Subcontractors,
6. if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If the Contractor fails to furnish such releases or waivers as the Owner reasonably requires satisfying the Owner that there are no outstanding liens, the Owner may require the Contractor, at the Contractor's expense, to furnish a bond satisfactory to the Owner to indemnify the Owner against such liens. If such lien remains unsatisfied after payments are made, the Contractor will refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.
7. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations,
8. Provide a certified statement signed by the Subcontractors, indicating actual amounts paid to the Women and Minority Business Enterprise (W/MBE) or Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the Project,
9. Manufacturer's certifications for all items incorporated in the Work,
10. All required record drawings, as-built drawings or as-constructed drawings,
11. Project Operation and Maintenance (O&M) Manual(s),
12. Security for Construction Warranty, and
13. Equipment commissioning documentation submitted, if required.

Upon satisfactory final acceptance of all Work required by the Contract Documents, receipt of notice of final acceptance from the Design Professional, compliance with project closeout of Section 01700 – PROJECT CLOSEOUT, completion of final cleanup and completion of all punch list items, the Contractor will make Application for Final Payment in the same format as progress payments.

- C. Acceptance of final payment by the Contractor, a Subcontractor or material supplier will constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of Final Application for Payment. Such waivers will be in addition to the waiver described in Subparagraph 4.03 D.
- D. All closeout documentation shall be furnished at least seven days before submission of Application for Final Payment.

- E. The Contractor is required to provide all information and supporting documentation required to enable the Owner to receive any applicable state or federal grants.

PART 10 – PROTECTION OF PERSONS AND PROPERTY

10.01 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

10.02 SAFETY OF PERSONS AND PROPERTY

- A. The Contractor will take reasonable precautions for safety of, and will provide reasonable protection to prevent damage, injury or loss to;
 - 1. employees performing Work and other persons who may be affected thereby;
 - 2. the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, or under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-Subcontractors;
 - 3. other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction; and
 - 4. any other property of the Owner, or construction by separate contractors.
- B. The Contractor will give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
- C. The Contractor will erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Owner and users of adjacent sites and utilities.
- D. When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor will exercise utmost care and carry on such activities under supervision of properly qualified personnel.
- E. The Contractor will promptly remedy damage and loss to property referred to in Paragraphs 10.02 A.2. and 10.02 A.3. caused in whole or in part by the Contractor, a Subcontractor, a Sub-Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable, except damage or loss solely attributable to acts or omissions of the Owner or Design Professional or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable in whole or in part to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Paragraph 3.18.

- F. The Contractor will designate a competent person of the Contractor's organization at the site whose duty will be the prevention of accidents. This person will be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Design Professional.
- G. The Contractor will not load or permit any part of the construction or site to be loaded so as to endanger its safety.
- H. The Contractor will comply with the provisions of the Occupational Safety and Health Act of 1970, 84 Stat. 1190, 29 U.S.C. 611 et seq. (as amended), and applicable regulations and requirements under said Act. The Contractor will maintain an accurate record of all accidents causing death, traumatic injury, occupational disease, or damage to property, materials, supplies and equipment incidental to Work performed under this Contract.
- I. The Contractor will be responsible for the preservation of all public and private property and will protect carefully from disturbance or damage all land monuments and property markers until the Design Professional has witnessed or otherwise referenced their location and will not move them until directed.
- J. The Contractor will be responsible for all damage or injury to property of any character during the prosecution of the Work resulting from any act, omission, neglect, or misconduct in the Contractor's manner or method of executing the Work, or at any time due to defective Work or materials, and said responsibility will not be released until the Project will have been completed and accepted.
- K. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the Work, or in consequence of the non-execution thereof, by the Contractor, Contractor will restore, such property, at the Contractor's own expense, to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring, as may be directed, or Contractor will make good such damage or injury in an acceptable manner.
- L. Work that is to remain in place which is damaged or defaced by reason of Work performed under this Contract will be restored at no additional cost to the Owner.
- M. Until the Owner's Final Written Acceptance of the whole Work, excepting only those portions of the Work accepted in accordance with Paragraph 9.07 B. herein, the Contractor will have the charge and care thereof and will take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the Work. The Contractor will rebuild, repair, restore, and make good all injuries or damages to any portion of the Work occasioned by any of the above causes before Final Completion and will bear the expense thereof.
- N. If the Work is suspended for any cause whatsoever, the Contractor will be responsible for the Work during such suspension and will take such precautions necessary to prevent damage to the Work. The Contractor will provide for normal drainage and will erect necessary temporary structures, signs, or other facilities at the Contractor's own expense. If the Owner orders the suspension of the Work, additional compensation or

extension of time may be claimed by the Contractor. During such period of suspension of Work, the Contractor will properly and continuously maintain in an acceptable growing condition all living material in newly established plantings, seedlings, and sod furnished under the Contract, and will take adequate precautions to protect new tree growth and other important vegetative growth against injury.

- O. The Contractor will be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor will be responsible to the Owner for the acts and omissions of all Contractor's employees and Subcontractors, their agents and employees, and all other persons performing any of the Work under a contract with the Contractor.

10.03 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor will act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency will be determined as provided in Paragraph 4.03 and Part 7, CHANGES IN THE WORK.

PART 11 – UNCOVERING AND CORRECTION OF WORK

11.01 UNCOVERING OF WORK

- A. If a portion of the Work is covered contrary to the Owner's/Design Professional's request or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Owner/Design Professional, be uncovered for the Owner's/Design Professional's observation and be replaced at the Contractor's expense without change in the Contract Time.
- B. If a portion of the Work has been covered which the Design Professional has not specifically requested to observe prior to its being covered, the Owner/Design Professional may request to see such Work and it will be uncovered by the Contractor. If such work is in accordance with the Contract Documents, costs of uncovering and replacement will, by appropriate Change Order, be charged to the Owner. If such Work is not in accordance with the Contract Documents, the Contractor will pay such costs unless the condition was caused by the Owner or a separate contractor in which event the Owner will be responsible for payment of such costs.

11.02 CORRECTION OF WORK

- A. The Contractor will promptly correct Work rejected by the Owner/Design Professional for failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor will bear costs of correcting such rejected Work, including additional testing and inspections and compensation for the Design Professional's services and expenses made necessary thereby.
- B. If, within one year after the Date of Substantial Completion of the whole Work or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

will correct it promptly after receipt of a written notice from the Owner to do so. This obligation will survive termination of the Contract. The Owner will give such notice promptly after discovery of the condition.

- C. The Contractor will remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
- D. If the Contractor fails to correct non-conforming work within a reasonable time, the Owner may correct it in accordance with Paragraph 2.04. If the Contractor does not proceed with correction of such non-conforming work within a reasonable time fixed by written notice from the Owner or Design Professional, the Owner may remove it and store the salvageable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten days after written notice, the Owner may, upon ten additional days' written notice, sell such materials and equipment at auction or at private sale and will account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including compensation for the Owner's or Design Professional's services and expenses made necessary thereby. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contract Sum will be reduced by the deficiency. If payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor will pay the difference to the Owner.
- E. The Contractor will bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate Contractors caused by the contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.
- F. Nothing contained in Paragraph 11.02 will be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the time period of one year as described in Subparagraph 11.02 B relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.
- G. Upon completion of the whole Work, the Owner and the Design Professional will expeditiously make final inspection in accordance with Section 01700 – PROJECT CLOSEOUT, and will notify the Contractor of Final Acceptance. Such Final Acceptance, however, will not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the whole Work, nor will the Owner be precluded or stopped from recovering from the Contractor or Contractor's Surety, or both, such overpayment as may be sustained, by failure on the part of the Contractor to fulfill Contractor's obligations under the Contract. A waiver on the part of the Owner of any breach of any part of the Contract will not be held to be a waiver of any other or subsequent breach.
- H. The Contractor, without prejudice to the terms of the Contract, will be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards to the Owner's rights under any warranty or guaranty.

11.03 ACCEPTANCE OF NON-CONFORMING WORK

If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate as determined by the Owner in its reasonable discretion. Such adjustment will be effected whether or not Final Payment has been made.

PART 12 – MISCELLANEOUS PROVISIONS

12.01 GOVERNING LAW

The Contract will be governed by the law of the State of Florida. Venue for any action, arising from or related to the Contract, will be in the Florida State Circuit Court in and for the 13th Circuit, Hillsborough County, such court having sole and exclusive jurisdiction. Confidential mediation with a mediator selected by the Owner shall be a condition precedent to litigation.

12.02 SUCCESSORS AND ASSIGNS

- A. The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, contracts and obligations contained in the Contract Documents. Except as hereinafter provided, the Contractor will not assign or sublet this Contract in whole or in part without the written consent of the Owner, nor will the Contractor assign any monies due or to become due to Contractor hereunder without the previous written consent of the Owner. If the Contractor attempts to make such assignment without such consent, the Contractor will nevertheless remain legally responsible for all obligations under the Contract.
- B. The Owner reserves the right to transfer its interests herein to any other governmental body created or authorized by law to operate the Airport.

12.03 WRITTEN NOTICE

Written notice will be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, on the date of delivery, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice on the date of mailing.

12.04 RIGHTS AND REMEDIES

- A. Except as otherwise provided in the Contract Documents, duties and obligations imposed by the Contract Documents and rights and remedies available thereunder will be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

- B. No action or failure to act by the Owner or Design Professional will constitute a waiver of a right or duty afforded them under the Contract, nor will such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.
- C. Continued performance by the Owner as to the terms of this Contract after default by the Contractor will not be deemed a waiver by the Owner of the right to cancel for any subsequent default. Inspections, measurements or certificates issued by the Owner, payments of money, acceptance of any Work, grants of any extension of time, or any other action taken by the Owner will not operate as a waiver of any provisions of the Contract or any power therein reserved to the Owner of any rights to damages therein provided. Any waiver of any breach of Contract will not be held to be a waiver of any other or subsequent breach.
- D. To the maximum extent permitted by applicable law, the Contractor agrees it will not seek equitable adjustment of the terms of this Contract and that its remedies are limited to those specified herein.

12.05 TESTS AND INSPECTIONS

- A. Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction will be made at an appropriate time. The Contractor will give the Owner and Design Professional timely notice of its readiness so the Design Professional may observe such inspections, tests or approvals conducted by the Contractor or public authorities other than the Owner. (Refer to Section 01410 – Testing Laboratory Services).
- B. If the Owner, Design Professional, or other public authority having jurisdiction determines that portions of the Work require additional testing, inspection or approval not included under Subparagraph 12.05 A., the Design Professional will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval and the Contractor will give timely notice to the Owner and Design Professional of when and where such tests, inspections or approvals are to be made so the Design Professional may observe such procedures. The Owner will bear such costs except as provided in Subparagraph 12.05 C.
- C. If such procedures for testing, inspection or approval under Subparagraphs 12.05 A. and 12.05 B. reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor will bear all costs made necessary by such failure including those of repeated procedures and compensation for the Design Professional's services and expenses.
- D. The Contractor will secure and promptly deliver to the Owner or Design Professional any required certificates of testing, inspection or approval, any occupancy permits, any certificates of final inspection of any part of the Contractor's Work and any operating permits for any mechanical apparatus, such as elevators, boilers, air compressors, etc., which may be required by law to permit full use and occupancy of the premises by the Owner. Receipt of such permits or certificates by the Owner or Design Professional will be a condition precedent to Substantial Completion of the Work or designated portion thereof.

- E. Tests or inspections conducted pursuant to the Contract Documents will be made promptly to avoid unreasonable delay in the Work.
- F. Notwithstanding any dispute which may arise out of the Work, the Contractor will carry on the work and maintain effective progress to complete same within the Contract Time(s) set forth in the Contract Documents.

12.06 E-VERIFY REQUIREMENTS/UNAUTHORIZED ALIENS

- A. The Contractor agrees to comply with all applicable E-Verify requirements, including but not limited to, the State of Florida, Office of the Governor, Executive Order Number 11-116 (Verification of Employment Status), which states that all agencies under the direction of the Governor are to include, as a condition of all state contracts for the provision of goods or services to the state in excess of nominal value, an express requirement that contractors utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the contractor during the contract term, and an express requirement that contractors include in such subcontracts the requirement that Subcontractors performing work or providing services pursuant to the state contract utilize the E-Verify system to verify the employment eligibility of all new employees hired by the Subcontractor during the contract term. Any projects with Florida Department of Transportation (FDOT) funding will contain this assurance as a condition for any new Joint Participation Agreements dated after January 4, 2011. The Contractor will verify all of its new employees and will require that its Subcontractors verify all of its new employees in accordance with the E-verify requirements set out above.
- B. FDOT considers the employment by any contractor of unauthorized aliens a violation of Section 274A(e) of the Immigration and Nationality Act. If the Contractor knowingly employs unauthorized aliens, such violation will be cause of unilateral cancellation of this Contract.
- C. By entering into this Contract, the Contractor becomes obligated to comply with the provisions of Section 448.095, Fla. Stat., "Employment Eligibility." This includes but is not limited to utilization of the E-Verify System to verify the work authorization status of all newly hired employees, and requiring all Subcontractors to provide an affidavit attesting that the Subcontractor uses the E-verify system and subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. Failure to comply will lead to termination of this Contract, or if a Subcontractor knowingly violates the statute, the subcontract must be terminated immediately. Any challenge to termination under this provision must be filed in the Circuit Court no later than 20 calendar days after the date of termination. If this contract is terminated for a violation of the Section 448.095 by the Contractor, the Contractor may not be awarded a public contract for a period of 1 year after the date of termination.

12.07 LOBBYING AND INFLUENCING FEDERAL OR STATE EMPLOYEES - 49 CFR part 20, Appendix A

The Contractor certifies by signing and submitting its bid and this Contract, to the best of its knowledge and belief, that:

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

- A. No Federal appropriated funds have been paid or will be paid, by or on behalf of the Contractor, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- B. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor or offeror must place the language of this certification in all contracts, purchase orders and other documents binding contractors, Subcontractors and suppliers and require that all contractors, Subcontractors and suppliers execute such certification and disclose accordingly.

No funds received pursuant to this Contract may be expended for lobbying the Florida Legislature, judicial branch, or any state agency, in accordance with Section 216.347, Florida Statutes.

PART 13 – TERMINATION OR SUSPENSION OF THE CONTRACT

13.01 TERMINATION BY THE OWNER FOR CAUSE

- A. The Owner may terminate this Contract for cause if the Contractor:
 - 1. Fails to commence the Work within the time specified, fails to maintain adequate progress toward completion of the Work, abandons the prosecution of the Work, or
 - 2. Fails to perform the Work, fails to provide a sufficient number of adequately skilled workers or supervisory staff who actively staff the Project and prosecute the Work, or fails to have available at the site proper equipment or materials to assure completion of the Work in accordance with the terms of the Contract Documents; or
 - 3. Performs the Work unsuitably, or neglects or refuses to remove materials or to perform anew such Work as may be rejected by Owner as unacceptable or unsuitable; or

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

4. Discontinues the execution of the Work; or
 5. Fails to resume the Work which has been discontinued within a reasonable time after notice to do so; or
 6. Becomes insolvent, is declared bankrupt, files for reorganization under the bankruptcy code or commits any act of bankruptcy or insolvency, either voluntarily or involuntarily; or
 7. Allows any final judgment against it to remain unsatisfied for a period of 30 days; or
 8. Makes an assignment for the benefit of creditors or attempts to assign its rights or obligations under this Contract or any part thereof to any third-party without the prior written consent of the Owner; or
 9. Fails to comply with Contract requirements regarding minimum wage payment EEO, W/MBE or DBE requirements; or
 10. Disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction; or
 11. Consents to or is the subject of any order or decree of any court or governmental authority or agency having jurisdiction appointing a receiver, trustee, or liquidator to take possession or control of all or substantially all of the Contractor's property for the benefit of creditors; or
 12. Materially breaches any provision in this Contract; or
 13. If at any time the Surety executing the bonds is determined by the Owner to be unacceptable and the Contractor fails to furnish an acceptable substitute Surety within ten days after notice from the Owner; or
 14. Fails or refuses to perform any other obligation under this Contract, or fails to remedy such nonperformance within seven (7) days after notice of the occurrence by the Owner; or
 15. Fails to achieve the required dates of Substantial and/or Final Completion.
- B. When any of the above reasons exist, the Owner may, without prejudice to any other rights or remedies available, give notice, in writing, to the Contractor and the Contractor's Surety. If the Contractor within a period of ten days after receiving such notice has not commenced in good faith to cure such cause or breach, or if having commenced such cure is not proceeding diligently to complete the cure, the Owner will have full power and authority, without violating this Contract, to immediately take the prosecution of the Work out of the hands of the Contractor, may declare the Contractor in default, and may terminate, in whole or in part, this Contract.

1. Upon termination of this Contract, the Owner may, subject to any prior rights of the Contractor's Surety:
 - a. Take possession of the site and of all materials, equipment, tools, electronic drawings, including but not limited to BIM models, shop drawings and machinery thereon owned by the Contractor; and
 - b. Finish the Work by whatever method the Owner may deem expedient and necessary.
- C. When the Owner terminates this Contract for cause, the Owner will be entitled to hold all amounts due the Contractor at the date of termination until completion of the Work and final evaluation of the Owner's damages associated with the termination. The Contractor will be liable to the Owner for costs and expenses incurred by the Owner in completing the Work, and also for losses, damages, costs and expenses including, but not limited to, direct, indirect and consequential damages. If such costs and expenses exceed the sum that would have been payable under this Contract, then the Contractor and the Surety will be liable and will pay to the Owner the amount of such excess. If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including any and all additional costs and expenses to the Owner, such excess, to the extent earned, will be paid to the Contractor and/or Contractor's Surety.
- D. Upon termination of this Contract, the Owner has no liability for anticipated profits for unfinished Work.
- E. Termination of this Contract, or any portion thereof, will not relieve the Contractor or the Contractor's Surety of their liability for past and future damages, losses or claims on Work performed or on account of any act, omission, or breach by the Contractor. Liability for liquidated damages, if any, will continue to accrue as set forth in the Contract Documents.
- F. The Owner's right to termination, as set forth herein, shall be in addition to and not a limitation of any and all other rights and remedies available to the Owner, at law, in equity or under the terms of this Contract. If the Owner improperly terminates this Contract for cause, this termination for cause will be converted to and deemed to be a termination for convenience in accordance with the provisions of Paragraph 13.03. In such case, Contractor shall only be entitled to those rights and remedies expressly stated in Paragraph 13.03 and in no event shall Contractor be entitled to any damages or remedies for wrongful termination.
- G. Termination of this Contract, or portion thereof, under this Article does not relieve the Contractor or the Contractor's Surety of its responsibilities for the completed portion of the Work or its obligation for and concerning any just claims arising out of the Work performed.

13.02 SUSPENSION BY THE OWNER

The Owner will have the authority to suspend the Work wholly, or in part, for such period or periods the Owner may deem necessary, with or without cause, due to unsuitable weather, or other conditions

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

considered unfavorable for the execution of the Work, or for any other reason or for such time necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the Contract. If the whole Work is suspended, all days elapsing due to causes not the fault of the Contractor between the effective dates of the Owner's order to suspend and subsequent order to resume the Work will be excluded from the Contract Time.

Notwithstanding Subsection 8.03 herein, in the event that the Contractor is ordered by the Owner, in writing, to suspend Work for some unforeseen cause not otherwise provided for in the Contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the Work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the written order to suspend Work to the effective date of the written order to resume the Work. Claims for such compensation shall be filed with the Owner within the time period stated in the Owner's order to resume Work. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather or for any other delay provided for in the Contract Documents.

If it becomes necessary to suspend Work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the Work performed and provide for normal drainage of the Work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

13.03 TERMINATION FOR CONVENIENCE OF OWNER

- A. Notwithstanding anything else in this Contract, the Owner may terminate performance of the Work under this Contract in whole or in part if the Owner determines that a termination is in the Owner's best interest or its sole and absolute discretion. The Owner will terminate by delivery to the Contractor a Notice of Termination specifying the extent of termination and the effective date.
- B. After receipt of a Notice of Termination, and except as directed by the Owner, the Contractor will immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this Paragraph:
 - 1. Complete Work not terminated and stop Work as specified in the Notice of Termination.
 - 2. Place no further subcontracts or orders (referred to as subcontracts in this paragraph) for materials, services, or facilities, except as necessary to complete the continued portion of the Contract.
 - 3. Terminate all subcontracts to the extent they related to the Work terminated.
 - 4. Assign to the Owner, as directed, all rights, title, and interest of the Contractor under the subcontract terminated, in which case the Owner will have the right to settle or to pay any termination settlement proposal arising out of those terminations.
 - 5. With approval or ratification to the extent required by the Owner, settle all outstanding liabilities and termination settlement proposals arising from the

terminations of subcontracts (the approval or ratification will be final for purposes of this paragraph).

6. As directed by the Owner, transfer title and deliver to the Owner (1) the fabricated or unfabricated parts, Work in progress, completed Work, supplies, and other material produced or acquired for the Work terminated, and (2) the completed or partially completed plans, drawings, information, and other property that, if the Contract had been completed, would be required to be furnished to the Owner.
 7. Complete performance of the Work not terminated. If it should become necessary to suspend Work for an indefinite period, the Contractor will store all materials in such a manner that they will not become an obstruction nor become damaged in any way. The Contractor will take every precaution to prevent damage or deterioration of the Work performed and provide for normal drainage of the Work. The Contractor will erect temporary structures where necessary to provide for traffic on, to, or from the Airport.
 8. Take any action that may be necessary, or that the Owner may direct, for the protection and preservation of the property related to this Contract that is in the possession of the Contractor and in which the Owner has or may acquire an interest.
 9. Use its best effort to sell, as directed or authorized by the Owner, any property of the types referred to in Subparagraph 13.03 B.6. above; provided, however, that the Contractor (1) is not required to extend credit to any purchaser and (2) may acquire the property under the conditions prescribed by, and at process approved by, the Owner. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Owner under this Contract, credited to the price or cost of the Work, or paid in any manner directed by the Owner.
- C. The Contractor may submit to the Owner a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Owner. Within 30 days, the Owner will accept title of those items and remove them or enter into a storage contract. The Owner may verify the list upon removal of the items or, if stored, within 45 days from submission of the list, and will correct the list, as necessary, before final settlement.
- D. After termination, the Contractor will submit a final termination settlement proposal to the Owner in the form and with the certification prescribed by the Owner. The Contractor will submit the proposal promptly, but no later than 60 days from the effective date of termination, unless extended in writing by the Owner upon written request of the Contractor. If the Contractor fails to submit the proposal within the time allowed, the Owner may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and will pay the amount determined. No further compensation will be considered if the Contractor fails to meet the submittal requirements.
1. Subject to Paragraph 13.03 D. above, the Contractor and the Owner may agree upon the whole or any part of the amount to be paid because of the

termination. The amount may include a reasonable allowance for profit of Work done. However, the agreed amount may not exceed the total Contract Sum as reduced by (1) the amount of payments previously made and (2) the Contract Sum of Work not terminated. The Contract will be amended and the Contractor paid the agreed amount. Paragraph 13.03 F. below will not limit, restrict, or affect the amount that may be agreed upon to be paid under this Paragraph.

- E. If the Contractor and the Owner fail to agree on the whole amount to be paid the Contractor because of termination of the Work, the Owner will pay the Contractor the amounts determined as follows, but without duplication of any amounts agreed upon under Paragraph 13.03 D.1. above:
1. For Contract Work performed before the effective date of termination, the total (without duplication of any items) of:
 - a. The cost of this Work;
 - b. The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the termination portion of the Contract if not included in subdivision a. above; and
 - c. A sum, as profit on a. above, which will not exceed 5%. If it appears, however, that the Contractor would have sustained a loss on the entire Contract had it been completed, the Owner will allow no profit under this subparagraph c. and will reduce the settlement to reflect the indicated rate of loss.
 - d. When the Contract, or any portion thereof, is terminated before completion of all items of Work in the Contract, payment will be made for the actual number of units of Work completed at the Bid Unit Price or as mutually agreed for items of Work partially completed. No claims or loss of anticipated profits will be considered for items of Work completed at the Bid Unit Prices.
 2. The reasonable costs of settlement of the Work terminated, including:
 - a. Reasonable accounting, clerical, and other expenses necessary only for the preparation of termination settlement proposals and support data;
 - b. The termination and settlement of subcontracts (excluding the amounts of such settlements);
 - c. Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory; and
 - d. Reimbursement for organization of the Work and other overhead expenses (when not otherwise included in the Contract), and moving equipment and materials to and from the site will be considered..
- F. Except for normal spoilage, and except to the extent that the Owner expressly assumed the risk of loss, the Owner will exclude from the amounts payable to the Contractor

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

under Paragraph 13.03 E. above, the fair value, as determined by the Owner, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Owner or to the buyer.

- G. In arriving at the amount due the Contractor under this paragraph, there will be deducted:
1. All unliquidated advance or other payments to the Contractor under the terminated portion of the Contract;
 2. Any claim which the Owner has against the Contractor under this Contract;
 3. The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this paragraph and not recovered by or credited to the Owner; and
 4. Contractor expressly waives any claim for loss of anticipated profit, overhead of any kind, including home office and jobsite overhead, or other indirect impacts.
- H. Unless otherwise provided in this Contract or by statute, the Contractor will maintain all records and documents (including but not limited to subcontracts, Subcontractor change orders, purchase orders, bid tabulations, proposals, and all other documents associated with the project) relating to the termination portion of this Contract for seven years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this Contract. The Contractor will make these records and documents available to the Owner, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Owner, photographs, microphotographs, electronic media or other authentic reproductions may be maintained instead of original records and documents.

13.04 Termination for National Emergencies

- A. The Owner shall terminate the Contract or portion thereof by written notice when the Contractor is prevented from proceeding with the Contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.
- B. When the Contract, or any portion thereof, is terminated before completion of all items of Work in the Contract, payment will be made for the actual number of units or items of Work completed at the contract price or as mutually agreed for items of Work partially completed or not started. No claims or loss of anticipated profits shall be considered.
- C. Reimbursement for organization of the Work, and other overhead expenses, (when not otherwise included in the Contract) and moving equipment and materials to and from the job will be considered.
- D. Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the Owner.

- E. Termination of the Contract or a portion thereof shall neither relieve the Contractor of its responsibilities for the completed Work nor shall it relieve its surety of its obligation for and concerning any just claim arising out of the Work performed.

PART 14 – AUDIT REQUIREMENTS

14.01 PAYMENTS

In connection with payments to the Contractor under this Contract, it is agreed the Contractor will maintain full, accurate and detailed books of account and records customarily used in this type of business operation in accordance with generally accepted accounting principles. The Owner, FAA, Federal Highway Administration, Florida Department of Transportation and the Comptroller General of the United States, or any duly authorized representative of each, may have the right to audit the Contractor's records for the purpose of making audits, examinations, excerpts, and/or transcriptions and to determine payment eligibility under this Contract and compliance with this Contract. The Owner also has the right to perform inspections or attestation engagements. Access will be to any and all of the Contractor's records, including books, documents, papers, accounting procedures and practices, and any other supporting evidence the Owner deems pertinent to this Contract, as well as records of parent, affiliate and subsidiary companies. The Contractor shall maintain such books and records for seven years after the end of the term of this Contract.

14.02 ACCESS TO RECORDS

If the records are kept at locations other than the Airport, the Contractor will arrange for said records to be brought to a location convenient to the Owner's auditors to conduct the engagement as set forth in this Article or the Contractor may transport the Owner's team to the location of the records for purposes of undertaking said engagement. In such event, the Contractor will pay reasonable costs of transportation, food and lodging for the Owner's team.

14.03 RECORDS FORMAT

In the event the Contractor maintains its accounting or Project information in electronic format, upon request by the Owner's auditors, the Contractor will provide a download of its accounting or Project information in an electronic format allowing readership in Microsoft Office products or Adobe Acrobat software.

14.04 RECORDS DELIVERY

The Contractor agrees to deliver or provide access to all records requested by the Owner's auditors within 14 calendar days of the request at the initiation of the engagement and to deliver or provide access to subsequent requests during the engagement within 7 calendar days of each request. The parties recognize that the Owner will incur additional costs if records requested by the Owner's auditors are not provided in a timely manner and that the amount of those costs is extremely difficult to determine with certainty. Consequently, the parties agree that Contractor may be assessed liquidated damages of \$100.00, in addition to other contractual financial requirements, for each item in a records request, per calendar day, for each time the Contractor is late in submitting requested records to perform the engagement. Accrual of fees will continue until specific performance is accomplished. The parties expressly agree that these liquidated damages are not a penalty and represent reasonable

estimates of fair compensation for the losses that reasonably may be anticipated from such failure to comply.

14.05 ENGAGEMENT

The Owner has the right during any engagement to interview the Contractor's employees, Subcontractors, subconsultants, suppliers or any other persons associated with the Work or this Contract, to make photocopies, and to inspect any and all records upon request. The right to initiate an engagement, inspection or attestation engagement will extend during the Contract period and for six years after the completion date of the Work, or six years after the termination of this Contract, whichever occurs later.

14.06 RECORDS RETENTION

The Contractor will provide all information and reports requested by the Owner, or any of its duly authorized representatives, or directives issued pursuant thereto, and will permit access, for the purpose of performing an audit, examination, inspection, or attestation engagement, to the Contractor's books, records, accounts, documents, papers, or other sources of information, and its facilities as may be determined by the Owner to be pertinent to ascertain compliance with this Article. The Contractor will keep all Project accounts and records which fully disclose the amount of the Contractor's Bid. The accounts and records will be kept in accordance with an accounting system that will facilitate an effective audit in accordance with the Single Audit Act of 1984, as amended.

14.07 OVERCHARGE PROVISIONS

In the event the Contractor has overcharged the Owner, the Contractor will re-pay the Owner the amount of the overcharge, plus interest on the overcharge amount up to 12% per year from the date the overcharge occurred. In addition, if the Contractor has overcharged the Owner by more than 3% of the correct reimbursable amount, the Owner may assess and the Contractor will pay for the entire cost of the audit.

14.08 SUBCONTRACT AUDIT PROVISIONS

The Contractor will include in all Subcontractor, subconsultant and supplier contracts a provision which provides the Owner the same rights to audit as provided in this Article.

14.09 OWNER'S RIGHT TO AUDIT

Approvals by the Owner's staff for any services not included in this Contract do not act as a waiver or limitation of the Owner's right to audit.

14.10 NOTIFICATION TO OWNER

The Contractor will notify the Owner no later than seven days after receiving knowledge that it is subject to any other audit, inspection or attestation engagement related to this Contract and provide a copy of any audit documents so received.

14.11 COOPERATION

The Contractor agrees to comply with Section 20.055(5), Florida Statutes, and to incorporate in all subcontracts the obligation to comply with Section 20.055(5), Florida Statutes.

END OF SECTION

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

SECTION 00820 – WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE (W/MBE)

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Woman and Minority Owned Business Enterprise (W/MBE) documents include:
 - 1. Authority Non-Federally Funded Policy
 - 2. Certified W/MBE Directory
 - 3. W/MBE Application
 - 4. Personal Statement of Net Worth
- B. The above listed W/MBE documents are not included herein but can be obtained in Adobe Acrobat format by accessing the “Airport Business” section of the Owner’s website, www.tampaairport.com.

END OF SECTION

SECTION 00850 - DRAWING INDEX

INDEX OF DRAWINGS	
DRAWING NO.	SHEET TITLE
GENERAL (G)	
G000	COVER AND INDEX OF DRAWINGS
G001	SUMMARY OF QUANTITIES
G002	OVERALL SITE LAYOUT PLAN
G003	OVERALL PHASING SCHEMATIC, NOTES, AND BARRICADE PLAN (VOLUMES I AND II)
G004	GENERAL AND STAGING AREA NOTES
G005	EROSION AND SEDIMENTATION CONTROL DETAILS
G006	PRE AND POST-DEVELOPMENT CONDITIONS
INDEX OF DRAWINGS: VOLUME I	
DRAWING NO.	SHEET TITLE
GENERAL (G) - VOLUME I	
G100	COVER AND INDEX OF DRAWINGS (VOLUME I)
G101	SAFETY AND SECURITY NOTES AND DETAILS (VOLUME I)
G102	CONTRACT LAYOUT PLAN (VOLUME I)
G103	OVERALL PHASING SCHEMATIC, NOTES, AND BARRICADE PLAN (VOLUME I)
G104	EROSION AND SEDIMENTATION CONTROL PLAN (VOLUME I)
G105	BORING LOCATION PLAN
G106	SOIL PROFILES (SHEET 1 OF 2)
G107	SOIL PROFILES (SHEET 2 OF 2)
G108	TEST HOLE REPORT (SHEET 1 OF 3)
G109	TEST HOLE REPORT (SHEET 2 OF 3)
G110	TEST HOLE REPORT (SHEET 3 OF 3)
CIVIL (C) - VOLUME I	
C101	EXISTING CONDITIONS AND DEMOLITION PLAN (VOLUME I) (SHEET 1 OF 2)
C102	EXISTING CONDITIONS AND DEMOLITION PLAN (VOLUME I) (SHEET 2 OF 2)
C103	GEOMETRY AND PAVING PLAN (SHEET 1 OF 2)
C104	GEOMETRY AND PAVING PLAN (SHEET 2 OF 2)
C105	TRUCK COURT REHABILITATION PLAN (SHEET 1 OF 2)
C106	TRUCK COURT REHABILITATION PLAN (SHEET 2 OF 2)
C107	PAVEMENT MARKING PLAN (SHEET 1 OF 2)
C108	PAVEMENT MARKING PLAN (SHEET 2 OF 2)
C109	SIGN PANEL REPLACEMENT DETAILS
C110	PAVEMENT TYPICAL SECTION AND DETAILS (SHEET 1 OF 3)
C111	PAVEMENT TYPICAL SECTION AND DETAILS (SHEET 2 OF 3)
C112	PAVEMENT TYPICAL SECTION AND DETAILS (SHEET 3 OF 3)

C113	METER AND GROUND BOX DETAILS
C114	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 1 OF 9)
C115	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 2 OF 9)
C116	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 3 OF 9)
C117	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 4 OF 9)
C118	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 5 OF 9)
C119	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 6 OF 9)
C120	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 7 OF 9)
C121	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 8 OF 9)
C122	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 9 OF 9)
C200	SPOT ELEVATION PLAN (SHEET 1 OF 2)
C201	SPOT ELEVATION PLAN (SHEET 2 OF 2)
CX100	CROSS SECTIONS – KEY MAP
CX101	CROSS SECTIONS – (SHEET 1 OF 2)
CX102	CROSS SECTIONS – (SHEET 2 OF 2)
INDEX OF DRAWINGS: VOLUME II	
DRAWING NO.	SHEET TITLE
GENERAL (G) - VOLUME II	
G200	COVER AND INDEX OF DRAWINGS (VOLUME II)
G201	SAFETY AND SECURITY NOTES AND DETAILS (VOLUME II)
G202	SAFETY AND SECURITY PLAN
G203	CONTRACT LAYOUT PLAN (VOLUME II)
G204	OVERALL PHASING SCHEMATIC, NOTES, AND BARRICADE PLAN (VOLUME II)
G205	EROSION AND SEDIMENTATION CONTROL PLAN (VOLUME II)
CIVIL (C) - VOLUME II	
C201	EXISTING CONDITIONS AND DEMOLITION PLAN (SHEET 1 OF 2)
C202	EXISTING CONDITIONS AND DEMOLITION PLAN (SHEET 2 OF 2)
C203	SERVICE ROAD REPAIR PLAN (SHEET 1 OF 2)
C204	SERVICE ROAD REPAIR PLAN (SHEET 2 OF 2)
C205	APRON REHABILITATION PLAN (SHEET 1 OF 2)
C206	APRON REHABILITATION PLAN (SHEET 2 OF 2)
C207	PAVEMENT AND PAVEMENT MARKING SECTION AND DETAILS

ELECTRICAL (E) - VOLUME II	
E201	ELECTRICAL SITE PLAN
E202	ELECTRICAL NOTES AND DETAILS

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.01 DESCRIPTION

A. Project/Work Identification:

1. The general overall description of the Work of the Contract for the:

**North Air Cargo Parking Expansion, Truck Court
Repairs, Service Road Relocation, and Apron
Rehabilitation
Tampa International Airport
Tampa, Florida**

can be summarized for purposes of administration and payment in the manner of project segments as follows:

Authority Project Number: 6530 18

Description: The intent of this Project is summarized in three distinct tasks:

- A. Relocate the perimeter service road, adjacent to the North Air Cargo building.
- B. Rehabilitate the Truck court and provide additional parking.
- C. Crack and Joint sealing areas of joint seal replacement as identified by the Authority.

B. Contract Documents:

Requirements of the Work are contained in the Contract Documents. Cross-references in the Contract Documents to published information are not necessarily bound with the Contract Documents.

C. Intent:

The intent of the Contract is to provide for construction and completion in full compliance with the Contract requirements with all Work performed and completed in a first class workmanlike manner in every detail. It is further intended that the Contractor will furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the Work in a first class workmanlike manner in accordance with the Contract Documents.

1.02 [RESERVED]

1.03 ARCHAEOLOGICAL AND HISTORICAL FINDINGS

- A. Unless otherwise specified in this subsection, the Contractor is advised that the site of the Work is not within any property, district, or site, and does not contain any building, structure, or object, listed in the current National Register of Historic Places published by the United States Department of Interior.
- B. Should the Contractor encounter, during its operations, any building, part of a building, structure, or object that is incongruous with its surroundings, it will immediately cease operations in that location and notify the Owner. The Owner will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume its operations or to suspend operations.
- C. Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such will be covered by an appropriate Contract modification (change order or supplemental contract). If appropriate, the Contract modification will include an extension of Contract Time.

1.04 REMOVAL OF EXISTING STRUCTURES

- A. All existing structures encountered within the established lines, grades, or grading sections will be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the Work or to remain in place. The cost of removing such existing structures will not be measured or paid for directly, but will be included in the Contract Sum.
- B. Wherever existing structures interfere with Contractor's Work, Contractor shall be responsible for all modifications, including removal if appropriate, to fit the Contractor's Work.
- C. Should the Contractor encounter an existing structure that interferes with Contractor's Work, the Owner will be notified prior to disturbing such structure. The disposition of existing structures so encountered will be determined by the Owner in accordance with the provisions of the Contract.
- D. Where existing structures are determined to be removed, the Contractor shall remove and dispose of the material. Where such structures are determined to remain and are integrated into the Contractor's Work, such materials and structures will remain the property of the Owner when so utilized in the Work.

1.05 RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK

- A. Should the Contractor encounter any material such as, but not restricted to, sand, stone, gravel, slag, or concrete slabs, within the established lines, grades, or grading sections, the use of which is intended by the terms of the Contract to be either embankment or waste, the Contractor may at its option either:
 - 1. Use such material in another Contract item, providing such use is approved by

the Owner and is in conformance with the Contract Specifications applicable to such use; or

2. Remove such material from the Project site, upon written approval of the Owner; or
 3. Use such material for the Contractor's own temporary construction on the Project site; or
 4. Use such material as intended by the terms of the Contract.
- B. Should the Contractor wish to exercise option 1, 2., or 3., the Contractor will request the Owner's approval in advance of such use.
- C. Should the Owner approve the Contractor's request to exercise option 1., 2., or 3., the Contractor will be paid for the excavation or removal of such material at an agreed upon unit price. The Contractor will replace, at Contractor's own expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the Work. The Owner will not be charged for Contractor's use of such material so used in the Work or removed from the Project site.
- D. Should the Owner approve the Contractor's exercise of any of the options in paragraph A., the Contractor shall be paid, at the applicable Contract price, for furnishing and installing such material in accordance with requirements of the Contract item in which the material is used.
- E. It is understood and agreed that the Contractor will make no claim for delays by reason of Contractor's exercise of option 1., 2., or 3.
- F. The Contractor will not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the Work, except where such excavation or removal is provided for in the Contract Documents.

1.06 SCHEDULING

- A. Refer to Section 01315.

1.07 LIST OF RELATED WORK

- A. During performance of the Work under this Contract, the following other contracts will be under construction:

Airside C and Air Cargo Trash Compactor Area Rehab
Airfield Drainage Rehabilitation
Replace Airfield Perimeter Fence

1.08 COOPERATION BETWEEN CONTRACTORS

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

- A. The Owner reserves the right to contract for and perform other or additional construction on or near the Work covered by this Contract.
- B. When separate contracts are awarded for different portions of the Project, the contractor in each case will be the person other than the Owner who signs each separate contract.
- C. When separate contracts are let within or near the limits of this Project, the Contractor will conduct its Work so as not to interfere with or hinder the progress of completion of the construction performed by other contractors. Contractors working near each other will cooperate with each other as directed by the Contract Documents and the Owner.
- D. The Contractor will assume all liability, financial or otherwise, in connection with Contractor's Work and will protect and save harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays or loss experienced by the Contractor because of the presence and operations (or lack thereof) of other contractors working within or near the limits of this Project.
- E. The Contractor will arrange the Work and will place and dispose of the materials as not to interfere with the operations of the other contractors within or near the limits of this Project. The Contractor will join the Work with that of the others in an acceptable manner and will perform it in proper sequence to that of the others.
- F. The terms of this Section may not be waived by the Owner unless such waiver is in writing and makes specific reference to this Section.

1.09 COOPERATION OF CONTRACTOR

The Contractor shall be supplied with an electronic PDF of the Contract Documents. The Contractor shall have available on the construction site at all times one hard copy of the Contract Documents. Hard copies of Contract Documents may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the Work to facilitate the progress thereof, and shall cooperate with the Owner and its inspectors and with other Contractors in every way possible. The Contractor shall have a competent superintendent on the Work at all times who is fully authorized as their agent on the Work. The superintendent shall be capable of reading and thoroughly understanding the Contract Documents and shall receive and fulfill instructions from the Owner or their authorized representative.

1.10 COORDINATION WITH CONTRACTS

- A. The Contractor will be responsible for directly coordinating and reviewing all schedule dates with the contracts listed above in Item 1.07 LIST OF RELATED WORK, Paragraph A., and shall plan its Work accordingly to not cause any delays or hinder the progress of its Work or that of the Related Work.

- B. It is the sole and full responsibility of the Contractor to coordinate the whole Work directly with the contracts listed above in Item 1.07 LIST OF RELATED WORK, Paragraph A.
- C. The listing of contracts under 1.07 LIST OF RELATED WORK, Paragraph A., may not be inclusive of other related work performed at the Project site; however, the Contractor will be required to coordinate same as directed under Paragraphs A. and B. above.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01015 - MOBILIZATION

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope:

The Work specified as Mobilization consists of preparatory work and operations in mobilizing for beginning work on the Project, including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to the Project site, building permit costs, and for the establishment of temporary offices, building facilities, utilities, safety equipment and first aid supplies, sanitary and other facilities, as required by these Contract Documents and State and local laws and regulations. The costs of bonds and all required insurance and other preconstruction expense necessary for the start of the Work, excluding the cost of construction materials, will also be included in Mobilization.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.01 BASIS OF PAYMENT

Not Used.

END OF SECTION

SECTION 01020 - OWNER'S ALLOWANCES

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

- A. Owner's allowances in the amounts indicated and as described below have been established for certain types of work. The Contractor will perform such Work only upon receipt of written work orders from the Owner. For this purpose, a Work Order will have the same meaning for requirements pertaining to submittals, approvals, etc. as in Section 00700, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, Paragraph 7.3 CONSTRUCTION CHANGE DIRECTIVES, as modified, except the Work Order is only signed by the Owner.
- B. If the Work Order directs that the allowance work be performed, the provisions of Section 00700, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, as modified, will govern the conduct and payment for this Work.
- C. Definitions and Explanations: All Work, including any allowance work if authorized, shall be performed in full compliance with the requirements of the Contract. All allowance work, if and when authorized, shall be performed by the Contractor in accordance with the Work Order.
 - 1. Contractor shall coordinate allowance Work with related Work to ensure that each selection is completely integrated and interfaced with related Work, and shall include all aspects of Work to fully integrate the Work with all other Work and Related Work.
- D. "Purchase and Installation" means the allowance covers both the purchase and installation of the indicated Work. The Contractor will bear the cost of coordinating the Work, providing the installer with access to the Work, temporary heat, ventilation, light, workspace, storage space, parking and toilet facilities, the cost of which will be included in the Contract Sum and not in the allowance.
- E. Work Order Data: Where applicable, Contractor shall include in each Work Order proposal both the quantities of products being purchased and units requested, and furnish survey-of-requirements data to substantiate quantities. Indicate applicable taxes, delivery charges, and amounts of applicable trade discounts.
- F. Upon issuance of a Work Order, the Work Order funds will be tracked separately on the Contractor's Schedule of Values by Work Order number and the amount of the Cost of Work. If multiple subcontractors are employed for the Work Order, each Subcontractor's Pay Requisition will include a separate line with the description Work Order number that will flow to the Contractor's Schedule of Values. Once work is complete on the Work Order, the Contractor has 30 days in which to reconcile the Work Order, as follows:
 - 1. Provide Owner Project Management with a package containing cost support documents totaling the Cost of Work.

2. Calculate mark-ups and fee using the same formula/calculations used to create the original Work Order budget.
3. Any unused Work Order funds will be returned to the Owner's Allowance budget via a negative Work Order.

The Contractor will forfeit their fee on the Work Order for any Work Orders that have not been reconciled within 30 days of the completion of the work, following the process above.

- G. **Work Order Mark-Up:** The amount of each Work Order resulting from final selection and installation of products and systems covered by an allowance will be the difference between the amount of installed Work and the allowance. This is a procedural clarification of Section 00700, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, as modified.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.01 SCHEDULE OF OWNER'S ALLOWANCES

- A. These allowances will cover the total cost of all Work authorized under a Work Order, including but not limited to design, cost of materials and equipment delivered and unloaded at the Project site, and all applicable taxes, permits, fees, labor, installation costs and integration as applicable. The Contractor's percentage, overhead and profit for the allowance will be included in the Work Order amount.
- B. Should the aggregate of charges for all approved Work Orders issued by the Owner under the allowances be less than the amount of the allowance, the final Contract Sum will be decreased by the amount of the difference. No Work will be performed that would cause total charges under the allowances to exceed the authorized allowance amount. The authorized allowance amount may be increased by Change Order. Should the aggregate charge for an approved Work Order issued by the Owner under the Allowance be less than the amount of the Work Order, the Owner may issue another Work Order in a negative amount to reconcile the Work Order. Such reconciliation Work Orders do not require executive management approval.
- C. The following allowance amounts will be included in the Contract Sum bid amount on the Bid Form:

OWNER'S ALLOWANCE: Allow an amount of \$65,000 of the Contract Sum for:

1. **Utilities** – Owner's Allowance may be used for resolution of unforeseen conditions relating to utilities including, but not limited to: sanitary and storm sewer, grouting of abandoned in place pipes, potable water, fire protection, irrigation lines, duct banks, vaults, conduits, electrical conductors, communication cabling, security lines, fiber optic lines, etc. This

addresses any work that would exceed the original contract requirements.

2. **Coordination with Tenant Spaces** - Owner's Allowance may be used for resolution of unforeseen conditions required to maintain all MEPF and other services to tenant spaces throughout the demolition, construction and closeout scopes of work in all work areas associated with the project. This addresses any work that would exceed the original contract requirements.
3. **Temporary Services & Facilities** - Owner's Allowance may be used for resolution of temporary services and facilities required to maintain public service requirements. This addresses any work that would exceed the original contract requirements.
4. **Coordination between projects** - Owner's Allowance may be used for coordination between proposed work and the work of other projects. This includes civil, structural, architectural, mechanical, plumbing and electrical disciplines. Also includes staging, sequencing, scheduling, and other coordination elements that could not have been known by the contractor(s). This addresses any work that would exceed the original contract requirements.
5. **Building Systems** – Owner's Allowance may be used for adjustments to Distributed Antenna Systems (DAS), Wireless Internet System (WIFI), Building Systems, Flight Information Display System (FIDS), Electronic Variable Information Displays (EVIDS), Cameras, Life Safety Devices, Automated Teller Machine (ATM), Pay per use Luggage Carts, Tension Cable, Surface Mounted Graphic Systems, and other building systems that conflict with the new scope of work. This addresses any work that would exceed the original contract requirements.
6. **Hazardous Material Remediation** - Owner's Allowance may be used for remediation of hazardous materials. This addresses any work that would exceed the original contract requirements.
7. **Temporary Signage** - Owner's Allowance may be used for temporary signage not shown on the Contract Documents, but which is deemed necessary to inform the public regarding facilities usage during construction. This addresses any work that would exceed the original contract requirements.
8. **Design deficiencies** - Owner's Allowance may be used to address Design discrepancies in the Contract drawings, necessary to provide complete and functioning systems. Includes civil, architectural, structural, MEPF, Technology, etc.
9. **Authority Having Jurisdiction (AHJ)** – Owner's Allowance may be used for resolution of scope of work related with any Authority Having Jurisdiction. AHJ include, but are not limited to: City of Tampa (COT), Federal Aviation

Administration (FAA), TECO/Peoples Gas, Florida Department of Transportation (FDOT). This addresses any work that would exceed the original contract requirements.

10. **Executive Approval** - Owner's Allowance may be used for desired Work not shown on the Contract Documents with the approval of Owner's executive management.

- D. Contract Time will not be extended as a result of the issuance of any Work Order under this Section 01020 – OWNER'S ALLOWANCES.

- E. The Contract Sum will not be adjusted for any costs of acceleration resulting from the issuance of Work Orders under this Section 01020 – OWNER'S ALLOWANCES. In addition, the Contract Sum will not be adjusted for any costs of acceleration of the whole work resulting from the issuance of Work Orders under this Section 01020 – OWNER'S ALLOWANCES.

END OF SECTION

SECTION 01025 – FIELD OFFICES

PART 1 – GENERAL

1.01 REQUIREMENTS

For the purpose of prosecuting its Work, including but not limited to conducting onsite Project and Contract meetings, the Contractor will furnish, install and maintain temporary field offices ~~for the Owner's representatives and the Contractor~~ during the entire construction period and Contractor will furnish, install and maintain storage and work sheds needed for its on-site activities, including storage of equipment, materials and construction. Upon completion of the Work, the Contractor will remove field offices, sheds and contents, and restore site to original condition.

1.02 OTHER REQUIREMENTS

Prior to installation of offices, the Contractor will consult and coordinate with the Owner on location, access and related facilities. Contractor's field offices, staging and laydown areas, and Contractor's employee parking, will be located onwithin (insert airport) Airport property in the area indicated on the Plans. Such areas will not be exclusive to the Contractor. Contractor shall coordinate its requirements with others having access to the areas through the Owner.

1.03 REQUIREMENTS FOR FACILITIES

A. Construction will:

1. Be structurally sound, weather tight, with floors raised above ground.
2. Have temperature transmission resistance compatible with occupancy and storage requirements.
3. At Contractor's option consist of portable or mobile buildings subject to the following:
 - a. Mobile trailers, when used, will be modified for office use.
 - b. Mobile trailers will not be used for living quarters.

B. Contractor's Office and Facilities shall:

1. Be sized as required for Contractor's general use. Will also provide separate office accommodations for Owner's staff and general use.
2. Have lighting and temperature control as follows:
 - a. Lighting: 50-foot candles at desk top height.
 - b. Exterior lighting at entrance door.
 - c. Automatic heating and mechanical cooling equipment sufficient to

maintain comfort conditions.

3. Have racks and files for Project Record Documents.
 4. Have other furnishings at Contractor's option.
 5. Have at least one copy machine with reduction and enlargement capabilities.
- C. The Contractor will make all provisions and pay for all installations and other costs including maintenance and supplies in order to provide, high speed internet service, power service, exterior lights, copy machine and facsimile machine at the Project site available for the Owner's use. The Contractor will pay all monthly charges for the various services throughout the period of use and until 60 days after the Contractor has reached Final Completion of the Work (including "punch list" items), or until Contractor removes the facilities, whichever is later.
- D. The Contractor will pay for the installation of all utilities required to support the Contractor's and Owner's temporary field offices.

PART 2 – PRODUCTS

2.01 MATERIALS, EQUIPMENT, FURNISHINGS

Materials, equipment and furnishings may be new or used, but must be serviceable, adequate for required purpose, and must comply with all applicable Laws and Regulations.

PART 3 – EXECUTION

3.01 PREPARATION

The Contractor will fill and grade sites for temporary structures to provide adequate surface drainage.

3.02 INSTALLATION

The Contractor will construct temporary field offices on proper foundations; provide connections for utility services; secure portable or mobile buildings when used; provide steps and landings at entrance doors; and provide hurricane or high wind tie-downs, all in accordance with all applicable Laws and Regulations.

3.03 MAINTENANCE AND CLEANING

The Contractor will provide regular maintenance and cleaning for temporary structures, furnishings, equipment and services to maintain such facilities in good hygienic condition compatible with their intended use.

3.04 REMOVAL

- A. The Contractor will remove temporary field offices, contents and services at a time when no longer needed and as approved by the Owner.

- B. The Contractor will remove foundations and debris and grade the site to required elevations and clean the areas.

3.05 LOCATION OF FIELD OFFICES

The Contractor will locate all temporary field offices on the Owner's property at the location(s) to be coordinated with the Owner per Paragraph 1.02 above or per agreement between the Contract parties if no on site space is available. No additional compensation will be provided to the Contractor for the offsite rental/purchase of space.

END OF SECTION

SECTION 01040 - PROJECT COORDINATION

PART 1 - GENERAL

1.01 DESCRIPTION

The minimum administration and supervisory requirements necessary for coordination of work on the Project include but are not necessarily limited to the following:

- A. Preconstruction Conference.
- B. Coordination and Progress Meetings.
- C. Preinstallation Conferences.
- D. Preconstruction and Progress Photographs.
- E. Reporting and Schedules.
- F. Special Reports.
- G. Service Interruption Requests.
- H. Drawing Log (updated weekly).

1.02 COVENANT OF GOOD FAITH AND FAIR DEALING

- A. This Contract imposes an obligation of good faith and fair dealing in its performance and enforcement.
- B. The Contractor and the Owner, with a positive commitment to honesty and integrity, agree to the following mutual duties:
 - 1. Each will function within the laws and statutes applicable to their duties and responsibilities.
 - 2. Each will assist in the other's performance.
 - 3. Each will avoid hindering the other's performance.
 - 4. Each will proceed to fulfill its obligations diligently.
 - 5. Each will cooperate in the common endeavor of the Contract.

1.03 PRECONSTRUCTION CONFERENCE

- A. Before beginning work at the Project site, the Contractor will attend a preconstruction conference and bring the Project Management Team, including but not limited to, the Project Manager and Superintendent employed for this Project. This conference will be

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

requested by the Contractor and called by the Owner who will arrange for other interested parties to be present.

- B. The Contractor will also notify its major subcontractors and suppliers of this meeting if their attendance is required. At this time, all parties will discuss the Project under Contract and prepare a program of procedure in keeping with requirements of the Contract Documents. The Contractor's Project Management Team will make every effort to expeditiously coordinate all phases of the Work, including the required reporting procedure, to obtain the end result within the full purpose and intent of the Contract Documents for this Project.

1.04 COORDINATION AND PROGRESS MEETINGS

The Contractor will:

- A. Prepare a written memorandum on required coordination activities. Included will be such items as required notices, reports, and attendance at meetings. This memorandum will be distributed to each entity performing construction at the Project site.
- B. In addition to specific coordination and preinstallation meetings for each element of Work, and other regular project meetings for other purposes, hold general progress meeting each week with time coordinated with preparation of payment request. Require each party then involved in planning, coordination, or performance of Work to be properly represented at each meeting. Review present and future needs including interface requirements, time, sequences, deliveries, access, site utilization, temporary facilities and services, hours of work, hazards and risks, housekeeping, change orders, and documentation of information for payment requests.
- C. Discuss whether each element of current Work is ahead of schedule, on time, or behind schedule in relation with updated progress schedule. Determine how behind schedule Work will be expedited and secure commitments from parties involved. Discuss whether schedule revisions are required to ensure that current Work and subsequent Work will be completed within Contract Time.
- D. Review everything of significance which could affect progress of Work or potential claims.
- E. Prepare written minutes of the meeting and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting in format required by Owner.

1.05 PREINSTALLATION CONFERENCES

The Contractor will:

- A. Well in advance of installation of every major unit of Work which requires coordination and interfacing with other Work, meet at Project site with installers and representatives of manufacturers and fabricators who are involved in or affected by unit of Work, and in

coordination or integration with other Work which has preceded or will follow. Preinstallation and coordination meetings shall also occur prior to a new trade or new scope of work starting. These meetings are also intended to review the approved submittals, means and methods, testing requirements, mock-up requirements, egress, MOT, and other relevant items.

The Contractor shall have a preinstallation and coordination meeting prior to starting work in a new area that could potentially impact the Authority. This pertains to multiple phased projects. Prior to transitioning to a new area of work, a preinstallation and coordination meeting shall occur to discuss impacts, schedule, temp signage, potential utility interruptions, MOT, delivery options, and other relevant items.

The Owner shall be invited to all preinstallation and coordination meetings. At the Owner's discretion, they may invite other parties that could include other contractors, engineers, department heads, or any other personnel that they deem necessary. These meeting should occur well in advance of any mobilization so as to allow the Owner to communicate to other team members and review the contract documents prior to the meetings. An agenda shall be distributed by the Contractor no later than 48 hours in advance.

- B. Advise Owner of schedule meeting dates.
- C. At each conference, review progress of other Work and preparations for particular Work under consideration, including requirements of Contract Documents, options, related change orders, purchases, deliveries, shop drawings, product data, quality control samples, possible conflicts, compatibility problems, time schedules, weather limitations, temporary facilities, space and access limitations, structural limitations, governing regulations, safety, inspection and testing requirements, required performance results, recording requirements, and protection.
- D. Record significant discussions of each conference. Record agreements and disagreements. Record final plan of action. Distribute written minutes of conference promptly to everyone concerned, including Owner and others in attendance in format required by Owner.

1.06 PRECONSTRUCTION AND PROGRESS PHOTOGRAPHS

The Contractor will provide:

- A. Preconstruction and progress photographs are required by the Contract. Contractor will promptly forward electronic copies to the Owner.
- B. Photographs, videotape(s) or other video recording media will be labeled with the item and date and properly identified and categorized with the name of the person taking the photographs and/or video.

1.07 REPORTING AND SCHEDULES

- A. Within 48 hours after each conference/meeting date, distribute copies of minutes-of-

the-meeting in format required by the Owner to each entity present and to others who should have been present.

- B. Include brief summary, in narrative form, of progress of the Work since previous conference/meeting and report.
- C. Schedule Updating:
 - 1. Immediately following each conference/meeting, where revisions to Progress Schedule have been made or recognized, revise Progress Schedule.
 - 2. Reissue revised Project Schedule concurrently with report of each conference/meeting where appropriate but no later than five days after the conference/meeting.

1.08 SPECIAL REPORTS

- A. Reporting Unusual Events: When an event of an unusual and significant nature, including, but not limited to an accident, injury, or criminal activity, occurs at the Project site, Contractor will prepare and submit a special report to the Owner. The special report will list chain of events, persons participating, response by the Contractor's personnel, an evaluation of the results or effects and similar pertinent information. The Contractor will advise the Owner as soon as possible when such events are known. Time is of the essence.
- B. The Contractor will submit special reports directly to the Owner no later than one day of occurrence. The Contractor will also submit a copy of the special reports to other entities that are affected by the occurrence no later than one day of the occurrence.

1.09 COORDINATION DURING CONSTRUCTION

The Contractor will:

- A. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work.

Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation including, but not limited to:
 - 1. Scheduling construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinating installation of different components to assure maximum accessibility for required maintenance, service, and repair.
 - 3. Making provisions to accommodate items scheduled for later installation.

- B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination; include such items as required notices, reports, and attendance at conference/meeting; and prepare similar memoranda for the Owner and separate contractors where coordination of their work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of schedules.
 - 2. Installation and removal of temporary facilities.
 - 3. Delivery and processing of submittals.
 - 4. Progress meetings.
 - 5. Project closeout activities.
- D. Conservation: Coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water, and materials and Owner's Sustainability Master Plan and salvage materials and equipment involved in performance of, but not actually incorporated in, the Work.

1.10 GENERAL COORDINATION PROVISIONS

The Contractor will:

- A. Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed and not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

1.11 STAFF NAMES

The Contractor will:

- A. At the Preconstruction and Preinstallation conferences, submit a list of the Contractor's principal staff assignments, including the superintendent and other personnel in attendance at the Project Site. Identify individuals and their duties and responsibilities. List their telephone numbers and email addresses. The Contractor will update the list as required. The list will be entered into the Owner's software management system. The Contractor will coordinate with the Owner's Document Control Manager to ensure that this information is up to date on a quarterly basis by providing this list and indicating all changes to the list each time.

END OF SECTION

SECTION 01045 - CUTTING AND PATCHING

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Cutting and patching includes cutting into existing construction to provide for installation or performance of other Work, subsequent fitting, and patching required to restore surfaces to original condition.
- B. The Contractor will proceed with cutting and patching at earliest feasible time to complete the Work without delay.
- C. The Contractor will execute cutting, fitting, and patching, including excavation and backfill, required to perform Work and to:
 - 1. Make several parts fit together properly.
 - 2. Uncover portions of Work to make provisions for installation of ill-timed Work.
 - 3. Remove and replace defective Work.
 - 4. Remove and replace Work not conforming to requirements of Contract Documents.
 - 5. Remove samples of installed Work as required for testing.
 - 6. Make routine penetrations of non-structural surfaces for installation of piping and electrical conduit.
 - 7. Uncover Work to allow for Owner's observation of covered Work, which has been covered prior to required observation of Owner.
- D. Cutting and patching performed during manufacture of products or during initial fabrication, erection or installation processes is not considered to be cutting and patching. Drilling of holes to install fasteners and similar operations is also not considered to be cutting and patching.
- E. Refer to other sections of Specifications for specified cutting and patching requirements and limitations applicable to individual units of Work. Do not cut and patch Work without Owner's written acceptance of procedures.
- F. The Contractor will for new Work, retain original installer or fabricator or another recognized, experienced and specialized firm to perform cutting and patching.
- G. The Contractor will locate all utilities and structural elements within a slab or deck.

1.02 BUILDING MODIFICATIONS

- A. Modifications to the structure and its mechanical and electrical parts will be provided as indicated and as necessary to accomplish the Work of these Contract Documents.
- B. Modifications will include the removal of existing structure or parts as applicable, relocation of materials and/or parts, termination and relocation of utilities, cutting, patching, cleaning, adjusting, and refinishing, and all incidental Work related to these tasks.
- C. It is the Owner's intent to maintain daily occupancy functions during the progress of this Work. The Contractor will closely coordinate this Work to minimize inconvenience thereto.
- D. No utilities will be interrupted without first notifying the Owner and obtaining concurrence with the interruption. Refer to Section 01545 - UTILITIES for requirements.

1.03 SUBMITTALS

- A. Procedural Proposal for Cutting and Patching:
 - 1. Where prior acceptance of cutting and patching is required, the Contractor will submit proposed procedures for Work well in advance of time Work will be performed.
 - 2. The Contractor will include the following information, as applicable, in submittal:
 - a. Nature of Work and how it is to be performed, indicating why cutting and patching cannot be avoided. Describe the extent of the cutting and patching required and how it is to be performed.
 - b. Anticipated results of Work in terms of change to existing conditions including structural, operational and visual changes, as well as other significant elements.
 - c. List products to be used and firms that will perform Work.
 - d. Dates when cutting and patching are to be performed.
 - e. List utilities that will be disturbed or otherwise be affected by Work, including utilities that will be relocated and utilities that will be out-of-service temporarily.
 - f. Indicate how long utility service will be disrupted.
- B. Where cutting and patching of structural Work involves addition of reinforcement, the Contractor will submit details and engineering calculations to show how reinforcement is integrated with original structure to satisfy requirements.
- C. Review of procedural proposal by Owner does not waive Owner's right to later require complete removal and replacement of Work found to be cut and patched in

unsatisfactory manner.

- D. The Contractor will not cut or patch structural elements in a manner that would impact their load carrying capacity or load-deflection ratio.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. The Contractor will use materials for cutting and patching that are identical to existing materials. If identical materials are not available, or cannot be used, use materials that match existing adjacent surfaces to fullest extent possible with regard to visual effect.
- B. The Contractor will use materials for cutting and patching that will result in equal-or-better performance characteristics.
- C. The Contractor will comply with specifications and standards for each specific product involved.
- D. Should conditions of Work or schedule indicate change of products from original installation, the Contractor will submit requirements for substitution with sufficient documentation to substantiate that the proposed substitution is equivalent in terms of performance to the original installation.

PART 3 – EXECUTION

3.01 EXAMINATION

The Contractor will:

- A. Before cutting, examine surfaces and conditions under which Work is to be performed. If unsafe or otherwise unsatisfactory conditions are encountered, take corrective action before proceeding with Work.
- B. Before the start of cutting Work, meet at Work site with all parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict between various trades. Coordinate layout of Work and resolve potential conflict before proceeding with Work.
- C. Slabs and walls shall be X-rayed for locations of any utilities and structural elements before coring or cutting begins. Due to the inability of GPR (ground penetrating radar) to properly locate PVC piping and conduit, GPR shall only be used with written approval by Owner.

3.02 PREPARATION

The Contractor will:

- A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of Work.

- B. Protect other work during cutting and patching to prevent damage. Provide protection from adverse weather conditions for that part of Project that may be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Take precautions not to cut existing pipe, conduit, or duct serving building(s) scheduled to be relocated until provisions have been made to bypass them.

3.03 CUTTING

The Contractor will:

- A. Cut Work using methods that are least likely to damage Work to be retained or adjoining Work.
- B. Use handheld small power tools designed for sawing or grinding, not hammering and chopping. Cut through concrete and masonry using cutting machine such as carborundum saw or core drill to ensure a neat hole. Cut holes and slots neatly to size required with minimum disturbance of adjacent Work. To avoid marring existing finished surfaces, cut or drill from exposed or finished side into concealed surfaces. Temporarily cover openings when not in use.
- C. Bypass utility services such as pipe and conduit before cutting, where such utility services are shown or required to be removed, relocated, or abandoned. Cut-off conduit and pipe in walls or partitions to be removed. After bypass and cutting, cap, valve, or plug and seal tight remaining portion of pipe and conduit to prevent entrance of moisture or other foreign matter.
- D. Not cut and patch operational elements or safety related components in a manner that would result in reduction of capacity to perform in manner intended, including energy performance, or that would result in increased maintenance, decreased operational life or decreased safety.
- E. Not cut and patch Work exposed on building's exterior or in occupied spaces, in a manner that would result in lessening building's aesthetic qualities. Do not cut and patch Work in a manner that would result in substantial visual evidence of cut and patch Work. Remove and replace Work judged by the Owner to be cut or patched in a visually unsatisfactory manner.
- F. Where structural members and/or other construction elements penetrate smoke and fire rated assemblies and sound barriers, including walls around and floor below mechanical equipment rooms, provide acoustical fire rated sealant between such Work and barrier to maintain acoustical attenuation, as well as smoke and fire integrity of the barrier.

3.04 PATCHING

The Contractor will:

- A. Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for Work.
- B. Where feasible, inspect and test patched areas to demonstrate integrity of Work.
- C. Restore exposed finishes of patched areas and where necessary extend finished restoration into retained adjoining Work in a manner which will eliminate evidence of patching and refinishing.
- D. Install new products to complete Work in accordance with requirements of Contract Documents.
- E. Where removal of walls or partitions extends one finished area into another finished area, patch and repair floor and wall surfaces in new space to provide an even surface or uniform color appearance. If necessary to achieve uniform color and appearance, remove existing floor and wall coverings and replace with new materials.
- F. Where patch occurs in smooth painted surface, extend final paint coat over entire unbroken surface containing patch, after patched area has received prime and base coat.

3.05 ADJUSTING

The Contractor will:

- A. Restore damaged pipe covering to original conditions.
- B. Remove and replace Work cut and patched in visually unsatisfactory manner.

3.06 CLEANING

The Contractor will:

Thoroughly clean areas and spaces where Work is performed or used as access to Work. Remove paint, mortar, oils, putty, and items of similar nature. Thoroughly clean piping, conduit, and similar features before painting or other finish is applied.

END OF SECTION

SECTION 01050 - FIELD ENGINEERING

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. The Owner shall furnish horizontal and vertical monuments, which may be outside the limits of the Project site. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. The Contractor is responsible for preserving the integrity of horizontal and vertical controls established by the Owner. If Contractor or its employees causes the destruction or damage of any horizontal and vertical control, any resulting costs will be deducted from the Contract Sum.

As applicable, prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the Owner that the Contractor concurs with survey control established for the Project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this Project will be provided to the Owner. The Contractor is responsible to establish all layout required for the construction of the Project.

Copies of survey notes will be provided to the Owner for each area of construction and for each placement of material as specified to allow the Owner to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided to the Owner prior to commencing Work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): PDF and AutoCAD

Laser, GPS, string line, or other automatic control shall be checked with temporary control as necessary. In the case of error, on the part of the Contractor, its surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

No direct payment will be made, unless otherwise specified in Contract Documents, for this labor, materials, or other expenses. The cost shall be included in the price of the Bid for the various items of the Contract.

- B. The Contractor will:
1. Furnish all lines, grades, and measurements necessary for the proper prosecution and control of the Work under these Contract Documents. The Work will include performing all calculations required and setting all controls needed such as offsets, reference points, and other reference marks or points necessary to provide lines and grades for construction. The Contractor is responsible to maintain these control points for use by subsequent contractors.
 2. Establish the building grades, lines, levels, columns, walls and partition lines required.

3. Calculate and measure required dimensions indicated within recognized tolerances.
4. Not scale drawings to determine dimensions.
5. Advise Subcontractors performing Work of marked lines and levels provided for use in layout of Work.

1.02 SURVEY

A. Surveyor:

The Contractor will retain a competent Professional Engineer or Land Surveyor, experienced and specialized in land survey work, registered and licensed by the State of Florida, and acceptable to the Owner, who will establish the exterior lines and required elevations of all buildings and structures to be erected on the Project site and will establish sufficient lines and grades for the construction of associated Work such as, but not limited to, roads, utilities, aircraft aprons, and site grading. The Professional Engineer or Land Surveyor will certify as to the actual location of the constructed facilities in relation to property lines, building lines, easements, and other restrictive boundaries.

B. Procedures:

The Contractor will:

1. Verify layout information indicated in relation to property survey and existing benchmarks before proceeding with layout of actual Work.
2. As Work proceeds, check major element for line, levels, and plumb.
3. Maintain accurate surveyor's log or record book of such checks, available for Owner's reference at reasonable times.
4. Record deviations from required lines and levels.
5. Advise Owner promptly upon detection of deviations exceeding indicated or recognized tolerances.
6. Record deviations which are accepted on Project Record Drawings.

1.03 RECORDS

The Contractor will:

- A. Maintain complete accurate log of control and survey Work as it progresses, updated monthly and accessible to Owner for review on an as needed basis.
- B. Upon completion of foundation walls and major Project site improvements, prepare certified survey showing dimensions, locations, angles, and elevations of construction.

- C. Final Survey:
 - 1. Immediately before time of Substantial Completion, prepare final survey showing significant features resulting from construction of Project.
 - 2. Include on survey certification, signed by surveyor, to effect that principal lines and levels of Project are accurately positioned as shown on survey.
- D. Survey Copies: Furnish electronic copy and one hard copy, if requested by Owner, of the final survey.
- E. Records of Actual Work: Furnish electronic copy and one hard copy, if requested by Owner, one of which will be returned for inclusion in Project Record Documents as specified in Section 01700 - PROJECT CLOSEOUT.

1.04 UNDERGROUND OBSTRUCTIONS

- A. The Contractor acknowledges that pipe lines, existing underground installation, and underground structures in vicinity of the Work are shown on the drawings according to best information available.
- B. The Contractor will verify the location of underground pipe lines, conduits, and structures by contacting owners of underground utilities and by prospecting in advance of excavation.
- C. The Contractor will secure written permission from the proper authority before initiating new construction over existing utilities. The Contractor will submit copy or original written permission before commencing Work. Furnish release from proper authority before Final Acceptance of Work.
- D. The Contractor will repair cuts to existing utilities made during the construction process as part of Project Work to the satisfaction of the utility Owner, unless otherwise stated in the Contract Documents.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01095 - DEFINITIONS AND STANDARDS

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

A. General:

1. This section specifies procedural and administrative requirements for compliance with governing regulations and the codes and standards imposed upon the Work. These requirements include the obtaining of permits, licenses, inspections, releases and similar requirements associated with regulations, codes and standards.
2. Regulations are defined to include laws, statutes, ordinances, and lawful orders issued by governing authorities, as well as those rules, codes, conventions and agreements within the construction industry which effectively control the performance of the Work, as well as applicable FAA Advisory Circulars and TSA Security Directives, regardless of whether they are lawfully imposed by governing authority or not.
3. Codes, standards and requirements of the Owner are identified within the Contract Documents. Contractor must examine, determine and identify other codes, standards and requirements that may be applicable to the Contractor's Work, such that the intent of the Contract is fully realized.

B. Governing Regulations:

Refer to Section 00700, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, as modified, for requirements related to compliance with governing regulations.

1.02 DEFINITIONS

A. General Requirements:

The provisions or requirements of Division 01 sections apply to the entire Work of this Contract and supplement the requirements in the Contract Documents.

A substantial amount of specification language consists of definitions of terms found in the Contract Documents. Certain terms used in Contract Documents are defined in this section. Definitions and explanation contained in this section are not necessarily either complete or exclusive, but are general for the Work to the extent they are not stated more explicitly in another element of the Contract Documents.

B. Whenever the following terms are used in the Contract Documents or any other documents or instruments pertaining to the construction of this Project, the intent and meaning will be interpreted as follows:

1. AASHTO. The American Association of State Highway and Transportation Officials.

2. ACCESS ROAD. The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.
3. ADVERTISEMENT. A public announcement, as required by local law, inviting bids for Work to be performed and materials to be furnished. Also referred to as "Invitation to Bid" or "Notice to Bidders."
4. AIR OPERATIONS AREA (AOA). For the purpose of these Specifications, the term AOA means any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An AOA includes such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway or apron.
5. AIRPORT. Airport means Tampa International Airport.
6. AIRPORT IMPROVEMENT PROGRAM (AIP). The AIP means a grant-in-aid program administered by the Federal Aviation Administration.
7. APPROVE. Where used in conjunction with Owner's response to submittals, requests, applications, inquiries, reports and claims by the Contractor, the term "approved" will be held to limitations of Owner's responsibilities and duties as specified in the Contract Documents. In no case will "approval" by Owner be interpreted as a release of Contractor from responsibilities to fulfill requirements of the Contract Documents.
8. APM: Automated People Mover. A guided transit mode with fully automated operation, featuring vehicles that operate on guideways with exclusive right-of-way.
9. APM SYSTEM: The vehicles, running surfaces or track, switches, other guideway equipment, active graphics, any platform barrier doors, power distribution, central control, communications, maintenance equipment, and all other equipment, which when integrated results in the operation of the APM trains.
10. APRON. Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.
11. ASTM INTERNATIONAL (ASTM). Formerly known as the American Society for Testing and Materials (ASTM).
12. AWARD. The acceptance by the Owner of the successful Bidder's Bid.
13. BID. The written offer of the Bidder to perform the Work and furnish the necessary materials and labor in accordance with the provisions of the Contract Documents.
14. BID BOND. The security furnished with a Bid to guaranty that the Bidder will enter into a Contract if Bidder's Bid is accepted by the Owner.

15. **BIDDER.** Any individual, partnership, firm or corporation, acting directly or through a duly authorized representative, who submits a Bid for the Work contemplated.
16. **BUILDING AREA.** An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way, together with all airport buildings and facilities located thereon.
17. **CERTIFICATE OF ANALYSIS (COA).** The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.
18. **CERTIFICATE OF COMPLIANCE (COC).** The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative.
19. **CHANGE ORDER.** A written order to the Contractor covering changes in the Contract, plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for work within the scope of the contract and necessary to complete the project.
20. **CONSTRUCTION SCHEDULE.** The Contractor-prepared schedule as adjusted from time to time in accordance with the Contract Documents showing planned and actual progress by items of the Work.
21. **CONTRACT.** A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment.

The awarded contract includes but may not be limited to the Contract Documents.
22. **CONTRACT ITEM (PAY ITEM).** A specific unit of work for which a price is provided in the contract.
23. **CONTRACT TIME.** The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.
24. **CONTRACTOR.** The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.
25. **CONTRACTOR'S QUALITY CONTROL (QC) FACILITIES.** The Contractor's QC

facilities in accordance with the Contractor Quality Control Program (CQCP).

26. **CONTRACTOR QUALITY CONTROL PROGRAM (CQCP).** Details the methods and procedures that will be taken to assure that all materials and completed construction required by the contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.
27. **CONTROL STRIP.** A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.
28. **CONSTRUCTION SAFETY AND PHASING PLAN (CSPP).** The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
29. **DAY.** As used in the Contract Documents means calendar day unless otherwise specifically defined.
30. **DESIGN PROFESSIONAL:** The individual, partnership, firm or corporation duly authorized by the Owner (Sponsor) to be responsible for the architectural and engineering supervision of the contract work and acting directly or through an authorized representative.
31. **CONTRACT DOCUMENTS.** The Contract Documents consist of: Advertisement, Contract Form, Proposal, Bid form, Exhibits, Performance Bond, Payment Bond, General Provisions, certifications and representations, Division 0 Documents, Division 01 Documents, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued Addenda.
32. **DIRECTED, REQUESTED, ETC.** Where not otherwise explained, terms such as "directed", "requested", "authorized", "selected", "accepted", and "permitted" mean "directed by Owner or Design Professional", "requested by the Owner or Design Professional", and similar phrases. However, no such implied meaning will be interpreted to extend Owner's or Design Professional's responsibility into the Contractor's area of Contractor, including but not limited to construction supervision.
33. **DRAINAGE SYSTEM.** The system of pipes, ditches, ponds, and structures by which surface or subsurface waters are collected and conducted from the airport area.
34. **DRAWINGS.** The official Drawings or exact reproductions which show the location, character, dimensions and details of the airport and the Work to be done.
35. **ENGINEER.** The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of

the contract work and acting directly or through an authorized representative.

36. **EQUIPMENT.** The articles, devices, software, control system, and other assets used to serve a function in the operation of the Project. Also, used to refer to all machinery, together with the necessary supplies for upkeep and maintenance, as well as all tools and apparatus, necessary for the proper construction and acceptable completion of Work.
37. **EXPERIENCED.** The term "experienced" when used with the term "Installer" means having previous projects similar in size and scope to the installation to be performed, being familiar with the procedures required, and having complied with requirements of the authority having jurisdiction.
38. **EXTRA WORK.** An item of Work not provided for in the awarded Contract as previously modified by work order or change order but which is found by the Owner to be necessary to complete the Work within the intended scope of the Contract as previously modified.
39. **FAA (Federal Aviation Administration).** When used to designate a person, FAA means the Administrator or its duly authorized representative.
40. **FAA SUPPLEMENT.** It is understood that federal grant funds may be used in the Project. In the event federal grant funds are used, the Contract Documents will be governed by all applicable rules and regulations of the FAA and U.S. Department of Transportation, as well as applicable requirements incorporated in any grant agreement between the Owner and the FAA with regard to said funding, which requirements are set forth in the attached "FAA Construction Contract Clauses, Airport Improvement Program," and which will be incorporated herein if federal grant funds are utilized.
41. **FEDERAL SPECIFICATIONS.** The Federal Specifications and Standards, and all supplements, amendments and indices thereto as prepared and issued by the General Services Administration of the Federal Government. They may be obtained from the Specifications Unit, 7th and D Street, SW, Washington, DC 20406, Tele: (202) 472-2205 or 472-2140.
42. **FHWA (Federal Highway Administration).** When used to designate a person, FHWA will mean the Administrator or its duly authorized representative.
43. Reserved.
44. **FURNISH.** Except as otherwise defined in greater detail, the term "furnish" is used to mean supply and delivery to Project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance for incorporation and installation into the Work.
45. **INDICATED.** The term "indicated" is a cross-reference to graphic representations, notes, or schedules on drawings, to other paragraphs or schedules in the Specifications, and to similar means of recording requirements in Contract Documents. Where terms such as "shown", "noted", "scheduled",

and "specified" are used in lieu of "indicated", it is for the purpose of helping the reader locate the cross-reference, and no limitation of location is intended except as specifically noted.

46. INSPECTOR. An authorized representative of the Owner assigned to make all necessary inspections and/or tests of the Work performed or being performed, or of the materials furnished or being furnished by the Contractor.
47. INSTALL. Except as otherwise defined in greater detail, the term "install" is used to describe operations at the Work site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations, as applicable in each instance, to incorporate the element being installed into the Work.
48. INSTALLER. The term "installer" is the entity (person or firm) engaged by the Contractor, its Subcontractor or Sub-subcontractor for performance of a particular unit of Work at the Project site, including installation, erection, application, and similar required operations. It is a general requirement that such entities (installers) be expert in the operations they are engaged to perform.
49. INTENTION OF TERMS. Whenever, in the Contract Documents, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it will be understood that the direction, requirement, permission, order, designation, or prescription of the Design Professional is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import will mean approved by, acceptable to, or satisfactory to the Design Professional.
 - a. Any reference to a specific requirement of a numbered paragraph of the Contract Document or a cited standard will be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.
50. LABORATORY. The official testing laboratories of the Contractor or Owner or such other laboratories as may be designated by the Owner.
51. LIGHTING. A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.
52. MAJOR AND MINOR CONTRACT ITEMS. A major contract item will be any item that is listed in the Bid, the total cost of which is equal to or greater than 20% of the total amount of the awarded Contract. All other items will be considered minor contract items.
53. MATERIALS. Any substance to be used in the Work.

54. MODIFICATION: A Modification is also a Change Order, Work Order or written order for a change in the Work issued by the Owner.
55. MODIFICATION OF STANDARDS (MOS). Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.
56. NO EXCEPTIONS TAKEN. The term "No Exceptions Taken" where used in conjunction with the Design Professional's action on the Contractor's submittals, applications, and requests, is limited to the Design Professional's duties and responsibilities as stated in Section 00700, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, as modified.
 - a. Refer to Section 01340 - SHOP DRAWINGS, PRODUCT DATA AND SAMPLES for more specific information.
57. NOT APPROVED. Where used in conjunction with the Design Professional's response to submittals, requests, applications, inquires, reports, and claims by the Contractor, indicates that the item or material is unsatisfactory, and must be revised, new material prepared in accordance with notations, and the item or material resubmitted. Material marked in this manner will not be released for any Work.
58. NOTE MARKINGS. Where used in conjunction with the Owner's response to submittals, requests, applications, inquires, reports, and claims by the Contractor, "Note Markings" indicates that the item or material submitted is approved subject to corrections noted. Correction and re-submittal of the item is not required unless specifically called for in the notations. Approval of Contractor's submitted item does not constitute approval of the design. Approval does not permit any deviation from the Contractor's requirements and does not relieve the Contractor of the responsibility for errors or deficiencies in design, dimension, details, or for coordinating installation and/or construction with actual conditions at the Project site.
59. NOTICE TO PROCEED (NTP). A written notice to the Contractor to begin the actual Contract Work. If applicable, the NTP will state the date on which the Contract Time begins.
60. OWNER (SPONSOR). The term Owner or Sponsor will mean the party of the first part or the contracting agency signatory to the Contract. The Hillsborough County Aviation Authority is the Owner, and will include its agents, employees, representatives and contractors when acting at its direction or on its behalf. The Hillsborough County Aviation Authority is also referred to as the "Owner" or "Authority" in these Contract Documents. For AIP Contracts, the term Sponsor will have the same meaning as the term Owner.
61. PAVEMENT. The combined surface or friction course, structural course, base course, and sub-base course, if any, considered as a single unit.
62. PAYMENT BOND. The approved form of security furnished by the Contractor

and Contractor's surety as a guaranty that the Contractor will pay in full all bills and accounts for material and labor used in the construction of the Work under the contract.

63. PERFORMANCE BOND. The approved form of security furnished by the Contractor and Contractor's surety as a guaranty that the Contractor will complete the Work in accordance with the terms of the Contract and will complete the guarantee of the Work specified therein.
64. PLANS. The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications. Plans may also be referred to as 'contract drawings.'
65. PROJECT. The Work defined in the Contract Documents.
66. PROJECT SITE. The term "Project Site" is defined as the space available to the Contractor for performance of the Work, either exclusively or in conjunction with others performing other Work, as part of the Project. The extent of the Project Site may or may not be identical with the description of the land upon which the Project is to be built but it is within or near the Airport.
67. PROPOSAL. The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.
68. PROPOSAL GUARANTY. The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner.
69. PROVIDE. Except as otherwise defined in greater detail, the term "provide" means furnish and install, complete, and ready for intended use, as applicable in each instance.
70. QUALITY ASSURANCE (QA). Owner's responsibility to assure that construction work completed complies with specifications for payment.
71. QUALITY CONTROL (QC). Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.
72. QUALITY ASSURANCE (QA) INSPECTOR. An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.
73. QUALITY ASSURANCE (QA) LABORATORY. The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer's, Owner's, or QA

Laboratory.

74. RESIDENT PROJECT REPRESENTATIVE (RPR). The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.
75. RETENTION. Retention (or Retainage) is the amount of compensation for Work accomplished by the Contractor which is retained by the Owner to be paid to the Contractor as specified herein.
76. RUNWAY. The area on the airport designated for the landing and takeoff of aircraft.
77. RUNWAY SAFETY AREA (RSA). A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA.
78. SAFETY PLAN COMPLIANCE DOCUMENT (SPCD). Details how the Contractor will comply with the CSPP.
79. SHOP DRAWINGS. All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a subcontractor, manufacturer, supplier or distributor and which illustrate the equipment, material or some portion of the Work.
80. SHUTTLE. A guided transit mode with fully automated operation, featuring vehicles that operate on guideways between the Main Terminal and Airsides
81. SPECIFICATIONS. A part of the Contract Documents containing the written directions and requirements for completing the Contract Work. Standards for specifying materials or testing which are cited in the Contract Specifications by reference will have the same force and effect as if included in the Contract physically.
82. SPONSOR. See "Owner".
83. STRUCTURES. Airport facilities such as buildings, aprons, bridges, culverts, catch basins, inlets, retaining walls, cribbing, storm and sanitary sewer lines, waterlines, underdrains, electrical ducts, manholes, handholes, lighting fixtures and bases, transformers, flexible and rigid pavements, navigational aids, buildings, vaults, and other manmade features of the airport that may be encountered in the Work and not otherwise classified herein.
84. SUBGRADE. The soil which forms the pavement foundation.
85. SUPERINTENDENT. The Contractor's executive representative who is present on the Work during progress, authorized to receive and fulfill instructions from the

Owner, and who will supervise and direct the construction.

86. SUPPLEMENTAL CONTRACT. A written agreement between the Contractor and the Owner covering (1) Work that would increase or decrease the total amount of the awarded Contract, or any major Contract item, by more than 25%, such increased or decreased work being within the scope of the originally awarded Contract; or (2) Work that is not within the scope of the originally awarded Contract.
87. SURETY. The corporation, partnership, or individual, other than the Contractor, executing Payment and Performance Bonds which are furnished to the Owner by the Contractor.
88. TAXILANE. A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.
89. TAXIWAY. The portion of the AOA of an airport that has been designated by the airport authority for movement of aircraft to and from the airport's runways or aircraft parking areas.
90. TAXIWAY/TAXILANE SAFETY AREA (TSA). A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA.
91. TESTING LABORATORIES. An independent entity engaged to perform specific inspections or tests of the Work, either at the Project site or elsewhere, and to report and (if required) interpret results of those inspections or tests.
92. TRADES. Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.
93. UNIT PRICE. Cost per unit of Work.
94. WORK. The construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.
95. WORKING DAY. A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.

1.03 SPECIFICATION FORMAT AND CONTENT EXPLANATION

A. General:

1. This article is provided to help the user of the Specifications to more readily understand the format, language, implied requirements and similar conventions of content. None of the following explanations will be interpreted to modify the substance of the Contract requirements.

B. Specification Content:

1. The Project Specifications and the Contract Documents have been produced employing certain conventions in the use of language as well as conventions regarding the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
 - a. In certain circumstances, the language of the Specifications and other Contract Documents is of the abbreviated type. It implies words and meanings that will be interpreted as plural. Plural words will be interpreted as singular where applicable and where the full context of the Contract Documents so indicates.
 - b. Imperative Language is used generally in the Specifications. Requirements expressed imperatively are to be performed by the Contractor. At certain locations in the text, for clarity, contrasting subjective language is used to describe responsibilities which must be fulfilled indirectly by the Contractor or by others when so noted.

1.04 INDUSTRY STANDARDS

A. Applicability of Standards:

Except where more explicit or stringent requirements are written into the Contract Documents, applicable industry standards have the same force and effect as if bound into or copied directly into the Contract Documents. Such industry standards are made a part of the Contract Documents by reference. Contractor shall keep available copies of all applicable codes and standards at locations where Work is being performed, including the Project Site.

B. Publication Dates:

Except as otherwise indicated, where compliance with an industry standard is required, comply with standard in effect as of date of Contract Documents.

C. Conflicting Requirements:

Where compliance with two or more standards is specified, and where these standards establish different or conflicting requirements, the Contractor shall call the conflict to the Owner's attention and the most stringent requirement may be enforced as determined by the Owner.

D. Copies of Standards:

1. The Contract Documents require that each entity performing Work be experienced in that part of the Work being performed. Each entity is also required to be familiar with industry standards applicable to that part of the Work. Copies of applicable industry standards are not bound with the Contract Documents.
 - a. Where copies of industry standards are needed for proper performance of the Work, the Contractor is required to obtain such copies directly from the publication source.
 - b. Although certain copies of industry standards needed for enforcement of the requirements may be required submittals, the Owner reserves the right to require the Contractor to submit additional copies of these standards as necessary for enforcement of requirements.

E. Abbreviations and Names:

Trade association names and titles of general standards are frequently abbreviated. Where acronyms or abbreviations are used in the Specifications or other Contract Documents they are defined to mean the recognized name of the trade association, standards generating organization, governing authority or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co.

F. Comply with applicable standards for work promulgated by organizations, associations, institutes, societies, boards and generally recognized organizations including but not limited to:

Acoustical Materials Association.....	AMA
Air Conditioning & Refrigeration Institute.....	ARI
Air Moving & Conditioning Association.....	AMCA
Aluminum Association.....	AA
American Association of State Highway and Transportation Officials	AASHTO
American Concrete Institute.....	ACI
American Gas Association.....	AGA
American Institute of Steel Construction.....	AISC
American National Standards Institute.....	ANSI
American Petroleum Institute.....	API
American Plywood Association.....	APA
American Society of Civil Engineers	ASCE
American Society of Mechanical Engineers.....	ASME
American Society for Testing and Materials.....	ASTM
American Society of Heating, Refrigerating & Air Conditioning Engineers.	ASHRAE
American Water Works Association.....	AWWA
American Welding Society.....	AWS

American Wood Preservers Bureau.....	AWPB
Architectural Precast Association.....	APA
Architectural Woodworking Institute.....	AWI
Cast Iron Pipe Research Association.....	CIPRA
Concrete Reinforcing Steel Institute.....	CRSI
Contracting Plasterers and Lathers International Association.....	CPLIA
Factory Mutual Engineering Corporation.....	FM
Federal Specifications.....	FED. SPEC.
Flat Glass Jobbers Association.....	FGJA
Gypsum Association.....	GA
Industrial Power Cable Engineers Association.....	IPCEA
Institute of Boiler & Refrigeration.....	IBR
Institute of Electrical & Electronic Engineers.....	IEEE
Joint Industry Council.....	JIC
Metal Lath Manufacturers Association.....	MLMA
Metal Lath/Steel Framing Association.....	ML/SFA
Military Specifications.....	MIL. SPEC.
National Association of Architectural Metal.....	NAAM
National Bureau for Lathing and Plastering.....	NBLP
National Concrete Masonry Association.....	NCMA
National Electric Code.....	NEC
National Electrical Manufacturers Association.....	NEMA
National Fire Protection Association.....	NFPA
National Lumber Manufacturers Association.....	NLMA
National Roofing Contractors Association.....	NRCA
National Terrazzo & Mosaic Association.....	NTMA
National Woodwork Manufacturers Association.....	NWMA
Occupational Safety and Health Administration	OSHA
Portland Cement Association.....	PCA
Post-Tensioning Institute.....	PTI
Precast Concrete Institute.....	PCI
Product Standards.....	PS
Research Council on Riveted and Bolted Structural Joints.....	RCRBSJ
Rubber Manufacturer's Association.....	RMA
Sealing and Waterproofers Institute.....	SWI
Sheet Metal & Air Conditioning Contractors National Assoc.....	SMACNA
Southern Pine Inspection Bureau.....	SPIB
Steel Boiler Institute.....	SBI
Steel Door Institute.....	SDI
Steel Joist Institute.....	SJI
Steel Structures Painting Council.....	SSPC
Stucco Manufacturer's Association.....	SMA
Tile Council of America.....	TCA
Tubular Exchange Manufacturers Association.....	TEMA

Underwriter's Laboratories.....	UL
United States Department of Commerce - Commercial Standards.....	CS
United States Department of Commerce – Products Standards	PS
United States Gypsum Company.....	USG
United States Postal Service.....	USPS
Vermiculite Institute.....	VI
Warnock Hersey.....	WH
West Coast Lumber Inspection Bureau.....	WCLIB

- G. Where more than one quality or requirement is set forth in such standards and reference is not made in these Specifications to which specific quality or requirement is intended, the conflict shall be brought to the attention of the Owner who will determine which one to follow. The Contractor will be deemed to have bid the most stringent and furnished the most stringent. Where under such standards options occur, the Owner will be called upon to designate which applies.
- H. No provisions of any referenced standard, specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) will be effective to change the duties and responsibilities of the Owner, Contractor or any of their consultants, agents or employees, from those set forth in the Contract Documents, nor will it be effective to assign to the Owner any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of the Contract Documents.

1.05 CODES/MANUFACTURER'S RECOMMENDATIONS

- A. Applicable code requirements are included herein by this reference. However, such are minimum criteria and no reduction from Drawings or Specifications will be permitted, even if allowed by applicable code.
- B. Electrical and mechanical apparatus, fixtures and equipment will bear approved device label of Underwriter's Laboratories.
- C. The local building code and the Florida Building Code (Latest Edition) apply to all Work. In the event a conflict occurs between the local and Florida Building Codes, the greater requirements will govern. The Contractor shall call to the attention of the Owner any conflict which may arise due to revisions to codes and regulations subsequent to the Contract Date.
- D. Specifically, comply with following codes and regulations:
 - .1. Florida Building Code, Latest Edition.
 - .2. Florida Plumbing Code, Latest Edition.
 - .3. Florida Mechanical Code, Latest Edition.
 - .4. Florida Fire/Gas Code, Latest Edition.
 - .5. Local Building Code.
 - .6. Local Public Utility regulations.

7. City of Tampa Water Department "Developer-Install" Manual.
8. City of Tampa Department of Sanitary Sewer Developer Review Package.
9. National Standard Plumbing Code.
10. National Electric Code (NEC).
11. ASME Code for unfired pressure vessels.
12. Building exits code (life safety code), NFPA 101.
13. Standards of National Board of Fire Underwriters.
14. ASHRAE Safety Code for Mechanical Refrigeration.
15. National Fire Codes.
16. National Fire Protection Association.
17. Occupational Safety and Health Administration (OSHA).
18. International Council of Building officials.
19. Housing and Urban Development.
20. Council of American Building Officials.
21. ANSI A17.1-1987 Safety Code for Elevators and Escalators.
22. American National Standards Institute (ANSI).
23. Florida Department of Environmental Regulation.
24. United States Environmental Protection Agency.
25. Americans with Disabilities Act (ADA).
26. Hillsborough County Environmental Protection Commission.
27. Florida Department of Transportation (FDOT).
28. Federal Aviation Administration (FAA)(Including, but not limited to applicable Advisory Circulars.) applicable Advisory Circulars.)
29. Transportation Security Administration (TSA).

E. Comply with recommendations of pertinent manufacturer to achieve first quality work.

1.06 ABBREVIATED SPECIFICATIONS

- A. In order to shorten these Specifications, certain terminology and form common in specification writing is employed. The following words are often omitted when meaning remains clear without the same, i.e., "the," "the Contractor will," "of," "a," "will comply with," etc.
- B. Uses of a period or colon after a general mention of a material lists means "will be," or "will comply with." Example:

"Portland Cement: ASTM C 150, Type 1."

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01110 - AIRPORT PROJECT PROCEDURES

PART 1 - GENERAL

The Contractor shall control its operations and those of its subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

1.01 AIRPORT OPERATIONS

Airport operations will be maintained throughout this Contract. The Contractor will in no way curtail or handicap normal operational characteristics of the airport facility except as specifically indicated and specified in these Contract Documents.

1.02 PERMITS, LICENSES AND TAXES

- A. The Contractor will be required to procure and pay for all permits, licenses, fees, duties and taxes and arrange for all inspections and similar procedural items as required by the authorities having jurisdiction.
- B. The Contractor will procure all necessary and required permits and licenses, including batch plant permit(s), pay all charges, fees and taxes and give all notices necessary and incidental to the due and lawful prosecution of the Work so as not to delay the completion of the Project. No extensions of Contract for the foregoing will be granted. The Contractor's claim that insufficient Contract Time was specified will not be a valid reason for extension of Contract Time. No extensions of Contract Time for completion will be granted for failure to timely procure all necessary and required permits and licenses, including Cutting & Welding permits, batch plant permit(s), or failure to pay all charges, fees and taxes, or failure to give all notices in a timely manner.

1.03 VERIFICATION OF EXISTING CONDITIONS

Prior to bidding and commencing with construction, the Contractor will familiarize itself with the existing conditions of the Project and requirements of the Contract Documents. Should the Contractor discover any inaccuracies, errors, or omissions between the actual existing conditions and the Contract Documents, the Contractor will, within 7 calendar days from the time it was discoverable, notify the Owner, in writing or otherwise, otherwise the Contractor will be deemed to have waived any claim arising therefrom. Submission of Bid by the Contractor will be held as an acceptance of the existing conditions and the requirements of the Contract Documents by the Contractor.

1.04 MAINTENANCE OF TRAFFIC

- A. It is the explicit intention of the Contract that the safety of aircraft, the public and other personnel, as well as the Contractor's equipment and personnel, is the most important consideration. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP). The Contractor will maintain the free and unobstructed movement of aircraft and vehicular traffic in the AOA of the Airport, including approach and departure surfaces, with respect to Contractor's own operations and the operations of all Contractor's Subcontractors, as follows:

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

1. The Contractor shall control its operations and the operations of its Subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the Airport.
2. When the Work requires the Contractor to conduct its operations within an AOA of the airport, the work shall be coordinated with airport operations (through the Owner) at least 48 hours prior to commencement of such Work. The Contractor shall not close an AOA until so authorized by the Owner and until the necessary temporary marking, signage and associated lighting is in place as provided in the CSPP.

When the Contract Work requires the Contractor to work within an AOA of the Airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume Work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the CSPP and as listed below, cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

1. The Contractor shall be required to conform to safety standards contained in the latest edition of AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.
2. All Contractors' operations shall be conducted in accordance with the approved project CSPP and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the latest edition of AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP included within the Contract Documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a SPCD that details how it proposes to comply with the requirements presented within the CSPP.
3. The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.
4. The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and SPCD and that they implement and maintain all necessary measures.
5. No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

It is further understood and agreed that the Contractor will provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport.

The Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control its operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the Contract Work, the approximate locations have been indicated on the plans and/or in the Contract Documents.

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the Work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the Contract, notify the Owners of all utility services or other facilities of its plan of operations. Such notification shall be in writing addressed to "The Person to Contact" as provided in this paragraph and subsection 1.02, Section 01545 - UTILITIES. A copy of each notification shall be given to the Owner.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in its plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of its plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's "Person to Contact" no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the Owner.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by

accident or otherwise, the Contractor shall immediately notify the proper authority and the Owner and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the Owner continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to its operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or its own surety.

The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project work, shall comply with the following:

1. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.
2. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the Owner's construction manager a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.
3. If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.
4. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.
5. If the Project Work requires the cutting or splicing of FAA owned cables, the FAA Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

- B. The cost of maintaining the aircraft and vehicular traffic will be borne by the Contractor as part of its Work and is included in the Contract Sum Bid Amount.
- C. The Contractor will not prevent public traffic from using active aviation and public areas in and around the Airport. The Work will be coordinated with the Owner and other agencies having an interest in the capability of the Airport and will be programmed and stated accordingly so that public traffic may be routed over partially completed Work. Appropriate safety precautions will be provided by the Contractor to protect employees, the public and the Work.
- D. If it is necessary for the Contractor to complete portions of the Contract Work for the beneficial occupancy of the Owner prior to completion of the whole Work, such "phasing" of the Work will be specified herein and indicated on the Drawings. When so specified, the Contractor will complete such portions of the Work on or before the date specified or as otherwise specified.
- E. If the Contractor, with the concurrence of the Owner, elects to complete one increment of Work prior to completion of the whole Work, the Owner may accept the Work for beneficial occupancy. Upon completion of any portion of the Work listed above, such portion will be accepted by the Owner in accordance with the Contract.
- F. No portion of the Work may be opened by the Contractor for use until ordered by the Owner in writing. Should it become necessary to open a portion of the Work to traffic on a temporary or intermittent basis, such openings will be made when, in the opinion of the Owner, such portion of the Work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the Work and will not constitute either acceptance of the portion of the Work so opened or a waiver of any provision of the Contract. Any damage to the portion of the Work so opened that is not attributable to traffic which is permitted by the Owner will be repaired by the Contractor at Contractor's expense.
- G. The Contractor will make its own estimate of the inherent difficulties involved in completing the Work under the conditions herein described and will not claim any added compensation by reason of delay or increased cost due to opening a portion of the Contract Work.
- H. When the Work is in or near vehicular traffic and pedestrian areas, the Contractor will arrange the Work so as to avoid disruption of normal traffic patterns. The Contractor will provide, erect and maintain effective barricades, danger signals, signs and equipment to provide protection of the Work and the safety of the public throughout the area in accordance with the "FDOT Roadway and Traffic Design Standards."
- I. The Contractor will maintain traffic within the limits of the Project for the duration of the construction period, including all temporary suspensions of Work. It will include the construction and maintenance of all necessary detour facilities; the furnishing, installing and maintaining of traffic control and safety devices during construction; the control of dust; and any other special requirements for safe and expeditious movement of aircraft, vehicular traffic and pedestrians. Before contracting with any outside agency for a uniformed law enforcement officer to assist in the maintenance of traffic, the Contractor will first coordinate availability of TPA Police with the Police Department

dispatch office at (813) 870-8760.

1. **Beginning Date of Contractor's Responsibility:** The Contractor's responsibility for maintenance of traffic will begin on the day Contractor starts Work on the Project at the Project site and will continue until the date of Final Acceptance of the Work.
 2. **Number of Traffic Lanes:** Unless otherwise specified, the Contractor will close no more than one lane on each roadway and ramp. Unless otherwise specified, the effective width of each lane used for maintenance of traffic will be at least as wide as the traffic lanes existing in the area prior to commencement of construction. Traffic control and warning devices will not encroach on lanes used for maintenance of traffic. All closures on any traffic lanes will be coordinated with the Owner a minimum of seven calendar days prior to any closure.
 3. **High Traffic Areas:** When the Work is in or near vehicular traffic and pedestrian areas, arrange the Work so as to avoid disruption of normal traffic patterns. Provide, erect and maintain effective barricades, variable message boards, danger signals, signs and equipment to provide protection of the Work and the safety of the public throughout the area.
- J. The Contractor will be responsible for performing daily inspections, including weekends and holidays with some inspections at night time, of the installations on the Project and replacing all equipment and devices not conforming to the approved standards during that inspection. The Owner will be advised of the schedule of these inspections and be given the opportunity to join in the inspection as deemed necessary.
- K. **Sections Not Requiring Traffic Maintenance:** The Contractor will not be required to maintain traffic over those portions of the Project where no Work is to be accomplished or where construction operations will not affect existing roads. The Contractor, however, will not obstruct nor create a hazard to any traffic during the prosecution of the Work and will be responsible for repair of all damage to existing pavement or facilities caused by its operations.
- L. **Traffic Plan:** If applicable, the Contractor will present its Maintenance of Traffic Plan at the Pre-construction Conference/meeting. The Maintenance of Traffic Plan will be in written form and include plan sheets which indicate the type and location of all signs, lights, barricades, variable message boards, arrow boards, striping and barriers to be used for the safe passage of pedestrians, vehicular and aircraft traffic through the Project. The plan will indicate conditions and set-up for each phase of the Contractor's activities. In no case may the Contractor begin Work until the Maintenance of Traffic Plan has been approved in writing by the Owner. Modifications to the Maintenance of Traffic Plan that may become necessary will also be accepted in writing. Except in an emergency, no changes to the accepted Maintenance of Traffic Plan will be allowed until acceptance of the change has been received.
- M. **Traffic During Construction:** All construction vehicles are required to use existing public traffic routes. Normal public traffic lanes are not to be used as staging areas for arriving delivery vehicles. The Contractor's employees will utilize the designated Contractor

employee parking area.

1. Adequate accommodations for intersecting and crossing traffic will be provided and maintained and, except where specific permission is given, no road or street crossing the Project will be blocked or unduly restricted.
- N. The "FDOT Roadway and Traffic Design Standards" manual sets forth the basic principles and prescribes minimum standards to be followed in the design, application, installation, maintenance, and removal of all traffic control devices and all warning devices and barriers which are necessary to protect the public and workers from hazards within the Project limits. The standards established in the aforementioned manual constitute the minimum requirements for normal conditions and additional traffic control devices, warning devices, barriers or other safety devices will be required where unusual, complex or particular hazardous conditions exist.
- O. Installation: The responsibility for installation and maintenance of adequate traffic control devices, warning devices and barriers for the protection of the public and workers, as well as to safeguard the Work, is exclusively the Contractor's. The required traffic control devices, warning devices and barriers will be erected by the Contractor prior to creation of any hazardous condition and in conjunction with any necessary re-routing of traffic. The Contractor will immediately remove, turn or cover any devices or barriers which do not apply to existing conditions.
1. The Contractor will make the Owner aware of any scheduled operation which will affect patterns or safety sufficiently in advance of commencing such operation to permit the Owner's review of the plan for installation of traffic control devices or barriers proposed by the Contractor.
 2. The Contractor will assign one of its employees the responsibility of maintaining the position and condition of all traffic control devices, warning devices and barriers throughout the duration of the Contract including holidays and blackout periods. The Owner will be kept advised at all times as to the identification and means of contacting this employee on a 24 hour basis.
- P. Furnishing of Devices and Barriers: All traffic control devices including signs, warning devices, variable message boards, arrow boards, and barriers will be furnished by the Contractor.
1. When the Work requires closing an AOA of the airport or portion of such area, the Contractor will furnish, erect, and maintain temporary markings and associated lighting conforming to the requirements specified in the Contract Documents or FAA Advisory Circular 150/5340-latest edition, "Marking of Paved Areas on Airports," as applicable.
 2. The Contractor will furnish and erect all barricades, warning signs, and markings for hazards prior to commencing Work which requires such erection and will maintain the barricades, warning signs, and markings for hazards until their dismantling is directed by the Owner.

- Q. Maintenance of Devices and Barriers: Traffic control devices, warning devices, and barriers will be kept in the correct position, properly directed, clearly visible and clean, at all times. Damaged, defaced or dirty devices or barriers will immediately be repaired, replaced or cleaned as directed.
- R. Flagger: The Contractor will provide competent flagger to direct traffic where one-way operation in a single lane is in effect and in other situations as may be required by the standards established herein.
- S. Contractor Signing: The Contractor may furnish and install construction traffic directional signs along the existing traffic route. The signs will depict the Contractor's logo and name, directional arrows and "deliveries". Signs will be of sufficient size to have 6" high lettering and will be located at each decision point. All signs and their locations will be approved by the Owner. NO OTHER SIGNS ARE PERMITTED ON OWNER PROPERTY. There will be no writing or signing on printed screen fences, unless directed by the Owner.
- T. Material Deliveries: The Contractor will make its own material and equipment deliveries. No deliveries will be made by vendors or suppliers without escort by a representative of the Contractor.
1. All trash is to be sealed and tied down in such a manner that it will not dirty the floor. The removal, in dustproof sealed containers, of debris will be scheduled the same as deliveries. Specific requirements will be covered at the Preconstruction Conference.
- U. Elevator Use: Existing passenger elevators and escalators will not be used without written permission by the Owner. However, the existing "Service Elevator" may be used if requested.
- V. All dollies, floats, or other conveyances used for debris removal will be rubber tired, box type, and lined with plastic barrier to prevent debris falling from the cart. All carts are to be loaded within the confines of the dust barrier. Transport of debris through public spaces, if permitted, will be made only after coordination of times and routes with the Owner.
- W. Notification: On days when construction traffic is expected to be extra heavy or when oversized pieces of equipment are to be delivered, the Contractor will provide the Owner a minimum of 72 hour notice prior to the event.
- X. Interference Request:
1. The Contractor will be responsible for notifying the Owner in writing of, and securing approval for, any and all interruptions or interference with traffic (pedestrian, automobile), or other necessary function of the Airport or any of the airlines.
 2. The request will include a traffic control plan indicating barricades, arrow boards, variable message boards, lighting and flagmen where required.

3. Such notification will be made as soon as possible but in no case less than 48 hours prior to the interference.
4. The Contractor should utilize a standard Maintenance / Construction Notification (MCN) form addressed to the Owner with a blank space for a description of the interference, the exact area affected, map of the location, and the exact times and dates the interference will take place and blanks for Owner's approval. The forms will be submitted in electronic format. No interference will be allowed until the Contractor has received back a copy of the approved interference request form.

Y. Personnel Traffic:

1. General: All construction personnel will be restricted to construction areas. They will wear shirts with sleeves and long pants at all times.
2. Walkways: When walking from the Contractor's parking lot to the job site, existing walkways and crossings will be used. The Contractor will not use vehicle traffic lanes as walkways.
3. Elevators/Escalators: Existing elevators and escalators will not be used at any time for the transporting of construction personnel or construction materials. The entry to all elevators will not be blocked at any time.
4. Use of Public Areas: The Contractor's workers will not utilize public areas for taking their "work breaks" or "lunch breaks." Areas for this purpose can be designated by the Owner upon request. No public toilets will be used by any workers at any time.
5. Use of Restaurants: The Contractor 's workers may use restaurants, lounges or other concession areas within the Airport, unless otherwise directed by the Owner.

Z. Character of Workers:

1. The Contractor will, at all times, employ sufficient labor and equipment for prosecuting the Work to full completion in the manner and time required by the Contract Documents.
2. All workers will have sufficient skill and experience to properly perform the Work assigned to them. Workers engaged in special Work or skilled Work will have sufficient experience in such Work, and in the operation of the equipment required, to perform the Work satisfactorily. This includes proper certification or training for equipment operators. Upon request by the Owner, the Contractor shall supply copies of all certification or training certificates.
3. The failure to provide adequate labor and equipment may be considered cause for terminating the Contract.
4. Any person employed by the Contractor or a Subcontractor who, in the opinion

of the Owner, does not perform their Work in a proper and skillful manner or is intemperate or disorderly, will, at the written request of the Owner, be removed forthwith by the Contractor or Subcontractor employing such person and will not be employed again in any portion of the Work without the approval of the Owner.

5. Should the Contractor or Subcontractor fail to remove such person or persons or fail to furnish suitable and sufficient personnel for the proper prosecution of the Work, the Owner may suspend the Work by written notice until compliance with such orders.
6. No firearms are permitted on Project site at any time.

AA.

1. With respect to its own operations and the operations of all its Subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the Airport in accordance with the CSPP and the SPCD.
2. When the Contract requires the maintenance of an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the Contract Documents, the Contractor shall keep the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at its expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (<http://mutcd.fhwa.dot.gov/>), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

AB. The Contractor must conform to safety standards contained in the latest edition of AC 150/5370-2 and the approved CSPP. The Contractor shall refer to the Contract Documents and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

1.05 METHODS AND EQUIPMENT

- A. All equipment that is proposed to be used on the Work shall be of sufficient size and in such mechanical condition as to meet requirements of the Work and to produce a satisfactory quality. Equipment used on any portion of the Work shall not cause injury to previously completed work, adjacent property, or existing Airport facilities due to its use.

- B. When the methods and equipment to be used by the Contractor in accomplishing the Work are not prescribed in the Contract Documents, the Contractor is free to use any methods or equipment that will accomplish the Work in conformity with the requirements of the Contract Documents.
- C. When the Contract Documents specify the use of certain methods and equipment, such methods and equipment shall be used unless otherwise authorization by the Owner. If the Contractor desires to use a method or type of equipment other than specified in the Contract, the Contractor may request authority from the Owner to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with Contract Document requirements. If, after trial use of the substituted methods or equipment, the Owner determines that the work produced does not meet Contract Document requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the Owner may direct. No change will be made in basis of payment for the Contract items involved nor in Contract time as a result of authorizing a change in methods or equipment under this paragraph.
- D. The Contractor will remove any deficient Work and replace it with Work of specified quality, or take such other corrective action as the Owner may direct. No change will be made in basis of payment for items in the Contract involved or in Contract Time as a result of authorizing a change in methods or equipment under this Section.

1.06 HOURS OF WORK

- A. Work hours will comply with the Construction Schedule requirements specified in Section 01315 - SCHEDULES, PHASING. In addition, the following limitations apply:
 - 1. Work may proceed at any time (24 hours a day) unless otherwise indicated on Drawings with the following exceptions (all hours subject to Owner approval).
 - 2. Holiday blackout periods
 - a. FAA Moratorium at Thanksgiving: Saturday in November before Thanksgiving through Monday in November following Thanksgiving. No work allowed near navigational aid critical areas and working in proximity to FAA cables. No runway closures.
 - b. FAA Moratorium at Christmas: 3rd Saturday in December until January 2. No work allowed near navigational aid critical areas and working in proximity to FAA cables. No runway closures.
 - c. Spring Break: Second week in March through mid-April. No runway closures.
 - d. All three blackout periods noted above will have limited or restricted

work hours throughout the campus. Work shall not impact the normal operations of the airport. Close coordination and Owner approval will be required for all work activities during these time periods.

3. Disruptive Work will be defined as any activity (including excessive noise, air pollution [dust, etc.] and similar events) that adversely disrupts, hinders or impacts normal Airport operations. These activities will be conducted so as not to interfere with the normal operation of the Airport. Work which may be considered disruptive will be conducted by the Contractor during middle of the night hours as designated by the Owner. When directed by the Owner to cease Disruptive Work, the Contractor will immediately suspend and discontinue the Disruptive Work. Work will not be resumed until directed by the Owner. Contractor's claim for additional cost or additional Contract Time for suspending Disruptive Work will not be accepted.

1.07 DAILY CLEAN-UP AND TRASH REMOVAL

- A. Debris from Work will be promptly removed from the Project site at least daily. Debris will not be allowed to become a hazard to the safety of the public. Areas occupied by the Owner and Building Tenants will be kept clean at all times.
- B. The Contractor will be responsible for clean-up and trash removal. Accumulation of trash and debris will not be allowed and the Owner may at any time direct the Contractor to immediately remove its trash and debris from the site of the Work when, in the opinion of the Owner, such trash constitutes a nuisance, hazard, or in any way hinders the Work or the Airport's operations. If the Contractor should fail to remove its trash and debris from the site of the Work in a timely manner, the Owner may have this Work performed and deduct the cost of such from Contractor's payment.

1.08 CLEANING AND PROTECTION

The Contractor will comply with the following:

- A. General: During all Work at the Project Site, clean and protect Work in progress and adjoining Work on the basis of continuous daily maintenance. Apply protective covering on installed Work to ensure freedom from damage or deterioration.
- B. Clean and perform maintenance on installed Work as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- C. Limiting Exposures of Work: To the extent possible through appropriate control and protection methods, supervise performance of the Work in such a manner and by such means which will ensure that none of the Work, whether completed or in progress, will be subjected to harmful, dangerous, damaging or otherwise deleterious exposure during the construction period. Such exposures include, where applicable, but are not limited to, the following:
 1. Excessive static or dynamic loading.

2. Excessive internal or external pressures.
 3. Excessive electrical loading.
 4. Solvents.
 5. Chemicals.
 6. Light.
 7. Puncture.
 8. Abrasion.
 9. Heavy Traffic.
 10. Soiling.
 11. Combustion.
 12. High speed operation, improper lubrication, unusual wear.
 13. Improper shipping or handling.
 14. Theft.
 15. Vandalism.
- D. Protection at Openings: Contractor will provide protection at all openings in structures and finishes to maintain the building weather and dust tight. All protection will be of solid material and substantial so that it will not be disturbed by wind and weather normal to the area and season, and will also be tight fitting to prevent noise infiltration.
- E. Protection of Improvements:
1. Damage to Existing Facilities: Existing surfaces and materials of the Owner's property not requiring work by the Contract Documents that are damaged by the Contractor's operations will be immediately repaired. Repaired surfaces and materials will match existing adjacent undamaged surfaces and materials. Repair work will be coordinated with the Owner with regards to time and method.
 2. All roads used by the Contractor during construction will be restored and/or replaced to their original condition.
 3. Accidental Demolition: All structures or parts thereof that may become damaged due to accident or Contractor's error will be restored to their original condition at no cost to the Owner. Materials and equipment being used in the repair or replacement resulting from damage will be new and will perform at the manufacturer's published capacities. If the existing equipment or materials

cannot be identified, or if unavailable, the selection of the replacement will be subject to approval by the Owner in writing.

4. Flooring: Where new carpeting, tile, terrazzo, or other flooring material has been installed, Contractor will fully protect such flooring from all damage and staining by Contractor's forces and the Owner may deduct from the Contractor's Contract Sum such sums as may be necessary to cover the cost of repairing and replacing such new flooring.

F. Owner's - Standards of Construction:

1. Hazardous Materials:

- a. Any product or material that contains asbestos material will not be permitted on this project.
- b. Any paint containing lead will not be used on this project.
- c. Construction products or material containing Per- and Polyfluorinated Substances (PFAS) will not be permitted on this project.

2. Building:

- a. Materials and finishes used in the Work will have a fire rating at least equal to the rating required for the type of space in which the Work is to be performed.
- b. No work will be performed which, when complete, will result in the degradation of the fire rating for the space.
- c. Any penetration of existing ceilings or walls which will break the fire rating of the ceiling or wall will be patched to obtain the same fire rating and to the satisfaction of the Owner.
- d. Any ceiling access panel now existing will remain in its present location and cannot be covered in a manner to prevent access.
- e. Any ceiling, other than Contractor's own space, that must be accessed or crossed from above will be done only with prior permission of the Owner.
- f. Wood framing is prohibited for partitioning.

G. Overhead Protection:

1. No cranes with or without loads or other construction equipment will cross over non-construction personnel, their travel ways which include but are not limited to, walkways, roadways, or passenger transfer system tracks.
2. The plan of operation of cranes and other hoisting equipment will be

established in writing by the Contractor. This plan of operation will be subject to review by the Owner.

3. Specific areas affected by construction may require protective covering. These protection coverings will be adequate to insure the protection of life and property and the continuous operation of the Airport. The layout and location of the protective systems will be subject to review and rejection by the Owner. Structural integrity of protection systems will be the responsibility of the Contractor.
4. The use of helicopters to lift, place, or otherwise maneuver equipment is expressly prohibited.

1.09 CONSERVATION AND SALVAGE

A. General:

Contractor shall refer to the Owner's Sustainability Master Plan for Owner's conservation and salvage policies prior to the start of construction.

1. It is a requirement for supervision and administration of the Work that construction operations be carried out with the maximum possible consideration given to conservation of energy, water and materials. In addition, maximum consideration will be given to salvaging materials and equipment involved in performance of the Work but not incorporated therein.
2. Refer to other sections for required disposition of salvage materials which are the Owner's property.

1.10 AUTHORITY AND DUTIES OF QUALITY ASSURANCE (QA) INSPECTORS

- A. QA inspectors shall be authorized to inspect all Work done and all material furnished. Such QA inspection may extend to all or any part of the Work and to the preparation, fabrication, or manufacture of the materials to be used. QA inspectors are not authorized to revoke, alter, or waive any provision of the Contract. QA inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.
- B. QA Inspectors are authorized to notify the Contractor or its representatives of any failure of the Work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the Owner for a decision. Refer to Section 01400 – QUALITY CONTROL SERVICES.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01150 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 MEASUREMENT AND PAYMENT

- A. Measurement of Quantities: The following requirements, in general, apply to those items listed by unit prices in the Contract Documents:
1. All "Unit Price" Work completed under the Contract will be measured by the Owner or Design Professional in conjunction with the Contractor, using United States Customary Units of Measurement. Any measurements made by the Contractor without the Owner or Design Professional present shall not be the basis for, or otherwise used for, payment.
 2. The method of measurement and computations to be used in determination of quantities of material furnished and of Work performed under the Contract will be those methods generally recognized as conforming to good engineering practice.
 3. Unless otherwise specified, longitudinal measurements for area computations will be made horizontally and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the Drawings or ordered in writing by the Design Professional.
 4. Structures will be measured according to neat lines shown on the Drawings or as altered to fit field conditions.
 5. Unless otherwise specified, all Contract Unit Price Items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items will be measured parallel to the base or foundation upon which such items are placed.
 6. In computing volumes of excavation, the average end area method or other acceptable methods as approved by Owner will be used.
 7. The thickness of plates and galvanized sheets used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inches.
 8. The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois. All materials which are measured or proportioned by weights will be weighed on a certified, approved scale by competent, qualified personnel. If material is shipped by rail, the car weight may be accepted, provided that only the actual weight of material be paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight will be weighed empty daily at such times as the Owner or

Design Professional directs, and each truck will bear a plainly legible identification mark.

9. Materials to be measured by volume in the hauling vehicle will be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Owner or Design Professional, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles will be loaded to at least their water level capacity and all loads will be leveled when the vehicles arrive at the point of delivery.
10. When requested by the Contractor and approved by the Owner in writing, material specified to be measured by the cubic yard may be weighed and such weights will be converted to cubic yards for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Owner or Design Professional and will be agreed to by the Owner and Contractor before such method of measurement of pay quantities is used.
11. Asphalt materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities.
12. Not Used.
13. Cement will be measured by the ton (kg) or hundredweight (km).
14. Concrete will be measured by the yard.
15. Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thickness and the extreme length of each piece.
16. The term "lump sum" when used as an item of payment will mean complete payment for the Work described in the Contract. When a complete structure or structural unit (in effect, "Lump Sum" Work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories. However, payment of a lump sum item may be paid over several or all pay applications.
17. When a complete structure or structural unit (in effect, "Lump Sum" Work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

18. When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc. and these items are identified by gage, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
19. Scales must be tested for accuracy and serviced before use. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end. Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the Owner before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted. In the event inspection reveals the scales have been "overweighing" (indicating more than correct weight) they will be immediately adjusted. All materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%. In the event inspection reveals the scales have been underweighing (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded. Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the Owner can safely and conveniently view them. Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment. All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the Project.
20. Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered in connection with extra work will be measured as agreed in the Change Order or Supplemental Agreement authorizing such work.
21. Not Used.
22. Not Used.
23. Not Used.
24. Not Used.
25. Not Used.

26. When the estimated quantities for a specific portion of the Work are designated as the pay quantities in the Contract, they will be the final quantities for which payment for such specific portion of the Work will be made, unless the dimensions of said portion of the Work shown on the Drawings are revised by the Design Professional. If revised dimensions result in an increase or decrease in the quantities of such Work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.
27. The Contractor and Owner will meet and conduct a quantity-in-place meeting (QIP meeting) on a monthly basis to review and agree to the quantities prior to pencil copy pay application submission.
28. The Contractor will establish a written process for managing and tracking all unit rate scopes of work identified within their subcontracts. This process will be reviewed with Owner and shall be accepted by Owner or modified as agreed upon. The Contractor will meet with Subcontractor(s) and Owner on a routine basis to confirm and document agreed upon quantities. The Meeting shall occur at a minimum of once per month and prior to the pencil copy pay application submission. More frequent meetings shall occur at the Owner's request.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01315 - SCHEDULES, PHASING

PART 1 - GENERAL

1.01 DESCRIPTION

The Scope includes construction scheduling and phasing/sequencing required for proper execution of the Work as described herein and indicated on the Drawings.

1.02 CONSTRUCTION SCHEDULE

A. Preliminary Schedule:

1. Within 15 days after the date of award of the Contract, the Contractor will submit its preliminary network phasing diagram (preliminary schedule) indicating a comprehensive overview of the Project including an activity line for each of the work segments to be performed at the site.
 - a. Arrange schedule to indicate required phasing of Work as outlined below and in the Contract Documents and to indicate time allowances for submittals and material acquisitions including the scheduled dates for purchase orders or subcontract issuance or execution, inspections, and similar time margins.
 - b. The Contractor may submit suggestive modifications and revisions to Work sequencing and barricade arrangements indicated in the Drawings. All suggestions are dependent on the Owner's approval.
 - c. Submitted schedule will be reviewed for comment by Owner and Design Professional for conformance to overall Project completion time criteria. Lack of this information will be cause for rejection of the schedule.

B. Bar-Chart Schedule:

1. Subsequent to review and comment by the Owner of the preliminary schedule, the Contractor will submit a comprehensive bar-chart type Construction Schedule indicating a time bar for each significant category or unit of work to be performed. Arrange schedule to indicate required phasing of units and to show time allowances for submittals and material acquisitions including the scheduled dates for purchase orders or subcontract issuance or execution, inspections, and similar time margins.
 - a. Show critical submittal dates related to each time bar or prepare separate coordinated listing of critical submittal dates.
 - b. Superimpose an S-curve on schedule to show "estimated" total dollar-volume of work performed at any date during Contract Time, with a column of cost figures in the left hand margin, ranging from zero to Contract Sum.

- c. Submit updated schedule and S-curve with monthly pay request as herein specified.
2. The initial Construction Schedule, along with electronic media containing all activity data including but not limited to early start, early finish, late start, late finish and float, will be submitted to the Owner and Design Professional for review and comment within 30 days after the date of the Notice to Proceed but no later than seven days before the first Application for Payment request is submitted. Owner's review and recognition of this schedule will not relieve the Contractor of responsibility for scheduling of the Work and maintaining progress in accordance with the Contract Documents.

The Contractor's progress schedule, once accepted by the Owner, will represent the Contractor's baseline plan to accomplish the Project in accordance with the terms and conditions of the Contract.

C. Distribution:

After Owner's and Design Professional's review and recognition, the Contractor will distribute the Construction Schedule to entities as appropriate. The Contractor will also post the Construction Schedule in temporary office space. The Contractor will revise the Construction Schedule at intervals matching payment requests and redistribute.

D. Maintenance of Schedule:

1. The Contractor's recognized Construction Schedule will be updated monthly, and will be submitted with each of the Contractor's Applications for Payment in a method as determined by the Owner. The updated Construction Schedule will include copies of issued Purchase Orders and contracts (subcontracts) for materials and services scheduled to have been purchased during the period of time covered by the Application for Payment. The updated Construction Schedule will describe Work completed during the preceding month, Work in progress, major problems, schedule deviations, organizational changes, Subcontractor progress and "Record Document" schedule progress dates. The updated Construction Schedule will also include a section detailing activities planned for the next month. Progress will be reported in comparison with the recognized Construction Schedule. A special section of the updated Construction Schedule will address any activities that are behind schedule, describing the reason therefore, any impact on the overall Contract Completion Dates and the Contractor's plans for overcoming any delays. Updates will also be made any time that changes in the design, construction, procurement and installation cause any major change in the overall Construction Schedule.
2. The Owner will review the updated Construction Schedule and provide comment with regard to the Construction Schedule's compliance with the provisions of the Contract Documents. The updated Construction Schedule will be recognized by the Owner when it is prepared in accordance with the Contract Documents. The Owner will not approve the Contractor's Application for Payment without the Contractor's monthly submission of a recognized

Construction Schedule. Each monthly Construction Schedule will show all Work substantially complete by the Contract Completion Dates.

3. If the Contractor's monthly schedule update reflects, or Owner or Design Professional determines, that the Contractor is at least 10% behind the original Construction Schedule or 21 or more days behind the original Construction Schedule for:
 - a. the Work as a whole;
 - b. a major Contract item;
 - c. an major item of Work; or
 - d. an item of Work not on the original critical path that, because of the delay or anticipated delay, becomes a critical path item;

then such may constitute a material breach of the Contract. The Contractor must submit with the monthly update of the Construction Schedule, Contractor's proposed plan for bringing the Work back on schedule and completing the Work by the Contract Completion Dates.

4. The Construction Schedule will be coordinated by the Owner and Design Professional with the overall schedule for the total Project as a whole. The Contractor will revise the Construction Schedule promptly in accordance with the conditions of the Work, subject to approval by the Owner and Design Professional.
5. The Contractor will comply fully with all time and other requirements of the Contract Documents. Recommendation of an Application for Payment by the Design Professional and payment thereon by the Owner, without the submission of a recognized monthly schedule update of the Construction Schedule, or plan for bringing Work back on schedule, will not constitute a waiver of the requirements for such updates, nor will it relieve the Contractor from the obligation to complete the Work within the Contract Time(s).
6. Not Used.
7. If the Work is determined to be unsatisfactory for any reason and requires removal and replacement, rework, or any action that will affect the operation of the Airport, it will be considered part of the Construction Schedule and if the time period exceeds that specified, liquidated damages may be assessed, in the sole discretion of the Owner.
8. If the Owner or Design Professional has determined that the Contractor should be permitted to extend the time for completion as provided in Section 00700, Paragraph 8.03 of GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, as modified, the date(s) in the Construction Schedule will be adjusted accordingly to retain their same relationship to the adjusted date of Substantial Completion, and the dollar value of Work to be completed as of the

first of each month will be adjusted *pro rata*.

1.03 GENERAL

- A. The following phasing constraints will universally apply to all phases and elements of this Work, unless the Plans indicate otherwise, or the Owner has approved an exception.
1. Not Used.
 2. Not Used.
 3. Not Used.
 3. Not Used.
 4. All roadway or drive closures will be coordinated with and approved by the Owner prior to the closures. The Contractor will make its request in writing at least seven days prior to the planned closure. The request will include the number of lanes and location of the closure. The Contractor will submit a Maintenance of Traffic Plan associated with this requested closure.
 5. Not Used.
 6. Not Used.
 7. Not Used.
 8. Not Used.
 9. Not Used.
 10. Not Used.
 11. The Contractor will submit a detailed Phasing Plan for review and approval prior to beginning Work on-site.
 12. Not Used.
 13. Barricades will be relocated and barricaded areas reduced in size as Work within the barricaded area is completed.
 14. Upon completion of the installation of barricades, work platforms, temporary signage, temporary air conditioning (if necessary) and temporary lighting in any barricaded area, the Contractor may work 24 hours a day, seven days a week within the interior of the barricaded area.
 15. Not Used.
 16. Not Used.

1.04 MAINTENANCE OF OPERATIONS

A. Not Used.

B. Not Used.

1. Apron Level:

- a. Work in and around the airside will only be accomplished with close coordination between the tenant and the Owner. Any Work that generates excessive noise, dust, or vibrations will only be performed between the hours of 10:00 p.m. and 6:00 a.m. The Contractor will provide at least 14 days advance written notice of this Work.
- b. The Contractor will not close the drive lanes at any time without Owner approval. At all times a minimum 10' wide drive will be open for use. The Contractor will provide a Maintenance of Traffic Plan for this Work. Contractor will maintain access for baggage vehicles to and from all operational baggage belts and carousels at all times.
- c. Not Used.

1.05 PHASING/SEQUENCING

A. General:

1. The Work of this Contract will be performed in a phased Construction Schedule which will include all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area, surveying of existing conditions and preparation of necessary schedules to meet the rigid requirements for Project completion according to the specific phases herein outlined and for the project Substantial Completion, in accordance with Contract Documents. Where clock times are specified for specific Work elements, these times will be local times.
2. THE CONTRACTOR WILL NOTIFY THE OWNER, IN WRITING, AT LEAST 48 HOURS PRIOR TO THE DATE OF COMMENCEMENT OF ANY ON-SITE WORK, INCLUDING TEMPORARY FACILITIES, MOBILIZATION AND MATERIAL AND EQUIPMENT DELIVERIES.
3. The Contractor will coordinate with Owner and tenant and adjust Construction Schedule so as not to interfere with the on-going operations of the airport.
4. Not Used.
5. If the Work related to any prescribed Milestone is determined to be unsatisfactory for any reason and requires removal, replacement, or rework, it must still be completed within the Milestone.

B. Work Sequence of Construction:

The sequence of construction illustrated on the Drawings and in this Section is provided solely for the purpose of indicating the general overview of the progressive steps to the Work so that existing airport operations and functions and other contracts will be maintained in accordance with the requirements of the Owner. The descriptions of construction sequence will not be considered as definitive explanations of all the Work which may be required during each sequence.

END OF SECTION

SECTION 01340 - SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Requirements of the Contract Documents, including Division 01. The Contractor will be required to follow the Submittal Management Process for the development of a Submittal Register Log and submission of Submittal Packet.

1.2 SUMMARY:

This Section specifies administrative and procedural requirements for submittal of Shop Drawings, Product Data and Samples to verify that products, materials and systems proposed for use comply with provisions of the Contract Documents.

- A. Shop Drawings include, but are not limited to, the following:

1. Fabrication Drawings.
2. Installation Drawings.
3. Setting diagrams.
4. Shop-work manufacturing instructions.
5. Templates and patterns.
6. Schedules.
7. Design mix formulas.
8. Coordination Drawings.

- B. Product Data include, but are not limited to, the following:

1. Manufacturer's product specifications.
2. Manufacturer's installation instructions.
3. Standard color charts.
4. Catalog cuts.
5. Roughing-in diagrams and templates.
6. Standard wiring diagrams.
7. Printed performance curves.
8. Operational range diagrams.
9. Mill reports.
10. Standard product operating and maintenance manuals.
11. Material Safety Data Sheets (MSDS).

- C. Samples include, but are not limited to, the following:

1. Partial Sections of manufactured or fabricated components.
2. Small cuts or containers of materials.
3. Complete units of repetitively-used materials.
4. Swatches showing color, texture and pattern.
5. Color range sets.

6. Components used for independent inspection and testing.
- D. Administrative Submittals: Refer to other Division 01 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:
1. Schedule of Submittals.
 2. Permits.
 3. Applications for payment.
 4. Performance and payment bonds.
 5. Insurance certificates and endorsements.
 6. Listing of subcontractors, subcontracts and purchase orders.
 7. Design-Builder's construction schedule.
 8. Progress Schedules.
 9. Progress reports.

1.3 SUBMITTAL PROCEDURES:

- A. Coordination: Coordinate preparation and processing of submittals with performance of the Work.
1. At the beginning of the Work, the Contractor will prepare and submit a Submittal Register based on all of the submittal requirements in the specifications. Each item called out shall have an individual record (line) in the Submittal Register and this will be submitted for Owner approval and comment. The Owner will indicate on the Submittal Register those submittals that will be reviewed by the Owner.
 2. The Contractor shall review submittals before submitting to the Owner. Transmit each submittal to the Owner sufficiently in advance of scheduled performance of related construction activities to avoid delay. If any submittals will be delayed, inform the Owner in writing giving reasons for the delay and a revised submittal schedule. Delays will be subject to Owner's approval. No extension of time will be authorized because of a Contractor's failure to transmit submittals to the Owner sufficiently in advance of the Work to permit processing.
 3. The Owner will review submittals for general conformance with the Contract Documents. The review of the submittals by the Owner will not constitute any release or discharge of Contractor's sole liability and responsibility for all such submittals.
 4. Request for payment of stored materials will not be considered until submittals have been received and approved by the Owner.
 5. Transmit submittals to the Owner to prevent delays. The Contractor is responsible for delays accruing directly or indirectly from submission or resubmission of submittal date.

6. The Contractor shall coordinate each submittal with other submittals and related activities that require sequential activity including:
 - a. Testing.
 - b. Purchasing.
 - c. Fabrication.
 - d. Delivery.

7. The Contractor shall coordinate transmittal of different types of submittals for the same element of the Work and different elements of related parts of the Work so that processing will not be delayed by the Owner's need to review submittals concurrently for coordination.
 - a. The Owner reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are delivered to the Owner.

8. Processing: The Contractor shall allow sufficient review time so that Work will not be delayed as a result of the time required to process submittals, including time for re-submittals.
 - a. The Contractor shall allow for time for the Owner's initial review of each submittal. The standard time for Owner review will be three weeks unless a different duration has been agreed to by Owner and Contractor. Where processing must be delayed to permit coordination with subsequent submittals, additional time is allowed. The Owner will advise the Contractor promptly when a submittal being processed must be delayed for coordination.
 - b. The Contractor shall where necessary to provide an intermediate submittal between the initial and final submittals, process the intermediate submittal in the same manner as the initial submittal.
 - c. The Contractor shall allow time for reprocessing of each submittal to meet the schedule.
 - d. No extension of time will be authorized because of a Contractor's failure to transmit submittals to the Owner sufficiently in advance of the Work to permit processing.

- B. All submittals shall be submitted electronically through the Owner's Management Software and use the Packages to pull register items in for review. Close-out submittals, including O&M Manuals shall be submitted through the Close-out Register for review and tracking purposes.
 1. The Contractor shall place a permanent label or title block on each submittal for information.

2. The Contractor shall indicate the name of the firm or entity that prepared each submittal on the label or title block.
3. The Contractor shall provide a space approximately 4 inches by 5 inches on the label or adjacent to the title block to record the Contractor's review and approval markings and the action taken by the Owner.
4. The Contractor shall include the following information on the label for processing and recording action taken.
 - a. Project name.
 - b. Project Number.
 - c. Date.
 - d. Name and address of Owner.
 - e. Name and address of Contractor.
 - f. Name and address of subcontractor.
 - g. Name and address of supplier.
 - h. Name of manufacturer.
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Similar definitive information as necessary.

5. The Contractor shall include on each page (sheet) of the submittal with the Contractor's certification statement, or other approval statement, as follows:

“Contractor hereby certifies that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated in the work, is in compliance with the Contract Documents, can be installed in the allocated spaces, and is submitted for review by the Owner. Contractor acknowledges that Owner may rely on the information contained in this submittal.

Certified by Submittal Reviewer _____ . Date: _____”

- C. Submittal Transmittal: The Contractor shall package each submittal appropriately for electronic transmittal and handling. The Contractor shall transmit each submittal from Contractor to Owner, as indicated, by use of a transmittal form. Submittals received from sources other than the Contractor will be returned to the sender without action. Submittal descriptions shall follow the Owner's naming conventions. Electronic transmittals must have descriptive subject lines for ease of retrieval. The transmittal form should be the first page in the attached PDF.
 1. The Contractor shall record relevant information and requests for data on the transmittal form. On the form, or an attached separate sheet, the Contractor shall call attention to deviations from requirements of the Contract Documents, including minor variations and limitations.
 2. The Contractor shall include the Contractor's signed certification stating that

information submitted complies with requirements of the Contract Documents.

3. The Contractor shall prepare a draft of a transmittal form and submit it to the Owner's review and acceptance. The Contractor shall provide places on the form for the following information:
 - a. Project name.
 - b. Project Number.
 - c. Date.
 - d. Destination (To:).
 - e. Source (From:).
 - f. Names of subcontractor, manufacturer and supplier.
 - g. Category and type of submittal.
 - h. Submittal purpose and description.
 - i. Submittal and transmittal distribution record.
 - j. Remarks.
 - k. Signature of transmitter.

1.4 SPECIFIC SUBMITTAL REQUIREMENTS:

- A. Shop Drawings: The Contractor shall submit newly prepared information, drawn to accurate scale. THE CONTRACTOR SHALL NOT REPRODUCE CONTRACT DOCUMENTS OR COPY STANDARD PRINTED INFORMATION AS THE BASIS OF SHOP DRAWINGS.
 1. The Contractor shall include the following information on Shop Drawings:
 - a. Dimensions.
 - b. Identification of products and materials included.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 2. The Contractor shall submit Coordination Drawings where required for integration of different construction elements. The Contractor shall show construction sequences and relationships of separate components where necessary to avoid conflicts in utilization of the space available.
 3. The Contractor shall encircle, identify with arrow, or otherwise indicate deviations from the Contract Documents on the Shop Drawings.
 - a. THE CONTRACTOR SHALL NOT USE COLORED HIGHLIGHTERS TO INDICATE SELECTIONS.
 4. The Contractor shall not allow Shop Drawing copies which do not have an appropriate final stamp or other marking indicating action taken by the Owner to be used for construction.

- B. Product Data: The Contractor shall collect Product Data into a single submittal for each element of construction or system.
1. The Contractor shall encircle and identify with an arrow, each copy to show which choices and options are applicable to the Project.
 - a. The Contractor shall not use colored highlights to indicate selection.
 2. Where Product Data has included information on several similar products, some of which are not required for use on the Project, or are not included in this submittal, the Contractor shall mark copies to clearly indicate which information is applicable.
 3. Where Product Data must be specially prepared for required products, materials or systems, because standard printed data are not suitable for use, the Contractor shall submit as "Shop Drawings" not "Product Data."
 4. The Contractor shall include the following information in Product Data:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with recognized trade association standards.
 - c. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of coordination requirements.
 5. The Contractor shall not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
 6. The Contractor shall furnish copies of final Product Data submittal to manufacturers, subcontractors, suppliers, fabricators, installers, governing authorities and others as required for performance of the construction activities. The Contractor shall show distribution on transmittal forms.
 - a. The Contractor shall not proceed with installation of materials, products and systems until a copy of Product Data applicable to the installation is in the installer's possession.
 - b. The Contractor shall not permit use of unmarked copies of Product Data in connection with construction.
- C. Samples: The Contractor shall submit Samples physically identical with the material or product proposed for use; submit full-size, fully fabricated Samples, cured and finished in the manner specified.
1. The Contractor shall mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. The Contractor shall prepare Samples to match Designers' Sample where so indicated and include the

following information:

- a. Generic description of the Sample.
 - b. Size limitations.
 - c. Sample source.
 - d. Product name or name of manufacturer.
 - e. Compliance with recognized standards.
 - f. Compliance with governing regulations.
 - g. Availability.
 - h. Delivery time.
2. The Contractor shall submit a Sample log at the beginning of the project to the Owner based on the required samples per the submittals.
 3. In-place samples are only allowed with written approval by Owner.
- D. Operating and Maintenance Manuals: Operating and Maintenance Manuals shall be initially submitted for review at the appropriate 30 percent completion stage of Work per requirements under these Sections. The Manuals will be reviewed and comments returned to the Contractor. Corrections shall be made before submittal of the Manuals at subsequent completion levels for Owner review and at Project Close-out.
- E. In order to facilitate review of product data and shop drawings, they shall be noted, indicating by cross reference the contract drawing sheet number, note, and specification paragraph numbers, where and what item(s) are used for and where item(s) occur in the contract documents.

1.5 OWNER ACTION:

- A. Except for submittals for the record, for information and similar purposes, where action and return on submittals is required or requested, the Owner will review each submittal, mark with appropriate "action," and where possible return within the time period allotted for Owner review. Where the submittal must be held for coordination, the Owner will so advise the Contractor without delay.
1. Compliance with specified characteristics is the Contractor's responsibility, and not considered part of the Owner's review and indication of action taken.
- B. The Owner will mark each submittal to be returned with a uniform, self-explanatory action stamp appropriately marked and executed to indicate whether the submittal returned is for unrestricted use (no exceptions taken), final-but-restricted use (as marked), must be revised and resubmitted (use not permitted), or without action (as explained on the transmittal form), or other similar type wording.
- C. The Owner's review of submittals is for design conformity and general conformance of the Contract Documents only and does not relieve the Contractor from responsibility for any deviations from the requirements of the Contract Documents. The Owner's review shall not be construed as a complete check nor shall it relieve the Contractor from responsibility for errors of any sort in shop drawings or schedules, or from the necessity

of furnishing any work required by the Contract Documents which may have been omitted on the shop drawings. The Owner's review of a separate item shall not indicate review of the complete assembly in which it functions.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.5 SCHEDULE OF SUBMITTALS DESCRIPTION AND SUBMITTAL REGISTER

- A. General: The following is a description of each submittal type, specified in other Sections, required for the Contract. Contractor shall include each submittal description in the Submittal Register included as part of this Section.
1. Product Data means submittals that provide calculations, descriptions or other documentation regarding the work.
 2. Manufacturer's Catalog Data (Product Data) means data composed of information sheets, brochures, circulars, specifications and product data, and printed information in sufficient detail and scope to verify compliance with requirements of the Contract Documents.
 3. Manufacturer's Standard Color Charts (Product Data) means preprinted illustrations displaying choices of color and finish for a material or product.
 4. Shop Drawings means graphic representations illustrating the relationship of various components of the work, schematic diagrams of systems, details of fabrications, layout of particular elements, connections, and other relational aspects of the work.
 5. Design Data (Shop Drawings) means design calculations, mix designs, analyses, or other data written and pertaining to a part of the work.
 6. Instructions (Product Data) means preprinted material describing installation of a product, system, or material, including special notices and Material Safety Data Sheets, if any, concerning impedance, hazards, and safety precautions.
 7. Schedules (Shop Drawings) means a tabular list of data or a tabular listing of locations, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.
 8. Statements (Shop Drawings) means documents, required of the Contractor, or through the Contractor by way of a supplier, installer, manufacturer, or other lower tier contractor, the purpose of which is to further the quality or orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel, qualifications, or other verification of quality.

9. Reports (Product Data) mean reports of inspection and laboratory tests, including analysis, an interpretation of test results. Each report shall be properly identified. Test methods used and compliance with recognized test standards shall be described.
10. Test Reports (Product Data) mean reports signed by an authorized official of a testing laboratory that a material, product, or system identical to the material, product or system to be provided has been tested in accordance with requirements specified by naming the test method and material. The test report must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test. Testing must have been within three years of the date of award of this Contract.
11. Factory Test Reports (Shop Drawings) mean written reports which include the findings of a test required to be performed by the Contractor or an actual portion of the work or prototype prepared for this project before it is shipped to the job site. The report must be signed by an authorized official of a testing laboratory and must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test.
12. Field Test Reports (Shop Drawings) mean written reports which includes the findings of a test made at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation. The report must be signed by an authorized official of a testing laboratory or agency and must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test.
13. Certificates (Shop Drawings) mean statements signed by responsible officials of a manufacturer of a product, system, or material attesting that the product, system, or material meet specified requirements. The statements must be dated after the award of this contract, name the project, and list the specific requirements which it is intended to address.
14. Warranties (Product Data) include but are not limited to statements signed by responsible officials of a manufacturer of a product, system, or material attesting that the product, system, or material will perform its specific function over a specified duration of time. The statement must be dated, and include the name of the project, the Owner's name, and other pertinent data relating to the warranty.
15. Samples (Samples) include both fabricated and non-fabricated physical examples of materials, products, and units of work as complete units or as portions of units of work.

16. Color Selection Samples (Samples) mean samples of the available choice of colors, textures, and finishes of a product or material, presented over substrates identical in texture to that proposed for the work.
17. Sample Panels (Samples) mean assemblies constructed at the project site in a location acceptable to the Owner and using materials and methods to be employed in the work; completely finished; maintained during construction; and removed at the conclusion of the work or when authorized by the Owner.
18. Sample Installations (Samples) mean portions of an assembly or material constructed where directed and, if approved, retained as a part of the work.
19. Record means documentation to ensure compliance with an administrative requirement or to establish an administrative mechanism.
20. Operating and Maintenance Manuals (Records) mean data intended to be incorporated in an Operating and Maintenance Manual.
21. Test Reports of Existing Conditions mean documents describing existing conditions and operations of systems and components prior to the start of any work. Testing shall be held in the presence of the Owner. Provide copies of the test reports to the Owner.
22. Demonstration means physical operation of equipment and systems by factory authorized representatives to demonstrate to the Owner's facility personnel proper operation of systems. Provide all required documentation that certified completed demonstration.
23. As-Built Drawings means delineated documentation accurately depicting final installation location of components and systems of the building.
24. Shop Drawings in Electronic format mean that when drawings are required all materials shall be provided in AUTOCAD latest release and PDF and/or BIM on a CD/DVD.
25. Coordination Drawings mean the special type of Shop Drawings that show the relationship and integration of different construction elements that require close and careful coordination during fabrication or during installation to fit in the restricted space provided or to function as intended.
26. Certification of Approved Disposal of Hazardous Materials means the certification signed by the Contractor indicating legal disposal of hazardous materials.
27. CD/DVD Training Video means the recorded training instructions to be used by the Owner's personnel.
28. Spare Parts Memo means the listing of spare parts required; refer to Section

01700.

29. UL Letter of Finding means a document from Underwriters Laboratories Inc., attesting compliance with UL's standard for connection to an existing lightning protection system; a document from Underwriters Laboratories Inc., attesting compliance with UL's standard for UL Master Label.
30. Equipment Check-Out Memos mean documents signed by the manufacturer's authorized representative stating that equipment has been installed and is operating in accordance with the manufacturer's specifications; refer to Section 01700 B.

B. Submittal Register: The Contractor is to maintain an accurate updated Submittal Register and will bring this register to each scheduled OAC meeting with the Owner. The Submittal Register should include the following items:

1. Submittal-Description and Number assigned.
2. Date to Owner.
3. Date to Designer as appropriate.
4. Date returned to Owner.
5. Date returned to Contractor from Owner.
6. Submittal Status.
7. Date of Re-submittal and Return (as applicable).
8. Date material released (for fabrication).
9. Projected date of fabrication.
10. Projected date of delivery to site.
11. Status of submittal.
12. Specification Section Number.
13. Specification Paragraph Number.
14. Owner Reviewer.
15. Designer Reviewer.
16. Transmittal Control Number.
17. Planned Submittal Date.
18. Action Code.
19. Date of Action.
20. Remarks.

END OF SECTION

SECTION 01370 - SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section includes requirements for preparation and submission of "Schedule of Values."
- B. Related work specified elsewhere:
 - 1. SCHEDULES, PHASING: Section 01315.
 - 2. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES: Section 01340.
 - 3. PRODUCTS AND SUBSTITUTIONS: Section 01605.
- C. Time Coordination: In coordination of initial submittals and other administrative start-up activities, the Contractor shall submit Schedule of Values to the Owner at earliest feasible date, but in no case later than 14 days before initial payment request is to be submitted.
- D. Upon request by the Owner, the Contractor shall support values given with data that will substantiate their correctness.
- E. The Contractor shall use Schedule of Values only as a basis for the Contractor's Applications for Payment.

1.02 FORM OF SUBMITTAL

- A. The Contractor shall submit the Schedule of Values using a modified AIA Document G-703 "Continuation Sheet". Modifications to the Template Microsoft Excel Schedule of Values will be required per Owner's direction. The basic format structure for the Schedule of Values will be governed by the following elements. Changes or clarification to the format will be at the sole approval of the Owner.
 - 1. No negative line items without Owner approval.
 - 2. Should a negative line item be allowed, it shall be billed out 100% during the first month that the negative line item appears.
 - 3. Any approved negative line items shall have all retainage dropped to 0% by the second pay application following the initial item appearing on the Schedule of Values.
 - 4. Schedule of Values shall be crafted using Excel. Monthly adjustments shall be made using a tracking mechanism. This tracking mechanism will be dictated by the Owner.
 - 5. Each Schedule of Values line item must be specific to one subcontractor once bought out.
 - 6. Once the SOV has been established, the Contractor may not add additional line items to the Schedule of Values without Owner approval unless new work is added by Owner Change Order or by Work Order. .
 - 7. Changes to existing work shall not have a new line added to the Schedule of

- Values but shall be adjusted using a tracking method approved by the owner.
8. A column will be added to track funding source if required by Owner.
 9. Columns will be included to track status of retainage and release of retainage.

1.03 PREPARING SCHEDULE OF VALUES

- A. The Contractor shall prepare Schedule of Values in coordination with preparation of Progress Schedule.
- B. The Contractor shall provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of payment requests and progress reports. The Contractor shall breakdown principal separate Contract amounts based on the Work Break Down Structure approved through the Baseline schedule review process.
- C. The Contractor shall submit copies of Schedule of Values to the Owner through the Owner's management software.
- D. Listing: The Contractor shall arrange Schedule with columns to indicate generic name of item; related Specifications Sections; subcontractor, supplier, manufacturer, or fabricator; change orders which have affected value; dollar value of item; and percentage of Contract Sum to nearest 1/100% and adjusted to total 100%.
- E. Margins of Cost:
 1. Major cost items which are not directly cost of actual work-in-place, such as distinct temporary facilities, shall be either shown as line items in Schedule of Values as General Conditions or General Requirements.
- F. The Contractor shall itemize separate line item cost for Work required by each Section of this Specification including conditions of the Contract.
- G. For each line item, the installed value should not exceed more than \$20,000.00, this value can be raised as needed with Owner approval.
- H. The Contractor shall make sum of total costs of all items listed in schedule equal to total Contract Sum.

1.04 REVIEW AND RESUBMITTAL

- A. After review by the Owner and Design Professional, revise and re-submit Schedule (and Schedule of Material Value) as required.
- B. The Contractor shall re-submit revised schedule in same manner.
- C. Schedule Updating: The Contractor shall update and resubmit the Schedule of Values when Change Orders affect the listing and when actual performance of Work involves necessary changes of substance to values previously listed.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01390 - CONTROL OF WORK

PART 1 - GENERAL

1.01 AUTHORITY OF THE OWNER

The Owner has final authority regarding the interpretation of the Contract Documents. The Owner shall determine acceptability of the quality of materials furnished, method of performance of Work performed, and the manner and rate of performance of the Work. The Owner will decide all questions which may arise as to the interpretation of the Contract Documents relating to the Work, the fulfillment of the Contract on the part of the Contractor, and the rights of different Contractors on the Project. The Owner will determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for under the Contract. The Owner does not have the authority to accept work that does not conform to the Contract Documents.

1.02 CONFORMITY WITH DRAWINGS AND SPECIFICATIONS

- A. All Work and all materials furnished will be in reasonably close conformity with the lines, grades, grading sections, cross sections, dimensions, material requirements, and testing requirements that are specified, including specified tolerances, in the Contract Documents.
- B. If the Owner finds the materials furnished, Work performed, or the finished product not within reasonably close conformity with the Contract Documents but that the portion of the Work affected will, in Owner's opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the affected Work may be accepted and remain in place at the Owner's sole discretion. In this event, the Owner will document its determination and provide for an adjustment in the Contract Sum for the affected portion of the Work. The Owner's determination and Contract Sum adjustments will be based on good engineering judgment and such tests or retests of the affected Work as are, in Owner's opinion, needed. Such determinations and changes in the Contract Sum will be covered by Contract modifications as applicable.
- C. If the Owner finds the materials furnished, Work performed, or the finished product are not in reasonably close conformity with the Contract Documents and have resulted in an unacceptable finished product, the affected Work or materials will be removed and replaced or otherwise corrected by, and at the expense of, the Contractor in accordance with the Owner's written orders.
- D. For the purpose of this section, the term "reasonably close conformity" will not be construed as waiving the Contractor's responsibility to complete the Work in accordance with the Contract Documents. The term will not be construed as waiving the Owner's right to insist on strict compliance with the Contract Documents during the Contractor's prosecution of the Work, when, in the Owner's opinion, such compliance is essential to provide an acceptable finished portion of the Work.
- E. For the purpose of this section, the term "reasonably close conformity" is also intended to provide the Owner with the authority, after consultation with the FAA (if required), to

use good architectural and engineering judgment in the Owner's determinations as to issue Contract Modifications for Work that is not in strict conformity with the original Contract Document but will provide a finished product equal to or better than that intended by the requirements of the original Contract Documents.

- F. The Owner will not be responsible for the Contractor's means, methods, techniques, sequences or procedures of construction or the safety precautions incident thereto.

1.03 COORDINATION OF CONTRACT DOCUMENTS

- A. The Contract Documents, and all referenced standards cited are essential parts of the Contract requirements. If electronic files are provided and used on the Project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete Work. In case of discrepancy, the Contractor must bring the discrepancy to Owner's attention. In general, calculated dimensions govern over scaled dimensions; Contract technical specifications govern over Contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars or Directives (ACs); Contract general provisions govern over plans, cited standards for materials or testing, and cited ACs; plans govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions govern. Notwithstanding the forgoing paragraph, Owner reserves the right to interpret any contractual discrepancies in its sole discretion.
- B. From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the Owner for an interpretation and decision, and such decision shall be final.
- C. The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify the Owner or the designated representative in writing requesting their written interpretation and decision.
- D. Any table, gradation, size, dimension, rate, mix, method, nomenclature, pay item number, basis of payment or method of measurement shown on the Drawings, which is in variance with the Standard Specifications, will be considered an amendment or supplement to the applicable Specification.

1.04 DESIGN PROFESSIONAL'S DRAWINGS

- A. The Drawings furnished by the Design Professional consist of general drawings showing such details as are necessary to give a comprehensive idea of the Work. Roadway Drawings will show, in general, alignment, profile grades, typical cross sections and general cross sections. Structure Drawings, in general, will show in detail all dimensions of the Work contemplated.

- B. When the Structure Drawings do not show dimensions in detail, they will show general features and such details as necessary to give a comprehensive idea of the structure.
- C. Not all conflicts are known within the Project area. Not all conflicts are shown on the Drawings. The Contractor is solely responsible for the location and protection of all equipment and facilities which are to remain in service and in place during and after all Project Work.
- D. No changes (additions, deletions, or substitutions) to the drawings or specifications shall occur without the express written approval of the Owner.

1.05 FIELD NOTES

Adequate field notes and records will be kept as layout work is accomplished. These field notes and records will be available for review by the Owner and Design Professional as the Work progresses and copies will be furnished to the Owner and Design Professional at the time of completion of the Project. An inspection or checking of the Contractor's field notes or layout work by the Owner or Design Professional, and the acceptance of all or any part thereof will not relieve the Contractor of its responsibility to achieve the lines, grades, and dimensions shown in the Drawings and Specifications.

1.06 AUTHORITY AND DUTIES OF INSPECTORS

- A. Inspectors employed by the Owner will be authorized to inspect all Work done and all materials furnished. Such inspection may extend to all or any part of the Work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the Contract. Inspectors are not authorized to issue instructions contrary to the Drawings and Specifications or to act as foreman for the Contractor.
- B. Inspectors employed by the Owner are authorized to notify the Contractor or their representatives of any failure of the Work or materials to conform to the requirements of the Contract, Drawings, or Specifications and to reject such nonconforming materials until such issues can be referred to the Design Professional for recommendation and Owner's approval.
- C. Inspectors have the authority to immediately suspend the Work upon observation of any condition that could adversely impact or interfere with the safety or protection of persons or property.

1.07 INSPECTION OF THE WORK

- A. All materials and each part or detail of the Work will be subject to inspection by the Owner or Design Professional. The Owner or Design Professional will be allowed access to all parts of the Work and will be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection. Required assistance from the Contractor might include use of qualified personnel and equipment to gain access to the area, safety or personal protection equipment, and other resources to provide safe egress to and from the area to be inspected.

- B. If the Owner or Design Professional requests it, the Contractor, at any time before acceptance of the Work, will remove or uncover such portions of the finished Work as may be directed. After examination, the Contractor will restore said portions of the Work to the standard required by the Specifications. Should the Work thus exposed or examined prove acceptable, the uncovering or removing and the replacing of the covering or making good of the parts removed will be paid for as extra work. Should the Work so exposed or examined prove unacceptable, the uncovering or removing and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.
- C. Provide advance written notice to the Owner of Work the Contractor plans to perform each week and each day. Any Work done or materials used without written notice and allowing opportunity for inspection by the Owner may be ordered removed and replaced at the Contractor's expense.
- D. Should the Contract Work include relocation, adjustment, or any other modification to existing facilities not the property of the Owner, authorized representatives of the owners of such facilities will have the right to inspect such Work. Such inspection will in no way make any facility owner a party to the Contract, and will in no way interfere with the rights of the parties to this Contract. Inspection and/or approval of the Work or any portion thereof will not relieve the Contractor of responsibility for faulty materials or workmanship.

1.08 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK

- A. All Work which does not conform to the requirements of the Contract Documents will be considered unacceptable, unless otherwise determined acceptable by the Owner as provided in Item 1.02 CONFORMITY WITH DRAWINGS AND SPECIFICATIONS of this Section.
- B. Unacceptable Work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the Final Completion of the Work, will be removed immediately and replaced in an acceptable manner in accordance with the provisions of Section 00700, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, PART 11, UNCOVERING AND CORRECTION OF WORK.
- C. No removal Work made under provision of this paragraph shall be done without lines and grades having been established by the Owner. Work done contrary to the instructions of the Owner, work done beyond the lines shown on the Drawings or as given, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the Contract. Work so done may be ordered removed or replaced at the Contractor's expense.
- D. Upon failure on the part of the Contractor to comply with any order of the Owner made under the provisions of this Section, the Owner will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs (incurred by the Owner) from any monies due or to

become due the Contractor.

1.09 MAINTENANCE DURING CONSTRUCTION

The Contractor shall maintain the Work during construction and until the Work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the Project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such Work.

1.10 FAILURE TO MAINTAIN THE WORK

- A. Should the Contractor at any time fail to maintain the Work as provided in Item 1.09 MAINTENANCE DURING CONSTRUCTION of this Section, the Owner or Design Professional will immediately notify the Contractor of such noncompliance. Such notification will specify a reasonable time within which the Contractor will be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.
- B. Should the Contractor fail to respond to the Owner's or Design Professional's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner will be deducted from monies due or to become due the Contractor.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01400 - QUALITY CONTROL SERVICES

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Contract Documents: drawings, contract articles, special provisions, supplementary conditions, and all Division 01 specification sections attached to the project contract.
- B. Contractor issued specifications: Division 02 through 34 as they pertain to the tasks and requirements of carrying out the quality control program including commissioning.

2.01 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced within the contract documents. The publications are referred to in the text by the basic designation only.
 - 1. FEDERAL AVIATION ADMINISTRATION (FAA).
 - a. FAA Advisory Circular (AC) 150/5370-2 (latest edition).
 - 2. HILLSBOROUGH COUNTY AVIATION AUTHORITY (Owner).
 - a. Owner Construction Safety and Health Guidelines Manual.
 - b. Owner Design Criteria Manual.
 - c. Tampa International Airport Sustainable Management Plan.

3.01 DEFINITIONS

- A. Commissioning (Cx) - a systematic process of ensuring that all building systems meet the requirements and perform interactively according to the contract documents.
- B. Commissioning Agent or Commissioning Authority (CA) – an individual who meets the qualification requirements and is experienced in leading the commissioning effort.
- C. Control – to guide and have influence over.
- D. Definable Feature of Work (DFOW) - a task that is separate and distinct from other tasks and has control requirements and work crews unique to that task. A DFOW is identified by different trades or disciplines and is an item or activity on the construction schedule. For example, excavation, electrical, concrete, roofing, mechanical, HVAC, etc. are all definable features of work.

- E. Experienced – a minimum of five (5) years’ experience.
- F. Hillsborough County Aviation Authority (Owner) – An agent or approved representative having authority to act on behalf of the airport.
- G. Project Management Software (PMS) – software utilized for the purpose of submitting required information, correspondence, etc.; organizing and archiving project information; and managing and recalling project information.
- H. Quality – conformance to the requirements established by the contract documents, specification, and drawings.

4.01 SUBMITTALS

- A. The following submittals shall be submitted for Owner review and acceptance prior to start of construction:
 - 1. Construction Quality Control (QC) Plan.
 - 2. Not Used.
 - 3. Not Used.
- B. Submit the following to Owner during construction by entering each of the items below into the approved project management software (PMS) database within the various timeframes indicated:
 - 1. QC Report: Submit the report electronically by 10:00 AM the next working day after each day that work is performed and for every seven consecutive calendar days of no-work.
 - 2. Contractor Production Report: Submit the report electronically by 10:00 AM the next working day after each day that work is performed and for every three consecutive calendar days of no-work.
 - 3. Preparatory Phase Meeting Minutes: Submit meeting minutes for each Preparatory Phase Meeting held by the end of the next working day following the meeting date.
 - 4. Initial Phase Inspection Meeting Minutes and Checklist(s): Submit meeting minutes and all checklists for each Initial Phase Inspection Meeting held by the end of the next working day following the meeting date.
 - 5. QC Specialist Reports: Submit the report electronically by 10:00 AM the next working day after each day that work is performed.
 - 6. Field Test Reports: Field test reports that do not require an engineer’s or other third-party review, stamp, and certification, shall be submitted within two working

days after the test is performed. Test reports requiring an engineer's or other third-party review, stamp, and certification, shall be submitted within five working days after the test is performed.

7. Monthly Status Report of Tests: Submit the updated test register at the end of each month. The test register shall clearly indicate which tests have been completed and which tests have not been completed for the various systems requiring testing.
8. Testing Plan and Test Register: Provide a copy of the final Testing Plan and Test Register to the Commissioning Authority for inclusion into the final commissioning documentation.
9. Rework Items List: As follow-up inspections, third-party inspections, AHJ inspections, engineer and architect field inspections, etc. occur, submit lists containing new rework items daily.
10. QC Meeting Minutes: Submit QC meeting minutes within two working days after the meeting is held.
11. QC Certifications: Submit QC Certifications as required by the paragraph entitled "QC Certifications."
12. Special Inspection Reports: Submit Special Inspection reports within five working days of the inspection date.

5.01 QC PROGRAM REQUIREMENTS

- A. Establish and maintain a QC program as described in this specification section.
- B. Establish and maintain an effective QC program which produces a product that complies with the Contract Documents. A QC program comprises plans, procedures, and an organization that supports project design, construction, and commissioning. The QC program must cover all design, construction, and commissioning operations, both onsite and offsite, and be keyed to the contract design and construction sequence schedule.
- C. The QC program consists of a QC Organization, QC Plan, QC Plan Meeting(s), a Coordination and Mutual Understanding Meeting, submittal review and approval, periodic QC meetings, three phases of control, material receipt and storage inspections, testing, inspections, QC certifications, independent Special Inspections, and documentation necessary to provide materials, equipment, workmanship, fabrication, construction, and operations which comply with the requirements of this Contract. The QC program must cover on-site and off-site work and be keyed to the project schedule. No construction work or testing may be performed unless the QC Manager, QC Assistant, or the QC Alternate Manager is on the work site. The QC Manager must report to an officer of the firm and not be subordinate to the Project Superintendent or the Project Manager. The QC Manager, Project Superintendent, and Project Manager

must interact and work together efficiently and effectively. Although the QC Manager is the primary individual responsible for the coordination of QC efforts and tasks, all individuals will be held responsible for the quality of work on the job.

6.01 COMMISSIONING

Not Used.

7.01 QC ORGANIZATION

A. Project Manager:

1. The project manager shall be intimately involved in the management and enforcement of the QC program. The project manager shall be familiar with the project QC requirements and take an active role in developing the QC plan, resolving QC issues, ensuring documentation of QC efforts and tasks, and other oversight of the QC program necessary to deliver the project per the contract documents.

B. Project Superintendent:

1. The project superintendent is the highest-level manager responsible for the overall construction activities at the site, including quality and production. The project superintendent will be held responsible for the quality of work and is subject to removal by Owner for non-compliance with the quality requirements specified in the contract. The project superintendent must maintain a physical presence at the site at all times and is responsible for all construction and related activities at the site, except as otherwise acceptable to Owner.

C. QC Manager:

1. Duties:

- a. Provide a QC Manager at the work site to implement and manage the QC program. The only duties and responsibilities of the QC Manager are to manage and implement the QC program on this Contract. The QC Manager is required to attend the QC Plan Meetings, Coordination and Mutual Understanding Meeting, conduct periodic QC meetings, perform the three phases of control except for those phases of control designated to be performed by QC Specialists or other Special Inspectors as outlined in the QC Plan, perform submittal reviews, ensure testing is performed and provide QC certifications and documentation required in the Contract Documents. The QC Manager is responsible for managing and coordinating the three phases of control and documentation performed by the QC Specialists, testing laboratory personnel, and any other inspection and testing personnel required by the Contract Documents. The QC Manager is the manager of all QC activities. The QC manager is responsible for notifying the Special Inspector or Special Inspector of

Record of activities which require their review. The QC manager is responsible for coordinating Special Inspection activities.

2. Qualifications:

- a. An individual with a minimum of 5 years combined experience in the following positions: QC Manager, Project Manager, Project Superintendent, Project Engineer, or Construction Manager on similar size and type construction contracts which included the major trades that are part of this Contract. The individual must have at least two years of experience as a QC Manager. The individual must be familiar with the safety requirements of this Contract, and have experience in the areas of hazard identification, safety compliance, and sustainability.

D. Commissioning Authority:

Not Used.

E. Alternate QC Manager Duties and Qualifications:

1. Designate an alternate for the QC Manager at the work site to serve in the event of the designated QC Manager's absence. The period of absence may not exceed two weeks at one time, and not more than 30 workdays during a calendar year. The qualification requirements for the Alternate QC Manager must be the same as for the QC Manager.

F. Assistant QC Manager Duties and Qualifications:

1. Provide an assistant to the QC Manager at the work site to perform the three phases of control, perform submittal review, ensure testing is performed, and prepare QC certifications and documentation as required by this Contract. The Assistant QC Manager must be on the work site during supplemental work shifts beyond the regular shift and perform the duties of the QC Manager during such supplemental shift work. The Assistant QC Manager must have a minimum of one year of experience in the following positions: QC Assistant Manager, Project Superintendent, Project Engineer, or Construction Manager on similar size and type construction contracts which included the major trades that are part of this Contract. The individual must be familiar with the safety requirements of this Contract, and have experience in the areas of hazard identification, safety compliance, and sustainability.

G. QC Specialists Duties and Qualifications

1. Provide a separate QC Specialist at the work site for each of the areas of responsibilities as specified within the QC Plan who must assist and report to the QC Manager. The QC Specialist must have no duties other than their assigned QC

duties. QC Specialists are required to attend the Coordination and Mutual Understanding Meeting, QC meetings, and be physically present at the construction site to perform the three phases of control and prepare documentation for each definable feature of work in their area of responsibility.

2. The QC Specialist shall be competent and have acceptable education, experience, training, certification, and/or licensing in their designated discipline.

H. Special Inspectors or Special Inspectors of Record:

Not Used.

I. Submittal Reviewer(s) Duties and Qualifications:

1. Provide a Submittal Reviewer(s), other than the QC Manager or CA, qualified in the discipline(s) being reviewed, to review and certify that the submittals meet the requirements of this Contract prior to certification or approval by the QC Manager.
2. Each submittal must be reviewed by a registered architect or professional engineer prior to review by the Submittal Reviewer(s).

J. QC Administrative Assistant:

Not Used.

K. Acceptance of QC Personnel:

1. Owner reserves the right to interview any member of the QC organization at any time in order to verify the submitted qualifications. Owner may require the removal of any individual for non-compliance with quality requirements specified in the Contract Documents.

8.01 QUALITY CONTROL (QC) PLAN

A. Acceptance of the Construction QC Plan:

1. Acceptance of the QC Plan is required prior to the start of construction. Once construction begins, Owner reserves the right to require changes in the QC Plan as necessary to conform to changes and developments in the project.
2. The only construction work that is authorized to proceed prior to the acceptance of the QC Plan is mobilization of storage and office trailers, temporary utilities, and surveying.

B. Requirements of the QC Plan:

1. Provide, for acceptance by Owner, a Construction QC Plan submitted electronically that includes a table of contents, with major sections identified and bookmarked, with pages numbered sequentially, and that documents the proposed methods and responsibilities for accomplishing QC and commissioning activities during the construction of the project. At a minimum, the plan shall contain the following:
 - a. QC ORGANIZATION:
 - 1) A chart showing the QC organizational structure.
 - b. NAMES AND QUALIFICATIONS:
 - 1) Provide the names and qualifications, in resume format, for each person in the QC organization. Include the CQM for Contractors course certifications for the QC Manager and Alternate QC Manager as required by the paragraphs entitled "Construction Quality Management Training" and "Alternate QC Manager Duties and Qualifications."
 - c. DUTIES, RESPONSIBILITY AND AUTHORITY OF QC PERSONNEL:
 - 1) Identify the project specific duties, responsibilities, deliverables, and authorities of each person in the QC organization.
 - d. OUTSIDE ORGANIZATIONS:
 - 1) Provide a listing of outside organizations, such as architectural, consulting engineering firms, and subcontractors that will be employed by the Contractor and a description of the services these firms will provide. All major definable features of work shall be covered by this listing of organizations. Identify company names, addresses, points of contact, contact information, etc.
 - e. APPOINTMENT LETTERS:
 - 1) Letters signed by an officer of the firm appointing the QC Manager and Alternate QC Manager and stating that they are responsible for implementing and managing the QC program as described in this Contract. Include in this letter the responsibility of the QC Manager and Alternate QC Manager to implement and manage the three phases of control, and their authority to stop work which is not in compliance with the Contract. Letters of direction are to be issued by the QC Manager to the Assistant QC Manager and all other QC Specialists outlining their duties, authorities, and responsibilities. Include copies of the letters in the QC Plan.
 - f. SUBMITTAL PROCEDURES AND SUBMITTAL REGISTER:

- 1) Provide a description of the procedures and processes for reviewing, approving, and managing submittals. Provide the name(s) of the person(s) in the QC organization authorized to review and certify submittals prior to overall approval by the Contractor. Provide the initial Submittal Register. This register shall list all required submittals per the contract documents. The register shall be maintained as required submittals are submitted, added, or not required due to changes or modifications in the project. The submittal register shall be kept up-to-date and readily accessible for review by the project team.

g. TESTING LABORATORY INFORMATION:

- 1) Provide testing laboratory information as required by the Contract Documents. Identify testing laboratory company names, addresses, points of contact, contact information, and the definable features of work they are responsible for on this project. Include company and/or personnel licenses, certifications, qualifications, affiliations, etc. as required by the various specifications.

h. TESTING PLAN AND TESTING REGISTER:

- 1) Provide a Testing Plan and Test Register that identify the various tests required by the Contract Documents. The Test Plan shall reference the specification paragraph number requiring the test, the frequency, and the entity and/or person responsible for each test. The Test Register shall break down each definable feature of work (by area, floor, system, etc.) and be able to track which tests have been completed as well as which tests have not been completed. The Test Register shall be used to provide an overall status on the progress of testing.

i. INSPECTION PLAN AND INSPECTION REGISTER:

- 1) Provide an Inspection Plan and Inspection Register that identify the various inspections required by the Contract Documents. The Inspection Plan shall reference the specification paragraph number requiring the inspection, the frequency, and the entity and/or person responsible for each inspection. The Inspection Register shall break down each definable feature of work (by area, floor, system, etc.) and be able to track which inspections have been completed as well as which inspections have not been completed. The Inspection Register shall be used to provide an overall status on the progress of inspections.

j. PROCEDURES TO COMPLETE REWORK ITEMS:

- 1) Provide a description of the procedures that will be employed to identify, record, track, and complete rework items. These procedures shall cover

rework items identified during various stages of the project including initial and follow-up phase inspections, close-in/concealment inspections, code and special inspector inspections, punchlist inspections, etc. The procedures shall include how rework items will be communicated to the respective responsible parties. The rework items list shall be readily available to all project team members.

k. DOCUMENTATION PROCEDURES:

- 1) Provide a description of how project QC documentation will be recorded, tracked, reported, and stored. If hardcopies are required, describe the procedures for receiving and filing hardcopies and provide the location of where hardcopy files are kept. If electronic copies are required, describe the procedures; format of various deliverables; software used to enter, track, status, and store deliverables; and the location of where the files are stored. All project QC documentation shall be readily available to all project team members.

l. LIST OF DEFINABLE FEATURES:

- 1) A Definable Feature of Work (DFOW) is a task that is separate and distinct from other tasks and has control requirements and work crews unique to that task. A DFOW is identified by different trades or disciplines and is an item or activity on the construction schedule. Include in the list of DFOWs, but not be limited to, all critical path activities. Include all activities for which this specification requires QC Specialists or specialty inspection and testing personnel.

m. PROCEDURES FOR PERFORMING THE THREE PHASES OF CONTROL:

- 1) State the procedures used to ensure the three phases of control to manage the project. Conduct the preparatory and initial phase meetings with the goal of obtaining quality construction by planning ahead and identifying potential problems for each DFOW. Perform follow-up inspections to assure that standards are continually met throughout the rest of construction.
- 2) Special inspections shall be identified, scheduled, and tracked as part of the QC plan.

n. PERSONNEL MATRIX:

- 1) A personnel matrix showing for each section of the specification who

will review and approve submittals, who will perform and document the three phases of control, and who will perform and document the testing.

o. PROCEDURES FOR COMPLETION INSPECTIONS:

- 1) Procedures for identifying and documenting the completion inspection process. Include in these procedures the responsible party for close-in/concealment inspections, punch out inspection, pre-final inspection, and final acceptance inspection.

p. TRAINING PROCEDURES AND TRAINING REGISTER:

- 1) Describe the procedures for coordinating and documenting the training of personnel required by the Contract Documents. The training procedures shall clearly identify the prerequisites prior to training, who will receive training, the duration of training, any deliverables required prior to, or at the time of, training. Provide a Training Register that lists all of the required training and update the register as training is completed. The training register shall be used to provide an update on which training has been complete and what training is still outstanding.

q. ORGANIZATION AND PERSONNEL CERTIFICATIONS LOG:

- 1) Procedures for coordinating, tracking and documenting all certifications on subcontractors, testing laboratories, suppliers, personnel, etc. QC Manager will ensure that certifications are current, appropriate for the work being performed, and will not lapse during any period of the contract that the work is being performed.

C. Notification of Changes:

1. Notify Owner, in writing, of any proposed changes in the QC Plan or changes to the QC organization personnel, a minimum of 10 work days prior to a proposed change. Proposed changes are subject to acceptance by Owner.

9.01 COORDINATION AND MUTUAL UNDERSTANDING MEETING

- A. After submission of the QC Plan, and prior to Owner approval and the start of construction, the QC Manager will meet with Owner to present the QC program required by this Contract. When a new QC Manager is appointed, the coordination and mutual understanding meeting must be repeated.
- B. The purpose of this meeting is to develop a mutual understanding of the QC details, including documentation, administration for on-site and off-site work, design intent, commissioning, environmental requirements and procedures, coordination of

activities to be performed, Special Inspections, and the coordination of the Contractor's management, production, and QC personnel. At the meeting, the Contractor will be required to explain in detail how the three phases of control will be implemented for each DFOW, as well as how each DFOW will be affected by each management plan or requirement as listed below:

1. Waste Management Plan.
2. Not Used.
3. Not Used.
4. Environmental Protection Plan.
5. Environmental regulatory requirements.
6. Not Used.
7. Not Used.
8. Coordination of Activities.
 - a. Coordinate activities included in various sections to assure efficient and orderly installation of each component. Coordinate operations included under different sections that are dependent on each other for proper installation and operation. Schedule construction operations with consideration for indoor air quality as specified in the IAQ Management Plan. Coordinate pre-functional tests and startup testing with the commissioning CA.
9. Describe how the QC team will involve, interact, and support the project superintendents and managers. This interaction is key so approved equipment and materials are installed correctly; rework items are identified, tracked, and corrected in a timely manner to minimize project disruption; and construction activities are properly sequenced to accommodate inspections and testing.

C. Attendees:

1. As a minimum, the Contractor's personnel required to attend include the Project Principal, the Project Manager, Project Superintendent, QC Manager, (and other QC Specialists as appropriate to the size and complexity of the Project), Special Inspector or Special Inspector of Record, Commissioning Authority, Environmental Manager, and, to the extent assigned QC responsibilities, subcontractor project manager, superintendent and QC representative(s). Minutes of the meeting will be prepared and signed by the Contractor.

10.01 QC MEETINGS

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

- A. After the start of construction, conduct weekly QC meetings by the QC Manager at the work site with the Project Superintendent, the QC Specialists, the Special Inspector, the Special Inspector of Record, the CA, and the foremen who are performing the work of the DFOWs. Owner shall be invited to participate in these meetings, but is not required to be present to conduct the meeting. The QC Manager is to prepare the minutes of the meeting and enter them into the approved PMS database within two working days after the meeting. As applicable, accomplish the following at each meeting:
1. Review the minutes of the previous meeting.
 2. Review the project schedule and the status of work and rework.
 3. Review the work to be accomplished in the next two weeks and the documentation required to support the work.
 4. Review the status of submittals.
 5. Identify and schedule when equipment and materials will be delivered to the site for inspection, offloading, and storage.
 6. Identify and schedule tests and inspections required to support construction.
 7. Resolve or provide steps to resolve QC and production problems (RFI, schedule modifications, elevate issue to higher authorities, etc.).
 8. Address items that may require revising the QC Plan.
 9. Review Accident Prevention Plan (APP).
 10. Review environmental requirements and procedures.
 11. Review Waste Management Plan.
 12. Not Used.
 13. Review Environmental Management Plan.
 14. Review the status of training completion.
 15. Not Used.

11.01 THREE PHASES OF CONTROL

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

- A. Adequately cover both on-site and off-site work with the Three Phases of Control and include the following for each DFOV.
- B. Preparatory Phase Meetings
 - 1. Notify Owner at least two work days in advance of each preparatory phase meeting. The meeting will be conducted by the QC Manager and attended by the QC Specialists, the Project Superintendent, the CA, the Special Inspector, the Special Inspector of Record, and the foreman responsible for the DFOV. When the DFOV will be accomplished by a subcontractor, that subcontractor's foreman must attend the preparatory phase meeting. Prepare minutes of the meeting and enter them into the Owner PMS database within two working days after the meeting.
 - 2. As applicable, perform the following prior to beginning work on each DFOV:
 - a. Review each paragraph of applicable specification sections.
 - b. Review the Contract drawings.
 - c. Verify that field measurements are as indicated on construction and/or shop drawings before confirming product orders.
 - d. Verify that appropriate shop drawings and submittals for materials and equipment have been submitted and approved. Verify receipt of approved factory test results, when required.
 - e. Review the testing plan and register to ensure that provisions have been made to provide the required testing.
 - f. Review the inspections register to identify all required inspections. Add inspection activities or inspection hold points to the project schedule as a precursor prior to concealment, approval, acceptance, or further construction.
 - g. Not Used.
 - h. Discuss site investigations and examinations of the work area to ensure that the required preliminary work has been completed.
 - i. Coordinate and schedule equipment and product deliveries to designated offloading and storage areas for inspection.
 - j. Discuss specific controls used and construction methods, construction tolerances, workmanship standards, and the approach that will be used to

provide quality construction by planning ahead and identifying potential problems for each DFOW.

k. Review the Job Hazard Analysis (JHA) to ensure that applicable safety requirements are met, and that required Safety Data Sheets (SDS) are submitted.

l. Not Used.

C. Initial Phase Inspections:

1. Notify Owner at least two work days in advance of each initial phase inspection. When construction crews are ready to start work on a DFOW, conduct the initial phase with the QC Specialists, the Project Superintendent, the Special Inspector, the Special Inspector of Record, and the foreman responsible for that DFOW. Observe the initial segment of the DFOW to ensure that the work complies with Contract requirements. Document the results of the initial phase inspection including any checklists or other field documentation and enter them into the Owner PMS database within two working days after the inspection. Repeat the initial phase for each new crew to work on-site, or when acceptable levels of specified quality are not being met.

2. As applicable, perform the following for each DFOW:

a. Establish level of workmanship and verify that it meets the minimum acceptable workmanship standards. Compare with samples and mock-ups as appropriate.

b. Verify field test equipment has been calibrated and is within the calibration date.

c. Resolve any workmanship issues.

d. Ensure that testing is performed by the approved laboratory.

e. Check work procedures for compliance with the appropriate SPA to ensure that applicable safety requirements are met.

f. Review project specific work plans (i.e., HAZMAT Abatement, Stormwater Management) to ensure all preparatory work items have been completed and documented.

g. Not Used.

D. Follow-Up Phase Inspections:

1. Perform the following for on-going work daily, or more frequently as necessary, until the completion of each DFOW and document in the daily QC Report:
 - a. Ensure the work is in compliance with Contract requirements.
 - b. Maintain the quality of workmanship required.
 - c. Ensure that testing is performed by the approved testing agency or laboratory.
 - d. Continue to verify that field test equipment has been calibrated and is within the calibration date.
 - e. Ensure that rework items are being corrected.
 - f. Conduct equipment and material receipt inspections.
 - g. Examine the required materials, equipment, and sample work to ensure that they are on hand and conform to the approved shop drawings and submitted data and are properly stored.
 - h. Assure manufacturers' representatives have performed necessary inspections if required and perform safety inspections.
 - i. Not Used.
 - j. Not Used.

E. Additional Preparatory and Initial Phases:

1. Conduct additional preparatory and initial phases on the same DFOW if the quality of on-going work is unacceptable, if there are changes in the applicable QC organization, if there are changes in the on-site production supervision or work crew, if work on a DFOW is resumed after substantial period of inactivity, or if other problems develop.

F. Notification of Three Phases of Control for Off-Site Work:

1. Notify Owner at least two weeks prior to the start of the preparatory and initial phases for off-site work.

12.01 SUBMITTAL REVIEW AND APPROVAL

- A. Procedures for submission, review and approval of submittals are described in Section 01340 SHOP DRAWINGS.

13.01 MATERIAL RECEIPT AND STORAGE INSPECTIONS

- A. All equipment and material delivered to the project site shall be inspected and verified to the approved project submittal. If material does not meet the requirements of the submittal, the material shall not be received or offloaded and shall be returned to the sender.
- B. Material shall be delivered in new condition. Packing shall not show signs of damage or mishandling.
- C. Equipment and material shall be delivered to designate receiving/storage areas for inspection, offloading, and storage.
- D. Handle and store equipment and materials in a manner as to prevent loss from theft, weather, and damage. Keep materials, products, and accessories covered and off the ground, and store in a dry, secure area. Prevent contact with other material or conditions that may cause corrosion, discoloration, or staining. Protect all material from damage by the activities of other trades.
- E. A material receipt inspection report shall be generated and submitted along with the daily QC report stating that material meets the requirements in this section. Attach any checklist used to inspect and receive the equipment and material.

14.01 TESTING

- A. Perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements.
- B. Upon request, furnish to Owner duplicate samples of test specimens for possible testing by Owner.
- C. Testing includes operation and/or acceptance tests when specified.
- D. Procure the services of an approved testing laboratory or establish an approved testing laboratory at the project site.
- E. Perform the following activities and record and provide the following data:
 - 1. Verify that testing procedures comply with contract requirements
 - 2. Verify that facilities and testing equipment are available and comply with testing standards
 - 3. Check test instrument calibration data against certified calibration standards

4. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared
5. Record results of all tests taken, both passing and failing on the QC report for the date taken. Identify the specification paragraph reference, location where tests were taken, and the sequential control number identifying the test. If approved by Owner, actual test reports may be submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an offsite or commercial test facility directly to Owner. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract

F. Accreditation Requirements:

1. Construction materials testing laboratories must be accredited by a laboratory accreditation authority and will be required to submit a copy of the Certificate of Accreditation and Scope of Accreditation. The laboratory's scope of accreditation must include the appropriate standards (e.g. ASTM E 329, C 1077, D 3666, D 3740, A 880, E 543) listed in the technical sections of the specifications. Laboratories engaged in Hazardous Materials Testing must meet the requirements of OSHA and EPA. The policy applies to the specific laboratory performing the actual testing, not just the Corporate Office.
2. Owner retains the right to check laboratory equipment in the proposed laboratory and the laboratory technician's testing procedures, techniques, and other items pertinent to testing, for compliance with the standards set forth in the Contract.

G. Test Results:

1. Cite applicable Contract requirements, tests or analytical procedures used. Provide actual results and include a statement that the item tested or analyzed conforms or fails to conform to specified requirements. If the item fails to conform, notify Owner immediately.
2. Conspicuously stamp the cover sheet or first page of each test report in large letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements, whichever is applicable. Test results must be signed by a testing laboratory representative authorized to sign certified test reports.

H. Test Reports and Monthly Summary Report of Tests:

1. Furnish the signed reports, certifications, and a summary report of field tests at the end of each month to Owner. Attach a copy of the summary report to the last daily Contractor QC Report of each month. Provide a copy of the signed test reports and certifications to the CA for inclusion into the final commissioning

documentation.

15.01 QC CERTIFICATIONS

- A. QC Report Certifications:
 - 1. Contain the following statement within the QC Reports: "On behalf of the Contractor, I certify that this report is complete, correct, and equipment and material used along with the work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report."
- B. Invoice Certifications:
 - 1. Furnish a certificate to Owner with each payment request, signed by the QC Manager, attesting that the work for which payment is requested, including stored material, is in compliance with Contract requirements and that redline and as-built drawings are current and coordinated.
- C. Redline and As-built Drawings Certifications:
 - 1. The QC Manager shall provide a certification along with the redline and as-built drawing submissions stating that the drawings have been reviewed and provide an accurate depiction of the actual field installed condition.
- D. Completion Certifications:
 - 1. Upon completion of work under this Contract, or a portion thereof in the case of phased completion, the QC Manager must furnish a certificate to Owner attesting that "the work has been completed, inspected, tested, and is in compliance with the Contract."

16.01 CONCEALMENT INSPECTIONS

- A. Underground concealment inspections:
 - 1. Prior to concealing underground work, the Contractor shall conduct concealment inspections to ensure that all construction below grade is complete and meets all contract document requirements.
- B. Wall concealment inspections:
 - 1. Prior to the completion of walls, the Contractor shall conduct concealment inspections to ensure that all construction within the wall is complete and meets all contract document requirements.

C. Ceiling concealment inspections:

1. Prior to the completion of ceilings, the Contractor shall conduct concealment inspections to ensure that all construction above the ceiling is complete and meets all contract document requirements.

D. Concealment inspection reports:

1. A report shall be generated by the contractor stating that the required inspections have been performed by all parties and that the space is approved for concealment. Attach any checklists used during the inspection.

17.01 COMPLETION INSPECTIONS

A. Punch-Out Inspection:

1. Near the completion of all work or any phased increment thereof, the QC Manager and the CA must conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings, specifications and Contract. Include in the punch list any remaining items on the "Rework Items List", which were not corrected prior to the Punch-Out Inspection. Include within the punch list the estimated date by which the deficiencies will be corrected. Provide a copy of the punch list to Owner per Article 6 and Division 1 specification section 01700 - PROJECT CLOSEOUT of the contract. The QC Manager must make follow-on inspections to ascertain that all deficiencies have been corrected. Once this is accomplished, notify Owner that the facility, or portion thereof, is ready for Owner's Pre-Final Inspection.

B. Pre-Final Inspection:

1. Owner and the QC Manager will perform this inspection to verify that the facility is complete and ready to be occupied. An Owner "Pre-Final Punch List" will be documented by the contractor's QC Manager as a result of this inspection. The QC Manager will ensure that all items on this list are corrected prior to notifying Owner that a "Final" inspection can be scheduled. Any items noted on the "Pre-Final" inspection must be corrected in a timely manner and be accomplished before the contract completion date for the work, or any particular increment thereof, if the project is divided into increments by separate completion dates.

C. Final Acceptance Inspection:

1. Notify Owner at least 14 calendar days prior to the date a final acceptance inspection can be held. State within the notice that all items previously identified on the pre-final punch list will be corrected and acceptable, along with any other unfinished Contract work, by the date of the final acceptance

inspection. The Contractor must be represented by the QC Manager, the Project Superintendent, the CA, and others deemed necessary. Attendees for Owner will include the Project Manager, other Owner personnel, and personnel representing clients or tenants. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for Owner to bill the Contractor for additional inspection costs in accordance with the Contract.

18.01 DOCUMENTATION

- A. Maintain current and complete records of on-site and off-site QC program operations and activities. Establish and maintain QC documentation in an electronic format within an approved PMS database, organized, bookmarked, searchable, and readily accessible to Owner 24-hours a day, 7-days a week.
- B. Construction Documentation:
 - 1. Reports are required for each day that work is performed and must be attached to the Contractor QC Report prepared for the same day. Maintain current and complete records of on-site and off-site QC program operations and activities. Account for each calendar day throughout the life of the Contract. The Project Superintendent and the QC Manager must prepare and sign the Contractor Production and QC Reports, respectively.
- C. Reports from the QC Specialist(s):
 - 1. Reports are required for each day that work is performed in their area of responsibility. QC Specialist reports must include the same documentation requirements as the QC Report for their area of responsibility. QC Specialist reports are to be prepared, signed, and dated by the QC Specialists and must be attached to the CQC Report prepared for the same day.
- D. Testing Plan and Registers:
 - 1. As tests are performed, the CA and the QC Manager will record on the "Testing Plan and Register" the date the test was performed and the date the test results were forwarded to Owner. Attach a copy of the updated "Testing Plan and Log" to the last daily QC Report of each month. Provide a copy of the final "Testing Plan and Register" to the CA for inclusion into the final commissioning documentation.
- E. Rework Items List:
 - 1. The QC Manager must maintain a list of work that does not comply with the Contract, identifying what items need to be reworked, the date the item was originally discovered, the date the item will be corrected by, and the date the item was corrected. There is no requirement to report a rework item that is corrected

the same day it is discovered. Attach a copy of the "Rework Items List" to the last daily QC Report of each month. The Contractor is responsible for including those items identified by Owner.

F. Redline and As-Built Drawings:

1. The QC Manager is required to ensure the redline and as-built drawings, required by Section 01700 closeout submittals are kept current on a daily basis and marked to show deviations which have been made from the Contract drawings. Ensure each deviation has been identified with the appropriate modifying documentation (e.g. Change Order, Request for Information (RFI), etc.). The QC Manager or QC Specialist assigned to an area of responsibility must initial each revision. Upon completion of work, the QC Manager will furnish a certificate attesting to the accuracy of redline and as-built drawings prior to submission to Owner.

19.01 NOTIFICATION ON NON-COMPLIANCE

- A. Owner will notify the Contractor of any detected non-compliance with the Contract Documents. The Contractor shall take corrective action after receipt of such notice per the Contract requirements. Such notice, when delivered to the Contractor at the work site, is deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, Owner may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders will be made the subject of claim for extension of time for excess costs or damages by the Contractor.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

End of Section

SECTION 01410 - TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 PROCEDURE

A. Contractor's Testing Laboratory:

The Contractor will provide the services of an independent testing laboratory acceptable to the Owner to inspect and test the materials and methods of construction as hereinafter specified for compliance with the requirements of the Contract Documents and to perform such other specialized technical services as may be required by the Contractor or Owner to demonstrate compliance. Inspections or testing performed as part of the Contractor's operations will be included as part of the Work. Employment of a testing laboratory will in no way relieve the Contractor of its obligation to perform the Work in accordance with the Contract Documents.

B. Test Register:

The Contractor shall provide a Test Register identifying all required testing in accordance with the contract documents. Register shall be kept updated and used to track test information including, but not limited to, date, time and location of tests.

1.02 QUALIFICATIONS OF CONTRACTOR'S TESTING LABORATORY

A. The Testing Laboratory:

1. The Testing Laboratory selected will meet the basic requirements of ASTM E329 "Standard of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction." The Testing Laboratory will submit to the Owner a copy of the report of inspection of their facilities made by the Materials Reference Laboratory of the National Bureau of Standards during the most recent tour of such inspections and will submit a memorandum stating steps taken to remedy all deficiencies reported by this inspection.
2. The Testing Laboratory selected will meet "Recommended Requirements for Independent Laboratory Qualification", latest edition, as published by the American Council of Independent Laboratories.

B. Testing Machines:

Must be calibrated at intervals not exceeding 12 months by devices of accuracy traceable to the National Bureau of Standards or accepted values of natural physical constants.

C. Tests and Inspections:

Must be conducted in accordance with specified requirements, and if not specified, in accordance with the applicable standards of the American Society for Testing and Materials or other recognized and accepted authorities in the field.

1.03 AUTHORITIES AND DUTIES OF THE LABORATORY:

A. Attending Preconstruction Conferences:

The Testing Laboratory will obtain and review the Project plans and specifications with the Contractor as soon as possible prior to the start of construction. The Testing Laboratory will attend preconstruction conferences as required to coordinate materials inspection and testing requirements with the planned construction schedule. The Testing Laboratory will participate in such conferences throughout the course of the Project.

B. Outline Testing Program:

The Testing Laboratory will be responsible for outlining a written detailed testing program conforming to the requirements as specified in the Contract Documents and in consultation with the Owner and Design Professional. The testing program will contain an outline of inspections and tests to be performed with reference to applicable sections of the Contract Documents and the design drawings and specifications.

C. Cooperation with Design Team:

The Testing Laboratory will cooperate with the Owner, Design Professional, and Contractor and provide qualified personnel promptly on notice.

D. Inspections, Sampling, Testing, Reports and Certifications:

1. The Testing Laboratory will perform the required inspections, sampling, and testing of materials as specified under each Section of the Contract Documents and observe methods of construction for compliance with the requirements of the Contract Documents.
2. The Testing Laboratory will perform all inspections and submit all reports and certifications as required by all governing authorities.

E. Notification of Deficiencies in the Work:

The Testing Laboratory will notify the Owner and Contractor first by email of observed irregularities and deficiencies in the Work and other conditions not in compliance with the requirements of the Contract Documents.

F. Reports:

1. Information on Reports:
 - a. The Testing Laboratory will submit copies of all reports of inspections and tests promptly and directly to the parties named below. All reports will contain at least the following information:
 - (1) Project Name.
 - (2) Project Number.
 - (3) Date report issued.
 - (4) Testing Laboratory name and address.

- (5) Name and signature of inspector.
- (6) Date of inspection and sampling.
- (7) Date of test.
- (8) Identification of product and Specification Section.
- (9) Location in the Project.
- (10) Identification of inspection or test.
- (11) Record of weather conditions and temperature (if applicable).
- (12) Results of test regarding compliance with Contract Documents.
- (13) Deficiency log, including deficiencies from previous reports.

2. Copies:

- a. The Testing Laboratory will submit certified copies of all test and inspection reports promptly and directly to the following parties through the Owners Project Management Software Inspections and Tests modules:

- (1) Owner.
- (2) Contractor
- (3) Designer of Record.
- (4) supplier of the material tested.

3. Certification by Notary Public:

Upon completion of the job, the Testing Laboratory will furnish to the Owner a statement, under oath and notarized by a Notary Public, that all required tests and inspections were made in accordance with the requirements of the Contract Documents.

4. Accounting:

The Testing Laboratory will be responsible for separating and billing costs attributed to the Owner and costs attributed to the Contractor where appropriate, in accordance with the Contract Documents.

5. Obtaining Product and Material Certifications:

The Testing Laboratory will be responsible for obtaining all product and material certifications from manufacturers and suppliers as specified in the Specifications.

6. Limitations of Authority:

The Testing Laboratory is not authorized to revoke, alter, relax, enlarge upon or release any requirements of the Specifications or to approve or accept any portion of the Work or to perform any duties of the Contractor and its Subcontractors.

1.04 CONTRACTOR'S RESPONSIBILITY

A. Cooperation:

The Contractor will cooperate with laboratory personnel and provide access to the Work and manufacturer's operations.

B. Furnishing Samples:

The Contractor will provide to the laboratory representative samples of materials proposed for use in the Work in quantities sufficient for accurate testing as specified.

C. Furnishing Labor, Equipment and Facilities:

The Contractor will furnish labor, equipment, and facilities as required for sampling and testing by the laboratory and otherwise facilitate all required inspections and tests.

D. Advance Notice:

The Contractor will be responsible for notifying the Testing Laboratory sufficiently in advance of operations to allow for assignment of personnel and scheduling of tests.

E. Payment for Substitution Testing:

The Contractor will arrange with the Testing Laboratory and pay for any additional samples and tests above those required by the Contract Documents as requested by the Contractor for its convenience in performing the Work.

F. Notification of Source Change:

The Contractor will be responsible for notifying the Owner and Testing Laboratory when the source of any material is changed after the original tests or inspections have been made.

G. Tests for Suspected Deficient Work:

If, in the opinion of the Owner, any of the Work of the Contractor is not satisfactory, the Contractor will make all tests that the Owner deems advisable to determine its proper construction. The Owner will pay all costs if the tests prove the questioned work to be satisfactory.

H. Associated Services: The Contractor shall cooperate with the Owner and with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. The Contractor shall notify the Owner and the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required of the Contractor include but are not limited to the following:

1. Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests.
2. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
3. Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.

4. Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
5. Security and protection of samples and test equipment at the Project site.

1.05 PAYMENT OF TESTING LABORATORY

The Contractor will pay for the initial Testing Laboratory services for testing of materials for compliance with the requirements of the Contract Documents. The Contractor will pay for testing and retesting of materials that do not comply with the requirements of the Contract Documents and all other items as specified in these Specifications.

PART 2 - PRODUCTS

Not Used.

PART 3 – EXECUTION

3.01 SCOPE OF WORK

The work to be performed by the Testing Laboratory will be as specified in this Section and as determined in meetings with the Owner and Contractor. These are the Owner's minimum requirements; more stringent requirements may be required by the technical specifications.

3.02 EARTHWORK

A. Tests of Proposed Fill Material (if applicable):

The Testing Laboratory will conduct a survey of the Contractor's proposed location of borrow soil materials and will establish the suitability of any proposed fill material by determining the required engineering properties. Soil tests will include soil classification by the Atterberg Limit Tests ASTM D 4318, and grain size determination by ASTM D 422 "Particle Size Analysis of Soils."

B. Moisture Density Relationship for Natural and Fill Materials:

The Testing Laboratory will provide one optimum moisture density curve for each type of soil, natural fill, imported fill, or on-site fill encountered in subgrade and fills under building slabs and paved areas. Curves will be generated in accordance with ASTM D 1557 "Test Methods for Moisture Density Relationships of Soils and Soil Aggregate Mixtures."

C. Quality Control Testing Required During Construction:

1. Inspection of Subgrade and Fill: The Testing Laboratory will inspect and approve the following subgrades and fill layers before further construction work is performed thereon:
 - a. Paved Areas and Building Slab Subgrade: Make at least one field density test of the natural subgrade for every 2,500 square feet of paved area or building slab but in no case less than three tests. In each compacted fill

layer or lift, make one field density test for every 2,500 square feet of building slab or paved area but in no case less than three tests.

- b. Foundation Wall Backfill: Make at least one field density test for each 200 lineal feet of wall with a minimum of four tests for each basement wall around the perimeter of the building and a minimum of one test for every other type of foundation wall on the Project site. Tests will be at random locations and elevations for each wall.

2. Field Density Tests:

Field Density Tests will be run according to ASTM D 1556 "Density of Soil in Place by the Sand Core Method," ASTM D 2167 "Density of Soil in Place by the Rubber Balloon Method" or ASTM D 2922 "Density of Soil and Soil Aggregate in Place by Nuclear Methods" as applicable.

3. Report Copies:

The Testing Laboratory will submit all moisture density curves and results of field density tests to the parties specified at Paragraph 1.03.F.2.a. of this section
Additional Testing:

If reports by the Testing Laboratory indicate field densities lower than specified above, additional tests will be run by the Testing Laboratory with at least the frequencies scheduled above on recompacted fill and/or natural subgrade. The Testing Laboratory will notify the Contractor on a timely basis for any required retesting so as not to delay the Work. The costs of such tests will be borne by the Contractor.

Foundation:

- a. Mat and Dug Footing Subgrade Inspection: The Contractor's Geotechnical Engineer will provide inspection service of each mat and dug footing subgrade prior to placing foundation concrete. Such inspection will verify that field conditions are consistent with soil report test results and that the foundation is being installed in the proper soil strata at the proper elevation. The Design Professional will submit written field inspection reports promptly after inspection to all parties listed at Paragraph 1.03.F.2.a of this Section and report its findings after each inspection by telephone to the Owner and Design Professional.
- b. Field Inspection: The Design Professional may provide inspection of drilled pier installation.
- c. Pier Load Test: The Design Professional may supervise the test pier program and submit a written report of its findings to all parties listed at Paragraph 1.03.F.2.1.

3.03 CONCRETE MATERIALS AND POURED IN PLACE CONCRETE, OTHER THAN P-501 CONCRETE PAVING

A. Tests of Portland Cement:

1. Mill certificates certifying that the cement has been tested and meets the requirements of the Specification will be acceptable as test results, provided the cement proposed for use can be identified with test lots. Mill certificates will be submitted by the Contractor prior to use of any such material.
2. Retesting of cement will be required if:
 - a. In the opinion of the Testing Laboratory the cement has been damaged in storage or transit or is in any way defective.
 - b. The cement has been in storage at the mixing site for over 30 days.
3. Compressive strength cube specimens will be made at the start of the job and at a frequency of one set per 250-tons of cement or whenever the source or brand of cement changes so that the quality of cement can be observed throughout the Project. Each set of two-inch cubes will consist of four cubes tested according to ASTM C 109 at 28-day strengths.

B. Tests of Aggregates:

1. The Testing Laboratory will verify that concrete aggregates proposed for use conform to the following specifications:
 - a. ASTM C 33 "Specification for Concrete Aggregates"
 - b. ASTM C 330 "Specification for Lightweight Aggregates for Structural Concrete"
2. Tests of aggregates by the Testing Laboratory will be made before the concrete mix is established and thereafter as the character of the aggregate changes and whenever the service of materials is changed. The following tests will be required:
 - a. Sampling: The Testing Laboratory will secure samples of aggregate in accordance with ASTM D 75 from the concrete supplier. The proposed aggregate will not be used until the pit source has been approved by the Testing Laboratory and the plant capacity and ability to produce products has been verified.
 - b. Sieve Analysis: ASTM C 136.
 - c. Organic Impurities: ASTM C 40.
 - d. Soundness: ASTM C 88.
 - e. Abrasion of Concrete Aggregate: ASTM C 131.
 - f. Specific Gravity: ASTM C 127 (coarse aggregate), ASTM C 128 (fine aggregate).

- g. Deleterious Materials: ASTM C 33.
 - h. Materials Passing No. 200 Sieve: ASTM C 177.
3. Suppliers records of such tests run on the proposed material will be adequate provided a written affidavit is furnished as a shop drawing submittal.

C. Concrete Mix Designs:

- 1. The Contractor will submit for approval by the Owner and Design Professional, at least 15 days prior to the start of construction, concrete mix designs for each class of concrete indicated on the Structural Drawings and in the Specifications. The Contractor will not begin work until the applicable mix design has been approved.
- 2. The Contractor acting in conjunction with Contractor's concrete supplier and Testing Laboratory will submit in writing the mix designs, indicating whether the concrete is to be proportioned by either of the following methods as outlined in ACI 318:
 - a. Field Experience Method
 - b. Laboratory Trial Batch Method
- 3. When field experience methods are used to select concrete proportions, establish proportions as specified in ACI 301 and ACI 211. When Testing Laboratory trial batches are used to select concrete proportions, the procedure as outlined in ACI 318 will be followed. Prepare test specimens in accordance with ASTM C192 and conduct strength tests in accordance with ASTM C39.
- 4. Required types of concrete and compressive strengths as specified in the various sections of the Specifications.
- 5. All mix design will state the following information:
 - a. Mix design number or code designation by which the Contractor will order the concrete from the supplier.
 - b. Structural member for whom the concrete is designed (i.e. columns, walls footings, etc.).
 - c. Type of concrete (whether normal weight or lightweight).
 - d. 28 day compressive strength.
 - e. Aggregate type, source, size, gradation, fineness modulus.
 - f. Cement type and brand.
 - g. Fly ash type and brand (if any).

- h. Admixtures including air entrainment, water reducers, accelerators, and retarders.
- i. Slump.
- j. Proportions of each material used.
- k. Water cement ratio and maximum allowable water content.
- l. Method by which the concrete is intended to be placed (bucket, chute, or pump).

D. Concrete Supplier's Record of Quality Control:

The concrete supplier's past record of quality control will be used in the design of the concrete mixes to determine the amount by which the average concrete strength f'_c should exceed the specified f'_c as outlined in ACI 318. If a suitable record of test results is not available, the average strength must exceed the design strength by 1200 PSI as specified in ACI 318. After sufficient data becomes available from the job, the statistical methods of ACI 214 may be used to reduce the amount by which the average strength must exceed f'_c as outlined in ACI 318.

E. Admixtures:

- 1. Admixtures to be used in concrete will be subject to the approval of the Testing Laboratory.
- 2. Quantities of admixtures to be used will be in strict accordance with the manufacturer's instructions.
- 3. Admixtures containing chloride ions will not be used.
- 4. Air entraining admixtures will conform to "Specification for Air Entraining Admixtures for Concrete" ASTM C260.
- 5. Water reducing admixtures, retarding admixtures, accelerating admixtures, water reducing and retarding admixtures and water reducing and accelerating admixtures will conform to "Specification for Chemical Admixtures for Concrete" ASTM C494.
- 6. Fly ash or other Pozzolons used as admixtures will conform to "Specification for Fly Ash and Raw or Calcined Natural Pozzolons for use in Portland Cement Concrete" ASTM C618. Obtain mill test reports for approval.
- 7. Use amounts of admixtures as recommended by the manufacturer for climatic conditions prevailing at the time of placing. Adjust quantities of admixtures as required to maintain quality control.

F. Lightweight Structural Concrete:

Not Used.

G. Slump Limits:

Refer to Drawings and Specifications for slump limits.

H. Adjustments of Concrete Mixes:

Mix design adjustments may be requested by the Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant. Such mix design adjustments will be provided at no additional cost to the Owner. Any adjustments in approved mix designs, including changes in admixtures, will be submitted in writing to the Testing Laboratory for approval prior to field use.

I. Shrinkage:

All concrete will be proportioned for maximum allowable unit shrinkage of 0.03% at 28 days as determined by ASTM C157.

J. Chloride Ion Content:

A written submittal will be made with each mix design proposed for use on the Project that no soluble chloride ion exist in the concrete mixes.

K. Concrete Test Cylinders by the Testing Laboratory:

Molding and Testing: Cylinders for strength tests will be molded and Testing Laboratory cured in accordance with ASTM C31 "Method of Making and Curing Concrete Test Cylinders in the Field" and testing in accordance with ASTM C39 "Method of Testing for Compressive Strength of Cylindrical Concrete Specimens".

L. Field Samples:

Field Samples for strength tests will be taken in accordance with ASTM C172 "Method of Sampling Fresh Concrete".

M. Frequency of Testing:

Each set of test cylinders will consist of a minimum of four standard test cylinders. A set of test cylinders will be made according to the following frequency guidelines:

1. One set for each class of concrete taken not less than once a day.
2. Piers: One set for each 50 cubic yards or fraction thereof.
3. Spread Footings: One set for each 50 cubic yards or fraction thereof.
4. Foundation Walls: One set for each 150 cubic yards.
5. Pier Caps and Spread Footings: One set for each 50 cubic yards or fraction thereof.

6. Floors: One set for each 150 cubic yards or fraction thereof but not less than one set for each 5000 square feet of floor area.
7. Columns: One set for each 50 cubic yards or fraction thereof with a minimum of two sets per floor.
8. All Other Concrete: A minimum of one set for each 150 cubic yards or fraction thereof.
9. No more than one set of cylinders at a time will be made from any single truck.
10. The above frequencies assume that one batch plant will be used for each pour. If more than one batch plant is used, the frequencies cited above will apply for each plant used.
11. The cylinders will be numbered, dated, and the point of concrete placement in the building recorded. Of the four cylinders per set, break one at seven days, two at 28 days, and one automatically at 56 days, only if either 28 day cylinder break is below required strength.

N. Additional Cylinder for Floor Form Stripping:

Not Used.

O. Cylinder Storage Box:

The Contractor will be responsible for providing a protected concrete cylinder storage curing box at a point on the Project site mutually agreeable with the Testing Laboratory for the purpose of storing concrete cylinders until they are transported to the Testing Laboratory. Cylinder storage curing box must meet ACI guidelines.

P. Transporting Cylinders:

The Testing Laboratory will be responsible for transporting the cylinders to the Testing Laboratory in a protected environment such that no damage or ill effect will occur to the concrete cylinders until they are transported to the Testing Laboratory.

Q. Information on Concrete Test Reports:

1. The Testing Laboratory will make and distribute concrete test reports after each job cylinder is broken. Such reports will contain the following information:
 - a. Truck number and ticket number.
 - b. Concrete Batch Plant.
 - c. Mix design number.
 - d. Accurate location of pour in the structure.

- e. Strength requirement.
 - f. Date cylinders made and broken.
 - g. Technician making cylinders.
 - h. Concrete temperature at placing.
 - i. Air temperature at point of placement in the structure.
 - j. Amount of water added to the truck at the batch plant and at the Project site and whether it exceeds the amount allowed by the mix design.
 - k. Slump.
 - l. Unit weight.
 - m. Air content.
 - n. Cylinder compressive strengths with type of failure if concrete does not meet Specification requirements. Seven day breaks are to be flagged if they are less than 60% of the required 28 day strength. 28 day breaks are to be flagged if either cylinder fails to meet Specification requirements.
2. Other Required Tests of Concrete by the Testing Laboratory (unless noted otherwise):
- a. Slump Tests: (ASTM C143) will be made at the beginning of concrete placement for each batch plant and for each set of test cylinders made.
 - b. Air Entrainment: (ASTM C233) tests will be made at the same time slump tests are made as cited above.
 - c. Concrete Temperature: Will be measured at the same time slump tests are made as cited above.
 - d. Chloride Ions: If calcium ions are not approved, the following will not apply. If calcium ions are permitted per requirements of Concrete Section(s) of the Specifications, comply with the following.
 - (1) The Contractor will have Testing Laboratory verify in a written submittal with the mix designs that the chloride ion concentration will not exceed the limits specified.
 - (2) Tests will be run for each class of concrete according to AASHTO Designation T260-82 "Sampling and Testing for Total Chloride Ion in Concrete and Concrete Raw Materials" to determine that the maximum chloride ion content does not exceed the limits stated in the Concrete Section(s) of the Specifications. One set of tests will be run at the beginning of the Project for each class of concrete.

R. Evaluation and Acceptance of Concrete:

1. Strength Test: Will be defined as the average strength of two 28 day cylinder breaks from each set of cylinders.
2. Quality Control Charts and Logs: The Testing Laboratory will keep the following quality control logs and charts for each class of concrete containing more than 2,000 cubic yards. The records will be kept for each batch plant and submitted on a weekly basis with cylinder test reports:
 - a. Number of 28 day strength tests made to date.
 - b. 28 day strength test results containing the average of all strength tests to date, the high test result, the low test result, the standard deviation, and the coefficient of variation.
 - c. Number of tests under specified 28 day strength.
 - d. A histogram plotting the number of 28 day cylinders versus compressive strength.
 - e. Quality control chart plotting compressive strength test results for each test.
 - f. Quality control chart plotting moving average for strength where each point plotted is the average strength of three previous test results.
 - g. Quality control chart plotting moving average for range where each point plotted is the average of ten previous ranges.

S. Acceptance Criteria:

1. The strength level of an individual class of concrete will be considered satisfactory if both of the following requirements are met:
 - a. The average of all sets of three consecutive strength tests equal or exceed the required $f'c$.
 - b. No individual strength test (average of two 28 day cylinder breaks) falls below the required $f'c$ by more than 500 PSI.
2. If either of the above requirements is not met, the Testing Laboratory will immediately notify the Contractor and Owner by telephone. Steps will immediately be taken to increase the average of subsequent strength tests.

T. Investigation of Low Strength Concrete Test Results:

1. Contractor Responsibility for Low Strength Concrete:

If any strength test of Testing Laboratory cured cylinders falls below the

required f'c by more than 500 PSI, the Contractor will take steps immediately to assure that the load carrying capacity of the structure is not jeopardized.

2. Nondestructive Field Tests:

The Testing Laboratory will, under the direction of the Owner or Design Professional, perform nondestructive field tests of the concrete in question using Swiss Hammer, Windsor Probe, or other appropriate methods as approved by the Owner or Design Professional and report the results in the same manner as for cylinder test reports.

3. Core Tests:

- a. If the likelihood of low strength concrete is confirmed and computations indicate that the load carrying capacity of the structure has been significantly reduced, tests of cores by the Testing Laboratory, drilled from the area in question under the direction of the Owner or Design Professional, will be required in accordance with ASTM C42 "Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete". In such case, three cores will be taken for each strength test more than 500 PSI below required f'c.
- b. If concrete in the structure will be dry under service conditions, cores will be air dried (temperature 60° to 80°F, relative humidity less than 60 %) for seven days before test and will be tested dry. If concrete in the structure will be more than superficially wet under service conditions, cores will be immersed in water for at least 48 hours and tested wet. The Contractor will fill all holes made by drilling cores with an approved drypack concrete.

4. Acceptance Criteria for Core Tests:

Concrete in an area represented by core tests will be considered structurally adequate if the average of three cores is equal to at least 85% of f'c and if no single core is less than 75% of f'c. If approved by the Owner and Design Professional, locations of erratic core strengths may be retested to check testing accuracy.

5. Cost of Investigations for Low Strength Concrete:

The costs of all investigations of low strength concrete will be borne by the Contractor.

U. Concrete Inspection by the Testing Laboratory:

1. The following types of concrete inspection will be provided by the Testing Laboratory for the classes of concrete described in each type of inspection:

- a. Continuous concrete inspection at the batch plant and point of discharge at the Project site. This type of inspection will be followed for the following classes of concrete:

- (1) Mat Foundations or any other foundation types where more than two columns are supported on a common foundation unit.
- (2) All architectural concrete.
- (3) Columns.

The Testing Laboratory will assign the required number of technicians with the necessary equipment for each scheduled concrete placement to provide continuous concrete inspection at both the batch plant and the point of discharge at the Project site.

- b. Initial concrete inspection at the batch plant for first pour and travel to the Project site with the first truckloadings to inspect concrete placement at the point of discharge. This type of inspection will be followed for all structural concrete for foundation and floors not specified above.
- c. The Testing Laboratory will assign a technician with the necessary equipment to each scheduled concrete placement. The technician will initiate concrete mix inspection at the batch plant, then will proceed to the Project site with the first truckloadings to continue to inspect the mix at the point of discharge. The technician will remain at the Project site to inspect the mix for the required consistency for the duration of the concrete placement.

V. Batch Plant Inspection by the Testing Laboratory:

1. The scope of Batch Plant inspection by the Testing Laboratory will include the following:
 - a. Prior to start of Concrete Work, the Testing Laboratory will inspect batch plant facilities proposed for use in the Work and report, in writing, inspection results to the Contractor, Owner, and Design Professional for approval before the start of the Work. The inspection will follow that outlined in ASTM C 94 and as recommended by the National Concrete Ready Mix Association. Inspection will include:
 - (1) Batch plant operations and equipment.
 - (2) Truck mixers.
 - (3) Scales.
 - (4) Stockpile Placement.
 - (5) Material storage.
 - (6) Admixture dispensers.
 - b. The duties of the batch plant inspector will include the following:
 - (1) Perform initial inspection of batch plant facilities as specified above.
 - (2) Secure samples of aggregates for testing.
 - (3) Perform visual inspection of aggregate stockpiles to determine uniformity, cleanliness, and moisture variation.

- (4) Adjust design weights for moisture in aggregates.
- (5) Inspect aggregate conveying system for possible segregation to be performed at each visit.
- (6) Observe batching procedure. Verify that concrete mix design number is being batched and randomly monitor weighing operation for correct weights of each mix ingredient, including admixture dosages.
- (7) Prior to loading the truck at the batch plant, verify that the drum is free of water, fresh concrete, or aggregates. Check conditions and cleanliness of drum, fins, and blades.
- (8) During loading, observe loading procedures.
- (9) After loading, hold the truck for proper mix time and inspect concrete for thorough mix and consistency prior to leaving the batch plant.
- (10) Check size of batch for rated truck capacity.

W. Job Site Inspection:

1. The scope of the work to be performed by the inspection on the Project site will be as follows:
 - a. Verify that air temperatures at the point of placement in the structure are within acceptable limits defined above prior to ordering of concrete by the Contractor.
 - b. Inspect concrete upon arrival to verify that the proper concrete mix number, type of concrete, and concrete strength is being placed at the proper location.
 - c. Inspect plastic concrete upon arrival at the Project site to verify proper batching. Observe mix consistency and adding of water as required to achieve target slumps in mix designs. Record the amount of water added and note if it exceeds that allowed in the mix design. The responsibility for adding water to trucks at the Project site will rest only with the Contractor's designated representative. The Contractor is responsible for verifying that all concrete placed in the field is in conformance to the Contract Documents.
 - d. Obtain concrete test cylinders.
 - e. Perform slump tests and air entrainment tests.
 - f. Record information for concrete test reports.
 - g. Verify that all concrete being placed meets Specifications. Report concrete not meeting the specified requirements and immediately notify the Contractor, batch plant inspector, and Owner.
 - h. Pick up and transport to Testing Laboratory cylinders cast the previous day.

- i. Check concrete placing techniques to determine that concrete deposited is uniform and that vertical drop does not exceed six feet.
 - j. The Project site laboratory inspector will report and irregularities that occur in the concrete at the Project site or test results to the Contractor, Owner, and Design Professional.
2. Cause for Rejection of Concrete:
- a. The Contractor will reject all concrete delivered to the Project site for any of the following reasons:
 - (1) Wrong class of concrete (incorrect mix design number).
 - (2) Air temperature: Air temperature limits will be as follows:
 - (a) Cold Weather: Air temperature must be 40°F and rising.
 - (b) Hot Weather: Air temperature must be cooler than 100°F.
 - (c) Concrete may be placed at other air temperature ranges only with approval of the job inspector for the Testing Laboratory or other duly appointed representative.
 - (3) Concrete with temperatures exceeding 95°F may not be placed in the structure.
 - (4) Air contents outside the limits specified in the mix designs.
 - (5) Water added outside the limits specified in the mix designs.
 - (6) Slumps outside the limits specified in the mix designs.
 - (7) Excessive Age: Concrete will be discharged within 90 minutes of plant departure or before it begins to set if sooner the 90 minutes unless approved by the Testing Laboratory job inspector or Owner representative.
 - b. The Contractor will be responsible for verifying that all concrete placed in the field is in conformance with the Contract Documents.
 - c. Concrete Batch Trip Tickets: All concrete batch trip tickets will be collected and retained by the Contractor. Compressive strength, slump, air, and temperature tests will be identified by reference to a particular trip ticket. All tickets will contain the information specified in ASTM C 94. Each ticket will also show the amount of water that may be added in the field for the entire batch that will not exceed the specified water cement ration for the design mix. The Testing Laboratory will immediately notify the Contractor, Owner, and Design Professional of

tickets not meeting the criteria specified.

X. Extent of Services for Reinforcing Steel for Concrete:

1. When the Contractor or reinforcing steel fabricator notifies the Testing Laboratory that a shipment of reinforcing steel is in the final stages of fabrication and ready for shipment, the Testing Laboratory will inspect the shipment to determine the following:
 - a. The bars will be free from injurious defects and will have a workmanlike finish.
 - b. Deformations will be of the proper sizes, shapes, and spacing as detailed in ASTM A 615.
 - c. The bars will not have excessive rust and/or pelting.
 - d. The bars will not have any unusual twists or bends.

2. Identified Stock:

Where job material is taken from bundles as delivered from the mill, is properly identified as to heat number and is accompanied by mill and analysis test reports, such material will be used without further local tests provided an affidavit is given from the supplier to the Testing Laboratory that the materials conform with the requirements of the ASTM Specification listed on the Structural Drawings. In case of controversy, the procedure as stipulated below for unidentified stock will be followed.

3. Unidentified Stock:

- a. For all unidentified stock, the Testing Laboratory will secure samples of the reinforcing steel bars at the time of inspection. The samples will conform to the following:
 - (1) The sample will include two bars for each ten tons or fraction thereof of each bar size, heat number, and manufacturer being shipped.
 - (2) The sample bars will be a minimum of 24-inches in length and will be identical to the material being shipped.
 - (3) The Testing Laboratory will tag each of the steel bundles with the laboratory identification tag and appropriately mark the samples corresponding to the steel being inspected and shipped. The fabricator will supply shipping lists showing the weight of each bar to the Testing Laboratory for tensile strength tests and bend tests according to ASTM A 615.

3.04 STRUCTURAL STEEL

Not Used.

3.05 NON-SHRINK GROUT FOR BASE PLATES AND BEARING PLATES AND PRECAST PAVERS

Not Used.

3.06 OPEN WEB STEEL JOISTS

Not Used.

END OF SECTION

SECTION 01505 - TEMPORARY FACILITIES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Specific administration and procedural minimum requirements are specified in this Section as extensions of this Contract as modified and other Contract Documents. Provisions of this Section are applicable to, but not by way of limitation, utility services, construction facilities, security and protection provisions, and support facilities. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.
- B. The Contractor will furnish, install, maintain, and protect temporary utilities, construction facilities, and controls necessary for construction at locations and in a manner which will be safe, nonhazardous, sanitary, protective of persons and property, and free of deleterious effects.
- C. The Contractor will provide and maintain methods, equipment, and temporary construction as necessary to provide controls over environmental conditions at Project site and related areas under Contractor's control.
- D. The Contractor will remove physical evidence of temporary facilities upon completion of Work and restore site to original condition to satisfaction of Owner.
- E. The Contractor will provide temporary services and facilities ready for use when first needed to avoid delay in the Work. The Contractor will maintain, expand and modify as needed. Do not remove until no longer needed or replaced by authorized use of permanent facilities. Refer to Section 01315 - SCHEDULES, PHASING for additional requirements.
 - 1. Temporary utilities required include, but are not limited to:
 - a. Water service and distribution.
 - b. Temporary electric power and light.
 - c. Telephone service.
 - d. Storm and sanitary sewer.
 - e. Building systems.
 - f. Internet service.
 - 2. Temporary construction and support facilities required include, but are not limited to:
 - a. Temporary heat.

- b. Field offices, guard shack, and storage sheds.
 - c. Sanitary facilities, including drinking water.
 - d. Temporary enclosures.
 - e. Hoists and temporary elevator use.
 - f. Temporary Project identification signs and bulletin boards.
 - g. Waste disposal services.
3. Security and protection requirements include, but are not limited to:
- a. Temporary fire protection.
 - b. Barricades, warning signs, lights.
 - c. Environmental protection.
 - d. Temporary enclosures.

1.02 GENERAL DEFINITIONS

- A. Energy Considerations: Administer the use of temporary facilities in a manner which conserves energy without delaying Work or endangering persons or property. The Contractor will comply with reasonable requests by the Owner.
- B. Costs: Except as otherwise indicated, Contractor will pay for all costs associated with the temporary facilities, including use charges. Temporary facilities remain the property and responsibility of the Contractor.
- C. Dust Control: Adequate measures will be taken by the Contractor to prevent the transfer of dust to all other areas.
- D. Noise Control: Where Work is being conducted in or adjacent to occupied areas, the Contractor will make every effort to keep construction noise to a minimum.
- E. Environmental Protection: Contractor will review exposure to possible environmental problems with the Owner and Design Professional. Contractor will establish procedures and discipline among tradesmen and provide needed facilities which will protect against environmental problems (erosion control at all laydown areas and trailer compounds, pollution of air, air quality, water and soil, excessive noise, and similar problems).

1.03 QUALITY ASSURANCE

- A. Regulations: The Contractor shall comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including, but not limited to:

1. Building Code requirements.
 2. Health and safety regulations.
 3. Utility company regulations.
 4. Police, Fire Department and Rescue Squad rules.
 5. Environmental protection regulations.
- B. Standards: Comply with the requirements of NFPA Code 241, "Building Construction and Demolition Operations", ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition", and the NECA Electrical Design Library, "Temporary Electrical Facilities."
1. The Contractor shall refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services," prepared jointly by AGC and ASC, for industry recommendations.
 2. The Contractor shall comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service in compliance with National Electric Code (NFPA 70).
- C. Inspections: The Contractor shall inspect and test each service before placing temporary utilities in use. The Contractor shall arrange for authorities having jurisdiction to inspect and test each temporary utility before use. The Contractor shall obtain required certifications and permits.

1.04 SUBMITTALS

A. Reports and Tests:

The Contractor shall submit copies of reports and permits required or necessary for installation and operation, including reports of tests, inspections and meter readings performed on temporary utilities and permits and legal description of easements necessary for installation, use and operation.

B. Implementation and Termination Schedule:

The Contractor shall submit a schedule indicating implementation and termination of each temporary utility within 15 days of the date established for commencement of the Work.

1.05 PROJECT CONDITIONS

A. Temporary Utilities:

At the earliest feasible time, when acceptable to the Owner and Design Professional, change over from use of temporary service to use of permanent service.

B. Conditions of Use:

The Contractor shall keep temporary services and facilities clean and neat in appearance. The Contractor shall operate in a safe and efficient manner. The Contractor shall take necessary fire prevention measures. The Contractor shall not overload facilities or permit them to interfere with progress. The Contractor shall not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on the Project site.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. General: The Contractor shall use qualified tradesmen for installation of temporary services and facilities, or to disconnect existing services or facilities that must be temporarily removed to complete the Work. The Contractor shall locate temporary services and facilities where they will serve the entire Project adequately and result in minimum interference with performance of the Work and the operation of the Airport.
- B. The Contractor shall ensure that the proper permits are secured before starting any utility Work. The Contractor shall require that tradesmen accomplishing this Work be licensed as required by local authority for the Work performed.
- C. The Contractor shall relocate, modify, and extend services and facilities, as required, during the course of the Work so as to accommodate the entire Work of the Project. The Contractor shall not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.02 TEMPORARY STAGING AREAS

- A. The staging area(s) located within the property defined as Tampa International Airport to be used to house the Contractor's field offices will be coordinated with Owner. The layout of the staging area(s) will be coordinated with the Owner.
- B. The Contractor may provide a trailer or portable type field office for its own use. Location of field office will be approved by the Owner. Costs for connections to utilities will be paid for by the Contractor. Water, electric and telephone may be available at that location. The Contractor is responsible for obtaining and paying for all utilities that it requires.
- C. The Contractor may erect and maintain throughout the life of the Contract, at Contractor's expense, a floor to ceiling plywood Type 1 barricade around the perimeter of each staging area used (or a six foot high chain link fence around the perimeter of each staging area used). Contractor may also install vehicle and pedestrian gates as

necessary to provide adequate ingress/egress to its exclusive sites. The Contractor is solely responsible for its own security. Upon completion of all Work, Contractor shall remove all construction barricades from the Project site.

3.03 TEMPORARY STORAGE AND SPOIL AREAS

- A. The Contractor's vehicles, equipment, and materials will be stored in the staging area designated on the Drawings or as modified per the Owner. Upon completion of the Work, the storage areas will be cleaned-up and returned to their original condition to the satisfaction of the Owner. No special payment will be made for clean-up and restoration of the storage area. Personal vehicles will not be permitted beyond the Contractor's staging area. Drivers of personal vehicles being operated beyond the Contractor's staging area will be subject to loss of permission to enter the construction site.
- B. Stockpile areas will be used to store all materials needed for the Project and may or may not be fenced at the Owner's option. However, red flashing barricades will be installed where potential conflicts with air or ground vehicular traffic might occur. Stockpiles will not penetrate the FAR Part 77 imaginary surfaces. Stockpile areas will be used to store all materials needed for the Project and must be accommodated within the work area.
- C. If storage areas are needed, the Contractor will request them from the Owner. The request will be reviewed on the basis of what is to be stored and the area needed. The Contractor will provide all necessary fencing and/or security.
- D. All waste material, including rubble and debris, and environmental hazardous material will be removed from the Airport at the Contractor's expense. No hazardous materials will be stored within the Airport complex. Burning on Airport property is prohibited.
- E. Equipment not in use during construction, nights, and/or holidays will be parked in the staging area. Exceptions will only be approved by the Owner when absolutely necessary. Parking of construction worker's private vehicles will also be within the staging area.

3.04 TEMPORARY UTILITY INSTALLATION

- A. General:
 - 1. The Contractor will coordinate the requirements for temporary utilities with the Owner and will install at the Contractor's expense all necessary utilities in a safe, acceptable manner. Should leaks, breaks, etc., occur during installation or use, the Contractor will immediately notify the Owner and the appropriate utility personnel and promptly repair the utility so as to keep disruption of service to a minimum.
 - 2. Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with the company's recommendations.

- a. Arrange with the company and existing users for a time when service can be interrupted, where necessary, to make connections for temporary service.
- b. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
- c. Cost or use charges for temporary facilities are not chargeable to the Owner, with exception of the utilities furnished by the Owner as defined under Section 01505, Item 3.04, Paragraph B.1 and Item 3.04, Paragraph C.1., and will not be accepted as a basis of claims for a Change Order. All utility costs shall be at the Contractor's expense.

B. Water Service:

1. General: The Contractor will provide and pay for all water except within existing building structures where, if possible, the Owner will furnish water at the nearest available potable water outlet. Water connection (without charge) to Owner's existing potable water system is limited to one 3/4" pipe-size connection, and a maximum flow of 10 gpm to the cold water supply. The Contractor shall install using vacuum breakers or other backflow preventer as required by local authority.
 - a. The Contractor shall maintain hose connections and outlet valves in leak proof condition. Where finish work below an outlet might be damaged by spillage or leakage, the Contractor shall provide a drip pan of suitable size to minimize the possibility of water damage. The Contractor shall drain water promptly from pans as it accumulates.
2. Temporary Water Service Connection: Contractor may use the Owner's water as described above in Paragraph 3.04, B.1. for this Project; however, all connections to the Owner's water system will include backflow protection. Valves will be temperature and pressure rated for operation of the temperatures and pressures encountered. After completion of use, connections and fittings will be removed without damage or alteration to existing water piping and equipment. Leaking or dripping valves will be piped to the nearest drain or located over an existing sink or grade where water will not damage existing finishes or equipment.
3. Water Hoses: The Contractor shall employ heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system to provide water into each work area. The Contractor shall provide fittings as required to allow for connection to existing wall hydrants or spouts, as well as temporary water heating equipment, branch piping, showers, shut-off nozzles and equipment.
4. The Contractor shall install water service and distribution piping of sizes and pressures adequate for construction until permanent water service is in use.

5. The Contractor shall sterilize temporary potable water piping prior to use.
6. Non-Potable Water: Where non-potable water is used, the Contractor shall mark each outlet with adequate health-hazard warning signs.

C. Electrical Service:

1. General: The Contractor will provide and pay for all electricity. The Contractor is responsible for obtaining and paying for all required permits and for temporary electric connections, maintenance, installation and removal, and other attributable costs.
 - a. The Contractor shall provide a weatherproof, grounded temporary electric power service and distribution system of sufficient size, capacity, and power characteristics to accommodate performance of Work during the construction period. The Contractor shall install temporary lighting adequate to provide sufficient illumination for safe work and traffic conditions in every area of Work.
 - b. The Contractor shall supply temporary electrical service to construction site utilizing a State of Florida Certified Electrician. Contractor will comply with applicable NEMA, NECA and UL standards and governing regulations for materials and layout of temporary electric service.
 - c. The Contractor shall provide weather tight, grounded, temporary electrical service-entrance and distribution system, with automatic ground-fault circuit interrupters and ground-fault interrupter features of proper types, sizes, electrical ratings and characteristics to fulfill Project requirements during construction period.
 - d. The Contractor shall provide meters, transformers, and over current protective devices at main distribution panel for power and light circuitry. Provide disconnections for equipment circuits. The Contractor shall coordinate installation of all temporary wiring with the Owner.
 - e. The Contractor shall connect service to local power company main supply in the manner directed by utility company officials. The Contractor shall pay usage charges for electricity used by entities authorized to perform the Work at the Project site. The Contractor shall exercise control over power usage to conserve energy.
 - f. Except where overhead service must be used, the Contractor shall install electric power service underground.
 - g. The Contractor shall provide temporary power, telephone, and system connections, where required by the Owner, to continue operation of existing equipment or systems during construction.

- h. The Contractor shall replace all damaged receptacles. The Contractor shall provide temporary extension rings, wiring, boxes, and related hardware to allow power, telephone, and systems to function normally during the interim period between removal of existing surface treatment(s) and installation of new treatment.
- i. All electrical conductors for temporary power and lighting will be placed in conduits if exposed to public view. All temporary wiring for communication, security, fire protection and signal systems will be installed in accordance with all appropriate codes and will also be placed in conduits if exposed to public view.

2. Power Distribution System:

- a. All wiring and grounding will meet all safety requirements of the National Electrical Code and all federal, state and local requirements. In addition, all wire will be so sized that it is not overloaded according to the National Electrical Code, and all wire used will be fused to adequately protect that wire according to the National Electric Code referred to.
- b. The Contractor shall provide circuits of proper sizes, characteristics, and ratings for each use indicated. The Contractor shall install wiring overhead and risers vertically where least exposed to damage. The Contractor shall provide rigid steel conduit to protect wiring on grade, floors, decks or other areas exposed to possible damage.
- c. The Contractor shall provide properly configured NEMA polarized outlets to prevent insertion of 110-120 Volt plugs into higher voltage outlets. The Contractor shall provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light for connection of power tools and equipment.
- d. Electric power will be limited to 120-Volts for lighting and hand tools that can be operated on a circuit protected at 15-Amps.
- e. The Contractor shall provide grounded extension cords and use "hard service" cords where exposed to abrasion and traffic. The Contractor shall provide weatherproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress.
- f. Lockout: In all facilities, wherever possible, the Contractor shall lockout all existing power to or through the Work area as described below. Unless specifically noted otherwise, existing power and lighting circuits to the Work area are not to be used. All power and lighting to the Work area are to be provided from temporary electrical panel described below.

- (1) The Contractor shall lockout power to Work area by switching

of all breakers serving power or lighting circuits in Work area. The Contractor shall label breakers with tape over breaker with notation "DANGER circuit being worked on." All panels shall be locked and all keys shall be under the control of Contractor's Superintendent or the Owner.

- (2) The Contractor shall lockout power to circuits running through Work area wherever possible by switching off all breakers serving these circuits. The Contractor shall label breakers with tape over breaker with notation "DANGER Circuit Being Worked On." The Contractor shall sign and date danger tag All panels shall be locked and all keys shall be under the control of Contractor's Superintendent or the Owner. If circuits cannot be shut down for any reason, the Contractor shall label at intervals 4'-0" on center with tags reading, "DANGER Live Electric Circuit Electrocutation Hazard."

- g. Not Used.
- h. Circuit Protection: The Contractor shall protect each circuit with a ground fault circuit interrupter (GFCI) of proper size located in the temporary panel. The Contractor shall not use outlet type GFCI devices.
- i. Temporary Wiring: Inside the Work area or above the Work platforms will be type UF non-metallic sheathed cable located overhead and exposed for surveillance. The Contractor shall not wire temporary lighting with plain, exposed (insulated) electrical conductors. The Contractor shall provide liquid tight enclosures or boxes for wiring devices.
- j. Number of Branch Circuits: The Contractor shall provide sufficient branch circuits as required by the Work. All branch circuits are to originate at temporary electrical panel.

3. Not Used.

D. Not Used.

E. Sewers and Drainage:

1. If sanitary sewers are available, the Contractor shall provide temporary connections to remove effluent that can be lawfully discharged. If sanitary sewers are not available or cannot be used, the Contractor shall provide containers to remove and dispose of effluent off the Project site in a lawful manner.
 - a. The Contractor shall connect temporary sewers to the municipal system as directed by the City of Tampa Sewer Department Officials.

- b. The Contractor shall maintain temporary sanitary sewer facilities in a clean, sanitary condition.
2. If drainage systems are available, the Contractor shall provide temporary connections to remove stormwater that can be lawfully discharged. If drainage systems are not available, the Contractor shall provide drainage ditches, dry wells, stabilization ponds and similar facilities. The Contractor shall provide earthen embankments and similar barriers in and around excavations and subgrade construction sufficient to prevent flooding by runoff of stormwater from heavy rains.
- a. The Contractor shall filter out excessive amounts of soil, construction debris, chemicals, oils and similar contaminants that might clog storm sewers or pollute waterways before discharge.
 - b. The Contractor shall maintain drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.

F. Internet Service:

If available, the Contractor may install internet service at the Contractor's own expense. All charges will be paid by the Contractor.

3.05 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION

A. General:

- 1. The Contractor shall locate field offices, storage sheds, sanitary facilities and other temporary construction and support facilities for easy access.
- 2. The Contractor shall maintain temporary construction and support facilities until no longer necessary for the Work.
- 3. The Contractor shall provide incombustible construction for offices, shops and sheds located within the construction area, or within 30 feet of building lines. The Contractor shall comply with requirements of NFPA 241.
- 4. The Contractor will furnish all temporary wiring, piping connection and other apparatus that is needed to operate the utilities and will remove all evidence of same when Work is complete.
- 5. The Contractor will be responsible for obtaining and paying for utilities that Contractor requests at the Project site, except for the utilities furnished by the Owner as defined under Section 01505, Item 3.04, Paragraph B1 and Item 3.04, Paragraph C1.
- 6. The Contractor will at all times protect excavations, trenches, buildings, and materials from rain water, ground water, backup and leakage of sewers, drains, other piping, and from water of any other origin, and will remove promptly all

accumulation of water. The Contractor will provide and operate all pumps, piping and other equipment necessary to this end.

7. The Contractor shall provide facilities and services as necessary to effectively protect Project from losses and persons from injury during the course of the Work.
8. The existing utilities will not be modified for use by the Contractor.
9. The Contractor shall not interrupt existing services serving occupied or used facilities, except when authorized in writing by the Owner. The Contractor shall provide temporary services during interruptions to existing utilities, as acceptable to the Owner.
10. The Contractor shall provide scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes, other facilities, and equipment required by personnel and required to perform Work and facilitate inspection.
11. The Contractor shall comply with reasonable requests of governing authorities performing inspections.
12. When permanent stairs are available for access during construction, the Contractor shall protect surface by covering to prevent damage and deterioration at time of Substantial Completion.

B. Field Offices:

The Contractor shall provide insulated, weather tight temporary offices of sufficient size to accommodate required office personnel at the Project site. The Contractor shall keep the office clean and orderly for Contractor's use, Owner's use and for progress meetings. The Contractor shall furnish and equip offices with adequate furniture, heat, air conditioning, lights, telephones, water cooler, private toilet complete with water closet, lavatory, mirror, medicine cabinet and janitor services. Location of field office will be approved by the Owner. Costs for connections to utilities (electrical power, water, sanitary sewer, etc.) will be paid for by the Contractor. Contractor is responsible for obtaining and paying for all utilities that Contractor requires, except for the utilities furnished by the Owner under Section 01505, Item 3.04, Paragraph B1 and Item 3.04, Paragraph C1.

C. Storage and Fabrication Sheds:

The Contractor shall install storage and fabrication sheds, sized, furnished and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces within the building or elsewhere on the Project site.

D. Not Used.

E. Temporary Paving:

1. The Contractor shall construct and maintain temporary roads and paving to adequately support the indicated loading and to withstand exposure to traffic during the construction period. The Contractor shall locate temporary paving for roads, storage areas and parking where the same permanent facilities will be located. The Contractor shall review proposed modifications to permanent paving with the Owner.
2. Temporary paving will comply with applicable requirements of the Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction, latest edition, as amended.
3. The Contractor shall coordinate temporary paving development with subgrade grading, compaction, installation and stabilization of subbase, and installation of base and finish courses of permanent paving.
4. The Contractor shall install temporary paving to minimize the need to rework the installations and to result in permanent roads and paved areas that are without damage or deterioration when occupied by the Owner.
5. The Contractor shall delay installation of the final course of permanent asphalt concrete paving until immediately before Substantial Completion. The Contractor shall coordinate with weather conditions to avoid unsatisfactory results.
6. The Contractor shall extend temporary paving in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration and supervision.

F. Sanitary Facilities:

1. The Contractor shall include temporary toilets, wash facilities and drinking water fixtures. The Contractor shall comply with regulations and health codes for the type, number, location, operation and maintenance of fixtures and facilities. The Contractor shall install where facilities will best service the Project's needs.
2. The Contractor shall provide toilet tissue, paper towels, paper cups and similar disposable materials for each facility. The Contractor shall provide covered waste containers for used material.
3. Toilets:
 - a. Use of the Owner's existing toilet facilities will not be permitted.
 - b. The Contractor shall install single occupant, self-contained toilet units of a chemical type, properly vented and fully enclosed with a shell of glass fiber, reinforced polyester or other similar non-absorbent material. Use of pit-type privies will not be permitted. The Contractor shall provide

minimum ratio of one toilet per 25 construction personnel, or a greater number of toilets if required by governing regulations. The Contractor shall provide separate toilet facilities for male and female personnel. The Contractor shall thoroughly disinfect toilet facility a minimum of two times each week. The Contractor shall provide means to lock door from outside and keep locked at all times except during hours that construction personnel are at Project.

G. Wash Facilities:

1. The Contractor shall install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition. The Contractor shall dispose of drainage properly. The Contractor shall supply cleaning compounds appropriate for each condition.
2. The Contractor shall provide safety showers, eye-wash fountains and similar facilities for convenience safety and sanitation of personnel.

H. Drinking Water Fixtures:

The Contractor shall provide drinking water fountains including paper supply.

I. Drinking Water Facilities:

1. The Contractor shall provide containerized tap-dispenser bottled-water type drinking water units, including paper supply.
2. Where power is accessible, the Contractor shall provide electric water coolers to maintain dispensed water temperature at 45° to 55° F (7° to 13° C).
3. Drinking and Water Fixtures: The Contractor shall provide drinking water fountains where and when piped potable water, approved by local authorities, is reasonably accessible from permanent or temporary lines. Otherwise, the Contractor shall provide electric cooled bottled water type drinking water units spaced so that personnel at Project site will travel not more than 300 feet.
4. The Contractor will provide all temporary lines and connection from existing sources of the water as required for the Work. The Contractor shall be responsible for proper drainage of water used.

J. Dewatering Facilities and Drainage:

The Contractor shall maintain construction work free of water accumulation. The Contractor shall not endanger the Work or adjacent properties.

K. Miscellaneous Facilities:

The Contractor shall provide miscellaneous facilities as needed, including ladders,

runways, shoring, scaffolding, railing, bracing, barriers, closures, platforms, temporary partitions, and similar items.

L. Temporary Enclosures:

1. The Contractor shall provide temporary enclosure for protection of construction in progress and completed from exposure, foul weather, other construction operations and similar activities.
2. Where heat is needed and the permanent building enclosure is not complete, the Contractor shall provide temporary enclosures where there is no other provision for containment of heat. The Contractor shall coordinate enclosure with ventilation and material drying or curing requirements to avoid dangerous conditions and effects.
3. The Contractor shall install Type 1 barricades securely with incombustible wood framing and other materials. The Contractor shall close openings of 25 square feet or less with plywood or similar materials.
4. The Contractor shall close openings through floor or roof decks and horizontal surfaces with load-bearing wood-framed construction.
5. Where temporary wood or plywood enclosure exceeds 100 square feet in area, the Contractor shall use UL-labeled fire-retardant treated material for framing and main sheathing. For job-built temporary offices, shops and sheds within the construction area, the Contractor shall provide UL labeled, fire treated lumber and plywood for framing, sheathing and siding.

M. Temporary Lifts and Hoists:

The Contractor shall provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities. The Contractor shall not permit employees to ride hoists which comply only with requirements for hoisting materials.

N. Project Identification and Temporary Signs:

1. The Contractor shall prepare project identification and other signs of the size indicated. The Contractor shall install signs where indicated to inform the public and persons seeking entrance to the Project.
2. Contractor's identification sign located at its staging area:
 - a. Contractor may provide one 8 foot x 4 foot x 3/4" exterior grade plywood sign, properly supported with bottom 6 foot above grade. The Contractor shall engage professional sign painter to apply graphics and lettering as approved by Owner. NO OTHER SIGNS ARE PERMITTED

WITHIN THE AIRPORT COMPLEX.

- b. All signs must be pre approved by Owner. Signs must follow the Owner's standards with regards to font, style, color, and size. When appropriate, the temporary sign shall closely resemble the final sign.

3.05 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. General:

- 1. The Contractor shall provide a neat and uniform appearance in security and protection facilities acceptable to the Owner. The Contractor shall maintain site in a safe, lawful and publicly acceptable manner. The Contractor shall take necessary measures to prevent erosion.
- 2. Temporary Construction Barricades:
 - a. A barricade plan will be submitted to and approved by the Owner prior to the start of any Work. Following approval and subsequent installation of barricades, a representative from the Owner will inspect the Work to insure compliance with the barricade plan and the following requirements.
 - b. The Contractor will be fully responsible for the protection of the public and adjacent areas during the construction process. The Contractor shall safely isolate the construction areas while maintaining normal airport operations. The Contractor will use temporary barricades of the following types:
 - (1) Road Barricades:
 - Roadway barricades will be in accordance with FDOT Roadway and Design Standards and in accordance with the Contract Documents.
 - (2) Airfield Barricades:
 - Runway and taxiway barricades will be in accordance with Owner Standard Low Profile Barricade Specifications.
 - c. If at any time barricades are not maintained to these standards, or if the public areas are not protected from excessive noise, dust, or other interference, the Contractor will be required to cease all Work until the non-conforming situation is corrected.

- d. The Contractor shall provide warning signs and lighting where needed, including steady burn red lights where appropriate. The Contractor shall comply with recognized standards and code requirements.
- e. Contractor will cooperate and coordinate with Owner for installation of all barricades to allow continuous Airport operations. Access will be maintained into all Building Tenant spaces and existing mechanical and electrical control devices.

B. Security Enclosure and Lockup:

1. Storage:

Where materials and equipment must be stored and are of value or attractive for theft, the Contractor shall provide a secure lockup. The Contractor shall enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

- 2. The Contractor shall erect weatherproof closures for exterior openings.
- 3. The Contractor shall erect and maintain dustproof partitions composed of gypsum board and wood studs to prevent spread of dust, fumes, and smoke to other parts of the building.

C. Environmental Protection:

- 1. The Contractor shall provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations and minimize the possibility that air, waterways and subsoil might be contaminated or polluted or that other undesirable effects might result. The Contractor shall avoid use of tools and equipment which produce harmful noise. The Contractor shall restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the Project site.
- 2. The Contractor shall install and operate temporary facilities and perform construction activities in a manner which will be reasonably conservative and avoid waste of energy and materials including water.
- 3. The Contractor shall provide facilities, establish procedures, and conduct construction activities in compliance with regulations controlling construction activities at Project site.
- 4. The Contractor shall designate one person to enforce strict discipline on activities related to generation of wastes, pollution of air, water, and soil, generation of noise, and similar harmful or deleterious effects which might

violate regulations or reasonably irritate persons at or in vicinity of Project site and inform Owner of designee.

D. Dust Control:

The Contractor shall provide positive methods and apply dust control materials to minimize raising dust from construction operations. The Contractor shall provide positive means to prevent airborne dust from dispersing into atmosphere.

E. Water Control:

1. The Contractor shall provide methods to control surface water to prevent damage to Project site and adjoining properties.
2. The Contractor shall control fill, grading, and ditching to direct surface drainage away from excavations, pits, tunnels, and other construction areas, and to direct drainage to proper runoff.
3. The Contractor shall provide, operate, and maintain hydraulic equipment of adequate capacity to control surface and runoff water.
4. The Contractor shall dispose of drainage water in manner that prevents flooding, erosion, or other damage to any portion of Project site or adjoining areas.

F. Pest and Rodent Control:

1. The Contractor shall provide pest and rodent control as necessary to prevent infestation of construction or storage area.
2. The Contractor shall employ methods and use materials which will not adversely affect conditions at Project site and on adjoining properties.
3. Should use of rodenticides or pesticides be considered necessary, the Contractor shall submit informational copy of proposed program to Owner. Clearly indicate:
 - a. Area or areas to be treated.
 - b. Materials to be used, with copy of manufacturer's printed instructions.
 - c. Pollution preventative measures to be employed.
4. Use of any rodenticide or pesticide will be in full accordance with manufacturer's printed instructions and recommendations.
5. Before foundation Work has been completed, the Contractor shall retain a local exterminator or pest control company to recommend practices to minimize

attraction and harboring of rodents, roaches and other pests. The Contractor shall employ this service to perform extermination and control procedures at regular intervals so that the Project will be relatively free of pests and their residues at Substantial Completion of the whole Work. The Contractor shall perform control operations in a lawful manner using environmentally safe materials.

G. Debris Control:

1. The Contractor shall maintain areas under Contractor's control free of extraneous debris.
2. The Contractor shall initiate and maintain specific program to prevent accumulation of debris at construction site, storage and parking area, or along access roads and haul routes.
 - a. The Contractor shall provide containers for deposit of debris as specified.
 - b. The Contractor shall prohibit overloading of trucks to prevent spillages on access and haul routes.
 - c. The Contractor shall provide periodic inspection of traffic areas to enforce requirements.
3. The Contractor shall schedule daily collection and disposal of debris.
4. The Contractor shall provide additional collections and disposal of debris whenever periodic schedule is inadequate to prevent accumulation.
5. The Contractor shall transport debris and waste material in covered trucks.

H. Pollution Control:

The Contractor shall:

1. Provide methods, means, and facilities required to prevent contamination of soil, water, or atmosphere by discharge of noxious substances from construction operations.
2. Provide equipment and personnel and perform emergency measures required to contain any spillage, and remove contaminated soil or liquids.
3. Excavate and dispose of contaminated earth off site in accordance with local environmental regulations and replace with suitable clean, compacted fill and topsoil.
4. Take special measures to prevent harmful substances from entering public waters.

5. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams or in sanitary or storm sewers.
6. Provide systems for control of atmospheric pollutants.
7. Prevent toxic concentrations of chemicals.
8. Prevent harmful dispersal of pollutants into atmosphere.

I. Erosion Control:

The Contractor shall:

1. Plan and execute construction and earthwork by the following methods to control surface drainage from cuts and fills and borrow and waste disposal areas and to prevent erosion and sedimentation:
 - a. Hold areas of bare soil exposed at one time to minimum.
 - b. Provide temporary control measures, such as berms, dikes, and drains.
2. Construct fills and waste areas by selective placement to eliminate surface silts or clays which will erode.
3. Periodically inspect earthwork to detect any evidence of start of erosions. Apply corrective measures as required to control erosion.
4. Maintain all SWPPP (Storm Water Pollution Prevention Plan) protocols during construction and correct any damaged areas due to the failure to maintain such protocols adequately.

J. Collection and Disposal of Waste:

1. The Contractor shall collect waste from construction areas and elsewhere daily. The Contractor shall comply with requirements of NFPA 241 for removal of combustible waste material and debris. The Contractor shall enforce requirements strictly. The Contractor shall not hold materials more than seven days during normal weather or three days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. The Contractor shall dispose of material in a lawful manner.
2. In case of non-compliance with the above, the Owner, after having given a 24-hour notice, has the right to take any corrective action required at the expense of the Contractor.
3. Burying or burning of waste materials on the Project site or washing waste materials down sewers will not be permitted.

4. The Contractor shall provide rodent proof containers on each floor level to encourage depositing of wastes by construction personnel.

3.06 OPERATION, TERMINATION AND REMOVAL

A. Supervision:

The Contractor shall enforce strict discipline in use of temporary facilities. The Contractor shall limit availability of temporary facilities to essential and intended uses to minimize waste and abuse. The Contractor shall not permit temporary installations to be abused or endangered.

B. Maintenance:

1. The Contractor shall maintain facilities in good operating condition until removal. The Contractor shall protect from damage by freezing temperatures and similar elements.
2. The Contractor shall maintain operation of temporary enclosures, heating, cooling, humidity control ventilation and similar facilities on a 24-hour day basis where required to achieve indicated results and to avoid possibility of damage. The Contractor shall not allow unsanitary conditions, public nuisances or hazardous conditions to develop or persist on the Project site.

C. Protection:

The Contractor shall prevent water filled piping from freezing. The Contractor shall maintain markers for underground lines. The Contractor shall protect from damage during excavation operations.

D. Termination and Removal:

1. The Contractor shall remove each temporary service and facility promptly when need for has ended or when replaced by use of a permanent facility, but no later than Final Acceptance of the whole Work. Complete or if necessary restore permanent Work delayed because of interference with the temporary service or facility. The Contractor shall repair damaged Work, clean exposed surfaces and replace Work which cannot be repaired.
2. At Substantial Completion of the whole Work, the Contractor shall clean and renovate permanent services and facilities that have been used to provide temporary services and facilities during the construction period.
3. At Substantial Completion of the whole Work, the Contractor shall clean and renovate permanent facilities that have been used during the construction period, including but not limited to:
 - a. Replacing air filters and clean inside of ductwork and housings.

- b. Replacing significantly worn parts and parts that have been subject to unusual operating conditions.
- c. Replacing lamps that are burned out or noticeably dimmed by substantial hours of use.

END OF SECTION

SECTION 01540 - CONSTRUCTION SAFETY AND SECURITY REQUIREMENTS

PART 1 – GENERAL

1.01 PURPOSE AND OBJECTIVE

- A. The purpose of this section is to set forth guidelines concerning safety and security during construction of the Project. The following methods, procedures, rules and authorities must be adhered to during project construction. The Hillsborough County Aviation Authority (HCAA) Construction Safety & Security Guidelines Manual applies to the project, and the Contractor will also comply with all safety requirements described below, unless in direct conflict with the HCAA Construction Safety & Security Guidelines Manual. In such case, the more stringent requirements will govern, as determined by Owner.
- B. The following are the general safety objectives that must be achieved in order to maximize safety and to minimize time and economic loss to the aviation community, construction contractors and others directly affected by the Project.
 - 1. Keep the Airport safe for all users.
 - 2. Keep the Airport operational for all users.
 - 3. Maintain safety of Airport operations.
 - 4. Minimize delays to Airport operations.
 - 5. Minimize delays to construction operations.
 - 6. Minimize Airport-operation/construction-activity conflicts.
 - 7. Minimize impacts to tenants and passengers.

1.02 OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION

- A. All of Contractor's operations will be conducted in accordance with this Section. If the operations include work within the AOA or impacts the AOA or aircraft flight surfaces, the operations will be conducted in accordance with FAA Advisory Circular 150/5370- latest edition. The Contractor will prepare and submit a Safety Plan Compliance Document (SPCD or safety plan) that details how it proposes to comply with the Construction Safety and Phasing Plan (CSPP). The CSPP is appended to the Project Manual and is a part of the Contract.
- B. The Contractor will implement all necessary measures required by the safety plan prior to commencement of any work activity. The Contractor will conduct routine checks of the safety plan measures to assure compliance with the safety plan.
- C. The Contractor is responsible to the Owner for the conduct of all Subcontractors and others it employs on the Project. The Contractor will assure that all Subcontractors are made aware of the requirements of the safety plan and that they implement and maintain all necessary measures.
- D. No deviation or modifications may be made to the approved safety plan unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require

a significant amount of time.

- E. This Contract is intended to provide for the optimum degree of safety to aircraft, both parked and operating; Airport personnel, passengers and general public, equipment, and associated facilities; and to the Contractor's operations consistent with minimum interference to the movement of aircraft, vehicles, and/or personnel engaged in the day-to-day operation of the Airport. To this end, the Contractor will observe all Airport rules and regulations and all other operational limitations which may be imposed from time to time. Contractor will provide marking, lighting, barricades, signs, or other measures which are required to properly identify Contractor's construction areas, Work sites, equipment, vehicles, storage areas, and/or conditions which may be hazardous to Airport operations.
- F. If the Contractor fails to maintain the marking, lighting barricades, signs, etc., as required, the Owner will cause appropriate safety measures to be installed by others and all costs thereof will be charged to the Contractor and deducted by the Owner from monies due to the Contractor.
- G. The Contractor's responsibility for safety and security will begin on the day the Contractor starts Work or on the date of the Notice To Proceed and will continue until Contractor is complete.
- H. The Contractor is fully and solely responsible for all project safety as it pertains to the Contractor's Work. This includes complying with the Hillsborough County Aviation Authority Construction Safety & Health Guidelines Manual, if applicable, implementing and enforcing its safety plan and procedures. Owner's acceptance, directives, approval, comments or any such action regarding Contractor's safety plan or Work shall not relieve the Contractor of its obligations.

1.03 SAFETY PROCEDURES

- A. In as much as each Work area will be accessible to and used by the public, the Owner, airlines, and other companies doing business at the Airport during the construction period, it is the Contractor's responsibility to maintain each Work area in a safe, hazard free condition at all times. This will include barricades, fencing, taping up sharp corners or any other precautions necessary to protect the public. Should the Owner find an area unsafe at any time, Owner will notify the Contractor and the Contractor will take whatever steps necessary to remedy the unsafe condition. Should the Contractor not be immediately available for corrective action, the Owner will cause appropriate safety measures to be installed by others and all costs thereof will be charged to the Contractor and deducted by the Owner from monies due to the Contractor.
- B. Fire Control: Open flame torch cutting or welding is prohibited unless adequate safety precautions have been taken and approved by the Owner via Owner's cutting and welding permit process. Flame cutting will be permitted only on steel parts that cannot be removed in any other manner and only when at least one person is standing by exclusively with a fire extinguisher within ten feet of the Work and within full view of the area. The fire extinguisher will have been inspected, tagged and ready for use. The Contractor will submit a fire protection plan for approval prior to conducting the Work

- requiring said protection plan.
- C. Work Near Fire Alarm: Caution will be exercised as necessary when working near fire alarms so as not to accidentally activate fire alarms, doors or barriers.
 - D. Protection of Property: Fixed structures, equipment, paving, landscaping, vehicles (automobiles, trucks, etc.) and aircraft will be protected with drop cloths, shielding and other appropriate measures to assure maximum protection.
 - E. Use of explosively operated fastening devices within the confines of any Owner facilities or within Tampa International Airport is strictly prohibited, unless Owner provides prior written approval and Design-Builder provides safety plan.

1.04 GENERAL SAFETY REQUIREMENTS

- A. An initial construction/safety meeting will be coordinated with the Owner after the award of the Contract, and prior to commencing construction, during which the Contractor will become aware of and assume responsibility for all safety issues. Additional construction/safety meetings may be scheduled as deemed necessary by the Owner throughout the Contract. Representatives from the Owner, Contractor, Design Professional, and any others deemed necessary by the Contractor may attend.
- B. The Contractor will inform its supervisors and workers of the Airport activity and operations that are inherent to this Airport, the safety regulations of the Airport, and the prohibition of driving or walking on any area of the AOA without clearance. The Contractor will conduct its construction activities to conform to both routine and emergency requirements. The Contractor will provide initial and continuing instructions to all supervisors, employees, Subcontractors, and suppliers to enable them to conduct their Work in a manner that will provide the maximum safety with the least hindrance to air and ground traffic, the general public, Airport employees, and to the workers employed on the Project site.
- C. Work may be stopped/suspended by the Owner anytime the Owner considers that the intent of this Section is being violated or that a hazardous condition has been/was created. This decision to suspend the Work will be final and will only be rescinded by the Owner when satisfied that the Contractor has taken action to prevent recurrence. Delays/work stoppage as a result of the suspension of Work will be considered the fault of the Contractor and will not stop the Contract Time for assessing liquidated damages or other purposes.
- D. All Contractor vehicles authorized to operate on the Airport outside of the Construction Area Limits as defined herein and to cross active runways, safety areas, taxiways, aprons, instrument or approach clear zones or any area within the AOA will do so only under the direct control of a trained, qualified flagman who is monitoring (two-way) radio communication with the ground controller of the Air Traffic Control Tower or UNICOM. All aircraft have priority over ground vehicles.
 - 1. When necessary, the Contractor will provide a radio to monitor communications from the Air Traffic Control Tower or UNICOM. This operator will be trained and be familiar with aircraft/ground controller communications and will be on duty

whenever vehicles are operating in areas referenced above.

2. All vehicles operating in the AOA will be equipped with an operating yellow flashing beacon.
- E. All Contractor vehicles and equipment that are authorized to operate on or near the AOA or the Airport outside of the designated Construction Area Limits or haul routes as defined herein will display 3-foot by 3-foot flags or larger, orange and white checkerboard pattern, each checkerboard color being 1-foot square.
- F. Any construction activity within 250-feet of an active runway centerline or 107-feet from an active taxiway centerline requires the closure of the affected runway or taxiway, unless otherwise approved by the Owner. No runway, taxiway or apron area will be closed without approval of the Owner. This will enable "Notices to Airmen" or other advisory communications to be issued. A minimum of 48 hour notice of requested closing will be directed to the Owner who will coordinate the request with Authority Operations.
1. Debris, waste and loose material capable of causing damage to aircraft landing gears, propellers or being ingested in jet engines will be removed from the active portion of the AOA, placed in protected areas or otherwise secured to prevent dispersal into active portions of the AOA. The AOA is defined as all areas used or intended to be used for aircraft operations including active runways, aprons, taxiways, taxi lanes, etc. Debris will be promptly removed from the AOA. The Contractor will exercise care in the transportation of materials within the AOA. Materials tracked or spilled in the AOA will be removed immediately.
 2. When hauling, loading, grading, or when any of the Contractor's activities are likely to cause the deposit of loose materials in the AOA, powered vacuum sweepers will patrol the affected areas continuously to remove such deposits. The sweepers will be supplemented by hand sweepers, loaders, trucks, etc., as necessary.
 3. Closures:
 - a. Prior to the commencement of any demolition or other Work which will cause an interruption or modification to existing aircraft operations, the Contractor will confer with and obtain authorization from the Owner.
 - b. If the Contractor requires access to operational areas not delineated on the Drawing(s), the Contractor will participate in discussions leading to the imposition of restrictions on Airport operations in the affected areas. Contractor will strictly abide by all conditions imposed by the Owner relating to Contractor's entry and use of such areas and Contractor will not enter these areas until granted temporary, conditional entry clearance by the Owner.
 - c. Unless otherwise described in the Contract Documents, trenching, excavation and other work requiring temporary runway or taxiway closure will be limited by the Contractor to that amount of work that

can be completed within the hours of minimal operation. All ditches, excavations, etc., will be restored prior to the end of the Work period and affected pavements returned to service. This Work will be scheduled during hours of minimal operations. Hours of minimal operation will be the hours between 10:00 p.m. and 6:00 a.m. All other hours will be hours of normal operation.

- d. The Contractor may be required to pursue affected portions of the Work on a continuous 24-hour per day basis during construction of the various phases and sub phases shown on the Drawings and described in the Contract Documents (such as when runways or taxiways, aprons, service or access roadways, or service gates are closed for operations or when hazards of any kind arise).
- e. The Owner will arrange for inspection prior to opening for aircraft use any taxiway that has been closed for Work, on or adjacent thereto, or that has been used for a crossing point or haul route by the Contractor.

4. Operations Safety Inspections:

- a. The entire Project site will be inspected once per work shift and more frequently if construction activities are of a nature that debris may accumulate on AOA pavements. Special inspections will be conducted for each Work area prior to return to service for aircraft operation. The purpose of these inspections is to ascertain that areas returned to aircraft service are in satisfactory condition and that the overall Project site and its activities are within the safety criteria set forth in these Contract Documents. Inspections will be conducted jointly by representatives of the Contractor and the Owner.
- b. Any violations of safety criteria found during these inspections will be rectified immediately. If a violation cannot be corrected on an immediate basis by the Contractor, the Contractor will immediately notify the Owner. No areas will be approved for operations with violations occurring unless specifically authorized by the Owner.

G. The Contractor will preserve and/or protect existing and new pavements plus other facilities from damage due to construction operations. Existing pavements and facilities which are damaged will be replaced or reconstructed to original strength at the Contractor's expense. The Contractor will take immediate action to reconstruct any damaged area which is to remain in service. Unless indicated on the Drawings, existing pavements will not be cut for the installation of any utilities. Jack and bore or directional bore method will be required.

H. Construction Area Limits:

- 1. Contractor will be required to conform to safety requirements contained in the latest edition of FAA Advisory Circular 150/5370-latest edition. Construction within the safety areas or Obstacle Free Zone (OFZ), as defined in the latest

edition of FAA Advisory Circular 150/5300-latest edition is prohibited for both runways and taxiways. For Aircraft Group V pavements, this is 250 feet from the runway centerline and 107 feet from the taxiway centerline. The activity limits will be adequately signed and marked by the Contractor to preclude violation of this restriction. The area will be well identified by warning signs and lights at night. The Contractor will install lighting, marking, barricades, signs and other measures to delineate closed and hazardous areas during construction. The guidance and procedures provided by the latest edition of FAA Advisory Circular AC 150/5340, "Standards for Airport Markings," will be utilized as depicted on the Drawings. Barricades will be weighted or otherwise secured to sufficiently prevent displacement by aircraft engine and propeller blast and ambient winds. Steady burning red obstruction lights may be required in certain instances to supplement lighted barricades or highlight hazardous or potentially dangerous objects. The location of these lights will be as requested in the field by the Owner. Obstruction lights and barricades will not be located within runway, taxiway and/or taxi lane obstacle clearance areas.

2. The limits of construction, material storage area, plant site, equipment storage area, parking area and other areas defined as required for the Contractor's exclusive use during construction will be marked by the Contractor. The Contractor will erect and maintain around the perimeter of these areas suitable marking and warning devices visible for day/night use. Temporary fencing, barricades, flagging and/or flashing warning lights will be required at critical access points. Type of marking and warning devices will be approved by Owner. Open trenches, excavations and stockpiled materials will be permanently marked with flags and lighted by approved light units during hours of reduced visibility and darkness. No separate pay item is included for this Work and all costs must be included in the Contract Sum.
 - I. The Contractor will erect and maintain throughout the Contract, at Contractor's expense, a 6-foot high chain link opaque green fabric fence or barricade, with no advertising or writing visible, around the perimeter of the Construction Area as required. The Contractor will also install vehicular and pedestrian gates/doors as necessary to provide ingress/egress. Additionally, the perimeter of any fenced area which abuts an active operation pavement will be marked with red flashing barricades no more than 50-feet apart. The Contractor will be solely responsible for access control through any access gate leading to the AOA. This access control will be for all personnel using the gate/door for access to the AOA. This gate/door will be manned by the Contractor whenever unlocked. The Contractor is solely responsible for all security within the Construction Area from the date of the Notice to Proceed until the date of Final Acceptance. Equipment not in use during construction, nights and/or holidays will be parked in the Construction Area. The Contractor will at all times conduct all operations under the Contract in a manner to avoid or minimize the risk of loss, theft or damage by vandalism, sabotage or other means to any property. The Contractor will promptly take all reasonable precautions which are necessary and adequate to correct all conditions which threaten a risk of loss, theft, or damage to property.
 - J. During construction, the Contractor will maintain these areas in a neat condition. Upon completion of the Work, the staging and storage areas will be cleaned-up and returned

to their original condition to the satisfaction of the Owner. Remove all construction fencing and barricades from the Project site. No special payment will be made for clean-up and restoration of the storage area. Personal vehicles will not be permitted beyond Contractor's Construction Area. Drivers of personal vehicles being operated beyond this Contractor's Construction Area will be subject to loss of permission to enter the construction site.

K. Intermittent Construction Operations:

1. When the Work requires the Contractor to work within an AOA of the Airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the CSPP and on the construction phasing plans, cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as outlined in the Contract.
2. When directed to cease Work and move from the area, the Contractor will immediately respond and move all material, equipment and personnel outside areas. Operations will not be resumed until directed by the Owner. Every reasonable effort will be made by the Owner to cause minimum disturbance to the Contractor's operations. However, no guarantee can be made as to the extent to which disturbance can be avoided. Contractor's claim for additional Contract Time or Contract Sum for any such disruption will not be accepted.
3. Open trenches or excavations exceeding 3-inches in depth and 3-inches in width will not be permitted within 250-feet of the centerline of an active runway or within 100-feet of the centerline of active taxiways and taxi lanes. If an area is to be opened to aircraft movement, either at night or during the day, the Contractor will decrease the drop off to 3-inches by placing compacted fill. This fill will taper away from the paved area at a 5% maximum slope to existing grade. There is no separate payment for this temporary construction.
4. Disruptive Work will be defined as any activity, including excessive noise, air pollution, dust, and similar events that adversely disrupts, hinders or impacts normal Airport operations. These activities will be conducted so as not to interfere with the normal operation of the Airport. Work which may be considered disruptive will be conducted by the Contractor during the middle of the night hours as designated by the Owner. When directed by the Owner to cease Disruptive Work, the Contractor will immediately suspend and discontinue the Disruptive Work. Work will not be resumed until directed by the Owner. Contractor's claim for additional cost or additional Contract Time for suspending of Disruptive Work will not be accepted.

L. Limitation of Operations:

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

1. When the Work requires the Contractor to operate on or adjacent to any public area, the operation will be coordinated with the Owner at least 72-hours prior to commencement of the Work. At no time will the Contractor close a public area until authorization to do so is granted by the Owner.
2. When the Contract Work requires the Contractor to operate on or adjacent to the apron or taxiway AOA, the operation will be coordinated with the Owner at least 72-hours prior to commencement of the Work. At no time will the Contractor close an AOA until authorization to do so is granted by the Owner and until temporary marking and associated lighting is provided and in place as specified in the latest edition of FAA Advisory Circular 150/5340, "Marking of Paved Area on Airports" and/or the Drawings and Specifications.
3. The Contractor will be responsible for controlling its operations and those of its Subcontractors and others so as to provide for the free and unobstructed movement of all passengers and private vehicles on the Airport.
4. The Contractor will be responsible for controlling its operations and those of its subcontractors so as to provide for the free and unobstructed movement of aircraft in the apron and taxiway areas of the Airport AOA.

M. Obstructions to Navigation:

1. Penetrations of the imaginary surfaces defined in FAR Part 77 will not be permitted without advance notification of and approval by the Owner and the FAA Tower Chief. It may be necessary to file a Temporary Permit Application with the Owner to obtain approval prior to operation of exceptionally tall equipment. This includes any penetrations whatsoever by the Contractor, including but not limited to vehicles, cranes, other construction equipment, structures, stockpiled materials, excavated earth, etc.
2. When penetrations are unavoidable they will be brought to the attention of the Owner and the FAA as far in advance as is practical to allow Notices to Airmen (NOTAMS) to be prepared and distributed to appropriate FAA divisions for publication and dissemination.
3. Appropriate sketches will be prepared by the Contractor with precise locations shown on the Airport Layout Plan along with elevations depicting the obstruction object's relationship to the imaginary surfaces.
4. The maximum height allowed on the Airport is subject to review by the Owner unless, in special instances, this requirement is waived by the Owner and the FAA. During times when the safety of flight operations could be impaired, particularly during Instrument Flight Rules (IFR) weather, or when the equipment is idle, all booms, towers and other movable appendages will be lowered to the maximum extent.

N. Emergency Procedures:

1. The Contractor will familiarize itself with Airport emergency procedures and will endeavor to conduct its operations so as not to conflict with them. Clear routes for crash/fire/rescue equipment will be maintained in operable condition at all times.
2. Emergency Procedure: In case of an emergency caused by an accident, fire, or personal injury or illness, Airport Police are to be immediately notified by Page Phone found throughout the Main Terminal and Airsides or by calling 911 or Airport Police Emergency Phone No. (813) 870-3911. The caller must accurately report the location and type of emergency. Airport Police will then coordinate with Owner and/or other outside emergency agencies as necessary.

O. Access to the Construction Site:

1. The Contractor's access to the site will be defined by the Owner. This access route may also be used by Airport employees or others. **No other access routes will be allowed unless approved by the Owner.** All Contractor traffic authorized to enter the site will be experienced in the route or guided by the Contractor's personnel. The Contractor will be responsible for traffic control to and from the various construction areas on the site. The Contractor will be responsible to verify and coordinate with all vertical clearances for the George J. Bean Parkway, Bessie Coleman Service Road, Red and Blue Side Arrivals, Departure and Crossover Drives, as well as all other ramps, roads, drives and overpasses over and along or otherwise a component of the Contractor's access route.
2. The Contractor will familiarize its employees with the route. Material and equipment delivery trucks will be accompanied by an employee of the Contractor familiar with the route. The Contractor will be responsible for access control through any AOA access gate for the duration of this Contract. This access control will be for all personnel. Any AOA access gate will be manned, whenever unlocked, by a licensed, bonded security agency guard, contracted by the Contractor. Contractor personnel are not acceptable substitutes for the licensed, bonded security agency guard.
3. The Contractor will monitor and coordinate all Contractor traffic with the Owner. The Contractor will not permit any unauthorized construction personnel or traffic on the site, including food and beverage vendors or caterers. If breaches of security occur, the Owner may, at the Owner's option, close the AOA gates until adequate actions have been taken to prevent further breaches of security.
4. The Contractor will provide and operate an escort vehicle to lead other vehicles when operating within the site.
5. The following procedure will be used for access to site by AOA unauthorized persons:

- a. The unauthorized person will inform the gate guard of their reason for entrance to the site and which Contractor they intend to visit.
- b. Guard will notify the Contractor by telephone.
- c. Contractor will go to gate and escort visitor to Contractor facility.

The Contractor will provide and operate an escort vehicle to lead other vehicles when operating within the AOA.

6. The Contractor is responsible for immediate cleanup of any debris deposited along the access route as a result of Contractor's construction traffic. The entire access route and construction site will be kept free and clean of all debris at all times, will be maintained in good repair by the Contractor or its agents, and will be immediately repaired to the satisfaction of the Owner. Directional signing along the delivery route to the storage area or work site will be as directed by the Owner.

P. Load Restrictions:

1. The Contractor will comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the Work. A special permit will not relieve the Contractor of liability for damage which may result from the moving of material or equipment.
2. The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction will be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor, at its own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.
3. It is especially noted that the existing Airport pavements may not be capable of supporting certain types of construction equipment. Prior to submitting the Bid, the Contractor will fully satisfy itself as to the ability of the existing Airport pavements to satisfactorily sustain the type of equipment Contractor plans to use. Should damage occur as a result of construction operations, the Contractor will repair the damaged areas to an acceptable condition at Contractor's expense.

1.05 Contractor's Security Requirements:

- A. General Intent: It is intended that the Contractor will comply with all requirements of the Airport Security Program, SIDA training, TSA regulations, and with the Safety Plan specified herein. Also, if applicable, the Contractor will execute the Airport Access Request Form and follow all rules and guidelines stated therein. The Contractor will

designate to the Owner, in writing, the name of its Contractor Security Officer (CSO). The CSO will be the Contractor's representative on the "Construction Security Committee" and will be accountable for these security requirements for the Contractor. The Contractor will also comply with all requirements concerning sensitive security information as promulgated by the TSA.

- B. Contractor Security Personnel Orientation: The CSO will be responsible for all safety precautions. Prior to the commencement of the Work, the CSO will provide the Owner an outline of a proposed accident and fire protection plan for all Work contemplated under the Contract. The CSO will also conduct safety meetings as directed by the Owner for each shift and require the attendance of all supervisors at such meetings. Copies of the minutes of safety meetings will be kept on file in the Contractor's Office.

- C. Identification - Personnel: All employees of the Contractor or Subcontractors requiring access to the construction site are required to be supplied with identification badges to be worn at all times while within the area. Badges will be supplied by the Contractor and will state "**TPA – (North Air Cargo Parking Expansion, Service Road) Contractor.**" Badges can be plastic wallet size, metal pin or sticker with a minimum of 2-1/2" diameter and worn on outer garments so as to be clearly visible. Badging is to be uniform in appearance and sufficiently distinctive in design or color to clearly distinguish, on sight, employees assigned to this Contract. The badge number will be prominent for easy identification. Badges are to be identified numerically and issued individually to whom it was assigned. Blocks of numbers can be assigned to Subcontractors. Responsibility for supply issuance and control of identification badges will be that of the Contractor, through the CSO. In lieu of issuing badges, and with the approval of the Owner, the Contractor can require that each employee wear an outer garment with the company name prominently displayed so that all personnel can be identified as being member of the Contractor's work team.

In addition, all contractors working within the AOA at Tampa International Airport for more than 30 days, and requiring access to the Security Identification Display Area (SIDA) are required to obtain a TPA ID Media. They will be subjected to a FBI fingerprint-based Criminal History Records Check (CHRC) and a Transportation Security Administration Security Threat Assessment (STA). A TPA ID Media will not be issued to an individual until they successfully pass a CHRC and STA. Applicants that do not pass the required checks are not allowed to go into the SIDA.

New applicants requesting TPA ID Media must fill out and submit completed application form including the required identification documents. They are required to complete fingerprints and go through the required training. This can take two to four weeks or longer to complete and TPA ID Media must be obtained before the worker can go into the SIDA. There is a fee for new, renewed and unaccounted for TPA ID Media (ie, lost, stolen, or not returned TPA ID Media to the Tampa Airport Badging Office). All TPA ID Media is required to be returned to Tampa Airport Badging Office upon TPA ID Media expiration or project completion. All fees will be paid promptly by the Contractor, by company check, or the amount will be withheld by Owner from payments due to the contractor. Contractor agrees that fees described herein are not a penalty and are reasonable considering the impacts that a Breach of Security could have to public safety and welfare and the operations of the Airport.

Personnel will wear the TPA ID Media badge above the waist and on outermost garment at all times while on the AOA or SIDA area. All employees of Contractor or subcontractor requiring very limited access to the construction site are required to be escorted by a SIDA badged individual, with escort authority, at all times. The need for a TPA ID Media and the escort requirements shall be at the discretion of the Authority.

- D. Identification - Vehicles: The Contractor, through the CSO, will establish and maintain a list of Contractor and subcontractor vehicles authorized to operate on the Project site and for Work within the AOA and SIDA at Tampa International Airport. It is required that the Contractor and all Subcontractors submit a request for a TPA vehicle validation sticker through the TPA Badging office. The Owner requires vehicle details such as make, model, VIN or equipment number, etc. Vehicles are also required to have company indicia on both sides and it needs to be large enough print to be seen from a distance of 200'. TPA vehicle validation sticker will be placed on the front left portion of the vehicles windshield and be assigned in a manner to assure positive identification of the vehicle at all times.
- E. Identification – Equipment: The Contractor will clearly identify all on-site equipment such as portable motorized or non-motorized equipment, job boxes, material storage containers, port-a-lets, etc., whether owned or rented, with the Contractor's name. Identification must be physically marked on equipment or attached with a durable removable device such as a wire tie.
- F. Employee Parking:
1. Area for parking of the Contractor's employee's vehicles is in the Contractor's Construction Area or Staging Area to be defined by the Owner. Parking will be accomplished in straight equally spaced rows. Contractor will organize traffic flow and parking patterns, and supply traffic control signs and markings subject to approval of the Owner. Maintain the parking surface and pick up trash daily. No storage will be allowed at parking site. The Contractor will restore the shape and grade of this parking area upon Project completion, seed and mulch portions where existing ground cover is damaged and perform all Work required to restore the area to its original condition.
 2. When the Contractor's employee parking area is adjacent to another Contractor's parking area performing other construction for the Owner, cooperation is required to avoid any interferences in the performance of each respective construction. Any difficulties experienced will be brought to the attention of the Owner immediately.
 3. All vehicles entering any public parking garages will be required to pay the normal parking fee which will be calculated at the exit. Free garage parking will not be authorized.
- G. Materials Delivery to the Site: All Contractor's material orders for delivery to the Work site will use as a delivery address the street name and number assigned to the access point onto the Airport.
- H. Breach of Security Fine: Contractor agrees that liquidated damages in the amount of

Ten Thousand Dollars (\$10,000.00) per occurrence may be assessed against the Contractor if the Contractor violates the requirements of the Airport Security Program, SIDA training, TSA regulations, or the Security requirements specified herein. Contractor agrees that actual damages for breach of security are uncertain and the liquidated damages described herein are not a penalty and are reasonable considering the impacts that a Breach of Security could have to public safety and welfare and the operations of the Airport.

Notwithstanding the foregoing, repeated and/or flagrant violations of the Security Plan will be grounds for the suspension of the Work at no cost to the Owner, default of the Contractor and/or termination of the Contract.

- I. Amendments to this Safety Plan and Security requirements may be made by the Owner and will be immediately binding on Contractor.

END OF SECTION

SECTION 01545 - UTILITIES

PART 1 - GENERAL

1.01 GENERAL

- A. Existing facilities, utilities, and features depicted on the Drawings are not guaranteed to be accurate with respect to location, condition, and characteristics. Also, there may be additional facilities, utilities, and features existing that could affect the construction of the Work which are not depicted or described in the Contract Documents.
- B. Prior to bidding, the Contractor will make a thorough investigation of the Project area to satisfy itself as to the location, condition, and characteristics of any and all facilities, utilities, and features which may affect Contractor's Work. No additional compensation will be made for any extra expense relating to an existing facility, utility, or feature.
- C. The Contractor hereby agrees to make no claims against the Owner and/or its representatives relating to the existence, or lack thereof, location, condition, and/or characteristics of any existing facilities, utilities, or features.
- D. The Contractor will pay for the removal and installation of all utilities required by the Contract Documents.

1.02 PROTECTION OF EXISTING UTILITIES

- A. The term "utilities" includes FAA power and control cables, TECO power lines, other power lines, telephone cables, lines and fiber optics, Sheriff's Department lines, elevator control cables, airline communication cables, computer cables, airfield lighting cables, Owner underground electrical and communication lines, cables and fiber optics, water lines, irrigation lines, HVAC equipment, sanitary force mains, sanitary lines, stormwater lines and fuel and gas lines. These utilities may be located in the areas of construction. Disruption of these utilities could seriously disrupt the operation of the airport. Although the Drawings attempt to locate the cables and all utilities including fuel and gas lines, actual locations are uncertain and the Contractor is required to verify all locations.
- B. To the extent that such public and private utility services, FAA facilities, or utility services of another government agency are known to exist within the limits of the Work, the approximate locations have been indicated on the Drawings and some, but not all, utility services and FAA facilities are indicated as follows:

Utility Service or Facility "Person to Contact" Telephone Number
(To the best of the Owner's knowledge, the below information is correct, but it may change without notice.)

FAA Control Cables	Mr. Charles Hinnant, FAA	(813) 371-7751
HCAA	Mr. Nick D'Jimas	(813) 676-4346
TECO	Mr. Drew Sirianni	(813) 228-1639
Fuel Lines	Mr. Christopher Perea	(813) 396-3626
Irrigation Lines	Mr. Bruce Sather	(813) 870-7883

City of Tampa - Water	Mr. Chad Bailey	(813) 274-3344
City of Tampa – Wastewater	Mr. Ryan Smith	(813) 274-7844

- C. Any intentional, temporary interruption of existing utilities for the purpose of carrying out the Work will be carried out so as to minimize the length and scope of the interruption. Before any such interruption, the Contractor will give a minimum of 72 hours written notice to the Owner and will also give at least 72 hours' notice to the appropriate "Person to Contact" listed in Paragraph B of this Section.
- D. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the Work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) shall be shown on the plans and identified with specific utility related data (e.g., utility owner, contact information, etc.).
- E. Contractor will not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or FAA facilities located within the limits of the Work without the written permission of the Owner.
- F. Should the Owner, public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or FAA facility during the progress of the Work, the Contractor will cooperate with such utility service or FAA facility by arranging and performing the Work in this Contract so as to facilitate such construction, reconstruction, or maintenance by others. When ordered as Extra Work by the Owner, the Contractor shall make all necessary repairs to the Work, which are due to such authorized Work by others, unless otherwise provided for in the Contract Documents. In addition, the Contractor will control its operations to prevent the unscheduled interruption of such utility services, FAA facility, and other facilities. It is understood and agreed that the Contractor will not be entitled to make any claim due to such authorized construction by others or for any delay to the Work resulting from such authorized construction. The Contractor will coordinate all Work with all utility services, FAA facility, or other facility.
- G. To the extent that such public or private utility services, FAA or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the Contract Work, the approximate locations can be obtained by the Contractor from the Owner.
- H. It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, FAA facilities or structures that may be shown on the Drawings or encountered in the Work. Any inaccuracy or omission in such information will not relieve the Contractor of its responsibility to protect such existing features from damage or unscheduled interruption of service.
- I. It is further understood and agreed that the Contractor will, upon execution of the Contract, notify all utility services, FAA facility, or other facilities of the Contractor's plan

of operations. Such notification will be in writing addressed to the Person to Contact as provided herein. A copy of each notification will be given to the Owner.

- J. In addition to the general written notification hereinbefore provided, it will be the responsibility of the Contractor to keep such individual utility service or FAA facility advised of changes in the Contractor's plan of operation that would affect such utility service or FAA facility.
- K. Prior to commencing the Work in the general vicinity of an existing utility service or FAA facility, the Contractor will (1) Call Sunshine 811, and (2) again notify each such utility service or FAA facility in writing, copying the Owner, of Contractor's plan of operations. If, in the Contractor's opinion, assistance is needed to locate the utility service or FAA facility or the presence of a representative of the utility service or FAA facility is desirable to observe the Work, such advice will be included in the written notification. Such notification will be given by the most expeditious means to reach the utility service or FAA facility Person to Contact no later than two business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor will furnish a written summary of the notification to the Owner.
- L. Failure of the Contractor to provide at least 72 hours' notice and properly coordinate in advance Work on or near existing utilities will be cause for the Owner to suspend Contractor's operations in the general vicinity of such utilities.
- M. Power and control cables leading to and from any FAA facilities will be marked in the field by the local FAA Airway Facilities Sector personnel for the information of the Contractor before any Work in the general vicinity is started. Thereafter, through the entire time of the Work, the Contractor will not allow any construction equipment to cross these cables without first protecting the cable with steel boiler plate or similar structural devices on 3-feet either side of the marked cable route. All excavation within 3-feet of existing cables will be accomplished by hand digging only. No grading will be permitted over FAA cables under any conditions.
- N. Approval to work in areas where active utility services or FAA facilities are located is subject to withdrawal at any time because of change in the weather, emergency conditions on the existing airfield areas, anticipation of emergency conditions, or for any other reason determined by the Owner or the designated FAA and/or utility service representative. All instructions by the Owner, the utility service, or the FAA facility (by radio or other means) to the Contractor to clear any given area, at any time, will be immediately executed. Construction Work will be commenced in the cleared area only when additional instructions are issued by the Owner.
- O. FAA CABLES AND UTILITIES MUST BE PROTECTED AT ALL TIMES.
- P. Where the outside limits of an underground utility service or FAA facility have been located and staked on the ground, the Contractor will be required to use excavating methods acceptable to the Owner within 3-feet of such outside limits at such points as may be required to insure protection from damage due to the Contractor's operations.
- Q. If damage occurs to any utilities, the Contractor may be assessed a fee of \$2,000 liquidated damages per cut per cable, line or strand, which liquidated damages will only

represent the expense incurred by the Owner in coordinating the repair, and which will not prevent the Owner or others from recovering from the Contractor other costs, damages, or expenses of any other nature incurred on account of damages to utilities. The Contractor agrees that coordination damages for cut cables are uncertain and these liquidated damages are reasonable and are not a penalty and a reasonable consideration of the coordination of the repair. There is no intention to double count damages under this provision.

- R. FAA FACILITIES AND CABLE RUNS. The Contractor is hereby advised that the construction limits of the Project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the prosecution of the Project work, will comply with the following:
1. The Contractor will permit FAA maintenance personnel the right of access to the Project work site for purposes of inspecting and maintaining all existing FAA owned facilities.
 2. The Contractor will notify the above named FAA Airway Facilities Point-of-Contact seven days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.
 3. If prosecution of the Project work requires a facility outage, the Contractor will contact the above named FAA Person to Contact a minimum of 72 hours prior to the time of the required outage.
 4. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.
 5. If the Project work requires the cutting or splicing of FAA owned cables, the above named FAA Person to Contract will be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have an FAA Airway Facilities representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA Airway Facilities' specifications and require approval by the above named FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA Airway Facilities restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA Airway Facilities, the Contractor will furnish and install a sufficient length of new cable that eliminates the need for any splice.
- S. Should the Contractor damage or interrupt the operation of a utility service or FAA facility by accident or otherwise, the Contractor will immediately notify the proper utility service or FAA facility and the Owner and will take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such an event, will cooperate with the utility service or FAA facility and the Owner continuously until such

damage has been repaired and service restored to the satisfaction of the utility service or FAA facility.

- T. The Contractor will immediately repair, at the Contractor's own expense, with identical material by skilled workers, all utilities, FAA cables, and other facilities which are damaged by the Contractor's workers, equipment, or work. Prior approval of the appropriate utility service and/or FAA facility and Owner will be obtained for the materials, workers, time of day or night, method of repairs, and for any temporary or permanent repairs the Contractor proposes to make to any FAA cables or utility service damaged by the Contractor.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to its operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or its own surety.

- U. Airport publicly owned facilities and privately owned facilities located on Airport property, including underground cables, pavements, piping, buildings, turfed areas, vehicles and other facilities/improvements, that are damaged by the Contractor will, at the election of the Owner, (1) be replaced/repared by the Contractor to the satisfaction of the Owner or (2) be replaced/repared by the Owner at the Contractor's expense.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01560 - PREVENTION, CONTROL AND ABATEMENT OF EROSION
AND WATER POLLUTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This specification includes requirements for prevention, control and abatement of erosion, siltation and water pollution resulting from construction of the Project until Final Acceptance.
- B. The Contractor will comply with all applicable provisions of local Codes concerning grading, filling, excavation, and soil removal.
- C. The Contractor will comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor will take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

1.02 PERMITS

It will be the responsibility of the Contractor to obtain all federal, state, and local permits and to conduct its Work in the manner designated by all applicable permits. Violations of any permit by the Contractor will in no way involve the Owner regardless of who obtained the permit initially.

1.03 ECOLOGICAL REQUIREMENTS

- A. The Contractor shall take sufficient precautions to prevent pollution of rivers, streams, lakes, tidal waters, reservoirs, canals and other water impoundments with fuels, oils, bitumens, calcium chloride or other harmful materials. Also, the Contractor shall conduct and schedule operations so as to avoid interference with movement of migratory fish. No residue from dust collectors or washers will be dumped into any live stream.
- B. Construction operations in rivers, streams, lakes, tidal waters, reservoirs, canals and other water impoundments will be restricted to those areas where it is necessary to perform filling or excavation to accomplish the Work shown in the Plans and to those areas which must be entered to construct temporary or permanent structures. As soon as conditions permit, rivers, streams, lakes, tidal waters, reservoirs, canals and other water impoundments will be promptly cleared of all obstructions placed therein or caused by construction operations.
- C. Except as necessary for construction, excavated material will not be deposited in rivers, streams, lakes, tidal waters, reservoirs, canals and other water impoundments, or in a position close enough thereto to be washed away by high water or runoff.
- D. The Contractor shall not disturb lands or waters outside the limits of construction

except as may be found necessary and authorized by the Owner.

1.04 SCHEDULING/COORDINATION

- A. Clearing and grubbing will be so scheduled and performed that grading operations can follow immediately thereafter. Grading operations will be so scheduled and performed that permanent erosion control features can follow immediately thereafter if conditions on the Project permit.
- B. The Contractor shall schedule operations such that the area of unprotected erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operations, and the duration of exposed, uncompleted construction to the elements will be as short as practicable.

1.05 PROTECTION OF STORM DRAINS

- A. Storm drainage facilities, both open and closed conduit, serving the construction area will be protected from pollutants and contaminants by the Contractor.
- B. If the Owner determines that siltation of drainage facilities has resulted due to the Project, the Owner will advise the Contractor to remove and properly dispose of the deposited materials. At the Owner's sole discretion, the Contractor may be directed to camera the line to ensure that all siltation or materials have been removed. Cost for this work will not be an increase to the Contract Sum.
- C. Should the Contractor fail to or elect not to remove the deposits, the Owner will provide maintenance cleaning as necessary and charge all costs of such service against the amount of money due or to become due the Contractor.

1.06 PREVENTION, CONTROL AND ABATEMENT REQUIREMENTS

- A. The Contractor shall provide, install, construct, and maintain all coverings, mulching, sodding, sand bagging, berms, slope drains, hay and straw bales, sedimentation structures, or other devices necessary to meet City, State and Federal regulatory agency codes, rules and laws, and as indicated on the Drawings.
- B. The locations of and methods of operation in all detention areas, borrow pits, material supply pits and disposal areas furnished by the Contractor will meet the approval of the Owner as being such that erosion during and after completion of the Work will not likely result in detrimental siltation or water pollution.
- C. The Owner may limit the surface areas of unprotected erodible earth exposed by clearing and grubbing, excavation or filling operations and may direct the Contractor to provide immediate erosion or pollution control measures to prevent siltation or contamination of any river, stream, lake, tidal water, reservoir, canal, and other water impoundment or to prevent damage to the Project or property outside the Project limits.

PART 2 – PRODUCTS

Not used.

PART 2 – EXECUTION

Not used.

END OF SECTION

SECTION 01561 - CONSTRUCTION CLEANING

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor shall execute daily cleaning during progress of Work. Contractor shall execute final cleanup prior to Substantial Completion and again prior to Final Acceptance.
- B. Hazards Control:

Contractor shall:
 - 1. Store volatile wastes in covered metal containers.
 - 2. Remove containers from premises daily.
 - 3. Prevent accumulation of wastes which create hazardous conditions.
 - 4. Provide adequate ventilation during use of volatile or noxious substances.
- C. Contractor shall conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws:
 - 1. Contractor shall not burn or bury rubbish and waste materials on Project site.
 - 2. Contractor shall not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains.
- D. Contractor shall transport waste materials and debris across Airport property in covered trucks.

PART 2 - PRODUCTS

2.01 MATERIALS

Contractor shall use cleaning materials recommended by manufacturer of surface to be cleaned which will not create hazards to health or property and which will not damage surfaces.

PART 3 - EXECUTION

3.01 CLEANING DURING CONSTRUCTION

- A. Contractor shall execute periodic cleaning to keep building, grounds, and public properties free of accumulation of waste materials, rubbish, and wind-blown debris resulting from construction operations.
- B. Contractor shall apply protective covering on newly installed Work where reasonably required to ensure freedom from damage or deterioration at time of Substantial Completion and Final Acceptance. Contractor shall clean and perform maintenance on

other newly installed Work as frequently as necessary through remainder of construction period.

- C. Contractor shall adjust and lubricate operable components to ensure operability without damaging effects.
- D. Contractor shall furnish on-site containers for collection of waste materials, debris, and rubbish.
- E. Contractor shall remove waste material, debris, and rubbish from Project site daily.
- F. Contractor shall not drop or throw materials from heights.
- G. Contractor shall continue cleaning daily until building is ready for occupancy.

3.02 DUST CONTROL

Contractor shall:

- A. Clean interior building areas prior to start of finish painting or special coatings.
- B. Wet down materials and rubbish to prevent blowing dust.
- C. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.

3.03 FINAL CLEANING

- A. Contractor shall provide final cleaning of the Work, including all adjacent protection areas surface or unit of Work to normal "clean" condition expected for a first-class building cleaning and maintenance program. Contractor shall comply with manufacturer's instructions for cleaning operations. The following are examples, but not by way of limitation, of cleaning levels required:
 - 1. Removal of labels which are not required as permanent labels.
 - 2. Cleaning of transparent materials, including mirror, window, and door glass, to polished condition. Remove substances which are noticeable as vision obscuring materials.
 - 3. Replacing of broken glass and damaged transparent materials.
 - 4. Cleaning of exposed exterior and interior hard-surfaced finishes to dirt-free condition, free of dust, stains, films, and similar noticeable distracting substances.
 - 5. Restoring of reflective surface to original reflective condition.
 - 6. Wiping of surfaces of mechanical and electrical equipment clean, including elevator equipment.

7. Removal of excess lubrication and other substances.
 8. Removal of debris and surface dust from limited access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, and similar spaces.
 9. Broom cleaning of concrete floors in non-occupied spaces.
 10. Vacuum cleaning of carpeted surfaces and similar soft surfaces.
 11. Cleaning of plumbing fixtures to sanitary condition, free of stains, including those resulting from water exposure.
 12. Cleaning of equipment to condition of sanitation ready and acceptable for intended use.
 13. Cleaning of light fixtures and lamps to function with full efficiency.
 14. Cleaning of Project site, including landscape development areas, of litter and foreign substances.
 15. Sweeping of paved areas to broom-clean condition. Remove stains, petrochemical spills, and other foreign deposits.
 16. Raking of grounds which are neither planted nor paved to smooth, even-textured surface.
- B. Contractor shall remove waste materials from Project site daily and dispose of in a lawful manner.
- C. Protection - Limiting Exposures: Contractor shall supervise construction operations to assure that no part of the construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
- D. Removal of Protection:

Contractor shall remove temporary protection devices and facilities which were installed during course of the Work to protect previously completed Work during remainder of construction period.

END OF SECTION

SECTION 01600 - MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 TRANSPORTATION AND HANDLING

Contractor shall:

- A. Deliver, handle, and store products in accordance with manufacturer's recommendations and by methods and means which will prevent damage, deterioration, and loss, including theft.
- B. Control delivery schedule to minimize long-term storage of products at Project site from overcrowding of construction spaces. Coordinate delivery and installation to minimize holding of storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss.
- C. Deliver products in undamaged conditions, in manufacturer's original containers and prepackaging, with identifying labels intact and legible.
- D. Immediately upon delivery, inspect shipments for compliance with requirements of Contract Documents and accepted submittals and to verify that products are properly protected and undamaged.
- E. Promptly remove unsatisfactory materials from Project site.
- F. Furnish equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.
- G. Provide transportation and delivery F.O.B. Project Site.

1.02 STORAGE

Contractor shall:

- A. Store materials subject to damage from exposure to weather in weather tight storage facilities of suitable size with floors raised above ground. Materials not subject to weather damage may be stored on blocks off ground.
- B. Store fabricated products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store products subject to damage by elements in weather tight enclosures. Maintain temperature and humidity within range required by manufacturer's instructions.
- C. Cover materials which are subject to deterioration with impervious sheet covering providing adequate ventilation to avoid condensation.
- D. Store loose granular materials in well-drained area on solid surfaces to prevent mixing with foreign matter and cover during inclement weather. Store cementitious and clay products clear of earth or concrete floors, away from walls.

- E. Arrange storage in manner to permit easy access for inspections.
- F. Protect metal from damage, dirt, or dampness. Furnish flat, solid support for sheet products during storage.
- G. Make periodic inspections of stored materials to verify that products are maintained under specified conditions and are free from damage or deterioration.
- H. Not use materials in Work which have deteriorated, become damaged, or are otherwise unfit for use.
- I. Store and mix paints in assigned room or area kept under lock and key.
- J. Remove oil, rags, and other combustible materials daily, store in covered metal containers and take precautions to prevent fire hazards.
- K. Not load structure during construction by storing materials with load greater than structure can bear safely.

PART 2 - PRODUCTS

2.01 MATERIAL AND EQUIPMENT INCORPORATED INTO WORK

Contractor shall:

- A. Comply with applicable Specifications and Standards.
- B. Comply with size, make, type, and quality specified or as specifically accepted in writing by Owner.
- C. Design, fabricate, and assemble products in accordance with engineering and shop practices normal to trade.
- D. To greatest extent possible, for each unit of Work, provide products, materials, or equipment of singular generic kind and from single source.
- E. Manufacture like parts of duplicate units to standard interchangeable sizes and gages. Two or more items of same kind may be identical by same manufacturer.
- F. Provide products suitable for service conditions.
- G. Adhere to equipment capacities, sizes, and dimensions shown or specified unless variations are specifically accepted in writing.
- H. Not use material or equipment for any purpose other than that for which it is designed or is specified.
- I. Nameplates:

1. Not permanently attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view either in occupied spaces or on exterior of Work, except for Testing Laboratory approval labels and operating data.
 2. Locate required labels and stamps on concealed surface or, where required for observation after installation, on accessible surface which in occupied spaces are not conspicuous.
- J. Equipment Nameplates:
1. Provide permanent nameplate on each item of service-connected or power-operated equipment.
 2. Indicate manufacturer, product name, model number, serial number, capacity, speed, ratings, and similar essential operating data.
 3. Locate nameplates on an easily accessed surface which, in occupied spaces, is not conspicuous.
- K. Provide products which comply with requirements, which are undamaged and unused at time of installation, and which include accessories, trim, finish, safety guards, and other devices and details needed for installation, intended use, and effect.
- L. Standard Products: Where available, provide standard products of types which have been produced and used previously and successfully on other projects and in similar applications.
- M. Contractor shall affix Owner property tags to all equipment required to be inventoried by Owner. Contractor shall verify requirement with Owner for each purchased equipment.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

Contractor shall:

- A. When Contract Documents require that installation of Work will comply with manufacturer's printed instructions, obtain and distribute copies of instructions to parties in installation, including two copies to the Owner, prior to commencing Work.
- B. Maintain one set of complete instructions at Project site during installation and until completion.
- C. Maintain copies for Project Record Documents.
- D. Handle, install, connect, clean, condition, and adjust products in strict accord with manufacturer's instructions and in conformity with specified requirements.

- E. Inspect substrate to receive Work and conditions under which Work is to be performed.
- F. Notify the Owner in writing for further instructions, should job conditions or specified requirements conflict with manufacturer's instructions and not proceed with Work without clear written instructions.
- G. Perform Work in accordance with manufacturer's instructions and not omit preparatory steps or installation procedures.
- H. Install Work during conditions of temperature, humidity, exposure, forecasted weather, and status of Project completion which will ensure best possible results for each item of material or equipment.
- I. Isolate non-compatible materials to prevent deterioration.
- J. Mount individual units of Work at industry recognized standard mounting heights for applications indicated and refer questionable mounting height choices to Owner for final decision.

3.02 PROTECTION

Contractor shall:

- A. Furnish protection against weather. Cover building openings to protect interior of building from weather.
- B. Maintain Work, materials, apparatus, and fixtures free from damage.
- C. Protect items having factory finish to prevent damage to finish and equipment.
- D. At end of day's Work, cover new Work likely to be damaged or otherwise protect as necessary.
- E. After installation, secure substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations.
- F. Remove protection when no longer needed and upon completion of Work, remove storage facilities from Project site.
- G. Install and maintain barricades, stanchions, or other means of protection to keep traffic off of installed product as necessary.

END OF SECTION

SECTION 01605 - PRODUCTS AND SUBSTITUTIONS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Definitions: Definitions used in this paragraph are not intended to negate the meaning of other terms used in the Contract Documents, including such terms as, "specialties", "systems", "structure", "finishes", "accessories", "furnishings", "special construction" and similar terms. Such terms are self-explanatory and have recognized meanings in the construction industry.
1. "Products" are defined to include purchased items for incorporation into the Work, regardless of whether specifically purchased for Project or taken from Contractor's stock of previously purchased products.
 2. "Named Products" are products identified by use of the Manufacturer's name for a product, including such items as a make or model designation, as recorded in published product literature, of the latest issue as of the date of the Contract Documents.
 3. "Materials" are defined as products which must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, installed or applied to form units of Work.
 4. "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, etc).
- B. Substitutions: The Contractor's requests for changes in the products, materials, equipment and methods of construction required by the Contract Documents are considered requests for "substitutions" and are subject to the requirements specified herein.
1. The requirements for substitutions do not apply to specified Contractor options on products and construction methods. Revisions to Contract Documents, where requested by the Owner or Design Professional, are "changes" not "substitutions".
 2. Requested substitutions during subcontractor bidding period, which have been accepted prior to Receipt of Bids, are included in Contract Documents and are not subject to requirements for substitutions as specified herein.
 3. Contractor's determination of and compliance with governing regulations and orders issued by governing authorities does not constitute "substitutions", and does not constitute a basis for Change Orders, except as provided for in the Contract Documents. Otherwise, Contractor's requests for changes in products, materials and methods of construction required by Contract Documents are considered requests for "substitutions" and are subject to the requirements

hereof.

C. Standards:

Refer to Specification Section 01095 - DEFINITIONS AND STANDARDS for acceptability of industry standards to products of Project and for acronyms used in text of Specification sections.

1.02 REQUIREMENTS INCLUDED

- A. Materials specified are to define standard of quality or performance and to establish basis for evaluation of selections.
- B. Size of each item of material and equipment shown on the Drawings is based on dimensions of individual manufacturers. While other manufacturers may be acceptable, it will be responsibility of the Contractor to determine whether or not material and equipment proposed will fit into available space.
- C. Compliance requirements for individual products as indicated in Contract Documents are multiple in nature and may include generic, descriptive, proprietary, performance, prescriptive, compliance with standards, compliance with codes, conformance with graphic details, and other similar forms and methods of indicating requirements, all of which must be complied with. Allowances, alternatives, and similar provisions of the Contract Documents will have bearing on selection process.
- D. Where materials or equipment are specified by trade or brand name, it is not intended to discriminate against an equivalent product of another manufacturer, except where specifically noted NO SUBSTITUTION.
- E. Contractor's options for selecting products are limited by Contract Document requirements and governing regulations and are not controlled by industry traditions or procedures experienced by Contractor on previous construction projects.
- F. Revisions to Contract Documents, where requested by Owner or Design Professional, are changes not substitutions.
- G. When specified products do not comply with requirements or are not a feasible selection, advise Owner in writing before proceeding.

1.03 QUALITY ASSURANCE

- A. Source Limitations:
 - 1. To the greatest extent possible for each unit of Work, provide products, materials, or equipment of a singular generic kind from a single source.
 - 2. When it is discovered that specified products are available only from sources that do not or cannot produce a quality adequate to complete Project requirements in a timely manner, consult with the Design Professional for a

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

determination of the most important product qualities before proceeding. Qualities may include attributes relating to visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources that produce products that possess these qualities to the fullest extent possible.

B. Compatibility of Options:

When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected will be compatible with products previously selected, even if previously selected products were also options. Complete compatibility between the various choices available to the Contractor is not assured by the various requirements of the Contract Documents but will be provided by the Contractor.

1.04 SUBSTITUTIONS

A. Procedures:

1. During Bidding:

- a. Refer to requirements specified under Section 00100 - INSTRUCTIONS TO BIDDERS for substitutions during Bidding.

2. After Contract is Awarded:

- a. Contractor's request for substitutions will be received and considered when extensive revisions to Contract Documents are not required and changes are in keeping with general intent of Contract Documents, when timely, fully documented and properly submitted, and when one or more of the following conditions are satisfied, all as judged by the Owner. Otherwise requests will be returned without action except to record non-compliance with these requirements.

- (1) Where request is directly related to an "or equal" clause or other language of same effect in Contract Documents.
- (2) Where required product, material or method cannot be provided within Contract Time, but not as a result of Contractor's failure to pursue the Work promptly or to coordinate various activities properly.
- (3) Where required product, material or method cannot be provided in a manner which is compatible with other materials of the Work, or cannot be properly coordinated therewith, or cannot be warranted as required, or cannot be used without adversely affecting Owner's insurance coverage on completed Work, or will encounter other substantial non-compliances which are not possible to otherwise overcome except by making

requested substitution, which Contractor thereby certifies to overcome such non-compatibility, non-coordination, non-warranty, non-insurability or other non-compliance as claimed.

- (4) Where required product, material or method cannot receive required approval by a governing authority and requested substitution can be so approved.
- b. Noncomplying requests will be returned without action except to record noncompliance with requirements.
 - c. Properties of proposed substitution, including but not limited to the following, as applicable, will be considered:
 - (1) Physical dimension requirements to satisfy space limitations.
 - (2) Static and dynamic weight limitations, structural properties.
 - (3) Audible noise levels.
 - (4) Vibration generation.
 - (5) Interchangeability of parts or components.
 - (6) Accessibility for maintenance, possible removal or replacement.
 - (7) Colors, textures, and compatibility with other materials, products, assemblies, and components.
 - (8) Equipment capacities and performance characteristics.
 - (9) Electromagnetic interference.
 - d. Substitutions will not be considered if:
 - (1) They are indicated or implied on Shop Drawing, Project Data submittals, or mock-ups without formal request.
 - (2) Acceptance will require substantial revision of Contract Documents as determined by Owner.
 - (3) Additional cost to Owner is involved.
 - (4) Requests for substitutions are not submitted in a timely fashion.
 - e. Contractor will bear all costs for additional compensation to Owner's Design Professional for redesign and evaluation services, increased costs of other work by Owner or separate contractors, and other incurred costs or similar considerations due to acceptance of substitution.
 - f. Should substitution be accepted under provisions of above clauses, and substitution subsequently proves defective or otherwise unsatisfactory for service for which it was intended within warranty period, the Contractor will replace defective material with material specified at no additional cost to Owner.
 - g. Submittal of, and Contractor's acceptance of, shop drawings, product data, or samples which relate to work not complying with requirements of Contract Documents does not constitute an acceptable and valid request for substitution, nor approval thereof.

- h. If proposed substitution is not accepted or all requirements are not entirely complied with, provide specified product or material. Costs for delays will be borne by Contractor.

B. Form of Requests:

1. Submit three copies, fully identified for product or method being replaced by substitution, including related Specifications section and drawing number(s), and fully documented to show compliance with requirements for substitutions.
2. Proposed substitutions will state:
 - a. Product Data, Drawings.
 - b. Changes required in other elements of Work because of substitution.
 - c. Availability of maintenance service and source of replacement parts as applicable.
 - d. When requested, test data from independent testing laboratory to show compliance with performance characteristics specified.
 - e. Related Specifications sections and drawing numbers, fully documented to show compliance with requirements for substitutions.
 - f. Description of methods.
 - g. Samples where applicable.
 - h. Detailed comparison of significant qualities between specified item and proposed substitution.
 - i. Statement of effect on construction time and coordination with other affected work.
 - j. Statement to the effect that proposed substitution will result in Work equal to or better than Work originally indicated.
 - k. Cost information or proposal.

C. Shop Drawings, Product Data and Sample Submittals:

Contractor's submittal of (and Owner's acceptance of) Shop Drawings, mock-ups, Product Data or samples which relate to Work not complying with requirements of Contract Documents does not constitute an acceptable or valid request for a substitution, nor approval thereof.

1.05 CONTRACTOR'S REPRESENTATIONS

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

- A. Request for substitution constitutes representation that Contractor:
 - 1. Has investigated proposed product and determined that it is equal to or superior in all respects to that specified.
 - 2. Will furnish same warranties or bonds for substitution as for product specified.
 - 3. Will coordinate installation of accepted substitution into Work and make such other changes as may be required to make Work complete in all respects.
 - 4. Waives all claims for additional costs which may subsequently become apparent.

1.06 OWNER'S DUTIES

- A. Owner will determine acceptability of proposed substitutions.
- B. Owner will review requests for substitutions with reasonable promptness and notify Contractor, in writing, of decision to accept or reject requested substitution. Owners judgment and decision is final.
- C. Review of Owner's acceptance or failure to take exceptions to substitutions or other review documents will not relieve Contractor of its responsibility for item actually meeting performance or other requirements of Contract Documents.

1.07 SUBMITTALS

- A. Product List Schedule:
 - 1. Prepare a schedule showing products specified in a tabular form acceptable to the Owner. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed.
 - 2. Coordinate the product listing with the Contractor's Construction Schedule and the Schedule of Submittals.
 - 3. Form:
 - a. Prepare the product listing schedule with information on each item tabulated under the following column headings:
 - (1) Related Specification heading number.
 - (2) Generic name used in Contract Documents.
 - (3) Proprietary name, model number and similar designations.
 - (4) Manufacturer's name and address.
 - (5) Supplier's name and address.
 - (6) Installer's name and address.

4. Initial Submittal:

Within 14 days after date of commencement of the Work, submit initial product list schedule. Provide a written explanation for omissions of data and for known variations from Contract requirements.

5. Owner's Action:

a. The Owner will respond in writing to the Contractor. The Owner's response will include the following:

(1) A list of unacceptable product selections, containing a brief explanation of reasons for this action.

(2) A request for additional data necessary for the review and possible acceptance of the products and manufacturers listed.

PART 2 - PRODUCTS

2.01 GENERAL PRODUCT REQUIREMENTS

A. General:

1. Provide products which comply with requirements, which are undamaged and unused at time of installation, and which are complete with accessories, trim, finish, safety guards, and other devices and details needed for complete installation and for intended use and effect.
2. Compliance with codes, graphic details, allowances, and similar provisions of the Contract Documents also have a bearing on the selection process.
3. Refer to Section 01600 - MATERIALS AND EQUIPMENT.

B. Standard Products:

Where available, provide standard products of types which have been produced and used previously and successfully on other projects and in similar applications.

C. Continued Availability:

Where additional amounts of a product, by nature of its application, are likely to be needed by Owner at a later date for maintenance and repair or replacement work, provide a standard, domestically produced product which is likely to be available to Owner at such later date.

2.02 PRODUCT SELECTION LIMITATIONS

A. Product Selection Procedures: Contractor's options in product selection are governed

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

by the Contract Documents and governing regulations, not by previous industry tradition or project experience. Procedures governing product selection include, but are not limited to, the following:

1. Proprietary Specification Requirements:

- a. Where a single product or manufacturer is named, provide the product indicated. Other products may be considered by the Owner in compliance with provisions concerning substitutions. Where the term NO SUBSTITUTION is indicated, provide only product indicated.
- b. Advise the Owner before proceeding when it is discovered that the named product is not a feasible solution.

2. Semi-proprietary Specification Requirements:

- a. Where two or more products or manufacturers are named, provide one of the products indicated. No substitutions will be permitted, unless the Specifications indicate possible consideration of other products.
- b. Acceptable Manufacturers: When products are specified by one or more manufacturers' model or performance criteria with reference to other acceptable manufacturers, products manufactured by acceptable manufacturers listed must meet minimum performance criteria specified or meet quality of models specified.
- c. Advise the Owner before proceeding when it is discovered that the named product is not a feasible solution.
- d. Where products or manufacturers are specified by name accompanied by the term "or equal" or "or approved equal," comply with Item 1.04 SUBSTITUTIONS of this Section for procedural requirements governing substitutions to obtain approval for use of an unnamed product.

3. Non-Proprietary Specifications:

When the Contract Documents list products or manufacturers that are available and may be incorporated in the Work but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract Document requirements. Comply with Item 1.04 SUBSTITUTIONS of this Section for procedural requirements to obtain approval for use of an unnamed product.

4. Descriptive Specification Requirements:

Where Contract Documents describe a product or assembly listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides those characteristics and otherwise complies with the Contract Documents.

5. Prescriptive Requirements:

Provide products which have been produced in accordance with prescriptive requirements, using specified ingredients and components and complying with specified requirements for mixing, fabricating, curing, finishing, testing, and similar operations in manufacturing process.

6. Performance Specification Requirements:

- a. Where Contract Documents require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.
- b. Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.

7. Compliance with Standards, Codes and Regulations:

Where the Contract Documents only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.

8. Visual Matching:

- a. Where Contract Documents require matching an established sample, the Owner's decision will be final on whether a proposed product matches satisfactorily.
- b. Where no product available within the specified category matches satisfactorily and also complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another category, or for noncompliance with specified requirements.

9. Visual Selection:

- a. Where specified product requirements include the phrase ".....as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Owner will select the color, pattern and texture from the product line selected.
- b. Where specified product requirements include "..as selected from standard colors, patterns, textures available within the industry..", or words to that effect, selection of product complying with requirements and within established cost category is Owner's and Design Professional's

selection, including designation of manufacturer where necessary to obtain desired color, pattern, or texture.

10. Compatibility of Products:

- a. Where more than one choice is available as an option for Contractor's selection of product or material, select the option which is compatible with other products and materials already selected which may have been from among options for other products and materials.
- b. Total compatibility among options is not assured by limitations within Contract Documents, but must be provided by Contractor.
- c. Compatibility is basic general requirement of product and material selections.

2.03 NAMEPLATES

- A. Except as otherwise indicated for required approval labels and operating data, do not permanently attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view either in occupied spaces or on exterior of the Work.
 1. Labels: Locate required labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface which, in occupied spaces, is not conspicuous.
 2. Equipment Nameplates: Provide permanent nameplate on each item of service-connected or power-operated equipment. Locate nameplates on an easily accessed surface which, in occupied spaces, is not conspicuous. The nameplate will contain the following information and other essential operating data:
 - a. Name of product and manufacturer.
 - b. Model and serial number.
 - c. Capacity.
 - d. Speed.
 - e. Ratings.

PART 3 - EXECUTION

3.01 INSTALLATION OF PRODUCTS

- A. Except as otherwise indicated in individual sections of the Contract Documents, comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located

TPA / North Air Cargo Parking Expansion, Truck Court Repairs, Service Road Relocation, and Apron Rehabilitation

and aligned with other Work.

- B. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion of the whole Work.

END OF SECTION

SECTION 01640 - PRODUCT HANDLING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope:

Contractor shall protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in this Section.

B. Related Work:

Additional procedures also may be prescribed in other Sections of these Contract Documents.

See Section 014000 – Quality Control, 1.14 Material Receipt and Storage Inspections.

1.02 QUALITY ASSURANCE

Contractor shall:

A. Include within the Contractor's quality assurance program such procedures as are required to assure full protection of Work and materials and:

B. Submit a material receipt, offloading, and storage plan to the Owner for approval that addresses the following at a minimum:

1. Delivery, handling, and storage of products in accordance with manufacturer's recommendations and by methods and means which will prevent damage, deterioration, and loss, including theft.
2. Control delivery schedules to minimize long-term storage of products at Project site and overcrowding of construction spaces.
3. In particular, provide delivery/installation coordination to ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other sources of loss.
4. Delivery of products to the Project site in the manufacturer's sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
5. Inspection of products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected. Submission of a material receipt inspection report including checklists, pictures, etc. along with the daily production report.
6. Storage of products at the Project site in a manner that will facilitate inspection and measurement of quantity or counting of units.

7. Storage of heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
 8. Store products subject to damage by the elements above ground, under cover in a weather tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.
 9. Compliance with laws and regulations regarding storage of material and equipment such as quantity restrictions, stacking, compatibility with adjacent material, fire protection, containment, etc.
 10. Provision of drawings indicating delivery routes, off-loading and lay-down areas, and storage areas.
- C. Revise and resubmit the material receipt, offloading, and storage plan to the Owner for approval as onsite conditions change and/or project phasing progresses.

1.03 MANUFACTURER'S RECOMMENDATIONS

Except as otherwise approved by the Owner, Contractor shall determine and comply with manufacturer's recommendations on product handling, storage, and protection.

1.04 PACKAGING

- A. Contractor shall deliver products to the Project site in their manufacturer's original containers, with labels intact and legible.

Contractor shall:

1. Maintain packaged materials with seals unbroken and labels intact until time of use.
2. At the time of delivery, inspect and remove damaged material and unsuitable items from the Project site, and promptly replace with material(s) meeting the specified requirements, at no additional cost to the Owner.

- B. The Owner may reject as non-complying such material and products that do not bear identification satisfactory to the Owner as to manufacturer, grade, quality, and other pertinent information.

1.05 PROTECTION

Contractor shall:

- A. Protect finished surfaces, including jambs and soffits of openings used as passageways, through which equipment and materials are handled.
- B. Provide protection for finished floor surfaces in traffic areas prior to allowing equipment or materials to be moved over such surfaces.

- C. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.
- D. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
- E. Restore storage areas to their previous condition regarding cleanliness. Remove all trash, debris, and clean up any spills.

1.06 REPAIRS AND REPLACEMENTS

Contractor shall:

- A. In event of damage, promptly make replacements and repairs to the approval of the Owner and at no additional cost to the Owner.
- B. Additional time required to secure replacements and to make repairs will not be considered by the Owner to justify an extension in the Contract Time.

1.07 REMOVAL OF NON-COMPLIANT MATERIAL AND EQUIPMENT

- A. Material or equipment that is determined to be non-compliant with contract requirements shall not be off-loaded or stored onsite. The Contractor shall make prompt arrangements to have the material or equipment removed from the site. In the event the Contractor cannot or refuses to remove the material or equipment, the Owner reserves the right to have the non-compliant material or equipment removed from the site and stored at an appropriate location at the Contractor's expense.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01650 – CONSTRUCTION SALVAGE AND WASTE MANAGEMENT

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes demolition and construction salvage and construction waste management requirements. This section does not include hazardous materials removed. Refer to other sections, as applicable, for hazardous materials removed.

1.02 DEFINITIONS

- A. Alternative Daily Cover (ADC): Material, other than earthen material, placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter and scavenging.
- B. Co-mingled or Off-site Separation: Collecting all material types into a single bin or mixed collection System and separating the waste materials into recyclable material types at an off-site facility.
- C. Construction and Demolition Waste (CDW): Includes all nonhazardous solid wastes resulting from construction, remodeling, alterations, repair, and demolition. This includes material that is recycled, reused, salvaged or disposed as garbage.
- D. Diversion Rate: $(\text{Total Waste Diverted from Landfill} / \text{Total Waste produced by project}) \times 100$.
- E. Garbage: Product or material typically considered to be trash or debris that is unable to be salvaged for resale, salvaged and reused, returned, or recycled.
- F. Hazardous Materials/Hazardous Substance: Any substance that (i) the presence of which requires investigation, reporting, removal or remediation under any Environmental Law; (ii) that is or becomes defined as a "hazardous waste," "hazardous substance," "hazardous material," "extremely hazardous substance," or other type of pollutant or contaminant under any applicable Environmental Law; (iii) that is toxic, reactive, explosive, corrosive, flammable, radioactive, carcinogenic, mutagenic, teratogenic, or otherwise hazardous and is or becomes regulated by any applicable Environmental Law; (iv) that is or contains oil, gasoline, diesel fuel, aviation fuel, or other petroleum hydrocarbons, products or derivatives, other than petroleum, crude oil, and petroleum products to the extent contained within regularly operated motor vehicles; (v) that is or contains PCBs, asbestos, radon, urea formaldehyde or any substance that contains per- and polyfluoroalkyl substances (PFAS); (vi) that is fungi or bacterial matter which reproduces through the release of spores or the splitting of cells, including but

not limited to, mold (including, without limitation, penicillium/aspergillus and stachybotrys chartarum), and Legionella (legionella pneumophila); or (vii) the presence of which causes or threatens to cause a nuisance upon the Property or to adjacent property or poses or threatens to pose a hazard to the health or safety of any person, to plant or animal life, or to the environment, including, but not limited to sewage sludge, industrial slag, solvents and/or any other similar substances or materials.

Notwithstanding the foregoing, "Hazardous Substances" shall not include (i) "de minimis" quantities of such materials; (ii) substances customarily present in the ordinary course of business of ownership, operation and maintenance of a residential and commercial mixed-use property in a prudent manner, but only during the period that the same are stored in reasonable and customary quantities and stored and/or used in accordance with applicable Environmental Laws; or (iii) any quantities of such materials which are permitted to remain in the environment, including soil, sediments, groundwater, or other environmental media pursuant to principles of risk-based corrective action under applicable Environmental Laws.

- G. Land Clearing Debris (LCD): Materials that are natural (e.g., rock, soil, stone, vegetation). This also includes uncontaminated soils that are designated as geotechnically unsuitable or excess excavation.
- H. Proper Disposal: Disposal pursuant to all laws, rules, regulations and codes of the law.
- I. Recyclable Materials: Products and materials that can be recovered and remanufactured into new products.
- J. Recycling: The process of sorting, cleaning, treating and reconstituting materials for the purpose of using the material in the manufacture of a new product. This may be conducted on-site (e.g., as in the grinding of concrete).
- K. Recycling Facility: An operation that is permitted to accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product.
- L. Salvage for Reuse: Existing usable product or material that can be saved and reused in some manner on the project site or other projects off-site.
- M. Salvage for Resale: Existing usable product or material that can be saved and removed intact (as is) from the project site to another site for resale to others without remanufacturing.
- N. Solid Waste including Universal Waste: Any waste that is or becomes defined as a "solid waste", "waste", "special waste", "garbage", or "commercial solid waste"

under any environmental law or any waste that can require special handling and management, including but not limited to, white goods, waste tires, used oil, lead-acid batteries, construction and demolition debris, ash residue, yard trash, biological wastes, pesticides, pharmaceuticals and mercury-containing devices and lamps; or any waste that is not hazardous waste and that is not prohibited from disposal in a lined landfill or yard trash, construction and demolition debris, processed tires, asbestos, carpet, cardboard, paper, glass, plastic, or furniture other than appliances.

- O. Source Reduction: Eliminating project waste through reduced packaging, prefabrication, modular construction, or incorporating standard material lengths or sizes into construction documents.
- P. Source-Separated Materials: Materials that are sorted at the site into separate containers for the purpose of reuse or recycling.
- Q. Sources Separation: Sorting the recovered materials into specific material types with no, or a minimum amount of, cross-contamination on site.
- R. Time-Based Separation: Collecting waste during each phase of construction or deconstruction that results in primarily one major type of recovered material. The material is removed before it becomes mixed with the material from the next phase of construction.
- S. Waste Diversion: A management activity that disposes of waste through methods other than incineration or landfilling. Examples include reuse and recycling.
- T. Waste-to-Energy: The conversion of non-recyclable waste materials into usable heat, electricity, or fuel through a variety of processes, including combustion, anaerobic digestion, and landfill gas (LFG) recovery.

1.03 SUBMITTALS

- A. Construction Waste Management Plan
- B. Contractor Staging Area Site Plan
- C. Construction Waste Management Monthly Report
- D. Construction Waste Management Final Report

1.04 PERFORMANCE GOALS

- A. General: Divert CDW and LCD from landfill disposal by one or more combination of the following activities:
 - 1. Salvage

2. Reuse or refurbishment
 3. Source separated recycling
 4. Co-mingled recycling
 5. Donation to approved non-profit organization
 6. Resale in accordance with Authority Standard Procedure S440.05 Transfer/Disposal of Equipment/Construction Salvage
 7. Incineration in approved waste-to-energy facility
- B. CDW materials that can be salvaged, resold, reused or recycled, include, but are not limited to the following:
1. Clean dimensional wood, pallet wood, plywood, Oriented Strand Board (OSB), and particleboard
 2. Asphalt
 3. Concrete and concrete masonry units
 4. Brick
 5. Ferrous and non-ferrous metals
 6. Gypsum products
 7. Acoustical ceiling tile
 8. Glass, both window and bottle
 9. Plastics, including plastic film
 10. Carpet and pad
 11. Cardboard packaging
 12. Insulation
 13. Field office waste paper, aluminum cans, glass, plastic, and cardboard
 14. Non-hazardous solid waste or universal waste

1.05 CONSTRUCTION WASTE MANAGEMENT PLAN

- A. Unless specifically waived by the Owner in writing, the Contractor shall include a Construction Waste Management Plan as outlined in this section.
- B. Submit to the Owner a Construction Waste Management (CWM) Plan narrative in accordance with these specifications.
- C. The Construction Waste Management Plan shall include the following:
1. Name of designated Waste Management Coordinator.
 2. The plan must account for all materials, including land-clearing debris, materials to be used for alternative daily cover (ADC), and other materials not contributing to diversion but not included in the diverted waste total.
 3. A list of demolition or construction waste materials that will be diverted from landfill disposal. Materials may be structural or non-structural.
 4. Include approximate percentage of overall project waste each materials represents.
 5. Separately track CDW, LCD, landfill disposal, and recycled materials.
 6. Identify materials as demolition or construction waste.

7. Include reference to separate hazardous materials removal, tracking and disposal procedures in accordance with other sections, as applicable.
8. Identify waste handling methods to be used, including one or more of the following:
 - a. Method 1 - Contractor or subcontractor(s) hauls recyclable materials to an approved recycling facility.
 - b. Method 2 - Contracting with diversion/recycling hauler to haul recyclable material to an approved recycling or material recovery facility.
 - c. Method 3 - Recyclable material reuse on-site.
 - d. Method 4 - Recyclable material salvage for resale.
9. Identification of each recycling or material recovery facility to be utilized, including name, address, types of materials being recycled at each facility and/or how the materials will be disposed or reused onsite.
10. Description of the method to be employed in collecting, and handling, waste materials.
11. Description of methods to communicate Construction Waste Management Plan to personnel and subcontractors.

1.06 CONTRACTOR STAGING AREA SITE PLAN

- A. Submit a Contractor Staging Area Site Plan to achieve salvage and waste management goals prior to the start of construction.
 1. Identify designated areas in coordination with the Owner for stockpiling recyclable materials, including non-contaminated soils for re-use on site, including but not limited to infrastructure elevation changes, development of noise berms and consideration for landscape needs.
 2. Designate on-airport contractor haul routes in coordination with the Owner, focusing on safety and minimizing on-airport travel distances.

1.07 CONSTRUCTION WASTE MANAGEMENT MONTHLY REPORTS

- A. Submit a monthly construction waste management status report.
 1. Include items-to-date as noted in 1.08 CONSTRUCTION WASTE MANAGEMENT FINAL REPORT.

1.08 CONSTRUCTION WASTE MANAGEMENT FINAL REPORT

- A. Submit a Construction Waste Management Final Report. The report shall list the following for the project:
 1. A record of each waste material type and quantity recycled, reused, salvaged, or disposed from the Project.

2. Include total quantity of waste material removed from the site and hauled to a landfill.
 3. Percentage of total waste material generated that was recycled, reused, or salvaged.
 4. Documentation of recycling rates for commingled facilities if applicable.
 5. Total waste per gross floor area of project if applicable.
- B. Quantities shall be reported by weight (tons) unless otherwise approved by the Owner.
- C. Submit copies of manifests, weight tickets, recycling/disposal receipts or invoices, which validate the calculations or a signed certification of completeness and accuracy of the final quantities reported.
- D. Submit a construction and demolition waste calculator or equivalent tool, tracking total and diverted waste streams.
- E. The final reporting of hazardous materials removal will be in accordance with other sections and will not be included in the project's tracking total.

1.09 QUALITY ASSURANCE

- A. Regulatory Requirements: The Contractor shall maintain compliance with all applicable Federal, State, or Local laws.
- B. Disposal Sites, Recyclers and Waste Materials Processors: All facilities utilized for management of any materials covered under this specification must maintain all necessary permits as required by federal, state and local jurisdictions.

PART 2 – PRODUCTS - Not used.

PART 3 – EXECUTION

3.01 SOURCE-SEPARATED CDW AND LCD RECYCLING

- A. Provide individual containers for separate types of CDW and LCD to be recycled clearly labeled with a list of acceptable and unacceptable materials.

3.02 CO-MINGLED CDW AND LCD RECYCLING

- A. Provide containers for co-mingled CDW and LCD to be recycled, clearly labeled with a list of acceptable and unacceptable materials.

3.03 LANDFILL

- A. Provide containers for CDW and LCD that are to be disposed of in a landfill clearly labeled as such.

3.04 REMOVAL OF CDW and LCD FROM PROJECT SITE

- A. Transport CDW and LCD off Owner's property and legally dispose of it.

PART 4 – MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to and included in the payments made for the applicable project amount or bid item(s).

END OF SECTION

SECTION 01700 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 DESCRIPTION

Closeout is hereby defined as the performance of activities and the preparation and submittal of documents following Substantial Completion as specified in the Contract Documents as necessary to Final Acceptance and Contract closure. Specific requirements for individual units of Work are specified in other Sections. Should phased Substantial Completion be requested by the Owner, the Contractor and Owner will establish the extent of the area and scope that reached Substantial Completion. For each phased Substantial Completion area, the Contractor shall comply with this section.

1.02 PREREQUISITES TO SUBSTANTIAL COMPLETION

- A. Prior to requesting Owner's and Design Professional inspection for Certificate of Substantial Completion, for either the whole Work or designated portions thereof, complete the following and list known exceptions in request:
1. In progress payment request, coinciding with, or first following date claimed, show 100% completion for portion of Work claimed as substantially completed, or list incomplete items, value of incompleteness, and reasons for being incomplete.
 2. Include supporting documentation for completion as indicated in the Contract Documents.
 3. Submit statement showing accounting of changes to the Contract sum.
 4. Advise Owner of pending insurance change-over requirements.
 5. Obtain and submit releases enabling Owner's full and unrestricted use of the Work and access to services and utilities, including, where required, occupancy permits, operating certificates, and similar releases.
 6. Deliver tools, spare parts, extra stocks of materials, and similar physical items to Owner.
 7. Make final change-over of locks and transmit keys to Owner, and advise Owner's personnel of change-over in security provisions.
 8. Complete start-up testing of systems and instructions of Owner's operating-maintenance personnel. Discontinue, or change over, and remove from Project site temporary facilities and services, along with construction tools and facilities, mock-ups, and similar elements.

In Owner's sole discretion, it may waive the above requirements in writing and provide a deadline after Substantial Completion, but before final completion for compliance.

B. Cleaning and Repairs:

Immediately prior to the Owner's and Design Professional's inspection for Substantial Completion of the whole Work or designated portions thereof, the Contractor will completely clean the premises. Concrete and ceramic surfaces will be cleaned and washed. Resilient coverings will be cleaned, waxed and buffed. Woodwork will be dusted and cleaned. Sash, fixtures, and equipment will be thoroughly cleaned. Stains, spots, dust, marks, and smears will be removed from all surfaces. Hardware and all metal surfaces will be cleaned and polished. Glass and plastic surfaces will be thoroughly cleaned by professional window cleaners. All damaged, broken or scratched glass or plastic will be replaced by the Contractor at the Contractor's expense. Refer to Section 01561 - CONSTRUCTION CLEANING. In the event the Contractor does not strictly comply with these cleaning requirements, Owner may have the Work cleaned and backcharge the Contractor.

C. Inspection Procedures:

1. Incomplete Items Prior to Substantial Completion:

- a. One week prior to anticipated date of Substantial Completion, the Contractor will furnish the Owner a list of items which Contractor expects will be incomplete at date of Substantial Completion.
- b. The Owner will review the list and confirm its acceptability, or itemize objections and transmit such to the Contractor for action. Approval of this list by Owner will be a precondition for conducting the Substantial Completion inspection.

2. Upon receipt of Contractor's request for inspection, the Owner will either proceed with inspection or advise Contractor of prerequisites that are not fulfilled. Following initial inspection, the Owner will either prepare the Certificate of Substantial Completion or advise Contractor of work which must be performed prior to issuance of certificate. The Owner will repeat inspection when requested and when assured that the work has been substantially completed. A listing of work to be completed or corrected and the submission of closeout documents specified in Paragraph 1.03.A.1 will constitute the Final Acceptance punch list.

- a. For projects under \$10 million, the Final Acceptance punch list will be developed within 30 days after Substantial Completion and will be provided to the Contractor within five days after its completion.
- b. For projects over \$10 million, the Final Acceptance punch list will be

developed within 60 days after Substantial Completion and will be provided to the Contractor within five days after its completion.

3. Following Substantial Completion, the Contractor will correct or complete all Final Acceptance punch list items, excluding closeout documents, to the satisfaction of the Owner within 30 days after delivering the Final Acceptance punch list for projects under \$10 million and 60 days for projects above \$10 million. If subsequent inspections are necessary after the prescribed time in order to eliminate all deficiencies, the cost of all subsequent inspections with respect to Owner's time will be paid by the Contractor. When ready, the Contractor will request in writing a final inspection of the Work. Upon completion of re-inspection, the Owner will either prepare a Certificate of Final Acceptance or advise Contractor of Work that is not completed or obligations that are not fulfilled as required for Final Acceptance. If necessary, procedures will be repeated. In the event of unacceptable Work discovered on the final inspection or if the submission of the closeout document is incomplete, the issuance of the Certificate of Final Acceptance will be withheld until all Final Acceptance punch list items and closeout documents are corrected or submitted to the Owner's satisfaction.

1.03 PREREQUISITES FOR FINAL COMPLETION AND ACCEPTANCE

- A. Prior to requesting Owner's final inspection for Certification of Final Acceptance as required by this Part 2 Contract, complete the following and list known exceptions in requests:
 1. Submit certified copy of Final Acceptance punch list with a statement that each item has been completed, submitted or otherwise resolved for acceptance, and has been endorsed and dated by Owner. The Final Acceptance punch list will contain the requirement that the following named items will be submitted as closeout documents on Owner or statutory forms:
 - a. Consent of Surety to Payment
 - b. Contractor's Final Affidavit of Payment of Debts and Claims
 - c. Contractor's Affidavit of Releases of Lien waivers
 - d. Waiver of Right to Claim Against Payment Bond upon Final Payment
 - e. List of Contractor's first tier and second tier subcontractors and suppliers, including addresses, phone numbers and a summary of the scope of work.
 - f. Final release of lien from each subcontractor and supplier listed in d. above
 - g. Statement of compliance with labor standards and payment of all applicable taxes
 - h. Statement of Contractor's one-year general warranty
 - i. Specific warranties as specified in Contract Documents and include the subcontractor or supplier with its contact information when applicable.
 - j. Accounting of final Contract amount

- k. Accounting of actual DBE (W/MBE) participation
 - l. As-Built drawings sufficient for the production of record drawings
 - m. O&M manuals, Record Project Manual and record documents (see paragraph 1.06)
 - n. Evidence of continuing insurance complying with specified requirements
 - o. Contractor's final pay application
 - p. Final amendment – when applicable
2. Submit final meter readings for utilities, measured record of stored fuel, and similar data either as of time of Substantial Completion or when Owner took possession of and responsibility for corresponding elements of the Work.
 3. Complete final cleaning requirements, including touch-up of marred surfaces. Refer to Section 01561 - CONSTRUCTION CLEANING, Paragraph 3.03 FINAL CLEANING.
 4. Touch-up and otherwise repair and restore marred exposed finishes.

1.04 PREREQUISITES TO FINAL PAYMENT

A. Final Payment: Final Payment will be made after Final Acceptance of the whole Work by the Owner upon request by the Contractor and on condition that the Contractor:

1. Acceptance and final payment: The Owner will check the final estimate submitted by the Contractor of the items of Work actually performed. The Contractor will approve the Owner's final estimate or advise the Owner of Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities.

The Contractor and the Owner will resolve all disputes in the measurement and computation of final quantities to be paid within 30 days of the Contractor's submission of the final estimates. If, after such 30 day period, a dispute still exists, the Contractor may approve the Owner's estimate under protest of the portions of Work in dispute, and such disputed quantities will be considered by the Owner as a claim in accordance with the Contract Documents.

- a. After the Contractor has approved, or approved under protest, the Owner's final estimate, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the Contract. All prior progress payments will be subject to correction in the final estimate and payment.
- b. If the Contractor has filed a claim for additional compensation under the provisions of the Contract, such claims will be considered by the Owner. Upon final resolution of such claims, any additional payment

determined to be due the Contractor, if any, will be paid.

1.05 COMPLIANCES

- A. Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at Project site, bury debris or excess materials on Owner's property, or discharge volatile or other harmful or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of in a lawful manner.
- B. Where extra materials of value remain after Work has been completed and become Owner's property, they will be relocated and stored as directed by Owner.

1.06 RECORD DOCUMENT SUBMITTALS

- A. Specific requirements for record documents are shown in this Section. Other requirements are indicated in the General Conditions. General submittal requirements are indicated in submittals sections. Contractor should not use record documents for construction purposes, should protect record documents from deterioration and loss in a secure, fire-resistant location and should provide access to record documents for Owner's reference during normal working hours.
 - 1. Definition: Record documents are defined to include those documents relating directly to performance of the Work which Contractor is required to prepare or maintain for Owner's records and which record the Work as actually performed. In particular, record documents show changes in the Work in relation to way in which shown and specified by original Contract Documents and show additional information of value to Owner's records but not indicated by original Contract Documents. Record documents include newly-prepared drawings (if any are specified), marked-up copies of Contract Documents, specifications, addenda and change orders, field records for variable and concealed conditions such as excavations and foundations, and miscellaneous record information on Work which is otherwise recorded only schematically or not at all.
 - 2. Record Drawings: Upon receipt of acceptable as-built drawings, Designer of Record will produce the official record drawings in the manner prescribed by the Contract Documents. The Contractor will submit the as-built drawings to the Owner for coordination. Record Drawings shall be sent electronically through the Owner's Management Software.
 - 3. Record Project Manual: Upon completion of mark-up, submit to Owner for Owner's records. Record Project Manual shall be sent electronically through the Owner's Management Software.
 - 4. Maintenance Manuals: Contractor will complete, place in order, properly identify and submit to Owner for Owner's records. Maintenance Manuals shall be sent electronically through the Owner's Management Software (close-out module) prior to required training and before substantial completion when

applicable.

5. Miscellaneous Record Submittals: As defined in F, 1, a-g of this Section: Provide Reports from Owner's Management Software for each of the areas of Miscellaneous Records with Bookmarks for each section. Complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to Owner for Owner's records through the Owner's Management Software Close-out Module after Substantial Completion.

B. Contractor's as-built drawings:

1. As-built drawings: The Contractor will maintain one conformed set of as-built drawings at the Project site. These will be kept legible and current and will be available for inspection at all times by the Owner. Changes or work added on these drawings will be shown in a contrasting color. Should as-built drawings be maintained electronically, the Owner shall have access to them at all times.
 - a. Mark-up Procedure: During progress of the Work, maintain a white-set (blue-line or black-line) of contract drawings and shop drawings, with mark-up of actual installations which vary substantially from the Work as originally shown. Mark fully and accurately whatever drawing is most capable of showing actual physical condition. Where shop drawings are marked-up, mark cross-reference on contract drawings at corresponding location. Mark with erasable colored pencil, using separate colors where feasible, or editable in electronic format, to distinguish between changes for different categories of Work at same general location. Mark-up important additional information which was either shown schematically or omitted from original drawings. Give particular attention to information on Work concealed which would be difficult to identify or measure and record at a later date. Note alternate numbers, change order numbers and similar identification. Require each person preparing mark-up to initial and date mark-up and indicate name of firm. Label each sheet "AS-BUILT" in 1/2 inch high letters. Contractor will provide in BIM format if BIM specification submittals are required
 - b. Show actual position of all underground and otherwise concealed civil, mechanical and electrical lines, conduit, pipes, ducts, etc. Items in areas with accessible ceilings or other ready access will not be considered as being concealed.
 - c. In showing changes in the Work, use the same legends as used on the original drawings. Indicate exact locations by dimensions and exact elevations by job datum. Give dimensions from a permanent point.
 - d. When manholes, boxes, underground conduits, plumbing hot or chilled water lines, inverts, etc., are involved as part of the Work, the

Contractor will furnish true elevations and locations, all properly referenced by using the original bench mark used for this Project.

- e. The Contractor will submit completed as-built drawings to the Owner for coordination. The Contractor will transmit original ½ size hard copy to the Owner and the Contractor will submit a consolidated electronic copy via Owner's Management Software and organized by design packages inclusive of all ASIs/ESIs.
- f. As-built drawings will contain the names, addresses and phone numbers of the Contractor and the major subcontractors.
- g. As-built drawings will be reviewed monthly for compliance and acceptability.
- h. The Owner will be the sole judge of the acceptability of the as-built drawings. Receipt and acceptance of the as-built drawings is a pre-requisite for Final Payment.

C. Record Project Manual:

- 1. During progress of the work, maintain one copy of the record project manual, including addenda, change orders and similar modifications issued in printed form during construction. Mark-up variations in actual Work in comparison with text of specification and modification as issued. Give particular attention to substitutions, selection of options, and similar information on Work where it is concealed or cannot otherwise be readily discerned at a later date by direct observation. Note related record drawing information and product data, where applicable.
- 2. Where record project manual is printed on one side of page only, mark variation on blank left-hand pages of record project manual, facing printed right-hand pages containing original text affected by variation.
- 3. Upon completion of the Work, the document information maintained during construction such as addenda, alternates, construction change directives, change orders, work orders, etc. will be recorded as follows:
 - a. Neatly cross out the non-conforming portion of the record project manual and add by writing in the revised portion of the record project manual. Do not revise the record project manual by cutting and pasting the actual addenda, alternates, construction change directive, change orders, work orders, etc., as actually issued by the Owner. The revisions have to be actually written by the Contractor.
 - b. The volume(s) of record project manual will be clearly marked "PROJECT RECORD" in 1/2 inch high letters and bear the name of the Contractor

and where applicable, the name of the subcontractor.

- c. The Contractor will review the completed record project manual and ascertain that all data furnished in the record project manual is accurate and truly represents the Work as actually installed.
 - d. Any deviations from the method of executing the record project manual as described above will be considered just cause for disapproval by the Owner and the Design-Builder will be required to conform and resubmit.
 - e. Submit the record project manual to the Owner for compliance review and approval through the Owner's Management Software Close-out Module
 - f. Upon Owner's approval, the Contractor will submit the completed record project manual to the Owner through the Owner's Management Software Close-out Module
4. Information maintained during construction such as addenda, alternates, construction change directives, change orders, work orders, etc. will also be electronically recorded in original word processed documents converted to PDF format prior to submittal using strike-throughs for deletions, bold and italic for revisions and additions, and/or other acceptable method(s) where feasible to distinguish between changes. All of this information is to be submitted through the Owner's Management Software in individual records for each document.

D. Record Product Data:

During progress of the Work, maintain electronic copies of each product data submittal and mark-up significant variations in the actual Work in comparison with submitted information. Include both variations in product as delivered to Project site and variations from manufacturer's instructions and recommendations for installation. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned at a later date by direct observation. Note related change orders and mark-up of record drawings and specifications. Product Data should be submitted through the Owner's Management Software Close-out Module by Specification Division with each Specification Subdivision requirement bookmarked. Submit prior to Final Completion.

E. Record Sample Submittal:

After Substantial Completion, and prior to Final Completion, Owner's personnel will meet with Contractor at Project site and will determine if any of submitted samples maintained by Contractor during progress of the Work are to be transmitted to Owner for record purposes. Comply with Owner's instruction for packaging, identification marking, and delivery to Owner's sample storage space. Dispose of other samples in manner specified

for disposal of surplus and waste materials, unless otherwise indicated by Owner.

F. Miscellaneous Record Submittals:

1. Refer to other Sections of these Contract Documents for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to date(s) of Substantial Completion, complete miscellaneous records should be properly entered in to the Owner's Management Software in the appropriate modules for the types of records, and ready for continued use and reference. For Close-Out submission, provide reports as described in section 1.06.A.5 above. Categories of requirements resulting in miscellaneous work records are recognized to include, but, the following:
 - a. Required field records on excavations, foundations underground construction, wells and similar Work.
 - b. Accurate survey showing locations and elevations of underground lines, including invert elevations of drainage piping, valves, tanks and manholes.
 - c. Surveys establishing lines and levels of building.
 - d. Soil treatment certification.
 - e. Inspection and Test Reports, where not processed as shop drawings or product data.
 - f. Concrete mix design record.
 - g. Concrete Block Certification.

G. Digital Electronic Format:

1. The Contractor will submit Record Documents, after review and approval by the Owner, in digital electronic format as follows:
 - a. All textual data will be provided in PDF with Optical Character Recognition (OCR) and a report quality of 300 dpi or higher format. All formatting and tabular data will be preserved. Tabular data will be embedded in the document in Excel for Windows format.
 - b. All Drawings will be provided in AutoCAD 2000 (or higher) format, as well as a PDF document of each drawing.
 - c. After the documents are in correct digital electronic format, they will be submitted to the Owner on a solid state hard drive containing all

documents in an organized document library.

1.07 GUARANTEES AND WARRANTIES

- A. After Substantial Completion and prior to Final Acceptance, all guarantees and warranties, as specified under various sections of the Contract Documents, will be obtained by the Contractor, addressed to and in favor of the Owner.
- B. Delivery of said guarantees and/or warranties will not relieve the Contractor from any obligations assumed under any other provision of the Contract.
- C. If, within any guarantee and/or warranty period, repairs or changes are required in connection with the guaranteed and/or warranted work, which in the opinion of the Owner is rendered necessary as the result of the use of materials, equipment or workmanship which are defective, inferior or not in accordance with the terms of the Contract, the Contractor will, upon receipt of notice from the Owner, and without expense to the Owner, proceed within seven calendar days to:
 - 1. Place all guaranteed and/or warranted work in satisfactory conditions correct all defects therein, and make good all damages to the structure or site.
 - 2. Make good all work or materials, or the equipment and contents of structures or site, disturbed in fulfilling any such guarantee and/or warranty.
- D. If the Contractor, after notice, fails to comply with the terms of the guarantee and/or warranty, the Owner may have the defects corrected and the Contractor and Contractor's surety will be liable for all expenses incurred, including Owner's fees.
- E. All Guarantees and Warranties will be submitted to the Owner through the Owner's Management Software Close-Out Module and via original hard copy, giving a summary of the guarantees and warranties attached and stating the following with respect to each:
 - 1. Description of work included
 - 2. Name of subcontractors
 - 3. Period of guarantee/warranty
 - 4. Conditions of guarantee/warranty

1.08 OPERATING INSTRUCTIONS AND MAINTENANCE MANUALS

- A. Prior to any required training, and prior to Final Acceptance, complete operating instructions and maintenance manuals will be obtained by the Contractor for each piece of equipment or system furnished under the Contract. Organize operating and maintenance data into suitable sets of manageable size. Each manual will be uploaded to the Owner's Management Software Close-out Module in a separate record and the

documents will be properly bookmarked for ease of use.

1. In addition to the electronic version submitted through Owner's Management Software , the Contractor will submit one copy of each completed manual on equipment and systems, in final form, to the Owner for review and distribution. There should be an individual manual that is organized and indexed for each unit of equipment, each operating system, and each electric and electronic system.
2. Refer to Specification Sections for individual requirements on operating and maintenance of the various pieces of equipment and operating systems.

B. Equipment and Systems:

1. Provide the following information for each piece of equipment, each building operating system, and each electric or electronic system.
 - a. Description: Provide a complete description of each unit and related component parts, including the following:
 - (1) Equipment or system function.
 - (2) Operating characteristics.
 - (3) Limiting conditions.
 - (4) Performance curves.
 - (5) Engineering data and tests.
 - (6) Complete nomenclature and number of replacement parts.
 - b. Manufacturer's Information: For each manufacturer of a component part of a piece of equipment provide the following:
 - (1) Printed operating and maintenance instructions.
 - (2) Assembly drawings and diagrams required for maintenance.
 - (3) List of items recommended to be stocked as spare parts.
 - c. Maintenance Procedures: Provide information detailing essential maintenance procedures, including the following:
 - (1) Routine operations.
 - (2) Trouble-shooting guide.
 - (3) Disassembly, repair and reassembly.
 - (4) Alignment, adjusting and checking.
 - d. Operating Procedures: Provide information on equipment and system operating procedures, including the following:
 - (1) Start-up procedures.
 - (2) Equipment or system break-in.
 - (3) Routine and normal operating instructions.

- (4) Regulation and control procedures.
 - (5) Instructions on stopping.
 - (6) Shut-down and emergency instructions.
 - (7) Summer and winter operating instructions.
 - (8) Required sequences for electric or electronic systems.
 - (9) Special operating instructions.
- e. Servicing Schedule: Provide a schedule of routine servicing and lubrication requirements, including a list of required lubricants for equipment with moving parts.
 - f. Controls: Provide a description of the sequence of operation and as-installed control diagrams by the control manufacturer for systems requiring controls.
 - g. Coordination Drawings will be submitted through the BIM Model submittal requirement.
 - h. Valve Tags: Provide charts of valve tag numbers with the location and function of each valve.
 - i. Circuit Directories: For electric and electronic systems, provide complete circuit directors of panel-boards, including the following:
 - (1) Electric service.
 - (2) Controls.
 - (3) Communication.

1.09 REPLACEMENT MATERIALS

Prior to Final Acceptance, Contractor will transmit and turn over, at the Project site, in a location directed by Owner, all replacement materials which may be required by other sections of these Contract Documents.

PART 2 - PRODUCTS

"Not Used"

PART 3 - EXECUTION

3.01 EQUIPMENT OPERATIONAL DEMONSTRATIONS

- A. Prior to Substantial Completion of the whole Work or designated portions thereof, and prior to Final Acceptance, the Contractor will provide a competent and experienced person thoroughly familiar with the Work to demonstrate and instruct the Owner's personnel in operation, adjustment and maintenance of products, equipment and systems. This instruction will include normal start-up, run, stop, and emergency

operations, location and operation of all controls, alarms and alarm systems, etc. The instruction will include tracing the system in the field and on the diagrams in the instruction booklets so that the Owner's operating personnel will be thoroughly familiar with both the system and the data supplied. Provide instruction at mutually agreed upon times.

1. Use operation and maintenance manuals for each piece of equipment or system as the basis of instruction. Review contents in detail to explain all aspects of operation and maintenance.
 2. For equipment that requires seasonal operation, provide similar instruction during other seasons.
- B. If installers and/or Contractor's personnel are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:
1. Maintenance manuals.
 2. Record documents.
 3. Spare parts and materials.
 4. Tools.
 5. Lubricants.
 6. Fuels.
 7. Identification systems.
 8. Control sequences.
 9. Hazards.
 10. Cleaning.
 11. Warranties and bonds.
 12. Maintenance agreements and similar continuing commitments.
 13. Similar procedures and facilities.
 14. Any other appropriate item.
- C. As part of instruction for operating equipment, demonstrate the following procedures:
1. Start-up.
 2. Shut down.
 3. Emergency operations.
 4. Noise and vibration adjustments.
 5. Safety procedures.
 6. Economy and efficiency adjustments.
 7. Effective energy utilization.
 8. Similar operations.
 9. Any other appropriate procedure.
- D. Review maintenance and operations in relation to applicable warranties, agreements to maintain bonds, and similar continuing commitments.

- E. Owner will be notified in writing of scheduling and completion of all equipment operational instructions and demonstrations.

END OF SECTION

SECTION 01740 - WARRANTIES

PART 1 - GENERAL

1.01 SUMMARY

A. This Section specifies general administrative and procedural requirements for warranties required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.

1. Refer to Section 00700, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, as modified, for terms of the Contractor's special warranty of workmanship and materials.
2. General closeout requirements are included in Section 01700 - PROJECT CLOSEOUT.
3. Specific requirements for warranties for the Work and products and installation that are specified to be warranted are included in the individual Sections of the Specifications.
4. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.

B. Disclaimers and Limitations:

Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor of Contractual warranty requirements.

1.02 DESCRIPTION OF REQUIREMENTS/DEFINITIONS

A. Categories of Specific Warranties:

1. It is recognized that warranties on the Work are in several categories, including those of the conditions of the Contract and including (but not necessarily limited to) the following specific categories related to the individual units of Work specified in the sections of the Specifications:
 - a. **Special Warranty (Guarantee):** A warranty specifically written and signed by the Contractor for a defined portion of the Work; and, where required, countersigned by subcontractor, installer, manufacturer or other entity engaged by Contractor. Formerly generally recognized as (and sometimes specified in Contract Documents as) a "guarantee".
 - b. **Specified Product Warranty:** A warranty which is required by Contract Documents to be provided for a manufactured product which is incorporated into the Work, regardless of whether the manufacturer has published the warranty without consideration for specific

incorporation of product into the Work, or has written and executed the warranty as a direct result of Contract Documents requirements.

- c. **Coincidental Product Warranty:** A warranty which is not specifically required by Contract Documents (other than as specified in this Section) but which is available on a product incorporated into the Work by virtue of the fact that the manufacturer of the product has published the warranty in connection with purchases and uses of product without regard for specific applications, except as otherwise limited by terms of the warranty.

B. Definition: Manufactured Product:

A physical item for incorporation into the Work which has been produced from raw or natural materials by a manufacturing process and which is purchased from a manufacturer either specifically for the Work or for Contractor's/subcontractor's/fabricator's/installer's stock from which it is drawn for incorporation into the Work.

C. General Limitations:

1. It is recognized that specific warranties are intended primarily to protect Owner against failure of Work to perform as required and against deficient, defective and faulty materials and workmanship, regardless of sources. Except as otherwise indicated, specific warranties do not cover failures in Work which result from:
 - a. Damage or defect caused by abuse
 - b. Modifications not executed by the Contractor
 - c. Improper or insufficient maintenance
 - d. Improper operations, or normal wear and tear under normal usage
2. Although manufacturer's commitments in product warranties on products used in the Work are generally written to exclude product failures which result from failure of other Work (such as failure of substrate supporting product), such limitations in product warranties do not relieve Contractor of the more general warranties on Work which incorporates use of such products. Except as otherwise indicated, this same relationship applies to units of Work performed by other entities (other than manufacturers), such as fabricators, installers and subcontractors, who are required to countersign special Project warranties with Contractor for such units of Work.
3. Owner's signature on any manufacturer's or other warranties does not excuse the Contractor from its common law warranty obligations or its contractual warranty obligations.

1.03 WARRANTY REQUIREMENTS

A. Related Damages and Losses:

When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

B. Reinstatement of Warranty:

When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty will be equal to the original warranty from the date of correction or rebuilding.

C. Replacement Cost:

Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

D. Owner's Recourse:

1. Written warranties made to the Owner are in addition to contractual and implied warranties and will not limit the duties, obligations, rights and remedies otherwise available under the law, nor will warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - a. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
2. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work until evidence is presented that entities required to countersign such commitments are willing to do so.
3. Written warranties shall not require the signature of the Owner for compliance.

1.04 SUBMITTALS

A. Submit written warranties to the Owner prior to the date certified for Final Payment.

1. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties.

Submit a draft to the Owner for approval prior to final execution.

- a. Refer to individual sections of Division 2 through 16 for specific content requirements and particular requirements for submittal of special warranties.
 2. Submit specific warranties for beginning of the warranty periods. Date(s) will be inserted to correspond with certification or acceptance dates, as established and accepted by the Owner.
- B. Form of Submittal:
1. Provide one Electronic Copy and one Hard copy of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Record Project Manual. All Warranties should be submitted through the owners Project Management Software.
 2. Bind warranties in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, with thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.
 - a. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address and telephone number of the installer.
 - b. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS," the Project title or name, and the name of the Contractor.
 3. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION



AVIATION AUTHORITY APPLICATION FOR PAYMENT

APPLICATION No.: _____ Application Period From: _____ To: _____

HCAA PROJECT No.: _____

PROJECT DESCRIPTION: _____

Design-Bid Design-Build State Funded

APPLICANT : _____

ADDRESS: _____

The undersigned Contractor / Design Builder / Construction Manager certifies that to the best of their knowledge, information and belief, the work covered by this Application has been completed in accordance with the Contract Documents; that all amounts have been paid by the undersigned for work for which previous Certificates for Payment were issued and payments received from the Owner; and that current payment shown herein is now due.

In consideration of the amounts and sums received, the undersigned does hereby waive and release to the Owner any and all claims and liens and rights to liens upon the premises described below, and upon improvements now thereon, and upon the monies or other considerations (due as of the date of the aforesaid payment application or invoices from the Owner or from any other person, firm or corporation), said claims and liens and rights to liens being on account of labor, services, materials, fixtures or apparatus heretofore furnished by or at the request of the undersigned. The premises as to which said claims and liens and right to liens are hereby released as identified above.

The undersigned further represents and warrants that s/he is duly authorized and empowered to sign and execute this waiver on her/his own behalf and on behalf of the company or business for which s/he is signing; that s/he has properly performed all work and furnished all the materials of the specified quality per plans and specifications and in a good and workmanlike manner through the date of said payment application or invoice; that s/he has paid for all the labor, materials, equipment, and services that s/he has used or supplied to the above premises through the date of said payment application or invoice; that s/he has no other outstanding and unpaid payment applications, invoices, retentions, holdbacks, chargebacks or unbilled work or material against the Owner as of the date of the aforementioned payment application; and that any materials which have been supplied or incorporated into the above premises were either taken from his fully-paid or open stock or were fully paid for and supplied as stated on the statements accompanying the said payment application or invoice.

The undersigned further agrees to reimburse and does hold harmless and fully indemnify Owner for any losses or expenses should any such claims, lien or right to a lien be asserted (by the undersigned or by any laborer, materialman or subcontractor or the undersigned), including, without implied limitation, attorneys' fees incurred in the defense thereof.

The undersigned further accepts and acknowledges the receipt of the aforesaid sums in full accord and satisfaction for the aforementioned claims with full knowledge that the Owner, it's successors and assigns, are relying thereon; and furthermore, the undersigned agrees to perform, now and in the future, each and every covenant and provision of his written contract as modified or changed in writing with the Owner, hereby acknowledging that said contract is now in full force and effect.

In addition, for and in consideration of the amounts and sums received, the undersigned hereby waives, releases and relinquishes any and all claims, rights or causes of action whatsoever arising out of or in the course of the work performed on the above-mentioned project, contract or event transpiring prior to the date hereof, excepting the right to receive payment of work performed and properly completed and retainage, if any, after the date of the above-mentioned payment application or invoices.

Created on: 12/07/07

Revised: 12/29/2021

The present status of this Contract is as follows:

ORIGINAL GMP / CONTRACT SUM:	\$	-
NET CHANGE BY PREVIOUS CHANGE ORDERS:	\$	-
GMP or CONTRACT SUM TO DATE:	\$	-
TOTAL COMPLETED & STORED TO DATE:	#DIV/0!	\$ -
CURRENT RETAINAGE AMOUNT:	#DIV/0!	\$ -
TOTAL EARNED LESS RETAINAGE	\$	-
LESS PREVIOUS CERTIFICATES FOR PAYMENT	\$	-
CURRENT PAYMENT DUE:	\$	-

CONTRACTOR/DESIGN BUILDER/CONSTR. MGR.

By: _____ Date: _____

State of: _____ County of: _____

Sworn to (or affirmed) and subscribed before me by means of physical presense or online notarization, this day of _____ year, by _____

Notary Public Signature: _____

My commission expires: _____

Personally Known OR Produced Identification Type of Identification Produced _____

DESIGN PROFESSIONAL'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, on-site observations and the data comprising the above application, the Architect / Engineer certifies that the Work has progressed as indicated; that to the best of their knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents; and that the Applicant is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$ _____

Design Professional _____ Date _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Applicant named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Applicant under this contract.

HCAA Approval will occur electronically through Oracle Workflow

**CHANGE ORDER
HILLSBOROUGH COUNTY AVIATION AUTHORITY**

PROJECT:

CHANGE ORDER No:

INITIATION DATE:

OWNER: Hillsborough County Aviation Authority
P.O. Box 22287
Tampa, Florida 33622-2287

HCAA PROJECT No:

FAA AIP No:

FDOT FM No:

CONTRACT DATE:

TO (Contractor):

You are directed to make the following changes in this Contract dated _____ by and between yourself and the Hillsborough County Aviation Authority, in accordance with its conditions. The Contract Documents shall apply to this Change Order. All terms and conditions of the Contract remain unchanged, except as they may be expressly modified by the terms of this Change Order. This Change Order addresses all adjustments to the Contract Terms, Contract Sum and Contract Time for which the Contractor may be entitled with respect to the subject change work, including all labor, materials, equipment, services, overhead and profit necessary to accomplish the change work, which change work includes all items that are expressly identified in this Change Order, as well as all items that are reasonably inferable as being necessary or appropriate for the satisfactory completion of the subject change work by the Contractor. The total cost adjustment to the Contract Sum reflected in this Change Order, if any, includes all direct, indirect and impact costs resulting from the subject change, including, but not limited to, extended or unabsorbed home office overhead costs, extended general conditions and field overhead, extra equipment (whether operating or idle), costs relating to labor and equipment inefficiency, taxes, insurance costs, bonds, profit, interest and all other fees and costs for which the Contractor may have entitlement to under the Contract or otherwise, arising out of or relating to the change work that is the subject of this Change Order. In addition, this Change Order encompasses all time adjustments to the Contract Time, if any, relating to any delay, disruption, acceleration, interference, escalation, or other time related impacts for which the Contractor may be entitled under the Contract or otherwise, arising out of or relating to the change work that is the subject of this Change Order. In addition, this Change Order constitutes a full accord and satisfaction for all of the Contractor's outstanding extra work items, claims, overtime charges, changes to and/or interpretations of the Contract Documents with respect to the Contract. It is agreed and understood that the Contractor, by executing this Change Order, hereby waives all claims, through the date of this Change Order, with respect to the Work or the Project. This Change Order in no way relieves the Contractor from providing all outstanding obligations to the Owner under the Contract, including, but not limited to, close-out obligations, punch list items, warranty and correction of defective and non-conforming work.

Description:

Attachments:

Not valid until signed by the Owner. Signature by the Contractor indicates final agreement herewith, including all adjustments in the Contract Sum and/or the Contract Time.

The original Contract Sum was _____ \$ _____
 Net change by previously authorized Change Order _____ \$ _____
 The Contract Sum prior to this Change Order was _____ \$ _____
 The Amount of this Change Order is _____ \$ _____
 The new Contract Sum including this Change Order will be _____ \$ _____
 The Contract Time will be Increased , Decreased , Unchanged , _____ calendar days.
 The date of substantial completion will change from _____ .
 The DBE goal as a result of this change will change from _____ .

Issued and Approved by:

Agreed To:

 Architect / Engineer

 Contractor

 Address

 Address

By: _____ Date _____

By: _____ Date _____

Reviewed:

Authorized:

 Hillsborough County Aviation Authority
 Owner

 Hillsborough County Aviation Authority
 Owner

By: Jeff Siddle, P.E. _____ Date _____
 V.P. of Planning & Development

By: Joseph W. Lopano _____ Date _____
 Chief Executive Officer

**WAIVER OF RIGHT TO CLAIM AGAINST PAYMENT BOND
UPON FINAL PAYMENT**

The undersigned, in consideration of the final payment in the amount of \$ _____ to the total final contract amount of \$ _____ hereby waives and releases its right to claim against the Payment Bond for labor services or materials and any lien and right to claim a lien for labor, services, or materials furnished to _____ on
(Insert the name of your customer)

the job of _____ to the following described property:
(insert the name of the Owner)

(Description of Property)

STATE OF _____ COUNTY OF _____

The foregoing instrument was acknowledged before me by means of physical presence or online notarization, this day of _____, _____, by _____
(year) (name of person)

as _____ for _____
(type of authority. . . e.g. officer, trustee, attorney in fact) (name of party on behalf of whom

instrument was executed).

(Signature of Notary Public – State of Florida)

(Print, Type or Stamp Commissioned Name of Notary Public)

Personally Known OR Produced Identification Type of Identification Produced

TECHNICAL SPECIFICATIONS



**Tampa
International
Airport**

**TPA NORTH AIR CARGO PARKING EXPANSION,
TRUCK COURT REPAIRS, SERVICE ROAD
RELOCATION, AND APRON REHABILITATION**

TECHNICAL SPECIFICATIONS

HCAA PROJECT NO. 6530 18

RS&H PROJECT NUMBER 204-1880-047

CONSTRUCTION DOCUMENTS

RS&H

TPA NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION SPECIFICATIONS

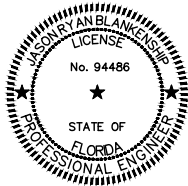
Tampa International Airport
HCAA Project No: 6530-18
RS&H Project No: 1004-1880-047



Technical Specifications found in this project manual were prepared by the Design Professional whose name and stamp appear below:

ALL SHEETS, EXCEPT ELECTRIC (E) SHEETS, IN ACCORDANCE WITH RULE 61G15-23.00, F.A.C.

Jason Ryan Blankenship, PE



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JASON RYAN BLANKENSHIP.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

RS&H INC.
1715 N. WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

TPA NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION SPECIFICATIONS

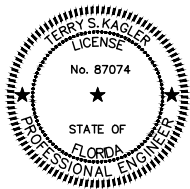
Tampa International Airport
HCAA Project No: 6530-18
RS&H Project No: 1004-1880-047



Technical Specifications found in this project manual were prepared by the Design Professional whose name and stamp appear below:

ELECTRIC (E) SHEETS, IN ACCORDANCE WITH RULE 61G15-23.00, F.A.C.

Terry S. Kagler, PE



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY TERRY S. KAGLER.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

RS&H INC.
1715 N. WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

SPECIFICATIONS TABLE OF CONTENTS

TPA NORTH AIR CARGO PARKING EXPANSION, TRUCK COURT REPAIRS, SERVICE ROAD RELOCATION, AND APRON REHABILITATION

HCAA Project Number 6530 18

TAMPA INTERNATIONAL AIRPORT
Tampa, Florida

SECTION	TITLE	PAGES
TOC	TABLE OF CONTENTS	2
C-103-1	SAFETY AND SECURITY	5
C-104-1	PROJECT STAKEOUT AND AS-BUILT SURVEY.....	11
C-105-1	MOBILIZATION AND GENERAL CONDITIONS	16
C-106-1	MAINTENANCE OF TRAFFIC AND TEMPORARY CONSTRUCTION ITEMS	18
FL-104-1	PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION	22
FL-110-1	CLEARING & GRUBBING	29
FL-120-1	EXCAVATION AND EMBANKMENT.....	37
FL-160-1	STABILIZED SUBGRADE (12 IN) (LBR 40)	54
FL-285-1/2	6 IN / 8 IN RECYCLED CONCRETE AGGREGATE (RCA) BASE COURSE	60
FL-300-1	PRIME AND TACK COATS	65
FL-320-1	HOT MIX ASPHALT – PLANT METHODS AND EQUIPMENT	70
FL-327-1	2 IN BITUMINOUS PAVEMENT MILLING	79
FL-330-1	HOT MIX ASPHALT – GENERAL CONSTRUCTION REQUIREMENTS	83
FL-334-1	2 IN BITUMINOUS SURFACE COURSE (FDOT TYPE SP-12.5)	95
FL-350-1	SPALL REPAIR – CONCRETE PAVEMENT (VARIABLE DEPTH).....	116
FL-350-2/3	CLEANING & SEALING JOINTS – CONCRETE PAVEMENT.....	116
FL-350-4/5	CLEANING & SEALING CRACKS – CONCRETE PAVEMENT	116
FL 353-1	CONCRETE PAVEMENT SLAB REPLACEMENT (6 IN THICK)	127
FL 520-1	CONCRETE GUTTER, CURB ELEMENTS, AND TRAFFIC SEPARATOR	132
FL 570-1	PERFORMANCE TURF.....	136
FL-635-1	PULL, SPLICE, AND JUNCTION BOXES	140
FL-700-1	SIGN REMOVAL & RELOCATION.....	143
FL-700-2	HIGHWAY SIGNING	143
FL-710-1	PAINTED PAVEMENT MARKINGS	146

P-101	PREPARATION OF EXISTING PAVEMENTS	153
P-101-1	ROUTE AND SEAL JOINT AND ASPHALT SURFACE CRACKING.....	153
P-108-1	REMOVAL OF PAVEMENT MARKINGS	158
P-109-1	SAWCUTTING	160
P-631-1	REFINED COAL TAR EMUL. WITH ADDITIVES FOR SLURRY COAT (2 COATS SAND)	162
260501-1	BASIC ELECTRICAL REQUIREMENTS	169
260519-1	LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES	177
260543-1	UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS.....	181

END OF SECTION

INTENTIONALLY LEFT BLANK

ITEM C-103
SAFETY AND SECURITY

GENERAL

103-1.1 The provisions of this safety and security plan and associated procedures are applicable within the boundaries of the Tampa International Airport. A complete understanding of all procedures and requirements contained herein is required to ensure safety during construction.

CONTRACTOR SAFETY AND SECURITY OFFICER

103-2.1 CONTRACTOR SAFETY AND SECURITY OFFICER (CSSO). The Contractor shall appoint its on-site Construction Superintendent or other qualified individual(s) as its duly authorized representative to serve as Contractor Safety and Security Officer (CSSO) for the duration of the Contract. The CSSO shall thoroughly understand the safety and security requirements of the Contract, the necessity for them and shall have sufficient authority to implement its provisions without significant deviation. The Contractor shall notify the Authority in writing of the name of the individual(s) selected for the assignment.

The CSSO shall represent the Contractor on safety and security requirements compliance.

103-2.2 RESPONSIBILITIES OF THE CONTRACTOR SAFETY AND SECURITY OFFICER. Prior to the desired date for commencement of any work on the project, the CSSO shall accomplish the following:

a. Develop and submit in writing a detailed work sequence schedule with dates and times specified for all milestone events. This sequence schedule shall be subject to the approval of the Authority. To assure adequate time for coordination, this document shall be submitted at least one week prior to the date of the Pre-construction Conference.

b. Develop and submit in writing a detailed outline of the procedures to be followed to maintain safety and security of both Contractor operations and the integrity of airport operations during the prosecution of contract work. This plan shall detail, in addition, the procedures to be followed in the event of an accident or fire involving Contractor personnel and the Contractor's efforts to maintain fire protection and security. These procedures shall be subject to the approval of the Authority and reflect any change as may be deemed necessary.

c. Conduct at least one meeting of all Contractor supervisory personnel prior to the start of contract work. The purpose of this meeting is to review the approved Work sequence schedule and safety and security procedures. Attendance at this meeting by the CSSO, all Contractor supervisory personnel and the Authority is mandatory. This meeting shall also be open to other employees of the Contractor and others as the Authority may deem appropriate. Minutes of this meeting shall be taken by the CSSO, copies provided to each supervisor and kept on file in the Contractor's construction office for periodic review and updating.

d. Develop a safety and security orientation program and provide a briefing for all employees of the Contractor and subcontractors that will be used on the project. A similar briefing will be given to new employees prior to their use on contract work. In addition, the CSSO shall be responsible for briefing, from time to time, all Contractor personnel on any changes to safety and security measures deemed necessary.

CONSTRUCTION SEQUENCING

103-3.1 CONSTRUCTION SEQUENCE. The Contractor shall prepare a construction schedule and submit to the Authority within 15 days from the date of award of the Contract.

MARKING AND LIGHTING

103-4.1 Proper marking and lighting of areas on the airfield associated with the construction shall be the responsibility of the Contractor and shall be described by the SPCD. This will include properly marking and lighting closed runways, taxiways, taxilanes, and aprons, the limits of construction, material storage areas, equipment storage areas, haul routes, parking areas and other areas defined as required for the Contractor's exclusive use. The Contractor shall erect and maintain around the perimeter of these areas suitable marking and warning devices visible for day and night use. Temporary barricades, flagging, and flashing warning lights shall be required at critical access points. The type and location of marking and warning devices will be approved by the Authority.

Special emphasis shall be given to open trenches, excavations, heavy equipment marshalling areas, and stockpiled material located in the airport operations area, which shall be predominantly marked by the Contractor with flags and lighted by approved light units during hours of restricted visibility and darkness. All marking shall be in accordance with FAA Advisory Circular (AC) 150/5340-1M or latest edition.

TRAFFIC CONTROL

103-5.1 VEHICLE IDENTIFICATION. The Contractor shall establish and maintain a list of Contractor and subcontractor vehicles authorized to operate on the site. Contractor employee vehicles shall be restricted to the Contractor's staging area and are not allowed in the Airport Operations Area (AOA) at any time. To be authorized to operate on the airport, each Contractor or subcontractor's vehicle shall:

a. be marked/flagged for high daytime visibility and lighted for nighttime operations/periods of low visibility. Vehicles that are not marked and/or lighted shall be escorted by a vehicle appropriately marked and/or lighted. Vehicles requiring escort shall be identified on the list.

b. be identified with the name and/or logo of the Contractor and be of sufficient size to be identified at a distance. Vehicles needing intermittent identification could be marked with tape or with commercially available magnetically attached markers. Vehicles that are not appropriately identified shall be escorted by a vehicle that conforms to this requirement. Vehicles requiring escort shall be identified on the list.

c. be operated in a manner that does not compromise the safety of either landside or airside airport operations. If, in the opinion of the Authority, any vehicle is operated in a manner not fully consistent with this requirement, the Authority has the right to restrict operation of the vehicle or prohibit its use on the airport.

103-5.2 ACCESS TO THE SITE OF CONSTRUCTION. The Contractor's access to the site shall be as shown on the Contract Layout Plan. No other access points shall be allowed unless approved by the Authority. All Contractor traffic authorized to enter the site shall be experienced in the route or guided by

Contractor personnel. The Contractor shall be responsible for traffic control to and from the various construction areas on the site, and for the operation and security of the access gate to the site. A Contractor's flagman or traffic control person shall monitor and coordinate all Contractor traffic at the access gate with Airport Security. The Contractor shall not permit any unauthorized construction personnel or traffic on the site. Access gates to the site shall be locked and secured at all times when not attended by the Contractor. If the Contractor chooses to leave any access gate open, it shall be attended by Contractor personnel who are familiar with the requirements of the Airport Security Program. The Contractor is responsible for the immediate cleanup of any debris deposited along the access route as a result of his construction traffic. Directional signing from the access gate along the delivery route to the storage area, plant site or work site shall be as directed by the Authority. In addition, the following requirements are applicable:

a. All Contractor traffic authorized to travel on the airport shall have been briefed as part of the Contractor's construction safety and security orientation program, be thoroughly familiar with the access procedures and route for travel or be escorted by personnel authorized by the Contractor Safety and Security Officer (CSSO).

b. The Contractor shall install work site identification signs at the authorized access point(s). If, in the opinion of the Authority, directional signs are needed for clarity, they shall be installed along the route authorized for access to each construction site.

c. Under no circumstance will Contractor personnel be permitted to drive their individually owned vehicles to any construction site on the airport. All vehicles must be parked in the area designated for employee parking and out of secured airport property.

d. In addition to the inspection and cleanup required at the end of each shift, the Contractor is responsible for the immediate cleanup of any debris generated along the construction site access route(s) as a result of construction related traffic or operations whether or not created by Contractor personnel.

103-5.3 MATERIAL SUPPLIERS. All material suppliers, subcontractors and visitors to the work site are obligated to follow the same safety and security operating procedures as the Contractor. All material suppliers shall make their deliveries using the same access points and routes as the Contractor and shall be advised of the appropriate delivery procedures at the time the materials order is placed. The Contractor shall not use the Airport address for any delivery but shall use the street address appropriate to the location of the entrance of the work site. If it is not practical to conform to the vehicle identification requirements of Section 103-5.1 the Contractor shall be prepared to escort all suppliers, subcontractors and visitors while they are on the airport.

103-5.4 PERSONNEL IDENTIFICATION. All employees, agents, vendors, invitees, etc. of the Contractor or subcontractors requiring access to the construction site shall, conform to the Security Program.

GENERAL SAFETY REQUIREMENTS

103-6.1 All Contractor vehicles that are authorized to operate on the airport outside of the designated construction area limits or haul routes as defined herein shall display in full view above the vehicle a flashing amber (yellow) dome-type light or a three-foot by three-foot, or larger, orange and white

checkerboard flag, each checkerboard color being one-foot square. Vehicles must be under control of a Contractor mobile (two-way) radio operator (flagmen) monitoring the Airport frequency. Vehicle operators must be vigilant for conflict with any aircraft and give way to any operating aircraft.

All Contractor vehicles that are required to operate outside of the construction area limits as defined herein and cross active runways, taxiways, aprons, or runway approach clear zones shall do so under the direct control of a flagman who is monitoring the Airport frequency. Flagmen and two-way radios shall be furnished by the Contractor. Flagmen shall be instructed in the use of two-way radios prior to use. All aircraft traffic on runways, taxiways and aprons shall have priority over Contractor's traffic.

Construction vehicles not in use for extended periods during the work day, or during nights and weekends (nonwork periods) shall be parked away from active runways, taxiways, and aprons in designated vehicle marshalling areas.

CONSTRUCTION CONTROL

103-7.1 A primary and alternate responsible Contractor's representative shall be designated by the Contractor. The Contractor's representatives shall be available locally on a 24-hour basis. Names of the primary and alternate, including phone number, shall be made available to the Authority by the Contractor. The Contractor shall insure that the names and phone numbers are kept current and made available to the Authority.

CONSTRUCTION TECHNIQUES

103-8.1 Construction shall be planned and conducted throughout this project in such a manner as to allow the maintenance of completely safe airport operations. Every effort shall be made to reduce the impact of construction activity on overall airport operations. To this end the Contractor's activities shall be conducted in such a manner so as to preclude, except where absolutely required, open excavations, trenches, ditches and above ground obstacles such as booms on cranes or obstacle markers such as wooden saw horses. The primary responsibility for assuring that the safest possible construction techniques are followed rests with the Contractor Safety and Security Officer (CSSO).

METHOD OF MEASUREMENT

103-9.1 Based upon the contract lump sum price for "Safety and Security" partial payments will be allowed as follows:

- a. A negotiated percentage based on documentable costs will be paid with the first pay request. The amount will be negotiated between the Owner, Contractor and Engineer prior to the first pay request.
- b. Each subsequent pay request will include equal payments derived as follows: 100% less the negotiated initial payment divided by the total duration of the project in months.
- c. The final equal installment will be paid after final inspection and delivery of all project close-out materials as outlined in the Contract Documents is complete.

The Owner reserves the right to adjust the above payment schedule if agreed to by the Owner,

Contractor and Engineer. Should a payment adjustment occur, the remaining Safety and Security cost will be adjusted such that it is paid in equal installments spread over the remainder of the project duration.

The item of Safety and Security shall be measured as a lump sum item when required and furnished for the life of the Contract.

BASIS OF PAYMENT

103-10.1 Payment shall be made for airport safety and security measures for personnel or materials related to this specification item and incidentally required to satisfy the specified objective(s) under item C-103, Safety and Security. This compensation shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment shall be made under:

Item C-103-1	Safety and Security - per lump sum
--------------	------------------------------------

In the event the contract completion date is extended, or additional work is added to the project, no additional payment will be made for safety and security unless otherwise addressed by change order.

END OF ITEM C-103

INTENTIONALLY LEFT BLANK

ITEM C-104

PROJECT STAKEOUT AND AS-BUILT SURVEY

DESCRIPTION

104-1.1 GENERAL. Under this item, the Contractor shall do all necessary surveying and project stakeout required to construct all elements of the Project as shown on the Contract Drawings and specified in the Specifications. This shall include but not be limited to stakeout, layout and elevations for excavations, embankments, pavements, structures, forms, and appurtenances as shown and required, consistent with the current practices and shall be performed by a State of Florida licensed professional land surveyor. The stakeout survey shall proceed immediately following the Notice to Proceed or as soon as authorized by the Authority in accordance with the phasing of the construction and shall be expeditiously progressed to completion in a manner and at a rate satisfactory to the Authority and/or Engineer. The Contractor shall keep the Authority fully informed as to the progress of the stakeout survey.

All survey work shall be provided under the direction of a State of Florida licensed professional land surveyor or approved equal.

MATERIALS

104-2.1 All instruments, equipment, stakes, and any other material necessary to perform the work satisfactorily shall be provided by the Contractor.

All stakes used shall be of a type approved by the Authority. It shall be the Contractor's responsibility to maintain these stakes in their proper position and location at all times.

CONSTRUCTION METHODS

104-3.1 The Contractor shall trim trees, brush and other interfering objects, not inconsistent with the Contract Drawings, from survey lines in advance of all survey work to permit accurate and unimpeded work by his stakeout survey crews.

The exact position of all work shall be established from control points, baseline transit points or other points of similar nature which are shown on the Contract Drawings and/or modified by the Engineer. Prior to any layout of works to be constructed, the Contractor shall verify the location and accuracy of all control points provided in the plans. Any error, apparent discrepancy, or absence in or of data shown or required for accurately accomplishing the stakeout survey shall be referred to the Authority and Engineer for interpretation or furnishing when such is observed or required.

The Contractor shall, at a minimum, place two offset stakes or references at 100-foot intervals at each centerline station and at such intermediate locations as the Authority may direct. From computations and measurements made by the Contractor, these stakes shall be clearly and legibly marked with the correct centerline station number, offset, and cut or fill so as to permit the establishment of the exact centerline location and elevation during construction. If markings become faded or blurred for any reason, the markings shall be restored by the Contractor at the request of the Authority. He shall locate and place all cut, fill, slope, fine grade or other stakes and points, as the engineer may direct, for the proper progress of the work. All control points shall be properly guarded and flagged for easy identification.

Alignments for installation of visual barriers (i.e., orange safety fence) along the runway/taxiway safety and object free areas shall be staked out by the Contractor at the locations shown on the Contract Drawings or as directed by the Authority.

Reference points, baselines, stakes, and benchmarks for stockpiles shall be established by the Contractor.

The Contractor shall be responsible for the accuracy of his work and shall maintain all reference points, stakes, etc., throughout the life of the Contract. Damaged or destroyed points, benchmarks or stakes, or any reference points made inaccessible by the progress of the construction, shall be replaced or transferred by the Contractor. Any of the above points which may be destroyed or damaged shall be transferred by the Contractor before they are damaged or destroyed. All control points shall be referenced by ties to acceptable objects and recorded. Any alterations or revisions in the ties shall be so noted and the information furnished to the Authority immediately. All stakeout survey work shall be referenced to the centerlines shown on the Contract Drawings. All computations necessary to establish the exact position of the work from control points shall be made and preserved by the Contractor. All computations, survey notes and other records shall be made available to the Authority and/or Engineer upon request and shall become the property of the Owner and delivered to the Authority no later than the date of acceptance of the Contract.

The Contractor shall furnish, at his expense, all horizontal and vertical control, all staking, and layout of construction work called for on the plans. The Authority, Engineer and Owner shall not be responsible for such work. However, the Owner and Engineer reserve the right to check all said lines, grades, and measurements with their appointed surveyor. Should the Owner's surveyor detect errors in said lines, grades, and measurements, the contractor shall pay for all said surveying costs and subsequent surveying costs performed to verify correction of errors found in said lines, grades and measurements. Definition of an error shall be a discrepancy of $\frac{1}{4}$ " or more. In the case of a discrepancy between the technical specifications and this defined tolerance, the more severe tolerance shall govern.

During the progress of the construction work, the Contractor will be required to furnish all of the surveying and stakeout incidental to the proper location by line and grade for each phase of the work. For paving and any other operation requiring extreme accuracy, the Contractor will re-stake with pins or other acceptable hubs located directly adjacent to the work at a spacing directed by the Authority.

Any existing stakes, iron pins, survey monuments or other markers defining property lines which may be disturbed during construction shall be properly tied into fixed reference points before being disturbed and accurately reset in their proper position upon completion of the work.

Just prior to completion of the Contract, the Contractor shall reestablish, if necessary, and retie all control points as permanently as possible and to the satisfaction of the Authority.

104-3.2 AS-BUILT SURVEY. Upon completion of the work, after Substantial Completion and before Final Acceptance, the Contractor shall supply to the Authority a complete as-built survey of the entire limits of the project, including repair limits. All survey points, including horizontal and vertical control, property corners, section corner and reference (hereinafter referred to as "survey point") shall be clearly marked and referenced prior to construction. These survey points must be sufficiently referenced so that they can be reestablished after construction if they are disturbed. All survey data shall be state plane coordinates, NAD 83 datum. Elevations shall be provided in NGVD 88 datum unless otherwise noted by the Authority.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

This as-built survey will be a complete physical features survey of the entire project site on a maximum 50'x50' grid. If any work is done outside the limits of construction for any reason, this limit of survey will be increased to include this area plus 10'.

This survey shall be certified by a Florida Licensed Professional Land Surveyor as meeting the minimum Technical Standards for topographic surveys as set forth in chapter 5J-17, Florida Administrative Code. The survey data must be supplied as a signed and sealed drawing (11" x 17" maximum size) at a minimum scale of 1"=50' and be electronically submitted in AutoCAD V2018 or later on CD-ROM media. Signed and sealed copies of all field notes, sketches and calculations must be submitted concurrently with the as-built survey. Larger scale details shall be provided to clarify any complicated or complex areas. A separate point database file shall be electronically submitted in TXT or ASCII format, with each point on a single row with comma delimited columns with data ordered as follows: point number, northing, easting, elevation, and description.

The as-built survey is to be supplied to the Authority for review and approval not more than thirty (30) calendar days after substantial completion for the project has been given. If the acceptable surveys are not supplied within the required time, the Owner reserves the right to perform the required survey and bill the Contractor for this work.

METHOD OF MEASUREMENT

104-4.1 Payment will be made at the lump sum price bid for this item.

BASIS OF PAYMENT

104-5.1 The lump sum price bid shall include the cost of furnishing all labor, equipment, instruments, and all other material necessary to satisfactorily complete the Project stakeout and as built survey. Seventy-five percent (75%) of this item will be paid based on the percentage of work paid for a month vs. the total project cost. The remaining twenty-five percent (25%) will be paid after the as-built survey has been given the Authority and approved.

This item will not be increased or decreased based on changes to the total contract amount.

Payment will be made under:

Item C-104-1 Project Survey and Stakeout – per lump sum

In the event the contract completion date is extended, or additional work is added to the project, no additional payment will be made for the survey and stakeout unless otherwise addressed by change order.

END OF ITEM C-104

INTENTIONALLY LEFT BLANK

ITEM C-105
MOBILIZATION AND GENERAL CONDITIONS

DESCRIPTION

105-1.1 This item of work shall consist of the preparatory work and operations in mobilizing for the project, including, but not limited to, the movement of personnel, equipment, supplies, materials and incidentals to the project site, and the establishment of temporary offices, shops, material storage areas, equipment and personnel vehicle parks, utility services, safety and security measures, first aid supplies, sanitary and other facilities, etc., except as provided in the contract as separate pay items. The maintenance and removal of these facilities and incidentals at the end of the project are also included in this item.

105-1.2 The costs of bonds and any required insurance and other preconstruction expense necessary for the start of the work, excluding the cost of construction materials, shall be included in this item.

105-1.3 This item of work will also include any other item or items of work shown, implied or required for the completion of the project that are not directly paid for under other pay items.

105-1.4 All costs associated with the required meetings and coordination with the Authority and Architect/Engineer. In addition, all costs associated the quality control plan requirements, as well as preparation and maintenance of the project schedule, shall be included in this item.

100-1.5 Demobilization. The Contractor shall completely demobilize and remove from the project site all equipment, vehicles, materials, offices, and waste within 10 days of final acceptance. Retainage will not be released for the project until the Contactor has completely demobilized from the project site.

105-1.6 Mobilization limit. Mobilization shall be limited to 10 percent of the total project cost.

105-1.7 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

METHOD OF MEASUREMENT

105-2.1 Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

a. A negotiated percentage based on documentable costs will be paid with the first pay request. The amount will be negotiated between the Owner, Contractor, and Engineer prior to the first pay request.

b. Each subsequent pay request will include equal payments derived as follows: 100% less the negotiated initial payment divided by the total duration of the project in months.

c. The final equal installment will be paid after final inspection and delivery of all project close-out materials as outlined in the Contract Documents is complete.

The Owner reserves the right to adjust the above payment schedule if agreed to by the Owner, Contractor, and Engineer. Should a payment adjustment occur, the remaining Mobilization cost will be adjusted such that it is paid in equal installments spread over the remainder of the project duration.

The item of Mobilization shall be measured as a lump sum item when required and furnished for the life of the Contract.

BASIS OF PAYMENT

105-3.1 The work and incidental costs covered under this item will be paid for at the Contract lump sum price for the item of mobilization and general conditions. No additional payment will be made for demobilization and/or remobilization due to project shutdowns or suspensions of the work identified in the project documents. No payment for any percentage of construction mobilization shall be made until the Contractor's initial project schedule is approved by the Engineer and Authority.

105-3.2 Payment will be made under:

Item C-105-1 Mobilization – per Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

ITEM C-106

MAINTENANCE OF TRAFFIC AND TEMPORARY CONSTRUCTION ITEMS

DESCRIPTION

106-1.1 This item consists of furnishing all labor, materials, and equipment for temporary construction items necessary for the safe and proper execution of work and not otherwise included in other contract bid items. The Contractor will be expected to supply and utilize the items listed below and other items contained in the plans and specifications. Temporary construction items to be provided include, but are not limited to the following: flaggers, steel plates for temporary covering of excavations and structures as required, temporary excavation shoring, construction barricades, temporary traffic control device materials, signage coverings, test pitting, and men and equipment as needed to keep all areas free of debris.

All Maintenance of Traffic (MOT), including all facilities, devices, and operations as required for safety and convenience of the public within the work zone must follow FDOT Section 102 Maintenance of Traffic requirements listed in the July 2022 release.

MATERIALS AND PLACEMENT

106-2.1 CONSTRUCTION BARRICADES. Construction barricades shall be constructed in accordance with the details shown in the plans and shall be placed in accordance with the Work Area Plans and Phasing Notes. The Contractor shall furnish, place and maintain temporary barricades as required and/or as directed by the Authority. Contractor must provide enough barricades as required to segregate work areas from active aircraft and/or vehicular operations, with barricades spaced at 12 feet maximum, center to center. Barricades shall be low mass and easily collapsible. Also, the Contractor shall furnish suitable and sufficient direction and warning signs, orange flags, battery powered red warning lights (at least 10 candelas for steady burning) of the type approved by the Authority.

Lights, barricades, and other protective devices shall be relocated as required to conform to airport operations. The Contractor will not be paid separately for furnishing, placing, relocating and maintaining barricades, lights, danger signals, etc., and shall make due allowance in the bid, in the applicable items of work, to cover such non-productive costs.

106-2.2 PORTABLE FLOODLIGHTING. Portable floodlighting shall be provided, as required, for construction which occurs during nighttime operations. The Contractor shall provide sufficient units so that all work areas are illuminated to a level of 5 horizontal foot-candles. Back-up flood lighting shall be provided on-site. The lighting levels shall be calculated and measured in accordance with the current standards of the Illumination Engineering Society.

106-2.3 STEEL PLATES. Steel plates of adequate size and thickness shall be furnished as necessary to cover temporary excavations, unfinished structures or surfaces requiring protection or for safety purposes. Plates shall be securely fastened down and shall be adequate to safely support any anticipated loadings to be imposed. Steel plates are required where the contractor's hauling operations are to cross existing buried utilities.

106-2.4 ORANGE SAFETY FENCE. The Contractor shall provide orange safety fence at the locations as directed. Orange safety fence shall be plastic, shall be secured to the ground with stakes no more than 10' apart, and shall be maintained in neat straight lines according to the plans. Safety fence shall not be installed within active runway and taxiway safety areas. The Contractor shall submit a sample of the material to be provided for approval by the Engineer.

106-2.5 MECHANICAL VACUUM SWEEPERS. Cleaning and maintenance of all paved areas by the use of vacuum type mechanical sweepers will be required as directed by the Authority Airport Operations. The use of a power broom may be allowed if it can remove all debris from the pavement surface without damage to surrounding area (i.e., parked aircraft or hangar buildings) by the throwing of rocks. The removal of dirt, sand, rocks, and other debris from all active pavement areas within the work site or as used for haul routes is of the highest important and must be done continuously during construction. Also, dust control by the use of water trucks or other methods will be as directed by the Authority throughout the project duration. Contractor shall submit list of proposed equipment to the Authority prior to commencement of work.

106-2.6 EQUIPMENT. Red lights shall be placed on stationary equipment, materials, and other obstructions in areas which may be critical to aircraft ground movement as required. Hazardous areas, in which no part of an aircraft may enter, are indicated by use of barricades with alternate orange and white markings. These barricades are supplemented with orange flags a minimum of 20 by 20 inches square and made and installed so that they are always in the extended position and properly oriented. For nighttime use, the barricades shall be supplemented with red lights having a constant burn. The intensity of the lights and spacing for barricades, flags, and lights must be such to adequately define and delineate the hazardous area.

106-2.7 SIGN AND LIGHT COVERS. The Contractor shall provide a secured opaque material covering existing guidance signs and runway/taxiway lights which correspond with the required runway and taxiway closures as shown the phasing plans. The Contractor shall submit to the Authority, for approval, materials to be used prior to installation.

106-2.8 OTHER MISCELLANEOUS ITEMS. Any other items not listed herein but which are associated directly or indirectly with temporary construction related work shall, by reference, be included in the requirements of this specification. No additional payment will be made for any temporary construction related item not specifically listed herein. The Contractor shall be responsible for providing any and all items necessary to ensure a safe, secure and functioning project construction site.

SPECIAL CONSTRUCTION PERSONNEL

106-3.1 FLAGMEN. Flagmen shall be provided, as necessary, to control the Contractor's traffic during the prosecution of work (i.e., into and out of the secured air operations area (AOA) or along public traffic routes). All Contractor vehicles or equipment that are required to cross active airfield pavement only shall do so under the direct control of a competent flagman equipped with an aviation band radio monitoring the appropriate ATC frequency and with the approval of the Owner.

METHOD OF MEASUREMENT

106-4.1 Based upon the contract lump sum price for "Maintenance of Traffic and Temporary Construction

Items” partial payments will be allowed as follows:

- a. A negotiated percentage based on documentable costs will be paid with the first pay request. The amount will be negotiated between the Owner, Contractor and Engineer prior to the first pay request.
- b. Each subsequent pay request will include equal payments derived as follows: 100% less the negotiated initial payment divided by the total duration of the project in months.
- c. The final equal installment will be paid after final inspection and delivery of all project close-out materials as outlined in the Contract Documents is complete.

The Owner reserves the right to adjust the above payment schedule if agreed to by the Owner, Contractor and Engineer. Should a payment adjustment occur, the remaining Maintenance of Traffic and Temporary Construction Items cost will be adjusted such that it is paid in equal installments spread over the remainder of the project duration.

BASIS OF PAYMENT

Payment will be made under:

Item C-106-1	Maintenance of Traffic and Temporary Construction Items – per lump sum
--------------	--

END OF ITEM C-106

INTENTIONALLY LEFT BLANK

SECTION 104
PREVENTION, CONTROL, AND ABATEMENT OF
EROSION AND WATER POLLUTION

104-1 Description.

Provide erosion control measures where work is accomplished in conjunction with the project, to prevent erosion, pollution of water, detrimental effects to public or private property adjacent to the project right-of-way and damage to work on the project.

104-2 General.

Coordinate the installation of temporary erosion control devices with the construction of the permanent erosion control devices to ensure economical, effective, and continuous control of erosion and water pollution throughout the life of the Contract.

104-3 Control of Contractor's Operations Which May Result in Water Pollution.

Prevent contaminants, pollutants, or hazardous substances, as defined in Section 376.301, Florida Statutes, from migrating from the construction site or from materials and equipment into any surface waters, wetlands, groundwater, or property beyond the project limits. Conduct and schedule operations to avoid and minimize pollution or siltation from the project to surface waters, wetlands, groundwater, or property beyond the project limits.

Do not drive in, operate, or place construction equipment or materials in surface waters, wetlands, groundwater, or property beyond the project limits without permitted authority for permanent or temporary impacts. Water crossings or other wetlands impacts must be authorized by permit. Obstructing or impeding the water flow or movement of the water or wildlife must be authorized by permit.

Where pumps are used to remove highly turbid waters from enclosed construction areas such as cofferdams or forms, treat the water by one or more of the following methods prior to discharge from the project: pumping into grassed swales or appropriate upland vegetated areas or constructed sediment basins, or confined by an appropriate enclosure such as turbidity barriers when other methods are not practical. Do not discharge water that does not meet State water quality standards or does not meet the criteria specified in any applicable permit.

Remove sediment accumulated during construction from all existing or newly constructed stormwater facilities prior to final acceptance. Ensure that all stormwater conveyances and stormwater facilities meet final grade requirements at final acceptance. Remove silt or regrade as necessary to comply with the lines and grades shown in the Plans.

Do not enter onto lands or waters outside the limits of construction as staked, except as authorized by the Engineer. Do not allow water that does not meet state water quality standards or does not meet the permitted criteria to exit the project limits.

Obtain the Engineer's approval for the location and method of operation in borrow pits, material pits, and disposal areas furnished for waste material from the project (other than commercially operated sources) such that erosion during and after completion of the work will not result in detrimental siltation or water pollution.

104-4 Materials for Temporary Erosion Control.

For materials that are part of the permanent work, meet the testing requirements of the applicable permanent materials.

For materials not part of the permanent work, no testing is required; acceptance will be based on visual inspection

Use new or used materials for the construction of temporary silt fence, staked turbidity barriers, and floating turbidity barrier not to be incorporated into the completed project

For geotextile fabrics, use a product on the Approved Product List (APL) meeting the requirements of Section 985.

104-5 Preconstruction Requirements.

Prior to the Preconstruction Conference, submit an Erosion and Sediment Control Plan meeting the requirements or special conditions of all permits authorizing project construction. If no permits are required or the approved permits do not contain special conditions or specifically address erosion and water pollution, the project’s Erosion and Sediment Control Plan will be governed by 7-1.1, 7-2.2, 7-8.1, 7-8.2, and Section 104.

When a DEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities permit is issued, the Contractor’s Erosion and Sediment Control Plan shall be prepared to accompany the Department’s Stormwater Pollution Prevention Plan. Ensure the Erosion and Sediment Control Plan includes procedures to control off-site tracking of soil by vehicles and construction equipment and a procedure for cleanup and reporting of non-storm water discharges, such as contaminated groundwater or accidental spills. Do not begin any soil disturbing activities before receiving the Engineer’s written approval of the Erosion and Sediment Control Plan, including the required signed certification statements.

Failure to sign and submit any required documents or certification statements will be considered a default of the Contract. Any soil disturbing activities performed without the required signed documents or certification statements is considered a violation of the DEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

Prepare a site-specific Erosion and Sediment Control Plan in accordance with the planned sequence of operations and present it in a format acceptable to the Department. The Erosion and Sediment Control Plan shall describe, but not be limited to, the following items or activities:

1. For each phase of construction operations or activities, supply the following information:

- a. Locations of all erosion control devices
- b. Types of all erosion control devices
- c. Estimated time erosion control devices will be in operation
- d. Monitoring schedules for maintenance of erosion control devices
- e. Methods of maintaining erosion control devices
- f. Dewatering plan
- g. Locations of all stored fuel or other containments, pollutants or hazardous waste
- h. Spill prevention and response measures and disposal and removal methods
- i. Submit any changes to the Erosion and Sediment Control Plan within seven calendar days

2. The name and telephone number of the person responsible for monitoring and maintaining the erosion control devices.

3. Submit for approval the Erosion and Sediment Control Plans meeting paragraphs 3a, 3b, or 3c below:

a. Projects permitted by the Southwest Florida Water Management District (SWFWMD), require the following:

Submit the Erosion and Sediment Control Plan to the Engineer for review and to the appropriate SWFWMD Office for review and approval. Include the SWFWMD permit number on all submitted data or correspondence.

The Contractor may schedule a meeting with the appropriate SWFWMD Office to discuss the Erosion and Sediment Control Plan in detail, to expedite the review and approval process. Advise the Engineer of the time and place of any meetings scheduled with SWFWMD.

Do not begin construction activities until the Erosion and Sediment Control Plan receives written approval from both SWFWMD and the Engineer.

b. Projects permitted by the South Florida Water Management District or the St. Johns River Water Management District, require the following:

Obtain the Engineer's approval of the Erosion and Sediment Control Plan.

Do not begin construction activities until the Erosion and Sediment Control Plan receives written approval from the Engineer.

c. Projects authorized by permitting agencies other than the Water Management Districts or projects for which no permits are required require the following:

The Engineer will review and approve the Contractor's Erosion and Sediment Erosion Control Plan.

Do not begin construction activities until the Erosion and Sediment Control Plan receives written approval from the Engineer.

104-6 Construction Requirements.

104-6.1 Limitation of Exposure of Erodible Earth: Do not allow the surface area of erodible earth that clearing and grubbing operations, excavation and filling operations, or other earth disturbing activities to exceed 750,000 square feet without specific prior written approval by the Engineer. This limitation applies separately to clearing and grubbing operations and excavation and filling operations.

The Engineer may further limit the surface areas of unprotected erodible earth exposed by the construction operation and may direct the Contractor to provide additional erosion or pollution control measures to prevent contamination of any surface waters, wetlands, or groundwater or to prevent detrimental effects on property outside the project limits or damage to the project.

104-6.2 Incorporation of Erosion and Sediment Control Devices: Incorporate permanent erosion and sediment control devices into the project at the earliest practical time. Complete the installation of temporary erosion and sediment control devices prior to the commencement of any earthwork. Use temporary erosion and sediment control devices found in the State of Florida Erosion and Sediment Control Designer and Reviewer Manual (E&SC Manual) to control erosion and sediment generated by construction operations, to correct unforeseen conditions during construction, and to control erosion and sediment prior to the incorporation of permanent erosion and sediment control devices. An electronic version of the E&SC Manual can be found at the following URL:

<https://www.fdot.gov/programmanagement/Implemented/URLinSpecs/FLerosionSedimentManual.shtm>.

104-6.3 Scheduling of Successive Operations: Schedule operations such that the area of unprotected erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operations, and the duration of exposure of uncompleted construction to the elements is as short as practicable.

Schedule and perform clearing and grubbing such that grading operations can be incorporated immediately thereafter. Schedule and perform grading operations so that permanent erosion control devices can follow immediately thereafter if conditions on the project permit.

104-6.4 Details for Temporary Erosion and Sediment Control Devices:

104-6.4.1 General: Use temporary erosion, sediment and water pollution control devices found in the E&SC Manual. These devices consist of, but are not limited to, temporary sod, rolled erosion control products, sediment containment systems, runoff control structures, sediment barriers, inlet protection systems, silt fences, turbidity barriers, and chemical treatment. For design details for some of these devices, refer to the E&SC Manual. Perform installation, inspection, maintenance, and removal of all temporary erosion and sediment control devices in accordance with applicable permits, manufacturer's directions, and the Contract Documents.

104-6.4.2 Temporary Sod: The Engineer may designate certain areas of sod constructed in accordance with Section 570, as a temporary erosion control device. Do not use seed as a temporary erosion control device. The Engineer may waive the turf establishment requirements of Section 570 for areas of temporary sod that will not be a part of the permanent construction.

104-6.4.3 Runoff Control Structures: Construct runoff control structures in accordance with the details shown in the Contract Documents.

104-6.4.4 Sediment Containment Systems: Construct sediment containment systems in accordance with the details shown in the Contract Documents. Clean out sediment containment systems as necessary in accordance with the Contract Documents.

104-6.4.5 Sediment Barriers: Provide and install sediment barriers according to details shown in the Contract Documents or, as directed by the Engineer to protect against downstream accumulation of sediment. Sediment Barriers include, but are not limited to synthetic bales, silt fence, fiber logs and geosynthetic barriers. Reusable barriers that have had sediment deposits removed may be reinstalled on the project as approved by the Engineer.

104-6.4.6 Silt Fence:

104-6.4.6.1 General: Furnish, install, maintain, and remove silt fences, in accordance with the applicable permits, the manufacturer's directions, and the Contract Documents.

104-6.4.6.2 Materials and Installation: Use a geotextile fabric made from woven or nonwoven fabric, meeting the physical requirements of Section 985 according to those applications for erosion control.

Choose the type and size of posts and wire mesh reinforcement (if required). Do not use products which have a separate layer of plastic mesh or netting. Provide a durable and effective silt fence that controls sediment in accordance with the Contract Documents.

Erect silt fence at upland locations and at temporary locations shown in the Contract Documents or where continuous construction activities change the natural contour and drainage runoff. Do not attach silt fence to existing trees unless approved by the Engineer.

104-6.4.6.3 Inspection and Maintenance: Inspect all silt fences in accordance with any applicable permit. If the project does not have a permit, inspect within 24 hours after each rain event and at least daily during prolonged rainfall. Immediately correct any deficiencies. In addition, make a daily review of the location of silt fences in areas where construction activities have changed the natural contour and drainage runoff to ensure that the silt fences are properly located for effectiveness. Where deficiencies exist, repair, or replace silt fences in accordance with the Contract Documents or as directed by the Engineer.

Remove sediment deposits when the deposit reaches approximately 1/2 the height of the silt fence or as directed by the Engineer. Shape any remaining sediment deposits to conform with the finished grade and prepare the area for turf in accordance with Section 570.

104-6.4.7 Floating Turbidity Barriers and Staked Turbidity Barriers: Furnish, install, maintain, and remove floating turbidity barriers in accordance with the applicable permits, the manufacturer's directions, and the Contract Documents. The Contractor may need to deploy turbidity barriers around isolated areas of concern (such as, seagrass beds, coral communities) both within as well as outside the project limits. The Engineer will identify such areas. Place the barriers prior to the commencement of any work that could impact the area of concern. Ensure that the type of barrier used and the deployment and maintenance of the barrier will minimize dispersion of turbid waters from the project. The Engineer may approve alternate methods or materials.

Install and maintain turbidity barriers to avoid or minimize the degradation of the water quality of the surrounding waters and minimize damage to areas where the floating barriers are installed.

104-6.4.8 Inlet Protection System: Furnish and install inlet protection systems as shown in the Contract Documents.

104-6.4.9 Rolled Erosion Control Products (RECPs):

104-6.4.9.1 General: Install RECPs in locations where temporary protection from erosion is needed. Two common applications are described below.

1. Use RECPs composed of natural or synthetic fiber mats, plastic sheeting, or netting as protection against erosion, when directed by the Engineer, during temporary pauses in construction caused by inclement weather or other circumstances. Remove the material when construction resumes.

2. Use RECPs as erosion control blankets, at locations shown in the Plans, to facilitate plant growth while permanent grassing is being established. For the purpose described, use non-toxic, biodegradable, natural or synthetic woven fiber mats. Install erosion control blankets capable of sustaining a maximum design velocity of 6.5 ft/sec as determined from tests performed by Utah State University, Texas Transportation Institute or an independent testing laboratory approved by the Department. Submit to the Engineer, certified test reports from the manufacturer showing that the erosion control blankets meet the requirements of this Specification. Certification must be attested, by a person having legal authority to bind the manufacturing company. Also, furnish two 4 by 8-inch samples for product identification. The manufacturers test records shall be made available to the Department upon request. Leave the material in place, as installed, to biodegrade.

104-6.4.10 Chemical Treatment: Provide chemical treatment in accordance with the Contract Documents. Chemical treatment may be used to clarify turbid or sediment laden water that does not meet state water quality standards or to supplement other erosion and

sediment control devices to aid in their performance. The contractor must provide the required toxicity testing information in accordance with the Contract Documents to the Engineer for review and acceptance prior to using any chemical treatment on the project site.

104-6.5 Removal of Temporary Erosion Control Devices: In general, remove or incorporate into the soil any temporary erosion control devices upon incorporation of the permanent erosion control devices into the project. The Engineer may direct that temporary devices be left in place.

104-7 Maintenance of Erosion and Sediment Control Devices.

104-7.1 General: Provide routine maintenance of permanent and temporary erosion and sediment control devices, at no expense to the Department, until the project is complete and accepted. If reconstruction or replacement of erosion and sediment control devices is necessary due to the Contractor's negligence or carelessness or, in the case of temporary erosion and sediment control devices, improper installation, lack of maintenance, excessive wear, design-life exceedance or failure by the Contractor to install permanent erosion control devices as scheduled, the Contractor shall repair or replace such erosion control devices at no expense to the Department. If reconstruction of permanent or temporary erosion and sediment control devices is necessary due to factors beyond the control of the Contractor, the Department will pay for replacement under the appropriate Contract pay item or items.

Inspect all erosion and sediment control devices at least once every seven calendar days and within 24 hours of the end of a storm event that is 0.50 inches or greater. Maintain all erosion and sediment control devices as required in the Stormwater Pollution Prevention Plan, the Contractor's Erosion and Sediment Control Plan, and if applicable, as specified in the State of Florida Department of Environmental Protection Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

104-8 Protection During Suspension of Contract Time.

Initiate stabilization measures within seven calendar days upon suspension of construction activities. If it is necessary to suspend the construction operations for any appreciable length of time, shape the disturbed areas to facilitate stormwater runoff and construct earthen berms along the top edges of embankments to intercept stormwater runoff. Provide temporary slope drains in areas that are highly erodible to avoid pollution of surface waters, wetlands, groundwater, or property beyond the project limits. Locate slope drains at intervals of approximately 500 feet and stabilize by paving or covering with waterproof materials. Should such preventive measures fail, immediately take action as necessary to effectively prevent erosion and siltation. During suspension of operations, the Engineer may direct the Contractor to perform additional erosion and sediment control work as necessary.

104-9 Method of Measurement.

Protection of newly constructed inlets and drainage systems is incidental to their installation. No separate payment will be made for temporary erosion control devices used to protect newly constructed drainage systems.

104-10 Basis of Payment.

Prices and payments will be full compensation for all work specified in this Section, including construction and routine maintenance of temporary erosion control devices.

Any additional costs resulting from compliance with the requirements of this Section, other than construction, routine maintenance, and removal of temporary erosion control devices, will be included in the Contract unit prices for the item or items to which such costs are related. Temporary sod used as a temporary erosion control device in accordance with 104-6.4.2 will be paid for under Section 570.

Separate payment will not be made for the cost of constructing temporary earth berms

along the edges of the roadways to prevent erosion during grading and subsequent operations. The Contractor shall include these costs in the Contract prices for grading items.

In case of repeated failure on the part of the Contractor to control erosion, pollution, or siltation, the Engineer reserves the right to employ outside assistance or to use the Department's own forces to provide the necessary corrective measures. Any such costs incurred, including engineering costs, will be charged to the Contractor and appropriate deductions made from the monthly progress estimate.

Payment will be made under:

Item No. 104- 1- Temporary Erosion and Sedimentation Control – Per Lump Sum

END OF ITEM FL-104

SECTION 110

CLEARING AND GRUBBING

110-1 Description.

Clear and grub within the areas shown in the Plans. Remove and dispose of all trees, stumps, roots and other such protruding objects, buildings, structures, appurtenances, existing flexible asphalt pavement, and other facilities necessary to prepare the area for the proposed construction. Remove and dispose of all product and debris not required to be salvaged or not required to complete the construction.

Perform miscellaneous work necessary for the complete preparation of the overall project site as specified in 110-10.

110-2 Standard Clearing and Grubbing.

110-2.1 Work Included: Completely remove and dispose of all buildings, timber, brush, trees, stumps, roots, rubbish, debris, existing flexible pavement and base, drainage structures, culverts, and pipes. Remove all other obstructions resting on or protruding through the surface of the existing ground and the surface of excavated areas.

Perform standard clearing and grubbing within the following areas:

1. All areas where excavation is to be done, including borrow pits, lateral ditches, right-of-way ditches, etc.
2. If constructing over an existing road, remove existing asphalt pavement. If shown in the Contract Documents, remove existing pavement base.
3. All areas where roadway embankments will be constructed.
4. All areas where structures will be constructed, including pipe culverts and other pipe lines.

110-2.2 Depths of Removal of Roots, Stumps, and Other Debris: In all areas where excavation is to be performed, or roadway embankments are to be constructed, remove roots and other debris to a depth of 12 inches below the ground surface. Remove roots and other debris from all excavated material to be used in the construction of roadway embankment or roadway base. Plow the surface to a depth of at least 6 inches, and remove all roots thereby exposed to a depth of at least 12 inches. Completely remove and dispose of all stumps within the roadway right-of-way.

Remove all roots, etc., protruding through or appearing on the surface of the completed excavation within the roadway area and for structures, to a depth of at least 12 inches below the finished excavation surface.

Remove or cut off all stumps, roots, etc., below the surface of the completed excavation in borrow pits, material pits, and lateral ditches.

In borrow and material pits, do not perform any clearing or grubbing within 3 feet inside the right-of-way line.

Within all other areas where standard clearing and grubbing is to be performed, remove roots and other debris projecting through or appearing on the surface of the original ground to a depth of 12 inches below the surface, but do not plow or harrow these areas.

110-2.3 Boulders: Remove any boulders encountered in the roadway excavation (other than as permitted under the provisions of 120-7.2) or found on the surface of the ground. When approved by the Engineer place boulders in neat piles inside the right of way. The Contractor may stockpile boulders encountered in Department-furnished borrow areas, which are not suitable for use in the embankment construction, within the borrow area.

110-2.4 Asbestos Containing Materials (ACM) Not Identified Prior to the Work: When

encountering or exposing any condition indicating the presence of asbestos, cease operations immediately in the vicinity and notify the Engineer, in accordance with 110-6.5.

110-3 Selective Clearing and Grubbing.

110-3.1 General: Remove and dispose of vegetation, obstructions, etc., as shown in the Plans. Provide acceptable fill material, and grade and compact holes or voids created by the removal of the stumps. Perform all selective clearing and grubbing in accordance with ANSI A300.

No staging, storing, stockpiling, parking, or dumping will be allowed in selective clearing and grubbing areas. Only mechanical equipment related to selective clearing and grubbing activities will be allowed in selective clearing and grubbing areas. Protect trees to remain from trunk, branch, and root damage.

110-3.2 Protection of Plant Preservation Areas: Areas to remain natural may be designated in the Plans. No clearing and grubbing, staging, storage, stockpiling, parking, or dumping is allowed in these areas. Do not bring equipment into these areas.

110-3.3 Tree Protection Barrier: Construct a tree protection barrier in accordance with Standard Plans Index 110-100 and the Plans. Maintain barrier for duration of the Contract.

110-3.4 Tree Root and Branch Pruning: When pruning cuts or root pruning to existing trees are shown in the Plans, work is to be supervised on site by an International Society of Arboriculture (ISA) Certified Arborist and performed in accordance with ANSI A300.

110-3.5 Tree Removal: Remove trees as shown in the Plans.

110-4 Protection of Property Remaining in Place.

Protect property to remain in place in accordance with 7-11.

110-5 Removal of Buildings.

110-5.1 Parts to be Removed: Completely remove all parts of the buildings, including utilities, plumbing, foundations, floors, basements, steps, connecting concrete sidewalks or other pavement, septic tanks, and any other appurtenances, by any practical manner which is not detrimental to other property and improvements.

Remove utilities to the point of connection to the utility authority's cut-in. After removing the sewer connections to the point of cut-in, construct a concrete plug at the cut-in point, as directed by the Engineer, except where the utility owners may elect to perform their own plugging. Contact the appropriate utility companies prior to removal of any part of the building to ensure disconnection of services.

Submit demolition schedule 15 working days before beginning any demolition or renovation of a building.

110-5.2 Removal by Others: Where buildings within the area to be cleared and grubbed are so specified to be removed by others, remove and dispose of any foundations, curtain walls, concrete floors, basements or other foundation parts which might be left in place after such removal of buildings by others.

110-6 Removal of Existing Bridges.

110-6.1 General: The work under this Article includes bridges, as defined in 1-3.

Remove and dispose of the materials from existing bridges. Remove

1. those bridges and approach slabs, or portions of bridges, shown in the Plans to be removed,
2. those bridges and approach slabs, or portions of bridges, found within the limits of the area to be cleared and grubbed, and directed by the Engineer to be removed,
3. those bridges and approach slabs, or portion of bridges, which are necessary to be removed in order to complete the work, and
4. other appurtenances or obstructions which may be designated in the Contract Documents to be included as an item of payment for the work under this Article.

Submit schedule information and demolition plan for approval 15 working days before beginning any demolition or renovation of any structures.

110-6.2 Method of Removal:

110-6.2.1 General: Remove the structures in such a way so as to leave no obstructions to any proposed new bridge or to any waterways. Pull, cut off, or break off pilings to the requirements of the permit or other Contract Documents, or if not specified, not less than 2 feet below the finished graded surface. In the event that the Plans indicate channel excavation to be done by others, consider the finished graded surface as the limits of such excavation. For materials which are to remain the property of the Department or are to be salvaged for use in temporary bridges, avoid damage to such materials, and entirely remove all bolts, nails, etc. from timbers to be so salvaged. Mark structural steel members for identification as directed.

110-6.2.2 Removal of Steel Members with Hazardous Coatings: Submit to the Engineer for approval the "Contractor's Lead in Construction Compliance Program", QP2 certification from the Society for Protective Coatings (SSPC) from the firm actually removing and disposing of these steel members before any members are disturbed.

Vacuum power tool clean any coated steel member to bare metal as defined by SSPC-SP11 a minimum of 4 inches either side of any area to be heated (e.g. torch cutting, sawing, grinding, etc.) in accordance with 29 CFR 1926.354. Abrasive blasting is prohibited.

110-6.3 Partial Removal of Bridges: On concrete bridges to be partially removed and widened, remove concrete by manually or mechanically operated pavement breakers, by concrete saws, by chipping hammers, or by hydro-demolition methods. Do not use explosives. Where concrete is to be removed to neat lines, use concrete saws or hydro-demolition methods capable of providing a reasonably uniform cleavage face. If the equipment used will not provide a uniform cut without surface spalling, first score the outlines of the work with small trenches or grooves. For all demolition methods, submit for review and approval of the Engineer, a demolition plan that describes the method of removal, equipment to be used, types of rebar splices or couplers, and method of straightening or cutting rebar. In addition, for hydro- demolition, describe the method for control of water or slurry runoff and measures for safe containment of concrete fragments that are thrown out by the hydro-demolition machine.

110-6.4 Authority of U.S. Coast Guard: For bridges in navigable waters, when constructing the project under authority of a U.S. Coast Guard permit, the U.S. Coast Guard may inspect and approve the work to remove any existing bridges involved therein, prior to acceptance by the Department.

110-6.5 Asbestos Containing Materials (ACM) Not Identified Prior to the Work: When encountering or exposing any condition indicating the presence of asbestos, cease operations immediately in the vicinity and notify the Engineer.

Make every effort to minimize the disturbance of the ACM. Immediately provide provisions for the health and safety of all jobsite personnel and the public that may be exposed to

any ACM. Provisions shall meet all applicable Federal, State, and Local Rules and Regulations regarding potentially hazardous conditions due to ACM.

The Engineer will notify the District Contamination Impact Coordinator (DCIC) who will engage the services of the Department's Contamination Assessment/Remediation Contractor (CAR). Provide access to the potential contamination area. Preliminary investigation by the CAR Contractor will determine the course of action necessary for site security and the steps necessary to resolve the contamination issue.

The CAR Contractor will perform an asbestos survey to delineate the asbestos areas, and identify any staging or holding areas that will be needed for assessment or abatement of the asbestos material.

The CAR Contractor will maintain jurisdiction over activities within areas contaminated with ACM including staging and holding areas. The CAR Contractor will be responsible for the health and safety of workers within these delineated areas. Provide continuous access to these areas for the CAR Contractor and representatives of regulatory or enforcement agencies having jurisdiction.

Coordinate with the CAR Contractor and Engineer to develop a work plan with projected completion dates for the final resolution of the contamination, in coordination with any regulatory agencies as appropriate. Use the work plan and schedule as a basis for planning the completion of all work efforts. The Engineer may grant Contract Time extensions according to the provisions of 8-7.3.2.

Cooperate with the CAR Contractor to expedite integration of the CAR Contractor's operations into the construction project. Adjustments to quantities or to Contract unit prices will be made according to work additions or reductions on the part of the Prime Contractor in accordance with 4-3.

The Engineer will inform the Prime Contractor when operations may resume in the affected area.

110-7 Removal of Existing Concrete.

Remove and dispose of existing Portland cement concrete pavement, sidewalk, slope pavement, ditch pavement, curb, and curb and gutter, etc., where shown in the Plans.

Remove all gravity walls, noise/sound walls, retaining walls, MSE walls, perimeter walls, and roadway concrete barriers, where shown in the Plans. All ancillary elements of these concrete features being removed including, but not limited to, base, leveling pads, copings, reinforcing steel or straps, footings, edge drains, etc, are incidental and included in the cost of the removal.

110-8 Ownership of Materials.

Except as may be otherwise specified in the Contract Documents, take ownership of all buildings, structures, appurtenances, and other materials removed and dispose of them in accordance with 110-9.

110-9 Disposal of Materials.

110-9.1 General: Either stack materials designated to remain the property of the Department in neat piles within the right-of-way, load onto the Department's vehicles, or deliver to location designated in the Plans.

Dispose of timber, stumps, brush, roots, rubbish, and other material resulting from clearing and grubbing in areas and by methods meeting the applicable requirements of all Federal, State and Local Rules and Regulations. Do not block waterways by the disposal of debris.

With the approval of the Engineer, wood chips may be evenly distributed to a depth of no more than one inch in designated areas in the Department's right-of-way.

110-9.2 Burning Debris: Where burning of such materials is permitted, perform all such burning in accordance with the applicable Federal, State and Local rules and regulations. Perform all burning at locations where trees and shrubs adjacent to the cleared area will not be harmed.

110-9.3 Timber and Crops: The Contractor may sell any merchantable timber, fruit trees, and crops that are cleared under the operations of clearing and grubbing for his own benefit, subject to the provisions of 7-1.2, which may require that the timber, fruit trees, or crops be burned at or near the site of their removal, as directed by the Engineer. The Contractor is liable for any claims which may arise pursuant to the provisions of this Subarticle.

110-9.4 Disposal of Treated Wood: Treated wood must be handled and disposed of properly during removal. Treated wood should not be cut or otherwise mechanically altered in a manner that would generate dust or particles without proper respiratory and dermal protection. The treated wood must be disposed of in at least a lined solid waste facility or through recycling/reuse. Treated wood shall not be disposed by burning or placement in a construction and demolition (C&D) debris landfill.

110-9.5 Hazardous Materials/Waste: Handle, transport, and dispose of hazardous materials/waste in accordance with all Federal, State, and Local Rules and Regulations including, but not limited to, the following:

1. SSPC Guide 7
2. Federal Water Pollution Control Act, and
3. Resource Conservation and Recover Act (RCRA).

Accept responsibility for the collection, sampling, classification, packaging, labeling, accumulation time, storage, manifesting, transportation, treatment and disposal of hazardous materials/waste, both solid and liquid. Separate all solid and liquid waste and collect all liquids used at hygiene stations and handle as hazardous materials/waste. Obtain written approval from the Engineer for all hazardous materials/waste stabilization methods before implementation.

Obtain an EPA/FDEP Hazardous Waste Identification Number (EPA/FDEP ID Number) before transporting and/or disposal of any hazardous materials/waste.

List the Department as the generator for hazardous materials/waste resulting from removal or demolition of Department materials.

Submit the following for the Engineers' approval before transporting, treatment or disposal of any hazardous materials/waste:

1. Name, address, and qualifications of the transporter,
2. Name, address, and qualifications of the treatment facility,
3. Proposed treatment and/or disposal of all Hazardous Materials/Waste.
4. EPA/FDEP Hazardous Waste Identification Number Application Form.
5. Manifest forms.

Transport all hazardous materials/waste in accordance with applicable Federal, State, and Local Rules and Regulations including, but not limited to, the 40 CFR 263 Standards.

Submit all final Hazardous Materials/Waste manifest/bills of lading and certificates of disposal to the Engineer within 21 days of each shipment.

110-9.5.1 Steel Members with Hazardous Coating: Dispose of steel members with hazardous coating in one of the following manners:

1. Deliver the steel members and other hazardous waste to a licensed recycling or treatment facility capable of processing steel members with hazardous coating.
2. Deliver the steel members with hazardous coating to a site designated by the Engineer for use as an offshore artificial reef. Deliver any other hazardous materials/waste to a licensed hazardous materials/waste recycling treatment facility.

Dismantle and/or cut steel members to meet the required dimensions of the recycling facility, treatment facility or offshore artificial reef agency.

All compensation for the cost of removal and disposal of hazardous materials/waste will be included in the Cost of Removal of Existing Structures.

110-9.5.2 Certification of Compliance: Submit certification of Compliance from the firm actually removing and disposing of the hazardous materials/waste stipulating, the hazardous materials/waste has been handled, transported and disposed of in accordance with this Specification. The Certification of Compliance shall be attested to by a person having legal authority to bind the company.

Maintain all records required by this Specification and ensure these records are available to the Department upon request.

110-10 Miscellaneous Operations.

110-10.1 Water Wells Required to be Plugged: Fill or plug all water wells within the right-of-way, including areas of borrow pits and lateral ditches, that are not to remain in service, in accordance with applicable Federal, State, and Local Rules and Regulations.

Cut off the casing of cased wells at least 12 inches below the existing surface or 12 inches below the elevation of the finished graded surface, whichever is lower. Water wells, as referred to herein, are defined either as artesian or non-artesian, as follows:

1. An artesian well is an artificial hole in the ground from which water supplies may be obtained and which penetrates any water-bearing rock, the water in which is raised to the surface by natural flow or which rises to an elevation above the top of the water-bearing bed. Artesian wells are further defined to include all holes drilled as a source of water that penetrate any water-bearing beds that are a part of the artesian water system of Florida, as determined by representatives of the applicable Water Management District.

2. A non-artesian (water-table) well is a well in which the source of water is an unconfined aquifer. The water in a non-artesian well does not rise above the source bed.

110-10.2 Leveling Terrain: Within the areas between the limits of construction and the outer limits of clearing and grubbing, fill all holes and other depressions, and cut down all mounds and ridges. Make the area of a sufficient uniform contour so that the Department's subsequent mowing and cutting operations are not hindered by irregularity of terrain. Perform this work regardless of whether the irregularities were the result of construction operations or existed originally.

110-10.3 Mailboxes: When the Contract Documents require furnishing and installing mailboxes, permit each owner to remove the existing mailbox. Work with the Local Postmaster to develop a method of temporary mail service for the period between removal and installation of the new mailboxes. Install the mailboxes in accordance with the Standard Plans.

110-11 Method of Measurement.

110-11.1 Clearing and Grubbing: The quantity to be paid for will be the lump sum quantity.

110-11.2 Selective Clearing and Grubbing: The quantity to be paid will be the plan quantity area in acres designated for Selective Clearing and Grubbing. The quantity to be paid for Tree Protection Barrier will be the linear foot measurement as shown in the Plans. Tree Root, Branch Pruning, and Tree Removal will be paid per each tree. Tree Removal per each will not be used where Clearing and Grubbing or Selective Clearing and Grubbing per acre is used.

110-11.3 Removal of Existing Bridges: The quantity to be paid for will be the lump sum quantity or quantities for the specific structures, or portions of structures to be removed.

110-11.4 Removal of Existing Concrete:

The quantity to be paid for will be the number of square yards of existing concrete elements, acceptably removed and disposed of, as specified. The quantity will be determined by actual measurement along the surface of the element before its removal. Measurements for appurtenances which have irregular surface configurations, such as curb and gutter, steps, and ditch pavement, will be the area as projected to an approximate horizontal plane. Where the removal of pavement areas is necessary only for the construction of box culverts, pipe culverts, storm sewers, inlets, manholes, etc., these areas will not be included in the measurements.

Area measurements for walls will be based on exposed vertical face measurements times the horizontal length of the wall.

110-11.5 Plugging Water Wells: The quantity to be paid for will be the number of water wells plugged, for each type of well (artesian or non-artesian).

110-11.6 Mailboxes: The quantity to be paid for will be the number of mailboxes acceptably furnished and installed.

110-11.7 Delivery of Salvageable Material to the Department The quantity to be paid for will be the Lump Sum quantity for delivery of salvageable materials to the Department, as indicated in the Plans.

110-11.8 General: In each case, except as provided below, where no item of separate payment for such work is included in the proposal, all costs of such work will be included in the various scheduled items in the Contract, or under specific items as specified herein below or elsewhere in the Contract.

110-12 Basis of Payment.

110-12.1 Clearing and Grubbing:

110-12.1.1 Lump Sum Payment: Price and payment will be full compensation for all clearing and grubbing required for the roadway right-of-way and for lateral ditches, channel changes, or other outfall areas, and any other clearing and grubbing indicated, or required for the construction of the entire project, including all necessary hauling, furnishing equipment, equipment operation, furnishing any areas required for disposal of debris, leveling of terrain and the landscaping work of trimming, etc.

Where construction easements are specified in the Plans and the limits of clearing and grubbing for such easements are dependent upon the final construction requirements, no adjustment will be made in the lump sum price and payment, either over or under, for variations from the limits of the easement defined in the Plans.

110-12.1.2 When No Direct Payment is Provided: When no item for clearing and grubbing is included in the proposal, the Contractor shall include the cost of any work of clearing and grubbing which is necessary for the proper construction of the project in the

Contract price for the structure or other item of work for which such clearing and grubbing is required. The Contractor shall include the cost of all clearing and grubbing which might be necessary in pits or areas from which base material is obtained in the Contract price for the base in which such material is used. The clearing and grubbing of areas for obtaining stabilizing materials, where required only for the purpose of obtaining materials for stabilizing, will not be paid for separately.

110-12.2 Selective Clearing and Grubbing: Price and payment will be full compensation for all selective clearing and grubbing, including all necessary hauling, furnishing equipment, Certified Arborist, equipment operation, furnishing any areas required for disposal of debris, leveling of terrain, root pruning and tree protection.

110-12.3 Removal of Existing Bridges: Price and payment will be full compensation for all work of removal and disposal of the designated bridges.

When direct payment for the removal of existing bridges is not provided in the proposal, the Contractor shall include the cost of removing all bridges in the Contract price for clearing and grubbing or, if no item of clearing and grubbing is included, in the compensation for the other items covering the new bridge being constructed.

110-12.4 Removal of Existing Concrete: Price and payment will be full compensation for performing and completing all the work of removal and satisfactory disposal.

When no separate item for this work is included, the Contractor shall include the costs of this work in the Contract price for the item of clearing and grubbing or for the pipe or other structure for which the concrete removal is required.

110-12.5 Plugging Water Wells: Price and payment will be full compensation for each type of well acceptably plugged.

If a water well requiring plugging is encountered and the Contract contains no price for plugging wells of that specific type, the plugging of such well will be paid for as unforeseeable work.

110-12.6 Mailboxes: Price and payment will be full compensation for all work and materials required, including supports and numbers.

110-12.7 Delivery of Salvageable Material to the Department: Price and payment will be full compensation for all work required for delivery of the materials to the Department.

110-12.8 Payment Items: There is no direct payment for the work specified in this Section, it is incidental to, and is to be included in the other items of related work.

END OF ITEM FL-110

SECTION 120
EXCAVATION AND EMBANKMENT

DESCRIPTION

120-1 Description.

120-1.1 General: Excavate and construct embankments as required for the roadway, ditches, channel changes and borrow material. Use suitable excavated material or authorized borrow to prepare subgrades and foundations. Construct embankments in accordance with Standard Plans, Index 120-001. Compact and dress excavated areas and embankments.

Meet the requirements of Section 110 for excavation of material for clearing and grubbing and Section 125 for excavation and backfilling of structures and pipe. Material displaced by the storm sewer or drainage structure system is not included in the earthwork quantities shown in the Contract Documents.

The existing surface may be a combination of the following:

1. The original unpaved ground line;
2. The bottom of the existing pavement;
3. The bottom of existing features removed by clearing and grubbing;
4. The bottom of the existing base, if the base is to be removed.

The finished graded surface includes the completed grades of side slopes, unpaved shoulders, and the bottom of the base for flexible or rigid pavement.

120-1.2 Unidentified Areas of Contamination: When encountering or exposing any abnormal condition indicating the presence of contaminated materials, cease operations immediately in the vicinity and notify the Engineer. The presence of tanks or barrels; discolored earth, metal, wood, ground water, etc.; visible fumes; abnormal odors; excessively hot earth; smoke; or other conditions that appear abnormal may indicate the presence of contaminated materials and must be treated with extreme caution.

Make every effort to minimize the spread of contamination into uncontaminated areas. Immediately provide for the health and safety of all workers at the job site and make provisions necessary for the health and safety of the public that may be exposed to any potentially hazardous conditions. Ensure provisions adhere to all applicable laws, rules or regulations covering potentially hazardous conditions and will be in a manner commensurate with the gravity of the conditions.

The Engineer will notify the District Contamination Impact Coordinator (DCIC) who will coordinate selecting and tasking the Department's Contamination Assessment/Remediation Contractor (CAR). Provide access to the potentially contaminated area. Preliminary investigation by the CAR Contractor will determine the course of action necessary for site security and the steps necessary under applicable laws, rules, and regulations for additional assessment and/or remediation work to resolve the contamination issue.

The CAR Contractor will delineate the contamination areas, any staging or holding area required; and, in cooperation with the Prime Contractor and Engineer, develop a work plan that will provide the CAR Contractor's operations schedule with projected completion dates for the final resolution of the contamination issue.

The CAR Contractor will maintain jurisdiction over activities inside any outlined contaminated areas and any associated staging holding areas. The CAR Contractor will be responsible for the health and safety of workers within the delineated areas. Provide continuous access to these areas for the CAR Contractor and representatives of regulatory or enforcement agencies having jurisdiction.

Both Contractors will use the schedule as a basis for planning the completion of both work efforts. The Engineer may grant the Contract Time extensions according to the provisions of 8-7.3.2.

Cooperate with the CAR Contractor to expedite integration of the CAR Contractor's operations into the construction project. The Prime Contractor is not expected to engage in routine construction activities, such as excavating, grading, or any type of soil manipulation, or any construction processes required if handling of contaminated soil, surface water or ground water is involved. All routine construction activities requiring the handling of contaminated soil, surface water or groundwater will be by the CAR Contractor. Adjustments to quantities or to Contract unit prices will be made according to work additions or reductions on the part of the Prime Contractor in accordance with 4-3.

The Engineer will direct the Prime Contractor when operations may resume in the affected area.

120-2 Classifications of Excavation.

120-2.1 General: The Department may classify excavation specified under this Section for payment as any of the following: regular excavation, subsoil excavation, lateral ditch excavation, and channel excavation.

If the proposal does not show subsoil excavation or lateral ditch excavation as separate items of payment, include such excavation under the item of regular excavation.

If the proposal shows lateral ditch excavation as a separate item of payment but does not show channel excavation as a separate item of payment, include such excavation under the item of lateral ditch excavation. Otherwise, include channel excavation under the item of regular excavation.

120-2.2 Regular Excavation: Regular excavation includes roadway excavation and borrow excavation, as defined below for each.

120-2.2.1 Roadway Excavation: Roadway excavation consists of the excavation and the utilization or disposal of all materials necessary for the construction of the roadway, ditches, channel changes, etc., except for removal of existing pavement as defined in Section 110.

120-2.2.2 Borrow Excavation: Borrow excavation consists of the excavation and utilization of material from authorized borrow pits, including only material that is suitable for the construction of roadway embankments or of other embankments covered by the Contract. A Cost Savings Initiative Proposal (CSIP) submittal based on using borrow material from within the project limits will not be considered.

120-2.3 Subsoil Excavation: Subsoil excavation consists of the excavation and disposal of muck, clay, rock, or any other material that is unsuitable in its original position and that is excavated below the existing surface. For pond and ditches that identify the placement of a blanket material, the existing surface is template as the bottom of the blanket material. Subsoil excavation also consists of the excavation of all suitable material within the above limits as necessary to excavate the unsuitable material. Consider the limits of subsoil excavation indicated in the Plans as being particularly variable, in accordance with the field conditions actually encountered.

The quantity of material required to replace the excavated material and to raise the elevation of the roadway to the bottom of the template will be paid for under embankment or borrow excavation (Truck Measure).

120-2.4 Lateral Ditch Excavation: Lateral ditch excavation consists of all excavation of inlet and outlet ditches to structures and roadway, changes in channels of streams, and ditches parallel to the roadway right-of-way. Dress lateral ditches to the grade and finished graded surface shown in the Plans.

120-2.5 Channel Excavation: Channel excavation consists of the excavation and satisfactory disposal of all materials from within the limits of the channel as shown in the Plans.

120-3 Preliminary Soils Investigations.

When the Plans contain the results of a soil survey, do not assume such data is a guarantee of the depth, extent, or character of material present.

120-4 Removal of Unsuitable Materials and Existing Roads.

120-4.1 Subsoil Excavation: Where muck, rock, clay, or other material within the limits of the roadway is unsuitable in its original position, excavate such material to the depths shown in the Plans as the removal limits or as indicated by the Engineer, and backfill with suitable material. Where the removal of plastic soils is required, meet a construction tolerance, of plus or minus 0.2 foot in depth and plus or minus 6 inches (each side) in width.

120-4.2 Construction over Existing Old Road: Where a new roadway is to be constructed over an old one, completely remove the existing flexible and Portland cement concrete pavement for the entire limits of the width and depth in accordance with Section 110. Compact disturbed material in accordance with Section 120 or 160, whichever material applies. If indicated in the Plans, remove the existing base in accordance with Section 110.

120-5 Disposal of Surplus and Unsuitable Material.

120-5.1 Ownership of Excavated Materials: Dispose of surplus and excavated materials as shown in the Plans or, if the Plans do not indicate the method of disposal, take ownership of the materials and dispose of them outside the right-of-way.

120-5.2 Disposal of Muck on Side Slopes: As an exception to the provisions of 120-5.1, when approved by the Engineer, in rural undeveloped areas, the Contractor may place muck (A-8 material) on the slopes, or store it alongside the roadway, provided there is a clear distance of at least 6 feet between the roadway grading limits and the muck, and the Contractor dresses the muck to present a neat appearance. In addition, the Contractor may also dispose of this material by placing it on the slopes in developed areas where, in the opinion of the Engineer, this will result in an aesthetically pleasing appearance and will have no detrimental effect on the adjacent developments. Where the Engineer permits the disposal of muck or other unsuitable material inside the right-of-way limits, do not place such material in a manner which will impede the inflow or outfall of any channel or side ditches. The Engineer will determine the limits adjacent to channels within which such materials may be disposed.

120-5.3 Disposal of Paving Materials: Unless otherwise noted, take ownership of paving materials, such as paving brick, asphalt block, concrete slab, sidewalk, curb, and gutter, etc., excavated in the removal of existing pavements, and dispose of them outside the right-of-way. If the materials are to remain the property of the Department, place them in neat piles as directed. Existing base materials that are removed may be incorporated in the stabilized portion of the subgrade in accordance with Section 160. If the construction sequence will allow, incorporate all existing base material into the project as allowed by the Contract Documents.

120-5.4 Disposal Areas: Where the Contract Documents require disposal of excavated materials outside the right-of-way, and the disposal area is not indicated in the Contract Documents, furnish the disposal area without additional compensation.

Provide areas for disposal of removed paving materials out of sight of the project and at least 300 feet from the nearest roadway right-of-way line of any State maintained road. If the materials are buried, disregard the 300-foot limitation.

120-6 Borrow.

120-6.1 Materials for Borrow: Do not open borrow pits until the Engineer has approved their location.

Prior to the purchase or use of any borrow pit materials, provide the Engineer with a written certification of borrow pit compliance meeting the requirements of Section 337.0262, Florida Statutes.

Do not provide borrow materials that are polluted as defined in Chapter 376 of the Florida Statutes (oil of any kind and in any form, gasoline, pesticides, ammonia, chlorine, and derivatives thereof, excluding liquefied petroleum gas) in concentrations above any local, State, or Federal standards.

Prior to placing any borrow material that is the product of soil incineration, provide the Engineer with a copy of the Certificate of Materials Recycling and Post Burn Analysis showing that the material is below all allowable pollutant concentrations.

120-6.2 Furnishing of Borrow Areas: To obtain the Engineer's approval to use an offsite construction activity area that involves excavation such as a borrow pit or local aggregate pit, request in writing, a review for cultural resources involvement. Send the request to the Division of Historical Resources (DHR), Department of State, State Historic Preservation Officer, Tallahassee, FL. As a minimum, include in the request the Project Identification Number, the County, a description of the property with Township, Range, Section, etc., the dimensions of the area to be affected, and a location map. Do not start any work at the off-site construction activity area prior to receiving clearance from the DHR that no additional research is warranted.

For certain locations, the DHR will require a Cultural Resources Assessment (CRA) Survey before approval can be granted. When this is required, secure professional archaeological services to complete an historical and archaeological survey report. Submit the report to the DHR and to the Department. The Engineer will determine final approval or rejection of off-site construction activity areas based on input from the DHR.

Before receiving approval or before use of borrow areas, obtain written clearance from the Engineer concerning compliance with the Federal Endangered Species Act and other Wildlife Regulations as specified in 7-1.4 and Section 4(f) of the USDOT Act as specified in 7-1.8.

The Department will adjust Contract Time in accordance with 8-7 for any suspension of operations required to comply with this Article. The Department will not accept any monetary claims due to delays or loss of off-site construction activity areas.

Except where the Plans specifically call for the use of a particular borrow or dredging area, the Contractor may substitute borrow or dredging areas of his own choosing provided the Engineer determines the materials from such areas meet the Department's standards and other requirements for stability for use in the particular sections of the work in which it is to be placed, and the Contractor absorbs any increase in hauling or other costs. Stake the corners of the proposed borrow area and provide the necessary equipment along with an operator in order for the Engineer to investigate the borrow area. The Engineer will determine test locations, collect samples, and perform tests to investigate the proposed borrow area based on soil strata and required soil properties. The Engineer will approve use of materials from the proposed area based on test results and project requirements. Final acceptance of materials will be based on Point of Use Test as described in 6-1.2.4.

Before using any borrow material from any substitute areas, obtain the Engineer's approval, in writing, for the use of the particular areas, and, where applicable, ensure that the Engineer has surveyed the surface. Upon such written approval by the Engineer, consider the substitute areas as designated borrow areas.

When furnishing the dredging or borrow areas, supply the Department with evidence that the necessary permits, rights, or waivers for the use of such areas have been secured.

Do not excavate any part of a Contractor furnished borrow area which is less than 300 feet from the right-of-way of the project or any State Road until the Engineer has approved a plan for landscaping and restoring the disturbed area. Perform this landscaping and land restoration at no expense

to the Department, prior to final acceptance of the project. Do not provide a borrow area closer than 25 feet to the right-of-way of any state road. In Department furnished borrow pits, do not excavate material within 5 feet of adjacent property lines.

Upon completion of excavation, neatly shape, dress, grass, vegetate, landscape, and drain all exposed areas including haul roads, as necessary so as not to present an objectionable appearance.

Meet the requirements of Section 104 when furnishing borrow areas, regardless of location.

120-6.3 Borrow Material for Shoulder Build-up: When indicated in the Plans, furnish borrow material with a specific minimum bearing value, for building up of existing shoulders. Blend materials as necessary to achieve this specified minimum bearing value prior to placing the materials on the shoulders. Take samples of this borrow material at the pit or blended stockpile. Include all costs of providing a material with the required bearing value in the Contract unit price for borrow material.

120-6.4 Haul Routes for Borrow Pits: Provide and maintain, at no expense to the Department, all necessary roads for hauling the borrow material. Where borrow area haul roads or trails are used by others, do not cause such roads or trails to deteriorate in condition.

Arrange for the use of all non-public haul routes crossing the property of any railroad. Incur any expense for the use of such haul routes. Establish haul routes which will direct construction vehicles away from developed areas when feasible, and keep noise from hauling operations to a minimum. Advise the Engineer in writing of all proposed haul routes.

120-6.5 Authorization for Use of Borrow: When the item of borrow excavation is included in the Contract, use borrow only when sufficient quantities of suitable material are not available from roadway and drainage excavation, to properly construct the embankment, subgrade, and shoulders, and to complete the backfilling of structures. Do not use borrow material until so ordered by the Engineer, and then only use material from approved borrow pits.

120-7 Materials for Embankment.

120-7.1 Use of Materials Excavated from the Roadway and Appurtenances: Assume responsibility for determining the suitability of excavated material for use on the project in accordance with the applicable Contract Documents. Consider the sequence of work and maintenance of traffic phasing in the determination of the availability of this material.

120-7.2 General Requirements for Embankment Materials: Construct embankments of acceptable material including reclaimed asphalt pavement (RAP), recycled concrete aggregate (RCA) and Portland cement concrete rubble, but containing no muck, stumps, roots, brush, vegetable matter, rubbish, reinforcement bar or other material that does not compact into a suitable and enduring roadbed. Do not use RAP or RCA in the top 3 feet of slopes and shoulders that are to be grassed or have other type of vegetation established. Do not use RAP or RCA in stormwater management facility fill slopes or permitted wetland impact areas.

Remove all waste material designated as undesirable. Use material in embankment construction in accordance with Plans or as the Engineer directs.

Complete the embankment using maximum particle sizes (in any dimension) as follows:

1. In top 12 inches: 3-1/2 inches (in any dimension).
2. 12 to 24 inches: 6 inches (in any dimension).

3. In the depth below 24 inches: not to exceed 12 inches (in any dimension) or the compacted thickness of the layer being placed, whichever is less.

Spread all material so that the larger particles are separated from each other to minimize voids between them during compaction. Compact around these rocks in accordance with 120-9.2.

When and where approved by the Engineer, the Contractor may place larger rocks (not to exceed 18 inches in any dimension) outside the 1:2 slope and at least 4 feet or more below the bottom of the base. Compact around these rocks to a firmness equal to that of the supporting soil. Construct grassed embankment areas in accordance with 120-9.2.5. Where constructing embankments adjacent to bridge end bents or abutments, do not place rock larger than 3-1/2 inches in diameter within 3 feet of the location of any end-bent piling.

120-7.3 Materials Used at Pipes, Culverts, etc.: Construct embankments over and around pipes, culverts, and bridge foundations with selected materials.

120-8 Embankment Construction.

120-8.1 General: Construct embankments in sections of not less than 300 feet in length or for the full length of the embankment. Do not construct another LOT over an untested LOT without the Engineer’s approval in writing.

For construction of mainline pavement lanes, turn lanes, ramps, parking lots, concrete box culverts and retaining wall systems, a LOT is defined as a single lift of finished embankment not to exceed 500 feet.

For construction of shoulder-only areas, shared use paths, and sidewalks areas, a LOT is defined as a single lift of finished embankment not to exceed 2000 feet.

Isolated compaction operations will be considered as separate LOTs. For multiple phase construction, a LOT shall not extend beyond the limits of the phase.

120-8.2 Dry Fill Method:

120-8.2.1 General: Construct embankments to meet the compaction requirements in 120-9 and in accordance with the acceptance program requirements in 120-10.

As far as practicable, distribute traffic over the work during the construction of embankments so as to cover the maximum area of the surface of each layer.

Construct embankment using the dry fill method whenever normal dewatering equipment and methods can accomplish the needed dewatering.

120-8.2.1.1 Maximum Compacted Lift Thickness Requirements: Construct the embankment in successive layers with lifts up to a maximum listed in Table 120-1 below based on the embankment material classification group.

Table 120-1			
Group	AASHTO Soil Class	Maximum Lift Thickness	Thick Lift Control Test Section Requirements
1	A-3	12 inches	Not Needed
	A-2-4 (No. 200 Sieve ≤ 15%)		
2	A-1	6 inches without Control Test Section	Maximum of 12 inches per 120-8.2.1.2
	A-2-4 (No. 200 Sieve > 15%)		
	A-2-5, A-2-6, A-2-7, A-4, A-5, A-6		
	A-7 (Liquid Limit < 50)		

120-8.2.1.2 Thick Lift Requirements: For embankment materials classified as Group 2 in Table 120-1 above, the option to perform thick lift construction in successive layers of not more than 12 inches compacted thickness may be used after meeting the following requirements:

1. Notify the Engineer and obtain approval in writing prior to beginning construction of a test section. Demonstrate the possession and control of compacting equipment sufficient to achieve density required by 120-10.2 for the full depth of a thicker lift.

2. Construct a test section of the length of one full LOT of not less than 500 feet.

3. Perform five Quality Control (QC) tests at random locations within the test section.

a. All five QC tests and a Department Verification test must meet the density required by 120-10.2.

b. Identify the test section with the compaction effort and soil classification in the Department's Earthwork Records System (ERS).

4. Obtain Engineer's approval in writing for the compaction effort after completing a successful test section.

In case of a change in compaction effort or soil classification, failing QC test or when the QC tests cannot be verified, construct a new test section. The Contractor may elect to place material in 6 inches compacted thickness at any time. Construct all layers approximately parallel to the centerline profile of the road.

The Engineer reserves the right to terminate the Contractor's use of thick lift construction. Whenever the Engineer determines that the Contractor is not achieving satisfactory results, revert to the 6-inch compacted lifts.

120-8.2.1.3 Equipment and Methods: Provide normal dewatering equipment including, but not limited to, surface pumps, sump pumps and trenching/digging machinery. Provide normal dewatering methods including, but not limited to, constructing shallow surface drainage trenches/ditches, using sand blankets, sumps, and siphons.

When normal dewatering does not adequately remove the water, the Engineer may require the embankment material to be placed in the water or on low swampy ground in accordance with 120-9.2.3.

120-8.2.2 Placing in Unstable Areas: When depositing fill material in water, or on low swampy ground that will not support the weight of hauling equipment, construct the embankment by dumping successive loads in a uniformly distributed layer of a thickness not greater than necessary to support the hauling equipment while placing subsequent layers. Once sufficient material has been placed so that the hauling equipment can be supported, construct the remaining portion of the embankment in layers in accordance with the applicable provisions of 120-9.2.2.

120-8.2.3 Placing on Steep Slopes: When constructing an embankment on a hillside sloping more than 20 degrees from the horizontal, before starting the fill, deeply plow or cut steps into the surface of the existing slope on which the embankment is to be placed.

120-8.2.4 Placing Outside the Standard Minimum Slope: The standard minimum slope is defined as the plane described by a one (vertical) to two (horizontal) slope downward from the roadway shoulder point or the gutter line, in accordance with Standard Plans, Index 120-001 and 120-002. Where material that is unsuitable for normal embankment construction is to be used in the embankment outside the standard minimum slope, place such material in layers of not more than 18 inches in thickness, measured loose. The Contractor may also place material, which is suitable for normal embankment, outside such standard minimum slope, in 18 inch layers. Maintain a constant thickness for suitable material placed within and outside the standard minimum slope, unless placing in a separate operation.

120-8.3 Hydraulic Method:

120-8.3.1 Method of Placing: When the hydraulic method is used, as far as practicable, place all dredged material in its final position in the embankment by such method. Place and compact any

dredged material that is reworked, or moved and placed in its final position by any other method, as specified in 120-9.2. Baffles or any other form of construction may be used if the slopes of the embankments are not steeper than indicated in the Plans. Remove all timber used for temporary bulkheads or baffles from the embankment, and fill and thoroughly compact all voids. When placing fill on submerged land, construct dikes prior to beginning of dredging, and maintain the dikes throughout the dredging operation.

120-8.3.2 Excess Material: Do not use any excess material placed outside the prescribed slopes or below the normal high-water table to raise the fill areas. Remove only the portion of this material required for dressing the slopes.

120-8.3.3 Protection of Openings in Embankment: Maintain openings in the embankments at the bridge sites. Remove any material which invades these openings or existing channels without additional compensation to provide the same existing channel depth as before the construction of the embankment. Do not excavate or dredge any material within 200 feet of the toe of the proposed embankment.

120-8.4 Reclaimed Asphalt Pavement (RAP) Method:

120-8.4.1 General: Use only RAP material stored at facilities with an approved Florida Department of Environmental Protection Stormwater permit or, transferred directly from a milling project to the Department project. Certify the source if RAP material is from an identifiable Department project. Do not use RAP material in the following areas: construction areas that are below the seasonal high groundwater table elevation; MSE Wall backfill; underneath MSE Walls or the top 6 inches of embankment.

Prior to placement, submit documentation to the Engineer for his approval, outlining the proposed location of the RAP material.

120-8.4.2 Soil and RAP Mixture: Place the RAP material at the location and spread uniformly, using approved methods to obtain a maximum layer thickness of 4 inches. Mix this 4 inch maximum layer of RAP with a loose soil layer 8 to 10 inches thick. After mixing, meet all embankment utilization requirements of Standard Plans, Index 120-001 for the location used. The total RAP and other embankment material shall not exceed 12 inches per lift after mixing and compaction if the contractor can demonstrate that the density of the mixture can be achieved. Perform mixing using rotary tillers or other equipment meeting the approval of the Engineer. The Engineer will determine the order in which to spread the two materials. Mix both materials to the full depth. Ensure that the finished layer will have the thickness and shape required by the typical section. Demonstrate the feasibility of this construction method by successfully completing a 500-foot-long test section.

120-8.4.3 Alternate Soil and RAP Layer Construction: Construct soil in 6 to-12-inch compacted lifts and RAP in alternate layers with 6-inch maximum compacted lifts. Use soil with a minimum LBR value of 40 to prevent failure during compaction of the overlying RAP layer. Demonstrate the feasibility of this construction method by successfully completing a 500-foot-long test section.

120-9 Compaction Requirements.

120-9.1 Moisture Content: Compact the materials at a moisture content such that the specified density can be attained. If necessary to attain the specified density, add water to the material, or lower the moisture content by manipulating the material or allowing it to dry, as is appropriate.

120-9.2 Compaction of Embankments:

120-9.2.1 General: Uniformly compact each layer, using equipment that will achieve the required density, and as compaction operations progress, shape and manipulate each layer as necessary to ensure uniform density throughout the embankment.

120-9.2.2 Compaction Over Unstable Foundations: Where the embankment material is deposited in water or on low swampy ground, and in a layer thicker than 12 inches (as provided in 120-8.2.2), compact the top 6 inches (compacted thickness) of such layer to the density as specified in 120-10.2.

120-9.2.3 Compaction Where Plastic Material Has Been Removed: Where unsuitable material is removed and the remaining surface is of the A-4, A-5, A-6, or A-7 Soil Groups (see AASHTO M 145), as determined by the Engineer, compact the surface of the excavated area by rolling with a sheepsfoot roller exerting a compression of at least 250 psi on the tamper feet, for the full width of the roadbed (subgrade and shoulders). Perform rolling before beginning any backfill, and continue until the roller feet do not penetrate the surface more than 1 inch. Do not perform such rolling where the remaining surface is below the normal water table and covered with water. Vary the procedure and equipment required for this operation at the discretion of the Engineer.

120-9.2.4 Compaction of Grassed Shoulder Areas: For the upper 6-inch layer of all shoulders which are to be grassed, since no specific density is required, compact only to the extent needed for planting.

120-9.2.5 Compaction of Grassed Embankment Areas: Do not compact the outer layers of any embankments where plant growth will be established. Leave this layer in a loose condition to a minimum depth of 6 inches for the subsequent seeding or planting operations. Do not place RAP or RAP blended material within the top 12 inches of areas to be grassed.

120-9.3 Compaction for Pipes, Culverts, etc.: Compact the backfill of trenches to the densities specified for embankment or subgrade, as applicable, and in accordance with the requirements of 125-9.2.

Thoroughly compact embankments over and around pipes, culverts, and bridges in a manner which will not place undue stress on the structures, and in accordance with the requirements of 125-9.2.

120-9.4 Compaction of Subgrade: If the Plans do not provide for stabilizing, compact the subgrade in both cuts and fills, to the density specified in 120-10.2. For cut areas, determine Standard Proctor Maximum Density in accordance with FM 1-T099 at a frequency of one per mile or when there is a change in soil type, whichever occurs first. For undisturbed soils, do not apply density requirements where constructing paved shoulders 5 feet or less in width.

Where trenches for widening strips are not of sufficient width to permit the use of standard compaction equipment, perform compaction using vibratory rollers, trench rollers, or other type compaction equipment approved by the Engineer.

Maintain the required density until the base or pavement is placed on the subgrade.

120-10 Acceptance Program.

120-10.1 General Requirements:

120-10.1.1 Initial Equipment Comparison: Before initial production, perform an initial nuclear moisture density gauge comparison with the Verification and Independent Assurance (IA) gauges. When comparing the computed dry density of one nuclear gauge to a second gauge, three sets of calculations must be performed (IA to QC, IA to Verification, and QC to Verification). Ensure that the difference between any two computed dry densities does not exceed 2 lb/ft³ between gauges from the same manufacturer, and 3 lb/ft³ between gauges from different manufacturers. Repair or replace any gauge that does not compare favorably with the IA gauge.

Perform a comparison analysis between the QC nuclear gauge and the Verification nuclear gauge any time a nuclear gauge or repaired nuclear gauge is first brought to the project. Repair and replace any QC gauge that does not compare favorably with the Verification gauge at any time during the remainder of the project. Calibrate all QC gauges annually.

120-10.1.2 Initial Production LOT: Before construction of any production LOT, prepare a 500 foot initial control section consisting of one full LOT. Notify the Engineer in writing at least 24 hours prior to production of the initial control section. Perform all QC tests required in 120-10.1.4 with the Engineer present. Do not begin constructing another LOT until successfully completing the initial production LOT

If the QC test result fails the density requirements of 120-10.2, correct the areas of non-compliance. The QC and Verification tests will then be repeated.

120-10.1.3 Density over 105%: When a QC computed dry density results in a value greater than 105% of the applicable Proctor maximum dry density, the Engineer will perform an Independent Verification (IV) density test within 5 feet. If the IV density results in a value greater than 105%, the Engineer will investigate the compaction methods, examine the applicable Standard Proctor Maximum Density and material description. The Engineer may collect and test an IV Standard Proctor Maximum Density sample for acceptance in accordance with the criteria of 120-10.2.

120-10.1.4 Quality Control (QC) Tests:

120-10.1.4.1 Standard Proctor Maximum Density Determination: Determine the QC standard Proctor maximum density and optimum moisture content by sampling and testing the material in accordance with the specified test method listed in 120-10.2.

120-10.1.4.2 Density Testing Requirements: Ensure compliance to the requirements of 120-10.2 by Nuclear Density testing in accordance with FM 1-T238. Determine the in-place moisture content for each density test. Use FM 1-T238, FM 5-507 (Determination of Moisture Content by Means of a Calcium Carbide Gas Pressure Moisture Tester), or ASTM D4643 (Laboratory Determination of Moisture Content of Granular Soils by use of a Microwave Oven) for moisture determination.

120-10.1.4.3 Soil Classification: Perform soil classification tests on the sample collected in 120-10.1.4.1, in accordance with AASHTO T88, T89, T90, and FM 1-T267. Classify soils in accordance with AASHTO M145 in order to determine compliance with embankment utilization requirements as specified in Standard Plans, Index 120-001.

120-10.1.5 Department Verification: The Engineer will conduct Verification tests in order to accept all materials and work associated with 120-10.1.4. The Engineer will verify the QC results if they meet the Verification Comparison Criteria, otherwise the Engineer will implement Resolution procedures.

The Engineer will select test locations, including Station, Offset, and Lift, using a random number generator, based on the LOTs under consideration. Each Verification test evaluates all work represented by the QC testing completed in those LOTs.

In addition to the Verification testing, the Engineer may perform additional Independent Verification (IV) testing. The Engineer will evaluate and act upon the IV test results in the same manner as Verification test results.

When the project requires less than four QC tests per material type, the Engineer reserves the right to accept the materials and work through visual inspection.

120-10.1.6 Reduced Testing Frequency: Obtain the Engineer's written approval for the option to reduce density testing frequency to one test every two LOTs if Resolution testing was not required for 12 consecutive verified LOTs, or if Resolution testing was required, but the QC test data was upheld and all substantiating tests are recorded in the ERS.

Generate random numbers based on the two LOTs under consideration. When QC test frequency is reduced to one every two LOTs, obtain the Engineer's approval to place more than one LOT over an untested LOT. Assure similar compaction efforts for the untested LOTs. If the Verification test fails, and QC test data is not upheld by Resolution testing, the QC testing will revert to the original

frequency of one QC test per LOT. Do not apply reduced testing frequency in construction of shoulder-only areas, shared use paths, sidewalks, and first and last lift.

120-10.1.7 Payment for Resolution Tests: If the Resolution laboratory results compare favorably with the QC results, the Department will pay for Resolution testing. No additional compensation, either monetary or time, will be made for the impacts of any such testing.

If the Resolution laboratory results do not compare favorably with the QC results, the costs of the Resolution testing will be deducted from monthly estimates. No additional time will be granted for the impacts of any such testing.

120-10.2 Acceptance Criteria: Obtain a minimum QC density of 100% of the standard Proctor maximum density as determined by FM 1-T099, Method C, with the following exceptions: embankment constructed by the hydraulic method as specified in 120-8.3; material placed outside the standard minimum slope as specified in 120-8.2.4 except when a structure is supported on existing embankment; and, other areas specifically excluded herein.

120-10.3 Additional Requirements:

120-10.3.1 Frequency: Conduct QC sampling and testing at a minimum frequency listed in Table 120-2 below. The Engineer will perform Verification sampling and tests at a minimum frequency listed in Table 120-2 below.

Table 120-2			
Test Name	Quality Control	Verification	Verification of Shoulder-Only Areas, Shared Use Paths, and Sidewalks
Standard Proctor Maximum Density	One per soil type	One per soil type	One per soil type
Density	One Per LOT	One per four LOTS and for wet conditions, the first lift not affected by water	One per two LOTS
Soil Classification and Organic Content	One per Standard Proctor Maximum Density	One per Standard Proctor Maximum Density	One per Standard Proctor Maximum Density

120-10.3.2 Test Selection and Reporting: Determine test locations including stations and offsets, using the random number generator approved by the Engineer. Record data directly in the ERS. Do not use notepads or worksheets to record data for later transfer to the ERS. Notify the Engineer upon successful completion of QC testing on each LOT prior to placing another lift on top.

120-10.4 Verification Comparison Criteria and Resolution Procedures:

120-10.4.1 Standard Proctor Maximum Density Determination: The Engineer will verify the QC results if the results compare within 4.5 lb/ft³ of the Verification test result. Otherwise, the Engineer will take one additional sample of material from the soil type in question. The State Materials Office (SMO) or an AASHTO accredited laboratory designated by the SMO will perform Resolution testing. The material will be sampled and tested in accordance with FM 1-T099.

The Engineer will compare the Resolution test results with the QC test results. If all Resolution test results are within 4.5 lb/ft³ of the corresponding QC test results, the Engineer will use the QC test results for material acceptance purposes for each LOT with that soil type. If the Resolution

test result is not within 4.5 lb/ft³ of the Contractor's QC test, the Verification test result will be used for material acceptance purposes.

120-10.4.2 Density Testing: When a Verification or IV density test fails the acceptance criteria, retest the site within a 5-foot radius and the following actions will be taken:

1. If the QC retest meets the acceptance criteria and meets the 120-10.1.1 criteria when compared with the Verification or IV test, the Engineer will accept those LOTs.
2. If the QC retest does not meet the acceptance criteria and compares favorably with the Verification or IV test, rework, and retest the LOT. The Engineer will re-verify those LOTs.
3. If the QC retest and the Verification or IV test do not compare favorably, complete a new comparison analysis as defined in 120-10.1.1. Once acceptable comparison is achieved, retest the LOTs. The Engineer will perform new verification testing. Acceptance testing will not begin on a new LOT until the Contractor has a gauge that meets the comparison requirements.

Record QC test results in the ERS section of the Department's database.

120-10.4.3 Soil Classification: The Engineer will verify the QC test results if the Verification and the QC test results both match the soil utilization symbol listed in Standard Plans, Index 120-001. Otherwise, the Engineer will test the sample retained for Resolution testing. The SMO or an AASHTO accredited laboratory designated by the SMO will perform the Resolution testing. The material will be sampled and tested in accordance with AASHTO T 88, T 89, and T 90, and classified in accordance with AASHTO M 145.

The Engineer will compare the Resolution test results with the QC test results. If the Resolution test matches the QC soil utilization symbol, the Engineer will use the QC soil utilization symbol for material acceptance purposes. If the Resolution test result does not match the Contractor's QC soil utilization symbol, the Verification test results will be used for material acceptance purposes.

120-10.4.4 Organic Content: The Engineer will verify the QC test results if the Verification test results satisfy the organic content test criteria in Standard Plans, Index 120-001. Otherwise, the Engineer will test the sample retained for Resolution testing. The SMO or an AASHTO accredited laboratory designated by the SMO will perform Resolution testing. The material will be sampled and tested in accordance with FM 1-T 267. If the Resolution test results satisfy the required criteria, material of that soil type will be verified and accepted. If the Resolution test results do not meet the required criteria, reject the material, and reconstruct with acceptable material.

120-10.5 Disposition of Defective Materials: Assume responsibility for removing and replacing all defective material, as defined in Section 6. Alternately, submit an Engineering Analysis Scope in accordance with 6-4 to determine the disposition of the material.

120-11 Maintenance and Protection of Work.

While construction is in progress, maintain adequate drainage for the roadbed at all times. Maintain a shoulder at least 3 feet wide adjacent to all pavement or base construction in order to provide support for the edges. Maintain all earthwork construction throughout the life of the Contract, and take all reasonable precautions to prevent loss of material from the roadway due to the action of wind or water. Repair, at no expense to the Department except as otherwise provided herein, any slides, washouts, settlement, subsidence, or other mishap which may occur prior to final acceptance of the work. Perform maintenance and protection of earthwork construction in accordance with Section 104.

Maintain all channels excavated as a part of the Contract work against natural shoaling or other encroachments to the lines and grades, shown in the Plans, until final acceptance of the project.

120-12 Construction.

120-12.1 Construction Tolerances: Shape the surface of the earthwork to conform to the lines and grades, and shown in the Plans. In final shaping of the surface of earthwork, maintain a tolerance of 0.3 foot above or below the finished graded surface with the following exceptions:

1. Shape the surface of shoulders to within 0.1 foot of the finished graded surface shown in the Plans.
2. Shape the earthwork to match adjacent pavement, curb, sidewalk, structures, etc.
3. Shape the bottom of conveyance ditches so that the ditch impounds no water.
4. When the work does not include construction of base or pavement, shape the entire roadbed (shoulder point to shoulder point) to within 0.1 foot above or below the Plan finished graded surface.
5. When the work includes permitted linear stormwater management facilities, shape the swales and ditch blocks to within 0.1 foot of the finished graded surface shown in the Plans.

Ensure that the shoulder lines do not vary horizontally more than 0.3 foot from the true lines shown in the Plans.

120-12.2 Operations Adjacent to Pavement: Carefully dress areas adjacent to pavement areas to avoid damage to such pavement. Complete grassing of shoulder areas prior to placing the final wearing course. Do not manipulate any embankment material on a pavement surface.

When shoulder dressing is underway adjacent to a pavement lane being used to maintain traffic, exercise extreme care to avoid interference with the safe movement of traffic.

120-13 Method of Measurement.

120-13.1 General: When payment for excavation is on a volumetric basis, the quantity to be paid for will be the volume, in cubic yards. The material will be measured in its original position by field survey or by photogrammetric means as designated by the Engineer, unless otherwise specified under the provisions for individual items.

Where subsoil excavation extends outside the lines shown in the Plans or authorized by the Engineer including allowable tolerances, and the space is backfilled with material obtained in additional authorized roadway or borrow excavation, the net fill, plus shrinkage allowance, will be excluded from the quantity of roadway excavation or borrow excavation to be paid for, as applicable.

The quantity of all material washed, blown, or placed beyond the limits of the finished graded surface will be determined by the Engineer and will be excluded from the quantity of roadway excavation or borrow excavation to be paid for, as applicable.

Subsoil excavation that extends outside the lines shown in the Plans or authorized by the Engineer including allowable tolerances will be excluded from the quantity to be paid for as subsoil excavation.

120-13.2 Roadway Excavation: The measurement will include only the net volume of material excavated between the original ground line or finished graded surface of an existing roadbed, as applicable, and the finished surface of new pavement, except that the measurement will also include all unavoidable slides which may occur in connection with excavation classified as roadway excavation.

The pay quantity will be the plan quantity provided that the excavation was accomplished in substantial compliance with the plan dimensions and subject to the provisions of 9-3.2 and 9-3.4. On designated 3-R Projects, regular excavation will be paid for at the Contract lump sum price provided that the excavation was accomplished in substantial compliance with the plan dimension.

120-13.3 Borrow Excavation: Measurement will be made on a loose volume basis, measured in trucks or other hauling equipment at the point of dumping on the road. If measurement is made in vehicles, level the material to facilitate accurate measurement.

Unsuitable material excavated from borrow pits where truck measurement is provided for and from any borrow pits furnished by the Contractor, will not be included in the quantity of excavation to be paid for.

120-13.4 Lateral Ditch Excavation: The measurement will include only material excavated within the lines and grades indicated in the Plans or as directed by the Engineer. The measurement will include the full length shown in the Plans or directed by the Engineer and acceptably completed. Excavation included for payment under Section 125 will not be included in this measurement.

The pay quantity will be the plan quantity provided that the excavation was accomplished in substantial compliance with the plan dimensions and subject to the provisions of 9-3.2 and 9-3.4.

120-13.5 Channel Excavation: The measurement will include only material excavated within the lines and grades indicated in the Plans or in accordance with authorized Plan changes. The measurement will include the full length shown in the Plans including any authorized changes thereto.

If shoaling occurs subsequent to excavation of a channel and the Engineer authorized the shoaled material to remain in place, the volume of any such material remaining within the limits of channel excavation shown in the Plans will be excluded from the measured quantity of channel excavation.

120-13.6 Subsoil Excavation: The measurement will include only material excavated within the lines and grades indicated in the Plans (including the tolerance permitted therefore) or as directed by the Engineer.

When no item for subsoil excavation is shown in the Contract but subsoil excavation is subsequently determined to be necessary, such unanticipated subsoil excavation will be paid for as provided in Article 4-4.

120-13.7 Embankment: The quantity will be at the plan quantity. Where payment for embankment is not to be included in the payment for the excavation and is to be paid for on a cubic yard basis for the item of embankment, the measurement will include material placed within the limits of the existing surface, to the finished graded surface as shown in the Plans, Standard Plans Index 120-001, or directed by the Engineer. Where embankment is constructed over an existing road, the embankment measurement will include only the material actually placed up to the finished graded surface. If there are authorized changes in plan dimensions or if errors in plan quantities are detected, plan quantity will be adjusted as provided in 9-3.2.

Any overrun or underrun of plan quantity for subsoil excavation which results in a corresponding increase or decrease in embankment will be considered as an authorized plan change for adjustment purposes as defined in 9-3.2.2.

No payment will be made for embankment material used to replace unsuitable material excavated beyond the lines and grades shown in the Plans or ordered by the Engineer.

In no case will payment be made for material allowed to run out of the embankment on a flatter slope than indicated on the Plans. The Contractor shall make his own estimate on the volume of material actually required to obtain the pay section.

120-14 Basis of Payment.

120-14.1 General: Prices and payments for the various work items included in this Section will be full compensation for all work described herein, including excavating, dredging, pumping, hauling, placing, and compacting; dressing the surface of the earthwork; maintaining and protecting the complete earthwork.

The Department will not allow extra compensation for any reworking of materials. The Department will compensate for the cost of grassing or other permanent erosion control measures directed by the Engineer as provided in the Contract.

120-14.2 Excavation:

120-14.2.1 Items of Payment: When no classification of material is indicated in the Plans, and bids are taken only on regular excavation, the total quantity of all excavation specified under this Section will be paid for at the Contract unit price for regular excavation.

When separate classifications of excavation are shown in the proposal, the quantities of each of the various classes of materials so shown will be paid for at the Contract unit prices per cubic yard for regular excavation, lateral ditch excavation, subsoil excavation, and channel excavation, as applicable, and any of such classifications not so shown will be included under the item of regular excavation (except that if there is a classification for lateral ditch excavation shown and there is no classification for channel excavation, any channel excavation will be included under the item of lateral ditch excavation). As an exception on designated projects, regular excavation will be paid for at the Contract lump sum price.

120-14.2.2 Basic Work Included in Payments: Prices and payments will be full compensation for all work described under this Section, except for any excavation, or embankment which is specified to be included for payment under other items. Such prices and payments will include hauling; any reworking that may be necessary to accomplish final disposal as shown in the Plans; the dressing of shoulders, ditches and slopes; removal of trash, vegetation, etc., from the previously graded roadway where no item for clearing and grubbing is shown in the Plans; and compacting as required.

120-14.2.3 Additional Depth of Subsoil Excavation: Where subsoil excavation is made to a depth of 0 to 5 feet below the depth shown in the Plans, such excavation will be paid for at the unit price bid.

Where subsoil excavation is made to a depth greater than 5 feet, and up to 15 feet, deeper than the depth shown in the Plans, such excavation will be paid for at the unit price bid plus 25% of such unit price. Additional extra depth, more than 15 feet below such plan depth, will be considered as a change in the character of the work and will be paid for as unforeseeable work.

Where no subsoil excavation is shown in a particular location on the original Plans, payment for extra depth of subsoil will begin 5 feet below the lowest elevation on the finished graded surface.

120-14.2.4 Borrow Excavation: When the item of borrow excavation is included in the Contract, price and payment will also include the cost of furnishing the borrow areas and any necessary clearing and grubbing thereof, the removal of unsuitable material that it is necessary to excavate in order to obtain suitable borrow material, and also the costs incurred in complying with the provisions of 120-6.3.

120-14.2.5 Materials Excluded from Payment for the Excavation: No payment for excavation will be made for any excavation covered for payment under the item of embankment.

No payment will be made for the excavation of any materials which is used for purposes other than those shown in the Plans or designated by the Engineer. No payment will be made for materials excavated outside the lines and grades given by the Engineer, unless specifically authorized by the Engineer. As an exception, in operations of roadway excavation, all slides and falls of insecure masses of material beyond the regular slopes that are not due to lack of precaution on the part of the Contractor, will be paid for at the Contract unit price for the material involved. The removal of slides and falls of material classified as lateral ditch excavation or as subsoil excavation will not be paid for separately, but will be included in the Contract unit price for the pay quantity of these materials, measured as provided in 120-14.

120-14.3 Embankment:

120-14.3.1 General: Price and payment will be full compensation for all work specified in this Section, including all material for constructing the embankment, all excavating, dredging, pumping, placing and compacting of material for constructing the embankment complete, dressing of the surface of the roadway, maintenance and protection of the completed earthwork, and the removal of rubbish, vegetation, etc., from the roadway where no clearing and grubbing of the area is specified in the Plans. Also, such price and payment, in each case, will specifically include all costs of any roadway, lateral ditch, or channel excavation, unless such excavation is specifically shown to be paid for separately, regardless of whether the materials are utilized in the embankment.

120-14.3.2 Excluded Material: No payment will be made for the removal of muck or overburden from the dredging or borrow areas. No payment will be made for embankment material used to replace muck or other unsuitable material excavated beyond the lines and grades shown in the Plans or ordered by the Engineer.

120-14.3.3 Clearing and Grubbing: No payment will be made for any clearing and grubbing of the borrow or dredging areas. Where no clearing and grubbing of such areas is specified in the Plans, the cost of any necessary clearing and grubbing will be included in the Contract unit or lump sum price for Embankment.

120-14.3.4 Cost of Permits, Rights, and Waivers: Where the Contractor provides borrow or dredging areas of his own choosing, the cost of securing the necessary permits, rights or waivers will be included in the Contract price for embankment.

120-14.4 Payment Items: Payment will be made under:

Item No. 120- 1- Excavation and Embankment (Including Topsoil Stripping) – Per Cubic Yard.

END OF ITEM FL-120

INTENTIONALLY LEFT BLANK

SECTION 160
STABILIZING

DESCRIPTION

160-1 Description.

Stabilize designated portions of the roadbed to provide a firm and unyielding subgrade, having the required bearing value specified in the Plans.

160-2 Materials.

160-2.1 Commercial Material: Meet the requirements of Section 914-2.1.

160-2.2 Local Material: Submit test results to the Engineer at least 14 days prior to the stabilization operation.

160-2.2.1 Local Stabilizing Material: Sample and test material from each source and meet the requirements of Section 914. The Engineer will verify the Quality Control (QC) test results meet the requirements of Section 914. If the QC and Verification results do not compare, the Engineer will take one additional sample of material from the source in question and the State Materials Office (SMO) or an AASHTO accredited laboratory designated by the SMO will perform Resolution testing. If the Resolution test results satisfy the required criteria, material from that source will be verified and accepted. If the Resolution test results do not meet the required criteria, reject the material.

160-2.2.2 Reclaimed Asphalt Pavement (RAP): Obtain the Engineer's approval in writing for the option to use 100% RAP material. Material must be milled and stockpiled without blending or contaminating with any other material.

160-2.2.3 Reclaimed Asphalt Pavement (RAP) Blended Material: RAP blended material is defined as material meeting the requirements of 914-1 and 914-2.2 except for the limits for organic content. If the RAP blended material meets the requirements of 914-1 and 914-2, then the blended material will be classified as local stabilizing material. Provide test results to the Engineer and obtain their approval in writing before using RAP blended material. The Engineer will verify that the QC test results meet the acceptance criteria, otherwise the Engineer will perform Resolution testing procedures specified in 160-2.2.1.

160-2.3 Existing Base: Obtain the Engineer's approval in writing before using existing base. When the material from an existing base is used as all, or a portion, of the stabilizing additives, no further testing is required unless directed by the Engineer.

160-2.4 Granular Subbase: The Engineer may allow, at no additional cost to the Department, the substitution of 6 inches of granular subbase meeting the requirements of 290-2 and 290-3, only when 12 inches of Type B stabilization requiring a Limerock Bearing Ratio (LBR) value of 40 is specified in accordance with Standard Plans, Index 120-001.

160-3 Construction Methods.

160-3.1 General: Prior to the beginning of stabilizing operations, construct the area to be stabilized to an elevation such that, upon completion of stabilizing operations, the completed stabilized subgrade will conform to the lines and grades shown in the Plans. Prior to spreading any additive stabilizing material, bring the surface of the roadbed to a plane approximately parallel to the plane of the finished graded surface shown in the Plans.

Construct mainline pavement lanes, turn lanes, ramps, parking lots, concrete box culverts, retaining wall systems, shoulder-only areas, sidewalk, and shared use path areas meeting the requirements of 120-8.1, except replace "embankment" with "subgrade".

Isolated mixing operations will be considered as separate LOTs. Curb pads and shoulders compacted separately shall be considered separate LOTs. Isolated compaction operations will be considered as separate LOTs. For multiple phase construction, a LOT shall not extend beyond the limits of the phase.

160-3.2 Application and Acceptance of Stabilizing Material: After completing the roadbed grading operations, determine the type and quantity (if any) of stabilizing material necessary for compliance with the bearing value requirements. Before using any Fossil Fuel Combustion Products (FFCPs), submit documentation, at the preconstruction meeting or no later than 30 days prior to delivery of FFCP's to the project, signed and sealed by the Specialty Engineer that these materials meet the requirements of 403.7047 F.S. Notify the Engineer of the approximate quantity to be added before spreading. When additive stabilizing materials are required, spread the material uniformly over the area to be stabilized.

The Engineer may perform Independent Verification (IV) sampling and testing if variability in the stabilizing material is observed during inspection after spreading on the roadway. If the IV test results do not meet the requirements of Section 914, then remove and replace the failing LOTs with acceptable material. The Engineer reserves the right to reject stabilizing material that contains excessive deleterious substances.

160-3.3 Mixing: Perform mixing using rotary tillers, a plant or other equipment meeting the approval of the Engineer. The subgrade may be mixed in one course if the equipment and method of construction provides the uniformity, particle size limitation, compaction, and other desired results of 160-4. Thoroughly mix the area to be stabilized throughout the entire depth and width of the stabilizing limits.

Perform the mixing operations, as specified, (either in place or in a plant) regardless of whether the existing soil, or any select soils placed within the limits of the stabilized sections, have the required bearing value without the addition of stabilizing materials.

160-3.4 Mixed Material Requirements: At the completion of the mixing, ensure the gradation of the material within the limits of the area being stabilized is such that 97% will pass a 3-1/2 inch sieve. Break down or remove from the stabilized area materials, including clay lumps or lumps made of clay-size particles (any particle size 2 microns or less), not meeting the gradation requirements. After mixing, remove any existing lumps of clay or clay-sized particles greater than one inch that do not meet the requirements of 160-3.2 or this Section from the stabilized area. The final product must meet the acceptance requirements of 160-4.

160-3.4.1 Classification and Bearing Value: Meet the soil utilization and bearing value requirements for the subgrade in accordance with 160-4.

160-3.4.2 Compaction: After completing the mixing operations and satisfying the requirements for bearing value, uniformity, and particle size, compact the materials at a moisture content permitting the specified compaction in 160-4.2.3. If the moisture content of the material is improper for attaining the specified density, either add water or allow the material to dry until reaching the proper moisture content for the specified compaction.

160-3.4.3 Finish Grading: Shape the completed stabilized subgrade to conform with the finished graded surface shown in the Plans. Check the subgrade using elevation stakes or other means approved by the Engineer.

160-3.4.4 Condition of Completed Subgrade: After completing the stabilizing and compacting operations, ensure that the subgrade is firm and substantially unyielding to the extent that it will support construction equipment and will have the bearing value required by the Plans.

Remove all soft and yielding material, and any other portions of the subgrade which will not compact readily, and replace it with suitable material so that the whole subgrade is brought to line and grade, with proper allowance for subsequent compaction.

160-3.4.5 Maintenance of Completed Subgrade: After completing the subgrade as specified above, maintain it free from ruts, depressions, and any damage resulting from the hauling or handling of materials, equipment, tools, etc. The Contractor is responsible for maintaining the required density until the subsequent base or pavement is in place including any repairs, replacement, etc., of curb and gutter, sidewalk, etc., which might become necessary in order to recompact the subgrade in the event of underwash or other damage occurring to the previously compacted subgrade. Perform any such recompaction at no expense to the Department. Construct and maintain ditches and drains along the completed subgrade section.

160-4 Acceptance Program for Mixed Materials.

160-4.1 General Requirements:

160-4.1.1 Initial Equipment Comparison: Meet the requirements of 120-10.1.1.

160-4.1.2 Initial Production LOT: Meet the requirements of 120-10.1.2.

160-4.1.3 Density over 105%: Meet the requirements of 120-10.1.3.

160-4.1.4 Quality Control Tests:

160-4.1.4.1 Modified Proctor Maximum Density Determination:

Collect enough material to split and create three separate samples. Determine test locations, including stations and offsets, using the Random Number generator approved by the Department. Retain the Verification and Resolution samples for the Department until the Engineer accepts the LOTs represented by the samples. Determine modified Proctor maximum density and optimum moisture content by sampling and testing the material in accordance FM 1-T 180.

160-4.1.4.2 Density Testing Requirements: Meet the requirements of 120-10.1.4.2.

160-4.1.4.3 Bearing Value Requirements: Test the stabilized subgrade sample collected in 160-4.1.4.1 to determine the LBR in accordance with FM 5-515. Within the entire limits of the width and depth of the areas to be stabilized, obtain the required minimum bearing value at the frequency in 160-4.4.1. For any area where the bearing value obtained is deficient from the value indicated in the Plans, in excess of the tolerances established herein, spread and mix additional stabilizing material in accordance with 160-3.3. Perform this reprocessing for the full width of the roadway being stabilized and longitudinally for a distance of 50 feet beyond the limits of the area in which the bearing value is deficient. Determine the quantity of additional stabilizing material to be used in reprocessing.

160-4.1.4.3.1 Under-tolerances in Bearing Value Requirements: The under-tolerances are allowed for the following specified Bearing Values:

Table 160-1	
Specified Bearing Value	Under-tolerance
LBR 40	5.0
LBR 35	4.0
LBY 30 (and under)	2.5

160-4.1.4.3.2 Unsoaked LBR Requirements: If unsoaked LBR is desired, submit request for approval to the Engineer. Upon approval by the Engineer to consider the use of unsoaked LBR, randomly sample and test from three locations in the initial LOT for both soaked and unsoaked LBR in accordance with FM 5-515. Ensure all of the tests achieves the LBR value shown in the table below. Continue testing unsoaked LBR at the frequency shown in 160-4.4.1. Discontinue unsoaked LBR testing if any unsatisfactory QC LBR test result is obtained or resolution determines an unsatisfactory

LBR.

The following unsoaked bearing value requirement is based on tests performed on samples obtained after completing mixing operations:

Table 160-2		
Specified Bearing Value	Unsoaked Bearing Value Required	Under-tolerance
LBR 40	LBR 43	0.0

160-4.1.4.4 Soil Classification and Organic Content Testing: Perform soil classification tests on the sample collected in 160-4.1.4.1, in accordance with AASHTO T88, AASHTO T89, AASHTO T90, and FM 1-T 267. The Engineer may waive the soil classification and organic content testing requirements for existing base or granular subbase materials. Classify soils in accordance with AASHTO M145 to determine compliance with soil utilization requirements as specified in Standard Plans, Index 120-001. If the stabilizing material used is 100% RAP or RAP blended material, then replace FM 1-T 267 with FM 5-563 (excluding gradation analysis). The following testing requirements must be met.

Table 160-3	
Test Method	Criteria
AASHTO M145	Soil Symbol = S
FM 1-T 267	Average of 3 Organic Content $\leq 2.5\%$
	Individual Organic Content Result $\leq 4.0\%$
AASHTO T89	Liquid Limit ≤ 30
AASHTO T90	Plastic Index ≤ 8
FM 5-563*	Asphalt Content $\leq 4.0\%$
*Replace FM 1-T 267 with FM 5-563 (excluding gradation analysis) for 100% RAP or RAP blended material	

160-4.1.5 Department Verification: Meet the requirements of 120-10.1.5 except the Engineer will conduct the Verification tests in order to accept all materials and work associated with 160-4.1.4.

160-4.1.6 Reduced Testing Frequency: Meet the requirements of 120-10.1.6.

160-4.1.7 Payment for Resolution Tests: Meet the requirements of 120-10.1.7.

160-4.2 Mixing Depth Requirements: Report depth requirements in the Earthwork Records System (ERS) section of the Department’s database measured to the nearest 0.25 inch. The difference between the individual measured depth thickness on the roadway and the plan target thickness must not exceed 2 inches. The difference between the LOT average (average of the three individual measured depth thickness) and the plan target thickness must not exceed 1 inch. No undertolerance of mixing depth is allowed.

As an exception to the above mixing requirements, where the subgrade is of rock, the Engineer may waive the mixing operations (and the work of stabilizing), and the Department will not pay for stabilization for such sections of the roadway.

Meet the required Plan mixing-depths by measuring from the proposed final grade line. Determine test locations, including stations and offsets, using the Random Number generator approved by the Department. Notify the Engineer a minimum of 24 hours before checking mixing depths. Record results on Department approved forms.

160-4.3 Density Acceptance Criteria:

160-4.3.1 General: Within the entire limits of the width and depth of the areas to be stabilized, other than as provided in 160-4.3.2, obtain a minimum density at any location of 98% of the

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Modified Proctor maximum density as determined by FM 1-T 180.

160-4.3.2 Exceptions to Density Requirements: The Contractor need not obtain the minimum density specified in 160-4.3.1 in the upper 6 inches of areas to be grassed under the same Contract. Compact these areas to a reasonably firm condition as directed by the Engineer.

160-4.4 Additional Requirements:

160-4.4.1 Frequency: Conduct QC sampling and testing at a minimum frequency listed in the table below. The Engineer will perform Verification sampling and tests at a minimum frequency listed in the table below.

Table 160-4			
Test Name	Quality Control	Verification	Verification for Shoulder-Only, Shared Use Path and Sidewalk Construction
Modified Proctor Maximum Density	One per two consecutive LOTS	One per eight consecutive LOTS	One per four LOTS
LBR			
Gradation, LL/PI, and Soil Classification			
Organic Content			
Asphalt Content*			
Density	One per LOT	One per four LOTS	One per two LOTS
Stabilizing Mixing Depth	Three per 500 feet	Witness QC	Witness QC

*Replace organic content with asphalt content for 100% RAP or RAP blended material only.

160-4.5 Verification Comparison Criteria and Resolution Procedures:

160-4.5.1 Bearing Value: The Engineer will collect a sample at a location other than the location where the sample was collected in 160-4.1.4.1, and test the stabilized subgrade for determination of the LBR in accordance with FM 5-515. The Engineer will select test locations, including stations and offsets, using a Random Number generator, based on the LOTS under consideration.

160-4.5.1.1 Unsoaked LBR: The Engineer will sample and test the initial LOT for one soaked and one unsoaked LBR if consideration of the unsoaked LBR has been approved.

160-4.5.1.2 Resolution Procedure: If the Department’s Verification test meets the requirements of 160-4.1.4.3, the Engineer will accept the corresponding LOTS. Otherwise, the Engineer will collect an additional sample in the same LOT the Verification sample was obtained. SMO or an AASHTO accredited laboratory designated by SMO will perform Resolution testing on the additional sample. The material will be sampled and tested in accordance with FM 5-515.

If the resolution testing results meet the requirements of 160- 4.1.4.3, then the Engineer will accept the LOTS in question. Otherwise reprocess the corresponding LOTS in accordance with 160-3 and retest in accordance with 160-4.1.4.3.

160-4.5.2 Modified Proctor Maximum Density Determination: The Engineer will randomly select one of the retained split samples referenced in 160-4.1.4.1. The Engineer will compare the Verification test results to the corresponding Quality Control (QC) test results. If the test result is within 4.5 lb/ft³ of the QC test result, the LOTS will be verified. Otherwise, the Engineer will collect the Resolution split sample corresponding to the Verification sample tested. The State Materials Office or an AASHTO accredited laboratory designated by the State Materials Office will perform Resolution testing.

The material will be sampled and tested in accordance with FM 1-T 180.

The Engineer will compare the Resolution Test (RT) results with the QC test results. If the RT result is within 4.5 lb/ft³ of the corresponding QC test result, the Engineer will use the QC test results for material acceptance purposes for each corresponding pair of LOTS. If the RT result is not within 4.5 lb/ft³ of the corresponding QC test, the Engineer will collect and test the remaining Verification split samples for the LOTS in question. Verification test results will be used for material acceptance purposes for the remaining LOTS in question.

160-4.5.3 Density Testing: Meet the requirement of 120-10.4.2

160-4.5.4 Soil Classification: Meet the requirements of 120-10.4.3 with the exception that the limits will be in accordance with 160-4.1.4.4.

160-4.5.5 Organic Content: Meet the requirements of 120-10.4.4 with the exception that the limits will be in accordance with 160-4.1.4.4.

160-4.5.6 Asphalt Content: If the material used to stabilize is 100% RAP or RAP blended material, meet the requirement of 120-10.4.4, except replace FM 1-T 267 with FM 5-563 (exclude gradation analysis) and meet the limits of 160-4.1.4.4.

160-4.5.7 Mixing Depth: The Engineer will witness the Contractor's mixing depth checks to ensure compliance with 160-4.2. The Engineer will select test locations, including stations and offsets, using a Random Number generator. The Department will witness the mixing depth checks.

1. If the depth checks meet the requirements of 160-4.2, the Engineer will accept that 500-foot section.

2. If the depth checks confirm shallow depth, re-mix the 500-foot section to an appropriate depth and re-measure in accordance with 160-4.2. The Engineer will repeat the witness process.

3. If the depth checks confirm extra deep mixing, conduct an additional QC density test after compaction for the bottom 12 inches of the subgrade for that 500-foot section in addition to a QC density test for the top 12 inches. The additional density test must meet the requirements of 160-4.3.

160-4.6 Disposition of Defective Materials: Meet the requirements of 120-10.5.

160-5 Method of Measurement. The quantity to be paid for will be the plan quantity, in square yards, completed and accepted.

160-6 Basis of Payment.

Price and payment will constitute full compensation for all work and materials specified in this Section, including furnishing, spreading, and mixing of all stabilizing material required and any reprocessing of stabilization areas necessary to attain the specified bearing value. The Department will make full payment for any areas where the existing subgrade materials meet the design bearing value requirements without the addition of stabilizing additives, as well as areas where the Contractor may elect to place select high-bearing materials from other sources within the limits of the stabilizing.

If the item of borrow excavation is included in the Contract, any stabilizing materials obtained from designated borrow areas will be included in the pay quantity for borrow excavation.

Payment will be made under:

Item No. 160- 1- Stabilized Subgrade (12 IN) (LBR40) - per square yard.

END OF ITEM FL-160

SECTION 285
OPTIONAL BASE COURSE

285-1 Description.

Construct a base course composed of one of the optional materials shown on the typical sections.

285-2 Materials.

Meet the material requirements as specified in the Section covering the particular type of base to be constructed.

Graded Aggregate.....	Section 204
Asphalt.....	Section 234
Reclaimed Asphalt Pavement (RAP)*	Section 283
Limerock	Section 911
Shell Base.....	Section 911
Shell-Rock.....	Section 911
Cemented Coquina.....	Section 911
Recycled Concrete Aggregate (RCA)**	Section 911

*Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic bearing applications.

**Do not use on interstate roadways.

285-3 Selection of Base Option.

The Plans will include typical sections indicating the various types of base construction (material and thickness) allowable.

When base options are specified in the Plans, use only those options. When base options are not specified, select one base option as allowed for each typical section shown in the Plans. Only one base option is permitted for each typical section. See Tables 285-1 and 285-2 for optional base materials, thickness, and additional restrictions.

Notify the Engineer in writing of the base option selected for each typical section at least 45 calendar days prior to beginning placement of base material.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Table 285-1 Optional Base Groups 1 through 7							
Base Materials	Base Group (Base Group Pay Item)						
	1 (701)	2 (702)	3 (703)	4 (704)	5 (705)	6 (706)	7 (707)
Limerock, LBR 100	4"	5"	5-1/2"	6"	7"	8"	8-1/2"
Cemented Coquina, LBR 100	4"	5"	5-1/2"	6"	7"	8"	8-1/2"
Shell Rock, LBR 100	4"	5"	5-1/2"	6"	7"	8"	8-1/2"
Bank Run Shell, LBR 100	4"	5"	5-1/2"	6"	7"	8"	8-1/2"
Recycled Concrete Aggregate, LBR 150 ⁽¹⁾	4"	5"	5-1/2"	6"	7"	8"	8-1/2"
Graded Aggregate Base, LBR 100	4-1/2"	5-1/2"	6-1/2"	7-1/2"	8-1/2"	9"	10"
Type B-12.5	4" ⁽³⁾	4" ⁽³⁾	4" ⁽³⁾	4" ⁽³⁾	4-1/2"	5"	5-1/2"
B-12.5 and 4" Granular Subbase, LBR 100 ⁽²⁾	-	-	-	-	-	-	-
RAP Base ⁽⁴⁾	5" ⁽⁴⁾	-	-	-	-	-	-

(1) Do not use on interstate roadways.
 (2) The construction of both the subbase and Type B-12.5 will be bid and used as Optional Base. Granular subbases include limerock, cemented coquina, shell rock, bank run shell, recycled concrete aggregate and graded aggregate base. All subbase thicknesses are 4" minimum prior to adding the required prime coat.
 (3) Based on minimum practical thickness.
 (4) Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic bearing applications.
 (5) To be used for widening, three feet or less.

Table 285-1(continued) Optional Base Groups 8 through 15								
Base Materials	Base Group (Base Group Pay Item)							
	8 (708)	9 (709)	10 (710)	11 (711)	12 (712)	13 (713)	14 (714)	15 (715)
Limerock, LBR 100	9-1/2"	10"	11"	12"	12-1/2"	13-1/2" ⁽⁵⁾	14" ⁽⁵⁾	-
Cemented Coquina, LBR 100	9-1/2"	10"	11"	12"	12-1/2"	13-1/2" ⁽⁵⁾	14" ⁽⁵⁾	-
Shell Rock, LBR 100	9-1/2"	10"	11"	12"	12-1/2"	13-1/2" ⁽⁵⁾	14" ⁽⁵⁾	-
Bank Run Shell, LBR 100	9-1/2"	10"	11"	12"	12-1/2"	13-1/2" ⁽⁵⁾	14" ⁽⁵⁾	-
Recycled Concrete Aggregate, LBR 150 ⁽¹⁾	9-1/2"	10"	11"	12"	12-1/2"	13-1/2" ⁽⁵⁾	14" ⁽⁵⁾	-
Graded Aggregate Base, LBR 100	11"	12"	13"	14"	-	-	-	-
Type B-12.5	5-1/2"	6"	6-1/2"	7"	7-1/2"	8"	8-1/2"	9"
B-12.5 and 4" Granular Subbase, LBR 100 ⁽²⁾	-	4"	4-1/2"	5"	5-1/2"	6"	6-1/2"	7"

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Table 285-1(continued) Optional Base Groups 8 through 15								
Base Materials	Base Group (Base Group Pay Item)							
	8 (708)	9 (709)	10 (710)	11 (711)	12 (712)	13 (713)	14 (714)	15 (715)
RAP Base ⁽⁴⁾	-	-	-	-	-	-	-	-
(1) Do not use on interstate roadways. (2) The construction of both the subbase and Type B-12.5 will be bid and used as Optional Base. Granular subbases include limerock, cemented coquina, shell rock, bank run shell, recycled concrete aggregate and graded aggregate base. All subbase thicknesses are 4" minimum prior to adding the required prime coat. (3) Based on minimum practical thickness. (4) Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic bearing applications. (5) To be used for widening, three feet or less.								

Table 285-2: Limited Use Optional Base Groups ⁽¹⁾								
Base Materials	Base Group (Base Group Pay Item)							
	101 (701)	102 (702)	103 (703)	104 (704)	105 (705)	106 (706)	107 (707)	108 (708)
Limerock Stabilized, LBR 70	5"	6-1/2"	8"	9"	10"	11"	12-1/2"	-
Shell, LBR 70	5"	6-1/2"	8"	9"	10"	11"	12-1/2"	-
Shell Stabilized, LBR 70	7"	8-1/2"	9-1/2"	10-1/2"	12"	-	-	-
Sand-Clay, LBR 75	5"	6-1/2"	8"	9"	10"	11"	12-1/2"	-
Soil Cement (300 psi) (Plant Mixed)	5"	5-1/2"	6-1/2"	7-1/2"	8-1/2"	9"	10"	11"
Soil Cement (300 psi) (Road Mixed)	5"	5-1/2"	6-1/2"	7-1/2"	8-1/2"	-	-	-
Soil Cement (500 psi) (Plant Mixed)	4" ⁽²⁾	4"	5"	5-1/2"	6"	7"	7-1/2"	8-1/2"
(1) Use only when specified in the Plans. (2) Based on minimum practical thicknesses.								

285-4 Construction Requirements.

Construct the base in accordance with the Section covering the particular type of base to be constructed.

Graded Aggregate.....	Section 204
Asphalt.....	Section 234
Reclaimed Asphalt Pavement (RAP)*	Section 283
Limerock	Section 200
Shell Base.....	Section 200
Shell Rock	Section 200
Cemented Coquina.....	Section 200
Recycled Concrete Aggregate (RCA)**	Section 200

*Only for use on non-limited access paved shoulders, shared use paths, or other non-traffic

**Do not use on interstate roadways.

285-5 Variation in Earthwork Quantities.

The Plans will identify the optional materials used by the Department for determining the earthwork quantities (Roadway Excavation, Borrow Excavation, Subsoil Excavation, Subsoil Earthwork, or Embankment). The Department will not revise the quantities, for those items having final pay based on plan quantity, to reflect any volumetric change caused by the Contractor’s selection of a different optional material.

285-6 Thickness Requirements

285-6.1 Measurements: For non-asphalt bases, meet the requirements of 200-7.3.1.2.

For subbases, meet the thickness requirements of 290-4.

The Engineer will determine the thickness of asphalt base courses in accordance with 234-8.1.

285-6.2 Correction of Deficient Areas: For non-asphalt bases, correct all areas of the completed base having a deficiency in thickness in excess of 1/2 inch by scarifying and adding additional base material. As an exception, if authorized by the Engineer, such areas may be left in place without correction and with no payment.

For asphalt bases, correct all areas of deficient thickness in accordance with 234-8.

285-7 Calculation of Average Thickness of Base.

For bases that are not mixed in place, the Engineer will determine the average thickness from the measurements specified in 285-6.1, calculated as follows:

1. When the measured thickness is more than 1/2 inch greater than the design thickness shown on the typical section in the Plans, it will be considered as the design thickness plus 1/2 inch.
2. Average thickness will be calculated per typical section for the entire job as a unit.
3. Any areas of base left in place with no payment will not be included in the calculations.
4. Where it is not possible through borings to distinguish the base materials from the underlying materials, the thickness of the base used in the measurement will be the design thickness.
5. For Superpave asphalt base course, the average spread rate of each course shall be constructed in compliance with 234-8.

285-8 Method of Measurement.

The quantity to be paid for will be the plan quantity area in square yards, omitting any areas where under-thickness is in excess of the allowable tolerance as specified in 285-6. The pay area will be the surface area, determined as provided above, adjusted in accordance with the following formula:

$$Pay\ Area = Surface\ Area \left(\frac{Calculated\ Average\ Thickness\ per\ 285 - 7}{Plan\ Thickness} \right)$$

The pay area shall not exceed 105% of the surface area.

There will be no adjustment of the pay area on the basis of thickness for base courses constructed utilizing mixed-in-place operations.

For Superpave asphalt base course, the quantity to be paid for will be the plan quantity area in square yards. The pay area will be adjusted in accordance with 234-9.

285-9 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section, including tack coat between base layers, prime coat, cover material for prime coat, bituminous material used in bituminous plant mix, and cement used in soil-cement.

For superpave asphalt base course, a pay adjustment based upon the quality of the material will be applied in accordance with 334-8.

Where the Plans include a typical section which requires the construction of an asphalt base only, price adjustments for bituminous material provided for in 9-2.1.2 will apply to that typical section. For typical sections which permit the use of asphalt or other materials for construction of an optional base, price adjustments for bituminous material provided for in 9- 2.1.2 will not apply.

Payment will be made under:

Item No. 285- 1- 6 IN Recycled Concrete Aggregate (RCA) Base Course – per square yard.

Item No. 285- 2- 8 IN Recycled Concrete Aggregate (RCA) Base Course – per square yard.

END OF ITEM FL-285

SECTION 300
PRIME AND TACK COATS

300-1 Description.

Apply bituminous prime coats on previously prepared bases and apply bituminous tack coats on previously prepared bases and on existing pavement surfaces.

300-2 Materials.

300-2.1 Prime Coat: For prime coat, use a product listed on the Department's Approved Product List (APL), meeting the requirements of 916-3, or other types and grades of bituminous material if specified in the Contract Documents. A copy of the Bill of Lading representing the material in the distributor tank must be in the truck and be always available.

Where prime coats are to be diluted, certify the dilution was done in accordance with the specific dilution requirements for each product and for each load of material used.

The Contractor may select any approved prime coat unless the Contract Documents indicate the use of a specific material. The Engineer may allow types and grades of bituminous material other than those specified above if the Contractor can show the alternate material will properly perform the function of prime coat material.

300-2.2 Cover Material for Prime Coat: Uniformly cover the primed base by a light application of cover material. The Contractor may use either sand or screenings for the cover material. For the sand, meet the requirements as specified in 902-2 or 902-6, and for the screenings, meet the requirements as specified in 902-5. If the primed base course will be exposed to general traffic, apply a cover material coated with 2 to 4% asphalt cement. Apply the asphalt coated material at approximately 10 pounds per square yard. Roll the entire surface of asphalt coated prime material with a traffic roller as required to produce a reasonably dense mat.

300-2.3 Tack Coat: Unless the Contract Documents call for a specific type or grade of tack coat, use PG 52-28 meeting the requirements of 916-2, heated to a temperature from 250 to 300°F or use an undiluted emulsion listed on the APL, meeting the requirements of 916-3. Heat the emulsion to the temperature recommended by the tack coat manufacturer. A copy of the Bill of Lading representing the material in the distributor tank must be in the truck and be always available.

For night paving, use PG 52-28 tack coat. The Engineer may approve an emulsified tack coat for night paving if the Contractor demonstrates, at the time of use, the emulsion will break and not affect the progress of the paving operation.

300-3 Equipment.

300-3.1 Pressure Distributor: Provide a pressure distributor equipped with pneumatic tires having a sufficient width of rubber in contact with the road surface to avoid breaking the bond or forming a rut in the surface. Ensure the distance between the centers of openings of the outside nozzles of the spray bar is equal to the width of the application required, plus or minus two inches. Ensure the outside nozzle at each end of the spray bar has an area of opening greater than the opening of an interior nozzle by 25% to 75%. Ensure all other nozzles have uniform openings. When the application covers less than the full width, the Contractor may allow the

normal opening of the end nozzle at the junction line to remain the same as the interior nozzles. A trailer-mounted pressure distributor can be used for non-mainline applications, if approved by the Engineer. It shall have a self-contained heat system, clean out system, calibration chart, manhole, and shall meet the requirements herein.

Clean the distributor tank at a minimum of every twelve months and whenever the product type in the tank is changed. Remove all emulsion and asphalt material during cleaning. Additionally, clean the distributor tank if the quality of the tack or prime shot diminishes or buildup causes the calibration of the tank to be affected.

300-3.2 Sampling Device: Equip all pressure distributors and transport tanks with an approved spigot-type sampling device.

300-3.3 Temperature Sensing Device: Equip all pressure distributors and transport tanks with an approved dial type thermometer.

Use a thermometer with a temperature range from 50 to 500°F, no greater than 25°F increments, and a minimum dial diameter of two inches.

Locate the thermometer near the midpoint of the tank's length and within the middle third of the tank's height, or as specified by the manufacturer (if in a safe and easily accessible location). Enclose the thermometer in a well with a protective window or by other means as necessary to keep the instrument clean and in the proper working condition.

300-4 Contractor's Quality Control.

Provide the necessary quality control of the prime and tack coats and application in accordance with the Contract requirements. If the application rate varies by more than 0.01 gallon per square yard from the rate set by the Engineer or varies beyond the range established in 300-7 or 300-8, immediately make all corrections necessary to bring the application rate into the acceptable range. The Engineer may take additional measurements at any time. The Engineer will randomly check the Contractor's measurement to verify the application rate.

300-5 Cleaning Base and Protection of Adjacent Work.

Before applying any bituminous material, remove all loose material, dust, sand, dirt, caked clay, and other foreign material which might prevent proper bond with the existing surface for the full width of the application. Take particular care in cleaning the outer edges of the strip to be treated, to ensure the prime or tack coat will adhere.

When applying prime or tack coat adjacent to curb and gutter, valley gutter, or any other concrete surfaces, cover such concrete surfaces, except where they are to be covered with a bituminous wearing course, with heavy paper or otherwise protect them as approved by the Engineer, while applying prime or tack coat. Remove any bituminous material deposited on such concrete surfaces.

300-6 Weather Limitations.

Do not apply prime and tack coats when the air temperature in the shade and away from artificial heat is less than 40°F at the location where the application is to be made or when weather conditions or the surface conditions are otherwise unfavorable.

300-7 Application of Prime Coat.

300-7.1 General: Clean the surface to be primed and ensure the moisture content of the base does not exceed the optimum moisture. Heat the prime coat material to the temperature

recommended by the prime coat manufacturer. Apply the material with a pressure distributor. Determine the application amount based on the character of the surface. Use an amount sufficient to coat the surface thoroughly and uniformly with no excess.

300-7.2 Application Rate: Use an application rate as defined in Table 300-1. Control the application rate within the minimum and plus 0.01 gallon per square yard of the minimum application rate. The minimum application rate may be adjusted by the Engineer to meet specific field conditions. Determine and record the application rate a minimum of twice per day, once at the beginning of each day’s production and, as needed, to control the operation.

Table 300-1 Prime Coat - Minimum Application Rates	
Base Type	Minimum Application Rate (gal/yd ²)
Limerock, Limerock Stabilized, Shell-Rock, Recycled Concrete Aggregate and Local Rock Bases	0.10
Sand-Clay, Cemented Coquina, Shell, and Shell Stabilized Bases	0.15

300-7.3 Sprinkling: If required by the Engineer, lightly sprinkle the base with water and roll it with a traffic roller in advance of the prime coat application.

300-7.4 Partial Width of Application: If traffic conditions warrant, the Engineer may require the application be made on only one-half the width of the base at one time, in which case, use positive means to secure the correct amount of bituminous material at the joint.

300-8 Application of Tack Coat.

300-8.1 General: Where the Engineer requires a tack coat prior to laying a bituminous surface, apply the tack coat as specified herein below. Coat the surface completely and uniformly with tack.

300-8.2 Where Required: Place a tack coat on all asphalt layers prior to constructing the next course. In general, the Engineer will not require a tack coat on primed bases except in areas that have become excessively dirty and cannot be cleaned, or in areas where the prime has cured to the extent all bonding effect has been lost.

300-8.3 Method of Application: Apply the tack coat with a pressure distributor except on small jobs, if approved by the Engineer, apply it by other mechanical devices or by hand methods. Heat the bituminous material to a suitable temperature as designated by the supplier.

300-8.4 Application Rate: Use an application rate defined in Table 300-2. Control the application rate within plus or minus 0.01 gallon per square yard of the target application rate. The target application rate may be adjusted by the Engineer to meet specific field conditions. Determine and record the application rate a minimum of twice per day, once at the beginning of each day’s production and again, as needed, to control the operation. When using PG 52-28, multiply the target application rate by 0.6.

Table 300-2 Tack Coat Application Rates		
Asphalt Mixture Type	Underlying Pavement Surface	Target Tack Rate (gal/yd ²) ¹
Base Course, Structural Course, Dense-Graded Friction Course, Open-Graded Friction Course	Newly Constructed Asphalt Layers	0.06
	Milled Asphalt Pavement Surface, Oxidized and Cracked Asphalt Pavement, Concrete Pavement	0.09
Note 1: Target tack application rates greater than those specified may be used upon approval of the Engineer.		

When using a meter to control the tack or prime application rate, manually measure the volume in the tank at the beginning and end of the application area for a specific target application rate. Perform this operation at a minimum frequency of once per production shift. Resolve any differences between the manually measured method and the meter to ensure the target application rate is met in accordance with this Section. Adjust the application rate if the manually measured application rate is greater than plus 0.02 or minus 0.01 gallons per square yard when compared to the target application rate.

300-8.5 Curing and Time of Application: When using a distributor, apply tack coat sufficiently in advance of placing bituminous mix to permit drying, but do not apply tack coat so far in advance that it might lose its adhesiveness as a result of being covered with dust or other foreign material. When using a spray paver, the requirements above do not apply.

300-8.6 Protection: Keep the tack coat surface free from traffic until the subsequent layer of bituminous hot mix has been laid.

300-9 Method of Measurement.

300-9.1 General: The quantity specified will be the volume, in gallons, of bituminous material actually applied and accepted. This application rate will be determined from measurements made by the Contractor and verified by the Engineer based on tank calibrations, as specified in 300-9.2. Where it is specified prime coat material is to be diluted with water, the amount specified for the application rate will be the volume after dilution.

300-9.2 Calibration of Tanks: Ensure all distributors used for applying tack or prime coats are calibrated prior to use by a reliable and recognized firm engaged in calibrating tanks. Submit a certification of calibration and the calibration chart to the Engineer prior to use. In lieu of a volumetrically calibrated distributor, use a distributor equipped with a calibrated meter approved by the Engineer.

300-9.3 Temperature Correction: Measure the volume and increase or decrease the volume actually measured to a corrected volume at a temperature of 60°F.

Make the correction for temperature by applying the applicable conversion factor (K), as shown below.

For petroleum oils having a specific gravity above 0.966 at 60°F, K = 0.00035 per degree.

For petroleum oils having a specific gravity of between 0.850 and 0.966 at 60°F, K = 0.00040 per degree.

For emulsified asphalt, K = 0.00025 per degree.

When volume-correction tables based on the above conversion factors are not

available, use the following formula in computing the corrections for volumetric change:

$$V = \frac{V^1}{K(T - 60) + 1}$$

Where:

V= Volume of bituminous material at 60°F (pay volume). V¹=

Volume of bituminous material as measured.

K= Correction factor (Coefficient of Expansion).

T= Temperature (in °F), of bituminous material when measured.

300-10Basis of Payment.

There is no direct payment for the work specified in this Section, it is incidental to, and is to be included in the other items of related work.

END OF ITEM FL-300

SECTION 320
HOT MIX ASPHALT -
PLANT METHODS AND EQUIPMENT

320-1 General.

This Section specifies the basic equipment and operational requirements for hot mix asphalt (including warm mix asphalt) production facilities used in the construction of asphalt pavements and bases. Establish and maintain a quality control system that provides assurance that all materials and products submitted for acceptance meet Contract requirements.

320-2 Quality Control (QC) Requirements.

320-2.1 Minimum Producer QC Requirements: Perform as a minimum the following activities:

1. Stockpiles:
 - a. Assure materials are placed in the correct stockpile;
 - b. Assure good stockpiling techniques;
 - c. Inspect stockpiles for separation, contamination, segregation, and other similar items;
 - d. Properly identify and label each stockpile.
2. Incoming Aggregate:
 - a. Obtain gradations and bulk specific gravity (G_{sb}) values from aggregate supplier for reference;
 - b. Determine the gradation of all component materials and routinely compare gradations and G_{sb} values to mix design.
3. Cold Bins:
 - a. Calibrate the cold gate/feeder belt for each material;
 - b. Determine cold gate/feeder belt settings;
 - c. Observe operation of cold feeder for uniformity;
 - d. Verify accuracy of all settings;
 - e. Verify that the correct components are being used, and that all modifiers or additives or both are being incorporated into the mix.
4. Batch Plants:
 - a. Determine percent used and weight to be pulled from each bin to assure compliance with the mix design;
 - b. Check mixing time;
 - c. Check operations of weigh bucket and scales.
5. Drum Mixer Plants:
 - a. Determine aggregate moisture content;
 - b. Calibrate the weigh bridge on the charging conveyor.
6. Control Charts: Maintain QC data and charts (updated daily) for all QC Sampling and Testing and make available upon demand. Provide the following charts:
 - a. All components used to determine the composite pay factor (No. 8 sieve, No. 200 sieve, asphalt binder content, air voids, and density);
 - b. Gradation of incoming aggregate;
 - c. Gradation, asphalt binder content and maximum specific gravity (G_{mm}) of RAP;

d. Any other test result or material characteristic (as determined by the Contractor) necessary for process control.

The above listed minimum activities are to be considered normal activities necessary to control the production of hot mix asphalt at an acceptable quality level. Depending on the type of process or materials, some of the activities listed may not be necessary and in other cases, additional activities may be required. The frequency of these activities will also vary with the process and the materials. When the process varies from the defined process average and variability targets, the frequency of these activities will be increased until the proper conditions have been restored.

320-2.2 Minimum Process Control Testing Requirements: Perform, as a minimum, the following activities at the testing frequencies provided in Table 320-1. QC tests used in the acceptance decision may be used to fulfill these requirements.

Table 320-1		
Asphalt Plant - Materials Testing Frequencies		
Material	Property	Minimum Testing Frequency
Aggregate	Gradation	Once per 1,000 tons of incoming aggregate
Asphalt Mix	Asphalt Binder Content	If daily production > 100 tons, once per day; If daily production > 1,000 tons, twice per day. *
Asphalt Mix	Bulk Specific Gravity (G_{mb})	If daily production > 100 tons, once per day; If daily production > 1,000 tons, twice per day. *
Asphalt Mix	Gradation	If daily production > 100 tons, once per day; If daily production > 1,000 tons, twice per day. *
Asphalt Mix	Maximum Specific Gravity (G_{mm})	If daily production > 100 tons, once per day; If daily production > 1,000 tons, twice per day. *
Asphalt Mix	Temperature	Each of first 5 loads, then once every 5 loads thereafter, per day per mix design.
RAP	Asphalt Binder Content	Once per 1,000 tons RAP
RAP	Gradation	Once per 1,000 tons RAP
RAP	Maximum Specific Gravity (G_{mm})	Once per 5,000 tons RAP

*If less than 100 tons of mix is produced on each of successive days of production, resulting in a cumulative quantity of greater than 100 tons, then perform the indicated test.

320-2.3 Personnel Qualifications: Provide QC Technicians in accordance with Section 105.

320-2.4 Hot Mix Asphalt Testing Laboratory Requirements: Furnish a fully equipped asphalt laboratory at the production site. The laboratory must be qualified under the Department’s Laboratory Qualification Program, as described in Section 105. In addition, the laboratory shall meet the following requirements:

1. Area - The effective working area of the laboratory shall be a minimum of 180 square feet, with a layout of which will facilitate multiple tests being run simultaneously by two technicians. This area does not include the space for desks, chairs, and file cabinets. Any variations shall be approved by the Engineer.

2. Lighting - The lighting in the lab must be adequate to illuminate all areas of the work.

3. Temperature Control - Equip the lab with heating and air conditioning units that provide a satisfactory working environment.

4. Ventilation - Equip the lab with exhaust fans that will remove all hazardous fumes from within the laboratory in accordance with OSHA requirements.

5. Equipment and Supplies - Furnish the lab with the necessary sampling and testing equipment and supplies for performing contractor QC and Department Verification Sampling and Testing. A detailed list of equipment and supplies required for each test is included in the appropriate FDOT, AASHTO, or ASTM Test Method. In the event testing equipment goes out of service during production, the Contractor may elect to use replacement equipment at another laboratory qualified, as described in Section 105, for up to 72 hours upon notification of the Engineer.

6. Personal Computer - Provide a personal computer capable of running a Microsoft Excel™ spreadsheet program, along with a printer.

7. Communication - Provide a telephone and fax machine (with a private line) for the use of the testing facility's QC personnel. In addition, provide an internet connection capable of uploading data to the Department's database and for e-mail communications.

320-3 Requirements for All Plants.

320-3.1 General: Design, manufacture, coordinate, and operate the asphalt plant in a manner that will consistently produce a mixture within the required tolerances and temperatures specified.

320-3.2 Electronic Weigh Systems: Equip the asphalt plant with an electronic weigh system that has an automatic printout, is certified every six months by an approved certified scale technician, and meets monthly comparison checks with certified truck scales as specified in 320-3.2.4. Weigh all plant produced hot mix asphalt on the electronic weigh system, regardless of the method of measurement for payment.

Include, as a minimum, the following information on the printed delivery ticket:

1. Sequential load number
2. Project number
3. Date
4. Name and location of plant
5. Mix design number
6. Place for hand-recording mix temperature
7. Truck number
8. Gross, tare, and net tonnage per truck (as applicable)
9. Daily total tonnage of mix for the mix design

Print the delivery ticket with an original and at least one copy. Furnish the original to the Engineer at the plant and one copy to the Engineer at the paving site.

Utilize any one of the following three electronic weigh systems.

320-3.2.1 Electronic Weigh System on the Truck Scales: Provide an electronic weigh system on all truck scales, which is equipped with an automatic recordation system that is

approved by the Engineer. Use scales of the type that directly indicate the total weight of the loaded truck. Use scales meeting the requirements for accuracy, condition, etc., of the Bureau of Weights and Measures of the Florida Department of Agriculture, and re-certify such fact every six months, either by the Bureau of Weights and Measures or by a registered scale technician.

320-3.2.2 Electronic Weigh System on Hoppers Beneath a Surge or Storage Bin:

Provide an electronic weigh system on the hopper (hopper scales or load cells) beneath the surge or storage bin, which is equipped with an automatic recordation system approved by the Engineer.

320-3.2.3 Automatic Batch Plants with Printout: For batch plants, provide an approved automatic printer system which will print the individual or cumulative weights of aggregate and liquid asphalt delivered to the pugmill and the total net weight of the asphalt mix measured by hopper scales or load cell type scales. Use the automatic printer system only in conjunction with automatic batching and mixing control systems that have been approved by the Engineer.

320-3.2.4 Monthly Electronic Weigh System Comparison Checks: Check the accuracy of the electronic weighing system at the commencement of production and thereafter at least every 30 days during production by one of the following two methods and maintain a record of the weights in the Scale Check Worksheet.

320-3.2.4.1. Electronic Weigh System on Truck Scales:

1. The Engineer will randomly select a loaded truck of asphalt mix, a loaded aggregate haul truck, or another vehicle type approved by the Engineer and record the truck number and gross weight from the Contractor's delivery ticket.

2. Weigh the selected truck on a certified truck scale, which is not owned by the Contractor and record the gross weight for the comparison check. If another certified truck scale is not available, the Engineer may permit another set of certified truck scales owned by the Contractor to be used. The Engineer may elect to witness the scale check.

3. The gross weight of the loaded truck as shown on the Contractor's delivery ticket will be compared to the gross weight of the loaded truck from the other certified truck scale. The maximum permissible deviation is 8 pounds per ton of load, based on the certified truck scale weight.

4. If the distance from the asphalt plant to the nearest certified truck scale is enough for fuel consumption to affect the accuracy of the comparison checks, a fuel adjustment may be calculated by using the truck odometer readings for the distance measurement, and 6.1 miles per gallon for the fuel consumption rate, and 115 ounces per gallon for fuel weight.

5. During production, when an additional certified truck scale is not available for comparison checks, the Engineer may permit the Contractor to weigh the truck on his certified scales used during production and then weigh it on another certified truck scale, as soon the other scale is available for the comparison checks.

In addition to the periodic checks as specified above, check the scales at any time the accuracy of the scales becomes questionable. When such inaccuracy does not appear to be sufficient to seriously affect the weighing operations, the Engineer will allow a period of two calendar days for the Contractor to conduct the required scale check. However, in the event the indicated inaccuracy is sufficient to seriously affect the mixture, the Engineer may require immediate shut-down until the accuracy of the scales has been checked and necessary

corrections have been made. Include the cost of all scale checks in the bid price for asphalt concrete, at no additional cost to the Department.

320-3.2.4.2. Electronic Weigh System on Hoppers Beneath a Surge or Storage Bin and Automatic Batch Plants with Printout:

1. The Engineer will randomly select a loaded truck of asphalt mix and record the truck number, and the net weight of the asphalt mix from the Contractor's delivery ticket.

2. Weigh the selected truck on a certified truck scale, which is not owned by the Contractor and record the gross weight for the comparison check. If another certified truck scale is not available, the Engineer may permit another set of certified truck scales owned by the Contractor to be used. The Engineer may elect to witness the scale check.

3. Deliver the asphalt mix to the project, then weigh the selected empty truck on the same certified truck scales. Record the tare weight of the truck.

4. Compare the net weight of the asphalt mix from the delivery ticket to the calculated net weight of the asphalt mix as determined by the certified truck scale weights. The maximum permissible deviation is 8 pounds per ton of load, based on the certified truck scale weight.

5. Use the fuel adjustment as specified in 320-3.2.4.1(4), when the distance from the asphalt plant to the nearest certified truck scale is enough for fuel consumption to affect the accuracy of the comparison checks.

6. During production, when an additional certified truck scale is not available for comparison checks, the Engineer may permit the Contractor to load a truck with aggregate from the pugmill, surge or storage bin, and follow the above procedures to conduct the comparison checks as soon as certified truck scale is available.

If the check shows a greater difference than the tolerance specified above, then recheck on a second set of certified scales. If the check and recheck indicate that the printed weight is out of tolerance, have a certified scale technician check the electronic weigh system and certify the accuracy of the printer. While the system is out of tolerance and before its adjustment, the Engineer may allow the Contractor to continue production only if provisions are made to use a set of certified truck scales to determine the truck weights.

320-3.3 Asphalt Binder: Meet the following requirements:

320-3.3.1 Transportation: Deliver the asphalt binder to the asphalt plant at a temperature not to exceed 370°F, and equip the transport tanks with sampling and temperature sensing devices meeting the requirements of 300-3.2.

320-3.3.2 Storage: Equip asphalt binder storage tanks to heat the liquid asphalt binder to the temperatures required for the various mixtures. Heat the material in such a manner that no flame comes in contact with the binder. Heat or insulate all pipe lines and fittings. Use a circulating system of adequate size to ensure proper and continuous circulation during the entire operating period. Locate a thermometer, reading from 200 to 400°F, either in the storage tank or in the asphalt binder feed line. Maintain the asphalt binder in storage within a range of 230 to 370°F in advance of mixing operations. Locate a sampling device on the discharge piping exiting the storage tank or at a location as approved by the Engineer. Provide a metal can of one quart capacity for binder sampling at the request of the Engineer.

320-3.4 Aggregate: Meet the following requirements:

320-3.4.1 Stockpiles: Place each aggregate component in an individual stockpile, and separate each from the adjacent stockpiles, either by space or by a system of bulkheads.

Prevent the intermingling of different materials in stockpiles at all times. Identify each stockpile, including RAP, as shown on the mix design.

Form and maintain stockpiles in a manner that will prevent segregation. If a stockpile is determined to be segregated, discontinue the use of the material on the project until the appropriate actions have been taken to correct the problem.

320-3.4.2 Blending of Aggregates: Stockpile all aggregates prior to blending or placing in the cold feed bins. If mineral filler or hydrated lime is required in the mix, feed or weigh it in separately from the other aggregates.

320-3.4.2.1 Cold Feed Bin: Provide a separate cold feed bin for each component of the fine and coarse aggregate required by the mix design. Equip the cold feed bins with accurate mechanical means for feeding the aggregate uniformly into the dryer in the proportions required for the finished mix to maintain uniform production and temperature. When using RAP as a component material, prevent any oversized RAP from being incorporated into the completed mixture by the use of: a grizzly or grid over the RAP bin; in-line roller or impact crusher; screen; or other suitable means. If oversized RAP material appears in the completed recycled mix, take the appropriate corrective action immediately. If the appropriate corrective actions are not immediately taken, stop plant operations.

Use separate bin compartments in the cold aggregate feeder that are constructed to prevent any spilling or leakage of aggregate from one cold feed bin to another. Ensure that each cold feed bin compartment has the capacity and design to permit a uniform flow of aggregates. Mount all cold feed bin compartments over a feeder of uniform speed, which will deliver the specified proportions of the separate aggregates to the drier at all times. If necessary, equip the cold feed bins with vibrators to ensure a uniform flow of the aggregates at all times.

320-3.4.2.2 Gates and Feeder Belts: Provide each cold feed bin compartment with a gate and feeder belt, both of which are adjustable to assure the aggregate is proportioned to meet the requirements of the mix design.

320-3.4.3 Screening Unit: Remove any oversized pieces of aggregate by the use of a scalping screen. Do not return this oversized material to the stockpile for reuse unless it has been crushed and reprocessed into sizes that will pass the scalping screen. Ensure that the quantity of aggregates being discharged onto the screens does not exceed the capacity of the screens to actually separate the aggregates into the required sizes.

320-3.5 Dryer: Provide a dryer of satisfactory design for heating and drying the aggregate. Use a dryer capable of heating the aggregate to within the specified temperature range for any mix, and equip the dryer with an electric pyrometer placed at the discharge chute to automatically register the temperature of the heated aggregates.

320-3.6 Asphalt Binder Control Unit: Provide a satisfactory means, either by weighing, metering, or volumetric measuring, to obtain the proper amount of asphalt binder material in the mix, within the tolerance specified for the mix design.

320-3.7 Contractor's Responsibilities: Acceptance of any automatic delivery ticket printout, electronic weight delivery ticket, other evidence of weight of the materials or approval of any particular type of material or production method will not constitute agreement by the Department that such matters are in accordance with the Contract Documents and it shall be the Contractor's responsibility to ensure that the materials delivered to the project are in accordance with the Contract Documents.

320-4 Additional Requirements for Batch Plants.

320-4.1 Heating and Drying: Heat and dry the aggregate before screening. Control the temperature of the aggregate so the temperature of the completed mixture at the plant falls within the permissible range allowed by this Section.

320-4.2 Gradation Unit: Provide plant screens capable of separating the fine and coarse aggregates and of further separating the coarse aggregate into specific sizes. In addition, equip the gradation unit with a scalping screen to restrict the maximum size of the aggregates. In the event that the plant is equipped with cold feed bins that are capable of adequately controlling the gradation of the mixture, the use of plant screens is optional.

320-4.3 Hot Bins: Provide storage bins of sufficient capacity to supply the mixer when it is operating at full capacity. Provide hot bins with divided compartments to ensure separate and adequate storage of the appropriate fractions of the aggregate. Equip each compartment with an overflow chute of suitable size and location to prevent any backing up of material into other bins.

320-4.4 Weigh Box or Hopper: Equip the batch plant with a means for accurately weighing each bin size of aggregate and the mineral filler into the weigh box or hopper.

320-4.5 Pugmills: Utilize a pugmill capable of mixing the aggregate and the asphalt binder.

320-5 Additional Requirements for Drum Mixer Plants.

320-5.1 Weight Measurements of Aggregate: Equip the plant with a weigh-in-motion scale capable of measuring the quantity of aggregate (and RAP) entering the dryer.

320-5.2 Synchronization of Aggregate Feed and Asphalt Binder Feed: Couple the asphalt binder feed control with the total aggregate weight device, including the RAP feed, in such a manner as to automatically vary the asphalt binder feed rate as necessary to maintain the required proportions.

320-5.3 Hot Storage or Surge Bins: Equip the plant with either a surge bin or storage silo that is capable of storing an adequate amount of material to assure a uniform and consistent product.

320-6 Preparation of the Mixture.

320-6.1 Mixing: After the aggregate is dried and properly proportioned, mix the aggregate, along with any other components, with the asphalt binder to produce a thoroughly and uniformly coated mixture. Do not produce the mix by altering the component blend percentage of the RAP or sand by more than plus or minus 5.0% from the job mix formula on the approved mix design. For mix designs using fractionated RAP, the combined blend change for all RAP components must not exceed plus or minus 5.0%. The plus or minus 5.0% maximum component change does not apply to crushed virgin aggregate components during production.

320-6.2 Storage: If necessary, store the asphalt mixture in a surge bin or hot storage silo for a maximum of 72 hours. For FC-5 mixtures containing mineral fibers, store the asphalt mixture in a surge bin or hot storage silo for a maximum of one hour. For FC-5 mixtures containing cellulose fibers, store the asphalt mixture in a surge bin or hot storage silo for a maximum of 1-1/2 hours.

320-6.3 Mix Temperature: Produce the mixture with a temperature within the master range as defined in Table 320-2.

320-6.3.1 Test Requirements: Determine the temperature of the completed mixture using a quick-reading thermometer through a hole in the side of the loaded truck immediately after loading. Locate a 1/4 inch hole on both sides of the truck body within the

middle third of the length of the body, and at a distance from 6 to 10 inches above the surface supporting the mixture. If a truck body already has a hole located in the general vicinity of the specified location, use this hole. At the Engineer’s discretion, the Contractor may take the temperature of the load over the top of the truck in lieu of using the hole in the side of the truck.

320-6.3.2 Test Frequency: The normal frequency for taking asphalt mix temperatures will be for each day, for each design mix on the first five loads and one out of every five loads thereafter. Take the temperature of the asphalt mix at the plant and at the roadway before the mix is placed at the normal frequency. Record the temperature on the front of the respective delivery ticket. The Engineer shall review the plant and roadway temperature readings and may take additional temperature measurements at any time.

If any single load at the plant or at the roadway is within the master range shown in Table 320-2 but does not meet the criteria shown in Table 320-3, the temperature of every load will be monitored until the temperature falls within the specified tolerance range in Table 320-3; at this time the normal frequency may be resumed. For warm mix asphalt, the Contractor may produce the first five loads of the production day and at other times when approved by the Engineer, at a hot mix asphalt temperature not to exceed 330°F for purposes of heating the asphalt paver. For this situation, the upper tolerances of Tables 320-2 and 320-3 as applied to the warm mix asphalt mix design do not apply.

For windrow paving, in addition to the truck load temperature measurements noted above, perform windrow temperature measurements at a frequency of one measurement per 500 feet of windrow placed. Check the temperature of the windrow asphalt mixture using a quick-reading thermometer or directly in front of the windrow material transfer vehicle, but not so close that paving must be stopped. Measure the temperature of the windrow beneath the exposed surface by shoveling away a portion of the windrow and then measuring the temperature. For windrow temperature measurements, the requirements of Table 320-2 and 320-3 apply.

320-6.3.3 Rejection Criteria: Reject any load or portion of a load of asphalt mix at the plant or at the roadway with a temperature outside of its respective master range shown in Table 320-2. Notify the Engineer of the rejection immediately. The maximum temperature for any load of mixture containing PG 76-22 PMA or High Polymer binder shall not exceed 355°F.

Table 320-2	
Mix Temperature Master Range Tolerance	
Location	Acceptable Temperature Tolerance
Plant	Mixing Temperature $\pm 30^{\circ}\text{F}^*$
Roadway (mix in truck)	Compaction Temperature $\pm 30^{\circ}\text{F}^*$
Roadway (mix in windrow)	Compaction Temperature $+30^{\circ}\text{F}^*$, -40°F
*Not to exceed 355°F for mixtures containing PG 76-22 PMA or High Polymer binder.	

Table 320-3	
Mix Temperature Tolerance from Verified Mix Design	
Any Single Measurement	$\pm 25^{\circ}\text{F}$

320-7 Transportation of the Mixture.

Transport the mix in trucks of tight construction, which prevents the loss of material and the excessive loss of heat and previously cleaned of all foreign material. After cleaning, thinly

coat the inside surface of the truck bodies with soapy water or an asphalt release agent as needed to prevent the mixture from adhering to the beds. Do not allow excess liquid to pond in the truck body. Do not use a release agent that will contaminate, degrade, or alter the characteristics of the asphalt mix or is hazardous or detrimental to the environment. Petroleum derivatives (such as diesel fuel), solvents, and any product that dissolves asphalt are prohibited. Provide each truck with a tarpaulin or other waterproof cover mounted in such a manner that it can cover the entire load when required. When in place, overlap the waterproof cover on all sides so that it can be tied down. Cover each load during cool and cloudy weather and at any time it appears rain is likely during transit with a tarpaulin or waterproof cover. Cover and tie down all loads of friction course mixtures.

END OF ITEM FL-320

SECTION 327
BITUMINOUS PAVEMENT MILLING

327-1 Description.

Remove existing asphalt concrete pavement by milling to improve the rideability and cross slope of the finished pavement, to lower the finished grade adjacent to existing curb before resurfacing, or to completely remove existing pavement.

When milling to improve rideability, the Plans will specify an average depth of cut.

Take ownership of milled material.

327-2 Equipment.

Provide a milling machine capable of maintaining a depth of cut and cross slope to achieve the results specified in the Contract Documents. Use a machine with a minimum overall length (out-to-out measurement excluding the conveyor) of 18 feet and a minimum cutting width of 6 feet.

Equip the milling machine with a built-in automatic grade control system that can control the transverse slope and the longitudinal profile to produce the specified results.

To start the project, the Engineer will approve any commercially manufactured milling machine that meets the above requirements. If it becomes evident after starting milling that the milling machine cannot consistently produce the specified results, the Engineer will reject the milling machine for further use.

The Contractor may use a smaller milling machine when milling to lower the grade adjacent to existing curb or other areas where it is impractical to use the above-described equipment.

Equip the milling machine with means to effectively limit the amount of dust escaping during the removal operation.

For complete pavement removal, the Engineer may approve the use of alternate removal and crushing equipment instead of the equipment specified above.

327-3 Construction.

327-3.1 General: Remove the existing raised pavement markers (RPMs) before milling. Include the cost of removing existing RPMs in the price for milling.

When milling to improve rideability or cross slope, remove the existing pavement to the average depth specified in the Plans, in a manner that will restore the pavement surface to a uniform cross slope and longitudinal profile. The Engineer may require the use of a stringline to ensure maintaining the proper alignment.

Establish the longitudinal profile of the milled surface in accordance with the milling plans. Ensure the final cross slope of the milled surface parallels the surface cross slope shown in the Plans or as directed by the Engineer. Establish the cross slope of the milled surface by a second sensing device near the outside edge of the cut or by an automatic cross slope control mechanism. The Plans may waive the requirement of automatic grade or cross slope controls where the situation warrants such action.

Operate the milling machine to minimize the amount of dust being emitted. The Engineer may require prewetting of the pavement.

Provide positive drainage of the milled surface and the adjacent pavement. Perform this operation on the same day as milling. Pave all milled surfaces no later than the day after the surface was milled.

If traffic is to be maintained on the milled surface before the placement of the new asphalt concrete, provide suitable transitions between areas of varying thickness to create a smooth longitudinal riding surface. Control milling operations to produce a pattern of striations and a texture that provide an

acceptable riding surface.

Before opening an area, which has been milled to traffic, sweep the pavement and gutters with a power broom or other approved equipment to remove, to the greatest extent practicable, fine material which will create dust under traffic. Sweep in a manner to minimize the potential for creation of a traffic hazard and to minimize air pollution. Do not sweep or allow milled asphalt into inlets.

Sweep the milled surface with a power broom before placing asphalt concrete.

In urban and other sensitive areas, use a street sweeper or other equipment capable of removing excess milled materials and controlling dust. Obtain the Engineer's approval of such equipment, contingent upon its demonstrated ability to do the work.

Perform the sweeping operation immediately after the milling operations or as directed by the Engineer.

327-3.1.1 Extended Time for Milled Surface Traffic: Upon approval of the Engineer, the time period for maintaining traffic on a milled surface may be extended up to 3 calendar days before paving is required, provided the Contractor can demonstrate the ability to produce a milled surface texture with continuous, longitudinal milling striations with no gaps in the longitudinal striations, and drop off conditions are not exceeded. Gaps in the milling striations and cases where gaps create a diagonal pattern or chevron appearance are to be milled again such that continuous, longitudinal striations are achieved prior to allowing traffic on the milled surface. Photos of acceptable and unacceptable surface texture are located at: <https://www.fdot.gov/programmanagement/implemented/urlinspecs/milling-patterns>

Maintain adequate drainage on the milled surface and at transitions between milled and non-milled surfaces on the same day as milling. At no cost to the Department, re-mill or pave any area the Engineer determines to have an unacceptable ride, does not provide adequate pavement structure, or does not provide adequate drainage.

If the Engineer determines the Contractor is unable to provide a milled surface meeting the Specification requirements above, at no cost to the Department, the Contractor will be required to pave all milled surfaces no later than the day after the surface was milled.

327-3.2 Quality Control Requirements: Furnish a four-foot-long electronic level accurate to 0.1 degree, approved by the Engineer for the control of cross slope. Make this electronic level available at the jobsite at all times during milling operations. Calibrate and compare electronic levels in accordance with 330-9.3.1 at a minimum frequency of once per day before any milling operation.

Multiple cuts may be made to achieve the required pavement configuration or depth of cut.

327-3.2.1 Cross Slope Measurement: Measure the cross slope of the milled surface by placing the level at the center of the lane and perpendicular to the roadway centerline. Record all the measurements to the nearest 0.1% on an approved form and submit the data to the Engineer.

327-3.2.1.1 Cross Slope Measurement Frequency:

1. Tangent Sections: Measure the cross slope at a minimum frequency of one measurement every 100 feet per lane. When the average absolute deviation is consistently within the acceptance tolerance in Table 327-1, upon approval by the Engineer, the frequency of the cross-slope measurements can be reduced to one measurement every 200 feet.

2. Superelevated Sections: Measure the cross slope every 100 feet per lane within the length of full superelevation. For curves where the length of full superelevation is less than 250 feet, measure the cross slope at the beginning point, midpoint, and ending point of the fully superelevated section. For transition sections, measure the cross slope at control points identified in the Plans or, if not shown in the Plans, at a control point at a location of 0.0% cross slope.

327-3.2.1.2 Cross Slope Deviations and Corrections: Calculate the absolute deviation of each cross-slope measurement and the average of the absolute deviations of ten consecutive cross slope

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

measurements. The absolute deviation is the positive value of a deviation. In superelevated sections, when the number of measurements is less than ten, average the absolute deviation of all measurements.

If the average absolute deviation of any cross-slope measurement falls outside the acceptance tolerance shown in Table 327-1, stop the milling operations and make adjustments until the problem is resolved to the satisfaction of the Engineer. If an individual cross slope deviation falls outside the acceptance tolerance as shown in Table 327-1, make corrections only in the deficient area to the satisfaction of the Engineer at no cost to the Department. For pavement with multiple cuts, the deficient areas not caused by the final cut may be left in place upon approval of the Engineer. All milling corrections shall be completed before placement of the asphalt course unless stated otherwise in the Plans or as determined by the Engineer.

The limits of deficient areas requiring correction may be verified and adjusted with more accurate measurement methods, including survey instruments, upon approval of the Engineer and at no cost to the Department.

Should the Contractor wish to have any required corrections waived, submit a request to the Engineer for approval. The Engineer may waive the corrections at no reduction in payment if the deficiencies are sufficiently separated so as not to significantly affect the final cross slope or project grade.

For intersections, tapers, crossovers, transitions at the beginning and end of the project, bridge approaches and similar areas, adjust the cross slope to match the actual site conditions, or as directed.

Roadway Feature	Individual Absolute Deviation	Average Absolute Deviation
Tangent section (including turn lanes)	0.4%	0.2%
Superelevated curve	0.4%	0.2%
Shoulder	0.5%	0.5%

In the event the distance between two edges of deficient areas is less than 100 feet, the correction work shall include the area between the deficient areas.

327-3.3 Verification: The Engineer will verify the Contractor's cross slope measurements by randomly taking a minimum of ten cross slope measurements per lane per mile in tangent sections, at control points in transition sections, and a minimum of three cross slope measurements in fully superelevated sections. The Engineer will measure the cross slope of the milled surface by placing the level at the center of the lane and perpendicular to the roadway centerline.

327-3.3.1 Cross Slope Deviations and Corrections: If the average absolute deviation or an individual cross slope deviation falls outside the acceptance tolerance in Table 327-1, immediately make a comparison check at the QC test locations to verify the QC measurements in the section. If the comparisons are beyond the acceptable comparison tolerance in accordance with 327-3.2, stop the milling operation until the issue is resolved to the satisfaction of the Engineer. Correct any cross slope not meeting the individual deviation acceptance tolerance at no cost to the Department. The Engineer reserves the right to check the cross slope of the milled surface at any time by taking cross slope measurements at any location.

327-4 Milled Surface.

Provide a milled surface with a reasonably uniform texture, within 1/4 inch of a true profile

grade, and with no deviation in excess of 1/4 inch from a straightedge applied to the pavement perpendicular to the centerline. Ensure the variation of the longitudinal joint between multiple cut areas does not exceed 1/4 inch. The Engineer may accept areas varying from a true surface in excess of the above stated tolerance without correction if the Engineer determines they were caused by a pre-existing condition which could not have reasonably been corrected by the milling operations. Correct any unsuitable texture or profile, as determined by the Engineer, at no cost to the Department.

The Engineer may require remilling of any area where a surface lamination causes a nonuniform texture to occur.

327-5 Method of Measurement.

The quantity to be paid for will be the plan quantity area, in square yards, over which milling is completed and accepted.

327-6 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section, including hauling off and stockpiling or otherwise disposing of the milled material.

Payment will be made under:

Item No. 327-1 - 2 IN Milling Existing Asphalt Pavement - per square yard.

END OF ITEM FL-327

SECTION 330
HOT MIX ASPHALT -
GENERAL CONSTRUCTION REQUIREMENTS

330-1 Description.

This Section specifies the basic equipment and construction requirements for hot mix asphalt (including warm mix asphalt) pavements and bases. Establish and maintain a quality control system that provides assurance that all materials, products and completed construction submitted for acceptance meet Contract requirements.

330-2 Quality Control (QC) Requirements.

330-2.1 Minimum QC Requirements: Perform as a minimum, the following activities necessary to maintain process control and meet Specification requirements:

1. Pavement Density: Monitor the pavement temperature with an infrared temperature device so compaction is completed before the surface temperature of the pavement drops to the extent that effective compaction may not be achieved or the rollers begin to damage the pavement. Monitor the roadway density with either 6-inch diameter roadway cores, a nuclear density gauge, or other density measuring device, at a minimum frequency of once per 1,500 feet of pavement.

2. Mix Temperature: Determine the mix temperature at the roadway for the first five loads and one out of every five loads thereafter.

3. Mix Spread Rate: Monitor the mix spread rate at the beginning of each day's production, and as needed to control the operations, at a minimum of once per 200 tons placed. When determining the spread rate, use, at a minimum, an average of five truckloads of mix.

4. Pavement Texture: Monitor the pavement texture to minimize pavement segregation. Use density gauges, infrared temperature measurement devices, or roadway cores at the beginning of each day's production, and as necessary, both at truck exchanges and during normal paving operations.

5. Reporting: Ensure the accuracy of the QC Roadway Reports on the Department's approved form to reflect the actual surface area of the finished work and be in compliance with the requirements of the Contract Documents.

330-2.2 Personnel Qualifications: Provide QC Technicians in accordance with Section 105.

330-3 Limitations of Operations.

330-3.1 Weather Limitations: Do not transport asphalt mix from the plant to the roadway unless all weather conditions are suitable for the paving operations.

330-3.2 Limitations of Paving Operations:

330-3.2.1 General: Place the mixture only when the surface upon which it is to be placed has been previously prepared, is intact, firm, dry, clean, and the tack or prime coat, with acceptable spread rate, is properly broken or cured. Do not place friction course until the adjacent shoulder area has been dressed and grassed.

330-3.2.2 Ambient Air Temperature: Place the mixture only when the air temperature in the shade and away from artificial heat meets requirements of Table 330-1. The minimum ambient temperature requirement may be reduced by 5°F when using warm mix technology, if mutually agreed to by both the Engineer and the Contractor.

SECTION 330
HOT MIX ASPHALT -
GENERAL CONSTRUCTION REQUIREMENTS

330-1 Description.

This Section specifies the basic equipment and construction requirements for hot mix asphalt (including warm mix asphalt) pavements and bases. Establish and maintain a quality control system that provides assurance that all materials, products and completed construction submitted for acceptance meet Contract requirements.

330-2 Quality Control (QC) Requirements.

330-2.1 Minimum QC Requirements: Perform as a minimum, the following activities necessary to maintain process control and meet Specification requirements:

1. Pavement Density: Monitor the pavement temperature with an infrared temperature device so compaction is completed before the surface temperature of the pavement drops to the extent that effective compaction may not be achieved or the rollers begin to damage the pavement. Monitor the roadway density with either 6-inch diameter roadway cores, a nuclear density gauge, or other density measuring device, at a minimum frequency of once per 1,500 feet of pavement.

2. Mix Temperature: Determine the mix temperature at the roadway for the first five loads and one out of every five loads thereafter.

3. Mix Spread Rate: Monitor the mix spread rate at the beginning of each day's production, and as needed to control the operations, at a minimum of once per 200 tons placed. When determining the spread rate, use, at a minimum, an average of five truckloads of mix.

4. Pavement Texture: Monitor the pavement texture to minimize pavement segregation. Use density gauges, infrared temperature measurement devices, or roadway cores at the beginning of each day's production, and as necessary, both at truck exchanges and during normal paving operations.

5. Reporting: Ensure the accuracy of the QC Roadway Reports on the Department's approved form to reflect the actual surface area of the finished work and be in compliance with the requirements of the Contract Documents.

330-2.2 Personnel Qualifications: Provide QC Technicians in accordance with Section 105.

330-3 Limitations of Operations.

330-3.1 Weather Limitations: Do not transport asphalt mix from the plant to the roadway unless all weather conditions are suitable for the paving operations.

330-3.2 Limitations of Paving Operations:

330-3.2.1 General: Place the mixture only when the surface upon which it is to be placed has been previously prepared, is intact, firm, dry, clean, and the tack or prime coat, with acceptable spread rate, is properly broken or cured. Do not place friction course until the adjacent shoulder area has been dressed and grassed.

330-3.2.2 Ambient Air Temperature: Place the mixture only when the air temperature in the shade and away from artificial heat meets requirements of Table 330-1. The minimum ambient temperature requirement may be reduced by 5°F when using warm mix technology, if mutually agreed to by both the Engineer and the Contractor.

Table 330-1	
Ambient Air Temperature Requirements for Paving	
Layer Thickness or Asphalt Binder Type	Minimum Temperature (°F)
≤ 1 inch	50
Any mixture > 1 inch containing a PG asphalt binder with a high temperature designation ≥ 76°C	45
Any mixture > 1 inch containing a PG asphalt binder with a high temperature designation < 76°C	40
FC-5 ⁽¹⁾	65

(1)As an exception, place the mixture at temperatures no lower than 60°F, only when approved by the Engineer based on the Contractor’s demonstrated ability to achieve a satisfactory surface texture and appearance of the finished surface. For mixtures containing PG 76-22 binder, the minimum ambient temperature may be further reduced to 55°F when using warm mix technology, if agreed to by both the Engineer and the Contractor.

330-3.2.3 Rain and Surface Conditions: Immediately cease transportation of asphalt mixtures from the plant when rain begins at the roadway. Do not place asphalt mixtures while rain is falling, or when there is water on the surface to be covered. Once the rain has stopped, standing water has been removed from the tacked surface to the satisfaction of the Engineer, and the temperature of the mixture caught in transit still meets the requirements as specified in 320-6.3, the Contractor may then place the mixture caught in transit.

For windrow paving, immediately cease dumping of asphalt material when rain begins at the roadway. Stop paving operations while rain is falling or where there is water on the surface to be covered. Remove windrowed asphalt mixture exposed to rain. Once the rain has stopped, standing water has been removed from the tacked surface to the satisfaction of the Engineer, and the temperature of the mixture caught in transit still meets the requirements as specified in 320-6.3, the Contractor may then windrow the remaining material caught in transit.

330-3.2.4 Wind: Do not place the mixture when the wind is blowing to such an extent that proper and adequate compaction cannot be maintained or when sand, dust, etc., are being deposited on the surface being paved to the extent the bond between layers will be diminished.

330-4 Surface Preparation.

330-4.1 Cleaning: Before placing the mixture, clean the surface of the base or underlying pavement of all loose and deleterious material by the use of power brooms or blowers, supplemented by hand brooming where necessary.

330-4.1.1 Application over Asphalt Membrane Interlayer (AMI): Where an asphalt mix is to be placed over a newly constructed AMI, do not sweep or otherwise disturb the cover material before placing the asphalt mix, unless directed by the Engineer.

330-4.2 Tacking: Apply a tack coat on all existing pavement surfaces that are to be overlaid with an asphalt mix as specified in Section 300 and between successive layers of all asphalt mixes. Apply tack on a clean surface.

Do not place tack while rain is falling or when there is water on the surface to be tacked. Once the rain has stopped, standing water has been removed from the surface to be tacked to the satisfaction of the Engineer, the Contractor may then apply tack.

Apply a tack coat on freshly primed bases only when directed by the Engineer.

330-5 Paving Equipment.

330-5.1 General Requirements: Use mechanically-sound equipment capable of consistently meeting Specification requirements.

330-5.2 Asphalt Paver:

330-5.2.1 General: Provide a self-propelled asphalt paver that can be steered, and is equipped with a receiving and distribution hopper and a mechanical screed. Use a mechanical screed capable of adjustment to regulate the depth of material spread and to produce the desired cross slope.

When asphalt mix is placed in windrows, operate windrow pickup equipment so substantially all of the mixture deposited on the roadbed is picked up and loaded into the paver. Prevent the windrow pickup equipment from contaminating the mixture.

330-5.2.2 Automatic Screed Control: For all asphalt courses placed with an asphalt paver, equip the paver with automatic longitudinal screed controls of either the skid type, traveling stringline type, or non-contact averaging ski type with a minimum length of 25 feet. On the final layer of asphalt base, overbuild, structural courses, and friction courses, use the joint matcher instead of the skid, traveling stringline, or non-contact averaging ski on all passes after the initial pass. Equip the asphalt paver with electronic cross slope controls.

330-5.2.3 Screed Width: Provide an asphalt paver with a screed width greater than 8 feet when required to pave full width lanes. Do not use extendable screed strike-off devices that do not provide preliminary compaction of the mat in place of fixed screed extensions. Use a strike-off device only on irregular areas that would normally be done by hand and on shoulders 5 feet or less in width. When using the strike-off device on shoulders, instead of an adjustable screed extension, demonstrate the ability to obtain acceptable texture, density, and thickness.

When using an extendable screed device to extend the screed's width on the full width lane or shoulder by 24 inches or greater, the Engineer will require an auger extension, paddle, or kicker device unless the Contractor can demonstrate the ability to achieve an acceptable pavement with respect to density, surface texture, and pavement smoothness without such devices.

330-5.3 Rollers:

330-5.3.1 Steel-Wheeled Rollers: Provide compaction equipment capable of meeting the density requirements described in the Specifications. When density testing is not required, and the standard rolling pattern is used, provide a tandem steel-wheeled roller weighing 5 to 15 tons for breakdown rolling. For finish rolling, use a separate roller weighing 5 to 15 tons. Variations from these requirements shall be approved by the Engineer.

330-5.3.2 Traffic Rollers: Provide compaction equipment capable of meeting the density requirements described in the Specifications. When density testing is not required, and the standard rolling pattern is used, provide a self-propelled, pneumatic-tired traffic roller equipped with at least seven smooth-tread, low pressure tires, equipped with pads or scrapers on each tire. Maintain the tire pressure between 50 and 55 psi or as specified by the manufacturer. Use rollers with a minimum weight of 6 tons. Do not use wobble-wheeled rollers. Variations from these requirements shall be approved by the Engineer.

330-5.3.3 Prevention of Adhesion: Do not allow the mixture to adhere to the wheels of any rollers. Do not use fuel oil or other petroleum distillates to prevent adhesion. Do not use any method which results in water being sprinkled directly onto the mixture.

330-5.4 Coring Equipment: Furnish a suitable saw or drill for obtaining the required density cores.

330-5.5 Hand Tools: Provide the necessary hand tools such as rakes, shovels, and other similar tools, and a suitable means for keeping them clean. Do not use diesel fuel or other petroleum-based solvents contained in an open container for cleaning purposes on the paver.

330-6 Placing Mixture.

330-6.1 Requirements Applicable to All Pavement Types:

330-6.1.1 Alignment of Edges: Place all asphalt mixtures by the stringline method to obtain an accurate, uniform alignment of the pavement edge. As an exception, pavement edges adjacent to curb and gutter or other true edges do not require a stringline. Control the unsupported pavement edge to ensure it will not deviate from the stringline more than plus or minus 1.5 inches.

330-6.1.2 Paving Width: If necessary due to the traffic requirements, place the mixture in strips in such a manner as to provide for the passage of traffic. As an option, where the road is closed to traffic, place the mixture to the full width with machines traveling in echelon.

330-6.1.3 Mix Temperature: Maintain the mix temperature at the time of paving within the master range as defined in 320-6.3. Take mix temperatures on the roadway at the minimum frequency indicated in 320-6.3. Any load, or portion of a load, of asphalt mix on the roadway with a temperature outside of the master range shall be rejected for use on the project. Immediately notify the Engineer of the rejection.

Remove any windrow material not meeting the temperature requirements of 320-6.3.2 from the area of deficient temperature and replace with new asphalt meeting the temperature requirements.

330-6.1.4 Speed of Paver: Establish the forward speed of the asphalt paver based on the rate of delivery of the mix to the roadway, but not faster than the optimum speed needed to adequately compact the pavement.

330-6.1.5 Thickness and Spread Rate of Layers: Construct each layer as defined in the following Table 330-2:

Table 330-2	
Thickness and Target Spread Rate Requirements	
Mix Type	Specification Section and Article
Type SP	334-1
Type FC	337-8
Type B	234-8
ATPB	287-8

330-6.1.5.1 Thickness Control: Ensure the spread rate is within plus or minus 5% of the target spread rate. When determining the spread rate, use, at a minimum, an average of five truckloads of mix and at a maximum, an average of 10 truckloads of mix, except for windrow paving, use an average of three truckloads of mix. When the average spread rate is beyond plus or minus 5% of the target spread rate, monitor the thickness of the pavement layer closely and adjust the construction operations.

When the average spread rate for two consecutive days is beyond plus or minus 5% of the target spread rate, stop the construction operation until the issue is resolved.

330-6.1.5.2 Maximum Spread Rate Tolerances: When an individual spread rate, measured in accordance with 330-6.1.5.1, is beyond plus or minus 20% of the target spread rate, stop the construction operation until the issue is resolved. Address the unacceptable pavement in accordance with 330-9.5. The following areas are exempt from a work stoppage based solely on the calculated spread rate: median crossovers, turnouts, variable thickness overbuild courses, leveling courses, miscellaneous asphalt pavement, as well as, turn lanes and ramps less than 1,000 feet.

As an exception, the Engineer may allow the Contractor to leave areas in place if it is determined by the Engineer that the deficiency is not a significant detriment to the pavement quality. For areas of deficient thickness, a reduction to the pay item quantity will be made in accordance with 330-9.5.2.

330-6.1.6 Correcting Defects: Before starting any rolling, check the surface; correct any irregularities; remove all drippings, sand accumulations from the screed, and fat spots from any source; and replace them with satisfactory material. Do not skin patch. When correcting a depression while the mixture is hot, scarify the surface and add fresh mixture.

330-6.1.7 Hand Work: In limited areas where the use of the paver is impossible or impracticable, the Contractor may place and finish the mixture by hand.

330-7 Compacting Mixture.

330-7.1 General Requirements: When density testing for acceptance is required, select equipment, sequence, and coverages of rolling to meet the specified density requirement. Regardless of the rolling procedure used, complete the final rolling before the surface temperature of the pavement drops to the extent effective compaction may not be achieved or the rollers begin to damage the pavement.

No vibratory compaction in the vertical direction will be allowed for layers one inch or less in thickness or, if the Engineer or Contract Documents limit compaction to the static mode only. Compact these layers in the static mode only. Other non-vertical vibratory modes of compaction will be allowed, if approved by the Engineer; however, no additional compensation, cost or time, will be made.

330-7.2 Standard Rolling Procedure: When density testing for acceptance is not required, propose an alternative rolling pattern to be approved by the Engineer or use the following standard rolling procedure:

1. Breakdown rolling: Provide two static coverages with a tandem steel-wheeled roller, following as close behind the paver as possible without pick-up, undue displacement, or blistering of the mix.

2. Intermediate rolling: Provide five static coverages with a pneumatic-tire roller, following as close behind the breakdown rolling operation as the mix will permit.

3. Finish rolling: Provide one static coverage with a tandem steel-wheeled roller, after completing the breakdown rolling and intermediate rolling, but before the surface pavement temperature drops to the extent effective compaction may not be achieved or the rollers begin to damage the pavement.

330-7.3 Rolling Procedures: Use procedures that will uniformly compact the pavement layer to the desired density level, while meeting the appropriate smoothness requirements, without damaging the pavement surface, crushing aggregate or leaving excessive roller marks,

roller heads, or ripples. While rolling is in progress, monitor the surface continuously, and adjust the compaction operations to comply with the surface requirements.

330-7.4 Compaction of Areas Inaccessible to Rollers: Use hand tamps or other satisfactory means to compact areas which are inaccessible to a roller, such as areas adjacent to curbs, gutters, bridges, manholes, etc.

330-7.5 Correcting Defects: Do not allow the compaction equipment to deposit contaminants onto the pavement surface. Remove and replace any areas damaged by such deposits as directed by the Engineer. Correct any depressions that develop before completing the rolling by loosening the mixture and adding new mixture to bring the depressions to a true surface. Should any depression remain after obtaining the final compaction, remove the full depth of the mixture, and replace it with enough new mixture to form a true and even surface. Correct all defects before laying the subsequent course.

330-7.6 Use of Traffic Roller: Use a traffic roller on the first overbuild course. Use a traffic roller or vibratory roller (unless restricted by the Contract Documents) on the first structural layer placed on an AMI.

330-7.7 Compaction at Bridge Structures: Compact asphalt mixtures placed over bridge decks and approach slabs using static compaction only. Use the standard rolling procedure described in 330-7.2 or an alternative procedure approved by the Engineer.

330-8 Joints.

330-8.1 General: When laying fresh mixture against the exposed edges of joints, place it in close contact with the exposed edge to produce an even, well-compacted joint after rolling.

330-8.2 Transverse Joints: Place the mixture as continuously as possible to minimize transverse joints. When constructing permanent transverse joints, meet the surface requirements as defined in 330-9. Construct temporary transverse joints in such a manner to allow traffic to pass over it. When resuming the paving operation, construct a transverse joint by cutting back on the previously placed pavement at a location where the straightedge requirements are met. At the project limits, tie into the adjoining pavement layers as shown in the Plans.

330-8.3 Longitudinal Joints: Place each layer of pavement so all longitudinal construction joints are offset 6 to 12 inches laterally between successive layers. Plan offsets in advance so the longitudinal joints of the friction course are not in wheel path areas. The longitudinal joints for friction course layers should be within 6 inches of the lane edge or at the center of the lane. The Engineer may waive this requirement where offsetting is not feasible due to the sequence of construction.

330-8.4 Placing Asphalt Next to Concrete Pavement: When placing asphalt next to concrete pavement, construct the joint as shown in the Plans.

330-9 Surface Requirements.

330-9.1 General: Construct a smooth pavement with good surface texture and the proper cross-slope.

330-9.2 Texture of the Finished Surface of Paving Layers: Produce a finished surface of uniform texture and compaction with no pulled, torn, raveled, crushed or loosened portions and free of segregation, bleeding, flushing, sand streaks, sand spots, or ripples. Some examples of pavement deficiencies are displayed at the following URL:

<https://www.fdot.gov/programmanagement/Implemented/URLinSpecs/Pavement.shtm>. Address any pavement not meeting the requirements of this specification in accordance with 330-9.5.

For dense-graded structural and dense-graded friction course mixtures, in areas not defined as density testing exceptions per 334-5.1.2, obtain for the Engineer, three 6-inch diameter roadway cores at locations visually identified by the Engineer to be segregated. For areas that the Engineer identifies as being segregated, obtain and submit cores within 30 days of notification. The Engineer will determine the density of each core in accordance with FM 1- T166 and calculate the percent G_{mm} of the segregated area using the average G_{mb} of the roadway cores and the QC subplot G_{mm} for the questionable material. If the average percent G_{mm} is less than 89.5, address the segregated area in accordance with 330-9.5.

Do not use asphalt concrete mixtures containing aggregates that cause a different color appearance in the final wearing surface unless the section is greater than or equal to one mile in length and across the full width of the pavement, including shoulders and turn lanes. Exceptions to these requirements will be permitted if approved by the Engineer.

330-9.3 Cross Slope: Construct a pavement surface with cross slopes in compliance with the requirements of the Contract Documents. Furnish a four-foot-long electronic level accurate to 0.1 degree, approved by the Engineer for the control of cross slope. Make this electronic level available at the jobsite at all times during paving operations.

330-9.3.1 QC Calibration and Comparison: Calibrate the electronic levels a minimum of once per day before paving operations begin, in accordance with manufacturer's instructions.

Compare the QC level with the Verification level before paving operations begin, and at any time as directed. If the comparison between the QC and Verification levels is within plus or minus 0.2%, the QC level is considered to compare favorably and can be used for measurement and acceptance of cross-slopes. If the levels do not compare favorably, perform a second comparison using another calibrated electronic level (Department or Contractor) for resolution. If the resolution level compares favorably with the QC level, the QC level is considered to be verified. If the resolution level does not compare favorably with the QC level, discontinue the use of the QC electronic level and obtain another approved electronic level that meets the requirements of this specification. The Contractor assumes all risk associated with placing the pavement at the correct cross slope.

330-9.3.2 Cross Slope Measurement: Measure the cross slope of the compacted pavement surface by placing the level at the center of the lane and perpendicular to the roadway centerline. Record all measurements to the nearest 0.1% on an approved form and submit the data to the Engineer.

330-9.3.2.1 Cross Slope Measurement Frequency:

1. Tangent Sections: Measure the cross-slope at a minimum frequency of one measurement every 100 feet per lane. When the average absolute deviation is consistently within the acceptance tolerance in Table 330-3, upon the approval of the Engineer, the cross-slope measurements may be reduced to one measurement every 200 feet.

2. Superelevated Sections: Measure the cross slope every 100 feet per lane within the length of the full superelevation. For curves where the length of full superelevation is less than 250 feet, measure the cross slope at the beginning point, midpoint, and ending point of the fully superelevated section. For transition sections, measure the cross slope at control points identified in the Plans, or if not shown in the Plans, at a control point at the location of 0.0% cross slope.

330-9.3.2.2 Cross Slope Deviations and Corrections: Calculate the absolute deviation of each cross-slope measurement and the average of the absolute deviations of

ten consecutive cross slope measurements. The absolute deviation is the positive value of a deviation. In superelevated sections, when the number of measurements is less than ten, average the absolute deviation of all measurements.

If the average absolute deviation of any cross-slope measurement falls outside the acceptance tolerance shown in Table 330-3, stop the paving operation and make adjustments until the problem is resolved to the satisfaction of the Engineer.

Address, in accordance with 330-9.5, all individual cross slope deviations outside the acceptance tolerances shown in Table 330-3. Complete all corrections before placement of the final pavement surface layer. For pavement with multiple layers, the deficient areas for the structural course may be left in place, if approved by the Engineer. For friction course layers, make corrections in accordance with 330-9.5.

The limits of deficient areas requiring correction may be verified and adjusted with more accurate measurement methods, including survey instruments, upon approval of the Engineer and at no cost to the Department.

Should the Contractor wish to have any required corrections waived, submit a request to the Engineer for approval. The Engineer may waive the corrections at no reduction in payment if the deficiencies are sufficiently separated so as not to affect the pavement’s overall traffic safety, surface drainage, ride quality, or surface texture.

For intersections, tapers, crossovers, transitions at the beginning and end of the project, bridge approaches and similar areas, adjust the cross slope to match the actual site conditions or as directed by the Engineer.

Table 330-3 Cross Slope Acceptance Tolerance		
Roadway Feature	Individual Absolute Deviation	Average Absolute Deviation
Tangent section (including turn lanes)	0.4%	0.2%
Superelevated curve	0.4%	0.2%
Shoulder	0.5%	0.5%

In the event the distance between two edges of deficient areas is less than 100 feet, the correction work shall include the area between the deficient areas.

330-9.3.3 Verification: The Engineer will verify the Contractor’s cross slope measurements by randomly taking a minimum of ten cross slope measurements per lane per mile in tangent sections, at control points in transition sections, and a minimum of three cross slope measurements in fully superelevated sections.

The Engineer will measure the cross slope of the compacted pavement surface by placing the level at the center of the lane and perpendicular to the roadway centerline.

330-9.3.3.1 Cross Slope Deviations and Corrections: If the average absolute deviation or an individual cross slope deviation falls outside of the acceptance tolerance in Table 330-3, immediately make a comparison check at the QC test locations to verify the QC measurements in the section. If the comparisons are beyond the acceptable comparison tolerance in accordance with 330-9.3.1, stop the paving operations until the issue is resolved to the satisfaction of the Engineer. Correct any cross slope not meeting the individual deviation acceptance tolerance in accordance with 330-9.5 at no cost to the Department. The Engineer

reserves the right to check the pavement cross slope at any time by taking cross slope measurements at any location.

330-9.4 Pavement Smoothness: Construct a smooth pavement meeting the requirements of this Specification.

330-9.4.1 General: Furnish a 15-foot manual and a 15-foot rolling straightedge meeting the requirements of FM 5-509. Obtain a smooth surface on all pavement courses placed, and then straightedge all layers as required by this Specification.

330-9.4.2 Test Method: Perform all straightedge testing in accordance with FM 5-509 in the outside wheel path of each lane. The Engineer may require additional testing at other locations within the lane.

330-9.4.3 Traffic Control: Provide traffic control in accordance with Section 102 and Standard Plans, Index 102-607 or 102-619 during all testing. When traffic control cannot be provided in accordance with Index 102-607 or 102-619, submit an alternative Traffic Control Plan as specified in 102-4. Include the cost of this traffic control in the Contract bid prices for the asphalt items.

330-9.4.4 Process Control Testing: Assume full responsibility for controlling all paving operations and processes such that the requirements of these Specifications are met at all times.

330-9.4.5 QC Testing:

330-9.4.5.1 General: Straightedge the final Type SP structural layer and friction course layer in accordance with 330-9.4.2, with the exception that if the method of acceptance is by laser profiler, then straightedging of the friction course layer is not required unless otherwise stated in the Specifications. If the project's method of acceptance is by laser profiler, areas not suitable for testing with the laser profiler will be tested and accepted by straightedging. Test all pavement lanes and ramps where the width is constant and document all deficiencies in excess of 3/16 inch on a form approved by the Engineer.

330-9.4.5.2 Straightedge Exceptions: Straightedge testing will not be required in the following areas: shoulders, intersections, tapers, crossovers, sidewalks, shared use paths, parking lots, raised crosswalks, speed tables, and similar areas, or in the following areas when they are less than 250 feet in length: turn lanes, acceleration/deceleration lanes and side streets. The limits of the intersection will be from stop bar to stop bar for both the mainline and side streets.

As an exception, in the event the Engineer identifies an objectionable surface irregularity in the above areas, straightedge and address all deficiencies in excess of 3/8 inch in accordance with 330-9.5.

The Engineer may waive straightedge requirements for transverse joints at the beginning and end of the project, at the beginning and end of bridge structures, at manholes, and at utility structures if the deficiencies are caused by factors beyond the control of the Contractor, as determined by the Engineer. In addition, the Engineer may also waive the straightedging requirements on ramps and superelevated sections where the geometrical orientation of the pavement results in an inaccurate measurement with the rolling straightedge.

330-9.4.5.3 Intermediate Layers and Temporary Pavement: When the design speed is 55 mph or greater and the intermediate Type SP layer or temporary pavement is to be opened to traffic, if the Engineer identifies an objectionable surface irregularity, straightedge and address all deficiencies in excess of 3/8 inch within 72 hours of placement in accordance with 330-9.5.

330-9.4.5.4 Final Type SP Structural Layer: Straightedge the final Type SP structural layer in accordance with 330-9.4.2, either behind the final roller of the paving train or as a separate operation. Notify the Engineer of the location and time of straightedge testing a minimum of 48 hours before beginning testing. The Engineer will verify the straightedge testing by observing the QC straight edging operations. Address all deficiencies in excess of 3/16 inch in accordance with 330-9.5.

When the final structural course is to be opened to traffic and the design speed is 55 mph or greater, if any defect is 3/8 inch or greater, the Engineer may require deficiencies to be corrected within 72 hours after opening to traffic.

330-9.4.5.5 Friction Course Layer: Where required per 330-9.4.5.1, and in areas noted in 330-9.4.6.2 as not suitable for testing with the Laser Profiler, straightedge the friction course layer in accordance with 330-9.4.2, either behind the final roller of the paving train or as a separate operation upon completion of all paving operations. Notify the Engineer of the location and time of straightedge testing a minimum of 48 hours before beginning testing. The Engineer will verify the straightedge testing by observing the QC straightedging operations. Address all deficiencies in excess of 3/16 inch in accordance with 330-9.5.

330-9.4.6 Acceptance:

330-9.4.6.1 Straightedge Acceptance: For areas of roadways where the design speed is less than 55 miles per hour, and for areas of roadways where the design speed is greater than or equal to 55 miles per hour which are noted in 330-9.4.6.2 as not suitable for testing with the Laser Profiler, acceptance for pavement smoothness of the friction course will be based on verified QC measurements using the straightedge as required by 330-9.4.5. The Engineer will verify the straightedge testing by observing the QC straightedging operations.

330-9.4.6.2 Laser Acceptance: For areas of high speed roadways where the design speed is equal to or greater than 55 miles per hour, acceptance testing for pavement smoothness of the friction course (for mainline traffic lanes only) will be based on the Laser Profiler. Ramps, acceleration and deceleration lanes, and other areas not suitable for testing with the Laser Profiler will be tested and accepted with the straightedge in accordance with 330- 9.4.5.5 and 330-9.4.6.1.

The pavement smoothness of each lane will be determined by a Laser Profiler furnished and operated by the Department in accordance with FM 5-549 and a report issued with the Ride Number (RN) reported to one decimal place. If corrections are made, as required following Laser Acceptance, the pavement will not be retested for smoothness using the Laser Profiler.

For this testing, the pavement will be divided into 0.1 mile segments. Partial segments equal to or greater than 0.01 mile will be considered as a 0.1 mile segment. The pavement will be accepted as follows:

1. For segments with a RN greater than or equal to 4.0, the pavement will be accepted at full pay.

2. For segments with a RN less than 4.0, the Engineer will further evaluate the data in 0.01 mile intervals for both wheel paths.

If the RN is 3.5 or above for all 0.01 mile intervals in both wheel paths, the segment will be accepted at full payment.

If the RN is less than 3.5 for one or more 0.01 mile intervals, the segment will be tested with the rolling straightedge in both wheel paths in accordance with FM 5-509. If approved by the Engineer, this straightedging may be completed

(in both wheel paths) as part of the QC straightedging operations described in 330-9.4.5.5, before testing with the laser profiler. Notify the Engineer of the location and time of straightedge testing a minimum of 48 hours before beginning testing. The Engineer will verify the straightedge testing by observing the QC straightedging operations. Address all deficiencies in excess of 3/16 inch in accordance with 330-9.5.

Test and accept areas at the beginning and ending of the project, bridge approaches and departures, and areas where the segment is less than 0.01 mile, with the straightedge in accordance with 330-9.4.5.5 and 330-9.4.6.1.

330-9.5 Unacceptable Pavement:

330-9.5.1 Corrections: Address all areas of unacceptable pavement at no cost to the Department. Retest all corrected areas and assure the requirements of these Specifications are met.

330-9.5.1.1 Structural Layers: Correct all deficiencies, as defined in the Specifications, in the Type SP structural layers by removing and replacing the full depth of the layer, extending a minimum of 50 feet on both sides (where possible) of the defective area for the full width of the paving lane.

The following options only apply if the structural layer is not the final surface layer:

1. As an option for high and low straightedge deficiencies 5/16 of an inch or less, pave over with friction course to correct the deficiency.
2. As an option for high straightedge deficiencies, mill the pavement surface the full lane width to a depth and length adequate to remove the deficiency.
3. As an option for low straightedge deficiencies 8/16 of an inch or less, mill the pavement surface the full lane width to a depth and length adequate to remove the deficiency.

330-9.5.1.2 Friction Course: Correct deficiencies in the friction course or final surface layer by removing and replacing the full depth of the layer, extending a minimum of 50 feet on both sides (where possible) of the defective area for the full width of the paving lane. As an exception, the Engineer may allow the Contractor to leave these areas in place if it is determined by the Engineer that the deficiency is not a significant detriment to the pavement quality. A reduction to the pay item quantity will be made in accordance with 330-9.5.2.

330-9.5.2 Reduction in Pay Item Quantity: When the Engineer elects to waive corrections, the Department will reduce the pay quantity for the pay item in question by the amount of material within the defective area. For all mix types, when the measured deficiency lane length is less than 5 feet, use 5 feet for the deficiency lane length when determining the pay reduction. When the pay quantity is in tons, the Department will base the reduction on the volume of material within the defective area (the deficiency lane length by the lane width by layer thickness) multiplied by the maximum specific gravity of the mix as determined through the following equation:

$$\text{Quantity (tons)} = L \times W \times t \times G_{mm} \times 0.0024 \text{ Where: } L$$

= Deficiency Lane length (ft.)

W = Lane width (ft.)

t = Layer thickness (in.)

G_{mm} = Maximum specific gravity from verified mix design

For FC-5 open-graded friction course, the Department will base the reduction on the area within the defective area (the deficiency lane length by lane width) multiplied by a spread rate of 80 pounds per square yard as determined through the following equation:

$$\text{Quantity (tons)} = L \times W \times 0.0044$$

Where: L = Deficiency Lane length (ft.) W =
Lane width (ft.)

330-10 Protection of Finished Surface.

Keep sections of newly compacted asphalt concrete, which are to be covered by additional courses, clean until the successive course is laid.

Do not dump embankment or base material directly on the pavement. Dress shoulders before placing the friction course on adjacent pavement.

Equip blade graders operating adjacent to the pavement during shoulder construction with a 2 inch by 8 inch or larger board, or other attachment providing essentially the same results, attached to their blades so it extends below the blade edge and protects the pavement surface from damage by the grader blade.

To prevent rutting or other distortion, protect sections of newly finished dense-graded friction course and the last structural layer before friction course from traffic until the surface temperature has cooled below 160°F.

The Contractor may use artificial methods to cool the pavement to expedite paving operations. The Department may direct the Contractor to use artificial cooling methods when maintenance of traffic requires opening the pavement to traffic at the earliest possible time.

END OF ITEM FL-330

mixtures. Type SP-19.0 mixtures are permissible for the layer directly below FC-9.5 and FC-12.5 mixtures. Do not use for the final (top) layer of shoulders.

334-1.4.2 Additional Requirements: The following requirements also apply to Type SP Asphalt Concrete mixtures:

1. A minimum 1-1/2 inch initial lift is required over an Asphalt Membrane Interlayer (AMI).

2. When construction includes the paving of adjacent shoulders (less than or equal to 5 feet wide), the layer thickness for the upper pavement layer and shoulder must be the same and paved in a single pass, unless called for differently in the Contract Documents.

3. All overbuild layers must be Type SP Asphalt Concrete designed at the traffic level as stated in the Contract Documents. Use the minimum and maximum layer thicknesses as specified above unless called for differently in the Contract Documents. On variable thickness overbuild layers, the minimum and maximum allowable thicknesses will be as specified below, unless called for differently in the Contract Documents.

Type SP-9.5..... 3/8 to 2 inches

Type SP-12.5..... 1/2 to 3 inches

Type SP-19.0.....1-1/2 to 4 inches

4. Variable thickness overbuild layers constructed using a Type SP-9.5 or SP-12.5 mixtures may be tapered to zero thickness provided the contract documents require a minimum of 1-1/2 inches of dense-graded mix placed over the variable thickness overbuild layer.

334-2 Materials.

334-2.1 General Requirements: Meet the material requirements specified in Division III. Specific references are as follows:

Superpave PG Asphalt BinderSection 916

Coarse Aggregate.....Section 901

Fine Aggregate.....Section 902

334-2.2 Superpave Asphalt Binder: Unless specified otherwise in the Contract Documents, use an asphalt binder grade as determined from Table 334-2.

High polymer binder mixtures may be used in lieu of mixtures with other specified binders at no additional cost to the Department, provided they meet the traffic level and mixture type requirements of the project.

High polymer binder may be substituted in a mixture at no additional cost to the Department when the mix design contains a maximum of 20% RAP.

334-2.3 Reclaimed Asphalt Pavement (RAP) Material:

334-2.3.1 General requirements: RAP may be used as a component of the asphalt mixture subject to the following requirements:

1. When using a PG 76-22 asphalt binder in friction course mixtures, limit the amount of RAP material used in the mix to a maximum of 20% by weight of total aggregate. As an exception, amounts greater than 20% RAP by weight of total aggregate can be used if no more than 20% by weight of the total asphalt binder comes from the RAP material. When using a PG 76-22 asphalt binder in structural course mixtures, refer to 334-2.3.6. RAP is not allowed in mixtures containing High Polymer asphalt binder. High Polymer asphalt is defined in Section 916.

2. Assume full responsibility for the design, production and construction of asphalt mixes which incorporate RAP as a component material.

3. Use RAP from a Department approved stockpile or millings from a Department project.

4. Provide stockpiled RAP material that is reasonably consistent in characteristics and contains no aggregate particles which are soft or conglomerates of fines.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

5. Provide RAP material having a minimum average asphalt binder content of 4.0% by weight of RAP. As an exception, when using fractionated RAP, the minimum average asphalt binder content for the coarse portion of the RAP shall be 2.5% by weight of the coarse portion of the RAP. The coarse portion of the RAP shall be the portion of the RAP retained on the No. 4 sieve. The Engineer may sample the stockpiles to verify that this requirement is met.

334-2.3.2 Material Characterization for Mix Design: Assume responsibility for establishing the asphalt binder content, gradation, and bulk specific gravity (G_{sb}) of the RAP material based on a representative sampling of the material by roadway cores or stockpile samples. For roadway core samples, assume responsibility for the degradation that will occur during the milling operation.

334-2.3.3 RAP Stockpile Approval: Prior to the incorporation of RAP into the asphalt mixture, stockpile the RAP material and obtain approval for the stockpile by one of the following methods:

1. Continuous stockpile: When RAP is obtained from one or multiple sources and is either processed, blended, or fractionated, and stockpiled in a continuous manner, assure an adequate number of test results are obtained for stockpile approval. Test the RAP material for gradation and asphalt content at a minimum frequency of one sample per 1,000 tons with a minimum of six test results. Test the RAP material for G_{mm} (for G_{sb} determination) at a minimum frequency of one sample per 5,000 tons with a minimum of two test results. Based on visual inspection and a review of the test data, the Engineer will determine the suitability of the stockpiled material. In addition, address the details and specifics of the processing, sampling, testing, and actions to be taken in the Producer Quality Control (QC) Plan.

When RAP is added to the continuous stockpile after original approval of the stockpile as described above, test the RAP material for gradation and asphalt content at a minimum frequency of one sample per 1,000 tons with a minimum of six test results. Test the RAP material for G_{mm} (for G_{sb} determination) at a minimum frequency of one sample per 5,000 tons with a minimum of two test results. Monitor test results during crushing operations for conformance to the requirements of Table 334-1. After the minimum frequency of tests have been performed, the Engineer will review the test data and visually inspect the stockpiled material. The average gradation and G_{mm} of the added material shall be within the allowable ranges shown in Table 334-1 from the originally approved stockpile values. If the added RAP material does not meet the conditions of Table 334-1, then the Contractor must create a new stockpile when resuming crushing operations and the stockpile will receive a new number designation from the Department. The previously crushed material, which was added to the continuous stockpile and did not meet the conditions of Table 334-1, may remain and that stockpile used until depleted.

Table 334-1 Allowable Ranges for Continuous RAP Stockpile Properties	
Characteristic	Limit from Original Approved Stockpile Gradation
No. 8 sieve and coarser	± 6.0%
No. 16 sieve	± 5.0%
No. 30 sieve	± 5.0%
No. 50 sieve	± 4.0%
No. 100 sieve	± 4.0%
No. 200 sieve	± 2.0%
G_{\square}	± 0.040

2. Non-continuous single stockpile: When an individual stockpile is being constructed, obtain representative samples at random locations and test the RAP material for gradation and asphalt content at a minimum frequency of one sample per 1,000 tons with a minimum of six test results. Test the RAP material for G_{mm} (for G_{sb} determination) at a minimum frequency of one sample per 5,000 tons with a minimum of two test results. Based on visual inspection and a review of the test data, the Engineer will determine the suitability of the stockpiled material. If the properties of the new stockpile compare with the properties of an existing stockpile within the ranges provided in Table 334-1, the RAP in the new stockpile may be added to the existing stockpile. Once the RAP stockpile has been approved, do not add additional material without prior approval of the Engineer.

Determine the asphalt binder content and gradation of the RAP material in accordance with FM 5-563 and FM 1-T 030, respectively. Establish the G_{sb} of the RAP material by using one of the following methods:

a. Calculate the G_{sb} value based upon the effective specific gravity (G_{se}) of the RAP material, determined on the basis of the asphalt binder content and maximum specific gravity (G_{mm}) of the RAP material. The Engineer will approve the estimated asphalt binder absorption value used in the calculation.

b. Measure the G_{sb} of the RAP aggregate, in accordance with FM 1-T 084 and FM 1-T 085. Obtain the aggregate by using a solvent extraction method.

334-2.3.4 Pavement Coring Report: When the Contract includes milling of the existing asphalt pavement, the Pavement Coring Report may be available on the Department’s website.

334-2.3.5 Asphalt Binder for Mixes with RAP: Select the appropriate asphalt binder grade based on Table 334-2. The Engineer reserves the right to change the asphalt binder grade at design based on the characteristics of the RAP asphalt binder, and reserves the right to make changes during production.

Table 334-2 Asphalt Binder Grade for Mixes Containing RAP	
Percent RAP	± 6.0%
0 - 15	± 5.0%
16 - 30	± 5.0%
> 30	± 4.0%

334-2.3.6 Allowable RAP Percentages for Type SP Structural Mixtures with PG 76-22 Asphalt Binder: For Type SP structural mixtures using PG 76-22 asphalt binder, select the percentage of RAP material based on Table 334-3.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Table 334-3 Allowable RAP Percentages ¹ in Type SP Structural Mixtures with PG 76-22 Asphalt Binder				
		Coarse RAP	Intermediate RAP	Fine RAP
Gradation % Passing #16 Sieve ²		≤ 40%	> 40% to ≤ 50%	> 50%
PG _{HT} ³ > 100.0° C	Allowable RAP Percentage	≤ 25%	≤ 20%	≤ 20%
PG _{HT} ³ ≤ 100.0° C		≤ 30%	≤ 25%	
Notes:				
1. RAP aggregate by weight of total aggregate or RAP binder by weight of total binder.				
2. RAP gradations based on ignition oven extraction of RAP material in accordance with FM 5-563.				
3. PG _{HT} : asphalt binder high temperature continuous performance grade of RAP in accordance with Section 916.				

334-2.4 Recycled Crushed Glass: Recycled crushed glass may be used as a component of the asphalt mixture subject to the following requirements:

1. Consider the recycled crushed glass a local material and meet all requirements specified in 902-6.
2. Limit the amount of recycled crushed glass to a maximum of 15% by weight of total aggregate.
3. Use an asphalt binder that contains an anti-stripping agent listed on the Approved Product List (APL). The anti-strip additive shall be introduced into the asphalt binder by the supplier during loading.
4. Do not use recycled crushed glass in friction course mixtures or in structural course mixtures which are to be used as the final wearing surface.

334-3 General Composition of Mixture.

334-3.1 General: Compose the asphalt mixture using a combination of aggregate (coarse, fine or mixtures thereof), mineral filler, if required, and asphalt binder material. Size, grade and combine the aggregate fractions to meet the grading and physical properties of the mix design. Aggregates from various sources may be combined.

334-3.2 Mix Design:

334-3.2.1 General: Design the asphalt mixture in accordance with AASHTO R 35, except as noted herein. Prior to the production of any asphalt mixture, submit the proposed mix design with supporting test data indicating compliance with all mix design criteria to the Engineer. For all mix designs, include representative samples of all component materials, including asphalt binder. Allow the Director of the Office of Materials a maximum of four weeks to either conditionally verify or reject the mix as designed.

At no additional cost to the Department, for a Type SP mix the following Traffic Level substitutions are allowed:

- Traffic Level E can be substituted for Traffic Level C.
- Traffic Level C can be substituted for Traffic Level B.

The same traffic level and binder type that is used for the mainline traffic lanes may be placed in the shoulder at no additional cost to the Department, even if the conditions stated above are not met for the shoulder.

Do not use more than four mix designs per nominal maximum aggregate size per

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

traffic level per binder grade per year, where the year starts at the Notice to Proceed. Exceeding this limitation will result in a maximum Composite Pay Factor (CPF) of 1.00 as defined in 334-8.2 for all designs used beyond this limit.

Warm mix technologies (additives, foaming techniques, etc.) listed on the Department's website may be used in the production of the mix. The URL for obtaining this information, if available, is: <https://www.fdot.gov/materials/laboratory/asphalt/index.shtm>.

When warm mix technologies are used, for mixtures containing a PG 52- 28, PG 58-22, or PG 67-22 binder, a mixture will be considered a warm mix asphalt design if the mixing temperature is 285°F or less. For mixtures containing a PG 76-22 or High Polymer binder, a mixture will be considered a warm mix asphalt design if the mixing temperature is 305°F or less.

The Engineer will consider any marked variations from original test data for a mix design or any evidence of inadequate field performance of a mix design as sufficient evidence that the properties of the mix design have changed, and the Engineer will no longer allow the use of the mix design.

334-3.2.2 Mixture Gradation Requirements: Combine the coarse and fine aggregate in proportions that will produce an asphalt mixture meeting all of the requirements defined in this specification and conform to the gradation requirements at design as defined in AASHTO M 323. Aggregates from various sources may be combined.

334-3.2.2.1 Mixture Gradation Classification: Plot the combined mixture gradation on an FHWA 0.45 Power Gradation Chart. Include the Control Points from AASHTO M 323, as well as the Primary Control Sieve (PCS) Control Point from AASHTO M 323. Fine mixes are defined as having a gradation that passes above the primary control sieve control point and above the maximum density line for all sieve sizes smaller than the primary control sieve and larger than the No. 30 sieve.

334-3.2.3 Aggregate Consensus Properties: For Traffic Level C and E mixtures, meet the following consensus properties at design for the aggregate blend. Aggregate consensus properties do not apply to Traffic Level B mixtures.

334-3.2.3.1 Coarse Aggregate Angularity: When tested in accordance with ASTM D5821, meet the percentage of fractured faces requirements specified in AASHTO M 323.

334-3.2.3.2 Fine Aggregate Angularity: When tested in accordance with AASHTO T 304, Method A, meet the uncompacted void content of fine aggregate specified in AASHTO M 323.

334-3.2.3.3 Flat and Elongated Particles: When tested in accordance with ASTM D4791, (with the exception that the material passing the 3/8-inch sieve and retained on the No. 4 sieve shall be included), meet the requirements specified in AASHTO M 323. Measure the aggregate using the ratio of 5:1, comparing the length (longest dimension) to the thickness (shortest dimension) of the aggregate particles.

334-3.2.3.4 Sand Equivalent: When tested in accordance with AASHTO T 176, meet the sand equivalent requirements specified in AASHTO M 323.

334-3.2.4 Gyrotory Compaction: Compact the design mixture in accordance with AASHTO T 312, with the following exception: use the number of gyrations at N_{design} as defined in Table 334-4. Measure the inside diameter of gyrotory molds in accordance with AASHTO T 312.

Traffic Level	N_{design} Number of Gyrations
B	65
C	75
E	100

334-3.2.5 Design Criteria: Meet the requirements for nominal maximum aggregate size as defined in AASHTO M 323, as well as for relative density, VMA, VFA, and dust-to-binder ratio as specified in AASHTO M 323. N_{initial} and N_{maximum} requirements are not applicable.

334-3.2.6 Moisture Susceptibility:

1. For all traffic levels, use a liquid anti-strip agent listed on the APL at the specified dosage rate. Hydrated lime may be used instead of the liquid anti-strip agent.
2. Provide a mixture having a retained tensile strength ratio of at least 0.80 and a minimum tensile strength (unconditioned) of 100 psi in accordance with FM 1-T 283.

334-3.2.7 Additional Information: In addition to the requirements listed above, provide the following information with each proposed mix design submitted for verification:

1. The design traffic level and the design number of gyrations (N_{design}).
2. The source and description of the materials to be used.
3. The Department source number and the Department product code of the aggregate components furnished from a Department approved source.
4. The gradation and proportions of the raw materials as intended to be combined in the paving mixture. The gradation of the component materials shall be representative of the material at the time of use. Compensate for any change in aggregate gradation caused by handling and processing as necessary.
5. A single percentage of the combined mineral aggregate passing each specified sieve. Degradation of the aggregate due to processing (particularly material passing the No. 200 sieve) should be accounted for and identified.
6. The bulk specific gravity (G_{sb}) value for each individual aggregate and RAP component, as identified in the Department's aggregate control program.
7. A single percentage of asphalt binder by weight of total mix intended to be incorporated in the completed mixture, shown to the nearest 0.1%.
8. A target temperature for the mixture at the plant (mixing temperature) and a target temperature for the mixture at the roadway (compaction temperature) in accordance with 320-6.3. Do not exceed a target temperature of 340°F for High Polymer asphalt binders, 330°F for PG 76-22 asphalt binders, and 315°F for unmodified asphalt binders.
9. Provide the physical properties at the optimum asphalt content, which must conform to all specified requirements.
10. The name of the Construction Training Qualification Program (CTQP) Qualified Mix Designer.
11. The ignition oven and maximum specific gravity (G_{mm}) calibration factors.
12. The warm mix technology, if used.

334-3.3 Mix Design Revisions: During production, the Contractor may request a target value revision to a mix design, subject to meeting the following requirements: the target change falls within the limits defined in Table 334-5, appropriate data exists demonstrating that the mix complies with production air voids specification criteria, and the mixture gradation meets the basic gradation requirements defined in 334-3.2.2.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Table 334-5 Limits for Potential Adjustments to Mix Design Target Values	
Characteristic	Limit from Original Mix Design
Asphalt Binder Content ⁽¹⁾	±0.3%
Gradation and Aggregate Component ⁽²⁾	
No. 8 sieve and Coarser	±5.0%
No. 16 sieve	±4.0%
No. 30 sieve	±4.0%
No. 50 sieve	±3.0%
No. 100 sieve	±3.0%
No. 200 sieve	±1.0%
Each Component of Aggregate Blend	±5.0%
⁽¹⁾ Reductions to the asphalt binder content will not be permitted if the VMA during production is lower than 1.0% below the design criteria. ⁽²⁾ The Engineer may waive the limits for the individual sieves and component of the aggregate blend contingent upon the quality of the production data for the mixture. Revisions for FC-5 mixtures to be determined by the Engineer.	

Submit all requests for revisions to mix designs, along with supporting documentation, to the Engineer. In order to expedite the revision process, the request for revision or discussions on the possibility of a revision may be made verbally, but must be followed up by a written request. The verified mix design will remain in effect until the Engineer authorizes a change. In no case will the effective date of the revision be established earlier than the date of the first communication between the Contractor and the Engineer regarding the revision.

A new design mix will be required if aggregate sources change, or for any substitution of an aggregate product with a different aggregate code, unless approved by the Engineer.

334-4 Producer Process Control (PC).

Assume full responsibility for controlling all operations and processes such that the requirements of these Specifications are met at all times. Perform any tests necessary at the plant and roadway for process control purposes. Enter all PC test data into the Department’s database. The Engineer will not use these test results in the acceptance payment decision.

Address in the Producer QC Plan how PC failures will be handled. When a PC failure occurs, investigate, at a minimum, the production process, testing equipment and/or sampling methods to determine the cause of the failure, and make any necessary changes to assure compliance with these Specifications. Obtain a follow up sample immediately after corrective actions are taken to assess the adequacy of the corrections. In the event the follow-up PC sample also fails to meet Specification requirements, cease production of the asphalt mixture until the problem is adequately resolved to the satisfaction of the QC Manager.

334-5 Acceptance of the Mixture.

334-5.1 General: The mixture will be accepted at the plant with respect to gradation (P-8 and P-200), asphalt content (Pb), and volumetrics (volumetrics is defined as air voids at N_{design}). The mixture will be accepted on the roadway with respect to density of roadway cores. Acceptance will be on a LOT-by-LOT basis (for each mix design) based on tests of random samples obtained within each subplot taken at a frequency of one set of samples per subplot. A roadway LOT and a plant production LOT shall be the same. Acceptance of the mixture will be based on Contractor QC test results that have been verified by the Department.

334-5.1.1 Sampling and Testing Requirements: Obtain the samples in accordance with

FM 1-T 168. Obtain samples at the plant of a sufficient quantity to be split into three smaller samples; one for QC, one for Verification testing and one for Resolution testing. Obtain each split sample of a sufficient quantity, approximately 40 pounds, for all required testing. The split samples for Verification testing and Resolution testing shall be reduced in size and stored in three boxes each. The approximate size of each box must be 12 inches x 8 inches x 4 inches. Provide, label, and safely store sample boxes in a manner agreed upon by the Engineer for future testing.

The asphalt content of the mixture will be determined in accordance with FM 5-563. The gradation of the recovered aggregate will be determined in accordance with FM 1-T 030. Volumetric testing will be in accordance with AASHTO T 312 and FM 1-T 209. Prior to testing volumetric samples, condition the test-sized sample for one hour, plus or minus five minutes, at the target roadway compaction temperature in a shallow, flat pan, such that the mixture temperature at the end of the one-hour conditioning period is within plus or minus 20°F of the roadway compaction temperature.

If one of the QC gyratory specimens is damaged, make an additional gyratory specimen.

For situations where two properly prepared gyratory specimens do not meet single-operator precision requirements for G_{mb} as provided in FM 1-T 166:

1. Retest both gyratory specimens in accordance FM 1-T 166.
2. Following the retest, if the newly measured G_{mb} values do not meet single-operator precision requirements, QC shall prepare a third gyratory specimen in accordance with AASHTO T 312 and test in accordance with FM 1-T 166. All three test results shall be input into MAC. The average G_{mb} will be determined by MAC after performing an outlier check in accordance with ASTM E178.

Test for roadway density in accordance with FM 1-T 166.

334-5.1.2 Acceptance Testing Exceptions: When the total combined quantity of hot mix asphalt for the project, as indicated in the Plans for Type B-12.5, Type SP and Type FC mixtures only, is less than 2,000 tons, the Engineer will accept the mix on the basis of visual inspection. The Engineer may require the Contractor to run process control tests for informational purposes, as defined in 334-4, or may run independent verification tests to determine the acceptability of the material.

Density testing for acceptance will not be performed on widening strips or shoulders with a width of 5 feet or less, open-graded friction courses, variable thickness overbuild courses, leveling courses, any SP-9.5 or SP-12.5 asphalt layer placed on subgrade with a layer thickness less than or equal to 3 inches, miscellaneous asphalt pavement, shared use paths, crossovers, gore areas, raised crosswalks, speed tables, or any course with a specified thickness less than 1 inch or a specified spread rate that converts to less than 1 inch as described in 334-1.4. Density testing for acceptance will not be performed on asphalt courses placed on bridge decks or approach slabs; compact these courses in static mode only per the requirements of 330-7.7. In addition, density testing for acceptance will not be performed on the following areas when they are less than 500 feet (continuous) in length: turning lanes, acceleration lanes, deceleration lanes, shoulders, parallel parking lanes, ramps, or unsignalized side streets with less than four travel lanes and speed limits less than 35 mph. Do not perform density testing for acceptance in situations where the areas requiring density testing is less than 50 tons within a subplot.

Density testing for acceptance will not be performed in intersections. The limits of the intersection will be from stop bar to stop bar for both the mainline and side streets. A random core location that occurs within the intersection shall be moved forward or backward from the intersection at the direction of the Engineer.

Where density testing for acceptance is not required, compact these courses (with the exception of open-graded friction courses) in accordance with the rolling procedure (equipment and pattern) as approved by the Engineer or with Standard Rolling Procedure as specified in 330-7.2. In the event that the rolling procedure deviates from the procedure approved by the Engineer, or the Standard Rolling Procedure, placement of the mix shall be stopped.

The density pay factor (as defined in 334-8.2) for areas not requiring density testing for acceptance will be paid at the same density pay factor as for the areas requiring density testing within the same LOT. If the entire LOT does not require density testing for acceptance, the LOT will be paid at a density pay factor of 1.00.

334-5.2 Full LOTs: Each LOT will be defined (as selected by the Contractor prior to the start of the LOT) as either (1) 2,000 tons, with each LOT subdivided into four equal sublots of 500 tons each, or (2) 4,000 tons, with each LOT subdivided into four equal sublots of 1,000 tons each. As an exception to this, the initial LOT of all new mix designs shall be defined as 2,000 tons, subdivided into four equal sublots of 500 tons each. Before the beginning of a LOT, the Engineer will develop a random sampling plan for each subplot and direct the Contractor on sample points, based on tonnage, for each subplot during construction.

334-5.3 Partial LOTs: A partial LOT is defined as a LOT size that is less than a full LOT. A partial LOT may occur due to the following:

1. The completion of a given mix type or mix design on a project.
2. Closure of the LOT due to time. LOTs will be closed 30 calendar days after the start of the LOT. Time periods other than 30 calendar days may be used if agreed to by both the Engineer and the Contractor, but under no circumstances shall the LOT be left open longer than 90 days.
3. A LOT is terminated per 334-5.4.4.

All partial LOTs will be evaluated based on the number of tests available, and will not be redefined. If a LOT is closed before the first plant random sample is obtained, then the LOT will be visually accepted by the Engineer and the LOT pay factor will be 1.00.

334-5.4 QC Sampling and Testing: Obtain all samples randomly as directed by the Engineer.

Should the Engineer determine that the QC requirements are not being met or that unsatisfactory results are being obtained, or should any instances of falsification of test data occur, acceptance of the Producer's QC Plan will be suspended and production will be stopped.

334-5.4.1 Lost or Missing Verification/Resolution Samples: In the event that any of the Verification and/or Resolution asphalt mixture samples that are in the custody of the Contractor are lost, damaged, destroyed, or are otherwise unavailable for testing, the minimum possible pay factor for each quality characteristic as described in 334-8.2 will be applied to the entire LOT in question, unless called for otherwise by the Engineer. Specifically, if the LOT in question has more than two sublots, the pay factor for each quality characteristic will be 0.55. If the LOT has two or less sublots, the pay factor for each quality characteristic will be 0.80. If only the roadway cores are lost, damaged, destroyed, or are otherwise unavailable for testing, then the minimum possible pay factor for density will be applied to the entire LOT in question. In either event, the material in question will also be evaluated in accordance with 334-5.9.5.

If any of the Verification and/or Resolution samples that are in the custody of the Department are lost, damaged, destroyed or are otherwise unavailable for testing, the corresponding QC test result will be considered verified, and payment will be based upon the Contractor's data.

334-5.4.2 Plant Sampling and Testing Requirements: Obtain one random sample of mix per subplot in accordance with 334-5.1.1 as directed by the Engineer. Test the QC split sample for gradation, asphalt binder content and volumetrics in accordance with 334-5.1.1. Complete all QC testing within one working day from the time the samples were obtained.

334-5.4.3 Roadway Sampling and Testing Requirements: Obtain five 6-inch diameter roadway cores within 24 hours of placement at random locations as directed by the Engineer within each subplot. Test these QC samples for density (G_{mb}) in accordance with 334-5.1.1. Obtain a minimum of three cores per subplot at random locations as identified by the Engineer in situations where the subplot/LOT was closed or terminated before the random numbers were reached or where it is impractical to cut five cores per subplot. Do not obtain cores any closer than 12 inches from an unsupported edge. The Engineer may adjust randomly generated core locations for safety purposes or as the Engineer deems necessary. Do not perform density testing for acceptance in a subplot if the plant random sample for that subplot has not been

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

obtained. Maintain traffic during the coring operation; core the roadway, patch the core holes (within three days of coring); and trim the cores to the proper thickness prior to density testing.

Density for the subplot shall be based on the average value for the cores cut from the subplot with the target density being a percentage of the maximum specific gravity (G_{mm}) of the subplot, as defined in the Contract. Once the average density of a subplot has been determined, do not retest the samples unless approved by the Engineer. Ensure proper handling and storage of all cores until the LOT in question has been accepted.

334-5.4.4 Individual Test Tolerances for QC Testing: Terminate the LOT if any of the following QC failures occur:

1. An individual test result of a subplot for air voids does not meet the requirements of Table 334-6,
2. The average subplot density does not meet the requirements of Table 334-6,
3. Two consecutive test results within the same LOT for gradation or asphalt binder content do not meet the requirements of Table 334-6,

When a LOT is terminated due to a QC failure, stop production of the mixture until the problem is resolved to the satisfaction of the QC Manager and/or Asphalt Plant Level II technician responsible for the decision to resume production after a QC failure, as identified in Section 105. In the event that it can be demonstrated that the problem can immediately be or already has been resolved, it will not be necessary to stop production. When a LOT is terminated, make all necessary changes to correct the problem. Do not resume production until appropriate corrections have been made. Prior to resuming production, inform the Engineer of the problem and corrections made to correct the problem. After resuming production, sample and test the material to verify that the changes have corrected the problem. Summarize this information and provide it to the Engineer prior to the end of the work shift when production resumes.

In the event that a QC failure is not addressed as defined above, the Engineer’s approval will be required prior to resuming production after any future QC failures.

Address any material represented by a failing test result, as defined above in this subarticle, in accordance with 334-5.9.5. Any LOT terminated under this subarticle will be limited to a maximum Pay Factor of 1.00 (as defined in 334-8.2) for all quality characteristics and will include all material placed up to the point when the LOT was terminated.

In the event that a Gmm test result differs by more than 0.040 from the mix design Gmm, investigate the causes of the discrepancy and report the findings and proposed actions to the Engineer.

Table 334-6 Master Production Range	
Characteristic	Tolerance ⁽¹⁾
Asphalt Binder Content (%)	Target ±0.55

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Passing No. 200 Sieve (%)	Target ± 1.50
Air Voids (%)	2.30 - 6.00
Density (minimum % G_{mm}) ⁽²⁾	89.5
⁽¹⁾ Tolerances for sample size of n = 1 from the verified mix design	
⁽²⁾ Based on an average of three to five randomly located cores	

334-5.5 Verification Testing: In order to determine the validity of the Contractor’s QC test results prior to their use in the Acceptance decision, the Engineer will run verification tests.

334-5.5.1 Plant Testing: At the completion of each LOT, the Engineer will test a minimum of one Verification split sample randomly selected from the LOT. Results of the testing and analysis for the LOT will be made available to the Contractor within one working day from the time the LOT is completed. Verification samples shall be reheated at the target roadway compaction temperature for 1-1/2 hours, plus or minus 5 minutes, reduced to the appropriate testing size, and conditioned and tested as described in 334-5.1.1. In lieu of the 1-1/2 hours reheating procedure, the mixture may be reheated to within plus or minus 20°F of the roadway compaction temperature using a microwave oven. Stir the mixture as necessary during the reheating process to maintain temperature uniformity. Subsequently, condition and test the mixture as described in 334-5.1.1.

The Verification test results will be compared with the QC test results based on the between-laboratory precision values shown in Table 334-7.

Table 334-7 Between-Laboratory Precision Values	
Property	Maximum Difference
G_{mm}	0.016
G_{mb} (gyratory compacted samples)	Target ± 1.50
G_{mb} (roadway cores)	0.014
P_b	0.44%
$P_{.200}$	FM 1-T 030 (Figure 2)
$P_{.8}$	FM 1-T 030 (Figure 2)

If all of the specified mix characteristics compare favorably, then the LOT will be accepted, with payment based on the Contractor’s QC test data for the LOT.

If any of the results do not compare favorably, then the Resolution samples from the LOT will be sent to the Resolution laboratory for testing, as described in 334-5.6.

334-5.5.2 Roadway Testing: At the completion of each LOT, the Engineer will determine the density (G_{mb}) of each core (previously tested by QC) as described in 334-5.1.1 from the same subplot as the plant samples. For situations where roadway density is not required for the random subplot chosen, then another subplot shall be randomly chosen for roadway density cores only. Results of the testing and analysis for the LOT will be made available to the Contractor within one working day from the time the LOT is completed.

The individual Verification test results will be compared with individual QC test results by the Engineer based on the between-laboratory precision values given in Table 334-7.

If each of the core test results compare favorably, then the LOT will be accepted with respect to density, with payment based on the Contractor’s QC test data for the LOT.

If any of the results do not compare favorably, then the core samples from the LOT will be sent to the Resolution laboratory for testing as specified in 334-5.6.

334-5.6 Resolution System:

334-5.6.1 Plant Samples: In the event of an unfavorable comparison between the Contractor's QC test results and the Engineer's Verification test results on any of the properties identified in Table 334-7, the Resolution laboratory will test all of the split samples from the LOT for only the property (or properties) in question. Resolution samples shall be reheated at the target roadway compaction temperature for 1-1/2 hours, plus or minus 5 minutes, reduced to the appropriate testing size, and conditioned and tested as described in 334-5.1.1. In lieu of the 1- 1/2 hours reheating procedure, the mixture may be reheated to within plus or minus 20°F of the roadway compaction temperature using a microwave oven. Stir the mixture as necessary during the reheating process to maintain temperature uniformity. Subsequently, condition and test the mixture as described in 334-5.1.1.

334-5.6.2 Roadway Samples: In the event of an unfavorable comparison between the Contractor's QC test data and the Engineer's Verification test data on the density results, the Resolution laboratory will test all of the cores from the LOT. Testing will be as described in 334-5.1.1.

334-5.6.3 Resolution Determination: The Resolution test results (for the property or properties in question) will be compared with the QC test results based on the between-laboratory precision values shown in Table 334-7.

If the Resolution test results compare favorably with all of the QC results, then acceptance and payment for the LOT will be based on the QC results, and the Department will bear the costs associated with Resolution testing. No additional compensation, either monetary or time, will be made for the impacts of any such testing.

If the Resolution test results do not compare favorably with all of the QC results, then acceptance and payment for the LOT will be based on the Resolution test data for the LOT, and the costs of the Resolution testing will be deducted from monthly estimates. No additional time will be granted for the impacts of any such testing.

In addition, the material failure requirements of 334-5.4.4 apply to the Resolution test data. Address any material represented by the failing test results in accordance with 334-5.9.5. For this situation, the LOT will be limited to a maximum Pay Factor of 1.00 (as defined in 334-8.2) for all quality characteristics.

In the event of an unfavorable comparison between the Resolution test results and QC test results, make the necessary adjustments to assure that future comparisons are favorable.

334-5.7 Independent Verification (IV) Testing:

334-5.7.1 Plant: The Contractor shall provide sample boxes and take samples as directed by the Engineer for IV testing. Obtain enough material for three complete sets of tests (two samples for IV testing by the Engineer and one sample for testing by the Contractor). If agreed upon by both the Engineer and the Contractor, only one sample for IV testing by the Engineer may be obtained. IV samples will be reheated at the target roadway compaction temperature for 1-1/2 hours, plus or minus 5 minutes, reduced to the appropriate testing size, and conditioned and tested as described in 334-5.1.1. The Contractor's split sample, if tested immediately after sampling, shall be reduced to the appropriate testing size, and conditioned and tested as described in 334-5.1.1. If the Contractor's sample is not tested immediately after sampling, then the sample shall be reheated at the target roadway compaction temperature for 1- 1/2 hours, plus or minus 5 minutes, reduced to the appropriate testing size, and conditioned and tested as described in 334-5.1.1. For the IV and Contractor's samples, in lieu of the 1-1/2 hours reheating procedure, the mixture may be reheated to within plus or minus 20°F of the roadway compaction temperature using a microwave oven. Stir the mixture as necessary during the reheating process to maintain temperature uniformity. Subsequently, condition and test the mixture as described in 334-5.1.1. The Contractor's test results shall be provided to the Engineer within one working day from the time the sample was obtained.

If any of the IV test results do not meet the requirements of Table 334-6, then a comparison of the IV test results and the Contractor's test results, if available, will be made. If a comparison of the IV test results and the Contractor's test results meets the precision values of Table 334-7 for the material properties in question, or if the Contractor's test results are not available, then the IV test results are considered verified and the Contractor shall cease production of the asphalt mixture until the problem is adequately resolved (to the satisfaction of the Engineer), unless it can be demonstrated to the satisfaction of the Engineer that the problem can immediately be (or already has been) resolved. Address any material represented by the failing test results in accordance with 334-5.9.5.

If a comparison of the IV test results and the Contractor's test results does not meet the precision values of Table 334-7 for the material properties in question, then the second IV sample shall be tested by the Engineer for the material properties in question. If a comparison between the first and second IV test results does not meet the precision values of Table 334-7 for the material properties in question, then the first IV test results are considered unverified for the material properties in question and no action shall be taken, with the following exception: if the first and second IV test results do not meet the precision values of Table 334-7 and the first IV test result and Contractor's test result do not meet the precision values of Table 334-7, yet all three test results do not meet the requirements of Table 334-6, then address any material represented by the failing test results in accordance with 334-5.9.5.

If a comparison between the first and second IV test results meets the precision values of Table 334-7 for the material properties in question, then the first IV sample is considered verified and the Contractor shall cease production of the asphalt mixture until the problem is adequately resolved (to the satisfaction of the Engineer), unless it can be demonstrated to the satisfaction of the Engineer that the problem can immediately be (or already has been) resolved. Address any material represented by the failing test results in accordance with 334-5.9.5.

The Engineer has the option to use the IV sample for comparison testing as specified in 334-6.

334-5.7.1.1 Asphalt Binder and Mixture Sampling for Determination of Asphalt

Binder Quality: At the Department's request, obtain an asphalt binder sample from the asphalt plant storage tank and a corresponding asphalt mixture sample using binder from the same storage tank. Samples of asphalt binder and mixture shall be sampled the same day. The asphalt binder from the storage tank and the asphalt binder recovered from the asphalt mixture will be tested by the Department for compliance with Contract Documents.

334-5.7.2 Roadway: Obtain five 6-inch diameter roadway cores within 24 hours of placement, as directed by the Engineer, for IV testing. In situations where it is impractical to cut five cores per subplot, obtain a minimum of three cores per subplot at random locations, as identified by the Engineer. These independent cores will be obtained from the same LOTs and sublots as the Independent Verification Plant samples, or as directed by the Engineer. The density of these cores will be obtained as described in 334-5.1.1. If the average of the results for the subplot does not meet the requirements of Table 334-6 for density, then a comparison of the IV G_{mm} test results and the Contractor's G_{mm} test results, if available, will be made in accordance with the procedure provided in 334-5.7.1. Address any material represented by the failing test results in accordance with 334-5.9.5.

334-5.8 Surface Tolerance: The asphalt mixture will be accepted on the roadway with respect to surface tolerance in accordance with the applicable requirements of 330-9.

334-5.9 Minimum Acceptable Quality Levels:

334-5.9.1 PFs Below 0.90: In the event that an individual pay factor for any quality characteristic of a LOT falls below 0.90, take steps to correct the situation and report the actions to the Engineer. In the event that the pay factor for the same quality characteristic for two consecutive LOTs is

below 0.90, cease production of the asphalt mixture until the problem is adequately resolved (to the satisfaction of the Engineer), unless it can be demonstrated to the satisfaction of the Engineer that the problem can immediately be (or already has been) resolved. Actions taken must be approved by the Engineer before production resumes.

334-5.9.2 CPFs Less Than 0.90 and Greater Than or Equal to 0.80: If the composite pay factor for the LOT is less than 0.90 and greater than or equal to 0.80, cease production of the asphalt mixture until the problem is adequately resolved (to the satisfaction of the Engineer), unless it can be demonstrated to the satisfaction of the Engineer that the problem can immediately be (or already has been) resolved. Actions taken must be approved by the Engineer before production resumes.

334-5.9.3 CPFs Less Than 0.80 and Greater Than or Equal to 0.75: If the CPF for the LOT is less than 0.80 and greater than or equal to 0.75, address the defective material in accordance with 334-5.9.5.

334-5.9.4 CPFs Less Than 0.75: If the CPF for the LOT is less than 0.75, remove and replace the defective LOT at no cost to the Department, or as approved by the Engineer.

334-5.9.5 Defective Material: Assume responsibility for removing and replacing all defective material placed on the project, at no cost to the Department.

As an exception to the above and upon approval of the Engineer, obtain an engineering analysis in accordance with Section 6 by an independent laboratory (as approved by the Engineer) to determine the disposition of the material. The engineering analysis must be signed and sealed by a Professional Engineer licensed in the State of Florida.

The Engineer may determine that an engineering analysis is not necessary or may perform an engineering analysis to determine the disposition of the material.

Any material that remains in place will be accepted with a CPF as determined by 334-8, or as determined by the Engineer.

If the defective material is due to a gradation, asphalt binder content or density failure, upon the approval of the Engineer the Contractor may perform delineation tests on roadway cores in lieu of an engineering analysis to determine the limits of the defective material that may require removal and replacement. Prior to any delineation testing, all sampling locations shall be approved by the Engineer. All delineation sampling and testing shall be monitored and verified by the Engineer. For materials that are defective due to air voids, an engineering analysis is required.

When evaluating defective material by engineering analysis or delineation testing, at a minimum, evaluate all material located between passing QC, PC or IV test results. Any additional PC samples obtained in the same work shift after an IV sample has been obtained shall include enough material for three complete sets of tests (PC, IV and IV check samples) in the event the Contractor requests using the PC test results for engineering analysis or delineation. These additional PC samples must compare with verified IV test results as determined by the comparison process of 334-5.7.1 in order to be used for engineering analysis or delineation. Exceptions to this requirement shall be approved by the Engineer.

334-6 Comparison Testing.

At the start of the project (unless waived by the Engineer) and at other times as determined necessary by the Engineer, provide split samples for comparison testing with the Engineer. The purpose of these tests is to verify that the testing equipment is functioning properly and that the testing procedures are being performed correctly. In the event that the Engineer determines that there is a problem with the Contractor's testing equipment and/or testing procedures, immediately correct the problem to the Engineer's satisfaction. In the event that the problem is not immediately corrected, cease production of the asphalt mixture until the problem is adequately resolved to the satisfaction of the Engineer.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

If so agreed to by both the Contractor and the Engineer, the split sample used for comparison testing may also be used for the QC sample. The split sample used for comparison testing must also meet the requirements for IV testing described in 334-5.7.

334-7 Method of Measurement.

For the work specified under this Section (including the pertinent provisions of Sections 320 and 330), the quantity to be paid for will be the weight of the mixture, in tons. For each pay item, excluding overbuild, the pay quantity will be based on the quantity placed on the project, limited to 110% of the adjusted plan quantity for the pay item. The adjusted plan quantity will be determined by dividing the pay item’s original plan quantity (including any Engineer approved quantity revisions) by the design G_{mm} stated in 334-1.4, then multiplying it by the tonnage-weighted average G_{mm} of the mixes used for the pay item.

The bid price for the asphalt mix will include the cost of the liquid asphalt and the tack coat application as directed in 300-8. There will be no separate payment or unit price adjustment for the asphalt binder material in the asphalt mix. For the calculation of unit price adjustments of bituminous material, the average asphalt content will be based on the percentage specified in 9- 2.1.2. The weight will be determined as provided in 320-3.2 (including the provisions for the automatic recordation system).

Prepare and submit a Certification of Quantities to the Engineer in accordance with 9- 2.1.2.

334-8 Basis of Payment.

334-8.1 General: Price and payment will be full compensation for all the work specified under this Section (including the applicable requirements of Sections 320 and 330). For materials accepted in accordance with 334-5, based upon the quality of the material, a pay adjustment will be applied to the bid price of the material as determined on a LOT-by-LOT basis. The pay adjustment will be assessed by calculating a Pay Factor for the following individual quality characteristics: pavement density, air voids, asphalt binder content, and the percentage passing the No. 200 and No. 8 sieves. The pay adjustment will be computed by multiplying a Composite Pay Factor (CPF) for the LOT by the bid price per ton.

334-8.2 Pay Factors:

334-8.2.1 Partial LOTs: For Partial LOTs where no random sample is obtained due to insufficient tonnage, a CPF of 1.00 shall be applied.

334-8.2.2 Two or Less Sublot Test Results: In the event that two or less sublot test results are available for a LOT, Pay Factors will be determined based on Table 334-8, using the average of the accumulated deviations from the target value. (Except for density, deviations are absolute values with no plus or minus signs.) Use the 1-Test column when there is only one sublot test result and use the 2-Tests column when there are two sublots.

Table 334-8 Small Quantity Pay Table		
Pay Factor	1 Sublot Test Deviation	2 Sublot Test Average Deviation
Asphalt Bonder Content		
1.05	0.00-0.23	0.00-0.16
1.00	0.24-0.45	0.17-0.32
0.90	0.46-0.55	0.33-0.39
0.80	>0.55	>0.39
No. 8 Sieve		

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

1.05	0.00-2.25	0.00-1.59
1.00	2.26-4.50	1.60-3.18
0.90	4.51-5.50	3.19-3.89
0.80	>5.50	>3.89
No. 200 Sieve		
1.05	0.00-0.55	0.00-0.39
1.00	0.56-1.10	0.40-0.78
0.90	1.11-1.50	0.79-1.06
0.80	>1.05	>1.06
Air Voids		
1.05	0.00-0.50	0.00-0.35
1.00	0.51-1.00	0.36-0.71
0.90	1.01-1.70	0.72-1.20
0.80	1.71-2.00	1.21-1.41
0.70	2.01-2.50	1.42-1.77
0.55	>2.50	>1.77
Density ⁽¹⁾ Target=93.00 percent of G _{mm}		
1.05	+(0.00-3.50),-(0.00-0.50)	+(0.00-3.25),-(0.00-0.35)
1.00	+(3.51-4.50),-(0.51-1.00)	+(3.26-4.25),-(0.36-0.71)
0.95	+(4.51-5.00),-(1.01-2.00)	+(4.26-4.75),-(0.72-1.41)
0.90	+(5.01-5.50),-(2.01-3.00)	+(4.76-5.25) - (1.42-2.12)
0.80	+(>5.50),-(>3.00)	+ (>5.25), - (>2.12)
Density ⁽¹⁾ Target=92.00 percent of G _{mm}		
1.05	+(0.00-4.50),-(0.00-0.50)	+(0.00-4.25),-(0.00-0.35)
1.00	+(4.51-5.50),-(0.51-1.00)	+(4.26-5.25),-(0.36-0.71)
0.95	+(5.51-6.00),-(1.01-1.50)	+(5.26-5.75),-(0.72-1.41)
0.90	+(6.01-6.50),-(1.51-2.00)	+(5.76-6.25),-(1.42-2.12)
0.80	+(>6.50),-(2.00)	+(>6.25),-(>2.12)

(1). Each density test result is the average of three to five randomly located cores. The target density is 93.00 percent of G_{mm} (92.00 percent when compaction is limited to the static mode of for laves specified to be one inch thick). When compaction is limited to the static mode, no vibratory mode in the vertical direction will be allowed. Other vibratory modes will be allowed, if approved by the Engineer. In this case, the target density is 92.00 percent of G_{mm}.

334-8.2.3 Three or More Sublot Test Results: When three or more sublot test results are available for a LOT, the variability-unknown, standard deviation method will be used to determine the estimated percentage of the LOT that is within the specification limits. The number of significant figures used in the calculations will be in accordance with requirements of AASHTO R 11/ASTM E29, Absolute Method.

334-8.2.3.1 Percent Within Limits: The percent within limits (PWL) and Pay Factors for the LOT will be calculated as described below. Variables used in the calculations are as follows:

x = individual test value (sublot)

n = number of tests (sublots)

s = sample standard deviation

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

$\Sigma(x^2)$ = summation of squares of individual test values
 $(\Sigma x)^2$ = summation of individual test values squared
 Q_U = upper quality index
 USL = upper specification limit (target value plus upper specification limit from Table 334-9)

Q_L = lower quality index
 LSL = lower specification limit (target value minus lower specification limit from Table 334-9)

P_U = estimated percentage below the USL

P_L = estimated percentage above the LSL

1. Calculate the arithmetic mean (\bar{X}) of the test values:

$$(\bar{X}) = \frac{\Sigma x}{n}$$

2. Calculate the sample standard deviation (s):

$$s = \sqrt{\frac{n\Sigma(x^2) - (\Sigma x)^2}{n(n - 1)}}$$

3. Calculate the upper quality index (Q_U):

$$Q_U = \frac{USL - \bar{X}}{s}$$

4. Calculate the lower quality index (Q_L):

$$Q_L = \frac{\bar{X} - LSL}{s}$$

5. From Table 334-10, determine the percentage of work below the USL (P_U).

6. From Table 334-10, determine percentage of work above the LSL (PL)

Note: If USL or LSL is not specified; percentages within (USL or LSL) will be 100.

7. If Q_U or Q_L is a negative number, then calculate the percent within limits for Q_U or Q_L as follows: enter Table 334-10 with the positive value of Q_U or Q_L and obtain the corresponding percent within limits for the proper sample size. Subtract this number from 100.00. The resulting number is the value to be used in the next step (Step 8) for the calculation of quality level.

8. Calculate the percent within limits (PWL) = $(P_U + PL) - 100$

9. Calculate the Pay Factor (PF) for each quality characteristic using the equation given in 334-8.2.3.2.

Table 334-9 Specification Limits	
Quality Characteristic	Specification Limits

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Passing No. 8 sieve (percent)	Target ± 3.1
Passing No. 200 sieve (percent)	Target ± 1.0
Asphalt Content (percent)	Target ± 0.40
Air Voids (percent)	4.00 ± 1.20
Density, vibratory mode (percent of G _{mm}):	93.00 + 4.00, - 1.20
Density, static mode (percent of G _{mm})	92.00 + 5.00, - 1.50 ⁽¹⁾

(1): No vibratory mode in the vertical direction will be allowed. Other vibratory modes will be allowed, if approved by the Engineer.

Table 334-10 Percent Within Limits		
Quality Index	Percent within Limits for Selected Sample Size	
	n = 3	n = 4
0.00	50.00	50.00
0.05	51.38	51.67
0.10	52.76	53.33
0.15	54.14	55.00
0.20	55.54	56.67
0.25	56.95	58.33
0.30	58.37	60.00
0.35	59.80	61.67
0.40	61.26	63.33
0.45	62.74	65.00
0.50	64.25	66.67
0.55	65.80	68.33
0.60	67.39	70.00
0.65	69.03	71.67
0.70	70.73	73.33

Table 334-10 Percent Within Limits		
Quality Index	Percent within Limits for Selected Sample Size	
	n = 3	n = 4
0.75	72.50	75.00
0.80	74.36	76.67
0.85	76.33	78.33
0.90	78.45	80.00
0.95	80.75	81.67

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

1.00	83.33	83.33
1.05	86.34	85.00
1.10	90.16	86.67
1.15	97.13	88.33
1.20	100.00	90.00
1.25	100.00	91.67
1.30	100.00	93.33
1.35	100.00	95.00
1.40	100.00	96.97
1.45	100.00	98.33
1.50	100.00	100.00
1.55	100.00	100.00
1.60	100.00	100.00
1.65	100.00	100.00
1.70	100.00	100.00
1.75	100.00	100.00
1.80	100.00	100.00
1.85	100.00	100.00
1.90	100.00	100.00
1.95	100.00	100.00
2.00	100.00	100.00
2.05	100.00	100.00
2.10	100.00	100.00
2.15	100.00	100.00
2.20	100.00	100.00
2.25	100.00	100.00
2.30	100.00	100.00
2.35	100.00	100.00
2.40	100.00	100.00
2.45	100.00	100.00
Table 334-10 Percent Within Limits		
Quality Index	Percent within Limits for Selected Sample Size	
	n = 3	n = 4
2.50	100.00	100.00
2.55	100.00	100.00
2.60	100.00	100.00
2.65	100.00	100.00

334-8.2.3.2 Pay Factors (PF): Pay Factors will be calculated by using the

following equation:

$$\text{Pay Factor} = (55 + 0.5 \times \text{PWL}) / 100$$

The PWL is determined from Step (8) of 334-8.2.3.1.

334-8.3 Composite Pay Factor (CPF): A CPF for the LOT will be calculated based on the individual PFs with the following weighting applied: 40% Density (D), 25% Air Voids (Va), 20% asphalt binder content (Pb), 10% Passing No. 200 (P-200) and 5% Passing No. 8 (P-8).

Calculate the CPF by using the following formula:

$$\text{CPF} = [(0.400 \times \text{PF D}) + (0.250 \times \text{PF Va}) + (0.200 \times \text{PF Pb}) + (0.100 \times \text{PF P-200}) + (0.050 \times \text{PF P-8})]$$

Where the PF for each quality characteristic is determined in either 334-8.2.2 or 334-8.2.3, depending on the number of subplot tests. Note that the number after each multiplication will be rounded to the nearest 0.01.

The pay adjustment shall be computed by multiplying the CPF for the LOT by the bid price per ton.

334-8.4 Payment: Payment will be made under:

Item No. 334- 1- 2 IN Bituminous Surface Course (FDOT Type SP-12.5) - per ton.

END OF ITEM FL-334

SECTION 350
CEMENT CONCRETE PAVEMENT

GENERAL

350-1 Description.

Construct Portland cement concrete pavement in one course, on a prepared subgrade or base. Use either the fixed-form or the slip-form method of construction. When reinforced cement concrete pavement is specified or required, use concrete reinforced with steel bars or welded wire reinforcement, in accordance with details shown in the Plans. The Engineer may require a demonstration of equipment and paving operations.

If any uncontrolled cracks appear during the life of the Contract, remove, and replace the cracked concrete at no expense to the Department. Investigate and implement immediate effective solutions to eliminate further cracks, in consultation with, and subject to the approval of the Engineer.

350-2 Materials.

Meet the following requirements except as modified herein:

Concrete.....	Section 346
Grinding Concrete Pavement.....	Section 352
Curing Materials*	Section 925
Embedded Items	Section 931
Joint Seal	Section 932

*Use products listed on the Department’s Approved Product List (APL).

Provide concrete with a minimum 24-hour compressive strength of 4,000 psi and maximum water to cementitious materials ratio of 0.50.

For concrete pavement placed using the slip-form method of construction, utilize concrete with a target slump of 1.5 inches plus or minus 1 inch. For concrete pavement placed by hand in constructed forms, utilize concrete with a target slump of 3 inches plus or minus 1.5 inches. Air content testing for concrete pavement mixes is not required.

350-3 Equipment.

350-3.1 General: Ensure the equipment and tools used have the capability of handling materials and performing all parts of the work and meet the following requirements:

To be of such capacity that the paver operates continuously and at a constant rate of production, with starting and stopping held to a minimum.

When equipment operates on the side forms, use scraping devices to clean accumulations from the top of the forms and wheels.

The forms will be a rigid material and mortar tight. Ensure that the alignment and grade of all forms are in accordance with the contract documents, prior to the placing of concrete.

350-3.2 Slip-Form Paver: Use a self-propelled slip-form paving system consisting of a slip-form paver and if needed, a concrete spreader to distribute, strike-off, consolidate, and screed the freshly placed concrete in one complete pass to produce a dense and homogeneous pavement requiring minimal hand finishing. The slip-form paving machine must extrude concrete into a shape using attached molding components consisting of a profile pan and side forms. The slip-form paving machine must be equipped with the following components:

1. Automatic controls to regulate line and grade from either or both sides of the machine.
2. Vibrators to consolidate the concrete for the full width and depth of the course placed in a single pass and designed and constructed so no spreading or slumping of the concrete

occurs.

3. A positive interlock system to stop all vibration and tamping elements when forward motion of the machine stops.

For finishing small areas of concrete pavement, the Contractor may use alternative finishing equipment if approved by the Engineer. This equipment must produce equivalent results including adequate consolidation by internal vibration and an acceptable finish.

350-3.3 Vibratory Equipment: Consolidate the concrete for the full width and depth of concrete in a single pass of an approved internal vibrator system. Operate internal vibrators within a frequency range of 4,000 to 8,000 vibrations per minute (vpm). The Engineer may authorize lowering the minimum vibration frequency to 3,500 vpm for isolated sections of paving such as super elevations.

Do not operate vibrators in a manner to cause segregation, either a downward displacement of large aggregate particles or an accumulation of laitance on the surface of the concrete. Reduce the vibrator frequency when forward motion of the paver is decreasing.

Stop vibrators whenever forward motion of the paver is stopped.

For internal vibrators, set the depth of penetration at the paver screed pan or below while passing above any dowels and dowel baskets. Use an operating position locking device so that no part of the vibrating unit will be in contact with reinforcing steel or tie bars while paving.

Meet the manufacturer's recommendations for the horizontal spacing of the vibrators or 16 inches from center to center of the vibrators, whichever is less.

Ensure that the longitudinal axis of the vibrator body is mounted approximately parallel to the direction of paving.

Use vibrators that meet or exceed the following specifications at the manufacturer's design frequency of 8,000 vpm:

1. Amplitude (peak to peak) 0.070 inches.
2. Centrifugal force 1,200 pounds.

350-3.4 Vibratory Monitoring Equipment: All projects with concrete paving over 15,000 square yards in area, or 1 mile in length, must use an electronic vibrator monitoring device displaying the operating frequency of each individual internal vibrator.

Use a monitoring device with a readout display visible to the paver operator and the Engineer while paving. Display all vibrator frequencies with manual or automatic sequencing among all individual vibrators. Record the clock time, station location, paver track speed, and operating frequency of individual vibrators. Provide an electronic record of the data to the Engineer daily for the first 3 days of paving and weekly thereafter. The Engineer may adjust the frequency submission if necessary.

If the electronic monitoring and recording devices fail to operate properly, immediately check the vibrators manually. If the vibrators are functioning properly, paving may continue. Correct the malfunction within 3 days.

350-3.5 Curing Compound Application Equipment: Use equipment for applying membrane curing compound that is self-propelled and capable of uniformly applying the curing compound at the specified rate. Use mechanical spray equipment that continuously stirs the curing compound, by effective mechanical means. Thoroughly atomize the curing compound during the spraying operation so that the finished surface of the fresh concrete will not be marred. Cover the entire surface of the pavement and, with slip-form type paving, the vertical faces by a single pass of the machine. Only use spray nozzles that are equipped with appropriate wind guards to ensure uniform application.

Power-spray equipment may be used to apply curing compound to areas where it is impracticable to operate the self-propelled equipment.

350-4 Subgrade Preparation.

Complete the construction of the subgrade for a distance of at least 500 feet ahead of the

paving operation. Maintain the finished subgrade in a smooth, compact condition. Restore any areas which are disturbed prior to placing the concrete. Do not place concrete on a frozen subgrade.

Uniformly moisten the subgrade surface ahead of the paving operations with no standing water.

350-5 Setting Forms.

For straight forms, use only steel forms intended for concrete pavement. For curved work, use forms approved by the Engineer.

Clean forms and apply a release agent in accordance with the manufacturer's recommendations before use.

Align and grade so that the forms rest firmly, throughout their entire length, upon the subgrade surface. Join forms neatly and tightly. Brace the form to resist the pressure of the placed concrete and equipment operating on them. Obtain the Engineer's approval of the alignment and grade of all forms before and immediately prior to the placing of concrete.

350-6 Protection from Weather.

Protect unhardened concrete from effects of inclement weather. Cease production and paving operations in rain. The following will apply during paving in cold and hot weather:

1. During the cold weather paving, do not mix or place concrete when the air temperature is below 40°F. Protect the fresh concrete from freezing in accordance with Section 400 until the concrete reaches a minimum compressive strength of 1,500 psi.

2. During paving in hot weather, cool the aggregates and mixing water as necessary to maintain the concrete temperature at not more than 100°F at time of placement with the protective covering.

350-7 Placement Widths.

The Contractor may construct the pavement either in lanes as determined by the longitudinal joints shown in the Plans, or for the full width of the pavement in one operation. Construct the pavement to the full width of the lane or slab in a single construction operation. When constructing pavement in separate lanes, do not deviate the junction line from the true line shown in the Plans by more than 1/2 inch at any point.

350-8 Delivery Certification.

Ensure that a printed delivery ticket is furnished with each batch of concrete before unloading at the placement site. Include the following information on the delivery ticket:

1. Mix design number.
2. Time all materials are introduced into mixer.
3. Cubic yards in this load. At the end of each day's production provide a summary listing all the daily ticket numbers along with the materials and quantities incorporated into each load, water to cementitious materials ratio, and the signature of the plant operator attesting to the accuracy and conformance of each load delivered to the project.

350-9 Sampling and Testing Methods.

350-9.1 General: Meet the requirements of 346-8 and 346-9, with the exception of air content.

350-9.2 Sampling Frequency for Quality Control Tests: Sample and test concrete of each design mix for temperature and compressive strength tests once per LOT. A LOT is defined as the concrete placement of 2,000 square yards or one day's production, whichever is less. The LOT must be of the same type of placement method, such as slip form or formwork methods. Partial LOTs of less than 500 square yards will be combined with the previous LOT for testing and acceptance purposes.

350-9.2.1 Reduced Frequency for Quality Control Tests: Reduced frequency for testing may be requested in accordance with Section 346. The LOT may represent a maximum production quantity of 4,000 square yards as approved by the Engineer.

350-9.2.2 Sampling Frequency for Verification: The Engineer will verify one of every four consecutive LOTs, randomly selected, for each mix design in accordance with 346-8. The Engineer may perform additional independent verifications tests. All QC activities, calculations and inspections may be randomly confirmed by the Engineer.

The Engineer may obtain additional samples for informational purposes.

350-10 Striking-off, Consolidating, and Finishing Concrete.

350-10.1 General Requirements: Immediately after placing the concrete, strike-off, consolidate, and finish it to produce a finished pavement in accordance with the cross-section, width, and surface finish required by the Contract Documents. After screeding while the concrete is plastic, correct all flaws such as cavities, blemishes, marks, or scratches that will not be removed by grinding.

Provide a concrete surface true to grade, cross slope and superelevation, and free of irregularities. If the Engineer permits adding water to assist the finishing operations, apply water as a fog spray by means of approved spray equipment.

350-10.2 Hand Methods: Use hand methods in areas of narrow width or irregular dimensions, where operation of a slip-form paver is impracticable or when using fixed form paving.

350-10.2.1 Strike-off and Screeding: Use a portable screed of an approved design, constructed either of metal or of other suitable material shod with metal, to strike-off and screed the concrete. Use a screed that is sufficiently rigid to retain its shape and is at least 2 feet longer than the maximum width of the strip to be screeded.

350-10.2.2 Consolidation: Use hand-operated spud-type vibrators to consolidate.

350-10.3 Work Bridges: Provide work bridges or other devices necessary for access to the pavement surface for the purpose of inspection, finishing, straightedging, and performing corrective work.

350-10.4 Cross Slope: Control the cross slope using a level with a minimum length of 4 feet or a digital measuring device approved by the Engineer. Make this level or measuring device available at the jobsite at all times during paving operations.

Measure the cross slope at a minimum frequency of one measurement every 100 feet. When the difference between the measured cross slope and the design cross slope exceeds plus or minus 0.2% for travel lanes (including auxiliary lanes) or plus or minus 0.5% for shoulders, make any necessary corrections immediately to bring the cross slope for subsequent paving into the acceptable tolerance.

Upon approval of the Engineer, the frequency of the cross-slope measurements may be reduced to one measurement every 200 feet during paving operations when the cross slope is consistently within the acceptable tolerance.

350-11 Final Finish.

350-11.1 Finishing: Use a burlap drag that consists of two layers of medium weight burlap with the trailing edge of the lower layer extending approximately 2 inches behind the upper layer. Support the burlap drag in a manner so that a length of at least 3 feet of burlap is in contact with the pavement.

Except in areas where using hand methods to construct the pavement, support the lead end of the burlap drag by a traveling bridge. Maintain the drag clean and free from encrusted mortar. Replace the burlap with new material as necessary.

Apply a broom or burlap finish to areas constructed using hand methods.

350-11.2 Edging: After applying the final finish, but before the concrete has become nonplastic,

carefully round the edges to a 1/4 inch radius on each side of transverse expansion joints and construction joints and along any structure extending into the pavement. Produce a well-defined and continuous radius, and obtain a smooth, dense mortar finish. Completely remove all concrete from the top of the joint filler.

350-12 Curing.

350-12.1 General: After completing the finishing operations and as soon as the concrete has hardened sufficiently to not mar the surface, cure the entire surface and, when the slip-form method is used, cover and cure the edges of the newly placed concrete. Do not leave freshly placed concrete exposed for more than 30 minutes without applying curing protection. Failure to provide sufficient curing materials to adequately cure the concrete in place in a timely manner may result in the suspension of paving operations.

Continuously cure the freshly placed concrete for a period of 72 hours, exclusive of any periods when the temperature of the surface of the concrete falls below 50°F.

350-12.2 White-Pigmented Curing Compound: Uniformly apply a Type 2 white-pigmented curing compound meeting the requirements of Section 925 to the surfaces to be cured, including the edges of slip-form produced paving, in a single coat of continuous film, at the minimum rate of 1 gallon per 200 square feet.

During application, thoroughly mix the compound in accordance with the manufacturer's recommendation.

Do not apply curing compound during periods of rainfall. Do not apply curing compound to the inside faces of joints to be sealed. Should the film become damaged from any cause within the required curing period, repair the damaged portions immediately with additional compound. If using forms, upon their removal, immediately coat the sides of the slabs exposed to provide a curing treatment equal to that provided for the surface.

350-12.3 Removal of Forms: Do not remove forms from freshly placed concrete for at least 12 hours after placement. Remove forms carefully so as to avoid damage to the pavement. After removing the forms, immediately cure the sides of the slab in the same manner as the surface of the pavement.

350-13 Joints.

350-13.1 General: Construct joints at the locations and in accordance with the details shown in Standard Plans, Indexes 350-001 and 370-001 and the Contract Documents.

350-13.2 Longitudinal Joints: Construct longitudinal construction joints in accordance with the details shown in the Plans. Construct longitudinal lane-tie joints within the limits of the pavement placed, in accordance with the details shown in the Plans by sawing a groove in the surface of the hardened concrete.

350-13.2.1 Tie Bars: Place deformed steel tie bars at the required depth, parallel to the finished surface, at right angles to the joint and at the uniform spacing required in the Plans. Place them in the plastic concrete using approved equipment, or rigidly support them on the subgrade by approved devices capable of preventing displacement prior to placing of the concrete. Do not paint or coat the bars with any material before placing them in the concrete.

Use Grade 40 reinforcing steel when placing tie bars along a longitudinal construction joint by inserting bars with a 90 degree bend in the edge of the plastic concrete. When the concrete hardens, straighten the bar, and replace any bar broken while being straightened in an approved manner.

Do not insert steel tie-bars into the unsupported side of the freshly formed slab. The Contractor may place tie-bars into position prior to extrusion from the paver by insertion through a temporary support form placed against the form slab, or by other means approved by the Engineer. Use

a method that results in placement of the tie-bars at the specified locations without damaging or disrupting the plastic concrete.

350-13.3 Transverse Joints:

350-13.3.1 Load-Transfer Devices: Provide dowel load-transfer devices in all transverse joints. Firmly hold dowel bars in a position parallel to the surface in the longitudinal direction of the pavement and the centerline of the slab depth, by approved steel supports and spacers. Allow the dowels to be free to move in one slab as the concrete contracts and expands. Wait a minimum of 7 days before coating one-half of the dowel with a petroleum based lubricant grease to inhibit bonding to the concrete. Provide a cap for the free end of expansion joint dowels. Use dowel bars coated in accordance with 931-2.3.

Ensure that the bars are straight, round, smooth, and free from burrs or other deformations detrimental to the free movement of the bar in the concrete. Provide a cap for the free end of expansion joint dowels.

Position each dowel such that:

1. Fits final deviation from parallel to the surface of the pavement does not exceed 1/2 inch.
2. Final deviation from parallel to the longitudinal centerline of the pavement does not exceed 1/2 inch.
3. Final deviation from being centered on the joint does not exceed 2 inches, and at no point in its length does it deviate from the surface of the pavement as shown in the Plans in excess of 1 inch. Confirm the position of dowel bars by suitable means acceptable to the Engineer.

350-13.3.2 Transverse Construction Joints: Construct transverse construction joints at the end of all pours and at other locations where the paving operations are stopped for 30 minutes or longer. Do not place construction joints within 7 1/2 feet of any other transverse joint or within 7 1/2 feet of either end of a section of pavement. If sufficient concrete has not been placed to form a slab at least 7 1/2 feet long, remove the excess concrete, back to the last preceding joint. Form the joints in place, in a plane perpendicular to the profile and centerline of the pavement. Saw or form construction joints, in a manner similar to contraction joints, so that a groove will be formed for holding the joint sealing compound.

Check all joints with a straightedge before the concrete has become nonplastic. Make corrections as necessary if one side of the joint is higher than the other, or the entire joint is higher or lower than the adjacent slabs.

350-13.3.3 Transverse Contraction Joints: Construct transverse contraction joints at the interval in accordance with the Standard Plans, Index 350-001.

Ensure that the sawing equipment does not damage the pavement and saw the transverse contraction joints as soon as the pavement has hardened to the degree that tearing and raveling are not excessive and before uncontrolled shrinkage cracking begins.

Accomplish the joint sawing in two steps. Make the initial cut 1/8 inch wide by a depth at least 1/3 of the pavement thickness and as soon as possible but in no case longer than 12 hours after placing the concrete. Make a second saw cut, to provide the joint dimensions indicated in the Plans, just prior to final grinding and sealing the joint.

Repair any uncontrolled cracks at no expense to the Department by removing and replacing the pavement across the full width of all affected lanes or shoulders and to the nearest transverse joint in each direction.

350-13.3.4 Transverse Expansion Joints: Form transverse expansion joints using preformed joint filler, and provide them with dowel load transfer, in accordance with the details shown on the Standard Plans, or in the Plans.

Form the joints during the placing of the concrete, by securely staking a metal bulkhead accurately in place at the joint location or by other methods which will securely brace and support the joint filler. Where using approved devices to keep the expansion joint filler and dowels securely in place, the Engineer will not require a bulkhead. For concrete pavement using the Special Select soil base option, protect all transverse expansion joints at the bottom and side edges by a sheet metal strip as specified in 931-2.1 and as shown in the Contract Documents.

Cut the filler to the crown and shape of the slab cross-section and extend it to the subgrade. After installation, ensure that the top is not less than 1 inch, and not more than 1.25 inches, below the finished surface. Furnish the joint filler in lengths not less than the lane widths being poured, except that the Engineer will not require lengths greater than 12 feet. Where more than one section is allowed and used in a joint, securely lace or clip the sections together.

Place the filler normal to the pavement surface. Stake the assembly into position in such a way as to hold the assembly securely in position throughout construction. Ensure that the assembly is true to the line prescribed, subject to a tolerance of 1/4 inch in the width of the slab. Obtain the Engineer's approval of the assembly and its installation before placing any concrete against it. Obtain the Engineer's approval of the cross-section and length of the stakes.

When laying the pavement in partial width slabs, place transverse joints in the succeeding slab in line with the like joints in the first slab. In the case of widening existing pavement, place transverse joints in line with like joints in the existing pavement or as otherwise shown in the Plans.

350-13.4 Expansion Joints Around Structures at Manholes, Meter Boxes, and other Projections: Form expansion joints by placing premolded expansion joint material around all structures and features projecting through, into or against the pavement. Ensure that such joints are 3/4 inch in width.

350-13.4.1 Bridge Approach Expansion Joints: Construct in accordance with Standard Plans, Index 370-001.

350-13.5 Cleaning Joints and Cracks:

350-13.5.1 Cleaning Joints in New Pavement:

350-13.5.1.1 Sawed Joints: Immediately after the final saw cut, completely remove the resulting slurry from the joint and the immediate area by flushing with a pressure washer and by using other tools as necessary.

1. After flushing, blow out the joints with compressed air.
2. Patch all spalled edges with an epoxy compound.
3. Immediately prior to joint seal installation, clean the joints using compressed air to remove all traces of debris and dust within and on the joint surfaces.

350-13.5.1.2 Non-Sawed Joints: Thoroughly clean joints which require sealing of all foreign material for the full depth of the seal installation. With the exception of slurry removal due to sawing, meet the cleaning requirements as specified for sawed joints.

350-13.5.2 Cleaning Joints in Existing Pavement: Remove all existing joint sealing material and foreign material for the full depth of the new joint seal by sawing, wire brushing, sandblasting, or other methods approved by the Engineer.

Remove any existing sealant or parting strip material below the tape or backer rod bond breaker and replace it with additional bond breaker. When conditions require removal and replacement with additional bond breaker below the new joint seal, obtain the Engineer's approval of the type of bond breaker and its installation procedure. Perform cleaning by any method or combination of methods, as detailed in the Plans.

Flush the joint with a pressurized jet of water, and use other tools as necessary, to remove loose remnants and debris.

After flushing, blow out the joints with compressed air. After the flushed joints have dried, sandblast the joint faces to thoroughly remove all foreign material. Perform sandblasting in two passes, once for each face.

Patch all spalled edges with an epoxy compound.

Immediately prior to joint seal installation, clean the joints using compressed air to remove all traces of debris and dust within and on the joint surfaces.

350-13.5.3 Cleaning Random Cracks in Existing Pavement: Do not begin cleaning random cracks in existing pavement until all other concrete pavement repairs have progressed to the point where those operations will not adversely affect the installation of the new seal.

Cut the random cracks to be repaired and sealed into grooved joints to the depth and width detailed in the Plans. Clean the joints in accordance with 350-13.5.2.

350-13.6 Sealing Joints and Cracks: Clean joints in accordance with 350-13.5 prior to final grinding and sealing.

When using silicone and non-silicone sealants in the transverse and longitudinal joints, respectively, use the silicone sealants first to prevent contamination at the intersection of the joint faces. Remove non-silicone sealant 1 foot in each direction from the transverse joints and replace it with silicone sealant.

350-13.6.1 Hot-Poured Type Sealant: When the Plans require hot poured sealant for specific joints, fill the joint thoroughly, without trapping air, ensuring the sealant is recessed 1/4 inch below the pavement surface. Control the pouring rate to avoid spilling of sealant onto the adjacent pavement surface. If any spilling of sealant occurs, immediately remove, and clean the entire surplus amount from the pavement surface. Place the poured material when the ambient air temperature is 50°F or greater.

Use an indirect heating or double boiler type heating kettle that uses oil as a heat transfer medium, for hot poured sealer. Use a heating kettle that has a thermostatically controlled heat source, a built-in automatic agitator, and thermometers installed to indicate both the temperature of the melted sealing material and that of the oil bath.

350-13.6.2 Low Modulus Silicone Sealant: Use low modulus silicone sealant of either Type A non-sag (non-self-leveling), or Type B and/or Type C (self-leveling silicone sealant). Install and tool the sealant as necessary until firm contact is achieved and appropriately formed with the joint faces as specified.

Provide the required depth of recess above the sealant surface and below the pavement surface. Install the silicone sealant at ambient air temperatures above 40°F.

350-14 Surface Requirements.

Produce, by grinding in accordance with Section 352, a pavement surface that is true to grade and uniform in appearance with a longitudinal line type texture.

350-15 Thickness Determinations.

350-15.1 General: After completing the concrete pavement, including any corrective work to meet ride requirement, determine the thickness by core boring or non-destructive testing. The Engineer will select the locations for testing and make the determination of thickness. Sample locations will be taken at various offsets from the centerline such that each test represents an area not exceeding 2,500 square yards. Provide traffic control, non-destructive equipment, coring equipment, and operator to obtain the samples.

350-15.1.1 Core Borings: Drill cores from the pavement and measure thickness in accordance with ASTM C174 to determine the actual thickness. Replace the portions of the pavement removed by the borings at no expense to the Department.

350-15.1.2 Non-destructive Testing: Measure the thickness of the pavement in accordance with ASTM C1383 using the impact-echo method. The initial thickness measurement will be validated by having a core boring taken at that the same location in accordance with 350-15.1.1. If the results from the impact-echo test vary by plus or minus 0.15 inches from the core boring, then the non-destructive test method cannot be used on the pavement. In such case, the core boring will be used for acceptance of that LOT of concrete. The Engineer has the option to verify the accuracy of the results at any time.

350-15.2 Method of Calculating Average Thickness: The Engineer will determine the average thickness of the pavement by using the following method of calculation:

1. Areas of pavement which are left in place, but for which no payment will be made, will not be taken into account.
2. The specified thickness plus 1/2 inch will be considered in the calculation when the thickness of the pavement is more than 1/2 inch greater than the specified thickness.
3. The average thickness for the entire job will be calculated as a unit.

350-16 Deficient Thickness.

350-16.1 General: The Department will not pay for any pavement which is more than 1/2 inch less than the specified thickness. When the pavement contains no longitudinal construction joint, the Department will not pay for the area of such pavement that is the product of the full width of the strip placed as a unit times the sum of the distances each way from the short core or cores to the cores on each side which show measurements within the tolerance limits. When the pavement contains longitudinal construction joints, for the width, the Department will use the width between longitudinal construction joint and the edge of pavement.

350-16.2 Deficient Pavement Requiring Removal: The Engineer will evaluate areas of pavement found deficient in thickness by more than 1/2 inch and if, in his judgment, the deficiency is enough to seriously impair the anticipated service life of the pavement, remove such areas and replace them with concrete of the thickness shown in the Plans. The Department will not pay for the area of pavement removed or for the materials or labor involved in its removal. When removing a section of pavement, remove the full length between transverse joints and the full lane width. Grind replaced sections in accordance with 350-14.

350-16.3 Deficient Pavement Left in Place: If the Engineer determines that the deficiency will not seriously impair the anticipated service life of the pavement, the pavement may be left in place, at no compensation.

350-16.4 Additional Borings: If the number of cores taken is not sufficient to indicate the thickness of the pavement, additional boring locations may be requested, with prior approval from the Engineer at no cost to the Department.

350-17 Pay Reductions for Low Compressive Strength Concrete.

Payment reductions for low compressive strength concrete will be assessed in accordance with Section 346. The payment reductions of 346-12 do not apply.

350-18 Opening Pavement to Traffic.

Construct an earth berm along longitudinal free edges of the pavement within 36 hours, when newly placed concrete pavement is constructed on a granular base of an erodible material. Build the berm to the full height of the pavement and at least 18 inches wide. Sufficiently compact the berm to prevent underwash of the pavement. Maintain the berm until the final shoulders are complete.

Keep the pavement closed to traffic, including construction operations until one of the following has been met:

1. Fourteen calendar days after placement of the concrete.
2. Test cylinders, made in accordance with ASTM C31 and tested in accordance with ASTM C39, indicate a compressive strength of at least 2,200 psi (cure these test cylinders in a manner identical to the corresponding section of pavement).
3. Provide a strength-maturity relationship curve as outlined by FM 3-C1074 for opening to traffic determined during design mix verification. Use the maturity method specified in this Section to:
 - a. Determine if the concrete has achieved 2,200 psi and can be opened to traffic.
 - b. Verify the strength of the last slab of each day's placement. Fabricate three test cylinders for strength and maturity curve correlation testing. The compressive strength cylinders and maturity curve correlation testing will be performed at the first day of production or at the discretion of the Engineer.

350-19 Method of Acceptance. Acceptance will be based on compressive strength of cylinders at placement in accordance with Section 346 and pavement thickness in accordance with 350-15.

350-20 Method of Measurement.

350-20.1 Concrete Pavement: The quantities to be paid for will be the plan quantity, in square yards, of plain cement concrete pavement and of reinforced cement concrete pavement, omitting any areas not allowed for payment under the provisions of 350-16.3 and adjusted for average thickness as provided herein.

For purposes of payment, the average thickness of pavement will determine the final pay quantities for this pavement as follows:

The area of pavement represented by the difference between the calculated average thickness and the specified thickness will be converted into equivalent square yards of specified thickness pavement, and the quantity thereby obtained will be added to, or deducted from, the quantity of pavement to be paid for, subject to the limitation that the maximum average of over-thickness permitted in the adjustment of the quantity of pavement to be paid for will be 1/4 inch.

Where the Plans call for cement concrete pavement that is to be covered with asphalt concrete surface course, payment will be made for the total thickness of the combination as plain cement concrete pavement. In such cases, price and payment will also include all costs of the asphalt concrete surface course constructed in accordance with Section 334.

Reinforcing steel, placed, and accepted, will be measured and paid for as provided in Section 415.

350-20.2 Joints and Cracks: For cleaning and sealing joints in new or existing concrete pavement, the quantity to be paid will be the length in feet, as determined by field measurement along the joints. Payment for the joints between concrete pavement and curb will be made under Section 520.

For cleaning and sealing random cracks in existing concrete pavement, the quantity to be paid will be the length in feet, as determined by field measurement along the cracks.

350-21 Basis of Payment.

Prices and payments will be full compensation for all work specified in this Section, including any preparation of the subgrade not included in the work to be paid for under another Contract item; all transverse and longitudinal joint construction, including tie-bars and dowel bars; the furnishing of test specimens; repair of core holes; and all incidentals necessary to complete the work.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Payment will be made under:

foot.	Item No. 350- 1 -	Spall Repair – Concrete Pavement (Variable Depth) - per cubic
	Item No. 350- 2-	Cleaning and Sealing Joints - per foot.
foot.	Item No. 350- 3-	Cleaning and Sealing Joints (Petroleum Resistant Sealant) – per
	Item No. 350- 4-	Cleaning and Sealing Random Cracks - per foot.
	Item No. 350- 5-	Cleaning and Sealing Random Cracks (Petroleum Resistant
	Sealant) – per foot.	

END OF ITEM FL-350

SECTION 353
CONCRETE PAVEMENT SLAB REPLACEMENT

GENERAL

353-1 Description.

Replace the existing defective area of concrete pavement with Portland cement concrete free of any uncontrolled cracks. Repair the damaged area of adjacent slabs, caused by slab removal at no cost to the Department. When using the maturity method, submit a strength maturity relationship curve as determined by FM 3-C 1074 for opening to traffic during design mix verification.

353-2 Materials.

Meet the following requirements:

Portland Cement Concrete*	Section 346
Curing Materials	Section 925
Epoxy Compounds	Section 926
Dowel Bar Assembly**	Section 931
Post-Installed Anchor Systems for Structural Applications in Concrete Elements	Section 937
Accelerating Admixtures	ASTM C494, Type C and E

*For concrete pavement slab replacement, the use of supplementary cementitious materials is optional.

**Concrete pavement containing only dowel bars will be considered nonreinforced concrete.

353-3 Composition of Concrete.

353-3.1 Mixture Proportions: Designate the actual proportions to be used to produce a concrete with a minimum 24-hour compressive strength of 4,000 psi.

Prior to producing concrete, submit the design mix for approval on a form acceptable to the Department. Provide a mix design that will produce a concrete with a minimum compressive strength of 1,600 psi, designated for opening to traffic, at the time period specified in the Contract Documents. Perform the plastic property tests in accordance with Section 346 prior to the addition of the accelerator. Use mixes approved by the Department and obtain concrete from a plant that is currently on the Department's Production Facility listing. Producers seeking inclusion on the list shall meet the requirements of Section 105.

Make necessary adjustment to the concrete mix-water to account for the amount of water in the accelerating admixture solution.

353-3.2 Delivery Certification: Submit a delivery ticket in accordance with Section 346.

353-3.3 Demonstration Slab: Prior to batching production concrete, demonstrate the ability to furnish replacement slabs by constructing a demonstration slab at the project site. Demonstrate production techniques for slab removal, dowel installation, concrete placement, finishing, slab curing, sample preparation and curing, and proper timing of joint sawing. Demonstrate the ability to achieve the required compressive strengths. Demonstrate proficiency to the Engineer the ability to determine when the concrete has achieved a compressive strength of 1,600 psi by testing concrete cylinders or by using the maturity-strength curve. Use cylinders to verify the concrete compressive strength at 1 day. Schedule construction of the demonstration slab at the time specified in the Contract Documents. If the Engineer determines that elements of the demonstration slab fail to meet requirements of the Contract Documents, propose adjustments to the construction processes and/or materials for the Engineer's

approval.

The demonstration slab may be used in the final work with the approval of the Engineer. No slab replacements will be constructed until the demonstration slab is approved. The Engineer may require additional demonstration slabs until a demonstration slab conforms to the Contract Documents.

353-4 Batching and Mixing Concrete.

Obtain concrete that meets the requirements of Section 346 with the following additional requirements:

Add all the concrete ingredients, excluding the accelerator to the truck mixer at the plant.

Add the accelerator to the load at the job site and record the amount on the delivery ticket. Mix the concrete for 30 additional revolutions at mixing speed after the accelerator is added to the mixer.

Incorporate the accelerator into the concrete design mix in accordance with the recommendations of the admixture manufacturer. Do not exceed the manufacturer’s written recommendations for the dosage rate of the accelerating admixture.

353-5 Test Requirements.

353-5.1 General: Perform concrete sampling and testing in accordance with Section 346, with the addition of density measurement testing is required. Perform the plastic property tests prior to the addition of the accelerator. Concrete strength determination can be done using test cylinders or by using the maturity method. If test cylinders are used, prepare after the addition of accelerator.

353-5.2 Verification of Maturity Curve Data: Develop a new maturity curve if any of the plastic properties or the density results exceed the tolerances specified in Table 353-1, for the initial sampling.

Table 353-1 Slump and Density Tolerances Prior to Accelerator Addition	
Slump Tolerance	± 1.5 inches
Density Tolerance	± 3.0 lb/ft ³

Use either the maturity method in FM 3-C1074 or concrete cylinder testing to determine if the concrete has achieved 1,600 psi and can be opened to traffic. Use the maturity value or concrete cylinder test results to verify the strength of the last slab of each day’s placement. Additional maturity meters or concrete cylinder testing may be used to open other locations to traffic prior to the last slab of each day, as needed, provided each location has achieved the minimum strength.

353-5.3 Cylinder Fabrication and Testing: If cylinders will be used for opening to traffic strength determination, fabricate three test cylinders for opening to traffic strength and three cylinders for 28-day strength after all materials, including the accelerator, are added. If the maturity method will be used for opening to traffic strength, fabricate three test cylinders for maturity curve correlation testing and three for 28-day strength.

The compressive strength cylinders and maturity curve correlation testing will be performed at the beginning of each production day, when the mix design is changed to another mix design, at the discretion of the Engineer for each remaining placement week, when a new maturity curve is required, or until terminated by the Engineer.

353-6 Concrete Slab Acceptance and Testing.

Reject any Concrete not meeting the plastic property requirements of Section 346. Acceptance will be based on achieving a 1,600-psi compressive strength prior to opening the slab to traffic, and a 1-day compressive strength of 4,000 psi. Determine opening to traffic strength using the maturity method

or concrete cylinder testing, and determine 1 day strength using concrete cylinder testing.

Perform Quality Control (QC) tests for temperature, slump, and density, and prepare compressive strength cylinders once per LOT. A LOT is defined as one day's production.

The Engineer will evaluate the particular circumstances in each instance where a strength deficiency occurs. Strength deficiencies will be addressed in accordance with Section 346.

Lost quality control cylinders and payment reductions for low strength concrete will be addressed in accordance with Section 346.

Controlled cracks are cracks designed to occur at specific locations based on the pavement design. All other cracks in the pavement are uncontrolled cracks. Repair uncontrolled cracked slabs, which occur during the life of the contract, by removing and replacing the pavement across the full width of all affected lanes or shoulders and to the nearest transverse joint in each direction. Investigate and implement immediate effective solutions to eliminate further cracks, in consultation with, and subject to the approval of, the Engineer.

353-7 Placing, Striking Off, Consolidating and Finishing Concrete.

The requirements of Section 350 are applicable to this Section.

Perform straightedging while the concrete is still in plastic state after floating is completed and the excess water removed. Furnish and operate a 10-foot straightedge meeting the requirements of Section 350. Hold the straightedge in successive positions parallel to the road centerline, in contact with the surface, testing until the replacement slab is straight edged from one side to the other. Advance along the road in successive stages of not more than one-half the length of the straightedge. Fill any depressions immediately with freshly mixed concrete, consolidate, strike-off, and refinish. Cut down and refinish any high areas. Continue straightedge testing and surface correction until the entire surface conforms to the required grade and cross slope. Ensure that transverse slope deviations of the finished pavement do not exceed 1/8 inch with the straightedge laid in a direction perpendicular to the centerline. When Portland cement concrete pavement abuts bridge approaches or pavement not under this Contract, ensure that the longitudinal slope deviations of the finished pavement do not exceed 1/8 inch in 10-foot length. Produce a uniform, gritty textured final finish longitudinally along the pavement by dragging a broom or seamless strip of damp burlap, having at least 3 feet in contact with the pavement.

If the Engineer identifies a surface irregularity determined to be objectionable, straightedge with a 10-foot-long straightedge and address all deficiencies in excess of 1/8 inch by grinding in accordance Section 352.

When required in the Contract Documents, produce a pavement surface that is true to grade and uniform in appearance with a longitudinal line type texture by grinding in accordance with Section 352.

353-8 Curing.

Cure the slab as specified in Section 350, except for time and temperature restrictions. Use a Type I (with dye) or Type ID (clear with dye) curing compound and apply within 1/2 hour after completing the finishing operations. After the curing compound has been applied, cover the surface and exposed edges with two layers of white burlap-polyethylene curing blanket conforming to Section 925 or insulating blankets approved by the Engineer. Continue curing the slab until the concrete achieves the required 1,600 psi compressive strength.

353-9 Joints.

353-9.1 General: Construct transverse joints as specified in Section 350 and as shown in the Standard Plans, except that dowel bars are installed per this Section. Tie bars will not be placed along

the longitudinal joints unless shown in the Contract Documents. Apply a bond breaker to all vertical faces of the adjacent slabs. Submit the proposed bond breaker and manufacturer's technical data to the Engineer for approval.

Clean and seal joints in accordance with Section 350.

353-9.2 Dowel Bars: Provide dowel bars in accordance with the details shown in the Contract Documents.

353-9.2.1 Dowel Bars at Transverse Joint Between Two Replacement Slabs: Follow the requirements of 350-12 when providing dowel bars at a transverse joint between two freshly placed replacement slabs.

353-9.2.2 Dowel Bars at Transverse Joints Between Existing and Replacement Slabs: Follow the requirements of Section 350, except drill holes and install dowel bars into the sawed face or end of the existing slab. Develop load transfer between existing and freshly placed replacement slab. The dowels shall be free to move inside the replacement slab and epoxy-bonded into the existing slab.

353-9.2.3 Dowel Bar Installation: Install dowel bars in accordance with Section 416 except as modified herein. Position each dowel such that its final deviation from parallel to the surface of the pavement and parallel to the longitudinal centerline of the pavement does not exceed 1/2 inch. Position each dowel such that its final deviation from centered on the joint does not exceed 2 inches. Position each dowel such that at no point in its length does it deviate from the surface of the pavement as shown in the Plans in excess of 1 inch. Confirm the position of dowel bars by means acceptable to the Engineer, which may include non-destructive testing methods.

Use epoxy compounds in accordance with Section 937. Dispense the epoxy from a cartridge or from metered equipment that indicates the amount of each component material being dispensed.

Inject epoxy into the hole after cleaning and prior to dowel insertion. Start injection at the back of the hole to force the epoxy to move forward during dowel insertion. Twist the dowel a minimum of one full turn during the insertion to ensure that the epoxy surrounds the dowel. The injection process and viscosity of the epoxy shall be adequate to ensure that the space between the surface of the dowel and the inside of the hole is filled with epoxy.

Do not allow the epoxy to escape from the front of the hole after inserting the dowel in the hole. Use a 1/8 inch thick nylon or plastic grout retention disk to hold epoxy in the hole during dowel insertion.

353-10 Protection and Opening to Traffic.

353-10.1 General: The requirements of Section 350 apply to this Section. Keep the placed slabs closed to traffic until the 1,600-psi compressive strength requirement is achieved. Submit documentation to the Engineer indicating that the required strength was achieved prior to opening to traffic. If documentation is not provided, the concrete will not be accepted. The Engineer may allow opening to traffic should the maturity equipment fail to provide a reading. Opening to traffic due to equipment failure does not constitute acceptance of the concrete.

Protect the pavement from all traffic, including construction vehicles, until the required strength has been obtained. The protective measures shall be arranged so as not to interfere with traffic lanes being utilized for required maintenance of traffic.

353-10.2 Maturity Method Testing: Use a maturity curve to estimate the strength of the concrete for opening to traffic for each day of production. Embed temperature sensors at middepth in the slab, at 6 inches from the leading edge of the transverse joint and at 6 inches from the longitudinal joint or at locations designated by the Engineer.

Develop a strength-maturity relationship curve using the Arrhenius maturity function with an activation energy of 33,500 J/mol as outlined in FM 3-C1074, in a laboratory with personnel

qualified to perform the method. Compressive strength tests, as specified in FM 3-C1074, will be performed to produce a six-point curve with points before and after the anticipated time for opening to traffic. Submit the mix design supporting data and the maturity curve to the Engineer for his approval.

Any changes of a material source or proportion in the concrete mixture will require a new maturity curve.

353-11 Method of Measurement.

The pay quantity for concrete pavement slab replacement, calculated using field measured horizontal dimensions and thickness of the removed slab, will be the volume, in cubic yards, of calculated concrete volume placed and accepted.

The pay quantity for cleaning and sealing joints will be in accordance with Section 350.

353-12 Basis of Payment.

Price and payment for concrete pavement slab replacement, will be full compensation for all work specified in this Section and shall include demonstration slab construction, all joint construction, including tie bars and dowels, furnishing of test specimens, and all necessary incidentals.

Price and payment for cleaning and sealing joints will be made in accordance with Section 350.

Payment will be made under:

Item No. 353- 1- Concrete Pavement Slab Replacement - per cubic yard.

END OF ITEM FL-353

SECTION 520
CONCRETE GUTTER, CURB ELEMENTS, AND
TRAFFIC SEPARATOR

520-1 Description.

Construct portland cement concrete curb. Curb will include concrete curb and gutter, concrete traffic separator, valley gutter, special concrete gutter, curb for sidewalk curb ramps and driveways, and any other types of concrete curb not specified in other Sections.

520-2 Materials.

520-2.1 Concrete: Use concrete meeting the requirements of Section 347.

520-2.2 Reinforcement: For all steel reinforcement required by the Plans, meet the requirements of Section 415.

520-2.3 Joint Materials: Meet the requirements of Section 932.

520-2.4 Toll Header Curb Concrete: Use concrete meeting the requirements of Section 346, Class II.

520-3 Forms.

520-3.1 Form Materials: Construct forms for this work of either wood or metal. Provide forms that are straight, free from warp or bends, and of sufficient strength, when staked, to resist the pressure of the concrete without deviation from line and grade. For all items constructed on a radius, use flexible forms.

520-3.2 Depth of Forms: Ensure that forms have a depth equal to the plan dimensions for the depth of concrete being deposited against them.

520-3.3 Machine Placement: The Contractor may place these items by machine methods with the approval of the Engineer provided that the Contractor consistently produces an acceptable finished product, true to line, grade, and cross section.

520-4 Excavation.

Excavate to the required depth, and compact the foundation material upon which these items are to be placed as specified in 120-1.

520-5 Placing Concrete.

Place the concrete in the forms, and tamp and spade it to prevent honeycombing, and until the top of the structure can be floated smooth and the edges rounded to the radius shown in the Plans.

520-6 Joints.

520-6.1 Contraction Joints: Except for machine placed items, the Contractor may form joints by using dummy joints (either formed or sawed) or by using sheet metal templates. If using sheet metal templates, ensure that they are of the dimensions, and are set to the lines, shown in the Plans. Hold templates firmly while placing the concrete. Leave templates in place until the concrete has set sufficiently to hold its shape, but remove them while the forms are still in place.

Saw contraction joints, for machine placed items, unless the Engineer approves an alternate method. Saw the joints as soon as the concrete has hardened to the degree that excessive raveling will not occur and before uncontrolled shrinkage cracking begins.

Space contraction joints at intervals of 10 feet except where closure requires a lesser interval, but do not allow any section to be less than 4 feet in length.

520-6.2 Expansion Joints: Construct expansion joints at all inlets, at all radius points, and at other locations indicated in the Plans. Locate them at intervals of 500 feet between other expansion joints or ends of a run. Ensure that the joint is 1/2 inch in width.

520-7 Finishing.

520-7.1 Repair of Minor Defects: Remove the forms within 24 hours after placing the concrete, and then fill minor defects with mortar composed of one-part portland cement and two parts fine aggregate. The Engineer will not allow plastering on the face of the curb. Remove and replace any rejected curb, curb and gutter, or valley gutter without additional compensation.

520-7.2 Final Finish: Finish all exposed surfaces while the concrete is still green. In general, the Engineer will only require a brush finish. For any surface areas, however, which are too rough or where other surface defects make additional finishing necessary, the Engineer may require the Contractor to rub the curb to a smooth surface with a soft brick or wood block, using water liberally. Also, if necessary to provide a suitable surface, the Engineer may require the Contractor to rub further, using thin grout or mortar.

520-7.3 Imprinted Concrete: Install imprinted concrete as shown in the Plans.

520-8 Curing.

520-8.1 General: Continuously cure the concrete for a period of at least 72 hours. Commence curing after completely finishing and as soon as the concrete has hardened sufficiently to permit application of the curing material without marring the surface. Immediately replace any curing material removed or damaged during the 72 hour period.

After removing the forms, cure the surfaces exposed by placing a berm of moist earth against them or by any of the methods described below, for the remainder of the 72 hour curing period.

520-8.2 Wet Burlap Method: Place burlap, as specified in 925-1, over the entire exposed surface of the concrete, with sufficient extension beyond each side to ensure complete coverage. Overlap adjacent strips a minimum of 6 inches. Hold the burlap securely in place such that it will be in continuous contact with the concrete at all times, and do not allow any earth between the burlap surfaces at laps or between the burlap and the concrete. Saturate the burlap with water before placing it, and keep it thoroughly wet throughout the curing period.

520-8.3 Membrane Curing Compound Method: Apply clear membrane curing compound or white pigmented curing compound, as specified in 925-2, by a hand sprayer meeting the requirements of 350-3.10, in a single coat continuous film at a uniform coverage of at least one gallon per 200 square feet. Immediately recoat any cracks, checks, or other defects appearing in the coating. Thoroughly agitate the curing compound in the drum prior to application, and during application as necessary to prevent settlement of the pigment.

520-8.4 Polyethylene Sheeting Method: Place polyethylene sheeting, as specified in 925-3, over the entire exposed surface of the concrete, with sufficient extension beyond each side to ensure complete coverage. Overlap adjacent strips a minimum of 6 inches. Hold the sheeting securely in place and in continuous contact with the concrete at all times.

520-9 Backfilling and Compaction.

After the concrete has set sufficiently, but not later than three days after pouring, refill the spaces in front and back of the curb to the required elevation with suitable material. Place and thoroughly compact the material in layers not thicker than 6 inches.

520-10 Surface Requirements.

520-10.1 Straightedge: Test the gutter section of curb and gutter with a 10 foot straightedge laid parallel to the centerline of the roadway and while the concrete is still plastic. Perform straightedging along the edge of the gutter adjacent to the pavement or along other lines on the gutter cross-section, as directed by the Engineer. Immediately correct irregularities in excess of 1/4 inch.

520-10.2 Elevation and Cross Slope: Place curb and gutter so the calculated actual roadway or shoulder cross slope to be placed within the curb and gutter is within +/- 0.2% of the calculated design cross slope for that location. Once per 500 feet, check the elevation of lip of curb and gutter and calculate actual cross slope between curb and gutter on each side of a lane or set of adjacent lanes. Perform these checks prior to placement of the curb and gutter and adjust to ensure cross slope tolerance is met. After placement and curing of curb and gutter, perform the above checks again. Correct any curb and gutter found to be outside the cross slope tolerance described above.

520-11 Method of Measurement.

For curb or curb and gutter, the quantity to be paid will be the plan quantity, in feet, measured along the face of the completed and accepted curb or curb and gutter. Curb for sidewalk curb ramps or driveways will be paid at the Contract unit price for the adjacent curb type.

For valley gutter or shoulder gutter, the quantity to be paid will be the plan quantity, in feet, measured along the gutter line of the completed and accepted valley gutter or shoulder gutter.

For concrete traffic separator of constant width, meeting the requirements of Standard Plans, Index 520-020, the quantity to be paid will be the plan quantity, in feet, measured along the center of its width, completed and accepted, including the length of the nose.

For concrete traffic separator of nonstandard or varying width, the quantity to be paid will be the plan quantity, in square yards, completed and accepted.

For curb of any type next to concrete pavement, the curb-pavement joint quantity to be paid will be the plan quantity, in feet, measured along the face of the completed and accepted curb.

520-12 Basis of Payment.

520-12.1 Concrete Gutter, Curb Elements, and Traffic Separator: Price and payment will be full compensation for all work specified in this Section, including reinforcement steel, dowels, asphalt pavement and base under traffic separator, joint materials and asphalt curb pad.

520-12.2 Excavation: Excavation for new installations will be paid for as roadway excavation in accordance with 120-13.2.

520-12.3 Payment Items: Payment will be made under:

Item No. 520- 1- Concrete Curb - per foot.

INTENTIONALLY LEFT BLANK

SECTION 570
PERFORMANCE TURF

GENERAL

570-1 Description.

Establish a growing, healthy turf over all areas designated in the Plans. Use sod in areas designated in the Plans to be sodded. Use seed, hydroseed, bonded fiber matrix, or sod in all other areas. Maintain performance turf areas until final acceptance of all Contract work in accordance with Section 5-11 and the establishment requirements of 570-4 have been met.

570-2 Materials.

Meet the following requirements:

- Turf Materials Section 981
- Fertilizer Section 982
- Water Section 983

570-3 Construction Methods.

570-3.1 General: Remove all construction debris in performance turf areas. Install performance turf at the earliest practical time for erosion control and establishment.

Shape the areas to be planted to the plan typical sections and lines and grade shown in the Plans.

Except in areas where the Contract Documents requires specific types of turf to match adjoining private property, any species of turf designated in Section 981 may be used. All of the permanent performance turf material shall be in place prior to final acceptance.

The Department will only pay for replanting as necessary due to factors determined by the Engineer to be beyond control of the Contractor.

Install all performance turf on shoulder areas prior to the placement of the friction course on adjacent pavement.

570-3.2 Seeding: At the Contractor’s option, wildflower seed may be included in the performance turf seeding operation or performed separately from the performance turf seeding. Seed must produce visible seedlings within 45 days of planting.

Use of compost meeting the requirements of Section 987 as mulch is acceptable unless otherwise specified.

570-3.3 Sod: Place the sod on the prepared surface, with edges in close contact. Do not use sod which has been cut for more than 48 hours.

Place the sod to the edge of all landscape areas as shown in the Plans and the Standard Plans. Place rolled sod parallel with the roadway and cut any exposed netting even with the sod edge.

Monitor placed sod for growth of exotic or invasive pest plants and noxious weeds. If exotic or invasive pest plants and/or noxious weeds manifest themselves within 30 days of placement of the sod during the months April through October, within 60 days of placement of the sod during the months of November through March treat affected areas by means acceptable to the Department at no expense to the Department. If pest plants and/or noxious weeds manifest themselves after the time frames described above from date of placement of sod, the Engineer, at his sole option, will determine if treatment is required and whether or not the Contractor will be compensated for such treatment. If compensation is provided, payment will be made as Unforeseeable Work as described in 4-4.

Remove and replace any sod as directed by the Engineer.

570-3.4 Hydroseeding: Use equipment specifically designed for mixing the mulch, seed,

fertilizer, tackifier and dye, and applying the slurry uniformly over the areas to be hydroseeded.

Use mulch that does not contain reprocessed wood or paper fibers. Ensure that 50% of the fibers will be retained on a twenty-five-mesh screen.

Mix fertilizer as required into the hydroseeding slurry.

Ensure that the dye does not contain growth or germination inhibiting chemicals.

When polyacrylamide is used as part of hydroseeding mix, only anionic polymer formulation with free acrylamide monomer residual content of less than 0.05% is allowed. Cationic polyacrylamide shall not be used in any concentration. Do not spray polyacrylamide containing mixtures onto pavement. These may include tackifiers, flocculants or moistureholding compounds.

570-3.5 Bonded Fiber Matrix (BFM): Meet the minimum physical and performance criteria of this Specification for use of BFM in hydroseeding operations or temporary nonvegetative erosion and sediment control methods.

Provide evidence of product performance testing, manufacturer's certification of training and material samples to the Engineer at least 7 calendar days prior to installation.

Provide documentation to the Engineer of manufacturer's testing at an independent laboratory, demonstrating superior performance of BFM as measured by reduced water runoff, reduced soil loss and faster seed germination in comparison to erosion control blankets.

Use only BFMs that contain all components pre-packaged by the manufacturer to assure material performance. Deliver materials in UV and weather resistant factory labeled packaging. Store and handle products in strict compliance with the manufacturer's directions.

When polyacrylamide is used as part of hydroseeding mix, only anionic polymer formulation with free acrylamide monomer residual content of less than 0.05% is allowed. Cationic polyacrylamide shall not be used in any concentration. Do not spray polyacrylamide containing mixtures onto pavement. These may include tackifiers, flocculants or moistureholding compounds.

Meet the following requirements after application of the formed matrix:

Ensure that the tackifier does not dissolve or disperse upon re-wetting.

Ensure that the matrix has no gaps between the product and the soil and that it provides 100% coverage of all disturbed soil areas after application.

Ensure that the matrix has no germination or growth inhibiting properties and does not form a water-repelling crust.

Ensure that the matrix is comprised of materials which are 100% biodegradable and 100% beneficial to plant growth.

Mix and apply the BFM in strict compliance with the manufacturer's recommendations.

Apply the BFM to geotechnically stable slopes at the manufacturer's recommended rates.

Degradation of BFM will occur naturally as a result of chemical and biological hydrolysis, UV exposure and temperature fluctuations. Re-application, as determined by the Engineer, will be required if BFM-treated soils are disturbed or water quality or turbidity tests show the need for an additional application.

570-3.6 Watering: Water all performance turf areas as necessary to produce a healthy and vigorous stand of turf. Ensure that the water used for turf irrigation meets the requirements of Section 983.

570-3.7 Fertilizing: Fertilize as necessary to promote turf growth and establishment based on soil testing. Refer to Section 982 for fertilizer rates.

For bid purposes, base estimated quantities on an initial application of 265 lb/acre and one subsequent application of 135 lb/acre of 16-0-8.

570-3.8 Shoulder Treatment: Provide soil for shoulder treatment in accordance with Standard Plans, Index 570-010. Soil needed for these purposes will be included in the corresponding Pay Item.

570-4 Turf Establishment.

Perform all work necessary, including watering and fertilizing, to sustain an established turf, free of noxious weeds, at no additional expense to the Department. Provide the filling, leveling, and repairing of any washed or eroded areas, as necessary.

Established turf is defined as follows:

1. An established root system (leaf blades break before seedlings or sod can be pulled from the soil by hand).
2. No bare spots larger than one square foot.
3. No continuous sod seams running perpendicular to the face of the slope.
4. No bare areas comprising more than 1% of any given 1,000 square foot area.
5. No deformation of the performance turf areas caused by mowing or other Contractor equipment.
6. No exposed sod netting.
7. No competing vegetation, exotic or invasive pest plants or noxious weeds.

Monitor turf areas and remove all competing vegetation, exotic or invasive pest plants, and noxious weeds (as listed by the Florida Exotic Pest Plant Council, Category I "List of Invasive Species", Current Edition, <https://www.fleppc.org>). Remove such vegetation regularly by manual, mechanical, or chemical control means, as necessary. When selecting herbicides, pay particular attention to ensure use of chemicals that will not harm desired turf or wildflower species. Use herbicides in accordance with 7-1.7.

If at the time that all other work on the project is completed, but all turf areas have not met the requirements for established turf set forth in 570-4, continuously maintain all turf areas until the requirements for established turf set forth in 570-4 have been met.

During establishment and until the performance turf is established in accordance with this Section, continue the inspection, maintenance, and documentation of erosion and sedimentation control items in accordance with Section 104. Remove and dispose of all erosion and sedimentation control items after the performance turf has been established.

Notify the Engineer, with a minimum of seven calendar days advance notice, to conduct inspections of the performance turf at approximate 90-day intervals during the establishment period to determine establishment. Results of such inspections will be made available to the Contractor within seven calendar days of the date of inspection. Determination of an established turf will be based on the entire project and not in sections.

Upon the determination by the Engineer that the requirements of 570-4 have been met and an established turf has been achieved and all erosion and sedimentation control items have been removed, the Engineer will release the Contractor from any further responsibility provided for in this Specification.

The Contractor's establishment obligations of this specification will not apply to deficiencies due to the following factors, if found by the Engineer to be beyond the control of the Contractor, his subcontractors, vendors or suppliers:

1. Determination that the deficiency was due to the failure of other features of the Contract.
2. Determination that the deficiency was the responsibility of a third-party performing work not included in the Contract or its actions.

The Department will only pay for replanting as necessary due to factors determined by the Department to be beyond the control of the Contractor.

570-5 Responsible Party.

For the purposes of this Specification, the Contractor shall be the responsible party throughout construction and establishment periods.

Upon final acceptance of the Contract in accordance with 5-11, the Contractor's responsibility for maintenance of all the work or facilities within the project limits of the Contract will terminate in accordance with 5-11; with the sole exception that the facilities damaged due to lack of established turf and the obligations set forth in this Specification for performance turf shall continue thereafter to be responsibility of the Contractor as otherwise provided in this Section.

570-6 Statewide Disputes Review Board.

The Statewide Disputes Review Board in effect for this Contract will resolve any and all disputes that may arise involving administration and enforcement of this Specification related to the remedial work performed during the warranty period. The Responsible Party and the Department acknowledge that use of the Statewide Disputes Review Board is required, and the determinations of the Statewide Disputes Review Board for disputes arising out of this Specification will be binding on both the Responsible Party and the Department, with no right of appeal by either party. Meet the requirements of 8-3.

570-7 Failure to Perform.

Should the Contractor fail to timely submit any dispute to the Statewide Disputes Review Board, refuse to submit any dispute to the Statewide Disputes Review Board, fail to provide an established turf in accordance with 570-4 within six months of final acceptance of the Contract in accordance with 5-11, or fail to compensate the Department for any remedial work performed by the Department in establishing a turf and other remedial work associated with lack of an established turf, including but not limited to, repair of shoulder or other areas due to erosion and removal of sediments deposited in roadside ditches and streams, as determined by the Statewide Disputes Review Board to be the Contractor's responsibility, the Department shall suspend, revoke or deny the Contractor's certificate of qualification under the terms of Section 337.16(d)(2), Florida Statutes, until the Contractor provides an established turf or makes full and complete payment for the remedial work performed by the Department. In no case shall the period of suspension, revocation, or denial of the Contractor's certificate of qualification be less than six months. Should the Contractor choose to challenge the Department's notification of intent for suspension, revocation or denial of qualification and the Department's action is upheld, the Contractor shall have its qualification suspended for a minimum of six months or until the remedial action is satisfactorily performed, whichever is longer.

570-8 Method of Measurement.

The quantities to be paid for will be plan quantity in square yards based on the area shown in the Plans, completed, and accepted.

570-9 Basis of Payment.

Prices and payments will be full compensation for all work and materials specified in this Section.

Payment will be made under: Item No. 570- 1- Performance Turf (Sodding) - per square yard.

END OF ITEM FL-570

SECTION 635

PULL, SPLICE, AND JUNCTION BOXES

635-1 Description.

Furnish and install pull, splice, and junction boxes as shown in the Plans.

635-2 Materials.

635-2.1 General: Use pull and splice boxes listed on the Department's Approved Product List (APL).

635-2.2 Pull and Splice Boxes:

635-2.2.1 General: Use only boxes that meet the requirements of Section 996 and are listed on the Department's Approved Product List (APL). Ensure box bodies and covers are free of flaws such as cracks, sharp, broken, or uneven edges, and voids.

Ensure in-ground boxes have an open bottom design.

635-2.2.2 Marking: Mark boxes in accordance with 996-5.

635-2.2.3 Dimensions: Unless otherwise shown in the Plans, provide pull and splice boxes with dimensions in accordance with 996-5.

635-2.3 Junction Boxes:

635-2.3.1 Fabrication: Provide galvanized steel, aluminum or NEMA 4X non-metallic junction boxes. Ensure all attachment hardware is Type 316 or 304, passivated stainless steel.

Ensure the outside surface has a smooth, uniform finish. Ensure boxes are free of burrs, pits, sharp corners, and dents. Ensure all welds are neatly formed and free of cracks, blow holes, and other irregularities.

635-2.3.1.1 Aerial Junction Boxes: Unless otherwise shown in the Plans, provide aerial junction boxes with minimum inside dimensions of 8 inches wide by 8 inches long and at least 3 inches deep.

635-2.3.1.2 Mounted Junction Boxes: Provide mounted junction boxes fabricated of 5052 sheet aluminum alloy with a minimum thickness of 1/8 inch. Ensure all mounted junction boxes have a hinged door and lock as specified in Section 676.

Unless otherwise shown in the Plans, provide mounted junction boxes for the following installations:

For pole and cabinet mounted installations, provide junction boxes with minimum inside dimensions of 13 inches long by 10 inches wide and at least 3 inches deep.

For base mounted installations, provide junction boxes with minimum inside dimensions of 21 inches long by 10 inches wide and at least 8 inches deep.

635-2.3.1.3 Embedded Junction Boxes: Provide weatherproof embedded junction boxes for use in concrete structures or traffic railings. Include gasketed weatherproof covers made of the same material as the box and stainless steel, tamper resistant screws for securing the cover. Fabricate galvanized steel boxes and their covers from steel meeting the requirements of ASTM A36 and galvanized in accordance with ASTM A123.

For embedded junction boxes not exposed to vehicular impacts, provide the following types of junction boxes. Where the structure's environmental classification is slightly or moderately aggressive, provide a galvanized steel or NEMA 4X (non-metallic) box,

as approved by the Engineer. Where the structure's environmental classification is extremely aggressive, provide a NEMA 4X (non-metallic) box, unless otherwise directed by the Engineer.

For embedded junction boxes exposed to vehicular impacts, provide a galvanized steel box regardless of the structure's environmental classification.

635-2.3.2 Barrier Terminal Blocks: Provide a barrier terminal block with a minimum of ten positions and rated at 600 VAc in all aerial and mounted junction boxes. Ensure each terminal block position has two screws electrically connected by a shorting bar or other Department approved method. Ensure all terminal block positions are numbered sequentially.

635-3 Installation.

635-3.1 General: Do not install power and communication cables in the same box unless otherwise shown in the Plans.

When signal or 120-volt (or greater) power is present, ground all metal covers in accordance with Section 620.

Ensure metal junction boxes are grounded and bonded in accordance with the NEC Section 314.4.

635-3.2 Pull and Splice Boxes: Install pull and splice boxes in accordance with Standard Plans, Index 635-001. Ensure pull and splice boxes are sized for the amount of cable to be placed inside. Ensure that the pull or splice box cover is flush with the concrete apron or sidewalk. Do not install pull or splice boxes in roadways, driveways, parking areas, ditches, or public sidewalk curb ramps. Avoid placing pull and splice boxes in low-lying locations with poor drainage. Ensure that pull and splice boxes house fiber optic cable without subjecting the cable to a bend radius less than 14 times the diameter of the cable.

635-3.2.1 Placement and Spacing: Place pull and splice boxes as shown in the Plans and at the following locations, unless directed otherwise by the Engineer:

1. At all major fiber optic cable and conduit junctions.
2. Approximately every 2,500 feet for fiber optic cable applications in rural areas with any continuous section of straight conduit if no fiber optic cable splice is required.
3. At a maximum of 1,760 feet for fiber optic cable applications in metropolitan areas.
4. At each end of a tunnel, and on each side of a river or lake crossing.
5. On each side of an aboveground conduit installation, such as an attachment to a bridge or wall.
6. At all turns in the conduit system.
7. Near the base of a service pole or communication cabinet to provide:
 - a. A transition point between the fiber optic conduits extending from the fiber backbone and the conduit feeding the communication cabinet.
 - b. An assist point for the installation of fiber optic drop cable.
 - c. Storage of slack fiber optic drop cable.

635-3.2.2 Electronic Box Marker: Equip all pull and splice boxes buried below finish grade with an electronic box marker inside the pull or splice box to mark the location.

Ensure that the electronic box marker is a device specifically manufactured to electronically mark and locate underground facilities. Ensure that the electronic box marker includes circuitry and an antenna encased in a waterproof polyethylene shell. Ensure that the outer shell is impervious to minerals, chemicals, and temperature extremes normally found in underground plant environments. Ensure that the electronic box marker does not require any batteries or active

components to operate. Ensure that electronic box markers used to mark fiber optic cable and general telecom applications are orange in color and operate at 101.4 kHz. Ensure that the electronic box marker's passive circuits produce an RF field when excited by a marker locator to direct the locator to the marker's position. Ensure that the electronic box marker has a minimum operating range of 5 feet from the marker locator.

635-3.3 Aerial Junction Boxes: Install aerial junction boxes in accordance with Standard Plans, Index 634-002.

635-3.4 Mounted Junction Boxes: Install mounted junction boxes in accordance with Standard Plans, Index 676-010. Ensure that the bottom surface of pole mounted junction boxes is a minimum of 4 feet above the finished grade.

635-3.5 Cable Terminations: Make cable terminations in junction boxes in accordance with Section 632. Route and form the cable to allow access to the terminal screws. Do not cover the terminal identification numbers with the cable.

635-4 Relocation of Pull, Splice, and Junction Boxes.

Relocation of pull, splice, and junction boxes shall consist of removing an existing box and installing the box at the location shown in the Plans. Restore the area of the box removal and relocation to the condition of the adjacent area. The costs for restoration will be included in the Contract unit price of the relocation.

Boxes damaged due to the Contractor's operations must be replaced by the Contractor at no cost to the Department. Replacement boxes must be of the same material and size of the existing box, unless directed otherwise by the Engineer.

635-5 Warranty.

Ensure all pull, splice, and junction boxes have a manufacturer's warranty covering defects for a minimum of one year from the date of final acceptance in accordance with 5-11 and Section 608. Ensure the warranty includes providing replacements, within 30 calendar days of notification, for defective parts and equipment during the warranty period at no cost to the Department or the maintaining agency.

635-6 Method of Measurement.

The Contract unit price each for pull, splice, and junction box, furnished and installed, will consist of the pull, splice, and junction box including all required hardware for the type of box and location as specified in the Contract Documents, and all labor and materials necessary for a complete and accepted installation.

635-7 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section, except grounding.

No separate payment will be made for the removal of pull, splice, and junction boxes. Payment will be made under:

Item No. 635- 1- Vehicle Rated Meter & Fiber Boxes (Remove & Replace) -
each.

END OF ITEM FL-635

SECTION 700 HIGHWAY SIGNING

700-1 General Requirements.

700-1.1 Description: Furnish and erect roadway signs at the locations, and in accordance with the details, shown in the Plans.

The Department designates ground traffic signs as signs erected on the shoulders, slopes, or medians, but not extending over the traveled roadway, and may further classify these signs as single post or multi-column.

The Department designates signs erected partially or completely over the traveled roadway or mounted on bridges as overhead traffic signs, and may further classify these signs as overhead cantilever or span traffic signs.

Meet the requirements of Section 603.

700-1.2 Materials:

700-1.2.1 General: Meet the materials requirements shown in the Specifications, Standard Plans, and any additional requirements identified in the Plans.

700-1.2.2 Concrete: Use concrete meeting the requirements of Section 346. Obtain concrete from a plant that is listed on the Department's Production Facility Listing. Producers seeking inclusion on the list shall meet the requirements of Section 105.

700-1.2.3 Static Sign Assembly Requirements: See 700-7 for In-Street sign requirements. Sheets and plates for sign panels shall meet the requirements of ASTM B209, Aluminum Association Alloy 6061-T6, 5154-H38 or 5052-H38. Sign panels for single column ground mounted signs shall utilize aluminum plate with a minimum thickness of 0.08 inch. All other sign panels shall utilize aluminum plate with a minimum thickness of 0.125 inch. All panels shall have rounded corners. For flip up signs, the continuous hinge shall be stainless steel ANSI grade 316.

700-1.3 Sign Fabrication Requirements: Obtain overhead sign structures from a facility that is listed on the Department's Production Facility Listing. Producers seeking inclusion on the list shall meet the requirements of Section 105.

700-1.4 Storage, Handling and Labeling: If signs are stored prior to installation, store them in accordance with the manufacturer's recommendations. Properly package signs to protect them during storage, shipment and handling to prevent damage to the sign face and panel.

In addition to the information required in Section 994, all permanent roadway signs must be labeled on the back bottom edge with the date of installation. Make the labels unobtrusive, but legible enough to be easily read by an observer on the ground when the sign is in its final position. Apply the label in a manner that is at least as durable as the sign face.

700-1.5 Acceptance of Signs:

700-1.5.1 Sign Inspection: Submit certification that the sign assembly meets the material and installation requirements of the Contract Documents. The Engineer will inspect the signs upon delivery to the storage or project site and again at the final construction inspection.

Repair and replace signs deemed unacceptable by the Engineer at no expense to the Department.

700-1.5.2 Imperfections and Repairs: Repair or replace signs containing imperfections or damage regardless of the kind, type, or cause of the imperfections or damage. For sign panels exceeding 30 square feet, the Contractor may make one patch, if necessary, to each sign panel not to exceed two square inches. Make repairs according to the manufacturer's recommendations and to the satisfaction of the Engineer. Ensure that completed repairs provide a level of quality necessary to maintain the service life of the sign and are satisfactory in appearance to the Engineer.

700-2 Static Signs.

700-2.1 Ground Mounted Signs: Ground mounted signs consist of both single column and multi-

column static signs.

700-2.1.1 Materials: Use aluminum tubing materials meeting the general provisions of Section 965 for all single column ground signs. Multi-column signs must be galvanized steel W or S beams steel columns meeting the general provisions of Section 962. All materials must meet the requirements of the appropriate Standard Plans.

700-2.1.2 Fabrication of Panel Messages: Fabricate standard sign panel messages in accordance with details included in the Standard Highway Signs (SHS) manual published by the U.S. Department of Transportation. Submit shop drawings to the Department for approval as specified in Section 5.

700-2.1.3 Foundation: Construct foundations in accordance with the applicable Standard Plans. The Contractor may use precast foundations in augured or excavated holes a minimum of 12 inches larger than each axis dimension of the precast foundation. Obtain precast foundations from a plant that is currently on the Department's Production Facility Listing.

Producers seeking inclusion on the list shall meet the requirements of Section 105. The holes must be clean and without loose material. Temporary casing will be required if the soil is unstable. Fill the void around the precast foundation with flowable fill meeting the requirements of Section 121 or use clean sand placed using hydraulic methods.

700-2.1.4 Breakaway Support Mechanisms for Ground Traffic Signs:

700-2.1.4.1 Frangible Supports: Provide support posts for all frangible sign assemblies consisting of aluminum tubes up to 3-1/2 inches outside diameter with 3/16-inch wall thickness in accordance with the requirements in the Standard Plans.

700-2.1.4.2 Slip Bases: Slip base assemblies for single column signs will use aluminum sleeves and base plates. Slip base assemblies for multi-column signs will use galvanized steel bases. All slip bases must be fabricated in accordance with the requirements of the Standard Plans.

700-2.1.5 Installation: Verify the length of the column supports in the field prior to fabrication to permit the appropriate sign mounting height. Fabricate the supports and wind beams in accordance with the Standard Plans. Columns must be plumb and panels must be level with the proper orientation.

700-2.3 Method of Measurement: For single post and multi post sign assemblies, an assembly consists of all the signs mounted on a single structure. The Contract unit price per assembly for ground mounted signs (single post and multi-post), furnished and installed, will include furnishing the sign panels, support structure, foundation, hardware, and labor necessary for a complete and accepted installation.

Relocation of signs will consist of removing the existing sign assembly and installing the sign on a new foundation at the location shown in the Plans.

When the Plans call for existing ground-mounted signs to be relocated or removed, after removing the sign panel from the assembly, remove supports and footings. Restore the area of the sign removal or relocation to the condition of the adjacent area.

700-2.4 Basis of Payment: Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

- | | |
|------------------|--|
| Item No. 700- 1- | Single Post Sign, per Assembly (Remove & Relocate) |
| Item No. 700- 2- | Multi Post Sign Replacement (Existing Posts) , per Assembly. |

END OF ITEM FL-700

SECTION 710
PAINTED PAVEMENT MARKINGS

710-1 Description.

Apply painted pavement markings, in accordance with the Contract Documents.

710-2 Materials.

Use only materials listed on the Department's Approved Product List (APL) meeting the following requirements:

Standard Paint.....971-1 and 971-3

Durable Paint.....971-1 and 971-4

Glass Spheres.....971-1 and 971-2

The Engineer will take random samples of all material in accordance with the Department's Sampling, Testing and Reporting Guide schedule.

710-3 Equipment.

Use equipment that will produce continuous uniform dimensions of pavement markings of varying widths and meet the following requirements:

1. Capable of traveling at a uniform, predetermined rate of speed, both uphill and downhill, in order to produce a uniform application of paint and capable of following straight lines and making normal curves in a true arc.

2. Capable of applying glass spheres to the surface of the completed line by an automatic sphere dispenser attached to the pavement marking machine such that the glass spheres are dispensed closely behind the installed line. Use a glass spheres dispenser equipped with an automatic cut-off control that is synchronized with the cut-off of the paint and applies the glass spheres in a manner such that the spheres appear uniform on the entire pavement markings surface.

3. Capable of spraying the paint to the required thickness and width without thinning of the paint. Equip the paint tank with nozzles equipped with cut-off valves, which will apply broken or skip lines automatically.

710-4 Application.

710-4.1 General: Remove existing pavement markings, such that scars or traces of removed markings will not conflict with new pavement markings, by a method approved by the Engineer.

Before applying pavement markings, remove any material that would adversely affect the bond of the pavement markings by a method approved by the Engineer.

Apply standard paint to dry surfaces only, and when the ambient air and surface temperature is at least 40°F and rising.

Apply durable paint to dry surfaces only. Do not apply durable paint when the ambient air and surface temperature is below 50°F, relative humidity is above 80% or when the dew point is within 5°F of the ambient air temperature.

Do not apply painted pavement markings when winds are sufficient to cause spray dust.

Apply painted pavement markings, having well defined edges, over existing pavement markings such that not more than 2 inches on either end and not more than 1 inch on

either side is visible. When stencils are used to apply symbols and messages, the areas covered by the stencil reinforcing will not be required to be painted.

Mix the paint thoroughly prior to pouring into the painting machine. Apply paint to the pavement by spray or other means approved by the Engineer.

Conduct field testing in accordance with FM 5-541. Remove and replace painted pavement markings not meeting the requirements of this Section at no additional cost to the Department.

Apply all pavement markings prior to opening the road to traffic.

710-4.1.1 Painted Pavement Markings (Final Surface): On concrete surfaces or newly constructed asphalt, the painted pavement markings (final surface) will include one application of standard paint applied to the final surface.

For center line and edge line rumble strip installations where the pavement marking is placed within the grinding, apply a second application of standard paint within 24 hours of each day's grinding operation.

Do not apply final surface paint for bicycle arrows or bicycle messages, 24-inch longitudinal bars in special emphasis crosswalks, or route shields where preformed thermoplastic will be applied.

710-4.2 Thickness: Apply standard paint to attain a minimum wet film thickness in accordance with the manufacturer's recommendations. Apply durable paint to attain a minimum wet film thickness of 0.025 inches or 25 mils. Measure, record, and certify on a Department approved form and submit to the Engineer, the thickness of white and yellow durable paint pavement markings in accordance with FM 5-541.

710-4.3 Retroreflectivity: Apply white and yellow standard paint that will attain an initial retroreflectance of not less than 300 mcd/lx m' and not less than 250 mcd/lx m', respectively. Apply white and yellow durable paint that will attain an initial retroreflectance of not less than 450 mcd/1x m² and not less than 300 mcd/lx m', respectively. Black pavement markings must have a retroreflectance of less than 20 mcd/lx m'.

Measure, record and certify on a Department approved form and submit to the Engineer, the retroreflectivity of white and yellow pavement markings in accordance with FM 5-541.

The Department reserves the right to test the markings within three days of receipt of the Contractor's certification. Failure to afford the Department opportunity to test the markings will result in non-payment. The test readings should be representative of the Contractor's pavement marking performance. If the retroreflectivity values measure below values shown above, reapply the pavement marking at no additional cost to the Department.

For standard paint, ensure that the minimum retroreflectance of white and yellow pavement markings are not less than 150 mcd/1x m². If the retroreflectivity values for standard paint fall below the 150 mcd/1x m² value within 180 days of initial application, the pavement marking will be reapplied at the Contractor's expense. If the retroreflectivity values for durable paint fall below the initial values of 450 mcd/lx m' value for white and 300 mcd/lx m' for yellow within 180 days of initial application, the pavement marking will be reapplied at the Contractor's expense.

710-4.4 Color: Use paint material that meets the requirements of 971-1.

710-4.5 Glass Spheres: Apply glass spheres on all pavement markings immediately and uniformly following the paint application. The rate of application shall be based on the manufacturer's recommendation.

For longitudinal durable paint markings, apply a double drop of Type 1 and Type 3 glass spheres. For transverse durable paint markings, apply a single drop of Type 3 glass spheres.

The rate of application shall be based on the manufacturer's recommendation.

710-5 Tolerances in Dimensions and in Alignment.

Establish tack points at appropriate intervals for use in aligning pavement markings and set a stringline from such points to achieve accuracy.

710-5.1 Dimensions:

710-5.1.1 Longitudinal Lines: Apply painted skip line segments with no more than plus or minus 12 inches variance, so that over-tolerance and under-tolerance lengths between skip line and the gap will approximately balance. Apply longitudinal lines at least 2 inches from construction joints of portland cement concrete pavement.

710-5.1.2 Transverse Markings, Gore Markings, Arrows, and Messages: Apply paint in multiple passes when the marking cannot be completed in one pass, with an overall line width allowable tolerance of plus or minus 1 inch.

710-5.1.3 Contrast Lines: Use black paint to provide contrast on concrete or light asphalt pavement, when specified by the Engineer. Apply black paint in 10-foot segments following each longitudinal skip line.

710-5.2 Alignment: Apply painted pavement markings that will not deviate more than 1 inch from the stringline on tangents and curves one degree or less. Apply painted pavement markings that will not deviate more than 2 inches from the stringline on curves greater than one degree. Apply painted edge markings uniformly, not less than 2 inches or more than 4 inches from the edge of pavement, without noticeable breaks or deviations in alignment or width.

Remove and replace at no additional cost to the Department, pavement markings that deviate more than the above stated requirements.

710-5.3 Correction Rates: Make corrections of variations in width at a maximum rate of 10 feet for each 0.5 inch of correction. Make corrections of variations in alignment at a maximum rate of 25 feet for each 1 inch of correction, to return to the stringline.

710-6 Contractor's Responsibility for Notification.

Notify the Engineer prior to the placement of the materials. At the time of notification, submit a certification to the Engineer with the APL number and the batch or Lot numbers of the paint and glass spheres to be used.

710-7 Protection of Newly Applied Pavement Markings.

Do not allow traffic onto or permit vehicles to cross newly applied pavement markings until they are sufficiently dry. Remove and replace any portion of the pavement markings damaged by passing traffic or from any other cause, at no additional cost to the Department.

710-8 Corrections for Deficiencies to Applied Painted Pavement Markings.

Reapply a 1.0-mile section, centered around any deficiency, at no additional cost to the Department.

710-9 Submittals.

710-9.1 Submittal Instructions: Prepare a certification of quantities, using the Department's current approved form, for each project in the Contract. Submit the certification of

quantities and daily worksheets to the Engineer. For Lump Sum pay item 710-90, document the quantity as an estimated percentage (in decimal form) of the total lump sum amount on the daily worksheet. The Department will not pay for any disputed items until the Engineer approves the certification of quantities.

710-9.2 Contractor's Certification of Quantities: Request payment by submitting a certification of quantities no later than Twelve O'clock noon Monday after the estimate cut-off date or as directed by the Engineer, based on the amount of work done or completed. Ensure the certification of quantities consists of the following:

1. Contract Number, FPID Number, Certification Number, Certification Date, and the period that the certification represents.
2. The basis for arriving at the amount of the progress certification, less payments previously made and less any amount previously retained or withheld. The basis will include a detailed breakdown provided on the certification of items of payment.

710-10 Method of Measurement.

The quantities, authorized and acceptably applied, under this Section will be paid as follows:

1. The length, in gross miles, of solid, 10'-30' skip, 3'-9' dotted, 6'-10' dotted, 2'-2' dotted, and 2'-4' dotted lines.
2. The length, in linear feet, of transverse lines, diagonal lines, chevrons, and parking spaces.
3. The number of pavement messages, symbols, and arrows. Each arrow is paid as a complete marking, regardless of the number of "points" or directions.
4. Lump Sum, as specified in 710-4.1.1 (final surface) and 710-9.1.
5. The area, in square feet, for removal of existing markings acceptably removed.

Payment for removal of conflicting markings will be in accordance with 102-5.8. Payment for removal of non-conflicting markings will be paid separately.

The gross mile measurement will be taken as the distance from the beginning of the painted line to the end of the painted line and will include the unmarked gaps for skip and dotted lines. The gross mile measurement will not include designated unmarked lengths at intersections, turn lanes, etc. Final measurement will be determined by plan dimensions or stations, subject to 9-1.3.1.

710-11 Basis of Payment.

710-11.1 General: Price and payment will be full compensation for all work specified in this Section, including, all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of all items, protection of traffic, furnishing of all tools, machines and equipment, and all incidentals necessary to complete the work. Final payment will be withheld until all deficiencies are corrected.

710-11.2 Painted Pavement Markings (Final Surface): Price and payment for painted pavement markings (final surface) will be full compensation for all applications of painted pavement markings in accordance with 710-4.1.1 and 710-9.1.

710-11.3 Payment Items: Payment will be made under:

Item No. 710 -1	Painted Pavement Markings.
	Solid per square foot.
	Skip per square foot.
	Arrows per square foot.
	Yield Line per square foot.
	Island Nose per square foot

END OF ITEM FL-710

Item P-101
PREPARATION OF EXISTING PAVEMENTS

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.0 General. The Contractor must furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified herein. All work will be subject to the inspection and approval of the RPR. All machinery and equipment owned or controlled by the Contractor must be of sufficient size to meet the requirements of the work and must be such as to produce work to the requirements listed herein and in the plans.

101-3.2 Preparation of joints and cracks prior to overlay/surface treatment. Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690 . The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

Wider cracks (over 1-1/2 inch wide (38 mm)), along with soft or sunken spots, indicate that the pavement or the pavement base should be repaired or replaced as stated below.

Cracks and joints may be filled with a mixture of emulsified asphalt and aggregate. The aggregate shall consist of limestone, volcanic ash, sand, or other material that will cure to form a hard substance. The combined gradation shall be as shown in the following table.

Gradation

Sieve Size	Percent Passing
No. 4 (4.75 mm)	100
No. 8 (2.36 mm)	90-100
No. 16 (1.18 mm)	65-90
No. 30 (600 μm)	40-60
No. 50 (300 μm)	25-42
No. 100 (150 μm)	15-30
No. 200 (75 μm)	10-20

Up to 3% cement can be added to accelerate the set time. The mixture shall not contain more than 20% natural sand without approval in writing from the RPR.

The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume. The material shall be poured or placed into the joints or cracks and compacted to form a voidless mass. The joint or crack shall be filled to within +0 to -1/8 inches (+0 to -3 mm) of the surface. Any material spilled outside the width of the joint shall be removed from the pavement surface prior to constructing the overlay. Where concrete overlays are to be constructed, only the excess joint material on the pavement surface and vegetation in the joints need to be removed.

101-3.3 Removal of Foreign Substances/contaminates prior to seal-coat. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction. This is subsidiary to the various bid items of the project.

High-pressure water, cold milling or rotary grinding may be used. If chemicals are used, they shall comply with the state’s environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of off Airport property in accordance with local laws and regulations, unless otherwise noted. No material may be wasted on the Airport site unless approved by the Owner. This is subsidiary to the various bid items of the project.

Additional requirements for removing existing markings are as noted in Item P-620, Runway and Taxiway Marking, and Item X-206, Removal of Markings.

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 Joint sealant. Joint material and installation will be in accordance with Item P-605 .

101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.

101-3.9.1 Preparation of Crack. Widen crack with router by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air.

101-3.9.2 Removal of Existing Crack Sealant. Existing sealants will be removed by routing. Following routing, any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.

101-3.9.3 Crack Sealant. Crack sealant material and installation will be in accordance with Item P-605.

METHOD OF MEASUREMENT

101-4.2 Joint and crack repair. The unit of measurement for joint and crack repair shall be the linear foot of joint.

101-4.3 Removal of Foreign Substances/contaminates. No separate payment will be made for foreign substance or contaminate removal and will be considered subsidiary to Joint and crack repair.

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-1	Route and Seal Joint and Asphalt Surface Cracking – per linear foot
Item P 101-5.3	Removal of Foreign Substances/contaminates – No separate payment will be made for removal of Foreign Substances/contaminates and will be considered subsidiary to Joint and Crack Repair

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.
---------------	---

ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
------------	--

END OF ITEM P-101

Page Intentionally Blank

ITEM P-108
REMOVAL OF PAVEMENT MARKINGS

DESCRIPTION

108-1.1 This item shall consist of furnishing all labor, materials and equipment required for the removal of pavement markings as indicated in the plans, including the removal of temporary painted pavement markings installed under this contract, or as directed by the Authority.

EQUIPMENT

108-2.1 Equipment, tools and machines used in the performance of the removal operation shall be safe and in satisfactory working condition at all times. The Contractor shall provide satisfactory evidence that the Contractor's equipment has been used in the performance of similar work.

108-2.2 The water blasting equipment shall be truck mounted and shall be capable of water pressures of 2,000 to 40,000 psi. The equipment shall be capable of adjusting the pressure to accomplish paint removal without damaging the pavement surface. The equipment shall be capable of following a straight line and be maneuverable to accommodate various pavement markings. The spray width must be able to accommodate lines from 4" to 8" wide. If water blasting is used to remove lines on active airfield pavements, a vacuum system shall be provided to allow for timely repainting and the prevention of any debris being ingested into propellers or turbine engines once the water blasting equipment has exited the active pavements.

108-2.3 The Contractor shall submit the proposed water blasting equipment to the Authority as a formal submittal for review and approval prior to use of the equipment on the project.

PERFORMANCE

108-3.1 This removal operation will be accomplished with high pressure water blasting. Milling, grinding, and sandblasting are prohibited for the removal of either temporary or permanent markings on finished pavement surfaces. The use of chemicals will also not be permitted. The Contractor shall furnish all equipment, water trucks and labor for delivery of water to the job site. Water is available for the Contractor's use from hydrants on airport property. If the Contractor chooses to use water from this source, he shall provide and attach a water meter to the hydrant(s). The Contractor shall obtain any and all permits, pay any and all fees and provide to the Authority the written approval of the authority having jurisdiction over the water source that all requirements for its use have been met. The quantity of water used, as measured by the meter, shall be charged to the Contractor at the Owner's prevailing rate.

108-3.2 The removal method applied to the surface shall not be damaging to pavement surfaces, joint sealing material or light fixtures. If it is deemed by the Authority that damage to any existing facility is caused by an operational error, such as permitting a pressure water jet to dwell in one location for an extensive time, the Contractor shall repair said damage without additional compensation from the Owner.

108-3.3 Pavement markings which are to be removed prior to being repainted in kind shall consist of 85% removal of the existing paint from the pavement surface. Pavement markings to be remarked shall have

ITEM P-109
SAWCUTTING

DESCRIPTION

109-1.1 This work shall consist of sawcutting the edge of existing Portland cement and/or asphaltic concrete pavements to provide a uniform joint alignment in sound material, as shown on the Plans or as directed by the Authority.

EQUIPMENT

109-2.1 Saws shall be power-driven, self-propelled, wheel or track-mounted, and capable of cutting to a depth of at least three (3) inches in one pass. The Contractor shall make the necessary number of passes to cut through the Portland cement and/or bituminous concrete pavement. The use of a cutting wheel mounted on a roller, grader or similar equipment, or the use of pneumatically driven hand-held tools, will only be approved if the Contractor can demonstrate to the satisfaction of the Authority that such equipment can consistently produce satisfactory results. Multi-blade arbor saws shall be used to construct sealant reservoirs.

CONSTRUCTION METHODS

109-3.1 The Contractor shall establish the line to be cut using chalkline or similar means in accordance with the details shown on the Plans or as directed by the Authority. The finished cut shall be true to line, smooth and vertical and shall not deviate from the established line more than 1/2-inch from side to side or end to end of the pavement being sawcut.

109-3.2 The existing paving material beyond the saw cut on the construction side shall be removed to the depth of the final cut and disposed of legally off Airport property. The saw cut depth shall be full depth so that spalling or other breakage of the existing pavement along the bottom of the pavement does not occur. If spalling or other breakage of the existing pavement along the bottom of the pavement does occur, the Contractor shall relocate the saw cut line to a point deeper in the existing pavement to remove completely any spalled or broken pavement so that the subbase under the existing pavement is not damaged and the new pavement can be constructed up against the existing pavement without either the new or existing pavement strength and pavement section being compromised.

109-3.3 All dust, chips, slurry, or waste material shall be carefully collected and removed from the site in accordance with the general safety requirements of the Contract and disposed of legally off the airport property.

METHOD OF MEASUREMENT

109-4.1 Sawcutting will not be measured for payment.

BASIS OF PAYMENT

109-5.1 No separate payment will be made for Sawcutting. The cost of the work described in this Item shall be considered incidental to installation of the various other elements included in the project.

END OF ITEM P-109

INTENTIONALLY LEFT BLANK

Item P-631

REFINED COAL TAR EMULSION WITH ADDITIVES, SLURRY SEAL SURFACE TREATMENT

DESCRIPTION

631-1.1 This item shall consist of a mixture of emulsified asphalt, mineral aggregate, and water properly proportioned, mixed, and spread on an asphalt pavement surface, including roads, and other general applications. The purpose of this refined coal tar emulsion product is to provide a fuel-resistant surface where pavements are subjected to fuel spills. The application of the surface treatment shall be in accordance with these specifications and shall conform to the dimensions shown on the plans or as directed by the Resident Project Representative (RPR).

631-1.2 General. This item shall consist of a mixture of refined coal tar emulsion, mineral aggregate, additives, and water properly proportioned, mixed, and applied as a slurry seal on new or existing (aged) asphalt concrete pavement.

MATERIALS

631-2.1 Refined coal tar emulsion. A refined coal tar emulsion prepared from a high temperature refined coal tar conforming to the requirements of ASTM D490 for grade 11-12. The use of oil and water gas tar is not allowed. Base refined coal tar emulsion must conform to all requirements of ASTM D5727. The Contractor shall provide a copy of the manufacturer's Certificate of Analysis (COA) for the emulsified asphalt delivered to the project. If the asphalt emulsion is diluted at other than the manufacturer's facility, the Contractor shall provide a supplemental COA from an independent laboratory verifying the asphalt emulsion properties.

The COA shall be provided to and approved by the RPR before the emulsified asphalt is applied. The furnishing of the vendor's certified test report for the asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer's COA may be subject to verification by testing the material delivered for use on the project.

a. Health, safety, and environment. The Contractor must provide a complete Safety Data Sheet (SDS) in accordance with U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), Regulations (Standards – 29 CFR, 1910.1200) which establishes the requirement and minimum information for the MSDS for hazardous materials. The MSDS, Section II, shall include the Chemical Abstracts Service (CAS) registry numbers for all applicable hazardous ingredients in the coal tar emulsion product. The Contractor must provide the manufacturer's certification that the product complies with the Code of Federal Regulation (CFR) Title 40 – Protection of Environment. The manufacturer's certification shall address compliance for Air Programs, Part 59, National Volatile Organic Compound Emission Standards for Consumer and Commercial Products (for the airport location) and Water Programs, Part 116, Designation of Hazardous Substances.

631-2.2 Aggregate. The aggregate shall be washed dry silica sand or boiler slag free of dust, trash, clay, organic materials, or other deleterious substances. The aggregate shall meet the gradation in Table 1, when tested in accordance with ASTM C136.

Table 1. Gradation of Aggregates*

Sieve Size		Percent Retained	
		Minimum	Maximum
#20 or coarser	850 µm	0	2
#30	600 µm	0	12
#40	425 µm	2	60
#50	300 µm	5	60
#70	212 µm	5	60
#100	150 µm	5	30
#140	106 µm	0	10
#200	75 µm	0	2
Finer than #200	<75 µm	0	0.3

* Table 1 represents the maximum range of aggregate gradations. In all cases the refined coal tar emulsion supplier is to give written approval of the aggregate used in the mix design.

631-2.3 Additive. As specified by the coal tar emulsion manufacturer.

631-2.4 Water. Water used in mixing or curing shall be from potable water sources and at least 50°F (10°C). Other sources shall be tested in accordance with ASTM C1602 prior to use.

631-2.5 Crack sealant. Crack sealant shall be certified for compatibility with the refined coal tar emulsion by the manufacturer of the refined coal tar emulsion, and approved by the RPR.

631-2.6 Oil spot primer. Oil spot primer shall be certified for compatibility with the refined coal tar emulsion by the manufacturer of the refined coal tar emulsion, and approved by the RPR.

631-2.7 Pavement primer. Pavement primer shall be certified for compatibility with the refined coal tar emulsion by the manufacturer of the refined coal tar emulsion, and approved by the RPR.

COMPOSITION AND APPLICATION

631-3.1 Composition. The refined coal tar emulsion seal coat is to consist of a mixture of refined coal tar emulsion, water, additive and aggregate, and be proportioned as shown in Table 2. The composition must have written approval of the coal tar emulsion manufacturer.

631-3.2 Quantities of materials per square yard (square meter). The Contractor shall submit the recommended formulation of water, emulsion, aggregate and application rate proposed for use to a testing laboratory together with sufficient materials to verify the formulation at least **14** days prior to the start of operations. The mix design shall be within the range shown in the below table. No seal coat shall be produced for payment until a mix has been approved by the RPR. The formulation shall pass the fuel resistance test in accordance with ASTM D5727.

The mix for each mixture shall be in effect until modified in writing by the RPR.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Table 2. Composition of Mixture Per 100 Gallons (379 Liters) of Refined Coal Tar Emulsion

Application	Refined Coal Tar Emulsion Gallons (Liters)	Water Gallons (Liters)	Additive Gallons (Liters)	Aggregate Pounds (Liters)	Formula Rate of Application of Mix per Square Yard (Liters)	
					Minimum Gallons (Liters)	Maximum Gallons (Liters)
Prime Coat (where required) as specified by the coal tar emulsion manufacturer						
1st Seal Coat	100 (379)	25-70 (95-265)	2-6 (7.6-22.7)	300-700 (136-318)	0.12 (0.54)	0.20 (0.91)
2nd Seal Coat	100 (379)	25-70 (95-265)	2-6 (7.6-22.7)	300-700 (136-318)	0.12 (0.54)	0.20 (0.91)

631-3.3 Application rate. Application rates are not to exceed 0.20 gal/yd²/coat (0.91 liters/m²/coat), and at no time are total coats to exceed 0.51 gal/yd² (2.3 liters/m²).

631-3.4 Control strip. Prior to full production, the Contractor shall prepare a quantity of mixture in the proportions shown in the approved mix design. The amount of mixture shall be sufficient to place a control strip a minimum of 250 square yard (209 m²) at the rate specified in the job mix formula. Separate test sections by a minimum of 200 feet between sections. The test area will be designated by the RPR on a representative section of the pavement to be seal coated. The actual application rate will be determined by the RPR during placement of the control strip and will depend on the condition of the pavement surface.

The control strip shall be used to verify the adequacy of the mix design and to determine the application rate. The same equipment and method of operations shall be used on the control strip that will be used on the remainder of the work.

If the control strip should prove to be unsatisfactory, the necessary adjustments to the job mix formula, mix composition, application rate, placement operations, and equipment shall be made. Additional control strips shall be placed and evaluated, if required. Full production shall not begin without the RPR's approval. Acceptable control strips shall be paid for in accordance with paragraph 631-7.1.

A qualified manufacturer's representative shall be present in the field to assist the Contractor in applying control areas and/or control strips to determine the optimum application rate of both emulsion and sand.

CONSTRUCTION METHODS

631-4.1 Weather limitations. The seal coat shall not be applied when the surface is wet or when the humidity or impending weather conditions will not allow proper curing. The seal coat shall be applied only when the atmospheric or pavement temperature is 50°F (10°C) and rising and is expected to remain above 50°F (10°C) for 24 hours, unless otherwise directed by the RPR.

631-4.2 Equipment and tools. The Contractor shall furnish all equipment, tools, and machinery necessary for the performance of the work.

a. Distributors. Distributors or spray units used for the spray application of the seal coat shall be self-propelled and capable of uniformly applying 0.12 to 0.55 gallons per square yard (0.54 to 2.5 liters per square meter) of material over the required width of application. Distributors shall be equipped with removable manhole covers, tachometers, pressure gauges, and volume-measuring devices.

The mix tank shall have a mechanically powered, full-sweep, mixer with sufficient power to move and homogeneously mix the entire contents of the tank.

The distributor shall be equipped with a positive placement pump so that a constant pressure can be maintained on the mixture to the spray nozzles.

b. Mixing equipment. The mixing machine shall have a continuous flow mixing unit capable of accurately delivering a predetermined proportion of aggregate, water, and emulsion, and of discharging the thoroughly mixed product on a continuous basis. The mixing unit shall be capable of thoroughly blending all ingredients together and discharging the material to the spreader box without segregation.

c. Spreading equipment. Spreading equipment shall be a mechanical-type squeegee distributor attached to the mixing machine, equipped with flexible material in contact with the surface to prevent loss of slurry from the spreader box. It shall be maintained to prevent loss of slurry on varying grades and adjusted to assure uniform spread. There shall be a lateral control device and a flexible strike-off capable of being adjusted to lay the slurry at the specified rate of application. The spreader box shall have an adjustable width. The box shall be kept clean; coal tar emulsion and aggregate build-up on the box shall not be permitted.

d. Hand squeegee or brush application. The use of hand spreading application shall be restricted to places not accessible to the mechanized equipment or to accommodate neat trim work at curbs, etc. Material that is applied by hand shall meet the same standards as that applied by machine.

e. Calibration. The Contractor shall furnish all equipment, materials, and labor necessary to calibrate the equipment. It shall be calibrated to assure that it will produce and apply a mix that conforms to the job mix formula. Commercial equipment should be provided with a method of calibration by the manufacturer. All calibrations shall be made with the approved job materials prior to applying the seal coat to the pavement. A copy of the calibration test results shall be furnished to the RPR.

631-4.3 Preparation of asphalt pavement surfaces. Clean pavement surface immediately prior to placing the seal coat by sweeping, flushing well with water leaving no standing water, or a combination of both, so that it is free of dust, dirt, grease, vegetation, oil, or any type of objectionable surface film. Remove oil or grease that has not penetrated the asphalt pavement by scraping or by scrubbing with a detergent, then wash thoroughly with clean water. After cleaning, treat these areas with the oil spot primer. Any additional surface preparation, such as crack repair, shall be in accordance with Item P-101, paragraph 101-3.6.

631-4.4 Mixing. Blend the coal tar emulsion mixture in the equipment described in paragraph 631-4.2 using the ingredients described in Table 2. The mixing must produce a smooth homogeneous mixture of uniform consistency. (Consult coal tar emulsion supplier for its recommended order of addition of the ingredients.) During the entire mixing and application process, no breaking, segregating, or hardening of the emulsion, nor balling or lumping of the sand is to be permitted. Continue to agitate the seal coating mixture in the mixing tank at all times prior to and during application so that a consistent mix is available for application.

Small additional increments of water may be needed to provide a workable consistency, but in no case is the water content to exceed the specified amount.

631-4.5 Application of slurry seal surface treatment. The aggregate filled slurry seal surface treatment shall be applied at a uniform rate determined in paragraph 631-3.4.

In order to provide maximum adhesion, the pavement shall be dampened with a fog spray of water if

recommended by the supplier. No standing water shall remain on the surface.

If a prime coat is required, mix and apply the prime coat as specified in paragraph 631-3.2.

Apply the first coat uniformly to obtain the rate determined in paragraph 631-3.4.

Each coat shall be allowed to dry and cure initially before applying any subsequent coats. The initial drying shall allow evaporation of water of the applied mixture, resulting in the coating being able to sustain light foot traffic. The initial curing shall enable the mixture to withstand vehicle traffic without damage to the seal coat.

Apply the second coat in the same manner as outlined for the first coat.

Additional coats shall be applied over the entire surface as directed by the RPR.

The finished surface shall present a uniform texture.

The final coat shall be allowed to dry a minimum of eight hours in dry daylight conditions before opening to traffic, and initially cure enough to support vehicular traffic without damage to the seal coat. Where marginal weather conditions exist during the eight-hour drying time, additional drying time shall be required. The length of time shall be as specified by the supplier. The surface shall be checked after the additional drying time for trafficability before opening the section to vehicle traffic.

Where striping is required, the striping paint used shall meet the requirements of Item P-620, shall be compatible with the seal coat and as recommended by the coal tar emulsion manufacturer.

QUALITY CONTROL (QC)

631-5.1 Contractor's certification. The Contractor shall furnish the manufacturer's certification that each consignment of emulsion shipped to the project meets the requirements of ASTM D5727, except that the water content shall not exceed 50%. The certification shall also indicate the solids and ash content of the emulsion and the date the tests were conducted. The certification shall be delivered to the RPR prior to the beginning of work. The manufacturer's certification for the emulsion shall not be interpreted as a basis for final acceptance. Any certification received shall be subject to verification by testing samples received for project use.

The Contractor shall also furnish a certification demonstrating a minimum of three years of experience in the application of coal tar emulsion seal coats.

631-5.2 Sampling. A minimum of one sample per day shall be tested for the properties of Table 2. A random sample of approximately one-quart of the composite mix will be obtained daily by the Contractor and stored in a glass container. The containers shall be sealed against contamination and retained in storage by the Owner for a period of six months. Samples shall be stored at room temperature and not be subjected to freezing temperatures.

A sample of undiluted coal tar emulsion shall be obtained from each consignment shipped to the job.

631-5.3 Records. The Contractor shall maintain an accurate record of each batch of materials used in the formulation of the seal coat and provide the documentation to the RPR daily.

METHOD OF MEASUREMENT

631-6.1 The refined coal tar emulsion with additives shall be measured by the gallon. Only the actual quantity of undiluted refined coal tar emulsion with additives will be measured for payment.

631-6.2 Aggregate shall be measured by the ton of dry aggregate.

BASIS OF PAYMENT

631-7.1 Payment shall be made at the contract unit price per gallon for the refined coal tar emulsion

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

with additives and at the contract price per ton for aggregate.

631-7.2 No direct payment shall be made per ton for dry aggregate.

These prices shall be full compensation for furnishing all materials, preparing, mixing, and applying these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-631-1	Refined Coal Tar Emulsion with Additives for Slurry Coat (Two Coats with Sand) - per square yard.
Item P-631-2	Aggregate - per ton of dry aggregate. No direct payment will be made for this item, considered subsidiary to P-631-1.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C67	Standard Test Method for Sampling and Testing Brick and Structural Clay Tile
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D490	Standard Specification for Road Tar
ASTM D3699	Standard Specification for Kerosine
ASTM D5727	Standard Specification for Emulsified Refined Coal Tar (Mineral Colloid Type)

Code of Federal Regulations (CFR)

29 CFR Part 1910.1200	Hazard Communication
40 CFR	Protection of the Environment

END OF ITEM P-631

INTENTIONALLY LEFT BLANK

SECTION 260501
BASIC ELECTRICAL REQUIREMENTS

DESCRIPTION

260501-1.1 Divisions 26 of the specifications covers all electrical work for the project. Work shall include labor, including time necessary to investigate existing conditions, material, tools, temporary wiring, accessories, etc. required to accomplish the work as specified and shown on the drawings.

260501-1.2 Installation shall comply with all laws applying to electrical installation in effect; with the regulations of the NEC, National Electrical Safety Code, and other applicable publications of the National Fire Protection Association, all local governing codes and ordinances and with the regulations of the serving utility company. Provide required permits.

260501-1.3 All electrical work shall comply with the HCAA Design Criteria Manual dated October 1st, 2022.

260501-1.4 DEFINITIONS

- A. EMT: Electrical Metallic Tubing.
- B. FMC: Flexible Metal Conduit.
- C. GRS: Rigid Steel Conduit
- D. IMC: Intermediate Metal Conduit.
- E. LFMC: Liquidtight Flexible Metal Conduit.
- F. MWW: Metal Wireway.
- G. RAC: Rigid Aluminum Conduit
- H. RMC: Rigid Metal Conduit
- I. RNC: Rigid Nonmetallic Conduit.
- J. SMR: Surface Metal Raceway.

SUBMITTALS

260501-2.1 SUBMITTALS. Prior to the initiation of site work, the Contractor will submit product literature and data for basic electrical requirements to include, but not limited to the following:

- A. Shop Drawings and Product Data:
 - 1. Shop Drawings: Shall be submitted on equipment as indicated under each section of this division. Shop drawings shall include sufficient information to indicate complete compliance with specifications.
 - 2. Product Data: Submittal shall include illustrations, catalog sheets, installation instructions, drawings, and certifications as required. Each sheet shall show

manufacturer's name or trademark. Edit product data to identify only those items to be provided for this project.

3. All equipment of a particular kind such as wiring devices, power distribution panelboards and switchboards, and all lighting fixtures of the same type, shall be the product of the same manufacturer.
4. Where items are those specified, only a list of such items shall be provided, except where shop drawings and product data are specifically required.
5. At the time of each submission, any deviations from the Contract Documents shall be called to the attention of the Engineer in writing, and be plainly marked on the shop drawings and product data.

B. Record Drawings:

1. Provide 1 complete set of contract drawings in clean, undamaged condition, indicating all significant changes from the work as shown. Use multiple pencil colors to aid in the differentiation of the work for separate electrical systems. In general, record every substantive detail of the electrical work which previously is either not shown or has been field modified.
 - a. Show exact locations of underground cable and conduits including manholes and handholes, both interior and exterior, drawn to scale and fully dimensioned from building column lines.
 - b. Indicate mains and branches of wiring systems, with switchgear, panelboards, and control devices located and identified. Locate devices requiring maintenance.
 - c. Indicate changes in equipment ratings and locations.
 - d. Indicate scope of each change order and clarification, noting change order or clarification number.
2. Refer to General Conditions and Division 01 for additional requirements pertaining to record documents.

C. Submit the following upon completion of the work:

1. Certificate of Final Inspection from local authority.
2. Tabulation of all motors listing respective manufacturer, horsepower, nameplate voltage and current, actual running current after installation and overload heater rating.
3. O&M Manuals.

GENERAL

260501-3.1 QUALITY ASSURANCE. Materials shall comply with standards of UL, where standards have been established for the particular product and the various NEMA, ANSI, ASTM, IEEE, AEIC, ICEA or other publications referenced.

260501-3.2 MANUFACTURERS' NAMES AND CATALOG NUMBERS.

- A. In some instances, specific references have been made to one or more manufacturer's names and model or catalog numbers. Use of names and catalog numbers does not indicate that the equipment specified is necessarily an "off the shelf" item. Variances may be due to requirement of a desired finish, material, or other modification.

- B. In the case of panelboards, safety switches and other equipment requiring wire and cable terminations, verify that lug sizes and wiring gutters or space allowed for proper accommodation and termination of the wire and cables are adequate.

260501-3.3 PROTECTION OF ELECTRICAL EQUIPMENT.

- A. Electrical equipment shall be protected from the weather, in particular, dripping or splashing water, at all times during shipment, storage and construction. Manufacturer's recommendations with regard to storage and protection shall be followed. Should any apparatus be subjected to possible injury by water, it shall be thoroughly dried and put through a dielectric test, at the expense of the Contractor, to ascertain the suitability of the apparatus or it shall be replaced without additional cost to the Owner.
- B. Damaged or Defective Equipment: Inspect all electrical equipment and materials prior to installation. Damaged equipment and materials shall not be installed or placed in service until the Owner has been notified. Replace or repair to new condition and test repaired damaged equipment in compliance with industry standards at no additional cost to the Owner. Equipment required for the test shall be provided by the Contractor.

260501-3.4 WORKING CLEARANCES. Working clearances around equipment requiring electrical service shall comply with code requirements. Should there be apparent violations of clearances, notify the Authority before proceeding with connection or placement of equipment.

260501-3.5 COORDINATION.

- A. Installation studies shall be made to coordinate the electrical work and to coordinate with the work of other trades.
- B. For locations where several elements of electrical or combined mechanical and electrical work must be sequenced and positioned with precision in order to fit into the available space, prepare coordination drawings at accurate scale showing the actual physical dimensions required for the installation to assure proper integration of equipment with building systems.
- C. Request, in a timely manner, approved shop drawings from all required disciplines and verify final electrical characteristics before roughing power feeds to any equipment. When electrical data on approved shop drawings differs from contemplated design, make the necessary adjustments to the wiring, disconnect, and branch-circuit protection for the equipment actually installed.
- D. Damage from interference caused by inadequate coordination by the Contractor shall be rectified at no additional cost to the Owner.
- E. Access panels required for access to equipment or wiring shall be provided as specified in Division 08.

PRODUCTS

260501-4.1 RACEWAYS.

- A. EMT: ANSI C80.3, Zinc-Coated Steel, with set-screw or compression fittings.
- B. FMC: Zinc-Coated Steel.
- C. IMC: ANSI C80.6, Zinc-Coated Steel, with threaded fittings.
- D. RMC:
 - 1. GRS: ANSI C80.1, Galvanized Rigid Steel Conduit
 - 2. RAC: ANSI C80.5, Aluminum Rigid Conduit
- E. Raceway Fittings: Specifically designed for the raceway type with which used.

260501-4.2 CONDUCTORS.

- A. Conductors, No. 10 AWG and smaller: Solid or stranded copper.
- B. Conductors, larger than No. 10 AWG: Stranded copper.
- C. Insulation:
 - 1. Thermoplastic, rated 600 V, 75 degrees C minimum, Type THW, THHN/THWN, or USE.
 - 2. Thermosetting, rated 600 V, 90 degrees C minimum, Type XHHW or UF/RHW/XHHW.
- D. Wire connectors and splices: Units of size, ampacity rating, material, type, and class suitable for service indicated.

260501-4.3 BOXES, ENCLOSURES, AND CABINETS.

- A. Cast-metal outlet and device boxes: NEMA FB 1, Type FD, with gasketed cover.
- B. Cast-metal pull and junction boxes: NEMA FB 1, cast aluminum with gasketed cover.
- C. Finish: For enclosure or cabinet components, provide manufacturer's standard color paint applied after fabrication to factory-assembled surface raceways, enclosures, and cabinets before shipping.
- D. Handholes: Tier 5 Quazite 1324 CA or equal (13"x24"x11" interior dimensions). Box shall be composed of polymer concrete. Cover shall be marked "Electric".

260501-4.4 WIRING DEVICES.

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Bryant Electric, Inc./Hubbell subsidiary.

2. Eagle Electric Manufacturing Co., Inc.
3. Hubbell Incorporated; wiring device-Kellems.
4. Leviton Mfg. Company Inc.
5. Pass & Seymour/Legrand; Wiring Devices Div.

260501-4.5 SUPPORTING DEVICES.

- A. Material: Cold-formed steel, with corrosion-resistant coating acceptable to authorities having jurisdiction.
- B. Metal items for use outdoors or in damp locations: Hot-dip galvanized steel.
- C. Slotted-steel channel supports: Flange edges turned toward web, and 9/16-inch diameter slotted holes at a maximum of 2 inches O.C., in webs.
- D. Slotted-steel channel supports:
 1. Channel thickness: Selected to suit structural loading.
 2. Fittings and accessories: Products of the same manufacturer as channel supports.
- E. Nonmetallic channel and angle systems: Structural-grade, factory-formed, glass-fiber-resin channels and angles with 9/16-inch diameter holes at a maximum of 8 inches O.C., in at least one surface.
 1. Fittings and accessories: Products of the same manufacturer as channels and angles.
 2. Fittings and accessory materials: Same as channels and angles, except metal items may be stainless steel.
- F. Raceway and cable supports: Manufactured clevis hangers, riser clamps, straps, threaded C-clamps with retainers, ceiling trapeze hangers, wall brackets, and spring-steel clamps or click-type hangers.
- G. Cable supports for vertical conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug for non-armored electrical cables in riser conduits. Plugs have number and size of conductor gripping holes as required to suit individual risers. Body constructed of malleable-iron casting with hot-dip galvanized finish.
- H. Expansion anchors: Carbon-steel wedge or sleeve type.
- I. Toggle bolts: All-steel springhead type.
- J. Powder-driven threaded studs: Heat-treated steel.

EXECUTION

260501-5.1 INSTALLATION PROCEDURE.

- A. Erect equipment parts at such time and in such manner as to minimize interferences and delays in the execution of the work.
- B. Care shall be used in the erection and installation of all equipment and materials to avoid marring surfaces of the work. Damages shall be repaired at no additional cost to the Owner.
- C. Housekeeping pads 3" high must be provided under all floor mounted electrical equipment.
- D. Labels shall be provided for each motor controller, safety switch, relay, panelboard, contactor, timer, control device, meter and circuit breaker. Labels shall be laminated, phenolic strips 1/16 inch thick and engraved to show black letters on white background not less than 1/4 inch in height. Strips shall be of size to properly fit manufacturer's brackets and legible. Where brackets are not provided, labels shall be mounted with screws.

260501-5.2 PLACING EQUIPMENT IN SERVICE.

- A. Prior to energization, all equipment connections shall be tight and wiring tested for shorts and opens. Equipment enclosure interiors shall be clean and free of dirt and debris.
- B. Equipment requiring electrical service shall not be energized or placed in service until all interested parties have been duly notified and are present or have waived their right to be present. Where equipment to be placed in service involves service or connection from another contractor or the Owner, the Contractor shall notify the Owner in writing when the equipment will be ready. The Owner shall be notified as far in advance as possible, of the date the various items of equipment will be complete.

260501-5.3 SUPPORTS FOR CONDUIT AND EQUIPMENT.

- A. Shall be supported from structural members and not from metal deck and slab assemblies.
- B. All lighting fixtures shall be properly supported to structural members. Provide independent supports for the lighting fixtures. The support shall be in addition to the supports from the ceiling grid system.

260501-5.4 FINAL INSPECTION AND TESTING.

- A. The work shall be thoroughly tested in the presence of the Authority to demonstrate that the entire system is in proper working order and in accordance with the drawings and specifications. Each motor with its control shall be run as nearly as possible under operating conditions for a sufficient length of time to demonstrate correct alignment, wiring capacity, speed and satisfactory operation. All main switches and circuit breakers

shall be operated, but not necessarily at full load. During final inspection, furnish the test instruments and qualified personnel to perform complete testing. Costs of tests, including expenses incident to retest occasioned by defects and failures of the equipment to meet the specifications shall be paid by the Contractor.

METHOD OF MEASUREMENT

260501-6.1 Measurement for this item shall be for each unit installed and accepted by the Authority.

BASIS OF PAYMENT

Payment for this item shall be made at the contract price for each, which constitutes full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, supervision, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

Item No. 260501-1	Site Lighting (Including Light Pole, LED Fixture, and Foundation) – per each
-------------------	--

END OF ITEM 26 05 01

INTENTIONALLY LEFT BLANK

SECTION 260519

LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 – DESCRIPTION

1.1 DESCRIPTION

- A. This item shall consist of furnishing and installing power cables within conduit per these specifications at the locations shown on the plans. Also included are the installation of connections, cable splicing, cable testing and all incidentals necessary to place the cable in operating condition as a completed unit to the satisfaction of the OAR.

PART 2 – PRODUCTS

2.1 Materials

A. General

- I. Equipment and materials shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location. Cable shall be RoHS compliant and shall be UL listed.
- II. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the OAR) and replaced with materials that comply with these specifications at the Contractor's cost.
- III. All materials and equipment used to construct this item shall be submitted to the OAR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.
- IV. The data submitted shall be sufficient, in the opinion of the OAR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format. The OAR reserves the right to reject any and all equipment, materials, or procedures that do not meet the system design and the standards and codes, specified in this document.
- V. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

- B. Cable.
 - I. Conductors shall be copper complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors.
 - II. Insulation shall be Type THWN-2 or DLO complying with UL 83.
 - III. Cable shall be solid for No. 12 AWG and smaller and stranded for No. 10 AWG and larger.
- C. Connectors and Splices.
 - I. Connectors shall be factory fabricated of size, ampacity rating, material type and class for application and service indicated.

PART 3 – EXECUTION

3.1 CONSTRUCTION METHODS

- A. General
 - I. The Contractor shall install the specified cable in conduit at the approximate locations indicated on the plans.
 - II. Use manufacturer approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommend maximum pulling tensions and sidewall pressure values.
 - III. Use pulling means, including fish tape, cable, rope and basket-weave wire/cable grips that will not damage cables or raceway.
 - IV. The ends of all cables shall be sealed with moisture-seal tape providing moisture-tight mechanical protection with minimum bulk, or alternately, heat shrinkable tubing before pulling into the conduit and it shall be left sealed until connections are made. Where more than one cable is to be installed in a conduit, all cable shall be pulled in the conduit at the same time.
- B. Connections
 - I. Tighten electrical connectors and terminals according to manufacturer's published torque values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.
 - II. Make splice and terminations that are compatible with conductor material.
 - III. Surfaces of equipment or conductors being terminated or connected shall be prepared in accordance with industry standard practice and manufacturer's recommendations. All surfaces to be connected shall be thoroughly cleaned to remove all dirt, grease, oxides, nonconductive films, or other foreign material. Paints and other nonconductive coatings shall be removed to expose base metal. Clean all surfaces at least 1/4 inch (6.4 mm) beyond all sides of the larger bonded area on all mating surfaces. Use a joint compound suitable for the materials used in the connection. Repair painted/coated surface to original condition after

completing the connection.

- C. Testing.
 - I. Perform the following tests and inspections.
 - a) Inspect exposed sections of cable for physical damage and correct connection according to the plans.
 - b) Test bolted connections with a calibrated torque wrench.
 - c) Inspect compression applied connectors for correct cable match and indentation.
 - d) Inspect for correct identification.
 - e) Inspect cable jacket and condition.
 - f) Insulation resistance test on each conductor for ground and adjacent conductors. Apply a potential of 2000VIIDC for a one minute duration. The insulation resistance to ground of all new non-grounded conductors of new multiple circuits or circuit segments is not less than 100 megohms.
 - g) Continuity test on each conductor and cable.
 - h) Uniform resistance of parallel conductors.
 - II. Cables will be considered defective if they do not pass tests and inspections.
 - III. Prepare test and inspection reports to record the following.
 - a) Procedures used.
 - b) Results that comply with requirements.
 - c) Results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

PART 4 – METHOD OF MEASUREMENT

Measurement for this item shall be on a linear foot basis for all work installed complete and accepted by the Authority.

PART 5 – BASIS OF PAYMENT

Payment for this item will be made at the contract linear foot price, which constitutes full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, supervision, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

Item No. 260519-1 No. 10 and No. 10G, Type XHHN Cable, Installed in
Conduit – per linear foot

PART 5 - TESTING AND MATERIAL REQUIREMENTS

ANSI STD 81 Resistance

ASTM B3 Spec for Copper Wire

ASTM B8 Spec for Copper Conductors

NFPA 70 National Electrical Code

Note: Others as required by referenced specifications.

END OF ITEM 26 05 19

SECTION 260543

UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

PART 1 – DESCRIPTION

1.1 DESCRIPTION

- A. This item shall consist of underground electrical conduits installed per this specification at the locations and per the dimensions, designs, and details shown on the plans. This item shall include furnishing and installing of all underground conduits for electrical systems as shown in the plans. It shall also include all turfing trenching, backfilling, removal, and restoration of any paved or turfed areas; concrete encasement, mandrelling, pulling lines, duct markers, plugging of conduits, and the testing of the installation as a completed system ready for installation of cables per the plans and specifications. This item shall also include furnishing and installing conduits and all incidentals for providing positive drainage of the system.

PART 2 – PRODUCTS

2.1 MATERIALS

Materials shall meet the requirements shown on the plans and as specified below.

- A. General.
 - I. Equipment and materials shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location.
 - II. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the Authority) and replaced with materials that comply with these specifications at the Contractor's cost.
 - III. All materials and equipment used to construct this item shall be submitted to the Authority for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.
 - IV. The data submitted shall be sufficient, in the opinion of the Authority, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format. The Authority reserves the right to reject any and all equipment, materials, or procedures that do not meet the system design and

the standards and codes, specified in this document.

- V. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.
- B. Conduit.
- I. Rigid galvanized steel (RGS) conduit and fittings shall comply with ANSI C80.1 and UL 6.
 - II. PVC coated rigid galvanized conduit shall comply with NEMA RN1 and shall have a coating thickness of .040 inch, minimum.
 - III. Coating for fittings for PVC coated conduit shall have a minimum thickness of 0.040 inch, with overlapping sleeves protecting threaded joints.
 - IV. LFMC consisting of flexible steel conduit with PVC jacket shall comply with UL 360.
 - V. Schedule 80 PVC conduit shall comply with NEMA TC2 and UL 651 with matching fittings complying with NEMA TC3 by same manufacturer as duct.
 - VI. The type of solvent cement shall be as recommended by the conduit/fitting manufacturer.
 - VII. Conduit spacers shall be prefabricated interlocking units manufactured for the intended purpose and selected to provide a minimum duct spacing indicated while supporting the duct during backfilling.
 - VIII. Warning tape shall comply with Section 260553.
- C. Handholes and boxes for exterior underground wiring.
- I. Boxes and handholes for use underground systems shall be designed and identified as defined in NFPA 70, for intended location and application.
 - II. Boxes installed in wet areas shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 - III. Handholes shall meet AASHTO H-20 loading requirements.

PART 3 – EXECUTION

3.1 CONSTRUCTION METHODS

- A. General.
- I. The Contractor shall install the conduits at the approximate locations indicated on the plans. Coordinate layout and installation with final arrangement of other utilities, site grading and surface features as determined in the field.
- B. Conduit.
- I. Install conduit according to NEMA TCB2.

- II. Pitch conduit a minimum slope of 1:300 down towards handholes and away from buildings and equipment. Slope conduit from a high point between two handholes to drain in both directions.
 - III. Use 5 degree angle couplings from small changes in direction. Use manufactured long sweep bends with a minimum radius of 48 inches both horizontally and vertically.
 - IV. Use solvent cemented joints in conduits and fittings and make watertight according to manufacturer's written instructions.
 - V. Install a 200 lbf test nylon cord in empty conduits.
 - VI. Excavate trench bottom to provide firm and uniform support for conduit. Install top of duct 24 inches below finished grade. Support conduits on spacers. After installing first tier of duct, backfill and compact. Start at tie-in point and work toward end of duct run, leaving ducts at end of run free to move with expansion and contraction as temperature changes during this process. Repeat procedure after placing each tier. After placing last tier, hand place backfill to 4 inches over duct and hand tamp. Firmly tamp backfill around ducts to provide maximum supporting strength. Use hand tamper only. After placing controlled backfill over final tier, make final duct connections at end of run and complete backfilling with normal compaction.
 - VII. Place minimum 3 inches of sand as a bed for duct. Place sand to a minimum of 3 inches above top level of duct.
 - VIII. Install underground warning tape no less than 12 inches above conduit.
 - IX. Pull leather washer type duct cleaner, with graduate washer sizes, through full length of duct until duct cleaner indicates that the duct is clear of dirt and debris. Follow with rubber duct swab for final cleaning and to assist in spreading lubricant throughout ducts. Cap unused conduits with pressure type duct plug.
- C. Underground handholes and boxes.
- I. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.
 - II. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.
 - III. Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch above finished grade.
 - IV. Install handholes with bottom below frost line, below grade.
 - V. First paragraph below requires Contractor to select hardware to install and support cable. Delete if cable support is not required. If required, revise paragraph to refer Contractor to Drawings, and show specific requirements on Drawings for each enclosure.
- A. Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators, as required for installation and support of cables and conductors and as indicated. Select arm

lengths to be long enough to provide spare space for future cables but short enough to preserve adequate working clearances in enclosure.

- B. Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

PART 4 – METHOD OF MEASUREMENT

Measurement for electrical conduit shall be on a linear foot basis for the specified number of conduits in the duct installed and accepted by the Authority. Measurement for handholes shall be for each handhole installed and accepted by the Authority.

PART 5 – BASIS OF PAYMENT

Payment for electrical conduit shall be made at the contract linear foot price. Payment for handholes shall be made at the contract unit price per each. These prices shall constitute full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, supervision, equipment, tools and incidentals necessary to complete this item. Measurement and payment for conduit required for technology work shall be included in the associated Division 27 item.

Payment will be made under:

Item No. 260543-1	Direct Buried Electrical Conduit 1-Way, 1-Inch Schedule 40 PVC Installed in Turf – per linear foot
-------------------	---

END OF ITEM 26 05 43

Tampa International Airport

CONSTRUCTION PLANS FOR

**VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS**

**VOLUME II: NORTH AIR CARGO (NAC) SERVICE
ROAD RELOCATION AND APRON REHABILITATION**

HCAA No. 6530 18

RS&H No. 1004-1880-047

HILLSBOROUGH COUNTY AVIATION AUTHORITY

BOARD MEMBERS

**GARY W. HARROD - CHAIRMAN
ROBERT I. WATKINS - VICE CHAIRMAN
BRIG. GENERAL CHIP DIEHL - TREASURER
CITY OF TAMPA MAYOR JANE CASTOR - SECRETARY
HILLSBOROUGH COUNTY COMMISSIONER
HARRY COHEN - ASST. SECRETARY/ASST. TREASURER
CHIEF EXECUTIVE OFFICER - JOSEPH W. LOPANO**



MARCH 20, 2023

**ISSUED FOR
CONSTRUCTION**

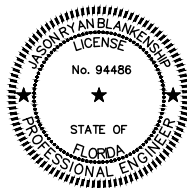
G000

THIS ITEM HAS BEEN SIGNED AND SEALED BY
JASON RYAN BLANKENSHIP ON MARCH 20, 2023.

PRINTED COPIES OF THIS DOCUMENT ARE NOT
CONSIDERED SIGNED AND SEALED AND THE
SIGNATURE MUST BE VERIFIED ON ELECTRONIC
COPIES.

RS&H INC.
1715 NORTH WESTSHORE BLVD.,
SUITE 600
TAMPA, FL 33607

JASON R. BLANKENSHIP, PE, NO. 94486
THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL
BE RESPONSIBLE FOR THE FOLLOWING SHEETS,
EXCEPT ELECTRIC (E) SHEETS, IN ACCORDANCE WITH
RULE 61G15-23.00, F.A.C.

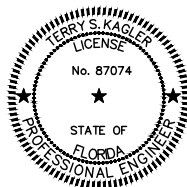


THIS ITEM HAS BEEN SIGNED AND SEALED BY TERRY
S. KAGLER ON MARCH 20, 2023.

PRINTED COPIES OF THIS DOCUMENT ARE NOT
CONSIDERED SIGNED AND SEALED AND THE
SIGNATURE MUST BE VERIFIED ON ELECTRONIC
COPIES.

RS&H INC.
1715 NORTH WESTSHORE BLVD.,
SUITE 600
TAMPA, FL 33607

TERRY S. KAGLER, PE, NO. 87074
THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL
BE RESPONSIBLE FOR THE ELECTRIC (E) SHEETS IN
ACCORDANCE WITH RULE 61G15-23.00, F.A.C.



NOTE:
DO NOT SCALE PRINTS
REPRODUCTION MAY CAUSE DISTORTION

CONSTRUCTION DATA

PRIME CONTRACTOR _____ WORK: COMMENCED _____ COMPLETED _____
COST: BIDS \$ _____ FINAL \$ _____
PROJECT ENGINEERS/INSPECTORS: _____
MAJOR SUBCONTRACTORS AND/OR SUPPLIERS: _____

ALL CONSTRUCTION PERFORMED UNDER THIS CONTRACT WAS
COMPLETED IN SUBSTANTIAL CONFORMITY WITH THE DRAWINGS, NOTES
AND SPECIFICATIONS CONTAINED IN THESE PLANS. ALL CHANGES FROM
THE PLANS AS BID, HAVE BEEN NOTED TO THE BEST OF OUR
KNOWLEDGE.

(CERTIFIED) _____ PROJECT ENGINEER _____ DATE _____

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

APPROVED _____ DATE _____



RS&H, Inc.
1715 N. Westshore Boulevard, Suite 600
Tampa, Florida 33607-3999
813-289-5550
www.rsandh.com
FL Cert Nos. AAC001886 EB0005620 LCC00210

SUBMITTED JASON R. BLANKENSHIP DATE MARCH 20, 2023
P. E. No. 94486

INDEX OF DRAWINGS	
DRAWING NO.	SHEET TITLE
GENERAL (G)	
G000	COVER SHEET
G001	INDEX OF SHEETS AND SUMMARY OF QUANTITIES
G002	OVERALL SITE LAYOUT PLAN
G003	OVERALL PHASING SCHEMATIC, NOTES, AND BARRICADE PLAN (VOLUMES I AND II)
G004	GENERAL AND STAGING AREA NOTES
G005	EROSION AND SEDIMENTATION CONTROL DETAILS
G006	PRE AND POST-DEVELOPMENT CONDITIONS

INDEX OF DRAWINGS: VOLUME I	
DRAWING NO.	SHEET TITLE
GENERAL (G) - VOLUME I	
G100	COVER AND INDEX OF DRAWINGS (VOLUME I)
G101	SAFETY AND SECURITY NOTES AND DETAILS (VOLUME I)
G102	CONTRACT LAYOUT PLAN (VOLUME I)
G103	OVERALL PHASING SCHEMATIC, NOTES, AND BARRICADE PLAN (VOLUME I)
G104	EROSION AND SEDIMENTATION CONTROL PLAN (VOLUME I)
G105	BORING LOCATION PLAN
G106	SOIL PROFILES (SHEET 1 OF 2)
G107	SOIL PROFILES (SHEET 2 OF 2)
G108	TEST HOLE DATA REPORT (SHEET 1 OF 3)
G109	TEST HOLE DATA REPORT (SHEET 2 OF 3)
G110	TEST HOLE DATA REPORT (SHEET 3 OF 3)
CIVIL (C) - VOLUME I	
C101	EXISTING CONDITIONS AND DEMOLITION PLAN (VOLUME I) (SHEET 1 OF 2)
C102	EXISTING CONDITIONS AND DEMOLITION PLAN (VOLUME I) (SHEET 2 OF 2)
C103	GEOMETRY AND PAVING PLAN (SHEET 1 OF 2)
C104	GEOMETRY AND PAVING PLAN (SHEET 2 OF 2)
C105	TRUCK COURT REHABILITATION PLAN (SHEET 1 OF 2)
C106	TRUCK COURT REHABILITATION PLAN (SHEET 2 OF 2)
C107	PAVEMENT MARKING PLAN (SHEET 1 OF 2)
C108	PAVEMENT MARKING PLAN (SHEET 2 OF 2)
C109	SIGN PANEL REPLACEMENT DETAILS
C110	PAVEMENT AND PAVEMENT MARKING SECTION AND DETAILS (SHEET 1 OF 3)
C111	PAVEMENT AND PAVEMENT MARKING SECTION AND DETAILS (SHEET 2 OF 3)
C112	PAVEMENT AND PAVEMENT MARKING SECTION AND DETAILS (SHEET 3 OF 3)
C113	METER AND GROUND BOX DETAILS
C114	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 1 OF 9)
C115	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 2 OF 9)
C116	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 3 OF 9)
C117	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 4 OF 9)
C118	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 5 OF 9)
C119	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 6 OF 9)
C120	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 7 OF 9)
C121	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 8 OF 9)
C122	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 9 OF 9)
C201	SPOT ELEVATION PLAN (SHEET 1 OF 2)
C202	SPOT ELEVATION PLAN (SHEET 2 OF 2)
CX100	CROSS SECTION KEY MAP
CX101	CROSS SECTIONS (SHEET 1 OF 2)
CX102	CROSS SECTIONS (SHEET 2 OF 2)

INDEX OF DRAWINGS: VOLUME II	
DRAWING NO.	SHEET TITLE
GENERAL (G) - VOLUME II	
G200	COVER AND INDEX OF DRAWINGS (VOLUME II)
G201	SAFETY AND SECURITY NOTES AND DETAILS (VOLUME II)
G202	SAFETY AND SECURITY PLAN
G203	CONTRACT LAYOUT PLAN (VOLUME II)
G204	OVERALL PHASING SCHEMATIC, NOTES, AND BARRICADE PLAN (VOLUME II)
G205	EROSION AND SEDIMENTATION CONTROL PLAN (VOLUME II)
CIVIL (C) - VOLUME II	
C201	EXISTING CONDITIONS AND DEMOLITION PLAN (VOLUME II) (SHEET 1 OF 2)
C202	EXISTING CONDITIONS AND DEMOLITION PLAN (VOLUME II) (SHEET 2 OF 2)
C203	SERVICE ROAD REPAIR PLAN (SHEET 1 OF 2)
C204	SERVICE ROAD REPAIR PLAN (SHEET 2 OF 2)
C205	APRON REHABILITATION PLAN (SHEET 1 OF 2)
C206	APRON REHABILITATION PLAN (SHEET 2 OF 2)
C207	PAVEMENT AND PAVEMENT MARKING SECTION AND DETAILS
ELECTRICAL (E) - VOLUME II	
E201	ELECTRICAL NOTES AND DETAILS
E202	ELECTRICAL NOTES AND DETAILS

SUMMARY OF QUANTITIES

ITEM	DESCRIPTION	UNIT	BID QUANTITY			CHANGE ORDERS					FINAL QUANTITY	REMARKS
			TOTAL	VOL. 1	VOL. 2	CCO #1 (FINAL)	CCO #2	CCO #3	CCO #4	CCO #5		
GENERAL												
C-103-1	SAFETY AND SECURITY	LS	1									
C-104-1	PROJECT SURVEY AND STAKEOUT	LS	1									
C-105-1	MOBILIZATION	LS	1									
C-106-1	MAINTENANCE OF TRAFFIC AND TEMPORARY CONSTRUCTION ITEMS	LS	1									
FL-104-1	TEMPORARY EROSION AND SEDIMENTATION CONTROL	LS	1									
CIVIL												
FL-120-1	EXCAVATION AND EMBANKMENT (INCLUDING TOPSOIL STRIPPING)	CY	925	650	275							
FL-160-1	STABILIZED SUBGRADE 12" THICK (LBR 40)	SY	3,200	2,400	800							
FL-285-1	6" RECYCLED CONCRETE AGGREGATE (RCA) BASE COURSE	SY	2,400	2,400								
FL-285-2	8" RECYCLED CONCRETE AGGREGATE (RCA) BASE COURSE	SY	800		800							
FL-327-1	2" BITUMINOUS PAVEMENT MILLING	SY	2,100	800	1,300							
FL-334-1	2" BITUMINOUS SURFACE COURSE (FDOT TYPE SP-12.5)	TN	570	350	220							
FL-350-1	SPALL REPAIR - CONCRETE PAVEMENT (VARIABLE DEPTH)	CF	50	50								
FL-350-2	CLEANING & SEALING JOINTS - CONCRETE PAVEMENT	LF	54,350	15,000	39,350							
FL-350-3	CLEANING & SEALING JOINTS - CONCRETE PAVEMENT (PETROLEUM RESISTANT)	LF	1,200		1,200							
FL-350-4	CLEANING & SEALING CRACKS - CONCRETE PAVEMENT	LF	15,200	5,000	10,200							
FL-350-5	CLEANING & SEALING CRACKS - CONCRETE PAVEMENT (PETROLEUM RESISTANT)	LF	250		250							
FL-353-1	CONCRETE PAVEMENT SLAB REPLACEMENT (6" THICK)	CY	35	35								
FL-520-1	CONCRETE CURB (FDOT TYPE D)	LF	1,000	1,000								
FL-570-1	PERFORMANCE TURF (SODDING)	SY	2,000	1,500	500							
FL-635-1	VEHICLE RATED METER & FIBER BOXES (REMOVE & REPLACE)	EA	4	4								
FL-700-1	SIGN REMOVAL & RELOCATE	EA	4	4								
FL-700-2	MULTI-POST SIGN REPLACEMENT (EXISTING POSTS)	EA	2	2								
FL-710-1	PAINTED PAVEMENT MARKINGS	SF	8,700	6,500	2,200							
P-101-1	ROUTE AND SEAL JOINT AND ASPHALT SURFACE CRACKING	LF	1,500	1,500								
P-108-1	PAVEMENT MARKING REMOVAL	SF	3,570	1,470	2,100							
P-631-1	REFINED COAL TAR EMULSION WITH ADDITIVES FOR SLURRY COAT (TWO COATS WITH SAND)	SY	5,500	5,500								
260501-1	SITE LIGHTING (INCLUDING LIGHT POLE, LED FIXTURE, AND FOUNDATION)	EA	7		7							
260519-1	NO. 10 AND 10G, TYPE XHHN CABLE, INSTALLED IN CONDUIT	LF	1,500		1,500							
260543-1	DIRECT BURIED ELECTRICAL CONDUIT 1-WAY, 1-INCH SCHEDULE 40 PVC INSTALLED IN TURF	LF	1,250		1,250							


ISSUED FOR CONSTRUCTION

HILLSBOROUGH COUNTY
AVIATION AUTHORITY

DATE: _____
BY: _____

REVISIONS: _____

1715 N. Washington Blvd., Suite 800
Tampa, Florida 33607-3999
www.rsandh.com
FL EIT 00008801
EIT 00008801, LCC00001910





PROJECT NAME: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE: INDEX OF SHEETS AND SUMMARY OF QUANTITIES

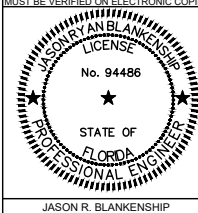
DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

G001

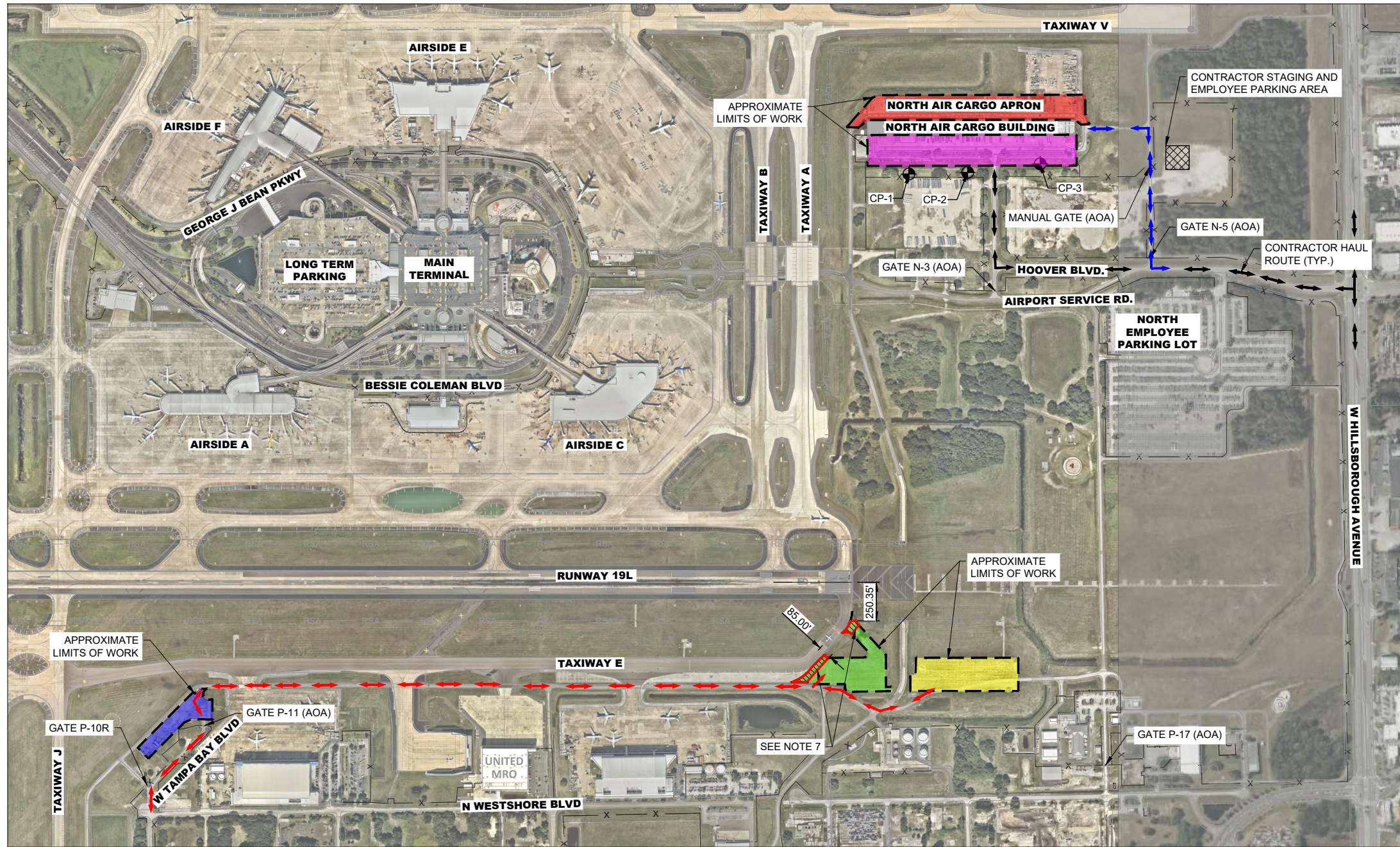
SHEET NO. _____



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



JASON R. BLANKENSHIP
FL PE NO. 94486



LEGEND

- APPROXIMATE LIMITS OF WORK
- SERVICE ROAD RELOCATION ACCESS AND HAUL ROUTE
- TRUCK COURT REPAIRS ACCESS AND HAUL ROUTE
- APRON REHABILITATION ACCESS AND HAUL ROUTES
- CONTRACTOR STAGING AND EMPLOYEE PARKING AREA
- SERVICE ROAD RELOCATION (VOLUME II)
- NAC PARKING EXPANSION AND TRUCK COURT REPAIRS (VOLUME I)
- APRON 1 REHABILITATION (VOLUME II)
- APRON 2 REHABILITATION (VOLUME II)
- APRON 3 REHABILITATION (VOLUME II)
- x --- EXISTING FENCE
- o --- CONTROL POINT

NORTH

0 200 400 800 FEET

REV	DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1715 N. WILSON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL. LICENSE NO. EC 0000820
EIN: 80000020



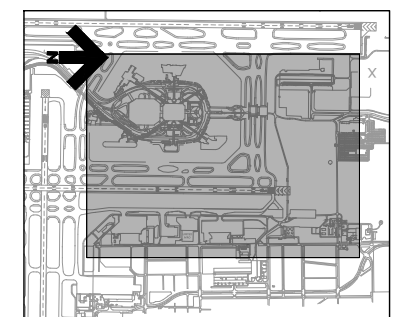
NOTES

- FOR GENERAL NOTES AND CONTRACTOR'S STAGING AREA NOTES, SEE SHEET G004.
- ACCESS TO THE SITE SHALL BE AS SHOWN ON THIS SHEET OR AS APPROVED BY THE AUTHORITY. THE CONTRACTOR SHALL NOT UTILIZE ALTERNATIVE ROUTES UNLESS PREVIOUSLY APPROVED BY THE AUTHORITY.
- CONTRACTOR EMPLOYEES SHALL PARK IN THE DESIGNATED PARKING AREA. CONTRACTOR EMPLOYEE PERSONAL VEHICLES ARE NOT ALLOWED ON THE AIRFIELD AT ANY TIME.
- THE CONTRACTOR STAGING AREA IS LOCATED OUTSIDE OF THE AIR OPERATIONS AREA (AOA).
- CONTRACTOR SHALL IMMEDIATELY CLEAN UP ALL DEBRIS RESULTING FROM THE MOVEMENT OF CONSTRUCTION TRAFFIC ON ALL ROADS OPEN TO TRAFFIC.
- CONTRACTOR SHALL PROVIDE TEMPORARY DETOURS FOR ROADS IN APRONS 1 AND 3 USING TRAFFIC CONES.
- CONTRACTOR SHALL CONTACT AIRPORT OPERATIONS TO OBTAIN CLOSURES OF TAXIWAY E. REFERENCE SHEET C205 FOR ADDITIONAL INFORMATION ON CLOSURES.

CONTROL POINT TABLE

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-1	1328855.05	483057.71	19.73'	SET PK NAIL & DISK, LB NO. 5122
CP-2	1329237.26	483061.38	19.34'	SET PK NAIL & DISK, LB NO. 5122
CP-3	1329710.31	483021.47	19.53'	SET PK NAIL & DISK, LB NO. 5122

*HORIZONTAL COORDINATES SHOWN ARE BASED ON NORTH AMERICAN DATUM 1983 (2011 ADJUSTMENT). VERTICAL COORDINATES SHOWN ARE BASED ON NORTH AMERICAN VERTICAL DATUM 1988.



KEY MAP
ISSUED FOR CONSTRUCTION

THIS SHEET TO BE PRINTED IN COLOR

Sunshine State 811 One Call

THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
FL. PE NO. 94486

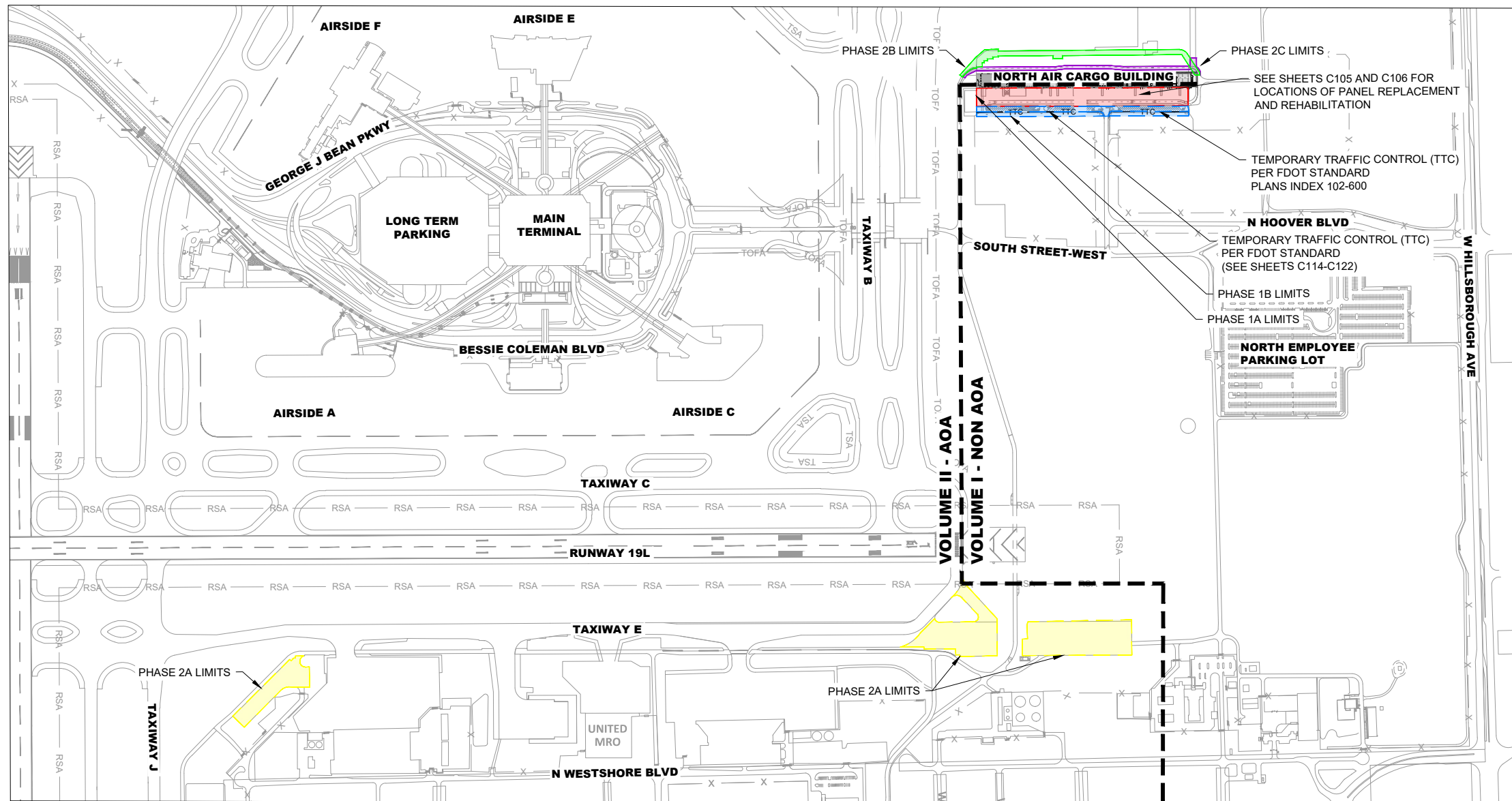
PROJECT NAME: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE: OVERALL SITE LAYOUT PLAN

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

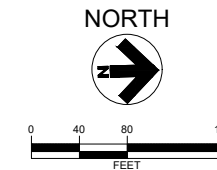
G002

SHEET NO.:



PHASING NOTES

- FOR CONTRACT LAYOUT PLANS AND ASSOCIATED NOTES, REFER TO SHEETS G102 (VOLUME I) AND G203 (VOLUME II).
- THE PHASING SCHEDULE SHOWN ON THIS SHEET IS INTENDED TO GIVE THE CONTRACTOR A GENERAL IDEA OF THE SEQUENCE OF WORK WHICH WILL BE CONSIDERED ACCEPTABLE BY HCAA. THE CONTRACTOR SHALL SUPPLY A COMPLETE AND DETAILED CONSTRUCTION SCHEDULE TO THE AUTHORITY FOR REVIEW AND APPROVAL PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL NOT REVISE THE SCHEDULE WITHOUT THE WRITTEN APPROVAL OF THE AUTHORITY.
- THE DURATIONS INCLUDED FOR PHASING ARE CONSECUTIVE CALENDAR DAYS.
- WORK HOURS SHALL BE 7AM TO 7PM, MONDAY THRU FRIDAY, UNLESS OTHERWISE NOTED.
- SEE SHEETS C114-C122 (VOLUME I) FOR TEMPORARY CONSTRUCTION ITEMS NOTES AND DETAILS.
- NUMERICAL SEQUENCE MAY BE MODIFIED THROUGH TENANT COORDINATION AND APPROVAL BY OWNER.



PHASING DESCRIPTIONS

PHASE 0 - MOBILIZATION - 30 DAYS

THE CONTRACTOR SHALL UTILIZE THIS PHASE TO MOBILIZE FOR CONSTRUCTION. MOBILIZATION SHALL INCLUDE, BUT NOT BE LIMITED TO, THE DEVELOPMENT OF A COMPREHENSIVE CONSTRUCTION SCHEDULE, PREPARATION AND SUBMISSION OF ALL SHOP DRAWINGS FOR REVIEW AND APPROVAL, OBTAINING SUFFICIENT QUANTITY OF AOA ACCESS BADGES, ORDERING OF MATERIALS (SPECIAL ATTENTION SHALL BE PAID TO ITEMS WITH LONG LEAD TIMES), ETC. IT IS THE INTENT OF THIS PHASE TO PROVIDE THE CONTRACTOR WITH SUFFICIENT TIME TO COMPLETE ALL TASKS REQUIRED TO FULLY MOBILIZE BEFORE BREAKING GROUND ON THE CONSTRUCTION SITE. THE CONTRACTOR HAS 30 CONSECUTIVE CALENDAR DAYS FOR PHASE 0.

ADDITIONALLY, THE PRE-CONSTRUCTION CONFERENCE SHALL BE CONDUCTED DURING THIS PHASE TO FAMILIARIZE THE CONTRACTOR WITH THE PROJECT SITE, OPERATIONS REQUIREMENTS AND OTHER GENERAL PROJECT REQUIREMENTS.

PHASE 1 - TRUCK COURT REPAIR AND PARKING EXPANSION

PHASE 1 GENERALLY CONSISTS OF REMOVAL AND REPLACEMENT OF DAMAGED CONCRETE PANELS, SPALL REPAIRS, CRACK ROUTING AND SEALING, EXCAVATION AND EMBANKMENT, STABILIZATION, MILLING, GROUND BOX ADJUSTMENTS AND REPLACEMENTS, ASPHALT PAVING, AND STRIPING OUTSIDE OF THE AOA. THE CONTRACTOR HAS 90 CONSECUTIVE CALENDAR DAYS FOR PHASE 1.

PHASE 1A - TRUCK COURT REPAIRS - 90 DAYS

PHASE 1A GENERALLY CONSISTS OF REMOVAL AND REPLACEMENT OF DAMAGED CONCRETE PANELS, SPALL REPAIRS, CRACK ROUTING AND SEALING, AND STRIPING. THE CONTRACTOR HAS 90 CONSECUTIVE CALENDAR DAYS FOR PHASE 1A. WORK IN THE PHASE MAY PROGRESS CONCURRENTLY WITH PHASE 2 UPON APPROVAL OF OWNER.

PHASE 1B - PARKING EXPANSION - 45 DAYS

PHASE 1B GENERALLY CONSISTS OF EXCAVATION, EMBANKMENT, STABILIZATION, MILLING, GROUND BOX ADJUSTMENT AND REPLACEMENT, ASPHALT PAVING, SEAL COAT APPLICATION, AND STRIPING. THE CONTRACTOR HAS 45 CONSECUTIVE CALENDAR DAYS FOR PHASE 1B.

PHASE 2 - SERVICE ROAD RELOCATION AND APRON REHABILITATION

PHASE 2 GENERALLY CONSISTS OF PAVEMENT MARKINGS, EARTHWORK, BASE CONSTRUCTION, LIMITED ASPHALT PAVING, AND JOINT AND CRACK SEALING WITHIN THE AOA. THE CONTRACTOR HAS 45 CONSECUTIVE CALENDAR DAYS FOR PHASE 2.

PHASE 2A - APRON REHABILITATION - 15 DAYS

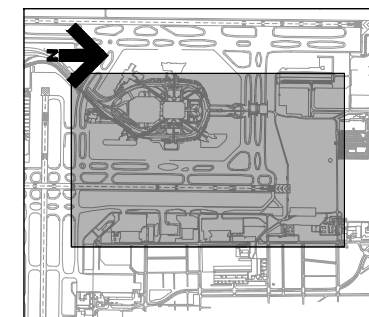
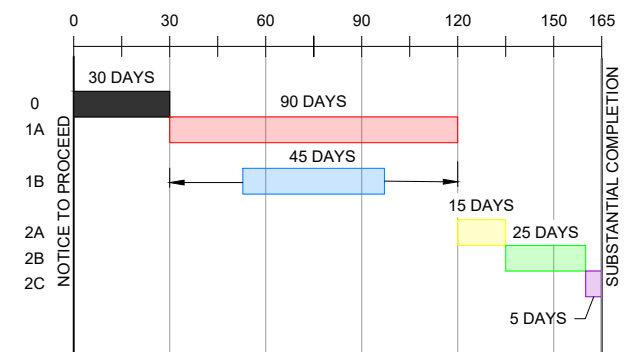
PHASE 2A GENERALLY CONSISTS OF JOINT AND CRACK SEALING AND LIMITED PAVEMENT MARKING REPLACEMENT.

PHASE 2B - APRON SERVICE ROAD RELOCATION - 25 DAYS

PHASE 2B CONSISTS OF ALL CONSTRUCTION ACTIVITIES REQUIRED TO CONSTRUCT THE NORTH AIR CARGO APRON SERVICE ROAD. THIS WORK INCLUDES PAVEMENT MARKINGS, EARTHWORK, BASE CONSTRUCTION, ILLUMINATION, AND LIMITED ASPHALT PAVING. NOTE THAT THE EXISTING SERVICE ROAD MARKINGS SHALL REMAIN UNTIL THE PROPOSED SERVICE ROAD IS OPERATIONAL. THE CONTRACTOR HAS 25 CONSECUTIVE CALENDAR DAYS FOR PHASE 2B.

PHASE 2C - EXISTING SERVICE ROAD MARKING REMOVAL - 5 DAYS

PHASE 2C CONSISTS OF ALL CONSTRUCTION ACTIVITIES REQUIRED TO OBLITERATE THE EXISTING NORTH AIR CARGO APRON SERVICE ROAD MARKINGS ON ASPHALT PAVEMENT AND REMOVE MARKINGS ON CONCRETE PAVEMENT. THE CONTRACTOR HAS 5 CONSECUTIVE DAYS FOR PHASE 2C.



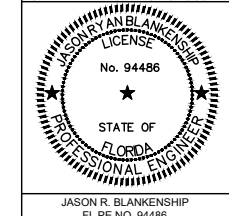
KEY MAP

ISSUED FOR CONSTRUCTION

THIS SHEET TO BE PRINTED IN COLOR



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



BR	
REVISIONS	
DATE	
HILLSBOROUGH COUNTY AVIATION AUTHORITY TAMPA, FLORIDA 	
PROJECT NAME	NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS
SHEET TITLE	OVERALL PHASING SCHEMATIC, NOTES, AND BARRICADE PLAN (VOLUMES I AND II)
DESIGNED:	CJT
DRAWN:	JDH
CHECKED:	MRB
HCAA NO.:	6530 18
JOB NO.:	204-1880-047
DATE:	MARCH 20, 2023
SHEET NO.:	G003

GENERAL NOTES

- HAUL ROUTES:** LOCATION OF HAUL ROUTES ON THE AIRPORT SITE MUST BE AS SPECIFIED ON THE PLANS OR AS APPROVED BY THE AUTHORITY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES (STATE HIGHWAYS, COUNTY ROADS OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. ON-SITE HAUL ROUTES MUST BE MAINTAINED BY THE CONTRACTOR AND MUST BE RESTORED TO THEIR ORIGINAL CONDITION UPON COMPLETION OF BEING USED AS A HAUL ROUTE. THE BEFORE AND AFTER CONDITION OF ON-SITE HAUL ROUTES MUST BE JOINTLY INSPECTED AND CONDITION DETERMINED BY THE CONTRACTOR AND THE AUTHORITY. FENCING, DRAINAGE, GRADING AND OTHER MISCELLANEOUS CONSTRUCTION REQUIRED TO CONSTRUCT TEMPORARY HAUL ROUTES OR ACCESS POINTS ON THE AIRPORT WILL BE THE CONTRACTOR'S TOTAL RESPONSIBILITY AND MUST BE APPROVED BY THE AUTHORITY PRIOR TO THE WORK. ALL ON-SITE FAA ACCESS ROADS TO FAA FACILITIES MUST REMAIN OPEN AND MAINTAINED AT ALL TIMES. PHOTOGRAPHS AND A VIDEO OF THE HAUL ROUTES SPECIFIED BY THE PLANS MUST BE PROVIDED BY THE CONTRACTOR BEFORE AND AFTER CONSTRUCTION TO THE AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO HAUL ROUTES RESULTING FROM CONSTRUCTION TRAFFIC. HAUL ROADS ARE TO REMAIN CLEAN AT ALL TIMES. ALL COSTS ARE TO BE INCLUDED IN THE C-106-1 MAINTENANCE OF TRAFFIC AND TEMPORARY CONSTRUCTION ITEMS PAY ITEM.
- ANY DAMAGE TO STATE, COUNTY, LOCAL OR AIRPORT FACILITY ROADWAYS CAUSED BY THE CONTRACTOR'S HAULING OR CONSTRUCTION EQUIPMENT MUST BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE AUTHORITY AT CONTRACTOR'S SOLE EXPENSE.
- THE CONTRACTOR MUST MAINTAIN AT ALL TIMES A SECURED AIR OPERATIONS AREA (AOA). THIS MUST INCLUDE THE TEMPORARY FENCING AND NECESSARY ACCESS GATES, AS REQUIRED. ACCESS GATES TO THE AOA LOCATIONS MUST BE AS SHOWN ON THE PLANS, OR APPROVED BY THE AUTHORITY. IF AN AOA ACCESS GATE IS REQUIRED, A SECURITY GUARD IS REQUIRED AT ALL TIMES WHEN AN ACCESS GATE IS IN USE. NO OTHER SITE ACCESS WILL BE ALLOWED. SECURITY GUARDS MUST UNDERGO A FINGERPRINT-BASED BACKGROUND CHECK AND OBTAIN A SIDA BADGE FROM HCAA. THE COST OF THE SIDA BADGE AND SECURITY GUARD MUST BE THE CONTRACTORS RESPONSIBILITY.
- FOR MANUAL GATES ONLY, THE CONTRACTOR MUST INSTALL ITS OWN LOCK AT EACH GATE AUTHORIZED FOR USE IN THIS CONTRACT. THE CONTRACTOR MUST INSTALL ITS LOCK BY INTERLOCKING TO THE EXISTING HCAA LOCK ON THE GATE. THE CONTRACTOR MUST PROVIDE 4 DUPLICATE KEYS FOR EACH LOCK TO THE AUTHORITY. LOCK I.D. TAGS MUST BE PLACED ON EACH LOCK BY THE CONTRACTOR WITH THE COMPANY NAME AND EMERGENCY CONTACT NUMBER INSCRIBED ON THE SURFACE. THIS REQUIREMENT DOES NOT APPLY TO AUTOMATIC TYPE ACCESS CONTROLLED GATES.
- THE CONTRACTOR'S VEHICLES AND EQUIPMENT MUST BE RESTRICTED TO THE CONSTRUCTION LIMITS AND CONTRACTOR'S STAGING AREA ONLY. DESIGNATED PARKING FOR THE CONTRACTOR'S EMPLOYEES VEHICLES MUST BE RESTRICTED TO THE CONTRACTORS STAGING AREA OR OTHER LOCATIONS IDENTIFIED BY THE AUTHORITY. THE CONTRACTOR MUST BE RESPONSIBLE FOR TRANSPORTING ALL PERSONNEL BETWEEN THE STAGING AREA AND THE PROJECT WORK AREAS. OVERNIGHT EQUIPMENT STORAGE MUST BE AT THE CONTRACTORS STAGING AREA ONLY.
- LIMITS OF WORK MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR, ENGINEER, AND AUTHORITY PRIOR TO BEGINNING WORK.
- THERE ARE EXISTING UNDERGROUND UTILITIES IN THE PROJECT WORK AREA. LOCATION, ELEVATION, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN IN ACCORDANCE WITH THE BEST INFORMATION AVAILABLE AT TIME OF THE PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY ACCURATE. IT MUST BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY UNDERGROUND UTILITY LOCATED, FLAGGED AND IDENTIFIED PRIOR TO CONSTRUCTION, AND AT A MINIMUM HAVE A SUNSHINE STATE "ONE CALL" PLACED (DIAL 811 OR 1-800-432-4770). HCAA WILL BE NOTIFIED AS A PART OF THE "ONE CALL" PROCESS. ANY DAMAGE DONE TO ANY EXISTING UTILITIES MUST BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MUST IMMEDIATELY REPAIR ANY UTILITY DAMAGED BY HIS ACTIONS AT NO ADDITIONAL COST TO THE OWNER.
- PROTECTION AND REPAIR OF DAMAGE TO EXISTING CABLES:**
LOCATION OF EXISTING FAA UNDERGROUND CABLES WILL BE FLAGGED ONE TIME BY THE LOCAL AIRWAY FACILITIES SECTOR OFFICE PERSONNEL IF APPLICABLE THROUGH COORDINATION WITH THE AUTHORITY. THESE FLAGS MUST BE PROTECTED AND MAINTAINED BY THE CONTRACTOR AT ALL TIMES. IF FLAGS ARE LOST OR REMOVED BY THE CONTRACTOR, THEY WILL BE FLAGGED AGAIN AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING UTILITY LOCATIONS ON NON-FAA UNDERGROUND CABLES. ALL UNDERGROUND CABLES MUST BE PROTECTED AND DAMAGES REPAIRED EXPEDITIOUSLY AT NO ADDITIONAL COST TO THE OWNER.
- CONSTRUCTION LIMITS:**
ALL CONTRACTOR VEHICLES AND TRAFFIC MUST REMAIN WITHIN THE DESIGNATED CONSTRUCTION LIMITS OR HAUL ROUTES. ABSOLUTELY NO CONTRACTOR VEHICLES WILL BE ALLOWED ON OTHER AIRFIELD OPERATIONS AREAS.
- NIGHTTIME CONSTRUCTION LIGHTING:**
WHEN NIGHT WORK IS PERMITTED OR REQUIRED, THE CONTRACTOR MUST PROVIDE SUFFICIENT LIGHTING CAPABLE OF FULLY ILLUMINATING THE WORK AREA. THE CONTRACTOR MUST COORDINATE THE DIRECTION AND ANGLE OF THE LIGHTS WITH THE AUTHORITY TO PREVENT IMPAIRING THE VISION OF AIRCRAFT OPERATIONS AND THE FAA AIR TRAFFIC CONTROL TOWER.

GENERAL NOTES (CONTINUED)

- ALL MATERIALS TO BE INSTALLED MUST BE APPROVED BY THE ENGINEER AND THE AUTHORITY PRIOR TO INSTALLATION.
- WASTE DISPOSAL:** ALL WASTE MATERIAL GENERATED AS PART OF CONSTRUCTION MUST BE REMOVED FROM THE CONSTRUCTION AREA AND BE DISPOSED OF OFF-SITE IN A LEGAL MANNER. NO MATERIAL SHALL BE WASTED ON THE AIRPORT SITE.
- ANY EXISTING TURF AREA DISTURBED OUTSIDE THE LIMITS OF WORK AS A RESULT OF THE CONTRACTOR'S WORK EFFORT MUST BE SODDED AT THE AUTHORITY'S DISCRETION IN ACCORDANCE WITH THE AIRPORT'S DESIGN STANDARDS AND CONTRACT SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE. ANY SOD INSTALLED MUST MATCH THE EXISTING BAHIA SOD SPECIES.
- THE CONTRACTOR MUST PROVIDE A FULL-TIME ON-SITE SUPERVISOR FOR THE DURATION OF THE PROJECT. FOR OTHER SUPERVISOR REQUIREMENTS REFER TO THE PROJECT SPECIFICATIONS.
- THE CONTRACTOR MUST BE RESPONSIBLE FOR THE COMPLETE STAKE-OUT OF THE PROJECT (I.E., LINE, GRADE, SLOPE STAKE, UTILITY RELOCATIONS OR ANY OTHER STAKE OUT THAT MAY BE REQUIRED TO COMPLETE THE PROJECT) IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ANY AND ALL EXPENSES INCURRED FOR THIS WORK MUST BE INCLUDED IN THE UNIT PRICE BID FOR THE C-104-1 SURVEY AND STAKEOUT PAY ITEM.
- THE CONTRACTOR MUST PROTECT PRIVATE PROPERTY. ANY DAMAGE CAUSED BY THE CONTRACTOR IN THE PERFORMANCE OF HIS WORK MUST BE CORRECTED TO THE SATISFACTION OF THE AUTHORITY AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR MUST COORDINATE THE WORK OF THIS PROJECT WITH THE AUTHORITY, HCAA, ALL TENANTS, OTHER CONTRACTORS AND OTHER ON GOING PROJECTS AT THE SITE AS REQUIRED.
- WORK AREA CLEANLINESS:** THE CONTRACTOR'S WORK AND STAGING AREAS ARE IN VERY CLOSE PROXIMITY TO ACTIVE AIRCRAFT OPERATIONS. THE AIRCRAFT'S JET ENGINES ARE SUSCEPTIBLE TO INTAKE OF MATERIAL FROM PAVEMENT SURFACES OR SITE AREAS WHICH COULD CAUSE DAMAGE TO THE AIRCRAFT. THE CONTRACTOR MUST TAKE SPECIAL CARE TO ENSURE THE SITE IS CLEAN AND FREE OF DEBRIS AT ALL TIMES. UPON COMPLETION OF A DAY'S WORK, THE CONTRACTOR MUST INSPECT ALL PAVEMENTS AND SITE AREAS IN THE IMMEDIATE VICINITY OF THE DAY'S WORK AREA FOR DEBRIS PRIOR TO LEAVING THE SITE. ANY DEBRIS MUST BE REMOVED FROM THE SITE BY MECHANICAL SWEEPER, WATER TRUCK, OR OTHER APPROVED METHOD. PAYMENT FOR THIS WORK SHOULD BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION WILL BE MADE FOR CLEANING EFFORTS.

CONTRACTOR STAGING AREA NOTES

- THE CONTRACTOR MUST COORDINATE WITH THE AUTHORITY DURING THE MOBILIZATION PHASE FOR ESTABLISHMENT OF A STAGING AREA. THE CONTRACTOR MUST UTILIZE THIS LOCATION THROUGHOUT CONSTRUCTION.
- IF REQUESTED BY THE CONTRACTOR, ADDITIONAL AREAS ADJACENT TO THE WORK SITE MAY BE MADE AVAILABLE FOR USE BY THE CONTRACTOR AS A STAGING AREA AT THE DISCRETION OF THE OWNER.
- THE EXACT LOCATIONS AND DIMENSIONS OF THE STAGING AREA WILL BE CONFIRMED IN THE FIELD BY THE OWNER.
- THE STAGING AREA LOCATION DOES NOT HAVE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING ANY UTILITIES REQUIRED FOR THE CONTRACTOR'S OWN USE AND ANY UTILITIES REQUIRED WILL BE AT THE CONTRACTOR'S EXPENSE. IT MUST BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL ASSOCIATED UTILITY CONNECTIONS FOR THE STAGING AREA WITH THE LOCAL AUTHORITIES.
- AT THE CONCLUSION OF CONSTRUCTION, AND BEFORE FINAL ACCEPTANCE, THE STAGING AREA AND EMPLOYEE PARKING AREA MUST BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION. THE AREA MUST BE GRADED TO DRAIN AS EXISTING AND SODDED IF NECESSARY PER THE PROJECT DRAWINGS AND SPECIFICATIONS. COST MUST BE CONSIDERED INCIDENTAL TO THE C-105-1 MOBILIZATION PAY ITEM. ANY DAMAGE DONE TO EXISTING FENCE, PAVEMENT, CURBS, ETC. AS A RESULT OF THE CONTRACTORS FORCES MUST BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- NO STAGING ON ANY ACTIVE AIRFIELD PAVEMENTS OR ROADWAYS WILL BE ALLOWED AT ANY TIME.
- THE CONTRACTOR MUST ESTABLISH AND MAINTAIN FENCING OR BARRICADES TO PREVENT UNAUTHORIZED OR INADVERTENT ACCESS TO THE STAGING AREA BY OTHERS.

REVISED	BY

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H

1715 N. WASHINGTON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3998
WWW.RSANDH.COM
FL. LICENSE NO. EC-00008201-LCC000819

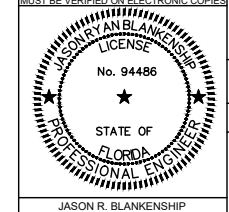


PROJECT NAME
NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
GENERAL AND STAGING AREA NOTES



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: CJT
DRAWN: JDH
CHECKED: JRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

SHEET NO. G004

GENERAL EROSION CONTROL NOTES

1. THE PURPOSE OF EROSION CONTROL IS TO PREVENT POLLUTION OF BODIES OF WATER ON OR ADJACENT TO THE PROJECT SITE. IN ADDITION, EROSION CONTROL MUST PREVENT DAMAGE TO ADJACENT PROPERTY, AIRPORT PROPERTY AND WORK IN PROGRESS.
2. ALL EROSION AND SEDIMENTATION MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. CARE AND MAINTENANCE OF EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH DRAWINGS, TECHNICAL SPECIFICATIONS, APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) OR AS DIRECTED BY THE AUTHORITY.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT ALL EROSION CONTROL DEVICES PERIODICALLY AND AFTER EVERY RAINFALL. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES MUST BE MADE IMMEDIATELY.
4. CONTRACTOR IS RESPONSIBLE FOR STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
5. CONTRACTOR MUST SUBMIT AND RECEIVE APPROVAL ON THROUGH THE SHOP DRAWING SUBMITTAL PROCESS AN EROSION CONTROL AND DUST CONTROL PLAN PRIOR TO ANY LAND DISTURBING ACTIVITY. EROSION CONTROL PLAN MUST INCLUDE PROPOSED LOCATION OF SILT FENCE, INLET/OUTLET PROTECTION, AND OTHER EROSION CONTROL MEASURES AS NECESSARY.
6. PAYMENT FOR EROSION CONTROL MUST BE INCLUSIVE OF THE TEMPORARY EROSION AND SEDIMENTATION CONTROL PAY ITEM. THERE MUST BE NO SEPARATE MEASUREMENT OR PAYMENT FOR PLACEMENT, CARE, MAINTENANCE, REMOVAL AND SITE RESTORATION OF ANY EROSION CONTROL MATERIALS, EXCEPT AS NOTED FOR SODDING.

SILT FENCE NOTES

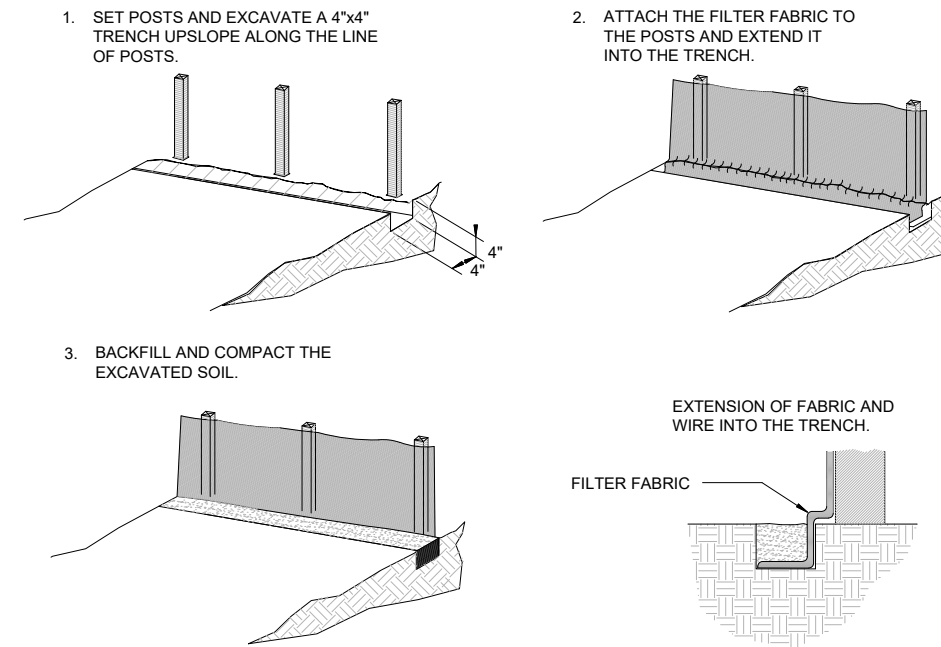
1. SILT FENCE MUST BE INSTALLED AT THE PERIMETER OF ALL DISTURBED LAND AREAS.
2. SILT FENCE SEDIMENT BARRIER MUST BE IN PLACE PRIOR TO GRADING.
3. SILT FENCE AND FILTER FABRIC MUST BE ENTRENCHED, 4 INCHES DEEP BY 4 INCHES WIDE, ON THE UPSLOPE SIDE OF THE SILT FENCE.
4. WHEN JOINTS ARE NECESSARY, THE FABRIC MUST BE SPLICED AT A SUPPORT POST WITH A MINIMUM 12 INCH OVERLAP AND SECURELY SEALED.
5. POST FOR SILT FENCES MUST BE 2.5 X 2 INCH DIAMETER WOOD WITH A MINIMUM LENGTH OF 5 FEET.
6. POSTS MUST BE SPACED A MAXIMUM OF 10 FEET APART ON CENTER AND DRIVEN SECURELY INTO THE GROUND (MIN. OF 12 INCHES).
7. SEDIMENT MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
8. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED MUST BE DRESSED TO CONFORM WITH THE PROPOSED AND EXISTING GRADES, PREPARED AND SEEDED.
9. UNDER NO CIRCUMSTANCES SHOULD SILT FENCE BE CONSTRUCTED IN LIVE STREAMS.
10. SILT FENCE MUST BE REMOVED UPON COMPLETION OF THE PROJECT OR WHEN NECESSARY PER THE APPROVED SWPPP.
11. PAYMENT FOR SILT FENCE MUST BE INCLUSIVE OF THE FL-104 TEMPORARY EROSION AND SEDIMENTATION CONTROL PAY ITEM.

INLET PROTECTION NOTES

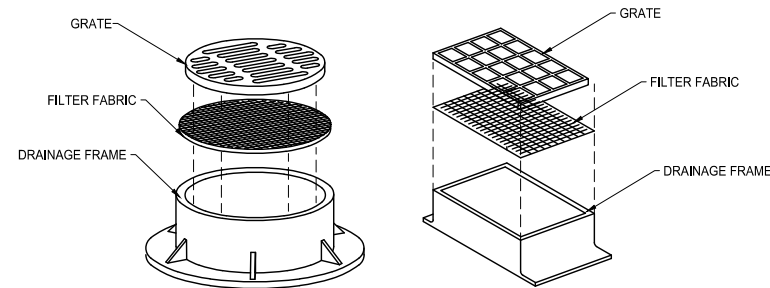
1. INLET PROTECTION MUST BE PLACED AT ALL INLETS WITHIN THE PROJECT WORK AREA AND AT ALL INLETS DOWNSTREAM OF ANY DISTURBED LAND AREA.
2. INLET PROTECTION METHOD MUST BE PER THE DETAIL SHOWN ON THIS SHEET. ALTERNATIVE METHODS MAY BE APPROVED THROUGH THE SHOP DRAWING SUBMITTAL PROCESS.
3. CONTRACTOR MUST CLEAR DEBRIS AND SILT AS REQUIRED FROM FABRIC TO MAINTAIN DRAINAGE THROUGH THE STRUCTURE.
4. FABRIC MUST REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
5. PAYMENT FOR INLET PROTECTION MUST BE INCLUSIVE OF THE FL-104-1 TEMPORARY EROSION AND SEDIMENTATION CONTROL PAY ITEM.

SODDING NOTES

1. ANY DISTURBED AREA WHICH WILL NOT BE PAVED OR BUILT UPON MUST BE SODDED IN ACCORDANCE WITH SPECIFICATION FL-570-1. THIS INCLUDES ANY GRASS AREAS THAT HAVE BEEN DAMAGED BY USE OF THE HAUL ROUTES, LIMITS OF GRADING, AND ANY OTHER AREAS THAT HAVE BEEN DAMAGED OR DESTROYED (AS DETERMINED BY THE AUTHORITY) BY THE CONSTRUCTION VEHICLES, EQUIPMENT OR OTHER RELATED ACTIVITIES. REFER TO G004 FOR THE SODDING REQUIREMENTS WITHIN THE STAGING AREA. SODDING WITHIN THE PROPOSED LIMITS OF GRADING MUST BE PAID FOR THE FL-570 PERFORMANCE TURF PAY ITEM; SODDING FOR ALL OTHER AREAS INCLUDING THE STAGING AREA, HAUL ROUTES AND TEMPORARY PARKING AREAS MUST BE PAID FOR UNDER THE MAINTENANCE OF TRAFFIC AND TEMPORARY CONSTRUCTION ITEMS PAY ITEMS. REFER TO THE PAVING AND GRADING PLAN AND TYPICAL CROSS SECTIONS FOR THE LIMITS OF GRADING.



1 **SILT FENCE CONSTRUCTION DETAILS**
G005



2 **GRATE INLET PROTECTION**
G005

REV	DATE	REVISIONS

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1715 N. WILSON BOULEVARD
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL. EROSION CONTROL
EPC00000201.LCC000010

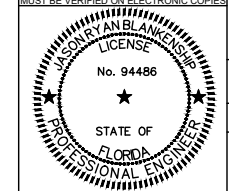
Tampa International Airport

PROJECT NAME
NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
EROSION AND SEDIMENTATION CONTROL DETAILS

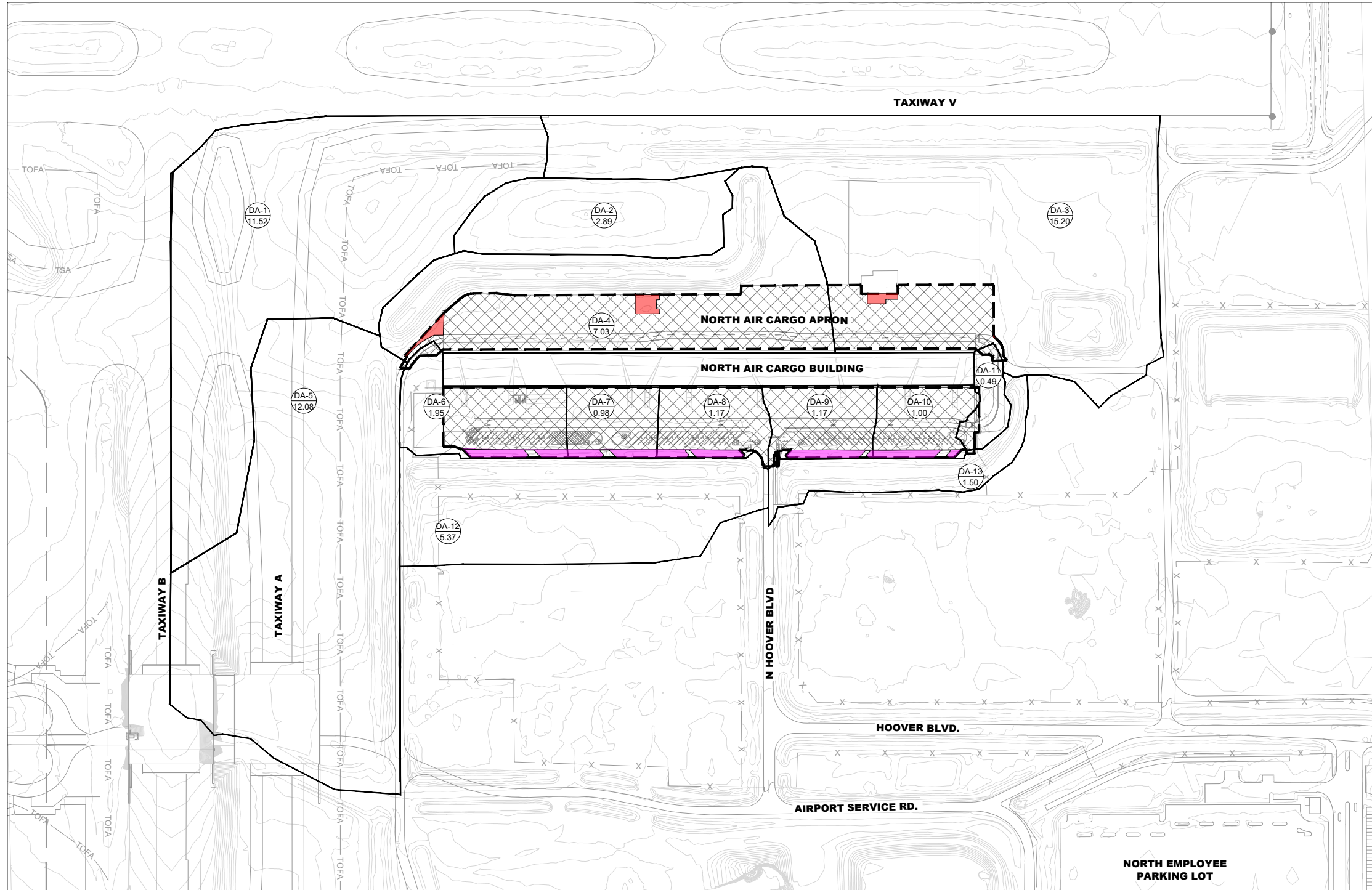


THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



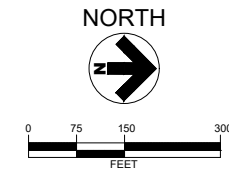
DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

G005
SHEET NO.

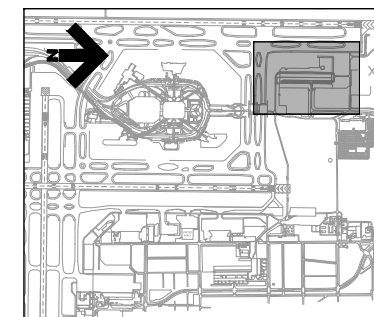


LEGEND

- APPROXIMATE LIMITS OF WORK (TOTAL AREA)
- DRAINAGE SUB-BASIN AREAS
- SERVICE ROAD RELOCATION POST-CONSTRUCTION IMPERVIOUS AREA
- TRUCK COURT REPAIRS POST-CONSTRUCTION IMPERVIOUS AREA
- PRE-CONSTRUCTION IMPERVIOUS AREAS WITHIN LIMITS OF WORK
- SUB-BASIN LABEL AREA (AC)



SERVICE ROAD					
PRE-CONST. IMPERVIOUS (AC)	PRE-CONST. PERVIOUS (AC)	POST-CONST. IMPERVIOUS (AC)	POST-CONST. PERVIOUS (AC)	Δ IMPERVIOUS (AC)	TOTAL AREA (AC)
4.73	0.15	4.88	0.00	0.15	4.88
NORTH AIR CARGO PARKING LOT					
PRE-CONST. IMPERVIOUS (AC)	PRE-CONST. PERVIOUS (AC)	POST-CONST. IMPERVIOUS (AC)	POST-CONST. PERVIOUS (AC)	Δ IMPERVIOUS (AC)	TOTAL AREA (AC)
4.95	0.51	5.41	0.05	0.46	5.46



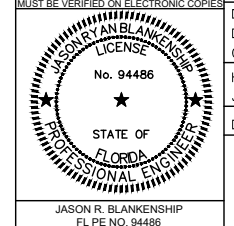
KEY MAP

ISSUED FOR CONSTRUCTION

THIS SHEET TO BE PRINTED IN COLOR



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1715 N. WASHINGTON BLVD., SUITE 400
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL. LICENSE NO. EC 00008201, LCC0000210



PROJECT NAME
NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
PRE AND POST-DEVELOPMENT CONDITIONS

DESIGNED: CJT
DRAWN: JDH
CHECKED: JRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

G006

SHEET NO.

Tampa International Airport

CONSTRUCTION PLANS FOR

VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

VOLUME I: INDEX OF DRAWINGS	
DRAWING NUMBER	SHEET TITLE
GENERAL (G) - VOLUME I	
G100	COVER AND INDEX OF DRAWINGS (VOLUME I)
G101	SAFETY AND SECURITY NOTES AND DETAILS (VOLUME I)
G102	CONTRACT LAYOUT PLAN (VOLUME I)
G103	OVERALL PHASING SCHEMATIC, NOTES, AND BARRICADE PLAN (VOLUME I)
G104	EROSION AND SEDIMENTATION CONTROL PLAN (VOLUME I)
G105	BORING LOCATION PLAN
G106	SOIL PROFILES (SHEET 1 OF 2)
G107	SOIL PROFILES (SHEET 2 OF 2)
G108	TEST HOLE REPORT (SHEET 1 OF 3)
G109	TEST HOLE REPORT (SHEET 2 OF 3)
G110	TEST HOLE REPORT (SHEET 3 OF 3)
CIVIL (C) - VOLUME I	
C101	EXISTING CONDITIONS AND DEMOLITION PLAN (VOLUME I) (SHEET 1 OF 2)
C102	EXISTING CONDITIONS AND DEMOLITION PLAN (VOLUME I) (SHEET 2 OF 2)
C103	GEOMETRY AND PAVING PLAN (SHEET 1 OF 2)
C104	GEOMETRY AND PAVING PLAN (SHEET 2 OF 2)
C105	TRUCK COURT REHABILITATION PLAN (SHEET 1 OF 2)
C106	TRUCK COURT REHABILITATION PLAN (SHEET 2 OF 2)
C107	PAVEMENT MARKING PLAN (SHEET 1 OF 2)
C108	PAVEMENT MARKING PLAN (SHEET 2 OF 2)
C109	SIGN PANEL REPLACEMENT DETAILS
C110	PAVEMENT TYPICAL SECTION AND DETAILS (SHEET 1 OF 3)
C111	PAVEMENT TYPICAL SECTION AND DETAILS (SHEET 2 OF 3)
C112	PAVEMENT TYPICAL SECTION AND DETAILS (SHEET 3 OF 3)
C113	METER AND GROUND BOX DETAILS
C114	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 1 OF 9)
C115	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 2 OF 9)
C116	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 3 OF 9)
C117	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 4 OF 9)
C118	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 5 OF 9)
C119	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 6 OF 9)
C120	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 7 OF 9)
C121	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 8 OF 9)
C122	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 9 OF 9)
C201	SPOT ELEVATION PLAN (SHEET 1 OF 2)
C202	SPOT ELEVATION PLAN (SHEET 2 OF 2)
CX100	CROSS SECTIONS KEY MAP
CX101	CROSS SECTIONS (SHEET 1 OF 2)
CX102	CROSS SECTIONS (SHEET 2 OF 2)

HCAA No. 6530 18

RS&H No. 1004-1880-047



MARCH 20, 2023

HILLSBOROUGH COUNTY AVIATION AUTHORITY

BOARD MEMBERS
GARY W. HARROD - CHAIRMAN
ROBERT I. WATKINS - VICE CHAIRMAN
BRIG. GENERAL CHIP DIEHL - TREASURER
CITY OF TAMPA MAYOR JANE CASTOR - SECRETARY
HILLSBOROUGH COUNTY COMMISSIONER
HARRY COHEN - ASST. SECRETARY/ASST. TREASURER
CHIEF EXECUTIVE OFFICER - JOSEPH W. LOPANO

ISSUED FOR CONSTRUCTION

NOTE:
DO NOT SCALE PRINTS
REPRODUCTION MAY CAUSE DISTORTION

G100

CONSTRUCTION DATA	
PRIME CONTRACTOR _____	WORK: COMMENCED _____ COMPLETED _____
_____	COST: BID\$ _____ FINAL \$ _____
_____	PROJECT ENGINEER/INSPECTORS: _____
MAJOR SUBCONTRACTORS AND/OR SUPPLIERS _____	_____
_____	_____
_____	_____

ALL CONSTRUCTION PERFORMED UNDER THIS CONTRACT WAS COMPLETED IN SUBSTANTIAL CONFORMITY WITH THE DRAWINGS, NOTES AND SPECIFICATIONS CONTAINED IN THESE PLANS. ALL CHANGES FROM THE PLANS AS BID, HAVE BEEN NOTED TO THE BEST OF OUR KNOWLEDGE.

(CERTIFIED) _____ PROJECT ENGINEER _____ DATE _____

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

APPROVED _____ DATE _____



RS&H, Inc.
1715 N. Westshore Boulevard, Suite 600
Tampa, Florida 33607-3999
813-289-5550
www.rsandh.com
FL Cert Nos. AAC001886 EB0005620 LCC00210

SUBMITTED JASON R. BLANKENSHIP DATE MARCH 20, 2023
P. E. No. 94486

SAFETY NOTES

1. THE CONTRACTOR MUST ACQUAINT ITS SUPERVISORS AND EMPLOYEES OF THE AIRPORT ACTIVITY AND OPERATIONS THAT ARE INHERENT TO THIS ACTIVE AIRPORT AND MUST CONDUCT ITS CONSTRUCTION ACTIVITIES TO CONFORM TO ALL ROUTINE REQUIREMENTS AND EMERGENCY AIR TRAFFIC REQUIREMENTS AND GUIDELINES ON SAFETY SPECIFIED IN THE CONTRACT DOCUMENTS.
2. NO AIRPORT ROADWAY MAY BE CLOSED WITHOUT WRITTEN APPROVAL OF THE HILLSBOROUGH COUNTY AVIATION AUTHORITY (HCAA), TO ENABLE NECESSARY ADVISORIES TO AIRPORT SERVICE OR TENANTS. A MINIMUM OF 72 HOURS WRITTEN NOTICE OF REQUESTED CLOSING MUST BE DIRECTED TO HCAA THROUGH THE AUTHORITY.
3. OPEN FLAMES, WELDING OR TORCH-CUTTING OPERATIONS ARE PROHIBITED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS HAVE BEEN TAKEN, THE PROCEDURE IS APPROVED BY THE AUTHORITY, AND A CUTTING AND WELDING PERMIT HAS BEEN ISSUED BY HCAA.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS. PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR MUST PROVIDE THE AUTHORITY WITH AN OUTLINE OF A PROPOSED ACCIDENT AND FIRE PROTECTION PLAN FOR ALL WORK CONTEMPLATED UNDER THE CONTRACT AND CONDUCT AT LEAST ONE SAFETY MEETING EACH MONTH FOR EACH SHIFT AND REQUIRE THE ATTENDANCE OF ALL SUPERVISORS AT SUCH MEETINGS. COPIES OF THE MINUTES OF SAFETY MEETINGS MUST BE KEPT ON FILE IN THE CONTRACTOR'S FIELD OFFICE AND BE MADE AVAILABLE UPON DEMAND BY THE AUTHORITY.
5. THE EMERGENCY NUMBER TO CALL FOR ANY INCIDENT ON THE PROJECT OR AIRPORT MUST BE 911, AND THE SITE IS TAMPA INTERNATIONAL AIRPORT, UNLESS OTHERWISE NOTIFIED BY HCAA.
6. CONSTRUCTION DURING THE PROJECT MAY BE HALTED AT ANY TIME BY THE AUTHORITY IF IT IS DETERMINED TO BE IN THE BEST INTEREST OF HCAA OR AIRPORT OPERATIONAL SAFETY, AND THE CONTRACTOR MAY BE DIRECTED TO REMOVE EQUIPMENT AND/OR EVACUATE THE SITE. NECESSARY EXTENSIONS IN CONTRACT TIME MAY BE GRANTED OR A STOP WORK ORDER WILL BE ISSUED DUE TO THESE DELAYS, HOWEVER, THERE WILL BE NO ADJUSTMENTS IN CONTRACT PRICE DUE TO THESE DELAYS.
7. THE CONTRACTOR IS FULLY RESPONSIBLE FOR AIRPORT OPERATIONAL SAFETY ASSOCIATED WITH CONSTRUCTION ACTIVITIES RELATIVE TO THE CONSTRUCTION PROJECT AT ALL TIMES.
8. THE PLANS AND SAFETY NOTES ARE NOT IN ANY WAY INTENDED TO IMPLY OR PROVIDE ANY DIRECTION REGARDING THE CONTRACTOR'S OWN CONSTRUCTION WORKFORCE SAFETY. THE CONTRACTOR'S SAFETY REQUIREMENTS/ACCOMMODATIONS ASSOCIATED WITH THE PROJECT CONSTRUCTION WORKFORCE IS SOLELY AND ENTIRELY THE RESPONSIBILITY OF THE CONTRACTOR.

CHANNELIZING DEVICES NOTES

1. BARRICADE SPACING MUST BE AS INDICATED IN THE APPLICABLE FDOT STANDARD PLANS INDEX. BARRICADES MUST BE INSTALLED AS DIRECTED BY THE AUTHORITY AND AS REQUIRED BY THE CONTRACTOR TO PROTECT THE WORK AREA. BARRICADES MUST BE INSTALLED PRIOR TO THE START OF CONSTRUCTION FOR THE PARKING EXPANSION AND TRUCK COURT REPAIRS AND MUST REMAIN IN PLACE THROUGHOUT THE DURATION OF THE PROJECT.
2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MAINTENANCE OF BARRICADES DURING CONSTRUCTION. SAND BAGS MAY BE USED TO SECURE BARRICADES FROM BECOMING WIND BORNE HAZARDS. SAND BAGS MUST BE REPLACED WHEN EXHIBITING SIGNS OF DISINTEGRATION AND ANY LOOSE SAND FROM THE BAGS MUST BE REMOVED FROM THE PAVEMENT SURFACE.
3. THE CONTRACTOR MUST FURNISH, MAINTAIN, AND REMOVE THE BARRICADES AS DIRECTED BY THE AUTHORITY. THE COST ASSOCIATED WITH THIS WORK MUST BE INCLUDED IN THE C-106-1 MAINTENANCE OF TRAFFIC AND TEMPORARY CONSTRUCTION ITEMS PAY ITEM.
4. SEE SHEET C122 FOR PLASTIC DRUM AND CONE DETAILS.


SECURITY NOTES

1. THE CONTRACTOR MUST COMPLY WITH ALL SECURITY REQUIREMENTS SPECIFIED HEREIN AND IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS REQUIRED TO FAMILIARIZE THEMSELVES WITH REQUIREMENTS OF OPERATING WITHIN AND AROUND THE AIRPORT AND APPLICABLE RULES AND REGULATIONS. THE CONTRACTOR MUST BE RESPONSIBLE FOR BRIEFING ALL CONTRACTOR PERSONNEL ON THESE REQUIREMENTS AND, FROM TIME TO TIME, OTHER SECURITY PROVISIONS ADOPTED BY HCAA. ALL NEW CONTRACTOR EMPLOYEES MUST BE BRIEFED ON THESE REQUIREMENTS PRIOR TO WORKING IN THE CONSTRUCTION AREA.
2. THE CONTRACTOR'S ACCESS TO THE SITE MUST BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE AUTHORITY. NO OTHER ACCESS POINTS ARE ALLOWED UNLESS APPROVED BY HCAA AND DIRECTED BY THE AUTHORITY. ALL CONTRACTOR TRAFFIC AUTHORIZED TO ENTER THE SITE MUST BE EXPERIENCED IN THE ROUTE OR GUIDED BY CONTRACTOR PERSONNEL. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON AIRPORT PROPERTY.
3. ALL CONTRACTOR'S MATERIAL ORDERS FOR DELIVERY TO THE SITE MUST BE ESCORTED BY THE CONTRACTOR. THIS WILL PRECLUDE DELIVERY TRUCKS FROM ENTERING INTO THE AIRPORT OR TAKING SHORT-CUTS THROUGH THE PERIMETER GATES AND ENTERING INTO AIRCRAFT OPERATIONS AREAS INADVERTENTLY.
4. THE CONTRACTOR ACCESS GATE DESIGNATED FOR USE MAY BE UTILIZED BY OTHER CONTRACTORS, HCAA STAFF, OR TENANTS DURING THIS PROJECT. THE CONTRACTOR IS REQUIRED TO COORDINATE ACCESS WITH ALL PARTIES. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR ISSUES RELATED TO SITE ACCESS.
5. **IDENTIFICATION OF PERSONNEL:** AT THE AUTHORITY'S DISCRETION, ALL EMPLOYEES OF THE CONTRACTOR OR SUBCONTRACTORS, REQUIRING ACCESS TO THE CONSTRUCTION SITE, ARE REQUIRED TO BE SUPPLIED WITH IDENTIFICATION BADGES TO BE WORN AT ALL TIMES WHILE WITHIN THE AREAS. BADGES MUST BE SUPPLIED BY THE CONTRACTOR AND SHALL STATE "CONTRACTOR - NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS". BADGES CAN BE PLASTIC WALLET SIZE OR METAL PIN WITH A MINIMUM 2 1/2" DIAMETER AND MUST BE WORN ON OUTER GARMENTS SO AS TO BE CLEARLY VISIBLE. BADGING IS TO BE UNIFORM IN APPEARANCE AND SUFFICIENTLY DISTINCTIVE IN DESIGN OR COLOR TO CLEARLY IDENTIFY AN EMPLOYEE AS BEING ASSIGNED/ASSOCIATED WITH THIS CONTRACT. THE BADGE NUMBER SHALL BE PROMINENT FOR EASY IDENTIFICATION. BADGES ARE TO BE IDENTIFIED NUMERICALLY AND ISSUED INDIVIDUALLY TO WHOM IT IS ASSIGNED. BLOCKS OF NUMBERS CAN BE ASSIGNED TO SUBCONTRACTORS. SUPPLY, ISSUANCE AND CONTROL OF IDENTIFICATION BADGES MUST BE THAT OF THE CONTRACTOR THROUGH THE SUPERINTENDENT. IN LIEU OF ISSUING BADGES, THE SUPERINTENDENT CAN REQUIRE THAT EACH EMPLOYEE WEAR AN OUTER GARMENT WITH THE COMPANY NAME, PROMINENTLY PLACED, SO THAT ALL PERSONNEL CAN BE IDENTIFIED AS BEING A MEMBER OF THIS GROUP.
6. **IDENTIFICATION OF VEHICLES:** THE CONTRACTOR MUST ESTABLISH AND MAINTAIN A LIST OF CONTRACTOR AND SUB-CONTRACTOR VEHICLES AUTHORIZED TO OPERATE ON THE SITE. VEHICLES MUST DISPLAY A LARGE COMPANY SIGN ON BOTH SIDES OF THE VEHICLE. THE CONTRACTOR MUST ISSUE TO THE AUTHORITY, A CURRENT LIST OF COMPANIES AUTHORIZED TO ENTER AND CONDUCT WORK ON THE AIRPORT. CONTRACTOR EMPLOYEE PERSONAL VEHICLES ARE NOT ALLOWED ON THE AIRFIELD AT ANY TIME. CONTRACTOR MUST COORDINATE WITH THE AUTHORITY TO RECEIVE AOA ACCESS VEHICLE STICKERS. VEHICLE STICKERS ARE SPECIFIC TO THE VEHICLE IDENTIFIED DURING THE STICKER APPLICATION PROCESS AND MUST NOT BE SHARED BETWEEN MULTIPLE VEHICLES.
7. ALL ACCESS GATES MUST BE NORMALLY CLOSED DURING CONSTRUCTION AND MANNED AT ALL TIMES WHILE GATE IS OPEN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP THE AIRPORT SECURED AT ALL TIMES DURING CONSTRUCTION.

REVISED	DATE	BY

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

1715 N. WILSON BLVD., SUITE 400
TAMPA, FLORIDA 33607-3998
WWW.AVIATIONAUTHORITY.FL
FL EMB000401 LCC000410

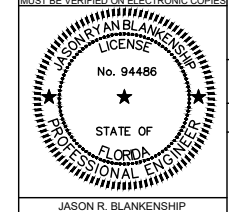



PROJECT NAME
VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
SAFETY AND SECURITY NOTES AND DETAILS (VOLUME I)

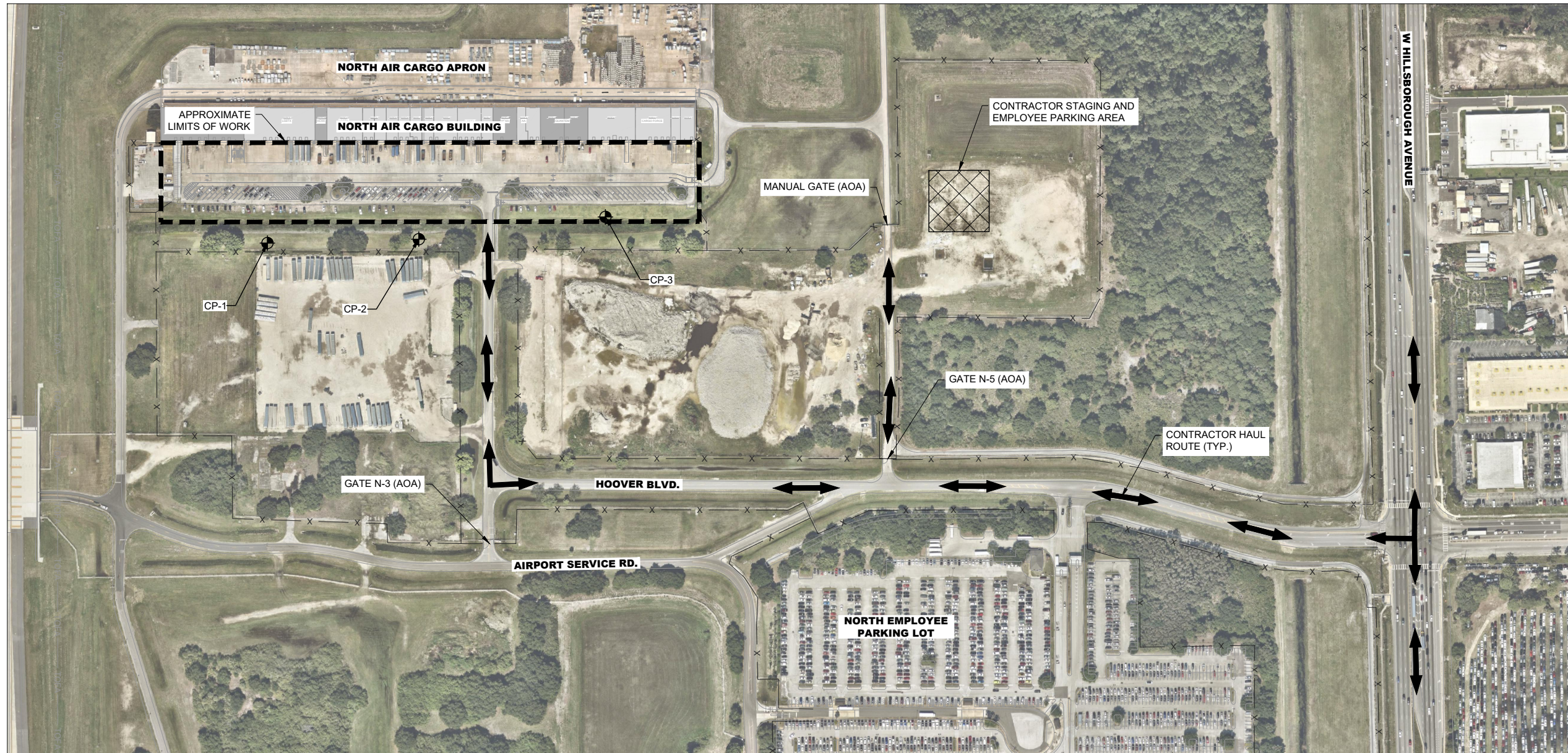


THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: JSA
DRAWN: _____
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

G101
SHEET NO.



NOTES

- FOR GENERAL NOTES AND CONTRACTOR'S STAGING AREA NOTES, SEE SHEET G004.
- ACCESS TO THE SITE SHALL BE AS SHOWN ON THIS SHEET OR AS APPROVED BY THE AUTHORITY. THE CONTRACTOR SHALL NOT UTILIZE ALTERNATIVE ROUTES UNLESS PREVIOUSLY APPROVED BY THE AUTHORITY.
- CONTRACTOR EMPLOYEES SHALL PARK IN THE DESIGNATED PARKING AREA. CONTRACTOR EMPLOYEE PERSONAL VEHICLES ARE NOT ALLOWED ON THE AIRFIELD AT ANY TIME.
- THE CONTRACTOR STAGING AREA IS LOCATED OUTSIDE OF THE AIR OPERATIONS AREA (AOA).
- CONTRACTOR SHALL IMMEDIATELY CLEAN UP ALL DEBRIS RESULTING FROM THE MOVEMENT OF CONSTRUCTION TRAFFIC ON ALL ROADS OPEN TO TRAFFIC.

CONTROL POINT TABLE

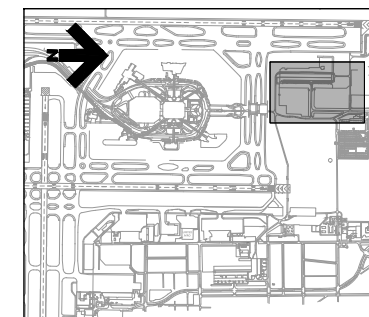
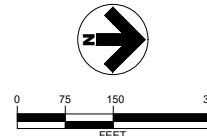
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-1	1328855.05	483057.71	19.73'	SET PK NAIL & DISK, LB NO. 5122
CP-2	1329237.26	483061.38	19.34'	SET PK NAIL & DISK, LB NO. 5122
CP-3	1329710.31	483021.47	19.53'	SET PK NAIL & DISK, LB NO. 5122

*HORIZONTAL COORDINATES SHOWN ARE BASED ON NORTH AMERICAN DATUM 1983 (2011 ADJUSTMENT). VERTICAL COORDINATES SHOWN ARE BASED ON NORTH AMERICAN VERTICAL DATUM 1988.

LEGEND

- APPROXIMATE LIMITS OF WORK
- ACCESS AND HAUL ROUTE
- CONTRACTOR STAGING AND EMPLOYEE PARKING AREA
- EXISTING FENCE
- CONTROL POINT

NORTH

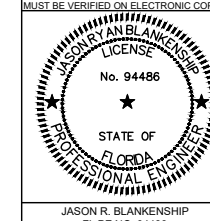


KEY MAP

ISSUED FOR CONSTRUCTION



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

1715 N. WILSON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL. LICENSE NO. EC 00008201
EIN: 80008201



PROJECT NAME: **VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS**

SHEET TITLE: **CONTRACT LAYOUT PLAN (VOLUME I)**

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

G102

SHEET NO.

PHASING DESCRIPTIONS

THE PROJECT CONSISTS OF ONE (1) CONSTRUCTION PHASE. DESCRIPTIONS OF THE PHASE IS IDENTIFIED AS FOLLOWS:

PHASE 0 - MOBILIZATION

THE CONTRACTOR SHALL UTILIZE THIS PHASE TO MOBILIZE FOR CONSTRUCTION. MOBILIZATION SHALL INCLUDE, BUT NOT LIMITED TO, THE DEVELOPMENT OF A COMPREHENSIVE CONSTRUCTION SCHEDULE, PREPARATION AND SUBMISSION OF ALL SHOP DRAWINGS FOR REVIEW AND APPROVAL, ORDERING OF MATERIALS (SPECIAL ATTENTION SHALL BE PAID TO ITEMS WITH LONG LEAD TIMES), ETC. IT IS THE INTENT OF THIS PHASE TO PROVIDE THE CONTRACTOR WITH SUFFICIENT TIME TO COMPLETE ALL TASKS REQUIRED TO FULLY MOBILIZE BEFORE BREAKING GROUND ON THE CONSTRUCTION SITE. THE CONTRACTOR HAS 30 CONSECUTIVE CALENDAR DAYS FOR PHASE 0.

ADDITIONALLY, THE PRE-CONSTRUCTION CONFERENCE SHALL BE CONDUCTED DURING THIS PHASE TO FAMILIARIZE THE CONTRACTOR WITH THE PROJECT SITE, OPERATIONS REQUIREMENTS AND OTHER GENERAL PROJECT REQUIREMENTS.

PHASE 1 - TRUCK COURT REPAIR AND PARKING EXPANSION

PHASES 1 GENERALLY CONSIST OF REMOVAL AND REPLACEMENT OF DAMAGED CONCRETE PANELS, SPALL REPAIRS, CRACK ROUTING AND SEALING, EXCAVATION EMBANKMENT, STABILIZATION, MILLING, GROUND BOX ADJUSTMENTS, ASPHALT PAVING, AND STRIPING. THE CONTRACTOR HAS 90 CONSECUTIVE CALENDAR DAYS FOR PHASE 1.

PHASE 1A - TRUCK COURT REPAIRS

PHASE 1A GENERALLY CONSISTS OF REMOVAL AND REPLACEMENT OF DAMAGED CONCRETE PANELS, SPALL REPAIRS, CRACK ROUTING AND SEALING, AND STRIPING. THE CONTRACTOR HAS 90 CONSECUTIVE CALENDAR DAYS FOR PHASE 1A.

PHASE 1B - PARKING EXPANSION

PHASE 1B GENERALLY CONSISTS OF EXCAVATION, EMBANKMENT, STABILIZATION, MILLING, GROUND BOX ADJUSTMENTS, ASPHALT PAVING, SEAL COAT, AND STRIPING. THE CONTRACTOR HAS 45 CONSECUTIVE DAYS FOR PHASE 1B.

PHASING NOTES

- FOR CONTRACT LAYOUT PLANS AND ASSOCIATED NOTES, REFER TO SHEET G102.
- THE PHASING SCHEDULE SHOWN ON THIS SHEET IS INTENDED TO GIVE THE CONTRACTOR A GENERAL IDEA OF THE SEQUENCE OF WORK WHICH WILL BE CONSIDERED ACCEPTABLE BY HCAA. THE CONTRACTOR SHALL SUPPLY A COMPLETE AND DETAILED CONSTRUCTION SCHEDULE TO THE AUTHORITY FOR REVIEW AND APPROVAL PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL NOT REVISE THE SCHEDULE WITHOUT THE WRITTEN APPROVAL OF THE AUTHORITY.
- THE DURATIONS INCLUDED FOR PHASING ARE CONSECUTIVE CALENDAR DAYS.
- WORK HOURS SHALL BE 7AM TO 7PM, MONDAY THRU FRIDAY, UNLESS OTHERWISE NOTED.
- SEE SHEETS C114-C122 FOR TEMPORARY CONSTRUCTION ITEMS NOTES AND DETAILS.
- NUMERICAL SEQUENCE MAY BE MODIFIED THROUGH TENANT COORDINATION AND APPROVAL BY OWNER.

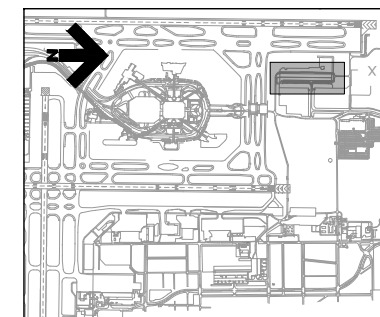
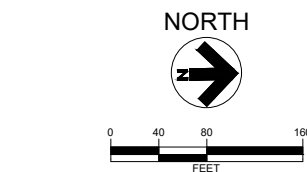
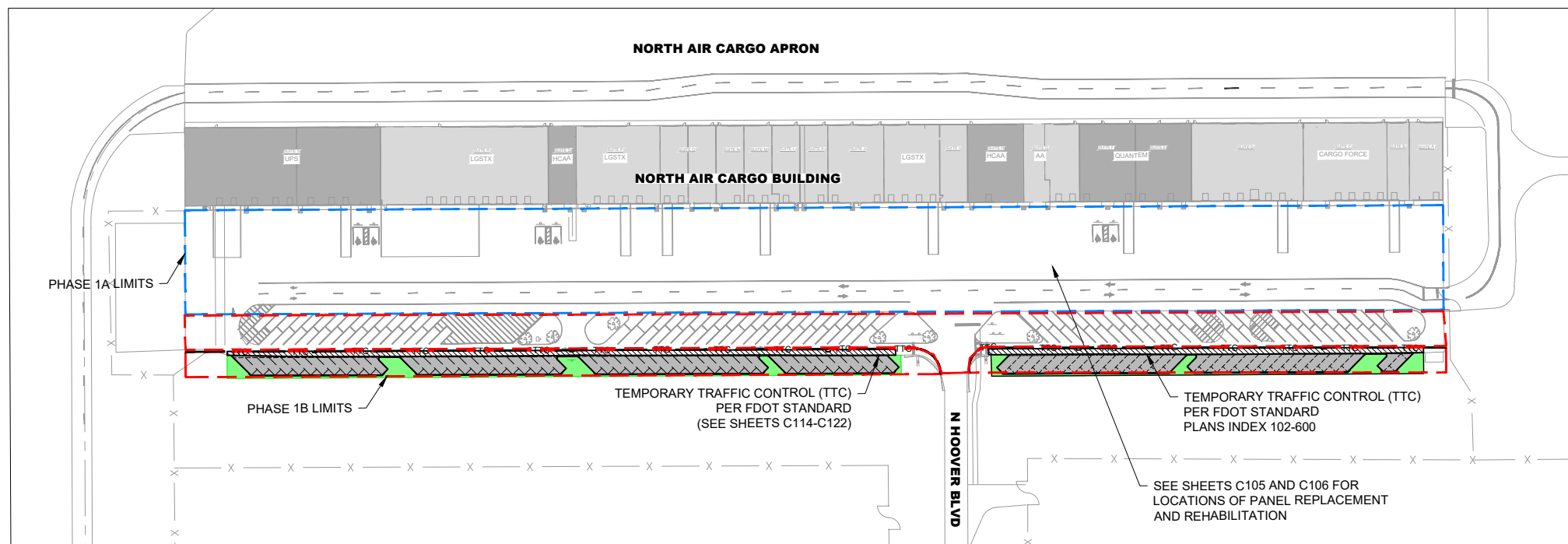
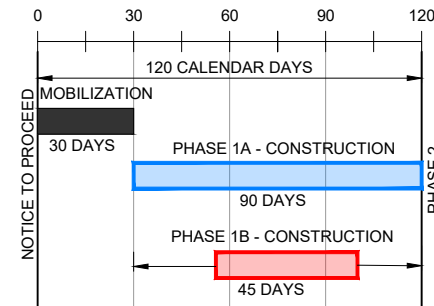
SEQUENCE OF CONSTRUCTION

PHASE 1A

- INSTALL SW3P AS SHOWN ON G104 - EROSION AND SEDIMENTATION CONTROL PLAN.
- EXECUTE INDICATED TRUCK COURT PANEL REPLACEMENTS (P1 - P5) IN NUMERICAL SUCCESSION. EACH INDICATED AREA OF PANEL REPLACEMENT SHALL BE COMPLETED AND RETURNED TO SERVICE BEFORE BEGINNING THE NEXT.
- EXECUTE INDICATED TRUCK COURT PANEL REPAIR (R1 - R20) IN NUMERICAL SUCCESSION. PANEL CRACK REPAIR SHALL FOLLOW PANEL REPLACEMENT IN AREAS WHERE IMMEDIATELY ADJACENT.
- PANEL REPLACEMENT AND PANEL REPAIR MAY PROCEED CONCURRENTLY PROVIDED TENANT DOCK ACCESS IS NOT FULLY INHIBITED.

PHASE 1B

- MAINTAIN SW3P AS SHOWN ON THE SW3P LAYOUTS.
- PLACE TRAFFIC CONTROL DEVICES AS SHOWN IN PLAN LAYOUT.
- EXECUTE PARKING EXPANSION SCOPE INCLUDING: EXCAVATION, TREATMENT, EMBANKMENT, HMA MILLING, HMA OVERLAY AND PAVING, AND CRACK SEALING OF EXISTING HMA PAVING INDICATED TO REMAIN.
- EXECUTE SEAL COAT APPLICATION OF EXISTING HMA PAVING INDICATED TO REMAIN.
- APPLY PAVEMENT MARKING AS INDICATED ON LAYOUT.

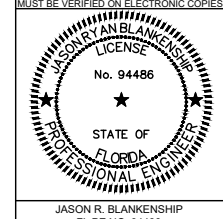


KEY MAP
ISSUED FOR CONSTRUCTION

THIS SHEET TO BE PRINTED IN COLOR



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



REV	DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

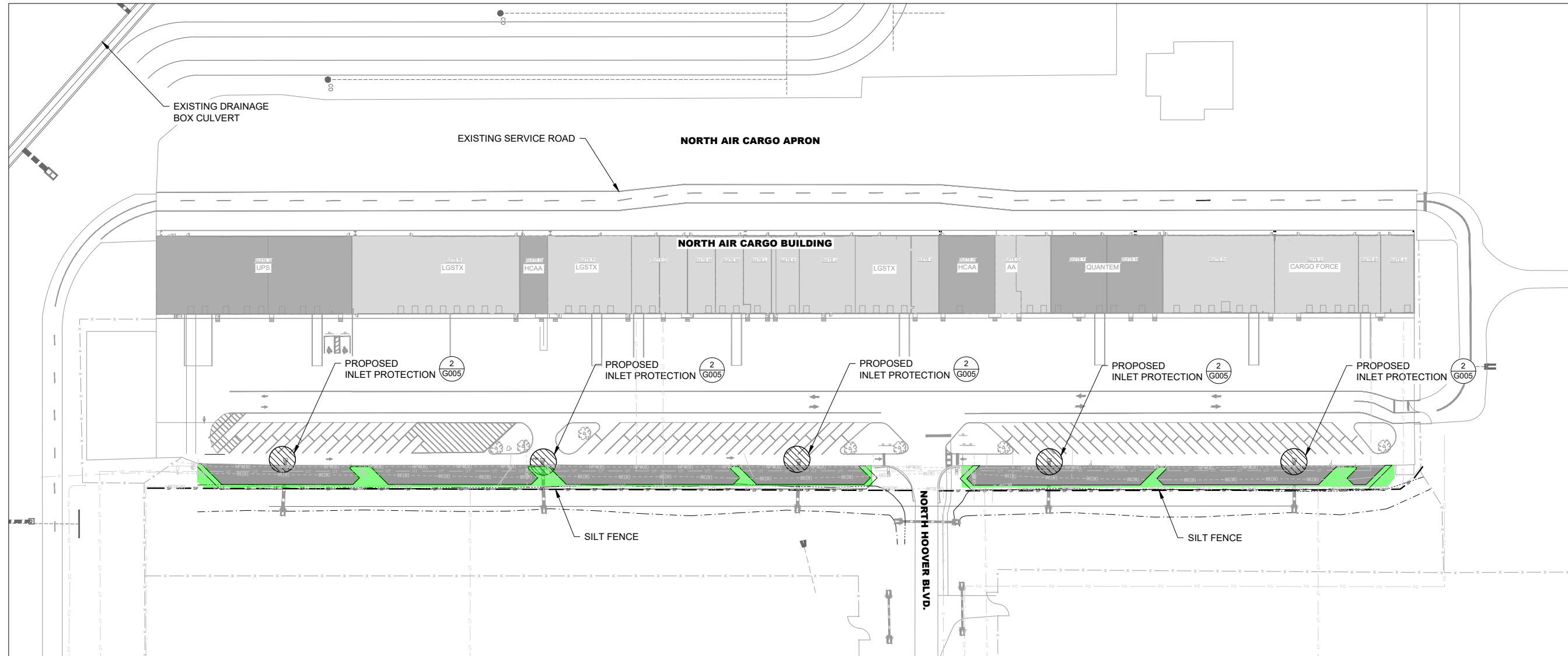
RS&H
1715 N. WASHINGTON BLVD., SUITE 400
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL. LICENSE NO. EC0000820
LCC00001910



PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS
SHEET TITLE: OVERALL PHASING SCHEMATIC, NOTES, AND BARRICADE PLAN (VOLUME I)

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

G103
SHEET NO.

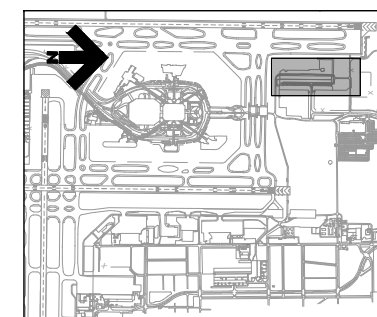
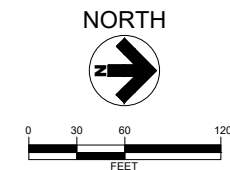


NOTES

1. REFER TO G005 FOR EROSION AND SEDIMENTATION NOTES AND DETAILS.
2. THESE PLANS ARE NOT, AND THE CONTRACTOR MUST NOT CONSIDER THESE PLANS AS A COMPLETE AND THOROUGH DEPICTION OF ALL THE NECESSARY EROSION CONTROL MEASURES REQUIRED FOR THE PROJECT. THE MEASURES SHOWN INDICATE ONLY THE MINIMUM MEASURES REQUIRED BY THE OWNER. THESE PLANS DO NOT INDICATE ALL THE INTERIM EROSION CONTROLS TO BE USED, PARTICULARLY AS EACH PHASE PROGRESSES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE PLANS, DETERMINE THE MOST APPROPRIATE MEANS OF PROTECTING THESE AREAS AND INCORPORATE, IN ADDITION TO THE MEASURES SHOWN, ANY NECESSARY ADDITIONAL MEASURES, ABOVE AND BEYOND THOSE SHOWN IN THE PLANS TO PROTECT HIMSELF AND TO INDEMNIFY THE OWNER AGAINST ANY DAMAGES DOWNSTREAM AND ANY FINES RESULTING IN CLAIMS FOR DAMAGES TO THE ENVIRONMENT AS A DIRECT RESULT OF THIS WORK.
3. THE GENERAL LOCATIONS FOR STAKED SILT FENCE, AS SHOWN ON THE EROSION CONTROL DRAWINGS ARE GRAPHICALLY DEPICTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL SILT FENCE LOCATIONS REQUIRED IN THE FIELD SO AS NOT TO CONFLICT WITH EXISTING UTILITIES.
4. THE CONTRACTOR IS RESPONSIBLE FOR A FINAL CLEANING OF THE STORM DRAINAGE SYSTEM OF ANY SILT OR DEBRIS UPON PROJECT COMPLETION WHICH MUST BE COMPLETED PRIOR TO FINAL INSPECTION AND ACCEPTANCE OF THE PROJECT.
5. THE CONTRACTOR MUST SEQUENCE THE WORK SO THAT AREAS OF STANDING WATER ARE NOT CREATED.

LEGEND

- | | | | |
|-------------|--|-------|------------------------|
| — SF — SF — | PROPOSED SILT FENCE, SEE DETAIL 1, SHEET G005 | ----- | EXISTING DRAINAGE PIPE |
| ⊘ | PROPOSED INLET PROTECTION SEE DETAIL 2, SHEET G005 | ----- | EXISTING TOP OF BANK |
| ■ | PROPOSED PAVEMENT | ----- | EXISTING TOE OF SLOPE |
| — | EXISTING PAVEMENT EDGE | □ | EXISTING INLET |
| — X — | EXISTING FENCE | ☼ | EXISTING LIGHT POLE |
| — E — | EXISTING ELECTRICAL LINE | | |
| — BE(B) — | EXISTING ELECTRICAL LINE | | |
| — W — | EXISTING WATER LINE | | |
| — NPW(B) — | EXISTING IRRIGATION LINE | | |
| — F — | EXISTING FUEL LINE | | |
| — SS — | EXISTING SANITARY SEWER LINE | | |
| — UT — | EXISTING UNDERGROUND TELEPHONE LINE | | |
| — BFOE(B) — | EXISTING UNDERGROUND TELEPHONE LINE | | |
| — FO — | EXISTING FIBER OPTICS LINE | | |

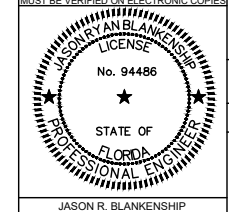


KEY MAP

ISSUED FOR CONSTRUCTION



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H

1715 N. WILSON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL. LICENSE NO. EC0000820, LC0000010



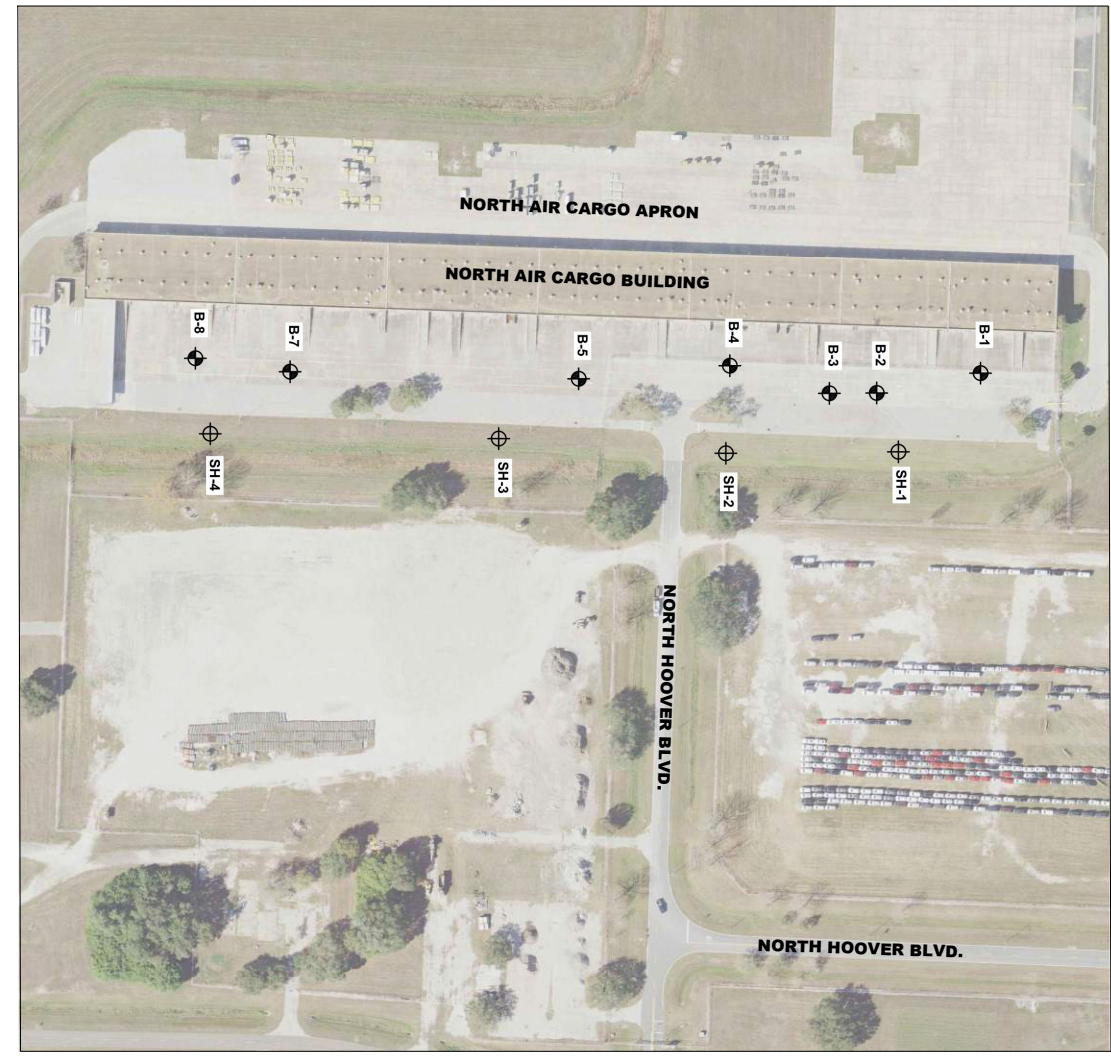
PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE: EROSION AND SEDIMENTATION CONTROL PLAN (VOLUME I)

DESIGNED: CJT
DRAWN: JDH
CHECKED: JRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

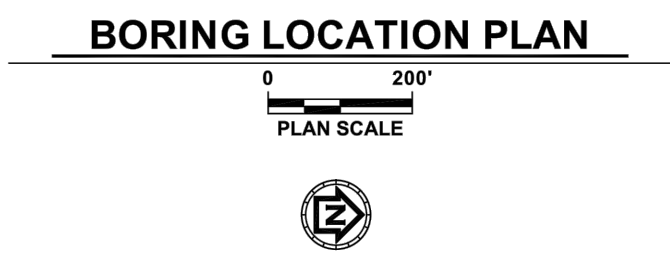
G104

SHEET NO.:



LEGEND

- ⊕ APPROXIMATE LOCATION OF AUGER BORING
- ⊕ APPROXIMATE LOCATION OF SPT BORING



DATE	REVISIONS	BY

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1715 N. WASHINGTON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3999
www.rsandh.com
TEL: 813-988-1000
E: 800708201, LCC000210



PROJECT NAME
**VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS**

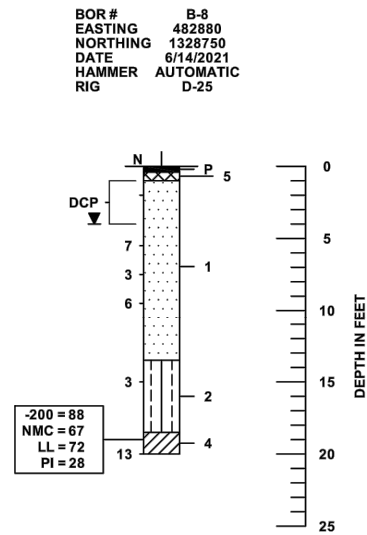
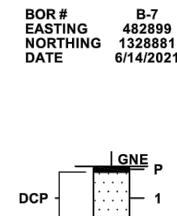
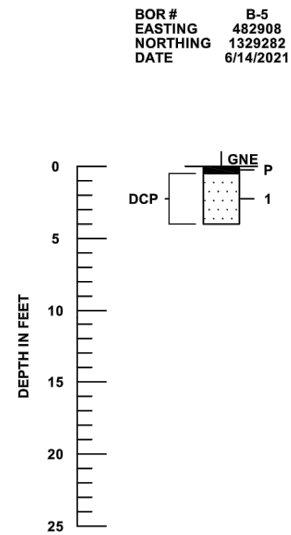
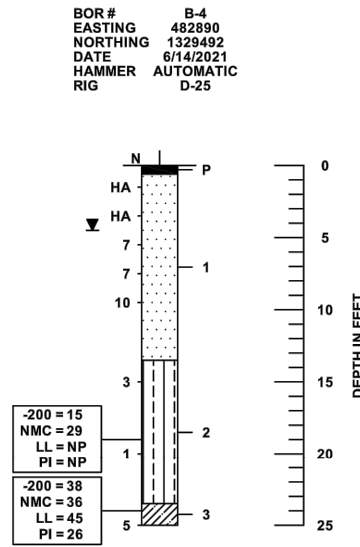
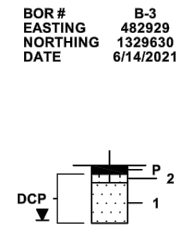
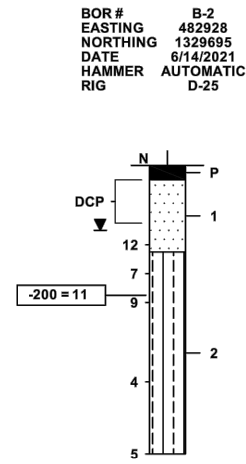
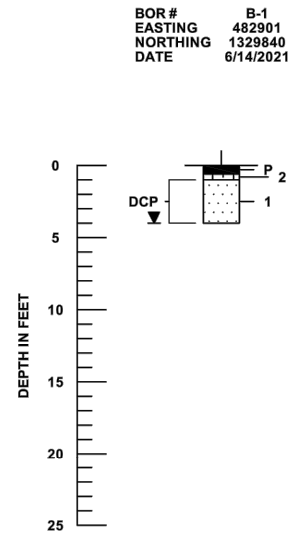
SHEET TITLE
BORING LOCATION PLAN

DESIGNED: C.J.T.
DRAWN: J.D.H.
CHECKED: M.R.B.
HCAA NO.: 6530.18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023.

G105
SHEET NO.

SOIL PROFILES

LEGEND



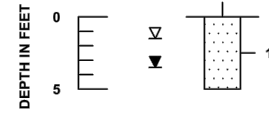
- 1 GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
 - 2 LIGHT GRAY TO GRAY TO LIGHT BROWN SILTY SAND (SM)
 - 3 GREEN-GRAY TO LIGHT GRAY CLAYEY SAND (SC)
 - 4 PALE BROWN SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
 - 5 WOOD WITH CLAYEY SAND (SC)
 - P ASPHALT/PAVEMENT AND BASE MATERIAL
- ▽ GROUNDWATER LEVEL ENCOUNTERED DURING INVESTIGATION
 - ▽ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
 - N SPT N-VALUE IN BLOWS/FOOT FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED)
 - SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW
 - GNE GROUNDWATER TABLE NOT ENCOUNTERED
 - HA HAND AUGERED TO VERIFY UTILITY CLEARANCES
 - CAVE-IN CAVE-IN DUE TO GROUNDWATER INTRUSION
 - DCP REFER TO GEOTECHNICAL REPORT BY TIERRA FOR DYNAMIC CONE PENETROMETER DATA
 - EASTING EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83 DETERMINED USING HAND-HELD GARMIN ETREX GPS EQUIPMENT WITH A REPORTED ACCURACY OF +/- 10 FEET
 - NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83 DETERMINED USING HAND-HELD GARMIN ETREX GPS EQUIPMENT WITH A REPORTED ACCURACY OF +/- 10 FEET
 - 200 PERCENT PASSING #200 SIEVE
 - NMC NATURAL MOISTURE CONTENT (%)
 - LL LIQUID LIMIT (%)
 - PI PLASTICITY INDEX (%)
 - NP NON PLASTIC

AUTOMATIC HAMMER	
GRANULAR MATERIALS-RELATIVE DENSITY	SPT (BLOWS/FT.)
VERY LOOSE	LESS THAN 3
LOOSE	3 TO 8
MEDIUM	8 TO 24
DENSE	24 TO 40
VERY DENSE	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FT.)
VERY SOFT	LESS THAN 1
SOFT	1 TO 3
FIRM	3 TO 6
STIFF	6 TO 12
VERY STIFF	12 TO 24
HARD	GREATER THAN 24

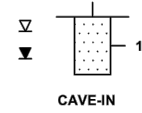
BY									
REVISIONS									
DATE									
HILLSBOROUGH COUNTY AVIATION AUTHORITY TAMPA, FLORIDA		1715 N. WASHINGTON BLVD., SUITE 600 TAMPA, FLORIDA 33607-3999 WWW.RS&H.COM FL. EIT 00000008 EIT 00000001, LCC0000010							
PROJECT NAME VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS		SOIL PROFILES (SHEET 1 OF 2)							
SHEET TITLE									
DESIGNED:	CJT								
DRAWN:	JDH								
CHECKED:	MRB								
HCAA NO.:	6530.18								
JOB NO.:	204-1880-047								
DATE:	MARCH 20, 2023								
G106									
SHEET NO.									

SOIL PROFILES

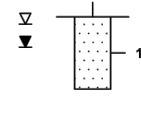
BOR # SH-1
EASTING 483010
NORTHING 1329726
DATE 6/7/2021



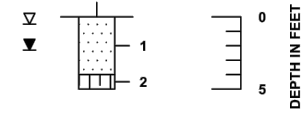
BOR # SH-2
EASTING 483012
NORTHING 1329486
DATE 6/7/2021









BOR # SH-3
EASTING 482991
NORTHING 1329171
DATE 6/7/2021





BOR # SH-4
EASTING 482985
NORTHING 1328771
DATE 6/7/2021



LEGEND

- 1  GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- 2  LIGHT GRAY TO GRAY TO LIGHT BROWN SILTY SAND (SM)
- 3  GREEN-GRAY TO LIGHT GRAY CLAYEY SAND (SC)
- 4  PALE BROWN SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- 5  WOOD WITH CLAYEY SAND (SC)
- P  ASPHALT/PAVEMENT AND BASE MATERIAL

-  GROUNDWATER LEVEL ENCOUNTERED DURING INVESTIGATION
-  ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- N SPT N-VALUE IN BLOWS/FOOT FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED)
- SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW
- GNE GROUNDWATER TABLE NOT ENCOUNTERED
- HA HAND AUGERED TO VERIFY UTILITY CLEARANCES
- CAVE-IN CAVE-IN DUE TO GROUNDWATER INTRUSION
- DCP REFER TO GEOTECHNICAL REPORT BY TIERRA FOR DYNAMIC CONE PENETROMETER DATA
- EASTING EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83 DETERMINED USING HAND-HELD GARMIN ETREX GPS EQUIPMENT WITH A REPORTED ACCURACY OF +/- 10 FEET
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83 DETERMINED USING HAND-HELD GARMIN ETREX GPS EQUIPMENT WITH A REPORTED ACCURACY OF +/- 10 FEET
- 200 PERCENT PASSING #200 SIEVE
- NMC NATURAL MOISTURE CONTENT (%)
- LL LIQUID LIMIT (%)
- PI PLASTICITY INDEX (%)
- NP NON PLASTIC

BY	DATE	REVISIONS

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H

1715 N. WILSON BOULEVARD, SUITE 400
TAMPA, FLORIDA 33607-5999
www.rsandh.com
FL EIT 00000001
EIT 00000001



PROJECT NAME
VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
SOIL PROFILES
(SHEET 2 OF 2)

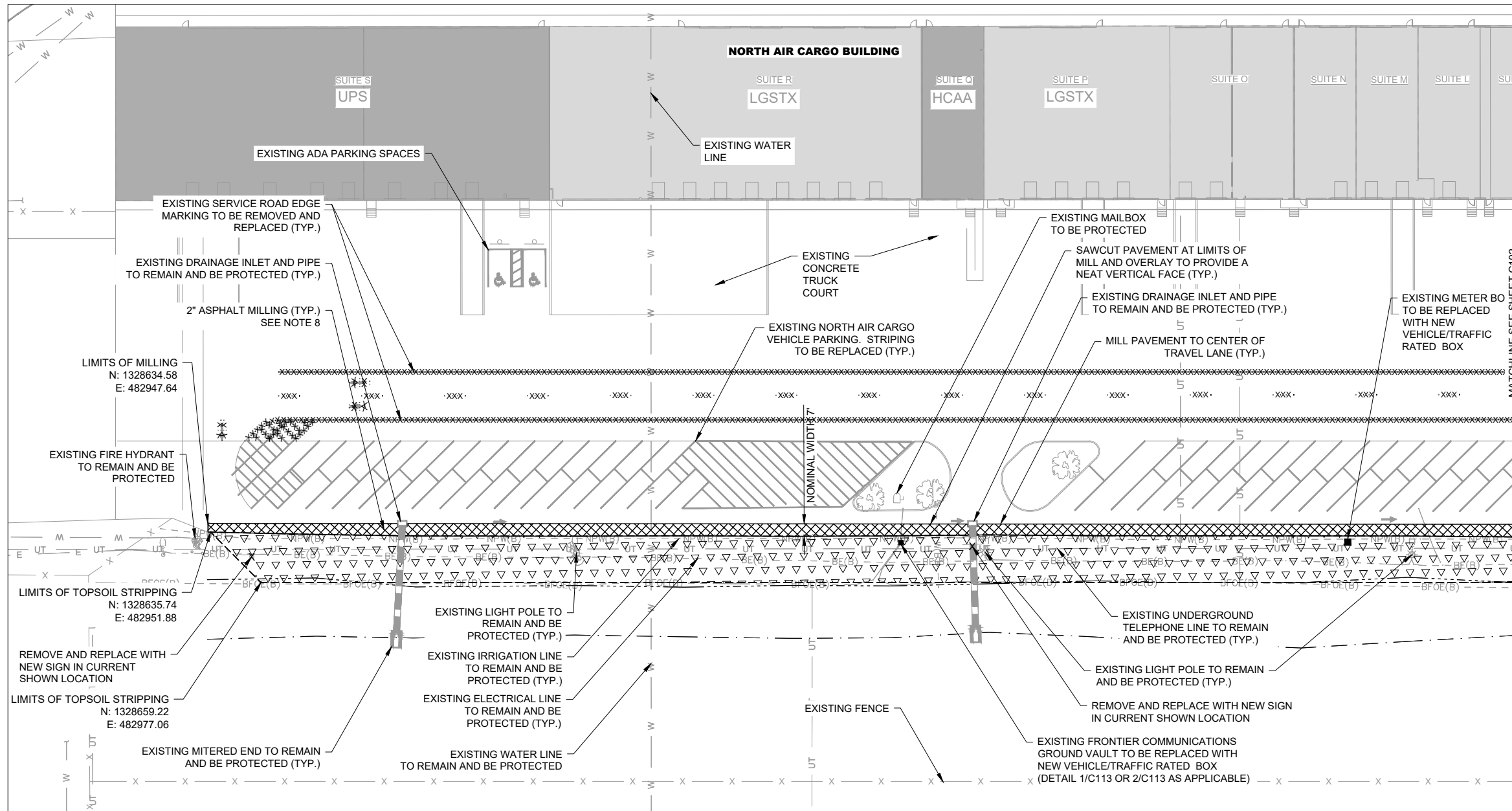
DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB

HCAA NO.: 6530 18
JOB NO.: 204-1880-047

DATE: MARCH 20, 2023

G107

SHEET NO.



LEGEND	
	PROPOSED TOPSOIL STRIPPING
	PROPOSED ASPHALT MILLING 2 IN DEPTH (SEE NOTE 8)
	TOPSOIL STRIPPING LIMIT
	EXISTING PAVEMENT EDGE
	EXISTING FENCE
	EXISTING ELECTRICAL LINE
	EXISTING ELECTRICAL LINE
	EXISTING WATER LINE
	EXISTING IRRIGATION LINE
	EXISTING FUEL LINE
	EXISTING SANITARY SEWER LINE
	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING FIBER OPTICS LINE
	EXISTING DRAINAGE PIPE
	EXISTING TOP OF BANK
	EXISTING TOE OF SLOPE
	REMOVE EXISTING PAVEMENT MARKINGS
	EXISTING INLET
	EXISTING LIGHT POLE

DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

1715 N. WASHINGTON BLVD., SUITE 400
TAMPA, FLORIDA 33607-5999
WWW.RSANDH.COM
TEL: 813.288.1000
FAX: 813.288.1001
E: 813.288.1002

PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE: EXISTING CONDITIONS AND DEMOLITION PLAN (SHEET 1 OF 2)

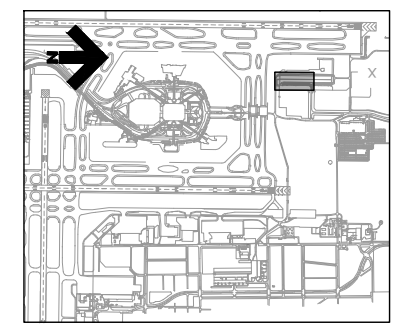
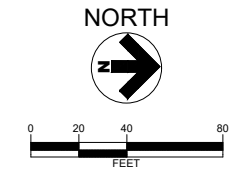
DESIGNED: CJT
DRAWN: JDH
CHECKED: MBR
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

SHEET NO.: C101

NOTES

- TOPSOIL STRIPPING MUST CONSIST OF THE REMOVAL OF ALL TURF AND TOPSOIL IN ACCORDANCE WITH SPECIFICATION FL-110 AND AS NECESSARY TO ENSURE THAT ALL UNDESIRABLE MATERIAL IS REMOVED TO THE LIMITS SHOWN IN THE PLANS. ANY EXCESS STRIPPINGS NOT USED IN ACCORDANCE WITH SPECIFICATION FL-120 MUST BE LEGALLY DISPOSED OF OFF AIRPORT PROPERTY. SEE SHEETS G105-G110 FOR GEOTECHNICAL INFORMATION.
- THE CONTRACTOR MUST CLEARLY DELINEATE THE LIMITS OF TOPSOIL STRIPPING IN THE FIELD FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH REMOVAL. NO PAYMENT WILL BE MADE FOR ANY STRIPPING WHICH OCCURS BEYOND THE LIMITS SHOWN IN THE PLANS UNLESS APPROVAL IS GRANTED BY THE CONSTRUCTION MANAGER.
- ALL ITEMS INDICATED AS "TO REMAIN" IN THE PLANS MUST BE LEFT UNDISTURBED THROUGHOUT CONSTRUCTION AND MUST BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. ANY DAMAGE TO THESE ITEMS MUST BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- ALL EXISTING STORMWATER DRAINAGE PIPES AND CITY-OWNED WATER PIPES, ELECTRICAL, COMMUNICATION, AND OTHER UTILITIES DEFINED IN THE PLANS MUST REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED. REFER TO SHEETS G108-G110 FOR IDENTIFIED UTILITIES.
- CONTRACTOR MUST COORDINATE WITH CONSTRUCTION MANAGER PRIOR TO DEMOLITION AND REMOVAL OF ANY ITEMS, INCLUDING ALL WATER, SEWER, ELECTRIC AND OTHER UTILITIES. LOCATE AND TRACE CABLES SHOWN ON THE PLANS THAT ARE WITHIN THE LIMITS OF EARTH WORK AND PROTECT AT ALL TIMES. HAND EXCAVATE WITHIN 5' OFF ALL IDENTIFIED CABLES.
- CONTRACTOR MUST SAWCUT AT ALL PROPOSED JOINT LINES IN ORDER TO OBTAIN A CLEAN JOINT SURFACE.
- LIMITS OF PAVEMENT MILLINGS MUST BE REVIEWED AND APPROVED BY THE CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
- EXISTING ASPHALT PAVING DEPTH VARIES. SURFACES DESIGNATED FOR MILLING MUST PRODUCE 2 INCH DEPTH FOR PLACEMENT OF NEW ASPHALT MATERIAL REGARDLESS OF MATERIAL ENCOUNTERED.

THERE ARE EXISTING UNDERGROUND UTILITIES IN THE PROJECT WORK AREA. THE ENGINEER HAS MADE EVERY EFFORT TO SHOW THEIR APPROXIMATE LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY UNDERGROUND UTILITY LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO CONSTRUCTION. ANY DAMAGE DONE TO ANY EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY UTILITY DAMAGED BY HIS ACTIONS WITH NO ADDITIONAL COMPENSATION.



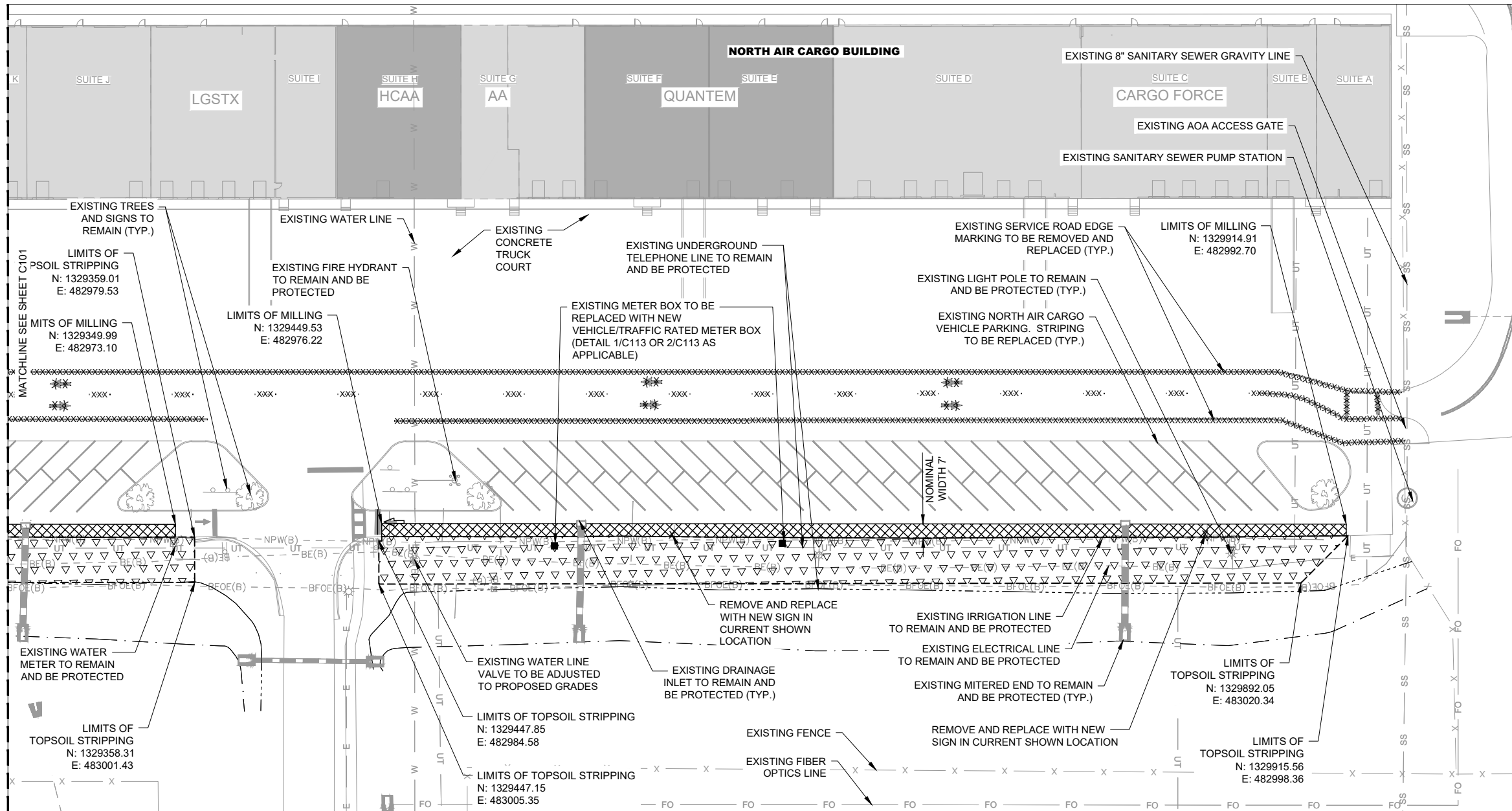
KEY MAP

ISSUED FOR CONSTRUCTION



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
FL PE NO. 94486



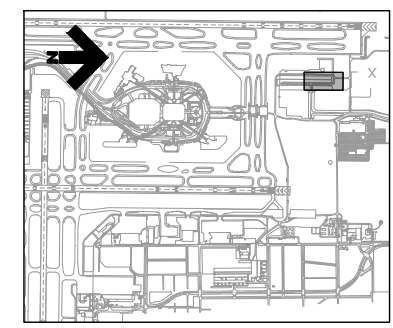
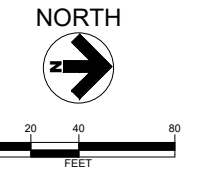
LEGEND

	PROPOSED TOPSOIL STRIPPING
	PROPOSED ASPHALT MILLING 2 IN DEPTH (SEE NOTE 8)
	TOPSOIL STRIPPING LIMIT
	EXISTING PAVEMENT EDGE
	EXISTING FENCE
	EXISTING ELECTRICAL LINE
	EXISTING ELECTRICAL LINE
	EXISTING WATER LINE
	EXISTING IRRIGATION LINE
	EXISTING FUEL LINE
	EXISTING SANITARY SEWER LINE
	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING FIBER OPTICS LINE
	EXISTING DRAINAGE PIPE
	EXISTING TOP OF BANK
	EXISTING TOE OF SLOPE
	REMOVE EXISTING PAVEMENT MARKINGS
	EXISTING INLET
	EXISTING LIGHT POLE

NOTES

1. TOPSOIL STRIPPING MUST CONSIST OF THE REMOVAL OF ALL TURF AND TOPSOIL IN ACCORDANCE WITH SPECIFICATION FL-110 AND AS NECESSARY TO ENSURE THAT ALL UNDESIRABLE MATERIAL IS REMOVED TO THE LIMITS SHOWN IN THE PLANS. ANY EXCESS STRIPPINGS NOT USED IN ACCORDANCE WITH SPECIFICATION FL-120 MUST BE LEGALLY DISPOSED OF OFF AIRPORT PROPERTY. SEE SHEETS G105-G110 FOR GEOTECHNICAL INFORMATION.
2. THE CONTRACTOR MUST CLEARLY DELINEATE THE LIMITS OF TOPSOIL STRIPPING IN THE FIELD FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH REMOVAL. NO PAYMENT WILL BE MADE FOR ANY STRIPPING WHICH OCCURS BEYOND THE LIMITS SHOWN IN THE PLANS UNLESS APPROVAL IS GRANTED BY THE CONSTRUCTION MANAGER.
3. ALL ITEMS INDICATED AS "TO REMAIN" IN THE PLANS MUST BE LEFT UNDISTURBED THROUGHOUT CONSTRUCTION AND MUST BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. ANY DAMAGE TO THESE ITEMS MUST BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
4. ALL EXISTING STORMWATER DRAINAGE PIPES AND CITY-OWNED WATER PIPES, ELECTRICAL, COMMUNICATION, AND OTHER UTILITIES DEFINED IN THE PLANS MUST REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED. REFER TO SHEETS G108-G110 FOR IDENTIFIED UTILITIES.
5. CONTRACTOR MUST COORDINATE WITH CONSTRUCTION MANAGER PRIOR TO DEMOLITION AND REMOVAL OF ANY ITEMS, INCLUDING ALL WATER, SEWER, ELECTRIC AND OTHER UTILITIES. LOCATE AND TRACE CABLES SHOWN ON THE PLANS THAT ARE WITHIN THE LIMITS OF EARTH WORK AND PROTECT AT ALL TIMES. HAND EXCAVATE WITHIN 5' OFF ALL IDENTIFIED CABLES.
6. CONTRACTOR MUST SAWCUT AT ALL PROPOSED JOINT LINES IN ORDER TO OBTAIN A CLEAN JOINT SURFACE.
7. LIMITS OF PAVEMENT MILLINGS MUST BE REVIEWED AND APPROVED BY THE CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
8. EXISTING ASPHALT PAVING DEPTH VARIES. SURFACES DESIGNATED FOR MILLING MUST PRODUCE 2 INCH DEPTH FOR PLACEMENT OF NEW ASPHALT MATERIAL REGARDLESS OF MATERIAL ENCOUNTERED.

THERE ARE EXISTING UNDERGROUND UTILITIES IN THE PROJECT WORK AREA. THE ENGINEER HAS MADE EVERY EFFORT TO SHOW THEIR APPROXIMATE LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY UNDERGROUND UTILITY LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO CONSTRUCTION. ANY DAMAGE DONE TO ANY EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY UTILITY DAMAGED BY HIS ACTIONS WITH NO ADDITIONAL COMPENSATION.



KEY MAP

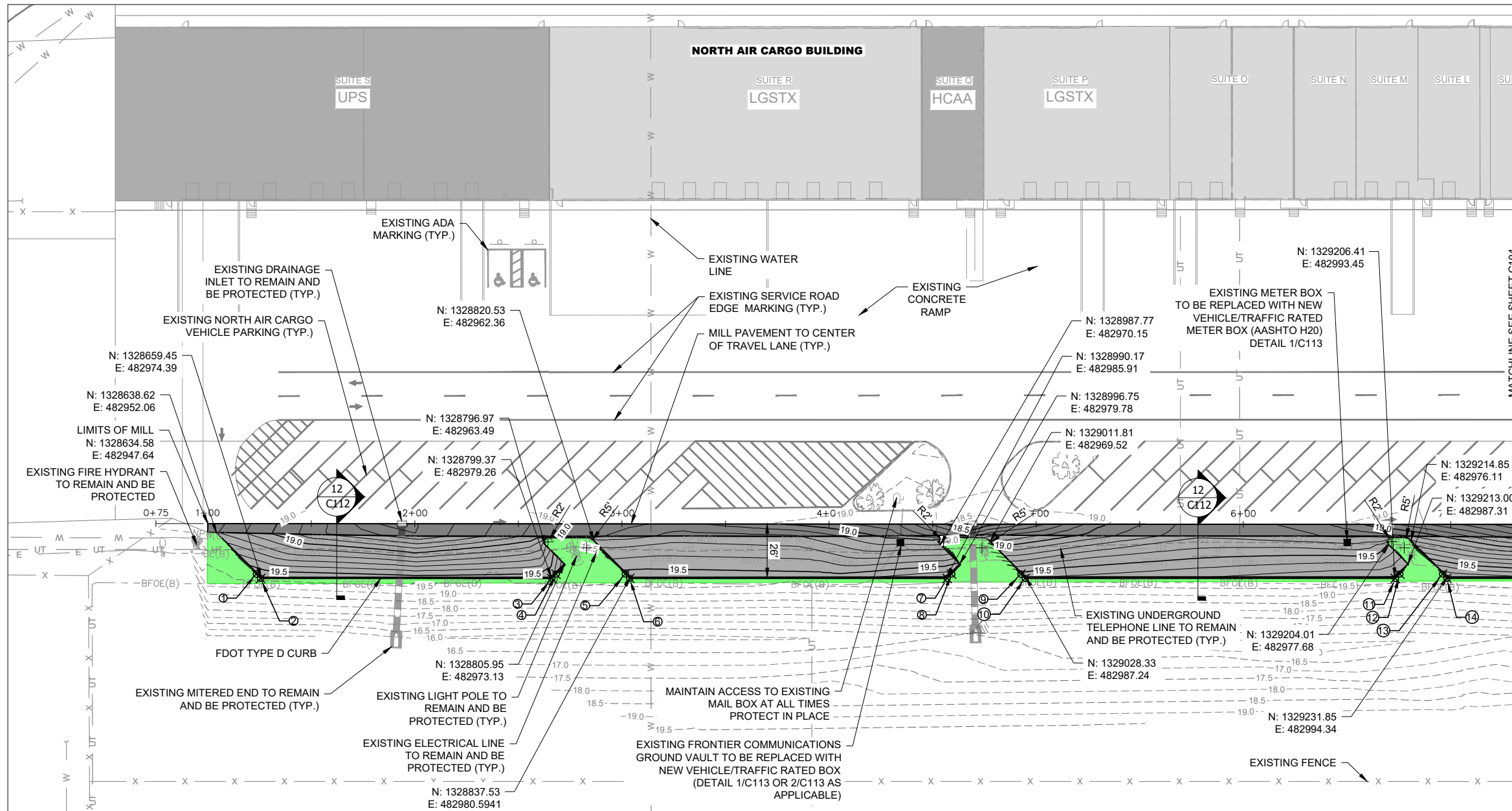
ISSUED FOR CONSTRUCTION



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
FL PE NO. 94486

BR									
REVISIONS									
DATE									
HILLSBOROUGH COUNTY AVIATION AUTHORITY TAMPA, FLORIDA 1715 N. WASHINGTON BLVD., SUITE 400 TAMPA, FLORIDA 33607-3999 WWW.RSANDH.COM FL ENGINEERING LICENSE NO. EC000880-1CC000910									
PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS SHEET TITLE: EXISTING CONDITIONS AND DEMOLITION PLAN (SHEET 2 OF 2) SHEET NO.: C102									
DESIGNED:	CJT								
DRAWN:	JDH								
CHECKED:	MRB								
HCAA NO.:	6530 18								
JOB NO.:	204-1880-047								
DATE:	MARCH 20, 2023								



LEGEND

- PROPOSED FULL DEPTH PARKING EXPANSION (DETAIL 5, SHEET C110)
- PROPOSED 2 IN ASPHALT OVERLAY (DETAIL 3, SHEET C110)
- EXISTING PAVEMENT EDGE
- X EXISTING FENCE
- E EXISTING ELECTRICAL LINE
- BE(B) EXISTING ELECTRICAL LINE
- W EXISTING WATER LINE
- NPW(B) EXISTING WATER LINE
- F EXISTING FUEL LINE
- SS EXISTING SANITARY SEWER LINE
- UT EXISTING UNDERGROUND TELEPHONE LINE
- BFOE(B) EXISTING UNDERGROUND TELEPHONE LINE
- FO EXISTING FIBER OPTICS LINE
- EXISTING DRAINAGE PIPE
- - - EXISTING CONTOUR (0.5')
- PROPOSED CONTOUR (0.1')
- EXISTING INLET
- ☼ EXISTING LIGHT POLE
- ⊗ FDOT TYPE D CURB (SEE POINT TABLE)

BR

REVISIONS

DATE

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1716 N. WASHINGTON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3998
WWW.RSANDH.COM
FL 00008801 LCC000010

Tampa International Airport

PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

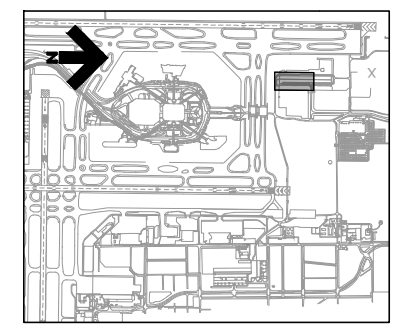
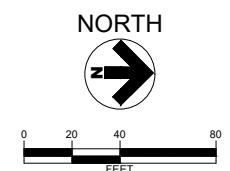
SHEET TITLE: GEOMETRY AND PAVING PLAN (SHEET 1 OF 2)

DESIGNED: CUT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

SHEET NO.: C103

- ### NOTES
- LIMITS OF PROPOSED PAVEMENT SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR AND APPROVED BY THE AUTHORITY.
 - ALL ITEMS INDICATED AS "TO REMAIN AND BE PROTECTED" IN THE PLANS MUST BE LEFT UNDISTURBED THROUGHOUT CONSTRUCTION AND MUST BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. ANY DAMAGE TO THESE ITEMS MUST BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
 - CONTRACTOR MUST MATCH EXISTING GRADE AT ALL LIMITS OF CONSTRUCTION UNLESS OTHERWISE NOTED. PROPOSED PAVEMENT MUST GRADE TO DRAIN. PONDING OF WATER FOLLOWING THE COMPLETION OF CONSTRUCTION IS NOT PERMITTED.
 - ANY EXISTING TURF AREA DISTURBED OUTSIDE THE LIMITS OF WORK AS A RESULT OF THE CONTRACTOR'S WORK EFFORT MUST BE SODDED AT THE AUTHORITY'S DISCRETION. ANY SOD INSTALLED MUST MATCH THE EXISTING BAHIA SOD SPECIES.
 - SEE SHEETS C107-C108 FOR PAVEMENT MARKING PLANS.

BEGIN FDOT TYPE D CURB 0 TO 6 INCH TRANSITION			BEGIN FDOT TYPE D CURB CONTINUOUS 6 INCH			END FDOT TYPE D CURB CONTINUOUS 6 INCH			END FDOT TYPE D CURB 6 INCH TO 0 TRANSITION		
POINT	NORTHING	EASTING	POINT	NORTHING	EASTING	POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
1	1328657.10	482972.85	2	1328659.15	482975.04	3	1328799.62	482979.94	4	1328801.81	482977.89
5	1328835.19	482979.06	6	1328837.23	482981.25	7	1328990.42	482986.59	8	1328992.62	482984.54
9	1329025.99	482985.71	10	1329028.04	482987.90	11	1329206.67	482994.13	12	1329208.86	482992.08
13	1329229.51	482992.80	14	1329231.56	482995.00	15	1329346.59	482999.00	16	1329348.78	482996.96
17	1329461.54	483001.70	18	1329463.59	483003.89	19	1329642.23	483009.91	20	1329644.43	483007.86
21	1329665.07	483008.55	22	1329667.12	483010.74	23	1329833.04	483016.33	24	1329835.24	483014.28
25	1329868.61	483015.41	26	1329870.65	483017.60	27	1329883.93	483018.05	28	1329886.12	483016.00



KEY MAP
ISSUED FOR CONSTRUCTION

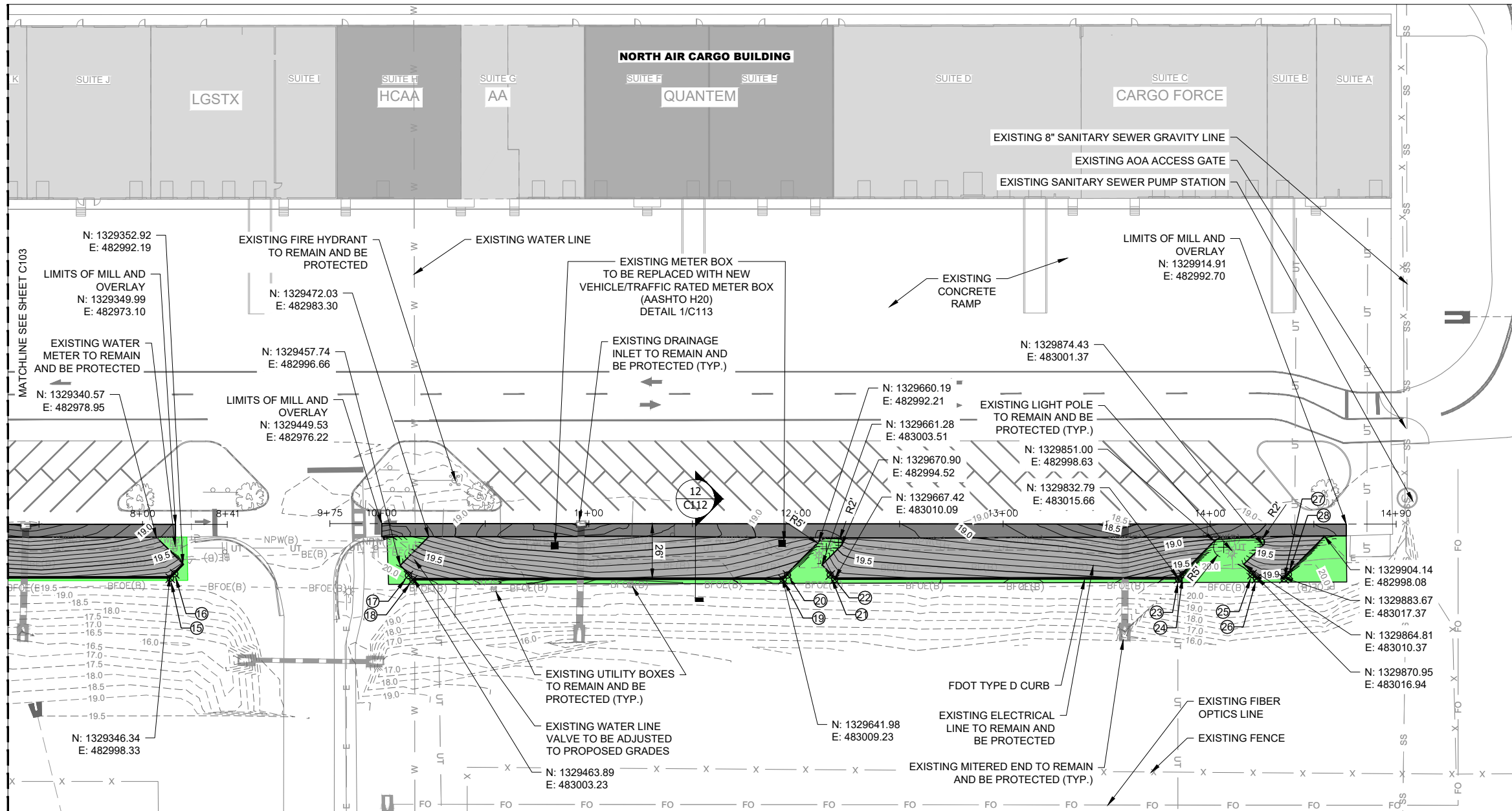
THERE ARE EXISTING UNDERGROUND UTILITIES IN THE PROJECT WORK AREA. THE ENGINEER HAS MADE EVERY EFFORT TO SHOW THEIR APPROXIMATE LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY UNDERGROUND UTILITY LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO CONSTRUCTION. ANY DAMAGE DONE TO ANY EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY UTILITY DAMAGED BY HIS ACTIONS WITH NO ADDITIONAL COMPENSATION.

THIS SHEET TO BE PRINTED IN COLOR

Sunshine State 811 One Call

THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
FL PE NO. 94486



LEGEND

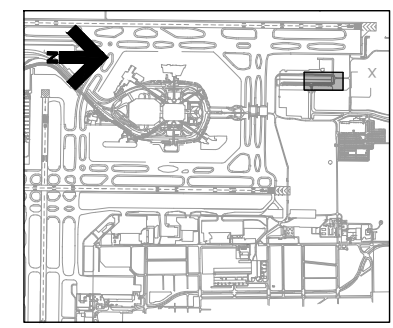
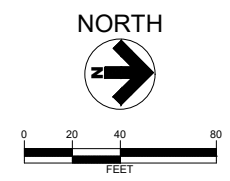
- PROPOSED FULL DEPTH PARKING EXPANSION (DETAIL 5, SHEET C110)
- PROPOSED 2 IN ASPHALT OVERLAY (DETAIL 3, SHEET C110)
- X — EXISTING PAVEMENT EDGE
- X — EXISTING FENCE
- E — EXISTING ELECTRICAL LINE
- BE(B) — EXISTING ELECTRICAL LINE
- W — EXISTING WATER LINE
- NPW(B) — EXISTING WATER LINE
- F — EXISTING FUEL LINE
- SS — EXISTING SANITARY SEWER LINE
- UT — EXISTING UNDERGROUND TELEPHONE LINE
- BFOE(B) — EXISTING UNDERGROUND TELEPHONE LINE
- FO — EXISTING FIBER OPTICS LINE
- — — EXISTING DRAINAGE PIPE
- — — EXISTING CONTOUR (0.5')
- — — PROPOSED CONTOUR (0.1')
- EXISTING INLET
- ☼ EXISTING LIGHT POLE
- ⊗ FDOT TYPE D CURB (SEE POINT TABLE)

NOTES

1. LIMITS OF PROPOSED PAVEMENT SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR AND APPROVED BY THE AUTHORITY.
2. ALL ITEMS INDICATED AS "TO REMAIN AND BE PROTECTED" IN THE PLANS MUST BE LEFT UNDISTURBED THROUGHOUT CONSTRUCTION AND MUST BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. ANY DAMAGE TO THESE ITEMS MUST BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
3. CONTRACTOR MUST MATCH EXISTING GRADE AT ALL LIMITS OF CONSTRUCTION UNLESS OTHERWISE NOTED. PROPOSED PAVEMENT MUST GRADE TO DRAIN. PONDING OF WATER FOLLOWING THE COMPLETION OF CONSTRUCTION IS NOT PERMITTED.
4. ANY EXISTING TURF AREA DISTURBED OUTSIDE THE LIMITS OF WORK AS A RESULT OF THE CONTRACTOR'S WORK EFFORT MUST BE SODDED AT THE AUTHORITY'S DISCRETION. ANY SOD INSTALLED MUST MATCH THE EXISTING BAHIA SOD SPECIES.
5. SEE SHEETS C107-C108 FOR PAVEMENT MARKING PLANS.

THERE ARE EXISTING UNDERGROUND UTILITIES IN THE PROJECT WORK AREA. THE ENGINEER HAS MADE EVERY EFFORT TO SHOW THEIR APPROXIMATE LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY UNDERGROUND UTILITY LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO CONSTRUCTION. ANY DAMAGE DONE TO ANY EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY UTILITY DAMAGED BY HIS ACTIONS WITH NO ADDITIONAL COMPENSATION.

BEGIN FDOT TYPE D CURB 0 TO 6 INCH TRANSITION			BEGIN FDOT TYPE D CURB CONTINUOUS 6 INCH			END FDOT TYPE D CURB CONTINUOUS 6 INCH			END FDOT TYPE D CURB 6 INCH TO 0 TRANSITION		
POINT	NORTHING	EASTING	POINT	NORTHING	EASTING	POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
1	1328657.10	482972.85	2	1328659.15	482975.04	3	1328799.62	482979.94	4	1328801.81	482977.89
5	1328835.19	482979.06	6	1328837.23	482981.25	7	1328990.42	482986.59	8	1328992.62	482984.54
9	1329025.99	482985.71	10	1329028.04	482987.90	11	1329206.67	482994.13	12	1329208.86	482992.08
13	1329229.51	482992.80	14	1329231.56	482995.00	15	1329346.59	482999.00	16	1329348.78	482996.96
17	1329461.54	483001.70	18	1329463.59	483003.89	19	1329642.23	483009.91	20	1329644.43	483007.86
21	1329665.07	483008.55	22	1329667.12	483010.74	23	1329833.04	483016.33	24	1329835.24	483014.28
25	1329868.61	483015.41	26	1329870.65	483017.60	27	1329883.93	483018.05	28	1329886.12	483016.00



KEY MAP

ISSUED FOR CONSTRUCTION

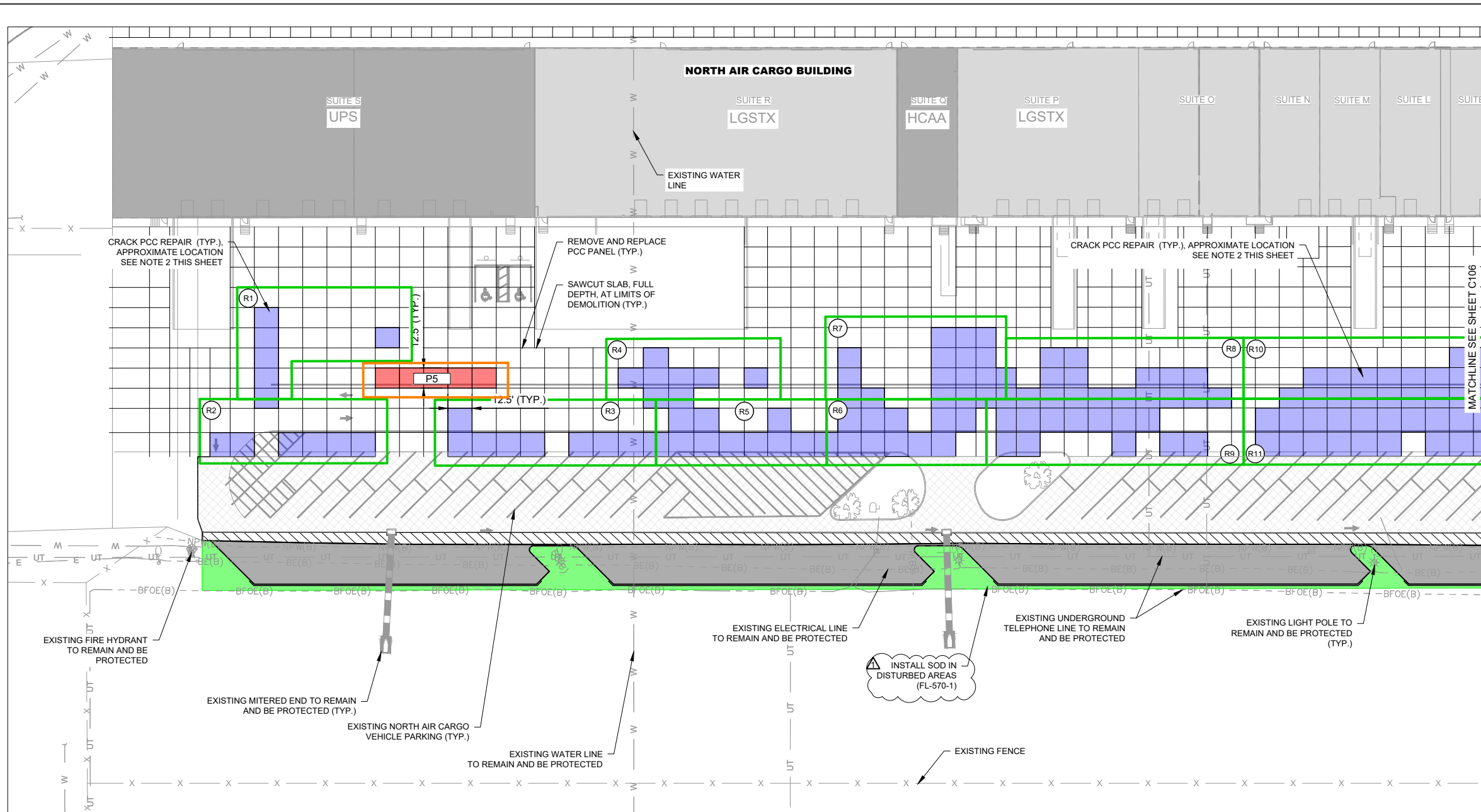
THIS SHEET TO BE PRINTED IN COLOR



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

DESIGNED: CJT
 DRAWN: JDH
 CHECKED: MRB
 HCAA NO.: 6530 18
 JOB NO.: 204-1880-047
 DATE: MARCH 20, 2023

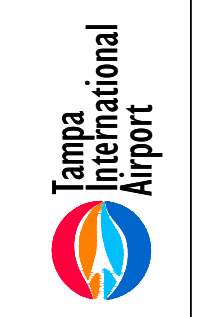
DATE		REVISIONS									
PROJECT NAME VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS											
SHEET TITLE GEOMETRY AND PAVING PLAN (SHEET 2 OF 2)											
SHEET NO. C104											



LEGEND

- EXISTING PCC PANEL TO UNDERGO CRACK REPAIR. CRACK REPAIR TO BE IDENTIFIED IN FIELD BY ENGINEER
- EXISTING PCC PANEL TO BE REMOVED AND REPLACED (## INDICATES SLAB ID NUMBER, SEE LOCATION TABLE THIS SHEET) (SEE DETAILS 2 & 4, SHEET C110)
- PROPOSED 2 IN ASPHALT PAVEMENT (DETAIL 5, SHEET C110)
- PROPOSED 2 IN ASPHALT OVERLAY (DETAIL 3, SHEET C110)
- SEAL COAT OVER EXISTING ASPHALT
- SOD (FL-570-1)
- EXISTING FENCE
- EXISTING ELECTRICAL LINE
- EXISTING ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING IRRIGATION LINE
- EXISTING FUEL LINE
- EXISTING SANITARY SEWER LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING FIBER OPTICS LINE
- EXISTING DRAINAGE PIPE
- EXISTING INLET
- EXISTING LIGHT POLE
- R# PHASE NUMBER FOR PCC PANEL CRACK REPAIR
- P# PHASE NUMBER FOR PCC PANEL REMOVAL & REPLACEMENT
- WORK ZONE PHASING FOR PANEL JOINT REHABILITATION
- WORK ZONE PHASING FOR PANEL REPLACEMENT

BR: _____
 REVISIONS: _____
 DATE: 2-17-23
 HILLSBOROUGH COUNTY AVIATION AUTHORITY
 TAMPA, FLORIDA
 1715 N. WASHINGTON BLVD., SUITE 600
 TAMPA, FLORIDA 33607-5999
 WWW.AVIATIONAUTHORITY.FL
 E: ERIC@HCAA.FL
 P: 813.272.0010

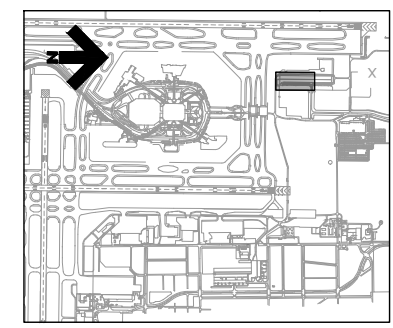
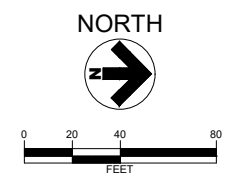


PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS
 SHEET TITLE: TRUCK COURT REHABILITATION PLAN (SHEET 1 OF 2)
 DESIGNED: JSA
 DRAWN: JSA
 CHECKED: MRB
 HCAA NO.: 6530 18
 JOB NO.: 204-1880-047
 DATE: MARCH 20, 2023
 SHEET NO.: C105

NOTES

1. SEE SHEET C110-C112 FOR SLAB REPLACEMENT AND JOINT/CRACK SEAL DETAILS.
2. LIMITS AND LOCATION OF PROPOSED JOINT/CRACK SEAL ARE APPROXIMATE ONLY. THE ENGINEER HAS ESTIMATED 5000 LF OF JOINT/CRACK SEAL REPAIR THAT WILL BE IDENTIFIED/MARKED IN THE FIELD BY THE ENGINEER AND AUTHORITY PRIOR TO CONSTRUCTION.
3. JOINT AND CRACK REPAIR PROCESS TO BE COMPLETED FOLLOWING SPECIFICATION FL-350.
4. ALL ITEMS INDICATED AS "TO REMAIN AND BE PROTECTED" IN THE PLANS SHALL BE LEFT UNDISTURBED THROUGHOUT CONSTRUCTION AND SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
5. CONTRACTOR SHALL MATCH EXISTING GRADE AND JOINTS AT ALL LIMITS OF CONSTRUCTION UNLESS OTHERWISE NOTED. PROPOSED PAVEMENT SHALL GRADE TO DRAIN. PONDING OF WATER FOLLOWING THE COMPLETION OF CONSTRUCTION SHALL NOT BE PERMITTED.
6. ALL WASTE MATERIAL GENERATED AS PART OF CONSTRUCTION SHALL BE REMOVED FROM THE CONSTRUCTION AREA ON A DAILY BASIS AND BE DISPOSED OF OFF AIRPORT PROPERTY IN A LEGAL MANNER. NO MATERIAL SHALL BE WASTED ON THE AIRPORT PROPERTY.

THERE ARE EXISTING UNDERGROUND UTILITIES IN THE PROJECT WORK AREA. THE ENGINEER HAS MADE EVERY EFFORT TO SHOW THEIR APPROXIMATE LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY UNDERGROUND UTILITY LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO CONSTRUCTION. ANY DAMAGE DONE TO ANY EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY UTILITY DAMAGED BY HIS ACTIONS WITH NO ADDITIONAL COMPENSATION.

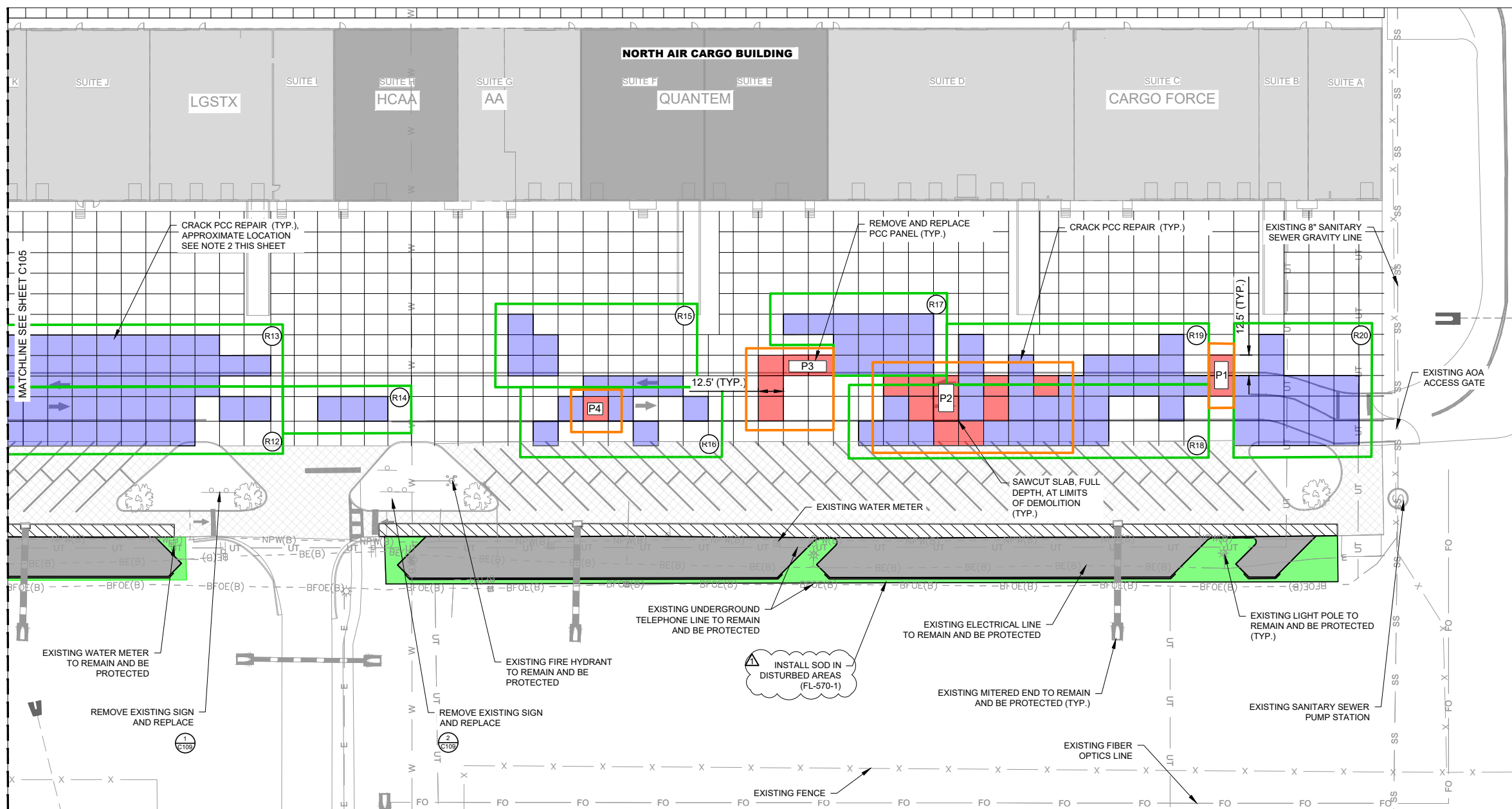


KEY MAP
 ISSUED FOR CONSTRUCTION

THIS SHEET TO BE PRINTED IN COLOR



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



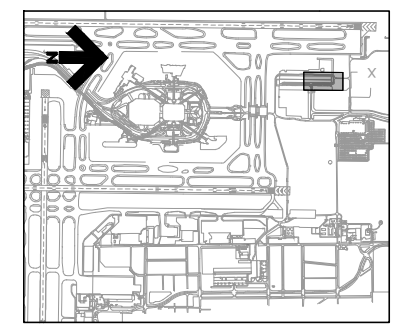
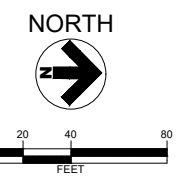
LEGEND

- EXISTING PCC PANEL TO UNDERGO CRACK REPAIR. CRACK REPAIR TO BE IDENTIFIED IN FIELD BY ENGINEER
- EXISTING PCC PANEL TO BE REMOVED AND REPLACED (## INDICATES SLAB ID NUMBER, SEE LOCATION TABLE THIS SHEET) (SEE DETAILS 2 & 4, SHEET C110)
- PROPOSED 2 IN ASPHALT PAVEMENT (DETAIL 5, SHEET C110)
- PROPOSED 2 IN ASPHALT OVERLAY (DETAIL 3, SHEET C110)
- SEAL COAT OVER EXISTING ASPHALT
- SOD (FL-570-1)
- X — EXISTING FENCE
- E — EXISTING ELECTRICAL LINE
- W — EXISTING WATER LINE
- NPW(B) — EXISTING IRRIGATION LINE
- F — EXISTING FUEL LINE
- SS — EXISTING SANITARY SEWER LINE
- UT — EXISTING UNDERGROUND TELEPHONE LINE
- BFOE(B) — EXISTING UNDERGROUND TELEPHONE LINE
- FO — EXISTING FIBER OPTICS LINE
- EXISTING DRAINAGE PIPE
- EXISTING INLET
- EXISTING LIGHT POLE
- R# — PHASE NUMBER FOR PCC PANEL CRACK REPAIR
- P# — PHASE NUMBER FOR PCC PANEL REMOVAL & REPLACEMENT
- WORK ZONE PHASING FOR PANEL JOINT REHABILITATION
- WORK ZONE PHASING FOR PANEL REPLACEMENT

NOTES

1. SEE SHEET C110-C112 FOR SLAB REPLACEMENT AND JOINT/CRACK SEAL DETAILS.
2. LIMITS AND LOCATION OF PROPOSED CRACK SEAL ARE APPROXIMATE ONLY. THE ENGINEER HAS ESTIMATED 5000 LF OF CRACK SEAL REPAIR THAT WILL BE IDENTIFIED/MARKED IN THE FIELD BY THE ENGINEER AND AUTHORITY PRIOR TO CONSTRUCTION.
3. JOINT AND CRACK REPAIR PROCESS TO BE COMPLETED FOLLOWING SPECIFICATION FL-350.
4. ALL ITEMS INDICATED AS "TO REMAIN AND BE PROTECTED" IN THE PLANS SHALL BE LEFT UNDISTURBED THROUGHOUT CONSTRUCTION AND SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
5. CONTRACTOR SHALL MATCH EXISTING GRADE AND JOINTS AT ALL LIMITS OF CONSTRUCTION UNLESS OTHERWISE NOTED. PROPOSED PAVEMENT SHALL GRADE TO DRAIN. PONDING OF WATER FOLLOWING THE COMPLETION OF CONSTRUCTION SHALL NOT BE PERMITTED.
6. ALL WASTE MATERIAL GENERATED AS PART OF CONSTRUCTION SHALL BE REMOVED FROM THE CONSTRUCTION AREA ON A DAILY BASIS AND BE DISPOSED OF OFF AIRPORT PROPERTY IN A LEGAL MANNER. NO MATERIAL SHALL BE WASTED ON THE AIRPORT PROPERTY.

THERE ARE EXISTING UNDERGROUND UTILITIES IN THE PROJECT WORK AREA. THE ENGINEER HAS MADE EVERY EFFORT TO SHOW THEIR APPROXIMATE LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY UNDERGROUND UTILITY LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO CONSTRUCTION. ANY DAMAGE DONE TO ANY EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY UTILITY DAMAGED BY HIS ACTIONS WITH NO ADDITIONAL COMPENSATION.



KEY MAP
ISSUED FOR CONSTRUCTION

THIS SHEET TO BE PRINTED IN COLOR



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

DESIGNED: JSA
 DRAWN: JSA
 CHECKED: MRB
 HCAA NO.: 6530 18
 JOB NO.: 204-1880-047
 DATE: MARCH 20, 2023

REV	DATE	DESCRIPTION
1	2-17-23	REVISED ADDENDUM 1

HILLSBOROUGH COUNTY AVIATION AUTHORITY
 TAMPA, FLORIDA

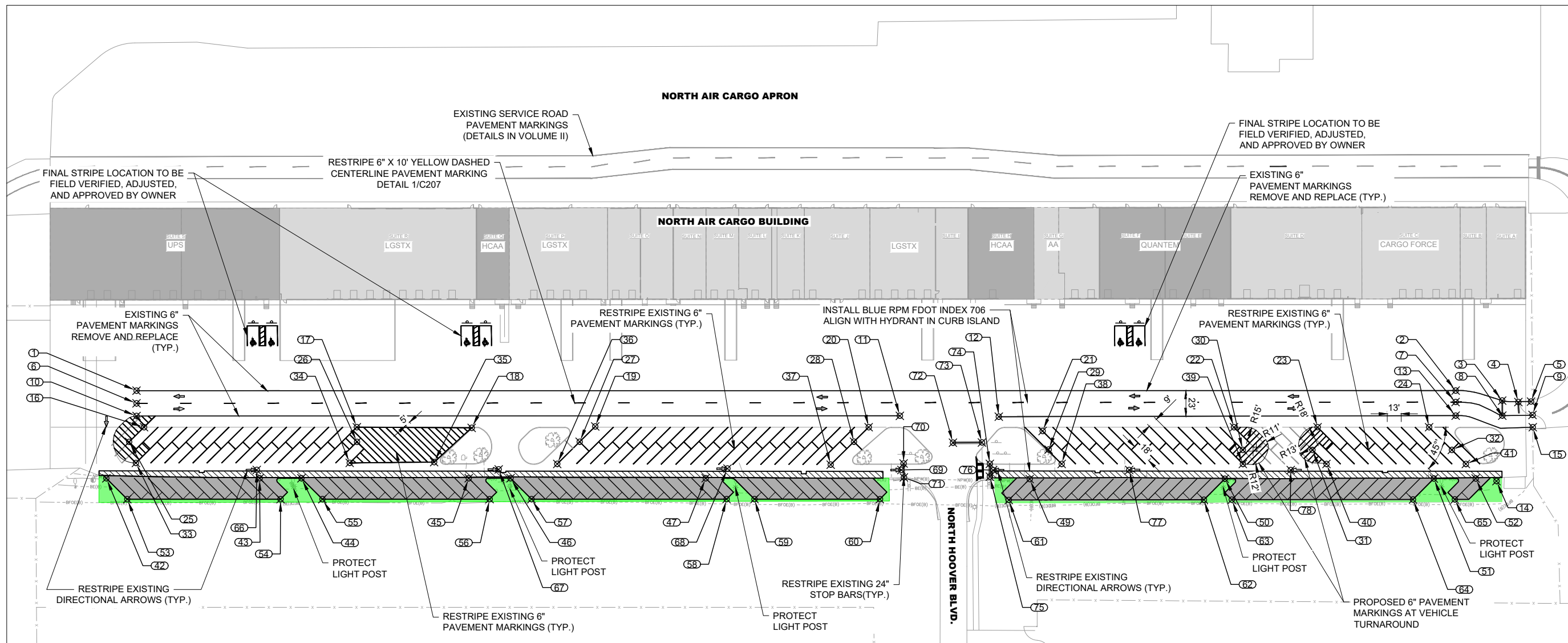
RS&H
 1716 N. WASHINGTON BLVD., SUITE 600
 TAMPA, FLORIDA 33607-3998
 WWW.RSANDH.COM
 FL 00009801 LCC000010



PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE: TRUCK COURT REHABILITATION PLAN (SHEET 2 OF 2)

SHEET NO.: C106



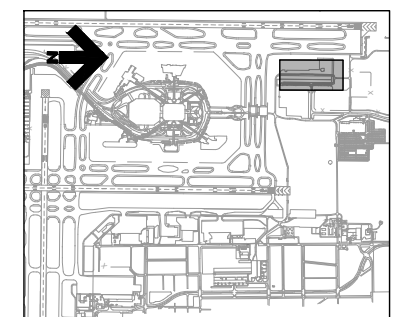
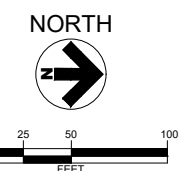
NOTES

- 1. SEE SHEET C108 FOR ADDITIONAL MARKING INFORMATION. SEE SHEET C112 AND C207 FOR MARKING DETAILS.

LEGEND

- PROPOSED PAVEMENT
- PROPOSED ASPHALT OVERLAY
- EXISTING FENCE
- PROPOSED PAVEMENT MARKINGS

POINT TABLE			POINT TABLE			POINT TABLE			POINT TABLE		
POINT	NORTHING	EASTING	POINT	NORTHING	EASTING	POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
1	1328671.37	482875.72	21	1329497.00	482941.39	41	1329882.18	482984.94	62	1329641.98	483009.23
2	1329875.18	482917.66	22	1329671.73	482944.01	42	1328641.03	482954.64	63	1329667.42	483010.09
3	1329917.36	482928.25	23	1329748.05	482946.67	43	1328780.95	482959.52	64	1329832.79	483015.66
4	1329932.02	482930.10	24	1329849.81	482950.23	44	1328819.11	482960.85	65	1329870.93	483016.94
5	1329943.63	482930.09	25	1328663.00	482922.23	45	1328971.76	482966.17	66	1328778.59	482951.85
6	1328670.97	482887.27	26	1328870.95	482929.43	46	1329009.92	482967.50	67	1328999.34	482959.09
7	1329874.78	482928.13	27	1329074.16	482936.46	47	1329188.00	482973.71	68	1329208.17	482965.63
8	1329916.93	482942.02	28	1329324.48	482945.12	49	1329483.63	482984.80	69	1329366.86	482972.39
9	1329944.57	482942.34	29	1329501.89	482958.53	50	1329661.70	482990.79	70	1329369.08	482966.55
10	1328670.57	482898.83	30	1329679.01	482965.02	51	1329852.49	482997.22	71	1329368.90	482979.29
11	1329367.17	482922.99	31	1329742.61	482967.24	52	1329890.65	482998.50	72	1329414.77	482949.19
12	1329457.42	482926.90	32	1329869.81	482971.68	53	1328659.45	482974.39	73	1329441.24	482949.90
13	1329874.39	482940.51	33	1328668.49	482941.63	54	1328799.37	482979.26	74	1329447.78	482969.66
14	1329909.58	483001.53	34	1328863.62	482948.38	55	1328837.53	482980.59	75	1329447.36	482981.32
15	1329944.41	482953.53	35	1328940.69	482950.37	56	1328990.17	482985.91	76	1329450.59	482975.50
16	1328677.09	482909.27	36	1329052.98	482955.93	57	1329028.33	482987.24	77	1329574.73	482979.71
17	1328871.26	482916.06	37	1329302.49	482965.33	58	1329206.41	482993.45	78	1329722.14	482984.93
18	1328976.05	482920.32	38	1329513.29	482972.06	59	1329231.85	482994.34			
19	1329088.84	482922.97	39	1329678.65	482977.83	60	1329346.34	482998.33			
20	1329338.36	482932.37	40	1329754.98	482980.50	61	1329463.92	483003.23			

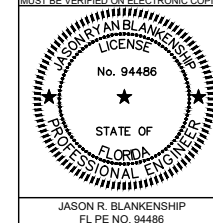


KEY MAP

ISSUED FOR CONSTRUCTION



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

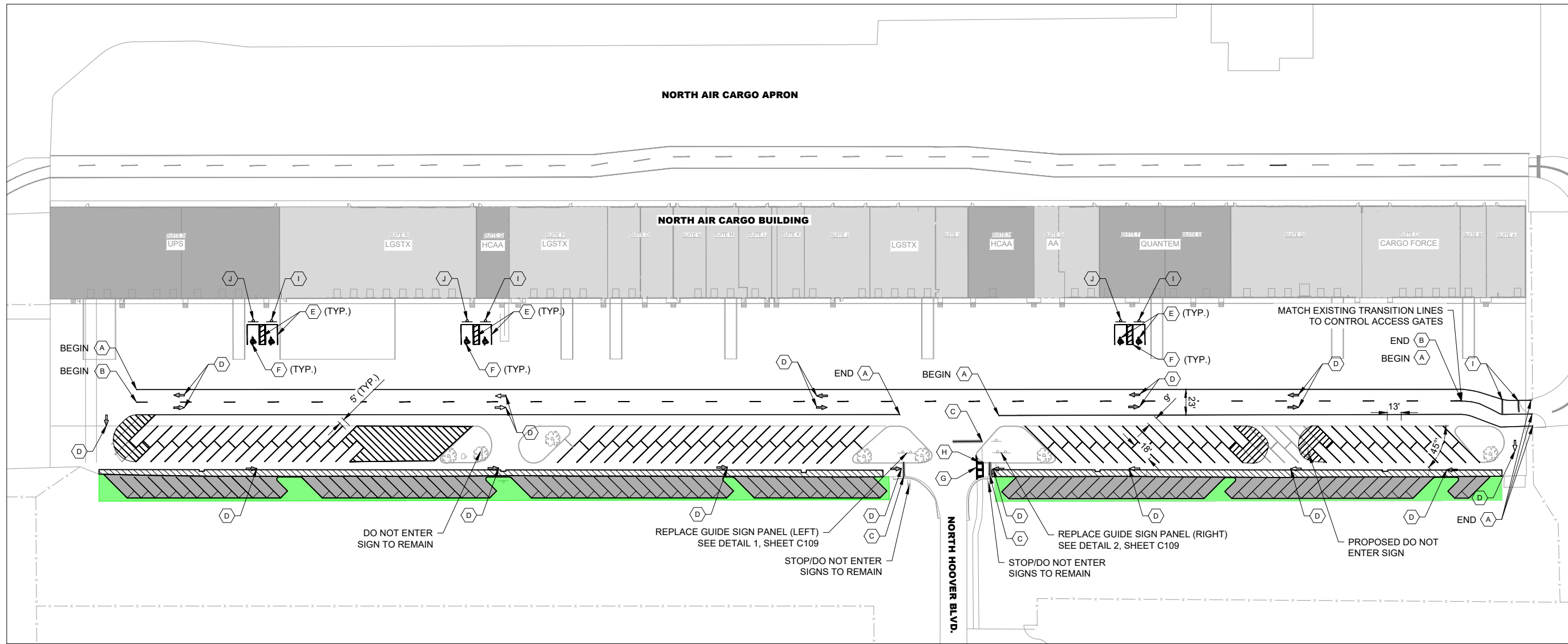


DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
 TAMPA, FLORIDA

Tampa International Airport

PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS
 SHEET TITLE: PAVEMENT MARKING PLAN (SHEET 1 OF 2)
 DESIGNED: CJT
 DRAWN: JDH
 CHECKED: MRB
 HCAA NO.: 6530 18
 JOB NO.: 204-1880-047
 DATE: MARCH 20, 2023
C107
 SHEET NO.:



LEGEND

- x x x --- EXISTING FENCE
- — — — — PROPOSED PAVEMENT MARKINGS
- (A) 6" SOLID WHITE PAVEMENT MARKING
- (B) 6" DASHED YELLOW CENTERLINE PAVEMENT MARKING (SEE DETAIL 16, SHEET C112)
- (C) 24" STOP BAR MARKING
- (D) THROUGH LANE ARROW (SEE SHEET C112, DETAIL 15)
- (E) ADA PARKING PAVEMENT MARKINGS (SEE SHEET C112, DETAIL 13)
- (F) UNIVERSAL ACCESSIBILITY MARKING (SEE SHEET C112, DETAIL 14)
- (G) 12" SOLID WHITE PAVEMENT MARKING
- (H) 24" SOLID WHITE PAVEMENT MARKING
- (I) 12" STOP BAR MARKING



FTP-21-06

PARKING BY
DISABLED
PERMIT
ONLY

FINE
\$250 MAX

FTP-22-06



FTP-21-06

PARKING BY
DISABLED
PERMIT
ONLY

VAN
ACCESSIBLE

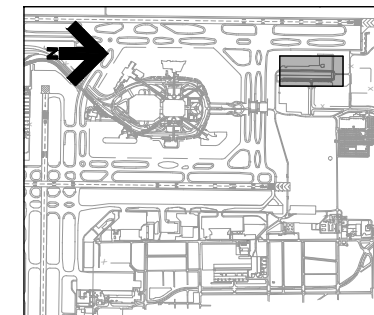
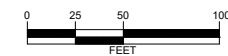
FINE
\$250 MAX

MUTCD R7-8P

FTP-22-06

NOTES

1. SEE SHEET C107 FOR PAVEMENT MARKING COORDINATES.

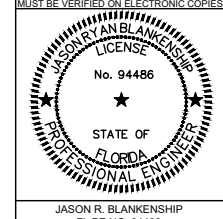


KEY MAP

ISSUED FOR CONSTRUCTION

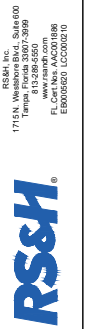


THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DATE	REVISIONS

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA



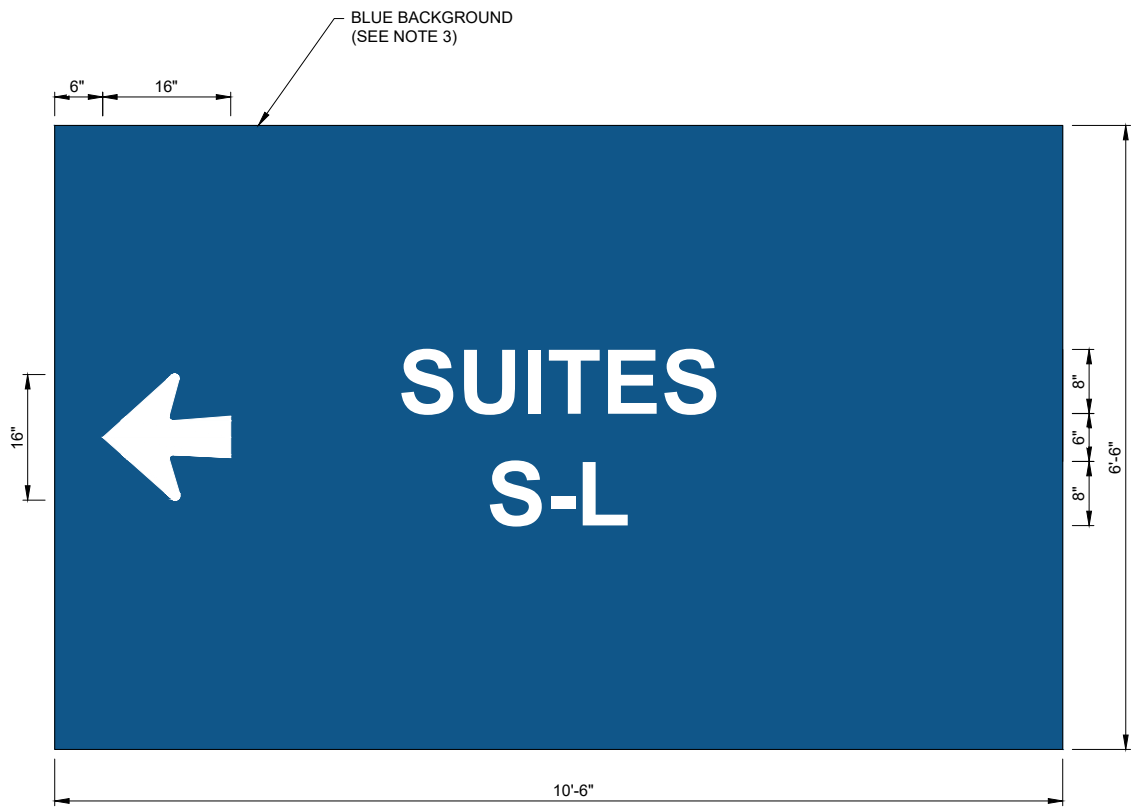
PROJECT NAME
VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
PAVEMENT MARKING PLAN
(SHEET 2 OF 2)

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C108

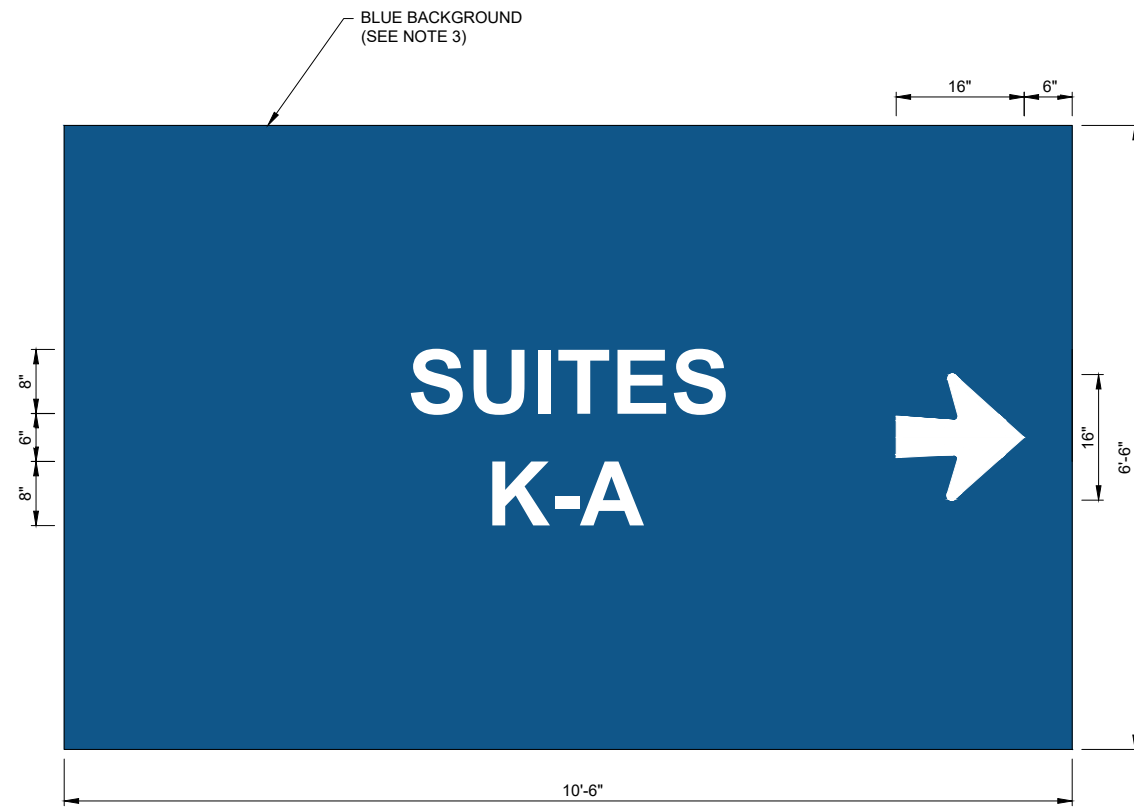
SHEET NO.



NOTES:

1. SIGN TO BE PLACED AT N HOOVER BLVD LEFT ENTRANCE CURB.
2. TYPOGRAPHY: FRUTIGER 55 ROMAN; 30 POINT TRACKING; OPTICAL KERNING.
3. GRAPHICS: 8" WHITE MESSAGE; 16"X16" ARROW; TPA (COASTAL BLUE) / PMS (PROCESS BLUE) / MATTHEWS PAINT (MP67627).
4. MATERIALS: 0.125" MINIMUM ALUMINUM WITH APPLIED 3M DG3 WHITE FILM WITH ELECTROCUT OVERLAY GRAPHICS.
5. SIGN PANELS TO BE MANUFACTURED PER FL-700 AND MOUNTED TO EXISTING HARDWARE. EXTERNAL LIGHTING NOT REQUIRED.
6. FINAL SIGN DETAILS TO BE CONFIRMED WITH OWNER PRIOR TO FABRICATION OR INSTALLATION.

1
C109 **PROPOSED SIGN PANEL (LEFT)**



NOTES:

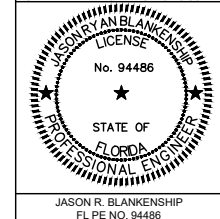
1. SIGN TO BE PLACED AT N HOOVER BLVD RIGHT ENTRANCE CURB.
2. TYPOGRAPHY: FRUTIGER 55 ROMAN; 30 POINT TRACKING; OPTICAL KERNING.
3. GRAPHICS: 8" WHITE MESSAGE; 16"X16" ARROW; TPA (COASTAL BLUE) / PMS (PROCESS BLUE) / MATTHEWS PAINT (MP67627).
4. MATERIALS: 0.125" MINIMUM ALUMINUM WITH APPLIED 3M DG3 WHITE FILM WITH ELECTROCUT OVERLAY GRAPHICS.
5. SIGN PANELS TO BE MANUFACTURED PER FL-700 AND MOUNTED TO EXISTING HARDWARE. EXTERNAL LIGHTING NOT REQUIRED.
6. FINAL SIGN DETAILS TO BE CONFIRMED WITH OWNER PRIOR TO FABRICATION OR INSTALLATION.

2
C109 **PROPOSED SIGN PANEL (RIGHT)**

THIS SHEET TO BE PRINTED IN COLOR



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C109
SHEET NO.

ISSUED FOR CONSTRUCTION

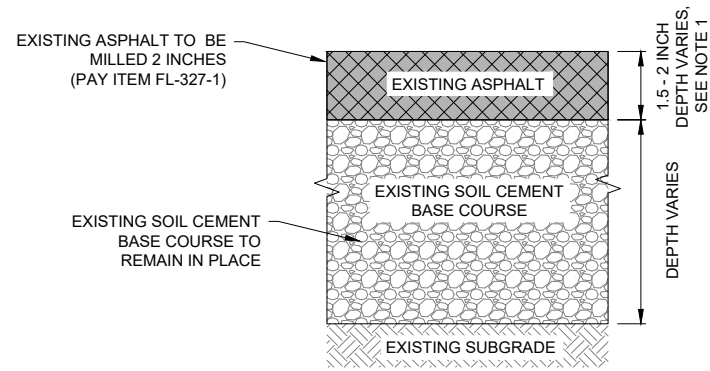
DATE	REVISIONS	BY

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1711 N. WILSON BLVD., SUITE 400
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL E00008201, LCC00001910



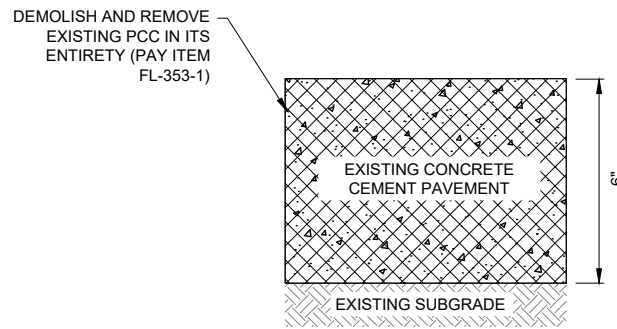
PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS
SHEET TITLE: SIGN PANEL REPLACEMENT DETAILS



NOTE:

- CONTRACTOR SHALL MILL 2.0 IN BELOW EXISTING GRADE TO PERMIT PLACEMENT OF A CONSISTENT 2.0 IN ASPHALT SURFACE COURSE. EXISTING ASPHALT DEPTH VARIES FROM 1.5 IN TO 2 IN. IT SHOULD BE ANTICIPATED THAT MILLING OF EXISTING BASE COURSE WILL BE REQUIRED IN ISOLATED LOCATIONS WHERE EXISTING ASPHALT IS LESS THAN 2.0 IN IN THICKNESS. SEE CONTROL AND BORING PLAN, SHEET G105 FOR CORE LOCATION.

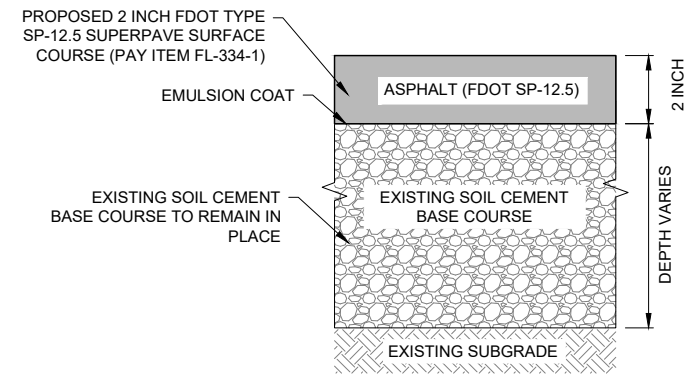
1 EXISTING PAVEMENT SECTION - MILLED
C110



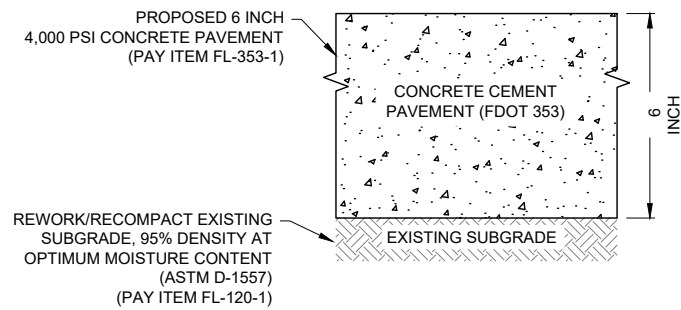
NOTE:

- SUBGRADE EXCAVATION MAY BE REQUIRED FOR NEW CONSTRUCTION. COST FOR SUBGRADE EXCAVATION SHALL BE INCLUDED IN THE FL-120-1 EXCAVATION AND EMBANKMENT PAY ITEM.
- SAW CUTTING CONCRETE AND EXISTING REINFORCEMENT SUBSIDIARY TO ITEM FL-353-1.

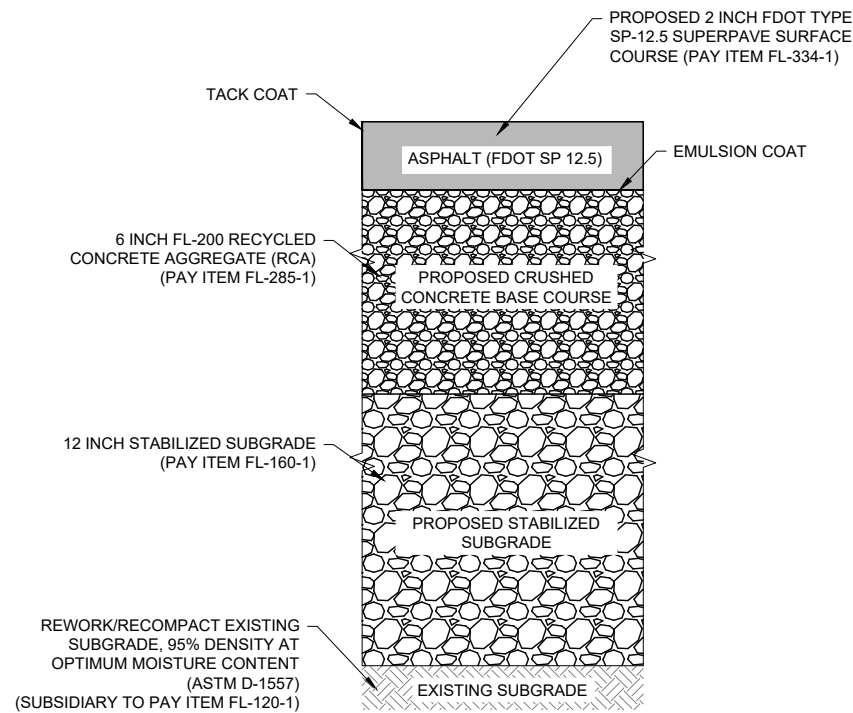
2 EXISTING PAVEMENT SECTION - FULL DEPTH DEMO
C110



3 PROPOSED ASPHALT OVERLAY
C110



4 PROPOSED CONCRETE PAVEMENT
C110



5 PROPOSED FULL-DEPTH ASPHALT SECTION
C110

DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
REGISTERED PROFESSIONAL ENGINEERS
FLORIDA LICENSE NO. EC0000820
1715 N. WILSON BOULEVARD
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
TEL: 813.973.8800

Tampa International Airport

PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS
SHEET TITLE: PAVEMENT AND PAVEMENT MARKING SECTION AND DETAILS (SHEET 1 OF 3)

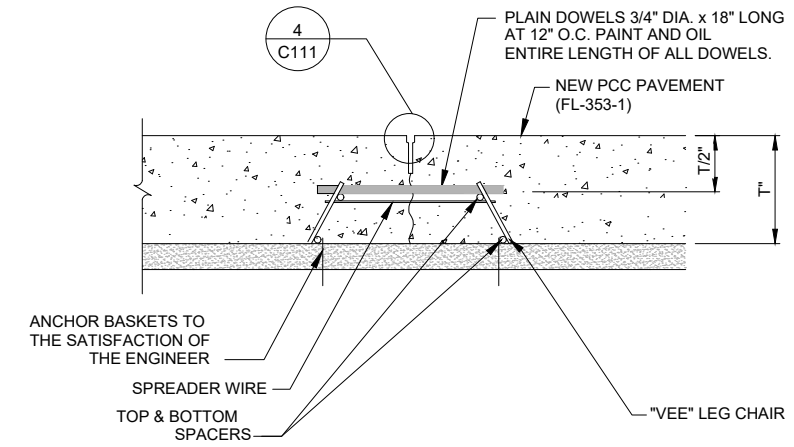
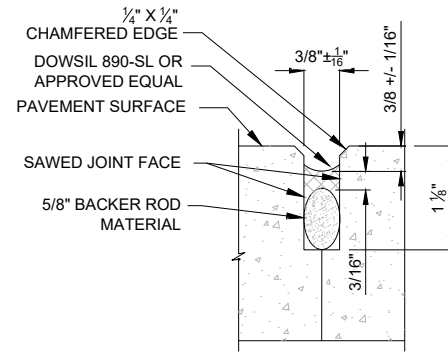
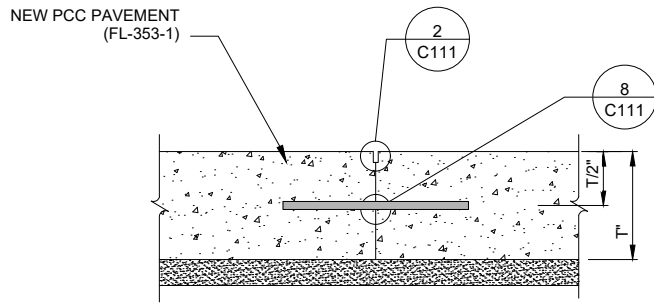


THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
FL PE NO. 94486

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

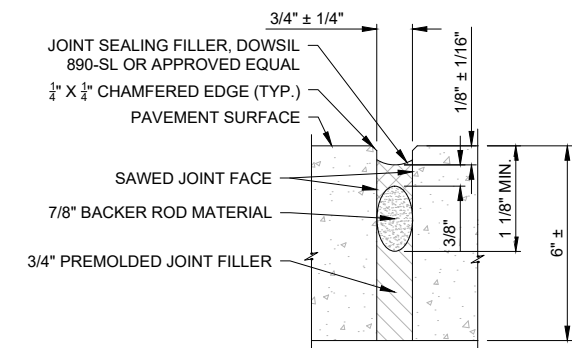
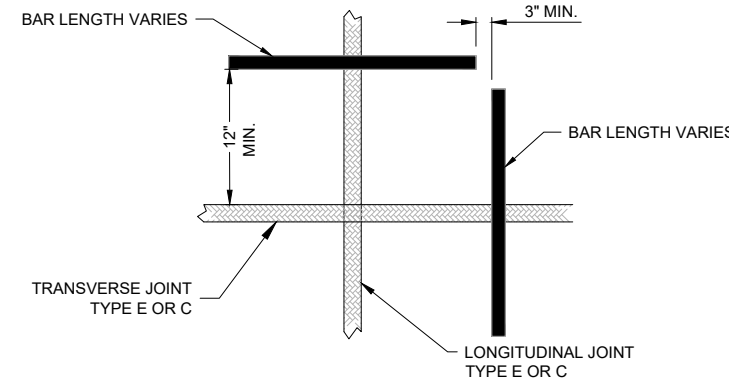
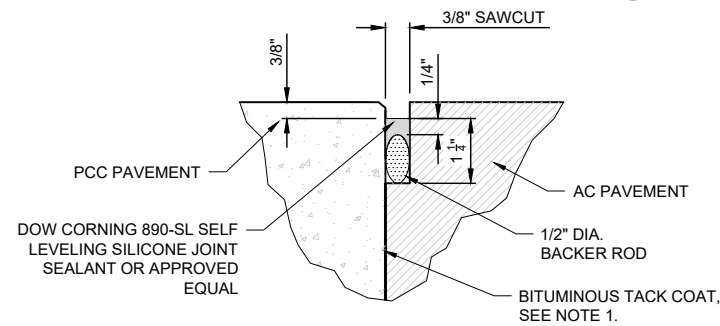
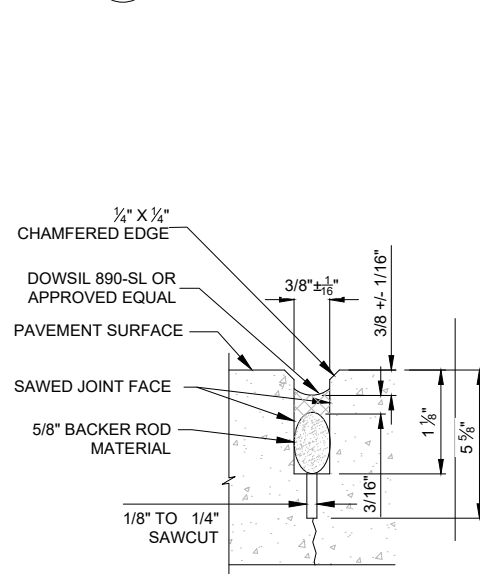
C110
SHEET NO.



1 TYPE E Doweled Construction Joint
C111

2 CONSTRUCTION JOINT
C111

3 TYPE C Doweled Contraction Joint
C111

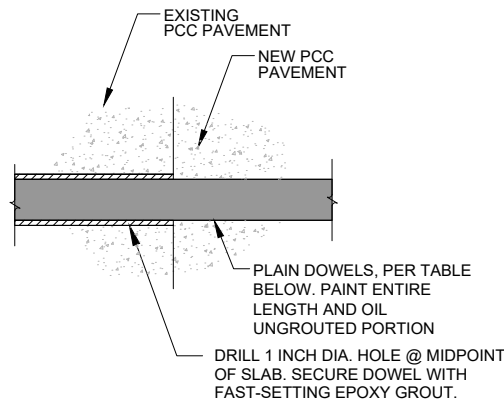


4 CONTRACTION JOINT
C111

5 PCC - AC JOINT SEAL
C111

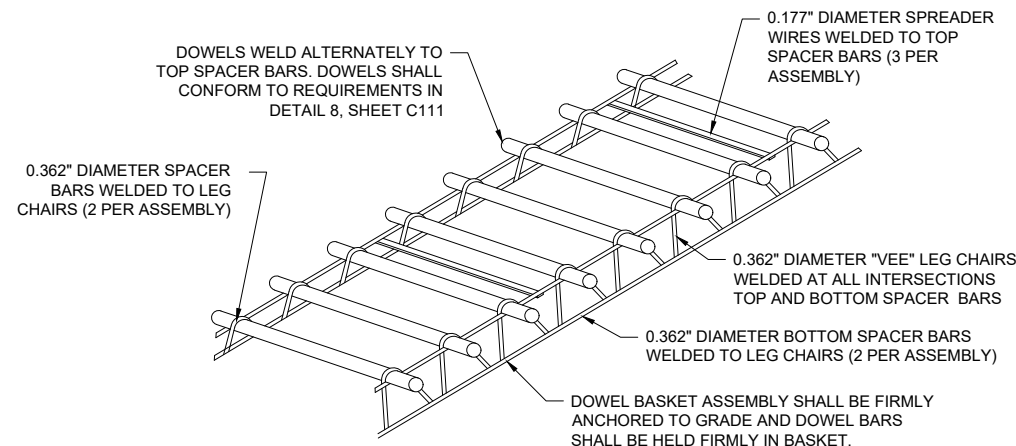
6 POSITION OF DOWELS AT EDGE OF JOINT
C111

7 EXPANSION JOINT DETAIL
C111



DIMENSIONS AND SPACING OF STEEL DOWELS			
SLAB THICKNESS (T)	DIAMETER (d)	LENGTH (L)	SPACING MAX.
6" +/-	3/4"	18"	12" O.C.

8 DOWEL LOCATION DETAIL
C111



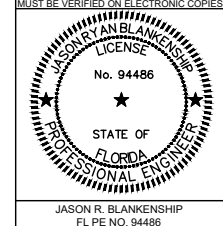
9 DOWEL BASKET ASSEMBLY
C111

GENERAL NOTES:

- BACKER ROD DIMENSION AND PLACEMENT SHALL BE PER FDOT STANDARD PLANS INDEX 350-001.
- BACKER RODS SHALL BE MANUFACTURED FROM CLOSED CELL POLYETHYLENE FOAM COMPATIBLE WITH APPROVED SEALANT.
- CONTRACTOR SHALL PROVIDE A MOCKUP OF THE SAWCUT AND JOINT SEAL FOR REVIEW AND APPROVAL PRIOR TO COMMENCING JOINT SEALING OPERATIONS.
- CONTRACTOR SHALL REMOVE EXCESS SEALANT FROM THE CONCRETE SLAB SURFACE.



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DATE	REVISIONS

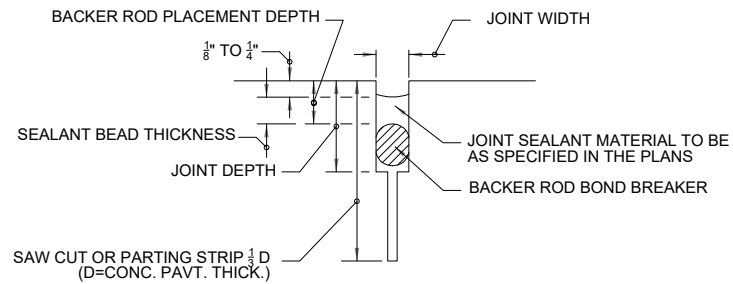
HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA
RS&H
1715 N. WILSON BOULEVARD
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
TEL: 813.288.1000
FAX: 813.288.1001
E: RSANDH@RSANDH.COM



PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS
SHEET TITLE: PAVEMENT AND PAVEMENT MARKING SECTION AND DETAILS (SHEET 2 OF 3)

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C111



FOR NEW AND REHABILITATION PROJECTS
BACKER ROD BOND BREAKER

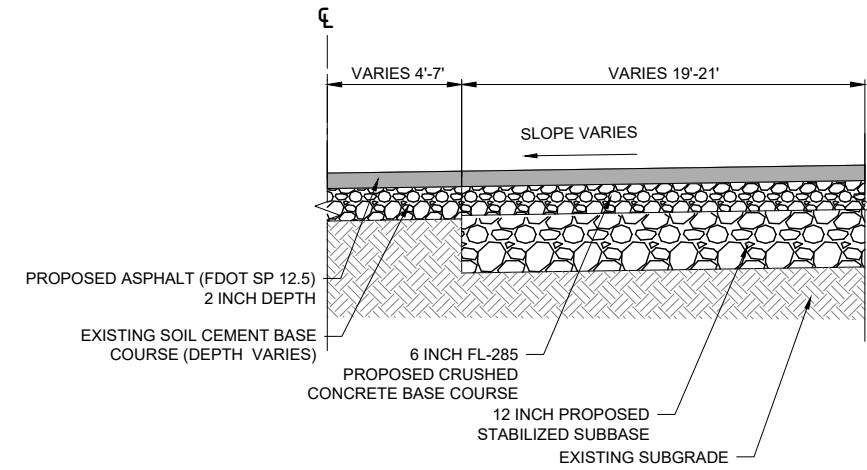
NOTES:

- SAWCUT OR ROUTE JOINTS TO PROVIDE UNIFORM JOINT/CRACK WIDTH AND FRESH SEALANT BONDING SURFACE PER FL-350.

BACKER ROD BOND BREAKER (CONCRETE-CONCRETE JOINTS)				
JOINT DIMENSIONS (INCHES)				
JOINT WIDTH	SEALANT BEAD THICKNESS	BACKER ROD DIA.	MINIMUM JOINT DEPTH	BACKER ROD PLACEMENT DEPTH
1/4	1/4	3/8	1	1/2
3/8	1/4	1/2	1 1/4	1/2
1/2	1/4	5/8	1 1/4	1/2
5/8	5/16	3/4	1 1/2	9/16
3/4	3/8	1	1 3/4	5/8
7/8	7/16	1 1/8	1 3/4	11/16
1	1/2	1 1/4	2	3/4
>1	1/2	1 1/4+	2+	3/4

UNLESS OTHERWISE INDICATED ON THE PLANS THE JOINT WIDTH FOR NEW CONSTRUCTION WILL BE 1/4" FOR CONSTRUCTION JOINTS, 3/8" FOR ALL OTHER JOINTS.

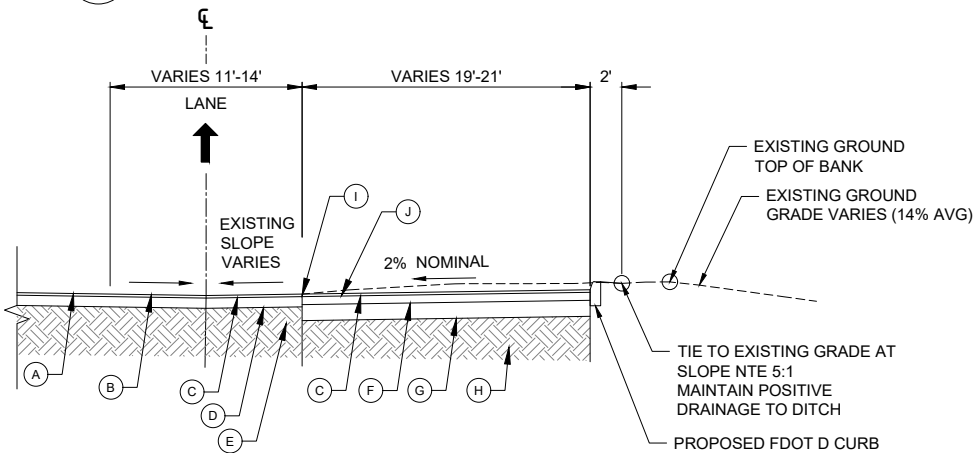
FOR REHABILITATION PROJECTS THE JOINT WIDTH WILL BE SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER BASED ON FIELD CONDITIONS.



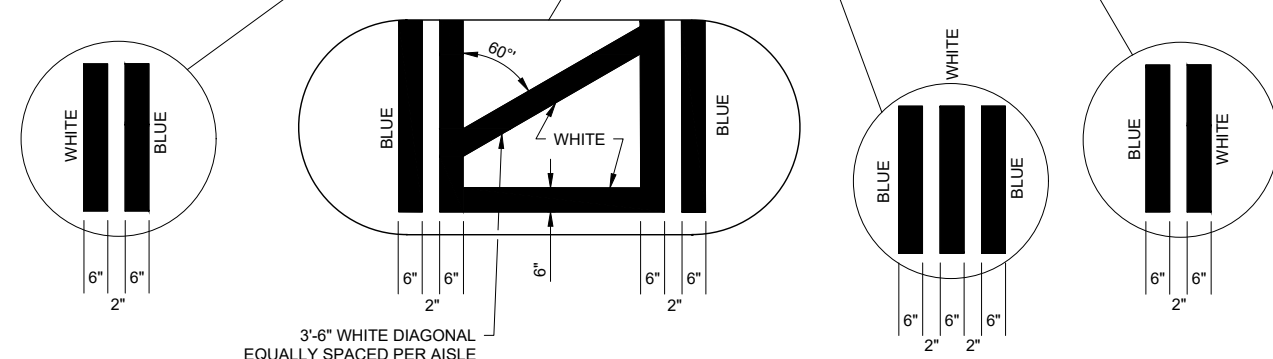
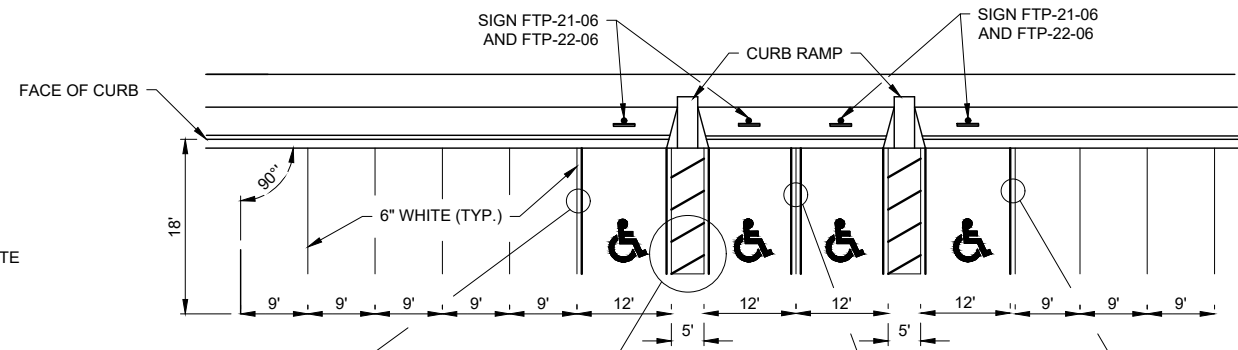
PROPOSED TYPICAL PAVEMENT SECTION

SCALE: N.T.S.

10 CONCRETE-CONCRETE JOINTS/CRACKS



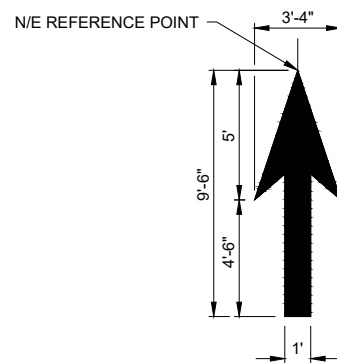
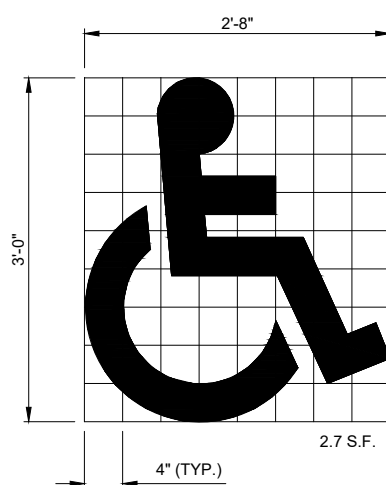
- (A) EXISTING PARKING LOT PAVEMENT
- (B) EXISTING ASPHALT TRAVEL LANE PAVEMENT
- (C) PROPOSED 2 INCH ASPHALT (FDOT SP-12.5)
- (D) EXISTING SOIL CEMENT BASE COURSE (DEPTH VARIES)
- (E) EXISTING SUBGRADE
- (F) PROPOSED 6IN FL-285-1 RECYCLED CONCRETE AGGREGATE
- (G) PROPOSED 12 INCH STABILIZED SUBBASE
- (H) REWORK/RECOMPACT EXISTING SUBGRADE
- (I) TACK COAT
- (J) EMULSION COAT



TYPICAL ADA PARKING LAYOUT

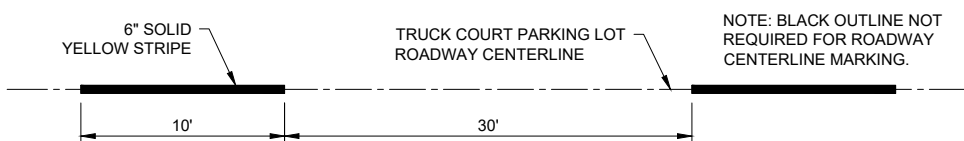
REFERENCE: FDOT STANDARD PLANS 711-001

12 TYPICAL PAVEMENT SECTION



15 THROUGH LANE-USE ARROW

14 UNIVERSAL SYMBOL OF ACCESSIBILITY



16 PARKING LOT CENTERLINE MARKING - DASHED

NOTES:

- ENDS OF TYPE D CURB TRANSITION FROM FULL TO ZERO HEIGHT IN 3 FEET.

17 FDOT D CURB

ISSUED FOR CONSTRUCTION

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA
RS&H

Tampa International Airport

PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS
SHEET TITLE: PAVEMENT AND PAVEMENT MARKING SECTION AND DETAILS (SHEET 3 OF 3)

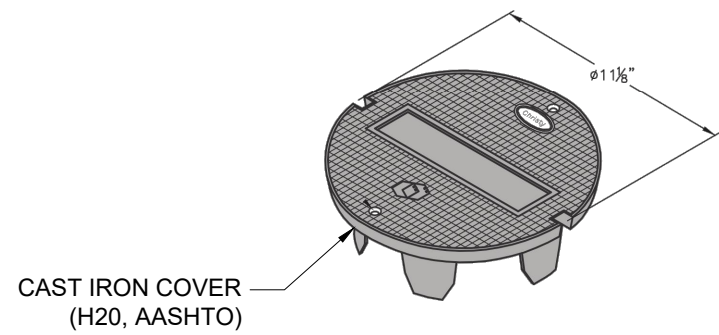


THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

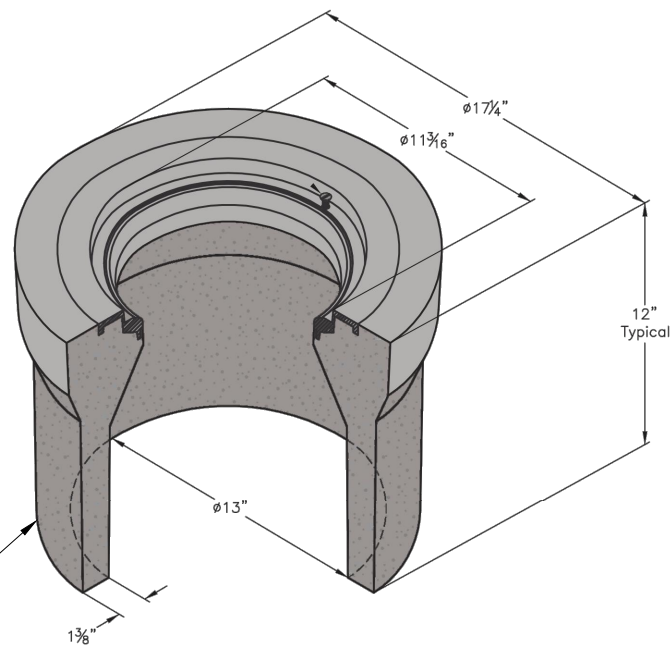
DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

STATE OF FLORIDA PROFESSIONAL ENGINEER
No. 94486
JASON R. BLANKENSHIP
FL PE NO. 94486

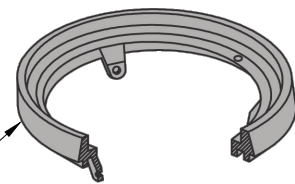
C112



CAST IRON COVER
(H20, AASHTO)



REINFORCED CONCRETE
WITH STEEL FRAME
(H20, AASHTO)

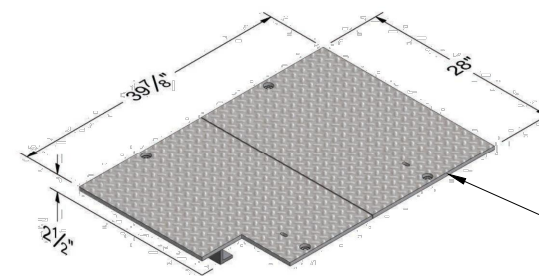


CAST IRON GRADE RING

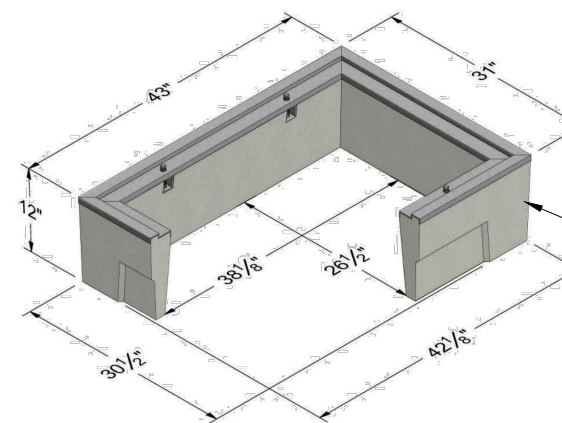
NOTES:

1. CHRISTY G08 OR APPROVED EQUIVALENT BOX TO BE USED.
2. DETAIL PROVIDED BY OLDCASTLE INFRASTRUCTURE.

1
C113 **METER BOX DETAIL**



STEEL CHECKER PLATE
(H20, AASHTO)



REINFORCED CONCRETE
WITH STEEL FRAME
(H20, AASHTO)

NOTES:

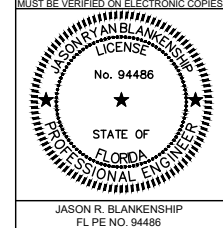
1. CHRISTY B2436 OR APPROVED EQUIVALENT BOX TO BE USED.
2. DETAIL PROVIDED BY OLDCASTLE INFRASTRUCTURE.

2
C113 **GROUND BOX DETAILS**

ISSUED FOR CONSTRUCTION



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: CJT
DRAWN: JDH
CHECKED: MBB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C113
SHEET NO.

DATE	REVISIONS	BY

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1715 N. WASHINGTON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
TEL: 813.289.1000
E: INFO@RSANDH.COM



PROJECT NAME
**VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS**

SHEET TITLE
METER AND GROUND BOX DETAILS

SHEET	TABLE OF CONTENTS
1	General Notes, TTC Tables
2	Definitions Temporary Traffic Control Devices Overhead Work Railroads Sight Distance Above Ground Hazard
3	Clear Zone Widths For Work Zones Superelevation Length Of Lane Closures Overweight/Oversize Vehicles Lane Widths High-Visibility Safety Apparel Speed Reduction Signing
4	Flagger Control Survey Work Zones Signs
5	Work Zone Sign Supports
6	Commonly Used Warning and Regulatory Signs In Work Zones
7	Manholes/Crosswalks/Joints Truck Mounted Attenuators Signals Channelizing Devices Channelizing Devices Consistency Advanced Warning Arrow Boards
8	Drop-Offs In Work Zones
9	Business Entrance Temporary Asphalt Separator
10	Channelizing Devices Notes Temporary Barrier Notes
11	Pavement Markings

GENERAL NOTES:

- This Index contains information specific to the Federal and State guidelines and standards for the preparation of traffic control plans and for the execution of traffic control in work zones, for construction and maintenance operations and utility work on highways, roads and streets on the State Highway System. Certain requirements in this Index are based on the high volume nature of State Highways. For highways, roads and streets off the State Highway System, the local agency (City/County) having jurisdiction may adopt requirements based on the minimum requirements provided in the MUTCD.
- Use this Index in accordance with the Plans and Indexes 102-601 through 102-680. Indexes 102-601 through 102-680 are Department-specific typical applications of commonly encountered situations. Adjust device location or number thereof as recommended by the Worksite Traffic Supervisor and approved by the Engineer. Devices include, but are not limited to, flaggers, portable temporary signals, signs, pavement markings, and channelizing devices. Comply with MUTCD or applicable Department criteria for any changes and document the reason for the change.
- Except for emergencies, any road closure on State Highway System must comply with Section 335.15, F.S.

**TABLE 1
CHANNELIZING DEVICE SPACING**

Work Zone Speed (mph)	Max. Spacing (feet)			
	Cones or Temporary Tubular Markers		Type I Barricades, Type II Barricades, Vertical Panels, or Drums	
	Taper	Tangent	Taper	Tangent
≤ 45	25	50	25	50
≥ 50	25	50	50	100

**TABLE 3
WORK ZONE SIGN SPACING "X"**

Road Type	Min. Spacing (feet)
Arterials and Collectors with Work Zone Speed ≤ 40 mph	200
Arterials and Collectors with Work Zone Speed ≥ 45 mph	500
Limited Access Roadways *	1,500

* For Limited access roadways with work zone speed ≤ 55 mph, the minimum spacing may be reduced in accordance with the MUTCD and as approved by the Engineer.

**TABLE 2
TAPER LENGTH "L"**

Work Zone Speed (mph)	Min. Length (feet)
≤ 40	$L = \frac{WS^2}{60}$
≥ 45	$L = WS$

Where: W = width of offset in feet
S = speed in mph

**TABLE 4
BUFFER LENGTH "B"**


Work Zone Speed (mph)	Min. Length (feet)
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730

Note: When Buffer Length "B" cannot be attained due to geometric constraints, use the greatest length possible, but not less than 155 feet.

DATE	REVISIONS	BY

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

REG. NO. 1712N, WASHINGTON BLVD., SUITE 600
TAMPA, FLORIDA 33607-5999
WWW.FLORIDAPE.COM
FL. E-REGISTRATION NO. E00008201, LCC00001910

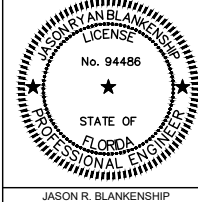



PROJECT NAME
VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
GENERAL INFORMATION FOR TRAFFIC CONTROL
THROUGH WORK ZONES (SHEET 1 OF 9)



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



JASON R. BLANKENSHIP
FL PE NO. 94486

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C114

SHEET NO.

DEFINITIONS:

Regulatory Speed (In Work Zones)

The maximum permitted travel speed posted for the work zone is indicated by the regulatory speed limit signs. The work zone speed must be shown or noted in the plans. This speed should be used as the minimum design speed to determine runout lengths, departure rates, flare rates, lengths of need, clear zone widths, taper lengths, crash cushion requirements, marker spacings, superelevation and other similar features.

Advisory Speed

The maximum recommended travel speed through a curve or a hazardous area.

Travel Way

The portion of the roadway for the movement of vehicles. For traffic control through work zones, travel way may include the temporary use of shoulders and any other permanent or temporary surface intended for use as a lane for the movement of vehicular traffic.

- a. *Travel Lane:* The designated widths of roadway pavement marked to carry through traffic and to separate it from opposing traffic or traffic occupying other traffic lanes.
- b. *Auxiliary Lane:* The designated widths of roadway pavement marked to separate speed change, turning, passing and climbing maneuvers from through traffic.

Detour, Lane Shift, and Diversion

A detour is the redirection of traffic onto another roadway to bypass the temporary traffic control zone. A lane shift is the redirection of traffic onto a different section of the permanent pavement. A diversion is the redirection of traffic onto a temporary roadway, usually adjacent to the permanent roadway and within the limits of the right of way.

Aboveground Hazard

An aboveground hazard is any object, material or equipment other than traffic control devices that encroaches upon the travel way or that is located within the clear zone which does not meet the Department's safety criteria, i.e., anything that is greater than 4" in height and is firm and unyielding or doesn't meet breakaway requirements.

TEMPORARY TRAFFIC CONTROL DEVICES:

- 1. All temporary traffic control devices shall be ON the Department's Approved Products List (APL). Ensure the appropriate APL number is permanently marked on the device in a readily visible location.
- 2. All temporary traffic control devices shall be removed as soon as practical when they are no longer needed. When work is suspended for short periods of time, temporary traffic control devices that are no longer appropriate shall be removed or covered. Do not store temporary traffic control devices on the shoulder, sidewalk, or other roadway facility not affected by the work when work is suspended.
- 3. Arrow Boards, Portable Changeable Message Signs, Radar Speed Display Trailer, Portable Regulatory Signs, and any other trailer mounted device shall be delineated with a channelizing device placed at each corner when in use and shall be moved outside the travel way and clear zone or be shielded by a barrier or crash cushion when not in use.

SIGHT DISTANCE:

- 1. *Tapers:* Transition tapers should be obvious to drivers. If restricted sight distance is a problem (e.g., a sharp vertical or horizontal curve), the taper should begin well in advance of the view obstruction. The beginning of tapers should not be hidden behind curves.
- 2. *Intersections:* Traffic control devices at intersections must provide sight distances for the road user to perceive potential conflicts and to traverse the intersection safely. Construction equipment and materials shall not restrict intersection sight distance.

ABOVEGROUND HAZARD:

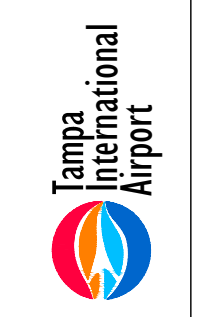
- 1. Aboveground hazards (see definitions) are to be considered work areas during working hours and treated with appropriate work zone traffic control procedures. During nonworking hours, all objects, materials and equipment that constitute an aboveground hazard must be stored/placed outside the travel way and clear zone or be shielded by a barrier or crash cushion.
- 2. For aboveground hazards within a work zone the clear zone required should be based on the regulatory speed posted during construction.

BY									
REVISIONS									
DATE									

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H

171 E. Washington Blvd., Suite 400
Tampa, Florida 33607-3999
www.rsandh.com
FL EIT 00078801
EIT 00078801, LCC0004910

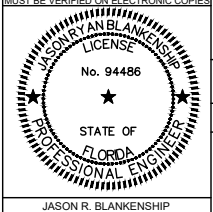


PROJECT NAME
VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
GENERAL INFORMATION FOR TRAFFIC CONTROL
THROUGH WORK ZONES (SHEET 2 OF 9)



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C115

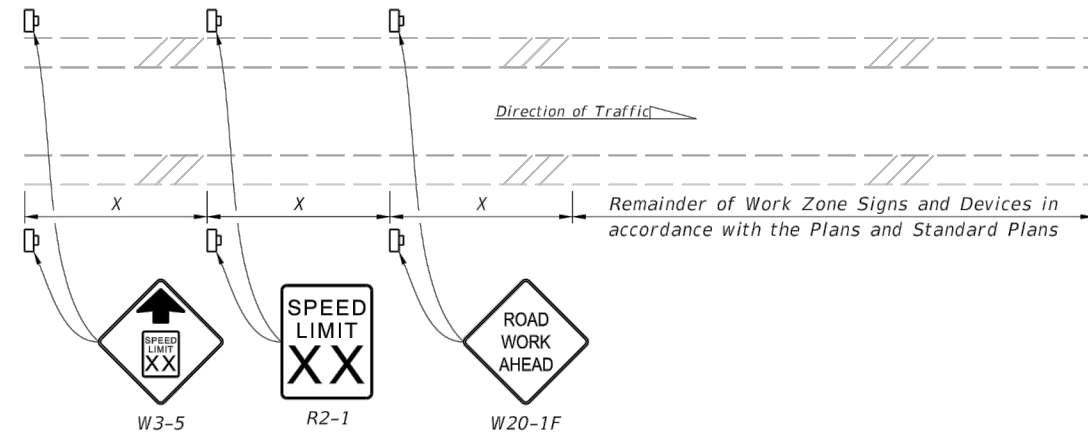
JASON R. BLANKENSHIP
FL PE NO. 94486

CLEAR ZONE WIDTHS FOR WORK ZONES:

The term 'clear zone' describes the unobstructed relatively flat area, impacted by construction, extending outward from the edge of the traffic lane. The table below gives clear zone widths in work zones for medians and roadside conditions other than for roadside canals; where roadside canals are present, clear zone widths are to conform with the distances to canals as described in the FDOT Design Manual 215.2.

WORK ZONE SPEED (MPH)	TRAVEL LANES & MULTILANE RAMPS (feet)	AUXILIARY LANES & SINGLE LANE RAMPS (feet)
60-70	30	18
55	24	14
45-50	18	10
30-40	14	10
ALL SPEEDS CURB & GUTTER	4' BEHIND FACE OF CURB	4' BEHIND FACE OF CURB

NOTE: For temporary conditions where existing curb has been removed but not reconstructed, curb and gutter values may be used.



NOTES:

1. X = Work Zone Sign Spacing
2. When called for in the Plans, use this detail in accordance with the Plans and Standard Plans. Place the speed reduction signs (W3-5 and R2-1) in advance of the "Road Work Ahead" sign (W20-1F) as shown.
3. Do not use this detail in conjunction with the Motorist Awareness System.
4. For speed reductions greater than 10 MPH, reduce the speed in 10 MPH increments of 'X' distance. Do not reduce the speed below the minimum statutory speed for the class of facility.
5. Place additional "Speed Limit" signs (R2-1) at intervals of no more than one mile for rural conditions and 1,000 feet for urban conditions.
6. For undivided roadways, omit the signs shown in the median.
7. Remove temporary regulatory speed signs as soon as the conditions requiring the reduced speed no longer exist. Once the work zone regulatory speeds are removed, the regulatory speed existing prior to construction will automatically go back into effect.

SPEED REDUCTION SIGNING

OVERWEIGHT/OVERSIZE VEHICLES:

Restrictions to Lane Widths, Heights or Load Capacity can greatly impact the movement of over dimensioned loads. The Contractor shall notify the Engineer who in turn shall notify the State Permits Office, phone no. (850) 410-5777, at least seven calendar days in advance of implementing a maintenance of traffic plan which will impact the flow of overweight/oversized vehicles. Information provided shall include location, type of restriction (height, width or weight) and restriction time frames. When the roadway is restored to normal service the State Permits Office shall be notified immediately.

LANE WIDTHS:

Lane widths of through roadways should be maintained through work zone travel ways wherever practical. Provide minimum widths for work zone travel lanes as follows: 11' for Interstate with at least one 12' lane provided in each direction, unless formally excepted by the Federal Highway Administration; 11' for all other limited access roadways; and 10' for all other facilities.

HIGH-VISIBILITY SAFETY APPAREL:

All high-visibility safety apparel shall meet the requirements of the International Safety Equipment Association (ISEA) and the American National Standards Institute (ANSI) for "High-Visibility Safety Apparel", and labeled as ANSI/ISEA 107-2004 or newer. The apparel background (outer) material color shall be either fluorescent orange-red or fluorescent yellow-green as defined by the standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. Class 3 apparel may be substituted for Class 2 apparel. Replace apparel that is not visible at 1,000 feet.

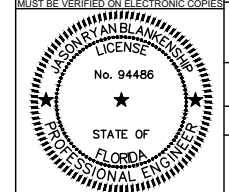
WORKERS: All workers within the right-of-way shall wear ANSI/ISEA Class 2 apparel. Workers operating machinery or equipment in which loose clothing could become entangled during operation shall wear fitted high-visibility safety apparel. Workers inside the bucket of a bucket truck are not required to wear high-visibility safety apparel.

UTILITIES: When other industry apparel safety standards require utility workers to wear apparel that is inconsistent with FDOT requirements such as NFPA, OSHA, ANSI, etc., the other standards for apparel may prevail.

FLAGGERS: For daytime activities, Flaggers shall wear ANSI/ISEA Class 2 apparel. For nighttime activities, Flaggers shall wear ANSI/ISEA Class 3 apparel.



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C116

ISSUED FOR CONSTRUCTION

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA
RS&H
1715 N. WILSON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3998
WWW.RSANDH.COM
FL LIC# 00000001
EIN# 00000001

Tampa International Airport
GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 3 OF 9)

PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS
SHEET TITLE: GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 3 OF 9)

FLAGGER CONTROL:

Regulatory Speed (In Work Zones)

Where flaggers are used, a FLAGGER symbol or legend sign must replace the WORKERS symbol or legend sign.

The flagger must be clearly visible to approaching traffic for a distance sufficient to permit proper response by the motorist to the flagging instructions, and to permit traffic to reduce speed or to stop as required before entering the work site. Flaggers shall be positioned to maintain maximum color contrast between the Flagger's high-visibility safety apparel and equipment and the work area background.

Hand-Signaling Devices

STOP/SLOW paddles are the primary hand-signaling device. The STOP/SLOW paddle shall have an octagonal shape on a rigid handle. If the STOP/SLOW paddle is placed on a rigid staff, the minimum length of the staff, measured from the bottom of the paddle to the end of the staff that rests on the ground, must not be less than 6 ft. STOP/SLOW paddles shall be at least 24 inches wide with letters at least 6 inches high and should be fabricated from light semirigid material. The background of the STOP face shall be red with white letters and border. The background of the SLOW face shall be orange with black letters and border. When used at night-time, the STOP/SLOW paddle shall be retroreflectorized.

Flag use is limited to immediate emergencies, intersections, and when working on the centerline or shared left turn lanes where two (2) flaggers are required and there is opposing traffic in the adjacent lanes. Flags, when used, shall be a minimum of 24 inches square, made of a good grade of red material, and securely fastened to a staff that is approximately 36 inches in length. When used at nighttime, flags shall be retroreflectorized red.

Flashlight, lantern or other lighted signal that will display a red warning light shall be used at night.

Flagger Stations

Flagger stations shall be located far enough in advance of the work area so that approaching road users will have sufficient distance to stop before entering the work area. When used at nighttime, the flagger station shall be illuminated.

SURVEY WORK ZONES:

The SURVEY CREW AHEAD symbol or legend sign shall be the principal Advance Warning Sign used for Traffic Control Through Survey Work Zones and may replace the ROAD WORK AHEAD sign when lane closures occur, at the discretion of the Party Chief.

When Traffic Control Through Work Zones is being used for survey purposes only, the END ROAD WORK sign as called for on certain 102 Series of Indexes should be omitted.

Survey Between Active Traffic Lanes or Shared Left Turn Lanes

The following provisions apply to Main Roadway Traffic Control Work Zones. These provisions must be adjusted by the Party Chief to fit roadway and traffic conditions when the Survey Work Zone includes intersections.

- (A) A STAY IN YOUR LANE (MOT-1-06) sign shall be added to the Advance Warning Sign sequence as the second most immediate sign from the work area.
- (B) Elevation Surveys-Cones may be used at the discretion of the Party Chief to protect prism holder and flagger(s). Cones, if used, may be placed at up to 50' intervals along the break line throughout the work zone.

SURVEY WORK ZONES: (Cont.)

(C) Horizontal Control-With traffic flow in the same direction, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' towards the flow of traffic.

(D) Horizontal Control-With traffic flow in opposite directions, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' in both directions towards the flow of traffic.

SIGNS:

SIGN MATERIALS

Mesh signs and non-retroreflective vinyl signs may only be used for daylight operations. Non-retroreflective vinyl signs must meet the requirements of Specifications Section 994.

Retroreflective vinyl signs meeting the requirements of Specification Section 994 may be used for daylight or night operations not to exceed 1 day except as noted in the Indexes.

Rigid or Lightweight sign panels may be used in accordance with the vendor APL drawing for the sign stand to which they are attached.

INTERSECTING ROAD SIGNING

Signing for the control of traffic entering and leaving work zones by way of intersecting crossroads shall be adequate to make drivers aware of work zone conditions. When Work operations exceed 60 minutes, place the ROAD WORK AHEAD sign on the side street entering the work zone.

ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING

Adjoining work zones may not have sufficient spacing for standard placement of signs and other traffic control devices in their advance warning areas or in some cases other areas within their traffic control zones. Where such restraints or conflicts occur or are likely to occur, one of the following methods will be employed to avoid conflicts and prevent conditions that could lead to misunderstanding on the part of the traveling public as to the intended travel way by the traffic control procedure applied:

- (A) For scheduled projects the engineer in responsible charge of project design will resolve anticipated work zone conflicts during the development of the project traffic control plan. This may entail revision of plans on preceding projects and coordination of plans on concurrent projects.
- (B) Unanticipated conflicts arising between adjoining in progress highway construction projects will be resolved by the Resident Engineer for projects under his residency, and, by the District Construction Engineer for in progress projects under adjoining residencies.
- (C) The District Maintenance Engineer will resolve anticipated and occurring conflicts within scheduled maintenance operations.
- (D) The Unit Maintenance Engineer will resolve conflicts that occur within routine maintenance works; between routine maintenance work, unscheduled work and/or permitted work; and, between unit controlled maintenance works and highway construction projects.

SIGNS: (Cont.)

SIGN COVERING AND INTERMITTENT WORK STOPPAGE SIGNING

Existing or temporary traffic control signs that are no longer applicable or are inconsistent with intended travel paths shall be removed or fully covered.

Sign blanks or other available coverings must completely cover the existing sign. Rigid sign coverings shall be the same size as the sign it is covering, and bolted in a manner to prevent movement.

Sign covers are incidental to work operations and are not paid for separately.

SIGNING FOR DETOURS, LANE SHIFTS AND DIVERSIONS

Detours should be signed clearly over their entire length so that motorists can easily determine how to return to the original roadway. The reverse curve (W1-4) warning sign should be used for the advanced warning for a lane shift. A diversion should be signed as a lane shift.

EXTENDED DISTANCE ADVANCE WARNING SIGN

Advance Warning Signs shall be used at extended distance of one-half mile or more when limited sight distance or the nature of the obstruction may require a motorist to bring their vehicle to a stop. Extended distance Advanced Warning Signs may be required on any type roadway, but particularly be considered on multilane divided highways where vehicle speed is generally in the higher range (45 MPH or more).

UTILITY WORK AHEAD SIGN

The UTILITY WORK AHEAD (W21-7) sign may be used as an alternate to the ROAD WORK AHEAD or the ROAD WORK XX FT (W20-1) sign for utility operations on or adjacent to a highway.

END ROAD WORK SIGN

The END ROAD WORK sign (G20-2) should be installed on all projects, but may be omitted where the work operation is less than 1 day. The sign should be placed approximately 500 feet beyond the end of a construction or maintenance project unless other distance is called for in the plans. When other Construction or Maintenance Operations occur within 1 mile this sign should be omitted and signing coordinated in accordance with Index 102-600, ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING.

REV	DATE	REVISIONS

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H

1715 N. WILSON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL EIT 00008201
FL EIT 00008201



PROJECT NAME
VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
GENERAL INFORMATION FOR TRAFFIC CONTROL
THROUGH WORK ZONES (SHEET 4 OF 9)



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

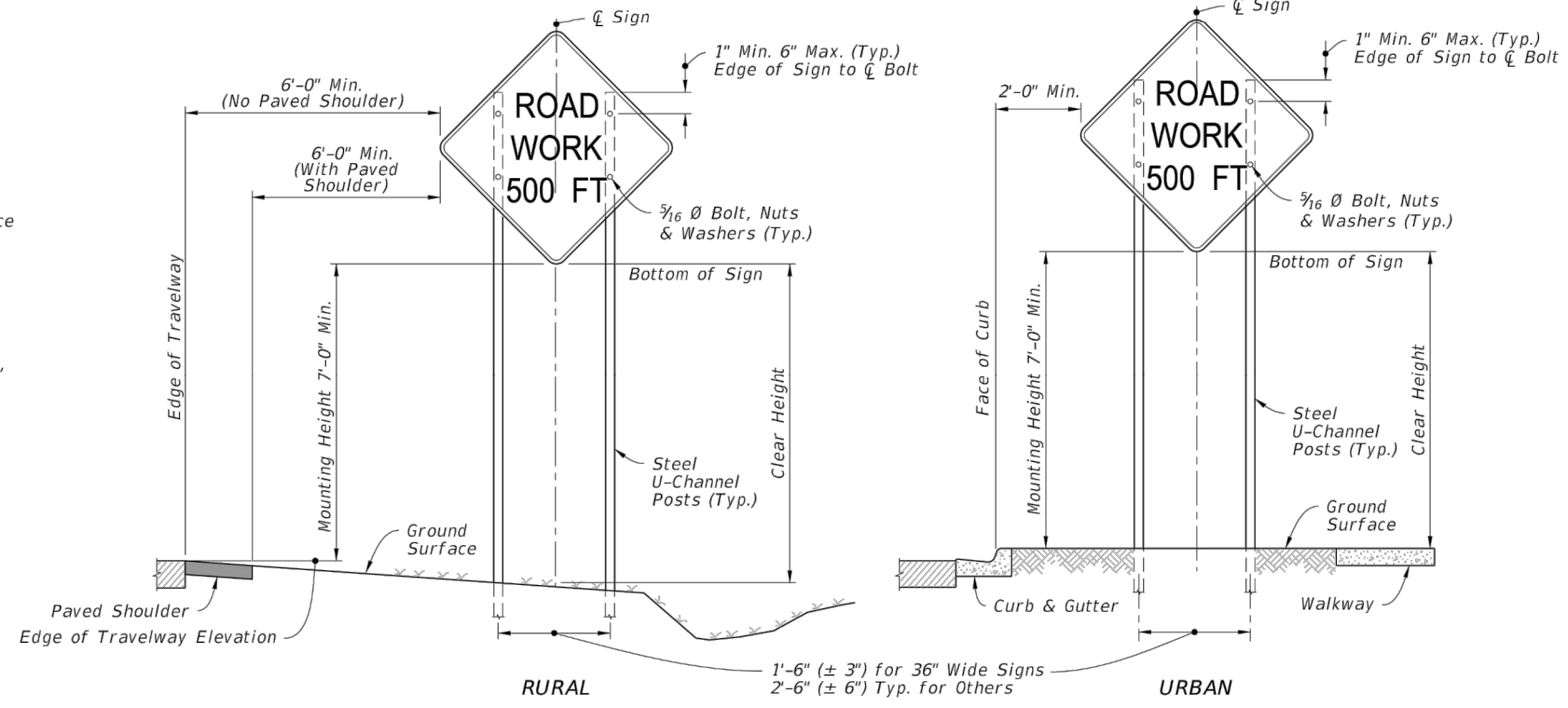
JASON R. BLANKENSHIP
FL PE NO. 94486

C117

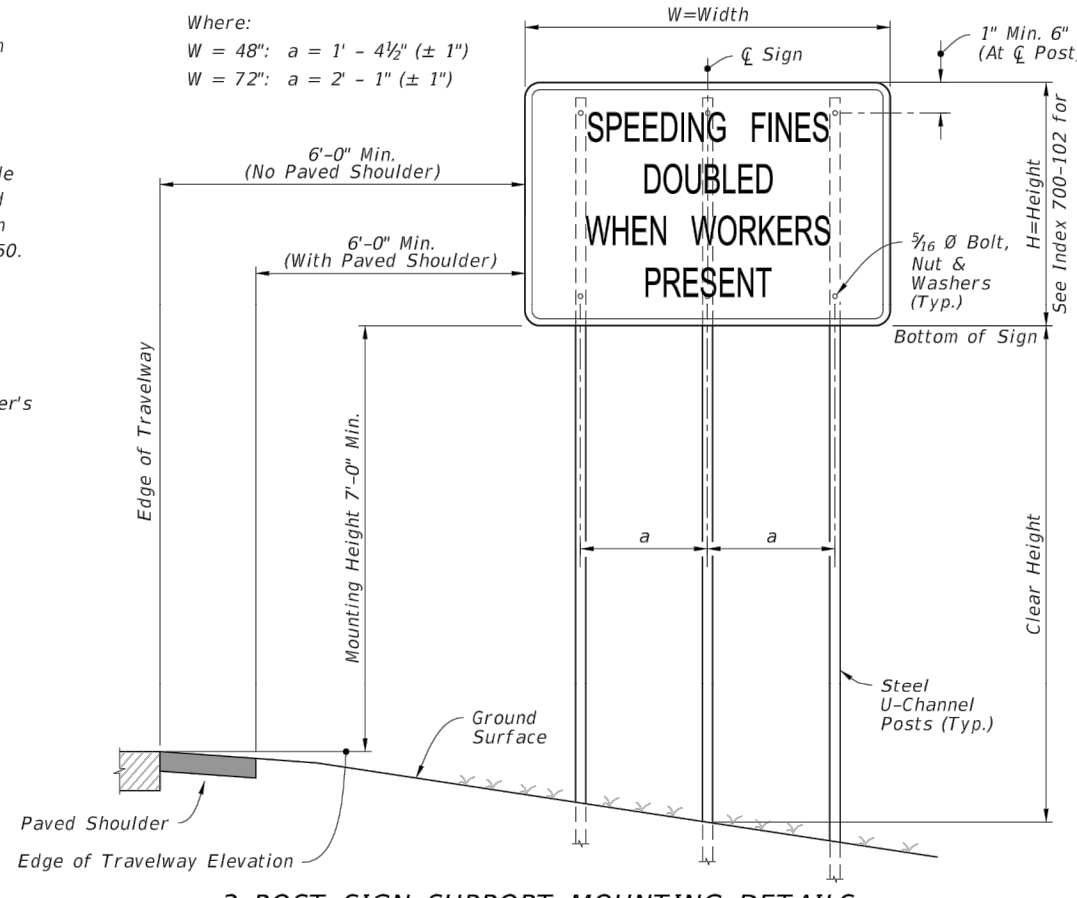
SHEET NO.

NOTES:

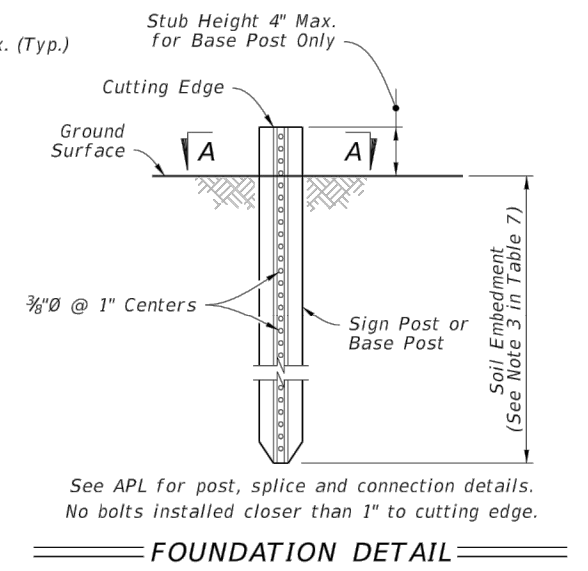
- All signs shall be post mounted when work operations exceed one day except for:
 - Road closure signs mounted in accordance with the vendor drawing for the Type III Barricade shown on the APL.
 - Pedestrian and bicycle advanced warning or pedestrian regulatory signs mounted on sign supports in accordance with the vendor drawing shown on the APL.
 - Median barrier mounted signs per Index 700-013.
 - Bridge mounted signs per Index 700-012.
- Unless shielded with barrier or outside of the Clear Zone, signs mounted on temporary supports or barricades, and barricade/sign combination must be crashworthy in accordance with NCHRP 350 requirements and included on the Approved Products List (APL).
- Use only approved systems listed on the Department's Approved Products List (APL).
- Manufacturers seeking approval of U-Channel and steel square tube sign support assemblies for inclusion on the Approved Products List (APL) must submit a APL application, design calculations (for square tube only), and detailed drawings showing the product meets all the requirements of this Index.
- Provide 3 lb/ft Steel U-Channel Posts with a minimum section modulus of 0.43 in³ for 60 ksi steel, a minimum section modulus of 0.37 in³ for 70 ksi steel, or a minimum section modulus of 0.34 in³ for 80 ksi steel.
- Provide 4 lb/ft Steel U-Channel Posts with a minimum section modulus of 0.56 in³ for 60 ksi steel, or a minimum section modulus of 0.47 in³ for 70 ksi or 80 ksi steel.
- U-channel posts shall conform with ASTM A 499, Grade 60, or ASTM A 576, Grade 1080 (with a minimum yield strength of 60 ksi). Square tube posts shall conform with ASTM A 653, Grade 50, or ASTM A 1011, Grade 50.
- Sign attachment bolts, washers, nuts, and spacers shall conform with ASTM A307 or A 36.
- Install 4 lb/ft Steel U-Channel Posts with approved breakaway splice in accordance with the manufacturer's detail shown on the APL.
- The contractor may install 3 lb/ft Steel U-Channel Posts with approved breakaway splice in accordance with the manufacturer's detail shown on the APL.
- Install all posts plumb.
- The contractor may set posts in preformed holes to the specified depth with suitable backfill tamped securely on all sides, or drive 3 lb/ft sign posts and any size base post in accordance with the manufacturer's detail shown on the APL.



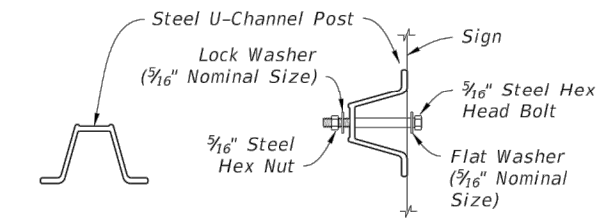
2 POST SIGN SUPPORT MOUNTING DETAILS
(SINGLE POST SIMILAR)



3 POST SIGN SUPPORT MOUNTING DETAILS



FOUNDATION DETAIL



(SCHEMATIC) SECTION A-A
SIGN ATTACHMENT DETAIL
(WITHOUT Z-BRACKET)

SIGN SHAPE	SIGN SIZE (inches)	NUMBER OF STEEL U CHANNEL POSTS
Octagon	30x30	1
	36x36x36	1
	48x48x48	1
Triangle	60x60x60	2
	24x18	1
	24x30	1
Rectangle (W x H)	30x24	1
	36x18	1
	36x24	1
	48x18	1
	48x24	1
	36x48	2
	48x30	2
	48x36	2
	54x36	2
	48x60	3
Square	72x48	3
	30x30	1
	36x36	2
Diamond	48x48	2
	36x36	2
Circle	36Ø	2

- Notes For Table:**
- Use 3 lb/ft posts for Clear Height up to 10' and 4 lb/ft posts for Clear Height up to 12'.
 - Minimum foundation depth is 4.0' for 3 lb/ft posts and 4.5' for 4 lb/ft posts.
 - For both 3 lb/ft and 4 lb/ft base or sign posts installed in rock, a minimum cumulative depth of 2' of rock layer is required.
 - The soil plate as shown on the APL vendor drawing is not required for base posts or sign posts installed in existing rock (as defined in Note 3), asphalt roadway, shoulder pavement or soil under sidewalk.
 - For diamond warning signs with supplement plaque (up to 5 ft² in area), use 4 lb/ft posts for up to 10 ft Clear Height (measure to the bottom of diamond warning sign).

BR

REVISIONS

DATE

HILLSBOROUGH COUNTY AVIATION AUTHORITY

TAMPA, FLORIDA

RS&H

Tampa International Airport

PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE: GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 5 OF 9)

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

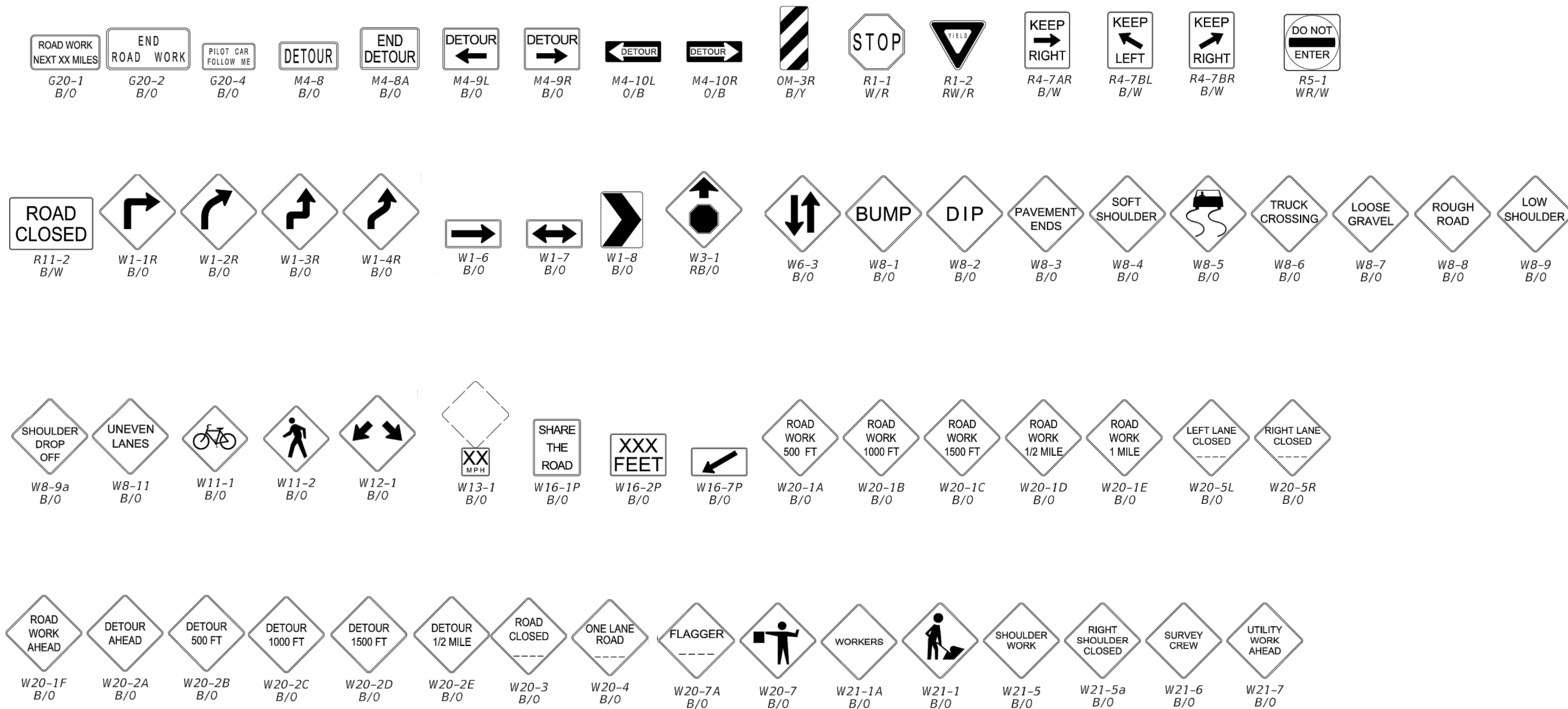
C118

SHEET NO.

ISSUED FOR CONSTRUCTION

THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
FL PE NO. 94486



NOTES:

1. The size of diamond shaped Temporary Traffic Control (TTC) warning signs shall be a minimum of 48" X 48".
2. Fluorescent orange shall be used for all orange colored work zone signs.
3. The sign shields, symbols and messages contained on this sheet are provided for ready reference to those signs used in the development of the 102 Series of Indexes and are commonly used in the development of traffic control plans. For additional signs and sign detail information refer to the STANDARD HIGHWAY SIGNS MANUAL as specified in the MUTCD. Special signs for traffic control plans will be as approved by the State Traffic Plans Engineer.

The sign codes shown on this sheet are for the purpose of identifying cell names found in the Traffic Control Cell Library (TCZ.Cel).

The STANDARD HIGHWAY SIGNS MANUAL should be referenced for the official sign codes for use in the development of traffic control plans.

See Index 700-102 for MOT sign details.

COLOR CODES:

- Legend and/or Symbol Background
- R-Red (Reflectorized)
 - Y-Yellow (Reflectorized)
 - G-Green (Reflectorized)
 - O-Orange (Reflectorized)
 - B-Black (Non-Reflectorized)
 - W-White (Reflectorized)

DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

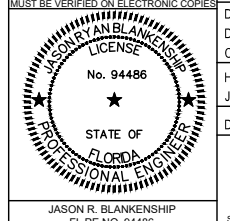


PROJECT NAME
VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 6 OF 9)

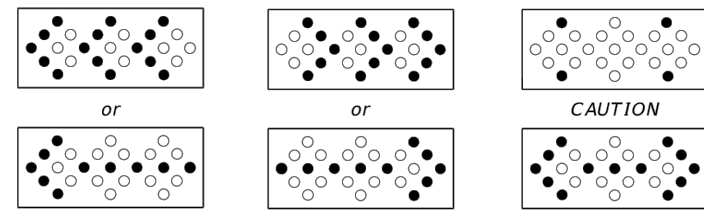


THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C119



MOVE/MERGE LEFT MOVE/MERGE RIGHT CAUTION
 MOVE/MERGE RIGHT OR LEFT

● Minimum Required Lamps
 ○ Additional Lamps Allowed

MODES

NOTES:

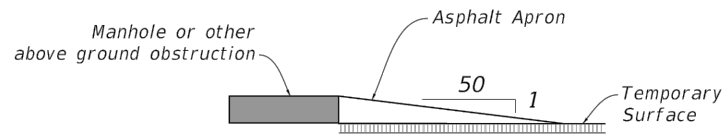
An arrow board in the arrow or chevron mode shall be used only for stationary or moving lane closures on multilane roadways.

For shoulder work, blocking the shoulder, for roadside work near the shoulder, or for temporarily closing one lane on a two-lane, two-way roadway, an arrow board shall be used only in the caution mode.

A single arrow board shall not be used to merge traffic laterally more than one lane. When arrow boards are used to close multiple lanes, a single board shall be used at the merging taper for each closed lane.

When Advance Warning Arrow Boards are used at night, the intensity of the flashers shall be reduced during darkness when lower intensities are desirable.

ADVANCE WARNING ARROW BOARDS



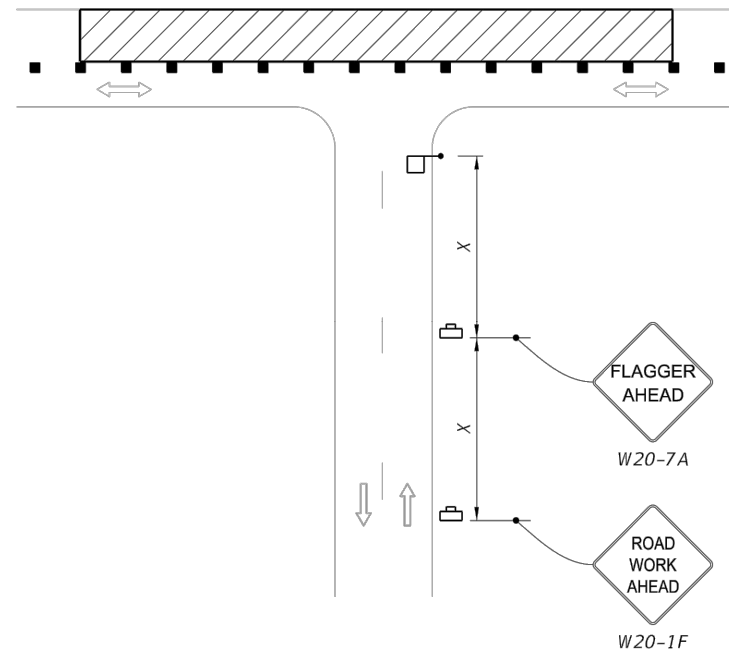
NOTES:

Manholes extending 1" or more above the travel lane and crosswalks having an uneven surface greater than 1/4" shall have a temporary asphalt apron constructed as shown above.

All transverse joints that have a difference in elevation of 1" or more shall have a temporary asphalt apron constructed as shown above.

The apron is to be removed prior to constructing the next lift of asphalt. The cost of the temporary asphalt shall be included in the contract unit price for Maintenance of Traffic, LS.

MANHOLES/CROSSWALKS/JOINTS



NOTE:

Optionally, use "Flagger Ahead" sign with text (W20-7A) instead of "Flagger Ahead" sign with symbol (W20-7).

SIDE ROAD INTERSECTING THE WORK ZONE

CHANNELIZING DEVICES:

Channelizing devices for work zone traffic control shall be as prescribed in Part VI of the MUTCD, subject to supplemental revisions provided in the contract documents and the 102 Series of Indexes. Lighting Devices must not be used to supplement channelization. Omit tapers and channelizing devices for paved shoulders less than 4' in width.

CHANNELIZING DEVICE CONSISTENCY:

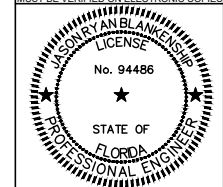
Barricades, vertical panels, cones, tubular markers and drums shall not be intermixed within either the lateral transition or within the tangent alignment.

TRUCK/TRAILER-MOUNTED ATTENUATORS:

Truck/Trailer-mounted attenuators (TMA) can be used for moving operations and short-term stationary operations. For moving operations, see Index 102-607. For short-term, stationary operations, see Part VI of the MUTCD.



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: CJT
 DRAWN: JDH
 CHECKED: MRB
 HCAA NO.: 6530 18
 JOB NO.: 204-1880-047
 DATE: MARCH 20, 2023

C120

JASON R. BLANKENSHIP
 FL PE NO. 94486

SHEET NO.

DATE	REVISIONS	BY

HILLSBOROUGH COUNTY
 AVIATION AUTHORITY
 TAMPA, FLORIDA

1715 N. WASHINGTON BLVD., SUITE 600
 TAMPA, FLORIDA 33607-3999
 WWW.HILLSBOROUGHAVIATION.COM
 TEL: 813.272.1000
 FAX: 813.272.1001

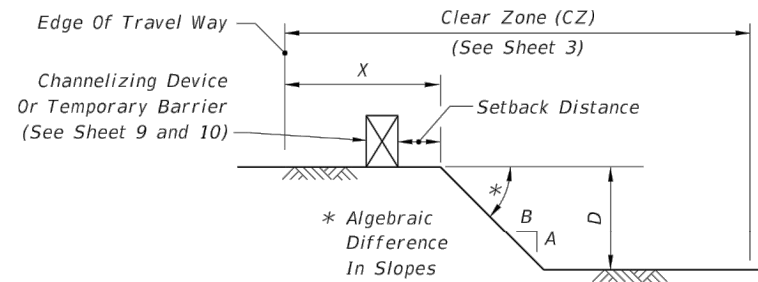


PROJECT NAME
 VOLUME I: NORTH AIR CARGO (NAC) PARKING
 EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
 GENERAL INFORMATION FOR TRAFFIC CONTROL
 THROUGH WORK ZONES (SHEET 7 OF 9)

DROP-OFF CONDITION NOTES

1. These conditions and treatments can be applied only in work areas that fall within a properly signed work zone.
2. When drop-offs occur within the clear zone due to construction or maintenance activities, protection devices are required (See Table 8). A drop-off is defined as a drop in elevation, parallel to the adjacent travel lanes, greater than 3" with slope (A:B) steeper than 1:4. In superelevated sections, the algebraic difference in slopes should not exceed 0.25 (See Drop-off Condition Detail).
3. Drop-offs may be mitigated by placement of slopes with optional base material per Specifications Section 285. Slopes shallower than 1:4 may be required to avoid algebraic difference in slopes greater than 0.25. Include the cost for the placement and removal of the material in Maintenance of Traffic, LS. Use of this treatment in lieu of a temporary barrier is not eligible for CSIP consideration. Conduct daily inspections for deficiencies related to erosion, excessive slopes, rutting or other adverse conditions. Repair any deficiencies immediately.
4. For Setback Distance, refer to the Index or Approved Products List (APL) drawing of the selected barrier.
5. For Conditions 1 and 3 provided in Table 8, any drop-off condition that is created and restored within the same work period will not be subject to use of temporary barriers; however, channelizing devices will be required.
6. When permanent curb heights are $\geq 6"$, no channelizing device will be required. For curb heights $< 6"$, see Table 8.

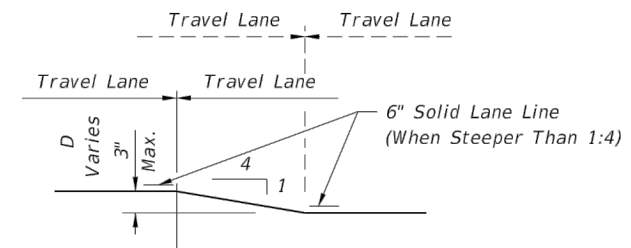


DROP-OFF CONDITION DETAIL

Condition	X (ft)	D (in.)	Device Required
1	0-12	> 3	Temporary Barrier
2	> 12-CZ	> 3 to ≤ 5	Channelizing Device
3	0-CZ	> 5	Temporary Barrier
4	Removal of Bridge or Retaining Wall Barrier		Temporary Barrier
5	Removal of portions of Bridge Deck		Temporary Barrier

TRAVEL LANE TREATMENT FOR MILLING OR RESURFACING NOTES

1. This treatment applies to resurfacing or milling operations between adjacent travel lanes.
2. Whenever there is a difference in elevation between adjacent travel lanes, the W8-11 sign with "UNEVEN LANES" is required at intervals of 1/2 mile maximum.
3. If D is 1 1/2" or less, no treatment is required.
4. Treatment allowed only when D is 3" or less.
5. If the slope is steeper than 1:4 (not to be steeper than 1:1), the R4-1 and MOT-1-06 signs shall be used as a supplement to the W8-11; this condition should never exceed 3 miles in length.



TRAVEL LANE TREATMENT FOR MILLING OR RESURFACING DETAIL

PEDESTRIAN WAY DROP-OFF CONDITION NOTES

1. A pedestrian way drop-off is defined as:
 - a. a drop in elevation greater than 10" that is closer than 2' from the edge of the pedestrian way
 - b. a slope steeper than 1:2 that begins closer than 2' from the edge of the pedestrian way when the total drop-off is greater than 60"
2. Protect any drop-off adjacent to a pedestrian way with pedestrian longitudinal channelizing devices, temporary barrier wall, or approved handrail.

DROP-OFFS IN WORK ZONES

ISSUED FOR CONSTRUCTION

DATE	REVISIONS

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

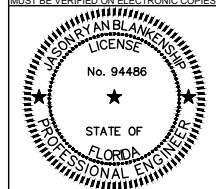


PROJECT NAME
VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES (SHEET 8 OF 9)



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

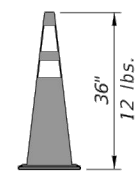


DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

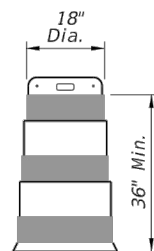
C121

JASON R. BLANKENSHIP
FL PE NO. 94486

SHEET NO.



CONES



PLASTIC DRUMS

CHANNELIZING DEVICE NOTES:

1. The details shown on this sheet are for the following purposes:
 - a. For ease of identification and
 - b. To provide information that supplements or supersedes that provided by the MUTCD.
2. The Type III Barricade shall have a unit length of 6'-0" only. When barricades of greater lengths are required those lengths shall be in multiples of the 6'-0" unit.
3. No sign panel should be mounted on any channelizing device unless the channelizing device/sign combination was found to be crashworthy and the sign panel is mounted in accordance with the vendor drawing for the channelizing device shown on the Approved Products List (APL).
4. Ballast shall not be placed on top rails or any striped rails or higher than 13" above the driving surface.
5. The direction indicator barricade may be used in tapers and transitions where specific directional guidance to drivers is necessary. If used, direction indicator barricades shall be used in series to direct the driver through the transition and into the intended travel lane.
6. The splicing of sheeting is not permitted on channelizing devices or MOT signs.
7. For rails less than 3'-0" long, 4" stripes shall be used.
8. Cones shall:
 - a. Be used only in active work zones where workers are present.
 - b. Be reflectorized as per the MUTCD with Department-approved reflective collars when used at night.
9. For pedestrian longitudinal channelizing devices, the device shall have a minimum of 8" continuous detectable edging above the walkway. A gap not exceeding a height of 2" is allowed to facilitate drainage. The top surface of the device shall be a minimum height of 32" and have a 1/8" or less difference in any plane at all connection points between the devices to facilitate hand trailing. The bottom and the top surface of the device shall be in the same vertical plane. If pedestrian drop-off protection is required, the device shall have a footprint or offset of at least 2', otherwise the device must be at least 42" in height above the walkway and be anchored or ballasted to withstand a 200 lb lateral point load at the top of the device.

TEMPORARY BARRIER NOTES:

1. Where a barrier is specified, any of the types below may be used in accordance with the applicable Index:

Index	Description
102-100	Temporary Barrier
102-120	Low Profile Barrier
536-001	Guardrail

2. Trailer Mounted Barriers may be used to provide positive protection for workers within the work areas. APL drawings may be used as a guide to develop project specific Temporary Traffic Control Plans that are signed and sealed by the Contractor's Engineer.

DATE	REVISIONS	BY

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1715 N. WILSON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL EIT00028201
EIT00028201.LCC000210

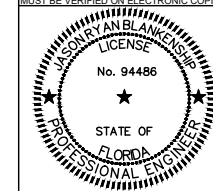


PROJECT NAME
VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
GENERAL INFORMATION FOR TRAFFIC CONTROL
THROUGH WORK ZONES (SHEET 9 OF 9)

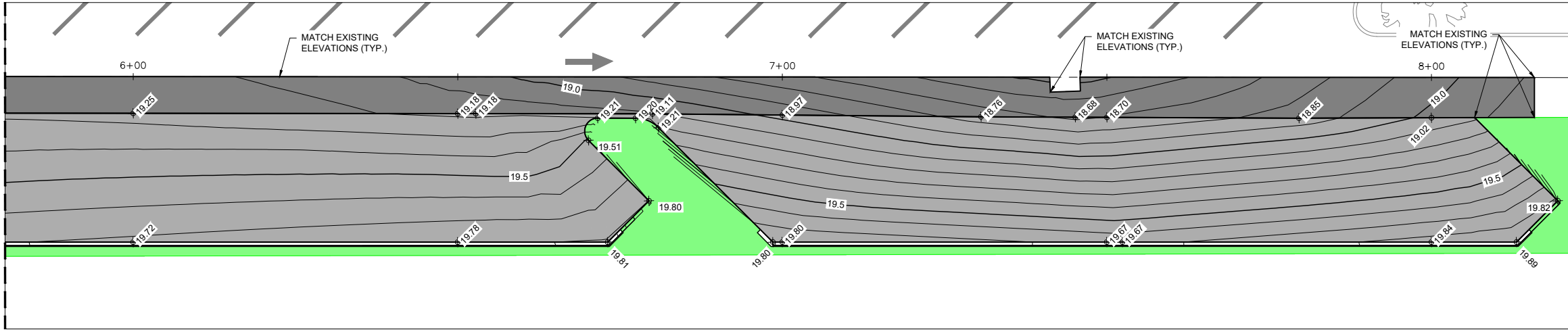
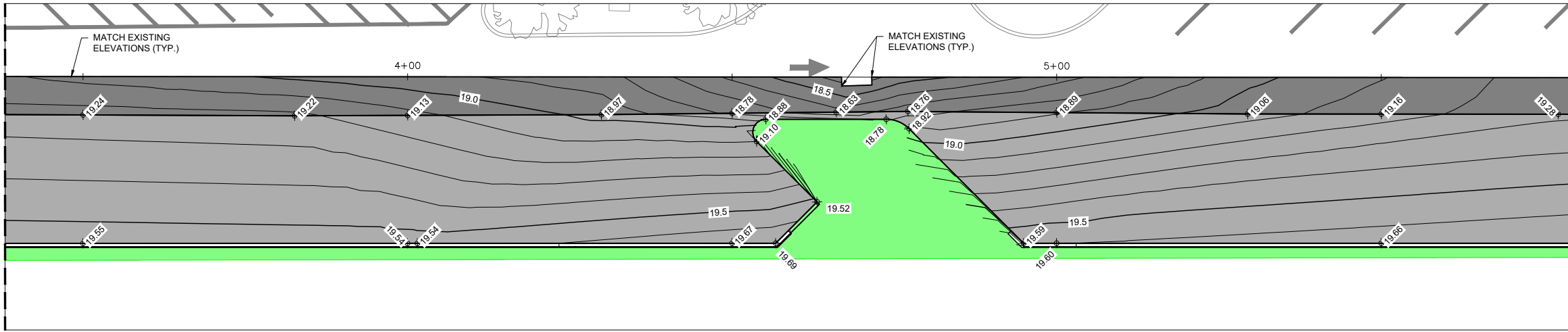
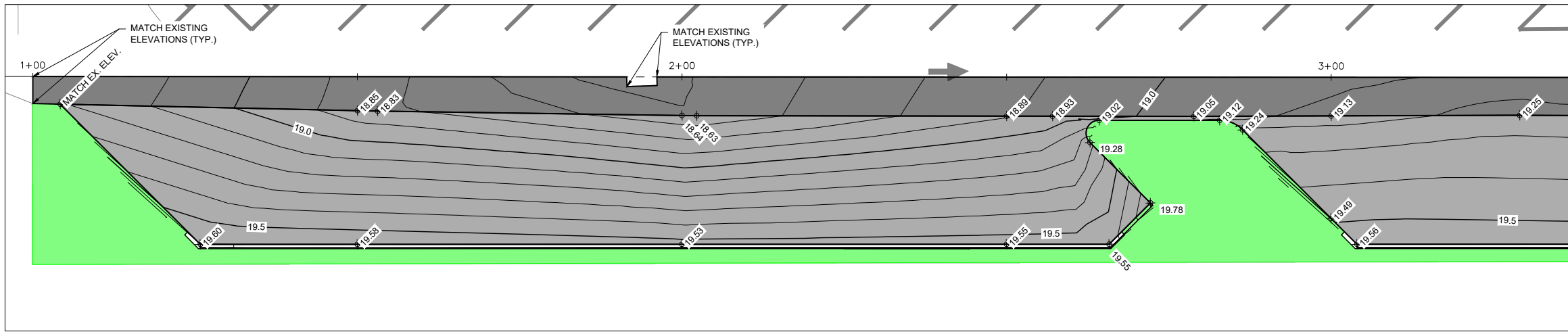


THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530.18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

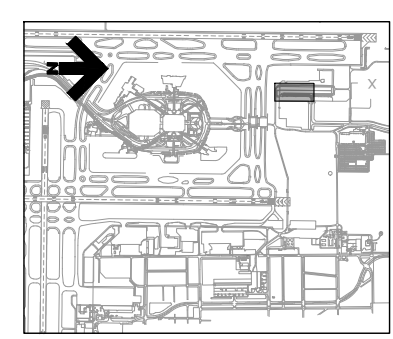
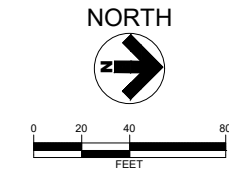
C122
SHEET NO.



LEGEND

- PROPOSED FULL DEPTH PARKING EXPANSION (DETAIL 5, SHEET C110)
- PROPOSED 2 IN ASPHALT OVERLAY (DETAIL 3, SHEET C110)
- EXISTING PAVEMENT EDGE
- EXISTING FENCE
- PROPOSED CONTOUR (0.1')
- FINISHED GRADE

- NOTES**
- SPOT ELEVATIONS ARE PROVIDED ONLY AS A SUPPLEMENT TO THE GEOMETRY AND PAVING PLANS. THE CONTRACTOR SHALL PAVE SUCH THAT THE PAVEMENT AREAS DRAIN AS DEPICTED IN THE GEOMETRY AND PAVING PLANS.
 - ALL ELEVATIONS PROVIDED ON THIS SHEET REPRESENT TOP OF PAVEMENT.
 - ALL PROPOSED PAVEMENT SHALL TIE INTO EXISTING GRADES AT ALL LOCATIONS SHOWN ON THE PLANS.
 - CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN THROUGHOUT THE DURATION OF CONSTRUCTION.



KEY MAP
ISSUED FOR CONSTRUCTION

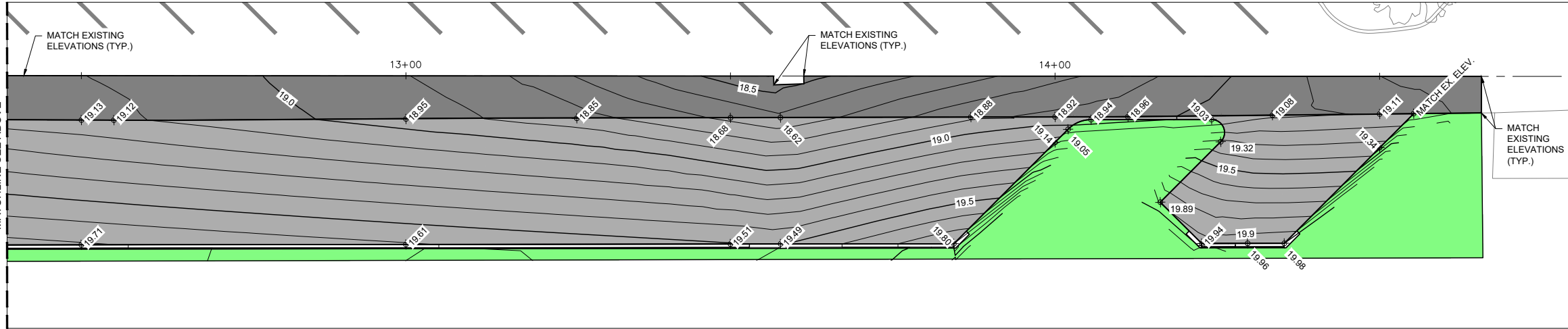
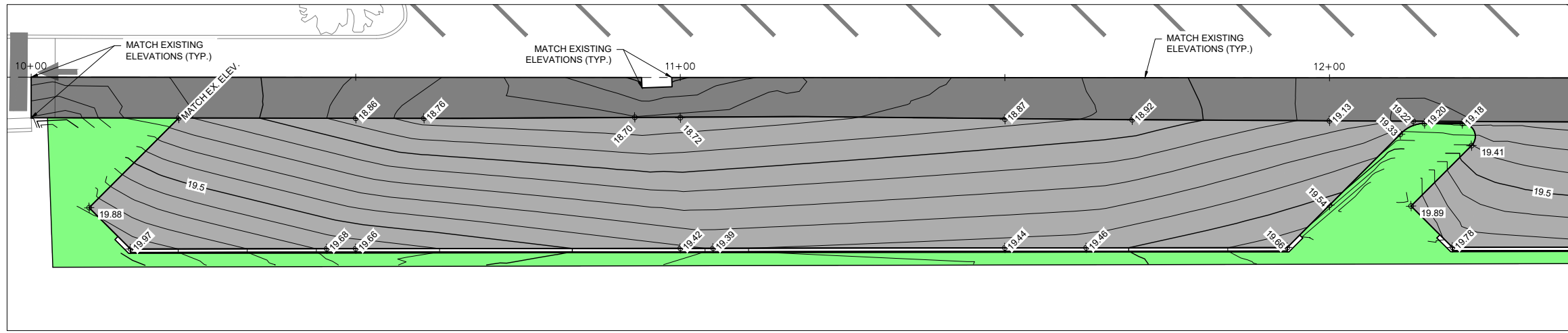
THIS SHEET TO BE PRINTED IN COLOR

Sunshine State 811 One Call

THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

DESIGNED: CJT
DRAWN: JDH
CHECKED: MBB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

DATE	REVISIONS	HILLSBOROUGH COUNTY AVIATION AUTHORITY TAMPA, FLORIDA	 1715 N. WASHINGTON BLVD., SUITE 600 TAMPA, FLORIDA 33607-5999 WWW.RSANDH.COM TEL: 813.281.1000 FAX: 813.281.1001
BY			
PROJECT NAME VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS			SHEET TITLE SPOT ELEVATION PLAN (SHEET 1 OF 2)
SHEET NO. C201			



LEGEND

- PROPOSED FULL DEPTH PARKING EXPANSION (DETAIL 5, SHEET C110)
- PROPOSED 2 IN ASPHALT OVERLAY (DETAIL 3, SHEET C110)
- EXISTING PAVEMENT EDGE
- EXISTING FENCE
- PROPOSED CONTOUR (0.1')
- FINISHED GRADE

- NOTES**
1. SPOT ELEVATIONS ARE PROVIDED ONLY AS A SUPPLEMENT TO THE GEOMETRY AND PAVING PLANS. THE CONTRACTOR SHALL PAVE SUCH THAT THE PAVEMENT AREAS DRAIN AS DEPICTED IN THE GEOMETRY AND PAVING PLANS.
 2. ALL ELEVATIONS PROVIDED ON THIS SHEET REPRESENT TOP OF PAVEMENT.
 3. ALL PROPOSED PAVEMENT SHALL TIE INTO EXISTING GRADES AT ALL LOCATIONS SHOWN ON THE PLANS.
 4. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN THROUGHOUT THE DURATION OF CONSTRUCTION.

DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1715 N. WASHINGTON BLVD., SUITE 600
TAMPA, FLORIDA 33607-5999
WWW.RSANDH.COM
FL 00008801 LCC000010



MATCHLINE SEE ABOVE

MATCHLINE SEE BELOW

NORTH

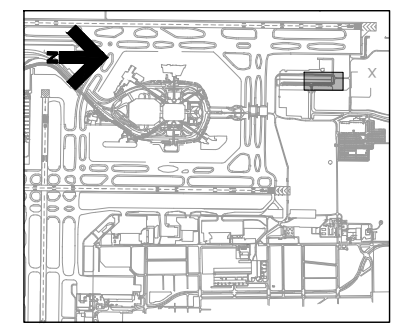
0 5 10 20
FEET

THIS SHEET TO BE PRINTED IN COLOR



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
FL PE NO. 94486



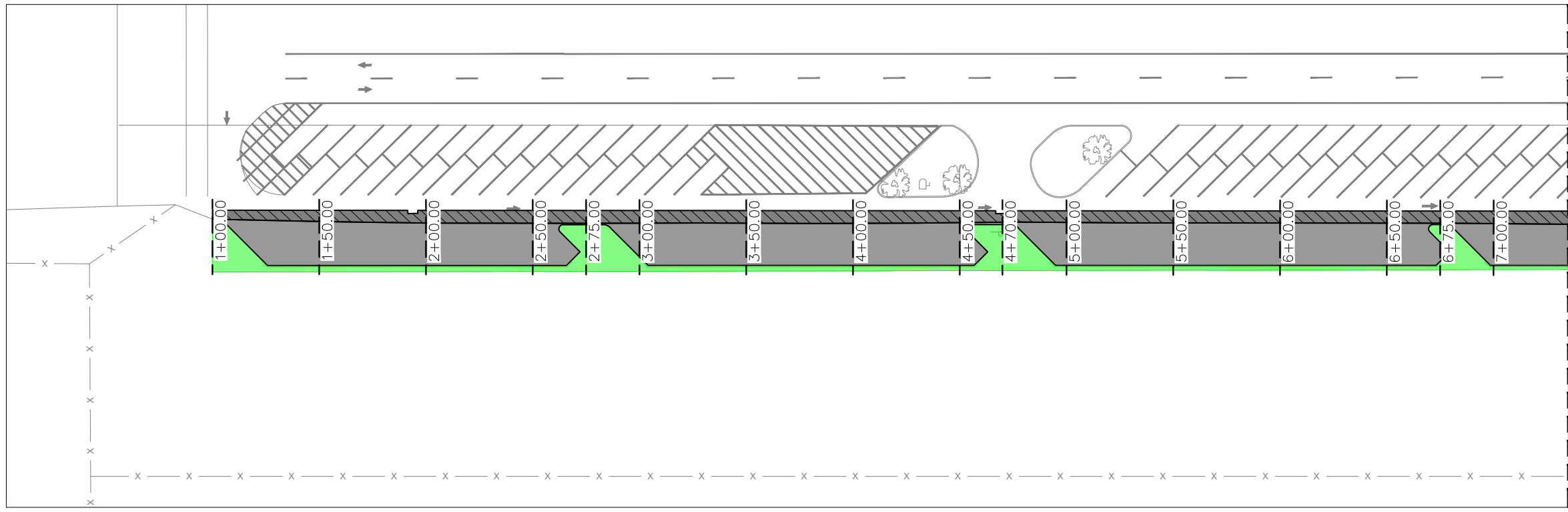
KEY MAP

ISSUED FOR CONSTRUCTION

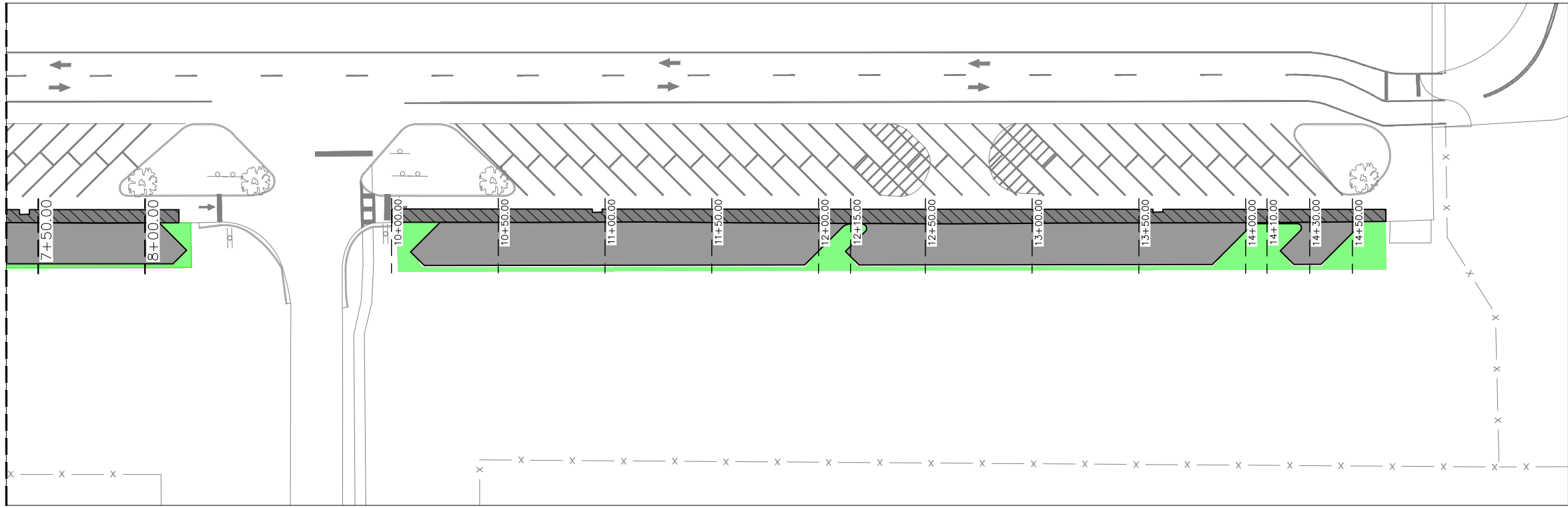
PROJECT NAME
VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
SPOT ELEVATION PLAN (SHEET 2 OF 2)

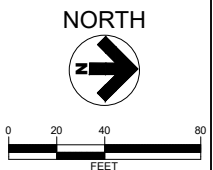
DESIGNED:	CJT
DRAWN:	JDH
CHECKED:	MRB
HCAA NO.:	6530 18
JOB NO.:	204-1880-047
DATE:	MARCH 20, 2023
C202	SHEET NO.:



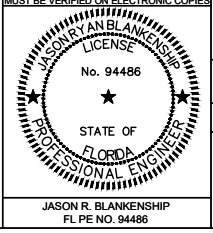
MATCHLINE SEE BELOW



MATCHLINE SEE ABOVE



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: CJT
 DRAWN: JDH
 CHECKED: MRB
 HCAA NO.: 6530 18
 JOB NO.: 204-1880-047
 DATE: MARCH 20, 2023

ISSUED FOR CONSTRUCTION

DATE	REVISIONS	BY

HILLSBOROUGH COUNTY
 AVIATION AUTHORITY
 TAMPA, FLORIDA

171 E. Washington Blvd., Suite 400
 Tampa, Florida 33607-5999
 www.rsandh.com
 FL 00008801 LCC000010



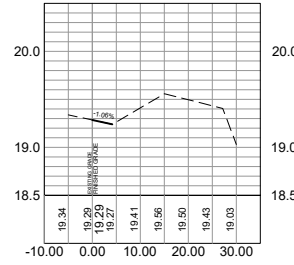
PROJECT NAME
**VOLUME I: NORTH AIR CARGO (NAC) PARKING
 EXPANSION AND TRUCK COURT REPAIRS**

SHEET TITLE
CROSS SECTION KEY MAP

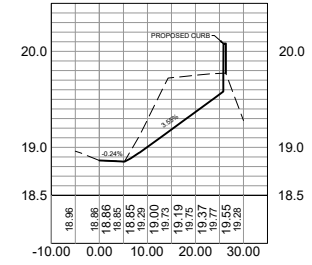
CX100

SHEET NO.:

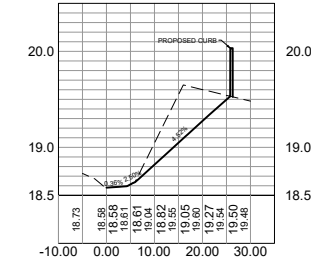
1+00.00



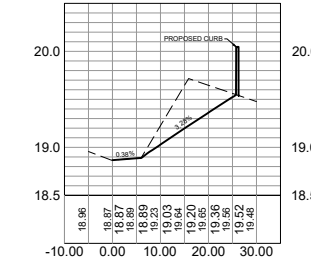
1+50.00



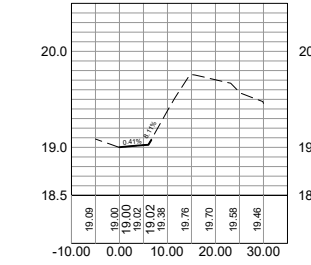
2+00.00



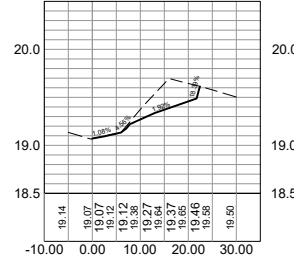
2+50.00



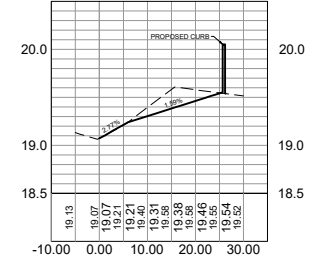
2+75.00



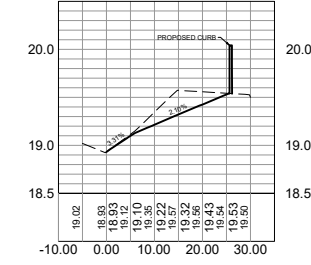
3+00.00



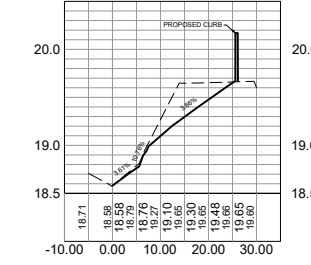
3+50.00



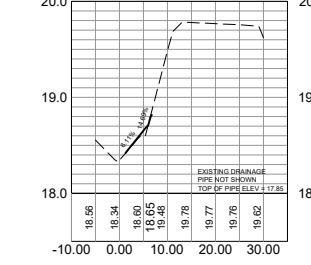
4+00.00



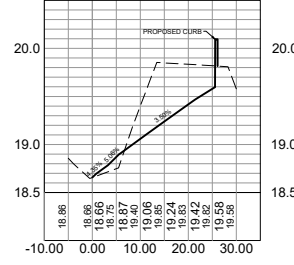
4+50.00



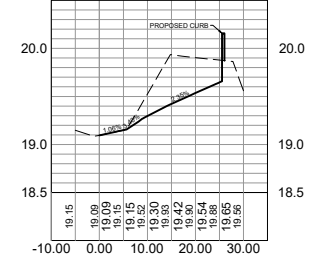
4+70.00



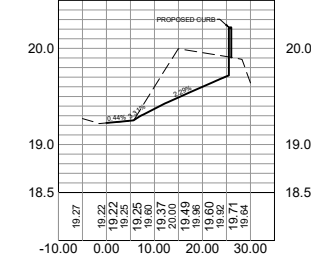
5+00.00



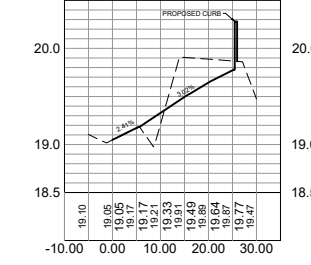
5+50.00



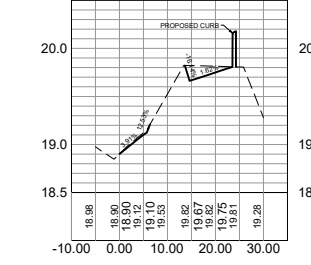
6+00.00



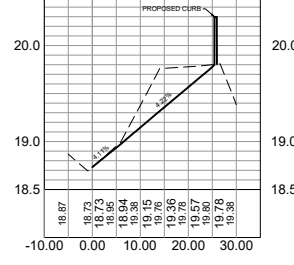
6+50.00



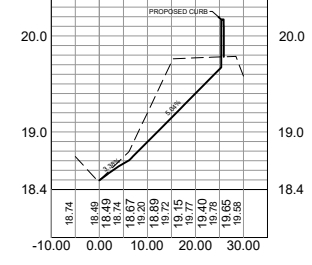
6+75.00



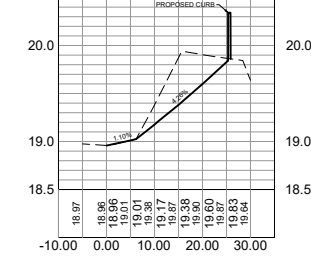
7+00.00



7+50.00

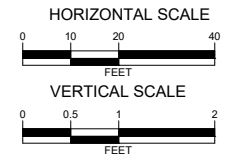


8+00.00



LEGEND

- - - - - EXISTING GROUND
- PROPOSED GROUND

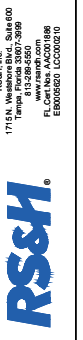


NOTES

- SEE GRADING PLANS FOR PROPOSED DRAINAGE PIPES AND STRUCTURES.
- ELEVATIONS OF UTILITIES ARE APPROXIMATED BASED ON AVAILABLE SUE DATA AND REVIEW OF AVAILABLE RECORD DRAWINGS. CONTRACTOR SHALL CONFIRM LOCATION AND DEPTH OF UTILITIES PRIOR TO GRADING OPERATIONS. SEE SPECIFICATIONS FOR THE COMPLETE SUE REPORT.

REV	
DATE	
REVISIONS	

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

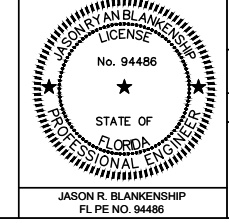


PROJECT NAME
**VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS**

SHEET TITLE
CROSS SECTIONS (SHEET 1 OF 2)



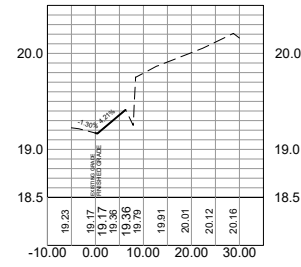
THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



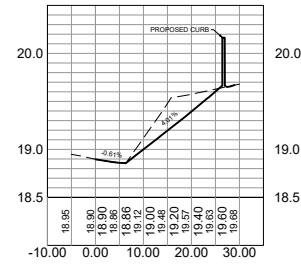
DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

CX101
SHEET NO.

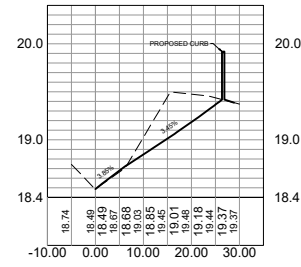
10+00.00



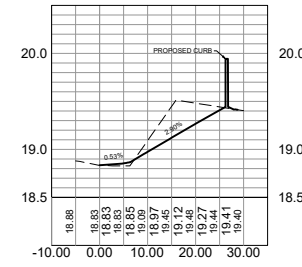
10+50.00



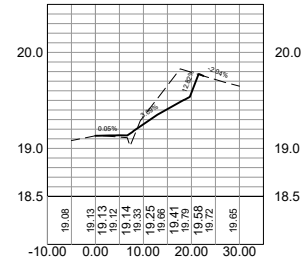
11+00.00



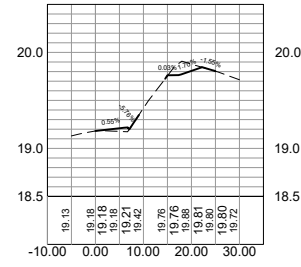
11+50.00



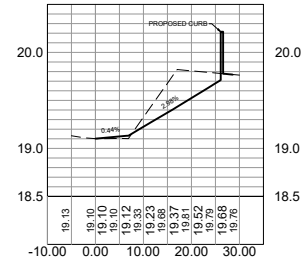
12+00.00



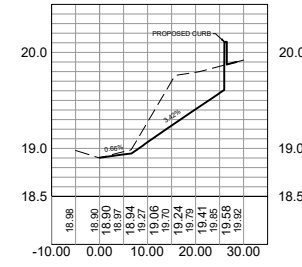
12+15.00



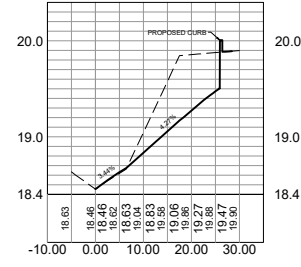
12+50.00



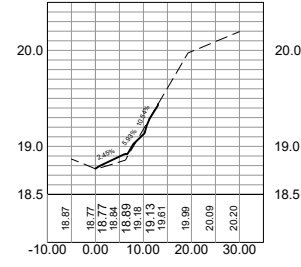
13+00.00



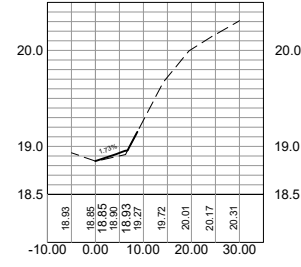
13+50.00



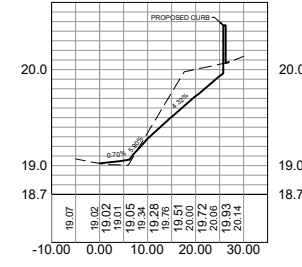
14+00.00



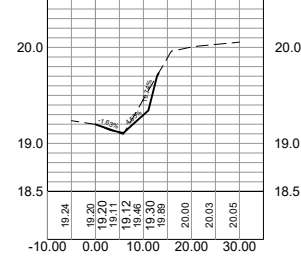
14+10.00



14+30.00

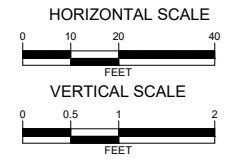


14+50.00



LEGEND

- EXISTING GROUND
- PROPOSED GROUND



NOTES

- SEE GRADING PLANS FOR PROPOSED DRAINAGE PIPES AND STRUCTURES.
- ELEVATIONS OF UTILITIES ARE APPROXIMATED BASED ON AVAILABLE SUE DATA AND REVIEW OF AVAILABLE RECORD DRAWINGS. CONTRACTOR SHALL CONFIRM LOCATION AND DEPTH OF UTILITIES PRIOR TO GRADING OPERATIONS. SEE SPECIFICATIONS FOR THE COMPLETE SUE REPORT.

DATE	REVISIONS

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

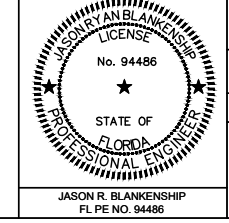


PROJECT NAME
**VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS**

SHEET TITLE
CROSS SECTIONS (SHEET 2 OF 2)



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: C.J.T.
DRAWN: J.D.H.
CHECKED: M.B.B.
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

CX102
SHEET NO.:

Tampa International Airport

CONSTRUCTION PLANS FOR

VOLUME II: NORTH AIR CARGO SERVICE ROAD RELOCATION AND APRON REHABILITATION

VOLUME II: INDEX OF DRAWINGS	
DRAWING NUMBER	SHEET TITLE
GENERAL (G)	
G200	COVER AND INDEX OF DRAWINGS (VOLUME II)
G201	SAFETY AND SECURITY NOTES AND DETAILS (VOLUME II)
G202	SAFETY AND SECURITY PLAN
G203	CONTRACT LAYOUT PLAN (VOLUME II)
G204	OVERALL PHASING SCHEMATIC, NOTES, AND BARRICADE PLAN (VOLUME II)
G205	EROSION AND SEDIMENTATION CONTROL PLAN (VOLUME II)
CIVIL (C)	
C201	EXISTING CONDITIONS AND DEMOLITION PLAN (SHEET 1 OF 2)
C202	EXISTING CONDITIONS AND DEMOLITION PLAN (SHEET 2 OF 2)
C203	SERVICE ROAD REPAIR PLAN (SHEET 1 OF 2)
C204	SERVICE ROAD REPAIR PLAN (SHEET 2 OF 2)
C205	APRON REHABILITATION PLAN (SHEET 1 OF 2)
C206	APRON REHABILITATION PLAN (SHEET 2 OF 2)
C207	PAVEMENT AND PAVEMENT MARKING SECTION AND DETAILS
ELECTRICAL (E)	
E201	ELECTRICAL NOTES AND DETAILS
E202	ELECTRICAL NOTES AND DETAILS

HCAA No. 6530 18

RS&H No. 1004-1880-047



MARCH 20, 2023

HILLSBOROUGH COUNTY AVIATION AUTHORITY

BOARD MEMBERS
GARY W. HARROD - CHAIRMAN
ROBERT I. WATKINS - VICE CHAIRMAN
BRIG. GENERAL CHIP DIEHL - TREASURER
CITY OF TAMPA MAYOR JANE CASTOR - SECRETARY
HILLSBOROUGH COUNTY COMMISSIONER
HARRY COHEN - ASST. SECRETARY/ASST. TREASURER
CHIEF EXECUTIVE OFFICER - JOSEPH W. LOPANO

**ISSUED FOR
CONSTRUCTION**

NOTE:
DO NOT SCALE PRINTS
REPRODUCTION MAY CAUSE DISTORTION

G200

CONSTRUCTION DATA	
PRIME CONTRACTOR	WORK: COMMENCED _____ COMPLETED _____
_____	COST: BIDS _____ FINAL \$ _____
_____	PROJECT ENGINEER/INSPECTORS:
MAJOR SUBCONTRACTORS AND/OR SUPPLIERS	_____
_____	_____
_____	_____
_____	_____

ALL CONSTRUCTION PERFORMED UNDER THIS CONTRACT WAS COMPLETED IN SUBSTANTIAL CONFORMITY WITH THE DRAWINGS, NOTES AND SPECIFICATIONS CONTAINED IN THESE PLANS. ALL CHANGES FROM THE PLANS AS BID, HAVE BEEN NOTED TO THE BEST OF OUR KNOWLEDGE.

(CERTIFIED) _____ PROJECT ENGINEER _____ DATE _____

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

APPROVED _____ DATE _____



RS&H, Inc.
1715 N. Westshore Boulevard, Suite 600
Tampa, Florida 33607-3999
813-289-5550
www.rsandh.com
FL Cert Nos. AAC001886 EB0005620 LCC00210

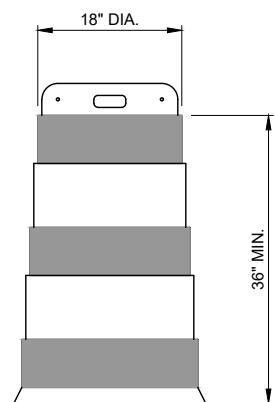
SUBMITTED JASON R. BLANKENSHIP DATE MARCH 20, 2023
P. E. No. 94486

SAFETY NOTES

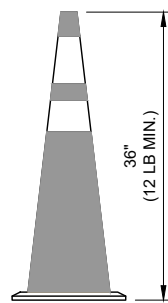
1. THE CONTRACTOR MUST ACQUAINT ITS SUPERVISORS AND EMPLOYEES OF THE AIRPORT ACTIVITY AND OPERATIONS THAT ARE INHERENT TO THIS ACTIVE AIRPORT AND MUST CONDUCT ITS CONSTRUCTION ACTIVITIES TO CONFORM TO ALL ROUTINE REQUIREMENTS AND EMERGENCY AIR TRAFFIC REQUIREMENTS AND GUIDELINES ON SAFETY SPECIFIED IN THE CONTRACT DOCUMENTS.
2. ALL CONTRACTOR VEHICLES MUST DISPLAY IN FULL VIEW ABOVE THE VEHICLE A 3' X 3' OR LARGER ORANGE AND WHITE CHECKERBOARD FLAG, EACH CHECKERBOARD COLOR BEING 1' SQUARE AND A FLASHING AMBER (YELLOW) DOME-TYPE LIGHT, MOUNTED ON TOP OF THE VEHICLE AND OF SUCH INTENSITY TO CONFORM TO LOCAL CODES FOR MAINTENANCE AND EMERGENCY VEHICLES.
3. ANY VEHICLE OPERATING IN THE ACTIVE AOA DURING THE HOURS OF DARKNESS MUST BE EQUIPPED WITH A FLASHING AMBER (YELLOW) DOME-TYPE LIGHT AS PREVIOUSLY DESCRIBED.
4. NO APRON OR AIRPORT ROADWAY MAY BE CLOSED WITHOUT WRITTEN APPROVAL OF THE HILLSBOROUGH COUNTY AVIATION AUTHORITY (HCAA), TO ENABLE NECESSARY ADVISORIES TO AIRPORT SERVICE OR TENANTS. A MINIMUM OF 72 HOURS WRITTEN NOTICE OF REQUESTED CLOSING SHALL BE DIRECTED TO HCAA THROUGH THE AUTHORITY.
5. OPEN FLAMES, WELDING OR TORCH-CUTTING OPERATIONS ARE PROHIBITED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS HAVE BEEN TAKEN, THE PROCEDURE IS APPROVED BY THE AUTHORITY, AND A CUTTING AND WELDING PERMIT HAS BEEN ISSUED BY HCAA.
6. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS. PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR MUST PROVIDE THE AUTHORITY WITH AN OUTLINE OF A PROPOSED ACCIDENT AND FIRE PROTECTION PLAN FOR ALL WORK CONTEMPLATED UNDER THE CONTRACT AND CONDUCT AT LEAST ONE SAFETY MEETING EACH MONTH FOR EACH SHIFT AND REQUIRE THE ATTENDANCE OF ALL SUPERVISORS AT SUCH MEETINGS. COPIES OF THE MINUTES OF SAFETY MEETINGS MUST BE KEPT ON FILE IN THE CONTRACTOR'S FIELD OFFICE AND BE MADE AVAILABLE UPON DEMAND BY THE AUTHORITY.
7. THE EMERGENCY NUMBER TO CALL FOR ANY INCIDENT ON THE PROJECT OR AIRPORT WILL BE 911, AND THE SITE IS TAMPA INTERNATIONAL AIRPORT, UNLESS OTHERWISE NOTIFIED BY HCAA.
8. CONSTRUCTION DURING THE PROJECT MAY BE HALTED AT ANY TIME BY THE AUTHORITY IF IT IS DETERMINED TO BE IN THE BEST INTEREST OF HCAA OR AIRPORT OPERATIONAL SAFETY, AND THE CONTRACTOR MAY BE DIRECTED TO REMOVE EQUIPMENT AND/OR EVACUATE THE SITE. NECESSARY EXTENSIONS IN CONTRACT TIME MAY BE GRANTED OR A STOP WORK ORDER WILL BE ISSUED DUE TO THESE DELAYS, HOWEVER, THERE WILL BE NO ADJUSTMENTS IN CONTRACT PRICE DUE TO THESE DELAYS.
9. THE CONTRACTOR IS FULLY RESPONSIBLE FOR AIRPORT OPERATIONAL SAFETY ASSOCIATED WITH CONSTRUCTION ACTIVITIES RELATIVE TO THE CONSTRUCTION PROJECT AT ALL TIMES.
10. THE PLANS AND SAFETY NOTES ARE NOT IN ANY WAY INTENDED TO IMPLY OR PROVIDE ANY DIRECTION REGARDING THE CONTRACTOR'S OWN CONSTRUCTION WORKFORCE SAFETY. THE CONTRACTOR'S SAFETY REQUIREMENTS/ACCOMMODATIONS ASSOCIATED WITH THE PROJECT CONSTRUCTION WORKFORCE IS SOLELY AND ENTIRELY THE RESPONSIBILITY OF THE CONTRACTOR.

CHANNELIZING DEVICES NOTES

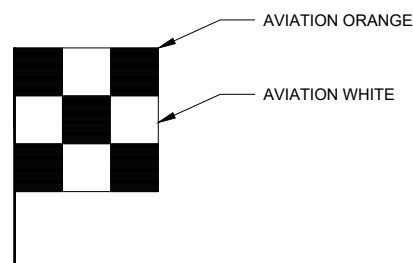
1. BARRICADE SPACING MUST BE AS INDICATED IN THE APPLICABLE FDOT STANDARD PLANS INDEX. BARRICADES MUST BE INSTALLED AS DIRECTED BY THE AUTHORITY AND AS REQUIRED BY THE CONTRACTOR TO PROTECT THE WORK AREA. BARRICADES MUST BE INSTALLED PRIOR TO THE START OF CONSTRUCTION FOR THE NEW CARGO APRON SERVICE ROAD AND MUST REMAIN IN PLACE THROUGHOUT THE DURATION OF THE PROJECT.
2. THE CONTRACTOR IS TO BE SOLELY RESPONSIBLE FOR MAINTENANCE OF BARRICADES DURING CONSTRUCTION. SAND BAGS MAY BE USED TO SECURE BARRICADES FROM BECOMING WIND BORNE HAZARDS. SAND BAGS MUST BE REPLACED WHEN EXHIBITING SIGNS OF DISINTEGRATION AND ANY LOOSE SAND FROM THE BAGS SHALL BE REMOVED FROM THE PAVEMENT SURFACE.
3. THE CONTRACTOR MUST FURNISH, MAINTAIN, AND REMOVE THE BARRICADES AS DIRECTED BY THE AUTHORITY. THE COST ASSOCIATED WITH THIS WORK MUST BE INCLUDED IN THE C-106 MAINTENANCE OF TRAFFIC AND TEMPORARY CONSTRUCTION ITEMS PAY ITEM.



PLASTIC DRUMS



CONES



2 CONSTRUCTION SAFETY FLAG

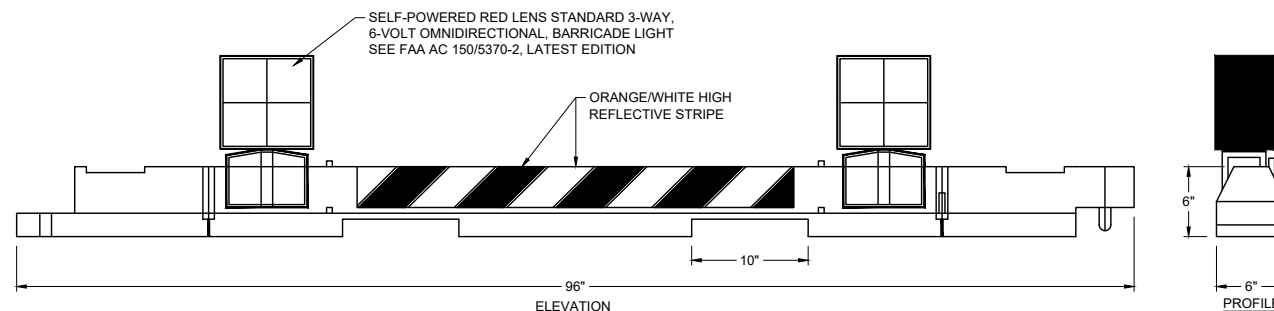
SEE SAFETY NOTE 2 ON THIS SHEET FOR CONSTRUCTION SAFETY FLAG MOUNTING LOCATION REQUIREMENTS

SECURITY NOTES

1. IT IS INTENDED THAT THE CONTRACTOR MUST COMPLY WITH ALL SECURITY REQUIREMENTS SPECIFIED HEREIN AND IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS REQUIRED TO FAMILIARIZE THEMSELVES WITH REQUIREMENTS OF OPERATING WITHIN AND AROUND THE AIRPORT AND APPLICABLE RULES AND REGULATIONS. THE CONTRACTOR MUST BE RESPONSIBLE FOR BRIEFING ALL CONTRACTOR PERSONNEL ON THESE REQUIREMENTS AND, FROM TIME TO TIME, OTHER SECURITY PROVISIONS ADOPTED BY HCAA. ALL NEW CONTRACTOR EMPLOYEES MUST BE BRIEFED ON THESE REQUIREMENTS PRIOR TO WORKING IN THE CONSTRUCTION AREA.
2. THE CONTRACTOR'S ACCESS TO THE SITE MUST BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE AUTHORITY. NO OTHER ACCESS POINTS ARE ALLOWED UNLESS APPROVED BY HCAA AND DIRECTED BY THE AUTHORITY. ALL CONTRACTOR TRAFFIC AUTHORIZED TO ENTER THE SITE MUST BE EXPERIENCED IN THE ROUTE OR GUIDED BY CONTRACTOR PERSONNEL. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON AIRPORT PROPERTY.
3. ALL CONTRACTOR'S MATERIAL ORDERS FOR DELIVERY TO THE SITE MUST BE ESCORTED BY THE CONTRACTOR. THIS WILL PRECLUDE DELIVERY TRUCKS FROM ENTERING INTO THE AIRPORT OR TAKING SHORT-CUTS THROUGH THE PERIMETER GATES AND ENTERING INTO AIRCRAFT OPERATIONS AREAS INADVERTENTLY.
4. THE CONTRACTOR ACCESS GATE DESIGNATED FOR USE MAY BE UTILIZED BY OTHER CONTRACTORS, HCAA STAFF, OR TENANTS DURING THIS PROJECT. THE CONTRACTOR IS REQUIRED TO COORDINATE ACCESS WITH ALL PARTIES. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR ISSUES RELATED TO SITE ACCESS.
5. **IDENTIFICATION OF PERSONNEL:** AT THE AUTHORITY'S DISCRETION, ALL EMPLOYEES OF THE CONTRACTOR OR SUBCONTRACTORS, REQUIRING ACCESS TO THE CONSTRUCTION SITE, ARE REQUIRED TO BE SUPPLIED WITH IDENTIFICATION BADGES TO BE WORN AT ALL TIMES WHILE WITHIN THE AREAS. BADGES SHALL BE SUPPLIED BY THE CONTRACTOR AND SHALL STATE "CONTRACTOR - NORTH AIR CARGO SERVICE ROAD RELOCATION". BADGES CAN BE PLASTIC WALLET SIZE OR METAL PIN WITH A MINIMUM 2 1/2" DIAMETER AND MUST BE WORN ON OUTER GARMENTS SO AS TO BE CLEARLY VISIBLE. BADGING IS TO BE UNIFORM IN APPEARANCE AND SUFFICIENTLY DISTINCTIVE IN DESIGN OR COLOR TO CLEARLY IDENTIFY AN EMPLOYEE AS BEING ASSIGNED/ASSOCIATED WITH THIS CONTRACT. THE BADGE NUMBER MUST BE PROMINENT FOR EASY IDENTIFICATION. BADGES ARE TO BE IDENTIFIED NUMERICALLY AND ISSUED INDIVIDUALLY TO WHOM IT IS ASSIGNED. BLOCKS OF NUMBERS CAN BE ASSIGNED TO SUBCONTRACTORS. SUPPLY, ISSUANCE AND CONTROL OF IDENTIFICATION BADGES MUST BE THAT OF THE CONTRACTOR THROUGH THE SUPERINTENDENT. IN LIEU OF ISSUING BADGES, THE SUPERINTENDENT CAN REQUIRE THAT EACH EMPLOYEE WEAR AN OUTER GARMENT WITH THE COMPANY NAME, PROMINENTLY PLACED, SO THAT ALL PERSONNEL CAN BE IDENTIFIED AS BEING A MEMBER OF THIS GROUP.
6. **IDENTIFICATION OF VEHICLES:** THE CONTRACTOR MUST ESTABLISH AND MAINTAIN A LIST OF CONTRACTOR AND SUB-CONTRACTOR VEHICLES AUTHORIZED TO OPERATE ON THE SITE. VEHICLES MUST DISPLAY A LARGE COMPANY SIGN ON BOTH SIDES OF THE VEHICLE. THE CONTRACTOR MUST ISSUE TO THE AUTHORITY, A CURRENT LIST OF COMPANIES AUTHORIZED TO ENTER AND CONDUCT WORK ON THE AIRPORT. CONTRACTOR EMPLOYEE PERSONAL VEHICLES ARE NOT ALLOWED ON THE AIRFIELD AT ANY TIME. CONTRACTOR MUST COORDINATE WITH THE AUTHORITY TO RECEIVE AOA ACCESS VEHICLE STICKERS. VEHICLE STICKERS ARE SPECIFIC TO THE VEHICLE IDENTIFIED DURING THE STICKER APPLICATION PROCESS AND MUST NOT BE SHARED BETWEEN MULTIPLE VEHICLES.
7. ALL ACCESS GATES MUST BE NORMALLY CLOSED DURING CONSTRUCTION AND MANNED AT ALL TIMES WHILE GATE IS OPEN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP THE AIRPORT SECURED AT ALL TIMES DURING CONSTRUCTION.

SECURITY WITHIN THE AOA NOTES

1. ALL AGENTS, VENDORS, INVITEES, ETC. OF THE CONTRACTOR OR SUBCONTRACTORS REQUIRING ACCESS TO THE PROJECT SITES LOCATED WITHIN THE AOA, WILL BE REQUIRED TO BE ESCORTED BY PROPERLY BADGED PERSONNEL. ALL EMPLOYEES, OF THE CONTRACTOR OR SUBCONTRACTORS REQUIRING ACCESS TO THE PROJECT SITES LOCATED WITHIN THE AOA, IN ACCORDANCE WITH THE HCAA SECURITY PROGRAM, WILL BE REQUIRED TO DISPLAY AIRPORT ISSUED IDENTIFICATION AND SHALL BE BADGED WITH A TAMPA INTERNATIONAL AIRPORT SIDA BADGE. AT THE COMPLETION OF THE CONTRACT ALL BADGES WILL BE RETURNED TO THE AIRPORT OR A PER BADGE CHARGE WILL BE ASSESSED FOR ALL BADGES NOT RETURNED. AS PART OF THE BADGE APPLICATION PROCESS, EACH APPLICANT WILL BE FINGERPRINTED FOR USE IN AN FBI CRIMINAL RECORDS SEARCH. ANY PERSON WHOSE CRIMINAL RECORD REVEALS OFFENSES LISTED BY FAA AS DISQUALIFYING OFFENSES WILL BE DENIED A BADGE AND WILL BE PROHIBITED FROM UNSCORTED ACCESS TO THE PROJECT SITE. ALL REQUIRED PAPERWORK AND ID BADGE APPLICATIONS SHALL BE SUBMITTED A MINIMUM OF TWO (2) WEEKS BEFORE ISSUANCE OF ANY BADGE. CONTRACTOR PERSONNEL REQUIRING AIRPORT ISSUED BADGES ARE RESPONSIBLE FOR ATTENDING SIDA TRAINING AND COMPLETING SECURITY BADGE APPLICATIONS, WHICH WILL INCLUDE AIR/GROUND RADIO, TAXIWAY AND AIRPORT FAMILIARIZATION. THERE IS A CHARGE FOR THE FBI BACKGROUND CHECK AND FINGERPRINTING PROCESS, THE COST OF WHICH SHALL BE INCIDENTAL TO ITEM C-105 MOBILIZATION PAY ITEM.



NOTES:

1. FLASHERS TO BE BATTERY OPERATED AND/OR SOLAR POWERED. LENS TO BE RED AND BE ABLE TO ROTATE 90°.
2. FACING OF LOW-PROFILE BARRICADE TO BE COVERED WITH REFLECTIVE MATERIAL.
3. LOW-PROFILE BARRICADES TO BE PLACED CONTINUOUSLY WITH NO GAPS BETWEEN BARRICADES ALONG OPERATIONAL PAVEMENT, ADJACENT TO CONSTRUCTION, OR AS DIRECTED BY THE OWNER. BARRICADES MUST BE PLACED FULL WIDTH ACROSS CLOSED PAVEMENT AREAS FROM OUTSIDE EDGE OF SHOULDER TO OUTSIDE EDGE OF SHOULDER.
4. MOUNT FLASHERS TO BARRICADES AT INTERVALS NO GREATER THAN 10 FEET. FLASHERS MUST BE SECURED TO THE BARRICADES PER MANUFACTURER'S INSTRUCTIONS. ALTERNATE FLASHER LENSES SO THAT EVERY OTHER LENS IS ROTATED 90°.
5. LOW-PROFILE BARRICADES MUST BE OF LOW MASS, EASILY COLLAPSIBLE UPON CONTACT WITH AN AIRCRAFT OR ANY OF ITS COMPONENTS, AND WEIGHTED OR STURDILY ATTACHED TO THE SURFACE. IF AFFIXED TO THE SURFACE, THE BARRICADE MUST BE FRANGIBLE AT GRADE LEVEL OR AS LOW AS POSSIBLE, NOT TO EXCEED 3 INCHES ABOVE THE GROUND.
6. FLASHERS MUST BE OPERATIONAL AT EACH BARRICADE LOCATION AT ALL TIMES. ANY FLASHERS MUST FOUND NON-OPERATIONAL MUST BE REPAIRED IMMEDIATELY. MAINTAIN SPARE BARRICADE FLASHERS AND BATTERIES. AT ANY GIVEN TIME, A MINIMUM NUMBER OF FLASHERS AND BATTERIES MUST BE ON-SITE ORDER TO REPLACE NO LESS THAN FIVE PERCENT (5.0%) OF ALL PROJECT LOW-PROFILE BARRICADES.
7. INSTALLATION, RELOCATION, OPERATION, MAINTENANCE (INCLUDING REPLACEMENT PARTS), AND REMOVAL OF LOW-PROFILE BARRICADES ARE INCIDENTAL TO PAYMENT FOR CONSTRUCTION SAFETY AND SECURITY, ITEM C-103-1.
8. ALTERNATE TRAFFIC CONTROL DEVICES MAY BE IMPLEMENTED WITH AUTHORIZATION OF THE AUTHORITY.
9. SEE SHEET G205 FOR LOCATION OF BARRICADES.

3 LOW PROFILE BARRICADE

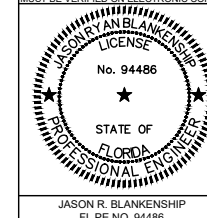
N.T.S.

1 CHANNELIZING DEVICES

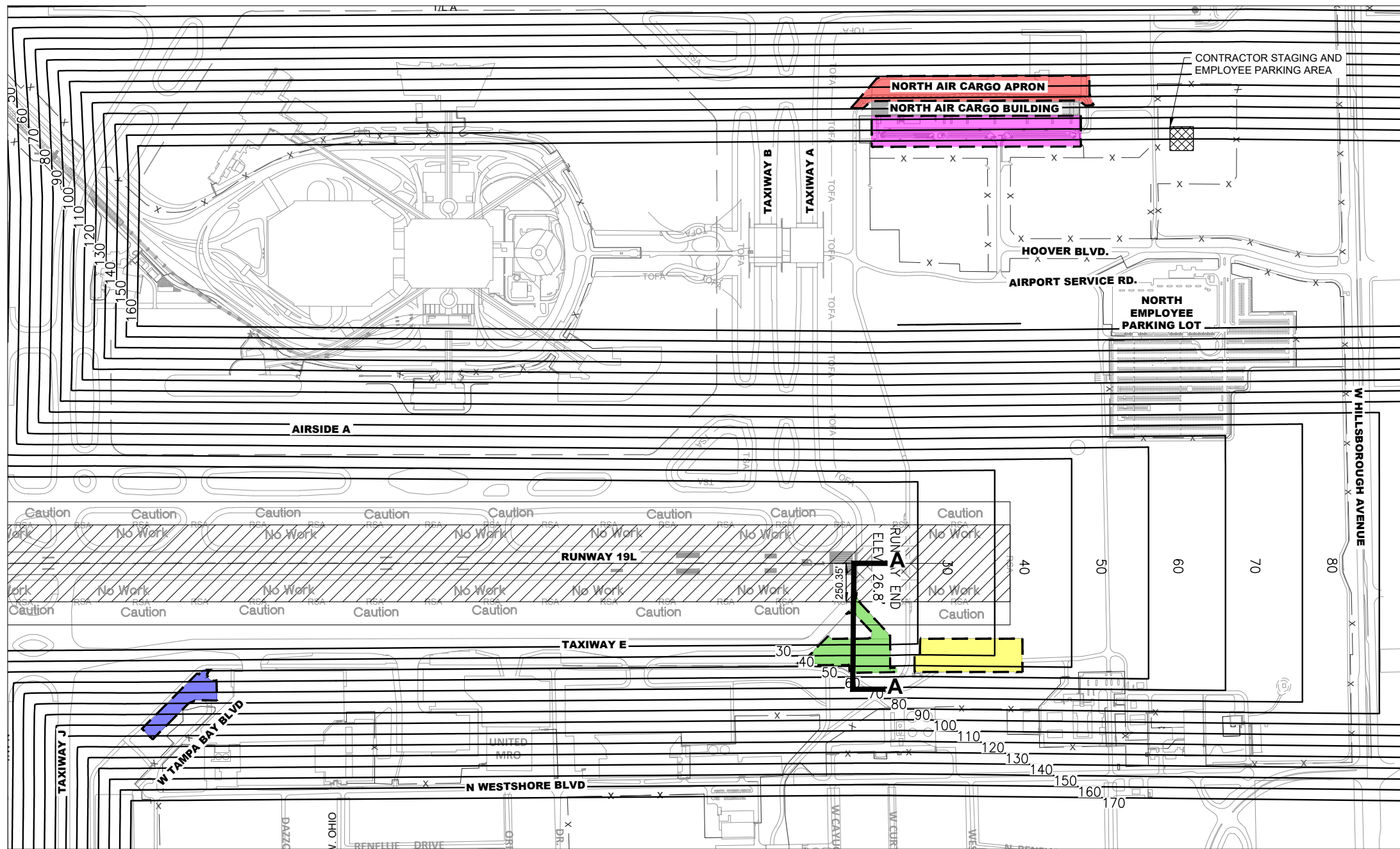
G201



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

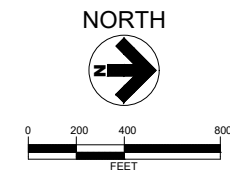


REV	DATE	REVISIONS
HILLSBOROUGH COUNTY AVIATION AUTHORITY TAMPA, FLORIDA 		1715 N. WASHINGTON BLVD., SUITE 600 TAMPA, FLORIDA 33607-3998 WWW.RSANDH.COM FL LIC# 00000001 EIT# 00000001
Tampa International Airport 		PROJECT NAME: VOLUME II: NORTH AIR CARGO (NAC) SERVICE ROAD RELOCATION AND APRON REHABILITATION SHEET TITLE: SAFETY AND SECURITY NOTES AND DETAILS (VOLUME II)
DESIGNED:	SCS	
DRAWN:	SCB	
CHECKED:	MRB	
HCAA NO.:	#6350 18	
JOB NO.:	1004-1880-047	
DATE:	MARCH 20, 2023	
G201		SHEET NO.



LEGEND

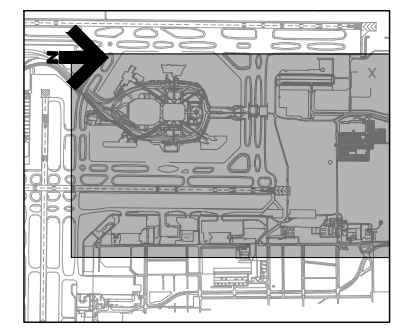
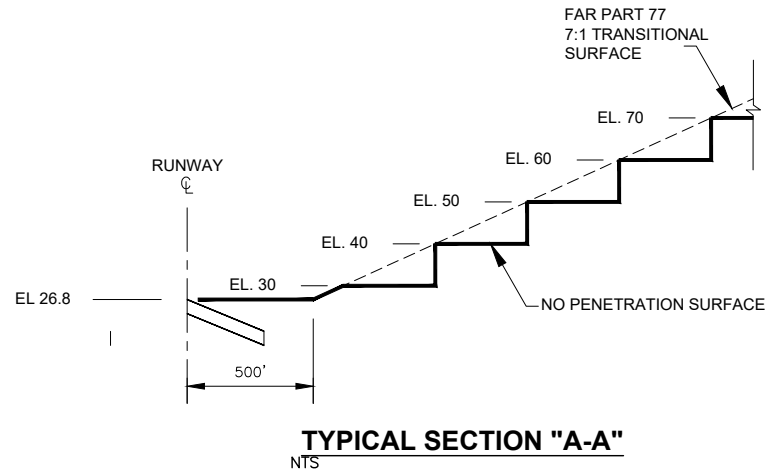
- APPROXIMATE LIMITS OF WORK
- CONTRACTOR STAGING AND EMPLOYEE PARKING AREA
- SERVICE ROAD RELOCATION
- TRUCK COURT REPAIRS (VOL I)
- APRON 1 REHABILITATION
- APRON 2 REHABILITATION
- APRON 3 REHABILITATION
- EXISTING FENCE



AIR PROTECTION SURFACES PLAN

NOTES

1. THE SURFACES SHOWN REPRESENT ELEVATIONS AND ARE CONSISTENT WITH THE VERTICAL DATUM USED THROUGHOUT THE DOCUMENTS. THE SURFACES ARE IMAGINARY PLANES AND ARE FOR THE PROTECTION OF AIR NAVIGATION SPACE FOR OPERATIONAL SAFETY AND ARE OF PARAMOUNT IMPORTANCE.
2. THE SURFACES SHOWN ARE FOR THE CONTRACTORS USE IN PLANNING THEIR CONSTRUCTION ACTIVITIES AND THE ASSOCIATED EQUIPMENT NECESSARY TO CONDUCT THE WORK WITHIN A SPECIFIC PROJECT AREA. THE INFORMATION IS TO BE USED IN CONJUNCTION WITH EXISTING GROUND DATA TO DETERMINE THE AVAILABLE VERTICAL CLEARANCE FOR EQUIPMENT.
3. THE SURFACES MUST NOT BE PENETRATED BY ANY CONSTRUCTION EQUIPMENT OR ACTIVITY UNLESS CLOSELY COORDINATED AND APPROVED A MINIMUM OF 48 HOURS IN ADVANCE WITH HCAA. ALL CONSTRUCTION ACTIVITIES WHICH POSE ANY THREAT TO A SURFACE PENETRATION MUST BE COORDINATED THROUGH HCAA.
4. HCAA HAS THE FINAL DECISION TO APPROVE OR REJECT THE CONTRACTOR'S REQUEST TO PENETRATE THE SURFACES WHEREBY THE CONTRACTOR WILL BE REQUIRED TO UTILIZE ALTERNATIVE EQUIPMENT OR METHODS, AS APPROVED BY THE AUTHORITY, TO CONDUCT THE CONSTRUCTION WHICH DOES NOT PENETRATE THE SURFACES. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR DISAPPROVAL RENDERED BY HCAA.
5. AREAS DESIGNATED BY "CAUTION" ARE AVAILABLE TO WORK IN BUT REQUIRE VERY CLOSE ADVANCE COORDINATION WITH HCAA AND OTHER SPECIAL CONSIDERATIONS (I.E., EQUIPMENT LIMITATIONS, BARRICADING, OBSTRUCTION LIGHTING AND/OR FLAGGING, ETC.)



KEY MAP
ISSUED FOR CONSTRUCTION

THIS SHEET TO BE PRINTED IN COLOR



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

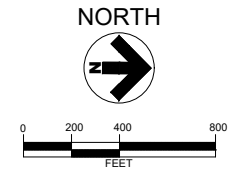
JASON R. BLANKENSHIP
FL PE NO. 94486

DATE		REVISIONS	
HILLSBOROUGH COUNTY AVIATION AUTHORITY		TAMPA, FLORIDA	
Tampa International Airport		RS&H	
PROJECT NAME	VOLUME II: NORTH AIR CARGO (NAC) SERVICE ROAD RELOCATION AND APRON REHABILITATION		
SHEET TITLE	SAFETY AND SECURITY PLAN		
DESIGNED:	CJT	CHECKED:	MRB
DRAWN:	JDH	HCAA NO.:	#6350 18
JOB NO.:	1004-1880-047	DATE:	MARCH 20, 2023
SHEET NO.:	G202		



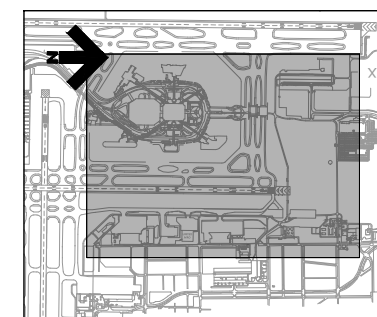
LEGEND

- APPROXIMATE LIMITS OF WORK
- SERVICE ROAD RELOCATION ACCESS AND HAUL ROUTE
- APRON REHABILITATION ACCESS AND HAUL ROUTES
- CONTRACTOR STAGING AND EMPLOYEE PARKING AREA
- SERVICE ROAD RELOCATION
- APRON 1 REHABILITATION
- APRON 2 REHABILITATION
- APRON 3 REHABILITATION
- EXISTING FENCE



NOTES

1. FOR GENERAL NOTES AND CONTRACTOR'S STAGING AREA NOTES, SEE SHEET G004.
2. ACCESS TO THE SITE MUST BE AS SHOWN ON THIS SHEET OR AS APPROVED BY THE AUTHORITY. THE CONTRACTOR MUST NOT UTILIZE ALTERNATIVE ROUTES UNLESS PREVIOUSLY APPROVED BY THE AUTHORITY.
3. CONTRACTOR EMPLOYEES MUST PARK IN THE DESIGNATED PARKING AREA. CONTRACTOR EMPLOYEE PERSONAL VEHICLES ARE NOT ALLOWED WITHIN THE AOA OR WITHIN THE AOA OR WITHIN ACTIVE TENANT OPERATION AREA NEAR THE WORK LIMITS AT ANY TIME.
4. CONTRACTOR MUST IMMEDIATELY CLEAN UP ALL DEBRIS RESULTING FROM THE MOVEMENT OF CONSTRUCTION TRAFFIC ON ALL AOA PAVEMENTS.
5. THE CONTRACTOR MUST PROVIDE AN HCAA BADGED EMPLOYEE AT ALL AOA GATES USED TO ACCESS THE PROJECT DURING ALL DURATION IN WHICH THE AOA GATE IS LEFT OPEN, UNLOCKED, OR REMAINS INOPERABLE DUE TO CONSTRUCTION ACTIVITIES. SEE GENERAL NOTE 3, SHEET G004 FOR ADDITIONAL REQUIREMENTS.
6. CONTRACTOR MUST COORDINATE WITH THE AUTHORITY TO INTERLOCK WITH THE EXISTING HCAA LOCKS ON ALL MANUAL GATES UTILIZED DURING CONSTRUCTION, AS REQUIRED. SEE NOTE 4, SHEET G004 FOR ADDITIONAL REQUIREMENTS.
7. CONTRACTOR MUST CONTACT AIRPORT OPERATIONS TO OBTAIN CLOSURES OF TAXIWAY E.



KEY MAP

ISSUED FOR CONSTRUCTION

THIS SHEET TO BE PRINTED IN COLOR



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
FL PE NO. 94486

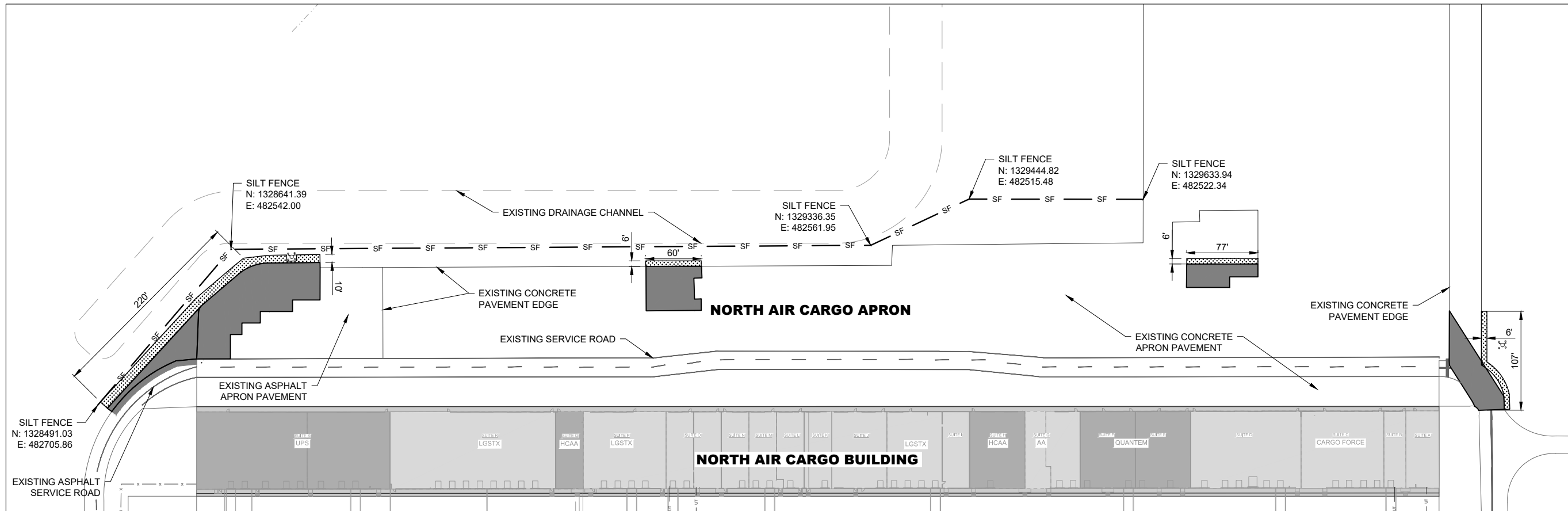
DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

PROJECT NAME: VOLUME II: NORTH AIR CARGO (NAC) SERVICE ROAD RELOCATION AND APRON REHABILITATION
SHEET TITLE: CONTRACT LAYOUT PLAN (VOLUME II)

DESIGNED: CJT
DRAWN: JDH
CHECKED: JRB
HCAA NO.: #6350 18
JOB NO.: 1004-1880-047
DATE: MARCH 20, 2023

G203
SHEET NO.

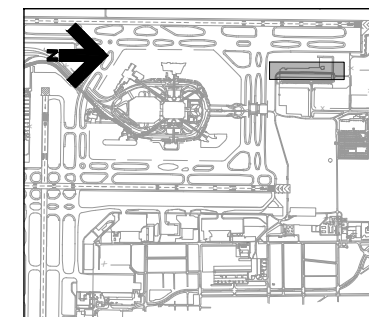
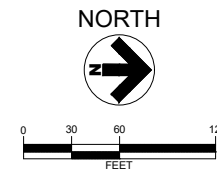


NOTES

1. REFER TO G005 FOR EROSION AND SEDIMENTATION NOTES AND DETAILS.
2. THE CONTRACTOR SHALL NOT CONSIDER THESE PLANS AS A COMPLETE AND THOROUGH DEPICTION OF ALL THE NECESSARY EROSION CONTROL MEASURES REQUIRED FOR THE PROJECT. THE MEASURES SHOWN INDICATE ONLY THE MINIMUM MEASURES REQUIRED BY THE OWNER. THESE PLANS DO NOT INDICATE ALL THE INTERIM EROSION CONTROLS TO BE USED, PARTICULARLY AS EACH PHASE PROGRESSES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE PLANS, DETERMINE THE MOST APPROPRIATE MEANS OF PROTECTING THESE AREAS AND INCORPORATE, IN ADDITION TO THE MEASURES SHOWN, ANY NECESSARY ADDITIONAL MEASURES, ABOVE AND BEYOND THOSE SHOWN IN THE PLANS TO PROTECT HIMSELF AND TO INDEMNIFY THE OWNER AGAINST ANY DAMAGES DOWNSTREAM AND ANY FINES RESULTING IN CLAIMS FOR DAMAGES TO THE ENVIRONMENT AS A DIRECT RESULT OF THIS WORK.
3. THE GENERAL LOCATIONS FOR STAKED SILT FENCE, AS SHOWN ON THE EROSION CONTROL DRAWINGS ARE GRAPHICALLY DEPICTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATIONS REQUIRED IN THE FIELD.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A FINAL CLEANING OF THE STORM DRAINAGE SYSTEM OF ANY SILT OR DEBRIS UPON PROJECT COMPLETION WHICH SHALL BE COMPLETED PRIOR TO FINAL INSPECTION AND ACCEPTANCE OF THE PROJECT.

LEGEND

- SF — PROPOSED SILT FENCE, SEE DETAIL 1, SHEET G005
- [Patterned Box] PROPOSED SODDING, SEE SHEET G005
- [Solid Grey Box] PROPOSED ASPHALT PAVEMENT
- - - - - EXISTING TOP OF BANK (TOB)

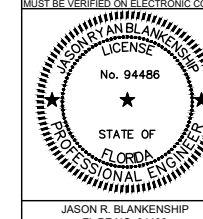


KEY MAP

ISSUED FOR CONSTRUCTION



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

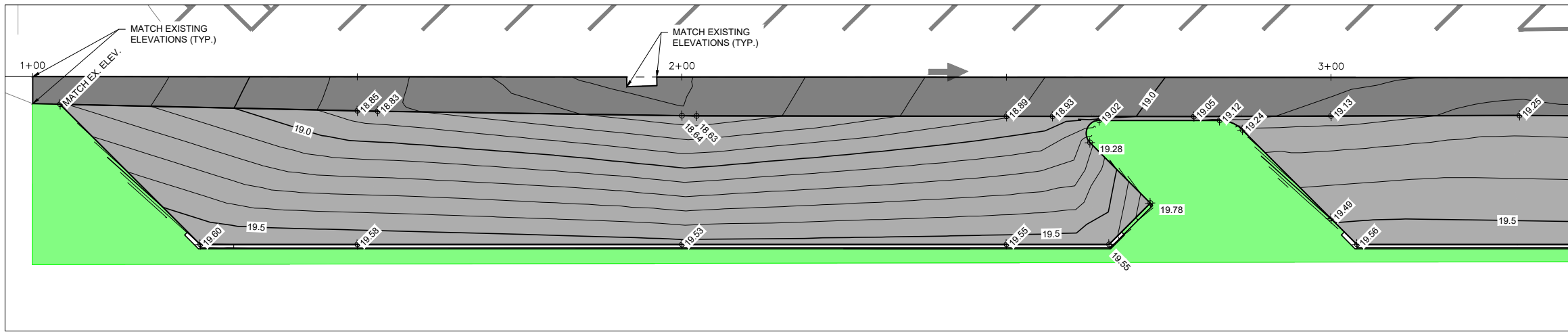
RS&H
1715 N. WILSON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
TEL: 813.289.1000
FAX: 813.289.1001



PROJECT NAME: VOLUME II: NORTH AIR CARGO (NAC) SERVICE ROAD RELOCATION AND APRON REHABILITATION
SHEET TITLE: EROSION AND SEDIMENTATION CONTROL PLAN (VOLUME II)

DESIGNED: SCS
DRAWN: SCB
CHECKED: MRB
HCAA NO.: #6350.18
JOB NO.: 1004-1880-047
DATE: MARCH 20, 2023

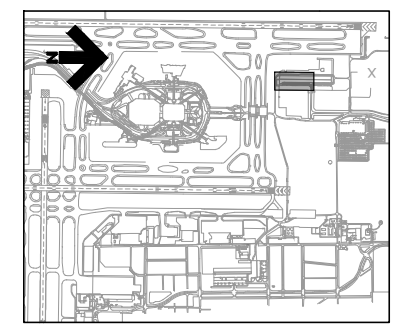
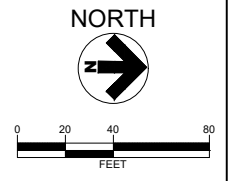
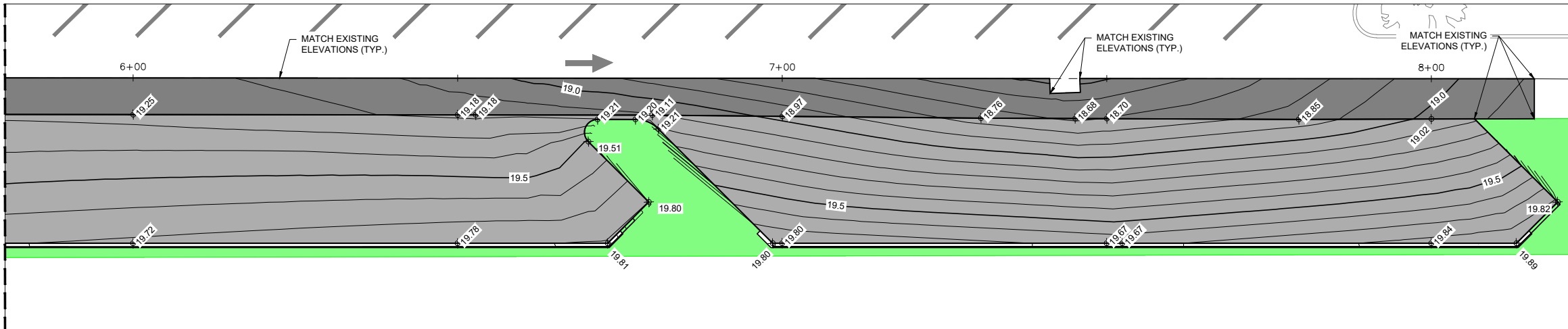
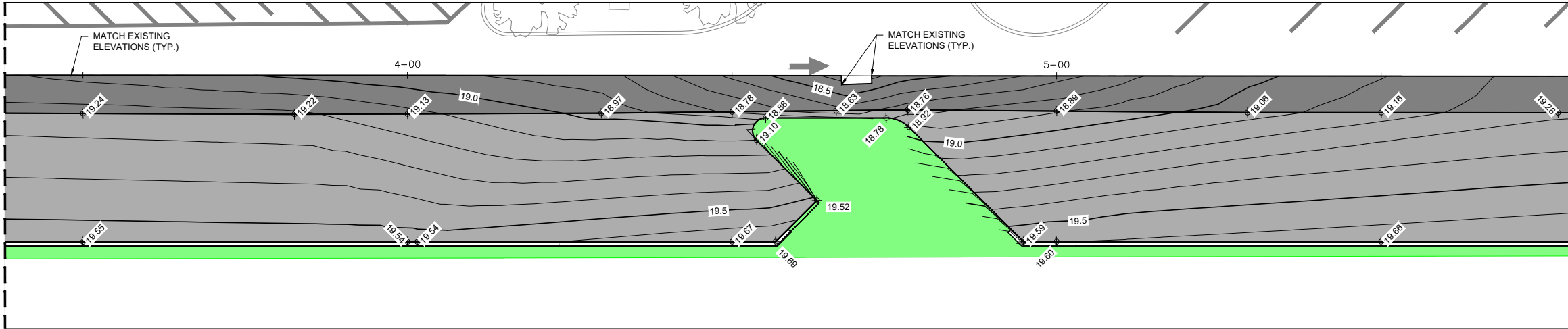
G205
SHEET NO.



LEGEND

- PROPOSED FULL DEPTH PARKING EXPANSION (DETAIL 5, SHEET C110)
- PROPOSED 2 IN ASPHALT OVERLAY (DETAIL 3, SHEET C110)
- EXISTING PAVEMENT EDGE
- EXISTING FENCE
- PROPOSED CONTOUR (0.1')
- FINISHED GRADE

- NOTES**
- SPOT ELEVATIONS ARE PROVIDED ONLY AS A SUPPLEMENT TO THE GEOMETRY AND PAVING PLANS. THE CONTRACTOR SHALL PAVE SUCH THAT THE PAVEMENT AREAS DRAIN AS DEPICTED IN THE GEOMETRY AND PAVING PLANS.
 - ALL ELEVATIONS PROVIDED ON THIS SHEET REPRESENT TOP OF PAVEMENT.
 - ALL PROPOSED PAVEMENT SHALL TIE INTO EXISTING GRADES AT ALL LOCATIONS SHOWN ON THE PLANS.
 - CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN THROUGHOUT THE DURATION OF CONSTRUCTION.



KEY MAP
ISSUED FOR CONSTRUCTION

THIS SHEET TO BE PRINTED IN COLOR

Sunshine State 811 One Call

THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
FL PE NO. 94486

DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1715 N. WASHINGTON BLVD., SUITE 600
TAMPA, FLORIDA 33607-5999
WWW.RSANDH.COM
FL ENGINEER LICENSE NO. EC0000801-LCC000010



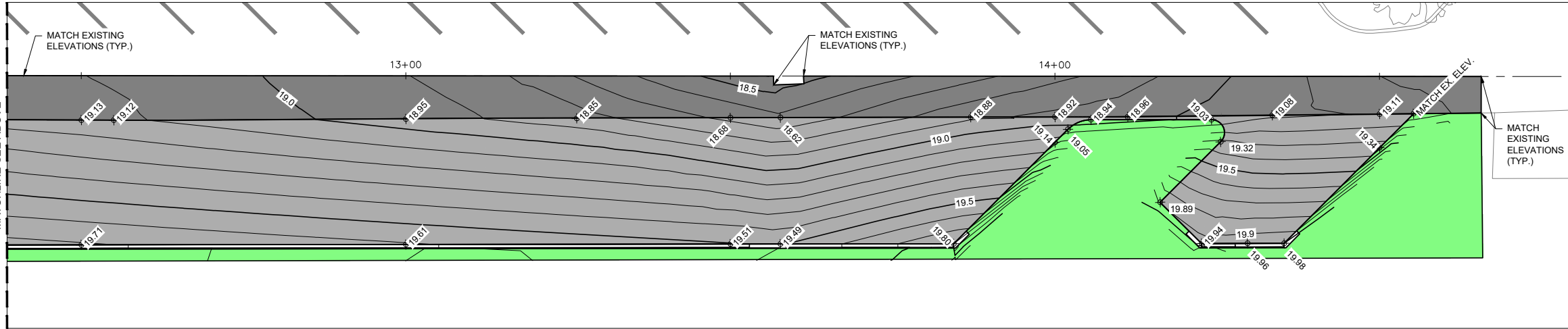
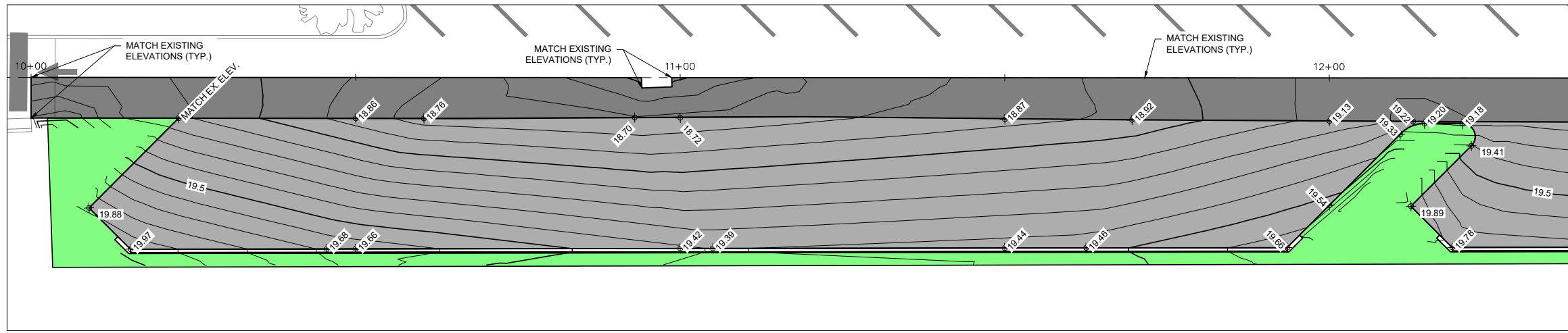
PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE: SPOT ELEVATION PLAN (SHEET 1 OF 2)

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRR
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C201

SHEET NO.:



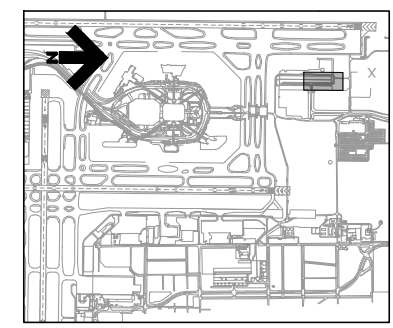
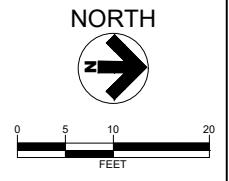
LEGEND

- PROPOSED FULL DEPTH PARKING EXPANSION (DETAIL 5, SHEET C110)
- PROPOSED 2 IN ASPHALT OVERLAY (DETAIL 3, SHEET C110)
- EXISTING PAVEMENT EDGE
- EXISTING FENCE
- PROPOSED CONTOUR (0.1')
- FINISHED GRADE

- NOTES**
1. SPOT ELEVATIONS ARE PROVIDED ONLY AS A SUPPLEMENT TO THE GEOMETRY AND PAVING PLANS. THE CONTRACTOR SHALL PAVE SUCH THAT THE PAVEMENT AREAS DRAIN AS DEPICTED IN THE GEOMETRY AND PAVING PLANS.
 2. ALL ELEVATIONS PROVIDED ON THIS SHEET REPRESENT TOP OF PAVEMENT.
 3. ALL PROPOSED PAVEMENT SHALL TIE INTO EXISTING GRADES AT ALL LOCATIONS SHOWN ON THE PLANS.
 4. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN THROUGHOUT THE DURATION OF CONSTRUCTION.

MATCHLINE SEE ABOVE

MATCHLINE SEE BELOW



KEY MAP
ISSUED FOR CONSTRUCTION

THIS SHEET TO BE PRINTED IN COLOR

THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
FL PE NO. 94486

DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

1715 N. WASHINGTON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3998
WWW.RSANDH.COM
TEL: 813.281.1000
FL E0000820 | LCC000010

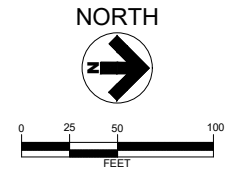
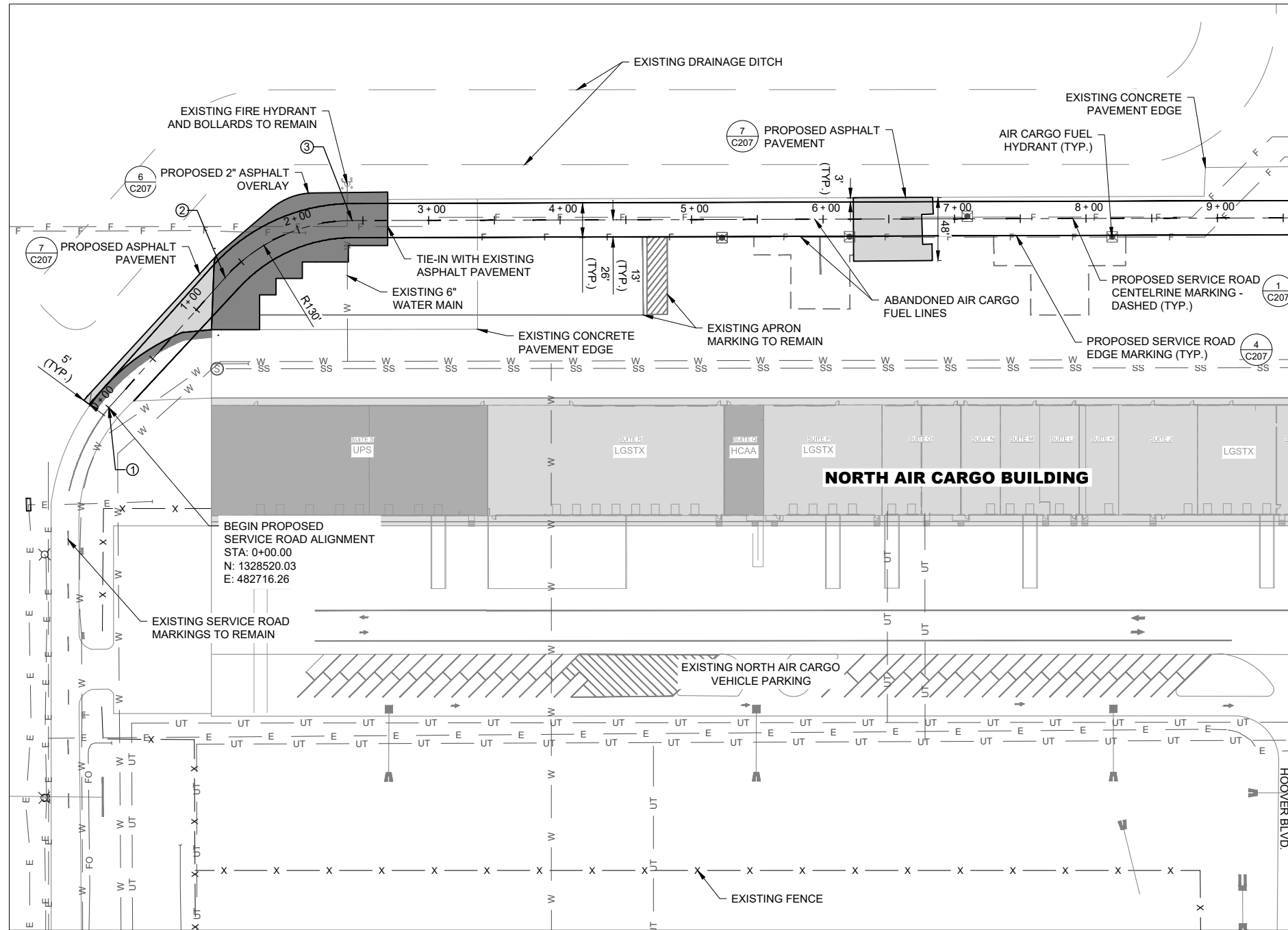
PROJECT NAME
VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE
SPOT ELEVATION PLAN (SHEET 2 OF 2)

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C202

SHEET NO.:



LEGEND

- PROPOSED FULL DEPTH ASPHALT PAVEMENT
- PROPOSED 2" ASPHALT OVERLAY
- EXISTING PAVEMENT EDGE
- EXISTING FENCE
- EXISTING ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING FUEL LINE
- EXISTING SANITARY SEWER LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING FIBER OPTICS LINE
- EXISTING PAVEMENT MARKINGS
- PROPOSED SERVICE ROAD ALIGNMENT
- PROPOSED SERVICE ROAD CENTERLINE MARKING
- PROPOSED SERVICE ROAD EDGE MARKING
- EXISTING LIGHT POLE
- HORIZONTAL CURVE DATA POINTS (SEE POINT TABLE)

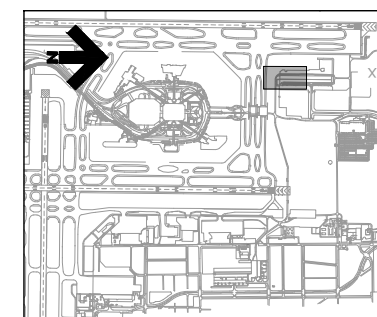
POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	STATION
1	BP	1328520.03	482716.26	0+00.00
2	PC	1328611.91	482620.40	1+32.00
3	PT	1328709.90	482580.42	2+41.78
4	PC	1329898.55	482618.34	14+31.07
5	PT	1329936.48	482642.81	14+77.80
6	PC	1329998.31	482747.70	15+99.56
7	PT	1330003.85	482768.80	16+21.66
8	EP	1330003.30	482797.01	16+50.00

NOTES

- SEE SHEET C207 FOR PAVEMENT TYPICAL SECTIONS AND PAVEMENT MARKING DETAILS.
- LIMITS OF CONSTRUCTION SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND APPROVED BY THE AUTHORITY.
- CONTRACTOR MUST MATCH EXISTING PAVEMENT ELEVATIONS AND GRADES AT ALL TIE IN LOCATIONS. THE CONTRACTOR MUST TIE IN WITH EXISTING.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EXISTING DRAINAGE CONDITIONS AT THE COMPLETION OF CONSTRUCTION. PONDING OF WATER FOLLOWING THE COMPLETION OF THE PROJECT WILL NOT BE PERMITTED.
- NORTHING AND EASTING INFORMATION PROVIDED IS APPROXIMATE. CONTRACTOR MUST STAKE OUT THE LIMITS OF WORK FOR REVIEW AND APPROVAL BY THE AUTHORITY PRIOR TO CONSTRUCTION.
- THE CONTRACTOR MUST NOTIFY THE AUTHORITY OF ANY SUBGRADE DEFICIENCIES PRIOR TO PLACING NEW BASE COURSE.

THERE ARE EXISTING UNDERGROUND UTILITIES IN THE PROJECT WORK AREA. THE ENGINEER HAS MADE EVERY EFFORT TO SHOW THEIR APPROXIMATE LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY UNDERGROUND UTILITY LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO CONSTRUCTION. ANY DAMAGE DONE TO ANY EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY UTILITY DAMAGED BY HIS ACTIONS WITH NO ADDITIONAL COMPENSATION.

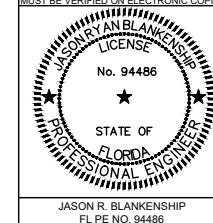


KEY MAP

ISSUED FOR CONSTRUCTION



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1715 N. WASHINGTON BLVD., SUITE 400
TAMPA, FLORIDA 33607-3999
www.rsandh.com
FL EIT 00000008
FL EIT 00000009
FL EIT 00000010



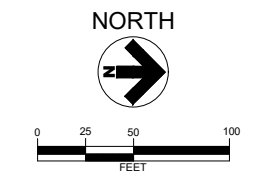
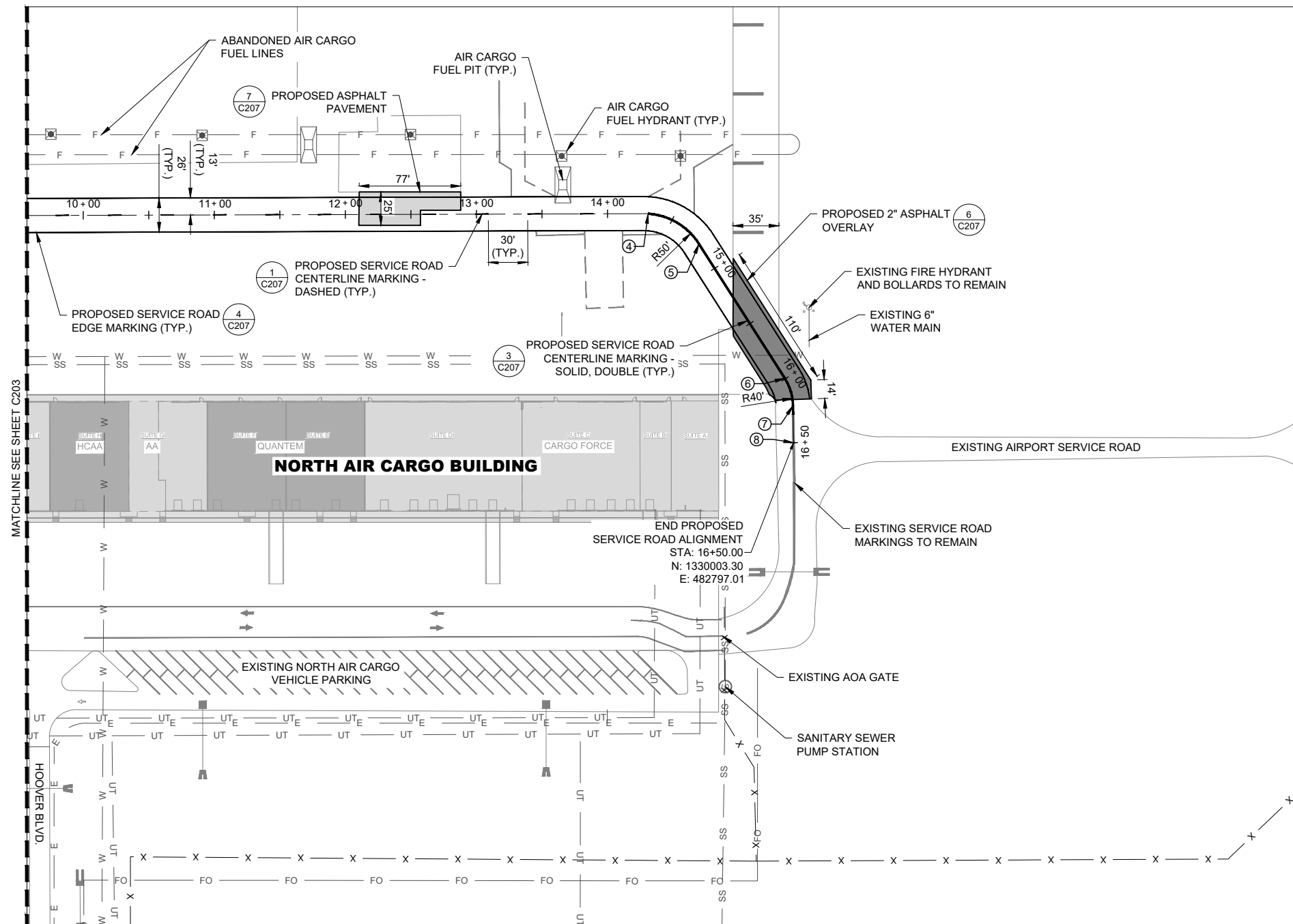
PROJECT NAME
VOLUME II: NORTH AIR CARGO (NAC) SERVICE ROAD RELOCATION AND APRON REHABILITATION

SHEET TITLE
SERVICE ROAD REPAIR PLAN (VOLUME II) (SHEET 1 OF 2)

DESIGNED:	SCS
DRAWN:	SCB
CHECKED:	MRB
HCAA NO.:	#6350 18
JOB NO.:	1004-1880-047
DATE:	MARCH 20, 2023

C203

SHEET NO.



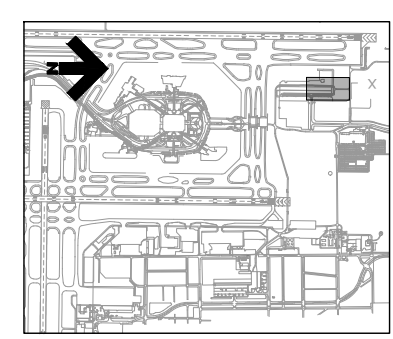
- LEGEND**
- PROPOSED FULL DEPTH ASPHALT PAVEMENT
 - PROPOSED 2" ASPHALT OVERLAY
 - — — — — EXISTING PAVEMENT EDGE
 - X — — — EXISTING FENCE
 - E — — — EXISTING ELECTRICAL LINE
 - W — — — EXISTING WATER LINE
 - F — — — EXISTING FUEL LINE
 - SS — — — EXISTING SANITARY SEWER LINE
 - UT — — — EXISTING UNDERGROUND TELEPHONE LINE
 - FO — — — EXISTING FIBER OPTICS LINE
 - — — — — EXISTING PAVEMENT MARKINGS
 - - - - - PROPOSED SERVICE ROAD ALIGNMENT
 - - - - - PROPOSED SERVICE ROAD CENTERLINE MARKING
 - - - - - PROPOSED SERVICE ROAD EDGE MARKING
 - ⊗ EXISTING LIGHT POLE
 - ⊗ HORIZONTAL CURVE DATA POINTS (SEE POINT TABLE)

POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	STATION
1	BP	1328520.03	482716.26	0+00.00
2	PC	1328611.91	482620.40	1+32.00
3	PT	1328709.90	482580.42	2+41.78
4	PC	1329898.55	482618.34	14+31.07
5	PT	1329936.48	482642.81	14+77.80
6	PC	1329998.31	482747.70	15+99.56
7	PT	1330003.85	482768.80	16+21.66
8	EP	1330003.30	482797.01	16+50.00

- NOTES**
- SEE SHEET C207 FOR PAVEMENT TYPICAL SECTIONS AND PAVEMENT MARKING DETAILS.
 - LIMITS OF CONSTRUCTION SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND APPROVED BY THE AUTHORITY.
 - CONTRACTOR MUST MATCH EXISTING PAVEMENT ELEVATIONS AND GRADES AT ALL TIE IN LOCATIONS. THE CONTRACTOR MUST TIE IN WITH EXISTING.
 - CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EXISTING DRAINAGE CONDITIONS AT THE COMPLETION OF CONSTRUCTION. PONDING OF WATER FOLLOWING THE COMPLETION OF THE PROJECT WILL NOT BE PERMITTED.
 - NORTHING AND EASTING INFORMATION PROVIDED IS APPROXIMATE. CONTRACTOR MUST STAKE OUT THE LIMITS OF WORK FOR REVIEW AND APPROVAL BY THE AUTHORITY PRIOR TO CONSTRUCTION.
 - THE CONTRACTOR MUST NOTIFY THE AUTHORITY OF ANY SUBGRADE DEFICIENCIES PRIOR TO PLACING NEW BASE COURSE.

THERE ARE EXISTING UNDERGROUND UTILITIES IN THE PROJECT WORK AREA. THE ENGINEER HAS MADE EVERY EFFORT TO SHOW THEIR APPROXIMATE LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY UNDERGROUND UTILITY LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO CONSTRUCTION. ANY DAMAGE DONE TO ANY EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY UTILITY DAMAGED BY HIS ACTIONS WITH NO ADDITIONAL COMPENSATION.



Sunshine State 811 One Call

THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
 LICENSE
 No. 94486
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

JASON R. BLANKENSHIP
 FL PE NO. 94486

BR

REVISIONS

DATE

HILLSBOROUGH COUNTY AVIATION AUTHORITY
 TAMPA, FLORIDA

RS&H

1715 N. WILSON BLVD., SUITE 400
 TAMPA, FLORIDA 33607-3999
 WWW.RSANDH.COM
 FL ENGINEERING LICENSE NO. EC0000820

Tampa International Airport

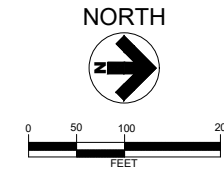
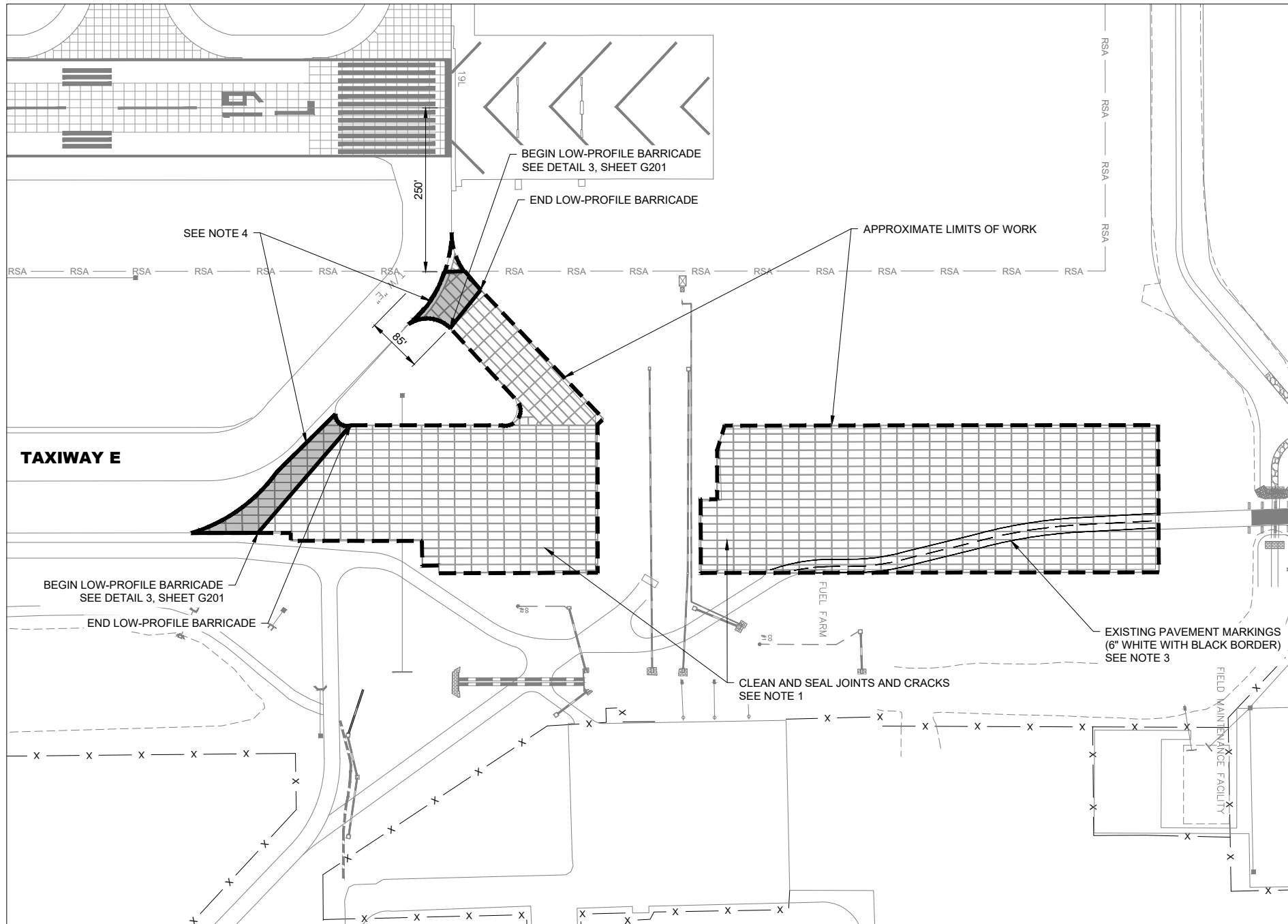
PROJECT NAME
VOLUME II: NORTH AIR CARGO (NAC) SERVICE ROAD RELOCATION AND APRON REHABILITATION

SHEET TITLE
SERVICE ROAD REPAIR PLAN (VOLUME II) (SHEET 2 OF 2)

DESIGNED: SCS
 DRAWN: NRL
 CHECKED: DAG
 HCAA NO.: #6350 18
 JOB NO.: 1004-1880-047
 DATE: MARCH 20, 2023

C204

SHEET NO.

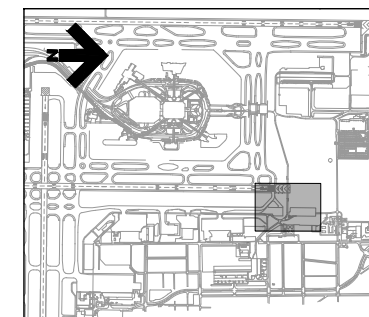


LEGEND

- APPROXIMATE LIMITS OF WORK
- EXISTING FENCE
- PROPOSED CONCRETE JOINT REHABILITATION
- TAXIWAY E CLOSURE REQUIRED DURING WORK IN THIS AREA

NOTES

1. JOINTS AND CRACKS TO BE CLEANED AND SEALED. SEE SHEETS C111-C112 AND C207 FOR DETAILS.
2. CONTRACTOR SHALL SAWCUT INTO EXISTING PAVEMENT AT ALL PROPOSED JOINT LINES IN ORDER TO OBTAIN A CLEAN JOINT SURFACE. SEE DETAIL 10, SHEET C112.
3. ALL SERVICE ROAD MARKINGS PASSING THROUGH LIMITS OF WORK SHOWN ON THIS SHEET SHALL BE RE-STRIPED.
4. WORK ON THIS SHEET WITHIN TAXIWAY OBJECT FREE AREA (TOFA) OF TAXIWAY E AND RUNWAY SAFETY AREA (RSA) OF 19-L MUST BE COORDINATED WITH THE AIRPORT A MINIMUM LEAD TIME OF 10 CALENDAR DAYS.

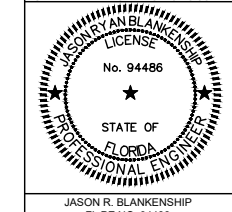


KEY MAP

ISSUED FOR CONSTRUCTION



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DATE	REVISIONS	BY

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA



PROJECT NAME
**VOLUME I: NORTH AIR CARGO (NAC) PARKING
EXPANSION AND TRUCK COURT REPAIRS**

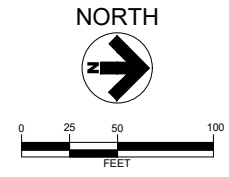
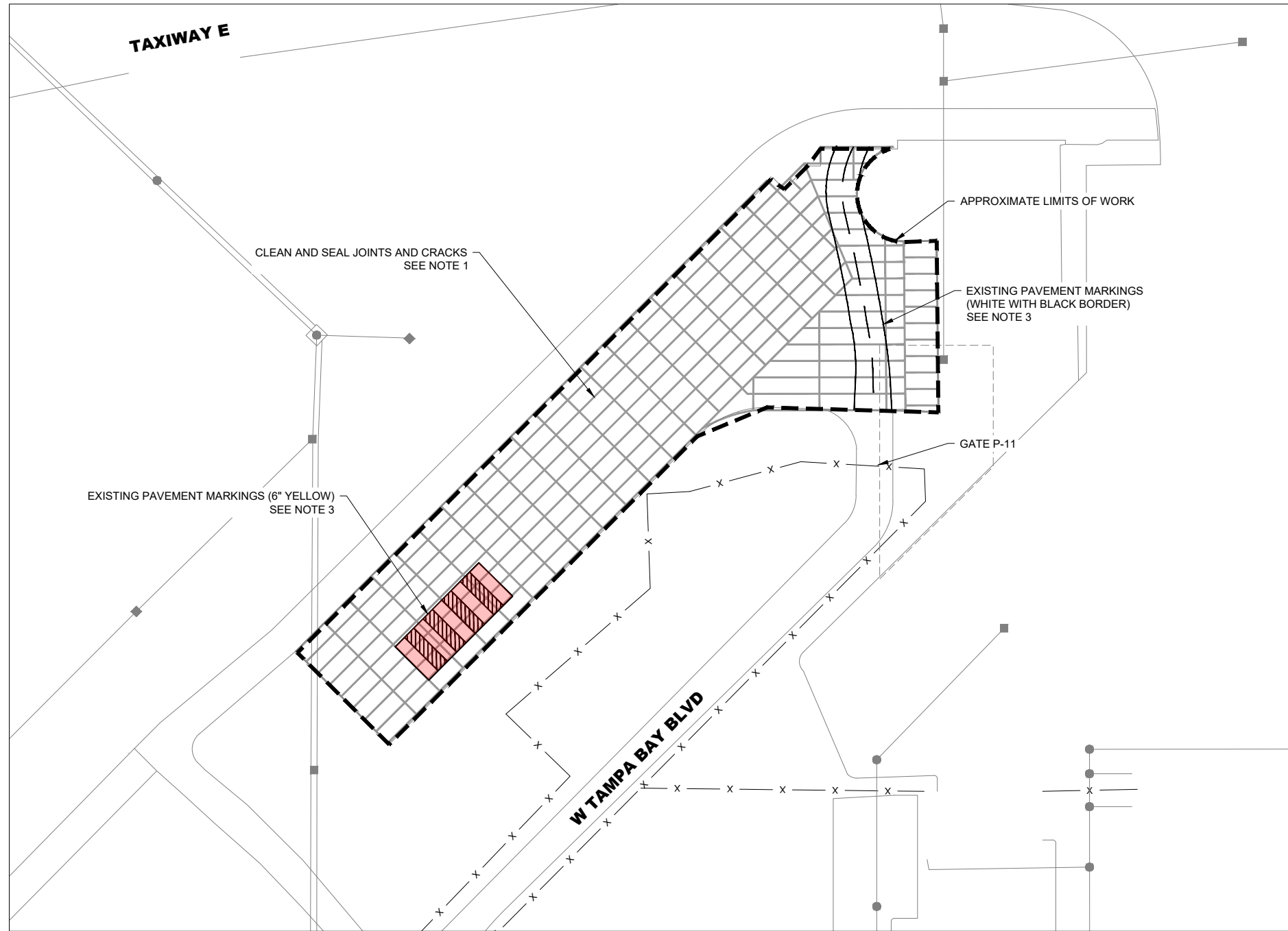
SHEET TITLE
**APRON REHABILITATION PLAN
(SHEET 1 OF 2)**

DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C205

SHEET NO.

JASON R. BLANKENSHIP
FL PE NO. 94486

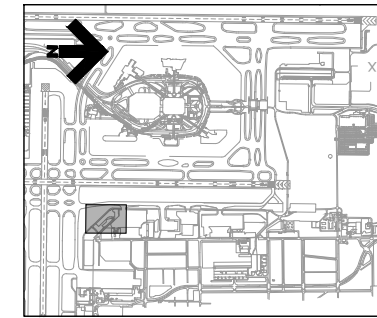


LEGEND

- APPROXIMATE LIMITS OF WORK
- EXISTING FENCE
- PROPOSED CONCRETE JOINT REHABILITATION
- LIMITS OF PETROLEUM RESISTANT JOINT SEALANT

NOTES

1. JOINTS AND CRACKS TO BE CLEANED AND SEALED. SEE SHEETS C111-C112 AND C207 FOR DETAILS.
2. CONTRACTOR SHALL SAWCUT INTO EXISTING PAVEMENT AT ALL PROPOSED JOINT LINES IN ORDER TO OBTAIN A CLEAN JOINT SURFACE. SEE DETAIL 10, SHEET C112.
3. ALL SERVICE ROAD MARKINGS PASSING THROUGH LIMITS OF WORK SHOWN ON THIS SHEET SHALL BE RE-STRIPED.



THIS SHEET TO BE PRINTED IN COLOR



THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

JASON R. BLANKENSHIP
FL PE NO. 94486

DATE	REVISIONS	BY

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H
1711 N. WASHINGTON BLVD., SUITE 400
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL EIT 00078201
FL EIT 00078201

Tampa International Airport

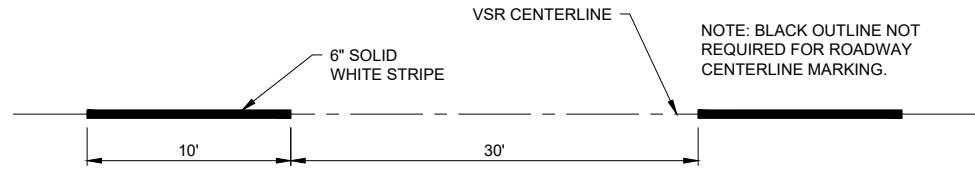
PROJECT NAME: VOLUME I: NORTH AIR CARGO (NAC) PARKING EXPANSION AND TRUCK COURT REPAIRS

SHEET TITLE: APRON REHABILITATION PLAN (SHEET 2 OF 2)

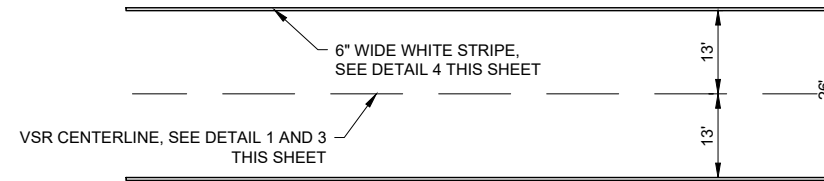
DESIGNED: CJT
DRAWN: JDH
CHECKED: MRB
HCAA NO.: 6530 18
JOB NO.: 204-1880-047
DATE: MARCH 20, 2023

C206

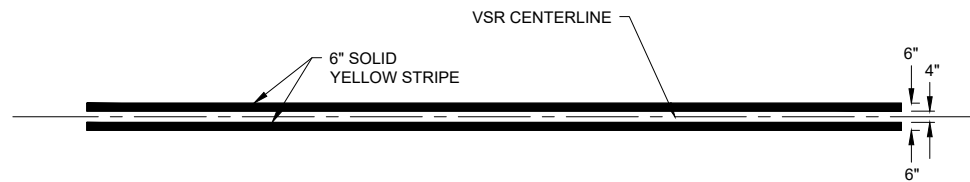
SHEET NO.:



1 **SERVICE ROAD CENTERLINE MARKING - DASHED**
C207



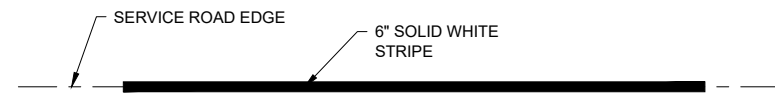
2 **VEHICLE SERVICE ROAD (VSR) MARKINGS**
C207



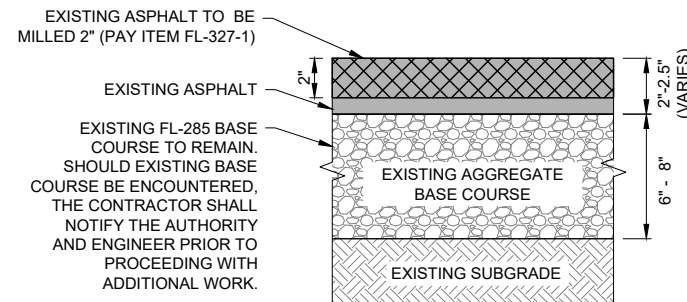
3 **SERVICE ROAD CENTERLINE MARKING - SOLID, DOUBLE**
C207

PAVEMENT MARKING NOTES

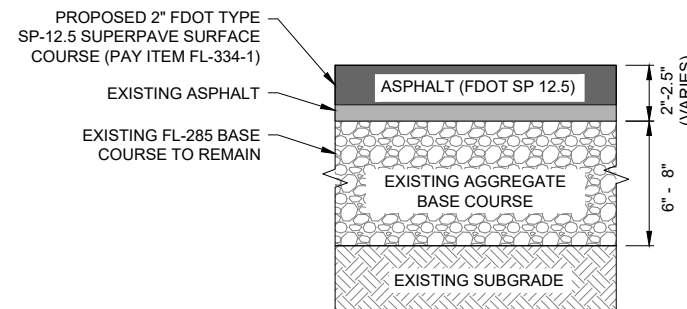
1. ALL PAVEMENT MARKING SHALL BE IN CONFORMANCE WITH SPECIFICATION FDOT SECTION 710, LATEST EDITION.
2. MECHANICAL SPRAYING OF MARKINGS IS REQUIRED. HAND SPRAYING OF MARKINGS IS NOT ALLOWED.
3. ALL PAVEMENT MARKINGS SHALL MATCH EXISTING MARKINGS AT THE LIMITS OF CONSTRUCTION. SHOULD EXISTING MARKING DIFFER FROM THE DETAILS SHOWN ON THIS SHEET, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE AUTHORITY.
4. ALL DIMENSIONS SHOWN ARE TO EDGE OF MARKING FOR EACH COLOR.
5. MARKING REMOVAL AND INSTALLATION LIMITS SHALL BE LAID OUT BY A FLORIDA LICENSED SURVEYOR.



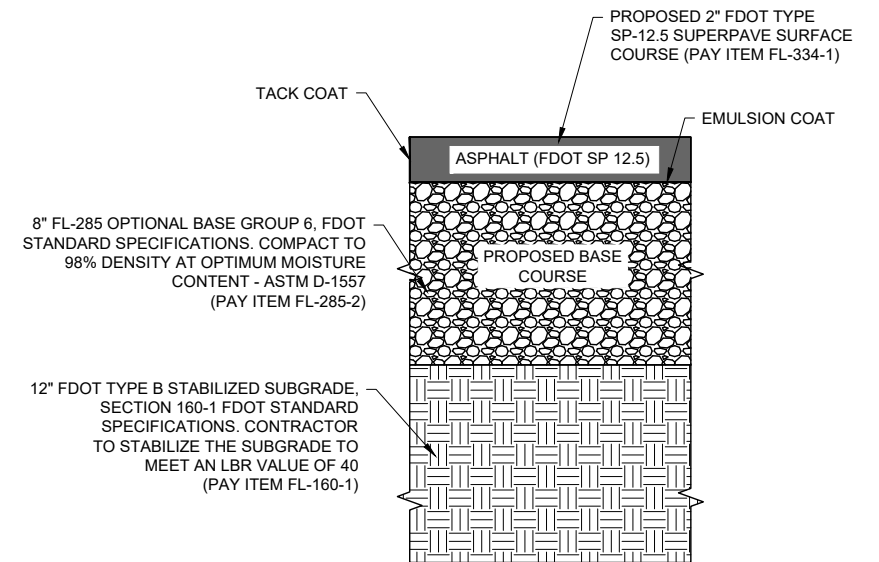
4 **SERVICE ROAD EDGE MARKING**
C207



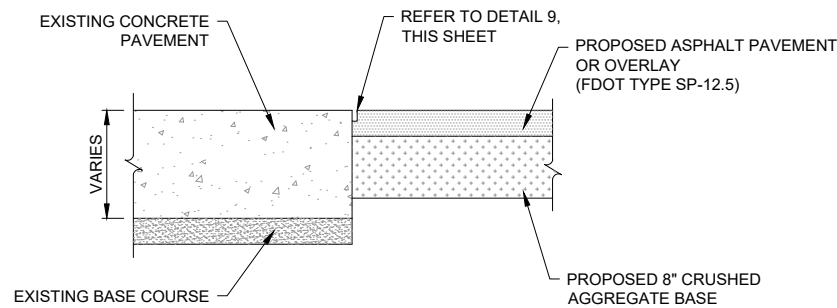
5 **EXISTING PAVEMENT SECTION - MILLED**
C207



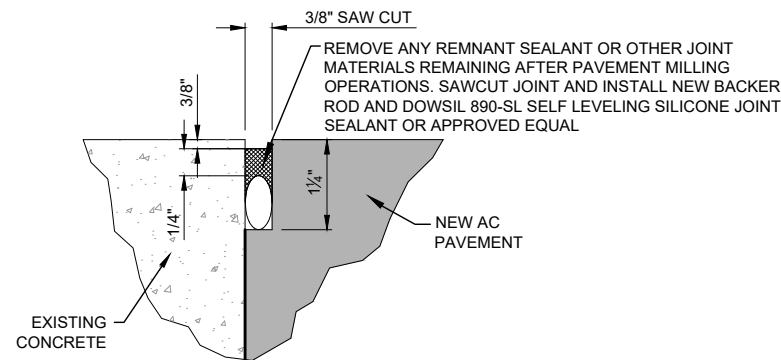
6 **PROPOSED OVERLAY PAVEMENT SECTION**
C207



7 **PROPOSED PAVEMENT SECTION**
C207



8 **PCC-AC JOINT DETAIL**
C207



9 **PCC-AC JOINT SEAL DETAIL**
C207

DATE	REVISIONS	BY

HILLSBOROUGH COUNTY
AVIATION AUTHORITY
TAMPA, FLORIDA

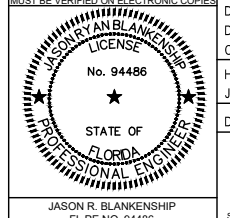


PROJECT NAME
VOLUME II: NORTH AIR CARGO (NAC) SERVICE ROAD
RELOCATION AND APRON REHABILITATION

SHEET TITLE
PAVEMENT AND PAVEMENT MARKING
SECTION AND DETAILS

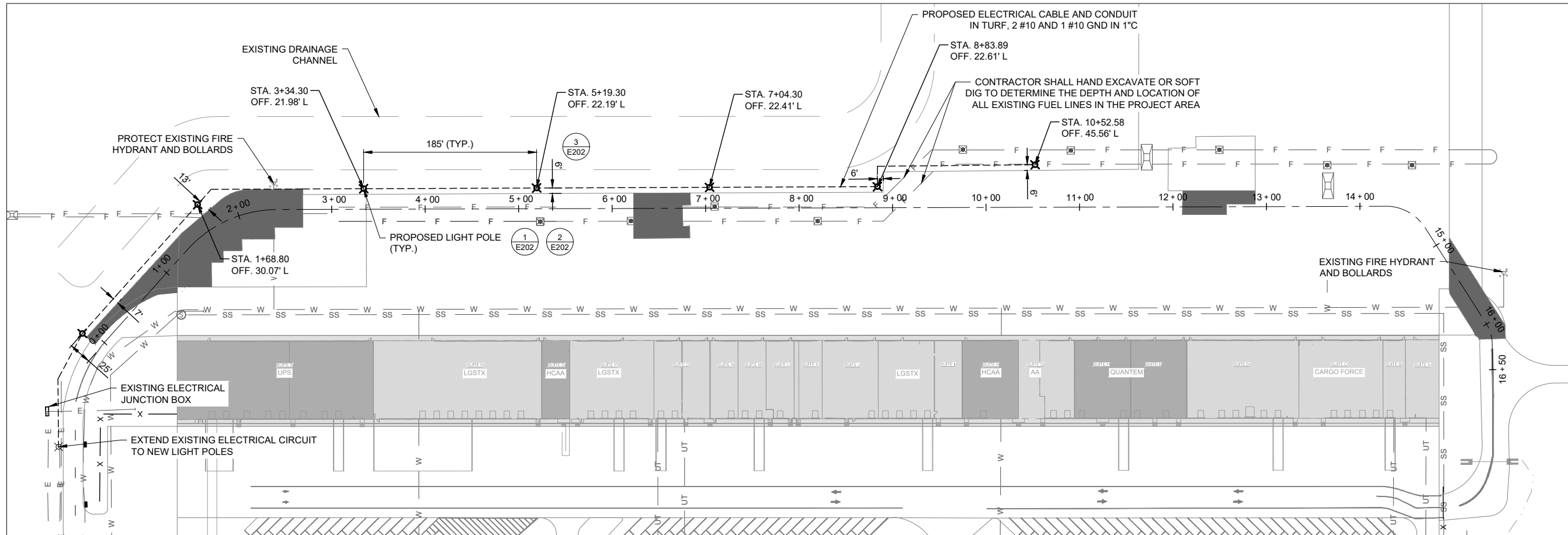


THIS ITEM HAS BEEN SIGNED AND SEALED BY JASON R. BLANKENSHIP ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



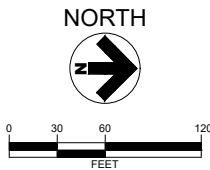
DESIGNED: SCS
DRAWN: NRL
CHECKED: DAG
HCAA NO.: #6350.18
JOB NO.: 1004-1880-047
DATE: MARCH 20, 2023

C207

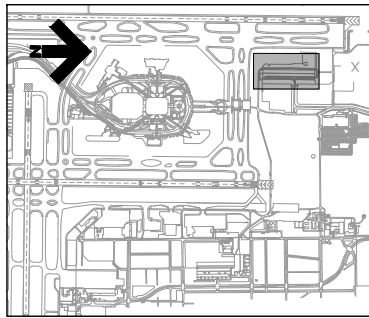


LEGEND

- PROPOSED ASPHALT PAVEMENT
- PROPOSED SERVICE ROAD ALIGNMENT
- EXISTING PAVEMENT EDGE
- PROPOSED SERVICE ROAD CENTERLINE MARKING
- EXISTING FENCE
- EXISTING ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING FUEL LINE
- EXISTING SANITARY SEWER LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING FIBER OPTICS LINE
- EXISTING PAVEMENT MARKINGS
- EXISTING LIGHT POLE
- PROPOSED LIGHT POLE
- PROPOSED ELECTRICAL CONDUIT AND CABLE. 2-#10 & 1-#10 GND IN 1" C



THERE ARE EXISTING UNDERGROUND UTILITIES IN THE PROJECT WORK AREA. THE ENGINEER HAS MADE EVERY EFFORT TO SHOW THEIR APPROXIMATE LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY UNDERGROUND UTILITY LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO CONSTRUCTION. ANY DAMAGE DONE TO ANY EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY UTILITY DAMAGED BY HIS ACTIONS WITH NO ADDITIONAL COMPENSATION.

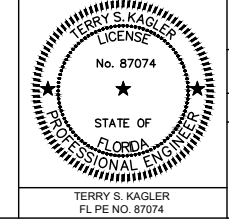


KEY MAP

ISSUED FOR CONSTRUCTION



THIS ITEM HAS BEEN SIGNED AND SEALED BY TERRY S. KAGLER ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DATE	REVISIONS

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA

RS&H

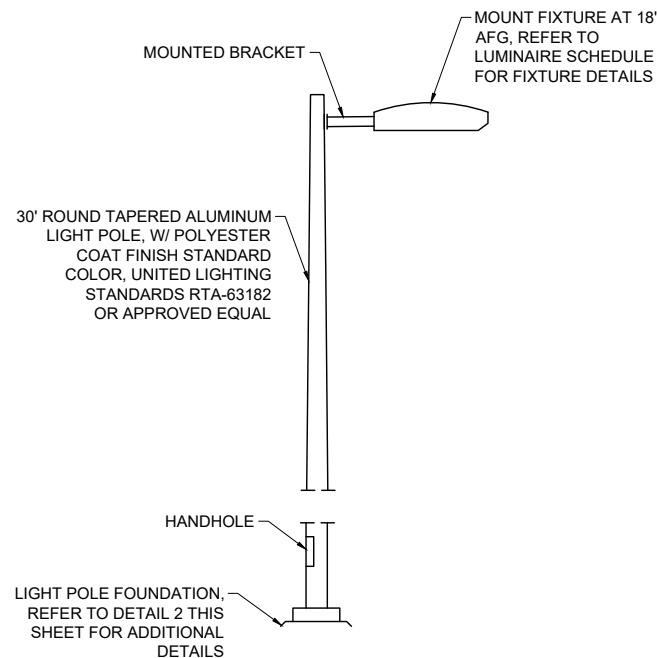
1715 N. WASHINGTON BLVD., SUITE 400
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL. LICENSE NO. EC 0000820
EIN: 8000820



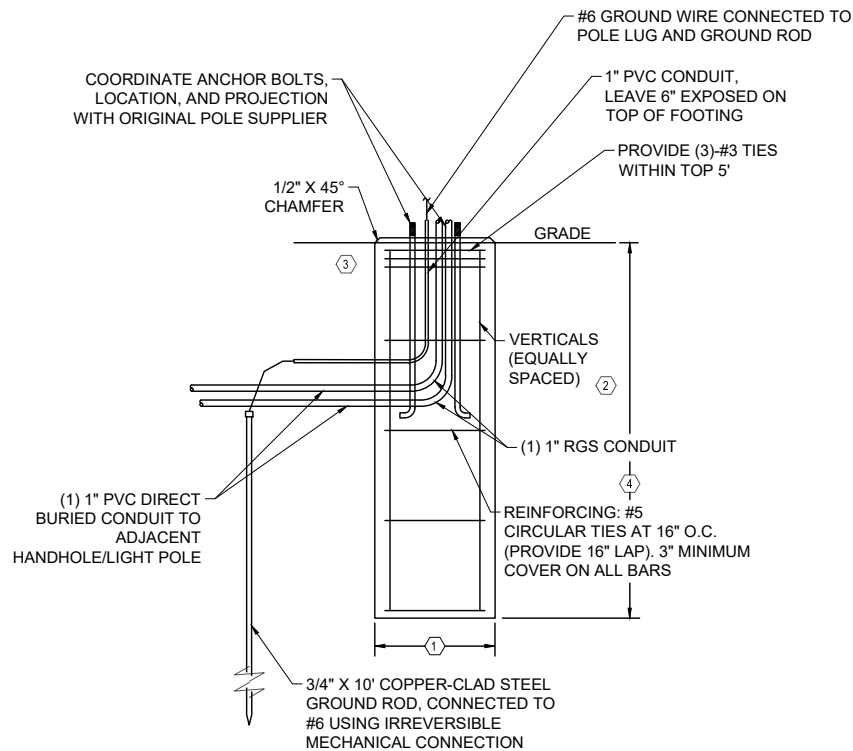
PROJECT NAME
VOLUME II: NORTH AIR CARGO (NAC) SERVICE ROAD RELOCATION AND APRON REHABILITATION

SHEET TITLE
ELECTRICAL NOTES AND DETAILS

DESIGNED:	SCS
DRAWN:	SCB
CHECKED:	MRB
HCAA NO.:	#6350 18
JOB NO.:	1004-1880-047
DATE:	MARCH 20, 2023
E201	
SHEET NO.	



1 LIGHT POLE
E202



KEY NOTES	①	②	③	④
30' POLES	18" DIA	(4)#5'S	TURF	6'-0"

FOUNDATION NOTES:

- ALL CONCRETE MUST BE 4000 PSI (f_c) AT 28 DAYS WITH A SLUMP OF 4"±1".
- ALL REINFORCING MUST BE ASTM A615 GR. 60.
- CONSTRUCTION OF LIGHT POLE FOUNDATION MAY REQUIRE DEWATERING. ANY DEWATERING MUST BE CONSIDERED INCIDENTAL TO THE LIGHT POLE FOUNDATION CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE MADE FOR DEWATERING.

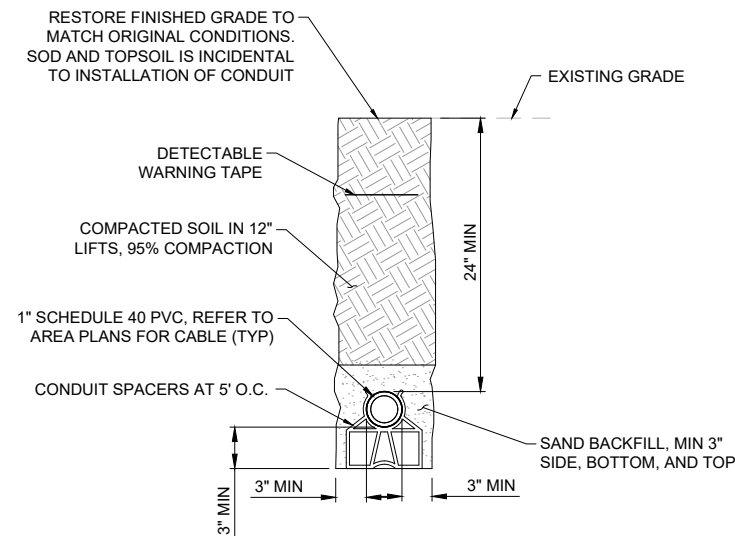
2 LIGHT POLE FOUNDATION
E202

LUMINAIRE SCHEDULE

DESCRIPTION	DATA				BASIS OF DESIGN		
	LUMENS	TYPE	COLOR	VOLTAGE	MANUFACTURER	MODEL OR SERIES	CATALOG NUMBER
HIGH LUMEN LED AREA LUMINAIRE, TYPE 3 DISTRIBUTION	20,000 L	LED	4000K	UNV	SIGNIFY OR APPROVED EQUAL	GARDCO ECOFORM OR APPROVED EQUAL	ECF-S(SEE NOTE 1)

LUMINAIRE SCHEDULE GENERAL NOTES

- THE MODEL/SERIAL NUMBER INDICATES THE TYPE OF THE FIXTURE AND DOES NOT INCLUDE ALL FEATURES REQUIRED. THE DESCRIPTION COLUMN INDICATES THE REQUIRED FEATURES AND FINISHES. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE LUMINAIRES INDICATING ALL REQUIRED FEATURES AS SHOWN ON THE DRAWINGS AND IN THE SPECIFICATIONS.
- THE LIGHTING FIXTURE SCHEDULE AND CATALOG NUMBERS INDICATE MAJOR REQUIREMENTS FOR THE LIGHTING FIXTURES. WHETHER SPECIFIED BY THE CATALOG NUMBERS OR NOT, THE CONTRACTOR SHALL PROVIDE ALL COMPONENTS, HARDWARE AND RELATED ITEMS TO PROVIDE A COMPLETE LIGHTING FIXTURE SYSTEM TO MEET THE REQUIREMENTS AS SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS.
- APPROVED EQUAL MANUFACTURERS:
 - PROVIDE A PRODUCT EQUAL IN PERFORMANCE AND QUALITY, INCLUDING PHYSICAL ATTRIBUTES, FROM APPROVED MANUFACTURER'S LISTED IN THE FIXTURE SCHEDULE.
 - A PRODUCT FROM MANUFACTURERS NOT LISTED AS APPROVED EQUAL IN THE SCHEDULE MAY BE SUBMITTED FOR APPROVAL DURING THE SHOP DRAWING PHASE, PROVIDED THE MANUFACTURER CAN PROVIDE A FIXTURE WHICH MEETS THE QUALITY AND PERFORMANCE REQUIREMENTS. THE A/E'S DETERMINATION FOR THE APPROVAL SHALL GOVERN. PROVIDE COMPLETE DETAIL OF THE PROPOSED EQUAL FIXTURE WITH A COMPARISON TO THE SPECIFIED FIXTURE INCLUDING COMPUTER GENERATED POINT BY POINT FOOT CANDLE CALCULATIONS, SAMPLES AND ANY ADDITIONAL INFORMATION REQUESTED BY THE A/E. PROTOTYPE PRODUCTS SHALL NOT BE SUBMITTED FOR APPROVAL AS EQUAL TO SPECIFIED PRODUCTS.
- ALL FIXTURES REQUIRE UL, CUL, OR ETL LISTING.



CONDUIT NOTES:

- INSTALL A DETECTABLE UNDERGROUND WARNING TAPE ABOVE ALL CONDUITS. TAPE SHALL BE A 5MIL, THREE-LAYER SANDWICH WITH A LAYER OF FOIL ENCASED BETWEEN TWO LAYERS OF PLASTIC. TAPE SHALL BE 6" WIDE RED/SILVER W/BLACK LETTERS INDICATING "CAUTION BURIED ELECTRICAL LINE BELOW". WARNING TAPE IS INCIDENTAL TO PAY ITEM 260543-1.

3 ELECTRICAL CONDUIT IN TURF
E202

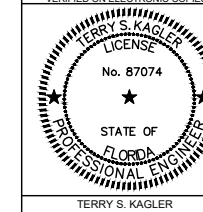
GENERAL NOTES

- ALL ELECTRICAL WORK MUST BE COMPLETED IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE (2020), THE NATIONAL ELECTRICAL SAFETY CODE, FAA ADVISORY CIRCULARS AND ORDERS, APPLICABLE PROJECT SPECIFICATIONS SECTIONS, AND APPLICABLE LOCAL BUILDING CODES, LAWS AND ORDINANCES.
- THE CONTRACTOR MUST OBTAIN AND PAY FOR ALL REQUIRED PERMITS, LICENSES, INSPECTIONS, FEES AND APPROVALS.
- THE CONTRACTOR MUST PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT TO REMOVE, RELOCATE, MODIFY AND INSTALL THE ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS. ITEMS NOT SHOWN BUT NECESSARY FOR COMPLETION OF THE WORK SHALL BE INCLUDED.
- ALL ITEMS TO BE PROVIDED BY THE CONTRACTOR MUST BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE. NEW MATERIALS SHALL BE U.L. LISTED.
- THE LOCATIONS OF UTILITIES, DUCT BANKS AND CONDUITS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST NOT BE SCALED FOR EXACT LOCATIONS. NOT ALL UTILITIES MAY BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE APPROPRIATE UTILITY/AGENCY PRIOR TO STARTING WORK FOR THE LOCATION OF EXISTING UTILITIES AND TO ALLOW THEM TIME TO PROPERLY LOCATE ALL UTILITIES. ANY INTERRUPTION OF AN EXISTING SYSTEM OR UTILITY SERVICE MUST BE COORDINATED AND APPROVED BY THE AUTHORITY, AGENCY OR UTILITY HAVING JURISDICTION.
- ALL EXISTING SYSTEMS AND UTILITIES TO REMAIN MUST BE PROTECTED FROM DAMAGE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGED SYSTEM OR UTILITY AND MUST REPLACE OR MAKE REPAIRS IMMEDIATELY, AT THEIR OWN EXPENSE, IN ACCORDANCE WITH THE AUTHORITY, AGENCY OR UTILITY HAVING JURISDICTION. DAMAGED SYSTEMS OR UTILITIES MUST BE IMMEDIATELY REPORTED TO THE AUTHORITY.
- THE CONTRACTOR MUST UTILIZE A LOCATE SERVICE AS WELL AS HAVE A CABLE TRACER AVAILABLE TO LOCATE THE EXISTING CABLES. ALL EXCAVATION WITHIN FOUR FEET OF ANY UNDERGROUND UTILITY TO REMAIN MUST BE PERFORMED BY HAND DIGGING METHODS.
- THE IDENTITY AND ROUTING OF ALL CABLES SHOWN ON THE PLANS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCY MUST BE BROUGHT TO THE ATTENTION OF THE EOR AND RECORDED IN THE AS-BUILT DRAWINGS TO PROVIDE AN ACCURATE RECORD OF CONDITIONS. THESE PLANS DO NOT PURPORT TO SHOW ALL EXISTING CABLES AND CONCEALED UTILITIES WHICH WILL REQUIRE STAKE OUT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY EXISTING CIRCUIT ROUTING PRIOR TO COMMENCING WORK.
- THE CONTRACTOR MUST COMPLY WITH THE AIRPORT MAINTENANCE "LOCK-OUT/TAG-OUT" PROCEDURES AND NFPA 70E.
- FOR EQUIPMENT INSTALLED UNDER THIS CONTRACT, THE CONTRACTOR MUST OBTAIN THE EXACT LOCATION VIA SURVEY AND BE APPROVED BY THE AUTHORITY PRIOR TO INSTALLATION.
- CONTRACTOR MUST VERIFY LOCATION OF ALL PROPOSED ELECTRICAL STRUCTURES AND BOLLARD AND NOTIFY THE AUTHORITY OF ANY CONFLICTS PRIOR TO INSTALLATION.

ISSUED FOR CONSTRUCTION



THIS ITEM HAS BEEN SIGNED AND SEALED BY TERRY S. KAGLER ON DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.



DESIGNED: _____ SCS
DRAWN: _____ NRL
CHECKED: _____ DAG
HCAA NO.: #6350.18
JOB NO.: 1004-1880-047
DATE: MARCH 20, 2023

E202

SHEET NO.

HILLSBOROUGH COUNTY AVIATION AUTHORITY
TAMPA, FLORIDA
RS&H
1715 N. WASHINGTON BLVD., SUITE 600
TAMPA, FLORIDA 33607-3999
WWW.RSANDH.COM
FL EIT 00008201
EIT 00008201, LCC0008201

Tampa International Airport

PROJECT NAME: VOLUME II: NORTH AIR CARGO (NAC) SERVICE ROAD RELOCATION AND APRON REHABILITATION
SHEET TITLE: ELECTRICAL NOTES AND DETAILS