



(BID SET)

HILLSBOROUGH COUNTY
AVIATION AUTHORITY

PROJECT MANUAL

(Containing Bidding and Contract Requirements, and Specifications)

FOR

**Short Term Parking Garage Level 8
Rehabilitation**

AUTHORITY PROJECT NUMBER 6120 17

TAMPA INTERNATIONAL AIRPORT
TAMPA, FLORIDA

Prepared By: Procurement Department

SOLICITATION NUMBER: 17-411-817
ISSUE DATE: August 9, 2017



Hillsborough County Aviation Authority
Solicitation Addendum

Addendum No.: 1

Solicitation No.: 17-411-817

Project No.: 6120 17

Solicitation Title: Short Term Parking Garage Level 8 Rehabilitation

Addendum Date: September 27, 2017

Procurement Agent: Joe Benjamin

NOTE: The due date for submission of the response remains on **October 4, 2017 by 2:00 p.m.**

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

Add:

Add the following to DRAWING G-004, SAFETY NOTES, No. 7:

- A. Contractor to submit a formal shop drawing including the following information: truck cut sheets, equipment cut sheets, and anticipated maximum material loads. Vehicle and equipment cut sheets shall include weights.
- B. Contractor to provide a minimum one week notice prior to each delivery to the Authority. Additionally, deliveries shall be included in the Contractor's two week look ahead schedule at each OAC meeting.
- C. Contractor to maintain a log of each delivery including the following information: date, time, weight, and contents of delivery.

Add:

Add the following to DRAWING G-005, NOTES, No. 4:

Delay in project completion date due to black-out time shall be at no increase in payment to the Contractor.

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

Short Term Parking Garage Level 8 Rehabilitation

Authority Project No. 6120 17

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 - 17
00300	BID FORM.....	1 - 6
00340	BID SCHEDULE.....	1 - 4
00350	BID AFFIDAVIT	1
00400-1	BID BOND	1
00400-2	SURETY BOND AFFIDAVIT	1
00417	WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE ASSURANCE AND PARTICIPATION	1 - 6
00418	CERTIFICATE OF NON-SEGREGATED FACILITIES.....	1
00420	BIDDER'S GENERAL BUSINESS INFORMATION	1 - 6
00421	SCRUTINIZED COMPANY CERTIFICATION.....	1
00422	E-VERIFY CERTIFICATION.....	1
00423	NON-COLLUSION CERTIFICATE.....	1
00430	SUBCONTRACTORS LIST	1 - 4
00440	BIDDER'S SELECTION OF PAYMENT METHOD.....	1 - 2
00500	AWARD OF CONTRACT AND EXECUTION OF CONTRACT BONDS	1 - 3
00510	CONTRACT.....	1 - 10
00610	COMMON LAW PERFORMANCE BOND	1 - 2
00620	STATUTORY PAYMENT BOND SURETY PAYMENT AND PERFORMANCE BOND AFFIDAVIT	1 - 3

TABLE OF CONTENTS

SECTION	TITLE	PAGES
00650	INSURANCE REQUIREMENTS	1 - 6
00700	GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION	1 - 62
00820	WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE	1
00850	DRAWING INDEX.....	1 - 2
DIVISION 01 - GENERAL REQUIREMENTS		
01010	SUMMARY OF WORK	1 - 4
01020	OWNER’S ALLOWANCES	1 - 3
01045	CUTTING AND PATCHING.....	1 - 5
01050	FIELD ENGINEERING.....	1 - 3
01095	DEFINITIONS AND STANDARDS.....	1 - 13
01110	AIRPORT PROJECT PROCEDURES	1 - 12
01150	MEASUREMENT AND PAYMENT	1 - 4
01315	SCHEDULES, PHASING (Bar Chart)	1 - 4
01340	SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES	1 – 14
01350	BUILDING INFORMATION MODELING REQUIREMENTS.....	1 - 6
01370	SCHEDULE OF VALUES.....	1 - 3
01390	CONTROL OF WORK.....	1 - 4
01400	QUALITY CONTROL SERVICES.....	1 – 8
01405	METHOD OF ESTIMATING PERCENTAGE OF MATERIAL WITHIN SPECIFICATION LIMITS (PWL).....	1 - 8
01410	TESTING LABORATORY SERVICES (<i>Contractor Furnished</i>).....	1 - 25
01505	TEMPORARY FACILITIES	1 - 25
01540	CONSTRUCTION SAFETY AND SECURITY REQUIREMENTS	1 - 13
01545	UTILITIES	1 - 5

TABLE OF CONTENTS

SECTION	TITLE	PAGES
01560	PREVENTION, CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION	1 - 2
01561	CONSTRUCTION CLEANING.....	1 - 3
01600	MATERIALS AND EQUIPMENT.....	1 - 4
01605	PRODUCTS AND SUBSTITUTIONS.....	1 - 11
01640	PRODUCT HANDLING	1 - 3
01700	PROJECT CLOSEOUT	1 - 12
01740	WARRANTIES.....	1 - 4

TECHNICAL SPECIFICATIONS

DIVISION 2 – EXISTING CONDITIONS

020000	DESCRIPTION OF WORK – RESTORATION.....	1 - 4
020010	WORK ITEMS.....	1 - 26
025130	GENERAL CONCRETE SURFACE PREPARATION.....	1 - 2
025140	SURFACE PREPARATION FOR PATCHING AND OVERLAY	1 - 6

DIVISION 3 - CONCRETE

033021	CAST-IN-PLACE CONCRETE RESTORATION.....	1 - 14
033760	PREPACKAGED REPAIR MORTAR	1 - 6

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

071800	TRAFFIC COATINGS.....	1 - 8
071900	WATER REPELLENTS.....	1 - 6
078100	APPLIED FIREPROOFING.....	1 - 6
079233	CONCRETE JOINT SEALANTS.....	1 - 8
079500	EXPANSION JOINT ASSEMBLIES.....	1 - 12

TABLE OF CONTENTS

SECTION	TITLE	PAGES
----------------	--------------	--------------

DIVISION 9 - FINISHES

099113	EXTERIOR PAINTING.....	1 - 6
--------	------------------------	-------

099120	PAVEMENT MARKINGS.....	1 - 6
--------	------------------------	-------

EXHIBIT A – AVIATION AUTHORITY APPLICATION FOR PAYMENT

END OF SECTION

HILLSBOROUGH COUNTY AVIATION AUTHORITY

INVITATION TO BID

Sealed bids will be received from Bidders by the Hillsborough County Aviation Authority (Owner) in the Airport Administrative Offices Building, front office located on the Second Level, Red Side, Tampa International Airport, for the Project listed below, until **2:00 p.m., October 4, 2017**. All bids received will be publicly opened and read aloud thereafter in the Airport Administrative Offices Lobby Conference Room B, Second Level, Red Side. No bid will be considered unless received on or before the time and at the place designated above:

Airport Name: Tampa International Airport

Authority Project No.: 6120 17

Project Title: Short Term Parking Garage Level 8 Rehabilitation

Project Description: This Project consists of rehabilitation of Level 8 of the Short Term Garage at Tampa International Airport including miscellaneous concrete Repairs and waterproofing of the entire Level.

Detailed Project Description: This Project consists of rehabilitation of Level 8 of the Short Term Parking Garage, including concrete repairs to floors, ceilings, columns and walls. Waterproofing components will be replaced with the replacement of 1,040 linear feet of existing expansion joint, application of approximately 118,000 square feet of epoxy crack healer and 246,000 square feet traffic bearing membrane to waterproof the entire parking level. Also included in this Project are pavement markings and miscellaneous painting of structural and non-structural components.

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 Available	August 9, 2017 after 1:30 p.m.
Deadline for on-line WebEx attendance registration for the Mandatory Pre-Bid Conference	August 22, 2017 by 1:30 p.m.
Mandatory Pre-Bid Conference	August 23, 2017 at 2:00 p.m.
Request for Clarification Deadline	September 13, 2017 by 2:00 p.m.
Addendum posted on Authority website	September 27, 2017 by 5:00 p.m.
Bid Submittal Time and Date	October 4, 2017 by 2:00 p.m.
Award by Authority's Board	December 7, 2017 at 9:00 a.m.

A **MANDATORY** Pre-Bid Conference for all Bidders will be held in the Authority Boardroom, Main Terminal Building, Third Level, Blue Side, Tampa International Airport on **August 23, 2017 at 2:00 p.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 WebEx.** To be considered as attending in person, Bidder must have signed 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 WebEx. To be considered as attending via WebEx, 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 Mandatory 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 10.8%.

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.

To download Contract Documents, fill out the form on the "Request to Download Contract Documents" link on the Authority's website. This form must be completed and submitted in order to download the Contract Documents. Contract Documents will be available for downloading on the date and time as listed on Page 00020-1.

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. 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.

Each bid and any attachments submitted will be placed in an opaque, sealed envelope plainly marked on the outside with:

"Bid for:

Short Term Parking Garage Level 8 Rehabilitation
Authority Project No. 6120 17
Tampa International Airport
Tampa, Florida"

and with the name and address of the Bidder. Each bid will be delivered to the Owner or mailed to the Owner at Hillsborough County Aviation Authority, P. O. Box 22287, Tampa, Florida 33622, at the time and place stated on Page 00020-1.

The physical address of the Owner for overnight delivery, courier or express services is Hillsborough County Aviation Authority, Tampa International Airport, 4160 George J. Bean Parkway, Suite 2400, Administrative Building, Second Level, Red Side, Tampa, Florida 33607.

If mailed, the bid will be sent by certified/registered mail, with return receipt requested.

The Bidder must supply all information required by the bid form, Contract Documents and required attachments.

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.

If you have any questions pertaining to this Project, please contact the Procurement Agent, Joe Benjamin, at (813) 801-6082 or email at JBenjamin@TampaAirport.com.

END OF SECTION

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 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 Contractor's own employment policies and practices as the Federal Aviation Administration, the Owner, 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, 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 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, 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, pollution control, and environmental regulations, applicable national and local codes, and Hillsborough County Aviation Authority Rules and Regulations, 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 OSHA requirements.
3. Bidders must comply with the Fair Labor Standards 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.
 - a. 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:

1. 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 procurement protest 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 > 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. Public Entity Crime Convicted Vendor List:

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.

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 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 your 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. 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 Bond will be a corporate Surety authorized under the laws of Florida to do business in Florida, and authorized to write that type of bond through a licensed agent of the Surety located in Florida. 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.

H. Insurance Requirements:

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 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 Owner and Contractor (herein referred to as the Contract), Conditions of the Contract (General Conditions), General Requirements and other Requirements, Reports, and Specifications.
- D. The 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 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 it has included in its Bid all items and costs necessary for the proper execution and completion of the Work.

1.03 CONE OF SILENCE AND INTERPRETATIONS

The Owner has established a cone of silence applicable to all competitive procurement processes, including this Bid. The cone of silence will be imposed beginning with the advertisement for this Bid and will end upon the Board's award of the Bid.

- 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, 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 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 Section 00020 – INVITATION TO BID, Page 00020-3. Please refer to the Owner's website at www.TampaAirport.com > Learn about TPA > Airport Business > Procurement > Current Solicitation Opportunities 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 Bidder requires clarification or finds any ambiguities, discrepancies in, or omissions or there is doubt as to the true meaning of any part of the Contract Documents, a written request for clarification or interpretation must be submitted to the Procurement Agent listed in Section 00020 – INVITATION TO BID, Page 00020-3.
- E. All such interpretations and any supplemental instructions will be in the form of a written addendum posted on the Owner's website at www.TampaAirport.com > Learn about TPA > Airport Business > Procurement > Current Solicitation Opportunities. It is the responsibility of the Bidder to verify the Owner received their request by contacting the Procurement Agent listed in Section 00020 – INVITATION TO BID, Page 00020-3. Failure of any Bidder to review any addendum will not relieve them from any obligation contained therein.
- F. The Owner will notify prospective Bidders of any changes by posting the addenda on the Owner's website.
- G. Any violation of the cone of silence will render voidable the bid, as well as the awarded Contract.

1.04 SUBSTITUTIONS

TPA/ Short Term Parking Garage Level 8 Rehabilitation

- 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 Contractor 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 in the proper format as a Request for Clarification. The burden of proof on the merit for the proposed substitution is 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 Bidder wishes to substitute, and the justification for the substitution. Requests submitted will include any and all adjustments of that and any other Work affected thereby.
- C. If the Owner approves a 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 website, it is each Bidder's responsibility to check with the Procurement Department and immediately secure all Addenda before submitting Bids. It is the usual practice for the Owner to e-mail Addenda to known Bidders, but it cannot be guaranteed that all Bidders will receive Addenda in this manner. Each Bidder will acknowledge receipt of each and every Addendum by notation on the Bid Form. If acknowledgment is not given on the Bid Form, the Bid may be considered irregular and may be rejected.
- B. Request for Clarifications are due on the date listed in Section 00020 - INVITATION TO BID, PAGE 00020-1. If addenda are to be issued, they will be posted on www.TampaAirport.com > Learn about TPA > Airport Business > Procurement > Current Solicitation Opportunities on the date listed in Section 00020 – INVITATION TO BID, Page 00020-1.
- 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 can be obtained from the Owner as designated in Section 00020 - INVITATION TO BID.
- 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. If Bidder has any questions or finds ambiguities, discrepancies in, or omissions from the Contract Documents, the Bidder shall promptly notify the Owner by submitting a Request for Clarification.
- 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 ISSUANCE OF BID FORMS

- A. The Owner reserves the right to refuse to issue the Contract Documents and Bid Form to a prospective Bidder should such Bidder be 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 qualification requirements of the Owner, including failure to supply such information as the Owner may require in evaluating the qualifications 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.
 - 2. Past performance of the Bidder or any affiliated or related entity.
 - 3. Failure of the Bidder or any affiliated or related entity to pay or satisfactorily settle all bills for labor and material on any former contract with the Owner.
 - 4. The outstanding obligations of the Bidder, whether previously assumed or to be assumed in the future.
 - 5. Unsatisfactory, defective, or non-conforming work on any previous contract with the Owner by the Bidder or any affiliated or related entity.
 - 6. 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.
- B. The issuance of the Contract Documents and Bid Form to a particular Bidder will not prevent or preclude the Owner from determining at a later date that a particular Bidder or entity is non-responsible. The Owner at all times reserves the right to refrain from issuing the Contract Documents or awarding this Contract to a non-responsible entity or to any affiliated or related entity, including the Owner of any non-responsible entity and subsidiaries of such Owner, as well as any successor, assignee, transferee or majority interest holder of any non-responsible entity.

1.08 RESPONSIBILITY OF BIDDERS

- A. The Owner reserves the right to investigate and determine the responsibility of the Bidders before and after Bids are received. Owner will not award the Contract to any Bidder determined by Owner to be non-responsible. Among the criteria which Owner may use in making such determination are the following:
1. Failure to comply with any qualification requirements of the Owner, including 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.
 2. Failure of the Bidder to obtain proper license (if any is required) prior to bidding, i.e. if 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 license(s) must be current and active throughout the life of the project.
 3. Past performance of the Bidder, one or more of the listed Subcontractors or any affiliated or related entity.
 4. Failure of Bidder or any affiliated related entity to pay or satisfactorily settle all bills for labor and materials on any former contract with Owner.
 5. The outstanding obligations of the Bidder, whether previously assumed or to be assumed in the future.
 6. 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.
 7. 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.
 8. The financial condition of the Bidder. 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. Such statements or reports will be certified by a 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 public accountant. If the Bidder's financial responsibility has changed, the Bidder will qualify the 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.
 9. Experience of the Bidder and/or its listed subcontractors in performing Work of

this nature.

10. Submission of appropriate Women and Minority Owned Business Enterprise (W/MBE) information.
11. Past compliance with the Owner's W/MBE Policy and Program on Owner projects only.
12. Submission, upon request, of the Bid Documents.
13. Bidders, subcontractors or material suppliers listed on the State or Federal convicted list or FDOT Suspension list.
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. 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.
15. If Bidder is not registered with the Florida Division of Corporations and authorized to do business in Florida.
16. If Bidder is listed on any of the following lists:
 - a. State Convicted Vendor List.
 - b. Federal Convicted Vendor List.
 - c. FDOT Suspension List
 - d. Scrutinized Companies with Activities in Sudan List or Scrutinized Companies with Activities in the Iran Petroleum Energy Sector.
17. Failure to register with the Owner as a Supplier (www.TampaAirport.com >Learn about TPA > Business Opportunities > Procurement > Supplier Registration). For general questions concerning the Supplier Registration process call 813-870-8796.

1.09 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 Sections 00340 – BID SCHEDULE, will be found non-responsive.
- D. Bids received without Section 00350 – BID AFFIDAVIT, may be considered irregular and may be rejected.

- E. Bids received without Section 00400-1 – Bid Bond or a Cashier’s Check will be found non-responsive. Bids received without Section 00400-2 –SURETY BOND AFFIDAVIT may be considered irregular and may be rejected.
- F. Bids received without Section 00417 – WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE (W/MBE) ASSURANCE AND PARTICIPATION, may be considered irregular and may be rejected.
- G. Bids received without Section 00418 – CERTIFICATE OF NON-SEGREGATED FACILITIES, may be considered irregular and may be rejected.
- H. Bids received without Section 00420 – BIDDER’S GENERAL BUSINESS INFORMATION may be considered irregular and may be rejected.
- I. Bids received without Section 00421 – SCRUTINIZED COMPANY CERTIFICATION may be found non-responsive and rejected.
- J. Bids received without Section 00422 - E-VERIFY CERTIFICATION may be considered irregular and may be rejected.
- K. Bids received without Section 00423 - NON-COLLUSION CERTIFICATION may be considered irregular and may be rejected.
- L. Bids received without Section 00430 – SUBCONTRACTORS LIST may be considered irregular and may be rejected.
- M. Bids received without Section 00440 – BIDDER’S SELECTION OF PAYMENT METHOD may be considered irregular and may be rejected.
- N. Bids received without the Financial Statement may be considered irregular and may be rejected.
- O. Bids received without a copy of a current and active Contractor’s License that qualifies the company to bid on the work may be considered irregular and may be rejected.
- P. Each bid submitted will include one set of signed originals of all the items listed in Paragraph R of this Section with the exception of those marked with an asterisk.
- Q. Due to the allocation of funds, successful Bidders will be required to provide a Schedule of Values in a manner acceptable to the Design Professional and Owner, and in accordance with the Contract Documents.
- R. Each Bid and any attachments submitted will be placed in a sealed opaque envelope plainly marked on the outside with:

“Bid for:

Short Term Parking Garage Level 8 Rehabilitation
Authority Project No. 6120 17

Tampa International Airport
Tampa, Florida”

When sent by mail, certified/registered, the sealed Bid, marked as indicated above, should be enclosed in an additional envelope. No Bid will be considered unless received at the place specified in the Contract Documents before the Bid submittal time and date specified for opening all Bids. Bids received after the specified Bid submittal time and date will be returned to the Bidder unopened.

The envelope will contain one set of signed originals of the following documents except those with an asterisk. Those documents with an asterisk may have copies of the completed, signed originals submitted.

<u>SECTION</u>	<u>TITLE</u>
00300	BID FORM
00340	BID SCHEDULE
00350	BID AFFIDAVIT
00400-1	BID BOND or (Cashier’s Check)
00400-2	SURETY BOND AFFIDAVIT
00417*	WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE ASSURANCE AND PARTICIPATION
00418	CERTIFICATE OF NON-SEGREGATED FACILITIES
00420	BIDDER’S GENERAL BUSINESS INFORMATION
00421	SCRUTINIZED COMPANY CERTIFICATION
00422	E-VERIFY CERTIFICATION
00423	NON-COLLUSION CERTIFICATION
00430	SUBCONTRACTORS LIST
00440	BIDDER’S SELECTION OF PAYMENT METHOD
---	COPY OF FINANCIAL STATEMENT
---	COPY OF CONTRACTORS LICENSE (CURRENT & ACTIVE) THAT QUALIFIES THE COMPANY TO BID ON THIS WORK

- S. The Bidder will have downloaded Contract Documents from the Owner and must submit their Bid on the forms furnished by the Owner in the Contract Documents. Bids submitted by Bidders who have not downloaded Contract Documents from the Owner's website may be rejected. All blank spaces in the Bid forms must be correctly filled in

where indicated and the Bidder must state the price(s) (written in ink) both in words and numerals. The words, unless obviously incorrect, will govern.

- T. Bids will be submitted as indicated in Section 00300 - BID FORM and will be signed in ink by an official of the firm submitting the Bid. If Section 00300 - BID FORM is not submitted with the Bid, the Bid will be found non-responsive.
- U. Erasures or other changes in a Bid will be explained or noted over the signature of the Bidder.
- V. Bids containing reservations, conditions, omissions, unexplained erasures or alterations, items not required in the Bid or irregularities of any kind may be rejected by the Owner.
- W. Each Bid will indicate the full business name and address of the Bidder and will be signed by Bidder with Bidder's usual signature.
- X. 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.
- Y. 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.
- Z. When requested by the Owner, a Power of Attorney or other satisfactory evidence of the authority of the officer signing in behalf of the corporation will be furnished for the Owner's records.
- AA. 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 federal funds are applicable) 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, Payment and Performance Bonds within seven calendar days after the date of award of the Contract, then the amount of the 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.
- BB. When sent by mail, the sealed Bid, marked as indicated in this Section, will be enclosed in an additional envelope and sent by certified/registered mail with return receipt requested. No Bid will be considered unless received on or before the time and at the place designated in the INVITATION TO BID. The Owner will in no way be responsible for delays caused by the U.S. Postal Service or any other deliverer of the Bid, or for delay caused by any other occurrence.
- CC. The Bidder will supply all information required by the Bid Form and Contract Documents.

1.10 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 Contract Documents 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.

1.11 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. Bids that have been withdrawn (by written or e-mail request) or received after the time and date specified for submittal of Bids will be returned to the Bidder unopened.
- C. 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.
- D. 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.

1.12 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 may be considered irregular for the following reasons:
 - 1. If the Bid is on a form other than that furnished by the Owner, or if the Owner's form is altered.
 - 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 is not accompanied by all the Documents listed in Item 1.09 R.
 4. Submitting more than one Bid from the same partnership, firm or corporation under the same or different name.
 5. 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 Owner as a qualified Bidder.
 6. Evidence that Bidder has a financial interest in the firm of another Bidder for the same Work.
 7. If the Bidder, employee or agent of the Bidder has a Conflict of Interest as determined by the Director of Procurement.
 8. If Bidder is considered to be "non-responsible" for any reason specified in Item 1.08-RESPONSIBILITY OF BIDDERS of this Section.
- D. Bids will be considered non-responsive for the following reasons:
1. If the bid is not accompanied by Section 00340-BID SCHEDULE or Section 00400-1-BID BOND.
 2. Bids received that do not meet the requirements specified in Section 1.14 - 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.

1.13 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.

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

- A. 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 and DBE policies and programs.

Bidders are encouraged to refer to the Owner's W/MBE Program and Policy 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.

- B. 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 or subsequent subcontracts. The bidder/proposer, contractor, supplier/vendor or subcontractor will carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT-assisted 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."

- C. 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.***
- D. W/MBE Goals: W/MBE Goals are established for each specific contract with subcontracting opportunities. The Bidder will subcontract with certified W/MBEs at least 10.8% of the dollar value of the Contract. Only certified W/MBEs will count toward the Contract Goal. In accordance with Owner policy, a recipient may count expenditures of materials and supplies obtained from a W/MBE supplier or company at 100% of the cost of the materials or supplies obtained from a W/MBE Goal.

In the event that the Bidder is a certified W/MBE, the Contract Goal will be deemed to have been met if the Bidder performs at least the prescribed W/MBE Contract Goal percentage of the Work with its own forces. The Bidder will be required to submit a W/MBE Assurance and Participation form and Letter of Intent for each W/MBE including Bidder that will participate in this Contract at the time the Bid is submitted to the Owner. 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 submit with its Bid a completed W/MBE Subcontractor Good Faith Effort Worksheet documenting Bidder's Good Faith efforts to meet the prescribed Goal.

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

1. 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:
 - a. Whether the Bidder advertised in newspapers of general circulation, websites, trade association, and minority-focus media concerning the subcontracting opportunities prior to bid opening;
 - b. 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;
 - c. Whether the Bidder followed up initial solicitations of interest by contacting W/MBEs to determine with certainty whether the W/MBEs were interested;
 - d. 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;
 - e. Whether the Bidder provided interested W/MBEs with adequate information about the Drawings, Specifications or requirements of the Contract;
 - f. 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;
 - g. Whether the Bidder made efforts to assist interested W/MBEs in obtaining bonding, lines of credit, or insurance required by the Owner or Contractor;
 - h. 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;

- i. 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 in-directly, was intended to achieve, in whole or in part, the specified W/MBE participation;
 - j. 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;
 - k. 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
 - l. Whether all other bidders met the W/MBE Goal but the apparent low bidder or most qualified bidder did not.
2. Bidders who do not meet W/MBE contract 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.
 3. 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.
 4. 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.

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 Concrete Protection & Restoration, Inc.
STREET ADDRESS 601 NE 44th Street
CITY, STATE, ZIP Oakland Park, FL 33334
DATE 10/3/17 PHONE 954-505-3977
E-MAIL momalley@concretecpr.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 developed by the Bidder. 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: Short Term Parking Garage Level 8 Rehabilitation.

Airport Name: Tampa International Airport
Authority Project No.: 6120 17
Project Title: Short Term Parking Garage Level 8 Rehabilitation
Dated: August 9, 2017

together with all Addenda to such Contract Documents as listed herein (Paragraph 1.08), 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 Section 00340 - BID SCHEDULE, titled the same as written above, attached hereto and incorporated by reference.

The undersigned understands that the estimated quantities shown in Section 00340 - 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.

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 161 days after Notice to Proceed.

The Owner may issue a Notice to Proceed seven days after the date of award of the Contract.

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 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 listed in Section 00100 – INSTRUCTIONS TO BIDDERS, Item 1.09, R.

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 affirms that Bidder has completed all of the blank spaces in the "Bid Schedule" with an amount in words and numbers and agrees that where a discrepancy occurs between the prices quoted in words and/or numbers, the figure quoted in words will take precedence and

govern when determining costs or award of Contract.

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."

1.08 The undersigned acknowledges receipt of the following Addenda:

ADDENDUM NUMBER	DATED
<u>1</u>	<u>09/27/17</u>
_____	_____
_____	_____
_____	_____

continue if required . . .

1.09 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: 52-1968972

B. Corporation:

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

Date of Incorporation: 2/22/1996

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

CT Corporation
1200 S Pine Island Rd
Plantation, FL 33324

2. If Foreign Corporation (non-Florida):
Date of Certificate of Authority to transact business in Florida: 4/19/06

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

CT Corporation
1200 S Pine Island Rd
Plantation, FL 33324

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. 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.

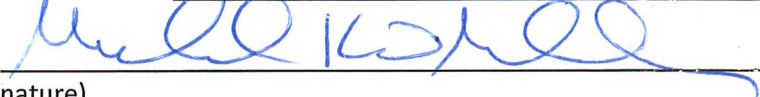
Name and address of Florida registered agent for service of process:

ALL BIDDERS MUST SIGN AND EXECUTE THE FOLLOWING:

Dated and signed at Oakland Park, FL

on this 3rd day of October, 2017.

NAME OF BIDDER Michael K. O'Malley


By: 
(Signature)

TITLE Vice President

BUSINESS ADDRESS 601 NE 44th Street

Oakland Park, FL 33334

WITNESSES:

By: 
(Signature)

By: 
(Signature)

END OF SECTION

HCAA PROJECT NO. 6120 17
SHORT TERM PARKING GARAGE LEVEL 8 REHABILITATION
Tampa International Airport
Tampa, Florida
Hillsborough County Aviation Authority


Work Item Number	Item Description	Bidders Price Per Unit	Est. Qty.	Unit	Total Amount Per Item <i>Unit Price times Est. Qty.</i>
1.1	Project Mobilization/Demobilization and Maintenance of Traffic one hundred fifty eight thousand <i>Bid price per unit in words</i>	<i>Dollars</i> zero <i>Cents</i> <i>In numbers</i>	\$ 158,000.00	1	LS \$ 158,000.00 -
3.1	Concrete Floor Repair - Partial Depth thirty five <i>Bid price per unit in words</i>	<i>Dollars</i> zero <i>Cents</i> <i>In numbers</i>	\$ 35.00	626	SF \$ 21,910.00 -
3.3	Concrete Floor Repair - Full Depth sixty <i>Bid price per unit in words</i>	<i>Dollars</i> zero <i>Cents</i> <i>In numbers</i>	\$ 60.00	400	SF \$ 24,000.00 -
3.4	Concrete Floor Repair - Curbs seventy five <i>Bid price per unit in words</i>	<i>Dollars</i> zero <i>Cents</i> <i>In numbers</i>	\$ 75.00	20	SF \$ 1,500.00 -
4.1	Concrete Ceiling Repair - Partial Depth ninety <i>Bid price per unit in words</i>	<i>Dollars</i> zero <i>Cents</i> <i>In numbers</i>	\$ 90.00	20	SF \$ 1,800.00 -
5.1	Concrete Beam/Joist Repair - Partial Depth ninety <i>Bid price per unit in words</i>	<i>Dollars</i> zero <i>Cents</i> <i>In numbers</i>	\$ 90.00	10	SF \$ 900.00 -
6.1	Concrete Column Repair - Partial Depth seventy five <i>Bid price per unit in words</i>	<i>Dollars</i> zero <i>Cents</i> <i>In numbers</i>	\$ 75.00	10	SF \$ 750.00 -
7.1	Concrete Wall Repair - Partial Depth seventy five <i>Bid price per unit in words</i>	<i>Dollars</i> zero <i>Cents</i> <i>In numbers</i>	\$ 75.00	5	SF \$ 375.00 -

Work Item Number	Item Description	Bidders Price Per Unit	Est. Qnty.	Unit	Total Amount Per Item <i>Unit Price times Est. Qnty.</i>
9.1	Expansion Joint Preparation - New Block-out twenty five <i>Bid price per unit in words</i>	Dollars ZERO Cents \$ 25.00 <i>In numbers</i>	1,040	LF	\$ 26,000.00 -
10.3	Expansion Joint - Elastomeric Concrete Edged - Less than or equal to 4" seventy five <i>Bid price per unit in words</i>	Dollars ZERO Cents \$ 75.00 <i>In numbers</i>	1,040	LF	\$ 78,000.00 -
10.7	Expansion Joint - Silicone Seal - Vertical twenty five <i>Bid price per unit in words</i>	Dollars ZERO Cents \$ 25.00 <i>In numbers</i>	40	LF	\$ 1,000.00 -
13.2	Epoxy Broadcast Crack Healer one hundred six thousand six hundred fifty <i>Bid price per unit in words</i>	Dollars ZERO Cents \$ 106,650.00 <i>In numbers</i>	1	LS	\$ 106,650.00 -
16.1	Traffic Topping - Vehicular five hundred fifty four thousand six hundred twenty five <i>Bid price per unit in words</i>	Dollars zero Cents \$ 554,625.00 <i>In numbers</i>	1	LS	\$ 554,625.00 -
25.2	Mechanical - Supplementary Floor Drains one thousand <i>Bid price per unit in words</i>	Dollars zero Cents \$ 1,000.00 <i>In numbers</i>	16	EA	\$ 16,000.00 -
25.3	Mechanical - Pipes and Hangers seventy five <i>Bid price per unit in words</i>	Dollars zero Cents \$ 75.00 <i>In numbers</i>	25	LF	\$ 1,875.00 -
35.8	Repair Stucco Fireproofing three hundred twenty five <i>Bid price per unit in words</i>	Dollars zero Cents \$ 325.00 <i>In numbers</i>	20	SF	\$ 6,500.00 -
35.9	Stucco Fireproof Enclosures one thousand three hundred <i>Bid price per unit in words</i>	Dollars zero Cents \$ 1,300.00 <i>In numbers</i>	6	EA	\$ 7,800.00 -
40.1	Shear Transfer Connections three hundred fifty <i>Bid price per unit in words</i>	Dollars zero Cents \$ 350.00 <i>In numbers</i>	5	Pair of Angles	\$ 1,750.00 -

Work Item Number	Item Description	Bidders Price Per Unit	Est. Qnty.	Unit	Total Amount Per Item <i>Unit Price times Est. Qnty.</i>
40.2	Repair Structural Steel Slide Bearing <u>three hundred fifty</u> <i>Bid price per unit in words</i>	<u>Dollars zero Cents</u> <i>In numbers</i>	<u>\$ 350.00</u>	<u>6</u>	<u>EA \$ 2,100.00 -</u>
40.2.1	Repair Structural Steel Slide Bearing - Shoring <u>thirty</u> <i>Bid price per unit in words</i>	<u>Dollars zero Cents</u> <i>In numbers</i>	<u>\$ 30.00</u>	<u>72</u>	<u>EA \$ 2,160.00 -</u>
40.5	Replace Junction Box Cover <u>twenty</u> <i>Bid price per unit in words</i>	<u>Dollars zero Cents</u> <i>In numbers</i>	<u>\$ 20.00</u>	<u>54</u>	<u>EA \$ 1,080.00 -</u>
45.1	Paint Traffic Markings <u>thirty six thousand nine hundred seventy five</u> <i>Bid price per unit in words</i>	<u>Dollars zero cents</u> <i>In Numbers</i>	<u>\$ 36,975.00</u>	<u>1</u>	<u>LS \$ 36,975.00 -</u>
45.2	Clean and Paint Concrete Columns <u>one</u> <i>Bid price per unit in words</i>	<u>Dollars sixty five cents</u> <i>In Numbers</i>	<u>\$ 1.65</u>	<u>112</u>	<u>EA \$ 18,480.00 -</u>
45.6	Clean and Paint Steel Bearing Assembly <u>one hundred ten</u> <i>Bid price per unit in words</i>	<u>Dollars zero cents</u> <i>In Numbers</i>	<u>\$ 110.00</u>	<u>6</u>	<u>EA \$ 660.00 -</u>
45.8	Clean and Paint Steel Embed Plates <u>one hundred ten</u> <i>Bid price per unit in words</i>	<u>Dollars zero Cents</u> <i>In numbers</i>	<u>\$ 110.00</u>	<u>120</u>	<u>EA \$ 13,200.00 -</u>
45.9	Clean and Paint Steel Column Collars <u>one hundred ten</u> <i>Bid price per unit in words</i>	<u>Dollars zero Cents</u> <i>In numbers</i>	<u>\$ 110.00</u>	<u>160</u>	<u>EA \$ 17,600.00 -</u>
45.10	Clean and Paint Bollards and Baseplates <u>two</u> <i>Bid price per unit in words</i>	<u>Dollars sixty Cents</u> <i>In numbers</i>	<u>\$ 2.60</u>	<u>64</u>	<u>EA \$ 6,656.00 -</u>
45.11	Clean and Paint Fire Hose Boxes & Supports <u>one hundred ten</u> <i>Bid price per unit in words</i>	<u>Dollars zero Cents</u> <i>In numbers</i>	<u>\$ 110.00</u>	<u>32</u>	<u>EA \$ 3,520.00 -</u>

Work Item Number	Item Description	Bidders Price Per Unit	Est. Qnty.	Unit	Total Amount Per Item <i>Unit Price times Est. Qnty.</i>
Sub-total for all Bid Items not including Owner's Allowance					
one million one hundred eleven thousand eight hundred sixty six		Dollars	zero	Cents	\$ 1,111,866.00
<i>Total Bid Price including Owner's Allowance in words</i>		<i>In numbers</i>			
1.7	Owner's Allowance (Work Item 1.7)				
	Fifty Thousand	Dollars	Zero	Cents	\$ 50,000.00
	<i>Bid price per unit in words</i>				<i>In numbers</i>
			1	OA	\$ 50,000.00
Total Bid Amount including Owner's Allowance					
one million one hundred sixty one thousand eight hundred sixty six		Dollars	zero	Cents	\$ 1,161,866.00
<i>Total Bid Price including Owner's Allowance in words</i>		<i>In numbers</i>			

Name of Bidder: Michael K. O'Malley

Signature of Bidder: *(Typed or Printed)*


Title: Vice President

Date: 10/3/17

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

SECTION 00350 - BID AFFIDAVIT

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

STATE OF Florida

COUNTY OF Broward

Michael K. O'Malley, 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: 

Subscribed and sworn to before me this 3rd day of October, 2017.

My Commission Expires:

8-12-2021

By: 
Notary Public (Signature)

[Affix Corporate Resolution if not 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 Concrete Protection and Restoration, Inc.
601 N.E., 44th Street, Oakland Park, FL 33334
as Principal, and Merchants Bonding Company (Mutual), PO Box 14498, Des Moines, Iowa 50306
as Surety, are held and firmly bound unto the **Hillsborough County Aviation Authority** in the sum of
5% of the bid amount shown on 00340 – 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 00340 – BID SCHEDULE for the Authority **Project No. 6250 15 entitled Short Term Parking Garage-Level 7 Rehabilitation at Tampa International Airport** for a period of 85 calendar days (or 115 calendar days if federal funds are applicable) 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 4th day of October, 2017.

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)
Concrete Protection and Restoration, Inc.

Name of Contractor Concrete Protection and Restoration, Inc.

Type Name and Title Below: Michael K. O'Malley, V.P.

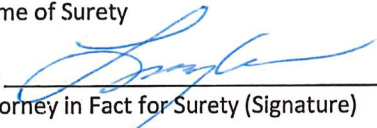
By: 

(Signature)

Address: 601 N.E. 44th Street
Oakland Park FL 33334
954-505-3977 954-272-7540
Telephone Number Fax Number

(Affix Surety's Corporate Seal)
Merchants Bonding Company (Mutual)


Name of Surety Merchants Bonding Company (Mutual)

By: 

Attorney in Fact for Surety (Signature)

Type name of Attorney in Fact: Leonard E. Callahan

Attorney in Fact Address: Contractor's Services, Inc.
3 Talbott Ave., #202A, Timonium, MD 21093
410-453-0925 410-453-0928
Telephone Number Fax Number

By: 

Florida Licensed Agent (Signature)

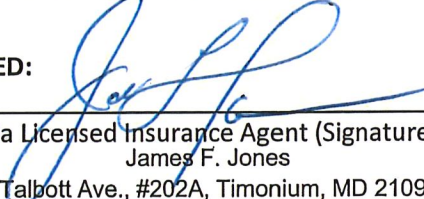
Type name of Fla. Licensed Agent: James F. Jones
License Number: W204375
Agent Address: 3 Talbott Ave., #202A, Timonium, MD 21093
410-453-0925 410-453-0928
Telephone Number Fax Number

SECTION 00400 2-SURETY BOND AFFIDAVIT

STATE OF Maryland
COUNTY OF Baltimore

BEFORE ME, THE UNDERSIGNED AUTHORITY, PERSONALLY APPEARED _____
James F. Jones, 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 Florida, TO REPRESENT _____
Merchants Bonding Company (Mutual) OF _____
Des Moines, Iowa, A COMPANY
AUTHORIZED TO MAKE CORPORATE SURETY BONDS UNDER THE LAWS OF THE STATE OF Iowa
(THE "SURETY").

SAID James F. Jones FURTHER CERTIFIES THAT
AS AGENT FOR THE SAID Merchants Bonding Company (Mutual)
THEY HAVE SIGNED THE ATTACHED BOND AS A LICENSED AGENT, IN THE SUM OF 5% OF THE BID AMOUNT
SHOWN ON 00340-BID SCHEDULE, ON BEHALF OF Merchants Bonding Company (Mutual)
TO THE **HILLSBOROUGH COUNTY AVIATION AUTHORITY COVERING PROJECT NO. 6250 15, SHORT TERM
PARKING GARAGE-LEVEL 7 REHABILITATION** at TAMPA INTERNATIONAL AIRPORT, TAMPA, FLORIDA.

SIGNED:
By: 
Florida Licensed Insurance Agent (Signature)
James F. Jones
3 Talbott Ave., #202A, Timonium, MD 21093
Address Of Agent

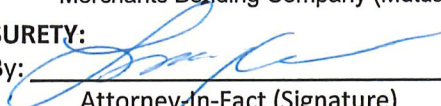
410-453-0925
Phone Number

410-453-0928
Fax Number

PO Box 14498, Des Moines, Iowa 50306
Address Of Bond Company

800-678-8171
Phone Number

515-243-3854
Fax Number

Merchants Bonding Company (Mutual)
SURETY:
By: 
Attorney-In-Fact (Signature)
Leonard E. Callahan

Acknowledgment For
Attorney-In-Fact

Sworn To And Subscribed
Before Me This 4th Day
Of October, 2017

By: 
(Signature of Notary Public) Deborah B. Hill

NOTARY PUBLIC
STATE OF Maryland
MY COMMISSION EXPIRES: 12/11/2017

END OF SECTION



**Contractor's
Services, Inc.**

The Surety Bond Specialist

October 4, 2017

Hillsborough Co. Aviation Authority
Tampa International Airport
4160 George J. Bean Parkway
Suite 2400
Tampa, FL 33622

RE: *Contractor:* Concrete Protection and Restoration, Inc.

Project: Project No. 6250 15 entitled Short Term Parking Garage-Level 7 Rehabilitation
at Tampa International Airport

To Whom It May Concern:

Concrete Protection & Restoration, Inc. is in good standing with their bonding company,
Merchants Bonding Company (Mutual) who has an AM Best rating of "A".

In the event that Concrete Protection & Restoration, Inc. should be awarded a contract for the
above named project, and accepts the award, their surety company anticipates no problem in
providing the Performance and Payment bonds as required by the contract specifications.

Naturally, all final bonds are subject to underwriting conditions that exist at the time the bond is
requested.

Regards,
Merchants Bonding Company (Mutual)

A handwritten signature in blue ink, appearing to read "Leonard E. Callahan".

Leonard E. Callahan, Attorney-in-Fact

MERCHANTS
BONDING COMPANYTM
POWER OF ATTORNEY

Know All Persons By These Presents, that MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC., both being corporations of the State of Iowa (herein collectively called the "Companies") do hereby make, constitute and appoint, individually, James F Jones; Leonard E Callahan; Steven T Johnson

their true and lawful Attorney(s)-in-Fact, to sign its name as surety(ies) and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments 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.

This Power-of-Attorney is granted and is signed and sealed by facsimile under and by authority of the following By-Laws adopted by the Board of Directors of Merchants Bonding Company (Mutual) on April 23, 2011 and amended August 14, 2015 and adopted by the Board of Directors of Merchants National Bonding, Inc., on October 16, 2015.

"The President, Secretary, Treasurer, or any Assistant Treasurer or any Assistant Secretary or any Vice President shall have power and authority to appoint Attorneys-in-Fact, and to authorize them to execute on behalf of the Company, and attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof."

"The signature of any authorized officer and the seal of the Company may be affixed by facsimile or electronic transmission to any Power of Attorney or Certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the Company, and such signature and seal when so used shall have the same force and effect as though manually fixed."

In connection with obligations in favor of the Florida Department of Transportation only, it is agreed that the power and authority hereby given to the Attorney-in-Fact includes any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts required by the State of Florida Department of Transportation. It is fully understood that consenting to the State of Florida Department of Transportation making payment of the final estimate to the Contractor and/or its assignee, shall not relieve this surety company of any of its obligations under its bond.

In connection with obligations in favor of the Kentucky Department of Highways only, it is agreed that the power and authority hereby given to the Attorney-in-Fact cannot be modified or revoked unless prior written personal notice of such intent has been given to the Commissioner-Department of Highways of the Commonwealth of Kentucky at least thirty (30) days prior to the modification or revocation.

In Witness Whereof, the Companies have caused this instrument to be signed and sealed this 5th day of April, 2017.

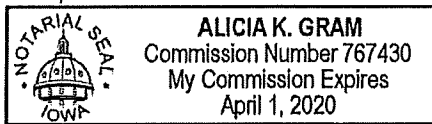


MERCHANTS BONDING COMPANY (MUTUAL)
MERCHANTS NATIONAL BONDING, INC.

By *Larry Taylor*
President

STATE OF IOWA
COUNTY OF DALLAS ss.

On this this 5th day of April 2017, before me appeared Larry Taylor, to me personally known, who being by me duly sworn did say that he is President of MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC.; and that the seals affixed to the foregoing instrument are the Corporate Seals of the Companies; and that the said instrument was signed and sealed in behalf of the Companies by authority of their respective Boards of Directors.



Alicia K. Gram
Notary Public

(Expiration of notary's commission does not invalidate this instrument)

I, William Warner, Jr., Secretary of MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC., do hereby certify that the above and foregoing is a true and correct copy of the POWER-OF-ATTORNEY executed by said Companies, which is still in full force and effect and has not been amended or revoked.

In Witness Whereof, I have hereunto set my hand and affixed the seal of the Companies on this 4th day of October, 2017.



William Warner Jr.
Secretary

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

SHORT TERM PARKING GARAGE LEVEL 8 REHABILITATION
AUTHORITY PROJECT NO. 6120 17
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 10.8% 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 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 10.8%, 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.

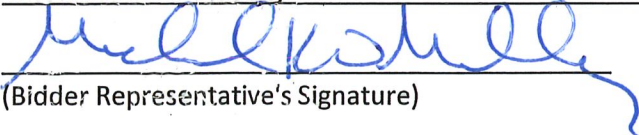
By: Name of Bidder: Concrete Protection & Restoration, Inc.

Date: 10/3/17

Bidder Representative's Name:

Michael K. O'Malley

Title: Vice President


(Bidder Representative's Signature)

SHORT TERM PARKING GARAGE LEVEL 8 REHABILITATION
AUTHORITY PROJECT NO. 6120 17
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.

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

SHORT TERM PARKING GARAGE LEVEL 8 REHABILITATION
AUTHORITY PROJECT NO. 6120 17
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: Concrete Protection & Restoration, Inc.
Address: 601 NE 44th St.
City: Oakland Park State: FL Zip Code: 33334
Phone: 954-505-3977 Fax number: _____
E-mail: momalley@concretecpr.com

Name of W/MBE firm: Construction Supply of Southwest Florida Inc.
Address: 2223 12th St.
City: Sarasota State: FL Zip Code: 34237
Phone: 941-366-2322 Fax number: _____
E-mail: laura@mystucco.com

Description of work to be performed by W/MBE firm: Supply materials

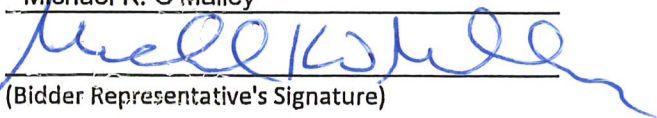
Amount of the W/MBE firm's subcontract \$ 125,500

Commitment

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

By: Name of Bidder: Concrete Protection & Restoration Inc. Date: 10/3/17

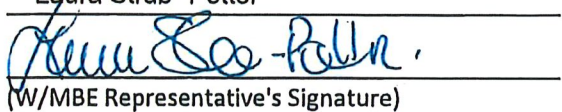
Bidder Representative's Name: Michael K. O'Malley Title: Vice President


(Bidder Representative's Signature)

Affirmation

By: Name of W/MBE Firm: Construction Supply of Southwest Florida Inc. Date: 10/3/17

W/MBE Representative's Name: Laura Strub-Potter Title: President


(W/MBE Representative's Signature)

TPA/ Short Term Parking Garage Level 8 Rehabilitation

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.

Concrete Protection & Restoration, Inc.

(Name of Bidder)

By: 
(Signature*)

Title: Vice-President

Date: 10/3/17

* 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: Concrete Protection & Restoration, Inc.

ADDRESS: 601 NE 44th Street
Oakland Park, FL 33334

PHONE: 954-505-3977

Contact in your firm for inquiries: Michael K O'Malley

Years in business under present name: 21

Date of Incorporation: 2/22/96

Place of Incorporation: Maryland

Contracting specialties: Concrete Restoration, Expansion Joints, Waterproofing

Years performing work specialties: 21

Geographic areas of business operation: Florida, Mid-Atlantic

List all Projects presently under contract:

450 E Las Olas Parking Garage Restoration

Brickell Harbour Plaza Deck Renovation and Restoration

Villa Nova Condominium Post Tension Cable Repair and Waterproofing

Key Colony The Center and Plaza Pool Deck and Plaza Repairs

Grove Isle Condominium Deck Rehabilitation Project

Marriott Harbor Beach Planter Waterproofing Repair

(Attach additional sheet(s) if necessary)

Work performed in last two years:

- Bal Harbour 101 PT Cable Repair and Spa Deck Renovation
- Alhambra Place Condominium Terrace Perimeter Edge Waterproofing, Sealing/Painting
- 350 E Las Olas Precast Panel Replacement
- Akoya Condomonium Garage Cable Repair
- The Grand Condominium Parking Garage Concrete Repairs
- Marriott Biscayne Bay Plaza Waterproofing

(Attach additional sheet(s) if necessary)

Contract value of work presently under construction: \$ 51,480,486.08

Average annual contract value of construction work last three years: \$ 22,000,000.00

Total bonding capacity: \$ 60,000,000.00

Value of work presently bonded: \$ 28,000,000.00

Bonding Company: Contractor's Services, Inc.
Address: 3 Talbott Ave. Suite 202A Timonium, MD 21093

Insurance Agent: HMS Insurance Associates
Address: 20 Wright Ave. Suite 300 Hunt Valley, MD 21030
Phone: 443-632-3489

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

Concrete Restoration, concrete hydro-demolition, waterproofing, caulking, painting,
application of concrete sealer, post tension cable repairs, concrete surface preparation,
application of coatings

(Attach additional sheet(s) if necessary)

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

Concrete repair, expansion joint, waterproofing, epoxy sealer, painting

(Attach additional sheet(s) if necessary)

Total employees employed by firm: 420

Engineers & Design Professionals	<u> </u>	Estimators	<u>6</u>
CPM Schedulers	<u> </u>	Tradesmen	<u>380</u>
Project Managers	<u>8</u>	Purchasing Agents	<u> </u>
Superintendents	<u>20</u>	Other (Describe)	<u> </u>
			<u> </u>
			<u> </u>

In-House Engineering or fabrication capability: N/A

Fabricating floor area (square feet): N/A

Value of capital equipment owned by firm: \$ 5,500,000.00

Bank references and addresses:

M&T Bank
25 S Charles St
19th floor
Baltimore, MD 21201

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>Verizon Campus Parking Garage Washington DC</u>	<u>Smislova Kehnemui & Associates</u>	<u>American Real Estate Partners 2350 Corporate Park Dr # 110, Herndon, VA James Moore 703-435-4800</u>	<u>\$2,542,075.00</u>	<u>June 2017</u>
<u>Dolphin Towers Sarasota, FL</u>	<u>Morobito Consultants</u>	<u>Dolphin Towers Condominium Association Charlotte Ryan 732-284-6391</u>	<u>\$9,500,000.00</u>	<u>February 2016</u>
<u>Washington Square Parking Garage Washington, DC</u>	<u>Smislova Kehnemui & Associates</u>	<u>Lerner Enterprises 2000 Tower Oaks Blvd, Rockville, MD David Howell 202-296-2800</u>	<u>\$1,760,740.80</u>	<u>May 2017</u>
<u>2 Hopkins Plaza Garage Baltimore, MD</u>	<u>Structura</u>	<u>Berman Enterprises 5410 Edson Ln 220, Rockville, MD Dan Brenner 301-816-1555</u>	<u>\$1,379,419.43</u>	<u>March 2017</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 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
Grove Isle Miami, FL	Metric Engineering Inc.	1 Grove Isle Dr, Miami, FL Claudia Garcia 786-547-1818	\$10,100,000.00	In progress
3 Bethesda Metro Center Bethesda, MD	Smislova Kehnemui & Associates	Brookfield Properties 7475 Wisconsin Ave #1200 Bethesda, MD Eileen Shiffet 202-467-7904	\$7,330,644.34	In progress
Queens Landing Condominium Chester, MD	Thomas Downey, Ltd	The Queens Landing Condominium 504 Queen Elizabeth Ct., Chester, MD Lynda Brady 410-643-5192	\$8,200,000.00	In progress

(Attach additional sheet(s) if necessary)

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

Chris Glorioso- Operations Manager

List the name, title, experience, and area of responsibility of each project manager and superintendent which Bidder will use on this Project:

Name	Title	Experience in this type of work (years)	Area of Responsibility
<u>Jaime Martinez</u>	<u>Superintendent</u>	<u>18</u>	<u>On-site supervision, quality control and safety</u>
<u>Michael Pou</u>	<u>Project Manager</u>	<u>7</u>	<u>Quality Control, contract administration</u>
_____	_____	_____	_____
_____	_____	_____	_____

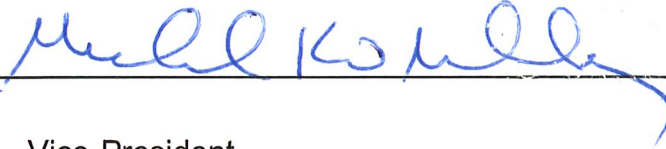
(Attach additional sheet(s) if necessary)

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: _____
 Sole Proprietorship: _____

Name: Michael K. O'Malley
 Signature: 
 Title: Vice-President
 Date: 10/3/17

END OF SECTION

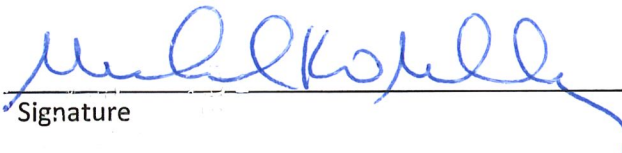
SECTION 00421 - SCRUTINIZED COMPANY CERTIFICATION

This certification is required pursuant to Florida Statute Section 287.135.

As of October 1, 2016, a company that, at the time of bidding or submitting a bid/response for a new contract/agreement or renewal of an existing contract/agreement, is 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, or that has been in business operations in Syria, is ineligible for, and may not bid on, submit a bid/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.

Company: Concrete Protection & Restoration, Inc. FID or EIN No.: 52-1968972
Address: 601 NE 44th Street City/State/Zip: Oakland Park, FL 33334

I, Michael K. O'Malley, as a representative of Concrete Protection & Restoration, Inc. certify and affirm that this company is not 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, and is not engaged in business operations in Syria.


Signature _____ Title Vice-President
Michael K. O'Malley _____ Date 10/3/17
Printed Name _____ 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).

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: Concrete Protection & Restoration, Inc. FID or EIN No.: 52-1968972

Address: 601 NE 44th Street City/State/Zip: Oakland Park, FL 33334

I, Michael K. O'Malley, as a representative of Concrete Protection & Restoration, Inc. certify and affirm that this company will comply with the E-Verification requirements of Executive Order Number 11-116.

 Vice-President
Signature Title

Michael K. O'Malley 10/3/17
Printed Name Date

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

END OF SECTION

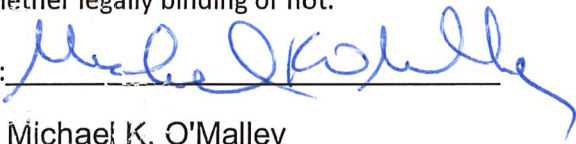
SECTION 00423 - NON-COLLUSION CERTIFICATE

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: _____



Witnessed By: _____



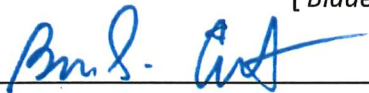
Name: Michael K. O'Malley

Date: 10/3/17

For and on behalf of: Concrete Protection & Restoration, Inc.

[Bidder's Name]

Signed: _____



Witnessed by: _____



Name: Ben S Custis

Date: 10/3/17

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)

Concrete Protection & Restoration Inc.
601 NE 44th Street
Oakland Park, FL 33334

For the construction of:

**SHORT TERM PARKING GARAGE LEVEL 8 REHABILITATION
AUTHORITY NO. 6120 17**

**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

Demolition

Concrete Protection & Restoration Inc.

601 NE 44th St., Oakland Park, FL 33334

Shoring

Concrete Protection & Restoration Inc.

601 NE 44th St., Oakland Park, FL 33334

Concrete Repair

Concrete Protection & Restoration Inc.

601 NE 44th St., Oakland Park, FL 33334

Masonry

N/A

Metal Work

N/A

Epoxy Crack Healer

Concrete Protection & Restoration Inc.
601 NE 44th St., Oakland Park, FL 33334

Traffic Topping

Concrete Protection & Restoration Inc.
601 NE 44th St., Oakland Park, FL 33334

Expansion Joints

Concrete Protection & Restoration Inc.
601 NE 44th St., Oakland Park, FL 33334

Sealants and Caulking

N/A

Cove Sealant

N/A

Pavement Markings

Parking Lot Services

PO Box 23125
Tampa, FL 33623

Painting

Concrete Protection & Restoration Inc.
601 NE 44th St., Oakland Park, FL 33334

Plumbing-Drainage

Apollo Construction & Engineering Services, Inc.

1821 36th St SE

Ruskin, FL 33570

813-645-3351

SUBCONTRACT

NAME, ADDRESS AND PHONE
NUMBER OF SUBCONTRACTOR

OTHERS

Material Supplier

Construction Supply of Southwest Florida Inc.

2223 12th. St.

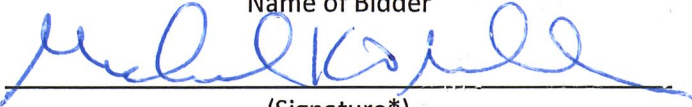
Sarasota, FL 34237

941-366-7435

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.

In witness thereof, the Bidder has hereunto set its signature and affixed its seal this 3rd day of October, 2017.

Concrete Protection & Restoration Inc.

By: 
Name of Bidder
(Signature*)

Title: Vice 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 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 Assistant 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.


Signature _____ Vice President
Title

Michael K. O'Malley _____ 10/3/17
Printed Name Date

END OF SECTION

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 Contract Lump Sum Bid Amounts contained therein.
- 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 1.12 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 federal funds are applicable) 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, the Owner may, at its discretion, 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, after which it will be returned to the Bidders. Should the award be delayed more than 85 calendar days (or 115 calendar days if federal funds are applicable) 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 good and sufficient Common Law Performance Bond and Statutory Payment Bond in the form 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, 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. No Contract is binding upon the Owner until it has been executed by the Owner and delivered to the Contractor.

1.08 FAILURE TO EXECUTE CONTRACT

TPA/ Short Term Parking Garage Level 8 Rehabilitation

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 7th day of December, 2017, by and between Concrete Protection and Restoration, 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 **Short Term Parking Garage Level 8 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, **Short Term Parking Garage Level 8 Rehabilitation** and dated **August 9, 2017**.

DRAWINGS entitled **Short Term Parking Garage Level 8 Rehabilitation** and dated **August 9, 2017**.

ADDENDUM No. 1 inclusive.

2. THAT THE CONTRACTOR will commence the Work within ten days of the date set by the Owner in a written Notice to Proceed and will achieve Substantial Completion of all Work under this Contract within **161** 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 One Hundred Thirty Seven Thousand Eighty One and Twenty Hundredth Dollars (U. S.) (\$1,137,081.20) 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 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 Two Thousand Two Hundred and No One Hundredth Dollars (U.S.) (\$2,200.00) 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 \$2,200.00 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 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. Preference to Florida State Residents: Contractor will give preference to the employment of state residents in the performance of the Work on this Project if state residents have substantially equal qualifications to those of non-residents. The term "substantially equal qualifications" means the qualifications of two or more persons among whom the Contractor cannot make a reasonable determination that the qualifications held by one person are better suited for the position than the qualifications held by the other person or persons. If required to employ state residents, Contractor must contact the Agency for Workforce Innovation to post the Contractor's employment needs in the state's job bank system.

7. 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 Authority, its members, officers, agents, employees, and volunteers from any and all liabilities, suits, claims, 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 by the:

A. presence on, use or occupancy of Authority property;

B. acts, omissions, negligence (including professional negligence and malpractice), recklessness, intentional wrongful conduct, activities, or operations;

C. any breach of the terms of this Contract;

D. performance, non-performance or purported performance of this Contract;

E. violation of any law, regulation, rule or ordinance;

F. infringement of any patent, copyright, trademark, trade dress or trade secret rights; and/or

G. 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, expense, loss, cost, fine or damages is caused in part by the Authority, 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.

8. In addition to the duty to indemnify and hold harmless, Contractor will have the separate and independent duty to defend the Authority, its members, officers, agents, employees, and volunteers from all suits, claims or actions of any nature seeking damages, expenses, losses, costs, royalties, fines or attorney's fees in the event the suit, claim, or action of any nature arises in whole or in part from:

- A. the presence on, use or occupancy of Authority property;
- B. acts, omissions, negligence (including professional negligence and malpractice), recklessness, intentional wrongful conduct, activities, or operations;
- C. any breach of the terms of this Contract;
- D. performance, non-performance or purported performance of this Contract;
- E. violation of any law, regulation, rule, order, decree or ordinance;
- F. infringement of any patent, copyright, trademark, trade dress or trade secret rights; and/or
- G. 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 Authority, 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 of omissions of the Owner, its members, officers, agents, employees, and volunteers.

9. 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.

10. Contractor's obligations to defend and indemnify as described in this Article 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.

11. Nothing in this Article 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.

12. 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 Contractor of any of its obligations under this Article.

13. If Paragraphs 7-13 or any part of Paragraphs 7-13 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.

14. **THIRD PARTY BENEFICIARY CLAUSE.** 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.

15. This Contract will be terminated in accordance with Florida Statute Section 287.135(3) if it is found that 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 or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List created pursuant to Florida Statute Section 215.473.

16. CHAPTER 119, FLA. STATUTE REQUIREMENT

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.

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. 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.

17. 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. Contractor shall require all consultants, subcontractors and suppliers of any tier to comply with this paragraph.

18. Nondiscrimination

A. Compliance with Nondiscrimination Requirements

During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

1. **Compliance with Regulations:** The Contractor (hereinafter includes subcontractors and consultants) will comply with the Title VI List of Pertinent Nondiscrimination Statutes and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this Contract.
2. **Nondiscrimination:** The Contractor, with regard to the work performed by it during the Contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, 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 Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this Contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The 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 Owner or the Federal Aviation Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Owner or the Federal Aviation Administration, 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 Nondiscrimination provisions of this Contract, the Owner will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
 - a. Withholding payments to the Contractor under the Contract until the Contractor complies; and/or
 - b. Cancelling, terminating, or suspending the contract, in whole or in part.

6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through five in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Owner or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in or is threatened with litigation by a subcontractor or supplier because of such direction, the Contractor may request the Owner to enter into any litigation to protect the interests of the Owner. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

B. Title VI List of Pertinent Nondiscrimination Authorities

During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest agrees to comply with the following nondiscrimination 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 Federal Aviation Administration'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 nondiscrimination 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 Contractor's programs (70 Fed. Reg. at 74087 to 74100); and
12. Title IX of the Education Amendments of 1972, as amended, which prohibits Contractor from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

C. Duration: Contractor must comply with this section during the period during which Federal financial assistance is extended to Owner, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case this provision obligates the Contractor for the longer of the following periods:

1. So long as the airport is used as an airport, or for another purpose involving the provision of similar services or benefits; or
2. So long as the Owner retains ownership or possession of the property.

19. Prohibited Interest

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 state of 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."

REMAINDER OF PAGE LEFT BLANK

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 _____, 201__.

ATTEST:

CONCRETE PROTECTION AND RESTORATION, INC.

By: _____

Title: _____

Print Name

Print Address

Signed, sealed, and delivered
in the presence of:

Witness

Print Name

Witness

Print Name

Notary for Concrete Protection and Restoration, Inc.

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____, 201__
by _____ in the capacity of _____, of

_____ a _____
(Name of organization or company, if any) (Corporation / Partnership / Sole Proprietor / Other)

on _____ behalf.

(Its / His / Her) (They are / He is / She is) (Personally known to me not personally known to me)

_____ and _____ take an oath.

and has produced the following document of identification) (they / he / she) (did / did not)

(Seal of Notary)

Signature of Notary

By the Authority this _____ day of _____, 201__.

HILLSBOROUGH COUNTY AVIATION AUTHORITY

(Affix Corporate Seal)

By: _____
Robert I. Watkins, Chairman

ATTEST:

Victor D. Crist, 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 this ____ day of _____, 201__,
by Robert I. Watkins, in the capacity of Chairman, and by Victor D. Crist, in the capacity of Secretary,
Hillsborough County Aviation Authority, a public body corporate under the laws of the State of Florida,
on its behalf. They are personally known to me and they did not take an oath.

Signature of Notary

Print, Type, or Stamp Commissioned Name of
Notary

END OF SECTION

**ATTACHMENT 1
HCAA PROJECT NO. 6120 17
BID TABULATION FOR
SHORT TERM GARAGE LEVEL 8 REHABILITATION
Tampa International Airport
Tampa, Florida**

Work Item Number	Item Description		Bidders Price Per Unit	Est Qty	Unit	Total Amount Per Item
1.1	Project Mobilization/Demobilization and Maintenance of Traffic					
	<u>One Hundred Fifty Eight Thousand</u>	<i>Dollars</i>	<u>Zero</u>	<i>Cents</i>	\$ <u>158,000.00</u>	<u>1</u> LS \$ <u>158,000.00</u>
	<i>Bid price per unit in words</i>		<i>In numbers</i>			
3.1	Concrete Floor Repair - Partial Depth					
	<u>Thirty Five</u>	<i>Dollars</i>	<u>Zero</u>	<i>Cents</i>	\$ <u>35.00</u>	<u>626</u> SF \$ <u>21,910.00</u>
	<i>Bid price per unit in words</i>		<i>In numbers</i>			
3.3	Concrete Floor Repair - Full Depth					
	<u>Sixty</u>	<i>Dollars</i>	<u>Zero</u>	<i>Cents</i>	\$ <u>60.00</u>	<u>400</u> SF \$ <u>24,000.00</u>
	<i>Bid price per unit in words</i>		<i>In numbers</i>			
3.4	Concrete Floor Repair - Curbs					
	<u>Seventy Five</u>	<i>Dollars</i>	<u>Zero</u>	<i>Cents</i>	\$ <u>75.00</u>	<u>20</u> SF \$ <u>1,500.00</u>
	<i>Bid price per unit in words</i>		<i>In numbers</i>			
4.1	Concrete Ceiling Repair - Partial Depth					
	<u>Ninety</u>	<i>Dollars</i>	<u>Zero</u>	<i>Cents</i>	\$ <u>90.00</u>	<u>20</u> SF \$ <u>1,800.00</u>
	<i>Bid price per unit in words</i>		<i>In numbers</i>			
5.1	Concrete Beam/Joist Repair - Partial Depth					
	<u>Ninety</u>	<i>Dollars</i>	<u>Zero</u>	<i>Cents</i>	\$ <u>90.00</u>	<u>10</u> SF \$ <u>900.00</u>
	<i>Bid price per unit in words</i>		<i>In numbers</i>			
6.1	Concrete Column Repair - Partial Depth					
	<u>Seventy Five</u>	<i>Dollars</i>	<u>Zero</u>	<i>Cents</i>	\$ <u>75.00</u>	<u>10</u> SF \$ <u>750.00</u>
	<i>Bid price per unit in words</i>		<i>In numbers</i>			
7.1	Concrete Wall Repair - Partial Depth					
	<u>Seventy Five</u>	<i>Dollars</i>	<u>Zero</u>	<i>Cents</i>	\$ <u>75.00</u>	<u>5</u> SF \$ <u>375.00</u>
	<i>Bid price per unit in words</i>		<i>In numbers</i>			

Work Item Number	Item Description	Bidders Price Per Unit	Est Qty	Unit	Total Amount Per Item
9.1	Expansion Joint Preparation - New Block-out				
	<u>Twenty Five</u> Dollars <u>Zero</u> Cents	\$ <u>25.00</u> In numbers	<u>1,040</u>	LF	\$ <u>26,000.00</u>
	<i>Bid price per unit in words</i>				
10.3	Expansion Joint - Elastomeric Concrete Edged - Less than or equal to 4"				
	<u>Seventy Five</u> Dollars <u>Zero</u> Cents	\$ <u>75.00</u> In numbers	<u>1,040</u>	LF	\$ <u>78,000.00</u>
	<i>Bid price per unit in words</i>				
10.7	Expansion Joint - Silicone Seal - Vertical				
	<u>Twenty Five</u> Dollars <u>Zero</u> Cents	\$ <u>25.00</u> In numbers	<u>40</u>	LF	\$ <u>1,000.00</u>
	<i>Bid price per unit in words</i>				
13.2	Epoxy Broadcast Crack Healer				
	<u>One Hundred Six Thousand Six Hundred Fifty</u> Dollars <u>Zero</u> Cents	\$ <u>106,650.00</u> In numbers	<u>1</u>	LS	\$ <u>106,650.00</u>
	<i>Bid price per unit in words</i>				
16.1	Traffic Topping - Vehicular				
	<u>Five Hundred Fifty Four Thousand Six Hundred Twenty Five</u> Dollars <u>Zero</u> Cents	\$ <u>554,625.00</u> In numbers	<u>1</u>	LS	\$ <u>554,625.00</u>
	<i>Bid price per unit in words</i>				
25.2	Mechanical - Supplementary Floor Drains				
	<u>One Thousand</u> Dollars <u>Zero</u> Cents	\$ <u>1,000.00</u> In numbers	<u>16</u>	EA	\$ <u>16,000.00</u>
	<i>Bid price per unit in words</i>				
25.3	Mechanical - Pipes and Hangers				
	<u>Seventy Five</u> Dollars <u>Zero</u> Cents	\$ <u>75.00</u> In numbers	<u>25</u>	LF	\$ <u>1,875.00</u>
	<i>Bid price per unit in words</i>				
35.8	Repair Stucco Fireproofing				
	<u>Three Hundred Twenty Five</u> Dollars <u>Zero</u> Cents	\$ <u>325.00</u> In numbers	<u>20</u>	SF	\$ <u>6,500.00</u>
	<i>Bid price per unit in words</i>				
35.9	Stucco Fireproof Enclosures				
	<u>One Thousand Three Hundred</u> Dollars <u>Zero</u> Cents	\$ <u>1,300.00</u> In numbers	<u>6</u>	EA	\$ <u>7,800.00</u>
	<i>Bid price per unit in words</i>				
40.1	Shear Transfer Connections				
	<u>Three Hundred Fifty</u> Dollars <u>Zero</u> Cents	\$ <u>350.00</u> In numbers	<u>5</u>	Pair of Angles	\$ <u>1,750.00</u>
	<i>Bid price per unit in words</i>				

Work Item Number	Item Description	Bidders Price Per Unit	Est Qty	Unit	Total Amount Per Item
40.2	Repair Structural Steel Slide Bearing				
	Three Hundred Fifty <i>Bid price per unit in words</i>	Dollars <u>Zero</u> Cents	\$ <u>350.00</u>	<u>6</u>	EA \$ <u>2,100.00</u>
			<i>In numbers</i>		
40.2.1	Repair Structural Steel Slide Bearing - Shoring				
	Thirty <i>Bid price per unit in words</i>	Dollars <u>Zero</u> Cents	\$ <u>30.00</u>	<u>72</u>	EA Post Shore \$ <u>2,160.00</u>
			<i>In numbers</i>		
40.5	Replace Junction Box Cover				
	Twenty <i>Bid price per unit in words</i>	Dollars <u>Zero</u> Cents	\$ <u>20.00</u>	<u>54</u>	EA \$ <u>1,080.00</u>
			<i>In numbers</i>		
45.1	Paint Traffic Markings				
	Thirty Six Thousand Nine Hundred Seventy Five <i>Bid price per unit in words</i>	Dollars <u>Zero</u> cents	\$ <u>36,975.00</u>	<u>1</u>	LS \$ <u>36,975.00</u>
			<i>In Numbers</i>		
45.2	Clean and Paint Concrete Columns				
	One <i>Bid price per unit in words</i>	Dollars <u>Sixty Five</u> cents	\$ <u>1.65</u>	<u>112</u>	EA \$ <u>184.80</u>
			<i>In Numbers</i>		
45.6	Clean and Paint Steel Bearing Assembly				
	One Hundred Ten <i>Bid price per unit in words</i>	Dollars <u>Zero</u> cents	\$ <u>110.00</u>	<u>6</u>	EA \$ <u>660.00</u>
			<i>In Numbers</i>		
45.8	Clean and Paint Steel Embed Plates				
	One Hundred Ten <i>Bid price per unit in words</i>	Dollars <u>Zero</u> Cents	\$ <u>110.00</u>	<u>120</u>	EA \$ <u>13,200.00</u>
			<i>In numbers</i>		
45.9	Clean and Paint Steel Column Collars				
	One Hundred Ten <i>Bid price per unit in words</i>	Dollars <u>Zero</u> Cents	\$ <u>110.00</u>	<u>160</u>	EA \$ <u>17,600.00</u>
			<i>In numbers</i>		
45.10	Clean and Paint Bollards and Baseplates				
	Two <i>Bid price per unit in words</i>	Dollars <u>Sixty</u> Cents	\$ <u>2.60</u>	<u>64</u>	LS \$ <u>166.40</u>
			<i>In numbers</i>		
45.11	Clean and Paint Fire Hose Boxes & Supports				
	One Hundred Ten <i>Bid price per unit in words</i>	Dollars <u>Zero</u> Cents	\$ <u>110.00</u>	<u>32</u>	EA \$ <u>3,520.00</u>
			<i>In numbers</i>		

Work Item Number	Item Description	Bidders Price Per Unit	Est Qty	Unit	Total Amount Per Item
NOTE: Basis of payment will be in accordance with the technical specifications applicable to each Bid					
Sub-total for all Bid Items not including Owner's Allowance					
	One Million Eighty Seven Thousand Eighty One <i>Total Bid Price including Owner's Allowance in words</i>	Dollars <u>Twenty</u> Cents	\$		<u>1,087,081.20</u> <i>In numbers</i>
1.7	Owner's Allowance (Work Item 1.7)				
	Fifty Thousand <i>Bid price per unit in words</i>	Dollars <u>Zero</u> Cents	\$ 50,000.00 <i>In numbers</i>	1 AL	50,000.00
Total Bid Amount including Owner's Allowance					
	One Million One Hundred Thirty Seven Thousand Eighty One <i>Total Bid Price including Owner's Allowance in words</i>	Dollars <u>Twenty</u> Cents	\$		<u>1,137,081.20</u> <i>In numbers</i>

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

WMBE Participation Commitment		
	A	B
Total WMBE Commitment Amount from Validated Letter of Intent	<u>\$125,500.00</u>	
Total Bid Amount		<u>\$1,137,081.20</u>
WMBE Commitment Percentage (equals A/B)	11%	

NOTE: The WMBE Commitment percentage is established in accordance with the Owner's WMBE 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 WMBE Commitment Percentage may only be modified by Change Order.

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

Name of Contractor: Concrete Protection and Restoration, Inc.

Signature of Contractor: _____

Title: _____

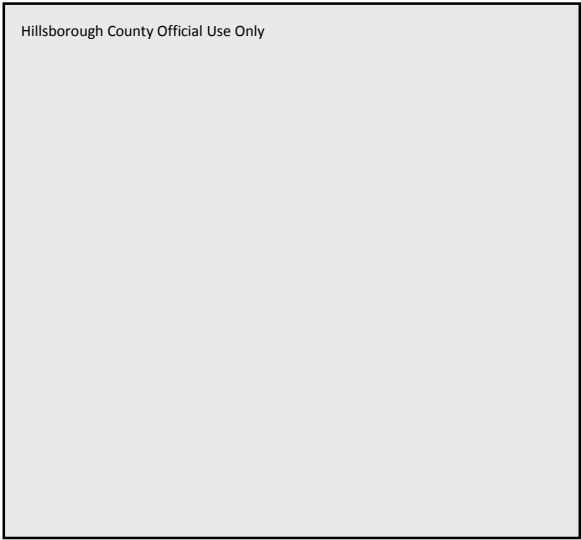
Date: _____

SECTION 00610
COMMON LAW PERFORMANCE BOND

BOND NO. _____

STATE OF _____

COUNTY OF _____



BY THIS BOND, Concrete Protection and Restoration, Inc. whose principal business address is 601 NE 44th Street, Oakland Park, FL 33334 business phone number is (954) 505-3977 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 One Hundred Thirty Seven Thousand Eighty One and Twenty Hundredth Dollars (U. S.) (\$1,137,081.20) 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 December 7, 2017 entered into an agreement with Owner for **AUTHORITY PROJECT NUMBER 6120 17, SHORT TERM PARKING GARAGE LEVEL 8 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.

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)

Name of Contractor

By: _____
(Signature)

Type Name and Title Below: _____

Address: _____

Telephone Number _____ Fax Number _____

(Affix Surety's Corporate Seal)

Name of Surety

By: _____
Attorney in Fact for Surety (Signature)

Type name of Attorney in Fact: _____
Attorney in Fact Address: _____
Attorney in Fact Address: _____

By: _____
Florida Licensed Agent (Signature)

Type name of Fla. Licensed Agent: _____
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.

SECTION 00620
STATUTORY PAYMENT BOND

BOND NO. _____

STATE OF _____

COUNTY OF _____

BY THIS BOND, Concrete Protection and Restoration, Inc. whose principal business address is 601 NE 44th Street, Oakland Park, FL 33334 business phone number (954) 505-3977 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 One Hundred Thirty Seven Thousand Eighty One and Twenty Hundredth Dollars (U. S.) (\$1,137,081.20) 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 December 7, 2017 between Contractor and Owner for **AUTHORITY PROJECT NUMBER 6120 17, SHORT TERM PARKING GARAGE LEVEL 8 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.

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 One
Hundred Thirty Seven Thousand Eighty One and Twenty Hundredth Dollars (U. S.) (\$1,137,081.20) on
behalf of Concrete Protection and Restoration, Inc. to the **HILLSBOROUGH COUNTY AVIATION AUTHORITY**
covering **PROJECT NUMBER 6120 17, SHORT TERM PARKING GARAGE LEVEL 8 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 this _____ day of _____
201__, by _____ who is personally known to me or who has produced the following
identification _____, and who did/did not take an oath.

Signature of Notary

SECTION 00650 - INSURANCE REQUIREMENTS

PART 1 - GENERAL CONDITIONS

1.01 INSURANCE COVERAGE AND LIMITS

A. Contractor must maintain the following limits and coverages uninterrupted or amended through the term of this Contract. In the event the Contractor becomes in default of the following requirements, the Owner reserves the right to take whatever actions deemed necessary to protect its interests. Required liability and property insurance policies, other than Workers' Compensation/Employer's Liability and Professional Liability, will provide that the Hillsborough County Aviation Authority (HCAA), members of the HCAA governing body, and the HCAA officers, volunteers, and employees are included as additional insureds.

1. Workers' Compensation/Employer's Liability:

The minimum limits of insurance (inclusive of any amounts provided by an umbrella or excess policy) will be:

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

2. Commercial General Liability:

The minimum limits of insurance (inclusive of any amounts provided by an umbrella or excess policy) covering the work performed pursuant to this Contract will be the amounts specified herein. Coverage will be provided for liability resulting out of, or in connection with, ongoing operations performed by, or on behalf of, Contractor under this Contract or the use or occupancy of Owner premises by, or on behalf of, Contractor in connection with this Contract. Completed operations coverage in the amount of \$1,000,000.00 will be maintained for a period of 3 years from the date of termination of Contract. Coverage shall be on a form no more restrictive than ISO form CG 00 01. Additional insurance coverage shall be provided on a form no more restrictive than ISO Form CG 20 10 10 01 and CG 20 37 10 01.

	Contract Specific
General Aggregate	\$ 1,000,000.
Each Occurrence	\$ 1,000,000.
Personal and Advertising Injury Each Occurrence	\$ 1,000,000.
Products/Completed Operations Aggregate	\$ 1,000,000.

3. Business Auto Liability:

Coverage will be provided for all owned, hired and non-owned vehicles. Coverage shall be provided on a form no more restrictive than ISO Form CA 00 01. The minimum limits of insurance (inclusive of any amounts provided by an umbrella or excess policy) covering the work performed pursuant to this Contract will be:

Each Occurrence - Bodily Injury and
Property Damage Combined \$ 1,000,000.

4. Builders Risk Coverage:

Builders Risk Coverage will be maintained by the Contractor and evidenced on the certificate during the life of the project. The required limits for this coverage will be the Contract sum amount or \$5,000,000 whichever is the lesser amount).

Limits of Coverage will be: \$ 1,000,000.
(amount to be inserted after bid is opened)

CONTRACTUAL INSURANCE TERMS AND CONDITIONS - STANDARD PROCEDURE S250.06

This Section incorporates the Owner's Standard Procedure S250.66 and establishes the insurance terms and conditions associated with contractual insurance requirements. This Section is applicable to all Contractors with Owner contracts. 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 Executive Vice President of Facilities and Administration or designee.

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 amounts and types of insurance conforming to the minimum requirements set forth in the Contract. Coverages 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 or companies with AM Best ratings lower than A- or a financial size category lower than VII may be approved on a case by case basis by Risk Management.

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. Completed operations coverage may be required to be maintained on specific commercial general liability policies effective on the date of substantial completion or the termination of the Contract, whichever is earlier. 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 stated otherwise in the Contract.

C. Reduction of Aggregate Limits:

If the aggregate limit is exhausted, the Contractor will immediately take all possible steps to have it reinstated. The general liability policies shall include a per policy endorsement providing that the limits of such insurance specified in the Contract shall apply solely to the work under the Contract without erosion of such limits by other claims or occurrences.

1. Cancellation Notice

Each of the insurance policies will be specifically endorsed to require the insurer to provide the Owner with 30 days written notice (or 10 days for non-payment of premium) prior to the cancellation of the policy. 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

D. No waiver by approval/disapproval:

The Owner accepts no responsibility for determining whether the Contractor's insurance is in full compliance with the insurance required by the Contract. Neither the approval by the Owner nor the failure to disapprove the insurance furnished by the Contractor will relieve the Contractor of their full responsibility to provide the insurance required by the Contract.

E. Future Modifications – Changes in Circumstances:

1. Changes in Coverages 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 coverages or minimum limits of insurance required by the Contractor, the Owner may change the coverages and minimum limits of insurance required, and the Contractor will, within 60 days of receipt of written notice of a change in the coverages and 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 until at least two years after inception of the Contract. Subsequent changes in the coverages or minimum limits of insurance will not be made until at least two years after any prior change unless extreme conditions warrant such change and are agreeable to both parties.

If, in the opinion of the Owner, compliance with the insurance requirements is not commercially practicable for the Contractor, 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. Any such modification will be subject to the prior written approval of the Executive Vice President of Facilities and Administration 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 will not commence work, 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 Contractor to commence work, 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 a certificate(s) of insurance satisfactory to the Owner. This certificate must be signed by an authorized representative of the insurer. 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, certificates of insurance, copies of required endorsements and/or 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.

The insurance certificate must:

- a. Indicate that, to the extent required by the Contract:
 - i. the Owner, members of the Owner's governing body, and the Owner's officers, volunteers and employees are included as Additional Insureds on all policies other than workers compensation and professional liability, and
 - ii. the insurers for all policies have waived their subrogation rights against the Owner;
- b. Indicate that the certificate has been issued in connection with the Contract;
- c. Indicate the amount of any deductible or self-insured retention applicable to all coverages;
- d. 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
and;

- e. Be signed and dated using approved methods by an individual who is an authorized representative of each insurer, whose insurance is the subject of the certificate and who is authorized by each such insurer to issue the certificate of insurance as modified. Facsimile signatures are acceptable.

G. Deductibles / Self Insurance:

1. All property and builders risk deductibles, as well as all self-insured retentions or any schemes other than a fully insured program, must be approved by the Executive Vice President of Facilities and Administration or designee. The Contractor agrees to provide all documentation necessary for the Owner to review the deductible or alternative program.
2. The Contractor will pay on behalf of the Owner, or any member of the Owner's governing body or any officer or employee of the Owner, any deductible or self-insured retention (SIR) 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 Agreement by the Owner to allow the use of a deductible or self-insurance program will be subject to periodic review by the Risk Manager. If, at any time, the Owner deems that the continued use of a deductible or self-insurance program by the Contractor should not be permitted, the Owner may, upon 60 days written notice to the Contractor, require the Contractor to replace or modify the deductible or self-insurance in a manner satisfactory to the Owner.
4. Any deductible amount or SIR program 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.

H. Contractor's Insurance Primary:

The Contractor's required insurance will apply on a primary basis. Any insurance maintained by the Owner will be excess and will not contribute to the insurance provided by or on behalf of the Contractor.

I. Applicable Law:

With respect to any contract entered into by the Owner with a value exceeding \$10,000,000, if any required policy 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 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 in connection

with claims arising out of work performed pursuant to the Contract.

J. 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 and employees, for damages or loss to the extent covered and paid for by any insurance maintained by the Contractor.

K. Contractor's Failure to Comply with Insurance Requirements:

1. Owner's Right to Procure Replacement Insurance

If, after the inception of the Contract, the Contractor 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 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 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 premium and a 15% administration cost.

a. Contractor to Remain Fully Liable

Except to the extent any insurance procured by the Owner actually provides the insurance coverage required by the Contract, the Contractor will remain fully liable for full compliance with the insurance requirements in 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. Authority is not obligated to procure any insurance pursuant to these requirements and retains the right, at its sole discretion, to terminate any such insurance which might be procured by the Owner.

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 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.
4. A Modification is a written amendment to the Contract signed by both parties, or a Change Order, work order or written order for a minor 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 Paragraph 3.18, 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 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 in not less than duplicate 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 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 Specifications, 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 good 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, 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 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. Contractor agrees to waive any personal claims it may have against Design Professional, its authorized representative or any officials of the Owner including its Board members, officers, employees, agents and volunteers.

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.
- 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. 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. 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.
- C. 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, free from faults and defects, and in conformance with the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective.
- 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 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 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.

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. 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 (POK)	City of Tampa
Plant City Airport (PCA)	City of Plant City
Tampa Executive Airport (TEA)	BOCC

- B. The Contractor will fully comply with all applicable federal, state, county, municipal or 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, Owner Rules and Regulations, and the Contractor 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 law, the Contractor will indemnify and hold Owner harmless from any fees, damages, fines or costs of any kind arising out of Contractor's failure to comply with such governmental regulations. This obligation to indemnify and hold harmless will be construed separately and independently. It is the parties mutual intent that if this change is found to be in conflict of the law, the clause will be considered modified by such law to the extent necessary to remedy the conflict. 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 the 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 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 preliminary and CPM (or bar chart) construction schedules 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 their 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.

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 airport authority concerned. In areas near airport operations, the Contractor will keep areas free from materials 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. The Contractor will defend suits or claims for infringement of patent rights and will hold the Owner and Design Professional harmless from loss on account thereof, but will not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents. However, 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.

3.19 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 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, subcontractor 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.

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 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.

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.
- 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: 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 their 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 their 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 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 at least three (3) working days' notice of such 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 at least three (3) working days' notice of such 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 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.

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 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 promptly 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 Contractor's Subcontractors List without permission of the Owner.
- E. Owner reserves the right but does not assume the obligation to pay any and all subcontractors and suppliers directly if a dispute arises with the Contractor. 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 subcontractor agreements executed to effect project completion.

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 their 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 schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

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 contractors' construction and operations with theirs 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 to the extent caused by the fault of the Contractor 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 Change Order, Supplemental Agreement, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Part and elsewhere in the Contract Documents.
 - 1. Any Claim for payment for changes in the Work that is not covered by written Change Order 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. An order for a minor 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 Change Order, Construction Change Directive or order for a minor change in the Work.
- 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 Change Order or Construction Change Directive 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 and will have the right to make such alterations in the Work as may be necessary or desirable to complete the Work originally intended in an acceptable manner. Unless otherwise specified herein, the Owner will be and is hereby authorized to make such alterations in the Work as may increase or decrease the originally awarded Contract Work, provided that the aggregate of such alterations does not change the total Contract cost or the total cost of any major Contract item by more than 25% (total cost being based on the unit prices and estimated quantities in the awarded Contract). Alterations that do not exceed the 25% limitation will not invalidate the Contract nor release the Surety, and the Contractor agrees to accept payment for such alterations as if the altered Work had been a part of the original Contract. These alterations which are for Work within the general scope of the Contract will be covered by "Change Orders" issued by the Owner. Change Orders for altered Work may include extensions of Contract Time where, in the Design Professional's opinion, such extensions are commensurate with the amount and difficulty of added Work.
2. Should the aggregate amount of altered Work exceed the 25% limitation specified above, such excess altered Work will be covered by Supplemental Agreement. 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. 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

TPA/ Short Term Parking Garage Level 8 Rehabilitation

- 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 MINOR 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.

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. Work under this Contract will not commence until the Owner has issued a written notice to proceed. 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.
- 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. 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).

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 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.

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 Section 00300 – BID FORM. 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 00300 – BID FORM 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.
 - 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 following 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 their 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 that is on the CD 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 thirty (30) day "look-ahead schedule", projected variances and calculation of the number of days difference between the as-built critical path and the Project Schedule critical path. Contractor shall, with each Application for Payment, provide completed monthly updated information for the previous month on the Project Schedule and updated information on manpower indicated as-built and as-planned conditions. The updated information in the Project Schedule shall not modify any milestone dates in the Project 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.
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 Project 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 Project Schedule;
 - b. A concise statement of the outlook for meeting future Project 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 Project 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; and
 - (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.
7. The Contractor will submit with each Application for Payment a detailed accounting of the value of Work performed to date by their Subcontractors. Submission detail will be organized identifying the supporting information.

This accounting will include:

 - a. the names and addresses of their Subcontractors that have participated on the Contract;
 - b. a description of the Work each of their Subcontractors has performed;
 - c. the value of Work performed by each of their Subcontractors;
 - d. fully signed Subcontractor agreements;
 - e. copies of statutory 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 detail 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. Until 50% of the total Contract Sum has been expended, the Owner will pay to Contractor 90% 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 10% 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. After 50% completion, the retainage withheld may be reduced to 5% from each subsequent application for payment.

The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 20 days after the Contractor has received a partial payment. The Contractor is required to fully pay retainage to the subcontractor within 20 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. 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 a good faith effort to do so.
 - (1) Failure of the Contractor to make a good faith effort to achieve 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.

- 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.

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 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, which defect, imperfection, or damage will have been discovered on or before the Final Acceptance of the Work. 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. When the Contractor considers a portion substantially complete, the Contractor will prepare and submit a list to the Design Professional as provided under Subparagraph 9.07 B.
- B. 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 used in order to determine and record the condition of the Work.
- C. 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 receipt of written notice that inspection of the whole Work is ready for Final Acceptance, the Owner and Design Professional will promptly make such inspection and, when the Owner and Design Professional finds 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 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.
- 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) all final certified payrolls, and (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. Upon satisfactory final acceptance of all Work required by the Contract Documents, receipt of notice of final acceptance from the Design Professional and compliance with project closeout of Section 01700 – PROJECT CLOSEOUT, 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.

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 Owners 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 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 Design Professional'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. 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 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, 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 authorities having jurisdiction determine 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

The Contractor agrees to comply with 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 their new employees and will require that their subcontractors verify all of their new employees in accordance with the E-verify requirements set out above.

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

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

- 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.

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.

PART 13 – TERMINATION OR SUSPENSION OF THE CONTRACT

13.01 TERMINATION BY THE OWNER FOR CAUSE

- A. 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, discontinues the prosecution of the Work, abandons the prosecution of the Work, or fails to resume Work which has been discontinued within a reasonable time after notice to do so; 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
 4. Fails to comply with Contract requirements regarding minimum wage payments, EEO, W/MBE or DBE requirements; or
 5. Disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction; or
 6. Allows any final judgment against it to remain unsatisfied for a period of 30 days; or
 7. 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

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. 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
 10. Materially breaches any provision in this Contract; or
 11. 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;
 12. 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
 13. 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 FOR CONVENIENCE

The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine. 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.

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 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.

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

Contractor agrees to deliver or provide access to all records requested by 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 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 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 their 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

TPA/ Short Term Parking Garage Level 8 Rehabilitation

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 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.

- A. 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, Federal Aviation Administration, Federal Highway Administration, Florida Department of Transportation, Florida Department of Financial Services, Florida Auditor General, Florida Inspector General, Florida Chief Financial Officer, 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 five years after the end of the term of this Contract.
- B. If the records are kept at locations other than the Airport, Contractor will arrange for said records to be brought to a location convenient to Owner's auditors to conduct the engagement as set forth in this Article. Or, Contractor may transport Owner's team to location of records for purposes of undertaking said engagement. In such event, Contractor will pay reasonable costs of transportation, food and lodging for Owner's team.
- C. 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.
- D. Contractor agrees to deliver or provide access to all records requested by Owner's auditors within 14 calendar days of the request at the initiation of the engagement and to deliver or provide access to subsequent request during the engagement within 7 calendar days of each request. The parties recognize that the Owner will incur additional costs if records requested by 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 Contractor is late in submitting requested records to perform the engagement. Accrual of fee will continue until specific performance is accomplished. This liquidated damage rate is not an exclusive remedy and Owner retains its rights including but not limited to its rights to elect its remedies and pursue all legal and equitable remedies. 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.

- E. 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.
- F. The Contractor will provide all information and reports requested by the Owner, or any of their 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 GMP Proposal. 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.
- G. 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 Authority 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.
- H. 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.
- I. Approvals by 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 perform audits, inspections, or attestation engagements.
- J. 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.

PART 15 – CIVIL RIGHTS

15.01 GENERAL REQUIREMENT FOR CONTRACTS

Subject to the applicability criteria noted in the specific Contract provisions, these Contract provisions apply to all work performed on the Contract. Failure to comply with the terms of these Contract provisions may be sufficient grounds to:

1. Withhold progress payments or final payment,
2. Terminate the Contract,
3. Seek suspension/debarment, or
4. Any other action determined to be appropriate by the Owner or the FAA.

15.02 CIVIL RIGHTS – GENERAL - 49 USC § 47123

- A. The Contractor agrees that it will 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 handicap be excluded from participating in any activity conducted with or benefiting from Federal assistance.
- B. Duration:
1. This provision binds the Contractor from the bid solicitation period through the completion of the Contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.
 2. This provision also obligates the Contractor or its transferee for the period during which Federal assistance is extended to the airport through the Airport Improvement Program, except where Federal assistance is to provide, or is in the form of personal property; real property or interest therein; structures or improvements thereon. In these cases the provision obligates the Contractor for the longer of the following periods:
 - i. The period during which the property is used by the Owner or any transferee for a purpose for which Federal assistance is extended, or for another purpose involving the provision of similar services or benefits; or
 - ii. The period during which the Owner or any transferee retains ownership or possession of the property.

END OF SECTION

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

DRAWING NUMBER	TITLE
	COVER SHEET
G-100	DRAWING INDEX
G-002	HAULING PLAN & STAGING PLAN
G-003	PHASING PLAN & SECURITY/SAFETY NOTES (1)
G-004	PHASING PLAN & SECURITY/SAFETY NOTES (2)
G-005	STPG LEVEL 8 GENERAL PHASING PLAN
R-001	RESTORATION GENERAL NOTES, LEGEND & ABBREVIATIONS
R-100	WORK ITEM SCHEDULE (STPG LEVEL 8)
R-101.01	PARTIAL STPG LEVEL 8 REPAIR FLOOR PLAN (01)
R-101.02	PARTIAL STPG LEVEL 8 REPAIR FLOOR PLAN (02)
R-101.03	PARTIAL STPG LEVEL 8 REPAIR FLOOR PLAN (03)
R-101.04	PARTIAL STPG LEVEL 8 REPAIR PLAN FLOOR (04)
R-102.01	PARTIAL STPG LEVEL 8 REFLECTED CEILING REPAIR PLAN (01)
R-102.02	PARTIAL STPG LEVEL 8 REFLECTED CEILING REPAIR PLAN (02)
R-102.03	PARTIAL STPG LEVEL 8 REFLECTED CEILING REPAIR PLAN (03)
R-102.04	PARTIAL STPG LEVEL 8 REFLECTED CEILING REPAIR PLAN (04)
R-103.01	PARTIAL STPG LEVEL 8 RESTRIPIING PLAN (01)
R-103.02	PARTIAL STPG LEVEL 8 RESTRIPIING PLAN (02)
R-103.03	PARTIAL STPG LEVEL 8 RESTRIPIING PLAN (03)
R-103.04	PARTIAL STPG LEVEL 8 RESTRIPIING PLAN (04)
R-104.01	PARTIAL STPG LEVEL 8 NUMBERING PLAN (01)
R-104.02	PARTIAL STPG LEVEL 8 NUMBERING PLAN (02)
R-104.03	PARTIAL STPG LEVEL 8 NUMBERING PLAN (03)
R-104.04	PARTIAL STPG LEVEL 8 NUMBERING PLAN (04)
R-105.01	PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-1)
R-105.02	PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-2)
R-105.03	PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-3)
R-105.04	PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-4)
R-105.05	PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN S/E CORES
R-109.01	STRIPING DETAILS (1)
R-109.02	STRIPING DETAILS (2)
R-109.03	STRIPING DETAILS (3)
R-109.04	STRIPING DETAILS (4)
R-501	WORK ITEM DETAILS (1)
R-502	WORK ITEM DETAILS (2)
R-503	WORK ITEM DETAILS (3)
R-504	WORK ITEM DETAILS (4)
R-505	WORK ITEM DETAILS (5)
R-506	WORK ITEM DETAILS (6)
R-507	WORK ITEM DETAILS (7)
R-508	WORK ITEM DETAILS (8)
R-509	WORK ITEM DETAILS (9)

TPA/ Short Term Parking Garage Level 8 Rehabilitation

DRAWING NUMBER	TITLE
R-510	WORK ITEM DETAILS (10)
R-601	REPAIR PHOTOS (1)
R-602	REPAIR PHOTOS (2)
R-603	REPAIR PHOTOS (3)
R-604	REPAIR PHOTOS (4)

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:

**Short Term Parking Garage Level 8 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: 6120 17

Description: This Project consists of rehabilitation of Level 8 of the Short Term Parking Garage, including concrete repairs to floors, ceilings, columns and walls. Waterproofing components will be replaced with the replacement of 1,040 linear feet of existing expansion joint, application of approximately 118,000 square feet of epoxy crack healer and 246,000 square feet traffic bearing membrane to waterproof the entire parking level. Also included in this Project are pavement markings and miscellaneous painting of structural and non-structural components.

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 good 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 good workmanlike manner in accordance with the Contract Documents.

1.02 LIMITS OF CONSTRUCTION

Any existing condition disturbed due to Contractor's Work will be restored to the Owner's satisfaction at the Contractor's expense.

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. 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.
- C. Wherever existing structures interfere with Contractor's Work, Contractor shall be responsible for all modifications, including removal if appropriate, to fit Contractor's Work.
- D. Where existing structures are determined to be removed, Contractor shall remove and dispose of the material. Where such structures are determined to remain and are integrated into 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, 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 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., 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. 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.
 - E. 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. The Contractor will be responsible for the planning, scheduling and coordination of all Work performed under the Contract Documents and the entire Project as a whole so that materials will arrive on schedule and Work will proceed without delay.
- B. Contractor will be responsible for complying with Scheduling requirements contained in the Contract Documents. Contractor will be responsible for coordination with Owner for site access.

1.07 COOPERATION BETWEEN CONTRACTORS

- A. 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.
- B. The Owner reserves the right to contract for and perform other or additional construction on or near the Work covered by this 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 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.

1.08 LAWS, PERMITS, AND REGULATIONS

The Contractor will:

- A. Comply with all applicable laws, ordinances, regulations, codes, and ADA requirements.
- B. Obtain and pay for all license and permits, all fees and charges for connection to outside services and parking for Contractor's vehicles.
- C. Abide by FAA, TSA, and Owner's safety and security regulations and procedures relative to access to, and work in, Airport Operations Areas and secured facilities.
- D. Comply with Owner's insurance requirements.
- E. Comply with the requirements of Authorities Having Jurisdiction (AHJ).

1.09 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 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. 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.
- 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 \$ 50,000.00 of the Contract Sum for:

- 1. Owner's Allowance may be used for repair and/or replacement of utilities (sanitary and storm sewer, potable water, fire protection, mechanical ductwork, pipe and duct insulation, conduits, electrical conductors, communications cabling, security lines, etc.) and structural steel located above ceilings when found to be deteriorated and/or damaged as determined by the Owner. A Work Order for this condition will be issued within seven days after Contractor permits unrestricted access to an environmentally safe and clean area for Owner's inspection.
- 2. Owner's Allowance may be used for relocation and adjustments of Work within the airport tenants' space (airlines, rental car companies, etc.) and other contracts. This Work shall include all disciplines: architectural, structural, mechanical, plumbing, electrical, communications, fire protection, etc.
- 3. Owner's Allowance may be used for resolution of unforeseeable conditions between proposed work and the work of tenants and other contracts. Include all disciplines: architectural, structural, mechanical, plumbing, electrical, communications, fire protection, etc.
- 4. Owner's Allowance may be used for any Work not shown in the Contract Documents, but which is necessary to complete the Project, with approval of 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 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.

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.

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 will furnish horizontal and vertical control points only, which may be outside the limits of the Project site. The Contractor will preserve all horizontal and vertical control points furnished by the Owner.
- 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.
- B. Upon completion of foundation walls and major Project site improvements, prepare certified survey showing dimensions, locations, angles, and elevations of construction.
- C. With respect to the 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. Furnish two copies of survey data and two copies of final survey.
- E. Furnish three copies, 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 Work are shown on drawings according to best information available.
- B. The Contractor will verify 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 proper authority before initiating new construction over existing utilities. The Contractor will submit copy or original written permission before commencing Work. The Contractor will furnish the proper release from proper authority before Final Acceptance of Work.
- D. The Contractor will repair cuts to existing utilities made during construction process as

part of Project Work to satisfaction of 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, conventions and agreements within the construction industry which effectively control the performance of the Work 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. Subject to 1.02 A, 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. **ACCESS ROAD.** The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.

2. **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."
3. **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.
4. **AIRPORT.** Airport means Tampa International Airport.
5. **AIRPORT IMPROVEMENT PROGRAM (AIP).** The AIP means a grant-in-aid program administered by the Federal Aviation Administration.
6. **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.
7. **APM: Automated People Mover.** A guided transit mode with fully automated operation, featuring vehicles that operate on guideways with exclusive right-of-way.
8. **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.
9. **AWARD.** The acceptance by the Owner of the successful Bidder's Bid.
10. **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.
11. **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.
13. **BIDDER.** Any individual, partnership, firm or corporation, acting directly or through a duly authorized representative, who submits a Bid for the Work contemplated.
14. **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.
15. **DAY.** As used in the Contract Documents means calendar day unless otherwise specifically defined.

16. 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.
17. 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.
18. CONTRACT DOCUMENTS. The Contract Documents consist of the executed Contract between the Owner and Contractor, the Contractor's GMP Proposal as accepted by the Owner, Bonds, Insurance Requirements, the Division 1 Documents, E-Verify Certification and any Contract Modifications issued after execution of the Contract.
19. 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.
20. DRAINAGE SYSTEM. The system of pipes, ditches, ponds, and structures by which surface or subsurface waters are collected and conducted from the airport area.
21. DRAWINGS. The official Drawings or exact reproductions which show the location, character, dimensions and details of the airport and the Work to be done.
22. 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.
23. 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.
24. 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.
25. FAA (Federal Aviation Administration). When used to designate a person, FAA means the Administrator or its duly authorized representative.

26. **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.
27. **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.
28. **FHWA (Federal Highway Administration).** When used to designate a person, FHWA will mean the Administrator or its duly authorized representative.
29. **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.
30. **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.
31. **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.
32. **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.
33. **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.
34. **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.
35. LABORATORY. The official testing laboratories of the Contractor or Owner or such other laboratories as may be designated by the Owner.
 36. 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.
 37. 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.
 38. MATERIALS. Any substance to be used in the Work.
 39. 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.
 40. 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.
 41. 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.

42. 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.
43. 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" in these Contract Documents. For AIP Contracts, the term Sponsor will have the same meaning as the term Owner.
44. PAVEMENT. The combined surface or friction course, structural course, base course, and sub-base course, if any, considered as a single unit.
45. 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.
46. 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.
47. PROJECT. The Work defined in the Contract Documents.
48. 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 Tampa International Airport.
49. 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.
50. 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.
51. RUNWAY. The area on the airport designated for the landing and takeoff of aircraft.

52. 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.
53. SHUTTLE. A guided transit mode with fully automated operation, featuring vehicles that operate on guideways between the Main Terminal and Airsides
54. 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.
54. SPONSOR. See "Owner".
55. 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.
56. SUBGRADE. The soil which forms the pavement foundation.
57. 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.
58. 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.
59. SURETY. The corporation, partnership, or individual, other than the Contractor, executing Payment and Performance Bonds which are furnished to the Owner by the Contractor.
60. 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.
61. 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.
62. 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.

- 63. UNIT PRICE. Cost per unit of Work.
- 64. 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.

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 will 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 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
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).

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

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. 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. 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 batch plant permit(s), or failure to pay all charges, fees and taxes, or failure to give all notices timely.

1.03 VERIFICATION OF EXISTING CONDITIONS

Prior to bidding and commencing with construction, the Contractor will familiarize themselves 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, Contractor will within 7 calendar days of discovery, notify the Owner in writing or otherwise 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, as well as the Contractor's equipment and personnel, is the most important consideration. It is understood and agreed that the Contractor will provide for the free and unobstructed movement of aircraft 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. 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.
- 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. Should it be 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 public use until ordered by the Owner in writing. Should it become necessary to open a portion of the Work to public 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 Tampa International Airport 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: 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. 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 Contractor's operations.
- L. Traffic Plan: If applicable, the Contractor will present its Maintenance of Traffic Plan at the Pre-construction Conference/meeting. 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 approved in writing. Except in an emergency, no changes to the approved Maintenance of Traffic Plan will be allowed until approval 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, will rest with the Contractor. 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 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. 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. Flagmen: The Contractor will provide competent flagmen 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 Contractor's logo or 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.
- 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.
- U. Elevator Use: Existing passenger elevators and escalators will not be used. 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, give 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 form addressed to the Owner with a blank space for a description of the interference, the exact area affected, 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 will not use restaurants, lounges or other concession areas within the Airport, unless approved 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.
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.

1.05 METHODS AND EQUIPMENT

- A. All equipment which is proposed to be used on the Work will be of sufficient size and in such mechanical condition as to meet requirements of the Work and to produce a satisfactory quality of Work. Equipment used on any portion of the Work will be such that no injury to previously completed Work, adjacent property, or existing Airport facilities will result from its use.
- B. When the methods and equipment to be used by the Contractor in accomplishing the Work are not prescribed in the Contract, 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 specifies the use of certain methods and equipment, such methods and equipment will be used unless others are authorized by the Owner. If the Contractor desires to use a method or type of equipment other than specified in the Contract, Contractor may request approval from the Owner to do so. The request will be in writing and will include a full description of the methods and/or equipment proposed and 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 the Contract Documents. If, after trial use of the substituted methods or equipment, the Owner determines that the Work produced does not meet the Contract Documents, the Contractor will discontinue the use of the substitute method or equipment and will complete the remaining Work with the specified methods and equipment.
- 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 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 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.

1.07 CLEANING AND PROTECTION

- 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. New Carpet: Where new carpeting has been installed, Contractor will fully protect such new carpeting 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 carpeting.

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.
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.

3. Electrical:
- a. All work will conform to applicable codes and standards.
 - b. All work will conform to the National Electric Code.
 - c. All work will conform to the City of Tampa Electric Code and a City of Tampa Electric Permit will be obtained and displayed at the work site.
 - d. In addition, the Owner requires:
 - (1) All temporary or permanent conductors (power, lighting, control or communication) to be placed in conduit or routed by way or existing approved cable trays.
 - (2) ALL CONDUITS AND RACEWAYS WILL BE CONCEALED. (Special permission may be granted for exposed conduit in shop areas or some other places that are completely removed from office, commercial, and public areas.)
 - (3) All items to be independently supported from the structural portion of the building. All items will be installed as close as possible to the structure; i.e., tight up against the structure. Conduits and raceways will be installed parallel to the building structural members. Conduits and raceways will not be located within 6-inches of other systems (HVAC ducts, chilled water lines, sprinkler lines, domestic water lines, bus ducts, etc.) and multiple runs of conduits or raceways will be routed together. Bus duct will be separately supported using manufacturer's standard equipment allowing for removal and inspection of all cover plates. Contractor will furnish drawings, prior to installation, showing layout and elevations of all multiple conduits, raceways, cable tray and bus duct routes.
 - (4) The Contractor to supply drawings showing all Work to be performed. Drawings will show new branch or feeder circuits and identify panel and breaker numbers where originating, size of conduit, size of wire, number of conductors and full load current.
 - (5) All conduits or raceways crossing expansion joints are to be equipped with expansion-type fittings. Cable extensions from raceway terminations will not exceed 5-feet. Sleeves will be used when conduits pass through walls, floors and roofs and will be galvanized steel, sized to allow for a minimum 1/4-inch clearance. Fire rating integrity will be restored after penetration.
 - (6) Flexible steel conduit is limited to final connections to motors

and transformers and will be restricted to 18 to 36-inches in length. Flexible steel conduit may also be used to connect outlet boxes to recessed lighting fixtures in lengths not to exceed 4 to 6-feet.

- (7) Self-stripping electrical wire connectors are prohibited.
- (8) Fixtures mounted in suspended ceilings are to be supported independently of the ceiling. Fixtures will be supported on all four corners with near-vertical supports.
- (9) All lighting fixtures and signs are to be equipped with a renewable fuse in an external GLR holder.
- (10) A manufacturer's drawing is to be submitted on all new light fixtures showing type and size.
- (11) Existing lighting fixtures that are scheduled for removal will not be salvaged to the Owner, unless otherwise noted.
- (12) All restroom automatic sensor system components are to be low voltage 24V, without exception.
- (13) All new fire alarm, security/access control and other systems are to match existing. Coordinate with Owner, as required

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.

1.08 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.

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 BID SCHEDULE, Section 00340:

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 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. Bituminous materials will be measured by the gallon or ton. When measured by volume, such volumes will be measured at 60-degrees F or will be corrected to the volume at 60-degrees F using ASTM D 1250 for asphalts or ASTM D 633 for tars.

12. 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 bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the Work.

13. When bituminous materials are shipped by rail or truck transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

14. Cement will be measured by the ton or hundredweight.

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 Unit Price Item of payment will mean complete payment for the Work described in the Contract.

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 for weighing materials which are required to be proportioned or measured and paid for by weight will be furnished, erected, and maintained by the Contractor, or by certified, permanently installed commercial scales.

20. Scales will be accurate within one-half percent of the correct weight throughout the range of use. The Contractor will have the scales checked under the observation of the Owner before beginning Work and at such other times as requested. The intervals will be uniform in spacing throughout the graduated or marked length of the beam or dial and will not exceed one-tenth of one percent of the nominal rated capacity of the scale, but not less than one pound. The use of spring balances will not be permitted.

21. Beams, dials, platforms, and other scale equipment will be so arranged that the operator and inspector can safely and conveniently view them.

a. Scale installations will have available ten standard 5.0-pound (2.3 kilogram) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

22. Scales must be tested for accuracy and serviced before use at a new site. Platform scales will be installed and maintained with the platform level and rigid bulkheads at each end.

23. Scales "overweighing" (indicating more than correct weight) will not be permitted to operate and all materials received subsequent to the last previous correct weighing-accuracy test will be reduced by the percentage of error in excess of one-half of one percent.

24. In the event inspection reveals the scales have been "underweighing" (indicating less than correct weight) they will be adjusted and no additional payment to the Contractor will be allowed for materials previously weighed and recorded.

25. 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 section and for the weighing of materials for proportioning or payment will be included in the Unit Contract Prices for the various items of the Project.

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.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01315 - SCHEDULES, PHASING

PART 1 - GENERAL

1.01 DESCRIPTION

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, Contractor will submit Contractor's 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 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 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 left hand margin, ranging from zero to Contract Sum.

- c. Submit updated schedule and S-curve with monthly pay request as herein specified.
2. This 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 initial Construction Schedule will be recognized by the Owner and Design Professional when it is prepared in accordance with the Contract Documents.

C. Distribution:

After Owner's and Design Professional's review and recognition, the Contractor will print and distribute the Construction Schedule to entities with a need-to-know responsibility, including three copies each to the Owner and Design Professional. Contractor will also post the Construction Schedule in temporary office space. Revise at intervals matching payment requests and redistribute. Provide copies required with payment requests.

D. Maintenance of Schedule:

1. The Contractor's recognized Construction Schedule will be updated monthly, and three printed copies and electronic media will be submitted with each of the Contractor's Applications for Payment. 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 will 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, 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. Should a review indicate the Work has fallen behind the recognized Construction Schedule, at the option of the Owner or Design Professional, funds equal to the established liquidated damages for the number of days behind schedule will be withheld until the Work is brought back on schedule.

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 will be assessed.

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 8.3 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 PHASING/SEQUENCING

A. General:

1. The Work of this Contract for Short Term Parking Garage Level 8 Rehabilitation 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 Project Schedule so as not to interfere with the on-going operations of the airport.
4. So that the Work of this Contract may be coordinated with the Work of other contracts, portions of the Work of this Contract will be completed by prescribed Milestones. The time schedule for these Milestones is critical.
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

1.01 RELATED DOCUMENTS:

- A. Requirements of the Contract Documents, including Division 01.

1.02 SUMMARY:

- B. 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.

- C. 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.

- D. 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. Safety Data Sheets (SDS).

- E. 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.

- F. 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.

1.03 SUBMISSION AND APPROVAL SCHEDULE

- A. Immediately following development and acceptance of a fully developed Progress Schedule specified under Section 01315 - SCHEDULES, PHASING, prepare complete schedule of work-related submittals, including Shop Drawings, Product Data, and Samples. Submit within ten days of date required for establishment of Progress Schedule. Correlate Submittal Schedule listing of principal subcontractors with listing of products or procurements schedule as specified in Section 01315 - SCHEDULES, PHASING. The Contractor will prepare and keep current, for the Owner's and Design Professional's approval, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Owner and Design Professional reasonable time to review submittals.
- B. Color Schedule: Submit to Owner separate listing of items requiring color selection by the Owner and the Design Professional.
- C. The Contractor will prepare and submit in triplicate to the Owner a complete itemized Schedule of Shop Drawings, Product Data and Samples, listing each and all such items as required under these Specifications. Schedules will indicate for each required item:
1. Chronological sequence of first submittals.
 2. Category of submittal, generic description of work covered, activity or event number on Progress Schedule, scheduled date for first submission, and blank columns for actual date of submittal, resubmittal, and final release or acceptance by Design Professional.
 3. Identification as to pertinent Specification Division.
 4. Item(s) involved.
 5. Name of pertinent subcontractor or supplier and the name of pertinent manufacturer.
 6. Schedule date of delivery of pertinent items to the Project.

1.04 PROCEDURE REQUIREMENTS

A. General:

1. The Contractor will submit all Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents to the Owner for Owner's comments and review in coordination with the Design Professional.
2. The Contractor will review, approve and submit to the Owner, 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, Design Professional or of separate contractors.
3. 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.
4. 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, quantities, 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 all such information is the responsibility of the Contractor. In reviewing Shop Drawings, Product Data, Samples and similar submittals, the Owner and Design Professional will be entitled to rely upon the Contractor's representation that such information is correct and accurate.
5. The Contractor will not be relieved of responsibility for deviations from requirements of the Contract Documents by the Owner's review of, or the Design Professional's approval of, Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Owner and Design Professional in writing of such deviation at the time of submittal and that the Design Professional 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.
6. Burden of proof that products, materials, Shop Drawings, Product Data, Samples and similar submittals comply with the Contract Documents in every respect and that any substitutions, variations, deviations or modifications to exactly what is specified will, in fact, work well in coordination and harmony and will serve the intended purpose, will rest solely with the Contractor.
7. Listing of subcontractors, subcontracts and purchase orders.
8. Contractor's construction schedule.

9. Progress Schedules.
10. Progress reports.

1.05 SUBMITTAL PROCEDURES:

- G. Coordination: Coordinate preparation and processing of submittals with performance of the Work.
1. 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.
 2. The Owner will review all submittals for conformance with the Contract Documents.
 3. Request for payment of stored materials will not be considered until submittals have been received and approved by the Owner.
 4. 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.
 5. 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.
 6. 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.
 7. 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 per the schedule. Where processing must be delayed to permit coordination with subsequent submittals, allow additional time. 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 each of submittal per 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.
- H. Submittal Preparation: Place a permanent label or title block on each submittal for identification, and submit the information in Submittal Binders. The Contractor has the option to provide Submittals in electronic (PDF) format for the Contractor's own uses, but the specified number of hard copy submittals shall be met. PDF files will be required for all Operations & Maintenance (O&M) and Close-out documents. The PDF file shall be enabled for Adobe Reader's Comment and Markup functionality. All stamps and markings described herein shall be electronically duplicated or added before scanning. The PDF files shall be transmitted on a CD/DVD to the Owner.
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's Designer.
 - f. Name and address of Contractor.
 - g. Name and address of subcontractor.
 - h. Name and address of supplier.
 - i. Name of manufacturer.
 - j. Number and title of appropriate Specification Section.

- k. Drawing number and detail references, as appropriate.
- l. Similar definitive information as necessary.

- 5. The Contractor shall stamp 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:_____"

- a. The Contractor's authorized representative shall sign the certifying statement or approval statement. The signatures shall be in original ink. Stamped or photocopied signatures are not acceptable.

- 6. The Contractor shall provide additional tabs (blank sections) in each manual for future submittals.

- I. Submittal Transmittal: The Contractor shall package each submittal appropriately for 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. 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.

1.06 SPECIFIC SUBMITTAL REQUIREMENTS:

- J. 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.
 - 5. Except for templates, patterns and similar full-size Drawings, the Contractor shall submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 30" x 42". Shop drawings submitted as PDF files shall be generated full size of the original and not scale to fit.
 - 6. In submitting paper, the Contractor shall submit a sufficient number of copies to enable the Owner to retain four (4) copies of each required Product Data submittal; submit two (2) additional copies where copies are required for operating and maintenance manuals. The Owner will return the other marked copies with the action taken and corrections or modifications required as appropriate. One (1) print of each drawing larger than 11" x 17" for review will be returned to the Contractor.
 - 7. The Contractor shall leave a blank area, approximately 4 inches by 2.5 inches, near the title block for the Owner's review stamp in print.

- K. 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 been printed to include 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. In submitting paper, the Contractor shall submit a sufficient number of copies to enable the Owner to retain four (4) copies of each required Product Data submittal; submit two (2) additional copies where copies are required for operating and maintenance manuals. The Owner will return the other marked copies with the action taken and corrections or modifications required as appropriate.
 - a. Unless the Owner observes noncompliance with provisions of the Contract Documents or requires re-submittal for other reasons, the initial submittal may serve as the final submittal, if appropriate.
 7. 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 three samples (sets). One set will be returned marked with the action taken. The Owner will retain copies.
- 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.

1.07 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 stamp each submittal sheet or page 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, of 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.

1.08 SUBMITTAL BROCHURE BINDERS: This section is applicable only to hard copy submittals.

- D. Brochure Binders shall be 3-ring, vinyl covered, with clear view insert type cover and spine.
 - 1. Binder Size: 8.5 x 11.0 inches x size (spine) adequate to easily contain the required submittals. Minimum spine size shall be 1-inch, maximum shall be 3-inches. Provide additional binders if the 3-inch size is not sufficient to properly contain submittals.
 - 2. Binder Cover: Binders shall have a clear view, vinyl pocket on the front cover, adequate to hold an 8.5 inch by 11 inch description sheet. The binder shall have a clear view, vinyl spine pocket adequate to hold an 11 inch long description sheet.
- E. Binder Contents shall include the following.
 - 1. Cover sheet; cover sheet shall be white with black letters, minimum 11-inches high and full width of spine pocket. See "EXAMPLES" included at end of this Section.
 - 2. First page shall be a copy of the Specification table of contents.
 - 3. Second page shall be a list of project addresses (see "EXAMPLE").
 - 4. Third page shall be Project information (see "EXAMPLE").
 - 5. Provide reinforced separation sheets tabbed with appropriate specification reference number.
 - 6. Product data sheets.
 - 7. Shop drawings.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.01 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.

TPA/ Short Term Parking Garage Level 8 Rehabilitation

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 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 includes 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 include 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 meets 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. Contractor shall 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 Maintenance 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, 3.01 B.3.
 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 Jobsite Coordination Meeting with the Owner. This 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 01350 - BUILDING INFORMATION MODELING REQUIREMENTS

PART 1 – GENERAL

1.01 DESCRIPTION

A. Definitions:

1. **Building Information Modeling (BIM):** Means a process focused on the development, use and transfer of facility attribute data of a construction project to improve the design, construction and operations of a project in order to achieve project specific goals.
2. **Level of Development (LOD):** Means the level of completeness to which a model element is developed at the end of each design and construction phase.
3. **BIM Project Execution Plan:** Means a plan that defines how BIM will be implemented throughout the project lifecycle.

1.02 BIM REQUIREMENTS

- A. **BIM Project Execution Plan:** Contractor will develop a BIM Project Execution Plan documenting the collaborative process, analysis technologies and workflows in which BIM will be implemented throughout the lifecycle of the project. Contractor will include a plan, prior to start of construction, which outlines the process for concurrent as-built documentation for Owner’s review.
- B. **Design Intent Model:** Contractor will develop a Design Intent Model that includes accurate and relevant geometry and facility information required to design the Project. Contractor will update the Design Intent Model with all design revisions at agreed upon intervals during Construction.
- C. **Clash Detection:** Contractor will manage, coordinate design disciplines and perform clash detection analyses within the BIM Model at each milestone set by the BIM Project Execution Plan.
- D. **As-Built BIM Model:** Contractor will validate and revise the Design Intent Model to produce a field accurate As-Built BIM Model to be delivered to the Owner prior to final acceptance of the Work.
- E. **BIM Meetings:** Contractor will facilitate coordination meetings as necessary to timely resolve design conflicts and/or coordination issues. Design changes made during this process will be properly documented by the Contractor and the As-Built BIM Model updated as necessary.

1.03 CONTRACTOR’S RESPONSIBILITIES

- A. The Contractor’s responsibilities include:

1. Overall development and delivery of the As-Built BIM Model.
2. Ensuring compliance with the BIM Project Execution Plan and related BIM Level of Development (LOD) Matrix.
3. Development, coordination, publication, and verification that all BIM configurations are in place as required for the integration of the design phase and construction phase model information, elements, etc.
4. Coordination of the file management procedures and protocols for the Design Intent Model and As-Built BIM Model.
5. Coordination and set-up of shared file servers to be utilized for the BIM, including related access, permissions, protocols, etc.
6. Preparation, assembly, and facilitation of the use of the Design Intent Model for design meetings, coordination meetings, and deliverables.
7. Proper classification of all spaces, equipment, and components within the Design Intent Model and As-Built BIM Model.
8. Scheduling, coordinate, and facilitate BIM technical meetings.
9. Facilitation of the use of trade models for the purpose of trade coordination and clash detection (when available or provided by trade contractors).
10. Determining the project BIM geo-reference point(s), and ensure that the models from all design disciplines are properly referenced and coordinated with the geo-reference point(s).
11. Serving as the interface between the Contractor and Owner for BIM data and file transfers.
12. Ensuring that the BIM design deliverables comply with Contract requirements.
13. Ensuring that the 2D Project drawings and Project specifications produced for bidding and construction purposes are properly derived from and adequately represent the information contained within the Design Intent Model and As-Built BIM Model.
14. Integration and/or coordination of the construction schedule with the BIM.
15. Updating the Design Intent Model and As-Built BIM Model for design changes that occur after construction has commenced.
16. Coordination with subcontractor fabrication modelers as may be required for procurement and construction activities.
17. Developing the final As-Built BIM Model.

1.04 PROJECT REQUIREMENTS

- A. Visualization Requirements: The Design Intent Model will be utilized to aid in visualizing and understanding the design during the early phases of the project.
- B. Sustainability/Documentation: When applicable, sustainability data will be incorporated in the As-Built BIM Model.
- C. Coordination/Clash Detection: The Contractor will utilize AutoDesk Revit Architecture, Revit Structure, Revit MEP, and Navisworks Manage to coordinate design disciplines and perform clash detection analyses.
- D. Operations and Maintenance Integration: The Contractor will incorporate Revit models and associated data of exterior envelope elements, fixtures/equipment or any other element of sufficient quality and accuracy where available from the manufacturer.

1.05 BIM SOFTWARE AND INFORMATION EXCHANGE

- A. Design Tools: The Contractor will develop the design using the latest versions of Autodesk "Revit Architecture" for Architectural content, Autodesk "Revit Structure" for structural content, and Autodesk "Revit MEP" for Mechanical, Electrical, Plumbing, Fire Protection, and Telecom/Technology content. Any deviations shall require approval from the Owner. The Contractor will not change software versions during the project without approval from the Owner.
- B. Information Exchange: The Contractor will use an electronic share platform as a means of sharing and storing BIM data.
- C. Owner's Use of Models: The Owner will have unlimited use of all BIM Models produced for the Project.

1.06 COORDINATION GUIDELINES

- A. Constructability Reviews:
 - 1. The Design Intent Model will be utilized for the purpose of constructability reviews. Use of the Design Intent Model for constructability review shall not be considered as in kind replacement for reviewing the traditional printed 2D line drawing documents but as a supplementary effort to improve the review process.
 - 2. At each design phase, the model maturity shall be developed to the extent that it will generate the drawing document deliverables with the content, level of detail, and format as required by the BIM Project Execution Plan. The resulting output, depicted in traditional two-dimensional drawing format with drawing sheets organized by discipline, dimensioned and detailed, shall serve as validation of the accuracy and completeness contained within the building information model(s).
- B. Resolution of Interferences: The Contractor shall participate in the coordination meetings as necessary to timely resolve design conflicts and/or coordination issues. Design changes made during this process shall be properly documented by the Contractor and the Design Intent Model shall be updated as necessary.
- C. Navisworks Requirements: Navisworks files will be created at all critical coordination milestones. This record format will document a coordinated section of the Design Intent Model, either by area of the building or between specific critical trades. The collision report showing all applicable collisions as either approved or resolved along with the Navisworks file will be uploaded together to the project collaboration system. A text or HTML document will also be uploaded which describes and references the approved coordination NWD File with respect to what has and has not been coordinated. Publish reports in a standard XML, HTML, or text format as created by Navisworks and agreed upon by the Contractor. Navisworks Reports will include the following information at a

minimum:

1. Description of collision report.
2. Date of collision report run.
3. List of all collisions detected in the Design Intent Model, their status, and the proposed solution to resolve the conflicts.
4. Graphical representation of the model geometry corresponding to each collision detected in the Design Intent Model.

1.07 PROJECT DELIVERABLE REQUIREMENTS

A. 30 Days after NTP

1. BIM Project Execution Plan.

B. Interim Design Submittals

1. Design Intent Model with Project and site Data.
2. Computer Aided Design (CAD) format files from the Design Intent Model.
3. Two dimensional drawing deliverables printed directly from the Design Intent Model in (individual and combined) PDF format.
4. A three dimensional interactive review format of the Design Intent Model in the latest version of Autodesk Navisworks.
5. A report generated from the Design Intent Model of all assets and attributes
6. A report verifying the accuracy of the delivered model elements and asset attributes.
7. A clash detection report including resolution to the clash detected.
8. A list of all submitted files. The list will include a description, directory, and file name for each file submitted. Identify files that have been produced from the submitted Design Intent Model and facility attribute data.
9. Other Deliverables specified in the BIM Project Execution Plan.

C. 100% Design Submittal.

1. Design Intent Model including facility and site data.
2. Computer Aided Design (CAD) format files from the Design Intent Model.
3. Two dimensional drawing deliverables printed directly from the Design Intent Model in (individual and combined) PDF format.
4. A three dimensional interactive review format of the Design Intent Model in the latest version of Autodesk Navisworks.
5. A report generated from the Design Intent Model of all assets and attributes.
6. A report verifying the accuracy of the delivered model elements and asset attributes.
7. A clash detection report including resolution to the clash detected. A list of all submitted files. The list will include a description, directory, and file name for each file submitted. Identify files that have been produced from the submitted Design Intent Model and facility attribute data.
8. Other Deliverables specified in the BIM Project Execution Plan.

- D. Final As-Built BIM and CAD Data Submittal.
1. As-Built BIM Model including all Request For Information (RFI), Architect Supplemental Instructions (ASI), and Change Order Requests (COR) for clear interpretations.
 2. Computer Aided Design (CAD) format files from the As-Built BIM Model.
 3. Two dimensional drawing deliverables printed directly from the As-Built BIM Model in (Individual and Combined) PDF format.
 4. A three dimensional interactive review format of the As-Built BIM Model in the latest version of Autodesk Navisworks.
 5. A report generated from the As-Built BIM Model of all assets and attributes.
 6. A report verifying the accuracy of the delivered model elements and asset attributes.
 7. Other Deliverables specified in the BIM Project Execution Plan.
 8. A list of all submitted files. The list will include a description, directory, and file name for each file submitted. Identify files that have been produced from the submitted As-Built BIM Model and Facility Attribute Data. The BIM Project Execution Plan will define additional intermediate deliverables for the project.

1.08 PROJECT CLOSE OUT

A. Documentation Methodology:

1. During the construction process, the Contractor will incorporate changes triggered by requests for information (RFIs), Supplemental Instructions, and Change Orders into the Architectural, Structural, and MEP design models.
2. At specified periods during the construction process, the Contractor will document in their copy of the Revit BIM model(s), 3D Coordinated Navisworks model(s), or on “red-line” drawings, all changes generated from shop drawings, coordination drawings, and field changes. Optionally, the completed form of the in-place construction may also be verified at these specified dates using laser scanning. The construction team will incorporate all changes as well as as-built model information differing from the basis of design included in the original construction documents. The finished model shall be reviewed for accuracy and completeness by the Contractor and Owner prior to finalization.

- B. Final As-Built BIM Model: Contractor will provide an As-Built BIM model including but not limited to all Architectural Systems, Engineering Systems, structural framing, partition systems with structure, flooring systems, partition systems with bulkheads, partition systems with expansion control, vertical transportation systems, specialty equipment, millwork and casework systems, horizontal ceiling systems with access openings, all finishes information, bulkheads, partitions, exterior skin systems with window openings, structure, roof edge conditions, parapets, roof penetrations, and equipment locations HVAC systems, piping, sewerage and/or conduit systems, HVAC duct runs, fire protection, lighting, power and data outlets, electrical conduits, ceiling grids layouts, audio visual, security and communication distribution systems (cable trays, etc.)

- C. Operations and Maintenance Documentation: Contractor will provide an As-Built BIM Model of exterior envelope and interior elements, fixtures and equipment of sufficient quality and accuracy as is available from the manufacturer.

1.09 WARRANTIES

- A. By approving and submitting the As-Built BIM Model to the Owner, the Contractor thereby represents that the Contractor has determined and verified all dimensions, quantities, relations to existing work, coordination with work, Product Data, and verification of compliance with contractual requirements. The accuracy of all such information is the responsibility of the Contractor. The Owner will be entitled to rely upon the Contractor's representation that such information in the As-Built BIM Model is correct and accurate.

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 seven 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 on AIA Document G-703 "Continuation Sheet", latest edition.
- B. The Contractor shall use Table of Contents of this Project Manual as basis for format for listing costs of Work for Sections under Divisions 01 through 50 of this Project Manual. The Contractor may provide additional breakdown of the Work in certain sections.
- C. The Contractor shall identify each line with number and title as listed in Table of Contents of this Specification.

1.03 PREPARING SCHEDULE OF VALUES

- A. The Contractor shall prepare a Schedule of Values in coordination with preparation of Progress Schedule. The Contractor shall correlate line items with other administrative schedules and forms required for Work, including progress schedule, payment request form, listing of subcontractors, schedule of allowances, schedule of alternatives, listing of products, principal suppliers and fabricators, and schedule of submittals.
- 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 into several line items. The Contractor shall round off to nearest whole dollar, but with total equal to Contract Sum.

- C. The Contractor shall submit three copies of Schedule of Values to the Owner.
- 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. The Contractor shall show line items of indirect costs and margins on actual costs, only to extent such items will be individually listed in payment requests.
 - 2. The Contractor shall establish each item in Schedule of Values and in payment requests to be complete with total expenses.
 - 3. Major cost items which are not directly cost of actual work-in-place, such as distinct temporary facilities, may be either shown as line items in Schedule of Values or distributed as general overhead expense.
- F. The Contractor shall itemize separate line item cost for Work required by each Section of this Specification including Section 00700, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION.
 - 1. The Cost of General Conditions of the Contract will be paid based on the percentage of the Work completed and this cost will appear in the Contractor's monthly Application for Payment.
- G. The Contractor shall break down installed costs into:
 - 1. Cost of product, delivered and unloaded at job site with taxes paid. (List under Column F, G-703).
 - 2. Total installed cost, with overhead and profit. (List under Column C, G-703).
- H. For each line item which has installed value of more than \$20,000.00, the Contractor shall break down costs to list major products or operations under each item.
- I. The Contractor shall round-off figures to nearest dollar.
- J. 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 will decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and/or the manner of performance and rate of progress 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.

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. 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 to use good architectural and engineering judgment in its determinations as to acceptance of Work that is not in strict conformity but will provide a finished product equal to or better than that intended by the requirements of the Contract Documents.

1.03 COORDINATION OF CONTRACT DOCUMENTS

- A. The Contract Documents and all referenced standards cited are essential parts of the Contract requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide the complete Work. In case of discrepancy, figured dimensions, unless obviously incorrect, will govern over scaled dimensions. Cited standards for materials or testing and cited FAA advisory circulars will be considered as Standard Specifications.
- B. 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.
- C. The Contractor shall not take advantage of any apparent error or omission on the various Contract Documents. In the event the Contractor discovers any apparent conflict, error or discrepancy, Contractor shall immediately call upon the Owner for the Owner's interpretation and decision, and such decision shall be final.
- D. From time to time, discrepancies within cited standards for testing occur due to the timing of changing, editing, and replacing of standards. In the event the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately call upon the Owner for interpretation and decision, and such decision shall be final.

1.04 DRAWINGS

- A. The Drawings furnished by the Owner 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.

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 as the Work progresses and copies will be furnished to the Owner at the time of completion of the Project. An inspection or checking of the Contractor's field notes or layout work by the Owner, 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 its 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 meet Owner's approval.

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. The Owner 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.
- B. If the Owner 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. Any Work done or materials used without supervision or inspection by the Owner may be ordered removed and replaced at the Contractor's expense unless the Owner or Design Professional failed to inspect after having been given reasonable notice in writing that the Work was to be performed.
- 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, as modified.

- C. 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 will maintain the Work during construction and until the Work is accepted. This maintenance will 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. All Work will be protected during any delay between phases or sub-phases of construction required to complete the 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 urgency 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 urgency 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 DESCRIPTION

- A. General: Required inspection and testing services are intended to assist the Owner in the determination of probable compliance of the Work with requirements specified or indicated. These required services do not relieve the Contractor of responsibility for compliance with these requirements or for compliance with requirements of the Contract Documents.
- B. Definitions: Quality control services include inspections and tests and related actions including reports performed by independent agencies and governing authorities, as well as directly by the Contractor or independent agencies retained by the Contractor. These services do not include Contract enforcement activities performed directly by the Owner.
 - 1. Specific quality control requirements for individual units of work are specified in the Contract Documents. These requirements, including inspections and tests, cover both production of standard products and fabrication of customized work. These requirements also cover quality control of the installation procedures.
 - 2. Inspections, tests and related actions specified in this Section and elsewhere in the Contract Documents are not intended to limit the Contractor's own quality control procedures which facilitate overall compliance with requirements of the Contract Documents. Requirements by the Owner, governing authorities or other authorized entities for the Contractor to provide quality control services are not limited by the provisions of this Section.
- C. Quality Control: When the Contract specifies the use of certain methods and equipment, such methods and equipment will be used unless others are authorized by the Owner.
 - 1. If the Contractor desires to use a method or type of equipment other than specified in the Contract, Contractor may request authority from the Owner to do so. The request will be in writing and will include a full description of the methods and equipment proposed and 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 the Contract Documents.
 - 2. If, after trial use of the substituted methods or equipment, the Owner determines that the Work produced does not meet Contract requirements, the Contractor will discontinue the use of the substitute method or equipment and will complete the remaining Work with the specified methods and equipment.
 - 3. The Contractor will remove all 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 the Contract Sum or in Contract Time as a result of authorizing a change in methods or equipment under this subsection.

- D. Source of Supply and Quality Requirements: The materials used on the Work will conform to the requirements of the Contract Documents. Unless otherwise specified, such materials that are manufactured or processed will be new (as compared to used or reprocessed). Modifications to existing materials will be done in accordance with manufacturer's recommendations and/or the drawings.
1. In order to expedite the inspection and testing of materials, the Contractor will furnish complete statements to the Owner as to the origin, composition, and manufacture of all materials to be used in the Work. Such statements will be furnished promptly after execution of the Contract but, in all cases, prior to delivery of such materials.
 2. At the Owner's option, materials may be approved at the source of supply before delivery is stated. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor will furnish materials from other sources.
 3. In addition, where an FAA Specification for airport lighting equipment is cited in the plans or Specifications, the Contractor will furnish such equipment that is:
 - a. Listed in FAA Advisory Circular (AC) 150/5345-1, Approved Airport Equipment, that is in effect on the date of advertisement; and
 - b. Produced by the manufacturer qualified (by FAA) to produce such specified and listed equipment.
- E. Samples, Tests, and Cited Specifications: All materials used in the Work may be inspected and/or tested by the Owner before incorporation in the Work. Any Work in which untested materials are used without approval or written permission of the Owner will be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Owner, will be removed at the Contractor's expense. Unless otherwise designated, tests in accordance with the cited standard methods of AASHTO or ASTM, Federal Specifications, Commercial Item Descriptions, and all other cited methods which are current on the date of this Contract will be made by and at the expense of the Contractor. Samples will be taken by a qualified representative of the Contractor. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the Work. Copies of all tests will be furnished to the Owner and Design Professional. Contractor will furnish the required samples without charge. Contractor will give sufficient notification of the placing of orders for materials to permit testing.
1. No approval of materials by the Owner or other representative of the Owner will relieve the Contractor of its obligation to provide and use materials that conform in all respects with the Contract requirements, and if the Contractor

chooses to rely on the results of such tests or such approvals as evidence or indication that the materials supplied do in fact so conform, the Contractor does so at its sole risk.

- F. Certification of Compliance: The Design Professional may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificate(s) of compliance stating that such materials or assemblies fully comply with the requirements of the Contract. The certificate(s) will be signed by the manufacturer. Each lot of such materials or assemblies delivered to the Project must be accompanied by a certificate of compliance in which the lot is clearly identified.
1. Materials or assemblies used on the basis of certificate(s) of compliance may be sampled and tested at any time and if found not to be in conformity with Contract requirements will be subject to rejection whether in place or not.
 2. The form and distribution of certificate(s) of compliance will be as approved by the Design Professional and the Owner.
 3. When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," the Contractor will be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the Work. Such certificate of compliance will clearly identify each lot delivered and will certify as to:
 - a. Conformance to the specified performance, testing, quality or dimensional requirements; and,
 - b. Suitability of the material or assembly for the use intended in the Contract.
 4. Should the Contractor propose to furnish an "or equal" material or assembly, Contractor will furnish the manufacturer's certificates of compliance as hereinbefore described for the specified brand name material or assembly. However, the Owner will be the sole judge as to whether the proposed "or equal" is suitable for use in the Work.
 5. The Owner reserves the right to refuse permission for use of materials or assemblies on the basis of certificate(s) of compliance.
- G. Plant Inspection: The Owner or its authorized representative may inspect, as its source, any specified material or assembly to be used in the Work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the Work and to obtain samples required for Contractor's acceptance of the material or assembly.
1. Should the Owner or its authorized representative conduct plant inspections, the following conditions must exist:

- a. The Owner or its authorized representative will have the cooperation and assistance of the Contractor and the producer with whom Contractor has contracted for materials.
 - b. The Owner or its authorized representative will have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.
 - c. If required by the Owner or its authorized representative, the Contractor will arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.
2. It is understood and agreed that the Owner will have the right to retest any material which has been tested and approved at the source of supply after it has been delivered to the Project Site. The Owner or its authorized representative will have the right to reject only material which, when retested, does not meet the requirements of the Contract Documents.
- H. Storage of Materials: Materials will be so stored as to assure the preservation of their quality and fitness for the Work. Stored materials, even though approved before storage, may again be inspected prior to their use in the Work. Stored materials will be located so as to facilitate their prompt inspection. The Contractor will coordinate the storage of all materials with the Owner. Materials to be stored on airport property will not create an obstruction to air navigation nor will they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the drawings, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles will be as directed by the Owner. Private property will not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor will make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor will furnish the Owner a copy of the property Owner's permission.
1. All storage sites on private or airport property will be restored to their original condition by the Contractor at the Contractor's entire expense, except as otherwise agreed to (in writing) by the owner or lessee of the property.
- I. Unacceptable Materials: Any material or assembly that does not conform to the requirements of the Contract Documents will be considered unacceptable and will be rejected. The Contractor will remove any rejected material or assembly from the site of the Work, unless otherwise instructed by the Owner.
1. Rejected material(s) or assembly(ies) that have been corrected by the Contractor will not be returned to the site of the Work until such time as the Owner has approved its use in the Work.

1.02 TESTING BORNE BY THE CONTRACTOR

- A. All initial testing costs will be borne by the Contractor. An independent testing laboratory selected by and responsible to the Contractor, and acceptable to the Owner will perform all testing required by the Contract Documents or other testing as directed by the Owner.
- B. The Contractor will also bear the cost of testing:
 - 1. If substitute materials or equipment are proposed by the Contractor, Contractor will pay the cost of all tests which may be necessary to satisfy the Owner that Specification requirements are satisfied. The Contractor will pay for the Owner's time spent in review and administration of such proposed substitution.
 - 2. If materials or workmanship are used which fail to meet Specification requirements, the Contractor will pay the cost of all testing and retesting deemed necessary by the Owner to determine the safety or suitability of the material or element.
 - 3. The Contractor will pay for all testing costs including, but not limited to, power, fuel, and equipment costs which may be required for complete testing of all equipment and systems for proper operation.
 - 4. The Contractor will pay for all standby time required when operations are delayed by the Contractor.

1.03 RETEST RESPONSIBILITY

Where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance of related work with the requirements of the Contract Documents, then the cost of all retests are the responsibility of the Contractor. The cost of retesting of Work revised or replaced by the Contractor is the Contractor's responsibility where required tests were performed on original Work.

1.04 RESPONSIBILITY FOR ASSOCIATED SERVICES

- A. The Contractor is required to cooperate with the agencies performing required inspections, tests and similar services. Provide such auxiliary services as are reasonably requested. Notify the testing agency sufficiently in advance of operations to permit assignment of personnel. These auxiliary services include but are not necessarily limited to the following:
 - 1. Providing access to the Work.
 - 2. Taking samples or assistance with taking samples.
 - 3. Delivery of samples to testing laboratories.
 - 4. Security and protection of samples and test equipment at the Project site.

1.05 COORDINATION

The Contractor will coordinate with each agency engaged to perform inspections, tests and similar services for the Project and will coordinate the sequence of activities so as to accommodate required services with a minimum of delay in the progress of the Work. In addition, the Contractor will coordinate the Work so as to avoid the necessity of removing and replacing work to accommodate inspections and tests. The Contractor is responsible for scheduling times for inspections, tests, taking of samples and similar activities. The testing will not be used as justification for claims for extension of Contract Time.

1.06 QUALITY ASSURANCE

Qualification for Service Agencies: Except as otherwise indicated, Contractor will only engage inspection and test service agencies, including independent testing laboratories, which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which are recognized in the industry as specialized in the types of inspections and tests to be performed.

1.07 SUBMITTALS

- A. General: Refer to Section 01340 - SHOP DRAWINGS, PRODUCT DATA AND SAMPLES for the general requirements on submittals. The Contractor will submit directly to the Owner a certified written report in triplicate of each inspection, test or similar service, performed by or on behalf of the Contractor. Contractor will also submit additional copies of each written report directly to a governing agency, when the agency so directs.
- B. Report Data: Written reports of each inspection, test or similar service will include the following:
1. Name of testing agency or test laboratory.
 2. Dates and locations of samples, tests and/or inspections.
 3. Names of individuals making the inspection, sample and/or test.
 4. Designation of the Work and test method. Complete inspection or test data.
 5. Test inspection and/or sample results.
 6. Interpretations of test sample and/or inspection results.
 7. Notation of significant ambient conditions at the time of sample-taking, testing and/or inspection.
 8. Comments or professional opinion as to whether inspected, sampled and/or tested Work complies with requirements of the Contract Documents.
 9. Recommendations on retesting, if applicable.
 10. Log of previous deficiencies and status thereof.

11. Other requirements as stated in the Specifications.

1.08 INSPECTION OF CONDITIONS

- A. Installer's Inspection of Conditions: The Contractor shall require the installer of each major unit of Work to inspect the substrate to receive Work and conditions under which the Work is to be performed. The installer will report all unsatisfactory conditions in writing to the Contractor. The Contractor shall not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.
- B. Manufacturer's Instructions: Where installations include manufactured products, the Contractor shall comply with the manufacturer's applicable instructions and recommendations for installation, to the extent that these instructions and recommendations are more explicit or more stringent than requirements indicated in the Contract Documents.
- C. The Contractor shall inspect each item of material or equipment immediately prior to installation. The Contractor shall reject damaged and defective items.
- D. The Contractor shall provide attachment and connection devices and methods for securing Work. The Contractor shall secure Work true to line and level and within recognized industry tolerances. The Contractor shall allow for expansion and building movement. The Contractor shall provide uniform joint width in exposed Work. The Contractor shall arrange joints in exposed Work to obtain the best visual effect to the satisfaction and approval of the Owner and Design Professional. Refer questionable visual-effect choices to the Owner and Design Professional for final decision.
- E. The Contractor shall recheck measurements and dimensions of the Work as an integral step of starting each installation.
- F. The Contractor shall install each unit of Work during weather conditions and project status which will insure the best possible results in coordination with the entire Work. The Contractor shall isolate each unit of Work from incompatible Work as necessary to prevent deterioration.
- G. The Contractor shall coordinate enclosure of the Work with required inspections and tests so as to minimize the necessity of uncovering Work for that purpose.
- H. Mounting Heights: Where mounting heights are not indicated, the Contractor shall mount individual units of Work at industry recognized standard mounting heights for the particular application indicated. The Contractor shall refer questionable mounting height choices to the Owner for final decision.

1.09 REPAIR AND PROTECTION

General: Upon completion of inspection, testing, sample-taking and similar services performed on the Work, the Contractor shall repair damaged Work and restore substrates and finishes to

eliminate deficiencies, including deficiencies in the visual qualities of exposed finishes. The Contractor shall comply with requirements of Section 01045 - CUTTING AND PATCHING. The Contractor shall protect Work exposed by or for quality control service activities and protect repaired Work. Repair and protection will be the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01405 – METHOD OF ESTIMATING PERCENTAGE OF MATERIAL WITHIN SPECIFICATION LIMITS
(PWL)

1.01 GENERAL

- A. When the Specifications provide for acceptance of material based on the method of estimating percentage of material within specification limits (PWL), the PWL will be determined in accordance with this Section. All test results for a lot will be analyzed statistically to determine the total estimated percent of the lot that is within specification limits. The PWL is computed using the sample average (\bar{X}) and sample standard deviation (S_n) of the specified number (n) of sublots for the lot and the specification tolerance limits, L for lower and U for upper, for the particular acceptance parameter. From these values, the respective Quality index(s), Q_L for Lower Quality Index and/or Q_U for Upper Quality Index, is computed and the PWL for the lot for the specified n is determined from Table 1.
- B. There is some degree of uncertainty (risk) in the measurement for acceptance because only a small fraction of production material (the population) is sampled and tested. This uncertainty exists because all portions of the production material have the same probability to be randomly sampled. The Contractor's risk is the probability that material produced at the acceptable quality level is rejected or subjected to a pay adjustment. The Owner's risk is the probability that material produced at the rejectable quality level is accepted.
- C. IT IS THE INTENT OF THIS SECTION TO INFORM THE CONTRACTOR THAT, IN ORDER TO CONSISTENTLY OFFSET THE CONTRACTOR'S RISK FOR MATERIAL EVALUATED, PRODUCTION QUALITY (USING POPULATION AVERAGE AND POPULATION STANDARD DEVIATION) MUST BE MAINTAINED AT THE ACCEPTABLE QUALITY SPECIFIED OR HIGHER. IN ALL CASES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PRODUCE AT QUALITY LEVELS THAT WILL MEET THE SPECIFIED ACCEPTANCE CRITERIA WHEN SAMPLED AND TESTED AT THE FREQUENCIES SPECIFIED.

1.02 METHOD FOR COMPUTING PWL

- A. The computational sequence for computing PWL is as follows:
 - 1. Divide the lot into n sublots in accordance with the acceptance requirements of the Specification.
 - 2. Locate the random sampling position within the subplot in accordance with the requirements of the Specification.
 - 3. Make a measurement at each location, or take a test portion and make the measurement on the test portion in accordance with the testing requirements of the Specification.
 - 4. Find the sample average (\bar{X}) for all subplot values within the lot by using the following formula:

$$X = (X_1 + X_2 + X_3 + \dots + X_N) / N$$

Where: X = Sample average of all subplot values within a lot

x_1, x_2 = Individual subplot values

n = Number of sublots

5. Find the sample standard deviation (S_n) by use of the following formula:

$$S_n = [(d_1^2 + d_2^2 + d_3^2) / (n-1)]^{1/2}$$

Where: S_n = Sample standard deviation of the number of subplot values in the set

d_1, d_2 = Deviations of the individual subplot values x_1, x_2, \dots from the average value X

that is: $d_1 = (x_1 - X), d_2 = (x_2 - X) \dots d_n = (x_n - X)$

n = number of sublots

6. For single sided specification limits (i.e., L only), compute the Lower Quality Index Q_L by use of the following formula:

$$Q_L = (X - L) / S_n$$

Where: L = specification lower tolerance limit

Estimate the percentage of material within limits (PWL) by entering Table 1 with Q_L , using the column appropriate to the total number (n) of measurements. If the value of Q_L falls between values shown on the table, use the next higher value of PWL.

7. For double-sided specification limits (i.e. L and U), compute the Quality Indexes Q_L and Q_U by use of the following formulas:

$$Q_L = (X - L) / S_n \text{ and } Q_U = (U - X) / S_n$$

Where: L and U = specification lower and upper tolerance limits

Estimate the percentage of material between the lower (L) and upper (U) tolerance limits (PWL) by entering Table 1 separately with Q_L and Q_U , using the column appropriate to the total number (n) of measurements, and determining the percent of material above P_L and percent of material below P_U for each tolerance limit. If the values of Q_L fall between values shown on the table, use the next higher value of P_L or P_U . Determine the PWL by use of the following formula:

$$PWL = (P_U + P_L) - 100$$

Where: P_L = percent within lower specification limit

P_U = percent within upper specification limit

EXAMPLE OF PWL CALCULATION

Project: Example Project

Test Item: Item P-401, Lot A.

A. PWL Determination for Mat Density.

1. Density of four random cores taken

from Lot A. A-1 96.60

A-2 97.55

A-3 99.30

A-4 98.35

n = 4

2. Calculate average density for

the lot. $X = (x_1 + x_2 + x_3 + \dots$

$\dots + x_n) / n$

$X = (96.60 + 97.55 + 99.30 + 98.35) / 4$

X = 97.95% density

3. Calculate the standard deviation for the lot.

$$S_n = [((96.60 - 97.95)^2 + (97.55 - 97.95)^2 + (99.30 - 97.95)^2 + (98.35 - 97.95)^2) / (4 - 1)]^{1/2}$$
$$S_n = [(1.82 + 0.16 + 1.82 + 0.16) / 3]^{1/2}$$
$$S_n = 1.15$$

4. Calculate the Lower Quality Index Q_L for the lot.

$$(L=96.3) \quad Q_L = (X - L) / S_n$$

$$Q_L = (97.95 - 96.30) / 1.15$$

$$Q_L = 1.4348$$

5. Determine PWL by entering Table 1 with $Q_L = 1.44$

and n = 4. PWL = 98

B. PWL Determination for Air Voids.

1. Air Voids of four random samples taken from

Lot A. A-A-1 5.00

A-2 3.74

A-3 2.30

A-4 3.25

2. Calculate the average air voids for

the lot. $\bar{X} = (x_1 + x_2 + x_3 + \dots + x_n) / n$

$$\bar{X} = (5.00 + 3.74 + 2.30 + 3.25) / 4$$

$$\bar{X} = 3.57\%$$

3. Calculate the standard deviation S_n for the lot.

$$S_n = [((3.57 - 5.00)^2 + (3.57 - 3.74)^2 + (3.57 - 2.30)^2 + (3.57 - 3.25)^2) / (4 - 1)]^{1/2}$$

$$S_n = [(2.04 + 0.03 + 1.62 + 0.10) / 3]^{1/2}$$

$$S_n = 1.12$$

4. Calculate the Lower Quality Index Q_L for the lot.

$$(L = 2.0)$$

$$Q_L = (\bar{X} - L) / S_n$$

$$Q_L = (3.57 - 2.00) / 1.12$$

$$Q_L = 1.3992$$

5. Determine P_L by entering Table 1 with $Q_L = 1.41$ and $n = 4$.

$$P_L = 97$$

6. Calculate the Upper Quality Index Q_U for the lot. ($U = 5.0$)

$$Q_U = (U - \bar{X}) / S_n$$

$$Q_U = (5.00 - 3.57) / 1.12$$

$$Q_U = 1.2702$$

7. Determine P_U by entering Table 1 with $Q_U = 1.29$ and $n = 4$.

$$P_U = 93$$

8. Calculate Air Voids PWL

$$PWL = (P_L + P_U) - 100$$

$$PWL = (97 + 93) - 100 = 90$$

EXAMPLE OF OUTLIER CALCULATION (Reference ASTM E 78)

Project: Example Project

Test Item: Item P-401, Lot A.

A. Outlier Determination for Mat Density.

1. Density of four random cores taken from Lot A. arranged in descending order.

A-3 99.30
A-4 98.35
A-2 97.55
A-1 96.60

2. Use $n=4$ and upper 5 percent significance level of to find the critical value for test criterion = 1.463.

3. Use average density, standard deviation, and test criterion value to evaluate density measurements.

- a. For measurements greater than the average:

If: $(\text{measurement} - \text{average}) / (\text{standard deviation})$ is less than test criterion,

Then: the measurement is not considered an outlier

for A-3 Check if $(99.30 - 97.95) / 1.15$ greater than 1.463

1.174 is less than 1.463, the value is not an outlier

- b. For measurements less than the average:

If $(\text{average} - \text{measurement}) / (\text{standard deviation})$ is less than test criterion, the measurement is not considered an outlier

for A-1 Check if $(97.95 - 96.60) / 1.15$ greater than 1.463

1.0 is less than 1.463, the value is not an outlier

NOTE: In this example, a measurement would be considered an outlier if the density was:
greater than $(97.95 + 1.463 \times 1.15) = 99.63$ percent or,
less than $(97.95 - 1.463 \times 1.15) = 96.27$ percent

TABLE 1. TABLE FOR ESTIMATING PERCENT OF LOT WITHIN LIMITS (PWL)

Percent Within Limits (PL and PU)	Positive Values of Q (QL and QU)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
99	1.1541	1.4700	1.6714	1.8008	1.8888	1.9520	1.9994	2.0362
98	1.1524	1.4400	1.6016	1.6982	1.7612	1.8053	1.8379	1.8630
97	1.1496	1.4100	1.5427	1.6181	1.6661	1.6993	1.7235	1.7420
96	1.1456	1.3800	1.4897	1.5497	1.5871	1.6127	1.6313	1.6454
95	1.1405	1.3500	1.4407	1.4887	1.5181	1.5381	1.5525	1.5635
94	1.1342	1.3200	1.3946	1.4329	1.4561	1.4717	1.4829	1.4914
93	1.1269	1.2900	1.3508	1.3810	1.3991	1.4112	1.4199	1.4265
92	1.1184	1.2600	1.3088	1.3323	1.3461	1.3554	1.3620	1.3670
91	1.1089	1.2300	1.2683	1.2860	1.2964	1.3032	1.3081	1.3118
90	1.0982	1.2000	1.2290	1.2419	1.2492	1.2541	1.2576	1.2602
89	1.0864	1.1700	1.1909	1.1995	1.2043	1.2075	1.2098	1.2115
88	1.0736	1.1400	1.1537	1.1587	1.1613	1.1630	1.1643	1.1653
87	1.0597	1.1100	1.1173	1.1192	1.1199	1.1204	1.1208	1.1212
86	1.0448	1.0800	1.0817	1.0808	1.0800	1.0794	1.0791	1.0789
85	1.0288	1.0500	1.0467	1.0435	1.0413	1.0399	1.0389	1.0382
84	1.0119	1.0200	1.0124	1.0071	1.0037	1.0015	1.0000	0.9990
83	0.9939	0.9900	0.9785	0.9715	0.9671	0.9643	0.9624	0.9610
82	0.9749	0.9600	0.9452	0.9367	0.9315	0.9281	0.9258	0.9241
81	0.9550	0.9300	0.9123	0.9025	0.8966	0.8928	0.8901	0.8882
80	0.9342	0.9000	0.8799	0.8690	0.8625	0.8583	0.8554	0.8533
79	0.9124	0.8700	0.8478	0.8360	0.8291	0.8245	0.8214	0.8192
78	0.8897	0.8400	0.8160	0.8036	0.7962	0.7915	0.7882	0.7858
77	0.8662	0.8100	0.7846	0.7716	0.7640	0.7590	0.7556	0.7531
76	0.8417	0.7800	0.7535	0.7401	0.7322	0.7271	0.7236	0.7211
75	0.8165	0.7500	0.7226	0.7089	0.7009	0.6958	0.6922	0.6896
74	0.7904	0.7200	0.6921	0.6781	0.6701	0.6649	0.6613	0.6587
73	0.7636	0.6900	0.6617	0.6477	0.6396	0.6344	0.6308	0.6282
72	0.7360	0.6600	0.6316	0.6176	0.6095	0.6044	0.6008	0.5982
71	0.7077	0.6300	0.6016	0.5878	0.5798	0.5747	0.5712	0.5686
70	0.6787	0.6000	0.5719	0.5582	0.5504	0.5454	0.5419	0.5394
69	0.6490	0.5700	0.5423	0.5290	0.5213	0.5164	0.5130	0.5105
68	0.6187	0.5400	0.5129	0.4999	0.4924	0.4877	0.4844	0.4820
67	0.5878	0.5100	0.4836	0.4710	0.4638	0.4592	0.4560	0.4537
66	0.5563	0.4800	0.4545	0.4424	0.4355	0.4310	0.4280	0.4257
65	0.5242	0.4500	0.4255	0.4139	0.4073	0.4030	0.4001	0.3980
64	0.4916	0.4200	0.3967	0.3856	0.3793	0.3753	0.3725	0.3705
63	0.4586	0.3900	0.3679	0.3575	0.3515	0.3477	0.3451	0.3432
62	0.4251	0.3600	0.3392	0.3295	0.3239	0.3203	0.3179	0.3161
61	0.3911	0.3300	0.3107	0.3016	0.2964	0.2931	0.2908	0.2892
60	0.3568	0.3000	0.2822	0.2738	0.2691	0.2660	0.2639	0.2624

59	0.3222	0.2700	0.2537	0.2461	0.2418	0.2391	0.2372	0.2358
58	0.2872	0.2400	0.2254	0.2186	0.2147	0.2122	0.2105	0.2093
57	0.2519	0.2100	0.1971	0.1911	0.1877	0.1855	0.1840	0.1829
56	0.2164	0.1800	0.1688	0.1636	0.1607	0.1588	0.1575	0.1566
55	0.1806	0.1500	0.1406	0.1363	0.1338	0.1322	0.1312	0.1304
54	0.1447	0.1200	0.1125	0.1090	0.1070	0.1057	0.1049	0.1042
53	0.1087	0.0900	0.0843	0.0817	0.0802	0.0793	0.0786	0.0781
52	0.0725	0.0600	0.0562	0.0544	0.0534	0.0528	0.0524	0.0521
51	0.0363	0.0300	0.0281	0.0272	0.0267	0.0264	0.0262	0.0260
50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE 1. TABLE FOR ESTIMATING PERCENT OF LOT WITHIN LIMITS (PWL)

Percent Within Limits (P _L and P _U)	Negative Values of Q (Q _L and Q _U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
49	-0.0363	-0.0300	-0.0281	-0.0272	-0.0267	-0.0264	-0.0262	-0.0260
48	-0.0725	-0.0600	-0.0562	-0.0544	-0.0534	-0.0528	-0.0524	-0.0521
47	-0.1087	-0.0900	-0.0843	-0.0817	-0.0802	-0.0793	-0.0786	-0.0781
46	-0.1447	-0.1200	-0.1125	-0.1090	-0.1070	-0.1057	-0.1049	-0.1042
45	-0.1806	-0.1500	-0.1406	-0.1363	-0.1338	-0.1322	-0.1312	-0.1304
44	-0.2164	-0.1800	-0.1688	-0.1636	-0.1607	-0.1588	-0.1575	-0.1566
43	-0.2519	-0.2100	-0.1971	-0.1911	-0.1877	-0.1855	-0.1840	-0.1829
42	-0.2872	-0.2400	-0.2254	-0.2186	-0.2147	-0.2122	-0.2105	-0.2093
41	-0.3222	-0.2700	-0.2537	-0.2461	-0.2418	-0.2391	-0.2372	-0.2358
40	-0.3568	-0.3000	-0.2822	-0.2738	-0.2691	-0.2660	-0.2639	-0.2624
39	-0.3911	-0.3300	-0.3107	-0.3016	-0.2964	-0.2931	-0.2908	-0.2892
38	-0.4251	-0.3600	-0.3392	-0.3295	-0.3239	-0.3203	-0.3179	-0.3161
37	-0.4586	-0.3900	-0.3679	-0.3575	-0.3515	-0.3477	-0.3451	-0.3432
36	-0.4916	-0.4200	-0.3967	-0.3856	-0.3793	-0.3753	-0.3725	-0.3705
35	-0.5242	-0.4500	-0.4255	-0.4139	-0.4073	-0.4030	-0.4001	-0.3980
34	-0.5563	-0.4800	-0.4545	-0.4424	-0.4355	-0.4310	-0.4280	-0.4257
33	-0.5878	-0.5100	-0.4836	-0.4710	-0.4638	-0.4592	-0.4560	-0.4537
32	-0.6187	-0.5400	-0.5129	-0.4999	-0.4924	-0.4877	-0.4844	-0.4820
31	-0.6490	-0.5700	-0.5423	-0.5290	-0.5213	-0.5164	-0.5130	-0.5105
30	-0.6787	-0.6000	-0.5719	-0.5582	-0.5504	-0.5454	-0.5419	-0.5394
29	-0.7077	-0.6300	-0.6016	-0.5878	-0.5798	-0.5747	-0.5712	-0.5686
28	-0.7360	-0.6600	-0.6316	-0.6176	-0.6095	-0.6044	-0.6008	-0.5982
27	-0.7636	-0.6900	-0.6617	-0.6477	-0.6396	-0.6344	-0.6308	-0.6282
26	-0.7904	-0.7200	-0.6921	-0.6781	-0.6701	-0.6649	-0.6613	-0.6587
25	-0.8165	-0.7500	-0.7226	-0.7089	-0.7009	-0.6958	-0.6922	-0.6896
24	-0.8417	-0.7800	-0.7535	-0.7401	-0.7322	-0.7271	-0.7236	-0.7211
23	-0.8662	-0.8100	-0.7846	-0.7716	-0.7640	-0.7590	-0.7556	-0.7531
22	-0.8897	-0.8400	-0.8160	-0.8036	-0.7962	-0.7915	-0.7882	-0.7858
21	-0.9124	-0.8700	-0.8478	-0.8360	-0.8291	-0.8245	-0.8214	-0.8192
20	-0.9342	-0.9000	-0.8799	-0.8690	-0.8625	-0.8583	-0.8554	-0.8533
19	-0.9550	-0.9300	-0.9123	-0.9025	-0.8966	-0.8928	-0.8901	-0.8882
18	-0.9749	-0.9600	-0.9452	-0.9367	-0.9315	-0.9281	-0.9258	-0.9241
17	-0.9939	-0.9900	-0.9785	-0.9715	-0.9671	-0.9643	-0.9624	-0.9610
16	-1.0119	-1.0200	-1.0124	-1.0071	-1.0037	-1.0015	-1.0000	-0.9990
15	-1.0288	-1.0500	-1.0467	-1.0435	-1.0413	-1.0399	-1.0389	-1.0382

14	-1.0448	-1.0800	-1.0817	-1.0808	-1.0800	-1.0794	-1.0791	-1.0789
13	-1.0597	-1.1100	-1.1173	-1.1192	-1.1199	-1.1204	-1.1208	-1.1212
12	-1.0736	-1.1400	-1.1537	-1.1587	-1.1613	-1.1630	-1.1643	-1.1653
11	-1.0864	-1.1700	-1.1909	-1.1995	-1.2043	-1.2075	-1.2098	-1.2115
10	-1.0982	-1.2000	-1.2290	-1.2419	-1.2492	-1.2541	-1.2576	-1.2602
9	-1.1089	-1.2300	-1.2683	-1.2860	-1.2964	-1.3032	-1.3081	-1.3118
8	-1.1184	-1.2600	-1.3088	-1.3323	-1.3461	-1.3554	-1.3620	-1.3670
7	-1.1269	-1.2900	-1.3508	-1.3810	-1.3991	-1.4112	-1.4199	-1.4265
6	-1.1342	-1.3200	-1.3946	-1.4329	-1.4561	-1.4717	-1.4829	-1.4914
5	-1.1405	-1.3500	-1.4407	-1.4887	-1.5181	-1.5381	-1.5525	-1.5635
4	-1.1456	-1.3800	-1.4897	-1.5497	-1.5871	-1.6127	-1.6313	-1.6454
3	-1.1496	-1.4100	-1.5427	-1.6181	-1.6661	-1.6993	-1.7235	-1.7420
2	-1.1524	-1.4400	-1.6016	-1.6982	-1.7612	-1.8053	-1.8379	-1.8630

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.

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 Specifications or Drawings.

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 telephone and then in writing 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:

- (1) 3 copies to the Owner.
- (2) 2 copies to the Contractor
- (3) 1 copy to the Design Professional.
- (4) 1 copy to the 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 certified 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 material 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 (4) 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.

D. 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.

3.03 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
3. Compressive strength cube been in storage at the mixing site for over 30 days.

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:

1. Comply with requirements of ACI 211 and ACI 301.
2. Lightweight concrete aggregate will conform to ASTM C 330 "Specification for Lightweight Aggregates for Structural Concrete."

3. Provide concrete with a dry unit weight of not more than 116-pounds per cubic foot and not less than 95-pounds per cubic foot. Design mix to produce strengths as indicated on the Drawings with a split cylinder strength factor ($f_{ct}/(f'c)^{0.5}$) of not less than 5.3 (Mpa) and a drying shrinkage limit of 0.03% at 28 days.

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:

One additional cylinder per set will be required for formed slab and pan joist floors for the purpose of evaluating the concrete strength at the time of form stripping. This cylinder will be stored on the floor where form removal is to occur under the same exposure conditions as the floor concrete. The cylinder will be cured under field conditions in accordance with ASTM C31 "Method of Making and Curing Concrete Test Specimens in the Field". Field cured test cylinders will be molded at the same time and from the same samples as Testing Laboratory cured test specimens. The cylinder will be broken at the time of form removal as directed by the Contractor.

O. Cylinder Storage Box:

The Contractor will be responsible for providing a protected concrete cylinder storage 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.

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 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.

3.04 STRUCTURAL STEEL

A. Contract Obligations:

- 1. The Contractor will pay for all initial shop and field inspections and tests as required during the fabrication and erection of the structural steel.
- 2. The Contractor will pay for and arrange with the Testing Laboratory for the certification of all shop and field welders. Each bolting crew and welder will be assigned an identifying symbol or mark and all shop and field connections will be so identified so that the inspector can refer back to the person or crew performing the work. The costs of all retesting of material or workmanship not in conformance with the Contract Documents will be borne by the Contractor. The fabricator and erector will provide the Testing Laboratory inspector with access to all places where work is being done. A minimum of 24 hours notification will be given prior to commencement of work.
- 3. The Contractor will provide the Testing Laboratory with the following:
 - a. A complete set of Contractor's and Design Professional's approved shop and erection drawings including all revisions and addenda.
 - b. Cutting lists, order sheets, material bills, shipping bills and mill test reports.
 - c. Information as to time and place of all rollings and shipment of material to shops.
 - d. Representative sample pieces requested for testing.
 - e. Full and ample means and assistance for testing all material.
 - f. Proper facilities, including scaffolding, temporary work platforms, hoisting facilities, etc., for inspection of the work in the mills, shop and

field.

B. Testing Laboratory Responsibility:

1. The inspection of shop work by the Testing Laboratory will be performed in the fabricator's shop to the fullest extent possible. Such inspections will be in sequence, timely, and performed in such a manner as to minimize disruptions in operations and to permit the repair of all nonconforming work while the material is in process in the fabricating shop. Inspection of field work will be completed promptly so that corrections can be made without delaying the progress of the work.
2. Inspections will be performed by qualified technicians with a minimum of two years experience in structural steel testing and inspection. All inspection personnel will be certified in accordance with AWS QC-1. The Testing Laboratory will provide test reports of all shop and field inspections. Shop test reports will include shop welders certifications. All test reports will indicate types and locations of all defects found during inspection, the measures required and performed to correct such defects, and statements of final approval of all welding and bolting of shop and field connections and other fabrication and erection data pertinent to the safe and proper welding and bolting of shop and field connections. In addition to the parties listed in this Specification, the fabricator and erector will receive copies of all test reports.

C. Rejection of Material or Workmanship:

The Owner, Contractor, and Testing Laboratory reserve the right to reject any material or workmanship not in conformance with the Contract Documents at any time during the progress of the Work. However, this provision does not allow waiving the obligation for timely, in sequence inspections.

D. Mill Tests of Structural Steel:

Mill Order Steel: The fabricator will furnish certified mill test reports and an affidavit stating that the structural steel furnished meets the requirements of the grade specified on the structural drawings for all mill order steel. In case of controversy, tests of the material according to ASTM A6 or A568, as applicable, made by the Testing Laboratory with certified test reports paid for by the Contractor will be made to verify conformity with ASTM standards. Tests will be made for each 10 tons of material used, unless approved otherwise by the Owner.

E. Local Stock Steel:

1. Materials taken from stock by a fabricator for use for structural purposes must be of a quality at least equal to that required by the ASTM specifications applicable to the classification covering the intended use. Certified mill test reports will be accepted as sufficient record of the quality of materials carried in stock by the fabricator provided the stock steel can be identified by heat or melt numbers. In case of controversy, tests by the Testing Laboratory with certified reports as specified for mill order steel will be required.

2. If tests are required, test specimens will be taken by the Contractor under the direction of its Testing Laboratory and will be machined by the Testing Laboratory to dimensions as required by the applicable ASTM standards.

F. Shop Inspections and Tests:

1. The Testing Laboratory will provide inspection at the designated fabrication shops for the designated periods of time to perform shop inspection and tests. The designated fabrication shops and time periods of inspection will be determined in consultation with the Owner prior to the start of fabrication in a timely manner so as to not delay the fabrication process. The following tests and inspections will be performed:
 - a. Review shop drawings and shop procedures with fabricator's supervisory personnel.
 - b. Request and obtain necessary mill certifications of steel and verify proper material throughout the duration of the Project.
 - c. Verify welding qualifications either by prequalification or by witnessing qualification tests.
 - d. Verify welder qualifications either by certification and/or by retesting. Obtain welder certificates.
 - e. Check layout and dimensions of jigs and fixtures for multiple fabrication, joint preparation, and fit up of members.
 - f. Verify welding electrodes to be used and other welding consumables as the Project progresses.
 - g. Check preheating procedures for uniformity and thoroughness through the full thickness of the material. Inspect preheating and interpass temperatures for conformance to AWS D1.1, Table 4.2. Verify procedure for control of distortion and shrinkage stresses.
 - h. Verify procedures for welding in accordance with applicable portions of Section 4, "Technique", AWS D1.1.
 - i. Inspect welding equipment for capacity, maintenance, and working condition.
 - j. Perform random dimensional checks of completed members.
 - k. Provide inspection of surface preparation for coating and coating operations.
 - l. Check shipping preparation schedules and obtain copies of shipping lists.
 - m. Check bolted connections according to inspection procedures outlined

in the "Specification for Structural Joints" using ASTM A325 or A490 Bolts.

- n. Make visual inspection of welding in progress for size, length, and quality.
- o. Perform nondestructive examination services for various weldments of shop fabrication determined in consultation with the Contractor and Owner prior to the start of fabrication. The testing agency will submit recommendations to the Owner for approval as to the type of nondestructive inspection methods best suited to the member being tested. Specifically, the Testing Laboratory will provide a qualified technician with the necessary equipment to perform the following:
 - (1) Nondestructive examination conduct in accordance with the specific requirements for the item being examined including radiographic, ultrasonic, magnetic particle, or dye penetrate inspection. All nondestructive inspection procedures will conform to Section 6 of AWS D1.1.
 - (2) Interpret, record, and report all results of the nondestructive tests.
 - (3) Mark for repair any area not meeting Specifications requirements. Correction of rejected welds will be made in accordance with Paragraph 3.7, "Corrections," AWS D1.1.
 - (4) Re-examine all repair areas and interpret, record, and report the results of examinations of repair welds.
- p. Verify that quality of welds meet the requirements of Paragraph B.15, "Quality of Welds," AWS D1.1.
- q. Unless otherwise specified, test all partial and complete penetration welds in connections of beams, girders, columns, trusses, and braces. Test a minimum of 10% of connections with fillet welds. Increase the testing rate for welders having a high rejection rate as required to ensure acceptable welds. Visual inspection is required for all welds. The costs of repairing all defective welds and the costs of retesting by the Testing Laboratory will be borne by the Contractor. If removal of a backing strip is required by the Testing Laboratory to investigate a suspected weld defect, such cost will be borne by the Contractor.

G. Field Inspections and Tests:

- 1. The Testing Laboratory will provide inspection in the field in a timely manner for a period of time as determined in consultation with the Owner prior to the start of erection so as to not delay the start of erection. The following tests and inspections will be made:
 - a. Obtain the planned erection procedure and review with the erector's

supervisory personnel.

- b. Check the installation of base plates for proper leveling, grout type, and grout application.
- c. Verify field welding procedures and obtain welder certificates.
- d. Check steel as received in the field for possible shipping damage, workmanship, and piece marking.
- e. Check plumbness and frame alignment as erection progresses.
- f. Check required camber of floor beams.
- g. Check joint preparation and fit up, backing strips, and runout plates for welded moment connections and column splices.
- h. Check preheating to assure proper temperature, uniformity, and thoroughness through the full material thickness.
- i. Review welding sequence.
- j. Visually inspect all field welding for size, length, and quality.
- k. Perform nondestructive examination services for various weldments of field erection determined in consultation with the Contractor and Owner prior to the start of erection. The Testing Laboratory will furnish a qualified technician with the necessary equipment to perform radiographic, ultrasonic, magnetic particle, or dye penetrant inspection as required for the item being tested and other duties as outlined for shop inspection in the previous Section. Unless specified otherwise, check all partial and complete penetration welds in connections of beams, girders, columns, and braces. Check 10% of connections with fillet welds. Visual inspection is required for all welds.
- l. Check calibration of impact wrenches used in field bolted connections.
- m. Check high strength friction field bolted connections according to inspection procedures outlined in the "Specification for Structural Joints Using ASTM A3256 or A490 Bolts". Unless specified otherwise, test 10% of the bolts, but not less than two bolts, selected at random in each connection. If any bolt is found to be improperly tightened, test all bolts in the connection. Visually inspect all bearing type bolts to verify that the bolts are snug tight.
- n. Visually inspect the welding of metal deck to the structure.
- o. Perform field tests on 10% of completed shear connectors in each beam according to inspection procedures outlined in AWS D1.1.

2. The costs of repairing all defective welds and the costs of retesting by the

Testing Laboratory will be borne by the Contractor. If removal of a backing strip is required by the Testing Laboratory to investigate a suspected weld defect, such cost will be borne by the Contractor.

H. Tests and Inspection of Sprayed-On Fireproofing:

1. The Testing Laboratory will confirm that sprayed-on fireproofing conforms to all performance criteria as specified in the Project Specifications by obtaining and reviewing manufacturer's certification or test reports.
2. The Testing Laboratory will sample sprayed-on fireproofing at each floor for each day's operations and verify oven dry density and compression strength as specified on the Drawings.
3. The Testing Laboratory will verify proper installation method, proper material, and proper material thickness for each day's operation.
4. The Testing Laboratory will randomly inspect the thickness of the sprayed-on fireproofing as specified in the UL designation numbers on the Drawings.

3.05 NON-SHRINK GROUT FOR BASE PLATES AND BEARING PLATES AND PRECAST PAVERS

A. Compressive Strength Tests (by the Testing Laboratory):

1. Compressive strength of grout will be determined by testing four cubes two inches in dimension according to the requirements of ASTM C109 "Compressive Strength of Hydraulic Cement Mortars." Each strength test will be the average of two 28 day strengths. Test one cube at seven days, two at 28 days, and one at 56 days, only if either 28 day test is low.
2. Frequency of Testing: One set of cubes (four cubes) will be made for every ten base plates and bearing plates or fraction thereof cut not less than one set for each day's operation. One set of cubes will be made for each day's operation of grouting wall panels.

3.06 OPEN WEB STEEL JOISTS

A. Scope: The Testing Laboratory will perform inspection of open web steel joists in the field as herein described.

1. Obtaining Manufacturer's Product Certification: The Testing Laboratory will obtain product certification for open web steel joists and joist girders as required by the Specifications.
2. The Testing Laboratory will perform the following field inspections:
 - a. Inspect joists for damage during shipment.
 - b. Verify proper bearing of joists supports.
 - c. Verify camber requirements of joists arriving in the field.

- d. Confirm bridging size and location.
- e. Confirm attachment of joists to supports (welding or bolting).
- f. Confirm bolting of joists to supports at column lines as required by OSHA requirements.
- g. Verify that no joists have been damaged during erection.

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 provisions in Section 00700, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION 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 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. 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 Contractor'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.

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. Temporary Electrical Panel: The Contractor shall provide temporary electrical panel sized and equipped to accommodate all electrical equipment and lighting required by the Work. The Contractor shall connect temporary panel to existing facility electrical system. The Contractor shall protect with circuit breaker or fused disconnect. The Contractor shall locate temporary panel as directed by the Owner.
- 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. Temporary Lighting:

- a. Lockout: In facilities, wherever possible, the Contractor shall lockout all existing power to lighting circuits in Work area. Unless specifically noted otherwise, existing lighting circuits to the Work area are not to be used. All lighting to the Work area is to be provided from temporary electrical panel described above.
- b. The Contractor shall provide inside the Work areas or above the Work platforms the following where natural lighting or existing facility lighting does not meet the required light level:
 - (1) One 200-Watt incandescent lamp per 1,000 square feet of floor area, uniformly distributed, for general construction lighting or equivalent of a similar nature. In corridors and similar construction traffic areas provide one 100-Watt incandescent lamp every 50 feet. In stairways and at ladder runs in construction areas, provide one lamp minimum per story, located to illuminate each landing and flight. Provide sufficient

temporary lighting to ensure proper workmanship everywhere by combined use of daylight, general lighting, and portable plug-in task lighting.

- c. The Contractor shall provide lighting in areas where Work is being performed.
- d. The Contractor shall provide lighting in any area being subjected to a visual inspection as required to supply a 100 foot candle minimum light level.
- e. Wherever overhead floor or roof deck has been installed, the Contractor shall provide temporary lighting with local switching.
- f. The Contractor shall install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system, and will provide adequate illumination for construction operations and traffic conditions.
- g. The Contractor shall provide general service fluorescent lamps of wattage required for adequate illumination. The Contractor shall protect lamps with guard cages or tempered glass enclosures. The Contractor shall provide exterior type fixtures where exposed to weather or moisture. The Contractor shall provide local switching to allow lights to be turned off in patterns to conserve energy.
- h. Number of Lighting Circuits: The Contractor shall provide sufficient lighting circuits as required by the Work. All lighting circuits are to originate at temporary panel.
- i. Circuit Protection: The Contractor shall protect each circuit with a ground fault circuit interrupter (GFCI) of proper size located in the temporary panel.

D. Temporary Telephones:

Where existing telephone service is unavailable, the Contractor may install a temporary telephone at the Contractor's own expense. All charges for calls made from such telephone will be paid by the Contractor.

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. Temporary Heat:

1. The Contractor shall provide temporary heat required by construction activities, for curing or drying of completed installations or protection of installed

construction from adverse effects of low temperatures or high humidity. The Contractor shall select safe equipment that will not have a harmful effect on completed installations or elements being installed. The Contractor shall coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.

2. The Contractor shall provide adequate forced ventilation of enclosed areas for curing of installed materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors, or gases.
3. Prior to enclosure, the Contractor shall provide heating as necessary to protect Work, materials, and equipment against damage from dampness and cold.
4. The Contractor shall provide connections to existing facilities and extend and supplement with temporary units as required to comply with requirements.
5. The Contractor shall provide temporary heating units that have been tested and labeled by UL, FM or other recognized trade associations related to the type of fuel being consumed.
6. Heating Facilities:
 - a. Except where use of the permanent system is authorized, the Contractor shall provide vented self-contained LP gas or fuel oil heaters with individual space thermostatic control.
 - b. Use of gasoline-burning space heaters, open flame, or salamander type heating units is prohibited.

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. Temporary Elevator Use:

The Contractor shall use Owner's Service Elevator ONLY, upon Owner's approval.

O. 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.**

P. Stairs:

Until permanent stairs are available, the Contractor shall provide temporary stairs where ladders are not adequate. The Contractor shall cover finished permanent stairs with a protective covering of plywood or similar material so finishes will be undamaged at the time of acceptance.

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) Type 1 Terminal Construction Barricades:

- Barricade walls will be constructed with a minimum of ½" AC-1 plywood panels, UL labeled fire-retardant treated as required, with the grain orientated vertically, securely fastened to 2 x 4 wood or steel stud framing, minimum 24" on center, capable of structurally supporting barricades up to 21' high.
- Fastening devices will not protrude or present a hazard on the public side.
- Framing will be on the non-public side of the barricade.
- Barricades will run from floor to bottom of ceiling secured without nailing to the floor or ceiling, and they will be plumb and aligned in a straight line utilizing appropriate bracing.
- Sections will fit together tightly to present a first class appearance and will not permit light to show through to the public.
- Corners of the barricades will be at four foot wide 45° angles with tapered plywood edges.
- Floor covering under the barricade will be protected with ½" plywood and 6 mil. plastic.
- The non-public side of the barricade will be lined with 6 mil. plastic for dust control, and all joints of the plastic will be taped to prevent dust from escaping.
- All barricade material, work platforms, and scaffold systems (including support systems) will be pre-painted prior to delivery to the Project with paint in a color selected by the Owner. The Type 1 barricade material will be pre-painted prior to delivery to the Project with a textured latex paint in a color selected by the Owner.

- All screws on the public side, as well as doors and frames, will be painted.
- Barricades, work platforms, and scaffold systems will be painted to represent a finished appearance in the view of the public that is compatible with adjacent areas.
- Wood doors, 1-3/8" to 1-3/4" hollow core, located in barricades, will swing inward into the construction area and will be locked when not in use with a common key passage door lockset. When fire code dictates, doors will be constructed in a recessed enclosure and swing outward. Doors will be installed in pre-hung frames.
- The Contractor will provide walk-offs (4' x 6' minimum) inside the barricade area and keep the mats and the area in front of the mats clean.
- The Owner will be given copies of all barricade keys.
- Erecting and dismantling of all barricades will be performed between the hours indicated elsewhere in the Contract Documents and with prior approval of and coordination with the Owner.

(2) Type 2 Terminal Short-Term Barricades:

- In the event that very short-term work is required within, overhead or above the ceiling of the public and tenant areas of the Airport Administrative Offices Building, the work side will be separated from the common-use public areas by temporary barricades.
- Work can only be accomplished in (or above) the public and tenant areas between the hours of 12:00 a.m. and 8:00 a.m. on the Transfer Level, 12:00 p.m. midnight and 8:00 a.m. on the Baggage Claim Level, 9:00 p.m. and 5:00 a.m. on the Ticketing Level, and 12:00 p.m. midnight and 8:00 a.m. in the Airport Administrative Offices Building.
- Erecting and dismantling of all barricades will be performed between the hours described above and with prior approval of and coordination with the Owner.
- All temporary barricades will be removed by 8:00 a.m. each morning on the Transfer Level, the Baggage Claim Level and Airport Administrative Offices Building, and by 5:00 a.m. on the Ticketing Level.

- Short-term barricades will be solid panels, a minimum of 4' height, using a minimum of 1/2" AC-1 plywood, securely fastened to 1 x 2 wood framing (minimum of 24" on center). Panels will be hinged with all hardware on the non-public side.
- All bracing will be on the non-public side of the barricade.
- The public side of the panels will be painted with textured latex paint in a color selected by the Owner.
- Barricade sections will be fitted together to prevent accidental entry into the Work area by Airport patrons.
- Fastening devices will not protrude or present a hazard on the public side. Floor covering inside the barricade will be protected with 1/2" plywood and 6 mil plastic.

(3) Road Barricades:

- Roadway barricades will be in accordance with FDOT Roadway and Design Standards and in accordance with the Contract Documents.

(4) 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. Temporary Fire Protection:

Until fire protection needs are supplied by permanent facilities, the Contractor shall install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. The Contractor shall comply

with NFPA 10 "Standard for Portable Fire Extinguishers," and NFPA 241 "Standard for Safeguarding Construction, Alterations and Demolition Operations."

1. The Contractor shall locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
2. The Contractor shall store combustible materials in containers in fire-safe locations.
3. The Contractor shall maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires. The Contractor shall prohibit smoking in hazardous fire exposure areas.
4. The Contractor shall provide and maintain temporary fire protection during construction in accordance with requirements of the local protection code.
5. The Contractor shall provide Type "A" fire extinguishers for temporary offices and similar spaces where there is minimal danger of electrical or grease-oil flammable liquid fires. In other locations, the Contractor shall provide type "ABC" dry chemical extinguishers, or a combination of several extinguishers of NFPA recommended types for the exposures in each case. Extinguishers will have a minimum UL rating of AZ-10BC.
6. The Contractor shall provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.

C. Permanent Fire Protection:

At the earliest feasible date in each area of the Project, the Contractor shall complete installation of the permanent fire protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.

D. 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.

E. 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.

F. 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.

G. 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.

H. 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.
- I. 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.

J. 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.

K. 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.

L. 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 construction and safety during construction of the Project. Described herein are methods, procedures, rules and authorities to be adhered to during said construction period. In the event the Owner implements an Owner Controlled Insurance Program (OCIP), the Hillsborough County Aviation Authority Construction Safety & Health Guidelines Manual shall apply. The Contractor shall also comply with all safety requirements herein, unless in direct conflict with the Hillsborough County Aviation Authority Construction Safety & Health 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 operational for all users.
 - 2. Minimize delays to Airport operations.
 - 3. Maintain safety of Airport operations.
 - 4. Minimize delays to construction operations.
 - 5. Minimize Airport-operation/construction-activity conflicts.

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 the current version of Advisory Circular 150/5370-2. The Contractor will prepare and submit a safety plan that details how it proposes to comply with the requirements when working.
- 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 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.

- 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 tested 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.

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.
- 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 familiar with aircraft/ground controller communications and will be on duty whenever vehicles are operating in areas referenced above.
 - 2. Between sunset and sunrise, 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 in the Contract Documents or Drawings will display 3-foot x 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, taxilanes, 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 subphases 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 daily 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 AC 150/5370-2, prohibits construction within the safety areas or Obstacle Free Zone (OFZ), as defined in Advisory Circular 150/5300-13, latest edition 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 FAA Advisory Circular AC 150/5340-1, "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 taxilane 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. Construction activity may require closing of certain areas by the Owner, including the AOA. However, some Work may be done on an intermittent basis. The Contractor will maintain constant communication with the Owner when working and immediately obey all instructions from the Owner. Failure to so obey instructions or maintain constant communications with the Owner will be cause to suspend the Contractor's operations in the areas until satisfactory conditions are assured.
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 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 taxilanes. 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:

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 FAA Advisory Circular 150/5340-1, "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 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 Form 7460-1 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. Cranes, draglines, derricks, or other unusually tall equipment operating on the Airport will be in direct radio communication with the control tower. To effect this communication, the Contractor will provide two-way VHF radios capable of communicating on ground control frequency. Operators of such construction equipment will be qualified and knowledgeable in the use of radio equipment communication protocols with the Tower and capable of following instructions in a timely fashion.
5. The maximum height allowed on the Airport is 15 feet above ground level 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 Terminal buildings or by calling them at 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 other Owner representatives 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. At Tampa International Airport, the vertical clearance in the Short Term Parking Garage is 6'-8". No vehicle taller than 6'-8" will be allowed to operate in the Short Term Parking Garage structure. The vertical clearance in the Long Term Parking Garage is 7'-10". No vehicle taller than 7'-10" will be allowed to operate in the Long Term Parking Garage structure.** 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 will be responsible for all damage done by Contractor's hauling equipment and will correct such damage at Contractor's own expense.
- 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.

Q. Contractor's Security Requirements:

- 1. General Intent: It is intended that the Contractor will comply with all requirements of the Airport Security Plan and with the Safety Plan specified herein. 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.
- 2. 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.

3. 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 – Short Term Parking Garage Level 8 Rehabilitation 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 addition, for all Work within the AOA at Tampa International Airport only, the Contractor's onsite supervisors will be badged with Airport ID badges provided by Authority Operations. Supervisors requiring unescorted access to the Security Identification Display Area (SIDA) will be subjected to a FBI fingerprint-based Criminal History Records Check (CHRC) and a Transportation Security Administration Security Threat Assessment (STA). An ID badge will not be issued to an individual until they successfully pass a CHRC and STA.

New applicants applying for a TPA ID badge will continue to be charged \$27.00 for the CHRC and an additional \$3.00 (ID badge with an expiration less than 12 months from date of issue) or \$6.00 (ID badge with an expiration greater than 12 months from date of issue). The new STA fees will also apply to ID badge renewals. Each time an individual renews their ID badge (including lost, stolen, name change, etc.), the authorized issue will be charged the STA fee of either \$3.00 or \$6.00 (depending on expiration date period).

Personnel will wear the badge on outermost garment at all times while on the AOA. All employees of Contractor or subcontractor requiring access to the construction site are required to be supplied with identification badges to be worn at all times while within the area. 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 and the Owner. Contractor agrees that the determination of damages for a lost badge is uncertain. The Contractor will be assessed Three Hundred Dollar (\$300.00) in liquidated damages for each security badge that is not returned to the Owner at the time of badge expiration or Project completion. These damages will be paid promptly by the Contractor by company check, or the amount will be withheld by Owner from payments due to the Contractor.

4. 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 will issue a TPA validation sticker to each vehicle to be made available upon demand by the Owner or any Airport Security Officer. Vehicle validation sticker will be placed on the front left portion of the vehicle and be assigned in a manner to assure positive identification of the vehicle at all times. In lieu of issuing individual vehicle permits, the CSO can require each vehicle to display a large company sign on both sides of the vehicle and advise the Owner of a current list of companies authorized to enter and conduct Work on the Airport.
5. 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.
6. Employee Parking:
 - a. 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.
 - b. 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.
 - c. All vehicles entering any public parking garages will be required to pay the normal parking fee which will be calculated at the exit. Free parking will not be authorized.
7. 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.
8. Breach of Security Fine: Contractor agrees that liquidated damages in the amount of Ten Thousand Dollar (\$10,000.00) per occurrence will be assessed against the Contractor if the Contractor violates the requirements of the Airport Security Plan 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.

9. 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. 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

(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	(813) 371-7751
HCAA	Mr. Paul Ridgeway	(813) 870-8744
TECO	Mr. Greg Keininger	(813) 228-4231
Fuel Lines	Mr. Enos Sage	(813) 396-3626
Irrigation Lines	Mr. Michael Garcia	(813) 554-1482
City of Tampa	Mr. Royce Person	(813) 274-8944

- 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, 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.
- 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. 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 Contractor of its responsibility to protect such existing features from damage or unscheduled interruption of service.
- I. It is further understood and agreed that 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 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 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 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 excavated 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 will 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. Contractor agrees that damages for cut cables are uncertain and these liquidated damages are reasonable and are not a penalty and a reasonable consideration of the impact that damage to utilities could have to the operation of the Airport. 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. If prosecution of the Project work results in damages to existing FAA equipment or cables, the Contractor will repair the damaged item in conformance with FAA Airway Facilities' standards to the satisfaction of the above named FAA Point-of-Contact.
 5. If the Project work requires the cutting or splicing of FAA owned cables, the above named FAA Point-of-Contact 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, 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 Contractor's own expense, with identical material by skilled workers, all utilities, FAA cables, and other facilities which are damaged by 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.

- 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/repaired by the Contractor to the satisfaction of the Owner or (2) be replaced/repaired 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. Contractor will comply with all applicable provisions of local Codes concerning grading, filling, excavation, and soil removal.

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. 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, 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. 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. 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 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 and Contractor will comply.
- 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. 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 3 – 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, petro-chemical 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 repackaging, 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 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 noncompatible 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.

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 Contractor's 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 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

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 or Project Data submittals 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, 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

- 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 three copies of an 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 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 materials 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 code, standard or regulation 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 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

TPA/ Short Term Parking Garage Level 8 Rehabilitation

the applications indicated. Anchor each product securely in place, accurately located 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.

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:

1. 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.
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. Deliver 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. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
6. Store products at the Project site in a manner that will facilitate inspection and measurement of quantity or counting of units.
7. Store 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.

1.03 MANUFACTURER'S RECOMMENDATIONS

Except as otherwise approved by the Owner, Design-Builder 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. Promptly 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.

1.06 REPAIRS AND REPLACEMENTS

Contractor shall:

- A. In the 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.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

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.

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.
- 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.

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. 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:
 - a. Consent of Surety to Payment
 - b. Contractor's Final Payment Affidavit.
 - c. Contractor's Affidavit of Release of Liens
 - d. List of subcontractors and suppliers
 - e. Final release of lien from each subcontractor and supplier listed in d. above
 - f. Statement of compliance with labor standards and payment of all applicable taxes
 - g. Statement of Contractor's one-year general warranty
 - h. Specific warranties as specified in Contract Documents
 - i. Accounting of final Contract amount
 - j. Accounting of actual DBE (W/MBE) participation
 - k. As-Built drawings sufficient for the production of record drawings
 - l. O&M manuals, Record Project Manual and record documents (see paragraph 1.06)
 - m. Evidence of continuing insurance complying with specified requirements
 - n. Contractor's final pay application
 - o. 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, Design-Builder 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.
3. Record Project Manual: Upon completion of mark-up, Contractor will submit to Owner for Owner's records.
4. Maintenance Manuals: Contractor will complete, place in order, properly identify and submit to Owner for Owner's records.
5. Miscellaneous Record Submittals: Complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Contractor should submit to Owner for Owner's records.

B. Contractor's as-built drawings:

1. As-built drawings: The Contractor will maintain a 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.
 - 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 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.
- f. As-built drawings will contain the names, addresses and phone numbers of the Contractor and the major subcontractors.
- g. 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.
 - f. Upon Owner's approval, the Contractor will submit the completed record project manual and two copies of the record project manual (at Contractor's expense) to the Owner.
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 using strike-throughs for deletions, bold and italic for revisions and additions, and/or other acceptable method(s) where feasible to distinguish between changes.

D. Record Product Data:

During progress of the Work, maintain one copy 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. Upon completion of mark-up, submit three complete sets of product data submittal to Owner for Owner's records. Label each data submittal "PROJECT RECORD" in 1/2 inch high letters.

E. Record Sample Submittal:

Immediately prior to date(s) of Substantial 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 and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit

three sets to Owner for Owner's records. Categories of requirements resulting in miscellaneous work records are recognized to include, but not limited to, 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 Microsoft Word 2003 (or higher) format. All formatting and tabular data will be preserved. Tabular data will be embedded in the document in Excel 2003 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 the following media:
 - (1) CDR (minimum 650 MB capacity per disk).
 - d. All media transmittals will be accompanied by a detailed paper printout of the files on each media. This printout will consist of:
 - (1) File name.
 - (2) File size.
 - (3) Date of creation.
 - (4) Submittal number.
 - (5) A brief but accurate description of the file.

1.07 GUARANTEES AND WARRANTIES

- A. 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, and delivered to the Owner in duplicate giving a summary of the guarantees and warranties attached and stating the following with respect to each:
 - 1. Character of work affected
 - 2. Name of subcontractors
 - 3. Period of guarantee/warranty
 - 4. Conditions of guarantee/warranty
- 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.

1.08 OPERATING INSTRUCTIONS AND MAINTENANCE MANUALS

- A. 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. Bind properly indexed data in individual heavy-duty 2-inch, 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder.
 - 1. Submit three copies of each completed manual on equipment and systems, in final form, to the Owner for review and distribution. Provide separate manuals 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: Provide each Contractor's coordination drawings.
 - (1) Provide as-installed color-coded piping diagrams, where required for identification.
- 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 store at the Project site, in 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. Subsequent 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 be 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.

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 implied warranties and will not limit the duties, obligations, right 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.

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. Compile two copies 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.
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

TECHNICAL SPECIFICATIONS

**SHORT TERM PARKING GARAGE LEVEL 8
REHABILITATION**

TECHNICAL SPECIFICATIONS

HCAA PROJECT NO. 6120 17

WALKER PROJECT NUMBER 15-2100.13

SPECIFICATIONS TABLE OF CONTENTS
SHORT TERM PARKING GARAGE LEVEL 8 REHABILITATION

HCAA Project Number 6120 17

TAMPA INTERNATIONAL AIRPORT
Tampa, Florida

SECTION	TITLE	PAGES
<hr/>		
TECHNICAL SPECIFICATIONS		
DIVISION 2 – EXISTING CONDITIONS		
020000	DESCRIPTION OF WORK – RESTORATION	1-4
020010	WORK ITEMS	1-26
025130	GENERAL CONCRETE SURFACE PREPARATION	1-2
025140	SURFACE PREPARATION FOR PATCHING AND OVERLAY	1-6
DIVISION 3 - CONCRETE		
033021	CAST-IN-PLACE CONCRETE RESTORATION	1-14
033760	PREPACKAGED REPAIR MORTAR	1-6
DIVISION 7 – THERMAL AND MOISTURE PROTECTION		
071800	TRAFFIC COATINGS	1-8
071900	WATER REPELLENTS	1-6
078100	APPLIED FIREPROOFING	1-6
079233	CONCRETE JOINT SEALANTS	1-8
079500	EXPANSION JOINT ASSEMBLIES	1-12
DIVISION 9 - FINISHES		
099113	EXTERIOR PAINTING	1-6
099120	PAVEMENT MARKINGS	1-6

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 020000 - DESCRIPTION OF WORK - RESTORATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General Requirements of the specifications apply to this Section.

1.2 PROJECT DESCRIPTION

- A. Work will be performed at locations shown on Drawings.
- B. Work required in these areas and estimated quantities are listed on Bid Form. Bid Quantities associated with Work Items listed on Drawings have been estimated and are subject to measurement as defined in Article "Measurements." Where additional Work Items are described, but not specifically located and/or shown on Drawings, Contractor shall be responsible for locating and marking areas to be repaired.
- C. Work Item specifications and details shall govern all repair operations. Locations where Work Items apply are shown on Drawings as symbols.
- D. Payment shall be made on basis of actual approved Work performed as measured in place.
- E. Project consists of rehabilitation of level 8 of the Short Term Garage at Tampa International Airport.
 - 1. Short Term Level 8: This project consists of rehabilitation of level 8 including concrete repairs to floors, ceilings, columns and walls. Floor slab cracks and joints will be sealed, epoxy crack healer applied 10' to either side of girder lines and at cantilever areas as shown on Drawings. Then the entire parking area of level 8 will be coated with a traffic bearing membrane.

1.3 MEASUREMENTS

- A. Before ordering any material or doing any Work, Contractor shall verify all measurements at Project site and shall be responsible for correctness of same.
- B. Before proceeding with each Work Item, Contractor shall locate, mark, and measure quantity of each item and report quantities to Engineer. If measured quantities exceed Engineer's estimate, Contractor shall obtain written authorization to proceed from Owner before executing Work required for that Work Item.
- C. Measurement of quantities for individual Work Items will be performed by Contractor and reviewed by Engineer.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

- D. Cost of Work included in each Work Item for quantities as indicated in Contract Documents shall be included in Base Bid.
 - 1. Additions to or deductions from lump sum price for quantities of each Work Item added to or deducted from Work respectively shall be at unit prices indicated in Bid Form and shall constitute payment or deductions in full for all material, equipment, labor, supervision and incidentals necessary to complete Work.

1.4 WORK SEQUENCE

- A. Prior to commencement of work, Contractor shall submit a project schedule detailing the work and meet with Engineer and Owner's representatives to review the document. Contractor shall give Airport Authority notice of areas to be worked in at least 2 working days in advance of actual Work.
 - 1. Contractor to coordinate barricade placement around parking areas to facilitate overhead work with Owner.
- B. Contractor shall notify Owner's representative at least 24 hr prior to beginning any abrasive blasting operations.
- C. Contractor shall remove all broken concrete and debris from Work area on daily basis and dispose of same at authorized dump sites.
- D. Contractor shall remove dust and air transported sand/debris from remainder of facility on a daily basis.

1.5 CONTRACTOR USE OF PREMISES

- A. General: Work hours shall be based on the work zone as follows:
 - 1. Work hours for this project are identified in Division 1. Refer to G-003 for Schematic Project Schedule.
 - 2. Contractor's use of premises is limited only by Owner's right to perform construction operations with its own forces or to employ separate contractors on portions of project.
- B. General: Limit use of premises to construction activities in areas indicated; allow for Owner occupancy and use by public.
 - 1. Confine operations to areas within Contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.
 - 2. Keep driveways, ramps, and entrances serving the premises clear and available to the Owner and Owner's employees at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

- C. Contractor's use of premises shall not interfere with operation of same. Elevators shall not be used for transfer of materials or equipment.
 - D. Contractor's debris removal path shall be over non-repaired surfaces unless physical restraints prevent use of such path.
 - E. Contractor shall confine its apparatus, materials, equipment, tool cribs, field offices and operations to areas designated by Owner. Premises shall not be unreasonably encumbered with materials and equipment. Neat and orderly stockpiling and other operations shall be maintained and debris shall be regularly removed from site. Contractor shall not load or permit any part of structure to be loaded with weight that will endanger structural integrity or safety of facility. Contractor shall limit axle loads to maximum 4000 lb per axle and gross weight of 8000 lb, or stockpiling of materials and equipment to 50 lb per sq ft. Contractor to note existing height and weight restrictions within parking structure.
 - F. Contractor Parking: Contractor's employees may park in the available parking garages but must pay the prevailing parking rates. Parking availability is not guaranteed. See phasing plan and notes on drawings for additional parking information.
 - G. On-Site Storage: Contractor shall not store materials or equipment at site of Work for more than one week prior to time that materials or equipment are incorporated into Work. On-site storage will be limited to the designated staging area near the 'D' Guideway. Staging area will remain in use by multiple contractors, Contractor is responsible for safeguarding any stored materials. Owner is not responsible for any damage or theft of stored materials.
- 1.6 BARRICADES
- A. Provide positive barricading to separate Work areas from areas open to public and to prevent the need for washing cars parked adjacent to the work area. Minimum acceptable separation: 3 ft. 0 in. high solid temporary barrier constructed of water filled polyethylene. Provide additional barriers as required to prevent damage to vehicle due to airborne debris.
- 1.7 TRAFFIC OFFICERS AND FLAGMEN
- A. See Section 01110 – “Airport Project Procedures.”
- 1.8 CLAIMS
- A. See Section 00700 – “General Conditions of the Contract.”
- 1.9 OWNER OCCUPANCY
- A. See Section 01110 – “Airport Project Procedures.”

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION 020000

SECTION 020010 - WORK ITEMS

PART 1 - GENERAL

RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Divisions 1, 2, 3, 7, and 9 Specification Sections apply to this Section.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

WI 1.1 MOBILIZATION/DEMOBILIZATION AND MAINTENANCE OF TRAFFIC

A. Scope of Work:

1. This item shall consist of the 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. For the establishment by the Contractor of staging areas, temporary offices, building facilities, all utilities, safety equipment and first aid supplies, sanitary and other facilities, as required by these Specifications, and State and local laws and regulations. The preparation, submittal and approval of all shop drawings, the ordering of required material and the cost to establish, maintain and restore to the existing condition, of the Contractor staging area and sodding of disturbed grass areas outside of the limits of construction shall also be included in this item.
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.
3. Included in this item are the furnishing, placing, repositioning, maintaining and removal of all temporary barriers, signage and barricades as shown on the Project Plans or as required, as well as, any and all other costs associated with the required maintenance of traffic or project phasing.
4. 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.
5. All costs associated with the required meetings and coordination with the Authority and Engineer. In addition, all costs associated with the Contractor badging and the quality control and safety plan requirements, as well as preparation and maintenance of the project schedule, shall be included in this item.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

6. 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.

B. Materials

1. None

WI 1.7 OWNER'S ALLOWANCES

A. Scope of Work:

1. An Owner's Allowance in the amount indicated in the Bid Schedule has been established for the possible increases in quantities established work items or for unforeseeable additional work elements that are not specifically identified in the plans or specifications for which there are bid items or for other work items which may be added at the Owners discretion. Detailed scopes and/or quantities will be provided to the Contactor during the progress of the project as necessary and applicable to complete the project. Refer to Section 01020 "Owner's Allowance" for requirements.

B. Materials

1. None

WI 3.0 CONCRETE FLOOR REPAIR

A. Scope of Work

1. This Work consists of furnishing all labor, materials, equipment, supervision and incidentals including shoring necessary to locate existing spalls, locate and remove delaminated and unsound floor concrete, prepare cavities and install new concrete and reinforcing (as required) materials to restore concrete floor to original condition and appearance. Refer to Detail Series 3.0 for specific requirements.

B. Materials

1. Concrete repair materials shall be as specified in Division 03 Section "Cast-in-Place Concrete Restoration" and/or Division 03 Section "Prepackaged Repair Mortar."
2. Conventional steel reinforcement shall be as specified in Division 03 Section "Cast-in-Place Concrete Restoration."

C. Execution

1. Locating, marking, removal, preparation, and inspection of deteriorated concrete and reinforcing steel preparation, repair and installation shall be performed as specified in Division 02 Section "Surface Preparation for Patching and Overlay."

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

2. Final surface preparation, concrete placement, finishing and curing shall be performed as specified in concrete repair material specification. Manufacturer specifications/ requirements for these issues shall also be followed in the event proprietary bag mix repair materials are used.

WI 3.1 FLOOR REPAIR - PARTIAL DEPTH/SHALLOW

- A. Refer to Work Item 3.0, "Concrete Floor Repair" for scope of Work, materials and Execution procedure associated with this Work Item. Refer to Detail 3.1 for specific requirements.

WI 3.3 FLOOR REPAIR - FULL DEPTH

- A. Refer to Work Item 3.0, "Concrete Floor Repair" for Scope of Work, Material and Execution procedures associated with this Work Item. Refer to Detail 3.3 for specific requirements.

WI 3.4 FLOOR REPAIR – CURBS/WALKS

- A. Refer to Work Item 3.0, "Concrete Floor Repair" for Scope of Work, Material and Execution procedures associated with this Work Item. Refer to Detail 3.4 for specific requirements.

WI 4.1 CEILING REPAIR – PARTIAL DEPTH/SHALLOW

- A. Scope of Work
 1. This Work consists of furnishing all labor, materials, equipment, supervision and incidentals including shoring necessary to locate existing spalls, locate and remove delaminated and unsound overhead concrete, prepare cavities and install new concrete and reinforcing (as required) materials to restore overhead concrete to original condition and appearance. Refer to Detail 4.1 for specific requirements.
- B. Materials
 1. Trowel applied patching material shall be as specified in Division 03 Section "Prepackaged Repair Mortar." This material may be used for shallow removal and repair Work Items only.
- C. Execution
 1. Locating, marking, removal, preparation, and inspection of deteriorated concrete and reinforcing steel preparation, repair and installation shall be performed as specified in Division 02 Section "Surface Preparation for Patching and Overlay."
 2. Final surface preparation, concrete placement, finishing and curing shall be performed as specified in concrete repair material specification. Manufacturer specifications/ requirements on these issues shall also be followed in the event proprietary bag mix repair materials are used.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

WI 5.0 CONCRETE BEAM AND JOIST REPAIR

A. Scope of Work

1. This Work consists of furnishing all labor, materials, equipment, supervision and incidentals including shoring necessary to locate existing spalls, locate and remove delaminated and unsound overhead concrete, prepare cavities and install new concrete and reinforcing (as required) materials to restore concrete beams and joists to original condition and appearance. Refer to Detail Series 5.0 for specific requirements.

B. Materials

1. Cast-in-place concrete repair materials shall be as specified in Division 03 Section "Prepackaged Repair Mortar."
2. Conventional steel reinforcement shall be as specified in Division 03 Section "Cast-in-Place Concrete Restoration."
3. Trowel applied patching material shall be as specified in Division 03 Section "Prepackaged Repair Mortar." This material may be used for shallow removal and repair Work Items only.

C. Execution

1. Locating, marking, removal, preparation, and inspection of deteriorated concrete and reinforcing steel preparation, repair and installation shall be performed as specified in Division 02 Section "Surface Preparation for Patching and Overlay ." Install shoring at repair locations where required per the Construction Documents prior to starting removals.
2. Final surface preparation, concrete placement, finishing and curing shall be performed as specified in concrete repair material specification. Manufacturer specifications/ requirements on these issues shall also be followed in the event proprietary bag mix repair materials are used.

WI 5.1 BEAM REPAIR - PARTIAL DEPTH

- A. Refer to Work Item 5.0, "Concrete Beam and Joist Repair" for scope of Work, materials and procedure associated with this Work Item. Refer to Detail 5.1 for specific requirements.

WI 6.0 CONCRETE COLUMN REPAIR

WI 6.1 COLUMN REPAIR – PARTIAL DEPTH

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals including shoring necessary to locate existing spalls, locate and remove delaminated and unsound concrete, prepare cavities and install concrete and reinforcing (as required)

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

materials to restore concrete columns to original condition and appearance. Refer to Detail 6.1 for specific requirements.

B. Materials

1. Cast-in-place concrete repair materials shall be as specified in Division 03 Section "Prepackaged Repair Mortar."
2. Conventional steel reinforcement shall be as specified in Division 03 Section "Cast-in-Place Concrete Restoration."
3. Trowel applied patching material shall be as specified in Division 03 Section "Prepackaged Repair Mortar." This material may be used for shallow removal and repair Work Items only.

C. Execution

1. Locating, marking, removal ,preparation, and inspection of deteriorated concrete and reinforcing steel preparation, repair and installation shall be performed as specified in Division 02 Section "Surface Preparation for Patching and Overlay ." Install shoring at repair locations where required per the Construction Documents prior to starting removals.
2. Final surface preparation, concrete placement, finishing and curing shall be performed as specified in concrete repair material specification. Manufacturer specifications/ requirements on these issues shall also be followed in the event proprietary bag mix repair materials are used.

WI 7.0 CONCRETE WALL REPAIR

WI 7.1 WALL REPAIR – PARTIAL DEPTH

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals including shoring necessary to locate existing spalls, locate and remove delaminated and unsound concrete, prepare cavities and install concrete and reinforcing (as required) materials to restore concrete walls to original condition and appearance. Refer to Detail 7.1 for specific requirements.

B. Materials

1. Cast-in-place concrete repair materials shall be as specified in Division 03 Section "Prepackaged Repair Mortar."
2. Conventional steel reinforcement shall be as specified in Division 03 Section "Cast-in-Place Concrete Restoration."
3. Trowel applied patching material shall be as specified in Division 03 Section "Prepackaged Repair Mortar." This material may be used for shallow removal and repair Work Items only.

C. Execution

1. Locating, marking, removal ,preparation, and inspection of deteriorated concrete and reinforcing steel preparation, repair and installation shall be performed as specified in Division 02 Section "Surface Preparation for Patching and Overlay ." Install shoring at repair locations where required per the Construction Documents prior to starting removals.
2. Final surface preparation, concrete placement, finishing and curing shall be performed as specified in concrete repair material specification. Manufacturer specifications/ requirements on these issues shall also be followed in the event proprietary bag mix repair materials are used.

WI 9.0 EXPANSION JOINT PREPARATION

WI 9.1 EXPANSION JOINT PREPARATION – NEW BLOCKOUT

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to locate the Work area, remove sound and unsound floor slab concrete as required, and place patch or fill material to prepare cavity, including modifications to joint opening to receive new expansion joint systems. Refer to Detail 9.1 for specific requirements and installation conditions. This Work shall be coordinated with Work Item "Expansion Joint Repair and Replacement."

B. Materials

1. Cast-in-place concrete repair materials shall be as specified in Division 03 Section "Prepackaged Repair Mortar."
2. Trowel applied patching material shall be as specified in Division 03 Section "Prepackaged Repair Mortar." This material may be used for shallow removal and repair Work Items only.

C. Execution

1. Contractor shall remove existing expansion joint materials in manner that minimizes damage to adjacent concrete.
2. Alterations and preparation to existing expansion joint concrete opening slab surfaces to prepare the necessary blockout required for installation of new expansion joint system shall be performed in accordance with this Work Item and Division 02 Section "Surface Preparation for Patching and Overlay."
3. Contractor shall locate and mark all expansion joint installation areas requiring new blockout as located on Drawings.
4. All concrete requiring removal shall be square sawcut and chipped to limits/dimensions detailed. Caution shall be exercised during sawcutting operations to avoid damaging existing reinforcement near surface of concrete.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

5. Spalls and delaminations located within blockout shall be patched in accordance with Work Item 3.0, "Concrete Floor Repair."
6. Contractor shall allow for Engineer/Architect inspection of all cavities for condition as specified.
7. Final surface preparation, concrete placement, finishing and curing shall be performed as specified in concrete repair material specification. Manufacturer shall confirm acceptance of joint opening, block-out and repair materials prior to installation of expansion joint system.

WI 10.0 EXPANSION JOINT REPAIR AND REPLACEMENT

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to remove existing expansion joints, and furnish and install new expansion joint system. Refer to Detail Series 10.0 for specific requirements.

B. Materials

1. Expansion joint system materials shall be as specified in Division 07 Section "Expansion Joint Assemblies," installed in strict accordance with manufacturer's recommendations.

C. Execution

1. Contractor shall remove existing expansion materials in manner that minimizes damage to adjacent concrete.
2. Alterations to existing expansion joint blockout required for installation of new expansion joint system shall be performed in accordance with Work Item Series 9.0, "Expansion Joint Preparation."
3. Joint installation procedures shall be in accordance with referenced specifications and manufacturer's recommendations.

WI 10.3 EXPANSION JOINT – ELASTOMERIC CONCRETE EDGED

- A. Refer to Work Item 10.0, "Expansion Joint Repair and Replacement" for scope of Work, materials and procedure associated with this Work Item. Refer to Detail 10.3 for specific requirements.

WI 10.7 EXPANSION JOINT – SILICONE SEAL - VERTICAL

- A. Refer to Work Item 10.0, "Expansion Joint Repair and Replacement" for scope of Work, materials and procedure associated with this Work Item. Refer to Detail 10.7 for specific requirements.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

WI 11.0 CRACK AND JOINT REPAIR

WI 11.1 SEAL CRACKS AND JOINTS

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to locate, prepare and seal random cracks and unsealed construction and control joints in concrete floor and/or topping. Refer to Detail 11.1 for specific requirements.
2. Work Item 11.1 is incidental to Work Item 16.1, "Traffic Topping-Vehicular."

B. Materials

1. Approved materials for use in this Work are specified in Division 07 Section "Concrete Joint Sealants."
2. Joint sealant material shall be compatible with traffic topping materials specified in Section "Traffic Coatings."

C. Execution

1. Contractor shall thoroughly clean and inspect concrete slabs and/or topping for cracks and unsealed construction and control joints. Those identified as either greater than 0.03 in. wide or showing evidence of water leakage and/or salt staining on ceiling below shall be sealed. All cracks and joints identified for repair shall be marked with chalk to aid in precision routing. Obtain depths to top reinforcing bars in area of repair by use of a pachometer (rebar locator). Determine depth of electrical conduit (metal or plastic). Do not exceed this depth of routing where the crack to be repaired crosses the embedded items. Damage to embedded items will require repair or replacement at no cost to the Owner.
2. Cracks and construction joints shall be ground or sawcut to an adequate width and depth as required by Work Item Detail. Routing shall be performed by mechanized device that has positive mechanical control over depth and alignment of cut. Hand held power grinders with abrasive disks shall not be used on control/construction joints, but may be used on random cracks.
3. Cavities shall be thoroughly cleaned by either sandblasting or grinding to remove all laitance, unsound concrete and curing compounds which may interfere with adhesion. Groove shall be air blasted to remove remaining debris.
4. Sealant materials and installation procedures shall be in accordance with referenced specifications for selected material.
5. Traffic topping manufacturer shall verify in writing that joint sealant is compatible with traffic topping. Crack and joint sealant work shall be incidental to traffic topping system.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

WI 11.2 REPAIR CRACK/JOINT SEALANT

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to locate and mark failed joint sealant, remove existing sealant, prepare edges and reseal joints and cracks. Refer to Detail 11.2 for specific requirements.
2. Work Item 11.2 is incidental to Work Item 16.1, "Traffic Topping-Vehicular."

B. Materials

1. Approved materials for use in this Work are specified in Division 07 Section "Concrete Joint Sealants."
2. Joint sealant material shall be compatible with traffic topping materials specified in Section "Traffic Coatings."

C. Execution

1. Contractor shall locate failed crack/joint sealant by visual inspection.
2. Contractor shall remove existing sealant from joints and/or cracks.
3. When existing joint dimensions do not conform to Detail 11.2, joints shall be routed or sawcut to an adequate width and depth to match Work Item Detail. Routing shall be performed by mechanized device that has positive mechanical control over depth and alignment of cut.
4. Cavities shall be thoroughly cleaned by either sandblasting or grinding to remove all remaining sealant and unsound concrete which may interfere with adhesion. Groove shall also be air blasted to remove remaining debris.
5. Sealant materials and installation procedures shall be in accordance with referenced specifications for selected material.
6. Traffic topping manufacturer shall verify in writing that joint sealant is compatible with traffic topping.
7. Crack and joint sealant work shall be incidental to traffic topping system.

WI 11.7 COVE SEALANT

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to prepare concrete surfaces and install cove sealant between floor and vertical surfaces as shown on Drawings. Refer to Detail 11.7 for specific requirements.
2. Work Item 11.7 is incidental to Work Item 16.1, "Traffic Topping-Vehicular."

B. Materials

1. Joint sealant materials shall be as specified in Division 07 Section "Concrete Joint Sealants."
2. Joint sealant material shall be compatible with traffic topping materials specified in Section "Traffic Coatings."

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

C. Execution

1. Intersection to be sealed shall be thoroughly cleaned by sandblasting to remove all contaminants and foreign material.
2. Entire Work area shall then be cleaned with compressed air to assure that all loose particles have been removed and that intersection is dry.
3. Properly prepared intersection shall be coated evenly and completely with joint primer material on each of intersecting faces in accordance with sealant manufacturer's recommendations.
4. After primer has cured, apply cove sealant to intersection such that sealant extends 0.75 in. onto each of intersecting faces.
5. Work cove sealant into joint so that all air is removed and tool to concave shape such that minimum throat dimension of no less than 0.5 in. is maintained.
6. Remove excess sealant and allow to cure.
7. Cove joint sealant work shall be incidental to traffic topping system.

WI 13.2 EPOXY BROADCAST CRACK HEALER

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals, necessary to prepare and apply epoxy crack healer as shown on Drawings.

B. Materials

1. Low viscosity, high strength epoxy floor resin designed to penetrate and seal cracks. Product shall be as specified in Section "Water Repellents."

C. Execution

1. Epoxy Crack Healer material shall be compatible with Traffic Topping.
2. Prior to start of Work, obtain written approval from Traffic Topping manufacturer that the Epoxy Crack Healer material is compatible with the proposed traffic topping. Include Crack Healer with Traffic Topping mock-up or trial applications.
3. Surface preparation shall be performed and paid for under Work Item Series 16.1 "Traffic Topping –Vehicular."

WI 16.0 TRAFFIC TOPPING

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals, including installation of joint sealant materials, necessary to prepare existing floor surfaces and install traffic topping. Coating of all vertical surfaces within Work limits shall be incidental to installation of traffic topping. Refer to Detail series 16.0 for specific requirements.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

B. Materials

1. Traffic topping materials shall be as specified in Division 07 Section "Traffic Coatings."

C. Execution

1. Floor surface preparation shall be performed by coating system licensed applicator or under its direct supervision.
2. Shotblast surface preparation is required for floors.
3. Coating system shall be installed by licensed applicators in strict accordance with manufacturer's recommendations and referenced specification section.
4. Crack preparation, including installation of sealant material where required, is incidental to traffic topping work.
5. Coating system shall be thoroughly cured prior to Work areas being returned to service.

WI 16.1 TRAFFIC TOPPING - VEHICULAR

- A. Refer to Work Item 16.0, "Traffic Topping" for Scope of Work, materials and procedure associated with this Work Item. Refer to Detail 16.1 for specific requirements.

WI 25.0 MECHANICAL - DRAINAGE

WI 25.2 MECHANICAL – SUPPLEMENTARY FLOOR DRAINS

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to supplement existing floor drain system by installing additional drains. Refer to Detail 25.2 for specific requirements.
2. Re-anchoring existing PVC drain line in the vicinity of the drain is incidental to this work item.
3. Refer to Work Item 25.3 for installation of Pipe and Hangers where no existing lines are present.

B. Materials

1. Approved materials for this Work are as shown on Detail 25.2.
2. Sealant materials shall be as specified in Section "Joint Sealants."

C. Execution

1. Contractor shall locate and mark existing drain holes for installation of supplemental floor drains.
2. Contractor shall verify low points on slab by ponding or elevation survey prior to locating drains.
3. Concrete preparation shall be as shown on Detail 25.2.

4. Drains shall be installed as shown on Detail 25.2.

WI 25.3 MECHANICAL - PIPE AND HANGERS

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary install pipe and hangers for supplemental floor drains where existing drain lines are not present. Work Item 25.2, "Mechanical - Supplementary Floor Drain" is directly related to this Work Item. Refer to Detail 25.3 for specific requirements.

B. Materials

1. Approved materials for this Work are as shown on Detail 25.3 and shall match existing drain lines.

C. Execution

1. Contractor shall locate and mark all areas where supplemental floor drain piping is to be installed.
2. Pipes and hangers shall be installed with adequate positive drainage slope at all locations along pipe runs.

WI 35.8 REPAIR STUCCO FIREPROOFING

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to remove and replace spalled, debonded or otherwise deteriorated Portland cement fireproofing, and rebuild soffit to match existing soffit condition and appearance. Refer to Detail 35.8 for specific requirements.

B. Materials

1. Repair materials shall as specified in Section "Applied Fireproofing."

C. Execution

1. The Contractor shall locate and mark all areas to receive repair under the direction of the Engineer.
2. Removal areas shall be removed in accordance with manufacturer written instructions.
3. Do not damage adjacent fireproofing during removals or repair work.
4. The Contractor shall place new metal lathe mechanically fastened to rebuilt steel stud framing to create reinforcing for the new fireproofing. Do not damage interior elements with mechanical fasteners, size accordingly.
5. Replace cement based fireproofing in accordance with manufacturer's instructions.
6. Finish coat shall match existing/surrounding fireproofing in texture and color.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

WI 35.9 STUCCO FIREPROOF ENCLOSURES

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to locate existing exposed steel connection, remove existing fireproofing material, install necessary metal lathe and steel stud supports and apply new cement based applied fireproofing. Refer to detail 35.9 for specific information.

B. Materials

1. Repair materials shall as specified in Section "Applied Fireproofing."

C. Execution

2. The Contractor shall locate and mark all areas to receive repair under the direction of the Engineer.
3. Removal areas shall be removed in accordance with manufacturer written instructions.
4. Do not damage adjacent fireproofing during removals or repair work.
5. The Contractor shall place new metal lathe mechanically fastened to rebuilt steel stud framing to create reinforcing for the new fireproofing. Do not damage interior elements with mechanical fasteners, size accordingly.
6. Replace cement based fireproofing in accordance with manufacturer's instructions.
7. Finish coat shall match existing/surrounding fireproofing in texture and color.

WI 40.0 METALWORK

WI 40.1 SHEAR TRANSFER CONNECTIONS

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, shoring and jacking, supervision and incidentals necessary to install shear transfer connection at expansion joints as indicated on the Drawings. Refer to Detail 40.1 for specific requirements.
2. Work includes application of traffic topping in accordance with Work Item 16.1 to cover the bolt holes of both sides of existing expansion joint to remain (approximately 6'-0" wide by 30'-0" long). This work is incidental to Work Item 40.1.

B. Materials

1. Angle shall be Grade 304 stainless steel.
2. Anchor bolts and all hardware shall be the same type and finish of steel as the angles above.
3. Anchoring system shall be as shown on the referenced detail.
4. Slide Bearing Pads: Ultrahigh molecular weight, high-density polyethylene resin. Acceptable material is "Korolath PE" by Koro Corporation, Hudson, MA.
5. Traffic topping materials shall be as specified in Division 7 section "Traffic Coatings."

C. Execution

1. Contractor shall locate and layout Work areas and verify location with Engineer/Architect.
2. Contractor shall provide and install shear transfer connections as indicated on the Drawings and Detail 40.1.
3. Application of traffic topping shall be in accordance with Work Item 16.1 "Traffic Topping – Vehicular."

WI 40.2 REPAIR STRUCTURAL STEEL SLIDE BEARING

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to contain preparation debris and paint during operations, prepare surfaces, repair any deficient steel components, prime and paint all structural steel and miscellaneous metal items as shown in detail 40.2. Surface Preparation shall be to SSPC-SP-3 standard.
2. Removal of existing fireproofing materials to inspect bearing is incidental to Work Item 35.9 "Stucco Fireproof Enclosures."

B. Materials

1. Paint materials shall be as specified in Division 09 Section "Exterior Painting."
2. Structural steel materials for repairs shall be:
 - a. Steel plate and bar shall be ASTM A36 steel, $F_y = 36,000$ PSI.
 - b. Structural steel shapes shall be ASTM A992 steel, $F_y = 50,000$ PSI.
 - c. Bolts, nuts and washers shall be ASTM A325, $F_y = 120,000$ PSI (105,000 PSI).
 - d. Welding electrodes shall be E70XX, per AWS D1.1, latest edition.

C. Execution

1. Contractor shall locate and verify with Engineer all Work areas. Contractor to coordinate inspection from Engineer to determine if repairs to steel in this Work Item are required. Removal of existing fireproofing is incidental to Work Item 35.9.
2. Contractor shall verify paint selection with Owner prior to start of Work.
3. Contractor shall take all necessary measures to contain, with full height barriers, sandblasting debris and paint to immediate Work area to protect public from injury and vehicles and public property from damage.
4. Contractor shall solvent clean any surface area with oil or grease build-up prior to receiving power tool cleaning preparation in accordance with SSPC-SP1.
5. Contractor shall prepare all surfaces with surface corrosion in accordance with SSPC-SP-3.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

6. Contractor shall airblast and remove all debris from Work area prior to application of primer or paint. Contractor shall locate and mark Work areas and verify location with Engineer. Remove and replace any deficient steel section (deficient means steel that exhibits more than a 15% loss of cross section due to corrosion/deterioration).
7. Contractor shall apply primer to all prepared metal surfaces on same day (within 8 hrs) as preparation operations. Apply primer in strict accordance with manufacturer's recommendations.

WI 40.2.1 REPAIR STRUCTURAL STEEL SLIDE BEARING – SHORING

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to provide, install and maintain shoring in conjunction with WI 40.2. Refer to Detail 40.2.1 for additional information.

B. Materials

1. Shores shall be steel, rated at a minimum allowable load of 4,500 lb at 12 ft extension.

C. Execution

1. Comply with ACI 301 and ACI 347 for shoring and reshoring in multi-story construction, except as modified in this Section.
2. Refer to Detail 40.2.1 for shoring loads and approximate shore and re-shore locations.
3. Prior to installation of shores, Contractor shall submit shoring scheme prepared and sealed by registered Professional Engineer in Florida.
4. Engineer/Architect will review shoring scheme for general conformance to requirements stated herein. If it does not conform, Contractor will be informed to resubmit another shoring scheme.
5. If during construction, modifications are necessary to accommodate other trades, revise and resubmit erection plan to Engineer/Architect for review.

WI 40.5 REPLACE JUNCTION BOX COVER

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to remove and replace deteriorating junction box covers below the light poles on the underside of the roof level.

B. Materials

1. Junction box covers and anchors shall be galvanized of size and shape needed to secure existing junction boxes. Contractor to field verify existing dimensions and thickness of junction box cover.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

C. Execution

1. The Contractor shall locate and mark all areas to receive repair under the direction of the Engineer. Repair any junction boxes, beyond the covers, that are deteriorated to Owner and Engineer.
2. Replace existing cover and anchors.

WI 45.0 PAINTING

WI 45.1 PAINT TRAFFIC MARKINGS

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to locate, layout and paint parking stall stripes, traffic arrows, crosswalks, accessible stall access aisles, curbs, symbols, stop bars and all other existing pavement markings.
2. Stripes shall match all existing marks and be provided at same locations.
3. Remove existing stripes in those locations where they conflict with new striping layout.
4. Remove and replace existing flexible delineators. Incidental to W.I. 45.1.
5. Replace accessible signage and posts. Incidental to W.I. 45.1.
6. Stall numbering is incidental to W.I. 45.1.

B. Materials

1. Painting materials shall be high-build, 100% Acrylic Waterborne as specified in Section "Pavement Markings."
 - a. Flexible delineators may be Impact Recovery Systems, Inc., San Antonio, TX: "Tuff Post High Performance Channelizer." Tuff Post fixed base; 42" high, Color: orange with white reflective bands. Provide Impact recovery system or equivalent by one of the following manufacturers:
 - 1) Bent Manufacturing, Hunt Beach, CA
 - 2) Three D Traffic Works, Inc., Burbank, CA
 - 3) Safe Hit Corporation, Hayward, CA
2. Break away or impact resistant post for accessible signs to be SP 72 W Flex & Sign Post and fixed base with Signage by Impact Recovery Systems, Inc. San Antonio, CA or equivalent. Refer to Details 11 & 12/R109.04.

C. Execution

1. Contractor shall prepare drawing of existing parking layout in repair areas prior to starting with repairs. Contractor shall note stall width, angle of parking, directional traffic arrows and all other existing pavement markings.
2. Contractor shall submit striping plan and stall numbering plan for Engineer's approval.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

3. Contractor shall locate and layout Work areas as indicated on Drawings and shall match existing pavement markings, except as directed otherwise by Engineer.
4. Where existing pavement markings conflict with new striping layout, remove conflicting pavement markings as indicated in Division 9 Section "Pavement Marking."
5. Engineer/Architect shall inspect all layout and surface preparation for conditions in accordance with Section "Pavement Marking."
6. Paint materials and associated referenced specifications are listed in Article "Materials," above. Procedures shall be in accordance with referenced specifications.

WI 45.2 CLEAN AND PAINT CONCRETE COLUMNS

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to contain surface preparation debris and paint during operations and prepare, prime and paint all concrete columns as noted on Drawings.

B. Materials

1. Paint materials shall be as specified in Division 09 Section "Exterior Painting."

C. Execution

1. Contractor shall locate and verify with Engineer/Architect all Work areas.
2. Contractor shall verify color selection with Owner prior to start of Work.
3. Contractor shall take all necessary measures to contain, with full height barriers, sandblasting debris and paint to immediate Work area to protect public from injury and vehicles and public property from damage.
4. Contractor shall prepare surface to be painted in accordance with Section "Exterior Painting" and manufacturer's recommendations.
5. Contractor shall apply paint in accordance with referenced specification section listed in Work Item "Paint Concrete Columns," Article "Materials," above and Manufacturer's recommendations.

WI 45.6 CLEAN AND PAINT STEEL BEARING ASSEMBLY

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to contain surface preparation debris and paint during operations and prepare, and epoxy coat embed plates steel bearing assemblies as noted on Drawings.

B. Materials

1. Epoxy Coating:
 - a. "Concresive Liquid LPL," by BASF Building Systems, Shakopee, MN.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

- b. "Euco 452", or "Duralcrete Series" by The Euclid Chemical Company, Cleveland, OH.
- c. "Sikadur 32 Hi-Mod LPL," by Sika Corporation, Lyndhurst, NJ.

C Execution

1. Contractor shall locate and verify with Engineer all Work areas.
2. Contractor shall take all necessary measures to contain all debris and paint to immediate Work area to protect public from injury and vehicles and public property from damage.
3. Contractor shall solvent clean any surface area with oil or grease build-up prior to receiving sandblast preparation in accordance with SSPC-SP1.
4. Contractor shall power tool clean all surfaces with surface corrosion in accordance with SSPC-SP3.
5. Contractor shall air blast and remove all debris from Work area prior to application of epoxy.
6. Contractor shall apply epoxy to all cleaned metal surfaces on same day (within 8 hrs) as cleaning operations.
7. Contractor shall provide epoxy materials in accordance with Work Item "Clean and Paint Steel Bearing Assembly," Article "Materials," above and in strict accordance with manufacturer's recommendations.

WI 45.8 CLEAN AND PAINT STEEL EMBED PLATES

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to contain surface preparation debris during operations and prepare, and epoxy coat rusting embed plates as noted on Drawings.

B Materials

1. Epoxy Coating:
 - a. "Concresive Liquid LPL," by BASF Building Systems, Shakopee, MN.
 - b. "Euco 452", or "Duralcrete Series" by The Euclid Chemical Company, Cleveland, OH.
 - c. "Sikadur 32 Hi-Mod LPL," by Sika Corporation, Lyndhurst, NJ.

C Execution

1. Contractor shall locate and verify with Engineer all Work areas.
2. Contractor shall take all necessary measures to contain all debris and paint to immediate Work area to protect public from injury and vehicles and public property from damage.
3. Contractor shall solvent clean any surface area with oil or grease build-up prior to receiving sandblast preparation in accordance with SSPC-SP1.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

4. Contractor shall power tool clean all surfaces with surface corrosion in accordance with SSPC-SP3.
5. Contractor shall air blast and remove all debris from Work area prior to application of epoxy.
6. Contractor shall apply epoxy to all cleaned metal surfaces on same day (within 8 hrs) as cleaning operations.
7. Contractor shall provide epoxy materials in accordance with Work Item "Epoxy Coat Rusting Steel Embed Plates," Article "Materials," above and in strict accordance with manufacturer's recommendations.

WI 45.9 CLEAN AND PAINT STEEL COLUMN COLLARS

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to contain surface preparation debris and paint during operations and prepare, prime and paint all steel column collars as noted on Drawings.

B. Materials

1. Paint materials shall be as specified in Division 09 Section "Exterior Painting."

C. Execution

1. Contractor shall locate and verify with Engineer/Architect all Work areas.
2. Contractor shall verify color selection with Owner prior to start of Work.
3. Contractor shall take all necessary measures to contain, with full height barriers, sandblasting debris and paint to immediate Work area to protect public from injury and vehicles and public property from damage.
4. Contractor shall solvent clean any surface area with oil or grease build-up prior to receiving sandblast preparation in accordance with SSPC-SP1.
5. Contractor shall power tool clean all surfaces with surface corrosion in accordance with SSPC-SP3.
6. Contractor shall air blast and remove all debris from Work area prior to application of primer or paint.
7. Contractor shall apply primer to all bare metal surfaces on same day (within 8 hrs) as surface preparation. Apply primer according to Section "Exterior Painting" and in strict accordance with manufacturer's recommendations.
8. Contractor shall apply paint in accordance with referenced specification section listed in Work Item "Paint Steel Column Collars," Article "Materials," above.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

WI 45.10 CLEAN AND PAINT BOLLARDS AND BASEPLATES

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to contain surface preparation debris and paint during operations and prepare, prime and paint all bollards and baseplates located on Drawings.

B. Materials

1. Paint materials shall be as specified in Division 09 Section "Exterior Painting."

C. Execution

1. Contractor shall locate and verify with Engineer/Architect all Work areas.
2. Contractor shall verify color selection with Owner prior to start of Work.
3. Contractor shall take all necessary measures to contain, with full height barriers, debris and paint to immediate Work area to protect public from injury and vehicles and public property from damage.
4. Contractor shall solvent clean any surface area with oil or grease build-up prior to receiving sandblast preparation in accordance with SSPC-SP1.
5. Contractor shall power tool clean all surfaces with surface corrosion in accordance with SSPC-SP3.
6. Contractor shall air blast and remove all debris from Work area prior to application of primer or paint.
7. Contractor shall apply primer to all prepared metal surfaces on same day (within 8 hrs) as surface preparation operations. Apply primer according to Section "Exterior Painting" and in strict accordance with manufacturer's recommendations.
8. Contractor shall apply paint in accordance with referenced specification section listed in Work Item "Paint Bollards and Baseplates," Article "Materials," above.

WI 45.11 CLEAN AND PAINT FIRE HOSE BOXES AND SUPPORTS

A. Scope of Work

1. Work consists of furnishing all labor, materials, equipment, supervision and incidentals necessary to contain surface preparation debris and paint during operations and prepare, prime and paint all fire hose cabinets and supports located on Drawings.

B. Materials

1. Paint materials shall be as specified in Division 09 Section "Exterior Painting."

C. Execution

1. Contractor shall locate and verify with Engineer/Architect all Work areas.
2. Contractor shall verify color selection with Owner prior to start of Work.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

3. Contractor shall take all necessary measures to contain, with full height barriers, debris and paint to immediate Work area to protect public from injury and vehicles and public property from damage.
4. Contractor shall solvent clean any surface area with oil or grease build-up prior to receiving sandblast preparation in accordance with SSPC-SP1.
5. Contractor shall power tool clean all surfaces with surface corrosion in accordance with SSPC-SP3.
6. Contractor shall air blast and remove all debris from Work area prior to application of primer or paint.
7. Contractor shall apply primer to all prepared metal surfaces on same day (within 8 hrs) as surface preparation operations. Apply primer according to Section "Exterior Painting" and in strict accordance with manufacturer's recommendations.
8. Contractor shall apply paint in accordance with referenced specification section listed in Work Item "Paint Fire Hose Boxes and Supports," Article "Materials," above.

3.2 MEASUREMENT AND BASIS OF PAYMENT

- A. MOBILIZATION/DEMOBILIZATION AND MAINTENANCE OF TRAFFIC. 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; safety plan compliance document (SPCD) and quality control plan are approved by the Engineer and Construction Manager.

Payment for the Contractors Bond will be deducted from the Mobilization/Demobilization and Maintenance of Traffic work item for the actual cost without markup. Partial payments for the remaining value of the Mobilization/Demobilization and Maintenance of Traffic work item will be made in accordance with the following schedule milestones:

SCHEDULE MILESTONE	ALLOWABLE PERCENT OF LUMP SUM PRICE FOR THE ITEM**
Notice to Proceed	0% (Except for Bonding)
Phase I: 30 day Mobilization Period	15%
Phase II-1 & 1A Complete	35%
Phase II-2 & 2A Complete	55%
Phase II-3 & 3A Complete	75%
Phase II-4 & 4A Complete	95%
Project Closeout Complete	100%

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

** The Percent of Lump Sum price for Work Item 1.1 after deduction for Bonding. In the event that the lump sum bid amount for mobilization exceeds ten percent (10%) of the original Contract amount for that project, the difference (remainder) will not be paid until the project is complete and the Engineer and Owner have issued a statement of substantial completion. This date shall be set in accordance with the project documents.

The standard retainage, as herein specified will be applied to these allowances. Partial payments made on this item shall in no way act to preclude or limit any of the provisions for partial payments otherwise provided for by the Contract.

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 mobilization or maintenance of traffic unless otherwise addressed by change order.

Payment will be made under:

Item 020010.1.1 Project Mobilization/Demobilization and Maintenance of Traffic - - per lump sum in accordance with payment schedule above.

- B. OWNER'S ALLOWANCES. Payment for additional work being performed under existing items of work shall be paid for per those items. Payment for other items shall be substantiated by complete itemized statements showing quantities and unit prices for materials, labor (including applicable fringe benefits) and equipment. Costs of labor (including applicable fringe benefits) and materials shall be actual costs to the Contractor. Refer to Section 01020 "Owner's Allowance" for requirements. The Contractor shall submit receipts or other evidences, as the Owner may direct, showing its actual costs and its rights to the payment. The Contractor shall only be paid for equipment, material and labor expended. An estimation of the percent complete of the work will be determined by the Design Professional and used as the basis of payment should the Work be conducted on a lump sum basis.

Payment will be made under:

Item 0020010.1.7 Owner's Allowances.

- C. CONCRETE FLOOR REPAIR. Payment for all work under this section shall be made under the contract unit price of floor repair and shall be full compensation for all materials, labor, equipment, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Construction Manager.

Measurement and payment will be made under:

Item 02010.3.1 Concrete Floor Repair –Partial Depth - - per square foot

Item 02010.3.3 Concrete Floor Repair –Full Depth - - per square foot

Item 02010.3.4 Concrete Floor Repair –Curbs- - per square foot

- D. CONCRETE CEILING REPAIR. Payment for all work under this section shall be made under the contract unit price of concrete ceiling repair and shall be full compensation for all materials, labor, equipment, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Construction Manager.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Measurement and payment will be made under:

Item 02010.4.1 Concrete Ceiling Repair -Partial Depth- - per square foot

- E. CONCRETE BEAM REPAIR. Payment for all work under this section shall be made under the contract unit price of concrete beam repair and shall be full compensation for all materials, labor, equipment, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Construction Manager.

Measurement and payment will be made under:

Item 02010.5.1 Concrete Beam Repair- Partial Depth- - per square foot

- F. CONCRETE COLUMN REPAIR. Payment for all work under this section shall be made under the contract unit price of concrete column repair and shall be full compensation for all materials, labor, equipment, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Construction Manager.

Measurement and payment will be made under:

Item 02010.6.1 Concrete Column Repair- Partial Depth- - per square foot

- G. CONCRETE WALL REPAIR. Payment for all work under this section shall be made under the contract unit price of concrete beam repair and shall be full compensation for all materials, labor, equipment, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Construction Manager.

Measurement and payment will be made under:

Item 02010.7.1 Concrete Wall Repair- Partial Depth- - per square foot

- H. EXPANSION JOINT PREPARATION: Payment for all work under this section shall be made under the contract unit price of joint preparation and shall be full compensation for all materials, labor, equipment, saw cutting, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Owner.

Measurement and payment will be made under:

Item 02010.9.1 Expansion Joint Preparation – New Block-out - - per linear foot

- I. EXPANSION JOINT REPAIR AND REPLACEMENT. Payment for all work under this section shall be made under the contract unit price of joint repair and/or replacement and shall be full compensation for all materials, labor, equipment, saw cutting, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Owner.

Measurement and payment will be made under:

Item 02010.10.3 Expansion Joint- Elastomeric Concrete - - per linear foot

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Item 02010.10.7 Expansion Joint- Silicone Seal - - per linear foot

- J. EPOXY BROADCAST CRACK SEALER. Payment for all work under this section shall be made under the contract unit price for Epoxy Broadcast Crack Healer - Sealer and shall be full compensation for all materials, labor, equipment, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Owner.

Measurement and payment will be made under:

Item 02010.13.2 Epoxy Broadcast Crack Healer- - per lump sum, estimated quantity provided for information only.

- K. TRAFFIC TOPPING. Payment for all work under this section shall be made under the contract unit price for traffic topping and shall be full compensation for all materials, labor, equipment, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Owner.

Measurement and payment will be made under:

Item 02010.16.1 Traffic Topping –Vehicular - - per lump sum, estimated quantity provided for information only.

- L. MECHANICAL - DRAINAGE. Payment for all work under this section shall be made under the contract unit price for Mechanical – Supplementary Floor Drains and shall be full compensation for all materials, labor, equipment, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Owner.

Measurement and payment will be made under:

Item 02010.25.2 Mechanical - Supplemental Floor Drains- - per each

Item 02010.25.3 Mechanical – Pipe and Hangers- - per linear foot

- M. FIREPROOFING. Payment for all work under this section shall be made under the contract unit price for fireproofing repairs and shall be full compensation for all materials, labor, equipment, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Owner.

Measurement and payment will be made under:

Item 02010.35.8 Repair Stucco Fireproofing - - per square foot.

Item 02010.35.9 Stucco Fireproof Enclosure - - per each location

- N. METAL WORK. Payment for all work under this section shall be made under the contract unit price for metalwork and shall be full compensation for all materials, labor, equipment, saw cutting, testing, shoring (if required) and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Owner.

Measurement and payment will be made under:

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

Item 02010.40.1	Shear Transfer Angles- - per pair of angles.
Item 02010.40.2	Repair Structural Steel Slide Bearing- - per each location.
Item 02010.40.2.1	Repair Structural Steel Slide Bearing – Shoring - - per each post shore.
Item 02010.40.5	Replace Junction Box Cover- - per each

- O. PAINTING. Payment for all work under this section shall be made under the contract unit price for painting and shall be full compensation for all materials, labor, equipment, mobilization, testing, and incidentals required to complete the work in accordance with these specifications, the plans and directed by the Owner.

Measurement and payment will be made under:

Item 02010.45.1	Paint Traffic Markings- - per lump sum.
Item 02010.45.2	Clean and Paint Concrete Columns- - per each
Item 02010.45.6	Clean and Paint Steel Bearing Assembly- - per each.
Item 02010.45.8	Epoxy Coat Rusting Steel Embed Plates- - per each.
Item 02010.45.9	Clean and Paint Steel Column Collars- - per each.
Item 02010.45.10	Clean and Paint Bollards and Baseplates- - per lump sum
Item 02010.45.11	Clean and Paint Fire Hose Cabinets and Supports- - per each

END OF SECTION 020010

PAGE BLANK INTENTIONALLY

SECTION 025130 - GENERAL CONCRETE SURFACE PREPARATION

PART 1 - GENERAL

1.1 DEFINITIONS

- A. DELAMINATIONS: Fracture planes, "internal cracks," within concrete. Typically these fractures are parallel to the member face and vary in depth.
- B. NEAR-VERTICAL CHIPPED EDGES: Provide an edge dressed to within 20° of perpendicular of finished surface.
- C. SPALLS: Potholes, cavities or voids in concrete. Usually result of delamination migrating to face of concrete member. When fracture finally reaches surface, concrete encompassed by delamination breaks away, resulting in spall.
- D. UNSOUND CONCRETE: Concrete exhibiting one or more of:
 - 1. Incipient fractures present beneath existing delaminated or spalled surfaces.
 - 2. Honeycombing.
 - 3. Friable or punky areas.
 - 4. Deterioration from freeze-thaw action.
- E. SCALING: Deterioration which attacks mortar fraction (paste) of concrete mix. First appears as minor flaking and disintegration of concrete surface. Scaling eventually progresses deeper into concrete, exposing aggregate which breaks away.
- F. SHOTBLASTING: Scarification of concrete surfaces using an abraded metal shot-rebound. See ICRI Guideline 03732 "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays."

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION 025130

PAGE BLANK INTENTIONALLY

SECTION 025140 - SURFACE PREPARATION FOR PATCHING AND OVERLAY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specification Sections apply to this Section.

1.2 SUMMARY

- A. This Section includes the provision of all labor, materials, equipment, supervision and incidentals necessary to locate and remove all delaminated and unsound concrete, all existing failed patches, all existing surface spalls and potholes, and preparation of cavities created by removal to receive concrete patching material.
- B. This Section includes the provision of all labor, materials, equipment, supervision and incidentals necessary to prepare existing sound concrete slab surfaces to receive bonded concrete overlay.
- C. Related Sections: Following Sections contain requirements that relate to this Section:
 - 1. Division 03 Section "Cast-in-Place Concrete – Restoration"
 - 2. Division 03 Section "Prepackaged Repair Mortar"

1.3 REFERENCES

- A. "Specifications for Structural Concrete for Buildings" (ACI 301) by American Concrete Institute, herein referred to as ACI 301, is included in total as specification for this structure except as otherwise specified herein.
- B. Comply with provisions of following codes, specifications and standards except where more stringent requirements are shown on Drawings or specified herein:
 - 1. "Concrete Repair Guide" (ACI 546R-04)

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 INSPECTION

A. Floor Slabs:

1. Floor slab delaminations: locate by sounding surface with hammer, rod, or chain drag.
2. When delaminated area is struck, distinct hollow sound is heard.
3. Contractor: sound all designated floors for delaminations.
4. Certain structural systems that contain thin slab thicknesses with Welded Wire Reinforcement or other small diameter reinforcing, such as waffle slab or precast tees, may have significant deterioration without evidence of delaminations. These structural systems require qualified personnel to provide additional inspections, primarily visual in nature, to define the extent of deterioration.
5. Contractor: Visually inspect thin slab thicknesses with small diameter reinforcing for deterioration.

B. Vertical and Overhead Surfaces:

1. Vertical and overhead surface delaminations: locate by sounding appropriate member with hammer or rod.
2. Cracks, usually horizontal in orientation along beam faces, and vertical in orientation near column corners are indicators of delaminated concrete.
3. Contractor: sound only vertical and overhead surfaces that show evidence of cracking and/or salt and water staining.

C. Delaminated areas, once located by Contractor, shall be further sounded to define limits. Mark limits with chalk or paint.

D. Contractor: locate spalls by visual inspection and mark boundaries with chalk or paint after sounding surface.

E. Engineer/Architect will define and mark additional unsound concrete areas for removal, if required.

F. Areas to be removed shall be as straight and rectangular as practical to encompass repair and provide neat patch.

G. Contractor: Locate and determine depth of all embedded REINFORCEMENT, and ELECTRICAL CONDUIT in repair area and mark these locations for reference during concrete removal. Do NOT nick or cut any embeds unless approved by Engineer/Architect.

H. For overlay installation, boundaries of overlay areas will be as defined in project drawings and verified by Engineer/Architect.

3.2 PREPARATION

- A. Temporary shoring may be required at concrete floor repair areas exceeding 5 sq ft and at any beam, joist, or column repair. Contractor: Review all marked removal and preparation areas and request clarification by Engineer/Architect of shoring requirements in questionable areas. Shores shall be in place prior to concrete removal and cavity preparation in any area requiring shores.
- B. Delaminated, spalled and unsound concrete floor areas: mark boundaries. All concrete shall be removed from within marked boundary to minimum depth of 0.75 in. using 15 to 30 lb chipping hammers equipped with chisel point bits. When directed by Engineer/Architect, chipping hammers less than 15 lb shall be used to minimize damage to sound concrete. Near vertical chipped edge shall be provided along perimeter of repair area where shown on drawings. Areas to be removed shall encompass repair and provide uniform cavity surface. If delaminations exist beyond minimum removal depth, chipping shall continue until all unsound and delaminated concrete has been removed from cavity.
- C. Where embedded reinforcement or electrical conduit is exposed by concrete removal, exercise extra caution to avoid damaging it during removal of unsound concrete. If bond between exposed embedded reinforcement and adjacent concrete is impaired by Contractor's removal operations, Contractor shall perform additional removal around and beyond perimeter of reinforcement for minimum of 0.75 in. along entire length affected at no cost to Owner.
- D. If rust is present on embedded reinforcement where it enters sound concrete, additional removal of concrete along and beneath reinforcement required. Additional removal shall continue until non-rusted reinforcement is exposed, or may be terminated as Engineer/Architect directs.
- E. Sawcut patch and overlay boundaries to depth of 0.75 in. into floor slab, unless otherwise noted. No sawcutting required at overlay boundaries abutting existing vertical surface (wall, beam, curb, etc.). For vertical and overhead surfaces marked boundary may be sawcut, ground or chipped to depth of 0.5 in. to 0.625 in. into existing concrete, measured from original surface. All edges shall be straight and patch areas square or rectangular-shaped. Diamond blade saw or grinder with abrasive disk suitable for cutting concrete is acceptable for performing work. Edge cut at boundary shall be dressed perpendicular to member face. It shall also be of uniform depth, for entire length of cut. Exercise extra caution during sawcutting to avoid damaging existing reinforcement and electrical conduit and any other embedded items near surface of concrete. Any damage to existing reinforcement, post-tensioning tendons or sheathing during removals shall be repaired by Contractor with Engineer/Architect-approved methods at no additional cost to Owner.
- F. All sound surfaces (surfaces not requiring spall or delamination repair as previously discussed in this section) to receive overlay shall be heavy abrasive blasted or heavy shotblasted prior to overlay placement, to produce a final concrete surface profile matching ICRI CSP.

3.3 INSPECTION OF REPAIR PREPARATION

- A. After removals are complete, but prior to final cleaning, exposed concrete surfaces and exposed reinforcement shall be inspected by Contractor and verified by Engineer/Architect for compliance with requirements of this Section. Where Engineer/Architect finds unsatisfactory surface or cavity preparation, Engineer shall direct Contractor to perform additional removals. Engineer/Architect shall verify areas after additional removals.
- B. Contractor shall inspect embedded reinforcement and conduits exposed within cavity for defects due to corrosion or damage resulting from removal operations. Contractor shall notify Engineer/Architect of all defective and damaged reinforcement or conduits. Replacement of damaged or defective reinforcement or conduits shall be performed according to this Section and as directed by Engineer/Architect.
- C. After inspections of exposed surfaces and reinforcement are complete, Engineer and Contractor shall measure and document removal and replacement quantities for payment, as required.

3.4 REINFORCEMENT AND EMBEDDED MATERIALS IN REPAIR AREAS

- A. All embedded reinforcement exposed during surface preparation that has lost more than 10% (5% if 2 or more consecutive parallel bars and/or tendons are affected) of original cross-section due to corrosion shall be considered DEFECTIVE. All non-defective exposed reinforcement that has lost section to extent specified above as direct result of Contractor's removal operations shall be considered DAMAGED.
- B. Embedded materials including, but not limited to, electrical conduit, corrosion protection systems and snow/ice melting equipment shall be protected by Contractor during removal operations. Damage due to removal operations shall be repaired by Contractor in accordance with national code requirements at no cost to Owner. Embedded materials which are defective due to pre-existing conditions may be repaired or replaced by Contractor or abandoned at Owner's option and cost.
- C. Supplement defective or damaged embedded reinforcement by addition of reinforcement of equal diameter with Class "B" minimum splice per ACI 318 beyond damaged portion of reinforcement. Secure new reinforcement to existing reinforcement with wire ties and/or approved anchors. Supplemental reinforcement shall be ASTM A615 Grade 60 steel installed in accordance with Division 03 specification Sections. Tendon supplement or repair materials, when applicable, shall be as required by Section "Work Items."
- D. Loose and supplemental reinforcement exposed during surface preparation shall be securely anchored prior to concrete placement. Loose reinforcement shall be adequately secured by wire ties to bonded reinforcement or shall have drilled-in anchors installed to original concrete substrate. Drilled-in anchors shall be Powers "Tie-Wire Lok-Bolt" anchors, ITW Ramset/Red Head "TW-1400" anchor, or approved equivalent. Supplemental reinforcing needed to be held off substrate shall be adequately secured by drilled-in anchors installed to original concrete substrate with Powers "Tie-Wire Spike", ITW Ramset/Red Head Redi-Drive "TD4-112" anchors,

or approved equivalent. Engineer/Architect will determine adequacy of wire ties and approve other anchoring devices prior to their use. Securing loose and supplemental reinforcement is incidental to surface preparation and no extras will be allowed for this Work.

- E. Concrete shall be removed to provide minimum of 3/4 in. clearance on all sides of defective or damaged exposed embedded reinforcement that is left in place. Minimum of 1.5-in. concrete cover shall be provided over all new and existing reinforcement. Concrete cover over reinforcement may be reduced to 1 in. with Engineer/Architect's approval if coated with an approved epoxy resin.
- F. Supplemental reinforcement and concrete removals required for repairs of defective or damaged reinforcement shall be paid for as follows:
 - 1. Concrete removals and supplemental reinforcement required for repairs of DEFECTIVE reinforcement shall be paid for by Owner at unit price bid.
 - 2. Concrete removals and supplemental reinforcement required for repairs of DAMAGED reinforcement shall be paid for by Contractor.

3.5 CLEANING OF REINFORCEMENT WITH DELAMINATION AND SPALL CAVITIES

- A. All exposed steel shall be cleaned of rust to bare metal by sandblasting. Cleaning shall be completed immediately before concrete placement to insure that base metal is not exposed to elements and further rusting for extended periods of time. Clean entire bar diameter be cleaned.
- B. After all sandblasting operations and cleanup are completed, paint all exposed steel with an approved epoxy. Protect prepared surfaces from damage prior to and during concrete placement.

3.6 PREPARATION OF CAVITY FOR PATCH PLACEMENT

- A. Floor slab and cavity surfaces will be examined prior to commencement of concrete placement operations. Sounding surface shall be part of examination. Any delamination noted during sounding shall be removed as specified in this Section.
- B. Cavities prepared by chipping or other impact methods shall be sandblasted to remove material that may impair concrete bonding. Sound concrete surfaces shall be prepared by shotblasting as previously specified in this section. Airblasting is required as final step to remove all debris including sand and dust. All debris shall be removed from site prior to commencement of concrete placement, bonding agent preparation, etc. as specified in Division 03 Sections.

END OF SECTION 025140

PAGE BLANK INTENTIONALLY

SECTION 033021 - CAST-IN-PLACE CONCRETE RESTORATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies cast-in-place concrete, including reinforcement, concrete materials, mix design, placement procedures, and finishes.
- B. Work in other Sections related to Cast-in-Place Concrete:
 - 1. Division 2 Section "Work Items."
 - 2. Division 2 Section "General Concrete Surface Preparation."
 - 3. Division 2 Section "Surface Preparation for Patching and Overlay."
 - 4. Division 7 Section "Traffic Coatings."
 - 5. Division 7 Section "Water Repellants."
 - 6. Division 7 Section "Expansion Joint Assemblies."
 - 7. Division 7 Section "Concrete Joint Sealants."
 - 8. Division 9 Section "Exterior Painting."
 - 9. Division 9 Section "Pavement Marking."

1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume.

1.4 SUBMITTALS

- A. General: In addition to the following, comply with submittal requirements in ACI 301.
- B. Product Data: For each type of manufactured material and product indicated.
- C. Design Mixes: For each concrete mix.
- D. Testing Agency: Promptly report all field concrete test results to Engineer, Contractor and Concrete Supplier.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed concrete work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.
- C. Source Limitations: Obtain each type of cement of the same brand from the same manufacturer's plant, each aggregate from one source, and each admixture from the same manufacturer.
- D. Comply with ACI 301, "Specification for Structural Concrete," including the following, unless modified by the requirements of the Contract Documents.
 - 1. General requirements, including submittals, quality assurance, acceptance of structure, and protection of in-place concrete.
 - 2. Formwork and form accessories.
 - 3. Steel reinforcement and supports.
 - 4. Concrete mixtures.
 - 5. Handling, placing, and constructing concrete.
- E. Testing Agency Qualifications:
 - 1. Independent agency, retained by Contractor and acceptable to engineer/Owner, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
- F. Testing Agency is responsible for conducting, monitoring and reporting results of all tests required under this Section. Testing Agency shall immediately report test results showing properties that do not conform to Project Specification requirements to Contractor's authorized on-site representative and to Owner's authorized on-site representative.
- G. Testing Agency: Submit following Field Test information for Project Concrete unless modified in writing by Engineer:
 - 1. Project name and location.
 - 2. Contractor's name.
 - 3. Testing Agency's name, address, and phone number.
 - 4. Concrete supplier.
 - 5. Date of report.
 - 6. Testing Agency technician's name (sampling and testing).
 - 7. Placement location within structure.
 - 8. Time of batching.
 - 9. Time of testing.
 - 10. Elapsed time from batching at plant to discharge from truck at site.
 - 11. Concrete mixture identification number.
 - 12. Weather data:

- a. Air temperatures.
 - b. Weather.
13. Field test data:
- a. Date, time and place of test.
 - b. Slump.
 - c. Concrete Temperature.
14. Compressive test data:
- a. Cylinder number.
 - b. Age of concrete when tested.
 - c. Date and time of cylinder test.
 - d. Curing time (field and lab).
 - e. Cross-sectional area of cylinder.
 - f. Compressive strength.
 - g. Type of failure (at break).

1.6 REFERENCES

A. American Concrete Institute (ACI):

- 1. ACI 117, "Standard Specifications for Tolerances for Concrete Construction and Materials."
- 2. ACI 214R, "Evaluation of Strength Test Results of Concrete."
- 3. ACI 301, "Specifications for Structural Concrete."
- 4. ACI 302.1R, "Guide for Concrete Floor and Slab Construction."
- 5. ACI 305R, "Hot Weather Concreting."
- 6. ACI 306.1, "Cold Weather Concreting."
- 7. ACI 308R, "Guide to Curing Concrete."
- 8. ACI 308.1, "Standard Specifications for Curing Concrete."
- 9. ACI 318, "Building Code Requirements for Structural Concrete & Commentary."
- 10. ACI 347, "Guide to Formwork for Concrete."
- 11. ACI 347.2 "Guide to Shoring/Reshoring of Concrete Multistory Buildings."

B. American Society for Testing and Materials (ASTM):

- 1. ASTM A 36, "Standard Specification for Carbon Structural Steel."
- 2. ASTM A 185, "Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete Reinforcement."
- 3. ASTM A 615, "Standard Specification for Deformed and Plain Carbon -Steel Bars for Concrete Reinforcement."
- 4. ASTM A 706, "Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement."
- 5. ASTM A 775, "Standard Specification for Epoxy-Coated Steel Reinforcing Bars."

6. ASTM A 884, "Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement for Reinforcement."
7. ASTM C 31, "Standard Practice for Making and Curing Concrete Test Specimens in the Field."
8. ASTM C 33, "Standard Specification for Concrete Aggregates."
9. ASTM C 39, "Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens."
10. ASTM C 94, "Standard Specification for Ready-Mixed Concrete."
11. ASTM C 138, "Standard Test Method for Unit Weight, Yield, and Air Content (Gravimetric) of Concrete."
12. ASTM C 143, "Standard Test Method for Slump of Hydraulic Cement Concrete."
13. ASTM C 150, "Standard Specification for Portland Cement."
14. ASTM C 171, "Standard Specification for Sheet Materials for Curing Concrete."
15. ASTM C 172, "Standard Practice for Sampling Freshly Mixed Concrete."
16. ASTM C 173, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method."
17. ASTM C 231, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method."
18. ASTM C 260, "Standard Specification for Air-Entraining Admixtures for Concrete."
19. ASTM C 309, "Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete."
20. ASTM C 494, "Standard Specifications for Chemical Admixtures for Concrete."
21. ASTM C 567, "Standard Test Method for Determining the Density of Structural Lightweight Concrete."
22. ASTM C 618, "Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete."
23. ASTM C 989, "Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars."
24. ASTM C 1218, "Standard Test Method for Water Soluble Chloride Ion in Mortar and Concrete."
25. ASTM C 1315, "Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete."
26. ASTM C 1611/C 1611M, "Standard Test Method for Slump Flow of Self-Consolidating Concrete."

PART 2 - PRODUCTS

2.1 FORMWORK

- A. Furnish formwork and form accessories according to ACI 301, ACI 347, and ACI 347.2.

2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M or ASTM A 706, Grade 60 (Grade 420), deformed.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

- B. Plain-Steel Welded Wire Fabric: ASTM A 185, fabricated from as-drawn steel wire into flat sheets, mats only. Roll stock prohibited.
- C. Provide bar supports according to CRSI's "Manual of Standard Practice." Use all-plastic bar supports when in contact with exposed concrete surface.

2.3 CONCRETE MATERIALS

- A. Ready Mixed Concrete: Obtain concrete from plant with current certification from:
 - 1. Concrete Materials Engineering Council.
 - 2. National Ready Mixed Concrete Association.
 - 3. Florida Department of Transportation(FDOT).
- B. Portland Cement: ASTM C 150, Types I or II or Type I/II.
- C. Normal-Weight Coarse Aggregate: ASTM C 33, Crushed and graded limestone or approved equivalent, Class 5S uniformly graded, not exceeding $\frac{3}{4}$ inch nominal size. No cherts, opaline or crushed hydraulic-cement concrete is permitted.
- D. Normal-Weight Fine Aggregate: Manufactured sand conforming to ASTM C 33 and having preferred grading shown for normal weight aggregate in ACI 302.1R, Table 5.1.
- E. Water: Potable and complying with ASTM C 1602.

2.4 ADMIXTURES

- A. General: Admixtures certified by manufacturer to contain no more than 0.1 percent water-soluble chloride ions by mass of cement and to be compatible with other admixtures. Do not use admixtures containing calcium chloride.
- B. General: Admixtures certified by manufacturer that all admixtures used are mutually compatible.
- C. Admixtures: Use admixtures according to manufacturer's written instructions.
 - 1. Use water-reducing or high-range water reducing admixture in concrete, as required, for placement and workability.
 - 2. Use high-range water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs, fiber reinforced concrete, and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.45.
 - 3. Use alkali-silica reactivity inhibitor unless ready mix company confirms that the aggregates to be used on the job are non-reactive.
- D. Normal Water-Reducing Admixture: ASTM C 494, Type A.

1. Products: Subject to compliance with requirements, provide one of following:
 - a. "Eucon Series," Euclid Chemical Co.
 - b. "WRDA Series," W.R. Grace & Co.
 - c. "Master Pozzoloth Series," or "Master PolyHeed Series," BASF Corporation.
 - d. "Plastocrete Series", Sika Corporation.

- E. Mid-Range Water-Reducing Admixture: ASTM C 494, Type A.
 1. Subject to compliance with requirements, provide one of following:
 - a. "Eucon MR" or "Eucon X-15 and X-20," Euclid Chemical Co.
 - b. "Daracem Series" or "MIRA Series," W.R. Grace & Co.
 - c. "Master Polyheed Series," BASF Corporation.
 - d. "Sikaplast Series" or "Plastocrete Series", Sika Corporation.
 - e. "Polychem 1000" or "KB Series," General Resource Technology.
 - f. "Finishease-NC," Russ Tech Admixtures, Inc.
 - g. "OptiFlo Series" or "EcoFlo Series," Premiere Concrete Admixtures.

- F. High-Range, Water-Reducing Admixture (Superplasticizer): ASTM C 494, Type F.
 1. Products: Subject to compliance with requirements, provide one of following:
 - a. "Eucon 37" or "Eucon SP-Series" or "Plastol Series," Euclid Chemical Co.
 - b. "Daracem Series" or "ADVA Series," W.R. Grace & Co.
 - c. "Master Rheobuild 1000", "PS 1466" or "Master Glenium Series," BASF Corporation.
 - d. "Sikament Series" or "Sika ViscoCrete Series," Sika Corporation.
 - e. "Melchem Series," General Resource Technology.
 - f. "Superflo 443" or "Superflo 2000 Series," Russ Tech Admixtures, Inc.
 - g. "EcoFlo Series" or "UltraFlo Series," Premiere Concrete Admixtures.

2.5 MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
 1. Evaporation Retarder:
 - a. AquaFilm J74 by Dayton Superior Corporation, Miamisburg, OH
 - b. Eucobar; Euclid Chemical Co.
 - c. E-Con; L&M Construction Chemicals, Inc.
 - d. MasterKure ER 50; BASF Corporation.
 - e. SikaFilm; Sika Corporation.
 - f. Sure-Film (J-74); Dayton Superior Corporation.
 - g. "EVRT", Russ Tech Admixtures, Inc.
 - h. "Barrier," Premiere Concrete Solutions.

- B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) dry. Materials must be free of harmful substances, such as sugar or fertilizer, or substances that may discolor the concrete. To remove soluble substances, burlap should be thoroughly rinsed in water before placing it on the concrete.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.

2.6 CONCRETE MIXTURES

- A. Proportion mixtures determined by either laboratory trial mix or field test data bases, as follows:
 - 1. Proportion normal-weight concrete according to ACI 211.1 and ACI 301.
 - 2. Proportion lightweight structural concrete according to ACI 211.2 and ACI 301.
 - 3. Provide different mixtures as the season warrants, as well as each type and strength of concrete or for different placing methods.
- B. Use a qualified independent testing agency for preparing and reporting proposed Mixture Proportions for the laboratory trial mix basis.
- C. Requirements for normal-weight concrete mix are shown on Drawings:
 - 1. Compressive strength
 - 2. Slump
 - 3. Water-cementitious materials ratio
 - 4. Air content
- D. Supplementary cementitious materials: For concrete exposed to deicers, limit percentage, by weight, of cementitious materials according to ACI 318 requirements.
- E. Alkali-Aggregate Reactivity Resistance: Provide one of the following:
 - 1. Total equivalent alkali content of mixture less than 5 lb. /cu. yd.
- F. Slump (ACI 301, Part 4 header "Slump"):
 - 1. Maximum slump for concrete is indicated on Drawings. Where field conditions require slump to exceed that shown, increased slump shall be obtained by use of high range water reducers (superplasticizers) only, and Contractor shall obtain written acceptance from Engineer who may require an adjustment to mix.
 - 2. All concrete containing high-range water-reducing admixture (superplasticizer) shall have a verified initial slump of 2– 3 in. Final slump after the addition of the superplasticizer shall be 6–9 in. as required by the contractor to properly place the concrete. Before permission for plant addition of superplasticizer to be granted by Engineer, fulfill following requirements:

- a. Submit letter from testing laboratory which developed original mixture proportions, for each super plasticized mixture, certifying volume of mix water which will produce specified slump and water/cement ratio, taking into account aggregate moisture content.
 - b. Submit plant computer printout of mixture ingredients for each truckload of super plasticized concrete with delivery of that truckload. Mix water volume greater than that certified shall be cause for concrete rejection.
 - c. Over-retarding or crusting of flatwork surface: cause for concrete rejection.
 - d. Segregation or rapid slump loss (superplasticizer life) due to incompatibility or under-dosing: cause for concrete rejection.
- G. Engineer's acceptance of mixture proportions shall not relieve Contractor from responsibility for any variation from requirements of Contract Documents unless Contractor has in writing called Engineer's attention to each such variation at time of submission and Engineer has given written approval of each such variation.
- H. Adjustment to Concrete Mixtures: Adjustments to mixture proportions may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant, as accepted by Engineer. Laboratory test data for revised mixture and strength results shall be submitted to and accepted by Engineer before using in work.

2.7 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94 and ASTM C 1116, and furnish batch plant-printed ticket information at delivery to site.
- 1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.
- B. Provide plant-printed batch ticket for each batch discharged and used in work, indicating project identification name and number, date, mixture identification number, date, time of batching, mixing time, quantity and details of materials, amount of water introduced and water permitted by plant to be added, if any.

2.8 MATERIAL ACCESSORIES

- A. Extended Open Time Epoxy Bonding Agent: Three component, water based, epoxy modified portland cement bonding agent providing the recommended Manufacturer's open time in which to apply repair mortar. Product shall be capable of achieving bond strength of 2,700 psi per ASTM C 882.
- 1. Acceptable materials for this Work are:
 - a. "Duralprep A.C." by The Euclid Chemical Company, Cleveland, OH.
 - b. "Sika Armatec 110 EpoCem", by Sika Corporation, Lyndhurst, NJ.

2.9 TOOLS

A. Slab Jointing

1. Concrete groovers: For tooled joints in concrete:
 - a. For concrete not exceeding 4 in. thickness, use groover with 1 in. deep v-cut bit, 0.5 in. surface width and 3/16 in. to 1/4 in. edge radius.
 - b. For concrete exceeding 4 in. thickness, use groover with 1.5 in. deep v-cut bit, 0.5 in. surface width and 3/16 in. to 1/4 in. edge radius.
2. Saw Cut Joints: Prohibited.

- B. All joints subject to acceptance by sealant installer. Concrete contractor to rework rejected joints until acceptable to sealant installer.

PART 3 - EXECUTION

3.1 FORMWORK

- A. Design, construct, erect, shore, brace, and maintain formwork according to ACI 301 and ACI 347.

3.2 STEEL REINFORCEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

3.3 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Locate and install so as not to impair strength or appearance of concrete, at locations indicated or as approved by Engineer.
- C. Isolation Joints: Install joint-filler strips at junctions with slabs-on-grade and vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
1. Extend joint filler full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.

3.4 CONCRETE PLACEMENT

- A. Comply with recommendations in ACI 304R for measuring, mixing, transporting, and placing concrete.

- B. Do not add water to concrete during delivery, at Project site, or during placement.
- C. Consolidate concrete with mechanical vibrating equipment.
- D. Hot Weather Placement: Comply with ACI 305 R.

3.5 FINISHING FORMED SURFACE.

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defective areas repaired and patched, and fins and other projections exceeding 1/4 inch (6 mm) in height rubbed down or chipped off.
 - 1. Apply to concrete surfaces not exposed to public view.
- B. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.6 FINISHING FLOORS AND SLABS

- A. Flatwork in Horizontal Areas (BROOM Finish, ACI 301, Section 5 header "Broom or Belt Finish":
 - 1. Bullfloat immediately after screeding. Complete before any excess moisture or bleed water is present on surface (ACI 302.1R, Article 8.3.3). The use of power trowels is discouraged; however, if they are used the following applies:
 - a. Use minimal passes so as to not overwork the concrete.
 - b. At the contractor's expense a petrographic analysis will be required in each area where a power trowel is used to verify the air content at the slab surface is within specified limits.
 - 2. After excess moisture or bleed water has disappeared and concrete has stiffened sufficiently to allow operation, give slab surfaces coarse transverse scored texture by drawing broom across surface. Texture shall be as accepted by Engineer from sample panels.
 - 3. Finish tolerance: ACI 301, Paragraph 5.3.4.2 and ACI 117, paragraph 4.5.7: The gap at any point between the straightedge and the floor (and between the high spots) shall not exceed 0.5 in. In addition, floor surface shall not vary more than plus or minus 0.75 in. from elevation noted on Drawings anywhere on floor surface.
 - 4. Finish all concrete slabs to proper elevations to ensure that all surface moisture will drain freely to floor drains, and that no puddle areas exist. Contractor shall bear cost of any corrections to provide for positive drainage.

B. Flatwork subject to pedestrian traffic:

1. Concrete surfaces at all walking areas subject to pedestrian traffic shall provide a smooth, slip resistant walking surface for pedestrians with these minimum requirements:
 - a. Shall provide walking surfaces in accordance with ASTM – F 1637 Standard Practice for Safe Walking Surfaces and “Americans with Disabilities Act (ADA), Accessibility Guidelines (ADAAG)” [and] [ICC A117.1].
 - b. Adjoining walkway surfaces shall be flush and meet the following minimum requirements:
 - 1) Changes in level of less than ¼ inch in height may be without edge treatment as shown in ADA Figure 303.2 and on the Drawings.
 - 2) Changes in Level between ¼ inch and ½ inch height shall be beveled with a slope no greater than 1:2 as shown in ADA Figure 303.3 and on the Drawings.
 - 3) Changes in level greater than ½ inch in height are not permitted unless they can be transitioned by means of a ramp with minimum requirements shown on the Drawings.
 - 4) Openings in floor or ground surfaces shall not allow passage of a sphere more than ½ inch diameter except as allowed for elevators and platform lifts as shown in ADA Figure 302.3 and on the Drawings.
 - c. Walkway surfaces shall provide a slip resistant surface.
 - 1) Concrete surfaces shall be troweled and finished to provide a slip resistant finish.
 - 2) Contractor shall provide sample area with slip resistant surface finish.

3.7 TOLERANCES

- A. Comply with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

3.8 CONCRETE PROTECTION AND CURING

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 305R for hot-weather protection during placement. Keep concrete continually moist prior to final curing by evaporation retarder, misting, sprinkling, or using absorptive mat or fabric covering kept continually moist.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.1 lb/sq. ft. x h before and during finishing operations. Apply material according to manufacturer’s written instructions one or more times after placement, screeding and bull floating concrete, but prior to float finishing. Repeated applications are prohibited after float finishing has begun.
 1. Acceptable evaporation retarder materials for this Work are:

- a. "Cimfilm", by Axim Concrete Technologies.
 - b. "MasterKure ER 50," by BASF Corporation.
 - c. "Aquafilm", by Conspec Marketing & Manufacturing Co., Inc.
 - d. "Sure-Film (J-74)", by Dayton Superior Corporation.
 - e. "Euco-bar", or "Tamms Surface Retarder", by The Euclid Chemical Company, Cleveland, OH.
 - f. "E-Con", by L&M Construction Chemicals, Inc.
 - g. "EVRT", by Russ Tech Admixtures, Inc.
 - h. "SikaFilm", by Sika Corporation, Lyndhurst, NJ.
- C. Immediate upon conclusion of finishing operation cure concrete in accordance with ACI 308 for duration of at least seven days by moisture curing or moisture retaining covering. Dissipating curing compounds complying with ASTM C309 may be used in accordance with recommendations of ACI 506.7, "Specification for Concrete." Provide additional curing immediately following initial curing and before concrete has dried.
1. Continue method used in initial curing.
 2. Material conforming to ASTM C171.
 3. Other moisture retaining covering as approved by Engineer/Architect.
 4. During initial and final curing periods maintain concrete above 50°.
 5. Prevent rapid drying at end of curing period.
- D. Concrete surfaces to receive slab coatings or penetrating sealers shall be cured with moisture curing or moisture-retaining cover. Do not cure surfaces that receive slab coatings or penetrating sealers using dissipating curing compounds.
- E. Curing Methods: Cure formed and non-formed concrete moisture curing, moisture-retaining-cover curing, curing compound, or a combination of these as follows:
1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3.9 EVALUATION AND ACCEPTANCE OF WORK

- A. Acceptance of Repairs (ACI 301):
1. Acceptance of completed concrete Work will be according to provisions of ACI 301.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

2. Repair areas shall be sounded by Engineer and Contractor with hammer or rod after curing for 72 hours. Contractor shall repair all hollowness detected by removing and replacing patch or affected area at no extra cost to Owner.
3. If shrinkage cracks appear in repair area when initial curing period is completed, repair shall be considered defective, and it shall be removed and replaced by Contractor at no extra cost.

END OF SECTION 033021

PAGE BLANK INTENTIONALLY

SECTION 033760 – PREPACKAGED REPAIR MORTAR

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specification Sections apply to this Section.

1.2 SUMMARY

- A. This Section includes the provision of all labor, materials, supervision and incidentals necessary to prepare deteriorated or damaged concrete surfaces and install prepackaged concrete repair mortar to formed horizontal, vertical and overhead surfaces to restore original surface condition and integrity.
- B. Related Sections: Following Sections contain requirements that relate to this Section:
 - 1. Division 02 Section "Work Items."
 - 2. Division 02 Section "General Concrete Surface Preparation."
 - 3. Division 02 Section "Surface Preparation for Patching and Overlay."
 - 4. Division 03 Section "Cast-In-Place Concrete - Restoration."
 - 5. Division 07 Section "Concrete Joint Sealants."
 - 6. Division 07 Section "Traffic Coatings."
 - 7. Division 09 Section "Pavement Marking."

1.3 QUALITY ASSURANCE

- A. Work shall conform to requirements of ACI 301 as applicable except where more stringent requirements are shown on Drawings or specified in this Section.

1.4 REFERENCES

- A. "Standard Specification for Structural Concrete" (ACI 301) by American Concrete Institute, herein referred to as ACI 301, is included in total as specification for this structure except as otherwise specified herein.
- B. Comply with provisions of following codes, specifications and standards except where more stringent requirements are shown on Drawings or specified herein:
 - 1. "Building Code Requirements for Structural Concrete" (ACI 318), American Concrete Institute, herein referred to as ACI 318.
 - 2. "Hot Weather Concreting" reported by ACI Committee 305.
 - 3. "Cold Weather Concreting" reported by ACI Committee 306.

4. "Standard Specification for Curing Concrete" (ACI 308.1)
- C. Contractor shall have following ACI publications at Project construction site at all times:
 1. "Standard Specifications for Structural Concrete (ACI 301) with Selected ACI and ASTM References," ACI Field Reference Manual, SP15.
 2. "Hot Weather Concreting" reported by ACI Committee 305.
 3. "Cold Weather Concreting" reported by ACI Committee 306.
- D. American Society for Testing and Materials (ASTM):
 1. ASTM C109, "Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or 50-mm Cube Specimens)."
 2. ASTM C31, "Test Method for Compressive Strength of Cylindrical Concrete Specimens."
 3. ASTM C1583, "Standard Test Method for the Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method)"

1.5 SUBMITTALS

- A. Make submittals in accordance with requirements of Division 01 and as specified in this Section.
- B. Contractor: At preconstruction meeting, submit procedures for demolition, surface preparation, material batching, placement, finishing, and curing of application. Provide procedure to protect fresh patches from severe weather conditions.
- C. Testing Agency: Promptly report all mortar test results to Engineer and Contractor. Include following information:
 1. See Article "Quality Assurance," paragraph "Testing Agency shall submit...."
 2. Strength determined in accordance with ASTM C109.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide products of one of following, only where specifically named in product category:
 1. BASF Building Systems (BASF), Shakopee, MN
 2. Euclid Chemical Corporation (Euclid), Cleveland, OH
 3. King Construction Products (King), Burlington, ON
 4. Mapei Corporation (MAPEI), Deerfield Beach, FL
 5. Sika Corporation (Sika), Lyndhurst, NJ.

2.2 MATERIALS

- A. Horizontal Repair and Form and Pour Mortar: Shall be prepackaged cementitious repair mortar capable of horizontal and form and pour partial depth applications, achieving a minimum 3,000 psi compressive strength at 7 days and 5,000 psi compressive strength at 28 days per ASTM C39 as certified by manufacturer with maximum lineal shrinkage of 0.10% at 28 days. Extend per manufacturer's instructions as required for deeper placements.

1. Acceptable materials for this Work are as follows:

- a. "MasterEmaco S440," by BASF.
- b. "Eucocrete," by Euclid.
- c. "FA-S10 Concrete," by King.
- d. "Planitop 11," by MAPEI.
- e. "Sikacrete 211," by Sika.

- B. Rapid Strength Repair Mortar: Shall be prepackaged, cementitious repair mortar. Repair mortar shall be capable of application achieving a minimum 3,500 psi compressive strength at 1 day and 5,000 psi compressive strength at 28 days per ASTM C39 as certified by manufacturer. Extend per manufacturer's instructions as required for deeper placements.

1. Acceptable materials for this Work are as follows:

- a. "MasterEmaco T430," by BASF.
- b. "Speedcrete 2028," by Euclid.
- c. "HP-S10 Concrete," by King.
- d. "Planitop 18 ES" by MAPEI.
- e. "Sikaquick 1000," by Sika.

- C. Trowel Applied Repair Mortar: Shall be prepackaged, cementitious repair mortar capable of vertical/overhead application by trowel achieving a minimum 3,000 psi compressive strength at 7 days and 4,500 psi compressive strength at 28 days per ASTM C 109 as certified by manufacturer.

1. Acceptable materials for this Work are as follows:

- a. "MasterEmaco N425," by BASF.
- b. "Verticoat Supreme," by Euclid.
- c. "Super-Top," by King.
- d. "Planitop XS," by MAPEI
- e. "Sikaquick VOH," by Sika.

2.3 MATERIAL ACCESSORIES

- A. Extended Open Time Epoxy Bonding Agent: Three component, water based, epoxy modified portland cement bonding agent and corrosion inhibitor coating providing the recommended Manufacturer's open time in which to apply repair mortar.

1. Acceptable materials for this Work are:
 - a. "MasterEmaco P124," by BASF.
 - b. "Duralprep A.C.," by Euclid.
 - c. "Planibond 3C," by MAPEI.
 - d. "Armatec 110 EpoCem", by Sika.

- B. Bonding Grout: Bonding grout shall consist of prepackage repair material mixed with sufficient water to form stiff slurry to achieve consistency of "pancake batter."

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Epoxy Bonding Agent Extended Open Time:
 1. In strict accordance with manufacturer's recommendations, mix and apply epoxy bonding agent to all areas as indicated on Drawings.
 2. Allow epoxy bonding agent to dry a minimum 2 hours, but no more than the Manufacturer's recommended open time prior to placing repair mortar.

- B. Mortar Placement: Mortar materials shall be placed in strict accordance with manufacturer's instructions. Properly proportioned and mixed mortar material shall be placed using tools to consolidate mortar so that no voids exist within new material and continuous contact with base concrete is achieved.

- C. Form and Pour Repair Mortar Placement: Mix and apply in strict accordance with manufacturer's written instructions, to achieve a maximum 9" slump. Consolidate mortar so that no voids exist and continuous contact with base concrete is achieved.

- D. Vertical and Overhead Repairs: Mortar materials shall be placed in strict accordance with manufacturer's instructions. Properly proportioned and mixed mortar material shall be placed using tools to consolidate mortar so that no voids exist within new material and continuous contact with base concrete is achieved. Supplemental wire mesh shall be required for delamination and spall repairs greater than two inches in depth. Fresh bonding grout is required between successive lifts of patching material.

- E. Finishing:
 1. Apply a nonslip broom finish to top of floor patches and to exterior concrete platforms, steps, and ramps. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.
 2. Provide a surface finish similar to adjacent surfaces for vertical and overhead partial depth repairs.
 3. Finish formed surfaces similar to adjacent surfaces.

3.2 CONCRETE PROTECTION AND CURING

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 305R for hot-weather protection during placement. Keep concrete continually moist prior to final curing by evaporation retarder, misting, sprinkling, or using absorptive mat or fabric covering kept continually moist.
- B. Immediate upon conclusion of finishing operation cure concrete in accordance with ACI 308.1 for duration of at least seven days by curing methods listed below. Provide additional curing immediately following initial curing and before concrete has dried.
 - 1. During initial and final curing periods maintain concrete above 50°.
 - 2. Prevent rapid drying at end of curing period.
- C. Concrete surfaces to receive slab coatings or penetrating sealers shall be cured with moisture curing or moisture-retaining-cover curing.
- D. Curing Methods: Cure formed and non-formed concrete moisture curing, moisture-retaining-cover curing, curing compound, or a combination of these as follows:
 - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
 - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3.3 EVALUATION AND ACCEPTANCE OF WORK

- A. Acceptance of Repairs (ACI 301):
 - 1. Acceptance of completed concrete Work will be according to provisions of ACI 301.
 - 2. Repair areas shall be sounded by Engineer and Contractor with hammer or rod after curing for 72 hours. Contractor shall repair all hollowness detected by removing and replacing patch or affected area at no extra cost to Owner.
 - 3. If shrinkage cracks appear in repair area when initial curing period is completed, repair shall be considered defective, and it shall be removed and replaced by Contractor at no extra cost.

END OF SECTION 033760

PAGE BLANK INTENTIONALLY

SECTION 071800 – TRAFFIC COATINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specification Sections apply to this Section.

1.2 SUMMARY

- A. A single installer shall be responsible for providing complete water proofing system including all products specified in following Sections:
 - 1. Division 07 Section, "Water Repellents"
 - 2. Division 07 Section, "Traffic Coatings"
 - 3. Division 07 Section, "Joint Sealants"
 - 4. Division 07 Section, "Expansion Joint Assemblies"
- B. This Section includes traffic coating: Fluid applied, waterproofing, traffic-bearing elastomeric membrane with integral wearing surface, where surface to which membrane is to be applied is per the locations marked in the plans.
- C. Materials shall be compatible with materials or related Work with which they come into contact, and with materials covered by this Section.
- D. Related Sections: Following Sections contain requirements that relate to this Section.
 - 1. Division 07 Section, "Water Repellents"
 - 2. Division 07 Section, "Concrete Joint Sealants"
 - 3. Division 07 Section, "Expansion Joint Assemblies"
 - 4. Division 09 Section, "Pavement Markings."

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Distribute reviewed submittals to all others whose Work is related.
- B. Pre-installation Conference: Meet at project site well in advance of time scheduled for Work to proceed to review requirements for Work and conditions that could interfere with successful coating performance. Require every party concerned with coating Work, or required to coordinate with it or protect it thereafter, to attend. Include manufacturer's technical representative and warranty officer.

C. Requests For Information:

1. Engineer reserves right to reject, unprocessed, any Request for Information (RFI) that Engineer, at its sole discretion, deems frivolous and/or deems already answered in the Contract Documents.
2. RFI process shall not be used for requesting substitutions. Procedures for substitutions are clearly specified elsewhere in Contract documents.

1.4 ACTION SUBMITTALS

A. Product Data: For each system indicated, submit the following at least 30 days prior to application.

1. Product description, technical data, appropriate applications and limitations.
2. Primer type and application rate
3. Material, and wet mils required to obtain specified dry thickness for each coat.
4. Type, gradation and aggregate loading required within each coat.

B. Samples:

1. If requested by Engineer, one 4 in. by 4 in. stepped sample showing each component for each system indicated.

C. Sample Warranty: For each system indicated.

1.5 INFORMATION SUBMITTALS

A. Certificates:

1. Certification that products and installation comply with applicable federal, state of Florida, and local EPA, OSHA and VOC requirements regarding health and safety hazards.
2. Evidence of applicator's being certified by manufacturer. Evidence shall include complete copy of manufacturer's licensing/certification document, spelling out repair responsibility for warranty claims.
3. Certification from Manufacturer that finishes as specified are acceptable for system to be installed at least 1 month before placement of any concrete which will receive traffic coating.
4. Certification stating static coefficient of friction meets minimum requirements of Americans with Disabilities Act (ADA).
5. Certification stating materials have been tested and listed for UL 790 Class "A" rated materials/system by UL for traffic coating application specified on project. Containers shall bear UL labels.
6. Certification from manufacturer confirming compatibility with existing underlying coatings and/or substrate.

- B. Manufacturer's Instructions: for each system indicated.
 - 1. Crack treatment and surface preparation method and acceptance criteria.
 - 2. Method of application of each coat.
 - 3. Maximum and minimum allowable times between coats.
 - 4. Final cure time before resumption of parking and/or paint striping.
 - 5. Any other special instructions required to ensure proper installation.

- C. Field Quality Control:
 - 1. Quality Control Plan as defined in Part 3.
 - 2. Two copies each of manufacturer's technical representative's log for each visit.

- D. Qualification Statements:
 - 1. Manufacturer's qualifications as defined in "Quality Assurance" article.
 - 2. Installer's qualifications as defined in "Quality Assurance" article.
 - 3. Signed statement from applicator certifying that applicator has read, understood, and shall comply with all requirements of this Section.

1.6 CLOSEOUT SUBMITTALS

- A. Three copies of System Maintenance Manual.
- B. Final executed Warranty.

1.7 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Owner retains right to reject any manufacturer.
 - 1. Evidence of acceptable previous work on WALKER-designed projects. If none, so state.
 - 2. Evidence of financial stability acceptable to Engineer/Architect.
 - 3. Listing of 20 or more projects completed with submitted system, to include:
 - a. Name and location of project.
 - b. Type of system applied.
 - c. On-Site contact with phone number.

- B. Manufacturer's technical representative, acceptable to Engineer/Architect, shall be on site during surface preparation and initial stages of installation.

- C. Installer's Qualifications: Owner retains right to reject any manufacturer.
 - 1. Evidence of compliance with Summary article paragraph "A single installer. . ."
 - 2. Evidence that installer has successfully performed or has qualified staff who have successfully performed at least 5 verifiable years of installations similar to those involved in this Contract, and minimum 10 projects with submitted system.

3. Listing of 5 or more installations in climate and size similar to this Project performed by installer's superintendent.

D. Certifications

1. Traffic coating shall satisfy current National Volatile Organic Compound (VOC) Emission Standards for Architectural Coatings.
2. Licensing/certification document from manufacturer that confirms system installer is a licensed/certified applicator for the manufacturer and is legally licensed to perform work in the state of Florida.
3. Licensing/certification agreement shall include following information:
 - a. Applicator's financial responsibility for warranty burden under agreement terms.
 - b. Manufacturer's financial responsibility for warranty burden under agreement terms.
 - c. Process for dispute settlement between manufacturer and applicator in case of system failures where cause is not evident or cannot be assigned.
 - d. Authorized signatures for both Applicator Company and Manufacturer.
 - e. Commencement date of agreement and expiration date (if applicable).

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver all materials to site in original, unopened containers, bearing following information:
 1. Name of product.
 2. Name of manufacturer.
 3. Date of preparation.
 4. Lot or batch number.
- B. Store materials under cover and protect from weather. Replace packages or materials showing any signs of damage with new material at no additional cost to Owner.

1.9 FIELD CONDITIONS

- A. Weather and Substrate Conditions: Proceed with work only when existing and forecast weather and temperature of concrete substrate will permit work in accordance with manufacturer's recommendations.

1.10 WARRANTY

- A. System Manufacturer (New Application): Furnish Owner with written total responsibility Joint and Several Warranty, detailing responsibilities of manufacturer and applicator with regard to warranty requirements (Joint and Several). Warranty shall provide that system will be free of defects, water penetration and chemical damage related to system design, workmanship or material deficiency, consisting of:

1. Any adhesive or cohesive failures.
 2. Spalling surfaces.
 3. Weathering.
 4. Surface crazing (does not apply to traffic coating protection course).
 5. Abrasion or tear failure resulting from normal traffic use.
 6. Failure to bridge cracks less than 0.0625 in. or cracks existing at time of traffic coating installation on double tees only.
- B. If material surface shows any of defects listed above, supply labor and material to repair all defective areas and to repaint all damaged line stripes.
- C. Warranty period shall be a 5 year Joint and Several Warranty commencing with date of acceptance of work.
- D. Perform any repair under this warranty at no cost to Owner.
- E. Address following in terms of Warranty: length of warranty, change in value of warranty – if any- based on length of remaining warranty period, transferability of warranty, responsibilities of each party, notification procedures, dispute resolution procedures, and limitations of liability for direct and consequential damages.
- F. Vandalism, and abnormally abrasive maintenance equipment are not normal traffic use and are exempted from warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide products of 1 of following, only where specifically named in product category:
1. Advanced Polymer Technology (APT), Harmony, PA
 2. BASF Building Systems (BASF), Shakopee, MN
 3. Lymtal International Inc. (Lymtal), Lake Orion, MI.
 4. Neogard Division of Jones-Blair Company (Neogard), Dallas, TX.
 5. Poly-Carb Inc. (Poly-Carb), Twinsburg, OH.
 6. Sika Corporation (Sika), Lyndhurst, NJ.
 7. Technical Barrier Systems, Inc. (TBS), Oakville, Ontario.
 8. Tremco (Tremco), Cleveland, OH.

2.2 MATERIALS, TRAFFIC COATING

- A. Acceptable low odor coatings are listed below. Coatings shall be compatible with all other materials in this Section and related work.
1. VOC Compliant, Extreme Low Odor, High-Solids, Fast Cure, Heavy Duty Coating System:

- a. AutoGard FC HD-48, Autogard E, Neogard.
 - b. Flexodeck Mark 170.2, Poly-Carb.
 - c. Iso-Flex 760 U HL AR and 760 U HL AL, Lymtal.
 - d. Kelmar FCW III, Exposure 3, TBS.
 - e. MasterSeal Traffic 2500, BASF.
 - f. Qualideck Heavy Vehicular (152/252/372/512), APT
 - g. Sikalastic 720/745, Sika.
 - h. Vulkem 360NF/950NF and 951NF, Tremco.
- B. Provide ultraviolet screening for all traffic coating placed on this project.
- C. Finish top coat shall be colored grey.
- D. Substitutions: None for this project. Contact Engineer/Architect for consideration for future projects.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to receive Work and report immediately in writing to Engineer/Architect any deficiencies in surface which render it unsuitable for proper execution of Work.
- B. Coordinate and verify that related Work meets following requirements before beginning surface preparation and application:
- 1. Concrete surfaces are finished as acceptable for system to be installed. Correct all high points, ridges, and other defects in a manner acceptable to Engineer/Architect.
 - 2. Curing compounds used on concrete surfaces are compatible with system to be installed.
 - 3. Concrete surfaces have completed proper curing period for system selected.
 - 4. Joint Sealants are compatible with traffic coatings.

3.2 PREPARATION

- A. Seal all openings to occupied space to prevent cleaning materials, solvents and fumes from infiltration. All protective measures and/or ventilating systems required to prevent infiltration are incidental to this Work.
- B. Acid etching is prohibited.
- C. Remove all laitance and surface contaminants, including oil, grease and dirt, by shotblasting and appropriate degreasers, or as specified by manufacturer's written recommendations to provide warranty.

- D. Before applying materials, apply system to small area to assure that it will adhere to substrate and joint sealants and dry properly and to evaluate appearance.
- E. All random cracks on concrete surface less than 0.03 in. wide and showing no evidence of water and/or salt water staining on ceiling below shall receive detail coat unless more complete treatment required in accordance with manufacturer's recommendations. Rout and seal random cracks, construction joints and control joints prior to installation of primer or base coat. Crack preparation including installation of joint sealant material, where required, is incidental to traffic coating work.
- F. Mask off adjoining surfaces not to receive traffic coating and mask off drains to prevent spillage and migration of liquid materials outside membrane area. Provide neat/straight lines at termination of traffic coating.

3.3 INSTALLATION/APPLICATION

- A. Installation should include all of the following steps:
 1. Surface Preparation: Prepare concrete for system application.
 2. Crack/Construction/Control/Cove Joint Sealing: Detail for crack bridging.
 3. Primer Coat: Insure proper adhesion of membrane to substrate.
 4. Base Coat: Provide crack spanning in conjunction with Crack Detail noted above.
 5. Aggregate Coat – to hold aggregate in system, providing skid and wear close up resistance.
 6. Aggregate: Correct size, shape, hardness and amount necessary to insure proper skid and wear resistance.
 7. Top Coat: Lock aggregate into place, provide a maintainable surface and provide resistance to ponding water, UV degradation, color loss and chemical intrusion.
- B. Do all Work in accordance with manufacturer's written instructions and specifications including, but not limited to, moisture content of substrate, atmospheric conditions (including relative humidity and temperature), coverages, mil thicknesses and texture, and as shown on Drawings.
- C. A primer coat is required for all systems. No exception.
- D. Do not apply traffic coating material until concrete has been air dried at temperatures at or above 40°F. for at least 30 days after curing period specified.
- E. Cease material installation under adverse weather conditions, or when temperatures are outside manufacturer's recommended limitations for installation, or when temperature of work area or substrate are below 40°F.
- F. All adjacent vertical surfaces shall be coated with traffic coating minimum of 4 in. above coated horizontal surface. Requirement includes, but is not limited to pipes, columns, walls, curbs (full height of vertical faces of all curbs) and islands.

- G. Complete all Work under this Section before painting line stripes.
- H. Clean off excess material and material smears adjacent to joints as work progresses using methods and materials approved by manufacturers.

3.4 FIELD QUALITY CONTROL

- A. Develop a quality control plan for assured specified uniform membrane thickness that utilizes grid system of sufficiently small size to designate coverage area of not more than 5 gallons at specified thickness. In addition, employ wet mil gauge to continuously monitor thickness during application. Average specified wet mil thickness shall be maintained within grid during application with minimum thickness of not less than 80% of average acceptable thickness. Immediately apply more material to any area not maintaining these standards.
- B. Install 1 trial section of coating system specified. Do not proceed with further coating application until trial sections accepted in writing by Engineer. Remove and replace rejected trial sections with acceptable application. Trial section shall also be tested for:
 - 1. Wet mil thickness application.
 - 2. Adhesion to concrete substrate and/or existing coating(s).
 - 3. Overall dry mil thickness.
- C. Use trial sections to determine adequacy of pre-application surface cleaning. Obtain Owner, Engineer/Architect and manufacturer acceptance of:
 - 1. Cleaning before proceeding with traffic coating application.
 - 2. Visual appearance of finished coating application.
 - 3. Conformance to ADA static coefficient of friction.
 - 4. Elcometer or equivalent pull test to quantify traffic coating adhesion to concrete and existing traffic coating.
- D. Determine overall coating system mil thickness:
 - 1. Contractor shall provide 6 in. by 6 in. bond breaker (coating coupon) on concrete surface for each 25,000 sq ft, or fraction thereof, of coating to be placed as directed by Engineer/Architect and manufacturer. Dimensionally locate coupon for easy removal.
 - 2. Contractor shall assist Testing Agency in removing coating coupons from concrete surface at completion of manufacturer-specified cure period. Contractor shall repair coupon area per coating manufacturer's instructions.
 - 3. Testing Agency shall determine dry mil thickness of completed Traffic Coating System, including bond breaker. Take 9 readings (minimum), 3 by 3 pattern at 2 in. on center. No reading shall be taken closer than 1 in. from coupon edge. Report individual readings and overall coating system average to Engineer/Architect. Readings shall be made with micrometer or optical comparator.

END OF SECTION 071800

SECTION 071900 – WATER REPELLENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. A single installer shall be responsible for providing complete water proofing system including all products specified in the following Sections:
 - 1. Division 03 Section, "Prepackaged Repair Mortar"
 - 2. Division 07 Section, "Traffic Coatings"
 - 3. Division 07 Section, "Water Repellents"
 - 4. Division 07 Section, "Concrete Joint Sealants"
 - 5. Division 07 Section, "Expansion Joint Assemblies"
- B. This Section includes epoxy crack healer on these surfaces:
 - 1. Supported concrete floor surfaces including curbs, walks, islands and pour strips at locations designated on Drawings.
- C. Related Sections: Following Sections contain requirements that relate to this Section.
 - 1. Division 07 Section, "Traffic Coatings"
 - 2. Division 07 Section, "Concrete Joint Sealants"
 - 3. Division 07 Section, "Expansion Joint Assemblies"
 - 4. Division 09 Section, "Pavement Markings."

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Materials shall be compatible with materials or related Work with which they come into contact, and with materials covered by this Section.
 - 2. Distribute reviewed submittals to all others whose Work is related.
- B. Requests For Information:
 - 1. Engineer reserves the right to reject, unprocessed, any Request for Information (RFI) that the Engineer, at its sole discretion, deems frivolous.

2. Engineer reserves the right to reject, unprocessed, any RFI that the Engineer, at its sole discretion, deems already answered in the Contract Documents.
3. RFI process shall not be used for requesting substitutions. Procedures for substitutions are clearly specified elsewhere in the contract documents.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated at least 30 days prior to application.
1. Product description, technical data, appropriate applications, and limitations.
 2. Areas and application rates of materials to be applied.
 3. Proposed alternate application methods, if any.

1.5 INFORMATION SUBMITTALS

- A. Certificates
1. Certification that products and installation comply with applicable federal, state of Florida, and local EPA, OSHA and VOC requirements regarding health and safety hazards.
 2. Evidence of applicator's being certified by manufacturer. Evidence shall include complete copy of manufacturer's licensing/certification document, spelling out repair responsibility for warranty claims.
- B. Qualification Statements
1. Manufacturer's qualifications as defined in the "Quality Assurance" article.
 2. Installer's qualifications as defined in the "Quality Assurance" article.
 3. Signed statement from applicator certifying that applicator has read, understood, and shall comply with all requirements of this Section.

1.6 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Owner retains right to reject any manufacturer.
1. Evidence of acceptable previous work on WALKER-designed projects. If none, so state.
 2. Evidence of financial stability acceptable to Engineer/Architect.
 3. Listing of 10 or more projects completed with submitted system, to include:
 - a. Name and location of project.
 - b. Type of system applied.
 - c. On-Site contact with phone number.
- B. Installer's Qualifications: Owner retains right to reject any installer.
1. Evidence of compliance with Summary article paragraph "A single installer. . ."

2. Evidence that installer has successfully performed or has qualified staff who have successfully performed at least 5 verifiable years of installations similar to those involved in this Contract, and minimum 10 projects with submitted system.
3. Listing of 5 or more installations in climate and size similar to this Project performed by installer's superintendent.

C. Certifications

1. Epoxy Crack Healer shall satisfy the current national and local Volatile Organic Compound (VOC) Emission Standards for Architectural Coatings.
2. Licensing/certification document from system manufacturer that confirms system installer is a licensed/certified applicator for the manufacturer and is legally licensed to perform work in the state of Florida.
3. Licensing/certification agreement must provide following information:
 - a. Applicator's financial responsibility for warranty burden under agreement terms.
 - b. Manufacturer's financial responsibility for warranty burden under agreement terms.
 - c. Process for dispute settlement between manufacturer and applicator in case of system failures where cause is not evident or cannot be assigned.
 - d. Officers' signatures for both Applicator Company and Manufacturer.
 - e. Commencement date of agreement and expiration date (if applicable).

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver all materials to site in original, unopened containers, bearing following information:
1. Name of product.
 2. Name of manufacturer.
 3. Date of preparation.
 4. Lot or batch number.
- B. Store materials under cover and protect from weather. Replace packages or materials showing any signs of damage with new material at no additional cost to Owner.

1.8 FIELD CONDITIONS

- A. Weather and Substrate Conditions: Do not proceed with application (except with written recommendation of manufacturer) under any of the following conditions:
1. Ambient temperature is less than 40° F.
 2. Substrate surfaces have cured for less than 1 month.
 3. Rain or temperatures below 40° F predicted for a period of 24 hours.
 4. Less than 24 hours after surfaces became wet.
 5. Substrate is frozen or surface temperature is less than 40° F.
 6. Wind velocities higher than manufacturer's specified limit to prevent solvent flash-off.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide products of one of following, only where specifically named in product category:
1. BASF Building Systems (BASF), Shakopee, MN.
 2. Deneef Construction Chemicals (Deneef), Houston, TX.
 3. Lymtal International Inc. (Lymtal), Lake Orion, MI.
 4. Sika Corporation (Sika), Lyndhurst, NJ.

2.2 MATERIALS, EPOXY CRACK HEALER - SEALER

- A. Material for epoxy crack healer – sealer over random horizontal cracks in Short Term Parking Garage (applied at a rate recommended by Manufacturer but not more than 150 square feet/gallon). Acceptable products:
1. Sikadur 55 SLV Epoxy Crack Healer/Sealer, Sika.
 2. MasterSeal 630, BASF.
 3. Denedeck Crack Sealer, Deneef.
 4. Iso-Flex 609 Epoxy Crack Sealer, Lymtal.
 5. Equivalent products as approved by the Engineer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to receive Work and report immediately in writing to Engineer/Architect any deficiencies in surface which render it unsuitable for proper execution of Work.
- B. Coordinate and verify that related Work meets following requirements before beginning surface preparation and application:
1. Concrete surface finishes are acceptable for system to be installed.
 2. Curing compounds used on concrete surfaces are compatible with system to be installed.
 3. Concrete surfaces have completed proper curing period for system selected.
 4. Control joint and expansion joint Work is complete and has been accepted by Engineer/Architect.

3.2 PREPARATION

- A. Seal all openings to occupied space to prevent cleaning materials, solvents and fumes from infiltration. All protective measures and/or ventilating systems required to prevent infiltration are incidental to this Work.
- B. Acid etching is prohibited.
- C. Repair or replace all sealant materials damaged by surface preparation operations.
- D. Shot blast clean all surfaces to be sealed as acceptable to sealer manufacturer before epoxy crack healer application. Prepare by sandblasting all surfaces inaccessible to shotblast equipment.
- E. Equipment used during floor slab cleaning shall not exceed height limitation of facility and shall not exceed 3,000 lb axle load or vehicle gross weight of 6,000 lb.
- F. Mask off adjoining surfaces not to receive sealer and mask off drains to prevent spillage and migration of liquid materials outside sealer area. Provide neat/straight lines at termination of sealer.

3.3 INSTALLATION/APPLICATION

- A. Do all Work in accordance with manufacturer's written instructions and specifications including, but not limited to, moisture content of substrate, atmospheric conditions (including relative humidity and temperature), coverage, mil thickness and texture, and as shown on Drawings.
- B. Clean all surfaces affected by sealer material overspray and repair all damage caused by sealer material overspray to adjacent construction or property at no cost to Owner.
- C. Clean off excess material as work progresses using methods and materials approved by manufacturer.

3.4 NON-CONFORMING WORK

- A. Unsatisfactory Field Quality Control test results shall be grounds for rejection of sealer or sealer application rate. Perform sealer reapplication at no additional cost to Owner.

END OF SECTION 071900

PAGE BLANK INTENTIONALLY

SECTION 078100 - APPLIED FIREPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Requirements and Division 01 Specification Sections apply to this Section.

1.2 SUMMARY

- A. Section includes sprayed fire-resistive materials (SFRM).

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Framing plans, schedules, or both, indicating the following:
 - 1. Extent of fireproofing for each construction and fire-resistance rating.
 - 2. Applicable fire-resistance design designations of a qualified testing and inspecting agency acceptable to authorities having jurisdiction.
 - 3. Minimum fireproofing thicknesses needed to achieve required fire-resistance rating of each structural component and assembly.
 - 4. Treatment of fireproofing after application.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Certificates: For each type of fireproofing.
- C. Evaluation Reports: For fireproofing, from ICC-ES.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A firm or individual certified, licensed, or otherwise qualified by fireproofing manufacturer as experienced and with sufficient trained staff to install manufacturer's products according to specified requirements.

1.6 FIELD CONDITIONS

- A. Environmental Limitations: Do not apply fireproofing when ambient or substrate temperature is 44 deg F (7 deg C) or lower unless temporary protection and heat are provided to maintain temperature at or above this level for 24 hours before, during, and for 24 hours after product application.
- B. Ventilation: Ventilate building spaces during and after application of fireproofing, providing complete air exchanges according to manufacturer's written instructions. Use natural means or, if they are inadequate, forced-air circulation until fireproofing dries thoroughly.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Assemblies: Provide fireproofing, including auxiliary materials, according to requirements of each fire-resistance design and manufacturer's written instructions.
- B. Fire-Resistance Design: Indicated on Drawings, tested according to ASTM E 119 or UL 263 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Steel members are to be considered unrestrained unless specifically noted otherwise.
- C. Asbestos: Provide products containing no detectable asbestos.

2.2 FIRE-RESISTIVE MATERIALS

- A. FRM: Manufacturer's standard, factory-mixed, medium weight, dry formulation, complying with indicated fire-resistance design, and mixed with water at Project site to form a slurry or mortar before conveyance and application.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Carboline Company, subsidiary of RPM International, Fireproofing Products Div.; Pyrocrete 40.
 - b. Grace, W. R. & Co. - Conn.; Grace Construction Products; Monokote Z146 or Monokote Z146T.
 - c. Isolatek International; Cafco 400.
 - 2. Application: Designated for exterior use by a qualified testing agency acceptable to authorities having jurisdiction.
 - 3. Bond Strength: Minimum 1000-lbf/sq. ft. (47.88-kPa) cohesive and adhesive strength based on field testing according to ASTM E 736.

4. Density: Not less than 40 lb/cu. ft. (640 kg/cu. m) as specified in the approved fire-resistance design, according to ASTM E 605.
5. Thickness: As required for fire-resistance design indicated, measured according to requirements of fire-resistance design or ASTM E 605, whichever is thicker, but not less than 0.375 inch (9 mm).
6. Combustion Characteristics: ASTM E 136.
7. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - a. Flame-Spread Index: 10 or less.
 - b. Smoke-Developed Index: 10 or less.
8. Compressive Strength: Minimum 500 lbf/sq. in. (2068 kPa) according to ASTM E 761.
9. Corrosion Resistance: No evidence of corrosion according to ASTM E 937.
10. Deflection: No cracking, spalling, or delamination according to ASTM E 759.
11. Effect of Impact on Bonding: No cracking, spalling, or delamination according to ASTM E 760.
12. Air Erosion: Maximum weight loss of 0.025 g/sq. ft. (0.270 g/sq. m) in 24 hours according to ASTM E 859.
13. Finish: To match existing.
 - a. Color: Standard concrete gray.

2.3 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that are compatible with fireproofing and substrates and are approved by UL or another testing and inspecting agency acceptable to authorities having jurisdiction for use in fire-resistance designs indicated.
- B. Metal Lath: Expanded metal lath fabricated from material of weight, configuration, and finish required, according to fire-resistance designs indicated and fireproofing manufacturer's written recommendations. Include clips, lathing accessories, corner beads, and other anchorage devices required to attach lath to substrates and to receive fireproofing.
- C. Reinforcing Fabric: Glass- or carbon-fiber fabric of type, weight, and form required to comply with fire-resistance designs indicated; approved and provided by fireproofing manufacturer.
- D. Reinforcing Mesh: Metallic mesh reinforcement of type, weight, and form required to comply with fire-resistance design indicated; approved and provided by fireproofing manufacturer. Include pins and attachment.
- E. Sealer: Transparent-drying, water-dispersible, tinted protective coating recommended in writing by fireproofing manufacturer for each fire-resistance design.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for substrates and other conditions affecting performance of the Work and according to each fire-resistance design. Verify compliance with the following:
 - 1. Substrates are free of dirt, oil, grease, release agents, rolling compounds, mill scale, loose scale, incompatible primers, paints, and encapsulants, or other foreign substances capable of impairing bond of fireproofing with substrates under conditions of normal use or fire exposure.
 - 2. Objects penetrating fireproofing, including clips, hangers, support sleeves, and similar items, are securely attached to substrates.
 - 3. Substrates receiving fireproofing are not obstructed by ducts, piping, equipment, or other suspended construction that will interfere with fireproofing application.
- B. Conduct tests according to fireproofing manufacturer's written recommendations to verify that substrates are free of substances capable of interfering with bond.
- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Cover other work subject to damage from fallout or overspray of fireproofing materials during application.
- B. Clean substrates of substances that could impair bond of fireproofing.
- C. For applications visible on completion of Project, repair substrates to remove surface imperfections that could affect uniformity of texture and thickness in finished surface of fireproofing. Remove minor projections and fill voids that would telegraph through fire-resistive products after application.

3.3 APPLICATION

- A. Construct fireproofing assemblies that are identical to fire-resistance design indicated and products as specified, tested, and substantiated by test reports; for thickness, primers, sealers, topcoats, finishing, and other materials and procedures affecting fireproofing work.

- B. Comply with fireproofing manufacturer's written instructions for mixing materials, application procedures, and types of equipment used to mix, convey, and apply fireproofing; as applicable to particular conditions of installation and as required to achieve fire-resistance ratings indicated.
- C. Coordinate application of fireproofing with other construction to minimize need to cut or remove fireproofing.
 - 1. Do not begin applying fireproofing until clips, hangers, supports, sleeves, and other items penetrating fireproofing are in place.
 - 2. Defer installing ducts, piping, and other items that would interfere with applying fireproofing until application of fireproofing is completed.
- D. Install auxiliary materials as required, as detailed, and according to fire-resistance design and fireproofing manufacturer's written recommendations for conditions of exposure and intended use. For auxiliary materials, use attachment and anchorage devices of type recommended in writing by fireproofing manufacturer.
- E. Extend fireproofing in full thickness over entire area of each substrate to be protected.
- F. Install body of fireproofing in a single course unless otherwise recommended in writing by fireproofing manufacturer.
- G. Where sealers are used, apply products that are tinted to differentiate them from fireproofing over which they are applied.
- H. Provide a uniform finish that matches adjacent fireproofed surfaces.
- I. Cure fireproofing according to fireproofing manufacturer's written recommendations.
- J. Finishes: Apply fireproofing to match adjacent fireproofing finish.

3.4 CLEANING, PROTECTING, AND REPAIRING

- A. Cleaning: Immediately after completing spraying operations in each containable area of Project, remove material overspray and fallout from surfaces of other construction and clean exposed surfaces to remove evidence of soiling.
- B. Protect fireproofing, according to advice of manufacturer and Installer, from damage resulting from construction operations or other causes, so fireproofing will be without damage or deterioration at time of Substantial Completion.
- C. As installation of other construction proceeds, inspect fireproofing and repair damaged areas and fireproofing removed due to work of other trades.

- D. Repair fireproofing by reapplying it using same method as original installation or using manufacturer's recommended trowel-applied product.

END OF SECTION 078100

SECTION 079233 – CONCRETE JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specification Sections apply to this Section.

1.2 SUMMARY

- A. A single installer shall be responsible for providing complete water proofing system including all products specified in the following Sections:

- 1. Division 07 Section, "Traffic Coatings"
- 2. Division 07 Section, "Water Repellents"
- 3. Division 07 Section, "Joint Sealants"
- 4. Division 07 Section, "Expansion Joint Assemblies"

- B. This Section includes the following:

- 1. Exterior joints in the following horizontal traffic bearing surfaces:
 - a. Control joints in slab-on-grade, pour strips, slabs and topping slabs.
 - b. Perimeter of all floor drains.
 - c. Random cracks.

- C. Related Sections: Following Sections contain requirements that relate to this Section.

- 1. Division 07 Section, "Traffic Coatings."
- 2. Division 07 Section, "Water Repellents."
- 3. Division 07 Section, "Expansion Joint Assemblies."
- 4. Division 09 Section, "Pavement Markings."

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:

- 1. Materials shall be compatible with materials or related Work with which they come into contact, and with materials covered by this Section.
- 2. Distribute reviewed submittals to all others whose Work is related.

B. Requests For Information:

1. Engineer reserves the right to reject, unprocessed, any Request for Information (RFI) that the Engineer, at its sole discretion, deems frivolous.
2. Engineer reserves the right to reject, unprocessed, any RFI that the Engineer, at its sole discretion, deems already answered in the Contract Documents.
3. RFI process shall not be used for requesting substitutions. Procedures for substitutions are clearly specified elsewhere in the contract documents.

1.4 ACTION SUBMITTALS

A. Product Data: For each system indicated at least 30 days prior to application.

1. Product description, technical data, appropriate applications and limitations.
2. Primer type and application rate

B. Samples:

1. One for each system indicated.

C. Sample Warranty: For each system indicated.

1.5 INFORMATION SUBMITTALS

A. Certificates:

1. Evidence of installer's being certified by manufacturer. Evidence shall include complete copy of manufacturer's licensing/certification document, spelling out repair responsibility for warranty claims.
2. Certification from the Manufacturer that joint details as specified are acceptable for system to be installed at least 1 month before placement of any concrete which will receive joint sealant.

B. Field Quality Control:

1. Two copies each of manufacturer's technical representative's log for each visit.

C. Qualification Statements:

1. Manufacturer's qualifications as defined in the "Quality Assurance" article.
2. Installer's qualifications as defined in the "Quality Assurance" article.
3. Signed statement from this Section applicator certifying that applicator has read, understood, and shall comply with all requirements of this Section.

1.6 CLOSEOUT SUBMITTALS

- A. Final executed Warranty.

1.7 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Owner retains right to reject any manufacturer.

1. Evidence of acceptable previous work on WALKER-designed projects. If none, so state.
2. Evidence of financial stability acceptable to Engineer/Architect.
3. Listing of 20 or more projects completed with submitted sealant, to include:
 - a. Name and location of project.
 - b. Type of sealant applied.
 - c. On-Site contact with phone number.

- B. Manufacturer's technical representative, acceptable to Engineer/Architect, shall be on site during surface preparation and initial stages of installation.

- C. Installer's Qualifications: Owner retains right to reject any installer or subcontractor.

1. Installer shall be legally licensed to perform work in the state of Florida. Evidence of compliance with Summary article paragraph "A single installer. . ."
2. Evidence that installer has successfully performed or has qualified staff who have successfully performed at least 5 verifiable years of installations similar to those involved in this Contract, and minimum 10 projects with submitted sealant.
3. Listing of 5 or more installations in climate and size similar to this Project performed by installer's superintendent.

- D. Certifications:

1. Licensing/certification document from system manufacturer that confirms sealant installer is a licensed/certified applicator for the manufacturer and is legally licensed to perform work in the state of Florida.
2. Licensing/certification agreement shall include following information:
 - a. Applicator's financial responsibility for warranty burden under agreement terms.
 - b. Manufacturer's financial responsibility for warranty burden under agreement terms.
 - c. Process for dispute settlement between manufacturer and applicator in case of system failures where cause is not evident or cannot be assigned.
 - d. Authorized signatures for both Applicator Company and Manufacturer.
 - e. Commencement date of agreement and expiration date (if applicable).

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver all materials to site in original, unopened containers, bearing following information:
 - 1. Name of product.
 - 2. Name of manufacturer.
 - 3. Date of preparation.
 - 4. Lot or batch number.
- B. Store materials under cover and protect from weather. Replace packages or materials showing any signs of damage with new material at no additional cost to Owner.

1.9 FIELD CONDITIONS

- A. Weather and Substrate Conditions: Proceed with work only when existing and forecast weather and temperature of concrete substrate will permit work in accordance with manufacturer's recommendations.

1.10 WARRANTY

- A. Manufacturer: Furnish Owner with written total responsibility Joint and Several Warranty, detailing responsibilities of manufacturer and installer with regard to warranty requirements (Joint and Several). The warranty shall provide that sealant will be free of defects, water penetration and chemical damage related to system design, workmanship or material deficiency, consisting of:
 - 1. Any adhesive or cohesive failures.
 - 2. Weathering.
 - 3. Abrasion or tear failure resulting from normal traffic use.
- B. If material surface shows any of defects listed above, supply labor and material to repair all defective areas and to repaint all damaged line stripes.
- C. Warranty period shall be a 5 year Joint and Several Warranty commencing with date of acceptance of work.
- D. Perform any repair under this warranty at no cost to Owner.
- E. Address the following in the terms of the Warranty: length of warranty, change in value of warranty – if any- based on length of remaining warranty period, transferability of warranty, responsibilities of each party, notification procedures, dispute resolution procedures, and limitations of liability for direct and consequential damages.
- F. Vandalism, and abnormally abrasive maintenance equipment are not normal traffic use and are exempted from warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide products of 1 of following, only where specifically named in product category:
1. BASF Building Systems (BASF), Shakopee, MN.
 2. Dow Corning Corp. (Dow Corning), Midland, MI.
 3. Lymtal International Inc. (Lymtal), Lake Orion, MI.
 4. Pecora Corporation (Pecora), Harleysville, PA.
 5. Sika Corporation (Sika), North Canton, OH.
 6. Tremco (Tremco), Cleveland, OH.

2.2 MATERIALS, JOINT SEALANT SYSTEM

- A. Provide complete system of compatible materials designed by manufacturer to produce waterproof, traffic-bearing control joints as detailed on Drawings.
- B. Compounds used for sealants shall not stain masonry or concrete. Aluminum pigmented compounds not acceptable.
- C. Color of sealants shall match adjacent surfaces.
- D. Closed cell or reticulated backer rods: Acceptable products:
1. "Sof Rod," Nomaco Inc., 501 NMC Drive, Zebulon, NC 27597. (800) 345-7279 ext. 341.
 2. "ITP Soft Type Backer Rod," Industrial Thermo Polymers Limited, 2316 Delaware Ave., Suite 216, Buffalo, NY 14216. (800) 387-3847.
 3. "MasterSeal 921 Backer Rod," BASF.
- E. Bond breakers and fillers: as recommended by system manufacturer.
- F. Primers: as recommended by sealant manufacturer.
- G. Acceptable sealants are listed below. Sealants shall be compatible with all other materials in this Section and related work.
- H. Acceptable polyurethane control joint sealants (traffic bearing):
1. MasterSeal SL-2 or MasterSeal SL-2 SG, BASF.
 2. Iso-flex 880 GB or Iso-flex 881, Lymtal.
 3. Dynatrol II-SG or Urexpan NR 200, Pecora.
 4. Sikaflex-2c SL or Sikaflex-2c NS TG, Sika.
 5. THC-900, THC-901, Vulkem 45SSL, Dymeric 240, Dymeric 240 FC or Dymonic 100, Tremco.

- I. Acceptable polyurethane vertical and cove joints sealants (non-traffic bearing):
 - 1. Sikaflex-2c NS, Sika.
 - 2. MasterSeal NP-2, BASF.
 - 3. Dymeric 240/240FC, Dymonic 100 or THC 901 (cove only), Tremco.
 - 4. Dynatred, Pecora.
 - 5. Iso-flex 881, Lymtal.

- J. Proposed Substitutions: None for this project. Contact Engineer/Architect for consideration for future projects.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to receive Work and report immediately in writing to Engineer/Architect any deficiencies in surface which render it unsuitable for proper execution of Work.

- B. Coordinate and verify that related Work meets following requirements before beginning installation
 - 1. Concrete surfaces are finished as acceptable for system to be installed.
 - 2. Curing compounds used on concrete surfaces are compatible with system to be installed.
 - 3. Concrete surfaces have completed proper curing period for system selected.

3.2 PREPARATION

- A. Seal all openings to occupied space to prevent cleaning materials, solvents and fumes from infiltration. All protective measures and/or ventilating systems required to prevent infiltration are incidental to this Work.

- B. Correct unsatisfactory conditions before installing sealant system.

- C. Acid etching is prohibited.

- D. Grind joint edges smooth and straight with beveled grinding wheel before sealing. All surfaces to receive sealant shall be dry and thoroughly cleaned of all loose particles, laitance, dirt, dust, oil, grease or other foreign matter. Obtain written approval of method from system manufacturer before beginning cleaning.

- E. Prime and seal joints and protect as required until sealant is fully cured. A primer coat is required for all systems.

3.3 INSTALLATION/APPLICATION

- A. Do all Work in strict accordance with manufacturer's written instructions and specifications including, but not limited to, moisture content of substrate, atmospheric conditions (including relative humidity and temperature), thicknesses and texture, and as shown on Drawings.
- B. Completely fill joint without sagging or smearing onto adjacent surfaces.
- C. Self-Leveling Sealants: Fill horizontal joints slightly recessed to avoid direct contact with wheel traffic.
- D. Non-Sag Sealants: Tool joints concave: Wet tooling not permitted.
- E. Clean off excess material and material smears adjacent to joints as work progresses using methods and materials approved by manufacturers.
- F. Cease material installation under adverse weather conditions, or when temperatures are outside manufacturer's recommended limitations for installation, or when temperature of work area or substrate are below 40°F.

3.4 FIELD QUALITY CONTROL

- A. Contractor, at Engineer/Architect's direction, shall cut out lesser of 1% of total lineal footage placed or total of 100 lineal ft of joint sealant at isolated/random locations (varying from in. to ft of material) for Engineer/Architect and Manufacturer's Representative inspection of sealant profile.
- B. Repair all random joint sealant "cut out" sections at no cost to Owner.

END OF SECTION 079233

PAGE BLANK INTENTIONALLY

SECTION 079500 – EXPANSION JOINT ASSEMBLIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. A single installer shall be responsible for providing complete water proofing system including all products specified in the following Sections:
 - 1. Division 07 Section, "Traffic Coatings"
 - 2. Division 07 Section, "Water Repellents"
 - 3. Division 07 Section, "Concrete Joint Sealants"
 - 4. Division 07 Section, "Expansion Joint Assemblies"
- B. This Section includes the following:
 - 1. Standard expansion joint systems:
 - a. Elastomeric concrete edged, extruded rubber joint system
 - b. Field applied Silicone sealant system
- C. Related Sections: The following Sections contain requirements that relate to this section:
 - 1. Division 07 Section "Concrete Joint Sealants" for liquid-applied joint sealants.
 - 2. Division 09 Section "Pavement Markings".

1.3 DEFINITIONS

- A. Maximum Joint Width: Widest linear gap a joint system tolerates and in which it performs its designed function without damaging its functional capabilities.
- B. Minimum Joint Width: Narrowest linear gap a joint system tolerates and in which it performs its designed function without damaging its functional capabilities.
- C. Movement Capability: Value obtained from the difference between widest and narrowest widths of a joint opening typically expressed in numerical values (mm or inches) or a percentage (plus or minus) of nominal value of joint width. Movement capability is to include anticipated movements from concrete shrinkage, concrete shortening and creep from post-tensioning or prestressing, cyclic thermal movements, and seismic movements.

- D. Nominal Joint Width: Width of linear opening specified in practice and in which joint system is installed.
- E. Nominal Form Width: Linear gap in joint system at time of forming or erection of structural elements bounding the expansion joint.
- F. Service Load Level: Defined level of load under which joint assembly remains elastic and fully functional.
- G. Fatigue Load Level: Defined level of load under which joint assembly remains elastic and fully functional, including all noise mitigation components, for the stated number of cycles.
- H. Collapse Load Level: Defined level of load under which joint assembly remains capable of bridging the gap, although plates may yield and components may break.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. General:

- a. Coordinate and furnish anchorages, setting drawings, and instructions for installing joint systems. Provide fasteners of metal, type, and size to suit type of construction indicated and to provide for secure attachment of joint systems.
- b. Coordinate requirements for transitions, tolerances, levelness, and plumbness to ensure the installed expansion joint system can perform with expected movement capabilities.
- c. Coordinate and assign responsibility for preparation of concrete surfaces adjacent to expansion joints.
- d. Expansion joint surface areas each side of joint gap shall have a vertical differential less than $\frac{1}{4}$ " and meet requirements of expansion joint manufacturer.
- e. Minor surface defects shall be repaired according to manufacturer's recommendations. Repair materials shall be compatible with intended system materials and shall be approved by the Engineer prior to surface preparation and installation.
- f. Submit for approval repair products and procedures for all major defects. Repair description shall indicate materials, manufacturer's requirements, expected service life, and maintenance requirements. Take all precautions necessary to avoid damaging adjacent surfaces and embedded reinforcement or post tensioned anchors and tendons. Contractor is responsible for any damages. Concrete repairs shall be of rectangular configuration, with no feather-edged surfaces. Final surface preparation of all repairs shall be sandblasting, or approved equivalent.
- g. Coordinate layout of joint system and approval of methods for providing joints.

2. Joint Opening Width:
 - a. Use temperature adjustment table to properly size joint gap at time of concrete pour and show that proposed joint system is capable of equal individual and combined movements in each direction when installed at designated temperature shown on drawings.
 - b. Where installation temperature is other than specified temperature, perform calculations showing joint is capable of movement within design temperature range for "other" temperature, and that design and installation follow manufacturer's recommendations.
 - c. Expansion joint movement capability and the actual joint gap movement may not coincide. Construct actual joint gap in accordance with expansion design criteria.
 3. Blockouts:
 - a. Blockouts shall be plumb with maximum tolerance per Manufacturer or not more than 0.125 inches deviation in 12 inches. Noncompliant blockouts shall be considered major defects.
 - b. Blockouts shall be straight and true with maximum tolerance per Manufacturer or not more than 0.250 inches deviation in 10 lineal feet. Noncompliant blockouts shall be considered major defects.
- B. Preinstallation Meetings: Meet at project site well in advance of time scheduled for Work to proceed to review requirements for Work and conditions that could interfere with successful expansion joint system performance. Require every party concerned with concrete formwork, blockout, concrete placement, or others required to coordinate or protect the Work thereafter, to attend. Include Engineer of Record and manufacturer's technical representative and warranty officer.
- C. Requests For Information
1. Engineer reserves the right to reject, unprocessed, any Request for Information (RFI) that the Engineer, at its sole discretion, deems frivolous.
 2. Engineer reserves the right to reject, unprocessed, any RFI that the Engineer, at its sole discretion, deems already answered in the Contract Documents.
 3. RFI process shall not be used for requesting substitutions. Procedures for substitutions are clearly specified elsewhere in the contract documents.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated:
1. Construction details, material descriptions, dimensions, and finishes.
 2. Proposed method of preparation of concrete surface to receive expansion joint systems.
 3. Proposed method and details for treatment of cracks, bugholes, or other potential concrete surface defects in areas to receive expansion joint systems.

- B. Shop Drawings: For each type of product indicated:
1. Placement Drawings: Show project conditions including, but not limited to, line diagrams showing plans, elevations, sections, details, splices, blockout requirement, and terminations. Provide isometric or clearly detailed drawings depicting how components interconnect. Include reviewed and approved details from others whose work is related. Other information required to define joint placement or installation.
 2. Joint System Schedule: Prepared by or under the supervision of the supplier. Include the following information in tabular form:
 - a. Manufacturer and model number for each joint system.
 - b. Joint system location cross-referenced to Drawings.
 - c. Form width.
 - d. Nominal joint width.
 - e. Movement capability.
 - f. Minimum and maximum joint width.
 - g. Classification as thermal or seismic.
 - h. Materials, colors, and finishes.
 - i. Product options.
 - j. Fire-resistance ratings.
 3. Components and systems required to be designed by a professional engineer, shall bear such professional's written approval when submitted.
- C. Samples:
1. Samples for each type of joint system indicated.
 - a. Submit 2 samples for each type. Full width by 6 inches (150 mm) long, for each system required.
- D. Test and Evaluation Reports:
1. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for current products.

1.6 INFORMATIONAL SUBMITTALS

- A. Certificates
1. Certification that products and installation comply with applicable federal, state of Florida, and local EPA, OSHA and VOC requirements regarding health and safety hazards.
 2. ADA Certification: Prior to installation, submit written certification from manufacturer indicating that expansion joints conform to Americans with Disabilities Accessibility Guidelines for Buildings and Facilities, as published by U.S. Architectural & Transportation Barriers Compliance Board, 1331 F Street, N.W., Suite 1000, Washington, DC 20004-1111. 1-800-872-2253.

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

- a. Submit test reports from accredited laboratory attesting to joint systems' movement capability and ADA compliance.
 - b. Static coefficient of friction shall meet minimum requirements of Americans with Disabilities Act (ADA).
 3. Signed statement from installer/applicator certifying that installer/applicator has read, understood, and shall comply with all requirements of this Section.
 4. Signed statement from manufacturer's representative that they have read, understood, and shall comply with all requirements of this section.
 - B. Field Quality Control
 1. Two copies each of manufacturer's technical representative's log for each visit.
 - C. Qualification Statements
 1. Manufacturer's qualifications as defined in the "Quality Assurance" article within 60 days of project award.
 2. Installer's qualifications as defined in the "Quality Assurance" article.
 3. Evidence of manufacturer's certification of installer/applicator. Evidence shall include complete copy of manufacturer's licensing/certification document, spelling out repair responsibility for warranty claims.
- 1.7 CLOSEOUT SUBMITTALS
- A. Maintenance Contracts: 2 copies of Maintenance Program contracts.
 - B. Operation and Maintenance Data
 1. Maintenance Manual: 3 copies of System Maintenance Manual.
 - C. Warranty Documentation: 2 executed copies of Labor and Material Warranty including all terms, conditions and maintenance requirements.
- 1.8 QUALITY ASSURANCE
- A. Manufacturer Qualifications: Owner retains right to reject any manufacturer.
 1. Evidence of compliance with Experience Record and Qualifications paragraph below.
 2. Evidence of acceptable previous work on WALKER-designed projects. If none, so state.
 3. Copy of sample warranty that meets the requirements of the "Warranty" article in Section 1.
 4. Evidence of financial stability acceptable to Owner or Engineer/Architect.
 5. Evidence of compliance with "Single Installer" requirement.

- B. Experience Record and Qualifications: Verification of systems shall be established by either System Validation or Design Validation.
 - 1. Acceptable field history consists of successful performance of five (5) installations in place over the previous five (5) years under similar project loads, traffic frequency, footprints, and joint sizes. Include sketches, photos, and references for each installation. Installations shall have experienced at least moderate levels of traffic.
- C. Installer Qualifications: An employer of workers, including superintendent for this project, trained and approved by manufacturer.
- D. Certifications
 - 1. Provide reports to Owner detailing maintenance activities have been performed in accordance with written maintenance agreement for expansion joints.
 - 2. Materials shall be compatible with materials or related Work with which they come into contact and the related materials sections.
 - 3. Manufacturer/Applicator: Review and approve all details before construction. Confirm in writing to Owner.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Deliver all materials to site in original, unopened containers, bearing following information:
 - 1. Name of product.
 - 2. Name of manufacturer.
 - 3. Date of preparation.
 - 4. Lot or batch number.
- B. Store materials under cover and protect from weather. Replace packages or materials showing any signs of damage with new material at no additional cost to Owner.

1.10 WARRANTY

- A. Warranty period shall be a 5 year labor and materials warranty commencing with date of acceptance of work.
- B. Installation Requirements: Include a written plan of construction and coordination requirements, to allow joint system installation to proceed with specified warranty, that specifically addresses the following:
 - 1. Block out acceptance criteria.
 - 2. Surface preparation acceptance criteria.
 - 3. Crack, surface defect, and detailing recommendations.
 - 4. Method of protection of surrounding surfaces.
 - 5. Method of expansion joint system installation description.

6. Primer type and application rate.
 7. Method of preparation of all glands and reinforced membranes.
 8. Temperature, humidity and other weather constraints. Specify substrate moisture testing criteria, if any.
 9. Final cure time before removal of protection, resumption of traffic, and/or paint striping.
 10. Any other special instructions required to ensure proper installation.
- C. Quality Service Requirements: Show evidence of licensed/approved installer. List of names, addresses and phone numbers, with copies of certification/approval agreement with each, satisfies requirement. Licensing/certification agreement shall include following information:
1. Installer's financial responsibility for warranty burden under agreement terms.
 2. Manufacturer's financial responsibility for warranty burden under agreement terms.
 3. Process for dispute settlement between manufacturer and installer in case of system failures where cause is not evident or cannot be assigned.
 4. Authorized signatures for both Installer Company and Manufacturer.
 5. Commencement date of agreement and expiration date (if applicable).
 6. Provide copy of contractor's field application quality control procedures.
- D. Warranty shall be jointly executed by Manufacturer and Installer for labor and materials. Detail responsibilities of General Contractor, manufacturer and installer with regard to warranty requirements, as outlined in the Manufacturer's warranty and related Licensing/Certification documents. Warranty shall provide that system shall be free of defects, water penetration and chemical damage related to system design, workmanship or material deficiency, consisting of:
1. Any water leakage through expansion joint system or leaking conditions of reinforced membrane, other waterproofing components, or glands.
 2. Any adhesive or cohesive failures of the system.
 3. Shifting of plates out of alignment due to system failure.
 4. Loose plates, anchor blocks, bolts.
 5. Metal to metal vibration causing noises during use.
 6. Metal to non-metal vibration causing noises during use.
 7. Tears, weathering, or degradation in gland from normal use.
 8. Expansion joint glands are considered defective if they buckle upwards beyond the level of the floor surface after installation or downward in excess of ½ inch below the floor surface.
- E. If expansion joint systems or components show any of defects listed above, supply labor and material to repair all defects at no cost to Owner.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

- A. A single Installer shall be responsible for providing complete expansion joint system. Obtain all joint systems through one source from a single manufacturer.

- B. Drawings indicate size, profiles, and dimensional requirements of joint systems and are schematic for systems indicated.
- C. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

2.2 PERFORMANCE REQUIREMENTS

- A. Intent of this section is to insure that installed expansion joints allow pedestrian and vehicular traffic to pass in a smooth, quiet fashion with minimal maintenance required over a period of not less than 10 years. Expansion joints shall not only function as structural bridging elements, but must also accommodate structural expansions/contractions and minimize water leakage.
- B. Provide design of expansion joint for preparation of final details for fabrication and construction of all concrete openings, expansion joint elements and required accessories. An integral part of this project is engineering for the following:
 - 1. Include calculations for the size of concrete openings to provide nominal joint width as indicated on drawings. Provide a summary of the design criteria used in the design.
 - 2. Include calculations for the appropriate size of expansion joint elements in accordance with the expansion joint assembly performance criteria. Include installation requirements of expansion joint assembly for specific project conditions and scheduling. Provide a summary of design criteria used in design.
- C. Nominal form width shown on the drawings shall be adjusted for the ambient temperature at time of concrete placement and designer shall verify that width of joint at installation shall meet minimum installation requirements.
- D. Expansion joint systems shall be capable of resisting a differential vertical movement of ½ inch.
- E. Materials shall be supplied in lengths to minimize or eliminate the need to splice waterproofing components.
 - 1. Waterproofing materials directly exposed to vehicular traffic shall be supplied with no joints in vehicle drive aisles.
 - 2. All mitered splices shall be performed at the factory and provide sufficient gland length for butt splicing with field splicing equipment.
 - 3. All Santoprene butt to butt splices shall be heat welded.
 - 4. Butt to butt splices with other materials shall be per manufacturer's recommendations.
- F. Design system for passenger vehicles traveling at speeds normally expected within a parking structure.
- G. Walking Surfaces: Expansion joint assemblies at walking areas subject to pedestrian traffic shall provide a smooth, slip resistant walking surface for pedestrians with these minimum requirements:

1. Shall provide walking surfaces in accordance with ASTM – F 1637 Standard Practice for Safe Walking Surfaces.
2. Shall be designed to comply with “Americans with Disabilities Act (ADA), Accessibility Guidelines (ADAAG)” and Florida Building Code. Americans with Disabilities Accessibility Guidelines for Buildings and Facilities, as published by U.S. Architectural & Transportation Barriers Compliance Board, 1331 F Street, N.W., Suite 1000, Washington, DC 20004-1111. 1-800-872-2253.
3. Adjoining walkway surfaces shall be flush and meet the following minimum requirements:
 - a. Changes in level of less than ¼ inch in height may be without edge treatment as shown in ADA Figure 303.2 and on the Drawings.
 - b. Changes in Level between ¼ inch and ½ inch in height shall be beveled with a slope no greater than 1:2 as shown in ADA Figure 303.3 and on the Drawings.
 - c. Changes in level greater than ½ inch in height are not permitted unless they can be transitioned by means of a ramp as shown on Drawings.
 - d. Openings in floor or ground surfaces shall not allow passage of a sphere more than ½ inch diameter except as allowed for elevators and platform lifts as shown in ADA Figure 302.3 and on the Drawings.

2.3 MANUFACTURERS

- A. Subject to compliance with requirements, provide products from one of following manufacturers (listed in alphabetical order), only where specifically named in product categories:
 1. Balco Inc., Wichita, KS (Balco).
 2. Construction Specialties, Inc., Muncy, PA (C/S).
 3. Dow Corning Corp., Midland, MI (Dow Corning).
 4. Emseal Joint Systems, Westborough, MA (Emseal).
 5. Erie Metal Specialties, Inc., Akron, NY (EMS).
 6. Inpro Jointmaster, Muskego, WI (Jointmaster)
 7. Lymtal International Inc. Lake Orion, MI (Lymtal).
 8. MM Systems Corporation, Atlanta, GA (MM).
 9. Tremco, Cleveland, OH (Tremco).
 10. Watson Bowman Acme Corporation, a Division of BASF Construction Chemicals NA, Amherst, NY (WBA).

2.4 PRODUCTS, STANDARD EXPANSION JOINT SYSTEMS

- A. Elastomeric concrete edged, extruded rubber expansion joint system.
 1. CR Series System, Jointmaster.
 2. DuraFlex Chambered Wing Seal CS and DCS Series, Balco.
 3. Iso-Flex Winged Joint System J Series, LymTal.
 4. Lokcrete Membrane System (LMS) Series, MM.
 5. Polycrcrete/Membrane System, Type CR Series, EMS.

6. Thermaflex Membrane/Nosing System, Type TM and TCR Series, Emseal.
7. Vulkem WF series Vehicular Expansion Joint System, Tremco.
8. Wabo®Crete Membrane System ME Series, WBA.
9. ZB 200/400 Series, C/S.

B. Field applied silicone sealant expansion joint system:

1. Dow Corning FC parking structure sealant (fast cure), Dow Corning.
2. Wabo®SiliconeSeal Two-Part Silicone, WBA.
3. Spectrem 800/900SL, Tremco.

C. Substitutions: None for this project. Contact Engineer/Architect for consideration for future projects.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces and blockouts where expansion joint systems will be installed for installation tolerances and other conditions affecting performance of Work.
- B. Check elevations on each side of expansion joint gap to ensure flush slab-to-slab transition.
- C. Check anticipated or actual minimum and maximum joint openings. Compare to manufacturer's movement specifications and make joint sizing recommendations.
- D. Coordinate and verify that related Work meets following requirements:
 1. Check adhesion to substrates and recommend appropriate preparatory measures.
 2. Curing compounds used on concrete surfaces are compatible with Work to be installed.
 3. Concrete surfaces have completed proper curing period for system selected.
 4. Coordinate expansion joint system with other related Work before installation of expansion joint.
 5. Verify expansion joints are compatible with Joint Sealants and traffic toppings.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.
- F. Cease installation if expansion joint blockouts and/or openings exhibit cracked edges, voids or spalls. Repair with approved material prior to installation of expansion joint.
- G. Correct unsatisfactory conditions in manner acceptable to Manufacturer and Engineer before installing joint system.

3.2 PREPARATION

- A. Prepare for installation of expansion joint systems in accordance with manufacturer's recommendations
- B. Surface Preparation:
 - 1. Acid etching: Prohibited.
 - 2. Prepare substrates according to joint system manufacturer's written instructions.
 - 3. Clean joints thoroughly in accordance with manufacturer's instructions to remove all laitance, unsound concrete and curing compounds which may interfere with adhesion.

3.3 INSTALLATION

- A. Comply with manufacturer's written instructions for storing, handling, and installing joint assemblies and materials unless more stringent requirements are indicated.
- B. Proceed with work only when existing and forecast weather and temperature of concrete substrate will permit work in accordance with manufacturer's recommendations.
- C. Cease material installation under adverse weather conditions, or when temperatures are outside manufacturers recommended limitations for installation, or when temperature of work area or substrate are below 40°F.
- D. During months when historic mean daily temperature at Project is more than 19° F. colder than annual mean daily temperature, premolded sealant shall be installed on temporary basis to prevent hot weather buckling. Provide permanent installation during acceptable weather conditions.
- E. Terminate exposed ends of joint assemblies with field- or factory-fabricated termination devices.
- F. Seal all openings to occupied spaces to prevent cleaning materials, solvents and fumes from infiltration. All protective measures and/or ventilating systems required to prevent infiltration are incidental to this Work.
- G. Clean off excess material and material smears adjacent to joints as work progresses using methods and materials approved by manufacturer.

3.4 FIELD QUALITY CONTROL

- A. Manufacturer Services: Provide qualified manufacturer's technical representative for periodic inspection of Work at critical time of the installation, including but not limited to pre-concrete formwork and placement site meetings, block out inspection, surface defect repair, surface preparation, metal work, expansion gland installation and waterproofing system installation.

3.5 PROTECTION

- A. Do not remove protective covering until finish work in adjacent areas is complete. When protective covering is removed, clean exposed metal surfaces to comply with manufacturer's written instructions.
- B. Protect installation from damage by work of other Sections. Where necessary due to heavy construction traffic, remove and properly store cover plates or seals and install temporary protection over joints. Reinstall cover plates or seals prior to Substantial Completion of Work.

END OF SECTION 079500

SECTION 099113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes surface preparation and the application of paint systems on the following exterior substrates:
 - 1. Concrete.
 - 2. Steel
 - 3. Galvanized metal.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
 - 1. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
 - 2. Indicate VOC content.
- B. Samples for Verification: For each type of paint system and each color and gloss of topcoat.
 - 1. Submit Samples on rigid backing, 8 inches (200 mm) square.
 - 2. Apply coats on Samples in steps to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.
- C. Product List: Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules. Include color designations.

1.4 QUALITY ASSURANCE

- A. MPI Standards:
 - 1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.
3. Final approval of color selections will be based on benchmark samples.
 - a. If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by Architect at no added cost to Owner.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
 1. Maintain containers in clean condition, free of foreign materials and residue.
 2. Remove rags and waste from storage areas daily.

1.6 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Behr Process Corporation.
 2. Benjamin Moore & Co.
 3. California Paints.
 4. Conco Paints.
 5. Coronado Paint; Benjamin Moore Company.
 6. Diamond Vogel Paints.
 7. Dulux (formerly ICI Paints); a brand of AkzoNobel.
 8. Dunn-Edwards Corporation.
 9. Duron, Inc.
 10. Frazee Paint; Comex Group.
 11. Glidden Professional.
 12. Kelly-Moore Paint Company Inc.
 13. Kwal Paint; Comex Group.
 14. M.A.B. Paints.
 15. Parker Paint; Comex Group.

16. PPG Architectural Finishes, Inc.
17. Pratt & Lambert.
18. Rodda Paint Co.
19. Rust-Oleum Corporation; a subsidiary of RPM International, Inc.
20. Sherwin-Williams Company (The).

2.2 PAINT, GENERAL

- A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."
- B. Material Compatibility:
 1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
- C. Colors: As selected by Architect from manufacturer's full range

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 1. Concrete: 12 percent.
- C. Exterior Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- D. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
- E. Proceed with coating application only after unsatisfactory conditions have been corrected.
 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.
- F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
 - 3. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
 - 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 - 5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.

- B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
 - 1. Contractor shall touch up and restore painted surfaces damaged by testing.
 - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 EXTERIOR PAINTING SCHEDULE

- A. Concrete Substrates, Non-traffic Surfaces:
 - 1. Basis of Design: Subject to compliance with requirements, provide the following products or equivalent product from acceptable manufacturers listed.
 - a. Primer: Sherwin Williams, Kem Cati-coat HS Epoxy Filler/Sealer or other primer recommended by manufacturer.
 - b. Topcoat: Sherwin Williams, Acrolon 218 HS in color to match column collar

HILLSBOROUGH COUNTY AVIATION AUTHORITY PROJECT SPECIFICATION

B. Steel Substrates:

1. Basis of Design: Subject to compliance with requirements, provide the following products or equivalent product from acceptable manufacturers listed.
 - a. Full Primer / All surfaces: Sherwin Williams "Macropoxy 646" @ 2.5-3.5 mils DFT.
 - b. Finish Coat: Sherwin Williams "Acrolon 218 H.S." @ 2.0-3.0 mils DFT.

END OF SECTION 099113

SECTION 099120 - PAVEMENT MARKING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Contract Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections apply to this Section.

1.2 SUMMARY

- A. This Section includes surface preparation and application of paint systems for the high build, two coat systems for the items of types, patterns, sizes, and colors described in this article.
- B. Provide the following systems as shown on Drawings:
 - 1. Parking Stall Stripes.
 - 2. Traffic Arrows, crosswalks, accessible stall access aisles, walkways, symbols, stop bars, words and other markings.
 - 3. International Symbol of Accessibility.
- C. Provide painting of curbs and curb ramps as described in the following paragraphs:
 - 1. Paint vertical surface and the first 6 in. of the abutting horizontal surface at the top of all curbs and islands (including PARCS equipment islands) within parking facility except those which do not exceed 3'0" in width and abut a wall, spandrel panel, bumper wall guardrail or other construction (not including landscaping or equipment) which prevents passage of pedestrians.
 - 2. In parking areas and/or at streets and sidewalks within the project limits or constructed as part of this project, paint curb ramps (including flares), curb returns at curb ramps and any projecting elements at edges of accessible ramps without handrails. Paint curb returns at driveways and paint curb minimum of 3 ft either side of curb ramp or driveway, (or curb ramp flare length, whichever is greater) in accordance with Pavement Marking.
 - 3. Paint color for curbs and curb ramps shall be yellow.
- D. Proportion International Symbol of Accessibility in accordance with ICC A117.1-2009 Accessible and Usable Buildings or 2010 ADA Standards for Accessible Design.
- E. Related Work:
 - 1. Pavement Marking Contractor shall verify compatibility with sealers, joint sealants, caulking and all other surface treatments as specified in Division 07.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Provide product data as follows:
 - 1. Manufacturer's certification that the material complies with standards referenced within this Section.
 - 2. Intended paint use.
 - 3. Pigment type and content.
 - 4. Vehicle type and content.
- C. Submit list of similar projects (minimum of 5) where pavement-marking paint has been in use for a period of not less than 2 yrs.

1.4 PROJECT CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 degrees F.
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces.

1.5 QUALITY ASSURANCE

- A. Provide written 1 year warranty to Owner that pavement markings will be free of defects due to workmanship, inadequate surface preparation, and materials including, but not limited to, fading and/or loss of markings due to abrasion, peeling, bubbling and/or delamination. Excessive delamination, peeling, bubbling or abrasion loss shall be defined as more than 15% loss of marking material within one year of substantial completion and/or occupancy of the parking area. With no additional cost to Owner, repair and/or recoat all pavement marking where defects develop or appear during warranty period and all damage to other Work due to such defects.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Pavement marking materials shall meet Federal, State and Local environmental standards.
- B. Paint shall be manufactured and formulated from first grade raw materials and shall be free from defects or imperfections that might adversely affect product serviceability.
- C. Paints shall comply with the National Organic Compound Emission Standards for Architectural Coatings, Environmental Protection Agency, 40 CFR Part 59.

- D. The product shall not contain mercury, lead, hexavalent chromium, or halogenated solvents.

2.2 PAVEMENT MARKING PAINTS:

- A. 100% acrylic waterborne - paint shall be used for white and yellow pavement markings and shall meet requirements of MPI #70.
 - 1. All products shall have performance requirements of Type I of Federal Standard TT-P-1952E.
 - 2. 100% acrylic waterborne paint for special color pavement markings (blue, green, red, black) shall meet requirements of Federal Specification TT-P-1952E. Special color marking materials shall be compatible with the white and yellow pavement markings where they are layered.

2.3 COLOR OF PAINT

- A. Color of paint, unless noted otherwise on Contract Drawings, shall be yellow and shall match federal color chip No. 33538. Color shall have daylight directional reflectance (without glass beads) of not less than 50% (relative to magnesium oxide) when tested in accordance with Federal Test Method Standard 141, Method 6121.
- B. Paint color for traffic white, where shown on Contract Drawings or specified herein, shall match federal color chip No. 37925 and daylight directional reflectance (without glass beads) shall not be less than 84% (relative to magnesium oxide) when tested in accordance with Federal Test Method Standard 141, Method 6121.
- C. Paint color for blue accessible parking space pavement markings, if shown on Contract Drawings, shall match federal color chip No. 35180. Color shall have daylight directional reflectance (without glass beads) of not less than 52% (relative to magnesium oxide) when tested in accordance with Federal Test Method Standard 141, Method 6121.

2.4 BEADS

- A. Use Glass Beads (Spheres) in all pavement markings except stall striping lines. Conform to Federal Specification TT-B-1325D, Type I. Broadcast beads into markings at rate not less than 6 lbs. per gallon of paint.

2.5 SILICA SAND

- A. Silica Sand, where used, shall be foundry grade silica sand composed of at least 99.5 percent silicon dioxide when tested in accordance with ASTM C 146. The gradation of silica sand shall meet the paint manufacturer's recommendation. Sand shall broadcast into markings at rate not less than 6 lbs per gallon of paint.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- C. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 - 1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.
- D. Striping shall not be placed until full cure of concrete slab and sealer. Concrete surfaces generally require 30 to 90 days @ 70°F or higher. Sealers (other than silane) generally require 14 days @ 70°F or higher. Silane sealers require 24 hrs @ 70°F or higher. Bituminous surfaces generally require 30 days @ 45° F or higher.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.
- B. Do not paint or finish any surface that is wet or damp.
- C. Clean substrates of substances that could impair bond of paints, including dirt, dust, oil, grease, and incompatible paints and encapsulants.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Lay out all striping on each tier, using dimensions and details shown on Contract Drawings, before painting that tier. Report any discrepancies, interferences or changes in striping due to field conditions to Engineer/Architect prior to painting. Pavement Marking Contractor shall be required to remove paint, repair surface treatment and repaint stripes not applied in strict accordance with Contract Drawings.
- F. Work Areas:
 - 1. Store, mix and prepare paints only in areas designated by Contractor for that purpose.
 - 2. Provide clean cans and buckets required for mixing paints and for receiving rags and other waste materials associated with painting. Clean buckets regularly. At close of each day's Work, remove used rags and other waste materials associated with painting.

3. Take precautions to prevent fire in or around painting materials. Provide and maintain appropriate hand fire extinguisher near paint storage and mixing area.

G. Mixing:

1. Do not intermix materials of different character or different manufacturer.
2. Do not thin material except as recommended by manufacturer.

H. Disposal:

1. Contractor shall properly dispose of unused materials and containers in compliance with Federal Resource Conservation Recovery Act (RCRA) of 1976 as amended, and all other applicable laws and regulations.

3.3 APPLICATION

- A. Apply paint in 2-coat system; first coat shall be 50% of total 15 wet mil minimum thickness, not to exceed 8 mils. First coat shall be cured prior to installation of second coat. At Contractor's option, one coat may be applied before substantial completion, with a second coat delayed for 3-6 months until weather conditions are appropriate and the concrete has cured sufficiently for proper adhesion.
1. Two coat system total wet mil thickness of 0.015 in (0.381 mm).
 2. Two coat system total wet mil thickness of 0.018 to 0.025 in (0.457 – 0.635 mm) When Type IVA beads are used.
 3. Two coat system total wet mil thickness of 0.015 to 0.018 in (0.381 – 0.457 mm) When Type IVB beads are used.
- B. Apply painting and finishing materials in accordance with manufacturer's directions. Use applications and techniques best suited for material and surfaces to which applied. Minimum air shall be used to prevent overspray. Temperature during application shall be minimum of 40° F and rising, unless manufacturer requires higher minimum temperature. Maximum relative humidity shall be as required by manufacturer.
- C. Application of beads and/or silica sand shall coincide with application of paint, but shall be done as separate operation by a suitable dispenser. Sand may be premixed with paint for application to curbs only. Glass beads and silica sand shall adhere to the cured paint or all marking operations shall cease until corrections are made.
- D. All lines shall be straight, true, and sharp without fuzzy edges, overspray or non-uniform application. Corners shall be at right angles, unless shown otherwise, with no overlaps. Line width shall be uniform (-0%, +5% from specified width). No excessive humping (more material in middle than at edges or vice versa).

END OF SECTION 099120

PAGE BLANK INTENTIONALLY



AVIATION AUTHORITY APPLICATION FOR PAYMENT

APPLICATION No.: _____ for the period ending: _____

HCAA PROJECT No.: _____

PROJECT DESCRIPTION: _____

CONTRACT TYPE: Design-Bid Design-Build Const Mgmt.

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.

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:	<u>#DIV/0!</u>	\$	-
CURRENT RETAINAGE AMOUNT:	<u>#DIV/0!</u>	\$	-
TOTAL EARNED LESS RETAINAGE		\$	-
LESS PREVIOUS CERTIFICATES FOR PAYMENT		\$	-
CURRENT PAYMENT DUE:		\$	-

CONTRACTOR/DESIGN BUILDER/CONSTR. MGR.

By _____ Date _____

State of _____ County of _____

Subscribed and sworn to/before me this _____ day of _____ year

Notary Public: _____

My commission expires: _____

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 under this contract.

ACKNOWLEDGED:

HCAA Construction Project Manager	Date
_____	_____
Director of Construction	Date
_____	_____
Jeff Siddle, P.E.	Date
Assistant Vice President of Planning & Development	_____

APPROVED FOR PAYMENT:

By: Al Illustrato	Date
Vice President of Facilities and Administration	_____

Tampa International Airport

CONSTRUCTION PLANS
FOR

SHORT TERM PARKING GARAGE LEVEL 8 REHABILITATION

H.C.A.A. PROJECT No. 6120 17



HILLSBOROUGH COUNTY AVIATION AUTHORITY

BOARD MEMBERS

ROBERT I. WATKINS - CHAIRMAN
GARY W. HARROD - VICE CHAIRMAN
BRIG. GENERAL CHIP DIEHL - TREASURER
HILLSBOROUGH COUNTY COMMISSIONER VICTOR D. CRIST - SECRETARY
CITY OF TAMPA MAYOR BOB BUCKHORN - ASST. SECRETARY/TREASURER

CHIEF EXECUTIVE OFFICER
JOSEPH W. LOPANO

CONFORMED DRAWINGS

OCTOBER 9, 2017

WALKER PROJECT No. 15-2100.13

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 _____



WALKER
RESTORATION CONSULTANTS
4904 Eisenhower Boulevard
Suite 150
Tampa, FL 33634
Ph. 813.888.5800
BE-0003840



SUBMITTED _____ DATE _____

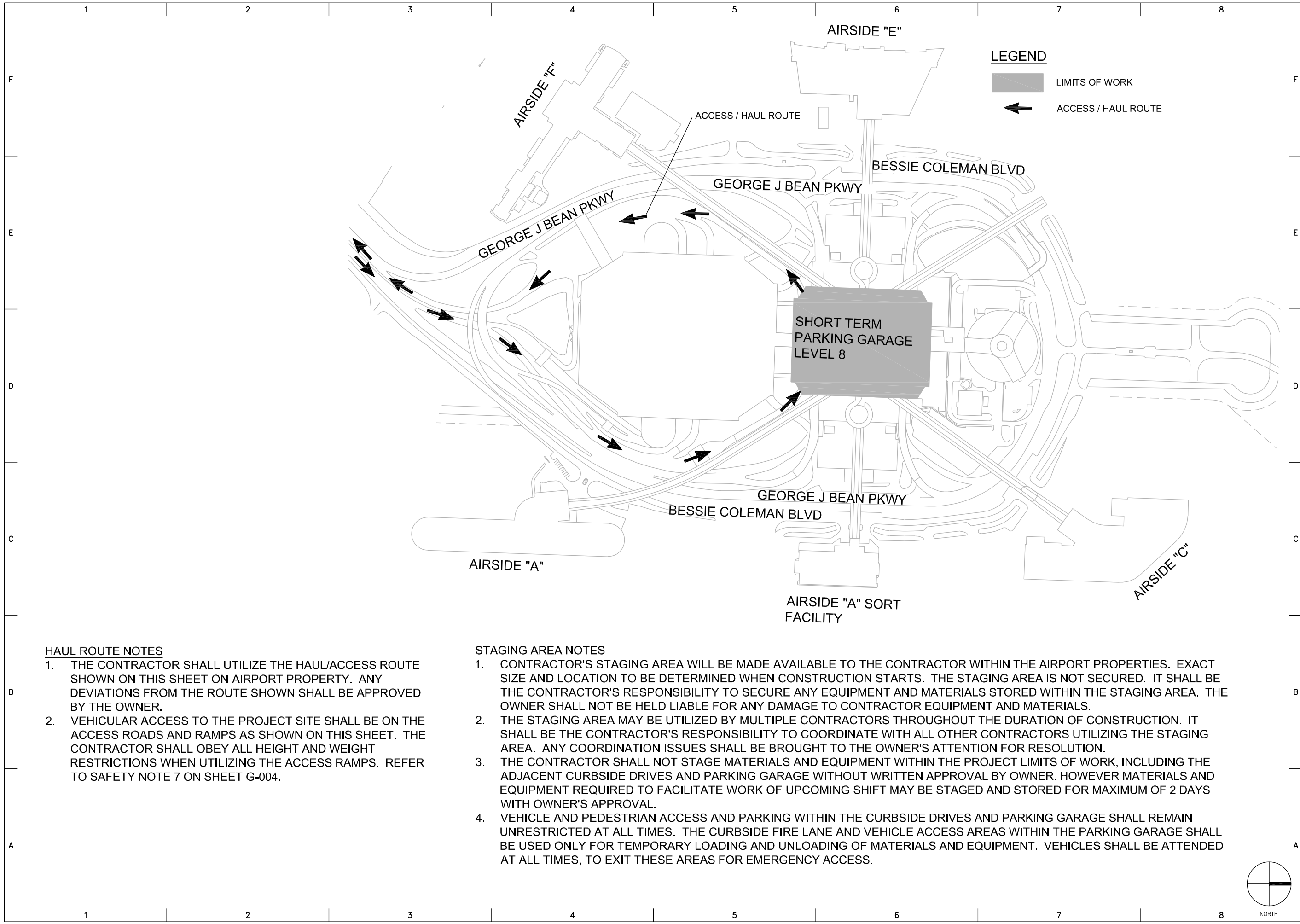
P.E. No. _____

	1	2	3	4	5	6	7	8
F								
E								
D								
C								
B								
A								

PROJECT DRAWING LIST

- COVER SHEET
- G-001 DRAWING INDEX
- G-002 HAULING PLAN & STAGING PLAN
- G-003 PHASING PLAN & SECURITY/SAFETY NOTES (01)
- G-004 PHASING PLAN & SECURITY/SAFETY NOTES (02)
- G-005 STPG LEVEL 8 GENERAL PHASING PLAN
- R-001 RESTORATION GENERAL NOTES, LEGEND & ABBREVIATIONS
- R-100 WORK ITEM SCHEDULE (STPG LEVEL 8)
- R-101.01 PARTIAL STPG LEVEL 8 REPAIR FLOOR PLAN (01)
- R-101.02 PARTIAL STPG LEVEL 8 REPAIR FLOOR PLAN (02)
- R-101.03 PARTIAL STPG LEVEL 8 REPAIR FLOOR PLAN (03)
- R-101.04 PARTIAL STPG LEVEL 8 REPAIR FLOOR PLAN (04)
- R-102.01 PARTIAL STPG LEVEL 8 REFLECTED CEILING REPAIR PLAN (01)
- R-102.02 PARTIAL STPG LEVEL 8 REFLECTED CEILING REPAIR PLAN (02)
- R-102.03 PARTIAL STPG LEVEL 8 REFLECTED CEILING REPAIR PLAN (03)
- R-102.04 PARTIAL STPG LEVEL 8 REFLECTED CEILING REPAIR PLAN (04)
- R-103.01 PARTIAL STPG LEVEL 8 RESTRIPIPING PLAN (01)
- R-103.02 PARTIAL STPG LEVEL 8 RESTRIPIPING PLAN (02)
- R-103.03 PARTIAL STPG LEVEL 8 RESTRIPIPING PLAN (03)
- R-103.04 PARTIAL STPG LEVEL 8 RESTRIPIPING PLAN (04)
- R-104.01 PARTIAL STPG LEVEL 8 NUMBERING PLAN (01)
- R-104.02 PARTIAL STPG LEVEL 8 NUMBERING PLAN (02)
- R-104.03 PARTIAL STPG LEVEL 8 NUMBERING PLAN (03)
- R-104.04 PARTIAL STPG LEVEL 8 NUMBERING PLAN (03)
- R-105.01 PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-1)
- R-105.02 PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-2)
- R-105.03 PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-3)
- R-105.04 PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-4)
- R-105.05 PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN S/E CORES
- R-109.01 STRIPING DETAILS (01)
- R-109.02 STRIPING DETAILS (02)
- R-109.03 STRIPING DETAILS (03)
- R-109.04 STRIPING DETAILS (04)
- R-501 WORK ITEM DETAILS (01)
- R-502 WORK ITEM DETAILS (02)
- R-503 WORK ITEM DETAILS (03)
- R-504 WORK ITEM DETAILS (04)
- R-505 WORK ITEM DETAILS (05)
- R-506 WORK ITEM DETAILS (06)
- R-507 WORK ITEM DETAILS (07)
- R-508 WORK ITEM DETAILS (08)
- R-509 WORK ITEM DETAILS (09)
- R-510 WORK ITEM DETAILS (10)
- R-601 REPAIR PHOTOS (01)
- R-602 REPAIR PHOTOS (02)
- R-603 REPAIR PHOTOS (03)
- R-604 REPAIR PHOTOS (04)

AUTH.								
	BY							
REVISIONS								
	DATE							
F								
								
C	PROJECT NAME: SHORT TERM GARAGE LEVEL 8 REHABILITATION TAMPA INTERNATIONAL AIRPORT, TAMPA, FL							
	F.A.A. NO. _____ N/A HCAA NO. 6120 17 JOB NO. 15-2100.13 DESIGN: BKP DRAWN: MCB CHECKED: BKP FILE NAME: _____ SCALE: N.T.S. DATE: 08/09/17 SHEET TITLE: DRAWING INDEX							
A	<h1 style="text-align: center;">G-001</h1>							



LEGEND

■ LIMITS OF WORK

← ACCESS / HAUL ROUTE

HAUL ROUTE NOTES

1. THE CONTRACTOR SHALL UTILIZE THE HAUL/ACCESS ROUTE SHOWN ON THIS SHEET ON AIRPORT PROPERTY. ANY DEVIATIONS FROM THE ROUTE SHOWN SHALL BE APPROVED BY THE OWNER.
2. VEHICULAR ACCESS TO THE PROJECT SITE SHALL BE ON THE ACCESS ROADS AND RAMPS AS SHOWN ON THIS SHEET. THE CONTRACTOR SHALL OBEY ALL HEIGHT AND WEIGHT RESTRICTIONS WHEN UTILIZING THE ACCESS RAMPS. REFER TO SAFETY NOTE 7 ON SHEET G-004.

STAGING AREA NOTES

1. CONTRACTOR'S STAGING AREA WILL BE MADE AVAILABLE TO THE CONTRACTOR WITHIN THE AIRPORT PROPERTIES. EXACT SIZE AND LOCATION TO BE DETERMINED WHEN CONSTRUCTION STARTS. THE STAGING AREA IS NOT SECURED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE ANY EQUIPMENT AND MATERIALS STORED WITHIN THE STAGING AREA. THE OWNER SHALL NOT BE HELD LIABLE FOR ANY DAMAGE TO CONTRACTOR EQUIPMENT AND MATERIALS.
2. THE STAGING AREA MAY BE UTILIZED BY MULTIPLE CONTRACTORS THROUGHOUT THE DURATION OF CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH ALL OTHER CONTRACTORS UTILIZING THE STAGING AREA. ANY COORDINATION ISSUES SHALL BE BROUGHT TO THE OWNER'S ATTENTION FOR RESOLUTION.
3. THE CONTRACTOR SHALL NOT STAGE MATERIALS AND EQUIPMENT WITHIN THE PROJECT LIMITS OF WORK, INCLUDING THE ADJACENT CURBSIDE DRIVES AND PARKING GARAGE WITHOUT WRITTEN APPROVAL BY OWNER. HOWEVER MATERIALS AND EQUIPMENT REQUIRED TO FACILITATE WORK OF UPCOMING SHIFT MAY BE STAGED AND STORED FOR MAXIMUM OF 2 DAYS WITH OWNER'S APPROVAL.
4. VEHICLE AND PEDESTRIAN ACCESS AND PARKING WITHIN THE CURBSIDE DRIVES AND PARKING GARAGE SHALL REMAIN UNRESTRICTED AT ALL TIMES. THE CURBSIDE FIRE LANE AND VEHICLE ACCESS AREAS WITHIN THE PARKING GARAGE SHALL BE USED ONLY FOR TEMPORARY LOADING AND UNLOADING OF MATERIALS AND EQUIPMENT. VEHICLES SHALL BE ATTENDED AT ALL TIMES, TO EXIT THESE AREAS FOR EMERGENCY ACCESS.

DATE	REVISIONS	BY	AUTH.

WALKER
 RESTORATION CONSULTANTS
 4904 Eisenhower Boulevard
 Suite 150
 Tampa, FL 33634
 Ph. 813.886.5900
 BE-0003640



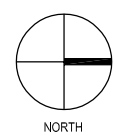
PROJECT NAME
SHORT TERM GARAGE LEVEL 8 REHABILITATION

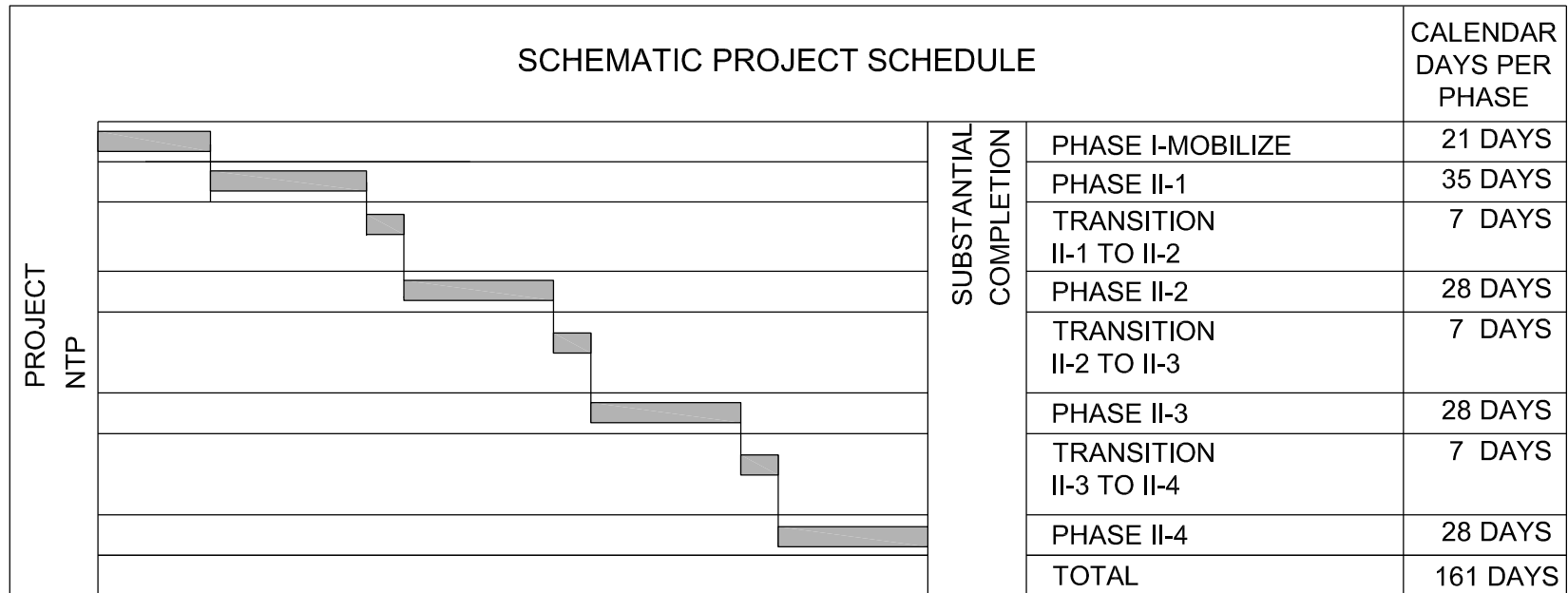
TAMPA INTERNATIONAL AIRPORT, TAMPA, FL

F.A.A. NO.	N/A
HCAA NO.	6120 17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17

SHEET TITLE
HAULING PLAN & STAGING PLAN

G-002





PHASING PLAN:

CONTRACTOR SHALL BE PROVIDED 2 PARKING PASSES THAT ALLOW FREE ACCESS INTO THE GARAGES FOR CONSTRUCTION VEHICLES (NO PERSONAL VEHICLES ALLOWED). CONSTRUCTION VEHICLES SHALL PARK WITHIN THE CONFINES OF CURRENT AREA UNDER CONSTRUCTION. SHOULD VEHICLES OCCUPY SPACES OUTSIDE THE CONFINES OF WORK THEY SHALL PAY THE PREVAILING RATE.

PHASE I: MOBILIZATION:

1. MOBILIZATION PERIOD IS SET TO ALLOW ALL SUBMITTAL AND SAMPLE APPROVALS, SETUP OF CONSTRUCTION STAGING AREAS AND TEMPORARY FACILITIES. DURING THIS PERIOD, MOCK-UPS FOR SURFACE PREPARATION AND TRAFFIC TOPPING VEHICLE (W.I. 16.1) SHALL BE COMPLETED. MOCK-UPS SHALL REMAIN IN PLACE TO SERVE AS A BENCHMARK FOR ACCEPTANCE OF WORK.

PHASE II: SHORT TERM LEVEL 8

1. REFER TO DRAWING G-005 FOR SCHEMATIC PHASING PLAN.
2. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE AREA OF TRAFFIC TOPPING THAT CAN BE APPLIED AT ONE TIME WHILE PREVENTING PASSAGE OF ODORS INTO PUBLIC SPACES OF THE MAIN TERMINAL BUILDING. CONTRACTOR SHALL ARRANGE SEAMS IN TRAFFIC TOPPING BETWEEN APPLICATIONS TO MINIMIZE SEAMS IN DRIVE BAYS. OWNER TO APPROVE FINAL PHASING OF TRAFFIC TOPPING APPLICATION. REFER TO ODOR MANAGEMENT PLAN REQUIREMENTS; GENERAL NOTE 7 ON G-004 .
3. EXPANSION JOINT REPLACEMENT SHALL BE PHASED TO ALLOW REPLACEMENT OF THE JOINT IN THE LARGEST POSSIBLE LENGTHS. FOR JOINT PREPARATION AND REPLACEMENT THAT REQUIRES CLOSURE OF PARKING OR DRIVE LANES ON PARKING LEVEL 8, CONTRACTOR TO COORDINATE WITH THE AIRPORT AUTHORITY.
4. WORK ON THE UNDERSIDE OF LEVEL 8 (LEVEL 7) TO BE COMPLETED ACCORDING TO PHASING PLAN. ALL WORK TO THE UNDERSIDE OF LEVEL 8 TO BE COMPLETED PRIOR TO TRAFFIC TOPPING APPLICATION.



BY									
REVISIONS									
DATE									
<p>WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 PH: 813.886.5800 EE-0003840</p>									
<p>Tampa International Airport</p>									
<p>PROJECT NAME: SHORT TERM GARAGE LEVEL 8 REHABILITATION TAMPA INTERNATIONAL AIRPORT, TAMPA, FL</p>									
<p>F.A.A. NO. _____ N/A HCAA NO. 6120 17 JOB NO. 15-2100.13 DESIGN _____ BKP DRAWN _____ MCB CHECKED _____ BKP FILE NAME _____ SCALE: _____ N.T.S. DATE: 08/09/17</p>									
<p>SHEET TITLE PHASING PLAN & SECURITY / SAFETY NOTES (1)</p>									
<p>G-003</p>									

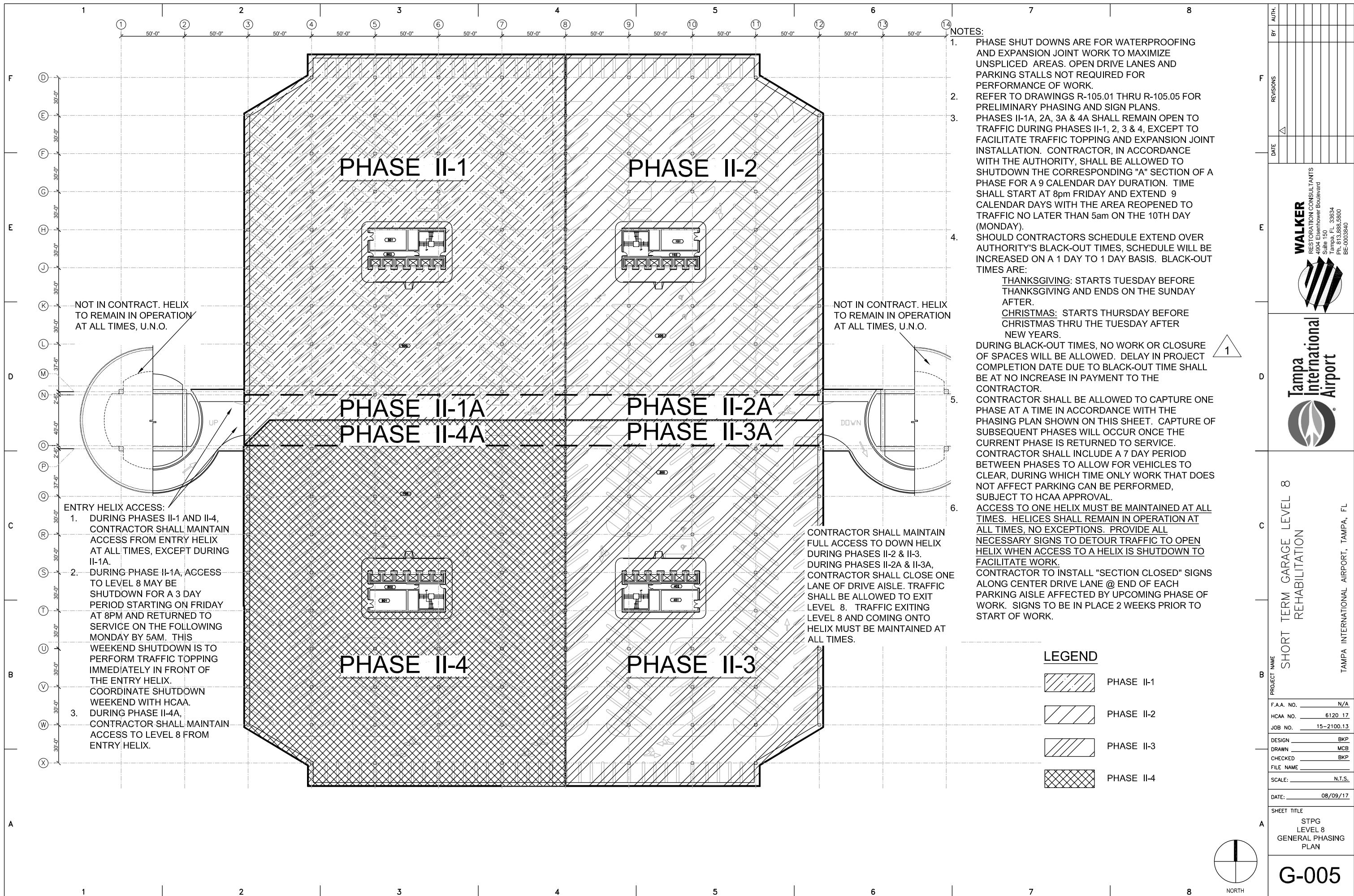
user downes m:\aureen\drawing\name\13-2100-13-G-003-004.dwg Plot Date: Aug 01, 2017 - 9:52am - 15-2100-13-G-002-003-004.dwg

user: maureen_wrawing; name: \\10-z-lu01-13-mw-3170-13-rehab\maureen\p03-002-004.dwg; Plot Date: Oct 09, 2017 - 10:31am - 15-2100-13-G-002-003-004.dwg

	1	2	3	4	5	6	7	8
F	GENERAL PHASING NOTES							
	<p>1. ALL EXISTING DIMENSIONS, MEASUREMENTS, AND FEATURES SHOWN ON THE PLANS ARE APPROXIMATE, OBTAINED FROM THE BEST INFORMATION AVAILABLE, AND SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DISCREPANCIES FOUND SHALL BE REPORTED TO THE OWNER.</p> <p>2. CONTRACTOR STAGING AREA LIMITS: THE MATERIAL STORAGE AREA, EQUIPMENT STORAGE AREA, PARKING AREA, AND OTHER AREAS DEFINED AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION SHALL BE DEMARCATED. THE CONTRACTOR SHALL PROVIDE FENCING, MARKING, AND/OR WARNING DEVICES AS NECESSARY, THAT ARE VISIBLE DURING DAY AND NIGHT.</p> <p>3. ALL RUBBISH AND DEBRIS RESULTING FROM WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR ON A CONTINUOUS BASIS.</p> <p>4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ALL DAMAGE TO ROADWAYS, AIRPORT PROPERTY, AND PRIVATE PROPERTY CAUSED BY THEM OR THEIR SUBCONTRACTOR'S FORCES.</p> <p>5. THE CONTRACTOR SHALL PAY CLOSE ATTENTION TO THE SAFETY AND PHASING PLANS AND THE AIRPORT SAFETY REQUIREMENTS SECTION OF THE SPECIFICATIONS. THESE PLANS SHALL BE STRICTLY ENFORCED.</p> <p>6. IF POLICE ARE REQUIRED FOR LANE CLOSURES, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COST AND THE THE AIRPORT POLICE SHALL BE USED.</p> <p>7. CONTRACTOR SHALL SUBMIT A DUST CONTROL & ODOR MANAGEMENT PLAN THAT OUTLINES PROCEDURES TO BE USED TO MANAGE DUST, ODOR AND FUMES DURING CONSTRUCTION TO PREVENT PENETRATION INTO STAIR TOWERS, ELEVATOR SHAFTS, MAIN TERMINAL AREAS & ADJACENT PARKING AREAS OPEN TO THE PUBLIC. CONTRACTOR SHALL NOT PROCEED WITH WORK UNTIL PLAN HAS BEEN APPROVED. AT A MINIMUM, THE DUST CONTROL & ODOR MANAGEMENT PLAN SHALL IDENTIFY:</p> <p>A. CONTRACTOR SHALL PROVIDE, AT A MINIMUM, FULL HEIGHT PLASTIC SHEETING SECURED TOP AND BOTTOM BETWEEN OPEN AREAS OF THE GARAGE LEVEL AND WORK ZONE. SHEETING SHALL BE SEALED ALONG EDGES AND SPLICES SUFFICIENT TO PREVENT DUST ESCAPING AND LIMIT ODOR TRANSMISSION FROM WORK ZONE. SHEETING SHALL BE ANCHORED SUFFICIENTLY TO WITHSTAND WIND PRESSURES. SIGNAGE TO BE PROVIDED ON THE PUBLIC SIDE OF ALL DOORS FROM THE LEVEL. REFER TO SCHEMATIC PHASING AND SIGNAGE PLANS ON DRAWING SERIES R-105.01 THRU R-105.05.</p> <p>B. CONTRACTOR SHALL EQUIP TOOLS AND EQUIPMENT WITH DUST SHROUDS, VACUUM FITTINGS, ETC. WHENEVER POSSIBLE TO REDUCE AIRBORNE DUST GENERATION.</p> <p>C. AUTHORITY MAY STOP WORK UNTIL DUST OR ODOR CONTROL MEASURES ARE REPAIRED SHOULD DUST OR ODOR ESCAPE WORK ZONE SUFFICIENT TO NECESSITATE CLEANING OF VEHICLES OR IMPACT AIRPORT OPERATIONS. CONTRACTOR SHALL PAY FOR ALL CAR WASHES, DETAILING, ETC. ASSOCIATED WITH UNCONTROLLED DUST. NO ADDITIONAL SCHEDULE IMPACT WILL BE AUTHORIZED DUE TO WORK STOPPAGES RELATED TO A FAILURE BY THE CONTRACTOR TO MAINTAIN PROPER DUST OR ODOR CONTROL MEASURES.</p>		<p>D. FANS (QUANTITY, LOCATION, VOLUME OF AIR MOVED) AND OTHER EQUIPMENT NEEDED FOR ODOR CONTROL.</p> <p>E. CONTRACTOR TO PERFORM A SURVEY OF THE GARAGE LEVELS IMPACTED AND EXTERIOR TO IDENTIFY THE LOCATION OF ALL INTAKES, EXHAUSTS, OPENINGS AND PENETRATIONS. NOTE SOME INTAKES FOR THE MAIN TERMINAL BUILDING ARE LOCATED ALONG THE PERIMETER OF THE BUILDING. COORDINATE SHUTDOWN OF ANY INTAKES THAT MAY NEED TO BE SHUTDOWN WITH OWNER AT LEAST 7 DAYS IN ADVANCE OF SCHEDULED WORK.</p> <p>F. SCHEDULE A MEETING WITH THE OWNER TO REVIEW MANAGEMENT PROCEDURES AND TO IDENTIFY ALL POTENTIAL PATHS FOR DUST & ODOR INTRUSION. OWNER MAY REQUIRE MOCK-UPS OF PARTITIONS PRIOR TO THE START OF WORK.</p> <p>8. DURING EXPANSION JOINT REPLACEMENT, CONTRACTOR SHALL COVER OPEN EXPANSION JOINTS WHEN RESTORATION WORK IS NOT ONGOING. COVERS SHALL BE WATER TIGHT SO AS TO PROTECT THE LEVELS BELOW FROM FLOODING DUE TO RAIN.</p>		<p>5. THERE SHALL BE NO PERMANENT WASTE SITES ON AIRPORT PROPERTY. ANY TEMPORARY WASTE AREA WILL BE APPROVED BY OWNER AND SHALL BE KEPT IN A NEAT CONDITION. OWNER MAY DIRECT THE CONTRACTOR TO REMOVE WASTE IF NOT PROPERLY MAINTAINED.</p> <p>6. SAFETY AND PROGRESS MEETINGS SHALL BE HELD AS NEEDED BETWEEN THE OWNER AND THE CONTRACTOR'S PROJECT MANAGER TO DISCUSS REQUIREMENTS FOR THE WORK PERIOD.</p> <p>7. CONTRACTOR SHALL LIMIT EQUIPMENT TO VEHICLES LESS THAN 8'-0" IN HEIGHT WITH AXLE LOADS OF LESS THAN 4,000 LBS AND TOTAL VEHICLE LOADS OF 8,000 LBS. STOCK PILING OF MATERIALS SHALL BE LIMITED TO 50 LBS PER SQUARE FOOT.</p> <p>A. CONTRACTOR TO SUBMIT A FORMAL SHOP DWG INCLUDING THE FOLLOWING: TRUCK CUT SHEETS, EQUIPMENT CUT SHEETS AND ANTICIPATED MAXIMUM MATERIAL LOADS. VEHICLE AND EQUIPMENT CUT SHEETS TO INCLUDE WEIGHTS.</p> <p>B. CONTRACTOR TO PROVIDE A MINIMUM ONE WEEK NOTICE PRIOR TO EACH DELIVERY TO THE AUTHORITY. ADDITIONALLY, DELIVERIES SHALL BE INCLUDED IN THE CONTRACTORS TWO WEEK LOOK AHEAD SCHEDULE AT EACH OAC MEETING.</p> <p>C. CONTRACTOR TO MAINTAIN A LOG OF EACH DELIVERY INCLUDING THE FOLLOWING INFORMATION: DATE, TIME, WEIGHT AND CONTENTS OF DELIVERY.</p>		<p>8. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY AT ALL TIMES AND WILL CONFORM TO ALL OSHA, FAA, AND ALL OTHER FEDERAL, STATE, AND LOCAL SAFETY REGULATIONS.</p> <p>9. NO EQUIPMENT OR MATERIALS SHALL BE LEFT UNATTENDED AT THE AIRPORT UNLESS WITHIN DESIGNATED STAGING AREAS OR UNLESS THE CONTRACTOR RECEIVES PRIOR WRITTEN APPROVAL FROM THE OWNER.</p> <p>10. THE CONTRACTOR SHALL TAKE NECESSARY ACTION AT ALL TIMES TO PROTECT THE PUBLIC, AND MAINTAIN VEHICULAR PARKING AND TRAFFIC.</p>	
E								
D	SAFETY NOTES							
C	<p>1. THE CONTRACTOR SHALL ACQUAINT HIS SUPERVISORS AND EMPLOYEES WITH THE AIRPORT ACTIVITY AND OPERATIONS THAT ARE INHERENT TO THIS ACTIVE AIR CARRIER AIRPORT AND SHALL CONDUCT THE CONSTRUCTION ACTIVITIES TO CONFORM TO ALL ROUTINE AND EMERGENCY AIR TRAFFIC REQUIREMENTS AND GUIDELINES ON SAFETY AS SPECIFIED IN THE CONTRACT DOCUMENTS.</p> <p>2. ALL CONTRACTOR VEHICLES SHALL HAVE THE COMPANY NAME PROMINENTLY DISPLAYED ON BOTH SIDES OF VEHICLE.</p> <p>3. DEBRIS, WASTE AND LOOSE MATERIAL CAPABLE OF BLOWING ONTO AIRFIELD AREAS OR ONTO PARKED VEHICLES SHALL BE PROPERLY CONTAINED AND REMOVED FROM SITE ON A DAILY BASIS.</p> <p>4. THE EMERGENCY NUMBER TO CALL FOR ANY INCIDENT ON THE PROJECT OR AIRPORT SHALL BE 911, AND THE SITE IS TAMPA INTERNATIONAL AIRPORT, UNLESS OTHERWISE NOTIFIED BY THE OWNER.</p>							
B								
A								

1

BY									
DATE									
REVISIONS									
AUTH.									
 <p>WALKER RESTORATION CONSULTANTS 4904 Ehrenpower Boulevard Suite 150 33624 Tampa, FL 33624 Ph: 813.888.5800 EE-0003840</p>									
 <p>Tampa International Airport</p>									
<p>PROJECT NAME SHORT TERM GARAGE LEVEL 8 REHABILITATION</p> <p>TAMPA INTERNATIONAL AIRPORT, TAMPA, FL</p>									
<p>F.A.A. NO. _____ N/A</p> <p>HCAA NO. _____ 6120 17</p> <p>JOB NO. _____ 15-2100.13</p> <p>DESIGN _____ BKP</p> <p>DRAWN _____ MCB</p> <p>CHECKED _____ BKP</p> <p>FILE NAME _____</p> <p>SCALE: _____ N.T.S.</p> <p>DATE: _____ 08/09/17</p>									
<p>SHEET TITLE</p> <p>PHASING PLAN & SECURITY / SAFETY NOTES (2)</p>									
<p>G-004</p>									



NOTES:

- PHASE SHUT DOWNS ARE FOR WATERPROOFING AND EXPANSION JOINT WORK TO MAXIMIZE UNSPLICED AREAS. OPEN DRIVE LANES AND PARKING STALLS NOT REQUIRED FOR PERFORMANCE OF WORK.
- REFER TO DRAWINGS R-105.01 THRU R-105.05 FOR PRELIMINARY PHASING AND SIGN PLANS.
- PHASES II-1A, 2A, 3A & 4A SHALL REMAIN OPEN TO TRAFFIC DURING PHASES II-1, 2, 3 & 4, EXCEPT TO FACILITATE TRAFFIC TOPPING AND EXPANSION JOINT INSTALLATION. CONTRACTOR, IN ACCORDANCE WITH THE AUTHORITY, SHALL BE ALLOWED TO SHUTDOWN THE CORRESPONDING "A" SECTION OF A PHASE FOR A 9 CALENDAR DAY DURATION. TIME SHALL START AT 8pm FRIDAY AND EXTEND 9 CALENDAR DAYS WITH THE AREA REOPENED TO TRAFFIC NO LATER THAN 5am ON THE 10TH DAY (MONDAY).
- SHOULD CONTRACTORS SCHEDULE EXTEND OVER AUTHORITY'S BLACK-OUT TIMES, SCHEDULE WILL BE INCREASED ON A 1 DAY TO 1 DAY BASIS. BLACK-OUT TIMES ARE:
 THANKSGIVING: STARTS TUESDAY BEFORE THANKSGIVING AND ENDS ON THE SUNDAY AFTER.
 CHRISTMAS: STARTS THURSDAY BEFORE CHRISTMAS THRU THE TUESDAY AFTER NEW YEARS.

DURING BLACK-OUT TIMES, NO WORK OR CLOSURE OF SPACES WILL BE ALLOWED. DELAY IN PROJECT COMPLETION DATE DUE TO BLACK-OUT TIME SHALL BE AT NO INCREASE IN PAYMENT TO THE CONTRACTOR.

CONTRACTOR SHALL BE ALLOWED TO CAPTURE ONE PHASE AT A TIME IN ACCORDANCE WITH THE PHASING PLAN SHOWN ON THIS SHEET. CAPTURE OF SUBSEQUENT PHASES WILL OCCUR ONCE THE CURRENT PHASE IS RETURNED TO SERVICE. CONTRACTOR SHALL INCLUDE A 7 DAY PERIOD BETWEEN PHASES TO ALLOW FOR VEHICLES TO CLEAR, DURING WHICH TIME ONLY WORK THAT DOES NOT AFFECT PARKING CAN BE PERFORMED, SUBJECT TO HCAA APPROVAL.

ACCESS TO ONE HELIX MUST BE MAINTAINED AT ALL TIMES. HELICES SHALL REMAIN IN OPERATION AT ALL TIMES, NO EXCEPTIONS. PROVIDE ALL NECESSARY SIGNS TO DETOUR TRAFFIC TO OPEN HELIX WHEN ACCESS TO A HELIX IS SHUTDOWN TO FACILITATE WORK. CONTRACTOR TO INSTALL "SECTION CLOSED" SIGNS ALONG CENTER DRIVE LANE @ END OF EACH PARKING AISLE AFFECTED BY UPCOMING PHASE OF WORK. SIGNS TO BE IN PLACE 2 WEEKS PRIOR TO START OF WORK.

LEGEND

	PHASE II-1
	PHASE II-2
	PHASE II-3
	PHASE II-4

BY		DATE	
REVISIONS			
DATE			

WALKER RESTORATION CONSULTANTS
 4904 Eisenhower Boulevard
 Suite 150
 Tampa, FL 33634
 Ph. 813.886.5900
 BE-0003640

Tampa International Airport

PROJECT NAME: SHORT TERM GARAGE LEVEL 8 REHABILITATION
 TAMPA INTERNATIONAL AIRPORT, TAMPA, FL

F.A.A. NO. N/A
 HCAA NO. 6120.17
 JOB NO. 15-2100.13

DESIGN BKP
 DRAWN MCB
 CHECKED BKP
 FILE NAME
 SCALE: N.T.S.
 DATE: 08/09/17

SHEET TITLE: STPG LEVEL 8 GENERAL PHASING PLAN

G-005

NORTH

GENERAL NOTES

A. CONSTRUCTION

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE OF FLORIDA (FBC 2014 & FEBC 2014) AND LOCAL CODES AND ORDINANCES, INCLUDING FIRE CODES.
2. ALL MATERIAL PROPERTIES SHALL BE AS NOTED IN SPECIFICATIONS.
3. PRIOR TO FABRICATION OF ANY MATERIAL OR PLACEMENT OF CONCRETE, FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS. REPORT ALL DISCREPANCIES TO THE CONSTRUCTION PROJECT MANAGER IMMEDIATELY.
4. DO NOT SCALE DRAWINGS.

B. CONSTRUCTION DOCUMENTS

1. DIMENSIONS SHOWN ON PLANS ARE BASED ON ORIGINAL CONSTRUCTION DOCUMENTS. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY ALL CONDITIONS FOR THE PURPOSE OF PREPARING THE BID AND PERFORMING THE WORK.

C. DETAILS AND SYMBOLS

1. ALL WORK ITEM REPAIR DETAILS ARE SHOWN ON DRAWINGS SERIES R-5XX.
2. DETAILS WITH A LAST DIGIT OTHER THAN 0 AND LABELED FOR CLARIFICATION ONLY, DO NOT REPRESENT A SEPARATE PRICE ITEM UNLESS IDENTIFIED ON BID SCHEDULE. THESE DETAILS SUPPLEMENT THE BASIC DETAIL TO PROVIDE ADDITIONAL INFORMATION. IN SOME CASES THESE DETAILS SHOW VARIATION OF THE TYPICAL CONDITION.
3. WHERE THE WORK ITEM BUBBLE IS NOTED "TYP." IT MEANS THE WORK ITEM OCCURS AT ALL LOCATIONS WHERE THE APPLICABLE DETERIORATION OR DESIGNATION SYMBOL OCCURS ON THAT PLAN.
4. WHERE "T.A.R." IS NOTED, IT MEANS THERE MAY BE AREAS OF THIS WORK IN ADDITION TO THE PARTICULAR DESIGNATED AREAS.
5. WHERE TWO OR MORE WORK ITEM BUBBLES ARE GROUPED TOGETHER, IT MEANS ANY OR ALL OF THE DESIGNATED WORK ITEMS MAY BE APPLICABLE. COORDINATION OF WORK ITEMS IS CONTRACTOR'S RESPONSIBILITY.
6. WHEN A WORK ITEM OR DETAIL IS LISTED AS INCIDENTAL, THAT WORK IS INCLUDED IN THE PAY UNIT OF OTHER WORK ITEMS AND DOES NOT HAVE A SEPARATE PRICE.
7. WHEN A DETAIL IS LABELED (FOR REFERENCE ONLY) IT PROVIDES INFORMATION ONLY ABOUT INCIDENTAL WORK AND DOES NOT HAVE A PAY UNIT.
8. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL EXTENT AND LOCATIONS OF REPAIR AREAS IN ACCORDANCE WITH THE SPECIFICATIONS, WORK ITEM IS SHOWN ONLY TO REPRESENT THE TYPES OF DETERIORATION.
9. SEE WORK ITEM SPECIFICATION FOR ADDITIONAL INFORMATION.

D. CONCRETE PROTECTION FOR REINFORCEMENT:

1. THE MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE PER ACI 318-11, SECTION 7.7.

E. SHORING AND BRACING

1. CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SHEETING, ETC. REQUIRED FOR SAFETY AND PROPER EXECUTION OF THE WORK.
2. CONTRACTOR IS SOLELY RESPONSIBLE TO PREPARE SHOP DRAWINGS FOR BRACING AND SHORING MEMBERS DESIGNED AND STAMPED/SEALED BY A PROFESSIONAL ENGINEER (REGISTERED IN STATE OF FLORIDA) AND SUBMIT THEM TO THE OWNER FOR RECORD PRIOR TO ANY BRACING OR SHORING INSTALLATION.

F. EXISTING SERVICES AND UTILITIES

1. CONTRACTOR SHALL REVIEW ALL EXISTING CONDITIONS TO DETERMINE ALL ELECTRICAL AND MECHANICAL SERVICES AND UTILITIES AFFECTED BY THE REPAIR WORK. MAKE NECESSARY TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SERVICES TO ALL AREAS OF THE PARKING GARAGE OR OTHER AREAS (NOT IN CONTRACT) AFFECTED BY THE WORK. THE CONTRACTOR SHALL SUBMIT THE METHODS AND SCHEDULE OF CONNECTIONS FOR THE OWNER'S APPROVAL PRIOR TO COMMENCEMENT.

G. CONSTRUCTION PHASING, SEQUENCING AND SIGNAGE

1. WORK SEQUENCE SHALL BE COORDINATED IN ACCORDANCE W/ THE SCHEMATIC PHASING AND SIGNAGE PLANS AND WITH THE OWNER.
2. OWNER WILL CONTINUE TO USE FACILITIES DURING REHABILITATION. CONTRACTOR MUST PHASE AND ARRANGE WORK SO AS TO MAINTAIN REASONABLE OPERATIONS. SEE DRAWINGS G-005 AND R-105.## SERIES FOR ADDITIONAL INFORMATION.

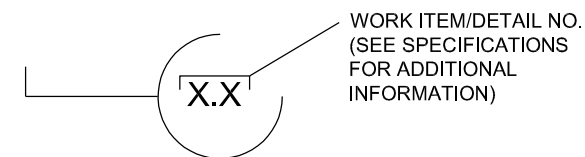
H. ESTIMATED QUANTITIES

1. QUANTITIES SHOWN ON DRAWINGS ARE ESTIMATED. CONTRACTOR TO MEASURE ACTUAL QUANTITIES PER SPECIFICATION SECTION 025140 "SURFACE PREPARATION FOR PATCHING AND OVERLAY". NOTIFY CONSTRUCTION PROJECT MANAGER OF QUANTITIES THAT EXCEED THOSE SHOWN IN BID FORM. OBTAIN WRITTEN APPROVAL FROM OWNER PRIOR TO PROCEEDING WITH WORK BEYOND THE BID QUANTITIES.

ABBREVIATIONS

APM	=	AUTOMATED PEOPLE MOVER (MONORAIL)
APP.	=	APPROXIMATE
B.O.C.	=	BOTTOM OF CURB
BOT.	=	BOTTOM
C.I.P.	=	CAST IN PLACE
C.J.	=	CONSTRUCTION JOINT/CONTROL JOINT
CLR.	=	CLEARANCE
COL.	=	COLUMN
CONC.	=	CONCRETE
DET.	=	DETAIL
EA.	=	EACH
E.J.	=	EXPANSION JOINT
EXIST.	=	EXISTING
FRP	=	FIBER REINFORCED POLYMER
L.F.	=	LINEAR FOOT
L.S.	=	LUMP SUM
MAX.	=	MAXIMUM
MIN.	=	MINIMUM
M.O.T.	=	MAINTENANCE OF TRAFFIC
N/A	=	NOT APPLICABLE
N.I.C.	=	NOT IN CONTRACT
O.C.	=	ON CENTER
O.H.	=	OPPOSITE HAND
P/C	=	PRECAST
REINF.	=	REINFORCEMENT
REQ.'D	=	REQUIRED
S.F.	=	SQUARE FOOT
SIM.	=	SIMILAR
S.O.G.	=	SLAB ON GRADE
SPEC.	=	SPECIFICATION
SUPT.	=	SUPPORTED
T.A.R.	=	TYPICAL AS REQUIRED
T.O.C.	=	TOP OF CURB
TYP.	=	TYPICAL
U.N.O.	=	UNLESS NOTED OTHERWISE
V.I.F.	=	VERIFY IN FIELD
W.I.	=	WORK ITEM
W.W.F.	=	WELDED WIRE FABRIC

GENERAL LEGEND



ALL WORK ITEM DETAILS ARE SHOWN ON SHEETS R-5XX SERIES.

WORK ITEM / DETAIL IDENTIFICATION

(NOT ALL DETAILS HAVE DETAILS, REFER TO SECTION 020010 FOR DETAILED DESCRIPTIONS OF ALL WORK ITEM SCOPE, MATERIALS, EXECUTIONS, MEASUREMENT & PAYMENT)

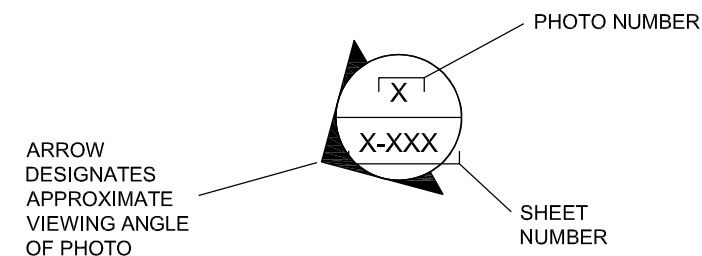


PHOTO IDENTIFICATION

(PHOTOS ARE PROVIDED TO PROVIDE TYPICAL OR NON-STANDARD CLARIFY ELEMENT OF WORK ITEMS)

AUTH.									
BY									
REVISIONS									
DATE									
F	 WALKER RESTORATION CONSULTANTS 4904 Esplanade Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5900 BE-0003840								
D	 Tampa International Airport								
C	PROJECT NAME: SHORT TERM GARAGE LEVEL 8 REHABILITATION TAMPA INTERNATIONAL AIRPORT, TAMPA, FL								
B	F.A.A. NO.	N/A							
	HCAA NO.	6120 13							
	JOB NO.	15-2100.13							
	DESIGN	BKP							
	DRAWN	MCB							
	CHECKED	BKP							
	FILE NAME								
	SCALE:	N.T.S.							
	DATE:	08/09/17							
A	SHEET TITLE RESTORATION GENERAL NOTES, LEGEND & ABBREVIATIONS								
R-001									

User: maureen, Drawing Name: \\15-2100-13-HCAA-SFPC_Level_8_Renov\Acad\Rest\15-2100-13-R-001.dwg, Plot Date: Aug 01, 2017 - 9:53am - 15-2100-13-R-001.dwg



SHORT TERM GARAGE LEVEL 8

ITEM	DESCRIPTION	UNIT	QUANTITY
PART I: GENERAL REQUIREMENTS / PRELIMINARY MATTERS			
1.0 Location			
1.1	Project Mobilization/Demobilization and Maintenance of Traffic	L.S.	1
PART II: CONCRETE FLOOR			
3.0 CONCRETE FLOOR REPAIR			
3.1	Floor Repair - Partial Depth	S.F.	626
3.3	Floor Repair - Full Depth	S.F.	400
3.4	Floor Repair - Curb	S.F.	20
4.0 CONCRETE CEILING REPAIR			
4.1	Ceiling Repair - Partial Depth	S.F.	20
5.0 CONCRETE CEILING REPAIR			
5.1	Beam/Joist Repair - Partial Depth	S.F.	10
6.0 CONCRETE COLUMN REPAIR			
6.1	Column Repair - Partial Depth	S.F.	10
7.0 CONCRETE WALL REPAIR			
7.1	Wall Repair - Partial Depth	S.F.	5
PART III: CRACKS AND JOINTS			
9.0 EXPANSION JOINT EDGE PREPARATION			
9.1	Exp Joint Preparation - New Blockout	L.F.	1,040
10.0 EXPANSION JOINT REPAIR AND REPLACEMENT			
10.3	Expansion Joint - Elastomeric Concrete Edged	L.F.	1,040
10.7	Expansion Joint - Silicone Seal - Vertical	L.F.	40
11.0 CRACK AND JOINT REPAIR			
11.1	Seal Cracks and Joints		Incidental
11.2	Repair Crack / Joint Sealant		Incidental
11.7	Cove Sealant		Incidental
13.0 EPOXY BROADCAST			
13.2	Epoxy Broadcast Crack Healer	L.S.(S.F.)	1 (118500)
16.0 TRAFFIC TOPPING			
16.1	Traffic Topping - Vehicular	L.S.(S.F.)	1 (246500)
PART IV: MISCELLANEOUS			
25.0 MECHANICAL - DRAINAGE			
25.2	Mechanical - Supplementary Floor Drains	EA.	16
25.3	Mechanical - Pipes and Hangars	L.F.	20
35.0 BRICK / MASONRY REPAIRS			
35.8	Repair Stucco Fireproofing	S.F.	20
35.9	Stucco Fireproof Enclosures	EA.	6
40.0 METALWORK			
40.1	Shear Transfer Connections	Pair of Angles	5
40.2	Repair Structural Steel Slide Bearing	EA.	6
40.2.1	Repair Structural Steel Slide Bearing - Shoring	EA. Post Shore	72
40.5	Replace Junction Box Cover	EA.	54

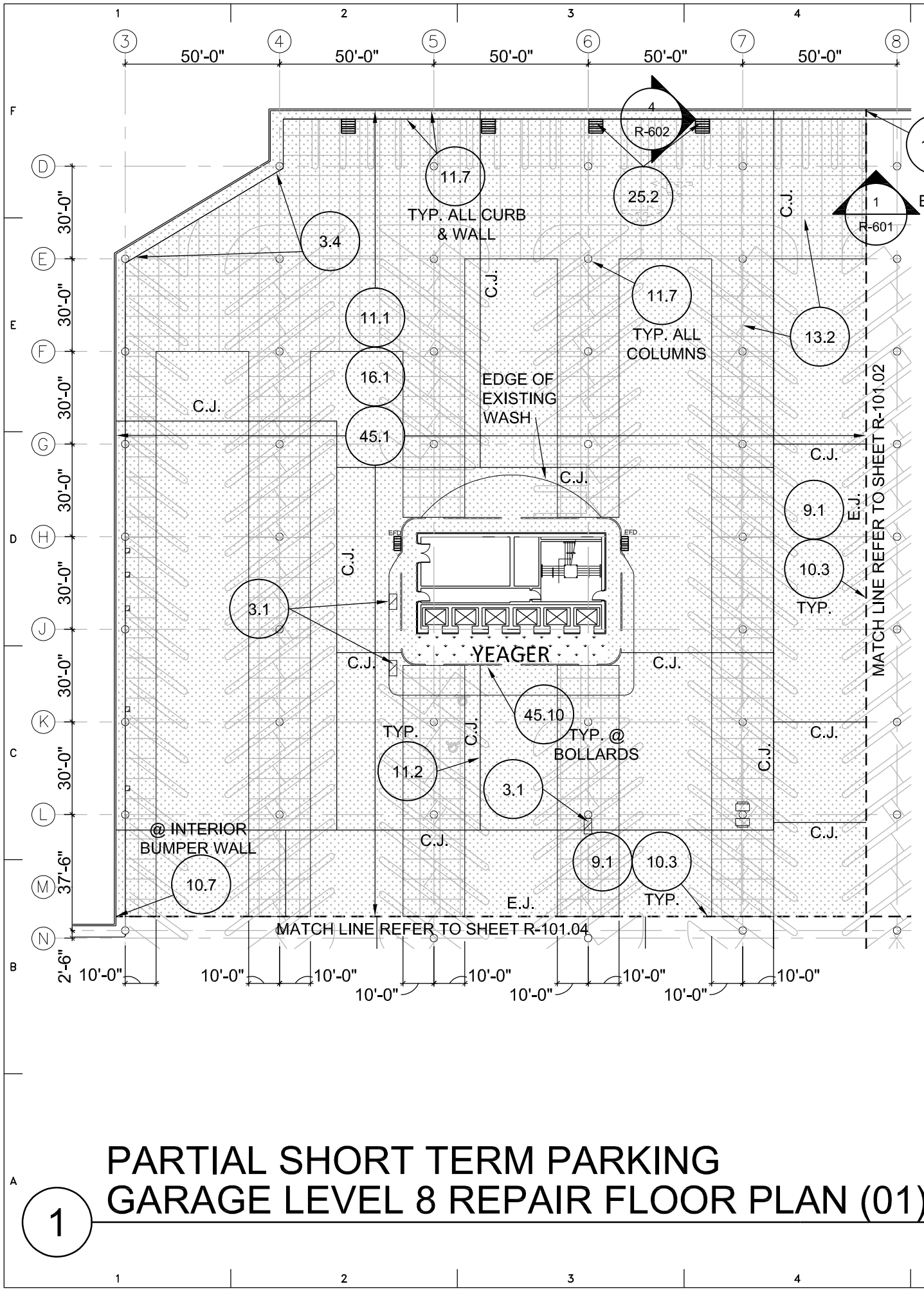
PART V: PAINTING			
45.0 PAINTING			
45.1	Paint Traffic Markings	L.S.(S.F.)	1 (246500)
45.2	Clean and Paint Concrete Columns	EA.	112
45.6	Clean and Paint Steel Bearing Assembly	EA.	6
45.8	Clean and Paint Steel Embed Plates	EA.	120
45.9	Clean and Paint Steel Column Collars	EA.	160
45.10	Clean and Paint Bollards and Baseplates	LS	1
45.11	Clean and Paint Fire Hose Boxes & Supports	EA.	32

UNIT

L.F. = Linear Foot
 S.F. = Square Foot
 EA. = Each
 L.S. (S.F. or L.F.) = Lump Sum (Approximate quantity shown for information only, Final quantity to be determined by Bidder prior to bid.)
 L.S. = Lump Sum

BY							
REVISIONS							
DATE							
 <p>WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 PH: 813.886.5900 BE-0003640</p>							
 <p>Tampa International Airport</p>							
<p>PROJECT NAME: SHORT TERM GARAGE LEVEL 8 REHABILITATION TAMPA INTERNATIONAL AIRPORT, TAMPA, FL</p>							
F.A.A. NO.	N/A						
HCAA NO.	6120 17						
JOB NO.	15-2100.13						
DESIGN	BKP						
DRAWN	MCB						
CHECKED	BKP						
FILE NAME							
SCALE:	N.T.S.						
DATE:	08/09/17						
SHEET TITLE	WORK ITEM SCHEDULE (STPG LEVEL 8)						
R-100							

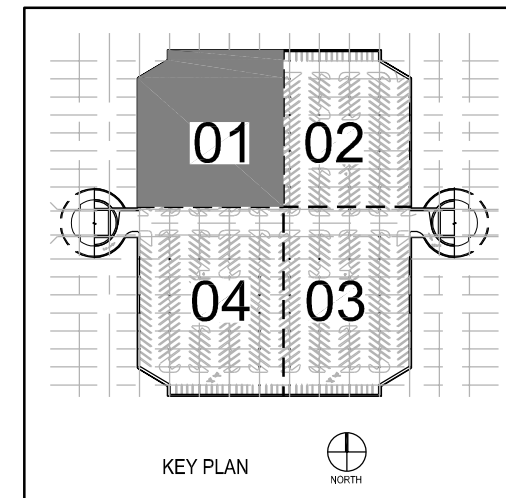
user: d:\work\15-2100-13-R101-01-02-03-04.dwg
 Plot Date: Aug 01, 2017 - 10:00am - 15-2100-13-R101-01-02-03-04.dwg



GENERAL LEGEND

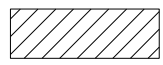


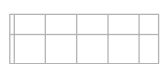


- EXPANSION JOINT (E.J.) (EXISTING) & MATCH LINE
- CONSTRUCTION JOINT (C.J.) (EXISTING)
- FLOOR SPALL OR DELAMINATION (W.I. 3.1)
- TRAFFIC TOPPING (W.I. 16.1)
- CARPET AT ELEVATORS (EXISTING) TO REMAIN
- EPOXY CRACK HEALER (W.I. 13.2)
- SUPPLEMENTAL FLOOR DRAIN (W.I. 25.2)
- E.F.D. EXISTING FLOOR DRAIN

- NOTES: (R-101.01 THRU R-101.04)
1. SEE SHEETS R-501 THRU R-510 FOR WORK ITEM DETAILS AND SPECIFICATION SECTION 020010
 2. PATCH SIZES ARE DIAGRAMMATIC & DO NOT REPRESENT ANTICIPATED SIZE. REFER TO SECTION 020010 & 025140 FOR INSPECTION PROCEDURE.
 3. CONTRACTOR TO PROVIDE PLASTIC SHEETING OR OTHER APPROVED MATERIAL AND TEMPORARILY ATTACH TO UNDERSIDE OF LEVEL 8 DURING EPOXY CRACK HEALER APPLICATION TO PROTECT VEHICLES. AUTHORITY WILL ALLOW ONLY ISOLATED SPACES ON LEVEL 7 TO BE SHUTDOWN TO FACILITATE WORK.

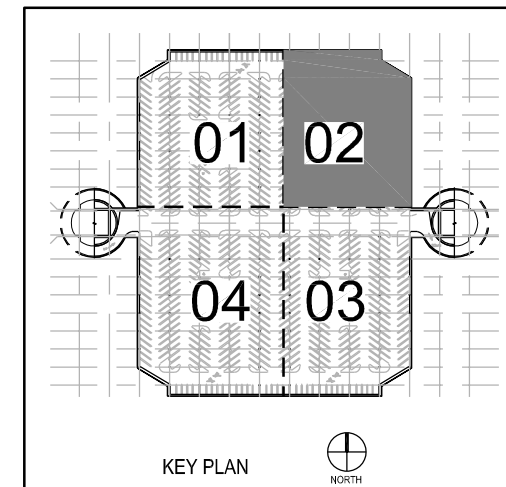




BY		AUTH.		REVISIONS		DATE	
 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 PH: 813.888.5800 BE-0003840							
 Tampa International Airport TAMPA INTERNATIONAL AIRPORT, TAMPA, FL							
PROJECT NAME SHORT TERM GARAGE LEVEL 8 REHABILITATION							
F.A.A. NO. N/A HCAA NO. 6120.17 JOB NO. 15-2100.13 DESIGN BKP DRAWN MCB CHECKED BKP FILE NAME SCALE: N.T.S. DATE: 08/09/17 SHEET TITLE PARTIAL STPG LEVEL 8 REPAIR FLOOR PLAN (01)							
R-101.01							

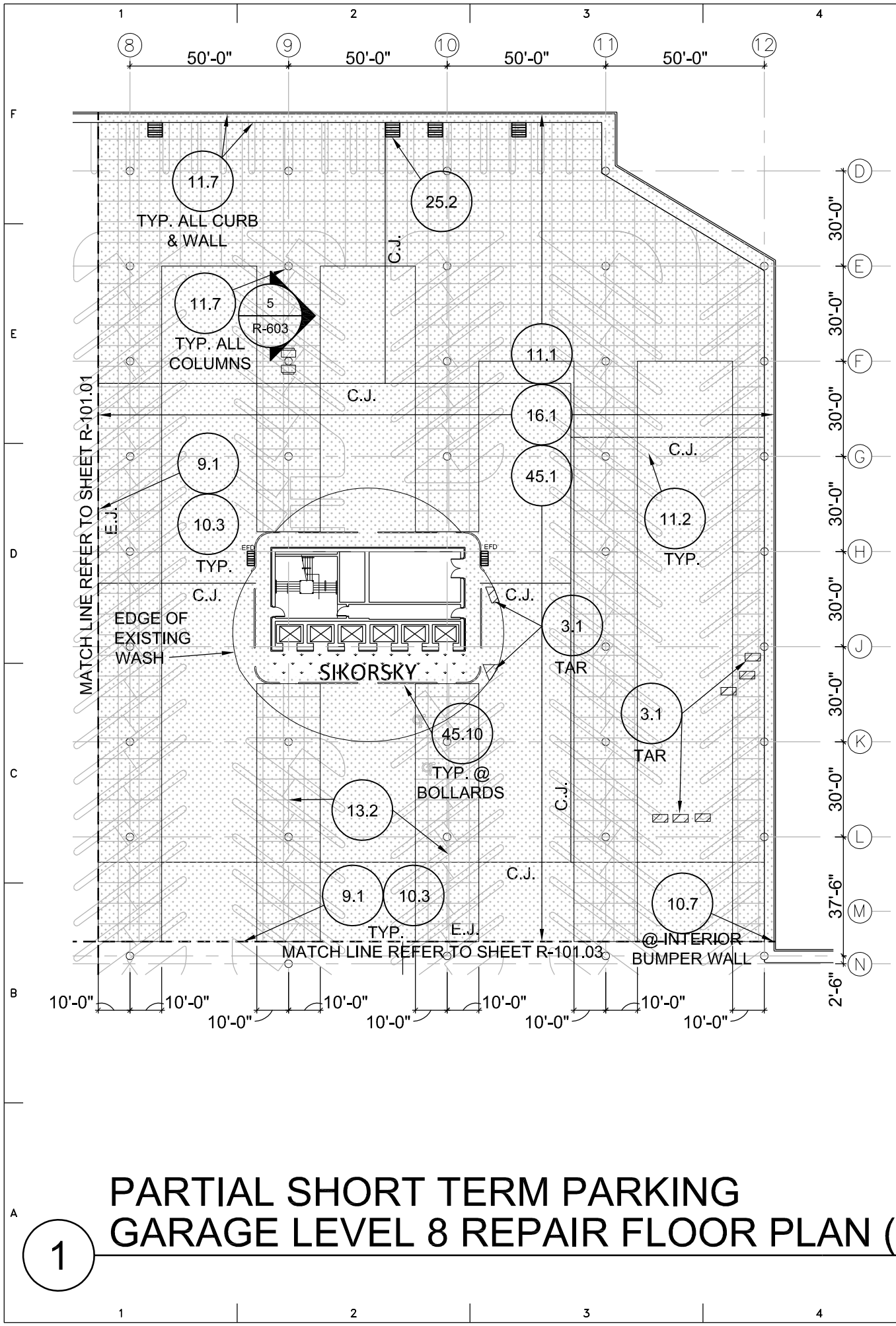
GENERAL LEGEND

- EXPANSION JOINT (E.J.) (EXISTING) & MATCH LINE
- CONSTRUCTION JOINT (C.J.) (EXISTING)
-  FLOOR SPALL OR DELAMINATION (W.I. 3.1)
-  TRAFFIC TOPPING (W.I. 16.1)
-  CARPET AT ELEVATORS (EXISTING) TO REMAIN
-  EPOXY CRACK HEALER (W.I. 13.2)
-  SUPPLEMENTAL FLOOR DRAIN (W.I. 25.2)
-  E.F.D. EXISTING FLOOR DRAIN

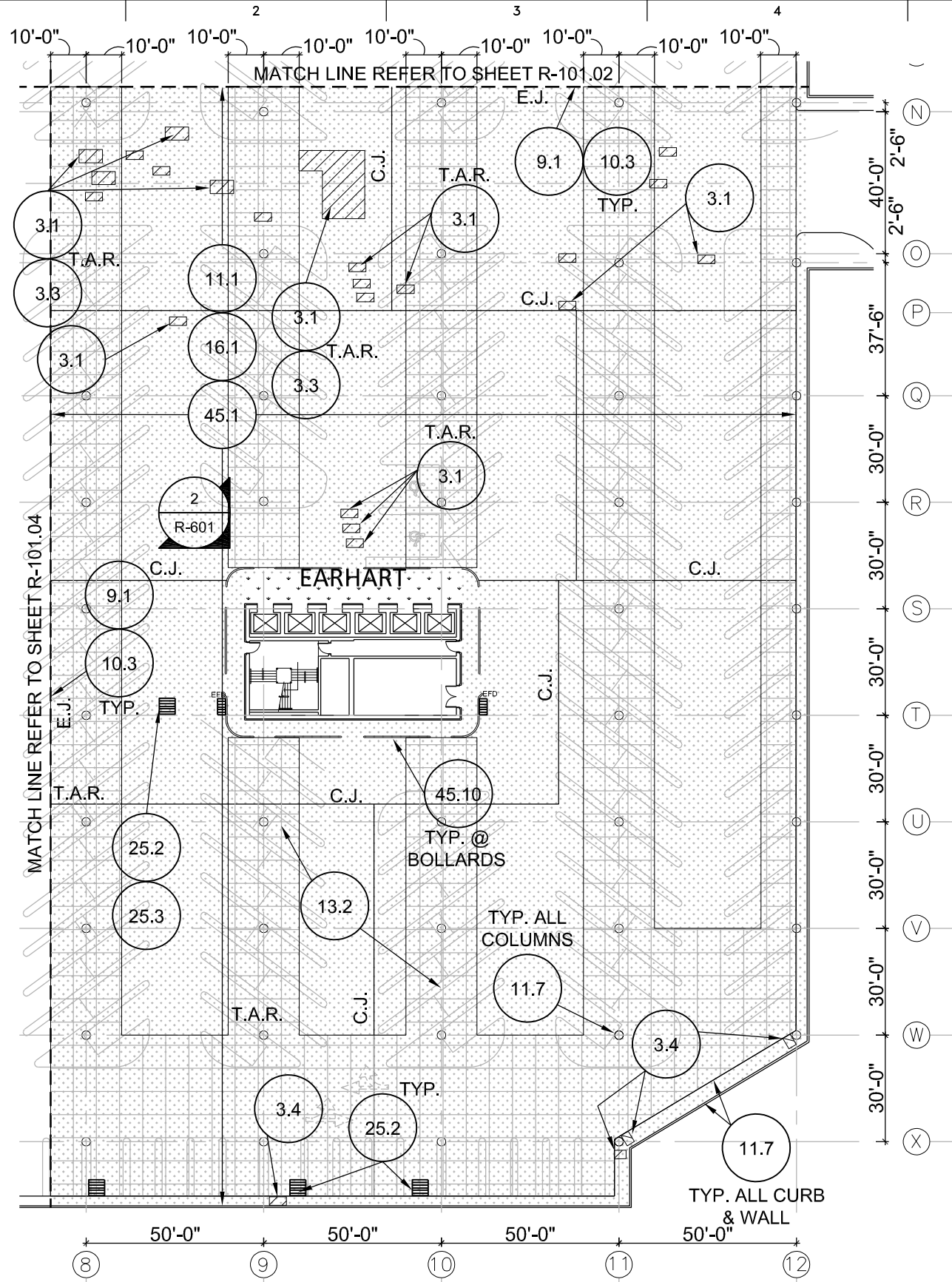
- NOTES: (R-101.01 THRU R-101.04)
1. SEE SHEETS R-501 THRU R-510 FOR WORK ITEM DETAILS AND SPECIFICATION SECTION 020010
 2. PATCH SIZES ARE DIAGRAMMATIC & DO NOT REPRESENT ANTICIPATED SIZE. REFER TO SECTION 020010 & 025140 FOR INSPECTION PROCEDURE.
 3. CONTRACTOR TO PROVIDE PLASTIC SHEETING OR OTHER APPROVED MATERIAL AND TEMPORARILY ATTACH TO UNDERSIDE OF LEVEL 8 DURING EPOXY CRACK HEALER APPLICATION TO PROTECT VEHICLES. AUTHORITY WILL ALLOW ONLY ISOLATED SPACES ON LEVEL 7 TO BE SHUTDOWN TO FACILITATE WORK.



BY		AUTH.		DATE		REVISIONS	
 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 33624 Tampa, FL 33634 Ph: 813.888.5800 BE-0003840							
 Tampa International Airport							
PROJECT NAME: SHORT TERM GARAGE LEVEL 8 REHABILITATION TAMPA INTERNATIONAL AIRPORT, TAMPA, FL							
F.A.A. NO. N/A HCAA NO. 6120.17 JOB NO. 15-2100.13 DESIGN BKP DRAWN MCB CHECKED BKP FILE NAME SCALE: N.T.S. DATE: 08/09/17 SHEET TITLE: PARTIAL STPG LEVEL 8 REPAIR FLOOR PLAN (02)							
R-101.02							



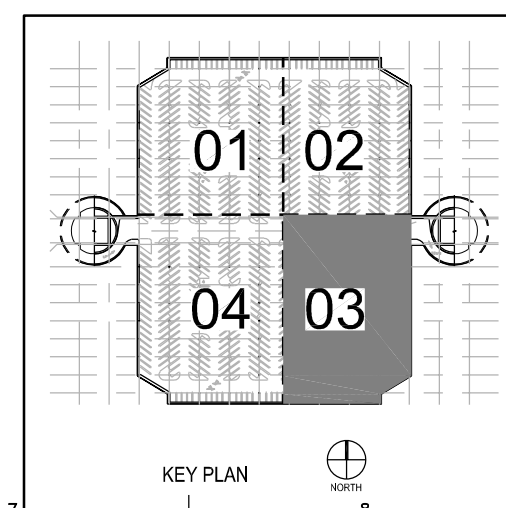
user: d:\dwg\mra\mra\working\mra\mra\15-2100-13-R101-02-03-04.dwg
 Plot Date: Aug 01, 2017 - 10:00am - 15-2100-13-R101-01-02-03-04.dwg



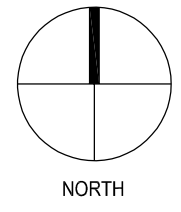
GENERAL LEGEND

- EXPANSION JOINT (E.J.) (EXISTING) & MATCH LINE
- CONSTRUCTION JOINT (C.J.) (EXISTING)
- FLOOR SPALL OR DELAMINATION (W.I. 3.1)
- TRAFFIC TOPPING (W.I. 16.1)
- CARPET AT ELEVATORS (EXISTING) TO REMAIN
- EPOXY CRACK HEALER (W.I. 13.2)
- SUPPLEMENTAL FLOOR DRAIN (W.I. 25.2)
- E.F.D. EXISTING FLOOR DRAIN

- NOTES: (R-101.01 THRU R-101.04)
- SEE SHEETS R-501 THRU R-510 FOR WORK ITEM DETAILS AND SPECIFICATION SECTION 020010
 - PATCH SIZES ARE DIAGRAMMATIC & DO NOT REPRESENT ANTICIPATED SIZE. REFER TO SECTION 020010 & 025140 FOR INSPECTION PROCEDURE.
 - CONTRACTOR TO PROVIDE PLASTIC SHEETING OR OTHER APPROVED MATERIAL AND TEMPORARILY ATTACH TO UNDERSIDE OF LEVEL 8 DURING EPOXY CRACK HEALER APPLICATION TO PROTECT VEHICLES. AUTHORITY WILL ALLOW ONLY ISOLATED SPACES ON LEVEL 7 TO BE SHUTDOWN TO FACILITATE WORK.



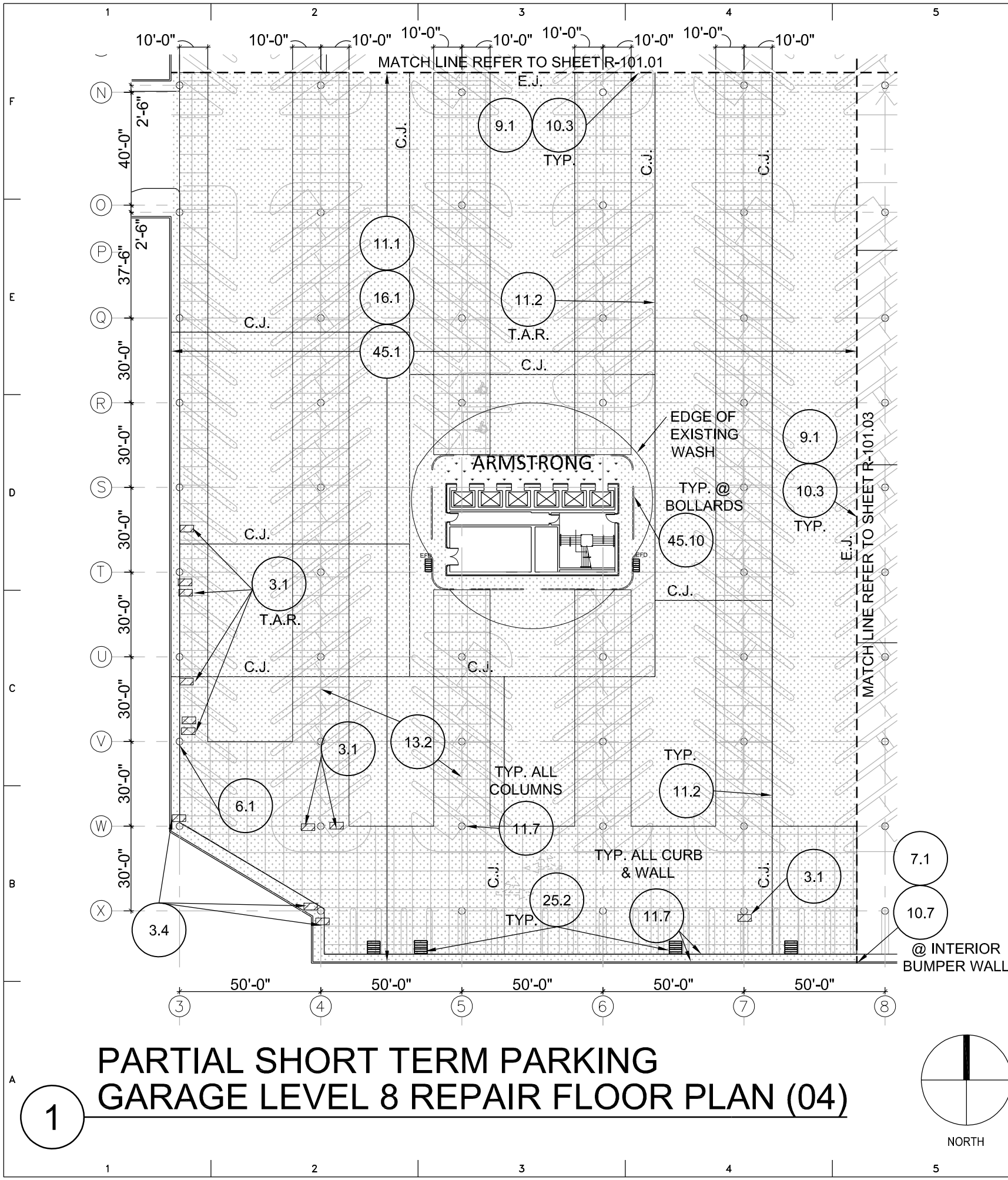
PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 REPAIR FLOOR PLAN (03)



BY	
DATE	
REVISIONS	
 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 33634 Phone: 813.888.5800 Fax: 813.888.5800 BE-0003840	
 Tampa International Airport	
PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION
F.A.A. NO.	N/A
HCAA NO.	6120 17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	PARTIAL STPG LEVEL 8 REPAIR FLOOR PLAN (03)
R-101.03	

user: d:\work\15-2100-13-01-02-03-04.dwg
 Plot Date: Aug 01, 2017 - 10:00am - 15-2100-13_R101_01-02-03-04.dwg

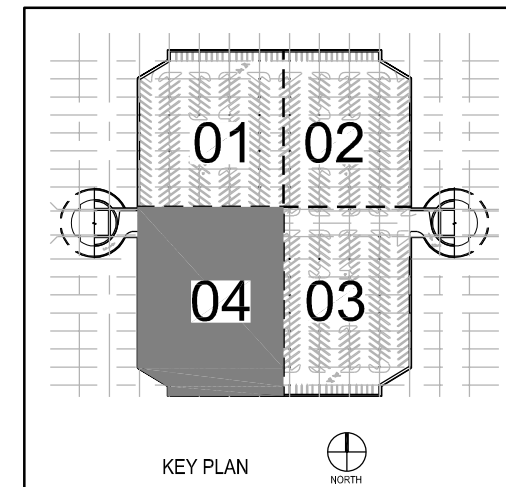
user: dms, m:\aerial\drawing\name: 15-2100-13-R101-01-02-03-04.dwg
 Plot Date: Aug 01, 2017 - 10:00am - 15-2100-13-R101-01-02-03-04.dwg



GENERAL LEGEND

- EXPANSION JOINT (E.J.) (EXISTING) & MATCH LINE
- CONSTRUCTION JOINT (C.J.) (EXISTING)
- FLOOR SPALL OR DELAMINATION (W.I. 3.1)
- TRAFFIC TOPPING (W.I. 16.1)
- CARPET AT ELEVATORS (EXISTING) TO REMAIN
- EPOXY CRACK HEALER (W.I. 13.2)
- SUPPLEMENTAL FLOOR DRAIN (W.I. 25.2)
- E.F.D. EXISTING FLOOR DRAIN

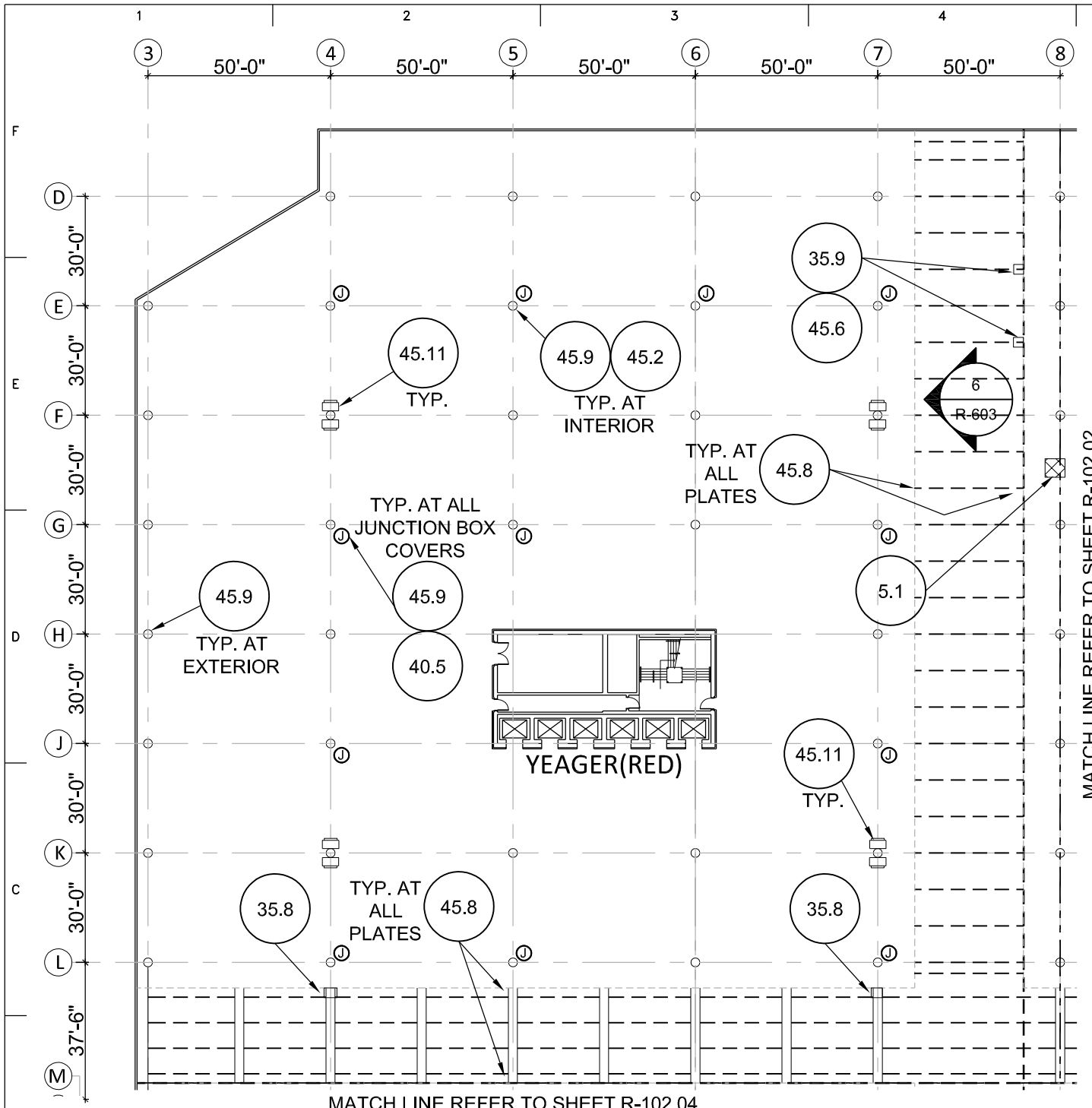
- NOTES: (R-101.01 THRU R-101.04)
- SEE SHEETS R-501 THRU R-510 FOR WORK ITEM DETAILS AND SPECIFICATION SECTION 020010
 - PATCH SIZES ARE DIAGRAMMATIC & DO NOT REPRESENT ANTICIPATED SIZE. REFER TO SECTION 020010 & 025140 FOR INSPECTION PROCEDURE.
 - CONTRACTOR TO PROVIDE PLASTIC SHEETING OR OTHER APPROVED MATERIAL AND TEMPORARILY ATTACH TO UNDERSIDE OF LEVEL 8 DURING EPOXY CRACK HEALER APPLICATION TO PROTECT VEHICLES. AUTHORITY WILL ALLOW ONLY ISOLATED SPACES ON LEVEL 7 TO BE SHUTDOWN TO FACILITATE WORK.



BY	DATE	REVISIONS

 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 33624 Tampa, FL 813.886.5800 Fax: 813.886.5800 BE-0003840
 Tampa International Airport
PROJECT NAME SHORT TERM GARAGE LEVEL 8 REHABILITATION TAMPA INTERNATIONAL AIRPORT, TAMPA, FL
F.A.A. NO. _____ N/A HCAA NO. _____ 6120 17 JOB NO. _____ 15-2100.13 DESIGN _____ BKP DRAWN _____ MCB CHECKED _____ BKP FILE NAME _____ SCALE: _____ N.T.S. DATE: _____ 08/09/17 SHEET TITLE PARTIAL STPG LEVEL 8 REPAIR FLOOR PLAN (04)
R-101.04

user: d:\dwg\mcares\15-2100-13-R102-01.dwg
 Plot Date: Aug 01, 2017 - 10:04am - 15-2100-13-R102-01-02-03-04.dwg

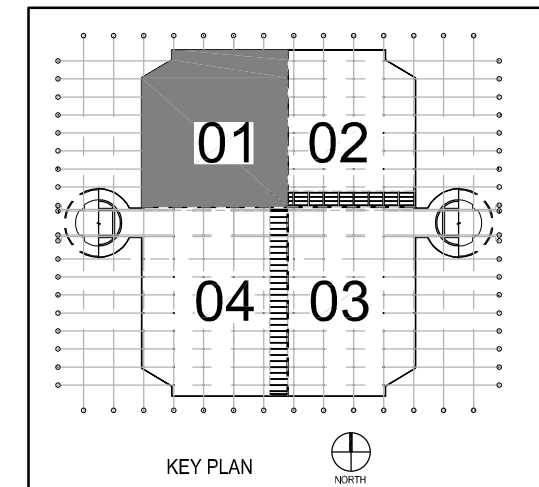


GENERAL LEGEND

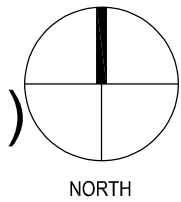
- STEEL BEAM (EXISTING)
- - - - - EXPANSION JOINT (E.J.) (EXISTING)
- · — · — MATCH LINE
- · — · — CONSTRUCTION JOINT (C.J.) (EXISTING)
- [Cross-hatch pattern] BEAM, COLUMN SPALL OR DELAMINATION (W.I. 5.1)
- [Diagonal hatch pattern] CEILING SPALL OR DELAMINATION (W.I. 4.1)
- [Square symbol] DETERIORATED FIREPROOF STUCCO ENCLOSURE TO BE REPLACED (W.I. 35.9)
- [Fire box symbol] EXISTING FIRE BOXES (W.I. 45.11)
- [Circle with dot symbol] CORRODED JUNCTION BOX COVER (W.I. 40.5)

NOTES: (R-102.01 THRU R-102.04)

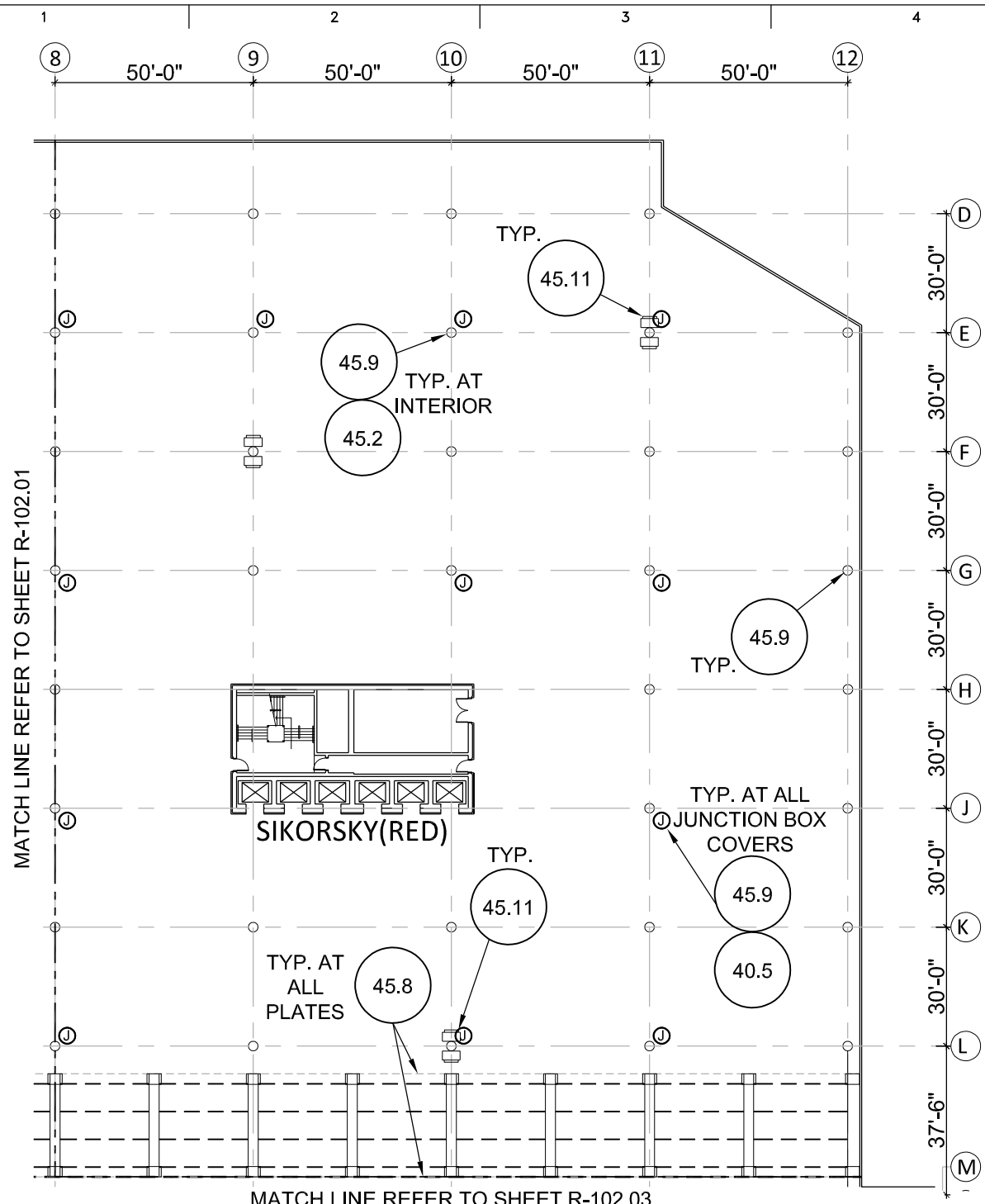
1. SEE SHEETS R-501 THRU R-510 FOR WORK ITEM DETAILS AND SPECIFICATION SECTION 020010
2. PATCH SIZES ARE DIAGRAMMATIC & DO NOT REPRESENT ANTICIPATED SIZE. REFER TO SECTION 020010 & 025140 FOR INSPECTION PROCEDURE.
3. REFLECTED CEILING PLANS SHOW ALL WORK ABOVE FLOOR LEVEL.



PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 REFLECTED CEILING REPAIR PLAN (01) UNDERSIDE OF LEVEL 9



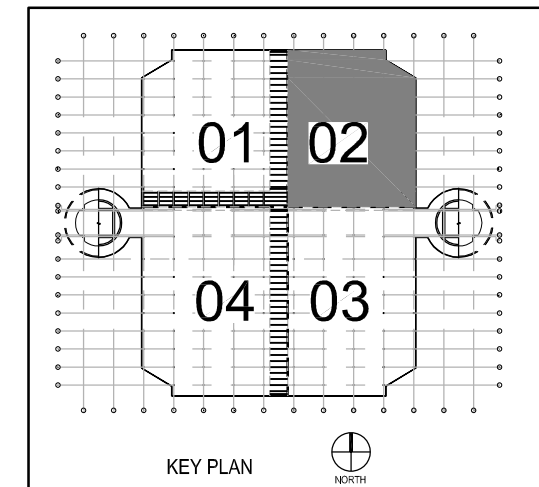
BY		AUTH.		REVISIONS		DATE	
 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 PH: 813.886.5800 BE-0003840							
 Tampa International Airport TAMPA INTERNATIONAL AIRPORT, TAMPA, FL							
PROJECT NAME: SHORT TERM GARAGE LEVEL 8 REHABILITATION							
F.A.A. NO. N/A							
HCAA NO. 6120.17							
JOB NO. 15-2100.13							
DESIGN BKP							
DRAWN MCB							
CHECKED BKP							
FILE NAME							
SCALE: N.T.S.							
DATE: 08/09/17							
SHEET TITLE: PARTIAL STPG LEVEL 8 REFLECTED CEILING REPAIR PLAN (01)							
R-102.01							



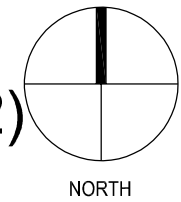
GENERAL LEGEND

- STEEL BEAM (EXISTING)
- - - - - EXPANSION JOINT (E.J.) (EXISTING)
- · - · - MATCH LINE
- CONSTRUCTION JOINT (C.J.) (EXISTING)
- BEAM, COLUMN SPALL OR DELAMINATION (W.I. 5.1)
- CEILING SPALL OR DELAMINATION (W.I. 4.1)
- DETERIORATED FIREPROOF STUCCO ENCLOSURE TO BE REPLACED (W.I. 35.9)
- EXISTING FIRE BOXES (W.I. 45.11)
- CORRODED JUNCTION BOX COVER (W.I. 40.5)

- NOTES: (R-102.01 THRU R-102.04)
- SEE SHEETS R-501 THRU R-510 FOR WORK ITEM DETAILS AND SPECIFICATION SECTION 020010
 - PATCH SIZES ARE DIAGRAMMATIC & DO NOT REPRESENT ANTICIPATED SIZE. REFER TO SECTION 020010 & 025140 FOR INSPECTION PROCEDURE.
 - REFLECTED CEILING PLANS SHOW ALL WORK ABOVE FLOOR LEVEL.



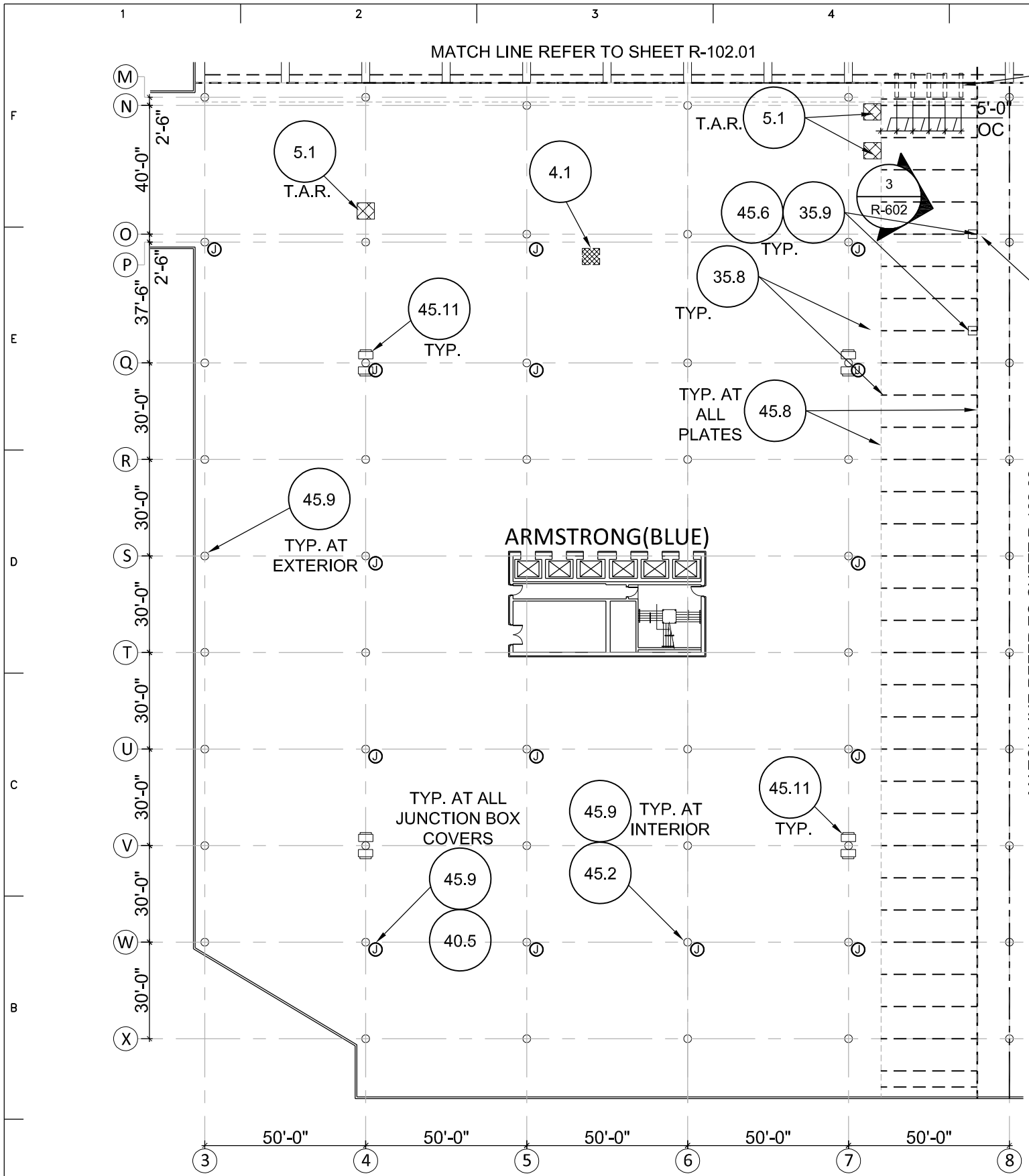
PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 REFLECTED CEILING REPAIR PLAN (02) UNDERSIDE OF LEVEL 9



BY									
REVISIONS									
DATE									
<p>WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Phone: 813.886.5800 Fax: 813.886.5800 BE-0003840</p> <p>Tampa International Airport</p> <p>PROJECT NAME: SHORT TERM GARAGE LEVEL 8 REHABILITATION TAMPA INTERNATIONAL AIRPORT, TAMPA, FL</p> <p>F.A.A. NO. N/A HCAA NO. 6120.17 JOB NO. 15-2100.13 DESIGN BKP DRAWN MCB CHECKED BKP FILE NAME SCALE: N.T.S. DATE: 08/09/17 SHEET TITLE: PARTIAL STPG LEVEL 8 REFLECTED CEILING REPAIR PLAN (02)</p> <p>R-102.02</p>									

user downes, mraureen drawing name: \\s-z\luc-13-m\m-3\p-2\level-8-rehab\ceiling-repair\02-03-04.dwg
 Plot Date: Aug 01, 2017 - 10:04am - 15-2100-13_R102_01-02-03-04.dwg

user downes, mraureen drawing name: \\s-z-lu001-10-nam\mra\mra\mra\13-R102_01-02-03-04.dwg Plot Date: Aug 01, 2017 - 10:05am - 15-2100-13_R102_01-02-03-04.dwg

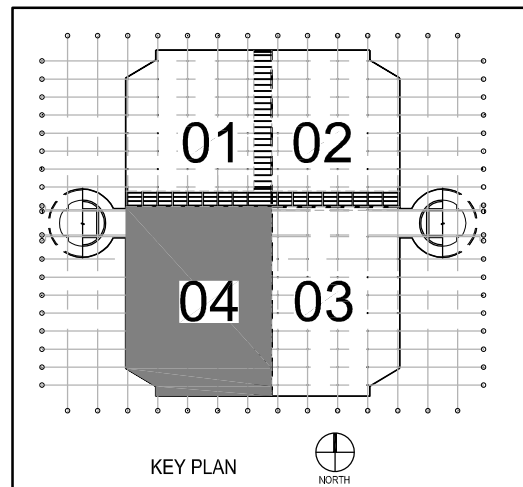


GENERAL LEGEND

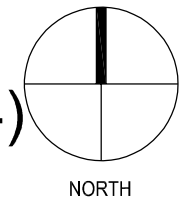
- STEEL BEAM (EXISTING)
- - - - - EXPANSION JOINT (E.J.) (EXISTING)
- MATCH LINE
- CONSTRUCTION JOINT (C.J.) (EXISTING)
- BEAM, COLUMN SPALL OR DELAMINATION (W.I. 5.1)
- CEILING SPALL OR DELAMINATION (W.I. 4.1)
- DETERIORATED FIREPROOF STUCCO ENCLOSURE TO BE REPLACED (W.I. 35.9)
- EXISTING FIRE BOXES (W.I. 45.11)
- CORRODED JUNCTION BOX COVER (W.I. 40.5)

NOTES: (R-102.01 THRU R-102.04)

1. SEE SHEETS R-501 THRU R-510 FOR WORK ITEM DETAILS AND SPECIFICATION SECTION 020010
2. PATCH SIZES ARE DIAGRAMMATIC & DO NOT REPRESENT ANTICIPATED SIZE. REFER TO SECTION 020010 & 025140 FOR INSPECTION PROCEDURE.
3. REFLECTED CEILING PLANS SHOW ALL WORK ABOVE FLOOR LEVEL.

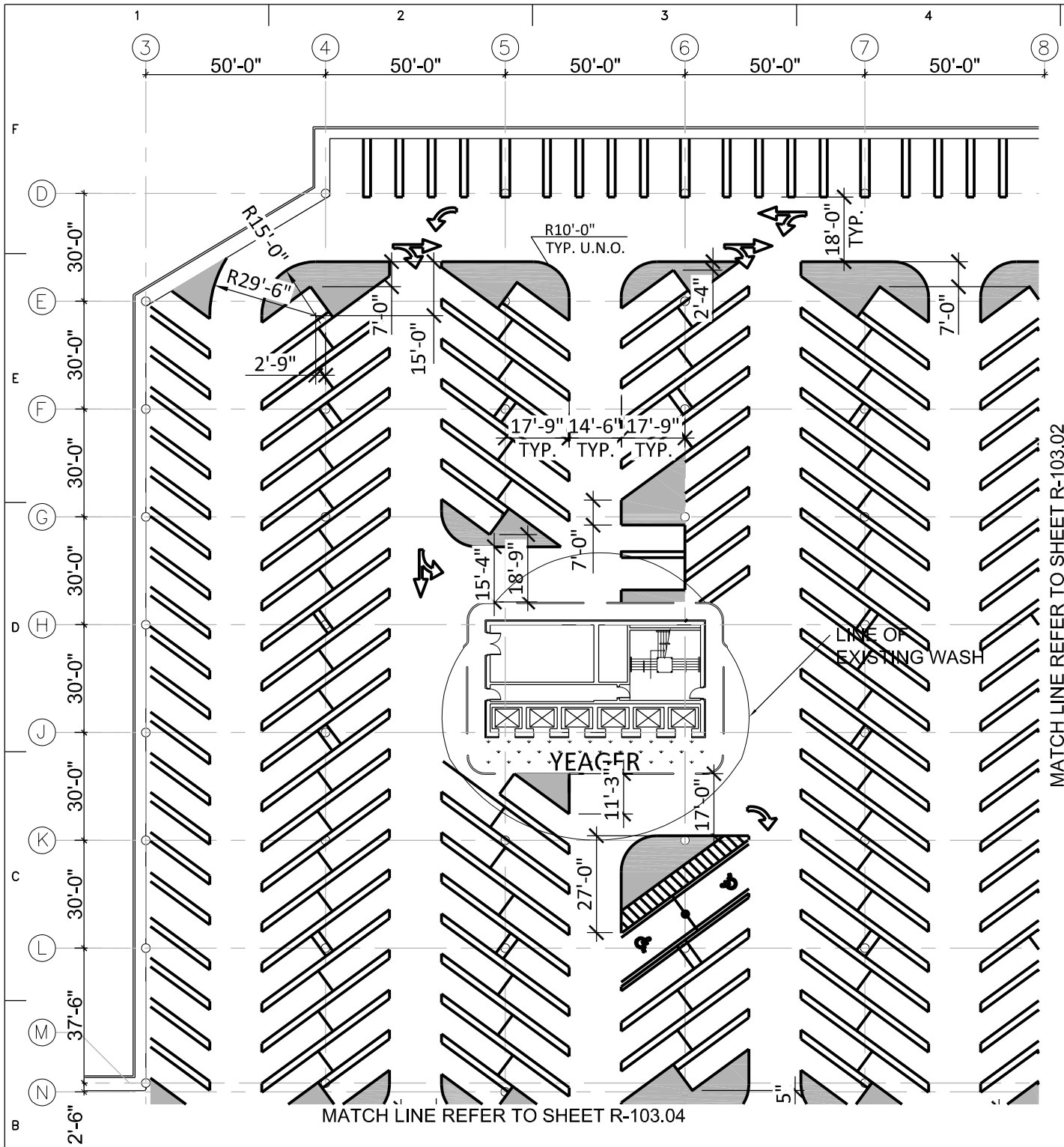


PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 REFLECTED CEILING REPAIR PLAN (04) UNDERSIDE OF LEVEL 9



BY	
REVISIONS	
DATE	
<p>WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 33624 PH: 813.886.5800 EE-0003840</p>	
<p>Tampa International Airport TAMPA INTERNATIONAL AIRPORT, TAMPA, FL</p>	
PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION
F.A.A. NO.	N/A
HCAA NO.	6120 17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	PARTIAL STPG LEVEL 8 REFLECTED CEILING REPAIR PLAN (04)
R-102.04	

PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 RE-STRIPING PLAN (01)

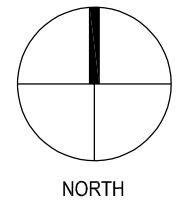
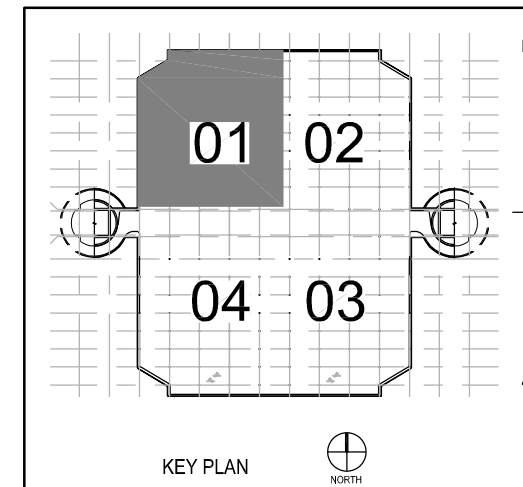


RE-STRIPING PARKING SPACE TABULATION

LEVEL 8	STANDARD	ACCESSIBLE	TOTAL
EXISTING STRIPING	677	8	685
PROPOSED STRIPING	670	8	678
	-7	0	-7

NOTES: (R-103.01 THRU R-103.04)

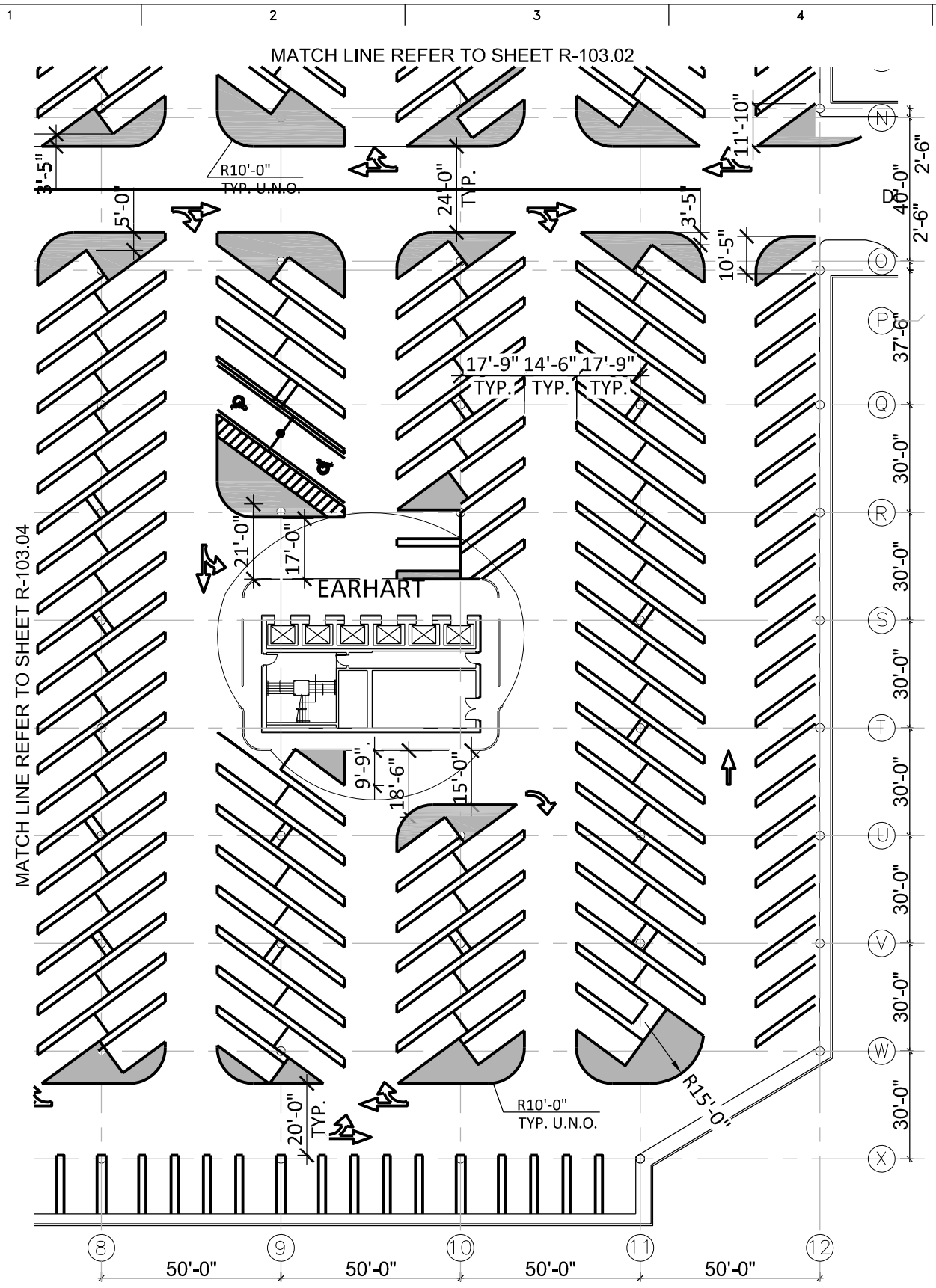
- RE-STRIPING LEVEL 8 PER W.I. 45.1. DIMENSIONS SHOWN ON PLANS ARE TYPICAL, U.N.O.
- SEE SHEETS R-109.01 THRU R-109.04 FOR TYPICAL STRIPING DETAILS.
- SEE DETAIL 9/R-109.04 FOR TYPICAL CURB DETAIL.
- CLOSURE AREA AT EACH END OF STRIPING TO BE PAINTED SOLID YELLOW.
- INDICATES AN ADA POLE MOUNTED SIGN, SEE DETAILS 10 & 11/R-109.04 FOR ADA STALL SIGN. MOUNT SIGN ON COLUMN WHEN POSSIBLE. SIGNAGE AND POST ARE INCIDENTAL TO W.I. 45.1.
- REFER TO SHEETS R-104.01 THRU R-104.04 FOR STALL NUMBERING.



PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION
F.A.A. NO.	N/A
HCAA NO.	6120.17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	PARTIAL STPG LEVEL 8 RE-STRIPING PLAN (01)
PROJECT NO.	R-103.01

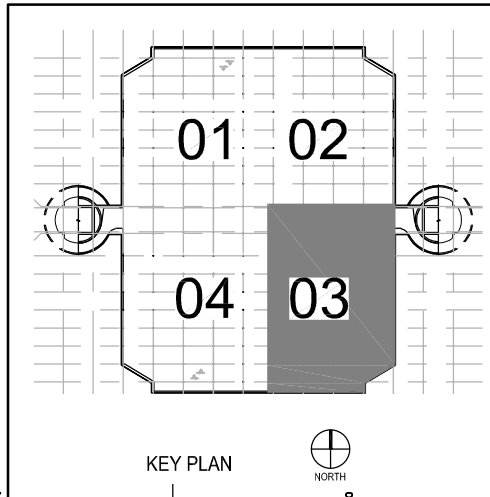
WALKER
 RESTORATION CONSULTANTS
 4904 Eisenhower Boulevard
 Suite 150 Tampa, FL 33634
 PH: 813.888.5800
 EE-0003840

Tampa International Airport
 TAMPA INTERNATIONAL AIRPORT, TAMPA, FL



PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 RE-STRIPING PLAN (03)

- NOTES: (R-103.01 THRU R-103.04)
- RE-STRIPING LEVEL 8 PER W.I. 45.1. DIMENSIONS SHOWN ON PLANS ARE TYPICAL, U.N.O.
 - SEE SHEETS R-109.01 THRU R-109.04 FOR TYPICAL STRIPING DETAILS.
 - SEE DETAIL 9/R-109.04 FOR TYPICAL CURB DETAIL.
 - CLOSURE AREA AT EACH END OF STRIPING TO BE PAINTED SOLID YELLOW.
 - INDICATES AN ADA POLE MOUNTED SIGN, SEE DETAILS 10 & 11/R-109.04 FOR ADA STALL SIGN. MOUNT SIGN ON COLUMN WHEN POSSIBLE. SIGNAGE AND POST ARE INCIDENTAL TO W.I. 45.1.
 - REFER TO SHEETS R-104.01 THRU R-104.04 FOR STALL NUMBERING.



BY	AUTH.
REVISIONS	
DATE	

WALKER
 RESTORATION CONSULTANTS
 4904 Eisenhower Boulevard
 Suite 150 Tampa, FL 33634
 PH: 813.888.5800
 EE-0003840

Tampa International Airport
 TAMPA INTERNATIONAL AIRPORT, TAMPA, FL

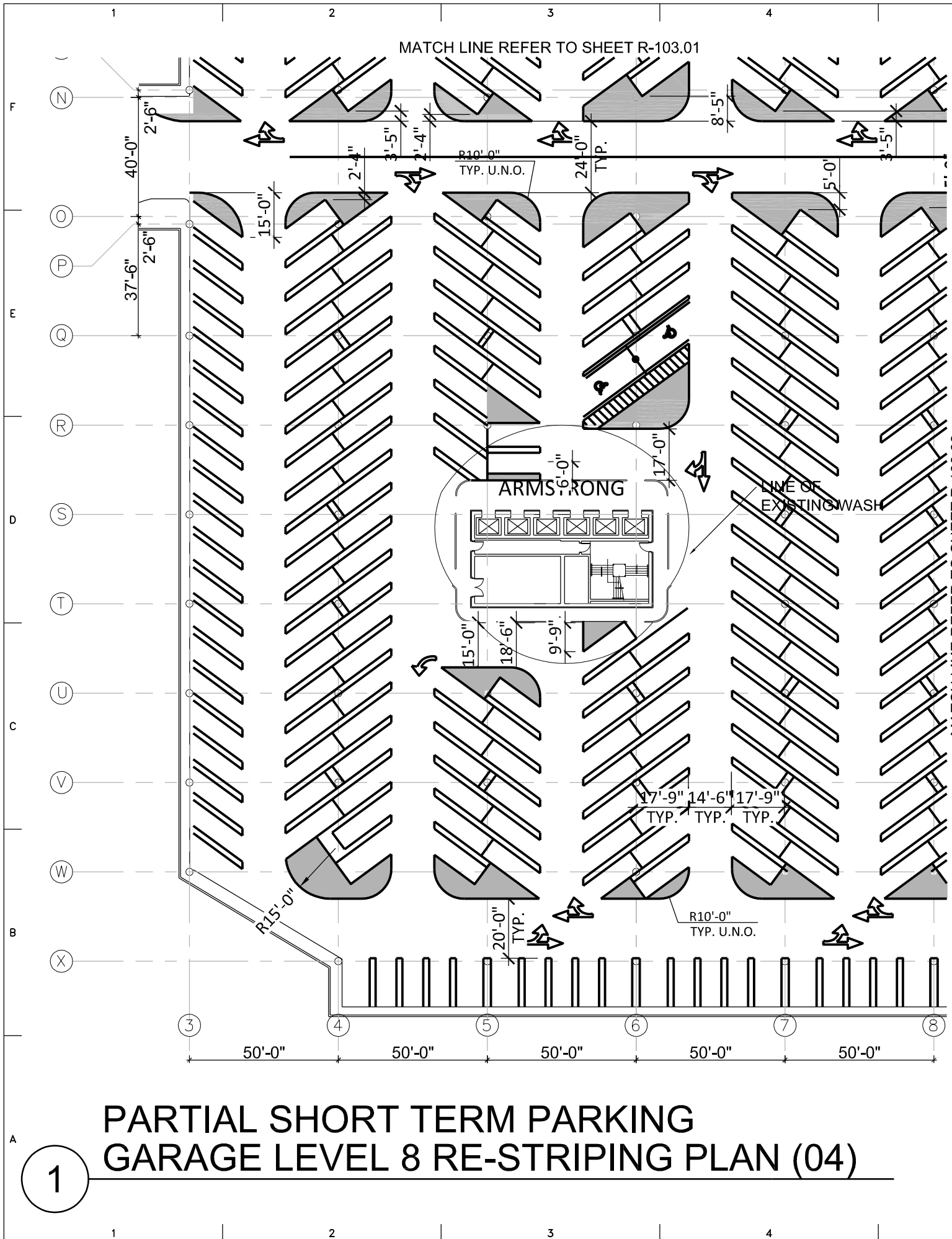
PROJECT NAME: SHORT TERM GARAGE LEVEL 8 REHABILITATION

F.A.A. NO.	N/A
HCAA NO.	6120.17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	PARTIAL STPG LEVEL 8 RE-STRIPING PLAN (03)

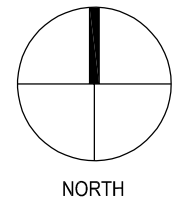
R-103.03

user downes, maureen drawing name: \\s10-z-luv-1-10-mua-317m-lev-0-rehab\pcao\res\10-z-luv-1-10-mua-317m-lev-0-rehab.dwg
 Plot Date: Aug 01, 2017 - 10:22am - 15-2100-13_R103_01-02-03-04.dwg

user: dms1; m:\aerial\drawing\name: 15-2100-13-R103-01-02-03-04.dwg
 Plot Date: Aug 01, 2017 - 10:22am - 15-2100-13-R103-01-02-03-04.dwg

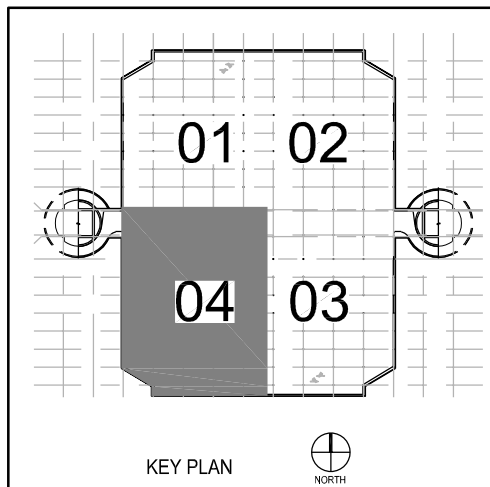


PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 RE-STRIPING PLAN (04)



NOTES: (R-103.01 THRU R-103.04)

- RE-STRIPING LEVEL 8 PER W.I. 45.1. DIMENSIONS SHOWN ON PLANS ARE TYPICAL, U.N.O.
- SEE SHEETS R-109.01 THRU R-109.04 FOR TYPICAL STRIPING DETAILS.
- SEE DETAIL 9/R-109.04 FOR TYPICAL CURB DETAIL.
- CLOSURE AREA AT EACH END OF STRIPING TO BE PAINTED SOLID YELLOW.
- INDICATES AN ADA POLE MOUNTED SIGN, SEE DETAILS 10 & 11/R-109.04 FOR ADA STALL SIGN. MOUNT SIGN ON COLUMN WHEN POSSIBLE. SIGNAGE AND POST ARE INCIDENTAL TO W.I. 45.1.
- REFER TO SHEETS R-104.01 THRU R-104.04 FOR STALL NUMBERING.



DATE	REVISIONS	BY	AUTH.

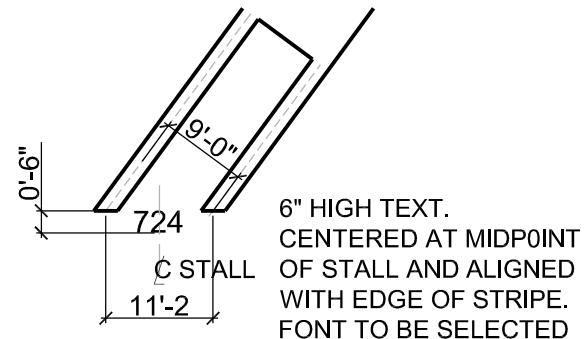
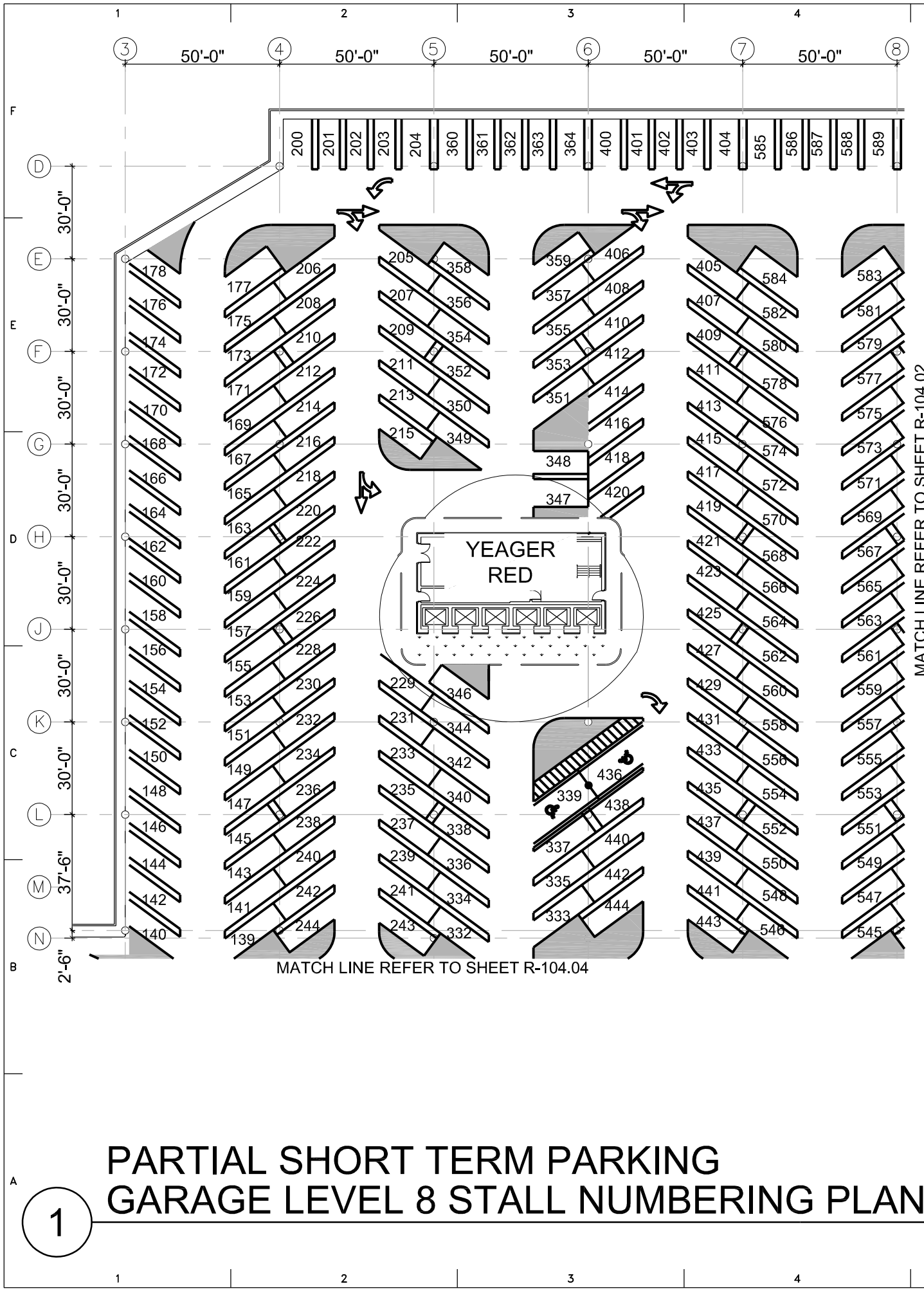
WALKER
RESTORATION CONSULTANTS
4904 Eisenhower Boulevard
Suite 150 Tampa, FL 33634
Ph: 813.886.5800
EE-0003840

Tampa International Airport

PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION
F.A.A. NO.	N/A
HCAA NO.	6120 17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	PARTIAL STPG LEVEL 8 RE-STRIPING PLAN (04)
R-103.04	

TAMPA INTERNATIONAL AIRPORT, TAMPA, FL

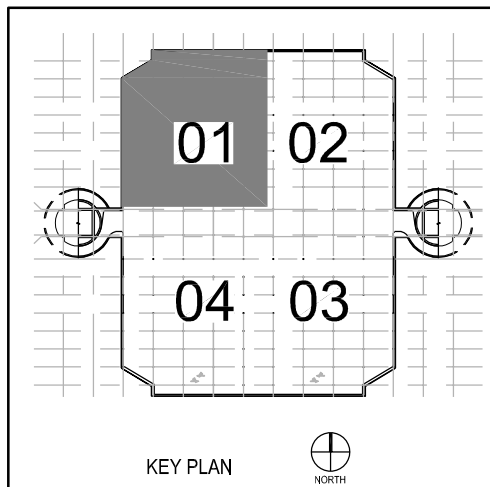
user downes, maureen drawing name: \\s-2-luv-1-10-mw-3-rm-2-level-0-remed-vicco\res\1-10-2-luv-1-10-mw-3-rm-2-level-0-remed-vicco_01-02-03-04.dwg
 Plot Date: Aug 01, 2017 - 10:35am - 15-2100-13_R104_01-02-03-04.dwg



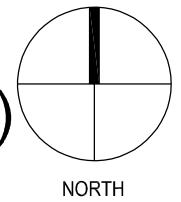
TYP STALL NUMBER LOCATION PLAN
N.T.S.

STALL NUMBERING NOTE:
 1. **000** INDICATES 3 DIGIT PARKING STALL NUMBERS PAINTED AT END OF EACH STALL. CHARACTERS TO BE 6" IN HEIGHT, FONT TO BE SELECTED BY AUTHORITY. CENTER STALL NUMBER AT END OF STALLS. COORDINATE FINAL LOCATION OF NUMBERS WITH OWNER.

NOTES: (R-104.01 THRU R-104.04)
 1. SEE SHEETS R-103.01 THRU R-103.04 FOR TYPICAL STRIPING DIMENSIONS.
 2. STALL NUMBERING IS INCIDENTAL TO W.I. 45.1.

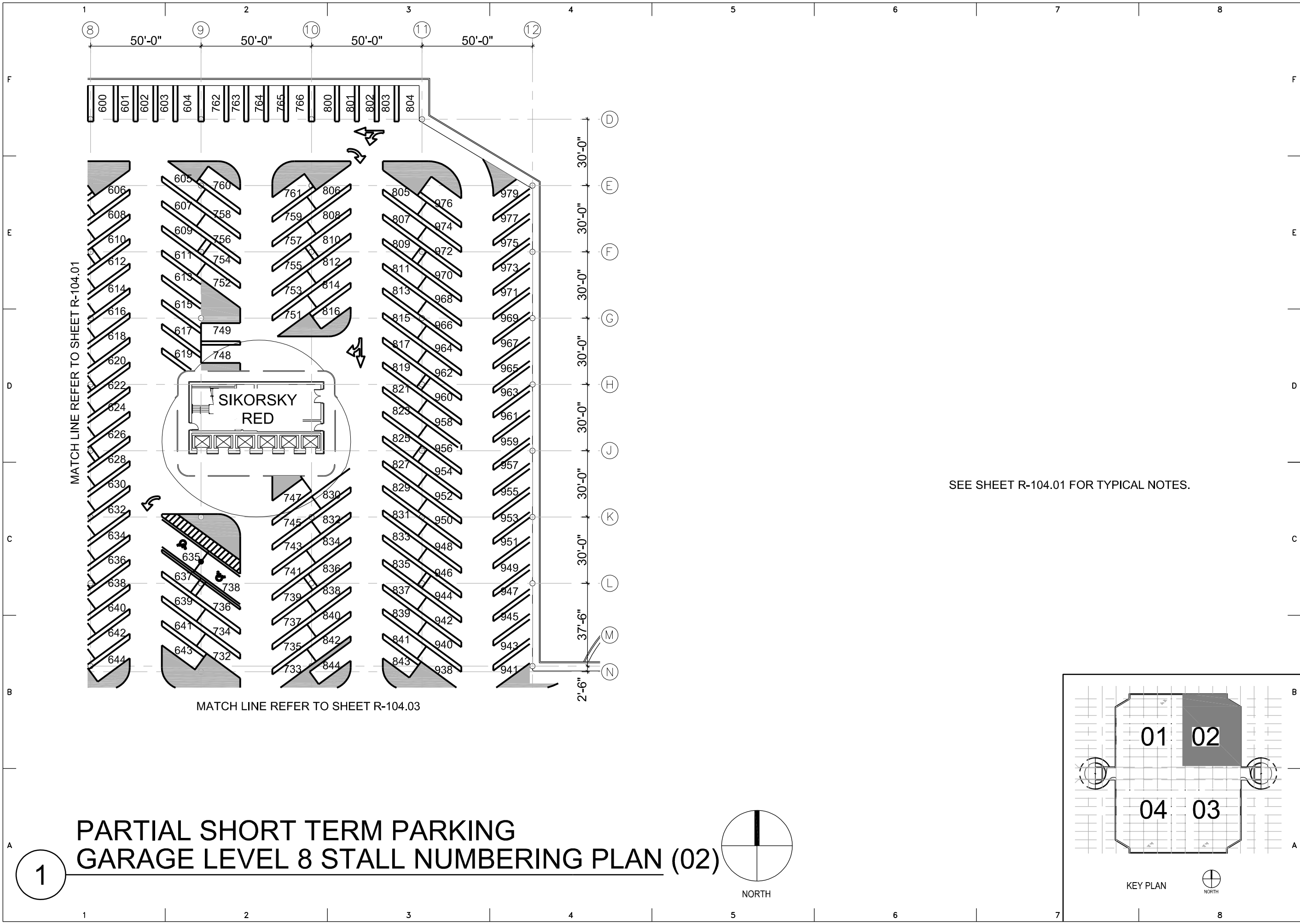


PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 STALL NUMBERING PLAN (01)

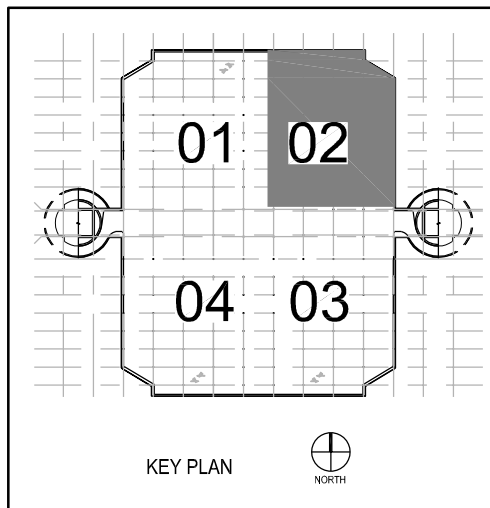


BY		REVISIONS	
DATE			
 WALKER RESTORATION CONSULTANTS 4904 Ehrenpower Boulevard Suite 150 33624 Tampa, FL 33634 Ph: 813.888.5800 EE-0003840			
 Tampa International Airport			
PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION		
F.A.A. NO.	N/A		
HCAA NO.	6120.17		
JOB NO.	15-2100.13		
DESIGN	BKP		
DRAWN	MCB		
CHECKED	BKP		
FILE NAME			
SCALE:	N.T.S.		
DATE:	08/09/17		
SHEET TITLE	PARTIAL STPG LEVEL 8 NUMBERING PLAN (01)		
R-104.01			

user: dms1, m:\aerom\working\15-2100-13-R104.01-02-03-04.dwg
 Plot Date: Aug 01, 2017 - 10:35am - 15-2100-13-R104.01-02-03-04.dwg



SEE SHEET R-104.01 FOR TYPICAL NOTES.

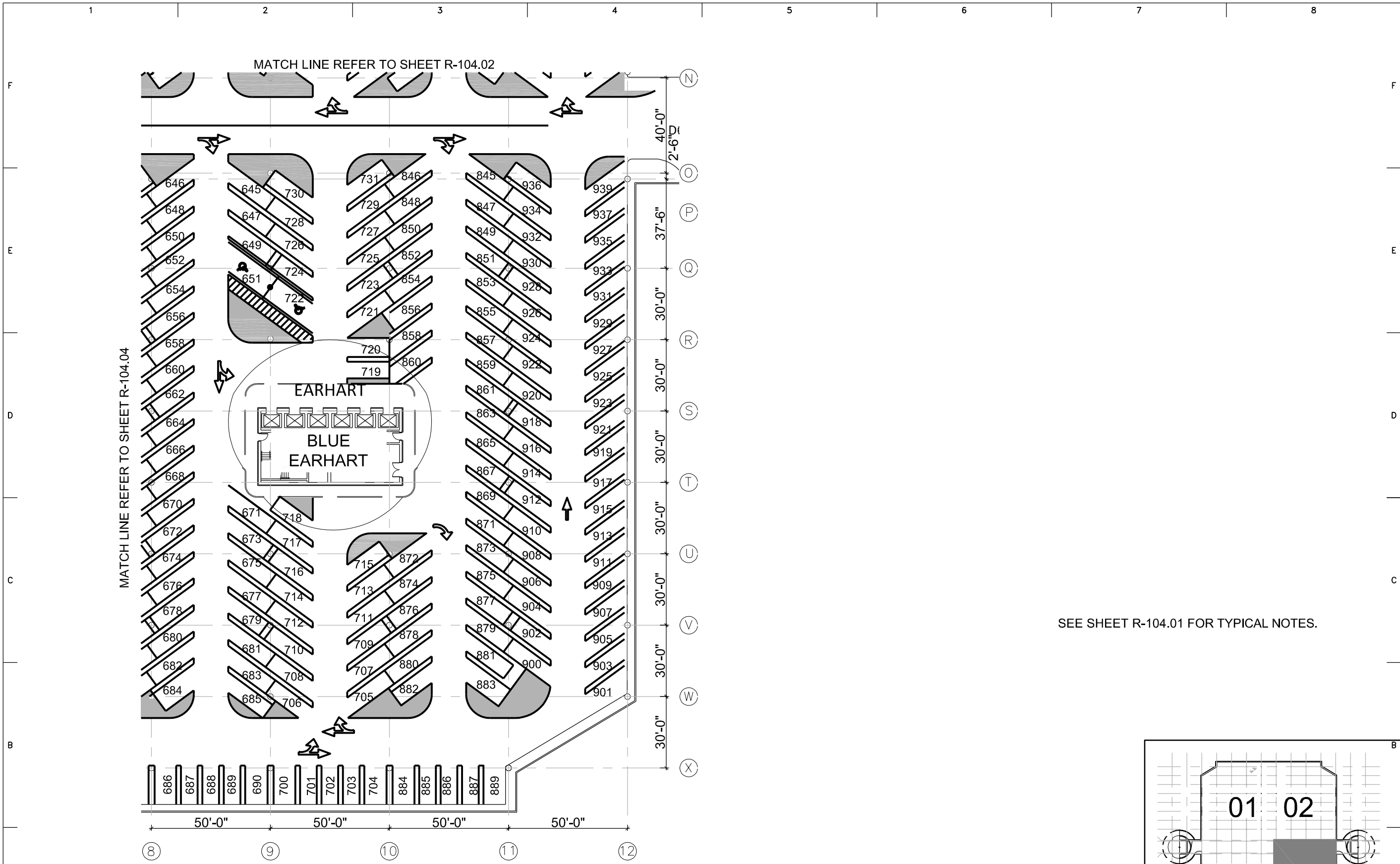


PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 STALL NUMBERING PLAN (02)

1

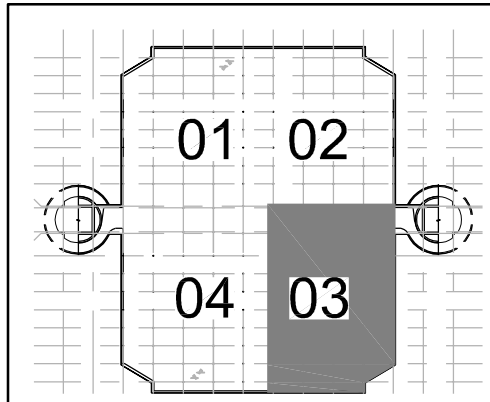
BY	AUTH.	
REVISIONS		
DATE		
 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 PH: 813.886.5800 BE-0003840		
 Tampa International Airport TAMPA INTERNATIONAL AIRPORT, TAMPA, FL		
PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION	
F.A.A. NO.	N/A	
HCAA NO.	6120.17	
JOB NO.	15-2100.13	
DESIGN	BKP	
DRAWN	MCB	
CHECKED	BKP	
FILE NAME		
SCALE:	N.T.S.	
DATE:	08/09/17	
SHEET TITLE	PARTIAL STPG LEVEL 8 NUMBERING PLAN (02)	
R-104.02		

user: dms100, m:\aerom\working\10-21-2017-10-35am - 15-2100-13_R104_01-02-03-04.dwg
Plot Date: Aug 01, 2017 - 10:35am - 15-2100-13_R104_01-02-03-04.dwg



PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 STALL NUMBERING PLAN (03)

1



KEY PLAN

SEE SHEET R-104.01 FOR TYPICAL NOTES.

DATE	REVISIONS	BY	AUTH.

WALKER
RESTORATION CONSULTANTS
4904 Eisenhower Boulevard
Suite 150
Tampa, FL 33634
PH: 813.886.5800
EE-0003840

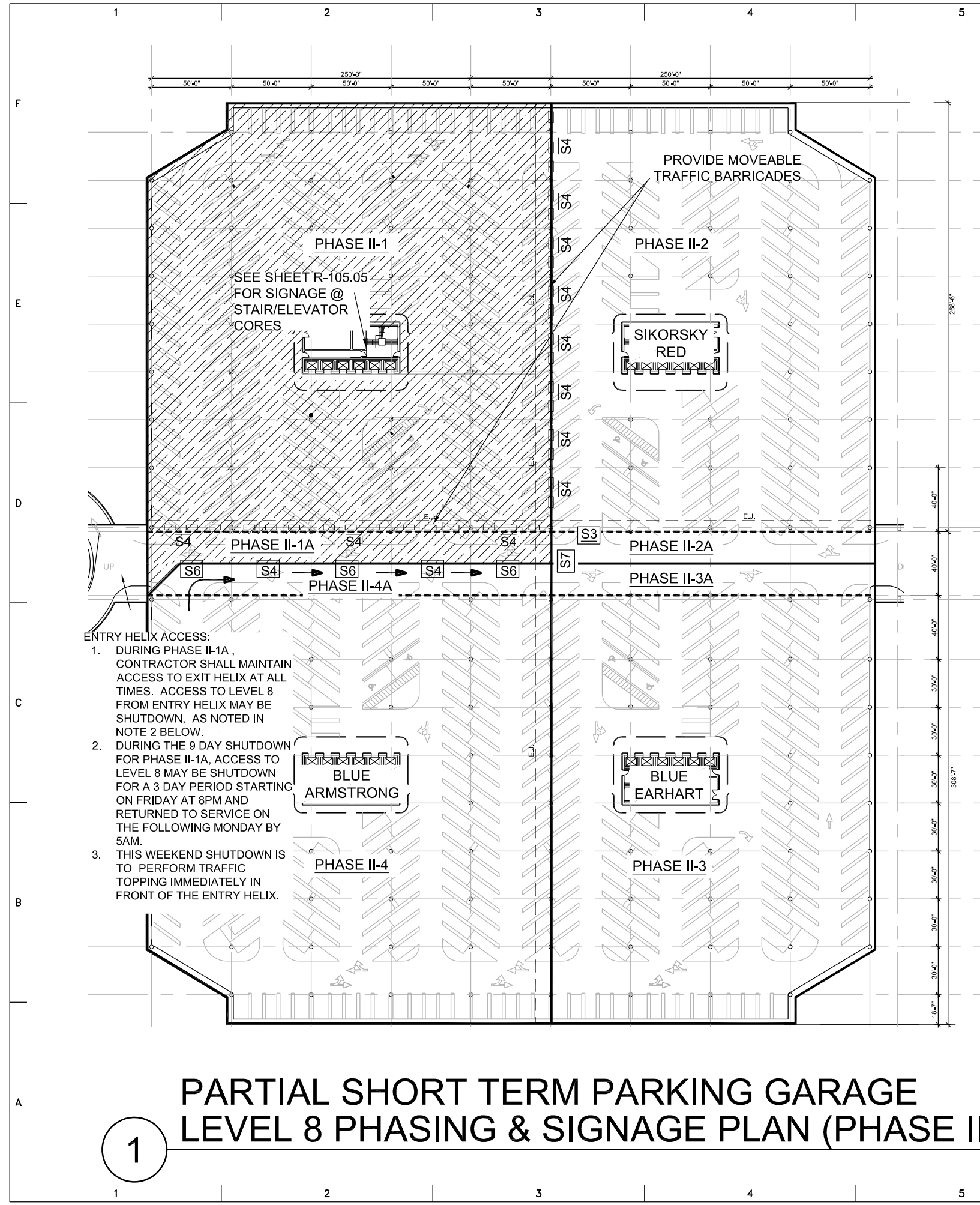


PROJECT NAME
SHORT TERM GARAGE LEVEL 8
REHABILITATION
TAMPA INTERNATIONAL AIRPORT, TAMPA, FL

F.A.A. NO.	N/A
HCAA NO.	6120.17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	PARTIAL STPG LEVEL 8 NUMBERING PLAN (03)

R-104.03

User: koudes, maureen Drawing Name: \\15-2100-13-HCA-SFPG_Level_8_Renov\Acad\Sheet\15-2100-13-R-105.01-105.02-105.03-105.04-51-PHASING.dwg
 Plot Date: Aug 01, 2017 10:39am - 15-2100-13-R-105.01-105.02-105.03-105.04-51-PHASING.dwg



PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-1)

1

SIGNAGE NOTES: (R-105.01 THRU R-105.04)

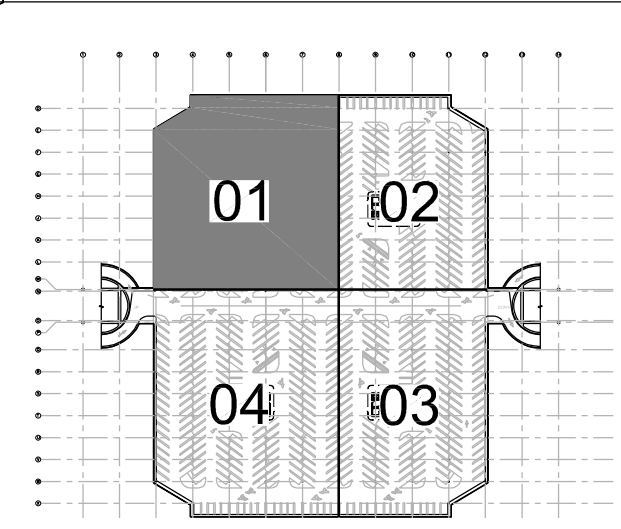
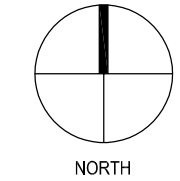
- BEFORE CONSTRUCTION BEGINS CONTRACTOR MUST SUBMIT A DETAILED MAINTENANCE OF TRAFFIC PLAN IN ACCORDANCE WITH FDOT STANDARDS TO THE OWNER FOR PRIOR APPROVAL. ALL SIGNAGE AND BARRICADES MUST BE PROVIDED BY THE CONTRACTOR.
- ALL M.O.T. SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL OWNER'S APPROVAL AT END OF PROJECT.
- BARRICADES TO BE REFLECTIVE AS PER MUTCD WITH APPROVED REFLECTIVE COLORS.
- FLUORESCENT ORANGE SHALL BE USED FOR ALL WORK ZONE SIGNS.
- SIGN TEXT IS PRELIMINARY. FINAL TEXT TO BE APPROVED BY OWNER.
- CONTRACTOR TO COORDINATE LOCKOUT OF ELEVATOR STOP AT LEVEL 8 DURING WORK.
- PHASES II-1A, II-2A, II-3A & II-4A SHALL RUN CONCURRENT, BUT SHALL REMAIN OPEN TO TRAFFIC DURING PHASES II-1, II-2, II-3 & II-4, EXCEPT TO FACILITATE TRAFFIC TOPPING AND EXPANSION JOINT INSTALLATION. CONTRACTOR, WITH APPROVAL FROM THE OWNER, SHALL BE ALLOWED TO SHUTDOWN THE CORRESPONDING "A" SECTION OF A PHASE FOR 9 CALENDAR DAYS DURATION. TIME SHALL START AT 8PM FRIDAY AND EXTEND 9 CALENDAR DAYS WITH THE AREA REOPENED TO TRAFFIC NO LATER THAN 5AM ON THE 10TH DAY (MONDAY).
- TEMPORARY SIGNS TO CONFORM WITH OWNER SIGN REQUIREMENTS. FONT SHALL BE FRUITGER 55 ROMAN. SIGNS TO BE ALUMINUM PANELS OR 1/8" PVC (HPDE), USING 3M SCOTCHCAL FILM OR PAINT.
- "PLEASE PARDON OUR DUST" SIGNS TO BE COORDINATED WITH OWNER MARKETING DEPARTMENT. SIGNS TO BE PRESENTATION QUALITY. MAY BE MOUNTED ON BARRICADES OR OTHER MEANS AS APPROVED BY OWNER.
- SIGNS TO BE BLACK BACKGROUND w/WHITE TEXT/SYMBOLS.
- SEE SHEET R-105.02 FOR SIGNS S2 THRU S9 AND SHEET R-105.05 FOR SIGN S1.
- CONTRACTOR TO INSTALL S9 SIGNS @ END OF EACH PARKING AISLE. SIGNS TO BE IN PLACE 2 WEEKS PRIOR TO START OF PHASE.

GENERAL LEGEND

- LIMITS OF WORK PHASE
- LIMITS OF WORK-SUB PHASE
- MOVEABLE BARRICADE
- SIGN LOCATION
- SIGN LOCATION DURING PHASES #A.

LEGEND

- PHASE II-1
- PHASE II-2
- PHASE II-3
- PHASE II-4
- TRAFFIC FLOW

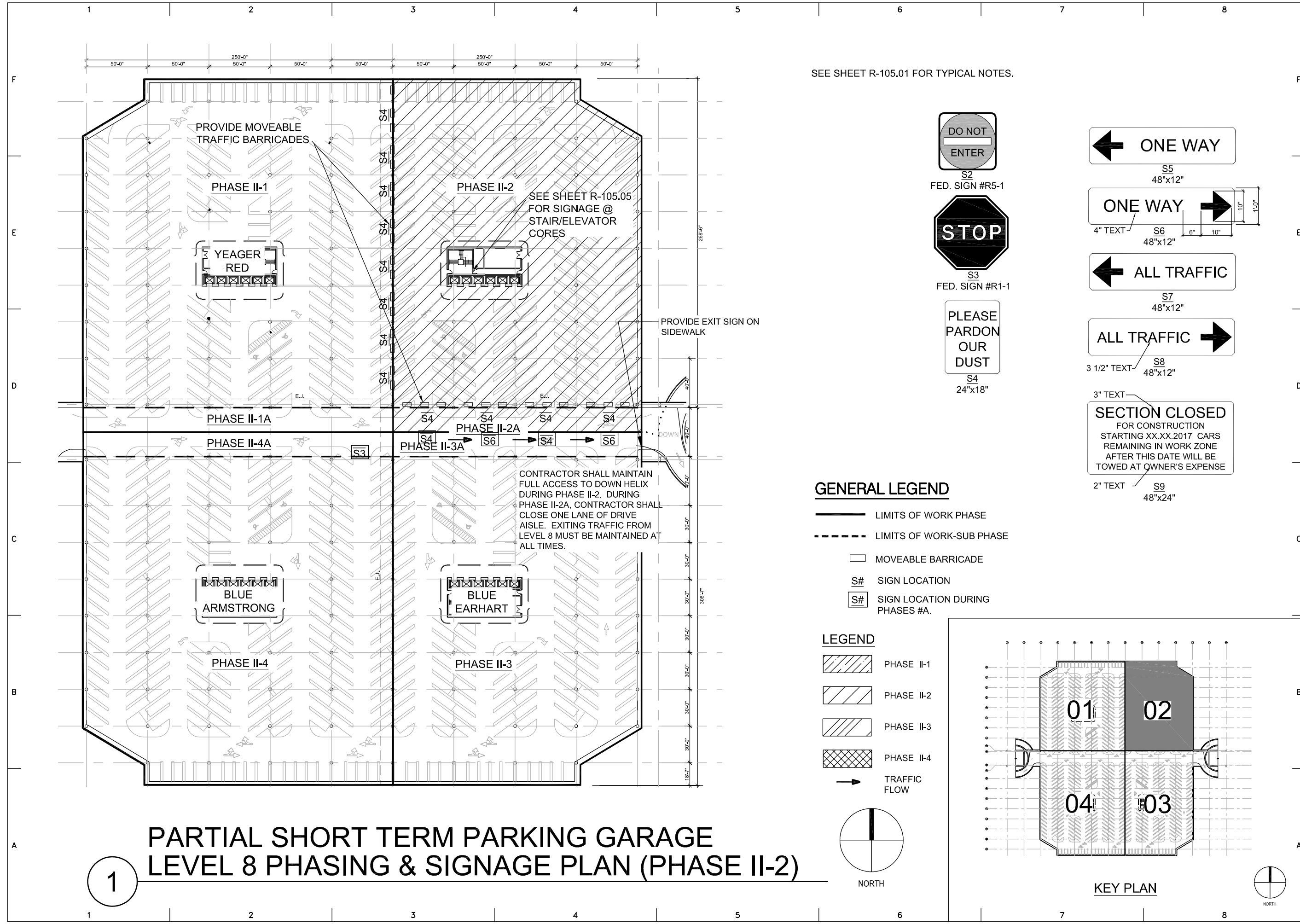


KEY PLAN



BY	
DATE	
REVISIONS	
AUTH.	
 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5800 BE-0003840	
 Tampa International Airport	
PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION
F.A.A. NO.	N/A
HCAA NO.	6120 17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-1)
<h1>R-105.01</h1>	

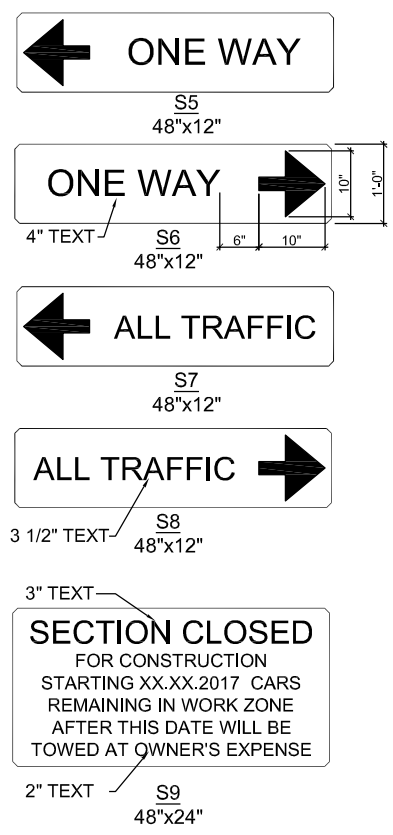
User: koudes, maureen Drawing Name: 15-2100-13-HCA-SFGC_Level_8_Renov\Acad\Sheet\15-2100-13-R-105_01-105_02-105_03-105_04-51-PHASING.dwg
 Plot Date: Aug 01, 2017 10:39am - 15-2100-13-R-105_01-105_02-105_03-105_04-51-PHASING.dwg



PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-2)

1

SEE SHEET R-105.01 FOR TYPICAL NOTES.

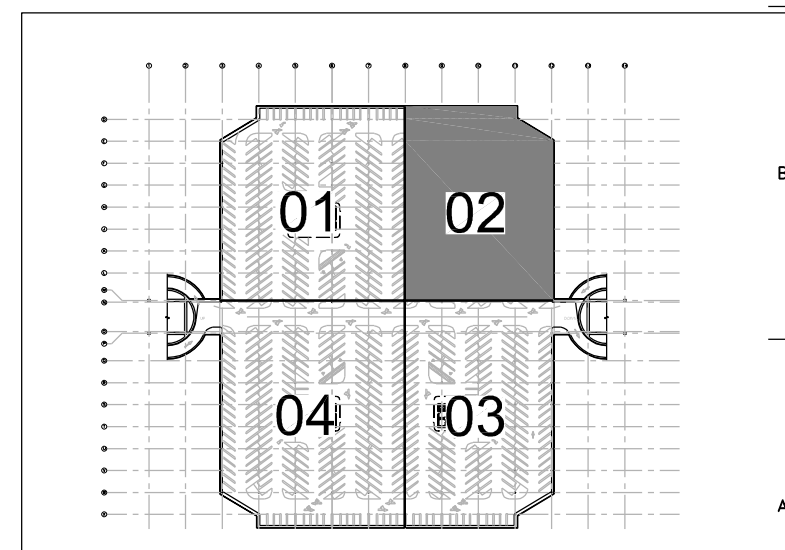
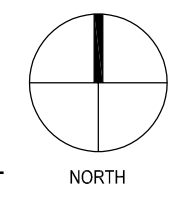


GENERAL LEGEND

- LIMITS OF WORK PHASE
- - - LIMITS OF WORK-SUB PHASE
- MOVEABLE BARRICADE
- S# SIGN LOCATION
- # SIGN LOCATION DURING PHASES #A.

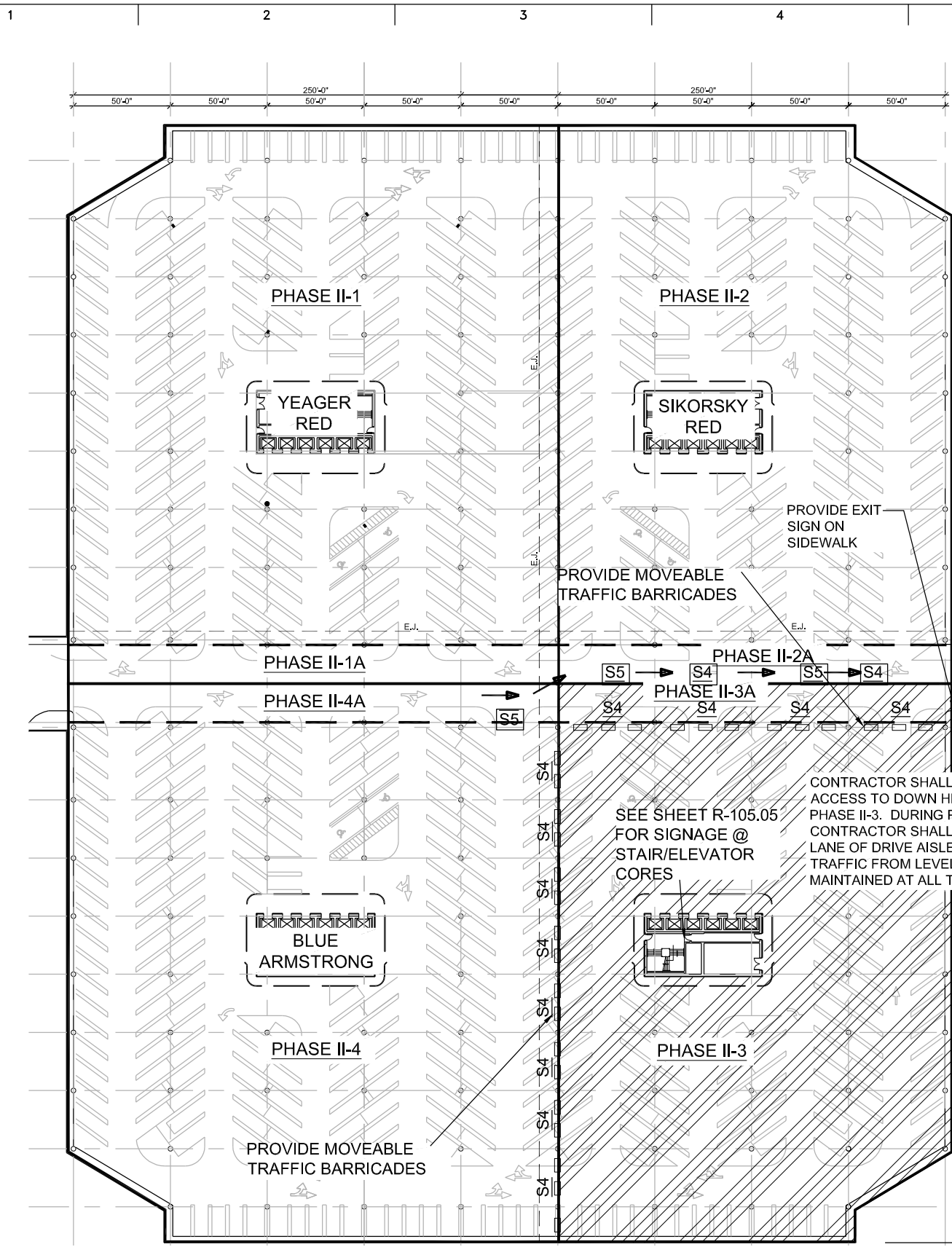
LEGEND

- ▨ PHASE II-1
- ▧ PHASE II-2
- ▩ PHASE II-3
- ▩ PHASE II-4
- TRAFFIC FLOW



KEY PLAN

BY	
DATE	
REVISIONS	
 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5800 BE-0003840	
 Tampa International Airport	
PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION
F.A.A. NO.	N/A
HCAA NO.	6120 17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-2)
R-105.02	



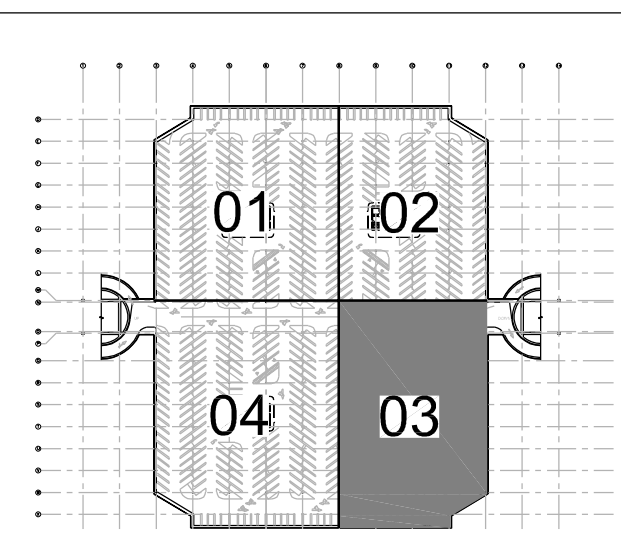
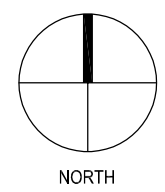
SEE SHEET R-105.01 FOR TYPICAL NOTES.

GENERAL LEGEND

- LIMITS OF WORK PHASE
- - - LIMITS OF WORK-SUB PHASE
- MOVEABLE BARRICADE
- S# SIGN LOCATION
- S# SIGN LOCATION DURING PHASES #A.

LEGEND

- [Diagonal Hatching] PHASE II-1
- [Diagonal Hatching] PHASE II-2
- [Diagonal Hatching] PHASE II-3
- [Cross-hatching] PHASE II-4
- TRAFFIC FLOW



KEY PLAN

PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-3)

1

DATE	REVISIONS	BY	AUTH.

WALKER
RESTORATION CONSULTANTS
4904 Eisenhower Boulevard
Suite 150
Tampa, FL 33634
Ph. 813.886.5800
BE-0003840



PROJECT NAME
SHORT TERM GARAGE LEVEL 8 REHABILITATION

TAMPA INTERNATIONAL AIRPORT, TAMPA, FL

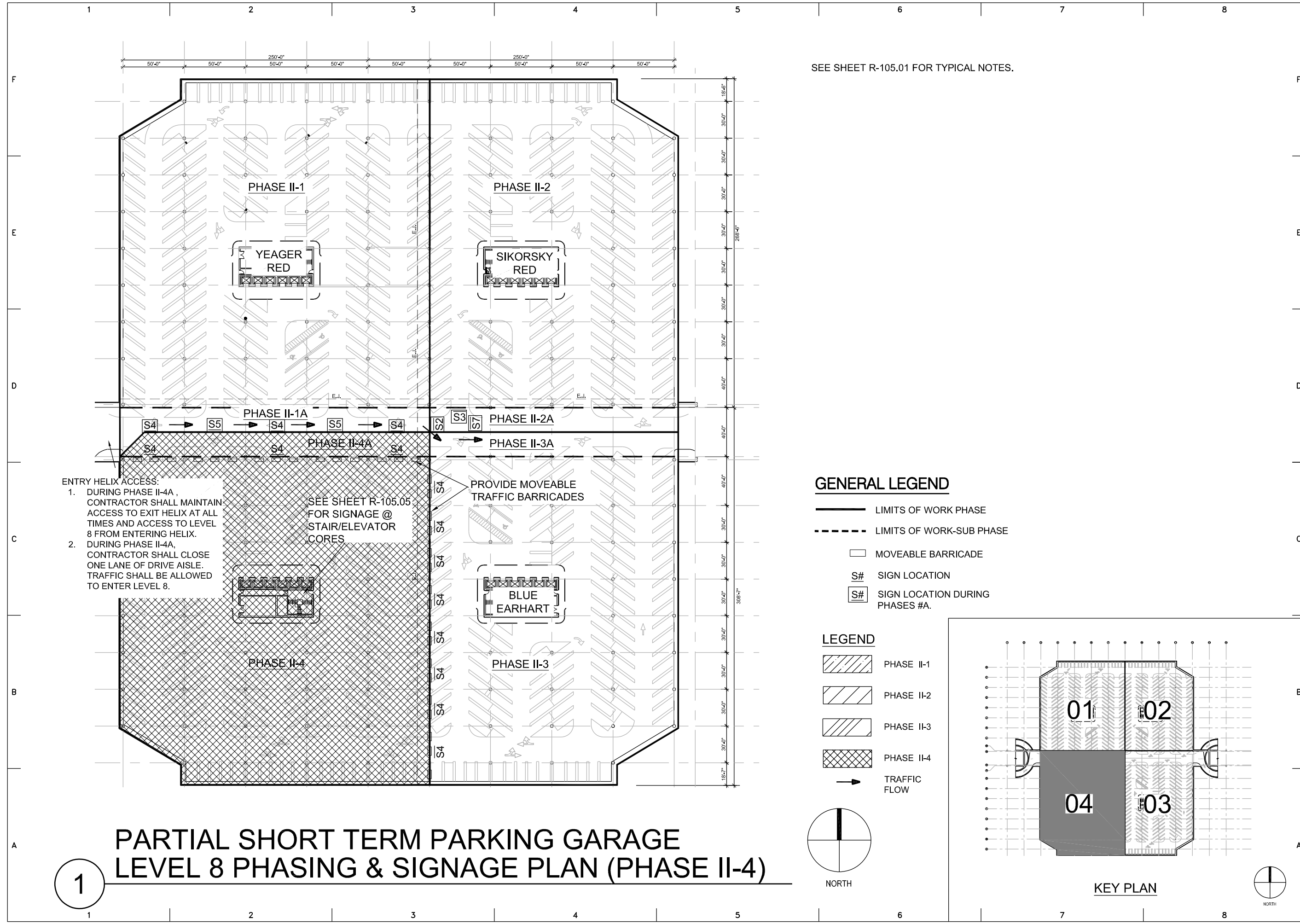
F.A.A. NO.	N/A
HCAA NO.	6120.17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17

SHEET TITLE
PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-3)

R-105.03

User: koudes, maureen Drawing Name: \\15-2100-13-HCAA-STPG_Level_8_Rehab\Acad\Rev\15-2100-13-R-105.01-105.02-105.03-105.04-51-PHASING.dwg Plot Date: Aug 01, 2017 - 10:39am - 15-2100-13-R-105.01-105.02-105.03-105.04-51-PHASING.dwg

User: koudes, mooreen Drawing Name: \\15-2100-13-HCA-SFPG_Level_8_Renov\Acad\Sheet\15-2100-13-R-105.01-105.02-105.03-105.04-51-PHASING.dwg
 Plot Date: Aug 01, 2017 10:39am - 15-2100-13-R-105.01-105.02-105.03-105.04-51-PHASING.dwg



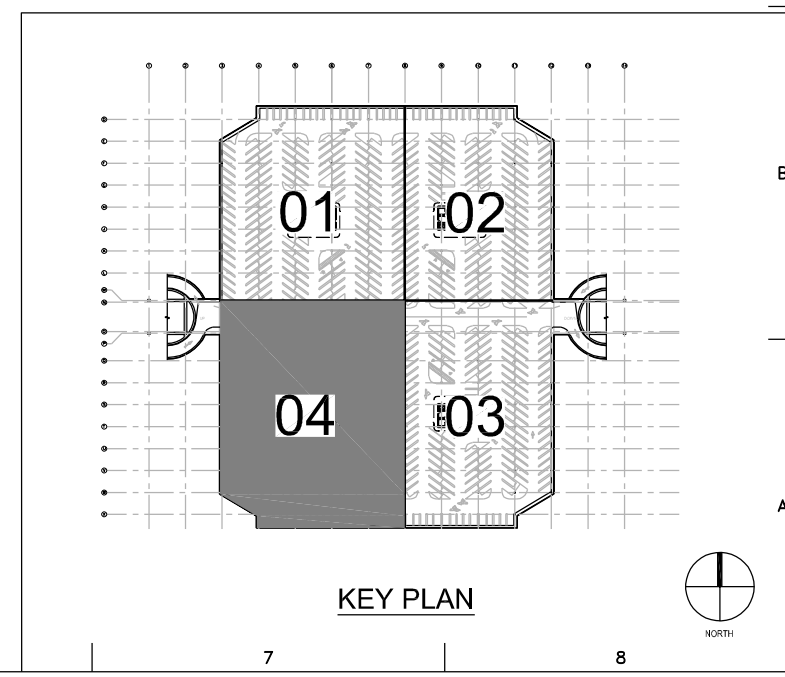
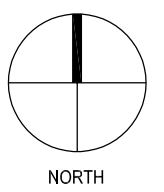
PARTIAL SHORT TERM PARKING GARAGE LEVEL 8 PHASING & SIGNAGE PLAN (PHASE II-4)

1

SEE SHEET R-105.01 FOR TYPICAL NOTES.

- ### GENERAL LEGEND
- LIMITS OF WORK PHASE
 - LIMITS OF WORK-SUB PHASE
 - MOVEABLE BARRICADE
 - SIGN LOCATION
 - SIGN LOCATION DURING PHASES #A.

- ### LEGEND
- PHASE II-1
 - PHASE II-2
 - PHASE II-3
 - PHASE II-4
 - TRAFFIC FLOW

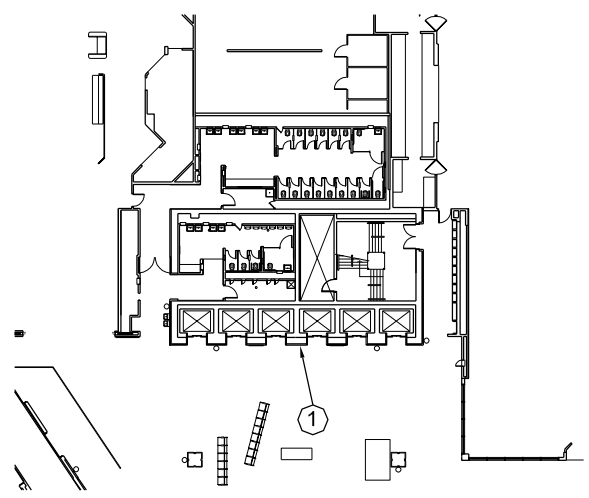


KEY PLAN

	AUTH.										
	REVISIONS										
	DATE										
WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5800 BE-0003840											
PROJECT NAME SHORT TERM GARAGE LEVEL 8 REHABILITATION											
TAMP INTERNATIONAL AIRPORT, TAMPA, FL											
F.A.A. NO. _____		N/A		H.C.A.A. NO. _____		6120.17		JOB NO. _____		15-2100.13	
DESIGN _____		BKP		DRAWN _____		MCB		CHECKED _____		BKP	
FILE NAME _____				SCALE: _____		N.T.S.		DATE: _____		08/09/17	
SHEET TITLE		PARTIAL STPG		LEVEL 8		PHASING & SIGNAGE		PLAN (PHASE II-4)			
R-105.04											

1 2 3 4 5 6 7 8

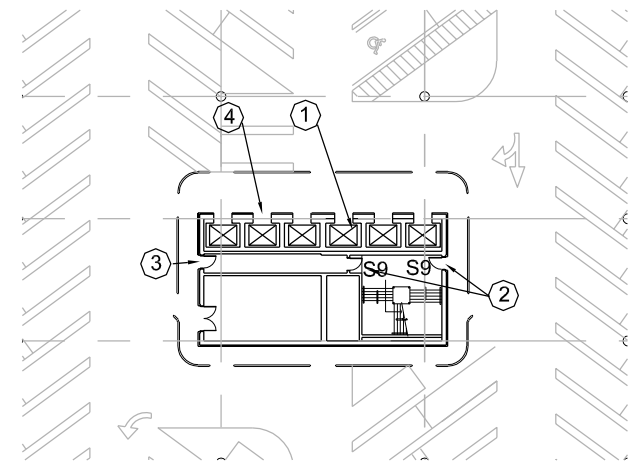
F
E
D
C
B
A



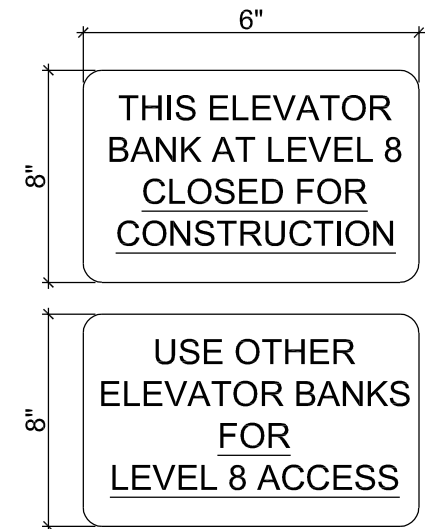
GENERAL NOTES: (X)
1. PROVIDE S1 SIGNS @ ELEVATOR CALL BUTTONS ON LEVELS 1, 2 & 3. SEE DETAIL 3, THIS SHEET.

GENERAL SIGNAGE NOTES:
1. REFER TO SIGNAGE NOTES ON SHEET R-105.01.
2. SIGNAGE AT ELEVATOR/STAIR CORES TO BE IN PLACE FOR DURATION OF WORK IN THAT PHASE.
3. CONTRACTOR TO MOUNT SIGNS TO GLASS WALL PANELS IN MAIN TERMINAL LEVELS AND STAINLESS STEEL IN ELEVATOR CABS USING TEMPORARY MEANS THAT DO NOT DAMAGE THE MOUNTING SURFACE. REPAIRS TO MOUNTING SURFACES WILL BE AT CONTRACTOR'S COST.
4. CONTRACTOR TO MAINTAIN SIGNS AND MOUNTING. PROMPTLY RE-INSTALL OR REPLACE DAMAGED/MISSING SIGNS OR MOUNTING.

1 MAIN TERMINAL LEVELS 1-3



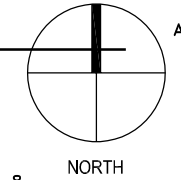
GENERAL NOTES: (X)
1. PROVIDE S1 SIGNS BESIDE LEVEL 8 ELEVATOR CALL BUTTON IN EACH ELEVATOR CAB (EACH CAB HAS BUTTONS ON EACH SIDE OF DOOR). SEE DETAIL 3, THIS SHEET.
2. PROVIDE S9 SIGNS @ EACH STAIR EXIT DOOR ON A-FRAME BARRICADES.
3. ALL STAIR DOORS TO REMAIN ACCESSIBLE AT ALL TIMES. SEAL DOORS WITHIN CURRENT PHASE, DURING TRAFFIC TOPPING w/PAINTERS TAPE OR APPROVED LOW ADHESIVE EQUIVALENT TO MINIMIZE ODOR TRANSMISSION INTO STAIR CORE.
4. CONTRACTOR TO SEAL OFF ELEVATOR DOORS w/PLASTIC TO PREVENT ODOR TRANSMISSION INTO SHAFTS. MAINTAIN VENTILATION IN FRONT OF ELEVATOR DOORS TO MINIMIZE BUILDUP OF ODORS DURING ODOR GENERATING WORK.
5. COORDINATE SHUTDOWN OF ELEVATORS IN EACH PHASE AT STPG LEVEL 8 w/OWNER.




SIGN S1 (SHORT TERM):
1. TYPICAL SIGN SHOWN. SIZE IS APPROX 6" W x 8"H, FIELD VERIFY SIZE PRIOR TO FABRICATION.
2. AT CONTRACTOR'S OPTION, SIGN MAY BE ONE OR TWO SIGNS.
3. RADIUS ALL CORNERS.

2 STPG LEVEL 8 SIM AT ALL OTHER ELEVATORS

3 STPG - S1

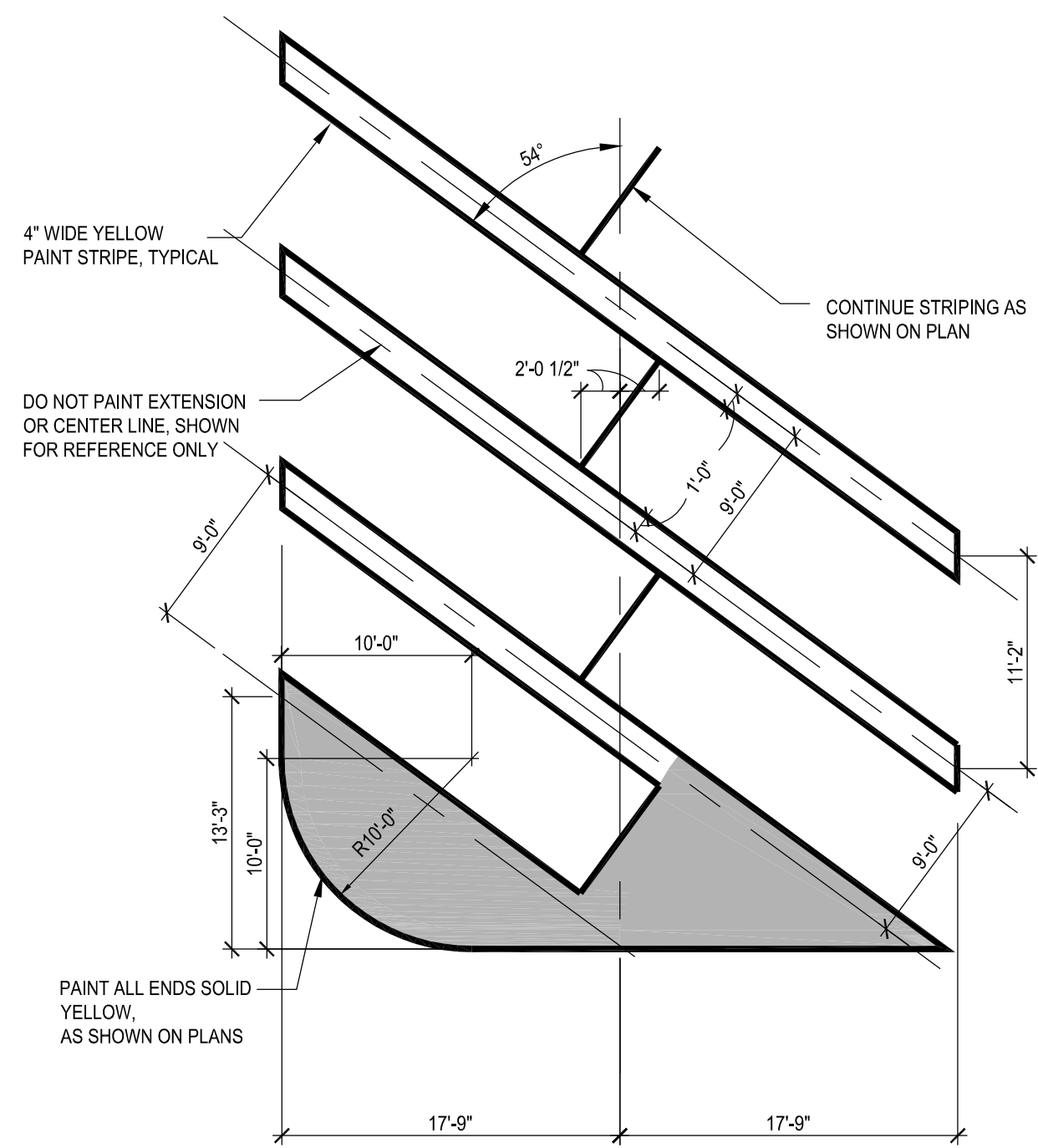


BY	
REVISIONS	
DATE	
WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5900 BE-0003840	
 Tampa International Airport	
PROJECT NAME SHORT TERM GARAGE LEVEL 8 REHABILITATION	
TAMP INTERNATIONAL AIRPORT, TAMPA, FL	
F.A.A. NO. _____ N/A HCAA NO. _____ 6120 17 JOB NO. _____ 15-2100.13 DESIGN _____ BKP DRAWN _____ MCB CHECKED _____ BKP FILE NAME _____ SCALE: _____ N.T.S. DATE: _____ 08/09/17 SHEET TITLE PARTIAL STPG LEVEL 8 PHASING & SIGNAGE PLAN S/E CORES	
R-105.05	

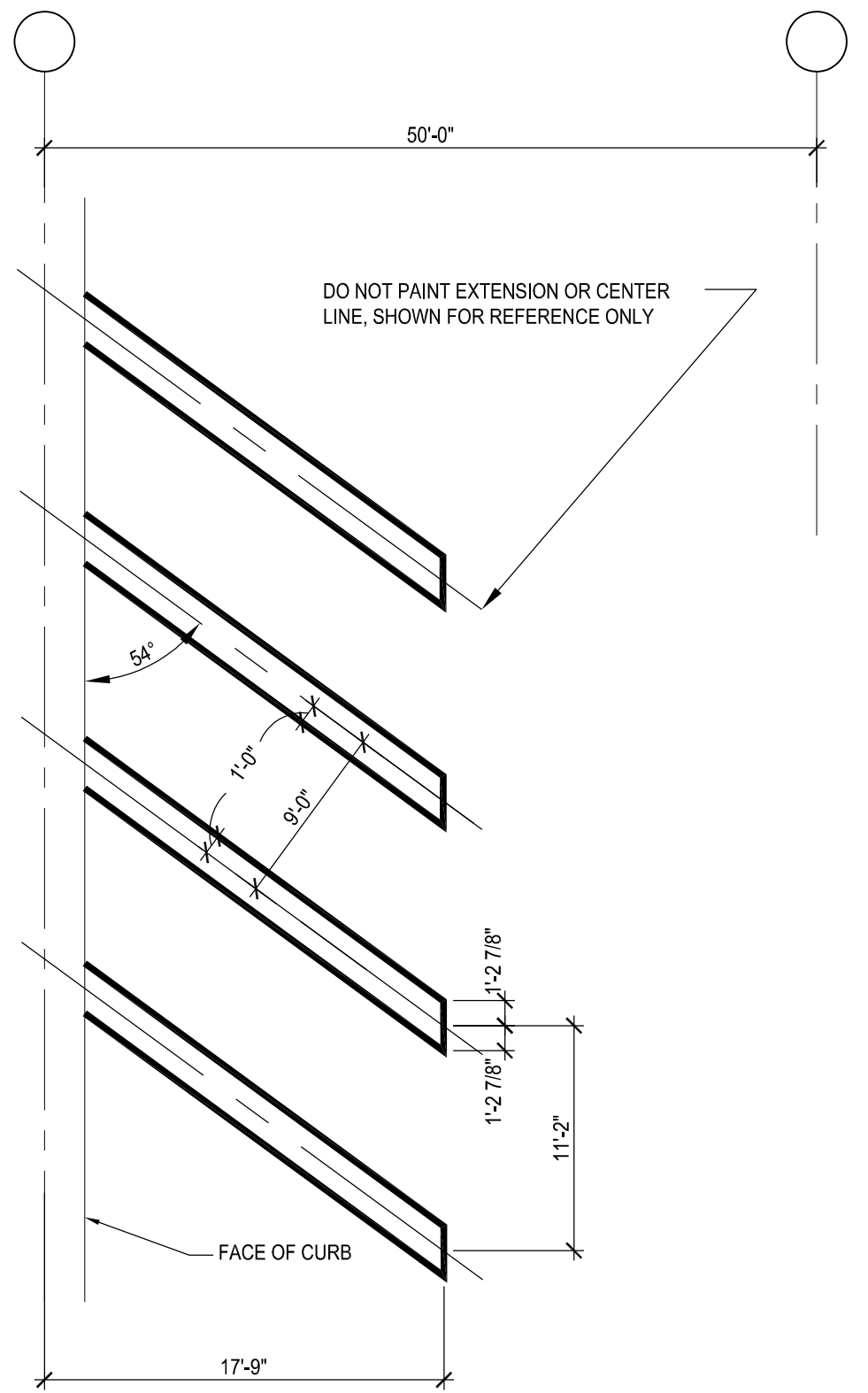
1 2 3 4 5 6 7 8

User: koudes, maureen Drawing Name: \\15-2100-13-HCAA-STPG_Level_8_Renov\Acad\Sheet\15-2100-13-R-105.01-105.02-105.03-105.04-51-PHASING.dwg Plot Date: Aug 01, 2017 - 10:39am - 15-2100-13-R-105.01-105.02-105.03-105.04-51-PHASING.dwg

User: koadis, maureen Drawing Name: \\15-2100-13-HCA-SFG_Level_8_Renov\Acad\Rest\109 Striping Details\15-2100-13-R-109.dwg Plot Date: Aug 01, 2017 - 10:43am - 15-2100-13-R-109.dwg



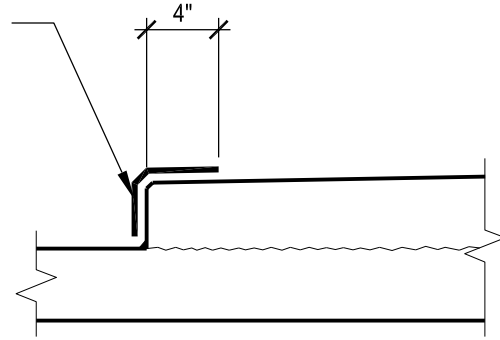
1 **54° TYPICAL STRIPING DETAIL**
SHORT TERM PARKING GARAGE



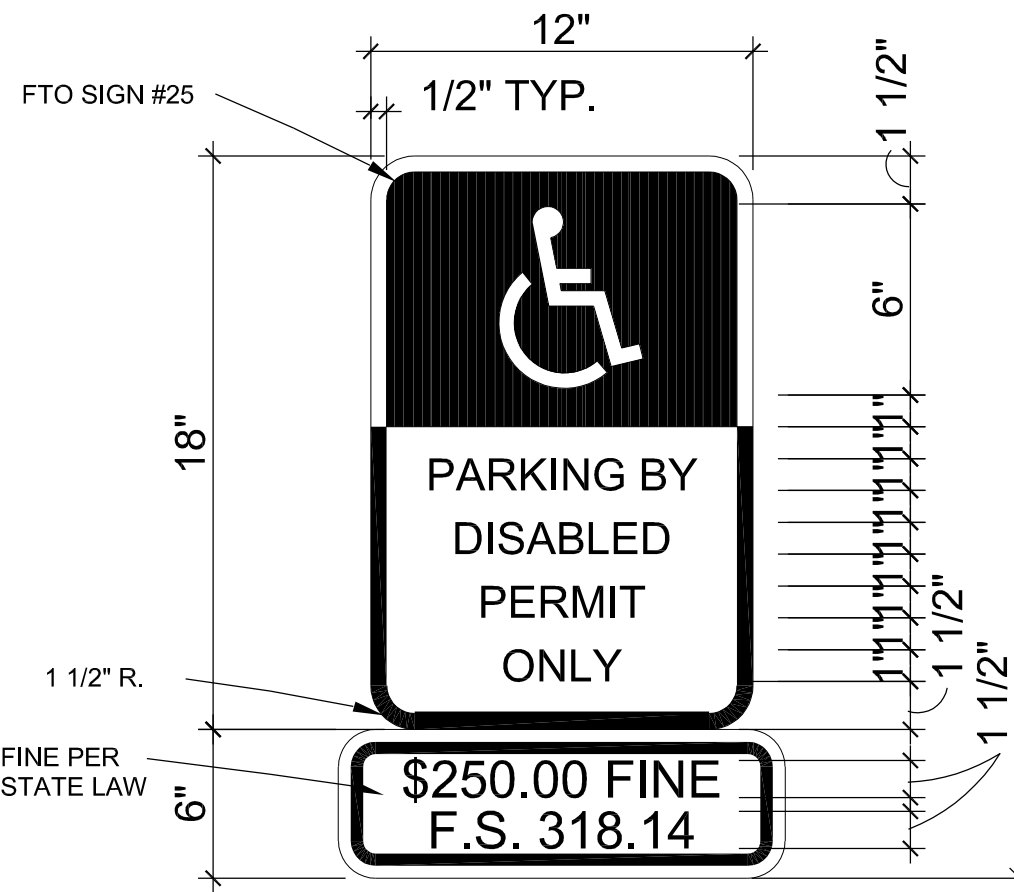
2 **54° TYPICAL STRIPING DETAIL**
SHORT TERM PARKING GARAGE

DATE		 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5800 BE-0003840	REVISIONS								
BY			 Tampa International Airport								
AUTH			PROJECT NAME SHORT TERM GARAGE LEVEL 8 REHABILITATION TAMPA INTERNATIONAL AIRPORT, TAMPA, FL								
F.A.A. NO.	N/A										
HCAA NO.	6120 17										
JOB NO.	15-2100.13										
DESIGN	BKP										
DRAWN	MCB										
CHECKED	BKP										
FILE NAME											
SCALE:	N.T.S.										
DATE:	08/09/17										
SHEET TITLE											
	STRIPING DETAILS (01)										
R-109.01											

YELLOW PAINT ON VERTICAL SURFACE OF ALL CURBS AND 4" ON HORIZONTAL FACE INCIDENTAL TO W.I. 45.1



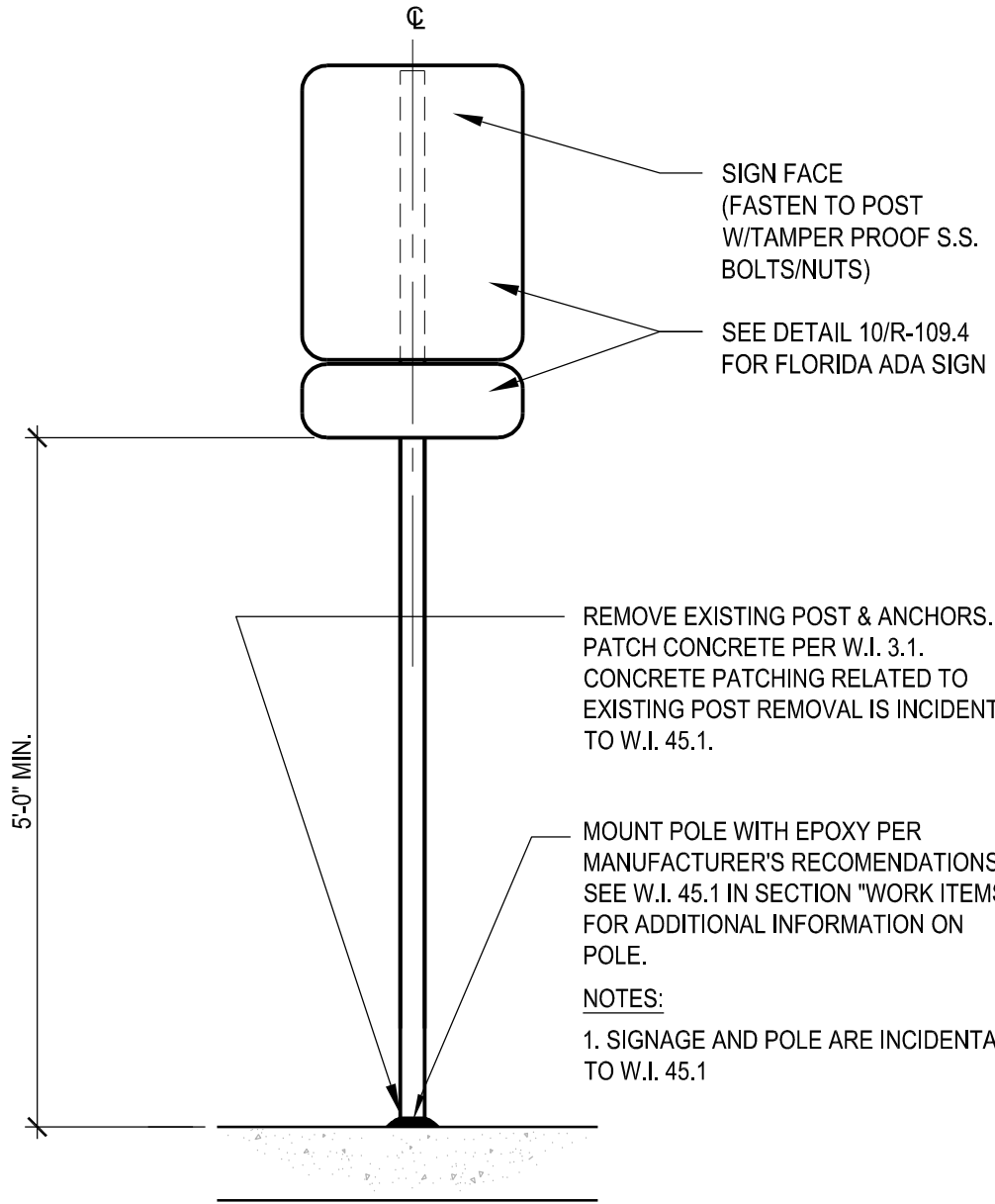
9 PAINTED CURB DETAIL



- NOTES:**
1. TOP PORTION OF SIGN SHALL HAVE A REFLECTORIZED BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND & BORDER.
 2. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED WHITE BACKGROUND WITH BLACK OPAQUE LEGEND & BORDER.
 3. \$250.00 FINE F.S. 318.14 MOUNTED

MOUNTING SEE 11/R-109.04

10 ADA SIGN DETAIL



REMOVE EXISTING POST & ANCHORS. PATCH CONCRETE PER W.I. 3.1. CONCRETE PATCHING RELATED TO EXISTING POST REMOVAL IS INCIDENTAL TO W.I. 45.1.

MOUNT POLE WITH EPOXY PER MANUFACTURER'S RECOMENDATIONS. SEE W.I. 45.1 IN SECTION "WORK ITEMS", FOR ADDITIONAL INFORMATION ON POLE.

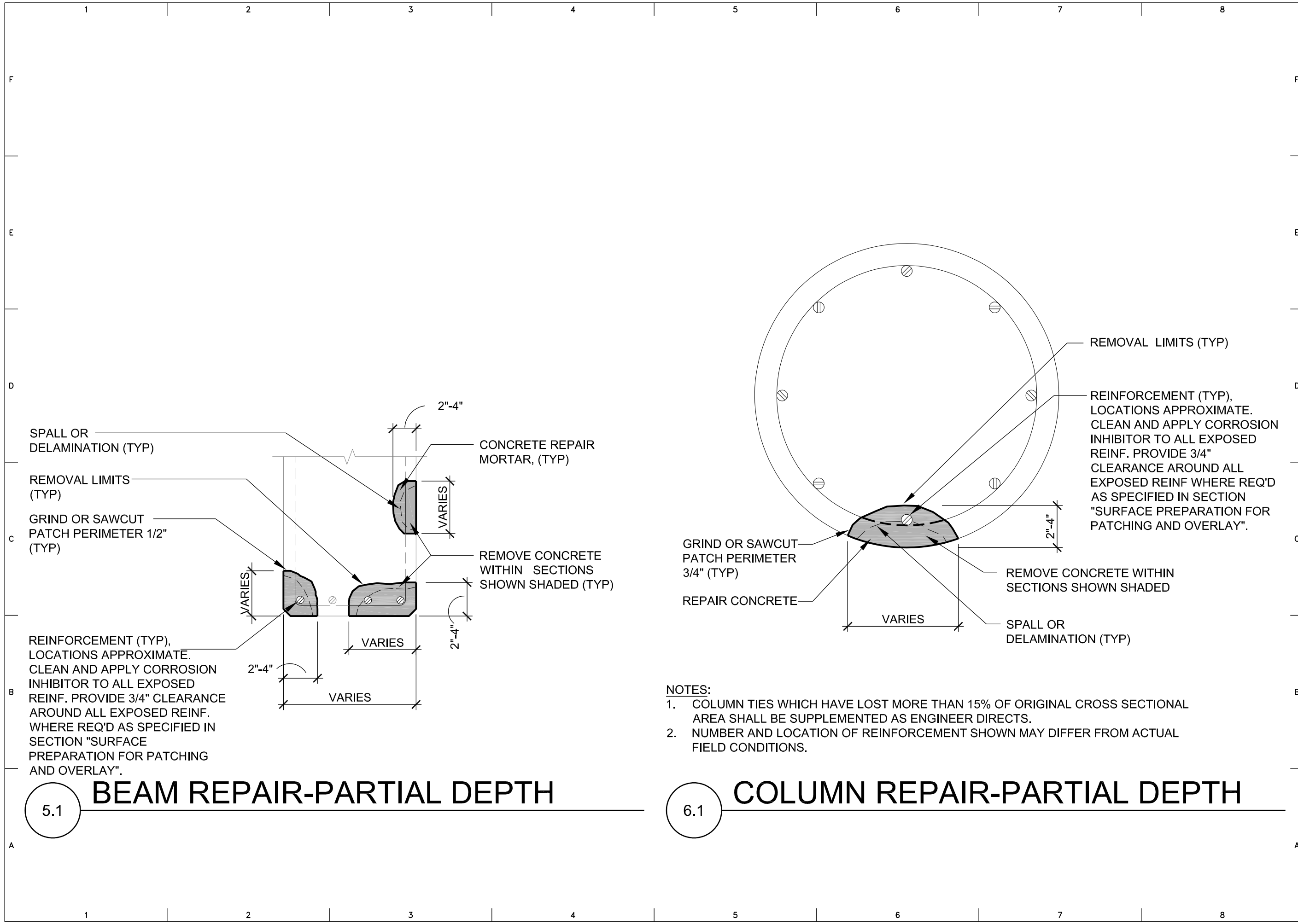
- NOTES:**
1. SIGNAGE AND POLE ARE INCIDENTAL TO W.I. 45.1

11 SIGN POLE DETAIL

BY	
DATE	
REVISIONS	
<p>WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5800 BE-0003840</p>	
<p>Tampa International Airport</p>	
PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION
	TAMPA INTERNATIONAL AIRPORT, TAMPA, FL
F.A.A. NO.	N/A
HCAA NO.	6120 17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	STRIPING DETAILS (04)
<p>R-109.04</p>	

User: maureen, maureen Drawing Name: 15-2100-13-HCAA-STRIPING_Level_8_Rehab\Acad\Rest\15-2100-13-R-109.dwg Plot Date: Aug 01, 2017 - 10:43am - 15-2100-13-R-109.dwg



User: koudes, mrouven Drawing Name: \\15-2100-13-HCA-SFPC_Level_8_Repair\Acad\Reat\15-2100-13-R-501-502-503-504-505-506-507-508-509-510-511-512-513-WI_Details.dwg Plot Date: Aug 01, 2017 10:47:06m



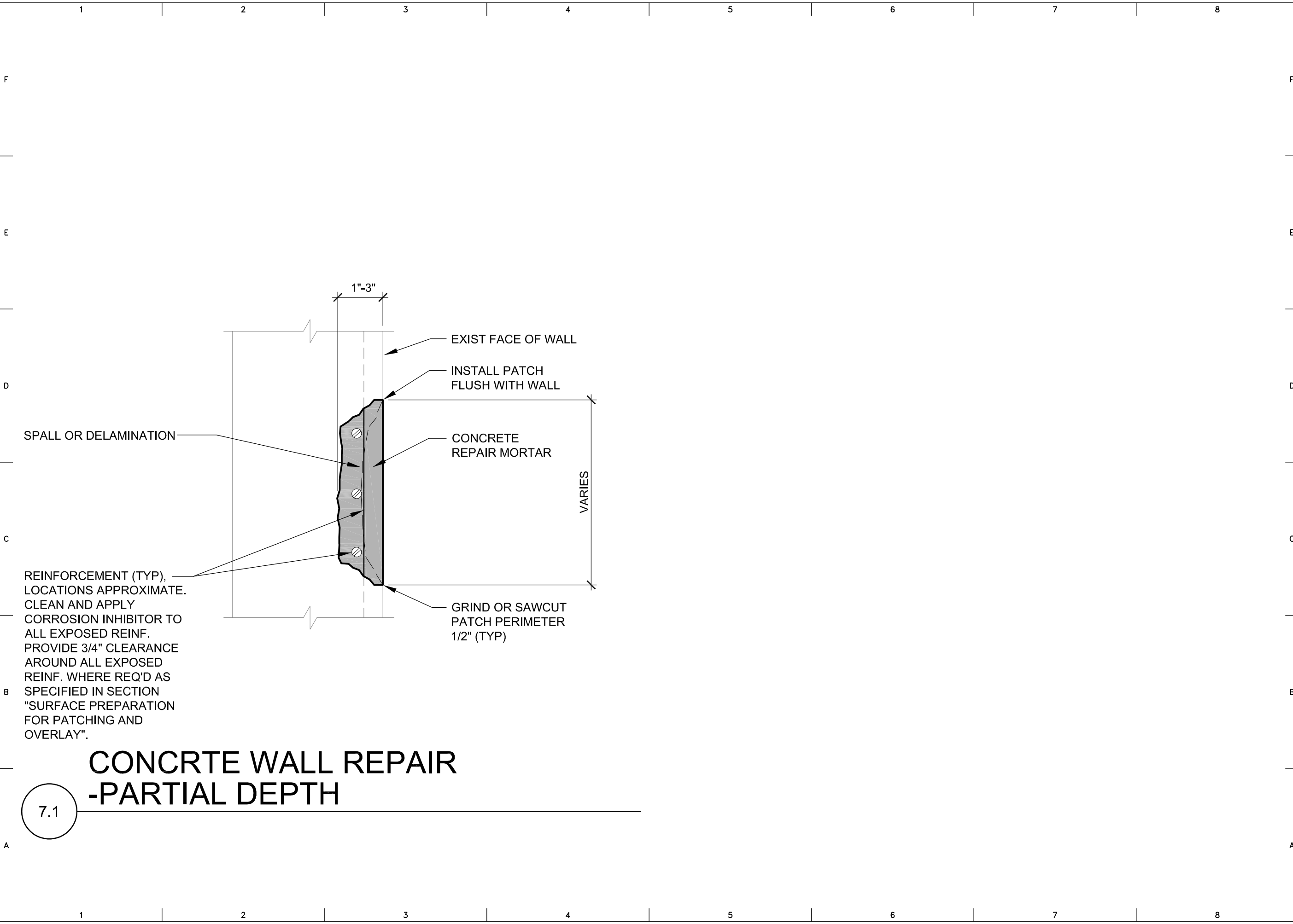
5.1 BEAM REPAIR-PARTIAL DEPTH

6.1 COLUMN REPAIR-PARTIAL DEPTH

- NOTES:**
- COLUMN TIES WHICH HAVE LOST MORE THAN 15% OF ORIGINAL CROSS SECTIONAL AREA SHALL BE SUPPLEMENTED AS ENGINEER DIRECTS.
 - NUMBER AND LOCATION OF REINFORCEMENT SHOWN MAY DIFFER FROM ACTUAL FIELD CONDITIONS.



AUTH.	
BY	
REVISIONS	
DATE	
F	 WALKER RESTORATION CONSULTANTS 4904 Esplanade Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5800 BE-0003840
D	 Tampa International Airport
C	PROJECT NAME SHORT TERM GARAGE LEVEL 8 REHABILITATION
B	TAMP INTERNATIONAL AIRPORT, TAMPA, FL
A	F.A.A. NO. _____ N/A HCAA NO. 6120 13 JOB NO. 15-2100.13 DESIGN _____ BKP DRAWN _____ MCB CHECKED _____ BKP FILE NAME _____ SCALE: _____ N.T.S. DATE: 08/09/17 SHEET TITLE WORK ITEM DETAILS (03)
R-503	

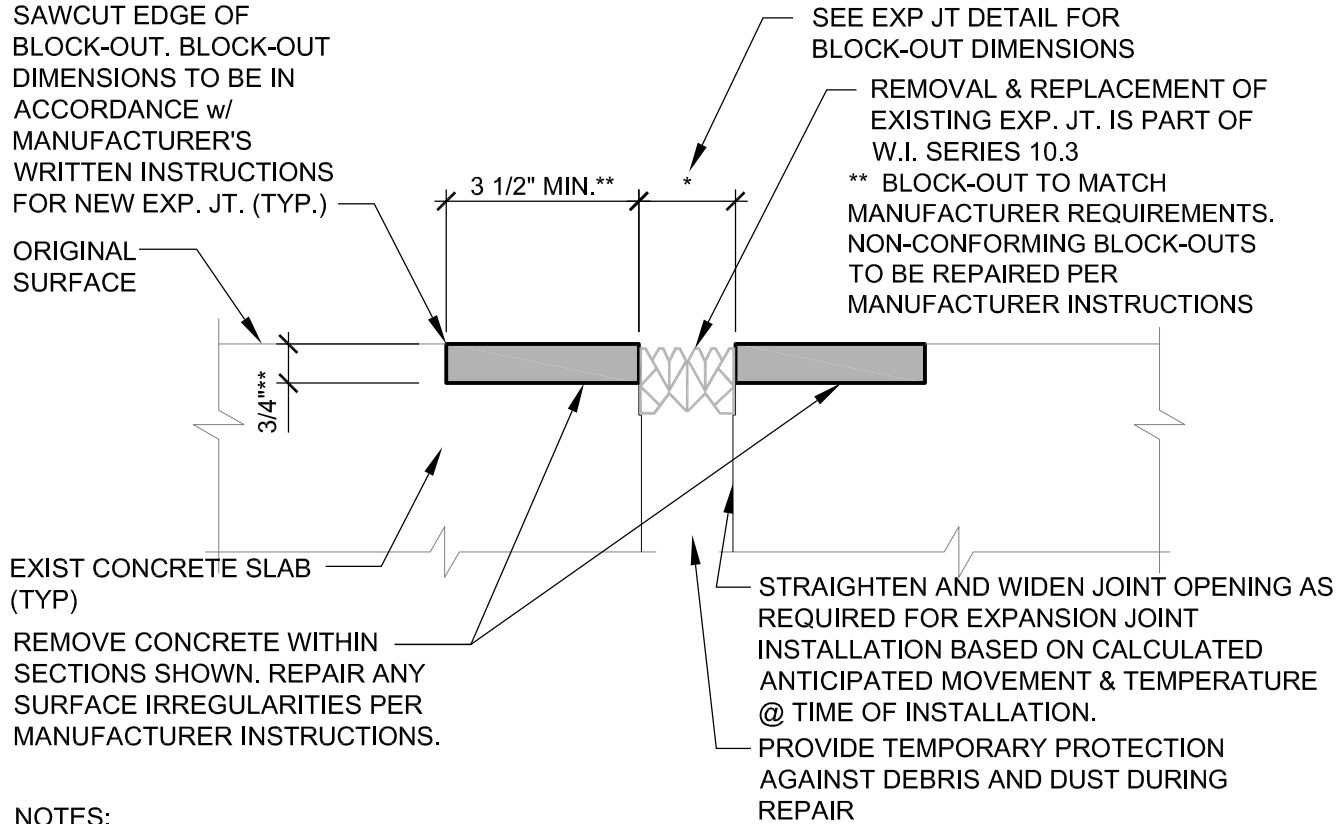
User: boudier, mrouven Drawing Name: \\15-2100-13-HCAA-STFC_Level_8_Renov\Acad\Revt\15-2100-13-R-501-502-503-504-505-506-507-508-509-510-511-512-513-WI_Details.dwg Plot Date: Aug 01, 2017 - 10:47:00m - 15-2100-13-R-501-502-503-504-505-506-507-508-509-510-511-512-513-WI_Details.dwg



7.1

CONCRTE WALL REPAIR -PARTIAL DEPTH

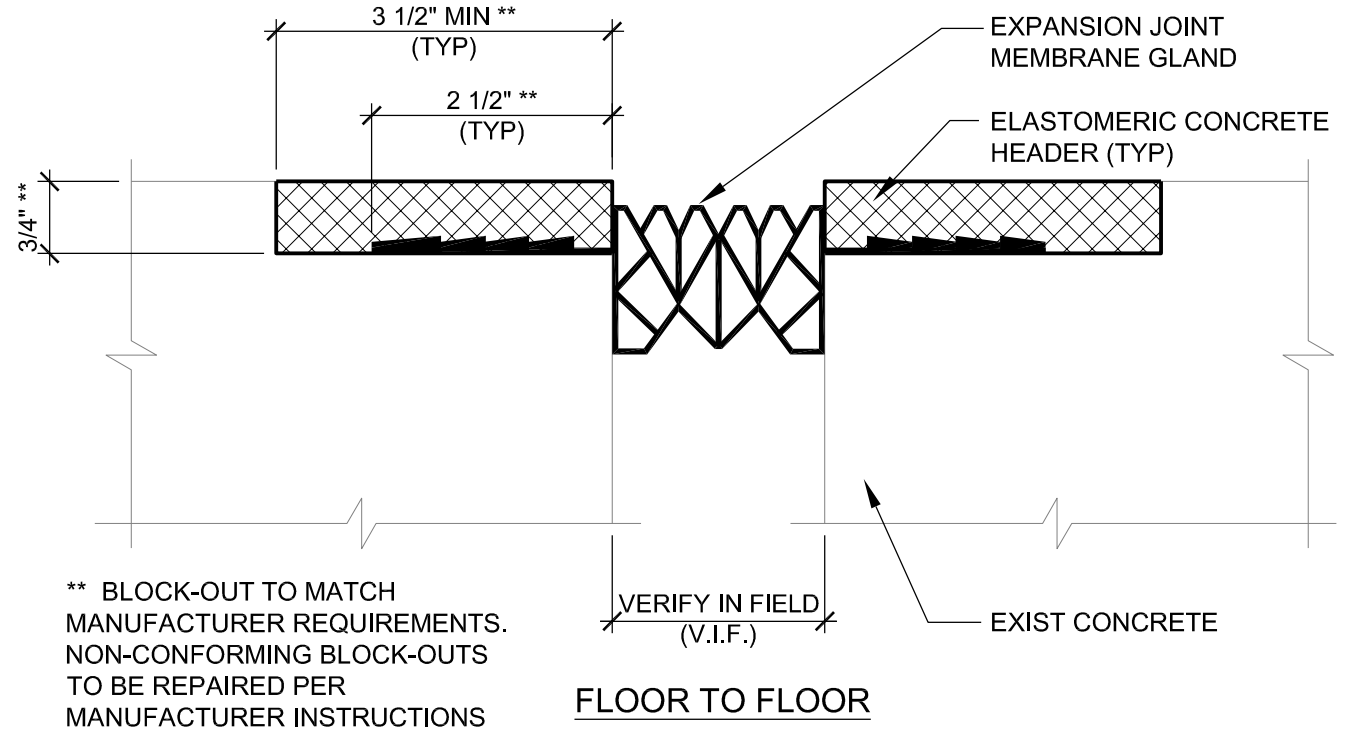
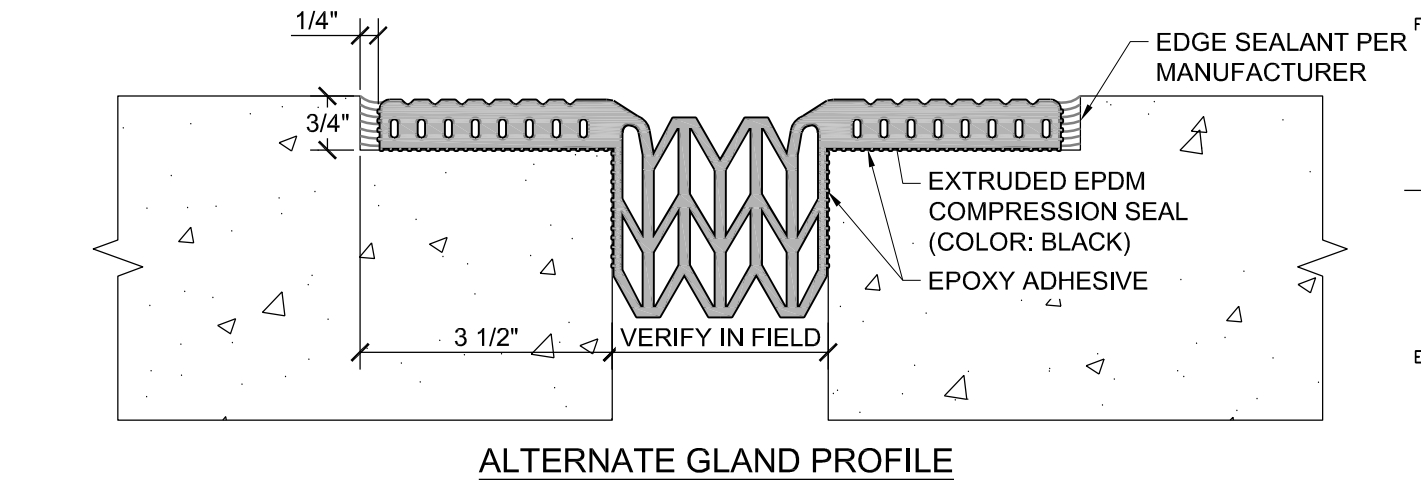
BY	
DATE	
REVISIONS	
AUTH	
 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.866.5800 BE-0003840	
 Tampa International Airport	
PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION
F.A.A. NO.	N/A
HCAA NO.	6120 17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	WORK ITEM DETAILS (04)
R-504	



- NOTES:**
1. MAINTAIN EXPANSION JOINT OPENING CLEAR OF DEBRIS. VERTICAL SURFACE MUST BE PLUMB AND SHALL NOT VARY MORE THAN 1/8" IN 6".
 2. EDGE STRAIGHTNESS TOLERANCE SHALL NOT VARY MORE THAN 1/4" IN 20'-0"
 3. CONTRACTOR TO COORDINATE CLOSURE OF PARKING SPACES BELOW EXP. JT. w/ OWNER.

EXPANSION JOINT PREPARATION-NEW BLOCK-OUT

9.1



- NOTE:**
1. CONTRACTOR SHALL, WITH MANUFACTURER, VERIFY FIELD INSTALLATION WIDTH BASED ON EXISTING JOINT AND TEMPERATURE CONDITIONS.
 2. PROVIDE SHOP DRAWINGS SHOWING JOINT INTERSECTIONS AND WALL TERMINATIONS.
 3. CONTRACTOR TO COORDINATE CLOSURE OF PARKING SPACES BELOW EXP. JT. w/ OWNER.
 4. ALL INTERSECTIONS TO BE FACTORY WELDED.
 5. JOINT TO BE SUPPLIED BY ONE MANUFACTURER FOR ENTIRE PROJECT.

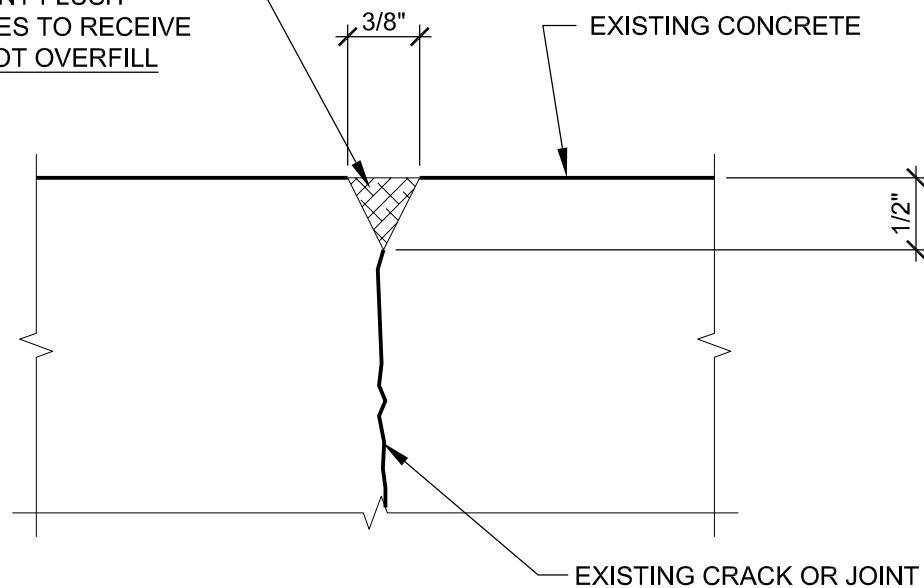
CONCRETE EDGED EXPANSION JOINT-ELASTOMERIC

10.3

AUTH:	
BY:	
REVISIONS:	
DATE:	
WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5900 BE-0003840	
PROJECT NAME:	SHORT TERM GARAGE LEVEL 8 REHABILITATION
F.A.A. NO.:	N/A
HCAA NO.:	6120 17
JOB NO.:	15-2100.13
DESIGN:	BKP
DRAWN:	MCB
CHECKED:	BKP
FILE NAME:	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE:	WORK ITEM DETAILS (05)
R-505	

User: hvdies, mvauren Drawing Name: \\15-2100-13-HCAA-STPC_Level_8_Rehab\Acad\Rev\15-2100-13-R-501-512-513-WI_Details.dwg Plot Date: Aug 01, 2017 10:47am - 15-2100-13-R-501-512-513-WI_Details.dwg

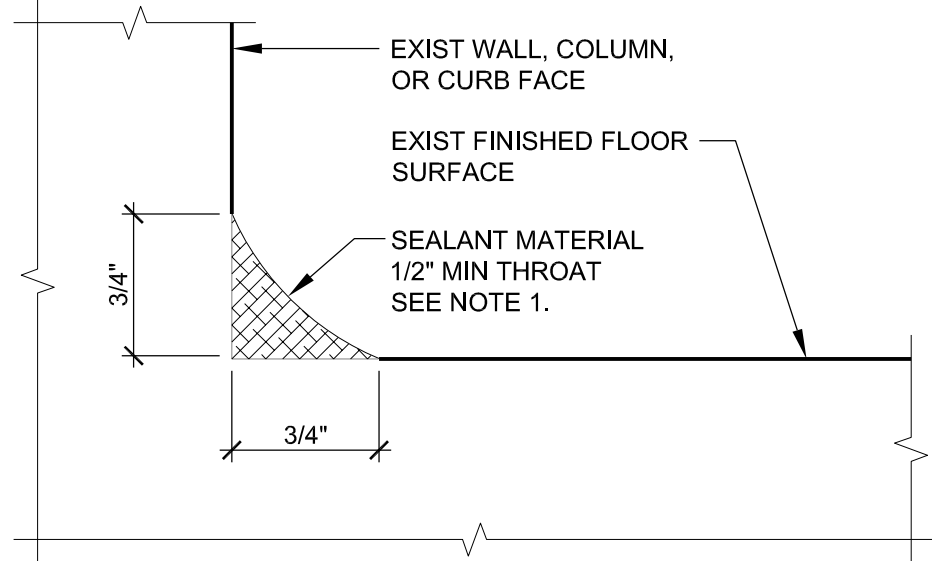
REMOVE EXISTING SEALANT, PREPARE SUBSTRATE, AND FILL WITH FLEXIBLE SEALANT. INSTALL SEALANT FLUSH WITH ADJACENT SURFACES TO RECEIVE TRAFFIC COATING. DO NOT OVERFILL JOINT.



REPAIR CRACK/JOINT SEALANT

(INCIDENTAL TO W.I. 16.1)

11.2



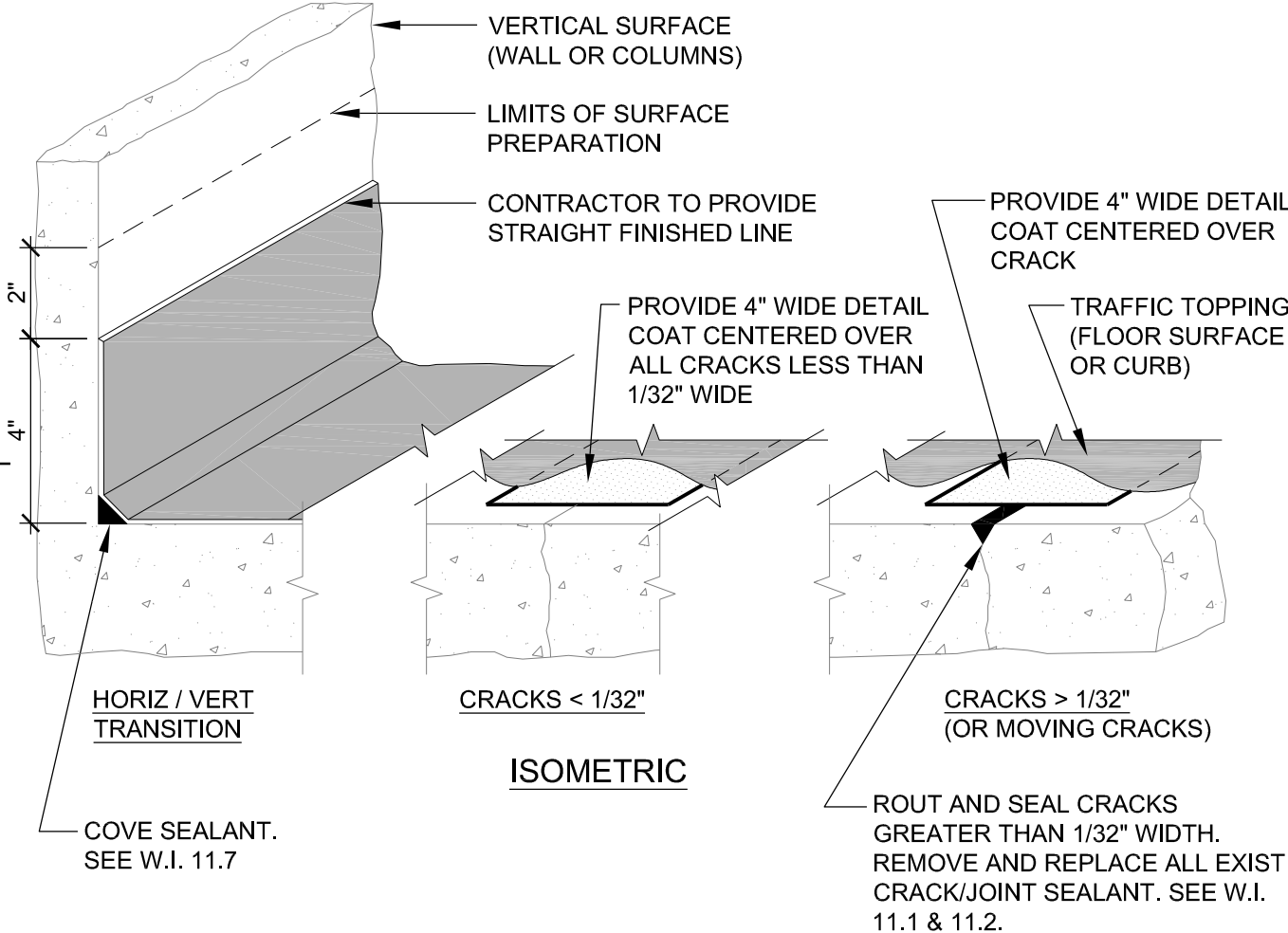
NOTE:

1. REMOVE EXISTING COVE SEALANT MATERIAL IF PRESENT. PREPARE SURFACE PER SPECIFICATIONS.

COVE SEALANT

(INCIDENTAL TO W.I. 16.1)

11.7



NOTE:

1. QUANTITIES BASED ON HORIZONTAL APPLICATION AREA. VERTICAL DETAILING, ADDITIONAL DETAIL COAT OVER CRACKS, ROUTING AND SEALING CRACKS, INSTALLATION OF COVE SEALANT, AND REMOVAL AND REPLACEMENT OF EXISTING SEALANTS ARE INCIDENTAL TO THIS WORK.

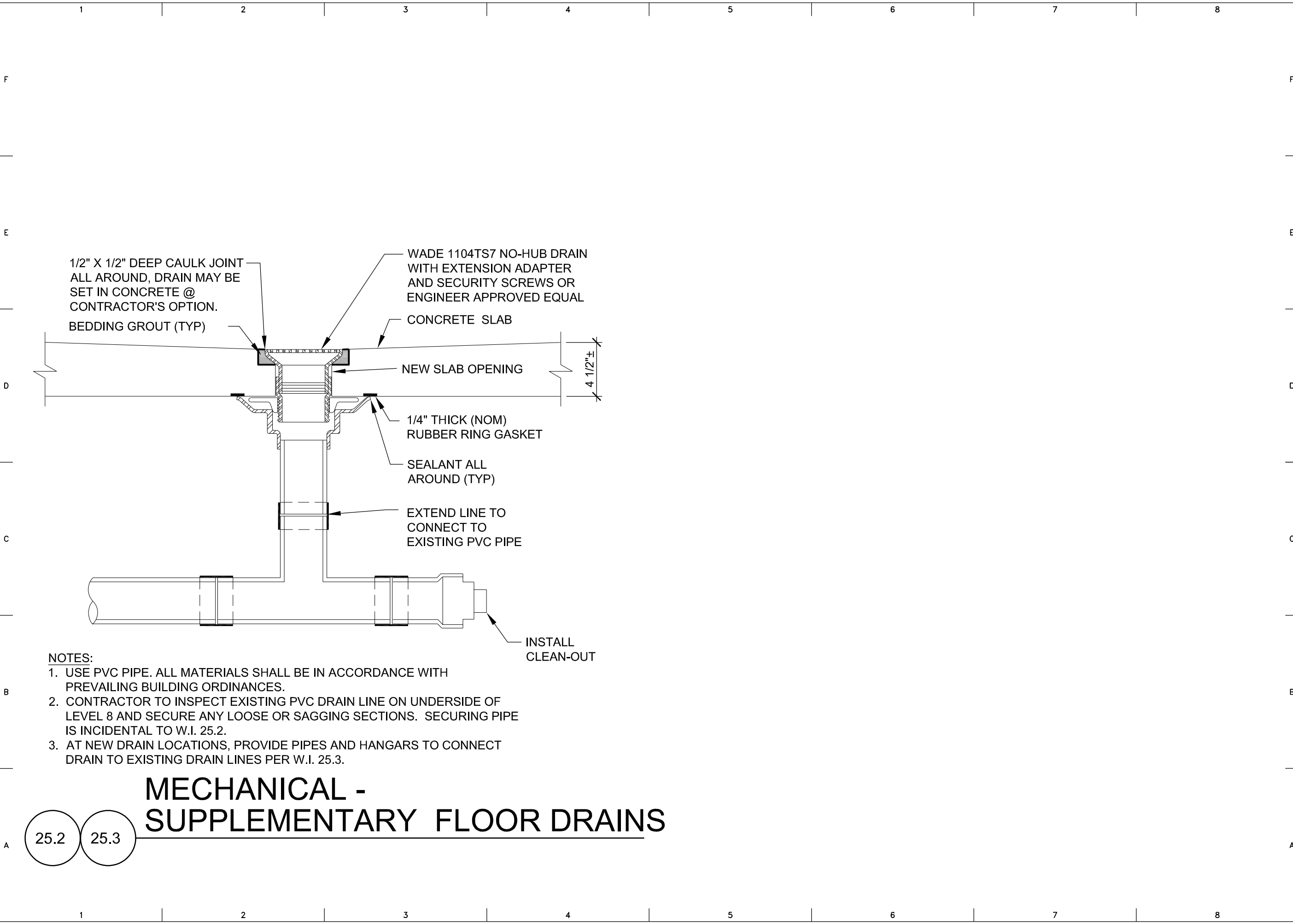
TRAFFIC TOPPING - VEHICULAR

16.1

BY	
DATE	
REVISIONS	
AUTH.	
 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5800 BE-0003840	
 Tampa International Airport	
PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION
LOCATION	TAMPA INTERNATIONAL AIRPORT, TAMPA, FL
F.A.A. NO.	N/A
HCAA NO.	6120 17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	WORK ITEM DETAILS (07)
R-507	

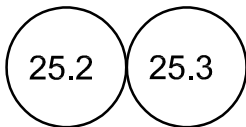
User: koudes, mrouven Drawing Name: \\15-2100-13-HCAA-SPEC_Level_8_Renovation\Level_8_Renovation\Level_8_Renovation\Level_8_Renovation\Level_8_Renovation\Level_8_Renovation.dwg
 Plot Date: Aug 01, 2017 10:47:00m - 15-2100-13-R-501-502-503-504-505-506-507-508-509-510-511-512-513-WI_Details.dwg



User: koudes, mrouven Drawing Name: \\15-2100-13-HCAA-STPC_Level_8_Rehab\Acad\Rehab\15-2100-13-R-501-502-503-504-505-506-507-508-509-510-511-512-513-WI_Details.dwg Plot Date: Aug 01, 2017 - 10:47:00m - 15-2100-13-R-501-502-503-504-505-506-507-508-509-510-511-512-513-WI_Details.dwg



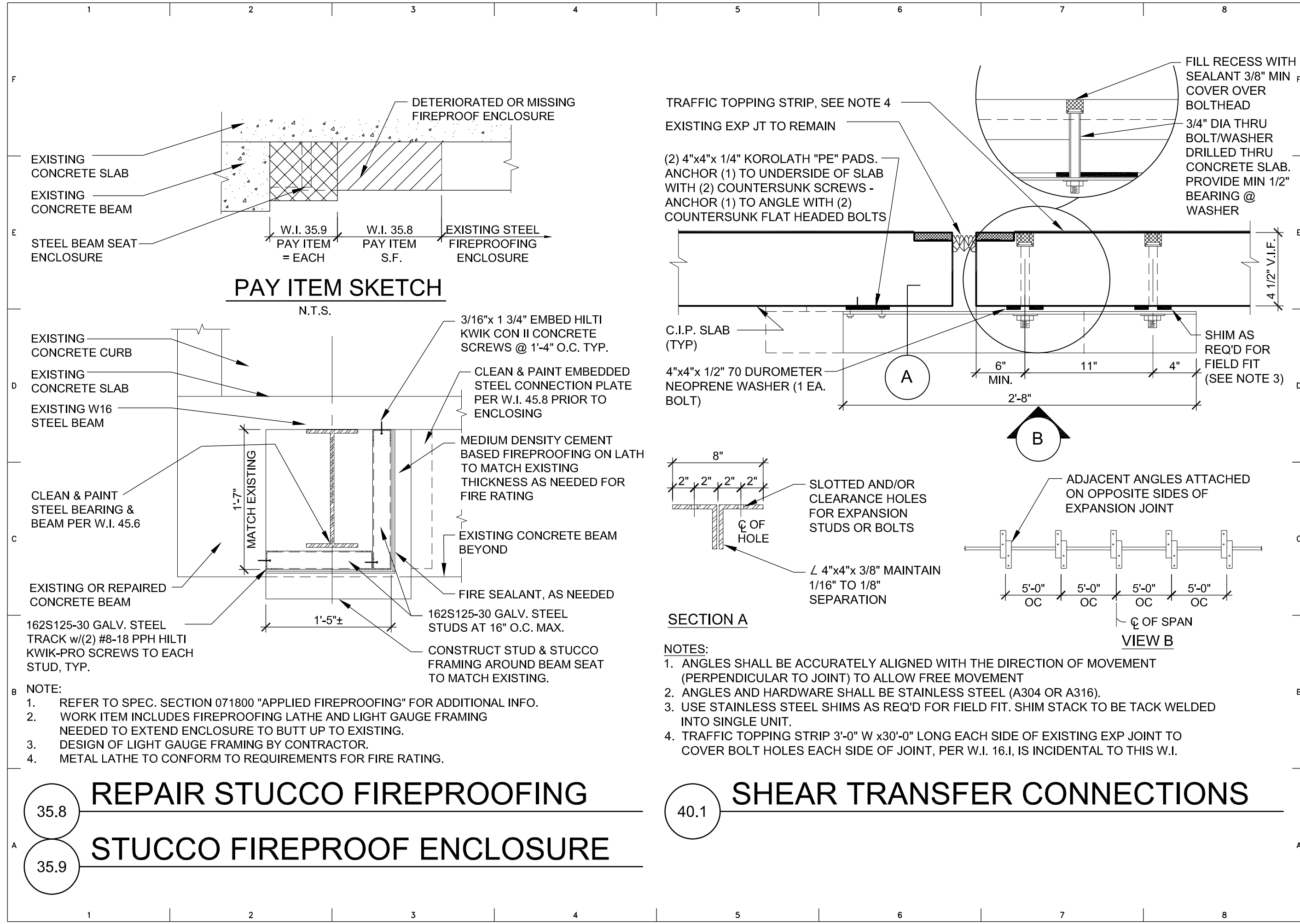
- NOTES:**
1. USE PVC PIPE. ALL MATERIALS SHALL BE IN ACCORDANCE WITH PREVAILING BUILDING ORDINANCES.
 2. CONTRACTOR TO INSPECT EXISTING PVC DRAIN LINE ON UNDERSIDE OF LEVEL 8 AND SECURE ANY LOOSE OR SAGGING SECTIONS. SECURING PIPE IS INCIDENTAL TO W.I. 25.2.
 3. AT NEW DRAIN LOCATIONS, PROVIDE PIPES AND HANGARS TO CONNECT DRAIN TO EXISTING DRAIN LINES PER W.I. 25.3.

MECHANICAL - SUPPLEMENTARY FLOOR DRAINS



AUTH.	
BY	
REVISIONS	
DATE	
F	 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.866.5800 BE-0003840
D	 Tampa International Airport
C	PROJECT NAME SHORT TERM GARAGE LEVEL 8 REHABILITATION TAMPA INTERNATIONAL AIRPORT, TAMPA, FL
B	F.A.A. NO. _____ N/A HCAA NO. _____ 6120.17 JOB NO. _____ 15-2100.13 DESIGN _____ BKP DRAWN _____ MCB CHECKED _____ BKP FILE NAME _____ SCALE: _____ N.T.S. DATE: _____ 08/09/17 SHEET TITLE WORK ITEM DETAILS (08)
A	R-508

User: koolies, m: aureen, Drawing: N:\15-2100-13-HCA-SPEC_Level_8_Repair\Acad\Sheet\15-2100-13-R-501-502-503-504-505-506-507-508-509-510-511-512-513-WI_Details.dwg, Plot Date: Aug 01, 2017 - 10:47:06m - 15-2100-13-R-501-502-503-504-505-506-507-508-509-510-511-512-513-WI_Details.dwg



35.8

REPAIR STUCCO FIREPROOFING

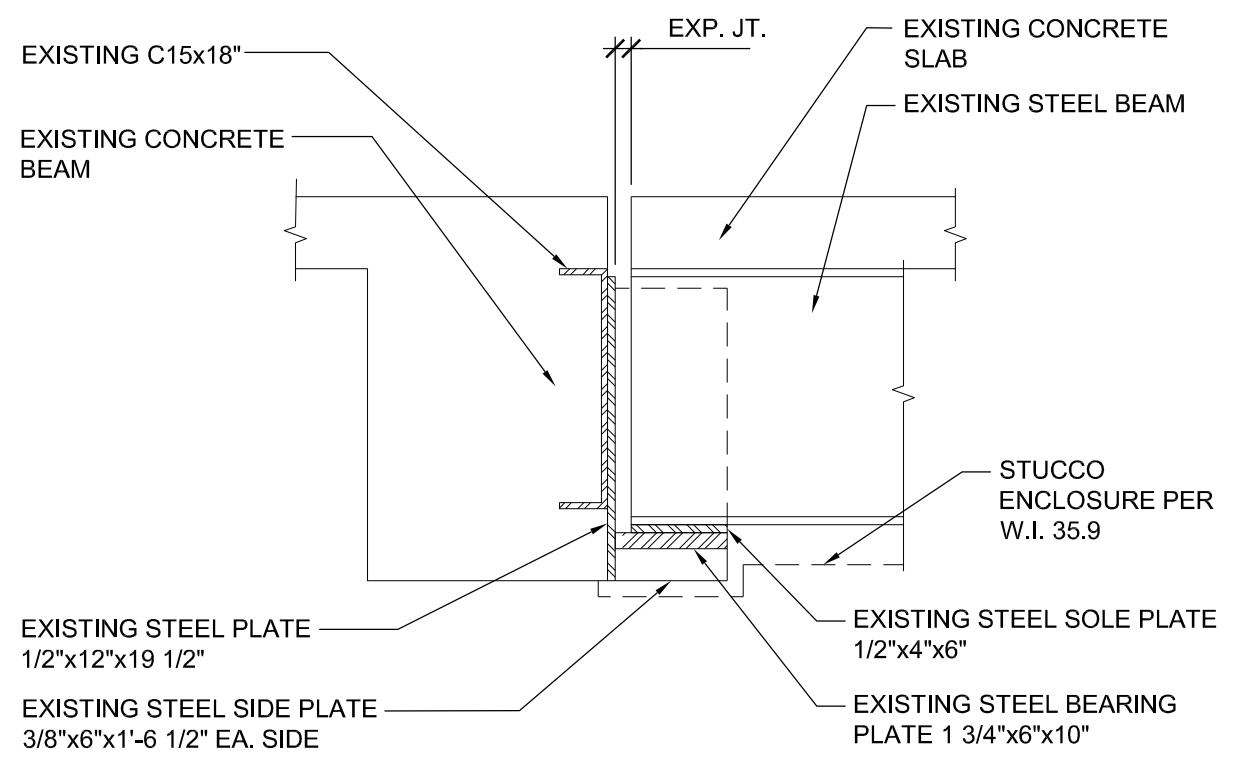
35.9

STUCCO FIREPROOF ENCLOSURE

40.1

SHEAR TRANSFER CONNECTIONS

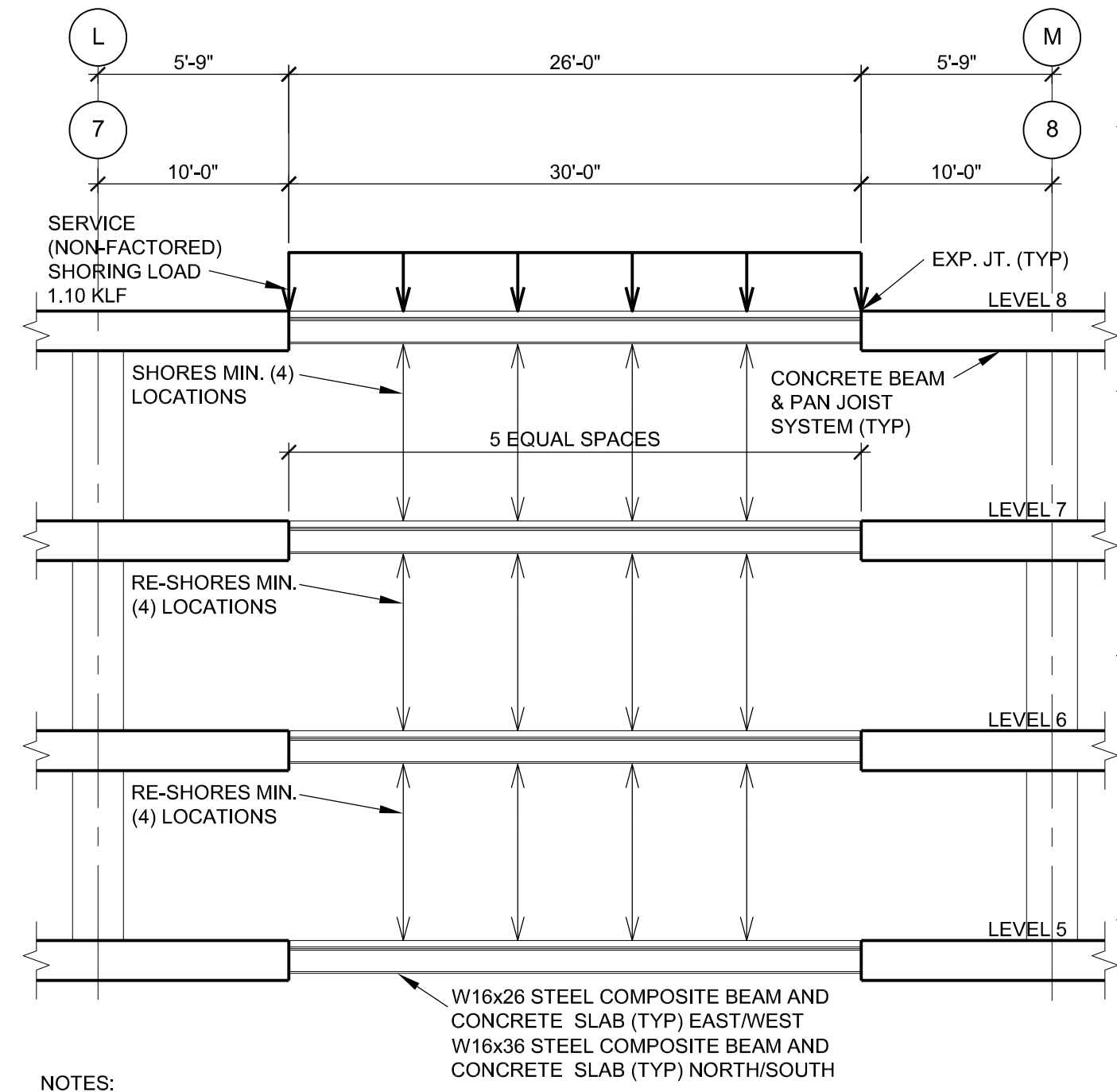
BY	
DATE	
REVISIONS	
AUTH.	
<p>WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5800 BE-0003840</p>	
<p>Tampa International Airport</p>	
PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION
TAMPA	INTERNATIONAL AIRPORT, TAMPA, FL
F.A.A. NO.	N/A
HCAA NO.	6120.17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE	N.T.S.
DATE	08/09/17
SHEET TITLE	WORK ITEM DETAILS (09)
<p>R-509</p>	



- NOTES:**
1. REMOVE EXISTING FIREPROOFING AS REQUIRED TO EXPOSE CORROSION OF BEAM AND BEARING PLATE. REMOVAL OF FIREPROOFING IS INCIDENTAL TO W.I. 35.9.
 2. CLEAN ALL CORROSION FROM BEARING ASSEMBLY PER W.I. 45.6. SHORE BEAM PER 40.2.1 TO COMPLETE WORK.
 3. REPAIR OR REPLACE ANY STEEL SECTIONS THAT ARE DAMAGED PER W.I. 40.2.
 4. CLEAN & PAINT ALL STEEL SURFACES EXCEPT BOTTOM OF SOLE PLATE AND TOP OF BEARING PLATE PER W.I. 45.6.
 5. RECONSTRUCT STUCCO ENCLOSURE PER W.I. 35.9. STUCCO ENCLOSURE TO BE PAID UNDER W.I. 35.9.
 6. SHORING, IF REQUIRED, TO BE PROVIDED AND PAID FOR PER W.I. 40.2.1. ENGINEER TO DETERMINE IF SHORING IS REQUIRED.

REPAIR STRUCTURAL STEEL SLIDE BEARING

40.2



- NOTES:**
1. EXTERIOR WALLS, CURBS, BEAM CONNECTIONS, ETC. NOT SHOWN FOR CLARITY.
 2. THE SHORING SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR'S SHORING ENGINEER FOR THE LOADING CRITERIA SHOWN. CONTRACTOR SHALL SUBMIT SIGNED AND SEALED SHORING DESIGN DRAWINGS AND CALCULATIONS TO WALKER RESTORATION FOR RECORD PURPOSES.

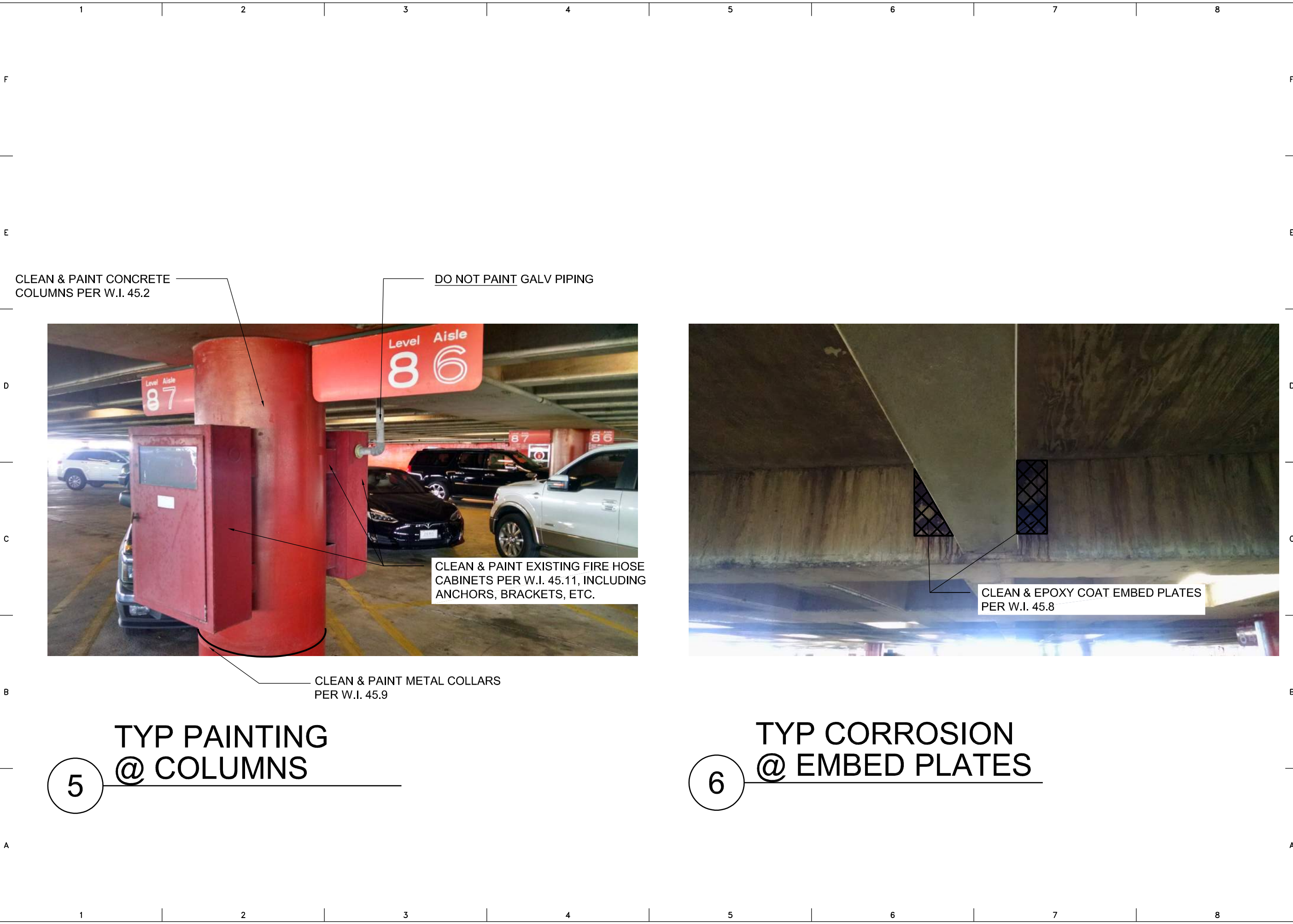
SHORING @ SLIDE BEARINGS

40.2.1

BY	
DATE	
REVISIONS	
 WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5900 BE-0003840	
 Tampa International Airport TAMPA INTERNATIONAL AIRPORT, TAMPA, FL	
PROJECT NAME	SHORT TERM GARAGE LEVEL 8 REHABILITATION
F.A.A. NO.	N/A
HCAA NO.	6120.17
JOB NO.	15-2100.13
DESIGN	BKP
DRAWN	MCB
CHECKED	BKP
FILE NAME	
SCALE:	N.T.S.
DATE:	08/09/17
SHEET TITLE	WORK ITEM DETAILS (10)
R-510	

User: houltes, mrouven Drawing Name: \\15-2100-13-HCAA-STPC_Level_8_Rehab\Acad\Sheet\15-2100-13-R-501-502-503-504-505-506-507-508-509-510-511-512-513-WI_Details.dwg
 Plot Date: Aug 01, 2017 - 10:47:06m - 15-2100-13-R-501-502-503-504-505-506-507-508-509-510-511-512-513-WI_Details.dwg

User: koades, maureen Drawing Name: \\15-2100-13-HCAA-STPG_Level_8_Renov\Acad\Draw\15-2100-13-R-601-602-603\WL_Photos.dwg Plot Date: Aug 01, 2017 10:51:0m - 15-2100-13-R-601-602-603\WL_Photos.dwg



CLEAN & PAINT CONCRETE COLUMNS PER W.I. 45.2

DO NOT PAINT GALV PIPING



CLEAN & PAINT EXISTING FIRE HOSE CABINETS PER W.I. 45.11, INCLUDING ANCHORS, BRACKETS, ETC.

CLEAN & PAINT METAL COLLARS PER W.I. 45.9

5 TYP PAINTING @ COLUMNS

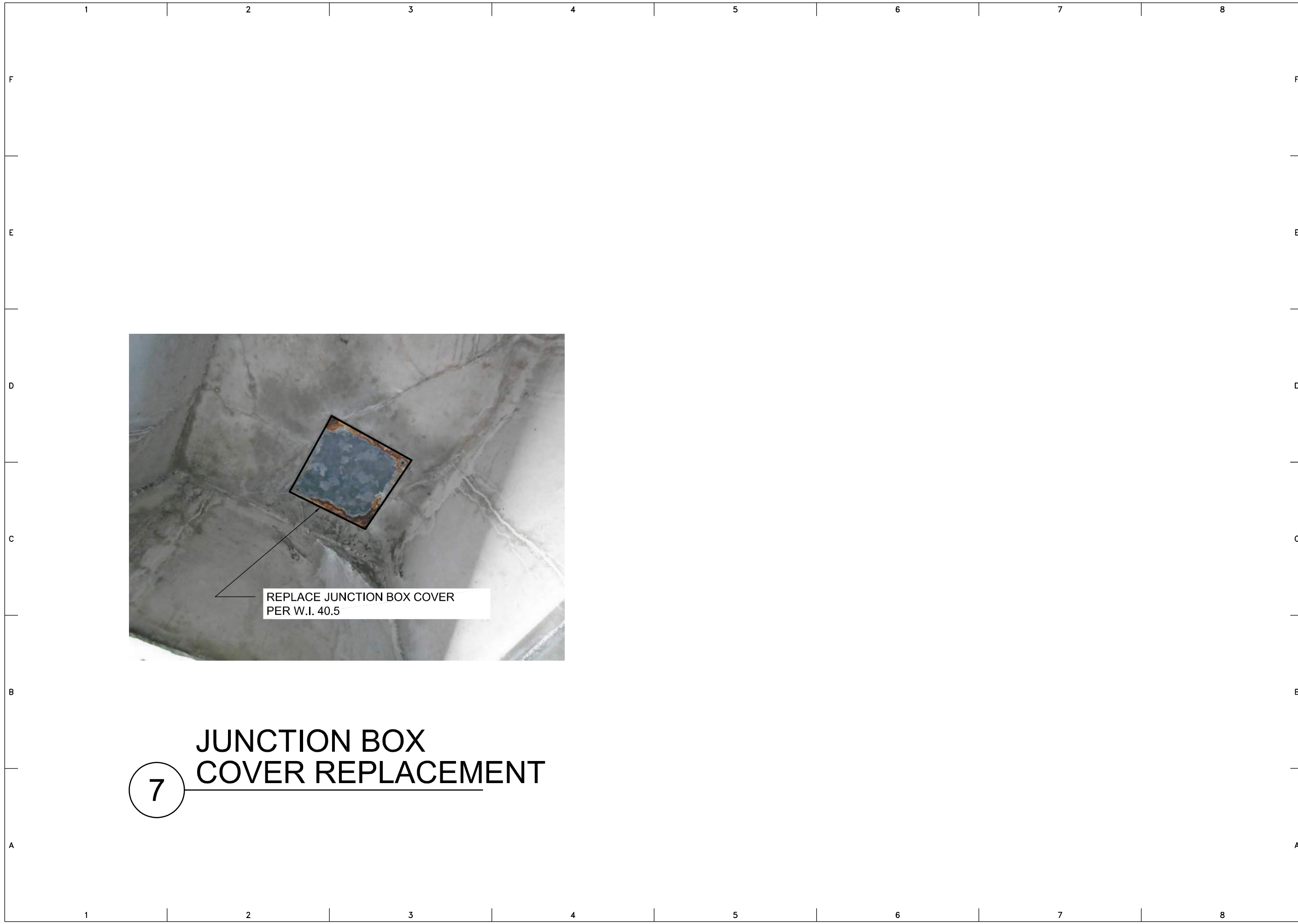


CLEAN & EPOXY COAT EMBED PLATES PER W.I. 45.8

6 TYP CORROSION @ EMBED PLATES

BY	DATE	REVISIONS	AUTH.
WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.866.5800 BE-0003840			
PROJECT NAME: SHORT TERM GARAGE LEVEL 8 REHABILITATION TAMA INTERNATIONAL AIRPORT, TAMPA, FL			
F.A.A. NO.	N/A		
HCAA NO.	6120 17		
JOB NO.	15-2100.13		
DESIGN	BKP		
DRAWN	MCB		
CHECKED	BKP		
FILE NAME			
SCALE	N.T.S.		
DATE	08/09/17		
SHEET TITLE	REPAIR PHOTOS (03)		
R-603			

User: boales, maureen Drawing Name: \\15-2100-13-HCAA-STFC_Level_8_Renov\Acad\Drawn\15-2100-13-R-601-602-603WL_Photos.dwg Plot Date: Aug 01, 2017 10:51am - 15-2100-13-R-601-602-603WL_Photos.dwg



7

JUNCTION BOX COVER REPLACEMENT

REPLACE JUNCTION BOX COVER PER W.I. 40.5

A	SHEET TITLE		REPAIR PHOTOS (04)
	DATE:		08/09/17
B	PROJECT NAME		SHORT TERM GARAGE LEVEL 8 REHABILITATION
	TAMPA INTERNATIONAL AIRPORT, TAMPA, FL		
C	F.A.A. NO.		N/A
	HCAA NO.		6120 17
D	JOB NO.		15-2100.13
	DESIGN		BKP
E	DRAWN		MCB
	CHECKED		BKP
F	FILE NAME		
	SCALE:		N.T.S.
WALKER RESTORATION CONSULTANTS 4904 Eisenhower Boulevard Suite 150 Tampa, FL 33634 Ph. 813.886.5800 BE-0003840		Tampa International Airport	
DATE		REVISIONS	
BY		AUTH.	
1		2	
3		4	
5		6	
7		8	
R-604			