



Lease and Concession Contract

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TABLE OF CONTENTS

<u>ARTICLE I.</u>	<u>DEFINITIONS</u>	<u>5</u>
<u>SECTION 1.01</u>	<u>DEFINITIONS</u>	<u>5</u>
<u>ARTICLE II.</u>	<u>EXCLUSIVE PREMISES</u>	<u>14</u>
<u>SECTION 2.01</u>	<u>EXCLUSIVE PREMISES DESCRIPTION</u>	<u>14</u>
<u>SECTION 2.02</u>	<u>CONRAC COMMON FUEL SYSTEM</u>	<u>15</u>
<u>SECTION 2.03</u>	<u>SERVICE CENTER SITE PETROLEUM STORAGE AND FUEL SYSTEMS</u>	<u>15</u>
<u>SECTION 2.04</u>	<u>ALLOCATION OF CUSTOMER SERVICE SPACE, OFFICE SPACE, READY/RETURN SPACE, QTA SPACE, AND VEHICLE STORAGE AREA SPACE WITHIN CONRAC</u>	<u>16</u>
<u>SECTION 2.05</u>	<u>RECONSTITUTION OF CONCESSIONAIRES</u>	<u>17</u>
<u>SECTION 2.06</u>	<u>OPTION TO RENEGOTIATE; NO ASSURANCE OF CONTINUED PARTICIPATION</u>	<u>17</u>
<u>SECTION 2.07</u>	<u>MINOR MODIFICATIONS TO CONRAC</u>	<u>18</u>
<u>SECTION 2.08</u>	<u>INGRESS AND EGRESS</u>	<u>18</u>
<u>SECTION 2.09</u>	<u>RIGHT OF ENTRY</u>	<u>18</u>
<u>SECTION 2.10</u>	<u>EXCLUSIVE PREMISES ACCEPTANCE AS IS</u>	<u>18</u>
<u>SECTION 2.11</u>	<u>NO WARRANTY OF ECONOMIC VIABILITY</u>	<u>19</u>
<u>ARTICLE III.</u>	<u>TERM</u>	<u>19</u>
<u>SECTION 3.01</u>	<u>TERM</u>	<u>19</u>
<u>SECTION 3.02</u>	<u>HOLDOVER</u>	<u>19</u>
<u>SECTION 3.03</u>	<u>RIGHTS AND OBLIGATIONS UPON EXPIRATION OR TERMINATION</u>	<u>20</u>
<u>SECTION 3.04</u>	<u>END OF TERM TRANSITION</u>	<u>20</u>
<u>ARTICLE IV.</u>	<u>PAYMENTS, OTHER CHARGES, REPORTING, AND ACCOUNTING RECORDS</u>	<u>21</u>
<u>SECTION 4.01</u>	<u>GROSS RECEIPTS</u>	<u>21</u>
<u>SECTION 4.02</u>	<u>PRIVILEGE FEE</u>	<u>23</u>
<u>SECTION 4.03</u>	<u>CONCESSION RECOVERY FEE</u>	<u>25</u>
<u>SECTION 4.04</u>	<u>CFC COLLECTIONS</u>	<u>25</u>
<u>SECTION 4.05</u>	<u>GROUND RENT</u>	<u>27</u>
<u>SECTION 4.06</u>	<u>CONCESSIONAIRE'S DEFICIENCY PAYMENTS, OPERATING EXPENSES, AND IMPOSITION</u>	<u>28</u>
<u>SECTION 4.07</u>	<u>LIABILITY FOR CONCESSIONAIRE'S DEFICIENCY PAYMENT</u>	<u>35</u>
<u>SECTION 4.08</u>	<u>TAXES</u>	<u>35</u>
<u>SECTION 4.09</u>	<u>OTHER FEES AND CHARGES</u>	<u>36</u>
<u>SECTION 4.10</u>	<u>FAILURE TO MAKE TIMELY PAYMENTS</u>	<u>36</u>
<u>SECTION 4.11</u>	<u>AUTHORITY'S LIEN</u>	<u>37</u>
<u>SECTION 4.12</u>	<u>RECORD KEEPING, REPORTS, ANNUAL AUDIT, AND END OF YEAR ADJUSTMENT</u>	<u>37</u>
<u>SECTION 4.13</u>	<u>PLACE OF PAYMENT AND STATEMENT FILING</u>	<u>40</u>
<u>SECTION 4.14</u>	<u>FORM OF PAYMENT</u>	<u>40</u>

<u>SECTION 4.15</u>	<u>AUTHORITY'S RIGHT TO PERFORM AUDITS, INSPECTIONS, OR ATTESTATION ENGAGEMENTS</u>	<u>40</u>
<u>ARTICLE V.</u>	<u>PERMITTED USES</u>	<u>42</u>
<u>SECTION 5.01</u>	<u>PERMITTED USES</u>	<u>42</u>
<u>SECTION 5.02</u>	<u>NON-EXCLUSIVE RIGHTS</u>	<u>43</u>
<u>SECTION 5.03</u>	<u>RESTRICTIONS</u>	<u>43</u>
<u>SECTION 5.04</u>	<u>PERMITS AND LICENSES</u>	<u>43</u>
<u>ARTICLE VI.</u>	<u>OPERATIONS AND PERFORMANCE STANDARDS</u>	<u>44</u>
<u>SECTION 6.01</u>	<u>AUTHORITY'S RIGHT TO MONITOR PERFORMANCE</u>	<u>44</u>
<u>SECTION 6.02</u>	<u>OPERATING PROCEDURES AND STANDARDS</u>	<u>44</u>
<u>SECTION 6.03</u>	<u>TRASH, WASTE AND REFUSE</u>	<u>48</u>
<u>SECTION 6.04</u>	<u>BADGING AND SECURITY REQUIREMENTS</u>	<u>49</u>
<u>SECTION 6.05</u>	<u>EMPLOYEE PARKING</u>	<u>50</u>
<u>SECTION 6.06</u>	<u>PAGING, AUDIO, VIDEO SYSTEMS AND FREQUENCY PROTECTION</u>	<u>50</u>
<u>SECTION 6.07</u>	<u>COMPLAINTS</u>	<u>50</u>
<u>ARTICLE VII.</u>	<u>NON-DISCRIMINATION / AFFIRMATIVE ACTION</u>	<u>51</u>
<u>ARTICLE VIII.</u>	<u>AIRPORT CONCESSION DISADVANTAGED BUSINESS ENTERPRISE</u>	<u>54</u>
<u>SECTION 8.01</u>	<u>AUTHORITY'S POLICY</u>	<u>54</u>
<u>SECTION 8.02</u>	<u>NON-DISCRIMINATION</u>	<u>55</u>
<u>SECTION 8.03</u>	<u>ACDBE PARTICIPATION AND COMPLIANCE</u>	<u>55</u>
<u>ARTICLE IX.</u>	<u>CONRAC CONSTRUCTION</u>	<u>57</u>
<u>SECTION 9.01</u>	<u>CONRAC/APM PROJECT</u>	<u>57</u>
<u>SECTION 9.02</u>	<u>CONSTRUCTION OF CONCESSIONAIRE IMPROVEMENTS BY CONCESSIONAIRE</u>	<u>59</u>
<u>SECTION 9.03</u>	<u>ALTERATIONS</u>	<u>61</u>
<u>SECTION 9.04</u>	<u>AUTHORITY STANDARDS</u>	<u>63</u>
<u>SECTION 9.05</u>	<u>TITLE TO IMPROVEMENTS</u>	<u>63</u>
<u>SECTION 9.06</u>	<u>SIGNAGE</u>	<u>63</u>
<u>ARTICLE X.</u>	<u>DISCLAIMER OF LIENS</u>	<u>64</u>
<u>ARTICLE XI.</u>	<u>MAINTENANCE AND REPAIRS</u>	<u>64</u>
<u>SECTION 11.01</u>	<u>CONCESSIONAIRE'S MAINTENANCE AND REPAIR OBLIGATIONS</u>	<u>64</u>
<u>SECTION 11.02</u>	<u>AUTHORITY'S MAINTENANCE AND REPAIR OBLIGATIONS</u>	<u>68</u>
<u>ARTICLE XII.</u>	<u>DEFAULT, REMEDIES AND TERMINATION RIGHTS</u>	<u>69</u>
<u>SECTION 12.01</u>	<u>EVENTS OF DEFAULT</u>	<u>69</u>
<u>SECTION 12.02</u>	<u>CONCESSIONAIRE REMEDIES</u>	<u>70</u>
<u>SECTION 12.03</u>	<u>AUTHORITY REMEDIES</u>	<u>70</u>
<u>SECTION 12.04</u>	<u>HABITUAL DEFAULT</u>	<u>71</u>
<u>ARTICLE XIII.</u>	<u>INDEMNIFICATION</u>	<u>71</u>
<u>ARTICLE XIV.</u>	<u>INSURANCE</u>	<u>74</u>

<u>SECTION 14.01</u>	<u>INSURANCE TERMS AND CONDITIONS</u>	<u>74</u>
<u>SECTION 14.02</u>	<u>LIMITS AND REQUIREMENTS</u>	<u>74</u>
<u>SECTION 14.03</u>	<u>CONDITIONS OF ACCEPTANCE</u>	<u>77</u>
<u>ARTICLE XV.</u>	<u>SECURITY FOR PERFORMANCE AND PAYMENT</u>	<u>77</u>
<u>SECTION 15.01</u>	<u>FORM OF PAYMENT AND PERFORMANCE SECURITY</u>	<u>77</u>
<u>SECTION 15.02</u>	<u>APPLICATION OF PAYMENT SECURITY</u>	<u>78</u>
<u>SECTION 15.03</u>	<u>RELEASE OF PAYMENT SECURITY</u>	<u>78</u>
<u>SECTION 15.04</u>	<u>GUARANTY OF CONTRACT</u>	<u>79</u>
<u>ARTICLE XVI.</u>	<u>PROPERTY DAMAGE</u>	<u>79</u>
<u>SECTION 16.01</u>	<u>PARTIAL DAMAGE</u>	<u>79</u>
<u>SECTION 16.02</u>	<u>EXTENSIVE DAMAGE</u>	<u>79</u>
<u>SECTION 16.03</u>	<u>COMPLETE DESTRUCTION</u>	<u>79</u>
<u>SECTION 16.04</u>	<u>ABATEMENT OF FEES</u>	<u>79</u>
<u>SECTION 16.05</u>	<u>LIMITS OF AUTHORITY'S OBLIGATIONS DEFINED</u>	<u>80</u>
<u>SECTION 16.06</u>	<u>ALTERNATE SPACE</u>	<u>80</u>
<u>SECTION 16.07</u>	<u>WAIVER OF SUBROGATION</u>	<u>80</u>
<u>ARTICLE XVII.</u>	<u>DAMAGING ACTIVITIES</u>	<u>80</u>
<u>ARTICLE XVIII.</u>	<u>COMPLIANCE WITH LAWS, REGULATIONS, ORDINANCES AND RULES</u>	<u>81</u>
<u>ARTICLE XIX.</u>	<u>ENVIRONMENTAL COMPLIANCE</u>	<u>81</u>
<u>ARTICLE XX.</u>	<u>AIRPORT SECURITY</u>	<u>87</u>
<u>ARTICLE XXI.</u>	<u>AMERICANS WITH DISABILITIES ACT</u>	<u>87</u>
<u>ARTICLE XXII.</u>	<u>FAA APPROVAL</u>	<u>87</u>
<u>ARTICLE XXIII.</u>	<u>RIGHT OF FLIGHT</u>	<u>87</u>
<u>ARTICLE XXIV.</u>	<u>FEDERAL RIGHT TO RECLAIM</u>	<u>87</u>
<u>ARTICLE XXV.</u>	<u>PROPERTY RIGHTS RESERVED</u>	<u>88</u>
<u>ARTICLE XXVI.</u>	<u>ASSIGNMENT AND SUBCONTRACT</u>	<u>88</u>
<u>ARTICLE XXVII.</u>	<u>ORGANIZATIONAL STANDING</u>	<u>88</u>
<u>ARTICLE XXVIII.</u>	<u>NON-EXCLUSIVE RIGHTS</u>	<u>88</u>
<u>ARTICLE XXIX.</u>	<u>RIGHT TO DEVELOP AIRPORT</u>	<u>88</u>
<u>ARTICLE XXX.</u>	<u>APPLICABLE LAW AND VENUE</u>	<u>89</u>
<u>ARTICLE XXXI.</u>	<u>ATTORNEYS' FEES AND COSTS</u>	<u>89</u>
<u>ARTICLE XXXII.</u>	<u>RIGHT TO AMEND</u>	<u>89</u>
<u>ARTICLE XXXIII.</u>	<u>HEADINGS</u>	<u>89</u>
<u>ARTICLE XXXIV.</u>	<u>NOTICES AND COMMUNICATIONS</u>	<u>89</u>
<u>ARTICLE XXXV.</u>	<u>SUBORDINATION TO CFC TRUST AGREEMENT</u>	<u>90</u>
<u>ARTICLE XXXVI.</u>	<u>RELATIONSHIP OF THE PARTIES</u>	<u>90</u>
<u>ARTICLE XXXVII.</u>	<u>AUTHORITY APPROVALS</u>	<u>91</u>
<u>ARTICLE XXXVIII.</u>	<u>SEVERABILITY</u>	<u>91</u>

<u>ARTICLE XXXIX.</u>	<u>TIME IS OF THE ESSENCE</u>	<u>91</u>
<u>ARTICLE XL.</u>	<u>SIGNATURES</u>	<u>91</u>
<u>SECTION 40.01</u>	<u>SIGNATURE OF PARTIES</u>	<u>91</u>
<u>SECTION 40.02</u>	<u>COUNTERPARTS</u>	<u>91</u>
<u>ARTICLE XLI.</u>	<u>SCRUTINIZED COMPANIES LIST</u>	<u>91</u>
<u>ARTICLE XLII.</u>	<u>AGENT FOR SERVICE OF PROCESS</u>	<u>91</u>
<u>ARTICLE XLIII.</u>	<u>COMPLIANCE WITH PUBLIC RECORDS LAW</u>	<u>92</u>
<u>ARTICLE XLIV.</u>	<u>DATA SECURITY</u>	<u>93</u>
<u>ARTICLE XLV.</u>	<u>FLORIDA PUBLIC ENTITY CRIMES</u>	<u>93</u>
<u>ARTICLE XLVI.</u>	<u>RADON GAS NOTIFICATION</u>	<u>93</u>
<u>ARTICLE XLVII.</u>	<u>HAZARDOUS SUBSTANCES AND OSHA COMPLIANCE</u>	<u>94</u>
<u>ARTICLE XLVIII.</u>	<u>NON-DISCLOSURE</u>	<u>94</u>
<u>ARTICLE XLIX.</u>	<u>WAIVERS</u>	<u>94</u>
<u>ARTICLE L.</u>	<u>COMPLETE CONTRACT</u>	<u>95</u>
<u>ARTICLE LI.</u>	<u>ORDER OF PRECEDENCE</u>	<u>95</u>

EXHIBITS:

<u>EXHIBIT A</u>	<u>OPERATING SPACE COMPONENTS</u>
<u>EXHIBIT B</u>	<u>MONTHLY REPORTING FORM</u>
<u>EXHIBIT C</u>	<u>MONTHLY DETAIL SALES INFORMATION</u>
<u>EXHIBIT D</u>	<u>FORM OF GUARANTY OF CONTRACT</u>
<u>EXHIBIT E</u>	<u>CONRAC OPERATIONS & MAINTENANCE STANDARDS</u>
<u>EXHIBIT F</u>	<u>CONCESSIONAIRE IMPROVEMENT HANDBOOK</u>
<u>EXHIBIT G</u>	<u>TENANT WORK PERMIT HANDBOOK</u>
<u>EXHIBIT H</u>	<u>AUTHORITY'S CONTRACTUAL INSURANCE TERMS AND CONDITIONS</u>
<u>EXHIBIT I</u>	<u>SCHEDULE OF CONCESSIONAIRE IMPROVEMENTS</u>
<u>EXHIBIT J</u>	<u>MAIN CONRAC BASELINE ENVIRONMENTAL REPORT</u>
<u>EXHIBIT K</u>	<u>SERVICE CENTER SITE 4 BASELINE ENVIRONMENTAL REPORT</u>
<u>EXHIBIT L</u>	<u>MAJORITY IN INTEREST EXAMPLE</u>

CONTRACT

This Lease and Concession Contract for On-Airport Vehicle Rental at Tampa International Airport (Contract) is made and entered into this 2nd day of December 2021 between the Hillsborough County Aviation Authority, a public body corporate under the laws of the State of Florida whose post office address is Post Office Box 22287, Tampa, Florida 33622 (Authority), and All Car Leasing, Inc., a corporation, authorized to do business in the State of Florida, (Concessionaire), (collectively referred to as the Parties).

NOW, THEREFORE, for and in consideration of the mutual covenants hereof, the Parties do hereby agree as follows:

Article I. DEFINITIONS

Section 1.01 DEFINITIONS

The following terms will have the meanings set forth below:

- A. **Airport:** Tampa International Airport located at 4100 George J. Bean Parkway, Tampa, Florida.
- B. **Airport Customer:** A person or person(s) who rents, picks-up, or enters into a Vehicle Rental Contract for the rental of a vehicle from a vehicle rental Concessionaire at the ConRAC on the Airport.
- C. **Airport Terminals:** The passenger transportation facilities at the Airport, existing or under construction as of the Effective Date of this Contract, or to be constructed during the Term of this Contract, known individually as the Main Terminal, Airside A, Airside C, Airside E, and Airside F, including all user movement areas, areas leased exclusively or preferentially to any third party or parties, common areas and baggage claim areas therein, and interconnecting hallways, concourses, and bridges.
- D. **APM:** The Airport's automated people mover system and any modifications, replacements, expansions, and/or improvements thereto, which travels on a dedicated guideway providing passenger transportation service at the Airport, including, without limitation, to the ConRAC, Main Terminal, and parking areas, and including, without limitation, the vehicles used for transport, stations, and all related equipment and associated improvements from time to time, together with any expansions or extensions thereof.
- E. **Approved Project:** As it applies to any portion of the Exclusive Premises, Concessionaire's construction, furnishing, fixturing, and remodeling of such portion of the Exclusive Premises as reviewed and approved by Authority in accordance with Authority's Concessionaire Improvement Handbook and Tenant Work Permit Handbook.

- F. **Authority's Fiscal Year:** The twelve-month period beginning October 1st of a calendar year through September 30th of the following calendar year.
- G. **Authority's Work:** The work to be done by or on behalf of Authority to construct the ConRAC pursuant to Section 9.01(B) of this Contract.
- H. **Bonds:** Collectively, the Tampa International Airport Customer Facility Charge Revenue Bonds, 2015 Series A and 2015 Series B (or such other or additional designation(s) as may be given to those Bonds under the CFC Trust Agreement), and any additional bonds from time to time issued and outstanding under the CFC Trust Agreement, the proceeds of which are used to pay the cost of modifications, replacements, expansions, and/or improvements to the ConRAC/APM Project, costs of issuance, and other Eligible Costs.
- I. **Bond Documents:** The documents and authorizations relating to the issuance, financing, investment, application, and retirement of the Bonds, including, without limitation, the CFC Trust Agreement Resolution, as supplemented and amended from time to time, and the CFC Trust Agreement, as supplemented and amended from time to time, and ancillary documents related thereto.
- J. **CFC Revenues:** The amount of Customer Facility Charges received by the Authority from Concessionaires pursuant to Section 4.04 of this Contract.
- K. **CFC Trust Agreement:** The agreement by and between the Authority and the Trustee from time to time named therein, pursuant to which the Bonds will be issued, as supplemented and amended from time to time.
- L. **CFC Trust Agreement Resolution:** Those certain resolutions adopted by the Authority's Board of Directors which, among other things, provide for the issuance of the Bonds to fund the design and construction of the ConRAC/APM Project, as such resolution(s) may be further supplemented or amended from time to time.
- M. **Common Concessionaire Areas:** Those areas of the ConRAC designed for the non-exclusive use in common by the Concessionaires pursuant to this Contract, including those which are more particularly described on Exhibit A, "Operating Space Components", attached hereto and made a part hereof. Common Concessionaire Areas include, but are not limited to, roadways, ramps, or other facilities within the ConRAC as designated by Authority. These areas will be maintained by the ConRAC Facility Manager at Concessionaires' expense.
- N. **Common Fuel System:** Collectively, the elements of the fuel receipt, storage, transmission, delivery and dispensing systems and related facilities, fixtures, equipment and other real and personal property used in conjunction therewith and as otherwise constructed by Authority as part of the ConRAC, and thereafter operated and maintained by the ConRAC Facility Manager.

- O. **Common Public Areas:** Those portions of the ConRAC designated for the non-exclusive use in common by the public, Concessionaires, and other Authority authorized users of the ConRAC pursuant to this Contract, which are more particularly described on Exhibit A, attached hereto and made a part hereof. Common Public Areas include, but is not limited to, public circulation space, lobbies, elevators, escalators, restrooms, or other facilities within the ConRAC as designated by Authority. These areas will be maintained by the Authority at Concessionaires' expense.
- P. **Concession:** The rights granted to Concessionaire by Authority to operate an on-airport vehicle rental business at the ConRAC in accordance with the terms and conditions of this Contract.
- Q. **Concessionaire:** The legal entity that is party to this Contract and that is bound by this Contract to operate an on-airport vehicle rental business at the ConRAC. In all provisions of this Contract that require a person to comply with a specific provision requiring representation of Concessionaire, this person will be an authorized official of Concessionaire.
- R. **Concessionaire Improvement Handbook:** Authority's ConRAC design and construction standards governing all aspects of the Concessionaire's design and construction of the Exclusive Premises, attached hereto as Exhibit F and incorporated herein. Authority reserves the right to amend the Concessionaire Improvement Handbook during the Term. Any amendment will be binding on Concessionaire without need for amendment of this Contract, provided that the amendment of the Concessionaire Improvement Handbook does not conflict with the other terms and conditions of this Contract. Authority will provide Concessionaire with any amendment to the Concessionaire Improvement Handbook.
- S. **Concessionaires:** Concessionaire and those other rental car companies from time to time that are parties to a valid contract with the Authority to operate an on-airport vehicle rental business at the ConRAC.
- T. **Concessionaire's Deficiency Payments:** Those payments required to be made by Concessionaire as defined in Section 4.06(A) of this Contract.
- U. **Concessionaire's Operating Obligations:** The various maintenance, repair, and operating responsibilities and obligations in this Contract to be performed by Concessionaire, at its own cost and expense, in the performance of the Concession. The performance of these obligations by the Concessionaire, or payment to a third party for the performance of these obligations, are not rental payments or other considerations for the right to occupy real property, but are acknowledgements by the Concessionaire of its obligation to maintain and repair the Exclusive Premises, as further described in Exhibit E, ConRAC Operations &

Maintenance Standards, attached hereto and made a part hereof.

- V. **Concessionaire's Proportionate Share:** The percentage determined by dividing the aggregate square footage of Concessionaire's Exclusive Premises as depicted in Exhibit A (which is deemed to be 25,198 square feet) by the aggregate square footage of all Concessionaires' Exclusive Premises (which is deemed to be 1,865,590 square feet), which is acknowledged and agreed to be 1.35% as of the Effective Date hereof, or otherwise as determined by the Authority from time to time based upon any increases, decreases or reconfigurations or reallocations of space.
- W. **ConRAC:** The Consolidated Rental Car Facility and any modifications, replacements, expansions, and/or improvements thereto, including the associated structures, roadways, facilities, infrastructure improvements to utilities, and other infrastructure to be constructed consisting of: (i) customer service area; (ii) the Exclusive Premises; (iii) Ready/Return Area; (iv) the QTA, together with a dedicated roadway for rental vehicle use; (v) storage/service facilities; and (vi) the portion of the Common Concessionaire Areas and Common Public Areas of the ConRAC allocated and dedicated to the Concessionaires, as reasonably determined by the Authority.
- X. **ConRAC/APM Project:** The permitting, design, development, construction, equipping, furnishing, and acquisition of the ConRAC, adjacent Service Center Sites, and APM, including the associated structures, roadways, facilities, infrastructure improvements to utilities, and other infrastructure to support the ConRAC and APM. For the purposes of this definition, the ConRAC/APM Project as it relates to the cost of the APM means, and is limited to, forty percent (40%) of the cost of the APM.
- Y. **ConRAC Facility Manager:** The third-party property manager hired from time to time by the Concessionaires for the operation, management and maintenance of the ConRAC.
- Z. **Contract:** This Contract, including all exhibits, schedules, subsequent amendments and attachments thereto, as well as Concessionaire's response to the Invitation to Bid (ITB) for an On-Airport Vehicle Rental Concession, and any subsequent information submitted by Concessionaire (such response and subsequent information collectively hereinafter referred to as Concessionaire's Response). Concessionaire and Authority acknowledge that Concessionaire's Response is a valuable consideration in the award of this Contract to Concessionaire, and is an authoritative reference for understanding the intention of the parties. Accordingly, Concessionaire will be obligated to meet all specifications described in Concessionaire's Response; provided, however, that where an express provision of this Contract conflicts with any provision of Concessionaire's Response, this Contract will control.

AA. **Contract Dates:**

1. **Effective Date:** The date of full execution of this Contract by the Parties.
2. **Expiration Date:** The thirtieth (30th) anniversary of the date of issuance of the initial series of Bonds.
3. **Required Completion Date:** The date set forth in the Notice to Proceed, which will not be less than 120 days, by which Concessionaire must achieve Substantial Completion of an Approved Project, except as such date may be extended in accordance with the provisions herein.

The Authority will confirm, no later than 30 Days after the Required Completion Date, the actual Contract Dates. Such confirmation will be in the form of a letter from the Authority's Vice President of Concessions and Commercial Parking, without need for formal amendment to the Contract.

- BB. **Contract Day:** The period of time up to twenty four (24) hours from the opening of the Vehicle Rental Contract to the close of the Vehicle Rental Contract. In the event Concessionaire offers a Grace Period for the vehicle rental returns, such Grace Period will be considered the same Contract Day. If a vehicle rental return exceeds Concessionaire's Grace Period, then another Contract Day will be applicable even if the Airport Customer is charged hourly and not a full additional day. The number of Contract Days will be applicable to the calculation of CFCs due to the Authority pursuant to Section 1.01(DD).
- CC. **Contract Year:** (a) With respect to the first Contract Year during the Term, the period commencing on the Effective Date and continuing through the end of Authority's Fiscal Year in which the Effective Date occurs, and (b) with respect to each Contract Year thereafter during the Term, each twelve-month period commencing on the first day of Authority's Fiscal Year and ending on the last day of Authority's subsequent Fiscal Year, provided that if the Term expires or is terminated on a day other than the last day of a Contract Year, the last Contract Year will then end as of the date of such expiration or termination.
- DD. **Customer Facility Charge or "CFC":** The rates or fees imposed by the Authority on Concessionaires which are specifically designated as "customer facility charges", the rates or amounts of which may be adjusted from time to time by the Authority's Board of Directors. Such fees do not constitute a rental charge for the use of a vehicle or for the use of real property.
- EE. **Day(s):** Unless otherwise stated, means calendar day(s).
- FF. **Debt Service:** The principal and interest payments, and redemption premiums, if any, due on the Bonds from time to time, puts and mandatory or optional tenders with respect to variable rate demand obligations, and any related required costs,

payments, or deposits in connection with any of the foregoing, including, without limitation, costs of issuance, costs of on-going tax compliance, reimbursements, fees, costs and expenses of trustees, credit and liquidity providers, remarketing agents, tender agents and the like, financing and administration costs and charges, and reserves, and further including, specifically, the amounts of any required deposits into each of the funds specifically referenced and defined in the Bond Documents and any amounts required to meet the coverage requirements of the Bond Documents, together with all deposits required in connection with any of the foregoing (except to the extent that any such costs, payments, deposits, credit and liquidity fees, or reserves are funded from the initial proceeds of the Bonds and comprise part of the principal and interest payments, it being understood and agreed that there will be no "double counting" of any such amounts for purposes hereof).

- GG. **Default Rate:** The rate of eighteen percent (18%) per annum or the maximum rate permitted by law, whichever is less.
- HH. **Deficiency Reserve Fund:** The fund established by the Authority, in an amount not to exceed ten million dollars (\$10,000,000), to be funded in accordance with Section 4.06(E) from Excess CFCs remaining at the end of the construction period for the ConRAC/APM Project. Amounts in the Deficiency Reserve Fund will be applied as provided in Section 4.06(F). The Deficiency Reserve Fund will be funded one time by the Authority, to the extent funds are available at the end of the construction period in accordance with Section 4.06(E), and will not be replenished if it is depleted.
- II. **Vice President of Concessions and Commercial Parking:** The Authority employee designated by Authority's Chief Executive Officer to manage and oversee this Contract.
- JJ. **Eligible Costs:** The sum of (a) Debt Service; (b) 40% of the annual cost for the operation and maintenance of the APM, as determined by the Authority (hereinafter referred to as "APM O&M"); (c) amounts necessary to establish and fund adequate repair/replacement reserves for the ConRAC/APM Project as required by the CFC Trust Agreement; (d) funds needed to pay or reimburse the Authority for (i) debt service accruing with respect to bonds heretofore issued by the Authority, and (ii) monthly amortization for recovery of the Authority's investments in so called "pay as you go" projects, in each case to the extent the proceeds of such bonds, or Authority funds, as the case may be, are used to pay the cost of existing rental car facilities. Subparagraphs ((a) through (d) are collectively hereinafter referred to as "Mandatory Eligible Costs"); and (e) any other funding deposits or payments that are required by the CFC Trust Agreement (hereinafter referred to as "Secondary Eligible Costs").
- KK. **Excess CFCs:** CFC funds remaining after funding of Mandatory Eligible Costs as more particularly described in Section 4.06(D).

LL. **Exclusive Premises:** Those areas of the ConRAC and Concessionaire's Service Center Site which are leased exclusively to Concessionaire pursuant to this Contract which are more particularly described on Exhibit A.

MM. **FAA:** The U.S. Department of Transportation Federal Aviation Administration or any successor thereto.

NN. **Ground Rent:** The rent paid by Concessionaire to Authority for the land area on which the ConRAC and Concessionaire's Service Center Site are situated.

OO. **Grace Period:** The period of time after the Airport Customer's rental vehicle is due, for which Concessionaire does not apply any additional charges.

PP. **Impositions:** All real property taxes, assessments, license fees, license taxes, business license fees, commercial rental taxes, levies, charges, improvement bonds, taxes, water and sewer rents and charges, utilities and communications taxes and charges, and similar or dissimilar impositions imposed by any authority having the direct power to tax, including any city, county, state, or federal government, or any school, agricultural, lighting, drainage, mosquito, water management or other improvement or special assessment district thereof, or any other governmental charge, general and special, ordinary and extraordinary, foreseen and unforeseen, which may be assessed against any legal or equitable interest of the Authority or Concessionaire in connection with the ConRAC and Service Center Site, or any portion or portions thereof, including, without limitation, (i) any tax on the Authority's "right" to rent or "right" to other income from the ConRAC and Service Center Site, or as against the Authority's business of leasing the ConRAC and Service Center Site; (ii) any assessment, tax, fee, levy or charge in substitution, partially or totally, of any assessment, tax, fee, levy, or charge previously included within real property tax, it being acknowledged by Concessionaire and the Authority that assessments, taxes, fees, levies and charges may be imposed by governmental agencies for such services as fire protection, street, sidewalk and road maintenance, refuse removal and for other governmental services formerly provided without charge to property owners or occupants, it being the intention of Concessionaire and the Authority that all such new and increased assessments, taxes, fees, levies, and charges be included within the definition of "Impositions" for the purposes of this Contract; (iii) any assessment, tax, fee, levy or charge allocable to or measured by the area of the ConRAC and Service Center Site, or the rent payable by Concessionaire hereunder, including, without limitation, any gross receipts tax or excise tax levied by state, city, or federal government, or any political subdivision thereof, with respect to the receipt of such rent, or upon or with respect to the possession, leasing, operation, management, maintenance, alteration, repair, use, or occupancy by ConRAC and Service Center Site, or any portion thereof, but not on the Authority's other operations; (iv) any assessment, tax, fee, levy or charge upon this Contract or any document to which Concessionaire is a party, creating or

transferring an interest or an estate in the ConRAC and/or Service Center Site; (v) any assessment, tax, fee, levy, or charge by any governmental agency related to any transportation plan, fund, or system (including assessment districts) instituted within the geographic area of which the ConRAC and Service Center Site are a part; and/or (vi) any costs and expenses (including, without limitation, reasonable attorneys' fees and costs) incurred in attempting to protest, reduce or minimize such impositions.

Any obligation of a Concessionaire to pay any tax, assessment, fee, levy, charge, or any other obligation imposed by any governmental or semi-governmental entity or authority, or by a regulated or unregulated utility or telecommunications provider, and defined as an "Imposition" herein or elsewhere in this Contract, is not deemed to be a rental payment or a payment in lieu of rent, or any form of payment by the Concessionaire, on behalf of the Authority or any of its related agencies or entities (as landlord), and is expressly excluded as an obligation to pay rent subject to the commercial rental tax imposed under Section 212.031, Florida Statutes. However, its exclusion as any form of rent (or substitution of rent) does not affect the Concessionaire's obligation to make such payments as otherwise required under this Contract, together with any attendant interest, penalties, or attorneys' fees.

- QQ. **Market Share Percentage:** The amount, expressed as a percentage, equal to (i) the total rental transactions of Concessionaire during the immediately preceding twelve (12) month period, divided by (ii) the aggregate sum of all Concessionaires' rental transactions during the immediately preceding twelve (12) month period.
- RR. **Month(s):** Unless otherwise stated, means calendar month(s).
- SS. **Notice to Proceed:** As it applies to any portion of the Exclusive Premises, the written notice from Authority to Concessionaire delivering possession of such portion of the Exclusive Premises to Concessionaire to commence the initial Approved Project for such portion of the Exclusive Premises, and which establishes the Required Completion Date for such portion of the Exclusive Premises.
- TT. **Petroleum Storage and Fuel Systems:** Concessionaire's fueling facility including all component parts thereof, that is now or hereafter located at Concessionaire's Service Center Site.
- UU. **Privilege Fee:** The annual fee paid by Concessionaire to Authority as consideration for the privilege of concession rights at the Airport that is comprised of the Minimum Annual Privilege Fee and the Percentage Fee as further described in Section 4.02.
- VV. **Quick Turn-Around Area or "QTA":** The areas located within the ConRAC dedicated to fueling, vacuuming, washing and servicing rental vehicles, as

depicted on Exhibit A.

- WW. **Ready/Return Area:** The area comprising a portion of the ConRAC in which rental vehicles are parked and/or staged for Airport Customer pick-up or return as depicted on Exhibit A.
- XX. **Repair and Replacement Fund:** The fund established and maintained pursuant to the CFC Trust Agreement and held by the Authority to pay the cost of modifications, repairs, and replacements of the ConRAC/APM Project.
- YY. **Rental Revenue Recovery:** The amount funded by Excess CFCs, to the extent they are available, to recover shortfalls in rental revenue to the Authority, pursuant to Section 4.06(E).
- ZZ. **Service Center Site:** That portion of Concessionaire's Exclusive Premises for use by Concessionaire for administration facilities, maintenance facilities, vehicle servicing, and supplemental vehicle storage as depicted on Exhibit A.
- AAA. **Substantial Completion:** The stage in the process of any construction or other work when such work is sufficiently complete, as reasonably determined by Authority, so that (i) in the case of Authority's Work, Concessionaire is able to take possession of its Exclusive Premises for the purpose of performing the Approved Project, or (ii) in the case of Approved Project work, Concessionaire has received a Certificate of Occupancy and/or a Temporary Certificate of Occupancy from the appropriate governmental agencies and is able to occupy the Exclusive Premises for the purpose of opening for business. In no event will Substantial Completion of any work occur prior to the issuance by Authority of the Notice to Proceed. It is the intent of the Parties that the application of the term Substantial Completion in the context of this Contract will coincide with the application of that term in Florida Statute Section 192.042, so that the date on which Substantial Completion occurs under this Contract will be the same date relative to the imposition and levy of local ad valorem taxes.
- BBB. **Tenant Work Permit Handbook:** Authority's standards, procedures, requirements, and rules and regulations governing Concessionaire's construction activities at the Airport, attached hereto as Exhibit G and incorporated herein. Authority reserves the right to amend the Tenant Work Permit Handbook during the Term. Any such amendment will be binding on Concessionaire without need for amendment of this Contract, provided that such amendment of the Tenant Work Permit Handbook does not conflict with the other terms and conditions of this Contract. Authority will provide Concessionaire with any amendment to the Tenant Work Permit Handbook.
- CCC. **Term:** The period of time beginning on the Effective Date and ending on the Expiration Date.

- DDD. **TSA:** The U.S. Department of Homeland Security Transportation Security Administration or any successor thereto.
- EEE. **Vehicle Rental Contract:** The written contract or other agreement under which a vehicle is rented at the ConRAC to an Airport Customer by Concessionaire.
- FFF. **Vehicle Storage Area:** Those areas comprising a portion of the ConRAC in which Concessionaire's overflow rental vehicles are stored, as depicted on Exhibit A.

Article II. EXCLUSIVE PREMISES

Section 2.01 EXCLUSIVE PREMISES DESCRIPTION

Authority hereby leases to Concessionaire and Concessionaire hereby agrees to lease from Authority the Exclusive Premises within the ConRAC consisting of the Customer Service Building, Ready/Return Area, QTA Area, Vehicle Storage Area, and adjacent Service Center Site, as listed and depicted in Exhibit A, Operating Space Components, including any improvements to be made or modifications to be made thereto.

Notwithstanding the above, Authority and Concessionaire recognize and agree that from time to time, particularly in the weeks surrounding major holiday periods, including but not limited to, President's Day, Spring Break, Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas, and New Years Day, Concessionaire may require the use of additional property for the temporary parking of rental vehicles in order to meet seasonal demands.

Concessionaire may have the temporary opportunity to use available vacant Authority land and/or facilities from time to time. Concessionaire understands and agrees that the use of any such vacant Authority land and/or facilities will not necessarily be in the most convenient location to Concessionaire's operations and may not be fenced or secured. The use of vacant Authority land and/or facilities shall be for the sole purpose of temporary parking of rental vehicles and no other activities are permitted, including vehicle maintenance.

Land and/or facilities for such temporary use is limited and will be made available to all Concessionaires holding contracts similar to this Contract on a first come, first serve basis and with minimum advance notice to the Authority of three (3) business days. Authority makes no guarantee that sufficient temporary land or facilities will be made available to Concessionaires. Authority will, however, use reasonable efforts to accommodate Concessionaire to the extent possible.

Temporary use of such land and/or facilities will be a short term basis, not to exceed six (6) months at a time. Rent for temporary use of land may be at Concessionaire's current Ground Rent pursuant to Section 4.05 of this Contract. Rent for temporary use of facilities will be determined by the Authority on a case-by-case basis and, where applicable, will be due fifteen (15) Days from the date of invoice sent to Concessionaire by Authority.

All terms and conditions of this Contract, including insurance and indemnification, will apply to any such temporary use referenced herein. Authorization for temporary use of land and/or facilities will be requested in writing by Concessionaire. Approval of the temporary use of land will be in writing from the Authority Vice President of Real Estate or designee without need for formal amendment to this Contract. Any terms or conditions specific to the temporary use of land over and above the terms and conditions of this Contract will be specified in the letter of approval relating to such temporary use. Approval of the temporary use of facilities will be in writing from the Authority Vice President of Concessions and Commercial Parking or designee without need for formal amendment to this Contract. Temporary use of facilities may require terms and conditions not currently included in this Contract which will be specified in the letter of approval and acknowledged in writing by Concessionaire.

Section 2.02 CONRAC COMMON FUEL SYSTEM

Authority hereby leases to Concessionaire an undivided, non-exclusive interest, in common with other Concessionaires, in and to the ConRAC Common Fuel System and grants to Concessionaire the non-exclusive right and privilege, for the benefit of Concessionaire and its employees and other authorized individuals, to use (subject to management in common by the ConRAC Facility Manager) the Common Fuel System with other Concessionaires. Concessionaire will have no right to fuel any vehicles other than Concessionaire's rental vehicles.

Section 2.03 SERVICE CENTER SITE PETROLEUM STORAGE AND FUEL SYSTEMS

- A. Concessionaire will operate its own Petroleum Storage and Fuel Systems in its Service Center Site. Notwithstanding any provision of this Contract giving Authority title to improvements located in the Concessionaire's Service Center Site, Authority will not acquire title to any part of the Petroleum Storage and Fuel Systems at any time whatsoever. The Petroleum Storage and Fuel Systems (and all component parts thereof) must be completely removed from the Service Center Site upon the expiration or other termination of this Contract, which removal will be performed in accordance with all applicable laws, rules and regulations. During the period of removal of all Petroleum Storage and Fuel Systems, and until the time that there is a completion of Florida Department of Environmental Protection (FDEP) closure requirements, Concessionaire will continue to demonstrate financial responsibility as required by Chapters 62-761 and 62-762 of the Florida Administrative Code as amended until the Petroleum Storage and Fuel Systems are closed and removed, as evidence by the receipt of a letter from FDEP or designee confirming same. Similarly, upon termination or expiration of this Contract as provided herein, Concessionaire will remove any and all oil-water separators and restore the Service Center Site to the same condition prior to installation or as approved by the Authority.

- B. In the event Concessionaire will fail or fails to remove the Petroleum Storage and Fuel Systems and oil-water separators at Concessionaire's Service Center Site upon the expiration or other termination of this Contract, then, Concessionaire will be considered to be holding over under Section 3.02 hereof and will be liable for charges payable pursuant to such Section. In addition, in the event Concessionaire will fail to remove the Petroleum Storage and Fuel Systems and oil-water separators within sixty (60) Days following the expiration or other termination of this Contract, then, in addition to all remedies available hereunder and at law or in equity, Authority will have the right to remove the Petroleum Storage and Fuel Systems and oil-water separators and Concessionaire will be liable for all expenses and charges (whether direct or indirect) incurred by Authority in effectuating such removal (including any storage charges), and Authority may include interest thereon at the Default Rate from the date incurred. In contracting for any such removal, Authority will be entitled to dispose of the Petroleum Storage and Fuel Systems and oil-water separators in any way it sees fit, including, without limitation, demolition, giving salvage rights to a contractor, by storage, by public auction, or other means of disposal.
- C. Concessionaire will provide Authority with documentation that the Petroleum Storage and Fuel Systems and oil-water separators have been removed in accordance with all applicable laws, rules and regulations, including such back-up documentation as the Authority may reasonably request. The provisions of this Section 2.03 will survive any termination or expiration of this Contract.

Section 2.04 ALLOCATION OF CUSTOMER SERVICE SPACE, OFFICE SPACE, READY/RETURN SPACE, QTA SPACE, AND VEHICLE STORAGE AREA SPACE WITHIN CONRAC

- A. Concessionaire's Exclusive Premises will initially be allocated in accordance with the ITB.
- B. Concessionaires operating and sharing space within Area Four (4) will cooperate with one another and will not hamper or interfere with the operations of the other Concessionaires at said locations.
- C. Concessionaire's Exclusive Premises may be subject to reallocation amongst other Concessionaires based upon a change that is fifteen percent (15%) or greater in Concessionaires' respective Market Share Percentages on the fifth (5th) anniversary of the opening of the ConRAC, which was February 14, 2018, and once every five (5) years thereafter subject to any reasonable adjustments by the Vice President of Concessions and Commercial Parking, taking into account, among other things, the inherent cost and difficulty associated with reallocating the Exclusive Premises.

Any such reallocation as provided hereunder will be reflected in an exhibit detailing such reallocation. The effective date and the applicable square footage(s) will be attached to this Contract by letter from the Vice President of Concessions and

Commercial Parking and the rentals payable hereunder will be adjusted as necessary according to the square footage of the resulting space, without the need for amendment of this Contract.

Such reallocation will apply to the amount of space attributable to Concessionaires' Exclusive Premises only, and will not be deemed to apply to the location of such Exclusive Premises. In the event that the Vice President of Concessions and Commercial Parking approves such reallocation, any and all costs and expenses associated therewith, including, without limitation, reallocation costs and the costs incurred by any other Concessionaire affected by such reallocation will be allocated amongst Concessionaires based upon their respective Market Share Percentage. Such reallocation will not apply if *all* Concessionaires agree to remain in their Exclusive Premises.

Section 2.05 RECONSTITUTION OF CONCESSIONAIRES

Notwithstanding anything herein to the contrary, in the event that any Concessionaire ceases to operate at the ConRAC at any time during the Term hereof, the Authority may, but will not be obligated to, enter into a new Contract with a reasonably comparable replacement Concessionaire. In the event that no reasonably comparable replacement Concessionaire is substituted therefor, the Authority may, but will not be obligated to, reassign and reallocate Exclusive Premises including available counter space, back office space, Ready/Return parking spaces, QTA parking spaces, and Vehicle Storage Area spaces, or parts thereof, among the remaining Concessionaires based upon their respective Market Share Percentage. Notwithstanding any such cessation of operations, substitution, or reallocation, Concessionaire will remain obligated to pay its allocable share of the Concessionaire Deficiency Payments, based on its Market Share Percentage at the date of execution of this Contract, unless the Authority expressly agrees in writing to the contrary.

Section 2.06 OPTION TO RENEGOTIATE; NO ASSURANCE OF CONTINUED PARTICIPATION

Notwithstanding anything herein to the contrary, the Authority will have the right and option, to be exercised in its sole, exclusive and absolute discretion, to renegotiate the terms of this Contract and the rights granted hereunder every ten (10) years during the Term hereof. In such event Authority will notify Concessionaire no later than twelve (12) months prior to the expiration of every tenth (10th) Contract Year of its election to open this Contract and the contracts of the other Concessionaires for renegotiation. The terms subject to such renegotiation may include, but are not limited to, a modified Minimum Annual Percentage Fee (MAPF), a modified Percentage Fee, a modified definition of Gross Receipts, and such other terms as the Authority may deem appropriate. Such renegotiation will not include the right to modify the Concessionaire's Deficiency Payments or Ground Rent provisions contained in the Contract. Concessionaire hereby acknowledges and agrees that the Authority has advised Concessionaire of the Authority's right and option to require the periodic renegotiation of this Contract as aforesaid, and Concessionaire further acknowledges that the Authority has not given

Concessionaire any assurances that Concessionaire will be given the opportunity to continually participate in the ConRAC pursuant to this Contract. If (i) those Concessionaires then-located in Areas 1, 2, and 3 representing more than fifty percent (50%) of the Market Share among those Concessionaires then-located in Areas 1, 2, and 3; and (ii) those Concessionaires then-located in Area 4 representing more than fifty percent (50%) of the Market Share among those Concessionaires then-located in Area 4; and (iii) more than one-half (1/2) of the total number of Concessionaires then-located in Areas 1, 2, 3 and 4 (the "Majority in Interest" an example of which is depicted on Exhibit L) and the Authority are able to reach agreement on proposed modified terms in connection with any such periodic renegotiation, the terms as modified by the Majority in Interest will become binding on all Concessionaires and this Contract will be deemed so modified, without further act by the Authority and the Concessionaire. If the Majority in Interest and the Authority are unable to reach agreement on the proposed modified terms, the Authority will have the right to reaffirm the terms of this Contract without revision, or to terminate this Contract and the Contracts of all other Concessionaires upon not less than thirty (30) Days' written notice. Upon such termination, the obligations of Concessionaire and the Authority hereunder will thereupon terminate (except for any obligations accruing hereunder prior to such termination or which expressly survive the termination hereof). Upon the approval of any such modifications, the Authority will provide Concessionaire with either a copy of such changes, or a restated agreement reflecting such changes.

Section 2.07 MINOR MODIFICATIONS TO CONRAC

Authority will have the right to make minor modifications, as defined by Authority, to any portion of the ConRAC at the sole discretion of Authority to accommodate Airport operations, security renovations, legal or regulatory requirements, maintenance, or other work to be completed in the ConRAC.

Section 2.08 INGRESS AND EGRESS

Concessionaire will have the right of ingress to and egress from the Airport and the ConRAC for Concessionaire's officers, employees, agents, and invitees, including customers, suppliers of materials, furnishers of services, equipment, vehicles, machinery and other property. Such right of ingress and egress will be subject to FAA Regulations, applicable laws, and Authority's Rules and Regulations and Operating Directives, as amended from time to time.

Section 2.09 RIGHT OF ENTRY

Authority will have the right to enter the Exclusive Premises, with advance notice, for the purposes of periodic inspection thereof from the standpoint of safety and health, and to monitor Concessionaire's compliance with the terms of this Contract.

Section 2.10 EXCLUSIVE PREMISES ACCEPTANCE AS IS

Concessionaire accepts the Exclusive Premises in its present condition, as is and with all existing faults. Authority will not be obligated to construct additional improvements or to modify existing conditions, nor to provide services of any type, character, or nature

(including any utilities or telephone/data service), on or to the Exclusive Premises during the Term other than as explicitly stated in this Contract.

Section 2.11 NO WARRANTY OF ECONOMIC VIABILITY

Authority makes no warranty, promises or representations as to the economic viability of the ConRAC or Concessionaire's business or any other matter pertinent to the potential or likelihood for success or failure of Concessionaire's business operations. Concessionaire acknowledges aspects of Airport operations are subject to change during the Term without notice and that the Authority makes no warranty regarding such Airport operations. Except as is specifically set forth herein, Authority will not, by virtue of the existence of this Contract, be constrained in connection with its operation of the Airport.

Article III. TERM

Section 3.01 TERM

The Term of this Contract will begin on the Effective Date and continue through the Expiration Date, unless sooner terminated as herein provided.

Section 3.02 HOLDOVER

Any occupancy of Exclusive Premises by Concessionaire with the written consent of Authority after the Expiration Date will be on a month to month basis with all provisions of this Contract, including rent, fees and charges, remaining in full force and effect between and among the parties until such time that Authority gives notice to Concessionaire to surrender the Exclusive Premises. Notice to surrender Exclusive Premises will be provided not less than 30 Days prior to the anticipated surrender date.

Any occupancy of Exclusive Premises by Concessionaire after the termination of this Contract, without the written approval of Authority, constitutes a month-to-month lease with the same terms and conditions of this Contract remaining in full force and effect. Concessionaire must pay the Ground Rent and Privilege Fee for the entire holdover period for that portion of Exclusive Premises where the Contract has expired or been terminated ("Holdover Premises"). Ground Rent for Holdover Premises will be payable at double the annual rate for that portion of the Exclusive Premises during the preceding Contract Year. No occupancy of any portion of the Exclusive Premises by Concessionaire after the expiration or other termination of this Contract with respect to such portion of the Exclusive Premises extends the Term, except as a holdover tenancy. Also, in the event of such holdover tenancy, Concessionaire will indemnify Authority against all damages arising out of the Concessionaire's holdover tenancy, including but not limited to, any costs incurred by Authority to evict Concessionaire, and all insurance policies and payment securities required to be obtained and maintained by Concessionaire as set forth in this Contract will continue in full force and effect. Any costs of eviction incurred by Authority shall include attorneys' fees and expert fees in preparation, at trial or in any ancillary proceeding or appeal.

Section 3.03 RIGHTS AND OBLIGATIONS UPON EXPIRATION OR TERMINATION

Concessionaire will, upon termination of this Contract by the Authority, with or without cause, surrender the Exclusive Premises to Authority peaceably, quietly and in as good order and condition as the same now are or may be hereafter improved by Concessionaire or Authority, reasonable use and wear thereof and damage by casualty, which damage Concessionaire did not cause and is not required to repair or restore to the extent based upon any exculpation as provided elsewhere herein, excepted. Concessionaire will remove all signage and provide temporary walls to seal all openings of the Exclusive Premises that meet the guidelines outlined in the Tenant Work Permit Handbook. Concessionaire will also provide to Authority any and all keys to doors or any area of controlled access within the footprint of the Exclusive Premises. Authority will be entitled to exercise the non-judicial remedy of locking Concessionaire out of the Holdover Premises as a means of enforcing the Authority's right of possession, regardless of whether Concessionaire is delinquent in rental payments, including without limitation, the de-activation of Concessionaire's security badges or credentials; and this right of de-activation will not, and legally cannot, limit or otherwise affect the Authority's governmental police powers to de-activate security credentials for security or other governmental reasons.

Upon expiration or termination of this Contract, Concessionaire will, subject to the Authority's Lien described in Section 4.11, remove all furniture, fixtures and equipment installed by Concessionaire, Concessionaire or brand proprietary property, inventory and other personal property, and leave the Exclusive Premises in broom clean condition. Any damage to the Exclusive Premises caused by Concessionaire's removal of such furniture, fixtures and equipment will be immediately repaired by Concessionaire at Concessionaire's sole cost, fee and expense and to the satisfaction of Authority. Notwithstanding the foregoing, if Concessionaire fails to remove such furniture, fixtures, equipment or property within thirty (30) Days from the date of termination or expiration of this Contract, then Concessionaire will be deemed to have abandoned same and Authority will have the right, at its option, and in its sole discretion, to take title to said furniture, fixtures, equipment and/or property and sell, contract, salvage, or dispose of the same in any manner permitted by law. Concessionaire will have no right, interest or claim in or to any proceeds of the sale or other disposition of such items. Any net expense Authority incurs in disposing of such will be immediately reimbursed by Concessionaire with interest at the Default Rate. No act by Authority will be deemed an acceptance of a surrender of the Exclusive Premises. No acceptance of a surrender of the Exclusive Premises will be valid unless it is in writing and signed by Authority nor will it constitute a release of Concessionaire of its obligations under this Contract unless such release is in writing and signed by an authorized official of the Authority and then only to the extent and with regard to the matters specified therein.

Section 3.04 END OF TERM TRANSITION

Authority may award and transition to new contracts for the Concession that may include rights to the Exclusive Premises or portions thereof. If Concessionaire is not selected for

the new contract, Authority will notify Concessionaire in writing of the exact dates of a transition period. Concessionaire will cooperate fully with Authority and Concessionaire's successor to ensure an effective and efficient transition of the Exclusive Premises and Concession operations to the successor. Concessionaire acknowledges its responsibility to continuously perform all of its obligations, duties and responsibilities under this Contract during the transition to the successor.

Article IV. PAYMENTS, OTHER CHARGES, REPORTING, AND ACCOUNTING RECORDS

Section 4.01 GROSS RECEIPTS

A. As used herein, the term "Gross Receipts" shall mean the total amount actually charged by Concessionaire for or in connection with the use of a vehicle and any additional services or accessories contracted for, delivered, rented to, or picked up by Airport Customers, as shown on the Vehicle Rental Contract, regardless of where, how (cash, credit, or barter) or by whom the payment is made or where the vehicle is returned. Unless revenues from Concessionaire's Concession are expressly and particularly excluded from "Gross Receipts" under this Contract, such revenues shall be included in Gross Receipts. Revenues derived from sources similar but not identical to those described herein shall also be included in Gross Receipts unless expressly excluded by this Contract.

Gross Receipts will mean all revenues paid or due to Concessionaire arising out of or in connection with its operations at the Airport, including but not limited to:

1. All time and mileage revenues.
2. All revenues from the sale of liability damage waiver, collision damage waiver, personal accident insurance, or any waiver or other insurance products.
3. All revenue relating to furnishing and/or replacing fuel provided by Concessionaire at the commencement or conclusion of the rental transaction.
4. All tolls collected by Concessionaire.
5. Daily and weekly service fees for toll transponders or similar license plate recognition services.
6. Any administrative fees or tolls charged by a third party vendor.
7. Cellular phones and global positioning navigation systems (GPS).
8. Child restraints.
9. Drop charges.
10. Additional driver fees.
11. Underage or overage driver fees.
12. Guaranteed reservation fees.
13. Third party vehicle comps for promotional services rendered as a travel promoter, agent, or otherwise.
14. Loss of Use payments by Airport Customers or insurance companies

(actual payment amount(s)-not claim amounts(s)) received by Concessionaire in lieu of rent for damage to vehicles, Concessionaire's property, or for loss, conversion, or abandonment of vehicles.

15. Vehicle sharing and/or valet services.
16. All other revenues paid or due to Concessionaire arising out of or in connection with its operations at the Airport unless expressly excluded by this Contract.
17. All time and revenue related to car-sharing or other similar type services including any and all membership fees.

B. Gross Receipts will not include:

1. Amounts of any Federal, State, or municipal taxes and surcharges separately stated on the Vehicle Rental Contract and collected from Airport Customers, and which are payable directly to the taxing authority by Concessionaire. No exclusion shall be allowed for taxes levied on Concessionaire's activities, facilities, equipment, or real or personal property, payroll taxes, income taxes, taxes on frequent flyer miles paid directly to an airline, license or tag fees, or other charges which recoup operating costs.
2. Any Concession Recovery Fee (as defined in Section 4.03 below).
3. CFCs.
4. Amounts for credits, refunds, or adjustments to Airport Customers for transactions made at the Airport at the time of, or prior to, the close-out of the rental transaction and shown on the Vehicle Rental Contract (without mark-up or additional fees). Includes customer satisfaction program adjustments applicable to revenues included in Gross Receipts which are subsequently refunded by Concessionaire and recorded and reported in a separately documented account from non-excludable adjustments. Concessionaire forfeits exclusion of all customer satisfaction program adjustments in the event otherwise allowable adjustments are commingled with any non-excludable amounts. Non-excludable adjustments are those which affect amounts already excludable from Gross Receipts (example: taxes) since this would result in a duplicate deduction from Gross Receipts.
5. Any discounts separately stated on the Vehicle Rental Contract which are granted at the time the rental transaction commences, and are recorded and reported in separately documented accounts from non-excludable discounts. Concessionaire forfeits exclusion of all discounts in the event otherwise allowable discounts are commingled with any non-excludable amounts. No exclusion shall be allowed for any amount retained by a third party as a financing discount which may apply by reason of Concessionaire's acceptance of credit cards or other credit arrangements. No exclusion shall be allowed for the portion of retroactive rebates, dividends or refunds to any Airport Customer upon attainment of a specified volume of rentals attributable to revenue or as part of any other marketing plan which does not list the discount on the Vehicle Rental Contract at the commencement of the rental transaction.
6. Sums received by reason of Concessionaire's disposal of capital assets and/or trade fixtures.

7. Sums received by Concessionaire from its Airport Customers, including all associated administrative charges, for traffic tickets, parking tickets, towing charges, impound fees, and other similar governmental fines and charges actually paid by Concessionaire on behalf of such Airport Customers (without mark-up or additional fees).
 8. Sums received by Concessionaire for pass-through charges collected by Concessionaire from its Airport Customers with respect to damage repair, parts replacement, extraordinary cleaning of vehicles, towing and transporting of damaged vehicles rented by such Airport Customers, and replacement of keys for such vehicles (without mark-up or additional fees). This exclusion does not include any payments by Airport Customers or insurance companies (actual payment amount(s) – not claim amount(s)) received by Concessionaire in lieu of rent for those vehicles (“Loss of Use” payments).
 9. Sums received by Concessionaire for damage to vehicles or Concessionaire’s property or premises from loss, conversion, or abandonment of vehicles (without mark up or additional fees).
 10. All tolls passed through by Concessionaire or third party vendor or paid by Concessionaire or third party vendor directly to the Florida Department of Transportation or similar governmental entity.
- C. It is understood and agreed that all losses or chargebacks (including bad debt expenses) are to be borne solely by Concessionaire, and Authority is to be paid on Gross Receipts without charge or reduction for costs of losses. As indicated above, Loss of Use payments by Airport customers or insurance companies (actual payment amount(s) - not claim amount(s)) received by Concessionaire in lieu of rental fees and charges for those vehicles are considered Gross Receipts.
- D. Concessionaire shall not intentionally divert, through direct or indirect means, any of Concessionaire's rental car or related business with Airport Customers to off-airport locations of Concessionaire or Affiliates of Concessionaire without including the Gross Receipts of such transactions, in Concessionaire's reported Gross Receipts. Any such intentional diversion of Gross Receipts shall constitute a Default under this Contract and Authority shall have the right to immediately terminate this Contract upon determination by Authority or its auditors that an intentional diversion exists or has occurred.
- E. Concessionaire shall not modify its accounting treatment or rename or redefine services or products which under the terms of this Contract would be subject to the Percentage Fee unless approved in writing by the Authority.
- F. Concessionaire shall notify Authority’s Concessions and Commercial Parking Department in writing within five (5) Days of all third-party arrangements where the third-party directly charges Concessionaire’s Airport Customer.

Section 4.02 PRIVILEGE FEE

In consideration of the rights granted herein to operate the Concession at the Airport,

Tampa International Airport
On-Airport Vehicle Rental Concession

beginning on the Effective Date and continuing through the Term, Concessionaire agrees to pay to Authority for each Contract Year, or portion thereof, a Privilege Fee equal to the greater of the MAPF or the Percentage Fee. The Privilege Fee is not rent, but is a payment excluded from the tax imposed by Florida Statute Sections 212.02(10)(j) and 212.031(1) (c).

A. MAPF.

1. Concessionaire's MAPF for the first full Contract Year is \$658,000. Beginning on the Effective Date and continuing through the Contract Year in which the Effective Date occurs, Concessionaire's MAPF will be pro-rated to include only the period of time from the Effective Date to the end of that Contract Year.
2. Beginning with the second full Contract Year and for each Contract Year thereafter, the MAPF will be equal to eighty-five percent (85%) of the Privilege Fee payable by Concessionaire to the Authority for the previous Contract Year, but will never be less than the MAPF set forth in Section 4.02(A)1 above. The MAPF applicable to the last Contract Year of this Contract will be pro-rated if such Contract Year is less than 12 months.

B. Percentage Fee. Concessionaire will pay a Percentage Fee for each Contract Year in an amount equal to ten percent (10%) of Gross Receipts, but only to the extent that such amount exceeds the MAPF for that Contract Year. If the Percentage Fee calculated in accordance with this Section 4.02 is an amount less than the MAPF, no Percentage Fee will be payable.

C. Payment of Privilege Fee. On or before the first (1st) day of each Month after the Effective Date, Concessionaire will pay to Authority, in advance and without set off, deduction, prior notice, or demand, one-twelfth (1/12th) of the MAPF. For any payment period of less than one Month, the MAPF payment will be paid on a pro rata basis in the same proportion that the number of days in the payment period bears to the total number of Days in the Month for which the MAPF is payable.

D. Car-Sharing or Similar Service. A portion of the revenues that Concessionaire directly or indirectly derives from the operation of a car-sharing or similar type service that consists of joining, membership, or subscriber fees paid to Concessionaire by members or subscribers (collectively the "Membership Fees"), and the portion of such Membership Fees allocable to a transaction in which an Airport Customer takes possession of a rental vehicle under car-sharing or other similar type service, and is dependent upon the factors which are not known at the time payments of the Percentage Fee are required to be made. Therefore, Concessionaire agrees to add to the Percentage Fee an amount equal to two dollars (\$2.00) for each vehicle rental transaction in which an Airport Customer takes possession of a rental vehicle during the applicable period as an equitable increase to the amount of the Percentage Fee (the "Car-Sharing Adjustment"). For the avoidance of doubt, the Percentage Fee first will be calculated as provided in

this Contract, and then Concessionaire will add to the Percentage Fee so calculated an amount equal to the product of (a) the total number of vehicle rental transactions in which Airport Customers took possession of car-sharing or similar vehicles during the applicable period, multiplied by (b) two dollars (\$2.00). The Car-Sharing Adjustment is not subject to downward adjustment after be paid, and no portion of a Car-Sharing Adjustment is refundable; provided, however, that Authority will have the right to audit and recover any underpayment of the Car-Sharing Adjustment as it exists with respect to the remainder of the Percentage Fee.

Within ten (10) Days after the end of each Month during the Term, Concessionaire will pay to Authority the Percentage Fee in the amount, if any, by which Gross Receipts for the Contract Year to date (for the Contract Year in which the Month falls) multiplied by the Percentage Fee exceeds the sum of the monthly MAPF and the Percentage Fee previously paid for such Contract Year.

Section 4.03 CONCESSION RECOVERY FEE

Concessionaire acknowledges that the Percentage Fee is a fee payable by Concessionaire to the Authority under this Contract for Concessionaire's privilege to operate its Concession at the Airport and is not a fee imposed by the Authority upon Concessionaire's Airport Customers. The Authority does not require, but will not prohibit, a separate statement of and charge for the Percentage Fee on Vehicle Rental Contracts (such separate charge being referred to herein as the "Concession Recovery Fee"), provided that such Concession Recovery Fee meets all of the following conditions: (a) it is permitted by the laws of the State of Florida and all other applicable laws, including, without limitation, Federal Trade Commission requirements, as such laws exist as of the Effective Date of this Contract, or as such laws may hereafter be amended; (b) it is titled "Concession Recovery Fee", "Concession Recoupment Fee", or such other name as is first approved by the Authority in writing; (c) it must be shown separately on the Vehicle Rental Contract and apart from other Concessionaire charges (i.e. "below the tax line"); (d) as stated on the Vehicle Rental Contract and as charged to the Airport Customer, it will be no more than ten percent (10%) of Gross Receipts (and will not be included in Gross Receipts for purposes of calculation of the Concession Recovery Fee); (e) Concessionaire will neither identify, treat, or refer to it as a tax or levy, nor state or imply that the Authority is requiring the pass-through or collection thereof; and (f) Concessionaire will not pass through, unbundle, or list any fees (other than a Concession Recovery Fee, vehicle license fee payable to the State of Florida, and CFC) as a separate item on its Vehicle Rental Contracts, except with the Authority's prior written approval in each instance.

Section 4.04 CFC COLLECTIONS

The Authority's Board of Directors adopted Resolution No. 2011-106 on September 1, 2011, implementing collection of CFCs on rental car companies at the Airport (collectively, as amended from time to time, including Resolution No. 2014-36, the "CFC Resolution"). The CFC Resolution and its rate may be amended and approved from time to time by the Authority's Board of Directors after the Effective Date. Concessionaire's obligations with

respect to CFCs hereunder will be in addition to, and not in substitution for, Concessionaire's obligations for Ground Rent, the MAPF, the Percentage Fee, Concessionaire's Deficiency Payments and other charges.

- A. Concessionaire will be required to pay CFCs to the Authority (regardless of whether such amounts are charged to or collected from Airport Customers) in accordance with the CFC Resolution. Concessionaire's election to not charge or collect CFCs will not relieve Concessionaire from its responsibility to pay the full amount of such CFCs due and payable to the Authority hereunder. Upon receiving such CFCs, Authority will deposit them in accordance with the requirements of the CFC Resolution, the CFC Trust Agreement Resolution, and the CFC Trust Agreement.
- B. Concessionaire will be required to pay CFCs for each car-sharing or similar service transaction regardless of the number of times car-sharing or similar type vehicles are rented by Airport Customers.
- C. Concessionaire will include in its Monthly Gross Receipts Report, in substantially the form set forth in Exhibit B hereto, the: (i) total number of Vehicle Rental Contracts entered into by Concessionaire with Airport Customers, (ii) total number of Contract Days thereunder, and (iii) total amount of CFCs payable by Concessionaire in connection with such Vehicle Rental Contracts. Concessionaire will remit to the Authority, by the tenth (10th) Day of the Month, the total amount of CFCs that accrued for the previous Month. Any such CFCs which are not paid by the 10th Day of the Month shall bear interest at the Default Rate until paid. In the event Concessionaire will fail to timely furnish to the Authority any Monthly Gross Receipts Report required under this Section, the Authority will have the right (but not the obligation), with seven (7) days' written notice, to conduct an audit of Concessionaire's books and records, which books and records will be prepared and maintained in accordance with, and will include all of the information required under Sections 4.12 and 4.15 hereof, and to prepare such Monthly Gross Receipts Report at Concessionaire's expense. Moreover, in the event that Concessionaire fails to timely furnish any such Monthly Gross Receipts Report or fails to make available its books and records, the Authority will have the right to estimate the CFCs due and payable hereunder. In such case, the Authority will furnish to Concessionaire, on a monthly basis, a report showing, in the aggregate, the total number of Contract Days and the total amount of CFCs payable in connection with such Contract Days hereunder, which shall be binding on Concessionaire.
- D. The audit rights set forth in Section 4.15 of this Contract will apply and will be available to the Authority with respect to the CFCs and collections thereof hereunder; provided, (i) if any such audit with respect to CFCs will disclose that Concessionaire's Monthly Gross Receipts Report understated CFC collections to the extent of two percent (2%) or more, Concessionaire will pay to the Authority, within fifteen (15) Days, the cost of said audit in addition to the deficiency (together with interest on such deficiency at the Default Rate from the date due until paid), which deficiency will be payable in any event, or (ii) if any such audit with respect to CFCs and collections

thereof discloses that Concessionaire's Monthly Gross Receipts Report understated CFC collections by less than two percent (2%), Concessionaire will pay to the Authority, within fifteen (15) Days, one-half (1/2) the cost of said audit in addition to the deficiency (together with interest on such deficiency at the Default Rate from the date due until paid), which deficiency will be payable in any event. If the Authority requires or performs more than one (1) audit during any Contract Year during the Term hereof, the cost of any such additional audit will be paid by the Authority (except to the extent that the initial or prior audit for such Contract Year revealed a deficiency of two percent (2%) or more, in which case the aforementioned provisions will apply).

- E. If Concessionaire elects to charge its Airport Customers the CFC, the Authority is authorized to mandate the manner in which Concessionaire identifies the CFC on Vehicle Rental Contracts.
- F. Concessionaire will not intentionally divert vehicle rentals to other locations to avoid the imposition or collection of CFCs. Intentional diversion will include, without limitation, Concessionaire advising, directing, or otherwise suggesting to an Airport Customer or prospective Airport Customer arriving at the Airport that such Airport Customer or prospective Airport Customer rent a vehicle at any off-Airport location, whether from Concessionaire or some other rental car provider, regardless of the basis or reason for such advice, direction, or suggestion. All CFCs which would otherwise have been imposed upon Concessionaire from such intentionally diverted rentals may, at the option of the Authority, be charged to and will be due and payable by Concessionaire as CFCs hereunder.
- G. Concessionaire covenants and agrees that Concessionaire will not be entitled to any rights to offset or other reduction in the requirements herein and will be required to remit to the Authority all CFCs imposed upon Concessionaire regardless of any amounts that may be owed or due to Concessionaire by the Authority.

Section 4.05 GROUND RENT

Concessionaire will pay annual Ground Rent for the underlying land for its Service Center Site, which is calculated to be 24,259 square feet, and Ground Rent for Concessionaire's Proportionate Share of the land underlying the ConRAC, which is calculated to be 12,818 square feet. The annual Ground Rent is one dollar and 16/100 (\$1.16) per square foot. The annual Ground Rent, subject to adjustment as hereinafter provided, will be paid by the Concessionaire in twelve (12) equal monthly installments, together with all applicable sales taxes thereon, in advance and without demand, set off or deduction. The first monthly installment of annual Ground Rent will be paid on the Effective Date. Thereafter monthly installments of annual Ground Rent will be payable in advance on the 1st day of each and every Month during the Term. If the Effective Date does not occur on the 1st day of a Month, then a partial payment of annual Ground Rent will be due, which will be an amount equal to the number of calendar Days remaining in the Month, together with all applicable sales taxes thereon.

- (1) The annual Ground Rent payable during the first Contract Year of the Term shall be Forty Three Thousand Nine Dollars and Thirty Two Cents (\$43,009.32), plus applicable sales taxes. The monthly installment payments of annual Ground Rent during the first Contract Year will be Three Thousand Five Hundred Eighty Four Dollars and Eleven Cents (\$3,584.11) each, plus applicable sales taxes.
- (2) Authority and Concessionaire agree that following the Effective Date, the annual Ground Rent established in subparagraph (1) above will be adjusted on the first day of each subsequent Contract Year based on the percentage increase in the CPI from the previous June. Said CPI is the Consumer Price Index (All Urban Consumers) (CPI-U) for the Tampa Bay areas as published by the U.S. Department of Labor, Bureau of Labor Statistics, or the generally accepted national replacement or successor index, as readjusted to the base month and computed by comparison to the October index with the index of the preceding October. In no event shall the rental rate decrease due to a decrease in the CPI. The CPI will not increase rent by more than 3% per Contract Year. Such adjusted annual Ground Rent (together with applicable sales taxes thereon) shall be the new annual Ground Rent for the succeeding Contract Year (subject to adjustment as hereinafter provided), and shall be payable in twelve equal monthly installments.

Concessionaires that share a Service Center Site will pay annual Ground Rent based on their pro-rata share of space occupied within the shared Service Center Site.

Section 4.06 CONCESSIONAIRE’S DEFICIENCY PAYMENTS, OPERATING EXPENSES, AND IMPOSITION

- A. Concessionaire will pay in monthly installments in accordance with the terms set forth in Sections 4.06(B) and 4.06(C) below, Concessionaire’s Deficiency Payments for each Contract Year under this Contract. For purposes hereof, the “Concessionaire’s Deficiency Payments” shall mean the Concessionaire’s Market Share Percentage of the CFC Deficiency. “CFC Deficiency” shall mean the amount, if any, computed on an annual basis, by which the Mandatory Eligible Costs in such Contract Year exceed the total CFC Revenues received by the Authority from all Concessionaires in such Contract Year, reduced by the amount, if any, in the Deficiency Reserve Fund and available therefor pursuant to the CFC Agreement. Deficiency Payments will be paid by Concessionaire as and when required under Sections 4.06(B) and 4.06(C) below, and in all events without set-off, deduction, credit, or discount, except for such credits for overpayments as are expressly permitted hereunder.
- B. The Authority will, within a reasonable time following the Effective Date hereof, and as soon as reasonably possible after the commencement of each Contract Year thereafter or at such other time as the Authority determines in its sole discretion, provide Concessionaire with a statement of the estimated amounts of such Concessionaire’s Deficiency Payments which will be due for the remainder of such initial or subsequent Contract Year under this Contract, as the case may be (the

"Concessionaire's Deficiency Payment Estimate"). Concessionaire's Deficiency Payment Estimate will be based on, among other things, the Authority's estimate or forecast of the number of Contract Days for such Contract Year, and will be the estimated amount necessary to offset the CFC Deficiency in such Contract Year. Concessionaire will pay to the Authority, concurrently with its monthly payment of Ground Rent as provided in Section 4.05 above, equal monthly installments of the estimated annual amount of Concessionaire's Deficiency Payments for the Contract Year in question as set forth in such Concessionaire's Deficiency Payment Estimate.

- C. As soon as reasonably practicable following the end of each Contract Year hereunder during the Term hereof, the Authority will provide Concessionaire with a statement (the "Deficiency Reconciliation Statement") indicating (i) the Mandatory Eligible Costs for the preceding Contract Year, (ii) the total CFC Revenues received by the Authority in such Contract Year, and (iii) the amount in the Deficiency Reserve Fund applied by the Authority to pay such Mandatory Eligible Costs in such Contract Year. If such Deficiency Reconciliation Statement indicates that the total amount of Mandatory Eligible Costs for such Contract Year exceeded the sum of (a) the total amount of CFC Revenues attributable to such Contract Year, plus (b) the amounts then available in the Deficiency Reserve Fund, plus (c) the aggregate monthly installments of all Concessionaire's Deficiency Payments received by the Authority from Concessionaire and all Concessionaires for such Contract Year, Concessionaire will pay to the Authority Concessionaire's Market Share Percentage of any such deficiency ("Concessionaire's Deficiency True-up") within sixty (60) Days after Concessionaire receives the Deficiency Reconciliation Statement for such Contract Year, and such sums will be deemed additional payments hereunder. Any such Concessionaire's Deficiency True-up which remains unpaid from and after such 60-Day period will bear interest at the Default Rate hereunder from the date due until paid. The Concessionaire will be required to timely pay its Market Share Percentage of any Deficiency Payment Estimate and Concessionaire's Deficiency True-up payable hereunder directly to the Authority, without set-off or counterclaim and without regard to any other rights and remedies it may have against the Authority hereunder or otherwise.
- D. If such Deficiency Reconciliation Statement indicates that the total amount of Mandatory Eligible Costs for such Contract Year was less than the total amount of CFC Revenues attributable to such Contract Year (such amount being referred to herein as "Excess CFCs"), the Authority will apply such Excess CFC Revenues first to Secondary Eligible Costs and then as otherwise permitted under the terms and provisions of the CFC Resolution or the CFC Trust Agreement (provided, the Authority will advise Concessionaire of any Excess CFCs which are to be applied to items other than Mandatory Eligible Costs and Secondary Eligible Costs). The CFCs and CFC Revenues will be governed by Section 4.04 hereof.
- E. The CFC Trust Agreement will require that all CFCs and Concessionaire's Deficiency Payments be deposited into a revenue fund. Funds in the revenue fund will be used and applied in the following order and priority as set forth in the CFC Trust Agreement

(subject to amendments and modifications as described therein), provided, however, that during the construction period for the ConRAC/APM Project, such amounts in the revenue fund will only be used to fund items 1, 2, 3 and 4 below, and any remaining funds shall be held in the revenue fund. Upon the date of completion of the ConRAC/APM Project, the amounts remaining in the revenue fund will be applied as follows to the extent funds are available: i) to make an initial deposit of up to ten million dollars (\$10,000,000) to the Repair and Replacement Fund, and ii) to deposit up to ten million dollars (\$10,000,000) in the Deficiency Reserve Fund. Any remaining amounts shall be held in the surplus fund. Any funds remaining in the revenue fund after the disbursements contemplated in (i) and (ii) above shall be used for the purposes and in the order or priority established by the CFC Trust Agreement.

Following the completion of the ConRAC/APM Project, amounts in the CFC revenue fund shall be applied in order as shown below. For purposes of clarity, items 1 through 5 below, collectively, are the Mandatory Eligible Costs.

1. First to a sinking fund, which shall include an interest account, principal account, and redemption account established for the CFC Bonds.
2. Next to a reserve fund for the CFC Bonds.
3. Next to an expense fund to be used to pay the fees, costs, and expenses of the trustee, remarketing agents, liquidity and credit providers, and other costs associated with the administration of the Bonds and to pay any rebate payments due to the United States Department of Treasury.
4. Next to an Authority reimbursement fund to be used (i) to reimburse the Authority for a 40% share of the operating and maintenance expenses (including repairs and replacements) attributable to the APM and (ii) to reimburse the Authority for (a) debt service accruing with respect to bonds previously issued by the Authority, and (b) amortization recovery of the Authority's investments in so called "pay as you go" projects, in each case to the extent the proceeds of such bonds, or Authority funds, as the case may be, the proceeds of which were used to pay the cost of prior rental car facilities.
5. Next to the Repair and Replacement Fund in amounts determined by the Authority, to be held as a reserve to pay the cost of modifications, repairs, and replacements for the ConRAC/APM Project.

CFCs remaining after making the deposits in items 1 through 5 above shall be considered Excess CFCs. Such Excess CFCs shall be applied in order toward items 6, 7 and 8 below which, collectively, are the Secondary Eligible Costs.

6. To reimburse the Concessionaires, on a pro rata basis, for up to 50% of their respective costs of maintaining the Common Public Areas of the ConRAC in an amount not to exceed two million dollars (\$2,000,000) per Contract Year.

7. To reimburse the Authority for Rental Revenue Recovery in the amount of two million dollars (\$2,000,000) each Contract Year.
 8. To be held in the surplus fund and used, in the Authority's sole and absolute discretion, to fund additions to, expansions of, and improvements to the ConRAC/APM, or other projects related to rental car facilities on the Airport, or to redeposit into the revenue fund under the CFC Trust Agreement, or for both purposes.
- F. The Deficiency Reserve Fund will be established and held by the Authority outside of the CFC Trust Agreement. Amounts in the Deficiency Reserve Fund may be used for the following purposes in the following order of priority: (i) on a pro rata basis among Concessionaire and all other Concessionaires to satisfy the obligations of the Concessionaires to fund the Concessionaire's Deficiency Payments and the Concessionaires Deficiency True-up Payments as contemplated herein; (ii) on a pro rata basis among Concessionaire and all other Concessionaires to cover shortfalls, if any, in any Contract Year in the amount of Excess CFCs available to reimburse Concessionaires for up to two million dollars (\$2,000,000) of Operating Expenses on Common Public Areas; and (iii) to reimburse the Authority for Rental Revenue Recovery to the extent that Excess CFCs are not sufficient to do so. Withdrawals from the Deficiency Reserve Fund will not be replenished.
- G. Authority will annually provide the budget of estimated costs for maintaining Common Public Areas of the ConRAC to the Concessionaires.
- H. As used herein, Operating Expenses means and will include any and all costs, expenses, and obligations in connection with the operation, ownership, management, repair, and replacement, as and when necessary, of the ConRAC, or any portion or portions thereof, whether or not the Authority is obligated hereunder to assume and perform maintenance obligations with respect thereto, including (i) additions or alterations made by the Authority to the ConRAC, or any portion or portions thereof, in order to comply with laws (other than those expressly required herein to be made by Concessionaire), or that are necessary or appropriate to the continued operation of the ConRAC, or any portion or portions thereof; provided, however, that the cost of additions or alterations that are required to be capitalized for federal income tax purposes will be amortized or depreciated on a straight line basis over a period equal to the lesser of the useful life thereof for federal income tax purposes or ten (10) years; (ii) premiums for liability, property damage, fire, workers compensation, earthquake, terrorism, wind and/or hurricane, rent, and any and all other insurance which the Authority deems necessary to carry on, for, or in connection with the Authority's ownership and operation of the ConRAC; and (iii) any and all other costs or expenses incurred by the Authority for the ConRAC, or any portion or portions thereof, and all other similar maintenance and repair expenses incurred by the Authority for the ConRAC, or any portion or portions thereof. Operating Expenses will not include any costs, expenses, or obligations to the extent incurred solely in

connection with the Service Center Site costs, expenses, and obligations, which are the sole responsibility of the Concessionaire.

- I. The Authority will have the right to invoice Concessionaire monthly or quarterly for Concessionaire's Proportionate Share of the Operating Expenses, Taxes and Impositions as estimated by the Authority, and Concessionaire will pay to the Authority those amounts for which Concessionaire is invoiced within fifteen (15) Days after receipt of said invoice. Alternatively, at the Authority's election, the Authority will have the right to invoice Concessionaire monthly for Concessionaire's Proportionate Share of the Operating Expenses, Taxes and Impositions, as reasonably estimated by the Authority. Notwithstanding the foregoing, with respect to the first Contract Year only, in the event that the Authority elects to estimate Concessionaire's Proportionate Share of Operating Expenses pursuant to this Section 4.06, any monies paid in advance to the Authority by Concessionaire will not accrue interest thereon. No later than sixty (60) Days following the end of each Contract Year thereafter, the Authority will deliver a statement to Concessionaire setting forth the difference between the actual Concessionaire's Proportionate Share of the Operating Expenses, Taxes and Impositions and the total amount of monthly payments theretofore paid by Concessionaire to the Authority for such Contract Year thereafter (the "Annual Operating Expense, Taxes and Impositions Statement"). Concessionaire will thereafter pay to the Authority the full amount of any difference between Concessionaire's actual obligation over the total amount of Concessionaire's estimated payments within thirty (30) Days after receipt of said Annual Operating Expense, Taxes and Impositions Statement. Conversely, in the event Concessionaire's estimated payments exceed Concessionaire's actual obligation, the Authority will credit said overpayment against Concessionaire's monthly obligation for Concessionaire's Proportionate Share of the Operating Expenses, Taxes and Impositions within thirty (30) Days following the Authority's delivery of such Annual Operating Expense, Taxes and Impositions Statement. In the event that this Contract expires on a date other than the end of a billing period, Concessionaire's obligation with respect to any amounts owed to the Authority will survive the Expiration Date and will be invoiced to Concessionaire when the same have been accurately determined, or at the Authority's option, such amounts will be reasonably estimated by the Authority to reflect the period of time this Contract was in effect during such billing period. If Concessionaire is owed any amounts by the Authority at the end of the Term, the Authority will issue a payment to Concessionaire within thirty (30) Days after the end of the Term.
- J. Any delay or failure of the Authority in (i) delivering any estimate or statement described in this Section 4.06, or (ii) computing or billing of Concessionaire's Proportionate Share of the Operating Expenses, Taxes and Impositions, will not constitute a waiver of Authority's right to require an increase of its estimate of Operating Expenses, Taxes, and Impositions each Contract Year, or in any way impair the continuing obligations of Concessionaire under this Section 4.06. Notwithstanding the provisions of this Section 4.06(J), the Authority may only invoice Concessionaire for up to two (2) prior Contract Years if the Authority fails to deliver

the Annual Operating Expense, Taxes, and Impositions Statement for those two (2) Contract Years. In the event of any dispute as to any component of Operating Expenses, Taxes and Impositions due under this Contract, Concessionaire, an officer of Concessionaire, or Concessionaire's certified public accountant (but (i) in no event will Concessionaire hire or employ an accounting firm or any other person to audit the Authority as set forth under this Section 4.06 who is compensated or paid for such audit on a contingency basis, (ii) in the event Concessionaire hires or employs an independent party to perform such audit, Concessionaire will provide the Authority with a copy of the engagement letter, and (iii) such accounting firm or other person must enter into a confidentiality agreement reasonably acceptable to the Authority) will have the right, after reasonable notice and at reasonable times, to inspect the Authority's accounting records at the Authority's designated accounting office only with respect to those items comprising part of Operating Expenses, Taxes or Impositions hereunder. If, after such inspection, Concessionaire still disputes such Concessionaire's Proportionate Share of the Operating Expenses, Taxes and Impositions, then, upon Concessionaire's written request therefor, a certification (the "Certification") as to the proper amount of all Operating Expenses, Taxes and Impositions and the amount due to or payable by Concessionaire will be made by an independent certified public accountant selected by the Authority; provided, however, that such certified public accountant will not be the accountant who conducted the Authority's initial calculation of the Operating Expenses, Taxes and Impositions to which Concessionaire is objecting. Such Certification will be final and conclusive as to all Parties. If the Certification reflects that Concessionaire has overpaid Concessionaire's Proportionate Share of the Operating Expenses, Taxes and Impositions for the period in question, then the Authority will credit such excess to Concessionaire's next payment(s) of Concessionaire's Proportionate Share of the Operating Expenses, Taxes and Impositions. Conversely, if Concessionaire has underpaid Concessionaire's Proportionate Share of the Operating Expenses, Taxes and Impositions, Concessionaire will pay such underpayment to the Authority within ten (10) Days following the Authority's written demand therefor. Concessionaire agrees to pay the cost of such Certification and any investigation with respect thereto, and no adjustments in Concessionaire's favor will be made unless it is determined that the Authority's original Annual Operating Expense, Taxes and Impositions Statement was in error. Concessionaire waives the right to dispute any matter relating to the calculation of Concessionaire's Proportionate Share of the Operating Expenses, Taxes and Impositions under this Section 4.06 if any claim or dispute is not asserted in writing to the Authority within thirty (30) Days after delivery to Concessionaire of the original Annual Operating Expense, Taxes and Impositions Statement with respect thereto. Notwithstanding anything herein to the contrary, Concessionaire will maintain strict confidentiality of all of the Authority's accounting records to which Concessionaire is granted or otherwise provided access hereunder, and will not disclose the contents of same to any other person or entity except for Concessionaire's professional advisory representatives (such as Concessionaire's employees, accountants, advisors, attorneys, and consultants) with a need to know such accounting information, who agree to similarly maintain the confidentiality of such financial information.

- K. If in any Contract Year there are Excess CFCs, the Authority will reimburse Concessionaires up to 50% of the Operating Expenses paid by Concessionaires, not to exceed two million dollars (\$2,000,000) in the aggregate per Contract Year, but only to the extent that either Excess CFCs are available pursuant to Section 4.06(E) or amounts in the Deficiency Reserve Fund are available pursuant to Section 4.06(F).
- L. For purposes of determining Impositions hereunder, if under applicable law any Imposition may at the option of the Authority be paid in installments, the Authority may elect to pay such Imposition in installments as the same from time to time becomes due under applicable law, together with such interest as may accrue thereon as the result of such installment payment. Should the Authority elect to pay such Impositions in installments, Concessionaire will not be responsible for any interest that may accrue and such interest will be the sole responsibility of the Authority. Any Impositions (other than Impositions payable in installments as referred to herein or which are assessed against the Exclusive Premises) relating to a fiscal or taxing period of the public authority imposing the Imposition which falls partly within the Term and partly after the Expiration Date or earlier termination of this Contract, will be considered as accruing from day to day during such fiscal or taxing period so that the amount thereof will be adjusted and prorated between the Authority and Concessionaire as of the Expiration Date or the earlier termination of this Contract. Commencing on a date no later than eighteen (18) Months prior to the Expiration Date, Concessionaire will, at the election of the Authority, pay into an escrow, at an escrow which the Authority selects, an amount sufficient to pay that portion of such Impositions which were not payable prior to the Expiration Date or earlier termination of the Contract (i) which accrued during the Term, (ii) which relate to fiscal or taxing periods falling entirely within the Term, or (iii) which relate to the Exclusive Premises (even if the fiscal period for which they are payable or assessed extends beyond the Term). Alternatively, Concessionaire will furnish the Authority a letter of credit or other security in amount and form acceptable to the Authority as security for payment of such Impositions. Concessionaire will have no liability for that portion of such Impositions (other than those payable in installments as referred to herein or which are assessed against the Exclusive Premises) which relates to the period after the Expiration Date or earlier termination of the Contract. No proration will be made for Impositions relating to Concessionaire's Exclusive Premises (regardless of the fiscal period for which assessed or payable), all such Impositions being the sole responsibility of Concessionaire. For purposes hereof, if any Imposition subject to deposit in escrow has not yet become due and payable or the rate or amount thereof has not become fixed at the Expiration Date or earlier termination of the Contract, then the estimated amount of the Imposition for the purposes of calculating the aforementioned escrow deposit will be based upon one hundred ten percent (110%) of the amount or rate of the same relevant Imposition for the immediately preceding fiscal or taxing period of the public authority.
- M. Notwithstanding anything herein to the contrary, the Authority will have the right (but not the obligation), at any time and from time to time, to seek separate parcel

identification numbers or tax identification numbers attributable to the Service Center Site and/or such other portion or portions of the ConRAC as the Authority will deem appropriate in order to provide for separate assessment and levy of Impositions with respect thereto. In such event, Impositions for the Exclusive Premises or such portion or portions of the ConRAC so separately assessed, as the case may be, will be payable directly by Concessionaire to the appropriate taxing authority as and when due (failing which the Authority will have the right, but not the obligation, to pay the same, in which event Concessionaire will reimburse the Authority for any and all amounts so paid within ten (10) Days following the Authority's invoice therefor, and such sums will be deemed additional payments hereunder).

N. The terms and provisions of this Section 4.06 which accrue during the Term hereof will survive the expiration or earlier termination of this Contract.

Section 4.07 LIABILITY FOR CONCESSIONAIRE'S DEFICIENCY PAYMENT

If a Concessionaire (a "Defaulting Concessionaire") fails to pay the full aggregate amount of its respective Concessionaire's Deficiency Payments due under its respective Contract, and such amounts remain unpaid for thirty (30) days, each non-defaulting Concessionaire will be liable, on a proportional basis based upon the pro-rata share of the Exclusive Premises allocated to Defaulting Concessionaire and each non-defaulting Concessionaire, for any and all of such Defaulting Concessionaire's Deficiency Payments payable under its respective Contract ("Concessionaire's Step-up Payments"). Concessionaire's Step-up Payments, to the extent they become due, will be treated as part of Concessionaire's Deficiency Payments for all purposes hereof. The payment of Concessionaire's Step-up Payments will not relieve Concessionaire of any of its other obligations to the Authority hereunder. If the Authority thereafter receives all or any portion of such Defaulted Concessionaire's Deficiency Payment, the Authority will, as soon as reasonably practicable thereafter, provide each non-defaulting Concessionaire with a credit.

Section 4.08 TAXES

Concessionaire will bear, at its own expense, all costs of operating its business including all applicable sales, use, intangible and ad valorem taxes of any kind, against Concessionaire's Exclusive Premises, the real property and any improvements thereto, trade fixtures and other personal property used in the performance of the Concession or Exclusive Premises, or which result from Concessionaire's occupancy or use of the Exclusive Premises or assessed on any payments made by Concessionaire hereunder, whether levied against Concessionaire or Authority. Concessionaire will also pay any other taxes, fees, or assessments against the Exclusive Premises. Concessionaire will pay the taxes, fees, or assessments reflected in a notice Concessionaire receives from the Authority within thirty (30) Days after Concessionaire's receipt of that notice or within the time period prescribed in the tax bill. Authority will attempt to cause the taxing authority to send the applicable tax bills directly to Concessionaire and Concessionaire will remit payment directly to the taxing authority in such instance. Concessionaire may reserve the right to contest such taxes, fees, or assessments and withhold payment upon written notice to Authority of its intent to do so, so long as the nonpayment does not result in a

lien against the real property or any improvements thereon or a direct liability on the part of Authority. Any such tax challenge on the part of Concessionaire will be done so consistent with the requirements of applicable law, including but not limited to, the payment of the amount admitted in good faith to be due and owing.

Section 4.09 OTHER FEES AND CHARGES

- A. Utilities. Concessionaire will pay for all utilities necessary in the operation of the Concession. All charges, including, but not limited to, deposits, installation costs, connection charges, usage, service charges, and applicable taxes for utility services metered directly to the Exclusive Premises or pro-rated by usage will be paid by Concessionaire, regardless of whether the utility services are furnished by Authority or other utility service entities. Any utility payments due to the Authority are due fifteen (15) Days from the date of invoice.

- B. Other Charges. Concessionaire agrees to pay Authority within fifteen (15) Days from date of invoice, other charges and fees as Authority assesses, which may include, but are not limited to, reimbursables and administrative costs in accordance with its procedures and requirements and that Concessionaire incurs in the normal course of its Concession business.

Section 4.10 FAILURE TO MAKE TIMELY PAYMENTS

Without waiving any other right or action available to Authority, in the event Concessionaire is delinquent in the payment of rents, fees, or charges hereunder or rightly due and owing by an audit of Concessionaire's books and records as provided in Section 4.12 and/or 4.15, and in the event Concessionaire is delinquent in paying to Authority any such rents, fees, or charges for a period of seven (7) Days after the payment is due, Authority reserves the right to charge Concessionaire a late fee of \$250.00 per Day until such payments are received.

In the event of a dispute as to the amount to be paid, Authority will accept the sum tendered without prejudice and, if a deficiency is determined to exist, interest will apply only to the deficiency. The acceptance of any such payment will not constitute a waiver, modification or accord and satisfaction with respect to the total amount due and owing under the Contract.

The right of Authority to require payment of interest and the obligation of the Concessionaire to pay same will be in addition to and not in lieu of the right of Authority to enforce other provisions herein, including termination of this Contract, and to pursue other remedies provided by law.

The failure of Authority to take action in the event of a delinquent payment or series of payments will in no way waive the right of Authority to take such action at a subsequent time. Authority expects all rent, fees and charges to be paid on time and Concessionaire agrees to pay on time.

Notwithstanding other provisions of this Contract, and without limiting the other provisions

Tampa International Airport
On-Airport Vehicle Rental Concession

of this Contract concerning, among other things, events deemed to constitute default of Concessionaire, Authority may, in Authority's reasonably exercised discretion, terminate this Contract upon written notice to Concessionaire if there are three (3) instances during any Contract Year in which (i) Concessionaire's payments required hereunder are not timely or are insufficient to cover sums actually due and payable; or (ii) Concessionaire fails to maintain adequate records and accounts reflecting its Concession at the Airport and calculation of Gross Receipts under this Contract; or (iii) Concessionaire fails or refuses to submit the formal supporting paperwork as required herein.

Section 4.11 AUTHORITY'S LIEN

Authority will have a lien upon all tenant improvements of the Concessionaire placed in or on the Exclusive Premises, to the extent permitted by law, for the purpose of securing the payment of all sums of money that may be due to Authority from Concessionaire under this Contract.

Section 4.12 RECORD KEEPING, REPORTS, ANNUAL AUDIT, AND END OF YEAR ADJUSTMENT

- A. Generally Accepted Accounting Principles. Concessionaire will prepare and maintain, in accordance with Generally Accepted Accounting Principles, complete and accurate books and records that include all financial transactions in the performance of this Contract. Concessionaire will maintain Source Documents sufficient to support its books, records, and reports. All monies related to this Contract will be deposited to and paid from a business bank account(s), the records for which will be subject to review and audit in accordance with the provisions hereof. Source Documents include but are not limited to open Vehicle Rental Contracts, closed Vehicle Rental Contracts, master rental agreements, all manual rental agreements, vouchers, and coupons. Concessionaire shall maintain records and controls pertaining to each Vehicle Rental Contract written at the Airport. The Vehicle Rental Contract shall be identified to indicate that Tampa International Airport is the originating location. All Vehicle Rental Contract forms used by Concessionaire in its operations at the Airport shall be sequentially numbered, in a numbering series exclusively for Tampa International Airport, including manual Vehicle Rental Contracts. Accounting records of Concessionaire shall be stored sequentially, or in such other manner approved by Authority, to provide reasonable and expeditious access for audit purposes hereunder. In the event the Concessionaire does not maintain exclusive sequential numbering for Vehicle Rental Contracts commencing at the Airport, the Concessionaire agrees to provide copies of Vehicle Rental Contracts from other rental locations included in the non-exclusive sequence to Authority or its auditors for the purposes of testing reporting completeness. A log shall be maintained for all manual Vehicle Rental Contracts that includes all pre-printed, pre-numbered manual Vehicle Rental Contract numbers and related computer generated rental agreement numbers.

B. Financial Reports.

1. Monthly Gross Receipts Report. No later than ten (10) Days after the end of each Month during the Term, Concessionaire will deliver to Authority a Monthly Gross Receipts Report, in a form as set forth in Exhibit B, or other such form that is acceptable to the Authority, signed by an authorized official of Concessionaire, stating Gross Receipts for said Month and the calculation of the Privilege Fee payable for said Month. The report will: (i) detail Gross Receipts for the prior Month; (ii) separately identify any exclusions from Gross Receipts, as provided herein, in the calculation of the Percentage Fee payments due to the Authority; (iii) detail Gross Receipts for each of Concessionaire's brands operating at the Airport; (iv) list the number of rental transactions, Contract Days, and average rental price occurring during the Month; and (v) be signed by an authorized official of Concessionaire.
2. Monthly Detail Sales Information. No later than ten (10) Days after the end of each Month during the Term, Concessionaire will deliver to Authority an electronic file that details monthly sales information by transaction number, as outlined in Exhibit C, Monthly Detail Sales Information, or other such form that is acceptable to the Authority. The monthly sales details presented in Exhibit C must agree with the total amounts reported in Exhibit B.
3. Authority reserves the right to change the monthly reporting forms and information submittal process at any time with thirty (30) Days' written notice to Concessionaire. Additionally, at the Authority's discretion, Exhibit B may be required in electronic format or by utilizing a portal system.
4. Concessionaire acknowledges that Authority will incur additional administrative costs if Concessionaire is late in providing all of the required monthly information in the monthly reports and electronic files required by this Section, and the amount of those costs are difficult to determine with certainty. Consequently, Concessionaire agrees to pay Authority, in addition to all other financial requirements of this Contract, one hundred dollars (\$100.00) per Report for each Day Concessionaire is late in submitting all of the monthly information in the formats required by this Section. Said charge will continue until specific performance is accomplished and will not be offset against any other amount due Authority as detailed in this Contract.

- C. Annual Audit. No later than ninety (90) days after the end of each Contract Year during the Term, Concessionaire will, at its sole cost and expense, provide an annual audit report by an independent Certified Public Accountant, licensed in the State of Florida and acceptable to Authority, of Concessionaire's monthly Gross Receipts and the amounts paid to Authority as a Privilege Fee for the subject Contract Year or part thereof (said annual audit report hereinafter referred to as Annual Report). There may be no limitation on the scope of the engagement that would preclude the auditor from expressing an unqualified opinion as to the

correctness and completeness of the reported Gross Receipts. The engagement will include a Schedule of Gross Receipts and Privilege Fees for each Month of the Concessionaire's operations in the Contract Year, prepared in accordance with the comprehensive basis of accounting defined herein and reported in a format acceptable to Authority. The engagement will be conducted in accordance with Generally Accepted Auditing Standards and will include an opinion on whether the Schedule of Gross Receipts and Privilege Fees has been completely and accurately presented, calculated and reported according to the terms of this Contract.

Authority reserves the right to challenge any findings or conclusions of the Annual Report if it believes an error may have occurred. In such event, Authority may conduct its own audit under the provisions in Section 4.15, or may require production of the supporting documentation used to reach the finding or conclusion in question. The resolution of Authority of any dispute will be final. Delivery of an Annual Report containing a qualified opinion, or an adverse opinion, or a disclaimer of opinion as defined in the Statements on Auditing Standards issued by the Auditing Standards Board of the American Institute of Certified Public Accountants, or any successor board or agency thereto, will be deemed a material breach of this Contract.

If Concessionaire has paid to Authority an amount greater than Concessionaire is required to pay as Privilege Fee for a Contract Year under the terms hereof, Concessionaire will be entitled to a credit which must be used against the next invoice. If Concessionaire has paid less than the amount required to be paid as Privilege Fee for such Contract Year, then Concessionaire will pay the difference to Authority within fifteen (15) Days from the date of invoice. If Concessionaire is owed any amounts by the Authority at the end of the Term, the Authority will issue a payment to Concessionaire within thirty (30) days after the end of the Term.

- D. Form, Frequency, and Method of Reporting. Acceptance of monthly reports and payments by Authority does not constitute agreement by Authority with the amounts reported and paid. Authority reserves the right to change the form and frequency of reports and statements, including, but not limited to, the Monthly Gross Receipts Report and Monthly Detail Sales Information, and to require the submission by Concessionaire of other statistics and information pertaining to the Gross Receipts hereunder.

Authority will have the right at any time to require that reports be delivered electronically using technology and procedures designated by Authority. If Authority instructs Concessionaire to deliver any reports and statements required hereunder by computer, e-mail, internet website, or other electronic transmission, Authority will not be obligated to furnish Concessionaire with the equipment or systems necessary to do so.

Section 4.13 PLACE OF PAYMENT AND STATEMENT FILING

Payments, reports, and statements required by this Contract will be delivered to:

Hillsborough County Aviation Authority
Attention: Finance Department
Tampa International Airport Service Building
4160 George J. Bean Pkwy, Suite 2400
Red Side, 2nd floor
Tampa, Florida 33607

The designated place of payment and filing may be changed at any time by Authority upon ten (10) Days' written notice to Concessionaire. Checks will be payable to Hillsborough County Aviation Authority. Concessionaire assumes all risk of loss of payments.

Section 4.14 FORM OF PAYMENT

All payments due under this Contract will be paid in lawful money of the United States of America. Authority may accept payment without prejudice to its right to recover the balance of said amount due and to pursue any other remedies under this Contract or otherwise. Concessionaire will pay returned check fees as reasonably determined by Authority in the event of a returned check. The acceptance of any such payment shall not constitute a waiver, modification or accord and satisfaction with respect to the total amount due and owing under the Contract.

Authority may require all payments of Ground Rent, MAPF, Privilege Fee, and all other fees and charges to be made by Automated Clearing House electronic transfers, or other method as designated in writing by Authority. Concessionaire will provide Authority with necessary information and authorizations as needed to facilitate such payments.

Section 4.15 AUTHORITY'S RIGHT TO PERFORM AUDITS, INSPECTIONS, OR ATTESTATION ENGAGEMENTS

Notwithstanding Concessionaire's requirement to submit an Annual Report set forth above, Authority, or its representative, will have the right, with seven (7) Days advance written notice, through the expiration of the fifth (5th) year after the expiration or termination of this Contract, through its representatives, and at all reasonable times, to review all books, records, and contracts of Concessionaire and, where applicable, all individuals or other business entities who are party to this Contract, including franchisee/licensee records and audits of all business transactions and records of sale at any business locations of Concessionaire within three (3) miles of the Airport boundary, requested by Authority's representatives to substantiate the accuracy of reported Gross Receipts and Concessionaire's compliance with other provisions of this Contract. The Concessionaire must provide documentation acceptable to the Authority which verifies Concessionaire's claim that any rentals that may be occurring at Concessionaire's locations other than at the Airport are not Airport Customers. This includes, but is not limited to, financial statements, general ledgers, sales journals, daily or periodic summary

reports, inventory and purchasing records, reports, bank deposit slips, bank statements, cancelled checks, tax reports/returns filed with state or federal entities, discount or rebate/allowance contracts, records of refunds or voids, and joint venture or partnership contracts. Such right of examination will include cooperation by Concessionaire personnel (including, but not limited to, cooperation in sending confirmations to Concessionaire's suppliers or others, assisting Authority in obtaining from governmental entities official copies of tax reports/returns, and disclosing all bank or other accounts into which Gross Receipts are deposited) as reasonably considered necessary by Authority or its representatives to complete the engagement. There may be no limitation in the scope of the engagement that would hinder Authority in testing the accuracy and completeness of the reported Gross Receipts. All such books, records, and contracts will be kept for a minimum period of five (5) years after the close of each Contract Year.

Engagements will be conducted at the Airport. However, if agreed to by Authority, the engagement can be conducted at another location, in which event Concessionaire will reimburse Authority for reasonable transportation, food and lodging costs associated with the engagement, in accordance with Authority's Policy and Standard Procedure relating to Travel Expenses. Concessionaire will allow Authority's representatives to photocopy any records the representatives determine to be necessary to conduct and support the engagement. Concessionaire will provide Authority's representatives with retrievals of computer-based record or transactions the representatives determine to be necessary to conduct the engagement. Concessionaire will not charge Authority for reasonable use of Concessionaire's photocopy machine while conducting the engagement, nor for any cost of retrieving, downloading to storage media and/or printing of any records or transactions stored in magnetic, optical microform or other media. Concessionaire will provide all records and retrievals requested within seven Days of the request. The Parties recognize that Authority will incur additional costs if records requested are not provided in a timely manner and that the amount of those costs is difficult to determine with certainty. Consequently, the Parties agree that Authority may assess liquidated damages in the amount of one hundred dollars (\$100.00) per Day, for each requested record not received. Such damages may be assessed beginning on the eighth (8th) day following the date the request was made. Accrual of such damages will continue until specific performance is accomplished.

If, as a result of any engagement, it is established that Concessionaire owes additional rent, fees or charges to Authority, Concessionaire will pay such additional rents, fees and charges and Authority may assess interest up to the Default Rate on the amount due from the date the amount was initially due. If it is established that Concessionaire underreported Gross Receipts or underpaid fees related to Gross Receipts by three percent (3%) or more for the period under consideration, the entire expense of the engagement may be billed to Concessionaire. Any additional payments due will be paid by Concessionaire to Authority and the Authority may assess interest at the Default Rate on the amount due from the date the amount was initially due. All payments will be due on the date stated within the transmittal letter accompanying the engagement results, but no less than fifteen (15) Days following issuance of said letter. If it is established that Concessionaire underreported Gross Receipts or underpaid fees related to Gross

Receipts by seven percent (7%) or more for the period under consideration, Authority will be entitled to terminate this Contract for cause upon thirty (30) Days' written notice, regardless of whether the deficiency is paid.

Concessionaire will include a provision providing Authority the same rights to initiate and perform audits, inspections or attestation engagements in any sublease agreement that Concessionaire enters into and cause its sublessees to similarly include the statements in further sublease agreements.

Concessionaire agrees to comply with Section 20.055(5), Florida Statutes with respect to contracts entered by Concessionaire after the Effective Date of this Contract and to incorporate in all subcontracts the obligation to comply with Section 20.055(5), Florida Statutes.

Article V. PERMITTED USES

Section 5.01 PERMITTED USES

Subject to the terms, provisions, and conditions hereof, the Concessionaire will have the non-exclusive right, privilege and obligation to conduct and operate a high-quality, well-managed vehicle rental concession at the Airport, during the Term of this Contract, from its Exclusive Premises. Concessionaire will have the right, privilege and obligation to provide only passenger-type rental vehicles; to dispense fuel (expressly limited to dispensing fuel to vehicles used in the Airport vehicle rental business of the Concessionaire); to rent and check-in passenger-type vehicle rentals, including the right to offer for sale related loss and collision damage waiver protection, personal injury and accident insurance, supplemental liability, uninsured motorist, and personal effects insurance; and to provide customer service features, including but not limited to, child restraints, global positioning navigation systems (GPS), and cellular phones.

Subject to the terms and provisions contained in this Contract, and all applicable laws in connection with the conduct of activities by Concessionaire at or around the Airport, Concessionaire is granted the following rights only and will use the ConRAC for the following purposes only:

- A. The use of the Exclusive Premises for the rental of vehicles, support functions such as the washing, fueling, maintenance, and storage of vehicles held for rental, and the related provision of gasoline, collision damage waiver protection, insurance (including, but not limited to, personal injury insurance), the rental of child restraints, mobile telephones, and such other services, items, and equipment as are reasonably associated with the rental of vehicles.
- B. Subject to the Rules and Regulations promulgated by the Authority from time to time, (i) Concessionaire will have the non-exclusive right to the Common Concessionaire Areas and Common Public Areas at the ConRAC, and (ii) Concessionaire or any subcontractor of Concessionaire is prohibited from transporting Airport Customers

between the Airport Terminals and ConRAC (provided, Concessionaire or any subcontractor will be permitted to provide direct transportation to the Airport Terminals solely with respect to Airport Customers that have bona fide and verifiable physical disabilities which reasonably preclude use of the APM).

- C. All of the operations of Concessionaire hereunder, including all Airport-related vehicle rental transactions conducted by Concessionaire, will take place at the ConRAC and from no other location at or on the Airport.
- D. Concessionaire will not permit parking on the Exclusive Premises and/or the ConRAC of vehicles of persons (other than employees, agents, licensees, members, and invitees of Concessionaire at the Exclusive Premises), it being acknowledged and agreed that no public parking will be allowed therein.
- E. Concessionaire will also have a non-exclusive right and license during the Term hereof for use of the APM. Concessionaire will not interfere with off-airport rental car companies and their customers using the APM, other parties as permitted by the Authority, and, solely in the event of an emergency, temporary shutdown or inaccessibility of other transportation systems or means of ingress and egress to and from the Airport, or other exigent circumstances, Concessionaire will not interfere with such other parties as the Authority will reasonably direct from time to time to so utilize the APM; provided, in all such instances, such use will not unreasonably disrupt the use of the APM by Concessionaire and the Authority will charge such other parties a proportionate share directly for use of the APM.

Section 5.02 NON-EXCLUSIVE RIGHTS

The rights granted herein for the performance of the Concession specifically provide that they are non-exclusive and that other Concessionaires of the Authority are engaged in the vehicle rental business at the Airport and will have equal rights and privileges.

In the event of a dispute between Concessionaire and any other Concessionaires operating at the ConRAC or the Airport as to the rights of the parties under their respective contracts, Authority will determine the rights of each party and Concessionaire agrees to be bound by Authority's decision.

Section 5.03 RESTRICTIONS

Nothing in this Article will be construed as authorizing Concessionaire to conduct its Concession in any areas at the Airport other than the ConRAC.

Any and all rights and privileges not specifically granted to Concessionaire for its use of and operations at the Airport pursuant to this Contract are hereby reserved for and to Authority.

Section 5.04 PERMITS AND LICENSES

Concessionaire will obtain and maintain throughout the Term all permits, certificates,

licenses, or other authorizations required in connection with the operation of the Concession. Copies of all required permits, certificates, licenses, or other authorizations will be appropriately displayed within the Exclusive Premises and forwarded to Authority upon issuance and each renewal.

Article VI. OPERATIONS AND PERFORMANCE STANDARDS

Section 6.01 AUTHORITY'S RIGHT TO MONITOR PERFORMANCE

It is Authority's intention that Concessionaire's business be conducted in a manner so as to meet the needs of Airport patrons and employees and in a manner that will reflect positively upon the Concessionaire and Authority. The Concessionaire will equip, organize and efficiently manage the Concession to provide service in a clean, attractive and pleasant atmosphere.

Authority in its sole discretion will have the right to raise reasonable objections to the condition of the Exclusive Premises, the quality and the character of the service, the hours of operation, and/or the appearance and performance of service personnel, and to require any such conditions or practices objectionable to Authority to be promptly remedied by Concessionaire. If requested by Concessionaire, Authority will submit its objections in writing and provide Concessionaire an opportunity to reply to the objections. Such reply will be given consideration by Authority.

Authority reserves the right to conduct periodic performance audits of the Exclusive Premises to assure that all of the operational, safety and compliance standards of this Contract are consistently performed by Concessionaire. Concessionaire acknowledges that performance audits will be conducted by Authority, or its representative, and hereby agrees to cooperate with all performance audits.

1. Performance audits may include minimum objective standards in any or all of the areas of (i) customer service; and (ii) cleanliness and maintenance. Authority reserves the right to issue written notices of violation of performance standards.
2. In order to assure consistent adherence to performance standards throughout the Term, the Authority will use a rolling twelve (12)-month cycle in the recording of incidents of failure to meet performance standards. Authority reserves the right to issue written notices of violation of performance standards.
3. Repeated violations and deficiencies in performance by Concessionaire may cause, at Authority's sole discretion, to terminate this Contract.

Section 6.02 OPERATING PROCEDURES AND STANDARDS

- A. Without limiting any other requirement set forth in this Contract, Concessionaire will conduct its operations in the ConRAC and within the Airport in a commercially reasonable manner in order to minimize the emanation of noise, vibration, dust,

fumes, and odors, and so as not to create a nuisance or interfere with the use and operation of the Airport, adjacent areas on or surrounding the Airport, or adjacent areas surrounding the ConRAC.

- B. The Authority and Concessionaire acknowledge that the operation of the business of Concessionaire in the ConRAC, as well as Concessionaire's performance of its obligations under this Contract with respect thereto, will enhance the economic development of the Authority, and that the rights of Concessionaire to use the ConRAC are subject to the rights of the Authority, as landlord, to monitor compliance with this Contract to ensure that the ConRAC is used and operated as required by this Contract.
- C. Concessionaire covenants and agrees to operate the Concessionaire's vehicle rental business during all hours of air carrier operations at the Airport each day as may be necessary to meet reasonable demands for such services and to properly and adequately serve the public, as determined by the Authority.
- D. Throughout the Term, the management and operation of the Concessionaire's vehicle rental business at the ConRAC will be under the supervision and direction of a Manager. The Concessionaire's Manager will be generally available, either in person or by phone, during regular business hours.
- E. Concessionaire will obtain all permits required for conduct of its operations at the Exclusive Premises and the ConRAC, all in accordance with applicable laws. Upon commencement of operations at the ConRAC and thereafter at the Authority's reasonable request, Concessionaire will provide evidence to the Authority that Concessionaire has obtained or caused to be obtained such permits and registrations.
- F. Concessionaire will not use or occupy or permit the Exclusive Premises and/or the ConRAC to be used or occupied, or do or permit anything to be done in or on the Exclusive Premises and/or the ConRAC, in whole or in part, in a manner which would in any way violate any certificate of occupancy affecting the Exclusive Premises and/or the ConRAC, or make void or voidable any insurance then in force with respect thereto, or which may make it impossible to obtain fire or other insurance thereon required to be furnished by Concessionaire under this Contract, or which will constitute a public or private nuisance, or which will disrupt the safe, efficient, and normal operations of the Airport.
- G. Concessionaire will not use or occupy the Exclusive Premises and/or the ConRAC, or permit the Exclusive Premises and/or the ConRAC to be used or occupied, in whole or in part, in a manner which may violate Permitted Uses, and Concessionaire will at all times comply with all applicable governmental laws, ordinances, regulations, codes and permits in the conduct of its operations under this Contract including, but not limited to, Authority and TSA rules and regulations.

- H. Concessionaire will be solely responsible for the quality of all work performed by Concessionaire, its employees and/or its subcontractors under this Contract. All services furnished by Concessionaire, its employees and/or its subcontractors must be performed in accordance with best management practices and professional judgment, in a timely manner, and must be fit and suitable for the purposes intended by Authority. Concessionaire's services and deliverables must conform with all applicable laws, regulations, and ordinances.
- I. The occupancy and use by Concessionaire of the ConRAC and the rights herein conferred upon Concessionaire will be subject to Authority Rules and Regulations and Operating Directives as are now or may hereafter be prescribed by Authority through the lawful exercise of its powers.
- J. Concessionaire will ensure that the Concession is maintained and operated in a manner that the Exclusive Premises are kept in a safe, clean, orderly and inviting condition at all times in a manner satisfactory to Authority. To comply with these requirements, Concessionaire must regularly review or cause to be reviewed the Exclusive Premises and Concessionaire's operations at the Airport.
- K. Concessionaire will, at its own cost and expense, provide all janitorial services for the Exclusive Premises. Concessionaire will ensure that the Premises are kept clean and free from all rubbish and refuse.
- L. Concessionaire, at its cost and expense, is responsible for pest control within the Exclusive Premises. Concessionaire will contract with a professional pest control service to provide pest control services on a regular basis and at any other times as needed. Concessionaire will coordinate its pest control service with third parties as directed by Authority. Upon request, Concessionaire must furnish Authority a copy of its pest control contract and monthly service reports.
- M. No less than thirty (30) Days prior to the Effective Date, Authority and Concessionaire will finalize a preventive and routine cleaning and maintenance program for the Exclusive Premises and Common Concessionaire Areas. The provisions of the program will be subject to the initial written approval of and periodic review by Authority. Upon request by Authority, Concessionaire will be required to update and/or adjust Concessionaire's cleaning and maintenance program.
- N. Concessionaire agrees to employ sufficient personnel and provide necessary equipment to keep the Exclusive Premises, and all furniture, furnishings, fixtures and equipment thereon, clean, neat, safe, sanitary and in good working order and condition at all times pursuant to the maintenance requirements of this Contract.
- O. Authority will be the sole judge of the quality of Concessionaire's maintenance of the Exclusive Premises. Authority or its representative may at any time, without notice, enter the Exclusive Premises to determine if maintenance satisfactory to Authority is being performed. Performance by Concessionaire of maintenance pursuant to a

written maintenance plan previously approved by Authority will be conclusive evidence of satisfactory maintenance unless Authority determines that there is a present and substantial danger or safety hazard within the Exclusive Premises. If Authority determines that maintenance is not satisfactory, Authority will notify Concessionaire in writing. Concessionaire will commence the required maintenance within fifteen (15) Days after receipt of written notice and perform the work to the Authority's satisfaction within fifteen (15) Days after commencement of the required maintenance, or Authority or its representative will have the right to enter upon the Exclusive Premises and perform the maintenance. Concessionaire agrees to promptly reimburse Authority for the cost thereof, plus an administrative fee of fifteen percent (15%) of such costs.

- P. If Authority establishes a customer service training program for the employees of all concessionaires at the Airport, Authority, after first giving reasonable notice to Concessionaire, will require all Concessionaire's employees to complete the training program.
1. Concessionaire's employees as of the date of implementation of the Authority's customer service training program must complete the training within six (6) months of the date of notice from the Authority.
 2. Concessionaire's employees hired after the date of implementation of the Authority's customer service training program must complete the training within one (1) month of being employed.

If established, the Authority customer service training program will be limited to no more than two (2) full working days per employee per year, will be conducted at the Airport, and will be evidenced by a Certificate of Completion issued to each employee upon successful completion. The Authority customer service training program will be offered at no cost to Concessionaire; however Concessionaire will be responsible for employees' wages, benefits and other employment costs incurred as a result of the training.

- Q. In addition to the requirements set forth herein, Concessionaire will ensure that all personnel engaged in the performance of the Concession will comply with Authority Rules and Regulations and Operating Directives.
- R. Authority will have the right to object to the demeanor, conduct, and appearance of any Personnel of Concessionaire, any of its invitees, and those doing business with it. Immediately upon notice of objection by Authority, Concessionaire will take all steps necessary to remedy the cause of the objection. If requested by Concessionaire, Authority will present its objections in writing and provide Concessionaire the opportunity to reply to the objections and such reply will be given consideration by Authority.
- S. Unless approved in writing in advance by Authority, which approval is at Authority's

sole discretion, Concessionaire will not install or permit to be installed coin-operated vending machines on the Exclusive Premises. Authority reserves the right to install and maintain, through independent contractors, coin-operated vending machines at the Airport, including in Common Concessionaire Areas and Common Public Areas.

- T. Concessionaire will not place excessive loads on the walls, ceilings, and floor or pavement areas of the ConRAC or Exclusive Premises and will repair any area damaged by excessive loading to the satisfaction of Authority.
- U. Unless approved in writing in advance by Authority, which approval is in Authority's sole discretion, Concessionaire will not keep or display anything on or within, or otherwise obstruct, any part of the ConRAC outside of the Exclusive Premises. Concessionaire will keep all service corridors, hallways, stairways, and doorways leading to and from the Exclusive Premises free and clear of all obstructions.
- V. Concessionaire will not interfere or permit interference with the use, operation, or maintenance of Airport, including but not limited to, the effectiveness or accessibility of the drainage, sewerage, water, communications, fire protection, utility, electrical or other systems installed or located from time to time at Airport.
- W. Concessionaire will not engage in any activity prohibited by Authority Rules and Regulations and Operating Directives as may be modified during the Term. If any prohibited act is not corrected as directed by Authority, Authority or its representative will have the right to enter upon the Exclusive Premises and take the corrective action, and Concessionaire agrees to promptly reimburse Authority for any related costs, plus an administrative fee equal to fifteen percent (15%) of the corrective action costs.

Section 6.03 TRASH, WASTE AND REFUSE

Concessionaire will, at its own cost and expense, provide for sanitary removal and disposal of all trash, waste and other refuse caused as a result of the operation of the Concession. Piling of boxes, cartons, barrels or other similar items in, or within view of, Common Public Areas or Common Concessionaire Areas will not be permitted. Concessionaire will use designated locations, containers and transport routes for trash, waste and refuse removal as directed by the Authority.

In transporting trash, waste and refuse associated with operating the Concession to and from the Exclusive Premises, where not otherwise restricted or prohibited by this Contract, Concessionaire will use only carts, vehicles, or conveyances that are sealed, leak proof and equipped with wheels suitable for operating without damaging floor coverings and which are approved by Authority. Concessionaire will not use the APM System for the purpose of transporting trash, waste or other refuse. Authority reserves the right to require changes in Concessionaire's transporting of trash, waste and other refuse, including permitted hours for transport, equipment used for each activity and routes of transport.

The plumbing facilities within the Exclusive Premises and elsewhere in the ConRAC will not be used for any purpose other than for the purposes for which they were constructed, and no foreign substance of any kind will be thrown therein. The expense to repair any breakage, stoppage, or damage resulting from a violation of this paragraph, wherever the breakage, stoppage or damage occurs, will be charged by Authority to Concessionaire if within Concessionaire's Exclusive Premises, or to all Concessionaires if elsewhere in the ConRAC.

Authority reserves the right, if deemed to be in its best interest, to provide trash, waste and other refuse removal, disposal and recycling services. In the event Authority elects to provide these services on behalf of Concessionaire, Concessionaire will pay its share of the cost of such trash, waste and other refuse removal, disposal and recycling services in an amount determined by Authority. If Authority establishes an Airport-wide recycling program, Concessionaire agrees to participate in any such program at its own cost.

Section 6.04 BADGING AND SECURITY REQUIREMENTS

All of Concessionaire's personnel who work at the Airport must apply for and be issued a proper security identification badge prior to beginning work at the Airport. Concessionaire shall be responsible for ensuring personnel, vendor and contractor compliance with all security rules, regulations and procedures including, but not limited to, those issued by the FAA, TSA, and Authority. The rules, regulations and procedures of the FAA, TSA and Authority regarding security matters may be modified during the Term and Concessionaire shall be required to comply with all modifications. Concessionaire shall pay all costs associated with obtaining the required security identification badge and security clearances for its personnel, including, but not limited to, the costs of training and badging as established by Authority.

Authority will fine Concessionaire for each security identification badge that is lost, stolen, unaccounted for or not returned to Authority at the time of security identification badge expiration, employee termination, termination of this Contract, or upon written request by Authority. This fine will be due within 15 Days from the date of invoice. The fine is subject to change without notice, and Concessionaire will be responsible for paying any increase in the fine.

If any of Concessionaire's personnel is terminated or leaves Concessionaire's employment, Authority must be notified immediately, and the security identification badge must be returned to Authority promptly.

Concessionaire's personnel who are issued security identification badges shall only utilize such badges and access rights in connection with the operation of Concessionaire's business as outlined herein. Concessionaire's personnel shall be informed by Concessionaire in writing of this requirement and a violation of such shall be a basis for the termination of a person's employment if that person violates such restrictions.

Section 6.05 EMPLOYEE PARKING

Concessionaire may provide parking for employees in the ConRAC in Concessionaire's Exclusive Premises. However, nothing in this Contract will be deemed to require Authority to provide parking to Concessionaire's employees. Authority may provide parking accommodations to Concessionaire's employees in common with employees of other concessionaires and users of the Airport subject to the payment of reasonable charges therefor as may be established from time to time by Authority. In such event, Concessionaire's employees will be required to park within the designated areas.

Section 6.06 PAGING, AUDIO, VIDEO SYSTEMS AND FREQUENCY PROTECTION

If Concessionaire installs, in accordance with the Tenant Work Permit Handbook and the Concessionaire Improvement Handbook, and with Authority's approval, any type of radio transceiver or other wireless communications equipment, Concessionaire will provide frequency protection within the aviation air/ground VHF frequency band and the UHF frequency band in accordance with restrictions promulgated by the FAA for the vicinity of FAA Transmitter or Receiver facilities. Frequency protection will also be provided for all other frequency bands operating in the vicinity of Concessionaire's equipment. If frequency interference occurs as a result of Concessionaire's installation, Authority reserves the right to shut down Concessionaire's installation until appropriate remedies to the frequency interference are made by Concessionaire. Remedies may include relocation of Concessionaire's equipment to another site. The cost to remedy the frequency interference will be solely at Concessionaire's expense.

Section 6.07 COMPLAINTS

- A. If Concessionaire receives (or Authority receives and forwards to Concessionaire) any written complaint concerning the operation in or use by Concessionaire of the Exclusive Premises, the ConRAC or the APM, other than (i) minor complaints not related in any material respect to Concessionaire's duties and obligations under this Contract or any other agreement between Concessionaire and Authority, or (ii) manifestly invalid or baseless complaints (as mutually and reasonably determined by Concessionaire and Authority following Concessionaire's submission of reasonable supporting or explanatory documentation in connection therewith), then (without limitation of the Authority's other rights and remedies hereunder), Concessionaire will deliver a copy of such complaint to the Authority within five (5) Days of its receipt, and:
1. In the case of the first such complaint, Concessionaire will promptly respond to such complaint in writing within seven (7) Days of its receipt and make a good-faith attempt to resolve or rectify the cause of such complaint within such seven (7) Day period, and in the event Concessionaire fails to do so, the Authority may (but will not be obligated to), at its election, resolve or rectify the cause of such complaint, in which event the reasonable costs, expenses, and fees incurred by the Authority in connection therewith will be deemed additional rent hereunder and will be due and payable by Concessionaire to the Authority within thirty (30)

Days following the Authority's invoice therefor, and if not paid within such 30-Day period, will bear interest at the Default Rate until paid.

2. In the case of the second such complaint from the same customer, or concerning the same or substantially the same issue, received by Concessionaire within ninety (90) Days following the first such complaint, Concessionaire will promptly respond to such complaint in writing within twenty-four (24) hours of its receipt and make a good-faith attempt to resolve or rectify the cause of such complaint within such 24-hour period, and in the event Concessionaire fails to do so, the Authority may (but will not be obligated to), at its election, resolve or rectify the cause of such complaint, in which event the reasonable costs, expenses, and fees incurred by the Authority in connection therewith will be deemed additional rent hereunder and will be due and payable by Concessionaire to the Authority within thirty (30) Days following the Authority's invoice therefor, and if not paid within such 30-Day period, will bear interest at the Default Rate until paid.
 3. In the case of the third such complaint from the same customer, or concerning the same or substantially the same issue, received by Concessionaire within ninety (90) Days following the second such complaint, the Authority may (but will not be obligated to), in addition to its rights and remedies under clause (2) above, at its election and upon prior notice to Concessionaire, thereafter perform directly the function(s) that were the basis of such complaint(s) for a period of time as determined by the Authority at its sole discretion, in which event the costs, expenses, and fees thereafter incurred by the Authority in connection with the performance of such functions will be payable by Concessionaire to the Authority.
 4. Without further notice or demand, Concessionaire will keep a copy of each such complaint and Concessionaire's written response thereto for a period of six (6) months from the date of the complaint, and will make the complaint and the written response available to the Authority upon its request.
- B. Concessionaire will respond in writing to complaints registered by the Authority's Police Department with respect to violations of traffic regulations committed on Airport roadways, including, without limitation, any use relating to the business operations of Concessionaire at the Exclusive Premises or the ConRAC by the agents, contractors, invitees, and licensees of Concessionaire, setting forth such action as has been taken or is immediately contemplated to remedy said violations.

Article VII. Non-Discrimination / Affirmative Action

During the performance of this Contract, Concessionaire, for itself, its assignees and successors in interest, agrees as follows:

- A. Concessionaire will comply with the regulations relative to non-discrimination in federally assisted programs of the Department of Transportation (DOT) Title 49, Code of Federal Regulations, Part 21, as amended from time to time (hereinafter referred to as the Regulations), which are incorporated herein by reference and made a part of this Contract.
- B. Civil Rights. Concessionaire, with regard to the work performed by it under this 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. Concessionaire will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when this Contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21. During the performance of this Contract, Concessionaire, for itself, its assignees, and successors in interest agrees to comply with the following non-discrimination statutes and authorities, including but not limited to:
1. Title VI of the Civil Rights Act of 1964 (42 U.S. C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
 2. 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation-Effectuation of Title VI of The Civil Rights Act of 1964);
 3. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal -aid programs and projects);
 4. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
 5. The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
 6. Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
 7. The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are

Federally funded or not);

8. Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
 9. The 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, Concessionaire must take reasonable steps to ensure that LEP persons have meaningful access to Concessionaire's programs {70 Fed. Reg. at 74087 to 74100}; and
 12. Title IX of the Education Amendments of 1972, as amended, which prohibits Concessionaire from discriminating because of sex in education programs or activities (20 U.S.C. 1681et seq).
- C. In all solicitations either by competitive bidding or negotiation made by Concessionaire for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier must be notified by Concessionaire of Concessionaire's obligations under this Contract and the Regulations relative to nondiscrimination on the grounds of race, color or national origin.
- D. Concessionaire will provide all information and reports required by the Regulations or directives issued pursuant thereto and must permit access to its books, records, accounts, other sources of information and its facilities as may be determined by Authority or the FAA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of Concessionaire is in the exclusive possession of another who fails or refuses to furnish this information, Concessionaire will so certify to Authority or the FAA, as appropriate, and will set forth what efforts it has made to obtain the information.

- E. In the event of Concessionaire's non-compliance with the non-discrimination provisions of this Contract, Authority will impose such contractual sanctions as it or the FAA may determine to be appropriate, including, but not limited to, withholding of payments to Concessionaire under this Contract until Concessionaire complies, and/or cancellation, termination or suspension of this Contract, in whole or in part.
- F. Concessionaire will include the provisions of Paragraphs A through E above in every subcontract and subconsultant contract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued thereto. Concessionaire will take such action with respect to any subcontract or procurement as Authority or the FAA may direct as a means of enforcing such provisions, including sanctions for non-compliance. Provided, however, that in the event Concessionaire becomes involved in or is threatened with litigation with a subcontractor or supplier as a result of such direction, Concessionaire may request Authority to enter into such litigation to protect the interests of Authority and, in addition, Concessionaire may request the United States to enter into such litigation to protect the interests of the United States.
- G. Concessionaire assures that, in the performance of its obligations under this Contract, it will fully comply with the requirements of 14 CFR Part 152, Subpart E (Non-Discrimination in Airport Aid Program), as amended from time to time, to the extent applicable to Concessionaire, to ensure, among other things, that no person will be excluded from participating in any activities covered by such requirements on the grounds of race, creed, color, national origin, or sex. Concessionaire, if required by such requirements, will provide assurances to Authority that Concessionaire will undertake an affirmative action program and will require the same of its subconsultants.

Article VIII. AIRPORT CONCESSION DISADVANTAGED BUSINESS ENTERPRISE

Section 8.01 AUTHORITY'S POLICY

Authority is committed to a policy and program for the participation of Airport Concession Disadvantaged Business Enterprises (ACDBEs) in concession-related contracting opportunities in accordance with 49 CFR Part 23, as set forth in the ACDBE Policy and Program, incorporated herein by reference (ACDBE Program). In advancing Authority's ACDBE Program, Concessionaire agrees to ensure that ACDBEs, as defined in 49 CFR Part 23 and Authority's ACDBE Program, have a fair opportunity to participate in the performance of this Contract. Concessionaire will take all necessary and reasonable steps in accordance therewith to ensure that ACDBEs are encouraged to compete for and perform subcontracts under this Contract.

Section 8.02 NON-DISCRIMINATION

- A. Concessionaire and any subcontractor of Concessionaire will not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. Concessionaire will carry out applicable requirements of 49 CFR Part 23, as amended from time to time during the Term, in the award and administration of agreements. Failure by Concessionaire 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 Authority deems appropriate.
- B. This Contract is subject to the requirements of the U. S. Department of Transportation's regulations found at 49 CFR Part 23, as amended from time to time during the Term. Concessionaire agrees that it will not discriminate against any business owner because of the owner's race, color, national origin, or sex in connection with the award or performance of any concession agreement, management contract, or subcontract, purchase or lease agreement, or other agreement covered by 49 CFR Part 23.
- C. Concessionaire agrees to include the statements in paragraphs (A) and (B) above in any subsequent concessions agreement or contract covered by 49 CFR Part 23 that it enters into and cause those businesses to similarly include the statements in further agreements.

Section 8.03 ACDBE PARTICIPATION AND COMPLIANCE

- A. ACDBE Contract Goal. Pursuant to 49 CFR Part 23, the Authority is required to develop an overall goal for ACDBE participation in car rental concessions to cover a three-year period. The Authority's overall ACDBE car rental goal for the three-year period beginning October 1, 2021 through September 30, 2023 is 2.2% of the total expenditure on goods and services by car rental concessions at the Airport. Concessionaire will provide a level of ACDBE participation in this Contract equal to or greater than 2.2% of the total goods and services expenditures with ACDBE firms, certified with the Florida Unified Certification Program, or clearly demonstrate in a manner acceptable to Authority its good faith efforts to do so. Subsequent overall car rental goals will be incorporated into this Contract by letter from the Authority's Vice President of Concessions and Commercial Parking, without need for formal amendment to this Contract.

Within 60 days after Contract award by the Authority's Board, Concessionaire will submit to the Authority's Senior Manager of Business Diversity, ACDBE Letter(s) of Intent for each ACDBE proposed to meet the ACDBE Contract Goal, or documentation that it made sufficient good faith efforts to do so in accordance with 49 CFR Part 23.25(e) (1) (iii) and (iv). The Letter(s) of Intent will be required to include the following information: (1) the names and addresses of ACDBEs that will participate in the Concession; (2) a description of the work that each ACDBE will perform; (3) the estimated dollar amount of the participation of each ACDBE participating; (4) written

and signed documentation of commitment to use an ACDBE whose participation Concessionaire submits to meet the ACDBE Contract Goal; and (5) written and signed confirmation from the ACDBE that it is participating in the Concession as provided in the Concessionaire's commitment.

B. Eligibility of ACDBEs: Only ACDBEs certified with the Florida Unified Certification Program will count toward the ACDBE Contract Goal. A directory of certified ACDBEs is available on the Authority website at www.TampaAirport.com > Airport Business > Business Diversity > Program Directories and Certifications.

C. ACDBE Termination and Substitution. Concessionaire will not terminate an ACDBE for convenience without the Authority's prior written consent. If an ACDBE is terminated by Concessionaire with the Authority's consent or, if an ACDBE fails to complete its work on the Contract for any reason, Concessionaire must make good faith efforts, in accordance with the requirements of 49 CFR Part 23.25(e) (1) (iii) and (iv), to find another ACDBE to substitute for the original ACDBE to provide the same amount or greater of ACDBE participation.

D. Reporting Requirements.

Concessionaire will submit to Authority, on Authority's monthly ACDBE Utilization Report form, or in a format acceptable to the Authority, a report of the total dollar value of all goods and services purchased or leased from the ACDBE and non-ACDBE firms during the Month by the Concessionaire under this Contract and the total dollar value of goods and services purchased or leased from an ACDBE under this Contract calculated in accordance with the requirements of 49 CFR Part 23. The monthly ACDBE Utilization Report form will be submitted no later than fifteen (15) Days after the end of the Month that follows the Month for which such form is filed. Consequently, the Parties agree Concessionaire shall pay Authority, in addition to all other financial requirements of this Contract, \$10 for every Day for each report Concessionaire is late in submitting all of the monthly information in the formats required by this Section. Said charge will continue until specific performance is accomplished and shall not be offset against any other amount due Authority as detailed in this Contract.

E. Monitoring. Authority will monitor the compliance and good faith efforts of Concessionaire in meeting the requirements of this Article. Authority will have access to the necessary records to examine such information as may be appropriate for the purpose of investigating and determining compliance with this Article, including, but not limited to, records, records of expenditures, contracts between Concessionaire and the ACDBE participants, and other records pertaining to the ACDBE participation plan, which Concessionaire will maintain for a minimum of three years following the termination of this Contract. The extent of ACDBE participation will be reviewed prior to the exercise of any renewal, extension or material amendment of this Contract to consider whether an adjustment in the ACDBE requirement is warranted. Without limiting the requirements of the Contract, Authority reserves the right to review and

approve all subcontracts, in advance of their commitment, utilized by the Concessionaire for the achievement of its ACDBE Contract Goal.

- F. Non-Compliance. In the event Concessionaire fails to comply with the ACDBE Program or fails to meet the ACDBE Contract Goal set forth in Section 8.03(A) and fails to demonstrate a good faith effort to do so, Authority may, in addition to pursuing any other available legal remedy, terminate, suspend or cancel this Contract in whole or in part; and/or suspend or debar Concessionaire from eligibility to contract with Authority in the future or to receive bid packages or request for proposal packages or other solicitations, unless Concessionaire demonstrates, within a reasonable time as determined by Authority, its compliance with the terms of the ACDBE Program or this Article or its good faith efforts to comply with such.

Article IX. CONRAC CONSTRUCTION

Section 9.01 CONRAC/APM PROJECT

- A. Pursuant to the Bond Resolution, the Authority anticipates the issuance of the Bonds in connection with the design and construction of the ConRAC/APM Project hereunder. Such Bonds are being issued pursuant to and in accordance with the Bond Indenture, together with any and all related documents executed in connection therewith, and will be and remain subject to the applicable terms, conditions, and provisions thereof, as the same may be amended or modified from time to time.
- B. The Authority, with reasonable diligence and at its own cost and expense (except as expressly provided to the contrary herein and subject to the Authority's receipt of funds attributable to the Bonds) constructed the ConRAC/APM Project. The ConRAC/APM Project includes (i) any and all Petroleum Storage and Fuel Systems and oil-water separators to be installed as part of the construction of the ConRAC/APM Project, and title to such Systems and oil separators in the Exclusive Premises will immediately pass to Concessionaire upon Substantial Completion thereof, and (ii) any and all on-site and off-site preparation and improvements necessary or desirable in connection with the ConRAC/APM Project, including, without limitation, earthwork, roadwork, off-site transportation-related improvements, wetland mitigation, the extension of utilities, storm water drainage, and water retention or detention.
- C. The Authority does not warrant the accuracy of any of the information provided by third parties as part of the ConRAC/APM Project and will have no liability arising out of any inaccurate information provided by third parties as part thereof; provided, to the extent that the Authority has actual knowledge of any such inaccurate information, the Authority will so advise Concessionaire and such third parties and will direct such third parties to correct such inaccurate information. The Authority's construction of the ConRAC/APM Project will not impose upon the Authority or its Board Members,

officials, officers, employees, or agents any liability or obligation with respect to the design or construction of the ConRAC/APM Project, or the compliance of the ConRAC/APM Project with any applicable laws; provided: (i) except to the extent arising from any acts or omissions of Concessionaire, any other Concessionaires, or any of their respective members, officers, employees, agents, contractors, or representatives, and subject to the availability of adequate CFC Revenues therefor, the Authority will be responsible for correcting any latent defects in, or any non-compliance with applicable laws resulting from the initial design or construction of the foundation, roof, structural components, or exterior walls of the ConRAC for a period equal to the greater of (A) one (1) year following Substantial Completion, or (B) the period of any third party warranty applicable to such portion of the ConRAC/APM Project; (ii) with respect to any other matters, the Authority will reasonably cooperate with Concessionaire (at no cost or expense to the Authority) with respect to any action, claim, or proceeding Concessionaire may elect to bring against the architect, engineer, general contractor(s), or any subcontractor(s) in connection with the design or construction of the ConRAC/APM Project, or any portion thereof; (iii) subject to the Authority's obligations under clause (i) above, the Authority will, upon the written request of Concessionaire, assign to Concessionaire or otherwise make available to Concessionaire the benefit of any and all warranties and guarantees received by the Authority, together with other rights and remedies of the Authority, if any, in connection with the ConRAC/APM Project as it was designed and constructed, or the applicable portions thereof (including, without limitation, any rights of the Authority against all designers, contractors, subcontractors, vendors and suppliers, together with their respective insurance carriers and bonding agents), it being understood and agreed that, with respect to claims involving more than one Concessionaire hereunder, all Concessionaires then operating at the ConRAC will reasonably coordinate and cooperate with respect to such claims and any related enforcement actions; and (iv) upon the written request of Concessionaire, but subject to the Authority's obligations under clause (i) above, the Authority will commence and pursue on behalf of Concessionaire (and at Concessionaire's sole cost and expense) any action, claim, or proceeding reasonably necessary to enforce the rights of Concessionaire and/or the Authority hereunder as against the architect, engineer, general contractor(s), or any subcontractor(s) in connection with the design or construction of the ConRAC/APM Project, or any warranties, guarantees, or other claims relating thereto.

- D. The Authority will (i) authorize Concessionaire to access the ConRAC for the purpose of commencing construction of its Concessionaire Improvements (as defined in Section 9.02 hereof), as provided by written notice from Authority's Vice President of Concessions and Commercial Parking or designee to Concessionaire after the Effective Date, such that Concessionaire is reasonably able to so commence construction of its Concessionaire Improvements hereunder..

Section 9.02 CONSTRUCTION OF CONCESSIONAIRE IMPROVEMENTS BY CONCESSIONAIRE

Concessionaire covenants and agrees, and it is an express condition of this Contract, that Concessionaire will, with due diligence and at Concessionaire's sole cost and expense, commence the construction within the Exclusive Premises of the improvements described herein (collectively, the "Concessionaire Improvements"), all in accordance with this Section 9.02, Exhibit I, Schedule of Concessionaire Improvements, and other terms and provisions of this Contract.

- A. Concessionaire may not commence construction of the Concessionaire Improvements in the Exclusive Premises without the Authority's prior written approval of the plans and specifications relating thereto (the "Concessionaire Improvement Plans"), which approval will not be unreasonably withheld, conditioned, or delayed, and receipt of all necessary Authority and other governmental approvals, licenses, and permits in connection therewith.
- B. Following approval of its Concessionaire Improvement Plans hereunder, and subject to compliance with the other terms and provisions of this Contract, Concessionaire will notify the Authority in advance of the date Concessionaire will commence construction of its Concessionaire Improvements in the Exclusive Premises and its proposed construction schedule with respect thereto.
- C. Prior to commencement of construction (and to the extent required), Concessionaire will procure the approval of the final Concessionaire Improvement Plans by any and all other governmental authorities, offices, and departments having jurisdiction of the Exclusive Premises. The Authority will cooperate with Concessionaire in procuring such approvals, provided that the Authority will have given its prior approval to such final Concessionaire Improvement Plans.
- D. Neither the approval by the Authority of the Concessionaire Improvement Plans, nor any other action taken by the Authority with respect thereto under the provisions of this Contract, will constitute an opinion or representation by the Authority as to the sufficiency of said Concessionaire Improvement Plans, or such design standards as the Authority will have in effect from time to time, compliance with any laws, or ability of Concessionaire to receive any permits from any department or agency of the Authority or other jurisdictions, nor impose any present or future liability or responsibility upon the Authority. Approval will not constitute approval of the Authority or its departments or agencies for any construction, extension, or renovation of any public utilities or public ways which may be necessary to service the Exclusive Premises. In any case where more than one standard, code, regulation, or requirement applies to construction or the Concessionaire Improvement Plans, the strictest will control.
- E. After Concessionaire's execution of any contracts for construction, engineering, or architectural services, Concessionaire will furnish to the Authority the names of the person or entity whom Concessionaire has engaged for such services. Such

architect, engineer, and contractor will be licensed in the discipline being contracted for, experienced in design and construction of improvements comparable to those for which its services are being required by Concessionaire and airport-related work, not be listed on any local, state, or federal non-responsible bidders' list, and not be debarred under any state or federal statute, regulation, or proceeding. Prior to commencement of construction, Concessionaire will deliver to the Authority copies of its contracts with any design architect, engineer and/or the general contractor.

- F. Concessionaire will also furnish co-obligee payment and performance bonds for all projects where the cost of construction is over twenty five thousand dollars (\$25,000). The bonds will be for Concessionaire's estimated construction cost, on the forms provided by or deemed acceptable by the Authority, with a surety or sureties for the full and faithful performance of the work. The surety on any bond will be a corporate surety, satisfactory to the Authority, authorized under the laws of Florida to do business in the State of Florida and authorized to write that type of bond through a resident agent of the corporation located in the State of Florida. Bonds must be approved by the Authority prior to the commencement of any on-site work. Any forms used other than the Authority form will require legal review by Authority staff. Such review may cause delay in the final approval of a permit.
- G. Once commenced, Concessionaire will diligently construct and substantially complete the Concessionaire Improvements within the time required by this Contract, notwithstanding any instances of force majeure events or delays caused by the Authority. For purposes of the Concessionaire Improvements, "Concessionaire Improvement Substantial Completion" will mean the completion, in accordance with the Concessionaire Improvement Plans and applicable Laws, of all Concessionaire's Improvements, other than minor punch list items, and will include issuance of a certificate of substantial completion by the architect and engineer in a customary form reasonably required by the Authority. If any work does not comply with the provisions of this Contract, the Authority may, by notice to Concessionaire, require that Concessionaire stop the work and take steps necessary to cause corrections to be made.
- H. Concessionaire will pay all costs of the construction incurred by Concessionaire when due, and will require all contractors to deliver sworn statements of persons furnishing materials and labor before any payment is made and waivers of lien for all work for which payment is made, in order to prevent attachment of mechanic's liens or other liens by reason of work, labor, services, or materials furnished with respect to the Exclusive Premises. During the course of construction, Concessionaire, at its sole expense, will carry or cause to be carried, the insurance required to be carried pursuant to Article 14.
- I. During the course of the construction, the Authority, and its architects, engineers, agents and employees on behalf of the Authority with responsibilities relating to the Exclusive Premises, may enter upon and inspect the Exclusive Premises for the purpose of verifying that the Concessionaire Improvements are proceeding in

accordance with the requirements of this Contract. With respect to any such entry and inspection on behalf of the Authority, persons requiring entry will present proper identification to Concessionaire. No right of review or inspection will make the Authority responsible for work not completed in accordance with the Approved Project or applicable laws. Concessionaire will keep at the Exclusive Premises all Concessionaire Improvement Plans, shop drawings, and specifications relating to such construction, which the Authority may examine at all reasonable times and, if required by the Authority, Concessionaire will also furnish the Authority with copies thereof. Further, Concessionaire will at all times during construction of Concessionaire Improvements and thereafter during the Term have an employee, representative, or contractor authorized to make decisions for Concessionaire available on the Premises or who may be contacted immediately by telephone or other communication to permit the Authority timely entry into Concessionaire Improvements or locked areas where required or permitted under this Contract.

- J. Any work performed at the direction of Concessionaire, even though performed by contractors, will be the responsibility of Concessionaire. During any construction by Concessionaire, Concessionaire will be solely responsible for the support, maintenance, safety, and protection of all facilities of the Authority resulting from such construction activities, and for the safety and protection of all persons or employees and of all property therein. All work will be performed in accordance with (and all Concessionaire Improvements, when completed, will comply with) the Concessionaire Improvement Plans and other documents submitted to and approved by the Authority, with such design standards and Airport and construction conditions as the Authority will have in effect from time to time, and any other applicable federal, state, or local laws and ConRAC/APM Project requirements.
- K. Within ninety (90) Days after the occupancy date with respect to any Concessionaire Improvements, Concessionaire will, at its expense, provide the Authority with a complete set of "as built" plans and specifications on a set of machine readable disks containing electronic data in a format that meets the Authority's graphic standards of the "as-constructed" or "record" plans for such improvements.

Section 9.03 ALTERATIONS

Concessionaire will have the right from time to time after the completion of the initial Concessionaire Improvements, in accordance with the provisions of Section 9.02, and at Concessionaire's sole cost and expense, to make alterations and changes ("Alterations") in or to the Exclusive Premises (except as hereinafter provided), provided Concessionaire will not then be in default in the performance of any of Concessionaire's covenants or agreements in this Contract; and further provided that Substantial Alterations may be made only with the written consent of the Authority, which consent will not be unreasonably withheld or delayed. "Substantial Alterations" means any Alterations (i) to infrastructure improvements, (ii) to the structure of the ConRAC or Exclusive Premises or any portion thereof, (iii) to other items required to be shown on the Concessionaire Improvement Plans for such Alterations or Substantial Alterations, as the case may be, and approved by Authority, or (iv) which would cost more than ten percent (10%) of the

replacement cost of the Concessionaire Improvements. The provisions of this Section 9.03 will apply to and will be complied with by Concessionaire as a condition to the performance of any Alteration or Substantial Alteration. The Authority's approval of the Concessionaire Improvement Plans for Alterations or Substantial Alterations, as the case may be, will not be required for those aspects of the Concessionaire Improvement Plans to the extent such approval would not be required for initial Concessionaire Improvements. Furthermore, all Alterations and Substantial Alterations will be subject to the following:

- A. No Alteration or Substantial Alteration of any kind will be made without the written consent of the Authority (which may be withheld in its sole discretion) which would (i) change the general design, use, or character of the Exclusive Premises, (ii) reduce or impair, to any material extent, the value, rentability, or usefulness of the Exclusive Premises, or constitute waste, or (iii) give to any owner, lessee, or occupant of any other property or to any other person or corporation any easement, right-of-way, or any other right over the Exclusive Premises.
- B. Any Alteration or Substantial Alteration will be made with reasonable dispatch and in a good and workmanlike manner and in compliance with all applicable permits and authorizations and building and zoning laws and with all other laws, and in accordance with the orders, rules, and regulations of the National Board of Fire Underwriters or any other body or bodies hereafter exercising similar functions. If any work does not comply with the provisions of this Contract, the Authority may, by notice to Concessionaire, require that Concessionaire stop the work and take steps necessary to cause corrections to be made.
- C. Concessionaire will demonstrate to the Authority's satisfaction financial capability to pay the entire cost of any Substantial Alteration or, in lieu thereof, furnish to the Authority a bond as described in Section 9.02 hereof, or cash or other security reasonably satisfactory to the Authority, in an amount at least equal to one hundred twenty percent (120%) of the estimated cost of such Substantial Alteration, guaranteeing the completion and payment of the cost thereof free and clear of all liens, conditional bills of sale, and chattel mortgages, except that security for demolition and new construction will be furnished as provided in Section 9.02 hereof.
- D. After completion of Concessionaire Improvements, Concessionaire will not demolish such Concessionaire Improvements without the prior written consent of the Authority. In connection with any such demolition, Concessionaire will otherwise comply with all of the other provisions of this Section 9.03 as though said demolition were a Substantial Alteration. Concessionaire will proceed diligently with its demolition and all demolition will be completed within a reasonable time after its commencement.
- E. In the event Concessionaire constructs a Petroleum Storage and Fuel System at its Service Center Site, Concessionaire will pay for all costs of construction, maintenance, repair, and upkeep, and all taxes and all use and occupational permits or licenses required by federal, state, and local regulations, statutes, codes, or

ordinances associated with a petroleum storage system. Concessionaire will construct a Petroleum Storage and Fuel System in such a manner as will meet all federal, state, or local requirements, including but not limited to the regulations of the FDEP as stated in Chapters 62-761 and 62-762, Florida Administrative Code (F.A.C), the requirements of the Federal Oil Pollution Prevention regulation found in Title 40 of the Code of Federal Regulations Part 112 (40 CFR Part 112), as well as the requirements of the Environmental Protection Commission of Hillsborough County (EPC), as may be amended or replaced. Upon termination or expiration of this Contract as provided herein, Concessionaire will remove any and all Petroleum Storage and Fuel Systems and oil-water separators from its Service Center Site and restore the Service Center Site to condition prior to installation or as approved by the Authority.

Section 9.04 AUTHORITY STANDARDS

In its design and construction work on the Exclusive Premises, Concessionaire will fully comply with the Concessionaire Improvement Handbook and Tenant Work Permit Handbook. Authority reserves the right to amend the Concessionaire Improvement Handbook and Tenant Work Permit Handbook during the Term. Concessionaire agrees to comply with the version of the Concessionaire Improvement Handbook and Tenant Work Permit Handbook in effect as of the date of any construction it undertakes.

Section 9.05 TITLE TO IMPROVEMENTS

The Authority will own the ConRAC/APM Project and all Concessionaire Improvements now existing or hereafter constructed (excluding the trade fixtures, trade equipment, supplies and personal property of Concessionaire) therein, except Petroleum Storage and Fuel Systems and oil-water separators. The Petroleum Storage and Fuel Systems and oil-water separators installed hereunder by the Authority or Concessionaire will be the personal property of Concessionaire.

Section 9.06 SIGNAGE

Subject to the terms and conditions of this Section 9.06, Concessionaire will have the right to install and maintain signs on the Exclusive Premises, provided that the design, installation and maintenance of all signs will be subject to the terms of this Section and comply with the Concessionaire Improvement Handbook. Concessionaire further acknowledges Authority's desire to maintain a high level of aesthetic quality in all concession facilities throughout the ConRAC. Therefore, Concessionaire covenants and agrees that in the exercise of its privilege to install and maintain appropriate signs on the Exclusive Premises, it will submit to Authority, for its review and approval, the size, design, content, construction or fabrication and intended location of each and every sign it proposes to install on or within the Exclusive Premises. Concessionaire will not install signs of any type on or within the Exclusive Premises without prior written approval of Authority, which approval will not be unreasonably withheld or denied if the proposal is in compliance with the Concessionaire Improvement Handbook and other Authority Rules and Regulations and Operating Directives governing signage.

Article X. DISCLAIMER OF LIENS

Absent prior written approval of Authority, none of the improvements made by or for Concessionaire shall be liened, pledged or mortgaged, or otherwise serve as collateral for any reason whatsoever. Further, the interest of Authority in the Exclusive Premises will not be subject to liens for any work, labor, materials or improvements made by or for Concessionaire to the Exclusive Premises, whether or not the same is made or done in accordance with an agreement between Authority and Concessionaire. A written statement evidencing this prohibition against construction, mechanics', laborer's or materialmen's liens shall be provided to all of Concessionaire's contractors, subcontractors, suppliers, laborers and materialmen. It is specifically understood and agreed by Concessionaire that in no event will Authority or the interest of Authority in the Exclusive Premises be liable for or subject to any construction, mechanic's, laborer's or materialmen's liens for materials furnished, improvements, labor or work made by or for Concessionaire to the Exclusive Premises. Concessionaire is specifically prohibited from subjecting Authority's interest in the Exclusive Premises to any construction, mechanic's, materialmen's, or laborers' liens for improvements made by or for Concessionaire or for any materials, improvements or work for which Concessionaire is responsible for payment. Concessionaire will indemnify and hold Authority harmless for any expense or cost associated with any lien or claim of lien that may be filed against the Exclusive Premises or Authority, including attorney fees incurred by Authority. Concessionaire will provide written and receipted notice of this disclaimer of liens to all contractors or subcontractors providing any materials or making any improvements to the Exclusive Premises.

In the event any construction, mechanic's, laborer's, materialmen's or other lien or notice of lien is filed against any portion of the Exclusive Premises for any work, labor or materials furnished to the Exclusive Premises, whether or not the same is made or done in accordance with an agreement between Authority and Concessionaire, Concessionaire will cause any such lien to be discharged of record within 30 Days after notice of filing thereof by payment bond or otherwise or by posting with a reputable title Concessionaire or other escrow agent acceptable to Authority, security reasonably satisfactory to Authority to secure payment of such lien, if requested by Authority, while Concessionaire contests to conclusion the claim giving rise to such lien.

Article XI. MAINTENANCE AND REPAIRS

Section 11.01 CONCESSIONAIRE'S MAINTENANCE AND REPAIR OBLIGATIONS

- A. Exclusive Premises. Concessionaire will, at all times during the Term hereof, at its sole cost and expense, operate and keep its Exclusive Premises in good condition and repair, in a safe, secure, clean and sanitary condition, and in full compliance with any and all applicable laws and such Rules, Regulations and standards as the Authority will maintain in effect from time to time, including, without limitation, the ConRAC Operations & Maintenance Standards attached as Exhibit E hereto and made a part hereof. Concessionaire will be responsible for all maintenance, repair

and replacements of any kind or nature whatsoever to its Exclusive Premises (except to the extent that the same are the express responsibility of the Authority) as further specified in Exhibit E. Concessionaire will keep its Exclusive Premises free from filth, overloading, danger of fire or any pest or nuisance, and repairing and/or replacing any damage or breakage done by Concessionaire, or any of its respective officers, agents, employees, contractors, guests, invitees, or licensees, including, without limitation, damage done by installation of Concessionaire's Improvements. Except for items which are the Authority's responsibility under Section 11.02 below, if any portion of the Exclusive Premises or any system or equipment in the Exclusive Premises which Concessionaire is obligated to maintain or repair cannot be fully repaired or restored, Concessionaire will promptly replace such portion of the Exclusive Premises or such system or equipment. Concessionaire will maintain a preventive maintenance contract providing for the regular inspection and maintenance of the heating and air conditioning system for the Exclusive Premises by a licensed heating and air conditioning contractor, such contract and contractor to be approved by the Authority. In the event that Concessionaire fails to perform any of its obligations hereunder, and fails to cure or commence to cure such failure within fourteen (14) Days after written notice from the Authority, or to thereafter diligently proceed to complete such cure, the Authority may, but will not be obligated to, enter the Exclusive Premises at any time to undertake any maintenance, repairs, alterations, improvements or additions as the Authority will direct or deem necessary for the maintenance, repair, safety, protection, preservation, or improvement of the Exclusive Premises, or as the Authority may be required to do by any governmental department or agency, or by the order or decree of any court or by any other proper authority. Any and all costs and expenses of such repairs, alterations, improvements or additions made by the Authority hereunder will include a fifteen percent (15%) administrative fee and will be due and payable by Concessionaire to the Authority within fifteen (15) Days following the Authority's invoice therefore. If not paid within such fifteen (15) Day period, such costs and expenses will bear interest at the Default Rate until paid. Concessionaire and other Concessionaires may contract with a third party to fulfill these responsibilities.

- B. Common Concessionaire Areas. Concessionaire will be jointly and severally responsible with other Concessionaires to perform such other maintenance, repair, and replacement of the Common Concessionaire Areas as specified in Exhibit E. Concessionaire and other Concessionaires shall contract with a third party to fulfill these responsibilities.
- C. Operating Agreement. Concessionaire is required to enter into an operating agreement (the "Operating Agreement") established by the consortium of the Concessionaires (the "RAC Consortium") which provides, among other things, for (i) the maintenance and repair of the Common Concessionaire Areas; (ii) the operation, maintenance, repair, and replacement of the QTA pursuant to, and in accordance with, the terms and provisions of this Contract then (or to be) in effect; (iii) the hiring of a ConRAC Facility Manager, reasonably acceptable to the

Authority; (iv) disbursement mechanisms among the Concessionaires for reimbursements received by the Authority; and (v) the allocation and assumption of liability for sums due and payable by Concessionaire hereunder and sums due and payable by the other Concessionaires then (or that will be) operating and occupying a portion or portions of the ConRAC from time to time.

1. Acceptable to the Authority. The Operating Agreement shall be acceptable to the Authority in form and substance, shall remain in full force and effect, and shall not dissolve or be terminated during the Term. The Operating Agreement shall provide for execution of additional agreements or other operative documents to provide for the parties' rights and obligations relating to Concessionaire and the ConRAC. The Operating Agreement shall provide for the circumstance when a new Concessionaire replaces an existing Concessionaire. Further, the Operating Agreement shall provide for the circumstance when, following a termination of a contract due to default by a Concessionaire thereunder, the Authority either replaces the Concessionaire with a new Concessionaire by entering into a new contract or, until replacement, permits the terminated concessionaire's spaces and areas to be re-allocated among the remaining Concessionaires in the manner described herein. The Operating Agreement shall also provide for the circumstance where the Authority, at its sole option, may require the addition of another concessionaire to the RAC Consortium from time to time. Once a concessionaire's contract is terminated, Authority shall not permit it to occupy any portion of the ConRAC. The Operating Agreement must acknowledge that no removal or replacement of a concessionaire shall serve to excuse such concessionaire from liability for any environmental damages incurred by such concessionaire. The Operating Agreement may include provisions providing that responsibility for Operating Expenses, any costs arising from compliance with Article 11, and other expenses which relate to the ConRAC may be payable by the concessionaires which operate concessions at the ConRAC; provided, however, that such provisions must provide that in the event of non-payment of any such amounts when due by any such concessionaire, such amount shall become the joint and several obligation of all concessionaires, payable to the Authority or such other third party in a commercially reasonable manner.
2. The RAC Consortium may request by written notice that the Authority send Concessionaire invoices for its Proportionate Share of the Operating Expenses, Taxes, and Impositions to the ConRAC Facility Manager for payment by the ConRAC Facility Manager. In the event the Authority consents to such, the RAC Consortium will cause the ConRAC Facility Manager to enter into a Letter of Agreement with the Authority which will provide for invoicing and payment requirements. The ConRAC Facility Manager will pay Concessionaire Proportionate Share of the Operating Expenses, Taxes, and Impositions due to Authority on Concessionaire's behalf. Authority's consent to send invoices to the ConRAC Facility

Manager shall not relieve Concessionaire of its obligation to pay its Proportionate Share of the Operating Expenses, Taxes, and Impositions as set forth in Article IV, Section 4.06(l) in the event the ConRAC Facility Manager fails to make payments to the Authority for any reason.

3. Assignment of Right. Concessionaire agrees it will not, without the Authority's prior written consent, transfer, assign, or grant a performance interest in the amounts paid relating to occupancy, construction, maintenance, and operation of the ConRAC Revenues under the Operating Agreement (provided that Authority may permit the granting of a security interest in certain contract rights under the Operating Agreement to a trustee or any other person first approved by the Authority); provide for any cross-default between the Operating Agreement and any other agreement between Concessionaire and other concessionaires; permit a termination of the Operating Agreement, except as expressly provided in the Operating Agreement; collect Revenues more than one (1) month in advance (except for the initial investment in the Operating Agreement); evict any Concessionaire under the Operating Agreement; waive, cancel, release, modify, excuse, discount, set off, compromise, or discharge the Concessionaire under the Operating Agreement from any obligations under the Operating Agreement; evict any Concessionaire under the Operating Agreement; waive cancel, release, modify, excuse, discount set off, compromise, or discharge the Concessionaire from any obligations under the Operating Agreement; amend or extend the Operating Agreement; or enter into any collateral agreement with the other concessionaires relating to the Exclusive Premises which is not included in the Operating Agreement.
4. Consistent with Contract. The Operating Agreement shall acknowledge this Contract, be consistent with this Contract, and require Concessionaire and other Concessionaires to comply with the terms of this Contract or such other Concessionaires' contracts. The Operating Agreement shall require the other Concessionaires to give notice to the Authority of any default by any concessionaire thereunder and provide the Authority with the option to elect to cure any such default within a period commensurate with any cure period given to Concessionaire under the Operating Agreement. In addition to the foregoing, the Operating Agreement shall prohibit the other Concessionaires from paying any amounts owed thereunder which have been assigned to the Authority more than thirty (30) Days in advance and shall be expressly subordinated to this Contract.
5. Prompt notification. The RAC Consortium shall promptly notify the Authority of any non-payment of Revenues (to the extent that the RAC Consortium has actual knowledge of any such non-payment of such Revenues) or other default by a Concessionaire under the Operating

Agreement or of any notice of default received by the RAC Consortium under the Operating Agreement.

- D. Concessionaire will be solely responsible for the illumination of the Exclusive Premises, which will comply with all FAA and Authority requirements. Any signs installed by Concessionaire on the Exclusive Premises will be limited to the purpose of identifying Concessionaire (including, without limitation, trade names, trademarks, logos, and brand names), and not for any third party advertising. The number, general type, size, design, and location of such signs, and any modifications or replacements thereof, will be subject to the prior written approval of the Authority in each instance, which approval will not be unreasonably withheld or delayed so long as such signage complies with applicable laws and applicable Airport signage standards, and is otherwise consistent with the appearance and architectural integrity of the Exclusive Premises. Signage will be approved separately or as part of the Concessionaire Improvement Plans. No exterior or roof signs are permitted. All signage will comply with such design standards and Main Terminal development guidelines as the Authority will have in effect from time to time.

Section 11.02 AUTHORITY'S MAINTENANCE AND REPAIR OBLIGATIONS

- A. The Authority will be responsible for performing any maintenance, repairs, and janitorial services in the Common Public Areas, subject to the inclusion of the costs thereof as part of Operating Expenses.
- B. The Authority will be responsible for performing any capital repairs or replacements of the ConRAC, including, without limitation, the foundation, roof, structural components, exterior walls, and HVAC chiller plant thereof, which are reasonably required during the Term hereof, and payment of all such costs, to the extent sufficient funds are not available in the Repair and Replacement Fund, in the Authority's discretion, will be included in the Operating Expenses and payable by the Concessionaires pursuant to Section 4.06(H) to the extent permitted hereunder. Concessionaire will promptly report in writing to the Authority any defective condition known to Concessionaire which the Authority is required to repair under this Section 11.02(A). Any maintenance, repairs, or replacements to the ConRAC, or any portion thereof, including, without limitation, the foundation, roof, structural supports, exterior walls and HVAC chiller plant thereof, which are required due to damage caused by, or as a result of, any act or omission of Concessionaire or Concessionaires, or any of its respective officers, agents, employees, contractors, guests, invitees, or licensees, will be performed by the Authority at the sole cost and expense of Concessionaire or Concessionaires and such costs and expenses will be due and payable by Concessionaire or Concessionaires to the Authority within fifteen (15) Days following the Authority's invoice therefor. If not paid within such fifteen (15) Day period, such costs and expenses will bear interest at the Default Rate until paid. The Authority may enter the ConRAC, inclusive of the Exclusive Premises, at all reasonable times upon reasonable prior notice (except in the event of an emergency) to perform any

maintenance, repairs, or replacements which are the Authority's responsibility hereunder, or as the Authority may be required to do by any applicable laws, governmental department or agency, or by the order or decree of any court or by any other proper authority. For purposes hereof, the determination of whether a repair item constitutes a capital repair or replacement hereunder will be made by Authority in accordance with Internal Policies and Standard Procedures. Notwithstanding anything herein to the contrary, in no event will the Authority be required to maintain, repair, and/or replace Concessionaire's Exclusive Premises, or any portion or portions thereof. Notwithstanding anything herein to the contrary, in the event that any such repair, maintenance, or replacement costs are reimbursed or reimbursable from funds available in the Repair and Replacement Fund, such costs will not also be included as part of Operating Expenses hereunder, it being understood and agreed that there will be no "double counting" of any such costs for purposes hereof.

Article XII. DEFAULT, REMEDIES AND TERMINATION RIGHTS

Section 12.01 EVENTS OF DEFAULT

Concessionaire will be deemed to be in default of this Contract upon the occurrence of any of the following:

1. The failure or omission by Concessionaire to perform its obligations under this Contract or the breach of any terms, conditions and covenants required herein.
2. The conduct of any business or performance of any acts at the Airport not specifically authorized in this Contract or by any other agreement between Authority and Concessionaire, and Concessionaire's failure to discontinue that business or those acts within thirty (30) Days of receipt by Concessionaire of Authority's written notice to cease said business or acts (which thirty (30) Day notice and cure period will also satisfy the 30-Day notice requirement of Section 12.03 below).
3. The appointment of a Trustee, custodian, or receiver of all or a substantial portion of Concessionaire's assets.
4. The divestiture of Concessionaire's estate herein by operation of law, by dissolution, or by liquidation, not including a merger or sale of assets.
5. The insolvency of Concessionaire; or if Concessionaire will take the benefit of any present or future insolvency statute, will make a general assignment for the benefit of creditors, or will seek a reorganization or the readjustment of its indebtedness under any law or statute of the United States or of any state thereof including the filing by Concessionaire of a voluntary petition of bankruptcy or the institution of

proceedings against Concessionaire for the adjudication of Concessionaire as bankrupt pursuant thereto.

6. Concessionaire's violation of Florida Statute Section 287.133 concerning criminal activity on contracts with public entities.
7. Any action or failure to act which results in the Authority being in violation of any governmental regulation, applicable law, Bond Documents, or other contractual obligation associated with any state, federal or other funding received by Authority.

Section 12.02 CONCESSIONAIRE REMEDIES

Upon thirty (30) Days' written notice to Authority, Concessionaire may terminate this Contract and all of its obligations hereunder, if Concessionaire is not in default of any term, provision, or covenant of this Contract or in the payment of any fees or charges to Authority, upon or after the inability of Concessionaire to use the Airport or operate its business for a period longer than ninety (90) consecutive Days due to war, terrorism, or the issuance of any order, rule or regulation by a competent governmental authority or court having jurisdiction over Authority; provided, however, that such inability or such order, rule or regulation is not due to any fault or negligence of Concessionaire.

Section 12.03 AUTHORITY REMEDIES

In the event of any of the foregoing events of default of Concessionaire, and following thirty (30) Days' written notice by Authority and Concessionaire's failure to cure, Authority, at its election, may exercise any one or more of the following options or remedies, the exercise of any of which will not be deemed to preclude the exercise of any other remedy herein listed or otherwise provided by statute or general law:

1. Terminate Concessionaire's rights under this Contract and, in accordance with law, take possession of the Exclusive Premises. In doing so, Authority will not be deemed to have thereby accepted a surrender of the Exclusive Premises, and Concessionaire will remain liable for all payments or other sums due under this Contract and for all damages suffered by Authority because of Concessionaire's breach of any of the covenants of this Contract; or
2. Treat the Contract as remaining in existence, and cure Concessionaire's default by performing or paying the obligation which Concessionaire has breached. In such event all sums paid or expenses incurred by Authority directly or indirectly in curing Concessionaire's default will become immediately due and payable, as well as interest thereon, from the date such fees or charges became due to the date of payment, at the Default Rate; or
3. Declare this Contract to be terminated, ended, null and void, and reclaim possession of the Exclusive Premises, whereupon all rights and interest of Concessionaire in the Exclusive Premises will immediately end.

No delay, failure, or omission of Authority to re-enter the Exclusive Premises or to exercise any right, power, privilege, or option arising from any default nor subsequent acceptance of fees or charges then or thereafter accrued will impair any such right, power, privilege, or option, or be construed to be a waiver of any such default, relinquishment, or acquiescence of the Exclusive Premises. No option, right, power, remedy, or privilege of Authority will be construed as being exhausted or discharged by the exercise thereof in one or more instances. It is agreed that each and all of the rights, powers, options, or remedies given to Authority by this Contract are cumulative and that the exercise of one right, power, option, or remedy by Authority will not impair its rights to any other right, power, option, or remedy available under this Contract or provided by law.

Section 12.04 HABITUAL DEFAULT

Notwithstanding the foregoing, in the event that the Concessionaire has defaulted three (3) times within one (1) Contract Year in the performance of or breached any of the terms, covenants and conditions required of this Contract, as determined solely by the Authority, and regardless of whether the Concessionaire has cured each individual condition of breach or default, the Concessionaire may be determined by the Authority to be an "habitual violator." At the time that such determination is made, the Authority will issue to the Concessionaire a written notice advising of such determination and citing the circumstances therefore. Such notice will also advise Concessionaire that there will be no further notice or grace periods to correct any subsequent breaches or defaults and that any subsequent breaches or defaults of whatever nature, taken with all previous breaches and defaults, will be considered cumulative and collectively, will constitute a condition of non-curable default and grounds for immediate termination of this Contract. In the event of any such subsequent breach or default, the Authority may terminate this Contract upon the giving of written notice of termination to the Concessionaire, such termination to be effective upon delivery of the notice to the Concessionaire.

Article XIII. INDEMNIFICATION

- A. To the maximum extent permitted by Florida law, in addition to Concessionaire's obligation to provide, pay for and maintain insurance as set forth elsewhere in this Contract, Concessionaire will indemnify and hold harmless Authority, its members, officers, agents, employees, and volunteers from any and all liabilities, suits, claims, procedures, liens, expenses, losses, costs, fines and damages (including but not limited to claims for attorney's fees and court costs) caused in whole or in part by the:
1. Presence on, use or occupancy of Authority property;
 2. Acts, omissions, negligence (including professional negligence and malpractice), errors, recklessness, intentional wrongful conduct, activities, or operations;
 3. Any breach of the terms of this Contract;

4. Performance, non-performance or purported performance of this Contract;
5. Violation of any law, regulation, rule, Advisory Circular, or ordinance;
6. Infringement of any patent, copyright, trademark, trade dress or trade secret rights; and/or
7. Contamination of the soil, groundwater, surface water, storm water, air or the environment by fuel, gas, chemicals or any other substance deemed by the Environmental Protection Agency or other regulatory agency to be an environmental contaminant;

by Concessionaire or Concessionaire's officers, employees, agents, volunteers, subcontractors, invitees, or any other person whether the liability, suit, claim, lien, expense, loss, cost, fine or damages is caused in part by an indemnified party. This indemnity obligation expressly applies, and shall be construed to include, any and all claims caused in part by negligence, acts or omissions of the Authority, its members, officers, agents, employees, and volunteers.

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

1. Presence on, use or occupancy of Authority property;
2. Acts, omissions, negligence (including professional negligence and malpractice), errors, recklessness, intentional wrongful conduct, activities, or operations;
3. Any breach of the terms of this Contract;
4. Performance, non-performance or purported performance of this Contract;
5. Violation of any law, regulation, rule, Advisory Circular, or ordinance;
6. Infringement of any patent, copyright, trademark, trade dress or trade secret rights;
7. Contamination of the soil, groundwater, surface water, stormwater, 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 Concessionaire or Concessionaire's officers, employees, agents, volunteers, subcontractors, invitees, or any other person directly or indirectly employed or utilized by

Concessionaire regardless of whether it is caused in part by Authority, its members, officers, agents, employees, or volunteers. This duty to defend exists immediately upon presentation of written notice of a suit, claim or action of any nature to Concessionaire by a party entitled to a defense hereunder. This defense obligation expressly applies, and shall be construed to include, any and all claims caused by the negligence, acts or omissions, of the Authority, its members, officers, agents, employees and volunteers.

- C. If the above indemnity or defense provisions or any part of the above indemnity or defense provisions are limited by 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 this 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.
- D. In addition to the requirements stated above, to the extent required by FDOT Public Transportation Grant Agreement and to the fullest extent permitted by law, the Concessionaire shall indemnify and hold harmless the State of Florida, FDOT, including the FDOT's officers and employees, from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness or intentional wrongful misconduct of the Concessionaire and persons employed or utilized by the Concessionaire in the performance of this Contract. This indemnification in this paragraph shall survive the termination of this Contract. Nothing contained in this paragraph is intended to nor shall it constitute a waiver of the State of Florida's and FDOT's sovereign immunity.
- E. Concessionaire'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 Authority, its members, officers, agents, employees, and volunteers its fully and finally barred by the applicable statute of limitations or repose.
- F. Nothing in this Article will be construed as a waiver of any immunity from or limitation of liability Authority, or its members, officers, agents, employees, and volunteers may have under the doctrine of sovereign immunity under common law or statute.
- G. Authority and its members, officers, agents, employees, and volunteers reserve the right, at their option, to participate in the defense of any suit, without relieving Concessionaire of any of its obligations under this Article.

H. If the above Sections A - G or any part of this Sections A – G is deemed to conflict in any way with any law, the Article or part of the Article will be considered modified by such law to remedy the conflict.

I. **ConRAC Remote Baggage Check Facility Indemnification and Hold Harmless**

Authority has constructed and will maintain a baggage check-in facility at the ConRAC and has entered into an agreement with an outside vendor to perform and operate certain baggage check-in services at the ConRAC. Authority agrees to indemnify and hold harmless Concessionaire against any and all claims, issues, and liability resulting from and/or in connection with any and all baggage check-in operations at the ConRAC.

Article XIV. INSURANCE

Insurance Terms and Conditions.

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

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. To the extent it is used to meet the minimum limit requirements, any Umbrella or Excess coverage shall follow form to the Employer's Liability, Commercial General Liability and Business Auto Liability coverages, including all endorsements and additional insured requirements. Any applicable Aggregate Limits in the Umbrella or Excess policy(ies) shall not be shared or diminished by claims unrelated to this Contract.

Section 14.01 LIMITS AND REQUIREMENTS

A. **Commercial General Liability**

The minimum limits of insurance 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, the Concessionaire under this Contract or the use or occupancy of Authority premises by, or on behalf of, the Concessionaire in connection with this Contract. Coverage shall be provided 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	\$5,000,000
Each Occurrence	\$5,000,000
Personal and Injury	\$5,000,000

B. Worker’s Compensation and Employer’s Liability Insurance

The minimum limits are:

Part One (Workers’ Compensation)	Florida Statutory
Part Two (Employer’s Liability)	
Each Accident	\$1,000,000
Disease – Policy Limit	\$1,000,000
Disease – Each Employee	\$1,000,000

C. Business Automobile Liability Insurance

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 covering the work performed pursuant to this Contract are:

Each Occurrence – Bodily Injury and Property Damage combined	\$5,000,000
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D. Property Insurance

Concessionaire will procure and maintain all risk Property Insurance covering all forms of risk on all improvements and any other interests of Concessionaire, if applicable, in or about Authority premises, including inventory, supplies, and other property of Concessionaire located at said Authority premises in an amount equal to the full replacement value of tenant improvements and any other interests of Concessionaire in or about said premises.

Except as described below, Authority will be responsible for procuring and maintaining Property Insurance on the ConRAC. The limits and deductibles of such insurance program will be determined by the Authority at its sole discretion. Authority is not obligated to procure any insurance pursuant to this Section and retains the right, in its sole discretion, to terminate any such Property Insurance procured by Authority pursuant to this Section. Concessionaire will be responsible for reimbursing the Authority for its pro rata share of such property insurance costs. Concessionaire’s pro rata share of such Property Insurance costs will be based on its respective allocated space. To the extent any deductibles apply to any loss under any Authority provided Property Insurance, Concessionaire will be responsible for its pro rata portion of such deductible, which will be determined in the same manner as the pro rata responsibility for all other Property Insurance costs. Insurance

reimbursable to the Authority will be invoiced annually in advance for the year and payable in advance without demand on the 1st of the Month.

In the event that Concessionaire is the sole occupant or user of any building that is a part of the Service Center Site, then Concessionaire will be required to purchase all risk Property Insurance covering such building. At a minimum, the Property Insurance will be written on a replacement cost basis and in the amount of the total replacement cost of the building. The maximum deductible for damage by windstorm will be fifty thousand dollars (\$50,000) per occurrence or five percent (5%) of the replacement cost of the building, whichever is greater. The maximum deductible for all perils other than windstorm will be fifty thousand dollars (\$50,000) per occurrence. Concessionaire will be responsible for paying all deductibles applicable to such Concessionaire purchased Property Insurance. Alternatively, at its sole discretion, upon thirty (30) Days' advance written notice to Concessionaire from Authority's Chief Executive Officer or designee, the Authority may elect to procure the Property Insurance on such Concessionaire occupied building and, in such instance, Concessionaire will be responsible for reimbursing the Authority for one hundred percent (100%) of the cost of such Property Insurance.

A. Environmental Impairment (Pollution) Liability Insurance

The minimum limits of Environmental Impairment (Pollution) Liability Insurance coverage for liability resulting from pollution or other environmental impairment in connection with operations performed by or on behalf of Concessionaire under this Contract, including but not limited to, the ownership, use and maintenance of underground and above ground storage tanks that are used solely by Concessionaire are:

Each Occurrence	\$1,000,000
Annual Aggregate	\$1,000,000

To the extent Concessionaire is the sole user of any fuel storage tank, such tank must be covered by the Concessionaire's Environmental Impairment (Pollution) Liability Insurance. Concessionaire will maintain this coverage for the Term of the Contract and until the petroleum storage system(s) are closed and removed from the sites as evidenced by the receipt of a letter from FDEP or designee confirming same.

B. Environmental Impairment Fuel Tank Liability

Authority may, in its sole discretion, maintain Fuel Tank Pollution Liability Insurance under the Florida Petroleum Liability Insurance Program Administrators (FPLIPA) for the fuel storage tank system, including piping and containment, owned by Authority and leased to Concessionaire under this Contract, at Authority's expense. It is understood and agreed by Concessionaire that such insurance covers only the aforementioned fuel storage tank system, including piping and containment, and

does not provide any liability protection or insurance coverage to Concessionaire for bodily injury, pollution or other environmental impairment arising out of, or in connection with, Concessionaire's use and occupancy of Exclusive Premises. Concessionaire will remain fully liable for any bodily injury, pollution or environmental impairment occurring as a result of its operations and use and occupancy of Exclusive Premises. Any insurance procured by Authority pursuant to this section is solely for Authority's benefit and is not intended to replace or supplement any insurance coverage that otherwise would have been maintained by Concessionaire. Authority is not obligated to procure any insurance pursuant to this Section and retains the right, in its sole discretion, to terminate any such insurance procured by Authority pursuant to this Section.

C. Application of Limits

Umbrella Liability Insurance or Excess Liability Insurance may be used to reach the limits of liability required for the Commercial General Liability, Employer's Liability, and Business Automobile Liability Policy. If applicable, the amounts specified as Contract specific will be an initial layer of coverage that will be applicable only to claims arising out of, or in connection with, the work performed or the use or occupancy of Authority premises in connection with this Contract and will not be reduced or diminished in any manner by claims resulting from other than the work performed or the use or occupancy of Authority premises in connection with this Contract. The amounts specified as total limits will be the total minimum limits required, including the initial layer.

Section 14.02 CONDITIONS OF ACCEPTANCE

The insurance maintained by Concessionaire throughout the Term must conform at all times with the Authority's Standard Procedure S250.06, Contractual Insurance Terms and Conditions, as may be amended from time to time, which is attached hereto as Exhibit H and made a part hereof.

Article XV. SECURITY FOR PERFORMANCE AND PAYMENT

Section 15.01 FORM OF PAYMENT AND PERFORMANCE SECURITY

To secure payment for rents, fees, charges and other payments required hereunder, Concessionaire will post with Authority a surety bond or standby letter of credit drawn in favor of Authority (hereinafter referred to as Payment and Performance Security).

The Payment and Performance Security will be maintained throughout the Term of this Contract and any holdover or extension period. Concessionaire's initial Payment and Performance Security will be an amount equal to the sum of one-fourth (1/4) of Concessionaire's MAPF for the first Contract Year, plus one-fourth (1/4) of the agreed upon estimate of Concessionaire's CFC Revenues for the first Contract year, plus one-fourth (1/4) of Concessionaire's Ground Rent for the first Contract Year. Beginning with the second Contract Year and each Contract Year thereafter, Concessionaire's Payment

and Performance Security will be adjusted to an amount equal to one-fourth (1/4) of Concessionaire's MAPF payable to the Authority for the previous Contract Year, plus one-fourth (1/4) of Concessionaire's CFC Revenues payable to the Authority for the previous Contract Year, plus one-fourth (1/4) of Concessionaire's Ground Rent for such Contract Year. The Payment and Performance Security will be issued by a bank or surety provider acceptable to Authority and authorized to do business in the State of Florida, and will be in a form and content satisfactory to Authority. Each time the Payment and Performance Security expires it will be renewed at the amount equal to the sum of one-fourth (1/4) of Concessionaire's Proportionate Share of the Ground Rent payable to the Authority over the previous twelve (12) months, plus one-fourth (1/4) of Concessionaire's MAPF payable to the Authority over the previous twelve (12) months, and one-fourth (1/4) of Concessionaire's CFC revenues payable to the Authority over the previous twelve (12) months. The Concessionaire will provide the Authority with written notice and accompanying documentation of the renewed or replaced Payment and Performance Security no later than sixty (60) Days prior to the date of expiration.

Concessionaire will furnish the Payment and Performance Security within thirty (30) Days prior to the Effective Date as security for the payment of all financial obligations and full performance of every provision of this Contract by Concessionaire. Failure to maintain the Payment and Performance Security as set forth herein will be an event of default hereunder.

Nothing in this Section will prevent Authority from requiring such additional Payment and Performance Security as it deems required to adequately protect Authority's interests.

Section 15.02 APPLICATION OF PAYMENT SECURITY

In the event Concessionaire fails to meet its financial obligations or fails to perform any obligation of this Contract, Authority, in addition to any other rights and remedies available by law or in equity, may, at any time, apply the Payment and Performance Security or any part thereof toward the payment of Concessionaire's obligations and performance of Concessionaire's obligations under this Contract. In such event, within five (5) Days after written notice of application of the Payment and Performance Security, Concessionaire will restore the Payment and Performance Security to its original amount. Authority will not be required to pay Concessionaire any interest on the Payment and Performance Security. Authority's Chief Executive Officer or designee, upon fourteen (14) Days' written notice to Concessionaire, may require an increase in the amount of the Payment and Performance Security equal to no more than three (3) additional Months of rents, fees, charges and other payments because of increased obligations hereunder, or, if upon a review of Concessionaire's payment or performance history at the Airport, Authority determines an increase is required.

Section 15.03 RELEASE OF PAYMENT SECURITY

The release of the Payment and Performance Security will be subject to the satisfactory performance by Concessionaire of all terms, conditions, and covenants contained herein throughout the entire Term. Upon termination of this Contract, the release of Payment and Performance Security will not occur until all rents, fees, charges, other payments,

and all obligations due to Authority are satisfied and Authority has accepted the findings of Concessionaire's audit or has successfully conducted an audit in accordance with the provisions of Section 4.15 of this Contract. In the event of a dispute as to the condition of the Exclusive Premises, only the amount in dispute will be retained for remedy. Authority will release the Payment and Performance Security without interest within thirty (30) Days of Concessionaire meeting all of the above requirements.

Section 15.04 GUARANTY OF CONTRACT

This Contract is contingent upon execution of a Limited Guaranty of Contract by the person or entity designated on the form shown in Exhibit D, Form of Guaranty of Contract.

Article XVI. PROPERTY DAMAGE

Section 16.01 PARTIAL DAMAGE

In the event all or a portion of the ConRAC or Exclusive Premises are partially damaged by fire, explosion, the elements, a public enemy, Act of God, or other casualty, but not rendered unusable, Concessionaire will give Authority immediate notice thereof, and Authority will make the necessary repairs with due diligence at its own cost and expense. Concessionaire will be required to comply with the obligations set forth in Article IX with respect to all work required to be performed in accordance with this Section.

Section 16.02 EXTENSIVE DAMAGE

In the event damages as a result of any event outlined in Section 16.01 are so extensive as to render all or a significant portion of the ConRAC or Exclusive Premises unusable, but capable of being repaired within one hundred twenty (120) Days, Concessionaire will give Authority immediate notice thereof, and Authority will make the necessary repairs with due diligence, at its own cost and expense. Concessionaire will be required to comply with the obligations set forth in Article IX with respect to all work required to be performed in accordance with this Section.

Section 16.03 COMPLETE DESTRUCTION

In the event the ConRAC and Exclusive Premises are completely destroyed as a result of an event outlined in Section 16.01 and the damages render the entire ConRAC and Exclusive Premises unusable and the ConRAC and Exclusive Premises cannot be repaired within one hundred twenty (120) Days, Concessionaire will give Authority immediate notice thereof, and Authority will be under no obligation to repair, replace, or reconstruct said ConRAC and Exclusive Premises. In the event Authority elects not to repair, replace, or reconstruct said ConRAC and Exclusive Premises, Authority will not be required to provide alternative operating areas to Concessionaire and this Contract and the obligations of the Parties hereunder will terminate.

Section 16.04 ABATEMENT OF FEES

In the event of extensive damage or complete destruction as referenced in Section 16.02 and Section 16.03 above, the portion of the Ground Rent and MAPF attributable to

unusable Exclusive Premises will abate from the date of casualty until such time as Authority issues notice to Concessionaire that the unusable portion of the ConRAC and Exclusive Premises can be re-occupied. For purposes of this Section 16.04, the portion of MAPF attributable to the unusable ConRAC and Exclusive Premises will be the proportion of MAPF equal to the proportion of the Gross Receipts attributable to the unusable ConRAC areas and Exclusive Premises bears to total Gross Receipts in the prior Contract Year. Notwithstanding the foregoing, in the event the ConRAC and Exclusive Premises are damaged or destroyed as a result of an act, omission, or negligence of Concessionaire, its employees, agents, representatives, invitees and/or subcontractors, Concessionaire's MAPF will not abate and Concessionaire will be responsible for all costs to repair or rebuild that portion of the ConRAC and Exclusive Premises damaged or destroyed as a result thereof.

Section 16.05 LIMITS OF AUTHORITY'S OBLIGATIONS DEFINED

Redecoration, replacement, and refurbishment of furniture, fixtures, equipment, and supplies will be the responsibility of and paid for by Concessionaire and will be of equivalent quality to that originally installed hereunder. Authority will not be responsible to Concessionaire for any claims related to loss of use, loss of profits, delay, or loss of business resulting from any partial, extensive, or complete destruction of the ConRAC and Exclusive Premises regardless of the cause of damage.

Section 16.06 ALTERNATE SPACE

Authority will use its best efforts to provide Concessionaire with alternate areas acceptable to Concessionaire to continue its operation while Authority makes repairs to the ConRAC and Exclusive Premises in accordance with the terms of Sections 16.01 and 16.02 of this Article, except for damages caused by Concessionaire's acts, omissions or negligence.

Section 16.07 WAIVER OF SUBROGATION

To the extent insurance permits, and then only to the extent collected or collectable by Concessionaire under its property insurance coverage, Concessionaire waives any and all claims against Authority and its Board members, directors, officers, agents, servants, volunteers and employees for loss or damage to property.

Article XVII. DAMAGING ACTIVITIES

Except for the Common Fuel System and Concessionaire's Petroleum Storage and Fuel Systems, no goods or materials will be kept, stored, or used in or in the ConRAC and Exclusive Premises that are flammable, explosive, hazardous (as defined in Article XIX) or that may be offensive or cause harm to the general public or cause damage to the ConRAC and Exclusive Premises. Nothing will be done in the ConRAC and Exclusive Premises other than as provided in this Contract that will increase the rate of or suspend the insurance on the ConRAC and Exclusive Premises or on any structure of the Authority. No machinery or apparatus will be used or operated in the ConRAC and Exclusive Premises that will damage the ConRAC and Exclusive Premises or adjacent

areas; provided, however, that nothing in this Article will preclude Concessionaire from bringing or using on or about the ConRAC and Exclusive Premises, with approval by Authority, such materials, supplies, equipment, and machinery as are appropriate or customary in the operation of Concessionaire's business under this Contract.

Article XVIII. COMPLIANCE WITH LAWS, REGULATIONS, ORDINANCES AND RULES

Concessionaire, its officers, employees, agents, subcontractors, or those under its control, will at all times comply with applicable federal, state, and local laws and regulations, Airport Rules, Regulations, Policies, Procedures and Operating Directives as are now or may hereinafter be prescribed by Authority, all applicable health rules and regulations and other mandates whether existing or as promulgated from time to time by the federal, state, or local government, or Authority including, but not limited to, permitted and restricted activities, security matters, parking, ingress and egress, environmental and storm water regulations and any other operational matters related to the operation of Airport.

Article XIX. ENVIRONMENTAL COMPLIANCE

A. General Conditions.

Notwithstanding any other provisions of this Contract, and in addition to any and all other requirements of this Contract or any other covenants, representations, or warranties of Concessionaire, Concessionaire hereby expressly covenants, warrants, and represents to Authority, in connection with Concessionaire's operations on the Exclusive Premises, the following:

1. Concessionaire is knowledgeable of and agrees to comply with all applicable federal, state, and local environmental laws, ordinances, rules, regulations, and orders that apply to Concessionaire's facilities or operations at the Exclusive Premises and acknowledges that such environmental laws, ordinances, rules, regulations, and orders change from time to time, and Concessionaire agrees to keep informed of any such future changes.
2. In addition to any and all other requirements of Concessionaire to indemnify and hold Authority harmless contained in this Contract, Concessionaire agrees to hold harmless and indemnify Authority, its Board Members, employees, officers and volunteers for any violation by Concessionaire of such applicable federal, state, and local environmental laws, ordinances, rules, regulations, and orders and for any non-compliance by Concessionaire with any permits issued to Concessionaire pursuant to such environmental laws, which hold harmless and indemnity will include but not be limited to, enforcement actions to assess, abate, remediate, undertake corrective measures, and monitor environmental conditions and for any monetary penalties, costs, expenses, or damages, including natural resource damages, imposed against Concessionaire, its employees, invitees, suppliers, or

service providers or against Authority by reason of Concessionaire's violation or non-compliance.

3. Concessionaire agrees to cooperate with any investigation, audit, or inquiry by Authority or any governmental agency regarding possible violation of any environmental law or regulation upon the Exclusive Premises.
4. Concessionaire agrees that all remedies of Authority as provided herein with regard to violation of any federal, state, or local environmental laws, ordinances, rules, regulations, or orders will be deemed cumulative in nature and will survive termination of this Contract.
5. Concessionaire agrees that any notice of violation, notice of non-compliance, or other enforcement action of the nature described herein will be provided to Authority within twenty four (24) hours of receipt by Concessionaire or Concessionaire's agent. Any violation or notice of violation or non-compliance with federal, state, or local environmental law or ordinance that Concessionaire fails to rectify within the cure period established in Article XII of this Contract will be deemed a default under this Contract. Any such default that is not cured will be grounds for termination of this Contract.
6. In entering this Contract, Authority expressly relies on the covenants, representations, and warranties of Concessionaire as stated herein.

B. Environmental Considerations.

1. Concessionaire, its officers, agents, servants, employees, invitees, independent contractors, successors, or assigns will not discharge or spill any Hazardous Substance, as defined herein, into any component of the storm drainage system or onto any paved or unpaved area within the boundaries of the Exclusive Premises. In addition, Concessionaire will not discharge or spill any Hazardous Substance into any component of the sanitary sewer system without first neutralizing or treating same as required by applicable anti-pollution laws or ordinances, in a manner satisfactory to Authority and other public bodies, federal, state, or local, having jurisdiction over or responsibility for the prevention of pollution of canals, streams, rivers, and other bodies of water. Concessionaire's discharge, spill or introduction of any Hazardous Substance onto the Exclusive Premises or into any component of Authority's sanitary or storm drainage systems will, if not remedied by Concessionaire with all due dispatch and as required by all applicable federal, state, and local environmental laws, ordinances, rules, regulations, and orders, be deemed a default and cause for termination of this Contract by Authority, subject to notice and cure. Such termination will not relieve Concessionaire of or from liability for such discharge or spill.
2. If Concessionaire is deemed to be a generator of hazardous waste, as defined by federal, state, or local law, Concessionaire will obtain a generator identification

number from the U.S. Environmental Protection Agency (EPA) and the appropriate generator permit and will comply with all federal, state, and local laws, and any rules and regulations promulgated thereunder, including but not limited to, ensuring that the transportation, storage, handling, and disposal of such hazardous wastes are conducted in full compliance with applicable law.

3. Concessionaire agrees to provide Authority, within 10 Days after Authority's request, copies of all hazardous waste permit application documentation, permits, monitoring reports, transportation, responses, storage and disposal plans, material safety data sheets and waste disposal manifests prepared or issued in connection with Concessionaire's use of the Exclusive Premises.
4. At the end of the Contract, Concessionaire will dispose of all solid and hazardous wastes and containers in compliance with all applicable regulations. Copies of all waste manifests will be provided to Authority at least 30 Days prior to the end of the Contract.

C. Hazardous Substance and Solid Waste.

1. The term "Hazardous Substance", as used in this Contract, will mean:
 - a. any substance the presence of which requires or may later require notification, investigation or remediation under any environmental law; or
 - b. any substance that is or becomes defined as a "hazardous waste", "hazardous material", "hazardous substance", "pollutant", or "contaminant" under any environmental law, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C §9601 et seq.), the Resources Conservation and Recovery Act (42 U.S.C. §6901 et seq.) and the associated regulations; or
 - c. any substance that is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or otherwise hazardous and is or becomes regulated by any governmental authority, agency, department, commission, board, agency, or instrumentality of the United States, any state of the United States, or any political subdivision within any state; or
 - d. any substance that contains gasoline, diesel fuel, oil, or other petroleum hydrocarbons or volatile organic compounds; or
 - e. any substance that contains polychlorinated biphenyls (PCBs), asbestos or urea Formaldehyde foam insulation; or
 - f. any substance that contains or emits radioactive particles, waves, or materials, including, without limitation, radon gas.

2. The term "Solid Waste", as used in this Contract, will mean:
 - a. any waste that is or becomes defined as a "solid waste", "waste", "special waste", "garbage", or "commercial solid waste" under any environmental law, including but not limited to, the rules of FDEP, specifically Chapter 62-702, FAC; or
 - b. any waste that can require special handling and management, including but not limited to, white goods, waste tires, used oil, lead-acid batteries, construction and demolition debris, ash residue, yard trash, biological wastes, and mercury-containing devices and lamps; or
 - c. any waste that is not hazardous waste and that is not prohibited from disposal in a lined landfill under Rule 62-701.300, FAC; or
 - d. yard trash, construction and demolition debris, processed tires, asbestos, carpet, cardboard, paper, glass, plastic, or furniture other than appliances.

D. Prior Environmental Impacts.

Nothing in this Article will be construed to make Concessionaire liable in any way for any environmental impacts or release of Hazardous Substances, as defined herein, affecting the Exclusive Premises that occurred prior to Concessionaire's entry upon or occupancy of the Exclusive Premises by Concessionaire or that occurred as a result of the actions of Authority or any of its employees, agents, or contractors. Concessionaire and Authority acknowledge and agree that Exhibit J, Main ConRAC Baseline Environmental Report and Exhibit K, Service Center Site 4 Baseline Environmental Report, attached hereto and by this reference made a part hereof, state the condition of the Exclusive Premises at the Effective Date of this Contract. Concessionaire reserves the right to conduct its own environmental due diligence in the form of a Phase 1 ESA (in accordance with ASTM 1527-13, as may be amended from time to time) and/or soil and/or groundwater baseline in the vicinity of the new fuel system. Such report will be made available to Authority upon completion.

E. Off-Site Contamination.

Nothing in this Article will be construed to make Concessionaire liable in any way for any environmental impacts or release of Hazardous Substances affecting the Exclusive Premises that occurs by reason of the migration or flow to the Exclusive Premises from verifiable or documented off-site contamination that is not attributable to Concessionaire's activities at the Exclusive Premises.

F. Petroleum Storage and Fuel Systems.

1. At Concessionaire's expense, Concessionaire will at all times comply with all federal, state, or local requirements, including but not limited to the regulations of the FDEP as stated in Chapters 62-761 and 62-762, FAC, the requirements of 40 CFR Part 112, as well as the requirements of the EPC as may be amended or

replaced, pertaining to petroleum storage tank and piping system construction, operation, inspection, and compliance monitoring programs; release detection methods and procedures; maintenance; and preventative maintenance programs. Concessionaire will be responsible for all spillage, overflow, or escape of gases, petroleum or petroleum products, and for all fines and penalties in connection therewith. All petroleum storage systems will be registered by Concessionaire, and Concessionaire will display the registration placard as required by law.

2. Concessionaire will train its employees and employees of fuel suppliers on proper fuel delivery and dispensing procedures with an emphasis on safety as well as on spill prevention and response. All fuel delivered to or dispensed from fuel farm facilities will be attended by a Concessionaire employee. Concessionaire will comply with all requirements of 40 CFR Part 112, as may be revised or amended. As a result, Concessionaire will prepare and implement a Spill Prevention Control and Countermeasure plan as applicable. Notification and response related to the spill or release of petroleum products will be in compliance with FDEP regulations as well as EPC's requirements.
3. Concessionaire will strictly comply with safety and fire prevention ordinances of the City of Tampa and Hillsborough County and all applicable safety regulations at the Exclusive Premises that may be adopted by the Authority. Concessionaire will provide adequate fire extinguishers and will establish a fuel dispensing operations manual for its employees and submit a copy to Authority.
4. Concessionaire is responsible for all costs and expenses that may be incurred as a result of compliance with this section.

G. Stormwater.

Notwithstanding any other provisions or terms of this Contract, Concessionaire acknowledges that certain properties within the Exclusive Premises or on Authority-owned land are subject to stormwater rules and regulations. Concessionaire agrees to observe and abide by such stormwater rules and regulations as may be applicable to the Exclusive Premises, and, if applicable, Concessionaire hereby expressly covenants, warrants, and represents to Authority, in connection with Concessionaire's operations on the Exclusive Premises, the following:

1. At Authority's request, Concessionaire may be required to submit a Notice of Intent to use the State of Florida Multi-Sector General Permit for Stormwater Discharge Associated with Industrial Activity. Authority and Concessionaire both acknowledge that close cooperation is necessary to ensure compliance with any stormwater discharge permit terms and conditions, as well as to ensure safety and to minimize the cost of compliance. Concessionaire acknowledges further that it may be necessary to undertake actions to minimize the exposure of stormwater to "significant materials" (as such term may be defined by applicable stormwater rules and regulations) generated, stored, handled, or otherwise used by Concessionaire by implementing and maintaining "best management practices" (BMPs) (as such

term may be defined in applicable stormwater rules and regulations). Concessionaire will establish a BMP Plan for the Exclusive Premises and submit a copy to Authority.

2. Concessionaire will be knowledgeable of any stormwater discharge permit requirements applicable to Concessionaire and with which Concessionaire will be obligated to comply. The submittal of a Notice of Intent will be made by Concessionaire to the FDEP; a copy will be submitted to Authority. Concessionaire is required to comply with the following requirements including but not limited to: certification of non-stormwater discharges; collection of stormwater samples; preparation of a Stormwater Pollution Prevention Plan or similar plans; implementation of BMPs; and maintenance and submittal of necessary records. In complying with such requirements, Concessionaire will observe applicable deadlines set by the regulatory agency that has jurisdiction over the permit. Concessionaire agrees to undertake, as its sole expense, those stormwater permit requirements for which it has received written notice from the regulatory agency and that apply to the Exclusive Premises, and Concessionaire agrees that it will hold harmless and indemnify Authority for any violations or non-compliance with any such permit requirements.

H. Environmental Inspection at End of Contract Term.

1. At least one hundred twenty (120) Days before the expiration or early termination of the Term, as provided herein, Concessionaire will conduct an environmental inspection and examination of the Exclusive Premises. At its discretion, the Authority may complete environmental reviews to determine if recognized environmental conditions exist that could warrant soil and groundwater sampling. If warranted by the findings of Concessionaire or Authority's inspection or if requested by the Authority, a compliance audit or site assessment will be performed within the aforementioned time period by a qualified professional acceptable to the Authority who will report the findings to the Authority. The cost for professional consulting or engineering services required for such compliance audit or site assessment will be at the expense of Concessionaire. If a site assessment is conducted, Concessionaire agrees to pay all associated laboratory and testing fees incurred to test and analyze samples collected during the site assessment process. Authority may also choose to conduct the compliance audit or site assessment. If the results of the compliance audit or site assessment indicate that Exclusive Premises have been impacted by the release of Hazardous Substances or hazardous waste is detected, Concessionaire will immediately take such action as is necessary and will provide a substantial guaranty in a form and content acceptable to Authority that Concessionaire will clean up the contamination at its own expense, at no expense to Authority, and in accordance with applicable federal, state, and local law to the extent that it is obligated to do so by virtue of the foregoing provisions of this Article.

2. During the period of a cleanup due to the environmental condition of the Exclusive Premises or Common Concessionaire Areas, Concessionaire's obligations,

including the payment of rents, charges, and fees, under the existing terms of the Contract will continue in full force and effect, in addition to any other damages for which Concessionaire may be liable.

3. The firm conducting cleanup work must be approved by Authority, and the methodology used by such firm will be consistent with engineering practices and methods required by the State of Florida or the United States government.

Article XX. AIRPORT SECURITY

Concessionaire, its officers, employees, agents, subcontractors, and those under its control, will comply with safety, operational, or security measures required of Concessionaire or Authority by the FAA or TSA. If Concessionaire, its officers, employees, agents, subcontractors or those under its control fail or refuse to comply with said measures and such non-compliance results in a monetary penalty being assessed against Authority, then, in addition to any other remedies available to Authority, Concessionaire will be responsible and will reimburse Authority in the full amount of any such monetary penalty or other damages. This amount must be paid by Concessionaire within fifteen (15) Days from the date of the invoice or written notice.

Article XXI. AMERICANS WITH DISABILITIES ACT

Concessionaire will comply with the applicable requirements of the Americans with Disabilities Act; the Florida Americans with Disabilities Accessibility Implementation Act; Florida Building Code, Chapter 11, Florida Accessibility Code for Building Construction; and any similar or successor laws, ordinances, rules, standards, codes, guidelines and regulations and will cooperate with Authority concerning the same subject matter.

Article XXII. FAA APPROVAL

This Contract may be subject to approval of the FAA. If the FAA disapproves this Contract, it will become null and void, and both Parties will bear their own expenses relative to this Contract, up to the date of disapproval.

Article XXIII. RIGHT OF FLIGHT

Concessionaire expressly agrees for itself, its successors and assigns, to prevent any use of the ConRAC and Exclusive Premises which would interfere with or adversely affect the operation or maintenance of Airport, or otherwise constitute an Airport hazard.

Article XXIV. FEDERAL RIGHT TO RECLAIM

In the event a United States governmental agency demands and takes over the entire facilities of the Airport or the portion thereof wherein the Exclusive Premises are located, for public purposes, for a period in excess of ninety (90) Days, then this Contract will

Tampa International Airport
On-Airport Vehicle Rental Concession

terminate and Authority will be released and fully discharged from any and all liability hereunder. In the event of such termination, Concessionaire's obligation to pay rent will cease; however, nothing herein will be construed as relieving either Party from any of its liabilities relating to events or claims of any kind whatsoever prior to this termination.

Article XXV. PROPERTY RIGHTS RESERVED

This Contract will be subject and subordinate to all the terms and conditions of any instruments and documents under which Authority acquired the land or improvements thereon, of which said ConRAC and Exclusive Premises are a part. Concessionaire understands and agrees that this Contract will be subordinate to the provisions of any existing or future agreement between Authority and the United States of America, or any of its agencies, relative to the operation or maintenance of the Airport, the execution of which has been or may be required as a condition precedent to the expenditure of federal funds for the development of the Airport, and to any terms or conditions imposed upon the Airport by any other governmental entity. The Concessionaire shall not take any actions that would violate any of the funding requirements and other obligations that are addressed in this Article.

Article XXVI. ASSIGNMENT AND SUBCONTRACT

Concessionaire will not assign this Contract or sublease its Exclusive Premises without the prior written consent of Authority which may be withheld by the Authority in its sole and absolute discretion. Any assignment or subcontract permitted by Authority will not constitute any release of the Concessionaire's obligation to perform and to make all of the payments required under this Contract.

Article XXVII. ORGANIZATIONAL STANDING

The undersigned representative of Concessionaire hereby warrants and certifies to Authority that Concessionaire is an organization in good standing in its state of registration, that it is authorized to do business in the State of Florida, and that the undersigned Officer is authorized and empowered to bind the organization to the terms of this Contract by his or her signature and seal thereto.

Article XXVIII. NON-EXCLUSIVE RIGHTS

This Contract will not be construed to grant or authorize the granting of an exclusive right within the meaning of 49 USC 40103(e) or 49 USC 47107(a), as may be amended from time to time, and related regulations.

Article XXIX. RIGHT TO DEVELOP AIRPORT

It is covenanted and agreed that Authority, in its sole and absolute discretion, reserves

the right to further develop or improve the Airport and all landing areas and taxiways as it may see fit, regardless of the desires or views of Concessionaire or its subcontractors and without interference or hindrance.

Article XXX. APPLICABLE LAW AND VENUE

This Contract will be construed in accordance with the laws of the State of Florida. Venue for any action brought pursuant to this Contract will be in Hillsborough County, Florida, or in the Tampa Division of the U.S. District Court for the Middle District of Florida.

Concessionaire hereby waives any claim against Authority and its officers, Board members, agents, or employees for loss of anticipated profits caused by any suit or proceedings directly or indirectly attacking the validity of this Contract or any part hereof, or by any judgment or award in any suit or proceeding declaring this Contract null, void, or voidable, or delaying the same, or any part hereof, from being carried out.

Article XXXI. ATTORNEYS' FEES AND COSTS

In the event legal action is required by Authority to enforce this Contract, Authority will be entitled to recover costs and attorneys' fees, including in-house attorney time (fees) and appellate fees.

Article XXXII. RIGHT TO AMEND

In the event that the FAA or its successors requires amendments, modifications, revisions, supplements, or deletions in this Contract as a condition precedent to the granting of funds for the improvement of the Airport, Concessionaire agrees to consent to such amendments, modifications, revisions, supplements, or deletions to this Contract as may be reasonably required to obtain such funds; provided, however, that in no event will Concessionaire be required, pursuant to this paragraph, to agree to an increase in the monetary obligations or charges provided for hereunder.

Article XXXIII. HEADINGS

The headings contained herein, including the Table of Contents, are for convenience in reference and are not intended to define or limit the scope of any provisions of this Contract. If for any reason there is a conflict between content and headings, the content will control.

Article XXXIV. NOTICES AND COMMUNICATIONS

All notices or communication, whether to Authority or to Concessionaire pursuant hereto will be deemed validly given, served, or delivered upon receipt by the party by hand delivery certified mail, return receipt requested, or one Day after depositing such notice

or communication with a reputable overnight courier service, and addressed as follows:

**TO AUTHORITY:
(MAIL DELIVERY)**
Hillsborough County Aviation Authority
Tampa International Airport
P.O. Box 22287
Tampa, Florida 33622-2287
Attn: Chief Executive Officer

**TO CONCESSIONAIRE:
(MAIL DELIVERY)**
All Car Leasing, Inc.

13900 Laurel Lakes Ave

Suite 100

Laurel, Maryland 20707

Attn: James W. Cash

OR

(HAND DELIVERY)
Hillsborough County Aviation Authority
Tampa International Airport
Administrative Offices Bldg., 2nd floor
4160 George J. Bean Parkway
Suite 2400
Tampa, Florida 33607
Attn: Chief Executive Officer

(HAND DELIVERY)
All Car Leasing, Inc.

13900 Laurel Lakes Ave

Suite 100

Laurel, Maryland 20707

Attn: James W. Cash

or to such other address as either party may designate in writing by notice to the other Party delivered in accordance with the provisions of this Article.

If the notice is sent through a mail system, a verifiable tracking documentation, such as a certified return receipt or overnight mail tracking receipt, is encouraged.

Article XXXV. SUBORDINATION TO CFC TRUST AGREEMENT

This Contract and all rights of Concessionaire hereunder are expressly subordinated and subject to the lien and provisions of any pledge, transfer, hypothecation, or assignment made at any time by Authority to secure financing. This Contract is subject and subordinate to the terms, covenants, and conditions of the CFC Trust Agreement made by Authority authorizing the issuance of bonds by Authority. Conflicts between this Contract and the documents mentioned above will be resolved in favor of such documents.

Article XXXVI. RELATIONSHIP OF THE PARTIES

Concessionaire is and will be deemed to be an independent contractor and operator

Tampa International Airport
On-Airport Vehicle Rental Concession

responsible to all parties for its respective acts or omissions, and Authority will in no way be responsible therefore. No third-party reliance or third-party liability will be contemplated by this Contract.

Article XXXVII. AUTHORITY APPROVALS

Except as otherwise indicated elsewhere in this Contract, wherever in this Contract approvals are required to be given or received by Authority, it is understood that the Authority's Chief Executive Officer, or a designee of the Authority's Chief Executive Officer, is hereby empowered to act on behalf of Authority.

Article XXXVIII. SEVERABILITY

The invalidity of any part, portion, article, paragraph, provision, or clause of this Contract will not have the effect of invalidating any other part, portion, article, paragraph, provision, or clause thereof, and the remainder of this Contract will be valid and enforced to the fullest extent permitted by law.

Article XXXIX. TIME IS OF THE ESSENCE

Time is of the essence of this Contract.

Article XL. SIGNATURES

Section 40.01 SIGNATURE OF PARTIES

It is an express condition of this Contract that it will not be complete or effective until signed by Authority and by Concessionaire.

Section 40.02 COUNTERPARTS

This Contract may be executed in one or more counterparts, each of which will be deemed an original and all of which will be taken together and deemed to be one instrument.

Article XLI. SCRUTINIZED COMPANIES LIST

This Contract will be terminated in accordance with Florida Statute Section 287.135(3) if it is found that Concessionaire 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.

Article XLII. AGENT FOR SERVICE OF PROCESS

It is expressly agreed and understood that if Concessionaire is not a resident of the State

of Florida, or is an association or partnership without a member or partner resident of said State, or is a foreign corporation, then in any such event Concessionaire does designate the Secretary of State, State of Florida, as its agent for the purpose of service of process in any court action between it and Authority arising out of or based upon this Contract, and the service will be made as provided by the laws of the State of Florida for service upon a non-resident. It is further expressly agreed, covenanted, and stipulated that if for any reason service of such process is not possible, and Concessionaire does not have a duly noted resident agent for service of process, as an alternative method of service of process, Concessionaire may be personally served with such process out of this State, by the registered mailing of such complaint and process to Concessionaire at the address set out in this Contract. Such service will constitute valid service upon Concessionaire as of the date of mailing. Concessionaire will have thirty (30) Days from date of mailing to respond thereto. It is further expressly understood that Concessionaire hereby agrees to the process so served, submits to the jurisdiction of the court, and waives any and all obligation and protest thereto, any laws to the contrary notwithstanding.

Article XLIII. COMPLIANCE WITH PUBLIC RECORDS LAW

IF CONCESSIONAIRE HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONCESSIONAIRE'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.

Concessionaire 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 Authority in order to perform the services contemplated in this Contract.**
- B. Upon request from Authority custodian of public records, provide Authority 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 this Contract Term and following completion of this Contract.**
- D. Upon completion of this Contract, keep and maintain public records required by Authority to perform the services. Concessionaire shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to Authority, upon request from**

Authority custodian of records, in a format that is compatible with the information technology systems of Authority.

Article XLIV. DATA SECURITY

Concessionaire will establish and maintain reasonable safeguards against the destruction, loss or alteration of Authority data or third party data that Concessionaire may gain access to or be in possession of while performing under this Contract. Concessionaire will not attempt to access, and will not allow its personnel access to, Authority data or third party data that is not required for the performance of this Contract by such personnel.

Concessionaire and its employees, vendors, subcontractors, and sub-consultants will adhere to and abide by the security measures and procedures established by Authority and any terms of service agreed to by Authority with regards to data security. In the event Concessionaire or Concessionaire's subcontractor (if any) discovers or is notified of a breach or potential breach of security relating to Authority data or third party data, Concessionaire will promptly:

- A. Notify Authority of such breach or potential breach; and
- B. If the applicable Authority data or third party data was in the possession of Concessionaire at the time of such breach or potential breach, Concessionaire will investigate and cure the breach or potential breach.

Article XLV. FLORIDA PUBLIC ENTITY CRIMES

Concessionaire attests compliance with Florida Statute Section 287.133, concerning public entity crimes.

Article XLVI. RADON GAS NOTIFICATION

RADON GAS NOTIFICATION: In accordance with requirements of the State of Florida, the following notification statement will be included in all agreements relating to rental of real property. This is provided for information purposes only.

RADON GAS: Radon is naturally occurring radioactive gas that, when it has accumulated in a building in sufficient quantities, may present health risks to persons who are exposed to it over time. Levels of radon that exceed federal and state guidelines have been found in buildings in Florida. Additional information regarding radon and radon testing may be obtained from your county public health department.

Article XLVII. HAZARDOUS SUBSTANCES AND OSHA COMPLIANCE

- A. Except as otherwise set forth herein, no goods, merchandise or material will be kept or stored by Concessionaire at the Airport which are explosive or hazardous; and no offensive or dangerous trade, business or occupation will be carried on therein or thereon. Nothing will be done in the performance of this Contract which will increase the rate of or suspend any insurance policy or coverage of Authority.
- B. Concessionaire assures that all materials, equipment, and all other items used in the performance of this Contract are in compliance with Occupational Safety and Health Administration (OSHA).

Article XLVIII. NON-DISCLOSURE

- A. All written and oral information and materials (hereinafter referred to as Information) disclosed or provided by Authority to Concessionaire under this Contract will not be disclosed by Concessionaire, whether or not provided before or after the date of this Contract.
- B. The Information will remain the exclusive property of Authority and will only be used by Concessionaire for purposes permitted under this Contract. Concessionaire will not use the Information for any purpose which might be directly or indirectly detrimental to Authority or any of its affiliates or subsidiaries.
- C. Concessionaire will prevent the unauthorized use, disclosure, dissemination or publication of the Information. Concessionaire agrees that it will cause its employees and representatives who have access to the Information to comply with these provisions and Concessionaire will be responsible for the acts and omissions of its employees and representatives with respect to the Information.
- D. Concessionaire agrees that any disclosure of the Information by Concessionaire's employees and/or representatives will be deemed a breach of this Contract. Concessionaire agrees that in the event of any breach or threatened breach by Concessionaire of its non-disclosure obligation, Authority may obtain such legal remedies as are available, and, in addition thereto, such equitable relief as may be necessary to protect Authority.
- E. The non-disclosure obligation imposed on Concessionaire under this Contract will survive the expiration or termination, as the case may be, of this Contract and the obligation will last indefinitely.

Article XLIX. WAIVERS

No waiver by Authority at any time of any of the terms, conditions, covenants, or agreements

of this Contract, or noncompliance therewith, will be deemed or taken as a waiver at any time thereafter of the same or any other term, condition, covenant or Contract herein contained, nor of the strict and prompt performance thereof by Concessionaire. No delay, failure or omission of Authority to exercise any right, power, privilege or option arising from any default nor subsequent payment of charges then or thereafter accrued, will impair any such right, power, privilege or option, or be construed to be a waiver of any such default or relinquishment thereof or acquiescence therein. No notice by Authority will be required to restore or revive time as being of the essence hereof after waiver by Authority or default in one or more instances. No option, right, power, remedy or privilege of Authority will be construed as being exhausted or discharged by the exercise thereof in one or more instances. It is agreed that each and all of the rights, powers, options, or remedies given to Authority by this Contract are cumulative and no one of them will be exclusive of the other or exclusive of any remedies provided by law, and that the exercise of one right, power, option or remedy by Authority will not impair its rights to any other right, power, option or remedy.

Article L. COMPLETE CONTRACT

This Contract represents the complete understanding between the Parties, and any prior contracts, or representations, whether written or verbal, are hereby superseded. This Contract may subsequently be amended only by written instrument signed by the Parties hereto, unless provided otherwise within the terms and conditions of this Contract.

Article LI. ORDER OF PRECEDENCE

The documents listed below are a part of this Contract and are hereby incorporated by reference. In the event of inconsistency between the documents, unless otherwise provided herein, the terms of the following documents will govern in the following order of precedence:

- A. Terms and Conditions as contained in this Contract;
- B. Authority's ITB for an On-Airport Vehicle Rental Concession, and all its addenda;
- C. Concessionaire's Response to Authority's ITB for an On-Airport Vehicle Rental Concession, and any subsequent information submitted by Concessionaire during the solicitation process.

(The rest of this page was intentionally left blank)

IN WITNESS WHEREOF, the parties hereto have set their hands and corporate seals on this ____ day of _____, 2021

HILLSBOROUGH COUNTY AVIATION AUTHORITY

ATTEST: _____
Secretary

BY: _____
Chairman

Address: PO Box 22287
Tampa, FL 33622

Address: PO Box 22287
Tampa, FL 33622

LEGAL FORM APPROVED:

WITNESS: _____
Signature

BY: _____
David Scott Knight, Assistant General Counsel

Printed Name

HILLSBOROUGH COUNTY AVIATION AUTHORITY

STATE OF FLORIDA

COUNTY OF HILLSBOROUGH

The foregoing instrument was acknowledged before me this ____ day of _____, 2021, by _____, in the capacity of Chairman of the Board of Directors and _____, in the capacity of Secretary of the Board of Directors, 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.

Stamp or Seal of Notary

Signature of Notary

Printed Name

Date Notary Commission Expires (if not on stamp or seal)

CONCESSIONAIRE

Signed in the Presence of:

BY:

Signature

Witness

Title

Printed Name

Printed Name

Witness

Printed Address

Printed Name

City/State/Zip

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledge before me this ____ day of _____,
20____, by _____ in the capacity of
_____,
(Individual's Name) (Individual's Title)

at _____, a corporation on its
behalf,
(Concessionaire Name)

_____ known to
me and _____
(He is / She is) (Personally / Not Personally)

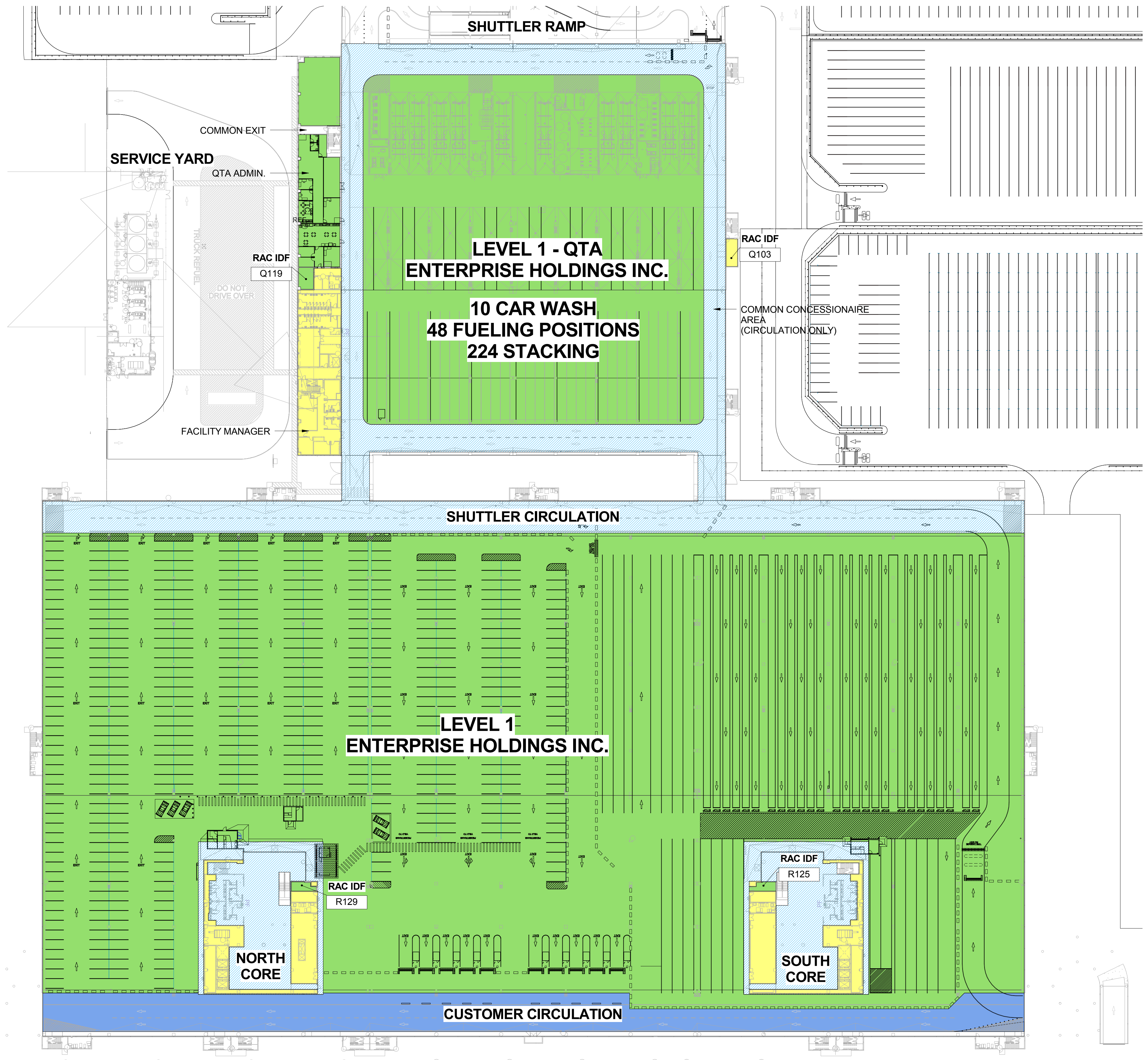
has produced _____.
(Form of Identification)

Stamp or Seal of Notary

Signature of Notary

Printed Name

Date Notary Commission Expires (if not on stamp or seal)



**LEVEL 1
ENTERPRISE HOLDINGS INC.**

READY RETURN ALLOCATION AREA:

READY RETURN	358,971 SF
RAC IDF R129	173 SF
RAC IDF R125	173 SF

QTA ALLOCATION AREA:

QTA FUEL/CARWASH/STACKING	102,101 SF
QTA ADMIN.	6,762 SF
QTA IDF Q103	268 SF
QTA IDF Q119	272 SF

CORES (NORTH & SOUTH):

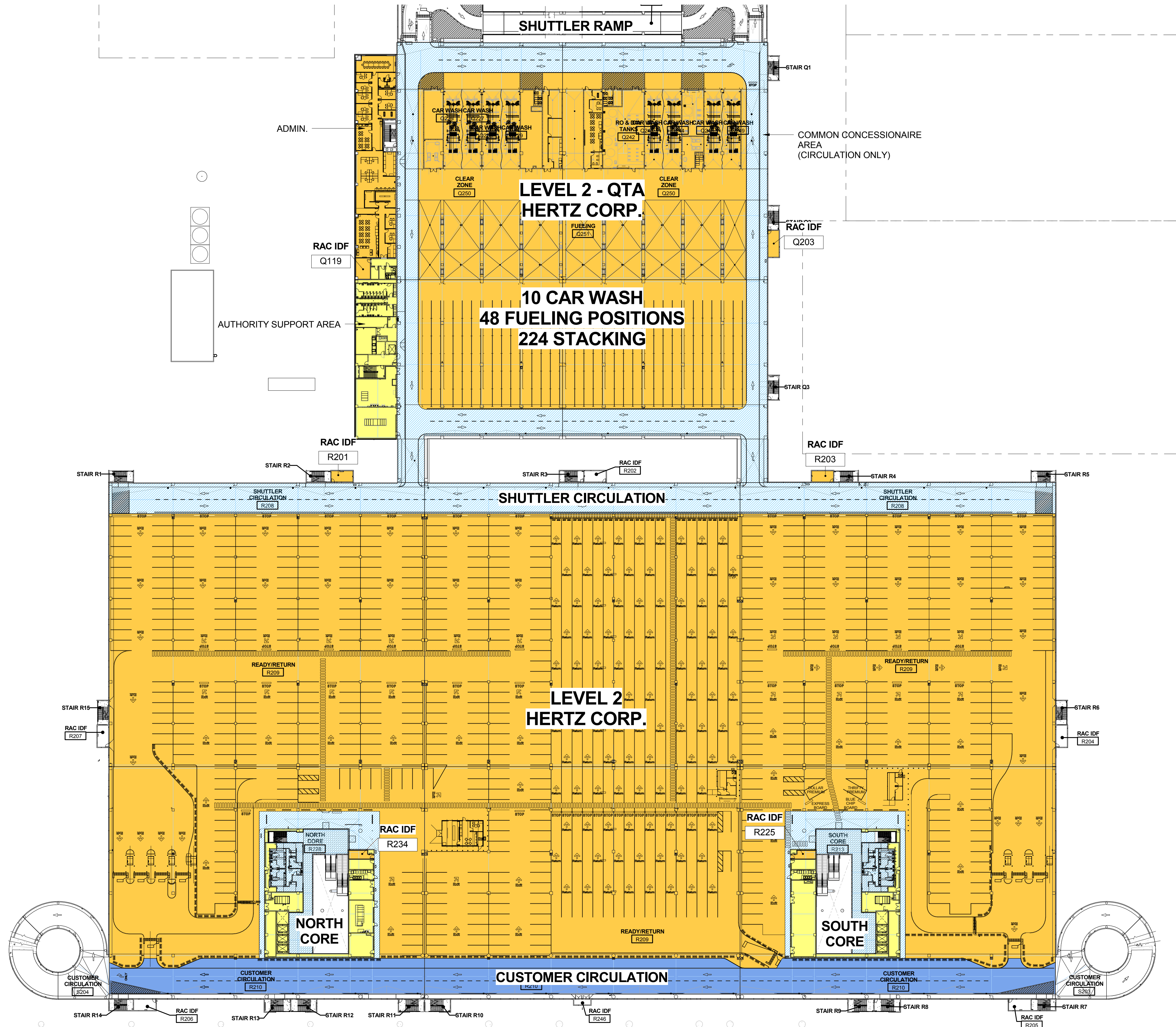
COMMON PUBLIC AREAS	21,958 SF
AUTHORITY SUPPORT AREAS	16,271 SF

CIRCULATION:

COMMON CONCESSIONAIRE AREA (SHUTTLE COMMON CIRC.)	61,497 SF
COMMON CONCESSIONAIRE AREA (CUSTOMER COMMON CIRC.)	27,975 SF

- AUTHORITY SUPPORT AREAS
- AUTHORITY SUPPORT AREAS
- COMMON CONCESSIONAIRE AREA (CUSTOMER COMMON CIRC.)

LEVEL 1 EHI ALLOCATION AREA



LEVEL 2 THE HERTZ CORPORATION

READY RETURN ALLOCATION AREA:

READY RETURN	357,425 SF
RAC IDF R234	165 SF
RAC IDF R225	165 SF
RAC IDF R201	219 SF
RAC IDF R203	219 SF

QTA ALLOCATION AREA:

QTA FUEL/CARWASH/STACKING	102,101 SF
QTA ADMIN.	6,918 SF
QTA IDF Q219	272 SF
QTA IDF Q203	268 SF

CORES (NORTH & SOUTH):

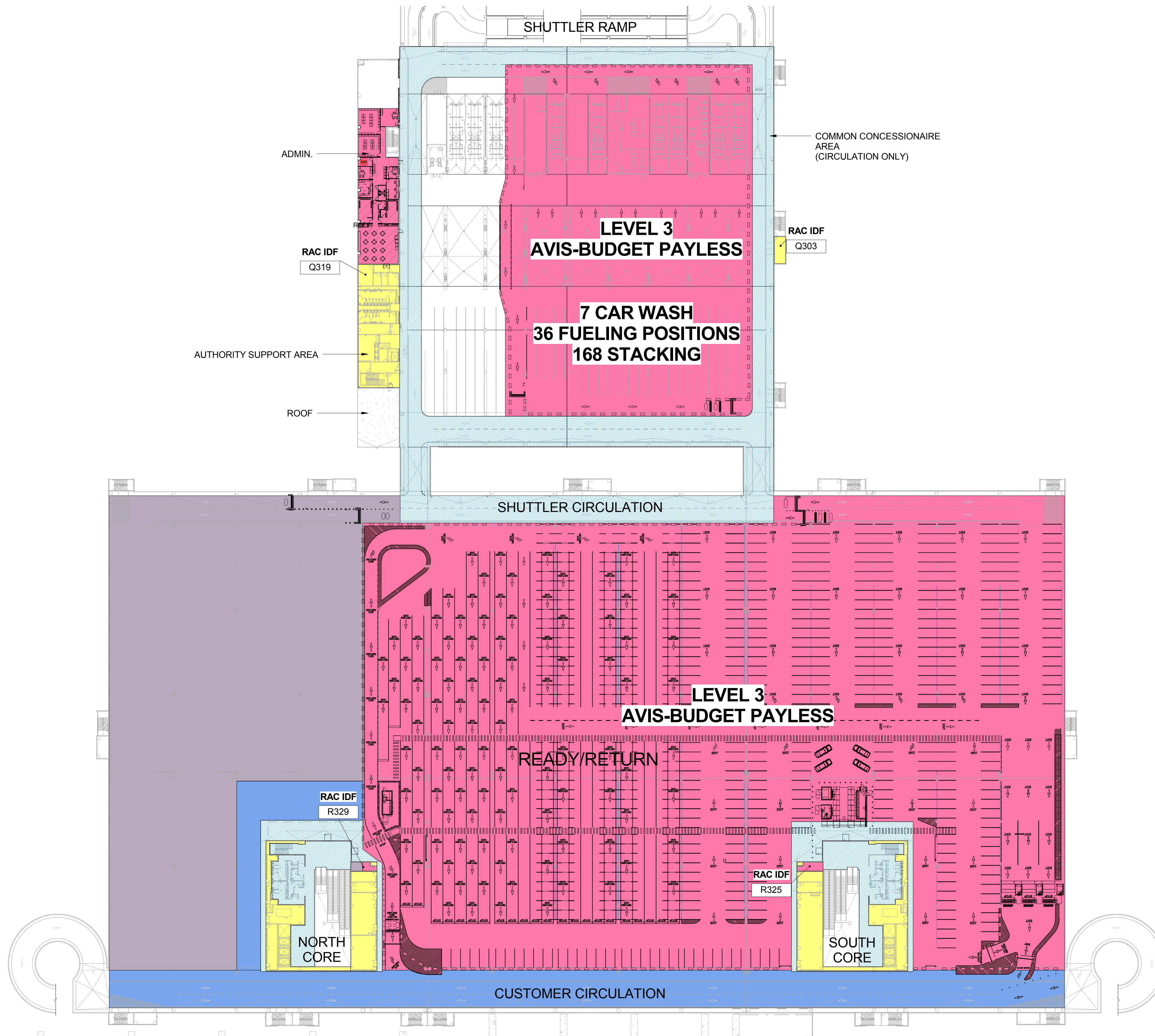
COMMON PUBLIC AREAS	15,554 SF
AUTHORITY SUPPORT AREAS	16,344 SF

CIRCULATION:

COMMON CONCESSIONAIRE AREA (SHUTTLE COMMON CIRC.)	61,497 SF
COMMON CONCESSIONAIRE AREA (CUSTOMER COMMON CIRC.)	29,853 SF

- AUTHORITY SUPPORT AREAS
- AUTHORITY SUPPORT AREAS
- COMMON CONCESSIONAIRE AREA (CUSTOMER COMMON CIRC.)

LEVEL 2 HERTZ ALLOCATION AREA



LEVEL 3 AVIS BUDGET GROUP

READY RETURN ALLOCATION AREA:

READY RETURN	273,458 SF
RAC IDF R329	96 SF
RAC IDF R325	192 SF

QTA ALLOCATION AREA:

QTA FUEL/CARWASH/STACKING	79,196 SF
QTA ADMIN.	5,232 SF
QTA IDF Q303	268 SF
QTA IDF Q319	273 SF

CORES (NORTH & SOUTH):

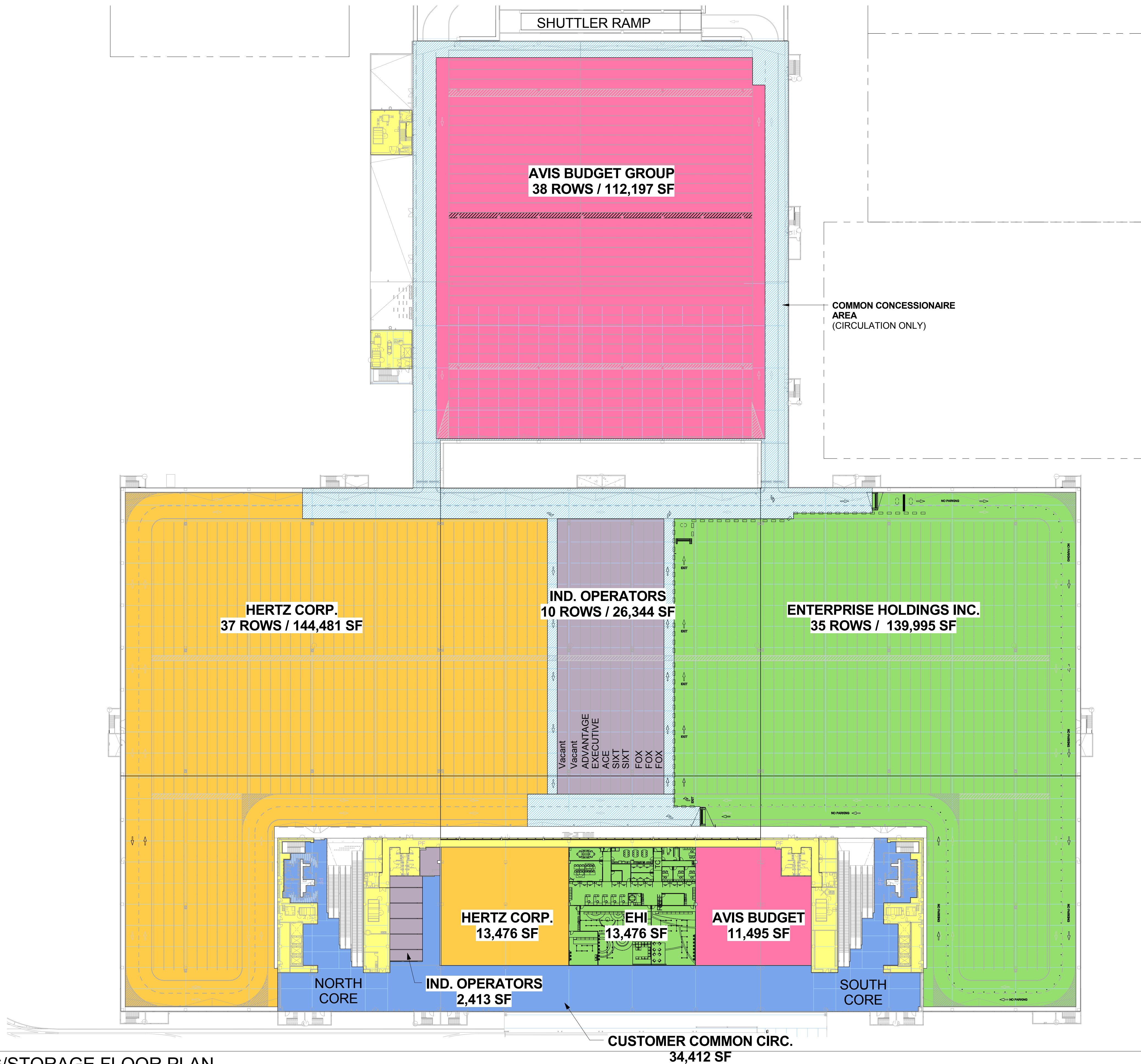
COMMON PUBLIC AREAS	24,119 SF
AUTHORITY SUPPORT AREAS	13,990 SF

CIRCULATION:

COMMON CONCESSIONAIRE AREA (SHUTTLE COMMON CIRC.)	42,970 SF
COMMON CONCESSIONAIRE AREA (CUSTOMER COMMON CIRC.)	39,630 SF

- AUTHORITY SUPPORT AREAS**
- AUTHORITY SUPPORT AREAS**
- COMMON CONCESSIONAIRE AREA
(CUSTOMER COMMON CIR.)**

LEVEL 3 AVIS-BUDGET ALLOCATION AREA



LEVEL 4 - STAGING / STORAGE

STAGING / STORAGE
COMMON CONCESSIONAIRE AREA (CIRCULATION ONLY) 49,348 SF

INDEPENDENT OPERATORS LEVEL 4 STAGING / STORAGE

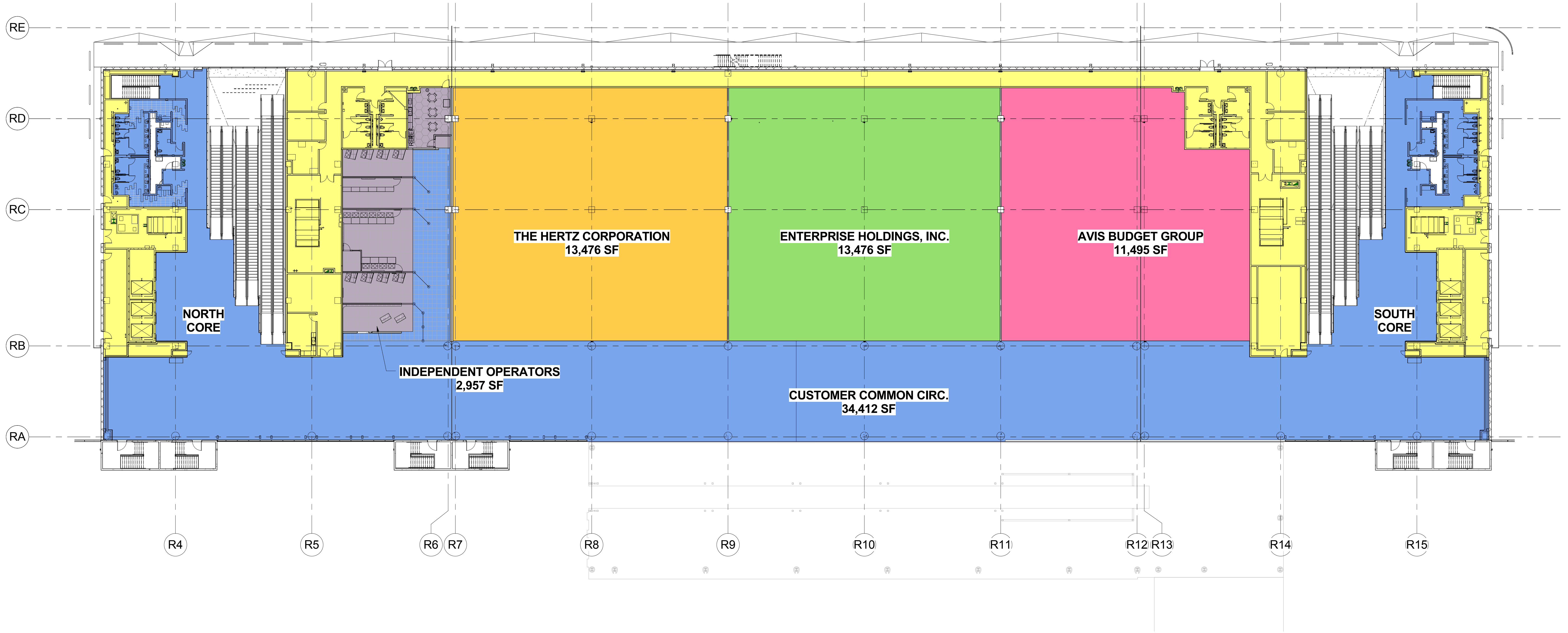
ROWS 8-10	FOX	7,904 SF
ROWS 6-7	SIXT	5,269 SF
ROW 5	ACE	2,634 SF
ROW 4	EXECUTIVE	2,634 SF
ROW 3	ADVANTAGE	2,634 SF
ROWS 1-2	Vacant	5,269 SF

CUSTOMER SERVICE BUILDING (CUSTOMER COMMON SERVICE CIRC.) 34,412 SF

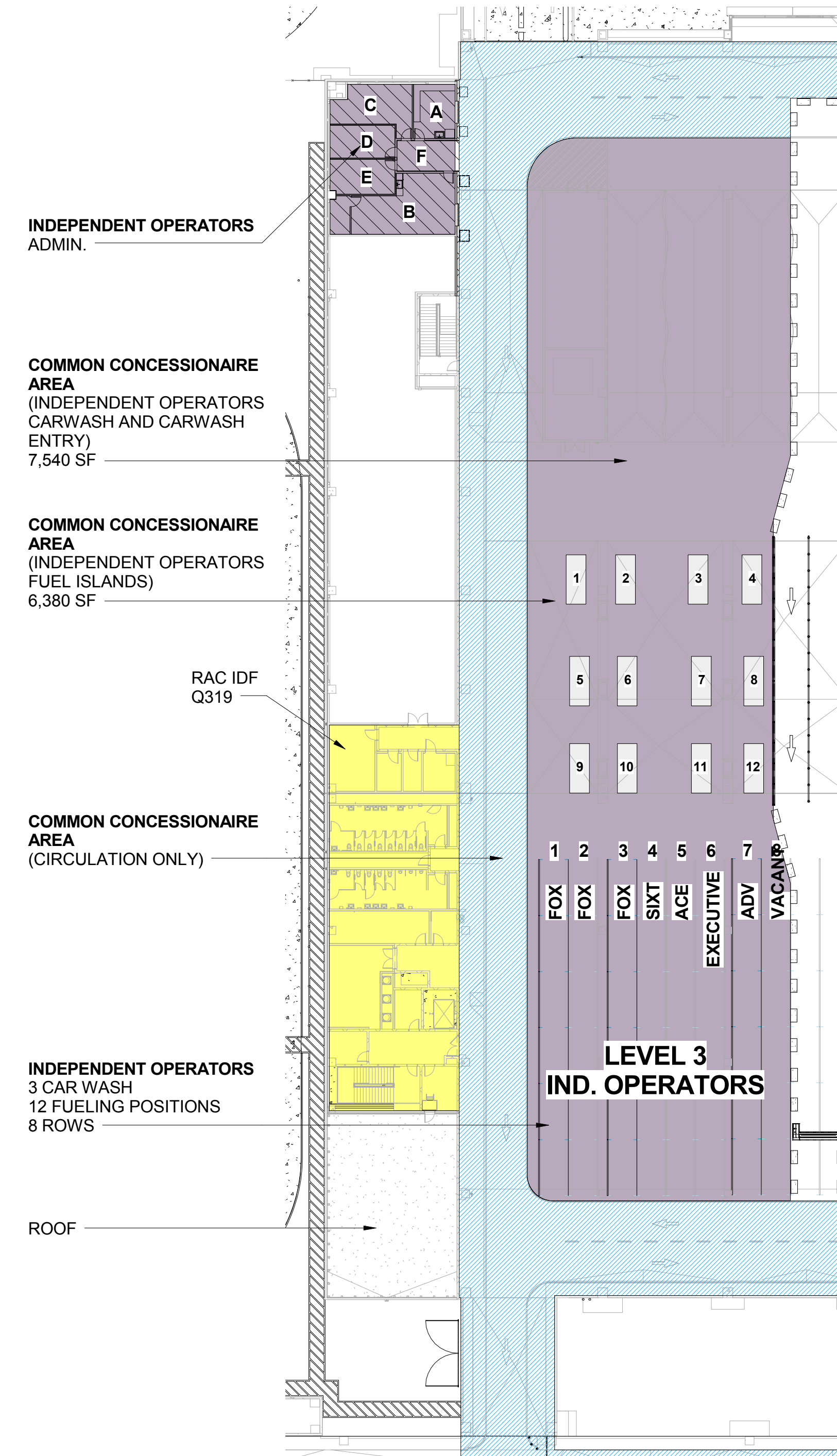
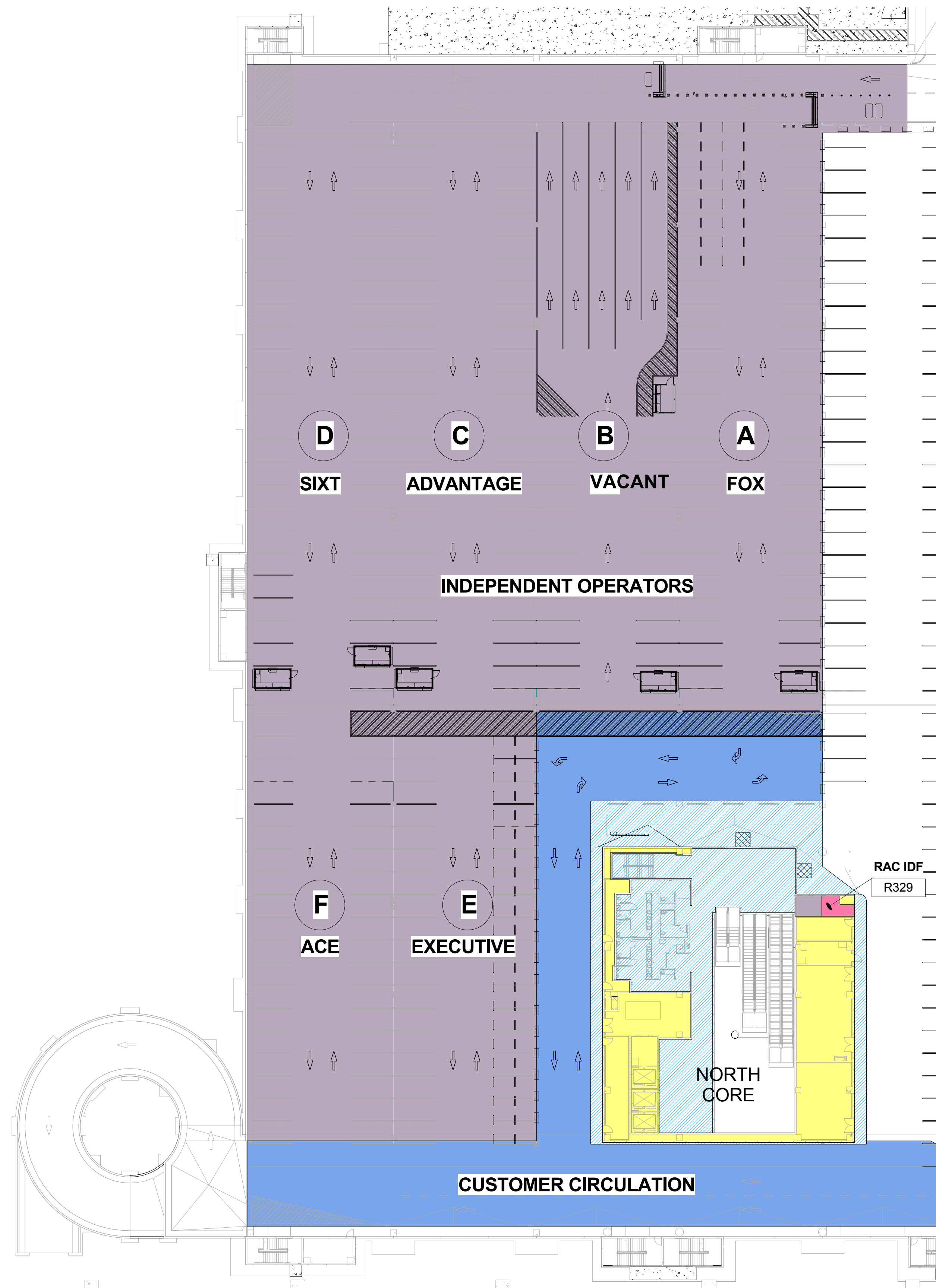
- AUTHORITY SUPPORT AREAS
- AUTHORITY SUPPORT AREAS
- COMMON CONCESSIONAIRE AREA (CUSTOMER COMMON CIRC.)

LEVEL 4 STAGING/STORAGE FLOOR PLAN

CUSTOMER SERVICE BUILDING



- AUTHORITY SUPPORT AREAS
- AUTHORITY SUPPORT AREAS
- COMMON CONCESSIONAIRE AREA (CUSTOMER COMMON CIR.)



LEVEL 3 INDEPENDENT OPERATORS

INDEPENDENT OPERATORS READY/RETURN	
A FOX RENT-A-CAR INC.	14,817 SF
B Vacant	14,817 SF
C ADVANTAGE OPCO LLC DBA ADVANTAGE RENT A CAR	13,952 SF
D SIXT RENT A CAR LLC	14,109 SF
E EXECUTIVE RENT A CAR	11,373 SF
F CISCON LLC DBA ACE RENT A CAR	11,844 SF

RAC IDF R329 96 SF

CIRCULATION	
COMMON CONCESSIONAIRE AREA (SHUTTLE COMMON CIRC.)	42,970 SF
COMMON CONCESSIONAIRE AREA (CUSTOMER COMMON CIRC.)	39,630 SF

QTA
QTA COMMON SUPPORT 4,292 SF

INDEPENDENT OPERATORS QTA ADMIN	
A FOX	207 SF
B ADVANTAGE/VACANT	560 SF
C SIXT	302 SF
D EXECUTIVE	303 SF
E ACE	207 SF
F VESTIBULE	306 SF

INDEPENDENT OPERATORS QTA STACKING	
ROWS 1-3 FOX	3,240 SF
ROW 4 SIXT	1,080 SF
ROW 5 ACE	1,080 SF
ROW 6 EXECUTIVE	1,080 SF
ROW 7 ADVANTAGE	1,080 SF
ROW 8 VACANT	1,080 SF

INDEPENDENT OPERATORS QTA FUEL POSITIONS	
1, 5, 9, 10 FOX	
4, 8, 12 VACANT	
3,7 ADVANTAGE	
2 SIXT	
11 EXECUTIVE	
6 ACE	

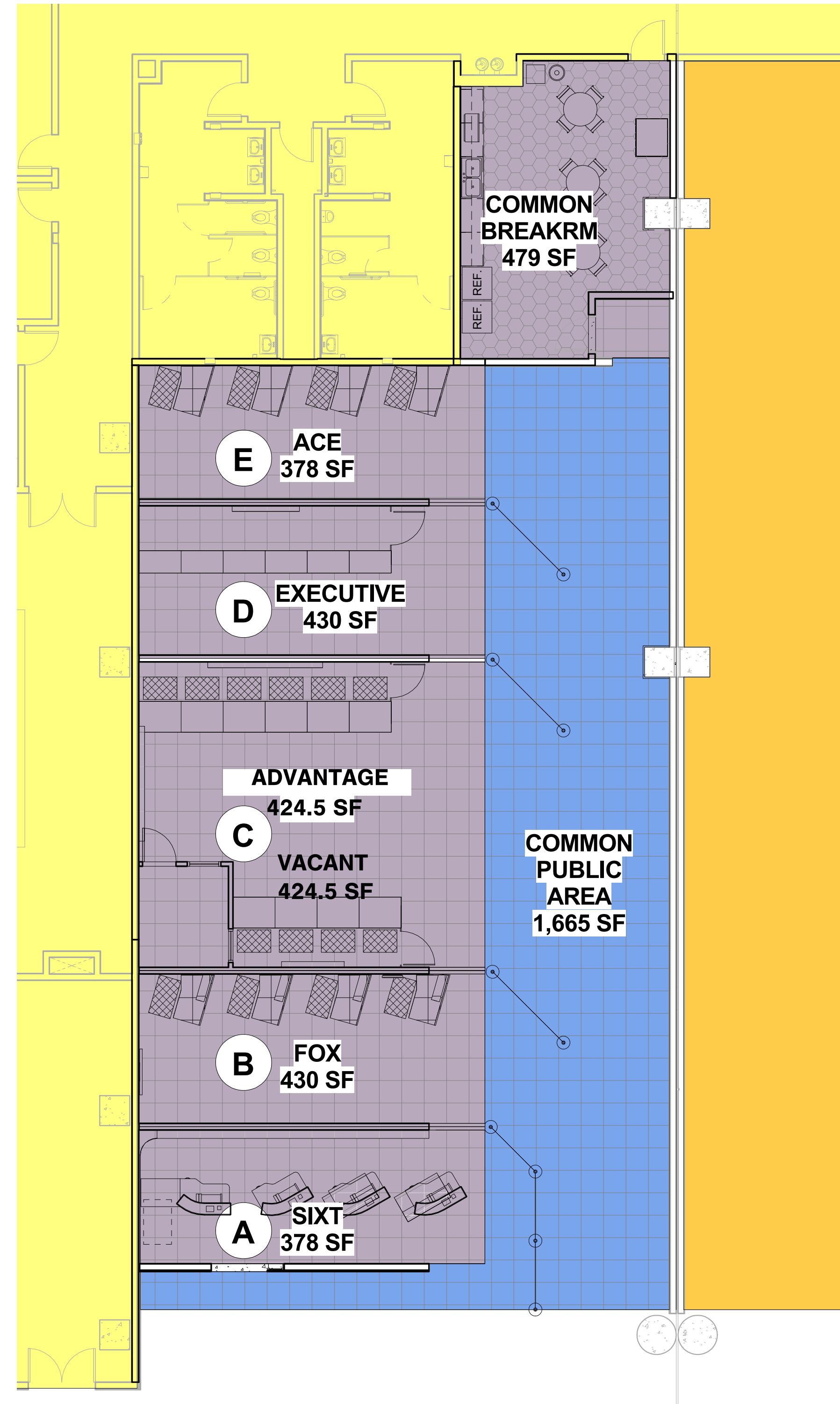
RAC IDF Q319 273 SF
RAC IDF Q303 268 SF

- AUTHORITY SUPPORT AREAS**
- AUTHORITY SUPPORT AREAS**
- COMMON CONCESSIONAIRE AREA (CUSTOMER COMMON CIR.)**

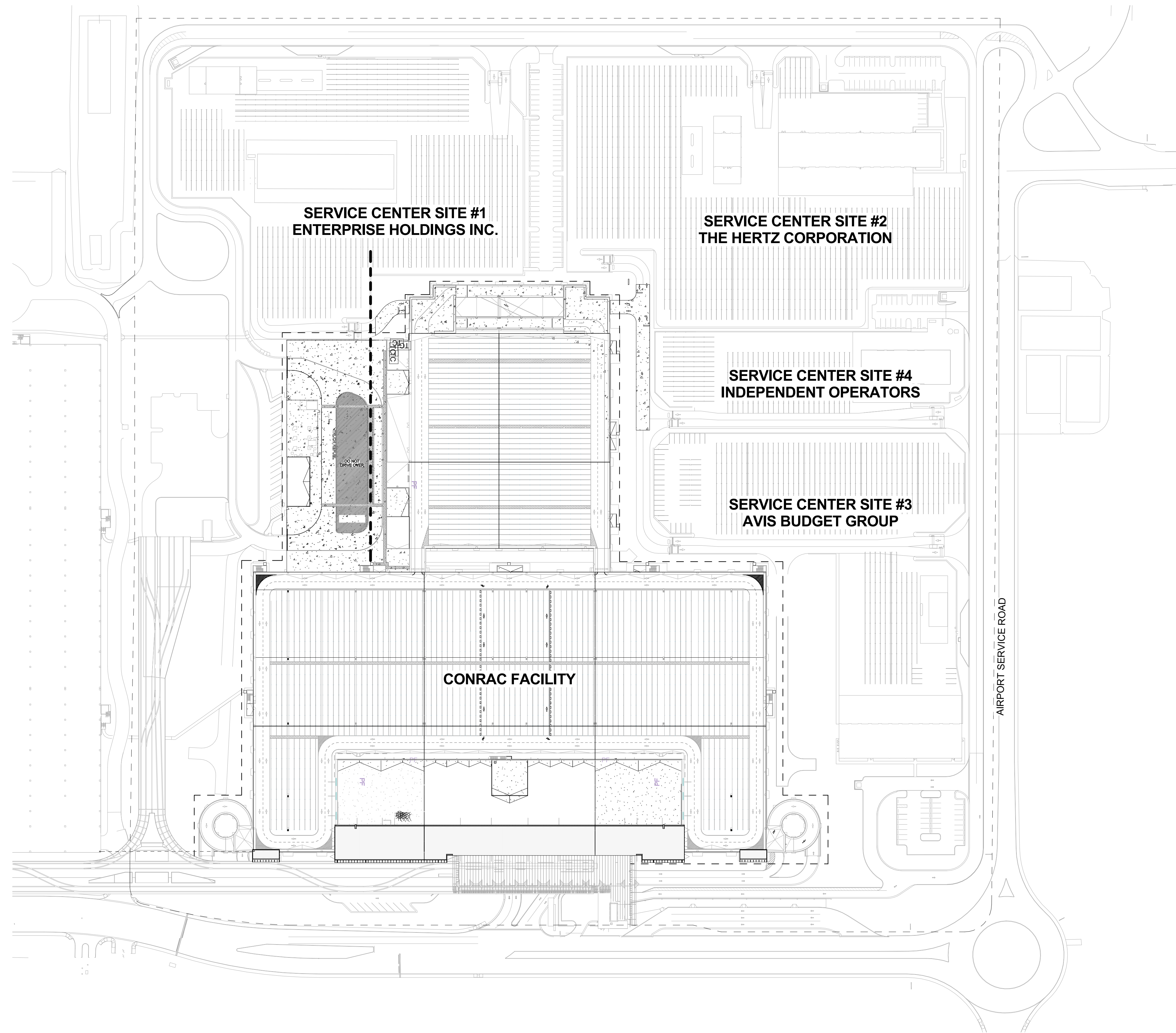
LEVEL 4 INDEPENDENT OPERATORS

CUSTOMER SERVICE BUILDING

A	SIXT RENT-A-CAR INC.	378 SF
B	FOX RENT-A-CAR INC.	430 SF
C	VACANT	424.5 SF
C	ORLANDO RENTCO LLC DBA ADVANTAGE RENT-A-CAR	424.5 SF
D	EXECUTIVE CAR RENTAL, INC.	430 SF
E	CISCON LLC DBA ACE RENT A CAR	378 SF



- AUTHORITY SUPPORT AREAS
- AUTHORITY SUPPORT AREAS
- COMMON CONCESSIONAIRE AREA (CUSTOMER COMMON CIR.)

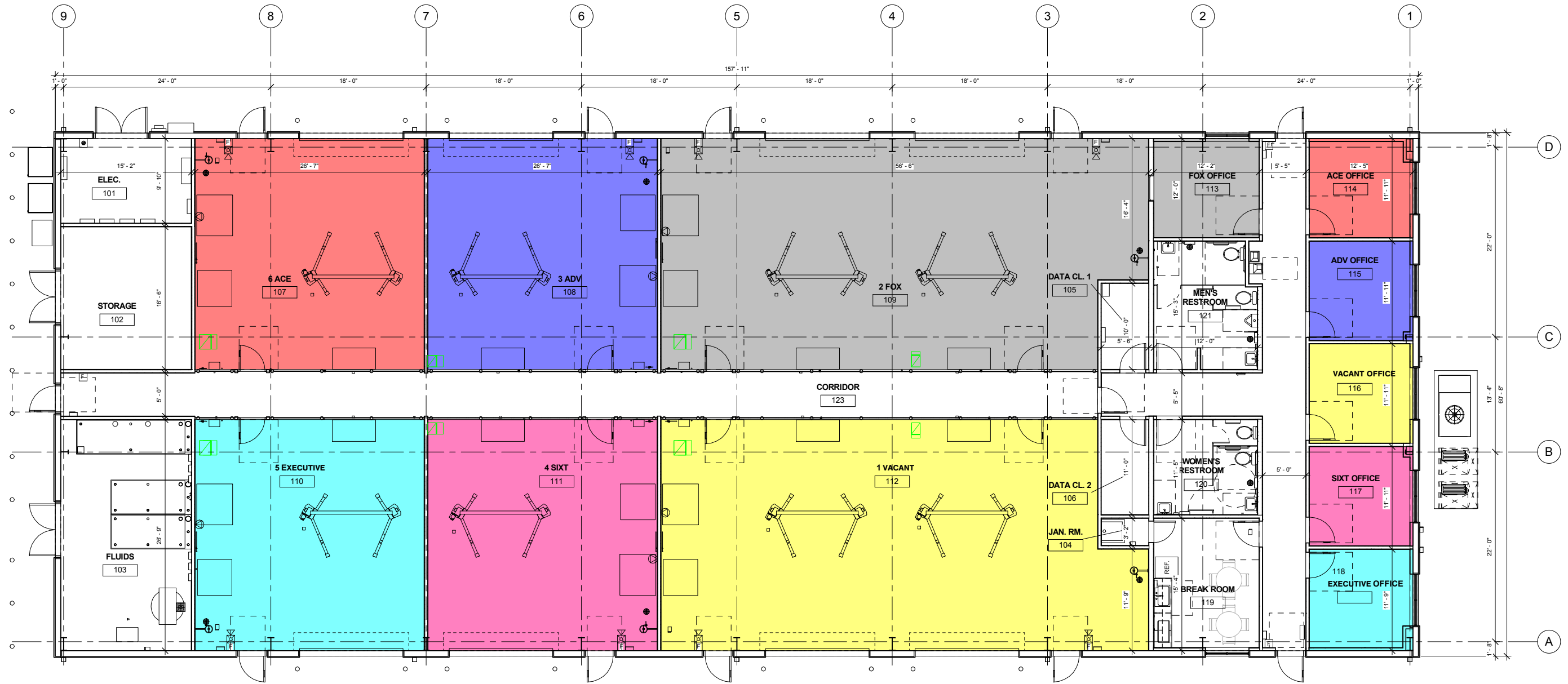


CONRAC	949,023 SF
SERVICE CENTER SITES	
SERVICE CENTER SITE #1 ENTERPRISE HOLDINGS	283,972 SF
SERVICE CENTER SITE #2 THE HERTZ CORPORATION	318,787 SF
SERVICE CENTER SITE #3 AVIS/BUDGET CAR RENTAL, LLC	233,136 SF
SERVICE CENTER SITE #4 INDEPENDENT OPERATORS	109,504 SF
FOX	40,804 SF
VACANT	24,259 SF
ADVANTAGE	22,063 SF
SIXT	10,360 SF
EXECUTIVE	6,439 SF
ACE	5,579 SF

SERVICE CENTER SITES OVERALL SITE PLAN

EXHIBIT A - OPERATING SPACE COMPONENTS

SERVICE CENTER SITE #4



APRIL 2021

EXHIBIT B - MONTHLY REPORTING FORM

Company Name: _____

Monthly Reporting Form For the Month Of: _____

Statement of Gross Receipts and Fees due to Hillsborough County Aviation Authority as required by Section 4.12

TIME & MILEAGE	\$0.00
DROP CHARGE	\$0.00
BABY SEAT	\$0.00
UPGRADES	\$0.00
UNDER 25 AND ADDITIONAL DRIVER	\$0.00
PERSONAL ACCIDENT INSURANCE AND EFFECTS COVERAGE	\$0.00
COLLISION DAMAGE WAIVER	\$0.00
EXCESS LIABILITY	\$0.00
OTHER INSURANCE COVERAGE	\$0.00
FUEL	\$0.00
TOLL TRANSPONDER or TOLL SERVICE (e.g. Plate Pass) FEES	\$0.00
LOSS OF USE REVENUE	\$0.00
SALES TAXES	\$0.00
STATE SURCHARGE	\$0.00
CUSTOMER FACILITY CHARGE	\$0.00
CONCESSION RECOVERY FEE/AIRPORT ACCESS FEE	\$0.00
VEHICLE SHARING and/or VALET SERVICE FEE	\$0.00
TOLL SERVICE ADMINISTRATION FEE	\$0.00
ALL TIME AND REVENUE RELATED TO CAR SHARING OR SIMILAR AND MEMBERSHIP FEES	\$0.00
BATTERY FEE	\$0.00
VEHICLE LICENSE FEE	\$0.00
CARBON OFFSET COLLECTIONS	\$0.00
GUARANTEED RESERVATIONS	\$0.00
MISC EQUIPMENT CHARGES	\$0.00
FREQUENT FLYER PROGRAM	\$0.00
CAR WASH	\$0.00
VIOLATION COLLECTIONS: TRAFFIC/TOLL/FUEL	\$0.00
CORRECTIVE MAINTENANCE CHARGED TO CUSTOMERS	\$0.00
OTHER REVENUE (describe)	\$0.00
OTHER REVENUE (describe)	<u>\$0.00</u>
GROSS RECEIPTS	<u>\$0.00</u>

LESS:			
EXCLUSIONS PER SECTION 4.01(B)			
CUSTOMER FACILITY CHARGE	(\$0.00)	Brand Name _____	Gross Receipts _____
CONCESSION RECOVERY FEE/AIRPORT ACCESS FEE	(\$0.00)	_____	\$ _____
STATE SURCHARGE	(\$0.00)	_____	_____
SALES TAXES	(\$0.00)	_____	_____
OTHER EXCLUSIONS	(\$0.00)	_____	_____
OTHER EXCLUSIONS	(\$0.00)	_____	_____
TOTAL DEDUCTIONS	<u>\$0.00</u>	_____	_____
GROSS RECEIPTS SUBJECT TO PRIVILEGE FEES	<u>\$0.00</u>	← TOTAL MUST AGREE	<u>0</u>
PRIVILEGE FEE:	<u>\$0.00</u>		
The Greater Of:			
(A) 10% of Gross Receipts			
(B) Minimum Annual Privilege Fee (Paid for the reporting month.)			
LESS: Minimum Privilege Fee Paid for the reporting month	<u>\$0.00</u>		
Overage Privilege Fee Due:			<u>\$0.00</u>
Number of Contract Days: 0		X \$5.95 Customer Facility Charge =	<u>\$0.00</u>
TOTAL DUE WITH THIS REPORT			<u>\$0.00</u>

Contract Day: The period of time up to 24 hours from the opening of the Vehicle Rental Contract to the close of the Vehicle Rental Contract. In the event Concessionaire offers a grace period for vehicle rental returns, such grace period will be considered the same Contract Day. If a vehicle rental return exceeds Concessionaire's grace period, then another Contract Day will be applicable even if customer is charged hourly and not a full additional day. The number of Contract Days will be applicable to the calculation of CFCs due to the Authority pursuant to Section 1.01(CC).

Grace Period: The period of time after the Airport Customer's rental vehicle is due, when Concessionaire does not apply any additional charges.

Total number of Contract Days: _____

Average rental price (total rental): _____

Authorized company official: _____

Name of Company Official (Printed)

E-Mail Address:

Title of Company Official

Phone Number

Signature

Date

EXHIBIT D FORM OF GUARANTY OF CONTRACT

WHEREAS, a certain Contract, more fully described below, has been or will be executed:

Location: Tampa International Airport
 Administrative Offices Bldg., 2nd Floor
 4160 George J. Bean Parkway Suite 2400
 Tampa, Florida 33607

Authority: Hillsborough County Aviation Authority

Concessionaire:

Guarantor:

WHEREAS, Authority under said Contract requires as a condition to its execution of said Contract that the undersigned (hereinafter referred to as Guarantor) guarantee the full performance of the obligations of Concessionaire under said Contract; and

WHEREAS, the undersigned is desirous that Authority enter into said Contract with Concessionaire.

NOW THEREFORE, in consideration of the execution of said Contract by Authority, Guarantor hereby unconditionally guarantees the complete and timely performance of each and all of the terms, covenants and conditions of said Contract to be kept and performed by said Concessionaire, including the payment of all Ground Rent and all other rent, fees and other charges to accrue thereunder. Guarantor further agrees as follows:

1. That this Guaranty shall continue in favor of Authority notwithstanding any extension, modifications, or alteration of said Contract entered into by and between the parties thereto, or their successors or assigns, notwithstanding any assignment of said Contract, with or without the consent of Authority, and no extension, modification, alteration or assignment of the above referred-to Contract shall in any manner release or discharge Guarantor and it does hereby consent thereto; and
2. This Guaranty will continue unchanged by any bankruptcy, reorganization or insolvency of Concessionaire or any successor or assignee thereof or by any disaffirmance or abandonment by a trustee to Concessionaire; and
3. Authority, may, without notice, assign this Guaranty in whole or in part, and no assignment or transfer of the Contract shall operate to extinguish or diminish the liability of Guarantor hereunder; and

-
4. The liability of Guarantor under this Guaranty shall be primary and, in any right of action that shall accrue to Authority under the Contract, Authority may, at its option, proceed against the undersigned without having commenced any action or obtained any judgment against Concessionaire; and
 5. Guarantor shall pay Authority's reasonable attorney fees and all costs and other expenses incurred in any negotiations, action or proceeding commenced to enforce this Guaranty; and
 6. Guarantor hereby waives notice of any demand by Authority as well as of any notice of Concessionaire's default in the payment of rent or any other amounts contained or reserved in the Contract; and
 7. Guarantor hereby consents to personal jurisdiction and venue in the state and judicial district in which the Exclusive Premises is located.

The use of the singular herein shall include the plural. The obligation of two or more parties shall be joint and several. The terms and provisions of this Guaranty shall be binding upon and in inure to the benefit of the respective heirs, legal representatives, successor and assigns of the parties herein named.

IN WITNESS WHEREOF, Guarantor has caused this Guaranty of Contract to be executed as of the effective date of the above mentioned Contract.

Corporate Seal:

By: _____
Title: _____
Printed Name: _____
Date: _____
Address: _____
City, State, Zip: _____
Telephone: _____

NOTE: If Guarantor is a corporation, its authorized officers must sign on behalf of the corporation and indicate the capacity in which they are signing. This Guaranty must be executed by the President or Vice President and the Secretary or Assistant Secretary, unless the bylaws or a resolution of Authority of Directors shall otherwise provide, in which event, the bylaws or a certified copy of the resolution, as the case may be, shall be attached to this Guaranty. The appropriate corporate seal should be affixed hereto.

Exhibit E, ConRAC Operations & Maintenance Standards

GENERAL OPERATIONS & MAINTENANCE RESPONSIBILITIES:

The Consolidated Rental Car Facility (ConRAC) is intended to be in operation twenty-four (24) hours per day and seven (7) days a week. It must be operated and maintained to meet the needs of the customers, visitors, and employees and in accordance with the terms of the Lease and Concession Contract for On-Airport Vehicle Rental Concession at Tampa International Airport (Contract).

The Hillsborough County Aviation Authority (Authority) is responsible for the operations and maintenance of the Common Public Areas in the Customer Service Building and circulation cores as well as landscaping on the exterior of the ConRAC. Concessionaires are responsible for the operations and maintenance of the Exclusive Premises and Common Concessionaire Areas. Concessionaires may delegate these responsibilities to a ConRAC Facility Manager. However, in all circumstances, it is ultimately the responsibility of the Concessionaires to ensure that their Exclusive Premises and the Common Concessionaire Areas are operated and maintained in accordance with Authority standards as required by the Contract, including all appendices and attachments thereto.

Responsibilities of the Concessionaires include but are not limited to:

- 1) Provide custodial services, including supplies;
- 2) Dispose of trash, debris, and/or other refuse;
- 3) Maintain and keep in good condition all ConRAC building finishes, including:
 - a) Floors (concrete, terrazzo, carpet, VCT, etc.)
 - b) Walls (paint or wall covering on gypsum drywall, ceramic tile, concrete, masonry, special coatings)
 - c) Ceilings (Lay-in Acoustical, painted gypsum drywall, etc.)
 - d) Restroom partitions (maintain in good working order; repair or replace where damaged or vandalized)
 - e) Exterior Metal Wall Panels
 - f) Exposed / Painted steel
 - g) Other ConRAC building finishes as directed by Authority.
- 4) Maintain and keep in good condition all equipment, including:
 - a) Heating Ventilating Air Conditioning (HVAC) and other mechanical systems
 - b) Plumbing systems
 - c) Electrical systems
 - d) Fire protection and safety systems as determined by Authority
 - e) Other equipment as directed by Authority.
- 5) Provide general repairs and maintenance, including painting;

Exhibit E, ConRAC Operations & Maintenance Standards

- 6) Maintain all utility (electrical, gas and water) services, including maintenance and repair of all utility lines (in connection with the utility service provider and/or the Authority);
- 7) Maintain parking lots, sidewalks, and roadways and ramps within the QTA Areas, Ready Return Area, and around the Service Center Sites and the ConRAC;
- 8) Maintain all office and storage areas, including non-Authority telecommunications rooms;
- 9) Operate and maintain access control systems leading to and from the QTA Areas. (The Authority will require the use of the access control system in support of Authority's day-to-day operations and emergency response requirements.);
- 10) Provide custodial services within the Exclusive Premises and Common Concessionaire Areas;
- 11) Develop an emergency plan(s) for the ConRAC. The emergency plan(s) will be submitted to the Authority for review and comment not less than thirty (30) days prior to the Contract Commencement Date; and
- 12) Repair and maintain pedestrian and vehicle way-finding signage located within the ConRAC.

MAINTENANCE REQUIREMENTS:

Concessionaires will submit a preventative and routine cleaning and maintenance program schedule to the Authority for approval at least thirty (30) days prior to the Contract Commencement Date. The following general requirements apply to the Exclusive Premises and Common Concessionaire Areas and will be incorporated into the preventative and routine cleaning and maintenance program schedule:

- 1) Routine service schedules will conform to warranty and/or manufacturers' requirements.
 - Routine service work will be scheduled in advance and will be completed on time. Maintain detailed database of routine service and warranty work history.
- 2) Windows / Skylights
 - Check for and maintain weather-tightness
 - Check for operation (as applicable)
 - Clean (interior and exterior)
- 3) Doors
 - Interior Doors
 - a) Check closers, locks and hinges
 - b) Check frame and operation
 - Exterior Doors
 - a) Check closers, locks and hinges
 - b) Check frame and operation

Exhibit E, ConRAC Operations & Maintenance Standards

- Overhead Doors
 - a) Lube door tracks
 - b) Check operation

- 4) Structure
 - Check walls for unusual cracks (building settlement)
 - Check for and repair (as necessary) cracks in concrete floors
 - Check for drainage or leakage
 - Immediately report structural issues to the Authority

- 5) Heating, Ventilating, and Air Conditioning Systems (HVAC)
 - Replace filters (4x per year minimum)
 - Clean condenser coils (1x per year or as recommend by manufacturer)
 - Clean evaporator coils
 - Check and replace belts
 - Check cooling operation
 - Check heating operation
 - Lubricate bearings and motors
 - Calibrate thermostats
 - Operate and maintain the building control system components for the Exclusive Premises and Common Concessionaire Areas.

- 6) Electrical Systems
 - Check all circuit breakers for trips
 - Check for damaged outlets, switches and conduit boxes
 - Have panel lugs checked and infrared scanned (annually, or as otherwise delineated in the preventative and routine cleaning and maintenance program schedule)
 - Repair/replace plumbing systems and fixtures within the Common Concessionaire Areas and Exclusive Premises (as needed)

- 7) Lighting Systems
 - Check for lamp outage (daily)
 - Provide all lighting maintenance including the cleaning of fixtures and lamp and ballast replacement (as needed)
 - Check emergency light fixtures, exit signs and test batteries (monthly)
 - Check time clocks for parking lot lighting (twice daily: on at dusk, off at sunrise)
 - Check lights, entrance and exit signage (daily)

- 8) Plumbing
 - Check for plumbing fixture leaks (i.e. faucets, hose bibs, valves and showers) (weekly)
 - Check for clogged sanitary lines (daily)

Exhibit E, ConRAC Operations & Maintenance Standards

- Repair/replace plumbing systems and fixtures within the Common Concessionaire Areas and Exclusive Premises (as needed)

9) Ready/Return Areas

- Conduct visual inspections and evaluation of the Exclusive Premises and Common Concessionaire Areas within the Ready/ Return areas, including but not limited to:
 - a) Lighting
 - b) Striping
 - c) Signage
 - d) Bollards
 - e) Walkways
 - f) Stairways
 - g) Egress areas
 - h) Car stops
 - i) Headache bars
- Perform the following activities within the Ready/ Return Area:
 - a) Paint curbs (minimum once annually)
 - b) Pavement striping (minimum once annually)
 - c) Perform preventative maintenance on tiger teeth and gate arms (as needed)
 - d) Pick up trash (daily)
 - e) Clean out storm drains (minimum once annually)
 - f) Sweep (weekly)
 - g) Pressure wash

10) Third-party service provider contracts:

- Pest Control
 - a) Spray for bugs (minimum once monthly, or more frequently as required)
 - b) Provide animal control (as needed/required)
- Cleaning
 - a) Provide for daily service
 - b) Check floors, walls, cabinets, desks, counters, rest rooms, windows, carpeting, seating, fixtures, paper products, and booths for cleanliness
- Fire Alarm/Fire Suppression
 - a) Check smoke detectors (minimum semi-annually)
 - b) Check fire extinguishers (monthly)
 - c) Check sprinkler system (annually)
 - d) Check fire pump (monthly) (Check for leaks & check pressure gauges)
 - e) Check pull boxes (annually)
 - f) Check enunciator panel (monthly)
 - g) Check call signal to alarm company (weekly)

Exhibit E, ConRAC Operations & Maintenance Standards

- Fuel Management
 - a) Tanks, pumps, and fuel delivery system
 - b) Necessary repairs as required
 - HVAC Management
 - a) Regular maintenance/cleaning
 - b) Necessary repairs as required
- 11) Trash Removal
- Check trash containers several times daily for capacity and remove to Trash Compactor
 - Clean area around Trash Compactor and ensure Service Yard remains clean
- 12) Safety & Security
- Plan and stage any safety drills as may be required or prudent, in coordination with the Authority. This includes development of the written safety plan
 - Develop and maintain a security plan for operations. The security plan will be developed in conjunction with Authority policy requirements and Concessionaires' goals
 - Develop and maintain a safety plan for operations. The safety plan will be developed in conjunction with Authority policy requirements and Concessionaires' goals

CONRAC FACILITY MANAGER GENERAL RESPONSIBILITIES AND REQUIREMENTS

- 1) Have a named manager and supervisor(s) which serve as Authority's point of contact for the operation.
- 2) Be available twenty-four (24) hours per day and seven (7) days a week and maintain up-to-date contact information with the Authority.
- 3) At Authority's request, develop a customer comment process that includes the ability to receive, track, and respond to customer comments in a timely fashion. The customer comment process will be developed with assistance from Authority staff and will require Authority approval prior to its implementation or any significant future modification.
- 4) Provide to the Concessionaires the training necessary to operate the equipment and systems in the ConRAC, including QTA Areas.
- 5) ConRAC Facility Manager and any service providers hired by ConRAC Facility Manager are not authorized to speak to the media on behalf of the Authority or Tampa International Airport.
- 6) Ensure compliance with service provider personnel requirements, including but not limited to:
 - Service providers are required to have proper company specific identification and to present this identification to the ConRAC Facility Manager, or representative on duty, upon arrival at the ConRAC. ConRAC Facility Manager should be provided with an authorized personnel list in advance of crew arrival for any overnight servicing.

Exhibit E, ConRAC Operations & Maintenance Standards

- Service providers are required to wear appropriate attire at all times (i.e., no tank tops, no T-shirts with inappropriate graphics, etc.)
 - Service providers are required to check in and out with the ConRAC Facility Manager or representative on duty whenever they enter or exit the ConRAC. Checkout procedures may involve visual inspection of all bags, boxes, toolboxes, buckets, etc.
 - Service providers must be able to communicate with the ConRAC Facility Manager in English.
 - Service providers are responsible for providing the necessary tools, cleaning products (removing paint, etc.), vacuums, ladders, etc. for specific jobs they are servicing.
- 7) Ensure compliance with the following Environmental, Health & Safety (EH&S) Requirements, including but not limited to:
- Along with any service providers, obtain required EH&S permits or agency approvals required to conduct work for Concessionaires in accordance with the Contract.
 - Along with any service providers, have and act in accordance with all required EH&S plans (e.g., storm water pollution plans, spill prevention control plans, emergency response, health and safety plans, waste minimization/recycling plans, etc.) and all Federal, State and local governing laws and regulations.
 - Immediately notify the Authority if hazardous conditions arise.
 - Prior to using hazardous material(s) in or around the ConRAC through self or service providers:
 - a) Notify the Authority and identify the hazardous material(s)
 - b) Identify any specific hazards associated with the material(s)
 - c) Supply a material safety data sheet (MSDS) for those material(s)
 - d) Obtain approval of Authority's Environmental Compliance Manager for using the material(s)
 - Dispose of all wastewater in accordance with State of Florida Environmental requirements. ConRAC Facility Manager, along with any service provider, is prohibited from discharging any chemical, waste or wastewater to storm drains or sewers.
 - Along with any service provider, be responsible for providing and properly using the appropriate Personal Protective Equipment (PPE) for the specific job.
 - ConRAC Facility Manager, along with any service provider, is responsible for providing their employees with all applicable EH&S training.
 - ConRAC Facility Manager, along with any service provider, must provide adequate ventilation to remove potential air contaminants from the work areas and adjacent spaces.
 - When ConRAC Facility Manager, through self or any service provider, must store materials on site:
 - a) Inform the Authority of the hazardous material(s) intended to be stored on site and identify the material(s)
 - b) Identify any specific hazards associated with the material(s)
 - c) Store minimal amount of material(s) necessary


Exhibit E, ConRAC Operations & Maintenance Standards

- d) Maintain MSDS(s) on site for those material(s)
 - e) Maintain a secure storage area that meets all applicable regulations
 - f) Comply with all other hazardous materials storage regulations
 - g) Dispose of all wastewater in accordance with State of Florida Environmental requirements. ConRAC Facility Manager, along with any service provider, is prohibited from discharging any chemical, waste or wastewater to storm drains or sewers.
- 8) HVAC Management Program
- HVAC management program shall consist of performing quarterly preventative maintenance services, receipt, dispatching and resolution of emergency and routine repair and maintenance work requests, warranty issues resolution and all associated management reporting and invoicing requirements within Exclusive Premises and Common Concessionaire Areas.
- 9) Lighting and Signage Maintenance Program
- Respond within 24-hours following notification or observation of outages.
- 10) General Repairs
- Doors
 - a) All necessary repairs and maintenance to doors and gates, hardware (including hinges and closers), door replacement, door refinishing, and repair due to vandalism or accidents.
 - Locks
 - a) All necessary repairs and maintenance to locksets, door alarms, or panic hardware.
 - b) Replacement of lost keys, lockouts.
- 11) Electrical
- All necessary repairs and maintenance to electrical service, outlets, receptacles, and restroom ventilation fans; testing of emergency light fixtures as required; and replacement of circuit breakers, timers, contactors, HVAC electrical system repair and maintenance, underground or exterior work, switchgear, electrical panel work, lightning damage/shorts, new wiring/outlets.
- 12) Signs
- All repairs and maintenance to all internal parts, replacement of sign faces, underground electrical, electrical connections, and repair due to vandalism or accidents.
- 13) Fire Protection System
- All necessary inspections, repairs and maintenance, regardless of local code or frequency requirements, to the fire alarm, burglar alarm, sprinkler and fire extinguishers.

Exhibit E, ConRAC Operations & Maintenance Standards

- 14) Fueling and QTA Systems and Equipment located in Common Concessionaire Areas
 - All necessary inspections, repairs and maintenance, regardless of State or local code or frequency requirements, to the Fueling system (including tanks, pumps and fuel delivery system) and QTA Areas Equipment (including carwash, fire suppression, vacuum, compressed air, windshield washer fluid).
- 15) Plumbing in Common Concessionaire Areas and Exclusive Premises
 - Clear in-facility sanitary lines and drains, repair/replace faucets, flush valves, water heaters; secure sinks, repair/replace toilets, urinals, handrails, tissue holders, hand dryers, towel and sanitary napkin dispensers, toilet seats; and remedy leaks.
- 16) Custodial Plan
 - Prepare a custodial plan consistent with then-current Authority custodial standards. The custodial plan will be developed with the assistance of Authority staff and will require Authority approval prior to its implementation. The custodial plan will be included in the ConRAC Facility Manager's Operations Manual and approved by the Authority annually.

Notwithstanding any provisions of these ConRAC Operations & Maintenance Standards, Concessionaire specifically acknowledges Article 11 of the Contract, Maintenance and Repairs, relating to the ConRAC Facility Manager.



**TAMPA INTERNATIONAL AIRPORT CONRAC
CONCESSIONAIRE IMPROVEMENT
HANDBOOK**

July 1, 2016

TABLE OF CONTENTS

1.0 INTRODUCTION	3
1.1 DEFINITIONS	4
1.2 PROJECT DELIVERY	8
1.3 AUTHORITY CONTACT	9
1.4 PROCUREMENT OF DESIGN CONSULTANTS AND CONSTRUCTION CONTRACTORS	9
1.5 CONCESSIONAIRE IMPROVEMENTS	9
1.6 SUSTAINABILITY	17
2.0 DESIGN STANDARDS	19
2.1 GENERAL REQUIREMENTS	19
2.2 DESIGN REVIEW AND APPROVAL PROCESS	23
2.3 FACILITY STANDARDS	28
2.4 READY/RETURN AREAS (OPERATIONAL FLOOR PLATES)	35
2.5 QUICK TURN AROUND (QTA) AREAS	49
2.6 CUSTOMER SERVICE BUILDING (CSB)	60
2.7 VEHICLE STAGING AND STORAGE AREA (LEVEL 4)	66
3.0 CONSTRUCTION STANDARDS	74
3.1 GENERAL REQUIREMENTS	74
3.2 CONCESSIONAIRE ALTERATIONS	77
3.3 INITIAL CONSTRUCTION OF CONCESSIONAIRE EXCLUSIVE PREMISES	77
APPENDIX List of Exhibits	

1. HILLSBOROUGH COUNTY AVIATION AUTHORITY DESIGN CRITERIA MANUAL 2016
2. HCAA TELECOMMUNICATIONS INFRASTRUCTURE STANDARDS SEPTEMBER 14, 2015
3. OVERALL LEVEL 1 FLOOR PLAN – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS
4. OVERALL LEVEL 2 FLOOR PLAN – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS
5. OVERALL LEVEL 3 FLOOR PLAN – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS
6. OVERALL LEVEL 4 FLOOR PLAN – EXCLUSIVE-PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS
7. INCREASED STRUCTURAL LOAD AREA – LEVELS 2 & 3
8. TYPICAL BARRIER PLACEMENT – LEVEL 1
9. TYPICAL BARRIER PLACEMENT – LEVELS 2 & 3
10. TYPICAL BARRIER PLACEMENT – LEVEL 4 (OVER READY/RETURN)
11. TYPICAL BARRIER PLACEMENT – LEVEL 4 (OVER QTA)
12. CSB – EXCLUSIVE PREMISES AREAS – LEVEL 4
13. QTA – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS – LEVEL 1
14. QTA – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS – LEVEL 2
15. QTA – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS – LEVEL 3
16. QTA – CONCESSIONAIRE IMPROVEMENT AREAS – LEVEL 1
17. QTA – CONCESSIONAIRE IMPROVEMENT AREAS – LEVEL 2
18. QTA – CONCESSIONAIRE IMPROVEMENT AREAS – LEVEL 3
19. QTA – TYPICAL CAR WASH BAY
20. QTA – TYPICAL FUEL ISLAND (TWO-POSITION)
21. READY/RETURN – ZONES DEFINED FOR EXIT/CUSTOMER SERVICE BOOTHS – LEVEL 1
22. READY/RETURN – ZONES DEFINED FOR EXIT/CUSTOMER SERVICE BOOTHS – LEVELS 2 & 3

23. READY/RETURN – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
24. READY/RETURN – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
25. READY/RETURN – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
26. READY/RETURN- ELECTRICAL ROOM/IDF ROOM/KEY PLAN
27. QTA – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
28. QTA – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
29. QTA – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
30. READY/RETURN – TYPICAL IDF ROOM
31. READY/RETURN – TYPICAL IDF ROOM
32. READY/RETURN – TYPICAL IDF ROOM
33. READY/RETURN – TYPICAL ELECTRICAL ROOM
34. READY/RETURN – TYPICAL ELECTRICAL ROOM
35. READY/RETURN – TYPICAL ELECTRICAL ROOM
36. QTA – TYPICAL IDF ROOM
37. QTA – TYPICAL ELECTRICAL ROOM
38. QTA – TYPICAL ELECTRICAL ROOM
39. CSB – SIGNAGE PLACEMENT AND SIZE
40. CSB – SIGNAGE PLACEMENT AND SIZE - SECTION
41. AREA 4 CONCESSIONAIRES CSB MINI-MALL COUNTER-LIMIT LINE
42. CONCRETE BARRIER DESIGN STANDARDS
43. TPA SUSTAINABLE MANAGEMENT PLAN (SMP), SEPTEMBER 2014
44. TPA SUSTAINABLE DESIGN CRITERIA MANUAL (SDCM), SEPTEMBER 2014
45. SUSTAINABLE DESIGN CRITERIA MANUAL (SDCM) PROJECT RECORD WORKSHEET

1.0 INTRODUCTION

The Concessionaire Improvement Handbook standards apply to the development of proprietary exclusive leasehold improvements and/or modifications within each Concessionaire's Exclusive Premises at Tampa International Airport's Consolidated Rental Car Facility (ConRAC). These standards apply to all common-use and Exclusive Concessionaire components, including: allocated vehicle Ready/Return facilities, Customer Service Building areas, Quick Turnaround Area vehicle service areas, exit security booths, and customer service booths. These standards are intended to provide each Concessionaire, its designers, and its contractors with information required for the design and construction of each Concessionaire's leasehold improvements.

These standards are generally organized to describe the work included in the Base Building, the responsibility of the Hillsborough County Aviation Authority (Authority), and work that shall be Concessionaire Improvements within the respective Exclusive Premises and the responsibility of the ConRAC Concessionaires as delineated per Exhibits A, A-1, and A-2 of the Lease and Concession Contract for On-Airport Vehicle Rental Concession at Tampa International Airport (Contract). The Design Standards section is further subdivided into the four major building components:

1. Ready/Return Areas (Operational Floor Plates)
2. Customer Service Building
3. Quick Turnaround Areas
4. Staging and Storage Areas

The Construction Standards section describes general issues and is further divided into three categories:

1. General requirements
2. Concessionaire Alterations
3. Initial Construction of Concessionaire Exclusive Premises

These standards must be read and applied in their entirety. Should there be any inconsistencies or ambiguities in this document, the Authority will be the sole interpreter of these standards. Should there be any inconsistencies or ambiguities between these standards and the Contract, the Contract shall govern. Design standards and criteria incorporated herein apply to building materials, appearance, and durability of improvements, signage, uses of the buildings and surrounding site, and ConRAC standards for Concessionaire Improvements on the ConRAC site.

1.1 DEFINITIONS

Acceptance - "Accept", "accepted", "acceptable", "acceptance" and other words of similar import shall mean that acceptance by the Authority or its authorized representatives is required unless otherwise stated. Acceptance will always be in writing.

Access Date - shall mean and refer to the date on which the Authority allows Concessionaire access to the Exclusive Premises to install its tenant improvements. The "Access Date" is 180 days prior to the opening date on April 1, 2017. There may be different Access Dates for different portions of the Exclusive Premises, and Concessionaire acknowledges that it is currently contemplated that there will be separate Access Dates for Concessionaires (other than Area 4 Concessionaires) for those portions of the Exclusive Premises in the Ready Return Area, Customer Service Building, QTA Area and the Vehicle Storage area (4th level of the ConRAC).

Alteration - shall have the meaning set forth in Section 9.03 of the Contract.

Approval - "Approve", "approved", "approval" and other words of similar import shall mean that approval of the Authority or its authorized representatives is required unless stated otherwise. Approval will always be in writing.

APM – shall mean the automated people mover which travels on a dedicated guideway providing passenger transportation service to the ConRAC, Economy Garage, and Main Terminal at TPA.

Area 4 - shall mean and refer to those locations in the Customer Service Building, Ready/Return Area, QTA Area, Vehicle Storage Area, and Service Center Site that are designated by the Authority for the use by the independent operators known as Area 4 Concessionaires. Area 4 consists of both Exclusive Premises assigned to individual Area 4 Concessionaires and shared spaces for use, in common, by all of the Area 4 Concessionaires.

Area 4 Concessionaire - shall mean and refer to a Concessionaire which occupies space and operates from Area 4 of the ConRAC.

Authority - shall mean the Hillsborough County Aviation Authority. The term as used in this document means the same as Owner or its authorized representative(s).

Base Building – Includes all improvements that will be designed, funded and constructed through the ConRAC project, including site development and the ConRAC structure, but exclusive of Concessionaire Improvements within Concessionaire Exclusive Use Premises.

Base Building Design/Builder – Austin Commercial is the Base Building Design/Builder for the ConRAC and APM who will be responsible for coordinating the construction of all Base Building components, including site development and the ConRAC structure.

Base Building Design Team – The Base Building Design Team is comprised of multi-disciplined architects and engineers who designed the Base Building Project components. The Architect of Record leading the Base Building Design Team is Demattei Wong Architecture.

CFM - Cubic feet per minute.

Circulation Cores – The main common-use circulation area located on Levels 1 through 4 to be utilized for customer access to each Concessionaire operating area.

Concessionaire – Any person, firm, corporation, or other entity that has or enters into a Contract with the Authority for the purpose of conducting a vehicle rental business in the ConRAC. When used in the singular, shall mean and refer to the particular Concessionaire executing a particular Contract relating to the operation of a vehicle rental business in the ConRAC. When used in the plural, shall mean and refer to all Concessionaires having executed a Contract relating to the operation of a vehicle rental business in the ConRAC.

Concessionaire Improvements – The design, construction, renovation, alteration, repair, relocation, or demolition of any structure, building facility or any part thereof including, but not limited to, paving, fencing, signs, landscaping, and utility services to or within any building site or interior site by or on account of a Concessionaire.

Concessionaires' Manager of Construction - shall mean and refer to such construction management firm as the Concessionaires may elect to utilize for purposes of monitoring the construction of the ConRAC project.

ConRAC Facility Manager - shall mean and refer to the party chosen by the Concessionaires to operate and maintain the Common Concessionaire Areas and Exclusive Premises pursuant to Article 11 of the Contract.

Consolidated Rental Car Facility (ConRAC) - shall mean and refer to the Consolidated Rental Car Facility to be constructed by the Authority. The ConRAC includes (but is not limited to) the Circulation Cores, the Ready/Return Area, the CSB, the QTA Areas and all improvements on the ConRAC Site.

Consolidated Rental Car Facility Concessionaire Design and Construction Standards (Concessionaire Standards) - shall mean and refer to those standards as contained in Section 9.02, Section 1.01(ZZ) and Section 1.01(AAA) of the Contract, and shall govern the development, design and construction of the ConRAC Exclusive Premises.

Contract - shall mean and refer to the certain Contract between the Authority and a particular Concessionaire, together with the exhibits to the Contract and all agreements or amendments supplemental to or modifying the Contract.

Customer Service Building (CSB) – shall mean and refer to the customer service area located on the Level 4 of the ConRAC and providing areas for public circulation, customer service counters and back office support space for the operation of the Concessionaires.

Days - unless otherwise specified, shall mean and refer to calendar days, not business days.

Exclusive Premises - shall mean and refer to those portions of the Customer Service Building, Ready/Return Area, QTA Area, and Vehicle Storage Area, as determined in accordance with Article 2 of the Contract and as thereafter depicted on Exhibits A, A-1, and A-2 of the Contract.

Fixtures, Furniture & Equipment (FF&E) – Improvements that are not affixed to any permanent structure and that can be removed without damage to the premises.

Fuel Facility Manager - shall mean and refer to the party chosen by the Concessionaires to operate the fueling facilities, which may be the same as the ConRAC Facility Manager.

Guarantee/Warranty - No distinction between the meaning of the words "guarantee" and "warranty" or their derivative word forms is intended or implied by any document or manual. These words are used interchangeably. Guarantee and Warranty refer to "performance of the work" and are commonly associated with time and quality of construction.

Hillsborough County Aviation Authority or Authority - The entity responsible for operation, maintenance and development of Tampa International Airport.

Initial Allocation – Allocation of customer service space, office space, Ready/Return space, QTA space and Vehicle Storage space is as described in Section 2.1 and reflected in Exhibit A of the Contract.

Lease Line - The line of demarcation separating the Base Building construction and the area in which the Concessionaire shall design, construct and fund its proprietary Concessionaire Improvements.

Opening Date - shall mean and refer to the date identified in the Contract as Commencement Date which is the date the ConRAC opens to the public for business.

Operational Floor Plate – Areas within the ConRAC used for rental vehicle Ready/Return operations.

Perform - shall mean that the Concessionaire, at Concessionaire's expense, will perform all the operations, including design, labor, and procurement of material and equipment, necessary to complete their work.

PLF - Pounds per linear foot.

Premises - shall mean and refer to the Exclusive Premises within the ConRAC consisting of the Customer Service Building, Ready/Return Area, QTA Area, Vehicle Storage Area, and adjacent Service Center Site, as listed and depicted in Exhibit A, Exclusive Premises, of the Contract, including any improvements to be made or modifications to be made thereto.

Provide - shall mean that the Concessionaire, at Concessionaire's expense, will furnish and install all work, complete in place and ready for the intended use. This definition applies the same to future, present, and past tenses except "provided" may mean "contingent upon" where such is the context.

PSF - Pounds per square foot.

Quick Turn Around (QTA) Area - "shall mean and refer to the quick turnaround areas to be located immediately to the east of the Ready/Return Area and to be utilized by Concessionaires for purposes of washing, cleaning, and fueling rental vehicles.

Quick Turn Around (QTA) Admin Space – shall mean and refer to the administration office space located within the North portion of the QTA Area.

QTA Equipment - shall mean and refer to all equipment located in the QTA Area and used in connection with car washing, cleaning, and fueling activities. The QTA Equipment includes, without limitation, fuel dispensers, car washes, associated standard equipment, vacuums, and all fluid and/or compressed air dispensing systems.

Ready/Return Area - shall mean and refer to those portions of the ConRAC located on Levels 1 through 3 to be utilized by the Concessionaires for purposes of stacking, staging, returning and delivering rental cars. Each floor of this Area is also referred to as an Operational Floor Plate.

Required - "Required", "required by the Authority" and other terms of similar import shall mean "as required to complete the work", as is applicable to the Concessionaires in the context of the place where used, unless stated otherwise.

Required Completion Date - shall mean and refer to the date identified by the Authority for the Concessionaires' substantial completion of their Concessionaire Improvements. Such date may be adjusted at the sole discretion of the Authority upon reasonable consultation with Concessionaires.

Roughed-In - Extended and terminated near or within the Concessionaire Exclusive Premises, with the Concessionaire completing the remaining Portions of work as required. Should the City of Tampa, Hillsborough County, or Authority require certain building areas to have received a Temporary Certificate of Occupancy (TCO) prior to the commencement of Concessionaire Improvements, "roughed in" refers to the installation of fire protection, fire detection, plumbing,

electrical, and Heating/Ventilation/Air Conditioning (HVAC) systems to the extent required for such TCO. For the purposes of this Handbook, TCO may also be regarded for beneficial occupancy.

Submit - "Submit", "submittal", "submission", and other terms of similar import will include the meaning of the phrase "submit to the Authority for approval" unless otherwise stated.

Sustainable Design Criteria Manual (SDCM) - Outlines sustainable strategy recommendations, requirements, and tracking protocols for design and construction projects at TPA.

Sustainable Management Plan (SMP) – Defines the context for the Authority's sustainability program, initiatives and implementation plans.

TPA – shall mean Tampa International Airport.

1.2 PROJECT DELIVERY

The following has been adopted as the procedure by which the ConRAC project and the Exclusive Premises shall be developed. The Authority has contracted with a comprehensive Base Building Design Team to address the overall planning and design of the ConRAC project site. This team includes Gresham, Smith and Partners (project manager, Demattei Wong Architecture (Architect of Record), AECOM (civil and security sub-consultant), Walter P. Moore (structural engineering), Master Consulting Engineers (structural engineering), TLC Engineering for Architecture (HVAC, electrical and technology sub-consultant), VoltAir Consulting Engineers (plumbing, electrical sub-consultant), Arora (digital graphics sub-consultant), and Blymyer Engineers Inc. (vehicle fueling / QTA sub-consultant).

The Authority has contracted with Austin Commercial to provide Base Building design/build services for the following work: 1) Enabling (infrastructure) work, 2) Site Civil/Infrastructure Improvements; 3) Circulation Cores; 4) Operational Floor Plates; 5) CSB, 6) QTA areas, and 7) Staging / Storage, and Service Center Sites.

The Concessionaire shall refer to the Base Building construction documents for all details regarding the Base Building, including plans and specifications. Each Concessionaire shall be responsible for the design and construction of its Concessionaire Improvements within its Exclusive Premises. During the design of each Concessionaire's Exclusive Premises, the Concessionaire shall submit its design documents to the Authority Construction Project Manager at the completion of the schematic design (35%), design development (60%), draft Contract Documents (95%), and final Contract Documents (100%) design completion phases for review by the Authority. Please refer to the Authority's Tenant Work Permit Handbook for process requirements. The Concessionaire shall be responsible for submitting its construction documents to City of Tampa Building Department for review and issuance of a building permit. The Concessionaire shall also be responsible for any costs associated with obtaining building permits or use and occupancy permits. Any Concessionaire

seeking to use an alternative approach or otherwise vary from the fulfillment of the requirements stated herein may submit written documentation explaining and supporting its position to City of Tampa Building Department and the Authority for consideration.

1.3 AUTHORITY CONTACT

All contact with the Authority regarding Concessionaire Improvements to the ConRAC is to be through the project director or their designee.

1.4 PROCUREMENT OF DESIGN CONSULTANTS AND CONSTRUCTION CONTRACTORS

Each Concessionaire shall select the design and construction entities of its choice. Concessionaires shall comply with all rules and regulations, including all applicable Federal, state and local regulations.

1.5 CONCESSIONAIRE IMPROVEMENTS

Each Concessionaire shall be solely responsible for the funding, design, construction and commissioning of its Concessionaire Improvements within their respective Exclusive Premises.

The following descriptions indicate the general anticipated scope for the specific items of the Concessionaire Improvements.

1.5.1 Ready/Return Areas / Operational Floor Plate Improvements

If Concessionaire requirements exceed the capacities or requirements of what is being provided by the Authority, the Concessionaire may request to upgrade or change said service or requirements from the Authority. The Authority will review the request and will render, at its sole discretion, a decision in writing to the Concessionaire. Should the Authority approve the Concessionaire's request, the Concessionaire shall proceed with the work at Concessionaire's expense under Authority oversight and supervision. The Authority reserves the right to require modifications to the Base Building or Base Building systems to be performed by the Base Building Design/Builder at Concessionaire's expense.

If the Authority incurs direct or indirect costs associated with the Concessionaire's request for a change to the Base Building, the Concessionaire shall reimburse the Authority for all such costs. Prior to reimbursement, Concessionaire will be notified in writing of all costs incurred.

Concessionaire is required to attenuate the transmission of sound from their Exclusive Premises to all surrounding public and adjacent areas. Refer to Section 2.3.9, Acoustics, below. The Concessionaire shall meet the following minimum requirements for Sound Transmission Class (STC), Impact Insulation Class (IIC) Noise Reduction Coefficient (NRC), and Noise Criteria (NC). NC values for all equipment, including but not limited to, the HVAC

systems, shall comply with the generally accepted practice by the American Society of the Heating Refrigeration and Air Conditioning Engineers (ASHRAE), sound and vibration design guidelines. The NC Level within the Exclusive Premises as a result of any equipment or system shall be limited to NC 40. All equipment, including but not limited to, the HVAC systems, shall be vibration isolated from the ConRAC structure.

The Concessionaire design and space planning shall strictly consider adjacencies and STC values. The Concessionaire's design team must confirm adjacencies prior to the start of design. IIC will be a minimum of 50 for all hard surfaced floor areas above occupied spaces. All waterproofing underlayment material must also be rated to increase the IIC of the floor assembly. Examples of isolation underlayment material manufacturers are Noble Seal, Ekasonic and Kinetic Noise Control.

Base Building Scope

The Base Building scope is as defined in Exhibit I of the Contract, Schedule of Concessionaire Improvements, as follows: Base Building construction includes the operational floor plate structure, vertical circulation cores, way-finding signage in common-use areas, lighting, common-use area striping, roughed-in utilities, IT backbone conduit, copper and fiber cabling, IT racks (enclosed racks or racks within cages), and termination devices (punch-down blocks or lockable cabinets) for terminating backbone cabling.

Concessionaire Scope

Each Concessionaire will occupy all or a portion of the operational floor plates (vehicle rental, return, parking and staging areas) of a single level pursuant to the Contract. Each Concessionaire shall secure its Exclusive Premises and control its public entry and exits by use of exit booths and/or other access control devices such as "tiger teeth", plate barrier, concrete vehicle barriers, and gate arms.

The Area 4 Concessionaires shall collectively secure the perimeter of their shared Exclusive Premises with:

- Access control devices such as "tiger teeth", plate barrier, concrete vehicle barriers, and gate arms at the common shuttler entry and exit point to the common shuttler road
- Concrete barriers along the shared perimeter with any adjacent Exclusive Premises

The Area 4 Concessionaires shall collectively physically separate the perimeter of their shared Exclusive Premises along the common circulation road, except at the shared entry and exit point, with concrete barriers.

Area 4 Concessionaires have the option to secure their individual Exclusive Premises provided all enhancements follow the building standards and structural parameters.

Barriers may only be located on structural beams and in structurally reinforced areas as indicated on [Exhibits 8, 9, 10, and 11](#) of this Handbook.

Each Concessionaire shall be responsible for the costs of labor, material and equipment required for enhancements which may include, but not be limited to, signage elements associated with preferred customer convenience (booths, signs, etc.) and other items dedicated to customer convenience and satisfaction. Structural penetrations, mountings, anchors, fastening systems, and other such items shall be coordinated with the Base Building Design Team. Other basic requirements within the Ready/Return areas of a Concessionaire's Exclusive Premises operational floor plate area covered by this category include:

- Vehicular control system, "tiger teeth" devices, plate barrier, and gate arms. Such passive and active systems shall be surface mounted.
- Concessionaire unique parking space designation signs, electrical wiring, and communication cabling for all of Concessionaire's equipment, and paint striping.
- Other miscellaneous temporary and permanent traffic circulation signage.
- Pavement markings required for circulation within Exclusive Premises.
- Customer service booths and exit booths. It is recommended that each Concessionaire seek approval from the City of Tampa on its proposed booth configuration (including booth size and physical separations) prior to the schematic design (35%) submittal to the Authority.

The location of exit booths and customer service booths on Levels 2 and 3 shall be restricted to areas of the operational floor plate that are structurally reinforced to accommodate the increased structural loads as part of the Base Building, as illustrated in [Exhibit 7](#) hereof. Zones for exit booths and customer service booths are illustrated in [Exhibit 21](#) – Level 1, and [Exhibit 22](#) - Levels 2 and 3, hereof. Exit booths and customer service booths shall not be constructed or located to obstruct customer visibility or interfere with access to, or visibility of, booths owned by another Concessionaire.

Electrical, communications, HVAC, fire suppression and other utility services to customer service booths and exit booths shall be provided by the Concessionaire.

1.5.1.1 Barriers

Concessionaire Scope

Concessionaire Scope is as defined in Exhibit I, Schedule of Concessionaire Improvements, of the Contract and as follows: Barriers defining the perimeter of and within Concessionaire's Exclusive Premises shall be provided by the Concessionaire. It is recommended that barriers be located within structurally reinforced areas or over beams as indicated on [Exhibits 8, 9, 10, and 11](#) hereof.

Barriers may be placed outside of structurally reinforced areas or away from beams, provided that the barriers are not arranged in a concentrated manner. All arrangements should seek the approval of the Base Building structural engineers.

Concrete barriers shall be constructed in accordance with details provided in Exhibit 42, hereof.

1.5.2 QTA Areas

Common-use features provided under the Base Building scope include:

1. Employee Restrooms
2. Windshield Washer Fluid system
3. Vacuum system
4. Compressed Air system
5. Fueling system
6. Traffic control signage for circulation and signage required by applicable building codes, located in the common-use areas
7. Miscellaneous pavement markings in common-use areas
8. Cat wash equipment

1.5.2.1 Administrative Support Space

Base Building Scope

The Base Building Scope is as defined in Exhibit J, Schedule of Concessionaire Improvements, of the Contract and as follows: It is anticipated that each QTA Admin Space, as defined above, will include sufficient space for each Concessionaire for its construction of office space to support service functions or to provide additional administrative functions.

Similar to an office building, Exclusive Premises of the QTA Admin Space include roughed-in basic building systems including fire protection, mechanical, electrical, and communications (for Exclusive employee break rooms) and general communications as part of the Base Building. Design standards have been established that address acceptable materials and quality to which each Concessionaire shall adhere.

The Base Building Scope will include demising wall framing (studs only) between the Area 4 Concessionaires' QTA Admin Space and the adjacent Concessionaire.

Concessionaire Scope

The Concessionaire Scope is as defined in Exhibit I, Schedule of Concessionaire Improvements, of the Contract and as follows: Each Concessionaire is responsible for the design and construction of improvements within its Exclusive Premises including, but not limited to, administration areas and employee break rooms. Exhibits 3, 4, 5, and 6 hereof illustrate Exclusive areas, common-use areas, and ConRAC Facility Manager areas.

Each Concessionaire shall be solely responsible for the costs of improvements including, but not limited to, interior wall construction, flooring, ceilings, all finishes, specialty millwork, extension of the mechanical/electrical/plumbing systems, extension and modifications to the fire detection and protection systems, data and communications wiring, lighting, signage, furniture and other Concessionaire Improvements.

1.5.2.2 Car Wash Area

Base Building Scope

The Base Building Scope is as defined in Exhibit I, Schedule of Concessionaire Improvements, of the Contract and as follows: Each wash bay will include an automated car washing system with a pre-wash and a reverse osmosis water reclamation system. The infrastructure (physical space and utility allowances) for optional pieces of equipment is provided. Exhibit 19 hereof illustrates a typical car wash bay.

Concessionaire Scope

The Concessionaire Scope is as defined in Exhibit I, Schedule of Concessionaire Improvements, of the Contract and as follows: Optional pieces of equipment (and extension of related utilities) such as air blowers, fast-acting doors, blasters, and plastic slats at car wash entry and exit openings.

1.5.2.3 Fueling Area

Base Building Scope

The Base Building Scope is as defined in Exhibit I, Schedule of Concessionaire Improvements, of the Contract and as follows: fueling equipment, which includes:

- Fuel dispensers and fuel monitoring control infrastructure
- Fuel storage tanks (below grade)
- Spill containment for the fueling area, including oil/water separators

- Lighted structure
- Hose bib at center columns
- Overhead vacuum drops
- Overhead compressed air reels
- Overhead windshield fluid dispenser reels

Each fuel dispenser (dual nozzle) will serve two cars under a lighted structure and will be installed between traffic lanes (Fuel Island). On any Fuel Island, there will be three dual dispensers. Refer to [Exhibit 20 hereof](#) which illustrates a typical Fuel Island.

Each side of a fuel dispenser will have an integral card reader to authorize fueling from the lane oriented nozzle.

Concessionaire Scope

The Concessionaire Scope is as defined in Exhibit I, Schedule of Concessionaire Improvements, of the Contract and as follows: Concessionaire may install a compatible card reader, pin pad or productivity meter for additional fuel inventory tracking compatible with the fuel monitoring control infrastructure.

1.5.3 CSB

1.5.3.1 Common Public Areas

Base Building Scope

The Base Building Scope is as defined in Exhibit I, Schedule of Concessionaire Improvements, of the Contract and as follows: The Common Public Areas, as defined in Section 1.01 of the Contract, will provide common customer services including circulation to access each Concessionaire's Exclusive Premises. The Common Public Areas includes finished floors, walls and ceilings up to the Exclusive Premises, basic building systems including fire protection, mechanical, electrical, and general communications.

Common Public Areas also include:

1. Common Public Restrooms
2. Common Employee Restrooms
3. Security equipment
4. Miscellaneous Customer Amenities
5. Vertical Circulation (elevators and escalators)
6. Area 4 Concessionaires' Common Lobby

No Concessionaire Improvements are permitted in the Common Public Areas.

1.5.3.2 Exclusive Premises Lobbies, Customer Counters, Customer queuing space and Administrative Support Space offices

Base Building Scope

The Base Building Scope is as defined in Exhibit I, Schedule of Concessionaire Improvements, of the Contract and as follows:

Exclusive Premises will include roughed-in basic building systems including fire protection, mechanical, electrical conduits, plumbing and waste (for employee break rooms) and general communications conduits. Design standards which address acceptable materials and quality to which each Concessionaire shall adhere have been established in Section 2 hereof.

Included in the Base Building Scope is a shell space common breakroom for the Area 4 Concessionaires including roughed-in basic building systems including fire protection, mechanical, electrical conduits, and plumbing and waste (for employee break rooms) along with demising wall framing (studs only) between Exclusive spaces.

Concessionaire Scope

The Concessionaire Scope is as defined in Exhibit I, Schedule of Concessionaire Improvements, of the Contract and as follows: Each Concessionaire is responsible for the design and construction of improvements within its Exclusive Premises including, but not limited to, the complete fit-out of their customer lobby, customer transaction counters, customer queuing area, support administrative functions areas, and employee break rooms. Exhibit A of the Contract illustrates the Exclusive Premises.

Customer queuing for all Concessionaires must remain within each Concessionaire's Exclusive Premises. Limits for construction of customer transition counters for the Independent Operators is restricted to 5'-0" from the Lease Line as delineated in Exhibit 41 hereof.

Each Concessionaire shall be solely responsible for the costs of improvements including, but not limited to, interior wall construction, flooring, ceilings, all finishes, specialty millwork, extension of the mechanical/electrical/plumbing systems, extension and modifications to the fire detection and protection systems, data and

communications wiring, lighting, signage, furniture and other Concessionaire Improvements.

1.5.4 Vehicle Staging and Storage Area

Base Building Scope

The Level 4 operational floor plate is provided for Exclusive Premises vehicle staging and storage areas. Each Concessionaire will occupy a portion of the vehicle staging and storage area pursuant to Exhibit A of the Contract. This area is accessible by an internal dedicated ramp system.

Concessionaire Scope

Each Concessionaire shall be responsible for the costs of labor, material and equipment required for enhancements that may include, but not be limited to, striping within its Exclusive Premises, securing its parking allocations, and control of its entry/exit by access control devices such as “tiger teeth”, plate barrier, card readers, license plate cameras, driver facial cameras, and gate arms. Exhibit A of the Contract illustrates Exclusive Premises and Common Concessionaire Areas on Level 4. Concessionaire shall provide any required separation/delineation within their individual Exclusive Premises. It is recommended that barriers be located within structurally reinforced areas or over beams as indicated on Exhibits 8, 9, 10, and 11 hereof. Barriers may be placed outside of structurally reinforced areas or away from beams, provided that the barriers are not arranged in a concentrated manner. All arrangements should seek the approval of the Base Building structural engineers.

Barriers shall be constructed in accordance with details provided in Exhibit 42 hereof.

1.5.5 Shuttler Ramps

Base Building Scope

Shuttler ramps are the internal dedicated ramp system which connects all levels of the QTA with the Level 4 operational floor plate.

Concessionaire Scope

Each Concessionaire shall be responsible for the costs of labor, material and equipment required for enhancements which may include, but not be limited to, securing its entry/exit by access control devices such as “tiger teeth”, plate barrier, card readers, license plate cameras, driver facial cameras, and gate arms. Exhibit A of the Contract illustrates Exclusive Premises and Common Concessionaire Areas on Level 4. Concessionaire shall provide any required separation/delineation within their individual Exclusive Premises. It is

recommended that barriers be located within structurally reinforced areas or over beams as indicated on Exhibits 8, 9, 10, and 11 hereof. Barriers may be placed outside of structurally reinforced areas or away from beams, provided that the barriers are not arranged in a concentrated manner. All arrangements should seek the approval of the Base Building structural engineers.

1.6 SUSTAINABILITY

As a local node in a global network, the Authority is committed to sustainability and thinking globally while acting locally. The Authority strongly encourages the integration of sustainable design strategies and operational practices in tenant designs.

1.6.1 Alignment with the TPA Sustainable Management Plan (SMP)

TPA is committed to designing, building and implementing capital improvements and programs that are economically wise and environmentally and socially responsible. Concession tenants shall become familiar with the Authority's official sustainability commitment by reviewing the SMP. The Authority has developed the following 7 sustainability priorities defined in the SMP which should be used as a guide by all tenants:

COMMUNITY

HEALTH, SAFETY & SECURITY

NATURAL SYSTEMS MANAGEMENT (AIR, WATER, BIODIVERSITY)

WASTE MANAGEMENT

BUILD AND BUY GREEN

ENERGY MANAGEMENT

REGIONAL ECONOMIC IMPACT

1.6.2 Alignment with the TPA Sustainable Design Criteria Manual (SDCM)

The SDCM is an integral part of the SMP, and Concessionaires should refer to it for specific guidance on the Authority's SMP goals, strategies, methods, tracking, and requirements related to facility design and construction. The SDCM is intended to communicate the Authority's expectations and encourage and document green building measures incorporated into project advance planning, design, and construction.

The Concessionaire is encouraged to design and construct its facilities following the recommendations and standards of the SDCM, September 2014 edition. Sustainable design strategies in the SDCM include but are not limited to:

- Energy efficient equipment, appliances, lighting, and HVAC systems as qualified by the EPA's ENERGY STAR program where applicable.
- Lighting systems to be energy efficient with lighting controls and task lighting to manage energy use and make use of day-lighting opportunities where they exist.
- Motion sensor lighting controls in storage, office and other support spaces.
- Occupancy sensors in low traffic areas.
- Maintain a comfortable thermal environment for employees and customers, with energy efficient systems properly installed, calibrated and commissioned.
- Water conservation by installing low-flow optimized appliances, fixtures, and fittings.
- Diversion of non-hazardous construction waste from the landfill through recycling and salvage practices.
- Specifying materials containing no urea formaldehyde and incorporate recycled content materials and building materials that are extracted and manufactured within the region.
- Ensuring recycling bins are available for tenant employees and customers.
- Specify low volatile organic compounds (VOC) emitting materials in furniture, adhesives and sealants, paints and coatings, composite wood and agricultural fiber products. Furniture is defined as any retail display fixture, casework, and built-in millwork such as wall shelving display units, display tables and fixtures, service counters, storage units and cabinets.
- Wood products are to be wood certified in accordance with the Forest Stewardship Council's principles and criteria.

1.6.3 Design for Waste Diversion

Diverting waste from landfills reduces waste removal costs. Concessionaires should design/allocate dedicated areas accessible to waste haulers and building occupants for the collection and storage of recyclable and compostable materials. Recyclable materials should be aligned with SMP protocol and TPA recycling practices.

End of Section 1

2.0 DESIGN STANDARDS

2.1 GENERAL REQUIREMENTS

2.1.1 Procurement of Design Consultant(s)

Concessionaire may contract with any designer including any member of the Base Building Design Team individually or collectively for the design of their individual Concessionaire Improvements. See Section 2.1.5, Professional Licensing, for designer requirements.

2.1.2 Design Contract

Each Concessionaire shall include the following language in the contract with its selected design team:

Construction Documents – All construction documents must comply with Federal, state and local regulations and Authority Approved ConRAC project-specific BIM/CAD Standards.

Record Documents - As-Built Drawings (Record Documents) shall comply with Authority Approved ConRAC project-specific BIM/CAD Standards. Record Drawings are drawings maintained by the Concessionaire’s contractor onsite during construction and continuously updated to reflect the “As-Built” condition of the Exclusive Premises, including all addenda and change orders for the project. At the completion of the work, the Concessionaire shall furnish the Authority Construction Project Manager with Record Documents, as well as all other items identified in the Authority’s Tenant Work Permit Handbook and pursuant to Section 9.02 of the Contract.

2.1.3 Insurance

Concessionaire and Concessionaire’s contractors shall provide insurance pursuant to Article 14 of the Contract and Authority’s Tenant Improvement Handbook.

2.1.4 Standards and Criteria for the Concessionaire’s Exclusive Premises Improvements

The design and construction of the Concessionaire’s Improvements shall be completed in accordance with the following standards or latest editions thereof. These standards shall be followed unless specific deviations have been requested in writing by the Concessionaire and approved in writing by the Authority. Concessionaires will submit deviations through the normal process for drawing submittals as soon as Concessionaire is aware of the deviation. As time is of the essence, the Authority and Concessionaires will respond in writing within an appropriate time frame. No formal process or forms are required.

2.1.4.1 Civil

2.1.4.1.1 Standard Specifications and Codes

- Standard Specifications for Public Works Construction (Greenbook), 2012 Edition
- City of Tampa Standard Specifications for Public Works Construction (Whitebook), 2012 Edition
- Florida Highway Administration has adopted the Federal Highway Administration Manual on Uniform Traffic Control Devices, 2009 Edition
- Florida Department of Transportation Design Standards, effective January 1, 2015, revised and published annually
- Requirements for Architects and Engineers Performing Services for the Tampa International Airport, April 2010 Edition

2.1.4.1.2 Standard Drawings:

- City of Tampa Standard Drawings for Public Works Construction, 2012 Edition
- 2012 Tampa Regional Standard Drawings
- Florida Department of Transportation U.S. Customary Standard Plans, 2010 Edition

2.1.4.2 Architectural

2.1.4.2.1 Standard Specifications and Codes

- Florida Building Code (FBC), latest edition
- City of Tampa Amendments to the FBC
- 2011 Florida Disabled Accessibility Guidelines
- 2010 ADA Standards for Accessible Design
- Master Format Division Numbers and Titles (Using 49 Section Format)

2.1.4.2.2 Standard Drawings:

- Tampa International Airport Facilities Criteria Document, March 2012 Edition
- Requirements for Architects & Engineers Performing Services for the Tampa International Airport, April 2010 Revision
- 2010 ADA Standards for Accessible Design

- BIM Requirements for Architects, Engineers, and Contractors Performing Services for the Tampa International Airport, August 2012 Revision

2.1.4.3 Structure

2.1.4.3.1 Standard Specifications and Codes

- FBC, latest edition
- ASCE 7-10 Minimum Design Loads for Buildings and Other Structures
- ACI 318-08 Building Code Requirements for Structural Concrete
- AISC Specification for the Design, Fabrication, and Erection of Structural Steel Buildings, Ninth Edition
- ACI 530-08 Building Code Requirements and Specification for Masonry Structures

2.1.4.4 Fire Protection

- NFPA 72, National Fire Alarm and Signaling Code, 2010 Edition
- NFPA 13, Standard for the Installation of Sprinkler Systems, 2010 Edition
- 2010 Edition of the Florida Fire Code

2.1.4.5 Mechanical/HVAC/Plumbing

2.1.4.5.1 Standard Specifications and Codes

- Current Title 24, Part 4 Florida Mechanical Code
- Current Title 24, Part 6 Florida's energy efficiency standards for residential and non-residential buildings
- Current Title 24, Part 11 Florida Green Building Standards Code
- City of Tampa Technical Policy 4-1, Minimum Plumbing Facilities, Issued May 2012
- 2010 Edition of the Florida Plumbing Code (CPC)

2.1.4.5.2 Standard Drawings:

- ASHRAE 52.2-1999, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size
- ASHRAE 55 - 2004, Thermal Environmental Conditions for Human Occupancy
- ASHRAE 62.1- 2007, Ventilation for Acceptable Indoor Air Quality
- NFPA 54, National Fuel Gas Code
- NFPA 90A: Standard for the Installation of Air-Conditioning and Ventilating Systems

- ASHRAE 90.1 – 2007, Energy Standard for Buildings Except Low Rise Residential Buildings

2.1.4.6 Electrical

- FBC, latest edition
- Tampa International Airport Facilities Criteria Document, March 2012 Edition
- National Electrical Code, 2008 Edition

2.1.4.7 Information technology/security/Fire alarm

- FBC, latest edition
- Telecommunication Industry Association and Electronic Industry Alliance (TIA/EIA)
- Building Industry Consulting Services International (BICSI)
- 2010 ADA Standards for Accessible Design
- NFPA 72, National Fire Alarm and Signaling Code, 2010 Edition
- HCAA Telecommunications Infrastructure Standards (September 14, 2015)
- National Electrical Code, 2008 Edition

2.1.4.8 Fueling

- NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages, 2003 Edition (Ref. from NFPA 30)
- NFPA 30, Flammable and Combustible Liquids Code, 2003 Edition
- Florida Administrative Code Chapters 62-761 and 62-762

2.1.4.9 Sustainability

- TPA Sustainable Management Plan, September 2014 Edition
- TPA Sustainable Design Criteria Manual, September 2014 Edition

2.1.5 Professional Licensing

All work and designs shall bear the seal of an architect and/or engineer licensed, insured and qualified to perform such work. All Architects and Engineers “sealing” the drawings and specifications shall be registered in the State of Florida. Out of state firms are allowed to team with architects and/or engineers licensed in the State of Florida to the extent allowed by the State of Florida.

Modifications to the fire sprinkler system shall be designed by a State of Florida Licensed Fire Protection Engineer under the employ of the fire protection subcontractor. Modifications to the fire alarm/detection system shall be designed by a State of Florida

Licensed Fire Alarm/Detection Engineer under the employ of the fire alarm/detection subcontractor.

2.1.6 Affirmative Action

Concessionaire and Concessionaire's contractors shall comply with Article 7 of the Contract, Non-Discrimination/Affirmative Action.

2.1.7 Interpretation/Clarifications

The ConRAC Concessionaire Improvements Handbook and the following sections from Authority's Design Criteria Manual must be read and applied in their entirety: Section 2 – Architecture-Building Engineering and Section 3 – Building Sections and Components. This Handbook complements other legal agreements between each Concessionaire and the Authority. Should there be any inconsistencies or ambiguities in this Handbook, the Authority shall be the sole interpreter. Should there be any ambiguities between this Handbook and the Contract, the Contract shall govern.

2.1.8 Variance Requests

Concessionaire may request a variance from any Authority standard. All such requests must provide justification of the variance request and shall be made in writing to the Authority's Construction Project Manager who shall coordinate the approval or disapproval of the request within thirty (30) calendar days of receipt. If approved, a variance shall be issued in writing. If disapproved, the Authority's Construction Project Manager shall provide a written statement setting out the reasons for disapproval. It is recommended all variance requests are submitted with the submittal of Schematic Design (35%), or earlier.

If conditions in the field preclude construction as designed, the Authority will consider variance requests on a case-by-case basis.

2.2 DESIGN REVIEW AND APPROVAL PROCESS

2.2.1 Required Coordination Prior to Beginning Design

The size of individual customer service booths and the aggregate square footage of all customer service booths will be restricted, and fire protection may be required as determined by the City of Tampa. Concessionaire is required to review customer service booth plans with Authority Planning and Development Department to determine maximum square footage and dimensions and the requirement for fire protection and coverage. Customer service booth plans are required to be presented at the Pre-Design Kick-Off Meeting. For further information, refer to Section 2.4.5.1 below.

2.2.2 Pre-Design Kick-Off Meeting

Before the commencement of Concessionaire Improvements design work, a mandatory Pre-Design Kick-Off meeting shall occur. Attendees shall include, at a minimum, the Concessionaire representative, Concessionaire design team representative, and the Authority's Construction Project Manager. The agenda shall include, but not be limited to: introduction of participants, review of this Handbook, communication plan, sustainability, required submittals and schedule. Each Concessionaire shall submit to the Authority a complete Gantt project schedule in Microsoft Project or Primavera reflecting all design project activities noted as bar tasks, milestones or critical path tasks. Each task shall show its respective commencement and completion dates. This schedule shall be reviewed in the Kick-Off meeting by the Authority Construction Project Manager, and must be accepted before any Concessionaire Improvements design work is commenced.

2.2.3 Base Building Issued-For-Construction Drawings

The Authority will provide the Concessionaire information on available Base Building documentation. The Concessionaire is responsible to determine the information it needs and make their request to the Authority's Construction Project Manager in writing. The Authority will make every effort to provide the Concessionaire the requested documents within five (5) to seven (7) business days.

The Concessionaire must recognize that not all documentation may be available or permissible for release. The Authority does not warrant the accuracy or completeness of same. The Concessionaire is solely responsible to verify the accuracy of the information provided as well as conduct site specific surveys and inspections as required.

After initial construction of the ConRAC, and for all subsequent Concessionaire Improvements, Base Building record drawings may be accessed through the Authority. The Authority's Project identification number is 1105-14. The project name is "Tampa Consolidated Rental Car Facility".

2.2.4 Design Review Requirements

The Authority will review the design submittals for adherence to these design standards, building utility allowances and compliance with the Contract, and will provide comments back to the Concessionaire in writing. Authority reviews require three (3) weeks for the first review and four (4) weeks for subsequent reviews, approval or re-submittal. All Concessionaires shall coordinate with the Authority's Construction Project Manager for coordination of submittals to the Authority.

The drawings and specifications for the proposed Concessionaire Improvements shall be submitted to the Authority at schematic design (35%) design development (60%), draft

Contract Documents (95%), and final Contract Documents (100%) completion phases. (NOTE: The Customer Service Building areas will be the only locations on the project that will have schematic design phase. Ready/Return and QTA will not require a schematic review.) Plans and specifications shall include a date reference on every page. One (1) full-sized set and seven (7) sets of half-size drawings on bond are required for each submittal and the complete package in pdf format should be burned to a CD/DVD.

SCHEMATIC DESIGN REVIEW – 35%

After the initial Pre-Design Kick-Off meeting, the Concessionaire will analyze the project based upon the requirements of this Handbook and any project specific issues or requirements identified by the Authority. From these parameters, the Concessionaire will prepare a schematic design consisting of drawings (plans, sections, elevations), renderings (color renderings of the customer service and Ready/Return Areas including signage concept; images must be a minimum of 300 DPI and 15 inches on the shorter dimension), finish material boards (no more than two (2) samples per each 11 x 17 board – minimum sample size 4" x 4"), signage and graphics plans and elevations with material samples, outline specifications and other documentation as required to accurately illustrate the scale and relationships of project components, furnishings, space planning, lighting, fixtures, displays, equipment and systems, and the SDCM Project Record Worksheet. A preliminary project cost estimate and updated project schedule shall be submitted along with schematic design documentation.

At the completion of schematic design review, the Authority's Construction Project Manager will schedule a meeting with the Authority Planning and Development Department. The Concessionaire is required to provide an overview of the schematic design submittal including all materials and finishes proposed for the project. The Architectural Review Team will review the schematic design for compliance with the Authority's design standards as outlined within this Handbook. After review and acceptance by the Authority of the schematic design documents, preliminary cost estimate, and updated project schedule submitted by the Concessionaire, the schematic design phase is complete.

DESIGN DEVELOPMENT REVIEW – 60%

The Design Development Review includes the preparation of more detailed design drawings and other product and systems data relating to the premises appearance, millwork, storefronts, furnishings, mechanical system extensions, electrical systems, plumbing fixtures and distribution, telecommunications systems, intercom systems, fire alarm system extensions, fire protection system extensions, construction materials and finishes, SDCM Project Record Worksheet, and other essential project components. The Concessionaire shall update the project cost estimate and the project milestone schedule and further refine the project delivery planning by considering accommodation for long-lead procurement and

fabrication items. Additionally, the Concessionaire shall submit an updated finish material board and renderings if changed from schematic design review. The design development review process is mandatory for complex Concessionaire Improvements; however, it may be waived for less complex Concessionaire Improvements at the sole discretion of the Authority's Construction Project Manager.

DRAFT CONTRACT DOCUMENT REVIEW – 95%

This submittal must fully address all issues identified in the Authority's Design Development Review from previous submittals.

The Draft Contract Document Review includes the preparation of contract construction documents and technical specifications, all describing in technical detail the construction contract scope of work to be performed. These contract construction documents shall include all Authority design, safety, security and construction requirements. The Concessionaire shall coordinate these requirements with the Authority's Construction Project Manager prior to the submission of the contract construction documents for Authority review. The Concessionaire shall also submit an updated construction schedule, as well as a site logistics and project coordination plan.

The minimum requirements for Draft Contract Documents (95%) documents are as follows:

- Site and Civil plans and specifications, where applicable, including a site drainage plan.
- Demolition plans showing specific walls, equipment and systems or portions thereof to be removed.
- Architectural plans and specifications showing completely the extent of new construction, including elevations of all permanent millwork, and types of new and modified partitions and finishes.
- Reflected ceiling plans showing types/elevation of all ceiling finishes, coordinated as required with HVAC and lighting components.
- Structural plans showing any new work or modifications to existing systems.
- Mechanical and HVAC plans and specifications showing complete diagrams of the new equipment, and ductwork and connections to duct work, including all register locations, all return air locations, thermostat locations, and fire and smoke detector locations.
- Plumbing plans and specifications showing all plumbing fixtures, water heaters and concept of piping runs.

- Electrical plans and specifications, showing power wiring to all switches and receptacles, communications and data cables and outlets, emergency lighting/exit signage systems, and fire alarm systems.
- An outline statement of the mechanical and electrical design criteria for the project, including an electrical load analysis and proposed connections to the Authority's utilities infrastructure.
- Key plan(s) indicating the location of the improvements (usually on the cover sheet of the construction documents).
- Sample board(s), covering finishes, materials and colors, if there have been any changes or additions from the 35% set.
- Any industry, Federal, state, or local standard or other standards or specifications cited in the Concessionaire Improvement Handbook.
- Fire Protection (Sprinkler) Plans and Specifications.
- Final project specifications subject to the requirements outlined in the Hillsborough County Aviation Authority Design Criteria Manual.
- Final Signage and graphic plans (with material samples, if there have been any changes from the 35% set).
- Final Sustainable Design Criteria Manual (SDCM) Project Record Worksheet. Highlighted supporting documentation demonstrating compliance should be included as applicable. Examples include, but are not limited to, project drawings, specifications, material safety data sheets (MSDS), and manufacturer literature.

The Contract Documents including, but not limited to, construction drawings, reports, calculations, and specifications required for the proposed construction, must strictly adhere to requirements as outlined within this Handbook and all previous design review comments from the Authority. When the Concessionaire has received approval from the Authority and all other applicable City of Tampa (City) and Hillsborough County (County) agency approvals, this phase of the project is complete.

FINAL CONTRACT DOCUMENT REVIEW – 100%

The Concessionaire will address all Authority comments and resubmit the drawings for Authority approval prior to City permit submittal with the Final Contract Document Review (100%). The requirements for the 100% set are the same as the 95% Draft Contract Document Review.

With the 100% Contract Document Review, the Concessionaire is to submit plans that are 100% complete. Any submittal that is determined not to be 100% complete will be returned without review to the Concessionaire with a list of missing or incomplete items. Contract Documents must be stamped “Approved” or “Approved as Noted” prior to submitting for City building permits, bidding or letting of a direct construction or procurement contract.

Authority approval does not mean approval of the work by City of Tampa or other Federal, state or local agencies.

2.2.5 Permit Procedures

The Concessionaire Improvements design team shall be responsible for applying for all required permits. The Authority reviews and approves all public and private construction projects at TPA and the City issues building permits. The City reviews only the 100% submittals; reviews may take twelve (12) to sixteen (16) weeks. Permitting fees shall be at the expense of the Concessionaire.

In addition to the building permit, other permits may be required. Each Concessionaire Improvements design team shall determine the applicability and requirements of the local governing agencies including, but not limited to:

- Airport Tenant Work Permit
- Southwest Florida Water Management District (SWFMD)

Concessionaires shall keep the Authority’s Construction Project Manager formally advised of their respective permitting position. Copies of all permits obtained shall be provided to the Authority prior to initiating construction.

2.2.6 Concessionaire Construction Coordination Services

See Section 3.0, Construction Standards, below for requirements prior to start of construction.

2.3 FACILITY STANDARDS

2.3.1 Concessionaire Equipment/Accessories

Concessionaire equipment such as but not limited to roof racks, baby seats, and wheel chairs, shall be stored out of public view at all times. Concessionaire design shall reflect adequately sized storage space for such items.

2.3.2 Signage

2.3.2.1 General Rules

The Base Building will provide and install all necessary identification, wayfinding, and code required signage within the Common Public and Common Concessionaire Areas, as both are defined at Section 1.01 of the Contract. Concessionaires are required to provide current corporate identity graphics along with any pertinent usage specifications to the Authority for their use in providing these signs. The Authority will apply Concessionaire identification as required and appropriate for ConRAC wayfinding.

The Authority standard fonts are Frutiger 55 Roman (Informational) and Frutiger 65 Bold (Wayfinding) Medium. All Authority-provided signage will use these standards. Concessionaires may use alternate fonts within their Exclusive Premises. All signage is to be submitted to the Authority for approval.

Sign message content is limited to primary building Concessionaire name and/or logo only. No cartoons or supplementary graphics are permitted.

All Concessionaire (including sub-tenant) signs must be of an informative nature. "For Sale," "For Lease," or "For Rent" signs are not permitted.

Signs are not permitted on exterior walls or rooftops.

All signs shall be surface-mounted or recessed to a flush condition. Any/all damage incurred on the existing facilities caused by the signage installation will be corrected by the Concessionaire. Signs painted on any surface of the ConRAC are not permitted.

All exterior metal sign materials, fasteners and clips of all types shall be hot dipped galvanized iron or stainless steel.

Concessionaire signs are not permitted in Common Public Areas, and are restricted to Concessionaire's Exclusive Premises.

An illuminated Concessionaire identification sign is permitted on the overhead bulkhead separating Concessionaire's Exclusive Premises from the CSB Lobby. These identification signs shall be 5'-0" in height and 30' in length; weight may not exceed 750 pounds; shall be centered in the bay; and the bottom of the sign may be no lower than 14'-6" above the finished floor. Mounting supports will be provided for Concessionaire's attachment of their signs at the proper viewing angle. An electrical j-box will be provided at the approximate center of the mounting supports. See Exhibits 39 and 40 hereof.

The Area 4 sign shall be individual 2'-6" tall x 10' wide panels grouped lengthwise on a 5' tall x 30' wide box. See [Exhibit 39](#) hereof.

Flashing or blinking signs are not permitted; however, Concessionaires shall not be restricted from using variable message signs, moving images, or moving lights within their Exclusive Premises.

Signs on doors and windows are not permitted except as permitted by this Handbook.

Exposed mounting devices, crossovers, conduit or raceways are not permitted.

All signs must meet safety standards. All illuminated signs must bear the Underwriters Laboratories, Inc. (UL) label, and meet all local code requirements. The Concessionaire is responsible for obtaining any permits required by local, state or Federal agencies.

Handwritten signs are prohibited.

Signs not covered by this Handbook are not permitted.

2.3.3 Structural

All elements of the Concessionaire's proposed improvements that are suspended from the structure above the Concessionaire's Exclusive Premises or from a shell building wall, floor, or roof shall be detailed (including methods of attachment and load calculations) in the Concessionaire's Improvements construction documents submitted to the Authority for review. Signage and wind load calculations shall be prepared and signed by a structural engineer licensed in the State of Florida as a part of the Concessionaire's submittal for approval.

The floor structure utilizes a post-tensioned system. Drilling and/or cutting into the floor could affect the structural integrity of the ConRAC. Concrete imaging shall be done prior to installation of any anchors or drilling into any slabs, beams, or columns. Floor penetrations shall be kept to a minimum. Floor penetrations shall be located by the Concessionaire to eliminate the possibility of compromising the structural integrity of the floor. Plans and test results shall be submitted to the Authority and engineer of record for written approval prior to drilling holes. Concessionaire is responsible to repair any Base Building systems or Concessionaire systems damaged by penetrations or attachment to the ConRAC. Holes shall be sealed appropriately.

The Concessionaire shall coordinate mechanical, electrical, plumbing and fire sprinkler work with existing structural members. All floor/roof or wall openings/penetrations shall be properly fire-safed.

2.3.3.1 Design Loading Criteria

Refer to the structural drawings for detailed design loading criteria. Concessionaire design teams will be responsible for requesting specific specification sections for review from the Authority. The Authority will provide upon written request.

Any floor area live load within the QTA Admin Space that exceeds 80 PSF will require the strengthening of the floor slabs.

2.3.3.2 Floor/Roof/Wall Penetrations

See appropriate Specification Section in Division 07 of the Base Building construction documents– Thermal and Moisture Protection. Floor, wall and roof assemblies are required to provide and maintain specific fire resistant construction and specific thermal performance. Concessionaire design teams will be responsible for requesting specific specification sections for review from the Authority. The Authority will provide upon written request.

2.3.4 Communication Systems

Base Building Scope

All communication systems shall be in compliance with Hillsborough County Aviation Authority IT Infrastructure Standards Construction Manual (Sept 14, 2015) unless otherwise directed by the Authority.

2.3.4.1 Cabling Requirements

Backbone Cabling: OS1 Single mode fiber optic cable.

Backbone Terminations: SC connector for OS1 single mode fiber.

Horizontal Cabling: Category 6, 4-pair 24 AWG unshielded twisted pair, single mode fiber optic, multimode fiber optic and coaxial for cable TV and distributed antenna system.

Horizontal Terminations: SC connector for OS1 single and multimode fiber.

8-position, Category 6, IDC terminal, T568B wiring scheme for Category 6 cable, F81 connectors for cable TV coaxial cable and other connectors as required for the distributed antenna system.

Color Coding: Category 6 cabling shall not be red.

2.3.4.2 Telecommunication/MPOE Room and Equipment

Telecom Room: Temperature and humidity controlled, access control entry door, CCTV camera viewing outside of entry door, interior walls covered with plywood backboard, four (4) equipment racks, dedicated electrical panel board fed from an Uninterrupted Power Supply (UPS), cable runway above the cabinets and around the Room.

MPOE Room: Temperature controlled, interior walls covered with plywood backboard, wire mesh partitions used to provide twelve (12) separate Concessionaire “cages”, five (5) standalone equipment cabinets will be mounted within the common area of the Room, one (1) equipment rack per Concessionaire cage, two (2) adjacent rooms for Local Exchange Carriers service demarcation equipment, cable runway above all the cabinets and around the MPOE and LEC rooms. See Exhibit 26 hereof for MPOE Room configuration.

Equipment Racks: Freestanding equipment cabinets with four corner posts, secured to the floor and capable of supporting 3000 lbs. of equipment. Cabinet shall be 79.3” by 23.6” by 39.4” with keyed lock.

Concessionaire Scope

Concessionaire IDF Rooms: Interior walls covered with plywood backboard, wire mesh partitions used to provide two (2) separate Concessionaire communication/data areas and, if necessary, a common hallway area, wall mounted equipment rack in some rooms for Authority system equipment, one (1) equipment rack per Concessionaire communication/data area, one (1) dedicated panel board per Concessionaire communications/data area. See Exhibits 23 through 25 hereof for IDF Room configurations.

Refer to Sections 2.4, 2.5 and 2.6 below for specific description of Concessionaire telecommunications scope at the Ready/Return, QTA and CSB, respectively.

2.3.5 Fire Detection and Alarm System

The facility will be equipped with a Fire Detection and Alarm System.

The system is set up with three separate zones, QTA, Ready/Return and CSB, and will include three fire alarm panels. These panels will be networked together and will report back to the central command via a fiber connection.

The three panels will be located in the Central Energy Plant (CEP), QTA and Ready/Return (serving both the CSB & Ready/Return). Concessionaires will need to provide additional notification appliance circuit (NAC) panels if spare capacity is exceeded as required to accommodate their needs for audible and visual coverage.

Concessionaires will not be installing standalone fire alarm systems within their Exclusive Premises, but shall be required to tie into the Base Building systems in accordance with local code requirements.

2.3.6 Fire Sprinkler System

The Base Building Fire sprinkler system is provided at the CSB and QTA. Wet standpipe systems will be provided for the emergency egress stairs and as required for area coverage. The sprinkler and standpipe systems will be designed per NFPA and local code requirements. Heads are turned up within Concessionaire Exclusive Premises.

Each Concessionaire will be responsible for modifications to the sprinkler system design and installation in accordance with local code requirements relative to their respective Exclusive Premises Concessionaire Improvements.

Sprinklers shall be installed per the tenant's occupancy type and be no more than 0.15 gpm/sf over a 1,500 sf area and spacing at no more than one sprinkler head per 130 sf. Sprinklers shall be concealed type sprinkler heads for ceiling applications and upright heads where exposed.

2.3.7 HVAC – Design Criteria for each space

1. Cooling design temperature: 75°F, 50% RH
2. Heating design temperature: 72°F
3. Outside design temperatures: 91°F DB/ 80°F WB Summer, 40°F Winter
4. Supplemental chilled water: 44°F entering/ 56°F leaving
5. Occupancies greater than 40 people/1000 sq. ft. shall be provided with demand control ventilation
6. Refer to each section for allocated airflow from building HVAC

2.3.8 Building Automation System – HVAC Controls

The Building Automation System (BAS) will extend to each mechanical room and operate all devices within the Base Building scope. The Concessionaire shall extend thermostats from the terminal boxes provided to their space. In a case where additional terminals are required, the Concessionaire shall match the Base Building system and utilize Johnson Controls Inc. (JCI) for equipment and programming of new devices.

The minimum controls needed to interface with the Main Terminal are as follows:

1. Variable air volume boxes:
 - a. Space temperature
 - b. Set point temperature
 - c. Supply air flow in cubic feet per minutes (cfm)
 - d. Supply air temperature
 - e. Heating element running status and stages
 - f. Damper position

2. Supplemental HVAC:
 - a. Space temperature
 - b. Set point temperature
 - c. Supply air flow in cfm (if variable)
 - d. Supply air temperature
 - e. Chilled water entering/leaving temperature
 - f. Chilled water valve position
 - g. Heating element running status and stages
 - h. Running status
 - i. Fire alarm interlock (if required)
 - j. Chilled water BTU meter
3. Exhaust/intake fans:
 - a. Running status

2.3.9 Acoustics

Concessionaires are required to minimize the transmission of sound from their Exclusive Premises to the Common Public Areas and adjacent Concessionaires. The Concessionaire must provide the following as a minimum:

1. Noise criteria (NC) values from the HVAC systems as generally accepted practice by the American Society of the Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), Sound and Vibration Chapter 46, Table 34, Design Guidelines for HVAC-Related Background Sound in Rooms, Latest Edition. NC Level outside a Concessionaire space as a result of the HVAC system should be limited to NC 40 in any adjacent occupied space.
2. All equipment including, but not limited to, HVAC systems and equipment, will be installed with vibration isolators as accepted practice by ASHRAE, Sound and Vibration Chapter 46, Table 45, Selection Guide for Vibration Isolators, Latest Edition.
3. Minimum partition sound transmission class (STC) for critical noise adjacencies such as beverage concessionaires, food preparation, cleaning areas, and dish washing adjacent to sensitive Concessionaire shall be STC 55 with consideration for plumbing noise vibration isolation. Higher STC values may be required based on space planning.

Music and background paging systems are permitted with the Authority's approval. The volume of sound must be controlled to limit the levels to the Exclusive Premises boundaries and not intrude into adjacent Concessionaire areas or Common Public Areas. The Background Paging System and Emergency Messaging System must be clearly heard without interference from Exclusive Premises sound systems. Music in Concessionaire Exclusive Premises must be "cut-off" during life safety announcements.

2.3.10 Video Surveillance and Access Control Systems

The Base Building Video Surveillance System has been designed to provide Operational and Security viewing requirements for the ConRAC. Viewed areas include customer lobbies, vertical transportation banks and walkway systems including elevators and escalators, exits, areas of rescue assistance, and general overviews of Common Public Areas and perimeter views of the property.

The video surveillance design does not extend into Exclusive Premises.

The Base Access Control System has been designed to provide secure access to Authority MDF and IDF communications rooms. Card Readers are installed on all Authority MDF and IDF doors. The Access Control System has not been extended to Concessionaire designated IDF rooms. Should secure access on Concessionaire's IDF's be desired, the design and overall approach for Access Control in Concessionaire IDF's will be the responsibility of the ConRAC Facility Manager.

2.4 READY/RETURN AREAS (OPERATIONAL FLOOR PLATES)

2.4.1 Introduction/Base Facility

The operational floor plates are levels 1 through 3 of the ConRAC.

Customers will pick-up and return cars in these areas. Expected Concessionaire Improvements in this area include customer service booths, exit booths, Concessionaire signage, and support systems.

2.4.2 Separation of Common Public Areas/Exclusive Premises

Both building circulation cores shall be designated as Common Public Areas. See [Exhibits 3, 4, 5, and 6](#) hereof for extent of Common Public Areas and Exclusive Premises.

2.4.3 Concessionaire Improvements

Any conduit installed by the Concessionaire shall be concealed from public view or painted to match the adjacent surfaces to which they are attached. All conduit runs shall be attached to existing horizontal or vertical surfaces and shall be a minimum of 1 inch from any joint line. Concessionaires are encouraged to locate utilities and conduit parallel to grid lines. Minimize visual and structural impact while maintaining NEC clearance requirements. Concessionaire shall not install any utilities below 10'-0" above the finish floor.

2.4.4 Operational Elements

[Exhibits 7, 8, 9, 10, 11, and 12](#) hereof depict the barrier locations and enhanced structural elements on a typical floor.

2.4.4.1 Pavement Markings

All pavement markings required by local codes in the Common Concessionaire Areas will be installed by the Base Building. Concessionaires are responsible for furnishing and installing all pavement markings within their Exclusive Premises. At a minimum, pavement markings shall be provided to delineate parking spaces, space identifiers, pedestrian walkways, exit directions, and vehicle circulation flow. Pavement marking paint within the Ready/Return Areas shall be a non-reflective latex waterborne emulsion. "No Parking" zones shall be painted by the Base Building in Common Concession Areas and where required by applicable codes.

2.4.4.2 Primary Perimeter Barriers

Each Concessionaire's Ready/Return Area and the perimeter boundary of the parking areas between a Ready/Return Area and the Common Concessionaire Area roadway shall be delineated and secured by use of re-locatable barrier system provided and installed by the Concessionaire. Primary perimeter boundaries shall be provided with openings for entrances and exits with locations provided by the Concessionaire and approved by the Authority.

See Section 2.4.7, Structural, below for barrier placement limitations.

Concrete barriers shall be constructed in accordance with details provided in Exhibit 42 hereof.

2.4.4.3 Lease Delineation Barriers

The Concessionaires will provide a re-locatable barrier system between each Concessionaire's Exclusive Premises. See Section 2.4.7, Structural, below for floor loading limitations.

Concrete barriers shall be constructed in accordance with details provided in Exhibit 42 hereof.

2.4.4.4 Internal Barriers

Barriers within Concessionaire Exclusive Premises shall be provided by the Concessionaire and approved by the Authority. See Section 2.4.7, Structural, below and Exhibits 8, 9, 10, 11, and 12 hereof for barrier placement limitations.

Concrete barriers shall be constructed in accordance with details provided in Exhibit 42 hereof.

2.4.4.5 Exterior Trash Receptacles

Each Concessionaire shall provide adequate trash and recycling receptacles within the Ready/Return Areas of the ConRAC. The Concessionaires do not necessarily need to match the Base Building receptacles as selected by the Authority, but any receptacles within public view must be approved by the Authority.

2.4.5 Architectural

2.4.5.1 Booths (Customer Service, Exit, Other) – General

Pre-fabricated booths, foundations (in this case the ConRAC operational floor deck or slab), and the connections thereto must be designed to meet the FBC and City of Tampa requirements for the wind loads imposed. This will be evaluated and permitted by City of Tampa, which will also check access to these structures for code compliance.

The Concessionaire shall provide the Authority with written certification that the booths meet Florida State regulations before the booths are delivered to the ConRAC site.

Allowable booths that are component structures must comply with the Authority's approval process and must meet the assembly Quality Assurance (QA) standards of the International Building Code (IBC). A component structure is defined as a structure that is built in sections or panels and is assembled on site. The manufacturers or plants where these components are built must have the IBC QA procedures in place and must provide the Authority with written certification to verify compliance with these procedures. The component connections to each other and to the structure below must be designed by a licensed design professional to meet all loads imposed in accordance with the IBC. All other applicable codes must be met including, but not limited to, electrical, ventilation, energy code, access to structure.

Concessionaire is responsible for providing any fire protection required by the City of Tampa.

- Booth construction must be Type II-B, non-combustible, materials Class A fire spread.
- Customer service booths that meet all of the criteria outlined below pose no greater fire hazard than a fire involving multiple vehicles and are not required to have any additional protection features:
 - The customer service booths do not have storage spaces.
 - The customer service booths do not exceed 500 sq. ft. in area.

- An enclosed office within the unsprinklered customer service booths shall not exceed 150 sq. ft. in area.
- The customer service booths will be protected with automatic sprinkler system(s) where any of the following occurs:
 - Storage areas are provided within the customer service booths.
 - The customer service booths exceed 500 sq. ft. in area.
 - An individual enclosed office or the aggregate area of enclosed offices within the customer service booths exceed 150 sq. ft.
- The customer service booths shall not exceed 1,000 sq. ft., and the aggregate area of the enclosed offices in each booth shall not exceed 300 sq. ft., regardless of their fire protection features.
- In addition to the maximum individual booth size, the maximum aggregate area for all booths located on a single floor shall not exceed 2,500 sq. ft. (i.e., less than 1% of the total area per floor based on a 900 ft. x 450 ft. floor plate).
- Adjacent booths should be separated by a minimum distance of 30 ft. When this separation distance cannot be provided, sprinkler protection will be required in each individual booths if the aggregate areas of the customer service booths within 30 ft. of one another exceed 500 sq. ft.

2.4.5.2 Exit Booths and Access Control Devices

Exit booths and access control devices, including associated booths software and wiring, shall be provided and installed by the Concessionaire within the Concessionaire's Ready/Return Area. These devices and/or booths shall be installed behind the perimeter barrier and with a setback from the perimeter roadway to permit at least one car length clear of the adjacent traffic lane. Access control devices such as gate arms, plate barrier, tiger teeth shall be located within the Concessionaire's Exclusive Premises.

Exit booths shall be pre-fabricated booths with tubular steel welded frame and metal or glass panel inserts. Exit booths shall be shop painted a custom color selected by the Concessionaire (as approved by The Authority), sealed for weather protection, and protected from cars with bollards. Bollard type and position are to be approved by the Authority.

Access control devices at exits shall be manually controlled or controlled by key pad, card swipe, bar code scanner or other secure technology from an adjacent booth. Only entrances shall have automatic access control devices.

- Booth size must be approved by the City of Tampa prior to schematic design submittal.

- Booths must meet pedestrian travel distances to exits (based on business occupancy).
- Booths must provide emergency lights within the booths.

Exit booths shall be delivered to the ConRAC fully wired per UL requirements with an electrical sub-panel. Booths may have rooftop/sidewall mounted HVAC units. Doors shall either swing open or be integrally sliding doors with deadbolt locks. Booths may have counters and sliding windows for the Concessionaire employees to interface with the Concessionaire customer. The maximum floor area of an exit booth shall be 8' x 10'. Exit booths shall not exceed 75 PSF in weight, including occupant load, and shall not be placed closer than 8'-0" to an adjacent exit booth or customer service booth or in accordance with City of Tampa requirements (see Section 2.4.5.1, Booths (Customer Service, Exit, Other) - General), for additional fire protection adjacency limitations).

Placement of leveling compounds to achieve level booth flooring is prohibited. Floor leveling measures utilized must be provided along with the initial Concessionaire Improvements design/construction submittal.

Exit booths shall not be placed closer than 8'-0" to an adjacent barrier unless the barrier is located directly over a beam, at which point the exit booths shall not occur within 4'-0" of an adjacent barrier. Exit booths shall not be located so as to limit or obstruct the visibility of Exit booths operated by other Concessionaires. See Section 2.4.7, Structural, below and Exhibits 7, 21 and 22 hereof, for exit booth location, structure connection information, and weight limitations. Concessionaire restrooms and break rooms shall not be located in the exit booths, customer service booths, or elsewhere on the floor. Temporary or portable exit booths are prohibited.

2.4.5.3 Customer Service Booths

Requirements for Concessionaire customer service booths shall be the same as the requirements listed in the exit booth section above.

- Booth size must be approved by the City of Tampa prior to schematic design submittal
- Booths must meet pedestrian travel distances to exits (based on Business occupancy).
- Booth must provide emergency lights within the booths

Such booths or structures shall be located entirely within the Concessionaire's Exclusive Premises in designated areas. The maximum total superimposed weight of customer service booths, including occupant load and any materials required to

level the ConRAC operational floor plates, shall not exceed 115 PSF. A customer service booth shall not be placed closer than 30'-0" to an adjacent customer service booth or exit booth (see Section 2.4.5.1, Booths (Customer Service, Exit, Other - General), for additional fire protection adjacency limitations). Customer service booths shall not be placed closer than 8'-0" to an adjacent re-locatable system barrier unless the barrier is located directly above a beam at which point the customer service booths shall not occur within 4'-0" of an adjacent barrier. See Section 2.4.7, Structural, for customer service booth weight limitations. Mechanical leveling techniques are required in lieu of leveling compounds to allow for booth relocation in the future.

See Exhibit 22 hereof for reinforced floor load zones in which to place customer service booths at Levels 2 and 3 and Exhibit 21 hereof for locations at Level 1.

2.4.6 Signage

The Authority reserves the right to require the removal of any Concessionaire advertising, displays or decorating that in its sole opinion is distasteful or in any way conflicts with the best interest of the ConRAC environment. All signage in the Concessionaire Exclusive Premises is to be provided and installed by the Concessionaire unless otherwise noted on the Base Building construction documents. All signage to be provided shall be incorporated into the Concessionaire's design and submitted for approval by the Authority.

Maximum embedment depths for signage or other conditions:

Ready/Return 1" maximum embedment (ceiling)

QTA 1" maximum embedment (ceiling)

½" maximum embedment (floor)

2.4.6.1 Concessionaire Signage

Concessionaire specific identification signage furnished and installed by the Concessionaire is permitted in the Exclusive Premises for rental return, special programs, space numbering and other directional information. Signs shall be surface mounted to the structural columns with compression fittings or hung from the surface of the beams or from the structure. See Section 2.4.7, Structural, for penetration and attachment limitations and information. All Concessionaire signage within drive aisles shall be mounted with 10'-0" clear above the finish floor. The location and orientation of Concessionaire signage may not block other Concessionaire signage nor the Base Building wayfinding/directional signage. Ground installed signage at the boundary of public customer drive and the Exclusive

Premises shall be of uniform dimensions on each floor. There is not a specific size requirement, but all signage will be submitted to the Authority for approval.

All regulatory and warning signage and pavement markings shall comply with the Manual on Uniform Traffic Control Devices (MUTCD). Power requirements for all electrical signage shall be the responsibility of the Concessionaire and part of the Concessionaire's Exclusive Premises. See Section 2.4.9, Electrical Systems, for electrical system requirements.

2.4.6.2 Customer Service Booth Signage

Signage on the customer service booths must be submitted to the Authority for approval. Promotional signs or banners are prohibited. Interior booth signage is permitted. Preferred service reader boards may be mounted to the exterior of the customer service booth or other locations within the Concessionaire's Exclusive Premises.

2.4.6.3 Exit Booth Signage

The exit booths may have up to an 18" sign band at the top and may be painted a Concessionaire-specific custom color. The sign band may include corporate identity graphics and colors.

2.4.6.4 Area 4 Concessionaires Areas

Area 4 Concessionaires shall provide and install signage graphics for their ready/return stalls, customer kiosks, and for the back wall of their CSB area (whether static or dynamic). Stall signage and numbering system will be provided by the authority-provided build-out of Area 4 spaces. The Concessionaire signage scope of work is to be further developed through consultation with the Area 4 Concessionaires.

2.4.7 Structural

2.4.7.1 Floor loading limits

Locations for customer service booths, exit booths, and barriers are limited. The increased structural floor loading area for customer service booths and exit booths is illustrated on the structural drawings.

The weight limit and placement of the re-locatable barrier system shall conform to the following:

- The weight of a barrier shall not exceed 270 pounds per linear foot.

- Barriers shall be placed directly above the beams when possible. Barriers may be placed off beam provided the barriers are not arranged in a concentrated manner.
- Recommended locations defined for barrier placement are shown on the structural drawings.
- In locations of increased structural floor loading for exits booths or customer service booth loading, a barrier shall not be placed closer than 8'-0" to an adjacent customer service booth unless the barrier is located directly above a beam at which point the barrier shall not occur within 4'-0" of an adjacent customer service booth. Exhibits 27 and 28 hereof identify defined zones for exit booths and customer service booths.
- Barriers shall not be placed within 1'-0" of any expansion joint cover.
- Expansion joint covers shall be protected from wheel loads when barriers are being installed and relocated.

2.4.8 Mechanical, Plumbing and Fire Sprinkler Systems

2.4.8.1 HVAC

1. Refer to Hillsborough County Aviation Authority Design Criteria Manual for HVAC guidelines. Exposed Amorflex or similar insulation will not be permitted in exposed areas. PVC or metal jacketing will be required.
2. IDF/Electrical Rooms – No Base Building HVAC is provided in the utilities. There is electrical capacity for tenant supplied split units, if required.
3. Base Building vertical sleeves at each column within both the customer and exit booth enhanced loading zones will be provided at Levels 2 and 3 for condensate drainage to a floor sink at Level 1. Concessionaire shall provide all piping. Piping shall be installed in a uniform and aesthetically pleasing manner as tight to the structure as possible. Piping should be consolidated whenever possible to minimize the number of runs. Piping routes and methods to be approved by the Authority prior to installation.

2.4.8.2 Domestic Water System

Water connections are not provided for the customer service booths or exit booths. Domestic water service will be available for Concessionaire connection at the CSB and at the Concessionaire's QTA Admin Space.

2.4.8.3 Sanitary Sewer system

Sanitary sewer system connections are not provided for the customer service booths or exit booths. The Concessionaire shall coordinate their design with the stub ups provided at the CSB and QTA and the condensate drain provided at the

operational floor plates. Concessionaire is responsible for tying into the 3" vent in the CSB and QTA.

2.4.8.4 Fire Sprinkler System by Concessionaire at booths

Fire sprinkler system is provided at the CSB and QTA. Wet standpipe systems will be provided for the emergency egress stairs. The sprinkler and standpipe systems will be designed per NFPA and local code requirements. Concessionaires shall be responsible for modifying the fire sprinkler system in accordance with their Concessionaire design requirements and code.

Refer to Section 2.4.5.1, Booths (Customer Service, Exit, Other) – General, for fire protection/fire sprinkler requirements related to booth size and proximity. When fire protection is required, Concessionaire shall extend the local wet pipe sprinkler system to be distributed within the booth. The point of connection will be at the cores, and coverage shall be considered light hazard.

Sprinklers shall be installed per the Concessionaire's occupancy type and be no more than 0.15 gpm/sf over a 1,500 sf area and spacing at no more than one sprinkler head per 130 sf. Sprinklers shall be concealed type sprinkler heads for ceiling applications and upright heads where exposed.

2.4.9 Electrical Systems

2.4.9.1 General

Please refer to Hillsborough County Aviation Authority Design Criteria Manual 2016 for additional electrical information and requirements.

The electrical service for the ConRAC is divided into two electrical services. One service is for the QTA and the other service is for the Ready/Return Area. The QTA electrical service consists of two 3000-ampere, 480/277 volt services configured in a main-tie-main arrangement. The Ready/Return Area consists of two 4,000-ampere, 480/277 volt services configured in a main-tie-main arrangement. The electrical service serves house and Concessionaire electrical panels located in electrical closets located throughout the QTA and the Ready/Return Area.

Each of the electrical services are served from the Tampa Electric Company. The primary service to the QTA Electrical Service and the Ready/Return Area Electrical Service are fed thru primary pad mounted automatic transfer equipment which consist of preferred and alternate feeders derived from two separate distribution substations. This provides each of the facilities with a reliable electrical service.

Additionally, emergency electrical power is provided for life safety systems including the lighting and the fire alarm systems. Standby power is provided to the elevators but not the escalators.

Electrical power is distributed throughout the facility for Base Building systems. Within the Ready/Return Area, these Base Building systems include lighting, HVAC and general receptacles.

2.4.9.2 Concessionaire Power

The Concessionaire electrical panels within the electrical rooms will operate at 480/277V 3-phase, 4-wire. These panels will be fitted out with 100 ampere main circuit breakers and an empty tub that can accommodate forty-two branch circuit breakers. Branch circuit breakers for this panel board shall be furnished and installed by the Concessionaire under their Concessionaire electrical fit-out work. Transformers and panel boards required for 120/208 volt loads will be provided in electrical rooms. Each 120/208-volt Concessionaire panel shall be served through a 45 KVA transformer. These electrical panels shall serve the anticipated following Concessionaire loads:

- Illuminated Signage
- Exit Booth(s)
- Plate Barrier(s), /Tiger Teeth and other security devices
- Preferred CSB Structure and associated loads (HVAC, Lighting, etc.)
- Miscellaneous (Receptacles, Additional lighting, etc.)
- Data Racks located in Concessionaire IDF Rooms

Concessionaire panels will be located in electrical rooms as follows:

- Levels 1 and 3 – Electrical rooms in zones 1, 3, 4, 5, and 6
- Levels 2 and 4 – Electrical rooms in zones 2 and 4
- Panels in electrical rooms for zones 4, 5 and 6 shall serve Concessionaires on floors above where there are no electrical rooms.

The use of these panels will be designated to each Concessionaire by the Authority and all Concessionaire panels shall be metered by the Authority.

From the demarcation points (panels) listed above, each Concessionaire shall be responsible for installing all electrical lighting panels and power subpanels, electrical conduit, wiring, and fixtures, to serve its supplementary lighting and power needs in their Ready/Return Areas (i.e. booths, gates, illuminated signage, security systems) if required.

Concessionaires are required to use Base Building provided block outs for conduit distribution through beams and girders and into adjacent structural bays.

When Concessionaire conduit is installed through another Concessionaire's Exclusive Premises, installing Concessionaire must coordinate installation location and path with the affected Concessionaire.

Concessionaires requiring additional circuits, panel boards or power in excess of the amount listed above shall pay the entire cost of installing the additional service, including any necessary power distribution equipment.

Residential grade equipment (load centers, etc.) or devices are not allowed.

New panel boards must have hinged covers with door-in-door construction and should match the panels installed in the Base Building.

Dry type transformers shall be located in compliance with Article 450.13 of the NEC. Transformers shall not be permitted to be located above accessible ceilings. Transformers shall be mounted within the Exclusive Premises in a visible location adjacent to the appropriate electrical panel. Transformers may be either floor mounted on a 4" concrete housekeeping pad or wall mounted with listed wall brackets. Connections to the transformers are to be liquid-tight.

It is the Concessionaire's responsibility to verify service capacity and availability for its space. Each Concessionaire shall be responsible for providing sizing requirements based on its specific need.

Shutdown of the existing building service or any main electrical distribution must be coordinated with the Authority not less than two weeks in advance. All electrical work required to complete the system to accommodate the Concessionaire's plans shall be performed by the Concessionaire's electrical contractor at the Concessionaire's sole cost and expense.

2.4.9.3 Raceways and Wiring

All Concessionaire wiring (i.e., power, telephone, data, communications, low voltage, controls, etc.) must be in conduit or in cable trays in concealed locations. Conduit used shall be EMT in interior spaces. Any conduit routed in areas that are subject to damage from motorized vehicles, machinery, etc., shall be galvanized rigid steel (GRS). All special systems must be routed in separate conduit. See Exhibit 1 hereof for other details.

All wiring is to be copper. Aluminum is not permitted.

All electrical equipment shall be labeled by UL for the intended use.

Exposed conduit ends to have bushings.

Minimum conduit size is 3/4" diameter for homeruns.

Wiremold surface raceways are not permitted.

Metal-Clad (MC) cable and Romex cabling are not permitted.

The Concessionaire shall be aware of all construction joints in this area. Where raceways cross a construction joint, the necessary fitting shall be provided. Refer to structural general notes within the Base Building construction documents for tolerances of movement.

Concessionaires are required to use Base Building-provided block outs for conduit distribution through beams and girders and into adjacent structural bays whenever possible. If space does not permit use of the provided block-outs, Concessionaire may seek alternate routing with Authority approval.

When Concessionaire conduit is installed through another Concessionaire's Exclusive Premises, installing Concessionaire must coordinate installation location and path with the affected Concessionaire.

Please refer to Exhibit 1 hereof for additional information and requirements.

2.4.9.4 Lighting

Lighting within the Common Public Areas of the ConRAC will be provided as a part of the Base Building scope of work. Lighting levels have been established at an average of 10 foot-candles at 30" above the parking surface level in the Ready/Return area. The light source for the ready-return area utilizes an array of light emitting diodes (LED).

Emergency lighting is provided and backed up by the generator. As egress paths cannot be defined until Concessionaire design is complete, the Base Building system provides +/-30 percent of the floor plate lighting on emergency power. Therefore, any egress paths (now or in future reallocation of Exclusive Premises) will be provided with code required egress lighting.

Additional lighting required to highlight signage, exit booths, plate barriers and preferred customer structures shall be done by the Concessionaire under their Concessionaire electrical fit out work. The lighting loads shall be circuited back to the Concessionaire electrical panels.

Concessionaires are required to use Base Building-provided block outs for conduit distribution through beams and girders and into adjacent structural bays whenever possible. If space does not permit use of the provided block-outs, Concessionaire may seek alternate routing with Authority approval.

When Concessionaire conduit is installed through another Concessionaire's Exclusive Premises, installing Concessionaire must coordinate installation location and path with the affected Concessionaire.

2.4.10 Communications Systems

All communication systems shall be in compliance with HCAA Telecommunications Infrastructure Standards (September 14, 2015) unless otherwise directed by the Authority. See Appendix A for further information.

2.4.10.1 Wired Systems

Each Concessionaire will be responsible for providing all telecommunication conduit and cabling within their areas. Concessionaire shall route conduit and cabling to the nearest telecommunications room dedicated for that Concessionaire.

Concessionaires are required to use Base Building-provided block outs for conduit distribution through beams and girders and into adjacent structural bays whenever possible. If space does not permit use of the provided block-outs, Concessionaire may seek alternate routing with Authority approval.

Prior to installing any conduit, pull box, manhole, or communications cable, the Concessionaire shall submit construction plans that are in accordance with HCAA Telecommunications Infrastructure Standards (September 14, 2015) and obtain written approval from Authority. All Concessionaire conduit and cables entering the communications rooms shall be furnished and installed by the Concessionaire.

The telecommunication rooms provided by the Base Building will only be used as a conduit and cable access and connection points and will not function as storage areas in any way.

Concessionaire IDFs are provided in the north and south cores on levels 1 through 3, and on the perimeter of the building on level 2. Raceway is provided through the perimeter electrical rooms on levels 1 and 3 to allow cable routing to level 2.

OS1 single mode fiber optic backbone cabling is provided in the RAC IDFs to allow for connectivity from the perimeter IDFs to the core IDFs and from the core IDFs to the core MDFs located in the CSB.

2.4.10.2 Wireless Systems

Concessionaires may use radio wireless systems working in the unlicensed radio frequency spectrum (900 Mhz, 2.4GHz and 5 GHZ). These devices must be used inside the Exclusive Premises only and the transmission power of those devices must be adjusted to minimize spill over outside the Exclusive Premises. The Authority requires spill over signal to be below -100 dBm.

Concessionaires may use wireless systems working in the licensed radio frequency if approved by the Authority after review of detailed equipment and frequency information. Conflicts with other radio frequency systems will not be permitted.

2.4.10.3 Fire Detection and Alarm System

Each Concessionaire will be responsible for any necessary fire alarm/detection design and installation associated with their customer service and exit booths. The Base Building construction will provide fire alarm/detection circuit panel connection points (FTC). Each FTC will contain connection terminal points for a fire detection signal and a fire alarm notification circuit from the Concessionaire space. Each Concessionaire is responsible for providing and installing compatible fire detection and alarm devices within its space, and the associated conduit and wiring to connect these devices to the FTC provided by the Base Building. The fire alarm system design, testing and commissioning of the fire alarm detection and alarm circuits and devices within the Concessionaire space will be the Concessionaire's responsibility. All design and installation shall be in compliance with all Federal, state and local codes. Fire alarm systems installation shall be contracted with Authority-approved vendor (Simplex Addressable System).

Concessionaire shall schedule a "pre-test" with the Authority prior to performing/requesting life safety inspections with City of Tampa. Any life safety inspections required by City of Tampa shall be scheduled through the Authority's Construction Project Manager.

2.4.11 Video Surveillance and Access Control Systems

Video Surveillance and Access Control systems have not been designed in the Ready/Return Areas. Should security be desired, the design and overall approach for Video Surveillance and Access Control in Concessionaire-shared areas will be the responsibility of the ConRAC Facility Manager.

Adequate infrastructure including power has been designed to support Security systems and installations.

2.5 QTA AREAS

2.5.1 Mechanical Systems

2.5.1.1 Space Heating and Cooling Systems - HVAC Design Criteria for each space

1. IDF Rooms – Base Building-provided 1-inch chilled water supply for “TI” fan coil.
2. Electrical Rooms– Base Building-provided 400 CFM of cooling from AHU VAV terminal.
3. Office Area: Base Building-provided 1.0 CFM/sq. ft./55°F Supply Air/20% Outside Air.

Base Building Scope

The QTA Admin Space has two (2) central station air handlers located in the penthouse. Each air handler is VAV with Supply and Return ducted down to each floor, for east and west halves. The core spaces will be fit out to include the restrooms and janitor’s closets.

All HVAC equipment and temperature sensors shall be connected to the Authority’s JCI Building Energy Management System. Concessionaires must provide unobstructed access to all mechanical units for maintenance purposes. Unobstructed access must also be available for ease of filter replacement and other maintenance.

QTA Equipment Rooms – Rooms will have general ventilation by means of an intake louver and exhaust fan, designed for a temperature rise of 10 degrees F. Main Electrical Rooms have temperature sensitive equipment and will have conditioned air. A common chilled water loop is on the Level 2 to each Electrical Room with a 1-ton chilled water fan coil unit in each room.

Concessionaire Scope

Concessionaire shall be responsible for providing associated air distribution within its space, including, but not limited to, supply and return ductwork, diffusers, registers and grilles, dampers, and fire dampers. Each Concessionaire shall insulate ductwork and limit flexible ductwork to 5’-0” in length to connect galvanized steel ducts to air distribution devices. Ductwork shall be constructed and installed in accordance with latest Sheet Metal and Air Conditioning Contractors National Association (SMACNA) construction standards. Ducts shall be externally insulated or of double wall construction. Internal insulation is not permitted.

The Base Building Automation System (Johnson Controls Metasys) will extend to each mechanical room and operate all devices within the Base Building scope. The

Concessionaire shall extend thermostats from the terminal boxes provided to their space. In a case where additional terminals are required, the Concessionaire shall match the Base Building system and utilize JCI for installation and programming of new devices. Programming of new devices must be performed by JCI's local branch office.

The QTA Base Building includes a centralized exhaust system in the fueling area. There are no specific Concessionaire requirements. Concessionaire is responsible for providing supplemental ventilation and man-cooling equipment, if necessary.

2.5.1.2 Sanitary and Domestic Water Systems

Base Building Scope

Common Concessionaire Areas plumbing fixtures will include bi-level electric water coolers located outside restrooms. The restrooms will be provided with water closets, urinals, and lavatories. A mop basin with mop rack will be provided in the janitor's closet. Located in the janitor's closet is the electric water heater providing hot water for lavatories. Safety shower/eyewash units will be provided in the QTA Area mounted on columns and accessible from the area of work. Wall hydrants will be located at the car wash and fueling areas for maintaining surface areas. Wall hydrants will be operated using a loose key and vacuum breakers will be provided at hose connections. Trap primers will be used for floor drains with traps to maintain a trap seal.

Urinals and water closets will be comfort height, wall-hung with automatic, hard wired solenoid flush valves. Lavatories in restrooms will be wall mounted with solenoid hard-wired faucets.

Domestic hot water for lavatories, mop basins, and sinks will be provided by electric water heaters.

Level 4 of the ConRAC will be sloped with rainwater collected at drains along the perimeter of the facility and guided to vertical storm drain pipes down to the stormwater sewer system.

A recycling-type car wash system will be installed by the Base Building.

If Concessionaires install plumbing fixtures, water hammer arrestors will be used to protect the piping at quick closing valves (such as flushometers used on urinals and water closets).

A 4" waste line with stub-ups within Base Building wall construction will be available for Concessionaire's use. One 3" vent will be available to each Concessionaire's

Exclusive Premises. Domestic cold water will be available overhead to each Concessionaire's Exclusive Premises.

Concessionaire Scope

Concessionaire shall be responsible for connecting their improvements to the waste line stub-up, vent and domestic cold water in accordance with required local codes. Refer to Base Building construction documents for locations.

Water heating devices within the Concessionaire's Exclusive Premises shall be provided by the Concessionaire. Water heaters shall be electric and shall not be larger than 25 KW.

2.5.1.3 Fire Sprinkler Systems

The entire QTA Base Building area will have an automatic fire suppression system in accordance with applicable codes. The fueling area will have a closed head Foam System. No Concessionaire Improvements or modifications are anticipated to the fire sprinkler systems at the fueling area. Concessionaire shall be responsible for tying into the Base Building Fire Sprinkler systems for its QTA Admin Space improvements in accordance with applicable local codes.

2.5.1.4 Fire Alarm System

The entire QTA Base Building area, including the fueling area, will have a fire alarm system in accordance with applicable codes. No Concessionaire Improvements or modifications to the fire alarm system are anticipated for the Base Building area or fueling area. Concessionaire shall be responsible for tying into the Base Building system for its QTA Admin Space improvements in accordance with applicable local codes.

2.5.2 Architectural/Operational – Administrative Support Space

Base Building Scope

Refer to Room Finish Schedule and specifications contained in the Base Building Construction Documents for requirements in addition to those listed below.

2.5.2.1 Demising Partitions

The Base Building will construct demising partitions between individual Concessionaires (as applicable), and between Concessionaires and Common Public Areas and Common Concessionaire Areas.

Base Building work includes concrete masonry units (CMU) or metal wall studs at demising walls located between individual Concessionaire Exclusive Premises. The Concessionaire shall be responsible for finishing demising walls (including providing and installing gypsum wall board, taping, sanding, painting, base trim, etc.) on its side of the partition. Fire rated walls constructed by Concessionaire as part of its Concessionaire Improvements shall extend to roof deck above.

Any modifications to demising partitions shall be constructed by the Concessionaire to match the Base Building standards. Prior approval by the Authority is required.

2.5.2.2 Exterior Walls

The exterior walls of the QTA Admin Space are pre-cast concrete and masonry. The Concessionaire shall provide and install rigid insulation, furring, gypsum wallboard and all finishes.

Concessionaire Scope

2.5.2.3 Interior Walls

Interior Concessionaire partitions, when not required to be fire-rated or a plumbing chase, may terminate above the suspended ceiling, unless otherwise required by applicable local codes.

2.5.2.4 Wall Finishes

Wall finishes shall be high-impact resistant, scratch and scrape resistant and easily removable for repair or capable of being repaired in place. All wall finishes shall be washable in place.

2.5.2.5 Floors

The Concessionaire may provide floor finish material(s) as selected by the Concessionaire and as appropriate for the conditions of use.

All finish floor surfaces shall be installed level and smooth with a maximum surface variation of $\frac{1}{4}$ ' vertical in 10' (Class A floor finish). Under no circumstances may the existing concrete slab be chipped to accommodate flooring underlayment or any other construction. Transitions between Concessionaire floor and the Authority-controlled finish floor materials shall be the responsibility of the Concessionaire. Transitions between any finish floor elevations cannot vary by more than $\frac{1}{8}$ " vertically. Ramping of floor materials at transitions is prohibited.

Floor materials and their respective methods of adhesion shall be submitted to the Authority for written approval. Adhesives, thin-set mastic, and applied backings shall be of such properties to eliminate or drastically reduce the occurrence of cracking, delaminating, shifting, popping and other negative results.

Variance from the requirements of this Section must be approved by the Authority.

2.5.2.6 Ceilings

No ceiling system (grid, tile) will be provided by the Authority in Exclusive Premises. The Concessionaire shall provide a ceiling that meets required local codes. In no case shall the weight of the ceiling finishes exceed 3 PSF without prior written approval of the Authority.

Recommended ceiling height is 9'-0".

2.5.2.7 Doors, Frames, and Hardware

See Specification Division 08 – Openings in general and Specification Sections 08 11 13, 08 31 13 and 08 71 00 of the construction specifications.

All interior doors at service buildings shall be 18 gauge (minimum) hollow-core metal doors with hollow metal, galvanized faces and rib construction at exterior doors, 16 gauge (minimum) frames.

All Concessionaire hardware will match the Authority proprietary lock system, as follows: locksets shall be Corbin Russwin ML 2000 with removable core cylinders. Panic hardware will be Von Duprin 99 series. Refer to Exhibit 1 hereof.

2.5.2.8 Windows and Window treatments

Window coverings may be installed by the Concessionaire subject to the review and approval by the Authority. Advertising and the application of decorative films are prohibited on all exterior windows. Windows shall be kept free of blockage at all times.

2.5.2.9 Millwork

Millwork within Exclusive Premises shall be provided by the Concessionaire.

2.5.2.10 Concessionaire Equipment/Accessories

Vending machines may only be installed in Exclusive Premises and must be approved in writing by the Authority.

2.5.3 QTA Signage

2.5.3.1 QTA Traffic Control Signage

The Base Building scope of work will include traffic control signage. Each Concessionaire may install additional traffic control signage in its Exclusive Premises as required. Concessionaires shall follow State of Florida Standards for regulatory and warning signage and pavement markings.

2.5.3.2 Exterior QTA Building Signage

The Base Building will provide one (1) identification sign adjacent to each door entering each Concessionaire's Exclusive Premises for the sole purpose of identifying the staff entrance into the Concessionaire's space. The sign shall contain the corporate name only. Concessionaire shall install the sign as provided; placement is to be contiguous with Concessionaire Exclusive Premises. Concessionaire identification signage shall be non-illuminated letterforms/graphics using Concessionaire-specific corporate standard colors as applicable.

2.5.4 QTA Structural

All elements of the Concessionaire's proposed Improvements that are suspended from the structure above the Concessionaire's Exclusive Premises or from a shell building wall, floor, or roof shall be detailed (including methods of attachment and load calculations) in the Concessionaire's Improvements construction documents as submitted to the Authority for review. Load and signage wind load calculations shall be prepared by a structural engineer licensed in the State of Florida and sealed as a part of the Concessionaire's submittal for approval.

Refer to Section 2.4.7 for floor loading limits and limitations on re-locatable barriers.

Floor penetrations shall be kept to a minimum. Floor penetrations shall be located by the Concessionaire to eliminate the possibility of compromising the structural integrity of the floor. Plans and test results shall be submitted to the Authority and Engineer of Record for written approval prior to drilling holes. Concessionaire is responsible to repair any Base Building systems or Concessionaire systems damaged by penetrations or attachment to the structure. The floor structure utilizes a post-tensioned system. Concrete imaging shall be done prior to installation of any anchors or drilling into any slabs, beams, or columns. Holes shall be sealed appropriately.

The Concessionaire shall coordinate mechanical, electrical, plumbing and fire sprinkler work with existing structural members. All floor/roof or wall openings shall be properly fire-safed.

2.5.5 Electrical Systems – Administrative Support Areas

2.5.5.1 General

Please refer to Exhibit 1 hereof for additional electrical information and requirements.

The QTA electrical service consists of two 3,000-ampere, 480/277 volt services configured in a main-tie-main arrangement. The electrical service is served from the Tampa Electric Company. The primary service to the QTA Electrical Service is fed thru primary pad mounted automatic transfer equipment which consists of preferred and alternate feeders derived from two separate distribution substations. This provides each of the facilities with a reliable electrical service.

Additionally, emergency electrical power is provided for life safety systems, including lighting and the fire alarm systems. Standby power is provided to the elevators, but not the escalators.

Electrical power is distributed throughout the facility for Base Building systems. Within the QTA area these Base Building systems include lighting, HVAC, fueling, carwash equipment, vacuum equipment, and general receptacles.

2.5.5.2 Concessionaire Power

The Concessionaire electrical panels within the three electrical rooms located in zone 8 on all levels of the QTA will operate at 480/277V 3-phase, 4-wire. These panels will be fitted out with 100 ampere main circuit breakers and an empty tub that can accommodate forty-two (42) branch circuit breakers. Branch circuit breakers for this panel board shall be furnished and installed by the Concessionaire under their Concessionaire electrical fit-out work. Transformers and panel boards required to for 120/208 volt loads will be provided in electrical rooms. Each 120/208-volt Concessionaire panel shall be served through a 45KVA transformer. These electrical panels shall serve the anticipated following loads:

- Illuminated Signage
- Security equipment
- HVAC
- Miscellaneous (Receptacles, Additional lighting, etc.)
- IT equipment

Within the QTA, perimeter electrical rooms will be located on Levels 1 and 3. Concessionaires will have shared use of electrical rooms with assignments designated by the Authority.

From these demarcation points (panels) listed above, each Concessionaire shall be responsible for installing all electrical lighting panels and power subpanels, electrical conduit, wiring, and fixtures to serve its supplementary lighting and power needs in their QTA Exclusive Premises (i.e. office space fit-up and illuminated signage).

All Concessionaire fit out loads shall originate from Concessionaire power panels located in electrical rooms that will have panels associated with the Base-Building electrical systems. Panels will be assigned by the Authority.

Concessionaires requiring additional circuits, panelboards or power in excess of the amount listed above shall pay the entire cost of installing the additional service, including any necessary power distribution equipment.

Residential grade equipment (i.e. load centers) or devices are not allowed.

New panel boards must have hinged covers with door-in-door construction and match the panels installed in the Base Building.

Dry type transformers shall be located in compliance with Article 450.13 of the NEC. Transformers shall not be permitted to be located above accessible ceilings. Transformers shall be mounted within the Concessionaire space in a visible location adjacent to the appropriate electrical panel. Transformers may be either floor mounted on a 4" concrete housekeeping pad or wall mounted with listed wall brackets. Connections to the transformers are to be liquid-tight.

Please refer to Exhibit 1 hereof for additional information and requirements.

It is the Concessionaire's responsibility to verify service capacity and availability for Exclusive Premises. Each Concessionaire shall be responsible for providing sizing requirements based on its specific need.

Shutdown of the existing building service or any main electrical distribution must be coordinated with the Authority not less than two weeks in advance. All electrical work required to complete the system to accommodate the Concessionaire's plans shall be performed by the Concessionaire's electrical contractor at the Concessionaire's sole cost and expense.

2.5.5.3 Raceways and Wiring

All Concessionaire wiring (i.e., power, telephone, data, communications, low voltage, and controls) must be in conduit or in cable trays in concealed locations. Conduit used shall be EMT in interior spaces. Any conduit routed in areas

that are subject to damage from motorized vehicles, and machinery shall be galvanized rigid steel (GRS). All special systems must be routed in separate conduit.

All wiring is to be copper. Aluminum is not permitted.

All electrical equipment shall be labeled by UL for the intended use.

Exposed conduit ends to have bushings.

Minimum conduit size is 3/4" diameter on homeruns.

Wiremold surface raceways are not permitted.

Metal-Clad (MC) cable and Romex cabling are not permitted.

The Concessionaire shall be aware of all expansion joints in this area. Where raceways cross an expansion joint, the necessary fitting shall be provided. Refer to Structural General Notes within the Base Building construction documents for tolerances of movement.

Please refer to Exhibit 1 hereof for additional information and requirements.

2.5.5.4 Lighting

Lighting throughout the facility will be provided as a part of the Base Building system. Lighting levels have been established at an average of 30 foot-candles at 30" above the parking surface level at the fueling island and 10 foot-candles at 30" above the parking surface at stacking, staging and light maintenance areas. The light source for the QTA area utilizes an array of LEDs.

Emergency lighting is provided and backed up by the generator. The Base Building system provides +/- 30 percent of the floor plate lighting on emergency power.

Additional lighting required by the Concessionaire shall be done by the Concessionaire under their Concessionaire electrical fit out work. The lighting loads shall be circuited back to the Concessionaire electrical panels.

2.5.6 Communications Systems – Administrative Support Space

All communication systems shall be in compliance with HCAA Telecommunications Infrastructure Standards (September 14, 2015) unless otherwise directed by the Authority. For purposes of the following, "service provider" shall be understood as the phone company. "Access Provider" shall be understood as Authority.

2.5.6.1 Wired Systems

Base Building scope shall include extending conduit and cabling from the Zone 1 IDF room to telecommunication rooms located within the Administrative Support Spaces adjacent to the car washes. Concessionaire will be responsible for providing all telecommunication conduit and cabling within their areas. Concessionaire shall route conduit and cabling to the nearest telecommunications room dedicated for that Concessionaire.

Concessionaire IDFs are provided in the Administrative Support Space of each floor and on the south perimeter of the ConRAC on Level 2. Raceway is provided through the south perimeter electrical rooms on Levels 1 and 3 to allow cable routing to Level 2.

OS1 single mode fiber optic backbone cabling is provided in the Concessionaire IDFs to allow for connectivity from the south perimeter IDF to the Administrative Support Space IDFs and from the Administrative Support Space IDFs to the north core MDF located in the CSB.

2.5.6.2 Wireless Systems

Concessionaires may use radio wireless systems working in the unlicensed radio frequency spectrum (900 Mhz, 2.4GHz and 5 GHz). These devices must be used inside the Exclusive Premises only and the transmission power of those devices must be adjusted to minimize spill over outside the Exclusive Premises. The Authority requires spill over signal to be below -100 dBm.

Concessionaires may use wireless systems working in the licensed radio frequency if approved by the Authority after review of detailed equipment and frequency information. Conflicts with other radio frequency systems will not be permitted.

2.5.7 QTA Washing, Fueling, and Other Equipment

2.5.7.1 Fueling System (Refer to [Exhibit 20](#) hereof)

Base Building construction will include a vehicle fueling system that will be operated and maintained by the ConRAC Facility Manager or an independent fueling manager. Eight direct-burial underground 25,000-gallon fuel storage tanks will be manifolded together to make up the fuel storage system. This system is located adjacent to the QTA facility within the service yard.

The fueling system will be provided with a fuel management system with integral card reader for the purposes of tracking the use of fuel at each nozzle by each Concessionaire. The Base Building will include junction boxes with wiring for power

and communication each dispenser location. Concessionaire may, at its sole discretion and expense, install its own compatible card readers at these junction box locations. Installation of compatible card readers must provide means to disable these card readers for repair and/or maintenance of the fuel system or dispenser. Concessionaire shall coordinate tracking and reporting requirements with ConRAC Facility Manager or fueling manager.

Information on the selected fueling system will be available as construction progresses.

Concessionaire shall remove existing enclosure to facilitate installation of its proprietary card reader. Concessionaire shall replace any Base Building enclosure that is removed at the expiration of its Contract.

2.5.7.2 Car Washes

2.5.7.2.1 Car Wash (Refer to Exhibit 19 hereof)

The Base Building will include QTA car wash facilities that provide a minimum of 90 percent recycled water. Car wash units and equipment will be enclosed within the car wash tunnel of each QTA building. Car wash operation overflow water will drain to the sanitary sewer system and will be pretreated and discharged as required by local and Federal codes. Base Building construction does not include air blowers, fast-acting doors, blasters, or plastic slats at car wash entry and exit openings.

The Base Building includes a five brush system, reverse osmosis system, rinse arch, reclaim system, pre-wash system, and a domestic water stub to each car wash equipment area with reduced pressure valve and shut-off valve.

Power for Concessionaire-installed equipment will be run from designated Concessionaire electrical panels. Conduit in this area shall be rigid galvanized due to harsh environment.

Water to car washes is not individually metered.

Water lines shall be extended downstream of the backflow preventer for the reverse osmosis systems.

Concessionaire shall provide detergent for the system through the ConRAC Facility Manager.

2.5.7.2.2 Concessionaire Installed Equipment

Space and power allowances have been made for Concessionaire installation of air blowers.

Conduit and wire shall be provided by the Concessionaire for equipment noted. Conduit shall be the same as used for the Base Building.

2.5.7.3 Other Equipment

2.5.7.3.1 Vacuum System – A fully operational system is located at fueling islands.

2.5.7.3.2 Windshield Washer Fluid – A fully operational system, including pumps and hose reels, is located at the fuel islands. Concessionaires shall provide concentrate windshield washer fluid through the ConRAC Facility Manager.

2.5.7.3.3 Compressed Air – A fully operational system, including air compressor and hose reels, is located at the fuel islands.

2.5.8 Video Surveillance and Access Control Systems

Video Surveillance and Access Control systems have not been designed in the QTA Areas. Should security be desired, the design and overall approach for Video Surveillance and Access Control in Concessionaire shared areas will be the responsibility of the ConRAC Facility Manager.

Adequate infrastructure including power has been designed to support Security systems and installations.

2.5.9 Area 4 Concessionaires

Area 4 Concessionaires shall provide office furnishings and equipment within their respective QTA Admin Spaces. Area 4 Concessionaire signage scope of work, as necessary, is currently to be determined.

2.6 CSB

2.6.1 HVAC – Design Criteria for each space

1. IDF Rooms—IDF rooms within the CSB are conditioned by the Base Building
2. Electrical Rooms – Base Building supplied 400 CFM of cooling from AHU VAV terminal

3. Office Area: Base Building supplied 1.0 CFM/sq. ft./55°F Supply Air/20% Outside Air/Demand Control Ventilation
4. CSB Mall Area: Base Building supplied 2.0 CFM/sq. ft./55°F Supply Air/20% Outside Air

2.6.2 HVAC Systems – Back of House

The Customer Service Building customer service areas and administrative support spaces are served by a centralized variable air volume system with non-fan powered VAV terminal units with electric reheat coils and direct digital controls. Each Concessionaire is responsible for providing all supply ductwork downstream of the VAV terminal units and extending the return ductwork to the customer service areas and back of house space including diffusers, registers and grilles, dampers, and fire dampers. Each Concessionaire shall insulate ductwork and limit flexible ductwork to 5'-0" in length to connect galvanized steel ducts to air distribution devices. Ductwork shall be constructed and installed in accordance with latest SMACNA construction standards and shall be externally insulated.

HVAC equipment energy efficiencies shall be per latest Florida Energy Conservation Code or ASHRAE 90.1, whichever is more stringent.

Tenant installed HVAC controls shall be connected to the Authority's Johnson Controls, Inc. building Energy Management System. Concessionaire shall provide exhaust grilles in all break rooms, connected to the central general exhaust system. Concessionaires must provide unobstructed access to all mechanical units for maintenance purposes. Unobstructed access must also be available for ease of filter replacement and other maintenance.

2.6.3 Fire Sprinkler System

Each Concessionaire will be responsible for modifications to the sprinkler system design and installation in accordance with required local codes relative to their respective Exclusive Premises improvements.

Sprinklers shall be installed per the Concessionaire's occupancy type and be no more than 0.15 gpm/sf over a 1,500 sf area and spacing at no more than one sprinkler head per 130 sf. Sprinklers shall be concealed type sprinkler heads for ceiling applications and upright heads where exposed.

2.6.4 Structural Slab

The structural slab in the CSB is recessed 4" to allow installation of conduits and boxes within a topping slab. Regardless of in-slab electrical distribution, a Concessionaire installed

topping slab will be required to provide a top of slab/finish floor elevation to match the CSB lobby elevation.

Concessionaire must maintain the building expansion joint through the topping slab and install an expansion joint in the finish flooring.

2.6.5 Lobby Tile Flooring and Concessionaire Finish Flooring

Base Building construction will include lobby tile flooring past the Lease Line into the Exclusive Premises to the beginning of the slab recess area in the large Concessionaire spaces. This is expected to be approximately four (4) feet or one full tile east of the round columns. Base Building provided lobby tile flooring will be installed up to the Lease Line at the Area 4 Concessionaires' Exclusive Premises.

Concessionaire is responsible for the topping slab, finish flooring, and transition at the joint between the lobby tile flooring and their respective Exclusive Premises flooring.

2.6.6 CSB Lobby Ceiling Bulkhead and Concessionaire Ceilings

Base Building construction will include the overhead bulkhead, return grilles and ceiling past the Lease Line into the Exclusive Premises approximately eight (8) feet in order to provide a consistent starting point for the Exclusive Premises ceiling at the large Concessionaire spaces. Base Building construction at the Area 4 Concessionaires will include the overhead bulkhead and ceiling up to the Lease Line.

Concessionaire is responsible for the ceiling in their respective Exclusive Premises.

2.6.7 Electrical Systems – Back of House

2.6.7.1 General

Please refer to Exhibit 1 hereof for additional electrical information and requirements.

2.6.7.2 Concessionaire Power

Each Concessionaire will be provided an empty conduit from their respective administrative support space to a distribution panel in the electrical rooms. As part of the Concessionaire electrical fit out work, the Concessionaire shall coordinate their service size (amperage) and extend the Base Building conduit to their panel. Concessionaire conduits will be provided from a 480V 3- phase source. All feeders from the Concessionaire's administrative support space panelboard to the Base Building distribution panel shall be done under the Concessionaire electrical fit out work.

From its individual panel, Concessionaire shall be responsible for installing all electrical lighting panels and power subpanels, electrical conduit, wiring, and fixtures to serve its supplementary lighting and power needs in the CSB Exclusive Premises.

All Concessionaire fit out loads shall originate from Concessionaire power panels and not cohabitate with the Base-Building electrical systems.

Residential grade equipment (i.e. load centers) or devices are not allowed.

New panel boards must have hinged covers with door-in-door construction and should match the panels installed in the Base Building.

Dry type transformers shall be located in compliance with Article 450.13 of the NEC. Transformers shall not be permitted to be located above accessible ceilings. Transformers shall be mounted within the Concessionaire space in a visible location adjacent to the appropriate electrical panel. Transformers may be either floor mounted on a 4" concrete housekeeping pad or wall mounted with listed wall brackets. Connections to the transformers are to be liquid-tight. Wall mounted transformers shall have vibration isolation pads incorporated into the design to mute vibration transmissions to the wall studs.

It is the Concessionaire's responsibility to verify service capacity and availability for its space. Each Concessionaire shall be responsible for providing sizing requirements based on its specific need.

Shutdown of the existing building service or any main electrical distribution must be coordinated with the Authority not less than two weeks in advance. All electrical work required to complete the system to accommodate the Concessionaire's plans shall be performed by the Concessionaire's electrical contractor at the Concessionaire's sole cost and expense.

2.6.7.3 Raceways and Wiring

All Concessionaire wiring (i.e., power, telephone, data, communications, low voltage, and controls) must be in conduit or in cable trays in concealed locations. Conduit used shall be EMT in interior spaces. Any conduit routed in areas that are subject to damage from motorized vehicles and machinery shall be GRS. All special systems must be routed in separate conduit.

All wiring is to be copper. Aluminum is not permitted.

All electrical equipment shall be labeled by UL for the intended use.

Exposed conduit ends to have bushings.

Minimum conduit size is 3/4" diameter for homeruns.

Wiremold surface raceways are not permitted.

Metal-Clad (MC) cable and Romex cabling are not permitted.

The Concessionaire shall be aware of all construction expansion joints in this area. Where raceways cross an expansion joint, the necessary fitting shall be provided. Refer to structural general notes within the Base Building construction documents for tolerances of movement.

Please refer to Exhibit 1 hereof for additional information and requirements.

2.6.7.4 Lighting

Lighting throughout the Common Public Area and Common Concession Areas of the CSB will be provided. Lighting levels have been established with the architect to meet the retail environment anticipated for this type of space.

Emergency lighting in the Common Public Area and Common Concession Areas of the CSB is provided and backed up by the generator.

Administrative support space lighting is not included in the Base Building system. The Concessionaire electrical fit-out work will provide all Concessionaire requested lighting in their Exclusive Premises. Emergency lighting in the Concessionaire Exclusive Premises shall be circuited to a dedicated emergency lighting circuit provided by the Base Building electrical system.

2.6.8 Communications Systems

All communication systems shall be in compliance with HCAA Telecommunications Infrastructure Standards (September 14, 2015) unless otherwise directed by the Authority. See Appendix A for further information.

2.6.8.1 Wired Systems

Each Concessionaire will be responsible for providing all telecommunication conduit and cabling within their areas. Concessionaire shall route conduit and cabling to the nearest telecommunications room dedicated for that Concessionaire.

Concessionaires are required to use Base Building-provided block outs for conduit distribution through beams and girders and into adjacent structural bays whenever

possible. If space does not permit use of the provided block-outs, Concessionaire may seek alternate routing with Authority approval.

Prior to installing any conduit, pull box, manhole, or communications cable, the Concessionaire shall submit construction plans that are in accordance with HCAA Telecommunications Infrastructure Standards (September 14, 2015) and obtain written approval from the Authority. All Concessionaire conduit and cables entering the communications rooms shall be furnished and installed by the Concessionaire.

The telecommunication rooms provided by the Base Building will only be used as a conduit and cable access and connection points and will not function as storage areas in any way.

Concessionaire MDFs are provided in the north and south cores. Conduit with inner duct will be provided for Concessionaire use and is routed from the north core MDF to the south core MDF in the administrative support space corridor. Conduit shall be routed from the outlet location to the cable tray for cable termination in one of the Concessionaire MDFs

OS1 single mode fiber optic backbone cabling is provided in the Concessionaire MDFs to allow for connectivity from the MDFs to all IDF locations located on the ConRAC property. This includes the service center sites.

2.6.8.2 Wireless Systems

Concessionaires may use radio wireless systems working in the unlicensed radio frequency spectrum (900 Mhz, 2.4GHz and 5 GHz). These devices must be used inside the Exclusive Premises only and the transmission power of those devices must be adjusted to minimize spill over outside the Exclusive Premises. The Authority requires spill over signal to be below -100 dBm.

Concessionaires may use wireless systems working in the licensed radio frequency if approved by the Authority after review of detailed equipment and frequency information. Conflicts with other radio frequency systems will not be permitted.

2.6.9 Video Surveillance and Access Control Systems

Video Surveillance and Access Control systems have not been designed in the Concessionaire Exclusive Premises in the CSB areas. Should security be desired, the design for Video Surveillance and Access Control is the responsibility of each Concessionaire.

2.7 VEHICLE STAGING AND STORAGE AREA (LEVEL 4)

2.7.1 Introduction/Base Facility

The Level 4 operational floor plate is provided for Exclusive Premises vehicle staging and storage areas. Each Concessionaire will occupy a portion of the vehicle staging and storage area pursuant to Exhibit A of the Contract. This area is accessible by an internal dedicated ramp system.

2.7.2 Separation of Common Public Areas/Exclusive Premises

Both building circulation cores shall be designated as Common Public Areas. See Exhibit 6 hereof for extent of Common Public Areas and Exclusive Premises.

2.7.3 Concessionaire Improvements

Any conduit installed by the Concessionaire shall be concealed from public view or painted to match the adjacent surfaces to which they are attached. All conduit runs shall be attached to existing horizontal or vertical surfaces and be a minimum of 1 inch from any joint line. Concessionaires are encouraged to locate utilities and conduit parallel to grid lines. Minimize visual and structural impact while maintaining NEC clearance requirements.

2.7.4 Operational Elements

Exhibits 7, 8, 9, 10, 11, and 12 hereof depict the barrier locations and enhanced structural elements on a typical floor.

2.7.4.1 Pavement Markings

All pavement markings required by required local codes in the Common Concessionaire Areas will be installed by the Base Building. Concessionaires are responsible for furnishing and installing all pavement markings within their Exclusive Premises. At a minimum, pavement markings shall be provided to delineate parking spaces, space identifiers, pedestrian walkways, exit directions, and vehicle circulation flow. Pavement marking paint within the vehicle staging and storage areas shall be a non-reflective latex waterborne emulsion. "No Parking" zones shall be painted by the Base Building in Common Concession Areas and where required by applicable codes.

2.7.4.2 Primary Perimeter Barriers

Each Concessionaire's vehicle staging and storage area and the perimeter boundary between vehicle staging and storage area and the Common Concessionaire Area

roadways may be delineated and secured by use of re-locatable barrier system provided and installed by the Concessionaire.

See Section 2.4.7, Structural, for barrier placement limitations.

Concrete barriers shall be constructed in accordance with details provided in Exhibit 42 hereof.

2.7.4.3 Lease Delineation Barriers

The Concessionaires will provide a re-locatable barrier system between each Concessionaire's Exclusive Premises. See Section 2.4.7, Structural, for floor loading limitations.

Concrete barriers shall be constructed in accordance with details provided in Exhibit 42 hereof.

2.7.4.4 Internal Barriers

Barriers within Concessionaire Exclusive Premises shall be provided by the Concessionaire and approved by the Authority. See Section 2.4.7, Structural, and Exhibits 8, 9, 10, 11, and 12 hereof for barrier placement limitations.

Concrete barriers shall be constructed in accordance with details provided in Exhibit 42 hereof.

2.7.5 Architectural

2.7.5.1 Access Control Devices

Access control devices, if used, including associated software and wiring, shall be provided and installed by the Concessionaire within the Concessionaire's vehicle staging and storage area. These devices shall be installed behind the perimeter barrier and with a setback from the perimeter roadway to permit at least one car length clear of the adjacent traffic lane. Access control devices such as gate arms, plate barrier, and tiger teeth shall be located within the Concessionaire's Exclusive Premises.

2.7.6 Signage

All signage in the Concessionaire Exclusive Premises is to be provided and installed by the Concessionaire unless otherwise noted on the Base Building construction documents. All signage to be provided shall be incorporated into the Concessionaire's design and submitted for approval by the Authority.

Maximum embedment depths for signage or other conditions:

Staging/Storage ½" maximum embedment (floor)

2.7.6.1 Concessionaire Signage

Concessionaire specific identification signage furnished and installed by the Concessionaire is permitted in the Exclusive Premises for rental return, special programs, space numbering and other directional information. Signs shall be surface mounted to the deck. See Section 2.7.7, Structural, for penetration and attachment limitations and information. The location and orientation of Concessionaire signage may not block other Concessionaire signage nor the Base Building wayfinding/directional signage.

All regulatory and warning signage and pavement markings shall comply with the MUTCD. Power requirements for all electrical signage shall be the responsibility of the Concessionaire and part of the Concessionaire's Exclusive Premises. See Section 2.4.9, Electrical Systems, for electrical system requirements.

2.7.7 Structural

2.7.7.1 Floor loading limits

Locations for barriers are limited.

The weight limit and placement of the re-locatable barrier system shall conform to the following:

- The weight of a barrier shall not exceed 270 pounds per linear foot.
- Barriers shall be placed directly above the beams when possible. Barriers may be placed off beam provided the barriers are not arranged in a concentrated manner.
- Recommended locations defined for barrier placement are shown on the structural drawings.
- Barriers shall not be placed within 1'-0" of any expansion joint cover.
- Expansion joint covers shall be protected from wheel loads when barriers are being installed and relocated.

2.7.8 Electrical Systems

2.7.8.1 General

Please refer to Exhibit 1 hereof for additional electrical information and requirements.

The electrical service for the ConRAC is divided into two electrical services. One service is for the QTA, including the vehicle staging and storage area on Level 4, and the second service is for the Ready Return Area, including the vehicle staging and storage area on Level 4. The QTA electrical service consists of two 3000-ampere, 480/277 volt services configured in a main-tie-main arrangement. The Ready Return Area consists of two 4,000-ampere, 480/277 volt services configured in a main-tie-main arrangement. The electrical service serves house and Concessionaire electrical panels located in electrical closets located throughout the QTA and the Ready Return Area.

Each of the electrical services are served from the Tampa Electric Company. The primary service to the QTA Electrical Service and the Ready Return Area Electrical Service are fed thru primary pad mounted automatic transfer equipment which consist of preferred and alternate feeders derived from two separate distribution substations. This provides each of the facilities with a reliable electrical service.

Additionally, emergency electrical power is provided for life safety systems including lighting and the fire alarm systems. Standby power is provided to the elevators but not the escalators.

Electrical power is distributed throughout the facility for Base Building systems. Within the vehicle staging and storage area, these Base Building systems include Lighting.

2.7.8.2 Concessionaire Power

The Concessionaire electrical panels within the electrical rooms will operate at 480/277V 3-phase, 4-wire. These panels will be fitted out with 100 ampere main circuit breakers and an empty tub that can accommodate forty-two branch circuit breakers. Branch circuit breakers for this panel board shall be furnished and installed by the Concessionaire under their Concessionaire electrical fit-out work. Transformers and panel boards required for 120/208 volt loads will be provided in electrical rooms. Each 120/208-volt Concessionaire panel shall be served through a 45 KVA transformer. These electrical panels shall serve the anticipated following Concessionaire loads:

- Illuminated Signage
- Exit Booth(s)
- Plate Barrier(s)/Tiger Teeth and other security devices
- Miscellaneous (Receptacles, Additional lighting, etc.)

Concessionaire panels will be located in electrical rooms as follows:

- Levels 1 and 3 – Electrical rooms in zones 1, 3, 4, 5, and 6
- Levels 2 and 4 – Electrical rooms in zones 2 and 4
- Panels in electrical rooms for zones 4, 5 and 6 shall serve Concessionaires on floors above where there are no electrical rooms.

The use of these panels will be designated to each Concessionaire by the Authority and all Concessionaire panels shall be metered by the Authority.

From these demarcation points (panels) listed above, each Concessionaire shall be responsible for installing all electrical lighting panels and power subpanels, electrical conduit, wiring, and fixtures to serve its supplementary lighting and power needs in their vehicle staging and storage areas if required.

Concessionaires are required to use Base Building-provided block outs for conduit distribution through beams and girders and into adjacent structural bays.

When Concessionaire conduit is installed through another Concessionaire's Exclusive Premises, installing Concessionaire must coordinate installation location and path with the affected Concessionaire.

Concessionaires requiring additional circuits, panel boards or power in excess of the amount listed above shall pay the entire cost of installing the additional service, including any necessary power distribution equipment.

Residential grade equipment (load centers, etc.) or devices are not allowed.

New panel boards must have hinged covers with door-in-door construction and should match the panels installed in the base building. Dry type transformers shall be located in compliance with Article 450.13 of the NEC. Transformers shall not be permitted to be located above accessible ceilings. Transformers shall be mounted within the Exclusive Premises in a visible location adjacent to the appropriate electrical panel. Transformers may be either floor mounted on a 4" concrete housekeeping pad or wall mounted with listed wall brackets. Connections to the transformers are to be liquid-tight.

It is the Concessionaire's responsibility to verify service capacity and availability for its space. Each Concessionaire shall be responsible for providing sizing requirements based on its specific need.

Shutdown of the existing building service or any main electrical distribution must be coordinated with the Authority not less than two weeks in advance. All electrical work required to complete the system to accommodate the Concessionaire's plans

shall be performed by the Concessionaire's electrical contractor at the Concessionaire's sole cost and expense.

2.7.8.3 Raceways and Wiring

All Concessionaire wiring (i.e., power, telephone, data, communications, low voltage, controls, etc.) must be in conduit or in cable trays in concealed locations. Conduit used shall be EMT in interior spaces. Any conduit routed in areas that are subject to damage from motorized vehicles, machinery, etc., shall be galvanized rigid steel (GRS). All special systems must be routed in separate conduit.

All wiring is to be copper. Aluminum is not permitted.

All electrical equipment shall be labeled by UL for the intended use.

Exposed conduit ends to have bushings.

Minimum conduit size is 3/4" diameter for homeruns.

Wiremold surface raceways are not permitted.

Metal-Clad (MC) cable and Romex cabling are not permitted.

The Concessionaire shall be aware of all construction joints in this area. Where raceways cross a construction joint, the necessary fitting shall be provided. Refer to structural general notes within the Base Building construction documents for tolerances of movement.

Concessionaires are required to use Base Building-provided block outs for conduit distribution through beams and girders and into adjacent structural bays whenever possible. If space does not permit use of the provided block-outs, Concessionaire may seek alternate routing with Authority approval.

When Concessionaire conduit is installed through another Concessionaire's Exclusive Premises, installing Concessionaire must coordinate installation location and path with the affected Concessionaire.

Please refer to Exhibit 1 hereof for additional information and requirements.

2.7.8.4 Lighting

Lighting within the Common-Public Areas of the ConRAC will be provided as a part of the Base Building scope of work.

Emergency lighting is provided and backed up by the generator. As egress paths cannot be defined until Concessionaire design is complete, the Base Building system provides +/-30 percent of the floor plate lighting on emergency power. Therefore, any egress paths (now or in future reallocation of Exclusive Premises) will be provided with code required egress lighting.

Additional lighting, if needed to highlight signage, exit booths, and plate barriers, shall be done by the Concessionaire under their Concessionaire electrical fit out work. The lighting loads shall be circuited back to the Concessionaire electrical panels.

Concessionaires are required to use Base Building-provided block outs for conduit distribution through beams and girders and into adjacent structural bays whenever possible. If space does not permit use of the provided block-outs, Concessionaire may seek alternate routing with Authority approval.

When Concessionaire conduit is installed through another Concessionaire's Exclusive Premises, installing Concessionaire must coordinate installation location and path with the affected Concessionaire.

2.7.9 Communications Systems

All communication systems shall be in compliance with Authority IT Infrastructure Standards Construction Manual unless otherwise directed by the Authority. See Appendix A for further information.

2.7.9.1 Wired Systems

Each Concessionaire will be responsible for providing all telecommunication conduit and cabling within their areas. Concessionaire shall route conduit and cabling to the nearest telecommunications room dedicated for that Concessionaire.

Concessionaires are required to use Base Building-provided block outs for conduit distribution through beams and girders and into adjacent structural bays whenever possible. If space does not permit use of the provided block-outs, Concessionaire may seek alternate routing with Authority approval.

Prior to installing any conduit, pull box, manhole, or communications cable, the Concessionaire shall submit construction plans that are in accordance with Authority IT Infrastructure Standards Construction Manual and obtain written approval from Authority. All Concessionaire conduit and cables entering the communications rooms shall be furnished and installed by the Concessionaire.

The telecommunication rooms provided by the Base Building will only be used as a conduit and cable access and connection points and will not function as storage areas in any way.

RAC IDFs are provided in the north and south cores on Levels 1 through 3 and on the perimeter of the building on Level 2. Raceway is provided through the perimeter electrical rooms on Levels 1 and 3 to allow cable routing to Level 2.

OS1 single mode fiber optic backbone cabling is provided in the RAC IDFs to allow for connectivity from the perimeter IDFs to the core IDFs and from the core IDFs to the core MDFs located in the CSB.

2.7.9.2 Wireless Systems

Concessionaires may use radio wireless systems working in the unlicensed radio frequency spectrum (900 Mhz. 2.4GHz and 5 GHZ). These devices must be used inside the Exclusive Premises only and the transmission power of those devices must be adjusted to minimize spill over outside the Exclusive Premises. The Authority requires spill over signal to be below -100 dBm.

Concessionaires may use wireless systems working in the licensed radio frequency if approved by the Authority after review of detailed equipment and frequency information. Conflicts with other radio frequency systems will not be permitted.

2.7.10 Video Surveillance and Access Control Systems

Video Surveillance and Access Control systems have not been designed in the vehicle staging and storage area. Should security be desired, the design and overall approach for Video Surveillance and Access Control in Concessionaire shared areas will be the responsibility of the ConRAC Facility Manager.

Adequate infrastructure including power has been designed to support Security systems and installations.

End of Section 2

3.0 CONSTRUCTION STANDARDS

3.1 GENERAL REQUIREMENTS

3.1.1 This section applies to the construction of Concessionaire's Improvements within its Exclusive Premises. Specifically, it applies to the following Exclusive Premises components: Ready/Return Area, CSB, QTA Area, and Service Center Sites. The standards and criteria are intended to provide Concessionaires and their contractors with information required for the construction of their Concessionaire Improvements, to outline coordination of Concessionaire Improvements construction logistics, and allocate responsibilities for the various logistics actions.

All Concessionaires will comply with the Authority Tenant Work Permit Handbook, included as Exhibit G of the Contract.

3.1.2 Concessionaire Improvements Construction Contractors

Each Concessionaire shall be permitted to select and contract with a contractor(s) to construct its Concessionaire Improvements, subject to the following:

Concessionaire shall only award construction contracts to qualified general contractors and sub-contractors licensed in the State of Florida. Concessionaire's contractor(s) must have proven experience with construction of this nature and the ability to execute the Contract Documents in a timely and professional manner in accordance with this Handbook and all Federal, state, local, and Authority rules and regulations, as applicable. The Authority Construction Project Manager reserves the right to withhold acceptance of any contractor, for reasons which may include, but are not limited to:

- Previous failure to safely, timely or otherwise satisfactorily complete construction work at the Airport
- Default on a contract within the last three (3) years
- Default on a contract which required that a surety complete the contract under payment or performance bonds issued by the surety
- Debarment within the last five (5) years by a public entity or any organization which has formal debarment proceedings
- Significant or repeated violations of Federal Safety Regulations (OSHA)
- Failure to have the required State of Florida licenses to perform the work described in the contract
- Failure to demonstrate adequate experience, resources, or personnel to successfully complete the work.

3.1.3 Pre-Construction Meeting

Prior to commencement of construction of Concessionaire Improvements, a mandatory pre-construction meeting will be held. Attendance shall include the Concessionaire, Concessionaire's architect, Concessionaire's contractor, Authority, and the Base Building Design/Builder. The agenda shall include Authority requirements for security, safety, site access, site maintenance, sustainability, inspections, coordination, insurance, and bonds. Concessionaire must provide the following prior to the pre-construction meeting: three (3) sets of "as permitted" construction documents, and copies of all permits, project schedules, project directory, estimate of construction cost and certificates of insurance.

3.1.4 Construction Requirements

Construction schedules and responsibilities shall comply with the Contract between the Authority and Concessionaire. Each Concessionaire and/or its respective design/construction team shall field verify all utilities, other existing construction, and utility conditions affecting its Concessionaire Improvements, and shall coordinate, as required, with the Base Building Design/Builder. Concessionaire shall submit the following required documents to the Authority for Authority's approval prior to commencement of Concessionaire Improvements work.

- Permits: Concessionaire is responsible for acquiring all necessary permits required for constructing Concessionaire Improvements in a timely manner. All permits must be clearly posted at the project site for the duration of the project.
- Certificates of Insurance: Copies of Concessionaire's certificates of insurance which comply with the insurance and indemnification requirements contained in the Contract. The Authority retains the right to review the coverage, form, and amount of the insurance and may require the Concessionaire's contractor to obtain additional coverage if deemed insufficient, at the Concessionaire's expense.
- Emergency Contact Numbers: Emergency contact phone numbers for Concessionaire's general contractor, all subcontractors, and Concessionaire's construction manager. Emergency contact numbers shall be posted at the job site in a manner acceptable to the Authority.
- Construction Schedule: A Bar Chart (Gantt) schedule shall be provided at the pre-construction meeting indicating activities and dates for each trade throughout the entire construction project, including indication of required mechanical and electrical shutdowns. Updated construction progress schedules are to be submitted bi-weekly to the Authority. All work activities must be planned to have minimum impact to the Authority. The work must be done in accordance with the schedule. Written approval from the Authority is required for schedule changes.

- Construction Contract: Copies of executed construction contracts or contract summaries containing AIA or equally explicit language, including construction cost breakdown.
- Safety Plan: Shall be submitted to the Authority and Design Builder.
- Submittal Log: A log of all required submittals shall be submitted if available at the pre-construction meeting. Future submittal logs to be submitted as appropriate.
- Contractor's License: A copy of the Concessionaires contractor's license.
- Shop drawing submittals: Six (6) copies of approved shop drawing and product operating and maintenance data shall be submitted if available at the pre-construction meeting. Future submittals to be submitted as appropriate.
- Payment and Performance Bond: Payment and Performance Bond in accordance with the terms of the Contract.

Within 90 Days of receiving its Temporary Certificate of Occupancy for its Concessionaire Improvements, Concessionaire shall submit to the Authority the Concessionaire's Close-out package.

3.1.5 Progress Meetings: Construction progress meetings will be held every two (2) weeks among Concessionaire, Authority, and the Base Building Design Builder.

3.1.6 Interpretation/Clarifications

The standards within this Handbook must be read and applied in their entirety and complement other legal agreements between the Concessionaire(s) and the Authority. In the event of any conflict or ambiguities between such standards and the Contract, the Contract shall govern.

3.1.7 The Concessionaire/Contractor Agreement

The construction contract between the Concessionaire and the Concessionaire's licensed contractor shall be deemed to have been made in the State of Florida, and shall be governed, interpreted, and construed in accordance with the laws of the State of Florida. The Concessionaire and its contractor shall at all times comply with the provisions of applicable ordinances and Rules and Regulations of the Authority, City of Tampa and County of Hillsborough; laws, rules and regulations of the State of Florida; and applicable Federal laws and Rules and Regulations which in any manner limit, control, or apply to the actions or operations of the Concessionaire, Concessionaire's contractor, subcontractors, subordinate subcontractors of any tier or their employees, agents or servants engaged upon the work or affecting the materials supplied to them or by them. The Concessionaire shall ensure all such construction contracts have been modified to directly bind the Concessionaire's contractor to all provisions, policies, procedures, and requirements as outlined herein, and within the Concessionaire's Contract with the Authority.

3.1.8 Notice to Proceed

Upon receipt of all required documentation listed herein and in the Contract, the Authority Construction Project Manager may issue a written Notice to Proceed (NTP) and schedule a Pre-Construction Conference. Thereafter the work shall be executed as the permits require and shall be completed within the time set forth in the Contract and the Concessionaire/Contractor construction contract.

3.1.9 Close-Out Packages

After issuance of the Certificate of Substantial Completion and Beneficial Occupancy, the Concessionaire shall have ninety (90) Days to provide the following project close-out documentation and any and all other documentation required per the Concessionaire's Contract. If required, Concessionaire has the option to request an extension in writing.

- Certificate of Occupancy
- Lien releases – General contractor
- Lien Releases – Subcontractors, vendors, suppliers
- Architects Certification of Compliance in accordance with the Authority's Design Criteria Manual 2016
- (2) CD's containing PDF's and CAD files of the As-Built record documents
- Certified Test and Air Balancing Report
- SDCM Project Record Worksheet and supporting documentation

3.2 CONCESSIONAIRE ALTERATIONS

For Concessionaire projects implemented after the initial build-out of Concessionaire's Improvements, refer to the Contract for applicable terms and conditions.

3.3 INITIAL CONSTRUCTION OF CONCESSIONAIRE EXCLUSIVE PREMISES

3.3.1 Contracting

3.3.1.1 Concessionaire Construction Contracting

Subject to the provisions of the Contract and this Handbook, Concessionaire is permitted to select and contract with a contractor(s) to construct its Concessionaire Improvements.

Concessionaire may contract with a member of the Base Building Design Team individually or collectively for the completion of Concessionaire's Improvements. Base Building construction schedule or quality must not be affected due to Base Building Design Team participation as Concessionaire Improvements contractor.

3.3.1.2 Base Building Contractor

The Base Building Design/Builder is responsible for the construction site until a Certificate of Occupancy is issued. Concessionaire and the Concessionaire's contractors are required to coordinate with the Authority and Base Building Design/Builder.

The Base Building Design/Builder shall be responsible for the supervision and detailed coordination of the Base Building. The Base Building Design/Builder scope of work is defined in the Base Building contract documents. The Concessionaire shall design its Concessionaire Improvements Exclusive Premises to merge with the Base Building design. The Concessionaire shall clarify all assumptions with respect to Base Building scope not clearly shown within the Base Building contract documents during Concessionaire Improvements design.

3.3.2 Authority Personnel Identification/Access Control

The ConRAC is not located within or directly adjacent to the Airport Operations Area (AOA). Authority Identification Badges are not required.

3.3.3 Safety

Concessionaire and its employees are required to comply with all applicable OSHA standards and any applicable Authority safety program and shall attend a site-specific training session by the Authority or their designee prior to initiating work. The Authority requires a hard-hat, proper eye and hearing protection, high visibility yellow safety vest, gloves, and hard-soled leather shoes for all workers and visitors on the ConRAC job site. This is a multi-employer worksite. As such, the following items will be required in addition to those called out within any applicable Authority safety program.

Concessionaire's contractor shall designate a safety representative who will be on site whenever work is being performed and who shall have the responsibility and authority to ensure the safety of employees and property. The safety representative shall, at a minimum, have completed an OSHA 10-hour Hazard Recognition Course. Concessionaire's contractor shall submit to the Authority no later than the pre-construction conference, the name and resume of the designated safety representative along with documentation of OSHA course completion, a written safety plan, and a statement signed by the Concessionaire's contractor and contractor's superintendent that all of Contractor's employees and all subcontractor employees of any tier have been briefed on and have read Authority's safety plan. The Authority will monitor contractor safety performance.

Concessionaire's contractor shall designate a job superintendent who will be on site whenever work is being performed and managing the installation of the work. Should a

contractor be awarded more than one contract, the superintendent may manage up to three (3) jobs.

- Personal Protective Equipment (PPE) shall be worn at all times in all areas of the construction site.
- Contractors are responsible for compliance with housekeeping and sanitation regulations regardless of what is provided on-site by other contractors. Designated smoking areas will be defined on the site. Smoking, except in designate smoking areas, is prohibited.
- The Base Building Design/Builder will not provide temporary power. Concessionaire will provide its temporary power utilizing generators. All temporary power will be provided with Ground Fault Circuit Interrupter protection.
- All concrete slab penetrations shall be properly evaluated so that post tension cables or in-slab utilities will not be impacted. Subsurface scanning (x-ray/radar/infrared) shall be used, at a minimum, at penetration locations.
- Contractors are responsible for their own dumpsters, scaffolding, ladders, temporary barriers or other equipment. Concessionaire's contractors shall coordinate site logistics with the Authority and the Base Building Design/Builder.
- Motor vehicles and equipment shall be operated in a safe manner around the ConRAC construction area.
- Barricade policy in place is as follows:
 - All barricades will have a sign posted identifying the person-in-charge.
 - Yellow Caution Tape – Do not cross unless hazard is identified and safe passage or access is assured.
 - Red Danger Tape - Do not cross. Permission to cross is granted only by the person-in-charge identified on barricade tape signage.

3.3.4 Base Building Construction Documents

3.3.4.1 Coordinated Shop Drawings

ConRAC Construction Documents will be made available to the Concessionaire's architect and contractors for coordination as reference documents or point of clarification. Concessionaire shall contact the Authority for access. The Concessionaire will route around Base Building infrastructure shown in the Construction Documents.

3.3.4.2 As-Built Construction Documents

The Base Building Design/Builder will be maintaining as-built construction documents at its construction trailers located on site. Concessionaire shall contact the Authority regarding access.

3.3.5 Coordination

3.3.5.1 Site Visits during Concessionaire Improvements Design and Bidding

Concessionaire shall contact the Authority regarding access to the site. Visitors shall be escorted and are required to follow all site safety procedures.

Concessionaire design team and contractor shall attend safety training and attend mandatory site visit prior to initiating work.

3.3.5.2 Coordination with Base Building Contractor

The Concessionaire must coordinate their work to ensure Concessionaire Improvements construction does not impact the Occupancy Permit effort of the Base Building contract. The Base Building Design/Builder must support the Occupancy Permits for the Concessionaire Improvements. All parties must work together to ensure Occupancy Permit efforts are effectively coordinated.

Concessionaire's contractor may not utilize any Common Public Areas or Common Concession Areas for equipment and materials storage and staging, employee parking, hoisting, and contractor vehicle parking and shall coordinate all activities with the Authority and Base Building Design/Builder. Prior to beginning work, the Concessionaire's contractor must accept the approved Authority and Base Building Design/Builder staging area. See Section 3.3.6.0, Logistics, below.

Concessionaire's contractors shall examine their drawings and specifications and determine the points of possible interference between the works of the various trades and the Base Building. If any part of the Concessionaire Improvements is installed which interferes with the Base Building work, the interference shall be eliminated and corrected as approved by the Authority, at the Concessionaire's expense.

Adequate clearance shall be maintained where work is to be installed in restricted spaces, as required by governing codes and laws to allow for access, repairs, maintenance, and the removal of equipment and devices. Should blocking occur, the responsible Concessionaire's contractor shall correct it as approved and required at no cost to the Authority.

3.3.5.3 Coordination with Other Concessionaire' Contractors

Each Concessionaire contractor shall conduct its work so as not to interfere with or hinder the progress or completion of the work being performed by other Concessionaire contractors. All Concessionaire contractors working on the project shall cooperate with each other.

Each Concessionaire contractor shall arrange its work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Concessionaire contractors or the Base Building Design/Builder. Each contractor shall join its work with that of others in an acceptable manner and shall perform it in proper sequence to that of the others.

The Authority reserves the right at any time to contract for and perform other or additional work in or near the Concessionaire's Exclusive Premises work. The Authority will coordinate any work efforts with the Concessionaire.

3.3.5.4 Coordination Meetings

A Concessionaire's contractor representative shall attend weekly coordination meetings with the Base Building Design/Builder and the Authority. The Concessionaire's contractor shall be held responsible for all information distributed at this meeting regardless of who attends.

3.3.5.5 Conflict Resolution

When piping, conduits, ducts, or other items are to run in the same general direction, elevation, or location as either Base Building scope or that of another Concessionaire, the Concessionaire's contractor involved shall request, in writing, a conference to determine the proper allocation of the space or position. Coordination meeting minutes shall be distributed to all interested parties.

All conflicts or disputes arising due to coordination issues between Concessionaires' contractors or the Base Building Design/Builder shall be brought to the Authority in writing for resolution. The decision of the Authority is final and binding.

3.3.5.6 Quality Assurance

Description: Concessionaire's contractor is responsible for establishing and implementing a Quality Assurance program that ensures timely and cost effective completion of the work.

Responsibilities of the Concessionaire contractor:

- Coordinate work of all subcontractors and work of all separate contracts, if any.
- Cooperate with other contractors and the Base Building Design/Builder in performing work at ConRAC construction site.
- Cooperate and coordinate with the Base Building Design/Builder in accommodating any Base Building materials, furnishings, or equipment, and its installation.

- Establish on-site lines of authority and communication.
- Attend and prepare for construction progress meetings with the Base Building Design/Builder.
- Furnish and maintain a competent staff of experienced construction, administrative and supervisory personnel in sufficient numbers to meet the Contract completion date.
- Furnish a detailed time schedule of operations for the entire work; monitor the schedule as work progresses; and revise the schedule at specified intervals to reflect actual progress and submit to the Authority.
- Prior to the start of work, attend a walk through with the Authority and Base Building Design/Builder intended to represent the hand off of the space from the Base Building Design/Builder and the acceptance of the space by the Concessionaire.
- Verify that applications for permits, inspections, temporary facilities, and permanent utilities are processed in a timely fashion.
- Resolve conflicts that may develop among subcontractors and vendors over access to, and utilization of, the restricted spaces available for construction activities, materials, and equipment.
- Thoroughly review the Base Building Drawings and Specifications and, in a timely manner, notify the Authority on issues that require resolution so as not to impact the milestone and completion dates for the ConRAC construction.

3.3.6 Logistics

3.3.6.1 Work Plans

Prior to the start of work, logistics plans that explain the contractor's course of work according to the items below shall be required. These work plans shall identify plans for site access, building access, material and equipment deliveries, staging, lay down, contractor vehicle access, trailer delivery, and dumpster locations. During the course of work, if the Concessionaire needs to tie in to Base Building services outside the footprint of their Exclusive Premises, the contractor shall provide the Authority with a work plan. Work plan templates are available from the Authority. If a work plan is incomplete or not on the template, the Authority may withhold approval.

3.3.6.2 Site Access

The Base Building Design/Builder will provide paths to access the site as needed or required for the Concessionaires to complete tenant improvement work. All off-

shift work shall be coordinated with and approved by the Authority in advance and in writing.

3.3.6.3 Building Access/Ready/Return Areas/QTA Area

All deliveries shall be coordinated with the Base Building Design/Builder. Routes will be confirmed at the pre-construction meeting.

3.3.6.4 Material and Equipment Deliveries

Concessionaire's contractors are responsible for unloading and transporting materials. Concessionaire's contractors shall coordinate and obtain approval for equipment mobilization and demobilization as well as placement on the site with the Authority. Concessionaire's contractor shall provide to the Authority equipment description (make and model), maximum loads, and maximum floor load. Floor loads within the ConRAC are limited. See Section 2.4.7, Structural, for load limits.

Concessionaire's contractor shall protect all expansion joints from construction loads.

Concessionaire's contractor shall coordinate with the Base Building Design/Builder for all deliveries and shall provide flagging personnel as required.

3.3.6.5 Elevators/Hoistways/Hoisting

Elevators will not be available for Concessionaire's contractor use; however, the helical ramps shall be available for the Concessionaire's contractor to make deliveries. Concessionaire's contractor shall coordinate directly with the Base Building Design/Builder, with no less than 24-hour notice.

Concessionaire's contractor shall provide its own hoisting for any equipment or material deliveries or transportation of materials within the ConRAC. All equipment use, storage and staging will be performed compliant with floor load limits. See Section 2.4.7, Structural, for load limits.

3.3.6.6 Equipment

All lifts and equipment shall have white rubber tires to avoid damage to finish floors.

Provide floor slab protection from equipment oil/hydraulic fluids.

3.3.6.7 Staging

Limited lay down area is available. Concessionaire's contractors are encouraged to schedule just-in-time deliveries. A small assigned lay-down area at grade will be available to the Concessionaire's contractors. Concessionaire's contractor shall receive a diagram indicating the location of their specific lay-down area at the Pre-Construction Meeting. Concessionaire's contractors must not obstruct circulation and access routes. The Authority may take back, change the size of the area, and/or relocate a Concessionaire contractor lay-down area at the Authority's discretion.

Lay-down areas must be kept clean at all times to the satisfaction of the Authority. Daily and end-of-shift cleaning is required.

Concessionaire's contractor shall protect floor slab sealant material from any damage.

3.3.6.7.1 Materials

Materials may be located in the assigned lay down area. It is Concessionaire's contractor's responsibility to confirm materials stored do not exceed the load limits. See Section 2.4.7, Structural, for load limits. Concessionaire's contractor shall protect all expansion joints from construction loads.

Material stocked in the building must be stored within the Concessionaire's Exclusive Premises. Concessionaire's contractors shall not store combustibles (e.g. card board packaging, wood crating) in the ConRAC and QTA Areas except for work in progress during a work shift. All combustibles shall be disposed of in the dumpsters or off-site at the end of each work shift.

3.3.6.7.2 Contractor Vehicles

Each Concessionaire is allowed one parking space for one contractor vehicle on site. Location will be provided at the Pre-Construction Meeting. Additional Concessionaire contractor vehicles may be parked at that Concessionaire's Exclusive Ready/Return Premises with approval of the Base Building Design/Builder and the Authority.

Overnight parking of contractor's vehicles is prohibited.

3.3.6.7.3 Trailers

Concessionaire's contractors may have construction/office trailers on the site provided that the locations for those trailers are coordinated with the Authority in advance.

3.3.6.7.4 Dumpsters

Concessionaire's contractors are responsible for providing dumpsters for use during the construction. Dumpster locations are to be coordinated with the Base Building Design/Builder and the Authority. Concessionaire's contractors are required to keep the dumpster areas clean and free of debris to the satisfaction of the Authority.

3.3.7 Temporary Facilities and Controls

3.3.7.1 Construction Barricades

Barricades may be located no more than six feet beyond the Concessionaire's Exclusive Premises. Construction barricades shall not be removed before the punch-list items are completed and approved by the Authority.

3.3.7.2 Keying

The Authority will do final keying. The Concessionaire or its contractor shall order construction cores and keys and provide such keys to the Authority.

3.3.7.3 Temporary Utilities

Availability: Refer to Construction Drawings for type and approximate probable locations. The Concessionaire's contractor shall verify location and availability.

Payment: The Authority will pay for water and electricity used for Concessionaire's Improvements construction purposes at the operational floor plates, CSB, and QTA Area until deadline for Substantial Completion of Concessionaire's Improvements.

Concessionaire's contractor must provide its own services listed below:

- Concessionaires will not be authorized to use any Base Building electrical panels for temporary power. Temporary power will be provided by means of portable generators
- Construction/temporary lighting of the Exclusive Premises
- Heating (Temperature) until such time as the building services are operational
- Filtration / Ventilation / Construction Barricades/ and Dust Enclosures
- Cell phones and phones for the contractor and employee use

- Sanitary Facilities – Base Building restrooms will not be available at any time for Concessionaire contractors. Concessionaire contractors must provide and use self-contained portable toilets. Location of portable toilets shall be coordinated with the Base Building Design/Builder. Violation and use of the Base Building restrooms is cause for removal from the site. Trash dumpsters to be provided by Concessionaire contractor, and the locations shall be coordinated with the Base Building Design/Builder.

No welders shall be connected to the Authority's electrical systems.

A non-potable permanent building water source will be available at each building level for use by the Concessionaire's contractor.

3.3.7.4 Security of Concessionaire's Contractor Site

Security and protection of each Exclusive Premises is the responsibility of the individual Concessionaire's contractor.

Security and protection of stored construction equipment and materials is the responsibility of the individual Concessionaire's contractor.

3.3.7.5 Progress Cleaning and Waste Removal

Throughout all phases of construction, including suspension of the work, and until Required Completion Date, the Concessionaire's contractor shall keep the work area clean and free from rubbish, excess materials and debris generated by Concessionaire Improvements construction activities.

At all times, and as may specifically be requested by the Authority, cleanup and remove all refuse resulting from the daily work in order that the project site remains free from an accumulation of construction debris. Leave the site broom-clean at the end of every shift. Upon failure to do so within 24 hours after request by the Authority to the Concessionaire, such cleanup work may be done by the Authority and the cost thereof shall be charged to the Concessionaire.

Concessionaire's contractor is responsible for protection of Base Building at all times.

Concessionaire's contractor shall provide adequate storage for all items awaiting removal from the job site and observe all requirements for fire prevention and protection of the environment.

Concessionaire's contractor shall take care to avoid spread of dust, dirt, debris, water, paint, cement, sprayed materials, and other substances about the site or

onto adjacent property. Splatters or spills of materials shall be cleaned up at time of occurrence. Cleaning materials shall not harm the finished surface being cleaned.

Concessionaire's contractor shall inform all trades and workers of clean-up requirements specified, and monitor where work is in progress to ensure full compliance with all clean-up requirements in this and other Sections.

Concessionaire's contractor shall not dispose of any rubbish or waste materials in fills or backfills. Disposal of wastes such as paint, thinner, mortar mix into drains is prohibited at all times. All disposal activity shall conform to Federal, state and local laws, ordinances, rules, regulations and pertaining orders. Concessionaire's contractor shall attend the Authority's Spill Prevention Training.

3.3.7.6 Photo Verification of Existing Conditions Prior to starting Work

Concessionaire's contractors shall provide the Authority with photos documenting condition of adjacent Base Building finishes prior to starting work.

3.3.7.7 Protection of Base Building

Any damage to the Base Building caused by Concessionaire's construction activity shall be repaired by the Concessionaire to the satisfaction of the Authority. Concessionaire's contractors will be held responsible for any such damage caused by their crews.

Concessionaire's contractors are responsible for general protection of Base Building or other Concessionaire Improvements work associated with the Concessionaire contractor's efforts. Concessionaire's contractors are obligated to take all reasonable measures to protect existing finishes or adjacent work, whether complete or under construction, whether or not the Authority has accepted them. To that end, all wheeled equipment in the ConRAC is required to have pneumatic wheels (white). The Authority is not responsible to protect, repair, or clean up after Concessionaire contractor operations.

Base Building Mechanical Filters: Concessionaire's contractors are required to take reasonable steps to control dust caused by their construction operations. If a Concessionaire's contractor does not take adequate steps to control dust caused by their construction operations and the Base Building mechanical system is damaged, or it is necessary to replace the filters early, the cost for repairs or replacement filters will be charged to the Concessionaire contractor.

Base Building materials and finishes that must be removed to accommodate the Concessionaire's Improvements effort must be preserved. Removal must be coordinated with the Authority and the Base Building Design/Builder prior to removal. The Concessionaire's contractor must map and number the items for reinstallation at a later date. Items to be removed must be crated for delivery to the Authority. Concessionaire is responsible to re-install or replace such Base Building materials and finishes.

3.3.7.8 Contractor Employee Services

Drinking water for Concessionaire's contractor employees is to be provided by each Concessionaire contractor.

Smoking is permitted ONLY in designated area(s) on the site. Break areas are limited to the Exclusive Premises. Concessionaire's contractors shall request approval of a designated area for breaks from the Authority. This designated area shall be kept clean at all times.

Base Building rest rooms shall not be used by Concessionaire's contractors.

Concessionaire contractor's employee parking is not available on the construction site. The Authority does not have an off-site location available. Concessionaire's contractors are responsible for transporting their employees to and from the worksite.

An employee load/unload zone will be designated.

3.3.7.9 Cutting and Patching; Attachment to ConRAC Structure

Roof Penetrations – No penetrations are permitted.

Changes to or additions of new windows or doors to the exterior envelope of the Base Building are prohibited.

For floor penetrations and openings and attachment to structure see Section 2.4.7, Structural. Results of testing shall be provided to Authority prior to any penetration of or attachment to structure. Contractor shall obtain Authority approval of a penetration plan prior to making penetrations.

Concessionaires are required to use Base Building-provided block outs for conduit distribution through beams and girders and into adjacent structural bays whenever possible. If space does not permit use of the provided block-outs, Concessionaire may seek alternate routing with Authority approval.

When Concessionaire conduit is installed through another Concessionaire's Exclusive Premises, installing Concessionaire must coordinate installation location and path with the affected Concessionaire.

Base Building vertical sleeves at each column within both the customer and exit booth enhanced loading zones will be provided at Levels 2 and 3 for condensate drainage to a floor sink at Level 1. Piping shall be installed in a uniform and aesthetically pleasing manner as tight to the structure as possible. Piping should be consolidated whenever possible to minimize the number of runs. Piping routes and methods are to be approved by the Authority prior to installation.

3.3.8 Acceptance of Concessionaire Exclusive Premises

Concessionaire shall perform a professional review of its Exclusive Premises prior to awarding a contract for and initiating Concessionaire Improvements construction. Concessionaire shall provide a statement in writing to the Authority indicating the space has been inspected and appears to be what was anticipated and is acceptable to construct the Concessionaire Improvements as intended.

3.3.9 Inspections

Concessionaire's contractor must receive all City, County, and Federal inspections as required by their permits and all associated rules and regulations. The Authority will inspect all Concessionaire Improvements projects for full compliance with the Contract Documents and Authority construction, safety, and security standards.

The Authority will observe Concessionaire Improvements construction to determine if designs, materials, equipment, furnishings, fixtures, systems and finishes installed satisfy the requirements of the Contract Documents. Additionally, Authority will work directly with the Concessionaire to facilitate and coordinate resolution of all Concessionaire design and construction issues.

The Authority will periodically review all Concessionaire construction sites and may determine any work to be defective that is not in compliance with the Contract Documents or is not in compliance with Authority standards. Additionally, should the appearance and performance of any element of the work, in the opinion of the Authority, fail to conform to the Authority standards for such work, that work may be declared defective. Any such rejection will be communicated by the Authority in writing to the Concessionaire with a courtesy copy to the Concessionaire's contractor. The Authority has the right to stop all construction until a resolution satisfactory to the Authority is reached.

The Concessionaire shall pay all costs associated with correcting defective work to the Authority's satisfaction. If any portion of the work is covered and inaccessible for inspection

contrary to the request of the Authority or contrary to requirements of the Contract Documents, such covering or finishes must be uncovered for observation and replaced without charge to the Authority.

The Authority's inspectors will work directly with the Concessionaire's contractor to facilitate and coordinate construction logistics and inspect construction sites for compliance with Authority standards.

The Authority inspector maintains authority to stop construction activities if it is determined that Authority safety and security requirements are not being followed or observes an unsafe working condition. The Concessionaire's contractor shall allow the Authority access and provide the means of access to the Concessionaire Improvements construction. The Concessionaire's contractor shall respond to any reasonable request to further the Authority's ability to complete construction site observations, inspections and testing. Such inspections shall not relieve the Concessionaire's contractor of any of its obligations under its contract with the Concessionaire.

End of Section 3

Appendix

LIST OF EXHIBITS

1. HILLSBOROUGH COUNTY AVIATION AUTHORITY DESIGN CRITERIA MANUAL 2016
2. HCAA TELECOMMUNICATIONS INFRASTRUCTURE STANDARDS SEPTEMBER 14, 2015
3. OVERALL LEVEL 1 FLOOR PLAN – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS
4. OVERALL LEVEL 2 FLOOR PLAN – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS
5. OVERALL LEVEL 3 FLOOR PLAN – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS
6. OVERALL LEVEL 4 FLOOR PLAN – EXCLUSIVE-PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS
7. INCREASED STRUCTURAL LOAD AREA – LEVELS 2 & 3
8. TYPICAL BARRIER PLACEMENT – LEVEL 1
9. TYPICAL BARRIER PLACEMENT – LEVELS 2 & 3
10. TYPICAL BARRIER PLACEMENT – LEVEL 4 (OVER READY/RETURN)
11. TYPICAL BARRIER PLACEMENT – LEVEL 4 (OVER QTA)
12. CSB – EXCLUSIVE PREMISES AREAS – LEVEL 4
13. QTA – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS – LEVEL 1
14. QTA – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS – LEVEL 2
15. QTA – EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS – LEVEL 3
16. QTA – CONCESSIONAIRE IMPROVEMENT AREAS – LEVEL 1
17. QTA – CONCESSIONAIRE IMPROVEMENT AREAS – LEVEL 2
18. QTA – CONCESSIONAIRE IMPROVEMENT AREAS – LEVEL 3
19. QTA – TYPICAL CAR WASH BAY

20. QTA – TYPICAL FUEL ISLAND (TWO-POSITION)
21. READY/RETURN – ZONES DEFINED FOR EXIT/CUSTOMER SERVICE BOOTHS – LEVEL 1
22. READY/RETURN – ZONES DEFINED FOR EXIT/CUSTOMER SERVICE BOOTHS – LEVELS 2 & 3
23. READY/RETURN – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
24. READY/RETURN – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
25. READY/RETURN – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
26. READY/RETURN- ELECTRICAL ROOM/IDF ROOM/KEY PLAN
27. QTA – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
28. QTA – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
29. QTA – ELECTRICAL ROOM/IDF ROOM/KEY PLAN
30. READY/RETURN – TYPICAL IDF ROOM
31. READY/RETURN – TYPICAL IDF ROOM
32. READY/RETURN – TYPICAL IDF ROOM
33. READY/RETURN – TYPICAL ELECTRICAL ROOM
34. READY/RETURN – TYPICAL ELECTRICAL ROOM
35. READY/RETURN – TYPICAL ELECTRICAL ROOM
36. QTA – TYPICAL IDF ROOM
37. QTA – TYPICAL ELECTRICAL ROOM
38. QTA – TYPICAL ELECTRICAL ROOM
39. CSB – SIGNAGE PLACEMENT AND SIZE
40. CSB – SIGNAGE PLACEMENT AND SIZE - SECTION
41. AREA 4 CONCESSIONAIRES CSB MINI-MALL COUNTER-LIMIT LINE
42. CONCRETE BARRIER DESIGN STANDARDS
43. TPA SUSTAINABLE MANAGEMENT PLAN (SMP), SEPTEMBER 2014
44. TPA SUSTAINABLE DESIGN CRITERIA MANUAL (SDCM), SEPTEMBER 2014
45. SUSTAINABLE DESIGN CRITERIA MANUAL (SDCM) PROJECT RECORD WORKSHEET



Exhibit-1

HILLSBOROUGH COUNTY AVIATION AUTHORITY DESIGN CRITERIA MANUAL 2016



Hillsborough County Aviation Authority

Design Criteria Manual

Table of Contents

Introduction

Section 1 Civil Engineering and Site Work

- 1.1 Abbreviations
- 1.2 Roadways
- 1.3 Airfield Paving: Runways, Taxiways, and Aprons
- 1.4 Surface Water Management
- 1.5 Site Utilities
- 1.6 Fueling Systems: Aircraft and Automotive - Reserved
- 1.7 AGT Guideways - Reserved
- 1.8 Landscaping and Irrigation
- 1.9 Site Signage and Graphics - Reserved
- 1.10 Access Control - Reserved
- 1.11 Fencing and Gates - Reserved
- 1.12 FAA Systems - Reserved

Section 2 Architecture – Building Engineering

- 2.1 Applicable Codes and Reference Standards
- 2.2 Building Objectives - Planning Criteria

Section 3 Building Sections and Components

- 3.1 Division 1 - General Requirements - Reserved
- 3.2 Division 2 - Site Work - Reserved
- 3.3 Division 3 - Concrete
- 3.4 Division 4 - Masonry
- 3.5 Division 5 - Metals
- 3.6 Division 6 - Wood and Plastics
- 3.7 Division 7 - Thermal and Moisture Protection
- 3.8 Division 8 - Doors and Windows
- 3.9 Division 9 - Finishes
- 3.10 Division 10 - Specialties
- 3.11 Division 11 – Equipment - (Reserved)
- 3.12 Division 12 – Furnishings - (Reserved)
- 3.13 Division 13 - Special Construction
- 3.14 Division 14 - Conveying Systems
- 3.15 Division 15 - Mechanical
- 3.15 Division 15 - Mechanical (Continued)
- 3.16 Division 16 – Electrical
- 3.17 Telecommunications Infrastructure Standards
- 3.18 Aviation Authority Labeling Standards

Appendix A – Main Terminal Public Restroom Criteria

Introduction

The criteria in this manual applies to all capital development projects administered by the Aviation Authority at Tampa International Airport, Peter O. Knight Airport, Tampa Executive Airport and Plant City Airport. The criteria in this manual is optional for any tenant development on airport property.

The objective of this design criteria manual is to provide guidance to design professionals in areas where owner preferences may be provided in a manner that does not detract from design intent. At all times it remains the responsibility of the design professional to ensure that all aspects of the design including plans, technical specifications and shop drawing reviews provide a finished product that complies with project objectives and all applicable codes, standards and regulations. It is incumbent on the design professional to identify and resolve any conflicts between criteria established in this and other criteria manuals published by the Authority with industry regulatory and advisory criteria and guidance.

Other sources of design criteria provided by the Authority include:

- Main Terminal Interior Design Criteria Manual
- Sustainable Design Criteria Manual
- Concessions Design Criteria Manual
- Land Use Standards

Copies of these documents may be found on the Authority's website.

Section 1 – Civil Engineering and Site Work

1.1 Abbreviations for Civil Engineering and Site Work Sections

AUTHORITY	Hillsborough County Aviation Authority
CFR	Code of Federal Regulations
COT	City of Tampa
DOT	Department of Transportation
EPA	Environmental Protection Agency
EPC	Hillsborough County Environmental Protection Commission
ERP	Environmental Resource Permit
FAA	Federal Aviation Administration
FAC	Florida Administrative Code
FAR	Federal Aviation Regulations
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
NGVD	National Geodetic Vertical Datum (1929 or 1983 as applicable)
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination system
OSHA	Occupational Safety and Health Administration
PC	City of Plant City
SWFWMD	Southwest Florida Water Management District
SWPPP	Stormwater Pollution Prevention Plan
SPCC	Spill Prevention Control and Countermeasure Plan

1.2 Roadways

1.2.A. Related Sections – Reserved

1.2.B. Scope – Reserved

1.2.C. Applicable Codes and Reference Standards

The design of all Authority roadways intended for automotive vehicular use, and not otherwise subject to any state or federal aviation authority standard, will be in accordance with the design criteria contained in the applicable edition of the State of Florida “Manual of Uniform Minimum Standards for Design, Construction, and Maintenance of Streets and Highways”.

1.2.D. Planning Objectives – Reserved

1.2.E Authority Standards – Reserved

1.3 Airfield Paving: Runways, Taxiways, and Aprons

1.3.A Related Sections – Reserved

1.3.B Scope – Reserved

1.3.C Applicable Codes and Reference Standards

Minimum design standards will be in accordance with the appropriate Advisory Circulars and Federal Aviation Regulations.

All proposed construction standards will be in accordance with Advisory Circular 150/5370-10, Standards for Specifying Construction of Airports.”

Pavement designs and establishment of subgrade characteristics and properties will be in accordance with the latest edition of the FAA Advisory Circular, AC 150/5320-6, *Airport Pavement Design and Evaluation*.

Erosion and sediment control measures must conform to the specifications contained in the document, Roadway and Traffic Design Standards Erosion Control and Water Quality, published by the State of Florida Department of Transportation.

Geotechnical testing should conform to applicable sections or ASTM Volume 04.08, Soil and Rock; Building Stones; Geotextiles.

Geotechnical testing and engineering will be conducted by corporations and experienced individuals licensed to practice this specialty by the State of Florida.

1.3.D Planning and Functional Criteria

Critical Design Aircraft: Critical Design Aircraft (CDA) will be identified for each project design pertaining to any of the following airfield elements:

- a. Width, Clearances, and Separations of Taxiways and Parking Aprons: The CDA, or its associated Airplane Design Group Number, per AC 150/5300-13, will be recommended by the designer and approved by the Authority.
- b. Taxiway Design Group will be recommended by the designer and approved by the Authority.

Geometrics: All airfield geometry will conform to the current Airport Layout Plan (ALP) where applicable, and will accommodate all Group V aircraft unless

otherwise directed by the Authority. Detailed geometry not included or referenced on the ALP will conform to the requirements in AC 150/5300-13 and other relevant advisory circulars, except as directed by the Authority.

1.3.D.1 Line-of-Sight

- a. All public-use taxiways will conform to the line-of-sight criteria of AC 150/5300-13, *Airport Design*. Public use taxiways, under the control of the Air Traffic Control (ATC) tower, will be in full view of the tower cab, full length and width. An ATC Tower Line-of-Sight (Shadow) study will be performed by the designer if in a potential ATC shadow zone. The responsibility for preparing this plan will be as directed by the Authority. Aprons and exclusive-use taxiways are not under the control of ATC and, therefore, normally do not require line-of-sight.
- b. Line-of-sight considerations may also be required when facilities are planned and designed near or in the vicinity of FAA NAVAIDS. Unless otherwise directed by the Authority, all proponents of construction, except those funded under the Airport Improvement Program (AIP), will complete an FAA Form 7460-1, "Notice of Proposed Construction or Alteration," with appropriate information and exhibits required by the FAA on which the FAA can conduct an Aeronautical Study of the proposal.

1.3.D.2 Gradients and Slopes

All paved and turfed areas on the airfield AOA will conform to the requirements of AC 150/5300-13 and the following criteria:

- a. Side slopes on excavation (cut) and embankment (fill) areas outside of runway and taxiway safety areas will have 4:1 maximum slope.
- b. The standard crowns (transverse slope) on taxiways will be 1.5%, except where flatter grades are necessary due to intersection transition in which case they will be a minimum of 0.5% for concrete pavements and 0.7 % for asphaltic pavements.
- c. All taxiway shoulders will be graded 5% surface gradient for 10 feet, and then graded between 3% to 5% surface gradient to the edge of the taxiway safety area.
- d. Pavement gradients on aircraft parking aprons will be 0.5 to 1.0%. Where conforming or transitioning to existing facilities, and except for 50 feet from terminal buildings at the gate/parking positions, they will be 1.0% to conform to NFPA Standard 415 on airport terminal buildings, fueling ramp drainage, and loading walkways.

- e. Gradients and slopes for the following areas will conform to the requirements of AC 150/5300-13 for the respective critical aircraft or mix of aircraft: Obstacle Free Zone, Runway and Taxiway Safety Areas, Clearway, and Stopway.

1.3.D.3 Aprons

Aircraft parking aprons will be based on an Apron Utilization Plan, approved by the Authority. The responsibility for preparing this plan will be as directed by the Authority. Apron utilization criteria, including wingtip clearance, will be approved by the tenant and the Authority, and will be within the maneuvering limits of the Aircraft Characteristics Manual of the Critical Design Aircraft.

1.3.D.4 Geotechnical Investigation

Guidelines for a geotechnical investigation are contained in FAA AC 150/5320-6, *Airport Pavement Design and Evaluation*. At a minimum, the following guidelines should be observed in the design investigation:

Standard Penetration Test (STP) boring should be performed per 10,000 square feet of area.

- a. In taxiway areas, STP borings should be performed at 200-foot intervals along centerlines.
- b. Borings should be SPT, and should extend to at least 10 feet in depth. At approximately 500-foot centers, borings should extend a minimum of 25 feet in depth.
- c. Any potential borrow material sources should be adequately investigated to evaluate acceptability.
- d. Borings and testing locations should carry airport grid coordinate locations, and ground surface NGVD elevations.
- e. Testing locations, procedures, and times of testing should be established well in advance of testing, and must be coordinated with representatives of the Authority. Test locations should be cleared for utilities by the Design Consultant, the Authority, and affected utility companies. All areas disturbed by testing should be restored satisfactorily.
- f. Sufficient field and laboratory testing should be performed to establish classifications and properties for the various strata encountered. This will include determination of Unified Soil Classifications,

plasticity/consolidation properties, permeability, in-place density, typical bearing ratio-moduli values, and groundwater conditions.

1.3.D.5 Earthwork

Specific recommendations will be made for the project needs in the areas of clearing and grubbing, undercutting, proof rolling, embankment construction, suitable materials, compaction, stabilization, subgrade preparation, and any special procedures to be used. FAA Advisory Circulars and/or FDOT standards will be reviewed as applicable.

WFor unit cost projects, the earthwork will be separated into the following pay items as appropriate:

- unclassified excavation
- unsuitable excavation
- embankment
- borrow

1.3.D.6 Pavement Design

Designer will provide a pavement design utilizing FAARFIELD software in accordance with the methods prescribed in AC 150/5320-6. The determination of recommended pavement sections should consider all factors including initial cost, constructability, long-term maintenance, past experiences at Tampa International Airport and adaptability to future changes.

1.3.D.7 Pavement Type

Unless directed otherwise by the Authority, all air carrier airfield pavements will be rigid Portland Cement Concrete (PCC) pavement, General Aviation Taxiways or Ramps and blast protective pavement (shoulders) will be asphaltic concrete pavement. Blast protective pavement type will be recommended by the designer, based on an occasional pass by the critical maintenance or Airfield Rescue and Fire Fighting (ARFF) equipment. General aviation pavement will be designed for the most demanding aircraft and approved by the Authority.

1.3.D.8 Underdrains

An underdrain/edge drain system should be reviewed for necessity on all pavement sections. If underdrains are not recommended, the designer will present the basis on which they are not recommended and submit to Authority for approval. System layout, elements, and design will be designed based on soils investigation results, pavement function, and other relevant factors and parameters.

1.3.D.9 Concrete Demolition

All existing airfield concrete pavement to be removed will be crushed to meet the FAA P-209 grading specification for use in the project or stockpiled for future use as directed by the Authority. This material will be incorporated into the following items and approved by the Authority as applicable:

- a. Aggregate source for econocrete subbase (FAA P-306).
- b. Aggregate source for shoulder base course. (FAA P-209)

*Existing econocrete subbase materials will not be incorporated into the crushing operations when creating the FAA P-209 crushed aggregate material.

1.3.D.10 Subbase and Base Course

All full-strength airfield pavements will include Econocrete subbase (FAA P-306) as a minimum. A crushed aggregate base course (FAA P-209) will also be included if sufficient crushed concrete materials are available.

1.3.D.11 Portland Cement Concrete (PCC) Pavement

PCC will be designed based on 650 PSI flexural strength at twenty-eight (28) calendar days. Mix design proportions and criteria will meet FAA P-501 (AC 150/5370-10). Longitudinal and transverse construction and contraction joints will be doweled. Keyways are not allowed. Surface texture may be burlap drag or broom finish. Joints will be sealed with Dow Corning 888 or 890-SL silicone as applicable. Preformed joint sealers will be used on all sawed contraction joints.

1.3.D.12 Asphalt Pavement

Asphalt pavement will be used on shoulders and General Aviation Ramps and Taxiways/Taxilanes. Mix design proportions and criteria will be FAA P-401 (AC 150/5370-10, *Standards for Specifying Construction of Airports*). All concrete-to-asphalt conform joints will be sawed and sealed to retard moisture intrusion and vegetation growth.

1.3.D.13 Pavement Marking

Pavement marking of aprons, taxiways, taxilanes, and paved shoulders will conform to AC 150/5340-1, *Standards for Airport Markings*, and approved by the Authority. Taxiway centerline markings and apron taxilane marking will be yellow and a minimum of 12 inches wide. All taxiway/taxilane centerline markings (on concrete) will have a 6" black outline applied. Lead-in lines will be yellow, fire lanes will be red, and service roads will be white.

Designers are responsible for verifying the accuracy of existing airfield pavement markings within their area of work. It is not acceptable to include plan notes to re-paint existing markings in their current location. All marking plans must include detailed marking layout data to ensure the final markings are fully compliant with FAA criteria. If proposed pavement marking will result in a paint dry film thickness greater than 40 mils, then full marking removal must be specified prior to painting.

Taxiway shoulder markings will not be installed.

1.4 Surface Water Management

1.4.A Related Sections – Reserved

1.4.B Scope – Reserved

1.4.C Applicable Codes and Reference Standards

The drainage requirements of the Authority and the FAA will be met.

The drainage connection permitting requirements of the FDOT, Chapter 14-86, F.A.C., will be met if applicable.

All proposed drainage structures and construction methods will be in accordance with FDOT *Roadway and Traffic Design Standards* (Latest Version - English Units), and Standard Specifications for Road and Bridge Construction most recent version (English Units). Special design considerations will be applied when drainage structures are located within airfield pavement or safety areas of the airfield.

All dredge and fill activities in wetlands and waters of Florida may require permits. All permits will be obtained for these activities from FDEP, SWFWMD, HCEPC, and the USCOE (United States Army Corps of Engineers).

The surface water management system design methods will be in accordance with approved SWFWMD, FDOT, City of Tampa, and FAA design methodologies.

All building, parking, and roadway areas will meet SWFWMD, City of Tampa, and other applicable federal, state, or local criteria regarding finish floor or low edge of pavement elevations.

1.4.D Guidelines for Surface Water Management Design

All features of any storm water management system proposed for the Authority projects are to be conceptually visualized and depicted on preliminary drawings, coordinated with the Authority's existing Master Stormwater Management Plan and approved by the Authority. These documents are to be presented in preliminary meetings with applicable regulatory agencies for comments and conceptual approval prior to final design.

Coordination with regulatory agencies, such as SWFWMD, City of Tampa, FDEP, EPC and so forth, will be conducted prior to the design of the surface water management system to determine the exact regulatory permitting requirements.

Representatives of SWFWMD, FDEP, and HCEPC should be contacted and arrangements made for a field review. Existing permitting treatment systems should be identified and modifications/mitigation plans coordinated with regulatory agencies.

All permit application documents will be submitted to the Authority for review and comment prior to their submission to any agency.

The surface water management system must be designed to alleviate existing flooding problems to permanent structures within the project area. Any relocated drainage structures or storm water systems must be able to convey the flows of their initial design. There should be no decrease in peak flow capacity to existing storm water systems or increases in hydraulic gradients which would cause increased flooding on or off airport property as a result of the proposed surface water management system.

The modifications to the surface water management system will not degrade the existing water quality of the Spruce Street Canal Basin. The co-mingling of treated and untreated storm water runoff should be prevented.

Off-site areas upstream and downstream will not be adversely affected by the time, stage, volume, or point or manner of discharge from the surface water management system.

Existing pump/irrigation systems will be considered in the surface water management system design. Existing storm water control structures (i.e., weirs, orifices, and so forth) will be considered in the surface water management system design.

The alignments of proposed conduits do not necessarily have to meet the alignment of existing ditches. The conduit lengths and sizes should be kept to the minimum requirement necessary to meet the design criteria.

The velocities of flow over grassed areas should be kept to a low enough level to prevent erosion.

Extended periods of ponding in depressed areas should be prevented to decrease the potential of “bird strikes.”

Clearances of ground water levels to the pavement bases should be sufficient to prevent adverse impacts to the pavements and pavement bases.

The net differences in impervious areas (i.e., pavement added, versus pavement removed), will be considered in the surface water management system design and permitting. A zero net difference will be achieved if possible.

If storm water pond facilities are necessary for quantity and for quality treatment, FAA AC 150/5200-33 *Hazardous Wildlife Attractants on or near Airports* will be reviewed. Ponds will be designed for dry detention rather than wet detention. Side slopes will be 4:1 (minimum) with a ten foot (minimum) maintenance berm. Whenever possible water quality standards will be met by utilizing detention with effluent filtration systems (under drains). For airfield projects, quality standards will be met by utilizing Best Management Practices (BMPs) design such as vegetative control measures wherever possible. Water quantity standards may or may not be required depending on the drainage basin in which the project is located.

All existing contributing drainage areas including roadways, parking areas, off-site areas, and so forth, will be included in the surface water management system design.

1.4.E Storm Sewers

All Drainage Structures will conform to the FDOT’s *Roadway and Traffic Design Standards*, latest version. Special design considerations will be applied when drainage structures are located within airfield pavements or safety areas of the airfield.

Except as may be specifically approved by the Authority, all storm drain pipe is to be reinforced concrete, of a minimum diameter of 15 inches, and conform to the FDOT *Standard Specifications for Road and Bridge Construction*, Concrete Pipe Section 941-1 and 941-2. Other pipe types that may be considered are polyvinyl chloride and corrugated polyethylene as appropriate for the project and approved by the Authority.

For all pipes 36” in diameter and greater to be installed on airfield projects, the contractor must provide the pipe supplier certified D-load test results for any lot of pipe delivered to the site.

Pipe bedding will consist of a bed of granular material having a thickness of at least six inches (6") below the bottom of the pipe and extending up around the pipe for a depth of not less than 30% of its vertical outside diameter. Filter fabric will be placed over the granular material and each pipe joint will be wrapped with a minimum one foot (1') overlap.

All pipes are to be kept clear of debris at all times during construction. After the completions of all earthwork and the placement of all sod and/or seeding and mulching and before final acceptance, all pipes will be cleaned of silt, debris, etc. to the satisfaction of the Engineer. This may require the de-watering of the pipes. Care must be taken during this operation so as not to damage the pipes or the surrounding areas.

The minimum physical slope will produce a flow velocity in Concrete pipe of 2.5 fps min. and 12.0 fps max. when flowing full. The minimum physical slope will produce a flow velocity in Corrugated Metal Pipe (when allowed) of 2.5 fps min., and 10.0 fps max. when flowing full.

The hydraulic gradient elevation in manholes and inlets will be a minimum of 1.0 foot below the throat of inlet or top of manhole unless minor energy losses are considered in the hydraulic calculations. The minimum physical slope will produce a flow velocity of 2.5 fps (min.) and 12.0 fps max when flowing full.

The maximum length of pipe between access entry structures will be 300 feet for pipes less than 18 inches, 400 feet for pipes 24-36 inches, and 500 feet for pipes greater than 36 inches.

1.4.F NPDES Generic Permit for Construction Activities

A NOI for NPDES Generic Permit must be filed with FDEP for construction sites where more than 1 acre of land is disturbed. FDEP Form 62-621.300 (4) (b) must be submitted and a copy of a SWPPP must be kept onsite. If an Environmental Resource Permit (ERP) was issued by SWFWMD, the Erosion and Sediment Control Plan prepared as part of the permit requirements can be used in lieu of a SWPPP, provided that all requested information is included in the Erosion and Sediment Control Plan. At the completion of the work Notice of Termination, on Department form 62-621.300(6) must be submitted.

1.5 Site Utilities

1.5.A Related Sections

1.5.A.1.1.1 Section 1.4 Surface Water Management

1.5.A.1.1.1.2 Section 2.2.A.6 Typical Facility Plumbing

1.5.A.1.1.1.3 Section 3.15

1.5.B Scope – Reserved

1.5.C Sanitary Sewers and Force Mains

Gravity sanitary sewers will be Polyvinyl Chloride for normal use and Ductile Iron for occasions requiring special strength or protection.

Polyvinyl Chloride pipe and fittings will conform to ASTM Specifications D-304 (SDR 35). The bell end of joints and fitting will have a rubber sealing ring to provide a tight, flexible seal in conformance with ASTM D-3212-76. The maximum laying length will be 12.5 feet.

Ductile Iron pipe and fittings for gravity sewers will conform to the specification for Ductile Water pipe (see Section 1.4.E), excepting that Ductile Iron pipe conveying sanitary sewer will have an interior “polylining” per manufacturer’s recommendations.

Sanitary sewer force mains will be either Polyvinyl Chloride or Ductile Iron and will conform to the Polyvinyl Chloride and Ductile Iron specifications for water mains (see Section 1.5.E following), except that Ductile Iron pipe will be provided with an interior polylining in accordance with manufacturer’s recommendation.

1.5.D Water Mains and Appurtenances

Ductile Iron pipe and fittings will be in accordance with ANSI / AWWA C 151 / A21.51-81. Pipe will have an asphalt coated exterior and a cement lined interior in accordance with ANSI / AWWA C104 / A21.4-80.

Pipes larger than 8 inches will be Ductile Iron.

Polyvinyl Chloride pipe (up to and including 8 inch size) will be in accordance with ANSI / AWWA C900-81 and with ASTM-D2241 and D-1784.

PVC pipe must be compatible with Cast and Ductile Iron pipe without the need for special adapters.

The bell of PVC pipe will consist of an integral wall section with an elastomeric ring which meets the requirements of ASTM D-1869.

Gate valve discs will be suitable for operation in any position with respect to the vertical. Valves for interior piping or exposed above grade will be handwheel operated.

Valves three inches and larger buried below grade will be equipped with a two inch square operating nut, valve box, and cover. The direction of opening for all valves will be to the left (counter-clockwise). Unless otherwise specified, valves for pressure service will be rated at not less than 150 psi, cold water, and nonshock.

Fire hydrants will be in accordance with AWWA Specification C-502 with breakable, dry-barrel, in two sections with the breaking flange located approximately 2 inches above the ground line. The main valve opening will not be less than 5 ¼ inches, and the hydrant nozzles will consist of two 2 ½ inch hose nozzles and one 4 ½ inch pump nozzle. The hydrant will be equal to a Mueller Centurion, Catalog Number A-423.

Backflow preventers will be above ground and will be of the double check valve assembly type or the reduced pressure type depending on the degree of hazard associated with the event to be prevented.

1.5.E Sanitary Sewer – Pretreatment Devices and Other Appurtenances

1.5.E.1 Applicable Standards and Regulations

Wastewater discharges are regulated by the City of Tampa for the majority of the areas located within the boundaries of Tampa International Airport (TPA) and for Peter O. Knight Airport (POK) and Tampa Executive Airport (TEA). Wastewater discharges from Plant City Airport (PCA) are regulated by Hillsborough County and the City of Plant City.

City Section 26 (Utilities) Article III Sanitary Sewers

Sec. 26-120. Excluded wastes prohibits...”any person to discharge or deposit any waste, waste material, gases, toxic materials or wastewater which contains any pollutants of a type, nature, temperature or concentration not found in normal domestic wastewater to the treatment works.”

In addition “The department’s Technical Manual of Standards for Industrial and Special Users sets forth the limitations and types of excluded wastes which may be discharged following pretreatment.” (Ord. No. 89-253, § 2(58-126), 9-28-89)

All operations that generate wastewater other than sanitary wastewater will be equipped with pretreatment devices or appurtenances that will

pretreat the generated wastewater to effluent levels compliant with the City of Tampa Code referenced above. The City of Tampa (or the regulating entity) will be contacted to confirm that the discharge is allowed.

1.5.E.2 Wash Racks

All wash racks built at Tampa International Airport for aircraft washing must meet the requirements of the Aircraft Washing Operating Directive. All other wash racks must meet the following requirements. Regardless of the type of pretreatment provided, all wash rack outlets will be connected to the sanitary sewer system, which is separate from the storm water drainage (sewer) system. The system can be designed with a bypass that allows the discharge of wastewater to the sanitary system, while diverting storm water runoff to the storm water drainage system.

An oil/waster separator will be installed as a pretreatment system before the wastewater is discharged into the sanitary sewer system. A sand trap is also recommended.

1.5.E.3 Floor Drains

All building floor drains will be connected to the sanitary sewer system. Depending on the types of activities conducted inside a building, the following appurtenances may be required in order to comply with the City of Tampa wastewater effluent disposal requirements:

Oil/Water Separator – They are required for all vehicles and equipment washing activities. A sand trap may also be required.

Acid Tank – If there is a potential for acidic wastewater or other similar liquids to be generated inside a building during equipment washing, floor washing, or other operations, an acid tank will be installed.

Grease Traps – Grease traps must be installed for all restaurant generated grease waste as required by local codes.

Dumpsters, waste compactors, and other waste handling equipment will be installed such that any wastewater or leachate generated through contact of water or storm water with the waste is discharged to the sanitary sewer system. Pretreatment may be required depending on the characteristics of the leachate.

1.5.E.4 Utility Permits

Coordination with regulatory agencies, such as City of Tampa Water Department (water service commitment), City of Tampa Department of

Sanitary Server (sanitary sewer service commitment), Hillsborough County Health Department (water distribution system approval), EPC, (sanitary sewer collection system approval), Hillsborough County Water Department (water service commitment), Hillsborough County Sanitary Sewer Department (sanitary sewer service commitment) will be conducted during the design phase to determine the exact regulatory permitting requirements.

All permit application documents will be submitted to the Authority for review and approval prior to their submission to any agency.

1.5.E.5 Easements

If a project requires the abandonment, relocation, extension or installation of utilities, the designer will include in their scope of services easement coordination services. At a minimum this will include preparation of developer agreements, legal descriptions and sketches of new or revised utility limits.

1.6 Fueling Systems: Aircraft and Automotive – Reserved

1.6.A Related Sections – Reserved

1.6.B Scope – Reserved

1.6.C Applicable Codes and Reference Standards

Storage tanks which are regulated by federal, state and local agencies must be registered with the FDEP. As defined by FDEP, a storage tank system includes all tanks, integral piping, dispenser, and release detection equipment. See Chapter 62-761 Florida Administrative Code (FAC) for complete definitions and rules pertaining to underground storage tanks (UST's) and aboveground storage tanks (AST's). Regulated systems generally consist of:

- 1.6.C.1 Underground storage tanks (UST) with capacities of greater than 110 gallons;
- 1.6.C.2 Stationary aboveground storage tanks (AST) with capacities of greater than 550 Gallons that store pollutants or hazardous substances.

In addition, if a facility has a single AST with a capacity greater than 1,320 gallons, the facility must also comply with the federal Oil Pollution Prevention regulation (40 CFR 112). Once a container exceeds the 1,320-gallon threshold, all containers with a capacity of 55 gallons or more are regulated under this rule.

In compliance with this regulation, A Spill Pollution Control and Countermeasure (SPCC) plan must be prepared and implemented.

All tanks, piping, and related equipment must be on the most recent edition of the FDEP Approved Equipment List.

All site sample collection, site assessment activities, and all laboratory analyses will be conducted in compliance with the most current FDEP Standard Operating Procedures.

1.6.D Aircraft Hydrant Fueling System

New Installation

At Tampa International Airport, jet fuel is delivered via the hydrant fueling system from the Bulk Fuel Farm to all the airside.

All new piping for the hydrant fuel will be double walled piping in compliance with current FDEP regulations Chapters 62-761 and 62-762, FAC.

All hydrant pits will be made on the most recent edition of the FDEP Approved Equipment List. If a proposed hydrant pit is not on the list, the engineer or contractor will contact the FDEP and notify Authority staff as early as possible.

Interstitial space will be filled with nitrogen with a pressure of 10 psi (pound per square inch) or more, or will have a vacuum with a pressure of -10 psi or less.

Pressure gauges will be installed to accurately monitor the interstitial space. Valves will be installed to allow visual monitoring for leaks and will be designed such that the proper pressure can be restored after visual testing.

A Release Detection Response Level (RDRL) will be prepared by the Engineer using the FDEP RDRL Guidance document. The RDRL will be submitted for review by Authority and EPC staff before the final inspection by EPC staff.

Removal and Abandonment of Existing Hydrant Piping

Before the removal and abandonment of any existing hydrant fuel piping or components, the operator of the system (currently ASIG) will be contacted by the Authority in order to have the fuel removed and valves secured as needed. Once the necessary work has been completed, the Authority will notify the Engineer/Contractor.

Residual fuel will likely remain on the line and must be appropriately handled by the contractor in charge of the removal or abandonment of the line.

For piping that will be removed, pigging is allowed, provided that the residual fuel and the waste generated are prevented from reaching the surrounding soil and is disposed of in accordance with applicable regulations.

Piping that will permanently be left in place will be grouted once the residual fuel has been removed. In some cases, the Authority will allow some piping be left in place without grouting. However, all residual fuel must be removed and the line must be certified gas free or filled with nitrogen to prevent corrosion.

1.6.E Automotive, Emergency Generator, and Other Tank Fueling Systems

The Authority recommends that fuel tanks used for automotive and emergency generators be stored in aboveground storage tanks instead of underground storage tanks. Emergency Generator tank will be less than 550 gallons to the extent possible. As indicated above, such tanks are exempt from FDEP regulations.

- All regulated tanks will be double walled tanks or have secondary containment in compliance with Chapters 62-761 and 62-762, FAC.
- Tanks and fuel dispensing equipment will be located as far as possible from storm water inlets.
- For all systems that fall under the SPCC regulations, the operator of the system must have an SPCC plan prepared in compliance with the Federal regulations and submitted to EPC and the Authority before the system is put in service.

A Release Detection Response Level will be prepared by the Engineer and submitted for review by Authority and EPC staff before the final inspection by EPC staff. The FDEP "Release Detection Response Level Guidance" document will be used in the preparation of the RDRL; it can be found at:

http://www.dep.state.fl.us/waste/quick_topics/publications/pss/tanks/rdrl.pdf

1.6.F Notification and Registration Protocol

Notify and coordinate all activities with the Authority Maintenance Engineering Department.

Determine whether the storage tank system is a regulated system. If the system is not regulated, no tank registration is required. However, copies of the design plans will be sent to the EPC for their records and submitted to Authority staff for review.

Submit storage tank system designs and a copy of the completed Storage Tank Registration Form to the EPC for review. If a tank system is being removed, an application for Closure of Pollutant Storage Tank System Form will be submitted to EPC. EPC will review the plans and approve them or return the submittal with comments for revisions. After revisions have been made, re-submit the documents to EPC for approval. A copy of the approved plans will be submitted to the Authority.

As applicable, obtain the appropriate construction permits from the city or county and submit copies to the Authority.

Provide the Authority and EPC with advance written or verbal notices as follows:

- Ten calendar days advance notice for tank installation, replacements, or upgrades.
- 30 calendar days advance notice for tank closures.
- Send the completed Storage Tank Registration Form to FDEP in Tallahassee with copies to EPC.
- Provide the Authority and EPC a 48-hour advance notification prior to commencement of on-site work for all tank removals, installations, replacements or upgrades. If work is to be completed in stages, this 48-hour notice is required prior to each stage of work.
- After completing steps above and approval by the Authority, work may begin. (Note: if an UST system is being installed or removed, an Underground Storage Tank Installation and Removal Form for Certified Contractors must be completed and submitted to EPC and the Authority after work is complete on the tank system.
- Copies of all applicable forms, plans, reports, and record drawings will be submitted to the Authority's Planning and Development Engineering Department.

1.6.G Design and Installation Requirements – Reserved

1.6.H Underground Storage Tank Removal/Abandonment Pre-Tank Removal Requirements

Notification of tank closure (removal) is to be submitted to the appropriate agencies as per the protocol, including the Fire Department, or local Fire Department, as applicable.

Only a State Certified Pollutant Storage Systems Contractor will perform tank removals. A copy of the Contractor's or sub-contractor's certification must be submitted prior to commencement of the Work.

A Work Plan will be prepared and submitted prior to commencement of work.

A Health and Safety Plan will be prepared and submitted prior to commencement of work.

When groundwater monitor wells are present, samples must be obtained prior to tank removal.

Tank removals will be performed in accordance with FDEP's Storage Tank System Closure Assessment Requirement (latest edition). A copy of this guidance document can be obtained for the FDEP website at: http://www.dep.state.fl.us/waste/quick_topics/publications/pss/tanks/reference/6closure.pdf

1.6.I Tank and Soil Removal Operations

All interior liquid from the tank and integral piping must be properly removed and disposed of prior to tank removal.

During excavation, soil samples will be continuously screened for organic vapors following the FDEP "headspace" method using an organic vapor analyzer (OVA) equipped with a flame ionization detector (FID) or equivalent.

All contaminated soils excavated during tank removal will be placed on, and covered with, plastic sheeting and secured.

Waste Characterization soil samples will be collected and analyzed for the FDEP "Pre-Burn" constituents prior to removal of contaminated soil from site for disposal.

All contaminated soil disposal manifests will be supplied to the Authority as part of the Closure Assessment Report.

1.6.J Tank Disposal Operations

Tank will be purged for all volatile and explosive vapors prior to entry and/or removal of interior sludge.

Tank will be rendered unsuitable for future use as a storage tank by drilling or cutting holes in the tank before removal of it from the site.

Tank disposal manifests will be included as part of the Closure Assessment Report.

1.6.K Free Product Removal and Groundwater Testing

Should any free product be encountered in tank system excavation, it should be removed by appropriate methods, (i.e., absorbent mats or vacuum suction).

Should groundwater be encountered less than 20 feet below land surface, samples will be obtained from each monitor well before tank removal. If there are no monitor wells present, a temporary well point should be installed in the area of highest OVA reading or in the area of the tank fill port before excavation is backfilled.

If groundwater is more than 20 feet below grade, coordinate with appropriate governmental agency to determine if sample is required.

1.6.L Storage Tank Forms

The following forms, where applicable, should be included in the Closure Assessment Report and also submitted to the appropriate agencies:

- Application for Closure of Pollutant Storage Tank Systems which can be found at:

<http://www.epchc.org/DocumentCenter/Home/View/101>

- Underground Storage Tank Installation and Removal Form for Certified Contractors, which can be found at:

http://www.dep.state.fl.us/waste/quick_topics/forms/documents/62-761/761_5.pdf

- Discharge Reporting Form and Incident Reporting Form which can be found at:

http://www.dep.state.fl.us/waste/quick_topics/forms/documents/62-761/761_1.pdf

http://www.dep.state.fl.us/waste/quick_topics/forms/documents/62-761/761_6.pdf ;

- Storage Tank Registration Form and instruction which can be found at:

http://www.dep.state.fl.us/waste/quick_topics/forms/documents/62-761/761_2.pdf

- Limited Closure Summary Report Form which can be found at:
http://www.dep.state.fl.us/waste/quick_topics/forms/documents/62-761/761_8.pdf

1.6.M Closure Assessment

For sites with documented soil or groundwater contamination that has already been reported to the regulatory agencies, a closure assessment is not required prior to the removal or abandonment of USTs, ASTs, and appurtenances. However, a Limited Closure Summary Report Form must be filled out and submitted to the EPC.

For all other site, a “full” Closure Assessment is required and a Closure Assessment Report must be prepared as described below.

Closure Assessment Report will include all items from the attached checklist.

1.6.N Post-Removal Activities

Return the site to original condition or as otherwise specified.

Remove all debris.

Address contaminated soils and/or groundwater in accordance with pertinent regulatory requirements.

Provide the Authority with a copy of the complete Closure Assessment Report including all pertinent drawings and specifications.

1.7 AGT Guideways - Reserved

1.8 Landscaping and Irrigation

1.8.A Related Sections – Reserved

1.8.B Scope – Reserved

1.8.C Applicable Codes and Reference Standards

Landscape treatment will be provided in accordance with the City of Tampa Municipal Code Chapter 13 (Latest Version), *Landscaping, Tree Removal, and Site Clearing*, and any other applicable City of Tampa Rules and Regulations.

Plans, specifications, and inspection for landscaping will be accomplished by a professional landscape architect registered in the State of Florida.

All plant materials will be in accordance with *Grades and Standards for Nursery Plants, Parts I and II*, latest edition, as published by the Florida Department of Agriculture and Consumer Services. All plants not otherwise specified as being "Specimen" will be Florida Grade Number One or better, as determined by the Florida Division of Plant Industry. "Specimen" refers to an exceptionally dense, symmetrical plant, so trained or favored in its development that its appearance is unquestionable and outstandingly superior in form, number of branches, compactness, and symmetry.

1.8.D Planning Objectives

Primary design objectives for the proposed project area will focus on the following areas of concern described below.

Maintaining and Reinforcing the Central Theme of Existing Planting Areas: By using certain varieties of landscape materials that currently exist within the terminal complex, a unity in design will result to enhance and reinforce the existing overall design concept.

Protecting Existing Plant Materials: Existing trees and shrubs will be protected.

Relocating Existing Trees: Existing trees that must be removed due to proposed construction will be relocated to a suitable location within the terminal complex whenever possible, at the direction of Authority. Tree relocation will be accomplished by a qualified and licensed mechanical tree mover and will be coordinated with Authority.

Visual Screening and Aesthetic Effects: Visual screening will be used where service-oriented and mechanical facilities, if any, are visually adjacent to public areas. Screening materials will consist of large trees and shrubs, berm/hedge combinations, or walls. Service facility walls should be softened with ground cover. The transition from parking area to public right-of-way can be made more visually pleasing with partial or intermittent screens of plant materials, which also function as a defining edge for the parking area.

Heat and Glare Reduction: Plant materials will be used wherever possible to reduce the glare and solar radiation in the airport environment created by pavement surfaces and structures. Plant materials effectively prevent the glaring light from reaching a reflective surface, block the glaring light from a reflective surface, and decrease the reflective qualities of a surface.

1.8.E Authority Standards

1.8.E.1 Soil and Planting Beds

Soils: The project site has been subject to considerable soil disturbance in the past. Soils analysis studies should be completed so that all variables are known. Soil testing locations will be designated on the Plans. Tests for soil pH, soluble salts, and organic content, as a minimum, will be conducted for each testing location. Soil testing will be conducted by an approved soil testing laboratory. Results of the analysis and recommendations for any amendments will be provided to the Owner/Architect prior to any installations throughout the project. If soil conditions are insufficient for proper plant growth, compensation for deficiencies can be made as detailed landscape plans are developed.

For the subject site, the following soil preparation will be completed prior to plant material installation. Inspections for soil medium verification will be strict, and must be in adherence with the following specification.

Preparation for tree planting areas will be as follows: Trees will grow in the existing soil, but to promote quick recovery from the transplanting process, backfill will be required that contains 60% high quality, pulverized, local brown peat; 1 cubic foot of manure per 1 cubic yard of peat; and, 40% sand loam. Backfill will be placed around the balls of all new trees. Large shade trees should have pits 2 feet greater in diameter than the size of the ball. Sides and bottoms of the pits should be scarified to increase porosity and to help root penetration into the existing soil. Care should be taken to ensure trees are planted at the proper depth, and to prevent settling of the soil. All trees should be set so that the top of the ball is 1 inch above the finished grade. For trees on sloping areas, the top of the ball should be even with the downhill side.

Shrubs require similar bed preparation. Bed areas require a minimum excavation depth of 6 inches. The excavated soil should be removed from the site and the beds backfilled with a thoroughly mixed and prepared soil containing 1 part sandy loam, 1 part peat moss, and 1 part sharp sand. Shrub areas which occur on compacted fill should have 12 inches of prepared soil. These areas require cultivation to a depth of approximately 6 inches before tilling in a topsoil mixture. Once the bed is prepared, it should be sterilized using an appropriate method to prevent weeds and unwanted growth. Bed areas which occur on slopes greater than 3:1 should be stabilized to prevent erosion until plants are established.

After bed preparation has been accomplished, plants should be spaced according to specifications and set with top of balls even with top of bed. Soil should be compacted carefully around each plant and watered

sufficiently to eliminate air pockets around roots. A minimum 3-inch layer of red hardwood mulch, certified by the Florida Mulch Council, will be added after plants have been installed.

Grassed and ground cover areas should have a minimum 4 inches of topsoil over regraded subsoil. Drainage is essential, so it is expedient to cultivate sand or sandy loam into the upper 4 inches of soil to permit fine grading. All areas to be grassed should be fine graded to establish a smooth, even grade, suitable for grass placement. Any undulations that cannot be raked out should be top dressed with sandy loam. Stones 1 inch or larger, sticks, roots, or other debris exposed during this operation should be removed from the site. Areas showing weed growth will be sprayed with Authority-approved herbicides, mowed, and clippings removed from grassed areas prior to final grading.

Grassed areas which receive sod application should have sod placed so edges are touching, top dressed to fill voids with sharp sand, and rolled to eliminate undulations. The ground should be scarified as necessary immediately before sodding to provide a smooth bed. Drainage swales or channels should be protected with solid sod and/or matting as required. During construction, temporary measures should be taken to prevent erosion and sediment build-up of all drainage systems.

Protection and Relocation of Existing Plant Materials: Protection and/or relocation of existing trees will be in accordance with City of Tampa Municipal Code Chapter 13, (10/12/89).

1.8.E.2 Acceptable Plant Material

For the purpose of unity in design, the plant list provided will form the basis of landscape design. Plant materials permitted have been selected for adaptability to existing conditions, harmony, interest in structure, texture, and ultimate growth habits. Acceptable plant materials for specific uses are shown in Table 1.3. Shade Trees and Other Trees as listed are acceptable for use in open areas, surrounding buildings, buffer areas, and parking areas except as noted. Shrubs as listed are acceptable for use in all landscape areas. Ground Covers as listed are acceptable for mass plantings. Vines as listed are acceptable for upright growth against buildings or other structures. Any deviation from this list will require the approval of Authority's Director of Maintenance.

Table 1.3
Acceptable Plant Material for Shade Trees,
Other Trees, Shrubs, Ground Covers, Vines, and Grassed Areas

Shade Trees		Shrubs	
Common Name	Botanical Name	Common Name	Botanical Name
Live Oak	Quercus virginiana	Cast-iron Plant	Aspidistra elatior
Jacaranda	Jacaranda acutifolia	Rigid Bottlebrush	Callistemon rigidus
Oriental Sweet Gum	Liquidambar formosana	Dwarf Yaupon Holly	Ilex vomitoria nana "Schillings"
Red Maple	Acer rubrum	Giant Liriope	Liriope muscari "Evergreen Giant"
Other Trees		African Iris	Moraea iridoides
Common Name	Botanical Name	Indian Hawthorn	Rhaphiolepis indica
Dahoon Holly	Ilex cassine	Crinum Lily	Crinum asiaticum
Crape Myrtle	Lagerstroemia indica	Florida Anise	Illicium anisatum
Southern Magnolia	Magnolia grandiflora	Dwarf Burford Holly	Ilex cornuta Burfordii Nana
Paurotis Palm	Paurotis Wrightii	Nandina	Nandina domestica
Senegal Date Palm	Phoenix reclinata	Oleader Calypso	Nerium oleander "Calypso"
Canary Island Date Island	Phoenix Canariensis	Split-leaf Philodendron	Philodendron selloum
Ligustrum Tree	Ligustrum japonicum	Coontie	Zamia floridana
Cabbage Palm	Sabal palmetto	Dwarf Wax Myrtle	Myrica cerifera
Drake Elm	Ulmus parvifolia sempervirens 'Drake'	Vines	
Chickasaw Plum (Note 1)	Prunus angustifolia (Note 1)	Common Name	Botanical Name
Ground Covers		Confederate Jasmine	Trachelospermum jasminoides
Common Name	Botanical Name	Coral Honeysuckle	Lonicera sempervirens
Day Lily	Hemerocallis spp.	Grassed Areas	
Lily-turf	Liriope muscari	St. Augustrine - Bitter blue or Floratam	
Mondo grass	Ophiopogon japonicus	Argentine Bahia	
Confederate Jasmine	Trachelospermum jasminoides		
Dwarf Confederate Jasmine	Trachelospermum asiaticum "minima"		
Society garlic	Tulbaghia violacea		
English Ivy	Hedera Helix		
Holly Fern	Cyrtomium falcatum		
Wood Fern	Thelypteris spp.		
Boston Fern	Nephrolepis exaltata		

1 Not in parking lots - open areas only

Depending on location, different sources of irrigation water are utilized including reclaimed, well and municipal potable. The irrigation water supply must be site specifically verified prior to plant selection to ensure proper plant selection compatible to water type.

Sleeving: All irrigation-related sleeving will be PVC Schedule 40 and installed for the proposed project area so that sprinkler systems can be installed without the disruption of transportation systems. All piping used in planting areas will be PVC Schedule 40.

Control Valves: The control valves will be electric automatic remote control valves. All electric valves will be enclosed in plastic valve boxes. Backflow preventers will only be used when tied to a potable system.

Reclaimed water valve boxes should consist of purple polyolefin material and clearly marked "Reclaimed water – do not drink".

- a. Small grassed areas which occur adjacent to roadway paving will be watered with small diameter pop-up heads so that close control can be maintained on wind spray.
- b. Flush lawn quick coupler valves will be provided in all landscape planted areas. They should be located so that all trees and planting areas can be reached by a 100-foot hose.
- c. Irrigation piping will not be installed on top of roadway slopes or along retaining wall toes unless cut-off valves are positioned at lower levels and away from structure.

1.8.E. Erosion Control During Construction

Where slopes are equal to or greater than 3:1, jute matting or fiberglass matting should be considered to protect against erosion of the topsoil or prepared soil. Drainage systems should be protected with solid sod and/or matting, as required. During construction, temporary measures should be taken to prevent erosion and sediment build-up of all drainage systems.

1.9 Site Signage and Graphics – Reserved

1.10 Access Control - Reserved

1.11 Fencing and Gates - Reserved

1.12 FAA Systems – Reserved

Section 2 - Architecture – Building Engineering

2.1 Applicable Codes and Reference Standards

The design professional is responsible for identifying and complying with all applicable local, state and federal codes, regulations and standards.

2.2 Building Objectives - Planning Criteria

2.2.A Typical Facility Objectives

2.2.A.1 Geotechnical

2.2.A.1.1 Building Area

Previous Foundation History: A variety of structural foundation types have been used at TIA, including the following:

- a. Landside Terminal Building (1971): This building is supported on both steel pipe piles and spread footings, bearing on rock at willow rock locations. A boring was drilled at each column location. At one column location, excessive settlement was experienced, resulting from solution activity in the limestone bedrock under a spread footing at that location. The settlement initiated when three levels of the garage were added in 1982. About two inches of settlement occurred and large quantities of grout had to be pumped into the solution void to stabilize the foundation. Grouting quantity could not be predicted in advance.
- b. The foundation systems utilized for the original four airside (1971) vary. Airsides B and C were built on pile foundations; Airsides D and E were constructed on willow spread footings. The foundations of the shuttle (AGT) system hammerhead pier and maintenance area/platforms for all four original airside were constructed with pile foundations.
- c. Taxiway "J" Overpass (1971): Spread footings on limestone were used.
- d. Airside F (1987): Spread footings, in combination with a grouting program, were used. A boring was drilled at each column location. Grouting quantities were substantial and could not be accurately predicted in advance.

- e. Airside F AGT System Guideway Piers (1987): Drilled shafts were used. Final lengths were determined by a boring taken at each drilled shaft, plus observations during the shaft drilling operations.
- f. Quad Deck Expansion on East and West Sides of Terminal Building (1987): Drilled shafts were used. Final lengths were determined by a boring taken at each drilled shaft, plus observations during the shaft drilling operations.
- g. Long Term Parking Garage (1991): Drilled shafts were used. Final lengths were determined by a boring taken at each drilled shaft, plus observations during the shaft drilling operations.
- h. Airside A (1993) was constructed utilizing 30", 36", 42" and 48" diameter drilled piers as the foundation system. The AGT maintenance platforms and the passenger loading bridge pedestals were constructed on 48" diameter drilled shafts.
- i. Airside E (2002) was constructed utilizing spread footings. The AGT maintenance platforms and the passenger loading bridge pedestals were constructed on 48" diameter drilled shafts.
- j. Airside A Outbound Baggage Sortation Facility (2003) was constructed utilizing 48" diameter caissons under all columns and strip footings under the exterior masonry walls.
- k. Airside C (2005) was constructed utilizing spread footings. The AGT maintenance platforms and the passenger loading bridge pedestals were constructed on 48" diameter drilled shafts.
- l. Remote Parking Garage (2005) was constructed utilizing 30", 48" and 60" diameter drilled piers (caissons). The administration building was built on spread footings.

New Foundations: Because of the uncertainty of the limestone bedrock consistency, drilled shafts or piers have been the most prevalent foundation system in recent years. Airside E was, however, a notable exception; it was constructed on willow spread footings.

The foundation system options must be considered on a site by site basis after an extensive geotechnical investigation.

If a deep system is required, the choices include drilled shafts, piers, or caissons and auger cast piles. Mechanically driven pile systems are not allowed with close proximity of the Landside Terminal Complex.

Geotechnical Investigation: As a minimum, the following guidelines will be observed in the design investigation.

- a. Minimum boring grid will be 200 feet on center.
- b. Borings and testing locations will carry airport grid coordinate locations and ground surface NGVD elevations.
- c. Minimum boring depth will be 50 feet, including 20 total feet into refusal (N=50+ blows/ft) limestone material.
- d. Testing locations, procedures, and times of testing will be established well in advance of testing, and must be coordinated with the Authority. Test locations will be cleared for utilities by the Design Consultant, the Authority, and affected utility companies. All areas disturbed by testing must be restored to the satisfaction of the Authority.
- e. Sufficient field and laboratory testing will be performed to establish classifications and properties for the various strata encountered. This will include determination of Unified Soil Classifications, plasticity/consolidation properties of compressible materials, bearing values, strength properties, and groundwater conditions.
- f. Design phase load test programs will only be considered after completion of a preliminary geotechnical program, a preliminary foundation analysis, and a cost study justifying the load test program.
- g. Foundation selection will address vibration and disturbance to adjacent structures, noise, and annoyance levels, cost, risk, and constructability.

Earthwork: Specific recommendations will be made for the project needs in the areas of clearing and grubbing, undercutting, proof rolling, embankment construction, suitable materials, compaction, stabilization, subgrade preparation, and any special procedures that may be proposed.

Related Sections:

3. Civil, Roadway, and Airfield
5. Utilities
7. Structural
8. Mechanical
9. Electrical
10. Landscape and Irrigation
12. Elevators

Code Requirements:

- a. Geotechnical testing will conform to applicable sections or ASTM Volume 04.08, "Soil and Rock; Building Stones; Geotextiles."
- b. Geotechnical testing and engineering will be conducted by corporations and experienced individuals licensed to practice this specialty by the State of Florida.

2.2.A.2 Structural – Reserved

2.2.A.3 Architectural

2.2.A.3.1 Glare Control or Prevention

- Use roof overhangs, tinted glass, coated glass, fritted glass or applied films to control glare and reduce heat gain from the sun.
- Exterior sunscreens are generally not allowed because they provide a roosting area for birds. Reflective-type glasses are generally not considered because of the possibility of creating high intensity reflections that might temporarily cause blindness to pilots during aircraft operations.
- Consider glare patterns in the placement of light fixtures. High contrast "scallop" can be created on walls or sign faces as a result of poor fixture placement. When preparing reflected ceiling plans, show all ceiling-hung signage elements so that lighting patterns and glare potential may be reviewed. Avoid placing lighting adjacent to ceramic tile walls; the "wash" of light accentuates irregularities that are common with such a finish.
- Avoid products or conditions that can create navigation hazards. Finishes such as metallic paints can cause visual reflections and even radar interference. Sloped glass areas can cause reflection problems.
- High intensity exterior lighting fixtures will be selected that include appropriate shielding or cut off provisions to eliminate glare to roadway and walkway areas.

2.2.A.3.2 Noise and Vibration Control

- Provide for isolation joints between slab areas and between slabs and columns. This isolation will be designed to prevent the transmission of low frequency vibrations from main

mechanical rooms that contain chillers, compressors, and pumps.

- Provide localized isolation for pumps, air handlers, and so forth. Consider inertia pads.
- Install sound attenuation devices on ductwork and provide acoustic treatment in air plenum areas.
- At baggage sortation areas, provide vibration isolators at all conveyor system suspension elements. Consider a sprayed-on insulation product on the bottom side of all elevated slabs for thermal and sound absorption purposes.

2.2.A.3.3 Passenger Circulation and Travel Distance

- Endeavor to maintain a maximum 700-foot walking distance from the passenger's parked car to the door of the aircraft.
- Understand the influences of the types of passenger flow as follows:

Enplaning passengers: “Trickle flow” describes the arrival rate for departing passengers. The earliest passengers arrive an hour or more before departure, and the arrivals continue a few at a time every few minutes until departure.

Deplaning passengers: “Slug flow” describes the 200-300 passengers arriving through a single doorway within a five- to ten-minute time period.

- Maintain a 30-foot minimum clear width for a double loaded concourse walkway.
- Position passenger check-in counters so they are set back a minimum of 16 feet from the edge of the concourse walkway to accommodate the passenger queue. By setting the check-in counter at a ± 60 degree angle relative to the concourse walkway, the available queuing area can be increased. The angular placement of the counter also provides improved sight lines for the gate number signage on the check-in counter back wall. (See 2.2.B.1.6, 2.2.B.2.2, and 2.2.B.2.3 for notes regarding ticket counter and back wall design.)
- Arrange seating and check-in counters to create separate enplaning and deplaning aisles within each holding area.

Provide a direct gate to walkway alignment for deplaning aisle. Locate the enplaning aisle parallel and adjacent to the outside wall.

- Provide stairs adjacent to up and down escalators as a backup system when the escalator(s) may be out of service. Minimum escalator tread width will be a nominal 40 inches to accommodate a single passenger with carry-on baggage.

2.2.A.3.4 Building Occupant Load and Miscellaneous Code Issues

With the 1991 edition, the Life Safety Code, NFPA 101, began to recognize the unique occupancy conditions associated with airport terminal buildings. Table A.7.3.1.2 provides airport terminal load factors to assist in calculating the occupant load.

Table A.7.3.1.2 (NFPA 101-2000) Airport Terminal Occupant Load Factors	
Airport Terminal Area	Area/Person
Concourse (circulation area)	100 sf / person
Waiting areas (seating areas)	15 sf / person
Baggage Claim	20 sf / person
Baggage Handling	300 sf / person

Other terminal space occupant loads that have been generally agreed to by the City of Tampa Building Department and Fire Marshal includes:

Gift shop (mercantile)	60 sf / person
Lounge / restaurant (small assembly)	15 sf / person
Airline operations (business)	100 sf / person
Storage	300 sf / person
Mechanical / Electrical (storage)	300 sf / person
AGT Maintenance (storage)	No occupant load
Toilet Rooms	No occupant load
Elevators, escalators, and stairs	No occupant load

Section 12.2.3.3 includes Exception No. 2 which allows exits to be distributed around the perimeter of the building. Exiting distances become more workable, but most of the exit doors must now be equipped with special delayed release locking hardware to maintain aircraft operations area (AOA) security. In Airsides F, A, E, and C,

exterior exit stairs are provided at frequent intervals around the building perimeter. These stairs are served by exit doors with delayed release exit hardware that is interfaced with an access control system based on a computer/identification badge program. Section 7-2.1.6, provides the guidelines for this operation (refer to subsections 2.2.A.3.5 and 2.2.A.3.6 for the functional features of the access control system and the delayed action fire alarm system).

In addition to the interior and exterior exit stairs, the elevated emergency walkway between the AGT guideways has been recognized as an acceptable exit, or area of refuge. Other potentially applicable NFPA fire codes include (but are not limited to) the following: NFPA 1, Uniform Fire Code, NFPA 10, Standard for Portable Fire Extinguishers; NFPA 13, Standard for the Installation of Sprinkler Systems; NFPA 20, Standard for the Installation of Stationary Pumps; NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages; NFPA 70, National Electric Code; NFPA 72, National Fire Alarm Code; NFPA 80, Standard for Fire Doors and Fire Windows; NFPA 88A, Standard for Parking Structures; NFPA 92B, Standard for Smoke Management Systems in Malls, Atria, Large Areas; NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations; NFPA 105, Standard for the Installation of Smoke Door Assemblies; NFPA 110, Standard for Emergency and Standby Power Systems; NFPA 111, Standard for Stored Electrical Energy Emergency and Standby Power Systems; NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems; NFPA 221, Standard for Fire Walls and Fire Barrier Walls; NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations; NFPA 407, Standard for Aircraft Fuel Servicing; NFPA 409, Standard for Aircraft Hangars; NFPA 415, Standard for Airport Terminal Buildings, Fueling Ramp Drainage, Loading Walkways; and NFPA 780, Standard for the Installation of Lightning Protection Systems.

NFPA 415, Section 2-1.5, addresses architectural features that may be required if potential fuel spill points (such as fuel hydrant boxes) are located less than 100 feet horizontally from glazed building walls. Section 3-1.1 addresses minimum ramp slopes away from terminal buildings.

Relatively obscure code provisions can create difficulties for designers if they are not considered in the early schematic phase of a project. NFPA 415, Section 2-2.2, restricts the placement of exhaust outlets, or air intakes, on the aircraft ramp side of the building. Openings will not be less than ten feet above grade level of the ramp.” This provision has required several creative solutions to accommodate kitchen makeup air and exhaust, and tenant area toilet exhausts.

2.2.A.3.5 Access Control System (ACS)

In compliance with Transportation Security Administration (TSA) Part 1542, the Authority has an Airport Security Program incorporating the use of a computerized Access Control System (ACS). The ACS software (CCure800) and processing panels are manufactured by Software House. This ACS controls select doors and gates throughout the airport terminal complex and airfield.

The system has the capability to:

- Ensure that only those persons authorized to have access to secured areas are able to obtain that access.
- Deny access immediately at the access point(s) to individuals whose authority to have access changes.
- Differentiate between persons authorized to have access only to a particular portion of the secured area or to the entire secured area(s).
- Restrict an individual's access by time and date.

Upon authorization, security training, and an FBI background check, employees of the airport, tenants, or contractors may be issued an Airport Identification Badge that incorporates a uniquely identifiable electronic code. When the proximity badge is presented to the badge reader at either side of the door or gate, the system confirms access authorization according to the particulars previously entered into the individual's computer record.

In addition, select components of the Access Control System have been installed in other non-secure access points (i.e., Authority Offices). For these doors, exit activation of the door release mechanism is usually controlled by a motion sensor and/or panic hardware.

The ACS host computer is located in the Communications (Comm.) Center. The access status of each employee is programmed into the system by way of a terminal located in the Operations Department. Comm. Center personnel monitor the system's operation and report alarm conditions to the Airport Police Department. At many portals, an alarm condition initiates a video scan of the location that can be recorded and reviewed.

The ACS host computer is networked with processors which are located at each airside building through a fiber optic conductor network. From these processors, the network is distributed to local processors, which generally are located in nearby mechanical or electrical spaces that can support four door openings. At doors, power supplies and timer modules interface with either electromagnetic locks or electronic panic devices to provide controllable access through the portal. At gates and turnstiles, the card reader interfaces with contacts to start a gate operator or release a turnstile.

Access-controlled building doors are also interfaced with the fire alarm system to allow a complete release of all doors in the event of general building alarm activation.

2.2.A.3.6 Closed Circuit Television (CCTV) System

The Airport utilizes CCTV for various security and operational purposes. The system transmits video via coaxial and fiber optic cable. The CCTV cameras consist of pan/tilt/zoom and fixed mount lens type that redesigned for both interior and exterior environments. Video is transmitted back to the Airport Communications Center where by the cameras can be controlled through video switchers located in Airport Operations, the Airport Police Department, and the Communications Center Many cameras and associated video signals are linked to the access Control System that displays video upon a generated alarm. All CCTV cameras are digitally recorded on a 24-hour basis.

Typical areas with CCTV monitoring include:

- Passenger screening areas at the airside
- Airside concourses and exit doors.
- AOA turnstiles from the truck court (at the airside)
- AOA vehicle gates (at the truck courts and around the airfield)

- At the monorail and shuttle stations (at the airside, at landside, and in the Long Term Garage)
- At entry/exit doors at baggage makeup areas (AOA);
- And at many other selected areas
- The CCTV system continues to expand. A designer must meet with the Operations and Police Departments to establish and confirm the definitive needs for a particular project

2.2.A.3.7 Federal Inspection Services (FIS) Security

In Airside F, a second door security system is installed to maintain a sterile accessway for arriving international passengers. At each of the international arrival ramps, a door interlock has been created with a pair of doors above and a pair of doors below the loading bridge entry/exit door. An electromagnetic lock system allows for only one pair of doors to be open at one time. The locking arrangement is controlled by key switches operated by an airline gate agent. In the most frequently used condition, the domestic mode, doors above the loading bridge door (located between the holdroom and the loading bridge door) are held open by energized electromagnetic door holders (their electromagnetic locks are de-energized). The second pair of doors below the loading bridge door is locked with electromagnetic locks preventing access to the lower level FIS processing area.

When an international flight is due to arrive, the gate agent resets the key switch reversing the locking arrangement. The electromagnetic holders on the upper doors are de-energized which allows the doors to close against an energized electromagnetic lock. The upper doors are then secure. As a result of the same key switch operation, the magnetic locks on the lower doors are de-energized which allows them to open. As the passengers move down the ramp, the doors can be opened and then held open by the electromagnetic holders which are now energized. When the last passenger passes through the lower door opening into the FIS screening area, the gate agent activates another key switch which resets the interlock to the domestic operation mode.

2.2.A.3.8 Fire Alarm Pre-Signal System

With the activation of a pull station, smoke detector, heat detector, or sprinkler flow switch, an audible signal and visual display are indicated at the local building annunciator and at the Comm. Center. An alphanumeric display is illuminated on the fire alarm control panel, a graphic representation appears at the “satellite” annunciator at the airside, security office, and the fire control rooms, and a user-defined English language description is transmitted to the Comm. Center CRT displays and line printers. Activation of a duct detector on an air handling unit will immediately shut that unit down. Additional HVAC control sequences may occur as a result of building control system programming. A local indicating lamp will light at locations of the area detector or duct detector initiating the alarm.

Upon activation of any elevator lobby, elevator machine room, or elevator hoistway smoke detector, Phase I recall will be initiated at that elevator (or bank of elevators), and the elevator car will return nonstop to its designated service level where the doors will open and remain open. The “Do Not Use Elevator” lamp will illuminate at the designated level.

Upon activation of an elevator machine room or elevator hoistway heat detector, the system will shunt trip the elevator controller operating power after the above recall event has successfully landed the elevator at the appropriate level and opened the doors.

Once the alarm is displayed, the Comm. Center notifies the airport police dispatcher of the alarm and an officer is dispatched to assess the alarm condition. If within a five-minute time period, the alarm is determined to be false, the system will reset and all functions will return to normal. If the alarm is verified as valid, the officer immediately advises the Comm. Center of the details and a general alarm is initiated.

At a general alarm, the City of Tampa Fire Department is notified (apparatus will be dispatched), a contact closure is made with the access control system, and all delayed-action door operators are immediately released. One of several prerecorded messages is broadcast over the annunciator speaker system, and the strobes begin to flash.

In the event the police officer is unable to complete alarm verification within the five-minute pre-signal period, a general alarm is initiated and all operations previously mentioned will occur.

2.2.A.3.9 Shunt-Trip Operation, Building Power, and AGT Power

Power feeds for both the airside building and its AGT system generally occur on the airside end of the AGT route. Typically, each system has its own switchgear room with dedicated transformers and switchgear. The buildings use 277V/480V, and 120V/208V systems, and the AGT system is typically 600V.

As a life safety precaution, the Fire Marshal has required the capability of de-energizing both power systems from either switchgear room. Typically, the local switchgear can be de-energized with a few disconnect pulls. In order to de-energize the entire building and the guideway, shunt trips for the other system will be located on the switchgear room wall, within steps of the main gear disconnects.

2.2.A.3.10 Tempered Glass

Shortly after opening in November 1987, Airside F experienced a large amount of spontaneous tempered glass breakage that was essentially due to nickel sulfide intrusion. The problem became so severe that the facility was ultimately completely reglazed with laminated glass. Apparently, the quality level of tempered glass in the mid 1980s deteriorated to such a degree that the industry as a whole began to discourage its use.

As a result of the Airside F difficulties, the Authority now specifies that all areas requiring safety glass (per Florida Building Code, Chapter 24) will be finished with laminated glass. The only exception might be the use of 1/4-inch clear tempered glass for infill in “normally-sized” storefront entrance doors.

For exterior purposes, Airside A used a 1-foot, 8-inch-high curb to eliminate the safety glass requirement, and 9/16” thick laminated heat-strengthened glass to achieve the strength necessary to achieve the opening sizes desired.

Airside E: (All Viracon Products)

Type 1: 9/16” laminated VH 13075, HS/HS
 1/4” clr with VE-1-85 coating, #2
 .060” PVB interlayer

¼" gry

Type 2: 9/16" laminated VH 13-75 HS/HS spandrel
¼" clr with VE-1-85 coating, #2
.060" PVB interlayer
¼" gry with V907LF blk, #4

Type 3: 9/16" laminated VH 13-75 HS/HS
¼" clr with VE-1-85 coating, #2
.60" PVB interlayer
¼" gry with V907LF blk, pattern 5006, #4

Type 4: 1" insulated glass, Low E, HS/HS
¼" gry with VE-3-2M coating, #2
½" air space
¼" clr

Type 6: 1" insulated glass, Low E, HS/HS
¼" gry with VE-3-2M coating, #2
½" air space
¼" clr with V907LF blk, pattern 5006, #4

Curtain wall and storefront systems:

Kawneer 1600, nominal 2 ½" x 7"
Kawneer Tri-fab 450, nominal 1 ¾" x 4 ½"

Specialty long span truss curtain wall system:
Advanced Structures, Inc. Marina del Rey, CA.

Airside C: (All Viracon Products)

Main glass: 1" insulated glass, Low E, HS/HS
¼" Evergreen with VE-8-2M coating, #2
½" air space
¼" clr

"A" glass: 1" insulated glass, Low E, HS/HS (appears "frosted")
¼" Evergreen with VE-8-2M coating, #2
½" air space
¼" clr SK/P V1086 S1M SANDBLAST #3
SCRN/P1 3058 #3

"B" glass: 1" insulated glass, Low #, HS/HS (appears "frosted")
¼" Evergreen with VE-8-2M coating, #2
½" air space

- $\frac{1}{4}$ " clr SLK/P1 V185 S11M ACID ETCN #3
 SCRNP1 3058 #3
 "C" glass: 1" insulated glass, Low E, HS/HS (fritted)
 $\frac{1}{4}$ " Evergreen with VE-8-2M coating, #2
 $\frac{1}{2}$ " airspace
 $\frac{1}{4}$ " clr SLK/P1 v175 lf opaque white #3
 SCRNP1 5006 #3
- "D" glass: 1" insulated glass, Low E, HS/HS
 $\frac{1}{4}$ " gry with VE-3-52 coating, #2
 $\frac{1}{2}$ " air space
 $\frac{1}{4}$ " clr
- "5D" glass: 1" insulated glass, Low E, HS/HS (spandrel)
 $\frac{1}{4}$ " gry with VE-3-52 coating, #2
 $\frac{1}{2}$ " air space
 $\frac{1}{4}$ " clr APD/P1 V175 LF (opaque wht) #4
- "E" glass: 1" insulated glass, Low E, HS/HS (spandrel)
 $\frac{1}{4}$ " Evergreen with VE-8-2M coating, #2
 $\frac{1}{2}$ " air space
 $\frac{1}{4}$ " clr
- "G" glass: 1" insulated glass, Low E, HS/HS
 $\frac{1}{4}$ " clr with VE-1-2M coating, #2
 $\frac{1}{2}$ " air space
 $\frac{1}{4}$ " clr

Curtain wall System:

Vistawall: Several frame configurations, 2 $\frac{1}{2}$ " wide X 6 $\frac{1}{2}$ ", 7 $\frac{1}{4}$ ", 8 $\frac{1}{2}$, and 12 $\frac{1}{4}$ " deep

Interior Tempered Glass System:

RDM Glass Systems (Inkan Limited), Ontario, Canada:

$\frac{1}{2}$ " and $\frac{3}{4}$ " glass panel system with 14" fins.

2.2.A.3.11 Maintenance Contracts

For nearly 30 years, the Authority Maintenance Department has maintained exclusive service contracts with various equipment and system manufacturers. Over the years, these contracts have resulted in competent regularly scheduled preventative maintenance, and in several cases, full-time, on-site representation for emergency maintenance. Current service contracts include:

Bombardier	for airside to landside AGT systems for monorail system at the Long Term Garage
ASIG	for hydrant fuel system
Bombardier	for monorail system at the Long Term Garage
Carrier	for chillers (building/preconditioned air) and chilled water systems
Com-Net	for EVIDS System
Johnson Controls	for building control system (Metasys - EMCS)
Schindler	for elevators, escalators, and dumbwaiters
Simplex	for fire alarm system

2.2.A.3.12 Toilet Room Design

Restroom design in public areas of the main terminal will comply with the requirements of the Main Terminal Interior Design Criteria Manual.

Fixture Counts: With the construction of Airsides F, A, E, and C, the CAA has exceeded the minimum standards for fixture counts as listed in the Florida Building Code-Plumbing (FBC-P). The increased fixture quantities have been developed in response to estimated slug load passenger counts at the terminal's peak load condition. The designer will review any updates to the passenger loading forecasts before finalizing any toilet facility modifications. The designer will also refer to the FBC-P, Paragraph 403.1.1, for special male/female fixture ratios associated with assembly occupancies. (potty parity)

Entry Detailing: Typically, a semi-circular maze arrangement is used, with carpeted wall for acoustical control (without doors). The minimum clear width will be 5 feet. The maze floor is typically carpeted, and a marble threshold transitions to ceramic tile upon entering the toilet room.

Finishes: Walls, within the toilet room, are typically clad full height with ceramic tile (minimum size is 4 inches by 4 inches), with 1/8 inch maximum joints, and gray grout. Floors are also ceramic tile (minimum size is 8 inches by 8 inches), with 1/4 inch or smaller joints, and gray grout. Ceilings will be painted gypsum wallboard.

Minimum Circulation Clearances: Toilet stall to front face of lavatory will be 5 feet, 6 inches; toilet stall door to toilet stall door will be 6

feet; front face of lavatory to front edge of urinal will be 6 feet, and a minimum walkway clearance will measure 5 feet.

Toilet Partitions, Toilet Accessories, and Toilet Fixtures/Fittings: The Authority maintains strict and well-defined standards for these components. Refer to Sections 3.10.A, 3.10.E, and 3.15.F, for a detailed listing of the respective Authority standards.

Trash Receptacles (in toilet rooms): A trash receptacle (R) must be placed adjacent to one edge of each lavatory (L). A typical configuration at a lavatory wall would be: L-R-L-L-R-L. In addition, a receptacle is to be placed on each side of the entrance/exit doorway.

Diaper Changing Facilities: Each toilet room (both men and women) will be equipped with a diaper changing area. A counter with an integral sink will be fabricated of Corian (or equal) and will have a raised front edge. The counter will have a minimum length of 6 feet, and the sink will be placed at one end, leaving a 4-foot clear shelf width. The counter depth will be 2 feet. Counter detailing will make ADA compliant accommodations for individuals with disabilities. Adjacent toilet accessories will include a towel dispenser, a soap dispenser and a waste receptacle.

Women's Vanities: Each woman's toilet room will be provided with a "makeup" vanity counter, fabricated from Corian (or equal). Length can vary from 8 feet to 16 feet, depending on toilet room capacity. Counter depth will be 1 foot. A full width stainless steel-framed mirror will be installed above the counter to a height of 6 feet, 6 inches, approximately. A duplex outlet will be provided for every 6 feet of counter length.

Mirrors: All mirrors will be framed in stainless steel. Each women's toilet must be equipped with a 24-inch by 60-inch-high, full length mirror, mounted 1 foot above the floor.

Companion/Family Toilets: At each large toilet room grouping, provide a separate private toilet room that is accessible by an individual with disabilities (of either sex), who requires assistance from a spouse, nurse, or companion. The room should be at least 80 square feet in area. Corian (or equal) shelves will be provided for baggage and diaper changing. All plumbing fixtures installations will be ADA compliant. A junction box for an emergency call system will be roughed in, between the toilet and lavatory, at a height of 1 foot, 4 inches above the floor. All finishes and

accessories will be consistent with standard toilet room construction.

Plumbing Chase Design: All plumbing chases will be designed to provide a minimum clear access walkway, 2 feet, 6 inches wide by 6 feet, 6 inches high, between the fixture carriers. Such a space is necessary to access and service the electronic flush valves, the electronic faucets, all fixture traps, waste line cleanouts, and water service branch isolation valves. Chases will be accessible from outside the toilet room such that a female plumber can service a men's room fixture, or vice versa. A 3'-0" wide door will be provided for access. Floor drains must be provided at each lateral cleanout location. A waterproofing membrane will be installed on all chase floors. The membrane will be turned up the perimeter wall a minimum of 2" to create a "mini-sump". Appropriate linear fluorescent fixtures will be provided to effectively illuminate any serviceable area. The light will be switchable at the chase door. Duplex outlets must be provided at 20 feet on center. All piping penetrations through elevated floors will be waterproofed. All valves within the chase will be located at or beneath 7 feet above the floor.

Floor Drains: Floor drains will be located frequently within the toilet room; allow one drain for each 500 square feet of floor area. Drains will be located near the wall and between fixtures, or under toilet partition sidewalls. The drain placement will be away from any traffic areas (refer to chase requirements listed previously)

Cleanouts: Waste cleanouts will be placed at the end of each fixture bank lateral.

Janitors Closet: All closets will include a floor sink and a mop holder. Walls abutting the sink will be clad with ceramic tile (4" x 4" minimum size) to a height of 6' - 0" and a width of 1' - 4" beyond the sink edge. The mop holder will be installed in a position that will allow the mop to drip into the floor sink. Walls beyond the tile areas will be painted gypsum wallboard to a height of 8' - 0". All plumbing lines and electrical conduit and junction boxes must be concealed behind the wallboard. The remainder of the space, above 8' - 0" can remain unfinished with exposed studs, conduit, piping, valves, etc.

2.2.A.3.13 Housekeeping Facilities

Vacuum cleaner outlets, 20 amp/120v, hospital-grade, will be located in carpeted areas within 100' of any point within that area. Breakroom facilities will be provided for the housekeeping staff that

includes a counter with a sink, a microwave oven, a refrigerator; other furnishings within the space may include a rectangular table (seating 6) and a desk and chair. Thirty-to-forty half lockers, 12" wide x 36" high x 16" deep, will be provided for storage of personal items. Lockers will have a padlock hasp.

2.2.A.3.14 Bird Control

Building designs will discourage the roosting of pigeons and other nesting birds by minimizing the amount of ledges and protected surfaces where nesting might occur. The building envelope will be sealed as necessary with grilles, screens, etc., to prevent bird entry. In areas where the design may create a roosting area, a proven means of discouraging birds will be used; such as low-voltage wiring strips along parapet walls, low-visibility nylon lines crossing the areas, nylon netting around cooling towers, etc.

2.2.A.4 Equipment/Furnishings

2.2.A.4.1 Ash/Trash Receptacles

The construction of Airside A prompted the development of new receptacle that has been repeated on many subsequent renovations. The stainless steel unit can be fabricated with a sloped top or a sand tray (smoking areas). Typically, it is fabricated with a wall-mounting bracket. The piano-hinged access door has a concealed latch and an integral raised lip receptacle shelf. A removable cylindrical galvanized receptacle sits on the shelf.

2.2.A.4.2 Landside Ticket Counters

During 1999-2000, a project was initiated to replace the airline ticket counters on the Ticket Level. The resulting shell configuration consists of stainless steel clad end pylons bridged by a solid surface cowling to conceal the computer monitors. Two solid surfaces are overlaid on stainless steel clad front panel. This has an overall width of 6' - 0".

Stainless steel clad bag wells are placed on each side of a ticket counter module. The "floating" top design for the bag well allows for the installation of electronic scales on an as-needed basis. Digital readouts are provided on the cowling ends on each side of the bag well. The typical width of a bag well is 3' - 0". On the agent side of the counter line, the shell is filled with an insert cabinet that is generally designed and built to the particular airlines specifications. Typically, the insert design and detailing reflect the

functional needs of the airline including the after hour security of ticket and bag tag stock. The design has generally evolved from work flow and ergonomic studies.

Shortly after the ticket counter replacement project was completed, the airlines began replacing many of the manned ticket counters with customized self-service E-ticket units. Many airlines installed a “corporate-standard” full height pedestal units, while others have chosen to install a small drop-in CRT module into a modified Authority counter shell. To date, the airlines have been generally receptive to making minor material adjustments to ensure visual compatibility with the Authority standard counter design. Most units are utilizing stainless steel and solid surface cabinetry.

2.2.A.5 Conveying Systems

Elevator entrance design has become a somewhat complex problem. The arrangement of up to ten distinct elements that may be necessary at an elevator entrance requires research and coordination with the elevator vendor, and numerous other subcontractors. The six items typically installed by the elevator installer include the call button unit (with or without the key switch), the hall lantern (indicating direction of travel), the current floor indicator (above the door), the fireman’s phone outlet, the emergency sign explaining firefighter’s operation, and the “Do not use elevator when flashing” signal light. In addition, other signage elements are required: a directory sign (that indicates the spaces accessed on the other floors via this elevator), an “In case of fir” sign, possibly a wall bumper (in a service corridor) and possibly a tenant requested sign (intended to provide instructions to flight crew members).

At airside buildings, it is frequently necessary to equip an elevator with special access-control control components to prevent the unauthorized access to a secure level of the building by the general public. The most frequently used controls are proximity cards (which require an interface with the airport’s access control computer) or a digital keypad. A reprogrammable digital keypad can be programmed to a “corporate” code that will allow out-of-town flight crew members to access the airline’s operations areas.

2.2.A.6 Miscellaneous Structural Considerations - Reserved

2.2.A.7 Miscellaneous Plumbing Requirements

Provide ½-inch water stub up and 2-inch sewer stub up for electric water coolers (typically a tenant provided item). The designer should consult with each tenant regarding the desire and need for water coolers.

Prepare waterproofing details for all piping penetrations through elevated floor slabs. Coordinate with fire safety system.

All public toilet rooms will have 24 volt electronic flush valves on water closets and urinals and electronic faucets with blended water at lavatories.

Provide access panels when it is necessary to conceal a valve or other device that may require service or adjustment. Generally, it is preferred to locate such devices within service spaces, such as janitor closets, or plumbing chase, where they can be directly accessible. The components should be located within 7 feet of the floor (accessible without a stepladder). If an access panel is required in a tiled wall, it will be fabricated in stainless steel.

Provide frequent placement of cleanouts (particularly at changes of direction) in all underground storm, sanitary, grease, and specialty waste lines.

Provide tenant sub-meters on each tenant water service line. Meters must be accessible for monthly readings (accessible without a stepladder).

Provide a separate city water meter for cooling tower makeup water and cooling tower blow down. Meters must be purchased from the City of Tampa.

All "P" traps, shutoff valves, and faucet electronics will be located inside the plumbing chase.

All watercloset and urinal flush valves will be located in the plumbing chases.

Electric water heaters (EWH) will be roughed-in (plumbing and electrical) so that they can be easily removed and replaced without unsoldering or cutting piping. Locate adjacent to a floor drain.

Install gate valves immediately adjacent on either side of any pressure-reducing valve. Install pressure reducing valves in an accessible area below 7' - 0" above finished floor.

Install domestic water isolation valves on branch lines 2" and larger.

Coordinate floor drain locations with structural framing.

Do not install storm, sanitary piping, drainage piping, or HVAC pans or piping directly over electrical equipment, including panels. Do not run

pressurized liquid (domestic water, chilled water, etc.) piping through electrical rooms.

Design water supply system for toilet rooms with valve zones so that only a small portion of the room must be shut down to service a particular component.

Install floor drains with trap primers and hose bibbs in all mechanical rooms.

All piping and conduit will be concealed in all finished interior spaces and on the exterior of the building.

Design domestic water pumps, so that one pump can be mechanically and electrically isolated to enable the other pump to remain operational (100% redundant and alternating function). Provide a full size bypass line on the domestic water system downstream of the booster pump package.

Provide a duplex in-line filter/strainer on the inlet to the domestic water pump.

Provide conductivity monitoring sensor on incoming city water and interface with BCS (METASYS).

Install gate valves immediately adjacent on either side of an air separator or a pressure reducing valve.

Provide cleanouts at the top of all sanitary risers. Provide cleanouts at the ends of all laterals and at all sanitary drops. Provide cleanouts at the end of all branch lines. Install floor drains beneath all cleanouts.

Coordinate the location of all storm and sanitary cleanouts with Authority maintenance prior to installing any piping.

2.2.A.8 Miscellaneous Fire Protection Requirements

A standpipe system will be an automatic wet system, class 1, 100 psi residual pressure at the most remote hose connection.

All fire sprinkler valves will be located in accessible areas. Access must be possible without a stepladder. If the valves must be concealed, appropriately sized access panels must be provided to allow inspection and/or servicing.

Fire sprinkler zone drain lines will be located at non-traffic locations and will terminate at a floor drain.

Utilize only UL-Listed hot-dipped galvanized hangers and threaded rods to support sprinkler system components in non-conditioned spaces such as: tug tunnels, bag make up areas, shuttle maintenance areas, and sheltered areas (exterior, but under cover.)

Utilize only UL Listed pipes and fittings for wet pipe and dry pipe systems. Pipe and fittings in non-conditioned spaces such as: tug tunnels, bag make up areas, shuttle maintenance area, sheltered areas (exterior, but under cover.) will be factory hot dipped galvanized.

All fire protection equipment and devices will be UL Listed and FM approved.

The designer will carefully consider the potential impact of an accidental discharge or leak from a wet pipe system in rooms housing significant electrical equipment or electronic systems. Increased fire separation provisions may eliminate the sprinkler requirement or negate the need for a dry pipe or pre-action system.

2.2.A.9 Miscellaneous Mechanical Requirements

Provide air conditioning for all mechanical equipment rooms, electrical distribution rooms, systems rooms, the sound rooms.

Install large mechanical system components (chillers, pumps, etc.) on isolated sections of floor slab to reduce vibration transmission throughout the structure.

Provide access panels when it is necessary to conceal a valve, damper, or other device that may require service or adjustment. Generally, it is preferred to locate such devices in mechanical equipment rooms, janitor closets, or plumbing chases. If an access panel cannot be avoided, coordinate location with the Architect.

Air handling unit condensate will drain to the storm sewer system. Chillers will be painted.

Specify a three-to-five year full service extended warranty on any new chillers in addition to a renewable maintenance contract. The warranty documents will list the monthly cost to the Owner for term of the warranty.

Provide sensors to monitor condenser water conductivity and pH, and interface with BCS (METASYS).

Provide vibration isolators on pipe hangers for the preconditioned air system (glycol) piping.

Cooling tower water piping and flange connections exposed to water spray should be constructed of PVC or coated steel.

Provide isolation valves in main glycol piping loop and branch line connections to main header.

All air handling unit equipment condensate drains will be piped to the nearest storm drain line. All air handling unit equipment on large scale "green field" projects, install a condensate collection system to recycle condensate "waste" as make up to replace evaporated condenser water. See system installed at Airside C.

2.2.A.10 Miscellaneous Power Requirements

No exposed conduit will be allowed in janitor closets beneath 8 feet above the floor.

All electrical distribution rooms will be air-conditioned.

Provide GFI (ground fault interruption) at vanities and between lavatories; an outlet must be adjacent to each lavatory.

Install gray 20 amp/120 volt hospital-grade outlets in carpeted areas (100 feet maximum spacing) for carpet cleaning equipment.

Provide power to irrigation system components such as pumps, controllers, and solenoid valves.

Provide power to all parking gates and electrical sliding gates.

Provide power stub-ups for FIDS system.

Extend normal and emergency power to subpanels in each tenant area.

Provide power source for low voltage 24VDC valves or lavatories, urinals, and water closets. Connect no more than three sensors to each transformer.

Rough-in empty conduit for an intercom system at each tenant's access-controlled security door. Rough-in power to master station location and rough-in system conduit between master station and substation. Typically, the substation will be located on the non-secured side of the

access-controlled door hardware for the system will be provided by the tenant).

Rough-in empty systems conduit (for an emergency call system) to a location 1 foot, 4 inches off the floor, between the watercloset and the lavatory in all companion toilets. Extend conduit to near systems room to allow interface with a future master station that may be installed in the security office or the Communications Center.

Provide separate electrical meters, located in satellite electrical rooms, for each tenant space.

Provide emergency power to the waterproof duplex outlets in the elevator and escalator pits.

Provide GFI receptacles in the elevator machine rooms and central plant spaces.

Construction documents will outline 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.

Provide a complete riser diagram if any electrical panels are added. (Having an accurate and complete riser diagram is a necessary tool to support the ongoing maintenance operation as well as provide for future development of the power network.)

Office Design: Provide a clean power receptacle in addition to a normal power outlet at each computer network data outlet. Provide separate transformer, dedicated panel and surge suppression when practical.

2.2.A.11 Miscellaneous Lighting Requirements

All HID downlights will be specified to have a protective glass lens to prevent hot glass from falling in the event of a lamp explosion.

Lighting at all exit stairs will be on emergency power.

Avoid using "shear" light along the walls; it accentuates all imperfections.

Do not install light fixtures (or speakers) above areas inaccessible to a lift device. Lower height construction such as bar/food service and preparation areas, planters, and escalators and stairs can make lamp maintenance impossible.

Provide appropriate lighting to enable nighttime servicing of the cooling tower.

Do not provide switches for toilet room lighting. They are always turned on. The only control is the breaker at the panel.

Provide emergency power to the light fixture in the elevator and escalator pits.

Minimize the use of fluorescent light fixtures. Lamp cost is high and replacement frequency is often.

2.2.A.12 Miscellaneous Systems Requirements

Provide raceways and conductors to monitor and control all elevators from the Communications Center.

The fire alarm system will be the pre-signal system operated through the Communications Center.

Provide data stub-ups for FIDS system.

Provide data raceway system and stub-ups for FIDS system.

Route systems cable tray (data, phone, fire alarm, CCTV, and so forth) to each tenant space.

Provide Gaitronic 280 series telephone in all elevator cabs.

Provide heat detectors in elevator pits.

Provide fire alarm speaker "strobe" devices in all enclosed rooms.

System vendors will provide source codes to allow local software adjustments. Systems include access control, fire alarm, and building management.

Provide fire alarm system annunciator in the fire control room (off the truck court) and in the security office. The system will also provide alarm notification to the Comm. Center in the Service Building.

When possible, expand existing fire alarm and building control systems instead of introducing new systems. Simplex and Johnson Controls are the manufacturers of the existing systems.

2.2.B Airside Terminals and Truck Courts

2.2.B.1 General Planning Criteria

2.2.B.1.1 Building Envelope Limitations

Provide raceways and conductors to monitor and control all elevators from the Communications Center.

The fire alarm system will be the pre-signal system operated through the Communications Center.

Provide data stub-ups for FIDS system.

Provide data raceway system and stub-ups for FIDS system.

Route systems cable tray (data, phone, fire alarm, CCTV, and so forth) to each tenant space.

Provide Gaitronic 280 series telephone in all elevator cabs.

Provide heat detectors in elevator pits.

Provide fire alarm speaker "strobe" devices in all enclosed rooms.

System vendors will provide source codes to allow local software adjustments. Systems include access control, fire alarm, and building management.

Provide fire alarm system annunciator in the fire control room (off the truck court) and in the security office. The system will also provide alarm notification to the Comm. Center in the Service Building.

When possible, expand existing fire alarm and building control systems instead of introducing new systems. Simplex and Johnson Controls are the manufacturers of the existing systems.

2.2.B.1.2 Shuttle System Design Issues

Provide a 2° angular splay from station centerline for the shuttle station tunnels. The widened exit lobby "throat" allows for better queuing distribution at all entry doors along the boarding area. The minimum lobby width dimension should be 27' - 0".

When designing the tunnel envelope, provide emergency egress doors for any possible vehicle stop location. Misalignment of doors is extremely rare, but all scenarios of misalignment must be planned for, including the worst case of striking and collapsing the buffer. Typically, the emergency egress doors have been concealed by the panel systems between the doors. The existing airside buildings present various approaches to the detailing of these doors.

The maintenance area for the shuttle system is typically constructed at the airside end of the system. The area required for a typical maintenance area is approximately 9,000 square feet. This space includes:

AGT Switchgear	850 SF
UPS Room	160 SF
ATC (automatic train control)	160 SF
Parts storage	1,100 SF
Toilet/lockers	64 SF
Maintenance area	6,666 SF
(Includes two elevated work platforms 20' x 95')	

These areas are for reference only. Consult with the system manufacturer/maintenance contractor for confirmation or current needs.

With the current Bombardier C-100 car system, the running surface (where the vehicle tires roll) is 3' - 6" below the lobby floor and vehicle floor level. The maintenance platform is 5' - 0" below the running surface and in Airside A the maintenance area is 8' - 4" below the work platform. The elevation difference between the maintenance platform and the maintenance area floor varies from airside to airside. With only 8' - 6" from the lobby floor to the maintenance platform, headroom for the mechanic becomes an issue. As a result, the lobby floor structure cantilevers approximately 5' - 0" on each side thus eliminating deep edge beams. (At Airside A the slab thickness is 10", which allows approximately 7' - 8" of headroom.)

The airside end of the system has also been constructed with wash platforms to allow regular cleaning of the vehicles. At Airsides F, A, E, and C, the 50' platform cantilevers from the outside face the guideway structure. The platform is approximately 5' - 0" wide and is constructed with a metal grating walking surface and enclosed by a perimeter guardrail. Each platform is equipped with a hose bibb and a power outlet to allow the use of a pressure washer. The

platform is connected by ships ladder to the interior maintenance platform.

2.2.B.1.3 Special Access Provisions

At Airside A, E, and C three distinct features were included to accommodate the movement of large items in or out of the building.

Near the loading dock, a 10,000 lb. capacity elevator was provided with an 8' x 10'(±) platform and a 6' wide door.

In addition, double wide exit doors have been provided at each airside onto the emergency walkway of the shuttle system to allow the movement of hydraulic boom or scissors lifts to and from the airside and the landside terminal.

On the apron side of the Airside A, a pair of exit doors and an exit stair was detailed to facilitate the movement of large furniture, equipment, or landscape features. The exit doors are equipped with a removable center mullion and the stair landing is detailed to allow the removal of a portion of the guardrail.

At Airside E, a removable section of curtain wall was detailed, without a concrete curb, into the east wall near Gate 75, just south of the outdoor patio.

2.2.B.1.4 Passenger Loading Bridges

The standard passenger loading bridge configuration utilized at this airport is an apron drive unit. Airside A has Stearns units throughout, with the exception of Gate 16 which is a Jetway unit. Jetway units are in place at Airsides C and E. Thyssen-Krup units are in place at Airside F. Bridges are manufactured in two tunnel and three tunnel configuration depending on the operational needs of the particular gate.

With the closure of Airside D, all airside are now "second generation" airside which have 400Hz power systems and pre-conditioned air systems on all loading bridges. The 400Hz power system consists of a power converter (that hangs beneath the loading bridge tunnel) that converts the standard 480V 3-phase 60Hz AC power to 90KVA, 200/115V, 400Hz, 3-phase AC power. The pre-conditioned air system consists of a series of air handling units (hung beneath the cab of the loading bridge) with flexible duct connecting to the aircraft utilizing a glycol-based refrigerant system

that is processed within the building through a system of chillers, pumps, and ice storage tanks.

In selecting a bridge configuration, the designer must analyze the relationship of aircraft threshold heights, ramp slope, rotunda height, and bridge length to meet the loading door. Bridge floor slope maximums will not exceed 8.33% or 12 to 1.

In analyzing bridge slope, avoid operations within five feet of full extension or five feet of full retraction. Within these limits, the bridges typically operate at half speed.

With many airlines downsizing their fleets to regional jets, they may very soon be a need to reconfigure a number of our current loading bridges to allow them to “stoop” to a lower to a 7’-2” threshold height (M0-80). Several regional jets require the bridge to lower to a 5’-0” threshold height. Rework kits are currently available from several sources.

In developing the apron layout, avoid placing manholes or fuel hydrant pits within expected operating zones for the loading bridge.

Maintain adequate clearance between bridge tunnels and fixed items such as columns and apron lighting poles.

Locate hurricane tie down positions with the bridge in a fully retracted condition as tight to the face of the building as possible. The tie down receptacles will not project above the apron surface and they will not present a tripping hazard.

An appropriate raceway system will be installed in the loading bridge to allow the installation of a telephone at the operator's console.

An appropriate raceway system will be installed in the loading bridge to allow the installation of an illuminated gate identification sign on the aircraft approach side of the cab. (See Airside A and E bridges.)

Boarding bridge interior air conditioning will be specified for all new boarding bridges.

2.2.B.1.5 Specialized Storage Areas

Provide a storage space for the Maintenance Department to high lift unit. Provide appropriate doors and power outlet to recharge batteries. Doors throughout the facility should be sized to allow necessary movement. Doors to the AGT system emergency walkway will be sized to accommodate the lift.

Provide a storage space for the interior plant maintenance cart. Provide appropriate doors and power outlet to recharge batteries.

Wheelchair storage spaces will be provided near all holdroom areas.

2.2.B.1.6 Holdroom Layout

In recent years, security concerns have prompted many airlines to relocate their check-in counter/backwall” packages” to a location very near the exterior concourse wall directly adjacent to the loading bridge door. With the closure of the gap behind the backwall, the possibility of an unticketed passenger sneaking onto a flight is significantly reduced.

The close proximity of the check-in counter to the loading bridge has allowed many airlines to reduce the number of personnel required to service a boarding operation. An agent at the counter can now oversee the door in the event that the podium or pass reader agent is required to assist a special needs passenger down the loading bridge.

Orient the check-in counter and backwall at angle (60 ±) facing toward the passengers as they approach the area from the shuttle lobby. The angled orientation increases the visibility of the gate numeral on the top of the backwall.

“Quick-turnaround” airlines such as Southwest require the creation of distinct deplaning and enplaning aisles. The deplaning aisle is usually a well-defined straight “chute” that directs the passenger out into the wider concourse walkway. With Southwest, the boarding queues are separated into four groups; preboards, and the A, B, and C groups. These groups must be separated from the deplaning aisles.

2.2.B.2 Equipment/Furnishings

2.2.B.2.1 Holdroom Seating

Holdrooms at Airside A, E, F, and C are all furnished with Herman Miller Eames Tandem Sling seating units. These seating units are also used throughout the Landside Terminal.

The tandem seating groupings are assembled in either single gang or back to back configurations with three to ten seat long groupings. Groupings that are too long prove to be difficult to move to allow carpet cleaning or overhead maintenance or housekeeping work.

2.2.B.2.2 Airside Check-in Counters (Airsides A and D)

With the development of Airside A, a prototype check-in counter shell was developed. The shell consists of two stainless steel clad end pylons which support a front-projecting transaction surface/cowling fabricated from solid surface material. The front panel consists of two solid surface panels set on a stainless steel-clad backpanel.

The top of the cowling is routed to accept a recessed signage panel containing required FAA notices.

As with ticket counters, an airline specific insert cabinet has been fabricated to accommodate the specific functional needs of their check-in operation. Utility interfaces include: emergency power, telephone, PA system, and data lines (connected to airline's network). Airline standard check-in counters were utilized by Delta and United at Airside E and by Southwest at Airside C.

2.2.B.2.3 Airside Back Wall Units (Airside A)

The back wall unit somewhat mimics the detailing of the check-in counter. Stainless steel clad rounded ends and corners surround a plastic laminate wall and storage cabinet.

Storage modules are provided in the lower portion of the front area and full height in two compartments on the back.

The upper portion of the front is allocated for airline signage and flight information displays (gate number, flight number, destination, and departure time).

A fire extinguisher cabinet and a waste receptacle are located on the backsides of the unit.

A sign box is mounted on the top of the storage unit and includes an illuminated gate number sign and a clock on the front and gate number signs on each side. Utility interfaces include: emergency power and data lines (connected to airline's network).

Airline standard back walls were utilized by Delta at Airside E and by Southwest at Airside C.

2.2.B.2.4 Airside Gate Podiums (Airsides A and D)

Typically, the airlines have established a final boarding pass checkpoint at the doorway to the lading bridge. These checkpoints vary in configuration with each airline. Some have a podium component with both a computer terminal and an electronic boarding pass scanner; another scanning console; a third may utilize an airport standard podium with an attached proprietary electronic scanning module; and smaller airline may simply have a podium from which the gate agent checks off a paper boarding pass.

2.2.B.3 Conveying Systems

2.2.B.4 Miscellaneous Structural Considerations

At security screening areas, provide adequate loading bearing capacity to support the latest generation of X-ray machines.

During the design of floor systems, consider weights and load distribution of the high lift equipment that will be utilized during construction as well as during the ongoing maintenance operations throughout the life of the structure.

Consult early with the Authority staff and tenant design professionals to establish special loading requirements for planters, aquariums, and any other concentrated load elements that may be associated with a concession buildout (i.e., signage pylons or "umbrella" canopies).

Consult early with signage and FIDS system designers to establish locations of ceiling/roof structure supported elements. The designer will survey other similar terminal areas to develop a sense of the typical signage locations.

Provide 2" floor depression for tile placement at all toilet room areas.

With the construction of baggage sortation facilities at the airside, elevated floor slab design should address the extensive vibration introduced into the structure by the conveyors and pushers suspended beneath.

2.2.B.5 Miscellaneous Plumbing Requirements

At Airside buildings, provide 1½-inch water stub-outs at the building wall for potable water cabinets (a tenant provided item). Potable water cabinets are generally located on the pilot's right side of the aircraft parking position.

2.2.B.6 Miscellaneous Mechanical Requirements

Provide an aboveground fuel tank for the emergency generator. Locate in close proximity of truck court. Verify tank truck accessibility and path for filler hose. The fuel tank construction and installation will comply with all NFPA, EPA, and DEP regulations.

Consult NFPA 415 for height restrictions for exhaust outlets or air intakes located in walls adjacent to the apron/aircraft parking areas.

2.2.B.7 Miscellaneous Power Requirements

Provide disconnects/breakers for the pre-conditioned air system (PCA), the 400 Hz system, and the loading bridge at the building wall beneath the bridge's rotunda.

Provide electric meters on the service to the loading bridges, including the PCA air handler and the 400 Hz equipment. Locate meters in the satellite electrical rooms.

Provide emergency power to all check-in counters, backwalls, and gate podium scanners.

Provide emergency power for the AGT system control system.

Provide appropriate conduit and junction box rough-in to accommodate the power/phone/PA/data systems that serve subsequent bid packages, such as millwork (check-in counters, back wall cabinets, podiums, phone kiosks), and loading bridges.

Provide shunt trips for building and AGT power systems. Provide signage in each switchgear room with instructions indicating how to de-energize both power systems.

Provide electrical rough-in at the transom of the loading bridge door to accommodate the gate identification sign and a future digital flight information signage system.

Provide power rough-in for a future aircraft guide/approach system at each gate position. Locate junction box at 14 (fourteen) to 16 (sixteen) feet above apron elevation at the intersection point of the apron lead-in line and the building wall. Confirm exact placement of rough-in with manufacturer of equipment.

Provide power rough-in for security screening equipment (X-ray machines, magnetometers, etc.) Confirm detailed electrical characteristics for all equipment. At Airside E, it was discovered that all magnetometers must be connected to the same electrical phase in order to operate without electrical interference problems.

Extend power distribution panels to mezzanine levels to accommodate the future development of offices or airline lounge space.

Emergency power requirements: Typically, the following components require emergency power to maintain the basic operational capabilities during a power outage.

- operational lighting for all public spaces
- toilet room lighting
- soffit lighting above exterior stairs
- lighting for interior stairs
- signage lighting
- apron lighting
- truck court lighting
- gate operators
- elevators (provide capacity for only a percentage of the unit, which is switchable to any selected unit)
- passenger loading bridges (provide capacity for only a percentage of the unit, this is switchable to any selected unit)
- sewage lift stations
- jockey pump
- security equipment - magnetometers and X-ray machines
- automatic doors
- turnstiles
- blast fence lights
- generator fuel pump and battery charger

- coolers and freezers (tenant facilities)
- irrigation controllers
- U.P.S. systems for various computer controlled systems
- toilet room devices - electronic flush valves and lavatory faucets
- check-in counters and gate podiums
- telephone kiosks
- sound and fire control room receptacles
- systems equipment - access control and CCTV
- FIDS monitors and EVIDS information boards

Provide power rough-in for potable water cabinets (the unit is generally equipped with a motorized hose reel and a duplex outlet.)

2.2.B.8 Miscellaneous Lighting Requirements

Design apron lighting with light sources aimed at the cargo loading side of the aircraft (pilot's right side).

Apron lighting will be high pressure sodium, with double arc tubes, quartz restrike and remote ballasts. Do not provide any dimming capability; it should either be "fully on" or "completely off."

Consider supplemental task-oriented lighting at ticket check-in counters and podiums. Carefully consider the impact of glare on computer screens.

Prepare a point-by-point photometric analysis of apron lighting prior to finalizing design.

2.2.B.9 Miscellaneous Systems Requirements

Provide rough-ins for public address (microphone station), data and phone at all check-in counters and gate podiums.

Design PA system with zones at each gate area. Do not provide local amplifiers that can be adjusted by gate agents. Locate all amplifiers in a common air-conditioned sound room.

Provide conduit/junction box for telephone installation on a loading bridge.

Provide separate cable trays or conduit for power and systems under and between each check-in counter.

Provide interface with terminal master clock system. Extend to all check-in counters and other clock locations.

Provide data conduit from the check-in counter to the transom of the loading bridge door to accommodate a future digital flight information signage system.

Provide raceways, conductors, and push, buttons for the passenger screening area phone and "trouble" alarm systems. The alarm will be interfaced with police department dispatch computer system. Develop decentralized "satellite" system rooms to provide localized connection/distribution points for phone, access control, fire alarm, data, and so forth. Locate systems room within the 100 meter maximum copper cable length.

Locate fire annunciator panels in the fire control room (accessible directly from the truck court) and the security office.

Extend the conduit or cable trays for phone, data, and other systems to the mezzanine level to accommodate the future development of offices or airline lounge space.

Provide appropriate raceways, conductors, and the necessary support equipment to provide monitoring at the Comm. Center of the following equipment and/or systems: fire alarm (typically Simplex); building management system (typically Johnson Control Metasys), elevator/escalator (typically Schindler), and access control. A trouble alarm will also be installed at each security screening area that is connected to the police department dispatch computer.

Require a five-year warranty on the public address system.

2.2.B.10 Building System Rough-in Provisions for Tenant Provided Equipment

Provide electrical junction boxes for aircraft parking "guide/approach system." Locate at approximate boarding level beam line at the projected intersection of parking lead-in lines.

Provide concealed empty conduits from the base of apron lighting poles to the apron level ceiling space to accommodate ground radio antennas that may be required by tenant airlines. Detail lighting poles to allow attachment points for these antennas. Confirm conductor size for antenna. Many airlines specify cabling that requires a 2" diameter conduit system.

Provide electrical junction boxes for hose reel power at locations appropriate for potable water cabinets. Typically, cabinets are placed to

the pilot's right side of the projection of the lead-in line extended to the building wall. Water source will be a valved 1 ½" line.

Provide electrical junction boxes for electric water coolers. Coordinate placement with a valved water line and sanitary drain.

Provide separate signal and power conduits to the locations planned for communication antennas and satellite dishes.

2.2.B.11 Truck Court Elements

An airside terminal truck court typically includes the following components:

2.2.B.11.1 A Guardhouse Placed Between Gate-Controlled Entry and Exit Roadways

Truck court entry and exit gates are controlled from the guardhouse. All vehicles entering the truck court must display proper identification. A guardhouse will be located adjacent to the service road and between the entry and exit gates. The guardhouse will have a clear view of AOA entry gates that are nearby. The guardhouse will be equipped with 120 volt power, an air conditioning/heating unit, telephone service, and be interfaced with the access control system to allow gate control.

2.2.B.11.2 AOA Entrance Gate(s)

The AOA gates will be electrically operated horizontal sliding cantilevered gates with sensitive edges that reverse the operation in the event of contact with a vehicle. The gate operator is to be interfaced with the access control system. Valid security identification must be presented to a card reader when passing through in either direction. Typically, an entry and an exit gate are provided at each AOA entry point. The drive lanes are separated by a raised curb. On the curb are two card readers and numerous pipe bollards to protect the equipment.

Inductive loop detectors are placed in both drive lanes to ensure the vehicles pass through the gates in a prescribed sequence. The loops on the existing side, of either approach direction, serve to monitor the position of the vehicle during the closing cycle of the gate operation.

By requiring the vehicle to maintain a nearby parking position until the gate closes, the vehicle operator becomes responsible for supervising the gate operation during both the opening and closing cycles. This operation also prevents two vehicles from passing through on a single access card swipe (piggybacking).

2.2.B.11.3 Transformer Enclosure (Building and Shuttle System Equipment)

At Airside A, a transformer enclosure was constructed adjacent to compactor enclosure. The concrete and masonry structure has a removable metal grating top that screens the electrical gear from view from above. The yard area enclosed is topped with course stone except at the concrete equipment pads. An underground drainage system is required to relieve any significant water accumulation. At Airside C, the generator building and transformer yard were combined into single enclosure. At Airside E, the generator building, the transformer yard the cooling tower and the compactor/dumpster enclosure were combined into a single concrete and masonry structure.

2.2.B.11.4 Trash Compactor Enclosure

A trash compactor is generally placed in a concrete/masonry enclosure. The compactor is generally integral with a 30 cubic yard trash container. When the compactor/container is removed for dumping, the compactor must be disconnected from a stationary hydraulic pump unit. The combined compactor/container assembly reduces the spillage that may result from a two component installation.

Electrical service will be in accordance with the container/compactor manufacturer's specifications.

The concrete slab should slope outward toward a trench drain and should be poured with steel guide channels to serve as the bearing surface for the container rollers as it is being removed or reset in place. The interior of the concrete enclosure should be constructed of poured-in-place concrete.

A pressure wash unit should be installed to allow periodic clean ups.

2.2.B.11.5 Loading Dock

At an airside, a loading dock will be constructed with minimum two berth width, 30'-0"±. The dock should be constructed with a minimum 10'-0" clear overhang to allow unloading during rain. The dock height is typically 4'-0".

2.2.B.11.6 Access Doors to Shuttle Maintenance Spaces

At the airside, exterior access doors are required for the following maintenance area spaces:

AGT Maintenance Space	- man door and overhead door
AGT Switchgear Room	- man door and overhead door
UPS Room	- overhead door
ATC Room	- man door

(See the Airside E and C construction documents for most recent configurations of shuttle maintenance areas)

2.2.B.11.7 Access Doors to Maintenance Areas and Central Plant

At the airside, exterior access doors are required for the following spaces:

Mechanical Equipment Room	double man door
Electrical Room	double man door
Fire Pump Room	double man door
Central Plant	man door and overhead door
Communications Room	man door

2.2.B.11.8 Access to Fire Control Room

At Airsides A, E and C, the fire control room is located at or adjacent to the loading dock.

2.2.B.11.9 Emergency Generator Enclosure and Cooling Tower

At Airside A and E, the cooling tower and the emergency generators are housed in adjacent concrete and masonry structures. The emergency generator area includes the generator unit, with control console, and an above ground fuel tank. The designer will consider the normal length of fueling hose and available tanker truck parking positions when siting this enclosure. All exhaust pipe exposed to view will be fabricated from stainless steel. Consult with DEP for special fuel facility regulations.

2.B.11.10 Flight Crew Loading/Unloading Area (Hotel Courtesy Vans)

At Airsides A, E, and C, flight crew entrances routes have been created to allow for non-Tampa badged airline personnel to enter the building and gain access to the Boarding Level passenger screening area. (Consult construction documents for Airsides A, E, or C.)

2.2.B.11.11 Ramp to Loading Dock

At Airsides A, E, and C, a ramp has been constructed to connect the loading dock to the truck court driveway to facilitate trash removal, handicapped access, and maintenance access.

2.2.B.11.12 Truck Court Lighting

2.2.B.11.13 Staff Parking Area

Every attempt should be made to maximize the amount of staff parking spaces in the truck court area. At least two spaces will be provided for Authority maintenance vehicles adjacent to the Central Plant overhead door.

2.2.B.11.14 Access-Controlled Pedestrian Turnstile

Pedestrian access to the AOA area is provided from the truck court via an electronic turnstile within the fence line. The turnstile operator is actuated by an airport employee ID/proximity card badge.

2.2.B.11.15 Maneuvering and Turn Around Area in Truck Court

Typical vehicles accessing the truck court can include large semi-trailer units, large roll-off container trucks (to haul the 30 cubic yard trash container/compactor unit), fuel trucks, and various fire department apparatus. Adequate maneuvering space must be provided for all vehicles.

2.2.B.11.16 Miscellaneous Site Utility Elements:

Double detector check valve for fire and domestic water service (with landscape screening); lift station for sanitary sewer (if required); irrigation system valves and controllers; manholes; fire department valves/standpipe connections

Provide water and power sources for irrigation system. Locate controllers and all solenoid valves in boxes below grade. (Investigate the possibility of utilizing nearby retention pond water for irrigation.)

Locate fire department connection (FDC) with 1000 GPM flow rate, maximum 6' from curb in an appropriate and accessible location. Verify position with the Fire Department.

Utilize landscaping elements to screen truck court from the service road and/or the shuttle system vehicles.

Section 3 – Building Sections and Components

3.1 Division 1 – General Requirements - Reserved

3.2 Division 2 – Site work – Reserved

3.2.A Section 02221 – Building Decommissioning and Demolition

Prior to the demolition of a building or structure, all hazardous waste and materials must be disposed of in accordance with all applicable federal, state, and local regulations including but not limited to OSHA, EPA, DOT, FDEP, and EPC regulations. The waste disposal transporters must be FDEP approved and provide a current State of Florida Hazardous Waste Transporter Status Form (DEP Form 62-730.900(5)(d) showing Transporter EPA ID Number. Copies of all waste disposal manifests must be provided to the Authority at the completion of the waste disposal task.

Asbestos survey, abatement, and disposal activities must be conducted in compliance with all applicable federal, state, and local regulations including but not limited to OSHA, EPA, FDEP HRS, and EPC regulations. Air quality monitoring (personal or ambient) during the asbestos abatement activities must be conducted by the contractor independently of other entities providing oversight.

Applicable Codes and Reference Standards

Applicable regulations include but are not limited to:

29 CFR 1910 Sections 2, 134, 145

29 CRR171 and 172

Chapter 99-469.001 99-469.015 of the Florida Statutes

40 CFR 61, Subpart M, and Section 61.145

3.3 Division 3 - Concrete

3.3.A Section 03200 - Concrete Reinforcement

In architectural concrete, only stainless steel tie wire will be used.

3.3.B Section 03300 - Cast-in-Place Concrete

The typical concrete for airport construction will have standard gray cement and normal weight limestone aggregate in accordance with ANSI/ASTM C 33.

All architectural concrete surfaces will be finished with a water-repellant.

The typical concrete floor slab finish, for a floor to receive VCT or carpet, will be steel-troweled with a liquid membrane forming, curing, and sealing compound.

The typical finish for a floor slab that is to be left exposed will be a "lightly broomed" finish with a liquid membrane forming, curing, and sealing compound.

Typically, slab hardener products are not used.

Typically, all slabs will be installed over compacted fill and a vapor retarder membrane (normally asphalt impregnated felts). At Airsides C and E, a heavy Stego-Wrap barrier (Stego Industries, (877/464-7834) was installed beneath the ground floor slab to prevent the upward flow of fuel vapors that exist in the building subgrade. This barrier has taped seams and is detailed to fit tightly around all vertical slab penetrations.

3.4 Division 4 - Masonry

3.4.A Section 04200 - Unit Masonry

Glazed brick for Landside Terminal renovations will be as follows:

Red face brick: "TIA - Red Glazed" by Belden Brick Co.

Blue face brick: "WG-90-3368" by Glen-Gery Corp.

White face brick: custom beige" to match existing by Endicott Clay Products, Co.

Sources: Clay paving bricks for Bag Claim and Ticketing Level paving bands:

Precast concrete pavers: 2'-0" x 2'-0" x 1-1/4" for Bag Claim, Ticketing and Plaza Level areas.

3.5 Division 5 – Metals

3.5.A Section 05511 - Metal Stairs

Exterior stairs and ladders will be left unpainted with a galvanized finish. Large assemblies will be detailed using "bolt-together" components or sub-assemblies. The weakest point in the integrity of a galvanized coating is in the area of a field weld that has only a thin, sprayed-on cold-galvanizing coating. Extensive preassembly by welding, before galvanizing, can be counter productive because the high heat associated with the galvanizing process will warp a competently prepared assembly to the point that it may not be usable. The designer will verify the limits on component or subassembly size dictated by capabilities of local processors

When fielding-welding is necessary, cold-galvanizing must be used to complete the corrosion protection. Careful research and sample procurement are necessary to find a matching cold-applied product.

Avoid products that tend to be a flat gray (either too light or too dark) without the “metallic” look.

3.6 Division 6 – Wood and Plastics

3.6.A Section 06100 - Rough Carpentry

In recent years, it has been discovered that the structural integrity of fire-treated wood framing and plywood can deteriorate significantly when exposed to the radiant heat of light fixtures (including fluorescents). Research the products carefully before specifying or using fire-treated wood. Do not use in a loadbearing condition. Backing boards for telephone terminal boards are acceptable. The painting of backing boards will be performed outdoors away from conditioned spaces.

3.7 Division 7 – Thermal and Moisture Protection

3.7.A Section 07190 - Water Repellants

Exterior exposed concrete surfaces will be typically coated with water repellent.

3.7.B Section 07411 – Metal Roof Panels

Six aluminum standing roofing systems have been installed at the airport. The north Pemco Hangar and Airside F are built with the Merchant and Evans, “Zip-Rib” system; the U.S. Airways Hangar (steel) and Airside A are built with a Centria(formerly H.H. Robertson/Smith Steelite) SRS-3 system; and Airside E and C and the Airside A baggage sortation building are built with a BemoUSA Corp. 305 system. All systems are field-formed from Kynar-coated aluminum coil stock, 0.40-inch thick. Panel lengths on the hangars approach 125 feet; Airside E has panels in excess of 250 feet long; and Airside C has panels exceeding 370 feet in length. Special detailing considerations are required to accommodate the thermal expansion of the very long roof panels. All systems have nominal 3-inch-high standing seams that are sealed with sealant and an electric sealing tool. All systems use a stainless steel clip system which attaches to a heavy gauge metal purlin system.

The curved panels on Airside A and F were formed in the field by running the panels through a second roll-forming machine to create the desired radius. Gutters for the standing seam roofs are formed from 18 or 16 gauge stainless steel that is fully welded and water tested.

Gutter expansion joints are typically spaced 30 to 40 feet on center. Downspout drops are formed from the same gauge stainless steel (18 or 16), and are welded

to the gutter box. Transitions are then made to connect to the building's downspout system (steel or PVC, depending on conditions).

3.8 Division 8 – Doors and Windows

3.8.A Section 08110 - Steel Doors and Frames

Do not specify of doors fabricated with vertical galvanized sheet steel channel-shaped sections or interlocking Z-shaped sections. The doors on Airside A exhibit significant spot weld dimples on the face panel at each of these reinforcement members. Care should be taken in considering acceptable manufacturers. Consider requiring a door and frame sample to assess quality of hardware preparations and finish. Galvanize all exterior doors and frames.

On frames with access control hardware, require the inclusion of a tightly sealed mud box, with a flexible conduit connection at each attachment point for electronic hardware. A continuous raceway must be provided from the face of the door from e to a system junction box located near the door. With a definitive conduit route, a new conductor can be re-pulled into the hardware location whenever necessary.

Airside F had significant wiring difficulties because of improperly constructed wiring raceways.

Each exterior door will be equipped with a small permanently affixed sign numbering the door in accordance with the Authority door numbering system. The sign will be placed in the upper hinge side corner of the door.

3.8.B Section 08211 - Flush Wood Doors

Typically, interior wood doors in airport buildings are solid core assemblies with plastic laminate faces.

3.8.C Section 08411 – Aluminum-framed Entrances and Storefronts

Use only “wide-style” sections for aluminum and glass entrance doors. The construction is more durable and the wide face dimension provides enough surface to accommodate all hardware components.

3.8.D Section 08461 – Sliding Automatic Entrance Doors

Fabricate entrance doors and side lights with “wide-style” sections to match manual doors.

Provide a minimum opening width of 5 feet, 0 inches, clear.

Detail assemblies with both inside and outside side light elements. The outside piece will require breakaway hardware to maximize egress width.

The inside fixed panel must be installed so as to protect any unsuspecting individual from the suddenly moving edge of the operable door.

3.8.E Section 08710 - Door Hardware

Locks will be Corbin/Ruswin ML 2000 Series (no substitution) with removable core cylinders.

All permanent cores are to be great grand master keyed into existing or Authority approved Ruswin removable cores, H Keyway 6-pin system, in accordance with owner's key control requirements and instructions. Owner is the Authority. Individual door keying requirements are to be established in a meeting with the Contractor, user, architect, Authority, key control staff, Operations and others as deemed appropriate by the Authority. Key bittings will be per Authority requirements and provide upon project completion to the Authority.

Unless otherwise agreed, permanent keys are to be delivered to the Authority key Authority will direct installation and establish key control over the permanent key set. The Authority reserves the right to order and install the cores for any project. If this occurs, the Contractor will install a construction set as directed by the Authority and they will be returned to the Contractor when the final set is installed.

For factory ordered cores, the order must be received by the factory a minimum of 90 calendar days prior to occupation. If delivery is not by space use date, the contractor must provide a construction set with all keys that mimics how the final key set will operate and that set must be available for installation a minimum of 10 calendar days prior to space use or sooner if so directed by the Authority.

Panic devices will be Von Duprin 99 - Series touchbar devices. No exposed vertical rod devices are allowed.

Hinges will be Hager, McKinney, or Stanley. Units installed on exterior doors will be stainless steel. Units installed with door closers will have ball bearings.

Door closers will be Corbin/Ruswin 2200 series. Valve body will be located on the non-public face of the door whenever possible.

Stainless steel kickplates will be provided at all high-traffic doors (push side). Armor plates will be installed at all doors where carts or equipment will be pushed against the door while it is being opened.

Access control: Designers will coordinate door hardware and access control electronic device installation to verify that all operational objectives are met. Refer to Section 16730 for narrative on access control operations.

3.9 Division 9 - Finishes

3.9.A Section 09220 - Portland Cement Plaster

Exterior stucco areas will use only zinc alloy or PVC accessories: corner beads, casing beads, control joints, and so forth.

Framing for exterior soffit areas will use "stiff-leg" framing that is engineered for both positive and negative uplift loading.

3.9.B Section 09310 - Ceramic Tile

Floor and wall tile will be 4 inches by 4 inches minimum size (larger sizes are preferred).

Grout will be gray-colored grout, with a maximum joint width of 1/8 inch.

Backing for tile on fixture or "wet" walls will be a glass fiber-reinforced cement board, such as "Durock" or "Wonderboard."

Transitions from ceramic tile to another floor finish (carpet, vinyl composition tiles, and so forth) will use a tapered marble strip that provides an ADA-compliant transition between the varied finish thicknesses.

3.10 Division 10 - Specialties

3.10.A Section 10155 - Toilet Compartments

The partition system will be manufactured by the American Sanitary Partition Corporation (no substitution).

The installation will be a ceiling-hung configuration, except at large handicapped stalls, where a full height pilaster may be necessary to achieve proper lateral stability for the compartment front. In Airside A, a removable floor connection was designed to allow periodic disassembly to facilitate a thorough cleaning of the floor in the area of the pilaster footprint.

Doors will be reinforced to prevent racking and twisting.

The panels will be furnished with the manufacturer's standard powder-coated finish.

All hardware will be consistent with the parts inventory maintained by the Authority Maintenance Department.

Accessory and partition installers will coordinate placement of accessories to prevent damaging contact between components.

Coat hooks will not be placed on the inside face of an outward swinging door. At the normal placement height, the hook can become a dangerous projection. Locate on a side wall near the back of the compartment, safely out of the way. In the larger handicapped stall, the hook can be located on the front panel opposite the water closet.

Coordinate wall framing to provide solid wall reinforcement or backing between studs to provide a competent anchoring substrate.

3.10.B Section 10265 – Impact-resistant Wall Protection

In public area service corridors and at high traffic corners within the Authority offices, install corner guards to protect the wall. Typical corner guards are SM-20 units (surface-mounted) and FS-20 or 20R units (flush-mounted in gypsum board partitions), by Construction Specialties, Inc. or approved equal. At non-gypsum board partitions (masonry or concrete) use 6 gauge stainless steel corner guards, with ½" hemmed edge on 3 ½" wide flanges.

In service areas, where carts or rolling equipment circulate frequently, it is appropriate to install both crash rails and corner guards. At Airsides E and C, dual crash rails were used to protect the walls, one just above the base and another at about 4'-0" above the floor. The crash rails are SCR-64 units by Construction Specialties, Inc., or approved equal. Corner guards are SM-20 units for surface mounted conditions and FS-20 units for flush-mounted conditions, by Construction Specialties, Inc. or approved equal.

3.10.C Section 10450 - Pedestrian Control Devices

At AOA pedestrian access points, a full-height turnstile (Model MSTX by Alvarado Manufacturing Company, Inc.) will be used. Controlled access is required in both directions. Allow a maximum 120-degree rotation with each card activation.

Refer to Section 16730 for narrative on access control operations.

3.10.D Section 10801 - Toilet Accessories

Toilet accessories will be by Bobrick Washroom Equipment, Inc. (no substitution) typical units are as follows:

B-224: Surface-mounted utility shelf, with mop/broom holders and rag hooks.

B-2621: Surface-mounted paper towel dispenser (typically used only in non-public service areas).

B-274: Toilet tissue dispenser, double roll (typically used only in non-public service areas).

B-290: Mirror with stainless steel angle frame (used above makeup vanities, and in full-height dressing configurations).

B-347: Partition-mounted toilet seat cover and toilet tissue dispenser (for installation between two toilet compartments, without grabbars in a men's restroom).

B-3471: Partition-mounted toilet seat cover and toilet tissue dispenser (for installation between two toilet compartments, one with grabbars, in a men's restroom).

B-3474: Recessed toilet seat cover and toilet tissue dispenser (for installation in a handicapped stall, with grabbars, in a men's restroom).

B-3500: Recessed napkin/tampon vendor, single coin mechanism, 25-cent operation.

B-357: Partition-mounted toilet seat cover dispenser, sanitary napkin disposal, and toilet tissue dispenser (for installation between two toilet compartments without grabbars in a women's restroom).

B-3571: Partition-mounted toilet seat cover dispenser, sanitary napkin disposal, and toilet tissue dispenser (for installation between two toilet compartments, one with grabbars, in a women's restroom).

B-3574: Recessed toilet seat cover dispenser, sanitary napkin disposal and toilet tissue dispenser (for installation in a handicapped stall, with grabbars, in a women's restroom).

B-3644: Recessed waste receptacle for 4-inch wall.

B-3900: Recessed paper towel dispenser and waste receptacle (for 8-inch wall or chase).

B-3944: Recessed paper towel dispenser and waste receptacle (for 4-inch wall).

B-6717: Surface-mounted robe hooks.

B-6806: 1½-inch (38mm) diameter stainless steel grabbars, with snap-flange cover.

In 2004, Bobrick discontinued the production of two multi-purpose soap dispenser/towel dispenser units (Items B-317 and B-330) that had been specific extensively for the larger terminal toilet rooms. As result, a Bradley Corporation product has been selected as a replacement unit: Model 130, a recessed multi purpose towel dispenser/soap dispenser/mirror/shelf unit. As with the Bobrick unit, the soap dispenser valve must be specified offset to the right to prevent soap from dripping on the faucet spout.

3.11 Division 11 – Equipment - Reserved

3.12 Division 12 – Furnishings - Reserved

3.13 Division 13 – Special Construction

3.13.A Section 13900 - Fire-Suppression System

All exposed sprinkler and standpipe piping will be painted red.

3.14 Division 14 – Conveying Systems

3.14.A Section 14200 - Elevator General Requirements

The controller must provide for future tie-ins to a vertical transportation monitoring system.

Initial maintenance service will include: fully paid, full service maintenance warranty service by skilled, competent employees of the elevator installer for a period of 12 months following the Date of Final Acceptance by the Owner on a daily-surveillance basis. Include repair or replacement of worn or defective parts or components and lubrication, cleaning and adjusting as required for proper elevator operation in conformance with specified requirements. Include 24 hours-per-calendar day, 7 calendar days-per-week emergency callback service. Exclude only repair or replacement due to misuse, abuse, accidents, or neglect caused by persons other than installer's personnel. Installer will have maintenance personnel at Airport property 24 hours-per-calendar day, Monday through Friday, 0600 hours until 1830 hours Saturday, and 0700 hours until 2130 hours Sunday and holidays. This work will not be subcontracted. Only parts and supplies as used in manufacture and installation of the original installation will be provided.

System maintenance service will include: Contractor, at Contractor's own cost, agrees to furnish to Owner an executed Amendment with the current Contractor specified in this Design Criteria under Section 2.2.A.3.9 Maintenance Contracts.

This amendment to the existing "Maintenance Contract Elevators, Escalators, and Dumbwaiters, Tampa International Airport" will expand the Scope of Work of the existing contract to include the Work of this Section, " Section 14240 - Hydraulic Passenger Elevator," of the Contract between Owner and Contractor. All Work under this Section will be added, by said Amendment and at no direct cost to the Owner, to the existing "Maintenance Contract Elevators, Escalators, and Dumbwaiters, Tampa International Airport." Said Amendment will be automatically effective on the date of Substantial Completion of the whole Work. All other terms and conditions of the existing "Maintenance Contract Elevators, Escalators, and Dumbwaiters, Tampa International Airport" will remain unchanged.

The design will include TriTronics safety edges.

Doors will be finished in #4 stainless steel.

ADA Compliant elevator telephones, such as the Micro Tech Emergency telephones, will be integral with the car station.

No elevator hoistways will have sump pumps or drains.

The key lock cylinder in the restricted-access keyed switch in the elevator car operation panel will match the Owner's standard.

Cars will have a 1.5" x 4" cutout adjacent to each floor level pushbutton for installation of graphics by the Owner.

Work on existing elevators will include modifications as necessary to meet applicable fire safety code requirements.

All work in existing elevator machine rooms and hoistways will be accomplished with the Elevator Maintenance Contractor mechanic present.

Elevators will not be used for construction purposes even on a temporary basis.

For additional notes, see the general hydraulic elevator specifications on file at the Authority.

3.14.B Section 14215 – Electric Traction Elevators

No traction-type elevators will have sprinkling systems installed in the elevator machinery rooms or hoistways.

For additional notes, see the traction elevator specifications on file at the Authority.

3.14.C Section 14240 - Hydraulic Elevators

The design will include Lifejacket hydraulic elevator safety brakes. For additional notes, see the hydraulic elevator specifications on file at the Authority.

3.14.D Section 14310 - Escalators

See the escalator specifications on file at the Authority.

3.14.E Section 14410 - Dumbwaiters

See the dumbwaiter specifications on file at the Authority.

3.14.F Section 14600 - Outbound Baggage Conveyors

The design professional will use the Authority's latest standard technical specification for outbound baggage conveyors and related systems. The technical specification will be provided by the Authority's Maintenance Department upon request and justification of project related need.

Where physically possible, conveyor belts

3.14.G Section 14630 - Sloped-Plate Sorting Carousels - Reserved

3.14.H Section 14650 - Inbound Baggage Conveyors (Flat-Plate)

Transitreads will be normally started from the Bag Make-up side of the belt by depressing a green "Start" button. They may additionally be started by turning a keyed start switch on the Bag Claim side.

All components of security doors will be removable for maintenance.

Transitreads will have emergency-stop buttons located on each side of the transitread on the Bag Claim side and at the Bag Make-up Control Panel, which illuminate when depressed and stop all power to the system, including a security doors. Upon pulling out the E-stop, the security doors will close. Keyed start switches will be located adjacent to each E-stop on the Bag Claim side to restart the system.

Each transitread will have the capability of accepting a remote control cable operating station for use by maintenance personnel.

Each transitread will have an adjustable section to allow for expansion and contraction of the system linkage.

All grease fittings will be connected to a remote manifold allowing greasing of the linkage without the need for disassembly.

3.14.I Section 14800 - Apron-Drive Passenger Loading Bridges

Mirrors will be installed allowing the bridge operator to view the drive wheels from the operator station.

An audible alarm and visual beacon will warn ground personnel that a bridge is energized and about to move.

The auto-leveler will have an audible and visual alarm at the console and under the bridge to alert personnel of a malfunction.

Floodlights will be installed at locations to illuminate the drive wheels and nose wheel of the aircraft.

A cab-floor light will be installed to illuminate the vestibule area between the aircraft and the bridge cab.

Each ramp area between tunnel sections will be equipped with ADA safety handrails.

Bridges will be constructed in accordance with NFPA guidelines for fire-retardant materials.

Side-mounted vertical maintenance ladders accessing the top of the bridge will have a safety cage surrounding the ladder.

If installed, bridge-mounted baggage slides will be of stainless steel construction with bracing mounted to the structural portion of the bridge and not cantilevered solely from the bridge stairs.

3.15 Division 15 - Mechanical

3.15.A Section 15030 - Electrical Requirements for Mechanical Equipment

3.15.A.1 Basic Motor Construction (15055)

General: Provide motors for continuous duty conditions in which they will be required to perform (i.e., general purpose, splash proof, explosion proof, standard load, high torque, or any other special type) as required by the equipment motor manufacturer's recommendations. Unless otherwise indicated or required, motors will be open drip-proof.

Motors installed outdoors will be totally enclosed and fan-cooled (TEFC).

Motor enclosures will be as recommended by the equipment manufacturer for the specific application.

All motors will be furnished for starting in accordance with the electric utility company's requirements, and will be compatible with the motor starter and driven load. Motors will not exceed full-rated nameplate load when operated at any point along the driven equipment's characteristic performance curve. The motor service factor will not be used to justify exceeding nameplate amperage.

Unless otherwise indicated, motors of 1/2 horsepower or less, will be single-phase. Motors of 3/4 horsepower and larger, will be three-phase, squirrel-cage induction.

Sound power levels for motors will be no greater than the guidelines as recommended by NEMA, MG 1-12.49. A motor which, in the opinion of the Architect, generates excessive noise within the occupied area of the building, will be replaced with a quieter operating motor at no additional cost to the Owner.

Motors designed to operate with a variable frequency drive will be approved by the manufacturer of the variable frequency drive equipment, and the manufacturer of the motor for inverter duty to insure quiet and stable continuous operation over the entire speed range.

Verify the circuit voltage and phase being furnished to the motor. All motors will be 1750 rpm, unless noted otherwise. Motors will operate with electrical input voltage variations of plus or minus 1 % of nameplate rating, or frequency variations of plus or minus 5 % of nameplate rating.

Design: Provide NEMA Design B for normal starting torque, with Standard MG1 12.42 Class F insulation, unless noted otherwise, or required by the equipment on which the motor is being used. Motors will be designed for operation in 104 degrees Fahrenheit (40 degrees Celsius), ambient temperature at 1.15 service factor on sine wave power at the base voltage and frequency, and will have all copper windings. Motors will meet or exceed the locked-rotor (starting) and breakdown (maximum) torques for the NEMA rating. Locked rotor current will not exceed six times full-load current. Motor current density and heating characteristics will be such that the motor insulation will not fail if subjected to locked-rotor current for 20 seconds.

Acceptable manufacturers for motors are General Electric, Westinghouse, Baldor Electric Company, Emerson, and Lincoln.

Efficiency: Motors 1 horsepower and larger will be high efficiency design.

3.15.A.2 Variable Frequency Drives (For Air Handling Units and Pumps)

Variable Frequency Drive: Specify variable torque Variable Frequency Drives (VFD) variable speed operation where suitable for controlling NEMA Design B motors on continuous duty in variable speed applications. The VFD will be listed by Underwriter's Laboratories and will comply with the latest standards of ANSI, IEEE, and the NEC.

Manufacturer: Refer to paragraph entitled "Manufacturers" in Section 15010. Acceptable manufacturers are as follows:

- a. Asea Brown Boveri (ABB)
- b. Cutler-Hammer, Eaton Corporation
- c. Allen-Bradley

Control Requirements: The following control interfaces will be provided at a terminal strip in the VFD as a minimum to assure control system integrity:

- a. Speed Control Input: A 4-20mA, or 0-5 vdc signal proportional to speed will be input for directly controlling the speed of the VFD when in automatic mode.
- b. Start/Stop Control: The VFD will be capable of being started and stopped remotely by a maintained-contact start/stop relay.
- c. Control Interlock: The VFD will provide an auxiliary control interlock output of 115 VAC whenever the VFD is enabled, to provide interlocking with the control system. The VFD will be provided with a 115 VAC control transformer so that no external 115 VAC power source is required.
- d. Speed Signal Reference: The VFD will furnish a 0-5 VDC, or 4-20mA signal directly proportional to the output frequency of the VFD for remote monitoring of the VFD speed.
- e. Hand-Off-Auto Switch: The VFD will be furnished with a door-mounted Hand-Off-Auto switch to allow switching of the speed control signal from the "Automatic" signal to a manually adjustable digital speed control on the VFD when in the "Hand" position. The VFD will be disabled when in the "Off" position.

- f. VFD Trip Contacts: The VFD will be furnished with a set of Form C (NO/NC) contacts for remote annunciation to the building automation system under Section 15950.
- g. Speed Control: A digital manual speed control will be door-mounted to select the speed when the H-O-A switch is in the "Hand" position.
- h. Speed Meter: The VFD will be furnished with a digital door-mounted speed meter (0-100 %) to indicate the rpm of the motor or the percent of full-load frequency of the VFD.
- i. The VFD manufacturer will provide "N2 bus interface card" for direct interface with Johnson Controls METASYS System.
- j. The VFD will be furnished with bypass contractors that will allow manual operation of the unit.

3.15.B Section 15050 - Basic Mechanical Materials and Methods

3.15.B.1 Housekeeping Pads and Equipment Supports

General: Pads and supports will extend a minimum of 4 inches and a maximum of 8 inches beyond the base or supporting member in all directions. It is the intent to have the pad not extend under the entire piece of equipment unless that equipment is located on the exterior of the building on the ground, or the weight of the pad is required for vibration control. Pads will have ½ inch chamfered on all exposed edges and will be poured and finished smooth and level to insure proper and continuous support for the bearing surfaces of the equipment. There will be no deviation in excess of 1/8 inch when tested with a 10-foot straightedge.

Size: Coordinate length and width of pads and penetrations necessary for piping or conduit with the actual equipment approved for use on the project.

Height: Pads will be a minimum of four inches high, or as required to maintain proper condensate drainage characteristics for the air handling unit.

3.15.B.2 Identification of Piping and Equipment

General: Comply with ANSI A13.1-1981, Scheme for Identification of Piping Systems, and OSHA requirements, or as otherwise indicated.

Markers and Bands: Use to identify contents of pipe and direction of flow. Required for all visible or accessible piping systems.

Valve Tags: Each tag will designate appropriate service and valve number. Used in association with the valve tag list to confirm operational data and other pertinent information.

Labels: Establishes identity for mechanical system components. Labels on access panels advise of item that is accessible through the panel.

Equipment Access: Provide access doors and panels at all locations where concealed equipment, fixtures, devices, and similar items require accessibility for service, inspection, maintenance, repair, or replacement.

3.15.C Section 15060 - Pipes and Pipe Fittings

Domestic Water Piping (Above Ground): Copper piping will be annealed seamless hard temper type "K" and will comply with ASTM B-88. Copper is allowed for pipe sizes up to an including 4 inch diameter. The name or trademark of the manufacturer and the type of pipe will be permanently marked on each section of pipe at intervals not exceeding 4'1/2 feet. Fittings used in copper alloy piping will be streamlined pattern, wrought or cast brass conforming to ANSI B16.22 or wrought bronze conforming to ANSI B16.15.

2-1/2 inches and smaller will be solder-type. Fittings for piping 3 inches and larger will be brazed fittings and will be braced or silver-soldered. Exposed piping in finished areas will be brass pipe or tube, chrome-plated.

Domestic Water Piping (Below Ground): Copper piping will be annealed seamless soft drawn type "K" copper tubing. Copper is allowed for pipe sizes up to an including 4 inch diameter. The name or trademark of the manufacturer and the type of pipe will be permanently marked on each section of pipe at intervals not exceeding 4-1/2 feet. Fittings used in copper alloy piping will be streamlined pattern, wrought or cast brass conforming to ANSI B16.22 or wrought bronze conforming to ANSI B16.15. Class 52 cement lined ductile iron for pipe 6 inches and larger with Rigid mechanical joint piping connections.

Sanitary Waste and Vent Piping (Above Ground): Cast-iron soil pipe, service weight, no-hub piping. Piping will comply with the requirements of CISPI 30 and ASTM A-888. Hubless joints will be "No-hub" type coupling consisting of a 24 gauge 304 stainless steel compression clamp with gasket guides, 304 stainless steel screw clamp and matching full neoprene gasket that interlocks with the housing. Coupling will comply with the requirements of CISPI 310 and ASTM C-564. Maximum size allowed for no-hub piping is 8 inches. Alternative materials will be considered on a case by case basis and will be approved prior to procurement or installation.

Sanitary Waste (Below Ground): Cast-iron soil pipe, service weight, hub and spigot piping. Piping will comply with the requirements of CISPI 301 and ASTM A-74. Joints for hub and spigot pipe will be installed with compression gaskets conforming to the requirements of ASTM C-564. Alternative materials will be considered on a case by case basis and will be approved prior to procurement or installation.

Storm Water Piping: Same as Sanitary Waste. Piping for encasement in concrete walls or columns will be Schedule 40 PVC. Alternative materials will be considered on a case by case basis and will be approved prior to procurement or installation.

Cooling Tower Make-up Water Piping (Above Ground): Copper pipe, Type L or K.

Cooling Tower Make-up Water Piping (Below Ground): Galvanized steel pipe, Schedule 40, with galvanized threaded fittings.

Subsoil Drainage: Perforated PVC.

Steam Piping: Steel.

Condensate Piping (Steam): Copper Type DWV with soldered joints or Schedule 80 steel

Chilled Water Piping (Inside): Type K copper or steel.

Heating Water Piping (Inside): Type K copper or steel.

Chilled Water Piping (Underground): Pre-insulated steel.

Hot Water Piping (Underground): Pre-insulated steel.

Thermal Insulation (Hydronic Piping):

Chillers and chilled water piping will be insulated with cellular glass insulation: Owens Corning Foamglas, 1 ½" minimum thickness with bore coating, joint sealant, finish fabric, and finish mastic.

Condensate drain piping will be insulated with elastomeric insulation: Rubatex or Armstrong AP Armaflex.

Sprinkler Piping (Above Ground): Pipes 2 inch and smaller will be schedule 40 black steel, ASTM A-53 and UL Listed, Fittings will be malleable iron, 150 psi banded, threaded, black, ANSI B-16.3; Pipes 2 ½ inches and larger roll and grooved schedule 10 black steel pipe, ASTM A-135 and UL Listed. Fittings will be mechanical grooved coupling system, UL Listed.

Sprinkler Piping (Below Ground): Ductile cast iron class 52, UL Listed and FM Approve. Fittings will be mechanical joint cast iron, class 250.

3.15.D Section 15110 – Valves

Domestic Water System: All valves in the domestic water system will be gate valves as manufactured by Crane, Milwaukee, Stockham, Nibco, and Powell. Valves 2 inch and smaller will be gate valves with bronze body and bronze trim, threaded or soldered connections. Valves 2 ½ inch and larger above ground will be butterfly valves with flanged, welded or mechanical joint connections, cast iron body with bronze trim. Valves underground will be butterfly (or ball – 2 inch or smaller) type with cast iron body and bronze trim, flanged or welded connections, and non-rising stem with square wrench nut head.

Hydronic Piping System: Gate, gate and angle gate valves can be appropriate for hydronic piping. Acceptable manufacturers are Crane, Milwaukee, Stockham, Nibco, and Powell. Other valve options include butterfly valves by Milwaukee (2 inches and smaller), and Crane, Centerline, DeZurik, and Nibco (2-1/2 inches and larger), and ball valves (2 inches and smaller) by Crane, Milwaukee, Nibco, Jamesbury and Stockham.

Double Detector Check Valves: Reduced Pressure Detector Assembly Backflow Preventor of, ASSE, FM Approved, UL Listed, with OS&Y gate valves on inlet and outlet, and strainer on inlet. Include 2 positive-seating check valves and test cocks, bypass with displacement-type water meter, valves and double-check backflow preventor for continuous pressure application.

Pressure Reducing Valves: Pressure reducing valves will have a means of externally adjusting the outlet pressure. All internal parts subject to wear will be replaceable without removing the valve from the piping. Valves will have an integral low inlet pressure check valve, and will maintain. Acceptable manufacturer: Golden Anderson (no substitutions).

3.15.E Section 15185 - Pumps

3.15.E.1 Basic Pump Construction

General: All pumps will comply with the following requirements unless otherwise indicated.

Casing: The casing will be designed for 175 psi working pressure and will be hydrostatically tested at 150% of the maximum working pressure. Suction and discharge flanges will be provided and drilled to ANSI Standards. Provide cast lifting lugs in pump casing. Casing will be horizontally split unless otherwise noted.

Pump Volute: Plugged drain, vent, and gauge tappings will be cast into the pump volute. The volute will be designed such that the motor and pump can be disconnected and removed, leaving the volute and piping in place.

Casing Rings: The pump case will have two replaceable bronze case wear rings (impeller wear rings), located at each impeller skirt. Each ring will be pinned or press-fit into grooved shoulders to lock the ring in place.

Mechanical Seals: Mechanical seals will be designed for operation in 225 Degrees Fahrenheit liquid. Seals will have a carbon seal ring and ceramic seat, or Ni resist seal, installed on both sides of the shaft, and will have provisions for venting and lubrication. The shaft will be steel, with a replaceable bronze shaft sleeve or collar. All pumps will be provided with mechanical seals unless specifically indicated otherwise.

Bearings: Radial and thrust bearings will be single row ball, re-grease lubricated, self-aligning type mounted in cast-iron cartridges, with 100,000 hours average life. Bearings will be removable without disconnecting the pump volute. Provide grease seals and neoprene water slingers to protect the bearings.

Base: Provide a cast-iron or steel drip rim base for each pump unit. Pump and drive unit will be aligned and bolted or welded in place on a common base plate prior to factory shipment.

Gasket: Provide cellulose fiber gaskets for the suction and discharge flanges.

3.15.E.2 Double Suction Pump

Certified Pump Curve: A certified pump curve for each double suction pump is required.

General: Pump will be single-stage centrifugal type with horizontal axially-split cast-iron casing.

Impeller: the impeller will be double suction type, made of cast bronze, balanced hydraulically and dynamically, keyed to the shaft and securely retained in an axial position by positive mechanical means.

Piping Connections: Suction and discharge connections will be located on opposite sides of the lower half casing, allowing removal of the rotating element without disturbing the system piping connections.

Manufacturer: Acceptable manufacturers are: Aurora, Bell & Gossett/ITT, or approved equal.

3.15.E.3 Domestic Water Booster Pump

The domestic water booster pump will be a UL Listed Variable Speed packaged system with 100% redundancy and alternating sequence of operation.

3.15.F Section 15410 - Plumbing Fixtures

Plumbing fixtures within public areas of the Main Terminal shall comply with the requirements of the Main Terminal Interior Design Criteria Manual.

Water closet, Wall Hung: American Standard No. 2258.125 (1.6 GPF) (or approved equal by Kohler Co.) white vitreous china, wall-mounted, elongated bowl, siphon jet, 1-1/2 inch back spud. Provide Sloan "Royal" Model No. 152-1.6 ES-S (1.6 GPF) water saver, automatic flush, valve system, with 24V. sensor and solenoid operator, with vandal resistant screws for the sensor cover plate, vacuum breaker, 1-1/2 inch flush connection for concealed back spud, angle stop valve and override push button. Provide each valve with a factory supplied transformer model EL-154 (no substitutions on flush valve assembly).

Provide a Zurn Series Z-1203, or approved equal, hub and spigot adjustable horizontal carrier system for siphon jet water closet. Provide a Sperzel No. 150-EEWSSCH, or approved equal, white heavy duty, open front, and extended back, toilet seat, with four bumpers.

Water closet, Handicapped, Wall-hung: Use all of the components as described in the previous paragraph, entitled, "Water closet, wall-hung." Set at raised handicapped height.

Urinal, Wall-hung: American Standard No. 6605.027 (or approved equal by Kohler Co.) white vitreous china, blowout flush action, 1-1/4 inch back inlet spud. Provide Sloan "Royal" Model No. 195-1.0 ES-S (1.0 GPF) water saver flush valve system, with 24V. sensor and solenoid operator, with tamper-proof screws for the sensor cover plate, vacuum breaker, 1-1/4 inch flush connection for concealed back spud and angle valve. Provide each valve with a factory supplied transformer model EL-154 (no substitutions on flush valve assembly). Provide a Zurn Series Z-1222 or approved equal plate type carrier system.

Urinal, Handicapped Wall-hung: Use all of the components as described in the previous paragraph, entitled, "Urinal, wall-hung." Set at lowered handicapped height.

Lavatory, Wall-hung: American Standard No. 0355.012 (or approved equal by Kohler Co.), white vitreous china, front overflow, and 4-inch centered faucet

holes. Provide a Speakman Sensor-Flo, Model S-8810-BO-HTS-VRS, electronic faucet with 4-inch deck plate (with double studs), complete with transformer, 12 VDC solenoid valve, waterproof connectors, filters, braided steel flex hose, 0.5 GPM reduced flow device and spout locking device (no substitutions on faucet assembly). Provide a Zurn Series Z1231 or acceptable equal, concealed arm carrier system. Provide one piece escutcheon with rubber grommet at wall for control wire and braided tube. Provide 17 GA.C.P.P-trap, supplies and stops (no substitutions for fittings).

Lavatory, Handicapped, Wall-hung: Use all of the components as described in the previous paragraph, entitled, "Lavatory, wall-hung." Set at handicapped accessible height.

Mop Sink: Fiat Model No. TSB 100, or approved equivalent, precast terrazzo, 24-inch by 124-inch by 2-inch high, with 2-inch wide shoulders and 1/2-inch pitch towards inside, and stainless steel integral drain. Provide Fiat Model 889-CC, 24 inches long by 3 feet wide stainless steel mop hanger with three rubber grips. Provide Speakman Model No. SC-5811-RCP chrome-plated cast brass, complete with 3/4-inch hose coupling discharge, pail hook, and top brace (no substitutions for fittings).

Lavatory, Fittings for solid-surface countertop with integral bowl (Corian or similar): Provide a Speakman Sensor-Flo, Model S-8810-BO-HTS-VRS, electronic faucet, with 4-inch deck plate, complete with transformer, 12 VDC solenoid valve, waterproof connectors, filters, braided steel flex hose, auto-flo 0.5 GPM reduced flow device, and spout locking device. Provide 17 GA. C.P. P-trap supplies and stops (no substitutions for fittings). This sink configuration would be typical at a diaper changing station.

Hydrants, Wall- or Floor-Mounted:

Interior: Recessed, wall-mounted, with hinged cover, 3/4-inch male hose thread nozzle, vacuum breaker-backflow preventer, chrome finish brass casting, with loose key-operated stem and door. Woodford Model B74, or approved equal.

Exterior: Recessed, wall-mounted, with hinged cover, 3/4-inch male hose thread nozzle, non-freeze, automatic draining, chrome finish all bronze construction, vacuum breaker-backflow preventer, with loose key-operated stem and door, Woodford Model B65, or approved equal.

3.15.G Section 15485 - Plumbing Equipment

3.15.G.1 Electric Water Heaters

Tank: Heater will be constructed with steel tank constructed to 125 psi working pressure, 300 psi test pressure and lined with borosilicate glass

bonded to tank. Glass lining to be baked at 1600 Degrees F., to assure a molecular-interchange between tank and lining. Tank to be protected against electrolytic activity with replaceable factory installed anode rod and factory installed dielectric nipples.

Temperature Control: Water heater to be provided with fully adjustable temperature controls and automatic high limit control. Unit will have ASME-approved temperature and pressure relief valve properly sized for BTU capacity of the unit installed.

Insulation: Water heater will be insulated to ASHRAE 90.1-1989 standards and jacketed with manufacturer's standard heavy steel jacket.

Heating Element: Water heater will also feature 90% efficient immersion type heating elements. Incoloy sheathed elements will be provided. All units will be constructed with factory-installed heat traps to increase efficiency and reduce standby loss by a minimum of 10%.

Relief Valve: Provide ASME-rated and UL-listed temperature and pressure relief valve. Temperature setting will be 210 Degrees F., and the pressure setting will be 125 psig, unless otherwise indicated.

Drain: Provide storage tank drain and drain pan fabricated of minimum 18-gauge galvanized steel, with a minimum lip of 1-1/2 inches, and provided with a drain connection piped to the nearest floor drain unless otherwise indicated.

Testing: Each unit is to be UL-tested, and UL-listed, for service as a domestic water heater for voltage inputs as indicated on the drawings.

Warranty: Water heater will carry a limited factory warranty of 5 years. Acceptable manufacturers are as follows:

- a. Rheem
- b. Lochinvar
- c. A. O. Smith

Thermostatic Mixing Valve: Provide a thermostatic mixing valve with bronze body construction and corrosion-resistant components for each water heater serving the public toilets. Valve will be equipped with a removable union and stop and check valve, and stainless steel strainer. Unit will be a Lawler No. 66-50, with dialed thermometer and solenoid valve. The mixing valve will be enclosed within a lockable metal box.

3.15.H Section 15710 - Cooling Tower

Enclosure: The Landside Terminal, Airside F and Airside A have custom-designed concrete and masonry structures that form the basin, the tower walls, the fan deck, and the fan stacks.

Product: The cooling tower design is to be based on a regularly catalogued product assembly of the manufacturers.

Lintels: The tile fill will be supported by pultruded fiberglass reinforced vinyl ester resin tee section lintels capable of withstanding imposed loadings with a safety factor of 3.

Tile Fill: The tile fill will be of multi-cell design, set without mortar, in a pattern, and of sufficient height to meet the necessary design performance level. The tile fill will be of hard burned clay, with a low absorption such that it will pass a freeze-thaw test conducted in accordance with ASTM C 67. The tile fill will have a minimum crushing strength of 2000 psi over the gross area with the load is applied parallel to the cells as tested in accordance with ASTM F 67.

Mist Eliminators: The eliminators will be of the 3 pass cellular type, assembled in sections. Free water carryover will not exceed 0.05 % of the total water flow. The eliminator will be constructed of PVC conforming to ASTM D 1784, Type I, Grade 2. The mist eliminators will have a flame spread rating of 25 or less when tested in accordance with ASTM Procedures E-84.

Speed Reducer: The speed reducer gears will be rated with a service factor of 2 and designed for cooling tower service. The alarms for both the vibration switch and the oil lever switch will be transmitted to the BCS.

Fan Assembly: The complete fan assembly will provide maximum efficiency and long life while handling saturated air at high velocities. The fan will be a multi-blade design and constructed of fiberglass reinforced resin.

Drive Connection: The motor will be located outside the airstream. The stainless steel drive shaft will be full floating type with flexible couplings at both ends. Each coupling will be provided with a galvanized steel guard.

Distribution System: The distribution system for each cell will consist of two central headers, side laterals and nozzles. The header capacities will be as indicated in the cooling tower schedule on the drawings. All piping will be fiberglass or PVC. Fittings and nozzles will be PVC or ABS. The distribution

system will terminate in a flange face located 6 inches below the top of the fill support beams.

Ladders: Provide stainless steel ladders that comply with OSHA requirements. Two ladders, located at opposite faces, will be provided for tower installations with more than two cells. Ladders will extend from the ground or walking surface to the top of the cooling tower working surface, unless otherwise indicated. Provide a stainless steel OSHA cage if the height of the top of the tower is more than 20 feet above the ground.

Water Level Control: Provide plastic or bronze mechanical float with adjustable linkage, unless otherwise indicated. The water level control will be provided with a still well and will be accessible without entering the tower basin.

Fan Motor: Provide totally enclosed, air over type motor located outside the air stream. Motor will be two-speed motor rated at 1800/900 rpm. Fan motor will have 1.5 service factor.

Vibration Cutout Switch: Provide switch to de-energize fan motors if excessive vibration occurs due to fan imbalance.

Maximum Permissible Sound Pressure Level: Use 0.0002 microbar as reference. Measure at 50 feet in several directions, uniformly covering 360 degrees. Do not exceed maximum permissible dB level in each of the following octave bands:

63 HZ - 73 dB	1000 HZ - 63 dB
125 HZ - 71 dB	2000 HZ - 60 dB
250 HZ - 69 dB	4000 HZ - 55 dB
500 HZ - 69 dB	8000 HZ - 50 dB

3.15.I Section 15800 - Air Handling Units

Solid Double Wall Construction: Units will be double wall construction with 2 inch thickness, 1-1/2 pound density fiberglass insulation. The insulation will be sandwiched between a minimum 18 gauge galvanized steel solid interior wall and the exterior wall. Removable or hinged access panels will provide access to both sides of cooling coil, drain pan, internal fan drive, electric heating coil, and filter section.

Condensate Drain Pan: Each unit will have an insulated, 20 gauge stainless steel double wall drain pan for condensate drainage. The insulation will be a minimum of 1 inch thick fiberglass and the inner pan will be coated with corrosion-resistant elastomeric-based material. Threaded pipe drain connections will be provided on one side only and the pan will slope toward the connection, allowing no standing water. The drain connection will be on the side of the unit that has the condensate drain plumbing connection. If the selected air handling

units have more than one drain connection, each connection will be provided with a trap and an individual drain line piped to discharge at the nearest condensate floor drain. The discharge of the individual condensate traps will not be connected together.

Fans: Fans will be double width, double inlet, multiblade type constructed in accordance with the American Fan Manufacturers' Association Standards. Fan wheels will be forward curve or backward inclined air foil type. Fan blades will be bonderized or galvanized steel and will be finished with baked enamel for corrosion protection. Fan shafts will not pass through their first critical speed at any cataloged rpm.

Bearings: Fans will be equipped with self-aligning, anti-friction pillow block ball type bearings with a minimum life of 100,000 hours.

Fan motors will be an open drip-proof when located outside the discharge air stream from the cooling coil and totally enclosed air-over type when located in the cooling coil discharge.

Water Coils: Coils will be leak tested to 200 psig air pressure underwater and designed for 300 psig working pressure. The coils will be continuous seamless copper tube with aluminum plate fins bonded by mechanical expansion of the tubes, unless otherwise indicated. Fin spacing will not exceed 12 per inch. Frames will be constructed of 16 gauge galvanized steel casing with copper headers brazed to tubes and threaded connections. Both supply and return headers will be provided with 1/8 inch NPT vent connection at top and bottom for venting and draining coil. The coils will be arranged for the water to counterflow in the direction of the air flow. Tube sheets will be 16 gauge stainless steel, located on each end and at a maximum of 80 inch intermediate spans with drain collars to support tubes. Return bends will be die-formed, brazed to tubes and header and will be seamless hard-drawn copper tubing. Casing channels will be free-draining, without depressions to collect moisture and contaminants or to block fin area, and with an air bypass/water carryover arrester between the casing bottom channel and the fins.

Electric Coils: Electric heating coils will be UL, ETL, or ARL listing for installation in a section of the air handling unit. Coils less than 5 kw will be single stage; above 5 kw will have a minimum of two stages. Electric heater element will be constructed of heavy-duty nickel chromium. 480 volt, three phase elements will be internally wye connected with automatic line break high limit control. Each heater will be provided with single point electric power connection and terminal strip connection for control wiring.

Whenever possible, fan coil units, necessary for the odd situation, will be installed in a vertical configuration and within a nearby mechanical room.

3.15.J Section 15845 – Variable Air Volume Terminal Units

VAV units will be double wall construction with no insulation exposed to the air stream.

VAV unit controls will be Johnson Controls “Metasys” type and be factory installed.

VAV units will be located as close to the finished ceiling as possible. Units will be accessible by using a ladder no taller than eight feet.

3.15.K. Section 15855 - Diffusers, Registers, and Grilles

Supply diffusers, return air grilles, and exhaust grilles mounted in ceilings will have a painted perforated metal face. Round, square, or rectangular devices with exposed directional blades are not allowable. Linear devices are allowable and generally preferred by architectural designers.

3.15.L Section 15890 – Ductwork

Sheet Metal Ductwork:

Material: Prime quality 48 inch wide resquare tight coat cold-rolled hot-dipped galvanized steel capable of double seaming without fracture. Conform to the requirements of ASTM A-525 and ASTM-G90 for a minimum galvanizing coat of 1.25 ounces per square foot total for both sides.

Construction: Provide corner closures. Longitudinal seams and transverse joints will be flat and smooth inside. Make slip joints in direction of air flow. Transverse joints will be Pittsburgh lock or double corner seam. Button punch snaplock construction is not acceptable. All welds will be continuous and corrosion-resistant.

Fittings: Fabricate offsets, turns, and elbows with centerline radius equal to 1-1/2 times diameter when possible. No mitered offsets will be allowed.

Insulation: All supply return, and outside air ducts will be externally insulated. Unless detailed system design dictates otherwise, external insulation will be minimum 2" thick fiberglass duct wrap where concealed and 1 ½" thick duct board where exposed. Continuity of the vapor barrier on the exterior insulation will be maintained in accordance with the manufacturer's instructions. Duct insulation within equipment rooms will be fully coated with mastic or painted in its entirety.

Double Wall Manufactured Ductwork:

Material: Duct will be double wall, machine formed round or flat oval spiral lock seam duct constructed of galvanized steel sheets. The inner wall will be

perforated and the annular space will be filled with minimum 1" glass fiber insulation with a maximum "k" value of 0.27 BTU per square foot per hour. Insulation will be covered with a minimum 1.5 mil film so that no fibrous material is exposed to the airstream.

Flexible Ducts:

Insulated Flexible Ducts, Fiberglass: Flexible duct will be factory-fabricated pre-insulated type with seamless vapor barrier. Fiberglass insulation will be nominal 1 inch thickness with maximum thermal conductance of 0.23 BTU/hr-sq. ft.-degrees F. at 75 degree F. mean temperature. Flexible duct will have an operating pressure range of minus 0.5 inch w.g. to plus 2 inch w.g., maximum working velocity to 4000 fpm and temperature range to 250 degree F. Core will be continuous and consist of aluminized mylar laminated to a corrosion resistant steel wire helix.

Vapor retardant rating will be 0.17 perm maximum per ASTM E96-A.

Flexible duct will be a maximum of 8 feet in length unless otherwise indicated and will be fully extended to smooth out internal corrugations, and will be installed without kinks, compression, or obstructions so that pressure drop is minimized. Install with a maximum equivalent of two 90-degree bends. No bend will be made with centerline radius of less than one duct diameter for fiberglass ductwork, or four and one-half diameters for metal ductwork. No additional flexible duct will be provided for future relocation unless otherwise indicated; cut and remove excess length.

Flexible duct will be supported at ends and at each 90-degree bend. Maximum permissible sag is ½ inch per foot of spacing between supports.

Hanger and saddle material in contact with the flexible duct will be of sufficient width to prevent any restriction of the internal diameter of the duct when the weight of the supported section rests on the hanger or saddle material. In no case will the material contacting the flexible duct be less than 1 inch wide. Hanger will be used in conjunction with a sheet metal saddle formed to cover one-half the circumference of the outside diameter of the flexible duct and will be rolled to fit neatly around the lower half of the duct's outer circumference.

will not be supported from the floor. Coordinate ductwork and piping to allow clear access to and around equipment.

3.15.M Section 15900 – HVAC Instrumentation and Controls Airside E

For the Landside Terminal complex, Airside F, Airside A, Airside E, and the new Airside C, the Building Control System is, and will be the Johnson Controls "Metasys" system installed by the manufacturer.

With a Johnson Controls system, all AHU and chiller plant control valves and dampers will be pneumatically actuated. In addition, all VAV control dampers will be electronically actuated.

All new and revised control drawings will be laminated and inserted in the master set in the HVAC Control Room (Service Building at the Central Plant).

3.16 Division 16 - Electrical

3.16.A Section 16050 - Basic Electrical Materials and Methods

A City of Tampa Electrical Permit must be obtained and displayed at the work location.

All work must conform to the National Electrical Code, the City of Tampa Code, the Authority Tenant Work Permit General Construction Standards (Special Provision No. 4) and the applicable Authority Design Criteria Manual.

All relays, contactors, starters, motor control centers, switchboards, panelboards, dry-type transformers and so forth, will be supplied and manufactured by the same manufacturer. Panelboards, switchboards, breakers, etc., will match the existing building equipment.

All screws, bolts, washers, and other fasteners used in supporting fixtures, conduit, or outlets will be fabricated from rust-resisting metal and will be of a common replacement type design. No rivets or other non-replaceable type fasteners will be permitted. Use of tie wire is not acceptable. Powder actuated anchors are not permitted.

Provide reinforced concrete "housekeeping pads" for switchgear, motor control centers, transformers, etc. Pads should be a minimum of 4 inches high and project at least 6 inches beyond the footprint perimeter of the cabinet. Pads should match existing pads within the same room. Chamfer top edges 1/2 inch.

Testing of cables 600V or less and size No. 2 or larger will be meggered using an industry-approved "megger" with a minimum of 500V internal generating voltage. All inspection, cleaning and testing procedures will be in compliance with the recommendations and standards outlined in the "Maintenance Testing Specifications for Electrical Power Distribution Equipment and Systems," latest edition, published by International Electrical Testing Association (NETA). Readings will be recorded in the presence of a Design Engineer or an Owner's Representative. Provide a schedule of testing to the Engineer and the Authority construction project manager a minimum of three calendar days prior to testing. Insulation resistance test values will be no less than 50 megaohms.

3.16.B Section 16060 - Grounding and Bonding

All branch circuit and feeder raceways will have a copper system ground conductor within the conduit throughout the entire length of the circuit and bonded to portions of the conduit that are metal by listed grounding bushings.

3.16.C Section 16075 - Electrical Identification

Equipment identification using phenolic plastic laminate nameplates will be as follows:

- a. Normal system will be 1/2-inch high white lettering on a black field
- b. Emergency system will be 1/2-inch high white lettering on a red field
- c. Uninterruptible power supply system will be 1/2 inch high white lettering on an orange field

3.16.D Section 16110 – Raceways

The entire installation will be in hot-dipped rigid galvanized conduit, intermediate metal conduit, heavy wall Schedule 40-PVC plastic conduit (in slab or underground only), or electric metallic tubing, unless specifically noted otherwise. Only heavy wall PVC (Schedule 40) will be used for all raceways trapped underground and in or under concrete slab on grade. Minimum conduit size for lighting, power, data, phone and fire alarm systems will be 3/4-inch C. All conduit will be UL-listed and labeled.

Conduit expansion fittings will be malleable iron, and will be hot-dipped galvanized inside and outside.

All raceways will be run in a neat and workmanlike manner, and will be properly supported from structural members (beams, joists, or slabs) in accordance with the latest edition of NEC using approved conduit clamps, hanger rods, and structural fasteners. Supporting conduit and boxes with wire is not approved. All raceways except those from surface-mounted switches, outlet boxes or panels, will be run concealed from view. Exposed raceways will be supported with clamp fasteners, with toggle bolt on hollow walls, and with lead expansion shields on masonry. Where PVC penetrates a floor from underground or in slab, a black mastic coated steel conduit elbow will be used. No PVC will be allowed anywhere except underground or in slab. Conduits will be run parallel and perpendicular to building beams wherever possible, exposed or concealed, and will be grouped in workmanlike fashion. Crisscrossing of conduits will be minimized. Multiple runs of raceways will be routed together. Raceways will not be located within six inches of other system components (HVAC ducts, chilled water lines, sprinkler lines, domestic water lines, bus ducts, etc.).

The Contractor will prepare and submit coordination review drawings to Authority prior to installation of all multiple raceway conditions illustrating layout, elevations, and coordination with other building system components. All raceways will be installed as close as possible to the structure and at the highest elevation possible.

All raceways will have an insulated copper system ground conductor throughout the entire length of circuit installed within conduit in strict accordance with NEC.

Insulated bushings will be used on all rigid steel conduits terminating in panels, wire gutters, or cabinets.

All connections to motors or other vibrating equipment (except dry type transformers) or at other locations where required will be made with not less than 12 inches of flexible liquid-tight steel conduits, using special type of connectors with strain relief fittings at both terminations of conduit.

Expansion fittings will be installed in the following cases: In each conduit run wherever it crosses an expansion joint in the concrete structure; on one side of joint with its sliding sleeve end flush with joint, and with a length of bonding jumper in expansion equal to at least three times the normal width of joints; in each conduit run which mechanically attaches to separate structures to relieve strain caused by shift on one structure in relation to the other; in straight conduit run above ground which exceeds one hundred feet in length. Interval between expansion fittings in such a run will not be greater than 100 feet.

Electric metallic tubing (thin wall) may be installed inside buildings above ground floor where not subject to mechanical injury. All electrical metallic tubing will be joined using compression type steel fittings. All connectors will have insulated throats.

Rigid metallic conduit installed underground will be coated with waterproofing black mastic before installation, and all joints will be recoated after installation.

All temporary and permanent conductors (power, lighting, control, communications, lightning protection, etc.) must be placed in conduit or approved cable trays.

The Contractor will furnish coordination drawings prior to installation which show layout and elevations of all multiple raceways.

Bus ducts will be separately supported using the manufacturer's standard recommended equipment allowing for removal of bus duct sections and inspection of all cover plates.

The minimum conduit size for power and lighting systems will be 3/4 inch conduit for all circuitry homeruns from the panelboard. Conduits branching off of the homerun conduit to devices may be 1/2 inch conduit, if it contains no more than 4 conductors per conduit (excluding the equipment grounding conductors), and phase conductors no larger than No. 12 AWG.

All systems (fire alarm, sound system, controls, etc.) conduits will be a minimum of 3/4 inch.

Catwalks and handrails will not be used to support raceways of any type.

All raceways crossing building expansion joints will be equipped with expansion-type fittings.

Sleeves will be used when conduits pass through walls, floors, and roofs, and will be of galvanized steel, sized to allow for a minimum 1/4 inch clearance. Fire rating integrity will be restored after penetration.

Flexible steel conduit will be limited to final connections to motors and transformers and will be restricted to 36 inches in length. Flexible steel conduit may also be used to connect light fixtures to junction boxes in lengths not to exceed 4-6 feet. All flexible steel installations will be a continuous length with threadless hinged clamp-type fittings and a male end provided with a locknut.

All conduit must have steel compression-type connectors and couplings with non-removable insulated throats.

All conduit exposed to the weather will be rigid galvanized conduit.

All raceways (conduits, wireways, busways, etc.) and boxes will be independently supported from the building structure. Attachment to ceiling support system or the use of tie wire for raceway support is prohibited.

All raceways and boxes will be installed as close as possible to the structure and at the highest elevation possible. The Contractor will prepare "coordination drawings" that establish MEP systems layering to ensure proper functioning and maintenance access for all ceiling cavity components.

All raceways will be installed parallel with the structural framing members.

Raceways and boxes will not be located within six inches of other systems (HVAC ducts, chilled water lines, sprinkler lines, water lines, bus ducts, etc.).

Multiple runs of raceways (two or more) will be routed together and supported by trapeze hangers consisting of all-thread rod and unistrut cross members. All multiple raceways will be installed horizontally. Conduit supports will be one-hole

malleable straps, clamp-backs, or other accepted devices with suitable bolts. Caddy batwing-style straps, which clip to wire without the use of bolts, are not allowed.

Floor Boxes: Design type will allow for continuous raceway into the floor boxes without a junction box. Floor box raceways will be installed to allow for the first junction box to be located within the same room and floor level.

Maximum allowable wire or cable fill in a raceway will be 40%. This applies to all systems (fire alarm, low voltage controls, fiber optic, telephone, etc.).

Spare parts will be provided at the completion of the work as follows:

- a. Lamps: Provide a minimum of one case or six lamps, whichever is greater, for every type of lamp installed. Quantity may be increased with large-scale projects.
- b. Fuses: Provide a fuse cabinet with 3 spare fuses of each size and type used.

3.16.E Section 16120 - Conductors and Cables

Branch circuit and feeder conductors for electric power will be copper type THW or THWN. No aluminum wiring will be permitted. Wire in vicinity of heat-producing equipment will be type XHHW/L-S insulation. All wiring will be manufactured in the USA.

All copper taps and splices in No. 8 or smaller wire will be fastened together by means of "wirenut" connectors. All taps and splices in wire larger than No. 8 will be made with solderless type lugs and taped to provide insulation equal to wire. Stranded conductors #2 and larger should have compression type connectors.

All power feeders and branch circuits No. 8 and smaller will be wired using color-coded wire having the same color used for a system throughout the building. Power feeders above No. 8 will be either fully color-coded or black insulated and be similarly color-coded with tape in all junction boxes and panels. Tape will completely cover 1/3 of the length of conductor insulation within the box or panel.

Modular connectors, MC, AC, or any similar type cable wiring are prohibited. The intent is to allow removal of conductors without conduit replacement. All electrical wiring will be performed by conventional, industry standard methods with the use of conduit, wire, and wire nuts.

All electrical feeders will be run in continuous pieces without joints or splices.

All conductors will be copper. Branch circuit and feeder conductors No. 12 AWG and smaller will be solid. No. 8 AWG and larger will be stranded.

Cable extensions from raceway terminations will not exceed 5 feet.

Connections: Conductors No. 10 and smaller will be connected with pre-insulated twist-on spring connectors encased in a plastic shell and rated at not less than 105 degrees C. No exceptions. Wire nut manufacturers will be Ideal or accepted substitution. A minimum of 3/8-inch skirt will cover all bare wires. Self-stripping or stab-in type electrical wire connectors are prohibited. This includes connectors within lighting fixtures, signs, and equipment.

3.16.F Section 16130 – Raceways and Boxes

At all concealed boxes for electric lights, switches, wall receptacles, telephone outlets, etc., standard galvanized one-piece steel boxes will be provided. Surface outlet boxes and conduit bodies will be made of heavy cast aluminum or iron with external raised hubs. Trim rings will be of one-piece construction.

Boxes will be of such form and dimensions as to be adapted to the specific use, location, type of device or fixtures to be used, as well as number and size of conductors and arrangement, and size and number of conduits connecting thereto.

All flush boxes will be mounted so that covers and plates will be flush with finished surfaces without the use of shims, mats, or other devices. Plates will not support wiring devices. Where two or more switches are installed in the same location, gang switches together using one-piece boxes with common plate. Wall-mounted devices of different systems (switches, thermostats, etc.) will be coordinated for symmetry when located near each other on the same wall. Trim rings will be extended to within 1/8 inch of finish wall surface.

Installation of outlet or junction box will be limited to one extension box. Flush outlets will be mounted so that covers and plates will finish flush with finished surfaces without the use of shims, mats, or other devices not submitted for this purpose. Add-a-Depth rings or switch box extension rings (Steel City #SBEX) are not acceptable. Plates will not support wiring devices. Arrange switches together with a common plate where two or more are indicated in the same location. Wall-mounted devices of different systems (switches, thermostats, etc.) will be coordinated for symmetry when located near each other on the same wall. Through-wall type boxes will not be permitted.

3.16.G Section 16140 - Wiring Devices

Wiring devices will be specification grade. Switches will be silent type. Receptacles will be duplex grounding type, and will be provided at a maximum spacing of twenty-five feet in public areas.

Coverplates for all devices will be stainless steel. All outside receptacles (weatherproof) will be duplex grounding type with stainless steel hinged covers.

Voltage and ampere rating of switches will be marked on switch, and will conform to voltage of system to which applied.

Use 20 AMP premium specification grade receptacles. Provide hospital-grade receptacles in all areas used by housekeeping (corridors, public areas, etc.). All devices (switches, receptacles, etc.) will be terminated with side-wired screw terminals only. Stab-in wire connections held by spring tension are not permitted.

Color of devices will be ivory with stainless steel coverplates.

3.16.H Section 16190 - Supporting Devices

All supports, hangers, and inserts required to mount fixtures; conduit, cables, and pullboxes will be furnished and installed. All items will be supported from the structural portion of the building. Boxes and conduits will not be supported or fastened to ceiling suspension wires or to ceiling channels.

All conduits will be securely fastened in place at intervals of 10 feet maximum. Hangers, supports, or fastenings will be provided at each elbow and at the end of each straight run terminating at a box or cabinet. The use of perforated iron for supporting conduits will not be permitted. The required strength of the supporting equipment and size and type of anchors will be based on the combined weight of conduit, hanger, and cables.

Hangers will be made of durable materials suitable for the application involved.

With concrete or masonry construction, insert anchors will be installed with round head machine screws. An electric or hand drill will be used for drilling holes for all inserts in brick, concrete, or similar construction. CAUTION: No anchors or holes will be made in the structure without first consulting with the Structural Engineer of Record.

3.16.I Section 16289 - Transient Voltage Suppression

Provide external Transient Voltage Surge Suppression (TVSS) on the following conditions:

- a. Service entrance equipment
- b. Panelboards (with circuits serving known electronic equipment)
- c. Systems panels (fire alarm, security access control, computer clean power,

etc.) on both the power feed and any wiring (signaling circuit, initiating device circuit, etc., shields), which extend beyond the building by either underground, aerial, or other methods such as walkways, bridges, etc. Also, device wiring located at high locations such as penthouses, parking garage roof levels, etc., should be included.

- d. Spark gap devices or devices incorporated in or installed within the panel in lieu of the external TVSS are not acceptable.

3.16.J Section 16415 - Automatic Transfer Switch (ATS)

Automatic Transfer Switch (ATS) will have a manual bypass isolation operating handle with transfer speed equal to automatic operation. Provide automatic and manual transfer switches manufactured by one of the following:

- a. Russelectric, Inc.
- b. Automatic Switch Company
- c. Zenith Company

3.16.K Section 16425 - Distribution Switchboards

Factory-assembled, metal-enclosed switchboard for distribution and control of power from incoming line terminals to outgoing feeder terminals, installed and tested in place.

Switchboard will include all protective devices and equipment as listed on drawings or as included in these specifications, with necessary interconnections, instrumentation, and control wiring.

3.16.K.1 Products – General

Switchboards with circuit breaker, fusible switch, or integrally fused circuit breaker branch protective devices will comply with NEMA PB2 as a minimum requirement. Switchboard will meet Underwriters' Laboratories enclosure requirements for service conditions.

Each cubicle will have UL label affixed, unless special construction prohibits and no labeling or listing is available.

The sides and tops will be covered with removable screw-on code gauge steel plates.

Switchboards will be completely self-supporting structures, 90 inches high.

3.16.K.2 Finish

All steel surfaces will be chemically cleaned and treated to provide a bond between paint and metal surfaces to help prevent the entrance of moisture and formation of rust under the paint film.

The switchboard exterior will be finished indoor light grey No. 61, ANSI Z55.1.

Apply corrosion-protective undercoating to undersurface.

3.16.K.3 Bussing and Terminations

Bus bars:

- a. Buses will be tin-plated copper sized on the basis of not more than
- b. The bus structure will be braced to withstand mechanical forces exerted during short circuit conditions as required to limit the system fault current.
- c. A copper ground bus will be furnished secured to each vertical section structure.

Bus connections will be front accessible.

When spaces for future devices are noted on the drawings, all necessary buses except for the device connecting straps will be furnished.

Where provisions for future sections are called for on drawings, all buses will be extended to last section, and be adaptable for extension.

Through bus that feeds additional sections to main section will have continuous current rating of 100% of rating of main device frame size.

Line and load terminations will be provided suitable for the size, number of conductors, and conductor material. Terminations will be accessible from the rear.

Provide full-height wiring gutter doors for quick access to wiring terminals.

All hardware will have high tensile strength, and have a suitably protective finish.

When called for on drawings, a bus duct stub will be suitable for a direct connection to the bus duct without cabling.

3.16.K.4 Accessories

A switchboard will be provided with adequate lifting provisions, and will be capable of being rolled or moved into installation position and bolted directly to the floor without the use of floor sills.

3.16.K.5 Control Wiring

Each control wiring conductor will have heat shrink identification labels on each end of termination. Terminations will be made to screw terminal strips using approved conductor terminals. All points of terminal strips are to be labeled to match conductor labeling.

3.16.K.6 Main Section

The following instruments and associated equipment will be provided when called for by the designer or the Authority

- a. Ammeter
- b. Voltmeter
- c. Ammeter and voltmeter transfer switches
- d. Current and potential transformers required
- e. Fuses
- f. All interconnecting wiring required

Instruments to be 4-1/2 square with +1 % accuracy, panel mount type.

Ground fault protection system will be provided.

- a. System will consist of a ground sensor on line side of main switch or on load side of branch breaker encircling all phase conductors, including neutral connected to a solids ate ground relay switch which initiates shunt tripping of the main or branch circuit interrupting device.
- b. System on main incoming service will be adjustable from 200 to 1200

primary amperes, system on branch breakers will be adjustable from 50 to 200 primary amperes, and time current characteristics should provide 6 cycle operation at about ten times setting.

- c. Relay output will operate from 120v AC fused sources from main bus.
- d. Submit coordination diagram relays and demonstrate coordination.

3.16.K.7 Distribution Sections

Circuit breaker, fusible switch, or integrally fused circuit breaker branch protective devices will be group-mounted with necessary bar connections accessible from the front, and have a minimum interrupting rating as required to limit the system fault current.

3.16.L Section 16430 - Switchgear

All switchgear will be equipped with the following:

- a. Current carrying parts of the bus structure will be copper
- b. The neutral will be fully rated
- c. Provide a copper equipment grounding bus of the set screw type

Circuit breakers for applications other than panel boards will be bolt-on type.

Electrical distribution will be similar to Airsides A, E, and C with two TECO transformers and the main building switchgear in two sections with an open tie breaker.

Provide spare switchgear breaker for the largest size breaker and a space within the switchgear to house. Provide spare capacity for future.

3.16.M Section 16440 - Disconnect Switches

All disconnect switches will be heavy-duty type, unless specifically noted otherwise. Switches will be fusible or non-fusible and sized as noted on drawings.

Switches will be 240 volt rated on systems up to and including 120/208V and 600V rated on higher voltage system with NEMA 1 enclosure, unless otherwise noted. All switches for motors will be dual horsepower rated. All switches mounted outdoors will be NEMA type 4X (stainless steel).

Provide and install lugs on disconnect switches as required to accept conductors.

3.16.N Section 16442 - Panelboards

Panelboard branch circuit breakers will be bolt-on, thermal-magnetic, molded case type.

Panelboards will be equipped with a minimum of 3 spare breakers and 25 % spare capacity.

All panelboards will be equipped with the following:

- a. Current carrying parts of the bus structure will be copper.
- b. The neutral will be fully rated.
- c. Provide a copper equipment grounding bus of the set screw type.

3.16.O Section 16450 - Grounding

In general, all electrical equipment (metallic conduit, motor frames, panel board, etc.) will be bonded together with a green insulated or bare copper system grounding conductor in accordance with the specific requirements of Article 250 of the NEC. Insulating bonding conductor through the raceway system will be continuous from main switch ground bus to panel ground bar of each panel board, and from panel grounding bar of each panel board to branch circuit equipment and devices.

A main ground, bare copper conductor, NEC sized but in no case less than No. 2/0, will be run in conduit from the main switchgear to a driven ground field outside the building. The main building service grounds will have resistance to ground at no more than 5 OHMS.

Grounding conductors will be so installed as to permit shortest and most direct path from equipment to ground; be installed in metal conduit with both conductor and conduit bonded at each end; have connections accessible for inspections and made with approved solderless connectors brazed (or bolted) to the equipment or structure to be grounded; in no case be a current carrying conductor; have a green jacket unless it is bare copper; and be run in conduit with power and branch circuit conductors. The main grounding electrode conductor will be exothermically welded to ground rods.

All contact surfaces will be thoroughly cleaned before connections are made to ensure good metal-to-metal contact.

Mechanical lugs or wire terminals will be used to bond ground wires together or to junction boxes and panel cabinets and will be manufactured by Anderson, Buchanan, Thomas and Betts Company, or Burndy.

All exterior grade mounted equipment will have their enclosures grounded directly to a separate driven ground at the equipment in addition to the building ground connection.

3.16.P Section 16461 - Transformers

Dry type transformers will be factory assembled, metal enclosed, provided, and installed in place.

Dry type transformers will be UL-listed and certified to meet NEMA ST-1 with convection cooling. Transformers will be tested and rated for sound level in accordance with ASA-C89. 1-1961.

Class H insulation will be employed for transformers above 30 KVA with maximum temperature rise of 150 degrees C. over 40 degrees C ambient. Class F insulation will be employed for transformers up to and including 30 KVA with a maximum temperature rise of 115 degrees C. over 40 degrees C ambient. Transformers will be copper wound.

Three phase units will be wound delta-wye. Minimum impulse level will be 10 KV. Each three phase transformers will have three separate sets of coils. No Scott T connections, open delta, or two coil arrangements will be permitted.

Transformers will be mounted where accessible. No units may be mounted behind partitions, above ceilings, etc. Each transformer will be mounted on 3-inch concrete base extending 3 inches beyond all sides.

3.16.Q Section 16442 - Panelboards

Panelboards will be of dead front design, equipped with bolt-on, quick-make, circuit breakers of the thermal magnetic type and mains with lugs or main breakers are required. Panel bus will be tin-plated copper. Bus will be braced for a capacity equal to or greater than the available symmetrical fault current. Double and triple pole breakers will be of common trip, single handle type.

Typical cabinets will be surface-mounted (concrete or masonry walls) or flush-mounted (gypsum board/stud walls) and will be fabricated from galvanized steel with a standard baked enamel finish.

Panels and breakers will be rated for voltage and class of service to which applied. All panels will have locks and all will be keyed alike. Panels will be supplied with standard baked enamel finish, both back box and front, except

flush panels will have galvanized backbones. All panel board cabinets will have a system grounding bar bonded to the panel board cabinet for connection of system grounding conductors system. This bar will be mechanically and electrically isolated from the neutral bar. Panel fronts on flush panels will have completely concealed trim clamps and door hinges. A typewritten circuit direction listing the actual circuit numbers, type of load and room names will be mounted on inside of door.

3.16.R Section 16475 - Overcurrent Protective Devices

3.16.R.1 Description of System

Provide overcurrent protection for all wiring and equipment in accordance with the NEC, all federal, state and local codes as required and/or as shown on the drawings.

3.16.R.2 Circuit Breakers

Circuit breakers for lighting and appliance panelboards will be bolt-on type. Circuit breakers for power panelboards will be bolt-on.

All circuit breakers will be molded-case, quick-make, quick-break, thermal magnetic type, and will be UL-listed and rated for voltage and class of service to which applied.

Double and triple pole breakers will be of the common trip, single handle type.

Circuit breakers will have minimum rating of 10,000 amp interrupting capacity, unless required otherwise by the design engineer.

3.16.R.3 Fuses

No fuses will be installed until equipment is ready to be energized and after tightening of all electrical connections, inspection of all ground conductors and a meggar test of adequate insulation to ground of all circuits.

Fuses rated 601 amperes and larger will be UL Class L and have a minimum time-delay of 45 seconds at 300% rating and have O-ring gas seals at the end bells.

Fuses rated 600 amperes or less, installed ahead of circuit breaker or circuit breaker panels, will be UL Class RK-1.

Fuses rated 600 amperes or less for all general power circuits will be dual-element, UL Class RK-5-time delay type. They will be self-protected from extraneous heat.

3.16.R.4 Spare Fuse Cabinet

10% (or a minimum of three) of each size and type of fuse will be placed in a spare fuse cabinet, wall-mounted near the electric service.

Cabinet will be sized as required to store all fuses neatly. Cabinet will contain shelves and /or slots as required to separate types of fuses. Cabinet door will be hinged with latch.

3.16.R.5 Identification Label

A fuse identification label, showing type and size, will be placed inside the door of each fused switch.

Labeling for rejection type fused switches will read:

WARNING!
USE ONLY CURRENT LIMITING FUSES
CLASS _____, TYPE _____, MFR _____

Label will be engraved in red laminated plastic.

3.16.S Section 16511 - Interior Lighting

All fixtures will be designed and installed with consideration for maintenance accessibility. Stairwell fixtures will be located so they are accessible from a ladder at each landing.

All public restroom fixtures will have battery backup in addition to an emergency circuit. Emergency circuit will have a key switch located in an accessible janitor's closet to allow for annual battery discharge.

Use photo controls in lieu of time locks whenever possible. Lighting control contactors will be electrically and mechanically held. (This allows for manual closing of a contractor when needed.)

All lighting fixtures and signs will be equipped with a renewable fuse in an external GLR fuse holder. Fuse placement will be in the most readily accessible location. An example would be to locate the pole-mounted fixture fuses at the bottom of the pole accessible from the handhold.

3.16.T Section 16670 - Lightning Protection

Lightning protection system will be designed in compliance with provisions of NFPA No. 780, "Standard for the Installation of Lightning Protection Systems."

The lightning protection system will be placed on the structure by experienced installers in compliance with provisions of the NFPA and Underwriters' Laboratories. Installers will be LPI (Lightning Protection Institute) certified, master, and journeyman in accordance with LPI standards. A UL Master Label and LPI certification will be required for the system.

Materials will comply in weight, size, and composition with the requirements of UL and the NFPA relating to this type of installation, and will be UL-labeled.

Air terminals will be solid copper with nickel-plated point, and will have proper base support for surface on which they are attached and will be securely anchored to this surface. Terminals will project a minimum of 10 inches above top of object to which attached.

Conductors will consist of commercially pure copper, complying with the weight and construction requirements of the Code, and will be coursed to interconnect with air terminals and, in general, provide a two-way minimum path to ground. The angle of any turn will not exceed 90 degrees, and will provide an approximately horizontal or downward course. Down conductors will be installed in concealed plastic conduit. Radius of bends will not be less than 8 inches.

Conductor fasteners will be of the same material as the conductor, having ample strength to support conductor. Where fasteners are to be mounted in masonry or structural work, they will be furnished to the Contractor for installation during the construction of the project.

Ground connections will be made in accordance with requirements of all applicable codes. Ground rods will be placed in a minimum of two feet from building foundations. In addition to above artificial grounds, one down conductor of each two-path system will be connected to water piping system with approved water pipe type strap connector.

3.17 Telecommunications Infrastructure Standards

3.17.A General

The Hillsborough County Aviation Authority currently specifies the requirements for the installation and use of copper and fiber optic telecommunications cabling to support voice, data, video, security and all low voltage applications and services at Tampa International Airport. This document describes the minimum requirements, standards, specifications, and methods of execution pertaining to cable and infrastructure support for all telecommunications, data, video, security,

and CCTV use at the Airport. It includes the furnishing, installation, testing and documentation of telecommunications copper and fiber optic cable, terminations, outlets, and related items for use throughout the Airport facilities.

3.17.A.1 Reference Standards

a. The publications listed below form a part of the telecommunications infrastructure requirements to the extent referenced. The publications are referred to in the text by basic designation only. All publications are intended to be the most current editions available.

b. Except where otherwise noted, all material and workmanship will conform to the following standards:

- (1) ANSI/TIA-568-C.0 (February 2009), Generic Telecommunications Cabling for Customer Premises
- (2) ANSI/TIA-568-C.1 (February 2009), Commercial Building Telecommunications Cabling Standard
- (3) TIA-568-C.2 (August 2009), Balanced Twisted- Pair Telecommunications Cabling Components Standard
- (4) ANSI/TIA-568-C.3 (June 2008), Optical Fiber Cabling Component Standard
- (5) ANSI/TIA/-569-B Commercial Building Standard for Telecommunications Pathways and Spaces

Notes:

1. Particular attention is to be given to Basic Building Elements - Telecommunications Closets and Equipment Rooms. There will be a minimum of one Telecommunications Closet established for each floor of a building.

2. Each Telecommunications closet will be provided with a lockable door that, if practical, will be integrated with TPAs' Access Control System. If this isn't possible, the door will have a lock compatible with the existing IT / Telecommunications' closet lock.

- (6) TIA/EIA-606-B Administration Standard for Commercial Telecommunications Infrastructure
- (7) ANSI-J-STD-607-B1 Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications
- (8) TIA/EIA-758-A Customer Owned Outside Plant Telecommunications Infrastructure Standard
- (9) ANSI/TIA-862 Building Automation systems Cabling Standard for Commercial buildings
- (10) ANSI/TIA-942 Telecommunications Infrastructure Standard for Data Centers
- (11) ANSI/TIA-1005 Telecommunications Infrastructure Standards for Industrial Premises
- (12) ANSI/NECA/BICSI 568-2006, Standard for Installing Commercial building Telecommunications Cabling
- (13) ANSI/NECA/BICSI-607-2011 Standard for Telecommunications Bonding and Grounding Planning and Installation Methods for Commercial Buildings
- (14) ANSI/NFPA 70 National Electrical Code, CSA C22.1
- (15) BICSI Telecommunications Distribution Methods Manual (TDMM)
- (16) BICSI Telecommunications Cabling Installation Manual (TCIM) **BICSI ITSIMM**
- (17) County Codes and Regulations
- (18) Underwriters Laboratories (UL)
- (19) FCC -Federal Communications Commission
- (20) ADA Requirements
- (21) Occupational Safety and Health Regulations (OSHA)
- (22) National Fire Protection Association (NFPA)

- (23) Florida Statutes and Administrative Rules
- (27) Manufacturers Product Cabling Catalogs
- (28) Manufacturers Training Manuals (Design and Installation).

3.17.A.2 Submittals

- a. **Materials & Equipment List:** Prior to installation the contractor will submit for approval a complete list of materials, equipment, accessories, configurations and installation methods proposed for work in accordance with these specifications. The list will include complete catalog identification numbers and models or system designator, quantities, options and catalogs "cuts."
- b. **As Built Drawings:** The contractor will provide one set of reproducible drawings depicting the final installation details, including final cable locations, quantities and routing, upon completion of the project. The contractor will also provide as built drawings in electronic format. The formats are to be determined by TPA at the time of implementation of the project.
- c. **Cable Management System Documentation:** The contractor will provide a listing in spreadsheet format of all horizontal and riser cables, indicating type of cable, origination and termination points and length. The contractor will provide this spreadsheet in electronic format, in Microsoft Excel (latest version available), using a specific spreadsheet format provided by TPA. The data will be entered into TPA's Cable Management System.
- d. **Record Drawings:** The contractor will maintain and keep up to date a complete record set of drawings that will show every change from the Contract Drawings.
- e. **Room Labeling:** Initial and all subsequent submittals will include a labeling scheme that reflects the labeling standards delineated in section 3.18 of the Design Criteria Manual.

3.17.A.3 Delivery, Storage, and Handling

- a. **Protection and Restoration:** Suitably protect all equipment provided under this Division during construction. Restore all damaged surfaces and items to "like new" condition before a request for substantial completion inspection.

- b. Handling: All materials shall be properly protected and all conduit openings shall be temporarily closed by the Contractor to prevent obstruction and damage. Post notice prohibiting the use of all systems provided under this Contract, prior to completion of work and acceptance of all systems by the Owner's representative. The Contractor shall take precautions to protect his materials from damage and theft.
- c. Safeguards: The Contractor shall furnish, place and maintain proper safety guards for the prevention of accidents that might be caused by the workmanship, materials, equipment or systems provided under this contract.
- d. Cleanup: Keep the job site free from all debris and rubbish. Remove all debris and rubbish from the site and leave premises in clean condition on a daily basis.

3.17.B Products

3.17.B.1 General – Materials Alternates and Substitutions

TPA has established standards for products to be used for telecommunications infrastructure to be installed at the Airport. These standards are established to ensure commonality of services throughout the Airport regardless of manufacturer, vendor or owner.

- a. Alternates: Specified products or manufacturers that will be in compliance with the performance and quality provisions of the specifications and may be proposed for use by the contractor. Alternates will also be a different model number from those identified on the documents. Acceptable alternates are as listed on the documents. Alternates must be justified on the basis of need, cost or both as long as there is no identified reduction in quality and that all design parameters are met.
- b. Substitutions: Products of unnamed manufacturers. Substitutions will not be acceptable.
- c. The contractor is expected to base his bid on materials and equipment complying fully with the drawings and specification. In the event he bases his bid on materials or equipment which do not conform, he shall be responsible for providing materials and equipment which fully conform at no change in his contract price. In any case, where a specific specification for any item that is required

is not shown, the contractor shall provide only the best quality equipment or material consistent with the quality of other specified equipment and material. The items of equipment shall be provided in the quantity as shown by the drawings or in the quantity as specified herein.

- d. The use of acceptable equipment does not relieve the Contractor of responsibility for the alternate equipment. The Contractor, at no cost to the Owner, shall remove and replace with the specified equipment any equipment or system that shows evidence of improper operation, function, or size.
- e. It is the responsibility of the Contractor to supply a working overall system. All equipment and material as well as labor must be provided whether or not specifically mentioned in the specification or shown by the drawings.
- f. The contractor selected for each Division 27 and 28 system must be certified by the manufacturer of the products, adhere to the engineering, installation and testing procedures and utilize the authorized manufacturer components and distribution channels in provisioning the Project.
- g. Contractor, as a minimum, must carry a current State issued limited energy license.
- h. Additional requirements as indicated on each individual specifications section.

3.17.B.2 Fiber Optic Backbone Cable Subsystem

- a. Single mode fiber cable used will have the following optical characteristics:

Size: Core/Cladding 9/125um

Attenuation	Bandwidth	Notes
1.0/1.0 dB/km@1310/1550	100 terahertz	OS1 – Tight Buffered/Inside Plant
0.4/0.4 dB/km@1310/1550	100 terahertz	OS2 – Loose Tube/Outside Plant

b. Multimode fiber cable used will have the following characteristics:

Size: Core/Cladding 50/125um

Attenuation	Bandwidth	Notes
3.0/1.0 dB/km@850/1300	500/500 MHz-km	OM2 – Laser - rated
3.0/1.0 dB/km@850/1300	2000/500 MHz-km	OM3 – Optimized for 850 nm
3.0/1.0 dB/km@850/1300	3600/500 MHz-km	OM4 – Optimized for 850 nm

Size: Core/Cladding 62.5/125um

Attenuation	Bandwidth	Notes
3.0/1.0 dB/km@1310/1550	160-200/500 MHz-km	OM1 – LAN fiber

d. Inside backbone cable will consist of tight-buffered single mode cable consisting of multiple fiber bundles and a dielectric central strength member. The outer jacket will meet the NEC requirements for Riser or Plenum.

e. Outside plant fiber cable will be of water-blocked, loose tube, single mode construction. The cable will consist of multiple fiber bundles surrounding a dielectric central strength member, and covered with a fire resistant jacket.

f. Acceptable manufacturers: Corning, Optical Cable Corporation, Superior Essex, Comm Scope, Berk-Tek or approved equal.

3.17.B.3 Fiber Distribution Panels

a. Panels used for terminating outside plant and inside building fiber optic cables will be of the distribution type. Where feasible, all fiber distribution panels will be rack mounted. Panels will be low profile, and selected to occupy minimum rack spaces.

Distribution panels will have both termination bays and splice bays, with the proper number of LC panels/mounting plates with stainless steel couplers and splice organizer trays plus 20% for expansion.

b. Acceptable manufacturers: Panduit, Ortronics, Commscope, Leviton or approved equal.

3.17.B.4 Fiber Cable LC Connectors

a. LC compatible connector couplings will be able to accommodate ceramic connectors. The contractor will use couplings specifically rated by the manufacturer for high-speed applications.

b. Multimode and single mode fiber connectors will be LC compatible, epoxy type, with ceramic tips. The maximum average insertion loss specifications will be as follows:

(1) Singlemode: .75dB/connector

(2) Multimode: .75dB/connector

Acceptable manufacturers: Panduit, Leviton or approved equal.

3.17.B.5 Fiber Optic Patch Cables

a. Fiber patch cables will be appropriate length duplex LC-to-LC fiber patch cords for all fiber distribution panel ports.

b. The contractor will provide cable management rings and support brackets for routing and support of all fiber patch cables and will ensure equipment is in place that will protect the fiber patch cables from damage.

c. Acceptable manufacturers: Panduit, Leviton, or approved equal.

3.17.B.6 Interior Copper Cable Backbone Subsystem

a. The interior copper cable backbone system will consist of the following:

(1) Multi-pair copper cable, UTP 4PR CAT 6 plenum and non plenum cable.

(2) 8 Position Modular (RJ45) Patch Panels and Jacks, 110 Punch Down Blocks, 66 Punch Down Blocks and Wire Management Devices.

(3) Fiber Optic – Conventional and Air Blown Fiber Optic Cables, Singlemode and Multimode, Connectors, Fiber Distribution and Termination Cabinets.

- b. The contractor will provide cable management rings and support brackets for routing and support of all interior copper backbone cables.
- c. Interior copper backbone cable will be UTP Category 6 cable minimum and will be in compliance with the TIA/EIA standards.
- d. Acceptable manufacturers: Berk-Tek, Superior Essex, or approved equal.

3.17.B.7 Outside Plant Copper Cable Subsystem

- a. Outside copper cable will be gel-filled to inhibit water penetration, and armored to enhance protection from external means. Outside copper cable will meet RUS PE-89 specifications.
- b. Acceptable manufactures: , Superior Essex, or approved equal.

3.17.B.8 Cable Voltage Protection

The contractor will provide gas-tube voltage protection blocks for outside plant cables. Voltage protection blocks will be wall mounted with locking front cover. Acceptable manufacturers: , Porta Systems or approved equal.

3.17.B.9 Horizontal Cable Subsystem

- a. The horizontal cable subsystem will consist of Category 6 non shielded or foil shielded UTP and six strands of multimode, fiber optic cable end-to-end installation as identified in the latest ANSI/TIA

568-C standard. Copper cables will consist of 4 twisted pair cable; either PVC-jacketed or plenum-rated as required in the environment where work is occurring. All cable will meet the following requirements:

- (1) Category 6 cable will meet all performance requirements as specified in the most current version of the ANSI/TIA 568-C.

(2) Unless otherwise specified, the standard category 6 cable complement will be four 4-pair data cables . All category 6 cable will be color coded and placed in the face plate as follows:

Cable	Cable Color	Insert Color	Placement
Data 1	Blue	Blue - if available	Upper Left
Data 2	Blue	Blue – if available	Upper Right Left
Data 3	Blue	Blue – if available	Lower Left
Data 4	Blue	Blue – if available	Lower Right
Fiber 1*	Blue and Orange	Electric Ivory	Center Right
Fiber 2*	Green and Brown	Electric Ivory	Upper Right

**If installed*

(3) Unless otherwise specified, the standard fiber installation will consist of two, two-strand fiber connections placed below the copper connections on the face plate as shown in section 3.18, page 4, of the DCM.

(4) Unless otherwise specified all CAT 6 jacks will be Panduit part numbers CJS6X88TGY.

(5) Unless otherwise specified all fiber jacks for the faceplates will be Panduit part number CMDJLCEI.

(6) Unless otherwise specified all double-ganged faceplates will be Panduit part number CFPF12EI-2G and all single gang faceplates will be Panduit part number CBEI.

b. Horizontal copper cable runs will not exceed 90 meters from the outlet to the IDF. If cable routing requires horizontal runs in excess of 90 meters, the contractor will notify TPA in advance of installation.

c. All fiber horizontal cable will be 6 strand, 50/125 multimode (OM3) micron cable.

d. Acceptable manufacturers: Panduit or approved equal for fiber; Panduit, Corning, Optical Cable Corporation or Superior for copper cable.

B.17.B.10 Station Cable Faceplates and Jacks

- a. All faceplates used will have a capacity of a minimum of four outlets utilizing a square, single gang box that is 2 inches wide and as deep as physically permissible.
- b. Data, voice and fiber communications jacks will meet all performance requirements as specified in the latest issue of the ANSI/TIA 568-C and will be wired to accommodate the T-568B wiring sequence.
- c. Faceplates will be flush mounted. Any surface mounted boxes must be approved in advance by TPA.
- d. Fiber inserts on the faceplate will have recessed inserts with a downward slope of 30 degrees.
- e. All modular jacks & plugs used will comply with FCC part 68 specifications.
- f. Metal faceplates may be used with prior approval from TPA.
- g. Acceptable manufacturers: Panduit or approved equal.

3.17.B.11 Category 6 Patch Panels

- a. Category 6 patch panels will meet the ANSI/TIA requirements for Category 6 cross-connect and switching hardware.
- b. The contractor will provide Category 6, 8 Pos modular patch panels in all wiring closets adequate to support all installed Category 6 cables (data and voice), plus 20% growth in each wiring closet.
- c. Category 6 patch panels will include wire management components that will be used for routing of communications cable to and from telecommunications panels and equipment. These components will include:
 - (1) Wire slots to organize cables
 - (2) Cable brackets for support and routing
 - (3) Strain relief clips

(4) Wire management panels

d. Acceptable 8 Pos modular patch panel manufacturers: Panduit, or approved equal.

3.17.B.12 Fiber Optic Distribution Panels

a. Fiber Optic Patch Panels will meet the ANSI/TIA requirements for fiber optic hardware.

b. The contractor will provide Fiber Optic LC patch panels in all wiring closets adequate to support all installed fiber optic cables plus a 20% growth in each wiring closet.

c. Fiber Optic Distribution Panels will include management components that will be used for routing of communications cable to and from related Fiber Optic source equipment.

(1) Wire slots to organize cables

(2) Cable brackets for support and routing

(3) Strain relief clips

(4) Wire management panels

d. Acceptable manufacturers: Panduit or approved equal.

3.17.B.13 Equipment Racks

a. In each wiring closet the contractor will mount 8 Pos modular patch panels and fiber distribution panels in floor-mounted, 84" high, 19" equipment racks with cable management troughs. Furnish and install adequate racks to support rack-mounted fiber optic distribution panels and category 6, RJ-45 patch panels, and 20% growth.

b. Acceptable manufacturers: B-Line, Chatsworth, X-Mark or approved equal.

3.17.B.14 Category Patch Cables and Fiber Optic Cross- Connect Cables

- a. The contractor will provide adequate Category 6 patch cables and Fiber Optic cross-connect cables of appropriate lengths to support all patch panel ports and Fiber Optic distribution panels installed.
- b. The contractor will not be responsible for installing patch cables. This specification only calls for furnishing the required patch cables to be installed.
- c. Acceptable manufacturers: Leviton, Siemon, Corning, Optical cable Corporation, Comm Scope, Berk-Tek or approved equal.
- d. Prior to purchase of patch cables, contractor will consult Aviation Authority Telecom Group concerning cables length to be supplied.

3.17.B.15 Fiber and Cable Management

- a. Vertical Cable Management will be required for each side of the equipment rack. The cable management devices must be sized accurately for the cable types and maximum capacity. Drop-downs of Copper and Fiber cables will be accomplished utilizing conduit “waterfall”, Panduit Part Number CMW-KIT, and waterfall accessories as appropriate. The contractor will consult with the Aviation Authority Telcom Group to clarify any questions on this matter.
- b. Horizontal Cable Management is required below each patch panel and switch. A 24-port patch panel requires one horizontal cable manager below and a 48-port patch panel requires one horizontal cable manager above and below the patch panel. The use of patch panels larger than 48-ports is discouraged. The cable management devices must be sized accurately for the cable types and maximum capacity.
- c. Acceptable manufactures: Panduit or approved equal.

3.17.C Execution

3.17.C.1 Installation

- a. General Instructions

(1) The contractor will install all provided and furnished materials in accordance with manufacturer's specifications, recommendations and guidelines. Copies of the manufacturer's guidelines, specifications and recommendations will be provided by the contractor to TPA and will be made available on site to the contractor's personnel.

(2) Install all wiring and cabling in accordance with the National Electric Code (NEC) where the provisions of the NEC are applicable.

(3) Installation will be in conformance to generally acceptable telecommunications means and methods and the manufacturers' specifications. Stress on any cable during installation will not exceed manufacturers' specifications. All splicing and connections will be in accordance with industry-standard practices.

(4) The contractor will coordinate installation of all cabling to promote ease of installation and efficient use of rack space, backboard space, conduits and cable trays.

b. Fiber Optic Cable Plant Installation

(1) All fiber cable will be terminated in LC connectors mounted in fiber distribution centers. The contractor will use fiber pigtailed and splice trays at all distribution points.

(2) All Backbone fiber optic cables will be installed in innerduct tubing to protect and isolate it.

(3) ALL Horizontal fiber optic cables will be six strand, armored, multimode.

(4) Fiber optic cable will be installed in accordance with manufactures specifications. The contractor will not exceed the maximum pulling tension or minimum bend radius of the cable.

c. Copper Outside Plant Installation Requirements

(1) All outside plant cables will be terminated in 110 blocks.

(2) All copper outside plant cable will terminate in voltage protection units upon entering the wiring closet in each building.

(3) All copper outside plant copper cable will be installed in accordance with manufacturers' specifications. The contractor will not exceed the maximum pulling tension or minimum bend radius of the cable.

d. Copper Inside Plant Backbone/Riser Subsystem

(1) All cables will be terminated in 110 blocks or 8 Pos modular patch panels.

(2) All copper inside plant copper cable will be installed in accordance with manufacturers' specifications. The contractor will not exceed the maximum pulling tension or minimum bend radius of the cable.

e. Horizontal Cabling

(1) The standard for horizontal distribution systems will consist of a complete Category 6 installation, using UTP cables and/or fiber optic cables where national and local codes will allow for such installation. Any cable designated to be routed in spaces identified as riser or return air plenum spaces will conform to the installation requirements for these spaces by national and local codes, such as the use of riser and plenum rated cables.

(2) Electrical service boxes identified for use as communications outlets will be connected to the accessible ceiling locations via continuous and integral electrical metallic tubing (EMT) conduit, at a minimum. This conduit will be routed between the CO and the accessible ceiling designated communications cable tray where the end of the conduit will terminate no further than 6" to 12" from the point of cable tray exit, and in such a manner that there is no requirement to support the communication cable between the cable tray and the CO conduit. This CO and conduit installation is a TPA requirement. If any deviation from this requirement is proposed by the contractor, the contractor will obtain explicit written permission from TPA for only the specified points of installation.

(a) If CO service boxes and integral conduit runs do not exist or specifically provided by others, then it will be the

responsibility of the contractor to furnish and install them. The minimum installation requirements will be a double-gang box and a 1" conduit run. The conduit run will be provided with swept conduit bends, not to exceed 180° in total, such that the conduit run is horizontal to the ceiling and at the same level of the accessible ceiling communication cable tray within ±3 inches vertically.

(b) All conduits will be reamed to remove sharp inside edges and any open conduit end will have a bushing installed to protect the communications cable jacket.

(c) All conduits will be adequately supported at 48" intervals or less.

(d) It is understood that certain communications outlet conduit installations may be impractical due to pathway and space limitations such as routing, penetrations and architectural aesthetics. For such conditions, the contractor is required to submit an alternate pathway design and rationale for TPA approval.

(e) When any cable is pulled through a CO conduit, an internal dragline is to be left in place to facilitate the installation of future cables.

(3) Between the end of the conduit stub-up and the wiring closet, the contractor will install appropriate cable tray of appropriate capacity to accommodate the expected full build-out at the area of the building facility being served. It is the expectation of TPA that cable tray be used in horizontal distribution. The contractor will install the appropriate cable tray support hardware. In no instance will the contractor attach cables to any other support hardware in the ceiling space. The cable tray will be supported at 48" intervals or less. The weight of maximum cable capacity will dictate a more frequent support.

(a) At locations where a cable tray cannot be accommodated due to floor/wall penetrations, structure and/or aesthetics, the cable routing must transition to other types of pathways. The contractor will utilize cable bridle rings or J-Hooks (open top cable supports) attached to hanger rod supports to secure the cable to the point of entry of the alternate pathways. Cable at these transition points between the cable tray and alternate pathways will be

supported at spacing of 48" or less depending on the weight of the bundle.

(b) Under no circumstances will cable be laid on suspended ceiling or draped across other conduits, pipes, ducts, or other facilities installed along the path of the cable.

f. Route Preparation, Drilling and Coring

Field coordination with TPA will be required prior to installing cable trays (where specified), sleeves, wall or floor penetrations and/or cables.

g. Termination

(1) The contractor will terminate all conductors of all cables. Each copper outside plant and riser cable pair will be terminated contiguously on wall-mounted 110 blocks with protectors. Terminations will be in color code sequence from left to right and from top to bottom on each block for each cable. 110 blocks will be labeled in a permanent legible fashion, in compliance with TPA's approved labeling scheme.

(2) Fiber strands will be field terminated in rack-mounted fiber distribution panels on LC connectors according to the specification of the manufacturer. Only tool kits and consumables that are specified by the manufacturer will be utilized. Completed LC connectors will be placed into the sleeve of the fiber termination panel from left to right in color code sequence. Strands will be protected and secured within the fiber panel to ensure both strain relief and bend radius. The fiber cable will be tie wrapped (this means the total cable with all strands inside of outer jacket) at the point of entry of the patch panel to prevent strain on the strands. Where required, to secure the fiber optic cable from pulling tension, the Kevlar strength members will be separated from the fiber strands and attached to the panel by a clamp. Fiber connectors will be terminated on LC connectors using manufacturer-approved methods.

(3) The contractor will terminate horizontal cables in modular jack inserts at the outlet in accordance with the floor plans, using the T568B wiring sequence.

(4) The contractor will terminate horizontal cables on rack mounted Category 6, 8 Pos Modular patch panels and/or Fiber

Optic Fiber Distribution Panels according to the T568B wiring sequence.

h. Site Survey

(1) Prior to placing any lateral, riser or outside plant cable, penetration, etc. the contractor will survey the site to see that job conditions do not impose any obstructions that would interfere with the safe and satisfactory placement of the cables, and arrange to remove any obstructions with TPA. The contractor will provide shop drawings for approval by TPA prior to starting work.

(2) The contractor is responsible for notifying TPA as soon as field conditions prevent proper installation.

(3) The contractor will verify site conditions and dimensions of equipment to ensure access for proper installation of equipment without disassembly that will void warranty, and will report in writing to TPA prior to purchase or shipment of equipment involved, on conditions that may prevent proper installation.

i. Inspection

All cable will be inspected as it is pulled off the reel for any obvious defects. If defects are observed, further use of the cable from this reel will be halted.

j. Pulling Tension

(1) No cable will be installed with a pulling tension exceeding the maximum recommended by the manufacturer. Pulling tension should be monitored with a tension gauge.

(2) If multiple cables are to be pulled at one time, the contractor will make the necessary allowances to back off the pulling tension of the bundle.

(3) Cable pulls will be protected by means of an overload cutoff or breakaway clutch set at least 10% below the cable manufacturers' maximum recommended pulling tension.

k. Bend Radii

All cables will be installed with a bend radius greater than recommended by the manufacturer.

l. Slack

(1) The contractor will leave a service loop prior to termination and patching.

(2) Prior to termination, the contractor will leave a service loop for riser cables to provide some degree of flexibility and for service rearrangement.

m. Securing Methods

(1) The contractor will provide Velcro tie wraps, riser cable support grips, vertical and horizontal cable trays in wiring closets and other equipment spaces based upon field conditions to maintain orderly cable organization.

(2) The contractor will be responsible for securing all cabling in a way to satisfy any structural engineering requirements.

(3) The contractor will obtain required structural engineering related information for any item that may affect the infrastructure of the building, and submit the information to TPA for prior review and approval.

(4) The contractor will provide suspended platforms, threaded rods, strap hangers, brackets, shelves, stands or legs as necessary for floor, wall or ceiling mounting of equipment provided under this Section. The contractor will provide steel supports and hardware for proper installation of hangers, anchors, guides, etc., and will provide cut sheets, weights, and other pertinent data required for proper coordination of equipment support.

(5) Velcro® tie wraps will be used at approximately 60-inch intervals to secure cable in cable trays and to provide strain relief at termination points.

n. Placing Cable in Conduit

(1) The contractor will verify that any conduits to be employed are clear of obstructions unless TPA has approved an exception in writing. For fiber, inner duct will be placed in conduit. A fishline and mandrel will be used to clear conduits of obstructions and as a guide for pulling the cable through.

(2) For riser cable, the cable strength members will be affixed to the pulling medium or, a properly sized 'kellum' type grip will be employed to make the pull. Cable pull tension will be monitored during the pull with a tension meter as necessary and if mechanical pulling equipment is used, a clutch set at 10% below the cable manufacturer's maximum pulling tension will be used.

(3) A nylon dragline will be pulled along with each conduit run installed so that future cables may be pulled in that conduit. Conduit bushings will be used to protect the cable jacket from abrasion as it is pulled through conduit and at each exposed end.

o. Lubrication

As necessary, for cable pulls in conduit, the contractor will use only an approved lubricant compatible with the cable's outer jacket insulation.

p. Protection

During installation, and prior to final acceptance, the contractor will protect finished and unfinished work against damage and loss. In the event of such damage or loss, the contractor will replace or repair such work at no additional cost to TPA. As cable is installed, care must be taken to avoid nicks, kinks or other damage to the cable. Cable is to be labeled at each end as specified. Provide strain relief at each termination point and 24 inches of slack to allow for easy re-termination of the cable, if required later.

q. Cable Routes and Clearances

Unshielded twisted pair cable will be routed so as to maintain the following minimum distances from power sources:

Condition	Minimum Separation Distance		
	<2 kVA	2-5 kVA	>5 kVA
Unshielded power lines or electrical equipment in proximity to open or nonmetal pathways	127 mm (5 in)	305 mm (12 in)	610 mm (24 in)
Unshielded power lines or electrical equipment in proximity to grounded metal conduit pathway	64 mm (2.5 in)	152 mm (6 in)	305 mm (12 in)
Power lines enclosed in a grounded metal conduit (or equivalent shielding) in proximity to a grounded metal conduit pathway		76 mm (3 in)	152 mm (6 in)
Electrical motors and transformers			1220 mm (48 in)

r. Grounding

(1) All metallic sheathed cables will be bonded and grounded. Riser cables will be bonded to the metal frames of the mounting hardware in the wiring closet using bonding clamps appropriate to the size of the cable.

(2) Each wiring closet will have a single ground point. This point is bonded to the integral building grounding system or to the local structural steel. All grounding and bonding in each wiring closet will be connected to that point either directly or through the use of ground bus connections.

(3) All cables with a metallic component, which enter a wiring closet from outside a building, will be grounded and bonded at the point of entrance with appropriate lightning protection.

s. Splicing

No splicing of any cables will be performed unless otherwise explicitly noted in the Drawings or pre-approved in writing by TPA.

t. Materials Management

(1) Equipment and materials will be properly stored, adequately protected and carefully handled to prevent damage until acceptance.

(2) The contractor will ensure delivery of cable, factory-packaged in containers or on reels. Storage of all components will be provided by the contractor including rental of containers or other suitable methods as specified.

u. Fire Stopping

(1) The contractor will suitably fire stop all riser shaft openings; horizontal sleeve penetrations, both ends of any horizontal

conduits and all slot cuts in walls and under the raised access floors which are needed to facilitate cable access/egress.

(2) The contractor will verify to TPA's satisfaction that the integrity of all fire stops is maintained upon completion of the work.

v. Protection/Restoration of Premises

The contractor will, as required, during the progress of work, remove and properly dispose of resultant dirt and debris, hang protective plastic sheathing when specified and keep premises clean. Upon completion of work, the contractor will remove equipment and unused material provided for work.

w. Quality Assurance

(1) The work will be executed in full accordance with the current rulings of the latest applicable standards and all rulings by state, utility, and local authorities. Where codes conflict, the more stringent will apply. Where the specification requirements exceed the requirements of these authorities, codes, and standards, the specification requirements will prevail.

(2) The contractor will replace any imperfect or rejected work with work conforming to the requirements of the specification and will be satisfactory to TPA without extra cost to TPA.

(3) The contractor will report to TPA promptly in writing, whenever plans or specifications are believed to be at variance with

these requirements and will not proceed with such work until further instructed in writing by TPA.

x. Abandoned and Future Cabling

(1) Abandoned cable will be removed from all pathways and spaces by the contractor anywhere the contractor is conducting new installations, renovations or replacement of existing cable plant backbone or horizontal pathways and space.

(2) Abandoned cable will be identified by the contractor, in consultation with TPA, for each project. Any cable later identified by the contractor as possibly abandoned will be brought to the attention of TPA.

(3) Any un-terminated communications cabling identified for future use by the TPA will be documented by the contractor pursuant to the TPA's cable management system specifications.

3.17.C.2 Testing

a. General Instructions

(1) For projects with a contract value in excess of \$25,000, testing will be performed by an independent testing agency, retained by and at the expense of the contractor. For projects valued at \$25,000 or less, inspections will be performed by the contractor.

(2) The contractor will thoroughly test, or have tested, all cables and connectors that they furnish and install. TPA requires certification that all pairs were tested and found to be 100% reliable end-to-end (block-to-block and block-to-receptacle); bad pairs/punch-downs and/terminations will not be used, but rather be corrected and/or replaced at no additional cost to TPA. The contractor will present all testing plans to TPA for approval prior to the start of testing.

(3) The contractor will provide a complete description of acceptance testing procedures and will notify TPA upon successful completion of acceptance testing.

b. General Rules

(1) The contractor will provide all labor, test equipment, and tools necessary to verify proper operation prior to final acceptance by TPA.

(2) Prior to any testing, the contractor will provide TPA with a two day minimum advance notice of the date testing is to begin. All test results shall be documented, and submitted to TPA for review, prior to final acceptance by TPA.

(3) The contractor will repair or replace all cable, connectors, and equipment supplied by the contractor, which do not meet acceptance criteria, prior to final acceptance by TPA.

c. Replacement

(1) Any cable, connector, or wiring block, patch panel or other device furnished by the contractor which tests below manufacturer's standards will be replaced at no additional cost to TPA. The replacement will be re-tested to verify compliance.

(2) Successful completion of all tests indicated below is required for acceptance.

d. Testing Procedures

(1) The contractor will provide the necessary test equipment to conduct the tests.

(2) Field tests may be required to be performed in the presence of TPA and/or its duly authorized representatives. The contractor will provide written documentation reporting the results of all tests.

e. Pre-Installation Testing

The contractor will obtain factory test data for each reel of cable including, but not limited to:

- (1) Physical Production Tests (tensile strength)
- (2) Transmission Production Tests

f. Fiber Optic Cable Test Procedures - Backbone and Horizontal

(1) Following the physical installation and termination of the fiber optic cables, the contractor will conduct any pre-checkout tests deemed necessary prior to the conduct of formal acceptance tests with the Owner.

(2) The contractor will verify continuity of all optical fiber strands.

(3) The contractor will be responsible to perform optical loss (attenuation) measurements and Optical Time Domain Reflectometer (OTDR) tests. contractor will document such items as the personnel involved in the testing, type of equipment utilized, equipment settings, the date tested, reel number (or cable ID when tested post-installation) and strand number. The contractor will be responsible to supply sufficient cable for the installation and to take whatever action is necessary to provide such cable at no additional cost to TPA.

(4) The contractor will provide written results, including actual trace records in As Built Drawings that the optical loss for each strand is within the limits established.

(5) If a fiber cable loss exceeds either the established optical loss or the manufacturer's standards, the contractor will first clean the connections at both ends and retest the cable. If loss is still excessive, the contractor will inspect the connections. Re-polishing or connector replacement may be required. If the connector terminations are determined to be acceptable, the cable may be defective. An Optical Time Domain Reflectometer (OTDR) will be used to locate cable breaks and points at which losses occur.

(6) In the event that the fiber continues to test outside of acceptable specifications, the contractor will replace the cable at no additional cost to TPA in accordance with TPA's schedule.

g. Acceptance Testing

The contractor will perform the tests and inspections described in this section in the presence of TPA. Each floor and closet will be tested individually and accepted on a per floor basis. The cabling system will be tested for compliance with the specifications for physical placement,

electrical specifications, wiring accuracy, continuity, and proper labeling and identification. Document all test results.

h. Physical Inspection

Prior to conducting any transmission testing, the following visual inspections will be performed:

- (1) Verify that cable has been installed to comply with contract documents.
- (2) Check for physical damage to Distribution Panels and Termination Blocks.
- (3) Verify that outlets have been securely mounted and properly labeled.
- (4) Check that all cabling is properly jacketed, installed and labeled at both ends (to the appropriate block/panel in the TR).
- (5) Verify that all cable bends are within the manufacturer's minimum bend radius allowed.
- (6) Check and demonstrate that all cable shields have been correctly grounded or bonded.
- (7) Verify that the cable is properly supported for termination and long-term placement (approvals must be obtained from TPA).
- (8) Verify that all cables are properly supported and independent of any other support/hanger rods in the ceiling space.
- (9) Verify that cables have been terminated properly and in proper color code sequence.

i. Copper Cable Transmission Tests

- (1) Electrical tests of copper cables will be performed only with connectors installed and cables punched down. Copper Riser and horizontal cables will be tested End-to-End from termination point to termination point via the appropriate punch-down on the termination block. 100% TESTING OF ALL PAIRS ON ALL CABLES IS REQUIRED.

Manufacturer standard test equipment will be employed in addition to any special test gear required.

- (2) All pairs of each cable will be electrically tested for:
 - (a) Continuity - the measured resistance value will be recorded.
 - (b) Opens
 - (c) Ground Faults
 - (d) Correct Termination - for the unshielded twisted pair, the correct color code will be punched down to be appropriate block/pin on the 110 block.
 - (e) Reversals (Correct Polarity)
 - (f) Splits
 - (g) Crosses
- (3) The contractor will create a punch list of bad pairs and re- terminate and, as necessary, replace any defective cables, connectors and/or panels.

j. Horizontal Station Cable Testing - Copper

- (1) Perform testing, and certify Category 6 compliance on all horizontal cable subsystems. All components of each horizontal subsystem must be of the Category 6 rating (cable, jack insert, patch panel, patch and station cables).and the link must be tested. Test results will be documented on hard copy media and listed by outlet.
- (2) The contractor will identify the test equipment and procedures that will be followed to complete and document the testing.
- (3) Test measurements will be conducted for bandwidth up to 625MHz, and include the following:
 - (a) Insertion Loss (Attenuation)
 - (b) Propagation Delay

- (c) Delay Skew
- (d) NEXT (Near-end crosstalk) Loss
- (e) PSNEXT (Power sum near-end crosstalk) Loss
- (f) Return Loss
- (g) Wire Map
- (h) Length
- (i) ACRF (Attenuation-to-crosstalk ration, far-end) Loss
- (j) PSACRF (Power sum attenuation-to-crosstalk far-end)

3.17.C.3 General Instructions

- a. The contractor will provide documentation enumerating termination panels and every cable run. Any additional documentation not explicitly listed that the contractor feels should be provided to facilitate a complete, working installation prior to acceptance by TPA will also be supplied.
- b. Documentation of all installed cable, manhole racking diagrams and splicing diagrams will be provided in an electronic database suitable for direct entry into TPA's cable management system. Fiber optic OTDR test results will be provided in hardcopy format.

3.17.C.4 Cleaning

- a. The contractor will clean up all work areas at the end of each day, removing all cartons, debris, emptied containers, etc. as the work progresses.
- b. Just prior to inspection for substantial completion the contractor will perform all final cleaning and sealing of equipment required to bring the installation to optimum appearance.3.16.A

3.18 Aviation Authority Labeling Standards

The Aviation Authority has implemented a labeling scheme for the labeling of all telecommunications cable, faceplates, patch panels, wiring blocks and equipment racks.

Building Identifiers

Each building on the airport property is designated by a two-character code as shown below.

<u>Designation</u>	<u>Building Name</u>
AA	Airside A
AB	Airside A Baggage Sort Bldg
AC	Airside C
AE	Airside E
AF	Airside F
AM	Airfield Maintenance
BR	Blue Car Rental
CB	Cargo Building
CF	Canine Facility
CL	Cell Lot
CB	Customs Bldg
EP	Economy Remote Garage
EV	East Airfield Electrical Vault
FB	Airside F Baggage Sort Bldg
FS	Fire station
FX	Federal Express Building
GA	Guard Shack for A/S A
GB	Check Point Bravo
GC	Guard Shack for A/S C
GE	Guard Shack for A/S E
GF	Guard Shack for A/SF
LP	Long Term Parking
NP	North Parking Lot
PO	Post Office
RB	Raytheon Building
RR	Red Car Rental
SB	Service Building
TB	Terminal Building
TP	Toll Plaza
WV	West Airfield Electrical Vault

Telecommunications Spaces

Telecommunications Rooms are defined using a seven (7)-character designation. The designation consists of the following:

Characters 1 & 2 - Building designation (i.e., TB = Terminal Building) Characters 3 & 4 – Floor designation (i.e., 04 = 4th floor, 71 = 71 foot level)

Characters 5, 6 & 7 – Room number (i.e., 880 = room 880) A list of current Telecommunications Spaces follows.

Terminal Building

<u>Location</u>	<u>Designation</u>
1 st Level	
A Core Bag Make-up	TB01280
B Core Bag Make-up	TB01380
C Core Bag Make-up	TB01680
D Core Bag Make-up	TB01780
2 nd Level	
2nd floor CommRoom	TB02680
NOC Server Room	TB02180
TSA Oversize	TB02380
Valet Door	TB02381
Behind Air Canada T/C	TB02682
Behind British Air T/C	TB02683
Behind Delta T/C	TB02780
3 rd Level	
Suite B	TB03980
48 Foot Level	
48' Level A Core	TB48180
48' Level B Core	TB48480
48' Level C Core	TB48580
48' Level D Core	TB48880
71 Foot Level	
71' Level A Core	TB71180
71' Level B Core	TB71480
71' Level C Core	TB71580
71' Level D Core	TB71880
4 th Level	
4th Floor Comm Room D Core	TB04880

4th Floor Comm Room A Core	TB04180
4th Floor Comm Room B Core	TB04480
4th Floor Comm Room C Core	TB04580
91 st Foot Level	
91' Level A Core	TB91180
91' Level B Core	TB91480
91' Level C Core	TB91580
91' Level D Core	TB91880

Service Building

Maintenance Work Control – IDF	SB01480
Switch Gear Room	SB01580
Mezzanine (East)	SB0M103
Mezzanine (West)	SB0M104
P&D IDF	SB02383
Police IDF	SB02580
AOC IDF	SB02581
Rental Car Garage Support	SB01481
Electronics Shop	SB01508
Lobby Conference Rooms AV	SB 02480

Long Term Parking

High Vehicle MDF	LPHV680
Elev. Mach. Room A	LP91880
Elev. Mach. Room B	LP91580
Elev. Mach. Room C	LP91180
Elev. Mach. Room D	LP91480
Toll Plaza Office DATA IDF	TP02581
Toll Plaza Office Voice IDF	TP02580

Airsides

A/S-A MDF	AA01580
A/S-A IDF-A	AA01780
A/S-A IDF-B	AA01680
A/S-A IDF-C	AA01380
A/S-A Comm. Room	AA01180
A/S-A Comm. Room	AA01181
A/S-C MDF	AC01780
A/S-C IDF ----West	AC01480
A/S-C IDF ----East	AC01280
A/S-E MDF	AE01380
A/S-E IDF-A	AE01880
A/S-E IDF-B	AE01680
A/S-E IDF-C	AE01280

A/S-E IDF-D	AE03380
A/S-E Shuttle Car Bay	AE01480
A/S-E Behind Delta Crown Rm	AE03580
A/S-F MDF	AF01980
A/S-F Shuttle Car Bay	AF01981
A/S-F TE	AF01480
A/S-F TE	AF01680

Outlying Buildings

Canine Facility MDF	CF01114
Airfield Maintenance MDF	AF02209
Airfield Maintenance	AF02180
Fire Station MDF	FS01370
Customs Bldg MDF	CS01980
Economy Parking Garage	EP01980
EPG Admin Bldg	EP01180
EPG Phase 2 (by Orange Elevators)	EP01204
A-Sort	AS01107

Backbone Cable Designations

Backbone cable designations will be based on the near-end and far-end of the cable. For example, a backbone cable from the 71 foot level, D Core of the Terminal Building to the Airside A MDF will be designated "TB71880/AA01580."

For backbone cables between telecommunications spaces within the same building, the building designation is dropped from the cable designation. For example, a cable between Airside A MDF and Airside A IDF-A will be designated "01580/01780."

In general, the 1st part of the cable designation is defined as the near-end cable termination point and the 2nd part of the cable designation is defined as the far-end.

Cable labels will be placed no more than three (3) inches from each end of the cable.

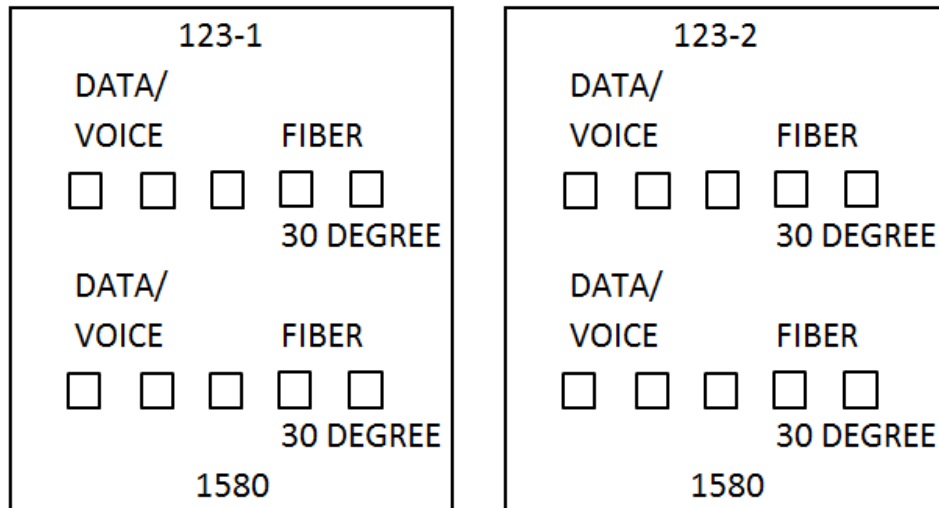
In cases where more than one cable exists between the same two points, the cable designation will include a modifier to indicate multiple cables, as in the following example:

- 1st Cable – AA01580/TB71880-1
- 2nd Cable – AA01580/TB71880-2

In cases where cables originating from different locations terminate in the same Telecommunications Space, each cable will be terminated on a separate patch panel or wiring block.

Faceplates and Jacks

Faceplates will be labeled as illustrated on the following sketch:



In the above examples:

1. The faceplate labels include the faceplate identification number on the top, which consists of the room number (123) and the faceplate number in the room (-1) or (-2). In rooms with multiple faceplates, the numbering system begins with the first faceplate to the left of the entrance door, as you enter, and proceeds clockwise around the room.
2. The faceplate labeling also includes the identification of the Telecommunications Space (TS, wiring closet) in which the jacks terminate. Note that when labeling the faceplate, the two character building designation does not need to be applied.
3. Typically, there will be multiple jacks on each faceplate. Each jack on the faceplate will have a designation. Unused jacks will have "blanks" inserted into their slots. On the double-gang faceplate shown above, the individual jacks will be identified (but not labeled on the faceplate) as follows:

Upper Left	123-1-1
Upper 2nd from Left	123-1-2
Upper 3rd from Left	123-1-3
Upper 4th from Left	123-1-4

Upper Right	123-1-5
Lower Left	123-1-6
Lower 2nd from Left	123-1-7
Lower 3rd from Left	123-1-8

Lower 4th from Left	123-1-9
Lower Right	123-1-10

4. The copper connections will be on jacks #2 and #7. Additional copper connections would go to jacks #1 and # 6 as needed.

5. The fiber connections will be on jacks #4 and #8.

6. Note that the Fiber connectors have a 30 Degree down slant on the faceplate.

The individual jack designations are not labeled on the faceplate due to space constraints. However, the jack designations are labeled in the Telecommunications Space on the appropriate patch panel or wiring block, as described below.

Each patch panel port shall be labeled with the individual jack designation connected to each port. For example, the patch panel port connected to jack 123-1-1 will be labeled 12311. The hyphens and are deleted due to space constraints.

In telecommunications spaces with multiple patch panels, each patch panel is sequentially numbered beginning with number "1."

Wiring Blocks

66 blocks will be covered with industry standard color-coded covers as follows:

Interbuilding Backbone Cable	Green
1st Level Riser (Backbone) Cable	White
2nd Level Riser (Backbone) Cable	Gray
Horizontal Cable	Blue

66 block covers will be labeled with the cable designation and pair count. For example: Cable 01580/01780 – Pairs 1-50

110 blocks will be labeled with the same information as found on the 66 block covers.

Appendix A
Main Terminal Public Restroom Criteria

Toilet Partitions

American Accessory

304 series stainless steel, diamond textured

Doors 1" thick, 22 gauge stainless steel #4 finish

Panels 1" thick, 22 gauge stainless steel #4 finish

Ceiling Hung Pilasters 1 1/4" thick, 26 gauge stainless steel #4 finish

Ceramic Floor Tile

Manufacturer Stone Peak

Pattern Materia 3D Selection

Color Sisal

Size 12" x 24"

Thickness 9 mm

Finish Honed

Grout Truecolor, Almond - H153/Coffee D-G28

Ceramic Wall Tile

Manufacturer Stone Peak

Pattern Materia 3D Selection

Color Sisal

Size 12" x 24"

Thickness 9 mm

Finish Lappato

Grout Truecolor, Almond - H153/Coffee D-G28

Quartz Surface Material

Manufacturer Dupont Zodiaq

Color: Galaxy Black

Size: 1 1/8" Thick

Water Closets

Manufacturer Kohler

Model K-4323

Flush Valve Zurn ZEMS6000 AV

Urinal

Manufacturer Kohler

Model UT104E

Lavatories

Sink Kohler Verticyl K-2882

Color 0-White

Faucet Kohler K-13463

Soap Dispenser Sloan SJS-1750 Foam

Toilet Accessories

Partition Mounted Seat-Cover Dispenser, Sanitary Napkin Disposal, Toilet Tissue Dispenser
Bobrick B-3571

Recessed Seat-Cover Dispenser, Sanitary Napkin Disposal, Toilet Tissue Dispenser
Bobrick B-3574

Recessed Seat-Cover and Toilet Tissue Dispenser
Bobrick B-3474

Recessed Paper Towel Dispenser
Bobrick B-35903

Recessed paper towel dispenser and waste receptacle
Bobrick B-3803

Recessed napkin/tampon vendor
Bobrick B-37063

Custom paper towel dispenser/mirror combination unit
American Accessories, Inc. Maryland Series MD-1 Modified for TIA

Angle Mirror
American Accessories Arkansas Series AR-Mirror 17.125" x 46"
American Accessories Arkansas Series AR-Mirror 36" x 86"

Robe Hook
Bobrick B-6716 Surface Mounted

Partition Door Stop
Jack Knob 4153, Pilaster Mounted

Grab Bar
Bobrick B-6806x48 48" stainless steel
Bobrick B-6806x36 36" stainless steel

Fold Down Shower Seat
Health Craft WS-36 SerenaSeat

Sharps Disposal
Sharps Compliance, Inc. Items #50030, 10101, 50026

Electric Hand Dryer
Dyson Airblade Model AB-02

Baby Changing Station
Koala Kare Products Model KB110-SSRE Recess Mounted

Under vanity waste receptacle
American Accessories WA-7 modifield



Exhibit-2

HCAA TELECOMMUNICATIONS INFRASTRUCTURE STANDARDS SEPTEMBER 14, 2015

HCAA Telecommunications Infrastructure Standards

General

The Hillsborough County Aviation Authority(HCAA) currently specifies the requirements for the installation and use of copper and fiber optic telecommunications cabling to support voice, data, video, security and all low voltage applications and services at Tampa International Airport. This document describes the minimum requirements, standards, specifications, and methods of execution pertaining to cable and infrastructure support for all telecommunications, data, video, security, and CCTV use at the Airport. It includes the furnishing, installation, testing and documentation of telecommunications copper and fiber optic cable, terminations, outlets, and related items for use throughout the Airport facilities.

A.1 Reference Standards

- a. The publications listed below form a part of the telecommunications infrastructure requirements to the extent referenced. The publications are referred to in the text by basic designation only. All publications are intended to be the most current editions available.
- b. Except where otherwise noted, all material and workmanship will conform to the following standards:
 - (1) ANSI/TIA-568-C.0 (February 2009), Generic Telecommunications Cabling for Customer Premises
 - (2) ANSI/TIA-568-C.1 (February 2009), Commercial Building Telecommunications Cabling Standard
 - (3) TIA-568-C.2 (August 2009), Balanced Twisted- Pair Telecommunications Cabling Components Standard
 - (4) ANSI/TIA-568-C.3 (June 2008), Optical Fiber Cabling Component Standard
 - (5) ANSI/TIA-569-B Commercial Building standard for Telecommunications Pathways and Spaces.

Notes:

1. **Particular attention is to be given to Basic Building Elements – Telecommunications Closets and Equipment Rooms. There will be a minimum of one Telecommunications Closet established for each floor of a building.**
2. **Each Telecommunications Closet will be provided with a lockable door that, if practical, will be integrated with the TPA's Access Control System. If this isn't possible, the door will have a lock compatible with the existing IT Telecommunications' closet lock.**

- (6) TIA/EIA-606-B Administration Standard for Commercial Telecommunications Infrastructure

- (7) ANSI-J-STD-607-B1 Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications
- (8) TIA/EIA-758-A Customer Owned Outside Plant Telecommunications Infrastructure Standard
- (9) ANSI/TIA-862 Building Automation systems, Cabling Standard for Commercial buildings
- (10) ANSI/TIA-942 Telecommunications Infrastructure Standard for Data Centers
- (11) ANSI/TIA-1005 Telecommunications Infrastructure Standards for Industrial Premises
- (12) ANSI/NECA/BICSI 568-2006, Standard for Installing Commercial Building Telecommunications Cabling
- (13) ANSI/NECA/BICSI-607-2011 Standard for Telecommunications Bonding and Grounding Planning and Installation Methods for Commercial Buildings
- (14) ANSI/NFPA 70 National Electrical Code, CSA C22.1
- (15) BICSI Telecommunications Distribution Methods Manual (TDMM)
- (16) BICSI Telecommunications Cabling Installation Manual (TCIM) **BICSI ITSIMM**
- (17) County Codes and Regulations
- (18) Underwriters Laboratories (UL)
- (19) FCC -Federal Communications Commission
- (20) ADA Requirements
- (21) Occupational Safety and Health Regulations (OSHA)
- (22) National Fire Protection Association (NFPA)
- (23) Florida Statutes and Administrative Rules
- (27) Manufacturers Product Cabling Catalogs
- (28) Manufacturers Training Manuals (Design and Installation).

A.2 Submittals

- a. **Materials & Equipment List:** Prior to installation the contractor will submit for approval a complete list of materials, equipment, accessories, configurations and installation methods proposed for work in accordance with these specifications. The list will include complete catalog identification numbers and models or system designator, quantities, options and catalogs "cuts."
- b. **As Built Drawings:** The contractor will provide one set of reproducible drawings depicting the final installation details, including final cable locations, quantities and routing, upon completion of the project. The contractor will also provide as built drawings in electronic format. The formats will be determined by HCAA at the time of Implementation of the project.
- c. **Cable Management System Documentation:** The contractor will provide a listing in a spreadsheet format of all horizontal and riser cables, indicating type of cable, origination and termination points and length. The contractor will provide this spreadsheet in electronic format, in Microsoft Excel (latest version available), using a specific spreadsheet format provided by HCAA. The data will be entered into the HCAA's Cable Management System.
- d. **Record Drawings:** The contractor will maintain and keep up to date a complete record set of drawings that will show every change from the Contract Drawings.
- e. **Room Labeling:** Initial and all subsequent submittals will include a labeling scheme that reflects the labeling standards delineated in section 3.18 of the Design Criteria Manual.
- f. The contractor shall be Manufacturer Certified and must include the company's current certification and the technician's certification in the bid package. The Company certification must be current along with the technician's training certificates.

A.3 Delivery, Storage, and Handling

- a. **Protection and Restoration:** Suitably protect all equipment provided under this Division during construction. Restore all damaged surfaces and items to "like new" condition before a request for substantial completion inspection.
- b. **Handling:** All materials shall be properly protected and all conduit openings shall be temporarily closed by the Contractor to prevent obstruction and damage. Post notices prohibiting the use of all systems provided under this Contract, prior to completion of work and acceptance of all systems by the Owner's representative. The Contractor shall take precautions to protect his materials from damage and theft.

- c. Safeguards: The Contractor shall furnish, place and maintain proper safety guards for the prevention of accidents that might be caused by the workmanship, materials, equipment or systems provided under this contract.
- d. Cleanup: Keep the job site free of all debris and rubbish. Remove all debris and rubbish from the site and leave premises in a clean condition on a daily basis.

B Products

B.1 General – Materials Alternates and Substitutions

HCAA has established standards for products to be used for telecommunications infrastructure to be installed at the Airport. These standards are established to ensure commonality of services throughout the Airport regardless of manufacturer, vendor or owner.

- a. Alternates: Specified products or manufacturers that will be in compliance with the performance and quality provisions of the specifications and may be proposed for use by the contractor. Alternates will also be a different model number of those identified on the documents. Acceptable alternates are as listed in the documents. Alternates must be justified on the basis of need, cost or both as long as there is no identified reduction in quality and that all design parameters are met.
- b. Substitutions: Products of unnamed manufacturers. Substitutions will not be acceptable.
- c. The contractor is expected to base his bid on materials and equipment complying fully with the drawings and specification. In the event he bases his bid on materials or equipment which do not conform, he shall be responsible for providing materials and equipment which fully conform at no change in his contract price. In any case, where a specific specification for any item that is required is not shown, the contractor shall provide only the best quality equipment or material consistent with the quality of other specified equipment and material. The items of equipment shall be provided in the quantity as shown by the drawings or in the quantity as specified herein.
- d. The use of acceptable equipment does not relieve the Contractor of responsibility for the alternate equipment. The Contractor, at no cost to the Owner, shall remove and replace with the specified equipment any equipment or system that shows evidence of improper operation, function, or size.
- e. It is the responsibility of the Contractor to supply a working overall system. All equipment and material as well as labor must be provided whether or not specifically mentioned in the specification or shown by the drawings.

- f. The contractor selected for each Division 27 and 28 system must be certified by the manufacturer of the products, adhere to the engineering, installation and testing procedures and utilize the authorized manufacturer components and distribution channels in provisioning the project. Their Certification must be current and will be included in the bid package. All test results must be presented to HCAA upon completion of the project and to the manufacturer.
- g. Contractor, as a minimum, must carry a current State issued limited energy license.
- h. Additional requirements as indicated on each individual specifications' section.

B.2 Fiber Optic Backbone Cable Subsystem for new installations

- a. Single mode fiber cable used will have the following optical characteristics:

Size: Core/Cladding 9/125um		
Attenuation	Bandwidth	Notes
1.0/1.0 dB/km@1310/1550	100 terahertz	OS1 – Tight Buffered/Inside Plant
0.4/0.4 dB/km@1310/1550	100 terahertz	OS2 – Loose Tube/Outside Plant

- a. For new Installations, the inside backbone cable will consist of tight-buffered single mode cable consisting of multiple fiber bundles and a dielectric central strength member. The outer jacket will meet the NEC requirements for Riser or Plenum.
- b. Outside plant fiber cable will be of water-tight, loose tube, single mode construction. The cable will consist of multiple fiber bundles surrounding a dielectric central strength member, and covered with a fire resistant jacket. A locator tape will be used to determine the location of the fiber.
- c. Acceptable manufacturers: General, Panduit or approved equal.

B.3 RackFiber Mount Enclosures

- a. Rack Fiber Enclosures used for terminating outside plant and inside building fiber optic cables will be of the distribution type. Where feasible, all fiber distribution panels will be rack mounted. Panels will be low profile, and selected to occupy minimum rack spaces.
- b. Distribution panels will have both termination bays and splice bays, with the proper number of LC panels/mounting plates with stainless steel couplers and splice organizer trays plus 20% for expansion. Part

numbers – FCEIU, FCE2U, and FCE4U for fiber enclosures. FOSMF – for splice modules.

- c. Acceptable manufacturers: Panduit or, approved equal.

B.4 Fiber Cable LC Connectors

- a. LC compatible fiber adapter panels will be able to accommodate ceramic connectors. The contractor will use the adapters specifically rated by the manufacturer for high-speed applications. For the OS1/OS2 fiber the FAP8WBUDLCZ or the FAP12WBUDLCZ adapters are acceptable.
- b. Multimode and single mode fiber connectors will be LC compatible, epoxy type or pre -terminated with ceramic ferrules. The maximum average insertion loss specifications will be as follows:
 - (1) Singlemode .75dB/connector
Part numbers – FLCDSBUY or FLCSSBUY
 - (2) Multimode: .75dB/connector
Part numbers –FLCDMCXAQY or FLCSEMBLY
- c. Acceptable manufacturers: Panduit or approved equal

B.5 Fiber Optic Patch Cables

- a. Fiber patch cables will be appropriate length, duplex LC-to-LC fiber patch cords for all fiber distribution panel ports. Must confer with HCAA for patch cord lengths. Part number – single mode duplex LC. - F9E10-10M*Y (*) indicates length.
- b. The contractor will provide cable management rings and support brackets for routing and support of all fiber patch cables and will ensure the equipment is in place that will protect the fiber patch cables from damage. CMVDR1S, CMVDR2S,
- c. Acceptable manufacturers: Panduit, or approved equal.

B.6 Interior, Copper Cable Backbone Subsystem

- a. The interior copper cable backbone system will consist of the following:
 - (1) Multi-pair copper cable, UTP 4PR CAT 6 plenum and non-plenum cable.

- (2) 8 Position Modular (RJ45) Patch Panels and Jacks, 110 Punch Down Blocks, 66 Punch Down Blocks and Wire Management Devices.
- b. Interior copper backbone cable will be UTP Category 6 cable minimum and will be in compliance with the TIA/EIA standards.
- c. Acceptable manufacturers: General, Panduit or approved equal.

B.7 Outside Plant Copper Cable Subsystem

- a. Outside copper cable will be gel-filled to inhibit water penetration, and armored to enhance protection from external means Outside copper cable will meet RUS PE-89 specifications.
- b. Acceptable manufactures: Superior Essex, General or approved equals.

B.8 Cable Voltage Protection

The contractor will provide gas-tube voltage protection blocks for outside plant cables. Voltage protection blocks will be wall mounted with locking front cover. Acceptable manufacturers: Porta Systems, Ditek or approved equal.

B.9 Horizontal Cable Subsystem

- a. The horizontal cable subsystem will consist of Category 6 568-C standard. Copper cables will consist of 4 twisted pair cable, 24AWG either PVC-jacketed or plenum-rated as required in the environment where work is occurring. All cables will meet the following requirements:
 - (1) Category 6 cable will meet all performance requirements as specified in the most current version of the ANSI/TIA 568-C.
 - (2) Unless otherwise specified, the standard category 6 cable complement will be four 4-pair data cables. All category 6 cables will be color coded and placed in the faceplate as follows:

Cable	Cable Color	Jack Color	Placement
Data 1	Blue	Blue	Upper Left
Data 2	Blue	Blue	Upper Right
Data 3	Blue	Blue	LowerRight
Data 4	Blue	Blue	Lower Right

- (3) Unless otherwise specified, the standard fiber installation will consist of two, two-strand fiber connections placed below the copper connections on the faceplate as shown in section 3.18, page 4, of the DCM.
 - (4) Unless otherwise specified, all CAT 6 jacks will be Panduit part numbers CJ688TGBUY (BLUE)
 - (5) Unless otherwise specified, all fiber jacks for the faceplates will be Panduit part number CMDJLCIW.
 - (6) Unless otherwise specified, all double-ganged faceplates will be Panduit part number CFPE12IW-2G and all single gang faceplates will be Panduit part number CFPE4IW.
- b. Horizontal copper cable runs will not exceed 90 meters from the outlet to the IDF. If cable routing requires horizontal runs in excess of 90 meters, the contractor will notify HCAA in advance of installation.
 - c. Acceptable manufacturers: Panduit, General or approved equal

B.10 Station Cable Faceplates and Jacks

- a. All faceplates used will have a capacity of a minimum of four outlets utilizing a square, single gang box that is 2 inches wide and as deep as physically permissible. Faceplate - CFPE4IW, box – JBX3510IW-A.
- b. Data, voice and fiber communications jacks will meet all performance requirements as specified in the latest issue of the ANSI/TIA 568-C and will be wired to accommodate the T-568B wiring sequence.
- c. Faceplates will be flush mounted. Any surface mounted boxes must be approved in advance by HCAA.
- d. All modular jacks & plugs used will comply with FCC part 68 specifications.
- e. Metal faceplates may be used-with prior approval from HCAA.
- f. Acceptable manufacturers: Panduit or approved equal.

B.11 Category 6 Patch Panels

- a. Category 6 patch panels will meet the ANSI/TIA requirements for Category 6 cross-connect and switching hardware.

- b. The contractor will provide Category 6 , 24 or 48 position modular patch panels in all wiring closets adequate to support all installed Category 6 cables (data and voice), plus 20% growth in each wiring closet. CPP48WBLY or CPP48WBLY or DP48668TGY.
- c. Category 6 patch panels will utilize wire management components that will be used for routing of communications cable to and from telecommunications panels and equipment. These components will include:
 - (1) Wire slots to organize cables – CMBRC1
 - (2) Cable brackets for support and routing – SRB19BL
 - (3) Strain relief clips
 - (4) Wire management panels - WMPH2E
- d. Acceptable manufacturers: Panduit or approved equal.

B.12 Equipment Racks

- a. In each wiring closet the contractor will mount 8 position modular patch panels and fiber distribution panels in floor-mounted, 84” high, 19” equipment racks. Furnish and install adequate racks to support rack-mounted fiber optic distribution panels and category 6, RJ-45 patch panels, and 20% growth. Vertical Wire Management will also be used for each side of the rack – WMPV45E OR WMPVHC45E.
- b. Vertical Cable Management will be required for each side of the equipment rack. (WMPV45E) The cable management devices must be sized accurately for the cable types and maximum capacity. Drop-downs of Copper and Fiber cables will be accomplished utilizing conduit “waterfall”, Panduit Part Number CMW-KIT, and waterfall accessories as appropriate. The contractor will consult with the Aviation Authority Telcom Group to clarify any questions on this matter.
- c. Horizontal Cable Management is required below each patch panel and switch. A 24-port patch panel requires one horizontal cable manager below(WMP1E) and a 48-port patch panel requires one horizontal cable manager above and below the patch panel. (WMP1E OR WMPHF2E) The use of patch panels larger than 48-ports are not permitted. The cable management devices must be sized accurately for the cable types and maximum capacity
- d. In the event there is no room for a standard 19x84” Communications Rack, a wall mount cabinet will be used. Part number – CPI- 11900-724. 24X24X24.

- e. Dual online conditioners will be installed in the racks along with battery backups.
- f. All racks will be properly bonded and grounded separately and will be grounded to the TGB in the Telecom Room.
- g. Acceptable manufacturers: Panduit or approved equal.

B.13 Category 6 Copper Patch Cables

- a. The contractor will provide adequate Category 6 patch cables (UTPSP **) ** indicates footage.
- b. The contractor will not be responsible for installing patch cables. This specification only calls for furnishing the required patch cables to be installed.
- c. Prior to purchase of patch cables, contractor will consult HCAA Telecom Group concerning cables length to be supplied.
- d. Acceptable manufacturers: Panduit or approved equal.

C Execution

C.1 Installation

- a. General Instructions
 - (1) The contractor will install all provided and furnished materials in accordance with manufacturer's specifications, recommendations and guidelines. Copies of the manufacturer's guidelines, specifications and Certification will be provided by the contractor to HCAA and will be made available on site to the contractor's personnel.
 - (2) Install all wiring and cabling in accordance with the National Electric Code (NEC) where the provisions of the NEC are applicable. The Contractor will submit all safety and design sheets to HCAA.
 - (3) Installation will be in conformance to generally acceptable telecommunications means and methods and the manufacturers' specifications. Stress on any cable during installation will not exceed manufacturers' specifications. All splicing and connectorization will be in accordance with industry-standard practices.
 - (4) The contractor will coordinate installation of all cabling to

promote ease of installation and efficient use of rack space, backboard space, conduits and cable trays.

b. Fiber Optic Cable Plant Installation

- (1) All fiber cable will be terminated in LC connectors mounted in fiber distribution centers. The contractor will use fiber pigtails and splice trays at all distribution points.
- (2) All Backbone fiber optic cables will be installed in Innerduct tubing to protect and isolate it.
- (3) Fiber optic cable will be installed in accordance with manufacturer's specifications. The contractor will not exceed the maximum pulling tension or minimum bend radius of the cable.

c. Copper Outside Plant Installation Requirements

- (1) All outside plant cables will be terminated in 110 blocks – GPKBW144Y.
- (2) All copper outside plant cable will terminate in voltage protection units upon entering the wiring closet in each building.
- (3) All copper outside plant copper cable will be installed in accordance with manufacturers' specifications. The contractor will not exceed the maximum pulling tension or minimum bend radius of the cable.

d. Horizontal Cabling Installation Requirements and Scope of Work

- (1) The standard for horizontal distribution systems will consist of a complete Category 6 installation, using UTP cables and/or fiber optic cables where national and local codes will allow for such installation. Any cable designated to be routed in spaces identified as riser or return air plenum spaces will conform to the installation requirements for these spaces by national and local codes, such as the use of riser and plenum rated cables.
- (2) Electrical service boxes identified for use as communications outlets will be connected to the accessible ceiling locations via continuous and integral electrical metallic tubing (EMT) conduit, at a minimum. This conduit will be routed between the CO and the accessible ceiling designated communications cable tray where the end of the conduit will terminate no further than 6" to 12" from the point of cable tray exit, and in such a manner

that there is no requirement to support the communication cable between the cable tray and the CO conduit. This CO and conduit installation is a HCAA requirement. If any deviation from this requirement is proposed by the contractor, the contractor will obtain explicit written permission from HCAA for only the specified points of installation.

- (a) If CO service boxes and integral conduit runs do not exist or specifically provided by others, then it will be the responsibility of the contractor to furnish and install them. The minimum installation requirements will be a double-gang box and a 1" conduit run. The conduit run will be provided with swept conduit bends, not to exceed 180° in total, such that the conduit run is horizontal to the ceiling and at the same level of the accessible ceiling communication cable tray within ±3 inches vertically.
 - (b) All conduits will be reamed to remove sharp inside edges and any open conduit end will have a bushing installed to protect the communications cable jacket.
 - (c) All conduits will be adequately supported at 48" intervals or less.
 - (d) It is understood that certain communications outlet conduit installations may be impractical due to pathway and space limitations, such as routing, penetrations and architectural aesthetics. For such conditions the contractor is required to submit an alternate pathway design and rationale for HCAA approval.
 - (e) When any cable is pulled through a CO conduit, an internal dragline is to be left in place to facilitate the installation of future cables.
- (3) Between the end of the conduit stub-up and the wiring closet, the contractor will install appropriate cable tray of appropriate capacity to accommodate the expected full build-out at the area of the building facility being served. It is the expectation of HCAA that cable tray be used in horizontal distribution. The contractor will install the appropriate cable tray support hardware. In no instance will the contractor attach cables to any other support hardware in the ceiling space. The cable tray will be supported at 48" intervals or less. The weight of maximum cable capacity will dictate a more frequent support.
- (a) At locations where a cable tray cannot be accommodated due to floor/wall penetrations, structure and/or

aesthetics, the cable routing must transition to other types of pathways. The contractor will utilize cable bridle rings or J-Hooks (open top cable supports) attached to hanger rod supports to secure the cable to the point of entry of the alternate pathways. Cable at these transition points between the cable tray and alternate pathways will be supported at spacing of 48" or less depending on the weight of the bundle.

- (b) Under no circumstances will cable be laid on suspended ceiling or draped across other conduits, pipes, ducts, or other facilities installed along the path of the cable.

f. Route Preparation, Drilling and Coring

Field coordination with HCAA will be required prior to installing cable trays (where specified), sleeves, wall or floor penetrations and/or cables.

g. Termination

- (1) The contractor will terminate all conductors of all cables. Each copper outside plant and riser cable pair will be terminated contiguously on wall-mounted 110 blocks with protectors. Terminations will be in color code sequence from left to right and from top to bottom on each block for each cable. 110 blocks will be labeled in a permanent legible fashion, in compliance with HCAA's approved labeling scheme.
- (2) Fiber strands will be field terminated in rack-mounted fiber distribution panels on LC connectors according to the specification of the manufacturer. Only tool kits and consumables that are specified by the manufacturer will be utilized. Completed LC connectors will be placed into the sleeve of the fiber termination panel from left to right in color code sequence. Strands will be protected and secured within the fiber panel to ensure both strain relief and bend radius. The fiber cable will be tie wrapped (this means the total cable with all strands inside of outer jacket) at the point of entry on the patch panel to prevent strain on the strands. Where required, to secure the fiber optic cable from pulling tension, the Kevlar strength members will be separated from the fiber strands and attached to the panel by a clamp. Fiber connectors will be terminated with LC connectors using manufacturer approved methods.
- (3) The contractor will terminate horizontal cables in modular jack inserts (CJ688TGBU) at the outlet in accordance with the floor plans, using the T568B wiring sequence.

- (4) The contractor will terminate horizontal copper cables on rack mounted Category 6, 8 position modular patch panels according to the T568B wiring sequence.

h. Site Survey

- (1) Prior to placing any lateral, riser or outside plant cable, penetration, etc. the contractor will survey the site to see that job conditions do not impose any obstructions that would interfere with the safe and satisfactory placement of the cables, and arrange to remove any obstructions with HCAA. The contractor will provide shop drawings for approval by HCAA prior to starting work.
- (2) The contractor is responsible for notifying HCAA as soon as field conditions prevent proper installation.
- (3) The contractor will verify site conditions and dimensions of equipment to ensure access for proper installation of equipment without disassembly that will void warranty, and will report in writing to HCAA prior to purchase or shipment of equipment involved, on conditions that may prevent proper installation.

i. Inspection

All cable will be inspected as it is pulled off the reel for any obvious defects. If defects are observed, further use of the cable from this reel will be halted.

j. Pulling Tension

- (1) No cable will be installed with a pulling tension exceeding the maximum recommended by the manufacturer. Pulling tension should be monitored with a tension gauge.
- (2) If multiple cables are to be pulled at one time, the contractor will make the necessary allowances to back off the pulling tension of the bundle.
- (3) Cable pulls will be protected by means of an overload cutoff or breakaway clutch set at least 10% below the cable manufacturers' maximum recommended pulling tension.

k. Bend Radii

All cables will be installed with a bend radius greater than recommended by the manufacturer.

I. Slack

- (1) The contractor will leave a service loop prior to termination and patching.
- (2) Prior to termination, the contractor will leave a service loop for riser cables to provide some degree of flexibility and for service rearrangement.

m. Securing Methods

- (1) The contractor will provide Velcro cable ties, riser cable support grips, vertical and horizontal cable trays in wiring closets and other equipment spaces based upon field conditions to maintain orderly cable organization.
- (2) The contractor will be responsible for securing all cabling in a way to satisfy any structural engineering requirements.
- (3) The contractor will obtain required structural engineering related information for any item that may affect the infrastructure of the building, and submit the information to HCAA for prior review and approval.
- (4) The contractor will provide suspended platforms, threaded rods, strap hangers, brackets, shelves, stands or legs as necessary for floor, wall or ceiling mounting of equipment provided under this Section. The contractor will provide steel supports and hardware for proper installation of hangers, anchors, guides, etc., and will provide cut sheets, weights, and other pertinent data required for proper coordination of equipment support.
- (5) Velcro® cable ties will be used at approximately 60-inch intervals to secure cable in cable trays and to provide strain relief at termination points.

n. Placing Cable in Conduit

- (1) The contractor will verify that any conduits to be employed are clear of obstructions unless HCAA has approved an exception in writing. For fiber, inner duct will be placed in conduit. A fishline and mandrel will be used to clear conduits of obstructions and as a guide for pulling the cable through.
- (2) For riser cable, the cable strength members will be affixed to the pulling medium or, a properly sized 'Kellum' type grip will be employed to make the pull. Cable pull tension will be

monitored during the pull with a tension meter as necessary and if mechanical pulling equipment is used, a clutch set at 10% below the cable manufacturer's maximum pulling tension will be used.

- (3) A nylon dragline will be pulled along with each conduit run installed so that future cables may be pulled in that conduit. Conduit bushings will be used to protect the cable jacket from abrasion as it is pulled through conduit and at each exposed end.

- o. Lubrication

As necessary, for cable pulls in conduit, the contractor will use only an approved lubricant compatible with the cable's outer jacket insulation.

- p. Protection

During installation, and prior to final acceptance, the contractor will protect finished and unfinished work against damage and loss. In the event of such damage or loss, the contractor will replace or repair such work at no additional cost to HCAA. As cable is installed, care must be taken to avoid nicks, kinks or other damage to the cable. Cable is to be labeled at each end as specified. Provide strain relief at each termination point and 24 inches of slack to allow for easy re-termination of the cable, if required later.

- q. Cable Routes and Clearances

Unshielded twisted pair cable will be routed so as to maintain the following minimum distances from power sources:

Condition	Minimum Separation		
	<2 kVA	2-5 kVA	>5 kVA
Unshielded power lines or electrical equipment in proximity to open or nonmetal pathways			
Unshielded power lines or electrical equipment in proximity to grounded metal	127 mm (5 in)	305 mm (12 in)	610 mm (24 in)
Power lines enclosed in a grounded metal conduit (or equivalent shielding) in proximity to a grounded metal conduit pathway		76 mm (3 in)	152 mm (6 in)
Electrical motors and transformers			1220 mm (48 in)

- r. Grounding

- (1) All metallic sheathed cables will be bonded and grounded. Riser cables will be bonded to the metal frames of the mounting hardware in the wiring closet using bonding clamps appropriate to the size of the cable.
- (2) Each wiring closet will have a single ground point. This point is bonded to the integral building grounding system or to the local structural steel. All grounding and bonding in each wiring closet will be connected to that point either directly or through the use of ground bus connections.
- (3) All cables with a metallic component, which enter a wiring closet from outside a building, will be grounded and bonded at the point of entrance with appropriate lightning protection.

s. Splicing

No splicing of any cables will be performed unless otherwise explicitly noted in the Drawings or pre-approved in writing by HCAA.

t. Materials Management

- (1) Equipment and materials will be properly stored, adequately protected and carefully handled to prevent damage until acceptance.
- (2) The contractor will ensure delivery of cable, factory-packaged in containers or on reels. Storage of all components will be provided by the contractor, including rental of containers or other suitable methods as specified.

u. Fire Stopping

- (1) The contractor will suitably fire stop all riser shaft openings; horizontal sleeve penetrations, both ends of any horizontal conduits and all slot cuts in walls and under the raised access floors which are needed to facilitate cable access/egress. STI EZ Path fire rated pathways or approved equal.
- (2) The contractor will verify to HCAA's satisfaction that the integrity of all fire stops is maintained upon completion of the work.

v. Protection/Restoration of Premises

The contractor will, as required, during the progress of work, remove and properly dispose of resultant dirt and debris, hang protective plastic sheathing when specified and keep premises clean. Upon completion

of work, the contractor will remove equipment and unused material provided for work.

w. Quality Assurance

- (1) The work will be executed in full accordance with the current rulings of the latest applicable standards and all rulings by state, utility, and local authorities. Where codes conflict, the more stringent will apply. Where the specification requirements exceed the requirements of these authorities, codes, and standards, the specification requirements will prevail.
- (2) The contractor will replace any imperfect or rejected work with work conforming to the requirements of the specification and will be satisfactory to HCAA without extra cost to HCAA.
- (3) The contractor will report to HCAA promptly in writing, whenever plans or specifications are believed to be at variance with these requirements and will not proceed with such work until further instructed in writing by HCAA.

x. Abandoned and Future Cabling

- (1) Abandoned cable will be removed from all pathways and spaces by the contractor anywhere the contractor is conducting new installations, renovations or replacement of existing cable plant backbone or horizontal pathways and space.
- (2) Abandoned cable will be identified by the contractor, in consultation with HCAA, for each project. Any cable later identified by the contractor as possibly abandoned will be brought to the attention of HCAA.
- (3) Any un-terminated communications cabling identified for future use by the HCAA will be documented by the contractor pursuant to the HCAA's cable management system specifications.

C.2 Testing

a. General Instructions

- (1) For projects with a contract value in excess of \$25,000, testing will be performed by an independent testing agency, retained by and at the expense of the contractor. For projects valued at \$25,000 or less, inspections will be performed by the contractor.
- (2) The contractor will thoroughly test, or have tested, all cables and connectors that they furnish and install. HCAA requires certification that all pairs were tested and found to be 100%

reliable end-to-end (block-to-block and block-to-receptacle); bad pairs/punch-downs and/terminations will not be used, but rather be corrected and/or replaced at no additional cost to HCAA. The contractor will present all testing plans to HCAA for approval prior to the start of testing.

- (3) The contractor will provide a complete description of acceptance testing procedures and will notify HCAA upon successful completion of acceptance testing.

b. General Rules

- (1) The contractor will provide all labor, test equipment, and tools necessary to verify proper operation prior to final acceptance by HCAA.
- (2) Prior to any testing, the contractor will provide HCAA with a two-day minimum advance notice of the date testing is to begin. All test results shall be documented, and submitted to HCAA for review, prior to final acceptance by HCAA.
- (3) The contractor will repair or replace all cable, connectors, and equipment supplied by the contractor, which do not meet acceptance criteria, prior to final acceptance by HCAA.

c. Replacement

- (1) Any cable, connector, or wiring block, patch panel or other device furnished by the contractor which tests below manufacturer's standards will be replaced at no additional cost to HCAA. The replacement will be re-tested to verify compliance.
- (2) Successful completion of all tests indicated below is required for acceptance.

d. Testing Procedures

- (1) The contractor will provide the necessary test equipment to conduct the tests.
- (2) Field tests may be required to be performed in the presence of HCAA and/or its duly authorized representatives. The contractor will provide written documentation, reporting the results of all tests.

e. Pre-Installation Testing

The contractor will obtain factory test data for each reel of cable

including, but not limited to:

(1) Physical Production Tests (tensile strength)

(2) Transmission Production Tests

f. Fiber Optic Cable Test Procedures - Backbone and Horizontal

(1) Following the physical installation and termination of the fiber optic cables, the contractor will conduct any pre-checkout tests deemed necessary prior to the conduct of formal acceptance tests with the Owner.

(2) The contractor will verify continuity of all optical fiber strands.

(3) The contractor will be responsible to perform optical loss (attenuation) measurements and Optical Time Domain Reflectometer (OTDR) tests. The contractor will document such items as the personnel involved in the testing, type of equipment utilized, equipment settings, the date tested, reel number (or cable ID when tested post-installation) and strand number. The contractor will be responsible to supply sufficient cable for the installation and to take whatever action is necessary to provide such cable at no additional cost to TPA.

(4) The contractor will provide written results, including actual trace records in As Built Drawings that the optical loss for each strand is within the limits established.

(5) If a fiber cable loss exceeds either the established optical loss or the manufacturer's standards, the contractor will first clean the connections at both ends and retest the cable. If loss is still excessive, the contractor will inspect the connections. Repolishing or connector replacement may be required. If the connector terminations are determined to be acceptable, the cable may be defective. An Optical Time Domain Reflectometer (OTDR) will be used to locate cable breaks and points at which losses occur.

(6) In the event that the fiber continues to test outside of acceptable specifications, the contractor will replace the cable at no additional cost to HCAA in accordance with HCAA's schedule.

g. Acceptance Testing

The contractor will perform the tests and inspections described in this section in the presence of HCAA. Each floor and closet will be tested

individually and accepted on a per floor basis. The cabling system will be tested for compliance with the specifications for physical placement, electrical specifications, wiring accuracy, continuity, and proper labeling and identification. Document all test results.

h. Physical Inspection

Prior to conducting any transmission testing, the following visual inspections will be performed:

- (1) Verify that cable has been installed to comply with contract documents.
- (2) Check for physical damage to Fiber enclosure panels and termination blocks.
- (3) Verify that outlets have been securely mounted and properly labeled.
- (4) Check that all cabling is properly jacketed, installed and labeled at both ends (to the appropriate block/panel in the TR).
- (5) Verify that all cable bends are within the manufacturer's minimum bend radius allowed.
- (6) Check and demonstrate that all cable shields have been correctly grounded or bonded.
- (7) Verify that the cable is properly supported for termination and long-term placement (approvals must be obtained from TPA).
- (8) Verify that all cables are properly supported and independent of any other support/hanger rods in the ceiling space.
- (9) Verify that cables have been terminated properly and in proper color code sequence.

i. Copper Cable Transmission Tests

- (1) Electrical tests of copper cables will be performed only with connectors installed and cables punched down. Copper riser and horizontal cables will be tested, end-to-end, from termination point to termination point via the appropriate punch-down on the termination block. 100% TESTING OF ALL PAIRS ON ALL CABLES IS REQUIRED. Manufacturer standard test equipment will be employed in addition to any special test gear required.

- (2) All pairs of each cable will be electrically tested for:
 - (a) Continuity - the measured resistance value will be recorded.
 - (b) Opens
 - (c) Ground Faults
 - (d) Correct Termination - for the unshielded twisted pair, the correct color code will be punched down to be appropriate block/pin on the 110 block.
 - (e) Reversals (Correct Polarity)
 - (f) Splits
 - (g) Crosses
- (3) The contractor will create a punch list of bad pairs and re-terminate and, as necessary, replace any defective cables, connectors and/or panels.

j. Horizontal Station Cable Testing - Copper

- (1) Perform testing, and certify Category 6 compliance on all horizontal cable subsystems. All components of each horizontal subsystem must be of the Category 6 rating (cable, jack insert, patch panel, patch and station cables).and the link must be tested. Test results will be documented in hard copy media and listed by outlet.
- (2) The contractor will identify the test equipment and procedures that will be followed to complete and document the testing.
- (3) Test measurements will be conducted for bandwidth up to 625MHz, and include the following:
 - (a) Insertion Loss (Attenuation)
 - (b) Propagation Delay
 - (c) Delay Skew
 - (d) NEXT (Near-end crosstalk) Loss
 - (e) PSNEXT (Power sum near-end crosstalk) Loss

- (f) Return Loss
- (g) Wire Map
- (h) Length
- (i) ACRF (Attenuation-to-crosstalk ration, far-end) LOSS
- (j) PSACRF (Power sum attenuation-to-crosstalk far-end) LOSS

C.3 Cable System Documentation

General Instructions

- a. The contractor will provide documentation enumerating termination panels and every cable run. Any additional documentation not explicitly listed that the contractor feels should be provided to facilitate a complete, working installation prior to acceptance by HCAA will also be supplied.
- b. Documentation of all installed cable, manhole racking diagrams and splicing diagrams will be provided in an electronic database suitable for direct entry into HCAA's cable management system. Fiber optic OTDR test results will be provided in a hard copy format.

C.4 Cleaning

- a. The contractor will clean up all work areas at the end of each day, removing all cartons, debris, emptied containers, etc. as the work progresses.
- b. Just prior to inspection for substantial completion the contractor will perform all final cleaning and sealing of equipment required to bring the installation to optimum appearance. A

Aviation Authority Labeling Standards

Aviation Authority has implemented a labeling scheme for the labeling of all telecommunications cable, faceplates, patch panels, wiring blocks and equipment racks.

Building Identifiers

Each building on the airport property is designated by a two-character code as shown below.

<u>Designation</u>	<u>Building Name</u>
AA	Airside A
AB	Airside A Baggage Sort Bldg
AC	Airside C
AE	Airside E
AF	Airside F
AM	Airfield Maintenance
BR	Blue Car Rental
CB	Cargo Building
CF	Canine Facility
CL	Cell Lot
CS	Customs Bldg
EP	Economy Remote Garage
EV	East Airfield Electrical Vault
FB	Airside F Baggage Sort Bldg
FS	Fire station
FX	Federal Express Building
GA	Guard Shack for A/S A
GB	Check Point Bravo
GC	Guard Shack for A/S C
GE	Guard Shack for A/S E
GF	Guard Shack for A/SF
LP	Long Term Parking
NP	North Parking Lot
PO	Post Office
RB	Raytheon Building
RR	Red Car Rental
SB	Service Building
TB	Terminal Building
TP	Toll Plaza
WV	West Airfield Electrical Vault

Telecommunications Spaces

Telecommunications Rooms are defined using a seven (7) -character designation. The designation consists of the following:

Characters 1 & 2 - Building designation (i.e., TB = Terminal Building)

Characters 3 & 4 – Floor designation (i.e., 04 = 4th floor, 71 = 71 foot level)

Characters 5, 6 & 7 – Room number (i.e., 880 = room 880)

A list of current Telecommunications Spaces follows.

Terminal Building

HCAA TELECOMMUNICATIONS INFRASTRUCTURE STANDARDS

<u>Location</u>	<u>Designation</u>
1 st Level	
A Core Bag Make-up	TB01280
B Core Bag Make-up	TB01380
C Core Bag Make-up	TB01680
D Core Bag Make-up	TB01780
2 nd Level	
2nd floor CommRoom	TB02680
NOC Server Room	TB02180
TSA Oversize	TB02380
Valet Door	TB02381
Behind Air Canada T/C	TB02682
Behind British Air T/C	TB02683
Behind Delta T/C	TB02780
3 rd Level	
Suite B	TB03980
48 Foot Level	
48' Level A Core	TB48180
48' Level B Core	TB48480
48' Level C Core	TB48580
48' Level D Core	TB48880
71 Foot Level	
71' Level A Core	TB71180
71' Level B Core	TB71480
71' Level C Core	TB71580
71' Level D Core	
4 th Level	
4th Floor Comm Room D Core	TB71880
4th Floor Comm Room A Core	TB04880
4th Floor Comm Room B Core	TB04180
4th Floor Comm Room C Core	TB04480
4th Floor Comm Room C Core	TB04580
91 st Foot Level	
91' Level A Core	TB91180
91' Level B Core	TB91480
91' Level C Core	TB91580
91' Level D Core	TB91880

Service Building

HCAA TELECOMMUNICATIONS INFRASTRUCTURE STANDARDS

Maintenance Work Control – IDF	SB01480
Switch Gear Room	SB01580
Mezzanine (East)	SB0M103
Mezzanine (West)	SB0M104
P&D IDF	SB02383
Police IDF	SB02580
AOC IDF	SB02581
Rental Car Garage Support	SB01481
Electronics Shop	SB01508
Lobby Conference Rooms AV	SB 02480

Long Term Parking

High Vehicle MDF	LPHV680
Elev. Mach. Room A	LP91880
Elev. Mach. Room B	LP91580
Elev. Mach. Room C	LP91180
Elev. Mach. Room D	LP91480
Toll Plaza Office DATA IDF	TP02581
Toll Plaza Office Voice IDF	TP02580

Airsides

A/S-A MDF	AA01580
A/S-A IDF-A	AA01780
A/S-A IDF-B	AA01680
A/S-A IDF-C	AA01380
A/S-A Comm. Room	AA01180
A/S-A Comm. Room	AA01181
A/S-C MDF	AC01780
A/S-C IDF ----West	AC01480
A/S-C IDF ----East	AC01280
A/S-E MDF	AE01380
A/S-E IDF-A	AE01880
A/S-E IDF-B	AE01680
A/S-E IDF-C	AE01280
A/S-E IDF-D	AE03380
A/S-E Shuttle Car Bay	AE01480
A/S-E Behind Delta Crown Rm	AE03580
A/S-F MDF	AF01980
A/S-F Shuttle Car Bay	AF01981
A/S-F TE	AF01480
A/S-F TE	AF01680

Outlying Buildings

Canine Facility MDF	CF01114
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Airfield Maintenance MDF	AF02209
Airfield Maintenance	AF02180
Fire Station MDF	FS01370
Customs Bldg MDF	CS01980
Economy Parking Garage	EP01980
EPG Admin Bldg	EP01180
EPG Phase 2 (by Orange Elevators)	EP01204
A-Sort	AS01107

Backbone Cable Designations

Backbone cable designations will be based on the near-end and far-end of the cable. For example, a backbone cable from the 71 foot level, D Core of the Terminal Building to the Airside A MDF will be designated "TB71880/AA01580."

For backbone cables between telecommunications spaces within the same building, the building designation is dropped from the cable designation. For example, a cable between Airside A MDF and Airside A IDF-A will be designated "01580/01780."

In general, the 1st part of the cable designation is defined as the near-end cable termination point and the 2nd part of the cable designation is defined as the far-end.

Cable labels will be placed no more than three (3) inches from each end of the cable.

In cases where more than one cable exists between the same two points, the cable designation will include a modifier to indicate multiple cables, as in the following example:

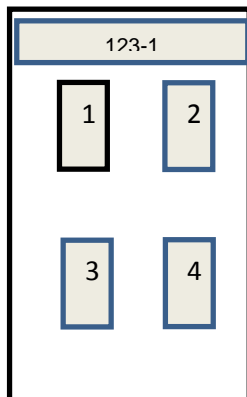
1st Cable – AA01580/TB71880-1

2nd Cable – AA01580/TB71880-2

In cases where cables originating from different locations terminate in the same Telecommunications Space, each cable will be terminated on a separate patch panel or wiring block.

Faceplates and Jacks

Faceplates will be labeled as illustrated in the following sketch:



01580

1. The faceplate labels include the faceplate identification number on the top, which consists of the room number (123) and the faceplate number in the room (-1) or (-2). In rooms with multiple faceplates, the numbering system begins with the first faceplate to the left of the entrance door, as you enter, and proceeds clockwise around the room.

2. The faceplate labeling also includes the identification of the Telecommunications Space (TS, wiring closet) in which the jacks terminate. Note that when labeling the faceplate, the two character building designation does not need to be applied.

3. Typically, there will be multiple jacks on each faceplate. Each jack on the faceplate will have a designation. Unused jacks will have “blanks’ inserted into their slots. On the double-gang faceplate shown above, the individual jacks will be identified (but not labeled on the faceplate) as follows:

Upper Left	123-1-1
Upper 2 nd from Left	123-1-2
Upper 3 rd from Left	123-1-3
Upper 4 th from Left	123-1-4
Upper Right	123-1-5
Lower Left	123-1-6
Lower 2 nd from Left	123-1-7
Lower 3 rd from Left	123-1-8

Lower 4 th from Left	123-1-9
Lower Right	123-1-10

4. The copper connections will be on jacks #2 and #7. Additional copper connections would go to jacks #1 and # 6 as needed.
5. The fiber connections will be on jacks #4 and #8.
6. Note that the Fiber connectors have a 30 Degree down slant on the faceplate.

The individual jack designations are not labeled on the faceplate due to space constraints. However, the jack designations are labeled in the Telecommunications Space on the appropriate patch panel or wiring block, as described below.

Each patch panel port shall be labeled with the individual jack designation connected to each port. For example, the patch panel port connected to jack 123-1-1 will be labeled 12311. The hyphens and are deleted due to space constraints.

In telecommunications spaces with multiple patch panels, each patch panel is sequentially numbered beginning with number "1."

Wiring Blocks

66 blocks will be covered with industry standard color-coded covers as follows:

Interbuilding Backbone Cable	Green
1 st Level Riser (Backbone) Cable	White
2 nd Level Riser (Backbone) Cable	Gray
Horizontal Cable	Blue

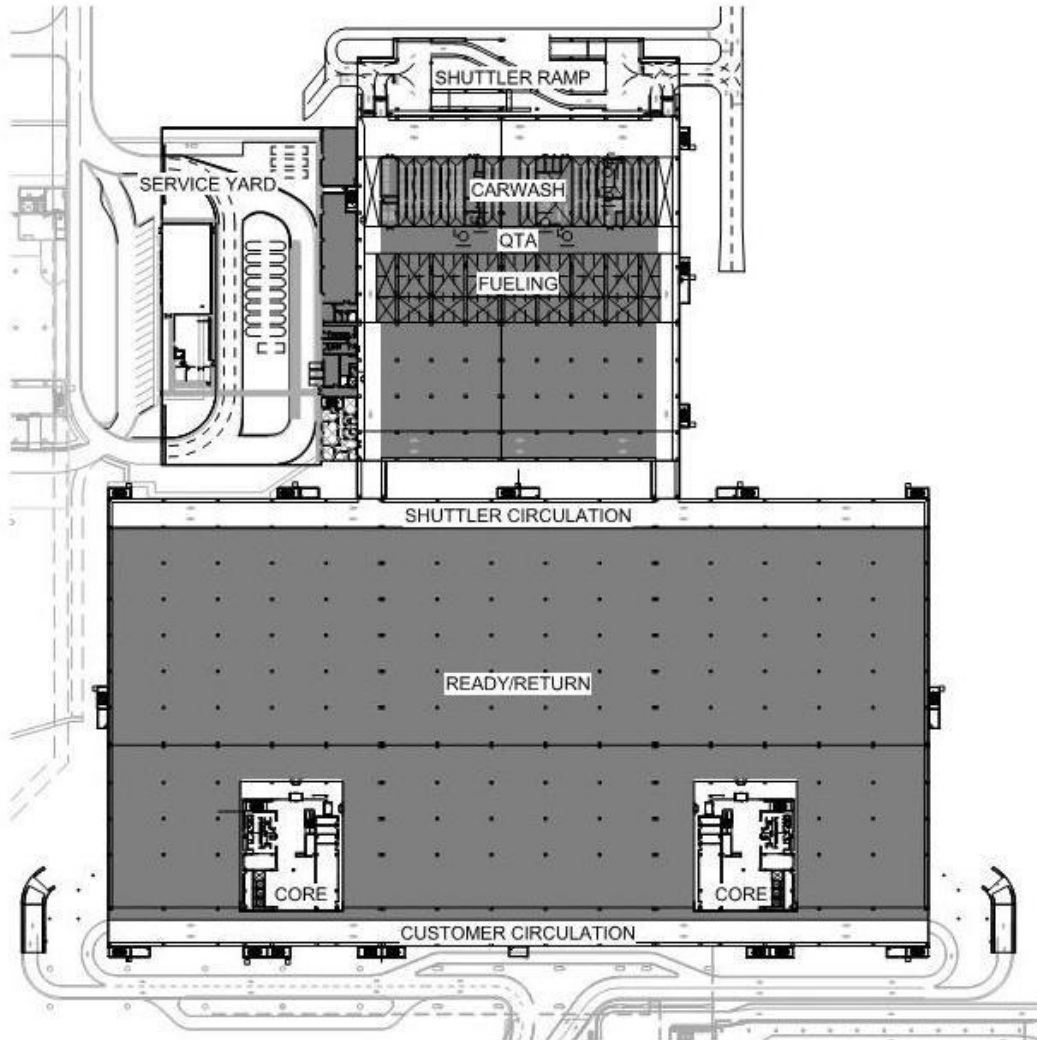
66 block covers will be labeled with the cable designation and pair count. For example:




Cable 01580/01780 – Pairs 1-50

110 blocks will be labeled with the same information as found on the 66 block covers.

Exhibit-3

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN WITH RESPECT TO EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS.

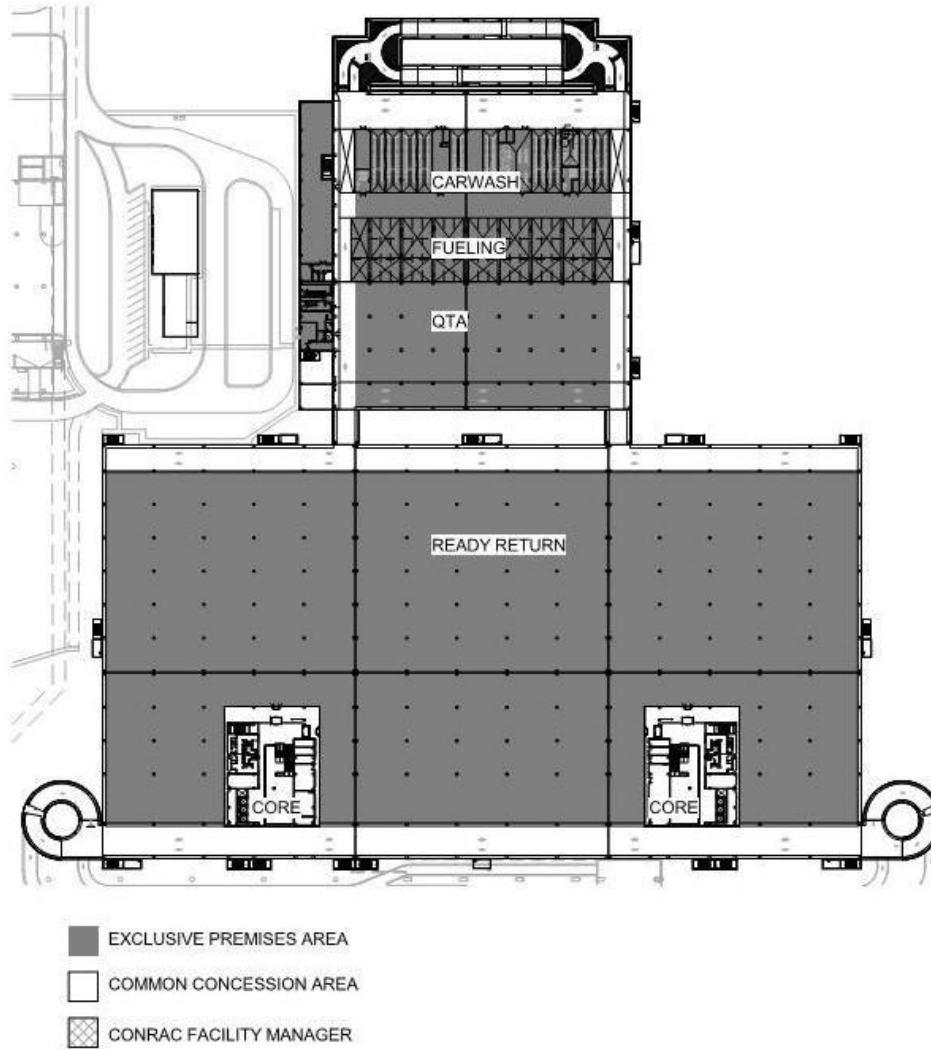


-  EXCLUSIVE PREMISES AREA
-  COMMON CONCESSION AREA
-  CONRAC FACILITY MANAGER

1 OVERALL LEVEL 1 FLOOR PLAN- EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS

Exhibit-4

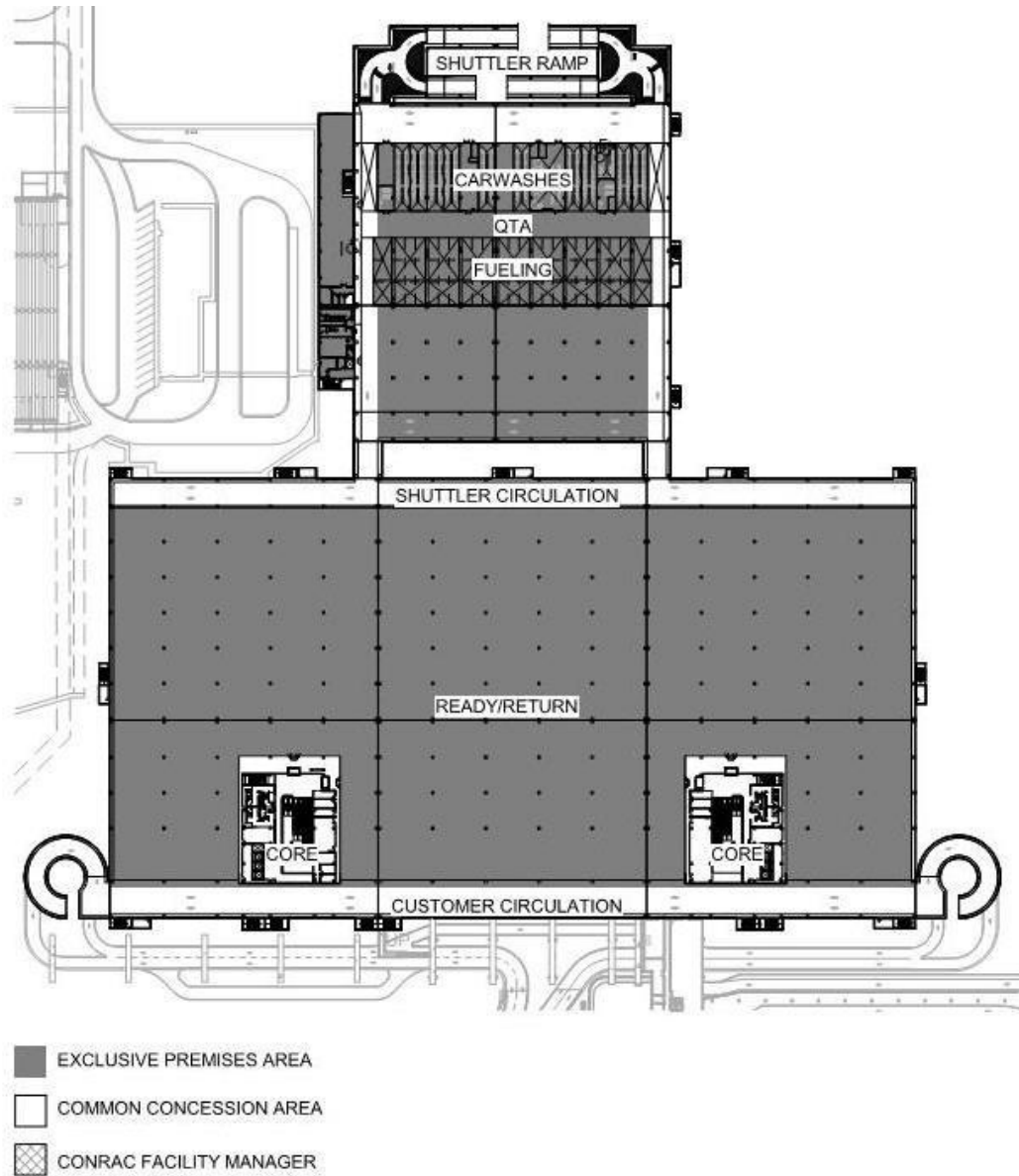
EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN WITH RESPECT TO EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS.



1 OVERALL LEVEL 2 FLOOR PLAN- EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS

Exhibit-5

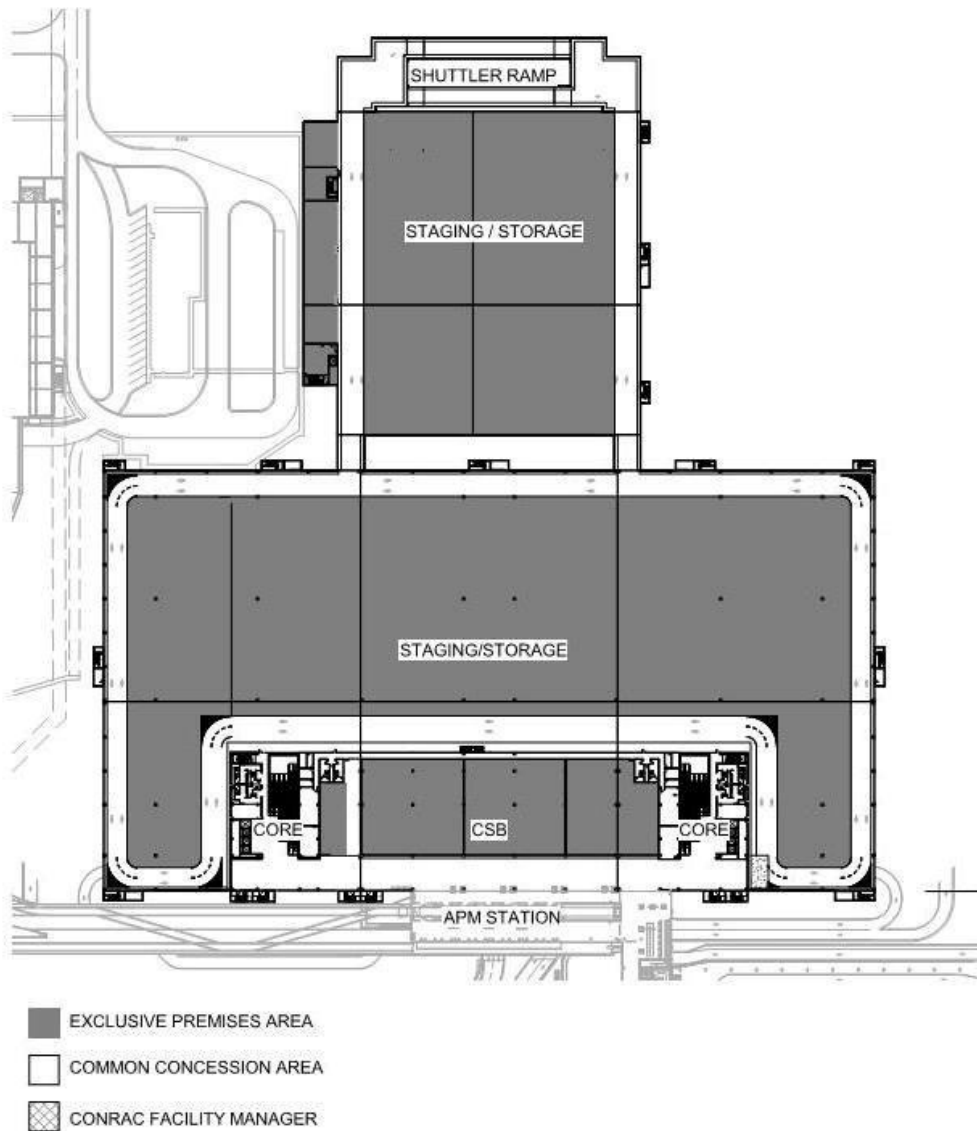
EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN WITH RESPECT TO EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS.



1 OVERALL LEVEL 3 FLOOR PLAN-EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS

Exhibit-6

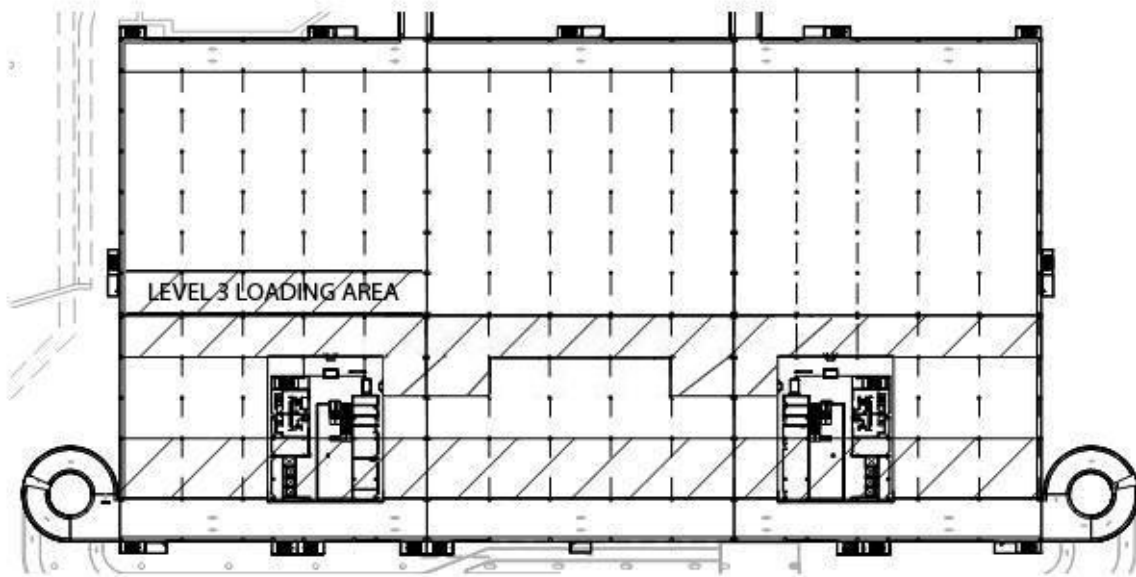
EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN WITH RESPECT TO EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS.



1 OVERALL LEVEL 4 FLOOR PLAN- EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY MANAGER AREAS

Exhibit-7

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



① INCREASED STRUCTURAL LOAD AREA - LEVELS 2 & 3

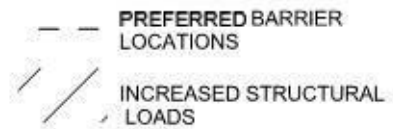
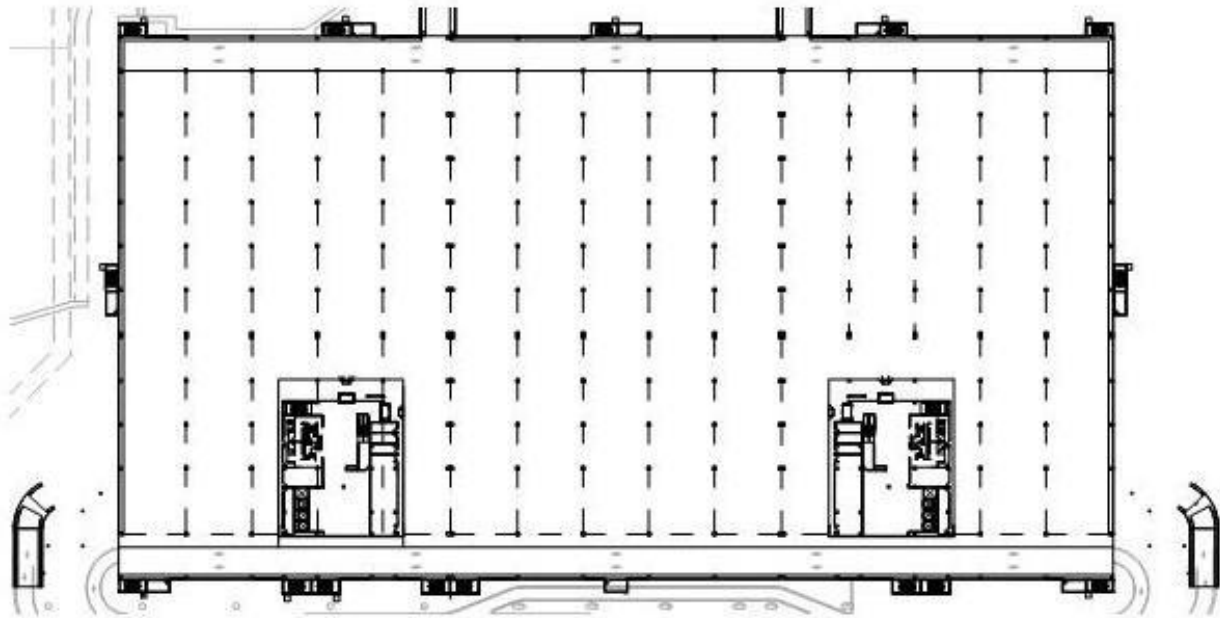


Exhibit-8

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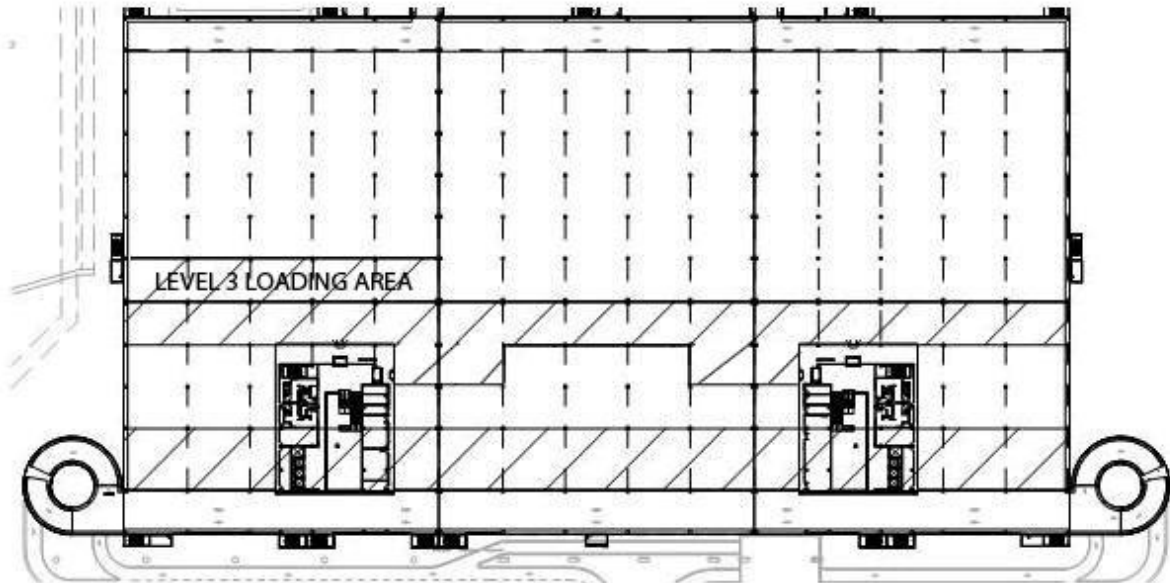


1 TYPICAL BARRIER PLACEMENT-LEVEL 1

- PREFERRED BARRIER LOCATIONS
- /// INCREASED STRUCTURAL LOADS

Exhibit-9

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



1 TYPICAL BARRIER PLACEMENT - LEVELS 2 & 3

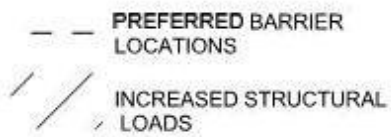
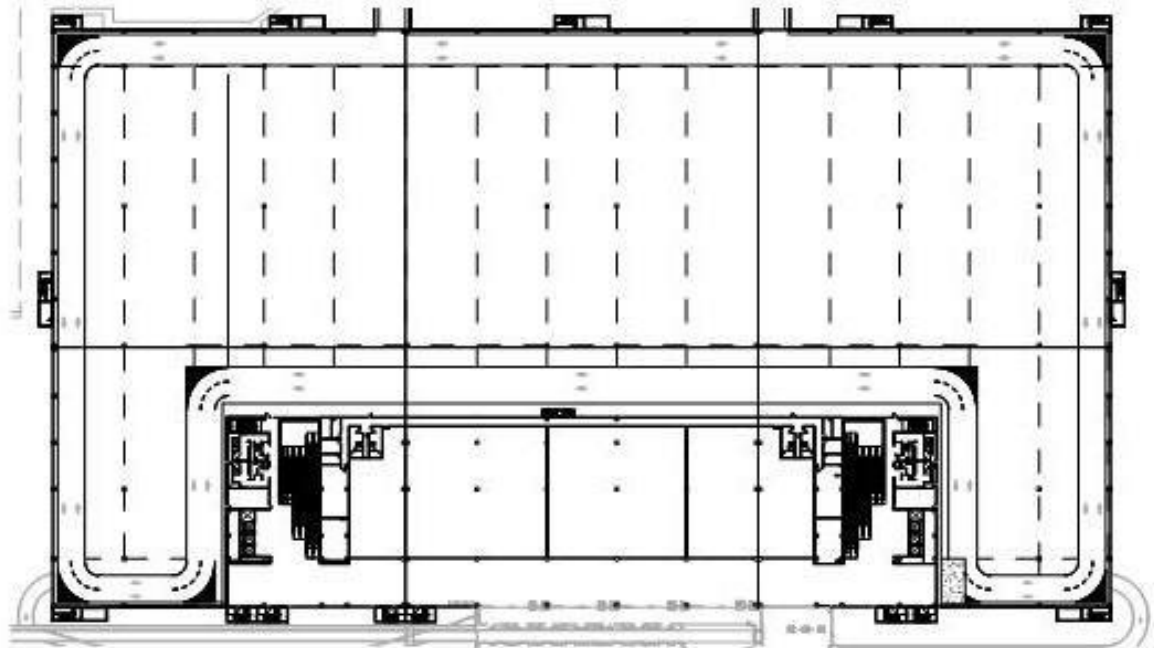


Exhibit-10

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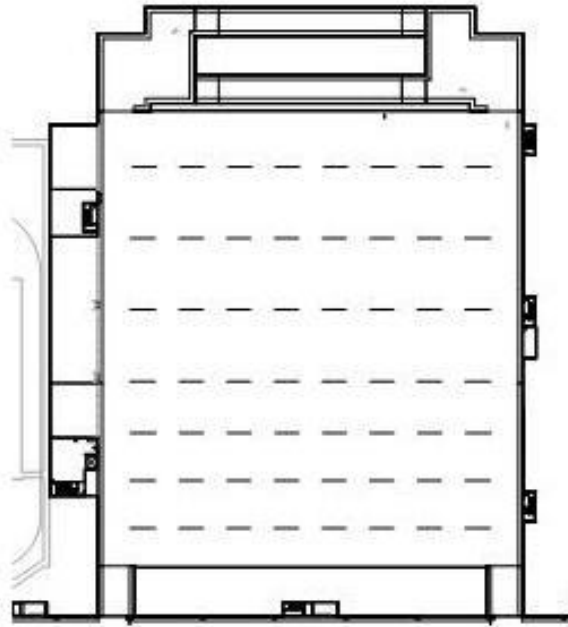


1 TYPICAL BARRIER PLACEMENT- LEVEL 4 (OVER READY/RETURN)

— — PREFERRED BARRIER LOCATIONS

Exhibit-11

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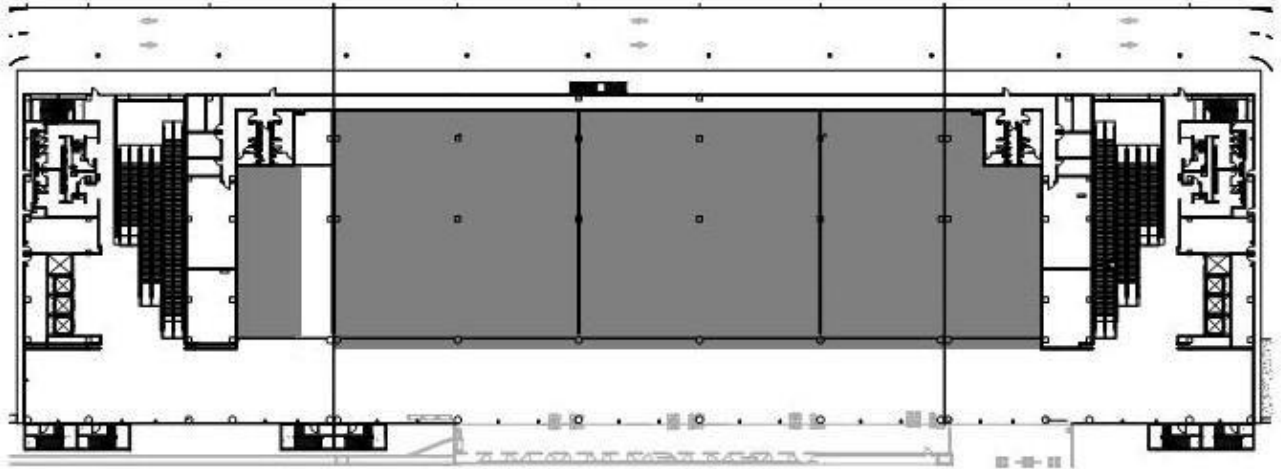


① TYPICAL BARRIER PLACEMENT- LEVEL 4 (OVER QTA)

— — PREFERRED BARRIER
LOCATIONS

Exhibit-12

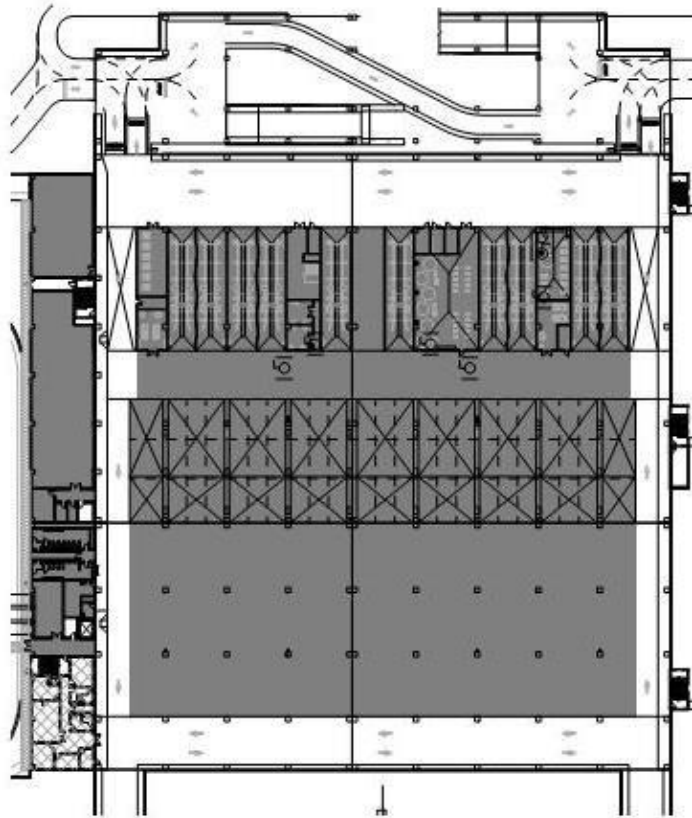
EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



① CSB-EXCLUSIVE PREMISES AREAS-LEVEL 4

Exhibit-13

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



QTA-EXCLUSIVE PREMISES, COMMON CONCESSION AREAS AND CONRAC FACILITY
MANAGER AREAS -LEVEL 1

1




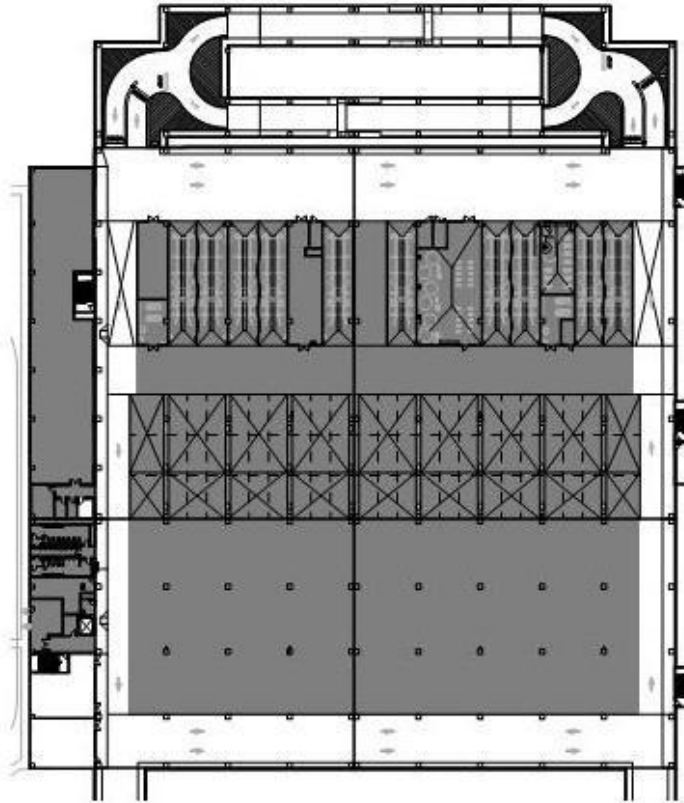
-  EXCLUSIVE PREMISES AREA
-  COMMON CONCESSION AREA
-  CONRAC FACILITY MANAGER

Exhibit-14

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



① QTA-EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY
MANAGER AREAS-LEVEL 2




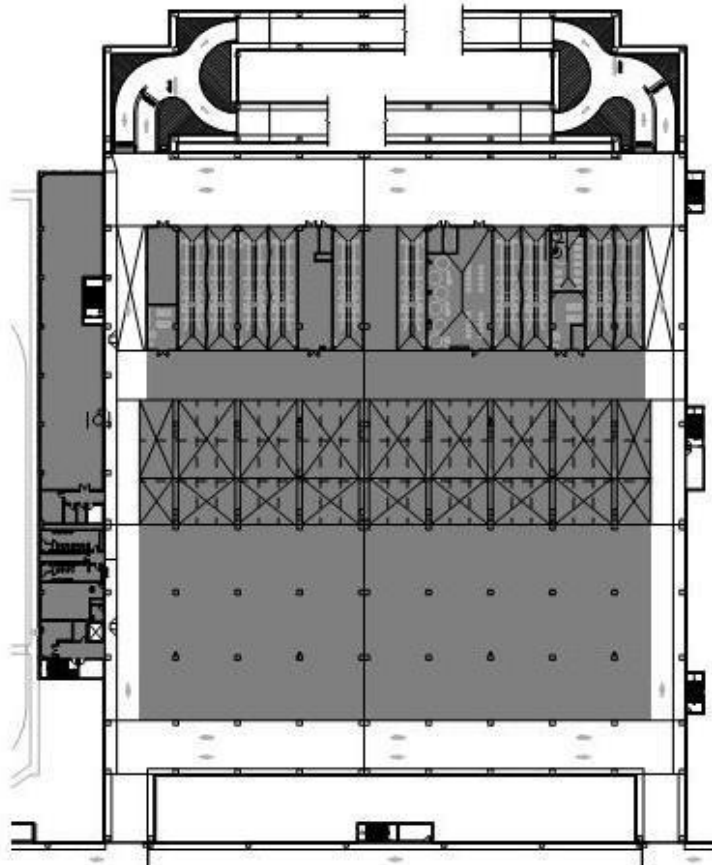
-  EXCLUSIVE PREMISES AREA
-  COMMON CONCESSION AREA
-  CONRAC FACILITY MANAGER

Exhibit-15

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



① QTA-EXCLUSIVE PREMISES, COMMON CONCESSION AREAS, AND CONRAC FACILITY
MANAGER AREAS-LEVEL 3




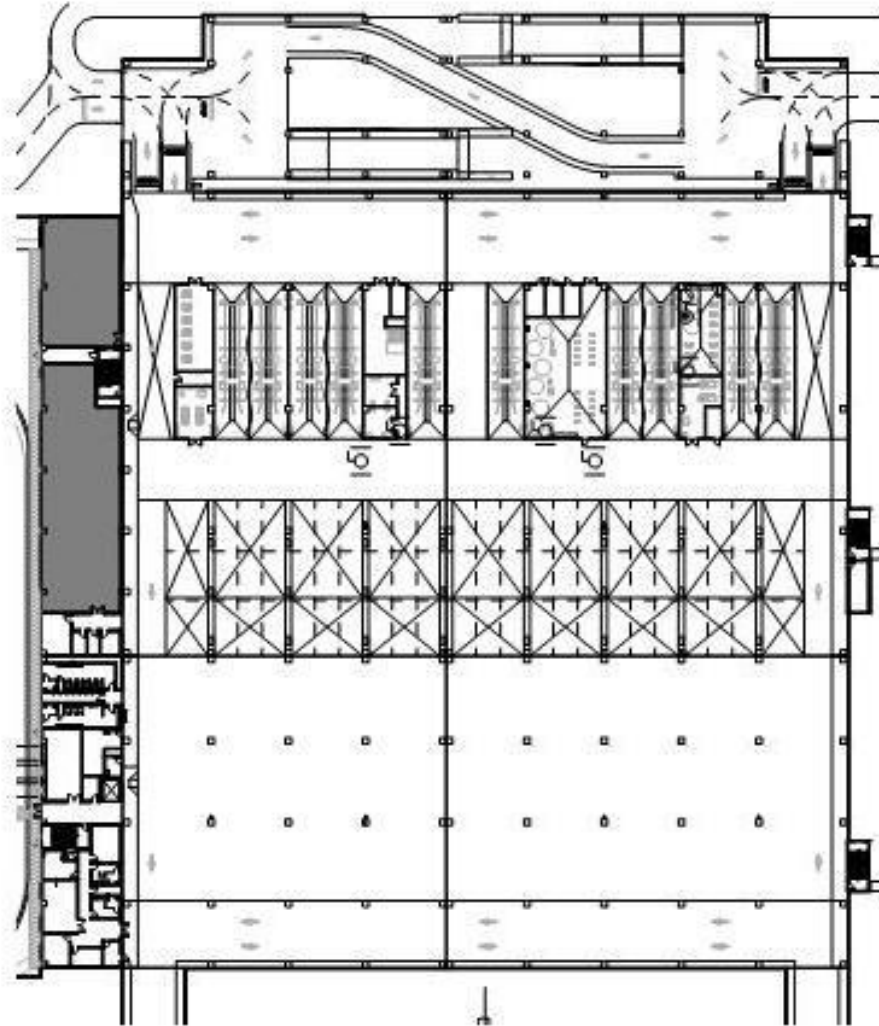
-  EXCLUSIVE PREMISES AREA
-  COMMON CONCESSION AREA
-  CONRAC FACILITY MANAGER

Exhibit-16

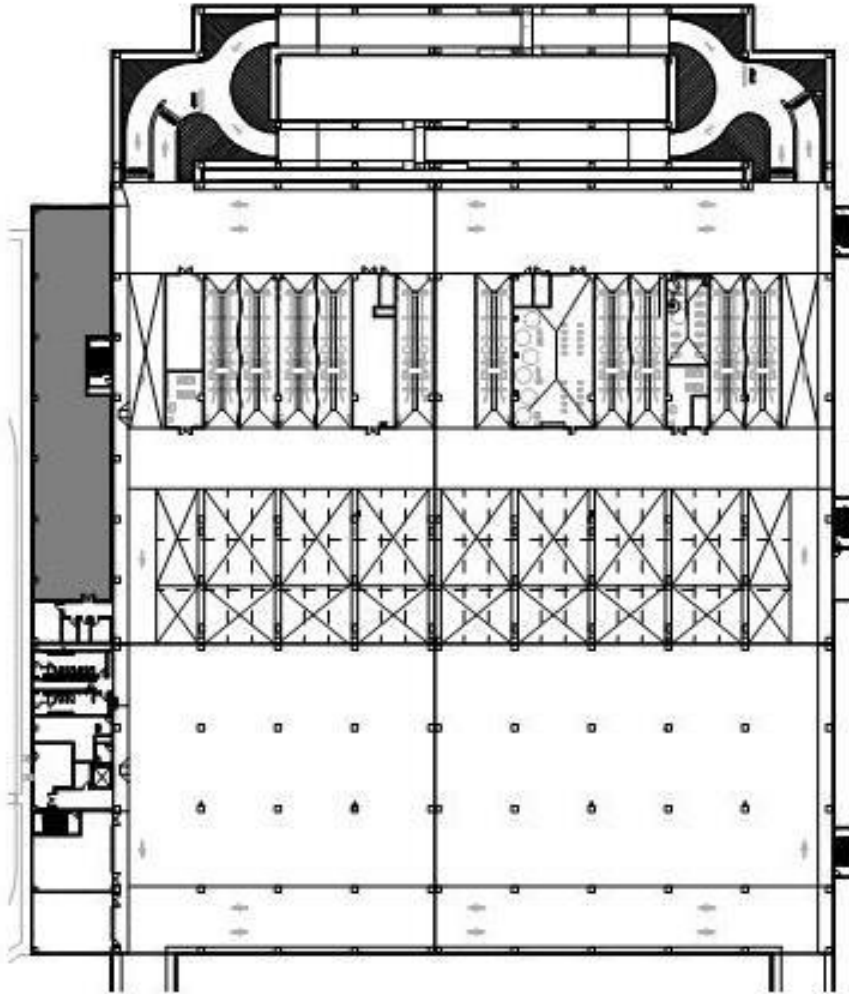
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1 QTA- CONCESSIONAIRE IMPROVEMENT AREAS- LEVEL 1

Exhibit-17

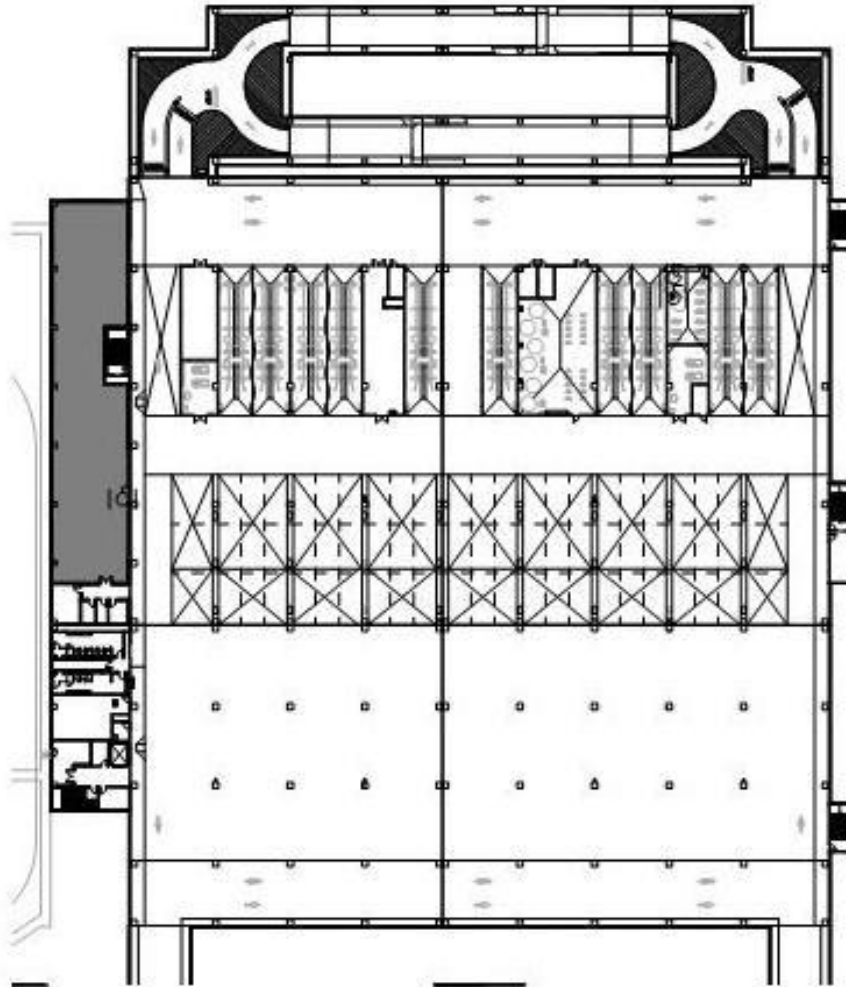
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1 QTA- CONCESSIONAIRE IMPROVEMENT AREAS-LEVEL 2

Exhibit-18

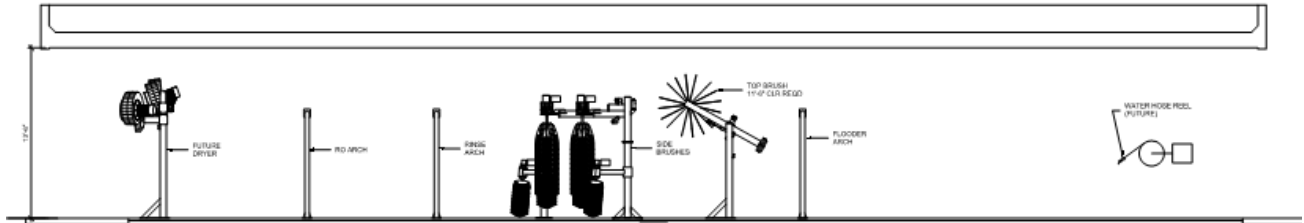
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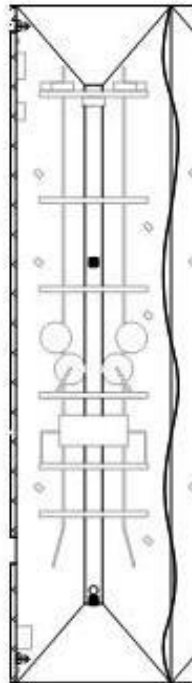
1 QTA- CONCESSIONAIRE IMPROVEMENT AREAS- LEVEL 3

Exhibit-19

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



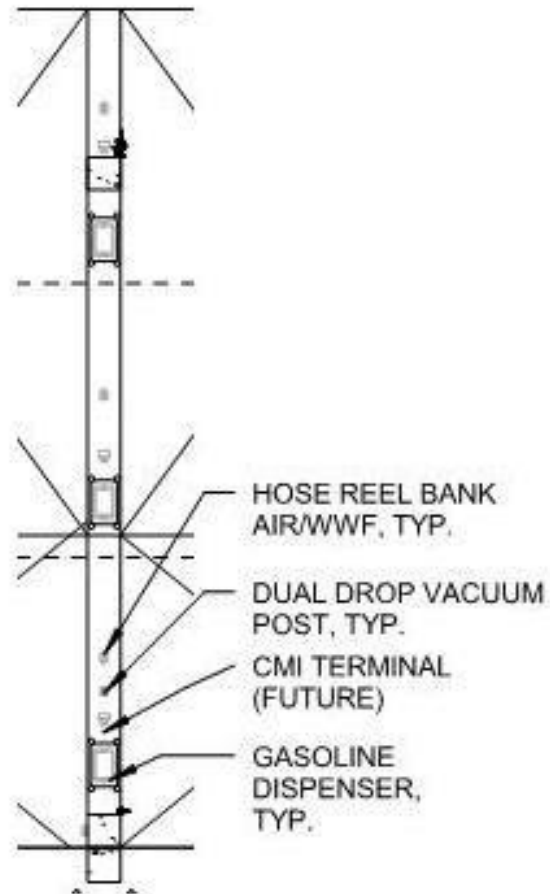
1 CARWASH ELEVATION TYPICAL



2 QTA-TYPICAL CARWASH BAY

Exhibit-20

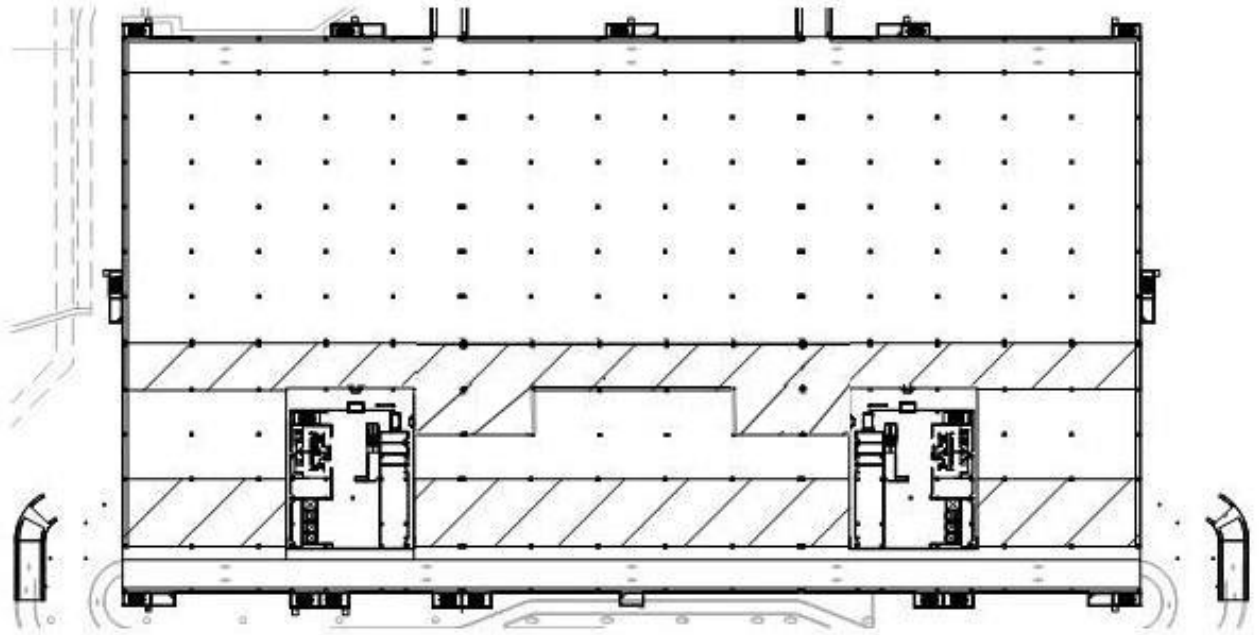
EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



1 QTA-TYPICAL FUEL ISLAND (TWO POSITION)

Exhibit-21

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



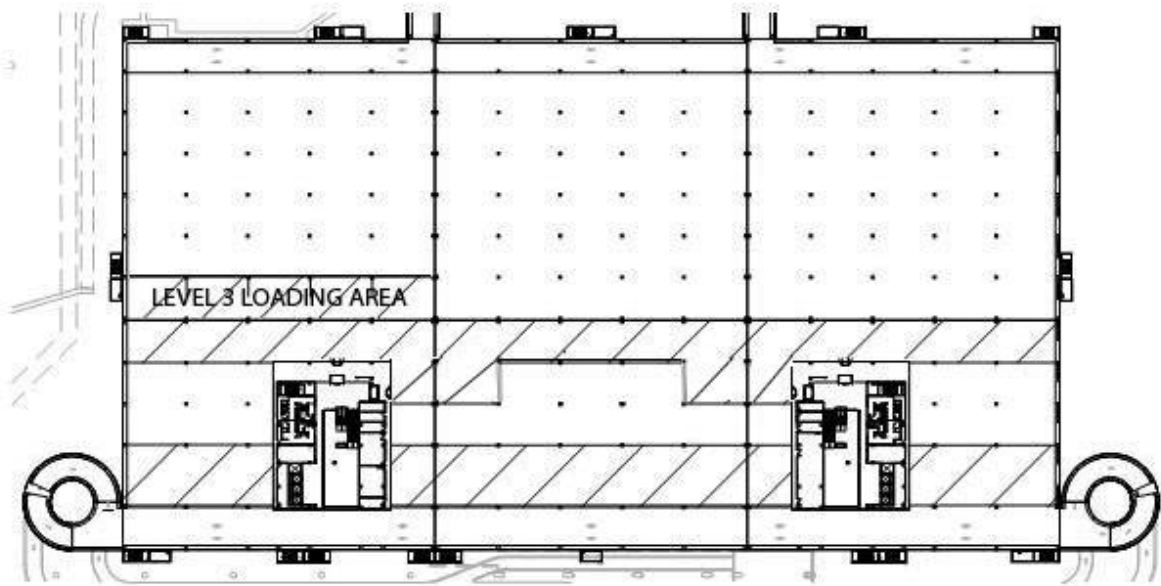
READY/RETURN-ZONES DEFINED FOR EXIT/CUSTOMER SERVICE
BOOTH-LEVEL 1

1

 EXIT/CUSTOMER SERVICE BOOTHS

Exhibit-22

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.

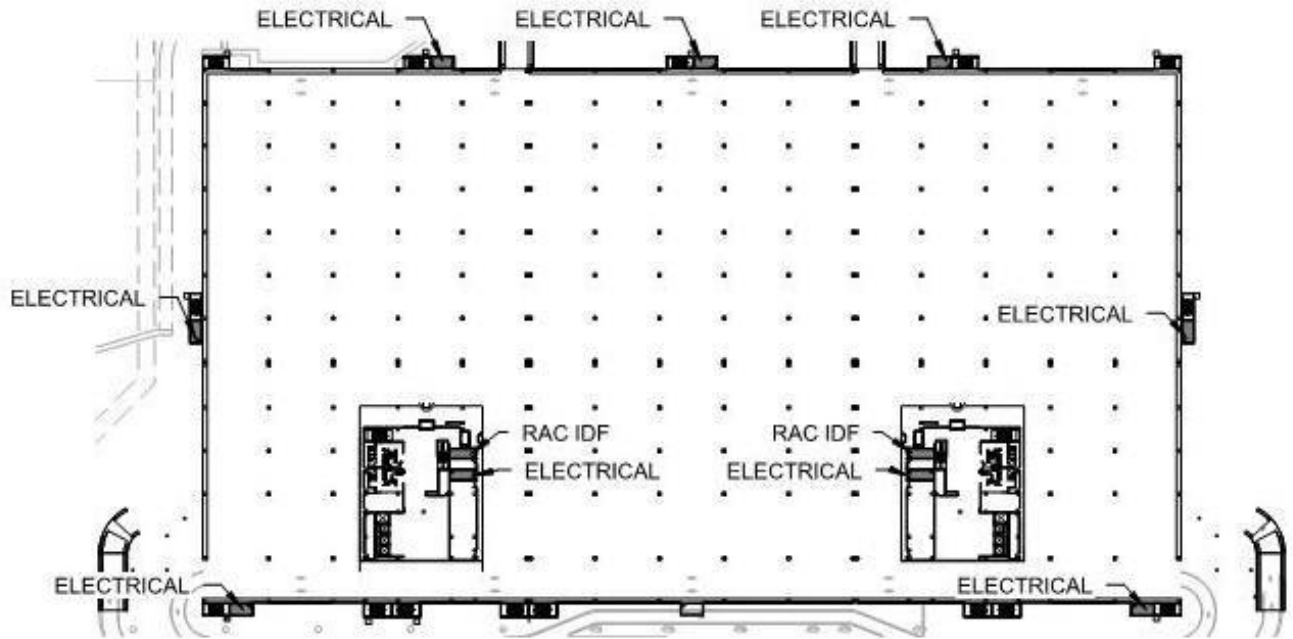


1 READY/RETURN-ZONES DEFINED FOR EXIT/CUSTOMER SERVICE BOOTHS
-LEVELS 2 & 3

 EXIT/CUSTOMER SERVICE BOOTHS

Exhibit-23

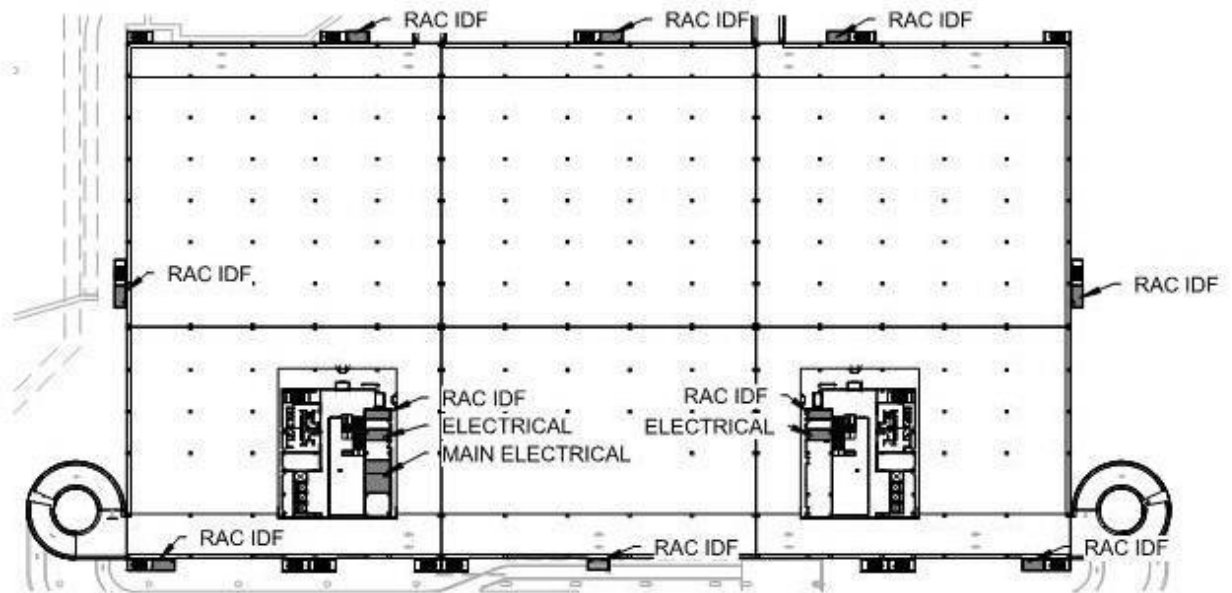
EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



① READY/RETURN-ELECTRICAL ROOM/IDF ROOM/KEY PLAN

Exhibit-24

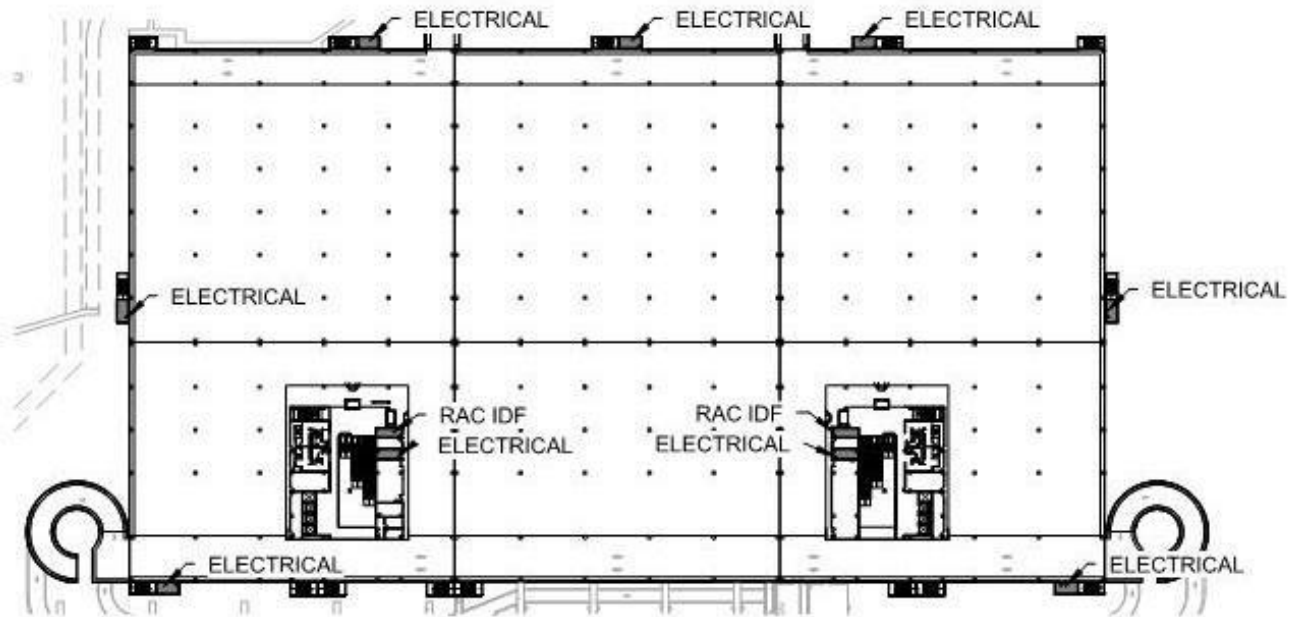
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① READY/RETURN-ELECTRICAL ROOM/IDF ROOM/KEY PLAN

Exhibit-25

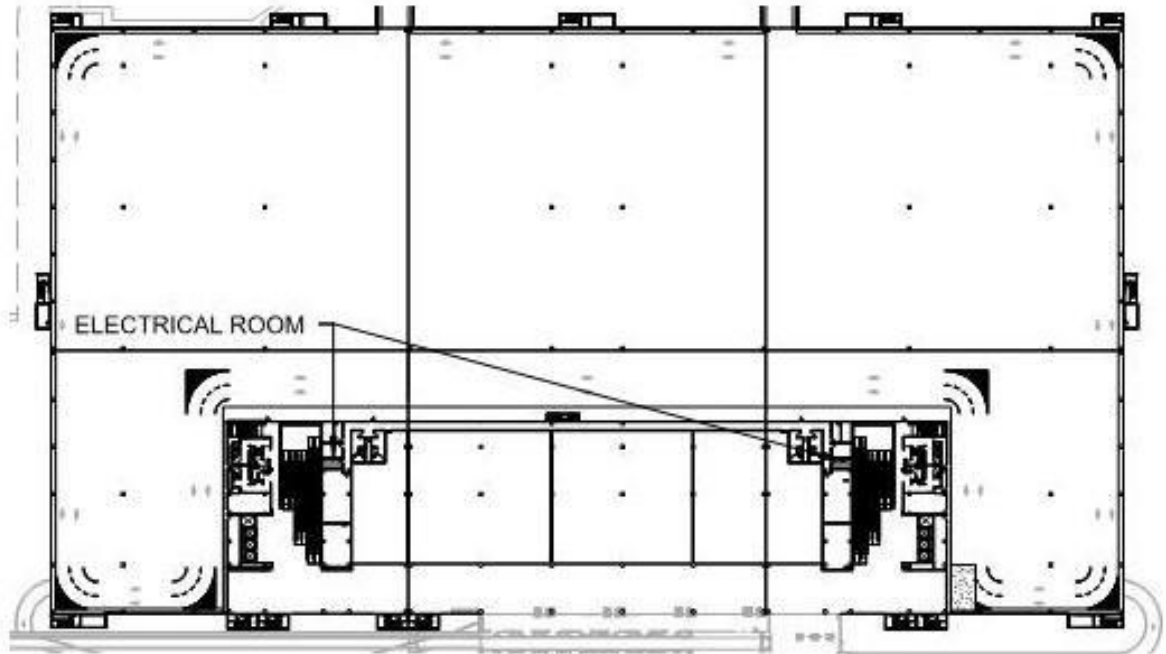
EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



① READY/RETURN-ELECTRICAL ROOM/IDF ROOM/KEY PLAN

Exhibit-26

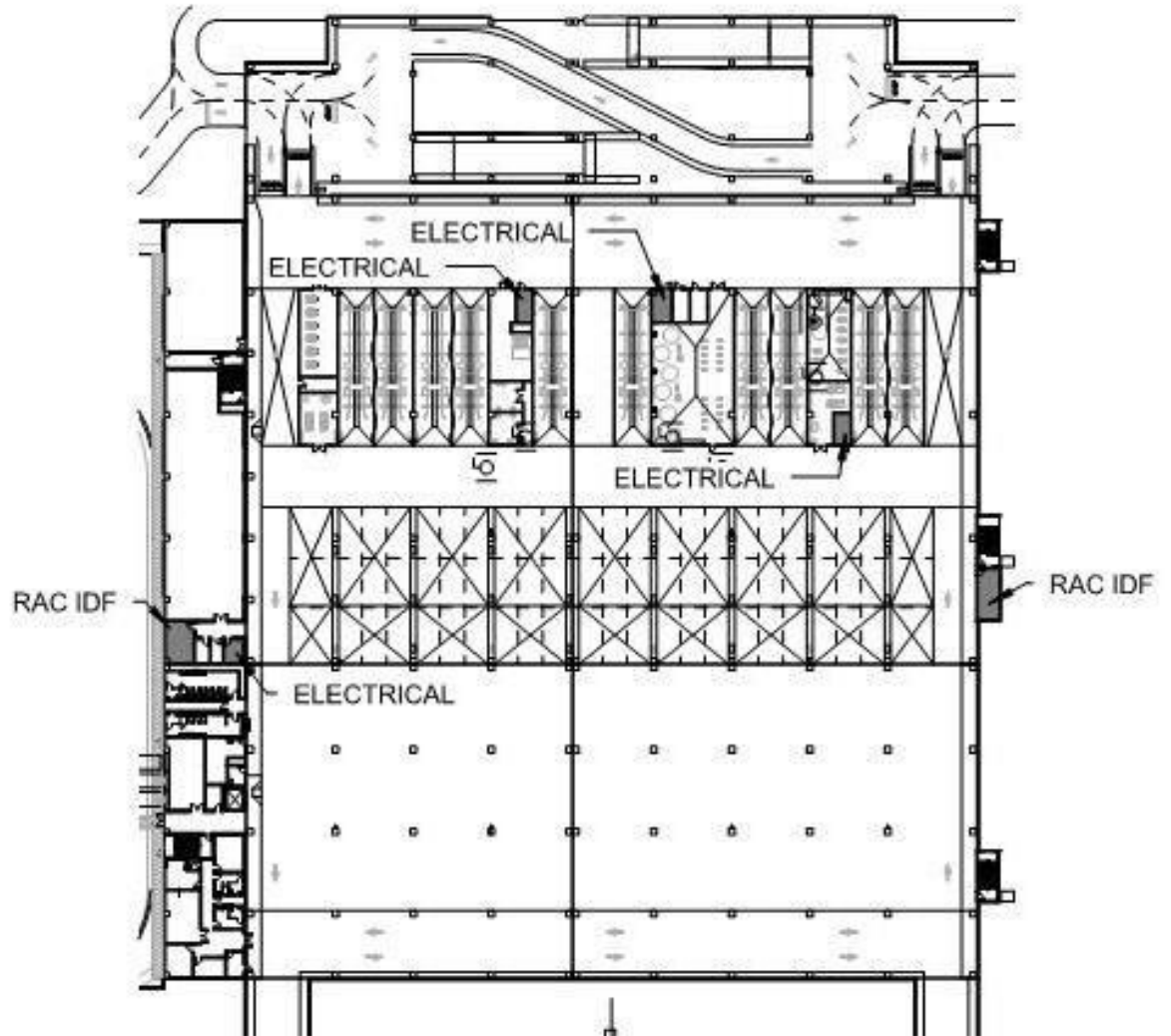
EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



① READY/RETURN-ELECTRICAL ROOM/IDF ROOM/KEY PLAN

Exhibit-27

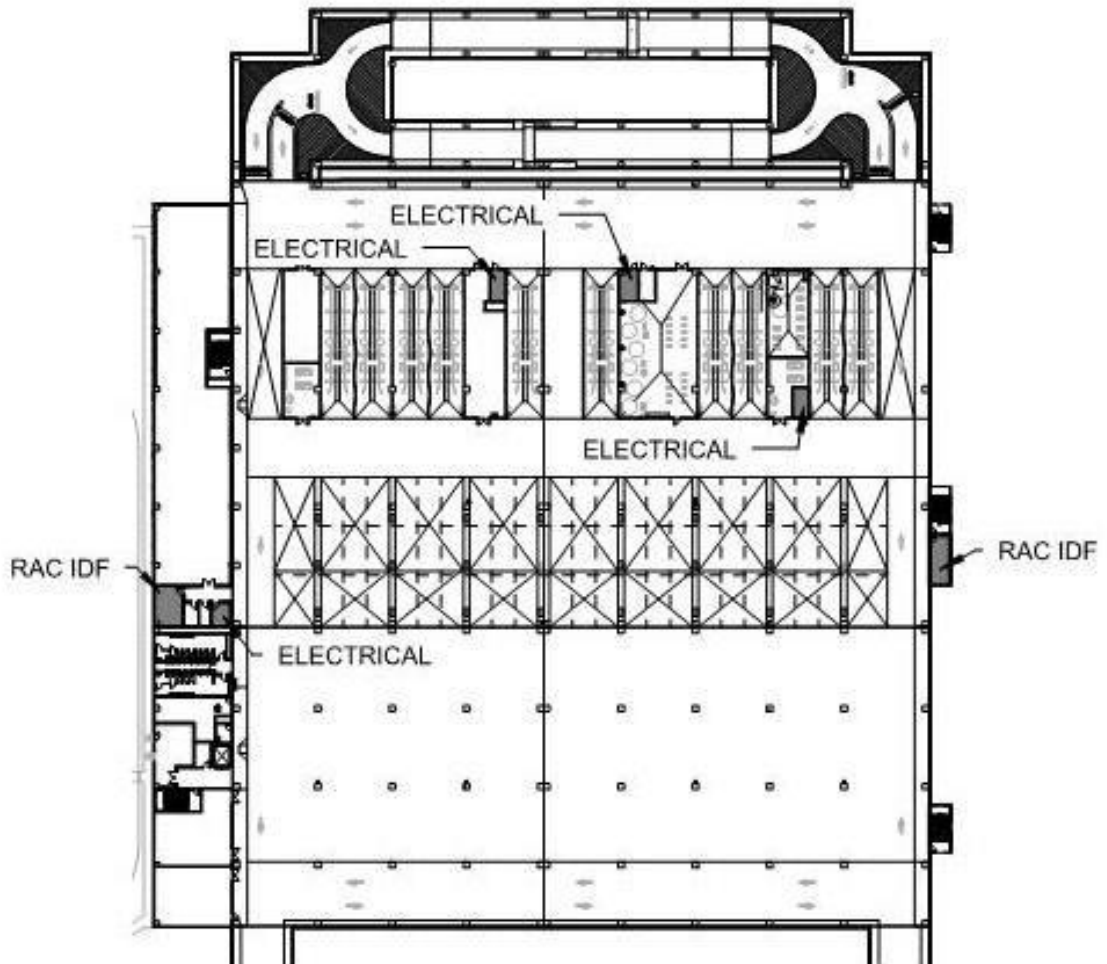
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1 QTA-ELECTRICAL ROOM/IDF ROOM/KEY PLAN

Exhibit-28

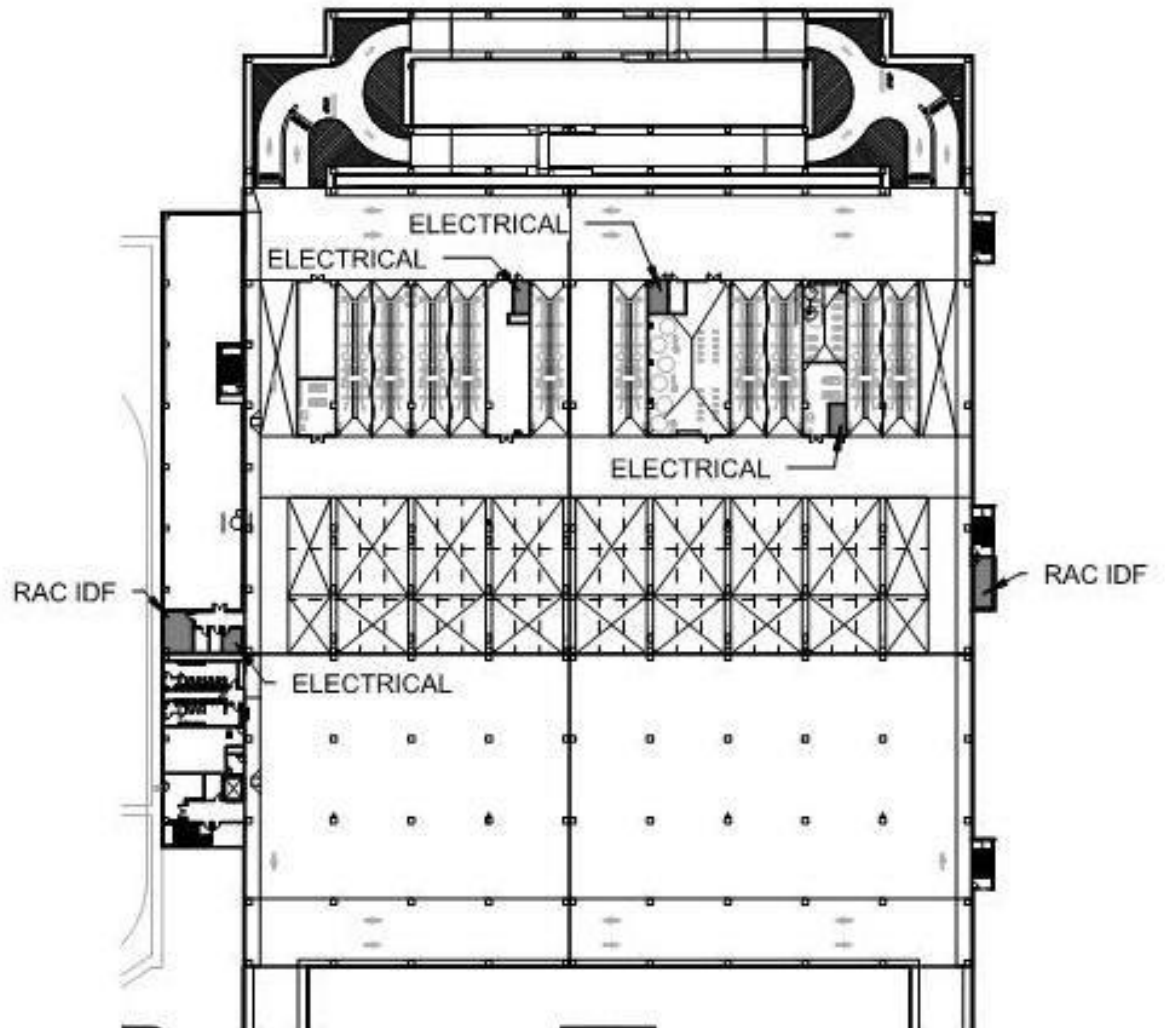
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1 QTA-ELECTRICAL ROOM/IDF ROOM/KEY PLAN

Exhibit-29

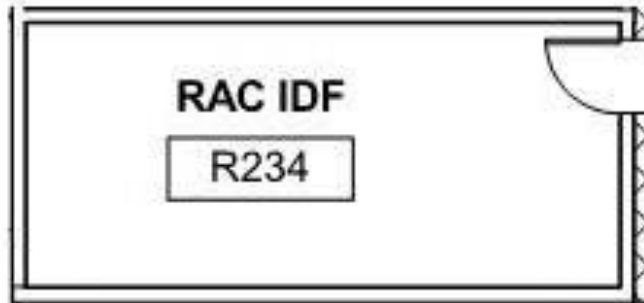
EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



1 QTA-ELECTRICAL ROOM/IDF ROOM/KEY PLAN

Exhibit-30

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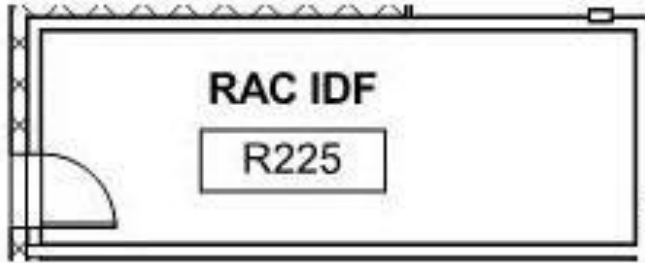
② READY/RETURN-TYPICAL IDF ROOM



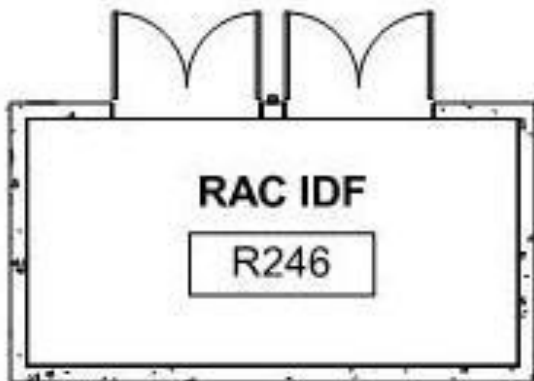
① READY/RETURN-TYPICAL IDF ROOM

Exhibit-31

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



② READY/ RETURN-TYPICAL IDF ROOM



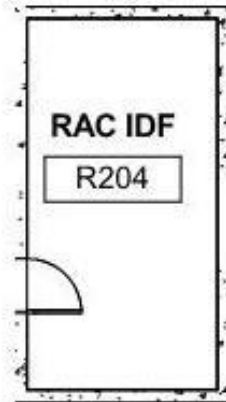
① READY/RETURN-TYPICAL IDF ROOM

Exhibit-32

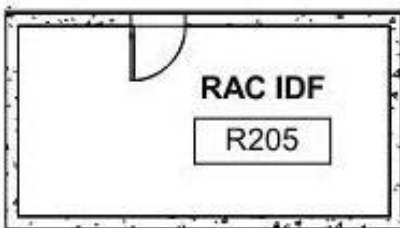
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3 RETURN/RETURN- TYPICAL IDF ROOM



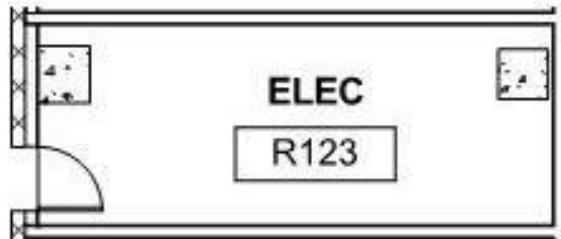
2 READY/RETURN-TYPICAL IDF ROOM



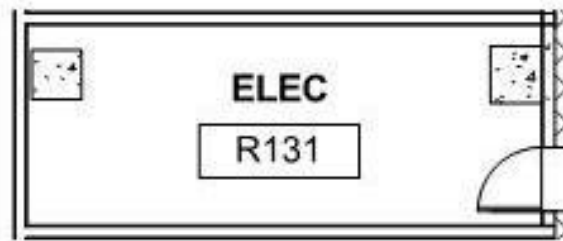
1 READY RETURN-TYPICAL IDF ROOM

Exhibit-33

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



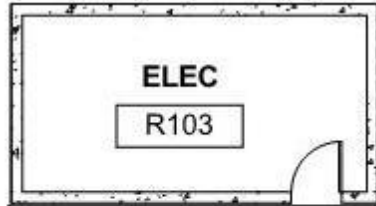
2 READY/RETURN-TYPICAL ELECTRICAL ROOM



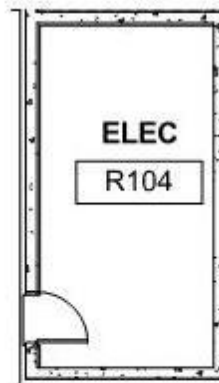
1 READY/RETURN-TYPICAL ELECTRICAL ROOM

Exhibit-34

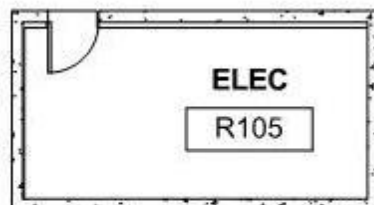
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3 READY/RETURN-TYPICAL ELECTRICAL ROOM



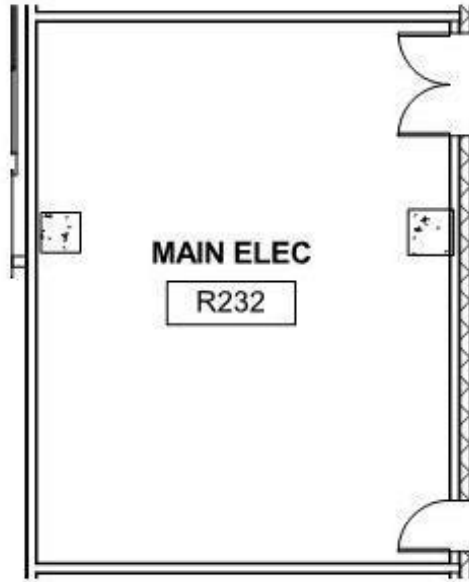
2 READY/RETURN-TYPICAL ELECTRICAL ROOM



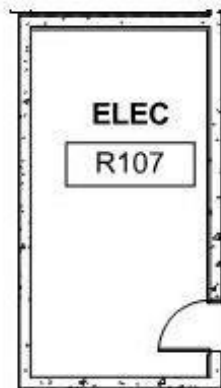
1 READY/RETURN-TYPICAL ELECTRICAL ROOM

Exhibit-35

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



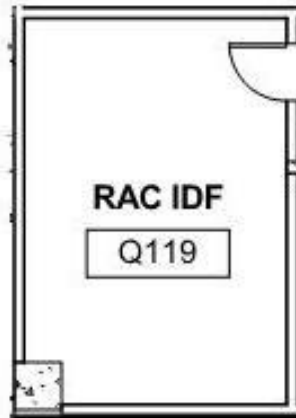
② READY/RETURN-TYPICAL ELECTRICAL ROOM



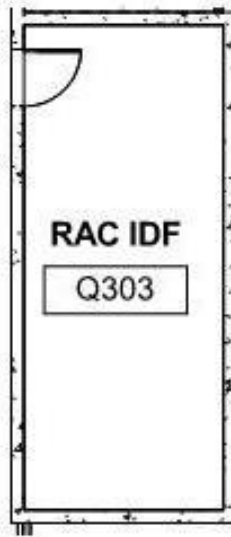
① READY/RETURN-TYPICAL ELECTRIC ROOM

Exhibit-36

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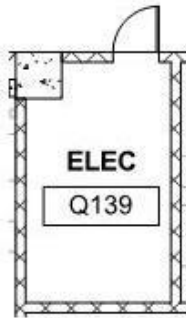
① QTA-TYPICAL IDF ROOM



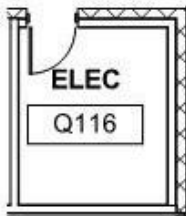
② QTA-TYPICAL IDF ROOM

Exhibit-37

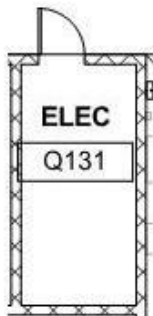
EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



3 QTA-TYPICAL ELECTRICAL ROOM



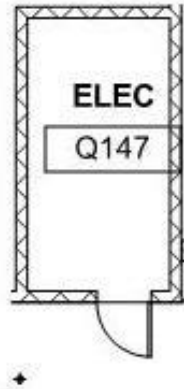
2 QTA-TYPICAL ELECTRICAL ROOM



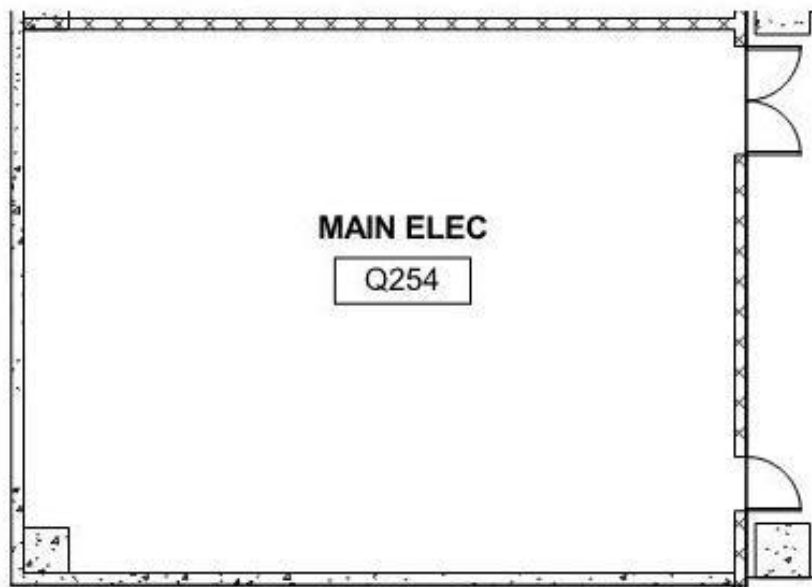
1 QTA-TYPICAL ELECTRIC ROOM

Exhibit-38

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



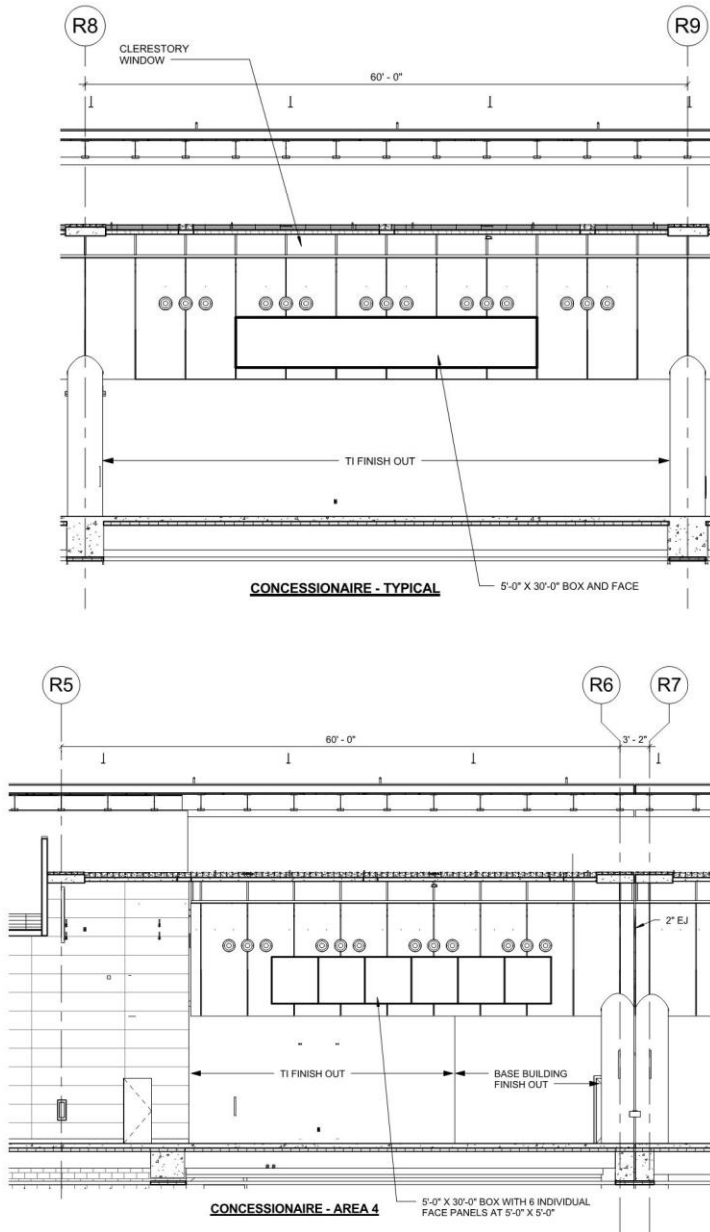
① QTA-TYPICAL ELECTRICAL ROOM



② QTA-TYPICAL ELECTRICAL ROOM

Exhibit-39

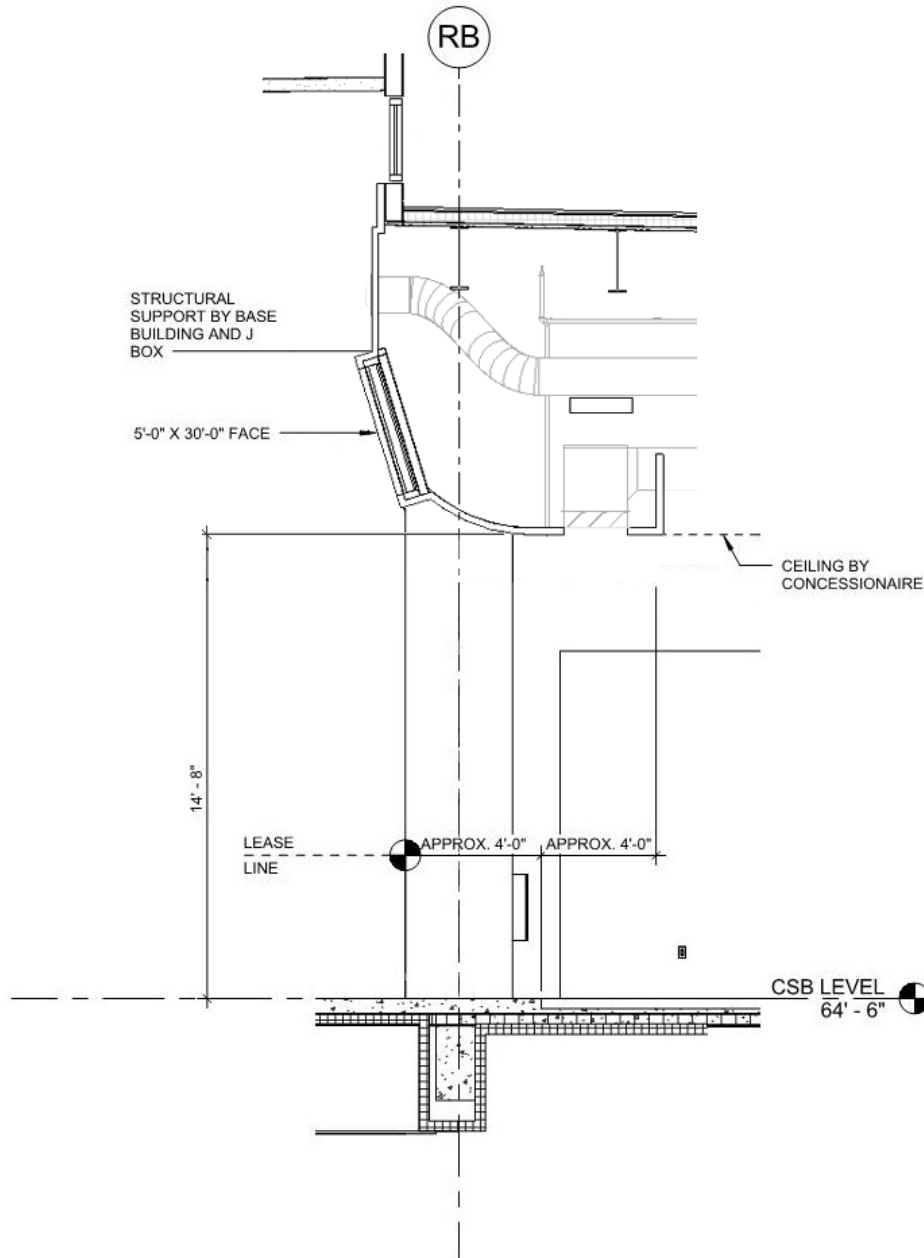
EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



CSB-SIGNAGE PLACEMENT AND SIZE

Exhibit-40

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.



CSB – SIGNAGE PLACEMENT AND DESIGN - SECTION

Exhibit-41

EXHIBIT REFERENCED FOR CONVENIENCE; EXHIBIT A OF THE CONTRACT SHALL GOVERN.

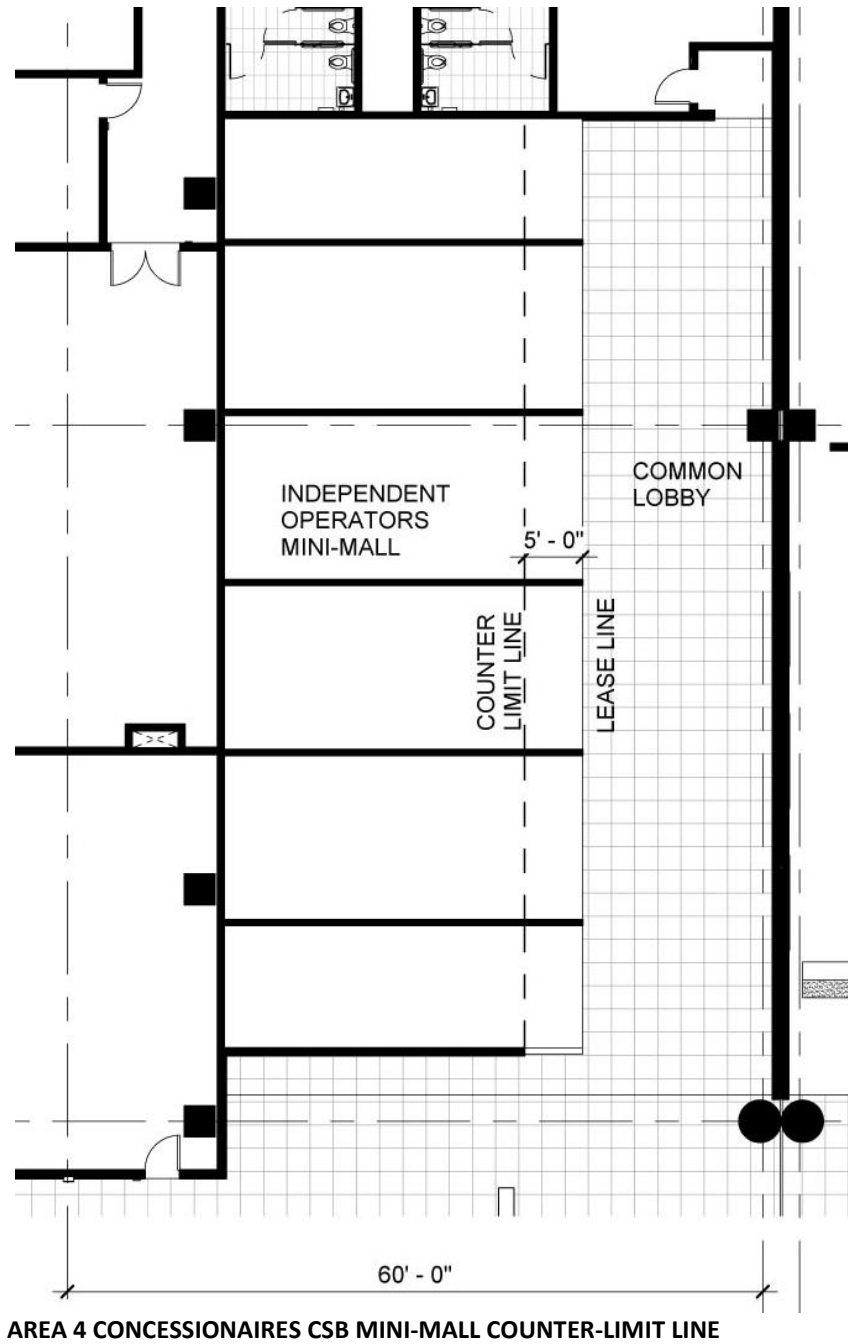


Exhibit-42

CONCRETE BARRIER DESIGN STANDARDS

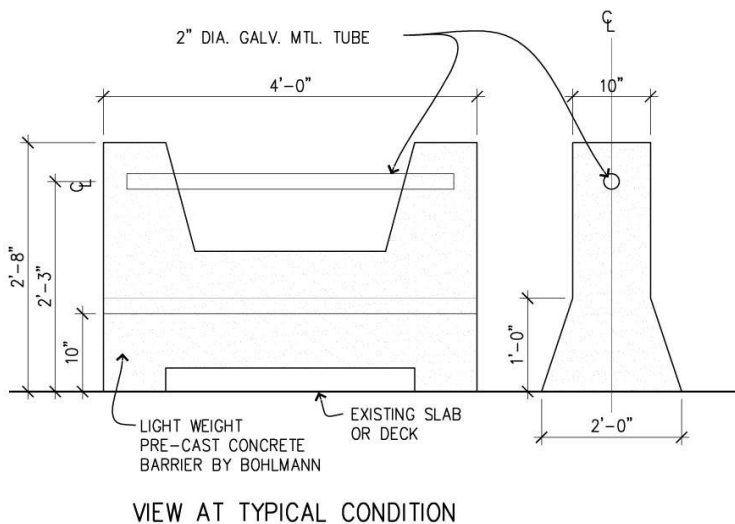
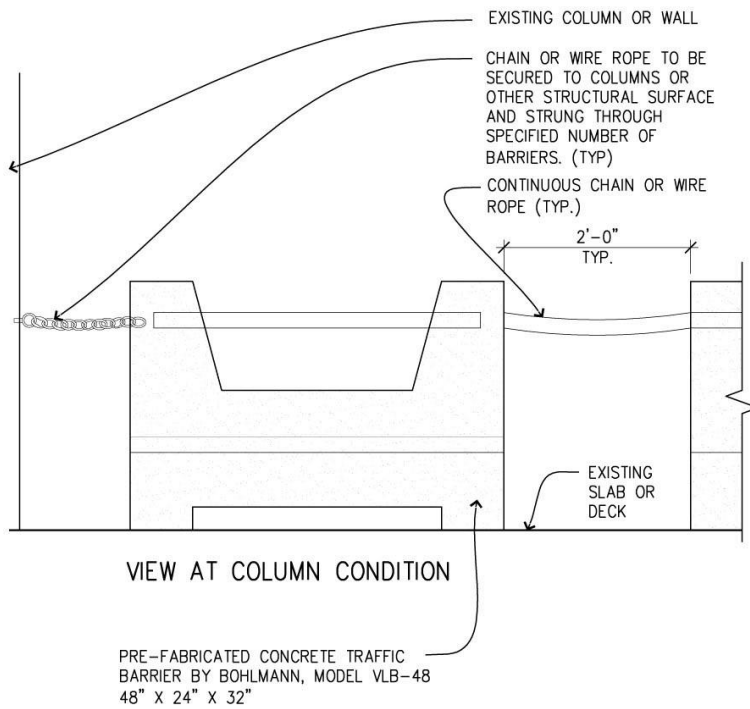




Exhibit-43

TPA SUSTAINABLE MANAGEMENT PLAN (SMP), SEPTEMBER 2014

TAMPA INTERNATIONAL AIRPORT

Sustainable Management Plan



TAMPA INTERNATIONAL AIRPORT

Sustainable Management Plan

SEPTEMBER 2014

PREPARED FOR:

Hillsborough County Aviation Authority

PREPARED BY:



RICONDO[®]
& ASSOCIATES

RICONDO & ASSOCIATES, INC.

IN ASSOCIATION WITH:

ICF International
KB Environmental Sciences, Inc.
Quest Corporation of America
URS Corporation
VoltAir Consulting Engineers

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Table of Contents

CHAPTER 1	Sustainability at Tampa International Airport	1
	What is Sustainability?	1
	The Authority's Sustainable Management Plan	3
	Sustainable Management Plan Companion Materials	5
CHAPTER 2	Sustainability Program Foundation	7
	Focus Areas.....	7
	The Authority's Sustainability Priorities.....	8
CHAPTER 3	Sustainability Baseline	11
	Airport Overview	11
	Community Baseline	13
	Health, Safety, and Security Baseline	14
	Natural Systems Baseline	15
	Waste Baseline	18
	Build Green and Buy Green Baseline	20
	Energy Baseline	21
	Regional Economic Baseline	23
CHAPTER 4	Sustainability Goals and Performance Targets	25
CHAPTER 5	Sustainability Initiatives	29
CHAPTER 6	Implementation Plan.....	33
	Continuous Improvement Model	33
	Management Activities and Responsibilities	34

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CHAPTER 1

Sustainability at Tampa International Airport

In 2013, the Hillsborough County Aviation Authority (the Authority) was awarded a Federal Aviation Administration (FAA) grant to develop a Sustainable Management Plan for Tampa International Airport (the Airport) under the FAA's Sustainable Master Plan Pilot Program. The FAA's intent for the Pilot Program is to make sustainability a core objective in the airport planning process by providing funding so airport operators can develop comprehensive sustainability plans inclusive of initiatives for improving environmental performance, achieving economic benefits, and increasing connections and engage with local communities.

At the time the Tampa International Airport grant was awarded, the Authority was completing its Airport Master Plan Update that outlined a 20-year development program. Participation in the Pilot Program offered the Authority the opportunity to strategically plan for how sustainability can be integrated into the future development and operation of the Airport.

Hillsborough County Aviation Authority

The Authority is an autonomous unit of County government that operates all publicly owned aviation facilities within Hillsborough County. Among the four airports operated by the Authority, Tampa International Airport is the largest, and the only airport offering commercial service.

What is Sustainability?

Numerous organizations, institutions, agencies, and others have defined the concept of sustainability. Fundamentally, the definitions emphasize a triple-bottom line of social, environmental, and economic responsibility in organizational decision making. Sustainability is about making decisions that meet our needs today without compromising the ability to meet our needs, and future generation's needs, in the future. It is more than just "being green." It means planning ahead and thinking holistically about the social, economic, environmental, and operational elements of business at the Airport.

Simply put, sustainability means being responsible to:



our
PEOPLE

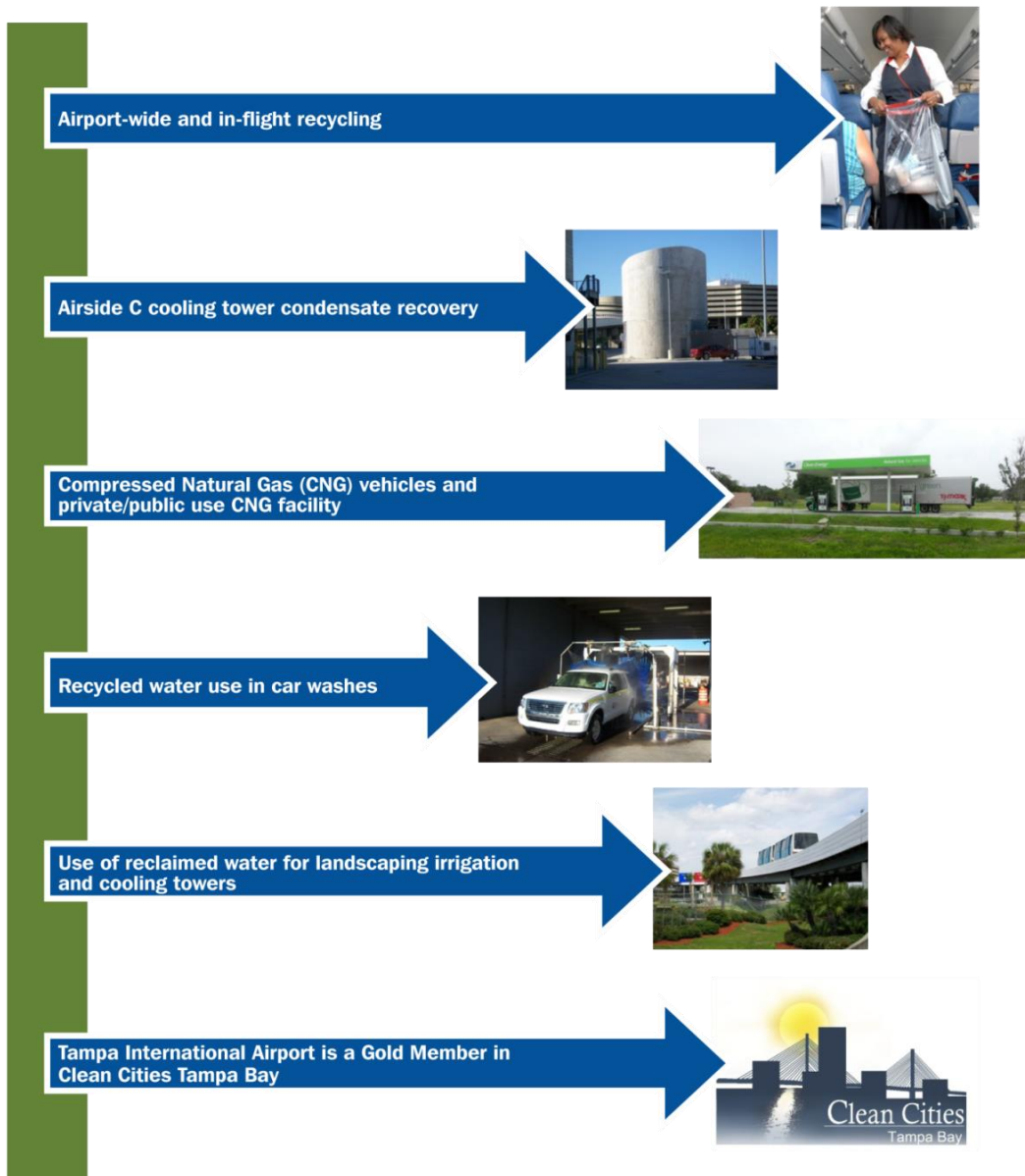


our
PLANET



and our collective
PROSPERITY

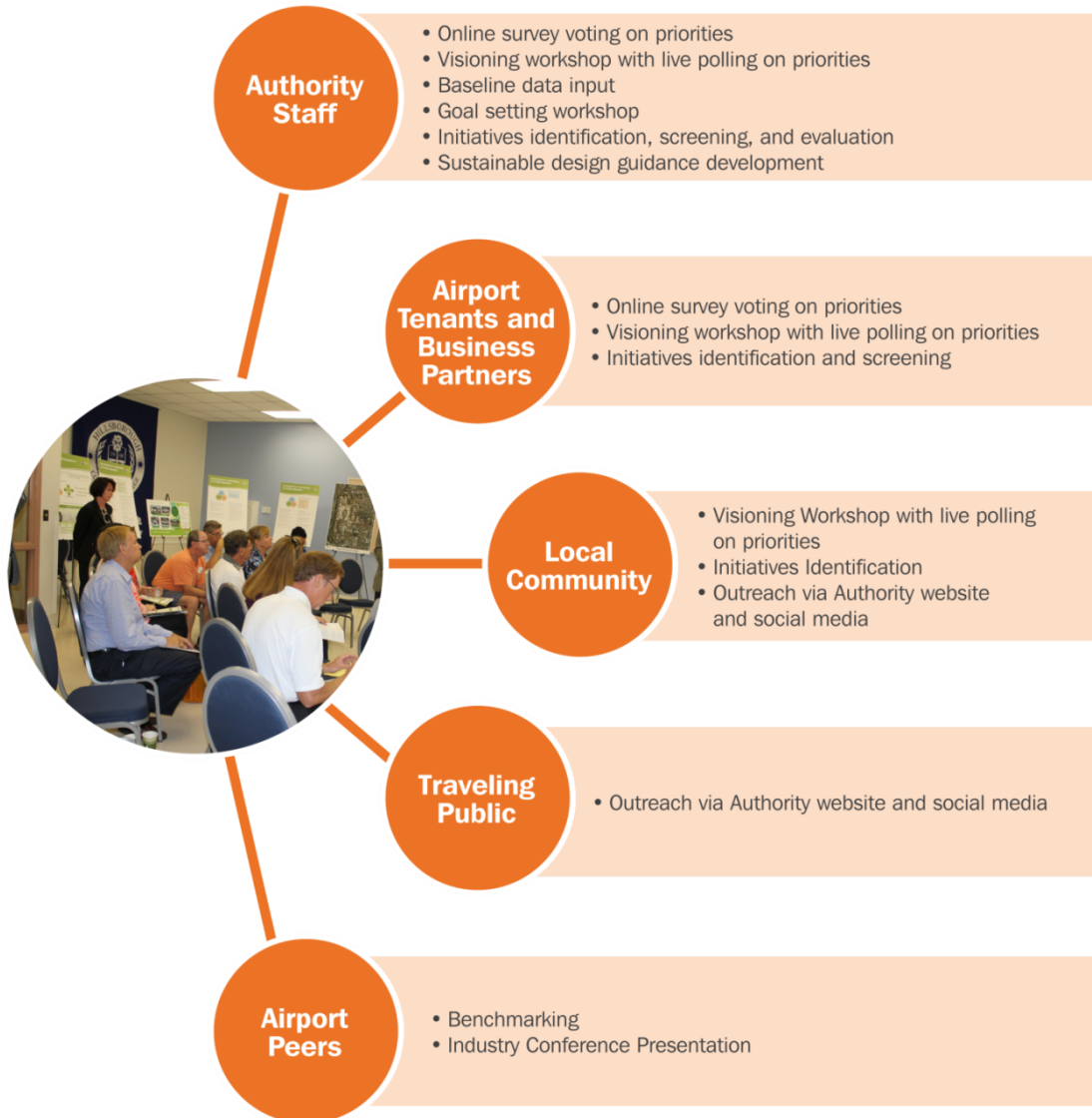
Sustainability is not new to Tampa International Airport. The Authority has already made great strides with a number of sustainability initiatives, such as the Airport-wide recycling program, use of reclaimed water for irrigation and cooling towers, and use of alternative fuels for fleet vehicles. A few notable achievements are summarized here, and more detailed lists of sustainability achievements are highlighted in Chapter 3.



The Authority's Sustainable Management Plan

As the Authority embarks on implementing the recently completed Airport Master Plan's 20-year development program, this Sustainable Management Plan will guide the Authority's approach to valuing people, planet, and collective prosperity in the ongoing development and operations of the Airport.

Led by the Ricondo & Associates Consultant Team, the Authority collaboratively defined a Sustainability Program with input from its stakeholders that integrates sustainability into the design and construction of the development program and also integrates sustainability into the day-to-day operations of the Airport through specific initiatives and new processes. The image below illustrates how the Authority staff and stakeholders were engaged throughout the project.

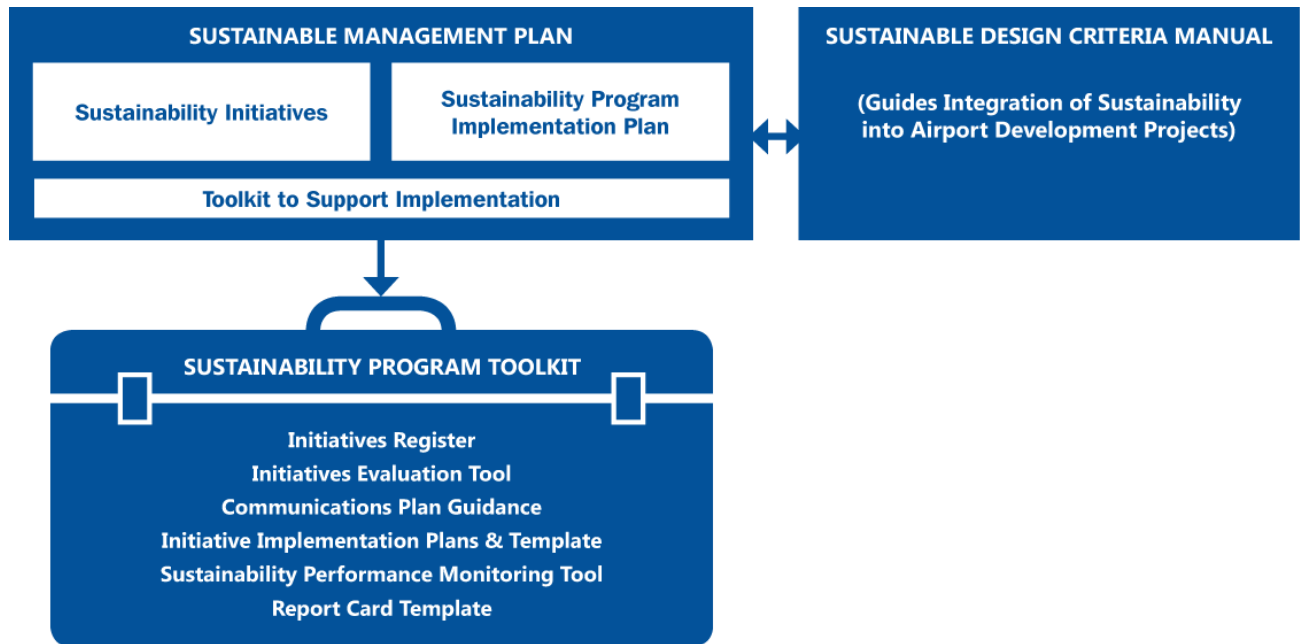


The 12-month planning project was conducted over two distinct phases. In Phase 1, the context for sustainability planning was established (e.g., sustainability priorities, baseline, and goals). A Sustainability Program was then defined in Phase 2 to guide the Authority’s achievement of its sustainability aspirations.

Phase 1—Setting the Sustainability Planning Foundation



Phase 2—Defining the Sustainability Program



This Sustainable Management Plan defines the context for the Authority’s Sustainability Program (Chapters 2 through 4), the sustainability initiatives the Authority plans to implement (Chapter 5), and the Implementation Plan to guide Sustainability Program implementation (Chapter 6).

Sustainable Management Plan Companion Materials

Supporting the Sustainable Management Plan, a number of associated reports, documents, and tools were developed as part of the project, as indicated on the previous inset graphic. The following companion materials were developed and are referenced in later chapters of this report:

- The [SUSTAINABLE DESIGN CRITERIA MANUAL](#) is a standalone document that provides guidance on integrating sustainability into Airport development projects. Key features of the Manual include topic-focused fact sheets that define sustainable design strategies supporting the Authority's sustainability goals for consideration by the Authority's design teams and tools to track sustainable design intent, achievements, and challenges.
- The [SUSTAINABILITY PROGRAM TOOLKIT](#) contains a series of Excel spreadsheets developed for the Authority's use to implement the Sustainability Program. The tools are referenced in later chapters of this report, and each tool includes instructions for its use and other background information on the first tab of the spreadsheet. Tools developed as part of the Sustainable Management Plan include the following:
 - The [INITIATIVES REGISTER](#) is a listing of candidate sustainability initiatives. Implementation of some of these initiatives is being planned as part of the Sustainable Management Plan, while other initiatives are retained in the Register for future consideration. The Initiatives Register tool also provides instructions to update the Register in the future with new initiatives.
 - The [INITIATIVES EVALUATION TOOL](#) is a spreadsheet for use in future evaluations of candidate initiatives, a version of which was employed to evaluate and select initiatives for implementation in the Sustainable Management Plan project. The evaluation tool can be adapted in the future as the Authority's sustainability priorities evolve.
 - The [COMMUNICATIONS PLAN GUIDANCE](#) provides information and a template for use in supporting the development of future communications and messaging activities.
 - The [INITIATIVE IMPLEMENTATION PLANS & TEMPLATE](#) provide draft implementation plans for the Authority's sustainability initiatives selected for implementation as part of the Sustainable Management Plan as well as a template for future implementation plan development.
 - The [SUSTAINABILITY PERFORMANCE MONITORING TOOL](#) is a spreadsheet formatted to track the Authority's sustainability metrics and monitor progress towards achieving sustainability targets.
 - The [REPORT CARD TEMPLATE](#) provides information on sustainability reporting and a template format to report performance. Data and information for the report card will be compiled in the [Sustainability Performance Monitoring Tool](#) and captured during implementation of the [Sustainable Design Criteria Manual](#).

- The **SUSTAINABLE MANAGEMENT PLAN PROJECT TECHNICAL MEMORANDA** is a report format compilation of Technical Memoranda documenting the development of the Sustainable Management Plan, including project approach; collaboration among Authority staff, Airport stakeholders, and the Consultant Team, and conclusions that lead to the development of the information presented in the Sustainable Management Plan and its companion materials.

CHAPTER 2

Sustainability Program Foundation

The Sustainable Management Plan is informed by Authority staff and Airport stakeholders' current vision of a sustainable future Airport and bounded by the activities addressed within this Sustainable Management Plan. This context for the Sustainability Program reflects current conditions and stakeholder interests. As conditions and interests evolve, it is expected that the Authority's Sustainability Program will adapt and change.



Authority staff contributed to the development of a vision statement for the Sustainability Program. The vision statement, highlighted below, will be communicated on sustainability materials used both internally and externally. Consistent, clear, and repeated inclusion of the vision statement on materials, ranging from subtle to prominent emphasis, will serve as a constant reminder of the intended outcome of the Authority's Sustainability Program.

Vision for a Sustainable Tampa International Airport

To be world-class leaders in promoting prosperity for the Tampa Bay region through efficient, responsible growth, while cherishing the natural beauty and quality of life in our community.

Focus Areas

To achieve this vision of sustainability, the Authority initiated development of the Sustainable Management Plan, which involved the Authority's first holistic look at integrating sustainability into the development and operation of the Airport. Development of the Sustainable Management Plan was concentrated on three primary focus areas—facility planning, design and construction, and Authority operations and maintenance.

Authority staff actively participated in plan development, particularly those with responsibilities in the focus areas, by providing input via in-person meetings, web-based meetings, teleconferences, online surveys, workshops and working meetings, and review comments on various materials.

As the Authority builds experience with implementing its Sustainability Program, it may consider expanding the focus of the program to areas such as concessions and tenant operations.

The Authority's Sustainability Priorities

A primary outcome of the early stakeholder engagement during plan development was the identification of sustainability priorities, or sustainability issues most important to the Authority and other Airport stakeholders. These priorities serve as the foundation for the Sustainable Management Plan. An assessment of input received from Authority staff, Airport tenants and business partners, and the public via online surveys, live interactive polling, and facilitated workshops yielded a set of seven sustainability priority topics. The seven topics, presented below, are generally grouped along the triple bottom line for the Authority—people, planet, and prosperity—although select topics tend to contribute to more than one area. For example, reducing electricity use under the Energy Management priority topic provides a direct economic benefit to the Authority (i.e., reduced energy costs), while also reducing greenhouse gas emissions generated during the production of electricity (i.e., “planet” benefits).

Similar to the focus areas, as the Authority improves sustainability performance in one or more of these sustainability topics, or as conditions and issues change over time, priorities for the Sustainability Program are expected to evolve.

Focus Areas

Facility Planning

- Airport Master Plan Update
- Advanced Planning

Design & Construction

- Sustainable Design and Construction

Maintenance & Operations

- Operations
- Maintenance
- Guest Services
- Human Resources
- Information Technology
- Marketing
- Procurement
- Safety and Security

Sustainability Priority Topics



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CHAPTER 3

Sustainability Baseline

This chapter provides an overview of Tampa International Airport and its sustainability performance for current conditions, represented by the year 2011 (baseline conditions), where data are available, and 2021 (future “business-as-usual” conditions). The year 2011 is consistent with the baseline year for the Airport’s recently completed Airport Master Plan Update, which outlines Airport improvements to meet aeronautical demand, better serve passengers, airlines, and other tenants as well as regional tourism, transportation, and business growth for the next 20 years. Sustainability data are projected, where meaningful, for the year 2021, representing future business-as-usual conditions with planned Airport Master Plan improvements in place and consistent with the Airport Master Plan’s 20-year planning horizon.

Performance Years

2011 represents current conditions, consistent with the recently completed Airport Master Plan baseline year

2021 represents future “business as usual” conditions, consistent with the Airport Master Plan’s 20-year planning horizon

Establishing current and future business-as-usual performance provides an understanding of the Airport’s performance today with respect to its sustainability priorities and provides an indication of how the Airport may perform in the future. During the project, goals were set and opportunities were identified to improve the Airport’s future sustainability performance, as documented in the remainder of this Sustainable Management Plan.

Airport Overview

Although the site has accommodated aviation activity since the 1930s, the Airport we think of today as Tampa International Airport got its start in 1971 with the opening of the terminal complex. Over the past four decades, both aviation activity and the Airport facilities to support that activity have grown. Today, the Airport is an essential part of the Tampa Bay area community and is central to the area’s economic vitality.

Commercial air service is the primary aviation activity at the Airport. The national recession, changes in the airline industry, and the BP oil spill in the Gulf contributed to a 14 percent decline in passenger activity at the Airport over three consecutive years, beginning in 2008 and hitting bottom in 2010 at 16.6 million

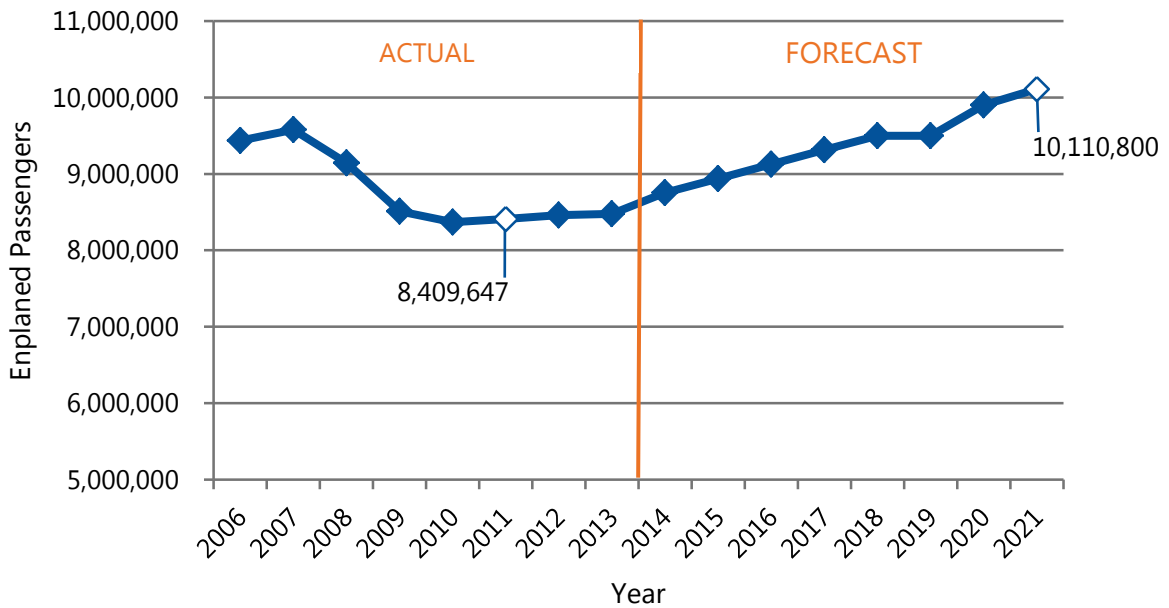
passengers.¹ Since then, the Airport has experienced a gradual recovery at 1–2 percent annual passenger growth.

Actual and forecast annual enplaned passengers (i.e., total number of passengers departing on flights from the Airport) are shown in the graph below, with 2011 and 2021 total enplaned passengers highlighted. Enplaned passengers are roughly half of the total passenger activity at the Airport, and in comparison with the other half—deplaned, or passengers arriving on flights—represent the segment of air travelers that put the greatest demand on Airport facilities. As such, quantitative performance data presented in this chapter are often characterized on a “per enplaned passenger” basis to account for the dependency of facility and utility needs on passenger activity.

2011 Airport Statistics

- 46,000** daily passengers traveling through Airport (approximately)
- 3,300**-acre campus
- 3** runways ranging from 7,000 to 11,000 feet in length
- 59** aircraft gates on **4** airside buildings
- 23,000** public parking spaces (approximately)

Annual Enplaned Passengers (Actual and Forecast)



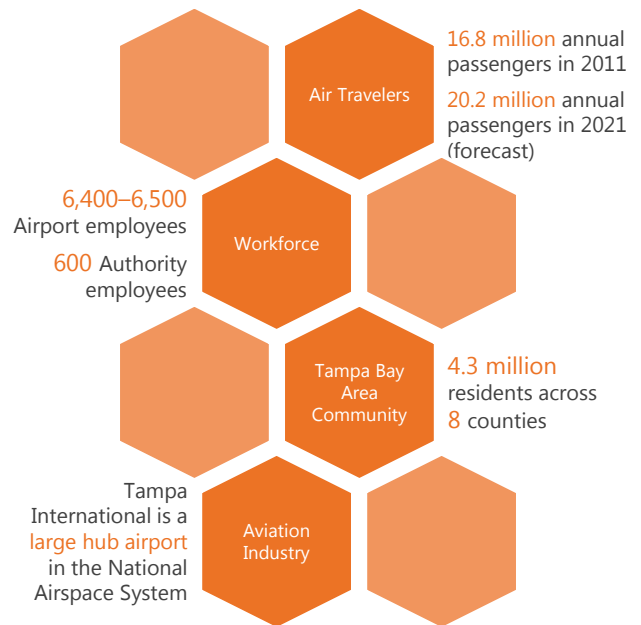
SOURCE: Hillsborough County Aviation Authority, *2013 Strategic Business Plan*, November 2013.
 PREPARED BY: Ricondo & Associates, Inc., April 2014.

¹ Hillsborough County Aviation Authority, *2013 Strategic Business Plan for Tampa International Airport*, November 2013.



Community Baseline

Shown on the inset graphic, many people within one or more of the Airport's communities have a direct or indirect interest in what happens at the Airport. These people belong to one or more of the Airport's communities, and are, therefore, important stakeholders providing context to this plan. Air travelers and the Airport workforce directly experience the Airport as a place, while the presence of the Airport and its activities both directly and indirectly influence the local Tampa Bay area community as well as the local, regional, and state business community. Finally, the Airport plays an important role in the broader aviation industry community.



The Airport's community "in numbers" paints a partial picture of the Airport's community impact. The impact of the Authority's sustainability achievements can also be appreciated with respect to these various communities. A successful sustainability program will be rooted in the communities' shared experiences and interests with the Airport—the collective beneficial path forward for the Airport's communities and the Airport itself.

Sustainability Achievement Highlights

- ▶ The Authority implemented a guest services program in 2012 that engages the community with the Airport. Local volunteers, typically retirees and students, staff four visitor information booths. In 2013, the Authority had **145 Volunteer Ambassadors** that provided **22,000 hours of service**.
- ▶ In recognition that the health, happiness, and overall well-being of employees affect work performance, the Authority contracts with an employee assistance and work/life company to offer **employee health and well-being services** to support issues such as depression, anxiety, conflicts, substance abuse, and grief.
- ▶ The Authority **sponsors community events**, including the Florida Strawberry Festival; the annual Planes, Trains, and Automobiles event; Sun 'n Fun; and Islands Fest; and **hosts an annual 5K Runway Fun Run**. The beneficiary of the fun run is the United Way Suncoast, which creates education, income, and safety net programs.
- ▶ The Authority has placed emphasis on offering **locally based concessions** to instill a sense of place at the Airport. Local options include The Columbia Café, Green Iguana, Cigar City Brewpub, and First Flight.
- ▶ Given the substantial economic benefits of tourism, the Authority participates in organizations that **support and promote tourism, air service, and increased travel** to Florida including the Gateway Airport Council of the U.S. Travel Association, VISIT Florida, and VISIT Tampa Bay.
- ▶ Authority staff participate in **industry conferences**, including presenting at the 2013 Airports Going Green conference during a case study session on "Partnerships Revealed."



Health, Safety, and Security Baseline

The Authority actively supports health, safety, and security throughout the Airport community. Fire rescue services are shared with the City of Tampa, and the Authority maintains its own Airport Police Department. In addition to the health, safety, and security of people using the Airport, the Authority proactively manages the safety and security of Airport data through the Information Technology Services Department.

Sustainability Achievement Highlights

- ▶ Preparing for operational continuity, the Tampa Fire Rescue maintains current training required by the FAA for its **38 Airport fire rescue staff** as well as for an **additional 55–60 staff** among citywide Tampa Fire Rescue units.
- ▶ The Airport Police Department is accredited through the **Commission on Accreditation for Law Enforcement Agencies (CALEA)**. CALEA is a management model promoting improved law enforcement services through professional standards.
- ▶ The Authority generates a **Public Safety and Security Department Annual Report**, which is available online. The annual report covers topics such as departmental goals, annual crime statistics, staff training, and community service.
- ▶ Tampa Fire Rescue extends **CPR training** to all Authority employees whose duties place them in public areas of the Airport.
- ▶ The Authority administers a community-based partnership program modeled on the neighborhood watch concept. Through the **Airport Watch Program**, the Airport Police Department educates the Airport community on how to actively watch for and report suspicious persons and activities.
- ▶ The Authority donates unclaimed clothing from the lost and found to the Vietnam Veterans of America Chapter 787 in Tampa. As of 2013, the Authority has **donated over 420 items**.
- ▶ The Airport Operations Department **actively manages potential wildlife concerns** on the airfield through twice daily perimeter checks and habitat monitoring.
- ▶ The Authority is developing and implementing a new **software application to support FAA inspections** that check if an airport is meeting certain operational and safety standards (referred to as Part 139 inspections), and the Authority has plans to expand the software application to support Safety Management System (SMS) implementation.



Natural Systems Baseline

The Authority and the community cherish the natural environment of the Tampa Bay area, and the protection of these resources—the air, the water, the biodiversity of native plant and animal species—is vital for a sustainable community. These environmental resources are the subject of numerous local, state, and federal environmental regulations, with which the Authority actively manages compliance.

AIR

Hillsborough County meets federal standards for all air pollutants regulated by the U.S. Environmental Protection Agency with the exception of lead and sulfur dioxide. The area of concern, or “nonattainment area,” within the County related to lead and sulfur dioxide is located approximately 8 miles from the Airport. Local noncompliance with these standards is attributed to battery smelting and other industrial activities unassociated with Tampa International Airport.

Greenhouse gases (GHG) are gases, such as carbon dioxide, methane, nitrous oxide, and fluorinated gases that trap heat in the atmosphere and thus contribute to global warming. They enter the atmosphere through burning of fossil fuels, solid waste, and trees and wood products; through certain chemical reactions and manufacturing operations, such as cement manufacturing; through a variety of industrial processes; and from use of refrigerants, aerosol propellants, solvents, and fire retardants. Plants absorb carbon and remove it from the atmosphere as part of the biological carbon cycle, in a process referred to as biological or carbon sequestration.

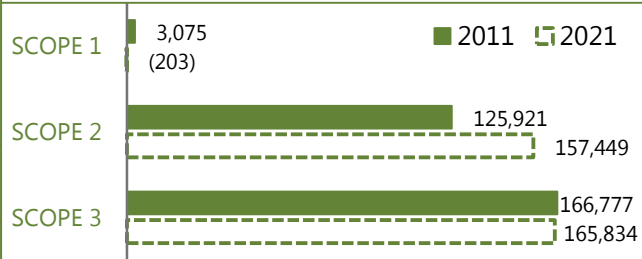
GHG emissions inventories were prepared for activities within the Airport boundaries for the years 2011 and 2021. The results are segregated into Scopes 1, 2, and 3 representing emissions “ownership” (e.g., those emissions under the jurisdiction and control of the Authority versus those produced by others, such as tenants) and reported in metric tons of carbon dioxide equivalent (mtCO_{2e}), consistent with industry practices.

Common sources of GHG emissions

- Aircraft
- Aircraft ground service equipment and auxiliary power units
- Electrical consumption
- Motor vehicles
- Refrigerant usage
- Stationary combustion (e.g., boilers for heating)
- Solid waste generation, transport, and disposal

- SCOPE 1: DIRECT** | GHG emissions from sources that are owned and controlled by the Authority, which may include Authority-owned and controlled stationary sources (such as boilers, emergency generators), as well as Authority-owned fleet vehicles using on-Airport roadways and associated areas.
- SCOPE 2: INDIRECT** | GHG emissions associated with the generation of electricity consumed by the Authority and its tenants.
- SCOPE 3: INDIRECT & OPTIONAL** | GHG emissions attributed to activities at the Airport but from sources that are not owned or controlled by the Authority, such as aircraft, passenger and tenant motor vehicles on Airport roadways, and emissions from other tenant activities.

Greenhouse Gas Emissions (mtCO_{2e})



SOURCE: KB Environmental Sciences, Inc., *Calendar Year 2011 and 2021 Greenhouse Gas Emissions Inventories: Draft Technical Report*, April 29, 2014.

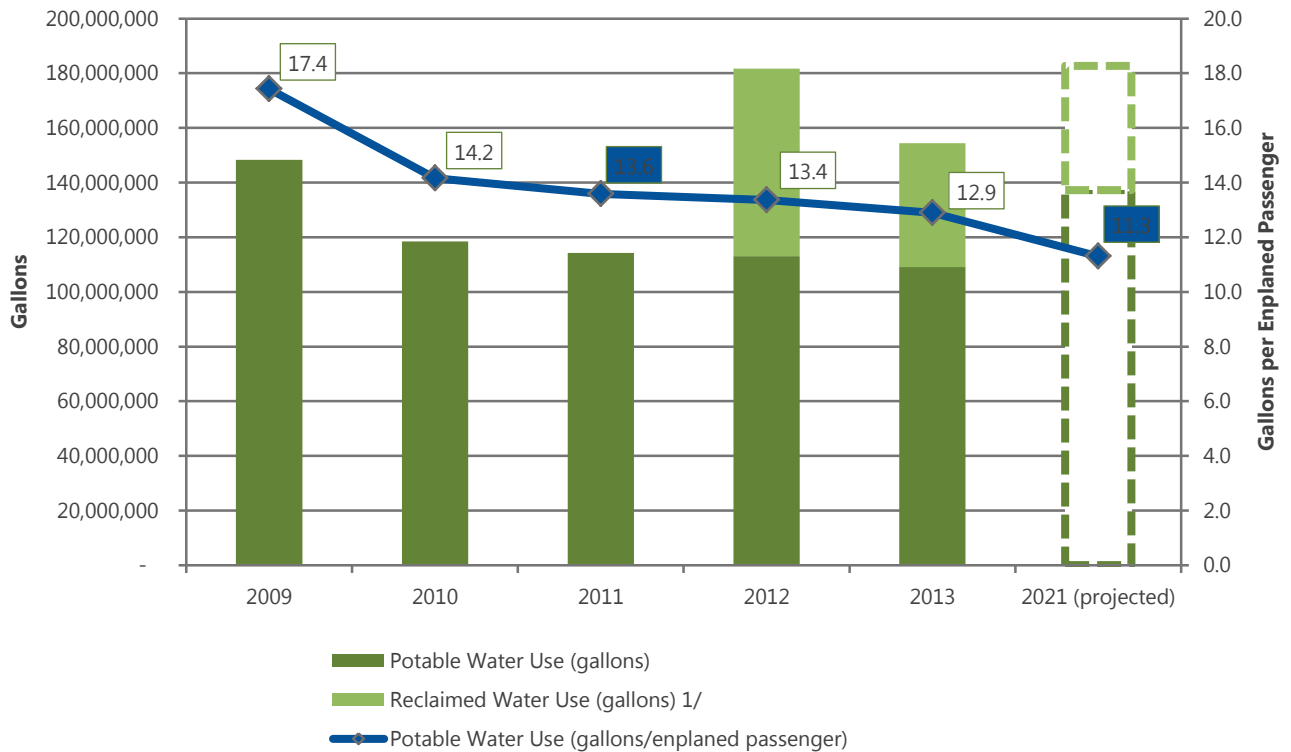
PREPARED BY: Ricondo & Associates, Inc., May 2014.

WATER

Water is a defining feature of the Tampa Bay area, and efficient use of the region’s water resources and protecting the quality of the region’s water sources are important to the Authority. The quality of stormwater discharges from the Airport is regulated and meets water quality standards. The City of Tampa supplies potable water (sourced from surface water, desalinated seawater, and groundwater) and reclaimed water to the Airport.

A water use performance data were collected for the 2011 baseline year and the 2021 future business-as-usual year, and is presented over time to illustrate recent water use trends.

Annual Potable and Reclaimed Water Use
(Total Gallons and Gallons per Enplaned Passenger)



NOTE:

(1) Although the Authority began using reclaimed water in 2010, data on reclaimed water use in 2010–2011 were not available.

SOURCES: Hillsborough County Aviation Authority, water use records, 2009–2013 (actual); Ricondo & Associates, May 2014 (2021 projected water use).

PREPARED BY: Ricondo & Associates, Inc., May 2014.

BIODIVERSITY

The natural environment of the Tampa Bay area is a draw for tourists—from the Gulf beaches to Tampa Bay, Florida’s largest estuary, with sea grasses, marshes, and mangroves, provide habitat for species such as fish, shrimp, crabs, birds, dolphins, sea turtles, and manatees. The Airport environment includes wetlands, forested areas, and landscaped areas, which the Authority manages to minimize wildlife attractant features that are not compatible with the operation of the Airport.

Sustainability Achievement Highlights

Air

- ▶ The Authority opened a **Cell Phone Lot** in 2009 to reduce curbside vehicle idling and congestion, and thereby lower emissions.
 - ▶ The Authority has converted over 35 percent of its fleet vehicles to **alternative fuel vehicles**, including CNG vehicles, bi-fuel vehicles (CNG or gasoline), electric carts, and hybrid vehicles. The Authority has plans to convert more than 70 percent of its fleet to CNG.
 - ▶ The Authority installed **electric vehicle charging** stations in the valet parking area and the Cell Phone Lot for public use, and in an airside location to support United Airlines' electric ground service equipment vehicle (GSE) fleet.
 - ▶ Clean Energy constructed and maintains a **CNG fueling station** near the Airfield Support Facility, supporting both Authority vehicle use and public CNG vehicle fueling.
 - ▶ **All aircraft gates** are served by a **hydrant fueling system**, which eliminates the need for transporting fuel by truck, and all gates have **pre-conditioned air (PCA)** and **ground power** to minimize the use of auxiliary power units (APUs) to condition aircraft while parked at the terminal.
 - ▶ **SunPass payment in parking garages** is offered to reduce vehicle idling at parking garage exit booths.
-

Water

- ▶ The Authority saves an estimated 3 million gallons per year of potable water use through the **recovery and reuse of condensate in the Airside C Cooling Tower**.
 - ▶ The Authority uses **reclaimed water in the Airside F Cooling Tower**. Given restrictions on potable water use during drought periods, use of reclaimed water ensures the Authority's ability to maintain a comfortable temperature in Airside F. It also reduces the amount of water on which the Authority pays sewage fees.
 - ▶ In 2010, the Authority began using **reclaimed water for irrigation** instead of potable water. As of 2012, 75 acres were irrigated by reclaimed water.
 - ▶ During public restroom renovation projects, **low-flow fixtures** are installed. As of 2013, all fixtures had been converted to low-flow (1.0 gallons/flush urinals and 1.6 gallons/flush toilets).
 - ▶ Rental car companies **recycle and reuse car wash water**.
-

Biodiversity

- ▶ The Authority has successfully completed two **onsite wetland mitigation projects**. One project was a storm water mitigation pond constructed in 2001–2002 that provides 1.86 acres of required mitigation. The second wetland mitigation project is the North Employee Parking Lot Pond, which provides 0.56 acres of required mitigation and was constructed in 2002–2003. The Authority actively manages both ponds.
 - ▶ The Authority uses **grass carp to control algae** in storm water facilities instead of chemicals.
-



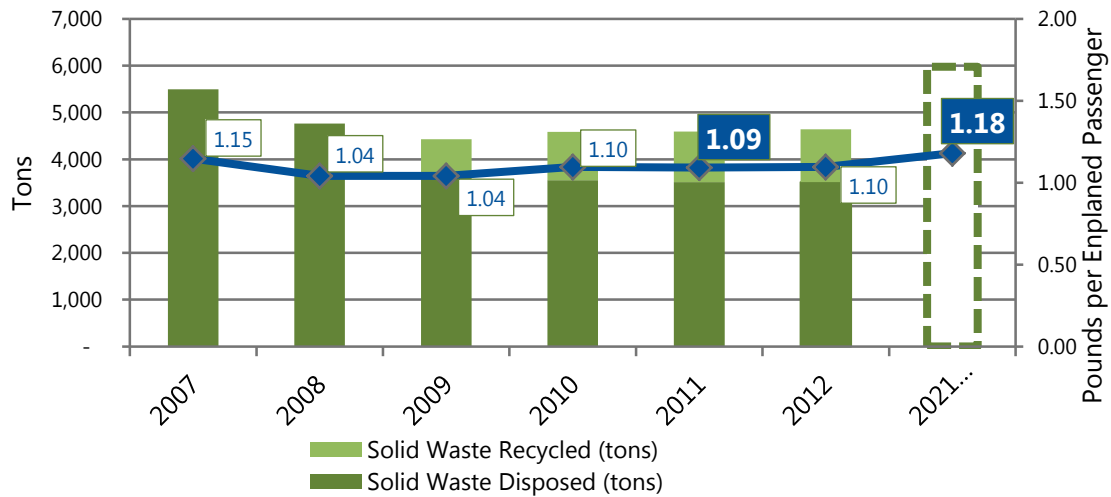
Waste Baseline

A waste/recycling opportunities assessment was conducted to document current waste management information and to provide recommendations for increasing waste diversion at the Airport. Waste diversion is defined as the volume of waste that is diverted from entering the waste stream for disposal through methods that may include source reduction or reuse, recycling, mulching, or composting.

Minimal waste from the Airport is sent to a landfill facility. The City of Tampa collects solid waste from the Airport and transports it to the McKay Bay Waste-to-Energy (WTE) facility, which processes up to 1,000 tons of municipal solid waste per day and has an electric-generating capacity of 22,000 kilowatts.² The City diverts waste that cannot be processed in the WTE facility (i.e., nonburnable waste, waste that may damage equipment, nonpermitted waste, or waste collected during a maintenance outage at the WTE facility or when the WTE facility reaches processing capacity) to the Hillsborough County Southeast Landfill.

The 2011 and 2021 solid waste performance data are presented over time to illustrate recent solid waste use trends.

Annual Solid Waste Disposal and Recycling Quantities (Total Tons and Pounds per Enplaned Passenger)



NOTE: The Authority developed and implemented a recycling program in 2009.

SOURCES: Hillsborough County Aviation Authority, solid waste and recycling records, 2007–2012 (actual); Ricondo & Associates, May 2014 (2021 projected solid waste).

PREAPRED BY: Ricondo & Associates, Inc., May 2014.

² Wheelabrator KcKay Bay Inc. (a Waste Management Company), <http://www.wheelabratortechnologies.com/linkservid/56046D7A-5056-B35E-2CA28FD174C9DABF/showMeta/0/> (Accessed June 1, 2014).

The Authority developed and implemented a recycling program in 2009 that includes commingled collection and recycling in the Main Terminal and Airside buildings. In addition, the Authority and Airport tenants reuse and recycle many items, diverting them from the waste stream. By 2011, an estimated 24 percent of the solid waste stream was collected and recycled through the commingled recycling program.

Since the recycling program began in 2009, an increasing percentage of waste is diverted from the waste stream each year. Metrics the Authority tracks related to waste management include total solid waste disposed (in tons) by month and year, pounds per enplaned passenger by month and year, and estimated recycling tonnage for terminal operations by month and year, as well as estimated savings by month and year.

The *Waste/Recycling Opportunities Assessment Report* provides recommendations for improving the Airport solid waste and recycling program and focuses on opportunities to increase solid waste diversion. Many of the recommendations documented in the assessment are incorporated into this Sustainable Management Plan as sustainability initiatives (Chapter 5).

Waste Diversion*

Recycled Items

- Antifreeze
- Batteries
- Commingled paper, paperboard, newspapers, magazines, plastic, glass, aluminum and steel cans
- Cardboard
- Cooking oil
- Electronics and computers
- Fluorescent Bulbs
- In-flight items
- Oils and lubricants
- Refrigerants
- Scrap metal
- Shrink wrap and mixed plastics
- Tires
- Toner cartridges
- Whipped cream canisters

Reused Items

- Coffee grounds for composting
- Food donation
- Landscape waste for mulching
- Pallet reuse

*Items diverted from the waste stream by the Authority and/or Airport tenants and business partners.

Sustainability Achievement Highlights

- ▶ The Authority implemented a **recycling program** in 2009, and as of 2013, over 20 different items are diverted from the solid waste stream through reuse and recycling.
- ▶ HMS Host, the Airport's concessionaire, and the University of South Florida Botanical Gardens have entered into a **composting partnership** to collect coffee grounds from the Airport for use as compost at the Botanical Gardens.
- ▶ HMS Host **donates food** to Feeding America Tampa Bay. Over 11,000 meals, approximately 9,000 pounds of food, are donated per month. Donations are made 5 days per week.
- ▶ The Authority provides infrastructure to enable **in-flight recycling**. Participating airlines include Delta Air Lines, Southwest Airlines, United Airlines, JetBlue, American Airlines, and British Airways.



Build Green and Buy Green Baseline

In addition to exploring how to improve the sustainability of the Authority's operations and maintenance activities, the Authority is focusing specifically on how to improve the sustainability performance of future development and purchases.

BUILD GREEN

The Authority has taken actions to integrate aspects of sustainability and green building into ongoing development projects, and some actions are highlighted in other sections of this chapter (e.g., installation of low-flow fixtures for restroom renovation projects). The Authority does not comprehensively track sustainable design accomplishments nor are sustainable measures required during construction. As a result, there is not sufficient data or information to establish a baseline for the Build Green priority at the time of the Sustainable Management Plan project. As the Authority embarks on the development program outlined in the Airport Master Plan Update, the Authority endeavors to increasingly integrate sustainability into project design and construction.

BUY GREEN

The Authority created a Procurement Department in 2011 to centralize and standardize procurement activities. Procurement decisions are made through a low-bid process. Approximately 80 percent of everyday goods are procured through a state purchasing contract maintained by the Florida Department of Management Services, and the remaining 20 percent of goods are put out to bid. Professional services and design and construction services are procured through facilitated committee review of qualifications or proposals. Although sustainability language has been included recently in requests for qualifications and proposals, the Authority does not have a sustainable procurement policy or consistently employ sustainability criteria to guide procurement decisions for goods or services. As a result, data or information to establish a baseline for the Buy Green priority were not available at the time of the Sustainable Management Plan project.

Sustainability Achievement Highlights

Build Green

- ▶ The Authority developed a Design Criteria Manual to guide **sustainable design of the Main Terminal Modernization (MTM) program**.
- ▶ In 2010, the Authority developed a draft sustainable design manual that outlined a process to **integrate environmental sustainability into capital projects**.

Buy Green

- ▶ In 2011, the Authority created a **Procurement Department** to centralize and standardize procurement activities.
- ▶ One of the Authority's three printers is an **FSC-certified printer**. Printers that maintain FSC Chain-of-Custody certification provide assurance that the paper stock being used has been harvested in a socially and environmentally responsible manner.



Energy Baseline

A substantial component of an airport’s environmental footprint and cost are contributed to energy (electricity and fuel use). Energy is also a controllable expense that can benefit from initiatives that improve the overall environmental performance of the airport as reduce ongoing operational expenditures.

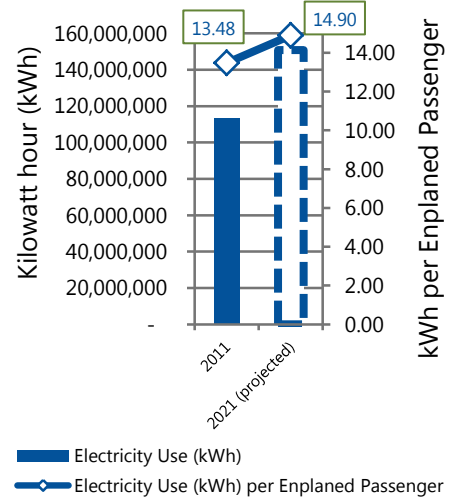
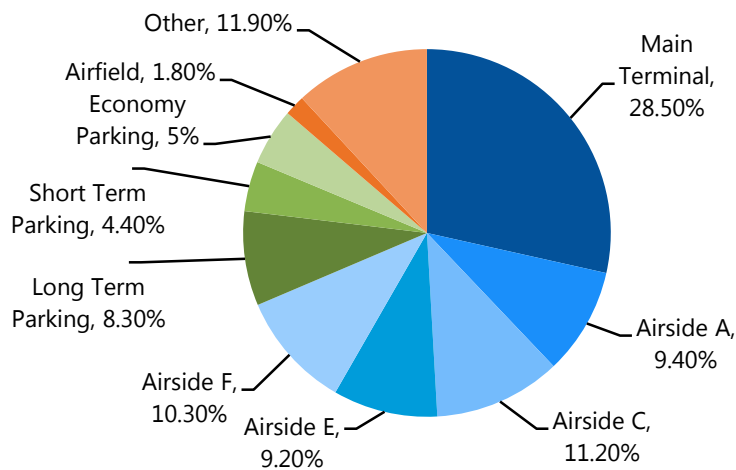
ELECTRICITY

The Authority’s utility budget, which includes electricity, accounted for over 14 percent of the total operating budget in 2011, compared with an average of 6.4 percent for large hub U.S. airports in the same year.³ With energy costs comprising a significant component of the Authority’s operating budget, an energy survey was conducted to evaluate the overall performance of existing facilities and identify means to improve energy efficiency.

The Main Terminal and the four Airside buildings collectively account for 70 percent of electricity use. Of these facilities, the Main Terminal building is both the largest consumer of energy at the Airport and the least energy efficient on a square foot basis, which can be attributed to factors including a high equipment load; retail and restaurant tenants with higher energy demands; elevators and escalators; baggage claim conveyor belts; outdated or inefficient heating, ventilation, and air conditioning (HVAC) systems; and infiltration of unconditioned outdoor air as people enter and exit the terminal building.

Electricity Use

(Percent Use by Facility [2012] and Annual Use [2011 and 2021])



SOURCES: Hillsborough County Aviation Authority, electrical use records, 2011–2012 (actual), Ricondo & Associates, Inc., May 2013 (projected).
 PREAPREP BY: Ricondo & Associates, Inc., May 2014.

³ Hillsborough County Aviation Authority, Budget for Fiscal Year 2011; and U.S. Department of Transportation, Federal Aviation Administration, Compliance Activity Tracking System (CATS), Airport Financial Reports, FAA-5100-127, as of March 5, 2014.

The most energy efficient Airside buildings on a square foot basis are Airsides C and E, relatively new facilities that opened in 2004 and 2002, respectively. Airside F, the oldest Airside building, opened in 1987 and has been renovated several times since, most recently in 2013. It is the least energy efficient facility of the Airside buildings. Collectively the parking structures consume approximately 16 percent of total Airport electricity use, primarily attributable to facility lighting. The garages generally do not allow daylight to effectively illuminate the interiors of the structures, and are illuminated by a combination of fluorescent and metal halide fixtures.

The *Energy Survey Report* identifies 17 Energy Conservation Measures (ECMs) for further investigation. Many of these ECMs became initiatives that are incorporated into the Sustainable Management Plan (Chapter 5).

FUEL

The Authority's vehicles and equipment use both petroleum-based and alternative fuels.

The Authority's Fleet by Fuel Type

Petroleum (Gasoline and Diesel)

- 44 fleet vehicles
- Landscaping equipment including 4 diesel Gators
- Heavy duty equipment (e.g., tractors, backhoes)
- Fire fighting vehicles
- EMS vehicles
- Several generators

Liquid Propane Gas (LPG)

- 1 generator

Compressed Natural Gas (CNG)

- 31 fleet vehicles including 15 shuttles and 6 employee buses

Bi-fuel (CNG/Gasoline)

- Several Authority fleet vehicles are bi-fuel, which were purchased because no 100 percent CNG vehicles were available at the time of purchase

Electricity

- 13 electric cart vehicles

Sustainability Achievement Highlights

Electricity

- ▶ The Authority started installing [LED lighting on the airfield](#) and in sign fixtures in 2009.
- ▶ [Airside F lighting replacement](#) converted high output (HO) fluorescent lighting to new ceramic metal halide (MH) lighting technology. MH lamps last 50 longer and have greater light output than HO fluorescent lamps.
- ▶ The Authority implemented improvements to the [building control system](#), including temperature setbacks, load shed programs, and lighting controls.
- ▶ The Authority implemented [non-peak baggage system energy conservation improvements](#), resulting in energy savings of approximately \$60,000 per year.

Fuel

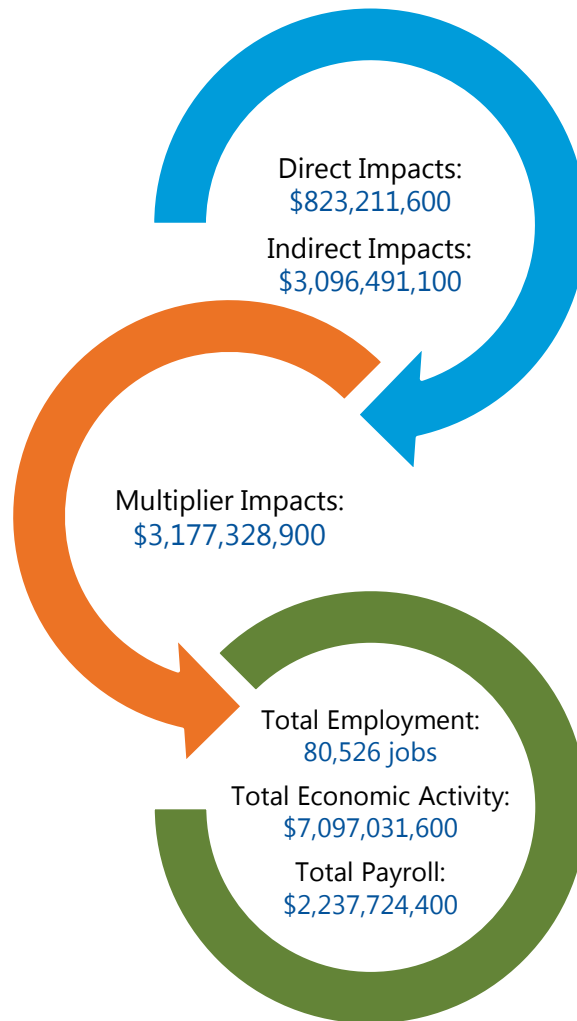
- ▶ The Authority has installed three [electric vehicle charging stations](#) for the public and high-capacity chargers to support United Airlines' electric ground support equipment on the airside.
- ▶ Florida's first [public/private CNG fueling station](#) was opened at the Airport in 2012. The station was constructed and is operated by Clean Energy and is located south of Hillsborough Avenue near the Airfield Support Facility.



Regional Economic Baseline

The Airport generates economic benefits associated with spending on commercial passenger travel, including visitors to the Tampa Bay area, cargo transport, employment at the Airport, among other activities. The Florida Department of Transportation completed an economic impact study of Florida airports in 2010, and concluded that Tampa International Airport created over 80,000 jobs and generates over \$7 billion in total economic activity, with a total payroll of \$2.2 billion.

Tampa International Airport Economic Impact (2010)



SOURCE: Florida Department of Transportation, *The Economic Impact of Tampa International Airport*, March 2010.
 PREAPRED BY: Ricondo & Associates, Inc., May 2014.

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CHAPTER 4

Sustainability Goals and Performance Targets

Based on the Authority’s sustainability accomplishments, baseline performance, and history of tracking performance data relevant to sustainability priorities, Authority staff established a mix of quantitative and qualitative goals and related performance targets to gauge progress towards goal achievement. The goals are organized by the triple-bottom line of people, planet, and prosperity, and by the Authority’s seven sustainability priorities.



Goal Statements by Priority Topic



PEOPLE

Health, Safety, and Security

Enhance the health, safety, and security of the Airport community

Reassess disaster recovery plans in the context of changing circumstances (such as new facilities and evolving technology)

Ensure safe and secure information technology and data systems

Community

Inspire sustainability actions throughout the Airport community

Create a learning Airport community focused on continual improvement

Exceed the expectations of our customers for a sustainable Airport experience

Enhance links between the Airport and the Tampa Bay area community

Support regional planning interests



PLANET

Natural Systems Management

Reduce greenhouse gas emissions (Scopes 1 and 2) on a per passenger basis by 5 percent by 2021 (compared with a 2011 baseline)

Reduce potable water use on a per passenger basis by 10 percent by 2021 (compared with a 2011 baseline)

Establish a target percent for low-maintenance, non-wildlife attracting species for each project involving landscaping

Provide opportunities for people to experience the Tampa Bay area’s natural environment

Waste Management

Reduce, reuse, and recycle to reduce the solid waste disposed on a per passenger basis by 10 percent by 2021 (compared with a 2011 baseline)

Encourage zero-waste zones within the Airport campus

Build Green and Buy Green

Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems

Promote sustainable procurement throughout the TPA community



PROSPERITY

Energy Management

Reduce electricity consumption on a per passenger basis by 3 percent by 2021 (compared with a 2011 baseline)

Pursue strategies to reduce petroleum fuel use

Promote the use of renewable energy sources over traditional energy sources

Regional Economic Impact

Pursue strategies to increase tenant revenues

Support local, regional, and state efforts in attracting new business to the community

Prioritize and implement financial flexibility through cost containment, access to capital, and contingency planning

To track progress towards goal achievement, the following 15 performance metrics and activities will be tracked:



Health, Safety, and Security

- Annual review of changing circumstances (e.g., facilities, technology) that may affect existing disaster recovery plans; identification of plans in need of updates/revision; and summary of plans that have been updated



Community

- Annual summary of community (e.g., agencies, local community, travelers, industry) outreach activities on the topic of sustainability
- Annual summary of Authority participation in/support of regional planning efforts



Natural Systems Management

- Annual or biennial greenhouse gas emissions inventory update, with a performance target of 5 percent reduction of greenhouse gas emissions (Scopes 1 and 2) on a per passenger basis by 2021 (compared with a 2011 baseline)
- Ongoing tracking of potable water use, with performance target of 10 percent reduction by 2021 (compared with a 2011 baseline)
- Annual summary of activities completed that connect customers with Tampa Bay area's natural environment



Waste Management

- Annual tracking of solid waste disposed per passenger, with a performance target of 10 percent reduction on a per passenger basis by 2021 (compared with a 2011 baseline)
- Annual summary of activities encouraging zero-waste zones



Build Green and Buy Green

- Annual summary of documented lessons learned and sustainable design achievements through the implementation of the Sustainable Design Criteria Manual (SDCM)
- Development of a sustainable procurement policy by 2015



Energy Management

- Annual tracking of electricity use per passenger, with a performance target of 3 percent reduction on a per passenger basis by 2021 (compared with a 2011 baseline)⁴
- Annual tracking of petroleum fuel use

⁴ The Authority is currently working with Tampa Electric Company (TECO) and Automated People Mover (APM) project engineers to assess the electricity demand of the APM installation, as well as how best to manage that demand with respect to local grid utilization. Concrete estimates of this demand are forthcoming and hence the listed goal should be considered a working goal, pending adjustment as the APM planning process proceeds.

- Annual tracking of energy generated on Airport through renewable energy sources



Regional Economic Impact

- Annual summary of Authority activities to support local, regional, and state efforts in attracting new business to the community
- Annual summary of actions towards incorporating life-cycle costing into capital project decision making, including examples or case studies where applicable, and formal incorporation of life-cycle costing into capital project decision making by 2021

In addition to the above actions and performance metrics identified to track overall progress of the Sustainability Program, the Authority will track performance metrics associated with the individual initiatives identified for implementation. A process for defining and tracking these metrics is included in the [INITIATIVE IMPLEMENTATION PLANS & TEMPLATE](#) tool.

The [SUSTAINABILITY PERFORMANCE MONITORING TOOL](#) provides a template for the Authority's use in tracking performance data to support the Authority's sustainability goals.

The data and information tracked in the Sustainability Performance Monitoring Tool, then, provides the basis for the Authority's sustainability performance reporting. The [REPORT CARD TEMPLATE](#) provides a suggested format and best practices for sustainability reporting to stakeholders.

Sustainability Program Toolkit

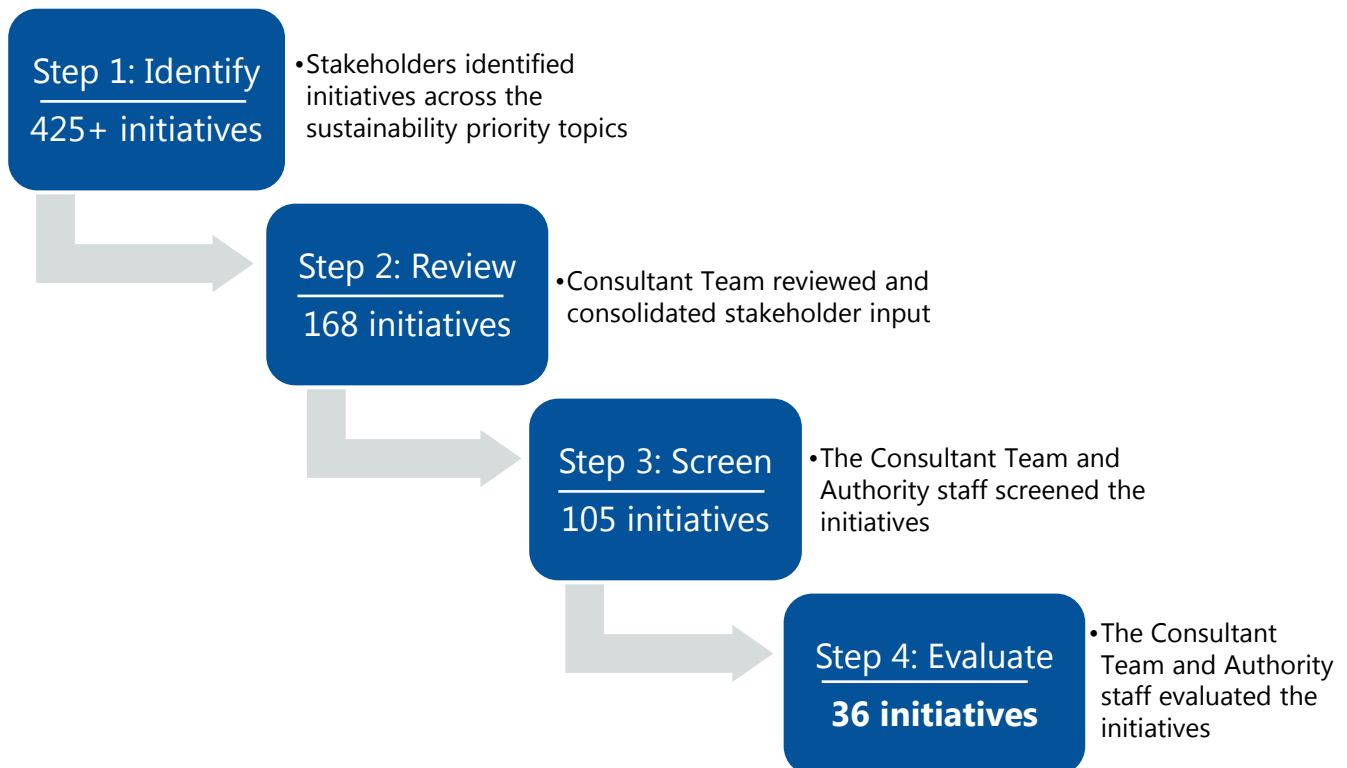
The Initiative Implementation Plans & Template, Sustainability Performance Monitoring Tool, and Report Card Template are included as part of the Sustainability Program Toolkit.

CHAPTER 5

Sustainability Initiatives

Hundreds of initiatives were identified during the project to improve the Authority's sustainability performance and meet its sustainability goals, with the list eventually narrowed to 36 initiatives the Authority plans to implement.

As a first step in the initiative identification and evaluation process, over 425 initiatives were identified collaboratively with Authority staff, stakeholders, and the public, primarily during the early visioning workshops. Second, the initiatives were reviewed—similar actions were consolidated and new initiatives, based on experience at other airports and in other industries, were added. Through this review, the list was distilled to 168 initiatives. In a third screening step, Authority staff and the Consultant Team reviewed and screened the resulting 168 initiatives to identify those initiatives that were not feasible. Authority staff also identified additional opportunities to consolidate initiatives, thus reducing the draft list to just over 100



initiatives. In a fourth and final step, the initiatives were evaluated qualitatively against criteria representative of the Authority's sustainability goals, and 36 top-ranking initiatives were identified for implementation.

The 36 initiatives the Authority plans to implement are listed on the following pages, along with an indication of which sustainability priorities benefit from implementation of the initiative. Notably, initiatives often provide multiple benefits. More detail on each initiative, such as specific tactics the Authority will consider when implementing the initiatives, are provided in the [INITIATIVES REGISTER](#).

Sustainability Program Toolkit

The Initiatives Register is included in the Sustainability Program Toolkit.

Sustainability Initiatives

		Health, Safety, and Security	Community	Natural Systems Management	Waste Management	Build Green and Buy Green	Energy Management	Regional Economic Impact
PEOPLE	Develop an employee fitness program for all Airport workers (HCAA and tenants)							
	Evaluate infrastructure resiliency and assess ability to operate without support from non-Airport systems (e.g., energy, water, waste disposal)							
	Conduct a resiliency assessment							
	Develop a sustainability employee engagement program to cultivate a culture of sustainability and innovation							
	Partner with regional and industry organizations to further the mutual pursuit of sustainability							
	Proactively support regional efforts to improve connectivity between the Airport and the local/regional community							
	Engage the traveling public in sustainability							
PLANET	Develop an action plan that provides a long-term roadmap for reducing GHG emissions							
	Consider incorporation of rainwater harvesting into new construction and major renovation projects							
	Develop a low-impact landscape maintenance program							
	Consider opportunities to integrate natural elements into facilities							
	Seek opportunities to showcase local organizations' efforts to protect and/or restore native habitats in the Tampa Bay area							
	Improve the visibility, organization, and labeling of public recycling/trash collection points							
	Provide temporary commingled recycling containers for use at special events held at the Airport							
	Develop a sustainable fleet management program for Authority vehicles							
	Explore opportunities to increase use of the Airport Compressed Natural Gas (CNG) station							
	Develop a traffic management system to reduce congestion along the Airport access roadway							
	Support regional connection to Airport People Mover (APM) system							

Sustainability Initiatives

	Health, Safety, and Security	Community	Natural Systems Management	Waste Management	Build Green and Buy Green	Energy Management	Regional Economic Impact	
PLANET (continued)	Identify and implement a zero-waste zone pilot project							
	Reduce Authority paper use							
	Expand the commingled recycling program to areas not currently covered							
	Develop a composting program at TPA for public areas, food concessionaires, kitchens, greenhouses, or other relevant areas							
	Advertise and promote recycling program results and best practices							
	Implement and maintain a Sustainable Design Criteria Manual							
	Prepare a facilities condition index to underpin a program to support capital decision-making regarding the Airport's facilities and assets							
	Update program development procedures to integrate sustainability into the planning, programming, and implementation processes							
	Define strategies to incorporate sustainability into procurement of services							
	Define strategies to increase the procurement of sustainable goods, and share strategies with tenants, where appropriate							
	Develop a "green IT" program							
PROSPERITY	Continue replacement/retrofitting escalators in the Main Terminal with variable speed controllers							
	Consider demand control ventilation strategies (CO ₂ sensors)							
	Expand use of daylight harvesting controls that dim/turn off lighting in appropriate daylight conditions							
	Explore partnership opportunity for a solar project							
	Explore expanded renewable energy supply as an alternative to fossil fuel based systems							
	Define an energy management program							
	Incorporate life-cycle cost analyses into capital project decision-making							

CHAPTER 6

Implementation Plan

The Implementation Plan identifies activities and responsibilities to implement the Authority's Sustainability Program, which comprises two main implementation components—the sustainability initiatives and the Sustainable Design Criteria Manual. Additionally, the Authority intends to finalize a communications plan in the near future. Activities to guide implementation of these three main Program components are organized into a continuous improvement model. As the Authority expands the Sustainability Program over time, additional implementation activities can be added within the framework to support new program components.

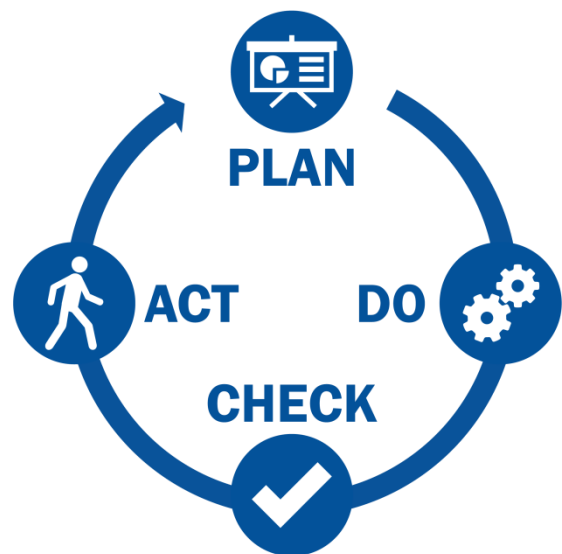
Sustainability Program Toolkit

The Sustainability Program Toolkit provides a series of tools designed specifically for the Hillsborough County Aviation Authority to implement the program defined in the Sustainable Management Plan. Tools are identified throughout this chapter for applicable implementation activities and are provided on the Sustainability Program Toolkit CD ROM.

Continuous Improvement Model

A common approach for continuous improvement of management processes is the four-step plan-do-check-act model. The model is employed and repeated to help identify gaps in processes, resolve the gaps and problems, carry out changes, and drive continuous improvement. The repeatable cycle provides a methodical approach to change management. The four steps include:

- Plan—Identify sustainability priorities, goals, initiatives, performance data and information needs, and challenges and opportunities, and define a plan or plans for actions to achieve goals.
- Do—Implement initiatives or plans to improve business processes, with clear milestones,



accountability, and timeframes, and collect necessary data and information.

- Check—Evaluate data and information, measure performance, and assess the results (Did the plan work? Understand why and how).
- Act—Report results to decision-makers and identify changes needed to improve the process

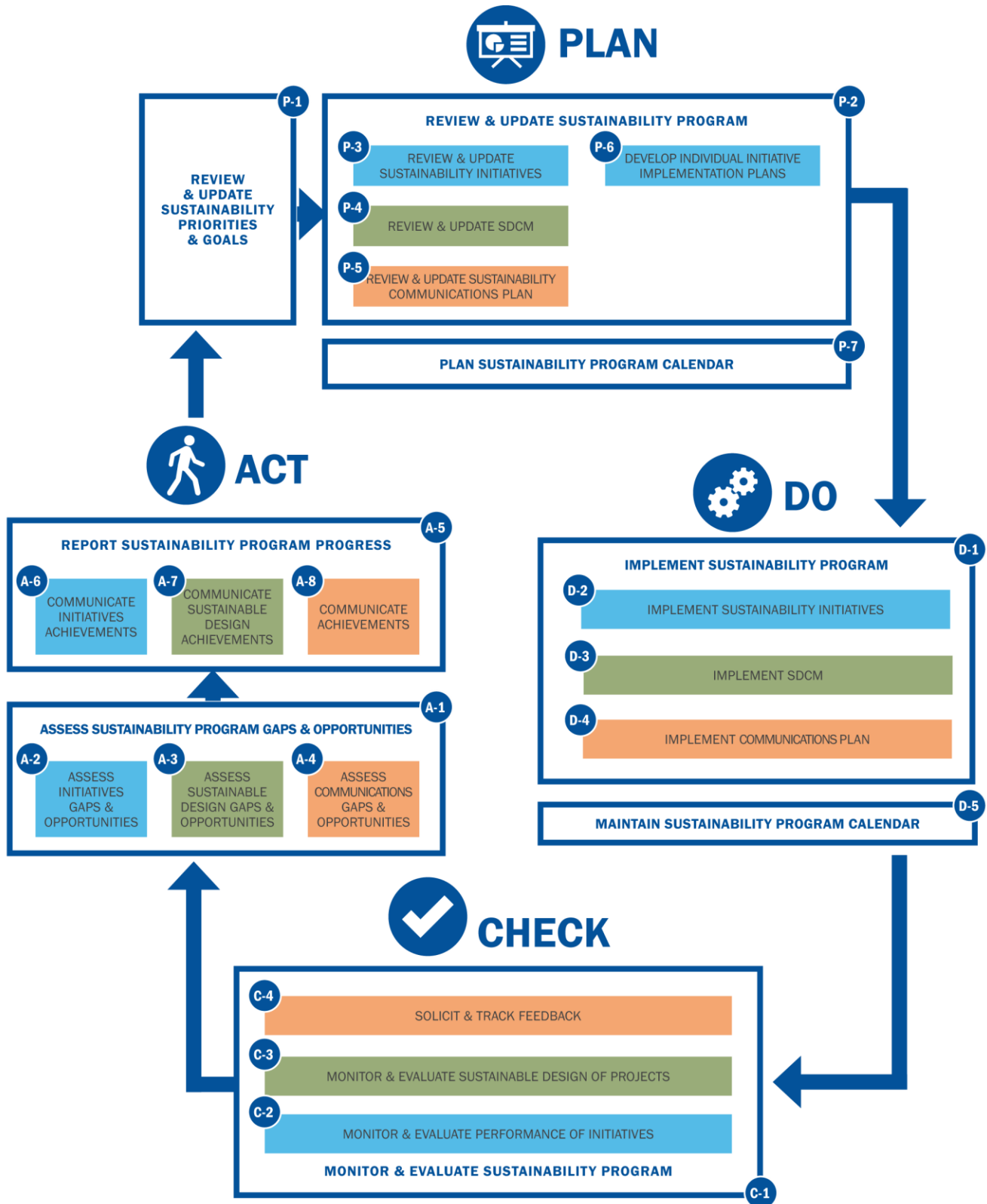
Needed changes identified in the *act step* are then addressed by reinitiating the *plan step* and continuing the cyclical process. The plan-do-check-act cycle offers the opportunity to implement changes, learn from implementation, and reevaluate, and thus, adjust implementation to continually enhance management practices and processes and improve performance.

The implementation plan for the Sustainability Program is built on this plan-do-check-act model. The implementation plan includes both overall Sustainability Program management activities to manage the full program as well as individual steps for the major plan components (the sustainability initiatives, the Sustainable Design Criteria Manual, and the communications plan). The recommended activities to implement and manage the Sustainability Program on an ongoing basis are described in the next section.

Management Activities and Responsibilities

This section provides a discussion of management activities, roles, and responsibilities for the Authority's Sustainability Program. An overview of the recommended plan-do-check-act activities is presented in the Sustainability Program Activities graphic on the following page. The remainder of this chapter provides a discussion of each of the identified management activities, which can be cross-referenced by activity number (e.g., P.1) to the activities graphic.

Sustainability Program Activities





PLAN ACTIVITIES

Plan is the first step in the plan-do-check-act cycle. In this step, priorities, goals, metrics, and targets are developed and subsequently refined during later cycles, and initiatives are defined to help the Authority achieve the goals and targets. This step also includes identification and evaluation of performance data and information needs, so that new information can be collected, if necessary, to assess performance on existing or new initiatives. The Sustainable Management Plan itself constitutes the first initiation of the cycle by setting priorities, goals, metric, and targets for the Authority's Sustainability Program and identifying sustainability initiatives for implementation. The *plan* activities discussed in this section, therefore, represent activities the Authority will conduct during subsequent passes through the *plan* step.

Seven *plan* activities are recommended, and are outlined in this section:

- Review and Update Sustainability Priorities and Goals (Activity P-1)
- Review and Update Sustainability Program (Activity P-2)
- Review and Update Sustainability Initiatives (Activity P-3)
- Review and Update SDCM (Activity P-4)
- Review and Update Sustainability Communications Plan (Activity P-5)
- Develop Individual Initiative Implementation Plans (Activity P-6)
- Plan Sustainability Program Calendar (Activity P-7)

P-1

Review and Update Sustainability Priorities and Goals

DESCRIPTION	Review and update priorities and goals in context of achievements and changing priorities.
FREQUENCY	Annually or Biennially
ROLES & RESPONSIBILITIES	<p>SUSTAINABILITY COORDINATOR Responsible for preparing for, facilitating, and formalizing a workshop or other forum to obtain Staff input and Management concurrence on revised sustainability priorities and goals.</p> <p>AUTHORITY MANAGEMENT TEAM Responsible for participating in priority/goal review workshop or other forum and providing direction on revised priorities and goals.</p>
TIPS	Exercises to build consensus around priority and goal development include use of online surveys, live interactive polling, and workshop brainstorming sessions, among others.

P-2

Review and Update Sustainability Program

DESCRIPTION	Review and update, as needed, sustainability metrics, targets, and components of Sustainability Program. Also, identify and evaluate performance data and information needs to ensure effective information is being collected to assess performance over time on existing or new initiatives. Review should consider updated sustainability priorities and goals, gaps and opportunities, and should clarify how these elements relate to the Sustainability Program components (see Activities P-3 through P-5).
FREQUENCY	Annually (more frequently, if needed)
ROLES & RESPONSIBILITIES	<p>SUSTAINABILITY COORDINATOR Responsible for preparing for, facilitating, and formalizing a workshop or other forum to obtain Authority input on metrics, targets, and performance data needs as well as revisions, as applicable. Also responsible for establishing as-needed or ad-hoc meetings based on program needs..</p> <p>OTHERS See Activities P-3 through P-5.</p>

P-3

Review and Update Sustainability Initiatives

DESCRIPTION	Review and update sustainability initiatives in the context of achievements and changing priorities and goals, and identify new initiatives for implementation.
FREQUENCY	Annually or Biennially
ROLES & RESPONSIBILITIES	<p>SUSTAINABILITY COORDINATOR Responsible for engaging internal and external stakeholders to compile and evaluate existing and new sustainability initiatives for implementation.</p> <p>INTERNAL AND EXTERNAL STAKEHOLDERS Participate in collaboration activities to identify and evaluate/rank candidate sustainability initiatives.</p>
TOOLS	See INITIATIVES REGISTER and INITIATIVES EVALUATION TOOL

See the Sustainability Program Toolkit

P-4

Review and Update SDCM

DESCRIPTION	Review and update SDCM in context of gaps and opportunities assessment, project lessons learned, and changing priorities and goals.
FREQUENCY	Annually or Biennially
ROLES & RESPONSIBILITIES	<p>SUSTAINABILITY COORDINATOR Facilitate the review of compiled lessons learned from projects for which the SDCM was implemented and update design strategies and other relevant information on the criteria fact sheets to reflect lessons learned, emerging technologies and practices, and changing priorities and goals.</p> <p>PLANNING AND DEVELOPMENT DEPARTMENT Participate in the update of the SDCM by providing project awareness and subject matter expertise.</p>
TOOLS	See the SUSTAINABLE DESIGN CRITERIA MANUAL

See the Sustainability Program Toolkit

P-5

Review and Update Sustainability Communications Plan

DESCRIPTION	Review and update, as needed, the overall Sustainability Program communications plan to reflect feedback from stakeholder engagement, and updated priorities and goals. Develop communications plans for new communications activities.
FREQUENCY	Annually or Biennially for Sustainability Program update, Ongoing for new communications activities
ROLES & RESPONSIBILITIES	<p>SUSTAINABILITY COORDINATOR Coordinate with Marketing Department to revise the Sustainability Communications Plan.</p> <p>MARKETING DEPARTMENT Support revision of Sustainability Communications Plan by providing subject matter expertise.</p>
TOOLS	See the COMMUNICATIONS PLAN GUIDANCE and REPORT CARD TEMPLATE

See the Sustainability Program Toolkit

P-6

Develop Individual Initiative Implementation Plans

DESCRIPTION	Develop an implementation plan for each of the sustainability initiatives identified for implementation in Activity P-3 . Revise, update, or create new supporting policies, as necessary.
FREQUENCY	Annually or Biennially
ROLES & RESPONSIBILITIES	INITIATIVE LEAD (for each initiative) Develop and gain approval of implementation plan for selected new initiatives and supporting policies, as needed. TO BE IDENTIFIED FOR EACH INITIATIVE Approve implementation plan.
TOOLS	See the INITIATIVE IMPLEMENTATION PLANS & TEMPLATE

See the Sustainability Program Toolkit

P-7

Plan Sustainability Program Calendar

DESCRIPTION	Develop calendar to schedule sustainability implementation activities.
FREQUENCY	Annually or Biennially
ROLES & RESPONSIBILITIES	SUSTAINABILITY COORDINATOR Develop calendar and schedule activities (e.g., meetings, workshops, stakeholder sessions, program gap and opportunity reviews).



DO ACTIVITIES

Plans established in the *plan* step are implemented in the *do* step, and the necessary data and information is collected. The actual number of individual sustainability actions being implemented at any particular time depends on the number of initiatives identified for implementation and their respective implementation periods.

Although the SDCM can be considered a sustainability initiative, and indeed ranked highly during the evaluation of initiatives conducted as part of the Sustainable Management Plan project, the SDCM is a separate Sustainability Program component since development of the manual was included as part of the project scope. Similar to the SDCM, the Authority may develop new Sustainability Program components over time.

Five *do* activities are recommended, and are outlined in this section:

- Implement Sustainability Program (Activity D-1)
- Implement Sustainability Initiatives (Activity D-2)
- Implement SDCM (Activity D-3)
- Implement Sustainability Communications Plan (Activity D-4)
- Maintain Sustainability Program Calendar (Activity D-5)

D-1

Implement Sustainability Program

DESCRIPTION	Oversee the implementation of the Sustainability Program components, as described in Activities D-2 through D-5 .
FREQUENCY	Ongoing
ROLES & RESPONSIBILITIES	SUSTAINABILITY COORDINATOR Responsible for ensuring overall program implementation.

D-2

Implement Sustainability Initiatives

DESCRIPTION	Implement sustainability initiatives and performance data and information, per approved initiative implementation plans.
FREQUENCY	Ongoing (implementation duration varies by initiative)
ROLES & RESPONSIBILITIES	INITIATIVE LEADS A designated Initiative Lead is responsible for implementation activities associated with each selected initiative.
TOOLS	See the individual INITIATIVE IMPLEMENTATION PLANS

See the Sustainability Program Toolkit

D-3

Implement SDCM

DESCRIPTION	Integrate the SDCM into the contracting, design, and construction of Authority development projects, and capture lessons learned and project evaluation data and information. Ensure project design teams are implementing the SDCM on projects.
FREQUENCY	Ongoing, per design project activity
ROLES & RESPONSIBILITIES	<p>PLANNING AND DEVELOPMENT DEPARTMENT Responsible for implementing the SDCM on selected projects and tracking lessons learned to build a body of knowledge about sustainable design at the Airport.</p> <p>PROJECT DESIGN TEAMS Responsible for integrating sustainability initiatives, as identified with Planning and Development Department, into project design, documenting design actions, and supporting the tracking of sustainability achievements and lessons learned (including barriers encountered).</p>
TOOLS	See the SUSTAINABLE DESIGN CRITERIA MANUAL

See the Sustainability Program Toolkit

D-4

Implement Communications Plan

DESCRIPTION	Engage stakeholders with sustainability messaging, and capture data and information.
FREQUENCY	Ongoing
ROLES & RESPONSIBILITIES	SUSTAINABILITY COORDINATOR Responsible for defining and facilitating opportunities to message sustainability to the Airport stakeholders and the public. MARKETING DEPARTMENT Support the messaging of sustainability achievements and outreach to the Airport stakeholders and the public.
TOOLS	See the COMMUNICATIONS PLAN GUIDANCE [Full branding/messaging materials to be developed by the Authority]

See the Sustainability Program Toolkit

D-5

Maintain Sustainability Program Calendar

DESCRIPTION	Maintain program calendar.
FREQUENCY	Ongoing
ROLES & RESPONSIBILITIES	SUSTAINABILITY COORDINATOR Responsible for maintaining the program calendar, including scheduling of meetings, public workshops, etc.



CHECK ACTIVITIES

During the *check* step, the Authority will monitor and evaluate data and information to determine whether implementation of the various Sustainability Program initiatives is improving the Airport's sustainability performance. Monitoring may take place both for the program as a whole in relation to the sustainability goals and targets, or at the initiative level to gauge the success of individual initiative implementation (the associated performance targets would be defined in the individual Initiative Implementation Plans).

Four *check* activities are recommended, and are outlined in this section:

- Monitor and Evaluate Sustainability Program (Activity C-1)
- Monitor and Evaluate Performance of Initiatives (Activity C-2)
- Monitor and Evaluate Sustainable Design of Projects (Activity C-3)
- Solicit and Track Feedback from Communications Activities (Activity C-4)

C-1

Monitor and Evaluate Sustainability Program

DESCRIPTION	Compile overall performance data and lessons learned for Sustainability Program and program components, and review results.
FREQUENCY	Ongoing, with review and compilation of data on an annual or biennial basis
ROLES & RESPONSIBILITIES	SUSTAINABILITY COORDINATOR Responsible for compiling data for the overall Sustainability Program and individual initiatives (as provided by the Initiative Leads), and evaluating program to determine if sustainability performance is improving.
TOOLS	See the SUSTAINABILITY PERFORMANCE MONITORING TOOL

See the Sustainability Program Toolkit

C-2

Monitor and Evaluate Performance of Initiatives

DESCRIPTION	Track and evaluation performance of initiatives per the individual Initiative Implementation Plans, and share performance with the Sustainability Coordinator at periodic (e.g., monthly) progress meetings.
FREQUENCY	Project Milestones or Periodic Progress Meetings
ROLES & RESPONSIBILITIES	INITIATIVE LEADS Responsible for tracking performance data for individual initiatives, evaluating performance data, and reporting to Sustainability Coordinator. SUSTAINABILITY COORDINATOR Track performance data for initiatives being implemented and evaluating initiatives to determine if sustainability performance is improving.

C-3

Monitor and Evaluate Sustainable Design of Projects

DESCRIPTION	Monitor process for incorporating sustainability into development projects, and evaluate achievements through the capture of lessons learned.
FREQUENCY	Project Milestones
ROLES & RESPONSIBILITIES	PLANNING AND DEVELOPMENT DEPARTMENT Responsible for tracking sustainability strategies considered and integrated into design projects and the resulting lessons learned from those project designs for future comparable designs. SUSTAINABILITY COORDINATOR Responsible for participating in project design reviews and supporting integration of sustainable strategies into project design.

OTHER See [SUSTAINABLE DESIGN CRITERIA MANUAL \[Worksheets\]](#)

See the Sustainability Program Toolkit

C-4

Solicit and Track Feedback from Communications Activities

DESCRIPTION	Capture and evaluate feedback from stakeholders.
FREQUENCY	Ongoing
ROLES & RESPONSIBILITIES	<p>SUSTAINABILITY COORDINATOR Responsible for capturing feedback received from stakeholders and the public and identify input that should be considered for integration into the Sustainability Program (e.g., new initiatives).</p> <p>MARKETING DEPARTMENT Support Sustainability Coordinator in conducting outreach and capturing feedback received.</p>
TOOLS	<p>See the COMMUNICATIONS PLAN GUIDANCE</p> <p>[Full branding/messaging materials to be developed by the Authority]</p>

See the Sustainability Program Toolkit



ACT ACTIVITIES

Based on evaluation of performance data captured in the *check* step, *act* activities guide the Authority to identify gaps and opportunities for Sustainability Program performance and to report performance to stakeholders. Gaps and opportunities identified in this step are carried into the *plan* step as the Authority reinitiates the plan-do-check-act cycle. This is the essence of the continual improvement process—capturing lessons learned and building on them to improve future performance.

Eight *act* activities are recommended, four associated with assessing gaps and opportunities and four with reporting achievements, and are outlined in this section:

- Assess Sustainability Program Gaps and Opportunities (Activity A-1)
- Assess Initiatives Gaps and Opportunities (Activity A-2)
- Assess Sustainable Design Gaps and Opportunities (Activity A-3)
- Assess Communications Gaps and Opportunities (Activity A-4)
- Report Sustainability Program Progress (Activity A-5)
- Communicate Initiative Achievements (Activity A-6)
- Communicate Sustainable Design Achievements (Activity A-7)
- Communicate Achievements (Activity A-8)

A-1

Assess Sustainability Program Gaps and Opportunities

DESCRIPTION	Identify opportunities to adjust Sustainability Program implementation.
FREQUENCY	Annually or Biennially
ROLES & RESPONSIBILITIES	SUSTAINABILITY COORDINATOR Responsible for identifying improvements to the overall Sustainability Program, with input from others as needed.
TIPS	Benchmarking other organizations and airports, participating in industry discussions about sustainability management (e.g., conferences, webinars).

A-2

Assess Initiatives Gaps and Opportunities

DESCRIPTION	Review initiative implementation and performance data to identify gaps and opportunities for each initiative being implemented.
FREQUENCY	Annually or Biennially, and upon completion of an initiative
ROLES & RESPONSIBILITIES	SUSTAINABILITY COORDINATOR Responsible for facilitating periodic review of overall achievements from the Authority's sustainability actions and identify needs to adjust initiative implementation or identify new initiatives for implementation. INITIATIVE LEADS Participate in review of initiative achievements and needs for adjustment.

A-3

Assess Sustainable Design Gaps and Opportunities

DESCRIPTION	Identify gaps and opportunities in the SDCM and green building program.
FREQUENCY	Annually or Biennially, and upon project completion
ROLES & RESPONSIBILITIES	SUSTAINABILITY COORDINATOR Responsible for facilitating review of the SDCM implementation process and the project-based sustainable design lessons learned. PLANNING AND DEVELOPMENT DEPARTMENT Participate in review of the SDCM implementation process, project-based lessons learned, and continually contribute to the lessons learned during SDCM implementation. Identify and lead opportunities to expand the sustainable design criteria based on industry developments, technology, rating system alignment, or other drivers.

A-4

Assess Communications Gaps and Opportunities

DESCRIPTION	Identify gaps and opportunities in sustainability messaging and ongoing communications
FREQUENCY	Annually or Biennially, and upon project completion
ROLES & RESPONSIBILITIES	SUSTAINABILITY COORDINATOR Responsible for facilitating review of communications processes. MARKETING DEPARTMENT Participate in review of communications processes.

A-5

Report Sustainability Program Progress

DESCRIPTION	Compile an annual or biennial sustainability report and confirm audience(s); consider separate internal and external report cards/reporting formats.
FREQUENCY	Annually or Biennially
ROLES & RESPONSIBILITIES	SUSTAINABILITY COORDINATOR Responsible for developing report content, engaging other Airport content developers and contributors, and issuing report. MARKETING DEPARTMENT Support Sustainability Coordinator in communications activities, including developing report content, where applicable. OTHER DEPARTMENTS Support Sustainability Coordinator in report development by providing content or access to content.
TOOLS	See the REPORT CARD TEMPLATE

See the Sustainability Program Toolkit

A-6

Communicate Initiatives Achievements

DESCRIPTION	Communicate initiative successes and lessons learned to various stakeholders (e.g., employees, tenants/business partners, aviation industry, agencies, the public).
FREQUENCY	Annually or Biennially, and upon project completion
ROLES & RESPONSIBILITIES	SUSTAINABILITY COORDINATOR Responsible for identifying initiative achievements to highlight. INITIATIVE LEADS Support the identification of initiative achievements and provide relevant supporting data and information for messaging purposes.
TOOLS	See Activity A-5

A-7

Communicate Sustainable Design Achievements

DESCRIPTION Identify messages to communicate successes and lessons learned during implementation of sustainable design to foster an understanding of the positive benefits and impacts that the Authority has had on the community.

FREQUENCY Annually or Biennially, and upon project completion

ROLES & RESPONSIBILITIES SUSTAINABILITY COORDINATOR | Responsible for identifying sustainable design messages to highlight and relevant audiences for those messages.
PLANNING AND DEVELOPMENT DEPARTMENT | Support identification and characterization of sustainable design messages.

TOOLS See **Activity A-5**

A-8

Communicate Feedback and Progress

DESCRIPTION Identify messages for internal communication to highlight successes and challenges of communications activities.

FREQUENCY Annually or Biennially

ROLES & RESPONSIBILITIES SUSTAINABILITY COORDINATOR | Responsible for identifying sustainability messages and audience(s).
MARKETING DEPARTMENT | Support Sustainability Coordinator in communications messaging.

TOOLS See **Activity A-5**



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Exhibit-44

TPA SUSTAINABLE DESIGN CRITERIA MANUAL (SDCM), SEPTEMBER 2014

Sustainable Design Criteria Manual



TAMPA INTERNATIONAL AIRPORT

Sustainable Design Criteria Manual

SEPTEMBER 2014

PREPARED FOR:

Hillsborough County Aviation Authority

PREPARED BY:



RICONDO[®]
& ASSOCIATES

RICONDO & ASSOCIATES, INC.

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Tampa International Airport Sustainability Program

SUSTAINABLE DESIGN CRITERIA MANUAL

Introduction

As the Hillsborough County Aviation Authority (the Authority) embarks on the implementation of the Sustainability Program for Tampa International Airport (the Airport), one of the high ranking initiatives identified during the Sustainable Management Plan project is to incorporate sustainability into the planning, design, and construction of Authority projects. Development of this Sustainable Design Criteria Manual (SDCM), completed as part of the Sustainable Management Plan project, is a critical tactic of this initiative.

The Authority is committed to considering sustainability and green building approaches as near-term and longer term projects are implemented, particularly those emerging from the 2013 Airport Master Plan Update. These efforts will yield a growing understanding of the benefits, challenges, potential barriers, and opportunities created by implementing the Authority's Sustainability Program.

In a sustainable approach to the built environment, social responsibility, financial viability, environmental sensitivity, and operational efficiency are emphasized in the definition, design, and construction of projects, including significant facility renovations, modifications to existing facilities, development of new facilities, and repurposing and reuse of existing facilities. This SDCM provides guidance to project design teams on those [green building strategies that support the Authority's defined vision of sustainability and specific sustainability goals](#) articulated in the Authority's Sustainable Management Plan.

Green Building

The U.S. Environmental Protection Agency defines "green building" as "the practice of creating and using healthier and more resource-efficient models of construction, renovation, operation, maintenance and demolition," a definition that is generally understood in the design and development communities.

Background and Context

In 2013, the Authority embarked on the development of a Sustainable Management Plan under a sustainability pilot program defined by the Federal Aviation Administration (FAA). This pilot program provided an opportunity to capture, extend, and document sustainable actions at the Airport, as well as define a comprehensive sustainability program. The Sustainable Management Plan was completed in 2014 and adopted as a primary component of the Sustainability Program for Tampa International Airport. This SDCM is a component of that program.

The Sustainability Program is guided by the Authority's sustainability priorities that were adopted during the Sustainable Management Plan project. These priorities formed the basis for the derivation of 22 sustainability goals. This guidance has been prepared with an emphasis on design strategies that support the Authority's sustainability goals.

The Authority's Sustainability Priorities

- Health, Safety, and Security
- Community
- Natural Systems Management
- Waste Management
- Build Green and Buy Green
- Energy Management
- Regional Economic Impacts

Intended Use

The SDCM is intended to communicate the Authority's expectations and encourage and document green building measures incorporated into advanced planning, design, and construction of projects. It is not intended to be prescriptive—establishing sustainability measures that must be incorporated during the design process—but rather encourage creativity in the design process and allow project design teams to incorporate green building strategies and measures where relevant and appropriate. The SDCM guidance should not be viewed as the only option available for infusing sustainability in project planning and design; rather, it reflects the Authority's sustainability priorities and goals and is a source of potential design strategies for promoting sustainability in built environment projects.

This SDCM supplements other design guidance and code requirements and is not intended in any way to supersede existing guidance. In all cases, design guidance and code requirements promulgated by the State of Florida, Hillsborough County, the City of Tampa, the Hillsborough County Aviation Authority, or other appropriate agency will be met first and foremost with the SDCM providing supplemental green building guidance.

Benefits

The SDCM provides the Authority with a consolidated source of planning and design guidance that can be distributed as part of the professional services solicitation and/or contracting process. Application of the guidance in this document will help the Authority achieve the sustainability goals documented in the Sustainable Management Plan. The Authority will be able to define desired areas of sustainability focus on an individual project basis, recognizing that projects will offer varying opportunities in this regard. A specific

project record will be developed for each project that highlights the relevant sustainability goals, and documents achievement or exceedance of those goals, challenges with incorporating or implementing specific sustainability measures, general costs associated with specific sustainability actions, and conflicts identified during the planning and design process for the project.

Over time, an expanding aggregate project record, representing the collective green building experience at the Airport, will allow the Authority to refine and adjust specific sustainability goals, supplement the SDCM, work to minimize or remove barriers to sustainability implementation and green building, expand the design and construction communities' understanding and prioritization of sustainability, understand the costs and benefits of prioritizing sustainability, and communicate successes and achievements to various stakeholders. For these reasons, a comprehensive project record will be a critical part of the overall Sustainability Program.

Applicability

The guidance in the SDCM ensures that all projects will include sustainability considerations with the degree of implementation driven by the scope of the project and the feasibility, benefit, and cost of the sustainability strategy. While the SDCM will be utilized initially in the design of Authority projects, it is available to tenants and others to support the design of any on-Airport projects. The SDCM formalizes and institutionalizes the Authority's commitment to infusing sustainability into ongoing operations, including development and construction.

While sustainability measures are applicable to construction activities, this manual prioritizes the design process with the general expectation that design accomplishments will ultimately lead to green building construction practices. Future iterations of the SDCM may encompass more criteria specifically related to construction activities.

Content

The SDCM includes specific criteria that are organized on [sustainable design fact sheets](#) to be considered for each project. A sample fact sheet is shown below.

SUSTAINABLE DESIGN FACT SHEET

COMMUNITY

COM-3 Noise and Acoustical Quality
Last Updated: September 25, 2014

PURPOSE
Limit noise levels and exposure in noise-sensitive spaces such as terminals and office spaces.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Enhance the health of the Airport community.
- Exceed the expectation of our customers for a sustainable Airport experience.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

- Incorporate and document a minimum of two sustainable design strategies to limit noise levels and exposure to occupants.
- Incorporate and document a minimum of four six sustainable design strategies to limit noise levels and exposure to occupants.
- Incorporate and document sustainable design strategies to reduce noise transmission to adjacent communities.

SUSTAINABLE DESIGN STRATEGIES

- Orient glazing/windows and other noise transmission surfaces away from the most noise-sensitive spaces.
- Orient buildings such that glazed or other acoustically reflective surfaces are not directed toward noise sources.
- Consider noise-sensitivity of adjacent interior spaces when siting rooms that have significant ventilation requirements (e.g., computer/server rooms).
- Utilize landscaping as a means of noise attenuation.
- Specify laminated glazing and double-pane windows to reduce noise transmission.
- Specify materials with noise-absorbent properties.
- Specify wrapping of exterior heating, ventilation, and air conditioning (HVAC) duct work with sound deadening materials.

SUSTAINABLE DESIGN CRITERIA MANUAL

Tampa International Airport

Criterion identifier and title

Intent of the criterion

Specific sustainability goals the criterion supports and supplemental benefits

Points defined for specific levels of design achievement to facilitate tracking of performance among Authority projects

Representative design strategies present ideas for and examples of candidate design measures. These strategies are not considered to be exhaustive. Project design teams are encouraged to identify, evaluate, and document strategies beyond those identified on each sheet.

Each fact sheet presents design strategies that represent ideas or examples of measures that can be taken to further the Authority’s sustainability accomplishments. However, project design teams are encouraged to consider strategies beyond those shown on each fact sheet.

Criteria were defined to align with and support the Authority’s sustainability priorities and specific goals. It is recognized that there are opportunities for sustainability measures that are not covered in the specific criteria or strategies presented in the SDCM. Project design teams are encouraged to stretch beyond the criteria presented herein to help the Authority demonstrate and communicate sustainability leadership within the aviation industry and local communities.

Design Evaluation Point System

Design Evaluation Points have been defined for each criterion and are presented on each fact sheet. The intent of the point system is to identify those areas/categories where green building actions can apply, support the documentation of sustainability achievement on an individual project basis, and facilitate comparison among Airport development projects over time. Commonality between the SDCM Design Evaluation Points and point systems defined by green building rating systems (e.g., the U.S. Green Building Council’s LEED Rating System) exists. However, the SDCM Design Evaluation Points are designed to support development of a foundational knowledge base of how sustainability can be effectively incorporated into project design at the Airport and to encourage and foster the consideration of sustainability actions as part of the design process. As the Authority refines and expands the SDCM, future guidance may more closely align with other green building rating systems. Alternatively, the Authority may opt to utilize one of these rating systems to refine the comprehensive green building program at the Airport.

Implementation

In general, the following steps will be followed in the implementation of the SDCM in Airport projects.

Project Sustainability Integration



NOTE: PMP is a Planning document that describes a project scope, budget, schedule, Airport project team, potential impacts, cost benefit analysis, delivery approach, and design review process (HCAA Development Program Manual).

Sustainability should be considered at the earliest stages of a project, allowing the Authority to capture these considerations in the Capital Improvement Program (CIP) so that project budgeting reflects realistic allowances for incorporation of sustainability measures.

The Authority relies on a documented process, defined in its *Development Program Manual*, for project planning, programming, and implementation. The sustainable design process defined in the SDCM is intended to be integrated into the Authority's current development program processes rather than conducted as a separate or parallel process. Integration will embed sustainability as a fundamental component of project budgeting, planning, programming, design, and implementation, rather than have it occur as an afterthought. Integration will also encourage durable project design that minimizes the potential for value engineering to eliminate sustainability aspects from projects.

Once a Project Management Plan (PMP) Team is established, that team will review each project to specifically define the sustainability expectations and objectives for that project.

Specifically, during pre-design, the PMP Team will, as part of the pre-design process, determine whether certain criteria in the SDCM are considered applicable to the specific project and then complete a worksheet documenting the applicability assessment and defining targeted Design Evaluation Points. An excerpt of the [Project Record Worksheet](#) is shown below. Through the worksheet, the applicability of these criteria to each project will be documented as part of the design record for ultimate communication with the design team. Use of the SDCM encourages the incorporation of sustainability practices, in support of specific goals, appropriate and applicable to the nature and scale of projects.

SDCM Implementation Tools

The Project Record Worksheet, Design Criteria Experience Summary, and Innovation Worksheet are included as part of the Sustainability Program Toolkit.

Project Record Worksheet Excerpt

TAMPA INTERNATIONAL AIRPORT		PRE-DESIGN						POST-DESIGN		
Code	Sustainable Design Criteria	Applicable to Project? (Yes or No)	PMP TEAM INTERFERENCE	If Criterion is applicable, identify the number of DESIGN EVALUATION POINTS that are targeted based on the ADDED COST TO THE PROJECT			List DESIGN EVALUATION POINTS that should be considered in Project Design	DESIGN TEAM INTERFERENCE	POINTS ACHIEVED through Project Design	
				Added Cost	May Add Cost	Limited / No Cost Impact			POINTS ACHIEVED	Of points that "should be considered," which were determined to not be feasible
Sustainable Procurement										
P-1	Furniture and Equipment	--								
P-2	Certified Wood Materials	--								
P-3	Rapidly Renewable Materials	--								
P-4	Recycled Content Materials	--								
P-5	Local/Regional Materials	--								
P-6	Low-emitting materials	--								
P-7	Green IT	--								
Energy Management										
EN-1	Systems Commissioning	--								
EN-2	Improved Energy Performance	--								
EN-3	Alternative and Renewable Energy	--								
EN-4	Energy Measurement and Verification	--								
EN-5	Energy Management	--								
EN-6	Maintenance Requirements	--								
EN-7	Thermal Comfort	--								
Health, Safety, and Security										
HSS-1	Indoor Air Quality Performance	--								
HSS-2	Environmental Tobacco Smoke Control	--								
HSS-3	Carbon Dioxide Monitoring	--								
HSS-4	Construction Indoor Air Quality Management	--								
HSS-5	Indoor Chemical & Pollutant Source Control	--								
Community										
COM-1	Light Pollution Reduction	--								
COM-2	Exterior Views	--								
COM-3	Noise and Acoustical Quality	--								

At design initiation, the SDCM will be provided to the project design team, along with a summary identifying the criteria specifically considered by the PMP Team to be applicable to the project. It will be the responsibility of the project design team to consider each of these design criteria and document the efforts and conclusions in addressing each criterion using the [Design Criteria Experience Summary](#). In some cases during the design development phase, it will be concluded that it is not feasible to incorporate a specific criterion into the project based on cost, regulatory, or other considerations. It will be the responsibility of the project design team to document the reasons that a specific criterion is determined to be infeasible and to communicate that to the Authority during project design and/or sustainability reviews.

Design Evaluation Points achieved during the design process will be documented by the by Project Director and PMP Team based on sustainability reviews at established design review milestones. It is the intent of the Authority to continually extend its understanding of sustainability influence on and achievement through the design process. Consequently, the design team is encouraged to consider sustainability early in the design process, looking for opportunities beyond those defined in the SDCM.

Innovation

While the sustainable design strategies listed on the SDCM fact sheets offer ideas for incorporating sustainability into the built environment, these strategies are not the only recognized ways to accomplish the purpose of each sustainability criterion or the broader purpose of green building. Project design teams are encouraged to explore and propose supplemental or alternative design strategies that incorporate new or emerging green building approaches and products to achieve the sustainable design intent expressed in the criteria purpose statements or that push beyond the Authority's established sustainability criteria and meet the broader intent of sustainable design. Encouraging innovation and *out-of-the-box* problem solving has the potential to both increase the sustainability aspects and benefits of individual projects, but also to expand the Authority's understanding of green building opportunities.

When an alternative sustainable design strategy is proposed, the project design team is encouraged to complete the [Innovation Worksheet](#) to document and explain the proposal, describe the alternative approach and its alignment with one or more criteria in the SDCM, and identify anticipated budget or schedule consequences.

Conclusion

Sustainable design strategies and best practices continue to evolve and expand, suggesting future opportunities that are not captured in this version of the SDCM. The Authority intends to update this guidance document in the future, as necessary, to reflect:

- ▶ Experience with the application of this guidance to Authority projects
- ▶ Experience of and alignment with the sustainability actions and accomplishments of Airport stakeholders
- ▶ Accomplishment of defined Authority sustainability goals (allowing the designation of future sustainability goals as sustainability remains an organizational priority)
- ▶ Identification of new opportunities for sustainability in design (new products, technologies, etc.)

Natural Systems Management: Air



NATURAL SYSTEMS MANAGEMENT: AIR

A-1

Erosion and Sediment Control—Dust

Last Updated: September 25, 2014

PURPOSE

Minimize airborne dust and particulate matter generated by construction activities.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Design and construct more environmentally responsible facilities using industry best practices and systems.
- Enhance the health, safety, and security of the airport community.
- Reduce airborne dust and particulate matter during construction.

DESIGN EVALUATION POINTS (1 POINT MAXIMUM)

1. Develop an Erosion and Sediment Control Plan that includes a plan for dust and particulate matter, minimizes the construction footprint, and requires for monitoring of activities throughout construction.

SUSTAINABLE DESIGN STRATEGIES

- Specify the re-use of stockpiled topsoil (if available).
- Prepare a construction dust control plan covering construction activities, site, and material transport (minimize fugitive dust through tarping, spraying, roadway sweeping, or other measures). Consider environmental factors such as seasonal weather patterns (dry vs. wet season) in developing plan.
- Employ temporary and permanent soil stabilization techniques, such as hydroseeding, biodegradable rolled mats, lime, soil binders, and mulching.
- Specify the use of non-potable water (e.g., stormwater, reclaimed, or graywater) to provide dust control.
- Minimize the size and duration of disturbed construction areas at any one time.
- Control/minimize wind driven movement of sediments and dust through the use of barriers such as fences, hay bales, and crate walls.
- Specify rock or other stabilizing materials on designated haul routes, and restrict vehicle and equipment movements to the use of the designated routes.



NATURAL SYSTEMS MANAGEMENT: AIR

A-2

Alternative Transportation

Last Updated: September 25, 2014

PURPOSE

Reduce pollution and regional road congestion by reducing low-occupant vehicle use.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce greenhouse gas emissions (Scopes 1 and 2) on a per passenger basis by 5% by 2021 (compared with a 2011 baseline).
- Reduce air pollutant emissions.
- Enhance links between the Airport and the Tampa Bay area community.
- Support regional planning interests.
- Pursue strategies to reduce petroleum fuel use.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Develop an alternative transportation plan (consistent with other local and regional transportation master plans) that reduces the amount of automobile traffic and increases the option for public and alternate transportation types.
2. Incorporate 1 to 3 sustainable design strategies to improve alternative transportation access and use.
3. Incorporate 4 or more sustainable design strategies to improve alternative transportation access and use.

SUSTAINABLE DESIGN STRATEGIES

Public Transportation/Mass Transit:

- Maintain passenger rail right-of-way on appropriate development parcels.
- Coordinate with Tampa Bay Area Regional Transportation Authority (TBARTA) to verify that all current and future projects are compatible with the TBARTA master plan.
- Coordinate with Hillsborough and Pinellas Metropolitan Planning Organizations (MPOs) to verify that all current and future projects are compatible with their Long Range Transportation Plans (L RTPs).



Bicycle and Non-vehicular Access:

- Coordinate with local and regional transportation planning organizations to evaluate the potential of co-locating a multi-use trail with passenger rail right-of-way for appropriate projects.
- Incorporate bicycle lanes and pedestrian facilities (e.g., bike lanes, sidewalks, improved crosswalks) to public transit connections that are supported by appropriate signage and consistent with local and regional transportation plans.
- Incorporate a facility for secure bicycle storage and access to convenient changing/shower areas.

Alternative Fuel and Fuel Efficient Vehicles:

- Design infrastructure and curbside layout to facilitate shared vehicle use (e.g., space for designated carpool and shuttle service pick-up and drop-off areas, shared ride boards, and preferred parking locations for shared-ride vehicles).
- Designate preferred parking spaces for alternative fuel vehicles in employee and public lots.
- Specify preferred parking and/or lot locations for rental car companies that offer alternative fuel rental vehicles.
- Design (or accommodate space to expand existing) fueling station infrastructure to meet the space requirements and considerations for alternative fuels for public and/or on-Airport use (e.g., electric charging stations for employee or public parking, comfortable waiting areas for electric vehicle charging, space for different types of fuel lines).
- Support tenant initiatives to convert to alternative fuel fleets (e.g., airline ground service equipment) through design of relevant projects.

Other Strategies:

- Design and site facilities to minimize vehicle miles traveled and reduce idling.
- Support regional efforts to improve connectivity between the airport and the region (e.g., Greenlight Pinellas Initiative) through design measures, as appropriate based on project type and scope.
- Require contractor shuttling of employees to construction site with pick-up locations in proximity to public transportation links.
- Locate contractor staging areas in locations that offer convenient bicycle and pedestrian facilities that link to public transportation connections.
- Specify limited contractor on-site vehicle parking to encourage use of public transportation, alternative transportation, or employee carpooling.



NATURAL SYSTEMS MANAGEMENT: AIR

A-3

Reduce Heat Islands

Last Updated: September 25, 2014

PURPOSE

Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce greenhouse gas emissions (Scopes 1 and 2) on a per passenger basis by 5% by 2021 (compared with a 2011 baseline).
- Provide opportunities for people to experience the Tampa Bay area's natural environment.
- Reduce heat island effect of the built environment.
- Reduce energy use required to condition interior spaces.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Develop and implement a heat island reduction plan that includes strategies for both roof and nonroof applications and makes a meaningful effort to reduce heat islands.
2. Develop and implement a heat island reduction plan that includes strategies for both roof or nonroof applications and covers full roof area OR at least 50% of site hardscape areas, respectively.
3. Develop and implement a heat island reduction plan that includes strategies for both roof or nonroof applications and covers full roof area AND at least 50% of site hardscape areas, respectively.

SUSTAINABLE DESIGN STRATEGIES

Non-roof Strategies:

- Maximize light colored/high albedo pavement, such as Portland cement concrete, for taxiways, runways, roadways, parking lots, sidewalks, and outdoor plazas, and other paved surfaces that are not under roof or other shading device. Reflectance must be a minimum of 0.3. ["White" Portland cement – 0.7 to 0.8, typical Portland cement – 0.35 to 0.5, typical asphalt pavement – 0.05 (new) to 0.15 (over 5 years)].
- For Landside projects, specify the planting of trees to provide shade within 5 years or architectural components (immediate benefit) for at least 30% of dark colored impervious surfaces, including parking lots, roadways, walkways, and outdoor plazas.



- Minimize amount of paving (impervious surfaces) on new projects (e.g., reduced lane widths, smaller parking spaces, and smaller walks).
- Specify coatings or colorants to improve reflectance of dark pavements.
- Combine design strategies to reduced heat islands. For example, a project can provide 5% shading of dark colored impervious surfaces and 25% light colored/high albedo pavement.
- Design structured parking in lieu of asphalt paved surface lots.
- Design an open grid pavement for surface lots and site pavement.
- Specify planting of shade producing trees in landside parking lot islands and in roadway medians.
- Specify architectural treatments of vertical walls to minimize heat absorption.
- Specify green walls to minimize heat absorption, considering both interior and exterior opportunities for integrating into new construction and significant renovation projects.
- Specify warm mix asphalt in place of hot mix asphalt.

Roof Strategies:

- Design a cool roof over enclosed areas with dedicated electric heating, ventilating, and air conditioning (HVAC) system. (See TECO Cool Roof Program: The cool roof must reflect at least 70 percent of the solar radiation, have a thermal emittance greater than 0.75 and be installed by a licensed contractor. The cool roof product must be labeled by ENERGY STAR and be based on ASTM E-903 or ASTM C-1549 testing. Also see Cool Roofs Rating Council Website, at www.coolroofs.org.)
- Design a cool roof.
- Consider the integration of green roofs into building design, giving consideration to plant selection to minimize the potential for wildlife attraction.



NATURAL SYSTEMS MANAGEMENT: AIR

A-4

Ozone-Depleting Chemicals and Refrigerant Management

Last Updated: September 25, 2014

PURPOSE

Reduce ozone depletion while minimizing direct contributions to climate change from refrigerant management.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce greenhouse gas emissions (Scopes 1 and 2) on a per passenger basis by 5% by 2021 (compared with a 2011 baseline).
- Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems.
- Reduce contribution to climate change.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Achieve no use of any chlorofluorocarbon (CFC) based refrigerants in new HVAC&R systems.
2. Create a CFC phase-out conversion plan for existing HVAC&R systems impacted by the project that use CFC refrigerants.
3. Utilize refrigerants in HVAC&R systems which have a low Lifecycle Direct Global Warming Potential or consider use of natural refrigerants or no refrigerants (i.e., natural ventilation).

SUSTAINABLE DESIGN STRATEGIES

- Specify new base building HVAC equipment that uses no CFC or hydrochlorofluorocarbon (HCFC) refrigerants.
- Specify HVAC equipment that uses refrigerants with low Global Warming Potential.
- Prohibit the specification of insulation materials that use ozone-depleting chemicals.
- Prohibit the specification of halons in fire suppression.
- Prohibit the specification of ozone-depleting substances in adhesives, coatings, and inks.



NATURAL SYSTEMS MANAGEMENT: AIR

A-5

Exterior Air Quality

Last Updated: September 25, 2014

PURPOSE

Reduce emissions of air toxins and criteria pollutants (National Ambient Air Quality Standards (NAAQS)) and limit exposure of airport visitors and employees to fuel vapors, air toxins, and particulate matter.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Enhance the health of the Airport Community.
- Reduce air pollutants and exposure to noxious fuel vapors.
- Reduce greenhouse gas emissions (Scopes 1 and 2) on a per passenger basis by 5% by 2021 (compared with a 2011 baseline).
- Pursue strategies to reduce petroleum fuel use.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Identify and incorporate operational changes in project design that reduce air toxins/criteria pollutants.
2. Document the use of low-emitting construction and contractor vehicles for 10% of the equipment fleet.
3. Document the use of low-emitting construction and contractor vehicles for 25% of the equipment fleet.

SUSTAINABLE DESIGN STRATEGIES

- Evaluate opportunities to include criteria pollutant emissions reduction measures into project design.
- Specify the use of fuel efficient and low-emitting construction and contractor vehicles during construction.
- Specify the reporting of monthly fuel usage quantities by contractors.
- Identify candidate operational changes to mitigate adverse air quality impacts and integrate into design.
- Minimize distances traveled in new facility design to minimize emissions (e.g., aircraft taxi distances/routes, vehicle distances/routes, vehicle circulation patterns).
- Encourage or incentivize the specification of low-emitting construction and contractor vehicles.

Sustainable Design Fact Sheets

Natural Systems Management: Water



NATURAL SYSTEMS MANAGEMENT: WATER

WA-1

Erosion and Sediment Control—Stormwater Runoff

Last Updated: September 25, 2014

PURPOSE

Reduce pollution by controlling soil erosion and waterway sedimentation.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Design and construct more environmentally responsible facilities using industry best practices and systems.
- Avoid erosion and sedimentation impact to local waterways and stormwater infrastructure.
- Reduce overall stormwater flows.

DESIGN EVALUATION POINTS (2 POINTS MAXIMUM)

1. Develop and implement an Erosion and Sediment Control Plan to address soil erosion and waterway sedimentation by stormwater runoff.
2. Develop an Erosion and Sediment Control Plan that addresses soil erosion and waterway sedimentation by stormwater runoff, minimizes the construction footprint, and provides monitoring for activities throughout construction.

SUSTAINABLE DESIGN STRATEGIES

- Obtain NPDES Permit for Construction Activities through the Florida Department of Environmental Protection for construction projects over 1 acre.
- Prepare Erosion and Sediment Control Plan for applicable projects.
- Incorporate temporary and permanent soil stabilization techniques including hydroseeding, biodegradable rolled mats, sod stabilization, dust control, soil binders, stream buffer zones, and mulching.
- Incorporate temporary or permanent structural practices that may include earth dikes, drainage swales, temporary stream crossings, pipe slope drains, silt fences, storm drain inlet protection, sediment traps, sediment basins, outlet protection, energy dissipation assemblies, and check dams.
- Require contractor use of and provide access to reclaimed or other non-potable water source for use in construction activities (e.g., vehicle and equipment washing, spraying for dust control).



NATURAL SYSTEMS MANAGEMENT: WATER

WA-2

Stormwater Management—Rate and Runoff Quality

Last Updated: September 25, 2014

PURPOSE

Limit disruption and pollution of natural water flows by minimizing and effectively managing stormwater runoff, and reducing stormwater contaminants.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Avoid impacts to local waterways and stormwater infrastructure.
- Reduce overall stormwater flows.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Incorporate stormwater minimization component(s) that reduce site runoff by 10% (compared to existing/pre-project conditions).
2. Incorporate stormwater minimization component(s) that reduce site runoff by 25% (compared to existing/pre-project conditions).
3. Incorporate stormwater minimization component(s) that reduce site runoff by 40% (compared to existing/pre-project conditions).

SUSTAINABLE DESIGN STRATEGIES

- Design landscaping, rain gardens, and bio-retention areas to reduce runoff.
- Incorporate non-wildlife attracting vegetated green roof systems (full or partial) to intercept and treat rainwater into design, where applicable.
- Design buildings and facilities to collect and reuse stormwater (e.g., building-integrated rainwater harvesting, rainwater cisterns, collection of water used during airport rescue and firefighting training exercises) and reuse stormwater for non-potable uses (e.g., toilet and urinal flushing, machine/vehicle washing, custodial uses, and landscape irrigation in areas not served by reclaimed water) to the extent allowed by the Safe Drinking Water Act of 1974.
- Consider future development of adjacent Airport parcels or off-Airport properties when designing storm water management facilities and identify opportunities to improve facility design efficiency.



- Design for the harvesting of stormwater for irrigation and use in buildings.
- Incorporate bio-filtration into stormwater detention for stormwater quality treatment.
- Design onsite detention basins, ditches, ditch checks and other BMPs to accommodate first flush treatment.
- Design first flush detention capacity for increasingly intensive future storms, based on latest climate change predictions for the Tampa Bay area.
- Incorporate bioswales in design (along roadways and parking areas) to encourage ground infiltration of stormwater runoff (address wildlife attractant potential, especially on the airfield).
- Specify the use of pervious and/or porous pavement and permeable pavers (e.g., pedestrian areas, roadways, shoulders, non-traffic pavements, maintenance roads, utility yards, and surface parking).



NATURAL SYSTEMS MANAGEMENT: WATER

WA-3

Water Efficient Landscaping

Last Updated: September 25, 2014

PURPOSE

Reduce potable and subsurface water usage by eliminating the use of potable water for interior and exterior landscaping.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce potable water use on a per passenger basis by 10% by 2021 (compared with a 2011 baseline).
- Minimize reliance on the Floridan aquifer.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Meet landscaping irrigation needs with a maximum of 50% potable or other subsurface water usage.
2. Meet landscaping irrigation needs with a maximum of 25% potable or other subsurface water usage.
3. Meet landscaping irrigation needs with no potable or other subsurface water usage.

SUSTAINABLE DESIGN STRATEGIES

- Specify low-maintenance, drought-tolerant, non-wildlife attracting vegetation in landscaping designs that does not require irrigation beyond initial plant establishment (e.g., temporary irrigation systems using reclaimed water are permitted if removed within 1 year of installation).
- Incorporate reclaimed water supply infrastructure for irrigation and other uses into design, such as cooling tower water makeup.
- Limit or eliminate the use of irrigation on turf areas for new landscapes/projects.
- In areas of low visibility, specify the replacement of high water requirement turf with more drought tolerant turf (e.g., replace St. Augustine with Bahia) and remove or abandon irrigation after establishment.
- For projects in locations of low visibility, require the establishment and maintenance of landscaping without the use of supplemental irrigation.
- Design buildings and facilities without access to reclaimed water to collect and reuse stormwater for landscape irrigation (e.g., building-integrated rainwater harvesting, rainwater cisterns, collection of water used during airport rescue and firefighting training exercises).



- Consider use of high-efficiency, slow-drip, sub-soil irrigation system that has an automated linkage to meteorological data and/or soil moisture content sensors.
- Design to avoid expansion of existing irrigation system or installation of new irrigation system that relies on potable water (for HCAA and tenant projects).
- Incorporate space/design for a water efficient landscaping demonstration area with informational signage within 200 yards of main public access to share strategies with the public.
- Incorporate space/design for non-plant components as part of the landscape design in areas with resort-style landscaping. Non-plant components (e.g., public art, an apiary) should be integrated into landscape design and visually interesting, but reduce the area dedicated to water-hungry plantings.
- Design a non-potable water supply for the irrigation of all interior landscaping.



NATURAL SYSTEMS MANAGEMENT: WATER

WA-4

Wastewater Reduction

Last Updated: September 25, 2014

PURPOSE

Reduce the burden on municipal wastewater systems.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce potable water use on a per passenger basis by 10% by 2021 (compared with a 2011 baseline).
- Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems.
- Reduce water utility bill costs.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Reduce potable water use for building sewage conveyance by 40%.
2. Reduce potable water use for building sewage conveyance by 60%.
3. Reduce potable water use for building sewage conveyance by 80%.

SUSTAINABLE DESIGN STRATEGIES

- Specify high-efficiency fixtures and valves.
- Specify waterless or water-efficient urinals, dual flush toilets, and/or pressure-assisted toilets.
- Specify motions sensors and water-conserving aerators on faucets.
- Design buildings and facilities to utilize non-potable water (e.g., rainwater harvesting, graywater, or reclaimed) to provide water for flush fixtures.
- Design for on-site wastewater treatment and infiltration of water on site versus conveying to public/municipal wastewater facility. Consider and mitigate the potential for wildlife attraction.
- Provide project-specific wastewater treatment as an alternative to the municipal system (e.g., engage a local partner to provide service).



NATURAL SYSTEMS MANAGEMENT: WATER

WA-5

Water Use Reduction

Last Updated: September 25, 2014

PURPOSE

Maximize water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce potable water use on a per passenger basis by 10% by 2021 (compared with a 2011 baseline).
- Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems.
- Reduce water utility bill costs.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Reduce the amount of potable water use by 30%.
2. Reduce the amount of potable water use by 40%.
3. Reduce the amount of potable water use by 50%.

SUSTAINABLE DESIGN STRATEGIES

- Specify high-efficiency fixtures and valves.
- Specify motion sensors and water-conserving aerators on faucets.
- Specify waterless or water-efficient urinals, dual-flush toilets, and/or pressure-assisted toilets.
- Design a non-potable water system (e.g., graywater) for toilet/urinal flushing in new construction, recognizing storage limitations.
- Design a non-potable water (e.g., reclaimed, rainwater) for cooling tower makeup; and/or capture condensate for use in cooling tower; and/or use pulsed-power electromagnetic water treatment, ultraviolet treatment, or ozone treatment for the cooling tower water.
- Evaluate the use of non-potable water (e.g., reclaimed, graywater, or rainwater harvesting) to meet construction water needs.
- Specify non-potable water for all vehicle and equipment washing.

Sustainable Design Fact Sheets

Natural Systems Management: Biodiversity



NATURAL SYSTEMS MANAGEMENT: BIODIVERSITY

B-1

Integrated Pest Management Program

Last Updated: September 25, 2014

PURPOSE

Through design, manage pests using methods that minimize hazards to people, property, and the environment in both interior and exterior settings.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Establish a target percent for low-maintenance, non-wildlife attracting species for each project involving landscaping.

DESIGN EVALUATION POINTS (1 POINT MAXIMUM)

1. Develop an Integrated Pest Management Plan that addresses both interior and exterior areas.

SUSTAINABLE DESIGN STRATEGIES

- Design interior and exterior landscapes that minimize the need for pest control measures and utilize low-maintenance plant materials.
- Specify the use of mulch as a weed control mechanism in all new or refreshed landscaped areas.
- Consider the use of stockpiled mulch created from on-airport landscape maintenance activities as a pest control measure.
- Minimize the use of non-native species in interior landscaping plans.
- Prohibit the use of invasive species in all interior landscaping.
- Submit a Plant Maintenance Plan as part of project landscape plans.
- Submit an Integrated Pest Control Plan as part of the design process that defines preferred methods for long-term prevention and management of pests without environmental harm.



NATURAL SYSTEMS MANAGEMENT: BIODIVERSITY

B-2

Wildlife Deterrence Program

Last Updated: September 25, 2014

PURPOSE

Through design, manage hazardous wildlife using non-toxic methods.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Establish a target percent for low-maintenance, non-wildlife attracting species for each project involving landscaping.
- Provide opportunities for people to experience the Tampa Bay area's natural environment.

DESIGN EVALUATION POINTS (2 POINTS MAXIMUM)

1. Document consultation with FAA-certified airport wildlife biologist during the design process.
2. Incorporate and document wildlife deterrent aspects in facility design.

SUSTAINABLE DESIGN STRATEGIES

- Incorporate established landscaping criteria that minimize wildlife hazards.
- In airfield design, accommodate an avian radar system to improve aviation safety, security surveillance, environmental management, weather detection, and wind measurement.
- As part of design, avoid the creation of natural open water features on or near airfield sites that attract wildlife.
- Provide stormwater facilities that utilize dry retention areas to the greatest extent possible and avoid or minimize the use of wet detention areas.
- For projects that include standing water or inundated areas, require the installation of bird deterrent wires or other mechanisms to prevent waterfowl from using a water body.
- Consult with an FAA-certified airport biologist to verify that plants selected will not attract wildlife.

Sustainable Design Fact Sheets

Waste Management



WASTE MANAGEMENT

WS-1

Storage and Collection of Recyclables

Last Updated: September 25, 2014

PURPOSE

Design buildings in a manner that facilitates the reduction of waste solid waste disposed by building occupants.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce, reuse, and recycle to reduce the solid waste disposed on a per passenger basis by 10% by 2021 (compared with a 2011 baseline).
- Encourage zero-waste zones within the Airport campus.
- Support the continued growth of the Airport recycling program.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Design includes storage and collection provisions for at least two waste streams (i.e., paper and metals/plastics/glass).
2. Design includes storage and collection provisions for at least six waste streams (i.e., paper, metals/plastics/glass, electronics/IT, batteries, light bulbs, and motor oil).
3. Maximize storage and collection provisions for all relevant waste streams to minimize the amount of solid waste disposed.

SUSTAINABLE DESIGN STRATEGIES

- Identify all potential recyclable waste streams (e.g., aluminum, glass, plastic, paper, cardboard, carpet, wood/pallets, food waste/grease and compostables, gas/oil filters, motor oil and anti-freeze, scrap metal, batteries, light bulbs, toner cartridges, tires, electrical wiring, electronics/e-Waste, deicing fluids/compounds, other) and consider opportunities to maximize collection of materials.
- Design buildings with convenient and appropriately sized areas for recyclable collection for a wide variety of waste streams.
- Design buildings with convenient, accessible, and appropriately sized areas for recyclable storage to support recycling infrastructure (e.g., cardboard balers).
- Specify identifying signage for all recycling collection and storage areas and equipment.



- Design area to accommodate of e-Waste recyclables, including storage area with necessary access to facilitate removal of stored materials.
- Design building to support separation of compostable waste from waste stream and potential onsite reuse of compostables.
- Identify zero-waste zone(s) within project design and minimize/eliminate corresponding solid waste infrastructure from zone(s).



WASTE MANAGEMENT

WS-2

Infrastructure and Building Reuse

Last Updated: September 25, 2014

PURPOSE

Extend the life cycle of existing buildings and infrastructure, conserve resources, and reduce waste and environmental impacts relating to materials, manufacturing, and transport.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce, reuse, and recycle to reduce the solid waste disposed on a per passenger basis by 10% by 2021 (compared with a 2011 baseline).
- Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems.
- Encourage zero-waste zones within the Airport campus.
- Reduce material and construction costs.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Maintain or reuse a minimum of 20%* of structural and/or non-structural elements.
2. Maintain or reuse a minimum of 40%* of structural and/or non-structural elements.
3. Maintain or reuse a minimum of 60%* of structural and/or non-structural elements.

*reuse can occur within a project or as part of a separate project

SUSTAINABLE DESIGN STRATEGIES

- Maintain/adapt for reuse the existing building structure (including structural floor and roof decking) and envelope (the exterior skin and framing, excluding window assemblies and non-structural roofing material) and infrastructure components (e.g., pavement, piping).
- Maintain/adapt for reuse existing interior nonstructural elements (e.g., interior walls, doors, floor coverings, millwork, and ceiling systems) in the completed building, including additions.
- Relocate existing structures or structural elements.
- Identify project waste by type, specify stockpiling/storage, and support an HCAA active inventory of potential resources for other projects. Include materials such as concrete, asphalt, land clearing debris, small ancillary buildings or structures, and building components.
- Specify the donation of project waste that cannot be reused or salvaged onsite to a cooperating agency.



WASTE MANAGEMENT

WS-3

Planning for Deconstruction

Last Updated: September 25, 2014

PURPOSE

Design with consideration toward the building or structure disassembly so that resources can be reused, salvaged, or recycled when they have outlived the usefulness of their primary purpose.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce, reuse, and recycle to reduce the solid waste disposed on a per passenger basis by 10% by 2021 (compared with a 2011 baseline).
- Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems.
- Encourage zero-waste zones within the Airport campus.
- Reduce need for virgin materials on future projects.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Design for ease of dismantling and reuse of some major structural components.
2. Design for ease of dismantling and reuse of some major structural components AND finishes.
3. Design for ease of dismantling and MAXIMUM reuse of both major structural components AND finishes.

SUSTAINABLE DESIGN STRATEGIES

- Consider the future value of materials and systems during selection/specification during design.
- Specify homogenous materials whenever possible.
- Provide a flexible structural system.



WASTE MANAGEMENT

WS-4

Construction/Contractor Staging Area Requirements

Last Updated: September 25, 2014

PURPOSE

Define minimum standards for construction/contractor staging areas to facilitate compliance with waste management, air quality, and other sustainability priorities and goals.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce, reuse, and recycling to reduce the solid waste disposed on a per passenger basis by 10% by 2021 (compared with a 2011 baseline).
- Encourage zero-waste zones within the Airport campus.

DESIGN EVALUATION POINTS (1 POINT MAXIMUM)

1. As part of design, prepare a Contractor Staging Area Site Plan to achieve waste management, air quality, and other sustainability priorities and goals established for the project.

SUSTAINABLE DESIGN STRATEGIES

- Specify that contractor must prepare and submit an update to the designer's Contractor Staging Area Site Plan (even if occupying a previously developed or occupied site) prior to the start of construction.
- Specify that Contractor Staging Area Site Plan include designated areas for recyclable material stockpiling.
- Specify signage articulating appropriate water use (reclaimed and potable), material stockpiling, recycled material stockpiling and other elements determined to contribute to achievement of sustainability goals.
- Designate on-airport contractor haul routes in coordination with HCAA, focusing on safety and minimizing on-airport travel distance.
- Specify minimum conditions for contractor staging area, including storage of materials to prevent erosion or deterioration, separation of waste streams/storage, signage, on-site parking, sweeping/maintenance necessary to keep site and interface with public roadways safe and clean, and related elements.
- Specify the preparation of a minimum operations plan to address vehicle activity, deliveries, hours of access, lighting requirements and limitations, and other relevant operational, safety, and environmental considerations.
- Specify the use/provision of energy efficient temporary lighting in contractor staging areas.



WASTE MANAGEMENT

WS-5

Construction Waste Management

Last Updated: September 25, 2014

PURPOSE

Divert construction and demolition (C&D), including land clearing debris, from disposal. Redirect recyclable recovered resources back to the manufacturing process and reusable materials to appropriate uses.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce, reuse, and recycle to reduce the solid waste disposed on a per passenger basis by 10% by 2021 (compared with a 2011 baseline).
- Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems
- Encourage zero-waste zones within the Airport campus.
- Reduce waste disposal fees.
- Reduce need for virgin materials.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Develop a Construction Waste Management Plan and divert a minimum of 20% of C&D debris from the solid waste disposal stream.
2. Develop a Construction Waste Management Plan and divert a minimum of 40% of C&D debris from the solid waste disposal stream.
3. Develop a Construction Waste Management Plan and divert a minimum of 60% of C&D debris from the solid waste disposal stream.

SUSTAINABLE DESIGN STRATEGIES

- Identify opportunities for on-site soil management during design (e.g., infrastructure elevation changes, construction or enhancement of noise berms, landscaping opportunity enhancements)
- Establish project-specific goals for diversion (e.g., achieve the highest feasible level, with a minimum target of 50 percent of debris recycled or salvaged, and consider alignment with Design Evaluation Points) and development of a Construction Waste Management Plan to achieve project goals that tracks recycling of waste streams such as land-clearing debris, cardboard, metal, brick, concrete, asphalt, plastic, wood, glass,



gypsum wallboard, carpet, and insulation.

- Identify the waste from one project that is a potential resource for another project such as concrete, asphalt, land clearing debris, small ancillary buildings or structures, and building components.
- Reuse aggregate from on-airport sources.
- Specify on-site concrete crushing operations to maximize reuse opportunities without requiring transport off-airport. Use portable concrete/asphalt crushers or operate concrete crushing/recycling plants on-site to facilitate reuse of materials in other construction projects.
- Specify submittal of Construction Waste Management plans and milestone reports.
- Specify documentation of construction waste management performance relative to construction waste management plan on a monthly basis and with aggregate quantities to be provided at project close-out with consequences for non-compliance or inability to demonstrate compliance.
- Include in all contract documents the minimum quantities of excess materials that will be accepted for return by the vendor and the required conditions of such material.
- Establish a process to track recycling efforts throughout the construction process in a way that identifies progress toward set goals and identifies resources generated for upcoming tasks/projects.
- Specify documentation of subcontractor materials practices for refused or rejected material (in particular concrete loads). Specify requirements and processes for recycling of such materials.



WASTE MANAGEMENT

WS-6

Balanced Earthwork

Last Updated: September 25, 2014

PURPOSE

Divert soils from landfills, reduce transportation of soil to off-site locations, and maintain or make soil available for reuse on other on-airport projects.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems.
- Encourage zero-waste zones within the Airport campus.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Consider and document efforts to utilize stockpiled materials available onsite.
2. Reuse or stockpile at least 25%* of excavation and earthwork soils on airport property for later use.
3. Reuse or stockpile at least 50%* of excavation and earthwork soils on airport property for later use.

*does not include contaminated soils/materials

SUSTAINABLE DESIGN STRATEGIES

- Develop a balanced earthwork plan and keep excavated soil on-site to reduce off-site hauling.
- Provide for the reuse or stockpiling of excavation and earthwork soils on airport property for later use.
- Specify contractor use of identified on-Airport earthwork stockpile areas acceptable to HCAA.
- Identify potential material reuse on concurrent projects.
- Utilize information on stockpiled earthwork materials during project design, maintained by HCAA.
- Evaluate opportunities for on-site soil management (e.g., infrastructure elevation changes, development of noise berms, considerations for landscaping needs).



WASTE MANAGEMENT

WS-7

Salvaged Materials & Resources

Last Updated: September 25, 2014

PURPOSE

Make salvaged resources available to other Authority projects and the regional construction community.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce, reuse, and recycle to reduce the solid waste disposed on a per passenger basis by 10% by 2021 (compared with a 2011 baseline).
- Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems.
- Encourage zero-waste zones within the Airport campus.
- Reduced disposal fees.
- Reduce need for virgin materials.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Salvage or reuse some demolition materials.
2. Salvage or reuse a minimum of 10% of all demolition materials.
3. Salvage or reuse a minimum of 25% of all demolition materials.

SUSTAINABLE DESIGN STRATEGIES

- Define plan for stockpiling of salvaged material that establishes necessary protection and handling to avoid degradation of quality or usability.
- Designate a salvaged construction materials stockpile area on-Airport. Establish a method to track material quantities, composition, and other information.
- In coordination with HCAA, support an HCAA-maintained "virtual warehouse" for salvaged materials (e.g., site lighting, millwork, fencing) maintained on-site and available for on- and off-Airport projects.
- Establish/confirm a process for the submittal of a project-specific salvaged material summary for posting to a public information site for the sale or donation of salvaged materials.
- Require documentation at project construction close-out of the aggregate salvaged resources (by type



and quantity) made available throughout project construction with specified consequences for non-compliance or inability to demonstrate compliance.

- Specify and source salvaged materials for non-structural elements, especially finishes.
- Specify the donation of project waste that cannot be reused or salvaged onsite to a cooperating agency.

Buy Green: Sustainable Procurement



BUY GREEN

P-1

Furniture and Equipment

Last Updated: September 25, 2014

PURPOSE

Reduce the natural resource and air quality impacts of furniture and equipment acquired for use in a building.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Promote sustainable procurement throughout the Airport community.
- Use products with lower environmental impact.
- Design and construct environmentally responsible and energy efficient facilities using industry best practices.
- Improve energy performance.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. At least 25%* of furniture and/or equipment purchased for the project achieves one or more environmental attribute.
2. At least 50%* of non-public furniture and/or equipment purchased for the project achieves one or more environmental attribute.
3. At least 75%* of non-public furniture and/or equipment purchased for the project achieves one or more environmental attribute.

*Based on total materials cost.

SUSTAINABLE DESIGN STRATEGIES

- Re-use, repair, and/or refurbish furniture and equipment.
- Specify furniture materials and products that are recycled, rapidly renewable, local/regional, low-emitting (i.e., contain no/low volatile organic compounds), contain wood materials that are certified (e.g., Forest Stewardship Council [FSC]) or low-emitting (e.g., no added urea-formaldehyde) and/or are salvaged.
- Specify furniture systems that are GreenGuard certified.
- Specify furniture that contains specific minimum (e.g., 10%) post-consumer recycled content or locally-sourced materials.

SUSTAINABLE DESIGN FACT SHEET



- Specify furniture that contains specific minimum certified wood materials (e.g., 50% FSC-certified wood) or rapidly renewable materials (e.g., 25%).
- Specify ENERGY STAR-labeled appliances, electric equipment, and ENERGY STAR computers, monitors, and other applicable IT systems.



BUY GREEN

P-2

Certified Wood Materials

Last Updated: September 25, 2014

PURPOSE

Encourage environmentally responsible procurement by purchasing products that are certified as meeting responsible forest management practices.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Promote sustainable procurement throughout the Airport community.
- Use products with lower environmental impact.
- Reduce pressure on traditional forests.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. At least 10%* of wood-based materials purchased for the project are either reclaimed or third-party certified.
2. At least 50%* of wood-based materials purchased for the project are either reclaimed or third-party certified.
3. At least 75%* of wood-based materials purchased for the project are either reclaimed or third-party certified.

***Based on total materials cost. The use of creosote-coated lumber, chromate copper arsenate (CCA) pressure-treated lumber, extruded polystyrene (XPS) rigid board insulation, or fiberglass insulation that contains phenol-formaldehyde binders are not counted.**

SUSTAINABLE DESIGN STRATEGIES

- For permanently installed wood-based materials, purchase products that are certified by the Forest Stewardship Council (FSC) or Sustainable Forestry Initiative (SFI). Building components include, at a minimum, framing, flooring, sub-flooring, wood doors, and finishes.
- Specify FSC-certified, SFI-certified, or reused wood for temporary construction materials, such as bracing, formwork, scaffolding, sidewalk protection, or guard rails.
- Establish a project-specific goal for certified wood-based materials.
- Identify material suppliers early in the project to demonstrate ability to achieve the project goal, or document barriers to the achievement of the goal.

SUSTAINABLE DESIGN FACT SHEET



- Use of lower grades of wood where appropriate.
- Specify submittal of documentation of certified wood material use (by type and quantity) at project close-out with specified consequences for non-compliance or inability to demonstrate compliance.



BUY GREEN

P-3

Rapidly Renewable Materials

Last Updated: September 25, 2014

PURPOSE

Reduce the use and depletion of finite raw materials and long-cycle renewable materials by replacing them with rapidly renewable materials.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Promote sustainable procurement throughout the Airport community.
- Use products with lower environmental impact.
- Reduce pressure on traditional forests.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Some products purchased for the project contain rapidly renewable materials, consistent with the project-specific goal.
2. At least 2.5%* of products purchased for the project contain rapidly renewable materials.
3. At least 5%* of products purchased for the project contain rapidly renewable materials.

*Based on total materials cost.

SUSTAINABLE DESIGN STRATEGIES

- Establish a project-specific goal for rapidly renewable material content.
- Specify the use of rapidly renewable (a mature growing cycle of seven years or less) building materials and products made from plants that are typically harvested within a ten-year or shorter cycle, including cork, bamboo, natural rubber, wheat, cotton, straw, or linseed. Document consideration of rapidly renewable materials such as straw board or "agriboard," bamboo, cork, wool carpets and fabrics, cotton-batt insulation, linoleum flooring, sunflower seed board, wheat grass or straw board cabinetry and others.
- Identify of material suppliers early in the project design to demonstrate ability to achieve project goal, or document barriers to the achievement of the goal.
- Specify submittal of documentation of rapidly renewable material (by type and quantity) at project close-out with consequences for non-compliance or inability to demonstrate compliance.



BUY GREEN

P-4

Recycled Content Materials

Last Updated: September 25, 2014

PURPOSE

Reduce the use and depletion of finite raw materials by replacing them with recycled materials.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Promote sustainable procurement throughout the Airport community.
- Use products with lower environmental impact.
- Reduce need for virgin materials in building products.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Some products purchased for the project contain recycled content, consistent with project-specific goal*.
2. At least 15%** of products purchased for the project contain recycled content.
3. At least 30%** of products purchased for the project contain recycled content.

*Requires establishment of project-specific goal.

**Based on total materials cost.

SUSTAINABLE DESIGN STRATEGIES

- Establish a project-specific goal for recycled content materials.
- Specify the use of recycled content building materials and products (e.g., aggregate in cast in place concrete, fly-ash in cast in place concrete, aggregate in pre-cast concrete including site work and infrastructure piping, fly-ash in pre-cast concrete including site work and infrastructure piping, bituminous concrete pavement, unit pavers, steel reinforcement, structural steel, miscellaneous steel, steel fencing and furnishings, unit masonry, ductile iron pipe, aluminum products, steel doors and frames, aluminum doors and windows, plaster, terrazzo, acoustical ceilings, drywall, finish flooring including carpet, tiles, resilient flooring and terrazzo, toilet compartments, and special finishes).
- Identify material suppliers early in the project to demonstrate ability to achieve the project goal, or document barriers to the achievement of the goal.
- Specify recycled content materials that provide comparable durability to conventional counterpart



materials in recognition of the influence of life cycle costs on material selection.

- Incorporate recycled content language into project specification documents.
- Specify submittal of documentation of recycled material (by type and quantity) in monthly reports at project close-out with consequences for non-compliance or inability to demonstrate compliance.



BUY GREEN

P-5

Local/Regional Materials

Last Updated: September 25, 2014

PURPOSE

Use materials and products (other than furniture and equipment) that are extracted, harvested, or recovered, as well as manufactured within the region, to reduce the environmental impacts from transportation and to support Tampa's regional economy.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Promote sustainable procurement throughout the Airport community.
- Reduce energy and environmental impact from building products and transportation of products.
- Support regional market for building products.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Some products purchased for the project contain local/regional content, consistent with project-specific goal*.
2. At least 15%** of products purchased for the project contain local/regional content.
3. At least 30%** of products purchased for the project contain local/regional content.

*Requires establishment of project-specific goal.

**Based on total materials cost.

SUSTAINABLE DESIGN STRATEGIES

- Establish a project-specific goal for local/regional content materials.
- Require the use of building materials or products that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of the project site.
- Incorporate local/regional material content language into project specifications.
- Identify material suppliers early in the project to demonstrate ability to achieve the project goal, or document barriers to the achievement of the goal.
- Specify submittal of documentation of local/regional materials (by type and quantity) at project close-out with specified consequences for non-compliance or inability to demonstrate compliance.



BUY GREEN

P-6

Low-emitting Materials

Last Updated: September 25, 2014

PURPOSE

Reduce the quantity of indoor air contaminants that are odorous, potentially irritating, and/or harmful to the health, comfort, and well-being of contractors and occupants.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Promote sustainable procurement throughout the Airport community.
- Enhance the health, safety, and security of the Airport community.
- Reduce the amount of harmful chemicals, such as volatile organic compounds (VOCs) released indoors during manufacturing, installation, and use of the product.

DESIGN EVALUATION POINTS (2 POINTS MAXIMUM)

1. One or more product types used in the project are compliant with the relevant standards specified for the project.
2. All applicable products used in the project are compliant with the relevant standards specified for the project.

SUSTAINABLE DESIGN STRATEGIES

- Specify submittal of documentation of low-VOC material at project close-out with consequences for non-compliance or inability to demonstrate compliance.
- Specify low-VOC adhesives and sealants that comply with the South Coast Air Quality Management District (SCAQMD) Rule #1168.
- Specify low-VOC field applied paints and coating coatings that comply with Green Seal Standards GS-11 and GC-3 and SCAQMD Rule #1113.
- Specify low-VOC carpet and flooring systems that comply with the Carpet and Rug Institute Green Label Plus program (carpet), Green Label program (cushion), and Floorscore (hard surface flooring).
- Specify furniture systems and furnishings that are GreenGuard certified.
- Specify wood and agrifiber products with no added urea-formaldehyde resins.
- Specify products with no-VOC content wherever feasible.



BUY GREEN

P-7

Green IT

Last Updated: September 25, 2014

PURPOSE

Reduce the environmental impacts associated with information technology (IT)-related materials, equipment, and processes.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Promote sustainable procurement throughout the Airport community.

DESIGN EVALUATION POINTS (1 POINT MAXIMUM)

1. Complete paperless design project.

SUSTAINABLE DESIGN STRATEGIES

- Electronically submit design review submittals to facilitate HCAA electronic review/response.
- Use HCAA-maintained file sharing website for collecting and submitting necessary design-related information.
- Conduct paperless communications regarding the design project.
- Use a system/software to meet the demands of design, bidding, and construction processes.
- For projects encompassing significant IT systems or components, design server room and specify (related) energy systems and components that minimize heat generation/cooling demand.
- For projects encompassing significant IT systems or components, locate server rooms within the facility to minimize cooling demand due to solar load or other heat source.
- Specify contractor reliance on double-sided printing for all on-site printing requirements (contractor staging area) during construction.

Sustainable Design Fact Sheets

Energy Management



ENERGY MANAGEMENT

EN-1

Systems Commissioning

Last Updated: September 25, 2014

PURPOSE

Provide for the verification that fundamental building elements and systems are designed, installed, and calibrated to operate as intended.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce electricity consumption on a per passenger basis by 3 percent by 2021 (compared with a 2011 baseline).
- Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems.
- Ensure that building systems operate as intended in terms of energy use performance from the date of completion.
- Reduce costs associated with energy consumption.
- Improved equipment life due to systems operating as designed.

DESIGN EVALUATION POINTS (2 POINTS MAXIMUM)

1. Complete a commissioning plan for all major mechanical, electrical, and plumbing systems.
2. Complete a commissioning plan for additional building systems, including building envelope, lighting systems, airfield lighting and illuminated signage, airfield navigational aids, runway lighting systems, traffic signals, pump stations, and oil/water separators and other project-specific minor systems.

SUSTAINABLE DESIGN STRATEGIES

- Incorporate commissioning requirements into construction documents.
- Develop process for future documentation of conformance with commissioning plan as part of project close-out, including submittal of a commissioning report.
- Specify successful commissioning prior to facility occupancy.
- Specify manufacturer documentation/guarantee of installations, projected results, and in-situ performance criteria to compare to standard performance results as part of systems commissioning.
- Develop project-specific operations and maintenance (O&M) checklists.



- Specify the submittal of training, and operations and maintenance documentation.
- Specify the provision to the Maintenance Department a single manual that contains the information required for future re-commissioning systems.
- Specify the provision to the Maintenance Department a comprehensive operation manual for all systems to be commissioned to allow optimal facility operation and adjustment.
- Conduct and document independent third party review of commissioning plans during project design.
- Conform to the commissioning requirements of a third party rating system such as LEED, which includes both fundamental and enhanced commissioning goals.



ENERGY MANAGEMENT

EN-2

Improved Energy Performance

Last Updated: September 25, 2014

PURPOSE

Optimize energy performance to reduce environmental impacts associated with excessive energy use.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce electricity consumption on a per passenger basis by 3% by 2021 (compared with a 2011 baseline).
- Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems.
- Reduce costs associated with energy consumption.
- Pursue strategies to reduce petroleum fuel use.
- Reduce the carbon footprint associated with the Airport community.

DESIGN EVALUATION POINTS (4 POINTS MAXIMUM)

1. Exceed mandatory and prescriptive requirements of ASHRAE 90.1.
2. Design a building which outperforms similar buildings by 40% as identified during benchmarking.
3. Design a building which outperforms similar buildings by 75% as identified during benchmarking.
4. Design a net-zero energy building (measure net-zero energy on an annual basis).

SUSTAINABLE DESIGN STRATEGIES

Overall Building Envelope:

- Prioritize energy conservation measures over renewable energy strategies (until such point that payback favors renewables) to achieve long-term energy use reduction in the most cost-effective manner.
- Design the building envelope and systems to maximize energy performance.
- Design buildings and site systems to comply with ASHRAE/IESNA 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*. Utilize concepts in the *ASHRAE Advanced Energy Design Guide* where feasible to improve building performance.



- Incorporate comprehensive energy specifications and design guidance into specifications and Requests for Proposals (RFPs).
- Use a computer simulation model to assess design energy performance and identify cost effective energy use optimization strategies.
- Provide opportunities for natural ventilation with building/structure orientation and operable windows in facilities that are not noise sensitive, such as cargo buildings.
- Incorporate renewable energy technologies (solar, wind) in design to offset all or a portion of the remaining energy usage after energy conservation measures have been implemented.
- Design a building automation system (BAS).
- Minimize air infiltration through all exterior openings including loading docks.

Energy Conservation/Performance:

- Design for energy peak shaving units to offset higher demand periods and costs.
- Design fuel cell, cogeneration, trigeneration, or geothermal systems to meet facility energy needs.
- Incorporate an on-airport power generation system in the project design.
- Incorporate an anaerobic digester in the project design.
- Design project facilities to meet the requirements of ASHRAE/IESNA 189.1, *Standard for the Design of High-Performance, Green Buildings*, to further improve project energy performance.
- Design facilities to comply with the Advanced Buildings™ Core Performance™ Guide, where applicable.
- For runways/taxiways/aprons, civil, stormwater, and roadways, design site systems to comply with the latest edition of ASHRAE/IESNA 90.1, to the greatest extent possible.
- Assess ENERGY STAR certification potential during the design process (relying on ENERGY STAR score) and consider design alternatives and options to support achievement of certification.
- Integrate high-performance chillers with thermal ice storage to reduce electrical demand use and costs during the cooling season.
- Perform payback analyses during the design phase which demonstrate that energy conservation measures have reasonable payback periods associated with them, and allow for increased project capital costs with the knowledge that both energy and operating costs will be saved long term.

HVAC/Mechanical Systems:

- Specify energy efficiency requirements for equipment in contract agreements.
- Specify premium efficiency motors for all air and water moving machines.
- Exceed ASHRAE 90.1 efficiency requirements for major HVAC equipment including refrigeration equipment.
- Design HVAC systems to provide ventilation air directly to spaces, reducing the overall quantity of ventilation air required for a given system.
- Include advanced HVAC equipment and control strategies on both airside and waterside systems to



reduce energy consumption. Strategies include economizers, energy recovery systems, room temperature setpoint setbacks, Variable Refrigerant Systems, and water and air supply temperature reset schedules.

- In large projects with central cooling plants, provide for optimization routines that examine the energy usage of all associated components in real time and make adjustments accordingly.
- Specify integrated occupancy sensors with heating, ventilation, and air conditioning (HVAC) operation.
- Specify an indirect evaporative and/or evaporative condensing direct expansion (DX) HVAC system instead of chilled water plant system.
- Specify direct-drive equipment instead of belt- or gear-driven HVAC equipment.
- Provide building automation systems (BAS) for all projects to facilitate the monitoring of energy related processes.

Lighting/Electrical:

- Incorporate energy efficient lighting systems, including LED and fluorescent lighting. Require individual control devices including occupancy sensors or timers to reduce lighting energy consumption.
- Specify lighting controls that dim or shut off lights in areas where daylighting is prevalent to maximize the use of daylighting. In single story buildings or at the roof level, incorporate skylights and/or light tubes to increase natural light and reduce artificial light.
- Incorporate large electrical cables (larger than required by the National Electric Code) into design to decrease the cable resistance and reduce energy loss during transmission.
- Specify solar-powered signage or equipment, where feasible.
- Specify occupancy sensors where practical to turn off lighting during unoccupied periods. Provide lighting control system that links lighting to flight schedules and occupancy. Provide occupancy sensors, either infrared (heat detection), ultrasonic (movement detection), or a combination of both, to control lighting in areas that are intermittently occupied (e.g., rest rooms, storage areas, stairwells).
- Upgrade airfield lighting to LED lighting if project affects existing airfield lights.
- Establish airside lighting controls and procedures to turn off or reduce the intensity of airside lighting (runway, taxiway, and apron lights, and navigational aids) when not in use.
- Specify energy efficient temporary lighting during construction.
- Provide task lighting in office areas and design overhead lighting to reduced levels.
- Specify use of Variable Frequency Drive (VFD) motors to control the rotational speed of an alternating current (AC) electric motor.

Other Equipment:

- Specify ENERGY STAR compliant equipment and appliances.
- Develop training program for the operation and maintenance of the facility to optimize the energy performance of the facility/equipment.
- Design aircraft gates to provide centralized pre-conditioned air (PCA) and ground power systems (400 Hz)



to gated aircraft.

- Design aircraft gates and hold rooms for common use, requiring airlines to use the same passenger processing system, displays, baggage handling, and baggage claim system.
- Design and equip aircraft remain overnight areas for common use (e.g., so they can serve as cargo ramps during the day and airline parking at night).
- Design for motor efficiency controllers in escalators and moving walkways.



ENERGY MANAGEMENT

EN-3

Alternative and Renewable Energy

Last Updated: September 25, 2014

PURPOSE

Increase the supply of on-site alternative and renewable energy technologies to reduce energy costs, dependency on fossil fuels, and the environmental impacts associated with fossil fuel energy use.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce electricity consumption on a per passenger basis by 3% by 2021 (compared with a 2011 baseline).
- Design and construct more environmentally responsible and energy efficient facilities using industry best practices and systems.
- Pursue strategies to reduce petroleum fuel use.
- Promote the use of renewable energy sources over traditional energy sources.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Consider and document exploration of opportunities to incorporate alternative energy technologies and/or renewable energy sources into project.
2. Incorporate alternative energy technologies and/or renewable power in facility design to reduce fossil fuel energy consumption.
3. Provide for sufficient renewable energy in facility design to offset all fossil fuel energy consumption and achieve a net zero energy building.

SUSTAINABLE DESIGN STRATEGIES

- Assess projects for renewable energy feasibility (e.g., solar, wind, geothermal) to determine the optimal size, type, location, and the cost of installing and operating a renewable energy system.
- Explore opportunities to enter into a public-private partnership to construct and operate a renewable energy system.
- Incorporate solar photovoltaic (PV) panels and/or solar-thermal powered water heaters into design (buildings and/or ground level).
- Incorporate solar PV panels into facility design. Consider roof structural system/support, hurricane tolerance, wildlife attractant potential, and FAA guidance for solar installations at airports.



- Incorporate solar thermal storage systems (e.g., solar Trombe walls) in facility design to provide passive solar heating.
- Incorporate solar trash compactors along curbsides and in remote areas.
- Incorporate solar-powered roadway signage and parking lot lighting.
- Incorporate solar-powered obstruction and barricade lighting.
- Incorporate solar-powered water heating.
- Incorporate geothermal heating and cooling systems.
- Incorporate wind turbine power generation as a component of facility design.
- Incorporate sewer heat recovery systems.
- Incorporate wind power.
- Investigate energy tax credits, rebates, and grants by local utilities or federal, state, or local agencies.
- Incorporate the use of fuel cells, biofuels, cogeneration, and geothermal energy technologies to reduce on-site fossil fuel consumption.



ENERGY MANAGEMENT

EN-4

Energy Measurement and Verification

Last Updated: September 25, 2014

PURPOSE

Ensure ongoing accountability and optimization of energy consumption

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce electricity consumption on a per passenger basis by 3% by 2021 (compared with a 2011 baseline).
- Ensure that building systems operate as intended in terms of energy use performance from the date of completion.
- Reduce costs associated with energy consumption.
- Assist maintenance personnel in the diagnosis and correction of system inefficiencies.
- Promote the involvement of facilities personnel in the overall goal of reducing energy consumption in the Airport community.

DESIGN EVALUATION POINTS (2 POINTS MAXIMUM)

1. Develop Energy Measurement & Verification (M&V) Plan incorporating all energy end uses.
2. Incorporate continuous monitoring devices and energy management control systems into design.

SUSTAINABLE DESIGN STRATEGIES

- Incorporate energy use metering and/or continuous monitoring (sub-metering) devices and energy management control systems into design; including but not limited to the following end uses: lighting systems and controls, constant and variable motor loads, chillers unitary equipment, chilled water and hot water, air and water economizer and heat recovery cycles, air distribution static pressures, ventilation air volumes, boiler efficiencies, building-related process energy systems and equipment (including cooking), and domestic hot water equipment.
- Diagnose and correct unexpected excess energy consumption in existing facilities when developing project designs for a related facility (e.g., where new facility ties into the HVAC or other systems of an existing facility).
- Include data collection requirements in M&V Plan to facilitate the collection and trending analysis of operational data to evaluate systems/equipment that are not operating at peak efficiency.



ENERGY MANAGEMENT

EN-5

Daylighting

Last Updated: September 25, 2014

PURPOSE

Reduce energy use through the introduction of daylight into regularly occupied areas.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce electricity consumption on a per passenger basis by 3% by 2021 (compared with a 2011 baseline).
- Promote the use of renewable energy sources over traditional energy sources.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Provide 25 foot-candles of daylight where feasible.
2. Provide 25 foot-candles of daylight in 50% of spaces.
3. Provide 25 foot-candles of daylight in 75% of spaces.

SUSTAINABLE DESIGN STRATEGIES

- Design skylights and/or light tubes in conjunction with daylight dimming controls to reduce daytime lighting requirements.
- Specify daylight dimming controls to reduce daytime lighting requirements.
- Integrate daylight harvesting strategy with the Building Automation System (BAS) and lighting control system.
- Specify spectrally selective glazing to maximize daylight while minimizing heat gain.
- Specify glazing films and/or coatings to minimize solar heat gain and air conditioning loss, maximize visible light transmittance and penetration, reduce glare, increase privacy, protect installed materials from the sun's ultraviolet rays, and prevent injury and damage from broken glass.
- Provide photo-integrated light sensors to dim artificial lights.
- Use a daylighting model or calculations to assess foot-candle levels and daylight factors achieved.
- Provide sky or clerestory lighting in appropriate facilities, such as cargo.



- Orient building geometry and articulate fenestration to optimize passive solar and/or daylight penetration.
- Orient building to optimize passive solar and/or daylight penetration when feasible.
- Optimize architectural features for daylighting and glare control. Consider light shelves, ceiling design, window placement, and window treatments.
- Specify thermally efficient/high performance glazing and window systems.
- Incorporate interior and exterior shading devices/strategies into design to filter daylight and control glare (e.g., shades, louvers, blinds, awnings/overhangs, vegetation).
- Provide exterior and interior permanent shading devices.
- Provide spectrally selective glazing to maximize daylight while minimizing heat gain.
- Provide photo-integrated light sensors to dim artificial lights.



ENERGY MANAGEMENT

EN-6

Maintenance Requirements

Last Updated: September 25, 2014

PURPOSE

Minimize the operational and environmental impacts of maintenance for Authority facilities and avoid maintenance requirements that are not cost-effective over the life of the facility/equipment.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Reduce electricity consumption on a per passenger basis by 3% by 2021 (compared with a 2011 baseline).
- Minimize adverse environmental and operational impacts relating to system maintenance.

DESIGN EVALUATION POINTS (1 POINT MAXIMUM)

1. Perform and document design reviews by HCAA Maintenance Department at all design milestones.

SUSTAINABLE DESIGN STRATEGIES

- Specify environmentally friendly cleaning products and processes for installed systems in O&M manuals.
- Project annualized maintenance costs and life-cycle costs for all equipment and systems during selection.
- At all design milestones, identify, consider, and document unique maintenance requirements or equipment.
- Develop project-specific operations and maintenance (O&M) checklists.



ENERGY MANAGEMENT

EN-7

Thermal Comfort

Last Updated: September 25, 2014

PURPOSE

Provide a thermally comfortable environment that supports the productivity and well-being of building occupants.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Maximize the number of building occupants that find the environment suitable.
- Promote employee productivity via a comfortable indoor workspace.

DESIGN EVALUATION POINTS (2 POINTS MAXIMUM)

1. Meet the requirements of ASHRAE 55.
2. Provide individual temperature controls for 25% of building occupants in non-public spaces.

SUSTAINABLE DESIGN STRATEGIES

- Design buildings to meet the requirements of ASHRAE 55: *Thermal Environmental Conditions for Human Occupancy*, including humidity control within established ranges.
- Provide air circulation or natural ventilation to increase air movement in cargo spaces and other large, open plan facilities.
- Provide dehumidification in HVAC systems serving office and terminal areas.
- Specify a temperature and humidity monitoring system that provides operators with control over thermal comfort performance and humidification and/or dehumidification systems.
- Provide controls for each individual in office spaces for airflow, temperature, and lighting of the occupied space, and for the occupants in non-perimeter, regularly occupied areas.
- Design buildings with operable windows in appropriate areas (consider security issues, noise-sensitivity of activities within building).
- Incorporate under floor air distribution systems with individual diffusers (controllable outlets) in office areas.
- Integrate micro switches of operable windows with HVAC operation.
- Specify direct digital control systems for greater accuracy, flexibility, and operator interface compared to pneumatic systems.

Sustainable Design Fact Sheets

Health, Safety, and Security



HEALTH, SAFETY, AND SECURITY

HSS-1

Indoor Air Quality Performance

Last Updated: September 25, 2014

PURPOSE

Establish minimum indoor air quality (IAQ) performance to enhance indoor air quality in buildings, contributing to the comfort and well-being of the occupants.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Enhance the health and comfort of the Airport community.
- Reduce energy waste due to the over-ventilation of occupied spaces.
- Reduce irritants in the air via proper air filtration.

DESIGN EVALUATION POINTS (2 POINTS MAXIMUM)

1. Design to exceed the minimum requirements for ventilation, as defined in applicable codes.
2. Specify permanent measurement equipment to allow continuous monitoring of ventilation levels.

SUSTAINABLE DESIGN STRATEGIES

- Design the HVAC system to meet the minimum ventilation requirements described in the latest version of ASHRAE 62.1: *Ventilation for Acceptable Indoor Air Quality*. If local building codes are applicable, design the minimum ventilation to satisfy the requirements of the most stringent code or standard.
- Design air filtration requirements that meet the needs of the spaces being served without over-filtering the air to reduce energy consumption associated with fan horsepower.
- Specify permanent outdoor air monitoring stations in all air handling units that supply ventilation and connect these stations to the building automation system (BAS).
- Locate air intakes in low traffic, elevated, or secure areas for protection from potential attacks.
- Provide operable windows, where appropriate.
- Design airside buildings to be positively pressurized at all times in order to prevent jet exhaust and other fumes from the airfield from entering the buildings.



HEALTH, SAFETY, AND SECURITY

HSS-2

Environmental Tobacco Smoke Control

Last Updated: September 25, 2014

PURPOSE

Prevent exposure of building occupants and systems to environmental tobacco smoke (ETS) by providing outdoor smoking areas.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Enhance the health of the Airport community.
- Reduce energy consumption associated with exhaust and ventilation of indoor smoking lounges.

DESIGN EVALUATION POINTS (2 POINTS MAXIMUM)

1. Prepare an environmental tobacco smoke (ETS) control plan as part of design.
2. Provide only outdoor smoking areas, a minimum of 25 feet from entries, air intakes, and operable windows.

SUSTAINABLE DESIGN STRATEGIES

- Specify appropriate signage (indoors and outdoors) that clearly communicates smoking area location.
- Provide sheltered and naturally ventilated exterior smoking areas for employees and travelers.
- If an indoor custom smoking room is desired, it must conform to the requirements of Florida Clean Indoor Air Act Section 386.2045.
- Specify specific and defined areas of construction sites for construction employee smoking, outside of any buildings and at least 25 feet from building entrances once the building is enclosed.



HEALTH, SAFETY, AND SECURITY

HSS-3

Carbon Dioxide Monitoring

Last Updated: September 25, 2014

PURPOSE

Provide capability for carbon dioxide monitoring to help sustain long-term occupant comfort and well-being.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Enhance the health and comfort of the Airport community.
- Reduce energy consumption by providing demand controlled ventilation in densely occupied spaces.
- Promote productive work environments by ensuring that carbon dioxide concentrations remain at low levels.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Specify installation of carbon dioxide monitors in all densely occupied spaces (i.e., spaces exceeding 25 occupants per thousand square feet of floor area).
2. Connect monitors to the building automation system (BAS) and provide alarms when high concentrations are reached.
3. Implement demand-controlled ventilation strategies to reduce outside air intake quantities when typically densely occupied spaces experience reduced occupant levels.

SUSTAINABLE DESIGN STRATEGIES

- Design HVAC systems for terminal buildings with carbon dioxide monitoring sensors in all densely occupied spaces and integrate these sensors with the building automation system (BAS).
- Design for real-time control of terminal unit (VAV box) flowrates and total outdoor air flowrates at the system level based on space carbon dioxide levels.
- Specify a permanent carbon dioxide monitoring system that provides feedback on space ventilation performance.
- Provide operable windows that allow systems to adjust the periods during which outside air is supplied by the system.
- Design to incorporate Demand Control Ventilation strategies, where possible, to vary the amount of



ventilation air based on carbon dioxide levels in the spaces being served by the Air Handling Units.

- Establish minimum ventilation rates for airside buildings so buildings are positively pressurized at all times to prevent fumes from entering buildings from airfield.



HEALTH, SAFETY, AND SECURITY

HSS-4

Construction Indoor Air Quality Management

Last Updated: September 25, 2014

PURPOSE

Reduce indoor air quality (IAQ) problems resulting from construction or renovation activities to promote the health, comfort, and well-being of construction workers and building occupants.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Enhance the health and comfort of the Airport community.
- Improve indoor air quality (by reducing airborne contaminants) for workers during construction and for employees, passengers, and tenants during occupancy.
- Protect and extend the lifetime of the ventilation system.

DESIGN EVALUATION POINTS (1 POINT MAXIMUM)

1. Develop a Construction IAQ Management Plan during design.

SUSTAINABLE DESIGN STRATEGIES

- Develop a Construction IAQ Management Plan during design that includes activities to be completed during construction and includes an approach for ensuring optimal IAQ before occupancy.

During Construction:

- Specify the recommended control measures found in the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) *IAQ Guideline for Occupied Buildings under Construction*, 2nd Edition 2007, Chapter 3. The SMACNA guidelines recommend control measures in five areas including HVAC protection, source control, pathway interruption, housekeeping, and scheduling. Examples of control measures include:
 - Specify the protection of stored on-site and installed absorptive materials from moisture damage.
 - Specify the partitioning of construction areas from occupied non-construction portions of a building to prevent the circulation of airborne contaminants.
 - Specify the sequencing of installation of materials to avoid contamination of absorptive materials such as insulation, carpeting, ceiling tile, and gypsum wallboard.
- Specify that if air handlers are used during construction, filtration media with a Minimum Efficiency



Reporting Value (MERV) of 8 at each return air grill, as determined by ASHRAE 52.2-1999, is required.

- Specify that smoking inside the building and within 25 feet of building entrances once the building is enclosed is prohibited during construction.

Before Occupancy:

- Specify replacement of all filtration media immediately prior to occupancy. Filtration media should have a Minimum Efficiency Reporting Value (MERV) of 13, as determined by ASHRAE 52.2-1999 for media installed at the end of construction.
- If practical after construction is complete and prior to occupancy, specify conduct of a two-week building flush out with 100% outside air or complete IAQ testing to ensure proper IAQ.



HEALTH, SAFETY, AND SECURITY

HSS-5

Indoor Chemical & Pollutant Source Control

Last Updated: September 25, 2014

PURPOSE

Minimize exposure of building occupants to potentially hazardous particulates and chemical pollutants.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Enhance the health and comfort of the Airport community.
- Avoid unnecessary exposure to airborne chemicals and particles.
- Improve indoor air quality for employees, passengers, and tenants.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Design or specify some physical means of chemical and pollutant source controls.
2. Design or specify substantial physical and some mechanical means of chemical and pollutant source controls.
3. Design or specify substantial physical and substantial mechanical means of chemical and pollutant source controls.

SUSTAINABLE DESIGN STRATEGIES

- Specify permanent entryway systems (e.g., grills, grates) or carpet walk-off entryway systems to capture dirt and particulates from entering the building at all high volume entryways. Roll-out entryway systems should be at least 10 feet long.
- Where chemical use occurs (e.g., housekeeping areas, garages, shops, and copying/printing rooms), design segregated areas with deck-to-deck partitions, self-closing doors, or hard ceiling, and maintain separate outside exhaust at a rate of at least 0.50 cubic feet per minute per square foot, with no air re-circulation and a negative pressure maintained.
- Provide drains plumbed for appropriate disposal of liquid waste in spaces where water/liquid and chemical concentrate mixing occurs.
- Specify finish materials and assemblies that resist mold growth.
- Design central locations in terminal and office buildings for storage of concentrated cleaning chemicals



and other pollutant sources. Locate these areas away from high volume occupant and tenant work areas.

- Locate sources of outdoor air pollution or noxious odors (e.g., trash dumpsters, vehicle idling, tobacco smoke) away from outdoor ventilation air intakes.
- Design separate exhaust and plumbing systems in spaces that are known to use or contain chemicals and hazardous products to achieve physical isolation from the rest of the building.
- Provide water and electricity utility outlets for cleaning.
- Design buildings to minimize pollutant cross-contamination of regularly occupied areas.
- Design for the use of electric vehicles in indoor cargo facilities and other large volume enclosed spaces; provide necessary infrastructure to accommodate.
- Design for and install indoor toxic-absorptive vegetation (e.g., green walls).
- Specify implementation of a GreenSeal-compliant cleaning program.

Community



COMMUNITY

COM-1

Light Pollution Reduction

Last Updated: September 25, 2014

PURPOSE

Minimize light trespass from the building and site, reduce sky-glow to increase night sky access, improve nighttime visibility through glare reduction, and reduce impact from lighting on nocturnal environments (light pollution reduction).

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Provide opportunities for people to experience the Tampa Bay area's natural environment.
- Enhance links between the Airport and the Tampa Bay community.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Limit exterior fixture night sky trespass to 10% and interior night sky trespass where feasible.
2. Limit exterior fixture and interior night sky trespass to 10%.
3. Specify full cut-off exterior fixtures and eliminate night sky trespass from interior lighting.

SUSTAINABLE DESIGN STRATEGIES

- Model the site lighting design using a computer model to establish a baseline level and to support evaluation of design alternatives.
- Specify site lighting criteria to maintain safe light levels while avoiding off-site lighting and night sky pollution.
- Minimize site lighting while satisfying public safety and passenger convenience needs.
- Utilize optimized fixture lenses to provide desired light distribution with reduced fixture quantities.
- Design the maximum candela value of all interior lighting to fall within the building (not out through windows) and the maximum candela value of all exterior lighting to fall within the property.
- Specify dynamic reductions in overall light levels during unoccupied periods within facilities, considering public safety.
- Specify full cutoff luminaires, low-reflectance, non-specular surfaces and low-angle spotlights for roadway and building lighting.



- Incorporate informed placement of interior lights, reflective glazing, physical shielding, and other measures to reduce/eliminate the trespassing of interior lighting into the night sky.
- Meet or provide lower light levels and uniformity ratios than those recommended by the Illuminating Engineering Society of North America (IESNA) *Recommended Practice Manual: Lighting for Exterior Environments* (RP-33-99).
- Develop greenbelts along the airport perimeter as an attractive light and noise buffer between the Airport and the community.
- Specify high pressure sodium (HPS) and/or LED lamps instead of metal halide (MH) lamps.
- Specify low-temperature fluorescents, LED, and/or solar-powered fixtures for exterior lighting.
- Specify high frequency electronic ballasts with fluorescent 2-, 4-, and 8-foot tubular lamps that do not contain mercury.
- Specify self-dimming ballasts and controls.
- Establish a schedule for when construction lighting is required and develop a policy to reduce lighting when not needed.



COMMUNITY

COM-2

Exterior Views

Last Updated: September 25, 2014

PURPOSE

Provide a connection for building occupants between indoor spaces and the outdoors through the incorporation of exterior views into regularly occupied areas.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Provide opportunities for people to experience the Tampa Bay area's natural environment.
- Exceed the expectations of our customers for a sustainable Airport experience.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Provide direct eye-level views to the outside from 50 percent of regularly occupied spaces on a square footage basis.
2. Provide direct eye-level views to the outside from 75 percent of regularly occupied spaces on a square footage basis.
3. Provide direct eye-level views to the outside from 90 percent of regularly occupied spaces on a square footage basis.

SUSTAINABLE DESIGN STRATEGIES

- Provide sky or clerestory restorative views as appropriate in terminal and non-terminal facilities (e.g., cargo).
- Orient building to optimize available restorative views.
- Limit the heights of interior partitions (e.g., maximum 42 inches).
- Design open workstation cubicles or cubicle walls to be lower than 42" and/or incorporate glazing into upper portions of partitions to provide views of the outside.
- Design partitioned and cellular office spaces toward the center of floor plans with windows to provide views of the outside.
- Incorporate glazing in interior walls with appropriate interior shading devices.
- Highlight airfield views in facility design.

SUSTAINABLE DESIGN FACT SHEET



- Consider use of interior daylighting patterns and views as a form of public art within public buildings.
- Consider sun penetration of views to support indoor landscaping.



COMMUNITY

COM-3

Noise and Acoustical Quality

Last Updated: September 25, 2014

PURPOSE

Limit noise levels and exposure in noise-sensitive spaces such as terminals and office spaces.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Enhance the health of the Airport community.
- Exceed the expectation of our customers for a sustainable Airport experience.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Incorporate and document a minimum of two sustainable design strategies to limit noise levels and exposure to occupants.
2. Incorporate and document a minimum of four six sustainable design strategies to limit noise levels and exposure to occupants.
3. Incorporate and document sustainable design strategies to reduce noise transmission to adjacent communities.

SUSTAINABLE DESIGN STRATEGIES

- Orient glazing/windows and other noise transmission surfaces away from the most noise-sensitive spaces.
- Orient buildings such that glazed or other acoustically reflective surfaces are not directed toward noise sources.
- Consider noise-sensitivity of adjacent interior spaces when siting rooms that have significant ventilation requirements (e.g., computer/server rooms).
- Utilize landscaping as a means of noise attenuation.
- Specify laminated glazing and double-pane windows to reduce noise transmission.
- Specify materials with noise-absorbent properties.
- Specify wrapping of exterior heating, ventilation, and air conditioning (HVAC) duct work with sound deadening materials.



- As project design allows, develop greenbelts as part of development projects along the airport perimeter as an attractive light and noise buffer between the airport and the community.
- Design acoustical silencers, barriers, and earthen berms to minimize transmission of noise to surrounding communities.
- Locate mechanical equipment and other sources of noise away from areas of occupancy. Where equipment cannot be located remotely, include sound insulation in adjacent partitions and ceiling voids.
- Specify acoustical ceiling tiles, flooring, and walls.



COMMUNITY

COM-4

Consistency with Local, Regional, and State Plans

Last Updated: September 25, 2014

PURPOSE

Foster and promote Airport development that maximizes alignment and consistency with local, regional, and state plans.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Inspire sustainable actions throughout the Airport community.
- Enhance links between the Airport and the Tampa Bay community.
- Support regional planning interests.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Document coordination with local and regional planning agencies to review proposed development (general and specific).
2. Document two sustainable design strategies incorporated to achieve consistency with local, regional, or state plans.
3. Document specific joint infrastructure utilization as a component of project design.

SUSTAINABLE DESIGN STRATEGIES

- Consider defined future local and regional development in designing infrastructure (e.g., intersection locations and future transit corridors).
- Support regional efforts to improve connectivity between the Airport and the region (e.g., Greenlight Pinellas Initiative).
- Propose cost-sharing or other mechanisms to incorporate specific improvements (e.g., expanded ductbank, supplemental manholes, detention basin inflow piping stubs) intended to facilitate future local or regional development with minimal impact.
- Consider future development of adjacent Airport parcels or off-Airport properties when designing storm water management facilities and identify opportunities to improve facility design efficiency.



COMMUNITY

COM-5

Placemaking

Last Updated: September 25, 2014

PURPOSE

Create a sense of place that capitalizes on the greater Tampa Bay community and regional assets to promote a restorative environment.

ASSOCIATED SUSTAINABILITY GOALS AND BENEFITS

- Inspire sustainable actions throughout the Airport community.
- Create a learning Airport community focused on continual improvement.
- Exceed the expectation of our customers for a sustainable Airport experience.
- Enhance links between the Airport and the Tampa Bay community.

DESIGN EVALUATION POINTS (3 POINTS MAXIMUM)

1. Consider and document the exploration of placemaking opportunities in publicly accessible projects or public spaces within a project (non-airfield).
2. Incorporate and document one placemaking strategy in project design (non-airfield).
3. Incorporate and document two placemaking strategies in project design (non-airfield).

SUSTAINABLE DESIGN STRATEGIES

- Incorporate public art in project design.
- Coordinate with local and regional organizations (e.g., City of Tampa Public Art Program) to capture local art resources.
- Provide interior spaces where employees and/or the public can voluntarily dwell to engage specific features or experiences that emphasize the greater Tampa Bay area (e.g., music, rotating art exhibits, local history displays, educational displays, imagery, culture).
- Provide space allowances to encourage the incorporation of place identity features.
- Provide inviting exterior spaces where employees and/or the public can voluntarily dwell to experience natural, geographic, and cultural aspects of the greater Tampa Bay area.



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Exhibit-45

SUSTAINABLE DESIGN CRITERIA MANUAL (SDCM) PROJECT RECORD WORKSHEET



Sustainable Design Criteria Manual (SDCM) Project Record Worksheet - ConRAC

Project:	<input type="text"/>	Company :	<input type="text"/>
Name:	<input type="text"/>	Date:	<input type="text"/>
Email:	<input type="text"/>	Phone:	<input type="text"/>

Instructions:

Check YES or NO next to each strategy included in the project. If a strategy is implemented but not listed, provide a brief description under 'Additional Information'.

CATEGORY: NATURAL SYSTEMS MANAGEMENT – AIR

OZONE-DEPLETING CHEMICALS AND REFRIGERANT MANAGEMENT		
<i>THE PROJECT REDUCES OZONE DEPLETION WHILE MINIMIZING DIRECT CONTRIBUTIONS TO CLIMATE CHANGE FROM REFRIGERANT MANAGEMENT.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project uses no CFC or hydrochlorofluorocarbon (HCFC) refrigerants.
<input type="checkbox"/>	<input type="checkbox"/>	The project does not use halons in fire suppression.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

CATEGORY: NATURAL SYSTEMS MANAGEMENT – WATER

WATER USE AND WASTEWATER REDUCTION		
<i>THE PROJECT MAXIMIZES WATER EFFICIENCY TO REDUCE THE BURDEN ON MUNICIPAL WATER SUPPLY AND WASTEWATER SYSTEMS.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project uses high-efficiency fixtures and valves.
<input type="checkbox"/>	<input type="checkbox"/>	The project uses waterless or water-efficient urinals, dual-flush toilets, and/or pressure assisted toilets.
<input type="checkbox"/>	<input type="checkbox"/>	The project uses motion sensors and water-conserving aerators on faucets.
<input type="checkbox"/>	<input type="checkbox"/>	The project utilizes non-potable water (e.g. rainwater harvesting, graywater, or reclaimed water) for flush fixtures.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

CATEGORY: WASTE MANAGEMENT

STORAGE AND COLLECTION OF RECYCLABLES		
<i>THE PROJECT FACILITATES THE REDUCTION OF SOLID WASTE DISPOSED BY BUILDING OCCUPANTS.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project identifies all potential recyclable waste streams (e.g., aluminum, glass, plastic, paper, cardboard, carpet, wood/pallets, gas/oil filters, motor oil and anti-freeze, scrap metal, batteries, light bulbs, toner cartridges, tires, electrical wiring, electronics/e-Waste, other) and considers opportunities to maximize collection of materials.
<input type="checkbox"/>	<input type="checkbox"/>	The project is designed with convenient, accessible, and appropriately sized areas for recyclable storage to support recycling infrastructure (e.g., cardboard balers).
<input type="checkbox"/>	<input type="checkbox"/>	Specify identifying signage for all recycling collection and storage areas and equipment.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes a zero-waste zone(s) to minimize/eliminate corresponding solid waste infrastructure from the zone(s).
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

CONSTRUCTION WASTE MANAGEMENT		
<i>THE PROJECT DIVERTS CONSTRUCTION WASTE FROM LANDFILL DISPOSAL.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project has a Construction Waste Management Plan with a specified diversion goal (%) and identifies waste streams relevant to the project such as cardboard, metal, concrete, plastic, wood, glass, gypsum wallboard, carpet and insulation.
<input type="checkbox"/>	<input type="checkbox"/>	The project documents the total amount of solid waste and of diverted materials.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

CATEGORY: BUY GREEN: SUSTAINABLE PROCUREMENT

FURNITURE AND EQUIPMENT		
<i>THE PROJECT REDUCES THE NATURAL RESOURCE AND AIR QUALITY IMPACTS OF FURNITURE AND EQUIPMENT ACQUIRED FOR USE IN THE BUILDING.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project incorporates salvaged, re-used, repaired and/or refurbished furniture and equipment.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes furniture materials and products that contain recycled content, are rapidly renewable, available locally/regionally, include Forest Stewardship Council (FSC)-certified wood components or are low-emitting.
<input type="checkbox"/>	<input type="checkbox"/>	The project contains furniture that is GreenGuard certified.
<input type="checkbox"/>	<input type="checkbox"/>	The project uses IT equipment and appliances that are ENERGY STAR rated.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

CERTIFIED WOOD MATERIALS (NON-FURNITURE)		
<i>THE PROJECT USES PRODUCTS THAT ARE CERTIFIED AS MEETING RESPONSIBLE FOREST MANAGEMENT PRACTICES.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project uses permanently installed wood-based materials certified by the Forest Stewardship Council (FSC) or the Sustainable Forest Initiative (SFI). Building components include items such as framing, flooring, sub-flooring, wood doors and finishes.
<input type="checkbox"/>	<input type="checkbox"/>	The project uses temporary construction material such as bracing certified by the Forest Stewardship Council (FSC) or the Sustainable Forest Initiative (SFI).
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

RAPIDLY RENEWABLE MATERIALS (NON-FURNITURE)		
<i>THE PROJECT REDUCES THE USE AND DEPLETION OF FINITE RAW MATERIALS AND LONG-CYCLE RENEWABLE MATERIALS BY REPLACING THEM WITH RAPIDLY RENEWABLE MATERIALS.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project has established a specific goal for rapidly renewable material content.
<input type="checkbox"/>	<input type="checkbox"/>	The project uses rapidly renewable building materials and products made from plants that are harvested within a ten-year or shorter cycle, such as cork, bamboo, natural rubber, wheat, cotton, straw, linseed, straw board or “agriboard,” bamboo, cork, wool carpets and fabrics, cotton-batt insulation, linoleum flooring, sunflower seed board, wheat grass or straw board cabinetry and others.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

RECYCLED CONTENT MATERIALS (NON-FURNITURE)

THE PROJECT REDUCES THE USE AND DEPLETION OF FINITE RAW MATERIALS REPLACING THEM WITH RECYCLED CONTENT MATERIALS.

YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project has established a specific goal for recycled content material.
<input type="checkbox"/>	<input type="checkbox"/>	The project uses recycled content materials such as aluminum products, steel doors and frames, aluminum doors and windows, plaster, terrazzo, acoustical ceilings, drywall, finish flooring including carpet, tiles, resilient flooring and terrazzo, toilet compartments, and special finishes.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

LOCAL/REGIONAL MATERIALS (NON-FURNITURE)

THE PROJECT USES MATERIALS AND PRODUCTS THAT ARE EXTRACTED, HARVESTED, RECOVERED AS WELL AS MANUFACTURED WITHIN THE REGION TO REDUCE THE ENVIRONMENTAL IMPACTS FROM TRANSPORTATION AND TO SUPPORT TAMPA'S REGIONAL ECONOMY.

YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project has established a specific goal for local/regional materials.
<input type="checkbox"/>	<input type="checkbox"/>	The project uses building materials or products that have been extracted, harvested, recovered and manufactured within 500 miles of the project site.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

LOW EMITTING MATERIALS (NON-FURNITURE)

THE PROJECT REDUCES THE QUANTITY OF INDOOR AIR CONTAMINANTS THAT ARE ODOROUS, POTENTIALLY IRRITATING, AND/OR HARMFUL TO THE HEALTH, COMFORT, AND WELL-BEING OF CONTRACTORS AND OCCUPANTS.

YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project uses one or more adhesive or sealant product(s) that contain low-VOC content according to the South Coast Air Quality Management District (SCAQMD) Rule # 1168.
<input type="checkbox"/>	<input type="checkbox"/>	The project uses one or more paint or coating product(s) that are in compliance with Green Seal Standards (GS-11) and (GC-3) and SCAQMD Rule #1113.
<input type="checkbox"/>	<input type="checkbox"/>	The project uses low-VOC carpet and flooring systems that comply with the Carpet and Rug Institute Green Label Plus program (carpet), Green Label program (cushion), and Floorscore (hard surface flooring).
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

GREEN IT		
<i>THE PROJECT REDUCES THE ENVIRONMENTAL IMPACTS ASSOCIATED WITH INFORMATION TECHNOLOGY (IT)-RELATED MATERIALS, EQUIPMENT, AND PROCESSES.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project will submit design review submittals electronically to facilitate HCAA electronic review process.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes significant IT systems or components in a server room that has energy systems and components that minimize heat generation/cooling demand.
<input type="checkbox"/>	<input type="checkbox"/>	The project implements best practices including double-sided printing for all on-site printing requirements during construction.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

CATEGORY: ENERGY MANAGEMENT

SYSTEMS COMMISSIONING		
<i>THE PROJECT PROVIDES FOR THE VERIFICATION THAT FUNDAMENTAL BUILDING ELEMENTS AND SYSTEMS ARE DESIGN, INSTALLED, AND CALIBRATED TO OPERATE AS INTENDED.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project incorporates a Commissioning Plan which details project-specific operations and maintenance (O&M) checklists
<input type="checkbox"/>	<input type="checkbox"/>	The project includes a Commissioning Report.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes operator training for commissioned systems.
<input type="checkbox"/>	<input type="checkbox"/>	The project provides a manual which contains information required for future re-commissioning of systems.
<input type="checkbox"/>	<input type="checkbox"/>	The project provides a comprehensive operations manual for all systems.
<input type="checkbox"/>	<input type="checkbox"/>	The project included an independent third party review of the Commissioning Plan during project design.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

IMPROVED ENERGY PERFORMANCE		
<i>THE PROJECT OPTIMIZES ENERGY PERFORMANCE TO REDUCE ENVIRONMENTAL IMPACTS ASSOCIATED WITH EXCESSIVE ENERGY USE.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project meets the current mandatory and prescriptive applicable energy code.
<input type="checkbox"/>	<input type="checkbox"/>	The project exceeds the current mandatory and prescriptive applicable energy code.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:
		Provide description of energy saving measures:

DAYLIGHTING		
<i>THE PROJECT REDUCES ENERGY USE THROUGH THE INTRODUCTION OF DAYLIGHT INTO REGULARLY OCCUPIED SPACES.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project includes daylight dimming controls to reduce daytime lighting requirements.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes daylight harvesting integrating photo-integrated light sensors to dim artificial lights.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes the development of a daylighting model or calculations to assess foot-candle levels and daylight factors achieved.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

MAINTENANCE REQUIREMENTS		
<i>THE PROJECT MINIMIZES THE OPERATIONAL AND ENVIRONMENTAL IMPACTS OF MAINTENANCE AND AVOIDS MAINTENANCE REQUIREMENTS THAT ARE NOT COST-EFFECTIVE OVER THE LIFE OF THE FACILITY/EQUIPMENT.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project has developed project-specific operations and maintenance (O&M) checklists.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

THERMAL COMFORT		
<i>THE PROJECT PROVIDES A THERMALLY COMFORTABLE ENVIRONMENT THAT SUPPORTS THE PRODUCTIVITY AND WELL-BEING OF OCCUPANTS.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project meets the requirements of ASHRAE 55: <i>Thermal Environmental Conditions for Human Occupancy</i> , including humidity control within established ranges.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes a temperature and humidity monitoring system that provides operators with control over thermal comfort performance and humidification and/or dehumidification systems.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes controls for each individual in office spaces for airflow, temperature, and lighting of the occupied space, and for the occupants in non-perimeter, regularly occupied areas.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

CATEGORY: HEALTH, SAFETY & SECURITY

INDOOR AIR QUALITY PERFORMANCE		
<i>THE PROJECT ESTABLISHES AN INDOOR AIR QUALITY (IAQ) PERFORMANCE TO ENHANCE INDOOR AIR QUALITY, CONTRIBUTING TO THE COMFORT AND WELL-BEING OF THE OCCUPANTS.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project is designed so that the HVAC system meets the minimum ventilation requirements described in the latest version of ASHRAE 62.1: <i>Ventilation for Acceptable Indoor Air Quality</i> . If local building codes are applicable, design the minimum ventilation to satisfy the requirements of the most stringent code or standard.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes air filtration requirements that meet the needs of the spaces being served without over-filtering the air to reduce energy consumption associated with fan horsepower.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes permanent outdoor air monitoring stations in all air handling units that supply ventilation and connect these stations to the building automation system (BAS).
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

ENVIRONMENTAL TOBACCO SMOKE CONTROL		
<i>THE PROJECT PREVENTS EXPOSURE OF BUILDING OCCUPANTS AND SYSTEMS TO ENVIRONMENTAL TOBACCO SMOKE (ETS) BY PROVIDING OUTDOOR SMOKING AREAS.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project includes signage (indoor and outdoor) that clearly communicates smoking areas.
<input type="checkbox"/>	<input type="checkbox"/>	The project provides specific and defined areas of construction sites for construction employee smoking, outside of any buildings and at least 25 feet from building.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

CARBON DIOXIDE MONITORING		
<i>THE PROJECT PROVIDES CAPABILITY FOR CARBON DIOXIDE MONITORING TO HELP SUSTAIN LONG-TERM OCCUPANT COMFORT AND WELL-BEING.</i>		
YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project includes HVAC systems with carbon dioxide monitoring sensors in all densely occupied spaces and integrates these sensors with the building automation system (BAS).
<input type="checkbox"/>	<input type="checkbox"/>	The project includes real-time control of terminal unit (VAV box) flowrates and total outdoor air flowrates at the system level based on space carbon dioxide levels.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes a permanent carbon dioxide monitoring system that provides feedback on space ventilation performance.
<input type="checkbox"/>	<input type="checkbox"/>	The project incorporates Demand Control Ventilation strategies, where possible, to vary the amount of ventilation air based on carbon dioxide levels in the spaces being served by the Air Handling Units.
<input type="checkbox"/>	<input type="checkbox"/>	The project establishes minimum ventilation rates so spaces are positively pressurized at all times.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT

THE PROJECT REDUCES INDOOR AIR QUALITY (IAQ) PROBLEMS RESULTING FROM CONSTRUCTION ACTIVITIES TO PROMOTE THE HEALTH, COMFORT AND WELL-BEING OF CONSTRUCTION WORKERS AND BUILDING OCCUPANTS.

YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project has developed a Construction IAQ Management Plan during design that include activities to be completed during construction and includes an approach for ensuring optimal IAQ before occupancy.
<input type="checkbox"/>	<input type="checkbox"/>	The project’s IAQ Management Plan includes the recommended control measures found in the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) <i>IAQ Guideline for Occupied Buildings under Construction</i> , 2nd Edition 2007, Chapter 3 in five areas including HVAC protection, source control, pathway interruption, housekeeping, and scheduling. Examples of control measures include: <ul style="list-style-type: none"> - Protection of stored on-site and installed absorptive materials from moisture damage. - Partitioning of construction areas from occupied non-construction portions of a building to prevent the circulation of airborne contaminants. - Sequencing of installation of materials to avoid contamination of absorptive materials such as insulation, carpeting, ceiling tile, and gypsum wallboard.
<input type="checkbox"/>	<input type="checkbox"/>	The project uses air handlers during construction with a filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 at each air return grill, as determined by ASHRAE 55.2-1999.
<input type="checkbox"/>	<input type="checkbox"/>	The project prohibits smoking within the tenant space, within 25 feet of building entrances and is prohibited during construction.
<input type="checkbox"/>	<input type="checkbox"/>	The project replaces all filtration media immediately prior to occupancy with a MERV rating of 13 as determined by ASHRAE 55.2-1999.
<input type="checkbox"/>	<input type="checkbox"/>	The project, if practical after construction and prior to occupancy, conducts a two-week building flush-out with 100% outside air.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:

INDOOR CHEMICAL & POLLUTANT SOURCE CONTROL

THE PROJECT PROVIDES MINIMAL EXPOSURE OF BUILDING OCCUPANTS TO POTENTIALLY HAZARDOUS PARTICULATES AND CHEMICAL POLLUTANTS.

YES	NO	STRATEGIES
<input type="checkbox"/>	<input type="checkbox"/>	The project includes permanent entryway systems (e.g., grills, grates) or carpet walk-off entryway systems (from exterior entrances) to capture dirt and particulates from entering the building at all high volume entryways. Roll-out entryway systems are at least 10 feet long.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes proper space for chemical use occurs (e.g., housekeeping areas, garages, shops, and copying/printing rooms), which are designed with segregated areas with deck-to-deck partitions, self-closing doors, or hard ceiling, and maintain separate outside exhaust at a rate of at least 0.50 cubic feet per minute per square foot, with no air re-circulation and a negative pressure maintained.
<input type="checkbox"/>	<input type="checkbox"/>	The project provides drains plumbed for appropriate disposal of liquid waste in spaces where water/liquid and chemical concentrate mixing occurs.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes finish materials and assemblies that resist mold growth.
<input type="checkbox"/>	<input type="checkbox"/>	The project includes indoor toxic-absorptive vegetation (e.g., green walls).
<input type="checkbox"/>	<input type="checkbox"/>	The project includes the implementation of a GreenSeal-compliant cleaning program.
<input type="checkbox"/>	<input type="checkbox"/>	Additional Information:



Hillsborough County Aviation Authority
Tenant Work Permit Handbook



CHAPTER 1 GENERAL 1-1

1. Tenant Work Permit (TWP)..... 1-1

2. Basis for an Authority TWP 1-1

3. Definitions..... 1-2

CHAPTER 2 TENANT WORK PERMIT APPLICATION REQUIREMENTS 2-1

1. Permit Fee..... 2-1

2. Complete a TWP Application Form FA-23 2-1

3. Attach Supporting Documentation..... 2-1

4. Preconstruction Conference 2-3

5. Submit for Approval..... 2-4

6. Completion of Work..... 2-4

7. Permit Closure 2-4

CHAPTER 3 BONDS 3-1

1. General..... 3-1

2. Commercial Real Estate 3-2

3. Verification..... 3-2

CHAPTER 4 INSURANCE AND INDEMNIFICATION 4-1

1. Indemnification and Hold Harmless 4-1

2. Contractual Insurance Terms and Conditions..... 4-3

3. Insurance Requirements 4-8

4. Contractor’s Minimum Required Insurance Coverage and Limits – (See Tables A and B 4-9

Sample Accord Form 4-11

CHAPTER 5 GENERAL CONSTRUCTION STANDARDS 5-1

1. Change Orders 5-1

2. Coordination and Inspection 5-1

3. General..... 5-1

4. Standards of Construction 5-2

A. Codes, Rules, and Regulations 5-2

B. Permits..... 5-2

C. Equipment..... 5-3

D. Material Storage 5-3

E. Demolition 5-3

F. Temporary Construction Barricades..... 5-4

G. Building 5-7

H. Telecommunications and Network Infrastructure Standards 5-8

I. General Electrical 5-9

J. Antennas 5-9

K. Fire Alarm and Detection Systems..... 5-11

L. Heating, Ventilation, and Air Conditioning (HVAC) 5-11

M. Cutting, Welding and Patching 5-11

TABLE OF CONTENTS
TENANT WORK PERMIT HANDBOOK

N.	Airfield Paving: Runways, Taxiways, and Aprons.....	5-12
O.	Landscaping	5-12
5.	Environmental Protection.....	5-12
6.	Storage Tank Systems	5-13
7.	Pollution Control.....	5-13
8.	Collection and Disposal of Waste	5-14
9.	Pest Control	5-15
10.	Limits of Construction.....	5-15
11.	Construction Layout and Stakes	5-15
12.	Environmental Management, Groundwater	5-15
13.	Familiarization of Existing Conditions.....	5-15
14.	Safety and Protection	5-15
15.	Work Hours.....	5-16
16.	Maintenance of Traffic.....	5-17
17.	Cleaning and Protection of Property	5-21
18.	Conservation and Salvage.....	5-22
19.	Sustainability.....	5-23
20.	Testing.....	5-23
21.	Final Cleaning.....	5-23
CHAPTER 6 SAFETY AND SECURITY REQUIREMENTS		6-1
1.	Safety Plan	6-1
2.	General Safety Requirements.....	6-1
3.	Special Written Safety Plans	6-3
4.	Emergency Procedures	6-4
5.	Security and Protection of Facilities	6-4
A.	Securing Work Area	6-4
B.	Staging, Stockpile, and Spoil Areas	6-4
C.	Intermittent Construction Operations on the AOA	6-6
D.	Limitation of Operations on the AOA	6-6
E.	Obstructions to Navigation.....	6-6
F.	Access to the Construction Site	6-7
6.	Tenant and Contractor's Security Requirements.....	6-8
CHAPTER 7 UTILITIES		7-1
1.	General.....	7-1
2.	Protection of Existing Utilities.....	7-1
CHAPTER 8 HEIGHT-ZONING PERMITS		8-1
1.	Submission of Height Zoning Permits for Construction Activity Located on Aviation Authority Property.....	8-1
2.	Application Requirements	8-1

CHAPTER 1 GENERAL

1. Tenant Work Permit (TWP)

These provisions specify certain minimum requirements by which the Tenant and Contractor agree to be bound while completing work under an approved TWP. The Contractor must comply with any other governing agency requirements or regulations. Except for routine maintenance on installed equipment, TWP is required any time a Tenant performs or hires a Contractor to perform construction or modification work on any Authority property.

Any Tenant work undertaken without the prior approval of the Authority may at the discretion of the Chief Executive Officer or designee, be required to be removed from the Tenant's lease premises and the leased premises restored to its prior condition at the sole expense of the Tenant.

2. Basis for an Authority TWP

The TWP program is designed to assure compliance with all of the legal restrictions imposed on the Authority by Florida Statutes, Authority Bond Covenants, Authority Grant Obligations, Hillsborough County Aviation Authority Rules and Regulations, Restatement and Amendment to Declaration of Development Standards and the Authority's provisions pertaining to construction activities within the boundaries of Tampa International Airport by parties other than the Authority. This assures all improvements have been reviewed for compliance with Authority objectives including public safety, security, workmanship, and project record documentation. The TWP Handbook contains detailed instructions on how to complete the required documents, along with Tenant and Contractor responsibilities under the program. Excerpts from the documents and a brief explanation of the basis of some of the provisions follow:

A. Hillsborough County Aviation Authority Policy P743, Development Standards.

The development standards of Authority-owned property will ensure that development of all facilities and improvements are compatible with performance, appearance, and general operating characteristics. The Chief Executive Officer will recommend to the Board, and the Board will adopt, development standards regarding land use and area regulations within the premises of the airports under the Authority's control and supervision. All Authority real property will be subject to development in accordance with these standards. The Chief Executive Officer or designee will ensure compliance with these standards.

B. Rules and Regulations, R340 Tampa International Airport, dated October 6, 2011, Section 2 – General Regulations, paragraphs 2.1 and 2.2 are quoted as follows:

1) COMPLIANCE WITH RULES AND REGULATIONS

- (a) Any permission granted by the Authority, directly or indirectly, expressly, or by implication or otherwise, to any person to enter or to use the Airport or any part thereof, is conditioned upon strict compliance with the Authority's rules and regulations, policies, standard procedures and directives.
- (b) Any permission granted by the Authority under these rules and regulations is conditioned upon the payment of any and all applicable fees and charges established by the Authority.

2) COMMERCIAL ACTIVITY, ADVERTISING, DISPLAY AND SPEECH

In compliance with the Authority's policies, standard procedures and directives no person for any business, commercial, or revenue producing purposes, will occupy or rent space, conduct any business, commercial enterprise or activity, post, distribute, or display signs, advertisements, circulars, pictures, sketches or drawings, or engage in any other forms of commercial speech on the airport without first obtaining a written contract, permit or other form of written authorization from the Authority.

Any Contractor by entering into an agreement to do work on Authority property is engaging in commercial activity on the Airport and consequently is bound to comply with all the rules and regulations of Tampa International Airport in conducting its business

3. Definitions

Whenever the following terms are used in TWP documents or any other documents or instruments pertaining to this program, the intent and meaning shall be interpreted as follows:

Air Operations Area (AOA): Area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft, and the paved and unpaved areas within the security fenced area.

Authority: Hillsborough County Aviation Authority, whose address is Post Office Box 22287, Tampa, Florida 33622.

Contractor: The person, firm or corporation performing construction activities on Authority-owned or controlled property.

Co-obligee Payment Bond: The approved form of security, naming both the tenant (the contracting agent) and Authority (the property owner), furnished by the Contractor and its

surety, on the form provided by the Authority, as a guaranty that the Contractor will pay all sub-Contractors and suppliers.

Co-obligee Performance Bond: The approved form of security, naming both the tenant (the contracting agent) and Authority (the property owner), furnished by the Contractor and its surety, on the form provided by the Authority, as a guaranty that the Contractor will complete the work in accordance with the terms of the contract, the TWP.

Commercial Real Estate: Property owned by the Hillsborough County Aviation Authority leased and or developed for commercial uses. Examples include International Mall and Corporate Centers.

Fixed Base Operator (FBO): The operator of general aviation facilities on Tampa International Airport (TPA) or Authority General Aviation Airports.

Surety: The corporation, partnership, or individual other than the Contractor, executing bonds which are furnished to the Owner by the Contractor.

Sustainable Design Criteria Manual (SDCM): Sustainable strategy recommendations, requirements, and tracking protocols for design and construction projects.

Sustainable Management Plan (SMP): Defines the context for the Authority's sustainability program, initiatives and implementation plans.

Tenant: Refers to that person, firm or corporation having a leasehold or sublease on Authority-owned or controlled property.

Tenant Work Permit Coordinator: The individual designated by the Authority to oversee and facilitate the TWP program.

CHAPTER 2 TENANT WORK PERMIT APPLICATION REQUIREMENTS

All applicants completing a Tenant Work Permit (TWP) will give special attention to the required attachments, which must accompany the application, especially the bonding and insurance requirements. When completed and signed, the application and attachments will be forwarded to the Authority Maintenance Department. General instructions for completing the Application are as follows:

1. Permit Fee

The Authority does not charge a fee for the TWP. However, work completed without an approved TWP will be subject to Tenant charges or removal at tenant expense. All other building permit and project development fees required to complete the work are the responsibility of the Tenant and Contractor.

2. Complete a TWP Application Form FA-23

- A. Complete the TWP application in its entirety and submit to the TWP coordinator for the processing and review of the permit application. Both the Tenant and Contractor must sign the TWP application. The TWP application can be found at:

<http://www.tampaairport.com/airport-operations>

- 1) Tenant: Complete page one of the TWP permit application. Provide a detailed description of the Scope/nature of request, dates required for work, airport location and all contact information.
- 2) Contractor: Complete applicable sections of page two of the TWP permit application.

3. Attach Supporting Documentation

- A. Performance and Payment Bonds

See Chapter 3 - Bonds for specific requirements.

- B. Insurance

All work must have proper insurance and must be approved by the Authority. For specific requirements, see Chapter 4 – Insurance.

- C. Drawings and Specifications

- 1) Two sets of complete drawings and specifications will be submitted with the TWP Application. The drawings should be to scale and submitted in a size, and in sufficient detail, to permit easy review and a clear understanding of the proposed work. At a minimum, the drawings shall contain a dimensioned plan view of the work, a location map of the work site, and as much additional information as necessary to define the scope of work, staging area, haul routes, and exact work requirements.
- 2) Drawings involving public safety, structural modifications, facility systems, or environmentally sensitive or hazardous work, etc., must be signed and sealed by an appropriately licensed professional. At the Authority's option, this requirement may be waived after a review of the planned work. If changes are made to the approved plans and specifications, the proposed changes must be certified signed and sealed and shall be submitted to the Authority for review prior to proceeding.
- 3) Tenants or Contractors designing projects using Building Information Modelling (BIM) shall include the Revit files as part of their closeout documents in addition to required CAD files.

D. Storage Tanks

Work involving the installation or removal of storage tanks, retention ponds, asbestos, and other environmentally sensitive items may require substantial additional detailed specifications, plans, and permits to be submitted prior to approval and before project closure. Additional guidelines for storage tank systems are contained in Chapter 5.6 – Storage Tanks Systems.

E. Antennas

For work involving new antennas, the Tenant will submit the proposed frequencies to the Authority for review to ensure there is no interference with existing frequencies. All antennas with an above ground level height greater than 10 feet will require an additional height-zoning permit(s) as described in Chapter 8 – Height-Zoning Permits.

F. Welding and Cutting Permit

The welding & cutting permit and instructions attached hereto are provided for the Contractor's use as may be required. The Contractor and tenant will execute the application and submit it to the Authority Maintenance Department at least two (2) work days prior to the date any welding, cutting, brazing or other hot work are expected to occur on the job site. See Chapter 5 – General

Construction Standards for additional information. Welding and Cutting Permit Application can be found at

<http://www.tampaairport.com/airport-operations>

G. Maintenance/Construction Notices (MCN)

Occasional interruptions to utilities and operations are required to complete projects. A MCN must be submitted to the Authority Maintenance Department 72 hours prior to the proposed interruption of the following systems.

Electrical Outages	Work on Live Electrical Feeds
Chilled Water	Shuttle Systems
Fire Sprinkler	HVAC
Fire Alarm	Tele/Data Systems
Roadways	Other (any system that may affect any Operations)
Domestic Water	

Interruptions to Traffic will require the Tenant or contractor to submit to the Tenant Work Permit Coordinator a Management of Traffic Plan (MOT) including barricades, lighting and flagmen where required.

The Authority has the right to reject or cancel any MCN in the event the work may be accomplished through other means or other that are unforeseeable circumstances. See Chapter 5, paragraph 16 for further Management of Traffic requirements.

4. Preconstruction Conference

Prior to approving the TWP, the Contractor and Tenant may be required to attend a preconstruction conference with the TWP Coordinator and other Authority representatives. The Tenant requesting the work permit will notify the TWP Coordinator a minimum of two working days in advance of when they would like to schedule the meeting, and will provide a list of Contractors and a proposed schedule of work activity. The Authority will not schedule a conference until it has reviewed the proposed project plans and specifications.

The agenda for the pre-construction meeting will include, but is not limited to, the following:

- A. Scope of Work
- B. Start and completion dates
- C. Contractor's staffing and list of subcontractors and emergency phone numbers
- D. Material and equipment (delivery and storage)

- E. Job site safety and Barricade plan
- F. Work hours, noise, construction lights, hard hats
- G. Accessing the work site
- H. Utilities (service interruption request)
- I. Cutting and welding permit
- J. Waste Removal and Sustainability
- K. Contractor parking
- L. Fire alarms
- M. Change Orders
- N. Inspections (City, County and HCAA)
- O. Insurance and bonds
- P. Safety and emergency (OSHA/HCAA requirements)
- Q. Security
- R. Progress meetings
- S. Project close out documents
- T. Special provisions

5. Submit for Approval

The Authority's Maintenance Department will coordinate a review of all documentation with the appropriate Authority staff. Any issues raised will be brought to Tenant or Contractor attention for resolution. The work permit will not be approved until all requirements specified in the TWP Handbook have been met. *If all submittals are complete, the TWP will be processed within five business days. Work on the project cannot begin until an approved Work Permit has been issued by the Authority.*

6. Completion of Work

Time is of the essence in the completion of an approved TWP. It is agreed that if a permit is not completed in a timely manner by the Tenant that the Authority may complete the work at Tenant's expense. Additionally, Tenant agrees to correct to the Authority's satisfaction any latent defects discovered after the work is completed.

7. Permit Closure

The Tenant will notify the Authority in writing when the work is complete. At that time, the Authority will schedule a final inspection of the project. Any discrepancies noted will be forwarded to the Tenant for resolution prior to final closeout of the permit.

Upon completion of the work, the Contractor shall submit to the Authority a signed and sealed reproducible set of record or as built drawings. The Contractor shall submit a CAD disk(s) or CD-ROM(s) of the as built drawings in AutoCAD Release 12 or later format and in accordance with Authority CAD Specifications.

Upon receipt of the notice of completion, and the required record drawings, the Authority will review and close the TWP. All Contractor insurance and bonds will remain current and in force until the TWP is closed by the Authority.

CHAPTER 3 BONDS

1. General

- A. The tenant/Contractor will furnish co-obligee payment and performance bonds for all projects where the cost of construction is over \$25,000. The bonds will be in the full amount of their contract, on the forms provided by or deemed acceptable by the Authority, with a surety or sureties for the full and faithful performance of the work. The surety on any bond will be a corporate surety, satisfactory to the Authority, authorized under the laws of Florida to do business in the state of Florida and authorized to write that type of bond through a resident agent of the corporation located in the state of Florida. Bonds must be approved by the Authority prior to the commencement of any on-site work. Any forms used other than the Authority form will require a legal review. Such review may cause a delay in the final approval of a permit.

Be advised the Florida Construction Lien Law in Chapter 713 of the Florida Statutes, may not be applicable to the Authority, as a public agency. Any Claim of Lien purporting to attach to the real property owned by public agencies is invalid.

If a payment bond is associated with the work, under Florida Statute, Chapter 713 and 255 this creates a right of action, if necessary, against the Contractor and the surety.

- B. For work done for and by a Tenant, where the Tenant is a federal government entity, the Authority may accept a co-obligee rider to the Contractor-provided payment and performance bonds issued to the federal government agency for whom it is doing work on the airport. The rider must name the Authority as a co-obligee of the bonds and must be submitted with an executed original copy of the bonds and power of attorney. It is the governmental agency's responsibility to verify the applicability of this provision before proceeding.
- C. In lieu of the bond required by this section, a tenant or Contractor may file with the Authority an alternative form of security acceptable to the Authority. Any such alternative form of security will be for the same purpose and be subject to the same conditions as those applicable to the bond required by this chapter. The Tenant and Contractor may also be required to pay for the Authority's additional costs associated with the review. Bond forms can be located at.

<http://www.tampaairport.com/airport-operations>

2. Commercial Real Estate

A. Work Requiring Bonds

The following types of construction will require bonding according to the provisions above.

- 1) Original construction of a facility
- 2) Additions to facility
- 3) Major exterior renovations

B. Work that may be Exempt from Authority Bonding Requirements

- 1) Initial interior fit-outs
- 2) Interior refurbishment and renovations

3. Verification

The Authority reserves the right to verify compliance with these bonding provisions. Bonds will remain in force for a minimum of one year after the close out of the TWP by the Authority or until all obligations by the Tenant and Contractor have been fulfilled, as determined by the Authority, whichever is later. The Tenant will ensure the Contractor's bonds or bonding instruments are current and in force until released of the obligation by the Authority.

END OF CHAPTER

CHAPTER 4 INSURANCE AND INDEMNIFICATION

1. Indemnification and Hold Harmless

- A. By applying for the Tenant Work Permit, Tenant and Contractor agree to the following:

To the maximum extent permitted by Florida Law, in addition to Tenant and Contractor's obligation to provide pay for and maintain insurance as set forth elsewhere in the Handbook, Tenant and 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, fines and damages (including but not limited to claims for attorney's fees and court costs) caused in whole or in part by the:

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

of the Tenant or Contractor or the Tenant or Contractor's officers, employees, agents, volunteers, subcontractors, invitees, or any other person directly or indirectly employed or utilized by the Tenant or Contractor regardless of whether the liability, suit, claim, expense, loss, cost, fine or damages is caused in part by an indemnified party.

- B. In addition to the duty to indemnify and hold harmless, Tenant and 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, fines or

attorney's fees in the event the suit, claim, or action of any nature arises in whole or in part from the:

- 1) Presence on, use or occupancy of Authority property;
- 2) Acts, omissions, negligence (including professional negligence and malpractice), recklessness, intentional wrongful conduct activities, or operations;
- 3) Any breach of the terms of this Handbook;
- 4) Performance, non-performance or purported performance for this Lease;
- 5) Violation of any law, regulation, rule or ordinance;
- 6) Infringement of any patent, copyright, trademark, trade dress or trade secret rights;
- 7) Contamination of the soil, groundwater, surface water, storm water, air or the environment by fuel, gas, chemicals or any other substance deemed by the Environmental Protection Agency or other regulatory agency to be an environmental contaminant;

of the Tenant or Contractor or the Tenant or Contractor's officers, employees, agents, volunteers, subcontractors, invitees, or any other person directly or indirectly employed or utilized by the Tenant or Contractor regardless of whether it is caused in part by the Authority, its members, officers, agents, employees, or volunteers. This duty to defend exists immediately upon presentation written notice of a suit, claim or action of any nature to the Tenant/Contractor by a party entitled to a defense hereunder.

- C. If the above indemnity or defense provisions or any part of the above indemnity or defense provisions are limited by Fla. Stat. § 725.06(2)-(3), then Tenant and Contractor agrees to the following: To the maximum extent permitted by Florida Law, Tenant and Contractor will indemnify and hold harmless the Authority, its officers and employees from any and all liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fee, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Tenant or Contractor and persons employed or utilized by the Tenant or Contractor in the performance of the Work governed by this manual.
- D. If the above indemnity or defense provisions or any part of the above indemnity or defense provisions are limited by Fla. Stat. § 725.06(1), the monetary limitation on the extent of the indemnification shall be the greater of the (i) monetary value of the Contract between Tenant and Contractor, (ii) coverage amount of Commercial General Liability Insurance required under this manual or contract (whichever is greater 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 manual

- E. Tenant and Contractor's obligations to defend and indemnify as described in this Article will survive the expiration or earlier termination of the permit providing for the work under this Manual or until it is determined by final judgment that any suit, claim or other action against the Authority, its members, officers, agents, employees, and volunteers is fully and finally barred by the applicable statute of limitations or repose.
- F. Nothing in this Provision will be construed as a waiver of any immunity from or limitation of liability the Authority, or its members, officers, agents, employees, and volunteers may have under the doctrine of sovereign immunity under common law or statute.
- G. The Authority and its members, officers, agents, employees, and volunteers reserve the right, at their option, to participate in the defense of any suit, without relieving Tenant/Contractor of any of its obligations under this Provision.
- H. If this Provision or any part of this Provision is deemed to conflict in any way with any law, the Provision or part of the Provision will be considered modified by such law to remedy the conflict.

2. Contractual Insurance Terms and Conditions

A. Procurement of Coverage

With respect to each of the required coverage, Tenant or Contractor will, at the its expense, procure, maintain and keep in force the amounts and types of insurance conforming to the minimum requirements set forth in this document. Coverage will be provided by insurance companies eligible to do business in the State of Florida and having an AM Best rating of "A-" or better and a Financial Size Category of "VII" or better. Utilization of non-rated companies or companies with AM Best ratings lower than A- or financial size category lower than VII may be approved on a case by case basis by the Authority's Risk Management Department.

B. Terms of Coverage

Except as otherwise specified in this document, the insurance will commence on or prior to the effective date of this document and will be maintained in force throughout the duration of this document.

C. Reduction of Aggregate Limits

If any reduction of an aggregate limit occurs, the Tenant or Contractor will take immediate steps to have it reinstated.

D. Cancellation Notice

Each of the insurance policies will be specifically endorsed to require the insurer to provide the Authority with 30 days' written notice (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

E. No Waiver by Approval/disapproval

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

F. Changes in Coverage and Required Limits of Insurance

The coverage and minimum limits of insurance required by this document are based on circumstances in effect at the inception of this document. If, in the opinion of the Authority, circumstances merit a change in such coverage or minimum limits of insurance required by this document, the Authority may change the coverage and minimum limits of insurance required, and that the Tenant or Contractor will, within 60 days of receipt of written notice of a change in the coverage and minimum limits required, comply with such change and provide evidence of such compliance in the manner required by this document. Provided, however, that no change in the coverage or minimum limits of insurance required will be made by the Authority until at least two years after inception of this this document. Subsequent changes in the coverage or minimum limits of insurance will not be made by the Authority until at least two years after any prior change by the Authority unless extreme conditions warrant such change and are agreeable to both parties.

If, in the opinion of the Authority, compliance with the insurance requirements is not commercially practical for the tenant/Contractor, at the written request of the tenant/Contractor, the Authority 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 tenant/Contractor. Any such modification will be subject to the prior written approval of the Authority, and subject to the conditions of such approval.

G. Specified Coverage Requirements

If, in the opinion of the Authority, tenant or Contractor's general liability, automobile liability, or workers' compensation will not adequately insure against specified risks the Authority reserves the right to require tenant or Contractor to purchase additional coverage including but not limited to builder's risk or environmental liability.

H. Proof of Insurance Coverage

Tenant and Contractor will not commence work or use or occupy Authority premises in connection with this document, until the required insurance is in force, preliminary evidence of insurance acceptable to the Authority has been provided to the Authority, and the Authority has granted permission to the tenant or Contractor to commence work or use or occupy the premises in connection with this document.

As preliminary evidence of compliance with the insurance required by this document, the tenant and Contractor will furnish the Authority with a certificate(s) of insurance satisfactory to the Authority. This certificate must be signed by an authorized representative of the insurer. If requested by the Authority, the tenant or Contractor will, within (15) days after receipt of written request from the Authority, provide the Authority with copies of required endorsements and/or a certified complete copy of the policies of insurance. The tenant and Contractor may redact those portions of the insurance policies that are not relevant to the coverage required by this document. The tenant and Contractor will provide the Authority with renewal or replacement evidence of insurance, acceptable to the Authority, prior to expiration or termination of such insurance.

I. Certificate of Insurance

For the purposes of this document, a certificate of insurance must be completed in a manner which clearly indicates that, to the extent required by this document:

Indicates the Authority, members of the Authority's governing body, and the Authority's officers, volunteers and employees are included as "Additional Insureds" on all policies other than workers compensation and professional liability;

Indicates insurers for all policies have waived their subrogation rights against the Authority, members of the Authority's governing body and the Authority's officers, volunteers and employees;

Indicates that the certificate has been issued in connection with this document;

Indicates the amount of any deductible or self-insured retention applicable to all Coverages;

Identify the name and address of the additional insured as:

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

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 . Facsimile signatures are acceptable.

J. Deductibles / Self Insurance (SIR)

- 1) All deductibles, self-insured retentions or any structures other than a fully insured program must be approved by the Authority. The Tenant and Contractor agree to provide all necessary documentation necessary for the Authority to review the deductible self-insured retention or alternative program structure.
- 2) Tenant and Contractor will pay on behalf of the Authority, or any member of the Authority's governing body, or any officer, volunteer or employee of the Authority, any deductible or self-insured retention which, with respect to the required insurance, is applicable to any claim by or against the Authority, or any member of the Authority's governing body, or any officer, volunteer or employee of the Authority.
- 3) Any agreement by the Authority to allow the use of a deductible or self-insurance program will be subject to periodic review by the Authority. If,

at any time, the Authority deems that the continued use of a deductible or self-insurance program by the Tenant or Contractor will not be permitted, the Authority may, upon 60 days' written notice to the Tenant or Contractor, require the Tenant or Contractor to replace or modify the deductible or self-insurance in a manner satisfactory to the Authority.

- 4) Any deductible amount or SIR program will be included and clearly described on the certificate of insurance prior to any approval by the Authority. This is to include fully insured programs which have a zero deductible applicable to the policy. Authority reserves the right to deny any certificate not in compliance with this requirement.

K. Tenant and Contractor's Insurance Primary

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

L. Waiver of Subrogation:

The Tenant and Contractor, for themselves and on behalf of their insurers, to the fullest extent permitted by law without voiding the insurance required by this document, waive all rights against the Authority, members of the Authority's governing body and the Authority's officers, volunteers and employees, for damages or loss to the extent covered and paid for by any insurance maintained by the them.

M Tenant or Contractor's Failure to Comply with Insurance Requirements

1) Authority's Right to Procure Replacement Insurance

If, after the inception of this document, Tenant or Contractor fail to fully comply with the insurance requirements of this document, in addition to, and not in lieu of any other remedy available to the Authority provided by this document the Authority may at its sole discretion procure and maintain on behalf of the Tenant or Contractor, insurance which provides, in whole or in part, the required insurance.

2) Replacement Coverage at Sole Expense of Tenant or Contractor

The entire cost of any insurance procured by the Authority pursuant to this section will be paid by the Tenant and Contractor. At the option of the Authority, the Tenant and Contractor will either directly pay the cost of the insurance or immediately reimburse the Authority for any costs

incurred by the Authority including premium and a 15% administration cost.

3) Tenant and Contractor to Remain Fully Liable

Except to the extent any insurance procured by the Authority pursuant to this section actually provides the insurance coverage required by this document, the Tenant and Contractor will remain fully liable for full compliance with the insurance requirements in this document.

4) Authority's Right to Terminate, Modify, or Not Procure

Any insurance procured by the Authority pursuant to this section is solely for the Authority's benefit and is not intended to replace or supplement any insurance coverage which otherwise would have been maintained by the Tenant or 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 Authority pursuant to this section.

3. Insurance Requirements

- A. In general, the Authority does not require proof of insurance for TWPs which are completed by the tenant on their facilities using their own employees or for Tenant or Contractor performing routine maintenance work on tenant facilities and equipment. The Contractor will furnish the Authority with properly completed and signed original certificates of insurance, in the amounts and types of insurance specified by the Authority. Specific TWP requirements are based on the location and type of work to be performed. The Tenant will be responsible for insuring that the Contractor maintains the required insurance coverage in force and current until the TWP is closed by the Authority. It is paramount that the insurance agent issuing the certificate of insurance read and follows the instructions carefully.

In general, the required minimum general liability limits for a TWP are primarily a function of the work location and are as follows:

For work on Tampa International Airport, \$1 Million for non-redevelopment construction or ongoing repair or work, outside the fenced air operations area (AOA); \$5 Million for Non-AOA redevelopment construction by general Contractors; \$5 Million for all projects inside the fences and on the ramp areas around parked aircraft; and \$10 Million for all projects inside the AOA fenced area and on or near the runways and taxiways. The final decision on the specific types and limits of coverage's required will be determined by Authority Risk

Management based on information submitted with the TWP Application and as otherwise determined by the Authority based on other considerations. Environmentally sensitive or hazardous types of work such as the removal of asbestos, storage tanks systems, and other similar work will require a minimum of \$1 Million general Liability coverage regardless of the project costs and may require other specialized forms of coverage such as an additional policy covering Contractor pollution liability.

- B. For General Aviation Airports (Plant City, Peter O. Knight, and Tampa Executive), same as Tampa International Airport, except the limits for non-AOA redevelopment construction by General Contractors is reduced to \$2 Million; work inside the AOA and on the ramps are reduced to \$2 Million, and work on or near the runways or taxiways will require \$5 Million of coverage.
- C. The amounts and types of insurance will conform to the following minimum requirements. The wording of all policies, forms, and endorsements must be acceptable to the Authority.
- D. Based on the project location and type of work proposed, the category of coverage and limits as specified in Tables A and B herein will generally apply. The minimum required coverage and limits stated therein may be changed by the Authority based on information discovered before the completion of the TWP. When notified of such changes, the Contractor will provide any new coverage or limits as may be required before proceeding with the work.

4. Contractor’s Minimum Required Insurance Coverage and Limits – (See Tables A and B

- A. Workers' Compensation and Employers' Liability Insurance - will be maintained by the Contractor during the term of the TWP for all employees engaged in this work under the TWP. The amount of such insurance will not be less than:

Workers' Compensation	Statutory
Employers' Liability	\$ Limit Each Accident
	\$ Limit Disease Policy Limit
	\$ Limit Disease Each Employee.

- B. Commercial General Liability Insurance - The minimum limits of insurance (inclusive of any amounts provided by an umbrella or excess policy) covering the work performed pursuant to this TWP 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, the Contractor under this TWP or the use or occupancy of Owner premises by, or on behalf of, the Contractor in connection with this TWP. Coverage shall be on a form no more restrictive than ISO Form CG 00 01. Additional insured coverage shall be on a

form no more restrictive than ISO Form CG 20 10 10 01 and CG 20 37 10 01. Coverage shall be provided with limits of not less than:

Bodily Injury and Property Damage Liability	\$ Combined Single Limit Each Occurrence and Aggregate with the General Aggregate Limit Specific for this project.
--	---

- C. Business Auto Liability Insurance - will be maintained by the Contractor as to ownership, maintenance, and use of 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 TWP will be:

Bodily Injury and Property Damage Liability	\$ Combined Limit Each Occurrence
--	-----------------------------------

- D. Contractor's Pollution Liability Insurance - Contractors performing work involving the installation, use, or disposal of substances, systems, or products which are classified as possible environmental pollutants, will obtain and maintain a Contractor's Pollution Liability Insurance policy for the project. The limits of coverage will not be less than, \$1,000,000 Combined Single Limit Each Occurrence.

- E. Professional Liability Insurance – Tenant or Contractor shall be required to either 1) maintain Professional Liability Insurance (as described herein); or 2) provide proof that Professional Liability Insurance (as described herein) is maintained by the project’s design professional. Such Professional Liability Insurance shall, at a minimum, provide coverage retroactively to commencement of design work on the project, shall be issued on a form acceptable to the Authority and shall, at a minimum, provide coverage for claims which are made within five (5) years of substantial completion of the work which is the subject of the architectural, engineering or design services. Any deductible amount in excess of \$25,000 per claim must be approved, in writing, by the Authority. The limits of coverage will not be less than, \$ Item 6 per claim. The limits of coverage will not be less than, \$ Item 6 per claim.

Insurance Limits - The project categories and insurance limits in Table A are guidelines for projects located on Tampa International Airport property including general aviation activities. Table B covers work located at the general aviation airports of Peter O. Knight, Plant City, and Tampa Executive. The limits are subject to adjustment by the Authority’s Risk Management Department for specific projects.

F. Insurance Limits

Category 1 Project - Non-AOA, non redevelopment, construction, ongoing maintenance or repair work for tenant.

Category 2 Project Non-AOA, redevelopment construction by general Contractors.

Category 3 Project -Work on the AOA other than work near or on the taxiways and runways.

Category 4 Project - Work on the AOA on or near the taxiways and runways.

Tenant Work Permit Handbook
TABLE A (TIA)

<u>Item</u>	<u>Coverage</u>	<u>Cat 1 Limits</u>	<u>Cat 2 Limits</u>	<u>Cat 3 Limits</u>	<u>Cat 4 Limits</u>
1	Workers Comp & Employer’s Liability – Each Accident	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
2	Workers Comp & Employer’s Liability – Disease Aggregate	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
3	Workers Comp & Employer’s Liability – Each Disease	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
4	General Liability	\$1,000,000	\$5,000,000	\$5,000,000	\$10,000,000
5	Business Auto Liability	\$1,000,000	\$1,000,000	\$5,000,000	\$10,000,000
6	Professional Liability ¹	N/A	\$1,000,000	\$1,000,000	\$1,000,000
7	Pollution Liability ²	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000

TABLE B (General Aviation Airports)

<u>Item</u>	<u>Coverage</u>	<u>Cat 1 Limits</u>	<u>Cat 2 Limits</u>	<u>Cat 3 Limits</u>	<u>Cat 4 Limits</u>
1	Workers Comp & Employer’s Liability – Each Accident	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
2	Workers Comp & Employer’s Liability – Disease Aggregate	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
3	Workers Comp & Employer’s Liability – Each Disease	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
4	General Liability	\$1,000,000	\$2,000,000	\$2,000,000	\$5,000,000
5	Business Auto Liability	\$1,000,000	\$1,000,000	\$2,000,000	\$5,000,000
6	Professional Liability ¹	N/A	\$1,000,000	\$1,000,000	\$1,000,000
7	Pollution Liability ²	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000

¹ Only if applicable. (this is for architect and engineering firms)

² Pollution liability is only required for Contractors performing work involving the installation, use, or disposal of substances, systems, or products which are classified as possible environmental pollutants.

Sample Accord Form



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
INSURED	INSURER A :	
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:
 THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INBR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			Deductible			EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS			Deductible			COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	UMBRELLA LIAB <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> RETENTION \$ <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE			Deductible			EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYER'S LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		Y/N N/A				<input type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 Description of work or project
 The Authority, Members, Officers, Employees and volunteers are included as Additional Insureds in relation to general liability and auto liability.

CERTIFICATE HOLDER	CANCELLATION
HILLSBOROUGH COUNTY AVIATION AUTHORITY TAMPA INTERNATIONAL AIRPORT 5503 W. SPRUCE STREET TAMPA, FL 33607-1475	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE

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ACORD 25 (2014/01)

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CHAPTER 5 GENERAL CONSTRUCTION STANDARDS

1. Change Orders

If changes to the scope of work or equipment to be installed occur, the Contractor, through the Tenant, will submit those proposed changes to the Authority for review and acceptance prior to proceeding. The Tenant will be solely responsible for the full cost of the work authorized under the permit. The Authority will not be responsible for any costs relating to the work, any change order, or other related expenses whether they were requested by the Tenant or required by the Authority or any other regulatory agency

2. Coordination and Inspection

The Authority's Maintenance Department will be the point of contact for all Authority TWP inspection and coordination.

The Authority may attend scheduled progress meetings or require additional meetings to be held at a time and place suitable to the Authority. The Authority will be advised as to the time and place of any general project coordination and progress meetings held by the Contractor/Engineer/Tenant during the construction. Contractor or Tenant will record minutes of any such meetings and distribute copies to Authority for review.

The Authority 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. The Authority reserves the right to issue a stop work notice at any time if unsafe conditions are observed, airport security is compromised, or the Contractor fails to follow the provisions of the TWP Program.

Other federal, state and local agencies may require the Contractor to have permits and inspections in addition to those required by the Authority. The Authority will have no responsibility for insuring that these permits or inspections are properly scheduled or completed. It is the Tenant's and Contractor's responsibility to ensure these items are properly completed and copies of the final signed documents forwarded to the Authority.

3. General

- A. These requirements and standards are in addition to and not in lieu of all other applicable local, state, and federal requirements or standards and are not all-inclusive.
- B. The Tenant is responsible for all subtenant compliance with the TWP program.

- C. The Tenant and Contractor will in no way interfere with normal operational characteristics of any airport facility except as specifically indicated and specified in the TWP approved by the Authority.

4. Standards of Construction

- A. Codes, Rules, and Regulations

- 1) Commercial Real Estate

Commercial Real Estate comprising of all facilities which are land leases where the Authority does not own or maintain the facility such as International Plaza, Corporate Centers, Privately owned Hangers and other type of commercial businesses.

All work will comply with the Florida Building Code, local, state, and federal laws, rules, regulations, and codes, and accepted good architectural and engineering standards and practices.

- 2) Authority Owned, Operated and Maintained Facilities

These facilities are comprised primarily of the Main Terminal, Airsides and support buildings.

All work will comply with the Florida Building Code, local, state, and federal laws, rules, regulations, and codes, and accepted good architectural and engineering standards and practices. Construction Standards for the below listed components will comply with the Authority's Design Criteria Manual which can be found at:

<http://www.tampaairport.com/capital-development>

- B. Permits

Any Tenant or Contractor doing work on Authority property will be fully trained and appropriately licensed to perform the work and will be familiar with and comply with all Authority, city, county, state, and federal codes, requirements, and standards affecting the proposed work. The Tenant or Contractor will obtain all required city, county state or federal agency permits and submit copies to the Authority prior to the issuance of a tenant work permit (TWP).

C. Equipment

- 1) Only non-marking rubber-tired dollies and equipment will be used inside buildings. All lifts and materials handling equipment operating in terminal areas with tiled floors will only be moved with plywood underneath them to prevent tile cracking.
- 2) All carpeted floor areas in a work site will be protected by placing drop cloths, heavy plastic, or tarpaulins on the floor. A "walk off" mat will be placed just inside of the barricade access. Any damage to carpeting in public spaces, due to construction activity, will be repaired or replaced by the Authority at Tenant's expense.
- 3) The use of gas, diesel or propane engines in unventilated areas is prohibited.
- 4) The cleaning of concrete trucks on Authority property is prohibited.
- 5) The use of any types of explosives, or the possession of firearms on Airport property, unless specifically approved by the Authority in writing, is prohibited.
- 6) The Authority and the FAA will not permit penetrations of the imaginary surfaces defined in FAR Part 77 without advance notification and approval. This includes any penetrations whatsoever by the Tenant or Contractor, including, but not limited to vehicles, cranes, other construction equipment, structures, stockpiled materials or excavated earth. See Chapter 10 for specific height-zoning requirements.

D. Material Storage

Construction material is to be stored only in spaces and in a manner specified by the Authority for the particular project. Generally, construction material must be stored out of public view. If storage in or near a public area is permitted, a solid 4-foot barricade, at a minimum, must separate the stored materials from public access. The Contractor and all subcontractors will work cooperatively with all other contracts and Authority employees. This coordination will include sharing of material and equipment staging areas, and proper connections to adjoining facilities.

E. Demolition

- 1) Any demolition that will cause dust must be done behind closed doors of the tenant's space or protected from the public. If the area to be

demolished is in an open area, not confined by doors, a dust barrier must be constructed to confine the work area. (See section F below.)

- 2) Air conditioning ducts (supply and return) in the work area will be closed off in a manner acceptable to the Maintenance Department during demolition phases of the work to prevent dust from entering the system.
- 3) Transport of debris through public spaces, if permitted, will be made only after coordination of times and routes with the Authority.

F. Temporary Construction Barricades

- 1) Tenant or Contractor will furnish barricades, which are neat and uniform in appearance to provide security and protection of the work area. The Tenant or Contractor will be fully responsible for the protection of the public and adjacent areas during the construction process. Tenant or Contractor will safely isolate the construction areas while maintaining normal airport operations. All work and/or material storage areas will be separated from the common use public areas of the airport by use of barricades of a type and size approved by the Authority. **A barricade plan will be submitted to and approved by the Authority prior to the start of any work.** Following approval and subsequent installation of barricades, a representative from the Authority's Maintenance Department will inspect the work to insure compliance with the barricade plan and the following requirements.
 - 2) When the work site is behind the ticket counter, the Tenant or Contractor will seal off the nearest baggage "pass through" by securing a barricade panel to the opening. A barricade of stanchions connected with a rope will be erected behind the counter.
 - 3) 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 Tenant or Contractor will be required to cease all work until the non-conforming situation is corrected.
 - 4) No Contractor company names or logos are to be displayed unless otherwise approved by the Authority. Tenant or Contractor must post "Coming Soon" signs on the exterior of the barricades depicting a rendering of the proposed concept.
 - 5) Tenant or Contractor will provide warning signs and lighting where needed, including flashing red lights where appropriate. Tenant or Contractor will comply with recognized standards and code requirements.

- 6) Tenant and Contractor will cooperate and coordinate with the Authority 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 device spaces.
- 7) The Tenant or Contractor will use temporary barricades of the following types as required by the space, location of work and duration of project and directed by the Authority. Barricade construction standards are as follows;
 - a) Solid panels, either 4' or 8' high, using a minimum of 1/2" AC-1 plywood, or drywall securely fastened to 1" x 2" wood framing or metal studs (minimum of 24" on center). Panels will be hinged with all hardware on the non-public side.
 - b) All bracing will be on the non-public side of the barricade.
 - c) All barricade material will be pre-painted to represent a finished appearance that is compatible with adjacent areas with a color approved by the Authority. All screws on the public side, as well as doors and frames, will be painted. Barricades will be painted to represent a finished appearance that is compatible with adjacent areas.
 - d) Barricade sections will be fitted together to prevent accidental entry into the work area by airport patrons.
 - e) 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.
 - f) The Tenant or Contractor will provide walk-off mats (4' x 6' minimum) inside the barricade area and keep the mats and the area in front of the mats clean.
 - g) All barricades will be constructed with doors for access and outfitted with a lock to keep the public out. The Authority's Maintenance Department will be given copies of all barricade keys or codes.
 - h) Erecting and dismantling of all barricades will be performed between the hours of 10:00 PM and 6:00 AM and with prior approval of and coordination with the Authority.

- i) **Road Barricades:** Roadway barricades will be in accordance with FDOT roadway and design standard.

- j) **Airfield Barricades (Non-movement areas):** Runway and taxiway barricades will be in accordance with Standard Low Profile Barricade Specifications and indicate construction locations on non-movement areas in which no part of an aircraft may enter by using barricades that are marked with diagonal, alternating orange and white stripes. Supplement these barricades with alternating orange and white flags at least 20 by 20 inches (50 by 50cm) square and made and installed so they are always in an extended position, properly oriented, and securely fastened to eliminate jet engine ingestion. Such barricades may be of many different shapes and made from various materials, including railroad ties, sawhorses, jersey barriers, or barrels. During reduced visibility or night hours, supplement barricades with yellow or red lights, either flashing or steady burning. If an aircraft would normally have access to these areas, use red lights. The intensity of the lights and spacing for barricade flags and lights must adequately and without ambiguity, delineate the hazardous area. The construction specification must include a provision requiring the tenant or Contractor to have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The tenant/Contractor must file this information with the airport.

- k) **Airfield Barricades (Movement areas):** Use alternating orange and white flag lines, traffic cones, omni-directional red flashers, and/or signs to separate all construction/maintenance areas from the movement area. All barricades, temporary markers, flag line supports, and other objects placed and left in safety areas associated with any open runway, taxiway, or taxi-lane must be as low as possible to the ground and of low mass; easily collapsible upon contact with an aircraft or any of its components; weighted or sturdily attached to the surface to prevent displacement from prop wash, jet blast, wing vortex, or other surface wind currents; and, if affixed to the surface, frangible at grade level or as low as possible, but not to exceed 3 inches (7.6 cm) above the ground. Do not use non-frangible hazard markings, such as railroad ties, jersey barricades, and/or metal-drum-type barricades in aircraft movement areas. Barricade taxiways leading to closed runways with highly reflective barriers with flashing or solid red lights. Evaluate all operating factors when dealing with temporary closures that can last from 15 to 20 minutes to a much longer

period of time. However, the Authority strongly recommends that, even for closures of relatively short duration, major taxiway/runway intersections be marked. Mark them with barricades with a flashing red light spaced at 20 feet (6m) intervals. At a minimum, use a single barricade placed on the taxiway centerline.

G. Building

- 1) Materials and finishes used in the work must have a fire rating at least equal to the rating required for the type space in which the work is to be performed.
- 2) No work may be performed which, when complete, will result in the degradation of the fire rating for the space.
- 3) Any penetration of existing ceilings or walls which will break the fire rating of the ceiling or wall must be patched with 5/8" Type X fire code sheet rock as necessary to restore the fire rating. All new cored holes in the slab and any existing abandoned holes will be properly sealed and made water tight.
- 4) Any ceiling access panel, now existing, must remain in its present location and cannot be covered in a manner to prevent access.
- 5) Any ceiling that must be accessed or crossed from above will be done only with prior permission of the Maintenance Department.
- 6) Tenant and Contractor will not walk on the ceiling T-bar suspension system.
- 7) The Authority must approve all floor and wall coverings. Proposed designs for floor and wall coverings in public areas should be submitted for approval prior to the purchase of materials. Carpeting for public areas will be commercial Class I, glued down without backing or padding. Class II commercial carpet without backing or padding will be the minimum carpet grade permitted in non-public areas. For Concessions and Rental Car Operations, refer to the Concessions Design Criteria Manual and the CONRAC, Concessionaire Improvement Handbook.
- 8) Interior and exterior spray painting is prohibited unless specifically authorized in writing by the Authority.

- 9) All building roof systems and building roof replacement systems will include a minimum 10-year manufacturer's warranty naming the Authority as the Owner unless otherwise approved in writing by the Authority.
- 10) Plumbing Standards will conform to the City of Tampa Building Code, and as applicable to the Authority's requirements as specified in the Authority's Design Criteria Manual which can be found at:

<http://www.tampaairport.com/capital-development>

- 11) All attachments to building support columns or to the ceilings of post tensioned facilities requiring drilling and/or anchors inserted into the concrete will be designed and sealed by an appropriately licensed professional engineer and specifically approved and accepted by the Authority.

H. Telecommunications and Network Infrastructure Standards

- 1) Commercial Real Estate

Telecommunications and Network Infrastructure shall conform to Building Industry Consulting Service International (BICSI) standard .

- 2) Authority Owned, Operated and Maintained Facilities

The Hillsborough County Aviation Authority currently specifies the requirements for the installation and use of copper and fiber optic telecommunications cabling to support voice, data, video, security and other low voltage applications and services at Tampa International Airport. This Document describes the general requirements, standards, specifications, and methods of execution pertaining to the telecommunications cable infrastructure for use at the Airport. It includes the furnishing, installation, testing and documentation of telecommunications copper and fiber optic cable, terminations, outlets, and related items for use throughout the Airport facilities. Telecommunication standards can be found in the Airport's Design Criteria Manual located at.

<http://www.tampaairport.com/capital-development>

I. General Electrical

- 1) City of Tampa Electric Permit must be obtained and displayed at the work site. Additionally a copy of the permit must be on file with the Authority prior to the approval of the TWP.
- 2) All work must conform to the National Electric Code, the City of Tampa Electric Code, and as applicable, and the Authority requirements as specified herein. The Authority's electrical standards can be found in the Airport's Design Criteria Manual, at.

<http://www.tampaairport.com/capital-development>

- 3) Design, Drawings, Specifications, and Materials Standards

Tenant or Contractor shall submit detailed electrical drawings that show 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. Provide a complete riser diagram if any electrical panels are added and include layout and elevations of all multiple raceways.

J. Antennas

1. All requests for installation approval must be presented on the standard tenant work permit application. Each permit application should list, under the scope of work section, type of system, transmitter/receiver location, antenna location, owner, call numbers, frequency and any other pertinent information available. This information will be used for the review and approval process and maintenance of records.
2. All antenna installations will be in accordance with the following:
 - a) All proposed new radio frequency (RF) antennas must be reviewed and accepted by the Authority and FAA for non-interference with existing equipment prior to installation. See Chapter 8 Height Zoning for application form and height-zoning requirements. Acceptance will be provisional and the radio equipment must be immediately removed from service and modified, by the tenant, to the Authority's/FAA's satisfaction if the new frequency or equipment causes any interference with existing equipment when it is put into service.

- b) All cable/wire must be placed in concealed conduit or other approved raceways.
- c) Antennas must be supported by brackets attached to permanent masts, designed and installed for this purpose, or they must be attached to some permanent stanchion light poles extending from roofs of buildings. Exposed cables on the sides of poles must be secured a minimum of every three feet utilizing stainless steel bonding straps.
- d) All antenna masts, guys and roof penetration ducts must be grounded for lightning protection.
- e) All roof penetrations must be made by licensed and bonded roofing contractors.
- f) Generally, antennas shall not be supported by brackets attached to the side walls of buildings. Certain antenna mast attachments to the passenger loading bridges may be acceptable. Requests for these types of installation will be approved on a case-by-case basis.
- g) Certain weighted base type antenna installations may be acceptable. Details on the specific type of base to be used must be submitted for consideration.
- h) The antenna and related equipment must be for the sole purpose of enabling or enhancing communications for a specific airport tenant for their use in operations or maintenance. There can be no commercial use of the system without approval of the Authority.
- i) The antenna must be in compliance with the Authority's height zoning regulations. Any proposed antenna that exceeds the height of the existing structure must obtain a height zoning permit from the Authority.
- j) Any questions regarding antenna installation should be directed to the Tenant Work Permit Coordinator in Maintenance.
- k) The proponent to be used, must have an approved FCC application for the proposed frequencies

K. Fire Alarm and Detection Systems

The Airport operates and maintains a **Simplex** fire alarm and detection system. Any construction activities that require the modification, relocation and/or addition devices must first be submitted and approved by the Authority Maintenance Department.

All new security/access control, EMCS, fire protection, communications, paging, or other facility system additions or modifications must match and be compatible with the Authority's existing systems. Coordination with the Authority's Maintenance Contractor(s) will be required. Additionally, the Authority reserves the right to specify the equipment manufacturer and Contractor for any proposed changes to its systems. Tenants will be responsible for all costs associated with any changes to the existing Maintenance contracts caused by their addition of new equipment or requirements.

L. Heating, Ventilation, and Air Conditioning (HVAC)

- 1) Submittal drawings by Tenant or Contractor for any proposed modification to the HVAC System must describe the modification in detail. Modifications must be fully compatible with the existing system.
- 2) All HVAC controls will be compatible with existing systems. Where the Johnson Controls "METASYS" control system is modified all work will be performed by the manufacturer. All affected control drawings will be revised and one set of Revised Drawings will be laminated for insertion into the Authority Master Set.
- 3) Modifications must comply with the Airport Mechanical System Standards which be found in the Authority's Design Criteria manual at.

<http://www.tampaairport.com/capital-development>

M. Cutting, Welding and Patching

- 1) Do not cut and patch the following categories of work without Authority's written acceptance of procedures:

Structural steel

Miscellaneous structural metals, including lintels, equipment supports, stair systems, and similar categories of work.

Structural concrete

Foundation construction

Bearing and retaining walls

Structural decking
Exterior wall construction
Piping, ductwork, vessels, and equipment
Water, moisture, vapor, air, and smoke barriers, membranes, and flashing
Noise and vibration control elements and systems
Control, communication, conveying, and electrical wiring systems
Primary operational systems and equipment
Roads and ramps

- 2) Cutting, welding, open flames, spark producing equipment, and use of explosive operated fastening devices within the confines of the Landside building, airside buildings, aircraft aprons, fuel farms, or other enclosures is prohibited unless an approved Welding & Cutting Permit is obtained from the Authority for the operation. The welding and cutting permit application can be found at:

<http://www.tampaairport.com/airport-operations>

- N. Airfield Paving: Runways, Taxiways, and Aprons

All construction involving Runways, Taxiways and Aprons will conform to the Authority's Design Criteria Manual, which can be found at:

<http://www.tampaairport.com/capital-development>

- O. Landscaping

Tenant and Contractor will obtain prior written approval from the Authority before making any additions, deletions, or other changes to the landscaping, landscape materials, or irrigation systems.

5. Environmental Protection

- A. Tenant and Contractor will 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. Tenant and Contractor will avoid the use of tools and equipment which produce harmful noise and will restrict the use tools and equipment creating excessive or disturbing noise to hours that will minimize complaints from persons or firms near the work site.
- B. Tenant and Contractor will designate one person to be responsible for and enforce

strict soil, water, and atmosphere pollution prevention discipline at the work site.

- C. Tenant or Contractor that installs monitoring wells or collecting soil samples will notify the TWP Coordinator and coordinate with the Authority's Environmental Protection Manager and obtain an approved TWP prior to initiating any on-site work.

6. Storage Tank Systems

- A. This Section specifies certain minimum requirements to be followed for work involving storage tank systems regardless of methods and means selected for performance of the work, but not by way of limitation, and as an assurance of compliance with governing regulations. Use of alternate methods and procedures may be permitted subject to Authority's approval and acceptance.
- B. Storage tanks which are regulated by federal, state and local agencies must be registered with the Florida Department of Environmental Protection (FDEP). As defined by FDEP, a storage tank system includes all tanks, integral piping, dispenser, and release detection equipment. See Chapter 62-761 Florida Administrative Code (FAC) for complete definitions and rules pertaining to underground storage tanks (UST's) and aboveground storage tanks (AST's). Regulated systems generally consist of:
 - 1) Underground storage tanks (UST) with capacities of greater than 110 gallons;
 - 2) Stationary above-ground storage tanks (AST) with capacities of greater than 550 Gallons that store pollutants or hazardous substances.

In addition, if a facility has a single AST with a capacity greater than 1,320 gallons, the facility must also comply with the federal Oil Pollution Prevention regulation (40 CFR 112). Once a container exceeds the 1,320-gallon threshold, all containers with a capacity of 55 gallons or more are regulated under this rule. In compliance with this regulation, a Spill Pollution Control and Countermeasure (SPCC) plan must be prepared and implemented.

Additional requirements for registering, closing and soil removal operations can be found in section 1.6 of the Authority's Design Criteria Manual located at:

<http://www.tampaairport.com/capital-development>

7. Pollution Control

The Tenant and Contractor will:

- A. Provide methods, means, and facilities required to prevent contamination of soil, water, or atmosphere by discharge of noxious substances from construction operations. The Tenant and Contractor will take special precautions such that noxious fumes and odors from any construction activities do not enter any facility or the facility HVAC system.
- B. Provide equipment and personnel to perform emergency measures required to contain any spillage and to remove or remediate contaminated soil or liquids.
- C. Excavate and dispose of contaminated earth off site, and replace with suitable compacted fill and topsoil.
- D. Take special measures to prevent harmful substances from entering waters.
- E. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams, or in sanitary or storm sewers.
- F. Provide systems for control of atmospheric pollutants.
- G. Prevent toxic concentrations of chemicals.
- H. Prevent harmful dispersal of pollutants into atmosphere.

8. Collection and Disposal of Waste

Tenant and Contractor will:

- A. Collect and dispose of waste from work areas daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of materials in a lawful manner. Disposal of hazardous waste will be at a public facility properly licensed to dispose of the waste, in accordance with all current rules and regulations, and the Tenant or Contractor will furnish the Authority with appropriate certificates of proper disposal.
- B. Make reasonable provisions to maximize construction material recycling. Accumulation of trash will not be allowed, and the Authority representative may at any time direct the Tenant or Contractor to immediately remove trash and debris from the site of the work when in the opinion of the Authority such trash constitutes a nuisance or in any way hinders the work or the Airport's operations. If the Tenant or Contractor should fails to remove trash and debris from the work site in a timely manner, the Authority may perform this work and collect the cost

(plus 15% administrative costs) of such from Tenant or Contractor, Make or their surety.

- C. Burying or burning of any materials on Authority property or washing waste materials down sewers or drains is prohibited.
- D. No hazardous material will be stored within the terminal complex.

9. Pest Control

Provide proof of rodent and pest control on job site and require the proper removal of wastes that attract pests by construction personnel.

10. Limits of Construction

Any surface disturbed outside the construction limits as shown on the approved plans will be restored to the Authority's satisfaction at the tenant/Contractor's expense.

11. Construction Layout and Stakes

Tenant or Contractor will furnish all lines, grades, and measurements necessary to the proper prosecution and control of the work.

12. Environmental Management, Groundwater

Tenants who are performing construction work under the Tenant Work Permit Program are responsible for immediately notifying the Authority of any incidents involving groundwater and forwarding copies of all environmental permits, notice(s) of violation, warning notice(s), consent orders and related documents, site rehabilitation reports and related correspondence to the Authority's Tenant Work Permit Coordinator and the Authority's Environmental Protection Manager.

13. Familiarization of Existing Conditions

Prior to commencing construction, the Tenant and Contractor will become familiar with existing conditions. Such familiarization will include a tour of the proposed work site with Authority staff. Should the Tenant or Contractor discover any inaccuracies, errors, or omissions between the actual existing conditions and the contract documents, Contractor will immediately notify the Tenant and verify any change order with the Authority prior to proceeding.

14. Safety and Protection

- A. Since work areas may be accessible to and used by the public, the Authority, and other companies doing business at the Airport during the construction period, it is the tenant/Contractor's responsibility to maintain each work area in a safe, hazard free condition at all times. Should the Authority find the area unsafe at any time, it will notify the Tenant and Contractor, and the Tenant and Contractor will immediately stop work and take whatever steps necessary to remedy the unsafe condition. Should the Tenant or Contractor not be immediately available for corrective action, the Authority will remedy the problem and the Tenant or Contractor will reimburse the Authority for the expense of such correction, including any administrative fees.
- B. Fixed structures, equipment, paving, landscaping and vehicles (automobiles, trucks, etc.) will be protected with drop cloths, shielding and other appropriate measures to ensure maximum protection of all property and vehicles.

15. Work Hours

- A. Work hours within existing buildings will comply with any special Authority requirements and the following limitations:
 - 1) Unless otherwise specified, work may proceed at any time (24 hours a day) with the following exceptions:
 - a) All work areas above suspended ceilings which are above areas open to access by the public, Tenant, and non-construction personnel will be restricted to times when these areas are unoccupied, typically 1:00 AM to 6:00 AM on the Baggage Claim Level and 10:00 PM to 5:00 AM on the Ticketing Level unless specifically approved in writing. See barricades.
 - b) All work in areas above roadways will be restricted to periods between 1:00 AM and 8:00 AM on the Baggage Claim Level and 10:00 PM and 5:00 AM on the Ticketing Level unless specifically approved in writing. See barricades.
 - c) Work inside a total isolation area (i.e., barricaded floor to the underside of the deck) of a site may proceed at any time (24 hours a day) unless it causes a problem with passengers or tenants.
 - 2) Disruptive work, including excessive noise, vibration, offensive fumes, and similar events, will be conducted so as not to interfere with the normal operation of the Airport. Disruptive work will be scheduled and conducted by the Tenant or Contractor between the hours of 10:00 PM and 6:00 AM. When directed by the Authority to cease disruptive work, the Tenant or

Contractor will immediately suspend and discontinue the disruptive work and will not resume until remedial action is taken.

- B. Work hours on the AOA will comply with any special Authority requirements for the specific work and will be approved in writing, in advance, by the Authority.

16. Maintenance of Traffic

- A. When the work is in a vehicular traffic or pedestrian area, arrange the work so as to avoid disruption of normal traffic patterns. Tenant or 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. Tenant or Contractor will maintain traffic within the limits of the project for the duration of the construction period, including all temporary suspension of work as well as the construction and maintenance of any 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 traffic and pedestrians. The Tenant or 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 roadways. Maintenance of traffic will include all facilities, devices and operations required for safety and convenience of the public and to minimize public nuisances.
- B. Tenant or Contractor will not obstruct or create a hazard during the prosecution of the work and will be responsible for repair of all damage to existing pavement or facilities caused by the operations.

- 1) Commencement

The Tenant and Contractor's responsibility for maintenance of traffic will begin on the day work begins on the Airport, and will continue until the Authority accepts the completed work.

- 2) Traffic Lanes

All closures of traffic lanes or parking spaces will be coordinated in advance in writing with the Authority Police Department and Parking and Ground Transportation Department a minimum of forty-eight (48) hours prior to any closure. Tenant or Contractor will not close more than one lane on each roadway or 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. At parking exit facilities, a minimum of ten (10)

booths will be available for operation at all times, to include one electronic reader, and at the parking entrance facilities, a minimum of three (3) ticket dispensers will be available for operation at all times, including and electronic reader, however during heavy traffic conditions on lane closures may not be allowed.

3) High Traffic Area

When the work is in or near a high vehicular traffic and pedestrian area the Tenant and Contractor will arrange the work so as to avoid disruption of normal traffic patterns. The Tenant and 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.

C. Daily Inspection of Control Devices

The Tenant or Contractor will be responsible for performing inspections as directed by the Authority at the pre-construction meeting, of all installed temporary traffic control devices on the project. Tenant or Contractor will replace all equipment and devices not conforming to the approved standards during an inspection. The Authority will be advised of the schedule of these inspections and be given the opportunity to join an inspection survey as deemed necessary.

D. Traffic Plan

If required, the Tenant or Contractor will present maintenance of traffic plan at the pre-construction conference.

1) The maintenance of traffic plan will be in written form and include drawings which indicate the type and location of all signs, lights, barricades, arrow boards, striping and barriers to be used for the safe passage of pedestrians, frequency of inspection, and vehicular traffic through the project for the protection of the workmen. The plan will indicate conditions and setups for each phase of the Tenant or Contractor's activities.

2) The Tenant or Contractor will not be permitted to begin work until the maintenance of traffic plan has been approved in writing by the Authority. Any modifications to the maintenance of traffic plan must also be approved in writing by the Authority before implementation. Except in an emergency, no changes to the approved plan will be allowed until approval to change such plan has been received.

E. Haul Routes

All construction vehicles are required to use established project haul traffic routes. Normal Airport traffic lanes will not to be used as staging areas for delivery vehicles. The Tenant and Contractor's employees will utilize the designated Tenant and 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.
- 2) The State of Florida, Manual of Traffic Control and Safe Practices for Street and Highway Construction, Maintenance and Utility Operations, 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 particularly hazardous conditions exist.

F. Traffic Control Devices

Adequate traffic control devices, warning devices, and barriers are the responsibility of the Tenant and Contractor. Traffic control devices, warning devices, and barriers will be erected by the Tenant and Contractor prior to work start to avoid the creation of any hazardous condition and in conjunction with any necessary re-routing of traffic. The Tenant and Contractor will immediately remove, turn or cover any devices or barriers which do not apply to existing conditions.

- 1) The Tenant and Contractor will make the Authority aware of any scheduled operation which will affect traffic patterns or safety, sufficiently in advance of commencing such operation to permit review of the plan for installation of traffic control devices, warning devices or barriers proposed by the Tenant and Contractor a minimum of forty-eight (48) hours in advance.
- 2) The Tenant and Contractor will assign an employee the responsibility of maintaining the position and condition of all traffic control devices, warning devices and barriers throughout the duration of the contract. The Authority representative will be kept advised at all times as to the identification and means of contacting this employee on a twenty-four (24) hour basis.

- 3) Use of flashing arrow boards is mandatory with lane closures on the inbound or outbound Terminal Parkway and during night construction.

G. Flagmen

The Tenant or 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 Authority.

H. Traffic Signs

The Tenant or Contractor may furnish and install construction traffic directional signs along the existing traffic route. The signs will depict Tenant or Contractor's logo or name, directional arrows and "Deliveries." Signs will be of sufficient size to have a 6-inch high message and will be located in advance of at each decision point. All signs and their locations will be pre-approved by the Authority.

I. Notification

Tenant or Contractor will give the Authority and any affected other tenants a minimum of forty-eight (48) hours advance notice of days when construction traffic is expected to be heavy or when oversized pieces of equipment are to be delivered.

J. Material Deliveries

All Tenant or Contractor's material orders for delivery to the Airport will use as a delivery address, the street name, and number assigned to the job site. The name "Tampa International Airport" will not be used in the delivery address at any time. All Tenant or Contractor materials will be delivered to the work site receiving area, and all deliveries will be made only during the Tenant or Contractor's working hours.

K. Work Personnel

- 1) To the maximum extent possible, all construction personnel will be restricted to the Tenant and Contractor's work areas. Workmen will be appropriately attired to perform their work. Additionally, workers will have at a minimum the Tenant or Contractor's company name displayed on their outer garment. Tampa Airport ID badges must be properly displayed, if appropriate.
- 2) When walking from the Tenant or Contractor's parking lot to the job site, existing walkways and crossings will be used. The Tenant or Contractor will not use vehicle traffic lanes as walkways.

- 3) The Tenant or Contractor's workers will not utilize public areas when taking their work breaks or lunch breaks. The Authority or Tenant will designate areas for this purpose upon request. Workers will not use public toilets at any time.
- 4) The Tenant or Contractor's personnel will not use restaurants, lounges or other concession areas within the Airport.
- 5) Public elevators and escalators will not be used at any time for the transporting of construction personnel or materials. Additionally, the entry to all elevators and escalators will not be blocked at any time.

17. Cleaning and Protection of Property

Tenant and Contractor will:

- A. During handling and installation of work at the work site, clean and protect work in progress and adjoining areas.
- B. Apply protective covering on installed work to ensure freedom from damage or deterioration.
- C. Adjust and lubricate operable components to ensure operability without damaging effects.
- D. To the extent possible through appropriate control and protection methods, supervise performance of the work in such a manner and by such means so as to ensure the work and adjoining areas, whether completed or in progress, will not be subjected to harmful, dangerous, damaging or otherwise deleterious exposure during the construction period. Such exposures include, where applicable, but not by way of limitation the following:
 - 1) Excessive static or dynamic loading
 - 2) Excessive internal or external pressures
 - 3) Solvents
 - 4) Chemicals
 - 5) Light
 - 6) Puncture
 - 7) Abrasion
 - 8) Heavy Traffic
 - 9) Soiling
 - 10) Combustion
 - 11) High speed operation, improper lubrication, unusual wear

- 12) Improper shipping or handling
 - 13) Theft
 - 14) Vandalism
 - 15) Excessive moisture
- E. 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 wind and weather normal to the area and season will not disturb it, and will be tight fitting to prevent noise infiltration.
- F. Tenant and Contractor will be responsible for any damage to Authority property. Materials and equipment used in the repair or replacement of damaged property will be new and will perform at the manufacturer's published capacities and Authority approval.
- G. Overhead Protection
- 1) No cranes or other construction equipment will cross over non-construction personnel, their travel ways or ride systems.
 - 2) The Tenant and Contractor will establish a plan of operation for cranes and other hoisting equipment in writing. This plan of operation will be subject to approval by the Authority.
 - 3) Specific areas within the Terminal Complex will require protective covering. These protective 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 approval by the Authority. Structural integrity of protection systems will be the responsibility of the Tenant and Contractor.
 - 4) The use of helicopters to lift, place, or otherwise maneuver equipment is expressly prohibited.

18. Conservation and Salvage

All work will be carried out with the maximum possible consideration of 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. Contractor will provide salvageable materials and equipment to the Authority for review. The Authority will direct the Contractor to deliver it for Authority storage or direct Contractor to dispose of it by acceptable means.

19. Sustainability

TPA's SDCM communicates TPA's expectations and encourages and document green building measures incorporated into project advance planning, design, and construction. All work will be carried out with the maximum possible consideration of applicable sustainable design criteria in accordance with the SDCM. The manual can be located at: <http://www.tampaairport.com/capital-development>

20. Testing

Unless otherwise specified in writing, all testing costs will be borne by the Tenant and Contractor.

21. Final Cleaning

Tenant and Contractor will:

- A. Provide final cleaning of the work site consisting of cleaning each surface or unit of work to normal "clean" condition.
- B. Remove temporary protection devices and facilities which were installed during course of the work.
- C. Comply with safety standards and governing regulations for cleaning operations. Tenant and Contractor will not burn waste materials, bury debris, discharge volatile or other harmful or dangerous materials into drainage systems. Tenant and Contractor will remove waste materials from site and will dispose of such materials in a lawful manner

CHAPTER 6 SAFETY AND SECURITY REQUIREMENTS

1. Safety Plan

- A. The purpose of the Safety Plan is to set forth guidelines concerning construction safety while performing work on an approved tenant work permit (TWP). Described herein are methods, procedures, rules and directives to be adhered to during said construction period.
- B. Following are the Safety Plan objectives that must be achieved in order to maximize safety and to minimize time and economic loss to Airport patrons, 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.

The Tenant and Contractor must keep these objectives in mind when formulating work schedules and operational activities.

2. General Safety Requirements

- A. A pre-construction coordination and safety meeting will be conducted prior to issuing an approved TWP or commencing construction. Additional meetings may be scheduled as necessary throughout the duration of the project. Representatives from the Tenant, Tenant and Contractor, architect/engineer, the Authority, and any others deemed necessary by the Authority will attend. The Tenant and Contractor will inform supervisors and workers of the airport activity and operations that are inherent to airport, the safety regulations of the airport, and the prohibition of driving or walking on any area of the (AOA) without authorization. The Tenant and Contractor will conduct construction activities to conform to both routine and emergency requirements.
- B. All Tenant and Contractor vehicles authorized to operate on the airport outside of the construction area limits as defined and 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 in

direct (two-way) radio communication with the ground controller of the Air Traffic Control Tower (Tower). Note: All aircraft have priority over ground vehicles.

- C. The Tenant or Contractor will provide a two-way radio with the required frequency (ground: 121.7 MHz, Tower: 119.5, MHz and backup Tower: 121.35 MHz) for use in communication with the Tower. Construction on the project will not begin until a radio which meets these requirements, to the satisfaction of the Authority, is physically present on the Project. This operator must be familiar with aircraft/ground controller communications and will be on duty whenever vehicles are operating in areas referenced above. Construction may be stopped/suspended by any Authority employee anytime the Authority employed considers that the intent of this Safety Plan is being violated or that a hazardous condition has been or is about to be created. This decision to suspend the operation will be final and will be rescinded by the Authority only when satisfied that the Tenant Contractor has taken action to prevent a hazardous situation. Delays/work stoppage as a result of the suspension of construction will be considered the fault of the Tenant or Contractor.
- D. Between sunset and sunrise, all vehicles operating in the AOA (or on a runway even if closed) will be equipped with an operating yellow flashing beacon.
- E. All Tenant and Contractor vehicles that are authorized to operate on the airport outside of the designated construction area limits or defined haul routes will display 3-feet by 3-feet flags or larger, orange and white checkerboard flag, each checkerboard color being 1-foot square. Vehicles operating in the active AOA must be under the control of the tower. Approved flags can be purchased from the MacDonald Training Center, Tampa, Florida.
- F. Any construction activity within 125 feet of an active runway edge or 83.5 feet from an active taxiway edge requires the closure of the affected runway or taxiway, unless otherwise approved by the Director of Operations . No runway, taxiway or apron area will be closed without prior coordination and written approval of the Director of Operations. The Authority will be given a minimum of 72 hours advanced notice of a requested closing. The Tenant or Contractor will arrange inspection by the Authority's Airfield Operations Manager prior to opening any area to air traffic. This will include areas adjacent to AOA cross-overs or areas used as a haul road by the tenant/Contractor. Any waste material, sand or debris, must be removed from active taxiways or apron promptly to avoid possible damage to aircraft. As necessary, the Tenant or Contractor will keep a sweeper at the tenant/Contractor's entrance checkpoint whenever there is a potential of spills or other debris being dropped on the runway or taxiway.
- G. No loose material waste or FOD capable of causing damage to aircraft or capable of being ingested into jet engines may be placed next to the runways, taxiways or

apron during operational hours. Special attention is directed to the Tenant and Contractor that all pavements which is operational to aircraft during construction must be kept clean and clear of any materials or debris.

- H. If the Tenant or Contractor elects to work at night, Tenant or Contractor will provide lights at the work site and, if on the AOA, along the access route. Type, direction, number and location of lights will be subject to the prior approval of the Authority.
- I. The existing airport pavements and facilities are designed for aircraft on single and dual gear configurations. The Tenant and 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 Tenant and Contractor's expense. The Tenant and Contractor will take immediate action to reconstruct any damaged area which is to remain in service.
- J. Construction Area Limits

FAA Advisory Circular 150/5370-2F, Operational Safety on Airports during Construction. Construction activities are prohibited in safety areas while the associated runway or taxiway is open to aircraft. The Tenant and Contractor will adhere to all of the provisions of this Advisory

Location of Stockpiled Construction Materials. Stockpiled materials and equipment storage are not permitted within the Runway Safety Area (RSA) and Obstacle Free Zone (OFZ), and if possible should not be permitted within the Object Free Area (OFA) of an operational runway. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval. The airport operator must ensure that stockpiled materials and equipment adjacent to these areas are prominently marked and lighted during hours of restricted visibility or darkness. This includes determining and verifying that materials are stabilized and stored at an approved location so as not to be a hazard to aircraft operations and to prevent attraction of wildlife and foreign object damage.

3. Special Written Safety Plans

For hazardous work such as tank or asbestos removal, pollution clean-up or the operation of open flame construction equipment near airport facilities, special written and approved safety and fire plans covering the specific work must be submitted prior to the approval of the work by the Authority.

4. Emergency Procedures

The Tenant and Contractor will have an understanding of the airport Emergency Procedures and will conduct all operations so as not to conflict with them. Clear routes for crash/fire/rescue equipment will be maintained in operable condition at all times.

- A. Emergency Procedure for Tampa International airport: In case of an emergency caused by an accident, fire, or personal injury or illness on Tampa International airport, airport Police are to be immediately notified by page phone found throughout the Terminal Buildings or by calling them at 911 (airport Police Emergency Phone Number). When calling in a report, especially on a cellular phone, the caller must accurately report the exact location and type of emergency. Airport Police will then coordinate with other Authority and/or outside emergency agencies as necessary.
- B. Emergency Procedure for General Aviation airports: In case of an emergency caused by an accident, fire, or personal injury or illness on Peter O. Knight, Tampa Executive or Plant City airports, the Tenant or Contractor will immediately call 911 to notify the appropriate emergency agency. When calling in a report, especially on a cellular phone, the caller must accurately report the exact location and type of emergency. Tenant or Contractor will then notify the Authority Operations Center.
- C. The Tenant or Contractor will submit special root cause reports directly to the Authority within one day of occurrence and will submit a copy of the report to the Tenant and other entities that are affected by the occurrence within one day of the occurrence. The report will list the chain of events, persons participating, response by the Tenant or Contractor's personnel, an evaluation of the results or effects and other pertinent information.

5. Security and Protection of Facilities

A. Securing Work Area

Any construction that will cause disruption to the public or other Tenants must be done behind closed doors of the tenant's space or protected from the public. If the work is in an open area, not confined by doors, a barrier must be erected to confine the work area. See the General Construction Standards for the specific details of the various approved barricades.

B. Staging, Stockpile, and Spoil Areas

- 1) Staging area(s), as approved by the Authority, will be used to house the Tenant or Contractor's and resident inspector's offices, and to store all idle equipment, supplies, and construction materials (other than bulk materials)

such as aggregate, sand, and soil). The Tenant or Contractor may erect and maintain throughout the life of the Permit, at Tenant or Contractor's own expense, a 6-foot high fence of chain link and tan or green fabric around the perimeter of each staging area used. Tenant or Contractor may also install vehicle and pedestrian gates, as necessary, to provide adequate ingress/egress. Additionally, the perimeter of any staging area which abuts an active operation pavement will be marked with yellow flashing barricades no more than 50 feet apart. Upon completion of all work, remove all construction fencing and barricades from the project site.

- 2) Tenant and Contractor's vehicles, equipment, and materials will be stored in the area designated by the Authority. Upon completion of the work, the storage area will be cleaned up and returned to its original condition and to the satisfaction of the Authority. Employee services will not be permitted beyond the Tenant and Contractor's parking area. Drivers of vehicles being operated beyond this area will be subject to loss of permission to enter the construction site.
- 3) Equipment not in use during construction, nights, and/or holidays will be parked in the Tenant or Contractor's staging area. Exceptions will only be allowed when approved by the Authority. Parking of construction workers' private vehicles will also be within the staging area construction fence or at other Authority designated sites.
- 4) Stockpile areas, if approved, to store bulk materials will be on the tenants lease area. All material removed by excavation, such as concrete, asphalt, or lime rock, will be transported off the airport limits when it is taken up. It will not be stockpiled on airport property.
- 5) Stockpile areas, if permitted, will be used to store all bulk materials needed for the project and may or may not be fenced at the Tenant or Contractor's option. However, yellow flashing barricades will be installed where potential conflicts with air or ground vehicular traffic might occur. Stockpiles will not penetrate the FAR Part 77 surfaces. All other waste material, including rubble and debris, will be removed from the airport at the tenant/Contractor's expense.
- 6) If additional storage area is needed, the Tenant or Contractor may request it from the Authority. The request will be reviewed on the basis of what is to be stored and the area needed. The Tenant Contractor will provide any necessary fencing and/or security.
- 7) No hazardous materials will be stored within the Terminal Complex.

C. Intermittent Construction Operations on the AOA

- 1) Some construction work may be done on an intermittent basis. The Tenant or Contractor will maintain constant communication with the Tower or designated Authority representative when working on an AOA, and immediately obey all instructions. Failure to so obey instructions or maintain constant communications will be cause to suspend the Tenant or Contractor's operations in the areas until satisfactory conditions are assured.
- 2) When directed to cease construction and move from the work area, the Tenant and Contractor will immediately respond and move all material, equipment and personnel away from the taxiways and runways as directed by the Authority. Operations will not be resumed until directed from the Authority. Every reasonable effort will be made by the Authority to cause minimum disturbance to the Tenant and Contractor's operations; however, no guarantee can be made as to the extent to which disturbance can be avoided.
- 3) No drop off or lip in excess of 3 inches will be permitted adjacent to an active taxiway or apron area. If an area is to be opened to aircraft movement, either at night or during the day, the Tenant or Contractor must decrease the drop off to 3 inches by placing compacted fill. This fill will taper away from the paved area at a 5 percent or less slope to the existing grade. The area must be maintained in compliance with FAR Part 130 at all times.

D. Limitation of Operations on the AOA

- 1) The Tenant or Contractor will be responsible for controlling all its operations and those of its subcontractor's so as to provide for the free movement of aircraft on the apron, runways, and taxiway areas of the AOA.
- 2) When the Work requires the Tenant or Contractor to operate on or adjacent to the apron or taxiways, the operation will be coordinated with the Operations Department at least seventy-two (72) hours prior to commencement of the work. Work will not commence on the AOA until closed by the Authority/FAA and until temporary marking and associated lighting is provided and in place as specified in FAA Advisory Circular 150/5340-1G, Marking of Paved Area on airports and/or the Plans and Specifications.

E. Obstructions to Navigation

- 1) The Authority and the FAA Tower Chief will not permit penetrations of the surfaces defined in FAR Part 77 without advance notification of and approval. It may be necessary to file Form 7460-1 with the FAA to obtain approval prior to operation of exceptionally tall equipment. This includes any penetrations whatsoever by the Tenant or Contractor, including but not limited to vehicles, cranes, other construction equipment, structures, stockpiled materials, excavated earth, etc. When penetrations are unavoidable they will be brought to the attention of the Authority 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.
- 2) The Tenant or Contractor will prepare appropriate sketches with precise locations shown on the Airport Layout Plan along with elevations depicting the obstruction object's relationship to the imaginary surfaces.
- 3) 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 Tenant or Contractor must provide two-way very high frequency (VHF) radios capable of operating on ground control frequency. Operators of such construction equipment will be qualified and knowledgeable in the use of radio equipment and capable of following instructions in a timely fashion.
- 4) The maximum height allowed on the AOA is 10-feet above ground level (AGL) unless, in special instances, the Authority and the FAA may waive this requirement. During times when the safety of flight operations could be impaired, particularly during Information Flight Rule (IFR) weather, or when the equipment is idle, all booms, towers and other movable appendages will be lowered to the maximum extent.

F. Access to the Construction Site

- 1) The Tenant and Contractor's access to the site will be as directed by the Authority. Airport employees may also use this access route. No other access routes are authorized unless approved by the Authority.
- 2) All Tenant and Contractor traffic authorized to enter the site will be experienced in the route or guided by Tenant and Contractor personnel. The Tenant and Contractor will be responsible for traffic control to and from the various construction areas on the Site and for the operation of the access gate to the site.

- 3) The Tenant and Contractor will familiarize all its employees with the access route. An employee of the Tenant and Contractor familiar with the route will accompany material and equipment delivery trucks. The Tenant and Contractor will be responsible for access control through any designated access gate for the duration of the contract. This access control will be for all personnel using the gate for access. This gate will be manned whenever unlocked, by a bonded security agency contracted and paid for by the Tenant and Contractor, not by the Tenant or Contractors personnel.
- 4) The Tenant and Contractor will monitor and coordinate all Tenant and Contractor traffic at the access gate with Authority Security. The Tenant and Contractor will not permit any unauthorized construction personnel or traffic on the site, including food and beverage vendors or caterers.
- 5) The Tenant and Contractor are responsible for immediate cleanup of any debris deposited along the access route as a result of construction traffic. The entire access route and construction site will be kept free and clean of all debris at all times and maintained in good repair by the Tenant and Contractor or Tenant and Contractor's agents, and will be immediately repaired to the satisfaction of the Authority. Directional signing along the delivery route to the storage area, plant site or work site will be as directed by the Authority.
- 6) The following procedure will be used for access to site by AOA unauthorized persons:
 - a) Visitors will inform the gate security guard of their reason for entrance to job site and which Tenant and Contractor they intend to visit.
 - b) Guard will notify the Tenant and Contractor by telephone.
 - c) Tenant or Contractor will go to the gate and escort visitor to Tenant or Contractor facility.
 - d) The Tenant or Contractor will provide and operate an escort vehicle to lead other vehicles when operating within the AOA.

6. Tenant and Contractor's Security Requirements

- A. The Tenant and Contractor will comply with all requirements of the Airport Security Plan and with the Security Plan specified herein. The Tenant or Contractor will designate a Tenant and Contractor Security Officer. The Security Officer will be the

Tenant and Contractor's representative on the "Construction Security Committee" and will be accountable for these security requirements for the Tenant and Contractor.

- B. All work performed in the AOA or the non-public secured areas will require workers and vehicle clearance (badges and passes) obtained through Authority Operations. Tenant and Contractors and their employees requiring security badges must submit through the FBI a fingerprint based criminal history records check (CHRC) and Security Threat Assessment (STA). A fee is associated with the investigation. The Tenant requesting the TWP will comply with the airport Security Program, Title 49 CFR Part 1542.209 or Part 1544.229.

- C. Tenant and Contractor Security Personnel Orientation

The Tenant and Contractor's Security Officer will be responsible for all safety precautions. Prior to the commencement of the work, the Security Officer will provide the Authority an outline of a proposed accident and fire protection plan for all work contemplated under the Tenant Work Permit.

- D. Work Personnel Identification

The Tenant or Contractor's onsite supervisors will be badged with airport ID badges provided by the Operations Department. The Tenant or Contractor will provide all required employee history verification on all supervisors. All other non-supervisory personnel of the Tenant or Contractor and Tenant or Contractor's subcontractor's will be issued a construction worker security badge supplied by the Operations Department. The Tenant or Contractor will maintain a master list of personnel issued badges, and it will be available for the Authority's examination during construction hours. Personnel will wear the badge on outermost garment at all times while on the AOA. All employees of the Tenant, 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 Tenant and Contractor, through the Security Officer. The Tenant or Contractor will be assessed a Sixty-Five Dollars (\$300) charge for each security badge that is not returned to the Authority at the time of badge expiration or job completion. This charge will be paid promptly by the Tenant or Contractor or the amount will be billed to the requesting Tenant.

- E. Vehicle Identification

The Tenant and Contractor, through their Security Officer, will establish and maintain a list of Tenant, Contractor and Subcontractor vehicles authorized to operate on the site. Vehicle permits, issued by badging will be assigned in a

manner to assure positive identification of the vehicle at all times. The Authority requires each vehicle to display a large company sign on both sides of vehicle, and display an airport blue decal and beacon when operating on the AOA.

F. Employee Parking

An area for parking Tenant or Contractor's employee's vehicles will be designated and approved by the Authority. Parking will be accomplished in straight equally spaced rows. Tenant or Contractor will organize traffic flow and parking patterns, and supply traffic control signs and markings subject to approval by the Authority. Tenant or Contractor will maintain the parking surface and pick up trash daily. No storage will be allowed at parking site.

G. Security Breach and Fines

Up to an Eleven-Thousand Dollar (\$11,000) per occurrence charge may be assessed against the Tenant or Contractor if the Tenant or Contractor violates the requirements of the airport Security Plan or the Security requirement specified herein. Notwithstanding the foregoing, repeated and/or flagrant violations of the Security Plan will also be grounds for the suspension of the work at no cost to the Authority or cancellation of the TWP.

H. Tenant and Contractor Security

Tenant and Contractor agrees to abide by the provisions of the Transportation Safety Administration (TSA) and airport security plans. The badging process can take two weeks or more complete, and the Authority will not issue badges until an approved TWP is issued

CHAPTER 7 UTILITIES

1. General

Existing facilities, utilities and features depicted on any plan provided by the Authority are not guaranteed to be accurate with respect to location, condition, and characteristics. Also, there may be additional facilities and features existing that could affect the work which are not depicted or described in the documents. Prior to beginning construction, the Tenant and Contractor will make a thorough investigation of the project area and determine the location, condition, and characteristics of any and all facilities and features which may affect the work by contacting Sunshine State One Call of Florida at:

<http://www.sunshine811.com/>.

The Tenant and Contractor hereby agrees to make no claims against the Authority, and/or its representatives relating to the existence or lack thereof, location, condition, and/or characteristics of any existing facilities or features.

2. Protection of Existing Utilities

- A. FAA cables, electric power lines, telephone cables, computer cables, airport cables, airline communication cables, water lines, irrigation lines, sanitary force mains and fuel and gas lines may be located in the areas of construction. Disruption of these utilities could seriously disrupt the operation of the airport. The Contractor is required to verify actual locations of all cables and all utilities, including fuel and gas lines prior to beginning construction.
- B. Power and control cables leading to and from any FAA Navigational Aids (NAVAIDS) and other facilities will be marked in the field by FAA personnel for the information of Contractor before any work in their general vicinity is started. Thereafter, through the entire time of this construction, they will be protected from any possible damage, including crossing with unauthorized equipment, etc. No grading will be permitted over the FAA cables under any conditions.
- C. There is a requirement to protect FAA NAVAIDs and other facilities and cables by the Contractor at all times.
- D. If damage occurs to any utilities, the Tenant or Contractor will be assessed a fee of \$2,000 liquidated damages per cut, which liquidated damages will only represent the expense incurred by the Authority in coordinating the repair, and which will not prevent the Authority or others from recovering from the Contractor or tenant other costs, damages, or expenses of any other nature on account of damages to utilities. By obtaining a TWP the Tenant and Contractor agree the \$2,000 per cut amount is reasonable and not a penalty. The Contractor will also reimburse the

FAA for all material and labor costs to repair FAA cables. All FAA cable repairs will be accomplished by FAA personnel only.

- E. It is understood and agreed that the Authority does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities or structures that may be shown on any plans or encountered in the work. Any inaccuracy or omission in such information will not relieve Contractor of Contractor's responsibility to protect such existing features from damage or unscheduled interruption of service.
- F. It is further understood and agreed that Tenant or Contractor will, upon execution of the work, notify the owner of all utility services or other facilities of the plan of operations. Such notification will be in writing addressed to the contact person for the utility and a copy of each notification will be given to the Authority. In accordance with Chapter 556, Florida Statutes entitled "Underground Facility Damage Prevention and Safety Act," the tenant will provide notification of excavation or demolition through the "Sunshine State One-Call of Florida, Inc. at:

<http://www.sunshine811.com/>.

The Authority will not be held liable for damage to any utility whether the tenant properly complied with this condition or not.

- G. In addition to the general written notification herein before provided, it will be the responsibility of the Contractor to keep such individual owners of utilities, cables, and lines, and Sunshine advised of any changes in the Plan of Operation that would affect such owners.
- H. Prior to commencing the work in the general vicinity of an existing utility service or facility, the Contractor will again notify each such utility owner and Sunshine in writing of the plan of operations. If, in the Contractor's opinion, the utility owner's assistance is needed to locate the utility service or facility or the presence of a representative of the utility owner is desirable to observe the work, such advice should be included in the written notification. Such notification will be given through the Authority representative by the most expeditious means to reach the utility owner's contact person no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity.
- I. The Contractor's failure to give the two (2) days notice herein above provided will be cause for the Authority to suspend the Contractor's operations in the general vicinity of a utility service or facility.
- J. Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor will be required to use excavation methods

acceptable to the Authority 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.

- K. Should the Tenant or Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, Contractor will immediately notify the proper utility and the Authority and will take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, will cooperate with the utility service or facility owner and the Authority continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.
- L. The Tenant and Contractor will bear all costs of damage and restoration of service to any utility service or facility resulting from Tenant or Contractor's operations, whether or not due to negligence or accident. The Authority reserves the right to collect such costs from the Contractor, tenant or the surety.
- M. Airport owned facilities and properties 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 Tenant or Contractor will, at the election of the Authority, (1) be replaced/repaired by the Tenant or Contractor to the satisfaction of the Authority, or (2) be replaced/repaired by the Authority at the Contractor's and/or the Tenant's expense.
- N. In the event that the Contractor encounters soils exhibiting a petroleum or chemical odor, the Contractor will immediately cease work and notify the TWP coordinator for the project.

3. Construction In the Vicinity Tampa Airport Pipeline

All construction activities that take place in or around the Tampa Airport Pipeline that feeds the Airports Fueling system, located at the Airport must meet the guidelines outlined in the Tampa Airport Pipeline Corporation notice; **GENERAL REQUIREMENTS FOR CROSSING AND WORKING NEAR OUR PIPELINES.** Contact the Tampa Pipeline Corporation at 7403 Hoadley Street, Tampa Fl. 33616. Telephone (813) 839-0426

CHAPTER 8 HEIGHT-ZONING PERMITS

1. Submission of Height Zoning Permits for Construction Activity Located on Aviation Authority Property

A proponent must submit an application to the Aviation Authority to initiate the review process for proposed development or use of construction equipment on airport property. The information obtained from this form allows the Airport to determine height violations or Airport Layout Plan modifications. Height Zoning Instructions, Forms and Applications can be found at:

<http://www.tampaairport.com/airport-height-zoning>

Prior to the submittal of any application for an airport height zoning permit, a prospective applicant should request a pre-application conference with the Airport Zoning Director. The pre-application conference is to advise the applicant of the information needed for submittal and the standards and other requirements so that issues can be identified and costly modifications avoided.

2. Application Requirements

- A. An application for an airport height zoning permit must contain a completed Aviation Authority Permit Application including the supplemental FAA Form 7460-1; a site survey, with an FAA accuracy code of 1A, which certifies the site coordinates and elevations with an accuracy of +/- 20-foot horizontal and +/- 3-foot vertical (all site coordinates must be based on North American Datum of 1983 and National Geodetic Vertical Datum of 1988); FDOT comments and a Variance application if applicable; site plans; drawings and other data as may be necessary to enable the Airport Zoning Director to determine whether or not the proposal will comply with these regulations.
- B. For Projects with multiple points the applicant must use the Multiple Point Template which is available on the Height Zoning Web Page.
- C. The Aviation Authority's Permit Application and the FAA Form 7460-1 should be sent to the attention of Development Program Services, Aviation Authority. Based on information obtained, the Airport will initiate a review process with the FAA.
- D. The Aviation Authority requires the elevation of each corner of the building and its highest point. It is also requested that submission of an AutoCAD drawing file of the proposed site plan in a State Plane Coordinate System.
- E. Each airport height zoning permit will specify an expiration date as a condition.

Development authorized by the permit must commence prior to the permit's expiration date and must continue without interruption in good faith until development is complete; otherwise it shall lapse. The Zoning Director may grant one extension concurrent with an FAA approval up to 180 days. The extension must be requested in writing and justifiable cause demonstrated.

- F. Temporary Permits may be issued in an emergency situation for construction equipment that will not exceed 48 hours and will not create an airspace hazard.

<p>STANDARD PROCEDURE</p> <p>Aviation Authority</p>	<p>Number: <u>S250.06</u></p> <p>Effective: <u>05/31/02</u></p> <p>Revised: <u>03/04/20</u></p> <p>Page: <u>1</u> of <u>12</u></p>
<p>Subject: CONTRACTUAL INSURANCE TERMS AND CONDITIONS</p>	

PURPOSE: To establish the insurance terms and conditions associated with contractual insurance requirements. This Standard Procedure is applicable to all companies with Authority contracts, and to the extent required by Florida Department of Transportation Public Transportation Grant Agreement, every contractor, subcontractor, consultant, and sub-consultant at each tier. Unless otherwise provided herein, any exceptions to the following conditions or changes to required coverages or coverage limits must have prior written approval from the General Counsel and Executive Vice President of Legal Affairs or designee.

INSURANCE COVERAGE:

A. Procurement of Coverage:

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

B. Term of Coverage:

Except as otherwise specified in the contract, the insurance will commence on or prior to the effective date of the contract and will be maintained in force throughout the duration

<p>STANDARD PROCEDURE</p> <p>Aviation Authority</p>	<p>Number: <u>S250.06</u></p> <p>Effective: <u>05/31/02</u></p> <p>Revised: <u>03/04/20</u></p> <p>Page: <u>2</u> of <u>12</u></p>
<p>Subject: CONTRACTUAL INSURANCE TERMS AND CONDITIONS</p>	

of the contract and for any period of extended coverage required in the contract. If a policy is written on a claims-made form, the retroactive date must be shown and this date must be before the earlier of the date of the execution of the contract or the beginning of contract work, and the coverage must respond to all claims reported within three years following the period for which coverage is required unless a longer period of time is otherwise stated in the contract.

C. Reduction of Aggregate Limits:

If the general or aggregate limit for any policy is exhausted, the company, and to the extent required by Florida Department of Transportation Public Transportation Grant Agreement, all of the company's contractors, subcontractors, consultants, and sub-consultants at each tier, will immediately take all possible steps to have it reinstated. The commercial general liability policies and any excess or umbrella policies used to provide the required amount of insurance shall include a per project designated aggregate limit 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 insurance policy will be specifically endorsed to require the insurer to provide written notice to the Authority at least 30 days (or 10 days prior notice for non-payment of premium) prior to any cancellation, non-renewal or adverse change, initiated by the insurer, and applicable to any policy or coverage described in the contract or in this Standard Procedure. The endorsement will specify that such notice will be sent to:

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

<p>STANDARD PROCEDURE</p> <p>Aviation Authority</p>	<p>Number: <u>S250.06</u></p> <p>Effective: <u>05/31/02</u></p> <p>Revised: <u>03/04/20</u></p> <p>Page: <u>3</u> of <u>12</u></p>
<p>Subject: CONTRACTUAL INSURANCE TERMS AND CONDITIONS</p>	

Tampa, Florida 33622

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

D. No waiver by approval/disapproval:

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

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 Authority, circumstances merit a change in such coverage or minimum limits of insurance required by the contract, the Authority may change the coverage and the minimum limits of insurance required, and the company will, within 60 days of receipt of written notice of a change in the coverage and/or the minimum limits

<p>STANDARD PROCEDURE</p> <p>Aviation Authority</p>	<p>Number: <u>S250.06</u></p> <p>Effective: <u>05/31/02</u></p> <p>Revised: <u>03/04/20</u></p> <p>Page: <u>4</u> of <u>12</u></p>
<p>Subject: CONTRACTUAL INSURANCE TERMS AND CONDITIONS</p>	

required, comply with such change and provide evidence of such compliance in the manner required by the contract. Provided, however, that no change in the coverages or minimum limits of insurance required will be made by the Authority until at least two years after inception of the contract or two years after any change by the Authority in the coverages or minimum limits of insurance required in the contract unless extreme conditions warrant such change and are agreeable to both parties. To the extent required by Florida Department of Transportation Public Transportation Grant Agreement, any such change or modification in coverage or limits shall also apply to the contractors, subcontractors, consultants, and sub-consultants at each tier.

If, in the opinion of the Authority, compliance with the insurance requirements is not commercially practicable for the company, its contractors, subcontractors, suppliers, consultants, or subconsultants at each tier, at the written request of the company, the Authority 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 company. Any such modification will be subject to the prior written approval of the Authority's General Counsel and Executive Vice President of Legal Affairs or designee, and subject to the conditions of such approval.

F. Proof of Insurance – Insurance Certificate:

1. Prior to Work, Use or Occupancy of Authority Premises

The company and, to the extent required by Florida Department of Transportation Public Transportation Grant Agreement, the company's contractors, subcontractors, consultants, and sub-consultants at each tier, will not commence work, or use or occupy Authority's premises in connection with the contract, until the required insurance is in force, preliminary evidence of insurance acceptable to the Authority has been provided to the Authority, and the Authority has granted

<p>STANDARD PROCEDURE</p> <p>Aviation Authority</p>	<p>Number: <u>S250.06</u></p> <p>Effective: <u>05/31/02</u></p> <p>Revised: <u>03/04/20</u></p> <p>Page: <u>5</u> of <u>12</u></p>
<p>Subject: CONTRACTUAL INSURANCE TERMS AND CONDITIONS</p>	

permission to the company to commence work or use or occupy the premises in connection with the contract.

2. Proof of Insurance Coverage

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

The Certificate must:

- a. Be signed by an authorized representative of the insurer. Upon request of the Authority, company will furnish the Authority with any specific endorsements effecting coverage required by the contract. The endorsements are to be signed by a person authorized by insurer to bind the coverage on the insurer's behalf;
- b. State that: "Hillsborough County Aviation Authority, members of the Authority's governing body and the Authority's officers, volunteers, and its employees are additional insureds for all policies described above other than workers' compensation and professional liability (if required by contract)";
- c. To the extent required by Florida Department of Transportation Public Transportation Grant Agreement, state that the Florida Department of Transportation is an additional insured for commercial general liability;
- d. Indicate that the insurers for all required policies shown on the Certificate have waived their subrogation rights against the Authority, members of the Authority's governing body, and the Authority's officers, volunteers, agents, and employees;

STANDARD PROCEDURE

Aviation Authority

Number: S250.06

Effective: 05/31/02

Revised: 03/04/20

Page: 6 of 12

Subject: CONTRACTUAL INSURANCE
TERMS AND CONDITIONS

- e. Indicate that the Certificate has been issued in connection with the contract;
- f. Indicate the amount of any deductible or self-insured retention applicable to all coverages; and
- g. Identify the name and address of the Certificate holder as:

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

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

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

- 1. All deductibles, as well as all self-insured retentions and any alternative risk or insurance programs (including, but not limited to, the use of captives, trusts, pooled programs, risk retention groups, or investment-linked insurance products), must be approved by the General Counsel and Executive Vice President of Legal Affairs or designee. The company agrees to provide all documentation necessary for the Authority to review the deductible, self-insurance or alternative risk or insurance program.

<p>STANDARD PROCEDURE</p> <p>Aviation Authority</p>	<p>Number: <u>S250.06</u></p> <p>Effective: <u>05/31/02</u></p> <p>Revised: <u>03/04/20</u></p> <p>Page: <u>7</u> of <u>12</u></p>
<p>Subject: CONTRACTUAL INSURANCE TERMS AND CONDITIONS</p>	

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

H. Company's Insurance Primary:

The insurance required by the contract will apply on a primary and non-contributory basis.

STANDARD PROCEDURE

Aviation Authority

Number: S250.06

Effective: 05/31/02

Revised: 03/04/20

Page: 8 of 12

Subject: CONTRACTUAL INSURANCE
TERMS AND CONDITIONS

Any insurance or self-insurance maintained by the Authority will be excess and will not contribute to the insurance provided by or on behalf of the company.

To the extent required by Florida Department of Transportation Public Transportation Grant Agreement, the company will ensure that the insurance provided by all contractors, subcontractors, consultants, and subconsultants at each tier will apply on a primary basis as to any other insurance available and shall not be more restrictive than the coverage afforded to the named insured.

I. Incident Notification:

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

J. Customer Claims, Issues, or Complaints:

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

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

K. Applicable Law:

<p>STANDARD PROCEDURE</p> <p>Aviation Authority</p>	<p>Number: <u>S250.06</u></p> <p>Effective: <u>05/31/02</u></p> <p>Revised: <u>03/04/20</u></p> <p>Page: <u>9</u> of <u>12</u></p>
<p>Subject: CONTRACTUAL INSURANCE TERMS AND CONDITIONS</p>	

With respect to any contract entered into by the Authority with a value exceeding \$10,000,000, if any required policy or program is: (i) issued to a policyholder outside of Florida or (ii) contains a “choice of law” or similar provision stating that the law of any state other than Florida shall govern disputes concerning the policy, then such policy or program must be endorsed so that Florida law (including but not limited to Part II of Chapter 627 of the Florida Statutes) will govern any and all disputes concerning the policy or program in connection with claims arising out of work performed pursuant to the contract.

L. Waiver of Subrogation:

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

“Hillsborough County Aviation Authority, members of the Authority’s governing body and the Authority’s officers, volunteers, agents, and its employees, as well as

<p>STANDARD PROCEDURE</p> <p>Aviation Authority</p>	<p>Number: <u>S250.06</u></p> <p>Effective: <u>05/31/02</u></p> <p>Revised: <u>03/04/20</u></p> <p>Page: <u>10</u> of <u>12</u></p>
<p>Subject: CONTRACTUAL INSURANCE TERMS AND CONDITIONS</p>	

the State of Florida, Department of Transportation, including the Department’s officers and its employees, are additional insureds for the coverages required by all policies as described above other than workers compensation and professional liability.”

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

1. Authority's Right to Procure Replacement Insurance

If, after the inception of the contract, the company 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 Authority provided by the contract, the Authority may, at its sole discretion, procure and maintain on behalf of the company, insurance which provides, in whole or in part, the required insurance coverage.

2. Replacement Coverage at Sole Expense of Company

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

a. Company to Remain Fully Liable

The company agrees to remain fully liable for full compliance with the insurance requirements in the contract. To the extent that there is any exclusion, deficiency, reduction, or gap in a policy which makes the insurance more restrictive than the coverage required, the company agrees to remain responsible and obligated to make the Authority whole as if the

STANDARD PROCEDURE

Aviation Authority

Subject: CONTRACTUAL INSURANCE
TERMS AND CONDITIONS

Number: S250.06

Effective: 05/31/02

Revised: 03/04/20

Page: 11 of 12

company and all of its contractors, subcontractors, consultants, and sub-consultants at each tier fully met the insurance requirements of the contract.

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

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

STANDARD PROCEDURE

Aviation Authority

Subject: CONTRACTUAL INSURANCE
TERMS AND CONDITIONS

Number: S250.06

Effective: 05/31/02

Revised: 03/04/20

Page: 12 of 12

APPROVED: Michael Stephens

DATE: 03/04/20

Exhibit I - Schedule of Concessionaire Improvements



TAMPA INTERNATIONAL AIRPORT CONRAC SCHEDULE OF CONCESSIONAIRE IMPROVEMENTS

AREA	ITEM	SUPPLIED BY		MAINTAINED BY		COMMENTS
		AIRPORT	TENANT	FACILITY MAN.	AIRPORT	
Building Exterior and Structural						
	Building Roof System					
	Building Structural					Including ramps
	Exterior Walls					
	Exterior Signage					
	Exterior Glazing					
	Landscaping					
	Directional Signage					
Ready/Return Areas / Operational Floor Plate Improvements						
	Ready/Return Deck					
	Ready/Return Deck Waterproofing					
	Ready/Return Lighting					
	Ready/Return Ceiling Hangar System					
	Directional Signage					
	Stairs - Code Required					
	Code Required Signage					
	Fire/Life/Safety Annunciator System					
	Primary Electrical Service Conduit					
	Primary Electrical Service Panel					
	Tenant IDF Room Flooring					Tenant IDF rooms on Level 2 perimeter
	Tenant IDF HVAC					Tenant IDF rooms on Level 2 perimeter
	Tenant IDF Electrical Service					Tenant IDF rooms on Level 2 perimeter
	Tenant IDF Comms Conduit					Tenant IDF rooms on Level 2 perimeter
	Comms Punchdown Board					
	Columns and Vertical Surface Finishes					
	Bottom of Deck Finish					
	Electrical/Data for Luggage Carts					
	Structural enhancement for customer service and exit booths					
	Customer Service Booths					
	Customer Service Booth HVAC					
	Customer Service Booth Electrical Conduit					
	Customer Service Booth Electrical Wiring					
	Customer Service Booth Data/Comms Conduit					
	Customer Service Booth Data/Comms Wiring					
	Customer Service Booth Data/Comms Installation					
	Customer Service Booth Data/Comms Systems					
	Customer Service Signage					
	Tenant Branding					
	Stall Signage					
	Branded Directional Signage					
	Floor Striping - Primary Circulation					Paint vs thermoplastic
	Floor Striping within Exclusive Premises					
	Gravity Condensation Drains for Customer Service Booths					
	Delineation barriers between Brand parking					
	Exit Service Booths					
	Exit Booth HVAC					
	Exit Booth Electrical Conduit					
	Exit Booth Electrical Wiring					
	Exit Data/Comms Conduit					
	Exit Booth Data/Comms Wiring Back to IDF					
	Exit Booth Data/Comms Installation Back to IDF					
	Exit Booth Data/Comms Systems Back to IDF					
	Exit Booth Signage					
	Exit Booth Vehicle Barricades					
	Exit Booth Gate Arms					
	Exit Booth Barricade Operational Systems					
	Exit Booth Return Lane Barrier & System					
	Trash & Recyclables Containers					Authority will approval all trash receptable selections
	Leveling pad for tenant booths					



TAMPA INTERNATIONAL AIRPORT CONRAC SCHEDULE OF CONCESSIONAIRE IMPROVEMENTS

AREA	ITEM	SUPPLIED BY			MAINTAINED BY			COMMENTS
		AIRPORT	TENANT	FACILITY MAN.	AIRPORT	TENANT		
Vehicle Staging and Storage Area Improvements								
	Vehicle Staging and Storage Deck							
	Vehicle Staging and Storage Waterproofing							
	Vehicle Staging and Storage Lighting							
	Directional Signage							
	Stairs - Code Required							
	Code Required Signage							
	Fire/Life/Safety Annunciator System							
	Primary Electrical Service Conduit							
	Primary Electrical Service Panel							
	Tenant Branding							
	Stall Signage							
	Branded Directional Signage							
	Floor Striping - Primary Circulation							Paint vs thermoplastic
	Floor Striping within Exclusive Premises							
	Delineation barriers between Brand parking							
	Concessionaire Security Electrical Conduit							
	Concessionaire Security Electrical Wiring							
	Concessionaire Security Data/Comms Conduit							
	Concessionaire Security Data/Comms Wiring Back to IDF							
	Concessionaire Security Data/Comms Installation Back to IDF							
	Concessionaire Security Data/Comms Systems Back to IDF							
	Concessionaire Security Vehicle Barricades							
	Concessionaire Security Gate Arms							
	Concessionaire Security Barricade Operational Systems							
Area 4 Concessionaires Ready/Return / Operational Floor Plate Improvements								
Additional Improvement Definition								
	Floor Striping - Shared Vehicular and Pedestrian Circulation within Area 4 Concessionaires' Ready/Return Area							Shared circulation striping is collectively an Area 4 Concessionaires responsibility
	Floor Striping within individual Area 4 Concessionaire Ready/Return spaces							
	Demising security barriers between Ready/Return Area 4 and adjacent Concessionaire's area							Shared responsibility among Area 4 Concessionaires and adjacent Concessionaire
	Security at entry/exit point to Common Shuttler Road							
	Demising security barriers between Ready/Return and customer entry road							
	Demising and/or security within individual Area 4 Concessionaire's lease spaces (if required)							
Customer Service Building (CSB)								
Common Public Areas								
	Exterior Walls & Roof							
	Ceiling							
	Floors							
	Floor Covering							
	FID System							
	Interior Walls & Finishes							
	Wayfinding and Building Signage							Concessionaire Signage - We are only providing the infrastructure for the Concessionaires to install their own signage.
	Public Seating							
	Concession Areas (if applicable)							
	Directional Signage							
	Code Required Signage							
	Public Restrooms							
	Lighting							
	Electrical Service							
	Electrical Conduit, Cabling, Outlets							
	Electrical/Data for Luggage Carts							
	Sprinklers							
	Trash & Recyclables Containers							
	Fire/Life/Safety Annunciator System							
Circulation Cores								
	Restrooms							
	Elevators							
	Public Escalators							
	Trash & Recyclables Containers							
	Electrical/Data for Luggage Carts							
	Fire/Life/Safety Annunciator System							
Area 4 Concessionaires Common Public Areas								
Area 4 Concessionaires Common Lobby Signage								
	Infrastructure							Signage facing into the CSB Common Lobby
	Enclosure							
	2'-6" x 10'-0" Inserts							
Area 4 Concessionaires area Common Lobby								
	Walls & Finishes							
	Common Lobby Ceiling & Lighting							
	Common Lobby flooring							
	Furniture							
Area 4 Concessionaires area Common Lobby Signage								
	Infrastructure							Signage facing into the Area 4 Common Lobby
	Enclosure							
	Inserts							



TAMPA INTERNATIONAL AIRPORT CONRAC SCHEDULE OF CONCESSIONAIRE IMPROVEMENTS

AREA	ITEM	SUPPLIED BY		MAINTAINED BY		COMMENTS
		AIRPORT	TENANT	FACILITY MAN.	AIRPORT	
Exclusive Premises	Lobbies, Customer Counters, Customer queuing space and Administrative Support Space offices					
	Counters (shells, inserts, etc....)					
	Counter infrastructure (data, elec, comm)					
	Backwall (framing, finish, elec, signage)					
	Flooring					
	Ceiling					
	Lighting					
	HVAC System Distribution					
	Tenant Check-in/Reservations Systems					
	Tenant Telephone Communications System					STS Service provided by authority as option
	Tenant MDF					Shared Tenant MDF's located at the north and south ends of the CSB
	Tenant Computer/WAN Other Systems					
	Trash & Recyclables Containers					Authority will approve all trash receptable selections
	Tenant Furniture, Fixtures, Equipment					
	Demising Wall Studs					Includes demising walls between Concessionaires and demising walls between individual Area 4 Concessionaires within the Area 4 Concessionaires Mini-Mall space
	Demising wall substrates & finishes					
Administrative Support Space office						
	Framing					
	Gyp. Board					
	Wall Finish					
	Ceiling					
	Lighting					
	HVAC System Distribution					
	Flooring					
	Frames and Doors					
	Door Hardware					
	Distribution Panels - Electrical and Data					
	Electrical Conduit					
	Electrical Wiring					
	Outlets and Switches					
	Data Conduit					
	Data Wiring					
	Water Line to shell					Water Line to Area 4 Concessionaires area provided to Area 4 Concessionaires' common breakroom, but not to individual CSB Mini-mall spaces
	Tenant IDF					Tenant IDF rooms located in the north and south cores
	Tenant IDF Flooring					Tenant IDF rooms located in the north and south cores
	Tenant IDF Separate HVAC					Tenant IDF rooms located in the north and south cores
	Tenant IDF Electrical Backbone					Tenant IDF rooms located in the north and south cores
	Tenant IDF Comms Conduit					Tenant IDF rooms located in the north and south cores
	Data / Comms Punchdown Board					
	Data / Communications Equipment					
	Data / Communications Installations					
	Tenant Check-in/Reservations Systems					
	Tenant Telephone Communications Systems					
	Tenant Computer/WAN Other Systems					
	Furniture, Fixtures, Equipment					
Area 4 Concessionaires CSB Breakroom						
	Shell Framing					
	Gyp. Board					
	Wall Finish					
	Ceiling					
	Flooring					
	Shell Frames and Doors					Only includes door to/from Area 4 Concessionaires area Common Lobby and door to/from back corridor.
	Door Hardware					Only includes door to/from Area 4 Concessionaires area Common Lobby and door to/from back corridor.
	Lighting					
	HVAC System Distribution					
	Distribution Panels - Electrical and Data					
	Electrical Conduit					
	Electrical Wiring					
	Outlets and Switches					
	Plumbing Infrastructure to shell					
	Plumbing / Sink					
	Furniture, Fixtures, Equipment					
	Millwork / Cabinetry					



TAMPA INTERNATIONAL AIRPORT CONRAC SCHEDULE OF CONCESSIONAIRE IMPROVEMENTS

AREA	ITEM	SUPPLIED BY		MAINTAINED BY		COMMENTS
		AIRPORT	TENANT	FACILITY MAN.	AIRPORT	
Quick Turn Around Area (QTA)						
Common-use Features						
	QTA Deck					
	QTA Deck Waterproofing					
	QTA Roof					
	QTA Lighting					
	Stairs - Code Required					
	QTA Code Signage					
	QTA Directional Signage					
	QTA Floor Common Striping					
	Sprinkler Systems					
	Fire/Life/Safety Systems					
	Lighting					
	HVAC					
	Electrical Conduit					
	Electrical Wiring					
	Electrical Outlets and Switches					
	Data/Comms Conduit					
	Data/Comms Wiring					
	Data/Comms Systems					
	Data/Comms Installation					
	Roll-up Doors					
	Emergency Generator					
	Emergency Power Distribution System					
Administrative Support Space						
	Common Restrooms / Janitor Rooms					
	Freight Elevator					
	Trash room					
	QTA Main Electrical Room					
	QTA Electrical Distribution Rooms					
	RAC IDF Room(s)					
	HCAA IDF Rooms					
	Gyp. Board					
	Wall Finish					
	Ceiling					
	Lighting					
	HVAC Distribution					Chilled water to space provided by authority
	Flooring					
	Frames and Doors					
	Door Hardware					
	Electrical Distribution Panel					
	Electrical Conduit					
	Electrical Wiring					
	Outlets and Switches					
	Data Conduit					
	Data Wiring					
	Breakroom					
	Breakroom Flooring					
	Breakroom Casework					
	Breakroom Plumbing and Sewer					
	Breakroom Garbage Disposal					
	Breakroom Electrical Service					
	Data/Comms Room					
	Data/Comms Room Flooring					
	Data/Comms Room HVAC					
	Data/Comms Room Electrical Service					
	Data/Comms Punchdown Board					
	Data/Communications System					STS provided by authority as an option
	Data/Communications Installations					
	Tenant Check-in/Reservations Systems					
	Tenant Telephone Communications Systems					
	Tenant Computer/WAN Other Systems					
	Furniture, Fixtures and Equipment					
	Shell Framing					Includes demising wall framing between Area 4 Concessionaires area and adjacent Concessionaire
Car Wash Area						
	Water Supply Hose Bib					
	Water Line to QTA office(s)					
	Wash Bay Structure					
	Wash Bay Exterior Walls					
	Wash Bay Enclosure-Bay Demising Wall/Curtains					Curtains between wash bays are provided on Level 3. Infrastructure for future installation of curtains is provided on Levels 1 and 2
	Drive-through Vehicle Wash System					
	Vehicle Wash Rocker Panel System					
	Vehicle Wash Blower Drying Power Infrastructure					
	Vehicle Wash R.O. System					
	Excess Water Drainage System					
	Oil/Water Separator(s)					
Fueling Area						
	Multi-level Fuel Pump/Distribution System					
	Fuel Island (Inc. Structural Upgrades)					
	Fuel Dispensers Inc. Nozzles					
	Fuel Accounting System					CMI terminal infrastructure only
	Fuel Monitoring System					
	O/H Hose Reel System					
	O/H Hose Reels					
	O/H Fluid Distribution System					
	Vehicle Vacuum System					



TAMPA INTERNATIONAL AIRPORT CONRAC SCHEDULE OF CONCESSIONAIRE IMPROVEMENTS

AREA	ITEM	SUPPLIED BY		MAINTAINED BY		COMMENTS
		AIRPORT	TENANT	FACILITY MAN.	AIRPORT	
Shuttler Ramps	Shuttler Ramp Security, Devices and Barriers					Each Concessionaire or group of Concessionaires is responsible to secure the Shuttler Ramps from its allocated floor at the points of connection to the QTA
Service Yard						
	Delivery Area					
	Vehicle Access Gates					
	Facility Manager's Office					
	Trash Receptacles and Compactor					
	Hose bib Trash Area					
	Dumpster Area					
	Fuel Area Improvements					
	Fuel Area Roadways and Signage					
	Fuel Area Fencing, Vehicle & Man Gates					
	Fuel Area Physical Security					
	Fuel Tanks and Req. Improvements					
	Fuel Fill System					
	Security - fuel tank fill point					
Other Requests						
	Bollards					R/R, Core exit & QTA
	CCTV					CSB Public Areas, Cores (inside and exterior perimeter, Service Yard, public roadways, SCS loop road)
	Access Control					
	Central Plant					Chilled water distribution to tenant spaces. Domestic water distribution to Concessionaire spaces. Fire pump.

Hillsborough County Aviation Authority

Exhibit J: Main ConRAC Baseline Environmental Report

Tampa International Airport, Tampa, FL

Prepared for:

**Hillsborough County Aviation Authority
Concessions Department**

Prepared by:

**Hillsborough County Aviation Authority
Planning and Development Department**

December 1, 2014

Prepared by:

 12/1/14

Keith Fleming, PG, Florida Registration No. 2078
Professional Geologist

At the request of the Hillsborough County Aviation Authority's (the Authority's) Concessions Department, the Authority's Planning and Development (P&D) Department completed this Baseline Environmental Conditions Report (Baseline Report) for the Authority-owned On-Airport Vehicle Rental Concession, which is commonly referred to as the Main ConRac and is located in the Gateway Area of Tampa International Airport in Tampa Florida. A site map is provided in the Appendix. The purpose of the baseline investigation is to document the site conditions at the beginning of the tenancy, and to determine if any recognized environmental conditions (RECs) are likely to exist. The identification of a REC means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not RECs.

In the case of the On-Airport Vehicle Rental Concession, the Authority commissioned CB&I Government Solutions, Inc (CB&I), to conduct an onsite soil investigation. Soil borings were conducted at select locations that have the highest likelihood of future environmental concern based on the proposed layout of future equipment including petroleum storage systems and oil-water separators. At each boring location, soil samples were collected from the vadose zone in general accordance with the Florida Department of Environmental Protection (FDEP) Standard Operating Procedure (SOP) PCS-004. Soil samples were screened in the field using an organic vapor analyzer. Sampling equipment was decontaminated between sample locations in accordance with FDEP SOP-001/01 FC 1000. CB&I's report is provided in the Appendix of this Baseline Report. CB&I's report provides a site map showing the soil boring locations and a table summarizing the soil testing results. CB&I's results do not identify any known or previously unknown environmental concerns.

Authority P&D staff has extensive knowledge of the site history as well as risk and receptor studies performed on other sites in the area. As a result of this knowledge and CB&I's results, Authority P&D staff has determined that RECs are not likely to exist with respect to the site and no further assessment of soils or groundwater is warranted at this time.

For the purpose of this Baseline Report, the term recognized environmental condition has been adapted from the American Society for Testing and Materials (ASTM) Designation E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

References

ASTM 2013, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. American Society for Testing Materials (ASTM E 1527-13).

CB&I Government Solutions, Inc., *Soil Testing Report*, November 20, 2014.

Hillsborough County Aviation Authority, Authority files, October 2014.

November 20, 2014

Mr. Keith Fleming, P.G.
Manager of Environmental Design
Hillsborough County Aviation Authority
PO Box 22287
Tampa, Florida 33622

**Re: Soil Testing Report (Service Center Site #4 and Main ConRAC)
Work Order #15-04
TPA, RAC Service Center Sites
Hillsborough County Aviation Authority
HCAA Project #1105 14**

Dear Mr. Fleming:

CB&I Government Solutions, Inc. (CB&I) recently performed additional requested support work in accordance with Task 1 of Work Order #15-04. Enclosed, please find tables containing field data of all additional soil borings advanced at the RAC Service Center Sites, and maps of each site containing locations of each soil boring.

On November 18, 2014, a CB&I geologist advanced a total of 10 soil borings in two RAC areas (Service Center Site 4 and the Main ConRAC site). All borings were installed to 4 feet below surface (ft bls) via stainless-steel hand auger, and samples were collected at 0.5 ft bls, 2.0 ft bls, and 4 ft bls for field screening with an organic vapor analyzer (OVA) equipped with a flame-ionization detector (FID) and visual inspection. Equipment was decontaminated between locations in accordance with FDEP's SOP-001/01 FC 1000. Results are presented in the enclosed tables and figures.

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client and the county, unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, county, FDEP, purposes, locations, timeframes, and project parameters indicated. CB&I is not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. CB&I does not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

CB&I appreciates the HCAA's assistance with this matter. In the event revisions or clarifications are necessary that can be addressed via e-mail to accelerate and streamline the schedule for this project, please contact Nathan Miller at nathan.miller@cbi.com or (813) 612-3642.

Sincerely,
CB&I Government Solutions, Inc

Nathan Miller
Environmental Scientist

Donald L. Lewis, PE
Program Manager

Attachments: Table 1: Soil Data Summary – Service Center Site #4
 Table 2: Soil Data Summary – Main ConRAC Site
 Table 3: Boring GPS Coordinates
 Figure 1: Net OVA Results – Service Center Site #4
 Figure 2: Net OVA Results – Main ConRAC

cc: Project File

Facility Name: TPA RAC Service Center Sites
HCAA Project No.: 1105.14

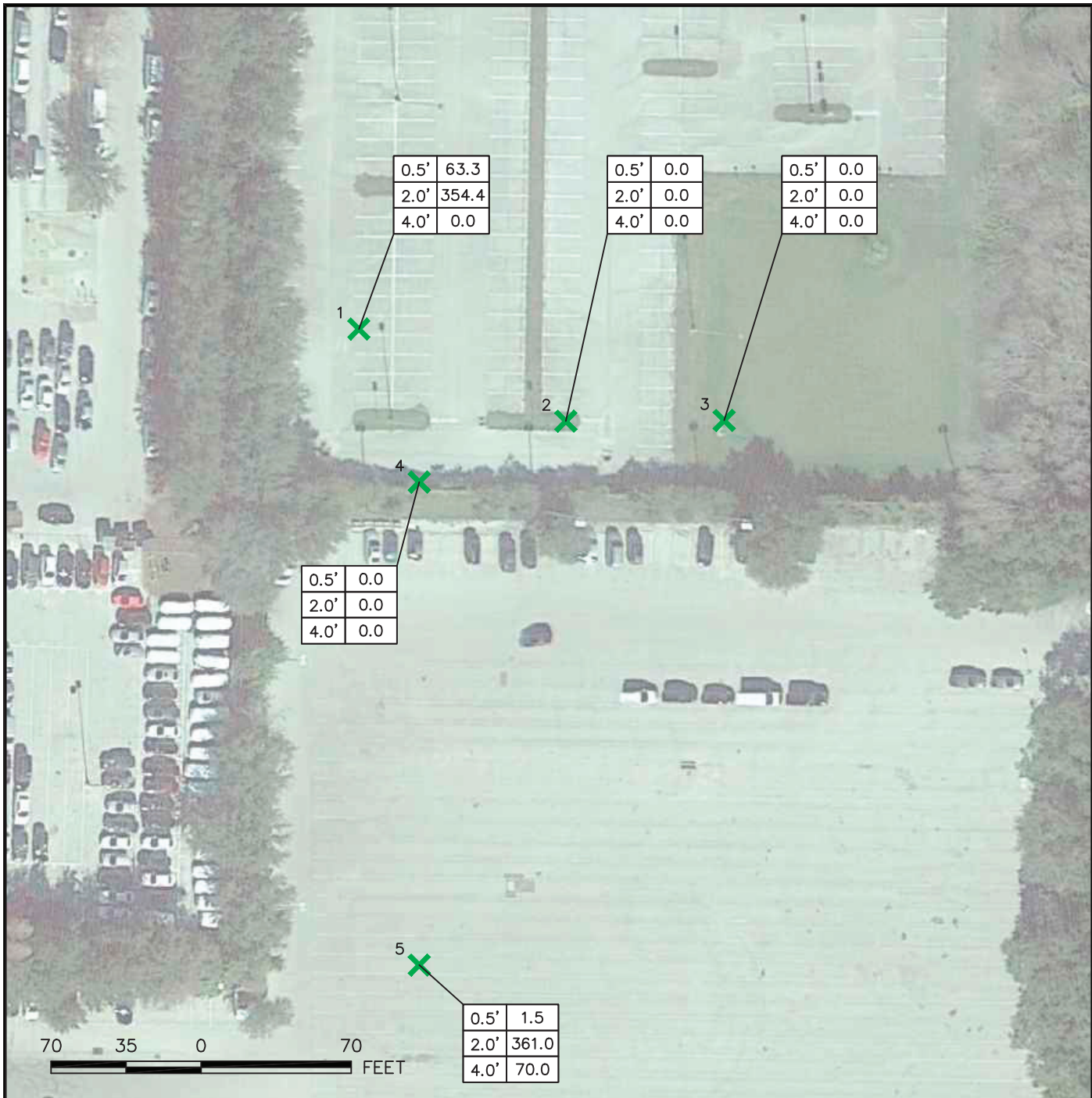
Sample				OVA Screening Results		
ID Number	Date	Approx. Depth to Water (feet)	Sample Interval (ft bls)	Unfiltered Reading (ppm)	Filtered Reading (ppm)	Net Reading (ppm)
SB-1	11/18/14	NA	0.5	155.4	92.1	63.3
			2.0	641.8	287.4	354.4
			4.0	0.0	0.0	0.0
SB-2	11/18/14	NA	0.5	0.0	0.0	0.0
			2.0	0.0	0.0	0.0
			4.0	0.0	0.0	0.0
SB-3	11/18/14	NA	0.5	0.0	0.0	0.0
			2.0	0.0	0.0	0.0
			4.0	0.0	0.0	0.0
SB-4	11/18/14	NA	0.5	0.0	0.0	0.0
			2.0	0.0	0.0	0.0
			4.0	0.0	0.0	0.0
SB-5	11/18/14	NA	0.5	341.2	339.7	1.5
			2.0	1,358	997.0	361.0
			4.0	1,890	1,820	70.0

Notes: ft bls = feet below land surface
OVA = organic vapor analyzer
ppm = parts per million
NA = not encountered

Facility Name: TPA RAC Service Center Sites
HCAA Project No.: 1105.14

LOCATION	DATE	BORING	LATITUDE	LONGITUDE
Service Center Site #4	11/19/14	1	27° 57' 41.640 N	82° 31' 57.731 W
		2	27° 57' 42.028 N	82° 31' 58.562 W
		3	27° 57' 42.771 N	82° 31' 59.745 W
		4	27° 57' 43.821 N	82° 31' 59.183 W
		5	27° 57' 43.921 N	82° 31' 58.299 W
Main ConRAC	11/19/14	1	27° 57' 51.948 N	82° 32' 00.136 W
		2	27° 57' 51.512 N	82° 31' 59.064 W
		3	27° 57' 51.495 N	82° 31' 58.264 W
		4	27° 57' 51.237 N	82° 31' 59.838 W
		5	27° 57' 48.863 N	82° 32' 00.134 W

Coordinates collected utilizing a Trimble GeoExplorer 2008 Series GeoXT.



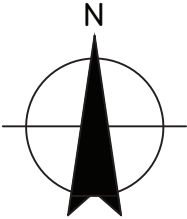
LEGEND:

1 X SOIL BORING LOCATIONS

DEPTH READING

0.5'	0.0
2.0'	0.0
4.0'	0.0

OVA READINGS



CB&I GOVERNMENT SOLUTIONS, INC.
725 U.S. HWY 301 SOUTH
TAMPA, FLORIDA 33619
(813) 612-3600 OFFICE
(813) 626-1663 FAX

OFFICE: TAMPA	DATE: 11-20-14	ACAD FILE: 2795A2
SOIL BORING LOCATIONS WITH NET OVA READINGS NOVEMBER 18, 2014		
CLIENT: HILLSBOROUGH COUNTY AVIATION AUTHORITY	PM: MG	
LOCATION: MAIN ConRAC AUTHORITY-WIDE SITE REHABILITATION HCAA PROJECT NUMBER 1105-14 TAMPA INTERNATIONAL AIRPORT TAMPA, HILLSBOROUGH COUNTY, FLORIDA		
DESIGNED: NM	DRAWN: SDJF	PROJECT NO.: 152795
		FIGURE: 2

Hillsborough County Aviation Authority

Exhibit K: Service Center Site 4 Baseline Environmental Report

Tampa International Airport, Tampa, FL

Prepared for:

**Hillsborough County Aviation Authority
Concessions Department**

Prepared by:

**Hillsborough County Aviation Authority
Planning and Development Department**

December 1, 2014

Prepared by: _____

 12/1/14

Keith Fleming, PG, Florida Registration No. 2078
Professional Geologist

At the request of the Hillsborough County Aviation Authority's (the Authority's) Concessions Department, the Authority's Planning and Development (P&D) Department completed this Baseline Environmental Conditions Report (Baseline Report) for the Authority-owned rent-a-car Service Center Site 4, located in the Gateway Area of Tampa International Airport in Tampa Florida. A site map is provided in the Appendix. The purpose of the baseline investigation is to document the site conditions at the beginning of the tenancy, and to determine if any recognized environmental conditions (RECs) are likely to exist. The identification of a REC means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not RECs.

In the case of Service Center Site 4, the Authority commissioned CB&I Government Solutions, Inc (CB&I), to conduct an onsite soil investigation. Soil borings were conducted at select locations that have the highest likelihood of future environmental concern based on the proposed layout of future equipment including petroleum storage systems and oil-water separators. At each boring location, soil samples were collected from the vadose zone in general accordance with the Florida Department of Environmental Protection (FDEP) Standard Operating Procedure (SOP) PCS-004. Soil samples were screened in the field using an organic vapor analyzer. Sampling equipment was decontaminated between sample locations in accordance with FDEP SOP-001/01 FC 1000. CB&I's report is provided in the Appendix of this Baseline Report. CB&I's report provides a site map showing the soil boring locations and a table summarizing the soil testing results. CB&I's results do not identify any known or previously unknown environmental concerns.

Authority P&D staff has extensive knowledge of the site history as well as risk and receptor studies performed on other sites in the area. As a result of this knowledge and CB&I's results, Authority P&D staff has determined that RECs are not likely to exist with respect to the site and no further assessment of soils or groundwater is warranted at this time.

For the purpose of this Baseline Report, the term recognized environmental condition has been adapted from the American Society for Testing and Materials (ASTM) Designation E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

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CB&I Government Solutions, Inc., *Soil Testing Report*, November 20, 2014.

Hillsborough County Aviation Authority, Authority files, October 2014.

November 20, 2014

Mr. Keith Fleming, P.G.
Manager of Environmental Design
Hillsborough County Aviation Authority
PO Box 22287
Tampa, Florida 33622

**Re: Soil Testing Report (Service Center Site #4 and Main ConRAC)
Work Order #15-04
TPA, RAC Service Center Sites
Hillsborough County Aviation Authority
HCAA Project #1105 14**

Dear Mr. Fleming:

CB&I Government Solutions, Inc. (CB&I) recently performed additional requested support work in accordance with Task 1 of Work Order #15-04. Enclosed, please find tables containing field data of all additional soil borings advanced at the RAC Service Center Sites, and maps of each site containing locations of each soil boring.

On November 18, 2014, a CB&I geologist advanced a total of 10 soil borings in two RAC areas (Service Center Site 4 and the Main ConRAC site). All borings were installed to 4 feet below surface (ft bls) via stainless-steel hand auger, and samples were collected at 0.5 ft bls, 2.0 ft bls, and 4 ft bls for field screening with an organic vapor analyzer (OVA) equipped with a flame-ionization detector (FID) and visual inspection. Equipment was decontaminated between locations in accordance with FDEP's SOP-001/01 FC 1000. Results are presented in the enclosed tables and figures.

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client and the county, unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, county, FDEP, purposes, locations, timeframes, and project parameters indicated. CB&I is not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. CB&I does not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

CB&I appreciates the HCAA's assistance with this matter. In the event revisions or clarifications are necessary that can be addressed via e-mail to accelerate and streamline the schedule for this project, please contact Nathan Miller at nathan.miller@cbi.com or (813) 612-3642.

Sincerely,
CB&I Government Solutions, Inc

Nathan Miller
Environmental Scientist

Donald L. Lewis, PE
Program Manager

Attachments: Table 1: Soil Data Summary – Service Center Site #4
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 Figure 1: Net OVA Results – Service Center Site #4
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cc: Project File

Facility Name: TPA RAC Service Center Sites
HCAA Project No.: 1105.14

Sample				OVA Screening Results		
ID Number	Date	Approx. Depth to Water (feet)	Sample Interval (ft bls)	Unfiltered Reading (ppm)	Filtered Reading (ppm)	Net Reading (ppm)
SB-1	11/18/14	NA	0.5	0.0	0.0	0.0
			2.0	0.0	0.0	0.0
			4.0	0.0	0.0	0.0
SB-2	11/18/14	NA	0.5	0.0	0.0	0.0
			2.0	0.0	0.0	0.0
			4.0	0.0	0.0	0.0
SB-3	11/18/14	NA	0.5	0.0	0.0	0.0
			2.0	0.0	0.0	0.0
			4.0	0.0	0.0	0.0
SB-4	11/18/14	NA	0.5	0.0	0.0	0.0
			2.0	0.0	0.0	0.0
			4.0	0.0	0.0	0.0
SB-5	11/18/14	NA	1.0 *	0.0	0.0	0.0
			2.0	0.0	0.0	0.0
			4.0	0.0	0.0	0.0

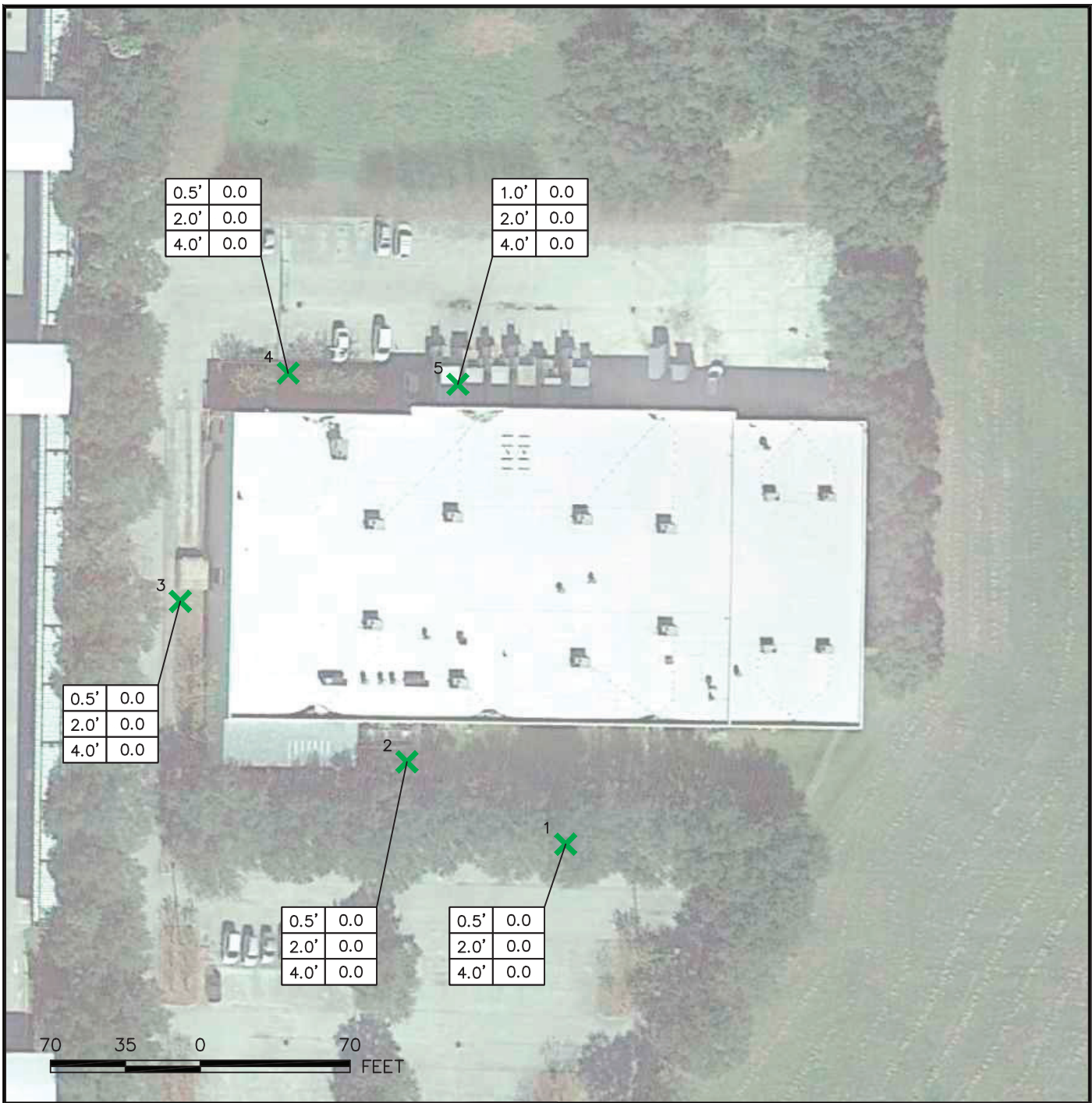
Notes: ft bls = feet below land surface
OVA = organic vapor analyzer
ppm = parts per million
NA = not encountered

* Approximately first 10 inches of surface were concrete, sample collected at 1.0 ft bls


Facility Name: TPA RAC Service Center Sites
HCAA Project No.: 1105.14

LOCATION	DATE	BORING	LATITUDE	LONGITUDE
Service Center Site #4	11/19/14	1	27° 57' 41.640 N	82° 31' 57.731 W
		2	27° 57' 42.028 N	82° 31' 58.562 W
		3	27° 57' 42.771 N	82° 31' 59.745 W
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		5	27° 57' 48.863 N	82° 32' 00.134 W

Coordinates collected utilizing a Trimble GeoExplorer 2008 Series GeoXT.



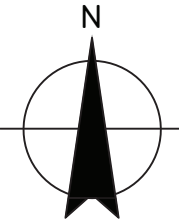
LEGEND:

1  SOIL BORING LOCATIONS

DEPTH READING

0.5'	0.0
2.0'	0.0
4.0'	0.0

OVA READINGS



OFFICE: TAMPA	DATE: 11-20-14	ACAD FILE: 2795A1
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**SOIL BORING LOCATIONS WITH
NET OVA READINGS
NOVEMBER 18, 2014**

CLIENT: HILLSBOROUGH COUNTY AVIATION AUTHORITY	PM: MG
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LOCATION:
SERVICE CENTER SITE #4
AUTHORITY-WIDE SITE REHABILITATION
HCAA PROJECT NUMBER 1105-14
TAMPA INTERNATIONAL AIRPORT
TAMPA, HILLSBOROUGH COUNTY, FLORIDA

CB&I GOVERNMENT SOLUTIONS, INC.
725 U.S. HIGHWAY 301 SOUTH
TAMPA, FLORIDA 33619
(813) 612-3600 OFFICE
(813) 626-1663 FAX

DESIGNED: NM	DRAWN: SDJF	PROJECT NO.: 152795	FIGURE: 1
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EXHIBIT L - MAJORITY IN INTEREST EXAMPLE

“Majority in Interest” means: Those Concessionaires (i) then-located in Areas 1, 2, and 3 representing more than fifty percent (50%) of the Market Share among those Concessionaires then-located in Areas 1, 2, and 3; and (ii) those Concessionaires then-located in Area 4 representing more than fifty percent (50%) of the Market Share among those Concessionaires then-located in Area 4; and (iii) more than one-half (1/2) of the total number of Concessionaires then-located in Areas 1, 2, 3 and 4.

Assume the following number of Concessionaires and relative market shares:

A. Market Share of Concessionaires in Areas 1, 2, and 3

Concessionaire/Area #	Relative Market Share among Concessionaires in Areas 1, 2 and 3
1. Area 1	42%
2. Area 2	31%
3. Area 3	27%

Example: 2 Concessionaires required to equal more than 50% of Market Share

B. Market Share of Concessionaires in Area 4

Concessionaire/Area #	Relative Market Share among Concessionaires in Area 4
4. Area 4	24%
5. Area 4	21%
6. Area 4	20%
7. Area 4	18%
8. Area 4	11%
9. Area 4	6%

Example: 3 Concessionaires required to equal more than 60% of Market Share

C. Must have more than 50% of Market share in Areas 1, 2, 3; More than 50% of Market Share in Area 4; and more than 50% of the total number of Concessionaires in Areas 1, 2, 3, and 4.

More than 50%	Number of Concessionaires Required to Achieve “Majority in Interest” (at least 5 out of 9)
Number of Concessionaires representing more than 50% of Market Share of Concessionaires in Areas 1, 2, 3; and	2
Number of Concessionaires representing more than 50% of Market Share of Concessionaires in Area 4; and	3
More than 50% of the total number of Concessionaires in Areas 1, 2, 3 and 4	5

Example:

2 Concessionaires in Areas 1, 2, and 3 equal more than 50% of Market Share

3 Concessionaires in Area 4 equal more than 50% of Market Share

In this this example, 5 Concessionaires out of 9 total Concessionaires equal more than 50% of number of Concessionaires.