



**PINELLAS SUNCOAST TRANSIT AUTHORITY (PSTA)  
ST. PETERSBURG, FLORIDA  
SOLICITATION, OFFER AND AWARD FORM**

**INVITATION FOR BIDS**

|   |   |
|---|---|
| <b>1. SOLICITATION #:</b> IFB-980062  | <b>4. BRIEF DESCRIPTION:</b><br><br>Bus Depot Charging Station Addition |
| <b>2. ISSUE DATE:</b> 2/27/18   |   |
| <b>3. FOR INFORMATION CONTACT:</b><br><b>NAME:</b> Al Burns<br><br><b>E-MAIL:</b> Aburns@psta.net |   |

**5. CONFERENCE:** (See Exhibit C for more information.)  
**LOCATION:** 3201 Scherer Drive      **DATE AND TIME:** 3/6/18, 10:00 a.m. Eastern Standard Time  
 St. Petersburg, FL 33716

|   |  |
|---|--|
| <b>6. SUBMIT OFFER TO THE FOLLOWING ADDRESS:</b><br>Pinellas Suncoast Transit Authority (PSTA)<br>Attn: Procurement Department,<br>IFB-980062<br>3201 Scherer Drive<br>St. Petersburg, FL 33716 | <b>7. OFFER SUBMISSION DUE DATE AND TIME:</b><br><br>03/30/2018, 10:00 a.m., Eastern Standard Time |
|---|--|

- 8. SUBMIT WITH OFFER:** Original offer including the exhibits and attachments listed on Page 2 of this form.
- 9.** Offers will be publicly opened; see Blocks 6 and 7 above for location, date and time.
- 10. FIRM OFFER PERIOD:** Offers shall remain firm for a period of 90 calendar days from the date specified in Block 7, above.
- 11.** This solicitation and any resulting contract, respectively, consists of this Form and the exhibits and documents designated on Page 2 of this form.

**OFFER**

(To be completed by Offeror)

**12. DISCOUNT FOR PROMPT PAYMENT:** \_\_\_\_\_%, \_\_\_\_\_ Calendar Days (Please refer to Invoice and Payment clauses in Exhibit D)

**13.** If this offer is accepted within the period specified in Block 10, above, the offeror agrees to fully provide the goods and/or services covered by this solicitation at the prices and timelines specified in the solicitation.

**14. ACKNOWLEDGEMENT OF AMENDMENTS:** The offeror acknowledges receipt of the following solicitation amendments (write in all amendment numbers and amendment dates.

| Amendment Number and Date | Amendment Number and Date | Amendment Number and Date |
|---------------------------|---------------------------|---------------------------|
|                           |                           |                           |
|                           |                           |                           |

|  |  |
|--|--|
| <b>15. OFFEROR'S NAME AND ADDRESS:</b> (Type or Print)<br><br><br><br><br><br><br><b>TELEPHONE:</b> <b>E-MAIL:</b><br><b>CELL PHONE:</b> <b>FAX:</b> | <b>16. NAME AND TITLE OF OFFEROR'S REPRESENTATIVE (PERSON AUTHORIZED TO EXECUTE CONTRACTS):</b><br>(Type or Print) |
|  | <b>17. OFFEROR'S REPRESENTATIVE SIGNATURE &amp; DATE:</b>  |

**AWARD**

(To be completed by PSTA)

**18.** Offeror is a: DBE: Yes  No  SBE: Yes  No

**19. DBE:** There are no DBE goals assigned to this solicitation.

|                            |                                   |                             |
|----------------------------|-----------------------------------|-----------------------------|
| <b>20. ACCEPTED AS TO:</b> | <b>21. TOTAL AMOUNT OF AWARD:</b> | <b>22. CONTRACT NUMBER:</b> |
|                            |                                   |                             |

**23. PSTA'S CONTRACTING OFFICER'S SIGNATURE & CONTRACT AWARD DATE:**

Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

| <b>NAME</b> | <b>FORM DESCRIPTION</b>                          | <b>FORM #</b> | <b>SUBMIT WITH OFFER</b> |
|-------------|--|---------------|--------------------------|
| Cover Sheet | Solicitation, Offer and Award Form               | CS-01         | YES                      |
| Schedule    | Schedule   | S-01          | YES                      |
| Exhibit A   | Representations and Certifications               | X             | YES                      |
| Exhibit B   | Special Solicitation Instructions and Conditions | B-01          |                          |
| Exhibit C   | Solicitation Instructions and Conditions         | X             |                          |
| Exhibit D   | Special Provisions                               | D-01          |                          |
| Exhibit E   | Addendum to General Provisions                   | X             |                          |
| Exhibit F   | General Provisions                               | X             |                          |
| Exhibit H   | Specifications                                   | X             |                          |
| Exhibit P   | Bid Bond   |               | YES                      |
| Exhibit Q   | Payment Bond                                     |               |                          |
| Exhibit R   | Performance                                      |               |                          |

**SCHEDULE**

CAUTION: A false statement in any offer submitted to PSTA may be a criminal OFFENSE.

NOTE: For Invitations for Bids the terms "Offer" and "Offeror" shall mean "Bid" and "Bidder", respectively; and for Request for Proposals the terms "Bid" and "Bidder" shall mean "Offer" and "Offeror", respectively, in this solicitation and any associated exhibits.

**THE OFFEROR MUST SIGN AND DATE THIS SCHEDULE WHERE PROVIDED AND SUBMIT ALL PAGES WITH THE OFFER.**

The rates include all costs that the offeror(s) intends to recover, such as, but not limited to: supervision, labor, equipment, materials, vehicle licensing, vehicle title, pick-up, financing, carrying charges, and all other such charges to accommodate the services and requirements. No price adjustments will be made, unless specifically provided for by an additional provision included in this contract.

**BASE TERM – ONE (1) YEAR**

| Line Item | Description  | QTY (a) | UOM (b) | Unit Cost (c) | Extended Cost (d) |
|-----------|--|---------|---------|---------------|-------------------|
|           | BUS DEPOT CHARGER  |         |         |               |                   |
| 1         | GHF1 CHANGES: ADD 250A-3P BREAKER                              | 1       | EA      |               |                   |
| 2         | 1 set of (4)250kcmil/(1)#4 CU THWN W/ CONDUIT                  | 115     | LF      |               |                   |
| 3         | Sawcutting and Concrete Replacement                            | 40      | CF      |               |                   |
| 4         | Concrete Pad   | 24      | CF      |               |                   |
| 5         | 250A NEMA 3R PANEL "BDP"+2 100A 3-POLE BRKRS                   | 1       | EA      |               |                   |
| 6         | 1 set of (4)#1/(1)#6 CU THWN W/ CONDUIT                        | 220     | LF      |               |                   |
| 7         | 1.5" Spare Conduit (Controls/Data)                             | 220     | LF      |               |                   |
| 8         | Disconnects (125A, 3 pole, 4 wire, 480V)                       | 2       | EA      |               |                   |
| 9         | Fiberglass and Stainless Steel Unistrut Assembly               | 2       | EA      |               |                   |
| 10        | Install Bus Charging Equipment and Start up and Testing (Lump) | 1       | EA      |               |                   |
| 11        | Payment Bond   | 1       | LS      |               |                   |
| 12        | Performance Bond   | 1       | LS      |               |                   |
| 13        | Bid Bond 5% of total offer                                     | 1       | LS      |               |                   |
| 14        |  |         |         |               |                   |
| 15        |  |         |         |               |                   |
| 16        |  |         |         |               |                   |

**TOTAL ->(d)**

**TOTAL PRICE OFFER**

**TOTAL PRICE OFFER = (a) QTY \* (c) Unit Cost --->**

**NAME & TITLE OF OFFEROR'S REPRESENTATIVE:**  
(print or type)

**SIGNATURE & DATE:**

\_\_\_\_\_  
(Name & Title)

\_\_\_\_\_  
(Signature of Offeror's Representative)

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Offeror's Name)

**EXHIBIT A**  
**REPRESENTATIONS AND CERTIFICATIONS**  
**(LOCALLY ASSISTED SUPPLY/SERVICE CONTRACT)**

\*\* NOTE: THIS FORM MUST BE COMPLETED AND RETURNED WITH THE OFFER \*\*

**TABLE OF CONTENTS**

|   |   |
|---|---|
| 1. Contingent Fee .....   | 1 |
| 2. Covenant Against Gratuities .....  | 1 |
| 3. Parent Company and Identifying Data .....  | 1 |
| 4. Type of Business .....   | 2 |
| 5. Certification of Independent Price Determination .....                                     | 2 |
| 6. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion ..... | 3 |
| 7. Certification of Restrictions on Lobbying .....  | 3 |
| 8. Conflict of Interest Certification .....   | 4 |
| 9. Non-Discrimination Assurance .....   | 4 |
| 10. Disadvantaged Business Enterprise Goals .....   | 4 |
| 11. Verification of Employment Status Certification .....                                     | 4 |
| 12. Execution of Contract .....   | 4 |

**REPRESENTATIONS**

**1. Contingent Fee**

Except for full-time bona fide employees working solely for the proposer, the proposer represents as part of its offer that it (Mark one with an "X"):

has  has not

been employed or retained any company or persons to solicit or obtain this contract, and (Mark one with an "X"):

has  has not

paid or agreed to pay any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

**2. Covenant Against Gratuities**

The proposer represents as part of its offer that no employee, official, or member of the Authority's Board of Directors is or will be peculiarly interested or benefited directly or indirectly in this contract. The proposer further represents and warrants that it has not offered or given gratuities (in the form of entertainment, gifts, or otherwise) to any employee, official, or member of the Authority's Board of Directors with a view toward securing favorable treatment in the awarding, amending, or evaluating the performance of any contract resulting from this solicitation. For breach of any representation or warranty in this clause, the Authority shall have the right to annul this contract without liability and/or have recourse to any other remedy it may have at law.

**3. Parent Company and Identifying Data**

(a) The proposer represents as part of its offer that it (Mark one with an "X"):

is  is not

owned or controlled by a parent company. A parent company, for the purpose of this provision, is one that owns or controls the activities and basic business policies of the proposer. To own the offering company means that the parent company must own more than 50 percent of the voting rights in that company. A company may control a proposer as a parent even though not meeting the requirements for such ownership if the company is able to formulate, determine, or veto basic policy decisions of the proposer through the use of dominant minority voting rights, use of proxy voting, or otherwise.

(b) If the proposer is not owned or controlled by a parent company, it shall insert its own Employer's Identification Number below:

(c) If the proposer is owned or controlled by a parent company, it shall enter in the blocks below the name and main office address of the parent company, and the parent company's Employer's Identification Number.

NAME OF PARENT COMPANY AND MAIN OFFICE  
ADDRESS (INCLUDE ZIP AND PHONE):

PARENT COMPANY'S EMPLOYER'S IDENTIFICATION #:

#### 4. Type of Business

(a) The proposer represents as part of its offer that it operates as (Mark one with an "X"):

- an individual  a sole proprietorship  
 a partnership  a corporation  
 another entity \_\_\_\_\_.

(b) If incorporated, under the laws of the State of:

(c) Age of the firm: \_\_ years, \_\_ months

(d) Previous year's annual gross receipts:

- less than \$500K  \$500K - \$2 mil.  \$2 mil. - \$5 mil.  more than \$5 mil.

### CERTIFICATIONS

#### 5. Certification of Independent Price Determination

(a) By submission of this offer, the proposer certifies, and in the case of a joint offer, each party thereto certifies as to its own organization, that in connection with this procurement:

(1) The prices in this offer have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other proposer or with any competitor.

(2) Unless otherwise required by law, the prices which have been quoted in this offer have not been knowingly disclosed by the proposer and will not knowingly be disclosed by the proposer prior to the opening (in the case of an advertised procurement) or prior to award (in the case of a negotiated procurement), directly or indirectly to any other proposer or to any competitor; and

(3) No attempt has been made or will be made by the proposer to induce any other person or firm to submit or not to submit an offer for the purpose of restricting competition.

(b) Each person signing this offer certifies that:

(1) He/she is the person in the proposer's organization responsible within that organization for the decision as to the prices being offered herein and that he has not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above; or

(2) He/she: (i) is not the person in the proposer's organization responsible within that organization for the decision as to the prices being offered herein but that he has been authorized in writing to act as an agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above, and as their agent does hereby so certify; and (ii) has not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above.

## **6. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion**

(1) The proposer certifies to the best of its knowledge and belief that it and its principals:

(i) are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any governmental department or agency;

(ii) have not within a three-year period preceding this offer been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes, or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(iii) are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1)(ii) of this certification; and

(iv) have not within a three-year period preceding this offer had one or more public transactions (federal, state, or local) terminated for cause or default.

(2) Where the proposer is unable to certify to any of the statements in this certification, the proposer shall attach an explanation.

## **7. Certification of Restrictions on Lobbying**

Lobbying of any PSTA board member, officer, evaluation/selection committee member, employee, agent or attorney by a bidder, any member of the proposer's staff, any agent or representative of the proposer, whether compensated or not, or any person employed by any legal entity affiliated with or representing the Proposer shall be prohibited on all competitive selection processes and contract awards, including but not limited to requests for proposals, requests for quotations, requests for qualification, invitation for bids, bids or the award of purchasing contracts of any type. Lobbying is strictly prohibited from the date of the advertisement or on a date otherwise established by the PSTA Board of Directors, until an award is final, any protest is finally resolved, or the competitive selection process is otherwise concluded.

The purposes of this prohibition is to protect the integrity of the procurement process by shielding it from undue influences prior to the contract award, a protest is resolved, or the competitive selection process is otherwise concluded. Nothing herein shall prohibit a proposer from contacting the purchasing division or PSTA's general counsel to address situations such as clarification and/or questions related to the procurement process or protest.

For the purposes of this paragraph, lobbying shall mean influencing or attempting to influence action or non-action, and/or attempting to obtain the goodwill of persons specified herein relating to the selection, ranking, or contract award in connection with the bidding process through direct or indirect oral or written communication. Lobbying includes such actions whether performed by the proposer itself, any employee of the proposer, the proposer's attorney, agent or other paid or non-paid representative, or any person who performs such actions of behalf or at the behest of the proposer. Further, lobbying includes the attempt to influence Board members while they are performing their functions for other governmental entities (e.g.) a city or Pinellas County). The final award of the contract shall be the effective date of the contract.

Any board member, officer, evaluation/selection committee member, employee, agent or attorney who has been lobbied will immediately report the lobbying activity to the Authority's Chief Executive Officer.

**8. Conflict of Interest Certification**

By submission of this offer, I certify that:

(a) I have read and understand the General Provisions clause entitled "Interest of Public Officials" that will be incorporated into any contract resulting from this solicitation. I further understand that the pecuniary interest in that clause includes employment relationships.

(b) I understand the Authority has for its employees that includes as an actual or possible conflict of interest whether or not a member of the employee's immediate family works for a firm doing, or seeking to do, business with the Authority.

(c) Mark one with an "X":

- To the best of my knowledge and belief, no employee of my firm is related to an Authority employee; or
- An employee of my firm is related to an Authority employee and a letter to the Contracting Officer explaining that relationship is attached to this Exhibit A.

(d) The requirements of this certification have been passed through to all first-tier subcontractors or subconsultants anticipated to be used at the time of the submission of my offer.

**9. Non-Discrimination Assurance**

The proposer certifies that it will not discriminate on the basis of race, color, disability, sexual orientation, national origin or sex in the performance of this contract. The proposer understands that it is required to insert the substance of this clause in all subcontracts and purchase orders. Failure by the proposer to carry out these requirements will be considered a material breach of the resulting contract, which may result in the termination of the contract or such other remedy as the Authority deems appropriate. The proposer further agrees by submitting this offer that it will include this certificate, without modification, in all subcontracts and purchase orders.

**10. Disadvantaged Business Enterprise Goals**

If goals have been established, by submission of this offer, the proposer certifies that it will comply with the provisions of Exhibit G entitled "Disadvantaged Business Enterprise Provisions," and will meet such goals as are established in any ensuing contract.

**11. Verification of Employment Status Certification**

In accordance with State of Florida Executive Order Number 11-116, as a condition of contracting with the Pinellas Suncoast Transit Authority the offeror certifies the use of the U.S. Department of Homeland Security's E-verify system to verify the employment eligibility of all new employees hired by Contractor during the contract term to perform employment duties pursuant to this Agreement and (a) that any subcontracts include an express requirement that subcontractors performing work or providing services pursuant to this Agreement utilize the E-verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

**12. Execution of Contract**

Upon award of this solicitation by PSTA's Board of Directors, the Proposer agrees to execute the contract attached as Exhibit K.

\*\*\*\*\*

**SIGNATURE BLOCK FOR ALL REPRESENTATIONS & CERTIFICATIONS**

\*\*\*\*\*

NAME OF PROPOSER & ADDRESS (INCLUDE ZIP & PHONE)

[Empty rectangular box for signature and address information]

---

Signature:

TYPE NAME:

DATE:

PROPOSERS MUST SET FORTH FULL, ACCURATE AND COMPLETE INFORMATION AS REQUIRED BY THIS SOLICITATION (INCLUDING THIS ATTACHMENT). FAILURE TO DO SO MAY RENDER THE OFFER NONRESPONSIVE OR UNACCEPTABLE.



## EXHIBIT B

### SPECIAL SOLICITATION INSTRUCTIONS and CONDITIONS

#### Table of Contents

|  |   |
|--|---|
| 1. Introduction and Purpose of Solicitation..... | 1 |
| 2. Basis for Award .....                         | 1 |
| 3. Examination of Bid Documents .....            | 2 |
| 4. Payment and Performance Bonds.....            | 2 |

#### 1. Introduction and Purpose of Solicitation

Pinellas Suncoast Transit Authority (PSTA or the Authority) is an independent special district created by special act of the Legislature in 1984, merging the St. Petersburg Municipal Transit System and the Central Pinellas Transit Authority to provide Pinellas County with a cohesive public transit system. A fleet of 210 buses and 16 trolleys serve 38 fixed routes throughout Pinellas County.

Pinellas County is 280 square miles with approximately 954,569 residents (2010 Census). Pinellas County is located along the west coast of Florida and includes a corridor of smaller beach communities along the Gulf of Mexico. Pinellas County is the second smallest county in the state of Florida; however, it is the most densely populated county in the state and is nearly three times more densely populated than the next closest county.

The Authority serves most of the unincorporated area and 19 of the County's 24 municipalities. This accounts for 98% of the County's population and 97% of its land area. The cities of St. Pete Beach, Treasure Island, Kenneth City, Belleair Beach, and Belleair Shore are not members of the Authority; however, St. Pete Beach and Treasure Island do contract for trolley service.

During fiscal year 2016, PSTA's vehicles traveled a total of 9.1 million revenue miles, providing approximately 611,000 hours of service, and 12.4 million passenger trips.

#### 2. Basis for Award

##### (a) **Number of Awards**

One contract award will be made.

##### (b) **Detailed Description of Supplies/Services Not in Schedule.**

Item descriptions in the Schedule are not intended as complete descriptions of the required supplies and/or services to be purchased under this solicitation. Complete descriptions are located in the Specifications, Exhibit H and Attachments, of this solicitation document.

##### (c) **Right to Reject Materially Unbalanced Offers.**

The Authority reserves the right to reject offers that are materially unbalanced, i.e., that contain unreasonably high unit prices for some items and/or unreasonably low unit prices for other items.

#### 3. Examination of Bid Documents

The Authority shall have the right to examine and review the Contractor's estimating documents used in preparing its bid as a reference to aid in the Authority's evaluation of bids. Within two (2) days of the Contracting Officers request, the bidder shall make available for inspection its estimating documents used in preparation of its bid. Estimating documents shall include all of the following:

- (1) clearly itemized estimated costs of performing the work,
- (2) easy identification of design vs. construction costs,
- (3) assumptions used to determine crew sizes and productivity rates, any quotations received from subcontractors, or suppliers, memoranda, narratives, and reports used to develop the price,
- (4) a breakdown of costs into categories such as direct labor, equipment, materials and supplies
- (5) overhead rates for the prime contractor and each subcontractor,
- (6) fee allocated to each subcontractor,
- (7) contingency and risk allocations, and
- (8) all other significant assumptions or factors used to develop the price.

#### **4. Payment and Performance Bonds**

The Contractor shall include only the actual costs of payment and performance bonds in the line item on the Schedule. The Authority will not consider any amount in excess of the actual costs of these bonds. The Authority reserves the right to request documentation from the Contractor as to the amount actually paid for these bonds.

**EXHIBIT C**  
**SOLICITATION INSTRUCTIONS AND CONDITIONS**  
**(INVITATION FOR BIDS - FEDERALLY ASSISTED CONSTRUCTION)**

**Table of Contents**

|     |  |   |
|-----|--|---|
| 1.  | Preparation of Offers .....  | 1 |
| 2.  | Confidential Data .....  | 2 |
| 3.  | Explanation to Bidder .....  | 2 |
| 4.  | Procurement Confidentiality, Cone of Silence.....                  | 2 |
| 5.  | Pre-Bid Conference and Questions Concerning the Solicitation ..... | 2 |
| 6.  | Acknowledgment of Amendments to Request for Bids .....             | 2 |
| 7.  | Submission of Bid.....   | 2 |
| 8.  | Late Submissions, Modifications and Withdrawals of Offers .....    | 3 |
| 9.  | Authority-Furnished Property .....                                 | 3 |
| 10. | Discounts.....   | 3 |
| 11. | Disadvantaged Business Enterprise (DBE) Participation .....        | 3 |
| 12. | Award of Contract.....   | 4 |
| 13. | Rights of PSTA in Solicitation Process .....                       | 4 |
| 14. | Cancellation of Solicitation .....                                 | 5 |
| 15. | Access to Records .....  | 5 |
| 16. | Omission.....  | 5 |
| 17. | Code of Ethics .....   | 5 |
| 18. | Public Entity Crimes .....   | 5 |
| 19. | Protest Procedures.....  | 6 |
| 20. | FTA Protest Procedures.....  | 8 |

**1. Preparation of Offers**

(a) Bidder are expected to examine the Schedule, solicitation instructions, Special Provisions, General Provisions, all drawings, specifications, the statement of work, and all other provisions of, and exhibits to, the solicitation, whether incorporated by reference or otherwise, prior to the submission of offers. Failure to do so will be at the Bidder's risk.

(b) Each Bidder shall furnish the information required by the solicitation. Bidder shall sign and print or type their name on the form provided by the Authority for submitting an offer and each continuation sheet on which they make an entry. Erasures or other changes must be initialed by the person signing the offer. Offers signed by an agent of the Bidder (other than an officer or a partner of the Bidder) are to be accompanied by evidence of the agent's authority (unless such evidence has been previously furnished to the Authority).

(c) Pricing for the property or services offered shall be provided by Bidder in the format required by the Authority. Where property is being offered, the prices offered shall include packing unless otherwise specified. In case of any discrepancy between a unit price and any extended or total price, the unit price will be presumed to be correct, subject, however, to correction to the same extent and in the same manner as any other mistake.

(d) Offers for property or services other than those specified in the Schedule will not be considered unless specifically authorized in the solicitation.

(e) The Bidder must state a definite time for delivery of property or for performance of services unless otherwise specified in the solicitation. All measurements shall be in the system of weights and measures in common usage in the United States, and pricing shall be in U.S. dollars.

(f) In computing any period of time for the solicitation or any resulting contract, "days" means calendar days, and the day of the event from which the designated period of time begins to run shall not be included, but the last day shall be included unless it is a Saturday, Sunday, or Federal or State of Florida holiday, in which event the period shall run to the end of the next business day.

(g) Bidder is responsible for all costs and expenses incurred preparing and submitting its proposal, and participating in the solicitation process. PSTA shall not be responsible to any Bidder for such costs.

---

**2. Confidential Data**

Each Proposer shall clearly mark each page of the proposal that contains trade secrets or other confidential commercial or financial information which the proposer believes is exempt from disclosure under Chapter 119, Florida Statutes. If a Proposer fails to clearly mark such information, or marks its entire proposal as a confidential trade secret, the Authority will be under no obligation to treat such information as confidential or exempt under Chapter 119, Florida Statutes. Evaluation and disclosure of information marked according to the requirements of this section will be determined by the Authority in accordance with the Florida laws, rules and regulations.

**3. Explanation to Bidder**

Any explanation desired by a proposer regarding the meaning or interpretation of the solicitation, drawings, specifications, etc., must be requested in writing from the Authority's Purchasing Agent and with sufficient time allowed for a reply to reach proposers before the submission of offers. Oral explanations or instructions given before the award of any contract, at any pre-proposal conferences or otherwise, will not be binding on the Authority. Any information given to a Proposer concerning an interpretation of this solicitation will be furnished as an amendment to this solicitation, if such information is necessary to Proposers in submitting offers on this solicitation or if the lack of such information would be prejudicial to uninformed proposers.

**4. Procurement Confidentiality, Cone of Silence**

Proposers are cautioned that until this solicitation is either awarded or cancelled, they may have contact only with the Purchasing Agent identified in block 3 of the solicitation Offer and Award Form (CS-01), Offer and Award Form. Discussions or communications regarding this solicitation with any other personnel associated in any capacity with the Authority, its consultants, contractors or members of its Board of Directors, are strictly prohibited, unless otherwise approved in writing by the Contracting Officer.

**5. Pre-Bid Conference and Questions Concerning the Solicitation**

- (a) A pre-bid conference may be held for all interested parties to discuss the solicitation requirements.
- (b) Questions and requests for clarification relating to this solicitation, shall be submitted in writing, to the contact person identified in Block 3 of the Solicitation Offer and Award form by mail, facsimile or commercial courier, at least three (3) working days in advance of the scheduled conference to allow sufficient time for responses to be considered and prepared by the Authority. Questions concerning this solicitation that are not addressed at the conference, if one is held, shall be submitted in writing no later than five (5) working days in advance of the proposal submission due date and time.

**6. Acknowledgment of Amendments to Request for Bids**

- (a) If this solicitation is amended, then all terms and conditions, which are not modified, remain unchanged.
- (b) Bidder shall acknowledge receipt of any amendment to this solicitation: (1) by signing and returning the amendment; or (2) by identifying the amendment number and date in the space provided for this purpose on the form for submitting an offer. The Authority must receive the acknowledgment by the time and at the place specified for receipt of offers.

**7. Submission of Bid**

Bids and modifications thereof shall be enclosed in sealed envelopes or sealed cartons and submitted to the Authority at the address specified in the solicitation. The bidder shall show the hour and date specified in the solicitation for receipt of bids, the solicitation number, and the bidder's name, address, and telephone number on the face of the envelope or carton.

Electronic (email, facsimile) bids will not be considered unless authorized by the solicitation; however, bids may be modified or withdrawn by written, or electronic (email, facsimile) notice, provided such notice is received prior to the hour and date specified for receipt of bids.

Samples of items, when required, must be submitted within the time specified and, unless otherwise specified in the

solicitation, at no expense to the Authority. If not destroyed by testing, samples will be returned at the bidder's request and expense, unless otherwise specified in the solicitation

Each copy of the bid shall include the legal name of the bidder and a statement whether the bidder is a sole proprietorship, a corporation, or any other legal entity. A bid for a corporation shall further give the state of incorporation.

## **8. Late Submissions, Modifications and Withdrawals of Offers**

Any offer received at the office designated in the solicitation after the exact time specified for receipt will not be considered unless it is the only offer received and is received on the date specified for receipt of offers.

(a) The only acceptable evidence to establish:

(1) the date of mailing of a late proposal or modification sent either by registered or certified mail is the U.S. Postal Service postmark on both the envelope and wrapper and on the original receipt from the U.S. Postal Service. If neither postmark shows a legible date, the offer, modification or withdrawal shall be deemed to have been mailed late. The term "postmark" means a printed, stamped, or otherwise placed impression, exclusive of a postage meter machine impression, that is readily identifiable without further action as having been supplied and affixed on the date of mailing by an employee of the U.S. Postal Service. Therefore, Proposers should request the postal clerk to place a hand cancellation bull's-eye "postmark" on both the receipt and the envelope or wrapper; and

(2) the time of receipt at the Authority is the time-date stamp of the Authority on the offer wrapper or other documentary evidence of receipt maintained by the Authority.

(3) the date of mailing of a late proposal, modification, or withdrawal sent by U. S. Postal Service Express Mail Next Day Service - Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service - Post Office to Addressee" label and the postmark on the envelope or wrapper and on the original receipt from the U. S. Postal Service. "Postmark" has the same meaning as defined in paragraph (c)(1) of this provision. Therefore, proposers should request the postal clerk to place a legible hand cancellation bull's-eye "postmark" on both the receipt and the envelope or wrapper.

## **9. Authority-Furnished Property**

No material, labor, or facilities will be furnished by the Authority unless otherwise provided for in the solicitation.

## **10. Discounts**

(a) Prompt payment discounts will not be considered in evaluating offers for award, unless otherwise specified in the solicitation. However, offered discounts will be taken if payment is made within the discount period, even though not considered in the evaluation of offers.

(b) In connection with any discount offered for prompt payment, time shall be computed from (1) the date of completion of performance of the services or delivery of the supplies to the carrier if acceptance is at a point of origin, or date of delivery at destination or port of embarkation if delivery and acceptance are at either of these points, or (2) the date the correct invoice or voucher is received in the office specified by the Authority, if the latter is later than the date of performance or delivery. For the purpose of computing the discount earned, payment shall be considered to have been made on the date of the Authority's check.

## **11. Disadvantaged Business Enterprise (DBE) Participation**

(a) It is the policy of the Authority and the Department of Transportation (DOT) to ensure that Disadvantaged Business Enterprises (DBEs), as defined in Exhibit G of this solicitation and pursuant to 49 Code of Federal Regulations (CFR) Part 26, are provided a level playing field, thus fostering an equal opportunity for them to participate in the performance of contracts financed in whole or in part with Federal funds. Consequently, the DBE requirements of 49 CFR Part 26 apply to this solicitation. In this regard, all Bidder shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that DBEs have a level playing field and an opportunity to compete for and perform contracts. The Authority and all Bidder shall not discriminate on the basis of race, color, national origin or sex in the award and performance of DOT-assisted contracts or subcontracts.

(b) In accordance with its DBE Policy, the Authority has established a goal for DBE participation in this solicitation. The Bidder will be expected to meet or exceed, and/or demonstrate its good faith efforts to meet the goal. This goal, expressed as a percentage of the total contract price, including any increases that may occur, is set forth in Exhibit G of this solicitation.

(c) The Authority's DBE requirements are set forth in Exhibit G of this solicitation. Bidder are advised to carefully review Exhibit G including the requisite forms attached thereto. Bidder should undertake necessary steps to plan and adequately provide for compliance with the stated DBE utilization goal well in advance of the date specified for the bid opening or receipt of Bids.

## **12. Award of Contract**

(a) The contract(s) for this solicitation will be awarded by PSTA's Board of Directors to the responsible, responsive Proposer(s) selected as the most highly qualified. Award of the contract will only be made to the Proposer(s) which, in PSTA's sole and absolute discretion, is responsive in all respects to the requirements of this solicitation, and is determined to be a responsible Proposer. In order to be considered for award, the Proposer must affirm and declare by submitting its proposal that:

- (a) The Proposer has the capacity to do business within the State of Florida.
- (b) The Proposer has the capability to assure completion of the required services within the time specified under this solicitation.
- (c) The Proposer presently has the necessary facilities, financial resources and licenses to complete the required services in a satisfactory manner and within the required time.
- (d) The Proposer is of lawful age and that no other person, firm, or corporation has any interest in its proposal or the contract proposed to be entered into.
- (e) The Proposer is not in arrears to the Authority upon debt or contract and is not defaulting as surety or otherwise, upon any obligation to the Authority.
- (f) The Proposer does not consist of any member, officer, or employee of PSTA or former member, officer, or employee which such positions at PSTA within the past two years.
- (g) To be "qualified" by PSTA, the Proposer must have all state and local licenses as legally required that are necessary to perform and complete the work as called for herein.
- (h) The Proposer is not on the Comptroller General's list of ineligible providers.

## **13. Rights of PSTA in Solicitation Process**

PSTA may investigate the qualifications of any Proposer under consideration. PSTA may require confirmation of information furnished by a Proposer, and require additional evidence of qualifications to perform the services described in this solicitation. In addition to any rights conveyed by Florida law, PSTA specifically reserves the right to:

- (a) Disqualify any Proposer in accordance with the information contained in this solicitation
- (b) Reject any or all of the proposals, in its sole and absolute discretion
- (c) Remedy errors in the solicitation documents
- (d) Cancel the entire solicitation
- (e) Issue subsequent solicitation(s) for the same or similar services
- (f) Rank firms and negotiate with the highest ranking firms
- (g) Select the proposal(s) it believes will serve the best interest of PSTA
- (h) Appoint evaluation committees to review proposals
- (i) Seek the assistance of outside technical experts to review proposals
- (j) Approve or disapprove the use of particular subcontractors and suppliers
- (k) Establish a short list of Proposers eligible for discussions after review of written proposals
- (l) Solicit best and final offers (BAFO) as part of its negotiations with the Proposers
- (m) Determine whether or not a Proposer is a responsible Proposer
- (n) Reject any part of a proposal

- (o) Negotiate with any, all, or none of the Proposers
- (p) Award a contract to one or more Proposers
- (q) Accept other than the lowest priced proposal
- (r) Request any necessary clarifications or proposal data without changing the terms
- (s) Disqualify Proposer(s) upon evidence of collusion with intent to defraud or other illegal practices on the part of the Proposer(s)
- (t) Waive any informalities or irregularities in any proposal, to the extent permitted by law

The issuance of this solicitation does not bind or commit PSTA to enter into a contract with any of the Proposers and does not create any property interest or expectation of any award.

(b) The Authority may accept any item or group of items of any offer, unless the proposer qualifies the offer by specific limitations. Unless otherwise provided in this solicitation, proposals may be submitted for any quantities less than those specified, and the Authority reserves the right to make an award on any item for a unit quantity less than the quantity offered at the unit prices offered unless the proposer specifies otherwise in the offer.

A written award (or acceptance of offer) which is mailed, sent electronically, or otherwise furnished to the successful proposer within the time for acceptance specified in the solicitation shall be deemed to result in a binding contract on the terms and conditions set forth in this solicitation and all exhibits, including the Contract (Exhibit K) without further action by either party.

#### **14. Cancellation of Solicitation**

This solicitation may be cancelled by the Authority before or after receipt of proposals in the sole discretion of the Authority.

#### **15. Access to Records**

- A) The Proposer agrees to provide PSTA or any authorized representatives access to any books, documents, papers and records of the Provider which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions.
- B) The Proposer agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
- C) The Proposer agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Proposer agrees to maintain same until PSTA or any duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto.

#### **16. Omission**

Notwithstanding the provision of drawings, technical specifications or other data by PSTA, the Proposer shall have the responsibility of supplying all details required to make an accurate proposal of services offered even though such details may not be specifically mentioned in the specifications of this solicitation.

#### **17. Code of Ethics**

With respect to this proposal, if any proposer violates or is a party to a violation of Chapter 112, Part III, Florida Statutes Code of Ethics for Public Officers and Employees, such proposer may be disqualified from performing the work described in this proposal or from furnishing the goods or services for which the proposal is submitted and shall be further disqualified from submitting any future proposals for work or for goods or services.

#### **18. Public Entity Crimes**

In accordance with Section 287.133, Florida Statutes, a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a proposal on a contract to provide any goods or services to a public entity, may not submit a proposal on a contract with a public entity for the construction or

repair of a public building or public work, may not submit proposals on leases or real property to a public entity, may not be awarded or perform work as a proposer, supplier, subproposer, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.0 17 for Category Two for a period of 36 months from the date of being placed on the convicted vendor list.

## **19. Protest Procedures**

(a) General. Any interested party affected in connection with a solicitation, award of contract or rejection of all offers may submit a written Notice of Intent to Protest and a Formal Written Protest.

(b) Timeline for Notice of Intent to Protest

(1) Protest of Solicitation. With respect to a protest of the terms, conditions, and specifications contained in a solicitation, including any provisions governing the methods for ranking offers, proposals, or replies, awarding contracts, reserving rights of further negotiation, or modifying or amending any contract, the Notice of Intent to Protest shall be filed in writing within seventy-two (72) hours after the posting of the solicitation.

(2) Failure to submit a Notice of Intent to Protest. Failure to submit the Notice of Intent to Protest within seventy-two (72) hours of the terms, conditions, and specifications of a solicitation and who continues to participate in the solicitation process, will be deemed to have waived any rights to protest the terms, conditions, or specifications of that solicitation.

(3) Protest of Award of Contract or Rejection of All Offers. Any person who is adversely affected by the Authority's decision or intended decision to award a contract or reject all offers shall file a Notice of Intent to Protest in writing within seventy-two (72) hours after the posting of the notice of decision or intended decision. Failure to submit the Notice of Intent to Protest within seventy-two (72) hours will result in the protest being rejected by the Authority without further consideration.

(4) Notice Requirements. The Notice of Intent to Protest shall include at a minimum:

- (i) the Notice of Intent to Protest shall be titled "Notice of Intent to Protest";
- (ii) name and address of the protester;
- (iii) identification of the procurement or contract;
- (iv) name of the attorney and firm representing protestor, if applicable; and
- (v) reasons for the protest.

(5) Timeline for Formal Written Protest. The formal written protest shall be filed within seven (7) days after the date the Notice of Intent to Protest is timely filed. Failure to submit the Formal Written Protest within seven (7) days will result in the protest being rejected by the Authority without further consideration.

(6) Written Protest Requirements. The Formal Written Protest shall include at a minimum:

- (i) the Formal Written Protest shall be titled "Formal Written Protest";
- (ii) name and address of the protester;
- (iii) name of the attorney and firm representing protestor, if applicable;
- (iv) identification of the solicitation;
- (v) reason(s) for the protest;
- (vi) requested relief;
- (vii) the Protest must demonstrate how the protestor has been aggrieved as a result of the Authority's decision and shall include the facts, argument(s), and the law upon which the protest is made;
- (viii) documents to substantiate the basis or ground for the protest; and



(ix) the required Protest Bond.

(c) No further consideration. Any documents, basis or ground(s) for a protest not set forth or provided in the formal written protest required under this provision shall be deemed waived.

(d) Protest Bond. Any person who files a protest of a solicitation, award of contract or rejection of all offers pursuant to this section shall post with the Authority, at the time of filing a Formal Written Protest, a bond payable to the Authority in the following amounts:

(1) for a protest of a solicitation, the bond shall be \$5,000; and

(2) for a protest of an award of contract or rejection of all offers, the bond shall be equal to one (1) percent of the lowest offer submitted or \$10,000, whichever is less. If there is no offer submitted, the bond amount shall be \$10,000.

(e) Condition of Bond. The bond required by this subsection shall be conditioned upon the payment of all costs which may be adjudged against the person filing the protest in the court which the action is brought and any subsequent appellate court proceeding. If, after completion of the court process and any appellate court proceedings, the Authority prevails, it shall recover all costs and charges which shall be included in the final order or judgment, including reasonable attorney fees. Upon payment of such costs and charges by the person filing the protest, the bond shall be returned to him or her. If the person filing the protest prevails, the bond shall be returned to him or her. The entire amount of the bond shall be forfeited if a court determines that a protest was filed for a frivolous or improper purpose, including, but not limited to, the purpose of harassing, causing unnecessary delay, or causing needless cost for the department or parties.

(f) Failure to Submit a Protest Bond. Failure to submit a protest bond with a Formal Written Protest will result in the protest being rejected by the Chief Executive Officer (CEO) or CEO's designee without further consideration by the Authority.

(g) Time Computation. Saturdays, Sundays, or Federal or State of Florida holidays shall be excluded in the computation of the time periods provided by this section.

(h) Delivery. Notice of Intent to Protest, Formal Written Protests, and Protest Bond shall be sent via hand delivery or certified mail. **Electronic forms of delivery are not an acceptable means of delivery.** The protester is solely responsible for verifying that the written protest was received in a timely manner. Written protests should be addressed to:

Pinellas Suncoast Transit Authority  
Attention: Chief Executive Officer  
3201 Scherer Drive  
St. Petersburg, Florida 33716

(i) Stay of Procurement. Upon receipt of a timely filed Formal Written Protest and Protest Bond, the Authority shall not proceed further with the solicitation or contract award process until the protest is resolved by final Authority action, unless the Chief Executive Officer (CEO) sets forth in writing particular facts and circumstances which require the continuance of the solicitation or contract award process without delay necessary to protect substantial interests of the Authority.

(j) Resolution of Protest.

(1) Review of Protest. The CEO or CEO's designee shall review all information and documents provided by the protester including the procurement file to make a determination on the protest.

(2) Hearing or Opportunity to be heard. The CEO or CEO's designee shall provide the protestor an opportunity to be heard on the issues stated in the protest.

(3) Written Determination. After the hearing on the protest and review of all evidence, the CEO or CEO designee shall provide a written decision to the protestor if the matter is not mutually resolved. The CEO or CEO designee shall take as much time as necessary to review the protest and make a written determination. The CEO or CEO's designee decision shall be final and conclusive unless within five (5) days of receipt of the written decision, the protesting party delivers a formal written appeal to the CEO.

**20. FTA Protest Procedures**

Federal Transit Administration (FTA) Circular 4220.1F prescribes the limited circumstances under which FTA will review a protest and establishes the detailed procedures that must be followed by a protestor. Under those procedures, FTA will only review protests submitted by an "interested party" regarding: (1) the alleged failure of the Authority to have or follow its written protest procedures, or its alleged failure to review a complaint or protest; or (2) violations of Federal law or regulation.

**PINELLAS SUNCOAST TRANSIT AUTHORITY (PSTA)  
St PETERSBURG, FLORIDA**

**EXHIBIT D  
SPECIAL PROVISIONS**

**Table of Contents**

|  |   |
|--|---|
| 1. Type of Contract .....  | 1 |
| 2. Notice to Proceed .....   | 1 |
| 3. Term of Contract.....   | 1 |
| 4. Post Award Submittals .....   | 1 |
| 5. Invoicing and Payment .....   | 1 |
| 6. Insurance Requirements .....  | 2 |
| 7. Testing.....  | 5 |
| 8. Training.....   | 5 |
| 9. Warranty of Supplies .....  | 5 |
| 10. Warranty of Services .....   | 7 |
| 11. Manufacturer’s Warranty .....  | 7 |
| 12. New Material.....  | 6 |
| 13. Contract Identification Number.....                                      | 6 |
| 14. Availability of Funds (Multi-Term).....                                  | 7 |
| 15. Standards of Performance .....   | 8 |
| 16. Independent Contractor.....  | 8 |
| 17. Composition of Contractor.....   | 8 |
| 18. Wage Rates.....  | 8 |
| 19. Pre-Employment Testing Requirements for Drug Free Workplace Program..... | 8 |
| 20. On-site Work Hours.....  | 7 |
| 21. Protection of Authority Property .....                                   | 7 |

**1. Type of Contract**

This is a firm-fixed price contract for the supplies or services specified. The Authority shall purchase the quantity of supplies or services specified elsewhere in this contract and the Contractor shall deliver them in accordance with the terms and conditions stipulated in this contract.

**2. Notice to Proceed**

The Contractor shall not proceed with any work required under this contract without a written Notice to Proceed from the Authority. Any work performed or expenses incurred by the Contractor prior to the Contractor's receipt of Notice to Proceed shall be entirely at the Contractor's risk.

**3. Term of Contract**

The term of contract shall be for 90 days from award of contract.

**4. Post Award Submittals**

Within five (5) days of contract award, the Contractor shall submit a detailed work plan with an estimated timeline for installation of the door.

**5. Invoicing and Payment**

- a) The Contractor may offer a cash discount for prompt payment.
- b) Invoices may be submitted once per month and shall conform to policies or regulations adopted from time to time by the Authority. Invoices shall be legible and shall contain, as a minimum, the following information: (1) the contract and order number (if any); (2) a complete itemization of all costs including quantities ordered and delivery order numbers (if any); (3) any discounts offered to the Authority under the terms of the contract; (4) evidence of the acceptance of the

supplies or services by the Authority; (5) unique traceable invoice number(s); and (6) any other information necessary to demonstrate entitlement to payment under the terms of the contract. Failure to provide the above critical information may result in the rejection and return of the invoice for resubmission with complete data.

c) Subject to the withholding provisions of the contract, payment shall be made within 30 days after the Authority's receipt of a properly prepared invoice.

d) Invoices shall be paid within forty five (45) days of the Authority's receipt of a proper invoice. To ensure timely processing of payments, all invoices must be sent to the attention of Accounts Payable at [AccountsPayable@psta.net](mailto:AccountsPayable@psta.net) or by mail to the following address:

Pinellas Suncoast Transit Authority (PSTA)  
Attn: Accounts Payable  
3201 Scherer Drive  
St. Petersburg, Florida 33716

e) Progress payments will be allowed where a determination of work performed can be verified by PSTA's Project Manager and where the schedule extends beyond a two-week period. PSTA reserves the right to hold back all or part of payments due until any defective work is corrected or cured. This holdback shall not constitute a breach by PSTA. If defective work cannot be cured or Contractor refuses to cure defective work upon request by PSTA within a reasonable time as specified herein, PSTA may use the holdback payments as partial liquidated damages for cost and expenses to cure the defective work. However, PSTA has the right to seek additional damages beyond the holdback payments to cure defective work caused by the Contractor to the extent allowed by law.

f) The Contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 10 days from the receipt of each payment the prime contract receives from PSTA. The prime contractor agrees further to return retainage payments to each subcontractor within 10 days after the subcontractors work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of PSTA.

## **6. Insurance Requirements**

(a) Before performing any contract work, the successful Proposer shall procure and maintain, during the life of the contract, unless otherwise specified, insurance to be determined by PSTA. The policies of insurance shall be primary and written on forms acceptable to PSTA and placed with insurance companies approved and licensed by the Insurance Department in the State of Florida in accordance with all laws, and meet a minimum financial **AM Best rating** of no less than:

- "A - Excellent: FSC VII."

Insurance certificates are to be provided to the Procurement and Contracts Administration Department as part of the bid response.

(b) The following amounts and types of insurance are the minimum requirements of the Contractor/Vendor. The required policies of insurance shall be performable in Hillsborough County, Florida, and shall be construed in accordance with the laws of the State of Florida. PSTA reserves the right but not the obligation to revise any insurance requirement, or reject any insurance coverage which fail to meet the criteria stated herein at any time. PSTA reserves the right to require Contractor/Vendor to provide and pay for any other insurance coverage PSTA deems necessary, depending upon the possible exposure to liability or loss. These insurance requirements shall not limit the liability of the Contractor/Vendor. PSTA does not represent these types or amounts of insurance to be sufficient or adequate to protect the Contractor/Vendor's interests or liabilities, but are merely minimums.

(c) To document required insurance is in effect, Certificates of Insurance shall be provided to PSTA during the life of the contract or work performed. No work shall commence under the Contract unless and until the required Certificates of Insurance are provided and approved by PSTA. The required certificates shall be supplied with your proposal, on or within seven (7) calendar days of the Authority's request.

(d) Required insurance shall be documented by Certificates of Insurance which provide that PSTA will be notified at least 10 days in advance of cancellation, non-renewal or adverse changes. If notice provision is not provided by the insurance policies, Contractor/Vendor is responsible for such notification directly to PSTA Procurement and Contracts Administration Department.

(e) Renewal Certificates of Insurance must be provided to PSTA at least 10 days prior to expiration of current coverages so that there shall be no interruption in the service due to lack of proof of insurance coverages required of the Contractor/Vendor.

Should at any time the Contractor not maintain the insurance coverages required of it, PSTA may either cancel or suspend delivery of goods or services as required by Contractor/Vendor or, at its sole discretion, shall be authorized to purchase such coverage and charge the Contractor/Vendor for such coverages purchased. PSTA shall be under no obligation to purchase such insurance or be responsible for the coverages purchased or the responsibility of the insurance company/companies used. The decision of PSTA to purchase such insurance coverages shall in no way be construed to be a waiver of its rights. Contractor/Vendor is responsible for providing or requiring the same insurance and conditions for any subcontractors utilized for this project.

Notices and Certificates shall be issued to:

Attn: Pinellas Suncoast Transit Authority  
 Procurement and Contracts Administration Department  
 Address: 3201 Scherer Drive North,  
 St. Petersburg, FL 33716

(f) Except for workers' compensation coverage and professional liability coverage, the Contractor/Vendor's policies shall be endorsed to name "Pinellas Suncoast Transit Authority" as an additional insured to the extent of PSTA's interests arising from this agreement, contract or lease.

(g) The Contractor/Vendor is responsible for the amount of any deductibles, self-insurance or self-insured retentions.

(h) Insurance required of the Contractor/Vendor shall be considered Primary and Non-Contributory, and insurance or self-insurance retention of PSTA shall be considered excess, as may be applicable to claims which arise out of the Hold Harmless, Payment on Behalf of PSTA, Insurance, Certificates of Insurance and any Additional Insurance provisions of this agreement, contract or lease.

(i) Workers' Compensation and Employers' Liability Insurance shall be maintained in force during the term of this Contract for all employees, subcontractors, or other persons engaged in the work under this contract, and shall not be less than:

|                                  |                                       |
|----------------------------------|---------------------------------------|
| Coverage A: Workers Compensation | Statutory benefits                    |
| Coverage B: Employers Liability  | \$100,000 Limit Each Accident         |
|                                  | \$500,000 Limit Disease Aggregate     |
|                                  | \$100,000 Limit Disease Each Employee |

(j) Commercial General Liability insurance with Occurrence Form shall be maintained by the Contractor/Vendor. Coverage shall include bodily injury and property damage liability for premises, operations, products and completed operations, personal & advertising injury, independent contractors, contractual liability covering this agreement, contract or lease, broad form property damage, and property damage resulting from explosion, collapse or underground (x,c,u) exposures with the following minimum limits:

- \$1,000,000 each occurrence for bodily injury and property damage
- \$2,000,000 general aggregate
- \$1,000,000 products completed operations aggregate
- \$1,000,000 personal & advertising injury

The Contractor/Vendor shall purchase and maintain coverage on forms no more restrictive than the latest editions of the Commercial General Liability Policies of the Insurance Services Office. Excess or Umbrella Insurance Coverage may be used to make up the difference between the policy limit of the underlying policy and the total amount of coverage required.

(k) Business Automobile Liability Insurance with Occurrence Form shall be maintained by the Contractor/Vendor for the ownership, maintenance and use of all its owned, non-owned, leased or hired vehicles with limits of not less than:

- \$1,000,000 Combined Single Limit Each Accident Bodily Injury and Property Damage

The Contractor/Vendor shall purchase and maintain coverage on forms no more restrictive than the latest editions of the Business Auto Policies of the Insurance Services Office. Excess or Umbrella Insurance Coverage may be used to make up the difference between the policy limit of the underlying policy and the total amount of coverage required.

(I) Umbrella Liability Insurance or Excess Liability Insurance, if used to reach the limits of liability required, shall be follow form any underlying insurance and in compliance with underlying requirements, including Additional Insured Provisions.

**OTHER PROVISIONS – *only those that are checked are required.***

- ✓ **Project Specific Aggregate/Per Job Aggregate/Per Location Aggregate** Provides that the General Aggregate applies separately to the project under contract.
- ✓ **Waiver of Subrogation** All of Contractor/Vendor's insurance policies, except Professional Liability, will waive rights of recovery against the PSTA.
- ✓ **Crime/Employee Dishonesty/Employee Fidelity Bond Coverage** –Crime/Employee Dishonesty/Fidelity insurance is to be purchased or extended to cover Dishonest Acts of the Contractor/Vendor's employees on PSTA's premises resulting in the loss to PSTA. Dishonest Acts include theft of monies, securities, vehicles, materials, supplies, equipment, tools, etc., especially property necessary to work performed. Limit \$500,000.00.

## 7. Testing

The Contractor shall perform all required system testing to ensure proper system operation prior to training, if any, and final acceptance of each unit by the Authority. The Authority will not begin acceptance testing until the unit is completely installed and ready for use, and all training, if any, is complete.

## 8. Training

The Contractor will be required to provide training on correct use of the door before final acceptance of all construction activities.

## 9. Warranty of Supplies

(a) Definitions. "Acceptance," as used in this clause, means the act of an authorized representative of the Authority by which the Authority assumes for itself, or as an agent of another, ownership of existing supplies, or approves specific services as partial or complete performance of the contract.

"Correction," as used in this clause, means the elimination of a defect.

"Supplies," as used in this clause, means the end item furnished by the Contractor and related services required under the contract. The word does not include "data."

(b) Contractor's Obligations.

(1) Notwithstanding inspection and acceptance by the Authority of supplies furnished under this contract, or any condition of this contract concerning the conclusiveness thereof, the Contractor warrants that for two (2) year

(i) all supplies furnished under this contract will be free from defects in material or workmanship and will conform with all requirements of this contract;

(ii) technical support shall be included;

(iii) any messages, screens, and patron interface modifications shall be included during the warranty period;

(iv) term for warranty for machines and components shall begin at the time of final acceptance of the project:  
and

(iv) the preservation, packaging, packing, and marking, and the preparation for and method of, shipment of such supplies will conform with the requirements of this contract.

(2) When return, correction, or replacement is required, transportation charges and responsibility for the supplies while in transit shall be borne by the Contractor. However, the Contractor's liability for the transportation charges shall not exceed an amount equal to the cost of transportation by the usual commercial method of shipment between the place of delivery specified in this contract and the Contractor's plant, and return.

(3) Any supplies or parts thereof, corrected or furnished in replacement under this clause, shall also be subject to the terms of this clause to the same extent as supplies initially delivered. The warranty, with respect to supplies or parts thereof, shall be equal in duration to that in paragraph (b)(1) of this clause and shall run from the date of delivery of the corrected or replaced supplies.

(4) All implied warranties of merchantability and "fitness for a particular purpose" are excluded from any obligation contained in this contract.

(c) Remedies Available to the Authority.

(1) The Contracting Officer shall give written notice to the Contractor of any breach of warranties in paragraph (b)(1) of this clause within 45 days after discovery of the defect.

(2) Within a reasonable time after the notice, the Contracting Officer may either --

(i) require, by written notice, the prompt correction or replacement of any supplies or parts thereof (including preservation, packaging, packing, and marking) that do not conform with the requirements of this contract within the meaning of paragraph (b)(1) of this clause; or

(ii) retain such supplies and reduce the contract price by an amount equitable under the circumstances.

(3) If the contract provides for inspection of supplies by sampling procedures, conforming of supplies or components subject to warranty action shall be determined by the applicable sampling procedures in the contract.

The Contracting Officer --

(4) Within a reasonable time after notice of any breach of the warranties specified in paragraph (b)(1) of this clause, the Contracting Officer may exercise one or more of the following options:

(i) require an equitable adjustment in the contract price for any group of supplies;

(ii) screen the supplies grouped for warranty action under this clause at the Contractor's expense and return all nonconforming supplies to the Contractor for correction or replacement;

(iii) require the Contractor to screen the supplies at locations designated by the Authority within the continental United States and to correct or replace all nonconforming supplies; or

(iv) return the supplies grouped for warranty action under this clause to the Contractor (irrespective of the f.o.b. point or the point of acceptance) for screening and correction or replacement.

(5) The Contracting Officer may, by contract or otherwise, correct or replace the nonconforming supplies with similar supplies from another source and charge to the Contractor the cost occasioned to the Authority thereby if the Contractor --

(i) fails to make redelivery of the corrected or replaced supplies within the time established for their return; or

(ii) fails either to accept return of the nonconforming supplies or fails to make progress after their return to correct or replace them so as to endanger performance of the delivery schedule, and in either of these circumstances does not cure such failure within a period of 10 days (or such longer period as the Contracting Officer may authorize in writing) after receipt of notice from the Contracting Officer specifying such failure.

(6) Instead of correction or replacement by the Authority, the Contracting Officer may require an equitable adjustment of the contract price. In addition, if the Contractor fails to furnish timely disposition instructions, the Contracting Officer may dispose of the nonconforming supplies for the Contractor's account in a reasonable manner. The Authority is entitled to reimbursement from the Contractor, or from the proceeds of such disposal, for the reasonable expenses of the care and disposition of the nonconforming supplies, as well as for excess costs incurred or to be incurred.

(1) The rights and remedies of the Authority provided in this clause are in addition to and do not limit any rights afforded to the Authority by law, equity, or any other clause of this contract.

## **10. Warranty of Services**

(a) "Acceptance" as used in this clause, means the act of an authorized representative of the Authority by which the Authority assumes for itself, or as an agent of another, ownership of existing and identified supplies, or approves specific services, as partial or complete performance of the contract. "Correction," as used in this clause, means the elimination of a defect.

(b) Notwithstanding inspection and acceptance by the Authority or any provision concerning the conclusiveness thereof, the Contractor warrants that all services performed under this contract will, at the time of acceptance, be free from defects in workmanship and conform to the requirements of this contract. The Contracting Officer shall give written notice of any defect or nonconformance to the Contractor within 45 days after discovery of the defect. This notice shall state either (1) that the Contractor shall correct or reperform any defective or nonconforming services, or (2) that the Authority does not require correction or reperformance.

(c) If the Contractor is required to correct or reperform, it shall be at no cost to the Authority, and any services corrected or reperformed by the Contractor shall be subject to this clause to the same extent as work initially performed. If the Contractor fails or refuses to correct or reperform, the Contracting Officer may, by contract or otherwise, correct or replace with similar services and charge to the Contractor the cost occasioned to the Authority thereby, or make an equitable adjustment in the contract price.

(d) If the Authority does not require correction or reperformance, the Contracting Officer shall make an equitable adjustment in the contract price.

## **11. Manufacturer's Warranty**

Any and all standard manufacturer's warranties shall accrue to the benefit of the Authority. The manufacturer's warranties referenced herein shall be in addition to any contractual remedies set forth in this contract, and in addition to any and all other statutory remedies or warranties imposed on the Contractor for the benefit of the Authority.

## **12. New Material**

Only first quality materials, workmanship, and finish shall be acceptable. PSTA requires high quality structures and operating equipment that have low maintenance costs. Structures shall be designed and constructed of materials and finishes that are demonstrated to minimize maintenance and provide maximum weather and vandal resistance.

## **13. Contract Identification Number**

The contract and purchase order number shall be clearly displayed on all correspondence, invoices and submittals.



---

**14. Availability of Funds (Multi-Term)**

Funds are not presently available for performance under this contract beyond the current fiscal year. The Authority's obligation for performance of this contract beyond the current fiscal year is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Authority for any payment may arise for performance under this contract beyond the current fiscal year, until the Contractor receives notice of availability of funds, in writing, from the Contracting Officer.

**15. Standards of Performance**

The Contractor shall perform all services required by this contract in accordance with high professional standards prevailing in the Contractor's field of work.

**16. Independent Contractor**

The Contractor at all times shall be an independent contractor. The Contractor shall be fully responsible for all acts and omissions of its employees, subcontractors, and their suppliers, and shall be specifically responsible for sufficient supervision and inspection to ensure compliance in every respect with the contract requirements. There shall be no contractual relationship between any subcontractor or supplier of the Contractor and the Authority by virtue of this contract. No provision of this contract shall be for the benefit of any party other than the Authority and the Contractor.

**17. Composition of Contractor**

If the Contractor hereunder is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.

**18. Wage Rates**

All persons employed in the performance of the work under this contract, or any subcontracts hereunder, shall be paid not less than the general rates of per diem, holiday, and overtime wages prevailing in the locality for work of a similar character (which wages are specified in Attachment No. 1 to Exhibit D to this contract).

**19. Pre-Employment Testing Requirements for Drug Free Workplace Program**

The Contractor shall be required to comply with the State of Florida Drug Free Workplace Program requirements (F.S., 440.102) for all employees working on, or expected to work on, the Authority's premises.

**20. On-site Work Hours**

Work shall begin no earlier than 6:00AM and should normally be terminated no later than 4:00PM Monday through Friday excluding Holidays, unless otherwise authorized by the PSTA Program Manager with the PSTA Contracting Officer's concurrence.

**21. Protection of Authority Property**

The Contractor shall use reasonable care to avoid damaging existing buildings, equipment, and vegetation on or about premises owned by, or under the control of, the Authority. If the Contractor's failure to use reasonable care causes damage to any of this property, the Contractor shall replace or repair the damage at no expense to the Authority as the Contracting Officer directs. If the Contractor fails or refuses to make such repair or replacement, the Contractor shall be liable for the cost, which may be deducted from the contract price.

General Decision Number: FL180267 01/12/2018 FL267

Superseded General Decision Number: FL20170267

State: Florida

Construction Type: Building

County: Pinellas County in Florida.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

| Modification Number | Publication Date |
|---------------------|------------------|
| 0                   | 01/05/2018       |
| 1                   | 01/12/2018       |

ASBE0067-003 03/01/2017

|   | Rates    | Fringes |
|---|----------|---------|
| ASBESTOS WORKER/HEAT & FROST INSULATOR..... | \$ 27.10 | 14.49   |

ELEC0915-001 12/01/2017

|   | Rates    | Fringes   |
|---|----------|-----------|
| ELECTRICIAN (Includes Low Voltage Wiring)<br>Building Electrical<br>Contracts over \$200,000.<br>Excludes all Educational,<br>Theme Park, and Hospital<br>Facilities..... | \$ 25.75 | 38%+ 0.35 |

\* ELEV0074-001 01/01/2018

|                        | Rates    | Fringes |
|------------------------|----------|---------|
| ELEVATOR MECHANIC..... | \$ 39.90 | 32.645  |

FOOTNOTE:

A. Employer contributions 8% of regular hourly rate to vacation pay credit for employee who has worked in business more than 5 years; Employer contributions 6% of regular hourly rate to vacation pay credit for employee who has worked in business less than 5 years.

Paid Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; The Friday after Thanksgiving Day; and Christmas Day.

-----  
 ENGI0487-021 07/01/2016

|                         | Rates    | Fringes |
|-------------------------|----------|---------|
| OPERATOR: Crane         |          |         |
| All Cranes 160 Ton      |          |         |
| Capacity and Over.....  | \$ 33.05 | 9.20    |
| All Cranes Over 15 Ton  |          |         |
| Capacity.....           | \$ 32.05 | 9.20    |
| OPERATOR: Forklift..... | \$ 23.25 | 9.20    |
| OPERATOR: Mechanic..... | \$ 32.05 | 9.20    |
| OPERATOR: Oiler.....    | \$ 23.50 | 9.20    |

-----  
 IRON0397-007 07/01/2017

|                             | Rates    | Fringes |
|-----------------------------|----------|---------|
| IRONWORKER, STRUCTURAL..... | \$ 29.85 | 15.83   |

-----  
 IRON0397-008 07/01/2017

|                              | Rates    | Fringes |
|------------------------------|----------|---------|
| IRONWORKER, REINFORCING..... | \$ 29.85 | 15.83   |

-----  
 IRON0402-001 02/01/2017

|                             | Rates    | Fringes |
|-----------------------------|----------|---------|
| IRONWORKER, ORNAMENTAL..... | \$ 23.00 | 10.99   |

-----  
 PLUM0123-001 05/01/2016

|   | Rates    | Fringes |
|---|----------|---------|
| PIPEFITTER (Includes HVAC<br>Pipe and Unit Installation)..... | \$ 24.40 | 13.24   |

-----  
 PLUM0123-004 05/01/2016

|  | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

PLUMBER.....\$ 24.40 13.24

-----  
SHEE0015-005 07/01/2014

|  | Rates    | Fringes |
|--|----------|---------|
| SHEET METAL WORKER (Excludes<br>HVAC Duct Installation)..... | \$ 20.08 | 13.44   |

-----  
SUFL2014-031 08/16/2016

|   | Rates    | Fringes |
|---|----------|---------|
| CARPENTER, Includes Drywall<br>Hanging, Form Work, and Metal<br>Stud Installation (Excludes<br>Carpet and Vinyl Floor Laying).... | \$ 16.36 | 0.70    |
| CEMENT MASON/CONCRETE FINISHER....  | \$ 13.00 | 1.30    |
| FLOOR LAYER: Carpet and Vinyl....   | \$ 17.64 | 0.00    |
| HVAC MECHANIC (HVAC Duct<br>Installation Only).....   | \$ 18.00 | 2.18    |
| LABORER: Pipelayer.....   | \$ 14.00 | 1.40    |
| LABORER: Common or General,<br>Includes Carpenter Tending<br>and Cement Mason Tending.....  | \$ 11.31 | 0.85    |
| OPERATOR:<br>Backhoe/Excavator/Trackhoe.....  | \$ 22.07 | 8.80    |
| OPERATOR: Bulldozer.....  | \$ 15.40 | 1.90    |
| OPERATOR: Grader/Blade.....   | \$ 18.97 | 0.00    |
| OPERATOR: Loader.....   | \$ 14.00 | 1.40    |
| OPERATOR: Roller.....   | \$ 14.43 | 4.78    |
| PAINTER: Brush, Roller and<br>Spray.....  | \$ 14.72 | 2.13    |
| ROOFER.....   | \$ 19.00 | 1.17    |
| SPRINKLER FITTER (Fire<br>Sprinklers).....  | \$ 20.11 | 6.74    |
| TILE SETTER.....  | \$ 18.01 | 0.00    |
| TRUCK DRIVER: Dump Truck.....   | \$ 13.22 | 2.12    |
| TRUCK DRIVER: Lowboy Truck.....   | \$ 14.24 | 0.00    |

-----

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

-----

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

---

#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

PINELLAS SUNCOAST TRANSIT AUTHORITY (PSTA)  
ST. PETERSBURG, FLORIDA

**EXHIBIT E**  
**ADDENDUM TO GENERAL PROVISIONS**  
**(FEDERALLY ASSISTED CONSTRUCTION)**

**TABLE OF CONTENTS**

|     |   |    |
|-----|---|----|
| 1.  | Access Requirements for Individuals with Disabilities .....                               | 1  |
| 2.  | Affirmative Action Compliance Requirements for Construction .....                         | 2  |
| 3.  | Apprentices and Trainees.....   | 5  |
| 4.  | Federal Changes .....   | 6  |
| 5.  | Audit and Inspection of Records .....   | 6  |
| 6.  | Cargo Preference - Use of United States-Flag Vessels .....                                | 7  |
| 7.  | Certification of Eligibility.....   | 7  |
| 8.  | Clean Air and Water Act .....   | 7  |
| 9.  | Compliance with Copeland Act Requirements .....   | 8  |
| 10. | Compliance with Davis-Bacon and Related Act Regulations .....                             | 8  |
| 11. | Contract Termination - Debarment.....   | 8  |
| 12. | Contract Work Hours and Safety Standards Act - Overtime Compensation – Construction ..... | 8  |
| 13. | Davis-Bacon Act .....   | 9  |
| 14. | Disadvantaged Business Enterprise (DBE) Program.....                                      | 10 |
| 15. | Disputes Concerning Labor Standards .....   | 11 |
| 16. | Energy Policy and Conservation Act .....  | 11 |
| 17. | Equal Employment Opportunity .....  | 11 |
| 18. | Fly America Requirements .....  | 12 |
| 19. | Incorporation of Federal Transit Administration (FTA) Terms).....                         | 12 |
| 20. | Non-Discrimination Assurance .....  | 12 |
| 21. | Notice of Federal Requirements.....   | 12 |
| 22. | Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity.....  | 12 |
| 23. | Officials Not to Benefit .....  | 13 |
| 24. | Payrolls and Basic Records.....   | 13 |
| 25. | Program Fraud and False or Fraudulent Statements or Related Acts.....                     | 14 |
| 26. | Project Signs.....  | 14 |
| 27. | Restrictions on Lobbying .....  | 15 |
| 28. | Seismic Safety .....  | 15 |
| 29. | Subcontracts (Labor Standards) .....  | 15 |
| 30. | Title VI Civil Rights Act of 1964 .....   | 15 |
| 31. | Withholding of Funds.....   | 16 |
| 32. | No Obligation by the Federal Government.....  | 16 |
| 33. | Recycled Products.....  | 16 |
| 34. | Buy America Provision .....   | 16 |

The contract clauses and provisions in this Exhibit apply to all Federally-assisted construction contracts. These provisions supersede and take precedence over any other clause or provision contained within this contract that may be in conflict therewith.

**1. Access Requirements for Individuals with Disabilities**

The Contractor shall comply with all applicable requirements of the Americans with Disabilities Act of 1990 (ADA), 42 U.S.C. 12101 et seq. and 49 U.S.C. 322; Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. 794; Section 16 of the Federal Transit Act, as amended, 49 U.S.C. app. 1612; and the following regulations and any amendments thereto:

- (1) US. DOT regulations, "Transportation Services for Individuals with Disabilities (ADA)," 49 CFR Part 37;
- (2) US. DOT regulations, "Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance," 49 CFR Part 27;



- (3) US. DOT regulations, "Americans With Disabilities (ADA) Accessibility Specifications for Transportation Vehicles," 49 CFR Part 38;
- (4) Department of Justice (DOJ) regulations, "Nondiscrimination on the Basis of Disability in State and Local Government Services," 28 CFR Part 35;
- (5) DOJ regulations, "Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities," 28 CFR Part 36;
- (6) General Services Administration regulations, "Construction and Alteration of Public Buildings," "Accommodations for the Physically Handicapped," 41 CFR Part 101-19;
- (7) Equal Employment Opportunity Commission (EEOC) "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 CFR Part 1630;
- (8) Federal Communications Commission regulations, "Telecommunications Relay Services and Related Customer Premises Equipment for the Hearing and Speech Disabled," 47 CFR Part 64, Subpart F;
- (9) FTA regulations, "Transportation for Elderly and Handicapped Persons," 49 CFR Part 609.

## **2. Affirmative Action Compliance Requirements for Construction**

### (a) Definitions. As used in this clause:

- (1) "Covered Area," as used in this clause, means the Pinellas County, Florida Standard Metropolitan Statistical Area (SMSA).
- (2) "Director," as used in this clause, means Director, Office of Federal Contract Compliance Programs (OFCCP), United States Department of Labor, or any person to whom the Director delegates authority.
- (3) "Employer Identification Number," as used in this clause, means the Federal Social Security Number used on the Employer's Quarterly Federal Tax Return, US Treasury Department Form 941.
- (4) "Minority," as used in this clause, means:
  - (i) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification);
  - (ii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent or the Pacific Islands);
  - (iii) Black (all persons having origins in any of the black African racial groups not of Hispanic origin);
  - (iv) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).

(b) If the Contractor, or a Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, each such subcontract in excess of \$10,000 shall include this clause and the Notice containing the goals for minority and female participation stated in the clause of this contract entitled "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)."

(c) If the Contractor is participating in a Hometown Plan (41 CFR 60-4.5) approved by the US. Department of Labor in a covered area, either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals) shall comply with the Plan for those trades that have unions participating in the Plan. Contractors must be able to demonstrate participation in, and compliance with, the provisions of the Plan. Each Contractor or Subcontractor participating in an approved Plan is also required to comply with its obligations under the Equal Opportunity clause, and to make a good-faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good-faith performance by other Contractors or Subcontractors toward a goal in an

approved Plan does not excuse any Contractor's or Subcontractor's failure to make good-faith efforts to achieve the Plan's goals.

(d) The Contractor shall implement the affirmative action procedures in subparagraphs (g)(1) through (g)(16) of this clause. The goals set forth in the clause entitled "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)" are expressed as percentages of the total hours of employment and training of minority and female utilization that the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where that work is being performed. The Contractor is expected to make substantially uniform progress toward its goals in each craft.

(e) Neither the terms and conditions of any collective bargaining agreement, nor the failure by a union with which the Contractor has a collective bargaining agreement, to refer minorities or women shall excuse the Contractor's obligations under this clause, Executive Orders 11246, as amended, or the regulations thereunder.

(f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the US. Department of Labor.

(g) The Contractor shall take affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and implement affirmative action steps at least as extensive as the following:

(1) Ensure a working environment free of harassment, intimidation, and coercion at all sites and in all facilities where the Contractor's employees are assigned to work. The Contractor, if possible, will assign two or more women to each construction project. The Contractor shall ensure that foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at these sites or facilities.

(2) Establish and maintain a current list of sources for minority and female recruitment. Provide written notification to minority and female recruitment sources and community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(3) Establish and maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant, referrals of minorities or females from unions, recruitment sources, or community organizations, and the action taken with respect to each individual. If an individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred back, not employed by the Contractor, this shall be documented in the file, along with whatever additional actions the Contractor may have taken.

(4) Immediately notify the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred back to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area that expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under (g)(2) above.

(6) Disseminate the Contractor's equal employment policy by:

(i) Providing notice of the policy to unions and training, recruitment, and outreach programs, and requesting their cooperation in assisting the Contractor in meeting its contract obligations;

(ii) Including the policy in any policy manual and in collective bargaining agreements;

- (iii) Publicizing the policy in the company newspaper, annual report, etc.;
  - (iv) Reviewing the policy with all management personnel and with all minority and female employees at least once a year;
  - (v) Posting the policy on bulletin boards accessible to employees at each location where construction work is performed.
- (7) Review, at least annually, the Contractor's equal employment policy and affirmative action obligations with all employees having responsibility for hiring, assignment, layoff, termination, or other employment decisions. Conduct review of this policy with on-site supervisory personnel before initiating construction work at a job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- (8) Disseminate the Contractor's equal employment policy externally including it in any advertising in the news media, specifically including minority and female news media. Provide written notification to, and discuss this policy with, other contractors and subcontractors with which the Contractor does or anticipates doing business.
- (9) Direct recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month before the date for acceptance of applications for apprenticeship or training by any recruitment source, send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- (10) Encourage present minority and female employees to recruit minority persons and women. Where reasonable, provide after-school, summer and vacation employment to minority and female youth, both on the site and in other areas of the Contractor's workforce.
- (11) Validate all tests and other selection requirements where required under 41 CFR. 60-3.
- (12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for, through appropriate training, etc., opportunities for promotion.
- (13) Ensure that seniority practices, job classifications, work assignments and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the Contractor's obligations under this contract are being carried out.
- (14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- (15) Maintain a record of solicitations for subcontracts for minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
- (16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment policy and affirmative action obligations.
- (h) The Contractor is encouraged to participate in voluntary associations that may assist in fulfilling one or more of the affirmative action obligations contained in subparagraphs (g)(1) through (g)(16). The efforts of a contractor association, joint contractor-union, contractor-community, or similar group of which the Contractor is a member and participant may be asserted as fulfilling one or more of its obligations under subparagraphs (g)(1) through (g)(16), provided the Contractor:
- (1) Actively participates in the group;
  - (2) Makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry;

- (3) Ensures that concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;
- (4) Makes a good-faith effort to meet its individual goals and timetables;
- (5) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
- (i) A single goal for minorities and a separate single goal for women shall be established. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.
- (j) The Contractor shall not use goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
- (k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.
- (l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination, and cancellation of existing subcontracts, as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any failure to carry out these sanctions and penalties as ordered shall be a violation of this clause and Executive Order 11246, as amended.
- (m) The Contractor in fulfilling its obligations under this clause shall implement affirmative action procedures at least as extensive as those prescribed in paragraph (g), above, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of Executive Order 11246, as amended, the implementing regulations, or this clause, the Director shall take action as prescribed in 41 CFR 60-4.8.
- (n) The Contractor shall designate a responsible official to:
- (1) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;
  - (2) Submit reports as may be required by the Authority;
  - (3) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.
- (o) Nothing contained herein shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon the requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

### **3. Apprentices and Trainees**

(a) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the US. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first ninety (90) days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the

applicable wage, determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rates specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees. Except as provided 29 CFR. 5.16, trainees will not be permitted work at less than the predetermined rate for the work performed unless they are employed pursuant to an individual registered in a program which has received prior approval, evidenced by formal certification by the US. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination of the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) Equal Employment Opportunity. The utilization of apprentices, trainees, and journeymen under this provision shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR. Part 3.

#### **4. Federal Changes**

The Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between the Authority and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

#### **5. Audit and Inspection of Records**

(a) This clause is applicable if this contract was entered into by means of negotiation and shall become operative with respect to any modification to this contract whether this contract was initially entered into by means of negotiation or by means of formal advertising.

(b) The Contractor shall maintain records, and the Contracting Officer, the US. Department of Transportation, and the Comptroller General of the United States or any of their duly authorized representatives shall, until the expiration of three years after final payment under this contract, have access to and the right to examine any directly pertinent books, documents, papers and records of such Contractor, involving transactions related to the contract, for the purpose of making audit, examination, excerpts and transcriptions.

(c) The Contractor further agrees to include in all his subcontracts hereunder a provision to the effect that the subcontractor agrees that the Contracting Officer, the US. Department of Transportation, and the Comptroller General of the United States or any of their duly authorized representatives shall, until the expiration of three years after final payment under this contract, have access to and the right to examine any directly pertinent books, documents, papers and records of such subcontractor, involving transactions related to the subcontract, for the purpose of making audit, examination, excerpts and transcriptions.

## **6. Cargo Preference - Use of United States-Flag Vessels**

This clause applies to contracts involving materials, equipment, or commodities that may be transported by ocean vessel in carrying out the terms of the contract. As required by 46 C.F.R. Part 381, the Contractor agrees:

(a) To utilize privately owned United States-Flag commercial vessels to ship at least fifty percent (50%) of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners and tankers) involved, whenever shipping any equipment, materials, or commodities pursuant to this section, to the extent such vessels are available at fair and reasonable rates for United States-Flag commercial vessels.

(b) To furnish within twenty (20) working days following the date of loading for shipments originating with the United States, or within thirty (30) working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading, in English, for each shipment of cargo described in paragraph (a) above to the Authority (through the Prime Contractor in the case of subcontractor bills-of-lading), to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, D.C. 20590, and to the FTA recipient, marked with appropriate identification of the Project.

(c) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract that may involve the transport of equipment, material, or commodities by ocean vessel.

## **7. Certification of Eligibility**

(a) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the US. Criminal Code, 18 U.S.C. 1001.

## **8. Clean Air and Water Act**

(a) Definitions:

(1) "Air Act," as used in this clause, means the Clean Air Act (42 U.S.C. 7401 et seq.).

(2) "Clean air standards," as used in this clause, means:

(i) Any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, work practices, or other requirements contained in, issued under, or otherwise adopted under the Air Act or Executive Order 11738.

(ii) An applicable implementation plan as described in Section 110(d) of the Air Act [42 U.S.C. 7410(d)];

(iii) An approved implementation procedure or plan under Section 110(c) or Section 111(d) of the Air Act [42 U.S.C. 7411(c) or (d)]; or

(iv) An approved implementation procedure under Section 112(d) of the Air Act [42 U.S.C. 7412(d)].

(3) "Clean water standards," as used in this clause, means any enforceable limitation, control, condition, prohibition, standard, or other requirement promulgated under the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a State under an approved program, as authorized by

Section 402 of the Water Act (33 U.S.C. 1342), or by local government to ensure compliance with pre-treatment regulations as required by Section 307 of the Water Act (33 U.S.C. 1317).

(4) "Compliance," as used in this clause, means compliance with:

(i) Clean air or water standards; or

(ii) A schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency, or an air or water pollution control agency under the requirements of the Air Act or Water Act and related regulations.

(5) "Facility," as used in this clause, means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations, owned, leased, or supervised, by a Contractor or subcontractor, used in the performance of a contract or subcontract. When a location or site of operations includes more than one building, plant, installation, or structure, the entire location or site shall be deemed a facility except when the Administrator, or a designee of the Environmental Protection Agency, determines that independent facilities are co-located in one geographical area.

(6) "Water Act," as used in this clause, means Clean Water Act (33 U.S.C. 1251 et seq.).

(b) The Contractor agrees:

(1) To comply with all the requirement of Section 114 of the Clean Air Act (42 U.S.C. 7414) and Section 308 of the Clean Water Act (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in Section 114 and Section 308 of the Air Act and the Water Act, and all regulations and guidelines issued to implement those acts before the award of this contract;

(2) That no portion of the work required by this prime contract will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date when this contract was awarded unless and until the EPA eliminates the name of the facility from the listing;

(3) To use best effort to comply with clean air standards and clean water standards at the facility in which the contract is being performed; and

(4) To insert the substance of this clause into any nonexempt subcontract, including this paragraph (b)(4).

## **9. Compliance with Copeland Act Requirements**

The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.

## **10. Compliance with Davis-Bacon and Related Act Regulations**

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3 and 5 are hereby incorporated by reference in this contract.

## **11. Contract Termination - Debarment**

A breach of the contract clauses entitled "Davis-Bacon Act, Contract Work Hours and Safety Standards Act - Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance With Copeland Act Requirements, Subcontracts (Labor Standards), Compliance with Davis-Bacon and Related Act Regulations or Certification of Eligibility" may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

## **12. Contract Work Hours and Safety Standards Act - Overtime Compensation – Construction**

(a) Overtime Requirements. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborers or mechanics in any workweek in which the individual is employed on such work to work in excess for forty (40) hours in such workweek

unless such laborer or mechanic receives compensation at a rate not less than one and one-half (1-1/2) times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek.

(b) Violation; Liability for Unpaid Wages; Liquidated Damages. In the event of any violation of the provisions set forth in paragraph (a) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the provisions set forth in paragraph (a) of this clause in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty (40) hours without payment of the overtime wages required by the provisions set forth in paragraph (a) of this clause.

(c) Withholding for Unpaid Wages and Liquidated Damages. The Contracting Officer shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal Contract with the same Prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same Prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the provisions set forth in paragraph (b) of this clause.

(d) Payrolls and Basic Records.

(1) The Contractor or subcontractor shall maintain payrolls and basic payroll records during the course of contract work and shall preserve them for a period of three (3) years from the completion of the contract for all laborers and mechanics working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classification, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Nothing in this paragraph shall require the duplication of records required to be maintained for construction work by Department of Labor regulations at 29 C.F.R. 5.5(a)(3) implementing the Davis-Bacon Act.

(2) The records to be maintained under paragraph (d)(1) of this clause shall be made available by the Contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit such representatives to interview employees during working hours on the job.

(e) Subcontracts. The Contractor also agrees to include the requirements of this section in each subcontract. The term "subcontract" under this section is considered to refer to a person who agrees to perform any part of the labor or material requirements of a contract for construction, alteration or repair. A person who undertakes to perform a portion of a contract involving the furnishing of supplies or materials will be considered a "subcontractor" under this section if the work in question involves the performance of construction work and is to be performed: (1) directly on or near the construction site, or (2) by the employer for the specific project on a customized basis. Thus, a supplier of materials which will become an integral part of the construction is a "subcontractor" if the supplier fabricates or assembles the goods or materials in question specifically for the construction project and the work involved may be said to be construction activity. If the goods or materials in question are ordinarily sold to other customers from regular inventory, the supplier is not a "subcontractor." The requirements of this section do not apply to contracts or subcontracts for the purchase of supplies or materials or articles normally available on the open market.

### **13. Davis-Bacon Act**

(a) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR. Part 3), the full amount of wage and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics, subject to the provisions of subparagraph (d) of this clause; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period. Such laborers and mechanics shall be paid not less than the



appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in the clause of these provisions entitled "Apprentices and Trainees". Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (b) of this clause) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(b) (1) The Contracting Officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (b)(2) and (b)(3) of this clause, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(c) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(d) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

#### **14. Disadvantaged Business Enterprise (DBE) Program**

It is the policy of the Authority and the Department of Transportation that Disadvantaged Business Enterprises (DBEs) as defined in 49 CFR Part 26 shall have a level playing field and an opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. Consequently, the DBE requirements of 49 CFR Part 26 apply to this contract.

**15. Disputes Concerning Labor Standards**

The United States Department of Labor has set forth in 29 CFR Parts 5, 6 and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the "Disputes" clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the Authority, the US. Department of Labor, or the employees or their representatives.

**16. Energy Policy and Conservation Act**

The Contractor shall recognize mandatory standards and policies relating to energy efficiency contained in the State Energy Conservation Plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. Section 6321 et seq.).

**17. Equal Employment Opportunity**

(a) During the performance of this contract, the Contractor agrees as follows:

- (1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, disability or national origin.
- (2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, disability or national origin. This shall include, but not be limited to: employment; upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- (3) The Contractor shall post in conspicuous places available to employees and applicants for employment, notices to be provided by the Contracting Officer that explain this clause.
- (4) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, disability or national origin.
- (5) The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the Contracting Officer advising the labor union or workers' representatives of the Contractor's commitments under this clause and Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (6) The Contractor will comply with Executive Order 11246, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor.
- (7) The Contractor will furnish to the Contracting Officer all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. Standard Form 100 (EEO-1) or any successor form, is the prescribed form to be filed within thirty (30) days following the award, unless filed within twelve (12) months preceding the date of award.
- (8) The Contractor shall permit access to its books, records, and accounts by the Contracting Officer, the Federal Transit Administration, and the Secretary of Labor for purposes of investigation to ascertain the Contractor's compliance with the applicable rules, regulations and orders.
- (9) In the event it is determined that the Contractor is not in compliance with this clause or with any rule, regulation or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Federal or Federally-assisted contracts in accordance with procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended, or by the rules, regulations and orders of the Secretary of Labor, or as otherwise provided by law.

(10)The Contractor shall include the provisions of paragraphs (1) through (10) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor. The Contractor shall take such action with respect to any subcontract or purchase order as the Contracting Officer or the FTA or the Secretary of Labor may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, however, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction. The Contractor may request the United States to enter into such litigation to protect the interests of the United States.

(b) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures 41 CFR. 60-1.1.

### **18. Fly America Requirements**

The Contractor agrees to comply with 49 U.S.C. 40118 (the "Fly America" Act) in accordance with the General Services Administration's regulations at 41 CFR Part 301-10, which provide that recipients and subrecipients of Federal funds and their contractors are required to use U.S. Flag air carriers for U.S Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation.

### **19. Incorporation of Federal Transit Administration (FTA) Terms**

These provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth herein. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F, are hereby incorporated by reference. All FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this contract.

### **20. Non-Discrimination Assurance**

The Contractor or subcontractor agrees that it will not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The Contractor shall carry out the applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the Authority deems appropriate. The Contractor understands that it is required to insert the substance of this clause in all subcontracts and purchase orders.

### **21. Notice of Federal Requirements**

The Contractor is advised that Federal requirements applicable to this contract as set forth in federal law, regulations, policies, and related administrative practices may change during the performance of this contract. Any such changes shall also apply to this contract.

### **22. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity**

(a) The offeror's attention is called to the "Equal Opportunity" clause and the "Affirmative Action Compliance Requirements for Construction" clause of this contract.

(b) (1)The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area are as follows:

Goals for Minority Participation for Each Trade = 18.2%

Goals for Female Participation for Each Trade = 6.9%

(2) The goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally-assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Compliance Programs Office.

(c) The Contractor's compliance with the Executive Order and the regulations at 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements For Construction", and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good-faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR. 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Director of Federal Contract Compliance Programs within ten (10) working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the: name, address and telephone number of the subcontractor; employer's identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

(e) As used in this Notice/Clause, the "covered area" is the Hillsborough County, Florida Standard Metropolitan Statistical Area (SMSA).

### **23. Officials Not to Benefit**

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract or to any benefit arising from it. However, this clause does not apply to this contract to the extent that this contract is made with a corporation for the corporation's general benefit.

### **24. Payrolls and Basic Records**

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three (3) years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the clause entitled "Davis-Bacon Act," that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b) (1)The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph (a) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, US. Government Printing Office, Washington, D.C. 20402. The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract, which shall certify:

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph (a) of this clause and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, at 29 CFR Part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth in the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (b)(2) of this clause.

(4) The falsification of any of the certifications in this clause may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(c) The Contractor or subcontractor shall make the records required under paragraph (a) of this clause available for inspection, copying, or transcription by the Contracting Officer or authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit the Contracting Officer or representatives of the Contracting Officer or Department of Labor to interview employees during working hours on the job. The contractor or subcontractor fails to submit the required records or to make them available, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

## **25. Program Fraud and False or Fraudulent Statements or Related Acts**

(a) The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 *et seq.* and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this contract. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.

(b) The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. § 5307, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.

(c) The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions

## **26. Project Signs**

(a) The Contractor shall erect at the site of construction, and maintain during construction, signs satisfactory to the Authority and the Department of Transportation identifying the project and indicating that the Federal Government is participating in the development of the project.

**27. Restrictions on Lobbying**

(a) The Contractor shall timely comply with the requirements of the lobbying restrictions set forth in 31 U.S.C. § 1352 and 49 CFR Part 20, and as those authorities may be hereafter amended.

(b) If a Standard Form LLL, Disclosure of Lobbying Activities, is required to be completed by the Contractor or subcontractor at any tier, such disclosure form shall be furnished to the Contracting Officer.

**28. Seismic Safety**

The Contractor agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Transportation Seismic Safety Regulations 49 CFR Part 41 and will certify to compliance to the extent required by the regulation. The Contractor also agrees to ensure that all work performed under this contract, including work performed by a subcontractor, is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the project.

**29. Subcontracts (Labor Standards)**

(a) The Contractor or subcontractor shall insert in any subcontracts the clauses entitled "Davis-Bacon Act, Contract Work Hours and Safety Standards Act - Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Withholding of Funds, Subcontracts (Labor Standards), Contract Termination-Debarment, Disputes Concerning Labor Standards, Compliance with Davis-Bacon and Related Act Regulations and Certification of Eligibility," and such other clauses as the Contracting Officer may, by appropriate instructions, require, and also a clause requiring subcontractors to include these clauses in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all the contract clauses cited in this paragraph.

(b) (1) Within fourteen (14) days after award of the contract, the Contractor shall deliver to the Contracting Officer a completed Statement and Acknowledgment Form (SF 1413) for each subcontract, including the subcontractor's signed and dated acknowledgment that the clauses set forth in paragraph (a) of this clause have been included in the subcontract. (2) Within fourteen (14) days after contract award of any subsequently awarded subcontract the Contractor shall deliver to the Contracting Officer an updated completed SF 1413 for such additional subcontract.

**30. Title VI Civil Rights Act of 1964**

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

(a) Compliance with Regulations. The Contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(b) Nondiscrimination. The Contract, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(c) Solicitations for Subcontracts, Including Procurement of Materials and Equipment. In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, religion, color, sex, age, or national origin.

(d) Information and Reports. The Contractor shall provide all information and reports required by the Regulations or directive issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Authority or the Federal Transit Administration (FTA) to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information is required or a

Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the Authority, or FTA, as appropriate, and shall set forth what efforts it has made to obtain the information.

(e) Sanctions for Noncompliance. In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, the Authority shall impose such contract sanctions as it or FTA may determine to be appropriate, including, but not limited to:

- (1) Withholding of payments to the Contractor under the contract until the Contractor complies; and/or
- (2) Cancellation, termination or suspension of the contract, in whole or in part.

(f) Incorporation of Provisions. The Contractor shall include the provisions of paragraphs (a) through (f) of this clause in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the Authority or FTA may direct as a means of enforcing such revisions including sanctions for noncompliance: provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the Authority, and, in addition, the United States to enter into such litigation to protect the interests of the Authority and the United States.

### **31. Withholding of Funds**

The Contracting Officer shall, upon his or her own action or upon written request of an authorized representative of the FTA or Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same Prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same Prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

### **32. No Obligation by the Federal Government**

(a) The Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the Authority, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.

(b) The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

### **33. Recycled Products**

The contractor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247.

### **34. Buy America Provision**

This solicitation and the resulting contract are subject to the Buy America requirements of 49 U.S.C. § 5323(j) and the Federal Transit Administration's implementing regulations found at 49 CFR § 661, the provisions of each of which are incorporated herein by reference. These regulations require, as a matter of responsiveness, that the bidder or offeror submit with its offer a completed certification in accordance with 49 CFR § 661.6 or § 661.12, as appropriate. These certifications are set forth in Exhibit U of this solicitation.

**EXHIBIT F**  
**GENERAL PROVISIONS**  
**(CONSTRUCTION CONTRACT)**

**TABLE OF CONTENTS**

|     |  |    |
|-----|--|----|
| 1.  | Definitions.....                                 | 2  |
| 2.  | Accident Prevention .....                        | 2  |
| 3.  | Additional Bond Security .....                   | 3  |
| 4.  | Administrative Control of Documents.....         | 3  |
| 5.  | Compliance with Public Records Law.....          | 3  |
| 6.  | Assignment .....                                 | 4  |
| 7.  | Change of Name.....                              | 4  |
| 8.  | Authority's Right to Carry Out the Work.....     | 4  |
| 9.  | Change Order Accounting.....                     | 4  |
| 10. | Changes .....                                    | 4  |
| 11. | Civil Rights .....                               | 5  |
| 12. | Cleaning Up .....                                | 6  |
| 13. | Compliance with the Law .....                    | 6  |
| 14. | Composition of Contractor .....                  | 6  |
| 15. | Construction Schedule .....                      | 6  |
| 16. | Differing Site Conditions.....                   | 6  |
| 17. | Resolution of Contract Claims and Disputes ..... | 7  |
| 18. | Appeal of Contract Claims or Disputes .....      | 8  |
| 19. | Disputes - Mediation and Arbitration.....        | 9  |
| 20. | Drug-Free Workplace Program .....                | 9  |
| 21. | Equitable Adjustments .....                      | 11 |
| 22. | Examination and Retention of Records .....       | 13 |
| 23. | Examination of Bid Documents .....               | 13 |
| 24. | Excusable Delays.....                            | 13 |
| 25. | Federal, State, and Local Taxes .....            | 14 |
| 26. | Governing Law .....                              | 14 |
| 27. | Government-Wide Debarment and Suspension .....   | 14 |
| 28. | Indemnification .....                            | 15 |
| 29. | Independent Contractor .....                     | 15 |
| 30. | Inspection of Construction.....                  | 15 |
| 31. | Interest of Public Officials.....                | 16 |
| 32. | Interest on Contractor Indebtedness.....         | 16 |
| 33. | Invoicing and Payment.....                       | 16 |
| 34. | Layout of Work .....                             | 17 |
| 35. | Licenses and Permits.....                        | 17 |
| 36. | Material and Workmanship .....                   | 17 |
| 37. | No Damages for Delay.....                        | 17 |
| 38. | Notice of Labor Disputes.....                    | 18 |
| 39. | Notice to Proceed.....                           | 18 |
| 40. | Operations and Storage Areas .....               | 18 |
| 41. | Order of Precedence.....                         | 18 |
| 42. | Other Contracts .....                            | 18 |
| 43. | Compliance with Public Records Law .....         | 18 |
| 44. | Ownership of Information .....                   | 19 |
| 45. | Examination and Retention of Records .....       | 19 |
| 46. | Payments .....                                   | 20 |
| 47. | Performance and Payment Bonds .....              | 21 |
| 48. | Permits and Responsibilities .....               | 21 |
| 49. | Prohibited Interest .....                        | 21 |
| 50. | Prompt Payment .....                             | 21 |
| 51. | Protection of Authority Property .....           | 21 |
| 52. | Protection of Existing Site Conditions .....     | 21 |
| 53. | Publicity Releases.....                          | 22 |
| 54. | Removal of Contract Personnel .....              | 22 |
| 55. | Royalties and Patents .....                      | 22 |



|  |    |
|--|----|
| 56. Seasonal Weather Conditions .....                          | 22 |
| 57. Severability.....  | 22 |
| 58. Site Investigation and Conditions Affecting the Work ..... | 22 |
| 59. Specifications and Drawings .....                          | 23 |
| 60. Soliciting or Accepting Gifts .....                        | 24 |
| 61. Standards of Performance .....                             | 24 |
| 62. Subcontractors .....                                       | 24 |
| 63. Superintendence by Contractor .....                        | 24 |
| 64. Subcontractors and Outside Consultants .....               | 24 |
| 65. Suspension of Work.....                                    | 25 |
| 66. Termination .....  | 25 |
| 67. Time Extensions.....                                       | 25 |
| 68. Title to Submittals.....                                   | 26 |
| 69. Use and Possession Prior to Completion .....               | 26 |
| 70. Variation in Estimated Quantity.....                       | 26 |
| 71. Warranty of Construction .....                             | 26 |
| 72. Wage Rates .....   | 27 |

## 1. Definitions

As used throughout this contract, the following terms shall have the meaning set forth below:

(a) The term "the Authority" means the Pinellas Suncoast Transit Authority or PSTA; and the term "duly authorized representative" means any person or persons or board (other than the Contracting Officer) authorized in writing to act for the Authority.

(b) The term "Contracting Officer" means the person executing this contract on behalf of the Authority or his duly appointed successor; and the term includes, except as otherwise provided in this contract, the authorized representative of the Contracting Officer acting within the limits of his authority.

(c) Except as otherwise provided in this contract, the term "subcontracts" includes purchase orders under this contract.

(d) In computing any period of time established under this contract, "days" means calendar days, and the day of the event from which the designated period of time begins to run shall not be included, but the last day shall be included unless it is a Saturday, Sunday, or Federal or State of Florida holiday, in which event the period shall run to the end of the next business day.

## 2. Accident Prevention

(a) In performing this contract, the Contractor shall provide for protecting the lives and health of employees and other persons; preventing damage to property, materials, supplies, and equipment; and avoiding work interruptions. For these purposes, the Contractor shall: (1) provide appropriate safety barricades, signs, and signal lights; (2) comply with all safety standards required by federal, state, or local law and any additional standards customarily employed in connection with the type of work being performed or the conditions at the site; and (3) ensure that any additional measures the Contracting Officer determines to be reasonably necessary for this purpose are taken.

(b) The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. The Contractor shall report this data in the manner prescribed by the Contracting Officer.

(c) The Contracting Officer shall notify the Contractor of any noncompliance with these requirements and of the corrective action required. This notice, when delivered to the Contractor or the Contractor's representative at the site of the work, shall be deemed sufficient notice of the noncompliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to take corrective action promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not base any claim or request for equitable adjustment for additional time or money on any stop order issued under these circumstances.

(d) The Contractor shall be responsible for its subcontractors' compliance with this clause.

### **3. Additional Bond Security**

The Contractor shall promptly furnish additional security required to protect the Authority and persons supplying labor or materials under this contract if --

- (a) any surety upon any bond furnished with this contract becomes unacceptable to the Authority;
- (b) any surety fails to furnish reports on its financial condition as required by the Authority; or
- (c) the contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer.

### **4. Administrative Control of Documents**

Contractor correspondence, transmittal letters, etc., forwarded to the Authority and associated with this contract shall be sequentially numbered by the Contractor prior to submission to the Authority for ease of control and cross referencing. Correspondence shall also refer to the contract number identified on the cover sheet of this contract. Correspondence shall be addressed to the appropriate Authority representative, and if it is addressed to any other individual other than the Contracting Officer, a copy of the correspondence shall be provided by the Contractor to the Contracting Officer also.

### **5. Compliance with Public Records Law**

- (a) If the contractor has questions regarding the application of Chapter 119, Florida Statutes, to the Contractor's Duty to provide public records relating to this contract, contact the Custodian of Public Records at 727-540-1806, [records@PSTA.net](mailto:records@PSTA.net), Pinellas Suncoast Transit Authority, ATTN; Public Records Dept, 3201 Scherer Drive, St. Petersburg, FL 33716
- (b) Contractor agrees in accordance with Florida Statute Section 119.0701 to comply with public records laws, specifically to keep and maintain public records required by the public agency to perform the service.
- (c) Upon request from the public agency's custodian of public records, provide the public agency 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 this chapter or as otherwise provided by law.
- (d) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the records to the public agency.
- (e) Upon completion of the contract, transfer, at no cost, to the public agency all public records in possession of the Contractor or keep and maintain public records required by the public agency to perform the service. If the Contractor transfers all public records to the public agency upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the public agency, upon request from the public agency's custodian of public records, in a format that is compatible with the information technology systems of the public agency.
- (f) A request to inspect or copy public records relating to a public agency's contract for services must be made directly to the public agency. If the public agency does not possess the requested records, the public agency shall immediately notify the contractor of the request, and the contractor must provide the records to the public agency or allow the records to be inspected or copied within a reasonable time.
- (g) If a contractor does not comply with the public agency's records request for records, the public agency shall enforce the contract provisions in accordance with the contract.
- (h) A contractor who fails to provide the public records to the public agency within a reasonable time may be subject to penalties under s. 119.10.

(i) (a) If a civil action is filed against a contractor to compel production of public records relating to a public agency's contract for services, the court shall assess and award against the contractor the reasonable costs of enforcement, including reasonable attorney fees, if:

(j) The court determines that the contractor unlawfully refused to comply with the public records request within a reasonable time; and

(k) At least 8 business days before filing the action, the plaintiff provided written notice of the public records request, including a statement that the contractor has not complied with the request, to the public agency and to the contractor.

(l) A notice complies with subparagraph (a)2. if it is sent to the public agency's custodian of public records and to the contractor at the contractor's address listed on its contract with the public agency or to the contractor's registered agent. Such notices must be sent by common carrier delivery service or by registered, Global Express Guaranteed, or certified mail, with postage or shipping paid by the sender and with evidence of delivery, which may be in an electronic format.

(m) A contractor who complies with a public records request within 8 days after the notice is sent is not liable for the reasonable costs of enforcement.

## **6. Assignment**

The Contractor shall not assign the whole or any part of this contract or any monies due or to become due hereunder without the prior written consent of the Contracting Officer. In addition, any and all successors or assigns of the contractor whether by sale or merger or otherwise shall be approved in writing by PSTA prior to working on this contract.

## **7. Change of Name.**

When a contractor requests to change the name in which it holds a contract with the Authority, the Contracting Officer shall, upon receipt of a document indicating such change of name (for example, an amendment to the articles of incorporation of the corporation), enter into an agreement with the requesting contractor to effect such a change of name. The agreement changing the name shall specifically indicate that no other terms and conditions of the contract are thereby changed.

## **8. Authority's Right to Carry Out the Work**

If the Contractor fails or refuses to carry out all or any part of the work in accordance with the contract requirements or within the contract schedule and fails or refuses to correct such deficiency within seven days of receipt of written notice thereof from the Authority, the Authority, in its sole discretion and without waiving any other rights it may have, may elect to correct such deficiencies and charge the Contractor the cost of such corrections. Nothing in this clause shall relieve the Contractor of its obligation to perform the remainder of the work in accordance with the contract.

## **9. Change Order Accounting**

In the event an equitable adjustment under the General Provision clause entitled "Changes" as supplemented by the General Provision entitled "Equitable Adjustment" cannot be agreed to in a timely manner, the Contracting Officer may issue a change order and require change order accounting. The Contractor for each change or series of related changes, shall maintain separate accounts, by job order or other suitable accounting procedure, of all incurred, segregable, direct costs (less allocable credits) of work, both changed and not changed, allocable to the change. The Contractor shall maintain such accounts until the parties agree to an equitable adjustment for the changes ordered by the Contracting Officer or the matter is conclusively disposed of in accordance with the "Disputes" clause.

## **10. Changes**

(a) The Contracting Officer may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes:

(1) in the specifications (including drawings and designs);

(2) in the method or manner of performance of the work;

(3) in the facilities, equipment, materials, services, or site to be furnished by the Authority; or

(4) directing acceleration in the performance of the work.

(b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change in the Contractor's obligations shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating (1) the date, circumstances, and source of the order and (2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for a "proposal for adjustment" (hereafter referred to as proposal) based on defective specifications, no proposal for any change under paragraph (b), above, shall be allowed for any costs incurred more than 20 days before the Contractor gives written notice as required. In the case of defective specifications for which the Authority is responsible, the equitable adjustment shall include the increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must submit any proposal under this clause within 30 days after (1) receipt of a written change order under paragraph (a), above, or (2) the furnishing of a written notice under paragraph (b), above, by submitting to the Contracting Officer a written statement describing the general nature and amount of the proposal, unless this period is extended by the Authority. The proposal may be included in the notice under paragraph (b), above.

(f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

## **11. Civil Rights**

(a) Nondiscrimination - In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12132, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

(b) Equal Employment Opportunity.

(1) Race, Color, Creed, National Origin, Sex - In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(2) Age - In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. § § 623 and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(3) Disabilities - In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity

Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(c) The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

## **12. Cleaning Up**

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Authority. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

## **13. Compliance with the Law**

The Contractor shall perform all work hereunder in compliance with all applicable federal, state, and local laws and regulations. The Contractor shall use only licensed personnel to perform work required by law to be performed by such personnel.

## **14. Composition of Contractor**

If the Contractor hereunder is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.

## **15. Construction Schedule**

(a) Promptly after contract award, the Contractor shall meet with the Contracting Officer to discuss project scheduling and, at that meeting, shall submit a practicable schedule showing the order in which the Contractor proposes to perform the work and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a network analysis of suitable scale to indicate appropriately the percentage of the Contractor's work breakdown schedule which will be completed by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the schedule as directed by the Contracting Officer and, upon doing so, immediately shall deliver a copy of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Authority. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the terms of this contract.

## **16. Differing Site Conditions**

(a) The Contractor shall promptly, and before the conditions are disturbed, give written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed unless the Contractor has given the written notice required; provided, that the time prescribed in (a), above, for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

## **17. Resolution of Contract Claims and Disputes**

(a) Claims and Disputes Authority to Resolve. All claims or disputes by a Contractor against the Authority relating to a contract shall be submitted in writing to the designated Contracting Officer of the Procurement Department for a determination.

(b) Definition. Claims and disputes include controversies arising under a Contract and those based upon breach of contract, mistake, misrepresentation or other cause of contract modification, termination or rescission.

(c) Notice of Claim or Dispute. The Contractor shall submit a Notice of Claim or Dispute in writing within ten (10) days of issue giving rise to claim or dispute. The date of the issue shall include when the contractor knew of the issue or should have known of the issue that gave rise to the claim or dispute.

(d) Notice Requirements. The Notice of Claim or Dispute shall include at a minimum:

- (1) the Notice of Claim or Dispute shall be titled "Notice of Contract Claim or Notice of Contract Dispute";
- (2) name and address of the contractor;
- (3) name of the attorney and firm representing contractor, if applicable;
- (4) identification of the contract; and
- (5) Reasons for the claim or dispute.

(e) Failure to timely submit Notice. Failure to submit the Notice of Claim or Dispute within ten (10) days of the issue that gave rise to the dispute or claim will result in the claim or dispute being rejected by the Authority without further consideration. The date of the issue shall include when the contractor knew of the issue or should have know of the issue that gave rise to the claim or dispute.

(f) Delivery. A Notice of Claim or Dispute shall be sent via hand delivery or certified mail. **Electronic forms of delivery are not an acceptable means of delivery.** The contractor is solely responsible for verifying that the Notice of Claim or Dispute was received in a timely manner. Notice of Claim or Dispute should be addressed to:

Pinellas Suncoast Transit Authority  
Attention: Chief Executive Officer  
3201 Scherer Drive  
St. Petersburg, Florida 33716

(g) Timeline for Formal Written Claim or Dispute. The Formal Written Claim or Dispute shall be filed within seven (7) days after the date the Notice of Claim or Dispute is timely filed. Failure to submit the Formal Written Claim or Dispute within seven (7) days will result in the Claim or Dispute being rejected by the Authority without further consideration.

(h) Written Claim or Dispute Requirements. The Formal Written Claim or Dispute shall include at a minimum:

- (1) the Formal Written Claim or Dispute shall be titled "Formal Written Contract Claim or Dispute";
- (2) name and address of the contractor;
- (3) name of the attorney and firm representing contractor, if any;
- (4) identification of the solicitation;

(5) reason(s) for the claim or dispute;

(6) requested relief;

(7) the claim or dispute must demonstrate how the contractor has been aggrieved as a result of the Authority's decision and shall include the facts, argument(s), and the law upon which the claim or dispute is made;

(8) documents to substantiate the basis or ground for the claim or dispute.

(i) No further consideration. Any documents, basis or ground(s) for the claim or dispute not set forth or provided in the formal written contract claim or dispute required under this provision shall be deemed waived.

(j) Written determination. The Contracting Officer shall issue a decision in writing within ten (10) days of the hearing of Claim or Dispute and shall mail to the contractor. The decision shall state the reasons for the decision reached.

(k) Administrative Remedies. This process is considered to be an administrative remedy and all contractors agree to exhaust their administrative remedies under the Authority policies prior to seeking judicial relief of any type in connection with any matter related to the suspension or debarment.

## **18. Appeal of Contract Claims or Disputes**

(a) Appeal. The Contracting Officer's decision shall be final and conclusive unless within five (5) days of receipt of the decision the contractor delivers a written appeal to the CEO or CEO's designee.

(b) Requirements of the Appeal. The Formal Written Appeal of the Claim or Dispute shall include at a minimum:

(1) the Formal Written Appeal shall be titled "Formal Written Appeal of the Contract Claim or Dispute";

(2) name and address of the contractor;

(3) name of the attorney and firm representing contractor, if any;

(4) identification of the solicitation;

(5) reason(s) for the appeal;

(6) requested relief;

(7) the Appeal of the claim or dispute must demonstrate how the contractor has been aggrieved as a result of the Authority's decision and shall include the facts, argument(s), and the law upon which the appeal is made; and

(8) documents to substantiate the basis or ground for the claim or dispute.

(c) Delivery of Appeal. Notice of Appeal of a Claim or Dispute under this Subsection shall be sent via hand delivery or certified mail. **Electronic forms of delivery are not an acceptable means of delivery.** The claimant is solely responsible for verifying that the written protest was received in a timely manner. Written protests should be addressed to:

Pinellas Suncoast Transit Authority

Attention: Chief Executive Officer

3201 Scherer Drive

St. Petersburg, Florida 33716

(d) Failure to submit a timely Appeal. Failure to submit the Appeal within five (5) days of the receipt of the determination will result in the appeal being rejected by the Authority without further consideration.

(e) Review of Appeal. The CEO or CEO's designee may review the Appeal or may refer to Binding Arbitration for review and determination of the decision by the Contracting Officer at CEO or CEO designee's sole discretion.

(f) Opportunity to be Heard. The CEO, CEO's designee or Arbitrator shall provide the appellee and Authority with an opportunity to be heard on the appeal.

(g) Arbitration. If the matter is referred to Binding Arbitration, the parties shall select a neutral arbitrator by agreement or striking from a selection panel. Both parties shall be given an opportunity to be heard. The Arbitrator shall render a written decision within thirty (30) days of the hearing. The prevailing party shall be entitled to all costs and fees associated with Arbitration. The decision of the Arbitrator shall be final.

(h) Administrative Remedies. This process is considered to be an administrative remedy and all contractors agrees to exhaust its administrative remedies under the Authority policies prior to seeking judicial relief of any type in connection with any matter related to the contract claim or contract dispute.

#### **19. Disputes - Mediation and Arbitration**

(a) The Contractor agrees to use good faith efforts to resolve all disputes. In the event the parties are unable to resolve any dispute relating to the contract, such dispute may be submitted to voluntary mediation or binding, self-administered arbitration pursuant to the Commercial Arbitration Rules of the American Arbitration Association ("AAA") as agreed to by the parties. A single mediator or arbitrator may be selected by the parties within thirty days of a written demand for mediation or arbitration. Demand for mediation or arbitration may be made within a reasonable time after the dispute has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such dispute would be barred by the applicable statute of limitations. If the parties cannot agree on the mediator or arbitrator, then either party may file a motion or application with the Chief Judge (or Acting Chief Judge) of the court with jurisdiction to appoint either a mediator or an arbitrator. Any mediator or arbitrator chosen shall be a disinterested party with knowledge of the industry. The mediator or arbitrator shall construe this contract in accordance with the laws of the State of Florida. Venue for mediation or arbitration shall be Pinellas or Hillsborough County, Florida. Any expenses incurred in connection with hiring the mediator and the administrative costs of the mediation shall be shared and paid equally between the Parties.

(b) If arbitration is elected, the arbitrator's reasoned opinion shall be in writing, separately and specifically stating the findings of fact and conclusions of law on which the decision is based, and shall be rendered within ninety (90) days following selection of the arbitrator unless the parties mutually agree to extend said time. Each party shall be entitled to reasonable discovery in accordance with the Federal Rules of discovery. Only damages allowed pursuant to the contract may be awarded and the arbitrator shall have no authority to award treble, exemplary or punitive damages of any type under any circumstances regardless of whether such damages may be available under Florida law. The decision of the arbitrator shall be final and non-appealable. Any expenses incurred in connection with hiring the arbitrator and the administrative costs of the arbitration shall be shared and paid equally between the parties. If the parties do not agree to mediate or arbitrate the disputes, the parties may avail themselves of any other action available by law.

#### **20. Drug-Free Workplace Program**

(a) As used in this clause:

(1) "Alcohol" means ethyl alcohol and any beverage containing ethyl alcohol.

(2) "Controlled substance(s)" means, but are not limited to, marijuana, heroin, LSD, concentrated cannabis or cannabinoids, hashish or hash oil, morphine or its derivatives, mescaline, peyote, phencyclidine (PCP, Angel Dust), opium, opiates, methadone, cocaine, qualudes, amphetamines, "exotic/designer" drugs, benzodiazepines, Seconal, codeine, barbiturates, phenobarbital, or Valium.

(3) "Safety sensitive task" means each category of work performed at a construction workplace which, if performed by a person impaired by the effects of alcohol or a controlled substance:

(i) would pose a serious risk of death or personal injury to the employee or others in the vicinity; or

(ii) could compromise the quality of the construction in such manner as would impose a significant public safety risk in the operation of the Authority's public transportation system.

(4) "Drug-free workplace" means a site for the performance of work done in connection with the Authority's construction contract at which employees are prohibited from using alcohol or from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.



(5) "Employee" means an employee of a Contractor or subcontractor who may be directly engaged in the performance of work under the Authority's construction contract.

(6) "Reasonable suspicion" means the presence or absence of specific criteria identified in the Contractor's drug-free workplace program (indicating the possibility that a person is under the influence of alcohol or a controlled substance) as observed by the Contractor's supervisory personnel with reasonable training in the identification of such criteria.

(b) The program shall provide for mandatory drug testing of employees who are to perform safety sensitive tasks under the following circumstances:

(1) All employees will be tested prior to assignment to the Authority's construction project to ascertain the use of controlled substances if the employee will be performing safety sensitive tasks; and

(2) When there is a reasonable suspicion that an employee is under the influence of alcohol or a controlled substance at the workplace; and

(3) When an employee has been involved in an accident or unsafe practice (as defined in the Contractor's safety program) at the workplace.

(c) The program may, at the Contractor's discretion, include mandatory employee drug testing under the following circumstances:

(1) As part of or as a follow-up to counseling or rehabilitation for controlled substance use; or

(2) As part of a voluntary employee drug testing program.

(d) A random testing procedure to detect the use of alcohol or a controlled substance by employees performing safety sensitive tasks is required as part of the Contractor's program for the purpose of preventing or deterring hazardous performance. The procedure shall require that, at a minimum, five percent (5%) of the Contractor's employees will be randomly tested within the contract period or within each year of the contract period, whichever period is shorter.

(e) All testing by or on behalf of the Contractor because of a requirement in the Authority's contract shall be conducted only for employees engaged (or to be engaged) in safety sensitive tasks and only for use of alcohol or a controlled substance and shall be conducted in a manner and under written policies that minimize the intrusion on the employee's privacy and personal dignity. This provision shall not preclude the Contractor from adding its own additional testing requirements.

(f) The Contractor shall publish a statement notifying employees that the use of alcohol at the workplace or the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance by employees at any time is prohibited and specifying the actions that will be taken against employees for violations of such prohibition.

(g) The program must require each employee who will perform a safety sensitive task, prior to working under the Authority's contract to:

(1) Acknowledge in writing the Contractor's drug-free workplace program; and

(2) Give advance written consent to any drug testing that may be conducted under the Contractor's program and the use of test results for decisions related to employment, disciplinary action, or continued employment. The Contractor will agree, in connection with the employee's consent, that the results of testing for alcohol and controlled substances will not be voluntarily referred to any law enforcement agency. If the Contractor is subject to a collective bargaining agreement:

(i) the procedure for obtaining the individual employee's acknowledgment and consent must be consistent with the Contractor's obligations under the collective bargaining agreement; and

(ii) employees shall have the right to be accompanied by a union representative when any specimen is obtained for testing.

(h) The Contractor will establish a drug-free awareness program to inform its employees about:

- (1) The dangers of drug abuse in the workplace;
  - (2) The Contractor's policy of maintaining a drug-free workplace;
  - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
  - (4) The penalties that may be imposed upon employees who refuse to submit to required testing and for other violations of the drug-free workplace program including, but not limited to, being unable to remain employed at the workplace until approval to return is obtained from the Authority.
- (i) The Contractor's drug-free workplace program shall, at a minimum, include:
- (1) Policies and procedures for specimen collection, chain of custody for specimens, laboratory qualification standards, laboratory analysis procedures, quality control requirements, and test result reporting procedures which substantially conform to the material requirements of the Mandatory Guidelines for Federal Workplace Drug Testing Programs promulgated by the U.S. Department of Health and Human Services in effect on the date of award of the Authority's construction contract.
  - (2) Procedures for the Contractor's employees to report their use of prescription drugs used in the course of medical treatment or which have been prescribed and authorized for use by a licensed medical practitioner.
  - (3) The criteria the Contractor will use for "reasonable suspicion" testing.
  - (4) The levels of alcohol or controlled substances which will be used in conjunction with a determination that an employee is "under the influence" or is "impaired by the effects of" alcohol or controlled substance(s).
- (j) The Contractor shall display a notice, prominently placed near each entrance to the workplace, stating that, by entering the premises, persons are consenting to an inspection of themselves and their property including, but not limited to, their clothing, vehicles, briefcases, lunch boxes, tool boxes, purses, and packages.
- (k) The Contractor agrees to use its best efforts to establish and maintain a work environment free of use by employees of alcohol or controlled substances through implementation of paragraphs (b) through (j) of this clause. The Contractor shall prepare and maintain records in sufficient detail to demonstrate compliance with the requirements of this clause including, but not limited to, certifications from subcontractors and records of drug or alcohol tests conducted during performance of the contract. Such records shall be subject to inspection and audit by the Authority, and the Contractor's noncompliance may authorize the Authority to withhold all or any portion of any payments due the Contractor until the Contractor demonstrates compliance.
- (l) A Drug-Free Workplace Program clause identical to this clause (except for changes appropriate for designation of the parties), including this subparagraph (l), will be included in every subcontract entered into in connection with this contract.

## **21. Equitable Adjustments**

- (a) The provisions of the "Changes" clause in the General Provision are supplemented as follows:
- (1) Upon written request, the Contractor shall submit a proposal, in accordance with the requirements and limitations set forth in the "Equitable Adjustments" clause, for work involving contemplated changes covered by the request. The proposal shall be submitted within the time limit indicated in the request for any extension of such time limit as may be subsequently granted. The Contractor's written statement of the monetary extent of a claim for equitable adjustment shall be submitted in the following form:
    - (i) Proposals totaling \$5,000 or less shall be submitted in the form of a lump sum proposal with supporting information to clearly relate elements of cost with specific items of work involved to the satisfaction of the Contracting Officer, or his/her authorized representative.
    - (ii) For proposals in excess of \$5,000, the claim for equitable adjustment shall be submitted in the form of a lump sum proposal supported with an itemized breakdown of all increases and decreases in the contract. The itemized breakdown shall, at the least, include the items specified in subparagraph (a)(2), below.
  - (2) Calculation of Direct Costs

- (i) Material quantities by trades and unit costs. (Manufacturing burden associated with material fabrication performed will be considered to be part of the material costs of the fabricated item delivered to the job site.)
- (ii) Labor breakdown by trades and unit costs. (Identified with specific item of material to be placed or operation to be performed.)
- (iii) Construction equipment exclusively necessary for the change.
- (iv) Costs of preparation and/or revision to shop drawings resulting from the change.
- (v) Employment taxes under FICA and FUTA.
- (vi) Bond Costs -- when size of change warrants revision.

(3) Calculation of Overhead, Profit and Commission

(i) The allowable overhead shall be determined in accordance with the public contracting cost principles and procedures but in no case shall exceed the following. The percentages for profit and commission shall be negotiated and may vary according to the nature, extent and complexity of the work involved, but in no case shall exceed the following:

|   | OVER-<br>HEAD (%) | PROFI<br>T<br>(%) | COMMIS<br>-<br>SION (%) |
|---|-------------------|-------------------|-------------------------|
| TO CONTRACTOR ON THE WORK PERFORMED BY OTHER THAN HIS OWN WORKFORCE   | 0                 | 0                 | 10                      |
| TO THE FIRST TIER SUBCONTRACTOR ON WORK PERFORMED BY HIS SUBCONTRACTORS   | 0                 | 0                 | 10                      |
| TO CONTRACTOR AND/OR THE SUBCONTRACTORS FOR THAT PORTION OF THE WORK PERFORMED WITH THEIR RESPECTIVE WORKFORCES | 15                | 10                | 0                       |

(ii) The Contractor or any subcontractor at any tier shall not be allowed any commission on the allowable profit or commission of any lower-tiered subcontractor. Equitable adjustments for deleted work shall include credits for overhead, profit and commission. On proposals covering both increases and decreases in the amount of the contract, the application of overhead and profit shall be on the net change in direct costs for the Contractor or subcontractor performing the work.

- (4) The Contractor shall submit with the proposal its request for time extension (if any), and shall include sufficient information and dates to demonstrate whether and to what extent the change will delay the contract in its entirety.
- (5) In considering a proposal, the Authority shall check estimates in detail, utilizing unit prices where specified or agreed upon, with a view to arriving at an equitable adjustment.
- (6) After receipt of a proposal the Contracting Officer shall act thereon. If the necessity to proceed with a change does not allow time properly to check a proposal, the change cannot be reasonably estimated, or in the event of a failure to reach an agreement on a proposal, the Authority may order the Contractor to proceed on the basis of price to be determined at the earliest practicable date. If appropriate, the contractor may be required to proceed in accordance with General Provision entitled Change Order Accounting (commonly referred to as Force Account or Time and Materials).

(7) If a mutually acceptable agreement cannot be reached, the Contracting Officer may determine the price unilaterally, subject to the "Disputes" clause of the General Provisions.

(b) The provisions of the "Differing Site Conditions" clause prescribed by the General Provisions, are supplemented as follows: The Contractor shall submit all claims for equitable adjustment in accordance with, and subject to the requirements and limitations set out in paragraph (a) of this "Equitable Adjustments" clause.

## **22. Examination and Retention of Records**

(a) The Contracting Officer and his representatives shall have the audit and inspection rights described in the applicable paragraphs (b) and (c), below.

(b) If this is a cost reimbursement type, incentive, time and materials, labor hour, or price redeterminable contract, or any combination thereof, the Contractor shall maintain, and the Contracting Officer and his representatives shall have the right to examine, all books, records, documents, and other evidence and accounting procedures and practices sufficient to reflect properly all direct and indirect costs of whatever nature claimed to have been incurred and anticipated to be incurred for the performance of this contract. Such right of examination shall include inspection at all reasonable times at the Contractor's plants, or such parts thereof, as may be engaged in or maintain records in connection with the performance of this contract.

(c) If the Contractor submitted certified cost or pricing data in connection with the pricing of this contract or if the Contractor's cost of performance is relevant to any change or modification to this contract, the Contracting Officer and his representatives shall have the right to examine all books, records, documents, and other data of the Contractor related to the negotiation, pricing, or performance of such contract, change, or modification for the purpose of evaluating the costs incurred and the accuracy, completeness, and currency of the cost or pricing data submitted. The right of examination shall extend to all documents necessary to permit adequate evaluation of the costs incurred and the cost or pricing data submitted, along with the computations and projections used therein.

(d) The materials described in (b) and (c), above, shall be made available at the office of the Contractor at all reasonable times for inspection, audit, or reproduction until the expiration of three (3) years from the date of final payment under this contract, except that: (1) if this contract is completely or partially terminated, the records relating to the work terminated shall be made available for a period of three (3) years from the date of any final settlement; and (2) records which relate to appeals under the Disputes Clause of this contract or litigation, or the settlement of claims arising out of the performance of this contract, shall be made available until such appeals, litigation, or claims have been resolved.

(e) The Contractor shall insert a clause containing all the provisions of this clause, including this paragraph (e), in all subcontracts exceeding \$10,000 hereunder, altered to reflect the proper identification of the contracting parties and the Contracting Officer under the prime contract.

## **23. Examination of Bid Documents**

The Authority shall have the right to examine and review the Contractor's original bid and estimating documents used in preparing its bid as a reference to aid in the Authority's evaluation of the Contractor's scheduling and construction progress. A certified copy of such documents shall be submitted to the Authority if requested by the Contracting Officer. The Authority shall maintain in confidence all information contained in such bid and estimating documents. It is the Authority's position that the Contractor's estimating documents in support of its original bid are exempt from mandatory release prior to award of contract under Florida State law. After award, the documents would require individual review to determine whether or not an exemption from release under Florida State law.

## **24. Excusable Delays**

(a) Except for defaults of subcontractors at any tier, the Contractor shall not be in default because of any failure to perform this contract under its terms if the failure arises from causes beyond the control and without the fault or negligence of the Contractor. Examples of these causes are (1) acts of God or of the public enemy, (2) acts of the Authority in either its sovereign or contractual capacity, (3) fires, (4) floods, (5) epidemics, (6) quarantine restrictions, (7) strikes, (8) freight embargoes, and (9) unusually severe weather. In each instance, the failure to perform must be beyond the control and without the fault or negligence of the Contractor. "Default" includes failure to make progress in the work so as to endanger performance.

(b) If the failure to perform is caused by the failure of a subcontractor at any tier to perform or make progress, and if the cause of the failure was beyond the control of both the Contractor and subcontractor and without the fault or negligence of either, the Contractor shall not be deemed to be in default, unless –

- (1) the subcontracted supplies or services were obtainable from other sources;
- (2) the Contracting Officer ordered the Contractor in writing to purchase these supplies or services from the other source; and
- (3) the Contractor failed to comply reasonably with this order.

(c) Upon request of the Contractor, the Contracting Officer shall ascertain the facts and extent of the failure. If the Contracting Officer determines that any failure to perform results from one or more of the causes above, the delivery schedule shall be revised, subject to the rights of the Authority under the Termination Clause of this contract.

## **25. Federal, State, and Local Taxes**

The contract price includes all applicable federal, state, and local taxes and duties. The Authority is exempt from Florida state and local sales and use taxes, and any such taxes included on any invoice or voucher received by the Authority shall be deducted from the amount of the invoice or voucher for purposes of payment.

## **26. Governing Law**

(a) The work done by the selected contractor in response to the request for proposals shall be in complete compliance with all applicable Federal, State and Local Laws and their respective rules and regulations. This compliance shall be at the Contractor's expense.

(b) Jurisdiction and venue for any legal action arising out of this contract and between the parties hereto shall be in Pinellas or Hillsborough County, Florida. The law governing any dispute between the parties to this contract shall be the law of the State of Florida except insofar as the dispute, or a part thereof, is subject to Federal Law by pre-emption.

(c) In the event that the contractor is domiciled in a country other than the United States or is a controlled subsidiary of a company which is domiciled in a country other than the United States and in the future event that any litigation should arise between the parties respecting any matter of fact or law that is international in nature, the venue of litigation with regard thereto shall be in the courts of the State of Florida or the United States of America, located in the State of Florida, County of Pinellas or Hillsborough.

(d) Whenever there is no applicable state statute or decisional precedent governing the interpretation of, or disputes arising under or related to, this contract, then federal common law, including the law developed by federal boards of contract appeals, the United States Claims Court (formerly the Court of Claims), and the Comptroller General of the United States, shall govern. This is the complete agreement between the parties. If any provision of the contract is found to be invalid or unenforceable, the remaining provisions shall not be impaired.

## **27. Government-Wide Debarment and Suspension**

(e) This contract is a covered transaction for purposes of 49 CFR Part 29. As such, the contractor is required to verify that none of the contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945.

(f) The Contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into.

(g) By signing and submitting its bid or proposal, the proposer or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by the Pinellas Suncoast Transit Authority. If it is later determined that the proposer or proposer knowingly rendered an erroneous certification, in addition to remedies available to the Pinellas Suncoast Transit Authority, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

**28. Indemnification**

(a) It is expressly agreed that the first five dollars of the amount to be paid the Contractor pursuant to this contract is given as separate consideration for the following covenant of indemnification: The Contractor agrees to be responsible for, and assume the defense of and indemnify and hold harmless PSTA, its officers and employees, except for the sole negligence of PSTA, from all claims, demands, judgments, liability, loss, damage, including attorney's fees or injuries of every kind, including patent infringements, resulting directly or indirectly from the performance of, or the failure to perform, the work by the Contractor or by any person, firm, or corporation to whom any portion of the work is subcontracted by the Contractor, or resulting from the use of any tools, machinery, or other property of PSTA.

(b) In any litigation or arbitration, including appellate proceedings, arising out of or relating to this contract, the prevailing party shall be entitled to recover reasonable attorney fees and costs.

**29. Independent Contractor**

The Contractor at all times shall be an independent contractor. The Contractor shall be fully responsible for all acts and omissions of its employees, subcontractors, and their suppliers, and shall be specifically responsible for sufficient supervision and inspection to ensure compliance in every respect with the contract requirements. There shall be no contractual relationship between any subcontractor or supplier of the Contractor and the Authority by virtue of this contract. No provision of this contract shall be for the benefit of any party other than the Authority and the Contractor.

**30. Inspection of Construction**

(a) The word "work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work called for by this contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Authority. All work shall be conducted under the general direction of the Contracting Officer and is subject to inspection and testing by the Authority at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Inspections and tests by the Authority are for the sole benefit of the Authority and do not: (1) relieve the Contractor of responsibility for providing adequate quality control measures; (2) relieve the Contractor of responsibility for damage to or loss of the material before acceptance; (3) constitute or imply acceptance; or (4) affect the continuing rights of the Authority after acceptance of the completed work under paragraph (i) below.

(d) The presence or absence of an inspector from the Authority does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specifications without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Authority may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The Authority shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Authority not to conform to contract requirements, unless in the public interest the Authority consents to accept the work with an appropriate downward adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Authority may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Authority decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its

subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Authority shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Subject to the provisions of the "Warranty of Construction" clause hereof, acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Authority's rights under any warranty or guarantee.

### **31. Interest of Public Officials**

The Contractor represents and warrants that no employee, official, or member of the Board of the Authority is or will be pecuniarily interested or benefited directly or indirectly in this contract. The Contractor further represents and warrants that it has not offered or given gratuities (in the form of entertainment, gifts or otherwise) to any employee, official, or member of the Board of the Authority with a view toward securing favorable treatment in the awarding, amending, or evaluating the performance of this contract. For breach of any representation or warranty in this clause, the Authority shall have the right to annul this contract without liability and/or have recourse to any other remedy it may have at law.

### **32. Interest on Contractor Indebtedness**

(a) Notwithstanding any other clause of this contract, all amounts that become payable by the Contractor to the Authority under this contract shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid. In no event shall the interest charged or payable hereunder exceed that allowable under Florida law.

(b) Amounts shall be due at the earliest of the following dates: (1) the date fixed under this contract; (2) the date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination; (3) the date the Authority transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt (unless a later date is set forth therein); or (4) if this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.

### **33. Invoicing and Payment**

(a) The Contractor may offer a cash discount for prompt payment.

(b) Invoices may be submitted once per month and shall conform to policies or regulations adopted from time to time by the Authority. Invoices shall be legible and shall contain, as a minimum, the following information: (1) the contract and order number (if any); (2) a complete itemization of all costs including quantities ordered and delivery order numbers (if any); (3) any discounts offered to the Authority under the terms of the contract; (4) evidence of the acceptance of the supplies or services by the Authority; (5) unique traceable invoice number(s); and (6) any other information necessary to demonstrate entitlement to payment under the terms of the contract. Failure to provide the above critical information may result in the rejection and return of the invoice for resubmission with complete data.

(c) Subject to the withholding provisions of the contract, payment shall be made within 45 days after the Authority's receipt of a properly prepared invoice.

(d) Invoices shall be paid within forty five (45) days of the Authority's receipt of a proper invoice. To ensure timely processing of payments, all invoices must be sent to the following address:

Pinellas Suncoast Transit Authority (PSTA)  
Attn: Accounts Payable  
3201 Scherer Drive  
St. Petersburg, FL 33716  
e-mail: AccountsPayable@PSTA.net

(e) Progress payments will be allowed where a determination of work performed can be verified by PSTA's Project Manager and where the schedule extends beyond a two-week period. PSTA reserves the right to hold back all or part of payments due until any defective work is corrected or cured. This holdback shall not constitute a breach by PSTA. If defective work cannot be cured or Contractor refuses to cure defective work upon request by PSTA within a reasonable time as specified herein, PSTA may use the holdback payments as partial liquidated damages for cost and expenses to cure the defective work. However, PSTA has the right to seek additional damages beyond the holdback payments to cure defective work caused by the Contractor to the extent allowed by law.

(f) The Contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 10 days from the receipt of each payment the prime contract receives from PSTA. The prime contractor agrees further to return retainage payments to each subcontractor within 10 days after the subcontractors work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of PSTA.

### **34. Layout of Work**

The Contractor shall lay out its work from Authority-established base lines and bench marks indicated on the drawings and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

### **35. Licenses and Permits**

The Contractor shall, without additional expense to the Authority, be responsible for obtaining any necessary licenses, permits, and approvals for complying with any federal, state, county, municipal, and other laws, codes, and regulations applicable to the performance of the work or to the products or services to be provided under this contract including, but not limited to, any laws or regulations requiring the use of licensed contractors to perform parts of the work.

### **36. Material and Workmanship**

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor also shall obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

### **37. No Damages for Delay**

Unless otherwise specifically provided for by the contract, the Contractor shall not be entitled to damages of any type resulting from hindrances, delays, or any other cause under this contract except when the work is stopped or suspended by a written order signed by the Contracting Officer or by intentional interference by the Authority.



**38. Notice of Labor Disputes**

(a) If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor immediately shall give notice, including all relevant information, to the Contracting Officer.

(b) The Contractor agrees to insert the substance of this clause, including this paragraph (b), in any subcontract under which a labor dispute may delay the timely performance of this contract; except that each subcontract shall provide that in the event its timely performance is delayed or threatened by delay by any actual or potential labor dispute, the subcontractor shall immediately notify the next higher tier subcontractor or the Contractor, as the case may be, of all relevant information concerning the dispute.

**39. Notice to Proceed**

The Contractor shall not proceed with any work required under this contract without a written Notice to Proceed from the Authority. Any work performed or expenses incurred by the Contractor prior to the Contractor's receipt of Notice to Proceed shall be entirely at the Contractor's risk.

**40. Operations and Storage Areas**

(a) The Contractor shall confine all operations (including storage of materials) on Authority premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Authority, and its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.

(b) Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Authority. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.

(c) The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any federal, state, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

**41. Order of Precedence**

In the event of any inconsistency between the provisions of the solicitation (including any resulting contract), the inconsistency shall be resolved by giving precedence in the following order: (a) the Schedule; (b) Special Solicitation Instructions and Conditions; (c) Solicitation Instructions and Conditions; (d) Special Provisions; (e) General Provisions; (f) other provisions of the contract whether incorporated by reference or otherwise; and (g) the specifications or statement of work.

**42. Other Contracts**

The Authority may undertake, or award other contracts for, additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with employees of the Authority and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by employees of the Authority.

**43. Compliance with Public Records Law**

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

(a) Keep and maintain public records that ordinarily and necessarily would be required by Authority.

- (b) Provide the public with access to public records on the same terms and conditions that Authority would provide the public records and at a cost that does not exceed the cost provided in Chapter 119 of the Florida Statutes 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.
- (d) Meet all requirements for retaining public records and transfer, at no cost, to Authority all public records in possession of Contractor upon termination of this Purchase Order and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to Authority in a format that is compatible with Authority information technology systems.
- (e) Failure of the Contractor to comply with these requirements shall be considered a material breach of this Contract.

#### **44. Ownership of Information**

(a) All data, technical information, materials gathered, originated, developed, prepared, used or obtained in the performance of the contract, including, but not limited to, all reports, surveys, plans, charts, literature, brochures, mailings, recordings (video and/or audio), pictures, drawings, analyses, graphic representations, software computer programs and accompanying documentation and print-outs, notes and memoranda, written procedures and documents, regardless of the state of completion, which are prepared for or are a result of the services required under this contract shall be and remain the property of the PSTA and shall be delivered to PSTA upon 30 days notice by PSTA. With respect to software computer programs and/or source codes developed for PSTA, the work shall be considered "work for hire", i.e., PSTA, not the contractor or subcontractor, shall have full and complete ownership of all software computer programs and/or source codes developed. To the extent that any of such materials may not, by operation of law, be a work made for hire in accordance with the terms of this contract, contractor or subcontractor hereby assigns to PSTA all right, title and interest in and to any copyright, and PSTA shall have the right to obtain and hold in its own name any copyrights, registrations and any other proprietary rights that may be available.

(b) Should the proposer anticipate bringing pre-existing intellectual property into the project, the intellectual property must be identified in the proposal. Otherwise, the language in the first paragraph of this section prevails. If the proposer identifies such intellectual property ("Background IP") in its proposal, then the Background IP owned by the proposer on the date of the contract, as well as any modifications or adaptations thereto, remain the property of the proposer. Upon contract award, the proposer or contractor shall grant PSTA a non-exclusive, royalty free license to use any of the proposer's/contractor's Background IP delivered to PSTA for the purposes contemplated by the contract.

#### **45. Examination and Retention of Records**

(a) The Contracting Officer and his representatives shall have the audit and inspection rights described in the applicable paragraphs (b) and (c), below.

(b) If this is a cost-reimbursement type, incentive, time and materials, labor hour, or price re-determinable contract, or any combination thereof, the Contractor shall maintain, and the Contracting Officer and his representatives shall have the right to examine, all books, records, documents, and other evidence and accounting procedures and practices sufficient to reflect properly all direct and indirect costs of whatever nature claimed to have been incurred and anticipated to be incurred for the performance of this contract. Such right of examination shall include inspection at all reasonable times at the Contractor's plants, or such parts thereof, as may be engaged in or maintain records in connection with the performance of this contract.

(c) If the Contractor submitted certified cost or pricing data in connection with the pricing of this contract or if the Contractor's cost of performance is relevant to any change or modification to this contract, the Contracting Officer and his representatives shall have the right to examine all books, records, documents, and other data of the Contractor related to the negotiation, pricing, or performance of such contract, change, or modification for the purpose of evaluating the costs incurred and the accuracy, completeness, and currency of the cost or pricing data submitted. The right of examination shall extend to all documents necessary to permit adequate evaluation of the costs incurred and the cost or pricing data submitted, along with the computations and projections used therein.

(d) The materials described in (b) and (c), above, shall be made available at the office of the Contractor at all reasonable times for inspection, audit, or reproduction until the expiration of three (3) years from the date of final payment under this contract, except that:

(1) if this contract is completely or partially terminated, the records relating to the work terminated shall be made available for a period of three (3) years from the date of any final settlement; and

(2) records which relate to appeals under the Disputes Clause of this contract or litigation, or the settlement of claims arising out of the performance of this contract, shall be made available until such appeals, litigation, or claims have been resolved.

(e) The Contractor shall insert a clause containing all the provisions of this clause, including this paragraph (e), in all subcontracts exceeding \$10,000 hereunder, altered to reflect the proper identification of the contracting parties and the Contracting Officer under the prime contract.

#### **46. Payments**

(a) The Authority shall pay the Contractor the contract price as provided in this contract.

(b) The Authority shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates approved by the Contracting Officer. If requested by the Contracting Officer, the Contractor shall furnish a breakdown of the total contract price showing the amount included therein for each principal category of the work, in such detail as requested, to provide a basis for determining progress payments. In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site may also be taken into consideration if consideration is specifically authorized by this contract and the Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) In making these progress payments, there shall be retained 10 percent of the estimated amount until final completion and acceptance of the contract work. However, if the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer may authorize payment to be made in full without retention of a percentage. When the work is substantially complete, the Contracting Officer shall retain an amount that the Contracting Officer considers adequate protection of the Authority and may release to the Contractor all or a portion of any excess amount. Also, on completion and acceptance of each separate building, public work, or other division of the contract for which the price is stated separately in the contract, payment may be made for the completed work without retention of a percentage.

(d) All materials and work covered by progress payments made shall, at the time of the payment, become the sole property of the Authority, but this shall not be construed as relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work, or waiving the right of the Authority to require the fulfillment of all of the terms of the contract.

(e) The Authority shall, upon request, reimburse the Contractor for the entire amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor furnishes evidence of full payment to the surety. Such reimbursement shall be part of, and not in addition to, the contract price.

(f) The Authority shall pay the amount due the Contractor under this contract after: (1) completion and acceptance of all work; (2) presentation of a properly executed voucher; and (3) presentation of a release of all claims against the Authority arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release.

(g) Concurrently with the submission of each request for a progress payment under this contract, the Contractor shall certify that all due and payable bills with respect to the contract work either have been paid or will be paid with the proceeds of the current request for progress payment.

(h) The Authority may withhold all or part of any progress payment otherwise due the Contractor if any one or more of the following conditions exist: (1) the Contractor fails to prosecute the work to completion in a diligent, efficient, timely, and workmanlike manner and in strict accordance with the provisions of the contract; (2) the Contractor fails to use an adequate amount or quality of personnel or equipment to complete the work without undue delay; (3) the Contractor fails to make prompt payments to its subcontractors, suppliers, materialmen, or laborers; (4) any part of such payment to the Contractor is attributable to work which is defective or not performed in accordance with the contract requirements; provided, however, such payment shall be made as to the part thereof attributable to work which is

performed in accordance with the contract requirements and is not defective; or (5) the Contractor is otherwise in default of any of its obligations under the contract.

#### **47. Performance and Payment Bonds**

(a) Performance Bond. A performance bond satisfactory to the Authority, executed by a surety company authorized to do business in this State of Florida or otherwise secured in a manner satisfactory to the Authority, in an amount equal to 100% of the contract price. A performance bond is obtained to ensure completion of the obligations under the contract.

(b) Payment Bond. A payment bond satisfactory to the Authority, executed by a surety company authorized to do business in the State of Florida, or otherwise secured in a manner satisfactory to the Authority, for the protection of all persons supplying labor and material to the contractor or its subcontractors for the performance of the construction work provided for in the contract. The bond shall be in an amount equal to 100% of the contract price.

(c) The performance and payment bonds shall be delivered by the contractor to the Authority before receiving a Notice to Proceed to start work. If a contractor fails to deliver the required payment bond, the Authority may terminate the contract for default and award of the contract may be made to the next lowest bidder.

(d) The Contractor shall be required to submit all required bonds within ten (10) days from the date of Notice of Award.

#### **48. Permits and Responsibilities**

The Contractor shall, without additional expense to the Authority, be responsible for obtaining any necessary licenses and permits and for complying with any federal, state, county, and municipal laws, codes, and regulations applicable to the performance of the work, including, but not limited to, any laws or regulations requiring the use of licensed contractors to perform parts of the work. The Contractor also shall be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence and shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. The Contractor also shall be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

#### **49. Prohibited Interest**

No member, officer, or employee of PSTA or of a local public body during his tenure or two years thereafter shall have any interest, direct or indirect, in this contract or the proceeds thereof, except as provided by law.

#### **50. Prompt Payment**

The Contractor agrees to pay each subcontractor under this Contract for satisfactory performance of its contract no later than 10 (ten) calendar days from receipt of each payment the prime receives from the Authority. The Contractor agrees further to release retainage payments (if applicable) to each subcontractor within ten (10) calendar days after the subcontractor's work is satisfactorily completed and final payment has been made to the subcontractor. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval from the Contracting Officer.

#### **51. Protection of Authority Property**

The Contractor shall use reasonable care to avoid damaging existing buildings, equipment, and vegetation on or about premises owned by, or under the control of, the Authority. If the Contractor's failure to use reasonable care causes damage to any of this property, the Contractor shall replace or repair the damage at no expense to the Authority as the Contracting Officer directs. If the Contractor fails or refuses to make such repair or replacement, the Contractor shall be liable for the cost, which may be deducted from the contract price.

#### **52. Protection of Existing Site Conditions**

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall remove trees only when specifically authorized to do so and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract

performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

### **53. Publicity Releases**

All publicity releases or releases of reports, papers, articles, maps, or other documents in any way concerning this contract or the work hereunder which the Contractor or any of its subcontractors desires to make for purposes of publication in whole or in part, shall be subject to approval by the Contracting Officer prior to release.

### **54. Removal of Contract Personnel**

(a) The Contractor and any subcontractor acknowledge that any person assigned to work under this Contract must perform their duties so as to not unduly impair contract performance. By assigning a person to work under this Contract, the Contractor agrees to be responsible for the behavior of that person during contract performance.

(b) The Contractor acknowledges that the Authority has the right to require the removal of any Contractor or subcontractor employee that the Contracting Officer determines, at his sole discretion, to be negatively effecting performance of work under the contract. Examples of such behavior include: (1) conduct which poses a threat to the safety of anyone working under the contract; (2) conduct which is disruptive to contract performance; (3) careless work performance; and (4) other behavior determined by the Contracting Officer to be objectionable or unduly hindering contract performance.

(c) Upon receipt of written notice from the Contracting Officer that a person's behavior is unduly impairing contract performance, the Contractor agrees to remove that person from doing any further work on the contract, and to cause that person to be removed from the worksite. The Contractor agrees that it is not entitled to any additional costs it may incur as a result of the removal of the person named by the Contracting Officer.

### **55. Royalties and Patents**

The Contractor shall pay all royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent rights and shall save the Authority harmless from loss on account thereof, except when a particular design, process, or product of a particular manufacturer is specified by the Authority; provided, that, if the Contractor has reason to believe that the design, process, or product specified infringes a patent, the Contractor shall be responsible for such loss unless it promptly gives such information to the Contracting Officer.

### **56. Seasonal Weather Conditions**

Seasonal weather conditions shall be considered and included in the planning and scheduling of all work influenced by high and low ambient temperatures, precipitation and/or saturated soil to ensure completion of all work within the contract time. Contract time extensions for abnormal weather will be granted only to the extent that the actual time lost during a particular month exceeds the average lost time as specified elsewhere in Exhibit D. Time extensions granted for abnormal weather are not compensable.

### **57. Severability**

If any provision of this contract, or the application thereof to any person or circumstances is rendered or declared illegal for any reason or shall be invalid or unenforceable, the remainder of this contract and the application of such provision to other persons or circumstances shall not be affected thereby but shall be enforced to the greatest extent permitted by applicable law. The parties agree to negotiate in good faith for a proper amendment to this contract in the event any provision hereof is declared illegal, invalid, or unenforceable.

### **58. Site Investigation and Conditions Affecting the Work**

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work and that it has investigated and satisfied itself as to the general and local conditions which can affect the

work or its cost, including, but not limited to, (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, flooding patterns and water drainage, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor acknowledges that its undertaking to complete the contract within the contract schedule includes an allowance for the normal number of days in which contract work may be partially or totally delayed because of weather during the season and at the location the contract will be performed and that the Contractor shall not be entitled to excusable delays or compensation for such delays. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, access to the site, and territory surrounding the site, including all exploratory work done by the Authority as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work or for proceeding to perform the work successfully without additional expense to the Authority.

(b) The Authority assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Authority. Nor does the Authority assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

### **59. Specifications and Drawings**

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of a discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any action or adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended; and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by", or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown", "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place" (that is, "furnished and installed").

(d) Shop drawings means drawings submitted to the Authority by the Contractor, subcontractor, or any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements and (2) the installation (i.e., form, fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract. The Authority may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and, if not approved as submitted, shall indicate the Authority's reasons therefore. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings or from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation,

the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Office for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of the specifications. Three sets (unless otherwise indicated) of all shop drawings will be retained by the Contracting Officer, and one set will be returned to the Contractor.

(h) This clause shall be included in all subcontracts at any tier.

#### **60. Soliciting or Accepting Gifts**

Pursuant to section 112.3148(3), Florida Statutes, no PSTA employee shall solicit anything of value to the recipient, including a gift, loan, reward, promise of future employment, favor, or service, when they know, or with the exercise of reasonable care should know, that it is given to influence a vote or other official action.

#### **61. Standards of Performance**

The Contractor shall perform all services required by this contract in accordance with high professional standards prevailing in the Contractor's field of work.

#### **62. Subcontractors**

(a) In addition to any other requirements under this contract for the submission of any subcontract agreement, the Contractor shall provide to the Contracting Officer one (1) copy of all executed subcontracts associated with this contract, including any changes or modifications to subcontracts, within three (3) days of their execution.

(b) No subcontractor shall be permitted to perform work associated with the subcontract until the subcontractor (or the Contractor on the subcontractor's behalf) is in compliance with the insurance requirements specified elsewhere in this contract, and has furnished satisfactory evidence of insurance to the Authority.

#### **63. Superintendence by Contractor**

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

#### **64. Subcontractors and Outside Consultants**

(a) Any subcontractors and outside associates or consultants required by the Contractor in connection with the services covered by the contract will be limited to such individuals or firms as were specifically identified and agreed to by the Authority in connection with the award of this contract. Any substitution in such subcontractors, associates, or consultants will be subject to the prior approval of the Contracting Officer.

(b) The Contractor shall not employ any subcontractor or other person or organization (including those who are to furnish the principal items of materials or equipment whether initially or as a substitute), against whom PSTA may have reasonable objection. A subcontractor or other person or organization identified in writing to PSTA by Contractor prior to the Notice of Award and not objected to in writing by PSTA prior to the Notice of Award will be deemed acceptable to PSTA. Acceptance of any subcontractor, other person or organization by PSTA, shall not constitute a waiver of any right of PSTA to reject defective work. If PSTA after due investigation has reasonable objection to any subcontractor, other person or organization proposed by the Contractor after the Notice of Award, Contractor shall submit an acceptable substitute and the contract price shall not, however, be adjusted. The Contractor shall not be required to employ any Subcontractor, other person or organization against whom Contractor has reasonable objection.

(c) The Contractor shall be fully responsible for all acts and omissions of his subcontractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that Contractor is responsible for the acts and omissions of persons directly employed by Contractor. Nothing in the contract documents shall create any contractual relationship between PSTA and any subcontractor or other person or organization having a direct contract with Contractor, nor shall it create any obligation on the part of PSTA to pay or to see to the payment of any monies except as may otherwise be required by law. PSTA may furnish to any subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to Contractor on account of specific work done.

(d) All work performed by a subcontractor will be pursuant to an appropriate agreement between the Contractor and the subcontractor which specifically binds the subcontractor to the applicable terms and conditions of the contract documents for the benefit of PSTA.

## **65. Suspension of Work**

(a) The Contracting Officer may order the Contractor in writing to suspend all or any part of the work for such period of time as he may determine to be appropriate for the convenience of the Authority.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended or delayed by an act of the Contracting Officer in the administration of this contract, or by his failure to act within the time specified in this contract (or, if no time is specified, within a reasonable time), an adjustment shall be made for any increase in cost of performance of this contract (excluding profit) necessarily caused by such unreasonable suspension or delay, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension or delay to the extent (1) that performance would have been suspended or delayed by any other cause, including the fault or negligence of the Contractor, or (2) for which an equitable adjustment is provided for or excluded under any other provision of this contract.

(c) No claim under this clause shall be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of such suspension or delay, but not later than the date of final payment. No part of any claim based on the provisions of this clause shall be allowed if not supported by adequate evidence showing that the cost would not have been incurred but for a delay within the provisions of this clause.

## **66. Termination**

(a) Termination for Convenience: Notwithstanding any provision herein, PSTA may terminate this contract by written notice, in whole or in part, when it is in the Government's interest. If this contract is terminated, PSTA shall be liable only for payment under the payment provisions of this contract for services rendered before the effective date of termination.

(b) Termination for Default: If the Contractor does not deliver supplies in accordance with the contract delivery schedule, or, if the contract is for services, the Contractor fails to perform in the manner called for in the contract, or if the Contractor fails to comply with any other provisions of the contract, the Pinellas Suncoast Transit Authority may terminate this contract for default. Termination shall be effected by serving a notice of termination on the contractor setting forth the manner in which the Contractor is in default. The contractor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the contract. If the Contractor defaults in performance of this contract PSTA has the right to withhold the disputed amounts.

(c) Opportunity to Cure: The Pinellas Suncoast Transit Authority in its sole discretion may, in the case of a termination for breach or default, allow the Contractor 10 days in which to cure the defect. In such case, the notice of termination will state the time period in which cure is permitted and other appropriate conditions.

(d) If Contractor fails to remedy to Pinellas Suncoast Transit Authority's satisfaction the breach or default of any of the terms, covenants, or conditions of this contract within ten (10) days after receipt by Contractor of written notice from Pinellas Suncoast Transit Authority setting forth the nature of said breach or default, Pinellas Suncoast Transit Authority shall have the right to terminate the contract without any further obligation to Contractor. Any such termination for default shall not in any way operate to preclude the Authority from also pursuing all available remedies against Contractor and its sureties for said breach or default.

(e) If it is later determined by the Pinellas Suncoast Transit Authority that the Contractor had an excusable reason for not performing, such as a strike, fire, or flood, events which are not the fault of or are beyond the control of the Contractor, the Pinellas Suncoast Transit Authority, after setting up a new delivery of performance schedule, may allow the Contractor to continue work, or treat the termination as a termination for convenience.

## **67. Time Extensions**

Notwithstanding any other provisions of this contract, the time extensions for changes in the work will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The contract modification granting the time extension may provide that the contract completion date will be extended only



for those specific elements so delayed and that the remaining contract completion dates for all other portions of the work will not be altered and may further provide for an equitable readjustment of liquidated damages under the new completion schedule.

#### **68. Title to Submittals**

All information, drawings, or other submittals required to be furnished by the Contractor to the Authority under this contract shall become the property of the Authority.

#### **69. Use and Possession Prior to Completion**

(a) The Authority shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Authority intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Authority's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Authority has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Authority's possession or use, notwithstanding the terms of the "Permits and Responsibilities" clause of this contract. If prior possession or use by the Authority delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

#### **70. Variation in Estimated Quantity**

If the quantity of a unit-priced item in this contract is an estimated quantity and the actual quantity of the unit-priced item varies more than 15 percent above or below the estimated quantity, an equitable adjustment in the contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above 115 percent or below 85 percent of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the Contractor may request (in writing) an extension of time to be received by the Contracting Officer within 10 days from the beginning of the delay, or within such further period as may be granted by the Contracting Officer before the date of final settlement of the contract. Upon the receipt of a written request for an extension, the Contracting Officer shall ascertain the facts and make an adjustment for extending the completion date as, in the judgment of the Contracting Officer, is justified.

#### **71. Warranty of Construction**

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (j) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed, by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of one year from the date of final acceptance of the work.

(c) The Contractor shall remedy at the Contractor's expense (i) any failure to conform to the contract requirements or (ii) any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to real or personal property owned or controlled by the Authority, when the damage is the result of: (1) the Contractor's failure to conform to contract requirements; or (2) any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(e) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Authority shall have the right to replace, remove, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(f) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) obtain all warranties that would be given in normal commercial practice; (2) require all warranties to be executed, in writing, for the benefit of the Authority, if directed by the Contracting Officer; and (3) enforce all warranties for the benefit of the Authority, if directed by the Contracting Officer.

(g) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Authority may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(h) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Authority or for the repair of any damage that result from any defect in material or designs furnished by the Authority.

(i) This warranty shall not limit the Authority's rights under the "Inspection of Construction" clause of this contract with respect to latent defects, gross mistakes, or fraud.

## **72. Wage Rates**

All persons employed in the performance of the work under this contract, or any subcontracts hereunder, shall be paid not less than the general rates of per diem, holiday, and overtime wages prevailing in the locality for work of a similar character (which wages are specified in an attachment to this contract).

PINELLAS SUNCOAST TRANSIT AUTHORITY  
BUS DEPOT CHARGER EQUIPMENT ADDITION

SPECIFICATION INDEX  
00000-1

SPECIFICATION INDEX

DIVISION 16 - ELECTRICAL

- 16010 BASIC ELECTRICAL REQUIREMENTS
- 16050 BASIC ELECTRICAL MATERIALS AND METHODS
- 16111 CONDUIT
- 16112 SURFACE RACEWAYS
- 16120 WIRE AND CABLE
- 16130 ELECTRICAL BOXES & FITTINGS
- 16170 GROUNDING AND BONDING
- 16190 SUPPORTING DEVICES
- 16195 ELECTRICAL IDENTIFICATION
- 16441 ENCLOSED SWITCHES
- 16470 PANELBOARDS
- 16477 FUSES

APPENDICES

- 80kW CHARGER CONTROL BOX DIMENSION & ASSEMBLY
- 80kW CHARGER CONTROL CIRCUIT WIRING DIAGRAM
- CHARGER COVER
- WIRING DIAGRAM

SPECIFICATION INDEX



This page intentionally left blank

SECTION 16010 - BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions, apply to this section.

1.2 SUMMARY

- A. This Section includes general administrative and procedural requirements for electrical installations. The following administrative and procedural requirements are included in this Section to expand the requirements specified in General Conditions:
  - 1. Submittals.
  - 2. Coordination drawings.
  - 3. Maintenance manuals.
  - 4. Record documents.
  - 5. Rough-ins.
  - 6. Electrical installations.
  - 7. Cutting and patching.
- B. Related Sections: The following sections contain requirements that relate to this section:
  - 1. Section "ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT," for factory-installed motors, controllers, accessories, and connections.
  - 2. Section "BASIC ELECTRICAL MATERIALS AND METHODS," for materials and methods common to the remainder of Division 16, plus general related specifications including:
    - a. Access to electrical installations.
    - b. Excavation for electrical installations within the building boundaries and from building to utility connections.

1.3 SUBMITTALS

- A. General: Follow the procedures specified in General Conditions Section "SUBMITTALS."
- B. Increase, by the quantity listed below, the number of electrical related shop drawings, product data, and samples submitted, to allow for required distribution plus two copies of each submittal required, which will be retained by the Electrical Consulting Engineer.
- C. Shop Drawings - Initial Submittal: 1 additional blue - or black-line prints.
- D. Shop Drawings - Final Submittal: 1 additional blue - or black-line prints.
- E. Product Data: 1 additional copy of each item.

- F. Samples: 1 addition as set.
- G. Additional copies may be required by individual sections of these Specifications.
- H. Submittals that include multiple items of equipment such as light fixtures, enclosed switches, motor controllers, TVSS devices, panelboards, cabinets, wiring devices, security devices, CATV/CCTV devices, computer data devices, voice/telephone devices, fire alarm devices, sound and intercom devices, and occupancy sensors should be provided with a spreadsheet schedule outlining the following:
  - 1. Quantity, manufacturer's code number, description of equipment or device, room location or equipment on which it will be installed i.e. HVAC AHU, EWC, water heater, etc., applicable rating such as voltage, wattage, amps, etc., and any mounting information.

#### 1.4 COORDINATION DRAWINGS

- A. Prepare coordination drawings in accordance with General Conditions Section "PROJECT COORDINATION," to a scale of 1/4"=1'-0" or larger; detailing major elements, components, and systems of electrical equipment and materials in relationship with other mechanical, electrical, HVAC, plumbing, fire protection, sprinkler, cabinet heights and other systems, installations, and building components. Indicate locations where space is limited for installation and access and where sequencing and coordination of installations are of importance to the efficient flow of the Work, including (but not necessarily limited to) the following:
  - 1. Exterior Charging Area
- B. Indicate the proposed locations of major raceway systems, equipment, and materials. Include the following:
  - 1. Clearances for servicing equipment, including space for equipment disassembly required for periodic maintenance.
  - 2. Exterior wall and foundation penetrations.
  - 3. Fire-rated wall and floor penetrations.
  - 4. Equipment connections and support details.
  - 5. Sizes and location of required concrete pads and bases.
  - 6. Indicate scheduling, sequencing, movement, and positioning of large equipment into the building during construction.
  - 7. Prepare floor plans, elevations, and details to indicate penetrations in floors, walls, and ceilings and their relationship to other penetrations and installations.
  - 8. Prepare reflected ceiling plans to coordinate and integrate installations, air outlets and inlets, light fixtures, communications systems components, sprinklers, and other ceiling-mounted devices.

#### 1.5 RECORD DOCUMENTS

- A. Prepare record documents in accordance with the requirements in General Conditions Section "CONTRACT CLOSEOUT." In addition to the requirements specified in General Conditions Section, indicate installed conditions for:
  - 1. Major raceway systems, size and location, for both exterior and interior;

- locations of control devices; distribution and branch electrical circuitry; and fuse and circuit breaker size and arrangements.
- 2. Equipment locations (exposed and concealed), dimensioned from prominent building lines.
- 3. Approved substitutions, Contract Modifications, and actual equipment and materials installed.

- B. Engage the services of a Land Surveyor or Professional Engineer registered in the state in which the project is located as specified in General Conditions Section "FIELD ENGINEERING" to record the locations and invert elevations of underground installations.

#### 1.6 MAINTENANCE MANUALS

- A. Prepare maintenance manuals in accordance with General Conditions Section "PROJECT CLOSE-OUT." In addition to the requirements specified in General Conditions, include the following information for equipment items:
  - 1. Description of function, normal operating characteristics and limitations, performance curves, engineering data and tests, and complete nomenclature and commercial numbers of replacement parts.
  - 2. Manufacturer's printed operating procedures to include start-up, break-in, and routine and normal operating instructions; regulation, control, stopping, shutdown, and emergency instructions; and summer and winter operating instructions.
  - 3. Maintenance procedures for routine preventative maintenance and troubleshooting; disassembly, repair, and reassembly; aligning and adjusting instructions.
  - 4. Servicing instructions and lubrication charts and schedules.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to the project properly identified with names, model numbers, types, grades, compliance labels, and other information needed for identification.

#### 1.8 CLOSEOUT DOCUMENTS

- A. The contractor shall provide electronic as-built construction drawings in AutoCAD dwg and Adobe pdf format. The electrical drawings will be available in electronic format at the beginning of the project. The contractor shall sign the release provided by the engineer prior to receiving the files.

### PART 2 - GENERAL

#### 2.1 ELECTRICAL EQUIPMENT

- A. All motor starters, safety switches, variable speed drives, relays, motor control centers, MDP's, switchboards, panelboards, contactors and all other electrical equipment shall be of the same manufacturer, unless provided as electrical equipment on approved factory fabricated equipment, such as chiller starters, rooftop units, condensing units, etc.



PART 3 - EXECUTION

3.1 ROUGH-IN

- A. Verify final locations for rough-ins with field measurements and with the requirements of the actual equipment to be connected.
- B. Refer to equipment specifications in rough-in requirements.

3.2 ELECTRICAL INSTALLATIONS

- A. General: Sequence, coordinate, and integrate the various elements of electrical systems, materials, and equipment. Comply with the following requirements:
  - 1. Coordinate electrical systems, equipment, and materials installation with other building components.
  - 2. Verify all dimensions by field measurements.
  - 3. Arrange for chases, slots, and openings in other building components during progress of construction, to allow for electrical installations.
  - 4. Coordinate the installation of required supporting devices and sleeves to be set in poured-in-place concrete and other structural components, as they are constructed.
  - 5. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the Work. Give particular attention to large equipment requiring positioning prior to closing in the building.
  - 6. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible.
- B. Coordinate connection of electrical systems with exterior underground and overhead utilities and services. Comply with requirements of governing regulations, franchised service companies, and controlling agencies. Provide required connection for each service. Install systems, materials, and equipment to conform with approved submittal data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the Architect.
- C. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.
- D. Install electrical equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.
- E. Install access panel or doors where units are concealed behind finished surfaces. Access panels and doors are specified in "ACCESS DOORS" and Division 16 Section "BASIC ELECTRICAL MATERIALS AND METHODS."

- F. Install systems, materials, and equipment giving right-of-way priority to systems required to be installed at a specified slope.

### 3.3 CUTTING AND PATCHING

- A. General: Perform cutting and patching in accordance with General Conditions Section "CUTTING AND PATCHING." In addition to the requirements specified in General Conditions, the following requirements apply:
  - 1. Perform cutting, fitting, and patching of electrical equipment and materials required to:
    - a. Uncover Work to provide for installation of ill-timed Work.
    - b. Remove and replace defective Work.
    - c. Remove and replace Work not conforming to requirements of the Contract Documents.
    - d. Remove samples of installed Work as specified for testing.
    - e. Install equipment and materials in existing structures.
  - 2. Upon written instructions from the Architect, uncover and restore Work to provide for Architect observation of concealed Work.
  - 3. Cut, remove, and legally dispose of selected electrical equipment, components, and materials as indicated, including but not limited to removal of electrical items indicated to be removed and items made obsolete by the new work.
  - 4. Protect the structure, furnishings, finishes, and adjacent materials not indicated or scheduled to be removed.
  - 5. Provide and maintain temporary partitions or dust barriers adequate to prevent the spread of dust and dirt to adjacent areas.
  - 6. Protection of Installed Work: During cutting and patching operations, protect adjacent installations.
  - 7. Patch new and existing finished surfaces and building components using new materials matching existing materials and experienced Installers. Installer's qualifications refer to the materials and methods required for the surface and building components being patched.
  - 8. Refer to Division 1 Section "REFERENCE STANDARDS" for definition of experienced "Installer."

END OF SECTION

This page intentionally left blank

SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions, apply to this Section.
- B. Requirements specified in Section "Basic Electrical Requirements" apply to this Section.

1.2 SUMMARY

- A. This Section includes limited scope general construction materials and methods for application with electrical installations as follows:
  - 1. Selective demolition including:
    - a. Nondestructive removal of materials and equipment for reuse or salvage as indicated.
    - b. Dismantling electrical materials and equipment made obsolete by these installations.
  - 2. Excavation for underground utilities and services, including underground raceways, vaults, and equipment.
  - 3. Miscellaneous metals for support of electrical materials and equipment.
  - 4. Wood grounds, nailers, blocking, fasteners, and anchorage for support of electrical materials and equipment.
  - 5. Joint sealers for sealing around electrical materials and equipment; and for sealing penetrations in fire and smoke barriers, floors, and foundation walls.
  - 6. Access panels and doors in walls, ceilings, and floors for access to electrical materials and equipment.

1.3 DEFINITIONS

- A. The following definitions apply to excavation operations:
  - 1. Additional Excavation: Where excavation has reached required subgrade elevations, if unsuitable bearing materials are encountered, continue excavation until suitable bearing materials are reached.
  - 2. Subbase: as used in this Section refers to the compacted soil layer used in pavement systems between the subgrade and the pavement base course material.
  - 3. Subgrade: as used in the Section refers to the compacted soil immediately below the slab or pavement system.
  - 4. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction from the Architect.

1.4 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and

General Conditions Specification Sections.

- B. Product data for the following products:
  - 1. Access panels and doors.
  - 2. Joint sealers.
- C. Shop drawings detailing fabrication and installation for metal fabrications, and wood supports and anchorage for electrical materials and equipment.
- D. Coordination drawings for access panel and door locations in accordance with Section "Basic Electrical Requirements."
- E. Samples of joint sealer, consisting of strips of actual products showing full range of colors available for each product.
- F. Welder certificates, signed by Contractor, certifying that welders comply with requirements specified under "Quality Assurance" article of this Section.
- G. Schedules indicating proposed methods and sequence of operations for selective demolition prior to commencement of Work. Include coordination for shut-off of electrical service, and details for dust and noise control.
- H. Coordinate sequencing with construction phasing and Owner occupancy specified in General Conditions Section "Summary of Work."

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer for the installation and application joint sealers, access panels, and doors.
- B. Qualify welding processes and welding operators in accordance with AWS D1.1 "Structural Welding Code - Steel."
  - 1. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification.
- C. Fire-Resistance Ratings: Where a fire-resistance classification is indicated, provide access door assembly with panel door, frame, hinge, and latch from manufacturer listed in the UL "Building Materials Directory" for rating shown.
  - 1. Provide UL Label on each fire-rated access door.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver joint sealer materials in original unopened containers or bundles with labels informing about manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multi-component materials.
- B. Store and handle joint sealer materials in compliance with the manufacturers' recommendations to prevent their deterioration and damage.

## 1.7 PROJECT CONDITIONS

- A. Conditions Affecting Selective Demolition: The following project conditions apply:
1. Protect adjacent materials indicated to remain. Install and maintain dust and noise barriers to keep dirt, dust, and noise from being transmitted to adjacent areas. Remove protection and barriers after demolition operations are complete.
  2. Locate, identify, and protect electrical services passing through demolition area and serving other areas outside the demolition limits. Maintain services to areas outside demolition limits. When services must be interrupted, install temporary services for affected areas.
- B. Conditions Affecting Excavations: The following project conditions apply:
1. Maintain and protect existing building services which transit the area affected by selective demolition.
  2. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by excavation operations. Site Information: Subsurface conditions were investigated during the design of the Project. Reports of these investigations are available for information only; data in the reports are not intended as representations or warranties of accuracy or continuity of conditions. The Owner will not be responsible for interpretations or conclusions drawn from this information.
  3. Existing Utilities: Locate existing underground utilities in excavation areas. If utilities are indicated to remain, support and protect services during excavation operations.
  4. Remove existing underground utilities indicated to be removed.
    - a. Uncharted or Incorrectly Charted Utilities: Contact utility owner immediately for instructions.
    - b. Provide temporary utility services to affected areas. Provide minimum of 48-hour notice to Architect prior to utility interruption.
  5. Use of explosives is not permitted.
- C. Environmental Conditions: Apply joint sealers under temperature and humidity conditions within the limits permitted by the joint sealer manufacturer. Do not apply joint sealers to wet substrates.

## 1.8 SEQUENCE AND SCHEDULING

- A. Coordinate the shut-off and disconnection of electrical service with the Owner and the utility company.
- B. Notify the Architect at least 5 days prior to commencing demolition operations.
- C. Perform demolition in phases as indicated.

## PART 2 - PRODUCTS

### 2.1 SOIL MATERIALS

- A. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, crushed slag, or natural or crushed sand.
- B. Drainage Fill: Washed, evenly graded mixture of crushed stone, or crushed or uncrushed gravel, with 100 percent passing a 1-1/2-inch sieve, and not more than 5 percent passing a No. 4 sieve.
- C. Backfill and Fill Materials: Materials complying with ASTM D2487 soil classification groups GW, GP, GM, SM, and SP; free of clay, rock, or gravel larger than 2 inches in any dimensions; debris; waste; frozen materials; and vegetable and other deleterious matter.

## 2.2 MISCELLANEOUS METALS

- A. Steel plates, shapes, bars, and bar grating: ASTM A 36.
- B. Cold-Formed Steel Tubing: ASTM A 500.
- C. Hot-Rolled Steel Tubing: ASTM A 501.
- D. Steel Pipe: ASTM A 53, Schedule 40, welded.
- E. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout, recommended for interior and exterior applications.
- F. Fasteners: zinc-coated, type, grade, and class as required.

## 2.3 MISCELLANEOUS LUMBER

- A. Framing Materials: Standard Grade, light-framing-size lumber of any species. Number 3 Common or Standard Grade boards complying with WCLIB or AWPB rules, or Number 3 boards complying with SPIB rules. Lumber shall be preservative treated in accordance with AWPB LP-2, and kiln dried to a moisture content of not more than 19 percent.
- B. Construction Panels: Plywood panels; APA C-D PLUGGED INT, with exterior glue; thickness as indicated, or if not indicated, not less than 15/32 inches.

## 2.4 JOINT SEALERS

- A. General: Joint sealers, joint fillers, and other related materials compatible with each other and with joint substrates under conditions of service and applications.
- B. Colors: As selected by the Architect from manufacturer's standard colors.
- C. Elastomeric Joint Sealers: Provide the following types:
  - 1. One-part, nonacid-curing, silicone sealant complying with ASTM C 920, Type S, Grade NS, Class 25, for uses in non-traffic areas for masonry, glass, aluminum, and other substrates recommended by the sealant

- manufacturer. Products: Subject to compliance with requirements, provide one of the following:
- a. "Chem-Calk N-Cure 2000," Bostic Construction Products Div.
  - b. "Dow Corning 790," Dow Corning Corp.
  - c. "Silglaze N SCS 2501," General Electric Co.
  - d. "Silpruf SCS 2000," General Electric Co.
  - e. "864," Pecora Corp.
  - f. "Rhodorsil 5C," Rhone-Poulenc, Inc.
  - g. "Spectrum 1," Tremco, Inc.
  - h. "Spectrum 2," Tremco, Inc.
  - i. or equal
2. One-part, mildew-resistant, silicone sealant complying with ASTM C 920, Type S, Grade NS, Class 25, for uses in non-traffic areas for nonporous joint substrates; formulated with fungicide; intended for sealing interior joints with nonporous substrates; and subject to in-service exposure to conditions of high humidity and temperature extremes. Products: Subject to compliance with requirements, provide one of the following:
- a. "Dow Corning 786," Dow Corning Corp.
  - b. "SCS 1702 Sanitary," General Electric Co.
  - c. "863 #345 White," Pecora Corp.
  - d. "Rhodorsil 6B White," Rhone-Poulenc, Inc.
  - e. "Proglaze White," Tremco Corp.
  - f. "OmniPlus," Sonneborn Building Products Div.
  - g. or equal
3. Acrylic-Emulsion Sealants: One-part, nonsag, mildew-resistant, paintable complying with ASTM C 834 recommended for exposed applications on interior and protected exterior locations involving joint movement of not more than plus or minus 5 percent. Products: Subject to compliance with requirements, provide one of the following:
- a. "Chem-Calk 600," Bostik Construction Products Div.
  - b. "AC-20," Pecora Corp.
  - c. "Sonolac," Sonneborn Building Products Div.
  - d. "Tremco Acrylic Latex 834," Tremco, Inc.
  - e. or equal
4. Fire-Resistant Joint Sealers: Two-part, formed-in-place, silicone sealant formulated for use in through-penetration fire-stopping around cables, conduit, pipes, and duct penetrations through fire-rated walls and floors. Sealants and accessories shall have fire-resistance ratings indicated, as established by testing identical assemblies in accordance with ASTM E 814, by Underwriters' Laboratories, In., or other testing and inspection agency acceptable to authorities having jurisdiction. Products: Subject to compliance with requirements, provide one of the following:
- a. "Dow Corning Fire Stop Foam," Dow Corning Corp.
  - b. "Pensil 851," General Electric Co.
  - c. or equal

## 2.5 ACCESS DOORS

- A. Provide access doors for concealed electrical equipment. Access doors shall be of the same finish material and construction as the surrounding wall, floor or



ceiling.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting installation and application of joint sealers and access panels. Do not proceed with installation until unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION FOR JOINT SEALERS

- A. Surface Cleaning for Joint Sealers: Clean surfaces of joints immediately before applying joint sealers to comply with recommendations of joint sealer manufacturer.
- B. Apply joint sealer primer to substrates as recommended by joint sealer manufacturer. Protect adjacent areas from spillage and migration of primers, using masking tape. Remove tape immediately after tooling without disturbing joint seal.

#### 3.3 SELECTIVE DEMOLITION

- A. General: Demolish, remove, demount, and disconnect abandoned electrical materials and equipment indicated to be removed and not indicated to be salvaged or saved.
- B. Materials and Equipment To Be Salvaged: Remove, demount, and disconnect existing electrical materials and equipment indicated to be removed and salvaged, and deliver materials and equipment to the location designated for storage, including offloading.
- C. Disposal and Cleanup: Remove from the site and legally dispose of demolished materials and equipment not indicated to be salvaged.
- D. Electrical Materials and Equipment: Demolish, remove, demount, and disconnect the following items:
  - 1. Inactive and obsolete raceway systems, controls, and fixtures.
    - a. Raceways embedded in floors, walls, and ceilings may remain if such materials do not interfere with new installations. Remove materials above accessible ceilings.
  - 2. Perform cutting and patching required for demolition in accordance with General Conditions Section "Cutting and Patching."

#### 3.4 ERECTION OF METAL SUPPORTS AND ANCHORAGE

- A. Cut, fit, and place miscellaneous metal fabrications accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.

- B. Field Welding: Comply with AWS "Structural Welding Code."

### 3.5 ERECTION OF WOOD SUPPORTS AND ANCHORAGE

- A. Cut, fit, and place wood grounds, nailers, blocking, and anchorage accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- B. Select fastener sizes that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood members.
- C. Attach to substrates as required to support applied loads.

### 3.6 APPLICATION OF JOINT SEALERS

- A. General: Comply with joint sealer manufacturers' printed application instructions applicable to products and applications indicated, except where more stringent requirements apply.
  - 1. Comply with recommendations of ASTM C 962 for use of elastomeric joint sealants.
  - 2. Comply with recommendations of ASTM C 790 for use of acrylic-emulsion joint sealants.
- B. Tooling: Immediately after sealant application and prior to time shinning or curing begins, tool sealants to form smooth, uniform beads; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
- C. Installation of Fire-Stopping Sealant: Install sealant, including forming, packing, and other accessory materials, to fill openings around electrical services penetrating floors and walls, to provide fire-stops with fire-resistance ratings indicated for floor or wall assembly in which penetration occurs. Comply with installation requirements established by testing and inspecting agency.

### 3.7 INSTALLATION OF ACCESS DOORS

- A. Set frames accurately in position and securely attached to supports, with face panels plumb and level in relation to adjacent finish surfaces.
- B. Adjust hardware and panels after installation for proper operation.

END OF SECTION

This page intentionally left blank

SECTION 16111 - CONDUIT

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Metal conduit.
- B. Flexible metal conduit.
- C. Liquidtight flexible metal conduit.
- D. Electrical metallic tubing.
- E. Nonmetal conduit.
- F. Electrical nonmetallic tubing.
- G. Flexible nonmetallic conduit.
- H. Fittings and conduit bodies.

1.2 RELATED SECTIONS

- A. Section - Fireproofing.
- B. Section - Boxes.
- C. Section - Grounding and Bonding.
- D. Section - Supporting Devices.
- E. Section - Electrical Identification.

1.3 REFERENCES

- A. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated.
- B. ANSI C80.3 - Electrical Metallic Tubing, Zinc Coated.
- C. ANSI C80.5 - Rigid Aluminum Conduit.
- D. ANSI/NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.
- E. ANSI/NFPA 70 - National Electrical Code.
- F. NECA "Standard of Installation."
- G. NEMA RN 1 - Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel

Conduit and Intermediate Metal Conduit.

H. NEMA TC 2 - Electrical Plastic Tubing (EPT) and Conduit (EPC-40 and EPC-80).

I. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing.

1.4 DESIGN REQUIREMENTS

A. Conduit Size: ANSI/NFPA 70.

1.5 SUBMITTALS

A. Submit under provisions of Section "Submittals."

B. Product Data: Provide for metallic conduit, flexible metal conduit, liquidtight flexible metal conduit, metallic tubing, nonmetallic conduit, flexible nonmetallic conduit, nonmetallic tubing, fittings, conduit bodies and rigid and intermediate metal and nonmetal conduit.

1.6 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Section "Contract Closeout."

B. Accurately record actual routing of conduits larger than 2 inches.

1.7 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

1.8 FIELD SAMPLES

A. Provide under provisions of Section "Submittals"

B. Provide field sample of conduit 2" and greater, two each at 2 feet long.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect, and handle Products to site under provisions of Section - Material and Equipment.

B. Accept conduit on site. Inspect for damage.

C. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.

D. Protect PVC conduit from sunlight.

1.10 PROJECT CONDITIONS

- A. Verify with field measurements dimensions as shown on Drawings.
- B. Verify routing and termination locations of conduit prior to rough-in.
- C. Conduit routing is shown on Drawings in approximate locations unless dimensioned. Route as required to complete wiring system.

PART 2 - PRODUCTS

2.1 METAL CONDUIT

- A. Manufacturers: See 2.8.
- B. Rigid Steel Conduit: ANSI C80.1.
- C. Rigid Aluminum Conduit: ANSI C80.5.
- D. Intermediate Metal Conduit (IMC): Rigid steel.
- E. Fittings and Conduit Bodies: ANSI/NEMA FB 1; material to match conduit.

2.2 PVC COATED METAL CONDUIT

- A. Manufacturers: See 2.8.
- B. Description: NEMA RN 1; rigid steel conduit with external PVC coating, 40 mil thick.
- C. Fittings and Conduit Bodies: ANSI/NEMA FB 1; steel fittings with external PVC coating to match conduit.

2.3 LIQUIDTIGHT FLEXIBLE METAL CONDUIT

- A. Manufacturers: See 2.8.
- B. Description: Interlocked steel construction with PVC jacket.
- C. Fittings: ANSI/NEMA FB 1.

2.4 ELECTRICAL METALLIC TUBING (EMT)

- A. Manufacturers: See 2.8.
- B. Description: ANSI C80.3; galvanized tubing.
- C. Fittings and Conduit Bodies: ANSI/NEMA FB 1; steel compression type.

2.5 NONMETALLIC CONDUIT

- A. Manufacturers: See 2.8.
- B. Description: NEMA TC 2; Schedule 40 PVC.
- C. Fittings and Conduit Bodies: NEMA TC 3.

2.6 NONMETALLIC TUBING

- A. Manufacturers: See 2.8.
- B. Description: NEMA TC 2.
- C. Fittings and Conduit Bodies: NEMA TC 3.

2.7 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
  - 1. Adalet-PLM
  - 2. American Electric
  - 3. Appleton Electric Co.
  - 4. Carlon
  - 5. Crouse-Hinds Division, Cooper Industries, Inc.
  - 6. Delta Industrial Products
  - 7. Killark Electric Mfg. Co.
  - 8. Kraloy Products Co.
  - 9. O-Z/Gedney
  - 10. Spring City Electrical Mfg. Co.

PART 3 - EXECUTION

3.1 CONDUIT REQUIREMENTS: Provide for All Systems: Power, Lighting, Motors, Fire Alarm, Clock, Public Address, Intercom and Paging, Telephone, Data, CCTV, Security, Communications and Automatic Controls.

- A. Minimum Size: 3/4 inch unless otherwise specified.
- B. Underground Installations:
  - 1. More than Five Feet from Foundation Wall: Use thickwall rigid nonmetallic conduit.
  - 2. Within Five Feet from Foundation Wall Crossing Foundation Walls: Use plastic coated or (2) coats of bitumastic coated rigid steel conduit.
  - 3. In or Under Slab on Grade: Use thickwall rigid nonmetallic conduit.
- C. Outdoor Locations, Above Grade: Use rigid steel conduit.
- D. In Slab Above Grade:

1. Use intermediate metal conduit.
  2. Maximum Size Conduit in Slab: 3/4 inch for conduits crossing each other.
- E. Wet and Damp Locations: Use rigid steel or intermediate metal conduit.
- F. Dry Locations:
1. Concealed: Use electrical metallic tubing in fire rated walls and through fire rated floors. Thickwall rigid non-metallic conduit in non-rated walls. MC cable not allowed.
  2. Exposed: Use rigid steel or intermediate metal conduit.

### 3.2 INSTALLATION

- A. Install conduit in accordance with NECA "Standard of Installation."
- B. Install nonmetallic conduit in accordance with manufacturer's instructions.
- C. Arrange supports to prevent misalignment during wiring installation.
- D. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.
- E. Group related conduits; support using conduit rack. Construct rack using steel channel; provide space on each for 25 percent additional conduits.
- F. Fasten conduit supports to building structure and surfaces under provisions of Section "Supporting Devices."
- G. Do not support conduit with wire or perforated pipe straps. Remove wire used for temporary supports
- H. Do not attach conduit to ceiling support wires.
- I. Arrange conduit to maintain headroom and present neat appearance.
- J. Route exposed conduit parallel and perpendicular to walls.
- K. Route conduit installed above accessible ceilings parallel and perpendicular to walls.
- L. Route conduit in and under slab from point-to-point.
- M. Do not cross conduits in slab unless max 3/4 and approved by structural engineer.
- N. Maintain adequate clearance between conduit and piping.
- O. Maintain 12 inch (300 mm) clearance between conduit and surfaces with temperatures exceeding 104° F (40° C).



- P. Cut conduit square using saw or pipecutter; de-burr cut ends.
- Q. Bring conduit to shoulder of fittings; fasten securely.
- R. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum.
- S. Use conduit hubs or sealing locknuts to fasten conduit to sheet metal boxes in damp and wet locations and to cast boxes.
- T. Install no more than equivalent of three 90-degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use factory elbows for bends in metal conduit larger than 2 inch size.
- U. Avoid moisture traps; provide junction box with drain fitting at low points in conduit system.
- V. Provide suitable fittings to accommodate expansion and deflection where conduit crosses control and expansion joints.
- W. Provide suitable pull string in each empty conduit except sleeves and nipples.
- X. Use suitable caps to protect installed conduit against entrance of dirt and moisture.
- Y. Ground and bond conduit under provisions of Section "Grounding and Bonding."
- Z. Identify conduit under provisions of Section "Electrical Identification."
- AA. Flexible metal conduit or MC cable only for use as connection from junction box to vibrating equipment.
- BB. Paint exposed conduit to match surrounding wall or ceiling.

### 3.3 INTERFACE WITH OTHER PRODUCTS

- A. Install conduit to preserve fire resistance rating of partitions and other elements, using materials and methods under the provisions of Section Insulation.
- B. Route conduit through roof openings for piping and ductwork or through suitable roof jack with appropriate roof penetrations. Coordinate location with roofing installation specified under Section Roofing.

END OF SECTION

## SECTION 16112 - SURFACE RACEWAYS

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Surface metal raceways.
- B. Multi-outlet assemblies.
- C. Wireways.
- D. Wall duct.

#### 1.2 RELATED SECTIONS

- A. Section - Wiring Devices: Receptacles.

#### 1.3 REFERENCES

- A. NECA (National Electrical Contractor's Association) Standard of Installation.
- B. NEMA WD 6 - Wiring Device Configurations.

#### 1.4 SUBMITTALS

- A. Submit under provisions of Section Submittals.
- B. Product Data: Provide dimensions, knockout sizes and locations, materials, fabrication details, finishes, and accessories.
- C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of Product.

#### 1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with NECA Standard of Installation.
- B. Maintain one copy of document on site.

#### 1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this Section with minimum three years documented experience.

#### 1.7 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.

- B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

## PART 2 - PRODUCTS

### 2.1 SURFACE METAL RACEWAY

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
  1. Alrey-Thompson Co., Inc.
  2. Allied Tube & Conduit
  3. American Electric
  4. B-Line Systems, Inc.
  5. Butler Mfg. Co.
  6. Erickson Electrical Equipment Co.
  7. GS Metals Corp.
  8. Haydon Corp.
  9. Hoffman Engineering Co.
  10. Isoduct Energy Systems
  11. Isotrol Systems
  12. Keystone/Rees, Inc.
  13. SL Industries, Inc.
  14. Square D Co.
  15. The Wiremold Co.
- B. Description: Construct of galvanized steel with snap-on covers, with 1/8-inch mounting screw knockouts in base approximately 8 inches o.c. Finish with manufacturer's standard prime coat and gray enamel.
- C. Size: Sizes and Channels as indicated or required.
- D. Finish: Gray, white or ivory enamel as selected by architect.
- E. Fittings, Boxes, and Extension Rings: Furnish manufacturer's standard accessories.

### 2.2 SURFACE NONMETAL RACEWAY

- A. Available Manufacturers:
  1. Anixter Brothers, Inc.
  2. Hoffman Engineering Co.
  3. Hubbell, Inc.
  4. JBC Enterprises, Inc.
  5. Panduit Corp.
  6. Premier Telecom Products, Inc.
  7. Thermotools Co.
  8. The Wiremold Co.
- B. Description: Two-pieced construction, manufactured of rigid PVC compound with

SURFACE RACEWAYS  
16112-2

matte texture. Raceway and system components shall meet UL 94 requirements for nonflammable, self-extinguishing characteristics.

- C. Size: Sizes and channels as indicated or required.
- D. Finish: Gray or white as selected by architect.
- E. Fittings, Boxes, and Extension Rings: Furnish manufacturer's standard accessories.

### 2.3 MULTIOUTLET ASSEMBLY

- A. Available Manufacturers:
  - 1. Alrey-Thompson Co., Inc.
  - 2. Allied Tube & Conduit
  - 3. American Electric
  - 4. B-Line Systems, Inc.
  - 5. Butler Mfg. Co.
  - 6. Erickson Electrical Equipment Co.
  - 7. GS Metals Corp.
  - 8. Haydon Corp.
  - 9. Hoffman Engineering Co.
  - 10. Isoduct Energy Systems
  - 11. Isotrol Systems
  - 12. Keystone/Rees, Inc.
  - 13. SL Industries, Inc.
  - 14. Square D Co.
  - 15. The Wiremold Co.
- B. Multioutlet Assembly: Sheet metal channel with fitted cover, with pre-wired receptacles, suitable for use as multioutlet assembly.
- C. Size: As indicated on Drawings or as required.
- D. Receptacles: NEMA WD 6, type 5-15R, single receptacle.
- E. Receptacle Spacing: 12 inches on center.
- F. Receptacle Color: Gray, white or ivory as selected by architect.
- G. Channel Finish: Gray, white or ivory enamel as selected by architect.
- H. Fittings: Furnish manufacturer's standard couplings, elbows, outlet and device boxes, and connectors.

### 2.4 WIREWAY

- A. Available Manufacturers:
  - 1. Anchor Electric Co.
  - 2. Circle AW Products

3. Cross Brothers, Inc.
4. Erickson Electric Equipment Co.
5. Gismo
6. GS Metals Corp.
7. Hoffman Engineering Co.
8. JBC Enterprises, Inc.
9. Keystone/Rees, Inc.
10. Robroy Industries, Inc.
11. Square D Co.
12. Thermotools Co.
13. Wadsworth Electric Mfg. Co., Inc.

- B. Description: Electrical wireways shall be of types, sizes, and number of channels as indicated. Fittings and accessories including but not limited to couplings, offsets, elbows, expansion joints, adapters, hold-down straps, and end caps shall match and mate with wireway as required for complete system. Where features are not indicated, select to fulfill wiring requirements and comply with applicable provisions of NEC.
- C. Knockouts: Manufacturer's standard.
- D. Size: 4 x 4 inch, 6 x 6 inch, 8 x 8 inch, or 12 x 12 inch; length as indicated.
- E. Cover: Hinged cover with full gasketing.
- F. Connector: Slip-in.
- G. Fittings: Lay-in type with removable top, bottom, and side; captive screws.
- H. Finish: Rust inhibiting primer coating with gray, white or ivory enamel finish as selected by architect.

## 2.5 WALL DUCT

- A. Available Manufacturers:
1. Anchor Electric Co.
  2. Circle AW Products
  3. Cross Brothers, Inc.
  4. Erickson Electric Equipment Co.
  5. Gismo
  6. GS Metals Corp.
  7. Hoffman Engineering Co.
  8. JBC Enterprises, Inc.
  9. Keystone/Rees, Inc.
  10. Robroy Industries, Inc.
  11. Square D Co.
  12. Thermotools Co.
  13. Wadsworth Electric Mfg. Co., Inc.
- B. Description: Sheet metal wall duct suitable for installation of X-ray cables; with

surface covers and accessories as required.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install Products in accordance with manufacturer's instructions.
- B. Use flat-head screws, clips, and straps to fasten raceway channel to surfaces. Mount plumb and level. Gray, white or ivory finish as selected by architect.
- C. Use suitable insulating bushings and inserts at connections to outlets and corner fittings.
- D. Wireway Supports: Provide steel channel as specified in Section Supporting Devices.
- E. Close ends of wireway and unused conduit openings.
- F. Ground and bond raceway and wireway under provisions of Section Grounding and Bonding.

END OF SECTION

This page intentionally left blank

SECTION 16120 - WIRES AND CABLE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions, apply to this Section.
- B. Requirements of the following Division 16 Sections apply to this section:
  - 1. Basic Electrical Requirements.
  - 2. Conduit.
  - 3. Boxes.
  - 4. Identification.

1.2 SUMMARY

- A. This Section includes wires, cables, and connectors for power, lighting, signal, control and related systems rated 600 volts and less. This section includes the following:
  - 1. Building wire and cable.
  - 2. Nonmetallic-sheathed cable.
  - 3. Underground feeder and branch circuit cable.
  - 4. Service entrance cable.
  - 5. Armored cable.
  - 6. Metal clad cable.
  - 7. Wiring connectors and connections.
- B. Related Sections: The following Sections contain requirements that relate to this section:
  - 1. Section "Earthwork" for trenching and backfilling for direct buried cable.
  - 2. Section "Electrical Boxes and Fittings: for connectors for Terminating Cables in boxes and other electrical enclosures.

1.3 SUBMITTALS

- A. Product Data for electrical wires, cables and connectors.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with provisions of the following code:
  - 1. NFPA 70 "National Electrical Code."
- B. Conform to applicable codes and regulations regarding toxicity of combustion products of insulating materials.
- C. UL Compliance: Provide components which are listed and labeled by UL under the following standards.
  - 1. UL Std. 4 Armored Cable.
  - 2. UL Std. 83 Thermoplastic-Insulated Wires and Cables.



3. UL Std. 486A Wire Connectors and soldering Lugs for Use with Copper Conductors.
  4. UL Std. 486B Wire Connectors for Use with Aluminum Conductors.
  5. UL Std. 854 Service Entrance Cable.
- D. NEMA/ICEA Compliance: Provide components which comply with the following standards:
1. WC-5 Thermoplastic-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.
  2. WC-7 Cross Linked Thermosetting Polyethylene-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.
  3. WC-8 Ethylene-Propylene-Rubber-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.
- E. IEEE Compliance: Provide components which comply with the following standard.
1. Std. 82 Test procedures for Impulse Voltage Tests on Insulated Conductors.
- F. ANSI/NFPA 70 - National Electrical Code.

#### 1.5 SUBMITTALS

- A. Submit under provisions of Section Submittals.
- B. Product Data: Provide for each cable assembly type.
- C. Test Reports: Indicate procedures and values obtained.
- D. Design Data: Indicate voltage drop and ampacity calculations for aluminum conductors substituted for copper conductors.
- E. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency specified under Regulatory Requirements.

#### 1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum of three years documented experience.

#### 1.7 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

1.8 FIELD SAMPLES

- A. Provide under provisions of Section Submittals.
- B. Submit one length, each 18 inches of cable assembly from each reel.
- C. Select each length to include complete set of manufacturer markings.
- D. Attach tag indicating cable size and application information.

1.9 PROJECT CONDITIONS

- A. Verify that field measurements are as shown on Drawings.
- B. Conductor sizes are based on copper unless indicated otherwise.
- C. Aluminum conductor is not acceptable.
- D. Wire and cable routing shown on Drawings is approximate unless dimensioned. Route wire and cable as required to meet Project Conditions.
- E. Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required.

1.10 COORDINATION

- A. Coordinate Work under provisions of Section Project Coordination.
- B. Determine required separation between cable and other work.
- C. Determine cable routing to avoid interference with other work.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- B. Wire and Cable:
  - 1. American Insulated Wire Corp.
  - 2. Brintec Corp.
  - 3. Carol Cable Co. Inc.
  - 4. Senator Wire and Cable Co.
  - 5. Southwire Company.

2.2 WIRES AND CABLES

- A. General: Provide wire and cable suitable for the temperature, conditions and location where installed. Minimum insulation voltage shall be 600 volts.

- B. Conductors: Provide solid conductors for power and lighting circuits No. 10 AWG and smaller. Provide stranded conductors for sizes No. 8 AWG and larger.
- C. Conductor Material: copper for all wires and cables.
- D. Insulation: Provide ANSI/NFPA 70 THHN/THWN insulation for all conductors size 500MCM and larger, and No. 8 AWG and smaller. For all other sizes provide ANSI/NFPA 70 THHN/THWN or XHHW insulation as appropriate for the locations where installed.
- E. Color Coding for phase identification in accordance with Table 1 in Part 3 below.
- F. Jackets: Factory-applied nylon or PVC external jacketed wires and cables for pulls in raceways over 100-feet in length, for pulls in raceways with more than three equivalent 90 deg. bends, for pulls in conduits underground or under slabs on grade, and where indicated.
- G. Cables: Provide the following type(s) of cables in NEC approved locations and applications where indicated. Provide cable UL listed for particular application:
- H. Armored Cable: ANSI/NFPA 70 Types AC and ACL, Insulation Thermoplastic, 75 Deg. C rated, conductor covering, lead.
- I. Metal-Clad Cable: ANSI/NFPA 70 Type MC, Insulation Thermoplastic, 75 Deg. C rated, corrugated steel tube with PVC jacket. MC cable shall be used only for connections to equipment.
- J. Nonmetallic-Sheathed Cable: ANSI/NFPA 70 Type NM and NMC.
- K. Above ground Service-Entrance Cable: ANSI/NFPA 70 Type SE, Insulation XHHW.
- L. Underground Service-Entrance Cable: ANSI/NFPA 70 Type USE, Insulation XHHW.
- M. Underground Feeder and Branch-Circuit Cable: ANSI/NFPA 70 Type UF, Insulation 90 Deg. C rating.
- N. Portable Cord: ANSI/NFPA 70 Type S.

### 2.3 WIRING CONNECTORS

- A. Split Bolt Connectors;
- B. Solderless Pressure Connectors:
- C. Spring Wire Connectors:
- D. Compression Connectors:

- E. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
  - 1. Amp
  - 2. 3M Company
  - 3. O-Z/Gedney Co.
  - 4. Square D Company
- F. Provide UL-listed factory-fabricated, solderless metal connectors of sizes, ampacity ratings, materials, types and classes for applications and for services indicated. Use connectors with temperature ratings equal to or greater than those of the wires upon which used.

### PART 3 - EXECUTION

#### 3.1 WIRING METHOD

- A. Use the following wiring methods as indicated:
  - 1. Wire: install all wire (power, lighting, signal, control and system) unless shown otherwise on drawings, in raceways.
  - 2. Armored Cable, Type AC: for connections from raceway outlet boxes to lighting fixtures.
  - 3. Metal Clad Cable, Type MC: in cable trays.
  - 4. Service Entrance Cable, Type SE: for service entrance cable and for feeders (and branch circuits), install in raceway.
  - 5. Service Entrance Cable Type USE: for underground service feeders to building. Install in raceway.
  - 6. Underground Feeder and Branch Circuit Cable Type UF: where permitted by Code, install in raceway.
  - 7. Portable Cord Type S: for flexible pendant leads to outlets and equipment where permitted by Code and as indicated.

#### 3.2 INSTALLATION OF WIRES AND CABLES

- A. General: Install electrical cables, wires, and connectors in compliance with NEC.
- B. Coordinate cable installation with other Work.
- C. Pull conductors simultaneously where more than one is being installed in same raceway. Use UL listed pulling compound or lubricant, where necessary.
- D. Use pulling means including, fish tape, cable, rope, and basket weave wire/cable grips which will not damage cables or raceways. Do not use rope hitches for pulling attachment to wire or cable.
- E. Conceal all cable in finished spaces.
- F. Install exposed cable parallel and perpendicular to surfaces or exposed structural members, and follow surface contours, where possible.

- G. Keep conductor splices to minimum.
- H. Install splice and tap connectors which possess equivalent or better mechanical strength and insulation rating than conductors being spliced.
- I. Use splice and tap connectors which are compatible with conductor material.
- J. Provide adequate length of conductors within electrical enclosures and train the conductors to terminal points with no excess. Bundle multiple conductors, with conductors larger than no 10 AWG cabled in individual circuits. Make terminations so there is no bare conductor at the terminal.
- K. Tighten electrical connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL 486A and UL 486B.
- L. Install products in accordance with manufacturer's instructions.
- M. Use solid conductor for feeders and branch circuits 10 AWG and smaller.
- N. Use stranded conductors for control circuits.
- O. Use conductor not small than 12 AWG for power and lighting circuits.
- P. Use conductor not smaller than 14 AWG for control circuits.
- Q. Use 10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet.
- R. Use 10 AWG conductors for 20 ampere, 277 volt branch circuits longer than 200 feet.
- S. Pull all conductors into raceway at same time.
- T. Use suitable wire pulling lubricant for building wire 4 AWG and larger.
- U. Protect exposed cable from damage.
- V. Support cables above accessible ceiling, using spring metal clips or plastic cable ties to support cables from structure. Do not rest cable on ceiling panels.
- W. Use suitable cable fittings and connectors.
- X. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- Y. Clean conductor surfaces before installing lugs and connectors.
- Z. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.

- AA. If aluminum conductors are provided with equipment, terminate aluminum conductors with tin-plated aluminum-bodied compression connectors only. Fill with anti-oxidant compound before installing conductor.
- BB. If aluminum conductors are provided with equipment, use suitable reducing connectors or mechanical connector adaptors for connecting aluminum conductors to copper conductors.
- CC. Use split bolt connectors for copper conductor splices and taps, 6 AWG and larger. Tape un-insulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.
- DD. Use solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.
- EE. Use insulated spring wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller.

### 3.3 EXAMINATION

- A. Verify that interior of building has been protected from weather.
- B. Verify that mechanical work likely to damage wire and cable has been completed.

### 3.4 PREPARATION

- A. Completely and thoroughly swab raceway before installing wire.

### 3.5 WIRING METHODS

- A. Concealed Dry Interior Locations: Use only building wire, Type THHN/THWN insulation, in raceway.
- B. Expose Dry Interior Locations: Use only building wire, Type THHN/THWN insulation, in raceway.
- C. Above Accessible Ceilings: Use only building wire, Type THHN/THWN insulation, in raceway.
- D. Wet or Dry Interior Locations: Use only building wire, Type THHN/THWN insulation, in raceway.
- E. Exterior Locations: Use only building wire, Type THHN/THWN insulation, in raceway, underground feeder and branch-circuit cable.
- F. Underground Installations: Use only building wire, Type THHN/THWN insulation, in raceway.
- G. Use wiring methods indicated on Drawings.

3.6 FIELD QUALITY CONTROL

- A. Prior to energizing, check installed wires and cables with megohm meter to determine insulation resistance levels to assure requirements are fulfilled.
- B. Prior to energizing, test wires and cable hook-ups, energize circuits and demonstrate proper functioning. Correct malfunctioning units, and retest to demonstrate compliance.
- C. Subsequent to wire and cable hook-ups, energize circuits and demonstrate proper functioning. Correct malfunctioning units, and retest to demonstrate compliance.

D. TABLE 1: Color Coding for Phase Identification:

Color code secondary service, feeder, and branch circuit conductors with factory applied color as follows:

| 208Y/120 Volts | Phase   | 480Y/277 Volts |
|----------------|---------|----------------|
| Black          | A       | Brown          |
| Red            | B       | Orange         |
| Blue           | C       | Yellow         |
| White          | Neutral | White          |
| Green          | Ground  | Green          |

- E. Perform field inspection and testing under provisions of Section Testing Laboratory Service.
- F. Inspect wire and cable for physical damage and proper connection.
- G. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.
- H. Verify continuity of each branch circuit conductor.
- I. Verify continuity of each circuit.

3.7 INTERFACE WITH OTHER PRODUCTS

- A. Identify wire and cable under provisions of Section Electrical Identification.
- B. Identify each conductor with its circuit number or their designation indicated on Drawings.

3.8 CABLE TESTING - 600V MAXIMUM

- A. Visual and Mechanical Inspection
  - 1. Inspect cables for physical damage and proper connection in accordance with drawings.

2. Test cable mechanical connections to manufacturer's recommended values or NETA ATS-1995 Table 10.12 using a calibrated torque wrench.
  3. Check cable color coding with engineer's specifications and National Electric Code standards.
- B. Electrical Tests
1. Perform insulation-resistance test on each conductor with respect to ground and adjacent conductors. Applied potential shall be 1,000 volts dc for 1 minute.
  2. Perform continuity test to insure proper cable connection.
  3. Test Values: Evaluate results by comparison with cables of same length and type. Investigate any values less than 50 megohms.

END OF SECTION



This page intentionally left blank

SECTION 16130 - ELECTRICAL BOXES AND FITTINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Wall and ceiling outlet boxes.
- B. Pull and junction boxes.

1.2 RELATED SECTIONS

- A. Section - Fireproofing.
- B. Section - Access Doors.
- C. Section - Wiring Devices: Wall plates in finished areas, floor box service fittings, fire-rated poke-through fittings, and access floor boxes.
- D. Section - Cabinets and Enclosures.
- E. Section - Equipment Wiring Systems.
- F. Section - Fire Alarm System: Mounting height of fire alarm outlets.

1.3 REFERENCES

- A. NECA - Standard of Installation.
- B. NEMA FB 1 - Fittings and Supports for Conduit and Cable Assemblies.
- C. NEMA OS 1 - Steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
- D. NEMA OS 2 - Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports.
- E. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- F. NFPA 70 - National Electrical Code.

1.4 SUBMITTALS FOR CLOSEOUT

- A. Section - Contract Closeout: - Operation and Maintenance Data: Submittals for Project closeout.
- B. Record actual locations and mounting heights of outlet, pull, and junction boxes on project record documents.

1.5 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.
- B. Provide Products listed and classified by Underwriters Laboratories, Inc., as suitable for the purpose specified and indicated.

PART 2 - PRODUCTS

2.1 OUTLET BOXES

- A. Sheet Metal Outlet Boxes: NEMA OS 1, galvanized steel.
  - 1. Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; include 1/2 inch (13 mm) male fixture studs where required.
  - 2. Concrete Ceiling Boxes: Concrete type.
- B. Nonmetallic Outlet Boxes: NEMA OS 2.
- C. Cast Boxes: NEMA FB 1, Type FD, cast ferroalloy. Provide gasketed cover by box manufacturer.
- D. Wall Plates for Finished Areas: As specified in Section Wiring Devices.
- E. Available Manufacturer: Subject to compliance with requirements, manufacturers offering outlet boxes which may be incorporated in the work include, but are not limited to, the following:
  - 1. Adalet-PLM Div, Scott Fetzer Co.
  - 2. Appleton Electric; Emerson Electric Co.
  - 3. Bell Electric; Square D Co.
  - 4. Eagle Electric Mfg. Co., Inc.
  - 5. Midland-Ross Corp.
  - 6. OZ/Gedney; General Signal Co.
  - 7. Pass and Seymour, Inc.
  - 8. RACO Div; Harvey Hubbell Inc.
  - 9. Thomas & Betts Co.

2.2 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes: NEMA OS 1, galvanized steel.
- B. Hinged Enclosures: As specified in Section Cabinets & Enclosures.
- C. Surface Mounted Cast Metal Box: NEMA 250, Type 4 or 6 as required; flat-flanged, surface mounted junction box:
  - 1. Material: Galvanized cast iron.
  - 2. Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover screws.
- D. In-Ground Cast Metal Box: NEMA 250, Type 6, outside flanged, recessed cover

box for flush mounting:

1. Material: Galvanized cast iron.
2. Cover: Smooth cover with neoprene gasket and stainless steel cover screws.
3. Cover Legend: "ELECTRIC".

E. Fiberglass Handholes: Die molded glass fiber hand holes:

1. Cable Entrance: Pre-cut size per number of conduits cable entrance at center bottom of each side.
2. Cover: Glass fiber weatherproof cover with nonskid finish.

F. Available Manufacturer: Subject to compliance with requirements, manufacturers offering outlet boxes which may be incorporated in the work include, but are not limited to, the following:

1. Adalet-PLM Div, Scott Fetzer Co.
2. Appleton Electric; Emerson Electric Co.
3. Arrow-Hart Div; Crouse-Hinds Co.
4. Bell Electric; Square D Co.
5. GTE Corp.
6. Keystone Columbia, Inc.
7. OZ/Gedney Co., General Signal Co.
8. Spring City Electrical Mfg. Co.

### 2.3 BUSHING, KNOCKOUT CLOSURES AND LOCK NUTS

A. Bushing, Knockout Closures and Locknuts: Provide corrosion-resistant box knockout closures, conduit locknuts and malleable iron conduit bushings, offset connectors, of types and sizes, to suit respective installation requirements and applications.

B. Available Manufacturer: Subject to compliance with requirements, manufacturers offering bushings, knockout closure, locknuts, and connectors which may be incorporated in the work include, but are not limited to, the following:

1. Adalet-PLM Div; Scott Fetzer Co.
2. AMP, Inc.
3. Arrow-Hart Div; Crouse-Hinds Co.
4. Appleton Electric Co.; Emerson Electric Co.
5. Bell Electric; Square D Co.
6. Midland-Ross Corp.
7. Midwest Electric; Cooper Industries Inc.
8. OZ/Gedney Co; General Signal Co.
9. RACO Div; Harvey Hubbell Inc.
10. Thomas & Betts Co., Inc.

### 2.4 RAIN TIGHT OUTLET BOXES

A. Raintight Outlet Boxes: Provide corrosion-resistant cast-metal raintight outlet wiring boxes, of types, shapes and sizes, including depth of boxes, with threaded conduit holes for fastening electrical conduit, cast-metal face plates with spring-hinged watertight caps suitable configured for each application, including face

plate gaskets and corrosion-resistant plugs and fasteners.

- B. Available Manufacturer: Subject to compliance with requirements, manufacturers offering raintight outlet boxes which may be incorporated in the work include, but are not limited to, the following:
1. Arrow-Hart Div; Crouse-Hinds Co.
  2. Appleton Electric Co.; Emerson Electric Co.
  3. Bell Electric; Square D Co.
  4. Eagle Electric Mfg. Co., Inc.
  5. Gould, Inc.
  6. Harvey Hubbell, Inc.
  7. OZ/Gedney Co; General Signal Co.
  8. Pass and Seymour, Inc.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verify locations of floor boxes and outlets in offices, classrooms and work areas prior to rough-in.

#### 3.2 INSTALLATION

- A. Install boxes in accordance with NECA "Standard of Installation."
- B. Install in locations as shown on Drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.
- C. Set wall mounted boxes at elevations to accommodate mounting heights as indicated on the drawings, in the legend or as specified in section for outlet device.
- D. Electrical boxes are shown on Drawings in approximate locations unless dimensioned. Adjust box location up to 10 feet if required to accommodate intended purpose.
- E. Orient boxes to accommodate wiring devices oriented as specified in Section Wiring Devices.
- F. Maintain headroom and present neat mechanical appearance.
- G. Install pull boxes and junction boxes above accessible ceilings and in unfinished areas only.
- H. Inaccessible Ceiling Areas: Install outlet and junction boxes no more than 6 inches (150 mm) from ceiling access panel or from removable recessed luminaire.
- I. Install boxes to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section Joint Sealers.

- J. Coordinate mounting heights and locations of outlets mounted above counters, benches, and backsplashes.
- K. Locate outlet boxes to allow luminaries positioned as shown on reflected ceiling plan.
- L. Align adjacent wall mounted outlet boxes for switches, thermostats, and similar devices.
- M. Use flush mounting outlet box in finished areas.
- N. Locate flush mounting box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.
- O. Do not install flush mounting box back-to-back in walls; provide minimum 6 inches (150 mm) separation. Provide minimum 24 inches (600 mm) separation in acoustic rated walls.
- P. Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.
- Q. Use stamped steel bridges to fasten flush mounting outlet box between studs.
- R. Install flush mounting box without damaging wall insulation or reducing its effectiveness.
- S. Use adjustable steel channel fasteners for hung ceiling outlet box.
- T. Do not fasten boxes to ceiling support wires.
- U. Support boxes independently of conduit.
- V. Use gang box where more than one device is mounted together. Do not use sectional box.
- W. Use gang box with plaster ring for single device outlets.
- X. Use cast outlet box in exterior locations exposed to the weather and wet locations.
- Y. Use cast floor boxes for installations in slab on grade; formed steel boxes are acceptable for other installations.
- Z. Set floor boxes level.
- AA. Large Pull Boxes: Use hinged enclosure in interior dry locations, surface-mounted cast metal box in other locations.

### 3.3 INTERFACE WITH OTHER PRODUCTS

- A. Coordinate installation of outlet box for equipment connected under Section

Equipment Wiring Systems.

- B. Verify box heights with cabinet submittals, ceiling heights, appliances and equipment, wall coverings, wall mounted devices and architectural elevations.

3.4 ADJUSTING

- A. Section Contract Closeout, and section - Starting of Systems: Adjusting installed work.
- B. Adjust floor box flush with finish flooring material.
- C. Adjust flush-mounting outlets to make front flush with finished wall material.
- D. Install knockout closures in unused box openings.

3.5 CLEANING

- A. Section- Contract Closeout: Cleaning installed work.
- B. Clean interior of boxes to remove dust, debris, and other material.
- C. Clean exposed surfaces and restore finish.

END OF SECTION

SECTION 16170 - GROUNDING AND BONDING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Grounding electrodes and conductors.
- B. Equipment grounding conductors.
- C. Bonding.

1.2 RELATED SECTIONS

- A. Section - Concrete Reinforcement.
- B. Section - Cast-In-Place Concrete.

1.3 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.
- B. NFPA 99 - Health Care Facilities.

1.4 GROUNDING ELECTRODE SYSTEM

- A. Existing or new Metal underground water pipe.
- B. Metal frame of the building.
- C. Concrete-encased electrode.
- D. Ground ring (counter poise loop).
- E. Existing or new Metal underground gas piping system.
- F. Rod electrode.
- G. Plate electrode.
- H. Active electrode.

1.5 PERFORMANCE REQUIREMENTS

- A. Grounding System Resistance: 10 ohms.

1.6 SUBMITTALS

- A. Submit under provisions of Section Submittals.



- B. Product Data: Provide data for grounding electrodes and connections.
- C. Test Reports: Indicate overall resistance to ground and resistance of each electrode.
- D. Manufacturer's Instructions: Include instructions for storage, handling, protection, examination, preparation and installation of exothermic connectors.

1.7 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section Contract Closeout.
- B. Accurately record actual locations of grounding electrodes.

1.8 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this Section with minimum three years documented experience.

1.9 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

PART 2 - PRODUCTS

2.1 GROUNDING AND BONDING PRODUCTS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering grounding and bonding products which may be incorporated in the work include, but are not limited to, the following:
  - 1. Adalet-PLM Div; Scott Fetzer Co.
  - 2. Burndy Corporation
  - 3. Cadweld Div; Erico Products Inc.
  - 4. Crouse-Hinds Div; Cooper Industries
  - 5. Harger Industries
  - 6. Ideal Industries, Inc.
  - 7. Joslyn Corporation
  - 8. Okonite Company
  - 9. OZ Gedney Div; General Signal Corp.
  - 10. Thomas and Betts Corp.
  - 11. Substitutions: Under provisions of Section Material and Equipment.

2.2 ROD ELECTRODE

- A. Manufacturers: See 2.1.A above.
- B. Material: Copper-clad steel.

C. Diameter: 3/4 inch.

D. Length: 10 feet.

### 2.3 ACTIVE ELECTRODES

A. Manufacturers: See 2.1.A above.

B. Plate Electrodes: Sheet copper plate, 20-gage by 36" by 36", with 2 cable attachments sized as indicated for either 1/0 or 2/0 cables.

### 2.4 MECHANICAL CONNECTORS

A. Manufacturers: See 2.1.A above.

B. Bonding Jumper Braid: Copper braided tape, constructed of 30-gage bare copper wires and properly sized for indicated applications.

C. Flexible Jumper Strap: Flexible flat conductor, 480 strands of 30-gage bare copper wire; 3/4" wide, 9-1/2" long; 48,250 CM. Select braid with holes sized for 3/8" diameter bolts, and protect braid with copper bolt hole ends.

D. Service Arrester: 2-pole, 1-phase, 120/240-volts, #14 AWG 3-wire including ground, 18" leads, with watertight enclosure.

E. Service Arrester: Electrical service arrester, gap type, 240/280-volt, 1-phase, 3-wire, for exterior mounting.

F. Service Arrester: Electrical service arrester, pellet type, 120/240-volt, 1-phase, 3-wire, for exterior mounting.

G. Service Arrester: Electrical service arrester, 480-volts, 3-phase, 4-wire, for exterior mounting.

### 2.5 EXOTHERMIC CONNECTIONS

A. Manufacturers: See 2.1.A above.

B. Electrical Grounding Connection Accessories: Provide electrical insulating tape, heat-shrinkable insulating tubing, welding materials, bonding straps, as recommended by accessories manufacturers for type service indicated.

C. Field welding: Comply with AWS Code for procedures, appearance, and quality of welds; and for methods used in correction welding work. Provide welded connections where grounding conductors connect to underground grounding and plate electrodes.

### 2.6 WIRE

A. Material: Stranded copper.

- B. Foundation Electrodes: 2/0 AWG.
- C. Grounding Electrode Conductor: Size to meet NFPA 70 requirements.

## 2.7 GROUNDING WELL COMPONENTS

- A. Well Pipe: 8 inch (200 mm) diameter by 24 inch (600 mm) long concrete pipe with belled end.
- B. Well Cover: Cast iron with legend "GROUND" embossed on cover.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that final backfill and compaction has been completed before driving rod electrodes.

### 3.2 INSTALLATION

- A. Install Products in accordance with manufacturer's instructions.
- B. Install rod electrodes at locations indicated. Install rod electrodes as required to achieve specified resistance to ground.
- C. Provide grounding well pipe with cover at rod locations where indicated. Install well pipe top flush with finished grade.
- D. Provide grounding electrode conductor and connect to reinforcing steel in foundation footing as required. Bond steel together.
- E. Provide bonding to meet Regulatory Requirements.
- F. Bond together metal siding not attached to grounded structure; bond to ground.
- G. Bond together each metallic raceway, pipe, duct and other metal object entering space under access floors. Use 2 AWG bare copper conductor.
- H. Provide isolated grounding conductor for circuits where shown.
- I. Provide grounding and bonding in patient care areas to meet requirements of NFPA 99 and ANSI/NFPA 70.
- J. Equipment Grounding Conductor: Provide separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

### 3.3 INTERFACE WITH OTHER PRODUCTS

- A. Interface with lightning protection system installed under Section Lightning

Protection System.

3.4 FIELD QUALITY CONTROL

- A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.
- B. Use suitable test instrument to measure resistance to ground of system. Perform testing in accordance with test instrument manufacturer's recommendations using the fall- of-potential method.

END OF SECTION

This page intentionally left blank

SECTION 16190 - SUPPORTING DEVICES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Conduit and equipment supports.
- B. Anchors and fasteners.

1.2 REFERENCES

- A. NECA - National Electrical Contractors Association.
- B. ANSI/NFPA 70 - National Electrical Code.

1.3 SUBMITTALS

- A. Submit under provisions of Section Submittals.
- B. Product Data: Provide manufacturer's catalog data for fastening systems.
- C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, installation, and starting of Product.

1.4 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

PART 2 - PRODUCTS

2.1 PRODUCT REQUIREMENTS

- A. Materials and Finishes: Provide adequate corrosion resistance.
- B. Provide materials, sizes, and types of anchors, fasteners and supports to carry the loads of equipment and conduit. Consider weight of wire in conduit when selecting products.
- C. Anchors and Fasteners:
  - 1. Concrete Structural Elements: Use precast insert system, expansion anchors, power actuated anchors and preset inserts.
  - 2. Steel Structural Elements: Use beam clamps, spring steel clips, steel ramset fasteners, and welded fasteners.
  - 3. Concrete Surfaces: Use self-drilling anchors and expansion anchors.

4. Hollow Masonry, Plaster, and Gypsum Board Partitions: Use toggle bolts.
5. Solid Masonry Walls: Use expansion anchors and preset inserts.
6. Sheet Metal: Use sheet metal screws.
7. Wood Elements: Use wood screws.

## 2.2 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
1. Slotted Metal Angle and U-Channel Systems:
    - a. Allied Tube & Conduit
    - b. American Electric
    - c. B-Line Systems, Inc.
    - d. Cinch Metals Corp.
    - e. GS Metals Corp.
    - f. Haydon Corp.
    - g. Kin-Line, Inc.
    - h. Unistrut Diversified Products
  2. Conduit Sealing Bushings:
    - a. Bridgeport Fittings, Inc.
    - b. Cooper Industries, Inc.
    - c. Elliott Electric Mfg. Corp.
    - d. GS Metals Corp.
    - e. Killark Electric Mfg. Co.
    - f. Madison Equipment Co.
    - g. L.E. Mason Co.
    - h. O-Z/Gedney
    - i. Producto Electric Corp.
    - j. Raco, Inc.
    - k. Red Seal Electric Corp.
    - l. Spring City Electrical Mfg. Co.
    - m. Thomas & Betts Corp.

## 2.3 COATINGS

- A. Coating: Supports, support hardware, and fasteners shall be protected with zinc coating or with treatment of equivalent corrosion resistance using approved alternative treatment, finish, or inherent material characteristic. Products for use outdoors shall be hot-dip galvanized.

## 2.4 MANUFACTURED SUPPORTING DEVICES

- A. Raceway Supports: Clevis hangers, riser clamps, conduit straps, threaded c-clamps with retainers, ceiling trapeze hangers, wall brackets, and spring steel clamps.
- B. Fasteners: Types, materials, and construction features as follows:
1. Expansion Anchors: Carbon steel wedge or sleeve type.

2. Toggle Bolts: All steel springhead type.
  3. Powder-Driven Threaded Studs: Heat-treated steel, designed specifically for the intended service.
- C. Conduit Sealing Bushings: Factory-fabricated watertight conduit sealing bushing assemblies suitable for sealing around conduit, or tubing passing through concrete floors and walls. Construct seals with steel sleeve, malleable iron body, neoprene sealing grommets or rings, metal pressure rings, pressure clamps, and cap screws.
- D. Cable Supports for Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug for nonarmored electrical cables in riser conduits. Provide plugs with number and size of conductor gripping holes as required to suit individual risers. Construct body of malleable-iron casting with hot-dip galvanized finish.
- E. U-Channel Systems: 16-gage steel channels, with 9/16 inch- diameter holes, at a minimum of 8 inches on center, in top surface. Provide fittings and accessories that mate and match with U-Channel and are of the same manufacture.

## 2.5 FABRICATED SUPPORTING DEVICES

- A. General: shop-or field-fabricated supports or manufactured supports assembled from U-Channel components.
- B. Steel Brackets: Fabricated of angles, channels, and other standard structural shapes. Connect with welds and machine bolts to form rigid supports.
- C. Pipe Sleeves: Provide pipe sleeves of one of the following:
1. Sheet Metal: Fabricate from galvanized sheet metal; round tube closed with snaplock joint, welded spiral seams, or welded longitudinal joint. Fabricate sleeves from the following gage metal for sleeve diameter noted:
    - a. 3-inch and smaller: 20-gage.
    - b. 4-inch to 6-inch: 16-gage.
    - c. over 6-inch: 14-gage.
  2. Steel Pipe: Fabricate from Schedule 40 galvanized steel pipe.
  3. Plastic pipe: Fabricate from Schedule 80 PVC Plastic pipe.
- D. Conduit Supports: All conduit straps and/or supports shall have a minimum of two holes.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Install supporting devices to fasten electrical components securely and permanently in accordance with NEC requirements.
- B. Coordinate with the building structural system and with other electrical installation.



- C. Raceway Supports: Comply with the NEC and the following requirements:
1. Conform to manufacturer's recommendations for selection and installation of supports.
  2. Strength of each support shall be adequate to carry present and future load multiplied by a safety factor of at least four. Where this determination results in a safety allowance of less than 200 lbs safety allowance in the strength of each support.
  3. Support parallel runs of horizontal raceways together on trapeze-type hangers.
  4. Support individual horizontal raceways by separate pipe hangers. Spring steel fasteners may be used in lieu of hangers only for 1-1/2-inch and smaller raceways serving lighting and receptacle branch circuits above suspended ceilings only. For hanger rods with spring steel fasteners, use 1/4-inch-diameter or larger threaded steel. Use spring steel fasteners that are specifically designed for supporting single conduits or tubing.
  5. Space supports for raceways in accordance with Table I of this sections. Space supports for raceway types not covered by the above in accordance with NEC.
  6. Support exposed and concealed raceway within 1 foot of an unsupported box and access fittings. In horizontal runs, support at the box and access fittings may be omitted where box or access fittings are independently supported and raceway terminals are not made with chase nipples or threadless box connectors.
  7. In vertical runs, arrange support so the load produced by the weight of the raceway and the enclosed conductors is carried entirely by the conduit supports with no weight load on race way terminals.
- D. Vertical Conductor Supports: Install simultaneously with installation of conductors.
- E. Miscellaneous Supports: Support miscellaneous electrical components as required to produce the same structural safety factors as specified for raceway supports. Install metal channel racks for mounting cabinets, panelboards, disconnects, control enclosures, pull boxes, junction boxes, transformers, and other devices.
- F. In open overhead spaces, cast boxes threaded to raceways need not be supported separately except where used for fixture support; support sheet metal boxes directly from the building structure or by bar hangers. Where bar hangers are used, attach the bar to raceways on opposite sides of the box and support the raceway with an approved type of fastener not more than 24 inches from the box.
- G. Sleeves: Install in concrete slabs and walls and all other fire-rated floors and walls for raceways and cable installations. For sleeves through fire rated-wall or floor construction, apply UL-listed firestopping sealant in gaps between sleeves and enclosed conduits and cables in accordance with "Fire Resistant Joint Sealers" requirement of Section "Joint Sealers."
- H. Conduit Seals: Install seals for conduit penetrations of slabs on grade and exterior walls below grade and where indicated. Tighten sleeve seal screws until

sealing grommets have expanded to form watertight seal.

- I. Fastening: Unless otherwise indicated, fasten electrical items and their supporting hardware securely to the building structure, including but not limited to conduits, raceways, cables, cable trays, busways, cabinets, panelboards, transformers, boxes, disconnect switches, and control components in accordance with the following:
  1. Fasten by means of wood screws or screw-type nails on wood, toggle bolts on hollow masonry units, concrete inserts or expansion bolts on concrete or solid masonry, and machine screws, welded threaded studs, or spring-tension clamps on steel. Threaded studs driven by a powder charge and provided with lock washers and nuts may be used instead of expansion bolts and machine or wood screws. Do not weld conduit, pipe straps, or items other than threaded studs to steel structures. In partitions of light steel construction, use sheet metal screws.
  2. Holes cut to depth of more than 1-1/2 inches in reinforced concrete beams or to depth of more than 3/4 inch in concrete shall not cut the main reinforcing bars. Fill holes that are not used.
  3. Ensure that the load applied to any fastener does not exceed 25 percent of the proof test load. Use vibration-and shock-resistant fasteners for attachments to concrete slabs.

3.2 TESTS

- A. Test pull-out resistance of one of each type, size, and anchorage material for the following fastener types:
  1. Expansion anchors.
  2. Toggle bolts.
  3. Powder-driven threaded studs.
- B. Provide all jacks, jigs, fixtures, and calibrated indicating scales required for reliable testing. Obtain the structural Engineer's approval before transmitting loads to the structure. Test to 90 percent of rated proof load for fastener. If fastening fails test, revise all similar fastener installations and retest until satisfactory results are achieved.

C. TABLE I: SPACING FOR RACEWAY SUPPORTS

| Raceway Size (Inches)  | No. of Conductors in Run | Location  | Maximum Spacing of Supports (Feet) |     |     |
|------------------------|--------------------------|---|------------------------------------|-----|-----|
|                        |                          |   | RMC&IMC*                           | EMT | RNC |
| <b>HORIZONTAL RUNS</b> |                          |   |                                    |     |     |
| 1/2,3/4                | 1 or 2                   | Flat ceiling or wall.   | 5                                  | 5   | 3   |
| 1/2,3/4                | 1 or 2                   | Where it is difficult to provide supports except at intervals fixed by the building construction. | 7                                  | 7   | ... |

|                   |           |   |    |    |     |
|-------------------|-----------|---|----|----|-----|
| 1/2,3/4           | 3 or more | Any location.   | 7  | 7  | ... |
| 1/2-1             | 3 or more | Any location.   |    |    |     |
| 1 & larger        | 1 or 2    | Flat ceiling or wall.   | 6  | 6  | ... |
| 1 & larger        | 1 or 2    | Where it is difficult to provide supports except at intervals fixed by the building construction. | 10 | 10 | ... |
| 1 & larger        | 3 or more | Any location.   | 10 | 10 | ... |
| Any               | ....      | Concealed.  | 10 | 10 | ... |
| <hr/>             |           |   |    |    |     |
| VERTICAL RUNS     |           |   |    |    |     |
| <hr/>             |           |   |    |    |     |
| 1/2,3/4           | ....      | Exposed.  | 7  | 7  | ... |
| 1,1-1/4           | ....      | Exposed.  | 8  | 8  | ... |
| 12-1/2 and larger | ....      | Exposed.  | 10 | 10 | ... |
| Up to 2           | ....      | Shaftway.   | 14 | 10 | ... |
| 2-1/2             | ....      | Shaftway.   | 16 | 10 | ... |
| 3 & larger        | ....      | Shaftway.   | 20 | 10 | ... |
| Any               | ....      | Concealed.  | 10 | 10 | ... |

\*Maximum spacings for IMC above apply to straight runs only. Otherwise the maximums for EMT apply.

1. Abbreviations:
  - a. EMT Electrical metallic tubing.
  - b. IMC Intermediate metallic conduit.
  - c. RMC Rigid metallic conduit.
  - d. RNC Rigid nonmetallic conduit.

END OF SECTION

SECTION 16195 - ELECTRICAL IDENTIFICATION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Nameplates and labels.
- B. Wire and cable markers.
- C. Conduit markers.

1.2 RELATED SECTIONS

- A. Section - Painting.

1.3 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.

1.4 SUBMITTALS

- A. Submit under provisions of Section Submittals.
- B. Product Data: Provide catalog data for nameplates, labels, and markers.
- C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency specified under regulatory requirements. Include instructions for storage, handling, protection, examination, preparation and installation of Product.

1.5 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

1.6 EXTRA MATERIALS

- A. Furnish under provisions of Section Contract Closeout.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
  - 1. American Labelmark Co.

2. Calpico, Inc.
3. Cole-Flex Corp.
4. Emed Co., Inc.
5. George-Ingraham Corp.
6. Ideal Industries, Inc.
7. Kraftbilt
8. LEM Products, Inc.
9. Markal Corp.
10. National Band and Tag Co.
11. Panduit Corp.
12. Radar Engineers Div., EPIC Corp.
13. Seton Name Plate Co.
14. Standard Signs, Inc.
15. W.H. Brady, Co.

## 2.2 ELECTRICAL IDENTIFICATION PRODUCTS

- A. Adhesive Marking Labels for Raceway and Metal-clad Cable: Preprinted, flexible, self-adhesive labels with legend indicating voltage and service (Emergency, Lighting, Power, Light, Power DC, Air Conditioning, Communications, Control, Fire).
- B. Label Size: as follows:
  1. Raceways 1-inch and Smaller: 1-1/8 inches high by 4 inches long.
  2. Raceways larger than 1-Inch: 1-1/8 inches high by 8 inches long.
  3. Color: Black legend on orange background.
- C. Colored Adhesive Marking Tape for Raceways, Wires, and Cables: Self-adhesive vinyl tape not less than 3 mils thick by 1 inch to 2 inches in width.
- D. Pretensioned Flexible Wraparound Colored Plastic Sleeves for Raceway and Cable Identification: Flexible acrylic bands sized to suit the raceway diameter and arranged to stay in place by pre-tensioned gripping action when coiled around the raceway or cable.
- E. Underground Line Marking Tape: Permanent, bright-colored, continuous-printed, plastic tape compounded for direct-burial service not less than 6 inches wide by 4 mils thick. Printed legend indicative of general type of underground line below.
- F. Wire/Cable Designation Tape Markers: Vinyl or vinyl-cloth, self-adhesive, wraparound, cable/conductor markers with preprinted numbers and letter.
- G. Aluminum, Wraparound, Cable Marker Bands: Bands cut from 0.014-inch thick, aluminum sheet, fitted with slots or ears for securing permanently around wire or cable jacket or around groups of conductors. Provide for legend application with stamped letters or numbers.
- H. Plasticized Card Stock Tags: Vinyl cloth with preprinted and field-printed legends to suit the application. Orange background, except as otherwise indicated, with Eyelet for fastener.

- I. Aluminum-Faced Card Stock Tags: Weather-resistant, 18-point minimum card stock faced on both sides with embossable aluminum sheet, 0.002 inches thick, and laminated with moisture-resistant acrylic adhesive. Pre-print legend to suit the application, and punch for tie fastener.
- J. Brass or Aluminum Tags: Metal tags with tamped legend, punched for fastener. Dimensions: 2 inches by 2 inches by 19 gage.
- K. Engraved, Plastic-Laminated Labels, Signs, and Instruction Plates: Engraving stock melamine plastic laminate, 1/16-inch minimum thick for signs up to 20 square inches, or 8 inches in length; 1/8-inch thick for larger sizes. Engraved legend in white letters on black face and punched for mechanical fasteners.
- L. Baked-Enamel Warning and Caution Signs for Interior Use: Preprinted aluminum signs, punched for fasteners, with colors, legend, and size appropriate to the location.
- M. Exterior Metal-Backed Butyrate Warning and Caution Signs: Weather-resistant, nonfading, preprinted cellulose acetate butyrate signs with 20-gage, galvanized steel backing, with colors, legend, and size appropriate to the location. Provide 1/4-inch grommets in corners for mounting.
- N. Fasteners for Plastic-Laminated and Metal Signs: Self-tapping stainless steel screws or number 10/32 stainless steel machine screws with nuts and flat and lock washers.
- O. Cable Ties: Fungus-inert, self-extinguishing, one-piece, self-locking nylon cable ties, 0.18-inch minimum width, 50-lb minimum tensile strength, and suitable for a temperature range from minus 50° F to 350° F. Provide ties in specified colors when used for color coding.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Lettering and Graphics: Coordinate names, abbreviations, colors, and other designations used in electrical identification work with corresponding designations specified or indicated. Install numbers, lettering, and colors as approved in submittals and as required by code.
- B. Install identification devices in accordance with manufacturer's written instructions and requirements of NEC.
- C. Sequence of Work: Where identification is to be applied to surfaces that require finish, install identification after completion of finish work.
- D. Conduit Identifications: Identify high-voltage feeder conduits (over 600 V) by words "DANGER-HIGH VOLTAGE" in black letters 2 inches high, stenciled at 10-foot intervals over continuous painted orange background.
  - 1. The following areas shall be identified:

- a. On entire floor area directly above conduits running beneath and within 12 inches of a basement or ground floor that is in contact with earth or is framed above unexcavated space.
- b. On wall surfaces directly external to conduits run concealed within wall. On all accessible surfaces of concrete envelope around conduits in vertical shafts, exposed at ceilings or concealed above suspended ceilings.
- c. On entire surface of exposed conduits.
2. Apply identification to areas as follows:
  - a. Clean surface of dust, loose material, and oily films before painting.
  - b. Prime surfaces: For galvanized metal, use single-component acrylic vehicle coating formulated for galvanized surfaces. For concrete masonry units, use heavy-duty acrylic resin block filler. For concrete surfaces, use clear alkali-resistant alkyd binder-type sealer.
  - c. Apply primer and finish materials in accordance with manufacturer's instructions.
  - d. Apply one intermediate and one finish coat of orange silicone alkyd enamel.
- E. Identify Raceways of Certain Systems with Color Banding: Band exposed or accessible raceways of the following systems for identification. Bands shall be pretensioned, snap-around colored plastic sleeves, colored adhesive marking tape, or a combination of the two. Make each color band 2 inches wide, completely encircling conduit, and place adjacent bands of two-color markings in contact, side by side. Install bands at changes in direction, at penetrations of walls and floors, and at 40-foot maximum intervals in straight runs. Apply the following colors:
  1. Fire Alarm System: Red
  2. Fire Suppression Supervisory and Control System: Red and Yellow
  3. Security System: Blue and Yellow
  4. Clock System: Green
  5. Mechanical and Electrical Supervisory System: Green and Blue
  6. Telephone System: Green and Yellow
  7. Data Communications: Orange
  8. Sound, Communication & P.A.: Purple
  9. TV/CCTV/Cable TV: Purple and Yellow
- F. Identify Junction, Pull, and Connection Boxes: Code-required caution sign for boxes shall be pressure-sensitive, self-adhesive label indicating system voltage in black, preprinted on orange background. Install on outside of box cover. Also label box covers with identity of contained circuits. Use pressure-sensitive plastic labels at exposed locations and similar labels or plasticized card stock tags at concealed boxes. Paint covers as follows:
  1. Blue: 120/208V or 120/240V
  2. Yellow: 277/480V
  3. Paint systems' covers, as per the color coding listed in Section E above.
- G. Underground Electrical Line Identification: During trench backfilling, for exterior

underground power, signal, and communications lines, install continuous underground plastic line marker, located directly above line at 6 to 8 inches below finished grade. Where multiple lines installed in a common trench or concrete envelope, do not exceed an overall width of 16 inches; install a single line marker.

- H. Install line marker for underground wiring, both direct-buried and in raceway.
- I. Conductor Color Coding: Provide color coding for secondary service, feeder, and branch circuit conductors throughout the project secondary electrical system as follows:

| WYE<br>208/120 Volts | DELTA*<br>240/120v | Phase   | 480/277 Volts |
|----------------------|--------------------|---------|---------------|
| Black                | Black              | A       | Brown         |
| Red                  | Red                | B       | Orange        |
| Blue                 | Blue               | C       | Yellow        |
| White                | White              | Neutral | White         |
| Green                | Green              | Ground  | Green         |

\*Mark DELTA system high leg with orange.

- J. Use conductors with color factory-applied the entire length of the conductors except as follows:
  - 1. The following field-applied color-coding methods may be used in lieu of factory-coded wire for sizes larger than No. 6 AWG for grounding conductors and No. 4 AWG for the ungrounded phase conductors.
    - a. Apply colored, pressure-sensitive plastic tape in half-lapped turns for a distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply the last two laps of tape with no tension to prevent possible unwinding. Use 1-inch wide tape in colors as specified. Do not obliterate cable identification markings by taping. Tape locations may be adjusted slightly to prevent such obliteration.
    - b. In lieu of pressure-sensitive tape, colored cable ties may be used for color identification. Apply three ties of specified color to each wire at each terminal or splice point starting 3 inches from the terminal and spaced 3 inches apart. Apply with a special tool or pliers, tighten for snug fit, and cut off excess length.
- K. Power Circuit Identification: Securely fasten identifying metal tags or aluminum wraparound marker bands to cables, feeders, and power circuits in vaults, pull boxes, junction boxes, manholes, and switchboard rooms with 1/4-inch steel letter and number stamps with legend to correspond with designations on Drawings. If metal tags are provided, attach them with approximately 55-lb test monofilament line or one piece self-locking nylon cable ties.
- L. Tag or label conductors as follows:
  - 1. Future Connections: Conductors indicated to be for future connection or connection under another contract with identification indicating source



- and circuit numbers.
2. Multiple Circuits: Where multiple branch circuits or control wiring or communications/signal conductors are present in the same box or enclosure (except for three-circuit, four-wire home runs), label each conductor or cable. Provide legend indicating source, voltage, circuit number, and phase for branch circuit wiring. Phase and voltage of branch circuit wiring may be indicated by means of coded color of conductor insulation. For control and communications/signal wiring, use color coding or wire/cable marking tape at terminations and at intermediate locations where conductors appear in wiring boxes, troughs, and control cabinets. Use consistent letter/number conductor designations throughout on wire/cable marking tapes.
  3. Match identification markings with designations used in panelboards shop drawings, Contract Documents, and similar previously established identification schemes for the facility's electrical installations.
- M. Apply warning, caution, and instruction signs and stencils as follows:
1. Install warning, caution, or instruction signs where required by NEC, where indicated, or where reasonably required to assure safe operation and maintenance of electrical systems and of the items to which they connect. Install engraved plastic-laminated instruction signs with approved legend where instructions or explanations are needed for system or equipment operation. Install butyrate signs with metal backing for outdoor items.
  2. Emergency Operating Signs: Install engraved laminated signs with white legend on red background with minimum 3/8-inch high lettering for emergency instructions on power transfer, load shedding, or other emergency operations.
- N. Install equipment/system circuit/device identification as follows:
1. Apply equipment identification labels of engraved plastic-laminate on each major unit of electrical equipment in building, including central or master unit of each electrical system. This includes communication/signal/alarm systems, unless unit is specified with its own self-explanatory identification. Except as otherwise indicated, provide single line of text, with 1/2-inch-high lettering on 1-1/2-inch-high label (2-inch high where two lines are required), white lettering in black field. Text shall match terminology and numbering of the Contract Documents and Shop drawings. Apply labels for each unit of the following categories of electrical equipment.
    - a. Panelboards, electrical cabinets, and enclosures.
    - b. Access doors and panels for concealed electrical items.
    - c. Electrical switchgear and switchboards.
    - d. Motor control centers.
    - e. Motor starters.
    - f. Pushbutton stations.
    - g. Power transfer equipments.
    - h. Contactors.
    - i. Remote-controlled switches.
    - j. Dimmers.

- k. Control devices.
  - l. Transformers.
  - m. Inverters.
  - n. Rectifiers.
  - o. Frequency converters.
  - p. Battery racks.
  - q. Power generating units.
  - r. Telephone switching equipment.
  - s. Clock/program master equipment.
  - t. Call system master station.
  - u. TV/audio monitoring master station.
  - v. Fire alarm master station or control panel.
  - w. Security monitoring master station or control panel.
- O. Apply circuit/control/item designation labels of engraved plastic laminate for disconnect switches, breakers, pushbuttons, pilot lights, motor control centers, and similar items for power distribution and control components above, except panelboards and alarm/signal components, where labeling is specified elsewhere. For panelboards, provide framed, typed circuit schedules with explicit description and identification of items controlled by each individual breaker.
- P. Install labels at locations indicated and at locations for best convenience of viewing without interference with operation and maintenance of equipment.
- Q. Provide engraved nameplates on each fire alarm device with device address.

END OF SECTION

This page intentionally left blank

SECTION 16441 - ENCLOSED SWITCHES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Fusible switches.
- B. Nonfusible switches.
- C. Fuses.

1.2 REFERENCES

- A. NEMA KS 1 - Enclosed Switches.
- B. NFPA 70 - National Electrical Code.
- C. UL 198C - High-Interrupting Capacity Fuses; Current Limiting Type.
- D. UL 198E - Class R Fuses.

1.3 SUBMITTALS

- A. Submit under provisions of Section Submittals.
- B. Product Data: Provide switch ratings and enclosure dimensions.
- C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, installation, and starting of Product.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with NECA Standard of Installation.
- B. Maintain one copy of each document on site.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this Section with minimum three years documented experience.

1.6 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.
- B. Furnish products listed and classified by UL as suitable for purpose specified and shown.

1.7 EXTRA MATERIALS

- A. Furnish under provisions of Section Contract Closeout.
- B. Provide three of each size and type fuse installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
  - 1. Siemens

2.2 ENCLOSED SWITCHES

- A. Fusible Switch Assemblies: NEMA KS 1, Type HD load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in ON position. Handle lockable in OFF position. Fuse clips: Designed to accommodate Class R fuses.
- B. Nonfusible Switch Assemblies: NEMA KS 1, Type HD load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in ON position. Handle lockable in OFF position.
- C. Enclosures: NEMA KS 1.
  - 1. Interior Dry Locations: Type 1.
  - 2. Exterior Locations: Type 3R.
  - 3. Hazardous Locations: For hazardous location classification installed.

2.3 FUSES

- A. Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
  - 1. Bussman Div; Cooper Industries
  - 2. Commercial Enclosed Fuse Co.
  - 3. General Electric Co.
  - 4. Shawmut Div; Gould Inc.
  - 5. Reliance Fuse Div; Federal Pacific Electric Co.
  - 6. Substitutions: Under provisions of Section Material and Equipment.
- B. Description: Dual element, current limiting, time delay, one-time fuse, 600 volt, UL 198E, Class RK 1.
- C. Interrupting Rating: 200,000 RMS amperes.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install disconnect switches where indicated.
- B. Install fuses in fusible disconnect switches.
- C. Provide adhesive label on inside door of each switch indicating UL fuse class and size for replacement.

3.2 TESTING

- A. Subsequent to completion of installation of electrical disconnect switches, energize circuits and demonstrate capability and compliance with requirements. Except as otherwise indicate, do not test switches by operating them under load. However, demonstrate switch operation through six opening/closing cycles with circuit unloaded. Open each switch enclosure for inspection of interior, mechanical and electrical connections, fuse installation, and for verification of type and rating of fuses installed. Correct deficiencies then retest to demonstrate compliance. Remove and replace defective units with new units and retest.

3.3 INSTALLATION OF FUSES

- A. Install fuses as indicated, in accordance with manufacturer's written instructions and with recognized industry practices to ensure that protective devices comply with requirements. Comply with NEC, and NEMA standards for installation of fuses.
- B. Coordinate with other work, including electrical wiring, as necessary, to interface installation of fuses with other work.
- C. Install fuses in fused switches.

3.4 FIELD QUALITY CONTROL

- A. Prior to energization of fusible devices, test devices for continuity of circuitry and for short-circuits. Replace malfunctioning units with new units, and then demonstrate compliance with requirements.

END OF SECTION

This page intentionally left blank

SECTION 16470 PANELBOARDS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Distribution and Service Entrance panelboards.
- B. Branch circuit panelboards.
- C. Load centers.

1.2 RELATED SECTIONS

- A. Section - Supporting Devices.
- B. Section - Electrical Identification: Engraved nameplates.

1.3 REFERENCES

- A. NECA (National Electrical Contractors Association) "Standard of Installation."
- B. NEMA AB 1 - Molded Case Circuit Breakers.
- C. NEMA ICS 2 - Industrial Control Devices, Controllers, and Assemblies.
- D. NEMA KS 1 - Enclosed Switches.
- E. NEMA PB 1 - Panelboards.
- F. NEMA PB 1.1 - Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less.
- G. NFPA 70 - National Electrical Code.

1.4 SUBMITTALS

- A. Submit under provisions of Section Submittals.
- B. Shop Drawings: Indicate outline and support point dimensions, voltage, main bus ampacity, integrated short circuit ampere rating, circuit breaker and fusible switch arrangement and sizes.
- C. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency. Include instructions for storage, handling, protection, examination, preparation, installation, and starting of Product.



- 1.5 PROJECT RECORD DOCUMENTS
  - A. Submit under provisions of Section Contract Closeout.
  - B. Record actual locations of Products; indicate actual branch circuit arrangement.
- 1.6 OPERATION AND MAINTENANCE DATA
  - A. Submit under provisions of Section Contract Closeout.
  - B. Maintenance Data: Include spare parts data listing; source and current prices of replacement parts and supplies; and recommended maintenance procedures and intervals.
- 1.7 QUALITY ASSURANCE
  - A. Perform Work in accordance with NECA Standard of Installation.
  - B. Maintain one copy of each document on site.
- 1.8 QUALIFICATIONS
  - A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- 1.9 REGULATORY REQUIREMENTS
  - A. Conform to requirements of NFPA 70.
  - B. Furnish products listed and classified by UL as suitable for purpose specified and indicated.
- 1.10 FIELD MEASUREMENTS
  - A. Verify that field measurements are as indicated on shop drawings.
- 1.11 MAINTENANCE MATERIALS
  - A. Provide maintenance materials under provisions of Section Contract Closeout.
  - B. Provide two of each panelboard key.
  - C. Provide two fuse pullers.
- 1.12 EXTRA MATERIALS
  - A. Furnish under provisions of Section Contract Closeout.
  - B. Provide three of each size and type of fuse.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering electrical panelboard products which may be incorporated in the work include, but are not limited to, the following:
1. Siemens

2.2 DISTRIBUTION PANELBOARDS

- A. Panelboards: NEMA PB 1, circuit breaker type.
- B. Service Conditions:
1. Temperature: 40 degrees F.
  2. Altitude: 100 feet.
- C. Panelboard Bus: Copper, ratings as indicated. Provide copper ground bus in each panelboard.
- D. Minimum integrated short circuit rating: 21000 amperes RMS symmetrical for 240 volt panelboards; 65000 amperes RMS symmetrical for 480 volt panelboards, or at maximum short circuit available from power company service.
- E. Fusible Switch Assemblies: NEMA KS 1, quick-make, quick-break, load interrupter enclosed knife switch with externally operable handle. Provide interlock to prevent opening front cover with switch in ON position. Handle lockable in OFF position. Fuse clips: Designed to accommodate Class R fuses.
- F. Molded-Case Circuit Breakers:
1. Provide factory- assembled, molded-case circuit breakers as shown on the drawings with frame sizes indicated; rated up to 1200 amperes, 600-volts, 60 Hz, 3-poles with RMS symmetrical interrupting ratings with trip units per below, and with fault-current limiting protection, ampere ratings as indicated on the drawings. Construct with overcenter, trip-free, toggle-type operating mechanisms with quick-make, quick- break action and positive handle trip indication. Provide push-to-trip button on enclosure cover for mechanically tripping circuit breakers. Construct breakers for mounting and operating in any physical position and operating in an ambient temperature of 40 deg. C. Provide breakers with mechanical screw type removable connector lugs, AL/CU rated, and with NEMA Type 1 general purpose enclosures. Provide the following internal circuit breaker accessories when shown on the drawings:
    - a. Shunt trip.
    - b. Auxiliary contacts.
    - c. Alarm switch.
    - d. Undervoltage trip.
  2. Provided panelboard circuit breakers as follows:
    - a. Molded Case 150A and greater: Solid State Digital Trip Circuit Breakers.

- b. Molded Case under 150A: Thermal-Magnetic Circuit Breakers.
- G. Molded Case Circuit Breakers with Current Limiters: NEMA AB 1. Provide circuit breakers with replaceable current limiting elements, in addition to integral thermal and instantaneous magnetic trip in each pole.
- H. Current Limiting Molded Case Circuit Breakers: NEMA AB 1. Provide circuit breakers with integral thermal and instantaneous magnetic trip in each pole, coordinated with automatically resetting current limiting elements in each pole. Interrupting rating 100,000 symmetrical amperes, let-through current and energy level less than permitted for same size Class RK-5 fuse.
- I. Controllers: NEMA ICS 2, AC general-purpose Class A magnetic controller for induction motors rated in horsepower, with bimetal overload relay. Coil operating voltage: 120 volts, 60 Hertz. Size as shown on Drawings. Provide unit mounted control power transformer and HAND-OFF-AUTO selector switch GREEN indicating light in front cover.
- J. Provide circuit breaker accessory trip units and auxiliary switches as indicated.
- K. Enclosure: NEMA PB 1, Type 1. Cabinet box: Size as required for rating.
- L. Cabinet Front: Surface type, fastened with concealed trim clamps. Provide hinged door with flush lock. Finish in manufacturer's standard gray enamel.

### 2.3 BRANCH CIRCUIT PANELBOARDS

- A. Lighting and Appliance Branch Circuit Panelboards: NEMA PB1, circuit breaker type.
- B. Panelboard Bus: Copper, ratings as indicated. Provide copper ground bus in each panelboard; provide insulated ground bus where scheduled.
- C. Minimum integrated short circuit rating: 14,000 amperes RMS symmetrical for 240 volt panelboards; 21,000 amperes RMS symmetrical for 480 volt panelboards.
- D. Molded Case Circuit Breakers: NEMA AB 1, bolt-on type thermal magnetic trip circuit breakers, with common trip handle for all poles. Provide circuit breakers UL listed as Type SWD for lighting circuits. Provide UL Class A ground fault interrupter circuit breakers where scheduled. Do not use tandem circuit breakers.
- E. Current Limiting Molded Case Circuit Breakers: NEMA AB 1. Provide circuit breakers with integral thermal and instantaneous magnetic trip in each pole, coordinated with automatically resetting current limiting elements in each pole. Interrupting rating 100,000 symmetrical amperes, let-through current and energy level less than permitted for same size Class RK-5 fuse.
- F. Enclosure: NEMA PB 1, Type 1.

- G. Cabinet box: 6 inches deep; width: 20 inches for 240 volt and less panelboards, 26 inches for 480 volt panelboards.
- H. Cabinet Front: Flush on new walls, surface cabinet elsewhere front with concealed trim clamps, concealed hinge, and flush lock all keyed alike. Finish in manufacturer's standard gray enamel.

#### 2.4 LOAD CENTERS

- A. Load Centers: Circuit breaker load center, with bus ratings as indicated.
- B. Minimum integrated short circuit rating: 22,000 amperes RMS symmetrical.
- C. Molded Case Circuit Breakers: NEMA AB 1, plug-on type thermal magnetic trip circuit breakers, with common trip handle for all poles. Provide circuit breakers UL listed as Type SWD for lighting circuits. Provide UL Class A ground fault interrupter circuit breakers where indicated. Do not use tandem circuit breakers.
- D. Enclosure: General Purpose.
- E. Box: Flush on new walls, surface type elsewhere with door, and lock on door. Finish in manufacturer's standard gray enamel.

#### 2.5 FUSES

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering fusible devices which may be incorporated in the work include, but are not limited to, the following:
  - 1. Bussmann Div; Cooper Industries
  - 2. Commercial Enclosed Fuse Co.
  - 3. General Electric Co.
  - 4. Shawmut Div; Gould Inc.
  - 5. Reliance Fuse Div; Federal Pacific Electric Co.
  - 6. Substitutions: Under provisions of Section Material and Equipment.
- B. Fuses 600 Amperes and Less: Dual element, current limiting, time delay, one-time fuse, 600 volt, UL Class RK 1.
- C. Fuses 601 Amperes and Larger: Current limiting, time delay fast-acting one time fuse, 600 volt, UL Class L.
- D. Interrupting Rating: 200,000 RMS amperes.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Install panelboards in accordance with NEMA PB 1.1.
- B. Install panelboards plumb. Install recessed panelboards flush with wall finishes.

Provide supports in accordance with Section Support Devices.

- C. Height: 6 ft (2 M) to top of panelboard; install panelboards taller than 6 ft (2 M) with bottom no more than 4 inches (10 cm) above floor.
- D. Provide filler plates for unused spaces in panelboards.
- E. Provide typed circuit directory for each branch circuit panelboard. Revise directory to reflect circuiting changes required to balance phase loads.
- F. Provide engraved plastic nameplates under the provisions of Section Electrical Identification.
- G. Provide spare conduits out of each recessed panelboard to an accessible location above ceiling. Minimum spare conduits: 3 empty 1 inch. Identify each as SPARE.
- H. Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values for equipment connectors. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Stds 486A and B.

### 3.2 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section Testing Laboratory Services.
- B. Prior to energization of electrical circuitry, check all accessible connections to manufacturer's tightening torque specifications.
- C. Prior to energization of panelboards, check with ground resistance tester phase-to-phase and phase-to-ground insulation resistance levels to ensure requirements are fulfilled.
- D. Prior to energization, check panelboards for electrical continuity of circuits, and for short-circuits.
- E. Measure steady state load currents at each panelboard feeder; rearrange circuits in the panelboard to balance the phase loads to within 20 percent of each other. Maintain proper phasing for multi-wire branch circuits.
- F. Visual and Mechanical Inspection: Inspect for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers, fusible switches, and fuses.

### 3.3 ADJUSTING AND CLEANING

- A. Adjust operating mechanisms for free mechanical movement.

- B. Touch-up scratched or marred surfaces to match original finishes.

3.4 DEMONSTRATION

- A. Subsequent to wire and cable hook-ups, energize panelboards and demonstrate functioning in accordance with requirements. Where necessary, correct malfunctioning units, and then retest to demonstrate compliance.

END OF SECTION

This page intentionally left blank

SECTION 16477 - FUSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and supplementary Conditions and division-1 Specification sections, apply to the work of this section.
- B. Division-16 Basic Electrical Materials and Methods sections apply to work of this section.

1.2 SUMMARY

- A. Extent of fuse work required by this section is indicated by drawings, and by requirements of this section.
- B. Refer to other Division-16 sections for the following items; not work of this section.
  - 1. Switchboards.
  - 2. Unit substations.
  - 3. Panelboards.
  - 4. Switchgear.
  - 5. Motor disconnects.

1.3 SYSTEM DESCRIPTION

- A. Types of fuses specified in this section include the following:
  - 1. Class L time-delay.
  - 2. Class L fast-acting.
  - 3. Class RK1 time-delay.
  - 4. Class RK1 and Class J current-limiting.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical product data on fuses, including specifications, electrical characteristics, installation instructions, furnished specialties and accessories. In addition, include voltages and current ratings, interrupting ratings, current limitation ratings, time-current trip characteristic curves, and mounting requirements.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of fuses of types and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Codes and Standards:
  - 1. UL Compliance and Labeling: Comply with applicable provisions of UL



- 198D, "High-Interrupting-Capacity Class K Fuses". Provide overcurrent protective devices which are UL-listed and labeled.
2. NEC Compliance: Comply with NEC as applicable to construction and installation of fusible devices.
3. ANSI Compliance: Comply with applicable requirements of ANSI C97.1 "Low-Voltage Cartridge Fuses 600 Volts or Less".

#### 1.6 MAINTENANCE

- A. Extra Materials:
  1. Maintenance Stock, Fuses: for types and ratings required, furnish additional fuses, amounting to one unit for every 5 installed units, but not less than one set of 3 of each kind.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide fuses of one of the following:
  1. Bussmann Div; Cooper Industries.
  2. Commercial Enclosed Fuse Co.
  3. General Electric Co.
  4. Shawmut Div; Gould Inc.
  5. Reliance Fuse Div; Federal Pacific Electric Co.

#### 2.2 FUSES

- A. General: Except as otherwise indicated, provide fuses of types, sizes, ratings, and average time-current and peak let-through current characteristics indicated, which comply with manufacturer's standard design, materials, and constructed in accordance with published product information, and with industry standards and configurations.
- B. Class L Time-Delay Fuses: Provide UL Class L time-delay fuses rated 600-volts, 60 Hz, 800 amperes, with 200,000 RMS symmetrical interrupting current rating for protecting transformers, motors, and circuit-breakers.
- C. Class L Fast-Acting Fuses: Provide UL Class L fast-acting fuses rated 600-volts, 60 Hz, 2000 amperes, with 200,000 RMS symmetrical interrupting current rating for protecting service entrances and main feeder circuit-breakers.
- D. Class RK1 Time-Delay Fuses: Provide UL Class RK1 time-delay fuses rated 600-volts, 60 Hz, 400 amperes, with 200,000 RMS symmetrical interrupting current rating for protecting motors and circuit-breakers.
- E. Class RK1 Current-Limiting Fuses: Provide UL Class RK1 current-limiting fuses rated 250-volts, 60 Hz, 200 amperes, with 200,000 RMS symmetrical interrupting current rating for protecting circuit-breakers.

- F. Cable Limiters: Provide cable limiters rated 600-volts, 60 Hz, 400 amperes with tubular type terminals for compression connection to 500 MCM copper cable.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions under which fuses are to be installed, and notify Contractor in writing of conditions detrimental to proper completion of the work. Do not proceed with the work until satisfactory conditions have been corrected in a manner acceptable to Installer.

3.2 INSTALLATION OF FUSES

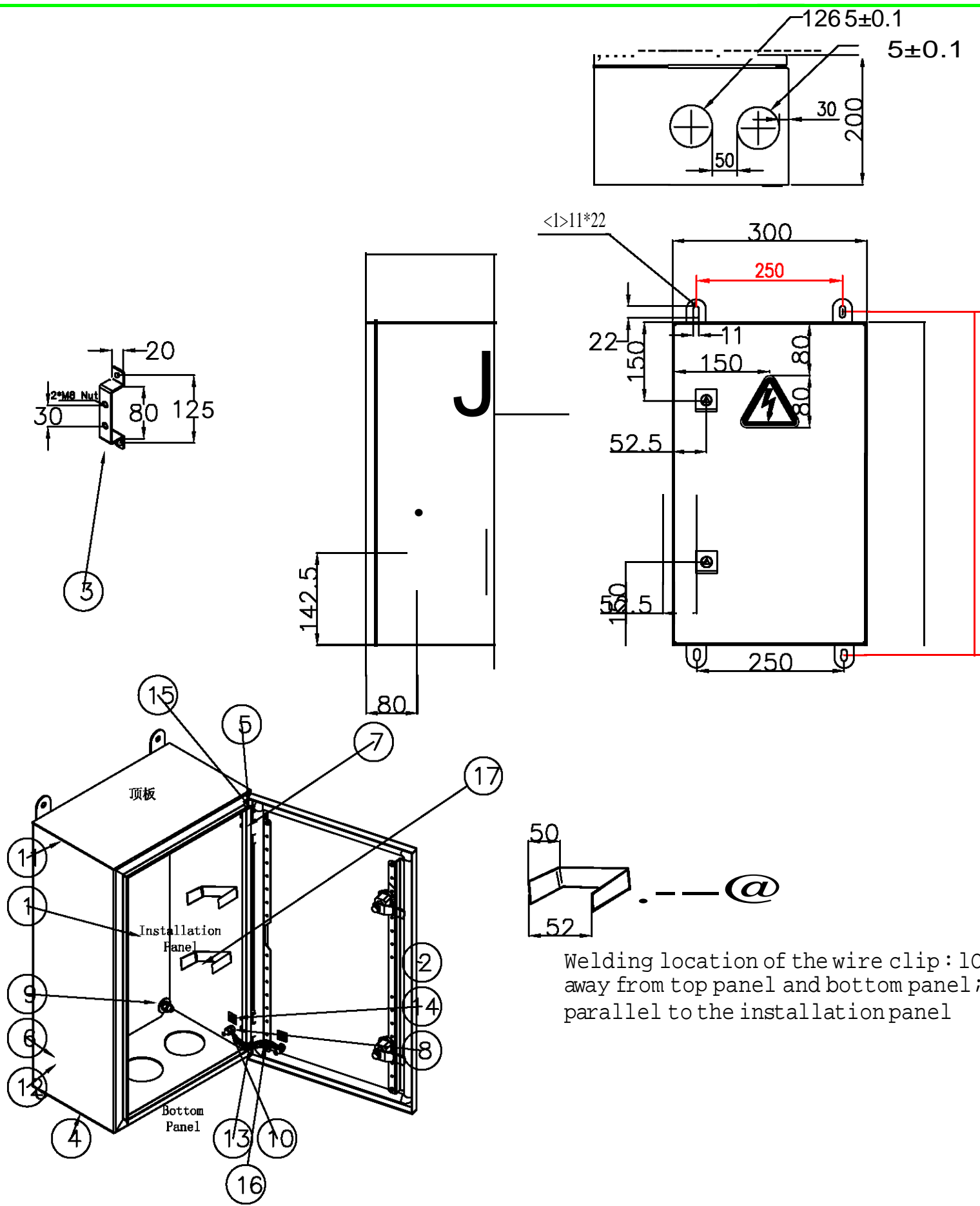
- A. Install fuses as indicated, in accordance with manufacturer's written instructions and with recognized industry practices to ensure that protective devices comply with requirements. Comply with NEC, and NEMA standards for installation of fuses.
- B. Coordinate with other work, including electrical wiring, as necessary, to interface installation of fuses with other work.
- C. Install fuses in fused switches, if any.

3.3 FIELD QUALITY CONTROL

- A. Prior to energization of fusible devices, test devices for continuity of circuitry and for short-circuits. Replace malfunctioning units with new units, and then demonstrate compliance with requirements.

END OF SECTION

This page intentionally left blank



**Technical Requirement:**  
 1.. Remove ragto prevent scratching ;  
 2.. Perform degrease/derusting on the surface. IP Rating: IPSS ;  
 3.. Follow GB/TISOSS-M for unspecified tolerance;  
 4.. Thickness of mounting brackets and installation panel: 2.0mm

|     |                         |                   |     |
|-----|-------------------------|-------------------|-----|
| 17  |                         | Wire Clip         | 2   |
| 16  |                         | .Ground           | 1   |
| 15  | tt 4 GB894.1            | Spring Washer     | 2   |
| 14  | Q/DKBAB.817.1004        | Ground Label      | 1   |
| 13  | ...65.5* <t8* <t5       | Door Shaft        | 2   |
| 12  | GB/T GB848.85 8         | Flat Washer       | 8   |
| 11  | GB/T 9074.26-87 8       | Spring Washer     | 4   |
| 10  | GB/T 9074.24-88 6       | Flat Washer       | 1   |
| 9   | GB/T 6170 MB            | Hexagon Nut       | 4   |
| 8   | GB/T 6170 M6            | Hexagon Nut       | 2   |
| 7   | GB/T 819.2 M4X6         | Cross-head Bolt   | 4   |
| 6   | DQPTH2G-002051-3        | MB Screw          | 4   |
| 5   | DQPTH2G-002051-2        | Hinge             | 2   |
| 4   | A.E1532X T-6T120830-01  | Box Assembly      | 1   |
| 3   | A.E1532TP-8T120830-001  | Copper Bar        | 1   |
| 2   | A.E1532MB-6T120830-01   | Box Door          | 1   |
| 1   | A.E1532A ZB-8T120830-01 | Installation Pane | 1   |
| No. | P/N & Specs             | Part Name         | Qty |

ECN NO:

DESC RIPTION

SCHEMATIC NAME

Charger Control Box Assembly

DRAWN BY:

DATE:

8

9

B

7

SHEET NAME:  
6

SHEET PAGE:  
5

SCALE:  
4

REV:  
3

2

*Build Your Dreams*

1

F

E

D

C

B

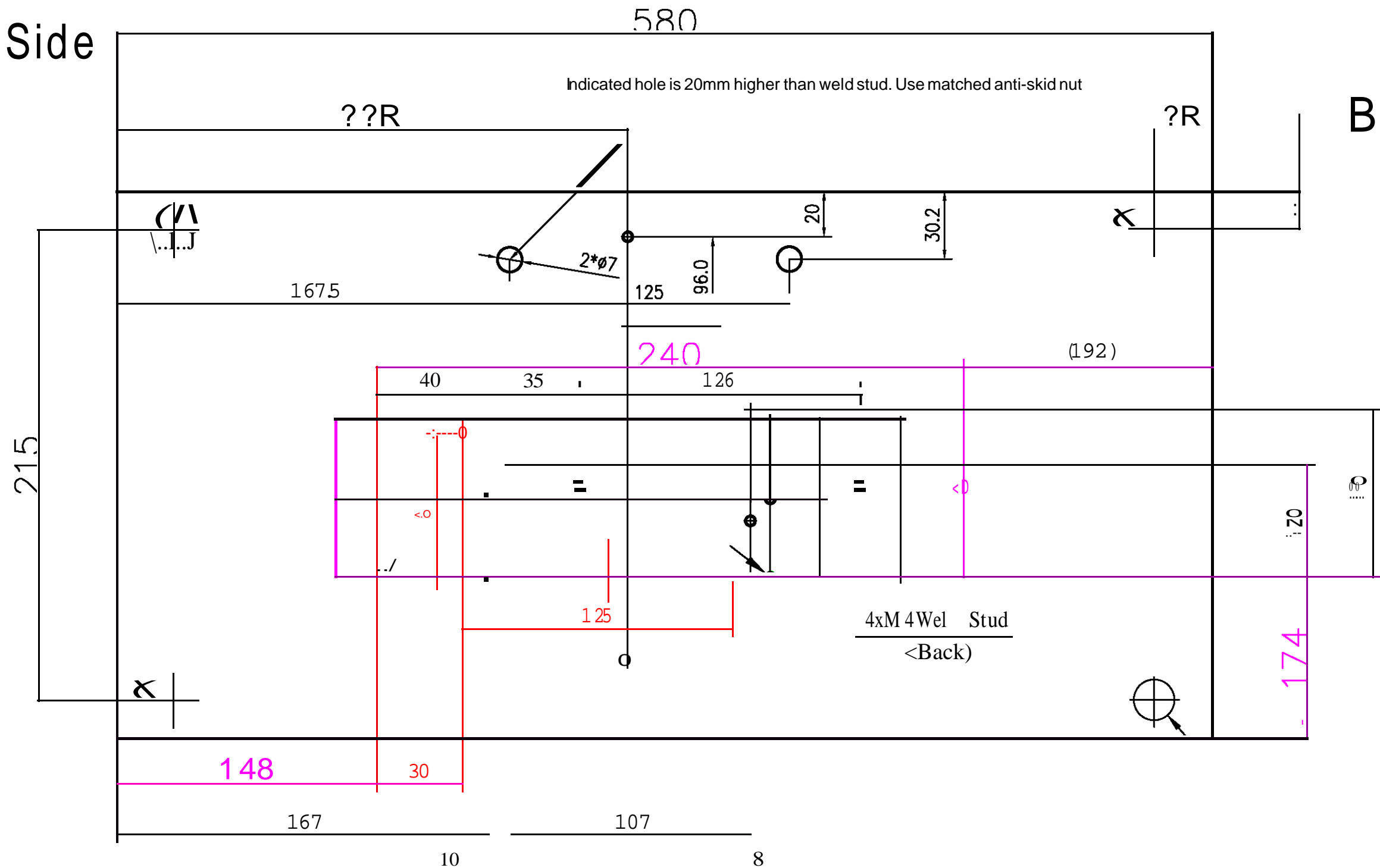
A

9xM4 Weld Stud  
(Back)

4xØ8.5

Top Side

Bottom Side



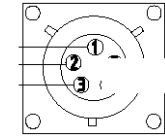
DRAWN BY:  
DATE:

|         |              |                  |                               |        |      |
|---------|--------------|------------------|-------------------------------|--------|------|
| ECN NO: | DESC RIPTION | SCHEMATIC NAME 8 | Charger Control Box Dimension |        |      |
|         |              | SHEET NAME:      | SHEET PAGE:                   | SCALE: | REV: |



|       |    |
|-------|----|
| GND   | 7  |
|       | 8  |
| CDH19 | 9  |
|       | 10 |
|       | 11 |
| CDH23 | 12 |

|    |          |
|----|----------|
| 7  | 232TX2   |
| 8  | CAN0-    |
| 9  | CAN1H    |
| 10 | 485-TXD1 |
| 11 |          |
| 12 |          |



F

E

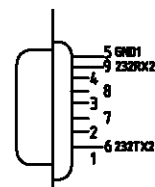
D

C

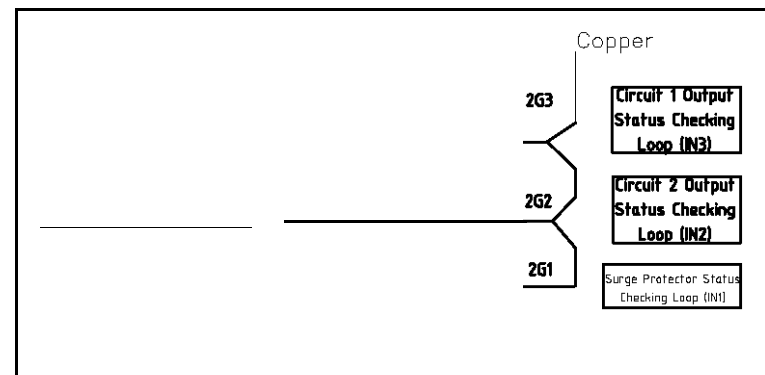
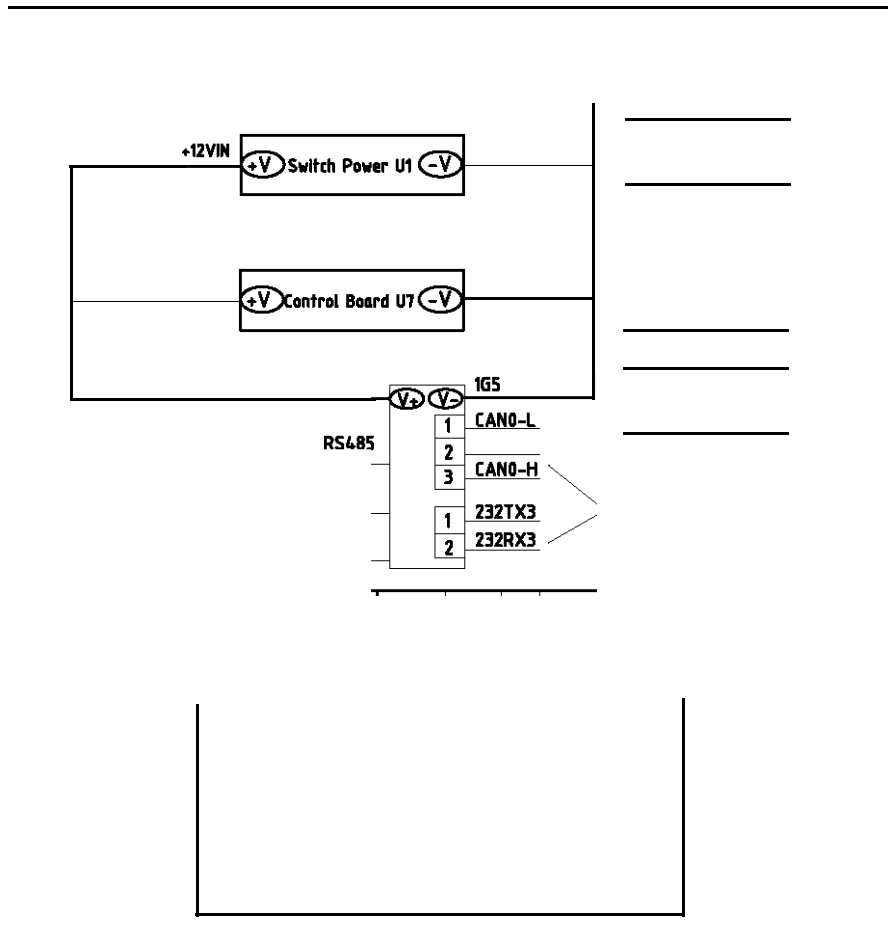
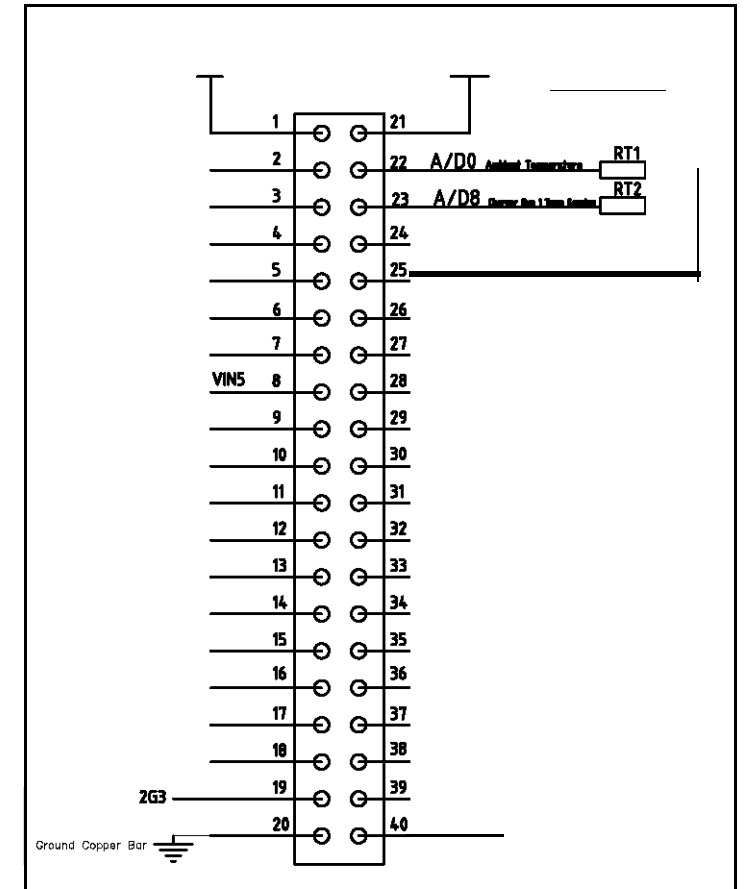
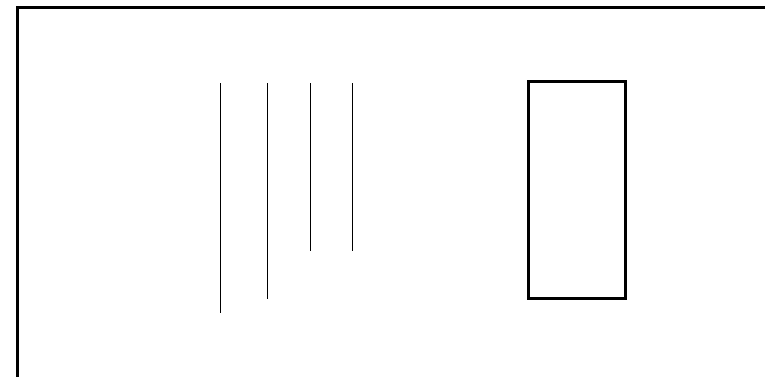
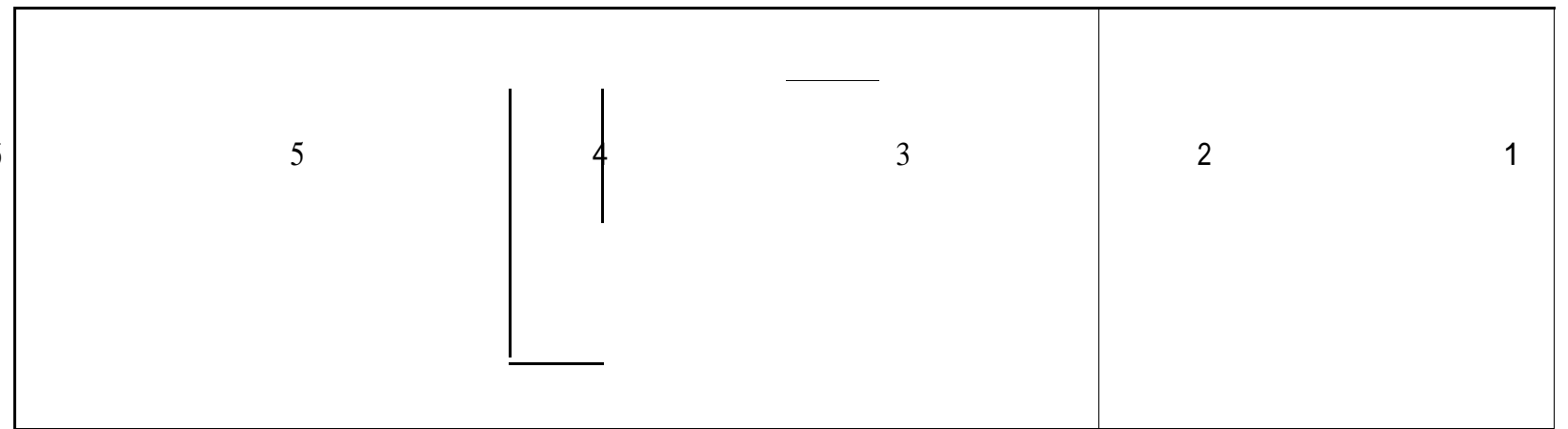
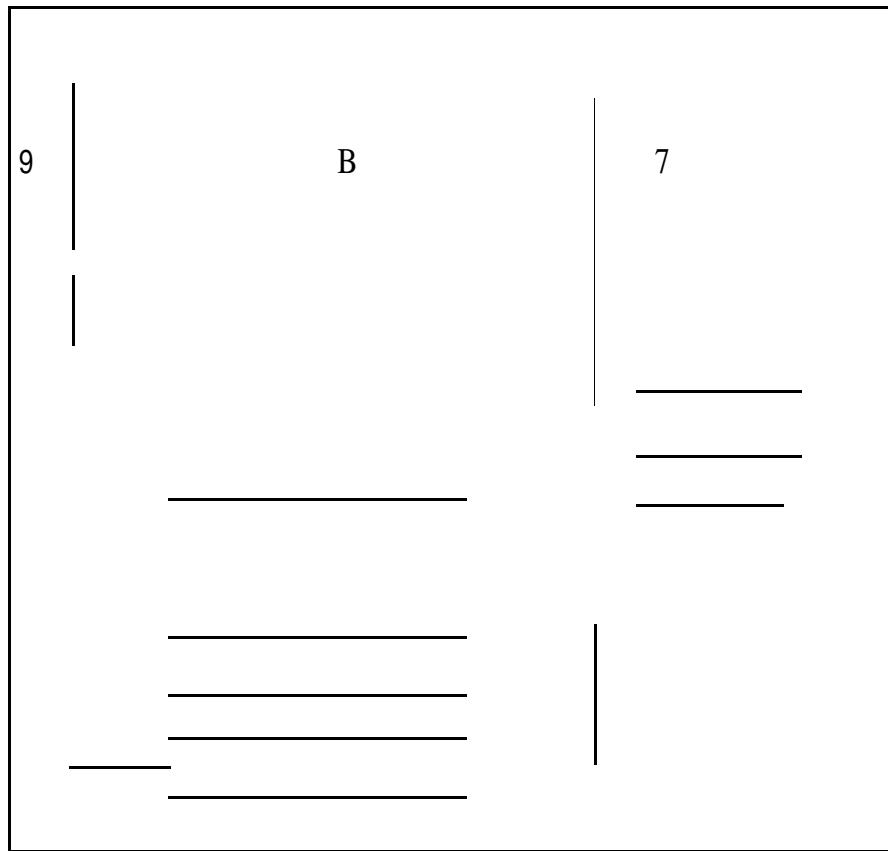
B

A

|     |       |       |     |    |                |
|-----|-------|-------|-----|----|----------------|
| LAN | RS485 | RS232 | CAN | St | Power          |
|     | RX TX | TX RX | L H |    | 1----<br>V- V+ |

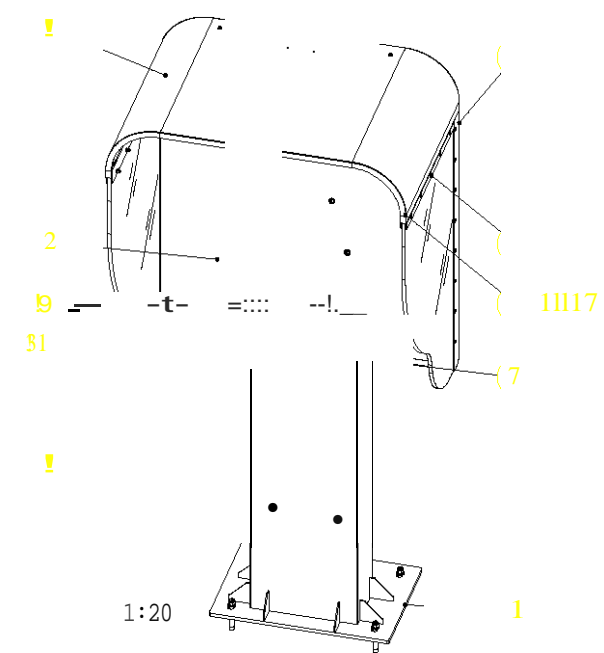
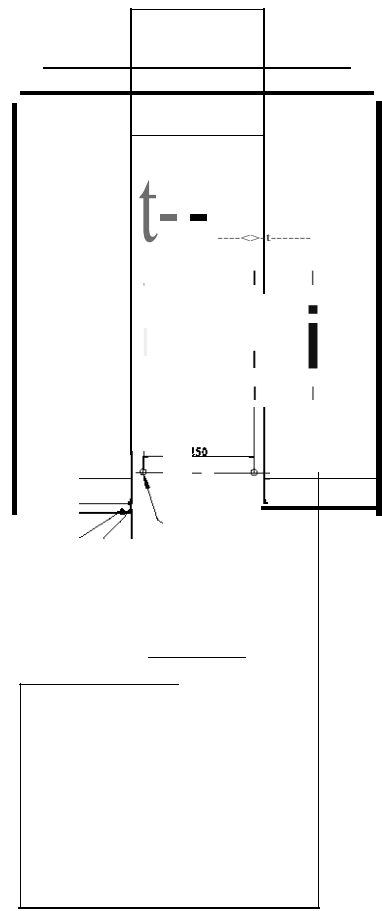
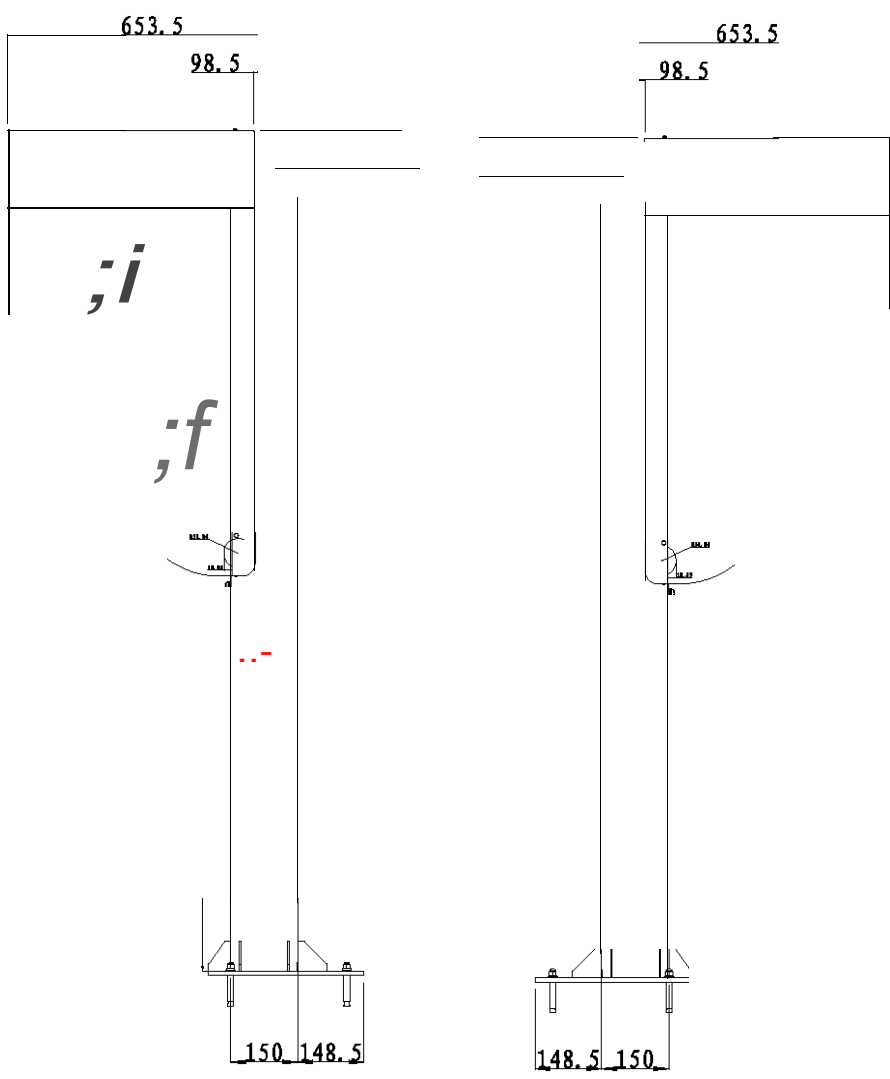
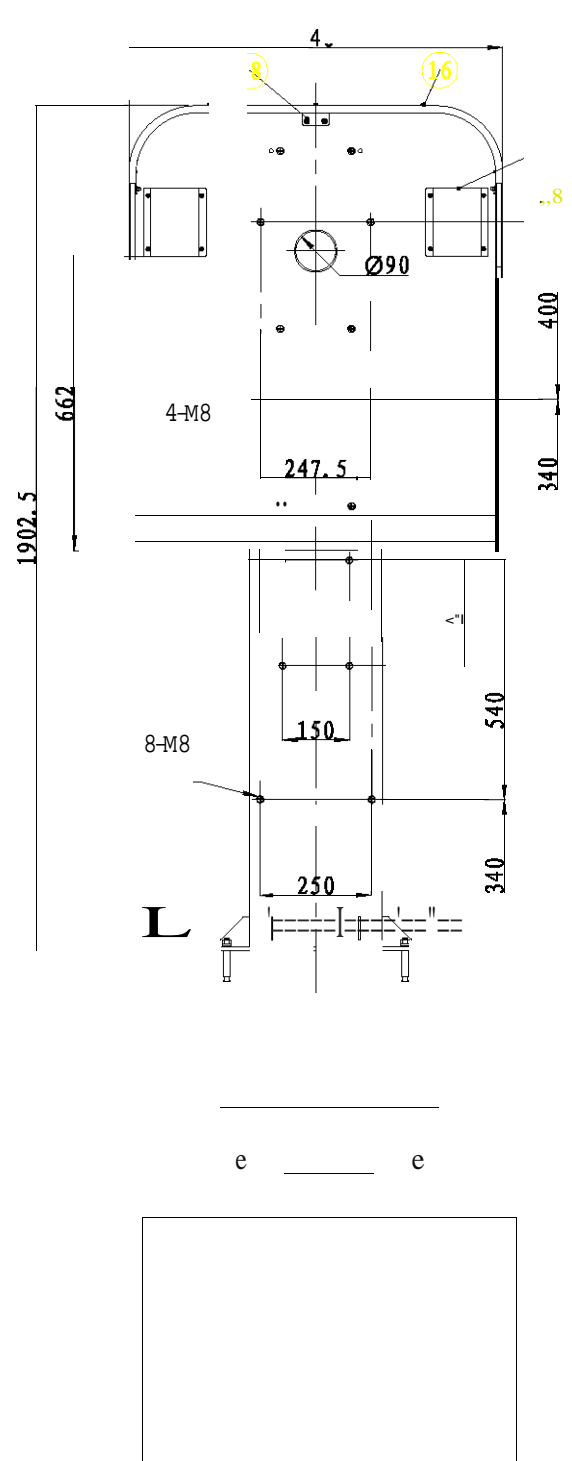
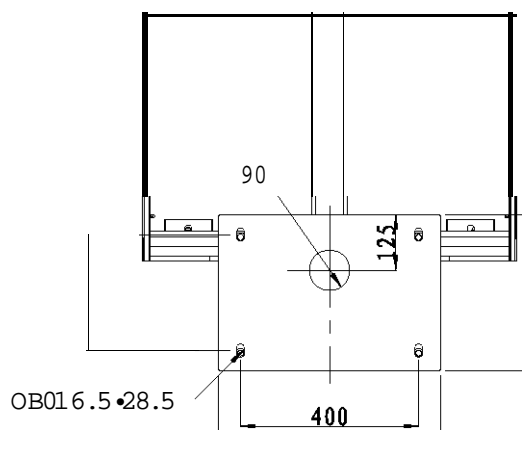






**NOTE :**

1. Need to check the size and quantity of each component before assembly;
2. The surface of each component should be clear enough, no stains, debris, cracks, corrosion spots;
3. No crush and corrosion during assembling;
4. Painting RAL5025 on surface;
5. Shipping package of parts and components should be with carton inside and wooden box outside;
6. Attached one packing list and assembling instruction  
Please refer to the packing list for parts and components.



Note: The M8 screw includes one M8 pan head screw, one spring washer and one plain washer

|    |                     |   |    |                   |
|----|---------------------|---|----|-------------------|
| 21 | PZLS-M12X100-SUS    | Expansion bolts                             | 4  | SUS               |
| 20 | M8X20-GB9074-4S     | Cross recessed pan head combination screws  | 8  |                   |
| 19 | M8X16-GB9074_4S     | Cross recessed pan head combination screws  | 10 |                   |
| 18 | M6X16-GB9074_4S     | Cross recessed pan head combination screws  | 2  |                   |
| 17 | M5-GB923-S          | Cap nut                                     | 26 |                   |
| 16 | M5X12-GB9074_4S     | Cross recessed pan head combination screws  | 3  |                   |
| 15 | M4X10-GB9074-4S     | Cross recessed pan head combination screws  | 12 |                   |
| 14 | GB/T819.2M5.12      | Cross recessed countersunk flat head screws | 2  |                   |
| 13 | D8-GB97-LS          | Flat washer                                 | 4  | SUS               |
| 12 | D8-GB93-S           | spring washer                               | 4  | SUS               |
| 11 | D5-GB97-LS          | Flat washer                                 | 26 | SU                |
| 10 | D5-GB93-S           | spring washer                               | 26 | S                 |
| 9  | BYD-EVA-BL-C80001   | Transparent                                 |    | SUS               |
| 8  | BYD-EVA080G-HT      | organic glass                               | 2  | organic glass T10 |
| 7  | BYD-M8-C80001       | Nylon screws                                | 4  | WhitePA, \2515    |
| 6  | BYD-EVA080KG-AZ-011 | Connecting piece                            | 2  | SPCC 2.0          |
| 5  | BYD-EVA-DG-C60003   | Vertical layering weldment                  | 2  | weldment          |
| 4  | BYD-EVA-DG-C60002   | Horizontal layering weldment                | 2  | weldment          |
| 3  | BYD-EVA-DG-C60001   | cap welding                                 | 1  | weldment          |
| 2  | BYD-EVA080KG-BB     | Back panel welding                          | 1  | weldment          |
| 1  | BYD-EVA080KG-LZ     | Column welding                              | 1  | weldment          |

| NO. | Drawing NO. | Name   | QTY | Material |
|-----|-------------|--------|-----|----------|
| VER | QTY         | Weight |     | Ratio    |

1

2

3

4

3

0

A

1

7

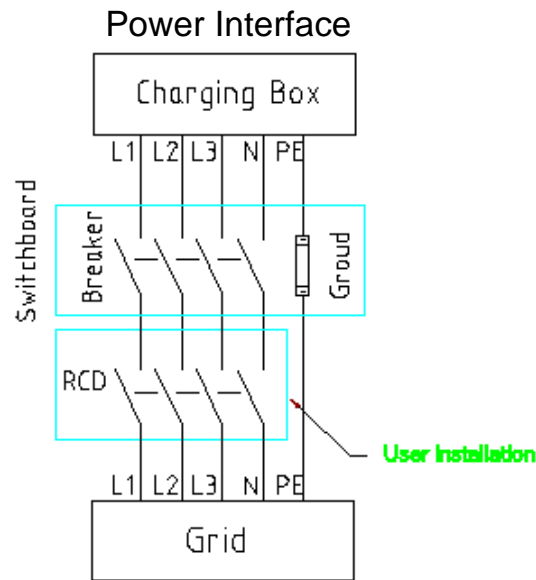
575.41

3:50

8

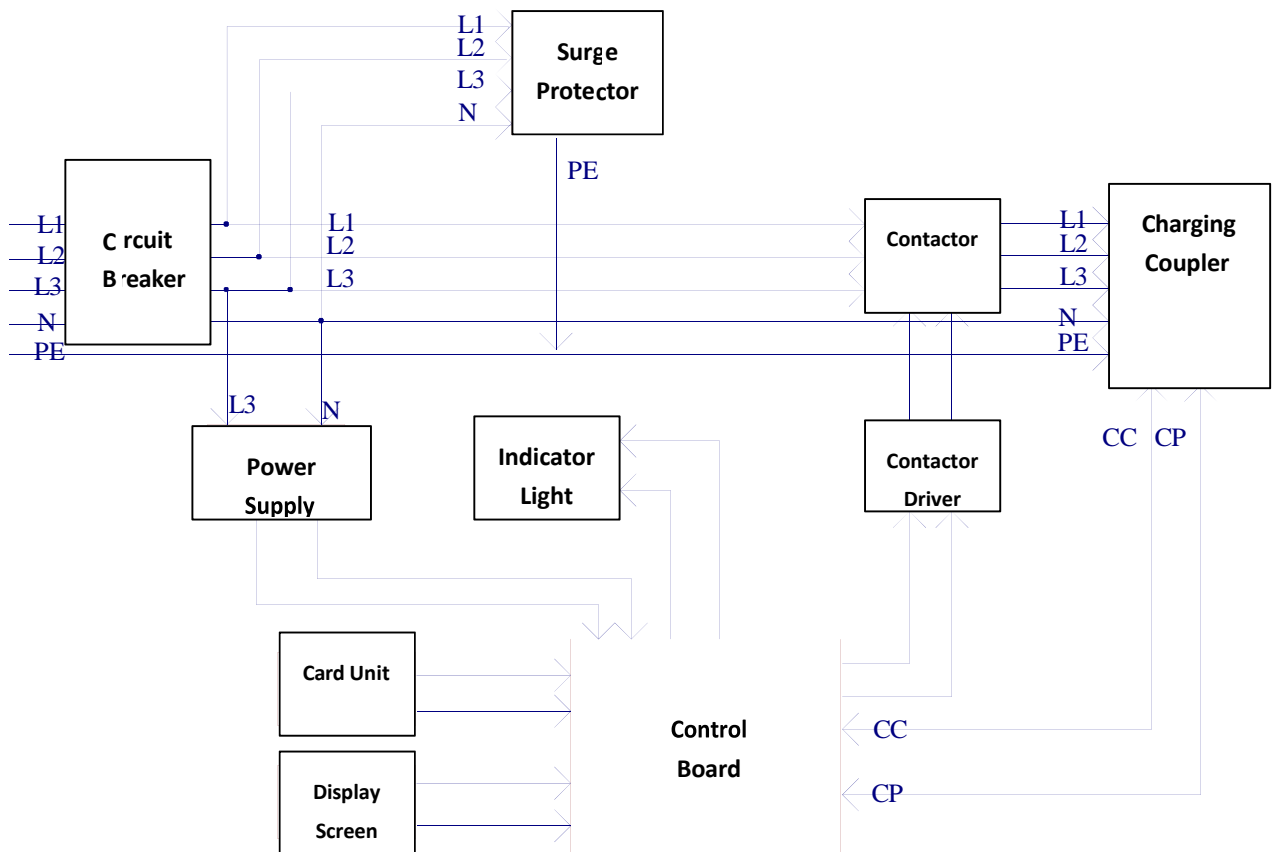
# Power Interface

## 1. System Wiring Schematic:

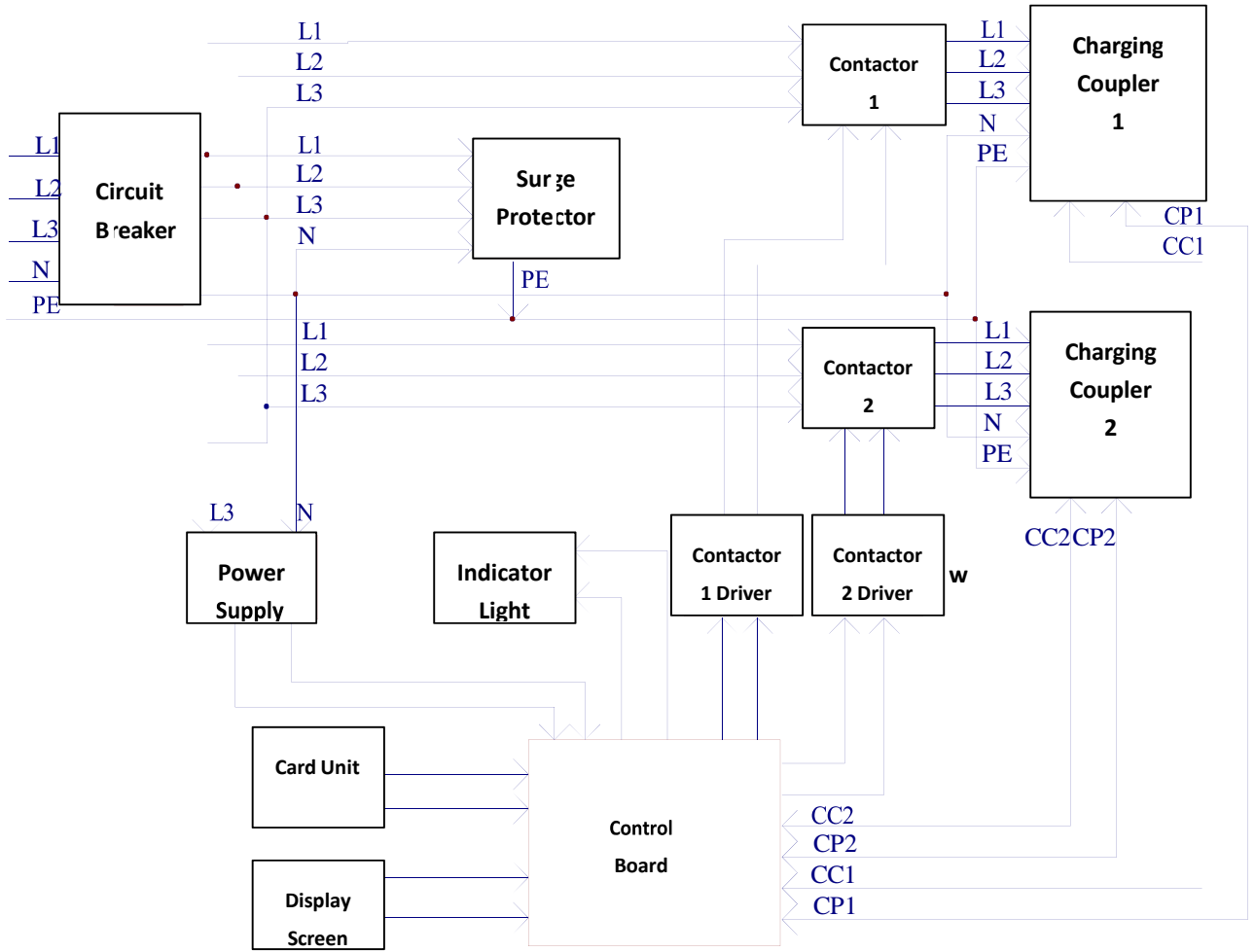


Drawing 1: System Wiring Schematic

## 2. System Chart:



Drawing 2: Single connector Power Interface



**Drawing3: Dual-connector Power Interface**





# PINELLAS SUNCOAST TRANSIT AUTHORITY

## BUS DEPOT CHARGER EQUIPMENT ADDITION

3201 SCHERER DRIVE  
ST. PETERSBURG, FLORIDA 33716

08/25/2017

| DRAWING LIST                                 |             |       |  |
|--|-------------|-------|--|
| PINELLAS SUNCOAST TRANSIT AUTHORITY          |             |       |  |
| 3201 SCHERER DRIVE, ST. PETERSBURG, FL 33716 |             |       |  |
| BUS CHARGER ADDITION                         |             |       |  |
| HE# 17- 401                                  |             |       |  |
| NO   | DRAWING     | DWG # | DRAWING TITLE                              |
| <b>ELECTRICAL</b>                            |             |       |  |
| 1  | 17401-E-0.1 | E-0.1 | ELECTRICAL SITE PLAN                       |
| 2  | 17401-E-1.1 | E-1.1 | ELECTRICAL FUEL AND REVENUE BUILDINGS PLAN |
| 3  | 17401-E-2.1 | E-2.1 | ELECTRICAL RISER DIAGRAM                   |
| 4  | 17401-E-3.1 | E-3.1 | ELECTRICAL PANEL SCHEDULES                 |

### SCOPE OF WORK

PROVIDE ALL MATERIAL, LABOR, EQUIPMENT, PROGRAMMING, TESTING AND COMMISSIONING REQUIRED FOR AN EXTENSION OF THE EXISTING FUEL BUILDING ELECTRICAL POWER DISTRIBUTION SYSTEM TO NEW PANEL AT REVENUE BUILDING. PROVIDE PANELS, DISCONNECT SWITCHES, BREAKERS, GROUNDING, BRANCH CIRCUITS, CONDUIT, WIRING AND ALL OTHER ITEMS REQUIRED FOR A COMPLETE EXTENSION OF THE POWER DISTRIBUTION SYSTEM TO SUPPORT THE FOLLOWING NEW EQUIPMENT TO BE INSTALLED BY OTHERS:

- (1) NEW NEMA 3R PANEL 'BDP,' SEE RISER DIAGRAM AND PANEL SCHEDULE
- (2) BUS DEPOT CHARGERS AND DISCONNECTS, LOCATED AS SHOWN

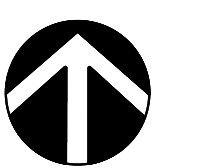
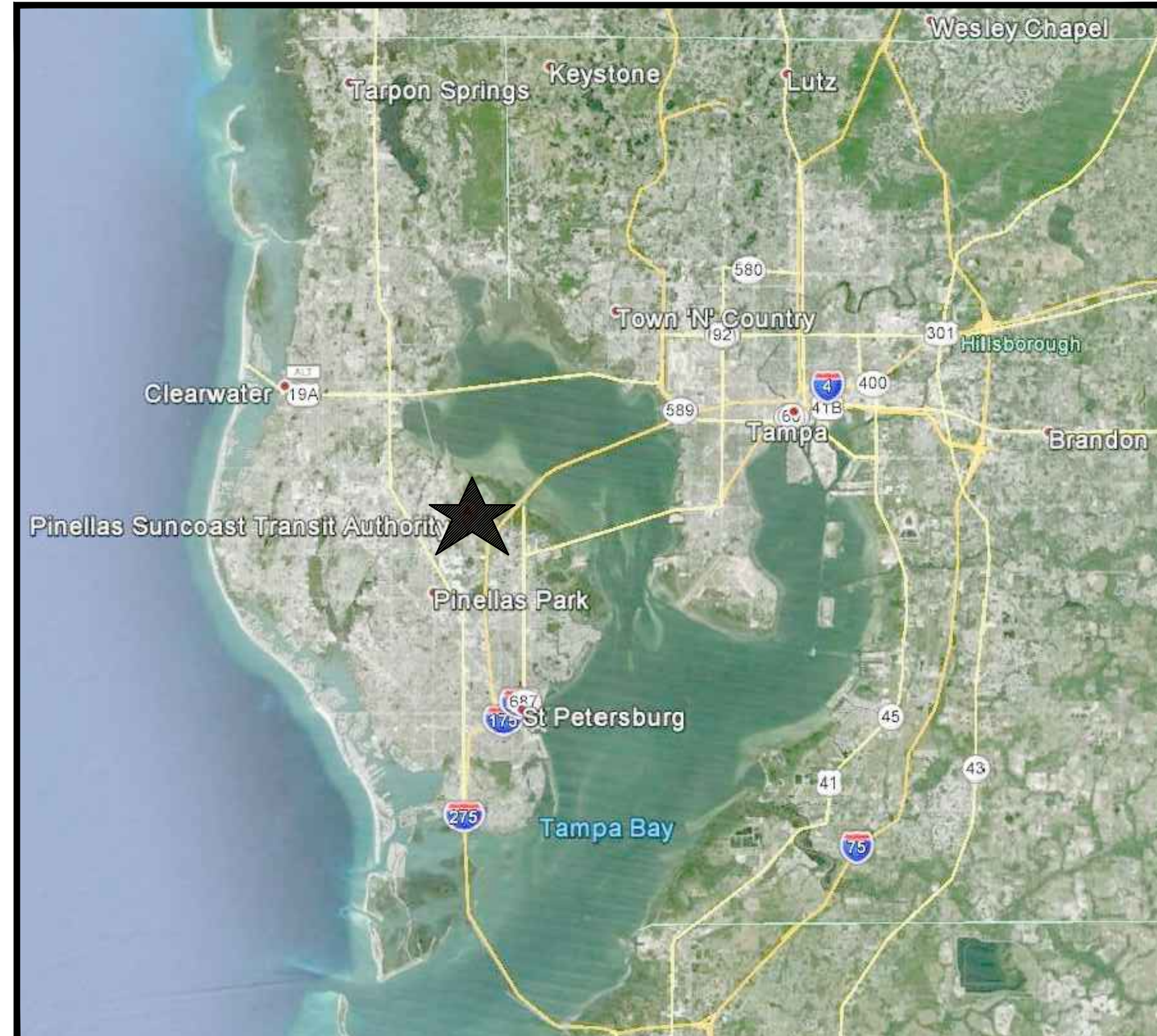
ALL EQUIPMENT WILL BE POWERED FROM AN EXTENSION OF THE EXISTING ELECTRICAL SERVICE IN THE FUEL BUILDING.

WORKMANSHIP FOR ALL ELECTRICAL SYSTEMS SHALL BE NEAT AND PROFESSIONAL AND SHALL COMPLY WITH CURRENT NECA/NEIS INSTALLATION STANDARDS.

AMPLE SPACE ON SITE IS AVAILABLE FOR MATERIAL STAGING AND LAY DOWN AREAS. THE STAGING/LAY DOWN AREAS SHALL BE COORDINATED WITH THE OWNER AND PROPERLY SEPARATED AND SECURED WITH FENCING. THE OWNER WILL NOT PROVIDE SECURE STORAGE FOR ANY MATERIAL OR EQUIPMENT.

### FAMILIARITY OF WORK

IT IS EXPECTED THAT THE SUCCESSFUL CONTRACTOR WILL HAVE PERFORMED A DETAILED REVIEW OF THE PROJECT AND PROJECT REQUIREMENTS, INCLUDING SITE REVIEW SUCH THAT SEQUENCING, STAGING, ACCESS, AND POTENTIAL AREAS WITH DIFFICULT EXISTING FIELD CONDITIONS ARE ACCOUNTED FOR IN THE BID. CONTRACTOR'S UNFAMILIARITY WITH EXISTING SITE CONDITIONS WILL NOT BE CONSIDERED A MEANS FOR COMPENSATION ADJUSTMENTS.



## HAHN ENGINEERING, INC.

MECHANICAL & ELECTRICAL CONSULTING

3060 S. DALE MABRY  
TAMPA, FLORIDA 33629

[www.hahneng.com](http://www.hahneng.com)

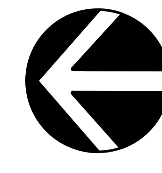
Phone 813.831.8599  
Fax 813.835.7046



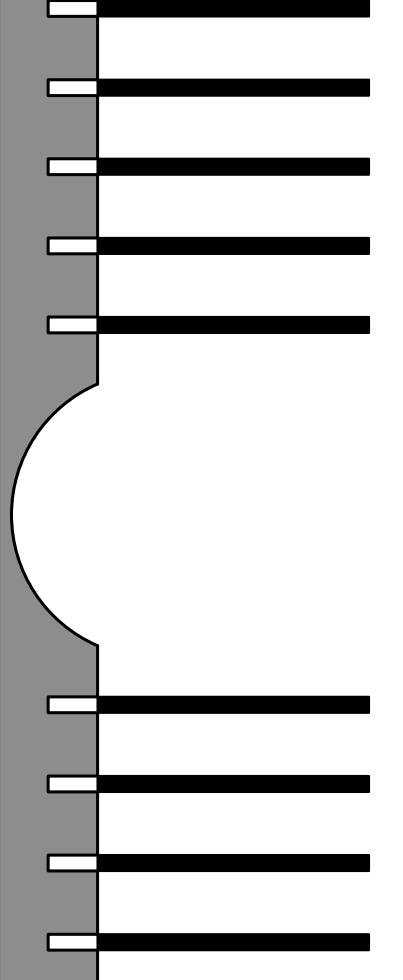


| GHFI LOAD SUMMARY  |         |                      |    |
|--|---------|----------------------|----|
| Load   | VA      | A                    |    |
| EXISTING LOAD*   | 78,945  | 95                   |    |
| FACTOR**:  | 0.25    | 19,736               | 24 |
| SUB TOTAL  | 98,681  | 119                  |    |
| PROPOSED ADDITION:   |         |                      |    |
| PANEL 'BDP'  | 160,000 | 192                  |    |
| *PEAK AVERAGE LOAD OVER 15 MINUTE PERIODS OF TIME OVER THE COURSE OF A 30 DAY LOAD STUDY |         |                      |    |
| **125% OF EXISTING DEMAND PER NEC ARTICLE 220.87   |         |                      |    |
|  | 258,681 | DEMAND VA            |    |
|  | 311     | DEMAND AMPS          |    |
|  | 78      | SPARE (25%)          |    |
|  | 389     | TOTAL SERVICE (AMPS) |    |
| 600 AMP 277/480V 3 PHASE SERVICE   |         |                      |    |

- KEY NOTES**
- EXISTING 600A 3 $\phi$  4W PANEL 'GHFI.' SEE LOAD SUMMARY.
  - PROVIDE NEW WIRING, ONE SET OF (4) 250 KCMIL THWN CU AND (1) #4 THWN CU EGC IN 2 1/2" CONDUIT.
  - PROVIDE NEW 250A MCB 277/480V 3 $\phi$  4W NEMA 3R PANEL 'BDP.' SEE PANEL SCHEDULE. PROVIDE PERMANENT LABEL ON PANEL TO SHOW THAT IT IS EXCLUSIVELY FOR BUS CHARGING CIRCUITS.



- GENERAL NOTES**
- WORK SHALL MEET OR EXCEED REGULATORY REQUIREMENTS, INCLUDING LATEST EDITION OF THE NFPA 70E (LIFE SAFETY CODE), THE NATIONAL ELECTRICAL CODE 2011, FLORIDA BUILDING CODE 5TH EDITION (2014) AND LOCAL REQUIREMENTS & BUILDING CODES.
  - EQUIPMENT, FIXTURES, SWITCHES, STARTERS, CONTACTORS, CONTROLS, DEVICES, CONNECTIONS, BOXES, MOUNTING SUPPORTS, HARDWARE, WIRE, CONDUIT & ACCESSORIES SHALL BE PER PLANS AND SPECIFICATIONS FOR COMPLETE AND OPERATING ELECTRICAL SYSTEMS.
  - CIRCUIT NUMBERS INDICATED ON THE DRAWINGS ARE FOR REFERENCE USE. CONTRACTOR TO BALANCE THE LOADS IN ALL PANELS IN WHICH WORK IS PERFORMED. MAINTAIN COMPLETE AS-BUILT DRAWINGS. PROVIDE ELECTRONIC AS-BUILT DRAWINGS AT COMPLETION OF PROJECT. ELECTRONIC SET OF DRAWINGS WILL BE PROVIDED OFR USE TO UPDATE THROUGHOUT PROJECT.
  - PROVIDE ENGRAVED NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT.
  - PROVIDE REQUIRED CONDUIT & CABLE PENETRATIONS THROUGH PARTITIONS, WALLS, FLOORS, SLABS & ROOFS, WITH APPROVED FIRE SEALANT COMPOUND.
  - CONDUCTORS SHALL BE COPPER, 600 VOLT WITH MINIMUM SIZE OF #12 AWG THWN / THWN, UNLESS OTHERWISE SPECIFIED. WIRE SIZES OF #10 AND LARGER SHALL BE STRANDED.
  - EQUIPMENT SHALL BE RATED FOR MAXIMUM AVAILABLE VOLTAGE AND GROUND FAULT CURRENT. ALL EQUIPMENT SHALL HAVE U.L. LISTING.
  - CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENTS AND MAKE FINAL CONNECTIONS OF EQUIPMENT FURNISHED BY OTHER TRADES.
  - CONTRACTOR SHALL MAINTAIN A COMPLETE TEMPORARY POWER SYSTEM DURING CONSTRUCTION. COORDINATE ALL POWER OUTAGES & CHANGEOVERS WITH THE OWNER.
  - CONTRACTOR SHALL GUARANTEE MATERIALS AND WORKMANSHIP FOR ONE YEAR.
  - CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS AND INSPECTIONS.
  - EXPOSED EXTERIOR CONDUIT SHALL BE RIGID GALVANIZED STEEL. ALL EXPOSED INTERIOR CONDUIT SHALL BE RIGID GALVANIZED STEEL OR EMT. MC CABLE IS ALLOWABLE WHERE CONCEALED AND ALLOWED BY CODE. CONDUIT INSTALLED BELOW SLAB OR UNDERGROUND MAY BE SCHEDULE 40 PVC OR RIGID GALVANIZED STEEL. PAINTED WITH HEAVY COAT OF BITUMASTIC PAINT (3/4" MINIMUM). CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. CONCEALED CONDUIT IN WALLS AND CEILING SHALL BE EMT. EMT FITTINGS SHALL BE DIE CAST SET SCREW TYPE AT DRY INTERIOR LOCATIONS. EMT FITTINGS AT DAMP, OR WET LOCATIONS SHALL BE DIE CAST COMPRESSION RAIN-TIGHT TYPE. WIRING (POWER, LIGHTING, SECURITY, SOUND, INTERCOM, FIRE ALARM, CONTROL, CCTV, TELEPHONE, COMPUTER DATA, TELECOM, ETC.) SHALL BE IN CONDUIT.
  - RECESSED LIGHTING FIXTURES SHALL HAVE THERMAL PROTECTION. PROVIDE A FIXTURE SUPPORT AT EACH CORNER FOR ALL LAY-IN LIGHT FIXTURES, OR PROVIDE UL LISTED FIXTURE CLIPS AND REQUIRED MOUNTING HARDWARE & ACCESSORIES. DRIVERS AND BALLASTS SHALL BE FUSED.
  - PROVIDE GREEN GROUND WIRE IN EACH RACEWAY. SIZE WIRE IN ACCORDANCE WITH TABLE 250.122 OF THE NEC.
  - PANELBOARDS SHALL BE CIRCUIT BREAKER TYPE AS MANUFACTURED BY SIEMENS, OR AS NOTED. PANELBOARDS SHALL HAVE A HINGED LOCKING DOOR. PANELS RATED 600 AMPS AND LARGER SHALL HAVE HINGES ON THE COVER SO THAT THE COVER IS SUPPORTED AND MAY SWING TO THE SIDE WHEN THE COVER BOLTS ARE REMOVED.
  - PROVIDE A TYPED CIRCUIT DIRECTORY WITH PROTECTIVE COVERING. WIRES IN PANEL SHALL BE TAGGED WITH CIRCUIT NUMBER. CIRCUIT BREAKERS FOR MECHANICAL EQUIPMENT SHALL BE HACR TYPE.
  - SWITCHBOARDS, MCC'S, PANELBOARDS, CIRCUIT BREAKERS, TRANSFORMERS, DISCONNECT SWITCHES, MOTOR STARTERS AND OTHER ELECTRICAL APPARATUS INSTALLED FOR THE OPERATION OF ANY EQUIPMENT SHALL BE PROPERLY IDENTIFIED WITH ENGRAVED LAMINATED PLASTIC NAMEPLATES ATTACHED TO EQUIPMENT BY STAINLESS STEEL SCREWS.
  - WIREWAYS, PULLBOXES, OUTLETS AND JUNCTION BOXES SHALL BE PROPERLY SIZED PER THE NATIONAL ELECTRICAL CODE. ALL PULLBOXES AND OUTLET BOXES SHALL BE PLAINLY COLOR CODED AND HAVE WIRING TAGGED TO INDICATE PANEL AND CIRCUIT NUMBERS.
  - DISCONNECT SWITCHES SHALL BE SQUARE D, SIEMENS, GENERAL ELECTRIC OR CUTLER HAMMER SAFETY SWITCHES. SWITCHES SHALL BE HEAVY DUTY AND RATED FOR THE PROPER VOLTAGE. SWITCHES SHALL BE RATED AS INDICATED ON THE DRAWINGS FOR SIZE, NUMBER OF POLES AND TYPE ENCLOSURE.
  - FUSES SHALL BE BUSSMAN CURRENT LIMITING TYPE.
  - WHERE RECEPTACLES ARE INSTALLED CLOSER THAN 72" FROM EDGE OF SINK OR LAV, RECEPTACLE SHALL BE OF THE GROUND FAULT CIRCUIT INT. TYPE, OR SERVED BY A GFI BREAKER.
  - EXTERIOR RECEPTACLES SHALL BE WP GFCI TYPE WITH WHILE IN USE COVER. PROVIDE RECEPTACLE AT ELECTRICAL EQUIPMENT.
  - IN ADDITION TO THE LEGEND THE CONTRACTOR SHALL COORDINATE EXACT LOCATION OF OUTLETS AND DEVICES WITH ARCHITECTURAL INTERIOR ELEVATIONS & CABINET WORK.
  - BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED FOR NO MORE THAN 3% VOLTAGE DROP AT THE FARTHEST POINT. 20 AMPERE BRANCH CIRCUITS SHALL HAVE MINIMUM SIZE #10 COPPER HOMERUN WIRING FOR CIRCUITS OVER 57' LONG & #8 COPPER HOMERUN WIRING FOR CIRCUITS OVER 150' LONG.
  - DISPOSE OF LAMPS, BALLASTS, & OTHER HAZARDOUS MATERIALS IN ACCORDANCE WITH FEDERAL, STATE, LOCAL, & EPA REGULATIONS.
  - MOTOR STARTERS, SAFETY SWITCHES, VARIABLE SPEED DRIVES, RELAYS, MOTOR CONTROL CENTER, MDP'S, SWITCHBOARDS, PANELBOARDS, CONTACTORS, & ALL OTHER ELECTRICAL EQUIPMENT, SHALL BE OF THE SAME MANUFACTURER, UNLESS PROVIDED AS ELECTRICAL EQUIPMENT ON APPROVED FACTORY FABRICATED EQUIPMENT, SUCH AS CHILLER STARTERS, ROOF TOP UNITS, CONDENSING UNITS, ETC.
  - PROVIDE FLEXIBLE CONDUIT & WIRING CONNECTION TO MOTORS & VIBRATING EQUIPMENT.
  - OUTDOOR EQUIPMENT, CONDUIT & CONNECTIONS SHALL BE WEATHERPROOF.
  - PROVIDE A DEDICATED NEUTRAL FOR ALL CIRCUITS.
  - WHERE GFCI RECEPTACLES ARE SHOWN, A SEPARATE GFCI DEVICE SHALL BE PROVIDED, THEY SHALL NOT BE SLAVED.
  - PRIOR TO COMPLETION OF THE PROJECT, PROVIDE WRITTEN CERTIFICATION FOR EACH LIFE SAFETY AND LOW VOLTAGE ELECTRICAL SYSTEM.





**DRAWING NOTES**

1. PROVIDE 250A 480/277V 3 $\phi$  NEMA 3R PANEL 'BDP.' SEE RISER DIAGRAM AND PANEL SCHEDULE. EXISTING PANEL 'GHVP.' PROVIDE SIGNAGE INDICATING 'MAIN 2 OF 2 FOR THIS BUILDING.'
2. BUS DEPOT CHARGER PROVIDED BY OTHERS. VERIFY LOCATION. SEE DETAIL 2/E-1.1, THIS SHEET, FOR MINIMUM CLEARANCE DISTANCES FOR BUS CHARGER. PROVIDE SQUARE 'D' 125A, 3 $\phi$ , 4W 277/480V NEMA 3R HEAVY DUTY FUSED DISCONNECTS OR EQUAL ON FIBERGLASS AND STAINLESS STEEL UNISTRUT ASSEMBLY. INSTALL OWNER PROVIDED BUS CHARGERS.
3. ROUTE CONDUIT UP WALL, THEN ALONG CANOPY OVER TO BUS DEPOT CHARGER. THEN BACK DOWN. PROVIDE TWO SETS OF (4) 250kcmil THWN CU AND (1) #2 THWN CU EGC EACH IN 2.5" RIGID CONDUIT AND ONE ADDITIONAL 1.5" CONDUIT FOR POTENTIAL DATA CONNECTION. HANG ALL CONDUIT WITH A METHOD THAT WILL NOT PENETRATE THE CANOPY - UNISTRUT, BEAM CLAMPS, ETC.
4. PROVIDE FEEDER WIRING FROM EXISTING PANEL 'GHF1' TO NEW PANEL 'BDP,' ONE SET OF (4) #250 THWN CU AND (1) #4 THWN CU EGC IN 2 1/2" CONDUIT. PROVIDE NEW 250A-3P BREAKER IN PANEL 'GHF1.'
5. EXISTING PANEL 'GHVP.' PROVIDE SIGNAGE INDICATING 'MAIN 1 OF 2 FOR THIS BUILDING.'
6. PROVIDE CONCRETE UTILITY PAD, 12" HIGH, WITH FOUR PROTECTIVE BOLLARDS, 36" TALL AND 6.625" DIAMETER MINIMUM.

**GENERAL NOTES**

1. ALL INTERIOR EXPOSED CONDUIT SHALL BE EMT. CONDUIT UNDER EXTERIOR CANOPIES SHALL BE RIGID GALVANIZED STEEL WITH COMPRESSION FITTINGS. DO NOT PENETRATE THE ROOF WITH ANY HANGERS.
2. ALL FEEDER WIRING AND BRANCH CIRCUIT CONDUITS SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO BUILDING LINES.
3. SURVEY EXISTING STRUCTURE, UTILITIES AND EQUIPMENT PRIOR TO ROUGH-IN. NOTIFY OWNER AND ENGINEER OF ANY CONFLICTS PRIOR TO ROUGH IN.
4. PAINT ALL EXPOSED CONDUIT AND HANGERS TO MATCH SURROUNDING SURFACES. OBTAIN PAINT COLOR CODES/INFORMATION FROM THE OWNER.
5. WORKMANSHIP FOR ALL ELECTRICAL SYSTEMS SHALL BE NEAT AND PROFESSIONAL AND SHALL COMPLY WITH CURRENT NECA/NEIS STANDARDS.

NOTE: LIGHT COLORED BACKGROUND IS OWNER PROVIDED PDF OF AS-BUILT EXISTING ELECTRICAL POWER DISTRIBUTION SYSTEM. WHERE CONNECTING TO OR ALTERING THE EXISTING ELECTRICAL POWER DISTRIBUTION SYSTEM, THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO ROUGH-IN. NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES PRIOR TO ROUGH-IN.

02 Installation Instruction BYD Wall-mounted AC Charging Box User Manual Version/Revision: A/0

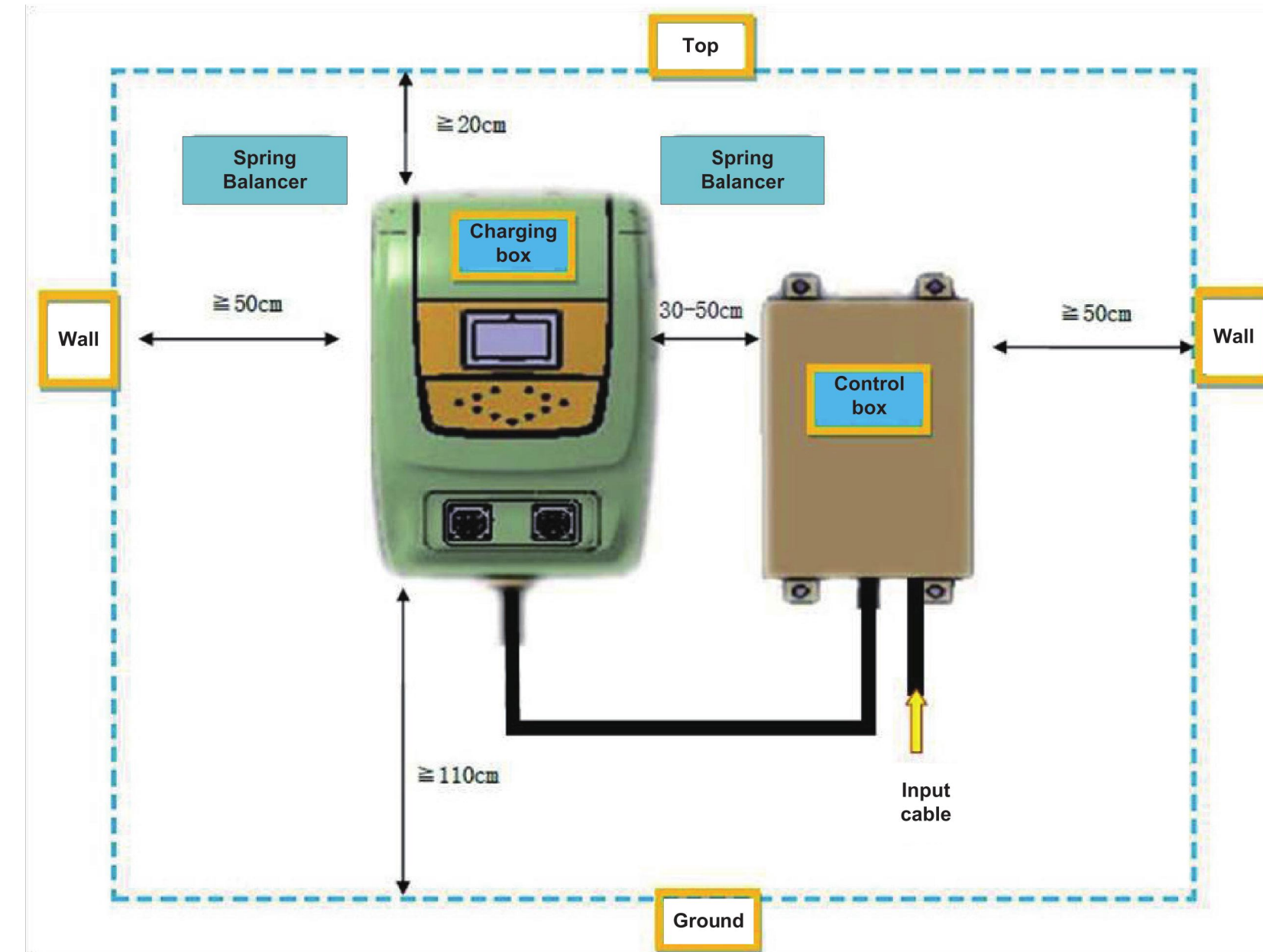
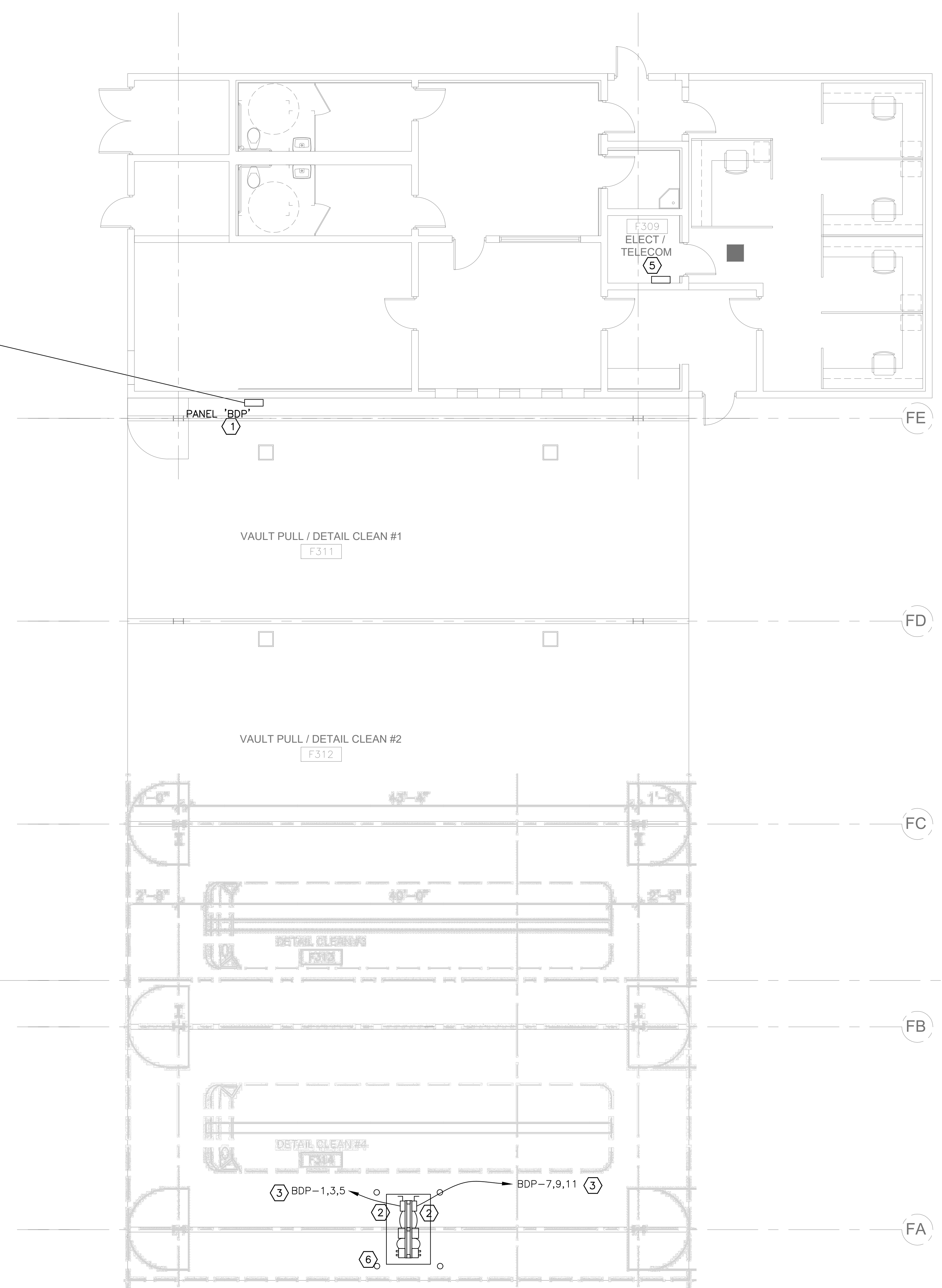
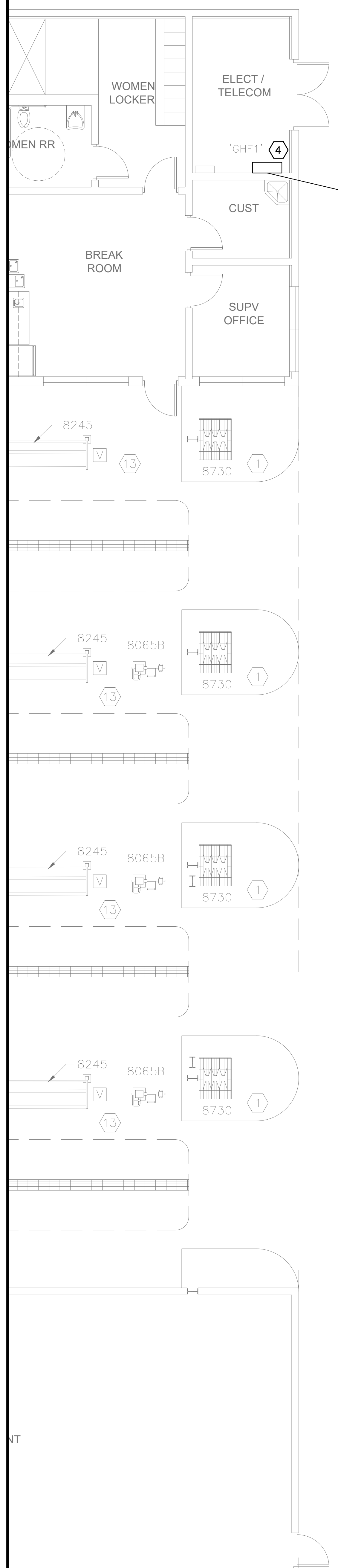
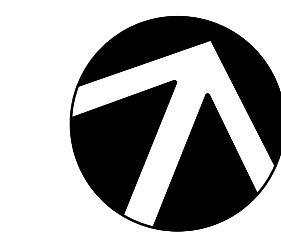


Fig. 2.1 Diagram of minimum installing distance

2 BYD BUS CHARGER MINIMUM INSTALLING DISTANCE  
E-1.1 SCALE: NOT TO SCALE

REVENUE BUILDING  
1 ELECTRICAL RENOVATION - REVENUE BUILDING  
E-1.1 SCALE: 3/16"=1'-0"



100% CONSTRUCTION DOCUMENTS

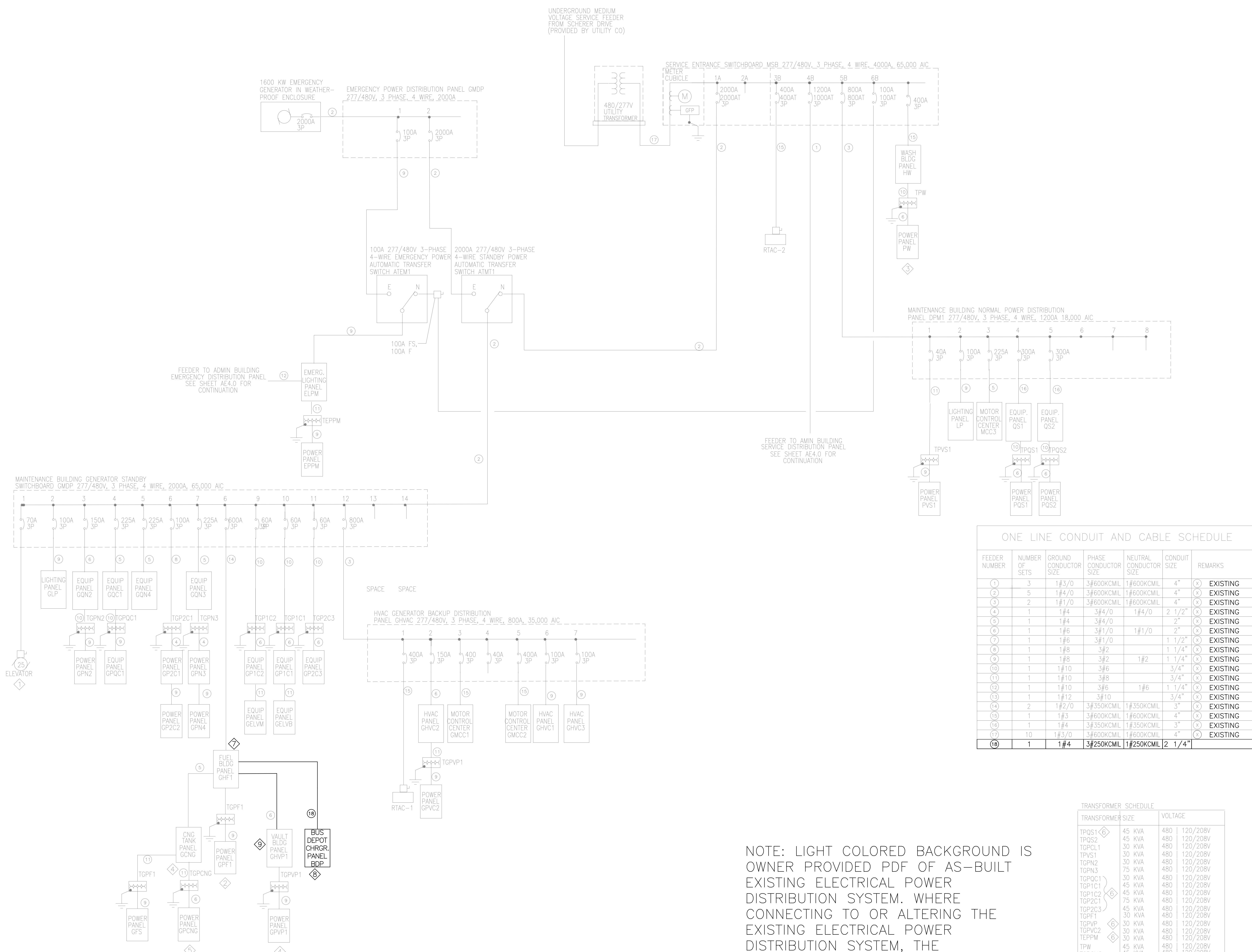
TITLE ELECTRICAL FUEL AND REVENUE BUILDINGS PLAN  
SCALE 1/8" = 1'-0"  
FILE 17401-Elec.dwg  
JOB 17-401  
DRAWN J.D.E.  
CHECK J.J.H.  
SHEET E-1.1  
DATE 08/25/2017 CONSTRUCTION SET

PINELLAS SUNCOAST TRANSIT AUTHORITY  
PSTA  
BUS DEPOT CHARGER  
EQUIPMENT ADDITION  
3201 SCHERER DRIVE, ST. PETERSBURG, FL 33716  
3201 SCHERER DRIVE, ST. PETERSBURG, FL 33716



KEY NOTES  
 (THIS SHEET ONLY)

- ① EXISTING
- ② EXISTING
- ③ EXISTING
- ④ EXISTING
- ⑤ EXISTING
- ⑥ EXISTING
- ⑦ EXISTING 600A 3φ, 4W 480V PANEL 'GHF1.' SEE LOAD CALCULATION FOR PANEL 'GHF1' ON SHEET E-0.1. PROVIDE NEW 250A-3P BREAKER ON PANEL TO FEED NEW PANEL 'BDP.' PROVIDE SIGNAGE INDICATING 'MAIN 2 OF 2 FOR THIS BUILDING.'
- ⑧ PROVIDE NEW 250 AMP NEMA 3R SIEMENS PANEL 'BDP'. SEE PANEL SCHEDULE.
- ⑨ EXISTING PANEL 'GHVP1.' PROVIDE SIGNAGE INDICATING 'MAIN 1 OF 2 FOR THIS BUILDING.'



ONE LINE CONDUIT AND CABLE SCHEDULE

| FEEDER NUMBER | NUMBER OF SETS | GROUND CONDUCTOR SIZE | PHASE CONDUCTOR SIZE | NEUTRAL CONDUCTOR SIZE | CONDUIT SIZE | REMARKS    |
|---------------|----------------|-----------------------|----------------------|------------------------|--------------|------------|
| 1             | 3              | 1#3/0                 | 3#600KCMIL           | 1#600KCMIL             | 4"           | ① EXISTING |
| 2             | 5              | 1#4/0                 | 3#600KCMIL           | 1#600KCMIL             | 4"           | ② EXISTING |
| 3             | 2              | 1#1/0                 | 3#600KCMIL           | 1#600KCMIL             | 4"           | ③ EXISTING |
| 4             | 1              | 1#4                   | 3#4/0                | 1#4/0                  | 2 1/2"       | ④ EXISTING |
| 5             | 1              | 1#4                   | 3#4/0                |                        | 2"           | ⑤ EXISTING |
| 6             | 1              | 1#6                   | 3#1/0                | 1#1/0                  | 2"           | ⑥ EXISTING |
| 7             | 1              | 1#6                   | 3#1/0                |                        | 1 1/2"       | ⑦ EXISTING |
| 8             | 1              | 1#8                   | 3#2                  |                        | 1 1/4"       | ⑧ EXISTING |
| 9             | 1              | 1#8                   | 3#2                  | 1#2                    | 1 1/4"       | ⑨ EXISTING |
| 10            | 1              | 1#10                  | 3#6                  |                        | 3/4"         | ⑩ EXISTING |
| 11            | 1              | 1#10                  | 3#8                  |                        | 3/4"         | ⑪ EXISTING |
| 12            | 1              | 1#10                  | 3#6                  | 1#6                    | 1 1/4"       | ⑫ EXISTING |
| 13            | 1              | 1#12                  | 3#10                 |                        | 3/4"         | ⑬ EXISTING |
| 14            | 2              | 1#2/0                 | 3#350KCMIL           | 1#350KCMIL             | 3"           | ⑭ EXISTING |
| 15            | 1              | 1#3                   | 3#600KCMIL           | 1#600KCMIL             | 4"           | ⑮ EXISTING |
| 16            | 1              | 1#4                   | 3#350KCMIL           | 1#350KCMIL             | 3"           | ⑯ EXISTING |
| 17            | 10             | 1#3/0                 | 3#600KCMIL           | 1#600KCMIL             | 4"           | ⑰ EXISTING |
| 18            | 1              | 1#4                   | 3#250KCMIL           | 1#250KCMIL             | 2 1/4"       | ⑱          |

TRANSFORMER SCHEDULE

| TRANSFORMER | SIZE   | VOLTAGE        |
|-------------|--------|----------------|
| TPQS1       | 45 KVA | 480 / 120/208V |
| TPQS2       | 45 KVA | 480 / 120/208V |
| TGCL1       | 30 KVA | 480 / 120/208V |
| TPVS1       | 30 KVA | 480 / 120/208V |
| TGPN2       | 30 KVA | 480 / 120/208V |
| TGPN3       | 75 KVA | 480 / 120/208V |
| TGPC1       | 45 KVA | 480 / 120/208V |
| TGPF1       | 45 KVA | 480 / 120/208V |
| TGPN2       | 75 KVA | 480 / 120/208V |
| TGPN3       | 45 KVA | 480 / 120/208V |
| TGPF1       | 30 KVA | 480 / 120/208V |
| TGPN2       | 30 KVA | 480 / 120/208V |
| TGPN3       | 30 KVA | 480 / 120/208V |
| TPVS1       | 45 KVA | 480 / 120/208V |
| TGPCNG      | 45 KVA | 480 / 120/208V |

NOTE: LIGHT COLORED BACKGROUND IS OWNER PROVIDED PDF OF AS-BUILT EXISTING ELECTRICAL POWER DISTRIBUTION SYSTEM. WHERE CONNECTING TO OR ALTERING THE EXISTING ELECTRICAL POWER DISTRIBUTION SYSTEM, THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO ROUGH-IN. NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES PRIOR TO ROUGH-IN.

100% CONSTRUCTION DOCUMENTS



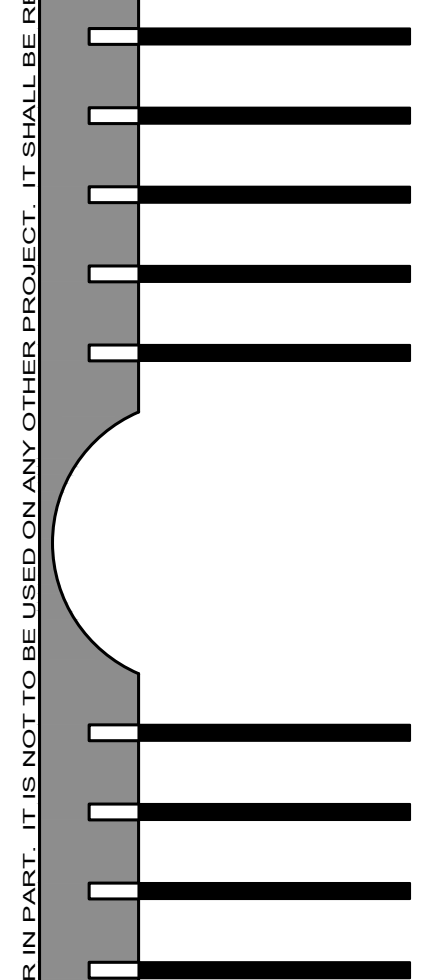
PANEL 'BDP'

| PANEL          | BDP    | 08/25/17       | HERTZ    | 60            | AUTO CALCULATIONS |
|----------------|--------|----------------|----------|---------------|-------------------|
| HI VOLTAGE     | 480    | SYM RMS AMPS   | 22,000   | LOAD (VA)     | 160,000           |
| LOW VOLTAGE    | 277    | BREAKER TYPE   | MLO      | DIVERSITY(VA) | 0                 |
| PHASE          | 3      | MAN LUG AMPS   | 250A MLO | 25% C LOAD    | 0                 |
| #WIRES         | 4      | FED TOP/BOTTOM | TOP      | TOTAL VA      | 160,000           |
| NEUTRAL        | Y      | MOUNTING       | SURFACE  | TOTAL KVA     | 160               |
| GROUND BUS Y/N | Y      | NEMA TYPE      | NEMA 3R  | CONN AMPS     | 193               |
| GND WIRE Y/N   | Y      | MANUFACTURER   | SQUARE D | FACTOR AMPS   | 48                |
| WIRE TH#N/THW  | THWN   | PANEL TYPE     | I LINE   | TOTAL AMPS    | 241               |
| FROM           | GHF1   |                |          | DESIGN AMPS   | 250               |
| NO. OF POLES   | 12     |                |          |               |                   |
| MIN. AMPS      | 250    |                |          |               |                   |
| % FACTOR       | 25     |                |          |               |                   |
| BUSSING        | COPPER |                |          |               |                   |
| ISOLATED GND   | Y      |                |          |               |                   |

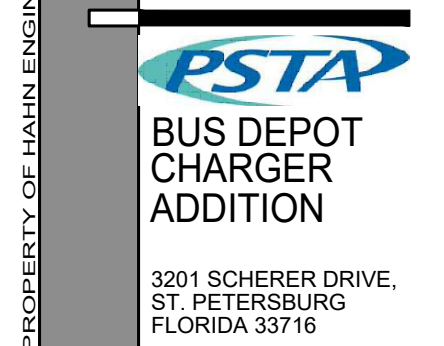
| CIR # | BREAKER | CIRCUIT DESCRIPTION | Feeder Selection | L1     | L2     | L3     |
|-------|---------|---------------------|------------------|--------|--------|--------|
| 1     | 125A-3P | BUS DEPOT CHARGER   | 1 set of #1      | 26,667 |        |        |
| 3     |         |                     |                  |        | 26,667 |        |
| 5     |         |                     |                  |        |        | 26,667 |
| 7     | 125A-3P | BUS DEPOT CHARGER   | 1 set of #1      | 26,667 |        |        |
| 9     |         |                     |                  |        | 26,667 |        |
| 11    |         |                     |                  |        |        | 26,667 |
| 2     | 20A-1P  | SPACE               |                  | 0      |        |        |
| 4     | 20A-1P  | SPACE               |                  |        | 0      |        |
| 6     | 20A-1P  | SPACE               |                  |        |        | 0      |
| 8     | 80A-3P  | TVSS                |                  | 0      |        |        |
| 10    |         |                     |                  |        | 0      |        |
| 12    |         |                     |                  |        |        | 0      |

| LOAD CALCULATIONS FOR PANEL                |                                 |           |              |
|--|---------------------------------|-----------|--------------|
| CONNECTED LOAD L1                          |                                 |           | 53,333 VA    |
| CONNECTED LOAD L2                          |                                 |           | 53,333 VA    |
| CONNECTED LOAD L3                          |                                 |           | 53,333 VA    |
| SUB TOTAL VA                               |                                 |           | 160,000 VA   |
| RECEPTACLE LOAD                            |                                 | 0 VA      |              |
| LESS 1ST 10,000 VA                         |                                 | 10,000 VA |              |
| REMAINING VA                               |                                 | 0 VA      |              |
| 50% OF THE REMAINING VA                    |                                 | 0 VA      |              |
| LESS DIVERSITY (PER ARTICLE 220-44 N.E.C.) |                                 |           | 0 VA         |
| CONTINUOUS LOAD                            |                                 | 0 VA      |              |
|  |                                 | X .25     |              |
| PLUS 25% OF THE CONTINUOUS LOAD            |                                 |           | 0 VA         |
| APPLIANCE RECEPTACLE LOAD                  |                                 | 0 VA      |              |
| FOR 1 APPLIANCE, TAKE 100% OF THE LOAD     |                                 | 0         |              |
| RANGE RECEPTACLE LOAD                      |                                 | 0 VA      |              |
| FOR 1 RANGE, TAKE 100% OF THE LOAD         |                                 | 0         |              |
| HVAC LOAD - HEATING-COOLING                |                                 | 0         | 0 VA         |
| REMOVE COOLING LOAD                        |                                 | 0         |              |
|  |                                 |           | 0 VA         |
| SUB TOTAL                                  |                                 |           | 160,000 VA   |
| FACTOR                                     | 25%                             |           | 40,000 VA    |
| TOTAL VA                                   |                                 |           | 200,000 VA   |
| AMPS                                       | 200,000 VA / 1.73 / VOLTAGE --> |           | 480 241 AMPS |

THIS DRAWING IS THE PROPERTY OF HAHN ENGINEERING, INCORPORATED. IT IS NOT TO BE REPRODUCED IN WHOLE OR IN PART. IT IS NOT TO BE USED ON ANY OTHER PROJECT. IT SHALL BE RETURNED UPON REQUEST. NOT VALID UNLESS SIGNED AND SEALED.



PINELLAS SUNCOAST TRANSIT AUTHORITY  
**PSTA**  
 BUS DEPOT CHARGER  
 EQUIPMENT ADDITION  
 3201 SCHERER DRIVE, ST. PETERSBURG, FL 33716



3201 SCHERER DRIVE, ST. PETERSBURG, FLORIDA 33716

TITLE ELECTRICAL PANEL SCHEDULES  
 SCALE N.T.S.  
 FILE 17401-Elec.dwg  
 JOB 17-401  
 DRAWN J.D.E.  
 CHECK J.J.H.  
 SHEET **E-3.1**  
 DATE 08/25/2017 CONSTRUCTION SET

100% CONSTRUCTION DOCUMENTS

PINELLAS SUNCOAST TRANSIT AUTHORITY (PSTA)  
ST. PETERSBURG, FLORIDA

## EXHIBIT P BID BOND

|   |   |
|---|---|
| <b>PRINCIPAL (Legal name, business address and telephone number)</b>    | <b>Date Bond Executed:</b><br><b>(must not be later than bid opening date)</b>  |
|   | <b>Type Of Organization ("X" one)</b><br><input type="checkbox"/> Individual <input type="checkbox"/> Partnership<br><input type="checkbox"/> Joint Venture |
|   | <b>State of Incorporation:</b>  |
| <b>SURETY(IES) (Name(s), business address(es) and telephone number)</b> |   |
| <b>PROJECT (Address and description)</b>                                |   |
| <b>PENAL SUM OF BOND</b>  | <b>BID IDENTIFICATION</b>   |
| <b>PERCENT OF BID PRICE</b>   | <b>BID DUE DATE:</b>  |
| <b>%</b>  | <b>SOLICITATION #</b>   |
|   | FOR ("X" one)<br><input type="checkbox"/> Construction <input type="checkbox"/> Supplies <input type="checkbox"/> Services                                  |

**KNOW ALL MEN BY THESE PRESENTS.**

that we, the Principal and Surety(ies) hereto, are firmly bound to the Pinellas Suncoast Transit Authority (hereinafter called the Authority) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally; provided, that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or action against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as it is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

**THE CONDITION OF THIS OBLIGATION IS SUCH.**

that whereas the Principal has submitted the offer identified above, if the Principal, upon acceptance by the Authority of his offer identified above, within the period specified therein for acceptance, shall execute such further contractual documents, if any, and give such bond(s) as may be required by the terms of the offer as accepted within the time specified (ten 10) days if no period is specified) after receipt of the forms by him, or in the event of failure so to execute such further contractual documents and give such bonds, if the Principal shall pay the Authority for any cost of procuring the work (including administrative costs) which exceeds the amount of his offer, then the above obligation shall be void and of no effect.

Each surety executing this instrument hereby agrees that its obligation shall not be impaired by any extension(s) of the time for acceptance of the offer that the Principal may grant to the Authority, notice of which extension(s) to the Surety(ies) being hereby waived; provided, that such waiver of notice shall apply only with respect to extensions aggregating not more than sixty (60) calendar days in addition to the period originally allowed for acceptance of the offer; provided further, that if any legal action be filed upon this bond, venue shall lie in Pinellas or Hillsborough County, Florida.

The entity identified as the RESIDENT AGENT of the Surety is hereby designated by the Surety as the Resident Agent in the State of Florida to whom any requisite notices may be delivered and on whom service of process may be had in matters arising out of such suretyship as required pursuant to Florida State Statute 624.422.

**IN WITNESS WHEREOF.**

the Principal and Surety(ies) have executed this bid bond and have affixed their seals on the date set forth above.

### PRINCIPAL

| Signature(s) | Typed Names and Titles | <b>Corporate Seal</b> |
|--------------|------------------------|-----------------------|
| 1.<br>(seal) | 1.                     |                       |
| 2.<br>(seal) | 2.                     |                       |

| <b>INDIVIDUAL SURETIES</b>  |           |                               |                       |
|---|-----------|-------------------------------|-----------------------|
| <b>Signature(s)</b>   |           | <b>Typed Names and Titles</b> |                       |
| 1.<br>(seal)  |           | 1.                            | <b>Corporate Seal</b> |
| 2.<br>(seal)  |           | 2.                            |                       |
| <b>CORPORATE SURETY(IES)</b>  |           |                               |                       |
| (Surety A)<br>Name &<br>Address   |           | State of Incorporation        | <b>Corporate Seal</b> |
|   |           | Liability Limit \$            |                       |
| Signature(s)  | 1. (seal) | 2. (seal)                     |                       |
| Name(s) &<br>Title(s) (Typed)   | 1.        | 2.                            |                       |
| The RESIDENT AGENT of the surety in the State of Florida, for the delivery of notice and service of process is: |           |                               |                       |
| Name: _____ Address: _____  |           |                               |                       |
| _____   |           |                               |                       |
| (Surety B)<br>Name &<br>Address   |           | State of Incorporation        | <b>Corporate Seal</b> |
|   |           | Liability Limit \$            |                       |
| Signature(s)  | 1. (seal) | 2. (seal)                     |                       |
| Name(s) &<br>Title(s) (Typed)   | 1.        | 2.                            |                       |
| The RESIDENT AGENT of the surety in the State of Florida, for the delivery of notice and service of process is: |           |                               |                       |
| Name: _____ Address: _____  |           |                               |                       |
| _____   |           |                               |                       |
| (Surety C)<br>Name &<br>Address   |           | State of Incorporation        | <b>Corporate Seal</b> |
| Signature(s)  | 1. (seal) | 2. (seal)                     |                       |
| Name(s) &<br>Title(s) (Typed)   | 1.        | 2.                            |                       |
| The RESIDENT AGENT of the surety in the State of Florida, for the delivery of notice and service of process is: |           |                               |                       |
| Name: _____ Address: _____  |           |                               |                       |
| _____   |           |                               |                       |

**INSTRUCTIONS**

1. This form is authorized for use whenever a bid guaranty is required in connection with construction work or the furnishing of supplies or services. There shall be no deviation from this form without approval by the Authority.
2. The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of this form. The bond shall be signed by an authorized person. When such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of his authority must be furnished.
3. (a) Corporations executing the bond as sureties must be authorized to act as sureties on bonds for principals in the State of Florida. Where more than a single corporate surety is involved, their names and addresses (city and state) shall be inserted in the spaces (Surety A, Surety B, etc.) Headed "CORPORATE SURETY(IES)." In the space designated "SURETY(IES)" on the face of this form, only the letter identification of the Sureties shall be inserted.  
  
(b) Where individual sureties execute the bond, they shall be two or more fiscally responsible persons. A completed Affidavit of Individual Surety, for each individual surety, shall accompany the bond. Such sureties may be required to furnish additional substantiating information concerning their assets and financial capability as the Authority may require.
4. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Seal".
5. The name and title of each person signing this bid bond should be typed in the space provided.

**PINELLAS SUNCOAST TRANSIT AUTHORITY (PSTA)  
ST. PETERSBURG, FLORIDA**

**EXHIBIT Q  
PAYMENT BOND**

|   |  |                     |
|---|--|---------------------|
| <b>PRINCIPAL (Legal name, business address and telephone number)</b>    | <b>Date Bond Executed:<br/>(must be same as or later than contract date)</b>   |                     |
|   | <b>Type Of Organization ("X" one)</b><br><input type="checkbox"/> Individual <input type="checkbox"/> Partnership<br><input type="checkbox"/> Joint Venture <input type="checkbox"/> Corporation |                     |
|   | <b>State of Incorporation</b>  |                     |
| <b>SURETY(IES) (Name(s), business address(es) and telephone number)</b> | <b>PENAL SUM OF BOND</b>   |                     |
|   | \$   |                     |
|   | <b>CONTRACT DATE</b>   | <b>CONTRACT NO.</b> |

**PROJECT (Address and description)**

KNOW ALL MEN BY THESE PRESENTS,  
that we, the Principal and Surety(ies) hereto, are firmly bound to the Pinellas Suncoast Transit Authority (hereinafter called the Authority) and to all persons, firms, and corporations who may furnish materials for, and perform labor under the contract referred to above, in the above penal sum for the payment of which we bind ourselves, heirs, executors, administrators, and successors, jointly and severally; provided, that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or action against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as it is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT,  
whereas the Principal has entered into the contract identified above,

NOW, THEREFORE,

if the Principal shall promptly make payment to all persons supplying labor and/or material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modification(s) to the Surety(ies) being hereby waived, then this obligation shall be void and of no effect; otherwise, it shall remain in full force and effect. This bond is given to pursuant to the provisions of Florida State law. If any legal action be filed upon this bond, venue shall lie in Pinellas or Hillsborough County, Florida.

The entity identified as the RESIDENT AGENT of the Surety is hereby designated by the Surety as the Resident Agent in the State of Florida to whom any requisite notices may be delivered and on whom service of process may be had in matters arising out of such suretyship as required pursuant to Florida Statute 624.422..

IN WITNESS WHEREOF,

the Principal and Surety(ies) have executed this payment bond and have affixed their seals on the date set forth above.

**PRINCIPAL**

| Signature(s) | Typed Names and Titles | Corporate Seal |
|--------------|------------------------|----------------|
| 1.<br>(seal) | 1.                     |                |
| 2.<br>(seal) | 2.                     |                |

**CORPORATE SURETY(IES)**

| (Surety A)<br>Name &<br>Address | State of Incorporation |           | Corporate Seal |
|---------------------------------|------------------------|-----------|----------------|
|                                 | Liability Limit \$     |           |                |
| Signature(s)                    | 1. (seal)              | 2. (seal) |                |
| Name(s) &<br>Title(s) (Typed)   | 1.                     | 2.        |                |

The RESIDENT AGENT of the surety in the State of Florida, for the delivery of notice and service of process is:

Name: \_\_\_\_\_ Address: \_\_\_\_\_  
 \_\_\_\_\_

**CORPORATE SURETY(IES)**

|                                 |                        |                   |
|---------------------------------|------------------------|-------------------|
| (Surety B)<br>Name &<br>Address | State of Incorporation | Corporate<br>Seal |
|                                 | Liability Limit \$     |                   |
| Signature(s)                    | 1. (seal)              | 2. (seal)         |
| Name(s) &<br>Title(s) (Typed)   | 1.                     | 2.                |

The RESIDENT AGENT of the surety in the State of Florida, for the delivery of notice and service of process is:

Name: \_\_\_\_\_ Address: \_\_\_\_\_

|                                 |                        |                   |
|---------------------------------|------------------------|-------------------|
| (Surety C)<br>Name &<br>Address | State of Incorporation | Corporate<br>Seal |
|                                 | Liability Limit \$     |                   |
| Signature(s)                    | 1. (seal)              | 2. (seal)         |
| Name(s) &<br>Title(s) (Typed)   | 1.                     | 2.                |

The RESIDENT AGENT of the surety in the State of Florida, for the delivery of notice and service of process is:

Name: \_\_\_\_\_ Address: \_\_\_\_\_

|                                 |                        |                   |
|---------------------------------|------------------------|-------------------|
| (Surety D)<br>Name &<br>Address | State of Incorporation | Corporate<br>Seal |
|                                 | Liability Limit \$     |                   |
| Signature(s)                    | 1. (seal)              | 2. (seal)         |
| Name(s) &<br>Title(s) (Typed)   | 1.                     | 2.                |

The RESIDENT AGENT of the surety in the State of Florida, for the delivery of notice and service of process is:

Name: \_\_\_\_\_ Address: \_\_\_\_\_

**INSTRUCTIONS**

1. This form is authorized for use in connection with construction work or the furnishing of supplies or services. There shall be no deviation from this form without approval by the Authority.
2. The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of this form. The bond shall be signed by an authorized person. When such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, a certified copy of the Power of Attorney must be attached. If the amount of the bond exceeds \$100,000, the surety(ies) shall be approved for the amount of the bonds, and must hold a certificate of authority from the U.S. Secretary of the Treasury or have obtained reinsurance from a Treasury listed insurer, in accordance with the requirements of Florida.
3. The bond shall be executed by a corporate surety or corporate sureties duly authorized to do business in the State of Florida and licensed by the State of Florida to issue surety bonds. All payment bonds shall comply with Florida Statute 255.05 and comply with the notice and time limitations contained in Florida Statute 255.05(2).
4. Where more than a single corporate surety is involved, their names and addresses (City and State) shall be inserted in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURETY(IES)." In the space designated "SURETY(IES)" on the face of this form, only the letter identification of the Sureties shall be inserted.
5. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Seal".
6. The name and title of each person signing this payment bond should be typed in the space provided.

PINELLAS SUNCOAST TRANSIT AUTHORITY (PSTA)  
ST. PETERSBURG, FLORIDA

**EXHIBIT R**  
**PERFORMANCE BOND**

|  |  |              |
|--|--|--------------|
| <b>PRINCIPAL (Legal name, business address and telephone number)</b>       | <b>Date Bond Executed:</b><br>(must be same as or later than contract date)  |              |
|  | <b>Type Of Organization ("X" one)</b><br><input type="checkbox"/> Individual <input type="checkbox"/> Partnership<br><input type="checkbox"/> Joint Venture <input type="checkbox"/> Corporation |              |
|  | <b>State of Incorporation</b>  |              |
| <b>SURETY(IES) (Name(s), business address(es) and telephone number(s))</b> | PENAL SUM OF BOND  |              |
|  | \$   |              |
|  | CONTRACT DATE  | CONTRACT NO. |

**PROJECT (Address and description)**

KNOW ALL MEN BY THESE PRESENTS.  
 that we, the Principal and Surety(ies) hereto, are firmly bound to the Pinellas Suncoast Transit Authority (hereinafter called the Authority) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally; provided, that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or action against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as it is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

THE CONDITION OF THIS OBLIGATION IS SUCH,  
 whereas the Principal has entered into the contract identified above,  
  
 if the Principal shall faithfully perform and fulfill all the undertakings, covenants, terms, conditions, and agreement of said contract, in accordance with the plans, specifications and contract documents, during the original term of said contract and any extensions thereof that may be granted by the Authority, with or without notice to the Surety(ies), and during the life of any guaranty required under the contract, and shall also faithfully perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety(ies) being hereby waived, then this Obligation shall be void; otherwise, it shall remain in full force and effect. This bond is given pursuant to the provisions of Florida State law. If any legal action be filed upon this bond, venue shall lie in Pinellas or Hillsborough County, Florida.

The entity identified as the RESIDENT AGENT of the Surety is hereby designated by the Surety as the Resident Agent in the State of Florida to whom any requisite notices may be delivered and on whom service of process may be had in matters arising out of such suretyship as required pursuant to Florida Statute 624.422

IN WITNESS WHEREOF,  
 the Principal and Surety(ies) have executed this performance bond and have affixed their seals on the date set forth above.

**PRINCIPAL**

| Signature(s) | Typed Names and Titles |                |
|--------------|------------------------|----------------|
| 1. (seal)    | 1.                     | Corporate Seal |
| 2. (seal)    | 2.                     |                |

**CORPORATE SURETY(IES)**

|                            |           |                        |                |
|----------------------------|-----------|------------------------|----------------|
| (Surety A) Name & Address  |           | State of Incorporation | Corporate Seal |
|                            |           | Liability Limit \$     |                |
| Signature(s)               | 1. (seal) | 2. (seal)              |                |
| Name(s) & Title(s) (Typed) | 1.        | 2.                     |                |

The RESIDENT AGENT of the surety in the State of Florida, for the delivery of notice and service of process is:

Name: \_\_\_\_\_ Address: \_\_\_\_\_

\_\_\_\_\_



**CORPORATE SURETY(IES)**

|                                 |                 |                        |                   |
|---------------------------------|-----------------|------------------------|-------------------|
| (Surety B)<br>Name &<br>Address |                 | State of Incorporation | Corporate<br>Seal |
|                                 |                 | Liability Limit \$     |                   |
| Signature(s)                    | 1. _____ (seal) | 2. _____ (seal)        |                   |
| Name(s) &<br>Title(s) (Typed)   | 1. _____        | 2. _____               |                   |

The RESIDENT AGENT of the surety in the State of Florida, for the delivery of notice and service of process is:  
 Name: \_\_\_\_\_ Address: \_\_\_\_\_  
 \_\_\_\_\_

|                                 |                 |                        |                   |
|---------------------------------|-----------------|------------------------|-------------------|
| (Surety C)<br>Name &<br>Address |                 | State of Incorporation | Corporate<br>Seal |
|                                 |                 | Liability Limit \$     |                   |
| Signature(s)                    | 1. _____ (seal) | 2. _____ (seal)        |                   |
| Name(s) &<br>Title(s) (Typed)   | 1. _____        | 2. _____               |                   |

The RESIDENT AGENT of the surety in the State of Florida, for the delivery of notice and service of process is:  
 Name: \_\_\_\_\_ Address: \_\_\_\_\_  
 \_\_\_\_\_

**INSTRUCTIONS**

1. This form is authorized for use in contracts with construction work or the furnishing of supplies or services. There shall be no deviation from this form without approval by the Authority.
2. The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of this form. The bond shall be signed by an authorized person. When such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, a certified copy of the Power of Attorney must be attached.
3. The bond shall be executed by a corporate surety or corporate sureties duly authorized to do business in the State of Florida and licensed by the State of Florida to insure surety bonds. All payment bonds shall comply with the Florida Statute 255.05 and comply with the notice and time limitations contained in Florida Statute 255.05(2). If the amount of the bond exceeds \$100,000, the surety(ies) shall be approved for the amount of the bonds, and must hold either a certificate of authority from the U.S. Secretary of the Treasury or have obtained reinsurance from a Treasury listed insurer.
4. Where more than a single corporate surety is involved, their names and addresses (City and State) shall be inserted in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURETY(IES) " on the face of this form, only the letter identification of the Sureties shall be inserted.
5. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Seal".
6. The name and title of each person signing this performance bond should be typed in the space provided.