

State of Florida
Department of Transportation
District Five
Procurement Services, MS #524-4
719 South Woodland Boulevard
DeLand, Florida 32720-6834

REQUEST FOR PROPOSAL REGISTRATION

**PLEASE COMPLETE AND RETURN THIS FORM ASAP
TO THE ABOVE ADDRESS OR FAX TO 850-412-8092**

RFP Number: RFP-DOT-14-15-5005-TRK

Title: Central Florida Rail Corridor (CFRC) Track Renewal and Grade Crossing Upgrade

Proposal Due Date & Time (On or Before): May 22, 2015 12:00 Noon

Potential proposers should notify our office by returning this Registration Form as soon as possible after downloading. Complete the information below and fax this sheet only to the Florida Department of Transportation Procurement Office at (850) 412-8092, or mail to the address noted above.

THE REQUEST FOR PROPOSAL DOCUMENT YOU RECEIVED IS SUBJECT TO CHANGE. Notice of changes (addenda), will be posted on the Florida Vendor Bid System at www.myflorida.com, under this RFP number (click on "BUSINESS", click on "Doing Business with the State", under "Everything for Vendors and Customers", click on "Vendor Bid System (VBS)", then click on "Search Advertisements", click on the drop-down arrow beside the box under Advertisement Type, select Competitive Solicitation, click on the drop-down arrow beside the box under Agency, select DEPARTMENT OF TRANSPORTATION, then go to the bottom of the same page and click on Initiate Search). It is the responsibility of all potential proposers to monitor this site for any changing information prior to submitting your proposal.

Company Name: _____

Address: _____

City, State, Zip: _____

Telephone: (____) _____ Fax Number: (____) _____

Contact Person: _____

Internet E-Mail Address: _____

For further information on this process, you may e-mail or telephone: Tammy Hodgkins, CPPB, BAS Purchasing Agent III, Phone: (386) 943-5513; email: tamara.hodgkins@dot.state.fl.us

**BID PRICE PROPOSAL Form
Track Renewal & Grade Crossing Upgrade
RFP-DOT-14-15-5005-TRK**

<u>Item</u>	<u>Units</u>	<u>Description</u>	<u>Amount</u>
1	1	Lump Sum – Grade Crossings	\$ _____
2	1	Lump Sum – Track Renewal	\$ _____
3	1	Lump Sum – Tie Replacements	\$ _____
4	1	Lump Sum – Pedestrian Crossings	\$ _____
 DO NOT BID ITEMS			
5	1	Unforeseen Work Allowance	\$ <u>150,000.00</u>
6	1	Dispute Review Board	\$ <u>25,000</u>
7	1	Partnering	\$ <u>16,500</u>
TOTAL LUMP SUM AMOUNT **			\$ _____

Price evaluation is the process of examining a prospective price without evaluation of the separate cost elements and proposed profit of the potential provider. Price analysis is conducted through the comparison of price quotations submitted.

** This Total Lump Sum Amount will be used in calculating the Proposer's Awarded Points
The criteria for price evaluation shall be based upon the following formula:

$$\frac{\text{Low Price}}{\text{Proposer's Price}} \times \text{Price Points} = \text{Proposer's Awarded Points}$$

Company Name: _____

Contractor Number: _____

Address: _____

City, State, Zip: _____

Authorized Signature: _____

Printed Name: _____

Title: _____

Date: _____

Note: Successful Contractor is required to submit a Schedule of Values prior to the first invoice.

BID PRICE PROPOSAL Form
Track Renewal & Grade Crossing Upgrade
RFP-DOT-14-15-5005-TRK

MFMP Transaction Fee:

All payment(s) to the vendor resulting from this competitive solicitation **WILL** be subject to the 1% MFMP Transaction Fee in accordance with the attached Form PUR 1000 General Contract Condition #14.

NOTE: In submitting a response, the proposer acknowledges they have read and agree to the solicitation terms and conditions and their submission is made in conformance with those terms and conditions.

ACKNOWLEDGEMENT: I certify that I have read and agree to abide by all terms and conditions of this solicitation and that I am authorized to sign for the proposer. I certify that the response submitted is made in conformance with all requirements of the solicitation.

Proposer: _____ FEID # _____

Address: _____ City, State, Zip _____

Authorized Signature: _____ Date: _____

Printed / Typed: _____ Title: _____

**CONTRACTOR DATA SHEET
CENTRAL FLORIDA RAIL Corridor (CFRC)
Track Renewal & Grade Crossing Upgrade
RFP-DOT-14-15-5005-TRK**

CORPORATE INFORMATION

DATE: _____

FEDERAL EMPLOYER IDENTIFICATION NUMBER (FEID): _____
(State Purchasing System (SPURS) Contractor Number)

CONTRACTOR NAME: _____

CORPORATE STRUCTURE: (Inc./LLC): _____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE: _____

CELLULAR: _____

TOLL FREE NO.: (800) _____ FAX NO.: _____ / _____

INTERNET E-MAIL ADDRESS: _____

INTERNET WEBSITE URL: _____

LOCAL OFFICE INFORMATION, (If other than above)

CONTACT NAME: _____

ALTERNATE CONTACT: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE: _____

CELLULAR: _____

TOLL FREE NO.: (800) _____ FAX NO.: _____ / _____

INTERNET E-MAIL ADDRESS: _____

**CONTRACTOR DATA SHEET
CENTRAL FLORIDA RAIL Corridor (CFRC)
Track Renewal & Grade Crossing Upgrade
RFP-DOT-14-15-5005-TRK**

RFP Requirements

- 1) REGISTERED IN MYFLORIDAMARKETPLACE: (Y/N) _____ Attach Proof
- 5.2) AUTHORIZED TO DO BUSINESS IN THE STATE OF FLORIDA: (Y/N) _____ Attach Proof
- 5.3) LICENSED TO CONDUCT BUSINESS IN THE STATE OF FLORIDA: (Y/N) _____
Attach Proof
- 5.4) LICENSED AS A GENERAL CONTRACTOR IN THE STATE OF FLORIDA: (Y/N) _____
Attach Proof
- 5.5) FDOT PREQUALIFICATION (if used for Experience): (Y/N) _____

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
DRUG-FREE WORKPLACE PROGRAM CERTIFICATION
RFP-DOT-14-15-5005-TRK

287.087 Preference to businesses with drug-free workplace programs. --Whenever two or more bids, proposals, or replies that are equal with respect to price, quality, and service are received by the state or by any political subdivision for the procurement of commodities or contractual services, a bid, proposal, or reply received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. In order to have a drug- free workplace program, a business shall:

(1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

(2) Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

(3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

(4) In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by, any employee who is so convicted.

(6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

Does the individual responding to this solicitation certify that their firm has implemented a drug-free workplace program in accordance with the provision of Section 287.087, Florida Statutes, as stated above?

YES

NO

Name of Business: _____

(Authorized Signature in Ink)

(Date)

(Print Name)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
**BID OPPORTUNITY LIST FOR PROFESSIONAL CONSULTANT SERVICES,
 AND COMMODITIES & CONTRACTUAL SERVICES**

375-040-62
 PROCUREMENT
 04/07

Prime Contractor/Prime Consultant: _____

Address/Phone Number: _____

Procurement Number/Advertisement Number: _____

49 CFR Part 26.11 The list is intended to be a listing of all firms that are participating, or attempting to participate, on DOT-assisted contracts. The list must include all firms that bid on prime contracts, or bid or quote subcontracts and supplies materials on DOT-assisted projects, including both DBEs and non-DBEs. For consulting companies this list must include all subconsultants contacting you and expressing an interest in teaming with you on a specific DOT-assisted project. Prime contractors and consultants must provide information for Numbers 1, 2, 3 and 4, and should provide any information they have available on Numbers 5, 6, 7, and 8 for themselves, and their subcontractors and subconsultants.

1. Federal Tax ID Number: _____	6. <input type="checkbox"/> DBE	8. Annual Gross Receipts
2. Firm Name: _____	<input type="checkbox"/> Non-DBE	<input type="checkbox"/> Less than \$1 million
3. Phone: _____		<input type="checkbox"/> Between \$1 - \$5 million
4. Address: _____		<input type="checkbox"/> Between \$5 - \$10 million
_____	7. <input type="checkbox"/> Subcontractor	<input type="checkbox"/> Between \$10 - \$15 million
_____	<input type="checkbox"/> Subconsultant	<input type="checkbox"/> More than \$15 million
5. Year Firm Established: _____		

1. Federal Tax ID Number: _____	6. <input type="checkbox"/> DBE	8. Annual Gross Receipts
2. Firm Name: _____	<input type="checkbox"/> Non-DBE	<input type="checkbox"/> Less than \$1 million
3. Phone: _____		<input type="checkbox"/> Between \$1 - \$5 million
4. Address: _____		<input type="checkbox"/> Between \$5 - \$10 million
_____	7. <input type="checkbox"/> Subcontractor	<input type="checkbox"/> Between \$10 - \$15 million
_____	<input type="checkbox"/> Subconsultant	<input type="checkbox"/> More than \$15 million
5. Year Firm Established: _____		

1. Federal Tax ID Number: _____	6. <input type="checkbox"/> DBE	8. Annual Gross Receipts
2. Firm Name: _____	<input type="checkbox"/> Non-DBE	<input type="checkbox"/> Less than \$1 million
3. Phone: _____		<input type="checkbox"/> Between \$1 - \$5 million
4. Address: _____		<input type="checkbox"/> Between \$5 - \$10 million
_____	7. <input type="checkbox"/> Subcontractor	<input type="checkbox"/> Between \$10 - \$15 million
_____	<input type="checkbox"/> Subconsultant	<input type="checkbox"/> More than \$15 million
5. Year Firm Established: _____		

1. Federal Tax ID Number: _____	6. <input type="checkbox"/> DBE	8. Annual Gross Receipts
2. Firm Name: _____	<input type="checkbox"/> Non-DBE	<input type="checkbox"/> Less than \$1 million
3. Phone: _____		<input type="checkbox"/> Between \$1 - \$5 million
4. Address: _____		<input type="checkbox"/> Between \$5 - \$10 million
_____	7. <input type="checkbox"/> Subcontractor	<input type="checkbox"/> Between \$10 - \$15 million
_____	<input type="checkbox"/> Subconsultant	<input type="checkbox"/> More than \$15 million
5. Year Firm Established: _____		

**AS APPLICABLE, PLEASE SUBMIT THIS FORM WITH YOUR: BID SHEET (Invitation to Bid - ITB)
 LETTERS OF RESPONSE (LOR)
 PRICE PROPOSAL (Request for Proposal - RFP)
 REPLY (Invitation to Negotiate - ITN)**

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
ANTICIPATED DBE PARTICIPATION STATEMENT

Form No. 6
375-040-63
PROCUREMENT
02/07

The Prime contractor is encouraged to complete this form and submit this form with your bid/price proposal/reply. Submission of this form is not mandatory.

Procurement Number: RFP-DOT-14-15-5005-TRK

Contractor's Name: _____

Contractor's FEID Number: _____

Is the prime contractor a Florida Department of Transportation Certified Disadvantaged Business Enterprise (DBE)?
(yes) (no)

Expected amount of contract dollars to be subcontracted to DBE(s): \$ _____

OR

It is our intent to subcontract _____ % of the contract dollars to DBE(s). Listed below are the proposed DBE sub-contractors:

<u>DBE (s) Name</u>	<u>Type of Work/Specialty</u>	<u>Dollar Amount/Percentage</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Submitted by: _____ Title: _____
(Type or Print)

Date: _____

Note: This information is used to track and report anticipated DBE participation in FDOT contracts. The anticipated DBE amount will not become part of the contractual terms.

**STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
Public Records Form**

Solicitation No: RFP-DOT-14-15-5005-TRK

Financial Project No(s): 412994-4-52-11

Project Description: Track Renewal & Grade Crossing Upgrade

Vendor/Consultant acknowledges and agrees to the following:

The Vendor shall allow public access to all documents, papers, letters, or other material subject to the provisions of Chapter 119, Florida Statutes, and made or received by the Vendor in conjunction with this Agreement. Specifically, if the Vendor is acting on behalf of a public agency the Vendor shall:

- (1) Keep and maintain public records that ordinarily and necessarily would be required by the Department in order to perform the services being performed by the Vendor.
- (2) Provide the public with access to public records on the same terms and conditions that the Department would provide the records and at a cost that does not exceed the cost provided in chapter 119, Florida Statutes, or as otherwise provided by law.
- (3) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law.
- (4) Meet all requirements for retaining public records and transfer, at no cost, to the Department all public records in possession of the Vendor upon termination of the contract 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 the Department in a format that is compatible with the information technology systems of the Department.

Failure by the Vendor to grant such public access shall be grounds for immediate unilateral cancellation of this Agreement by the Department. The Vendor shall promptly provide the Department with a copy of any request to inspect or copy public records in possession of the Vendor and shall promptly provide the Department a copy of the Vendor's response to each such request.

Company/Firm: _____

Authorized Signature: _____

Printed Name: _____

Title: _____

Date: _____

**Certification of Railroad Construction and/or Maintenance Experience
Project Experience**

Experience and Reference Form
State of Florida Department of Transportation

Contract No.: RFP-DOT-14-15-5005-TRK
Project Description: Central Florida Rail Corridor (CFRC) Track Renewal & Grade Crossing Upgrade

Firm Name: _____

Project Name:		
Begin Date	End Date	Contract Amount:
Description of Work:		
Safety Record:		
Reference:	Name & Title: Address: Phone Number: Email Address:	

Project Name:		
Begin Date	End Date	Contract Amount
Description of Work:		
Safety Record:		
Reference:	Name & Title: Address: Phone Number: Email Address:	

Project Name:		
Begin Date	End Date	Contract Amount:
Description of Work:		
Safety Record:		
Reference:	Name & Title: Address: Phone Number: Email Address:	

**Certification of Construction and/or Maintenance Experience
Key Staff Experience**

Experience and Reference Form
State of Florida Department of Transportation

Contract No.: RFP-DOT-14-15-5005-TRK

Project Description: Central Florida Rail Corridor (CFRC) Track Renewal & Grade Crossing Upgrade

Position: _____

Name: _____

Firm: _____

Degree(s): _____

Experience: _____

Begin Date	End Date	Employer:
		Description of Work:
Reference:		Name & Title Address: Phone Number Email Address:

Begin Date	End Date	Employer:
		Description of Work:
Reference:		Name & Title Address: Phone Number Email Address:

Begin Date	End Date	Employer:
		Description of Work:
Reference:		Name & Title Address: Phone Number Email Address:

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
VENDOR CERTIFICATION REGARDING
SCRUTINIZED COMPANIES LISTS

Florida Statutes
PROCUREMENT
287.135

06/11

Respondent Vendor Name: _____
Vendor FEIN: _____
Vendor's Authorized Representative Name and Title: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone Number: _____
Email Address: _____

Section 287.135, Florida Statutes, prohibits agencies from contracting with companies, for goods or services of \$1 million or more, that are on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List. Both lists are created pursuant to section 215.473, Florida Statutes.

As the person authorized to sign on behalf of Respondent, I hereby certify that the company identified above in the section entitled "Respondent Vendor Name" is not listed on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List. I understand that pursuant to section 287.135, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

Certified By: _____,
who is authorized to sign on behalf of the above referenced company.
Authorized Signature Print Name and Title: _____

BID OR PROPOSAL BOND

KNOW ALL MEN BY THESE PRESENTS: That we, _____, as Principal (Bidder), and _____, as Surety, are held and firmly bound unto the Florida Department of Transportation (hereinafter called the Obligee), in the full and just sum of FIVE PERCENT (5%) of the actual total of the Proposal referred to herein (do not enter figures), in lawful money of the United States of America, to be paid to the Obligee, to which payment will and truly to be made we bind ourselves, our heirs, executors, administrators, successors and assignees, jointly and severally and firmly be these presents:

WHEREAS, The said Principal is herewith submitting a proposal to the obligee for constructing or otherwise improving a road(s) and/or bridge(s) or building(s) in Orange, Seminole and Volusia County, particularly known as Federal Aid Project No.(s) _____ Financial Project No.(s) 412994-4-52-11 Proposal ID _____ RFP-DOT-14-15-5005-TRK, Central Florida Rail Corridor (CFRC) Track Renewal and Grade Crossing Upgrade

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the said Principal shall execute a contract and give bond for the faithful performance thereof within the time period as stipulated by the project specifications after being notified in writing of the award of such contract to Principal, or if the Surety shall pay the Obligee the full amount of this bond, then this obligation shall be void; otherwise it shall remain in full force and effect.

SIGNED, SEALED AND DATED THIS _____ day of _____,

NAME OF SURETY: _____ (Affix Surety Seal)

By: _____ Florida Licensed Insurance Agent or Attorney-In-Fact (Signature) _____ Type/Print

Countersigned: _____ Florida Licensed Insurance Agent _____ Type/Print

The following Statement to be completed regarding the Florida Licensed Insurance Agent:

STATE OF _____
COUNTY OF _____

Before me, the above signed authority, personally appeared _____, who is personally known to me or has produced _____ (type of identification) identification and is duly sworn, deposes and says that he/she is a duly authorized insurance agent properly licensed under the laws of the State of Florida to represent _____ of _____, a company authorized to make corporate Surety Bonds under the laws of Florida and acceptable as Surety on Federal Bonds and that he has signed or countersigned the above bond on their behalf.

Sworn, and subscribed to before me this _____ day of _____, _____ Notary Public, State of _____.

(Notary Signature)

My commission expires: _____

NOTE: The principal bidder is not required to sign this document, as execution of Form 375-020-08 specifically binds the principal bidder to the obligations arising from this document. Failure of the principal bidder to execute Form 375-020-08, or failure of the surety to execute this document, shall result in the bid being declared nonresponsive.

NOTE: Power of Attorney showing authority of Florida Licensed Insurance Agent to sign on behalf of, and bind, surety must be furnished with this form. Affix Corporate Seal of Surety. No Bid Bond is required if the total amount of the bid is \$150,000 or less.



PROPOSAL OF

(Proposer's Firm Name) (Prequalified Name, if Applicable)

(Proposing Firm's Physical Address -- City -- State -- Zip)

F.E.I.D. No. _____ Telephone No. (____) _____ FAX No. (____) _____

Email Address: _____

for constructing or otherwise improving a Bridge(s) and/or Section(s) of Road(s) No(s). or building(s) Central Florida
Rail Corridor, (CFRC) Track Renewal and Grade Crossing Upgrade

in Orange County(ies),

_____ approximately _____

in length, and known as Federal Aid Project No(s):

Contract No.: _____ Financial Project No(s): 412994-4-52-11

TO THE STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION: Submitted _____

The Bidder, hereby declares that no person or persons, firm or corporation, other than the Bidder, is interested, in this proposal, as principals, and that this Proposal is made without collusion with any person, firm or corporation, and we have carefully and to our full satisfaction examined the Proposal forms, the Standard Specifications as amended by the Specifications Package and any Supplemental Specifications Packages, and the Plans, and that we have made a full examination of the location of the proposed work and the sources of supply of materials, and we hereby agree to furnish all necessary labor, equipment, and materials, fully understanding that the quantities shown herewith are approximate only, and that we will fully complete all necessary work in accordance with the Plans and Specifications, and the requirements under them of the Engineer, within the time limit specified in this Proposal for the following unit prices, to wit:

Was an addendum issued on this project?

Yes No

I (We) hereby acknowledge receipt of the following Addenda issued during the bidding period.

Addendum No.	Dated	Addendum No.	Dated

**State of Florida
Department of Transportation**



REQUEST FOR PROPOSAL
Central Florida Rail Corridor (CFRC) Track Renewal and Grade Crossing Upgrade

RFP-DOT-14-15-5005-TRK

Financial Project No. 412994-4-52-11

VOLUSIA, SEMINOLE & ORANGE COUNTIES

PROCUREMENT OFFICE CONTACT:

Tammy Hodgkins, CPPB, BAS Purchasing Agent III
tamara.hodgkins@dot.state.fl.us
Fax: (850) 412-8092
Phone: (386) 943-5513
Florida Department of Transportation
719 South Woodland Boulevard MS-4-524-
DeLand, Florida 32720-6834

INTRODUCTION SECTION

1) INVITATION

The State of Florida Department of Transportation, hereinafter referred to as the "Department", requests written proposals from qualified Proposers to provide the Track Renewal and Grade Crossing Upgrades. These include the replacement of highway/railroad grade crossings, rail replacement, tie replacement and replacement of pedestrian crossing ties and panels. The project includes the required maintenance of railroad and highway traffic in accordance with the scope of services included with this RFP as Technical Requirements. The Contractor shall be required to coordinate with the Central Florida Rail Corridor (CFRC) staff, the Operations and Maintenance contractor and the Signal Maintenance of Way contractor. The Contractor shall comply with the available working hours as outlined in the Technical Requirements included with this RFP. The Contractor shall be responsible for contracting with the Operations and Maintenance contractor for Roadway Worker Protection services and with the Signal Maintenance of Way Contractor for signal location services. Coordination with the tenant railroads on the CFRC shall be completed by the Department.

Interested contractors must submit a Technical Proposal and a Price Proposal by the Date and time to the location cited in Introduction, Section 4, Timeline of this Request for Proposal. Specific requirements for the Technical Proposal and Price Proposal are outlined in Section 22 of this Request for Proposal. All Technical Proposals and Price Proposals will be evaluated in accordance with Section 30 of this Request for Proposal.

The process for selecting a single Contractor to represent the Department requires submission of the sealed Technical and Price Proposals to provide the services. Subject to the Qualifications outlined in this Request for Proposal, the Department will select a single Contractor to provide the services. The selected Contractor will fully coordinate with the Department's Project Manager or his designee in the performance of all services hereunder.

It is anticipated that the term of the contract will begin on June 29, 2015 and be effective through May 24, 2016.

The Department intends to award this contract to the responsive and responsible Proposer whose proposal is determined to be the most advantageous to the Department. After the award, said Proposer will be referred to as the "Contractor". For the purpose of this document, the term "Proposer" means the prime Contractor acting on its own behalf and those individuals, partnerships, firms, or corporations comprising the Proposer team. The term "proposal" means the complete response of the Proposer to the Request for Proposals (RFP), including properly completed forms and supporting documentation.

The Contractor shall be responsible for all work efforts included in the Technical Requirements attached to this RFP. The work shall be performed in accordance with this project's Contract Documents which are stated in this RFP's SPECIAL CONDITIONS, Section 14, Contract Documents.

2) NOTIFICATION OF FEDERAL PARTICIPATION

To the extent required by Federal law, the State of Florida agrees that, in administering any Federal assistance Program or Project supported by the underlying Grant Agreement or Cooperative Agreement, any request for proposals, solicitation, grant application, form, notification, press release, or other publication involving the distribution of FTA assistance for the Program or the Project that it will identify the FTA grant source by listing the Catalog of Federal Domestic Assistance Number of the program. The following FTA grant programs will be eligible to participate in this bid, Federal Transit Capital Investment

Grant, 49 U.S.C. 5309, and the CFDA number 20.500. Federal funding assistance up to Fifty (50%) percent may be provided.

3) DETAILS OF SERVICES

Details of the desired services, information and items to be furnished by the Contractor are described in the Contract Documents included with this Request for Proposal attached by reference hereto and made a part thereof. The Contract Documents are as stated in this RFP's SPECIAL CONDITIONS, Section 14, Contract Documents.

3.2 Examination of Contract Documents and Site of Work

Examine the Contract Documents and the site of the proposed work carefully before submitting a proposal for the work contemplated. Proposers are not permitted to enter the CFRC Right-of-Way to investigate the site except during the specified "Site Visit" shown in Section 4, Timeline Each proposer is responsible to Investigate the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished and as to the requirements of all Contract Documents. The Department does not guarantee the details, to be more than a general indication of the materials likely to be found at the site of the work, approximately at the locations indicated. The Contractor shall make his own interpretation of the subsoil investigations and other preliminary data, and shall base his bid on his own opinion of the conditions likely to be encountered.

The Contractor's submission of a Technical and a Price Proposal is prima facie evidence that the Contractor has made an examination as described in this Special Condition.

4) TIMELINE

Provided below is a list of critical dates and actions. These dates are subject to change. Notices of changes (addenda) will be posted on the Florida Vendor Bid System at www.myflorida.com (click on "BUSINESS", click on "Doing Business with the State", under "Everything for Vendors and Customers", click on "Vendor Bid System (VBS)", click on "Search Advertisements") under this RFP number. It is the responsibility of all potential proposers to monitor this site for any changing information prior to submitting your proposal.

<u>ACTION / LOCATION</u>	<u>DATE</u>	<u>LOCAL TIME</u>
ADVERTISEMENT DATE	02-27-2015	
MANDATORY PRE-PROPOSAL CONFERENCE Cypress A and B Conference Rooms Florida Department of Transportation 719 South Woodland Boulevard DeLand, Florida 32720-6834	03-09-2015	10:00 AM
SITE VISIT CFRC Operations and Control Center 801 SunRail Drive Sanford, Florida	03-10-2015	09:00 AM
DEADLINE FOR All QUESTIONS	05-15-2015	05:00 PM
POSTING OF ALL QUESTIONS TO VENDOR BID SYSTEM	05-18-2015	4:00 PM

PROPOSALS DUE, ON OR BEFORE 05-22-2015 12:00 PM
 (Technical and Price Proposal)
 Tammy Hodgkins, CPPB, BAS Purchasing Agent III
 Florida Department of Transportation
 719 South Woodland Boulevard, MS 524-4
 DeLand, Florida 32720-6834
 Phone (386) 943-5513

PUBLIC OPENING (Technical Proposal) 05-22-2015 1:00 PM
 Cypress A and B Conference Rooms
 Florida Department of Transportation
 719 South Woodland Boulevard
 DeLand, Florida 32720-6834

PUBLIC MEETING OF THE TECHNICAL REVIEW 06-1-2015 01:00 PM
COMMITTEE AND ADVISORS
 Volusia County Conference Room
 Florida Department of Transportation
 719 South Woodland Boulevard
 DeLand, Florida 32720-6834

PUBLIC OPENING / MEETING (Price Proposal).06-10-2015 02:00 PM
Public Meeting to Average Technical Scores, Open Price Proposals & Determine Intended Award
]Cypress A and B Conference Room
 Florida Department of Transportation
 719 South Woodland Boulevard
 DeLand, Florida 32720-6834

SELECTION COMMITTEE MEETING06-15-2015 08:15 AM
 Lake County Conference room, fourth floor
 Florida Department of Transportation
 719 South Woodland Boulevard
 DeLand, Florida 32720-6834

POSTING OF INTENDED AWARD - 06-15-2015 10:00 AM

5) AGENDA FOR PUBLIC MEETINGS

Agenda – Pre-Proposal Meeting

Agenda for Pre-Proposal Meeting for RFP-DOT-14-15-5005-TRK

Starting Time: see “Timeline” in RFP Solicitation

- Opening remarks by Department Procurement Office personnel
- Public input period – To allow a maximum of 15 minutes total for public input related to the RFP solicitation
- Review of Project and Response Requirements
- Questions from Contractors
- Adjourn meeting

Agenda – Public Opening (Technical Proposals)

Agenda for Public Opening of Technical Proposals for RFP-DOT-14-15-5005-TRK:

Starting Time: see “Timeline” in RFP solicitation

- Opening remarks of approx. 2 minutes by Department Procurement Office personnel.
- Public input period – To allow a maximum of 15 minutes total for public input related to the RFP solicitation.

- At conclusion of public input or 15 minutes, whichever occurs first, the Technical Proposals received timely will be opened, with proposer's name read aloud and tabulated. Price proposals will be kept secured and unopened until the Price Proposal Opening.
- Adjourn meeting.

Agenda – Technical Review Committee and Advisor Meeting

Agenda for Technical Review Committee and Advisor Meeting for RFP-DOT-14-15-5005-TRK

Starting Time: see "Timeline" in RFP solicitation

- Opening Comments by Department Procurement Office personnel
- Introduction of meeting attendees
- Project overview and Timeline
- Review of Scope
- Evaluation Requirements
- Review of Submittals and Requirements
- Comments from Technical Advisors, if applicable
- Questions from Technical Review Committee to Advisors and responses, if applicable
- Adjourn meeting.

Agenda – Public Meeting to Average Technical Scores, Open Price Proposals & Determine Intended Award RFP-DOT-14-15-5005-TRK

Starting Time: see "Timeline" in RFP solicitation

- Opening remarks of approx. 2 minutes by Department Procurement Office personnel.
- Public input period – To allow a maximum of 15 minutes total for public input related to the RFP solicitation.
- At conclusion of public input or 15 minutes, whichever occurs first, the Technical evaluation scores will be summarized.
- Announce the firms that did not achieve the minimum technical score.
- Announce the firms that achieved the minimum technical score and their price(s) as price proposals are opened.
- Calculate price scores and add to technical scores to arrive at total scores.
- Announce Proposer with highest Total Score.
- Announce time and date the decision will be posted on the Vendor Bid System (VBS).
- Adjourn.

Agenda – Selection Committee Meeting to Summarize Evaluations and Determine Anticipated Award

Agenda for Selection Committee Meeting for RFP-DOT-14-15-5005-TRK

Starting Time: See "Timeline" in RFP Solicitation

- Opening remarks of approx. 2 minutes by Department Procurement Office personnel.
- Public input period – To allow a maximum of 15 minutes total for public input related to the RFP solicitation
- Summarize Technical Evaluation Scores
- Summarize Price Proposal Scores
- Summarize Total Scores (Technical Scores plus Price Proposal Scores)
- Announce Anticipated Award decision
- Announce time and date decision will be posted on the Contractor Bid System (VBS)
- Adjourn meeting

6) SPECIAL ACCOMMODATIONS

Any person with a qualified disability requiring special accommodations at a pre-proposal conference, public meeting, oral presentation and/or opening shall contact the contact person at the phone number, e-mail address or fax number provided on the title page at least five (5) working days prior to the event. If you are hearing or speech impaired, please contact this office by using the Florida Relay Services which

can be reached at 1 (800) 955-8771 (TDD).

SPECIAL CONDITIONS

1) MyFloridaMarketPlace

PROPOSERS MUST BE REGISTERED IN THE STATE OF FLORIDA'S MYFLORIDAMARKETPLACE SYSTEM BY THE TIME AND DATE OF THE TECHNICAL PROPOSAL OPENING OR THEY MAY BE CONSIDERED NON-RESPONSIVE (see Special Condition 21). All prospective proposers that are not registered should go to <https://vendor.myfloridamarketplace.com/> to complete on-line registration, or call 1-866-352-3776 for assisted registration.

All payment(s) to the vendor resulting from this competitive solicitation **WILL** be subject to the 1% MFMP Transaction Fee in accordance with the attached Form PUR 1000 General Contract Condition #14.

2) Florida Department of Financial Services (DFS) W-9 INITIATIVE

The Florida Department of Financial Services (DFS) requires all vendors that do business with the state to submit an electronic Substitute Form W-9. Vendors must submit their W-9 forms electronically at <https://flvendor.myfloridacfo.com> to receive payments from the state. Contact the DFS Customer Service Desk at (850) 413-5519 or FLW9@myfloridacfo.com with any questions.

3) QUESTIONS & ANSWERS

In accordance with section 287.057(23), Florida Statutes, respondents to this solicitation or persons acting on their behalf may not contact, between the release of the solicitation and the end of the 72-hour period following the agency posting the notice of intended award, excluding Saturdays, Sundays, and state holidays, any employee or officer of the executive or legislative branch concerning any aspect of this solicitation, except in writing to the procurement officer or as provided in the solicitation documents. Violation of this provision may be grounds for rejecting a response.

All questions arising from this Request for Proposal must be forwarded, in writing as described below.

All questions arising from this Request for Proposal must be forwarded, in writing, to the Web Address identified below. Questions must be received no later than the applicable time and date reflected on the Timeline. Proposers shall direct all questions to the Department by posting them to the Department's Bid Q&A website at the following URL address:

<https://www3b.dot.state.fl.us/BidQuestionsAndAnswers/Proposal.aspx/SearchProposal>. Questions posted after the applicable deadline stated in the Timeline will be answered at the Departments discretion. When, in the sole judgment of the Department, responses to questions, required revisions to any procurement related document and addendum will be posted on the Departments Bid VBS website. The Department's response to questions submitted timely by Proposers will be posted on the Departments Bid Q&A site and the Florida Vendor Bid System at www.myflorida.com (click on "BUSINESS", click on "Doing Business with the State", under "Everything for Vendors and Customers", click on "Vendor Bid System (VBS)", click on "Search Advertisements"). **It is the responsibility of all potential Proposers to monitor these sites for any changing information prior to submitting their Proposal.**

4) ORAL INSTRUCTIONS / CHANGES TO THE REQUEST FOR PROPOSAL (ADDENDA)

No negotiations, decisions, or actions will be initiated or executed by a proposer as a result of any oral discussions with a State employee. Only those communications which are in writing from the Department will be considered as a duly authorized expression on behalf of the Department.

Notices of changes (addenda) will be posted on the Florida Vendor Bid System at www.myflorida.com (click on "BUSINESS", click on "Doing Business with the State", under "Everything for Vendors and Customers", click on "Vendor Bid System (VBS)", click on "Search Advertisements") under this RFP number. It is the responsibility of all potential proposers to monitor this site for any changing information prior to submitting your proposal. All addenda will be acknowledged by signature and subsequent submission of addenda with the Technical Proposal when so stated in the addenda.

5) DIVERSITY ACHIEVEMENT

DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION

The Department, in accordance with *Title VI of the Civil Rights Act of 1964, 42 USC 2000d- 2000d-4, Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21*, Nondiscrimination in federally-assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that the Department will affirmatively ensure that in any contract/agreement entered into pursuant to this advertisement, minority and disadvantaged business enterprises will be afforded the full opportunity to submit bids in response to this invitation and will not be discriminated on the basis of race, color, national origin, or sex in consideration for an award.

The Department encourages DBE firms to compete for Department contractual services projects, and also encourages non-DBE and other minority contractors to use DBE firms as sub-contractors. The Department, its contractors, suppliers, and consultants shall take all necessary and reasonable steps to ensure that disadvantaged businesses have an opportunity to compete for and perform contract work for the Department in a nondiscriminatory environment. The Department shall require its contractors, suppliers, and consultants to not discriminate on the basis of race, color, national origin, religion, gender, age, or disability in the award and performance of its contracts.

Federal law requires states to maintain a database of all firms that are participating or attempting to participate in DOT-assisted contracts. To assist the Department in this endeavor, proposers are requested to submit the **Bidder's Opportunity List** with their Price Proposal Sheet. The list should include yourself as well as any prospective sub-contractor that you contacted or who has contacted you regarding the project.

Proposers are requested to indicate their intention regarding DBE participation on the **Anticipated DBE Participation Statement** and to submit that Statement with their Price Proposal Sheet. After award of the contract resulting from this RFP, the awarded Vendor will need to complete the "Anticipated DBE Participation Statement" online through the Equal Opportunity Compliance (EOC) system within 3 business days after award of the contract. The link to access the EOC system is: <https://www3.dot.state.fl.us/EqualOpportunityCompliance>. This will assist the Department in tracking and reporting planned or estimated DBE utilization.

During the contract period, the Vendor will be required to report actual payments to DBE and MBE subcontractors through the web-based EOC system. All DBE payments must be reported whether or not you initially planned to utilize the company. In order for our race neutral DBE Program to be successful, your cooperation is imperative. If you have any questions, please contact EOOHelp@dot.state.fl.us.

Additional information about the EOC system can be found on the Equal Opportunity Office (EOO) website at <http://www.dot.state.fl.us/equalopportunityoffice/eoc.shtm>. A help manual on how to use the system will be available within the EOC application. If you have any questions or technical issues, please contact the EOO help desk at EOOHelp@dot.state.fl.us.

To request certification or to locate DBEs, call the Department of Transportation's Equal Opportunity

Office at (850) 414-4747, or access an application or listing of DBEs on the Internet at: www.dot.state.fl.us/equalopportunityoffice/ .

6) SCOPE OF SERVICES

Details of the services, information and items to be furnished by the Contractor are described in Technical Requirements, attached hereto and made a part hereof.

7) INTENDED AWARD

The Department intends to award a contract to the responsive and responsible vendor with the highest cumulative total points for the evaluation criteria specified herein (See Section 30, Proposal Evaluation). The Intended Award decision will be announced at the Selection Committee meeting specified in the Timeline (See Introduction Section 4 Timeline). If the Department is confronted with identical scoring from multiple vendors, the Department shall determine the order of award in accordance with Rule 60A-1.011 Florida Administrative Code.

8) MANDATORY PRE-PROPOSAL CONFERENCE

A MANDATORY pre-proposal conference will be held at the date, time, and location in the Timeline. The purpose of this meeting is to provide an open forum for the Department to review the Technical Requirements and respond to general questions from potential proposers regarding the Technical Requirements, RFP requirements, contractual requirements, and other conditions or requirements that may, in any manner, effect the work to be performed. Any changes and/or resulting addenda to the RFP will be the sole prerogative of the Department. All questions requiring a response must be posted to the Departments Bidders Q&A site as per section 3 above.

Attendance at this pre-proposal conference is MANDATORY

Failure by a proposer to attend or be represented at this pre-proposal conference will constitute a non-responsive determination of their proposal package. Proposals found to be non-responsive will not be considered.

LATE ARRIVALS TO MANDATORY PRE-PROPOSAL MEETINGS

All bidders must be present and signed in prior to the start of the mandatory pre-proposal meeting. Anyone not signed in at the commencement of the meeting will be considered late and will not be allowed to bid on the project.

8.1 SITE VISIT

Proposers may attend the site visit as outlined in Section 4 – Timeline of this RFP. Each proposer must fully acquaint themselves with the conditions which may in any manner affect the work to be done or the equipment, materials and labor required to perform the services required under the conditions of this solicitation. This may require an on-site visit, the only opportunity the proposers shall have to inspect the site will be during the site visit as shown in Section 4 Timeline. Ignorance of the conditions or requirements will not relieve the Contractor from their liability and obligation under the contract.

The site visit shall consist of a trip to view selected locations on the CFRC corridor. Each Contractor shall be responsible for providing their own transportation for the site visit. The Contractor shall not be permitted in the corridor except for the site visit when accompanied by CFRC staff. A tentative agenda for the site visit will be made available at the Mandatory Pre-Proposal meeting

9) QUALIFICATIONS

9.1 General

The Department will determine whether the Proposer is qualified to perform the services being contracted based upon their proposal demonstrating satisfactory experience and capability in the work area. The Proposer shall identify necessary experienced personnel and facilities to support the activities associated with this proposal.

The requirements of Sections 9.2, 9.3, 9.4 and 9.5 below are threshold requirements and failure to meet these requirements shall disqualify the Proposer.

9.2 Construction Experience and Qualifications of Key Personnel

Construction Experience

The Proposer shall have specific expertise and experience in performing railroad construction and/or maintenance including the replacement of continuously welded rail, replacement of wood ties, and grade crossing replacements. Experience with Federal Railroad Administration (FRA) Code of Federal Regulations (CFR) compliance is required. The Proposer may use one or more subcontractors to meet the expertise and experience requirements for one or more of the work elements. To verify compliance with this requirement, the Proposer must provide a summary of the expertise and experience in a narrative form. In addition to the summary, the Proposal shall provide Form 8a for all construction and/or maintenance contracts in the U.S. for the past five (5) years, regardless of whether these contracts are currently active. The forms shall include a complete description of the work effort completed for the contract including the track mileage, number of trains per day and number of crossings. The individual cells on Form 8 may be expanded to provide all of the required information. Each project must include a reference with current contact information to be included in the evaluation of the experience.

Qualifications of Key Personnel

Those individuals who will be directly involved in the project should have demonstrated experience in the areas delineated in the scope of work, including the replacement of continuously welded rail, replacement of wood ties, and grade crossing replacements. Individuals whose qualifications are presented will be committed to the project for its duration unless otherwise excepted by the Department's Project Manager. Where State of Florida registration or certification is deemed appropriate, a copy of the registration or certificate should be included in the proposal package. To verify compliance with this requirement, the Proposer must provide a summary of experience and expertise of the key personnel in a narrative form. In addition to the summary, the Proposer shall provide a Form 8b for the experience of the staff proposed. The individual cells on the form may be expended to provide sufficient experience information. Each employer shall include a reference with current contact information to be included in the evaluation of the experience of the key personnel.

9.3 Authorized To Do Business in the State of Florida

In accordance with sections 607.1501, 608.501, and 620.9102, Florida Statutes, out-of-state corporations, out-of-state limited liability companies, and out-of-state limited partnerships must be authorized to do business in the State of Florida. Such authorization should be obtained by the proposal due date and time, but in any case, must be obtained prior to posting of the intended award of the contract. For authorization, contact:

Florida Department of State
Tallahassee, Florida 32399
(850) 245-6051

9.4 Licensed to Conduct Business in the State of Florida

If the business being provided requires that individuals be licensed by the Department of Business and Professional Regulation, such licenses should be obtained by the proposal due date and time, but in any case, must be obtained prior to posting of the intended award of the contract. For licensing, contact:

Florida Department of Business and Professional Regulation
Tallahassee, Florida 32399-0797
(850) 487-1395

9.5 E-VERIFY

Vendors/Contractors:

1. shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Vendor/Contractor during the term of the contract; and
2. shall expressly require any subcontractors performing work or providing services pursuant to the state contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

9.6 Bid Guaranty

A bid guarantee payable to the Florida Department of Transportation must accompany the Price Proposal in the form of either a certified check, cashier's check, trust company treasurer's check, back draft of any national or state bank, or Surety Bid Bond made payable to the Florida Department of Transportation. The bid guaranty amount shall be 5% of the actual total of the Price Proposal referred to herein. If this Price Proposal is accepted and the Contractor fails to execute the Contract under the conditions of these Technical and Price Proposals, the bid guaranty shall be forfeited to the Department; otherwise, said guaranty is to be returned to the Contractor upon delivery of a satisfactory Performance and Payment Bond.

9.6.1 Release of Bid Guarantees

The Department will release all Bid Guarantees except those of the two highest scoring Proposers immediately following the opening and checking of the proposals. The Department will immediately release the Bid Guarantees of the two highest scoring Contractors after the successful Contractor delivers the executed contract and a satisfactory contract bond to the Department, except that the Department will not retail the proposal guaranty of the second ranked Proposer longer than 50 days after the opening of the Price Proposals unless the Department awards the contract to the second ranked Contractor prior to the expiration of this time limit

10) WARRANTY/SUBSTITUTIONS

Material, Samples and Statement. The Department may require that the Contractor furnish a statement of the origin, composition and manufacture of any and all materials to be used in the construction of the work, together with samples that may be subjected to the test provided for in this Project's FDOT Specifications to determine the materials' quality and fitness for the work.

All items provided during the performance of the contract found to be poorly manufactured will not be accepted, but returned to the Contractor, at their expense, for replacement. Replacement of all items found defective shall be made without cost to the Department, including transportation, if applicable. As it may be impossible for each facility to inspect all items upon arrival, a reasonable opportunity must be

given to these facilities for inspection of the items, and returning those that are defective.

11) INSURANCE

The Contractor shall not commence any work until it has obtained the insurance required by this project's FDOT Specifications, Special Provision Article 7-13, and documentation of such insurance has been received by the Department. Nor shall the Contractor allow any subcontractor to commence work on this project until all similar insurance required of the subcontractor has been so obtained. The Contractor shall submit Certificates of Liability Insurance, Additional Insured endorsements, and documentation evidencing all Insurance required **in accordance with this projects FDOT Specifications, Article 7-13** shall be provided to the **Florida Department of Transportation, Procurement Services, 719 South Woodland Boulevard, DeLand, Florida 32720-6834** as stated in this project's FDOT Specifications, Article 3-6, Execution of Contract and Bond..

12) CONTRACT BOND

Upon award, the proposer shall furnish to the Department a Contract Bond in a sum at least equal to the amount of the Contract. The Contract Bond required shall be furnished as stated and within the time as stated in this project's FDOT Specifications, Article 3-5 Contract Bond Required, Article 3-6 Execution of Contract and Bond, and Article 3-7 Failure of Contractor to execute Contract and Furnish Bond.

12.1 SURETY LETTER

The proposer must submit, with their Technical Proposal, a current letter from a surety company or bonding agent authorized to do business in the state of Florida and written on company letterhead, to document the proposer's present ability to obtain a Contract Bond in the amount of the full amount of the proposal. Failure by the proposer to provide this letter with its response will constitute a non-responsive determination for its proposal. **Proposals found to be non-responsive will not be considered.**

13) METHOD OF COMPENSATION

Payment for commodities and services under this contract shall be made in accordance with this project's FDOT Specifications, Division I.

14) CONTRACT DOCUMENT

The Department and Contractor shall execute the AGREEMENT BETWEEN DEPARTMENT AND CONTRACTOR FOR CONSTRUCTION attached hereto. The Contract Documents are as stated in that Agreement, Article 5 - Contract Documents.

15) REVIEW OF PROPOSER'S FACILITIES & QUALIFICATIONS

After the proposal due date and prior to contract execution, the Department reserves the right to perform or have performed an on-site review of the Proposer's facilities and qualifications. This review will serve to verify data and representations submitted by the Proposer and may be used to determine whether the Proposer has an adequate, qualified, and experienced staff, and can provide overall management facilities. The review may also serve to verify whether the Proposer has financial capability adequate to meet the contract requirements.

Should the Department determine that the proposal has material misrepresentations or that the size or nature of the Proposer's facilities or the number of experienced personnel (including technical staff) are not adequate to ensure satisfactory contract performance, the Department has the right to reject the proposal.

16) PROTEST OF REQUEST FOR PROPOSAL SPECIFICATIONS

Any person who is adversely affected by the contents of this Request for Proposal must file the following with the Department of Transportation, Clerk of Agency Proceedings, Office of the General Counsel, 605 Suwannee Street, Mail Station 58, Tallahassee, Florida 32399-0450:

1. A written notice of protest within seventy-two (72) hours after the posting of the solicitation, (the notice of protest may be Faxed to 850-414-5264), and
2. A formal written protest in compliance with Section 120.57(3), Florida Statutes, within ten (10) days of the date on which the written notice of protest is filed.

Failure to file a protest within the time prescribed in section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

17) UNAUTHORIZED ALIENS

The employment of unauthorized aliens by any contractor is considered a violation of Section 274A(e) of the Immigration and Nationality Act. If the contractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of the contract.

18) SCRUTINIZED COMPANIES LISTS

Section 287.135, Florida Statutes, requires that at the time a company submits a bid or proposal for a contract for goods or services of \$1 million or more, the company must certify that the company is not on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List. Both lists are created pursuant to section 215.473, Florida Statutes.

RFP responses of \$1 million or more must include the attached **Scrutinized Companies Lists Form** to certify the respondent is not on either of those lists. The Form should be submitted with the Price Proposal.

19) RESERVATIONS

The Department reserves the right to accept or reject any or all proposals received and reserves the right to make an award without further discussion of the proposals submitted. Therefore, the proposals should be submitted initially in the most favorable manner. It is understood that the proposal will become a part of the Department's official file, without obligation to the Department.

20) ADDITIONAL TERMS & CONDITIONS

No conditions may be applied to any aspect of the RFP by the proposer. Any conditions placed on any aspect of the proposal documents by the proposer may result in the proposal being rejected as a conditional proposal (see "RESPONSIVENESS OF PROPOSALS"). **DO NOT WRITE IN CHANGES ON ANY RFP SHEET.** The only recognized changes to the RFP prior to proposal opening will be a written addenda issued by the Department.

21) RESPONSIVENESS OF PROPOSALS

21.1 Responsiveness of Proposals

Proposals will not be considered if not received by the Department **on or before** the date and time

specified as the due date for submission. All proposals must be typed or printed in ink. A responsive proposal is an offer to perform the scope of services as outlined in Technical Requirements called for in this Request for Proposal in accordance with all requirements of this Request for Proposal and receiving seventy (70) points or more on the Technical Proposal. Proposals found to be non-responsive shall not be considered. Proposals may be rejected if found to be irregular or not in conformance with the requirements and instructions herein contained. A proposal may be found to be irregular or non-responsive by reasons that include, but are not limited to, failure to utilize or complete prescribed forms, conditional proposals, incomplete proposals, indefinite or ambiguous proposals, and improper and/or undated signatures.

21.2 Multiple Proposals

Proposals may be rejected if more than one proposal is received from a Proposer. Such duplicate interest may cause the rejection of all proposals in which such Proposer has participated. Subcontractors may appear in more than one proposal.

21.3 Other Conditions

Other conditions which may cause rejection of proposals include, but are not limited to, evidence of collusion among Proposers, obvious lack of experience or expertise to perform the required work, failure to perform or meet financial obligations on previous contracts, or in the event an individual, firm, partnership, or corporation is on the General Services Administration Excluded Parties List. Proposers whose proposals, past performance, or current status do not reflect the capability, integrity, or reliability to fully and in good faith perform the requirements of the Contract may be rejected as non-responsive. The Department reserves the right to determine which proposals meet the requirements of this solicitation, and which Proposers are responsive and responsible.

22) PROPOSAL FORMAT INSTRUCTIONS

22.1 General Information

This section contains instructions that describe the required format for the proposal. All proposals submitted shall contain two parts and be marked as follows:

PART I TECHNICAL PROPOSAL NUMBER RFP-DOT-14-15-5005-TRK
(One Separately Sealed Package for Technical Proposal)

PART II PRICE PROPOSAL NUMBER RFP-DOT-14-15-5005-TRK
(One Separately Sealed Package for Price Proposal)

THE SEPARATELY SEALED PACKAGES MAY BE MAILED TOGETHER IN ONE ENVELOPE OR BOX.

22.2 Technical Proposal (Part I) **One (1) original and one (1) copy on CD/DVD which should be fixed to the inside cover of the original hard copy**

(Do not include price information in Part I)

The Proposer must submit one (1) original and one (1) CD/DVD of the Technical Proposal which is to be divided into the sections described below. Since the Department will expect all technical proposals to be in this format, failure of the Proposer to follow this outline may result in the rejection of the proposal. The Technical Proposal must be submitted in a separate sealed package marked "TECHNICAL PROPOSAL NUMBER RFP-DOT-14-15-5005-TRK"

1. EXECUTIVE SUMMARY

The Proposer shall provide an Executive Summary to be written in nontechnical language to summarize the Proposer's overall capabilities and approaches for accomplishing the services specified herein. The Executive Summary shall be limited to two (2) pages.

2. PROPOSER'S MANAGEMENT PLAN

The Proposer shall provide a management plan which describes administration, management and key personnel. The Management Plan shall be limited to four (4) pages, including the organization chart, but excluding the Form 8b for key personnel.

a. Administration and Management

The Proposer shall provide an organization chart of the proposed firms and key personnel, including the reporting relationships within the organization and between the Proposer, the Department, the Operations and Maintenance contractor and the Signal Maintenance contractor.

b. Identification of Key Personnel

The Proposer shall provide the names of key personnel on the Proposer's team, as well as a Form 8b for each individual proposed and a description of the functions and responsibilities of each key person relative to the task to be performed. The approximate percent of time to be devoted exclusively for this project and to the assigned tasks should also be indicated.

3. PROPOSER'S TECHNICAL PLAN

The Proposer shall provide a technical plan which explains their technical approach, and prior relevant experience. The Technical Plan shall be limited to Ten (10) pages.

a. Technical Approach

The Proposer shall explain the approach, capabilities, and means to be used in accomplishing the tasks in the Technical Requirements and where significant development difficulties may be anticipated and resolved. Any specific techniques to be used should also be addressed. This shall include the work hours anticipated and mitigation requirements.

b. Prior Relevant Experience

The Proposer shall provide a summary of prior relevant experience they have acquired in providing/performing similar work. A narrative description shall be included and shall not exceed three (3) pages, excluding Form 8a. Only experience with a completed Form 8a included in the Technical Proposal submittal shall be evaluated.

22.3 Price Proposal (Part II) (One (1) Original)

The price proposal information is to be submitted in a separate sealed package marked "PRICE PROPOSAL NUMBER RFP-DOT-14-15-5005-TRK". The Price Proposal information shall be submitted on the forms provided in the Request for Proposal.

22.4 Presenting the Technical Proposal

The proposal shall be limited to a page size of eight and one-half by eleven inches (8½" x 11") with one half inch margins on all sides. Only the Organizational Chart may be submitted on paper 11"X17" all other pages must be 8½" x 11". Type size shall not be less than 10 point font. The proposals shall be indexed and all pages sequentially numbered. Bindings and covers will be at the Proposer's discretion. Plain page dividers will not be counted towards any page count unless they contain additional information or drawings. Page dividers that contain any project information

or drawings will be counted towards the total amount of pages for that section.

Unnecessarily elaborate special brochures, art work, expensive paper and expensive visual and other presentation aids are neither necessary nor desired.

23) "DRUG-FREE WORK PLACE" PREFERENCE

Whenever two or more bids which are equal with respect to price, quality, and service are received, the Department shall determine the order of award in accordance with section 295.187(4), Florida Statutes, and Rule 60A-1.011 Florida Administrative Code, which includes a preference for bid responses that certify the business has implemented a drug-free workplace program in accordance with Section 287.087, F.S. The "Drug-Free Workplace Program Certification" must be completed and submitted with the bid response to be eligible for this preference.

24) COPYRIGHTED MATERIAL

Copyrighted material will be accepted as part of a technical proposal only if accompanied by a waiver that will allow the Department to make paper and electronic copies necessary for the use of Department staff and agents. It is noted that copyrighted material is not exempt from the Public Records Law, Chapter 119, Florida Statutes. Therefore, such material will be subject to viewing by the public, but copies of the material will not be provided to the public.

25) ATTACHMENT TO RFP SUBMITTAL - CONFIDENTIAL MATERIAL

The Proposer must include any materials it asserts to be exempted from public disclosure under Chapter 119, Florida Statutes, in a separate bound document labeled "**Attachment to Request for Proposals, Number RFP-DOT-14-15-5005-TRK - Confidential Material**". The Proposer must identify the specific Statute that authorizes exemption from the Public Records Law. Any claim of confidentiality on materials the Proposer asserts to be exempt from public disclosure and placed elsewhere in the proposal will be considered waived by the Proposer upon submission, effective after opening.

26) COSTS INCURRED IN RESPONDING

This Request for Proposal does not commit the Department or any other public agency to pay any costs incurred by an individual firm, partnership, or corporation in the submission of a proposal or to make necessary studies or designs for the preparation thereof, nor to procure or contract for any articles or services.

27) MAIL OR DELIVER PROPOSAL TO: (DO NOT FAX OR E-MAIL)

**Tammy Hodgkins, CPPB, BAS Purchasing Agent III
Florida Department of Transportation
719 South Woodland Boulevard
MS 524-4
DeLand, Florida 32720-6834
Phone # (386) 943-5513**

It is the proposer's responsibility to assure that the Technical and Price Proposals are delivered to the proper place **on or before** the Proposal Due date and time (See Introduction Section 4 Timeline). Proposals which for any reason are not so delivered will not be considered.

By submitting a proposal, the Proposer represents that it understands and accepts the terms and conditions to be met and the character, quality and scope of services as outlined in the Technical Requirements and Contract Documents to be provided.

All proposals and associated forms shall be signed and dated in ink by a duly authorized representative of the Proposer.

Each Proposer shall fully acquaint itself with the conditions relating to the performance of the services under the conditions of this Request for Proposal. This may require an on-site observation.

28) MODIFICATIONS, RESUBMITTAL AND WITHDRAWAL

Proposers may modify submitted proposals at any time prior to the proposal due date. Requests for modification of a submitted proposal shall be in writing and must be signed by an authorized signatory of the proposer. Upon receipt and acceptance of such a request, the entire proposal will be returned to the proposer and not considered unless resubmitted by the due date and time. Proposers may also send a change in a sealed envelope to be opened at the same time as the proposal. The RFP number, due date and time should appear on the envelope of the modified proposal.

29) PROPOSAL OPENING

All proposal openings are open to the public. Technical Proposals will be opened by the Department at the date, time and location in the Timeline (See Introduction Section 4 Timeline). Price Proposals, which have a corresponding responsive Technical Proposal, will be opened by the Department at the date, time and location in the Timeline (See Introduction Section 4 Timeline).

30) PROPOSAL EVALUATION

30.1 Evaluation Process:

A Technical Review team will be established to review and evaluate each proposal submitted in response to this Request for Proposal (RFP). The Technical Review team will be comprised of at least three persons with background, experience, and/or professional credentials in relative service areas.

The Procurement Office will distribute to each member of the Technical Review team a copy of each technical proposal. The Technical Review Committee will meet with the Advisors if any to seek clarification and information regarding each Technical Proposal. The Technical Review team members will independently evaluate the proposals on the criteria and point system established in the section below entitled "Criteria for Evaluation" in order to assure that proposals are uniformly rated. The independent evaluations will be sent to the Procurement Office and averaged for each vendor. A public meeting will be held to announce the Technical Proposal scores, calculate the Price Proposal scores and the Total score for each responsive Proposer. The Total Score for each Proposer will be the sum of the Technical Proposal Score and the Price Proposal Score. The outcome of this will be the intended Award. The results will be submitted to the Selection Committee. The Selection Committee will review the scores and adjust the points as it deems appropriate and confirm the intended Award. (See Section 32).

Proposing firms must attain an average score of seventy (70) points or higher on the Technical Proposal to be considered responsive. Should a Proposer receive fewer than seventy (70) points for their average Technical Proposal score, the Price Proposal will not be opened.

During the process of evaluation, the Department staff will conduct examinations of proposals for responsiveness to requirements of the RFP. Those determined to be non-responsive will be automatically rejected.

30.2 Oral Presentations THERE ARE NO ORAL PRESENTATIONS FOR THIS PROJECT.

30.3 Price Proposal

The Proposer shall complete the Price Proposal form and submit as part of the Price Proposal. Any proposal in which this form is not used or in which the form is improperly executed, or incomplete may be considered non-responsive and the proposal will be subject to rejection. The vendor's completed form shall become a part of the contract upon award of the contract.

The Procurement Office will open Price Proposals in accordance with Section 29, Proposal Openings. The Procurement Office and/or the Project Manager/Technical Review team will review and evaluate the price proposals and prepare a summary of its price evaluation. The Procurement Office and/or the Project Manager/Technical Review team will assign points based on price evaluation criteria identified herein.

30.4 Criteria for Evaluation

Proposals will be evaluated and graded in accordance with the criteria detailed below.

a. Technical Proposal (100 Points)

Technical evaluation is the process of reviewing the Proposer's response to evaluate the experience, qualifications, and capabilities of the proposers to provide the desired services and assure a quality product.

The following point system is established for scoring the Technical Proposals:

1. Executive Summary (Maximum 5 points)

The Proposers Executive Summary will be evaluated to determine how well the provided narrative summarizes the significant project issues, the proposed staffing plan, and the required coordination with others.

2. Management Plan (Maximum 35 points)

Proposers Technical Proposal will be evaluated to determine that the proposed firm and key personnel have the appropriate relevant experience. If the Proposer fails to provide specific expertise and experience as cited in this RFP, the Proposer will not receive a score of more than 5 points for this section. The Proposer will be evaluated to review the proposed relationships within the organization and between the Proposer, the Department, the Operations and Maintenance contractor, and the Signal Maintenance contractor.

3. Technical Plan (Maximum 60 points)

Proposer's Technical Proposal will be evaluated to determine how well the narrative describes the understanding of the work to be completed, the maintenance of traffic requirements (both highway and rail traffic), the Roadway Worker Protection requirements, and the hours when construction can be completed. The narrative will be evaluated to determine an understanding of how the work needs to be integrated with existing rail operations and the Proposers understanding of the unique requirements of a shared use corridor.

b. Price Proposal (40 Points)

Price evaluation is the process of examining a prospective price without evaluation of the separate cost elements and proposed profit of the potential provider. Price analysis is conducted through the comparison of price quotations submitted.

The criteria for price evaluation shall be based upon the following formula:

$$\underline{(\text{Low Price} / \text{Proposer's Price}) \times \text{Price Points} = \text{Proposer's Awarded Points}}$$

31) POSTING OF INTENDED DECISION/AWARD

31.1 The Department's decision will be posted on the Florida Vendor Bid System, at www.myflorida.com, (click on "BUSINESS", click on "Doing Business with the State", under "Everything for Vendors and Customers", click on "Vendor Bid System (VBS)", on date and time in the Timeline, and will remain posted for a period of seventy-two (72) hours. Any proposer who is adversely affected by the Department's recommended award or intended decision must file the following with the Department of Transportation, Clerk of Agency Proceedings, Office of the General Counsel, 605 Suwannee Street, Mail Station 58, Tallahassee, Florida 32399-0450:

1. A written notice of protest within seventy-two (72) hours after posting of the Intended Award, (the notice of protest may be Faxed to 850-414-5264), and
2. A formal written protest and protest bond in compliance with Section 120.57(3), Florida Statutes, within ten (10) days of the date on which the written notice of protest is filed. At the time of filing the formal written protest, a bond (a cashier's check or money order may be accepted) payable to the Department must also be submitted in an amount equal to one percent (1%) of the estimated contract amount based on the contract price submitted by the protestor.

Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

31.2 - Inability to Post:

If the Department is unable to post as defined above, the Department will notify all proposers by electronic notification on the Florida Vendor Bid System (see special condition 31.1, above) or by mail, fax, and/or telephone. The Department will provide notification of any future posting in a timely manner.

31.3 - Request to Withdraw Proposal:

Requests for withdrawal will be considered if received by the Department, in writing, within seventy-two (72) hours after the price proposal opening time and date. Requests received in accordance with this provision will be granted by the Department upon proof of the impossibility to perform based upon obvious error on the part of the proposer.

32) AWARD OF THE CONTRACT

The contract will be awarded to the responsible and responsive Proposer whose Proposal is determined to be the most advantageous to the State. The Department will hold a public meeting of the Selection Committee to review the Technical Proposal scores, Price Proposal scores, and Total scores of the Proposers. The Selection Committee will adjust the Technical and Price Proposal scores as it deems appropriate. After review and adjustment, if any, the total of the Technical Proposal score and the Price Proposal score will be determined for each responsive Proposer. The Proposer with the highest Total Score will be the apparent winner. If the Department is confronted with identical scoring from multiple Proposers, the Department shall determine the order of award in accordance with Rule 60A-1.011, Florida Administrative Code. The final decision will be determined by the Selection Committee. A statement will be placed in the procurement file that explains the basis for Proposer selection. The Department reserves the right to reject any Proposal submitted with an un-reasonably high or unreasonably low Price Proposal Amount. The Award will become final in accordance with Florida Statutes.

The Department reserves the right to accept or reject any or all Technical Proposals and Price Proposals received. The Department is not obligated to execute a contract and may terminate this solicitation at any time.

33 ATTACHED FORMS, To be included in a separate section of the Technical Proposal marked "Required Forms"

TECHNICAL PROPOSAL

- Bid Forms, Forms No. 1, 3, 4, 5, 6, 7, 8a, 8b, and 9 as described below shall be properly executed and included in the Original copy of the Technical proposal.
 - No. 1, Registration Form
 - No. 3, Contractor Data Sheet
 - No. 4, Drug Free Workplace Certification
 - No. 5 Bid Opportunity List for Professional Consultant Services, &Commodities and Contractual Services, form no. 375- 040-62
 - No. 6, DBE Participation Statement
 - No. 7, Public Records form
 - No. 8a & 8b Experience forms,
 - 8a, Railroad Construction/Maintenance - Project Experience
 - 8b, Railroad Construction/Maintenance – Key Staff Experience
 - No. 9 Contractor Certification Regarding Scrutinized Companies Lists

PRICE PROPOSAL

- Bid Forms 2, 10, 11 and the appropriate Buy America Certification and the Certification Regarding Lobbying (Required Contract Provisions for Federal Transit Administration Federal Aid), shall be properly completed and submitted in a sealed envelope on the date and time shown in Section 4, Timeline
 - No. 2, Bid Price Proposal Form, to be submitted in a separate sealed envelope.
 - No. 10, Bid Bond Form or acceptable Bid Guaranty (per Section 9.6)
 - No. 11, Proposal Of Form
 - Properly completed appropriate Buy American Certification and the Certification Regarding Lobbying (Required Contract Provisions for Federal Transit Administration Federal Aid).

Do not include Price Proposal Forms with the Technical Proposal. Submit in a separate sealed envelope

34) ATTACHED TERMS AND CONDITIONS

All responses are subject to the terms and conditions of this solicitation, which, in case of conflict, shall have the following order of precedence listed:

Required Contract Provisions for Federal Transit Administration Federal-Aid Contract
Contract Documents
Form PUR 1001, General Instructions to Respondents,
RFP-DOT-14-15-5005-TRK
Contract Bond

35) ATTACHED FORM PUR 1001, GENERAL INSTRUCTIONS TO RESPONDENTS

This is a Standard Form from the Department of Management Services that the Department is required to include in all formal solicitations. The following paragraphs do not apply to this Request for Proposal. Deletion of these paragraphs shall not be deemed to be deletion of content contained elsewhere and the substance of these excepted paragraphs may be addressed in other locations in the procurement documents. That substance located elsewhere continues to apply regardless of this exception paragraph PUR 1001

Paragraph 3, Electronic Submission
Paragraph 4, Terms and Conditions
Paragraph 5, Questions
Paragraph 10, Manufacturers Name and Approved Equivalents
Paragraph 11, Performance Qualifications
Paragraph 12, Public Opening
Paragraph 13, Electronic Posting
Paragraph 14, Firm Response
Paragraph 19, Public Records
Paragraph 21, Limitation on Vendor Contact

36) RECYCLED MATERIAL

The Department encourages the use of products and materials with recycled content and postconsumer recovered materials. If the item(s) specified herein is available with recycled content, we request that you provide product information to help in our search for recycled products. However, this RFP request is for the product as specified herein and does not require prices for recycled product unless specified. This information should be sent separately and not as a part of your proposal response.

State of Florida PUR 1001 General Instructions to Respondents

Contents

1. Definitions.
2. General Instructions.
- ~~3. Electronic Submission of Responses.~~
- ~~4. Terms and Conditions.~~
- ~~5. Questions.~~
6. Conflict of Interest.
7. Convicted Vendors.
8. Discriminatory Vendors.
9. Respondent's Representation and Authorization.
- ~~10. Manufacturer's Name and Approved Equivalents.~~
- ~~11. Performance Qualifications.~~
- ~~12. Public Opening.~~
- ~~13. Electronic Posting of Notice of Intended Award.~~
- ~~14. Firm Response.~~
15. Clarifications/Revisions.
16. Minor Irregularities/Right to Reject.
17. Contract Formation.
18. Contract Overlap.
- ~~19. Public Records.~~
20. Protests.
- ~~21. Limitation on Vendor Contact with Agency During Solicitation Period~~

1. Definitions. The definitions found in s. 60A-1.001, F.A.C. shall apply to this agreement. The following additional terms are also defined:

- (a) "Buyer" means the entity that has released the solicitation. The "Buyer" may also be the "Customer" as defined in the PUR 1000 if that entity meets the definition of both terms.
- (b) "Procurement Officer" means the Buyer's contracting personnel, as identified in the Introductory Materials.
- (c) "Respondent" means the entity that submits materials to the Buyer in accordance with these Instructions.
- (d) "Response" means the material submitted by the respondent in answering the solicitation.
- (e) "Timeline" means the list of critical dates and actions included in the Introductory Materials.

2. General Instructions. Potential respondents to the solicitation are encouraged to carefully review all the materials contained herein and prepare responses accordingly.

~~**3. Electronic Submission of Responses.** Respondents are required to submit responses electronically. For this purpose, all references herein to signatures, signing requirements, or other required acknowledgments hereby include electronic signature by means of clicking the "Submit Response" button (or other similar symbol or process) attached to or logically associated with the response created by the respondent within MyFloridaMarketPlace. The respondent agrees that the action of electronically submitting its response constitutes:~~

- ~~• an electronic signature on the response, generally,~~
- ~~• an electronic signature on any form or section specifically calling for a signature, and~~
- ~~• an affirmative agreement to any statement contained in the solicitation that requires a definite confirmation or acknowledgement.~~

~~**4. Terms and Conditions.** All responses are subject to the terms of the following sections of this solicitation, which, in case of conflict, shall have the order of precedence listed:~~

- ~~• Technical Specifications,~~
- ~~• Special Conditions and Instructions,~~
- ~~• Instructions to Respondents (PUR 1001),~~
- ~~• General Conditions (PUR 1000), and~~
- ~~• Introductory Materials.~~

~~The Buyer objects to and shall not consider any additional terms or conditions submitted by a respondent, including any appearing in documents attached as part of a respondent's response. In submitting its response, a respondent agrees that any additional terms or conditions, whether submitted intentionally or inadvertently, shall have no force or effect. Failure to comply with terms and conditions, including those specifying information that must be submitted with a response, shall be grounds for rejecting a response.~~

~~**5. Questions.** Respondents shall address all questions regarding this solicitation to the Procurement Officer. Questions must be submitted via the Q&A Board within MyFloridaMarketPlace and must be RECEIVED NO LATER THAN the time and date reflected on the Timeline. Questions shall be answered in accordance with the Timeline. All questions submitted shall be published and answered in a manner that all respondents will be able to view. Respondents shall not contact any other employee of the Buyer or the State for information with respect to this solicitation. Each respondent is responsible for monitoring the MyFloridaMarketPlace site for new or changing information. The Buyer shall not be bound by any verbal information or by any written information that is not contained within the solicitation documents or formally noticed and issued by the Buyer's contracting personnel. Questions to the Procurement Officer or to any Buyer personnel shall not constitute formal protest of the specifications or of the solicitation, a process addressed in paragraph 19 of these Instructions.~~

6. Conflict of Interest. This solicitation is subject to chapter 112 of the Florida Statutes. Respondents shall disclose with their response the name of any officer, director, employee or other agent who is also an employee of the State. Respondents shall also disclose the name of any State employee who owns, directly or indirectly, an interest of five percent (5%) or more in the respondent or its affiliates.

7. Convicted Vendors. A person or affiliate placed on the convicted vendor list following a conviction for a public entity crime is prohibited from doing any of the following for a period of 36 months from the date of being placed on the convicted vendor list:

- submitting a bid on a contract to provide any goods or services to a public entity;
- submitting a bid on a contract with a public entity for the construction or repair of a public building or public work;
- submitting bids on leases of real property to a public entity;
- being awarded or performing work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and
- transacting business with any public entity in excess of the Category Two threshold amount (\$35,000) provided in section 287.017 of the Florida Statutes.

8. Discriminatory Vendors. An entity or affiliate placed on the discriminatory vendor list pursuant to section 287.134 of the Florida Statutes may not:

- submit a bid on a contract to provide any goods or services to a public entity;
- submit a bid on a contract with a public entity for the construction or repair of a public building or public work;
- submit bids on leases of real property to a public entity;
- be awarded or perform work as a contractor, supplier, sub-contractor, or consultant under a contract with any public entity; or
- transact business with any public entity.

9. Respondent's Representation and Authorization. In submitting a response, each respondent understands, represents, and acknowledges the following (if the respondent cannot so certify to any of following, the respondent shall submit with its response a written explanation of why it cannot do so).

- The respondent is not currently under suspension or debarment by the State or any other governmental authority.
- To the best of the knowledge of the person signing the response, the respondent, its affiliates, subsidiaries, directors, officers, and employees are not currently under investigation by any governmental authority and have not in the last ten (10) years been convicted or found liable for any act prohibited by law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract.
- Respondent currently has no delinquent obligations to the State, including a claim by the State for liquidated damages under any other contract.
- The submission is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive response.
- The prices and amounts have been arrived at independently and without consultation, communication, or agreement with any other respondent or potential respondent; neither the prices nor amounts, actual or approximate, have been disclosed to any respondent or potential respondent, and they will not be disclosed before the solicitation opening.
- The respondent has fully informed the Buyer in writing of all convictions of the firm, its affiliates (as defined in section 287.133(1)(a) of the Florida Statutes), and all directors, officers, and employees of the firm and its affiliates for violation of state or federal antitrust laws with respect to a public contract for violation of any state or federal law involving fraud, bribery, collusion, conspiracy or material misrepresentation with respect to a public contract. This includes disclosure of the names of current employees who were convicted of contract crimes while in the employ of another company.
- Neither the respondent nor any person associated with it in the capacity of owner, partner, director, officer, principal, investigator, project director, manager, auditor, or position involving the administration of federal funds:
 - Has within the preceding three years been convicted of or had a civil judgment rendered against them or is presently indicted for or otherwise criminally or civilly charged for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state, or local

government transaction or public contract; 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; or

- Has within a three-year period preceding this certification had one or more federal, state, or local government contracts terminated for cause or default.
- The product offered by the respondent will conform to the specifications without exception.
- The respondent has read and understands the Contract terms and conditions, and the submission is made in conformance with those terms and conditions.
- If an award is made to the respondent, the respondent agrees that it intends to be legally bound to the Contract that is formed with the State.
- The respondent has made a diligent inquiry of its employees and agents responsible for preparing, approving, or submitting the response, and has been advised by each of them that he or she has not participated in any communication, consultation, discussion, agreement, collusion, act or other conduct inconsistent with any of the statements and representations made in the response.
- The respondent shall indemnify, defend, and hold harmless the Buyer and its employees against any cost, damage, or expense which may be incurred or be caused by any error in the respondent's preparation of its bid.
- All information provided by, and representations made by, the respondent are material and important and will be relied upon by the Buyer in awarding the Contract. Any misstatement shall be treated as fraudulent concealment from the Buyer of the true facts relating to submission of the bid. A misrepresentation shall be punishable under law, including, but not limited to, Chapter 817 of the Florida Statutes.

~~**10. Manufacturer's Name and Approved Equivalents.** Unless otherwise specified, any manufacturers' names, trade names, brand names, information or catalog numbers listed in a specification are descriptive, not restrictive. With the Buyer's prior approval, the Contractor may provide any product that meets or exceeds the applicable specifications. The Contractor shall demonstrate comparability, including appropriate catalog materials, literature, specifications, test data, etc. The Buyer shall determine in its sole discretion whether a product is acceptable as an equivalent.~~

~~**11. Performance Qualifications.** The Buyer reserves the right to investigate or inspect at any time whether the product, qualifications, or facilities offered by Respondent meet the Contract requirements. Respondent shall at all times during the Contract term remain responsive and responsible. In determining Respondent's responsibility as a vendor, the agency shall consider all information or evidence which is gathered or comes to the attention of the agency which demonstrates the Respondent's capability to fully satisfy the requirements of the solicitation and the contract.~~

~~Respondent must be prepared, if requested by the Buyer, to present evidence of experience, ability, and financial standing, as well as a statement as to plant, machinery, and capacity of the respondent for the production, distribution, and servicing of the product bid. If the Buyer determines that the conditions of the solicitation documents are not complied with, or that the product proposed to be furnished does not meet the specified requirements, or that the qualifications, financial standing, or facilities are not satisfactory, or that performance is untimely, the Buyer may reject the response or terminate the Contract. Respondent may be disqualified from receiving awards if respondent, or anyone in respondent's employment, has previously failed to perform satisfactorily in connection with public bidding or contracts. This paragraph shall not mean or imply that it is obligatory upon the Buyer to make an investigation either before or after award of the Contract, but should the Buyer elect to do so, respondent is not relieved from fulfilling all Contract requirements.~~

~~**12. Public Opening.** Responses shall be opened on the date and at the location indicated on the Timeline. Respondents may, but are not required to, attend. The Buyer may choose not to announce prices or release other materials pursuant to s. 119.071(1)(b), Florida Statutes. Any person requiring a special accommodation because of a disability should contact the Procurement Officer at least five (5) workdays prior to the solicitation opening. If you are hearing or speech impaired, please contact the Buyer by using the Florida Relay Service at (800) 955-8771 (TDD).~~

~~**13. Electronic Posting of Notice of Intended Award.** Based on the evaluation, on the date indicated on the Timeline the Buyer shall electronically post a notice of intended award at http://fen.state.fl.us/owa_vbs/owa/vbs_www.main_menu. If the notice of award is delayed, in lieu of posting the notice of intended award the Buyer shall post a notice of the delay and a revised date for posting the notice of intended award. Any person who is adversely affected by the decision shall file with the Buyer a notice of protest within 72 hours after the electronic posting. The Buyer shall not provide tabulations or notices of award by telephone.~~

~~**14. Firm Response.** The Buyer may make an award within sixty (60) days after the date of the opening, during which period responses shall remain firm and shall not be withdrawn. If award is not made within sixty (60) days, the response shall remain firm until either the Buyer awards the Contract or the Buyer receives from the respondent written notice that the response is withdrawn. Any response that expresses a shorter duration may, in the Buyer's sole discretion, be accepted or rejected.~~

15. Clarifications/Revisions. Before award, the Buyer reserves the right to seek clarifications or request any information deemed necessary for proper evaluation of submissions from all respondents deemed eligible for Contract award. Failure to provide requested information may result in rejection of the response.

16. Minor Irregularities/Right to Reject. The Buyer reserves the right to accept or reject any and all bids, or separable portions thereof, and to waive any minor irregularity, technicality, or omission if the Buyer determines that doing so will serve the State's best interests. The Buyer may reject any response not submitted in the manner specified by the solicitation documents.

17. Contract Formation. The Buyer shall issue a notice of award, if any, to successful respondent(s), however, no contract shall be formed between respondent and the Buyer until the Buyer signs the Contract. The Buyer shall not be liable for any costs incurred by a respondent in preparing or producing its response or for any work performed before the Contract is effective.

18. Contract Overlap. Respondents shall identify any products covered by this solicitation that they are currently authorized to furnish under any state term contract. By entering into the Contract, a Contractor authorizes the Buyer to eliminate duplication between agreements in the manner the Buyer deems to be in its best interest.

~~**19. Public Records.** Article 1, section 24, Florida Constitution, guarantees every person access to all public records, and Section 119.011, Florida Statutes, provides a broad definition of public record. As such, all responses to a competitive solicitation are public records unless exempt by law. Any respondent claiming that its response contains information that is exempt from the public records law shall clearly segregate and mark that information and provide the specific statutory citation for such exemption.~~

20. Protests. Any protest concerning this solicitation shall be made in accordance with sections 120.57(3) and 287.042(2) of the Florida Statutes and chapter 28-110 of the Florida Administrative Code. Questions to the Procurement Officer shall not constitute formal notice of a protest. It is the Buyer's intent to ensure that specifications are written to obtain the best value for the State and that specifications are written to ensure competitiveness, fairness, necessity and reasonableness in the solicitation process.

Section 120.57(3)(b), F.S. and Section 28-110.003, Fla. Admin. Code require that a notice of protest of the solicitation documents shall be made within seventy-two hours after the posting of the solicitation.

Section 120.57(3)(a), F.S. requires the following statement to be included in the solicitation: "Failure to file a protest within the time prescribed in section 120.57(3), Florida Statutes, shall constitute a waiver of proceedings under Chapter 120, Florida Statutes."

Section 28-110.005, Fla. Admin. Code requires the following statement to be included in the solicitation: "Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes."

~~**21. Limitation on Vendor Contact with Agency During Solicitation Period.** Respondents to this solicitation or persons acting on their behalf may not contact, between the release of the solicitation and the end of the 72-hour period following the agency posting the notice of intended award, excluding Saturdays, Sundays, and state holidays, any employee or officer of the executive or legislative branch concerning any aspect of this solicitation, except in writing to the procurement officer or as provided in the solicitation documents. Violation of this provision may be grounds for rejecting a response.~~

RFP CHECKLIST
(DOES NOT NEED TO BE RETURNED WITH YOUR PROPOSAL)

This Checklist is provided as a guideline, only, to assist Proposers in the preparation of their RFP response. Included are some important matters that the proposer should check. This checklist is just a guideline, and is not intended to include all matters required by the RFP. Proposers are responsible to read and comply with the RFP in its entirety.

Check off each the following:

- 1. The Price Proposal has been completed, as specified, and enclosed in the RFP response.
- 2. The Federal Employers Identification Number or Social Security Number has been entered in the space provided.
- 3. The “Drug-Free Workplace Program Certification” form has been read, signed, and enclosed in the RFP response, if applicable.
- 4. “Scrutinized Companies Lists” certification form has been read, signed, and enclosed in the RFP price proposal, if applicable (proposals of \$1 million or more).
- 5. The “Bid Opportunity List” and the “DBE Participation Statement” form has been read, completed, and enclosed in the RFP response, if applicable.
- 6. The Technical Requirements has been thoroughly reviewed for compliance to the RFP requirements.
- 7. The Technical Proposal (one (1) original and the specified number of copies) has been completed, as specified, and enclosed in the RFP response.
- 8. A letter from a surety company to document your ability to obtain the required Performance Bond, as per Section 12 of the Special Condition, is included in the Technical Proposal (if applicable).
- 9. The www.myflorida.com website has been checked and any Addendums posted have been completed, signed, and included in the RFP response.
- 10. The RFP response must be received, at the location specified, **on or before** the Opening Date and Time designated in the RFP.
- 11. On the Lower Left Hand Corner of the Envelope transmitting your RFP response, write in the following information:
RFP No.: RFP-DOT-14-15-5005-TRK

Title: Central Florida Rail Corridor (CFRC) Track Renewal and Grade Crossing

Upgrade

Opening Date & Time: May 22, 2015 1PM

*Florida Department of Transportation
District 5*

**REQUIRED CONTRACT PROVISIONS FOR
FEDERAL TRANSIT ADMINISTRATION
FEDERAL-AID CONSTRUCTION CONTRACTS**

For

Central Florida Rail Corridor (CFRC)
Track Renewal and Grade Crossing Upgrade

Financial Projects Number(s): 412994-4-52-11

Federal Aid Project Number(s): N/A

Contract Number: _____

REQUIRED CONTRACT PROVISIONS FOR
FEDERAL TRANSIT ADMINISTRATION FEDERAL-AID
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I. 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.

II. CARGO PREFERENCE REQUIREMENTS

Cargo Preference - Use of United States-Flag Vessels - The contractor agrees: a. to use privately owned United States-Flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to the underlying contract to the extent such vessels are available at fair and reasonable rates for United States-Flag commercial vessels; b. to furnish within 20 working days following the date of loading for shipments originating within the United States or within 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 the preceding paragraph to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to the FTA recipient (through the contractor in the case of a subcontractor's bill-of-lading.) c. to include these requirements in all subcontracts issued pursuant to this contract when the subcontract may involve the transport of equipment, material, or commodities by ocean vessel.

III. 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.

IV. ENERGY CONSERVATION

The contractor agrees to comply with mandatory standards and policies relating to energy

efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

V. CLEAN WATER

(1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

VI. LOBBYING

Byrd Anti-Lobbying Amendment, 31 U.S.C. 1352, as amended by the Lobbying Disclosure Act of 1995, P.L. 104-65 [to be codified at 2 U.S.C. § 1601, et seq.] - Contractors who apply or bid for an award of \$100,000 or more shall file the certification required by 49 CFR part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier to tier up to the recipient.

APPENDIX A, 49 CFR PART 20--CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

(To be submitted with each bid or offer exceeding \$100,000)

The undersigned [Contractor] certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, *et seq.*)]

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, apply to this certification and disclosure, if any.

_____ Signature of Contractor's Authorized Official

_____ Name and Title of Contractor's Authorized Official

_____ Date

VII. ACCESS TO RECORDS

The following access to records requirements apply to this Contract:

1. Where the Purchaser is not a State but a local government and is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C.F.R. 18.36(i), the Contractor agrees to provide the Purchaser, the FTA Administrator, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 C.F.R. 633.17 to provide the FTA Administrator or his authorized representatives including any PMO Contractor access to Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311.
2. Where the Purchaser is a State and is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C.F.R. 633.15, Contractor agrees to provide the Purchaser, the FTA Administrator or his authorized representatives, including any PMO Contractor, access to the Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311. By definition, a major capital project excludes contracts of less than the simplified acquisition threshold currently set at \$100,000.
3. Where the Purchaser enters into a negotiated contract for other than a small purchase or under the simplified acquisition threshold and is an institution of higher education, a hospital or other non-profit organization and is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C.F.R. 19.48, Contractor agrees to provide the Purchaser, FTA Administrator, the Comptroller General of the United States or any of their duly authorized representatives with access to any books, documents, papers and record of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions.
4. Where any Purchaser which is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 U.S.C. 5325(a) enters into a contract for a capital project or improvement (defined at 49 U.S.C. 5302(a)1) through other than competitive bidding, the Contractor shall make available records related to the contract to the Purchaser, the Secretary of Transportation and the Comptroller General or any authorized officer or employee of any of them for the purposes of conducting an audit and inspection.
5. The Contractor shall provide to the U.S. Secretary of Transportation and the Comptroller General of the United States, or their duly authorized representatives, access to all third party records as required by 49 U.S.C. section 5325 (g). The Contractor shall further provide sufficient access to third party procurement records as needed for compliance with Federal laws and regulations or to assure Project management as

determined by FTA.

6. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

7. The Contractor 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 Contractor agrees to maintain same until the Purchaser, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. Reference 49 CFR 18.39(i)(11).

8. Contractor shall also include in its subcontracts the requirement that the subcontractors shall provide to the U.S. Secretary of Transportation and the Comptroller General of the United States or their duly authorized representatives access to all third party contract records as required by 49 U.S.C. section 5325 (g), and shall further provide sufficient access to third party procurement records as needed for compliance with Federal laws and regulations or to assure Project management as determined by FTA.

VIII. FEDERAL CHANGES

Contractor shall at all times comply with all applicable Federal laws, regulations, and directives, including without limitation those listed directly or by reference in the Master Agreement between the Florida Department of Transportation and FTA, as they may be amended or promulgated from time to time during the term of this contract, except to the extent that FTA determines otherwise in writing, which Master Agreement is hereby incorporated herein by this reference. All standards or limits in the Grant Agreement or Cooperative Agreement for the Project, and in the Master Agreement, are minimum requirements, unless modified by FTA.

Contractor's failure to so comply shall constitute a material breach of this contract.

IX. CLEAN AIR

(1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

X. RECYCLED PRODUCTS

Recovered Materials - 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.

XI. DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS

(1) **Minimum wages** - (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), 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 wages 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 are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; 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 weekly period. Such laborers and mechanics shall be paid 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 29 CFR Part 5.5(a)(4). 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 (1)(ii) of this section) 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.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, 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 therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a

classification in the wage determination; and

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

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

(B) 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, U.S. Department of Labor, Washington, DC 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.

(C) 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.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, 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.

(iii) 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.

(iv) 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.

(2) **Withholding** - The Department shall upon its own action or upon written request of

an authorized representative of the 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 (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the Department may, after written notice to the contractor, sponsor, applicant, or owner, 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.

(3) Payrolls and basic records - (i) 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 years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). 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 29 CFR 5.5(a)(1)(iv) 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.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Transit Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Transit Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social

security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose - from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Transit Administration if the agency is a party of the contract, but if the agency is not such a party the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Transit Administration, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) 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 and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under section 5.5(a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) 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, 29 CFR part 3;

(3) 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.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Federal Transit Administration or the Department of Labor, and

shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. 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.

(4) **Apprentices and trainees** - (i) 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 U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 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 Office of Apprenticeship Training, Employer and Labor Services 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 above, shall be paid not less than the applicable wage rate on the 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 rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen 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 Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, 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.

(ii) Trainees - Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval,

evidenced by formal certification by the U.S. 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 on 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 on 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 on 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 on the wage determination for 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.

(iii) Equal employment opportunity - The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) **Compliance with Copeland Act requirements** - The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) **Subcontracts** - The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the Federal Transit Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) **Contract termination: debarment** - A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) **Compliance with Davis-Bacon and Related Act requirements** - All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) **Disputes concerning labor standards** - Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the

Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) **Certification of eligibility** - (i) 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).

(ii) 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).

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

XII. CONTRACT WORK HOURS AND SAFETY STANDARDS

(1) **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 laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) **Violation; liability for unpaid wages; liquidated damages** - In the event of any violation of the clause set forth in paragraph (1) of this section 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 clause set forth in paragraph (1) of this section, 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 hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

3) **Withholding for unpaid wages and liquidated damages** - The Department shall upon its 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 clause set forth in paragraph (2) of this section.

(4) **Subcontracts** - The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) of this section and also a clause requiring the 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 the clauses set forth in paragraphs (1) through (4) of this section.

XIII. NO OBLIGATION BY FEDERAL GOVERNMENT.

(1) The Contractor acknowledges and agrees 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 Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.

(2) 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.

XIV. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

(1) 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 Project. 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.

(2) 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.

(3) 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.

XV. GOVERNMENT-WIDE DEBARMENT AND SUSPENSION (NONPROCUREMENT)

The contractor is required to comply with 2 CFR 1200 and 2 CFR 180, Subpart 3, and must include the requirement to comply with 2 CFR 180, Subpart 3, as supplemented by 2 CFR 1200, in any lower tier covered transaction it enters into. By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by the Department. If it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to the Department, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 CFR 1200 and 2 CFR 180, Subpart C, while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

XVI. PRIVACY ACT

Contracts Involving Federal Privacy Act Requirements - The following requirements apply to the Contractor and its employees that administer any system of records on behalf of the Federal Government under any contract:

(1) The Contractor agrees to comply with, and assures the compliance of its employees with, the information restrictions and other applicable requirements of the Privacy Act of 1974,

5 U.S.C. § 552a. Among other things, the Contractor agrees to obtain the express consent of the Federal Government before the Contractor or its employees operate a system of records on behalf of the Federal Government. The Contractor understands that the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying contract.

(2) The Contractor also agrees to include these requirements in each subcontract to administer any system of records on behalf of the Federal Government financed in whole or in part with Federal assistance provided by FTA.

XVII. CIVIL RIGHTS REQUIREMENTS

Civil Rights - The following requirements apply to the underlying contract:

(1) 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.

(2) Equal Employment Opportunity - The following equal employment opportunity requirements apply to the underlying contract:

(a) 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.

(b) 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.

(c) 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.

(3) 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.

XVIII. ACCESS FOR INDIVIDUALS WITH DISABILITIES

Contractor agrees to comply with 49 U.S.C. Section 5301(d), which states the Federal policy that elderly individuals and individuals with disabilities have the same right as other individuals to use public transportation services and facilities, and that special efforts shall be made in planning and designing those services and facilities to implement transportation accessibility rights for elderly individuals and individuals with disabilities. The Contractor also agrees to comply with all applicable provisions of section 504 of the Rehabilitation Act of 1973, as amended, 29. U.S.C. Section 794, and all applicable provisions of the American with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. Sections 12101 *et. seq.* , and all applicable provisions of the Architectural Barriers Act of 1968, as amended, 42 U.S. C. sections 4151 *et. seq.*, and with other laws and amendments thereto pertaining to access for individuals with disabilities that may be applicable. In addition, the Contractor agrees to comply with applicable implementing Federal regulations, and any later amendments thereto, and agrees to follow applicable Federal implementing directives, except to the extent FTA approves otherwise in writing.

XIX. TRANSIT EMPLOYEE PROTECTIVE AGREEMENTS

Transit Employee Protective Provisions. (1) The Contractor agrees to the comply with applicable transit employee protective requirements as follows:

(a) General Transit Employee Protective Requirements - To the extent that FTA determines that transit operations are involved, the Contractor agrees to carry out the transit operations work on the underlying contract in compliance with terms and conditions determined by the U.S. Secretary of Labor to be fair and equitable to protect the interests of employees employed under this contract and to meet the employee protective requirements of 49 U.S.C. A 5333(b), and U.S. DOL guidelines at 29 C.F.R. Part 215, and any amendments thereto. These terms and conditions are identified in the letter of certification from the U.S. DOL to FTA applicable to the FTA Recipient's project from which Federal assistance is provided to support work on the underlying contract. The Contractor agrees to carry out that work in compliance with the conditions stated in that U.S. DOL letter. The requirements of this subsection (1), however, do not apply to any contract financed with Federal assistance provided by FTA either for projects for elderly individuals and individuals with disabilities authorized by 49 U.S.C. § 5310(a)(2), or for projects for nonurbanized areas authorized by 49 U.S.C. § 5311. Alternate provisions for those projects are set forth in subsections (b) and (c) of this clause.

(b) Transit Employee Protective Requirements for Projects Authorized by 49 U.S.C. § 5310(a)(2) for Elderly Individuals and Individuals with Disabilities - If the contract involves transit operations financed in whole or in part with Federal assistance authorized by 49 U.S.C. § 5310(a)(2), and if the U.S. Secretary of Transportation has determined or determines in the future that the employee protective requirements of 49 U.S.C. §

5333(b) are necessary or appropriate for the state and the public body subrecipient for which work is performed on the underlying contract, the Contractor agrees to carry out the Project in compliance with the terms and conditions determined by the U.S. Secretary of Labor to meet the requirements of 49 U.S.C. § 5333(b), U.S. DOL guidelines at 29 C.F.R. Part 215, and any amendments thereto. These terms and conditions are identified in the U.S. DOL's letter of certification to FTA, the date of which is set forth Grant Agreement or Cooperative Agreement with the state. The Contractor agrees to perform transit operations in connection with the underlying contract in compliance with the conditions stated in that U.S. DOL letter.

(c) Transit Employee Protective Requirements for Projects Authorized by 49 U.S.C. § 5311 in Nonurbanized Areas - If the contract involves transit operations financed in whole or in part with Federal assistance authorized by 49 U.S.C. § 5311, the Contractor agrees to comply with the terms and conditions of the Special Warranty for the Nonurbanized Area Program agreed to by the U.S. Secretaries of Transportation and Labor, dated May 31, 1979, and the procedures implemented by U.S. DOL or any revision thereto.

(2) The Contractor also agrees to include the any applicable requirements in each subcontract involving transit operations financed in whole or in part with Federal assistance provided by FTA.

XX. BUY AMERICA REQUIREMENTS

The Contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. Part 661, and any amendments thereto, which provide that Federal funds may not be obligated unless all steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver, or except as provided in 49 C.F.R. 661.11. General waivers are listed in 49 C.F.R. 661.7 Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11.

A bidder or offeror must submit to the FTA recipient the appropriate Buy America certification (below).

If steel, iron, or manufactured products (as defined in 49 CFR 661.3 and 661.5) are being procured, the appropriate certificate as set forth below shall be completed and submitted by each bidder or offerer in accordance with the requirement contained in 49 CFR 661.13(b).

Certificate of Compliance with Buy America Requirements

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j)(1), and the applicable regulations in 49 C.F.R. Part 661.

Date _____

Signature _____

Company _____

Name _____

Title _____

Certificate of Non-Compliance with Buy America Requirements

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j), but it may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2), as amended, and the applicable regulations in 49 C.F.R. 661.7.

Date _____

Signature _____

Company _____

Name _____

Title _____

If buses or other rolling stock (including train control, communication, and traction power equipment) are being procured, the appropriate certificate as set forth below shall be completed and submitted by each bidder in accordance with the requirement contained in 49 CFR 661.13 (b).

Certificate of Compliance with Buy America Rolling Stock Requirements

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j), and the applicable regulations at 49 CFR 661.11.

Date _____

Signature _____

Company _____

Name _____

Title _____

Certificate of Non-Compliance with Buy America Rolling Stock Requirements

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j), but may qualify for an exception to the requirement consistent with 49 U.S.C. 5323(j)(2) (C), and the applicable regulations in 49 CFR 661.7.

Date _____

Signature _____

Company _____

Name _____

Title _____

XXI. DRUG AND ALCOHOL TESTING

The contractor agrees to establish and implement a drug and alcohol testing program that complies with 49 CFR Parts 655, produce any documentation necessary to establish its compliance with Parts 655, and permit any authorized representative of the United States Department of Transportation or its operating administrations, the State Oversight Agency of Florida, or the Florida Department of Transportation, to inspect the facilities and records associated with the implementation of the drug and alcohol testing program as required under 49 CFR Parts 655 and review the testing process. The Florida Department of Transportation will hereafter set the date before which contractor must certify annually its compliance with its compliance with Parts 655 and the date before which it must submit the Management Information System (MIS) reports to

<http://transit-safety.fta.dot.gov/DrugAndAlcohol/DAMIS/default.asp>

and Contractor shall comply with those dates for certification and submitting the MIS reports. To certify compliance the contractor shall use the "Substance Abuse Certifications" in the "Annual List of Certifications and Assurances for Federal Transit Administration Grants and Cooperative Agreements," which is published annually in the Federal Register.

XXII. SENSITIVE SECURITY INFORMATION

Contractor must protect, and take measures to ensure that its subcontractors protect, "sensitive security information" made available during the administration of the contract or subcontract to ensure compliance with 49 U.S.C. Section 40119 (b) and implementing DOT regulations, "Protection of Sensitive Security Information," 49 CFR Part 15, and with 49 U.S.C. Section 114 (r) and implementing Department of Homeland Security regulations, "Protection of Sensitive Security Information," 49 CFR 1520.

XXIII. INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS

The preceding provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the preceding contract provisions.

All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any Florida Department of Transportation requests which would cause Florida Department of Transportation to be in violation of the FTA terms and conditions.

**AGREEMENT
BETWEEN DEPARTMENT AND CONTRACTOR
FOR CONSTRUCTION CONTRACT**

Contract No.:	_____
F.E.I.D. No:	_____
Appropriation No.:	<u>SB 1500, Line No. 1856</u>
Procurement No:	<u>RFP-DOT-14-15-5005-TRK</u>
D.M.S Catalog Class No.:	<u>30121700, 30130100</u>

BY THIS AGREEMENT, effective as of the _____ day of _____ 20____, the STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION (hereinafter called "Department") and _____, (hereinafter called "Contractor"), of _____, authorized to do business in the State of Florida, agree as follows:

ARTICLE 1 – WORK

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Central Florida Rail Corridor (CFRC) Track Renewal and Grade Crossing Upgrade.

ARTICLE 2 – THE PROJECT

The Project for which the Work under the Contract Documents may be the whole or only a part is generally identified by the Department as Project Financial Number 412994-4-52-11.

ARTICLE 3 – CONTRACT TIMES

3.01 *Time of the Essence*

- A. Time is of the essence to each and every obligation under this Agreement.

3.02 *Days to Achieve Completion of Work*

- A. The Work will be completed within 330 calendar days after the date when the Contract Time commences to run. It is understood and agreed that the date on which calendar days will begin to be charged to the project shall be either (1) the 30 calendar day from the date of issuance of the initial notice to begin work, or (2) the date on which the Contractor actually begins work, whichever date is the earlier.

3.03 *Liquidated Damages*

- A. Contractor and Department recognize that time is of the essence as stated in Paragraph 3.01 above and that Department will suffer financial loss if the Work is not

completed within the time specified in Paragraph 3.02 above, plus any extensions thereof allowed in accordance with Subarticle 8-7.3 of the Specifications. The parties also recognize the delays, expense, and difficulties involved in proving the actual loss suffered by Department if the Work is not completed on time. Accordingly, instead of requiring any such proof, Department and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Department for each calendar day that expires after the time specified in Paragraph 3.02 above, plus any extensions thereof allowed in accordance with Subarticle 8-7.3 of the Specifications until the work is complete, the dollar amount as specified in Subarticle 8-10.2 of the Specifications.

ARTICLE 4 – CONTRACT PRICE

4.01 Department shall pay Contractor the Contract Price of \$_____, for completion of the Work—in accordance with the Contract Documents as a lump sum price, payable in accordance with the Specifications.

ARTICLE 5 – CONTRACT DOCUMENTS

5.01 *Contents*

A. The Contract Documents which comprise the entire agreement between Department and Contractor concerning the Work and which are incorporated herein by this reference consist of the following:

1. This Agreement.
2. Specifications.
3. The PUR 1000 conditions, which are deemed to be part of Division 1 of the Specifications.
4. Required Contract Provisions for Federal Transit Administration Federal-Aid Construction Contracts.
5. Technical Requirements.
6. Performance and Payment Bond.
7. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. All written Amendments, Supplemental Agreements, Work Orders, and other documents modifying or supplementing the Contract Documents pursuant to the Specifications.

B. There are no Contract Documents other than those listed above in this Article 5. The Contract Documents may only be amended, modified, or supplemented as provided in the Specifications.

ARTICLE 6 – MISCELLANEOUS

- 6.01 Department and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.
- 6.02 Assignment of the Contract is addressed in Article 8-1 of the Specifications.
- 6.03 The Contractor agrees that it shall make no statements, press releases or publicity releases concerning this Agreement or its subject matter or otherwise disclose or permit to be disclosed any of the data or other information obtained or furnished in compliance with this Agreement, or any particulars thereof, during the period of the Agreement, without first notifying the Department's Engineer and securing the Department's prior written consent.
- 6.04 The Contractor shall comply with all federal, state, and local laws and ordinances applicable to the work or payment for work thereof, and will not discriminate on the grounds of race, color, religion, sex, national origin, age, or disability in the performance of work under this Agreement.
- 6.05 If the Contractor is licensed by the Department of Business and Professional Regulation to perform the services herein contracted, then Section 337.162, Florida Statutes, applies as follows:
- A. If the Department has knowledge or reason to believe that any person has violated the provisions of state professional licensing laws or rules, it shall submit a complaint regarding the violations to the Department of Business and Professional Regulation. The complaint shall be confidential.
 - B. Any person who is employed by the Department and who is licensed by the Department of Business and Professional Regulation and who, through the course of the person's employment, has knowledge to believe that any person has violated the provisions of state professional licensing laws or rules shall submit a complaint regarding the violations to the Department of Business and Professional Regulation. Failure to submit a complaint about the violations may be grounds for disciplinary action pursuant to Chapter 455, Florida Statutes, and the state licensing law applicable to that licensee. The complaint shall be confidential.
 - C. Any complaints submitted to the Department of Business and Professional Regulation are confidential and exempt from Section 119.07(1), Florida Statutes, pursuant to Chapter 455, Florida Statutes, and applicable state law.
- 6.06 The Contractor covenants and agrees that it and its employees and agents shall be bound by the standards of conduct provided in applicable law and applicable rules of the Board of Business and Professional Regulation as they relate to work performed under this Agreement. The Contractor further covenants and agrees that when a former state employee is employed by the Contractor, the Contractor shall require that strict adherence by the former state employee to Sections 112.313 and 112.3185, Florida Statutes, is a

condition of employment for said former state employee. These statutes will by reference be made a part of this Agreement as though set forth in full. The Contractor agrees to incorporate the provisions of this paragraph in any subcontract into which it might enter with reference to the work performed pursuant to this Agreement.

- 6.07 A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or rely on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.
- 6.08 An entity or affiliate placed on the discriminatory vendor list may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity, may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids, proposals, or replies on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with a public entity;, and may not transact business with any public entity.
- 6.09 The Department shall consider the employment by any contractor of unauthorized aliens a violation of Section 274 A (e) of the Immigration and Nationality Act. If the Contractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of this agreement.
- 6.10 Pursuant to Section 216.347, Florida Statutes, the Contractor may not expend any State funds for the purpose of lobbying the Legislature, the judicial branch, or a state agency.
- 6.11 This Agreement involves the expenditure of federal funds and Section 946.515, Florida Statutes does not apply.
- 6.12 This Agreement will not be renewed.
- 6.13 The Contractor and its employees, agents, representatives, or subcontractors are not employees of the Department and are not entitled to the benefits of State of Florida employees. Except to the extent expressly authorized herein, Contractor and its employees, agents, representatives, or subcontractors are not agents of the Department or the State for any purpose or authority such as to bind or represent the interests thereof, and shall not represent that it is an agent or that it is acting on the behalf of the Department or the State. The Department shall not be bound by any unauthorized acts or conduct of the Contractor or its employees, agents, representatives, or subcontractors. Contractor agrees to include this provision in all its subcontracts under this Agreement.
- 6.14 This Agreement embodies the whole agreement of the parties. There are no promises, terms, conditions, or obligations other than those contained herein, and this Agreement

shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties hereto. The State of Florida terms and conditions, whether general or specific, shall take precedence over and supersede any inconsistent or conflicting provision in any attached terms and conditions of the Contractor.

- 6.15 It is understood and agreed by the parties hereto that if any part, term or provision of this Agreement is by the courts held to be illegal or in conflict with any law of the State of Florida, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be invalid.
- 6.16 This Agreement shall be governed by and construed in accordance with the laws of the State of Florida.
- 6.17 In any legal action related to this Agreement, instituted by either party, the Contractor hereby waives any and all privileges and rights it may have under Chapter 47 and Section 337.19, Florida Statutes, relating to venue, as it now exists or may hereafter be amended, and any and all such privileges and rights it may have under any other statute, rule, or case law, including, but not limited to those grounded on convenience. Any such legal action may be brought in the appropriate Court in the county chosen by the Department and in the event that any such legal action is filed by the Contractor, the Contractor hereby consents to the transfer of venue to the county chosen by the Department upon the Department filing a motion requesting the same.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed the day and year first above written.

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

Name of Contractor

By: _____
(Authorized Signature)

(Print/Type)

Title: _____

By: _____
(Authorized Signature)

(Print/Type)

Title: _____

FOR DEPARTMENT USE ONLY

APPROVED:

LEGAL APPROVAL:

Contractual Services Office

**State of Florida
PUR 1000
General Contract Conditions**

**Central Florida Rail Corridor (CFRC)
Track Renewal and Grade Crossing Update**

The PUR 1000 conditions as set forth below are incorporated in and part of Division I of the Specifications, except that the following paragraphs of PUR 1000 do not apply: 2, 3, 4, 5, 11, 12, 13, 15, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 31, 35, 40, 41, 42, 43, 45, and 47. Deletion of these paragraphs shall not be deemed to be deletion of content contained elsewhere and the substance of these excepted paragraphs may be addressed in other locations in the Contract. The substance located elsewhere continues to apply regardless of this exception paragraph.

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1. Definitions. The definitions contained in s. 60A-1.001, F.A.C. shall apply to this agreement. The following additional terms are also defined:

(a) “Contract” means the legally enforceable agreement that results from a successful solicitation. The parties to the Contract will be the Customer and Contractor.

(b) “Customer” means the State agency or other entity identified in a contract as the party to receive commodities or contractual services pursuant to a contract or that orders commodities or contractual services via purchase order or other contractual instrument from the Contractor under the Contract. The “Customer” may also be the “Buyer” as defined in the PUR 1001 if it meets the definition of both terms.

(c) “Product” means any deliverable under the Contract, which may include commodities, services, technology or software.

(d) “Purchase order” means the form or format a Customer uses to make a purchase under the Contract (e.g., a formal written purchase order, electronic purchase order, procurement card, contract or other authorized means).

~~**2. Purchase Orders.** In contracts where commodities or services are ordered by the Customer via purchase order, Contractor shall not deliver or furnish products until a Customer transmits a purchase order. All purchase orders shall bear the Contract or solicitation number, shall be placed by the Customer directly with the Contractor, and shall be deemed to incorporate by reference the Contract and solicitation terms and conditions. Any discrepancy between the Contract terms and the terms stated on the Contractor’s order form, confirmation, or acknowledgement shall be resolved in favor of terms most favorable to the Customer. A purchase order for services within the ambit of section 287.058(1) of the Florida Statutes shall be deemed to incorporate by reference the requirements of subparagraphs (a) through (f) thereof. Customers shall designate a contract manager and a contract administrator as required by subsections 287.057(15) and (16) of the Florida Statutes.~~

~~**3. Product Version.** Purchase orders shall be deemed to reference a manufacturer’s most recently release model or version of the product at the time of the order, unless the Customer specifically requests in writing an earlier model or version and the contractor is willing to provide such model or version.~~

~~**4. Price Changes Applicable only to Term Contracts.** If this is a term contract for commodities or services, the following provisions apply.~~

~~(a) Quantity Discounts. Contractors are urged to offer additional discounts for one time delivery of large single orders. Customers should seek to negotiate additional price concessions on quantity purchases of any products offered under the Contract. State Customers shall document their files accordingly.~~

~~(b) Best Pricing Offer. During the Contract term, if the Customer becomes aware of better pricing offered by the Contractor for substantially the same or a smaller quantity of a product outside the Contract, but upon the same or~~

~~similar terms of the Contract, then at the discretion of the Customer the price under the Contract shall be immediately reduced to the lower price.~~

~~(c) **Sales Promotions.** In addition to decreasing prices for the balance of the Contract term due to a change in market conditions, a Contractor may conduct sales promotions involving price reductions for a specified lesser period. A Contractor shall submit to the Contract Specialist documentation identifying the proposed (1) starting and ending dates of the promotion, (2) products involved, and (3) promotional prices compared to then authorized prices. Promotional prices shall be available to all Customers. Upon approval, the Contractor shall provide conspicuous notice of the promotion.~~

~~(d) **Trade-In.** Customers may trade in equipment when making purchases from the Contract. A trade in shall be negotiated between the Customer and the Contractor. Customers are obligated to actively seek current fair market value when trading equipment, and to keep accurate records of the process. For State agencies, it may be necessary to provide documentation to the Department of Financial Services and to the agency property custodian pursuant to Chapter 273, F.S.~~

~~(e) **Equitable Adjustment.** The Customer may, in its sole discretion, make an equitable adjustment in the Contract terms or pricing if pricing or availability of supply is affected by extreme and unforeseen volatility in the marketplace, that is, by circumstances that satisfy all the following criteria: (1) the volatility is due to causes wholly beyond the Contractor's control, (2) the volatility affects the marketplace or industry, not just the particular Contract source of supply, (3) the effect on pricing or availability of supply is substantial, and (4) the volatility so affects the Contractor that continued performance of the Contract would result in a substantial loss.~~

~~**5. Additional Quantities.** For a period not exceeding ninety (90) days from the date of solicitation award, the Customer reserves the right to acquire additional quantities up to the amount shown on the solicitation but not to exceed the threshold for Category Two at the prices submitted in the response to the solicitation.~~

6. Packaging. Tangible product shall be securely and properly packed for shipment, storage, and stocking in appropriate, clearly labeled, shipping containers and according to accepted commercial practice, without extra charge for packing materials, cases, or other types of containers. All containers and packaging shall become and remain Customer's property.

7. Inspection at Contractor's Site. The Customer reserves the right to inspect, at any reasonable time with prior notice, the equipment or product or plant or other facilities of a Contractor to assess conformity with Contract requirements and to determine whether they are adequate and suitable for proper and effective Contract performance.

8. Safety Standards. All manufactured items and fabricated assemblies subject to operation under pressure, operation by connection to an electric source, or operation involving connection to a manufactured, natural, or LP gas source shall be constructed and approved in a manner acceptable to the appropriate State inspector. Acceptability customarily requires, at a minimum, identification marking of the appropriate safety standard organization, where such approvals of listings have been established for the type of device offered and furnished, for example: the American Society of Mechanical Engineers for pressure vessels; the Underwriters Laboratories and/or National Electrical Manufacturers' Association for electrically operated assemblies; and the American Gas Association for gas-operated assemblies. In addition, all items furnished shall meet all applicable requirements of the Occupational Safety and Health Act and state and federal requirements relating to clean air and water pollution.

9. Americans with Disabilities Act. Contractors should identify any products that may be used or adapted for use by visually, hearing, or other physically impaired individuals.

10. Literature. Upon request, the Contractor shall furnish literature reasonably related to the product offered, for example, user manuals, price schedules, catalogs, descriptive brochures, etc.

~~**11. Transportation and Delivery.** Prices shall include all charges for packing, handling, freight, distribution, and inside delivery. Transportation of goods shall be FOB Destination to any point within thirty (30) days after the Customer places an Order. A Contractor, within five (5) days after receiving a purchase order, shall notify the Customer of any potential delivery delays. Evidence of inability or intentional delays shall be cause for Contract cancellation and Contractor suspension.~~

~~**12. Installation.** Where installation is required, Contractor shall be responsible for placing and installing the product in the required locations at no additional charge, unless otherwise designated on the Contract or purchase order. Contractor's authorized product and price list shall clearly and separately identify any additional installation charges. All materials used in the installation shall be of good quality and shall be free of defects that would diminish the appearance of the product or render it structurally or operationally unsound. Installation includes the furnishing of any equipment, rigging, and materials required to install or replace the product in the proper location. Contractor shall protect the site from damage and shall repair damages or injury caused during installation by Contractor or its employees or agents. If any alteration, dismantling, excavation, etc., is required to achieve installation, the Contractor shall promptly restore the structure or site to its original condition. Contractor shall perform installation work so as to cause the least inconvenience and interference with Customers and with proper consideration of others on site. Upon completion of the installation, the location and surrounding area of work shall be left clean and in a neat and unobstructed condition, with everything in satisfactory repair and order.~~

~~**13. Risk of Loss.** Matters of inspection and acceptance are addressed in s. 215.422, F.S. Until acceptance, risk of loss or damage shall remain with the Contractor. The Contractor shall be responsible for filing, processing, and collecting all damage claims. To assist the Contractor with damage claims, the Customer shall: record any evidence of visible damage on all copies of the delivering carrier's Bill of Lading; report damages to the carrier and the Contractor; and provide the Contractor with a copy of the carrier's Bill of Lading and damage inspection report. When a Customer rejects a product, Contractor shall remove it from the premises within ten days after notification or rejection. Upon rejection notification, the risk of loss of rejected or non-conforming product shall remain with the Contractor. Rejected product not removed by the Contractor within ten days shall be deemed abandoned by the Contractor, and the Customer shall have the right to dispose of it as its own property. Contractor shall reimburse the Customer for costs and expenses incurred in storing or effecting removal or disposition of rejected product.~~

~~**14. Transaction Fee.** The State of Florida has instituted MyFloridaMarketPlace, a statewide eProcurement System ("System"). Pursuant to section 287.057(23), Florida Statutes (2002), all payments shall be assessed a Transaction Fee of one percent (1.0%), which the Contractor shall pay to the State, unless exempt pursuant to 60A-1.032, F.A.C.~~

~~For payments within the State accounting system (FLAIR or its successor), the Transaction Fee shall, when possible, be automatically deducted from payments to the Contractor. If automatic deduction is not possible, the Contractor shall pay the Transaction Fee pursuant to Rule 60A-1.031(2), F.A.C. By submission of these reports and corresponding payments, Contractor certifies their correctness. All such reports and payments shall be subject to audit by the State or its designee.~~

~~Contractor shall receive a credit for any Transaction Fee paid by the Contractor for the purchase of any item(s) if such item(s) are returned to the Contractor through no fault, act, or omission of the Contractor. Notwithstanding the foregoing, a Transaction Fee is non-refundable when an item is rejected or returned, or declined, due to the Contractor's failure to perform or comply with specifications or requirements of the agreement.~~

~~Failure to comply with these requirements shall constitute grounds for declaring the Contractor in default and recovering procurement costs from the Contractor in addition to all outstanding fees. **CONTRACTORS DELINQUENT IN PAYING TRANSACTION FEES MAY BE SUBJECT TO BEING REMOVED FROM THE DEPARTMENT OF MANAGEMENT SERVICES' VENDOR LIST AS PROVIDED IN RULE 60A-1.006, F.A.C.**~~

~~**15. Invoicing and Payment.** Invoices shall contain the Contract number, purchase order number if applicable, and the appropriate vendor identification number. The State may require any other information from the Contractor that the~~

~~State deems necessary to verify any purchase order placed under the Contract.~~

~~At the State's option, Contractors may be required to invoice electronically pursuant to guidelines of the Department of Management Services. Current guidelines require that Contractor supply electronic invoices in lieu of paper based invoices for those transactions processed through the system. Electronic invoices shall be submitted to the Customer through the Ariba Supplier Network (ASN) in one of the following mechanisms— EDI 810, eXML, or web based invoice entry within the ASN.~~

~~Payment shall be made in accordance with sections 215.422 and 287.0585 of the Florida Statutes, which govern time limits for payment of invoices. Invoices that must be returned to a Contractor due to preparation errors will result in a delay in payment. Contractors may call (850) 413 7269 Monday through Friday to inquire about the status of payments by State Agencies. The Customer is responsible for all payments under the Contract. A Customer's failure to pay, or delay in payment, shall not constitute a breach of the Contract and shall not relieve the Contractor of its obligations to the Department or to other Customers.~~

16. Taxes. The State does not pay Federal excise or sales taxes on direct purchases of tangible personal property. The State will not pay for any personal property taxes levied on the Contractor or for any taxes levied on employees' wages. Any exceptions to this paragraph shall be explicitly noted by the Customer in the special contract conditions section of the solicitation or in the Contract or purchase order.

17. Governmental Restrictions. If the Contractor believes that any governmental restrictions have been imposed that require alteration of the material, quality, workmanship or performance of the products offered under the Contract, the Contractor shall immediately notify the Customer in writing, indicating the specific restriction. The Customer reserves the right and the complete discretion to accept any such alteration or to cancel the Contract at no further expense to the Customer.

18. Lobbying and Integrity. Customers shall ensure compliance with Section 11.062, FS and Section 216.347, FS. The Contractor shall not, in connection with this or any other agreement with the State, directly or indirectly (1) offer, confer, or agree to confer any pecuniary benefit on anyone as consideration for any State officer or employee's decision, opinion, recommendation, vote, other exercise of discretion, or violation of a known legal duty, or (2) offer, give, or agree to give to anyone any gratuity for the benefit of, or at the direction or request of, any State officer or employee. For purposes of clause (2), "gratuity" means any payment of more than nominal monetary value in the form of cash, travel, entertainment, gifts, meals, lodging, loans, subscriptions, advances, deposits of money, services, employment, or contracts of any kind. Upon request of the Customer's Inspector General, or other authorized State official, the Contractor shall provide any type of information the Inspector General deems relevant to the Contractor's integrity or responsibility. Such information may include, but shall not be limited to, the Contractor's business or financial records, documents, or files of any type or form that refer to or relate to the Contract. The Contractor shall retain such records for the longer of (1) three years after the expiration of the Contract or (2) the period required by the General Records Schedules maintained by the Florida Department of State (available at: <http://dliis.dos.state.fl.us/barm/genschedules/gensched.htm>). The Contractor agrees to reimburse the State for the reasonable costs of investigation incurred by the Inspector General or other authorized State official for investigations of the Contractor's compliance with the terms of this or any other agreement between the Contractor and the State which results in the suspension or debarment of the Contractor. Such costs shall include, but shall not be limited to: salaries of investigators, including overtime; travel and lodging expenses; and expert witness and documentary fees. The Contractor shall not be responsible for any costs of investigations that do not result in the Contractor's suspension or debarment.

19. Indemnification. ~~The Contractor shall be fully liable for the actions of its agents, employees, partners, or subcontractors and shall fully indemnify, defend, and hold harmless the State and Customers, and their officers, agents, and employees, from suits, actions, damages, and costs of every name and description, including attorneys' fees, arising from or relating to personal injury and damage to real or personal tangible property alleged to be caused in whole or in part by Contractor, its agents, employees, partners, or subcontractors, provided, however, that the~~

~~Contractor shall not indemnify for that portion of any loss or damages proximately caused by the negligent act or omission of the State or a Customer.~~

~~Further, the Contractor shall fully indemnify, defend, and hold harmless the State and Customers from any suits, actions, damages, and costs of every name and description, including attorneys' fees, arising from or relating to violation or infringement of a trademark, copyright, patent, trade secret or intellectual property right, provided, however, that the foregoing obligation shall not apply to a Customer's misuse or modification of Contractor's products or a Customer's operation or use of Contractor's products in a manner not contemplated by the Contract or the purchase order. If any product is the subject of an infringement suit, or in the Contractor's opinion is likely to become the subject of such a suit, the Contractor may at its sole expense procure for the Customer the right to continue using the product or to modify it to become non-infringing. If the Contractor is not reasonably able to modify or otherwise secure the Customer the right to continue using the product, the Contractor shall remove the product and refund the Customer the amounts paid in excess of a reasonable rental for past use. The customer shall not be liable for any royalties.~~

~~The Contractor's obligations under the preceding two paragraphs with respect to any legal action are contingent upon the State or Customer giving the Contractor (1) written notice of any action or threatened action, (2) the opportunity to take over and settle or defend any such action at Contractor's sole expense, and (3) assistance in defending the action at Contractor's sole expense. The Contractor shall not be liable for any cost, expense, or compromise incurred or made by the State or Customer in any legal action without the Contractor's prior written consent, which shall not be unreasonably withheld.~~

20. Limitation of Liability. ~~For all claims against the Contractor under any contract or purchase order, and regardless of the basis on which the claim is made, the Contractor's liability under a contract or purchase order for direct damages shall be limited to the greater of \$100,000, the dollar amount of the contract or purchase order, or two times the charges rendered by the Contractor under the purchase order. This limitation shall not apply to claims arising under the Indemnity paragraph contain in this agreement.~~

~~Unless otherwise specifically enumerated in the Contract or in the purchase order, no party shall be liable to another for special, indirect, punitive, or consequential damages, including lost data or records (unless the contract or purchase order requires the Contractor to back up data or records), even if the party has been advised that such damages are possible. No party shall be liable for lost profits, lost revenue, or lost institutional operating savings. The State and Customer may, in addition to other remedies available to them at law or equity and upon notice to the Contractor, retain such monies from amounts due Contractor as may be necessary to satisfy any claim for damages, penalties, costs and the like asserted by or against them. The State may set off any liability or other obligation of the Contractor or its affiliates to the State against any payments due the Contractor under any contract with the State.~~

21. Suspension of Work. ~~The Customer may in its sole discretion suspend any or all activities under the Contract or purchase order, at any time, when in the best interests of the State to do so. The Customer shall provide the Contractor written notice outlining the particulars of suspension. Examples of the reason for suspension include, but are not limited to, budgetary constraints, declaration of emergency, or other such circumstances. After receiving a suspension notice, the Contractor shall comply with the notice and shall not accept any purchase orders. Within ninety days, or any longer period agreed to by the Contractor, the Customer shall either (1) issue a notice authorizing resumption of work, at which time activity shall resume, or (2) terminate the Contract or purchase order. Suspension of work shall not entitle the Contractor to any additional compensation.~~

22. Termination for Convenience. ~~The Customer, by written notice to the Contractor, may terminate the Contract in whole or in part when the Customer determines in its sole discretion that it is in the State's interest to do so. The Contractor shall not furnish any product after it receives the notice of termination, except as necessary to complete the continued portion of the Contract, if any. The Contractor shall not be entitled to recover any cancellation charges or lost profits.~~

23. Termination for Cause. ~~The Customer may terminate the Contract if the Contractor fails to (1) deliver the product within the time specified in the Contract or any extension, (2) maintain adequate progress, thus endangering performance of the Contract, (3) honor any term of the Contract, or (4) abide by any statutory, regulatory, or licensing requirement. Rule 60A 1.006(3), F.A.C., governs the procedure and consequences of default. The Contractor shall continue work on any work not terminated. Except for defaults of subcontractors at any tier, the Contractor shall not be liable for any excess costs if the failure to perform the Contract arises from events completely beyond the control, and without the fault or negligence, of the Contractor. If the failure to perform is caused by the default of a subcontractor at any tier, and if the cause of the default is completely beyond the control of both the Contractor and the subcontractor, and without the fault or negligence of either, the Contractor shall not be liable for any excess costs for failure to perform, unless the subcontracted products were obtainable from other sources in sufficient time for the Contractor to meet the required delivery schedule. If, after termination, it is determined that the Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Customer. The rights and remedies of the Customer in this clause are in addition to any other rights and remedies provided by law or under the Contract.~~

24. Force Majeure, Notice of Delay, and No Damages for Delay. ~~The Contractor shall not be responsible for delay resulting from its failure to perform if neither the fault nor the negligence of the Contractor or its employees or agents contributed to the delay and the delay is due directly to acts of God, wars, acts of public enemies, strikes, fires, floods, or other similar cause wholly beyond the Contractor's control, or for any of the foregoing that affect subcontractors or suppliers if no alternate source of supply is available to the Contractor. In case of any delay the Contractor believes is excusable, the Contractor shall notify the Customer in writing of the delay or potential delay and describe the cause of the delay either (1) within ten (10) days after the cause that creates or will create the delay first arose, if the Contractor could reasonably foresee that a delay could occur as a result, or (2) if delay is not reasonably foreseeable, within five (5) days after the date the Contractor first had reason to believe that a delay could result. **THE FOREGOING SHALL CONSTITUTE THE CONTRACTOR'S SOLE REMEDY OR EXCUSE WITH RESPECT TO DELAY.** Providing notice in strict accordance with this paragraph is a condition precedent to such remedy. No claim for damages, other than for an extension of time, shall be asserted against the Customer. The Contractor shall not be entitled to an increase in the Contract price or payment of any kind from the Customer for direct, indirect, consequential, impact or other costs, expenses or damages, including but not limited to costs of acceleration or inefficiency, arising because of delay, disruption, interference, or hindrance from any cause whatsoever. If performance is suspended or delayed, in whole or in part, due to any of the causes described in this paragraph, after the causes have ceased to exist the Contractor shall perform at no increased cost, unless the Customer determines, in its sole discretion, that the delay will significantly impair the value of the Contract to the State or to Customers, in which case the Customer may (1) accept allocated performance or deliveries from the Contractor, provided that the Contractor grants preferential treatment to Customers with respect to products subjected to allocation, or (2) purchase from other sources (without recourse to and by the Contractor for the related costs and expenses) to replace all or part of the products that are the subject of the delay, which purchases may be deducted from the Contract quantity, or (3) terminate the Contract in whole or in part.~~

25. Changes. ~~The Customer may unilaterally require, by written order, changes altering, adding to, or deducting from the Contract specifications, provided that such changes are within the general scope of the Contract. The Customer may make an equitable adjustment in the Contract price or delivery date if the change affects the cost or time of performance. Such equitable adjustments require the written consent of the Contractor, which shall not be unreasonably withheld. If unusual quantity requirements arise, the Customer may solicit separate bids to satisfy them.~~

26. Renewal. ~~Upon mutual agreement, the Customer and the Contractor may renew the Contract, in whole or in part, for a period that may not exceed 3 years or the term of the contract, whichever period is longer. Any renewal shall specify the renewal price, as set forth in the solicitation response. The renewal must be in writing and signed by both parties, and is contingent upon satisfactory performance evaluations and subject to availability of funds.~~

27. Purchase Order Duration. ~~Purchase orders issued pursuant to a state term or agency contract must be received~~

~~by the Contractor no later than close of business on the last day of the contract's term to be considered timely. The Contractor is obliged to fill those orders in accordance with the contract's terms and conditions. Purchase orders received by the contractor after close of business on the last day of the state term or agency contract's term shall be considered void.~~

~~Purchase orders for a one time delivery of commodities or performance of contractual services shall be valid through the performance by the Contractor, and all terms and conditions of the state term or agency contract shall apply to the single delivery/performance, and shall survive the termination of the Contract.~~

~~Contractors are required to accept purchase orders specifying delivery schedules exceeding the contracted schedule even when such extended delivery will occur after expiration of the state term or agency contract. For example, if a state term contract calls for delivery 30 days after receipt of order (ARO), and an order specifies delivery will occur both in excess of 30 days ARO and after expiration of the state term contract, the Contractor will accept the order. However, if the Contractor expressly and in writing notifies the ordering office within ten (10) calendar days of receipt of the purchase order that Contractor will not accept the extended delivery terms beyond the expiration of the state term contract, then the purchase order will either be amended in writing by the ordering entity within ten (10) calendar days of receipt of the contractor's notice to reflect the state term contract delivery schedule, or it shall be considered withdrawn.~~

~~The duration of purchase orders for recurring deliveries of commodities or performance of services shall not exceed the expiration of the state term or agency contract by more than twelve months. However, if an extended pricing plan offered in the state term or agency contract is selected by the ordering entity, the contract terms on pricing plans and renewals shall govern the maximum duration of purchase orders reflecting such pricing plans and renewals.~~

~~Timely purchase orders shall be valid through their specified term and performance by the Contractor, and all terms and conditions of the state term or agency contract shall apply to the recurring delivery/performance as provided herein, and shall survive the termination of the Contract.~~

~~Ordering offices shall not renew a purchase order issued pursuant to a state term or agency contract if the underlying contract expires prior to the effective date of the renewal.~~

28. Advertising. Subject to Chapter 119, Florida Statutes, the Contractor shall not publicly disseminate any information concerning the Contract without prior written approval from the Customer, including, but not limited to mentioning the Contract in a press release or other promotional material, identifying the Customer or the State as a reference, or otherwise linking the Contractor's name and either a description of the Contract or the name of the State or the Customer in any material published, either in print or electronically, to any entity that is not a party to Contract, except potential or actual authorized distributors, dealers, resellers, or service representative.

~~**29. Assignment.** The Contractor shall not sell, assign or transfer any of its rights, duties or obligations under the Contract, or under any purchase order issued pursuant to the Contract, without the prior written consent of the Customer. In the event of any assignment, the Contractor remains secondarily liable for performance of the contract, unless the Customer expressly waives such secondary liability. The Customer may assign the Contract with prior written notice to Contractor of its intent to do so.~~

30. Antitrust Assignment. The Contractor and the State of Florida recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the State of Florida. Therefore, the contractor hereby assigns to the State of Florida any and all claims for such overcharges as to goods, materials or services purchased in connection with the Contract.

~~**31. Dispute Resolution.** Any dispute concerning performance of the Contract shall be decided by the Customer's designated contract manager, who shall reduce the decision to writing and serve a copy on the Contractor. The~~

~~decision shall be final and conclusive unless within twenty one (21) days from the date of receipt, the Contractor files with the Customer a petition for administrative hearing. The Customer's decision on the petition shall be final, subject to the Contractor's right to review pursuant to Chapter 120 of the Florida Statutes. Exhaustion of administrative remedies is an absolute condition precedent to the Contractor's ability to pursue any other form of dispute resolution; provided, however, that the parties may employ the alternative dispute resolution procedures outlined in Chapter 120.~~

~~Without limiting the foregoing, the exclusive venue of any legal or equitable action that arises out of or relates to the Contract shall be the appropriate state court in Leon County, Florida; in any such action, Florida law shall apply and the parties waive any right to jury trial.~~

32. Employees, Subcontractors, and Agents. All Contractor employees, subcontractors, or agents performing work under the Contract shall be properly trained technicians who meet or exceed any specified training qualifications. Upon request, Contractor shall furnish a copy of technical certification or other proof of qualification. All employees, subcontractors, or agents performing work under the Contract must comply with all security and administrative requirements of the Customer and shall comply with all controlling laws and regulations relevant to the services they are providing under the Contract. The State may conduct, and the Contractor shall cooperate in, a security background check or otherwise assess any employee, subcontractor, or agent furnished by the Contractor. The State may refuse access to, or require replacement of, any personnel for cause, including, but not limited to, technical or training qualifications, quality of work, change in security status, or non-compliance with a Customer's security or other requirements. Such approval shall not relieve the Contractor of its obligation to perform all work in compliance with the Contract. The State may reject and bar from any facility for cause any of the Contractor's employees, subcontractors, or agents.

33. Security and Confidentiality. The Contractor shall comply fully with all security procedures of the United States, State of Florida and Customer in performance of the Contract. The Contractor shall not divulge to third parties any confidential information obtained by the Contractor or its agents, distributors, resellers, subcontractors, officers or employees in the course of performing Contract work, including, but not limited to, security procedures, business operations information, or commercial proprietary information in the possession of the State or Customer. The Contractor shall not be required to keep confidential information or material that is publicly available through no fault of the Contractor, material that the Contractor developed independently without relying on the State's or Customer's confidential information, or material that is otherwise obtainable under State law as a public record. To insure confidentiality, the Contractor shall take appropriate steps as to its personnel, agents, and subcontractors. The warranties of this paragraph shall survive the Contract.

34. Contractor Employees, Subcontractors, and Other Agents. The Customer and the State shall take all actions necessary to ensure that Contractor's employees, subcontractors and other agents are not employees of the State of Florida. Such actions include, but are not limited to, ensuring that Contractor's employees, subcontractors, and other agents receive benefits and necessary insurance (health, workers' compensations, and unemployment) from an employer other than the State of Florida.

~~**35. Insurance Requirements.** During the Contract term, the Contractor at its sole expense shall provide commercial insurance of such a type and with such terms and limits as may be reasonably associated with the Contract. Providing and maintaining adequate insurance coverage is a material obligation of the Contractor. Upon request, the Contractor shall provide certificate of insurance. The limits of coverage under each policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under the Contract. All insurance policies shall be through insurers authorized or eligible to write policies in Florida.~~

36. Warranty of Authority. Each person signing the Contract warrants that he or she is duly authorized to do so and to bind the respective party to the Contract.

37. Warranty of Ability to Perform. The Contractor warrants that, to the best of its knowledge, there is no pending

or threatened action, proceeding, or investigation, or any other legal or financial condition, that would in any way prohibit, restrain, or diminish the Contractor's ability to satisfy its Contract obligations. The Contractor warrants that neither it nor any affiliate is currently on the convicted vendor list maintained pursuant to section 287.133 of the Florida Statutes, or on any similar list maintained by any other state or the federal government. The Contractor shall immediately notify the Customer in writing if its ability to perform is compromised in any manner during the term of the Contract.

38. Notices. All notices required under the Contract shall be delivered by certified mail, return receipt requested, by reputable air courier service, or by personal delivery to the agency designee identified in the original solicitation, or as otherwise identified by the Customer. Notices to the Contractor shall be delivered to the person who signs the Contract. Either designated recipient may notify the other, in writing, if someone else is designated to receive notice.

39. Leases and Installment Purchases. Prior approval of the Chief Financial Officer (as defined in Section 17.001, F.S.) is required for State agencies to enter into or to extend any lease or installment-purchase agreement in excess of the Category Two amount established by section 287.017 of the Florida Statutes.

~~**40. Prison Rehabilitative Industries and Diversified Enterprises, Inc. (PRIDE).** Section 946.515(2), F.S. requires the following statement to be included in the solicitation: "It is expressly understood and agreed that any articles which are the subject of, or required to carry out, the Contract shall be purchased from the corporation identified under Chapter 946 of the Florida Statutes (PRIDE) in the same manner and under the same procedures set forth in section 946.515(2) and (4) of the Florida Statutes; and for purposes of the Contract the person, firm, or other business entity carrying out the provisions of the Contract shall be deemed to be substituted for the agency insofar as dealings with such corporation are concerned." Additional information about PRIDE and the products it offers is available at <http://www.pridefl.com>.~~

~~**41. Products Available from the Blind or Other Handicapped.** Section 413.036(3), F.S. requires the following statement to be included in the solicitation: "It is expressly understood and agreed that any articles that are the subject of, or required to carry out, this contract shall be purchased from a nonprofit agency for the Blind or for the Severely Handicapped that is qualified pursuant to Chapter 413, Florida Statutes, in the same manner and under the same procedures set forth in section 413.036(1) and (2), Florida Statutes; and for purposes of this contract the person, firm, or other business entity carrying out the provisions of this contract shall be deemed to be substituted for the State agency insofar as dealings with such qualified nonprofit agency are concerned." Additional information about the designated nonprofit agency and the products it offers is available at <http://www.respectofflorida.org>.~~

~~**42. Modification of Terms.** The Contract contains all the terms and conditions agreed upon by the parties, which terms and conditions shall govern all transactions between the Customer and the Contractor. The Contract may only be modified or amended upon mutual written agreement of the Customer and the Contractor. No oral agreements or representations shall be valid or binding upon the Customer or the Contractor. No alteration or modification of the Contract terms, including substitution of product, shall be valid or binding against the Customer. The Contractor may not unilaterally modify the terms of the Contract by affixing additional terms to product upon delivery (e.g., attachment or inclusion of standard preprinted forms, product literature, "shrink wrap" terms accompanying or affixed to a product, whether written or electronic) or by incorporating such terms onto the Contractor's order or fiscal forms or other documents forwarded by the Contractor for payment. The Customer's acceptance of product or processing of documentation on forms furnished by the Contractor for approval or payment shall not constitute acceptance of the proposed modification to terms and conditions.~~

~~**43. Cooperative Purchasing.** Pursuant to their own governing laws, and subject to the agreement of the Contractor, other entities may be permitted to make purchases at the terms and conditions contained herein. Non-Customer purchases are independent of the agreement between Customer and Contractor, and Customer shall not be a party to any transaction between the Contractor and any other purchaser.~~

~~State agencies wishing to make purchases from this agreement are required to follow the provisions of s.~~

~~287.042(16)(a), F.S. This statute requires the Department of Management Services to determine that the requestor's use of the contract is cost effective and in the best interest of the State.~~

44. Waiver. The delay or failure by the Customer to exercise or enforce any of its rights under this Contract shall not constitute or be deemed a waiver of the Customer's right thereafter to enforce those rights, nor shall any single or partial exercise of any such right preclude any other or further exercise thereof or the exercise of any other right.

~~**45. Annual Appropriations.** The State's performance and obligation to pay under this contract are contingent upon an annual appropriation by the Legislature.~~

46. Execution in Counterparts. The Contract may be executed in counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

~~**47. Severability.** If a court deems any provision of the Contract void or unenforceable, that provision shall be enforced only to the extent that it is not in violation of law or is not otherwise unenforceable and all other provisions shall remain in full force and effect.~~

CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS: That we, _____

(Entity Name) having its principal place of business at _____
 _____ (Bidding Office Street Address, City, State, Zip and Phone #)

(hereinafter called Principal or Contractor) and _____
 hereinafter called Surety), duly authorized to do business in the State of Florida, pursuant to the laws of the State of Florida, having its principal place of business at _____
 (City, State, Zip) are held and firmly bound unto the State of Florida, in the full and just sum of _____

_____ DOLLARS (_____), lawful money of the United States of America, to be paid to the Florida Department of Transportation, to which payment well and truly be made we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally and firmly by these presents; WHEREAS, the above-bound Principal has subscribed to a contract with the State of Florida Department of Transportation (hereinafter called the Department), for constructing Central Florida Rail Corridor (CFRC) Track Renewal and Grade Crossing Upgrade _____ in Volusia, Seminole, and Orange _____ County(ies), Financial Project No(s): 412994-4-52-11 _____ Contract No. _____.

(hereinafter called the Contract), upon certain terms and conditions in the Contract more particularly mentioned; and WHEREAS, it was one of the conditions of the Contract that these presents shall be executed; NOW, THEREFORE, the conditions of this obligation are such that if the above-bound Principal in all respects shall comply with Section 337.18(1), Florida Statutes, and shall promptly, faithfully, efficiently, and fully perform the Contract, and any alterations as may be made in said Contract as provided for therein, and within the time period specified, and further, shall remedy any errors in partial or final estimates and any defects which may exist, appear, occur or result in or from said work within a period of two (2) years from the date of final acceptance of the work under the Contract and further if the Contractor shall promptly make payment to all persons furnishing labor, material, equipment, and supplies, and all persons defined in Section 713.01, Florida Statutes, whose claims derive directly or indirectly from the prosecution of the work provided for in the Contract (See Section 337.18(1) (a)-(f), F.S., for specific "claim" notice and time limitation requirements), and shall promptly pay all State Workers' Compensation and Unemployment Compensation taxes incurred in the performance of the Contract, and shall be liable to the State in a civil action instituted by the Department or any officer of the State authorized in such cases for double any amount in money or property the State may lose or be overcharged or otherwise defrauded of, by reason of any wrongful or criminal act, if any, of the Contractor, its agents, and employees, and should the Contractor not be declared to be in default under the Contract then the bond shall be deemed void. In the event of default by the Contractor, the Surety shall pay the Department in addition to the above obligations, all liquidated damages and disincentives assessed against the Contractor because of the default which were not withheld from Contract proceeds and if the Department at its sole option demands that the Surety take over the project and provided further that should the Department elect to have the Surety to take over the project, then in such event, the Surety may not select the Contractor or any affiliate of the Contractor to complete the project for and on behalf of the Surety without the Department's express written consent and, finally, if the subject Contract required contractor qualification, under Section 337.14, Florida Statutes, or otherwise, the Surety must use a qualified contractor, who is approved by the Department, to perform the work. It is further covenanted and agreed that any alterations or additions made under this Contract or in the work to be performed therein or the granting of any extension of time for the performance of the Contract or any other forbearance by or on the part of either the Department or the Principal shall not in any way release the Principal and the Surety or either of them, their respective heirs, executors, administrators, successors, or assigns, from any liability hereunder. Notice to the Surety of such alterations, extension, or forbearance is hereby specifically waived. Under this bond, the surety, pursuant to Section 337.11(9)(a), F.S. shall be fully liable under such surety bond to the full extent of any modified contract amount up to and including 25 percent over the original contract amount and without regard to the fact that the surety was not aware of or did not approve such modifications. However, if modifications of the original contract amount cumulatively result in modifications of the contract amount in excess of 25 percent of the original contract amount, the surety's approval shall be required to bind the surety under the bond on that portion in excess of 25 percent of the original contract amount. This obligation shall remain in full force and effect until the

full performance of all covenants, terms, and conditions herein stipulated. Failure by the Surety to perform its obligations under the terms of this bond may result in the Surety being disqualified from issuing bonds for future Department contracts.

WITNESS the signature of the principal (Contractor) and the signature of the Surety by _____ its _____ (Agent or Attorney-in-Fact) with the seals of said Principal and Surety hereunto affixed this _____ day of _____, _____.

Complete the following as appropriate

Entity Name: _____	(Seal)
Authorized Signature: _____	Name & Title (Print): _____
*Signature: _____	Name & Title (Print): _____

*In the event of a Partnership both signature and printed name of 2 partners must be affixed.

Organized and existing under the laws of the State of _____ and authorized to do business in the State of Florida, pursuant to the laws of the State of Florida.	
Countersigned: _____ Florida Licensed Insurance Agent Print information below (Florida Licensed Insurance Agent; Whether in Attorney-in-Fact or Countersignature role): Name: _____ Business Address: _____ Telephone: _____	_____ Surety Company Name (Print) (Seal) By: _____ Florida Licensed Insurance Agent or Attorney-in-Fact (Surety) <input type="checkbox"/> Above Signatory is also a Florida Licensed Insurance Agent (check if applicable and complete business name, address and telephone number block; if not, have such an agent countersign and complete block) NOTE: Power of Attorney showing authority of Surety's Agent or Attorney-in-Fact is to be attached.

Contractor shall record this bond in the official records of the Clerk of Court of the county where the improvement is located prior to commencing the work in accordance with Section 337.18(1)(b), Florida Statutes.

Send "Notices to Owner" to:
Florida Department of Transportation
District 5
Attn: Procurement Services
719 South Woodland Boulevard
DeLand, Florida 32720-6834

February 26, 2015
PREPARED BY: Vacilios G. Liatsos



SPECIFICATIONS PACKAGE
FINANCIAL PROJECT ID(S). 412994-4-52-11
FEDERAL FUNDS
DISTRICT FIVE
VOLUSIA, SEMINOLE & ORANGE COUNTIES

The January 2015 Edition of the Florida Department of Transportation Standard Specifications is revised as follows:

I hereby certify that this specifications package has been properly prepared by me, or under my responsible charge, in accordance with procedures adopted by the Florida Department of Transportation.

The official record of this package is the electronic file signed and sealed under Rule 61G 15-23.003, F.A.C.

Prepared by:	<u>Vacilios Liatsos</u>
Date:	<u>02/26/15</u>
Fla. License No.:	<u>67440</u>
Firm Name:	<u>URS Corporation</u>
Firm Address:	<u>315 E. Robinson St, # 245</u>
City, State, Zipcode:	<u>Orlando, FL 32801</u>
Certificate of Authorization:	<u>000002</u>
Page(s):	<u>80</u>



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SPECIAL PROVISIONS

DEFINITIONS.

(REV 2-24-15)

ARTICLE 1-3 is being modified by the following:

The terms and definitions of “**Advertisement,**” and “**Proposal (Bid, Bid Proposal),**” and “**Proposal Form,**” and “**Proposal Guaranty,**” are each deleted.

The definition of “**Contract Documents**” is deleted and the following substituted:

Contract Documents.

The items so designated in the Agreement.

The definition of “**Plans**” is deleted and the following substituted:

Plans.

The approved plans, including reproductions thereof showing the location, character, and dimension, and details of the work, in this project means and is replaced by the “**Technical Requirements**”.

ARTICLE 1-3 is expanded by the following:

Agreement.

The written instrument which is evidence of the agreement between the Department and Contractor covering the Work

PROPOSAL REQUIREMENTS AND CONDITIONS.

(REV 2-24-15)

SECTION 2 is deleted.

AWARD AND EXECUTION OF CONTRACT.

(REV2-24-15)

ARTICLES 3-1, 3-2, 3-3 and 3-4 are deleted.

SCOPE OF THE WORK.

(REV 8-24-10) (FA 10-8-10) (1-15)

ARTICLE 4-1 is deleted and the following substituted:

4-1 Intent and Scope.

The Improvements under this Contract consist of furnishing, distribution, and installation of rail, ties, concrete panel highway grade crossings, pedestrian grade crossings, ballast and other related items of work within the Central Florida Rail Corridor (CFRC). The project area for these improvements is located between Debary and south Orlando, FL between MP A761.81 and MP A 796.63.

This is a Lump Sum Contract with only one pay item listed in the Contract.

All references to payment under individual pay item numbers, regardless of where those references are contained in the Contract Documents or when in time any such pay item reference is incorporated in the Contract Documents, are superseded by the pay item references in this Special Provision.

Payment for all work in this Contract will be made under:

Item No. (999-2) Lump Sum Contract - LS

Pay adjustments as shown in the Contract Documents, regardless of where those pay adjustments are referenced, shall not apply, except as provided for in 9-2 Scope of Payments.

SUBARTICLE 4-3.1 is deleted and the following substituted:

4-3.1 General: The Engineer reserves the right to make, at any time prior to or during the progress of the work, alterations or changes, whether a significant change or not, and such alterations in the details of construction, whether a substantial change or not, including but not limited to alterations in the grade or alignment of the road or structure or both, as may be found necessary or desirable by the Engineer. Such alterations or changes shall not constitute a breach of Contract, shall not invalidate the Contract, nor release the Surety from any liability arising out of this Contract or the Surety bond. The Contractor agrees to perform the work, as altered or changed, the same as if it had been a part of the original Contract.

The term “significant change” applies only when the Engineer determines that the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction. The allowance due to the Contractor will be in accordance with 4-3.2, below.

In the instance of an alleged “significant change”, the determination by the Engineer shall be conclusive and shall not be subject to challenge by the Contractor in any forum, except upon the Contractor establishing by clear and convincing proof that the determination by the Engineer was without any reasonable and good-faith basis.

SUBARTICLE 4-3.4 is deleted and the following substituted:

4-3.4 Conditions Requiring a Supplemental Agreement or Unilateral Payment: A Supplemental Agreement or Unilateral Payment will be used to clarify the Technical Requirements and Specifications of the Contract; to provide for Unforeseen Work, grade changes, or alterations in the Technical Requirements which could not reasonably have been

contemplated or foreseen in the original Technical Requirements and specifications; to change the limits of construction to meet field conditions; to provide a safe and functional connection to an existing pavement; to settle documented Contract claims; to make the project functionally operational in accordance with the intent of the original Contract and subsequent amendments thereto.

SUBARTICLE 4-3.9.4 is deleted and the following substituted:

4-3.9.4 Processing Procedures: Submit two copies of each Proposal to the Engineer or his duly authorized representative. The Department will process Proposals expeditiously; however, the Department is not liable for any delay in acting upon a Proposal submitted pursuant to this Subarticle. The Contractor may withdraw, in whole or in part, a Proposal not accepted by the Department within the period specified in the Proposal. The Department is not liable for any Proposal development cost in the case where the Department rejects or the Contractor withdraws a Proposal.

The Engineer is the sole judge of the acceptability of a Proposal and of the estimated net savings in construction costs from the adoption of all or any part of such proposal.

Prior to approval, the Engineer may modify a Proposal, with the concurrence of the Contractor, to make it acceptable. If any modification increases or decreases the net savings resulting from the Proposal, the Department will determine the Contractor's fair share upon the basis of the Proposal as modified. The Department will compute the net savings by subtracting the revised total cost affected by the Proposal from the total cost as represented in the original Contract.

Prior to approval of the Proposal that initiates the supplemental agreement, provide acceptable Contract-quality plan sheets revised to show all details consistent with the Proposal design.

UNFORESEEABLE WORK.

(REV 9-28-98) (1-15)

ARTICLE 4-4 is deleted and the following substituted:

4-4 Unforeseeable Work.

When the Department requires work that is not covered by a price in the Contract and such work does not constitute a "Significant Change" as defined in 4-3.1, and the Department finds that such work is essential to the satisfactory completion of the Contract within its intended scope, the Department will make an adjustment to the Contract. Such adjustment will be made by Work Order when the Contract Documents provide for Contingency Work. When the Contract Documents do not provide for Contingency Work or the available funds for Contingency Work are insufficient, such adjustment will be made by Supplemental Agreement. The cost of Unforeseeable Work will be a negotiated amount or, in lieu of negotiations or other agreement, an amount based on material invoices, equipment costs, labor payrolls, and markups provided in 4-3.2.

Contingency Work, as used in this Article, is defined as possible additional work required to satisfactorily complete the Contract within its intended scope.

CONTROL OF THE WORK.

(REV 2-24-15)

SUBARTICLE 5-1.1 is expanded by the following:

All reference to separate payment for individual items of work will not apply. The cost for various items of work will be included and paid for under the Contract Lump Sum Price.

ARTICLE 5-2 is deleted and the following substituted:

These Specifications, Special Provisions, Technical Requirements and all supplementary documents are integral parts of the Contract; a requirement occurring in one is as binding as though occurring in all. In addition to the work and materials specifically called for in the Contract Documents and any additional incidental work, not specifically mentioned, when so documented in the Technical Requirements, or if indicated, or obvious and apparent, as being necessary for the proper completion of the work will be included in the Contract Lump Sum Price.

In cases of discrepancy, the governing order of the documents is as follows:

1. Required Contract Provisions for Federal Transit Administration Federal-Aid Construction Contracts
2. Payment and Performance Bond
3. Special Provisions
4. Technical Requirements
5. Supplemental Specifications – Divisions II and III
6. Standard Specifications – Division II and III
7. Agreement
8. Supplemental Specifications – Division I
9. Standard Specifications – Division I.

SUBARTICLE 5-7.6 is deleted.

CONTROL OF MATERIALS.

(REV 8-17-09) (FA 8-24-09) (1-15)

ARTICLE 6-1 is expanded by the following new Subarticles:

6-1.3.3 Lump Sum Project General Requirements: Material is accepted by material sampling and testing requirements for the following work activities: earthwork and related operations, base courses, hot bituminous mixtures, portland cement concrete, and reinforcing steel as stated in 105-2. Fabricated metal acceptance will be in accordance with 105-1.2.3. All other material acceptance will be in accordance with 6-1.

6-1.3.4 Certification on Approved Product List (APL) Products: Submit to the Engineer a notarized manufacturer's certification on each APL product that will be incorporated

in the project. Submit the certification prior to utilization of the material on the project. Each certification will have the manufacturer letterhead, product name, batch number, FPID, Contract Number, category, county, title of certification person and test results in each product listed in the Department Specification. This letter will also provide the following statement: “This product meets the material specifications as provided in the Contract Documents.” Ensure that the date of the manufacturer’s certification is current to the shelf life of the product. This letter will be delivered to the jobsite prior to placement or utilization. Retain test results for a minimum of three years.

6-1.3.5 Certification on all Other Materials Not Specified: Submit to the Engineer a notarized manufacturer’s certification on each product that will be incorporated in the project. Submit the certification prior to utilization on the project. Each certification will have the manufacturer letterhead, identification and type of material, FPID, Contract Number, county, test results of the material and notarized signature from the manufacturer. This letter will also provide the following statement: “This product meets the material specifications as provided in the Contract Documents.” Ensure that the date of the manufacturer’s certification is current to the shelf life of the product. Retain test results for a minimum of three years.

PRODUCTS AND SOURCE OF SUPPLY.

(REV 2-24-15)

SUBARTICLES 6-5.1 and 6-5.2 are deleted.

DISCHARGE TO OR WORK OR STRUCTURES IN NAVIGABLE WATERS OF THE U.S., WATERS OF THE U.S. AND WATERS OF THE STATE.

(REV 7-16-09) (FA 7-30-09) (1-15)

SUBARTICLE 7-2.2 is expanded by the following:

The “State of Florida Department of Environmental Protection (DEP) Generic Permit for Stormwater Discharge from Large and Small Construction Activities” applies to this Contract. Obtain a copy of the permit through the Department’s website and comply with the requirements of the permit. The URL for obtaining a copy of the permit is <http://www.dot.state.fl.us/specificationsoffice/Implemented/URLinSpecs/Files/DEPPermit.pdf>

In accordance with the requirements of the DEP generic permit, accept responsibility for the following:

- (a) Preparation, execution and submission of DEP Generic Permit Notice of Intent (NOI) and payment of associated fee(s)
- (b) Preparation and submission of Erosion Control Plan as outlined in Section 104
- (c) Any Contractor initiated SWPPP modifications
- (d) Performing inspections using a qualified inspector
- (e) Completion of SWPPP construction inspection reports
- (f) Executing associated certification forms provided by the Engineer
- (g) Preparation, execution and submission of Notice of Termination (NOT) of the DEP Generic Permit coverage.

Use the SWPPP Construction Inspection Form provided by the Engineer to report all inspection findings and to document all corrective actions taken as a result of the inspection. Sign each inspection report and submit it weekly to the Engineer.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – OPERATIONS WITHIN THE RAILROAD RIGHT-OF-WAY.

(REV 11-5-10) (FA 11-9-10) (1-15)

ARTICLE 7-11.4 is deleted and the following substituted:

7-11.4 Operations Within Railroad Right of Way:

7-11.4.1 Notification to the Railroad Company: Notify the Engineer as indicated in the Technical Requirements before beginning any operation within the limits of the railroad right of way; any operation requiring movement of employees, trucks, or other equipment across the tracks of the railroad company at other than an established public crossing; and any other work that may affect railroad operations or property.

7-11.4.2 Contractor's Responsibilities: Comply with requirements the Engineer deems necessary in order to safeguard the railroad's property and operations. Specifically, comply with the Operating Rules and Roadway Worker Protection requirements of the Central Florida Rail Corridor (CFRC). The Contractor is responsible for all damages, delays, or injuries and all suits, actions, or claims brought on account of damages or injuries resulting from the Contractor's operations within or adjacent to railroad company right of way.

7-11.4.3 Watchman or Flagging Services: The Department's CFRC Operations and Maintenance Contractor, Bombardier Mass Transit Corporation, will furnish protective services (i.e., watchman or flagging services) to ensure the safety of railroad operations during certain periods of the project. The Contractor will reimburse the Department's CFRC Operations and Maintenance Contractor for the cost thereof. Schedule work that affects railroad operations so as to minimize the need for protective services by the Department's CFRC Operations and Maintenance Contractor.

Submit schedules and schedule changes to the Engineer so the Department can coordinate the scheduling of flagging resources.

INSURANCE.

(REV 2-24-15)

ARTICLE 7-13 is deleted and the following substituted:

7-13 Insurance.

7-13.1 FELA and Workers' Compensation Insurance: If the Federal Employers' Liability Act (FELA) applies to Contractor, then provide coverage in the greater of the amount required by federal law or a limit of not less than \$1,000,000 for all damages arising out of bodily injuries to, or death of, one person and, subject to that limit for each person, a total

limit of \$5,000,000 for all damages arising out of bodily injuries to, or death of, two or more persons in any one occurrence

If or to the extent that FELA does not apply, provide Workers' Compensation Insurance in accordance with Florida's Workers' Compensation law for all employees. If subcontracting any of the work, ensure that the subcontractor(s) have Workers' Compensation Insurance for their employees in accordance with Florida's Workers' Compensation law. If using "leased employees" or employees obtained through professional employer organizations ("PEO's"), ensure that such employees are covered by Workers' Compensation insurance through the PEO's or other leasing entities. Ensure that any equipment rental agreements that include operators or other personnel who are employees of independent Contractors, sole proprietorships or partners are covered by insurance required under Florida's Workers' Compensation law.

7-13.2 Commercial General Liability Insurance: Carry Commercial General Liability insurance providing continuous coverage for all work or operations performed under the Contract. Such insurance shall be no more restrictive than that provided by the latest occurrence form edition of the standard Commercial General Liability Coverage Form (ISO Form CG 00 01) as filed for use in the State of Florida. Cause the Department, and Central Florida Commuter Rail Commission, Volusia County, Seminole County, Orange County, Osceola County, and City of Orlando, each in the State of Florida, to be each made an Additional Insured as to such insurance. Such coverage shall be on an "occurrence" basis and shall include Products/Completed Operations coverage. The coverage afforded to the Department and to each of the other Additional Insureds stated above as an Additional Insured shall be primary as to any other available insurance and shall not be more restrictive than the coverage afforded to the Named Insured. The limits of coverage shall not be less than \$1,000,000 for each occurrence and not less than a \$5,000,000 annual general aggregate, inclusive of amounts provided by an umbrella or excess policy. The limits of coverage described herein shall apply fully to the work or operations performed under the Contract, and may not be shared with or diminished by claims unrelated to the contract. The policy/ies and coverage described herein may be subject to a deductible. Pay all deductibles as required by the policy. No policy/ies or coverage described herein may contain or be subject to a Retention or a Self-Insured Retention. Prior to the execution of the Contract, and at all renewal periods which occur prior to final acceptance of the work, the Department shall be provided with an ACORD Certificate of Liability Insurance reflecting the coverage described herein. The Department shall be notified in writing within ten days of any cancellation, notice of cancellation, lapse, renewal, or proposed change to any policy or coverage described herein. The Department's approval or failure to disapprove any policy/ies, coverage, or ACORD Certificates shall not relieve or excuse any obligation to procure and maintain the insurance required herein, nor serve as a waiver of any rights or defenses the Department may have.

7-13.3 Insurance Required for Construction at Railroads: When the Contract includes the construction of a railroad grade crossing, railroad overpass or underpass structure, or any other work or operations within the limits of the railroad right-of-way, including any encroachments thereon from work or operations in the vicinity of the railroad right-of-way, you shall, in addition to the insurance coverage required pursuant to 7-13.2 above, procure and maintain Railroad Protective Liability Coverage (ISO Form CG 00 35) where the Department is the Named Insured, and Central Florida Commuter Rail Commission, Volusia County, Seminole County, Orange County, Osceola County, and City of Orlando, each in the State of Florida, are

each an Additional Insured, and where the limits are not less than \$2,000,000 combined single limit for bodily injury and/or property damage per occurrence, and with an annual aggregate limit of not less than \$6,000,000. Prior to the execution of the Contract, and at all renewal periods which occur prior to final acceptance of the work, the Department shall be provided with an ACORD Certificate of Liability Insurance reflecting the coverage described herein. The insurance described herein shall be maintained through final acceptance of the work. The Department shall be notified in writing within ten days of any cancellation, notice of cancellation, renewal, or proposed change to any policy or coverage described herein. The Department's approval or failure to disapprove any policy/ies, coverage, or ACORD Certificates shall not relieve or excuse any obligation to procure and maintain the insurance required herein, nor serve as a waiver of any rights the Department may have.

7-13.4 Insurance for Protection of Utility Owners: When the Contract involves work on or in the vicinity of utility-owned property or facilities, the utility shall be added along with the Department, and Central Florida Commuter Rail Commission, Volusia County, Seminole County, Orange County, Osceola County, and City of Orlando, Florida, as an Additional Insured on the policy/ies procured pursuant to subsection 7-13.2 above.

7- 13.5 Insurance by Others: Require every subcontractor or other third party who may have a contract with Contractor and who may require access on the Corridor during construction to obtain and maintain for the duration of such access an insurance policy or policies with coverage that satisfies the conditions stated in paragraphs 7-13.1, 7-13.2, 7-13.3, and 7-13.4, including causing each of the Named Insureds and the Additional Insureds stated in those paragraphs to be Named Insureds and Additional Insureds on such subcontractor and third party policy or policies.

For purposes of this subarticle 7-13.5 the following applies: "Corridor" has the meaning stated in the "INTERLOCAL OPERATING AGREEMENT FOR OPERATION OF THE CENTRAL FLORIDA COMMUTER RAIL SYSTEM By and Between FLORIDA DEPARTMENT OF TRANSPORTATION AND CENTRAL FLORIDA COMMUTER RAIL COMMISSION," Appendix A, at page A-3. That agreement definition mentioned above, and as heretofore amended, is incorporated by reference and may be accessed at www.sunrail.com.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC - WAGE RATES FOR FEDERAL-AID PROJECTS.

(REV 12-21-09) (FA 12-28-09) (1-15)

ARTICLE 7-16 is expanded by the following:

For this Contract, payment of predetermined minimum wages applies.

The U.S. Department of Labor (USDOL) Wage Rates applicable to this Contract are listed in Wage Rate Decision Number(s) FL 223, as modified up through ten days prior to the opening of bids.

Obtain the applicable General Decision(s) (Wage Tables) through the Department's Office of Construction website and ensure that employees receive the minimum compensation applicable. Review the General Decisions for all classifications necessary to complete the project. Request additional classifications through the Engineer's office when needed.

For guidance on the requirements for the payment of wages and benefits and the submittal of certified payrolls, and for general guidance and examples of multiple wage rates when assigned to a Contract, refer to the Department's Office of Construction website.

Contact the Department's Wage Rate Coordinator at (850) 414-4492 if the Department's website cannot be accessed or there are questions.

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – E-VERIFY.
(REV 6-13-11) (FA 6-16-11) (1-15)**

SECTION 7 is expanded by the following new Article:

7-28 E-Verify.

The Contractor shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Contractor during the term of the Contract and shall expressly require any subcontractors performing work or providing services pursuant to the Contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the Contract term.

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC –
SCRUTINIZED COMPANIES.
(REV 6-17-11) (1-15)**

SECTION 7 is expanded by the following new Article:

7-29 Scrutinized Companies.

For Contracts \$1,000,000 and greater, if the Department determines the Contractor submitted a false certification under Section 287.135(5) of the Florida Statutes, or if the Contractor has been placed on the Scrutinized Companies with Activities in the Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, the Department shall either terminate the Contract after it has given the Contractor notice and an opportunity to demonstrate the Department's determination of false certification was in error pursuant to Section 287.135(5)(a) of the Florida Statutes, or maintain the Contract if the conditions of Section 287.135(4) of the Florida Statutes are met.

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – TITLE VI
ASSURANCE – DOT 1050.2, APPENDIX A.**

(REV 11-12-13) (FA 11-26-13) (1-15)

SECTION 7 is expanded by the following new Article:

7-30 Title VI Assurance – DOT 1050.2, Appendix A.

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:

7-30.1 Compliance with Regulations: The Contractor shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the US Department of Transportation (hereinafter, “USDOT”) 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.

7-30.2 Nondiscrimination: The Contractor, with regard to the work performed by it during the Contract, shall not discriminate on the basis of race, color, national origin or sex in the selection and retention of sub-contractors, including procurements 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.

7-30.3 Solicitations for Sub-contractors, including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under sub-contract, including procurements of materials or leases of equipment, each potential sub-contractor or supplier shall be notified by the Contractor of the Contractor’s obligations under this contract and the Regulations relative to nondiscrimination on the basis of race, color, national origin, or sex.

7-30.4 Information and Reports: The Contractor shall provide all information and reports required by the Regulations or directives 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 Florida Department of Transportation or the Federal Highway Administration, Federal Transit Administration, Federal Aviation Administration, and Federal Motor Carrier Safety Administration to be pertinent to ascertain compliance with such Regulations, order and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information the Contractor shall so certify to the Florida Department of Transportation, or the Federal Highway Administration, Federal Transit Administration, Federal Aviation Administration, or Federal Motor Carrier Safety Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

7-30.5 Sanctions for Noncompliance: In the event of the Contractor’s noncompliance with the nondiscrimination provisions of this Contract, the Florida Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration, Federal Transit Administration, Federal Aviation Administration, or Federal Motor Carrier Safety Administration may determine to be appropriate, including, but not limited to:

- a. withholding of payments to the Contractor under the Contract until the Contractor complies, and/or
- b. cancellation, termination or suspension of the Contract, in whole or in part.

7-30.6 Incorporation of Provisions: The Contractor shall include the provisions of the 7-30.1 through 7-30.6 in every sub-contract, 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 sub-contract or procurement as the Florida Department of Transportation or the Federal Highway Administration, Federal Transit Administration, Federal Aviation Administration, or Federal Motor Carrier Safety Administration may direct as a means of enforcing such provisions including sanctions for noncompliance, provided, however, that, in the event a Contractor becomes involved in, or is threatened with, litigation with a sub-contractor or supplier as a result of such direction, the Contractor may request the Florida Department of Transportation to enter into such litigation to protect the interests of the Florida Department of Transportation, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**PROSECUTION OF WORK – REGIONAL DISPUTES REVIEW BOARD.
(REV 1-4-11) (FA 1-21-11) (1-15)**

ARTICLE 8-3 is expanded by the following new Subarticle:

8-3.7 Disputes Review Board: For this Contract, a Disputes Review Board will be available to assist in the resolution of disputes and claims arising out of the work on the Contract.

8-3.7.1 Purpose: The Board will provide special expertise to assist in and facilitate the timely and equitable resolution of disputes and claims between the Department and the Contractor in an effort to avoid construction delay and future claims.

It is not intended that the Department or the Contractor default on their normal responsibility to cooperatively and fairly settle their differences by indiscriminately assigning them to the Board. It is intended that the Board encourage the Department and Contractor to resolve potential disputes or claims without resorting to this alternative resolution procedure.

The Board will be used when normal Department-Contractor dispute or claim resolution is unsuccessful. Either the Department or the Contractor may refer a dispute or claim to the Board. Referral to the Board should be initiated as soon as it appears that the normal dispute resolution effort is not succeeding. Referral to the Board is accomplished by providing a position paper outlining the nature and scope of the dispute or claim and describing the basis for entitlement to the dispute or claim. Only disputes or claims that have been duly preserved under the terms of the Contract as determined by the Board will be eligible to be heard by the Board. Requests for equitable adjustment must be certified as required by 4-3.2. Claims that are referred to the Board must be in compliance with 5-12. It is a condition of this Contract that the parties shall use the Dispute Review Board. The completed DRB hearing of any unresolved disputes or claims is a condition precedent to the Department or the Contractor having the right to initiate arbitration, other alternative resolution procedures, or to file a lawsuit, as provided by law on such unresolved disputes or claims.

The recommendations of the Board will not be binding on either the Department or the Contractor.

The Board will fairly and impartially and without regard to how or by whom they may have been appointed, consider disputes or claims referred to it and will provide written recommendations to the Department and Contractor to assist in the resolution of these disputes or claims.

8-3.7.2 Continuance of Work: During the course of the Disputes Review Board process, the Contractor will continue with the work as directed by the Engineer in a diligent manner and without delay or otherwise conform to the Engineer's decision or order, and will be governed by all applicable provisions of the Contract. Throughout any protested work, the Contractor will keep complete records of extra costs and time incurred. The Contractor will permit the Engineer and Board access to these and any other records needed for evaluating the disputes or claims.

8-3.7.3 Membership: The Disputes Review Board will consist of members pre-selected by the Engineer and the President of the Florida Transportation Builders' Association (FTBA), and posted on the Department's Website.

If during the life of the contract, a Board member has a discussion regarding employment or entered into any agreement for employment after completion of the contract with the Department, the Contractor or any subcontractor or supplier on the project, he/she shall immediately disclose this to the Contractor and the Department and shall be disqualified from serving on the Board.

Once established, the Board will remain active and in full force and effect. If, after the Department has made final acceptance of the project, there are unresolved disputes and claims remaining, the Disputes Review Board shall remain active and in full force and effect until the project is otherwise administratively closed by the Department following final payment so that the Board may continue in operation until all unresolved disputes and claims are resolved.

8-3.7.4 Procedure and Schedules for Disputes Resolution: Disputes and claims will be considered as quickly as possible, taking into consideration the particular circumstances and the time required to prepare detailed documentation. Steps may be omitted as agreed by the Department and the Contractor and the time periods stated below may be shortened in order to hasten resolution.

a. If the Contractor objects to any decision, action or order of the Engineer, the Contractor may file a written protest with the Engineer, stating clearly and in detail the basis for the objection, within 15 days after the event.

b. The Engineer will consider the written protest and make his decision on the basis of the pertinent contract provisions, together with the facts and circumstances involved in the dispute or claim. The Engineer's decision will be furnished in writing to the Contractor within 15 days after receipt of the Contractor's written protest.

c. This decision will be final and conclusive on the subject, unless a written appeal to the Engineer is filed by the Contractor within 15 days of receiving the decision. Should the Contractor preserve its protest of the Engineer's decision, the matter can be referred to the Board by either the Department or the Contractor.

d. Upon receipt by the Board of a written duly preserved protest of a dispute or claim, either from the Department or the Contractor, it will first be decided when to conduct the hearing.

e. Either party furnishing any written evidence or documentation to the Board will furnish copies of such information to the other party a minimum of 15 days prior to the date the Board sets to convene the hearing for the dispute or claim. If the Board requests any

additional documentation or evidence prior to, during, or after the hearing, the Department and/or Contractor will provide the requested information to the Board and to the other party.

f. The Contractor and the Department will each be afforded an opportunity to be heard by the Board and to offer evidence. Neither the Department nor the Contractor may present information at the hearing that was not previously distributed to both the Board and the other party.

g. The Board's recommendations for resolution of the dispute or claim will be given in writing to both the Department and the Contractor, within 15 days of completion of the hearings. In cases of extreme complexity, both parties may agree to allow additional time for the Board to formulate its recommendations. The Board will focus its attention in the written report to matters of entitlement and allow the parties to determine the monetary damages. If both parties request, and sufficient documentation is available, the Board may make a recommendation of monetary damages.

h. Within 15 days of receiving the Board's recommendations, both the Department and the Contractor will respond to the other and to the Board in writing, signifying either acceptance or rejection of the Board's recommendations. The failure of either party to respond within the 15 day period will be deemed an acceptance of the Board's recommendations by that party. If the Department and the Contractor are able to resolve the dispute or claim with or without the aid of the Board's recommendations, the Department will promptly process any required Contract changes.

i. Should the dispute or claim remain unresolved, either party may seek reconsideration of the decision by the Board only when there is new evidence to present. No provisions in this Specification will abrogate the Contractor's responsibility for preserving the request for equitable adjustment in accordance with 4-3.2 or the Contractor's responsibility for preserving a claim filed in accordance with 5-12.

Although both the Department and the Contractor should place great weight on the Board's recommendation, it is not binding. If the Board's recommendations do not resolve the dispute or claim, all records and written recommendations of the Board will be admissible as evidence in any subsequent dispute resolution procedures.

8-3.7.5 Contractor Responsibility: The Contractor shall furnish to each Board member a set of all pertinent documents which are or may become necessary for the Board, except documents furnished by Department, to perform their function. Pertinent documents are any drawings or sketches, calculations, procedures, schedules, estimates, or other documents which are used in the performance of the work or in justifying or substantiating the Contractor's position. A copy of such pertinent documents must also be furnished to the Department.

Except for its participation in the Board's activities as provided in the construction Contract and in this Agreement, the Contractor will not solicit advice or consultation from the Board or any of its members on matters dealing in any way with the project, the conduct of the work or resolution of problems.

8-3.7.6 Department Responsibilities: Except for its participation in the Board's activities as provided in the construction Contract and in this Agreement, the Department will not solicit advice or consultation from the Board or any of its members on matters dealing in any way with the project, the conduct of the work or resolution of problems.

The Department shall furnish the following services and items:

a. Contract Related Documents: The Department shall furnish each Board member a copy of all Contract Documents, supplemental agreements, written instructions

issued by the Department to the Contractor, or other documents pertinent to the performance of the Contract and necessary for the Board to perform their function. A copy of such pertinent documents must also be furnished to the Contractor.

b. Coordination and Services: The Department, in cooperation with the Contractor, will coordinate the operations of the Board. The Department, through the Project Engineer, will arrange or provide conference facilities at or near the Contract site and provide secretarial and copying services.

8-3.7.7 Limitation for Referral of Disputes or Claims to the Board: Any disputes or claims that were not resolved prior to Final Acceptance of the project pursuant to 5-11 must be referred to the Board within 90 calendar days after Final Acceptance for projects with an original Contract amount of \$3,000,000 or less, and within 180 calendar days after Final Acceptance on projects with an original Contract amount greater than \$3,000,000. Only duly preserved disputes or claims will be eligible to be heard by the Board. Failure to submit all disputes or claims to the Board within aforementioned timeframe after Final Acceptance constitutes an irrevocable waiver of the Contractor's dispute or claim.

8-3.7.8 Basis of Payment: A per hearing cost of \$8,000 has been established by the Department for providing compensation for all members of the Dispute Review Board for participation in an actual hearing. The Board chairman will receive \$3,000 for participation in the hearing while the remaining two members will receive \$2,500 each. The Department and the Contractor will equally provide compensation to the Board for participation in an actual hearing. The Department will compensate the Contractor \$4,000 as its contribution to the hearing cost. Such payment will be full and complete compensation to the Board members for all expenses related to the hearing. This includes travel, accommodations, meals, pre- and post- hearing work, review of position papers and any rebuttals, conducting the hearing, drafting and issuance of recommendations, readdressing any requests for clarification. It is not intended for hearings to last longer than a single day, however, in some cases they may. Any additional time and/or compensation for a hearing would only be allowed upon prior written approval of the Department and the Contractor. If an additional day(s) is granted for the hearing, it will be at \$3,300 per day, payment of which is equally split between the Department and the Contractor. Payment shall be made by issuing a work order against contingency funds set aside for this Contract.

The Department will prepare and mail minutes and progress reports, will provide administrative services, such as conference facilities and secretarial services, and will bear the cost of these services. If the Board desires special services, such as legal consultation, accounting, data research, and the like, both parties must agree, and the costs will be shared by them as mutually agreed.

PROSECUTION AND PROGRESS.

(REV 8-1-00) (1-15)

SUBARTICLE 8-4.1. The fifth paragraph is deleted.

SUBARTICLE 8-7.3.1 is deleted and the following substituted:

8-7.3.1 Increased Work: The Department may grant an extension of Contract Time when it increases the Contract amount due to adding new work or providing for unforeseen work. The Department will base the consideration for granting an extension of Contract Time on the extent that the time normally required to complete the additional designated work delays the Contract completion schedule.

COMPUTATION OF CONTRACT TIME.

(REV 1-10-15)

SUBARTICLE 8-7.1 is deleted and the following is substituted:

8-7.1 General: Perform the contracted work fully, entirely, and in accordance with the Contract Documents within the Contract Time specified in the Agreement, or as may be extended in accordance with the provision herein below.

The Department considers in the computation of the allowable Contract Time the effect that utility relocation and adjustments have on job progress and the scheduling of construction operations required in order to adequately maintain traffic, as detailed in the Technical Requirements or as scheduled in the Special Provision

SUBARTICLE 8-7.2 is deleted and the following is substituted:

8-7.2 Date of Beginning of Contract Time: The date on which Contract Time begins is either (1) the date on which the Contractor actually begins work, or (2) the date for beginning the charging of Contract Time as set forth in the Agreement; whichever is earlier.

LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE THE WORK.

(REV 2-24-15)

SUBARTICLE 8-10.1 is deleted and the following is substituted:

8-10.1 Requirements Pertaining to Liquidated Damages: The Contractor shall pay liquidated damages to the Department for any failure of the Contractor to complete the work within the required Contract Time.

SUBARTICLE 8-10.2 is deleted and the following is substituted:

8-10.2 Amount of Liquidated Damages: Applicable liquidated damages are the amounts established in the following schedule:

Original Contract Amount Daily Charge Per Calendar Day

\$50,000 and under.....	\$2,289
Over \$50,000 but less than \$250,000.....	\$2,344
\$250,000 but less than \$500,000.....	\$2,433
\$500,000 but less than \$2,500,000.....	\$2,724
\$2,500,000 but less than \$5,000,000.....	\$3,107
\$5,000,000 but less than \$10,000,000.....	\$3,407
\$10,000,000 but less than \$15,000,000.....	\$3,800
\$15,000,000 but less than \$20,000,000.....	\$4,041
\$20,000,000 and over.....	\$4,992 plus 0.000025 of any amount over \$20 million (Round to nearest whole dollar)

SUBARTICLE 8-10.4 is deleted and the following is substituted:

8-10.4 Conditions under which Liquidated Damages are Imposed: If the Contractor or, in case of his default, the surety fails to complete the work within the time stipulated in the Contract, or within such extra time that the Department may have granted then the Contractor or, in case of his default, the surety shall pay to the Department, not as a penalty, but as liquidated damages, the amount so due as provided in 8-10.2.

ARTICLE 8-10 is expanded by the following new Subarticle:

8-10.8 Liquidated Damages for Missed Trips: The Contractor shall be assessed liquidated damages of \$900 for each missed trip. A missed trip is a daily scheduled one-way trip that does not start or complete the trip as published in the schedule, but is a result of circumstances under the Contractor’s control. These damages are mutually exclusive from and in addition to the damages associated with failure of the Contractor to complete the work within the required Contract Time.

**PROSECUTION AND PROGRESS
(REV 2-24-15)**

SECTION 8 is expanded by the following new Article:

8-13 Fines and Penalties.

Any and all fines or penalties assessed against the Department due to train delays, as described in the CENTRAL FLORIDA OPERATING AND MANAGEMENT AGREEMENT (CFOMA), between the State of Florida Department of Transportation and CSX Transportation Inc., and the NATIONAL RAILROAD PASSENGER CORPORATION and the Florida Department of Transportation, which are a direct result of construction by the Contractor are the Contractor’s payment responsibility. The Department has the right to apply, as payment of such fines and penalties, any money the Department owes the Contractor.

MEASUREMENT AND PAYMENT.

(REV 4-9-14) (FA 4-29-14) (1-15)

SUBARTICLE 9-1.3 is deleted and the following substituted:

9-1.3 Determination of Pay Reduction: In measurement of areas of work, where pay reductions are to be assessed, the Engineer will use the lengths and/or widths in the calculations based upon the station to station dimensions actually constructed within the limits designated by the Engineer; or the final dimensions measured along the final surface of the completed work within the neat lines shown in the Contract Documents or designated by the Engineer. The Engineer will use the method or combination of methods of measurement which will reflect with reasonable accuracy, the actual surface area of the finished work as the Engineer determines.

Failure on the part of the Contractor to construct any item of work to plan or authorized dimensions within the Specification tolerances will result in: reconstruction to acceptable tolerances at no additional cost to the Department; acceptance at no pay; or, acceptance at reduced pay, all at the discretion of the Engineer.

When acceptance at no pay occurs for any material not listed in 9-2, the Engineer will apply a reduction in payment for the material in question based on the schedule of values submitted under this contract.

ARTICLE 9-2 is deleted and the following substituted:

9-2 Scope of Payments.

9-2.1 Items Included in Payment: Accept the compensation as provided in the Contract Documents as full payment for furnishing all materials and for performing all work contemplated and embraced under the Contract; also for all loss or damage arising out of the nature of the work or from the action of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its final acceptance; also for all other costs incurred under the provisions of Division I.

The Contract Lump Sum Price will include overhead, profits, and direct and indirect costs required to complete the project except as described below.

9-2.1.1 Fuels: On Contracts with an original Contract Time in excess of 120 calendar days, the Department will make price adjustments on each applicable progress estimate to reflect increases or decreases in the price of gasoline and diesel from those in effect during the month in which bids were received. The Contractor will not be given the option of accepting or rejecting these adjustments. Price adjustments for these fuels will be made only when the current fuel price (CFP) varies by more than 5% from the price prevailing in the month when bids were received (BFP), and then only on the portion that exceeds 5%.

The Contractor will certify the number of gallons of fuel (gasoline and/or diesel) used on this Contract during the period represented by each invoice.

The Department will determine the API for each month by averaging quotations in effect on the first day of the month at all terminals that could reasonably be expected to furnish fuel to projects in the State of Florida.

The API will be available on the State Construction Office website before the 15th of each month at the following URL:

<http://www.dot.state.fl.us/construction/fuel&Bit/Fuel&Bit.shtm>.

Payment on progress estimates will be adjusted to reflect adjustments in the prices for fuel in accordance with the following:

\$ Adjustment = (ID)(gallons)

Where ID = Index Difference = [CAPI - 0.95(BAPI)] when the API has decreased between the month of bid and month of this progress estimate.

Where ID = Index Difference = [CAPI - 1.05(BAPI)] when the API has increased between the month of bid and month of this progress estimate.

Gallons will be derived only from the established Standard Fuel Factor list posted on the State Construction Office website at the following URL:

<http://www.dot.state.fl.us/construction/fuel&Bit/Fuel&Bit.shtm>.

The Department will provide a computer application that will calculate and print the gallons of gasoline and/or diesel for the items that these factors represent. The Contractor will attach this worksheet and record these gallons on the Certified Invoice as required in 9-11.4.

Payment will be based on the quantities shown on the Contractor's Invoice on all items for which established standard fuel factors are posted on the State Construction Office website at the following URL:

<http://www.dot.state.fl.us/construction/fuel&Bit/Fuel&Bit.shtm>.

Payment will be made on the current progress estimate to reflect the index difference at the time work was performed.

Adjustments will be paid or charged to the Prime Contractor only. Any Contractor receiving an adjustment under this provision shall distribute the proper proportional part of such adjustment to subcontractors who perform applicable work.

9-2.2.6 Adjustment to the Lump Sum Payment for Deleted Items of Work:

When items of work are shown in the Contract Documents to be constructed or installed and due to actual field conditions, it is determined by the Engineer that the items are not needed, a negative adjustment to the Contract will be made. The negative adjustment will be based on the actual cost of the items being deleted less all costs incurred prior to the date the Engineer determined the items are not needed and the Contractor will retain ownership. The negative adjustment will be processed in accordance with 4-3.2.

ARTICLE 9-3 is deleted.

SUBARTICLE 9-5.5.2 is deleted and the following substituted:

9-5.5.2 Partial Payment Amounts: The following partial payment restrictions apply:

(1) Partial payments less than \$5,000 for any one month will not be processed.

(2) Partial payment will not be made for aggregate and base course material received after paving or base construction operations begin except when a construction sequence designated by the Department requires suspension of paving and base construction after the initial paving operations, partial payments will be reinstated until the paving and base construction resumes.

SECTION 9 is expanded by the following new Article:

9-11 Submittals.

9-11.1 Submittal Instructions: The Contractor will prepare a monthly estimate for each project in the Contract. Submit the Contractor's monthly estimate to the Engineer. The Engineer will not pay for any item of work until the Contractor's monthly estimate is approved.

9-11.2 Schedule of Values: Within 21 calendar days after contract award or at the preconstruction conference, whichever is earlier, prepare and submit a schedule of values to the Engineer for approval prior to invoicing. Assign the schedule of values to the scheduled work activities in the project schedule with the total being the lump sum contract amount.

The schedule of values will be the basis for determining monthly payments. Quantities will be compared with the project schedule to determine the percentage earned. The percentage shall be that portion of the work completed as compared to the total work contracted.

9-11.3 Contractor's Monthly Estimate: The Contractor must make a request for payment by submitting a monthly estimate, no later than 12 O'clock noon, Monday, after the estimate cut-off date or as directed by the Engineer, based on the amount of work done or completed. The Contractor's monthly estimate must consist of the following:

(a) Contract Number, Financial Project Identification Number, Estimate Number, Monthly Estimate Date and the period that the monthly estimate represents.

(b) The basis for arriving at the amount of the monthly estimate including approximate quantities of work completed, less payments previously made and less an amount previously retained or withheld.

(c) Contract Summary showing the percentage of dollar value of completed work based on the present Contract amount and the percentage of days used based on the present Contract Days.

(d) Certify the number of gallons of gasoline used during the monthly estimate period.

(e) Certify the number of gallons of diesel used during the monthly estimate period.

(f) Certify the number of gallons of bituminous material used during the monthly estimate period.

(g) Certify weight of steel for indexed items.

9-11.4 Payment to the Contractor: Upon receipt of the Contractor's monthly estimate and approval by the Engineer, payment will be made, less an amount retained or withheld per provisions included in the Contract. The monthly payments will be approximate only and will be subject to reduction for overpayments or increase for underpayments on preceding payments to the Contractor and to correction in the subsequent estimates and the final estimate and payment process.

SUPPLEMENTAL SPECIFICATIONS

102 MAINTENANCE OF TRAFFIC.
(REV 10-28-14) (FA 11-6-14) (1-15)

SUBARTICLE 102-3.2 is deleted and the following substituted:

102-3.2 Worksite Traffic Supervisor: Provide a worksite traffic supervisor in accordance with Section 105 with all equipment and materials needed to set up, take down, maintain traffic control, and handle traffic-related situations.

The worksite traffic supervisor is to perform the following duties:

1. On site direction of all traffic control on the project.
2. Is on site during all set up and take down, and performs a drive through inspection immediately after set up.
3. Is on site during all nighttime operations ensuring proper MOT.
4. Immediately corrects all safety deficiencies and corrects minor deficiencies that are not immediate safety hazards within 24 hours.
5. Is available on a 24 hour per day basis and present at the site within 45 minutes after notification of an emergency situation and is prepared to respond to repair the work zone traffic control or to provide alternate traffic arrangements.
6. Conducts daily daytime and weekly nighttime inspections of projects with predominately daytime work activities, and daily nighttime and weekly daytime inspections of projects with predominantly nighttime work activities of all traffic control devices, traffic flow, pedestrian, bicyclist, and business accommodations.

Advise the project personnel of the schedule of these inspections and give them the opportunity to join in the inspection as is deemed necessary. Pedestrians are to be accommodated with a safe, accessible travel path around work sites separated from mainline traffic in compliance with the Americans with Disabilities Act (ADA) Standards for Transportation Facilities. Maintain existing or detour bicycle facilities satisfactorily throughout the project limits. Existing businesses in work areas are to be provided with adequate entrances for vehicular and pedestrian traffic during business hours.

The Department may disqualify and remove from the project a worksite traffic supervisor who fails to comply with the provisions of this Section. The Department may temporarily suspend all activities, except traffic, erosion control and such other activities that are necessary for project maintenance and safety, for failure to comply with these provisions.

SUBARTICLE 102-6.2 is deleted and the following substituted:

102-6.2 Construction: Plan, construct, and maintain detours for the safe passage of traffic in all conditions of weather. Provide the detour with all facilities necessary to meet this requirement. Where pedestrian facilities are detoured, blocked or closed during the work, provide safe alternate accessible routes through or around the work zone meeting the requirements of the ADA Standards for Transportation Facilities.

When the Plans call for the Department to furnish detour bridge components, construct the pile bents in accordance with the Plans, unless otherwise authorized by the Engineer.

Provide two Contractor representatives, who will be directly involved in the erection of Department-owned temporary bridging, to attend a mandatory one-day training

session to be conducted at the Department's storage facility. No bridging will be released to the Contractor prior to the completion of this training.

Submit a letter with the following: company name, phone number, office address, project contact person, names of the representatives who will attend the training described above, project number, detour bridge type, bridge length, span length, location and usage time frames, to the Engineer at least 30 calendar days before the intended pick-up date, to obtain the storage facility location and list of components for the project. Upon receipt of letter, the Engineer will, within 10 calendar days provide an approved material list to the Contractor and the appropriate Department storage yard.

Provide a letter with an original company seal, identifying the representative with authority to pick up components, to the Engineer at least 10 calendar days before the proposed pick-up date. The Department is not obligated to load the bridge components without this notice. Take responsibility and sign for each item loaded at the time of issuance.

Provide timber dunnage, and transport the bridge components from the designated storage facility to the job site. Unload, erect, and maintain the bridge, then dismantle the bridge and load and return the components to the designated storage facility.

Notify the Engineer in writing at least 10 calendar days before returning the components. Include in this notice the name of the Contractor's representative authorized to sign for return of the bridge components. The yard supervisor is not obligated to unload the bridge components without this notice.

The Department will provide equipment and an operator at the Department's storage facility to assist in loading and unloading the bridge components. Furnish all other labor and equipment required for loading and unloading the components.

The Department's representative will record all bridge components issued or returned on the Detour Bridge Issue and Credit Ticket. The tickets must be signed by a Department and a Contractor representative, after loading or unloading each truck to document the quantity and type of bridging issued or returned.

Bind together all bridge components to be returned in accordance with the instructions given by the storage facility. The yard supervisor will repack components that are not packed in compliance with these instructions. Upon request, written packing instructions will be made available to the Contractor, before dismantling of the bridge for return to the Department's storage facility.

Assume responsibility for any shortage or damage to the bridge components. Monies due the Contractor will be reduced at the rate of \$35.00 per hour plus materials for repacking, repairs or replacement of bridge components.

The skid resistance of open steel grid decking on the detour bridge may decrease gradually after opening the bridge to traffic. The Department will furnish a pneumatic floor scabbler machine for roughening the roadway surface of the detour bridge decking. Provide an air compressor at the job site with 200 cubic feet per minute capacity, 90 psi air pressure for the power supply of the machine, and an operator. Transport the scabbler machine to and from the Department's structures shop. Repair any damage to the scabbler machine caused by operations at no expense to the Department. Perform scabbling when determined necessary by the Engineer. The Department will pay for the cost of scabbling as Unforeseeable Work in accordance with 4-4.

Return the bridge components to the designated storage facility beginning no later than 10 calendar days after the date the detour bridge is no longer needed, the date the new

bridge is placed in service, or the date Contract Time expires, whichever is earliest. Return the detour bridging at an average of not less than 200 feet per week. Upon failure to return the bridge components to the Department within the time specified, compensate the Department for the bridge components not returned at the rate of \$5.00 per 10 feet, per day, per bridge, for single lane; and \$10.00 per 10 feet, per day, per bridge, for dual lane until the bridge components are returned to the Department.

SUBARTICLE 102-9.1 is deleted and the following substituted:

102-9.1 Installation and Maintenance: Install and maintain temporary traffic control devices as detailed in the Plans, Index 600 of the Design Standards and when applicable, in accordance with the approved vendor drawings, as provided on the Department's Approved Product List (APL). Erect the required temporary traffic control devices to prevent any hazardous conditions and in conjunction with any necessary traffic re-routing to protect the traveling public, workers, and to safeguard the work area. Use only those devices that are on the APL. Immediately remove or cover any devices that do not apply to existing conditions.

All temporary traffic control devices must meet the requirements of National Cooperative Highway Research Program Report 350 (NCHRP 350) or the Manual for Assessing Safety Hardware 2009 (MASH) and current FHWA directives. Manufacturers seeking evaluation must furnish certified test reports showing that their product meets all test requirements set forth by NCHRP 350 or the MASH. Manufacturers seeking evaluation of Category I devices for inclusion on the APL shall include the manufacturer's self-certification letter. Manufacturer's seeking evaluation of Category II and Category III devices for inclusion on the APL shall include the FHWA WZ numbered acceptance letter with attachments and vendor drawings of the device in sufficient detail to enable the Engineer to distinguish between this and similar devices. For devices requiring field assembly or special site preparation, vendor drawings shall include all field assembly details and technical information necessary for proper application and installation. Vendor drawings for Category III devices must be signed and sealed by a Professional Engineer registered in the State of Florida. Manufacturers seeking evaluation of Category IV devices for inclusion on the APL must comply with the requirements of Section 990 and include detailed vendor drawings of the device along with technical information necessary for proper application, field assembly and installation.

The APL number is to be permanently marked on the device at a readily visible location. Sheeting used on devices is exempt from this marking requirement.

Notify the Engineer of any scheduled operation that will affect traffic patterns or safety sufficiently in advance of commencing such operation to permit review of the plan for the proposed installation of temporary traffic control devices.

Assign an employee the responsibility of maintaining the position and condition of all temporary traffic control devices throughout the duration of the Contract. Keep the Engineer advised at all times of the identification and means of contacting this employee on a 24 hour basis.

Maintain temporary traffic control devices in the correct position, properly oriented, clearly visible and clean, at all times. All traffic control devices must meet acceptable standards as outlined in American Traffic Safety Services Association (ATSSA) "Quality Guidelines for Temporary Traffic Control Devices and Features". Immediately repair, replace or clean damaged, defaced or dirty devices.

SUBARTICLE 102-9.2 is deleted and the following substituted:

102-9.2 Work Zone Signs: Furnish, install, maintain, remove and relocate signs in accordance with the Plans and Design Standards, Index No. 600. Use signs that meet the material and process requirements of Section 994. Use Type IV sheeting for fluorescent orange work zone signs. Roll-up signs must meet the requirements of Type VI sheeting. Use Type IV or Type XI sheeting for all other work zone signs. Attach the sign to the sign support using hardware meeting the manufacturer's recommendations on the APL vendor drawings or as specified in the Design Standards.

102-9.2.1 Post Mounted Signs: Meet the requirements of 990-8.

102-9.2.2 Portable Signs: Use only approved systems, which includes sign stands and attachment hardware (nuts, bolts, clamps, brackets, braces, etc.), meeting the vendor requirements specified on the APL drawings. Provide Federal Highway Administration's (FHWA) accepted sign substrate for use with accepted sign stands on the National Highway System (NHS) under the provisions of the NCHRP Report 350 "Recommended Procedures for the Safety Performance Evaluation of Highway Features."

102-9.2.3 Barrier Mounted Signs: If post mounting criteria cannot be achieved in accordance with Design Standards, Index No. 600 and a barrier or traffic railing exists, use temporary sign criteria provided in Design Standards, Index No. 11871.

SUBARTICLE 102-9.5 is deleted and the following substituted:

102-9.5 Channelizing Devices: Furnish and install channelizing devices in accordance with the Plans and Design Standards.

102-9.5.1 Retroreflective Collars for Traffic Cones: Use collars for traffic cones listed on the APL that meet the requirements of Section 990. Use cone collars at night designed to properly fit the taper of the cone when installed. Place the upper 6 inch collar a uniform 3-1/2 inches distance from the top of the cone and the lower 4 inch collar a uniform 2 inches distance below the bottom of the upper 6 inch collar. Collars are to be capable of being removed for temporary use or attached permanently to the cone in accordance with the manufacturer's recommendations. Provide a white sheeting having a smooth outer surface and that has the property of a retroreflector over its entire surface.

102-9.5.2 Barrier Wall (Temporary): Furnish, install, maintain, remove and relocate a temporary barrier wall in accordance with the Plans. Temporary concrete barrier wall used on roadway sections must comply with Design Standards, Index Nos. 412, 415 or 414. Temporary concrete barrier wall used on bridge and wall sections, shall comply with Design Standards, Index No 414. Temporary water filled barrier wall used on roadway sections shall meet the NCHRP Report 350 criteria or the MASH and be listed on the APL. Barriers meeting the requirements of Design Standards, Index Nos. 412, 415 or temporary water filled barriers on the APL will not be accepted as an alternate to barriers meeting the requirements of Design Standards, Index No. 414.

102-9.5.3 Glare Screen (Temporary): Use temporary glare screens listed on the APL that meet the requirements of Section 990. Furnish, install, maintain, remove and relocate

glare screen systems in conjunction with temporary barrier wall at locations identified in the Plans.

The anchorage of the glare screen to the barrier must be capable of safely resisting an equivalent tensile load of 600 pounds per foot of glare screen, with a requirement to use a minimum of three fasteners per barrier section.

When glare screen is utilized on temporary barrier wall, barrier delineators will not be required.

102-9.5.4 Longitudinal Channelizing Devices (LCDs): Furnish LCDs in accordance with the Plans and Design Standards. LCDs are categorized as vehicular or pedestrian and shall be interlocked. For LCDs requiring internal ballasting, an indicator that clearly identifies the proper ballast level will be required.

Use alternating orange and white pattern for solid color vehicular LCDs. Vehicular LCDs may be substituted for drums, vertical panels, or barricades.

SUBARTICLE 11.3 is deleted and the following substituted.

102-11.3 Special Detours: When a diversion or lane shift that requires temporary pavement is shown in the Plans, the work of constructing, maintaining, and subsequently removing such detour facilities will be paid for as a special detour. However, traffic control devices, warning devices, barriers, signing, and pavement markings for special detours will be paid for separately.

When the Plans show more than one special detour, each special detour will be paid for separately, at the Contract lump sum price for each.

SUBARTICLE 102-11.5 is deleted and the following substituted:

102-11.5 Work Zone Signs: The number of temporary post-mounted signs (temporary regulatory, warning and guide) certified as installed/used on the project will be paid for at the Contract unit price for work zone signs. When multiple signs are located on single or multiple posts, each sign panel will be paid individually. Signs greater than 20 square feet and detailed in the Plans will be paid for under Lump Sum MOT.

Temporary portable signs (excluding mesh signs) and vehicular mounted signs will be included for payment under work zone signs, only if used in accordance with the Design Standards.

The number of temporary barrier mounted signs (temporary regulatory, warning and guide) certified as installed/used on the project will be paid for at the Contract unit price for barrier mounted work zone signs.

SUBARTICLE 102-11.8 is deleted and the following substituted:

102-11.8 Channelizing Devices: The number of drums, vertical panels, and Type I, Type II, Type III, or direction indicator barricades, certified as installed/used on the project meeting the requirements of Design Standards, Index No. 600 and have been properly maintained will be paid for at the Contract unit prices for channelizing device. Payment for

vehicular LCDs will be paid as the length in feet installed divided by the device spacing for barricades, vertical panels, and drums and certified as installed/used on the project meeting the requirements of Design Standards, Index No. 600 and have been properly maintained will be paid for at the Contract unit price for channelizing device. Payment will be made for each channelizing device that is used to delineate trailer mounted devices. Payment will be made for channelizing devices delineating portable changeable message signs during the period beginning 14 working days before Contract Time begins as authorized by the Engineer. Pedestrian LCDs will be paid at the Contract unit price per foot.

SUBARTICLE 102-11.22 is deleted and the following substituted:

102-11.22 Temporary Lane Separator: The quantity of temporary lane separator to be paid for will be field measure, in feet, including drainage gaps, completed and accepted.

SUBARTICLE 102-13.23 is deleted and the following substituted:

102-13.23 Payment Items: Payment will be made under:

- Item No. 102- 1- Maintenance of Traffic - lump sum.
- Item No. 102- 2- Special Detour - lump sum.
- Item No. 102- 3- Commercial Material for Driveway Maintenance - per cubic yard.
- Item No. 102- 14- Traffic Control Officer - per hour.
- Item No. 102- 60- Work Zone Sign - per each per day.
- Item No. 102- 61- Business Sign - each.
- Item No. 102- 62- Barrier Mounted Work Zone Sign – per each per day
- Item No. 102- 71- Barrier Wall - per foot.
- Item No. 102- 75- Temporary Lane Separator - per foot
- Item No. 102- 94- Glare Screen - per foot.
- Item No. 102- 73- Guardrail (Temporary) - per foot.
- Item No. 102- 74- Channelizing Devices - per each per day.
- Item No. 102- 76- Arrow Board - per each per day.
- Item No. 102- 77- High Intensity Flashing Lights (Temporary - Type B) - per each per day.
- Item No. 102- 78- Temporary Retroreflective Pavement Markers - each.
- Item No. 102- 81- Crash Cushion (Gating) (Temporary) - per location.
- Item No. 102- 89- Crash Cushion (Redirective) (Temporary) - per location.
- Item No. 102- 99- Portable Changeable Message Sign (Temporary) - per each per day.
- Item No. 102-104- Temporary Signalization and Maintenance - per intersection per day.
- Item No. 102-107- Temporary Traffic Detection and Maintenance - per intersection per day.
- Item No. 102-150- Portable Regulatory Sign - per each per day.
- Item No. 102-150- Radar Speed Display Unit - per each per day.

Item No. 102-909-	Temporary Raised Rumble Strips - per day.
Item No. 102-911-	Removable Tape (White/Black) - per foot.
Item No. 102-912-	Removable Tape (Yellow) - per foot.
Item No. 710-	Painted Pavement Markings.
Item No. 711-	Thermoplastic Traffic Stripes and Markings.

471 FIBER REINFORCED POLYMER FENDER SYSTEM.
(REV 8-15-14) (FA 9-10-14) (1-15)

SECTION 471 is deleted and the following substituted:

SECTION 471
FIBER REINFORCED POLYMER FENDER SYSTEMS

471-1 Description.

Construct fiber reinforced polymer (FRP) fender systems using components in accordance with this Section and the Plans.

Develop and provide a design for the FRP fender system in accordance with 471-4.2.

471-2 Materials.

Meet the following requirements:

Fiber reinforced polymer composites (Piles, Wales, Spacer-blocks, Decking & Splice Plates) Section 973

Concrete used to fill hollow piles Section 347

Use only SAE Type 316 stainless steel metallic fastening and connection hardware.

471-3 Product Acceptance.

Obtain fender system components from a producer that is currently on the list of Producers with Accepted Quality Control (QC) Program for Fiber Reinforced Polymer Composites. Producers seeking inclusion on the list shall meet the requirements of 105-3.

Provide the Engineer with a manufacturer's certification in accordance with Section 6 that the fender system components meet the material requirements of Section 973.

471-4 Shop Drawings and Design Calculations.

471-4.1 Shop Drawings: Submit shop drawings in accordance with Section 5. Include the following, as a minimum, in the shop drawings:

- (a) General notes.
- (b) Energy absorption capacity (EAC) of the fender system (in units of kip-ft).
- (c) Fender system deflection (in units of feet).
- (d) Minimum pile tip elevation.
- (e) The name and address of the manufacturer for each component, including the physical address where the fabrication is performed.
- (f) Pile configuration and layout based on, and compatible with, the geometry shown in the Plans.

(g) Pile and wale material properties including fill material used for hollow piles and required admixtures. If the material properties are defined in the Standard Specifications, a reference to the applicable Sections.

(h) Pile and wale section properties used in the design (e.g., ultimate moment capacity, stiffness, etc.).

(i) Pile-to-wale and pile-to-pile connection details.

(j) Sections, views, details and dimensions required to successfully complete the construction of the fender system.

(k) Any supplier required limitations regarding pile installation techniques or other typical construction practices permitted by Section 455 (e.g., full length pile driving versus jetting/driving combination).

471-4.2 Design Calculations: Design fender piling, wales and connections in accordance with the latest edition of the FDOT Structures Design Guidelines (SDG) and the FDOT Structures Detailing Manual based on the desired energy capacity rating. Design calculations may be either by hand or by a computer program with hand calculations verifying the program output.

Provide the following design information:

(a) Written certification that the fender system meets the requirements of this Section.

(b) A report from an independent lab verifying the flexural properties of the piling as derived from ASTM D6109 using characteristic values in accordance with ASTM D7290 with the following modifications:

1. Supports shall be located to provide a minimum span to depth ratio of 16:1 and a maximum span to depth ration of 20:1.

2. Three-point bending tests are acceptable.

3. Test a minimum of 10 samples.

(c) Detailed material specifications showing material type, quality, certifications, acceptance and rejection criteria and placement procedures.

(d) Other information pertinent to the design and performance of the fender system as necessary.

471-5 Design Criteria.

471-5.1 Wales: Wales must meet the following minimum design criteria:

(a) Be structurally continuous across a minimum of two spans.

(b) Recess all attachment hardware.

(c) Provide sufficient creep resistance to prevent loosening of attachments over time.

(d) Provide adequate stiffness to distribute vessel impact loading so as to achieve the maximum efficiency of the system.

(e) For hollow wale sections, provide a minimum bolt pull-through and crushing resistance greater than or equal to the maximum connection reaction force. Pull-through and crushing resistance is defined at the point of first yield and/or the load at which an audible crack occurs.

(f) Hollow wale sections must be capable of resisting crushing loads perpendicular to the axis of the member as required for the impact force applied to fender in the analysis used to determine the associated energy absorption capacity of the system. This impact

force may be equally distributed between two lines of wales and over a longitudinal distance of five feet.

(g) Provide black wales unless otherwise shown in the Plans.

(h) Wales must meet the minimum requirements in Section 973, Table 5-1.

471-5.2 Piles: Piles must meet the following minimum design criteria:

(a) Recess all attachment hardware.

(b) Provide sufficient creep resistance to prevent loosening of attachments over time.

(c) For hollow pile sections, provide a minimum bolt pull-through and crushing resistance greater than or equal to the maximum connection reaction force. Pull-through and crushing resistance is defined at the point of first yield and/or the load at which first crack occurs.

(d) Provide black piles unless otherwise shown in the Plans.

471-6 Storage, Handling and Installation.

Unless otherwise shown in the manufacturer's approved field construction manual, use the following construction details.

Protect materials at all times against exposure to extreme heat or impact. Transport products in a manner that will minimize scratching or damage to the outer surfaces, stack on dunnage above ground so that it may be easily inspected and store in a manner that will avoid damage. Handle and lift products with nylon slings. Do not use sharp instruments in handling the product. Products damaged in shipping or handling will be rejected.

Products containing cracks in the reinforcing rods, or cracks or splits (partial or full depth) across the section will be rejected.

Cut, bevel, drill, countersink and otherwise install products in accordance with the manufacturer's recommendations. Set all material accurately to required levels and lines, with members plumb and true and accurately cut and fitted. Securely attach all materials to substrate by anchoring and fastening as shown in the shop drawings. Perform all cutting and drilling in a manner that allows for the collection of all debris and dispose of properly.

Install piles in accordance with Section 455.

471-7 Method of Measurement.

The quantity for the entire fender system to be paid will be lump sum.

471-8 Basis of Payment.

471-8.1 Price and payment for fender system will be full compensation for the work specified in this Section including all labor, equipment and materials required to furnish and install the piles to the pile cut-off elevations shown in the Plans, and all wales, dimensional lumber, material, storage costs, disposal of unused material and waste, transportation costs, fasteners and other necessary items required for completing the work.

Payment will be made under:

Item No. 471-3 Fender System, Polymeric – LS.

649 GALVANIZED STEEL POLES, MAST ARMS AND MONOTUBE ASSEMBLIES.

(REV 8-20-14) (FA 9-4-14) (1-15)

SECTION 649 is deleted and the following substituted:

**SECTION 649
GALVANIZED STEEL POLES, MAST
ARMS AND MONOTUBE ASSEMBLIES**

649-1 Description.

The work in this Section consists of furnishing and installing galvanized steel strain poles, galvanized steel mast arms, galvanized steel monotube assemblies, and galvanized steel CCTV poles in accordance with the details shown in the Contract Documents, subject to a five year warranty period as defined herein. The warranty period will apply only when poles, mast arms or steel monotube assemblies are painted as called for in the Contract Documents.

649-2 Materials.

649-2.1 Pole Assembly: Use pole assemblies as shown in the Design Standards when standard mast arm assemblies, standard strain pole assemblies, or standard steel CCTV pole assemblies are required by the Contract Documents.

Obtain poles, mast arm, monotube assemblies from a fabrication facility that is listed on the Department's list of Metal Producers with an Accepted Quality Control Program, meeting the requirements of 105-3.

Use coating products meeting the requirements of Section 975.

Use grouts meeting the requirements of Section 934 and listed on the Department's Approved Product List (APL).

Use water meeting the requirements of Section 923.

Use membrane curing compounds meeting the requirements of Section 925.

649-2.2 Camera Lowering Device: Meet the requirements of 641-2.2.

649-3 Fabrication.

Fabricate poles, mast arm, and monotube assemblies and miscellaneous hardware in accordance with the Contract Documents. Cut all materials to the final dimensions and complete all welding prior to galvanizing. Obtain all components for individual strain poles, mast arm and monotube assemblies from the same fabricator. Obtain the luminaire and bracket from other sources, when necessary.

Affix an aluminum identification tag which will be visible from the handhole or located inside the terminal box containing the information described in the Design Standards.

Before shipping, assemble mast arm and monotube assemblies including luminaire and bracket, to assure proper fit. The mast arm and monotube assemblies may be separated for shipment.

Ensure all components are protected from damage during shipping and handling by wrapping or other effective methods. Replace any component, which the Engineer determines is damaged beyond repair, at no additional cost to the Department. If components are wrapped for shipment, remove wrappings no later than five days after receipt of components or immediately if the wrappings become saturated. Post these instructions in brightly colored wording on the

wrapper. Failure to comply with these instructions may lead to damage of the coating system and will be cause for the rejection of the component.

649-4 Coatings.

649-4.1 Galvanizing: Galvanize all components in accordance with ASTM A123, except galvanize all fastener assemblies in accordance with ASTM A153. Use galvanizing methods which provide surfaces suitable for painting.

649-4.2 Surface Preparation: Prepare all galvanized surfaces to be painted in accordance with ASTM D6386 and the manufacturer of the coating system's specifications. Provide a clean and suitable galvanized surface that maximizes coating system adhesion.

Measure the thickness of the zinc coating after completion of surface preparation using a magnetic thickness gage in accordance with ASTM A123. Ensure sufficient galvanizing remains on the substrate to meet the requirements of ASTM A123 and the Contract Documents. Correct any deficient areas to the satisfaction of the Engineer at no additional cost to the Department.

649-4.3 Painting:

649-4.3.1 General: When required by the Contract Documents, provide painted poles, mast arms and monotube assemblies. Provide products from a fabricator on the Department's list of Prequalified Fabricators of Painted Galvanized Steel Strain Poles, Mast Arms and Monotube Assemblies. Provide products that will meet specification requirements throughout the warranty period. Meet the color requirement as specified in the Contract Documents. Provide the Engineer with two metal sample coupons, a minimum of 2 inches x 4 inches, painted concurrently and with the same paint as was used on the first lot of any poles, mast arms and monotube assemblies delivered to the jobsite. Provide sample coupons and manufacturer product data sheets to the Engineer along with the delivery of the first shipment of any painted poles, mast arms or monotube assemblies delivered to the jobsite. At the time of their delivery, the sample coupons described in this paragraph shall match the color of the poles, mast arms and monotube assemblies to within 1ΔE measured as specified in 975-4. If the delivered sample coupons exhibit a difference in color from the poles, mast arms and monotube assemblies greater than 1ΔE then the sample coupons will be considered unacceptable and no payment shall be made for the materials which the sample coupons represent. Those materials shall not be accepted by the Department until acceptable representative sample coupons in accordance with the requirements of this Section have been delivered to the Engineer.

649-4.3.2 Responsible Party Warranty: When the Contract Documents call for painted galvanized steel poles, mast arms or monotube assemblies, the Contractor shall designate a responsible party to accept responsibility. The responsible party designated by the Contractor must execute and deliver to the Department a form, provided by the Department, prior to the first delivery to the jobsite of any painted poles, mast arms or monotube assemblies, stipulating that the responsible party accepts responsibility for ensuring the coating system adhesion and color retention requirements as specified in 975-4 are met for a period of five years after final acceptance in accordance with 5-11. The responsible party shall also bear the continued responsibility for performing all remedial work associated with repairs of any adhesion or color retention failure as defined in Section 975, as to which notice was provided to the responsible party within the five year warranty period. Failure to timely designate the responsible party will result in the Contractor being the responsible party unless otherwise agreed to in writing by the Department. The responsible party shall be either the Contractor or the fabricator. When the responsible party is the fabricator, the responsible party shall be one of the fabricators listed on

the Prequalified Fabricators of Painted Galvanized Steel Strain Poles, Mast Arms and Monotube Assemblies. This list may be viewed on the Department's website at the following URL: <http://www.dot.state.fl.us/construction/>.

Upon final acceptance of the Contract in accordance with 5-11, the Contractor's responsibility to ensure that the coating system adhesion and color retention requirements specified in 975-4 will terminate. The obligations of the responsible party set forth in this Section shall start at final acceptance of the Contract in accordance with 5-11 and continue thereafter until expiration of the five year warranty period.

649-5 Installation.

Install foundations in accordance with Section 455. Do not install poles, mast arm poles, or monotubes until the foundation has achieved 70% of the specified 28-day concrete strength and verifying test results have been provided to the Engineer. Determine concrete strength from tests on a minimum of two test cylinders prepared and tested in accordance with ASTM C31 and ASTM C39. Before erecting the pole, clean the top of the foundation of any laitance, oils, grease or any other deleterious materials. Erect strain poles in an orientation which considering the rake and the application, cable forces will produce a plumb pole. Erect monotubes plumb at the time of installation. Plumb the pole supporting mast arms after the mast arms, traffic signals or sign panels have been placed.

If the traffic signals and/or sign panels are not in place within two working days after the mast arm is erected, furnish and install a 3 foot by 2 foot blank sign panel on the bottom of each mast arm within 6 feet of the mast arm tip and plumb the pole. Re-plumb the pole supporting mast arms after installation of traffic signals and sign panels.

Install ASTM A325 bolt, nut and washer assemblies in accordance with the following. Use bolt, nut and washer assemblies that are free of rust and corrosion and that are lubricated properly as demonstrated by being able to easily hand turn the nut on the bolt thread for its entire length. Tighten nuts to a snug tight condition to bring the faying surfaces of the assembly into full contact which is referred to as snug-tight. Snug-tight is defined as the maximum nut rotation resulting from the full effort of one person on a 12 inch long wrench or equivalent. After bringing the faying surfaces to a snug-tight condition, tighten nuts in accordance with the turn-of-nut method in 460-5, Table 460-7. Maintain uniform contact pressure on the faying surfaces during snugging and turn-of-nut process, by using a bolt tightening pattern that balances the clamping force of each bolt, as closely as possible, with the equal clamping force of a companion bolt.

Installation steps are as follows:

- 1) Verify that the nuts can be turned onto the bolts past the elevation corresponding to the bottom of each in-place leveling nut and be backed off by the effort of one person on a 12 inch long wrench, without employing a pipe extension on the wrench handle.
- 2) Clean and lubricate the exposed threads of all anchor bolts. Clean and lubricate the threads and bearing surfaces of all leveling nuts. Re-lubricate the exposed threads of the anchor bolts and the threads of the leveling nuts if more than 24 hours has elapsed since earlier lubrication, or if the anchor bolts and leveling nuts have become wet since they were first lubricated.
- 3) Turn the leveling nuts onto the anchor bolts and align the nuts to the same elevation.
- 4) Place structural plate washers on top of the leveling nuts; one washer corresponding to each anchor bolt.

5) Install the base plate onto the leveling nut washers, place structural plate washers on top of the base plate; one washer corresponding to each anchor bolt, and turn the top nuts onto the anchor bolts.

6) Tighten top nuts to a snug-tight condition in a star pattern. A star tightening pattern is one in which the nuts on opposite or near opposite sides of the bolt circle are successively tightened in a pattern resembling a star. For an 8 bolt circle with bolts sequentially numbered 1 to 8, tighten nuts in the following bolt order: (1, 5, 7, 3, 8, 4, 6, 2).

7) Tighten leveling nuts to a snug-tight condition in a star pattern. The distance from the bottom of the leveling nuts to the top of the concrete must not exceed one anchor bolt diameter.

8) Before final tightening of the top nuts, mark the reference position of each tip nut in a snug-tight condition with a suitable marking on one flat with a corresponding reference mark on the base plate at each bolt. Then incrementally turn the top nuts using a star pattern until achieving the required nut rotation specified in Table A. Turn the nuts in at least 2 full tightening cycles (passes). After tightening, verify the nut rotation. Do not exceed the Table A value by more than 20 degrees.

9) Tighten each retainer or jam nut until it is in firm contact with the top surface of the anchor bolt nut then while preventing the anchor bolt nut from rotating, tighten the jam nut until it is snug tight.

Table A	
Anchor Bolt Diameter (in.)	Nut Rotation from Snug-Tight Condition
≤ 1 1/2	1/3 turn
> 1 1/2	1/6 turn

649-5.1 Camera Lowering Device Installation: Meet the requirements of 641-4.4.

649-6 Screen Installation.

Install a screen that will prevent vermin and debris from entering the gap between the bottom of the base plate and the top of the concrete foundation. Cover the entire gap with a wire screen, the bottom horizontal wire of which shall be in full contact with the surface of the concrete foundation and the top horizontal wire of which shall not extend beyond the top surface of the base plate. For the screen, use standard grade plain weave galvanized steel wire cloth with 1/2 inch x 1/2 inch mesh and 0.063 inch diameter wires. Vertical screen wires shall not extend beyond the top and bottom horizontal wires of the screen. Use one continuous section of screen with only one overlapping splice where the ends come together and overlap the layers 3 inches minimum. Attach the screen to the vertical side of the base plate with self-tapping stainless steel screws (#8-1/2 inch long) with stainless steel washers (1/4 inch inside diameter). Drill pilot holes into the base plate to facilitate screw installation. Install screws on 9 inch centers maximum and at least one screw shall be installed through the overlapping splice to clamp the layers together. Also clamp the overlapping splice layers together just above the concrete foundation with an all stainless steel fastener assembly consisting of a machine screw (#8-5/8 inch long), nut and two flat washers (1/4 inch inside diameter) and lock washer. Tightly clamp the screen layers between the flat washers.

649-7 Remedial Work.

During the warranty period, the responsible party shall perform all remedial work necessary to meet the requirements of this Specification at no cost to the Department. Such remedial work shall be performed within 180 days of notification of a failure by the Department. Failure to perform such remedial work within the time frame specified will result in the work being performed by other forces at the responsible party’s cost.

If the responsible party is the fabricator, the fabricator will be removed from the list of Prequalified Fabricators of Painted Galvanized Steel Poles, Mast Arms and Monotube Assemblies for a minimum of six months or until payment in full for the correction of the deficiencies or defects has been made, whichever is longer.

If the responsible party is the Contractor, the Department will suspend, revoke or deny the responsible party’s certificate of qualification under the terms of Section 337.16(d)(2), Florida Statutes, for a minimum of six months or until payment in full for the correction of the deficiencies or defects has been made, whichever is longer.

649-8 Statewide Disputes Review Board.

A Statewide Disputes Review Board will resolve any and all disputes that may arise involving administration and enforcement of this Specification. The responsible party and the Department acknowledge that use of the Statewide Disputes Review Board is required, and the determinations of the Statewide Disputes Review Board for disputes arising out of this Specification will be binding on both the responsible party and the Department, with no right of appeal by either party.

649-9 Method of Measurement.

The Contract unit price each for poles, mast arms, and monotube assemblies, furnished and installed, will include all materials specified in the Contract Documents, including the foundation, cover plates, caps, clamps, blank sign panel, luminaire bracket, all labor, equipment, miscellaneous materials and hardware necessary for a complete and acceptable installation.

The Contract unit price for removal of poles, mast arms, and monotube assemblies will include the removal of all attachments (arms, vehicle signals, light fixtures, pedestrian signals, pedestrian detectors and other incidentals).

When shallow pole removal is called for, remove the pole, foundation, and all accessories or attachments (including pole keys, dead men, guying apparatus, conduit, anchor bolts and reinforcing steel) to a minimum depth of four feet below existing grade.

When deep pole removal is called for in the Plans, completely remove the pole including the foundation and all accessories or attachments as listed above.

649-10 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section. Sign panels and signal assemblies will be paid for separately.

Payment will be made under:

- Item No. 649- Steel Mast Arm Assembly - each.
- Item No. 649- Steel Monotube Assembly - each.
- Item No. 649- Steel Strain Pole - each.
- Item No. 649- Steel CCTV Pole - each.

650 VEHICULAR TRAFFIC SIGNAL ASSEMBLIES.
(REV 8-20-14) (FA 9-4-14) (1-15)

SECTION 650 is deleted and the following substituted:

SECTION 650
VEHICULAR TRAFFIC SIGNAL ASSEMBLIES

650-1 Description.

Furnish and install vehicular traffic signal assemblies as shown in the Plans and Design Standards. For additional requirements related to mounting and attaching the assemblies, see Section 659.

650-2 Materials.

650-2.1 General: Use vehicular signal assemblies listed on the Department's Approved Product List (APL). Vehicular traffic signal assemblies must meet the requirements of Section 603 and the Institute of Transportation Engineers (ITE) Standard for Vehicle Traffic Control Signal Heads.

Provide vehicular traffic signal assemblies as a complete and functioning unit. Components include, but are not limited to, signal housing, LED signal module, visors, backplates, lenses, and assembly hardware.

All sections of multi-section assemblies must be from the same manufacturer.

Fastening hardware such as bolts, screws, nuts, washers, latches, and studs must be must be SAE Type 316 or 304 stainless steel.

Horizontal signal assemblies must be constructed so the door hinges, when installed, are located on the bottom of the signal assembly. Vertical mounted five-section cluster assemblies must be constructed so that the door hinges, when installed, are located along the outside edges of the complete assembly and each section opens away from the horizontally adjacent section.

Vehicular traffic signal assemblies must be permanently marked with the manufacturer's name or trademark, part or model number and date of manufacture or serial number.

650-2.2 Twelve Inch Signal Head Assemblies: Construct the assembly of materials and alloys specified in the ITE Standard for Vehicle Traffic Control Signal Heads.

The top and bottom opening of each signal head section must include a circular 72-tooth serrated connection (2 inch nominal I.D.) capable of providing positive positioning and alignment in 5 degree increments. When assembled and tightened, these connections must prevent rotation or misalignment of the signal head as well as misalignment between sections. The serrated area must start at the outside of the 2 inch hole and be at least 1/8 inch wide. The teeth must have a minimum depth of 3/64 inch between peaks and valleys, be free from burrs or other imperfections, and provide positive locking with the grooves of mating sections, framework, and brackets. The serration on the top circular connection of a signal section must have a valley at the 0 degree position and the serration on the bottom circular connection must have a peak at the 0 degree position, both aligned perpendicular to the front of the section. Connections must permit the assembly of a multi-section signal with the front of each section aligned within 1 degree.

Provide at least two latching points with latch pads and manual Type 316 or 304 stainless steel latching devices that are tamper resistant.

Each signal section must have four backplate mounting attachment points on the back of the signal, on or no more than three inches from each section corner. Attachment points must be capable of accepting No. 10-16x3/8 inch or No. 10-24x3/8 inch Type 316 or 304 stainless steel screws for attaching backplates.

Tri-stud washers used between signal sections must have a minimum thickness of 0.090 inches. For five-section cluster assemblies, tri-stud washers used to attach the top signal section to the multi-signal bracket and the multi-signal bracket to the bottom four signal sections must have a minimum thickness of 3/8 inches. When fastened together, washer distortion is not allowed.

Design each signal section to prevent the accumulation of standing water within the assembly. All sections comprising a single multi-section assembly must be securely fastened together to form a rigid and weather-proof unit.

650-2.2.1 Doors: Construct each signal section with at least two hinges for mounting a door. Hinge pins must be captive. Doors must remain captive and secure at all times and be capable of either left or right swing. The door latch must hold the door tightly closed. The door must include slotted pads that allow the door to be opened and closed by engaging or disengaging the latching device. The outside face of the door must include four holes equally spaced around the circumference of the lens opening for the attachment of a visor. The lens opening in the door must have a diameter of 11 to 11-1/2 inches.

650-2.2.2 Visors: The rear of the visor must have four tabs, notches, or holes for securing the visor to the signal housing door. The visor mounting method must permit the visor to be rotated and secured at 90 degrees for horizontal signal head installations. All visors must have a minimum length of 9-1/2 inches, and a minimum downward tilt of 3.5 degrees measured from the center of the lens. Tunnel visors must encircle and shield the lens from 300 degrees, plus or minus 10 degrees. Louvers may only be used in combination with full circle visors. Light must not escape between the visor and the door.

650-2.2.3 Gaskets: Gaskets must be constructed of weather-resistant material and be glued or sealed where they meet to provide one continuous length of gasket capable of providing a weatherproof seal for the signal assembly. Provide seals between the housing and door, between the lens and the door, and between any other mating surfaces where dust and moisture could enter. Gasket material must meet NEMA 250 and be constructed of temperature stabilized material that prevents any residue from collecting on the internal surfaces of the signal head.

650-2.2.4 Terminal Blocks: Provide at least one five-connection terminal block in all three or more section signal head assemblies and at least three five-connection terminal blocks in all five section signal head assemblies. Terminal block connections in the signal assembly must not require any tools other than a screwdriver.

Mount terminal blocks to the signal housing with Type 316 or 304 passivated stainless steel hardware. Use only non-corrosive wire attachment screws approved by the Department.

650-2.2.5 Color and Finish: The housing, doors, visors and backplates must be powder coated dull black (Federal Standard 595-37038) with a reflectance value not exceeding 25 percent as measured by ASTM E1347. For polycarbonate heads, the black color must be incorporated into the plastic material before molding.

The finish on interior and exterior surfaces of aluminum signal head assemblies, visors, doors, and housing, must be painted in accordance with Military Standard MIL-PRF-24712A or American Architectural Manufacturers Association-2603-02 and must meet the requirements of ASTM D3359, ASTM D3363, and ASTM D522. Surface erosion, flaking, or oxidation must not occur within the normal life expectancy under typical installation conditions.

650-2.2.6 Polycarbonate Signal Housings and Visors: Construct signal housing assembly, door, and visors of UV stabilized polycarbonate plastic with a minimum thickness of 0.1 inches, plus or minus, 0.01 inches, with the following physical properties:

- a) Specific Gravity: 1.17 minimum, as per ASTM D792
- b) Vicat Softening Temperature: 305-325 F (152-163 C), as per

ASTM D1525

- c) Brittleness Temperature: Below -200 F (-129 C), as per ASTM D746
- d) Flammability: Self-extinguishing, as per ASTM D635
- e) Tensile Strength, yield: 8500 PSI (58 MPa) minimum, as per

ASTM D638

- f) Elongation at yield: 5.5-8.5 %, as per ASTM D638
- g) Shear, strength, yield: 5500 PSI (38 Mpa) minimum, as per

ASTM D732

h) Izod impact strength, [notched, 1/8 inch]: 15 ft-lb/in (800 j/m) minimum, as per ASTM D256

i) Fatigue strength at 2.5 mm cycles: 950 PSI (6.5 MPa) minimum, as per ASTM D671

650-2.2.7 Backplates (Standard and Retroreflective): Backplates may be constructed of either aluminum or polycarbonate. Minimum thickness for aluminum backplates is 0.060 inch and the minimum thickness for polycarbonate backplates is 0.120 inch. The required width of the top, bottom, and sides of backplates must measure between five to six inches. Color of backplates must be black in accordance with 650-2.2.5. Backplate thickness measurement must not include the retroreflective sheeting thickness.

Provide backplates with a minimum of four corner mounting attachment points per signal section (for example, a three-section signal assembly would have 12 mounting points). Attachment points must not interfere with the operation of traffic signal section doors. Backplate outside corners must be rounded and all edges must be de-burred.

Provide louvers for all backplates. Louver orientation must be vertical on sides and horizontal on top and bottom of the backplate and must be at least 1/2 inch from the inner and outer edge of the backplate panel. Universal backplates must fit all traffic signals listed on the APL.

Mount the backplate securely to the signal assembly with Type 316 or 304 passivated stainless steel installation hardware. All backplates must be marked in accordance with 650-2.1, on the long sides of the backplate.

Backplates with retroreflective borders must be constructed of aluminum. Use only Type IV yellow retroreflective sheeting listed on the APL. Place a 2 inch border on the entire outer perimeter of the backplate panel, no closer than 1/2 inch from louvers. No sheeting is allowed over any louvered area.

650-2.2.9 Light-Emitting Diode Optical Unit: The LED optical unit must conform to the requirements of ITE's latest LED Purchase Specification, "Vehicle Traffic

Control Signal Heads - Light Emitting Diode (LED) Circular Signal Supplement” with the following exceptions.

650-2.2.9.1 Physical and Mechanical Requirements: Retrofit LED signal modules must be compatible with all traffic signal housings listed on the APL. The rear of the LED signal module must be marked in accordance with 650-2.1.

650-2.2.9.2 LED Signal Module Lens: The lens must be tinted with an appropriate color (red, amber, or green) to reduce sun phantom affect and enhance on/off contrast. The tinting must be uniform across the face of the lens and be free from streaks, wrinkles, chips, bubbles, or other imperfections. If a polymer lens is used, a surface coating must be incorporated to provide abrasion resistance.

650-2.2.9.3 Minimum Maintained Luminous Intensity Values: Red and green modules must meet the current requirements of ITE’s Performance Specification, Vehicle Traffic Control Signal Heads - Light Emitting Diode (LED) Circular Signal Supplement, dated June 27, 2005. Yellow modules must be 1.7 times brighter than the ITE specification.

650-2.2.10 Electrical: Electrical conductors for LED signal modules must be a minimum of 36 inches in length. Each lead from the LED module must be terminated with insulated slide-on terminals. The conductors must be color coded to identify the color of the module as follows:

- a) White must identify the neutral lead.
- b) Red circular signals must be identified with a red lead, yellow circular signals with a yellow lead, and green circular signals with a green lead.
- c) Red arrows must be identified with a red and black tracer lead, yellow arrows with a yellow and black tracer lead, and green arrows with a green and black tracer lead.

650-2.2.11 Qualification Loading Requirements: Vehicular traffic signal assemblies must withstand 740 pounds loading (flexure) and 7400 pounds loading (tension). Alternatively, test results that demonstrate a complete assembly (such as from catenary wire to bottom of signal) is capable of withstanding 150 miles per hour wind speeds and meet the requirements of the Department’s Structures Manual, Volume 3 without structural damage that would breach the serviceability of the signal (i.e., the traffic signal continues to function properly and indication can be seen by approaching motorists) are acceptable evidence of load testing.

650-3 Installation.

650-3.1 Preassembly: Pre-assemble the signal heads when more than one signal section is required prior to installation at the site. Furnish signal heads with LED modules, backplates, and visors. Use tunnel visors unless otherwise specified in the Contract Documents. Install the LED circular module in the door so that the UP arrow or the word UP or TOP is in the up orientation of the signal housing. Install the LED arrow modules in the signal housing door in the direction of the intended use.

650-3.2 Positioning of Signals: Consider the locations of the installed signals as shown in the Plans as sufficiently flexible as to allow for unanticipated field conditions at the site. The Engineer will direct any variations from the locations shown. Position adjacent signal faces no closer than 8 feet apart measured horizontally at 90 degrees to the traffic flow between centers of faces.

Regardless of the results of any scaled dimensions, consider the location shown in the Plans to be approximate. Position a signal face mounted on a span wire or mast arm as near as practical to the line of the driver’s normal view.

Ensure that all sections are of the same manufacturer and the section assemblies are uniform in appearance and alignment.

650-3.3 Clearances: Unless directed otherwise by the Engineer for unusual circumstances at the site, provide a vertical clearance of not less than 17 feet-6 inches and not more than 19 feet for traffic signals placed over the roadway. Measure such clearance for each span directly under the most critical signal assembly (in regards to clearance) for that span. Place signal assemblies on each span as near as practical to the same elevation as the critical signal assembly.

Ensure that the lowest point on pedestal-mounted and side-mounted signal heads is 12 feet above finished grade at the point of their installation.

650-3.4 Aiming of Signal Indication: For proper lateral orientation, aim signals after installing and before locking them in position.

650-3.5 Wiring Connections: Do not splice signal cable. Connect the proper signal cable to the terminals in each signal head in order to provide the proper signal indication display when the cables are connected to the signal controller. Wire a separate neutral circuit and return it to the controller cabinet from each vehicular movement as shown in the Contract Documents.

650-3.6 Special Installation Requirements for Optically Programmed Signals: Install, direct (aim), and conceal optically programmed signals in strict accordance with the instructions of the manufacturer, using the materials furnished by the signal manufacturer, and with the direction of the Engineer.

Position the signals for maximum performance in accordance with the requirements shown in the Plans, and install them with rigid mounting assemblies, using elbows and plumbizers of such type as will provide for stability of the position of the signals. Do not use clevises in the supporting attachments.

Seal the cable routing to the signals to provide permanent water tightness.

650-3.7 Vertically Mounted Polycarbonate (Light-Weight) Signal Head Assemblies: The top section of all multi-section (5-section, 3-section), vertically mounted, light-weight signal assemblies must be constructed of die cast aluminum, unless the entire 3 (or more)-section polycarbonate signal assembly is specifically approved and listed on the APL as a 12 inch polycarbonate 3 (or more)-section vehicle assembly.

Single section signals may be constructed of die cast aluminum or polycarbonate.

650-3.8 Backplates: Install louvered backplates on all signal head assemblies.

650-3.9 Sealing Installed Signal Head Assembly: Ensure that the installed signal head assembly is sealed to exclude dust and moisture. Drill two, 1/4 inch drain holes in the bottom of the installed signal head assembly.

650-3.10 Concealing Signals Not in Use: Where traffic signals are installed and not put into service immediately, or placed out-of-service temporarily, conceal the signal head assembly by securely placing burlap bags or other covering approved by the Engineer over a weather resistant covering of non-transparent material open at the bottom to prevent condensation buildup.

650-3.11 Installation Sequence: Install all traffic signal assemblies at any intersection as a single operation unless a staged operation is approved by the Engineer.

650-3.12 Emergency Signal Heads: For new emergency fire stations signals, install 12 inch signal heads for all three indications. For existing 8 inch emergency fire station signals, retrofit with 8 inch LED modules. The 8 inch LED optical unit must conform to the requirements

of the ITE's Performance Specification, Vehicle Traffic Control Signal Heads - Light Emitting Diode (LED) Circular Signal Supplement.

650-4 Warranty.

Ensure that the signal housings, modules, backplates, and any other signal assembly components have a manufacturer's warranty covering defects for a minimum of three years from the date of final acceptance in accordance with 5-11 and Section 608. Ensure the warranty includes providing replacements, within 30 calendar days of notification, for defective parts and equipment during the warranty period at no cost to the Department or the maintaining agency.

Ensure that the LED signal modules have a manufacturer's warranty covering defects for a minimum of five years from the date of final acceptance in accordance with 5-11 and 608. Ensure that the warranty includes providing replacements, within 30 calendar days of notification, for any defective parts and equipment (including falling below minimum intensity levels) during the warranty period at no cost to the Department or the maintaining agency.

650-5 Method of Measurement.

The Contract unit price per assembly for vehicular traffic signal, furnished and installed, will consist of the traffic signal and all components necessary to make a complete unit, including mounting assemblies, backplates, visors, LED modules, labor, and materials necessary for a complete and accepted installation.

650-5 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

Item No. 650- 1- Vehicular Traffic Signal - per assembly.

653 PEDESTRIAN SIGNAL ASSEMBLIES.

(REV 9-4-14) (FA 9-16-14) (1-15)

SECTION 653 is deleted and the following substituted:

**SECTION 653
PEDESTRIAN SIGNAL ASSEMBLIES**

653-1 Description.

Install pedestrian signal assemblies as shown in the Plans and Design Standards, Index No. 17764. Meet the requirements of Section 603.

653-2 Materials.

653-2.1 General: Use pedestrian signals listed on the Department's Approved Product List (APL). Pedestrian signal assemblies must meet the requirements of the latest edition of the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) and the Institute of Transportation Engineers (ITE) standard for Pedestrian Traffic Control Signal Indications.

653-2.2 Housing and Visor: The housing must be weatherproof, sectional and may consist of as many sections as optical units. The housing must prevent light from escaping from one unit to another. The top and bottom opening of the housing must include a circular 72-tooth serrated connection (2 inch nominal I.D.) capable of providing positive positioning and alignment in 5 degree increments. When assembled and tightened, these connections must prevent rotation or misalignment. The serrated area must start at the outside of the 2 inch hole and be at least 1/8 inch wide. The teeth must have a minimum depth of 3/64 inch between peaks and valleys, free from burrs or other imperfections, and provide positive locking with the grooves of mating sections, framework, and brackets. The serration on the top circular connection of a signal section must have a valley at the 0 degree position and the serration on the bottom circular connection must have a peak at the 0 degree position, both aligned perpendicular to the front of the section. Housings must include latch pads and manual stainless steel latching devices that are captive, or non-removable. Housings must have at least two latching points.

Reinforce all mounting points and adjacent housing material. The door enclosing the lens must be hinged and held securely to the housing. Provide a gasket meeting the requirements of ASTM D1056, Grade 2B2 between the housing and door and between the lens and door. If the fitting between the housing and door is weather-tight, the gasket may be omitted.

Provide a visor for each signal face. Light must not escape between the door and visor. The visor must be three-sided and extend a minimum of 7 inches at the top from the face of the lens. The visor must be constructed of noncorrosive sheet metal, not less than 0.05 inch thick, (No. 18 gauge in thickness) or polycarbonate.

All metal housings and visors must be powder-coat painted black in accordance with Military Standard MIL-PRF-24712A or AAMA-2603-02 with a reflectance value not exceeding 25 percent as measured by ASTM E97. For polycarbonate heads, the black color must be incorporated into the material before the molding process.

The housing must be constructed of a non-corrosive material. Cast metal parts must have a minimum tensile strength of 1 ksi (117 MPa) and sheet metal parts a minimum tensile strength of 27 ksi (186 MPa).

653-2.2.1 Die castings: Meet the requirements in ASTM B85 for the physical characteristics and chemical content for alloys S12A, S12B, SC84A, SC84B, SG100A and SG100B.

653-2.2.2 Sand Castings: Meet the requirements in ASTM B26 for the physical characteristics and chemical content for alloys S5A and CS72A.

653-2.2.3 Permanent mold castings: Meet the requirements in ASTM B108 for the physical characteristics and chemical content for alloys S5A and CS72A.

653-2.2.4 Polycarbonate: Polycarbonate housing assemblies, doors and visors must be molded from ultraviolet stabilized polycarbonate plastic with a minimum thickness of 0.1 inches, plus or minus 0.01 inch, and provide the following physical properties:

Table 1		
Test	Minimum Requirement	Method
Specific Gravity	1.17	ASTM D 792
Vicat Softening Temp.	305-325°F (152 – 163°C)	ASTM D 1525
Brittleness Temp.	Below -200°F (-129°C)	ASTM D 746
Flammability	Self-extinguishing	ASTM D 635
Tensile Strength	Yield, 8500 psi (58 MPa)	ASTM D 638

Elongation at yield	5.5 - 8.5%	ASTM D 638
Shear Strength	Yield, 5500 psi (38 MPa)	ASTM D 732
Izod impact strength	15ft-lb/in (800 J/m)	ASTM D 256
Fatigue strength	950 psi (6.5MPa) at 2.5 mm cycles	ASTM D 671

653-2.3 Light Emitting Diode (LED) Pedestrian Signal Optical Unit (State Standard): Provide a countdown pedestrian signal module meeting the requirements of the latest ITE LED Pedestrian Signal Specifications.

653-2.4 Electrical: Wiring must be color-coded No. 18 AWG or larger, stranded wires with an approved 600 V outdoor insulation rating or equivalent. Wires must be a minimum of 3 feet long with self-insulating slide-on terminals with no bare wiring exposed where wires are secured.

The pedestrian signal must include a terminal block containing a minimum of five circuits, each with two noncorrosive screw-type terminals. Each terminal must accommodate three No. 18 AWG conductors and be labeled for ease of identification. The terminal block must not be obstructed and be visible when the housing is open.

653-2.5 Hardware: All brackets used to mount pedestrian signals must be an aluminum alloy cast fitting, pipe or equivalent material approved by the Department. Aluminum and aluminum alloy bars, rods, wires, profiles, and tubes must meet ASTM B221. Aluminum-alloy sand casting must meet ASTM B26. All mounting hardware must be painted black with a reflectance value not exceeding 25 percent as measured by ASTM E97.

Ensure that all assembly hardware, including nuts, bolts, external screws and locking washers less than 5/8 inch in diameter, are Type 304 or 316 passivated stainless steel. Stainless Steel bolts, screws and studs must meet ASTM F593. Nuts must meet ASTM F594. All assembly hardware greater than or equal to 5/8 inch in diameter must be galvanized. Bolts, studs, and threaded rod must meet ASTM A307. Structural bolts must meet ASTM A325.

653-3 Installation.

653-3.1 General: Use pedestrian signal assemblies capable of being maintained, adjusted, and disassembled with ordinary hand tools. Pre-assemble the pedestrian signal, with the exception of mounting hardware, prior to installation at the site. Construct the pedestrian signal assembly (including the mounting hardware) to be a weather-tight unit. Conceal all conductors.

653-3.2 Placement: Position pedestrian signals and all mounting assembly members as either plumb or level, and symmetrically arranged. Align signals in the line of the pedestrian's vision for the crosswalk being used.

653-3.3 Installation Sequence: Install all pedestrian signal assemblies at any intersection as a single operation unless a staged operation is approved by the Engineer. Do not install signals at any intersection until all other signal equipment, including the controller, and pedestrian detectors are in place and ready for operation, unless completely covered in accordance with 650-3.10.

653-4 Method of Measurement.

The Contract unit price per assembly for pedestrian signal assembly, furnished and installed, (including mounting hardware but not including poles or pedestals) will include all materials and equipment as specified in the Contract Documents, and all labor and materials necessary for a complete and accepted installation.

Payment for removal of pedestrian signal will be made only when the pole/pedestal is to remain. Removal of all other pedestrian signals will be incidental to the removal of the pole or pedestal.

653-5 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section. Payment will be made under:

Item No. 653- Pedestrian Signal - per assembly.

**659 MAST ARM, SPAN WIRE, AND POLE MOUNTING ASSEMBLIES.
(REV 8-21-14) FA 9-4-14) (1-15)**

The following new Section is added after Section 654.

**SECTION 659
MAST ARM, SPAN WIRE, AND POLE MOUNTING ASSEMBLIES**

659-1 Description.

Furnish and install mounting assemblies for vehicular and pedestrian traffic signals, signs, cameras, detectors, and other devices in accordance with the Contract Documents.

659-2 Materials.

659-2.1 General: Use mounting assemblies listed on the Department's Approved Product List (APL). Meet the requirements of Section 603.

Fastening hardware such as bolts, nuts, washers, set screws, studs, u-bolts, cable and cable swags, must be provided by the mounting assembly manufacturer, must be SAE Type 316 or 304 stainless steel. Hardware (studs, bolts and u-bolts) must be a minimum of 5/16 inch diameter unless otherwise specified in this Section. SAE Grade 8 bolts and nuts are also acceptable. Metallic mounting assemblies must meet ASTM B117 for corrosion resistance.

Connections that provide an entrance to the interior of a traffic device must be weather-resistant.

All assemblies must be constructed to support the weight of any combination of signal indications with all accessories such as back plates and visors.

Connections between signal, disconnect and disconnect hanging hardware must be of the tri-stud design unless otherwise specified. Tri-stud washers must be a minimum 0.090 inches thick unless otherwise specified in this Section.

Surfaces that mate to vehicular and pedestrian traffic signals must have a standard circular 72 tooth serration connection (two inch I.D.) capable of providing positive positioning and alignment of the signal in 5 degree increments. The serrated teeth must be clean and sharp and at least 1/8 inch wide and 3/64 inch deep. The connection between the teeth of the signal and the upper bracket must be weather resistant.

Design mounting assemblies capable of providing adjustment in multiple directions for proper alignment of the attached traffic device and to prevent rotation around the vertical axis or misalignment after installation.

Studs may be cast directly into the aluminum during the casting process or tapped and locked with a locking material. In each case, a pull-out force must be provided. Messenger wire clamps must be extruded aluminum six inches long or cast U-bolt type as shown in Design Standards Index No. 17727.

Torque specifications must be included with all assembly installation instructions if torque specifications are specified by the manufacturer.

659-2.2 Product Identification: Mounting assemblies must be permanently marked with the name or trademark of the manufacturer, part number and date of manufacture. Identification must be cast into, or metal-marked on, the assembly in a legible manner. When the assembly is made up of multiple components, each component must be identified with the manufacturer's name or trademark.

659-2.3 Finish: Unless otherwise specified, mounting assemblies and components must be supplied with a natural finish with mill scale removed in accordance with Military Standard MIL-PRF-24712A or AAMA 2603-02 and must meet the requirements of ASTM 3359 and ASTM D3363. Disconnect (interior and exterior) and disconnect hub must be powder-coat painted dull black (Federal Standard 595A-37038) with a reflectance value not exceeding 25 percent as measured by ASTM E97. All finished surfaces must have a smooth finish free from cracks, blow-holes, shrinks, excessive material, and other flaws.

659-2.4 Mast Arm Mounting Assemblies: Mast arm mounting assemblies must include the following components: mast arm saddle, swivel, attachment cables or bands, cable clamp mechanism, gusseted support tube, and top and bottom support arms. Aluminum mast arm mounting assemblies (clamps) must have a minimum yield strength of 16 ksi and a minimum ultimate tensile strength of 23 ksi in accordance with ASTM B26 or ASTM B108. Mast arm mounting assemblies must be designed to be attached to a mast arm by cables or bands.

659-2.4.1 Saddle: Aluminum saddles must have a minimum yield strength of 16 ksi and a minimum ultimate tensile strength of 23 ksi in accordance with ASTM B26 or ASTM B108. The saddle must be designed to be secured to the mast arm with no movement when 250 pounds of downward force is applied to the completed vehicular traffic signal assembly.

659-2.4.2 Swivel: Aluminum swivels must have a minimum yield strength of 16 ksi and a minimum ultimate tensile strength of 23 ksi in accordance with ASTM B26 or ASTM B108. The swivel must provide at least two connection devices to secure the support tube to the swivel and be configured to permit the support tube to pivot 360 degrees in a plane parallel to the mast arm. Any castings used to attach the support tube to the swivel must be manufactured from the same aluminum alloy as the swivel.

659-2.4.3 Saddle Attachment Cables and Bands: Mast arm saddle attachment cables must be 3/16 inch minimum diameter, Type 316 or 304 stainless steel aircraft type wire strand cable. The swage at the ends of the cable (used to tighten the cable against the saddle) must be Type 316 or 304 stainless steel with a minimum 3/8 inch diameter thread. The swage must permit use of a wrench to prevent rotation while tightening the nut at the end of the swage. If the attachment cable does not have swaged clamp screws at each end (double-ended), the unclamped end of the cable must be sintered, welded, or otherwise secured without adhesives to prevent unraveling of the cable. Banding must use two Type 304 or 201 series stainless steel 3/4 inch wide bands and Type 316 stainless steel buckles (clamp screws). De-burr the edges of the bands.

659-2.4.4 Cable Clamp Mechanism: Aluminum mast arm mount components used to secure the cable to the saddle must have a minimum ultimate tensile strength of 23 ksi per ASTM B26 or 30 ksi per ASTM B221.

659-2.4.5 Gusseted Support Tube: Gusseted tubes used in mast arm mounting assemblies must be extruded aluminum having a minimum yield strength of 31 ksi and a minimum ultimate tensile strength of 35 ksi as per ASTM B221. A gusseted hollow design must be used to provide for the routing of necessary wiring. The tube cross-sectional area's principal moments of inertia must average, at a minimum, that of a 1-1/2 inch standard aluminum Schedule 40 pipe and the cross-sectional metal area must not be less than that of a 1-1/2 inch Schedule 40 pipe. The bottom portion of the tube that supports the vertical load of the hanging device must be threaded using National Pipe Thread Taper (NPT), National Pipe Thread Straight (NPS) or be non-threaded U-bolt secured. Threaded support tubes that are fully slotted must have an aluminum insert in the 3/4 inch slot extending a minimum of 1/2 inch beyond the threaded section. To provide easy installation of wiring, the tube must have a minimum 0.562 inch wire entrance slot running the full length of the tube, or either stopping a minimum of 8 inches above the threaded or U-bolt secured end. Edges of slot must be supported with internal gusseting. The tube interior and slot must be free of sharp edges that may damage wiring. Provide an easily installed and removable UV stabilized seal to completely fill the wire entrance slot after installation.

659-2.4.6 Top Support Arm: The top support arm of the mounting assembly must be of one-piece solid construction and capable of holding the signal head firmly in place. Aluminum top support arms must have a minimum ultimate tensile strength of 30 ksi and minimum yield strength of 18 ksi per ASTM B26, or be die cast with a minimum ultimate tensile strength of 27 ksi and a minimum yield strength of 24 ksi.

A one or two piece top arm is acceptable. For a one piece top arm, use at least two 1/4 inch minimum diameter Type 316 or 304 stainless steel set screws to secure its position on the support tube. When a two-piece top arm is used, hardware required to connect components of the top arm must be 3/8 inch minimum diameter, Type 316 or 304 stainless steel.

The top support arm must have three 1/4 inch - 20 UNC-2B threaded holes to accept bolts for a tri-stud washer and gasket, or at least one imbedded or tapped and locked 5/16 inch - 18 threaded stud within the industry's standard 72 tooth serrated circular design that facilitates 5 degree increment positioning. Provide 0.090 inch thick (minimum) Type 316 or 304 stainless steel washers, nuts, and lock washers for attaching signal heads. A rubber washer, with dimensions similar to the large stainless steel washer, must be provided for traffic signals. When mast arm clamps are used to support illuminated signs with tri-stud arrangements, a rubber washer with dimensions similar to the steel washer must also be used.

659-2.4.7 Bottom Support Arm: The bottom support arm must be hollow to allow the routing and enclosing of all signal wiring. Aluminum bottom support arms must have a minimum ultimate tensile strength of 30 ksi and minimum yield strength of 18 ksi per ASTM B26, or be die cast with a minimum ultimate tensile strength of 27 ksi and a minimum yield strength of 24 ksi. Plastic bottom arm covers must be constructed of ABS with a UV inhibitor and be strong enough to contain the signal cable in the bottom arm cavity without bending during installation and warping over time.

The end of the bottom support arm that attaches to the support tube must have a 1-1/2 inch steel coupling imbedded and cast directly into the part during the solidification of the aluminum, or a 1-1/2 inch NPT or NPS pipe thread cut directly into the casting. For non-threaded

versions, the arm must allow the support tube to sit a minimum of 2 inches into an arm pocket and be secured to the arm with minimum 5/16 full U-shape U-bolt to distribute the load evenly to the lower arm casting.

The end of the bottom support arm that connects to the signal must have either three equally spaced and plumb imbedded 5/16 inch Type 316 or 304 stainless steel threaded studs located in the center of the 72 tooth serrated circular design, or three 1/4 inch – 20 UNC-2B tapped holes to accept bolts for a tri-stud washer.

659-2.4.7.1 Arms with Steel Coupling: If a threaded steel coupling is imbedded into the casting, the bottom arm must be aluminum alloy 319.0-F in accordance with ASTM B26, with a minimum ultimate tensile strength of 23 ksi, meeting all standards listed in ASTM B26, including chemical composition listed in Table 1 and material mechanical properties listed in Table 2. The end of the bottom support arm must have at least two 1/4 inch diameter Type 316 or 304 stainless steel set screws to secure its position on the support tube.

659-2.4.7.2 Threaded Arms: If threads are cut directly into the casting, the bottom arm must be aluminum alloy 535.0-F in accordance with ASTM B26, with a minimum ultimate tensile strength of 35 ksi and elongation of 9.0% in a two inch section, meeting all standards listed in ASTM B26, including chemical composition listed in Table 1 and material mechanical properties listed in Table 2. As an alternative, the arm can be die cast in aluminum with a minimum ultimate tensile strength of 27 ksi and a minimum yield strength of 24 ksi. The end of the bottom arm must have at least two 1/4 inch minimum diameter Type 316 or 304 stainless steel set screws to secure its position on the support tube.

659-2.4.7.3 Non-threaded Arms: Lower arm must be aluminum 356 having a minimum ultimate tensile strength of 30 ksi and meeting all standards listed in ASTM B26, including chemical composition listed in Table 1 and material mechanical properties listed in Table 2. The arm must have a locator tab to receive the support tube and be secured by a U-bolt.

659-2.5 Span Wire Mounting Assemblies: Span wire mounting assemblies must include a span wire clamp, a hanging device such as a drop pipe, adjustable hanger with extension bar or a cable hanger, messenger clamp, disconnect hanger, and multi-brackets.

659-2.5.1 Span Wire Clamp: Span wire clamps must be aluminum alloy with a minimum ultimate tensile strength of 32 ksi and minimum yield strength of 22 ksi in accordance with ASTM B28 or ASTM B108.

659-2.5.2 Drop Pipe: Drop pipe hangers must be galvanized 1-1/2 inch steel aluminum having a minimum yield strength of 35 ksi and a minimum ultimate tensile strength of 42 ksi in accordance with ASTM B221 and have NPT on each end for assembly.

659-2.5.3 Adjustable Hanger: Adjustable hangers must be aluminum alloy 535.0-F in accordance with ASTM B26 with a minimum ultimate tensile strength of 35 ksi and elongation of 9.0% in a two inch section, meeting the chemical composition listed in Table 1 and material mechanical properties listed in Table 2 in ASTM B26.

659-2.5.4 Cable Hanger: Provide cable hangers constructed of a 1/4 inch minimum, seven-wire stand cable, manufactured with a Class A zinc coating in accordance with ASTM A475.

Use a minimum of two cable clamps (sized to fit the size cable used) to secure the looped cable to itself after threading through the upper catenary clamp using a guy wire thimble.

Use a minimum of two cable clamps (sized to fit the size cable used) to secure the looped cable to itself after threading through the lower messenger clamp and guy wire thimble.

Use Type 316 or 304 stainless steel for guy wire thimbles, washers, clevis pins and bushings (sleeve) for the catenary and messenger clamp pin attachment holes.

659-2.5.5 Extension Bar: Extension bars used to extend the length of the adjustable hanger must be T6061-T6 extrusion aluminum having a minimum yield strength of 35 ksi and a minimum ultimate tensile strength of 42 ksi in accordance with ASTM B221.

659-2.5.6 Disconnect Hanger: Attach signal heads to the disconnect hanger in a manner that removal does not disconnect or disturb the wiring leads terminated inside the signal head assembly. The disconnect hanger must be supplied with the following as a minimum:

a) Wired screw type/compression terminal block and wiring rated at 600 V_{AC} Root Mean Square (rms) with 12 or 18 circuits. The terminal block must be easily accessible for connection of the field wiring. Attach the terminal block to the disconnect with Type 316 or 304 stainless steel or brass fastening hardware.

b) Weather resistant grommets in each signal cable entrance of the disconnect hanger to prevent insect and animal access and to protect the signal cable from chafing.

c) A two inch opening in the top of the disconnect hanger with an integral serrated area (or 1-1/2 inch NPT threaded top section) to interface with the hanger method employed above it.

d) A securable door that allows access to all areas of the interior. The door securing device must be Type 316 or 304 stainless steel and captive. Hinge or groove pins for the door must be Type 316, 304, 303, or 302 stainless steel.

659-2.5.7 Multi-Brackets: Top and bottom (multi) brackets used in the assembly of span wire mounted multi-directional signals must be constructed of aluminum having a minimum yield strength of 13 ksi and a minimum ultimate tensile strength of 23 ksi per ASTM B26.

Top brackets must be of one-piece hollow design, with a cross-sectional diameter of at least 1-1/2 inch I.D. for receiving signal wires. The wall thickness must be at least 3/16 inch. Each top bracket (2-way, 3-way, and 4-way) must have a two inch diameter hole (with integral serrated boss as specified above) in the top side of the bracket for receiving a 1-1/2 inch entrance fitting. The underside of the top bracket must have a covered hole of at least three inches in diameter for the installation of the signal wires.

Bottom brackets must be of one-piece solid construction and must hold the signal heads firmly in place.

For the five section cluster configuration, provide 3/8 inch thick Type 316 or 304 stainless steel tri-stud washers and nylock nuts with lock washers to secure the top and lower signal sections of the cluster to the top multi bracket. Washer distortion must not occur after assembly of the five section cluster. Multi-brackets must include all fastening hardware necessary to attach to the signal.

659-2.5.8 Qualification Loading Requirements: Disconnect hangers must withstand 740 pounds loading (flexure) and 7400 pounds loading (tension). As an alternative, test results that demonstrate an assembly (such as from catenary wire to bottom of signal) is capable of withstanding 150 mph wind speeds and meet the requirements of the Department's Structures Manual, Volume 3 without structural damage that would breach the serviceability of

the signal (i.e., the signal continues to function properly and indication can be seen by approaching motorists) are acceptable evidence of load testing.

659-2.6 Pole (Pedestal and Post) Mounting Assemblies: All trunnions, brackets, and suspensions used in mounting vehicular and pedestrian signals to concrete, steel, aluminum, or wood poles must be an aluminum alloy cast fitting, pipe or equivalent as approved by the Engineer. The aluminum alloy must have a minimum ultimate tensile strength of 35 ksi in accordance with ASTM B221, ASTM B85, or ASTM B26.

Pole side-mount brackets used for pedestrian signals may be constructed of polycarbonate material.

659-2.7 Mounting Assemblies for Signs, Cameras, Detectors, and Other Traffic Control Devices: Mounting assemblies or assembly components used for signs, cameras, detectors, and other traffic control devices must be constructed of the same material, and meet the same mechanical and chemical properties as mounting assemblies for signals.

659-2.8 Miscellaneous Mounting Components: Miscellaneous mast arm, span wire, and pole mounting components and accessories included with assemblies must meet the mechanical properties for its associated main assembly components or be listed separately on the APL. Mounting assemblies not approved with a specific primary device (such as a camera, detector, etc.), must be approved and listed separately on the APL.

659-3 Installation.

Install all mounting assemblies in accordance with the manufacturer's recommendations.

659-4 Warranty.

Ensure mounting assemblies have a manufacturer's warranty covering defects for a minimum of three years from the date of final acceptance in accordance with 5-11 and Section 608. The warranty must include providing replacements, within 10 calendar days of notification, for defective parts and equipment during the warranty period at no cost to the Department or the maintaining agency.

659-5 Method of Measurement.

The Contract unit price per assembly for each mounting assembly, furnished and installed, will include all materials specified in the Contract Documents and all labor, equipment, and miscellaneous items necessary for a complete and acceptable installation.

No separate payment will be made for mounting assemblies for new installations. All incidentals required by the Plans for new installations, including mounting hardware, will be included in cost of the new signal, sign, camera, detector, or other traffic control device.

659-6 Basis of Payment.

Price and Payment will be full compensation for all work specified in this Section.

Payment will be made under:

Item No. 659- 1 Mast Arm, Span Wire and Pole Mounting Assemblies - each

670 TRAFFIC CONTROLLER ASSEMBLIES.
(REV 7-29-14) (FA 9-10-14) (1-15)

SECTION 670 is deleted and the following substituted:

SECTION 670
TRAFFIC CONTROLLER ASSEMBLIES

670-1 Description.

Furnish and install a traffic controller assembly or flashing intersection control beacon controller assembly as shown in the Plans. Meet the requirements of Section 603.

670-2 Materials.

Use a traffic controller assembly or intersection control beacon controller assembly listed on the Department's Approved Product List (APL). Traffic controller assemblies and intersection control beacon controller assemblies must be permanently marked with manufacturer name or trademark, part number and serial number. Markings must be visible after installation.

Provide a traffic controller assembly consisting of a traffic controller, traffic controller accessories (including monitors, load switches, flasher, flash transfer relay, power supplies), and other equipment wired into a controller cabinet to make a complete and operational assembly. All traffic controller assemblies must provide functionality that meets or exceeds operational characteristics, including NTCIP support, as described in NEMA TS-2-2003.

670-2.1 Traffic Controller: Meet the requirements of Section 671.

670-2.2 Traffic Controller Accessories: Meet the requirements of Section 678.

670-2.3 Controller Cabinet: Meet the requirements of Section 676.

670-2.4 Flashing Intersection Control Beacon Controller Assembly: A flashing intersection control beacon controller assembly must consist of a Type 3 flasher wired into a Type 1 controller cabinet to make a complete and operational assembly.

670-3 Installation Requirements.

670-3.1 Controller Cabinets: Meet the requirements of Section 676.

670-3.2 Field Wiring: Meet the requirements of Sections 632 and 676.

670-3.3 Grounding: Meet the requirements of Sections 620 and 676.

670-3.4 Equipment Placement: Install all equipment in the cabinet in accordance with the manufacturer's recommendations.

670-4 Method of Measurement.

The Contract unit price per assembly for traffic controller assembly or intersection control beacon controller assembly will include all labor, equipment, and miscellaneous materials necessary for a complete and accepted installation.

670-5 Basis of Payment.

Prices and payments will be full compensation for all work specified in this Section.

Payment will be made under:

Item No. 670- 4- Intersection Control Beacon Controller Assembly - per assembly.

Item No. 670- 5- Traffic Controller Assembly - per assembly.

676 TRAFFIC CABINETS.
(REV 9-5-14) (FA 9-10-14) (1-15)

SECTION 676 is deleted and the following substituted:

SECTION 676
TRAFFIC CABINETS

676-1 Description.

Furnish and install traffic cabinets as shown in the Plans. Meet the requirements of Section 603.

676-2 Materials.

676-2.1 General: Use traffic cabinets and accessories that are listed on the Department's Approved Product List (APL). Cabinets must be permanently marked with a label including the manufacturer's name or trademark, model/part number, and the year and month of manufacture. Place the label on the inside of the main door using a water resistant method. The label must be visible after installation.

676-2.2 NEMA Traffic Signal Controller Cabinets: Provide NEMA traffic signal controller cabinets with all terminals and facilities necessary for traffic signal control meeting the following requirements:

NEMA TS1 Controller Cabinet	NEMA TS-1-1989
NEMA TS2 Controller Cabinet	NEMA TS 2 2003

676-2.2.1 Documentation: Provide four copies of the cabinet wiring diagram with each cabinet. The nomenclature of signal heads, vehicular movements and pedestrian movements on the wiring diagram must be in accordance with the signal operating plan.

Documentation must include a list identifying the termination points of cables used for vehicular and pedestrian signal heads, detector loop lead-ins, and pedestrian pushbutton wires.

A heavy duty, resealable plastic opaque bag must be mounted on the backside of main cabinet door for storing cabinet prints and other documentation.

676-2.2.2 Police Switches: Provide the following police switches with Type 3 and larger controller cabinets. The switches must be mounted on the police panel and identified as to their function.

(a) **AUTO-FLASH:** When this switch is in the FLASH position, all signal indications must immediately transfer to the flashing mode. AC power shall be removed from the load switches and stop timing applied to the controller unit. When this switch is placed in the AUTO position the controller unit must operate in accordance with the appropriate specification.

(b) **MANUAL ON-OFF:** When this switch is in the on position, a logic ground must be applied to the manual control enable input of the controller unit.

(c) **MANUAL JACK:** Install a manual jack on the police panel. The jack must mate with a three circuit, 1/4 inch diameter phone plug. Connect the tip and ring (middle) circuits of the jack to the logic ground and the interval advance inputs of controller unit. When

the manual hand cord is plugged into the jack and the pushbutton is pressed, logic ground must be connected to the interval advance input of the controller unit.

Provide a manual pushbutton with Type 3 and larger cabinets. The pushbutton cord must have a minimum length of six feet with a 1/4 inch diameter three circuit plug connected to one end and a hand held manual pushbutton at the other end. With the exception of the vehicular yellow and all red clearance intervals, a complete cycle (push-release) of the manual pushbutton shall terminate the controller unit interval that is active. Cycling the pushbutton during the vehicular yellow or all red clearance intervals must not terminate the timing of those intervals.

676-2.2.3 Service Switches: Service switches must be mounted on the service panel or other locations approved by the Department and identified as to their functions. Provide the following service switches with Type 3 and larger cabinets.

(a) SIGNALS ON-OFF: When this switch is in the off position, AC power shall be removed from all signal heads. The SIGNALS ON-OFF switch must be connected to the control input of a contactor (displacement relay). Current supplied to the switch must not exceed five amperes (amps) total. Do not directly route the main signal head power buss and cabinet power through the service or police switches.

(b) AUTO-FLASH: When this switch is in the FLASH position, all signal indications must transfer to the flashing mode in accordance with the Uniform Code Flash (UCF) requirements. AC power shall be removed from the load switches when the signal indications transfer to the flashing mode. The controller unit must operate in accordance with appropriate specifications during the flashing mode. When the switch is placed in the AUTO position, transfer from the flash mode to normal operation shall be made in accordance with UCF requirements.

(c) CONTROLLER ON-OFF: When this switch is in the off position, AC power shall be removed from the controller.

(d) AUX POWER ON-OFF: When this switch is in the off position, AC power shall be removed from all circuits of the cabinet except for the duplex receptacle, cabinet light and ventilation fan.

(e) VEHICLE DETECTORS: A detector test switch must be provided for each phase of the controller unit. Detector test switches must include a position for normal operation (phase receives calls from detectors), a position that provides a constant call, and a position that provides a momentary call.

676-2.2.4 Doors and Locks: Provide Type 3 and larger cabinets with a hinged, rain tight and dust tight police door which allows access to the police switches and manual jack.

Locate the police door in the bottom half of the main door for Type 3 and 4 pole mount cabinets. Locate the police door in the upper half of the main door for Type 4 and larger base mount cabinets.

Hinges and hinge pins must be constructed of stainless steel and prevent the door (main or police) from sagging. Hinges for the main and police doors must be located on the right side (viewed from the front).

Type 3 and larger cabinets must be furnished with a three point draw roller latching system consisting of the following latching points:

- (a) Center of the cabinet (lock)
- (b) Top of the cabinet--controlled by the door handle
- (c) Bottom of the cabinet--controlled by the door handle

The latching points on the top and bottom of the cabinet must remain in the locked position until the main cabinet door lock is unlocked. The locking mechanism must be equipped with nylon rollers to secure the top and bottom of the door.

Type 3 and larger cabinets must be furnished with a door stop which retains the main door open in a 90 degree and 120 degree position.

676-2.2.5 Police and Service Panels: Provide a police service panel with Type 3 and larger cabinets. The panels may be constructed of either sheet aluminum or cast aluminum. Locate the police panel behind the police door attached to the main door. The service panel must be mounted on the back side of the police panel. The police panel must have the following minimum dimensions:

- (a) Height – 4 inches
- (b) Width – 8 inches
- (c) Depth – 2-1/2 inches

676-2.2.6 Ventilation: Type 1 and 2 cabinets must be vented to allow dissipation of the heat generated by the equipment housed inside the cabinet.

Type 3 and larger cabinets must have dual thermostatically controlled fans, rated for continuous duty with a service life of at least three years. Mount thermostats on the inside top of the cabinet. Thermostats must be user adjustable to allow temperature settings ranging from a minimum of 70 F to a maximum of 140°F and capable of activating the fans within plus or minus 5 degrees of the set temperature. The intake vent must be rain tight, located on the bottom half of the cabinet, and covered with a removable filter.

676-2.2.7 Shelves: Type 2 cabinets must be furnished with one shelf. Type 3 and larger cabinets must be furnished with two adjustable shelves. Shelves must be adjustable in a maximum of 2 inch increments from the top of the load panel to 12 inches from the top of the controller cabinet.

676-2.2.8 Mounting Hardware: Type 1, 2, and 3 cabinets must be supplied with hardware for attaching the top and bottom half of the cabinet onto a flat or round surface. Optional wall or pole mount hardware must be provided for mounting Type 4 cabinets in specific installations.

Type 4 cabinets must have rigid tabs attached to the bottom of the cabinet. Type 5 cabinets must have rigid brackets attached to the bottom of the cabinet. Rigid brackets and tabs must be constructed of the same material used for the cabinet.

Type 4 and larger cabinets must be provided with one of the following alternatives for fastening to a concrete base:

(a) Galvanized anchor bolts, nuts, lock washers, and flat washers in accordance with ASTM A153. The anchor bolts must be at least 1/2 inch in diameter, seven inches in vertical length with at least three inch horizontal, or

(b) Heavy duty machine bolt anchors, flat washers, lock washers and machine screws at least 1/2 inch in diameter.

676-2.2.9 Electrical: Fabricate ground bussbars of copper alloy material compatible with copper wire and provide at least two positions where No. 2 AWG stranded copper wire can be attached.

Mount a ground bussbar on the side of the cabinet wall adjacent to the power panel for the connection of AC neutral wires and chassis ground wires.

If more than one ground bussbar is used in a cabinet, a minimum of a No. 10 AWG copper wire must be used to interconnect them.

676-2.2.9.1 Wiring: All wiring must be laced. All conductors in the cabinet must be stranded copper.

All inputs and outputs must be terminated on terminal strips. A connector harnesses for the controller, conflict monitor, vehicle detectors, and other controller accessory equipment must be furnished and wired into the cabinet circuitry.

A vehicle detector harness or rack must be furnished with the cabinet. Terminal strip circuits must be provided for connection of the loop lead-in cable.

676-2.2.9.2 Terminal Strips: The voltage and current rating of terminal strips must be greater than the voltage and current rating of the wire which is terminated on the terminal strip.

Conductors must be terminated on terminal strips with insulated terminal lugs. A calibrated ratchet crimping tool must be used to terminate the conductor in the terminal lug.

When two or more conductors are terminated on field wiring terminal strip screws, a terminal ring lug shall be used for termination of those conductors. All terminal strip circuits must be numbered.

676-2.2.9.3 Cabinet Light and Receptacle: Provide a light fixture capable of producing a minimum of 950 lumens with Type 3 and larger cabinets. The fixture must include a clear shatterproof shield and be mounted on the inside, front top of the cabinet and the light must automatically turn on when the main cabinet door is opened and off when the door is closed.

Mount and wire a three-wire 115 V_{AC} duplex receptacle in all cabinets. The receptacle must be protected by a 15A circuit breaker. Do not mount the receptacle on the main cabinet door or police and service switch panels.

676-2.2.9.4 Main Circuit Breaker: Provide a 15A circuit breaker with Type 1 and 2 cabinets, and a 30A circuit breaker with Type 3 and larger cabinets.

The main circuit breaker must turn off all power to the cabinet and shall not be used for the power switch located in the service panel.

676-2.2.9.5 Radio Interference Suppression: A radio interference suppressor must be provided in series with the AC power before it is distributed to any equipment inside the cabinet. The suppressor must provide a minimum attenuation of 50 decibels over a frequency range of 200 kHz to 75 MHz when used with normal installations and shall be hermetically sealed in a metal case.

The radio interference suppressor must have the same minimum current rating as the main circuit breaker.

The ground connection of the radio interference suppressor must be connected only to AC neutral and shall not be connected to earth ground directly.

676-2.2.9.6 Opto Isolation: The Opto Common input is the common reference pin for four optically isolated inputs.

The Opto inputs are intended to provide optical isolation for pedestrian detector and remote interconnect inputs. The Opto inputs are intended to connect through external 27 k Ω , 1 W resistors for 120 V_{AC} operation and are intended for direct connection to 12 V_{AC} from the cabinet power supply for pedestrian detector applications. These inputs may alternatively be used for low-true DC applications when the Opto Common pin is connected to the 24 V supply.

The Opto inputs shall provide electrical isolation of 10 MS minimum resistance and 1000 V_{AC} RMS minimum breakdown to all connector pins except the Opto Common pin. These inputs shall exhibit nominal impedance to the Opto Common pin of 5 kS', plus or minus 10 percent, and shall require 2.4 mA, plus or minus 10 percent, from a nominal 12 V_{AC} supply. The Opto inputs shall not recognize 3 V_{AC} RMS or less relative to the common input and recognize 6 V_{AC} RMS or more relative to the common input. Any steady state voltage applied between an Opto input and the Opto Common shall not exceed 35 V_{AC} RMS. Opto inputs shall not be acknowledged when active for 25 ms or less, and shall be acknowledged when active for 50 ms or more.

676-2.2.9.7 Load Resistors: A load resistor or capacitor must be installed between the AC (common) and each signal field wiring terminal for the yellow, green and walk indication. All load resistors and capacitors must be on the front side of any panel used in the cabinet.

676-2.2.9.8 Surge Protection: Furnish surge protective devices (SPDs) for the main AC power input, all signal head field wiring terminals, interconnect cable terminals and loop lead-in cable terminals which are located in the cabinet. SPDs must be unobstructed and accessible from the front side of any panel used in the cabinet.

The SPD for the main AC power input of the cabinet must be connected on the load side of the cabinet circuit breaker.

SPDs for signal and interconnect cable field wiring terminals must meet the following:

(a) Clamp the surge voltage to a level no greater than twice the peak operating voltage of the circuit being protected.

(b) Withstand a surge current of 1000A with an 8 by 20 μs waveform six times (at 1 second intervals between surges) without damage to the suppressor.

SPDs for loop lead-in cables must be designed in accordance with the following requirements:

(a) Protect the detector unit loop inputs against differential (between the loop lead) surges, and against common mode (between loop leads and ground) surges.

(b) Clamp the surge voltage to 25 V or less when subjected to repetitive 300A surges.

(c) Withstand repetitive 400A surges with an 8 by 20 μs waveform without damage.

SPDs must be installed according to the SPD manufacturer's instructions and not affect the operation of detectors. SPD leads must be kept as short as possible.

676-2.3 Type 170 Traffic Signal Controller Cabinets: Provide Type 170 traffic signal controller cabinets with all terminals and facilities necessary for traffic signal control and meeting the following requirements:

Model 332, 334 and 336S Cabinets

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Model 336S cabinet must incorporate input surge protection mounted on a fold-down termination panel at the input file.

Model 332 cabinets must incorporate a lower input termination panel. Model 332 and 334 cabinets must be base mounted. The Model 332 cabinet must have an auxiliary MODEL 420 output file, and be configured for 8 vehicle, 4 pedestrian, and 4 overlaps.

Model 552A designation is given to Model 332 cabinet assemblies that include a swing-out EIA 19 inch rack cage.

Cabinets must comply with figures for traffic control signals and devices available on the Department's website at the following URL:

http://www.dot.state.fl.us/trafficoperations/Traf_Sys/Product-Specifications.shtm

All terminals and facilities on panels must be clearly identified using permanent silk-screened text.

676-2.3.1 Base Plate and Mounting Brackets: Provide cabinets with a removable base plate and provisions for a standard base mounting bolt pattern. Cabinets must have two aluminum plates welded inside for anchoring to a concrete or composite base.

676-2.3.2 Police Switches: Police switch panels must include a manual jack. The jack must mate with a three circuit, 1/4 inch diameter phone plug. Connect the tip and ring (middle) circuits of the jack to the logic ground and the interval advance inputs of controller unit. When the manual hand cord is plugged into the jack and the pushbutton is pressed, logic ground must be connected to the interval advance input of the controller unit.

The pushbutton cord must have a minimum length of 6 feet with a 1/4 inch diameter three circuit plug connected to one end and a hand held manual pushbutton at the other end. With the exception of the vehicular yellow and all red clearance intervals, a complete cycle (push-release) of the manual pushbutton shall terminate the controller unit interval that is active. Cycling the push-button during the vehicular yellow or all red clearance intervals must not terminate the timing of those intervals.

676-2.3.3 Output File: Fabricate the output file using a "hard wired" harness. Printed board circuit boards are not acceptable.

676-2.3.4 Shelf: Provide an aluminum shelf with storage compartment in the rack below the controller (for remote secondary monitor/lap top computer use). The storage compartment must have telescoping drawer guides for full extension. The compartment top must have a non-slip plastic laminate attached. Provide an RS-232 connector for communications to the C2S port.

676-2.3.5 Loads: Provide dummy loads consisting of 4.7k resistors rated at five watts minimum for Greens, Peds, and Yellows. The dummy loads must be mounted on a terminal block in the rear of the output file or other approved location. Wire one side of each dummy load to AC return in a manner that allows a technician to easily attach the load to outputs from selected load switches.

676-2.3.6 Cabinet Light: Provide a light fixture capable of producing a minimum of 950 lumens. The fixture must include a clear shatterproof shield and be mounted on the inside, front top of the cabinet. The light must automatically turn on when the cabinet door is opened and off when the doors are closed.

676-2.3.7 Surge Protection: Provide each cabinet with devices to protect equipment from surges. Surge protection must be provided for the full capacity of the cabinet Input File and shall be in accordance with the assignment of the slots of a standard 336S cabinet assembly. Surge protector termination panels must be attached to the cabinet rack assembly and allow sufficient space for connections, access, and surge protector replacement. AC isolation

terminals must be on the same side of the cabinet as the AC service inputs. DC terminals and loop detector terminals must be installed on the opposite side of the cabinet from the AC power lines.

Surge protection for 332A cabinets must be mounted on the lower input termination panel.

Surge protection for 336S cabinets must be mounted on a custom fold down termination panel at the input file.

Under no circumstance (normal operation or short-circuit condition) shall the amperage capacity of the internal wiring and printed circuit board traces be less than the protecting threshold of circuit breakers and surge protectors provided.

676-2.3.7.1 Power Distribution Assembly Protection: The power distribution assembly (PDA) SPD must be a two stage series/parallel device that meets or exceeds the following:

- (a) Maximum AC line voltage: $140 V_{AC}$
- (b) 20 pulses of peak current, each of which will rise in 8 microseconds and fall in 20 microseconds to one-half the peak: 20kA.
- (c) The protector must include the following terminals:
 - Main line (AC Line first stage terminal)
 - Main Neutral (AC Neutral input terminals)
 - Equipment Line Out (AC Line second stage output terminal, 10A)
 - Equipment Neutral Out (Neutral terminal to protected equipment)
 - Ground (Earth connection)
- (d) The main AC line in and the equipment line outer terminals must be separated by a 200 microhenry (minimum) inductor rated to handle 10A AC service
- (e) The first stage clamp shall be between Main Line and ground terminals
- (f) The second stage clamp shall be between Equipment Line Out and Equipment Neutral
- (g) The protector for the first and second stage clamp must have a metal oxide varistor (MOV) or similar solid state device, rated 20 kA.

The main neutral and equipment neutral output shall be connected together internally, and shall have an MOV (or similar solid state device, or gas discharge tubes) rated at 20 kA between main neutral and ground terminals.

The PDA SPD must have a peak clamp voltage of 250V at 20 kA (voltage measured between equipment line out and equipment neutral out terminals, current applied between main line and ground terminals with ground and main neutral terminals externally tied together).

The PDA SPD must have a maximum let through voltage not exceeding 500 Vpk using an 8 by 20 μ s/1.2 by 50 μ s; 6 kV, 3 kA surge. The SPD must either be epoxy-encapsulated in a flame retardant material or utilize thermally protected varistors and be designed for continuous service current of 10A at 120 V_{AC} RMS. Power to the Type 170E controller and to the 24V power supply must be provided from the equipment line out terminal of the PDA SPD.

676-2.3.7.2 Inductive Loop Detector Protection: Protect each inductive loop detector input channel with an external SPD that meets or exceeds the following:

(a) The SPD must be a three-terminal device, two of which shall be connected across the signal inputs of the detector. The third terminal shall be connected to chassis ground to protect against common mode damage.

(b) The SPD must instantly clamp differential mode surges (induced voltage across the loop detector input terminals) via a semiconductor array. The array shall be designed to appear as a very low capacitance to the detector.

(c) The SPD must clamp common mode surges (induced voltage between the loop leads and ground) via solid state clamping devices.

(d) Peak Surge Current

Differential Mode: 400A (8 by 20 μ s)

Common Mode: 1000A (8 by 20 μ s)

Estimated Occurrences: 500 @ 200A

(e) Response Time: 40 ns

(f) Input Capacitance 35 pF typical

(g) Clamp Voltage

30V max @ 400A (Differential Mode)

30V max @ 1000A (Common Mode)

676-2.3.7.3 Signal Load Switch Protection: The outputs of each load switch in the output file shall be provided with a MOV connected from the AC positive field terminal to the chassis ground. The MOV must be rated 150 V_{AC} and shall be a V150LA20A (or approved equal).

676-2.3.7.4 Communication Input Protection: Each low voltage communication input must be protected as it enters the cabinet with a hybrid two-stage SPD that meets or exceeds the following:

(a) The SPD must be a dual pair (four-wire) module with a double-sided, gold-plated printed circuit board connector.

(b) The SPD must be installed in a ten-circuit card edge terminal block (PCB1B10A).

(c) The SPD must be utilized as two independent signal pairs. The data circuits must pass through the SPD in a serial fashion.

(d) Peak Surge Current

10kA (8 by 20 μ s)

Occurrences at 2000A: greater than 100

(f) Response Time: less than 1 ns

(g) Clamp Voltage: 30V maximum

(h) Series Resistance: greater than 15 ohms per line

(i) Primary Protector: 3 element gas tube

(j) Secondary Protector: Solid state clamp (1.5 kW minimum)

The line side of the SPD must be connected to the communication field wires, the load side connected to the communication connector of the controller, and the ground terminal connected to chassis ground.

676-2.3.7.5 Low Voltage DC input protection: Each DC input must be protected by an SPD that meets or exceeds the following:

(a) The SPD must be a 5 terminal device. Two terminals must be connected to the line side of the low voltage pair, two terminals must be connected to the input file side, and the fifth terminal connected to chassis ground.

(b) Peak Surge Current

2 kA (8 by 20 μ s)

Occurrences at peak current: 100 (typical)

(c) Response Time: 5-30 ns

(d) Shock: Must withstand 10 foot drop on concrete

(e) Clamp Voltage: 30V

(f) Series Resistance: greater than 15 ohms each conductor

676-2.3.7.6 Preemption and 115V AC signal input protection: Each preemption or AC signaling input channel must be protected by an external SPD that meets or exceeds the following requirements:

(a) The SPD must be a 3 terminal device

(b) Peak Surge Current

2000A (8 b 20 μ s)

Occurrences at peak current: 25 (minimum)

(c) Response Time: less than 200 ns

(d) Peak Surge Trip Point: less than 890V nominal

676-2.3.8 Model 210 Conflict Monitor with Absence of Red Monitoring: The conflict monitor must be a Model 210 "PLUS" conflict monitor capable of detecting fault sequencing of signals on a per channel basis (i.e. short or absence of yellow interval and/or simultaneous dual indications). All integrated circuits having 14 pins or more must be socket-mounted.

676-2.3.8.1 Absence of Red Monitoring: The conflict monitor must be capable of monitoring for the absence of voltage on all of the inputs of a channel (defined here as red, yellow, and green). If an output is not present on at least one input of a channel at all times, the unit shall begin timing the duration of this condition. If this condition exists for less than 700 milliseconds, the unit shall not trigger. If this condition exists for more than 1000 milliseconds, the unit shall trigger as if a conflict had occurred, causing the intersection to transfer immediately into a flashing mode, and "stop-time" to be applied to the controller. A red signal shall require the presence of a minimum of 60 V_{AC}, plus or minus 10 V_{AC}, to satisfy the requirements of a red indication. The red input signals shall be brought into the conflict monitor through an auxiliary connector on the monitor's front panel. Provide a similar connector on the output file, with a removable harness connecting the two. Provide an indicator on the front panel of the monitor to identify the triggering of the monitor in response to the absence of red condition.

676-2.3.8.2 Red Monitor Harness: A connector and terminal assembly designated as P20 for monitoring the absence of red, shall be an integral part of the output file. The connector must terminate, and be compatible with, the cable and connector of a Type 170 conflict monitor unit (CMU), capable of monitoring the absence of red. Provide the pin assignments of the P20 connector and terminal assembly with the cabinet plans. The P20 connector shall be physically like the cable and connector of a Type 170 CMU to prevent the absence of red cable connector from being inserted into the P20 connector 180 degrees out of alignment.

676-2.3.8.3 Programming of Unused Red Channels: Provide all cabinet assemblies with a means of programming unused red channels by installing jumpers from red monitor inputs to 115 V_{AC}. The connecting terminals for the jumpers must be accessible and located in the same terminal block for all 16 channels to assure full compatibility of all cabinet assemblies with "210 Plus" conflict monitor units.

676-2.3.9 Police Door and Panel: Provide cabinets with police doors and panels. The police panel must include text informing officers that yellow and all-red clearance intervals are timed internally.

676-2.3.9.1 Manual Control: Police switch panels must include a manual jack. The jack must mate with a three circuit, 1/4 inch diameter phone plug. Connect the tip and ring (middle) circuits of the jack to the logic ground and the interval advance inputs of controller unit. When the manual hand cord is plugged into the jack and the pushbutton is pressed, logic ground must be connected to the interval advance input of the controller unit.

The pushbutton cord must have a minimum length of six feet with a 1/4 inch diameter three circuit plug connected to one end and a hand held manual pushbutton at the other end. With the exception of the vehicular yellow and all red clearance intervals, a complete cycle (push-release) of the manual pushbutton shall terminate the controller unit interval that is active. Cycling the push-button during the vehicular yellow or all red clearance intervals must not terminate the timing of those intervals.

676-2.3.10 Technician Service Panel: Provide cabinets with a technician service panel which is mounted on the back side of the police panel (inside the main cabinet front door).

676-2.3.10.1 Service Panel Switches: There must be two switches located on the technician service panel, clearly labeled according to the following functions:

(a) UCF – This toggle switch shall:

Place the intersection into Flashing Operation.

After meeting requirements for Flashing

Operations, all power shall be removed immediately from signal load switches.

(b) Signal On/Off – This toggle switch shall disconnect all power to the signal lights through the use of a 60A contact switch placed in series with the load switch packs.

Labels must be silk screened directly on the panel.

676-2.3.11 Swing-out Rack Assembly: Provide 552-A cabinets with a pullout and rotatable rack assembly as well as an interface panel mounted on the top of the rack assembly and attached to the top shelf. The rack assembly must be constructed to house components designed to be installed in a standard EIA 19 inch rack and shall house the Controller, Input File, Output File No. 1, PDA No. 2, and a storage compartment.

Construct the rack and slide/hinged mounting brackets so that when the rack assembly (fully loaded) can be pulled out with one hand with complete ease of operation including rotation of the assembly.

The rack assembly must have a spring-loaded latch mechanism to secure the rack assembly inside the cabinet while in the "rest" position. When pulled out of the cabinet at any point from its resting position (inside cabinet) to its full extension and rotation, the fully loaded rack assembly shall not cause any member of the assembly to bend, warp or bind. The rack must be made of one inch square aluminum tubing with welded joints and extend and retract smoothly without noticeable friction or stress on roller guides, extension brackets, or other

mechanical components. Clearance between the mounting rails shall be 17-3/4 inches. Maximum deflection of the entire rack assembly (with all equipment installed) shall not exceed 1/8 inch.

The rack assembly must have 12 technician test switches mounted to the interface frame assembly. Technician test switches must be of the momentary type and shall have eight vehicle and four pedestrian inputs.

The front of the rack assembly must be tapped with 10-30 threads with EIA universal spacing for 19 inch electrical equipment racks.

The rack assembly must be attached to the left cabinet wall through combination slide/hinged mounting brackets.

The slide/hinged mounting brackets must be fabricated from aluminum and/or stainless steel only.

Mounting bracket guides must utilize 7/8 inch stainless steel ball bearing rollers and allow extension and retraction of a loaded rack with minimal effort.

The rack assembly must be capable of rotating 210 degrees from its rest position after full extension from the cabinet.

The rack assembly must have an minimum 7/16 inch diameter aluminum rack stop rod attached to the inside left cabinet wall from the left side of the rack assembly to lock the rack into final position.

All cabinet harnesses must be long enough to maintain cabinet connections and functionality when the rack assembly is fully extended and rotated to its maximum limit. Harnesses must not bind or crimp when the rack is fully retracted, extended, or in motion.

676-2.3.12 Service Panels for 552A: The 552A cabinet must include a field service panel, auxiliary field service panel, and interface panel, all constructed of aluminum with a 1/8 inch minimum thickness. All components must be accessible from the front of the panels. Do not mount components or attach wires behind panels.

676-2.3.12.1 Field Service Panel: The field service panel must consist of terminal strips, circuit breakers, transient protection devices, load resistors, capacitors, cable tie mounts and associated wiring for making all field wiring connections. Mount the field service panel in the cabinet on the lower right exterior cabinet wall.

The field service panel must provide the necessary interconnecting junction points between the rack assembly and cabinet for the field service wires. The panel must be grouped for internal connections (jumpers) between terminals boards, wiring from the panel to the rack assembly, and wiring from the panel to the cabinet.

The field service panel wiring harness must have flexible wire covered by a flexible non-metallic conduit from the field service panel to the PDA, output file, and interface panel. The harness must have a metal clamp with a rubber grommet center attached to the field service panel to secure the harness to the panel for proper orientation of the harness with the rack assembly. Terminal strips for the panel shall be as listed below:

a) TBS1 - Terminal Block, Deadfront type, 3 position, No. 4 to No. 14 AWG wire range, 70A, 600V.

b) TBS2 - Terminal Block, Barrier, 16 position, .375 Density, 5-40 x 3/16 BH Screw, Open Bottom, Double Row, No. 16 AWG (max), 15A, 250V.

c) TBS3 - Terminal Block, Barrier, 20 position, .375 Density, 5-40 x 3/16 BH Screw, Open Bottom, Double Row, No 16 AWG (max), 15A, 250V.

d) TBS4 & TBS5 - Terminal Block, Barrier, 12 position, .438 Density, 6-32 x 1/4 BH Screw, Open Bottom, Double Row, No. 14 AWG (max), 20A, 250V.

The panel must have a main cabinet circuit breaker rated at 30A and a cabinet accessory circuit breaker rated at 15A for cabinet fans and light. Mount the circuit breakers near the back cabinet door on the panel.

The panel must include load resistors for all Walk, Green, Green Arrow, Yellow and Yellow Arrow Switch Pack outputs to prevent the conflict-voltage monitor from going into "Flash" due to a failed signal lamp. Load resistors must be 2K, 10 watt.

MOVs must be physically tied to one side of each terminal on TBS4 and TBS5 and be physically secured to the field service panel with a 6-32 screw.

676-2.3.12.2 Auxiliary Field Service Panel: The auxiliary field service panel must be mounted on the lower left interior cabinet wall and consist of a minimum of four terminal strips, 18 detector surge protectors and one pedestrian button isolation board assembly. The 18 surge protectors must be a three-terminal device, two of which are connected across the signal inputs of the detector for differential mode protection and the third terminal is grounded to protect against common mode damage. Mount the pedestrian button isolation board on the auxiliary field service panel. Terminal strips for the panel shall be Terminal Block, Barrier, 12 position, .438 Density, 6-32 x 1/4 BH Screw, Open Bottom, Double Row, No. 14 AWG (max), 20A, 250V.

Install a four-button pedestrian isolation board on the auxiliary field service panel to provide for the connection of the pedestrian buttons on phases 2, 4, 6 and 8. The board must provide electrical isolation of the field wiring to the internal cabinet wiring. The inputs to this isolation board shall be wired to terminal block TBA5 for connection to field wiring. The outputs of this board shall be carried through the harness to the input file to the proper wires that go to the interface extension panel of the controller.

The pedestrian button isolation board must include a PC board mounted on an aluminum panel with the following minimum dimensions:

Height: 2 inches

Width: 8 inches

Thickness: 1/8 to 3/16 inches

676-2.3.12.3 Interface Panel: The interface panel must consist of eight terminal strips, one telephone line suppressor and mounting fixture, two 24 V_{DC} relays and mounting fixtures, and all associated wiring for connecting the required interface equipment modules.

The front of the panel must be covered by a 1/4 inch clear plexiglass sheet, supported from the panel by four 1-1/2 inch separators. Secure the panels to the separators using wing nuts that are removable without the use of tools. The plexiglass cover shall have 1/2 inch slot, centered over each of the terminal strips. All covers and panels must be interchangeable.

The panel wiring must provide the necessary interconnecting junction points between interface equipment cable harnesses and controller cabinet input and output signal. The panel wiring provides the functional wiring information for connecting the interface equipment in the cabinet.

The panel wiring must be grouped for internal connections (jumpers between terminal boards) as well as wiring from the controller and related cabinet functions to the terminal boards on the interface panel.

Ground wires must be No. 14 AWG wire, minimum. The internal harnesses must be located between TB1, TB2 and TB3. The external and internal wiring must be located outside of TB1 and TB4, between TB2 and TB3.

Terminal strips shall be Barrier type, .375 Density, 5-40 x 3/16 BH Screw, Open Bottom, Double Row, No. 16 AWG (max), 15A, 250V. Terminals must use nickel/cadmium plated brass screws. All terminals and facilities on panels must be clearly identified using permanent silk-screened

The K1P and K2F relays shall be 15A miniature relays with polycarbonate cover, 2 form C (CO) contact arrangement, DC coil input, socket mount, .187 inch quick connect/solder terminals, AgCdO (15A) contacts, and 24V_{AC} coil voltage with matching socket and hold down spring. All screws on the relay socket must be brass with nickel/cadmium plating.

676-2.3.13 Storage Compartment: Mount an aluminum storage compartment in the rack assembly. The storage compartment must have telescoping drawer guides for full extension of drawer from rack assembly and have a continuous front lip for opening the compartment top for storage. The top of the compartment must be non-slip plastic laminate.

Install a communication port on the right hand side of the drawer at the front for connecting to the communications port of the controller unit via the cabinet harness.

676-2.3.14 Cabinet Rails: Provide the cabinet with four cabinet rails for mounting wiring panels and various brackets. Rails must be keyhole design with slots 2 inches on center with a top opening diameter of 5/8 inches to allow the insertion of a 5/8 inch by 1 inch carriage bolt. The rails must be approximately 1-1/2 inch to 2 inches wide by 1/2 inches deep. Do not use unistruts or other rails.

676-2.3.15 Electrical: Do not use printed circuit boards in any controller cabinet subsystem file or panel, including but not limited to the output file (except for the red monitor program board), service panel, interface panel, and input file.

676-2.3.15.1 Wiring: Cut all wires to the proper length and neatly laced into cables with nylon lacing. No wire shall be doubled back to take up slack. Cables in the cabinet must not interfere with the routing and connection of field wiring. Cables must be secured with nylon cable clamps, unless specified otherwise. The position of cables between the components must be such that when the door is closed, it does not press against the cables or force the cables against the various components inside the controller cabinet.

Fabricate ground buss bars of a copper alloy material compatible with copper wire and provide at least two positions where a No. 2 AWG stranded copper wire can be attached. Mount a 6 inch ground buss bar with screw terminals on the bottom flange on each side of the cabinet for connection of AC neutral wires and chassis ground. Attach a flexible ground strap between the left side ground buss bar and the left side bottom rear of the rack assembly. Wiring harnesses must be covered by a flexible non-metallic conduit. Panel wire size must be a minimum of No. 18 AWG unless otherwise specified.

676-2.3.15.2 Terminals: Terminal connections must be soldered or constructed using a calibrated ratchet type crimping tool. Wiring must be traceable and without entanglement.

676-2.4 Controller Cabinet Flashing Operation: When a non-emergency flashing operation is required, the selected operation shall be performed by the UCF format. The following shall utilize UCF format:

- a) Flash Switch located on the cabinet service panel
- b) Time Base Coordination Flash
- c) Time Switch

When flashing operation is initiated, the controller assembly shall transfer from normal operation to flashing operation only at the end of the common major street red interval, the common minor street yellow interval, or the all red interval.

UCF shall be an internal function of the controller unit and must not be inhibited by the hold command. External logic will not be allowed to provide this function.

In the event of an emergency when flashing operation is required, the controller assembly shall immediately place the intersection on flash. Emergency flash may be initiated by the following:

- a) Auto/Flash Switch - A switch located on the cabinet police panel
- b) Conflict-Voltage Monitor senses a conflicting indication or system

error

When emergency flash is initiated, the controller assembly shall immediately transfer to flashing operation.

The transfer of the controller assembly from flashing operation to normal operation shall cause the controller unit to revert to its start-up sequence unless the conflict-voltage monitor has transferred the controller assembly to flashing operation. If transferred to flashing operation by the conflict-voltage monitor, the controller assembly shall remain in flashing operation until the monitor unit is reset and automatic operation can be implemented through the normal start-up sequence.

676-2.5 Intelligent Transportation System Cabinets: The cabinet shell must conform to NEMA 3R requirements, be constructed of unpainted sheet aluminum alloy 5052-H32 with a minimum thickness of 0.125 inches and have a smooth, uniform natural aluminum finish without rivet holes, visible scratches or gouges on the outer surface. Other finishes are acceptable if approved.

The minimum dimensions for cabinets are listed below.

Cabinet Type	Height	Width	Depth
336	36" - 39"	24" - 26"	20" - 22"
336S	46" - 48"	24" - 26"	22" - 24"
334	66" - 68"	24" - 26"	30" - 32"

The cabinet must be weather resistant and constructed with a crowned top to prevent standing water. All exterior cabinet welds must be gas tungsten arc (TIG) welds and all interior cabinet welds must be gas metal arc (MIG) or TIG welds. All exterior cabinet and door seams must be continuously welded and smooth and all inside and outside edges of the cabinet must be free of burrs, rounded and smoothed for safety. All welds must be neatly formed and free of cracks, blow holes and other irregularities. Use ER5356 aluminum alloy bare welding electrodes conforming to AWS A5.10 requirements for welding on aluminum. Procedures,

welders and welding operators must conform to AWS requirements as contained in AWS B3.0 and C5.6 for aluminum.

The cabinet must have a lifting eye plate on either side of the top for lifting the cabinet and positioning it. Each lifting eye opening must be a minimum diameter of 0.75 inches and capable of supporting a weight load of 1,000 pounds. All external bolt heads must be tamperproof.

Ground-mount cabinets must include a removable base plate and two aluminum plates, welded inside, for anchoring the cabinet to a concrete or composite type base as shown in the Plans. Fabricate the plates from aluminum alloy 5052-H32 a minimum of 4 inches wide by 0.125 inches thick. Provide the cabinet with four 1 inch diameter holes for anchoring.

676-2.5.1 Doors: Provide cabinets with front and rear doors, each equipped with a lock and handle. Doors must be full size, matching the height and width dimensions of the cabinet enclosure, with no fewer than three stainless steel hinges or; alternately, one full-length “piano” hinge. Hinges must be constructed of 14 gauge stainless steel with stainless steel hinge pins that are spot-welded at the top. Mount the hinges so that they cannot be removed from the door or cabinet without first opening the door. Brace the door and hinges to withstand 100 pounds per vertical foot of door height load applied vertically to the outer edge of the door when standing open. Ensure there is no permanent deformation or impairment of any part of the door or cabinet body when the load is removed.

Door opening must provide a flange that allows the door gasket to mate with a flat surface. Include a gasket made of closed-cell material resistant to UV, weathering, elevated temperatures, and permanent deformation that is permanently bonded to the inside of each door forming a weather-tight seal when the door is closed.

676-2.5.2 Latches: Provide all cabinets with a three-point draw roller latching system for the doors. The latching system must have the following latching points.

1. Center of the cabinet (lock).
2. Top of the cabinet – controlled by the door handle.
3. Bottom of the cabinet – controlled by the door handle.

The latching points on the top and bottom of the cabinet must remain in the locked position until the main cabinet door lock is unlocked. The locking mechanism must be equipped with nylon rollers to secure the top and bottom of the door.

Provide the cabinet with a door stop that retains the main door open in a 90 degree and 120 degree position.

Outfit the doors with an industrial standard pin tumbler lock with No. 2 key, or an approved alternate, and hardware that allows the door to be secured using a padlock. Provide two keys for each cabinet lock.

676-2.5.3 Rails: Provide the cabinet with four cabinet rails that form a cage for mounting miscellaneous wiring panels and various mounting brackets. Use rails constructed of either 0.1345 inch thick plated steel or 0.105 inch thick stainless steel that extend the length of the cabinet’s sides, starting from the bottom of the enclosure. Rails must be keyhole designed with slots 2 inches on center with a top opening of 5/8 inch in diameter to allow the insertion of a 5/8inch by 1 inch carriage bolt. Rails must be 1-1/2 to 2 inches wide by 1/2 inches deep, drilled and tapped for 10-32 screws or rack screws with EIA universal spacing. Do not use unistruts or other rail types.

676-2.5.4 Racks: The cabinet must include a standard 19 inch EIA/TIA equipment rack centered in the cabinet for mounting devices to be installed inside. Clearance in the rack between the rails must be 17-3/4 inches.

676-2.5.5 Shelf: Provide a level, rollout internal shelf with a minimum work area measuring 10 inches by 10 inches. The shelf must be capable of sustaining a constant 20 pound load and the shelf position must be adjustable.

676-2.5.6 Sunshield: Sunshields must be mounted on standoffs that provide an air gap of at least of one inch between the exterior cabinet walls and the sunshields. Construct sunshields of 0.125 inch thick 5052-H32 aluminum sheet with corners that are rounded and smoothed for safety.

676-2.5.7 Ventilation: Provide ventilation through the use of a louvered vent at the bottom of the door. Vent depth must not exceed 0.25 inch. Provide an air filter a minimum of 192 square inches and 1 inch thick behind the vent. The filter must be removable and held firmly in place so that all intake air is filtered.

Provide a bottom trough and a spring-loaded upper clamp to hold the filter in place. The bottom trough must drain any accumulated moisture to the outside of the field cabinet.

ITS field cabinets must have dual thermostatically controlled fans, rated for continuous duty with a service life of at least three years. Mount thermostats on the inside top of the cabinet. Thermostats must be user adjustable to allow temperature settings ranging from a minimum of 70°F to a maximum of 140°F and capable of activating the fans within plus or minus 5 degrees of the set temperature. Use UL-listed exhaust fans having a minimum air flow rating of 100 cubic feet per minute. Electric fan motors must have ball or roller bearings. Vent the exhaust air from openings in the roof of the field cabinet.

676-2.5.8 Electrical Requirements: All equipment must conform to applicable UL, NEC, EIA, ASTM, ANSI, and IEEE requirements. SPD's must be accessible from the front of any panel used in the cabinet. Connect the SPD for the cabinet's main AC power input on the load side of the cabinet circuit breaker. All wiring must be laced. All conductors must be stranded copper.

676-2.5.8.1 Service Panel Assembly: Provide a service panel assembly to function as the entry point for AC power to the cabinet and the location for power filtering, transient suppression and equipment grounding. Provide branch circuits, SPDs, and grounding as required for the load served by the cabinet, including ventilation fans, internal lights, electrical receptacles, etc.

676-2.5.8.2 Terminal Blocks: Terminate electrical inputs and outputs on terminal blocks where the voltage and current rating of the terminal block is greater than the voltage and current rating of the wire fastened to it.

Terminate conductors on terminal blocks using insulated terminal lugs large enough to accommodate the conductor to be terminated. When two or more conductors are terminated on field wiring terminal block screws, use a terminal ring lug for termination of those conductors. Number all terminal block circuits and cover the blocks with a clear insulating material to prevent inadvertent contact.

676-2.5.8.3 Ground Buss Bar: Fabricate ground buss bars of copper alloy material compatible with copper wire and provide at least two positions where a No. 2 AWG stranded copper wire can be attached.

Mount the ground buss bar on the side of the cabinet wall adjacent to the service panel assembly for the connection of AC neutral wires and chassis ground wires. If more than one ground buss bar is used in a cabinet, use a minimum of a No. 10 AWG copper wire to interconnect them. Connect the equipment rack to the ground buss bar in the cabinet to maintain electrical continuity throughout the cabinet.

Follow the PANI recommendations of USDA-RUS-1751 for connections to the ground buss bar. Producer (P) or electrical power and sources of stroke current connections shall be on the left end of the buss bar. Absorbing (A) or grounding wires shall be connected immediately right of the P connections. Non-isolated (N) connections such as doors and vents shall be connected to the right of the A connections. Isolated (I) equipment grounds from equipment in the cabinet shall be connected on the right end of the buss bar.

676-2.5.8.4 Power Distribution Assembly: Furnish a power distribution assembly that fits in the EIA 19 inch rack and provides for protection and distribution of 120 V_{AC} power unless otherwise shown in the Plans.

676-2.5.8.5 Interior Lighting: Provide the ITS cabinet with two light fixtures, each capable of producing a minimum of 950 lumens, with clear shatter-proof shields. Mount a fixture on the inside front and rear top of the cabinet and include door switches so that the lights automatically turn on when a cabinet door is opened and turn off when the door is closed. Light fixtures must be unobstructed and able to cast light on the equipment in the cabinet.

676-2.6 Generator and Auxiliary Power Connection: Traffic signal controller cabinets must include a generator and auxiliary power connection. ITS cabinets must include a generator and auxiliary power connection unless otherwise shown in the Plans.

Cabinets with generator and auxiliary power connection must include provisions for the connection of an external power source, such as a portable generator, through a weatherproof, secure interface. This feature must allow authorized personnel to access, connect, and secure an external power source to the cabinet in order to restore power within five minutes of arrival time at the cabinet.

Provide the cabinet with either a manual or automatic transfer switch as shown in the Plans. The transfer switch must meet UL 1008 and be rated equal to or higher than the design load of the cabinet's main breaker and the generator input twist-lock connector rating. The transfer switch must provide a means of switching between normal utility power and auxiliary backup generator power. Switching time cannot exceed 250 milliseconds. Ensure that the transfer switch does not allow simultaneous active power from more than one source and does not allow generator backflow into normal utility AC circuits.

676-2.6.1 Manual Transfer Switch: Provide a two-position manual transfer switch with the switch positions labeled "Generator Power" and "Utility Power".

Equip the transfer switch with a "Utility-on" indicator, which will illuminate when normal utility power service is available and the switch is in the "Generator Power" position. The indicator must turn off when the transfer switch is moved to the "Utility Power" position. The Utility-on indicator must be clearly visible outside the cabinet and the indicator's on/off state must be obvious from a distance of 30 feet.

676-2.6.2 Automatic Transfer Switch: An automatic transfer switch may be used instead of a manual transfer switch to provide for automatic transition from generator power back to normal utility service after utility power is restored. Provide the automatic transfer switch with indicators that display the status of connected power sources and indicate which power source is actively energizing the cabinet.

If a relay circuit is used to provide switching, the normally closed circuits must be connected to normal utility power. The relay must be energized solely by the generator. When energized, the relay must break the connection to normal utility power and make connection to the generator power input. Any automatic transfer switch or relay operated switch must include a bypass switch that disables automatic switching and permits manual selection of the power sources connected to the cabinet.

676-2.6.3 Generator Access Panel: Include a generator connection panel consisting of, at a minimum, the manual transfer switch and a three-prong, 30 amp twist-lock connector with recessed male contacts for generator hookup. Locate the access panel as close as possible to the main AC circuit breaker with the bottom of the access panel no less than 24 inches above the bottom of the cabinet. Do not place the generator access panel on the main cabinet door or back door. Locate and label the transfer switch and twist lock connector on a panel easily accessible behind a weatherproof lockable exterior access door equipped with a tamper-resistant hinge. Label this access door "Generator Access Door" Provide the access door with a No. 2 lock unless otherwise specified in the Plans.

The access door must include a weatherproof opening for the generator cable. The generator hookup compartment must be recessed no more than six inches into the cabinet but be deep enough to allow closing and locking of the access door when the generator cable is connected. Avoid blocking access to any other equipment in the cabinet.

676-2.7 Small Equipment Enclosures: Small equipment enclosures, such as equipment cabinets less than 13 inches high by 10 inches wide by 11 inches deep, may be constructed of aluminum or non-metallic materials. Enclosures must include a safe means of removing power from the installed equipment for servicing and replacement, such as a switch, fuse, or breaker. Discrete markings, such as manufacturer name and model, are permitted on the outside of small enclosures.

All fasteners less than 5/8 inch exposed to the elements must be Type 304 or 316 stainless steel.

Construct aluminum enclosures of 5052 sheet aluminum alloy with a minimum thickness of 0.090 inches. Aluminum enclosures must have a uniform natural finish or be powder coat painted in accordance with AAMA-2603-02 specifications. All welds, bends, and seams must be neatly formed and free of cracks, blow holes and other irregularities. All inside and outside edges of the enclosure must be free of burrs, rivet holes, visible scratches, and gouges and have a smooth, uniform finish.

Non-metallic enclosures must be UL 508A listed, be rated for outdoor use, and resist chemicals, corrosion, and ultraviolet rays. Enclosures must be NEMA 3R (IP 66) rated, minimum.

Enclosure doors must include a vandal resistant hinge and be secured with a locking latch or a minimum of two quick-release Type 304 or 316 stainless steel latches with padlock hasps. Removal of the hinge or hinge pin must not be possible while the enclosure is closed. Provide two sets of keys with each lock.

Enclosures may be vented. Holes larger than 1/8 inches must be covered by heavy duty screen.

Post mounted enclosures must be supplied with mounting hardware for attaching the enclosure to a 4-1/2 inch (OD) aluminum post.

676-3 Installation Requirements.

376-3.1 General: Ground all cabinets in accordance with the requirements of Section 620. Keep the ground wire from the cabinet ground bussbar to the ground rod assembly or array as short as possible. Ensure the ground wire is not in contact with any other part of the cabinet. Controller cabinets shall be wired in accordance with the signal operating plan specified in the Contract Documents. If phases are omitted for future use, the cabinet must be wired for these future phases. However, the load switches for the future phases do not have to be furnished. All field drilled conduit entrance holes or other holes must be reamed and free of burrs. All conduit connections to the cabinet must be weatherproof.

676-3.2 Traffic Signal Controller Cabinet Installation: Install traffic signal controller cabinets in accordance with the Design Standards, Index No. 17841.

676-3.2.1 Pole Mounted Cabinets:

- (a) Fasten the pole mounted hardware which is furnished with the cabinet to the cabinet, making all connections watertight.
- (b) Use stainless steel bands for mounting cabinets onto steel strain poles.
- (c) Use stainless steel bands or lead anchors (or equivalent) for mounting cabinets onto concrete strain poles.
- (d) Use stainless steel bands or lag bolts for mounting cabinets onto wood poles.

676-3.2.2 Base Mounted Cabinets:

- (a) Use anchor bolts to fasten base mounted cabinets to the concrete base.
- (b) Seal the joint between the bottom of the cabinet and the concrete base (inside and outside of cabinet) with a clear silicone rubber sealant.
- (c) Construct the base for the cabinets with concrete in accordance with Section 347. Make the concrete base for the cabinet level, free of honeycombs and as smooth as possible. Temporarily seal the end of conduit risers located in the base before placing the concrete. Position the end of the conduit risers a minimum of 2 inches above the finished surface of the concrete base.

676-3.2.3 Field Wiring:

- (a) Terminate signal cable, interconnect cable, and loop lead-in wires on the appropriate terminal strips in the controller cabinet with insulated terminal lugs. Use a calibrated ratchet type crimping tool to install the insulated terminal lugs onto the field wires.
- (b) Label spare circuits of the signal and interconnect cables and connect them to the cabinet ground bussbar.
- (c) Neatly bundle and identify all field wiring cables in the controller cabinet.

676-3.3 Intelligent Transportation System Cabinet Installation: Mount the cabinet as shown in the Plans, and provide the cabinet with the necessary base or pole mount hardware. Ensure that pole and structure-mounted field cabinets have mounting brackets on the side so that both cabinet doors are fully functional.

Make provisions for all telephone, data, control, and confirmation connections between the ITS device and field cabinet and for any required wiring harnesses and connectors.

Place a heavy-duty resealable plastic bag on the backside of the main cabinet door for containing cabinet prints, a list of terminal block connections, and other documentation.

Place all equipment in the cabinet according to the recommendations of the manufacturer. Maintain a minimum clearance of 6 inches between the top of the cabinet and the

top of any equipment placed on the top shelf of the cabinet and a minimum clearance of 2 inches between each side of the cabinet and any equipment placed on the cabinet shelves.

676-3.4 Small Enclosure Installation: Mount the enclosure on a pole or support structure as shown in the Plans, and provide any hardware necessary for a complete and accepted installation.

676-4 Warranty.

Ensure traffic cabinets have a manufacturer's warranty covering defects for a minimum of two years from the date of final acceptance in accordance with 5-11 and Section 608. The warranty must include providing replacements, within 10 calendar days of notification, for defective parts and equipment during the warranty period at no cost to the Department or maintaining agency.

676-5 Method of Measurement.

The Contract unit price each for traffic cabinet, furnished and installed, will include all materials specified in the Contract Documents, and all labor, equipment, and miscellaneous materials necessary for a complete and acceptable installation.

No separate payment will be made for a traffic cabinet when included with the controller assembly as per Section 670.

676-6 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

- Item No. 676- 1- Traffic Signal Controller Cabinet - each.
- Item No. 676- 2- ITS Cabinet - each.
- Item No. 676- 3- Small Equipment Enclosure - each.

985 GEOSYNTHETIC MATERIALS.

(REV 9-2-14) (FA 9-10-14) (1-15)

SECTION 985 is deleted and the following substituted:

**SECTION 985
GEOSYNTHETIC MATERIALS**

985-1 Description.

Geosynthetic materials are used for nonstructural and structural applications and shall be either geotextiles (woven or non-woven) or geogrids (woven or extruded) that are used for drainage, erosion control, reinforcement, separation or stabilization.

985-2 Materials.

985-2.1 General Requirements: Unless restricted in the Plans or Specifications, the geosynthetic material shall be a woven, non woven or extruded material consisting of long-chain polymeric filaments or yarns such as polypropylene, polyethylene, polyester, polyamides or polyvinylidene chloride formed into a stable network such that the filaments or yarns retain their

relative position to each other. The base plastic shall contain stabilizers and/or inhibitors to make the filaments resistant to deterioration due to ultra-violet light, heat exposure and potential chemically damaging environment. The edges of the material shall be selvaged or otherwise finished to prevent the outer yarn from pulling away from the material and shall be free of any treatment which may significantly alter its physical properties.

985-2.2 Physical Requirements: Each geosynthetic material shall be tested by an independent third party in accordance with the following methods as they apply to the specific application type. All testing and reported values, except apparent opening size (AOS), are to be minimum average roll values in the weakest principle direction unless indicated otherwise in this Section. Values for AOS are maximum average roll values.

Geotextile Selection	
In-situ Soil Types % passing a No. 200 Sieve*	Class for Type D1, D2, D3 Materials (see Table 1.1)
< 15%	a
15% to 50%	b
> 50%	c
> 50% with Plastic Index >7	d

*as per AASHTO T88.

Table 1.1 Drainage Geotextiles Test Methods and Requirements for Types D-1, D-2 and D-3			
Property/Test Method	D-1	D-2	D-3
Minimum Permittivity (Sec - 1) per ASTM D4491	D-1a = 0.7 D-1b = 0.2 D-1c = 0.1 D-1d = 0.1	D-2a = 0.7 D-2b = 0.2 D-2c = 0.1 D-2d = 0.1	D-3a = 0.5 D-3b = 0.2 D-3c = 0.1 D-3d = 0.1
Maximum AOS (US Sieve No.) per ASTM D4751	D-1a = 40 D-1b = 60 D-1c = 70 D-1d = 50	D-2a = 40 D-2b = 60 D-2c = 70 D-2d = 50	D-3a = 40 D-3b = 60 D-3c = 70 D-3d = 50
Minimum Grab Tensile Strength (lbs) per ASTM D4632	315	Woven Monofilament = 248 Other Woven Geotextiles: Elongation <50% = 315 Elongation >50% = 203	Elongation <50% = 248 Elongation >50% = 158
Minimum Sewn Strength (lbs) per ASTM D4632	283	Woven Monofilament=223 Other Woven Geotextiles: Elongation <50% = 283 Elongation >50% = 182	Elongation <50% = 223 Elongation >50% = 142
Minimum Puncture Strength (lbs) per ASTM D6241	618	Woven Monofilament = 495 Other Woven Geotextiles: Elongation <50% = 618 Elongation >50% = 433	Elongation <50% = 495 Elongation >50% = 309
Minimum Trapezoidal Tear (lbs) per ASTM D4533	113	Woven Monofilament = 57 Other Woven Geotextiles: Elongation <50% = 113 Elongation >50% = 79	Woven Monofilament = 57 Other Geotextiles: Elongation <50% = 90 Elongation >50% = 57
Minimum UV Resistance per ASTM D4355 (% Retained Strength)	50% @500 hours	50% @500 hours	50% @500 hours
Limitations	Woven Monofilament Geotextiles only	Woven Geotextiles only. No Slit Film Geotextiles allowed.	No Slit Film Geotextiles allowed.

Table 1.2 Test Methods and Requirements for Drainage Geotextiles Types D-4/6 and D-5		
Property/Test Method	D-4/6	D-5
Minimum Permittivity (Sec ⁻¹) per ASTM D4491	0.5	0.5
Maximum AOS (US Sieve No.) per ASTM D4751	40	40
Minimum Grab Tensile Strength (lbs) per ASTM D4632	180	180
Minimum Sewn Strength (lbs) per ASTM D4632	162	162
Minimum Puncture Strength (lbs) per ASTM D6241	223	223
Minimum Trapezoidal Tear (lbs) per ASTM D4533	35	40
Minimum UV Resistance per ASTM D4355 (% Retained Strength)	50% @500 hours	50% @500 hours

Table 2 Test Methods and Requirements for Erosion Control Materials					
Property/Test Method	E-1	E-2	E-3	E-4	E-5
Permittivity (Sec ⁻¹) per ASTM D4491	0.05	0.05			
Grab Tensile Strength (lbs) per ASTM D4632	90	90			
Minimum UV Resistance per ASTM D4355 (% Retained Strength)	80% @500 hours	80% @150 hours	80% @500 hours		
Wide Width Tensile Strength **(lbs/in) per ASTM D6818			11.4 x 5.7	22.8 x 11.4	45.7 x 22.8
Filtration Efficiency (%) per ASTM D5141	75% and min. flow rate of 0.3 gal/sf/min				
Design Shear***			≥2.1 psf	≥3.6 psf	≥5.0 psf

** Wide Width Tensile Strength is expressed in units of measure of lbs/in, in machine direction and cross direction as MD x CD.
*** Design Shear limits for Erosion mats must be determined by 30 minutes sustained flow in an unvegetated state as determined by tests performed by Utah State University, Texas Transportation Institute or an independent testing laboratory approved by the State Drainage Engineer.

Table 3 Test Methods and Requirements for Structural Geosynthetics			
Property/Test Method	Structural Application Type	Test Methods for Woven Geotextiles	Test Methods for Woven or Extruded Geogrids
Permittivity (sec^{-1})	R - 1, 2, 3, 4, 5	ASTM D4491	
UV Stability (Min Retained Strength @500 hr)	R - 3	ASTM D4355	ASTM D4355
Puncture Strength (lbs)	R - 5	ASTM D6241	
Grab Strength (lbs)	R - 5	ASTM D4632	
Opening Size	R - 1, 2, 3, 4, 5	AOS (US Sieve No.) ASTM D4751	Aperture Size (in x in)
Tensile Strength (lbs/ft)		ASTM D4595	ASTM D6637
Machine Direction Ultimate, (T_{ult})			
2% Strain	R - 1, 3		
5% Strain	R - 2, 3, 4, 5		
10% Strain	R - 1, 2, 3, 4, 5		
Cross Direction Ultimate			
2% Strain	R - 1, 2, 3, 4, 5		
5% Strain	R - 1, 2, 3, 4, 5		
10% Strain	R - 1, 2, 3, 4, 5		
Strain @ Ultimate Tensile Strength	R - 1, 2, 3, 4, 5		
Tear Strength (lbs)		ASTM D4533	
Machine Direction	R - 5		
Cross Direction	R - 5		
Soil-Geosynthetic Friction	R - 1, 2, 3	ASTM D6706	ASTM D6706
Creep Resistance- T_{creep} (lbs/ft)	R - 2, 3, 4	ASTM D5262	ASTM D5262
Creep Reduction Factor ($T_{\text{ult}}/T_{\text{creep}}$)	R - 2, 3, 4		
Installation Damage (RF_c)		GRI: GT7	GRI: GG4(a) & GG4(b)
Sand	R - 2, 3, 4		
Limestone	R - 2, 3, 4		
Durability (RF_d)		GRI: GT7	GRI: GG4(a) & GG4(b)
Chemical	R - 2, 3, 4		
Biological	R - 2, 3, 4		

Property/Test Method	Structural Application Type	Test Methods for Woven Geotextiles	Test Methods for Woven or Extruded Geogrids
Joint Strength (RF _j)		GRI: GT7	GRI: GG4(a) & GG4(b)
Mechanical	R - 2, 3		
Sewn	R - 2, 3	ASTM D4884	

985-2.3 Overlaps and Seams: Overlaps shall be in accordance with the manufacturer’s recommendations unless specified otherwise in the Contract Documents for a particular application. To reduce overlaps, the geosynthetic material may be sewn together in accordance with the manufacturer’s recommendations. Sew the seams with thread meeting the chemical requirements and minimum seam strength requirements in Tables 1.1, 1.2 and 3.

985-2.4 Packaging and Labeling: Geosynthetics shall be packaged in a protective covering sufficient to protect the material from temperatures greater than 140 F, sunlight, dirt, and other debris during shipment and storage. The manufacturer’s name, product name, style number, roll dimensions and LOT numbers must be clearly labeled on all packaging.

985-3 Product Acceptance and Certification.

985-3.1 Product Acceptance: All geosynthetic materials shall be one of the products listed on the Department’s Approved Product List (APL). Manufacturers seeking evaluation of products must submit an application in accordance with Section 6 and include independently certified test reports that the material meets the physical requirements of this Section. Products will be listed on the APL according to geosynthetic application type. Structural geosynthetics are listed with property values.

985-3.2 Certification: The Contractor shall provide the Engineer a certification from the manufacturer confirming that the material meets the requirements of this Section and is appropriate for the intended use. The manufacturer shall also provide two 8 inch by 10 inch samples of the geosynthetic material for product identification. The manufacturer’s certification shall be attested to by a person having legal authority to bind the manufacturing company.

The manufacturer shall maintain test records as required by this Specification and these records shall be made available to the Department upon request.

985-4 Applications.

985-4.1 Nonstructural:

985-4.1.1 Drainage: Select geotextile materials that meet the required permeability and AOS based on test results on the soil or fill adjacent to the geotextile for gradation. Materials for drainage applications must be tested in accordance with and meet the physical requirements in 985-2.2, Table 1.1.

Drainage Applications		
Geotextile Type	Description	Design Standards Index No.

Drainage Applications		
Geotextile Type	Description	Design Standards Index No.
D-1	Revetment (Special)	
D-2	Revetment (Standard)	
	Articulating Block	
	Gabions	281
	Rock, Rubble, and Broken Concrete	
	Ditch Pavement (Rubble Riprap)	281
	Joint Cover for Mechanically Stabilized Retaining Wall Supporting Spread Footing Foundations	
D-3	Underdrain	286
	French Drain	285
	Sheet Piling Filter	
	Filter Fabric Jacket (Culvert)	280
	Concrete Pavement Subdrainage	287
D-4/6	Slope Pavement	
	Ditch Pavement (Sand-Cement Riprap or Concrete)	281
D-5	Mechanically Stabilized Retaining Wall (Joint Cover)	548
	Cast-In-Place Retaining Wall	

985-4.1.2 Erosion Control: Materials used for erosion control applications must be tested in accordance with and meet the physical requirements in 985-2.2, Table 2.

Erosion Control Applications	
Type	Description
E-1	Staked Silt Fence
E-2	Wind Screen
E-3	Plastic Erosion Mat (Turf Reinforcement Mat) (Type 1)
E-4	Plastic Erosion Mat (Turf Reinforcement Mat) (Type 2)
E-5	Plastic Erosion Mat (Turf Reinforcement Mat) (Type 3)

985-4.2 Structural:

985-4.2.1 Reinforcement, Separation and Stabilization: Materials for reinforcement, separation and stabilization applications must be tested in accordance with and meet the physical requirements in 985-2.2, Table 3.

Reinforcement, Separation and Stabilization Applications	
Type	Description
R-1	Geosynthetic Reinforced Soil (GRS)

R-2	Reinforcement of Foundations over Soft Soils
R-3	Steepened Slopes
R-4	Reinforced Embankment
R-5	Construction Expedient

**THIS COMPLETES
THIS
SPECIFICATIONS
PACKAGE**