

Florida Department of Transportation
District 5

DESIGN-BUILD
REQUEST FOR PROPOSAL
for
Central Florida Rail Corridor
Positive Train Control (PTC)

Financial Projects Number(s): 412994-7-52-02
Federal Aid Project Number(s): Not Applicable

Contract Number: E5Y16

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ATTACHMENTS

The Attachments listed below are hereby incorporated into and made a part of this Request for Proposal (RFP) as though fully set forth herein.

Project Advertisement
Division I Design-Build Specifications)
Divisions II and III Special Provisions identified by the Department to be used on the Project:
Mobilization (SP1010000 Design-Build)
Contractor Quality Control General Requirements (SP1050813 Design-Build)
Structures Foundations (SP4550000 Design-Build)
Design Criteria – Positive Train Control
Central Florida Operations and Maintenance Agreement (CFOMA) and amendments
Amtrak Operating Agreement
FCEN Operating Agreement
CFRC Operating Rules
CFRC Roadway Worker Protection Safety Plan
CFRC Safety Transportation & Responsibility (STAR) Manual
CFRC Timetable No. 2 – latest version
CFRC General Bulletins – latest versions
Orange Fence Policy and Communication Procedure
CFRC Safety and Security Certification Plan (SSCP)
CFRC Safety and Security Emergency Preparedness Plan (SSEPP)
CFRC Emergency Response Plan - Passenger Train Emergency Preparedness Plan (PTEPP)
Internal Control Plan
CFRC Maintenance of Way Instructions

Bid Price Proposal Forms:

1. Bid Blank (375-020-17)
2. Design-Build Proposal of Proposer (375-020-12)
3. Design-Build Bid Proposal Form (700-010-65)
4. Bid or Proposal Bond (375-020-34)
5. DBE Forms (as applicable)

REFERENCE DOCUMENTS

The following documents are being provided with this RFP. Except as specifically set forth in the body of this RFP, these documents are being provided for reference and general information only. They are not being incorporated into and are not being made part of the RFP, the contract documents or any other document that is connected or related to this Project except as otherwise specifically stated herein. No information contained in these documents shall be construed as a representation of any field condition or any statement of facts upon which the Design-Build Firm can rely upon in performance of this contract. All information contained in these reference documents must be verified by a proper factual investigation.

The bidder agrees that by accepting copies of the documents, any and all claims for damages, time or any other impacts based on the documents are expressly waived.

Central Florida Commuter Rail Transit (CFCRT) IOS As-Built Signal Plans
Phase 2 Concept Signal Drawings
Route and Aspect Chart
OCC Plans and Communications Plans
Vehicle Plans

I. Introduction.

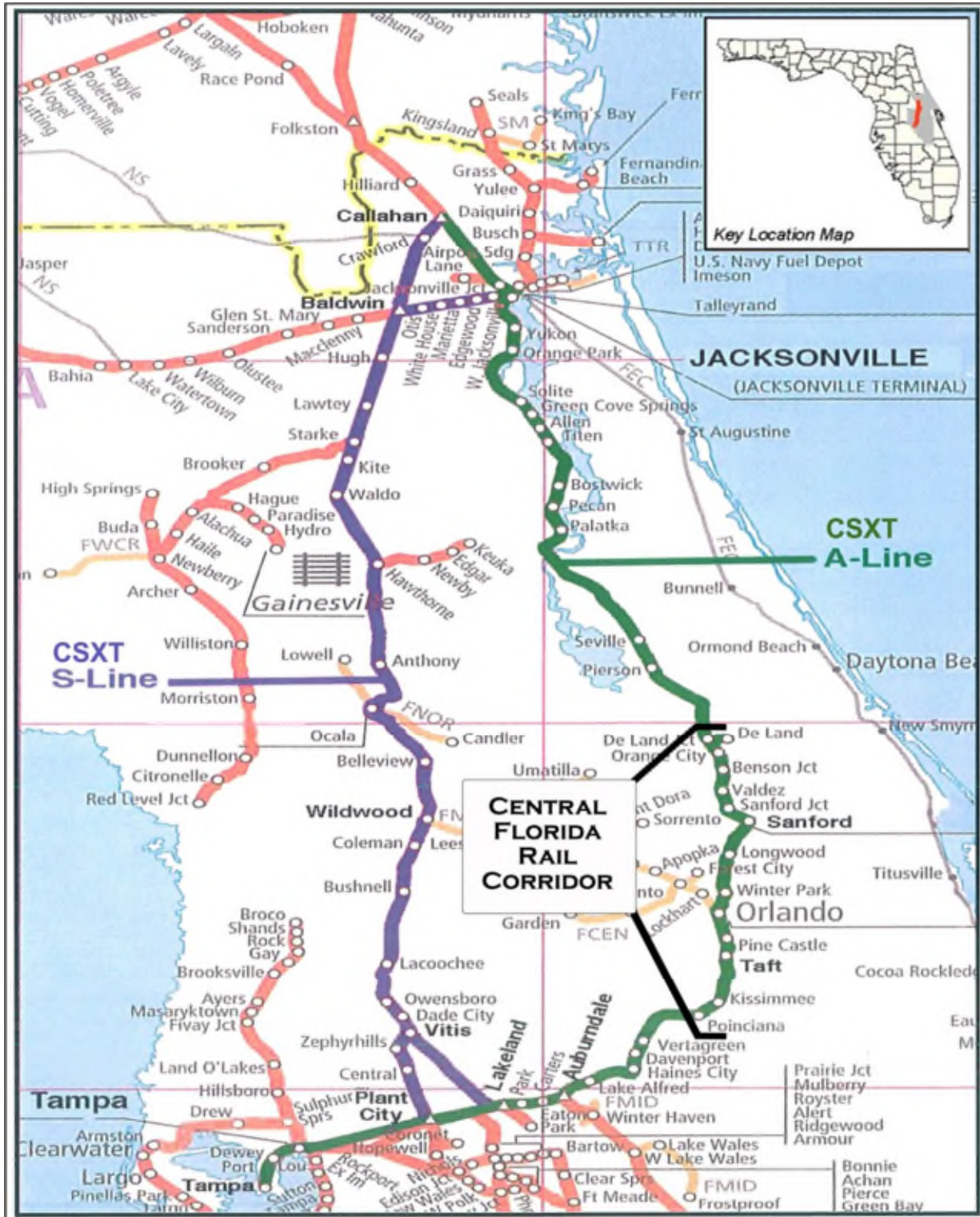
The Florida Department of Transportation (Department) has issued this Request for Proposal (RFP) to solicit competitive bids and proposals from Proposers for the design, installation and implementation of a FRA Type Approved Vital Positive Train Control System (PTC) in accordance with 49 CFR Part 236 subpart I for Central Florida Rail Corridor (CFRC) including any extensions. As part of the mandated PTC Regulations, a new PTC System shall provide associated warning and enforcement to the existing system to comply with FRA CFR 236 Subpart I. This enhancement shall provide the following:

- a. Enforce an upper speed limit associated with Civil Speed Restrictions.
- b. Enforce an upper speed limit associated with a Temporary Speed Restrictions.
- c. Prevent overspeed derailments related to civil speed restrictions
- d. Prevent overspeed derailments related to all speed restrictions.
- e. Prevent overspeed derailments related to slow orders.
- f. Prevent overspeed derailments related to excessive speeds over switches and through turnouts.
- g. Appropriate warning or enforcement for derails or switches that protect access to the mainline.
- h. Enforce an upper speed limit with a Mandatory Directive associated with a credible report of a crossing failure.
- i. Prevent the movement of a train through a mainline switch in the improper position.
- j. Interoperability with tenant railroads.
- k. Radio Spectrum, if required.
- l. Dispatch Office requirements

The design, installation and implementation work includes all design, engineering, installation, testing, commissioning and training as well as development and implementation of a vital PTC Safety Plan which will require approval by the Federal Railroad Administration (FRA) for the entire CFRC. This work includes all wayside, communications, onboard vehicle equipment and system interoperability.

Description of Work

The design of the PTC system includes the entire 61 miles of the CFRC territory. Design and installation will require coordination with the IOS and Phase 2 construction and design contractors, and with the O & M contractors. Such work shall be in conformance with CFRC Operating Rules and as specified in the Design Criteria. This Project shall be constructed entirely within the limits of the right of way owned by FDOT, also referred to herein as “the Department.” (See Map below)



The Design-Build Firm shall be responsible for all activities required for the design, installation and implementation of a Vital PTC System. Working with CFRC, the Design-Build Firm shall be responsible

for the functionality of the system segments, the interrelation amongst the system segments and the integration of the complete Vital PTC system.

The PTC Design-Build Firm is fully responsible for implementing the Vital PTC Safety Plan and FRA Approved Vital PTC System in accordance with CFR 49 Part §236 Subpart I. The PTC Design-Build Firm shall be fully responsible to mitigate all issues identified through the hazard analysis, risk assessment, and all issues identified by the FRA associated with implementation of the PTC System. If further development of the PTC system is required to receive system certification and obtain FRA Approval, the PTC Design Firm is fully responsible for achieving a Vital PTC Certified System from the FRA.

Project Milestones

A series of milestones have been identified for this project to ensure timely completion of all components. This is strictly a list of milestones. Incentives and disincentives that apply to select milestones are outlined in the Project Specifications.

- Construction Safety Plan – 15 days
- Quality Management Plan – 15 days
- Project Management Plan (PMP) – 30 days
- Updated PTC Implementation Plan submitted to the Department and FRA (Federal Railroad Administration) – 45 days
- Vital PTC Safety Plan submitted to the Department – 150 days
- Vital PTC Safety Plan approved by the Federal Railroad Administration (FRA) – 300 days
- Completion of the IOS including system integration testing – 320 days
- Completion of installation for Phase 2S system integration and testing – 521 days
- Completion of installation for Phase 2N system integration and testing – 710 days
- Completion of Phase 2S (Revenue Operation Date) – 621 days
- Completion of Phase 2N (Revenue Operation Date) – 810 days

Other Project Elements

The project will include partnering. For this Project, the Department considers the following requirements of the Project that are NOT to be changed by the Design-Build Firm:

- Interlocal Agreements
- Central Florida Operating and Management Agreement (CFOMA)
- Amtrak Operating Agreement
- FCEN Operating Agreement
- Operating Rules and On-Track Protection requirements

The Department has cleared all encroachments within the right-of-way that are anticipated to be impacted by the proposed improvements. If other encroachments are identified during the Design-Build Firm's design or construction, the Design-Build Firm shall be responsible for mitigation of the encroachment to include redesign, provide protection for any encroachments, or other means accepted by the Department.

The Design-Build Firm shall not start design or construction activities within the railroad right-of-way prior to the Department's issuance of a Notice to Proceed as to such activities. The Department will issue a Notice to Proceed for design services and a separate Notice to Proceed as to construction work

thereafter, as the Department may determine appropriate. It is currently anticipated that the Notice to Proceed as to design services will be issued on or about April 11, 2015. In the event the Department actually issues such Notice to Proceed for design services subsequent to April 11, 2015, the Design-Build Firm shall be entitled to relief solely limited to the extent provided under Sections 4-3.2 and 5-12 of the Division I Specifications. It is currently anticipated that the Notice to Proceed for construction work will be issued on or about Mid July, 2016. In the event the Department actually issues such Notice to Proceed for construction work subsequent to mid – July, 2016, the Design-build Firm shall be entitled to relief solely limited to the extent provided under Sections 4-3.2 and 5-12 of the Division I Specifications. Under no circumstances shall the Department have any liability, claim, or cause of action whatsoever for any monetary compensation, damages, or other relief of any nature or kind if the Notice to Proceed for construction work is never issued by the Department as a result of failure of the conditions precedent to issuance of those Notices to Proceed as set forth in this RFP.

The award is contingent upon the approval of the Roll-Forward amendment being approved by the Legislative Budget Commission which is expected to meet in September 2015.

A. Design-Build Responsibility

The Design-Build Firm shall be responsible for meeting all standards within the FRA §49 CFR Part 236 Subpart I – Positive Train Control System; these requirements that must be met in this proposal.

The Design-Build Firm shall be responsible for compliance with the Design Criteria which sets forth requirements regarding design, implementation and installation of PTC as well as the Vital PTC Safety Plan and all plans required under 49 CFR Part 236 SubPart I. The Design–Build Firm shall further be responsible for Project management, scheduling, and coordination with other contractors and agencies, such as utilities.

The Design-Build Firm is responsible for coordinating with the District Environmental Office any engineering information related to Environmental Re-evaluations. The Design-Build Firm will not be compensated for any additional costs or time associated with re-evaluation(s) resulting from proposed design changes.

The Design-Build Firm may propose changes which differ from the approved Interchange Proposal Report (if applicable) and/or the Project Development & Environment (PD&E) Study (if applicable). Proposed changes must be coordinated through the Department. If changes are proposed to the configuration, the Design-Build Firm shall be responsible for preparing the necessary analyses and documentation required to satisfy requirements to obtain approval of the Department. The Design-Build Firm shall provide the required documentation for review and processing. Approved revisions to the configuration may also be required to be included in the Reevaluation of the National Environmental Policy Act (NEPA) document or State Environmental Impact Report (SEIR) Reevaluations, per Section M (Environmental Services/Permits/Mitigation) of the RFP. The Design-Build Firm will not be compensated for any additional costs or time resulting from proposed changes.

The Design-Build Firm shall examine the Contract Documents and the site locations and equipment of the proposed work carefully before submitting a Proposal for the work contemplated and shall 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. Written notification of differing site and equipment conditions discovered during the design or construction phase of the Project will be given to the Department’s Project Manager.

The Design-Build Firm shall examine boring data, where available and if applicable, and make their own

interpretation of the subsoil investigations and other preliminary data, and shall base their bid on their own opinion of the conditions likely to be encountered. The submission of a proposal is prima facie evidence that the Design-Build Firm has made an examination as described in this provision.

The Design-Build Firm shall demonstrate good Project Management practices while working on this Project. These include communication with the Department and others as necessary, management of time and resources, and documentation. The Design-Build Firm shall have an organization established to properly manage the Contract and ensure on-time performance of the work. The Design-Build Firm shall manage the Contract to ensure all required design, and configuration reviews are addressed and all required deliverables are submitted as specified. The Design-Build Firm's project management program and team shall professionally and efficiently manage and execute the requirements of this Contract.

The Design-Build Firm shall develop and submit to CFRC for approval a Project Management Plan. The Project Management Plan shall be submitted no later than forty-five (45) days after Contract Award. The Project Management Plan shall be sufficiently comprehensive to enable CFRC to ascertain, with a high degree of confidence, that the Design-Build Firm will meet the requirements of this Contract, and to allow CFRC to effectively monitor the contractual effort.

The Design-Build Firm shall integrate the Contract specified requirements for availability, reliability, maintainability, safety, quality, testing, and human factors into the total engineering effort. The technical and performance requirements of the Contract shall be integrated into the Design-Build Firm's review process to ensure physical and functional interfaces are optimized throughout the design, installation, and test phases. The Design-Build Firm shall establish an organization to properly manage the all requirements for the Contract.

B. Department Responsibility

The Department will provide contract administration, management services, construction engineering inspection services, environmental oversight, and quality acceptance reviews of all work associated with the development and preparation of the contract plans, permits, and construction, installation and implementation of the improvements. The Department will provide Project specific information and/or functions as outlined in this document.

II. Schedule of Events.

Below is the current schedule of the events that will take place in the procurement process. The Department reserves the right to make changes or alterations to the schedule as the Department determines is in the best interests of the public. Proposers will be notified sufficiently in advance of any changes or alterations in the schedule. Unless otherwise notified in writing by the Department, the dates indicated below for submission of items or for other actions on the part of a Proposer shall constitute absolute deadlines for those activities and failure to fully comply by the time stated shall cause a Proposer to be disqualified.

Date	Event
<u>09/10/15</u>	Advertisement
<u>10/01/15</u>	Letters of Interest for Phase I of the procurement process due in District Office by 5:00 pm local time

<u>10/02/15</u>	Proposal Evaluators submit Letter of Interest Scores to Contracting Unit 3:00 pm local time
<u>10/27/15</u>	Contracting Unit provides Letter of Interest scores and Proposal Evaluators comments to Selection Committee 3:00 pm local time
<u>11/02/15</u>	Public Meeting of Selection Committee to review and confirm Letter of Interest scores 8:15 am local time
<u>11/02/15</u>	Notification to Responsive Design-Build Firms of the Letter of Interest scores 2:00 pm local time
<u>11/04/15</u>	Deadline for all responsive Design-Build firms to affirmatively declare intent to continue to Phase II of the procurement process 12:00 pm local time
<u>11/04/15</u>	Shortlist Posting 5:00 pm local time
<u>11/09/15</u>	Final RFP provided to Design-Build firms providing Affirmative Declaration of Intent to continue to Phase II of the procurement process
<u>11/16/15</u>	Mandatory Pre-proposal meeting at 10:00 am local time in 801 SunRail Drive. Site evaluation of the, CFRC Territory, OCC, Signals and Vehicles will occur at the pre-proposal meeting, upon request . All Utility Agency/Owners that the Department contemplates an adjustment, protection, or relocation is possible are to be invited to the mandatory Pre-Proposal meeting.
<u>11/16/15</u>	Utility Pre-Proposal Meeting facilitated by the District Utility Engineer at 11:00 am local time in Room 701 The Operations Control Center building, 801 SunRail Drive, Sanford, FL 32771
<u>12/01/15</u>	Final deadline for submission of requests for Design Exceptions or Design Variations.
<u>01/08/16</u>	Deadline for submittal of questions, for which a response is assured, prior to the submission of the Technical Proposal. All questions shall be submitted to the Pre-Bid Q&A website.
<u>01/22/16</u>	Deadline for the Department to post responses to the Pre-Bid Q&A website for questions submitted by the Design-Build Firms prior to the submittal of the Technical Proposal.
<u>01/29/16</u>	Technical Proposals due in District Office by 2:30 p.m. local time. The address is: 719 South Woodland Blvd. DeLand, Florida 32720
<u>01/29/16</u>	Deadline for Design-Build for to “opt out” of Technical Proposal Page Turn meeting.
<u>02/02/16</u>	Technical Proposal Page Turn Meeting. Times will be assigned during the Pre-Proposal Meeting. 30 Minutes will be allotted for this Meeting.
<u>02/18/16</u>	Question and Answer Session. Times will be assigned during the pre-proposal meeting. One hour will be allotted for questions and responses.
<u>02/24/16</u>	Deadline for submittal of Written Clarification letter following Question and Answer Session 5:00pm local time
<u>02/24/16</u>	Deadline for submittal of questions, for which a response is assured, prior to the submission of the Price Proposal. All questions shall be submitted to the Pre-Bid Q&A website.
<u>02/29/16</u>	Deadline for the Department to post responses to the Pre-Bid Q&A website for questions submitted by the Design-Build Firms prior to the submittal of the Price Proposal.

<u>03/02/16</u>	Price Proposals due in District Office by 2:30 pm local time. The address is: 719 South Woodland Blvd. DeLand, Florida 32720
<u>03/02/16</u>	Public announcing of Technical Scores and opening of Price Proposals at 2:30 pm local time in in the Cypress Conference Room at the District Office on 719 South Woodland Blvd. DeLand, Florida 32720
<u>03/07/16</u>	Public Meeting of Selection Committee to determine intended Award
<u>03/07/16</u>	Posting of the Department's intended decision to Award
<u>03/25/16</u>	Anticipated Award Date
<u>04/11/16</u>	Anticipated Execution Date

III. Threshold Requirements

A. Qualifications

Proposers are required to be pre-qualified in all work types required for the Project. The technical qualification requirements of Florida Administrative Code (F.A.C.) Chapter 14-75 and all qualification requirements of F.A.C. Chapter 14-22, based on the applicable category of the Project, must be satisfied.

B. Joint Venture Firm

Two or more Firms submitting as a Joint Venture must meet the Joint Venture requirements of Section 14-22.007, F.A.C. Parties to a Joint Venture must submit a Declaration of Joint Venture and Power of Attorney Form No. 375-020-18, prior to the deadline for receipt of Letters of Interest.

If the Proposer is a Joint Venture, the individual empowered by a properly executed Declaration of Joint Venture and Power of Attorney Form shall execute the proposal. The proposal shall clearly identify who will be responsible for the engineering, quality control, and geotechnical and construction portions of the Work.

C. Price Proposal Guarantee

A Price Proposal guaranty in an amount of not less than five percent (5%) of the total bid amount shall accompany each Proposer's Price Proposal. The Price Proposal guaranty may, at the discretion of the Proposer, be in the form of a cashier's check, bank money order, bank draft of any national or state bank, certified check, or surety bond, payable to the Department. The surety on any bid bond shall be a company recognized to execute bid bonds for contracts of the State of Florida. The Price Proposal guaranty shall stand for the Proposer's obligation to timely and properly execute the contract and supply all other submittals due therewith. The amount of the Price Proposal guaranty shall be a liquidated sum, which shall be due in full in the event of default, regardless of the actual damages suffered. The Price Proposal guaranty of all Proposers' shall be released pursuant to 3-4 of the Division I Design-Build Specifications.

D. Pre-Proposal Meeting

Attendance at the pre-proposal meeting is mandatory. Any affirmatively declared proposer failing to attend will be deemed non-responsive and automatically disqualified from further consideration. The purpose of this meeting is to provide a forum for the Department to discuss with all concerned parties the proposed Project, the design and construction criteria, Critical Path Method (CPM) schedule, and method of compensation, instructions for submitting proposals, Design Exceptions, Design Variations, and other relevant issues. In the event that any discussions at the pre-proposal meeting require, in the Department's opinion, official additions, deletions, or clarifications of the Request for Proposal, the Design and Construction Criteria, or any other document, the Department will issue a written addendum to this Request for Proposals as the Department determines is appropriate. No oral representations or discussions, which take place at the pre-proposal meeting, will be binding on the Department. Site evaluation of the CFRC Territory, OCC, Signals and Vehicles will occur at the pre-proposal meeting, upon request .. Proposers shall direct all questions to the Departments Question and Answer website:

<https://www3b.dot.state.fl.us/BidQuestionsAndAnswers/Proposal.aspx/SearchProposal>

E. Technical Proposal Page-Turn Meeting

The Department will meet with each Proposer, formally for thirty (30) minutes, for a page-turn meeting. The purpose of the page-turn meeting is for the Design-Build Firm to guide the Technical Review Committee through the Technical Proposal, highlighting sections within the Technical Proposal that the Design-Build Firm wishes to emphasize. The page-turn meeting will occur between the date the Technical Proposal is due and the Question and Answer session occurs, per the Schedule of Events section of this RFP. The Department will terminate the page-turn meeting promptly at the end of the allotted time. The Department will record all or part of the page-turn meeting. All recordings will become part of the Contract Documents. The page-turn meeting will not constitute discussions or negotiations. The Design-Build Firm will not be permitted to ask questions of the Technical Review Committee during the page-turn meeting. An unmodified aerial or map of the project limits provided by the Design-Build Firm is acceptable for reference during the page-turn meeting. The unmodified aerial or map may not be left with the Department upon conclusion of the page turn meeting. Use of other visual aids, electronic presentations, handouts, etc., during the page turn meeting is expressly prohibited. Upon conclusion of the thirty (30) minutes, the Technical Review Committee is allowed thirty (30) minutes to ask questions pertaining to information highlighted by Design-Build Firm. Participation in the page-turn meeting by the Design-Build Firm shall be limited to eight (8) representatives from the Design-Build Firm. Design-Build Firms desiring to opt out of the page-turn meeting may do so by submitting a request to the Department.

F. Question and Answer Session

The Department may meet with each Proposer, formally, for a Question and Answer (Q&A) session. The purpose of the Q & A session is for the Department to seek clarification and ask questions, as it relates to the Technical Proposal, of the Proposer. The Department may terminate the Q & A session promptly at the end of the allotted time. The Department shall record all or part of the Q & A session. All recordings will become part of the Contract Documents. The Q & A session will not constitute "discussions" or negotiations. Proposers will not be permitted to ask questions of the Department except to ask the meaning of a clarification question posed by the Department. No supplemental materials, handouts, etc. will be allowed to be presented in the Q & A session. No additional time will be allowed to research answers.

Within one (1) week of the Q & A session, the Design-Build Firm shall submit to the Department a written clarification letter summarizing the answers provided during the Q & A session. The questions, answers, and written clarification letter will become part of the Contract Documents and will be considered by the Department as part of the Technical Proposal. The Design-Build Firm shall not include information in the

clarification letter which was not discussed during the Q&A session. In the event the Design-Build Firm includes additional information in the clarification letter which was not discussed during the Q&A session and is not otherwise included in the Technical Proposal, such additional information will not be considered by the Department during the evaluation of the Technical Proposal.

The Department will provide some (not necessarily all) proposed questions to each Design-Build Firm as it relates to their Technical Proposal approximately 24 hours before the scheduled Q & A session.

G. Protest Rights

Any person who is adversely affected by the specifications contained in this Request for Proposal must file a notice of intent to protest in writing within seventy-two hours of the posting of this Request for Proposals. Pursuant to Sections 120.57(3) and 337.11, Florida Statutes, and Rule Chapter 28-110, F.A.C., any person adversely affected by the agency decision or intended decision shall file with the agency both a notice of protest in writing and bond within 72 hours after the posting of the notice of decision or intended decision, or posting of the solicitation with respect to a protest of the terms, conditions, and specifications contained in a solicitation and will file a formal written protest within 10 days after the filing of the notice of protest. The formal written protest shall be filed within 10 days after the date of the notice of protest if filed. The person filing the Protest must send the notice of intent and the formal written protest to:

Clerk of Agency Proceedings
Department of Transportation
605 Suwannee Street, MS 58
Tallahassee, Florida 32399-0458

Failure to file a notice of protest or formal written 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.

H. Non-Responsive Proposals

Proposals found to be non-responsive shall not be considered. Proposals may be rejected if found to be in nonconformance with the requirements and instructions herein contained. A proposal may be found to be non-responsive by reasons, including, but not limited to, failure to utilize or complete prescribed forms, conditional proposals, incomplete proposals, indefinite or ambiguous proposals, failure to meet deadlines and improper and/or undated signatures.

Other conditions which may cause rejection of proposals include evidence of collusion among Proposers, obvious lack of experience or expertise to perform the required work, submission of more than one proposal for the same work from an individual, firm, joint venture, or corporation under the same or a different name (also included for Design-Build Projects are those proposals wherein the same Engineer is identified in more than one proposal), failure to perform or meet financial obligations on previous contracts, employment of unauthorized aliens in violation of Section 274A (e) of the Immigration and Nationalization Act, or in the event an individual, firm, partnership, or corporation is on the United States Comptroller General's List of Ineligible Design-Build Firms for Federally Financed or Assisted Projects.

The Department will not give consideration to tentative or qualified commitments in the proposals. For example, the Department will not give consideration to phrases as “we may” or “we are considering” in

the evaluation process for the reason that they do not indicate a firm commitment.

Proposals will also be rejected if not delivered or received on or before the date and time specified as the due date for submission.

I. Waiver of Irregularities

The Department may waive minor informalities or irregularities in proposals received where such is merely a matter of form and not substance, and the correction or waiver of which is not prejudicial to other Proposers. Minor irregularities are defined as those that will not have an adverse effect on the Department's interest and will not affect the price of the Proposals by giving a Proposer an advantage or benefit not enjoyed by other Proposers.

1. Any design submittals that are part of a proposal shall be deemed preliminary only.
2. Preliminary design submittals may vary from the requirements of the Design and Construction Criteria. The Department, at their discretion, may elect to consider those variations in awarding points to the proposal rather than rejecting the entire proposal.
3. In no event will any such elections by the Department be deemed to be a waiving of the Design and Construction Criteria.
4. The Proposer who is selected for the Project will be required to fully comply with the Design and Construction Criteria for the price bid, regardless that the proposal may have been based on a variation from the Design and Construction Criteria.
5. Proposers shall identify separately all innovative aspects as such in the Technical Proposal. An innovative aspect does not include revisions to specifications or established Department policies. Innovation should be limited to Design-Build Firm's means and methods, roadway alignments, approach to Project, use of new products, new uses for established products, etc.
6. The Proposer shall obtain any necessary permits or permit modifications not already provided.
7. Those changes to the Design Concept may be considered together with innovative construction techniques, as well as other areas, as the basis for grading the Technical Proposals in the area of innovative measures.

J. Modification or Withdrawal of Technical Proposal

Proposers may modify or withdraw previously submitted Technical Proposals at any time prior to the Technical Proposal due date. Requests for modification or withdrawal of a submitted Technical Proposal shall be in writing and shall be signed in the same manner as the Technical Proposal. Upon receipt and acceptance of such a request, the entire Technical 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 sealed envelope to be opened at the same time as the Technical Proposal provided the change is submitted prior to the Technical Proposal due date.

K. Department's Responsibilities

This Request for Proposal does not commit the Department to make studies or designs for the preparation of any proposal, nor to procure or contract for any articles or services.

The Department does not guarantee the details pertaining to borings, as shown on any documents supplied by the Department, to be more than a general indication of the materials likely to be found adjacent to holes bored at the site of the work, approximately at the locations indicated.

L. Design-Build Contract

The Department will enter into a Lump Sum contract with the successful Design-Build Firm. In accordance with Section V, the Design-Build Firm will provide a schedule of values to the Department for their approval. The total of the Schedule of Values will be the lump sum contract amount.

The terms and conditions of this contract are fixed price and fixed time. The Design-Build Firm's submitted bid (time and cost) is to be a lump sum bid for completing the scope of work detailed in the Request for Proposal.

IV. Disadvantaged Business Enterprise (DBE) Program.

A. DBE Availability Goal Percentage:

The Department of Transportation has an overall, race-neutral DBE goal. This means that the State's goal is to spend a portion of the highway dollars with Certified DBE's as prime Design-Build Firms or as subcontractors. Race-neutral means that the Department believes that the overall goal can be achieved through the normal competitive procurement process. The Department has reviewed this Project and assigned a DBE availability goal shown in the Project Advertisement and on the bid blank/contract front page under "% DBE Availability Goal". The Department has determined that this DBE percentage can be achieved on this Project based on the number of DBE's associated with the different types of work that will be required.

Under 49 Code of Federal Regulations Part 26, if the overall goal is not achieved, the Department may be required to return to a race-conscious program where goals are imposed on individual contracts. The Department encourages Design-Build Firms to actively pursue obtaining bids and quotes from Certified DBE's.

This information is being collected through the Department's Equal Opportunity Compliance (EOC) system.

B. DBE Supportive Services Providers:

The Department has contracted with a consultant, referred to as DBE Supportive Services Provider, to provide managerial and technical assistance to DBE's. This consultant is also required to work with prime Design-Build Firms, who have been awarded contracts, to assist in identifying DBE's that are available to participate on the Project. The successful Design-Build Firm should meet with the DBE Supportive Services Provider to discuss the DBE's that are available to work on this Project. The current DBE Supportive Services Provider for the State of Florida can be found in the Equal Opportunity website at: <http://www.dot.state.fl.us/equalopportunityoffice/serviceproviders.shtm>

C. Bidders Opportunity List:

The Federal DBE Program requires States to maintain a database 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 on DOT-assisted Projects, including both DBE's and Non-DBE's.

A Bid Opportunity List should be submitted through the Equal Opportunity Compliance system which is available at the [Equal Opportunity Office Website](#). This information should be returned to the Equal Opportunity Office within 3 days of submission.

V. Project Requirements and Provisions for Work.

A. Governing Regulations:

The services performed by the Design-Build Firm shall be in compliance with all applicable Manuals and Guidelines including the Department, , Federal Railroad Administration (FRA), OSHA and additional requirements specified in this document. Except to the extent inconsistent with the specific provisions in this document, the current edition, including updates, of the following Manuals and Guidelines shall be used in the performance of this work. Current edition is defined as the edition in place and adopted by the Department at the date of advertisement of this contract with the exception of the Standard Specifications for Road and Bridge Construction (Divisions II & III), Special Provisions and Supplemental Specifications, Manual on Uniform Traffic Control Devices (MUTCD), Design Standards and Revised Index Drawings. The Design-Build Firm shall use the edition of the Standard Specifications for Road and Bridge Construction (Divisions II & III), Special Provisions and Supplemental Specifications, Design Standards and Revised Index Drawings in effect at the time the bid price proposals are due in the District Office. The Design-Build Firm shall use the 2009 edition of the MUTCD (as amended in 2012)It shall be the Design-Build Firm's responsibility to acquire and utilize the necessary manuals and guidelines that apply to the work required to complete this Project. The services will include preparation of all documents necessary to complete the Project as described in Section I of this document.

1. Florida Department of Transportation Specifications Package Preparation Procedure
<http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/630010005.pdf>
2. Florida Department of Transportation Design Standards
<http://www.dot.state.fl.us/rddesign/DesignStandards/Standards.shtm>
3. Florida Department of Transportation EFB User Handbook (Electronic Field Book)
http://www.dot.state.fl.us/surveyingandmapping/doc_pubs.shtm
4. Florida Department of Transportation Soils and Foundations Handbook
<http://www.dot.state.fl.us/structures/Manuals/SFH.pdf>
5. Florida Department of Transportation Structures Manual
<http://www.dot.state.fl.us/structures/DocsandPubs.shtm>
6. Florida Department of Transportation Current Structures Design Bulletins
<http://www.dot.state.fl.us/structures/Memos/currentbulletins.shtm>
7. Florida Department of Transportation Computer Aided Design and Drafting (CADD) Manual
<http://www.dot.state.fl.us/ecso/downloads/publications/Manual/default.shtm>
8. Florida Department of Transportation Computer Aided Design and Drafting (CADD) Production Criteria Handbook
<http://www.dot.state.fl.us/ecso/downloads/publications/CriteriaHandbook/>
9. Florida Department of Transportation Production Criteria Handbook CADD Structures

- Standards
<http://www.dot.state.fl.us/ecso/downloads/publications/CriteriaHandbook/>
10. Instructions for Design Standards
<http://www.dot.state.fl.us/structures/IDS/IDSportal.pdf>
 11. MUTCD - 2009
<http://mutcd.fhwa.dot.gov/>
 12. Safe Mobility For Life Program Policy Statement
<http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/000750001.pdf>
 13. Traffic Engineering and Operations Safe Mobility for Life Program
<http://www.dot.state.fl.us/trafficoperations/Operations/SafetyisGolden.shtm>
 14. Florida Department of Transportation American with Disabilities Act (ADA) Compliance – Facilities Access for Persons with Disabilities Procedure
<http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/625020015.pdf>
 15. Florida Department of Transportation Florida Sampling and Testing Methods
<http://www.dot.state.fl.us/statematerialsoffice/administration/resources/library/publications/fshtm/disclaimer.shtm>
 16. Florida Department of Transportation Design Bulletins and Update Memos
<http://www.dot.state.fl.us/rddesign/Bulletin/Default.shtm>
 17. Florida Department of Transportation Utility Accommodation Manual
<http://www.dot.state.fl.us/specificationsoffice/utilities/UAM.shtm>
 18. AASHTO LRFD Bridge Design Specifications
https://bookstore.transportation.org/category_item.aspx?id=BR
 19. Florida Department of Transportation Right-of-Way Manual
<http://www.dot.state.fl.us/rightofway/Documents.shtm>
 20. Florida Department of Transportation Project Development and Environment Manual, Parts 1 and 2
<http://www.dot.state.fl.us/emo/pubs/pdeman/pdeman1.shtm>
 21. AASHTO Highway Safety Manual
<http://www.highwaysafetymanual.org/>
 22. Florida Statutes
 23. AREMA Manual for Railway Engineering – Annual Publication
<http://www.arema.org/eseries/scriptcontent/index.cfm>
 24. AREMA Communications & Signals Manual of Recommended Practices
<http://www.arema.org/eseries/striptcontent/index.cfm>
 25. Handbook for streambed Erosion Hazard Recognition and Countermeasures for Railroad Embankments & Bridges
<http://www.arema.org/eseries/striptcontent/index.cfm>
 26. Federal Railroad Administration Safety Rules Safety Laws, Title 49, United States Code, Part 2014, Railroad Workplace Safety

http://www.access.gpo.gov/uscode/title49/dubtitlev_.html

27. Federal Railroad Administration Title 49, United States Code, Part 229.135, Part 234, Part 236 Subpart H Part 236 Subpart I, Positive Train Control System and other 49 CFR requirements relative to the implementation of Positive Train Control (PTC)
http://www.access.gpo.gov/uscode/title49/dubtitlev_.html
28. Federal Transit Laws, Title 49, United States Code, Chapter 53
http://www.fta.dot.gov/leg_reg.html
29. Federal Communication Commission Rules and Regulations, Title 47 CFR
http://wireless.fcc.gov/indez.htm?job=rules_and_regulations
30. 29 CFR Part 1926 Occupational Safety and Health Act (OSHA)
[http:// www.OSHA.gov](http://www.OSHA.gov)

B. Geotechnical Services:

1. General Conditions:

The Design-Build Firm shall be responsible for identifying and performing any geotechnical investigation, analysis and design of foundations, foundation construction, foundation load and integrity testing, and inspection dictated by the Project needs in accordance with Department guidelines, procedures and specifications. All geotechnical work necessary shall be performed in accordance with the Governing Regulations. The Design-Build Firm shall be solely responsible for all geotechnical aspects of the Project.

C. Department Commitments:

The Design-Build Firm will be responsible for adhering to the project commitments identified below:

- Maintain railroad operations in accordance with the CFOMA, Amtrak Operating Agreement and FCEN Agreement.
- CFRC's IOS Territory will have ongoing contracts to upgrade crossing warning systems including Quiet Zones and Station Ped Gates, grade crossing surface upgrades, and track and tie replacements.
- Phase 2 South has two separate contracts the first for construction of the track, stations and infrastructure and the second is for the wayside/crossing signal system,
 - At Grade Crossing upgrades,
 - Wayside Control Points and Automatic Signals,
 - Track Construction,
 - Wayside Communication (including Fiber Optics),
 - Station Platform construction,
 - Operations Control Center (OCC) Dispatch System upgrades.
- Phase 2 North will have separate contracts for construction of the track and infrastructure and for the wayside/crossing signal system,

- At Grade Crossing upgrades,
- Wayside Control Points and Automatic Signals,
- Track Construction,
- Wayside Communication (including Fiber Optic),
- Station Platform construction,
- Operations Control Center (OCC) Dispatch System upgrades.

The PTC Contractor shall coordinate all work with all Contractors within the CFRC territory.

The PTC Contractor shall attend all joint project meetings to coordinate all work including construction and testing. The PTC Contractor shall supply a three week look ahead at the weekly project coordination meeting which will consist of all contractors working on the CFRC territory. The PTC Contractor must coordinate all work with the associated maintenance groups for entrance into wayside bungalows, any track protection required, the OCC and the vehicle group. Progress Meeting Agendas shall be distributed by the Design-Build Firm a minimum of two (2) working days in advance of any regularly scheduled Progress Meeting.

The Design-Build Firm's authorized technical representative(s) shall also attend progress review meetings and technical meetings as required to discuss technical aspects of the project and to review comments on documents.

Meeting Locations and Meeting Minutes

All Design Review meetings between the Design-Build Firm and CFRC representatives shall be held at CFRC offices unless otherwise agreed. The Design-Build Firm shall record minutes of each meeting, distribute for CFRC review, and integrate review comments for final distribution. CFRC may record the minutes of each meeting and forward a copy to the Design-Build Firm for review and integration in the final review minutes within three (3) days of the meeting date. Progress meetings may use video conferencing in lieu of face-to-face meetings. The Design-Build Firm shall be responsible for establishing video conferencing.

Meetings between technical representatives for the purposes of issue resolution shall take place at the location(s) most appropriate for efficient problem resolution and maintenance of Schedule. In cases where a mutually accepted location or time cannot be readily negotiated, the meeting shall be held at the location and time as directed by CFRC representatives.

D. Environmental Permits:

1. Storm Water and Surface Water:

Plans shall be prepared in accordance with Chapters 373 and 403 (F.S.) and Chapters 40 and 62 (F.A.C.).

2. Permits:

The Design-Build Firm shall be responsible for modifying the issued permits as necessary to accurately depict the final design. The Design-Build Firm shall be responsible for any necessary permit time

extensions or re-permitting in order to keep the environmental permits valid throughout the construction period. The Design-Build Firm shall provide the Department with draft copies of any and all permit applications, including responses to agency Requests for Additional Information, requests to modify the permits and/or requests for permit time extensions, for review and approval by the Department prior to submittal to the agencies.

All applicable data shall be prepared in accordance with Chapter 373 and 403, Florida Statutes, Chapters 40 and 62, F.A.C.; Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act, 23 CFR 771, 23 CFR 636, and parts 114 and 115, Title 33, Code of Federal Regulations. In addition to these Federal and State permitting requirements, any dredge and fill permitting required by local agencies shall be prepared in accordance with their specific regulations. Preparation of all documentation related to the acquisition of all applicable permits will be the responsibility of the Design-Build Firm. Preparation of complete permit packages will be the responsibility of the Design-Build Firm. The Design-Build Firm is responsible for the accuracy of all information included in permit application packages. As the permittee, the Department is responsible for reviewing, approving, and signing, the permit application package including all permit modifications, or subsequent permit applications. This applies whether the project is Federal or state funded. Once the Department has approved the permit application, the Design-Build Firm is responsible for submitting the permit application to the environmental permitting agency. A copy (electronic and hard copy) of any and all correspondence with any of the environmental permitting agencies shall be sent to the District Environmental Management Office. If any agency rejects or denies the permit application, it is the Design-Build Firm's responsibility to make whatever changes necessary to ensure the permit application is approved. The Design-Build Firm shall be responsible for any necessary permit extensions or re-permitting in order to keep the environmental permits valid throughout the construction period. The Design-Build Firm shall provide the Department with draft copies of any and all permit applications, including responses to agency Requests for Additional Information, requests to modify the permits and/or requests for permit extensions, for review and approval by the Department prior to submittal to the agencies.

The Design-Build Firm will be required to pay all permit fees. Any fines levied by permitting agencies shall be the responsibility of the Design-Build Firm. The Design-Build Firm shall be responsible for complying with all permit conditions.

The Department is responsible for providing mitigation of all wetland impacts identified in the following documents. If any design modifications by the Design-Build Firm propose to increase the amount of these wetland impacts, the Design-Build Firm shall be responsible for providing the Department information on the amount and type of wetland impacts as soon as the impacts are identified (including temporary impacts and/or any anticipated impacts due to construction staging or construction methods). Prior to submitting a permit modification to a regulatory agency, the Design-Build Firm shall provide the Department a draft of all supporting information. The Department will have up to 15 calendar days (excluding weekends and Department observed holidays) to review and comment on the draft permit package. The Design-Build Firm will address all comments by the Department and obtain Department approval, prior to submittal of the draft permit. The Design-Build Firm shall be solely responsible for all time and costs associated with providing the required information to the Department, as well as the time required by the Department to perform its review of the permit package, prior to submittal of the permit application(s) by the Design-Build Firm to the regulatory agency(ies).

Any additional mitigation required due to design modifications proposed by the Design-Build Firm shall be the responsibility of the Design-Build Firm and shall be satisfied through the purchase of mitigation bank credits. The Design-Build Firm shall purchase credits directly from a permitted mitigation bank. In the event that permitted mitigation bank credits are unavailable or insufficient to meet the project needs,

the Design-Build Firm will be responsible for providing alternative mitigation consistent with the provisions of section 373.4173, Florida Statutes, and acceptable to the permitting agency(ies). The Design-Build Firm shall be solely responsible for all costs associated with permitting activities and shall include all necessary permitting activities in their schedule.

However, notwithstanding anything above to the contrary, upon the Design-Build Firm's preliminary request for extension of Contract Time, pursuant to 8-7.3, being made directly to the District Construction Engineer, the Department reserves unto the District Construction Engineer, in their sole and absolute discretion, according to the parameters set forth below, the authority to make a determination to grant a non-compensable time extension for any impacts beyond the reasonable control of the Design-Build Firm in securing permits. Furthermore, as to any such impact, no modification provision will be considered by the District Construction Engineer unless the Design-Build Firm clearly establishes that it has continuously from the beginning of the Project aggressively, efficiently and effectively pursued the securing of the permits including the utilization of any and all reasonably available means and methods to overcome all impacts. There shall be no right of any kind on behalf of the Design-Build Firm to challenge or otherwise seek review or appeal in any forum of any determination made by the District Construction Engineer under this provision.

E. Railroad Coordination:

The Design-Build Firm shall provide a minimum of 90 days of advance notice to the Department to inform CSX Transportation, Inc. of any physical signal system changes in the field required for the existing signal system where CSXT enters CFRC territory.

The Design-Build Firm shall be responsible for providing all required railroad On-Track/Roadway Worker Protection services, including Employee-in-Charge (EIC) providing positive protection, Point of Contact (POC) and Watchman/Look-out for the design and construction activities within the corridor. The On-Track/Roadway Worker Protection services shall be compliance with the CFRC Roadway Worker Protection Safety Plan, CFRC Operating Rules, CFRC S.T.A.R Manual and CFRC Orange Fence Policy included as attachments to this RFP and the Design Criteria for PTC.

The Design-Build Firm must comply with the terms of the agreements with the tenant railroads that are included as attachments to this RFP. The Design-Build Firm is responsible for coordinating track outages and work windows with CFRC staff.

The Design-Build Firm is required to coordinate with the Department in the preparation and implementation of a project specific Construction Safety Plan to establish the roles, responsibilities and communication requirements and protocols for all organizations working within the project corridor and construction safety requirements under OSHA. Once the Construction Safety Plan is accepted by the Department, the Design-Build Firm must comply with all requirements of said plan including signing an agreement with all plan participants.

The Department has Bombardier under contract for dispatching train traffic on the CFRC. The Design-Build Firm shall coordinate with CFRC staff regarding track outages, CFRC Operating Rule 707 provisions and other construction related coordination for the operations on the CFRC corridor. The Design-Build Firm shall use existing CFRC Dispatcher Channel 097 for communications between its Employee-in-Charge (EIC) and the dispatchers at the OCC. The Design-Build Firm shall be governed by and subject to CFRC Operating Rules and FRA regulations governing work on the track, operating equipment, and working near equipment being operated, including emergency procedures, as agreed to by

the Department. The Design-Build Firm shall designate personnel who are responsible for communications and coordination with the CFRC who will coordinate with the dispatchers for all construction activities, for all track occupancy, track outages and for returning track to service. The EIC shall be responsible for establishing and releasing the on-track protection with the dispatchers at the OCC. Unless explicitly approved by the Department in advance, the track shall be deemed returned to operational service by the Design-Build Firm only when the track is restored, allows freight and passenger speeds that are equal to or greater than the current operating speeds, and the signal system is operational to allow all trains to proceed on signal indication where currently supported.

The Department has Herzog under contract for maintaining the existing wayside signal and grade crossing warning systems on the CFRC. The Design-Build Firm shall coordinate all work efforts for signal cutovers with Herzog and not interfere with Herzog maintenance of the existing systems.

The Design-Build Firm shall be responsible for adopting and implementing a Railroad Worker Protection Safety Program for all work on the CFRC system. This program shall be in compliance with the Title 49, CFR 214 Roadway Worker Protection regulations; Title 49, CFR 234 Grade Crossing Signal Safety; other applicable FRA-mandated training requirements; CFRC Roadway Worker Protection Manual; CFRC Operating Rules; CFRC S.T.A.R. Manual and the CFRC Orange Fence Policy. This program shall include training, qualification and certification, record keeping, and retraining of all Design-Build Firm employees requiring access to the railroad right-of-way during the contract time. Title 49 CFR 214, Subpart A established responsibility for compliance with all of Part 214 under 214.5 Responsibility for Compliance. The Design-Build Firm's employees shall not enter the railroad right-of-way without proof of current CFRC Roadway Worker Protection Certification and eRailsafe Shortline photo identification.

The Department may revoke the privilege for the Design-Build Firm to operate under the CFRC Orange Fence Policy at any time if the Department believes that worker safety is compromised.

The Design-Build Firm shall provide a minimum of 90 days of advance notice to the Department to inform CSX Transportation, Inc. of any physical signal system changes in the field required for the existing signal system at the locations where CSX enters and exits the CFRC territory.

F. Survey:

The Design-Build Firm shall perform all surveying and mapping services necessary to complete the Project. Survey services must also comply with all pertinent Florida Statutes and applicable rules in the Florida Administrative Code. All field survey data will be furnished to the District Surveyor in a Department approved digital format, readily available for input and use in CADD Design files. All surveying and mapping work must be accomplished in accordance with the Department's Surveying Procedure, Topic Nos. 550-030-101; Right-of-Way Mapping Procedure, Topic No. 550-030-015; Aerial Surveying Standards for Transportation Projects Procedure, Topic No. 550-020-002. This work must comply with Chapter 5J-17, F.A.C., pursuant to Section 472.027, F.S. This survey also must comply with Chapter 177, F.S.

The Design-Build Firm will be responsible for all photogrammetric work necessary to interpret measure, digitize and compile, by stereoscopic techniques, the mapping and survey data from the aerial photography, as required for this Project.

G. Verification of Existing Conditions:

The Design-Build Firm shall be responsible for verification of existing conditions, including research of all existing Department records and other information.

By execution of the contract, the Design-Build Firm specifically acknowledges and agrees that the Design-Build Firm is contracting and being compensated for performing adequate investigations of existing site conditions sufficient to support the design developed by the Design-Build Firm and that any information is being provided merely to assist the Design-Build Firm in completing adequate site investigations. Notwithstanding any other provision in the contract documents to the contrary, no additional compensation will be paid in the event of any inaccuracies in the preliminary information.

H. Submittals:

- **Component Submittals:**

The Design-Build Firm may submit components of the contract plans set instead of submitting the entire contract plan set; however, sufficient information from other components must be provided to allow for a complete review. In accordance with the Plans Preparation Manual, components of the contract plans set are all plans and associated requirements, and deliverables that are required under 49 CFR Part 236 Subpart I as well as the Design Criteria for Positive Train Control.

- A. Submittals shall be provided for all materials, location and task specific work plans, documentation, quality assurance inspections, testing, and as required herein.
- B. Design-Build Firm shall submit proposed style sheets for all submittal items including documentation, drawings, training materials, product information, schedules, labeling, and invoices within 30 calendar days after NTP. Submittal items transmitted to the CFRC prior to approval of the style sheets are at the Design-Build Firm's risk.
- C. Hardware and software deliverables shall not be shipped until all required submittals are approved, inspections and tests have been completed, and all deficiencies have been corrected, re-inspected and re-tested to CFRC's satisfaction, and CFRC has provided written approval.
- D. Develop a spare parts list for the PTC systems to assure adequate and proper spares are on hand for implementation, and to support sustained PTC systems maintenance and operation requirements. Spare parts list shall include guaranteed/quantity price options.
- E. Develop a spare parts list for the wayside communications network to assure adequate and proper spares are on hand to support sustained network operation, administration and maintenance activities. Spare parts list shall include guaranteed/quantity price options.
- F. Procure necessary licensing and/or permits; this includes all software licensing and/or software escrow requirements. All licenses and/or permits shall be transferred to the CFRC at the termination of the Contract.
- G. Provide all warranties, special tools, test and diagnostic equipment, bonding and insurance as provided in the Contract Documents.
- H. Provide version control systems and software configuration management systems and their implementation sufficient for FRA Software Management Control Plan (SMCP) compliance.
- I. Ensure proper systems engineering processes, systems integration, system function, and correct sub-systems interaction for all aspects of the work related to the PTC System. The Design-Build Firm

shall be responsible for administrative functions and electronic database tracking systems to complete and document all PTC Project functions. This should be submitted to the CFRC monthly.

J. Assist CFRC with coordination and negotiations with other railroads and regulatory agencies on all PTC-related interoperability or other related matters as required.

K. Installation

1. Installation work plans are required to be submitted to the CFRC for approval prior to beginning any work.
2. Perform field installation, office updates, and cut over phases of the PTC Project in a manner that is coordinated with CFRC so as to provide minimal disruption to the CFRC's operation. This includes providing the workforce and facilities necessary to complete all PTC related wayside segment, onboard segment, back office segment and communications segment installation work.
3. Verify and validate that the installation work has been performed in a manner consistent with the design requirements of the technical specification, industry standards and recommended practices.

- **Contract Document Requirements List (CDRL) Submittals**

The Design-Build Firm shall develop a Contract Documents Requirements List (CDRL). This CDRL shall include all expected and required deliverables necessary for the completion of the project. This CDRL shall include expected due dates for each deliverable. In addition, each item shall be identified in the Schedule and tracked through the duration of the Work. CFRC will provide the approval of the CDRL.

1. The CDRL shall be a living document and updated through the duration of the Work.
2. The CDRL shall identify each deliverable, the date submitted, the date approved, and the specification requirement that satisfied.
3. The CDRL shall contain all contract requirements.

- **Phase Submittals:**

The Design-Build Firm shall provide the documents for each phase submittal listed below to the Department's Project Manager. The particular phase shall be clearly indicated on the documents. The Department's Project Manager will send the documents to the appropriate office for review and comment. Each review shall consist of documentation submittals as specified, and a formal presentation, demonstration, and tests for review and approval by CFRC. The reviews shall be conducted by the Design-Build Firm and shall be scheduled after CFRC has had time to review the corresponding review documentation submittals. Review agendas and material shall be made available to CFRC for review at least fifteen (15) working days prior to the review.

The Design-Build Firm's Schedule shall allow for up to fifteen (15) calendar days (excluding weekends and Department observed Holidays) review time for the Department's review of all submittals with the exception of Category 2 structures submittals."

Once all comments requiring a response from the Design-Build Firm have been satisfactorily resolved as

determined by the Department, the Department's Project Manager will initial, date and stamp the signed and sealed plans and specifications as "Released for Construction".

90% Phase Submittal

The Design-Build Firm shall submit Design Review packages for the PTC equipment and its installation. The package shall equate to a 90% design level. The package shall include sufficient detail to define the proposed design and to allow CFRC to determine that the intended design complies with the requirements of the Contract. Each preliminary design review package shall include, as applicable for the particular system element under review, the following information:

- A. System Design Implementation
 - 1. System Functional Description,
 - a. Handling of TSR's
 - b. Concept of Operations
 - i. Overall System
 - ii. Support System
 - iii. Dispatch
 - iv. NMS
 - 2. Top Level Diagrams (block diagrams),
 - 3. System Schematics (interconnection diagram),
 - a. Wayside, Communication, Vehicles and OCC
 - 4. Communication and Interoperability Plan,
 - a. Network Architecture
 - i. CSX Interface
 - 5. System Assembly Outline Drawings,
 - 6. Required changes to the existing systems and installations,
 - a. Braking Calculations
 - b. Block Design Changes
 - 7. Space requirements and capacity analysis,
 - 8. Component Data Sheets Related to the PTC System,
 - 9. List of System and Vehicle Interfaces.
 - 10. Product Vendor list,
 - 11. Field, Vehicle and OCC Survey Reports.
- B. Software Documentation
 - 1. Software Requirements Specification,
 - 2. Software Requirements Traceability Matrix,
 - 3. Software Release Strategy.
- C. Reliability, Accessibility, Maintainability, Availability Analysis and System Safety
 - 1. Reliability Prediction Analysis with Supporting Information,
 - 2. Maintainability Analysis with Supporting Information,
 - 3. Preliminary Hazard Analysis,
 - 4. Lowest Replaceable Unit List.
- D. Testing
 - 1. Testing Strategy Table- component level, system level and system integration level.

- E. Design Requirements and Traceability Report
 - 1. Updates and Revisions,
 - 2. Validation Method,
 - 3. Outstanding Items List.
- F. Action Items, CDRL and Correspondence Status
 - 1. Listing of All Open Issues, Requests.
- G. Other Supporting Information and Reports
 - 1. Traceability and Serialization Plan.
 - 2. Update of CFRC's Configuration Management Plan
 - 3. Interface management plan.
 - 4. Other Items as Appropriate.
- H. Preliminary Design Construction Schedule
- I. FRA required documentation (safety, certification, waivers), applications (amendment), submittals, test plans, coordination and condition items
- J. Training strategy table – operations, maintenance, management, and supervision
- K. Tenant coordination and notification documents

All open issues, action items and clarifications resulting from previous correspondence, working sessions and meeting shall be satisfactorily addressed and approved by CFRC prior to commencing the final design review activities.

- 3 copies of 11" X 17" plans
- 3 signed and sealed geotechnical report
- 3 copies of signed and sealed geotechnical report
- 3copies of Settlement and Vibration Monitoring Plan (SVMP) for Department acceptance and update throughout the construction period

- 3 copies of design documentation
- 1 copy of Technical Special Provisions

- 4 copies – All requirements specified in the PTC Safety Plan in accordance with 49 CFR Part 236.1015 entitled "PTC Safety Plan Content Requirements and PTC System Certification"
- 2 CD's containing the above information in .pdf format

Final Submittal

The Final Design Review (FDR) shall take place when the definition of design and interfaces are complete and approved by CFRC. The FDR package shall equate to a 100% design level or suitable for Issue For Construction (IFC) drawings and documentation. The FDR is to provide the opportunity to review, revise, and agree on the details of the final design prior to release of the designs for manufacture and/or installation. The FDR concerns design, application and installation details and should not modify the basic design defined through the PDR phase. Any open engineering items and related program management issues shall be discussed and resolved during the FDR. The FDR package shall emphasize design details and shall include details of the equipment, its installation, performance, manufacturing

processes, operating logic and interfaces. The Design-Build Firm shall submit FDR packages for the PTC equipment and its installation. Each FDR package shall have all the information required to permit CFRC to determine whether the system, equipment and/or apparatus complies with the Contract requirements. Each FDR package shall include, as applicable for the particular system element under review, the following information:

A. System Design Implementation

1. System functional description (system, communications, office, wayside, on-board and locomotive interoperability),
 - a. Handling of TSR's
 - b. Concept of Operations
 - i. Overall System
 - ii. Support System
 - iii. Dispatch
2. NMS
3. Block diagrams (system, wayside, communication, vehicle and office), System schematics (interconnection diagram with interface definitions and parameters),
 - a. Wayside, Communication, Vehicles and OCC
4. Communication links analysis,
5. System assembly drawings, including physical layouts of as-installed equipment, space envelope and clearance requirements for operations and maintenance,
6. Antenna towers/poles drawings and structural analysis (if required),
7. Component data sheets,
8. Definition and list of characteristics for system, wayside, vehicle and train interfaces,
9. System installation, maintenance access and special tool drawings,
10. Grounding and shielding wiring plans,
11. Surge protection,
12. Manufacturing scheme (who, what, where, when and how).

B. Software Documentation

1. Software requirements specification,
2. Software requirements traceability matrix,
3. Software design description,
4. Software verification and validation plan and report.

C. Reliability, Accessibility, Maintainability, Availability Analysis and System Safety

1. Reliability prediction analysis with support information,
2. Maintainability analysis (preventative and corrective),
3. Reliability summary,
4. Safety analysis and traceability matrix (Refer to 49 CFR 236 Appendix C),
5. Lowest removable unit list.

D. Testing (Qualification Testing, Production Testing, Field Testing, Integrated System Testing and Commissioning Testing)

1. Test procedure— component, equipment, wayside, system, vehicle and integrated system levels,
2. Test locations,
3. Test schedule.

E. Design Requirements and Traceability Report

1. Up-dates and revisions,
 2. Validation method,
 3. Define responsible entity,
 4. Outstanding items list.
- F. Action items, CDRL and Correspondence status
1. Listing of all open issues, requests.
- G. Other Supporting Information and Reports
1. Traceability and serialization plan,
 2. Update of CFRC's Configuration management plan,
 3. Other items as appropriate.
- H. Final Design, Implementation and Construction Schedule
- a. All Key Milestones
 - b. PTCIP Submission
 - c. PTC Test Plan
 - d. Wayside Installation
 - e. Wayside Testing
 - f. Communication Installation
 - g. Communication Testing
 - h. Vehicle Installation
 - i. Vehicle Testing
 - j. Dispatch Installation
 - k. Dispatch Testing
 - l. Integrated Testing
 - m. PTC Certification Testing

1 sets of signed and sealed 11" X 17" plans
3 copies of signed and sealed 11" X 17" plans
1 sets of signed and sealed design documentation
3 copies of signed and sealed design documentation
1 copies of Settlement and Vibration Monitoring Plan (SVMP)
3 sets of final documentation
4 copies – All Certain requirements specified in the Vital PTC Safety Plan in accordance with 49 CFR Part 236.1015 entitled "PTC Safety Plan Content Requirements and PTC System Certification"
2 CD's containing the above information in .pdf format

The Design-Build Firm shall provide a hard copy of the "Released for Construction" plans for placement in the signal house. Once the As-Built plans are completed, the Design-Build Firm shall replace the "Released for Construction" plans with the As-Built Plans in each signal house. These plans shall be complete and an electronic copy provided to the Department to provide to CFRC and Herzog to upload to their Information Management System within 30 days after the location is placed in-service.

- **Requirements to Begin Construction:**

The Design-Build Firm may choose to begin construction prior to completion of the Phase Submittals and the Department stamping the plans and specifications Released for Construction except for bridge construction. To begin construction the Design-Build Firm shall submit signed and sealed plans for the

specific activity; submit a signed and sealed Construction Specifications Package or Supplemental Specifications Package; obtain regulatory permits as required for the specific activity; obtain utility agreements and permits, if applicable; and provide five (5) days' notice before starting the specific activity. The plans to begin construction must be the final set of signed and sealed plans including all final reports. The reports can be on 8 1/2" X 11" sheets, and the construction plans must be on 11" X 17" sheets, and only the information needed by the Design-Build Firm to construct the specific activity needs to be shown. Beginning construction prior to the Department stamping the plans and specifications Released for Construction does not reduce or eliminate the Phase Submittal requirements.

As-Built Set:

The Design-Build Firm's Professional Engineer in responsible charge of the Project's design shall professionally endorse (sign, seal, and certify) the As-Built Plans, the special provisions and all reference and support documents. The professional endorsement shall be performed in accordance with the Department Plans Preparation Manual. It is the responsibility of the Design-Build Firm to provide as-built plans and as-built certifications signed and sealed, and note any deviations from what was originally permitted in accordance with state and federal permits for the Department's review and approval.

The Design-Build Firm shall complete the As-Built Plans as the Project is being constructed. All changes made subsequent to the "Released for Construction" Plans shall be signed/sealed by the EOR. The As-Built Plans shall reflect all changes initiated by the Design-Build Firm or the Department in the form of revisions. Once the As-Built plans are completed, the Design-Build Firm shall replace the "Released for Construction" plans with the As-Built Plans in each signal house. These plans shall be complete and an electronic copy provided to the Department to provide to CFRC and Herzog to upload to their Information Management System within 30 days after the location is placed in-service.

The Plans shall be submitted to the Department for review and acceptance as a condition precedent to the Department's issuance of Final Acceptance.

The Department shall review, certify, and accept the As-Built Plans prior to issuing Final Acceptance of the project in order to complete the As-Built Plans.

The Department shall certify the As-Built Plans per Chapter 5.12 of the Construction Project Administration Manual (TOPIC No. 700-000-000).

The Design-Build Firm shall furnish to the Department, upon Project completion, the following:

- 1 set of 11" X 17" signed and sealed plans
- 3 sets of 11 "X 17" copies of the signed and sealed plans
 - 2 sets of final documentation (if different from final component submittal)
- 2 (two) Final Project CD's including all final design documentation and CADD files
- Final version of PTCSP and all appendices for submittal to FRA for Certification

- **Milestones:**

Component submittals, in addition to the plan submittals listed in the previous section will be required. In addition to various submittals mentioned throughout this document the following milestone submittals will be required.

The following Vital PTC Safety Plan requirements and submittals are listed, without limitation, below:

- Final Human Factors Analysis [§236.1013(a)(5)] [§236.1015(d)]
- Safety Assessment and Application of 49 CFR § 236, Appendix C [§236.1015(d)(5)] [§236.1015(e)(2)(ii)] [49 CFR § 236, Appendix C]
- Hazard Log [§236.1015(d)(1)]
- Safety Assurance Concepts [§236.1015(d)(2)] [§ 236 Appendix C (b)]
- Risk Assessment [§236.1015(d)(3), § 236 Appendix B (as revised)]
- Hazard Mitigation Analysis [§236.1015(d)(4)]
- Verification and Validation Processes [§236.1015(d)(5)]
- Training Plan
- Procedures, Test Equipment, and Operations and Maintenance Manuals [§236.1015(d)(7)] [§236.1039 (all)]

- Configuration Management and Revision Control Measures, [§236.1015(d)(9)] [§236.1023(c)(2)]

- Initial Implementation Testing Procedures (Post-Certification) [§236.1015(d)(10)]

- Post-Implementation Testing (Validation) and Monitoring Procedures [§236.1015(d)(11)]

- Records [§236.1015(d)(12)] [§236.1023(b)(1)], [§236.1023(e)] [§236.1037] .

- Safety Analysis of Work Zone Incursion Protection from Human Error [§236.1015(d)(13)]

- Compliance with Stated MTEA [§236.1015(d)(16)] [§236.1019(f)]

- Communication and Security Requirements [§236.1015(d)(20)] [§236.1033]

- Potential Data Errors and their Mitigation [§236.1015(h)]

- PTC Data Maintained in Locomotive Event Recorder [§229.135(b)(3)(xxv)] [§229.135(b)(4)(xxi)] [§236.1005(d)]

- Errors and Malfunctions [§236.1023]

- Role of Office Automation Systems in the PTC System [§236.1027(a)]

I. Contract Duration:

The Department has established a Contract Duration of 621 calendar days for the subject Project.

J. Project Schedule:

The Design-Build Firm shall submit a Schedule, in accordance with Subarticle 8-3.2 (Design-Build Division I Specifications). The Design-Build Firm's Schedule shall allow for up to fifteen (15) calendar days (excluding weekends and Department observed Holidays) review time for the Department's review of all submittals with the exception of Category 2 structures submittals. The review of Category 2 structures submittals requires Central Office involvement and the Schedule shall allow for up to twenty (20) calendar days (excluding weekends and Department observed Holidays) for these reviews.

The Department will perform the review of Foundation Construction submittals in accordance with Section 455.

The following Special Events have been identified in accordance with Specification 8-6.4:

Osceola Fall Art Festival
Lake Toho Special Events
Winter Park Arts Festival

Any other Events that may affect the CFRC Territory and will be communicated to the Design-Build Firm

The minimum number of activities included in the Schedule shall be those listed in the Schedule of Values and those listed below:

- Anticipated Award Date
- Design Submittals
- Shop Drawing Submittals
- Design Survey
- Submittal Reviews by the Department
- Design Review / Acceptance Milestones