AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE	OF	PAGES
J	1		38

2. AMENDMENT/MODIFICATION NUMBER	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQUISITION NUMBER	5. PROJECT NUMBER *(If applicable)*
0010	06/29/2017		

6. ISSUED BY	CODE	7. ADMINISTERED BY *(If other than Item 6)*	CODE
USA ENGINEER DISTRICT, JACKSONVILLE CONTRACTING DIVISION 701 SAN MARCO BLVD JACKSONVILLE, FL 32207-8175		SEE ITEM 6	

8. NAME AND ADDRESS OF CONTRACTOR *(Number, street, county, State and ZIP Code)*	(X)	9A. AMENDMENT OF SOLICITATION NUMBER
	☒	W912EP-17-R-0006
		9B. DATED *(SEE ITEM 11)* 05/18/2017
	☐	10A. MODIFICATION OF CONTRACT/ORDER NUMBER
		10B. DATED *(SEE ITEM 13)*
CODE / FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☒ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NUMBER AS DESCRIBED IN ITEM 14.

CHECK ONE	
☐	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NUMBER IN ITEM 10A.
☐	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation data, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
☐	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
☐	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☐ is not ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (*Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Herbert Hoover Dike Rehabilitation Structure Replacements, S-265 (KI-2) and S-266 (KI-1) Reconstruction, Okeechobee County, Florida

Please see SF30 Continuation Sheet
The Proposal due date remains unchanged 07 July 2017 @ 3:00 PM Local Time.
All other conditions remain unchanged.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
15B. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*	16C. DATE SIGNED

Herbert Hoover Dike Rehabilitation Structure Replacements S-265 (KI-2) and S-266 (KI-1) Reconstruction,
Okeechobee County, FLORIDA
Amendment 0010

SUMMARY OF CHANGES

1. SPECIFICATIONS:

A. In some Volume 1 sections, asterisks appear before and after the line or lines where revisions have been made to the text, and pertain only to changes made by this amendment. In some cases, replacement clauses are attached to this amendment.

B. In Volume 2 sections, the text changes have been updated with additions noted by underlined text and deletions noted by line/cross-outs, and pertain only to changes made by this amendment. The entire section is replaced if there is any change. The Project Table of Contents and Submittal Register are replaced without underlines and cross-outs if there are changes to these documents.

Changes to Specifications:

Volume 1 of 2 – Technical Specifications:

SECTION 00100A - **DELETE** in it's entirety Section 00100A and **REPLACE** with the attached Section 00100A

Volume 2 of 2 – Technical Specifications:

Made changes to Section 35 20 18, paragraph 2.4.2 Operation Tests

(End of Summary of Changes)

SECTION 00100A

SOLICITATION PROVISIONS

A. ELIGIBILITY FOR CONTRACT AWARD

In accordance with the Federal Acquisition Regulation (FAR), no contract shall be entered into unless the Contracting Officer ensures that all requirements of law, executive orders, regulations, and all other applicable procedures, including clearances and approvals, have been met. This includes the FAR requirement that no award shall be made unless the Contracting Officer makes an affirmative determination of responsibility. To be determined responsible, a prospective contractor must meet the general standards in Part FAR 9 and any special standards set forth in the solicitation.

B. SOURCE SELECTION USING LOWEST PRICE TECHNICALLY ACCEPTABLE (LPTA)

The LPTA process is selected as appropriate for this acquisition because the best value is expected to result from selection of the lowest evaluated price proposal with acceptable non-priced proposal (Technical Acceptability). In order to permit efficient competition, the following methodology will be utilized. The Government will evaluate the proposals for technical acceptability. The lowest price technically acceptable will then be evaluated to determine fair and reasonableness in accordance with FAR 15.404-1(a). That Offeror will be selected for award.

If discussions are deemed necessary by the Contracting Officer, all proposals both price and non-priced will be evaluated for the purpose of establishing a competitive range.

C. EVALUATION FACTORS FOR AWARD

The solicitation requires the evaluation of: **Factor 1 - Technical Acceptablity, and Factor 2 - Price.**

Award will be made to the offeror who submits the lowest priced proposal that is determined to be technically acceptable. To be considered technically acceptable, an Offeror's proposal must be rated "Acceptable" Factor 1 - Technical Acceptability and its sub-factors.

Magnitude of Construction: The estimated cost of this project is between U.S. $25,000,000.00 and $50,000,000.00.

The Primary NAICS code is 237990 with a small business size of $36.5 million.

D. PROPOSAL REQUIREMENTS, AND FORMAT

The Government will not reimburse any costs incurred or associated with preparation and submission of any responses to this solicitation. Oral explanations or instructions to Offerors are not binding. Any information given to an Offeror which impacts the solicitation and/or offer will be given in the form of a written amendment to the solicitation. In accordance with Paragraph 999.204-4003,

Section 00100 of the Solicitation, any and all amendments to the solicitation will be distributed via

the Federal Business Opportunities website. It is the Offeror's responsibility to acknowledge any and all amendments in its proposal submission.

Offerors should not modify the terms and conditions of the solicitation in either the price or non-priced proposal or add conditions, exceptions, or qualifications to their offers. Should an Offeror include terms and conditions that conflict with the terms and conditions of the solicitation, that offer may be determined to be Unacceptable for award. Any questions related to specific terms and conditions contained within the solicitation should be submitted via Bidders Inquiry in ProjNet by no later than (NLT) the date specified in Section 00010A, Attachment A, Instructions For Technical Inquires and Questions, prior to submission of an offer. Notwithstanding the above, the Offeror must clearly describe in its proposal (Price and Non-Priced) any modifications to the contractual terms and conditions of the solicitation contained in its offer.

Offerors that include information in their proposals they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, must clearly mark their proposals in accordance with the instructions at FAR clause 52.215-1, *Instructions to Offerors-Competitive Acquisition,* paragraph (e), *Restriction on Disclosure and Use of Data, in Section 00100 of the Solicitation.*

Offerors shall place the following notification on the bottom of each page of their proposals: "SOURCE SELECTION INFORMATION – SEE FAR 2.101 AND 3.104. DO NOT DISCLOSE ANY SOURCE SELECTION INFORMATION TO ANY UNAUTHORIZED PERSON."

Use of the words "will", "shall", or "must" indicates a mandatory requirement for which failure to comply, at the time and date for submission of proposals, shall result in the Offeror's proposal being disqualified from consideration for award, unless the Government elects to established a competitive range and initiate discussions, thereby providing a means by which appropriate corrections by the Offeror(s) involved can be made. Failure to comply with pricing or non-pricing requirements that are annotated with the words "should" or "may" can result in an Unacceptable rating.

1. REQUIRED REGISTRATIONS

Failure to have an active and completed registration in **System for Award Management (SAM)**: http://www.sam.gov/ database will determine an Offeror ineligible for award and removed from competition. An Acceptable offer with incomplete or expired registrations at the time of award may not be eligible for a contract. In such instances, the Government will award to the next Acceptable offer who is eligible for award.

Information contained within an Offeror's registration must be current and valid. The responsibility of maintaining current information contained in an Offeror's registration rests solely on the Offeror.

If an Offeror is a joint venture (JV), the JV entity must have a valid registration representing the JV as one business/firm/entity; this is applicable to SAM. The Government will not accept separate registrations and licenses for each separate entity representing the JV.

2. PROPOSAL CONTENT

The Offeror's proposal shall be submitted in hard copy, with accompanying compact disc (CD), see Paragraph 999.215-4003, Section 00100. The RFP shall provide the Government address and receipt date for proposal submittal.

Information required with an Offeror's priced and non-priced factors and sub-factors are described under Basis of Award and Evaluation Factors.

Offerors are required to submit proposals with the content specified herein. Proposals without the specified content may be determined Unacceptable and removed from the competition. The Government will not make assumptions concerning intent, capabilities, or experiences. Clear identification of proposal details shall be the sole responsibility of the Offeror. The Government reserves the right to reject incomplete proposals after initial evaluation without further consideration.

The proposal shall be divided into volumes as indicated below. Each set of volumes shall be submitted and sealed separately. Each volume shall be marked with the Offeror's name, the solicitation number, the volume number and stamped with "Original" or "Copy." Each respective original or copy shall be separately bound or placed in a three-ring binder. See Attachment 6 – Proposal Format.

All proposals shall contain the evaluation requirements stated herein and every binder shall also contain: Table of Contents, List of Tables (if required), List of Figures (if required), List of Appendixes, and Name/Address/Telephone Number/e-mail address of the Offeror. Proposal clarity, organization, and cross-referencing are mandatory. No material (information not physically part of proposal) shall be incorporated by reference. The Offeror shall submit in the proposal the requested information specified herein.

Offerors shall verify that the information for all forms submitted are current, correct, and complete, including names of points of contact, email addresses, and telephone numbers.

The Government will not evaluate any material that exceeds the page limits specified within each evaluation factor. Elaborately prepared proposals are not required, and any material in excess of what is requested, such as corporate marketing information, will not be considered. Failing to submit or completely fill out attachments properly may result in rejection of the offer without further evaluation. Therefore, Offerors are urged to follow instructions and raise questions through inquiries if instructions are not understood. Do not include references to material or information not found within its respective volumes. Information submitted in the wrong volumes could lead to an Offeror's proposal being determined Unacceptable if materially incomplete in any aspect.

Written proposals are due no later than what is stated in Block 13 of the SF1442 to the address specified in Block 7 of the SF 1442.

a. **VOLUME ONE (Factor 1) – Technical Acceptability. (1 Original, 5 Copies):** Responses to Each Sub-Factor shall be organized shall be organized in Volume 1. **Do not include pricing information in Volume One. NOTE**: Page Limitations Not to Exceed 150 pages.

b. **VOLUME TWO (Factor 2) – Price (1 Original 1 Copy)** Offerors shall verify

that the information for all forms submitted are current, correct, and complete, including names of points of contact, email addresses, and telephone numbers.

All proposals shall contain the evaluation requirements stated herein and every binder shall also contain: Table of Contents, List of Tables (if required), List of Figures (if required), List of Appendixes, and Name/Address/Telephone Number/e-mail address of the Offeror. Proposal clarity, organization, and cross-referencing are mandatory. No material (information not part of proposal) shall be incorporated by reference. The offeror shall submit in the proposal the requested information specified herein.

Offerors shall verify that the information for all forms submitted are current, correct, and complete, including names of points of contact, email addresses, and telephone numbers

The Government will not evaluate any material that exceeds the page limits specified within each evaluation factor. Elaborately prepared proposals are not required, and any material in excess of what is requested, such as corporate marketing information, will not be considered. Failing to submit or completely fill out attachments properly may result in rejection of the offer without further evaluation. Therefore, Offerors are urged to follow instructions and raise questions through inquiries if instructions are not understood. Do not include references to material or information not found within its respective volumes. Information submitted in the wrong volumes could lead to an Offeror's proposal being determined Unacceptable if materially incomplete in any aspect.

Written proposals are due no later than what is stated in Block 13 of the SF1442 to the addresses specified in Block 7 of the SF 1442:

Claurice M. Dingle
Contract Specialist
Claurice.M.Dingle@usace.army.mil

E. DEBRIEFING OF UNSUCCESSFUL OFFERORS

The Contracting Officer will ensure Offerors are debriefed, if requested, in accordance with FAR Subparts 15.5.

F. BASIS OF AWARD

Subject to the provisions contained herein, award will be made to one (1) Offeror who is deemed responsible in accordance with the FAR; who conforms to the solicitation requirements; provides the lowest evaluated price and whose proposal, judged by an overall assessment of the evaluation criteria and other considerations specified in this solicitation, meets the technically acceptable standard for the non-price factors. Prices will be evaluated to determine fair and reasonableness in accordance with FAR 15.404-1(a).

To be considered acceptable (non-priced factors), no non-priced factors/sub-factors in the proposal may be rated as "unacceptable". **The failure of a proposal to meet all of the requirements under any non-priced factor/sub-factor will result in an unacceptable rating and precluded from award.**

The LPTA process is selected as appropriate for this acquisition because the best value is expected to result from selection of the lowest evaluated price proposal with acceptable non-priced proposal (Technical and Past Performance). In order to permit efficient competition, the following methodology will be utilized. The Government will evaluate the proposals for technical and past performance acceptability. The lowest price technically acceptable proposal with acceptable past performance will then be evaluated to determine fair and reasonable in accordance with FAR 15.404-1(a). That Offeror will be selected for award.

The Government intends to award a contract without discussions, but reserves the right to hold discussions if the Government determines that to do so would be in its best interests. If discussions are deemed necessary by the Source Selection Authority/Contracting Officer, all proposals will be evaluated for the purpose of establishing a competitive range.

Joint Ventures: A joint venture is defined as a legal business entity formed between two or more companies to undertake the performance activities of a contract together.

Offerors proposing as joint ventures shall provide evidence that the joint venture as a legal entity has been duly formed. Joint ventures shall include a copy of the legal joint venture agreement signed by an authorized officer from each of the firms comprising the joint venture, with the chief executive of each entity identified. The Government will not evaluate the capability of any firms that are not included in the joint venture agreement.

If submitting a proposal as a joint venture, the experience of each of the joint venture partners can be submitted for the joint venture entity. The experience of either joint venture partner will be considered the experience of the joint venture entity. Page and project form limits apply to the joint venture as a whole, i.e., a submission limitation of three (3) projects under the experience factor is not an allowance of three (3) projects for each of the joint venture partners. Prospective Offerors that submit proposals may not change their joint venture firms, if selected for award.

Subcontractors: If any portion of the work provided under Factor **1** is subcontracted, clearly identify that work as such and provide the required experience of that subcontractor as it relates to work the subcontractor will be performing for this requirement. In accordance with the non-substitution clause in Section 00800, Paragraph 999.215-4001, Limitations on Substitutions for Certain Positions and/or Subcontractors, provide a letter of commitment using **Attachment 2** for any subcontractor proposed to be used. Prime contractor will not be allowed to substitute a subcontractor's experience for its own; unless the subcontractor will be a team member in this requirement.

G. <u>DEFINITIONS</u>:

Joint Venture: If submitting a proposal as a joint venture, the experience of each of the joint venture partners can be submitted for the joint venture entity. The experience of either joint venture partner will be considered the experience of the joint venture entity.

A major subcontractor is defined as any subcontractor that has been identified under Factor 1. Additionally, a major subcontractor can be identified as one that is crucial for the successful completion of the project.

A letter of commitment is defined as a letter from a major subcontractor on official Company

letterhead (1) addressed to the prime contractor, (2) identifying the work they intend to perform, and (3) stating that they are willing to be bound to perform the identified work if the prime receives this contract. Failure to provide a letter of commitment from a proposed major subcontractor will cause any non-priced factor to be rated Unacceptable, if applicable.

H. EVALUATION FACTORS

FACTORS AND SUB-FACTORS TO BE EVALUATED

1. ***Factor 1 – Technical Acceptability***

   a. Sub-Factor 1 *– Demonstrated Experience*

   A Sub-Element A-Cofferdam System Experience
   B. Sub-Element B-Dewatering System Experience
   C. Sub-Element C-Construction of Gated Hydraulic Control Structure Experience
   D.Sub-Element D-Permanent Earthen Dam Experience

   b. Sub-Factor 2 *– Past Performance*

2. ***Factor 2 – Price: The Price factor is not rated. It is evaluated for reasonableness.***

FACTOR SUBMISSION REQUIREMENTS AND EVALUATION METHODS

FACTOR 1 – TECHNICAL ACCEPTABILITY

In responding to this factor, the objective should be to instill confidence that the offeror has the knowledge and experience required to meet or exceed the terms and conditions of the specifications and the ability to successfully complete the project within the required timeframe, as defined in specification Section 01 11 00, Summary of Work.

Offerors must receive an overall rating of Acceptable for ALL Sub-Factors and Sub-Elements to receive an overall proposal rating of Technically Acceptable.

SUB-FACTOR 1 – DEMONSTRATED EXPERIENCE

Submission Requirements

Provide two (2) examples of completed construction projects or close to complete projects for sub-elements A, B and D; provide three (3) examples of completed hydraulic control structure construction projects or close to complete projects for Sub-Element C. It is not necessary that all sub-factors and/or sub-elements below be performed on the same project. A project may be utilized for multiple sub-elements as long as the project meets the criteria for that sub-element.

The projects submitted under Sub-Factor 1 Demonstrated Experience must have a corresponding submission under Sub-Factor 2 Past Performance. In addition, projects submitted under Sub-Factor 1, Demonstrated Experience must be a complete project or a close to complete project.

A complete project is defined as work performed under a "project" that was physically completed within the last (10) years preceding the date of this solicitation and has been accepted by the customer.

A close to complete project is defined as work performed under a "project" that is over 75% physically complete and the cutoff wall and/or embankment work has been accepted by the customer.

SUB-ELEMENT A – Successfully install a cofferdam system, with a minimum 10 foot head differential, maintained across the structure, from the head water to the tail water (or dewatered water level), immediately adjacent to or within a labeled body of water.

- *The cofferdam systems must be earthen cofferdam systems.*
- *Clearly state the type of cofferdam system used to retain body of water.*
- *Clearly state the head differential maintained by each cofferdam system.*

SUB-ELEMENT B – Successfully install, operate, and maintain a dewatering system, with a minimum head differential of 10 feet maintained during dewatering operations, immediately adjacent to or within a labeled body of water.

- *The dewatering systems must include pre-drainage, defined as dewatering prior to excavation (To include but not limited to: deeps wells, well point systems and/or ejectors).*
- *Clearly state the type of dewatering system used.*
- *Clearly state the head differential maintained by each system submitted.*
- *Clearly describe the geology in which each dewater system was installed.*

SUB-ELEMENT C – Successful construction of gated concrete hydraulic control structures (i.e. water control structure such as a pump station, spillway, outlet works, or culvert) with water control gates with a minimum 10 foot hydraulic head differential maintained across the structure.

- *The submitted experiences must be for a completed hydraulic control structure including reinforced concrete, hydraulic steel structures (gates) and controls.*
- *The submitted experiences must include fabrication of hydraulic steel structures (steel water control gates) and controls.*
- *Each demonstrated experience shall include a minimum gated hydraulic opening of 49 square feet per opening.*
- *Clearly state the operating head differential (headwater minus tailwater) across the gate.*
- *Provide at least one experience involving placement and instrumentation of mass structural concrete.*

SUB-ELEMENT D – Successful construction of permanent earthen dam or new (non-modified) permanent levee embankments (water retaining structure) at least 15 feet in height, as measured from the toe of the constructed embankment to the embankment crest.

The Project Information Sheet at Attachment 1 must be utilized to provide project information in response to Sub-Element A, B, C, and D. The offeror shall ensure that all information required by the Project Information Sheet is provided and all descriptions and explanations are in great detail to provide the technical evaluation team with a clear understanding of the work completed and how it is similar to this project.

The technical evaluation team will evaluate each of the projects submitted to determine if they are similar to this project and whether or not these projects demonstrate that the offeror has the knowledge and experience required to meet or exceed the terms and conditions of the specifications, and the ability to successfully accomplish and complete the project within the required timeframe, as defined in specification Section 01 11 00, Summary of Work.

All of the offeror provided projects must have been completed in the last ten (10) years for Sub- Element A, B, C, and D as described above and demonstrate that the offeror has the knowledge and experience required to meet or exceed the terms and conditions of the specifications, and the ability to successfully complete the project within the required timeframe to be determined to meet the minimum requirements of the solicitation.

Offerors must receive a demonstrated experience rating of Acceptable for all submitted demonstrated experiences to receive an overall rating of Acceptable for this sub-factor.

NOTE 1: Do not submit more than two (2) projects for sub-elements A, B and D or more than three (3) projects for sub-elements C as no additional consideration or evaluation will be given for the submission of more than two (2) projects on sub-elements A,B and D and three (3) sub-elements C and only two (2) projects for sub-elements A, B and D and three (3) projects for sub-element C will be evaluated.

NOTE 2: If any portion of the work provided as demonstrated experience was subcontracted, clearly identify that work as it relates to this project. This Subcontractor is also required to be identified as the subcontractor performing this effort as such and provide the required experience of that subcontractor as it relates to work the subcontractor is performing on this project.

NOTE 3: Any demonstrated experience (to include subcontractors) provided for consideration in this sub-factor shall also have a corresponding submission in the Past Performance Factor. <u>If Past Performance information is not provided for a demonstrated ex perience, that demonstrated experience will not be evaluated.</u>

NOTE 4: For Sub-Element C, offerors are required to submit two (2) projects that include: completed hydraulic control structure including reinforced concrete, hydraulic steel structures (gates) and controls, experiences with fabrication of hydraulic steel structures (steel water control gates) and controls, demonstrated experiences with a minimum gated hydraulic opening of 49 square feet per opening and operating head differential of 10 feet (headwater minus tailwater) across the gate. In addition, offerors are required to submit one (1) experience involving placement and instrumentation of mass structural concrete.

Ratings for this sub-factor are defined below:

Acceptable *- Proposal clearly meets the minimum requirements of the solicitation.*

Unacceptable *- Proposal does not clearly meet the minimum requirements of the solicitation.*

Sub-Factor 2 – Past Performance

The projects submitted for Past Performance must have a corresponding submission under Sub- Factor 1 Demonstrated Experience.

The past performance evaluation is an assessment of the offeror's probability of meeting the minimum past performance solicitation requirements. This assessment is based on the offeror's record of relevant and recent past performances that pertain to the solicitation requirements. There are two aspects to the past performance evaluation.

The first aspect of the past performance evaluation is to evaluate whether the offeror's present/past performance is relevant or not relevant to the effort to be acquired. If a demonstrated experience submitted in Sub-Factor 1 is determined to be Acceptable, it will also be determined to be relevant and recent in this sub-factor.

The second aspect of the past performance evaluation is to determine how well the contractor performed a demonstrated experience submitted in Sub-Factor 1. This will be determined by utilizing the NAVFAC/USACE Past Performance Questionnaire at Attachment 2, CCASS records or official performance evaluation from a non-federal entity. The offeror must receive a past performance rating of Satisfactory or better to be considered technically acceptable.

A Satisfactory Rating is defined in the NAVFAC/USACE Past Performance Questionnaire.

Once relevancy has been determined and past performance ratings have been verified, a rating of Acceptable or Unacceptable will be assigned based on the results. Offeror's must receive a Past Performance rating of Acceptable for ALL submitted demonstrated experiences to receive and overall rating of Acceptable for this sub-factor.

Ratings for this sub-factor are defined below:

Acceptable *- Based on the offeror's performance record, the Government has a reasonable expectation that the offeror will successfully perform the required effort, (i.e. the offeror received a rating of Acceptable in Sub-Factor 1 and received a rating of Satisfactory or better from an offeror provided POC) or the offeror's performance record is unknown.*

Unacceptable *- Based on the offeror's performance record, the Government has no reasonable expectation that the offeror will be able to successfully perform the required effort. (i.e. the offeror DID NOT receive a rating of Acceptable in Sub-Factor 1 or the offeror DID NOT receive a rating of Satisfactory or better from an offeror provided POC).*

Note: *If an offeror's provided NAVFAC/USACE Past Performance Questionnaires cannot be verifiable with the POC, the offeror may not be evaluated favorably or unfavorably on past*

performance (see FAR 15.305 (a)(2)(iv)). Therefore, the offeror shall be determined to have unknown past performance. In the context of acceptability/unacceptability, "unknown" shall be considered "acceptable."

FACTOR 2 – PRICE

Submission Requirements

The Offeror's volume for this factor shall be fully completed. Offeror completeness addresses the extent to which the elements of the price proposal are consistent with the requirements of the RFP.

This volume will also include price and price related information:

a. Standard Form 1442 (Solicitation, Offer and Award) and Section 00010A (Line Items and Pricing Schedule) Include the completed Standard Form 1442 for the RFP, along with the completed Pricing Schedule. The total cost for the construction will be considered for evaluation, including all options and alternates (if applicable).

b. Section 00101, Representations, Certifications, and Other Statements of Offerors.

c. In accordance with FAR Clause 52.228-1, Bid Guarantee (Original bid guarantee).

d. Attachment 4, Proposal Data Sheet.

e. Attachment 5, Determination of Responsibility.

Evaluation Method:

Price is not rated. It will be evaluated for fairness and reasonableness through the use of a price analysis in accordance with FAR 15.404-1(b). The price analysis will also check for the appearance of unbalanced line item prices.

Additionally, Offerors' price proposals may be evaluated for price realism to determine if there are proposals that are unrealistically low in terms of overall price or reflective of an inherent lack of management and/or technical competence or comprehension of the requirements. Therefore, Offerors are advised that their business decision to submit a low-priced proposal can be considered in assessing their understanding or the risk associated with their proposal.

Prices will be reviewed for minor or clerical errors. If necessary, Offerors will be afforded an opportunity to resolve any such errors. Any exchange with Offerors under this subparagraph shall be for the purpose of clarification (FAR 15.306(a)) and shall not constitute negotiations as defined at FAR 15.306(d). In the event of discrepancy between a unit price and the extended amount, the unit price shall be controlling.

ATTACHMENTS

Attachment 1 – Demonstrated Experience

Attachment 2 – Letter of Commitment from Key

Subcontractor Attachment 3 – NAVFAC/USACE Past Performance Questionnaire

Attachment 4 - Proposal Data Sheet

Attachment 5 - Determination of Responsibility

Attachment 6 – Proposal Format

ATTACHMENT 1
DEMONS TRATED EXPERIENCE

Provide the following information to show examples of projects your company and/or its team members (IE: major subcontractors) constructed within the last ten (10) years indicating experience with projects of similar type and scope. Use one form per project. NOTE: Use additional pages as necessary to provide the information requested.

Type of Project Represented

Your Firm's Name

Project Name and Contract Number, Location of Project and Conditions, Owner,
General Scope.

Describe how this project is relevant and similar to the elements of the solicited (Kissimmee River Restoration Project C-37 Embankment Armoring). Use additional pages as necessary to provide this information, and to address all required elements of the sub-element/sub-factors.

Your Role (Prime, Joint Venture, or Subcontractor, etc.) and Work Your Company Self-Performed: Construction Cost:

Extent and Type of Work You Subcontracted Out

Dates Construction: Began_____Completed_____

Your Performance Evaluation by Owner and Awards and Recognitions (if any)

Were You Terminated or Assessed Liquidated Damages? (If either is "Yes", attach an Explanation) Owner's Point of Contact for Reference (Name and Company)
Current Telephone Number and email address of Owner Reference

Any unusualconditions/requirements

Problems encountered and corrective action taken to successfully complete the project

ATTACHMENT 2

LETTER OF COMMITMENT OF KEY SUBCONTRACTOR
(USE SUBCONTRACTOR'S COMPANY LETTERHEAD)

TO: **Name of Offeror**

SUBJECT: Letter of Commitment for Proposed Contract for _____

Dear Sir or Madam:
I hereby make the unequivocalcommitment that, in the event of an award of a contract to (Fill in name of Offeror), that (insert name of subcontractor firm) will fulfill the duties of (state role on a project)

Sincerely, (Authorized Subcontractor Official)

Date: _____

ATTACHMENT 3

NAVFAC/USACE PAST PERFORMANCE QUESTIONNAIRE

CONTRACT INFORMATION

1. Contractor Information

Firm Name: CAGE Code:

Address: DUNs Number:

Phone Number:

Email Address:

Point of Contact: Contact Phone Number:

2. Work Performed as: ☐Prime Contractor ☐Sub Contractor ☐Joint Venture ☐Other (Explain)

Percent of project work performed:

If subcontractor, who was the prime (Name/Phone #):

3. Contract Information

Contract Number:

Delivery/Task Order Number (if applicable):

Contract Type: ☐Firm Fixed Price ☐Cost Reimbursement ☐Other (Please specify):

Contract Title:

Contract Location:

Award Date (mm/dd/yy):

Contract Completion Date (mm/dd/yy):

Actual Completion Date (mm/dd/yy):

Explain Differences:

Original Contract Price (Award Amount):

Final Contract Price (*to include all modifications, ifapplicable*):

Explain Differences:

4. Project Description:

Complexity of Work ☐High ☐Med ☐Routine

How is this project relevant to project of submission? (*Please provide details such as similar equipment, requirements, conditions, etc.*)

CLIENT INFORMATION (Client to complete Blocks 5-8)

5. Client Information

Name:

Title:

Phone Number:

Email Address:

6. Describe the client's role in the project:

7. Date Questionnaire was completed (mm/dd/yy)**:**

8. Client's Signature:

PLEASE PROVIDE THE ADJECTIVE RATING WHICH BEST REFLECTS YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE.

1. QUALITY:	
a) Quality of technical data/report preparation efforts	E VG S M U N
b) Ability to meet quality standards specified for technicalperformance	E VG S M U N
c) Timeliness/effectiveness of contract problem resolution without extensive customer guidance	E VG S M U N
d) Adequacy/effectiveness of quality controlprogram and adherence to contract quality assurance requirements (without adverse effect on performance)	E VG S M U N
2. SCHEDULE/TIMELINESS OF PERFORMANCE:	
a) Compliance with contract delivery/completion schedules including any significant intermediate milestones. *(If liquidated damages were assessed or the schedule was not met, please address below)*	E VG S M U N
b) Rate the contractor's use of available resources to accomplish tasks identified in the contract	E VG S M U N
3. CUSTOMER SATISFACTION:	
a) To what extent were the end users satisfied with the project?	E VG S M U N
b) Contractor was reasonable and cooperative in dealing with your staff (including the ability to successfully resolve disagreements/disputes; responsiveness to administrative reports, businesslike and communication)	E VG S M U N
c) To what extent was the contractor cooperative, businesslike, and concerned with the interests of the customer?	E VG S M U N
d) Overall customer satisfaction	E VG S M U N
4. MANAGEMENT/ PERSONNEL/ LAB OR	
a) Effectiveness of on-site management, including management of subcontractors, suppliers, materials, and/or labor force?	E VG S M U N
b) Ability to hire, apply, and retain a qualified workforce to this effort	E VG S M U N
c) Government Property Control	E VG S M U N
d) Knowledge/expertise demonstrated by contractor personnel	E VG S M U N
e) Utilization of Small Business concerns	E VG S M U N
f) Ability to simultaneously manage multiple projects with multiple disciplines	E VG S M U N
g) Ability to assimilate and incorporate changes in requirements and/or priority, including planning, execution and response to Government changes	E VG S M U N
h) Effectiveness of overall management (including ability to effectively lead, manage and controlthe program)	E VG S M U N
5. COST/FINANCIAL MANAGEMENT	
a) Ability to meet the terms and conditions within the contractually agreed price(s)?	E VG S M U N

b) Contractor proposed innovative alternative methods/processes thatreduced cost, improved maintainability or other factors that benefited the client	E VG S M U N
c) If this is/was a Government cost type contract, please rate the Contractor's timeliness and accuracy in submitting monthly invoices with appropriate back-up documentation, monthly status reports/budgetvariance reports, compliance with established budgets and avoidance of significant and/or unexplained variances (under runs or overruns)	E VG S M U N
d) Is the Contractor's accounting systemadequate for management and tracking of costs? *If no, please explain in Remarks section.*	Yes No
e) If this is/was a Government contract, has/was this contract been partially or completely terminated for default or convenience or are there any pending terminations? *Indicate if show cause or cure notices were issued, or any default action in comment section below.*	Yes No
f) Have there been any indications that the contractor has had any financial problems? *If yes, please explain below.*	Yes No
6. SAFETY/S ECURITY	
a) To what extent was the contractor able to maintain an environment of safety, adhere to its approved safety plan, and respond to safety issues? (Includes: following the users rules, regulations, and requirements regarding housekeeping, safety, correction of noted deficiencies, etc.)	E VG S M U N
b) Contractor complied with all security requirements for the project and personnelsecurity requirements.	E VG S M U N
7. GENERAL	
a) Ability to successfully respond to emergency and/or surge situations (including notifying COR, PM or Contracting Officer in a timely manner regarding urgent contractualissues).	E VG S M U N
b) Compliance with contractualterms/provisions *(explain if specific issues)*	E VG S M U N
c) Would you hire or work with this firm again? *(If no, please explain below)*	Yes No
d) In summary, provide an overall rating for the work performed by this contractor.	E VG S M U N

END OF QUESTIONNAIRE

ATTACHMENT 4

PROPOSAL DATA SHEET

Solicitation W912EP-17-R-0014

Name of Firm:

Address:

Phone:

E-mail:

DUNS # (used for accessing the Contractor Performance Assessment Reporting System (CPARS). Also provide any other assigned number that identifies the member firm(s) Construction Contractor Appraisal Support System CCASS/CPARS databases. If a separate DUNS has been created for a joint venture (J-V) it must also be submitted. If the firm is a joint venture, list the individual firms and briefly describe the nature of the association. Provide DUNS for each.

Provide DUNS for any firm identified as a major subcontractor for which demonstrated experience has been submitted under Factor 1. Also, list the firm and briefly describe the nature of the association.

Firm 1:

Firm 2:

Firm 3:

Nature of Association:

AUTHORIZED NEGOTIATORS. FAR 52.215-11

The Offeror represents that the following persons are authorized to negotiate on its behalf with the Government in connection with this Request for Proposals (RFP).

[List names, titles, and telephone number of the authorized negotiator.]

Name of Person Authorized to Negotiate:

Negotiator's Address:

Negotiator's Telephone:

Negotiator's E-mail:

ATTACHMENT 5

DETERMINATION OF RESPONSIBILITY

The following information is provided to assist the contracting officer in determining whether or not the proposed contractor meets the general standards of responsibility enumerated at FAR 9.104-1, DFARS 209.104-1, and FAR 9.104-1 General Standards. To be determined responsible, a prospective contractor must --

(a) HAVE ADEQUATE FINANCIAL RESOURCES TO PERFORM THE CONTRACT, OR THE ABILITY TO OBTAIN THEM (SEE 9.104-3(b))

Banking References

Provide letters from the banking references to confirm this information.

***1st bank's name:** _____
Telephone #: _____
Address: _____
Person: _____
Title: _____
Length of time with bank: _____
Credit Rating: _____
Number/type of accounts: _____
Amount in each account (# of figures): _____
Credit line: _____ **Secured/Unsecured**
Outstanding loans: _____ **Secured/Unsecured**
Comments:

***2nd bank's name:** _____
Telephone #: _____
Address: _____
Person: _____
Title: _____
Length of time with bank: _____
Credit Rating: _____
Number/type of accounts: _____
Amount in each account (# of figures): _____
Credit line: _____ **Secured/Unsecured**
Outstanding loans: _____ **Secured/Unsecured**
Comments:

***** Provide letters from the banking references to confirm this information.**

(b) HAVE A SATISFACTORY RECORD OF INTEGRITY AND BUSINESS ETHICS

Trade References

***1st company:** _____
Telephone #: _____
Address: _____
Name: _____

Title: _____
Length of time with company: _____
Credit line: _____
Average monthly business: _____
High credit: _____
Payment history: _____
Takes discounts: _____
Comments: _____

***2nd Company:** _____
Telephone #: _____
Address: _____
Name: _____
Title: _____
Length of time with company: _____
Credit line: _____
Average monthly business: _____
High credit: _____
Payment history: _____
Takes discounts: _____
Comments: _____
_____

Workman's Compensation Experience Modification Rate (EMR):

2014:_____2015:_____2016:_____

ATTACHMENT 6

PROPOSAL FORMAT

PROPOSAL IN RESPONSE TO SOLICITATION NO:

W912EP-17-R-0014

OFFEROR'S NAME: [Offeror enter] OFFEROR'S

ADDRESS: [Offeror enter]

OFFEROR'S POINT OF CONTACT (POC): [Offeror enter]

POC's TELEPHONE: [Offeror enter] POC's FAX:

[Offeror enter]

POC's EMAIL: [Offeror enter]

THIS OFFER IS SUBMITTED IN SEPARATE VOLUMES AS FOLLOWS: [Offeror check each applicable item and enter NA for non-applicable items.]

_____ Volume One (Technical Acceptability) is submitted in 1 Original and 5 Copies. There is no pricing information in this package.

____ Volume Two (Price) is submitted in 1 Original and 1 Copy.

SECTION TABLE OF CONTENTS

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION

SECTION 35 20 18

VERTICAL LIFT DUAL LEAF GATES

-- End of Section Table of Contents --

SECTION 35 20 18

VERTICAL LIFT DUAL LEAF GATES

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

ASCE 8	(2002) Specification for the Design of Cold-Formed Stainless Steel Structural Members

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C542	(2009) Electric Motor Actuators for Valves and Slide Gates
ANSI/AWWA C561	(2012; R 2014) Fabricated Stainless-Steel Slide Gates

ASTM INTERNATIONAL (ASTM)

ASTM A240/A240M	(2015b) Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
ASTM A276	(2013a) Standard Specification for Stainless Steel Bars and Shapes
ASTM D2240	(2005; R 2010) Standard Test Method for Rubber Property - Durometer Hardness
ASTM D395	(2014) Standard Test Methods for Rubber Property - Compression Set
ASTM D412	(2006a; R 2013) Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension
ASTM D471	(2015a) Standard Test Method for Rubber Property - Effect of Liquids
ASTM D572	(2004; R 2010) Rubber Deterioration by Heat and Oxygen

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 1110-2-2105	(1993) Engineering and Design -- Design of

	Hydraulic Steel Structures
EM 1110-2-2701	(1997) Engineering and Design -- Vertical Lift Gates

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Detail Drawings; G, DO

Acceptance Trial Operation and Test Procedures; G, DO

Prior to conducting the "Acceptance Trial Operation and Test" indicated below, submit for approval test procedures detailing the means and methods of gate acceptance testing.

SD-03 Product Data

Materials
Welding; G, DO

SD-05 Design Data

Gate Component Design; G, DO

Engineering calculations, prepared by a Registered Professional Engineer, demonstrating compliance with the mechanical and structural criteria specified.

SD-06 Test Reports

Tests, Inspections, and Verifications

Certified material test reports with all material delivered to the site.

Acceptance Trial Operation and Test

SD-10 Operation and Maintenance Data

Operation And Maintenance Data

Submit operation and maintenance data in accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA.

Operation And Maintenance Instruction Manuals; G, DO

Furnish copies of operation and maintenance manuals containing complete information on operation, lubrication, adjustment, routine, and special maintenance, disassembly, repair, reassembly, and trouble diagnostics of gate operating units. Disassembly and reassembly portions of the manual shall take into account the

specific system that is being provided. Operation and maintenance manual shall be printed on good quality 8-1/2 by 11-inch paper, bound separately between flexible, durable covers. Drawings incorporated in the manual or part lists may be reduced to page size provided they are clear and legible, or they may be folded into the manual to page size. Photographs or catalog cuts of components may be included for identification.

1.3 DESIGN REQUIREMENTS

The landside culvert shall be equipped with a stainless steel electrically operated double leaf slide gate system with a manual operation capability. The gate manufacturer shall be responsible for the design and manufacture of all components of the entire gate system: gate, frame/guide/yoke, stem, actuator, etc. The gates shall be designed by a registered professional engineer of the gate manufacturer. Gates shall be designed and fabricated by a manufacturer with at least 10 years' experience in the design and fabrication of hydraulic control gates used in outlet works (sluice gates, service gates, vertical lift gates, flap gates, emergency bulkheads, etc.). The gate manufacturer shall have the responsibility for the successful operation of all the slide gates and ancillary equipment. The gates and accessories shall operate properly under a head of 11.5 feet of water. The components shall be designed in accordance with the requirements of EM 1110-2-2105, EM 1110-2-2701, ANSI/AWWA C561, AWWA C542, ASCE 8 or the manufacture's standard practice, whichever provides for a more conservative and robust design. Gates shall be classified Type B in accordance with EM 1110-2-2105, paragraph 4-4.

1.4 QUALIFICATION OF WELDERS AND WELDING OPERATORS

Qualification of welders and welding operators shall conform to the requirements of Section 05 50 14 STRUCTURAL METAL FABRICATIONS.

1.5 DELIVERY, STORAGE, AND HANDLING

1.5.1 General

Perform delivery, handling, and storage of materials and fabricated items conforming to the requirements specified and in Section 05 50 14 STRUCTURAL METAL FABRICATIONS.

1.5.2 Rubber Seals

Store rubber seals in a place which permits free circulation of air, maintains a temperature of 70 degrees F or less, and prevents the rubber from being exposed to the direct rays of the sun. Keep rubber seals free of oils, grease, and other materials which would deteriorate the rubber. Rubber seals shall not be distorted during handling.

1.6 WARRANTY

The gates and appurtenances shall be warrantied against defective design, material, workmanship for a period of one year from the date of final acceptance.

PART 2 PRODUCTS

2.1 MATERIALS

Furnish materials orders, material lists and material shipping bills conforming with the requirements of Section 05 50 14 STRUCTURAL METAL FABRICATIONS.

2.1.1 Metals

Structural steel, monel, steel forgings, steel castings, stainless steel, bronze, aluminum bronze, brass and other metal materials used for fabrication shall conform to the requirements as shown and as specified herein and in Section 05 50 15 CIVIL WORKS FABRICATIONS.

2.1.1.1 Stainless Steel Bars and Shapes

Stainless steel bars and shapes shall conform to ASTM A276, UNS S 30403 (Type 304L) or S 31603 (Type 316L) Condition A, hot-finished or cold-finished, Class C.

2.1.1.2 Stainless Stee Plate, Sheet and Strip

Stainless steel plate, sheet, and strip shall conform to ASTM A240/A240M, UNS S 30403 or S 31603. Plate finish shall be hot-rolled, annealed or heat-treated, and blast-cleaned or pickled. Sheet and strip finish shall be No. 1.

2.1.2 Rubber Seals

Rubber seals shall be compounded of natural rubber, synthetic polyisoprene, or a blend of both, and shall contain reinforcing carbon black, zinc oxide, accelerators, antioxidants, vulcanizing agents, and plasticizers.

2.1.2.1 Physical Characteristics

Physical characteristics of the seals shall meet the following requirements:

PHYSICAL TEST	TEST VALUE	TEST METHOD SPECIFICATION
Tensile Strength	2500 psi (min.)	ASTM D412
Elongation at Break	450 percent (min.)	ASTM D412
300 percent	900 psi (min.)	ASTM D412
Durometer Hardness (Shore Type A)	60 to 70	ASTM D2240
*Water Absorption	5 percent by weight (max.)	ASTM D471
Compression Set	30 percent (max.)	ASTM D395

PHYSICAL TEST	TEST VALUE	TEST METHOD SPECIFICATION
Tensile Strength (after aging 48 hrs)	80 percent of tensile strength (min.)	ASTM D572

The "Water Absorption" test shall be performed with distilled water. The washed specimen shall be blotted dry with filter paper or other absorbent material and suspended by means of small glass rods in the oven at a temperature of 70 degrees C plus or minus 2 degrees for 22 hours plus or minus 1/4 hour. The specimen shall be removed, allowed to cool to room temperature in air, and weighed. The weight shall be recorded to the nearest 1 mg as M subscript 1 (M subscript 1 is defined in ASTM D471). The immersion temperature shall be 70 degrees C plus or minus 1 degree and the duration of immersion shall be 166 hours.

2.2 MANUFACTURED UNITS

Bolts, nuts, washers, screws and other manufactured units shall conform with the requirements as shown and as specified and in Section 05 50 15 CIVIL WORKS FABRICATIONS.

2.2.1 Bolts, Nuts and Washers

Bolts 1/2 inch and larger shall have hexagon heads. The finished shank of bolts shall be long enough to provide full bearing. Washers for use with bolts shall conform to the requirements specified in the applicable specification for bolts.

2.3 FABRICATION

2.3.1 Detail Drawings

Submit detail drawings, including fabrication drawings, shop assembly drawings, delivery drawings, and field installation drawings, conforming to the requirements specified and in Section 05 50 14 STRUCTURAL METAL FABRICATIONS.

2.3.1.1 Fabrication Drawings

Fabrication drawings shall show complete details of materials, tolerances, connections, and proposed welding sequences which clearly differentiate shop welds and field welds.

2.3.1.2 Shop Assembly Drawings

Shop assembly drawings shall provide details for connecting the adjoining fabricated components in the shop to assure satisfactory field installation.

2.3.1.3 Delivery Drawings

Delivery drawings shall provide descriptions of methods of delivering components to the site, including details for supporting fabricated components during shipping to prevent distortion or other damages.

2.3.1.4 Field Installation Drawings

Field installation drawings shall provide a detailed description of the field installation procedures. The description shall include the location

and method of support of installation and handling equipment; provisions to be taken to protect concrete and other work during installation; method of maintaining components in correct alignment; plan for prestressing gate leaf diagonals, which shall include descriptions of connections, riggings, anchorages, and measuring equipment; methods for installing quoin and miter blocks, including checking and maintaining alignments of the blocks during concreting and placement of epoxy filler; procedures and equipment used for heating and placing of the zinc filler; and methods for installing other appurtenant items.

2.3.2 Structural Fabrication

Structural fabrication shall conform to the requirements as shown and specified herein and in Section 05 50 14 STRUCTURAL METAL FABRICATIONS. Dimensional tolerances shall be as specified and as shown. Splices shall occur only where shown. Pin holes shall be bored in components after welding, straightening, stress-relieving, and threading operations are completed. Brackets, eye bar sections, and other components requiring straightening shall be straightened by methods which will not damage the material. Bushings shall be press-fitted with supporting components. Bolt connections, lugs, clips, or other pick-up assembly devices shall be provided for components as shown and required for proper assembly and installation. Provisions shall be made for the installation of cathodic protection system devices and other appurtenances as required.

2.3.2.1 Welding

Submit schedules of welding procedures for structural steel conforming with the requirements specified and in Section 05 50 14 STRUCTURAL METAL FABRICATIONS. Welds shall be of the type shown and approved detail drawings.

2.3.2.2 Bolted Connections

Bolted connections shall conform with the requirements specified in Section 05 50 14 STRUCTURAL METAL FABRICATIONS.

2.3.2.3 Machine Work

Machine work shall conform with the requirements specified in Section 05 50 14 STRUCTURAL METAL FABRICATIONS.

2.3.2.4 Miscellaneous Provisions

Miscellaneous provisions for fabrication shall conform with the requirements specified herein and in Section 05 50 14 STRUCTURAL METAL FABRICATIONS.

2.3.3 Slide Gate Leaf

Each stainless steel slide gate leaf shall be a flat structural plate, reinforced with structural members or formed plates as required to limit its deflection to l/360 of the gate's span under the design head conditions. Slide gate shall be shop fabricated and shall be provided complete with gate stem, stem guides, leaf nut, leaf nut spanner wrench, bar seals, seal collars, and other appurtenant items as required for installation. Surfaces of leaf framing elements to which skin plates are to be welded shall not vary from a true plane by more than 1/16 inch to provide uniform bearing. The outside surfaces of skin plates welded to

framing elements shall not vary from a true plane by more than 1/16 inch. Splices in skin plates shall be located only where shown. The overall width and height of the fabricated gate leaf shall not vary from the respective dimensions shown by more than1/16 inch. Gate leaf shall be stress-relieved prior to the attachment of bar seals. Surfaces where bar seals are attached shall be accurately machined to provide uniform bearing for the full contact dimensions. Top and side bar seals shall be firmly butted together at the corners. The ends of side bar seals shall be flush with the bottom seating surface of the gate leaf. Final machining of bar seals shall be performed after they are attached to the gate leaf. The bottom seat of the gate leaf shall be machined for a tight fit with the gate frame sill. All components shall have a minimum material thickness of 1/4 inch. Slide gate leafs shall be designed to drain when opened above the water level and not trap debris, soil, etc.

2.3.4 Slide Gate Frame

Stainless steel slide gate frame shall be self contained with yoke mounted gate operators and flush bottom type. The structural members shall be designed to provide the required structural support for the gate operator and the loads produced from the gate operation under worse case design head conditions. The structural members or formed plates of the yoke shall be sized to limit deflections to l/360 of its span and resist the following loads imposed on the yoke, both in raising and lowering the gate, by the gate operator: a) Two (2) times the rated output thrust of a manual crank type gate actuator with 40-lb (pounds) effort. b) One-and-a-quarter (1.25) times the output thrust of an electric-motor-driven actuator in the stalled condition. Guiding and seal surfaces of slide gate frame shall be in a true vertical plane and shall be machined finished. Unmachined surfaces exposed to water flow shall match at joints between component parts, shall not depart from true planes shown by more than 1/16 inch and shall be free of offsets or irregularities greater than 1/16 inch. Allowable offsets or irregularities less than 1/16 inch shall be ground to a bevel of not greater than one on twenty-four. The bottom seat of the gate leaf shall be machined for a tight fit with the gate frame sill. Gate frame shall be stress relieved prior to the attachment of bar seals. Surfaces where bar seals are attached shall be accurately machined to provide uniform bearing for the full contact dimensions. Top, side, and invert bar seals shall be firmly butted together at the corners. Final machining of bar seals shall be performed after they are attached to the gate frame. All components shall have a minimum material thickness of 1/4 inch.

2.3.4.1 Slide Guides

Guides shall run the full length of the frame and prevent metal to metal contact between the slide and the frame. The guides shall be designed to accommodate the total thrust produced by water pressure at the design head conditions. The guides shall be mechanically interlocked or attached to the frame.

2.3.5 Slide Gate Stem

Stems shall have machined acme threads. Size stem to be of adequate diameter to safely withstand twice the force created by a 40-pound pull on the handwheel/handcrank. Support with guides spaced to provide L/R ratio less than 200. Provide single stem with clear butyrate plastic stem cover with mylar tape to indicate de "open" and "closed" positions. Attach stem cover to actuator with non-corrosive materials. Vent holes

shall be provided in stem cover to prevent condensation. A stop nut shall furnished on the stem to limit the downward travel of the gate. The stop nut shall be fabricated from a single piece matching the stem material, tapped to match the stem, and drilled and tapped for a minimum of two 3/8 inch set screws.

2.3.6 Slide Gate Operator and Handwheel/Handcrank

The gates shall be equipped with electrically operated actuators. During manual operation of gate the handwheel or handcrank shall operate the gate with no more than a 40-pound effort. Provide any necessary attachment to allow the use of a portable generator (which will be furnished by others) to open and close the gates. The gate shall operate under an electric gate operator that has an input of 40 ft-lbs. The operator shall have gearing that will open and close the gate to a speed of 6.6 inches per minute when the electric gate operator is at 250 RPM. Provide stop collar to limit the downward travel of the stem and slide gate leaf. Provide handwheel or handcrank with an arrow to show direction of opening.

2.3.7 Shop Assembly

Shop assembly requirements for gate, gate frame and appurtenant items shall be as shown and as specified and in Section 05 50 14 STRUCTURAL METAL FABRICATIONS. Gate, frame, guides, and appurtenant items shall be assembled completely in the shop to assure satisfactory field installation. The match marking of unassembled components shall be carefully preserved until the components are assembled. Adequate support shall be provided during assembly to maintain components within 1/16 inch of actual installation planes. Mating surfaces and machined surfaces shall be coated with a rust preventive coating until assembled. Other connecting surfaces which are not required to be disassembled for shipment shall be thinly coated with an approved rust preventive coating before being joined. Adjoining components shall be fitted and bolted together to facilitate field connections. Shop assembled components shall be delivered assembled, if practically permitted by shipping and field installation conditions. Assembled components shall be shop welded in their final positions as much as delivery and field installation conditions allow. Shop assembly and disassembly work shall be performed in the presence of the Contracting Officer unless otherwise approved. The presence of the Contracting Officer will not relieve the Contractor of any responsibility under this contract.

2.3.7.1 Gate Leaf

Shop assembly of the gate leaf shall be in the horizontal position with the skin side of the gate leaf facing down. Shop assembly shall include the attachment of all accessories to the gate leaf. The leaf shall be lifted by the lifting brackets and inspected for balance about the center of gravity after being shop assembled. If the gate leaf is out of plumb by more than 1/4 inch in the total length in a vertical plane in the upstream-downstream direction, or by more than 1/16 inch in the total width in a vertical plane perpendicular to the vertical plane in the upstream-downstream direction, it shall be balanced by counterweighting or some other method as approved at the Contractor's expense.

2.3.7.2 Gate Actuator

Provide operating machinery in accordance with Section 26 29 10 ELECTRIC MOTOR ACTUATOR FOR LIFT GATES. Sizing and gear reduction shall be based

on information given in the paragraph "Slide Gate Operator and Handwheel/Handcrank" above.

2.4 TESTS, INSPECTIONS, AND VERIFICATIONS

Submit certified material test reports with all material delivered to the site. Tests, inspections, and verifications for materials and fabricated items shall conform to the requirements specified and in Section 05 50 14 STRUCTURAL METAL FABRICATIONS.

2.4.1 Inspection

Shop assembled components shall be inspected for accurate fit and compliance with dimensional tolerances. Sealing, guiding, and connecting surfaces shall be inspected to determine if their planes are true, parallel, and in uniform contact with opposing surfaces. With the gate leaf closed and uniformly blocked in the sealing position, gate leaf and rubber seals shall be inspected to determine if they are in continuous contact with track and seal plates. Compression of rubber seals shall not vary by more than 1/32 inch. It shall not be possible to insert a feeler gauge of greater than 0.003 inch thickness at any point between bar seals and seal plates.

2.4.2 Operation Tests

The operation of the shop-assembled gate assembly shall be tested by opening and closing the gate several times by use of the operating machinery. The force used to operate the gate shall be the minimum required to open and close the gate. Since the sill of the unembedded gate frame is not fully supported during the operation tests, special precaution shall be taken to prevent the application of excessive force on the gate leaf and frame when the gate is closed. The operation of the lifting beam shall be tested by engaging and disengaging the lifting beam several times. Adjustments shall be made as required until operations are satisfactory. ~~The gate assembly shall be tested hydrostatically by applying a minimum of 10 feet of head in the unseating direction, measured at the sill of the gate frame, to the upstream side of the gate leaf in the closed position. For conducting the hydrostatic testing, the gate frame shall be bulkheaded or restrained by some other method as approved. Under hydrostatic testing, the gate seals shall be sufficiently tight to prevent water leakage.~~

PART 3 EXECUTION

3.1 INSTALLATION

Installation shall conform with the requirements specified and in Section 05 50 14 STRUCTURAL METAL FABRICATIONS. Gate and appurtenant items shall be assembled for installation in strict accordance with the contract drawings, approved installation drawings, and shop match-markings. Bearing surfaces requiring lubrication shall be thoroughly cleaned and lubricated with an approved lubricant before assembly and installation. Components to be field welded shall be in correct alignment before welding is commenced.

3.1.1 Embedded Metals

Frames, bases, and other embedded metal items shall be accurately installed to the alignment and grade required to ensure accurate fitting

and matching of components. Shims, jackbolts, or other supports required to align and hold components rigidly in place until embedment concrete has attained the specified strength shall be provided. Anchors shall be installed as shown. Embedded metals shall be given a primer coat of the required paint on all surfaces prior to installation in concrete forms. Items requiring two concrete pours for installation shall be attached to the embedded anchors after the initial pour, adjusted to the proper alignment, and concreted in place with the second pour.

3.1.2 Gate Frame and Guides

Gate frame and guides shall be connected to embedded anchors, aligned, and rigidly blocked in place prior to the placement of second-pour concrete. The sealing surfaces of the slide gate frame seal bars shall serve as the reference plane for the installation alignment. Alignment shall be to two theoretical control planes described as control plane "A" and control plane "B". Control plane "A" is a vertical plane that is normal to the water passageway and is located at the sealing surface of the gate frame seal bars. Control plane "B" is a vertical plane that is parallel to the water passageway and is located at the centerline of the water passageway. The gate frame shall be aligned to within 0.015 inch of control planes "A" and "B". A taut piano wire and an electric micrometer or some other approved method shall be used to measure the vertical alignment tolerances. The alignment of frame and guides shall be such that planes through the bearing surfaces of track plates and the sealing surfaces of seal plates shall be within 1/16 inch of the alignment shown. Gate frame and guides shall be tested for proper alignment and clearances prior to being embedded in concrete by lowering and raising the gate leaf through the full operating range.

3.1.3 Gate Leaf

Gate leaf shall be completely assembled, including the attachment of all components and accessories, prior to being placed in the gate frame. All necessary precautions shall be taken to avoid distortion of the gate leaf and attached components during installation. Rubber seals shall be fastened securely to metal retainers. Before operating the gate, a suitable lubricant shall be applied to the rubber seal rubbing plates to protect the rubber.

3.1.4 Operating Machinery

Operating machinery for the gate assembly and supporting components, shall be positioned and aligned to the installed location of the gate frame and guides and anchored in place. The location of the slide gate stem shall be projected to and scribed on the sill of the installed gate frame to serve as a reference point for the alignment of operating machinery and supporting components. Operating machinery and components shall be aligned to within 0.030 inch of the reference point.

3.1.5 Concrete and Concrete Grout Placement

The embedment of the gate frame and other components in concrete shall be performed in an approved manner to fill all voids, secure anchorage, prevent seepage, and provide uniform finish surfaces. After embedment concrete has cured for at least 7 days, any voids around embedded components shall be filled by pumping concrete grout around the components. After the pumped grout has cured for at least 7 days, hammer blows to the components shall be used to detect any remaining voids.

Where remaining voids are located, 1 inch diameter grout holes shall be drilled in the components and the voids shall be filled by pressure grouting through the grout holes. Grout holes in the components shall be plugged by welding and shall be ground flush.

3.2 ACCEPTANCE TRIAL OPERATION AND TEST

After the gate assembly has been installed, including operating machinery, the Contracting Officer will examine the complete system for final acceptance. Operation and test results shall be furnished to the Contracting Officer. The assembly will be examined first to determine whether or not the workmanship conforms to the specification requirements. Operate the gate throughout its full operating range a sufficient number of times to demonstrate proper operation. The initial operation of the gate assembly shall be conducted in the dry. With the gate leaf in the seated position, the rubber seals shall be checked to ensure that they are uniformly compressed against the frame. The second trial operation and testing of the gate assembly shall be conducted under hydrostatic pressure. Hydrostatic tests shall be performed as described below. The workmanship in the fabrication and installation of the gate assembly shall be such that the gate leaf shall form a watertight barrier when lowered to the seated position. Adjustments shall be made to the operation and control apparatus until all components function as required. The handwheel/handcrank and other appurtenances will be inspected to assure proper operation. Required repairs or replacements to correct defects, as determined by the Contracting Officer, shall be made at no additional cost to the Government. The trial operation and testing shall be repeated after defects are corrected.

3.2.1 Hydrostatic Testing

The Contractor shall coordinate the use and delivery of Government furnished bulkheads with the Contracting Officer. Hydrostatic testing will work within the structure with bulkheads in place. These areas shall be treated as confined spaces. The Contractor shall ensure bulkheads are sufficiently watertight to facilitate accurate hydrostatic testing of the vertical lift dual leaf gates. That is, leakage from the bulkhead (if any) shall not hinder accurate measurements required for hydrostatic testing.

3.2.1.1 Seating Head Leak Test

Each dual leaf gate shall be tested three (3) times at three (3) separate water elevations as described below. The installed gate shall be exposed to a seating head on the landside. The Contractor shall install Government furnished bulkheads. This test shall be performed by the Contractor after installing lakeside and landside bulkheads as a means of isolating the structure and controlling the simulated landside stage. A 12-inch (in height) temporary watertight knee wall shall be constructed lakeside of the gate between the gate and conduit opening to isolate and measure leakage from the gate. The bottom gate shall be in the fully closed (down & seated upon apron) position and the top gate crest at elevation 18.15 feet, NAVD88. The total gate height shall be 14.0 feet with bottom gate fully closed and top gate extended upward such that the gates overlap at approximately elevation 11.15 feet, NAVD88 and the overlap is watertight. Once in the correct position, the first test shall commence.

a. Test number one (1): The area between the landside bulkhead and the gate shall be filled with lake water via pump and maintained at

elevation 11.0 feet (NAVD88). The lakeside structure between the dual leaf gate and lakeside bulkhead shall remain dewatered to facilitate inspection and observation of leakage from the dual leaf gate. Results of this test shall consist of lakeside stage measurements (between the dual leaf gate and temporary knee wall) taken every minute for 30 minutes after the prescribed test stage is achieved. Measurements shall be taken to the nearest 1/16 - inch to accurately capture water depth. The gate leakage shall not exceed 0.1 gallons per minute per foot of gate wetted perimeter under seating head conditions. That is, leakage shall not exceed 2.3 gallons per minute for S-266 (KI-1) and S-265 (KI-2) for this test condition. Wetted perimeter is calculated as water in contact along both sides of the bottom gate (11.0 - 4.15 feet * 2 = 13.7 feet) and the bottom (9 feet) of the gate for this test (i.e. 13.7 + 9 = 22.7 feet * 0.1 ~ 2.3 gpm).

b. Test number two (2): The area between the landside bulkhead and the gate shall be filled with lake water via pump and maintained at elevation 14.5 feet (NAVD88). The lakeside structure between the dual leaf gate and lakeside bulkhead shall remain dewatered to facilitate inspection and observation of leakage from the dual leaf gate. Results of this test shall consist of lakeside stage measurements (between the dual leaf gate and temporary knee wall) taken every minute for 30 minutes after the prescribed test stage is achieved. Measurements shall be taken to the nearest 1/16 - inch to accurately capture water depth. The gate leakage shall not exceed 0.1 gallons per minute per foot of gate wetted perimeter under seating head conditions. That is, leakage shall not exceed 3.9 gallons per minute for S-266 (KI-1) and S-265 (KI-2) for this test condition. Wetted perimeter is calculated as water in contact along both sides of the bottom gate (11.15 - 4.15 feet * 2 = 14.0 feet) as well as the bottom (9 feet) of the gate, in addition to both sides of the top gate (14.5 - 11.15 feet * 2 = 6.7 feet) as well as the bottom (9 feet) of the top gate for this test (i.e. 14.0 + 9.0 + 6.7 + 9.0 = 38.7 feet * 0.1 ~ 3.9 gpm).

c. Test number three (3): The area between the landside bulkhead and the gate shall be filled with lake water via pump and maintained at elevation 17.5 feet (NAVD88). The lakeside structure between the dual leaf gate and lakeside bulkhead shall remain dewatered to facilitate inspection and observation of leakage from the dual leaf gate. Results of this test shall consist of lakeside stage measurements (between the dual leaf gate and temporary knee wall) taken every minute for 30 minutes after the prescribed test stage is achieved. Measurements shall be taken to the nearest 1/16 - inch to accurately capture water depth. The gate leakage shall not exceed 0.1 gallons per minute per foot of gate wetted perimeter under seating head conditions. That is, leakage shall not exceed 4.5 gallons per minute for S-266 (KI-1) and S-265 (KI-2) for this test condition. Wetted perimeter is calculated as water in contact along both sides of the bottom gate (11.15 - 4.15 feet * 2 = 14.0 feet) as well as the bottom (9 feet) of the gate, in addition to both sides of the top gate (17.5 - 11.15 feet * 2 = 12.7 feet) as well as the bottom (9 feet) of the top gate for this test (i.e. 14.0 + 9.0 + 12.7 + 9.0 = 44.7 feet * 0.1 ~ 4.5 gpm).

Total leakage rate shall be monitored and documented as agreed to in the gate testing procedures submittal. Temporary measures (e.g. knee wall) shall not cause any permanent damage to the structure and must be completely removed/repaired upon acceptance of the hydrostatic testing.

3.2.1.2 Unseating Head Leak Test

Each dual leaf gate shall be tested three (3) times at three (3) separate water elevations as described below. The installed gates shall be exposed to an unseating head on the lakeside. The Contractor shall install Government furnished bulkheads. This test shall be performed by the Contractor after installing lakeside and landside bulkheads as a means of isolating the structure and controlling the simulated lakeside stage. A 12-inch (in height) temporary watertight knee wall shall be constructed landside of the gate between the gate and landside bulkhead to isolate and measure leakage from the gate. The bottom gate shall be in the fully closed (down & seated upon apron) position and the top gate crest at elevation 18.15 feet, NAVD88. The total gate height shall be 14.0 feet with bottom gate fully closed and top gate extended upward such that the gates overlap at approximately elevation 11.15 feet, NAVD88 and the overlap is watertight. Once in the correct position, the first test shall commence.

a. Test number one (1): The area between the lakeside bulkhead and the gate shall be filled with lake water via pump and maintained at elevation 11.0 feet (NAVD88). The landside structure between the dual leaf gate and landside bulkhead shall remain dewatered to facilitate inspection and observation of leakage from the dual leaf gate. Results of this test shall consist of landside stage measurements (between the dual leaf gate and temporary knee wall) taken every minute for 30 minutes after the prescribed test stage is achieved. Measurements shall be taken to the nearest 1/16 - inch to accurately capture water depth. The gate leakage shall not exceed 0.2 gallons per minute per foot of gate wetted perimeter under unseating head conditions. That is, leakage shall not exceed 4.6 gallons per minute for S-266 (KI-1) and S-265 (KI-2) for this test condition. Wetted perimeter is calculated as water in contact along both sides of the bottom gate (11.0 - 4.15 feet * 2 = 13.7 feet) and the bottom (9 feet) of the gate for this test (i.e. 13.7 + 9 = 22.7 feet * 0.2 ~ 4.6 gpm).

b. Test number two (2): The area between the lakeside bulkhead and the gate shall be filled with lake water via pump and maintained at elevation 14.5 feet (NAVD88). The landside structure between the dual leaf gate and landside bulkhead shall remain dewatered to facilitate inspection and observation of leakage from the dual leaf gate. Results of this test shall consist of landside stage measurements (between the dual leaf gate and temporary knee wall) taken every minute for 30 minutes after the prescribed test stage is achieved. Measurements shall be taken to the nearest 1/16 - inch to accurately capture water depth. The gate leakage shall not exceed 0.2 gallons per minute per foot of gate wetted perimeter under unseating head conditions. That is, leakage shall not exceed 7.8 gallons per minute for S-266 (KI-1) and S-265 (KI-2) for this test condition. Wetted perimeter is calculated as water in contact along both sides of the bottom gate (11.15 - 4.15 feet * 2 = 14.0 feet) as well as the bottom (9 feet) of the gate, in addition to both sides of the top gate (14.5 - 11.15 feet * 2 = 6.7 feet) as well as the bottom (9 feet) of the top gate for this test (i.e. 14.0 + 9.0 + 6.7 + 9.0 = 38.7 feet * 0.2 ~ 7.8 gpm).

c. Test number three (3): The area between the lakeside bulkhead and the gate shall be filled with lake water via pump and maintained at elevation 17.5 feet (NAVD88). The landside structure between the

dual leaf gate and landside bulkhead shall remain dewatered to facilitate inspection and observation of leakage from the dual leaf gate. Results of this test shall consist of landside stage measurements (between the dual leaf gate and temporary knee wall) taken every minute for 30 minutes after the prescribed test stage is achieved. Measurements shall be taken to the nearest 1/16 - inch to accurately capture water depth. The gate leakage shall not exceed 0.2 gallons per minute per foot of gate wetted perimeter under unseating head conditions. That is, leakage shall not exceed 9.0 gallons per minute for S-266 (KI-1) and S-265 (KI-2) for this test condition. Wetted perimeter is calculated as water in contact along both sides of the bottom gate (11.15 - 4.15 feet * 2 = 14.0 feet) as well as the bottom (9 feet) of the gate, in addition to both sides of the top gate (17.5 - 11.15 feet * 2 = 12.7 feet) as well as the bottom (9 feet) of the top gate for this test (i.e. 14.0 + 9.0 + 12.7 + 9.0 = 44.7 feet * 0.2 ~ 9.0 gpm).

Total leakage rate shall be monitored and documented as agreed to in the gate testing procedures submittal. Temporary measures (e.g. knee wall) shall not cause any permanent damage to the structure and must be completely removed/repaired upon acceptance of the hydrostatic testing.

3.3 FINAL GATE POSITION

Once trial operation and testing has been completed and accepted by the Contracting Officer, at both S-266 & S-265, the bottom gate shall be fully closed (down position, seated on apron), while the top gate shall be lowered to a position where the crest (top of gate) is at elevation 16.15 feet, NAVD88.

3.4 PROTECTION OF FINISHED WORK

Protection of finished work shall conform to the requirements of Section 05 50 14 STRUCTURAL METAL FABRICATIONS.

-- End of Section --