## COUNTY OF WESTCHESTER NEW YORK

## DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING

## **ADDENDUM NO. 2**

## CONTRACT NO. 17-529

## FOR

## PUMPING STATION REHABILITATION CROTONVILLE PUMPING STATION OSSINING SANITARY SEWER DISTRICT OSSINING, NEW YORK

The attention of the bidders is directed to the following changes, additions, and/or substitutions affecting the above-referenced contract(s).

## A. <u>RE: GENERAL CONTRACT INFORMATION:</u>

ITEM A: Notice to Contractors, Cover Sheet & Proposal Page Cover:

Note: Change in Bid Date Delete: October 27, 2021 Insert: November 17, 2021

ITEM B: All requests for information with the contract number 17-529 shall be directed in writing to Lowell Kachalsky - <u>Lowell.Kachalsky@ramboll.com</u>, Rick Gell -<u>Rick.Gell@Ramboll.com</u> and copy John Coelho - <u>jjcb@westchestergov.com</u>; no later than Tuesday November 9, 2021 by 12 noon.

## ITEM C: Table of Contents

Under Technical Specifications heading, after 01 52 00, Environmental Requirements for Construction, <u>ADD</u> the following:

"01 52 13 Field Office Trailer" 01 52 13-1 to 3

Under Technical Specifications heading, after 40 05 59, Stainless Steel Gates,

**<u>ADD</u>** the following:

"40 05 60 Stainless Steel Stop Plates" 40 05 60-1 to 5

ITEM D: Bidders Questions and Responses

## Attached hereto.

## B. <u>RE: THE TECHNICAL SPECIFICATIONS:</u>

#### ITEM A: Table of Contents

Under Technical Specifications heading, after 01 52 00, Environmental Requirements for Construction, <u>ADD</u> the following:

"01 52 13 Field Office Trailer" 01 52 13-1 to 3

ITEM B: Under Technical Specifications heading, after 40 05 59, Stainless Steel Gates,

ADD the following:

"40 05 60 Stainless Steel Stop Plates" 40 05 60-1 to 5

**ITEM C:** In <u>Section 01 51 00, Temporary Facilities and Controls, in Article 1.1,</u> <u>ADD</u> the following paragraph:

> "B. The Contractor may use the area within the County Owned property as defined on the site plan for staging and locating temporary facilities. The County will also make off-site space available for staging and temporary facilities at the Croton Point Landfill, located at 1 Croton Point Ave., Croton-On-Hudson, NY 10520, as shown in the general location plan below. The location is approximately 350 feet south of the intersection of Croton Point Avenue and Half Moon Bay Drive. County access to the flare area must be maintained at all times and stockpiling of materials is not permissible. The site shall be restored to existing conditions."

## ITEM D: In Section 01 51 00, Temporary Facilities and Controls, in Article 3.2, <u>DELETE</u> paragraph H in its entirety, and <u>SUBSTITURE THEREFOR</u> the following:

"H. Provide temporary electrical service at the pumping station site required for the Work, including continuous power for bypass pumping, and construction equipment. Provide temporary electric service at the Croton Point Landfill for temporary field offices and sheds.

Make all arrangements with utility service companies for temporary services and obtain required permits and approvals for temporary utilities. Contractor to include all costs for establishing temporary electrical services in contract bid price. Owner will pay monthly utility bill for usage. Exercise measures to conserve energy.

Provide temporary outlets with circuit breaker protection and ground fault protection."

## **ITEM E:** In Section 01 51 00, Temporary Facilities and Controls, in Article 3.3, **DELETE** paragraph I in its entirety, and **SUBSTITURE THEREFOR** the following:

- "I. Use of Owner's Monorails, Hoists, and Other Equipment
  - 1. The Contractor may only use the Owner's monorails and hoists located at the facility for the loading of equipment and materials or use any other Owner owned equipment at the facility, with the express written approval of the Owner and Engineer and upon execution of the Release and Waiver Form attached to this section. If authorized to use any monorails, hoists or other Owner owned equipment, the Contractor shall be fully responsible for confirming its load capacity and/or operability. Contractor shall assume full responsibility as it relates to the use of the monorails, hoists or other Owner owned equipment and subsequent damage to materials, equipment and/or injury to personnel thereto.
  - 2. Pre-Use Inspection: Any hoist the Contractor intends to use shall be inspected and certified by an Owner approved inspection firm prior to use. The Contractor shall be responsible for the cost of inspection(s) prior to use. In the event the inspection firm determines that repairs are required to the hoist to make it operable, the cost for the repair shall be borne by the Owner.
  - 3. Post-Use Inspection: After use, at the completion of the project, the Contractor shall re-inspect any hoist used, using the same Owner-approved inspection firm in order to recertify the hoist systems operability. The Contractor shall be responsible for any cost of this inspection after use and shall be responsible for any costs related to any subsequent damage to the hoist or any of its components.

## ITEM F: ADD Section 01 52 13, Field Office Trailer,

Dated October 15, 2021, a copy of which is attached hereto and hereby made part of this addendum.

- ITEM G: In Section 33 29 60, Wastewater Temporary Bypass Pumping, Article 1.3, <u>ADD</u> the following paragraph:
  - "G. Temporary communications, electrical power, fuel, and other consumables shall be provided by the Contractor."
- ITEM H: In Section 33 29 60, Wastewater Temporary Bypass Pumping, Article 3.4, <u>DELETE</u> paragraph A in its entirety, and <u>SUBSTITURE THEREFOR</u> the following:
  - "A. Provide continuous monitoring of bypass pumping operation as defined in Article 3.3.H."

## ITEM I: In Section 40 05 53, Process Valves Three Inches and Larger, Article 3.5, DELETE the Article in its entirety, and SUBSTITURE THEREFOR the following:

## **"3.5 SCHEDULE**

A. The valve schedule below provides a summary of new valves to be provided under the Project.

| Valve<br>No. | Туре                           | Size<br>(inch) | Ends       | Min.<br>Pressure<br>Class | Actuator        |
|--------------|--------------------------------|----------------|------------|---------------------------|-----------------|
| GV-131       | Pump No. 1 Gate Valve          | 12             | FL         | 150                       | Manual – HW     |
| GV-132       | Pump No. 2 Gate Valve          | 12             | FL         | 150                       | Manual – HW     |
| GV-133       | Pump No. 3 Gate Valve          | 12             | FL         | 150                       | Manual – HW     |
| CV-131       | Pump No. 1 Check Valve         | 12             | FL         | 150                       | N/A             |
| CV-132       | Pump No. 2 Check Valve         | 12             | FL         | 150                       | N/A             |
| CV-133       | Pump No. 3 Check Valve         | 12             | FL         | 150                       | N/A             |
| GV-141       | Pump No. 1 Gate Valve          | 12             | FL         | 150                       | Manual – CW     |
| GV-142       | Pump No. 2 Gate Valve          | 12             | FL         | 150                       | Manual – CW     |
| GV-143       | Pump No. 3 Gate Valve          | 12             | FL         | 150                       | Manual – CW     |
| GV161        | Surge Relief                   | 8              | Fl         | 150                       | Manual - CW     |
| GV-162       | Surge Relief                   | 8              | FL         | 150                       | Manual – CW     |
| GV163        | Surge Relief                   | 8              | Fl         | 150                       | Manual – CW     |
| GV-160       | Forcemain Discharge Gate Valve | 16             | FL         | 150                       | Manual – BG     |
| SRV-161      | Surge Relief Valve             | 8              | FL         | 150                       | N/A             |
| GV-164       | Discharge                      | 6              | FL         | 150                       | Manual - CW     |
| Legend:      | BG – Bevel Gear FL – Flanged   |                | HW – Handy | wheel CV                  | W – Chainwheel" |

- **ITEM J:** <u>ADD</u> <u>Section 40 05 60, Stainless Steel Stop Plates</u>, Dated October 15, 2021, a copy of which is attached hereto and hereby made part of this addendum.</u>
- **ITEM K:** In <u>Section 43 41 43</u>, Polyethylene Chemical Storage Tank and Mixer, Article 2.4, paragraph A, <u>ADD</u> the following sub-paragraph:
  - "6. Mixer manufacturer named to establish a standard of quality necessary for the Project shall be Sharpe, a Hayward Gordon Company."

## C. <u>RE: THE DRAWINGS:</u>

## ITEM A: On Sheet M-104,

In the Notes, <u>ADD</u> the following note:

"2. Fabricate chemical feed pump weatherized enclosure from UV-resistant FRP. Slope bottom of enclosure four ways to drain connection. Provide latching door with stainless-steel piano hinge, fasteners and hardware. Submit shop drawing for review prior to fabrication. Attached to supports with Type 316 stainless-steel hardware"

## Attachments

- Bidders Questions and Responses
- Specification Section 01 52 13, Field Office Trailer (October 15, 2021)
- Specification Section 40 05 60, Stainless Steel Stop Plates (October 15, 2021)

ALL PROVISIONS OF THE CONTRACT NOT AFFECTED BY THE FOREGOING SHALL REMAIN IN FULL FORCE AND EFFECT.

COUNTY OF WESTCHESTER DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION

By: Hugh J. Greechan, Jr., P.E. Commissioner

Dated: October 20, 2021 WHITE PLAINS, NEW YORK

# Bidders Questions and Responses

• Question 1: Please confirm the minority goals for this project.

**Response:** Reference the SPECIAL NOTICE – MINORITY PARTICIPATION POLICY found in the General Requirements and Proposals, Information for Bidders, General and Special Clauses, Technical Specifications (Blue Book).

• Question 2: Please confirm the AIS requirements for this project.

**Response:** This project is not being financed through Environmental Facilities Corporation. Therefore, there is no AIS requirements included in the General Requirements and Proposals, Information for Bidders, General and Special Clauses, Technical Specifications (Blue Book).

• **Question 3:** Please provide a preferred vendor for the tank mixer specified in 43 41 43 – Polyethylene Chemical Storage Tanks, section 2.4.

Response: See amendments to the Technical Specifications

• **Question 4:** Please provide a specification for the brick veneer.

**Response:** See typical wall section on Drawing A-301.

• **Question 5:** Specification 33 29 60 – Temporary Bypass Pumping, section 3.3.H provides requirements for the manual oversight, monitoring and alarms of the bypass system. Section 3.4.A reads:

"Provide continuous monitoring of bypass pumping operation." Please clarify the intent of this statement as the monitoring requirements seem to be detailed in section 3.3.H.

**Response:** See amendments to the Technical Specifications.

- Question 6: Please provide requirements for the Engineer's field office, if required.
  Response: See amendments to the Technical Specifications.
- **Question 7:** Is there a designated location on the project site for the Contractor's field office trailer?

**Response:** See amendments to the Technical Specifications.

• **Question 8:** Please confirm if the existing 3-ton electric hoist is operable.

**Response:** As far as the County knows, the hoist functions but its condition is unknown. Contractors must follow the technical specifications if they plan to use it. There will be no extra payment for a contractor to make the hoist/monorail pass inspection, or for the contractor to use its own hoist/monorail/rigging.

See amendments to the Technical Specifications.

- **Question 9:** Specification 33 29 60 Temporary Bypass Pumping, section 1.3.B indicates that the primary bypass pump shall be electric.
  - a. Please provide the source and connection details of this temporary power.
  - b. Will the owner pay for the consumption costs to power the pump, control system, alarm system, and appurtenances?

**Response:** See amendments to the Technical Specifications.

• Question 10: The Influent Sewer Chamber on drawing C-101 indicates a 15" sewer effluent line discharging to the pump station at elev (-8.45). Drawing M-302 shows a 24" influent line into the wet well at approx elev (-9.00). We assume that this is the same line. Please confirm the diameter and material of this line.

**Response:** The influent sewer pipe is 24-inch diameter and noted as cast iron on available record drawings. The approximate invert elevation is -9.00'.

• **Question 11:** Refer to contract drawing M-103. Please provide a specification for the six Stop Plates.

**Response:** See amendments to the Technical Specifications.

• **Question 12:** Refer to contract drawing M-104. Please provide details of construction for the weatherized enclosure for the Chemical Feed Pump.

**Response:** See amendments to the Technical Specifications.

• **Question 13:** Will fiberglass tank be considered as an approved equal alternative to the PE tank on this project?

**Response:** See GENERAL CLAUSES Part 28.

• **Question 14:** Please provide full details on the mixer of the tank and the name of the mixer manufacturer in lieu of having tank manufacturer recommend it.

**Response:** See amendments to the Technical Specifications.

• **Question 15:** Does the specified Poly tank can support the weight of the mixer and handle a concentrated top load of 250 pounds distributed over a 4 inch by 4 inch area at the top of tank?

Response: See Section 43 41 43 Part 2.4.A.5.

• **Question 16:** Please clarify whether the specified ductile iron piping should be provided with Megalug joints per attached specification or flanged joints as per the contract drawings.

**Response:** Interior and above grade pipe is Flanged, exterior buried pipe is restrained mechanical joint. See Schedule in Section 40 05 13 Part 3.5.

• Question 17: Confirm the chemical solution for the referenced project?

**Response:** Chemical solution is magnesium hydroxide See Section 43 41 43 Part 3.5 for tank schedule and conditions of service.

• **Question 18:** There is no reference to a specific MBE/WBE participation goal. Please clarify what goals are required for this project.

Response: See response to Question 1.

• Question 19: Specification 01 51 00, page 2, 2.2 Temporary Facilities, B. calls for an Engineer's Field Office and refers to specification section entitled "Field Office Trailer". There is no specification for "Field Office Trailer" or furnishing and equipment required. Please clarify if there is a requirement for a trailer for the Field Engineer.

**Response:** See amendments to the Technical Specifications.

• **Question 20:** The specifications do not call out a specific percentage of the bid amount for a Bid Bond. Please indicate what percentage is required for the Bid Bond.

**Response:** The percentage, which is required for the Bid Bond, is under Proposal Requirements, Proposal Page 2 and 12 which is found in the General Requirements and Proposals, Information for Bidders, General and Special Clauses, Technical Specifications (Blue Book).

- Question 21: Please provide personnel requirements for Safety management.
  Response: See GENERAL CLAUSES.
- Question 22: Please provide personnel requirements for Quality management.
  Response: See GENERAL CLAUSES.
- Question 23: Please provide personnel requirements for Project management.
  Response: See GENERAL CLAUSES.
- **Question 24:** We would like to request a bid date extension. Several jobs are currently going in on October 26th/27th, and we'd greatly appreciate if you could

give us some more time to develop an accurate estimate for this project's scope of work.

**Response:** See change in Bid date in Addendum 2.

• **Question 25:** In order to accurately price the removal and remediation of the Under Ground Fuel Tank, we need to know what grade fuel has been stored and whether the tank has been emptied and certified by DEP. Please confirm the above.

**Response:** The underground fuel tank is actively being used to store diesel fuel and therefor has not been certified as closed. It will need to be emptied and cleaned prior to removal and closure.

• Question 26: Drawing M-102 shows the Electrical Generator and MCC #1 on the Main Level. Drawing M-104 does not show this equipment. Are the Generator and MCC to be removed, and if so, is it to be salvaged for WCDPW and location of delivery?

Response: See Drawing E-101.

# Section 01 52 13 Field Office Trailer

(October 15, 2021 - Addendum No. 2)

## SECTION 01 52 13 FIELD OFFICE TRAILER

#### PART 1 - GENERAL

#### 1.1 SUMMARY

A. This Section includes a separate field office trailer for the exclusive use of the Owner's Representative and his assistants.

#### 1.2 SUBMITTALS

- A. Submit shop drawings in accordance with the General Specifications and Special Project Conditions.
- B. In addition to submittals specified in General Specifications and Special Project Conditions submit the following:
  - 1. Proposed layout of the trailer
  - 2. Proposed method of furnishing the utilities
  - 3. Proposed trailer location

### PART 2 - PRODUCTS

### 2.1 GENERAL

- A. The field office trailer shall be not less than 10 feet by 40 feet.
  - 1. Built-in Items
    - a. Separate office room approximately 10 feet by 12 feet. Office shall be separated from the common area by floor-to-ceiling walls and a locking access door. The remainder of the field office will be used as multi-purpose common area for meetings (up to 10 people) work room, and lunch room.
    - b. Provide a minimum of two entry doors with 4 feet x 6 feet stabilized exterior access platform. Include slip resistant aluminum stairs/ramp/deck as required
    - c. Include exterior lighting at all entry doors.
    - d. Forced air heat
    - e. Two air conditioning units not less than 8,000 BTU each
    - f. Toilet facilities including water closet, vanity, medicine cabinet and water heater
    - g. Storage closet
  - 2. Movable Items
    - a. Desk, minimum 60-inch by 36-inch with two-drawer file cabinets, pencil drawers and overhead shelves
    - b. Drafting table, minimum 36-inch by 72-inch with double storage below
    - c. Wheeled desk chair with arms
    - d. Four office chairs
    - e. Two large waste baskets

- f. One drafting stool
- g. Two four-drawer, fire-proof, legal size, filing cabinets with locks and keys
- h. Two tables, 36-inch by 60-inch
- i. Twelve folding or stacking chairs
- j. Two eight place plan racks
- B. Office Equipment
  - 1. Install three dedicated phone lines for the exclusive use of the Owner's Representative.
    - a. Provide three extension phones and jacks
    - b. Provide one automatic telephone answering and recording device
    - c. Provide one telefax machine on separate phone line
  - 2. Provide, for duration of the project, Internet access through high-speed cable modem at a band width of 256 Kb at a minimum. Service shall be provided by Time Warner or equal.
    - a. Provide four port router with extension cables and jacks.
    - b. Provide wireless capabilities.
  - **3**. Provide one automatic paper feed copy machine, equal to Canon 940, with sufficient supply of paper for the entire Contract duration.
  - 4. Provide a color photo printer for use by the Owner's Representative equal to an HP Deskjet 9300.

## PART 3 - EXECUTION

## 3.1 INSTALLATION

- A. The trailer shall be located at or near the site, convenient to the work and in a position approved by the Owners and Owner's Representative.
  - 1. The field office trailer shall be ready for occupancy prior to starting work in the field.
  - 2. The office shall be furnished and maintained until the acceptance of the Contract.
  - 3. Relocate once, if directed, during the period of the Contract.
  - 4. Upon the completion and acceptance of the Contract, the Contractor shall remove the field office trailer and restore the area in accordance with the Section entitled "Restoration of Surfaces".

## 3.2 MAINTENANCE

- A. The maintenance of the trailer shall include but not be limited to:
  - 1. Adequate heating and cooling including a continual supply of fuel
  - 2. Electric power and lights
  - 3. Water supply and sewer service
  - 4. Telephone service
  - 5. Snow removal in winter
  - 6. Janitorial services not less than weekly

- B. Should sanitary and potable water services not be available on or near the site, portable facilities shall be provided.
  - 1. When sanitary and potable water becomes available services shall be provided.

## **END OF SECTION**

## Section 40 05 60, Stainless Steel Stop Plates

(October 15, 2021 - Addendum No. 2)

## SECTION 40 05 60 STAINLESS STEEL STOP PLATES

#### PART 1 - GENERAL

#### 1.1 SUMMARY

A. This Section includes stainless-steel hand-pulled stop plates and appurtenances, complete with frame guides, brackets, anchor bolts, complete with all necessary accessories as shown on the Contract Drawings.

### 1.2 REFERENCES

- A. Materials and installation shall be in accordance with the latest revisions of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
  - 1. American Society for Testing and Materials (ASTM)
  - 2. American Water Works Association (AWWA)
  - 3. American National Standards Institute (ANSI)
  - 4. American Society of Mechanical Engineers (ASME)
  - 5. American Welding Society (AWS)

### 1.3 SUBMITTALS

- A. Submit the following in accordance with the General Conditions/General Requirements.
- B. Product Data: "Catalog cuts" and specification sheets marked to specifically indicate the equipment and materials proposed for this project. Indicate selections with arrows, and cross out irrelevant data.
- C. Shop Drawings indicating the dimensions, materials of construction, size and weight of equipment and location of connections to other work. Catalog cuts are not acceptable for shop drawings.
- D. Design Calculations: Manufacturer shall submit design calculations and supporting data for all stop plates showing stresses, loads, and deflection for critical parts under design head conditions.
  - 1. Stop plates: At a minimum, these shall include operating load, slide deflection, slide bending stress and shear stress in stiffener welds.
- E. Certificates: Manufacturer's certification, stating paragraph-by-paragraph that all plates and materials furnished are in compliance with the applicable requirements of the latest edition of the AWWA Standard and this Specification.
- F. Manufacturer's data including catalog information, cut sheets, lubrication requirements, manufacturer's specifications, and materials description.
- G. Requirements for handling, storage and protection prior to installation.
- H. Manufacturer's installation recommendations.
- I. Submit a coordination list that identifies each stop plate. Coordination list shall include project specific information such as tag numbers, plate type, location, size, and application.

- J. Requirements for routine maintenance.
- K. Closeout Submittals.
  - Operation and Maintenance Data: Provide copies of the Manufacturer's Operation and Maintenance manuals in accordance with the General Conditions/General Requirements.
  - 2. Warranty Documentation: Provide a copy of the Manufacturer's warranty.
  - 3. Provide a copy of the Manufacturer's certificate of proper installation.

### 1.4 QUALITY ASSURANCE

- A. Qualifications:
  - 1. Manufacturer's Factory Qualifications: Manufacturer shall be regularly engaged in the manufacture of low leakage stop plates. Manufacturer shall have a minimum of 10 years' experience in the successful design and manufacture of low leakage stop plates under similar design conditions and applications.
  - 2. References and evidence of experience shall be provided if requested by the Engineer.
  - 3. Any required welding shall be performed by welders with ASME Section IX certification or AWS certification.
- B. Component Supply and Compatibility
  - 1. All equipment in this Section shall be supplied by a single manufacturer who shall be responsible for the design, coordination and proper operation of the entire system. Equipment shall be fabricated, assembled, erected and placed in proper operating condition in full conformity with the drawings, specifications, engineering data, instructions and recommendations of the equipment manufacturer.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Care shall be used in the handling and storage of this equipment to prevent damage or distortion of the equipment prior to installation. Materials and equipment shall be protected from exposure to the elements and kept dry at all times. Materials and equipment shall be handled and stored in accordance with manufacturer's recommendations.
- B. Materials and equipment shall be boxed, crated or otherwise completely enclosed and protected during shipment, handling, and storage. Such boxes, crates or protection shall be clearly labeled with manufacturer's name and model designation.
- C. Material and equipment damaged by handling and storage shall be repaired or replaced by the Contractor as directed by the Engineer.

#### 1.6 WARRANTY

- A. The plate manufacturer shall warrant the system being supplied to the Owner against defects in materials and workmanship for a period of five (5) years following acceptance of the plates by the Owner.
- B. The warranty shall be in published form and shall apply to all similar units.

#### PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. The following manufacturers are named to establish a standard of quality necessary for the Project:
  - 1. RW Gate Company
  - 2. Whipps, Inc.
  - 3. Or equal

## 2.2 SYSTEM DESCRIPTION

- A. Furnish and install stainless steel stop plates with frames and accessories suitable for highhumidity and highly corrosive conditions.
- B. Stainless steel stop plates shall be suitable for service in raw sewage.

### 2.3 PERFORMANCE REQUIREMENTS

- A. Stop plates shall be designed for the indicated design seating and unseating heads.
- B. Allowable leakage shall not exceed 0.10 gpm/ft. of wetted seal perimeter in seating head and unseating head conditions for stop plates.

### 2.4 MATERIALS AND CONSTRUCTION

- A. All stainless-steel referenced in this specification shall be Type 316 unless otherwise indicated herein.
- B. All welded stainless-steel components shall be constructed of Type 316L stainless-steel.
- C. All structural stainless-steel used in the construction of slides and frames shall have a minimum material thickness of 1/4-inch.
- D. All non-welded stainless-steel components, excluding anchor bolts and assembly bolts, shall be Type 316 or Type 316L stainless-steel.
- E. Anchor bolts and assembly bolts shall be Type 316 stainless-steel.
- F. Slide
  - 1. Slide shall consist of a stainless-steel plate that is reinforced with stiffeners to withstand the specified head conditions. Slide shall engage the frame a minimum of 1-inch on each side.
    - a. Slide plate and stiffeners shall have a minimum material thickness of 1/4-inch.
    - b. Slide shall be reinforced with plates or channel shaped members to restrict deflection to 1/16-inch or less at the design head.
    - c. Stiffeners shall be welded to the slide.
    - d. Dual lifting handles shall be provided on slides with opening widths in excess of 24-inches.
      - 1) Lifting handles shall be formed from round bar or shall be lifting slots in the top of the stop plate as shown on the Contract Drawings.
- G. Frame

- 1. Frame shall be constructed of stainless-steel plate, with the guide section formed into a C-channel shape or similar to house the seal, and shall be reinforced to withstand the specified operating conditions.
  - a. Guides shall be of a one-piece design with gussets that extend along the outside and top to accommodate unseating head. Guide members shall incorporate a tubular cross section along the guides for additional rigidity. Two-piece, sandwich type guides that are bolted together shall not be acceptable.
  - b. Mounting configuration of the frame shall be as shown on the Contract Drawings.
  - c. Wall mounted frames shall be of the flanged frame type. Flat frames shall only be provided on plates with frames that will be embedded in the concrete wall or mounted inside existing channels.
  - d. Guide portion of flanged frame plates shall have a minimum weight of 13 lbs./ft. The portion of the flanged frame, where the anchors penetrate, shall have a minimum thickness of 1/2-inch.
- H. Seals
  - 1. Seal system shall consist of UHMWPE seals along the sides and a flush bottom EPDM invert seal.
    - a. UHMWPE seals shall be arranged to ensure that there is no metal-to-metal contact between the slide and frame.
    - b. Invert seal on upward opening gates shall use a compressible EPDM seal located in the invert of the frame.
      - 1) The invert seal shall be of a flush bottom arrangement.
      - 2) The invert seal shall be mechanically fastened with stainless steel bolts.
      - 3) Invert seals attached solely by the use of adhesives are not acceptable.
    - c. All seats and seals shall be secured with assembly bolts. All seals shall be field removable and field replaceable without the need to remove the gate frame from the wall.
- I. Anchorage
  - 1. Anchor bolts shall be 316 stainless steel, fully threaded and shall have a minimum diameter of 1/2-inch.
    - a. Anchor bolts shall be of the epoxy type.
- J. Finish
  - 1. All heat tint and slag from the welding process shall be passivated in accordance with ASTM A380. If bead blasting is used, the entire slide and entire frame shall be bead blasted.

#### **PART 3 - EXECUTION**

#### 3.1 INSTALLATION

- A. Install stainless steel stop plates as shown on the Contract Drawings and in accordance with the manufacturer's installation instructions.
- B. Stop plates shall be installed in a true vertical plane, square and plumb.

C. Contractor shall fill the void between the frames and the wall with non-shrink grout in accordance with the manufacturer's recommendations.

## 3.2 FIELD QUALITY CONTROL

- A. Ease of Operation
  - 1. Adjustments in stem alignment or other changes required for maximum ease of operation shall be made at the Contractor's expense.
- B. The following field testing shall be performed on each of the stop plates:
  - 1. Leakage Test:
    - a. The Contractor shall adjust, test, and operate the stop plates. Any deficiencies shall be corrected at the Contractor's expense.
    - b. Fill the appropriate structure or channel with raw wastewater and test for leakage.
      - 1) Leakage under design seating head conditions shall not exceed 0.10 gpm/foot of seating perimeter at the design seating head and design unseating head for stop plates.

### 3.3 SCHEDULE

| Plate<br>No. | Assembly Type | Description                                     | Max. Head<br>(ft.) | Dimensions  | Material |
|--------------|---------------|---|--------------------|-------------|----------|
| 1            | Stop Plate    | Influent Channel Upstream<br>Isolation          | 3'-6"              | 30" x 38" * | St. Stl. |
| 2            | Stop Plate    | Influent Channel<br>Downstream Isolation        | 3'-6"              | 30" x 38" * | St. Stl. |
| 3            | Stop Plate    | Influent Bypass Channel<br>Upstream Isolation   | 3'-6"              | 30" x 38" * | St. Stl. |
| 4            | Stop Plate    | Influent Bypass Channel<br>Downstream Isolation | 3'-6"              | 30" x 38" * | St. Stl. |
| 5            | Stop Plate    | Wet Well Isolation                              | 3'-6"              | 30" x 38" * | St. Stl. |
| 6            | Stop Plate    | Wet Well Isolation                              | 3'-6"              | 30" x 38" * | St. Stl. |

\* Field verify dimensions prior to shop drawing submission.

#### **END OF SECTION**