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ARTICLE 1 - PROJECT DESCRIPTION

Scope of Work

- 1.1 The scope of the project shall include replacement of eighteen (18) slide gates in RBC Basin #2 at the Metropolitan Sewerage District's Water Reclamation Facility. Slide gate replacement shall include replacement of frame, guides and side seals, compression cord, bottom seal, slide, top seal, yoke mounted crank operated manual hoist, stem, stem guides, stem cover, anchor bolts and other work and/or materials as may be necessary, related to or incidental to providing a fully functional and operable gate system for RBC Basin #2. After installation of the slide gates is completed, stainless steel nameplates bearing the gate number (per MSD schematic drawing) shall be affixed to all gates in RBC basins 1, 2, and 3. The scope of this project shall also include restoration of the site upon completion of the project.
- 1.2 The work shall be performed by a lump sum contract, and shall consist of furnishing all materials, supplies, and equipment; performing all labor and services incidental to or necessary for the complete construction of the project in accordance with the Plans and Specifications; and maintenance of each completed portion of the work until final acceptance of the entire project by the DISTRICT, unless otherwise approved by the ENGINEER.
- 1.3 No work is to be conducted when the Water Reclamation Facility's effluent flow exceeds 25 MGD for 6 hours or more.
- 1.4 All RBC trains must be in service when the Water Reclamation Facility's effluent flow exceeds 25 MGD for 6 hours or more.
- 1.5 Work on gates in the effluent channel of RBC Basin 2 may begin as soon as the water level on the half of Basin 2 being drained falls below the weir between the RBC train and effluent channel. The CONTRACTOR shall complete the installation (including grouting and testing of the gates) on each side of Basin 2 in seven (7) calendar days or less from the time the CONTRACTOR begins draining Basin 2.

The CONTRACTOR shall complete installation of ALL gates (including grouting and testing) within twenty-one (21) calendar days from the time CONTRACTOR begins draining Basin 2.

If installation of the subject gates is not completed within these timeframes, the CONTRACTOR shall remove all tools and equipment from the Basin to allow the basin to be re-filled and achieve biological recovery for ten (10) days.

ARTICLE 2 - PHYSICAL CONDITIONS/CONTRACT PLANS

- 2.1 **Contract Plans.** The work shall be performed in accordance with these specifications and contract plans, which are incorporated herein as part of the contract, and which are identified by the following numbers and titles:

<u>Sheet No.</u>	<u>Description</u>
1	RBC Basin 2 – Plan View
2	RBC Basin 2 – Plan Section View (subsurface piping)
3	RBC Basin 2 – Profile Section View A-A
4	RBC Basin 2 – Profile Section View B-B
5	RBC Basin 2 – Profile Section View D-D (Influent West)
6	RBC Basin 2 – Profile Section View D-D (Influent East)
7	RBC Basin 2 – Profile Section View G-G (Effluent West)
8	RBC Basin 2 – Profile Section View G-G (Effluent East)

ARTICLE 3 - PROJECT COORDINATION

- 3.1 **Intent of Plans and Specifications**

The intent of the Plans and Specifications is to prescribe a complete work that the CONTRACTOR undertakes to do in full compliance with the Contract. The CONTRACTOR shall do all work as provided in the Plans, Special Conditions Detail Sheets, Specifications and other parts of the Contract and shall do such additional, extra, and incidental work as may be considered necessary to complete the work in a satisfactory and acceptable manner. Any work or material not shown on the Plans or described in the Specifications, but which may be fairly implied as included in any item of the Contract, shall be performed and/or furnished by the CONTRACTOR without additional charge therefore. The CONTRACTOR shall furnish all labor, materials, tools, equipment and incidentals necessary to the prosecution of the work.

- 3.2 **Interpretation of Estimate**

The quantities of the work and materials shown on the Proposal form or on the Plans are believed to approximately represent the work to be performed and materials to be furnished and are to be used for comparison of bids. Payment to the CONTRACTOR will be made only for the actual quantities of work performed or materials furnished in accordance with the Plans and Specifications, and it is understood that the quantities may be increased or decreased as hereinafter provided without in any way invalidating the bid prices.

Section V: Special Conditions

3.3 **Time of Completion**

The CONTRACTOR shall commence work to be performed on the project under this agreement on a date to be specified in a written Notice to Proceed from the DISTRICT and shall duly complete all work under this agreement within **Two Hundred Forty (240) consecutive calendar days** from said date. For each day in excess of the completion time limits specified above, the CONTRACTOR shall pay the DISTRICT the sum of Three Hundred Dollars (\$300.00) as liquidated damages reasonably estimated in advance to cover the losses incurred by the DISTRICT by reason of failure of said CONTRACTOR to complete the work within the time specified, such time being in the essence of this Contract and a material consideration thereof.

3.4 **Pre-Construction Conference**

Prior to starting any construction work on this project, a conference will be held in the Construction Office of the DISTRICT for the purpose of verifying general construction procedures, expediting the handling of shop drawings and schedules, and to establish a working understanding between the parties concerned on the project. Present at the conference shall be a responsible representative of the CONTRACTOR and the CONTRACTOR's job superintendent. The time of the conference shall be as agreed upon by the CONTRACTOR and DISTRICT.

3.5 **Progress Meetings**

The CONTRACTOR and any subcontractors, material suppliers or vendors whose presence is necessary or requested shall attend meetings, referred to as Progress Meetings, when requested by the DISTRICT for the purpose of discussing the execution of the work. Each meeting will be held at the time and place designated by the DISTRICT. A schedule for monthly meetings will be agreed upon at the pre-construction conference. The ENGINEER will call for and schedule additional meetings if necessary. All decisions, instructions and interpretations made at these meetings shall be binding and conclusive on the CONTRACTOR and such decisions, instructions and interpretations shall be confirmed in writing by the DISTRICT.

The proceedings of these meetings will be recorded, and the CONTRACTOR will be furnished with a reasonable number of copies for his use and for his distribution to the subcontractors' material suppliers and vendors involved.

3.6 **Suggested Construction Sequence**

1. Between Basin 2, Trains 1 & 2 (influent side), cut out ramp for access to place stop-log at Gate CO2. Between Basin 2, Trains 1 & 2 (effluent side), cut opening for access to place stop-log at Gate CO3.
2. Close Gates 144 & 145 at the effluent of Basin 1. Close Gate CO4 at the influent of basin 3. Close Gate 224. Close Gates 331-343. Ensure Cross-over Gate CO1 is open.
3. Drain Basin 2, Trains 3 & 4, as well as Basin 3, western side influent channel. Install pump to keep up with Gate 331-343 leakage, if necessary.
4. Within **seven (7) calendar days** of beginning drainage of Basin 2, Trains 3 & 4, replace Gates 234, 244, and CO3 (including grouting and testing). If gates 234, 244, and CO3 pass testing protocols, open gates 224, 234, 244, CO3, 331-343, and CO4 to restore flow to all of Basin 3.
5. Within **twenty-one (21) calendar days** of beginning drainage of Basin 2, Trains 3 & 4, replace Gates 231-243, and CO2 (including grouting and testing).
6. Close Gate CO2. With stop logs in place, pump water into space between stop log and CO gate to test gate sealing.
7. Close Gates 231-243, open gates 144, 145, CO2, and CO3. Test sealing for gates 231-243.
8. If all gates pass testing protocols, open all gates, and restore flow to Basin 2, Trains 3 & 4.
9. Remove stop-logs.
10. Wait the requisite ten (10) calendar days to allow biological recovery.
11. Close Gates 114, 115, CO2, CO3, CO4, and 311-323. Ensure Cross-Over Gate CO1 is open.
12. Drain Basin 2 Trains 1 & 2, as well as Basin 3, eastern side influent channel.
13. Within **seven (7) calendar days** of beginning drainage of Basin 2, Trains 1 & 2, replace Gates 214 and 224 (including grouting and testing). If gates 214 and 224 pass testing protocols, open gates 214, 224, CO3, CO4, and 311-323 to restore flow to all of Basin 3.
14. Within **twenty-one (21) calendar days** of beginning drainage of Basin 2, Trains 1 & 2, replace Gates 211-223 (including grouting and testing).
15. Repair concrete that was demolished for stop-log placement.
16. Open all Gates and restore flow to Basin 2, Trains 1 & 2.

Notes:

- *The Contractor must allow a minimum of ten (10) calendar days between the date that Trains 3 & 4 go online and the date that Trains 1 & 2 go offline. This is to allow the microbial growth to reform to ensure full treatment and plant regulatory compliance.*

Section V: Special Conditions

- *In the event of severe weather, MSD staff may need to place the RBC's back in service to accommodate heavier-than-normal flows. At the end of each workday all tools and materials must be removed from inside the trains.*
- *Any changes in flow (closing or opening valves, gates, etc.) must be performed by MSD Operations staff.*
- *Contractor shall have a crew on-call 24 hours a day in case of high flows or emergencies at the Water Reclamation Facility requiring removal of stop-logs or other changes to the configuration of the flow during installation of the new slide gates.*