

May 15, 2019

**COUNTY OF SAN MATEO**

**MEMORIAL PARK  
WASTEWATER TREATMENT FACILITIES  
IMPROVEMENT PROJECT**

**TOTAL PROJECT APPROXIMATELY 50 FEET IN LENGTH  
WITH APPURTENANT WORK THERETO  
IN SAN MATEO COUNTY**

**COUNTY PROJECT NO. P23P4  
PROJECT FILE NO. E4955**

**ADDENDUM NO. 1**

TO ALL PLAN HOLDERS:

The following **Addendum No. 1** to the above referenced project, dated April 24, 2019, shall be included in the project plans and specifications.

1. Pages ii, iii, and iv of the TableCon (Table of Contents) Section shall be replaced in the Project Specifications:

**Replace pages ii, iii, and iv of the NC Section with pages ii (rev), iii (rev), and iv(rev).**

2. Pages 4 & 5 of the NC (Notice to Contractors) Section shall be replaced in the Project Specifications:

**Replace pages 4 & 5 of the NC Section with pages 4 (rev) & 5 (rev).**

3. Pages 52A & 52B of the SP (Special Provisions) Section shall be added in the Project Specifications:

**Insert pages 52A (rev) & 52B (rev) after page 52 of the SP Section.**

4. Pages 102A, 102B, 102C, & 102D of the SP (Special Provisions) Section shall be added in the Project Specifications:

**Insert pages 102A (rev), 102B (rev), 102C (rev), and 102D (rev) after page 102 of the SP Section.**



To All Plan Holders  
**Memorial Park Wastewater Treatment Facilities Project**  
Addendum No. 1  
May 15, 2019

Page 2

5. Page 118 of the SP (Special Provisions) Section shall be replaced in the Project Specifications:

**Replace page 118 of the SP Section with page 118 (rev).**

6. Pages 252 A and 252 B of the SP (Special Provisions) Section shall be added in the Project Specifications:

**Insert pages 252A (rev) and 252B (rev) after page 252 of the SP Section.**

7. Pages 3 & 4 of the PR (Proposal) Section shall be replaced in the Project Specifications:

**Replace pages 3 & 4 of the PR Section with pages 3 (rev) & 4 (rev).**

8. Page S101 of the Plans shall be replaced in the Project Plans:

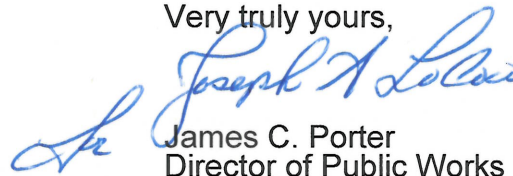
**Replace page S101 (Sheet 39 of 57) of the Plans with page S101 (rev) (Sheet 39 of 57).**

***Please sign and return the attached "Receipt of Addendum No. 1" form. The "Receipt of Addendum No. 1" form MUST be received in this office no later than 4:00 PM, Friday, May 17, 2019 or the bid will NOT be considered. The Receipt of Addendum can be faxed to Carter Choi's attention at (650)361-8220 or email at [cchoi@smcgov.org](mailto:cchoi@smcgov.org).***

If you have any questions or require additional information, please contact Anthony Lum, or Carter Choi of our office at (650) 363-4100. They can also be reached by e-mail at:

[alum@smcgov.org](mailto:alum@smcgov.org)  
[cchoi@smcgov.org](mailto:cchoi@smcgov.org)

Very truly yours,

  
James C. Porter  
Director of Public Works

JCP:JAL:CC: AL

F:\Users\design\C3D\E4955000\_Memorial Park Wastewater System\Docs\Advertise\Addendum #1\Addendum Template.doc

Encl.- "Receipt of Addendum No. 1" Form

cc: Ann M. Stillman, Deputy Director, Engineering and Resource Protection  
Gil Tourel, Principal Civil Engineer, Engineering and Construction  
Carter Choi, Acting Principal Civil Engineer, Project Development and Design  
Anthony Lum, Associate Civil Engineer, Project Development and Design

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**RECEIPT OF ADDENDUM NO. 1**

I, \_\_\_\_\_, an authorized representative for \_\_\_\_\_, have received **Addendum No. 1** for the “Memorial Park Wastewater Treatment Facilities Improvements Project.” from an authorized representative of the County of San Mateo, to be included in the Specifications for the above referenced project.

This form must be signed and received in the offices of the County of San Mateo, Department of Public Works ***no later than 4:00 PM, Friday, May 17, 2019.***

“Contractor”

\_\_\_\_\_  
(Print)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

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10-1.	Diversion Goals
10-2.	References and Resources
10-3.	Waste Management Plan and Daily Transport Report
10-4.	Waste Management Plan Implementation
11.	Mobilization
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12.	Maintaining Traffic
13.	Removable Bollard
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80.	Temporary Chain Link Fence
100.	Construction Staking
<b><u>102.</u></b>	<b><u>Tree Protection</u></b>
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Note: Gaps in Section numbering, above, indicate that the Section is either blank or does not apply.

**TECHNICAL SPECIFICATIONS****DIVISION 1 - GENERAL REQUIREMENTS**

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01360	Operating and Maintenance Information
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01611	Seismic Design Requirements
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**DIVISION 6 – WOOD AND PLASTICS**

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08700	Door Hardware

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## **DIVISION 9 – FINISHES**

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09800	Architectural Painting
09900	Protective Coating Systems

## **DIVISION 10 – SPECIALTIES**

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11010	General Requirements for Equipment
11050	Equipment Mounting
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11378	Sequencing Batch Reactor
<b><u>11519</u></b>	<b><u>Air Powered Mixers</u></b>
11535A	Submersible Cutter Pumps
11535B	Submersible Grinder Pumps

## **DIVISION 13 – SPECIAL CONSTRUCTION**

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13122	Pre-Engineered Metal Canopy
13250	Fiberglass Reinforced Plastic Pre-Engineered Enclosures
13300	FRP Tank Covers

## **DIVISION 15 – MECHANICAL**

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15055	Piping Materials and Components
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15100	Valves and Miscellaneous Components
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15150	Valves and Piping Accessories
15190	Mechanical Identification

## **DIVISION 16 – ELECTRICAL**

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16010	General Electrical Provisions

**ENGINEER'S ESTIMATE****MEMORIAL PARK  
WASTEWATER TREATMENT FACILITIES  
IMPROVEMENT PROJECT****TOTAL PROJECT APPROXIMATELY 50 FEET IN LENGTH  
WITH APPURTENANT WORK THERETO  
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PROJECT FILE NO. E4955**

<b>Item No.</b>	<b>Section No.</b>	<b>Estimated Quantity</b>	<b>Unit of Measure</b>	<b>Item Description</b>
1	10	1	LS	Construction Waste Management
2	11	1	LS	Mobilization
3	11-1	1	LS	Water Pollution Control
4	12	1	LS	Maintaining Traffic
5	13	4	EA	Removable Bollard
6	20	1	LS	Erosion and Sediment Control
7	80	780	LF	Temporary Chain Link Fence
8	100	1	LS	Construction Staking
<b><u>8A</u></b>	<b><u>102</u></b>	<b><u>23</u></b>	<b><u>EA</u></b>	<b><u>Tree Protection</u></b>
9	105	1100	LF	Exclusion Fencing
10	02055 02350	1	LS	Site Work (includes demolition, excavation, grading, and drainage)
<b><u>10A</u></b>	<b><u>02145</u></b>	<b><u>1</u></b>	<b><u>LS</u></b>	<b><u>Sewer Bypassing</u></b>
11	02200	1	LS	Earthwork
12	02832	213	LF	Chain Link Fence and Gates
13	03100 03315	1	LS	Concrete Work
14	03200	1	LS	Reinforcement Steel
15	03300	1	LS	Cast-in-Place Structural Concrete
16	03310	1	LS	Cast-in-Place Sitework Concrete
17	04232	470	SF	CMU Control Building

*Engineer's Estimate – Continued on next page*

*Memorial Park Wastewater Treatment Facilities Engineer's Estimate – Continued*

<b>Item No.</b>	<b>Section No.</b>	<b>Estimated Quantity</b>	<b>Unit of Measure</b>	<b>Item Description</b>
18	05501 05910	1	LS	Anchor Bolts and Anchoring Devices
19	05520	161	LF	Aluminum Handrailing
20	08110 - 08900	1	LS	Doors and Windows
21	10405	13	EA	Signs
22	10523	1	EA	Fire Extinguishers
23	11316	1	LS	Bar Screen
24	11378	1	LS	Sequencing Batch Reactor
<b><u>24A</u></b>	<b><u>11519</u></b>	<b><u>1</u></b>	<b><u>EA</u></b>	<b><u>Air Powered Mixers</u></b>
25	11535A	2	EA	Submersible Cutter Pumps
26	11535B	2	EA	Submersible Grinder Pumps
27	13122	1	LS	Pre-Engineered Metal Canopy
28	13250	1	LS	FRP Chemical Building
29	13300	1	LS	FRP Tank Covers
30	15090 - 15190	1	LS	Utility Piping and Appurtenances
31	15062	50	LF	Ductile Iron Pipe
32	15064	590	LF	PVC Pipe
33	16010 - 16450	1	LS	Electrical and Wires

**Engineer's Estimate of Costs: \$ 2,700,000**

(F) Final Pay Quantities - See Section 9-1.015, "Final Pay Items," of the Standard Specifications.

(S) Specialty Items - As defined in Section 8-1.01, "Subcontracting," of the Standard Specifications.

(Note: Gaps in section numbering, above, indicate the Section is blank or does not apply.)



**SECTION 102.**  
**TREE PROTECTION**

The construction limits are defined on the Drawings. The Contractor shall protect all existing trees and landscaping outside of this area. Existing trees and landscaping within the construction limits shall be protected in-place unless shown otherwise on the Drawings.

The Contractor shall prepare and submit a Tree Protection Plan to be reviewed and approved by the County Arborist. Prior to submitting the Tree Protection Plan, Contractor shall perform a job walk with the County Biologist or County Arborist to identify the trees that require protection measures and trees that may require trimming in order to perform the work. If trees and other plants need protection, install the fence to enclose the drip line of the foliage canopy of protected plants and protect visible roots from encroachment. Tree protective fencing shall be installed at a minimum distance of 2 feet (2') from the trunk of protected trees where work prohibits protection out to the drip line. In situations where the protected tree is in danger of being damaged by construction equipment, the trees within the construction limits shall be protected against incidental contact by construction equipment. Tree protection shall be installed under the direction of a licensed arborist or County representative.

All excavations within ten feet (10') of existing trees shall be performed by hand digging. All tree roots six inches (6") or larger that are encountered can only be cut under the direction of a licensed arborist.

The Contract unit price paid per each for this item, "Tree Protection," shall include full compensation for furnishing all labor, tools, materials, equipment and incidentals necessary for all work involved to trim trees including supervision by a licensed arborist, and protecting existing trees and landscaping, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no separate payment will be made therefor.

No adjustment to the Contract bid price will be made for any increase or decrease in the quantities for this item, "Tree Protection," required. The provisions in Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications shall not apply to this item of work.

The County reserves the right to eliminate this item, "Tree Protection," from the project completely. The Contractor shall request and receive written confirmation from the County as to

the status of this item of work prior to incurring any costs. The Contractor shall not be entitled to any compensation under this item of work for any cost incurred should he proceed in advance of receiving written authorization from the County.

**END OF SECTION**

## SECTION 02145 SEWER BYPASSING SYSTEMS

### PART 1--GENERAL

#### 1.01 Description

- A. Scope: This section specifies the requirements for temporary bypassing of flows in gravity sewers around Contractor's work. The existing sewers are currently and continuously receiving and conveying sewage, and those functions shall not be interrupted except as specified herein. The Contractor shall coordinate the work to avoid any interference with normal operation. Contractor shall immediately correct any undesirable conditions which result from bypassing or other operations.
- B. Requirements:
1. Contractor shall provide labor, equipment, materials and supervision to temporarily control flow around the Contractor's work during construction. Contractor shall not interrupt the functions of the existing sewers and is responsible for penalties and expenses in the event that his operations cause any violation of the Owner's discharge permit.
  2. No electrical power for operation of duty pumps is available.
  3. It shall be the Contractor's responsibility to maintain at all times the sewer flows through the project site. A bypass shall be made by plugging existing manholes or sewer pipelines upstream of the Contractor's work and pumping the sewage to manholes or bypass connections downstream of the Contractor's work as shown on the drawings. The pumps and bypass lines shall be of adequate capacity and size to handle the anticipated flows indicated herein. The bypassing system shall be approved by the Owner or the Owner's representative.
  4. Bypass pumping shall be done in a manner that will not damage private or public property, or create a nuisance. The pumped sewage shall be in an enclosed pipe or hose that is adequately protected from traffic and shall be redirected into the sanitary sewer system. Discharging of sewage on private property, gutters, streets, sidewalks, or into storm sewers is prohibited. The Contractor shall be liable for all damages or fines (including fines imposed on the Owner as a result of the Contractor's operations) associated with this work. After the work is completed, flow shall be restored to original conditions and temporary facilities shall be removed.
  5. Bypass pumping systems shall comply with the mitigations measures for this project.

#### 1.02 Submittals

- A. The Contractor shall submit a Sanitary Sewer Bypass Plan in accordance with Section 01300 sketches showing methods and equipment he proposes to utilize in sewer bypassing and flow control. The submittal shall include the following information:
1. Site plans showing the size and layout of pumps, valves, and temporary pipelines. The layout shall also show how facilities will be protected during use.
  2. Calculations showing the selected pumps are capable of pumping the anticipated flow. The calculations should include head loss of all pipe, valves, and fittings. Calculations shall be stamped and signed by a civil or mechanical engineer licensed in the State of California.
  3. Catalog data for selected pumps including pump performance curves.
  4. Catalog data for pump controls and audible alarms.

5. Catalog data for generators.
6. An emergency response plan to be followed in the event of a failure of the bypass pumping system.
7. A wiring diagram showing proposed connections and wire sizes for any temporary connections to pump control panels.

**1.03 Job Conditions**

A. Anticipated Flows: Flow monitoring data upstream of the Contractor’s is unknown, but total flows to the existing WWTP are known. Bypass methods and equipment shall be capable of continuously carrying an amount of flow equal to the estimated daily peak flows in the collection system upstream of the existing WWTP. These flows are based off of a wet weather peak flow of 100,000 gpd. Flow enters the existing WWTP from both the north and south; the flows have been split based upon the assumed contribution of collection system north and south of the existing WWTP.

B. Design Requirements:

<u>Characteristic</u>	<u>Value</u>
Peak Summer Flow North of WWTP, gpm	50
Peak Summer Flow South of WWTP, gpm	20
Upstream MH North – Rim, ft	494.32
Upstream MH North – Invert Out, ft	483.20
Upstream MH South* – Rim, ft	497.29
Upstream MH South* – Invert Out, ft	491.41
Top of New WWTP – ft	499.50

\*The first upstream manhole to the south of the existing WWTP is within the Contractor’s work, thus the second upstream manhole data is given.

C. Notification: The bypassing and dewatering systems shall not be shut down between shifts, on holidays or weekends, or during work stoppages without written permission from the Owner. The Contractor shall provide 1 week advance notice to the Owner of the location and schedule of flow control, and to request the assistance of Owner staff for the shutdown of lift stations.

**1.04 Payment**

- A. Contract lump sum paid for item “Sewer Bypassing” shall include full compensation for furnishing all labor, equipment, materials, tools, and for doing work as specified in Section 02145.

**PART 2—PRODUCTS (NOT USED)**

**PART 3--EXECUTION**

**3.01 Sewer Flow Control**

- A. General: Sewer bypassing shall be accomplished by pumping the upstream flow around the Contractor's work. The Contractor shall furnish, install and operate pumps, generators, plugs, pipes, valves, manifold piping, ramps, temporary trenching, steel plating, backfilling, paving,

5. Catalog data for generators.
6. An emergency response plan to be followed in the event of a failure of the bypass pumping system.
7. A wiring diagram showing proposed connections and wire sizes for any temporary connections to pump control panels.

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B. Design Requirements:

<u>Characteristic</u>	<u>Value</u>
Peak Summer Flow North of WWTP, gpm	50
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\*The first upstream manhole to the south of the existing WWTP is within the Contractor's work, thus the second upstream manhole data is given.

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## PART 2—PRODUCTS (NOT USED)

## PART 3--EXECUTION

### 3.01 Sewer Flow Control

- A. General: Sewer bypassing shall be accomplished by pumping the upstream flow around the Contractor's work. The Contractor shall furnish, install and operate pumps, generators, plugs, pipes, valves, manifold piping, ramps, temporary trenching, steel plating, backfilling, paving,

- E. Bypass Piping Removal: Prior to removal of the bypass system, Contractor shall flush system with clean water and completely drain piping to a sanitary sewer manhole or to the rehabilitated lift station wet well. Contractor shall remove all temporary bypass piping at the conclusion of bypassing operations. Pavement and other improvements shall be restored to their original condition or better.
- F. Contingency: The Contractor shall maintain on site sufficient equipment and materials to ensure continuous and successful operation of the bypass and dewatering systems. Standby pumps shall be fueled and operational at all times. The Contractor shall maintain on site a sufficient number of valves, tees, elbows, connections, tools, sewer plugs, piping and other parts or system hardware to ensure immediate repair or modification of any part of the system as necessary.

Contractor shall have, on an on-call basis, personnel and equipment necessary to handle any cleanup that may be necessary due to a spill. In the event that sewage is spilled as a result of the Contractor's operations, the Contractor shall pay any and all fines imposed on the Owner.

### **3.02 Sewer Dewatering**

- A. Contractor shall dewater all gravity sewers before beginning any work that may breach the pipes and cause leakage of wastewater. After plugging or valving off the pipeline, the Contractor shall either pump the flow from within the sewer or excavate the low portion of the sewer and pump the groundwater from below the sewer pipeline. Dewatering of excavations shall be conducted in accordance with the requirements of Section 02200.

### **3.03 Damages**

- A. The Contractor shall clean and repair without cost to the City/District any damage that may result from his negligence, inadequate or improper installation, maintenance and operation of bypassing and flow control system including mechanical or electrical failures.

**END OF SECTION**

- J. Barbed wire [ASTM A 121], Class 3, zinc coated steel wire double-strand, 12-1/2 gauge twisted line wire with galvanized steel, 4 point barbs spaced approximately 5" on center.
- K. Barbed wire supporting arms: Pressed steel arms with provisions for attaching 3 rows of barbed wire. Arms shall withstand 250 lb downward pull at the outermost end of arm without failure.
  - 1. Provide 45° 3 strands, single arm.
  - 2. Provide intermediate arms with hole for passage of top rail.
- L. Nuts and bolts are galvanized.
- M. Provide polyethylene or PVC privacy slats for all fencing. Color to be selected by the Owner and will be of an earthen-tone color to match existing buildings near the site.
  - 1. Owner will select color through material submittal outlined in section 01300

## 2.05 CHAIN LINK SWING GATES

- ~~A. Gate frames: Fabricate chain link swing gates in accordance with ASTM F 900 using galvanized steel tubular members, 2" square, weighing 2.60 lb/ft.~~
- A. Hardware materials: Hot dipped galvanized steel or malleable iron shapes to suit gate size.
- B. Hinges structurally capable of supporting gate leaf and allow opening and closing without binding. Non-lift-off type hinge design shall permit gate to swing 180° (3.14 rad) outward.
- C. Latch: Forked type capable of retaining gate in closed position and have provision for padlock. Latch shall permit operation from either side of gate.
- D. Keeper: Provide keeper for each gate leaf over 5' wide. Gate keeper shall consist of mechanical device for securing free end of gate when in full open position.
- ~~F. Double gates: Provide drop rod to hold inactive leaf. Provide gate stop pipe to engage center drop rod. Provide locking device and padlock eyes as an integral part of latch, requiring one padlock for locking both gate leaves.~~

## 2.06 SETTING MATERIALS

- A. Concrete: Minimum 28 day compressive strength of 3,000 psi (20 MPa).

## PART 2 - EXECUTION

### 3.01 EXAMINATION

- A. Verify areas to receive fencing are completed to final grades and elevations.
- B. Ensure property lines and legal boundaries of work are clearly established.

### 3.02 CHAIN LINK FENCE FRAMING INSTALLATION

- A. Install chain link fence in accordance with ASTM F 567 and manufacturer's instructions.

## **SECTION 11519 AIR POWERED MIXERS**

### **PART 1 - GENERAL**

#### **1.01 Summary**

- A. This section specifies air powered mixers for mixing in the influent lift station wet well.
- B. Payment
  - 1. Contract unit price paid for each item "Air Powered Mixers" shall include full compensation for furnishing all labor, materials, tools, equipment incidentals, and for doing work to complete in place, as specified in this Section 11519.

#### **1.02 System Description**

- A. Air powered mixer system: mixer, air hose, air unit with waterproof enclosure, lifting cable or chain, electrical cable, and similar type items as specified and as required for complete operations units ready for use as specified and installed as indicated on the drawings.
- B. Air powered mixer system shall provide adequate mixing for a maximum six feet (6') depth of wastewater.

#### **1.03 Submittals**

- A. The following shall be submitted in accordance with Section 01300 – Submittals:
  - 1. Shop drawings, material list and catalog information showing the details of mixer construction and performance.
  - 2. Outline installation drawings for each unit.
  - 3. Electrical characteristics.
  - 4. Operation and Maintenance: In accordance with Section 11010 – General Requirements for Equipment, paper or electronic copies of the general equipment Operation and Maintenance manuals shall be submitted for information with the equipment submittals. This is in addition to the information that shall be submitted in accordance with Section 01360 – Operating and Maintenance Information.

#### **1.04 Quality Assurance**

- A. Mixer shall be capable of continuous operation of mixing raw wastewater. The solids to be encountered will be those typically found in municipal wastewater treatment service including heterogeneous mixtures of inorganic and organic solids. Among the inorganic solids will be small rocks, sand, pieces of metal, animal bones and similar objects, while the organic solids may be expected to include vegetable parts, rags, paper products, rubber goods, fecal matter, and semi-solid grease particles. In addition, the liquid may be expected to include detergents, industrial solvents, petroleum products and water.
- B. Mixer systems specified in this Section shall be by one manufacturer.

#### **1.05 Delivery, Storage, and Handling**

- A. All equipment shall be shipped and delivered fully assembled, except where partial disassembly is required in order to conform to transportation regulations or for the protection of components.
- B. The Contractor shall be responsible for unloading of the machinery and shall have equipment on-site available at the time of delivery permitting proper hoisting of the equipment.



**1.06 Warranty**

- A. The equipment manufacturer shall furnish the Owner with a written warranty to cover the unit and motors against defects in workmanship and material for a minimum period of one (1) year under normal use and service. The manufacturer's warranty shall be issued in the owner's name.

**PART 2 - PRODUCTS****2.01 Manufacturers**

- A. Design Basis: GridBee AP500-AU200 air-powered mixers systems, Medora Corp. of Dickinson, ND.  
B. Or Approved equal.

**2.02 Equipment****A. General Mixer Construction**

1. The mixing equipment metal housing, intake plate and air manifold shall be constructed primarily of Type 316 stainless steel, it shall also undergo a passivation bath, also known as stainless steel pickling, to restore corrosion resistance to the welds and other areas of imperfections. The air distribution system shall be constructed primarily of glass filled polypropylene and EPDM.

**B. Air Supply Unit**

1. 1/2 HP rated air pump capable of producing 6.0 cubic feet per minute (0.17 cubic meters per minute) @ 4 psi (27.6 kiloPascal) consuming 1/2 HP (375 Watt) power. Includes weatherproof housing and contains 120vAC cord and plug. Requires 120vAC, 20 Amp, receptacle for power source.

**PART 3 - EXECUTION****3.01 Installation**

- A. Equipment shall be installed in strict conformance with manufacturer's installation instructions.

**END OF SECTION**

**PROPOSAL TO THE COUNTY OF SAN MATEO**

**MEMORIAL PARK  
WASTEWATER TREATMENT FACILITIES  
IMPROVEMENT PROJECT**

**TOTAL PROJECT APPROXIMATELY 50 FEET IN LENGTH  
WITH APPURTENANT WORK THERETO  
IN SAN MATEO COUNTY**

**COUNTY PROJECT NO. P23P4  
PROJECT FILE NO. E4955**

<b>Item No.</b>	<b>Section No.</b>	<b>Estimated Quantity</b>	<b>Unit of Measure</b>	<b>Item Description</b>	<b>Item Price (In Figures)</b>	<b>Total (In Figures)</b>
1	10	1	LS	Construction Waste Management	\$	\$
2	11	1	LS	Mobilization	\$	\$
3	11-1	1	LS	Water Pollution Control	\$	\$
4	12	1	LS	Maintaining Traffic	\$	\$
5	13	4	EA	Removable Bollard	\$	\$
6	20	1	LS	Erosion and Sediment Control	\$	\$
7	80	780	LF	Temporary Chain Link Fence	\$	\$
8	100	1	LS	Construction Staking	\$	\$
<b><u>8A</u></b>	<b><u>102</u></b>	<b><u>23</u></b>	<b><u>EA</u></b>	<b><u>Tree Protection</u></b>	\$	\$
9	105	1100	LF	Exclusion Fencing	\$	\$
10	02055 02350	1	LS	Site Work (includes demolition, excavation, grading, and drainage)	\$	\$
<b><u>10A</u></b>	<b><u>02145</u></b>	<b><u>1</u></b>	<b><u>LS</u></b>	<b><u>Sewer Bypassing</u></b>	\$	\$
11	02200	1	LS	Earthwork	\$	\$
12	02832	213	LF	Chain Link Fence and Gates	\$	\$
13	03100 03315	1	LS	Concrete Work	\$	\$
14	03200	1	LS	Reinforcement Steel	\$	\$
15	03300	1	LS	Cast-in-Place Structural Concrete	\$	\$
16	03310	1	LS	Cast-in-Place Sitework Concrete	\$	\$

*Proposal – Continued on next page*

*Memorial Park Wastewater Treatment Facilities Proposal – Continued*

<b>Item No.</b>	<b>Section No.</b>	<b>Estimated Quantity</b>	<b>Unit of Measure</b>	<b>Item Description</b>	<b>Item Price (In Figures)</b>	<b>Total (In Figures)</b>
17	04232	470	SF	CMU Control Building	\$	\$
18	05501 05910	1	LS	Anchor Bolts and Anchoring Devices	\$	\$
19	05520	161	LF	Aluminum Handrailing	\$	\$
20	08110 - 08900	1	LS	Doors and Windows	\$	\$
21	10405	13	EA	Signs	\$	\$
22	10523	1	EA	Fire Extinguishers	\$	\$
23	11316	1	LS	Bar Screen	\$	\$
24	11378	1	LS	Sequencing Batch Reactor	\$	\$
<b><u>24A</u></b>	<b><u>11519</u></b>	<b><u>1</u></b>	<b><u>EA</u></b>	<b><u>Air Powered Mixers</u></b>	\$	\$
25	11535A	2	EA	Submersible Cutter Pumps	\$	\$
26	11535B	2	EA	Submersible Grinder Pumps	\$	\$
27	13122	1	LS	Pre-Engineered Metal Canopy	\$	\$
28	13250	1	LS	FRP Chemical Building	\$	\$
29	13300	1	LS	FRP Tank Covers	\$	\$
30	15090 - 15190	1	LS	Utility Piping and Appurtenances	\$	\$
31	15062	50	LF	Ductile Iron Pipe	\$	\$
32	15064	590	LF	PVC Pipe	\$	\$
33	16010 - 16450	1	LS	Electrical and Wires	\$	\$
<b>TOTAL</b>						\$

Notes: (F) Final Pay Quantities - See Section 9-1.015, "Final Pay Items," of the Standard Specifications.

(S) Specialty Items - As defined in Section 8-1.01, "Subcontracting," of the Standard Specifications.