



SAN LUIS OBISPO COUNTY  
**DEPARTMENT OF PUBLIC WORKS**

Paavo Ogren, Director

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October 18, 2013

**FAX AND EMAIL &  
ATTACH TO CONTRACT**

**ADDENDUM NO. 1 TO  
LOS OSOS WASTEWATER PROJECT  
LOS OSOS WATER RECYCLING FACILITY  
LOS OSOS, CA  
CONTRACT NO. 300448.08.02**

**The final day, time and location for submittal of Bid remain unchanged:  
Date / Time: Thursday, November 21, 2013 at 3:00 p.m.**

At: Office of the County Clerk  
1055 Monterey Street, Room D-120  
San Luis Obispo, California 93408

Certain revisions are hereby incorporated into the Bidding Documents for the subject project. These revisions are as follows:

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Division 11, Equipment, is hereby amended as follows:

- 1) Include pages 11246-1 through 11246-18, attached to this Addendum No. 1, in their entirety. This Specification Section 11246, Polymer Blending and Feed Equipment-Liquid, shall be made part of Volume 1B, and goes after page 11245-11.

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Appendices, Appendix C, Storm Water Pollution Prevention Plan, is hereby amended as follows:

- 1) Delete the first page of Appendix C in its entirety and replace with the "Notice of Intent" page issued by the State Water Resources Control Board for this project, WDID No. 3 40C368004, that is attached to this Addendum No. 1.

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Appendices, Appendix I, Wage Determinations, is hereby amended as follows:

- 2) Delete contents of Appendix I, Wage Determinations, in their entirety and replace with the new pages I-1 through I-23 attached to this Addendum No. 1.
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All bidders shall acknowledge acceptance of this correction notice. **PLEASE FAX TO US, TODAY, A SIGNED COPY OF THIS SHEET INDICATING CONFIRMATION OF RECEIPT OF THIS ADDENDUM (FAX (805) 781-1229).** If you are unable to read the fax, please call Rosalyn Piza in the Public Works Department at (805) 781-5252.

*JBW*  


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PAAVO OGREN  
Director of Public Works

File: Contract No. 300448.08.02

**ACKNOWLEDGMENT**

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

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## SECTION 11246

### POLYMER BLENDING AND FEED EQUIPMENT-LIQUID

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section includes: Requirements for provision of complete and operational automatic polymer blending and feed systems to handle dilution of concentrated polymer and delivery of activated polymer to dewatering screw presses and secondary treatment.
1. All systems shall include vendor control panels and all drivers and controllers necessary for a complete and operational automated system.
  2. System for secondary treatment shall include a polymer storage tank to which the polymer blenders shall supply a dilute polymer solution at a setpoint concentration while also maintaining a setpoint range for operating level within the storage tank.
- B. Tag numbers:
1. Dewatering Polymer Blender No. 1: 50-PBU-451.
  2. Dewatering Polymer Blender No. 2: 50-PBU-452.
  3. Secondary Treatment Polymer Feed System: 50-PBU-453.
- C. Related sections:
1. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
  2. It is the CONTRACTOR's responsibility for scheduling and coordinating the Work of subcontractors, suppliers, and other individuals or entities performing or furnishing any of CONTRACTOR's Work.
  3. The following Sections are related to the Work described in this Section. This list of Related Sections is provided for convenience only and is not intended to excuse or otherwise diminish the duty of the CONTRACTOR to see that the completed Work complies accurately with the Contract Documents.
    - a. Section 01410 - Code Requirements.
    - b. Section 01660 - Testing, Training, and Commissioning.
    - c. Section 01740 - Warranties and Bonds.
    - d. Section 01757 - Disinfection.
    - e. Section 01770 - Closeout Procedures.
    - f. Section 01782 - Operation and Maintenance Data.
    - g. Section 09960 - High-Performance Coatings.
    - h. Section 10400 - Signage.
    - i. Section 11380 - Dewatering Screw Press.
    - j. Section 15050 - Common Work Results for Mechanical Equipment.
    - k. Section 15958 - Mechanical Equipment Testing.
    - l. Section 17101-51 - Process Control Strategy - Solids Dewatering.
    - m. Section 17710 - Control Systems - Panels, Enclosures, and Panel Components.

## 1.02 REFERENCES

- A. CSA International (CSA).
- B. National Electrical Manufacturers Association (NEMA):
  - 1. 250 - Enclosures for Electrical Equipment (1000 V Maximum).
- C. Underwriters Laboratories, Inc. (UL).

## 1.03 DEFINITIONS

- A. NEMA:
  - 1. NEMA Type 4 enclosure in accordance with NEMA 250.
  - 2. NEMA Type 4X enclosure in accordance with NEMA 250.

## 1.04 SYSTEM DESCRIPTION

- A. Design requirements:
  - 1. Provide equipment packages capable of automatically metering, diluting, blending, activating, and feeding liquid polymer and water. Activate concentrated emulsion polymer in a multi-zone Hydro-Mechanical or hydraulic mixing vessel with a tapered mixing regime.
    - a. For secondary treatment system, provide integral solution metering pumps to deliver the solution from the batching tank to the point of application.
- B. Pre-assemble and shop-test system to ensure compliance with pressure and operational requirements.
- C. Design criteria:
  - 1. Thickened Waste Activated Sludge Dewatering:
    - a. Polymer type: Emulsion.
    - b. Neat Polymer Viscosity Range (centipoise): 500 – 2,000.
    - c. Polymer activity (percent active): 40 – 55.
    - d. Active polymer volumetric consumption: 0.8-4 gallons per hour.
    - e. Final percent solution desired: Normally 0.50 with a range up to 1.0.
    - f. Percent solids of waste activated sludge feed: 0.5 - 2.0.
  - 2. Secondary Treatment Polymer:
    - a. Polymer type: Emulsion.
    - b. Neat Polymer Viscosity Range (centipoise): 300 – 2,000.
    - c. Polymer activity (percent active): 40 – 55.
    - d. Active polymer volumetric consumption: 0.005-0.31 gallons per hour.
    - e. Final percent solution desired: Normally 0.50 with a range up to 1.0.
  - 3. Dilution Water: Design system for use with either potable or non-potable dilution water.
    - a. Sludge Dewatering:
      - 1) Dilution water flow rate range: 150 to 1000 gallons per hour.
    - b. Secondary Treatment:
      - 1) Dilution water flow rate range: 30 to 300 gallons per hour.
    - c. Maximum water pressure available for dilution water is 50 pounds per square inch at the polymer blender skid.

<b>Dewatering Polymer Pressure Requirements</b>		
Screw press manufacturer/model	FKC Model BHX 1100 x 6000L	Huber Model RoS3 Q800
Polymer injection chamber discharge pressure requirement	10 psi	45 psi
Dilution water differential pressure required	35 psi	35 psi
Anticipated backpressure on blending unit	15 psi	15 psi
Minimum dilution water pressure required	60 psi	95 psi

- d. The manufacturer will provide integral, skid mounted booster pumps and appurtenances as a part of a fully operational, pre-packaged system to accommodate any differential pressure above the available dilution water pressure to meet the requirements of the screw press model selected as shown in the above table.
  - 1) Pressure regulating valve with stainless steel, liquid filled pressure gauges to monitor and control the pressure from the booster pump.
  - 2) Booster pump to be controlled by polymer blending unit and must be able to fit in area indicated on the Drawings without any interferences or changes to the specified system.
4. Neat Polymer Metering Pump:
  - a. General:
    - 1) Dewatering:
      - a) Each blender unit shall have one (1) progressive cavity neat polymer metering pump integrally mounted on the system skid in a configuration that provides access and is easy to maintain.
    - 2) Secondary Treatment:
      - a) Each batch system shall consist of two neat polymer feed pumps, one polymer blender, one polymer solution tank, and two polymer solution pumps.
  - b. Dewatering:
    - 1) Type: Progressive Cavity.
    - 2) Output range: 0.8 to 4 gallons per hour.
    - 3) Minimum pump motor horsepower: 0.5.
  - c. Secondary Treatment:
    - 1) Type: Peristaltic.
    - 2) Output range: 0.025 to 0.5 gallons per hour.
5. Mixing motor:
  - a. Dewatering:
    - 1) Minimum mixing motor horsepower: 1/2 horsepower, wash-down motor.
  - b. Secondary Treatment:
    - 1) Not required.
    - 2) Provide a non-mechanical hydrodynamic mixing device specifically designed to polymer.

6. Polymer Solution Pump:
  - a. Secondary Treatment:
    - 1) Type: Peristaltic.
    - 2) Approximate output range: 1 to 62 gallons per hour.

## **1.05 SUBMITTALS**

- A. Product data:
  1. Submit data completely describing product, including plan and section views, and listing of all components and materials of construction.
- B. Shop drawings:
  1. Submit detailed specifications and shop drawings with both isometric and orthogonal views of the proposed installation, including dimensions, weights, and complete parts list.
  2. Submit wiring, control schematics, and control logic diagrams for all electrical and control components furnished.
  3. Submit hydraulic characteristics of the mixer.
- C. Manufacturer's installation instructions:
  1. Installation and checkout instructions including lubrication and initial start-up procedures.
  2. Do not install equipment until all installation instructions have been supplied.
- D. Operations and Maintenance Manuals: As specified in Section 01782.

## **1.06 QUALITY ASSURANCE**

- A. Manufacturer's qualifications:
  1. Manufacturer must have at least 5 years experience in the design and manufacture of the equipment, and supply a list of not less than 10 operating installations as evidence of meeting the experience requirement.
    - a. Multiple units at a plant shall be considered as one installation toward meeting the experience requirements.
    - b. Fulfillment of the specified experience requirements shall be a condition of acceptance.
  2. Demonstrate to the satisfaction of the ENGINEER that the quality is equal to equipment made by the manufacturers named in this Section.
- B. System to be pre-assembled and shop-tested to assure compliance with the operational requirements, as specified in Section 01660 and Section 15050.
- C. Regulatory requirements: In accordance with:
  1. Fire code as specified in Section 01410, especially Article 80 - Hazardous Materials.
  2. Building code as specified in Section 01410.
- D. Certifications: Furnish affidavit from manufacturer stating that the polymer feed systems have been tested and ready for installation as specified in Section 01660.

## **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. As specified in Section 15050.

## 1.08 WARRANTY

- A. System shall be covered by a 2-year warranty against defects in materials and workmanship.
  - 1. Warranty period shall commence from the date specified in Section 01740.
  - 2. In addition, system shall be subject to the following provisions:
    - a. If OWNER is dissatisfied with system performance within 30 days of start-up by manufacturer's authorized representative, system may be returned for full refund, provided system has received reasonable use and care.
    - b. If OWNER and manufacturer's authorized representative determine, at time of start-up, that the system is improperly sized for the application, or if another system by the same manufacturer would be more suitable for any reason, the system will be exchanged at no penalty.
      - 1) OWNER will be charged or credited only the difference between the original and replacement systems, plus costs of shipping and handling.
      - 2) OWNER will not be billed for restocking the original system, nor for the second visit by the representative to start-up the replacement.
  - 3. The polymer blending mixing chamber shall be warranted for the life of the system to be free of defects in workmanship or materials.
    - a. This extended warranty shall not apply if the damage is caused by freezing or other weather related damage or over-pressure.
    - b. The polymer blending mixing chamber shall be warranted against failure due to mixing chamber plugging for any reason.
    - c. If the mixing chamber plugs a replacement mixing chamber will be provided at no cost to the OWNER.
    - d. This additional warranty does not cover the replacement of seals or motors, where applicable.
    - e. The warranty shall apply regardless whether potable or non-potable water is used.

## 1.09 MAINTENANCE

- A. As specified in Section 15050.
- B. Provide 1 complete set of special tools needed to assemble and disassemble the system.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. One of the following or equal:
  - 1. Dewatering:
    - a. VeloDyne, VeloBlend VM-P Series modified as specified in this Section.
    - b. Fluid Dynamics, DynaBlend series modified as specified in this Section.
  - 2. Secondary Treatment:
    - a. Fluid Dynamics, AIB/L6S batching system modified as specified in this Section.
    - b. VeloDyne, similar model modified as specified in this Section.

## 2.02 IDENTIFICATION

- A. Identify each unit of equipment with a corrosion resistant nameplate, securely affixed in a conspicuous place.
  - 1. Nameplate information to include equipment model number, serial number, manufacturer's name, and location.

## 2.03 MATERIALS

- A. General:
  - 1. Turbine and shaft of mechanical mixers shall be Type 316 stainless steel.
  - 2. Neat Polymer Check Valve:
    - a. Body shall be constructed of PVC or Teflon<sup>®</sup> with Viton<sup>®</sup> seals.
    - b. Valve poppet and spring shall be stainless steel.
  - 3. System shall be constructed with a Type 304 stainless steel chassis.
  - 4. Hardware shall be Type 304 stainless steel.
  - 5. Any components in contact with polymer or water shall be constructed of electroless nickel-plated brass, stainless steel, or an inert plastic.

## 2.04 EQUIPMENT – SLUDGE DEWATERING

- A. Mixing requirements:
  - 1. Mixing energy shall be provided by a variable speed stainless steel or bronze mixing impeller. Plastic impellers are not acceptable.
    - a. The mixer impeller shall be controlled by a SCR or VFD controller and driven by a wash down duty motor.
    - b. The mixer drive shaft shall be sealed by a mechanical seal, which shall have an integrally mounted and factory plumbed seal mounted and flushing valve. The seal shall be easily accessible for replacement.
  - 2. Mixing system shall be specifically designed to invert, disperse, and activate in solution emulsion and dispersion polymers with viscosities from 200 to 6,000 cps.
  - 3. The mixing system shall be designed to effectively induce high, non-damaging mixing energy over the systems full flow range without damage to the polymer's molecular structure.
- B. Mixing chamber:
  - 1. Mixing chamber shall be clear Lexan to view the mixing action and blending effectiveness.
  - 2. Mixing chamber shall have a maximum rated pressure of 100 pounds per square inch.
  - 3. Provide a brass mixing chamber pressure relief valve and drain valve.
  - 4. All bearings shall be external from the mixing chamber.
  - 5. Motor: 1/2 horsepower, 90 VDC, 1,750 revolutions per minute, wash-down duty.
  - 6. Neat polymer check valve:
    - a. Specifically designed to isolate neat polymer from dilution water.
    - b. Readily accessible for cleaning without the use of tools.
    - c. Installation inside the mixing chamber not allowed.
    - d. Mixing chamber disassembly for access not allowed.
    - e. Conventional ball type check valves, valves that rely on ball seals, and/or check valves installed inside the missing chamber, or which require mixing chamber disassembly for servicing not allowed.

- C. Dilution water system:
1. The system shall include an adjustable pressure regulator to reduce plant water pressure down to the allowable system pressure.
  2. The dilution water inlet assembly shall be ANSI 150 lb flange connection.
  3. The unit shall have an electric solenoid valve for on/off control of total dilution water flow.
  4. The unit shall have a linear actuated variable rate control valve to automatically proportion water flow to polymer flow for polymer / water ratio control.
  5. Provide a 2-inch stainless steel liquid filled pressure gauge to monitor dilution water inlet pressure.
  6. The dilution water flow rate shall be monitored by paddle-type flow meters sized for the required dilution water flow ranges.
    - a. Flowmeters shall be equipped with rate adjusting automated valves, to measure water flow of the "primary dilution" and "post dilution," if supplied.
    - b. Water flow rate to be adjustable and displayed in the range as specified in this Section.
    - c. Configure flowmeters so that adjustment of one flow meter will not affect the flow through the other.
    - d. A union shall be provided on the flowmeter to allow easy removal for cleaning.
  7. Provide a Type NEMA Type 4X rated differential pressure switch.
    - a. The differential pressure switch shall have a cast aluminum housing and brass and stainless steel wetted parts.
    - b. Plastic pressure switches shall not be acceptable.
- D. Solution discharge system:
1. Pressure gauge:
    - a. Size: 2 inches.
    - b. Materials: Type 304 stainless steel.
    - c. Liquid filled with diaphragm seal.
  2. Check valve:
    - a. Type: Swing check.
    - b. Materials: PVC and Viton<sup>®</sup>.
    - c. Size: Same size as the solution discharge piping.
- E. System skid:
1. Frame:
    - a. Material: Type 304 stainless steel.
      - 1) Mild steel not accepted.
    - b. Design: Easy access to all components.
  2. All piping rigidly supported.
  3. Pump suction mounting height not to exceed 5-inches from the bottom of the skid.
  4. The overall system dimensions shall not exceed 36 inches wide by 24 inches deep by 68 inches high for the Dewatering Polymer Blenders.
- F. Neat polymer metering pump:
1. General:
    - a. Each blender unit shall have one (1) positive displacement progressive cavity neat polymer metering pump integrally mounted on the system skid in a configuration that provides access and is easy to maintain.

- b. Capable of pumping polymer with apparent viscosities of up to 6,000 cps.
  - c. Capable of a 3.5-foot suction lift of polymer to ensure no loss of suction upon low storage tank levels.
  - d. The pump shall be 3 stages minimum to minimize slip.
  - e. The pump shall be seal packing type, mechanical seals shall not be used.
  - f. Metering pumps shall be capable of accurately metering the specified neat liquid polymers.
    - 1) Pump capacity adjustments shall give accurate and repeatable flows within 5 percent of calibrated values, and shall be free of drift during operation.
  - g. Manufacturer: Moyno, or equal
  - h. Materials of Construction:
    - 1) Type 316 stainless steel for all wetted components.
    - 2) Viton<sup>®</sup> stators.
    - 3) Stuffing box and seal type as recommended by polymer blending and feed equipment manufacturer for neat polymer service.
  - i. Gear reducers shall be provided to produce a maximum pump shaft speed of not more than 350 rpm.
  - j. Controllers: SCR motor controllers located in the vendor control panels.
2. Range: As Specified in PART 1 of this Specification Section.
3. Motor:
- a. TEFC 480 VAC inverter duty motor for pumps requiring variable frequency drives to achieve required turndown.
  - b. Dewatering: Minimum 0.5 horsepower, 90 VDC, 1,750 revolutions per minute, wash-down duty.

G. Accessories:

- 1. For each blender unit, provide a 2,000-mL calibration column.
  - a. Graduation:
    - 1) Minimum increments equal to 1 minute of drawdown at the maximum pump rate.
    - 2) Read in gallons per hour and millimeters.
  - b. Construction: Clear polyvinyl chloride.
  - c. Configuration:
    - 1) Nipple and plug for system operation without cylinder.
    - 2) Full port PVC ball valves having Viton<sup>®</sup> O-rings:
      - a) Locate 1 ball valve on the discharge of the calibration column.
      - b) Locate 1 ball valve on the neat polymer inlet pipe up stream of the calibration column discharge valve.
  - d. Assembly:
    - 1) Furnished and rigidly installed on polymer system skid.
    - 2) Use of piping for support is not acceptable.
  - e. Calibration: Calibrate for a 1-minute drawdown.
- 2. For each blender unit, provide a polymer flow sensor to monitor the metering pump rate and protect the pump from running dry.
  - a. Polymer flow sensor:
    - 1) Thermal type.
    - 2) All wetted parts Type 304 stainless steel.
    - 3) Mount on system skid with Type 304 stainless steel bracket.
    - 4) Mount with polymer piping is not acceptable.
- 3. For each blender unit, provide pressure relief valve:
  - a. Materials: PVC and Viton<sup>®</sup>.

- b. Location: Discharge line of the pump.
- c. Factory plumbed back to suction of the pump.
- 4. Pressure gauge:
  - a. Size: 2-inch.
  - b. Materials: Type 304 stainless steel.
  - c. Liquid filled with diaphragm seal.
  - d. Location: Discharge line of the pump.

## 2.05 EQUIPMENT – SECONDARY TREATMENT

### A. Mixing requirements:

- 1. Mixing energy shall be provided by either non-mechanical hydrodynamic blending device or a variable speed stainless steel or bronze mixing impeller. Plastic impellers are not acceptable.
  - a. The mixer impeller, if provided, shall be controlled by a SCR or VFD controller and driven by a wash down duty motor.
  - b. The mixer drive, if provided, shaft shall be sealed by a mechanical seal, which shall have an integrally mounted and factory plumbed seal mounted and flushing valve. The seal shall be easily accessible for replacement.
- 2. Mixing system shall be specifically designed to invert, disperse, and activate in solution emulsion and dispersion polymers with viscosities from 200 to 6,000 cps.
- 3. The mixing system shall be designed to effectively induce high, non-damaging mixing energy over the systems full flow range.

### B. Mixing chamber:

- 1. Minimum rated pressure of 100 pounds per square inch.
- 2. Equip with a brass or stainless steel mixing chamber pressure relief valve; brass or PVC drain valve. Plumb the drain valve to the floor with PVC piping.
- 3. All bearings, if required, shall be external from the mixing chamber.
- 4. Motor if required: 1/2 horsepower, 90 VDC, 1,750 revolutions per minute, wash-down duty.
- 5. Neat polymer check valve:
  - a. Specifically designed to isolate neat polymer from dilution water.
  - b. Readily accessible for cleaning without the use of tools.
  - c. Installed inside the mixing chamber not allowed.
  - d. Mixing chamber disassembly for access not allowed.
  - e. Conventional ball type check valves, valves that rely on ball seals, and/or check valves installed inside the missing chamber, or which require mixing chamber disassembly for servicing not allowed.
- 6. Dilution water variable orifice valve:
  - a. Stainless steel construction, needle valve.
  - b. PVC housing.

### C. Dilution water system:

- 1. The system shall include an adjustable pressure regulator to reduce plant water pressure down to the allowable system pressure.
- 2. The dilution water inlet assembly shall be ANSI 150 lb flange connection.
- 3. The unit shall have an electric solenoid valve for on/off control of total dilution water flow.
- 4. Provide a 2-inch stainless steel liquid filled pressure gauge to monitor dilution water inlet pressure.

5. The dilution water flow rate shall be monitored by rotometers sized for the required dilution water flow ranges.
    - a. Provide unions on the inlet and outlet of the flowmeters to facilitate removal for maintenance.
    - b. Flowmeters shall be equipped with rate adjusting valves, to measure water flow of the "primary dilution" and "post dilution," if supplied.
    - c. Water flow rate to be manually adjustable and displayed in the range as specified in this Section.
    - d. Configure flowmeters so that adjustment of 1 flow meter will not affect the flow through the other.
  6. Provide automatic flushing capability.
  7. Provide a Type NEMA Type 4X rated differential pressure switch.
    - a. The differential pressure switch shall have a cast aluminum housing and brass and stainless steel wetted parts.
    - b. Plastic pressure switches shall not be acceptable.
- D. Solution discharge system:
1. Pressure gauge:
    - a. Size: 2 inch.
    - b. Materials: Type 304 stainless steel.
    - c. Liquid filled with diaphragm seal.
  2. Check valve: Not required.
- E. System skid:
1. Frame:
    - a. Material: Type 304 stainless steel.
      - 1) Mild steel not accepted.
    - b. Design: Easy access to all components.
  2. All piping rigidly supported.
  3. Pump suction mounting height not to exceed 5-inches from the bottom of the skid.
  4. The overall system footprint shall not exceed 48 inches wide by 32 inches deep
- F. Neat polymer metering pump:
1. General:
    - a. Each unit shall have two neat polymer metering pumps. Pumps shall be positive displacement, peristaltic tubing type.
      - 1) Pump characteristics:
    - b. Capable of pumping polymer with apparent viscosities of up to 6,000 cps.
    - c. Metering pumps shall be capable of accurately metering the specified neat liquid polymers.
      - 1) Pump capacity adjustments shall give accurate and repeatable flows within 5 percent of calibrated values, and shall be free of drift during operation.
    - d. Manufacturer: Blue-White A100NV or equal.
    - e. Materials of Construction:
      - 1) Pump head and tubing compression surface: thermoplastic.
      - 2) Pump tubing: Tygothane or equal.
    - f. Integral Controller with LCD display on face of pump.

2. Flow Range: As Specified in PART 1 of this Specification Section.
    - a. Pump speed: adjustable from 5 to 100 percent via 4-20 MA signal or on face of pump.
- G. Polymer Solution Tank:
1. One 55-gallon capacity tank shall be provided to store polymer solution as a part of a batch system.
  2. Each tank shall be constructed of linear polyethylene or fiberglass.
  3. Include connections for pump suction/drain, solution inlet, and overflow. Plumb overflow to the floor, using PVC piping.
  4. Instruments:
    - a. Provide conductance type level probes.
    - b. Provide 1/2-inch diameter, 304 stainless steel probes for the following functions:
      - 1) Ground.
      - 2) Low Level: Blending System start.
      - 3) High Level: Blending System stop.
      - 4) Low Low Level: Timed function started at low level.
      - 5) High High Level.
- H. Polymer Solution Metering Pumps:
1. Provide two polymer solution meter pumps (one duty, one standby) for each system.
  2. Pump shall be positive displacement, peristaltic tubing type.
    - a. Manufacturer: Blue-White A4 or equal.
    - b. Materials of Construction:
      - 1) Pump head and tubing compression surface: thermoplastic.
      - 2) Pump tubing: Tygothane or equal.
    - c. Flow Range: As Specified in Part 1 of this Specification Section.
      - 1) Pump speed: adjustable from 5 to 100 percent via 4-20 MA signal or on face of pump.
  3. Installation:
    - a. Mount onto the system's stainless steel frame with a stainless steel bracket which positions the pump suction no more than 14 inches off the base to maintain ideal pump suction conditions. The pump shall also be mounted in such a way that the pump head is unobstructed and readily accessible for servicing.
    - b. Connect pump suction to the polymer solution tank.
- I. Accessories:
1. Calibration Columns:
    - a. For each neat polymer metering pump, provide a 500-mL calibration column.
    - b. For each polymer solution metering pump, provide a 4,000-mL calibration column.
    - c. Graduation:
      - 1) Minimum increments equal to 1 minute of drawdown at the maximum pump rate.
      - 2) Read in gallons per hour and millimeters.
    - d. Construction: Clear polyvinyl chloride.
    - e. Configuration:
      - 1) Nipple and plug for system operation without cylinder.

- 2) Full port PVC ball valves having Viton® O-rings:
  - a) Locate 1 ball valve on the discharge of the calibration column.
  - b) Locate 1 ball valve on the neat polymer inlet pipe up stream of the calibration column discharge valve.
- f. Assembly:
  - 1) Furnished and rigidly installed on polymer system skid.
  - 2) Use of piping for support is not acceptable.
- g. Calibration: Calibrate for a 30-second or 1-minute drawdown.
- 2. For each neat or solution metering pump, provide pressure relief valve:
  - a. Materials: PVC and Viton®.
  - b. Location: Discharge line of the pump.
  - c. Factory plumbed back to suction of the pump.
- 3. Pressure gauge:
  - a. Size: 2-1/2-inch.
  - b. Materials: Type 304 stainless steel.
  - c. Liquid filled with diaphragm seal.
  - d. Location: Discharge line of each neat or solution metering pump.

## 2.06 CONTROLS – SLUDGE DEWATERING

- A. General:
  - 1. Provide a vendor control panel at each unit for control of the polymer blender unit.
  - 2. The control panel enclosure and all electrical and instrumentation components shall conform to the requirements stated in the Contract Documents.
  - 3. Vendor control panels and all components shall be UL listed and labeled.
- B. Vendor control panel:
  - 1. Enclosures and control panel features:
    - a. Requirements: 120 VAC, 15 Amps maximum, 60 hertz.
    - b. Panel to have contacts as necessary to provide the control functions as indicated on the Drawings and as specified in this Section and in Sections 17100 and 17101-51.
    - c. NEMA Type 4X fiberglass reinforced plastic.
    - d. Panel shall be integrally mounted to polymer blending unit skid.
    - e. Panels shall be as specified in Section 17710 unless otherwise specified in this Section.
    - f. Panel shall be UL listed and shall be assembled in a UL listed facility.
    - g. Provide a manual disconnect switch to disconnect 120 VAC input power from each motor.
    - h. Mixing chamber motor:
      - 1) Motor starter.
      - 2) SCR controllers.
        - a) Remote 4-20 mA signal.
    - i. Neat polymer pump motor:
      - 1) Motor starter.
      - 2) SCR controllers:
        - a) Remote 4-20 mA signal.
    - j. The control panel shall not be less than 16 inches wide by 18 inches high by 8 inches deep to assure adequate room for components and cooling.
    - k. Provide a circuit breaker for main control circuit protection.
      - 1) Fuses shall not be used.

- l. All wires shall be numbered with heat shrink labels consistent with electrical schematics, adhesive labels shall not be used.
  - m. Provide component tag numbers consistent with electrical schematics.
  - n. Wires shall be neatly run in wire raceway.
  - o. Terminal blocks: Manufactures: The following or equal:
    - 1) Allen-Bradley J4 series.
  - p. Interconnecting conduit and fittings shall be rated NEMA Type 4X.
  - q. Provide an 8-foot power cord or a main power rotary disconnect switch.
  - r. Provide a laminated terminal block legend.
  - s. Provide electrical schematics inside control panel.
  - t. Interconnecting cable between each polymer unit and the control panel, 100 feet long.
  - u. "LOCAL/OFF/REMOTE" switch.
  - v. Post dilution, if required, to be controlled manually at the polymer blending unit.
  - w. System to include a loss of flow sensor which, sensing that dilution water flow has been interrupted, will place the polymer pump on standby and will restart it automatically when flow is restored.
2. CONTRACTOR responsible for coordination with suppliers of dewatering control panel, polymer system, and other trades.
  3. Selector switches and controls (30 millimeter switches):
    - a. System ON/OFF (reset)/REMOTE:
      - 1) In remote mode the system shall accept remote start/stop dry contacts and a 4-20mA metering pump control signal.
    - b. 1-turn potentiometer - mixer speed.
    - c. 10-turn potentiometer - progressive cavity metering pump control in HAND mode.
    - d. Booster pump ON/AUTO switch.
  4. Status/Alarm indicators (30mm LED lights):
    - a. Main power ON light.
    - b. LED display of metering pump rate.
    - c. Low water differential pressure alarm light.
    - d. Low polymer flow alarm light.
  5. Inputs (signals by others):
    - a. Remote Start/Stop (discrete dry contact).
    - b. Pacing signal based on process flow (4-20mA).
  6. Outputs:
    - a. System running (discrete dry contact).
    - b. Remote mode (discrete dry contact).
    - c. Common alarm (discrete dry contact).
    - d. Polymer pump rate (4-20mA).
    - e. Low water differential pressure.
    - f. Low polymer flow.

C. Pump protection module:

1. Supply each pump with a self-contained pump protection module.
2. 120 VAC, 1-phase, power supply.
3. Wired directly to the internal pump monitoring devices, including:
  - a. Stator thermal switches.
  - b. Moisture detection in motor chamber.
  - c. Lower bearing temperature sensor.
  - d. Cable junction box moisture sensor.

- e. Stator chamber moisture sensor.
- f. Oil chamber moisture sensor.
- 4. Provide the following output contacts:
  - a. Stator thermal switches.
  - b. Moisture detection in motor chamber.
  - c. Cable junction box moisture sensor.
  - d. Stator chamber moisture sensor.
  - e. Oil chamber moisture sensor.
- 5. Provide the following 4-20mA outputs:
  - a. Lower bearing temperature sensor.

## 2.07 CONTROLS – SECONDARY TREATMENT

### A. General:

- 1. Provide a vendor control panel for control of the polymer batching and solution pumping system.
- 2. The control panel enclosure and all electrical and instrumentation components shall conform to the requirements stated in the Contract Documents.
- 3. Vendor control panels and all components shall be UL listed and labeled.
- 4. Polymer dilution ration shall be manually adjustable.

### B. Vendor control panel:

- 1. Enclosures and control panel features:
  - a. Requirements: 120 VAC, 15 Amps maximum, 60 hertz.
  - b. Panel to have contacts as necessary to provide the control functions as indicated on the Drawings and as specified in this Section and in Sections 17100 and 17101.
  - c. NEMA Type 4X stainless steel.
  - d. Panel shall be integrally mounted to the skid.
  - e. Panels shall be as specified in Section 17710 unless otherwise specified in this Section.
  - f. Panel shall be UL listed and shall be assembled in a UL listed facility.
  - g. Provide a manual disconnect switch to disconnect 120 VAC input power from each motor.
  - h. Mixing chamber motor if required:
    - 1) Motor starter.
    - 2) SCR controllers.
      - a) Remote 4-20 mA signal.
  - i. Neat polymer pump motor:
    - 1) Motor starter.
    - 2) Integral pump controller.
  - j. The control panel shall not be less than 16 inches wide by 18 inches high by 8 inches deep to assure adequate room for components and cooling.
  - k. Provide a circuit breaker for main control circuit protection.
    - 1) Fuses shall not be used.
  - l. All wires shall be numbered with heat shrink labels consistent with electrical schematics, adhesive labels shall not be used.
  - m. Provide component tag numbers consistent with electrical schematics.
  - n. Wires shall be neatly run in wire raceway.
  - o. Terminal blocks: Manufactures: The following or equal:
    - 1) Allen-Bradley J4 series.
  - p. Interconnecting conduit and fittings shall be rated NEMA Type 4X.

- q. Provide an 8-foot power cord or a main power rotary disconnect switch.
  - r. Provide a laminated terminal block legend.
  - s. Provide electrical schematics inside control panel.
  - t. Interconnecting cable between each unit and the control panel, 100 feet long.
  - u. Automatic flushing capability.
  - v. Post dilution, if required, to be controlled manually at the polymer blending unit.
  - w. System to include a loss of flow sensor or a differential pressure switch which, sensing that dilution water flow has been interrupted, will place the polymer pump on standby and will restart it automatically when flow is restored.
2. CONTRACTOR responsible for coordination with suppliers of secondary polymer control panel, polymer system, and other trades.
  3. Selector switches and controls (30 millimeter switches):
    - a. Neat polymer metering pumps:
      - 1) LOCAL/OFF/LEVEL CONTROL switch.
      - 2) Duty/standby selector switch.
    - b. Polymer solution pumps
      - 1) System LOCAL/OFF (reset)/REMOTE switch:
        - a) In remote mode the system shall accept remote on/off dry contacts and a 4-20mA solution metering pump control signal.
      - 2) Duty/standby selector switch.
    - c. 1-turn potentiometer - mixer speed if required.
  4. Status/Alarm indicators (30mm LED lights):
    - a. System running light.
    - b. LED display of solution metering pump rate on the pump.
    - c. Low water differential pressure alarm light.
    - d. High high batching tank level alarm.
  5. Inputs (signals by others):
    - a. Remote On/Off (discrete dry contact).
    - b. Pacing signal based on process flow (4-20mA).
  6. Outputs:
    - a. System running (discrete dry contact).
    - b. Remote mode (discrete dry contact).
    - c. Common alarm (discrete dry contact).
    - d. Polymer solution metering pump rate (4-20mA).

## 2.08 SOURCE QUALITY CONTROL

- A. Witnessing: Source or factory testing shall be witnessed by the ENGINEER or OWNER when scheduled; provide advanced notice of source testing as specified in Section 15958.
- B. Equipment performance test: Test level as scheduled; test as specified in Section 15958.
- C. Vibration test: Test level as scheduled; test as specified in Section 15958.
- D. Noise test: Test level as scheduled; test as specified in Section 15958.

- E. Variable frequency drive and motor factory tests: Test as specified in the variable frequency drive section.
- F. Hydrostatic pressure tests: As specified for components in this Section.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. As specified in Section 15050.

#### **3.02 INSTALLATION**

- A. Polymer feed systems shall be installed under the direction of the system supplier in strict conformance with the manufacturer's installation instructions and with favorable review shop drawings.
- B. Checkout of final installation, start-up, calibration, and instruction of operating personnel shall be performed by an authorized representative of the manufacturer.
- C. Alignment of piping may vary from that indicated on the Drawings.
  - 1. Upon acceptance by the ENGINEER, align piping to suit the equipment furnished, without additional cost to OWNER.
- D. CONTRACTOR to flush out potable water line until water discharged from line is clear and free of debris, before conducting disinfection of the line as specified in Section 01757.
- E. CONTRACTOR to avoid exposing neat polymer lines to water at any point of the system.

#### **3.03 IDENTIFICATION**

- A. Identification of the health, flammability, and reactivity of hazardous materials shall be affixed to each chemical storage tote, as specified in Section 10400.

#### **3.04 FIELD COATING**

- A. Pumps, piping, valves, and accessories: Field coat as specified in Section 09960.

#### **3.05 TESTING**

- A. Functional testing of the entire polymer feed system to be conducted following installation and cleaning of the polymer blending units.
- B. Testing to be conducted by the CONTRACTOR and the manufacturer's representatives in the presence of the ENGINEER to demonstrate that equipment is capable of performing its specified function in a satisfactory manner without mechanical or electrical defects, binding, or operational difficulties.
- C. Excessive vibration or noise shall be corrected, as specified in Section 15050.
- D. Verify that all connections are watertight.

- E. Accuracy of all polymer feed components shall be demonstrated and brought within the limits specified in this Section.
- F. During testing, CONTRACTOR shall make all final adjustments necessary to place equipment in satisfactory working order.
- G. Test and calibrate all controls, switches, automatic valves, and other instrumentation and control equipment associated with the polymer feed system specified, in accordance with the manufacturer's printed instruction over the full operating range of the equipment.
- H. Provide certified test report as specified in Section 01660.
- I. Coordinate testing with functional testing of other associated equipment.

### **3.06 FIELD SERVICES AND TRAINING**

- A. Provide a factory trained representative from the polymer feed system manufacturer, after installation, to thoroughly inspect chemical feed systems, place them in operation, and make necessary adjustments.
  - 1. The polymer blending/batching and feed systems, associated equipment, and appurtenances shall be installed under the direction of the system supplier in strict conformance with the manufacturer's installation instructions and with favorable review of shop drawings. Checkout of final installation, start-up, calibration, and instruction of operating personnel shall be performed by an authorized representative of the manufacturer.
  - 2. Manufacturer will furnish one factory-trained and qualified technician for a total of 12 days during 4 separate trips to the jobsite to assist in installation inspection, start-up supervision, and operator training. The days shown do not include travel days.
- B. Training as defined below:
  - 1. The manufacturer shall provide the services of a factory-trained and qualified technician to provide a minimum of 16 hours on site "hands on" training to the OWNER's personnel in accordance with Section 01660 and the requirements specified in this Section. The manufacturer shall submit a course outline plan three months before training starts, with proposed class material and class schedule to the OWNER for approval. Training will begin only if the class material and class schedule have been reviewed and approved by the OWNER.
  - 2. Training will begin only after at least one system associated with secondary treatment and one system associated with dewatering have passed the performance test, have been started-up, and have provided beneficial use to the OWNER.
    - a. Subjects of instruction shall include the following:
      - 1) Start-up and shutdown procedures.
      - 2) Troubleshooting.
      - 3) System operation.
      - 4) Operating adjustments for performance optimization.
      - 5) Preventative mechanical and electrical maintenance.
      - 6) Removal and replacement of system components.
      - 7) Mechanical and electrical maintenance procedures.
      - 8) Emergency procedures.

- 9) Record keeping.
- 10) Mechanical unit function and description.
- 11) Variable frequency drives and SCR controllers.
- 12) System controls.
- b. The training shall be provided in 8-hour days with a 1-hour lunch break during regular workdays, Monday through Friday, except holidays. A list of County holidays is available upon request.
- c. Training sessions will be videotaped by the OWNER.
- 3. The manufacturer shall also provide 2 copies of the ENGINEER-approved Operations and Maintenance (O&M) Manuals 30 days prior to the training sessions.
- C. Post-start-up field visit:
  - 1. The manufacturer shall coordinate with OWNER to provide one Post-Start-Up Field Visit within 90 days after all polymer blending and feed systems have passed the performance test, have been started-up, and have provided beneficial use to the OWNER.
  - 2. The manufacturer shall furnish the services of a factory-trained and qualified technician experienced in the operation of polymer blending and feed systems of the same size and capacity as that installed at the OWNER's facility for a post-start-up field visit. The post-start-up field visit will include the technician being on site for a minimum of 8 hours.

### **3.07 DEMONSTRATION**

- A. Provide system start-up as specified in Section 01770.

END OF SECTION



State Water Resources Control Board  
**NOTICE OF INTENT**  
 GENERAL PERMIT TO DISCHARGE STORM WATER  
 ASSOCIATED WITH CONSTRUCTION ACTIVITY  
 (WQ ORDER No. 2009-0009-DWQ)



**WDID:** 3 40C368004 **Risk Level:** Level2

**Property Owner Information** **Type:** County Agency

Name: San Luis Obispo County Public Works1	Contact Name: Dave Flynn
Address: County Government Center	Title: Deputy Director Public Work
Address 2: Room 207	Phone #: 805-781-5252
City/State/Zip: San Luis Obispo CA 93408	Email: dflynn@co.slo.ca.us

**Contractor/Developer Information**

Name: San Luis Obispo County Public Works1	Contact Name: Dave Flynn
Address: County Government Center	Title: Deputy Director Public Work
Address 2: Room 207	Phone #: 805-781-5252
City/State/Zip: San Luis Obispo CA 93408	Email: dflynn@co.slo.ca.us

**Construction Site Information**

Site Name: Los Osos Water Recycling Facility	Contact Name: Dave Flynn
Address: 2198 Los Osos Valley Road	Title: Deputy Director Public Work
City/State/Zip: Los Osos CA 93402	Site Phone #: 805-781-5252
County: San Luis Obispo	Email: dflynn@co.slo.ca.us
Latitude: 35.308279      Longitude: -120.800708	
Total Size of Construction Area: 39.88	Construction Start: March 01, 2014
Total Area to be Disturbed: 20.07	Complete Grading: October 15, 2015
	Final Stabilization: October 15, 2015

**Risk Values**

R: 160.3	K: 0.24	LS: 1.86	Beneficial Uses/303(d): Yes
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Type of Construction:      \*Utility: Wastewater Treatment Plant

Receiving Water:      Los Osos Creek and Morro Bay

Qualified SWPPP Developer: Robert Carnes Certification #: 00161

RWQCB Jurisdiction: Region 3 - Central Coast

Phone: 805-549-3147 Email: r3\_stormwater@waterboards.ca.gov

**Certification**

Name Jeff Werst	Date: September 18, 2013
Title: Design Division Manager	

General Decision Number: CA130019 10/04/2013 CA19

Superseded General Decision Number: CA20120019

State: California

Construction Types: Building, Heavy (Heavy and Dredging) and Highway

County: San Luis Obispo County in California.

BUILDING, DREDGING (does not include hopper dredge work), HEAVY (does not include water well drilling, AND HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	01/04/2013
1	01/11/2013
2	02/08/2013
3	03/01/2013
4	03/08/2013
5	04/12/2013
6	05/10/2013
7	05/31/2013
8	06/07/2013
9	07/05/2013
10	07/19/2013
11	08/09/2013
12	08/30/2013
13	09/06/2013
14	09/13/2013
15	09/20/2013
16	09/27/2013
17	10/04/2013

ASBE0005-002 07/01/2013

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems).....	\$ 34.51	18.55
Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls, floors, ceilings and curtain walls).....	\$ 24.34	16.09

ASBE0005-004 06/24/2013

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging		

and disposing of all  
insulation materials from  
mechanical systems, whether  
they contain asbestos or not)....\$ 16.95 10.23

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BOIL0092-004 10/01/2012

Area within a 25 mile radius of City of Santa Maria

	Rates	Fringes
BOILERMAKER.....	\$ 41.17	28.27

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BOIL0549-007 01/01/2013

Remainder of County outside a 25 mile radius of City of Santa Maria

	Rates	Fringes
BOILERMAKER.....	\$ 38.37	31.32

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\* BRCA0004-006 05/01/2013

	Rates	Fringes
BRICKLAYER; MARBLE SETTER.....	\$ 36.05	12.71

\*The wage scale for prevailing wage projects performed in Blythe, China lake, Death Valley, Fort Irwin, Twenty-Nine Palms, Needles and 1-15 corridor (Barstow to the Nevada State Line) will be Three Dollars (\$3.00) above the standard San Bernardino/Riverside County hourly wage rate

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BRCA0018-008 06/01/2012

	Rates	Fringes
MARBLE FINISHER.....	\$ 27.04	10.66
TILE FINISHER.....	\$ 22.37	9.19

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BRCA0018-011 06/01/2012

	Rates	Fringes
TILE LAYER.....	\$ 33.55	13.55

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CARP0409-001 07/01/2010

	Rates	Fringes
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CARPENTER

(1) Carpenter, Cabinet Installer, Insulation Installer, Hardwood Floor Worker and acoustical installer.....	\$ 37.35	11.08
(2) Millwright.....	\$ 37.85	11.08
(3) Piledrivermen/Derrick Bargeman, Bridge or Dock Carpenter, Heavy Framer, Rock Bargeman or Scowman, Rockslinger, Shingler		

(Commercial).....	\$ 37.48	11.08
(4) Pneumatic Nailer, Power Stapler.....	\$ 37.60	11.08
(5) Sawfiler.....	\$ 37.44	11.08
(6) Scaffold Builder.....	\$ 28.55	11.08
(7) Table Power Saw Operator.....	\$ 37.45	11.08

FOOTNOTE: Work of forming in the construction of open cut sewers or storm drains, on operations in which horizontal lagging is used in conjunction with steel H-Beams driven or placed in pre- drilled holes, for that portion of a lagged trench against which concrete is poured, namely, as a substitute for back forms (which work is performed by piledrivers): \$0.13 per hour additional.

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 CARP0409-005 07/01/2010

	Rates	Fringes
Drywall		
DRYWALL INSTALLER/LATHER....	\$ 37.35	11.08
STOCKER/SCRAPPER.....	\$ 10.00	6.67

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 CARP0409-008 08/01/2010

	Rates	Fringes
Modular Furniture Installer.....	\$ 17.00	7.41

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 ELEC0011-002 11/26/2012

COMMUNICATIONS AND SYSTEMS WORK

	Rates	Fringes
Communications System		
Installer.....	\$ 27.25	12.25
Technician.....	\$ 29.05	12.30

SCOPE OF WORK:

Installation, testing, service and maintenance of systems utilizing the transmission and/or transference of voice, sound, vision and digital for commercial, educational, security and entertainment purposes for the following: TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multi-media, multiplex, nurse call systems, radio page, school intercom and sound, burglar alarms, fire alarm (see last paragraph below) and low voltage master clock systems in commercial buildings. Communication Systems that transmit or receive information and/or control systems that are intrinsic to the above listed systems; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding all other data systems or multiple systems which include control function or power supply; excluding installation of raceway systems, conduit systems, line voltage work, and energy management systems. Does not cover work performed at China Lake Naval Ordnance Test Station. Fire alarm work shall be performed at the current inside wireman total cost package.

ELEC0639-001 01/01/2013

	Rates	Fringes
Electricians		
Wireman/Technician.....	\$ 37.20	17.95

FOOTNOTES:

CABLE SPLICER: 10% additional per hour above Wireman/Technician basic hourly rate.

Work from trusses, swinging scaffolds, open ladders, scaffolds, bosun chairs, stacks or towers, where subject to a direct fall from the ground floor or support structure from a distance of fifty (50) feet to ninety (90) feet: to be paid time and one-half. Work from trusses, swinging scaffolds, open ladders, scaffolds, bosun chairs, stacks or towers, where subject to a direct fall from the ground floor or support structure from a distance over ninety (90) feet: to be paid double the regular straight time rate of pay. Where workers are required to work under compressed air or in areas where injurious gases, dust or fumes are present in amounts necessitating the use of gas masks or self-contained breathing apparatus (particle masks are not considered self-contained breathing apparatus) or where workers work on poles at a distance of seventy-five (75) feet or more from the ground: to be paid a bonus of straight time pay. This shall be at a minimum of one hour, and thereafter, each succeeding hour or fraction thereof shall constitute an hour at the bonus rate. Tunnel work: to be paid at the time and one-quarter hourly rate.

All employers may request workmen to report direct to a job within a free zone to include everything west of ten (10) miles east of Highway 101, as the crow flies, and then (10) miles north and south of Highway 46, as the crow flies, to the junction of Highway 41 and Highway 46. Everything outside of this area shall be paid at full subsistence provide said job is of five (5) days duration or more and provide there is storage on the job for the Employee's tools. The Employer will be responsible for loss of tools under such circumstances. (Road: The most direct route on a surfaced road).

On all jobs or projects outside the free zone, as stated above, Employees may be required to report to the job site in their own transportation at the regular starting time and remain on the job site until the regular quitting time and these shall be paid at thirty-eight dollars (\$38.00) per day or thirty-eight cents (\$0.38) per mile for each road mile from shop to job and job to shop (round trip). (Day worked shall mean at least four (4) hours on the job unless sent home on account of weather, emergency, sickness, or injury).

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ELEC1245-001 06/01/2012

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer..	\$ 48.95	14.05
(2) Equipment specialist (operates crawler		

tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment).....	\$ 39.09	12.97
(3) Groundman.....	\$ 29.91	12.70
(4) Powderman.....	\$ 43.71	13.15

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and day after Thanksgiving, Christmas Day

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 ELEV0008-003 01/01/2013

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 58.07	25.185

FOOTNOTE:

PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.  
 PAID HOLIDAYS: New Years Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

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 \* ENGI0012-003 08/26/2013

	Rates	Fringes
OPERATOR: Power Equipment (All Other Work)		
GROUP 1.....	\$ 38.20	21.10
GROUP 2.....	\$ 38.98	21.10
GROUP 3.....	\$ 39.27	21.10
GROUP 4.....	\$ 40.76	21.10
GROUP 5.....	\$ 41.86	21.10
GROUP 6.....	\$ 40.98	21.10
GROUP 8.....	\$ 41.09	21.10
GROUP 9.....	\$ 42.19	21.10
GROUP 10.....	\$ 41.21	21.10
GROUP 11.....	\$ 42.31	21.10
GROUP 12.....	\$ 41.38	21.10
GROUP 13.....	\$ 41.48	21.10
GROUP 14.....	\$ 41.51	21.10
GROUP 15.....	\$ 41.59	21.10
GROUP 16.....	\$ 41.71	21.10
GROUP 17.....	\$ 41.88	21.10
GROUP 18.....	\$ 41.98	21.10
GROUP 19.....	\$ 42.09	21.10
GROUP 20.....	\$ 42.21	21.10
GROUP 21.....	\$ 42.38	21.10
GROUP 22.....	\$ 42.48	21.10
GROUP 23.....	\$ 42.59	21.10
GROUP 24.....	\$ 42.71	21.10
GROUP 25.....	\$ 42.88	21.10
OPERATOR: Power Equipment (Cranes, Piledriving & Hoisting)		
GROUP 1.....	\$ 39.55	21.10
GROUP 2.....	\$ 40.33	21.10
GROUP 3.....	\$ 40.62	21.10

GROUP 4.....	\$ 40.76	21.10
GROUP 5.....	\$ 40.98	21.10
GROUP 6.....	\$ 41.09	21.10
GROUP 7.....	\$ 41.21	21.10
GROUP 8.....	\$ 41.38	21.10
GROUP 9.....	\$ 41.55	21.10
GROUP 10.....	\$ 42.55	21.10
GROUP 11.....	\$ 43.55	21.10
GROUP 12.....	\$ 44.55	21.10
GROUP 13.....	\$ 45.55	21.10
OPERATOR: Power Equipment		
(Tunnel Work)		
GROUP 1.....	\$ 40.05	21.10
GROUP 2.....	\$ 40.83	21.10
GROUP 3.....	\$ 41.12	21.10
GROUP 4.....	\$ 41.26	21.10
GROUP 5.....	\$ 41.48	21.10
GROUP 6.....	\$ 41.59	21.10
GROUP 7.....	\$ 41.71	21.10

PREMIUM PAY:

\$3.75 per hour shall be paid on all Power Equipment Operator work on the following Military Bases: China Lake Naval Reserve, Vandenberg AFB, Point Arguello, Seely Naval Base, Fort Irwin, Nebo Annex Marine Base, Marine Corp Logistics Base Yermo, Edwards AFB, 29 Palms Marine Base and Camp Pendleton

Workers required to suit up and work in a hazardous material environment: \$2.00 per hour additional. Combination mixer and compressor operator on gunite work shall be classified as a concrete mobile mixer operator.

SEE ZONE DEFINITIONS AFTER CLASSIFICATIONS

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Bargeman; Brakeman; Compressor operator; Ditch Witch, with seat or similar type equipment; Elevator operator-inside; Engineer Oiler; Forklift operator (includes loed, lull or similar types under 5 tons; Generator operator; Generator, pump or compressor plant operator; Pump operator; Signalman; Switchman

GROUP 2: Asphalt-rubber plant operator (nurse tank operator); Concrete mixer operator-skip type; Conveyor operator; Fireman; Forklift operator (includes loed, lull or similar types over 5 tons; Hydrostatic pump operator; oiler crusher (asphalt or concrete plant); Petromat laydown machine; PJU side dum jack; Screening and conveyor machine operator (or similar types); Skiploader (wheel type up to 3/4 yd. without attachment); Tar pot fireman; Temporary heating plant operator; Trenching machine oiler

GROUP 3: Asphalt-rubber blend operator; Bobcat or similar type (Skid steer); Equipment greaser (rack); Ford Ferguson (with dragtype attachments); Helicopter radioman (ground); Stationary pipe wrapping and cleaning machine operator

GROUP 4: Asphalt plant fireman; Backhoe operator (mini-max or similar type); Boring machine operator; Boxman or mixerman (asphalt or concrete); Chip spreading machine operator; Concrete cleaning decontamination machine operator; Concrete Pump Operator (small portable); Drilling machine operator, small auger types (Texoma super economatic or

similar types - Hughes 100 or 200 or similar types - drilling depth of 30' maximum); Equipment greaser (grease truck); Guard rail post driver operator; Highline cableway signalman; Hydra-hammer-aero stomper; Micro Tunneling (above ground tunnel); Power concrete curing machine operator; Power concrete saw operator; Power-driven jumbo form setter operator; Power sweeper operator; Rock Wheel Saw/Trencher; Roller operator (compacting); Screed operator (asphalt or concrete); Trenching machine operator (up to 6 ft.); Vacuum or much truck

GROUP 5: Equipment Greaser (Grease Truck/Multi Shift).

GROUP 6: Articulating material hauler; Asphalt plant engineer; Batch plant operator; Bit sharpener; Concrete joint machine operator (canal and similar type); Concrete planer operator; Dandy digger; Deck engine operator; Derrickman (oilfield type); Drilling machine operator, bucket or auger types (Calweld 100 bucket or similar types - Watson 1000 auger or similar types - Texoma 330, 500 or 600 auger or similar types - drilling depth of 45' maximum); Drilling machine operator; Hydrographic seeder machine operator (straw, pulp or seed), Jackson track maintainer, or similar type; Kalamazoo Switch tamper, or similar type; Machine tool operator; Maginnis internal full slab vibrator, Mechanical berm, curb or gutter (concrete or asphalt); Mechanical finisher operator (concrete, Clary-Johnson-Bidwell or similar); Micro tunnel system (below ground); Pavement breaker operator (truck mounted); Road oil mixing machine operator; Roller operator (asphalt or finish), rubber-tired earth moving equipment (single engine, up to and including 25 yds. struck); Self-propelled tar pipelining machine operator; Skiploader operator (crawler and wheel type, over 3/4 yd. and up to and including 1-1/2 yds.); Slip form pump operator (power driven hydraulic lifting device for concrete forms); Tractor operator-bulldozer, tamper-scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types); Tugger hoist operator (1 drum); Ultra high pressure waterjet cutting tool system operator; Vacuum blasting machine operator

GROUP 8: Asphalt or concrete spreading operator (tamping or finishing); Asphalt paving machine operator (Barber Greene or similar type); Asphalt-rubber distribution operator; Backhoe operator (up to and including 3/4 yd.), small ford, Case or similar; Cast-in-place pipe laying machine operator; Combination mixer and compressor operator (gunite work); Compactor operator (self-propelled); Concrete mixer operator (paving); Crushing plant operator; Drill Doctor; Drilling machine operator, Bucket or auger types (Calweld 150 bucket or similar types - Watson 1500, 2000 2500 auger or similar types - Texoma 700, 800 auger or similar types - drilling depth of 60' maximum); Elevating grader operator; Grade checker; Gradall operator; Grouting machine operator; Heavy-duty repairman; Heavy equipment robotics operator; Kalamazoo balliste regulator or similar type; Kolman belt loader and similar type; Le Tourneau blob compactor or similar type; Loader operator (Athey, Euclid, Sierra and similar types); Mobark Chipper or similar; Ozzie padder or similar types; P.C. slot saw; Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pumpcrete gun operator; Rock Drill or similar types; Rotary drill operator (excluding caisson type); Rubber-tired earth-moving equipment operator (single engine,

caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator (multiple engine up to and including 25 yds. struck); Rubber-tired scraper operator (self-loading paddle wheel type-John Deere, 1040 and similar single unit); Self-propelled curb and gutter machine operator; Shuttle buggy; Skiploader operator (crawler and wheel type over 1-1/2 yds. up to and including 6-1/2 yds.); Soil remediation plant operator; Surface heaters and planer operator; Tractor compressor drill combination operator; Tractor operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar-bulldozer, tamper, scraper and push tractor single engine); Tractor operator (boom attachments), Traveling pipe wrapping, cleaning and bending machine operator; Trenching machine operator (over 6 ft. depth capacity, manufacturer's rating); trenching Machine with Road Miner attachment (over 6 ft depth capacity): Ultra high pressure waterjet cutting tool system mechanic; Water pull (compaction) operator

GROUP 9: Heavy Duty Repairman

GROUP 10: Drilling machine operator, Bucket or auger types (Calweld 200 B bucket or similar types-Watson 3000 or 5000 auger or similar types-Texoma 900 auger or similar types-drilling depth of 105' maximum); Dual drum mixer, dynamic compactor LDC350 (or similar types); Monorail locomotive operator (diesel, gas or electric); Motor patrol-blade operator (single engine); Multiple engine tractor operator (Euclid and similar type-except Quad 9 cat.); Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Pneumatic pipe ramming tool and similar types; Prestressed wrapping machine operator; Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Rubber tired earth moving equipment operator (multiple engine, Euclid, caterpillar and similar over 25 yds. and up to 50 yds. struck), Tower crane repairman; Tractor loader operator (crawler and wheel type over 6-1/2 yds.); Woods mixer operator (and similar Pugmill equipment)

GROUP 11: Heavy Duty Repairman - Welder Combination, Welder - Certified.

GROUP 12: Auto grader operator; Automatic slip form operator; Drilling machine operator, bucket or auger types (Calweld, auger 200 CA or similar types - Watson, auger 6000 or similar types - Hughes Super Duty, auger 200 or similar types - drilling depth of 175' maximum); Hoe ram or similar with compressor; Mass excavator operator less tha 750 cu. yards; Mechanical finishing machine operator; Mobile form traveler operator; Motor patrol operator (multi-engine); Pipe mobile machine operator; Rubber-tired earth- moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Rubber-tired self- loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

GROUP 13: Rubber-tired earth-moving equipment operator operating equipment with push-pull system (single engine, up to and including 25 yds. struck)

GROUP 14: Canal liner operator; Canal trimmer operator; Remote- control earth-moving equipment operator (operating

a second piece of equipment: \$1.00 per hour additional);  
Wheel excavator operator (over 750 cu. yds.)

GROUP 15: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine-up to and including 25 yds. struck)

GROUP 16: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 17: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck); Tandem tractor operator (operating crawler type tractors in tandem - Quad 9 and similar type)

GROUP 18: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

GROUP 19: Rotex concrete belt operator (or similar types); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck)

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 21: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

GROUP 22: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, up to and including 25 yds. struck)

GROUP 23: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired

earth-moving equipment operator, operating with the tandem push-pull system (multiple engine, up to and including 25 yds. struck)

GROUP 24: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 25: Concrete pump operator-truck mounted; Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

#### CRANES, PILEDIVING AND HOISTING EQUIPMENT CLASSIFICATIONS

GROUP 1: Engineer oiler; Fork lift operator (includes loed, lull or similar types)

GROUP 2: Truck crane oiler

GROUP 3: A-frame or winch truck operator; Ross carrier operator (jobsite)

GROUP 4: Bridge-type unloader and turntable operator; Helicopter hoist operator

GROUP 5: Hydraulic boom truck; Stinger crane (Austin-Western or similar type); Tugger hoist operator (1 drum)

GROUP 6: Bridge crane operator; Cretor crane operator; Hoist operator (Chicago boom and similar type); Lift mobile operator; Lift slab machine operator (Vagtborg and similar types); Material hoist and/or manlift operator; Polar gantry crane operator; Self Climbing scaffold (or similar type); Shovel, backhoe, dragline, clamshell operator (over 3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

GROUP 7: Pedestal crane operator; Shovel, backhoe, dragline, clamshell operator (over 5 cu. yds. mrc); Tower crane repair; Tugger hoist operator (3 drum)

GROUP 8: Crane operator (up to and including 25 ton capacity); Crawler transporter operator; Derrick barge operator (up to and including 25 ton capacity); Hoist operator, stiff legs, Guy derrick or similar type (up to and including 25 ton capacity); Shovel, backhoe, dragline, clamshell operator (over 7 cu. yds., M.R.C.)

GROUP 9: Crane operator (over 25 tons and up to and including 50 tons mrc); Derrick barge operator (over 25 tons up to and including 50 tons mrc); Highline cableway operator; Hoist operator, stiff legs, Guy derrick or similar type (over 25 tons up to and including 50 tons mrc); K-crane operator; Polar crane operator; Self erecting tower crane operator maximum lifting capacity ten tons

GROUP 10: Crane operator (over 50 tons and up to and including 100 tons mrc); Derrick barge operator (over 50 tons up to and including 100 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 50 tons up to and including 100 tons mrc), Mobile tower crane operator

(over 50 tons, up to and including 100 tons M.R.C.); Tower crane operator and tower gantry

GROUP 11: Crane operator (over 100 tons and up to and including 200 tons mrc); Derrick barge operator (over 100 tons up to and including 200 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 100 tons up to and including 200 tons mrc); Mobile tower crane operator (over 100 tons up to and including 200 tons mrc)

GROUP 12: Crane operator (over 200 tons up to and including 300 tons mrc); Derrick barge operator (over 200 tons up to and including 300 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 200 tons, up to and including 300 tons mrc); Mobile tower crane operator (over 200 tons, up to and including 300 tons mrc)

GROUP 13: Crane operator (over 300 tons); Derrick barge operator (over 300 tons); Helicopter pilot; Hoist operator, stiff legs, Guy derrick or similar type (over 300 tons); Mobile tower crane operator (over 300 tons)

TUNNEL CLASSIFICATIONS

GROUP 1: Skiploader (wheel type up to 3/4 yd. without attachment)

GROUP 2: Power-driven jumbo form setter operator

GROUP 3: Dinkey locomotive or motorperson (up to and including 10 tons)

GROUP 4: Bit sharpener; Equipment greaser (grease truck); Slip form pump operator (power-driven hydraulic lifting device for concrete forms); Tugger hoist operator (1 drum); Tunnel locomotive operator (over 10 and up to and including 30 tons)

GROUP 5: Backhoe operator (up to and including 3/4 yd.); Small Ford, Case or similar; Drill doctor; Grouting machine operator; Heading shield operator; Heavy-duty repairperson; Loader operator (Athey, Euclid, Sierra and similar types); Mucking machine operator (1/4 yd., rubber-tired, rail or track type); Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pneumatic heading shield (tunnel); Pumpcrete gun operator; Tractor compressor drill combination operator; Tugger hoist operator (2 drum); Tunnel locomotive operator (over 30 tons)

GROUP 6: Heavy Duty Repairman

GROUP 7: Tunnel mole boring machine operator

ENGINEERS ZONES

\$1.00 additional per hour for all of IMPERIAL County and the portions of KERN, RIVERSIDE & SAN BERNARDINO Counties as defined below:

That area within the following Boundary: Begin in San Bernardino County, approximately 3 miles NE of the intersection of I-15 and the California State line at that point which is the NW corner of Section 1, T17N,m R14E, San Bernardino Meridian. Continue W in a straight line to that point which is the SW corner of the northwest quarter of Section 6, T27S,

R42E, Mt. Diablo Meridian. Continue North to the intersection with the Inyo County Boundary at that point which is the NE corner of the western half of the northern quarter of Section 6, T25S, R42E, MDM. Continue W along the Inyo and San Bernardino County boundary until the intersection with Kern County, as that point which is the SE corner of Section 34, T24S, R40E, MDM. Continue W along the Inyo and Kern County boundary until the intersection with Tulare County, at that point which is the SW corner of the SE quarter of Section 32, T24S, R37E, MDM. Continue W along the Kern and Tulare County boundary, until that point which is the NW corner of T25S, R32E, MDM. Continue S following R32E lines to the NW corner of T31S, R32E, MDM. Continue W to the NW corner of T31S, R31E, MDM. Continue S to the SW corner of T32S, R31E, MDM. Continue W to SW corner of SE quarter of Section 34, T32S, R30E, MDM. Continue S to SW corner of T11N, R17W, SBM. Continue E along south boundary of T11N, SBM to SW corner of T11N, R7W, SBM. Continue S to SW corner of T9N, R7W, SBM. Continue E along south boundary of T9N, SBM to SW corner of T9N, R1E, SBM. Continue S along west boundary of R1E, SMB to Riverside County line at the SW corner of T1S, R1E, SBM. Continue E along south boundary of T1S, SBM (Riverside County Line) to SW corner of T1S, R10E, SBM. Continue S along west boundary of R10E, SBM to Imperial County line at the SW corner of T8S, R10E, SBM. Continue W along Imperial and Riverside county line to NW corner of T9S, R9E, SBM. Continue S along the boundary between Imperial and San Diego Counties, along the west edge of R9E, SBM to the south boundary of Imperial County/California state line. Follow the California state line west to Arizona state line, then north to Nevada state line, then continuing NW back to start at the point which is the NW corner of Section 1, T17N, R14E, SBM

\$1.00 additional per hour for portions of SAN LUIS OBISPO, KERN, SANTA BARBARA & VENTURA as defined below:

That area within the following Boundary: Begin approximately 5 miles north of the community of Cholame, on the Monterey County and San Luis Obispo County boundary at the NW corner of T25S, R16E, Mt. Diablo Meridian. Continue south along the west side of R16E to the SW corner of T30S, R16E, MDM. Continue E to SW corner of T30S, R17E, MDM. Continue S to SW corner of T31S, R17E, MDM. Continue E to SW corner of T31S, R18E, MDM. Continue S along West side of R18E, MDM as it crosses into San Bernardino Meridian numbering area and becomes R30W. Follow the west side of R30W, SBM to the SW corner of T9N, R30W, SBM. Continue E along the south edge of T9N, SBM to the Santa Barbara County and Ventura County boundary at that point which is the SW corner of Section 34. T9N, R24W, SBM, continue S along the Ventura County line to that point which is the SW corner of the SE quarter of Section 32, T7N, R24W, SBM. Continue E along the south edge of T7N, SBM to the SE corner to T7N, R21W, SBM. Continue N along East side of R21W, SBM to Ventura County and Kern County boundary at the NE corner of T8N, R21W. Continue W along the Ventura County and Kern County boundary to the SE corner of T9N, R21W. Continue North along the East edge of R21W, SBM to the NE corner of T12N, R21W, SBM. Continue West along the north edge of T12N, SBM to the SE corner of T32S, R21E, MDM. [T12N SBM is a think strip between T11N SBM and T32S MDM]. Continue North along the East side of R21E, MDM to the Kings County and Kern County border at the NE corner of T25S, R21E, MDM, continue West along the Kings County and Kern County Boundary until the intersection of San Luis Obispo County. Continue west along the Kings County and San Luis Obispo County boundary until the intersection with Monterey

County. Continue West along the Monterey County and San Luis Obispo County boundary to the beginning point at the NW corner of T25S, R16E, MDM.

\$2.00 additional per hour for INYO and MONO Counties and the Northern portion of SAN BERNARDINO County as defined below:

That area within the following Boundary: Begin at the intersection of the northern boundary of Mono County and the California state line at the point which is the center of Section 17, T10N, R22E, Mt. Diablo Meridian. Continue S then SE along the entire western boundary of Mono County, until it reaches Inyo County at the point which is the NE corner of the Western half of the NW quarter of Section 2, T8S, R29E, MDM. Continue SSE along the entire western boundary of Inyo County, until the intersection with Kern County at the point which is the SW corner of the SE 1/4 of Section 32, T24S, R37E, MDM. Continue E along the Inyo and Kern County boundary until the intersection with San Bernardino County at that point which is the SE corner of section 34, T24S, R40E, MDM. Continue E along the Inyo and San Bernardino County boundary until the point which is the NE corner of the Western half of the NW quarter of Section 6, T25S, R42E, MDM. Continue S to that point which is the SW corner of the NW quarter of Section 6, T27S, R42E, MDM. Continue E in a straight line to the California and Nevada state border at the point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Then continue NW along the state line to the starting point, which is the center of Section 18, T10N, R22E, MDM.

REMAINING AREA NOT DEFINED ABOVE RECIEVES BASE RATE

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ENGI0012-004 08/01/2012

	Rates	Fringes
OPERATOR: Power Equipment (DREDGING)		
(1) Leverman.....	\$ 45.40	20.00
(2) Dredge dozer.....	\$ 40.93	20.00
(3) Deckmate.....	\$ 40.82	20.00
(4) Winch operator (stern winch on dredge).....	\$ 40.27	20.00
(5) Fireman-Oiler, Deckhand, Bargeman, Leveehand.....	\$ 39.73	20.00
(6) Barge Mate.....	\$ 40.34	20.00

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IRON0377-002 07/01/2013

	Rates	Fringes
Ironworkers:		
Fence Erector.....	\$ 26.58	17.74
Ornamental, Reinforcing and Structural.....	\$ 33.00	26.30

PREMIUM PAY:

\$6.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval

Reserve-Niland,  
Edwards AFB, Fort Irwin Military Station, Fort Irwin Training  
Center-Goldstone, San Clemente Island, San Nicholas Island,  
Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine  
Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB

\$4.00 additional per hour at the following locations:

Army Defense Language Institute - Monterey, Fallon Air Base,  
Naval Post Graduate School - Monterey, Yermo Marine Corps  
Logistics Center

\$2.00 additional per hour at the following locations:

Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

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LABO0220-001 07/01/2013

	Rates	Fringes
LABORER (TUNNEL)		
GROUP 1.....	\$ 34.84	16.02
GROUP 2.....	\$ 35.16	16.02
GROUP 3.....	\$ 35.62	16.02
GROUP 4.....	\$ 36.31	16.02
LABORER		
GROUP 1.....	\$ 28.99	16.02
GROUP 2.....	\$ 29.54	16.02
GROUP 3.....	\$ 30.09	16.02
GROUP 4.....	\$ 31.64	16.02
GROUP 5.....	\$ 31.99	16.02

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete  
screeding for rough strike-off; Concrete, water curing;  
Demolition laborer, the cleaning of brick if performed by a  
worker performing any other phase of demolition work, and  
the cleaning of lumber; Fire watcher, limber, brush loader,  
piler and debris handler; Flag person; Gas, oil and/or  
water pipeline laborer; Laborer, asphalt-rubber material  
loader; Laborer, general or construction; Laborer, general  
clean-up; Laborer, landscaping; Laborer, jetting; Laborer,  
temporary water and air lines; Material hose operator  
(walls, slabs, floors and decks); Plugging, filling of shee  
bolt holes; Dry packing of concrete; Railroad maintenance,  
repair track person and road beds; Streetcar and railroad  
construction track laborers; Rigging and signaling; Scaler;  
Slip form raiser; Tar and mortar; Tool crib or tool house  
laborer; Traffic control by any method; Window cleaner;  
Wire mesh pulling - all concrete pouring operations

GROUP 2: Asphalt shoveler; Cement dumper (on 1 yd. or larger  
mixer and handling bulk cement); Cesspool digger and  
installer; Chucktender; Chute handler, pouring concrete,  
the handling of the chute from readymix trucks, such as  
walls, slabs, decks, floors, foundation, footings, curbs,  
gutters and sidewalks; Concrete curer, impervious membrane  
and form oiler; Cutting torch operator (demolition); Fine  
grader, highways and street paving, airport, runways and  
similar type heavy construction; Gas, oil and/or water  
pipeline wrapper - pot tender and form person; Guinea  
chaser; Headerboard person - asphalt; Laborer, packing rod

steel and pans; Membrane vapor barrier installer; Power broom sweeper (small); Riprap stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Sandblaster (pot tender); Septic tank digger and installer(lead); Tank scaler and cleaner; Tree climber, faller, chain saw operator, Pittsburgh chipper and similar type brush shredder; Underground laborer, including caisson bellower

GROUP 3: Buggymobile person; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2-1/2 ft. drill steel or longer; Dri-pak-it machine; Gas, oil and/or water pipeline wrapper, 6-in. pipe and over, by any method, inside and out; High scaler (including drilling of same); Hydro seeder and similar type; Impact wrench multi-plate; Kettle person, pot person and workers applying asphalt, lay-kold, creosote, lime caustic and similar type materials ("applying" means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operator of pneumatic, gas, electric tools, vibrating machine, pavement breaker, air blasting, come-alongs, and similar mechanical tools not separately classified herein; Pipelayer's backup person, coating, grouting, making of joints, sealing, caulking, diapering and including rubber gasket joints, pointing and any and all other services; Rock slinger; Rotary scarifier or multiple head concrete chipping scarifier; Steel headerboard and guideline setter; Tamper, Barko, Wacker and similar type; Trenching machine, hand-propelled

GROUP 4: Asphalt raker, lute person, ironer, asphalt dump person, and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), grinder or sander; Concrete saw person, cutting walls or flat work, scoring old or new concrete; Cribber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Head rock slinger; Laborer, asphalt- rubber distributor boot person; Laser beam in connection with laborers' work; Oversize concrete vibrator operator, 70 lbs. and over; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit and any other stationary type of tubular device used for the conveying of any substance or element, whether water, sewage, solid gas, air, or other product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No-joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzle person), water blasting, Porta Shot-Blast

GROUP 5: Blaster powder, all work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Driller: All power drills, excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and any and all other types of mechanical drills without regard to the form of motive power; Toxic waste removal

#### TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Batch plant laborer; Bull gang mucker, track person; Changehouse person; Concrete crew, including rodder and spreader; Dump person; Dump person (outside); Swamper (brake person and switch person on tunnel work); Tunnel materials handling person

GROUP 2: Chucktender, cabledtender; Loading and unloading agitator cars; Nipper; Pot tender, using mastic or other materials (for example, but not by way of limitation, shotcrete, etc.); Vibrator person, jack hammer, pneumatic tools (except driller)

GROUP 3: Blaster, driller, powder person; Chemical grout jet person; Cherry picker person; Grout gun person; Grout mixer person; Grout pump person; Jackleg miner; Jumbo person; Kemper and other pneumatic concrete placer operator; Miner, tunnel (hand or machine); Nozzle person; Operating of troweling and/or grouting machines; Powder person (primer house); Primer person; Sandblaster; Shotcrete person; Steel form raiser and setter; Timber person, retimber person, wood or steel; Tunnel Concrete finisher

GROUP 4: Diamond driller; Sandblaster; Shaft and raise work

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LABO0220-004 07/01/2013

	Rates	Fringes
Brick Tender.....	\$ 28.37	15.78

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LABO0300-005 01/01/2013

	Rates	Fringes
Asbestos Removal Laborer.....	\$ 27.35	14.95

SCOPE OF WORK: Includes site mobilization, initial site cleanup, site preparation, removal of asbestos-containing material and toxic waste, encapsulation, enclosure and disposal of asbestos- containing materials and toxic waste by hand or with equipment or machinery; scaffolding, fabrication of temporary wooden barriers and assembly of decontamination stations.

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LABO0345-001 07/01/2013

	Rates	Fringes
LABORER (GUNITE)		
GROUP 1.....	\$ 33.04	17.86
GROUP 2.....	\$ 32.09	17.86
GROUP 3.....	\$ 28.55	17.86

FOOTNOTE: GUNITE PREMIUM PAY: Workers working from a Bosn'n's Chair or suspended from a rope or cable shall receive 40 cents per hour above the foregoing applicable classification rates. Workers doing gunite and/or shotcrete work in a tunnel shall receive 35 cents per hour above the foregoing applicable classification rates, paid on a portal-to-portal basis. Any work performed on, in or above any smoke stack, silo, storage elevator or similar type of structure, when such structure is in excess of 75'-0" above base level and which work must be performed in whole or in part more than 75'-0" above base level, that work performed above the 75'-0" level shall be compensated for at 35 cents per hour above the applicable classification wage rate.

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

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LABO1184-001 07/01/2013

	Rates	Fringes
Laborers: (HORIZONTAL DIRECTIONAL DRILLING)		
(1) Drilling Crew Laborer...\$	30.11	11.83
(2) Vehicle Operator/Hauler.\$	30.28	11.83
(3) Horizontal Directional Drill Operator.....\$	32.13	11.83
(4) Electronic Tracking Locator.....\$	34.13	11.83
Laborers: (STRIPING/SLURRY SEAL)		
GROUP 1.....\$	31.06	14.53
GROUP 2.....\$	32.36	14.53
GROUP 3.....\$	34.37	14.53
GROUP 4.....\$	36.11	14.53

LABORERS - STRIPING CLASSIFICATIONS

GROUP 1: Protective coating, pavement sealing, including repair and filling of cracks by any method on any surface in parking lots, game courts and playgrounds; carstops; operation of all related machinery and equipment; equipment repair technician

GROUP 2: Traffic surface abrasive blaster; pot tender - removal of all traffic lines and markings by any method (sandblasting, waterblasting, grinding, etc.) and preparation of surface for coatings. Traffic control person: controlling and directing traffic through both conventional and moving lane closures; operation of all related machinery and equipment

GROUP 3: Traffic delineating device applicator: Layout and application of pavement markers, delineating signs, rumble and traffic bars, adhesives, guide markers, other traffic delineating devices including traffic control. This category includes all traffic related surface preparation (sandblasting, waterblasting, grinding) as part of the application process. Traffic protective delineating system installer: removes, relocates, installs, permanently affixed roadside and parking delineation barricades, fencing, cable anchor, guard rail, reference signs, monument markers; operation of all related machinery and equipment; power broom sweeper

GROUP 4: Striper: layout and application of traffic stripes and markings; hot thermo plastic; tape traffic stripes and markings, including traffic control; operation of all related machinery and equipment

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LABO1414-001 08/07/2013

	Rates	Fringes
LABORER		
PLASTER CLEAN-UP LABORER....	\$ 27.45	16.36
PLASTER TENDER.....	\$ 30.00	16.36

Work on a swing stage scaffold: \$1.00 per hour additional.

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PAIN0036-007 07/01/2013

	Rates	Fringes
Painters:		
(1) Repaint Including Lead Abatement.....	\$ 23.49	11.73
(2) High Iron & Steel.....	\$ 29.86	11.73
(3) Journeyman Painter including Lead Abatement....	\$ 27.86	11.73
(4) Industrial.....	\$ 29.86	11.73
(5) All other work.....	\$ 27.86	11.73

REPAINT of any previously painted structure. Exceptions: work involving the aerospace industry, breweries, commercial recreational facilities, hotels which operate commercial establishments as part of hotel service, and sports facilities.

HIGH IRON & STEEL:

Aerial towers, towers, radio towers, smoke stacks, flag poles (any flag poles that can be finished from the ground with a ladder excluded), elevated water towers, steeples and domes in their entirety and any other extremely high and hazardous work, cooning steel, bos'n chair, or other similar devices, painting in other high hazardous work shall be classified as high iron & steel

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PAIN0036-008 01/01/2013

	Rates	Fringes
DRYWALL FINISHER/TAPER.....	\$ 33.22	14.81

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PAIN0169-002 01/01/2013

	Rates	Fringes
GLAZIER.....	\$ 32.48	18.20

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PAIN1247-002 09/01/2013

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 30.85	10.49

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\* PLAS0200-001 08/07/2013

	Rates	Fringes
PLASTERER.....	\$ 36.11	13.13

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PLAS0500-002 07/01/2013

	Rates	Fringes
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CEMENT MASON/CONCRETE FINISHER...\$ 30.85 21.00

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PLUM0016-001 07/01/2013

Rates Fringes

PLUMBER/PIPEFITTER

Plumber and Pipefitter  
 All other work except  
 work on new additions and  
 remodeling of bars,  
 restaurant, stores and  
 commercial buildings not  
 to exceed 5,000 sq. ft.  
 of floor space and work  
 on strip malls, light  
 commercial, tenant  
 improvement and remodel  
 work.....\$ 43.60 20.16

Work ONLY on new additions  
 and remodeling of bars,  
 restaurant, stores and  
 commercial buildings not  
 to exceed 5,000 sq. ft. of  
 floor space.....\$ 42.26 19.18

Work ONLY on strip malls,  
 light commercial, tenant  
 improvement and remodel  
 work.....\$ 34.11 17.51

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PLUM0345-001 07/01/2013

Rates Fringes

PLUMBER

Landscape/Irrigation Fitter.\$ 27.85 18.81  
 Sewer & Storm Drain Work....\$ 32.50 16.93

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ROOF0036-002 08/01/2012

Rates Fringes

ROOFER.....\$ 34.65 11.38

FOOTNOTE: Pitch premium: Work on which employees are exposed to pitch fumes or required to handle pitch, pitch base or pitch impregnated products, or any material containing coal tar pitch, the entire roofing crew shall receive \$1.75 per hour "pitch premium" pay.

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SFCA0669-014 07/01/2013

Rates Fringes

SPRINKLER FITTER.....\$ 32.98 19.35

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SHEE0273-002 08/01/2013

Rates Fringes

SHEET METAL WORKER.....\$ 40.50 22.54

HOLIDAYS: New Year's Day, Martin Luther King Day, President's Day, Good Friday, Memorial Day, Independence Day, Labor

Day, Veterans Day, Thanksgiving Day & Friday after,  
Christmas Day

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TEAM0011-002 07/01/2013

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 27.59	22.69
GROUP 2.....	\$ 27.74	22.69
GROUP 3.....	\$ 27.87	22.69
GROUP 4.....	\$ 28.06	22.69
GROUP 5.....	\$ 28.09	22.69
GROUP 6.....	\$ 28.12	22.69
GROUP 7.....	\$ 28.37	22.69
GROUP 8.....	\$ 28.62	22.69
GROUP 9.....	\$ 28.82	22.69
GROUP 10.....	\$ 29.12	22.69
GROUP 11.....	\$ 29.62	22.69
GROUP 12.....	\$ 30.05	22.69

WORK ON ALL MILITARY BASES:

PREMIUM PAY: \$3.00 per hour additional.

[29 palms Marine Base, Camp Roberts, China Lake, Edwards AFB,  
El Centro Naval Facility, Fort Irwin, Marine Corps  
Logistics Base at Nebo & Yermo, Mountain Warfare Training  
Center, Bridgeport, Point Arguello, Point Conception,  
Vandenberg AFB]

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Truck driver

GROUP 2: Driver of vehicle or combination of vehicles - 2  
axles; Traffic control pilot car excluding moving heavy  
equipment permit load; Truck mounted broom

GROUP 3: Driver of vehicle or combination of vehicles - 3  
axles; Boot person; Cement mason distribution truck; Fuel  
truck driver; Water truck - 2 axle; Dump truck, less than  
16 yds. water level; Erosion control driver

GROUP 4: Driver of transit mix truck, under 3 yds.; Dumpcrete  
truck, less than 6-1/2 yds. water level

GROUP 5: Water truck, 3 or more axles; Truck greaser and tire  
person (\$0.50 additional for tire person); Pipeline and  
utility working truck driver, including winch truck and  
plastic fusion, limited to pipeline and utility work;  
Slurry truck driver

GROUP 6: Transit mix truck, 3 yds. or more; Dumpcrete truck,  
6-1/2 yds. water level and over; Vehicle or combination of  
vehicles - 4 or more axles; Oil spreader truck; Dump truck,  
16 yds. to 25 yds. water level

GROUP 7: A Frame, Swedish crane or similar; Forklift driver;  
Ross carrier driver

GROUP 8: Dump truck, 25 yds. to 49 yds. water level; Truck  
repair person; Water pull - single engine; Welder

GROUP 9: Truck repair person/welder; Low bed driver, 9 axles or over

GROUP 10: Dump truck - 50 yds. or more water level; Water pull - single engine with attachment

GROUP 11: Water pull - twin engine; Water pull - twin engine with attachments; Winch truck driver - \$1.25 additional when operating winch or similar special attachments

GROUP 12: Boom Truck 17K and above

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived

from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
 Wage and Hour Division  
 U.S. Department of Labor  
 200 Constitution Avenue, N.W.  
 Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
 U.S. Department of Labor  
 200 Constitution Avenue, N.W.  
 Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION