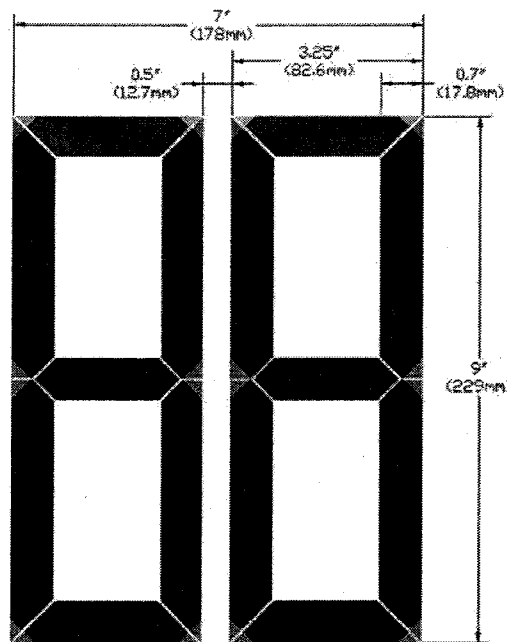


30. For a minimum period of 60 months, measured at 80 to 135 VAC RMS and over the ambient temperatures of  $-40^{\circ}\text{C}$  to  $+74^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $+165^{\circ}\text{F}$ ), the minimum maintained luminance values for the ped modules, when measured normal to the plane of the icon surface, shall not be less than:
- Walking Person, White:  $2,200 \text{ cd/m}^2$
  - Upraised Hand, Portland Orange:  $1,400 \text{ cd/m}^2$
  - Countdown Digits, Portland Orange:  $1,400 \text{ cd/m}^2$
31. The external lens shall have a textured outer surface to reduce glare.
32. Icons that are printed on the lens shall be on the interior surfaces in order to prevent scratching and abrasion to the icons.
33. All icons and numbers shall have a uniform incandescent non-pixelated appearance.
34. All exposed components of a ped module shall be suitable for prolonged exposure to the environment, without appreciable degradation that would interfere with function or appearance. As a minimum, selected materials shall be rated for service for a period of a minimum of 60 months in a south-facing Arizona Desert installation.
35. All LEDs used to illuminate the ped module shall use material that has industry acceptance for use in outdoor applications. At no time is the use of LEDs that utilize AlGaAs technology acceptable.
36. The countdown display shall consist of two 7 segment digits as shown below. All countdown display digits shall be 9 inches in height for use in all size crosswalks in compliance with MUTCD recommendations.



**Figure 2: Countdown Display**

37. Ped modules shall be repaired or replaced if the ped module fails to function as intended due to workmanship or material defects within warranty period.
38. Ped modules shall be repaired or replaced if the ped module exhibit luminous intensities less than the minimum specified values within 60 months of the date of delivery.

39. The manufacturer shall clearly disclose the country in which the factory of ped module origin is located, the name of the company or organization that owns the factory including all of its parent companies and organizations, and their respective country of corporate citizenship.

#### **Pedestrian, Bicycle and Equestrian Push Buttons**

Pedestrian, bicycle, and equestrian push buttons shall conform to the provisions in Section 86-5.02, "Pedestrian Push Button Assemblies", of the Standard Specifications and these Special Provisions.

Push button assembly shall be Type B per Standard Plans ES-5C.

Push button housing shall be die-cast or permanent mold cast aluminum powder coated frame with stainless steel inserts and sign screws.

Push button sign shall be white powder coat base with black heat cured ink. Right and left arrow signs shall be doubled sided.

Push button shall be Polara Engineering, Inc. model BDLM2-Y or approved equal.

Push button shall utilize solid-state Piezo switch technology, pressure activated, two-tone audible, visual LED confirmation of actuation and shall be ADA compliant.

The equestrian push buttons (EPB) shall be installed at 6 feet above finish grade or as directed by the Engineer. The Engineer shall approve the EPB placement on each pole prior to installation.

#### **Detectors**

Detectors shall conform to the provisions in Section 86-5, "Detectors", of the Standard Specifications and these Special Provisions.

Delay timers shall delay calls only during display of the associated red or yellow indications. If a vehicle departs the area of detection prior to expiration of the assigned delay period, the timer shall reset and no call shall be placed upon the controller. During display of the associated green indication, detectors shall operate in the present mode and calls shall not be delayed.

#### **Inductive Loops**

Detector loop configuration shall be Type E per Standard Plans ES-5B unless otherwise shown on the construction plan, in the Special Provisions, or as directed by the Engineer.

Limit Line detector loop configuration shall be modified Type E with diagonal saw cuts and wire winding conforming to Type D loop configuration.

Detector loop wire shall be Type 2.

Detector loop lead-in cable shall be Type B.

Detector loop curb terminations shall be Type A in accordance with Standard Plans ES-5D.

Loop sealant shall be the Hot-Melt Rubberized Asphalt sealant type, unless otherwise directed by the Engineer. Loop conductors and sealant shall be installed on the same day the loop slots are cut.

All detector loops shall be tested sequentially by the following methods:

- impedance (measured by megohms)
- resistance (measured by ohms)
- inductance (measured in microhenries)

#### **Video Detection**

The Contractor shall furnish and install video detection cameras (VDC), video detection processors (VDP), extension modules (EM), access module (AM), an industry standard 3-button USB mouse, a drawer mounted 17 inch LCD monitor, surge suppressors, and all necessary cabling and auxiliary

equipment to make the video detection systems fully functional for the intended operation. The Contractor shall furnish a spare VDC, a spare EM, and a spare VDP to the Engineer.

All equipment supplied shall come from and qualified by the VDP supplier to ensure proper system operation.

The VDC shall attach to the top of luminaire mast arm using mounting bracket provided by manufacturer, or the backside of signal mast arm using Pelco Astrobrac with 6' extension or approved equal. The Engineer shall approve the final camera placements.

The video detection systems shall be installed by supplier factory certified installers per recommended method provided in the supplier's installation manuals. Proof of factory certification shall be provided.

Video Detection Zones:

Placement of detection zones shall be done by using the supplied USB mouse connected to the VDP. Detection zones are drawn on the video image from the video camera displayed on a video monitor using the menu and graphical interface built into the VDP. The menu shall facilitate placement of detection zones and setting of zone parameters or to view system parameters.

Detection zone setup shall not require site-specific information such as latitude, longitude, date and time to be entered into the system. No separate computer shall be required to program the detection zones. Each detection zone shall be user definable in size and shape to suit the site and the desired vehicle detection region. A detection zone shall be approximately the width and length of one car. A single detection zone shall be able to replace multiple inductive loops and the detection zones shall be OR'ed as the default or may be AND'ed together to indicate vehicle presence on a single phase of traffic movement.

The VDP shall provide a minimum of 24 channels of vehicle presence detection/detection zones per camera through a standard detector rack edge connector and one or more EMs.

Functional Capabilities:

System must have a single point access to multiple rack-mounted video detection units. The access device shall provide interface capabilities to enable multiple rack-mounted video detection processors to be locally and remotely accessed from a single point via one set of user interface devices.

The camera shall be able to transmit the composite video signal, with minimal signal degradation, up to 1000 feet under ideal conditions.

The EM shall be plugged into the appropriate slot in the detector rack to avoid the need of rewiring the detector rack. The extension module shall be connected to the VDP by an 8-wire cable with modular connectors.

The EM and VDP communications shall be accommodated by methods using differential signals to reject electrically coupled noise. The EM shall be available in both 2 and 4 channel configurations programmable from the VDP.

The VDP shall have video input in NTSC composite video format and shall be digitized and analyzed in real time.

The VDP shall have a nine-pin RS232 port that is multi-drop compatible for communications with an external computer. The VDP shall be able to accept new detector patterns from and send its detection patterns to an external computer through this RS-232 port. A Windows™ based software designed for local or remote connection for uploading and downloading data, and providing video capture, real-time detection indication and detection zone modification capability shall be provided with the system.

The VDP shall store up to three different detection zone patterns within the VDP memory. The VDP's memory shall be non-volatile to prevent data loss during power outages. The VDP shall continue to operate (e.g. detect vehicles) using the existing zone configurations even when the operator is defining/modifying a zone pattern. The new zone configuration shall not go into effect until the operator saves the configuration. Each configuration can be uniquely labeled for identification and the current

configuration letter is displayed on the monitor. The selection of the detection zone pattern for current use shall be done through a local menu selection or remote computer via RS-232 port. It shall be possible to activate a detection zone pattern for a camera from VDP memory and have that detection zone pattern displayed within 1 second of activation.

The VDP shall provide dynamic zone reconfiguration to enable normal detector operation of existing channels except the one where a zone is being added or modified during the setup process. The VDP shall output a constant call on any detection channel corresponding to a zone being modified.

The VDP shall detect vehicles in real time as they travel across each detector zone.

The VDP shall output a constant call for each enabled detector output channel if a loss of video signal occurs. The VDP shall output a constant call during the background learning period. The background learning period shall be not more than three minutes.

The VDP shall be capable of detecting a low-visibility condition automatically, such as fog, and place all defined detection zones in a constant call mode. The VDP shall automatically revert to normal detection mode when the low-visibility condition no longer exists. A user-selected output shall be active during the low-visibility condition that can be used to modify the controller operation if connected to the appropriate controller input modifier(s).

Detection shall be at least 98% accurate in good weather conditions and at least 96% accurate under adverse weather conditions (rain, snow, or fog). Detection accuracy is dependent upon site geometry; camera placement, camera quality and detection zone location, and these accuracy levels do not include allowances for occlusion or poor video due to camera location or quality.

Detection zone outputs shall be configurable to allow the selection of presence, pulse, extend, and delay outputs. Timing parameters of pulse, extend, and delay outputs shall be user definable between 0.1 to 25.0 seconds.

Up to six detection zones shall be capable to count the number of vehicles detected. The count value shall be internally stored for later retrieval through the RS-232 port. The data collection interval shall be user definable in periods of 5, 15, 30 or 60 minutes.

System software shall

- Utilize a dual redundant hybrid tracking algorithm to enhance vehicle presence detection and data collection.
- Include a moving shadow and occlusion rejection algorithm that is activated by selection of a drop down menu tab.
- Include a menu selectable zone type labeled "Bike" that is specifically designed to detect bicycles.
- Include a virtual QWERTY keyboard that is present when performing any labeling functions for the detection zones and cameras.
- Include the ability to copy completed zones with one mouse click, drag and drop single zones, rows of zones together and entire detection configurations.

#### VDP & EM Hardware:

The VDP and EM shall be specifically designed to mount in a standard NEMA TS-1, TS-2, 2070 ATC, 170 type detector rack, using the edge connector to obtain power and provide contact closure outputs. No adapters shall be required to mount the VDP or EM in a standard detector rack. Detector rack rewiring shall not be required or shall be minimized.

Both VDP and EM shall operate in a temperature range from -34°C to +74°C and a humidity range from 0% RH to 95% RH, non-condensing.

Both VDP and EM shall be powered by 12 or 24 volts DC. These modules shall automatically compensate for the different input voltages.

Both VDP and EM shall include detector output pin out compatibility with industry standard detector racks. Both VDP and EM shall have a detector test switch on the front panel to allow the user to place calls on each channel. The test switch shall be able to place either a constant call or a momentary call depending on the position of the switch.

The VDP power consumption shall not exceed 300 milliamps at 24 VDC. The EM power consumption shall not exceed 120 milliamps at 24 VDC.

The VDP shall utilize flash memory technology to enable the loading of modified or enhanced software through the RS232 port without modifying the VDP hardware.

The VDP shall include the following on the front panel:

- A multi-drop compatible RS232 port, a 9-pin "D" subminiature connector, for serial communications with a remote computer.
- Detection indication such as LED for each channel of detection that display detector outputs in real time when the system is operational.
- One or two BNC video input connection suitable for RS170 video inputs as required. The video input shall include a switch selectable 75-ohm or high impedance termination to allow camera video to be routed to other devices, as well as input to the VDP for vehicle detection. Video must be inputted via a BNC connector on the front face of the processor. RCA type connectors/jacks for video input are not allowed. Video shall not be routed via the edge connectors of the processor.
- One BNC video output providing real time video output that can be routed to other devices. A RCA type connector/jack for video output is not allowed.

Video Detection Camera:

The camera shall be housed in a weather-tight sealed enclosure consists of the following:

1. The enclosure shall be made of 6061 anodized aluminum.
2. The enclosure shall be field rotatable to allow proper alignment between the camera and the traveled road surface.
3. The enclosure shall be equipped with a sunshield. The sunshield shall include a provision for water diversion to prevent water from flowing in the camera's field of view. The camera enclosure with sunshield shall be less than 6" diameter, less than 18" long, and shall weigh less than 6 pounds when the camera and lens are mounted inside the enclosure.
4. The enclosure shall be design so that the pan, tilt and rotation of the camera assembly can be accomplished independently without affecting the other settings.
5. The enclosure shall include a proportionally controlled Indium Tin Oxide heater design that maximizes heat transfer to the lens. The output power of the heater shall vary with temperature, to assure proper operation of the lens functions at low temperatures and prevent moisture condensation on the optical faceplate of the enclosure.
6. The glass face on the front of the enclosure shall have:
  - a. An anti-reflective coating to minimize light and image reflections.
  - b. A special coating to minimize the buildup of environmental debris such as dirt and water.

The camera shall produce a useable video image of the bodies of vehicles under all roadway lighting conditions, regardless of time of day. The minimum range of scene luminance over which the camera shall produce a useable video image shall be the minimum range from nighttime to daytime, but not less than the range 1.0 lux to 10,000 lux.

The imager luminance signal to noise ratio shall be more than 50 dB. In harsh backlit conditions, vehicles can be detected flawlessly with >100dB of dynamic range.

The camera shall be digital signal processor based and shall use a CCD sensing element and shall output color video with resolution of not less than 540 TV lines. The CCD imager shall have a minimum effective area of 811(h) x 508(v) pixels.

The camera shall include an electronic shutter control based upon average scene luminance and shall be equipped with an auto-iris lens that operates in tandem with the electronic shutter.  
The camera shall utilize automatic white balance.

The camera shall include a variable focal length lens with variable focus that can be adjusted, without opening up the camera housing, to suit the site geometry by means of a portable interface device designed for that purpose and manufactured by the detection system supplier.

The horizontal field of view shall be adjustable from 5.4 to 50.7 degrees. This camera configuration may be used for the majority of detection approaches in order to minimize the setup time and spares required by the user. The lens shall have a 27x zoom.

The lens shall also have an auto-focus feature with a manual override to facilitate ease of setup.  
The camera shall incorporate the use of preset positioning that store zoom and focus positioning information. The camera shall have the capability to recall the previously stored preset upon application of power.

The camera electronics shall include automatic gain control to produce a satisfactory image at night. When mounted outdoors in the enclosure, the camera shall operate satisfactorily in a temperature range from -34 °C to +60 °C and a humidity range from 0% RH to 100%-RH. Measurement of satisfactory video shall be based upon VDP system operation.  
The camera shall be powered by 120-240 VAC 50/60 Hz. Power consumption shall be 30 watts or less under all conditions.

The camera shall view approaching vehicles at a distance not to exceed 350 feet for reliable detection (height to distance ratio of 1:10). Camera placement and field of view shall be unobstructed and as noted in the installation documentation provided by the supplier.

There shall be at least 2 options for camera set up, diagnostic testing, and viewing video when it is mounted on mast arm or pole using lens adjustment module supplied by the VDP supplier:

1. Connected directly to the camera.
2. Connected to the coaxial cable from the cabinet.

The video signal shall be fully isolated from the camera enclosure and power  
Cable terminations at the camera for video and power shall not require crimping tools.  
No BNC or other connector shall be used for the coaxial video cable termination at the camera.  
The power connection at the camera shall use connector terminations that only require the use of wire strippers and a standard screwdriver. No special crimping tools or other types of terminations shall be used.

A weather-proof protective cover shall be provided shall be provided to protect all terminations at the camera. No special tooling shall be required to remove or install the protective cap.

#### Cabling and Cable Connections:

The coaxial cable to be used between the camera and the VDP in the traffic cabinet shall be Belden 8281. The coax cable shall be a continuous unbroken run from the camera to the VDP. This cable shall be suitable for installation in conduit or overhead with appropriate span wire. A BNC plug connector shall be used at the cabinet end. The coaxial video cable shall be stripped and terminated at the camera and cabinet per manufacturers' instructions (no BNC or other connector shall be used at the camera). The coaxial cable, BNC connector used at the cabinet termination, and crimping tool shall be approved by the

supplier of the video detection system and the manufacturer's instructions must be followed to ensure proper connection.

The power cable shall be three 16 AWG conductor cable with a minimum outside diameter of 0.325 inch and a maximum diameter of 0.490 inch. The power cable shall be terminated at the camera per manufacturers' instructions and shall only require standard wire strippers and a screw driver for installation (no special connectors or crimping tools shall be used for installation). The cabling shall comply with the National Electric Code, as well as local electrical codes. Cameras shall not acquire power from the luminaire.

A Din Rail mounted AC power panel assembly shall be supplied by the video detection manufacturer that will include a minimum of one convenience receptacle, four camera chassis ground connections, four camera AC neutral (AC-) connections, four 2 amp camera circuit breakers for hot (AC+) connections, and one AC source connection for Line, Neutral and Ground wires. A Din Rail video surge suppression protection panel assembly shall also be supplied by the video detection manufacture. One panel shall accommodate up to six EDCO surge suppressors. This equipment shall be installed, including termination of all necessary wiring, per the video detection manufacturer requirements for the intended use.

#### Maintenance and Support:

The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the system. These parts shall be available for delivery within 30 days of placement of an acceptable order at the supplier's then current pricing and terms of sale for said parts.

The supplier shall maintain an ongoing program of technical support for the access unit and video detection system. This technical support shall be available via telephone, or via personnel sent to the installation site upon placement of an acceptable order at the supplier's then current pricing and terms of sale for on-site technical support services.

Installation or training support shall be provided by factory-authorized representative.  
All product documentation shall be written in the English language.

#### Luminaires

Luminaires shall conform to the provisions in Section 86-6, "Lighting", of the Standard Specifications and these Special Provisions.

Luminaires shall be of the cutoff type and shall be 200, 250 or 400 Watt High Pressure Sodium Vapor as shown on the plans. The fixtures shall be constructed with flat lenses, integral ballasts, and detachable power unit assemblies. The power unit assemblies shall contain the ballast, starter board, capacitors, and a heavy-duty terminal block.

Each luminaire shall be furnished without the photoelectric unit receptacle.

Each luminaire shall have a 5-amp inline fuse installed inside the standard's hand hole.

Wall-mounted luminaires shall conform to the provisions in Section 86-6.05, "Soffit and Wall Luminaires", of the Standard Specifications and these Special Provisions.

#### Sign Lighting Fixtures

Sign lighting fixtures shall conform to the provisions in Sections 86-6.8, "Sign Lighting Fixtures", of the Standard Specifications.

Sign lamp for Type 9 Standard shall be LED type.

#### Internally Illuminated Street Name Signs

Internally illuminated street name signs (IISNS) shall conform to the provisions in Section 86-6.09, "Internally Illuminated Street Name Signs", of the Standard Specifications and these Special Provisions.

The sign fixture, panels, and mounting assemblies shall be designed and constructed to prevent deformation, warp or failure when subjected to a minimum of 100 mph wind loads, as set forth in the latest AASHTO publication, "Standard Specifications for Structural Supports of Highway Signs, Luminaires, and Traffic Signals", and amendments thereto. The IISNS manufacturer shall submit a certificate of compliance conforming to the provisions in Section 6-3.05E, "Certificates of Compliance", with each lot of IISNSs delivered.

The IISNS shall be double-faced Edge-lit LED sign with white translucent diamond grade reflective border, arrows, and lettering using 12" uppercase and 9" lowercase Clearview Series 5-W fonts. The background shall be green match color no. 09 of FED-STD-595.

The standard IISNS height shall be 2' and length shall be 6', 8' or 10' attached to the 10 feet IISNS mast arm with Pelco SE-5015 mast arm sign bracket, or approved equal, per County Standard No. 1200.

### **Photoelectric Controls**

Photoelectric controls shall conform to the provisions in Section 86-6.11, "Photoelectric Controls", of the Standard Specifications and these Special Provisions.

Photoelectric controls shall be a dual Type V for luminaires and internally illuminated street name signs conforming to the County Standard No. 1207.

Photoelectric units shall be the delay type.

### **Emergency Vehicle Preemption System**

Furnish and install complete and functioning emergency vehicle preemption (EVP) system as intended per plans, the manufacturer, and these special provisions.

The EVP system shall consist of the following equipments or components:

- Optical detector for each approach, as shown on the plans
- Rack-mounted 4-channel phase selectors for 8-phase operation
- Detector cable

The Contractor shall furnish the following spare EVP equipments or components:

- One (1) rack-mounted 4-channel phase selector
- One (1) optical detector

The EVP system shall be designed to prevent simultaneous pre-emption by two or more emergency vehicles on separate approaches to the intersection.

The Engineer shall approve EVP sequence of operation prior to timing and turn-on of each respective traffic signal.

At locations where optical detectors are not to be installed, EVP cable shall be installed for future use. The following also apply:

1. EVP cable shall be installed, without splices, between the controller cabinet and each mast arm traffic signal pole.
2. EVP cable shall be connected to the EVP rack terminals within the controller cabinet.
3. Each mast arm EVP detector mounting shall be drilled and tapped in its ultimate location. In lieu of the detector, install approved water tight UL listed electrical box. EVP cable shall be installed to terminate within the mast arm mounted electrical box. Excess cable shall be coiled within the electrical box sufficient for future installation of the EVP system.

### **Optical Detector**



The optical detector shall be mounted on the indicated signal mast arm per County Standard No. 1202. Each optical detector shall be waterproof unit capable of receiving optical energy from dual directions and have an adjustable turret configuration. The reception angle for each optical detector unit shall be a minimum of eight (8) degrees in all directions about the aiming axis of the unit.

Dual detectors shall utilize only one optical cable per detector.

Internal circuitry shall be solid state and electrical power shall be provide by the associated discrimination module.

Each optical detector unit shall have a minimum of a 3/4 inch NPT opening used for mounting and for bringing the connecting cable into the terminal block located within the assembly. The housing shall be provided with weep holes to permit drainage of condensed moisture.

Each optical detector shall be installed, wired, and aimed as specified by the manufacturer.

### **Cable**

Optical detector cable shall meet the requirements of IPCEA-S-61-402/NEMA WC 5, Section 7.4, 600 V Control cable, 75 degrees C, Type B, and the following:

1. The cable shall contain 3 conductors, each of which shall be AWG# 20 (7 x 28) stranded, tinned copper. Insulation of individual conductors shall be color-coded: 1-Yellow, 1-Orange, and 1-Blue.
2. The shield shall be either tinned copper braid or aluminized polyester film with a nominal 20% overlap. When film is used, an AWG# 20 (7 x 28) stranded, tinned, bare drain wire shall be placed between the insulated conductors and the shield and in contact with the conductive surface of the shield.
3. The jacket shall be marked as required by IPCEA/NEMA.

The cable run between each detector and the Traffic Controller cabinet shall be continuous without splices.

### **Phase Selector**

Each phase selector shall be compatible and usable with a Model 170E or 2070 controller unit, and shall be mounted in the input file of a Model 332 or Model 333 JP controller cabinet.

Each phase selector shall be capable of operating at least two or more channels, each of which shall provide and independent output for each separate input.

Phase Selector shall be a four-channel, dual priority, Multimode encoded signal device designed for use with both infrared and GPS emitters and optical detectors.

Phase Selectors and Optical detectors shall me manufactured by a single manufacturer  
Phase Selector shall recognize and discriminate among three distinct frequency rates via high priority, low priority and probe priority infrared and GPS signals.

Phase selector shall further discriminate among 254 agency ID's, 15 classes of vehicle identification codes and 10,000 individual vehicle codes per class, for more than 38 million total per priority level.  
Phase selector shall be capable of operating unlimited intersections and directions.

Phase selector shall have on the front panel, USB, serial and Ethernet capabilities

Phase selector shall be capable of accepting infrared signals from LED and or strobe technologies

Phase selector shall store the following records:

- Intersection name
- Date and time of activity
- Vehicle class and code of activating vehicle
- Activating vehicle's ID number
- Agency ID
- Channel called
- Priority of the activity
- Final green activity displayed at end of call
- Time spent in the final greens
- Duration of the activity
- Turn signal status
- Relative priority level

Capability to playback up to the last 250 seconds of the 100 most recent calls

Each phase selector, when used with its associated optical detectors, shall perform as a minimum, the following:

1. Receive Class I and Class II signals.
2. Decode the signals based on optical frequency, at 9.639 Hz + or -0.119 Hz for Class I signals and 14.035 Hz + or -0.255 Hz for Class II signals.
3. Establish the validity of received signals based on optical frequency and length of time received. A signal shall be considered valid only when received for more than 0.50 second. No combination of Class I signals shall be recognized as a Class II signal regardless of the number of signals being received, up to a maximum of 10 signals. Once a valid signal has been recognized, the effect shall be held by the module, in the event of temporary loss of signal for a minimum period of 4.0 seconds.
4. Provide an output for each channel that will result in a "low" or grounded condition of the appropriate input of a Model 170 controller unit. For a Class I signal, the output shall be a 6.25 Hz + or - 0.1 %, rectangular waveform with a 50 % duty cycle. For Class II signal, the output shall be steady.

Each phase selector shall receive power from the controller cabinet at either 12 VDC or 120 VAC.

Auxiliary inputs for each channel may enter each module through a front panel connector or by a parallel hook-up of the associated detector cables at the input location.

The phase selector shall provide an optically isolated output for each channel to the Model 170 controller unit. All outputs signals shall comply with NEMA signal level definitions and shall be compatible with the Model 170 controller assemblies' inputs.

Each phase selector shall be provided with means of preventing transients received by the detector from affecting the Model 170 controller assembly.

Each phase selector shall have a single connector board and shall occupy one slot of the input file. The front panel of each phase selector module shall have a handle to facilitate withdrawal and have the following controls and functions for each channel:

1. Range adjustments for both class I and Class II signals.
2. A 3-position, center off, momentary contact switch, one position (down) labeled for test operation of Class I signals, and one position (up) labeled for test operation of Class II signals.
3. A "signal" indication and a "call" indication each for Class I and for Class II signals. The "signal" indications denote that a signal, which is not valid, has been received; a "call"

indication denotes a steady, valid signal has been received. These 2 indications may be accomplished with a single indication lamp.

In addition, the front panel shall be provided with additional connectors or ports used to perform other functions as specified by the manufacturer.

### **Cabinet Wiring**

Wiring for a Model 332 cabinet shall conform to the following:

1. Slots 12 and 13 of input file "J" shall be wired to accept either a 2 channel or a 4 channel module.
2. Field wiring for the primary detectors, except the 24 VDC power, shall terminate on either terminal block TB-9 in the controller cabinet or on the rear of input file "J", depending on cabinet configuration. Where TB-9 is used, position assignments shall be as follows:
  - a. TB-9 - 1 = Not Used
  - b. TB-9 - 2 = + 24 VDC Out (Orange)
  - c. TB-9 - 3 = + 24 VDC Out (Orange)
  - d. TB-9 - 4 = EVA Detector (Yellow)
  - e. TB-9 - 5 = EVC Detector (Yellow)
  - f. TB-9 - 6 = DC Common Out (Blue)
  - g. TB-9 - 7 = EVB Detector (Yellow)
  - h. TB-9 - 8 = EVD Detector (Yellow)
  - i. TB-9 - 9 = DC Common Out (Blue)

Assuming TB9 - 2 and TB9 - 3 are unused on the "J" File, move wires on J11-J & J11-K (Twisted Pair) to J12-E & J13-E, respectively.

Field wiring for auxiliary detectors may terminate on terminal board TB-0 (If unused) in the controller cabinet. Use manufactures recommended wiring for these connections.

### **System Operation**

The Contractor shall demonstrate that the components of each system are compatible and will perform satisfactorily as a system. Satisfactorily performance shall be determined using the following test procedure during the functional test period:

1. Each system to be used for testing shall consist of an optical detector, an optical detector cable and a phase selector module.
2. The phase selector shall be installed in the proper input file slot of the Model 332 or 333 controller cabinet assembly.
3. Two tests shall be conducted; one using a Class I signal emitter and a distance of 1000 feet between the emitter and the detector, the other using a Class II signal emitter and a distance of 1800 feet between the emitter and the detector. Range adjustments on the phase selector shall be set to "Maximum" for each test.
4. During the tests of the Class I and Class II emitters, the proper response from the Model 170E and 2070 controller unit during the "ON" interval and there shall be no improper operation of the Model 170E or 2070 controller unit or the monitor during the "OFF" interval.

Arrange for a technician from the EVP manufacturer, to be present for the first day of the traffic signal and lighting function test to insure proper installation and functioning of the EVP equipment.

Arrange for a technician from the controller assembly manufacturer to perform any controller modifications required for the installation, or operation, of the EVP equipment.

### **GPS Universal Time Sources**

The GPS Universal Time Source shall be a McCain model M32755 or approved equal. The Engineer shall approve any alternate GPS time source prior to installation.

The GPS Universal Time Source shall incorporate a precision GPS receiver and a microprocessor to decode the time signals received from the GPS satellite network. The Universal Time Source shall interface this time signal to a model 170E controller (using Bi-Tran local software) to provide an accurate clock update to the traffic signal controller.

The GPS Universal Time Source shall meet or exceed the following criteria:

- Operate in temperatures from -30°C to +80°C.
- Receive power through 170E controller's ACIA port.
- Provide 170E controller with the time, date, and day of the week data.
- Software configured time zone and daylight savings operations.
- Support RS-232C serial data rates at 300, 600, 1200, 2400, 48000, 9600 and 19200 bps.
- Provide LED indicators for communication status to a satellite.
- Provide a weatherproof disc antenna no greater than 3" diameter x 1" height to be mounted directly to the top of the traffic signal controller cabinet.
- Provide all cabling and connectors with the correct pin assignments to interface the GPS unit to antenna and to 170E controller.

Proper gaskets or other weatherproofing materials for the antenna shall be supplied and installed to prevent water or moisture from entering the traffic signal controller cabinet.

### **Battery Backup System**

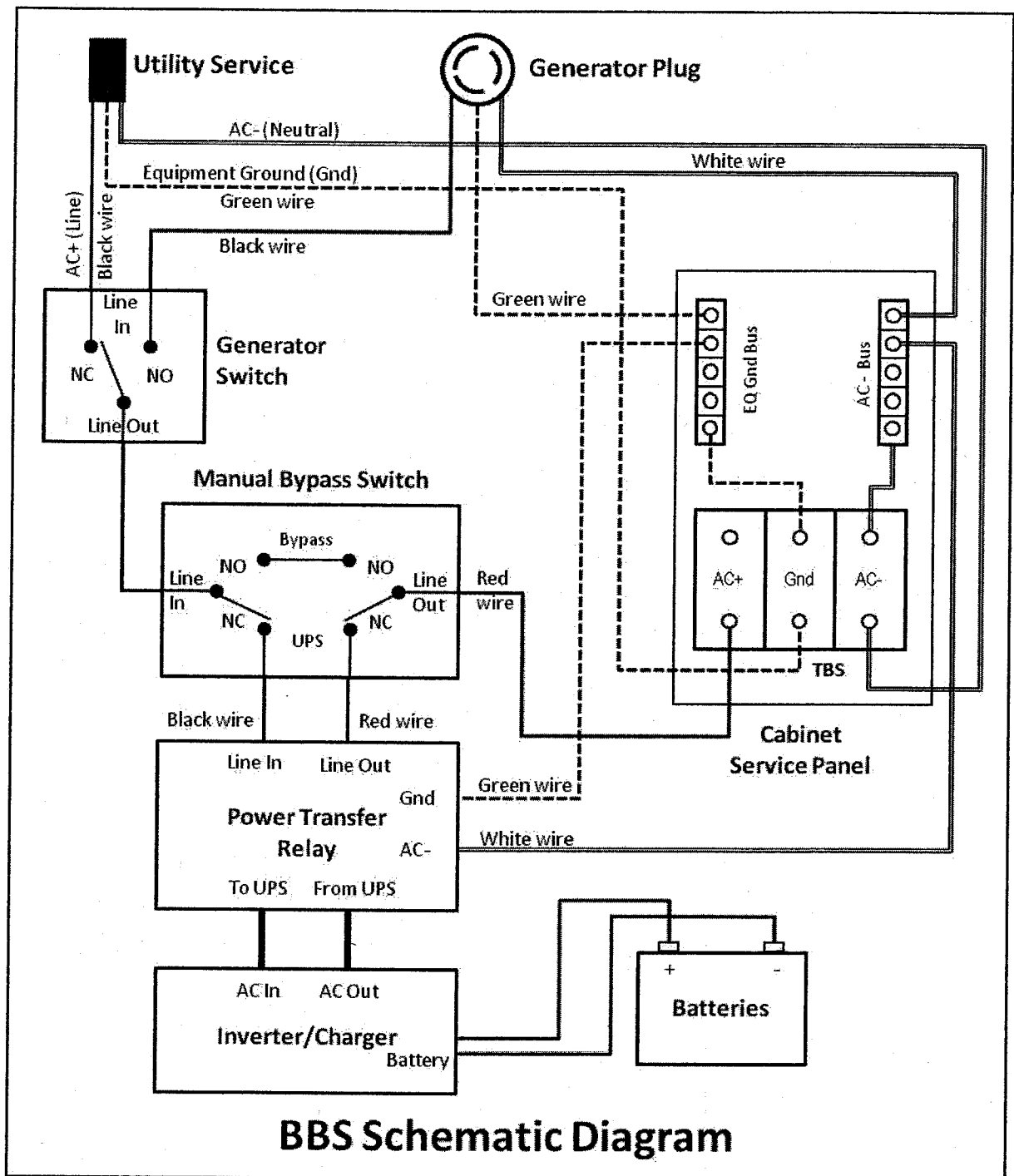
This special provision establishes the minimum requirements for a battery backup system (BBS) that shall provide power to a traffic signal system in the event of a power failure or interruption. The BBS shall be designed for outdoor applications, in accordance with the current edition of Chapter 1, Section 8 requirements of Transportation Electrical Equipment Specifications (TEES).

The BBS batteries shall be external to the traffic signal controller cabinet as specified under "External Battery Cabinet Option" herein unless specified otherwise.

BBS cabinet shall be listed on the current Caltrans pre-qualified product list. The BBS shall include, but not limited to the following:

- cabinet,
- utility line/generator switch,
- inverter/charger,
- power transfer relay,
- a separate manually operated non-electronic bypass switch,
- batteries,
- all necessary hardware, shelving, and interconnect wiring.

The following figure shows BBS components interconnecting with each other and the controller cabinet to ensure interchangeability between all BBS manufacturers.

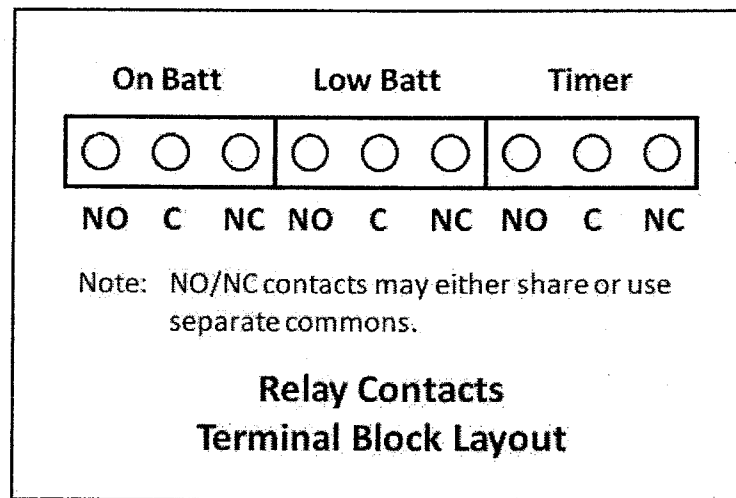


#### Operation

The BBS shall provide a minimum two (2) hours of full run-time operation for an intersection equipped with all LED traffic signal indications (minimum 1100W active output capacity, with 80% minimum inverter efficiency). and 2 (2) hours of flashing operation.

The maximum transfer time allowed, from disruption of normal utility line voltage to stabilized inverter line voltage from batteries, shall be 65 milliseconds. The same maximum allowable transfer time shall also apply when switching from inverter line voltage to utility line voltage.

The BBS shall provide the user with six (6)-sets of fully programmable normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) dry relay contact closures, available on a panel-mounted terminal block, rated at a minimum 120V/1A, and labeled so as to identify each contact. See below figure for typical configuration.



The first set of NO and NC contact closures shall be energized whenever the unit switches to battery power. Contact shall be labeled or marked "On Batt".

The second set of NO and NC contact closures shall be energized whenever the battery approaches approximately 40% of remaining useful capacity. Contact shall be labeled or marked "Low Batt".

The third set of NO and NC contact closures shall be energized two hours after the unit switches to battery power. Contact shall be labeled or marked "Timer".

The six programmable NO and NC contact closures shall be independently configured to activate under any of the following conditions: On Battery, Low Battery, Timer, Alarm, or Fault.

Operating temperature for inverter/charger, power transfer relay and manual bypass switch shall be – 37 °C to +74 °C.

Both the Power Transfer Relay and Manual Bypass Switch shall be rated at 240VAC/30 amps, minimum.

The BBS shall use a temperature-compensated battery charging system. The charging system shall compensate over a range of 2.5 – 4.0 mV/ °C per cell.

The temperature sensor shall be external to the inverter/charger unit. The temperature sensor shall come with 10' of wire.

Batteries shall not be recharged when battery temperature exceeds 50 °C ± 3 °C.

BBS shall bypass the utility line power whenever the utility line voltage is outside of the following voltage range: 100VAC to 130VAC (± 2VAC).

When utilizing battery power, the BBS output voltage shall be between 110 VAC and 125 VAC, pure sine wave output, ≤ 3% THD, 60Hz ± 3Hz.

BBS shall be compatible with NEMA and Model 332 and 333JP Cabinets, and Model 170, 390 & 2070 Controllers and cabinet components for full time operation.

In cases of low (below 100VAC) or absent utility line power, when the utility line power has been restored at above 105 VAC  $\pm$  2 VAC for more than 30 seconds, the BBS shall transfer from battery backed inverter mode back to utility line mode.

In cases of high utility line power (above 130VAC), when the utility line power has been restored at below 125VAC  $\pm$  2 VAC for more than 30 seconds, the BBS shall transfer from battery backed inverter mode back to utility line mode.

The BBS shall have an automatic tap to step up or step down the output voltage by 10 percent. The resulting output voltages shall remain within the above prescribed voltage range: 100VAC to 130VAC. This capability will extend BBS range for operating on input AC and not reverting to battery power. BBS shall be equipped to prevent a malfunction feedback to the cabinet or from feeding back to the utility service.

In the event of inverter/charger failure, battery failure or complete battery discharge, the power transfer relay shall revert to the NC (and de-energized) state, where utility line power is connected to the cabinet.

Recharge time for the battery, from "protective low-cutoff" to 80% or more of full battery charge capacity, shall not exceed twenty (20) hours.

### **Mounting / Configuration**

Generator Switch, Inverter/Charger, Power Transfer Relay and manually operated Bypass Switch shall fit inside a typical fully equipped traffic signal controller cabinet.

Mounting method inside the 332 and 333JP cabinet shall be shelf-mount, rack-mount or combination of either. Available rack space for front-mounted inside the 332 and 333JP cabinet is 3U or approximately 6 inches.

All interconnect wiring provided between Generator Switch, Inverter/Charger, Power Transfer Relay, Bypass Switch and Cabinet Terminal Service Block shall be no less than 9 feet of UL Style 1015 CSA TEW with the following characteristics:

- AWG Rating: 10 AWG
- Stranding: 105 strands of 10 AWG tinned copper
- Rating: 600 V, 105 °C, PVC Insulation

Relay contact wiring provided for each set of NO/NC relay contact closure terminals shall be 9 feet of UL Style 1015 CSA TEW 18 AWG wire, same ratings as above, except 16 strands of 18 AWG tinned copper.

All necessary hardware for mounting (shelf angles, rack, etc) shall be included in the **contract price paid** for the BBS, and no additional compensation will be allowed therefor.

### **Internal mounted battery option**

The controller cabinet shall be equipped with a generator twist lock flanged inlet receptable, manual transfer switch and bypass switch.

The twist lock flanged inlet receptacle shall be Hubbell 2615, NEMA L5-30P Twist Lock Flanged Male Inlet Rated for 30A/125VAC or approved equal. Receptacle shall be mounted flush to the cabinet in a weatherproof lift cover plate made of impact-resistant thermoplastic and gray in color.

The bypass switch shall transfer the load, including the UPS to the twist lock inlet receptacle. The manual transfer switch shall be wired to prevent any back feed to the utility service. Both the bypass switch and manual transfer switch shall be rack mounted independently in the controller cabinet meeting industry standards.

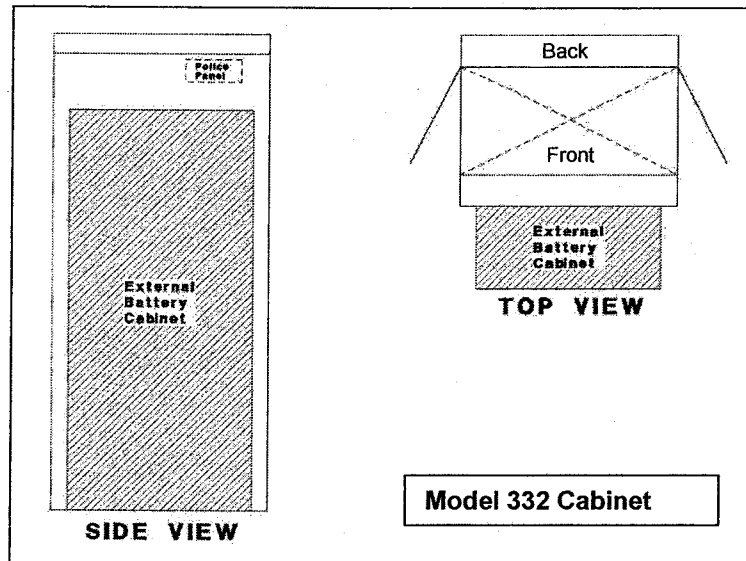
Batteries shall be mounted on swing-tray mounted below the controller shelf. A minimum of six (6) bolts/fasteners shall be used to secure swing-trays to the 332 Cabinet standard EIA 19" rack. All bolts/fasteners and washers shall meet the following requirements:

- Screw type: Pan Head Phillips machine screw
- Size and Thread pitch: 10-32
- Material: 18-8 stainless steel (Type 316 stainless steel is acceptable as an alternate)
- Washer: Use one 18-8 stainless steel flat washer under the head of each 10-32 screw; lock washers are unnecessary provided that the screws are properly tightened.

Number of screws per swivel bracket: minimum six (6) screws per swivel bracket. Screws are to be spaced evenly along bracket, with one screw near each end. Batteries may be shelf mounted in area behind controller so long as shelf and batteries do not interfere with controller unit and C1 plug.

#### **External battery cabinet option**

Batteries shall be housed in an external cabinet mounted to the side of the controller cabinet as shown in the following figure or as directed by the Engineer with a minimum of eight (8) bolts:



If BBS is installed at the back of controller cabinet, the modification shall include a minimum of 36 inches wide concrete walkway access to the BBS without encroaching outside the right-of-way. BBS shall be installed at the front of the controller cabinet (in locations where the back of the controller cabinet has limited ROW or conflicting structures and facilities and other obstructions), the BBS cabinet shall not cover the police panel. The BBS cabinet shall also not hinder the access ramp's compliance with ADA requirements.

Four shelves shall be provided within the battery cabinet. There shall be a minimum of 12 inches clearance between shelves. Each shelf shall be a minimum of 9" X 25", and capable of supporting a minimum of 125 lbs. Batteries shall be mounted on individual shelves.

The external battery cabinet shall be NEMA 3R rated in accordance to Section 2-Housings of the Chapter 7 of TEES, for the construction of the cabinet and anodic coating finish.

The external battery cabinet shall be ventilated through the use of louvered vents, filter, and one thermostatically controlled fan in accordance to Section 2-Housings of the Chapter 7 of TEES.

External battery cabinet fan shall be AC operated from the same line output of the Manual Bypass Switch that supplies power to the controller cabinet.



The external battery cabinet shall have a door opening to the entire cabinet. The door shall be attached to the cabinet through the use of a continuous stainless steel piano hinge or four, two-bolts per leaf, hinges in accordance to Section 2-Housings of the Chapter 7 of TEES. The door shall use a three-point, roller locking mechanism and standard #2 key lock to lock the door. The door shall have a stainless steel handle.

The external cabinet shall be equipped with a generator twist lock flanged inlet receptacle, manual transfer switch and bypass switch.

The twist lock flanged inlet receptacle shall be Hubbell 2615, NEMA L5-30P, Twist Lock Flanged Male Inlet Rated for 30A/125V or approved equal. Receptacle shall be mounted flush to the cabinet in a weatherproof lift cover plate made of impact-resistant thermoplastic and gray in color.

The bypass switch shall transfer the load, including the UPS to the twist lock inlet receptacle. The manual transfer switch shall be wired to prevent any back feed to the utility service. Both the bypass switch and manual transfer switch shall be rack mounted independently in BBS cabinet meeting industry standards.

The BBS with external battery cabinet shall come with all bolts, conduits and bushings, gaskets, shelves, and hardware needed for mounting.

#### **Maintenance, Displays, Controls and Diagnostics**

The BBS shall include a 2 line by 40 character LCD display to indicate current battery charge status, input/output voltages, time and settings of various conditions. The same parameters shall be available via RS232 or USB interfaces on the face of the BBS.

The BBS shall have lightning surge protection compliant with IEEE/ANSI C.62.41.

The BBS shall be capable of accepting firmware upgrades of the non-volatile, read-only memory via serial port communications. The updates shall be accomplished by uploading the software to the BBS over the RS232 serial port located on the face of the BBS.

The BBS shall be equipped with an integral system to prevent battery from destructive discharge and overcharge.

The BBS shall be capable of performing a SELF-TEST, locally from the BBS front panel LCD, or remotely via RS232 or USB interface. The duration of the SELF-TEST shall be programmable in 1-minute increments from 1 minute to 255 minutes.

The BBS and batteries shall be easily replaced with all needed hardware and shall not require any special tools for installation.

The BBS shall include a re-settable inverter event counter to indicate the number of times the BBS was activated and the total number of hours the unit has operated on battery power, accessible via the LCD screen or remotely via RS232 or USB.

The BBS shall be equipped with an event log that stores for a minimum the last 100 events. The events shall be time and date stamped. The event log shall be retrievable vial RS232, USB or from the BBS LCD screen. The event log shall be display and print out in plain English when output the RS232 or USB ports.

#### **Battery System**

Individual battery shall be 12V, rated 105 amp-hour for 20 hours @ 77°F to 1.70 VPC, deep cycle, sealed prismatic lead-calcium based Absorbed Glass Mat/ Valve Regulated Lead Acid (AGM/VRLA) battery and shall be easily replaced and commercially available off the shelf.

The manufacturer shall certify batteries to operate over a temperature range of  $-25^{\circ}\text{C}$  to  $+74^{\circ}\text{C}$ . The batteries shall be provided with appropriate interconnect wiring and corrosion-resistant mounting trays and/or brackets appropriate for the cabinet into which they will be installed.

Batteries shall **indicate** maximum recharge data and recharging cycles.

Furnish four (4) batteries for the BBS.

### **Battery Harness**

Battery interconnect wiring shall be via two-part modular harness:

- Part I shall be equipped with red (+) and black (-) cabling that can be permanently connected to the positive and negative posts of each battery. Each red and black pair shall be terminated into a Molex, polarized – keyed battery cable connector or equivalent. The length of the harness between batteries shall be a minimum of 12 inches.
- Part II shall be equipped with the mating Power Pole style connector for the batteries and a single, insulated Power Pole style connection to the inverter/charger unit. Harness shall be fully insulated and constructed to allow batteries to be quickly and easily connected in any order to ensure proper polarity and circuit configuration. The length of the battery interconnect harness shall be a minimum of 60 inches from the Inverter/Charger plug to the first battery in the string.

Power Pole connectors may be either one-piece or two-piece. If a two-piece connector is used, a locking pin shall be used to prevent the connectors from separating.

All battery interconnect harness wiring shall be UL Style 1015 CSA TEW or Welding Style Cable or equivalent, all of proper gauge with respect to design current and with sufficient strand count for flexibility and ease of handling.

Battery terminals shall be covered and insulated with molded boots to prevent accidental shorting.

### **BBS Quality Assurance**

Each Battery Backup System (BBS) shall be manufactured in accordance with a manufacturer Quality Assurance (QA) program. The QA program shall include two Quality Assurance procedures:

1. Design QA - The manufacturer, or an independent testing lab hired by the manufacturer, shall perform Design Qualification Testing on new BBS system(s) offered, and when any major design change has been implemented on an existing design. A major design change is defined as any modification - material, electrical, physical, or theoretical, that changes any performance characteristics of the system, or results in a different circuit configuration. Where a dispute arises in determining if a system is a new design or if the system has had a major design change, the County will make the final determination if Design Qualification Testing is required prior to production consideration.
2. Production QA - The Production QA shall include statistically controlled routine tests to ensure minimum performance levels of BBS units built to meet this specification and a documented process of how problems are to be resolved.

QA process and test results documentation shall be kept on file for a minimum period of seven years.

Battery Backup System designs not satisfying Design QA Testing and Production QA Testing requirements shall not be labeled, advertised, or sold as conforming to this specification.

A technician whom is qualified to work on the battery backup system and employed by the battery backup system manufacturer or the manufacturer authorized distributor, shall be present at the time the equipment is turned on.

It shall be the responsibility of the Contractor to implement and fund any traffic signal controller assembly modifications required to achieve the traffic signal operation as shown on the construction plans and as required in the Special Provisions.

The signal housing must be able to rotate independent from the bracket for lens alignment. The dual flashing beacons shall be mounted horizontally and the signal housing shall be black in color.

Full compensation for LIGHTING (CITY STREET) shall include bridge and retaining wall lighting. The lump sum price shall include all labor, materials and equipment and incidentals and no additional compensations shall be allowed therefore.

Full compensation for MODIFY SIGNAL AND LIGHTING shall include removal of exiting signal and lighting and installation of new signal and lighting. The lump sum price shall include all labor, materials and equipment and incidentals and no additional compensations shall be allowed therefore.

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## **DIVISION X MATERIALS**

### **87 MATERIALS—GENERAL**

Replace section 87-2 with:

#### **87-2 AGGREGATE**

##### **87-2.01 GENERAL**

###### **87-2.01A Summary**

Section 87-2 includes specifications for furnishing aggregate for a project in District 7, 8, 11, or 12.

###### **87-2.01B Definitions**

**stockpile lot:** Stockpile or portion of a stockpile of steel slag aggregate used.

###### **87-2.01C Submittals**

Submit a certificate of compliance for:

1. Each stockpile lot
2. Steel slag

##### **87-2.02 MATERIALS**

###### **87-2.02A General**

Do not use air-cooled iron blast furnace slag to produce aggregate for:

1. Structure backfill material
2. Pervious backfill material
3. Permeable material
4. Reinforced or prestressed PCC component or structure

Do not use aggregate produced from slag resulting from a steel-making process except in:

1. Imported borrow
2. AS
3. Class 2 AB
4. HMA

Steel slag used to produce aggregate for AS and Class 2 AB must be crushed such that 100 percent of the material will pass a 3/4-inch sieve and then control aged for at least 3 months under conditions that will maintain all portions of the stockpiled material at a moisture content in excess of 6 percent of the dry weight of the aggregate.

For steel slag aggregate, provide separate stockpiles for controlled aging of the slag. An individual stockpile must not contain less than 10,000 tons or more than 50,000 tons of slag. The material in each individual stockpile must be assigned a unique lot number, and each stockpile must be identified with a permanent system of signs. Maintain a permanent record of:

1. Dates for:
  - 1.1. Completion of stockpile
  - 1.2. Start of controlled aging
  - 1.3. Completion of controlled aging
  - 1.4. Making of tests
2. Test results

For each stock pile of steel slag aggregate, moisture tests must be made at least once each week. The time covered by tests that show a moisture content of 6 percent or less is not included in the aging time. Notify METS and the Engineer upon completion of each stockpile and the start of controlled aging and upon completion of controlled aging. Do not add aggregate to a stockpile unless a new aging period is started.

Steel slag used for imported borrow must be weathered for at least 3 months. Each delivery of aggregate containing steel slag for AS or Class 2 AB must include a delivery tag for each load. The tag must identify the lot by the stockpile number, slag aging location, and stockpile completion and controlled aging start date.

You may blend air-cooled iron blast furnace slag or natural aggregate in proper combinations with steel slag aggregate to produce the specified gradings.

California Test 202 is modified by California Test 105 whenever the difference in sp gr between the coarse and fine portions of the aggregate or between the blends of different aggregates is 0.2 or more.

For slag used as aggregate in HMA, the Kc factor requirements in California Test 303 do not apply.

If steel slag aggregates are used to produce HMA, no other aggregates may be used in the mixture except that up to 50 percent of the material passing the no. 4 sieve may consist of iron blast furnace slag aggregates, natural aggregates, or a combination of these. If iron blast furnace aggregates, natural aggregates, or a combination of these are used in the mixture, each aggregate type must be fed to the drier at a uniform rate. Maintain the feed rate of each aggregate type within 10 percent of the amount set. Provide adequate means for controlling and checking the feeder accuracy.

Store steel slag aggregate separately from iron blast furnace slag aggregate. Store each slag aggregate type separately from natural aggregate.

For HMA produced from steel slag aggregates, iron blast furnace slag aggregates, natural aggregates, or any combination of these, the same aggregate must be used throughout any one layer. Once an aggregate type is selected, do not change it without authorization.

Aggregate containing slag must comply with the applicable quality requirements for the bid items in which the aggregate is used.

## 87-2.03 CONSTRUCTION

Do not place aggregate produced from slag within 1 foot of a non-cathodically protected pipe or structure unless the aggregate is incorporated in concrete pavement, in HMA, or in treated base.

Do not place slag aggregate used for embankments within 18 inches of finished slope lines measured normal to the plane of the slope.

## 87-2.04 PAYMENT

The Department reduces the payment quantity of HMA if:

1. Steel slag aggregates are used to produce HMA
2. The sp gr of a compacted stabilometer test specimen is in excess of 2.40

The Department prepares the stabilometer test specimen under California Test 304 and determines the sp gr of the specimen under Method C of California Test 308.

The Department determines the HMA payment quantity by multiplying the quantity of HMA placed in the work by 2.40 and dividing the result by the sp gr of the compacted stabilometer test specimen. The Department applies this quantity reduction as often as necessary to ensure accurate results.

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## 88 GEOSYNTHETICS

### I. FILTER FABRIC

**Add to section 88-1.02B:**

Filter fabric for retaining wall drainage and edge drain must be Class A.

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## Appendix

### Table of Contents

<u>Description</u>	<u>Section</u>
AQMD Recommendations*	Appendix A
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Attachment "C" for Risk Level 1 Requirements	Appendix C
Federal Prevailing Wage Decision	Appendix D
Additional Federal Requirements Exhibits*	Appendix E
UPRR Overpass Agreement	Appendix F

\* Note: See the first page of this document description for a detailed Table of Contents.

# **Appendix A**

## **AQMD Recommendations**

## **Dust Abatement Attachments Table of Contents**

<b><u>Description</u></b>	<b><u>Page</u></b>
Signage Recommendation (AQMD document, modified)	DA1
Sample Dust Control Plan (AQMD sample)	DA5
Dust Control Plan Review Checklists (AQMD document)	DA6
Reasonably Available Control Measures (from Rule 403 Implementation Handbook)	DA10
Best Available Control Measures (from Rule 403 Implementation Handbook)	DA16
Best [Reasonably] Available Control Measures for High Winds Conditions (from Rule 403 Implementation Handbook)	DA22
Track Out Control Options (from Rule 403 Implementation Handbook)	DA26



**AQMD SIGNAGE RECOMMENDATIONS****November, 2001**

Plan holder shall post signage at specified locations on the subject property in accordance with the standards specified below. The exception to the standards is that all letters shall be 4 inches high, with the names and telephone numbers of appropriate contacts and services in bold print, as indicated in the standards. These signs shall also include the SCAQMD toll free complaint line 1-800-CUT-SMOG (1-800-288-7664) and the telephone number for the Environmental Observer. These signs shall be posted within 50 feet of the curb on all four (4) corners of the subject property.

For each Dust Control Plan aggregating less than, or equal to, ten (10) acres:

1. The applicant shall install a sign on such property which is visible to the public that meets the following requirements:
  - (a) Such sign shall measure at least four (4) feet wide by four (4) feet high and conform to the specifications in 1 (a) below.

For each Dust Control Plan aggregating over ten (10) acres:

2. The applicant shall install a sign on such property which is visible to the public that meets the following requirements:
  - (a) Such sign shall measure at least eight (8) feet wide by four (4) feet high and conform to the specifications in 1 (b) below.

**THE SIGN SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:**

1. **The sign boards shall be constructed with materials capable of withstanding the environment in which they are placed.**
  - (a) For 4' x 4' signs, the District recommends the following:
    - I. ¾" A/C laminated plywood board
    - II. Two 4" x 4" posts
    - III. The posts should be attached to the edges of the plywood board with at least 2 carriage bolts on each post.
    - IV. The front surface of the sign board should be painted in the contrasting color of a white background with black lettering.
  - (b) For 4' x 8' signs, the District recommends the following:
    - I. 1" A/C laminated plywood board
    - II. Two 5" x 6" posts
    - III. The posts should be attached to the 4' edges of the plywood board with at least 2 carriage bolts on each post.
    - IV. The front surface of the sign board should be painted in the contrasting color of a white background with black lettering.

**2. The sign board shall be installed and maintained in a condition such that members of the public can easily view, access, and read the sign at all times until the expiration date of the Dust Control plan.**

(a) For 4' x 4' signs, the District recommends the following:

- I. The lower edge of the sign board should be mounted at least 2' above the existing ground surface to facilitate ease of viewing.
- II. The posts should be set in a hole at least 3' deep with concrete footings to preclude downing by high winds.
- III. On the construction site, the sign should be positioned such that nothing obstructs the public's view from the primary street access point.
- IV. For construction projects that are developed in phases, the sign should be moved to the area that is under active construction.
- V. In situations where all phases of the construction project are completed on a property prior to expiration of the Dust Control Plan, a written request for cancellation of the Dust Control Plan must be submitted to the Engineer.

(b) For 4' x 8' signs, the District recommends the following:

- I. The lower edge of the sign board should be mounted at least 2' above the existing ground surface to facilitate ease of viewing.
- II. The posts should be set in a hole at least 4' deep with concrete footings to preclude downing by high winds.
- III. On the construction site, the sign should be positioned such that nothing obstructs the public's view from the primary street access point.
- IV. For construction projects that are developed in phases, the sign should be moved to the area that is under active construction.
- V. In situations where all phases of the construction project are completed on a property prior to expiration of the Dust Control Plan, a written request for cancellation of the Dust Control Plan must be submitted to the Engineer.

**3. The sign board shall contain the following information:**

- (a) Project Name
- (b) Name of Prime Contractor
- (c) Phone Number of Contractor's Employee Responsible for Dust Control Matters
- (d) County designated phone number (to be provided by the Engineer)
- (e) South Coast Air Quality Management District Phone Number

**4. The sign board shall be designed to the following alpha and numeric text dimensions (sign boards written in longhand are unacceptable).**

- (a) For a permittee subject to the 4' x 4' sign requirement, the District provides the following example: (as modified by the County of Riverside for use on County Public Works projects)

1" UPPERCASE Letters →	PROJECT NAME:		3 ½ " Title Case Bold Letters ←
1" UPPERCASE Letters →	CONTRACTOR		3 ½ " Title Case Bold Letters ←
1" Title Case Letters →	Contractor's Dust Control Phone #		3" Bold Numbers ←
1" Title Case Letters →	County of Riverside Phone #		3" Bold Numbers ←
1" Title Case Letters →	Phone Number:	<b>SCAQMD 1-800-CUT-SMOG</b>	3 ½ " Bold Numbers ←

"Title Case" means the first letter of a word is capitalized and subsequent letters are lower case.

AQMD Recommendations

(b) For a permittee subject to the 4' x 8' sign requirement, the District provides the following example: (as modified by the County of Riverside)

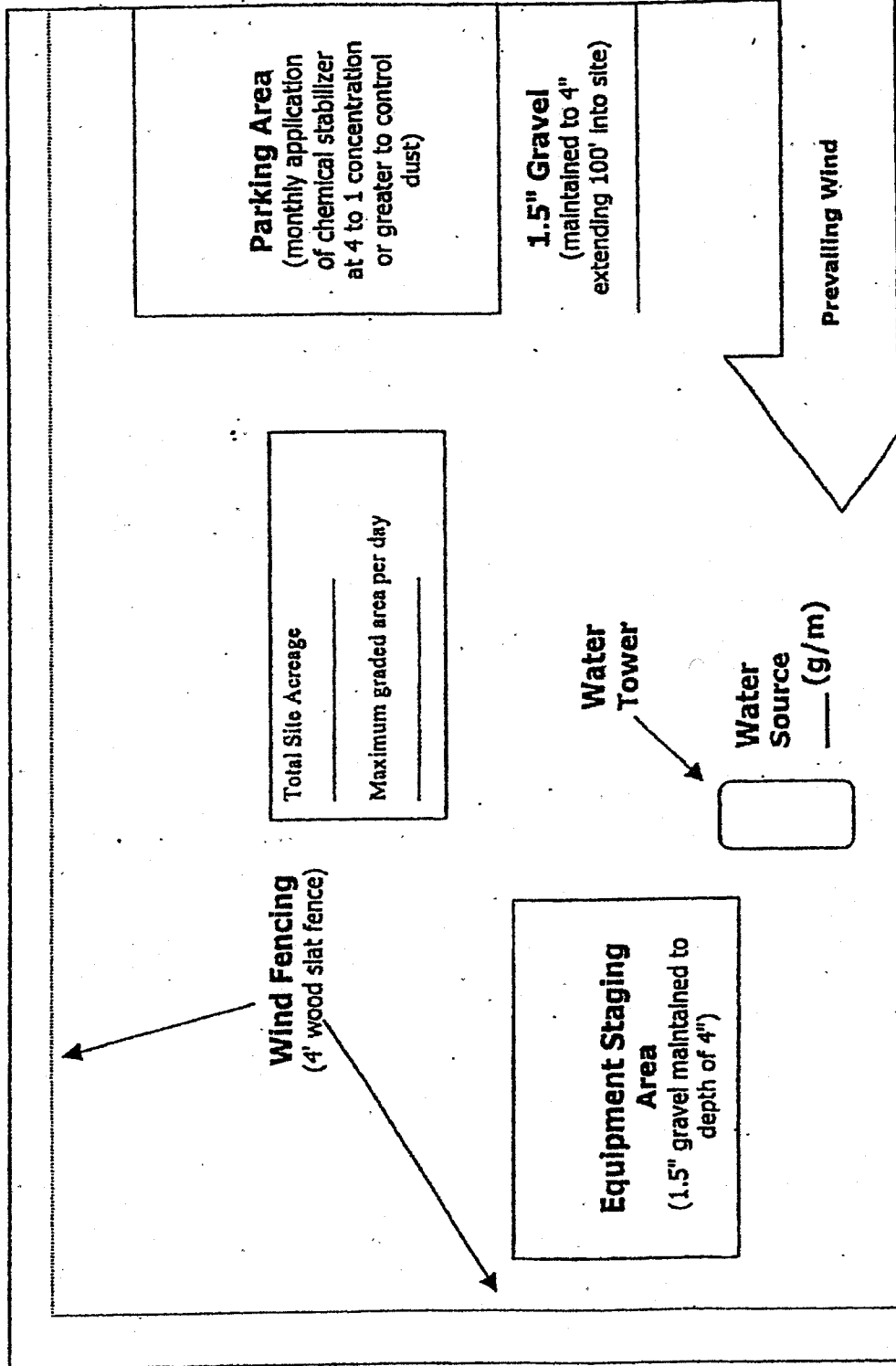
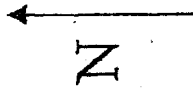
2" UPPERCASE Letters	PROJECT NAME:	4" Title Case Bold Letters
2" UPPERCASE Letters	CONTRACTOR	4" Title Case Bold Letters
2" Title Case Letters	Contractor's Dust Control Phone #	4" Bold Numbers
2" Title Case Letters	County of Riverside Phone #	4" Bold Numbers
2" Title Case Letters	Phone Number:	4 ½" Bold Numbers
2" Title Case Letters	SCAQMD 1-800-CUT-SMOG	
	COUNTY OF RIVERSIDE TRANSPORTATION DEPARTMENT	

Section 1

Simplified Sample Site Plan

Existing Residential

Distance and location of nearest:  
Residence \_\_\_\_\_  
Business \_\_\_\_\_



AMD Recommendations

Remember...  
DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,  
REGARDLESS OF CONSTRUCTION STATUS

### Plan Review Checklist Clearing/Grubbing/Mass Grading Phase

☐ If feasible, use grading permit conditions to break the project into phases so that only a portion of the site is disturbed at any given time to ensure control of fugitive dust. This technique is critical for project sites with greater than 100 acres.

☐ Prior to initiating activity, pre-water site through use of portable irrigation lines. At least 72 hours of pre-watering is recommended for each area prior to initiating earth-movement. Require the Applicant to specify water source and available flow rate (g/m).

☐ Water applied continuously to all disturbed portions of the site by means of water truck/water pull as necessary to maintain sufficient visible moisture on the soil surface. For reference, one 2,000 gallon water truck can treat approximately 4 acres of active construction per hour. Also, for cut and fill activities, one 10,000 gallon water pull is estimated to be necessary for each 7,000 cubic yards of daily earth-movement. Multiple 4,000-gallon water trucks may be used in place of one 10,000-gallon water pull. Touch and visual contrast are reasonably good indicators of soil moisture. Surface areas that are dry to the touch and appear lighter-colored require the application of additional water to prevent visible or fugitive dust. Require the Applicant to specify the number of watering vehicles available for dust control during mass grading and during off-hours as well as availability of back-up water trucks if the site experiences dust control problems.

☐ Water towers are necessary for projects with more than 10 acres of active construction. Without a water tower, it can take up to 30 minutes to fill a 2,000 gallon water truck. Also, multiple water towers are necessary for projects that use water pulls as filling one 10,000 gallon water pull can drain a water tower which takes up to 40 minutes to refill.

☐ Wind fencing is necessary between the site and nearby residences or businesses. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through the site.

☐ A perimeter watering system consisting of portable irrigation equipment may be an effective mitigation system to protect surrounding residences and businesses. The portable watering system may be used in place of or in conjunction with watering trucks. The local jurisdiction may also be provided access to this equipment.

Remember...

**DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,  
REGARDLESS OF CONSTRUCTION STATUS**

- ☐ Construction site accesses are to be improved with 1.5" gravel maintained to a depth of 4", at least 20' wide, and extending 100 feet into the site. If the project site is not balanced, a wheel washing system and/or ribbed steel plates should be placed in the roadway before the vehicle enters the graveled area to clean the tires and prevent trackout.
- ☐ Equipment staging areas are to be treated with 1.5" gravel maintained to a depth of 4".
- ☐ Employee parking areas are to be covered with 1.5" gravel maintained to a depth of 4" or treated with chemical dust suppressants at a 4 to 1 ratio on at least a monthly basis to prevent fugitive dust.
- ☐ Chemical dust suppressants are to be mixed at a ratio of 20 to 1 and applied to all disturbed surfaces that are proposed to remain inactive for a period of at least 10 consecutive days. These products are effective in preventing and controlling dust. Recordkeeping is necessary to demonstrate compliance.
- ☐ All project sites greater than 100 acres shall monitor daily wind speeds and AQMD forecasted wind events (call 1.800.CUT.SMOG; press one for air quality information, and then press five for Coachella Valley wind forecasts). Operators shall maintain these records for review by any local code enforcement officer or AQMD inspector.
- ☐ An environmental observer whose primary duty is to oversee dust control at the site is to be used for construction projects greater than 100 acres and/or sites with more than 50 acres of active construction. The environmental observer is tasked with monitoring dust abatement measures and authorized to deploy additional water trucks and other dust control actions (i.e., wind fencing, street sweepers, chemical dust suppressants, etc.) as necessary to prevent or control fugitive dust.
- ☐ Other (specify): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Remember...

**DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,  
REGARDLESS OF CONSTRUCTION STATUS**

### Plan Review Checklist Finish Grading Phase

- ☐ Water applied continuously to all disturbed portions of the site by means of water truck/water pull as necessary to maintain sufficient visible moisture on the soil surface. For reference, one 2,000 gallon water truck can treat approximately 4 acres of active construction per hour. Also, for cut and fill activities, one 10,000 gallon water pull is estimated to be necessary for each 7,000 cubic yards of daily earth-movement. Multiple 4,000-gallon water trucks may be used in place of a 10,000-gallon water pull. Touch and visual contrast are reasonably good indicators of soil moisture. Surface areas that are dry to the touch and appear lighter-colored require the application of additional water to prevent visible or fugitive dust. Require the Applicant to specify the number of watering vehicles available for dust control during finish grading and during off-hours as well as availability of back-up water trucks if the site experiences dust control problems.
- ☐ Water towers are necessary for projects with more than 10 acres of active construction. Without a water tower, it can take up to 30 minutes to fill a 2,000 gallon water truck. Also, multiple water towers are necessary for projects that use water pulls as filling one 10,000 gallon water pull can drain a water tower which takes up to 40 minutes to refill.
- ☐ Wind fencing is necessary between the site and nearby residences or businesses to reduce fugitive dust. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through a site.
- ☐ Chemical dust suppressants are to be applied at a concentration of at least 10 to 1 to finish graded areas once final elevations have been reached. For areas that will remain inactive for longer periods, vegetation can be a cost-effective alternative to chemical stabilization. Wind fencing or other obstructions can keep the stabilized area free from future disturbances.
- ☐ Construction site access(es) are to be improved with 1.5" gravel maintained to a depth of at least 4" with a minimum width of at least 20', extending 100 feet into the project site.
- ☐ Equipment staging areas are to be treated with 1.5" gravel maintained to a depth of 4".
- ☐ Internal roadway networks are to be treated with chemical dust suppressants at a minimum rate of at least 4 to 1 and retreated on a monthly basis once final roadway elevations have been reached.
- ☐ Employee parking areas are to be treated with chemical dust suppressants at a mix ratio of at least 4 to 1 and retreated on at least a monthly basis or covered with 1.5" gravel maintained to a depth of 4" to prevent fugitive dust.
- ☐ Other (specify): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Remember...

**DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,  
REGARDLESS OF CONSTRUCTION STATUS**



**Plan Review Checklist  
Construction Phase**

☐ Water applied continuously to all disturbed portions of the site by means of water truck/water pull is necessary to maintain sufficient visible moisture on the soil surface. For reference, one 2,000 gallon water truck can treat approximately 4 acres of active construction per hour. Touch and visual contrast are reasonably good indicators of soil moisture. Surface areas that are dry to the touch and appear lighter-colored require the application of additional water to prevent visible or fugitive dust. Require the Applicant to specify the number of watering vehicles available for dust control during the construction phase and during off-hours as well as availability of back-up water trucks if the site experiences dust control problems.

☐ Wind fencing is necessary between the site and nearby residences or businesses. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through the site. Block walls, if part of the final project, can replace wind fencing during the construction phase.

☐ Chemical dust suppressants are to be applied at a concentration of at least 20 to 1 to finish graded areas once final elevations have been reached. For areas that will remain inactive for longer periods, vegetation can be a cost-effective alternative to chemical stabilization. Wind fencing or other obstructions can keep the stabilized area free from future disturbances.

☐ Construction site accesses are to be improved with 1.5" gravel, maintained to a depth of 4", with a width of at least 20', extending 100' into the project site. Paving internal roadways can substitute for gravel.

☐ Internal roadway networks are to be paved as early as feasible in the construction phase. Street sweeping of internal and/or external access roads will likely be required to control entrained road dust.

☐ Employee parking areas are to be treated with chemical dust suppressants at a mix ratio of no less than 4 to 1 and retreated on a monthly basis, or more frequently if fugitive dust is observed. If internal roadway is complete, employees are to be instructed to park on paved roads.

☐ Other (specify): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Remember...

**DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,  
REGARDLESS OF CONSTRUCTION STATUS**

## **RULE 403 IMPLEMENTATION HANDBOOK**

---

### **REASONABLY AVAILABLE CONTROL MEASURES**

Paragraph (d)(3) of Rule 403 allows activities outside the South Coast Air Basin (see Figure 2-1) to implement reasonably available control measures in lieu of best available control measures. Additionally, as specified by subparagraph (f)(3)(D) of Rule 403, any person seeking approval of a fugitive dust emissions control plan for projects outside the South Coast Air Basin must demonstrate to the satisfaction of the District that the given activity is employing all reasonably available fugitive dust control measures.

The District has prepared the attached listing of reasonably available fugitive dust control measures for a variety of source categories. This list is based on the U.S. Environmental Protection Agency's reference document entitled, "Control of Open Fugitive Dust Sources," Midwest Research Institute, September 1988.

The District encourages the use of those dust control measures that minimize the use of potable water. When water is needed, reclaimed water should be utilized to the greatest extent feasible.

# REASONABLY AVAILABLE CONTROL MEASURES

The left column contains a listing of the sources of fugitive dust which are intended for emission control under District Rule 403 and a listing of control measures and high-wind measures. The right column contains a description of the reasonably available fugitive dust control measures for each of the sources.

Source: (I) Land Clearing/Earth-Moving

## CONTROL MEASURES

## DESCRIPTION

- |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (A) Watering                   | <p>(1) Application of water by means of trucks, hoses and/or sprinklers prior to conducting any land clearing. This will increase the moisture content of the soils; thereby increasing its stability.</p> <p>(2) Pre-application of water to depths of proposed cuts.</p> <p>(3) Once the land clearing/earth moving activities are complete, a second application of water can generate a thin crust that stabilizes the disturbed surface area provided that it is not disturbed. (Security fencing can be used to prevent unwanted future disturbances of sites where a surface crust has been created).</p> |
| (B) Chemical stabilizers       | <p>(1) Only effective in areas which are not subject to daily disturbances.</p> <p>(2) Vendors can supply information on product application and required concentrations to meet the specifications established by the Rule.</p>                                                                                                                                                                                                                                                                                                                                                                                 |
| (C) Wind fencing               | <p>(1) Three- to five-foot barriers with 50% or less porosity located adjacent to roadways or urban areas can be effective in reducing the amount of windblown material leaving a site.</p> <p>(2) Would likely be used in conjunction with other measures (e.g., watering, chemical stabilization, etc.) to ensure that visible emissions do not cross a property line.</p>                                                                                                                                                                                                                                     |
| (D) Cover haul vehicles        | <p>(1) Entire surface area of hauled earth should be covered once vehicle is full.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| (E) Bedliners in haul vehicles | <p>(1) When feasible, use in bottom-dumping haul vehicles.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## HIGH WIND MEASURE

- (a) Cease all active operations; or
- (b) Apply water within 15 minutes to any soil surface which is being moved or otherwise disturbed.

January 1999

Source: (2) Unpaved Roads

CONTROL MEASURESDESCRIPTION

- |                            |                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (F) Paving                 | (1) Requires street sweeping/cleaning if subject to material accumulation.                                                                                                                                |
| (G) Chemical stabilization | (1) Vendors can supply information as to application methods and concentrations to meet the specifications established by the Rule<br>(2) Not recommended for high volume or heavy equipment traffic use. |
| (H) Watering               | (1) In sufficient quantities to keep surface moist.<br>(2) Required application frequency will vary according to soil type, weather conditions, and vehicular use.                                        |
| (I) Reduce speed limits    | (1) 15 mile per hour maximum. May need to be used in conjunction with watering or chemical stabilization to prevent visible emissions from crossing the property line.                                    |
| (J) Reduce vehicular trips | (1) Access restriction or redirecting traffic to reduce vehicle trips by a minimum of 60 percent.                                                                                                         |
| (K) Gravel                 | (1) Gravel maintained to a depth of four inches can be an effective measure.<br>(2) Should only be used in areas where paving, chemical stabilization or frequent watering is not feasible.               |

HIGH WIND MEASURE

- (c) Apply a chemical stabilizer (to meet the specifications established by the Rule) prior to wind events; or  
 (d) Apply water once each hour; or  
 (e) Stop all vehicular traffic.

January 1999

## RULE 403 IMPLEMENTATION HANDBOOK

---

Source: (3) Storage Piles

### CONTROL MEASURES

#### DESCRIPTION

- |                                          |                                                                                                                                                                                                                  |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (L) Wind sheltering                      | (1) Enclose in silos.<br>(2) Install three-sided barriers equal to height of material, with no more than 50 percent porosity.                                                                                    |
| (M) Watering                             | (1) Application methods include: spray bars, hoses and water trucks.<br>(2) Frequency of application will vary on site-specific conditions.                                                                      |
| (N) Chemical stabilizers                 | (1) Best for use on storage piles subject to infrequent disturbances.                                                                                                                                            |
| (O) Altering load-in/load-out procedures | (1) Confine load-in/load-out procedures to leeward (downwind) side of the material.<br>(2) May need to be used in conjunction with wind sheltering to prevent visible emissions from crossing the property line. |
| (P) Coverings                            | (1) Tarps, plastic, or other material can be used as a temporary covering.<br>(2) When used, these should be anchored to prevent wind from removing coverings.                                                   |

### HIGH WIND MEASURE

- (f) Apply chemical stabilizers (to meet the specifications established by the Rule) prior to wind events; or  
(g) Apply water once per hour; or  
(h) Install temporary covers.

January 1999

Source: (4) Paved Road Track-Out

#### CONTROL MEASURES

#### DESCRIPTION

- |                                |                                                                                                                                                                          |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (Q) Chemical stabilization     | (1) Most effective when used on areas where active operations have ceased.<br>(2) Vendors can supply information on methods for application and required concentrations. |
| (R) Sweep/clean roadways       | (1) Either sweeping or water flushing may be used.                                                                                                                       |
| (S) Cover haul vehicles        | (1) Entire surface area should be covered once vehicle is full.                                                                                                          |
| (T) Bedliners in haul vehicles | (1) When feasible, use in bottom dumping vehicles.                                                                                                                       |
| (U) Site access improvement    | (1) Pave internal roadway system.<br>(2) Most important segment, last 100 yards from the connection with paved public roads                                              |

#### HIGH WIND MEASURE

- (i) Cover all haul vehicles; and  
(j) Clean streets with water flushing, unless prohibited by the Regional Water Quality Control Board.

January 1999

Source: (5) Disturbed Surface Areas/ Inactive Construction Sites

**CONTROL MEASURES**

**DESCRIPTION**

- |                            |                                                                                                                                                                               |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (Q) Chemical stabilization | (1) Most effective when used on areas where active operations have ceased.<br>(2) Vendors can supply information on methods for application and required concentrations.      |
| (R) Watering               | (1) Requires frequent applications unless a surface crust can be developed.                                                                                                   |
| (S) Wind fencing           | (1) Three- to five-foot barriers with 50% or less porosity adjacent to roadways or urban areas can be effective in reducing the amount of wind blown material leaving a site. |
| (T) Vegetation             | (1) Establish as quickly as possible when active operations have ceased.<br>(2) Use of drought tolerant, native vegetation is encouraged.                                     |

**HIGH WIND MEASURES**

- (k) Apply chemical stabilizers (to meet the specifications established by the Rule); or  
(l) Apply water to all disturbed surface areas 3 times per day.

**RULE 403 IMPLEMENTATION HANDBOOK**

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**BEST AVAILABLE CONTROL MEASURES**

Rule 403, paragraph (d)(2) requires active operations [defined in Rule 403, paragraph (c)(1)] within the South Coast Air Basin (see Figure 2-1) to implement at least one best available control measure for each fugitive dust source type on site. Additionally, as specified by subparagraph (f)(3)(D) of Rule 403, any person seeking approval of a fugitive dust emissions control plan for projects within the South Coast Air Basin must demonstrate to the satisfaction of the AQMD that the given activity is employing all best available fugitive dust control measures.

The AQMD has prepared the attached listing of best available fugitive dust control measures for a variety of source categories. This list is based on the U.S. Environmental Protection Agency's reference document entitled, "Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures," Office of Air and Radiation, September 1992.

The AQMD encourages the use of those dust control measures that minimize the use of potable water. When water is needed, reclaimed water should be utilized to the greatest extent feasible.



# RULE 403 IMPLEMENTATION HANDBOOK

## BEST AVAILABLE CONTROL MEASURES

The left column contains a listing of the sources of fugitive dust which are intended for emission control under District Rule 403 and a listing of control measures and high-wind measures. The right column contains a description of the best available fugitive dust control measures for each of the sources.

Source: (1) Land Clearing/Earth-Moving

### CONTROL MEASURES

### DESCRIPTION

(A) Watering (pre-grading)

- (1) Application of water by means of trucks, hoses and/or sprinklers prior to conducting any land clearing. This will increase the moisture content of the soils; thereby increasing its stability.
- (2) Pre-application of water to depths of proposed cuts.

(A-1) Watering (post-grading)

- (1) In active earth-moving areas water should be applied at sufficient frequency and quantity to prevent visible emissions from extending more than 100 feet from the point of origin.

(A-2) Pre-grading planning

- (1) Grade each phase separately, timed to coincide with construction phase; or
- (2) Grade entire project, but apply chemical stabilizers or ground cover to graded areas where construction phase begins more than 60 days after grading phase ends.

(B) Chemical stabilizers

- (1) Only effective in areas which are not subject to daily disturbances.
- (2) Vendors can supply information on product application and required concentrations to meet the specifications established by the Rule.

(C) Wind fencing

- (1) Three- to five-foot barriers with 50% or less porosity located adjacent to roadways or urban areas can be effective in reducing the amount of windblown material leaving a site. Must be implemented in conjunction with either measure (A-1) or (B).

(D) Cover haul vehicles

- (1) Entire surface area of hauled earth should be covered once vehicle is full.

(E) Bedliners in haul vehicles

- (1) When feasible, use in bottom-dumping haul vehicles.

### HIGH WIND MEASURE

- (a) Cease all active operations; or
- (b) Apply water within 15 minutes to any soil surface which is being moved or otherwise disturbed.

## RULE 403 IMPLEMENTATION HANDBOOK

Source: (2) Unpaved Roads

### CONTROL MEASURES

### DESCRIPTION

- |                            |                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (F) Paving                 | (1) Requires street sweeping/cleaning if subject to material accumulation.                                                                                                                                |
| (G) Chemical stabilization | (1) Vendors can supply information as to application methods and concentrations to meet the specifications established by the Rule<br>(2) Not recommended for high volume or heavy equipment traffic use. |
| (H) Watering               | (1) In sufficient quantities to keep surface moist.<br>(2) Required application frequency will vary according to soil type, weather conditions, and vehicular use.                                        |
| (I) Reduce speed limits    | (1) 15 mile per hour maximum. May need to be used in conjunction with watering or chemical stabilization to prevent visible emissions from crossing the property line.                                    |
| (J) Reduce vehicular trips | (1) Access restriction or redirecting traffic to reduce vehicle trips by a minimum of 60 percent.                                                                                                         |
| (K) Gravel                 | (1) Gravel maintained to a depth of four inches can be an effective measure.<br>(2) Should only be used in areas where paving, chemical stabilization or frequent watering is not feasible.               |

### HIGH WIND MEASURE

- (a) Apply a chemical stabilizer (to meet the specifications established by the Rule ) prior to wind events; or  
(b) Apply water once each hour; or  
(c) Stop all vehicular traffic.

## RULE 403 IMPLEMENTATION HANDBOOK

---

Source: (3) Storage Piles

### CONTROL MEASURES

### DESCRIPTION

(L) Wind sheltering

- (1) Enclose in silos.
- (2) Install three-sided barriers equal to height of material, with no more than 50 percent porosity.

(M) Watering

- (1) Application methods include: spray bars, hoses and water trucks.
- (2) Frequency of application will vary on site-specific conditions.

(N) Chemical stabilizers

- (1) Best for use on storage piles subject to infrequent disturbances.

(O) Altering load-in/load-out procedures

- (1) Confine load-in/load-out procedures to leeward (downwind) side of the material.  
Must be used in conjunction with either measure (L), (M), (N), or (P).

(P) Coverings

- (1) Tarps, plastic, or other material can be used as a temporary covering.
- (2) When used, these should be anchored to prevent wind from removing coverings.

### HIGH WIND MEASURE

- (a) Apply chemical stabilizers (to meet the specifications established by the Rule) prior to wind events; or
- (b) Apply water once per hour; or
- (c) Install temporary covers.

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**RULE 403 IMPLEMENTATION HANDBOOK**

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Source: (4) Paved Road Track-Out

CONTROL MEASURES

DESCRIPTION

Compliance with District Rule 403.

Paragraph (d)(5).

January 1999

## RULE 403 IMPLEMENTATION HANDBOOK

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Source: (5) Disturbed Surface Areas/ Inactive Construction Sites

### CONTROL MEASURES

### DESCRIPTION

- |                            |                                                                                                                                                                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (Q) Chemical stabilization | (1) Most effective when used on areas where active operations have ceased.                                                                                                                                                                      |
|                            | (2) Vendors can supply information on methods for application and required concentrations.                                                                                                                                                      |
| (R) Watering               | (1) Requires frequent applications unless a surface crust can be developed.                                                                                                                                                                     |
| (S) Wind fencing           | (1) Three- to five-foot barriers with 50% or less porosity adjacent to roadways or urban areas can be effective in reducing the amount of wind blown material leaving a site. Must be used in conjunction with either measure (Q), (R), or (T). |
| (T) Vegetation             | (1) Establish as quickly as possible when active operations have ceased.*                                                                                                                                                                       |

### HIGH WIND MEASURES

- (a) Apply chemical stabilizers (to meet the specifications established by the Rule); or
- (b) Apply water to all disturbed surface areas 3 times per day.

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\* Use of drought tolerant, native vegetation is encouraged.

TABLE 1

**BEST [REASONABLY]\* AVAILABLE CONTROL MEASURES FOR HIGH WIND CONDITIONS**

<b><u>FUGITIVE DUST SOURCE CATEGORY</u></b>	<b><u>CONTROL MEASURES</u></b>
<b>Earth-moving</b>	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
<b>Disturbed surface areas</b>	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
<b>Unpaved roads</b>	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice [once] per hour during active operation; OR (3C) Stop all vehicular traffic.
<b>Open storage piles</b>	(1D) Apply water twice [once] per hour; OR (2D) Install temporary coverings.
<b>Paved road track-out</b>	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
<b>All Categories</b>	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 1 may be used.

\* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

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**TABLE 2**  
**DUST CONTROL ACTIONS FOR EXEMPTION FROM PARAGRAPH (d)(4)\***

<b><u>FUGITIVE DUST SOURCE CATEGORY</u></b>	<b><u>CONTROL ACTIONS</u></b>
<b>Earth-moving (except construction cutting and filling areas, and mining operations)</b>	<p>(1a) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR</p> <p>(1a-1) For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.</p>
<b>Earth-moving: Construction fill areas:</b>	<p>(1b) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.</p>

\* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2 (Continued)\*

<b><u>FUGITIVE DUST SOURCE CATEGORY</u></b>	<b><u>CONTROL ACTIONS</u></b>
<b>Earth-moving: Construction cut areas and mining operations:</b>	(1c) Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
<b>Disturbed surface areas (except completed grading areas)</b>	(2a/b) Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 [70] percent of the unstabilized area.
<b>Disturbed surface areas: Completed grading areas</b>	(2c) Apply chemical stabilizers within five working days of grading completion; OR  (2d) Take actions (3a) or (3c) specified for inactive disturbed surface areas.
<b>Inactive disturbed surface areas</b>	(3a) Apply water to at least 80 [70] percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR  (3b) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR  (3c) Establish a vegetative ground cover within 21 [30] days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR  (3d) Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

\* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

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TABLE 2 (Continued)

<b><u>FUGITIVE DUST SOURCE CATEGORY</u></b>	<b><u>CONTROL ACTIONS</u></b>
<b>Unpaved Roads</b>	<p>(4a) Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR</p> <p>(4b) Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR</p> <p>(4c) Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.</p>
<b>Open storage piles</b>	<p>(5a) Apply chemical stabilizers; OR</p> <p>(5b) Apply water to at least 80 [70] percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR</p> <p>(5c) Install temporary coverings; OR</p> <p>(5d) Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile.</p>
<b><u>All Categories</u></b>	<p>(6a) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.</p>

\* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

January 1999

AQMD Recommendations

TABLE 3

TRACK-OUT CONTROL OPTIONS

PARAGRAPH (d)(5)(B)

CONTROL OPTIONS

(1)	Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.
(2)	Pave from the point of intersection with the public paved road surface, and extending for a centerline distance of at least 25 feet and a width of at least 20 feet, and install a track-out control device immediately adjacent to the paved surface such that exiting vehicles do not travel on any unpaved road surface after passing through the track-out control device.
(3)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

**Appendix B**

**Standard Plan List**

**and**

**Reference Drawings**

### Caltrans Standard Plan List

A20A

A20B

A20D

A24A

A24D

A24E

A88A

A88B

D73

D93B

D99A

ES-1A

ES-1B

ES-1C

ES-3C

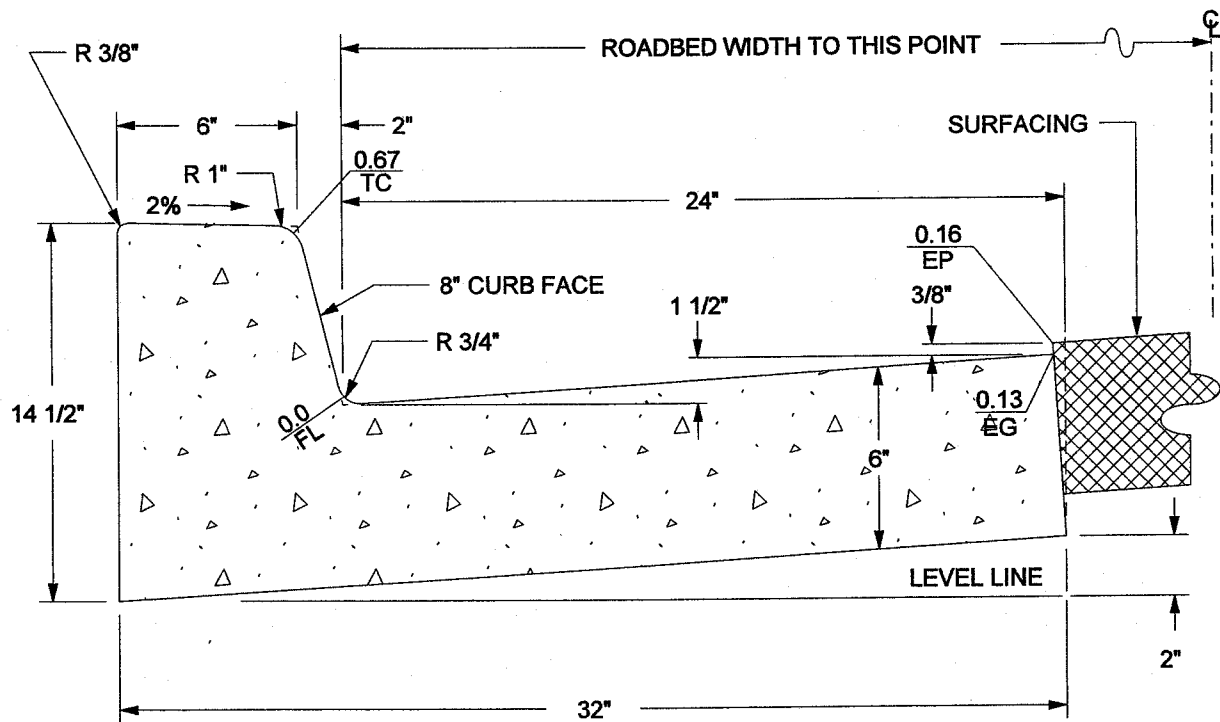
ES-2F

ES-5B

ES-5D

ES-7N

ES-9E



CLASS "B" CONCRETE

1.73 CU. FT. / L.F.

1 CU. YD. = 15.60 L.F.

## ABBREVIATIONS:

TC = TOP OF CURB

FL = FLOWLINE

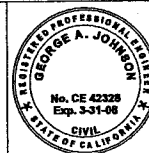
EG = EDGE OF GUTTER

EP = EDGE OF PAVEMENT

APPROVED BY:

*George A. Johnson*  
 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07

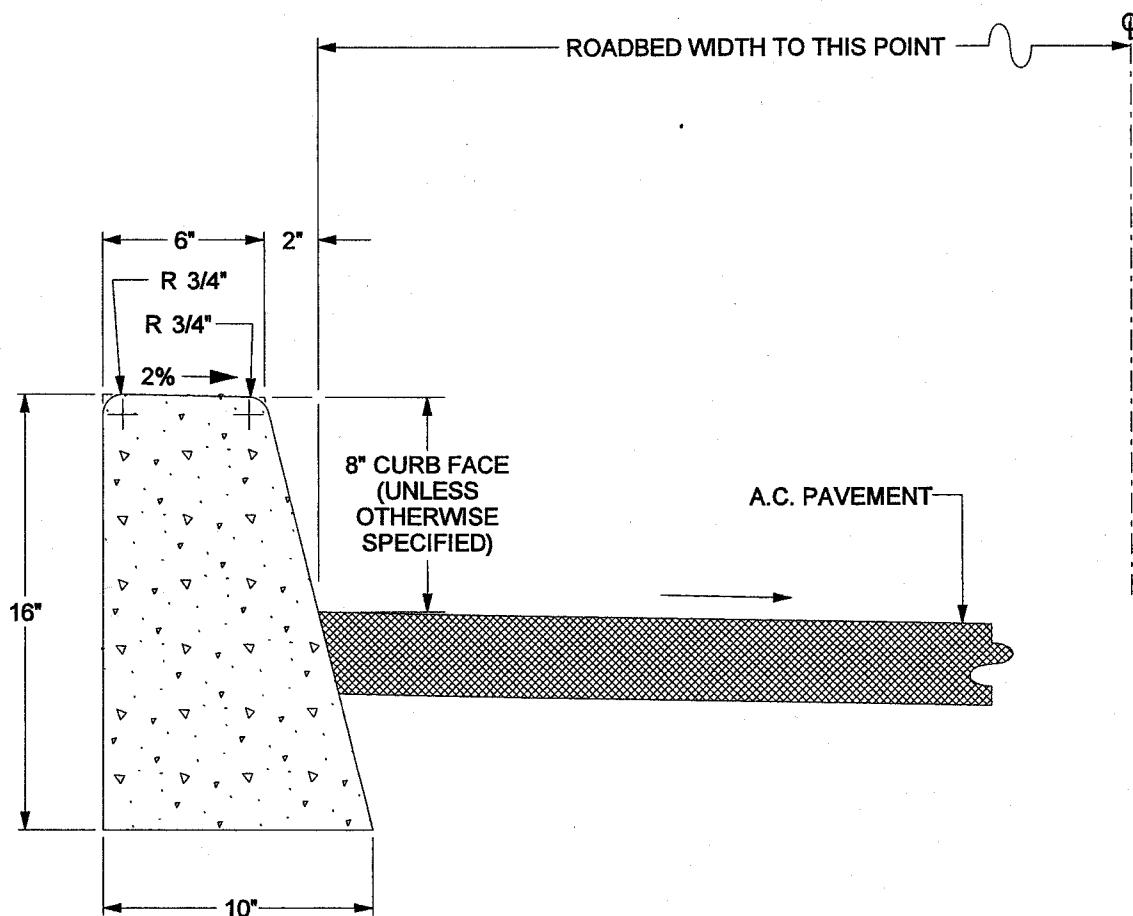


COUNTY OF RIVERSIDE

**TYPE A-8 CURB**

STANDARD NO. 201

REVISIONS				REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-71, 9-88				1				4			
2-90, 11-04				2				5			
				3				6			



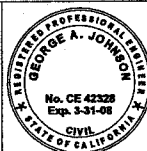
CLASS "B" CONCRETE

0.888 CU FT. / L.F.

1 CU. YD. = 30.41 L.F.

APPROVED BY:

DATE: 05/01/07

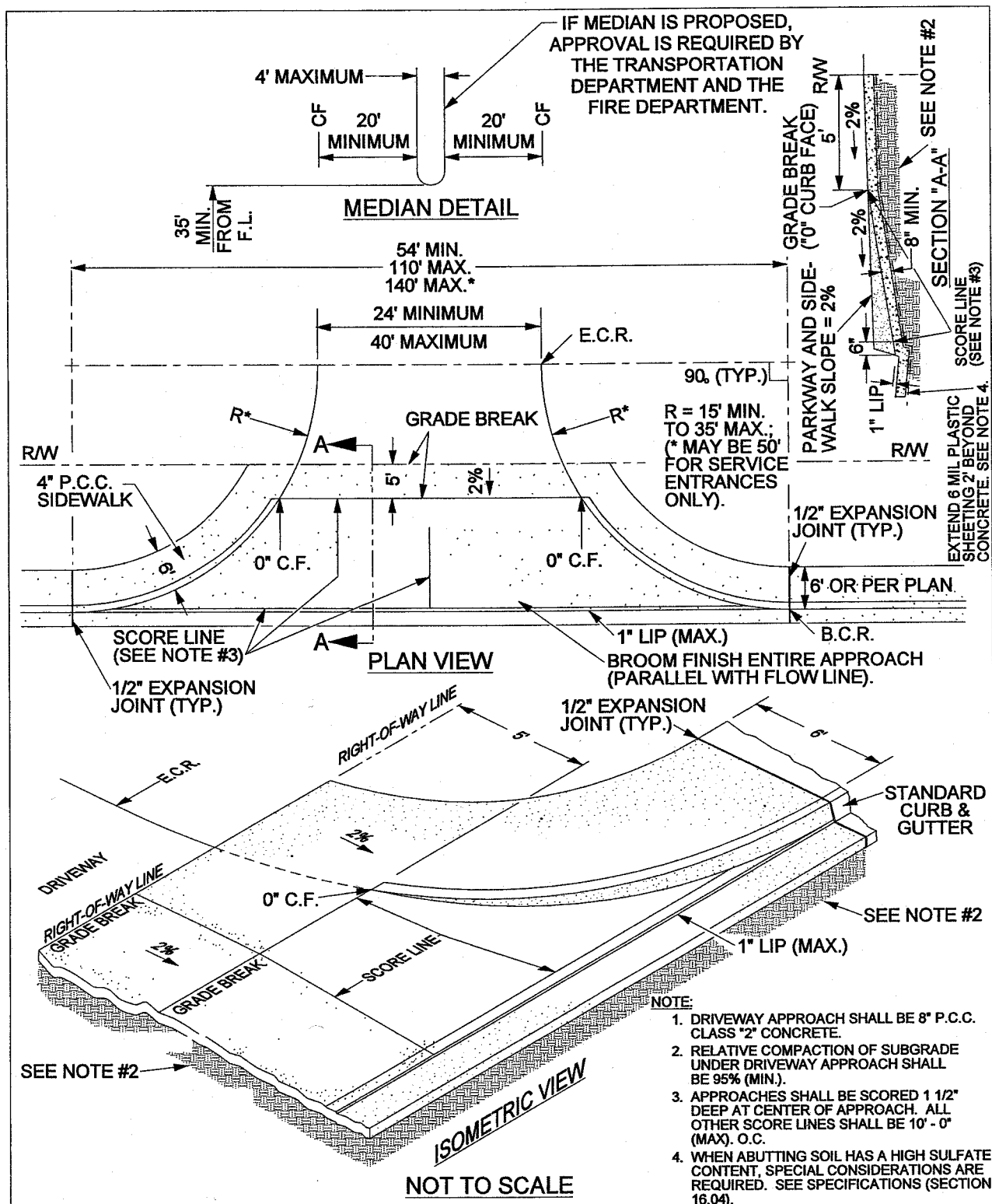
 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328


COUNTY OF RIVERSIDE

**TYPE "D" CURB**

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-71, 2-90		1				4			
11-04		2				5			
		3				6			

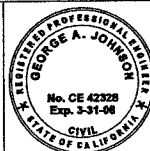
STANDARD NO. 204



APPROVED BY:

*George A. Johnson*  
 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328

DATE: 11/15/04

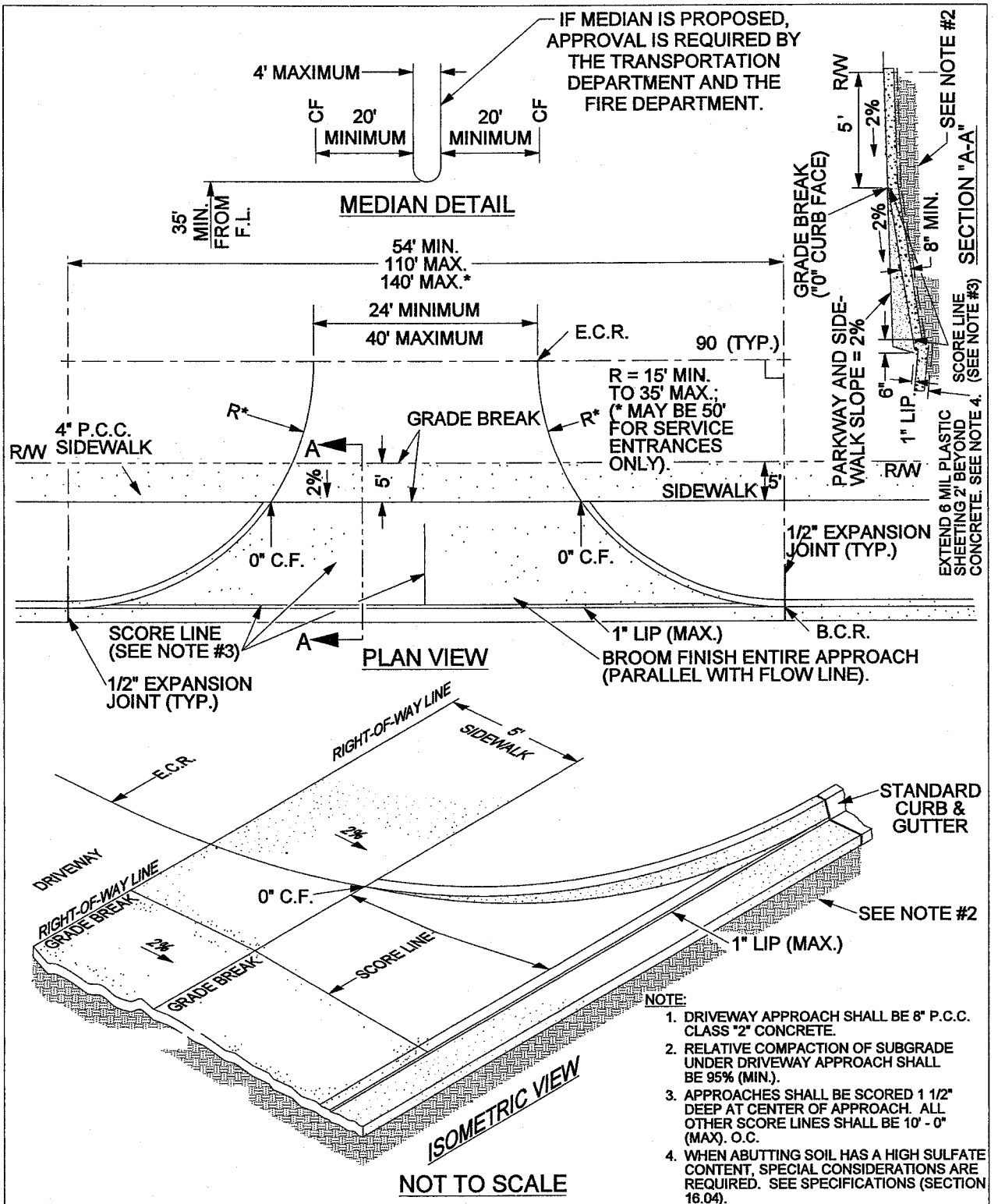


COUNTY OF RIVERSIDE

## COMMERCIAL DRIVEWAY (WITH SIDEWALK AT CURB)

STANDARD NO. 207A (1 OF 2)

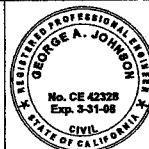
REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
11-04		1				4			
		2				5			
		3				6			



APPROVED BY:

*George A. Johnson*  
 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328

DATE: 11/15/04



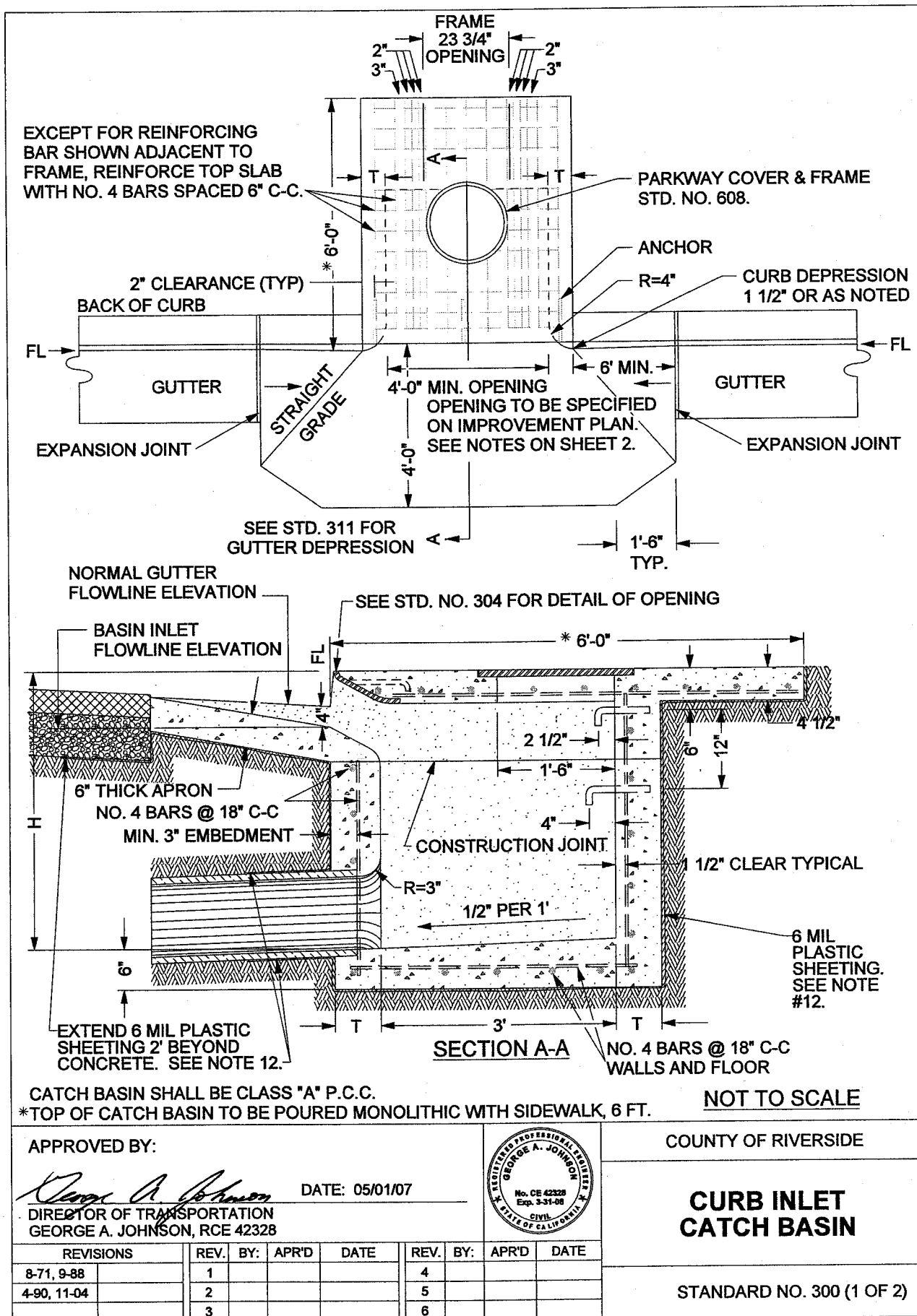
COUNTY OF RIVERSIDE

**COMMERCIAL DRIVEWAY  
 (WITH SIDEWALK AT R/W)**

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
11-04		1				4			
		2				5			
		3				6			

STANDARD NO. 207A (2 OF 2)



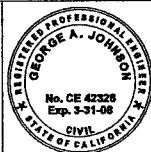


1. CONNECTION PIPES MAY BE PLACED ANY POSITION AROUND THE WALLS, PROVIDED THEY POINT IN THE PROPER DIRECTION AND THE POSITION IS OTHERWISE CONSISTENT WITH THE IMPROVEMENT PLAN.
2. CURVATURE OF THE LIP AND SIDEWALLS AT GUTTER OPENING SHALL BE FORMED BY CURVED FORMS AND SHALL NOT BE MADE BY PLASTERING.
3. DIMENSIONS:  
 T = 6" IF H IS 8 FEET OR LESS.  
 T = 8" IF H IS GREATER THAN 8 FEET AND LESS THAN 20 FEET.  
 H = 3 FEET 6 INCHES, UNLESS OTHERWISE SPECIFIED.
4. FLOOR OF BASIN SHALL BE GIVEN A STEEL - TROWELLED FINISH.
5. MANHOLE SHALL BE PLACED AS SHOWN ON STANDARD NO. 300, UNLESS NOTED DIFFERENTLY ON IMPROVEMENT PLANS.
6. OUTLET PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.
7. OPENING SHALL BE 4'-0" (MINIMUM) UNLESS OTHERWISE SPECIFIED.
8. REINFORCING STEEL SHALL BE NO. 4 ROUND DEFORMED BARS IN TOP SLAB, AT 18" CENTERS IN THE SIDES AND FLOOR OF THE BOX.
9. 3/4 INCH PLAIN ROUND GALVANIZED STEEL STEPS (ALHAMBRA FDY. A-3320 OR EQUAL) ARE REQUIRED AS FOLLOWS:  
 IF H IS 3.5 FEET OR LESS, NO STEPS ARE REQUIRED.  
 IF H IS MORE THAN 3.5 FEET, AND NOT MORE THAN 5 FEET, INSTALL 1 STEP 16" ABOVE FLOOR OF THE BASIN.  
 IF H IS MORE THAN 5 FEET, INSTALL STEPS 12 INCHES APART, WITH THE TOP STEP 6 INCHES BELOW THE SURFACE OF THE BASIN.  
 ALL STEPS SHALL BE 4 INCHES FROM THE WALL, EXCEPT THE TOP STEP, WHICH SHALL BE 2 1/2 INCHES (CLEAR) FROM THE WALL, AND ANCHORED NOT LESS THAN 5 INCHES INTO THE WALL OF THE BASIN.
10. SURFACE OF ALL EXPOSED CONCRETE IN BASIN SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH AND SCORING TO EXISTING OR PROPOSED CURB AND WALL ADJACENT TO THE BASIN.
11. CONCRETE SHALL BE CLASS "A" WHEN THE BASIN IS TO BE CONSTRUCTED WITHIN THE LIMITS OF A PROPOSED SIDEWALK OR IS CONTIGUOUS TO SUCH A SIDEWALK. THE TOP OF THE BASIN SHALL BE POURED MONOLITHIC WITH THE SIDEWALK, USING CLASS "A" CONCRETE IN THE SIDEWALK AND THE TOP OF THE CATCH BASIN PER SIDEWALK STANDARDS.
12. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).

APPROVED BY:

*George A. Johnson*  
 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07

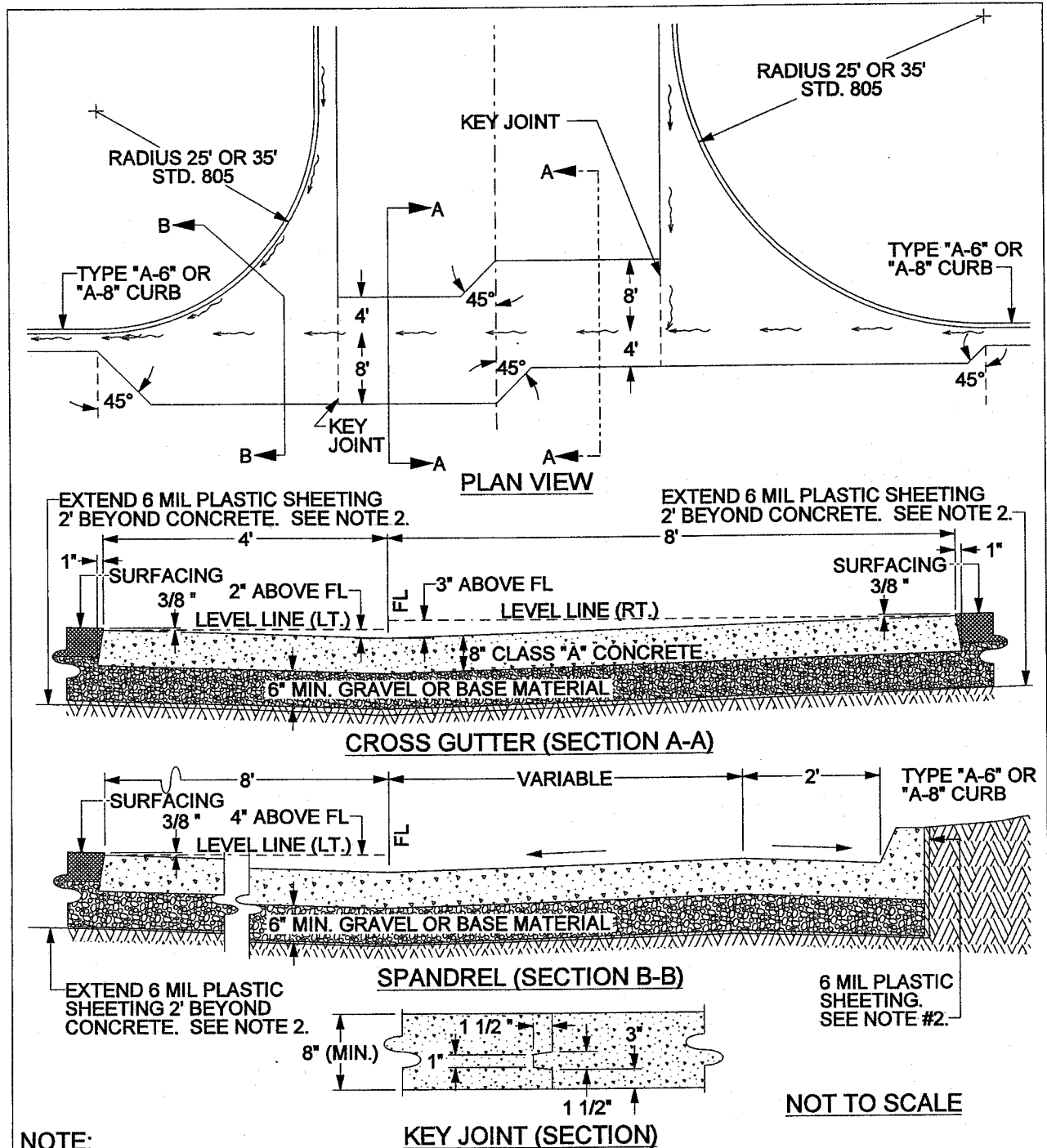


COUNTY OF RIVERSIDE

## CURB INLET CATCH BASIN (SPECS)

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-24-71		1				4			
11-04		2				5			
		3				6			

STANDARD NO. 300 (2 OF 2)

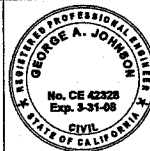
**NOTE:**

1. THIS CROSS GUTTER STANDARD TO BE CONSTRUCTED IN AREAS WHERE STREET GUTTERS HAVE CONSTANT OR FREQUENT FLOWS FROM LANDSCAPED PARKWAYS AND MEDIANS, GOLF COURSE, AND AGRICULTURAL RUNOFF OR WHEN GRADIENT IS LESS THAN 0.8%.
2. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).

APPROVED BY:

*George A. Johnson*  
 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07

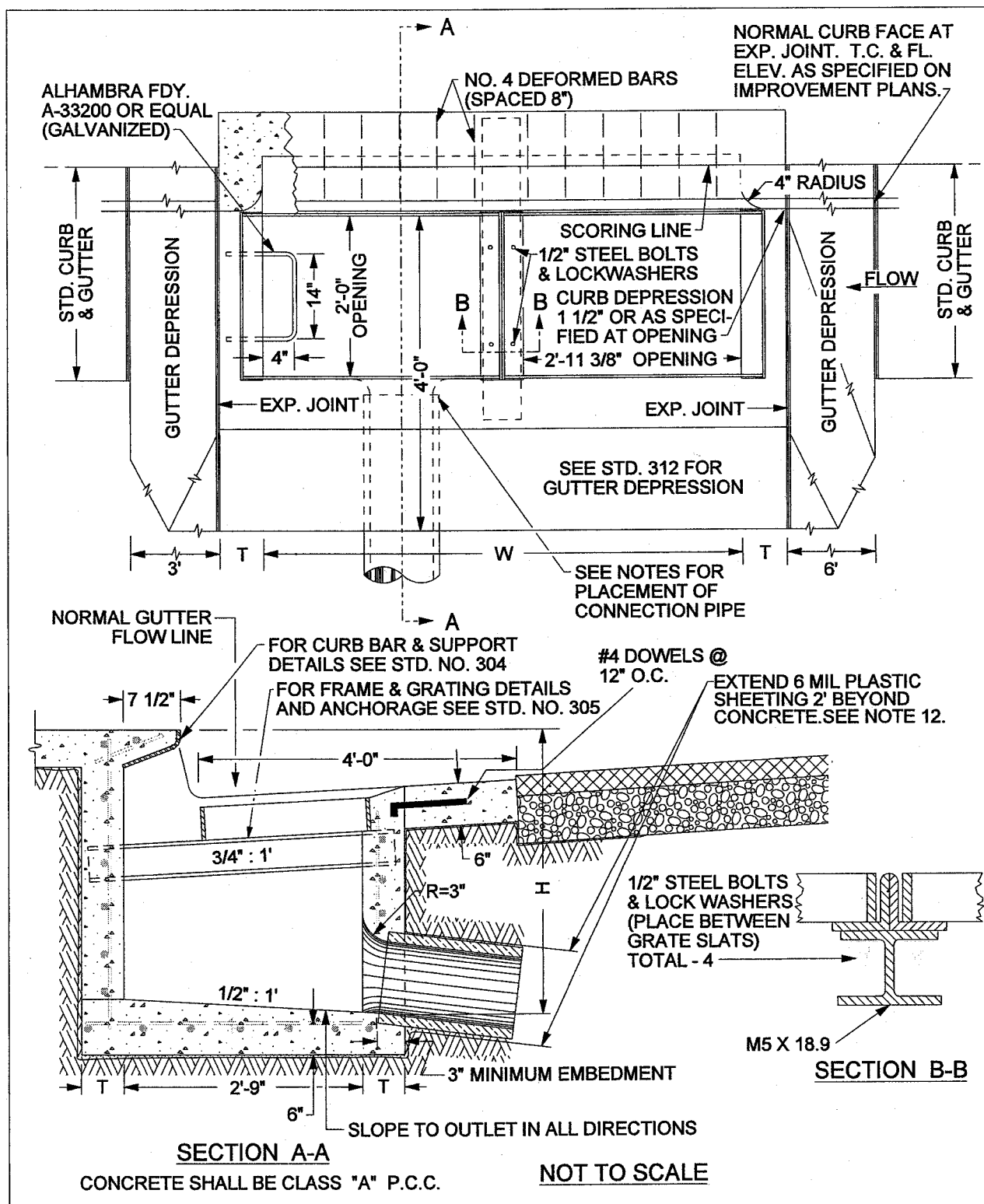


COUNTY OF RIVERSIDE

## CROSS GUTTER WITH SPLASH AREA

STANDARD NO. 210

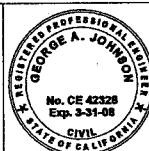
REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
11-04		1				4			
		2				5			
		3				6			



APPROVED BY:

*George A. Johnson*  
 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07



COUNTY OF RIVERSIDE

## COMBINATION INLET CATCH BASIN NO. 2

REVISIONS				REVISIONS			
REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-24-71, 9-88	1			4			
11-04	2			5			
	3			6			

STANDARD NO. 302 (1 OF 2)

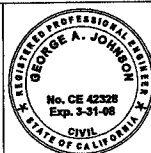
**NOTES:**

1. BASIN SHALL HAVE ONE GRATING UNLESS OTHERWISE SPECIFIED ON IMPROVEMENT PLANS.
2. CONCRETE SHALL BE CLASS "A". WHEN THE BASIN IS TO BE CONSTRUCTED WITHIN THE LIMITS OF A PROPOSED SIDEWALK, OR IS CONTIGUOUS TO SUCH A SIDEWALK, THE TOP OF THE BASIN SHALL BE POURED MONOLITHIC WITH THE SIDEWALK, USING CLASS "A" CONCRETE IN THE SIDEWALK. THE TOP OF THE CATCH BASIN SHALL BE FINISHED PER SIDEWALK STANDARDS.
3. CONNECTION PIPES MAY BE PLACED IN ANY POSITION AROUND THE WALLS, PROVIDED THEY POINT IN THE PROPER DIRECTION AND THE POSITION IS OTHERWISE CONSISTENT WITH THE IMPROVEMENT PLAN.
4. CURVATURE OF THE END-WALLS AT CURB OPENING SHALL BE FORMED BY CURVED FORMS AND SHALL NOT BE MADE BY PLASTERING.
5. DIMENSIONS:  
 GRATE SHALL BE PARALLEL TO PLANE OF GUTTER SLOPE 3/4" TO 1'-0".  
 T = 6 INCHES IF H IS 8 FEET OR LESS.  
 T = 8 INCHES IF H IS GREATER THAN 8 FEET AND LESS THAN 20 FEET.  
 H = 3 FEET 6 INCHES, UNLESS OTHERWISE SPECIFIED ON IMPROVEMENT PLANS.  
 W = 2 FEET 11 3/8 INCHES FOR ONE GRATING. ADD 3 FEET 5 3/8 INCHES FOR EACH ADDITIONAL GRATING.
6. EXPOSED SURFACES OF THE CATCH BASIN SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH AND SCORING TO EXISTING IMPROVEMENTS ADJACENT TO THE BASIN. WHERE NO SIDEWALK EXISTS, THE TOP SHALL BE FINISHED TO CONFORM TO STANDARD SIDEWALK SLOPE AND FINISH. WHERE NO CURB EXISTS, THE BATTER OF EXPOSED END WALLS ABOVE THE STREET SURFACE SHALL CONFORM TO BATTER FOR STANDARD CURB.
7. FLOOR OF BASIN SHALL BE GIVEN A STEEL - TROWELLED FINISH.
8. OUTLET PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.
9. REINFORCING STEEL SHALL BE NO. 4 DEFORMED BARS. CLEARANCE SHALL BE 1 1/2 INCHES FROM INSIDE OF BOX. SPACING IS AS SHOWN IN TOP SLAB AND AT 18 INCH CENTERS IN SIDES OF BOX.
10. SLOPE OF FLOOR PARALLEL WITH CURB SHALL BE 1 IN 12 UNLESS OTHERWISE SPECIFIED. SLOPE FLOOR FROM ALL DIRECTIONS TO THE OUTLET.
11. STEPS: 3/4 INCH PLAIN ROUND GALVANIZED STEEL STEPS (ALHAMBRA FDY. A-3320 OR EQUAL) ARE REQUIRED AS FOLLOWS:  
 IF H IS 3.5 FEET OR LESS, NO STEPS ARE REQUIRED.  
 IF H IS MORE THAN 3.5 FEET, AND NOT MORE THAN 5.0 FEET, INSTALL ONE STEP 16" ABOVE FLOOR OF BASIN.  
 IF H IS MORE THAN 5.0 FEET, INSTALL STEPS 12 INCHES APART, WITH THE TOP STEP 6" BELOW THE TOP OF GRATING.  
 ALL STEPS SHALL BE 4 INCHES CLEAR FROM THE WALL EXCEPT THE TOP STEP, WHICH SHALL BE 2 1/2 INCHES (CLEAR) FROM THE WALL AND ANCHORED NOT LESS THAN 5 INCHES IN WALL OF BASIN.
12. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).
13. GRATE SHALL BE HOT DIPPED GALVANIZED.

APPROVED BY:

*George A. Johnson*  
 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07

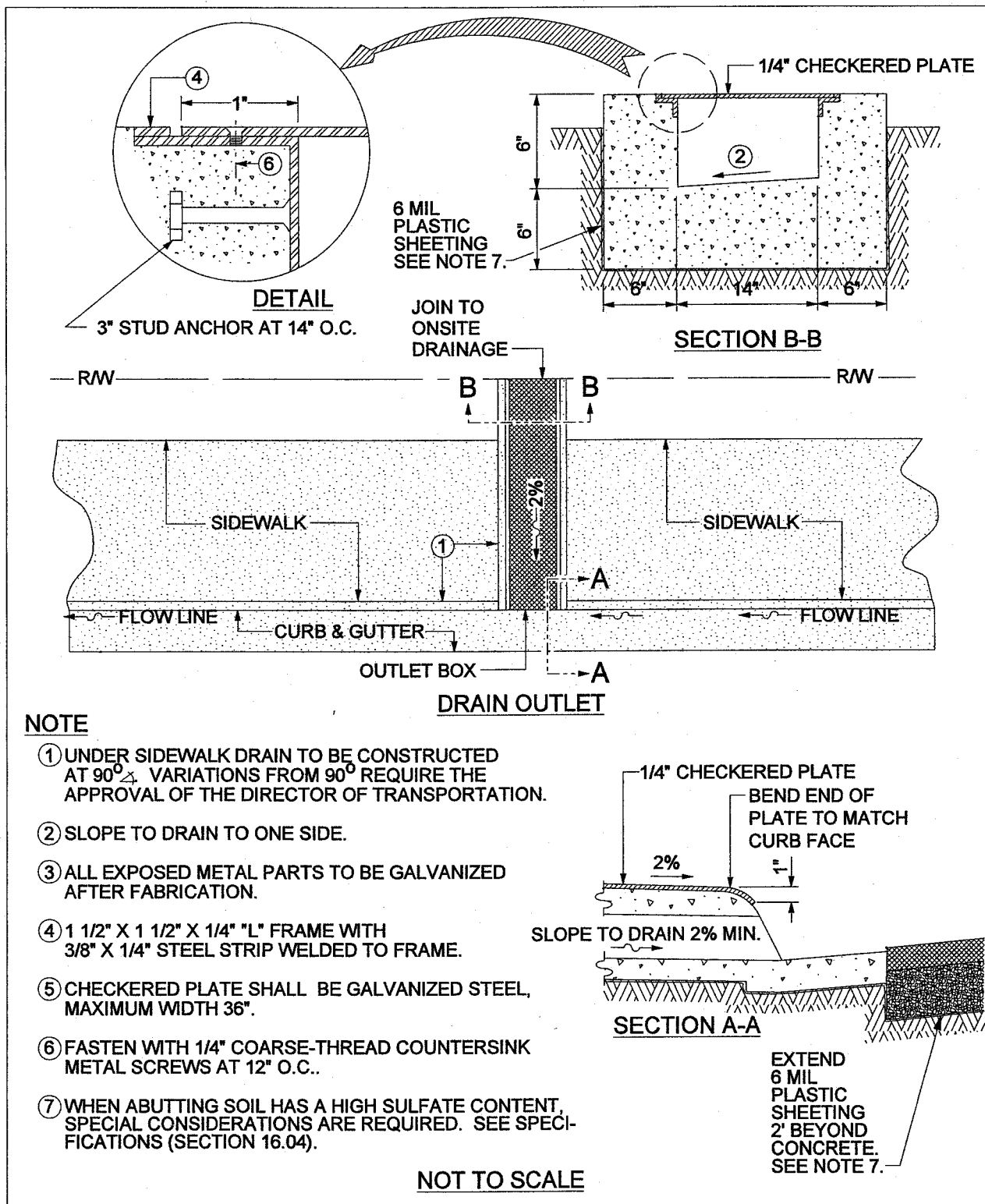


COUNTY OF RIVERSIDE

## COMBINATION INLET CATCH BASIN SPECIFICATIONS

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-71, 11-04		1				4			
		2				5			
		3				6			

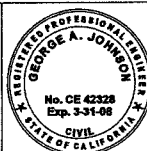
STANDARD NO. 302 (2 OF 2)



APPROVED BY:

*George A. Johnson*  
DIRECTOR OF TRANSPORTATION  
GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07

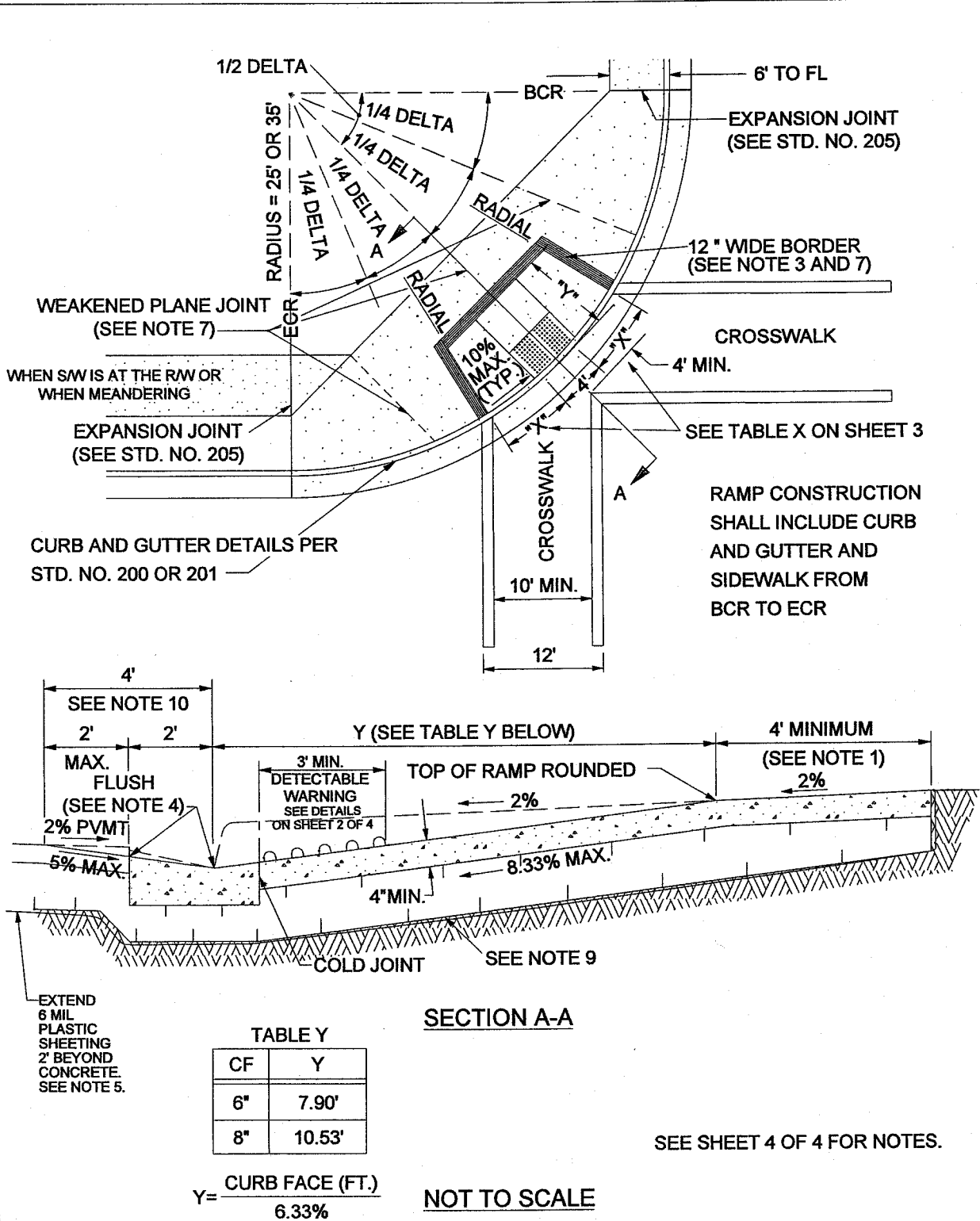



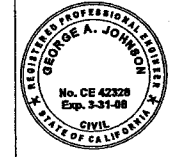
COUNTY OF RIVERSIDE

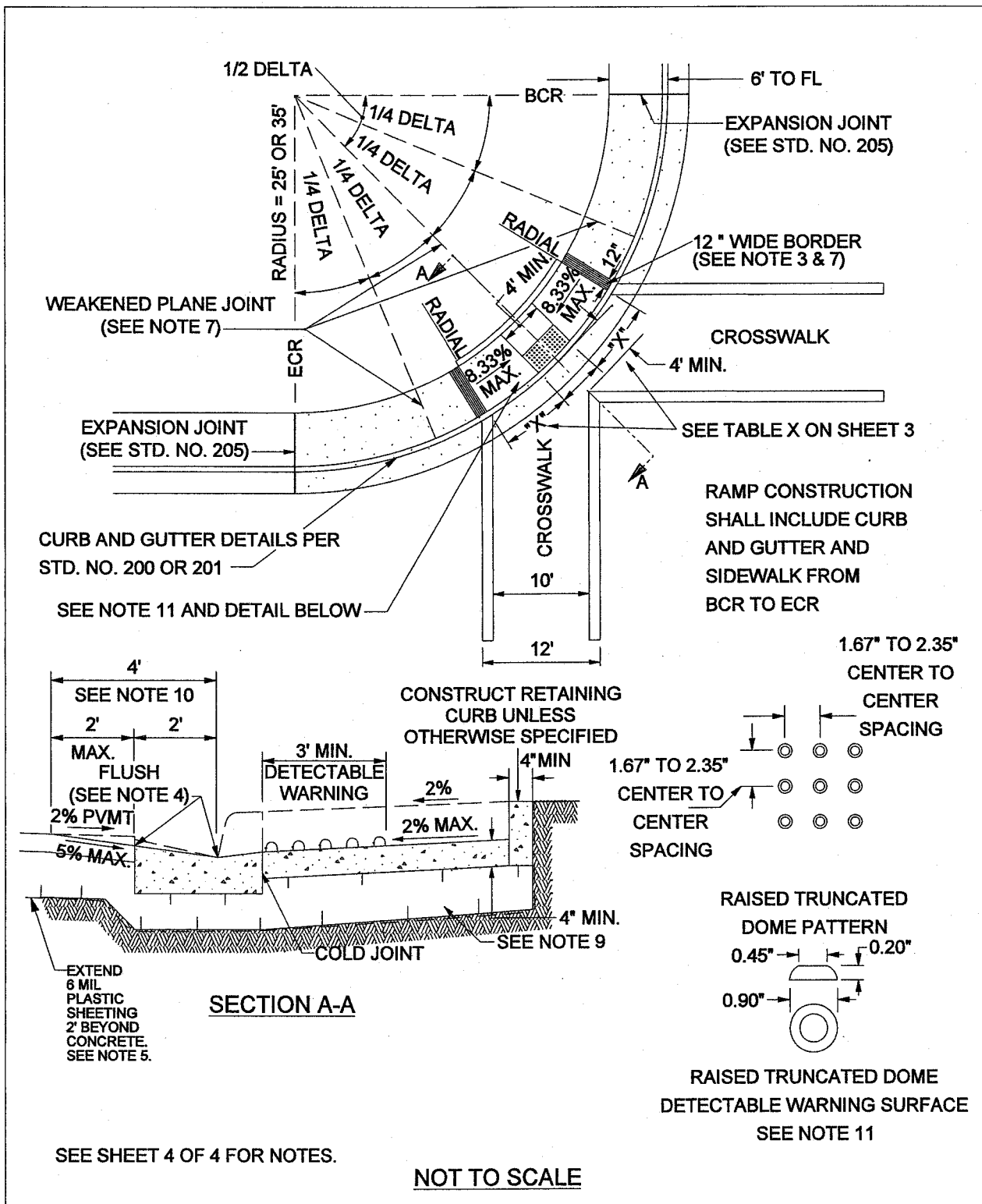
**UNDER SIDEWALK  
DRAIN  
CAST IN PLACE**

STANDARD NO. 309

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
11-04		1				4			
		2				5			
		3				6			



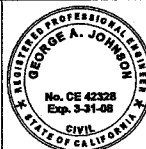
APPROVED BY:		COUNTY OF RIVERSIDE	
 DIRECTOR OF TRANSPORTATION GEORGE A. JOHNSON, RCE 42328		DATE: 11/15/04	
		<b>CURB RAMP CASE A</b>	
REVISIONS		STANDARD NO. 403 (1 OF 4)	
8-77, 5-80	11-04	REV.	BY:
10-81, 6-82		1	
9-88, 2-90		2	
		3	
APR'D	DATE	APR'D	DATE
		4	
		5	
		6	



APPROVED BY:

*George A. Johnson*  
 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328

DATE: 11/15/04



COUNTY OF RIVERSIDE

**CURB RAMP  
 CASE B**

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-77, 5-80	11-04	1				4			
10-81, 6-82		2				5			
9-88, 2-90		3				6			

12-97

STANDARD NO. 403 (2 OF 4)



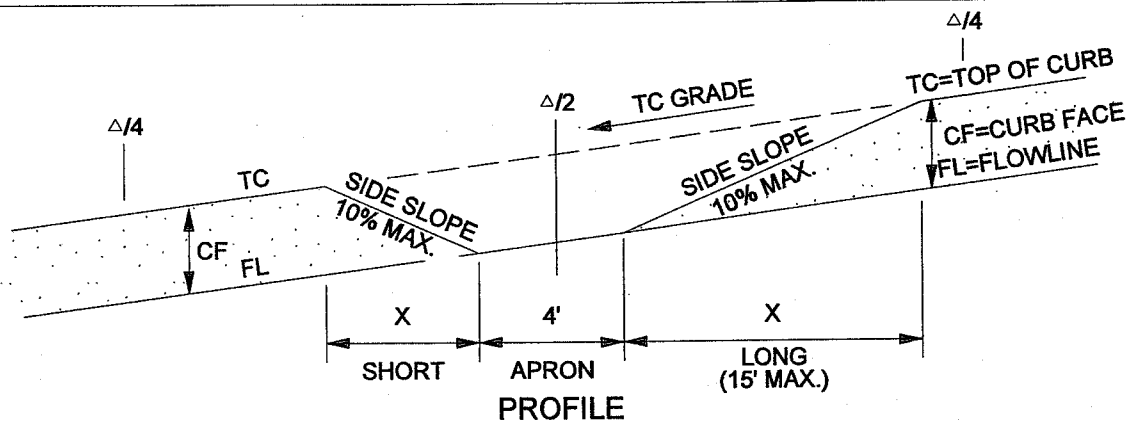


TABLE X

CF (IN)	RADIUS (FT)	SIDE SLOPE	X	TC GRADE (ALONG CURB RETURN)					
				1%	2%	3%	4%	5%	6%
6"	35'	10%	X <sub>S</sub>	4.6	4.2	3.9	3.6	3.4	3.2
			X <sub>L</sub>	5.6	6.3	7.2	8.4	10.0	12.5
8"	35'	10%	X <sub>S</sub>	6.1	5.6	5.2	4.8	4.5	4.2
			X <sub>L</sub>	7.5	8.4	9.6	11.2	13.4	15.0

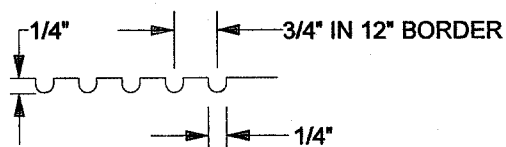
## TO CALCULATE "X" DIMENSION:

SHORT SIDE (DOWN SLOPE):

$$X_S \text{ (FT)} = \frac{\text{CURB FACE (FT)}}{\text{SIDE SLOPE} + \text{TC GRADE}}$$

LONG SIDE (UP SLOPE):

$$X_L \text{ (FT)} = \frac{\text{CURB FACE (FT)}}{\text{SIDE SLOPE} - \text{TC GRADE}}$$

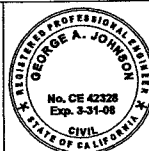
ENGINEER TO SHOW X<sub>S</sub> AND X<sub>L</sub> ON IMPROVEMENT PLANS

GROOVING DETAIL

APPROVED BY:

*George A. Johnson*  
 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/05/04



COUNTY OF RIVERSIDE

CURB RAMP

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-77, 5-80	11-04	1				4			
10-81, 6-82		2				5			
9-88, 2-90		3				6			

STANDARD NO. 403 (3 OF 4)

**CONSTRUCTION NOTES:**

1. IF DISTANCE FROM CURB TO BACK OF SIDEWALK IS TOO SHORT TO ACCOMMODATE RAMP AND 4' LANDING, THEN USE THE CASE "B" RAMP.
2. IF SIDEWALK IS LESS THAN 6' WIDE, THE FULL WIDTH OF THE SIDEWALK SHALL BE DEPRESSED AS SHOWN IN CASE B. MINIMUM SIDEWALK WIDTH IS 4' FROM BACK OF CURB.
3. THE RAMP SHALL HAVE A 12" WIDE BORDER WITH GROOVES 1/4" WIDE AND 1/4" DEEP APPROXIMATELY 3/4" ON CENTER. SEE GROOVING DETAIL.
4. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
5. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).
6. RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 10% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP (EXCEPT IN CASE B).
7. CONSTRUCT WEAKENED PLANE JOINTS AT 1/4 DELTAS WHEN RADIUS EQUALS 35' AND AT INSIDE EDGE OF GROOVED BORDER WHEN RADIUS EQUALS 25'.
8. IF EXPANSIVE SOIL IS ENCOUNTERED, THEN RAMP SHALL BE CONSTRUCTED OVER CLASS 2 AGGREGATE MATERIAL.
9. CONCRETE SHALL BE CLASS B.
10. MAXIMUM SLOPES OF ADJOINING GUTTERS: THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP AND CONTINUOUS PASSAGE TO THE CURB RAMP SHALL NOT EXCEED 5% WITHIN 4' OF THE BOTTOM OF THE CURB RAMP.
11. DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL CURB RAMPS THAT ENTER INTO A VEHICULAR TRAVEL WAY.

APPROVED BY:



DATE: 11/15/04

 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328

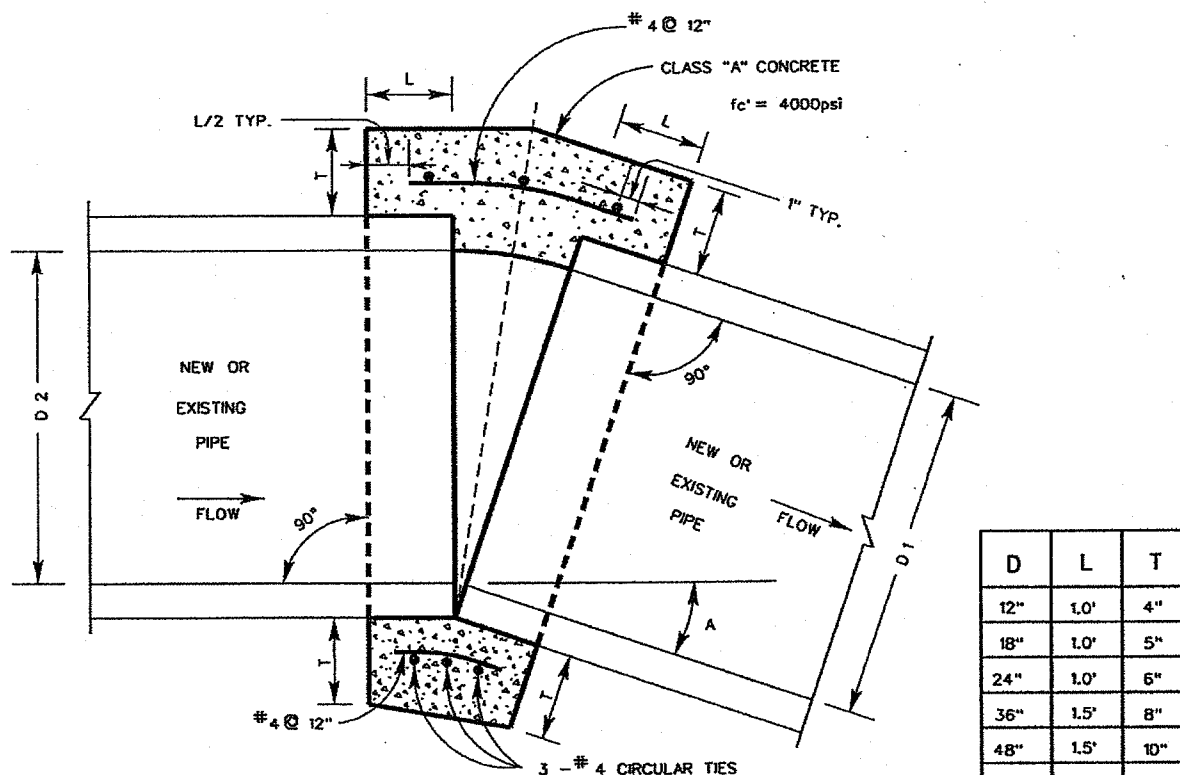

COUNTY OF RIVERSIDE

**CURB RAMP  
CONSTRUCTION NOTES**

REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-77, 5-80	1				4			
10-81, 6-82	2				5			
9-88, 2-90	3				6			

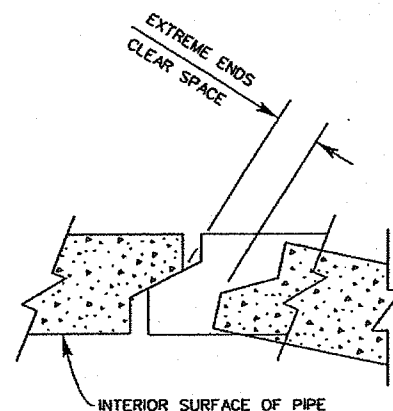
12-97

STANDARD NO. 403 (4 OF 4)



### NOTES

1. A CONCRETE COLLAR IS REQUIRED WHERE THE CHANGE IN GRADE EXCEEDS 0.10 FT. PER FOOT, OR IF CHANGE IN ALIGNMENT EXCEEDS 0.10 FT. PER FOOT.
2. IF THE EXTREME ENDS OF THE PIPE LEAVE A CLEAR SPACE THAT IS GREATER THAN 1", BUT LESS THAN 6", A CONCRETE COLLAR IS REQUIRED (SEE DETAIL A THIS SHEET). IF THE CLEAR SPACE IS 6" OR GREATER, A TRANSITION STRUCTURE IS REQUIRED.
3. CONCRETE COLLAR SHALL NOT BE USED FOR A SIZE CHANGE ON THE MAIN LINE.
4. WHERE PIPES OF DIFFERENT DIAMETERS ARE JOINED WITH A CONCRETE COLLAR, L AND T SHALL BE THOSE OF THE LARGER PIPE.  $D = D_1$  OR  $D_2$ , WHICHEVER IS GREATER.
5. FOR PIPE LARGER THAN 66" A SPECIAL COLLAR DETAIL IS REQUIRED.
6. FOR PIPE SIZE NOT LISTED USE THE NEXT SIZE LARGER.
7. OMIT REINFORCING ON PIPES 24" AND LESS IN DIAMETER AND ON ALL PIPES WHERE ANGLE A IS LESS THAN 10°.
8. WHERE REINFORCING IS REQUIRED THE DIAMETER OF THE CIRCULAR TIES SHALL BE  $D + (2 \times \text{WALL THICKNESS}) + 8"$ .
9. WHEN  $D_1$  IS EQUAL TO OR LESS THAN  $D_2$  JOIN INVERTS AND WHEN  $D_1$  IS GREATER THAN  $D_2$  JOIN SOFFITS.
10. PIPE MAY BE CORRUGATED METAL PIPE, CONCRETE PIPE, OR REINFORCED CONCRETE PIPE.



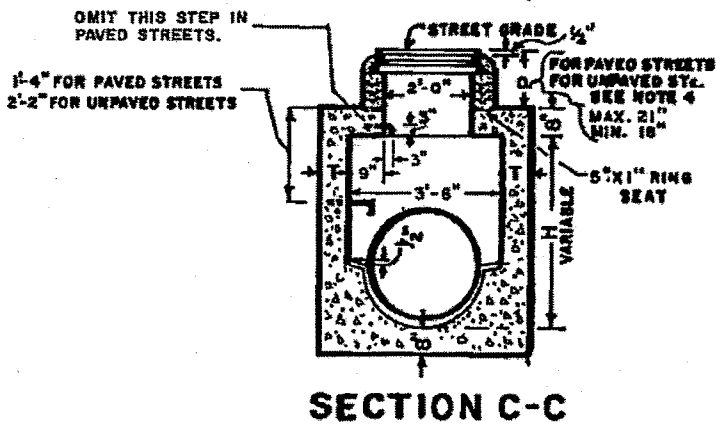
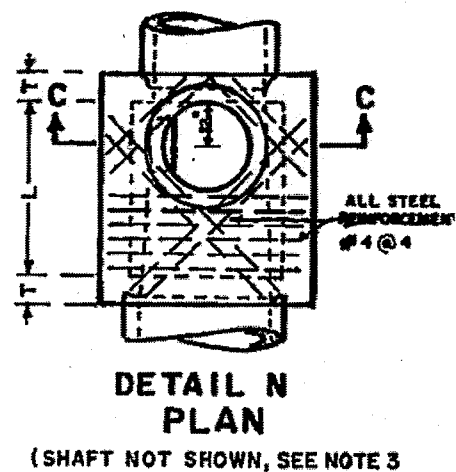
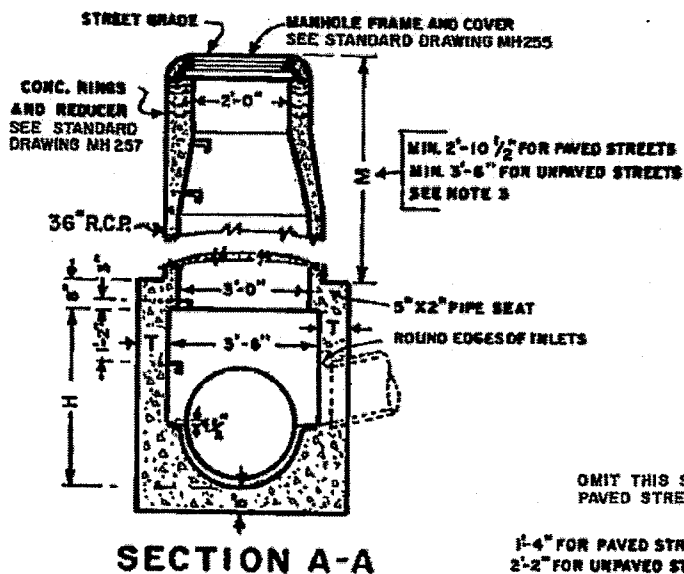
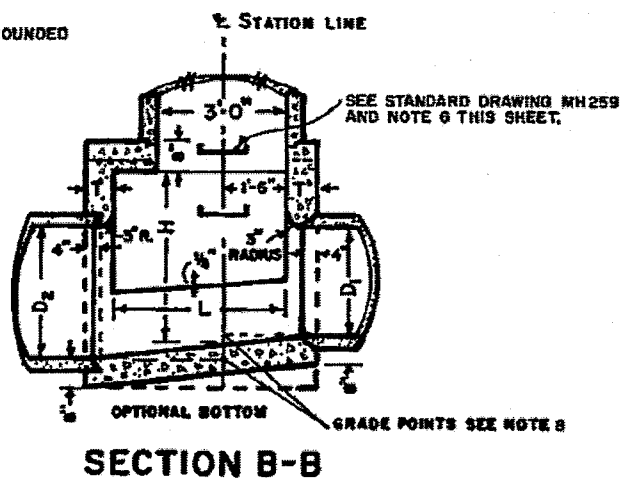
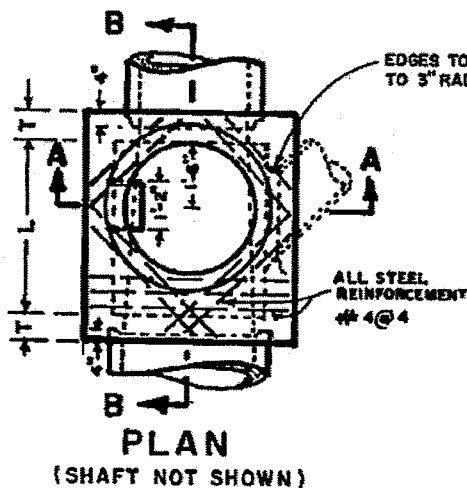
**DETAIL "A"**  
TYPICAL JOINT FOR  
REINFORCED CONCRETE PIPE

APWA STD. PLAN 380-1  
L.A.C.F.C. 2-D393



RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	
APPROVED BY:	<i>Warren D. Williams</i>
CHIEF ENGINEER	
DATE: April 5, 2004	R.C.E. NO. 32336

**CONCRETE COLLAR  
FOR  
PIPE 12 INCHES THROUGH  
66 INCHES**  
STANDARD DRAWING NUMBER M803



RIVERSIDE COUNTY FLOOD CONTROL  
AND  
WATER CONSERVATION DISTRICT

APPROVED BY:  
*Warren D. Williams*  
CHIEF ENGINEER

DATE: April 5, 2004

R.C.E. NO. 32336

MANHOLE NO. 1

STANDARD DRAWING NUMBER MH251  
SHEET 1 OF 2

1. HEIGHT H shall be not less than 4'-0" but may be increased at option of Contractor provided that the value of M shall not be less than the minimum specified and that the reducer shall be used. For H (in Sec. C-C) See Note 4.
2. LENGTH L shall be 4' unless otherwise shown on improvement plan. L may be increased or location of manhole shifted to meet pipe ends, at the option of Contractor, except that any change in location of manhole must be approved by the Engineer.
3. SHAFT shall be constructed as per Sec. C-C and Detail N when depth M from street grade to top of box is less than 2'-10½" for paved streets or 3'-6" for unpaved street.
4. DEPTH P may be reduced to an absolute limit of 6 inches when larger values of P would reduce H (in Sec. C-C) to be 3'-6" or less.
5. T shall be 8" for values of H up to and including 8 ft. T shall be 10" for values of H over 8 ft.
6. Steps shall be ¾" round, galvanized steel and anchored not less than 4 inches in the walls of structures. Unless otherwise shown, steps shall be spaced 16" on center. The lowest step shall be not more than 2 feet above the invert.
7. REINFORCING STEEL shall be No. 4 and 1½" clear from inside face of concrete.
8. STATIONS refer to Plan & Profile sheets. Elevations at  $\frac{1}{4}$  and prolonged invert grade line. See Note 2 for shifting location.
9. RINGS, reducer, and pipe for access shaft shall be seated in cement mortar and neatly pointed or wiped inside shaft.
10. FLOOR of manhole shall be steel-troweled.
11. CONCRETE shall be Class "A".



RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	
APPROVED BY:	<i>Warren D. Williams</i>
CHIEF ENGINEER	
DATE: April 5, 2004	R.C.E. NO. 32336

MANHOLE NO. 1

STANDARD DRAWING NUMBER MH251  
SHEET 2 OF 2

# NOTES

- 1- TABLE of values for  $D_1$  and  $D_2$  on this plan
- 2- CENTER OF MANHOLE SHAFT shall be located over center line of storm drain when diameter  $D_1$  is 48" or less, in which case place  $E$  bars symmetrically around shaft at 45° with center line and omit  $J$  bars
- 3- DETAIL M When depth of manhole from street grade to top of box is less than 2'-0" for paved street or 3'-6" for unpaved street construct manhole shaft as per Detail M. Shaft for any depth of manhole may be constructed as per Detail M. When diameter  $D_1$  is 48" or less, center of shaft may be located as per note 2
- 4- THICKNESS OF DECK shall vary when necessary to provide level pipe seat, but shall not be less than tabular values for  $F$  shown on this plan
- 5- REINFORCING STEEL to be round, deformed bars, 1/2" clear from inside face of concrete unless shown otherwise
- 6- STEPS shall be 3/4" round, galvanized steel and anchored not less than 4" inches in the walls of structure unless otherwise shown
- 7- RINGS, REDUCER AND PIPE for access shaft shall be seated in mortar and neatly pointed or wiped inside the shaft
- 8- STATIONS of manholes shown on plan apply at center of shaft
- 9- FLOOR of manhole shall be steel-troweled to springing line
- 10- BODY of manhole shall be poured in one continuous operation, except that a construction joint with a longitudinal keyway may be placed at the springing line
- 11- LENGTH  $L$  AND EMBEDMENT  $P$  shall have the following values unless otherwise shown on plan
  - for  $D_2$  36" or less,  $L=5'-6"$ ,  $P=5'$
  - $D_2$  over 36",  $L=6'-0"$ ,  $P=6'$
- $L$  may be increased or location of manhole shifted to meet pipe ends when  $L$  greater than that shown above is specified,  $D$  bars shall be continued 6" or 6"
- 12-  $D$  BARS shall be #4 for  $D_2$  39" or less, #5 for  $D_2$  42" to 60" inclusive and #6 for  $D_2$  60" or over. The bars shall be #3 bars
- 13- STRUCTURAL CONCRETE shall be Class "A"
- 14- Centerline of inlet pipe to intersect inside face of cover at springing line unless otherwise shown
- 15 Where Pressure Manhole No 2 is specified on plans see Std Dwg MH 259 and note 3

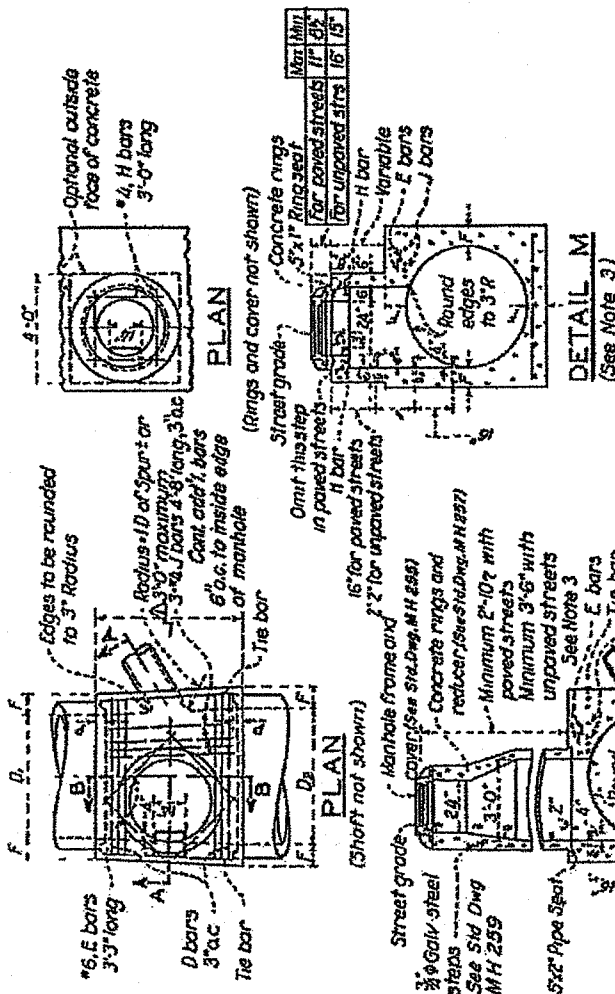
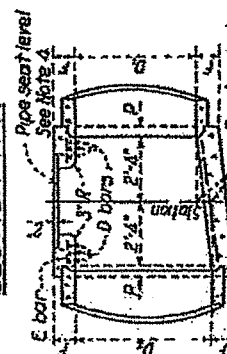


TABLE OF VALUES FOR  $F$

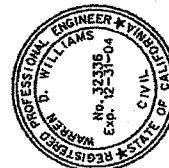
$D_1$	$F$	$D_2$	$F$
36"	6'	72"	17'
39"	7'	75"	18'
42"	8'	78"	19'
45"	9'	81"	20'
48"	10'	84"	21'
51"	11'	87"	22'
54"	12'	90"	23'
57"	13'	93"	24'
60"	14'	96"	25'
63"	15'	99"	26'
66"	16'	102"	27'
69"	17'	105"	28'
72"	18'	108"	29'

\* Use  $D_2$  or  $D_1$ , whichever is greater.

## SECTION A-A



## SECTION B-B



RIVERSIDE COUNTY FLOOD CONTROL

AND WATER CONSERVATION DISTRICT

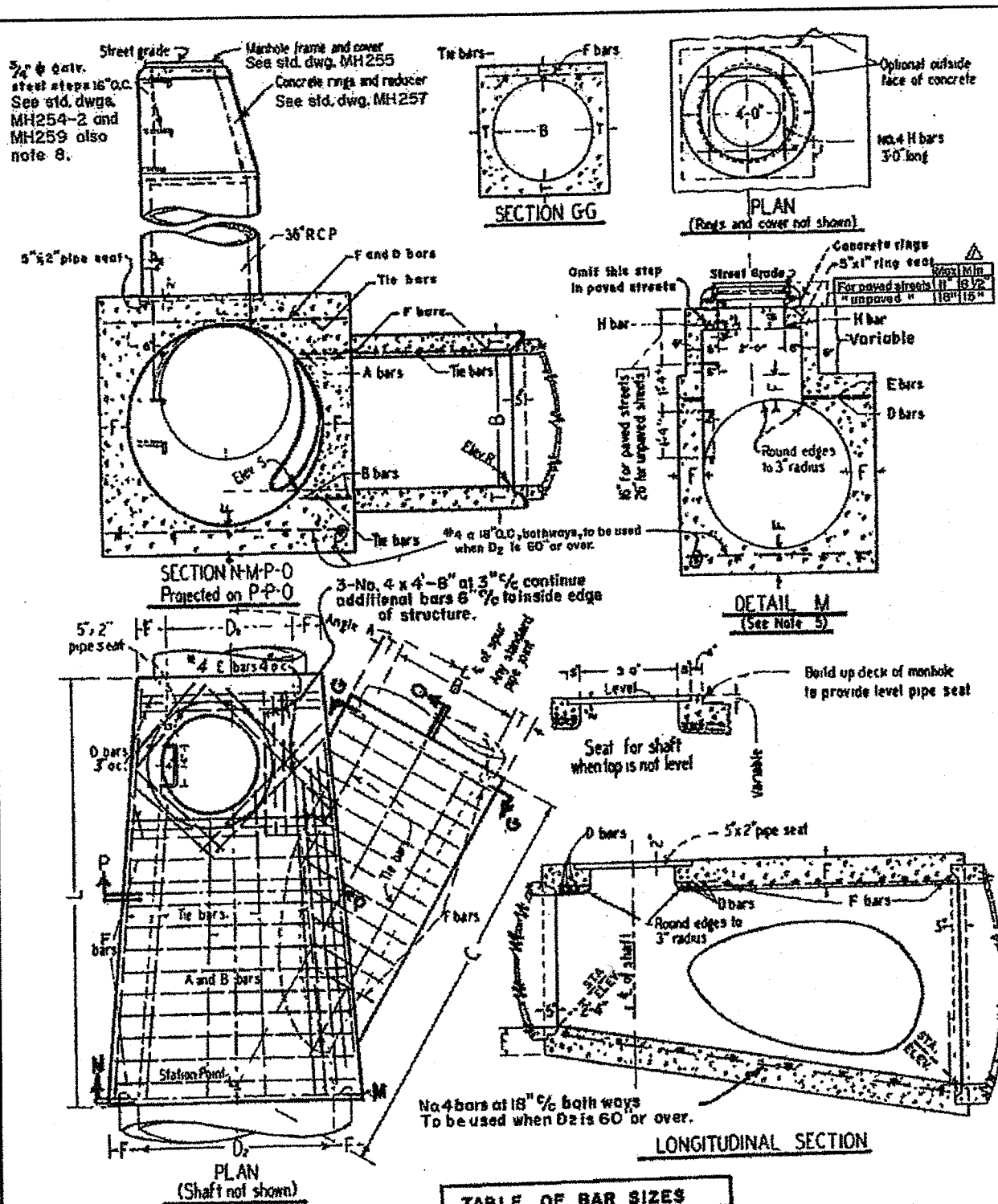
APPROVED BY: *[Signature]*

DATE: April 5, 2004

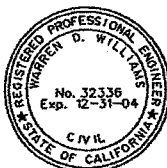
R.C.C. NO. 32335

MANHOLE NO. 2

STANDARD DRAWING NUMBER MH252



CITY OF RIV. STD. NO. 4  
CITY OF L.A. STD. NO. B-1528  
L.A.C.F.C.D. STD. NO. 2-0113



RIVERSIDE COUNTY FLOOD CONTROL  
AND  
WATER CONSERVATION DISTRICT

APPROVED BY: *Warren D. Williams*  
CHIEF ENGINEER  
DATE: April 5, 2004 R.C.E. NO. 32336

MANHOLE NO. 4  
STANDARD DRAWING NUMBER MH254  
SHEET 1 OF 2

## NOTES

- 1 - VALUES for A, B, C, D<sub>1</sub>, D<sub>2</sub>, Elevation R, and Elevation S are shown on the improvement plan  
TABLE of values for F and T hereon
- 2 - LATERALS: If laterals enter on both sides of manhole, access shaft shall be located on side receiving the smaller lateral
- 3 - CENTER OF MANHOLE SHAFT shall be located over center line of main storm drain when D<sub>1</sub> is 48" or less, in which case place 8 E bars symmetrically around shaft at 45° with center line
- 4 - LENGTH L may be increased at option of Contractor to meet pipe ends, but any change in location of spur must be approved by the Engineer
- 5 - DETAIL M: When depth of manhole from street grade to top of box is less than 2'-10½" for paved streets or 3'-6" for unpaved streets, construct monolithic shaft as per Detail M  
The Contractor shall have the option of constructing shaft as per Detail M for any depth of manhole  
When diameter D<sub>1</sub> is 48" or less, center of shaft shall be located as per Note 3
- 6 - REINFORCING STEEL shall be round, deformed, straight bars, 1½" clear from inside face unless otherwise shown.  
Tie bars shall be No. 4 and spaced 18" on centers or closer.
- 7 - CONCRETE shall be class A
- 8 - STEPS shall be ¾" round, galvanized steel and anchored not less than 6 inches in the walls of structure Unless otherwise shown the spacing shall be 16" on centers The lowest step shall be not more than 2 feet above the invert
- 9 - RINGS, REDUCER, AND PIPE for access shaft shall be seated in cement mortar and neatly pointed or wiped inside shaft
- 10 - FLOOR of manhole shall be steel troweled to springing line
- 11 - BODY of manhole, including spur, shall be poured in one continuous operation, except that the Contractor shall have the option of placing at the springing line a construction joint with longitudinal keyway.

\* Use D<sub>2</sub> or D<sub>1</sub>, whichever is greater, or B.

\*\* If D<sub>2</sub>, D<sub>1</sub>, or B falls between tabulated values then use the next highest value to determine F or T.

** TABLE OF VALUES FOR F AND T				
X D <sub>2</sub> , D <sub>1</sub>	F	B	T	
12"	4"	12"	4"	78"
15"	4 1/4"	15"	4 1/4"	84"
18"	4 1/2"	18"	4 1/2"	90"
21"	5"	21"	5"	96"
24"	5 1/4"	24"	5 1/4"	102"
27"	5 1/2"	27"	5 1/2"	108"
30"	6"	30"	6"	114"
33"	6 1/4"	33"	6 1/4"	120"
36"	6 1/2"	36"	6 1/2"	126"
39"	7"	39"	7"	132"
42"	7 1/2"	42"	7 1/2"	138"
45"	7 3/4"	45"	7 3/4"	144"
48"	8"	48"	8"	
51"	8 1/2"	51"	8 1/2"	
54"	9"	54"	9"	
57"	9 1/4"	57"	9 1/4"	
60"	9 1/2"	60"	9 1/2"	
63"	10"	63"	10"	
66"	10 1/4"	66"	10 1/4"	
69"	10 3/4"	69"	10 3/4"	
72"	11"	72"	11"	
78"	11 3/4"			
84"	12 1/2"			
90"	13 1/4"			
96"	14"			
102"	15 1/2"			
108"	16"			
114"	16 1/2"			
120"	17"			
126"	17"			
132"	17 1/2"			
138"	17 1/2"			
144"	18"			

## NOTE

- 12 - The maximum cover above this structure shall be 25'. If the cover exceeds 25' a special structure shall be designed for the cover and detailed on the project drawing.

CITY OF RIV. STD. NO. 432  
CITY OF L.A. STD. NO. B-1528



RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	
APPROVED BY:	<i>Warren D. Willkies</i>
CHIEF ENGINEER	
DATE: April 5, 2004	R.C.E. NO. 32336

MANHOLE NO. 4

STANDARD DRAWING NUMBER MH254  
SHEET 2 OF 2



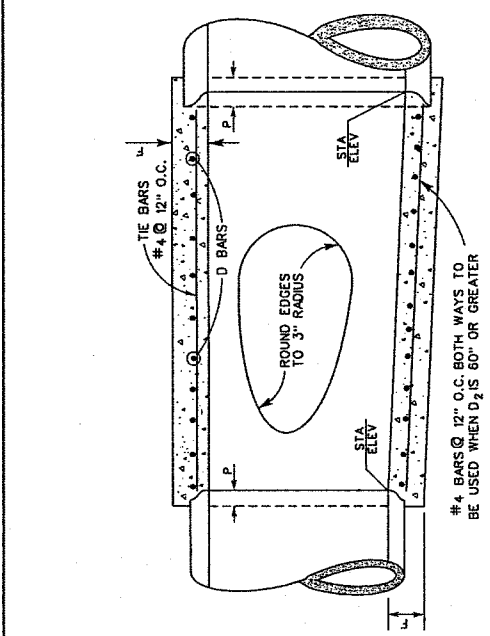
TABLE

$x, D, D_1$ OR B	F OR T	A OR B BARS	D OR F BARS	$d$
12	4	#4 @ 6" O.C.	#4 @ 6" O.C.	
18	4 1/2	#4 @ 6" O.C.	#4 @ 6" O.C.	
24	5 1/4	#4 @ 6" O.C.	#4 @ 6" O.C.	
30	6	#4 @ 6" O.C.	#4 @ 6" O.C.	
36	6 1/2	#4 @ 6" O.C.	#4 @ 6" O.C.	
42	7 1/2	#4 @ 6" O.C.	#4 @ 6" O.C.	
48	8	#4 @ 6" O.C.	#4 @ 6" O.C.	
54	9	#4 @ 6" O.C.	#4 @ 6" O.C.	
60	9 1/2	#4 @ 6" O.C.	#4 @ 6" O.C.	
66	10 1/4	#4 @ 6" O.C.	#4 @ 6" O.C.	
72	11	#4 @ 6" O.C.	#4 @ 6" O.C.	
84	12 1/2	#4 @ 6" O.C.	#4 @ 6" O.C.	
90	13 1/4	#4 @ 6" O.C.	#4 @ 6" O.C.	
96	14	#4 @ 6" O.C.	#4 @ 6" O.C.	
102	15 1/2	#4 @ 6" O.C.	#4 @ 6" O.C.	
108	16	#4 @ 6" O.C.	#4 @ 6" O.C.	
114	16 1/2	#4 @ 6" O.C.	#4 @ 6" O.C.	
120	17	#4 @ 6" O.C.	#4 @ 6" O.C.	
126	17	#4 @ 6" O.C.	#4 @ 6" O.C.	
132	17 1/2	#4 @ 6" O.C.	#4 @ 6" O.C.	
138	17 1/2	#4 @ 6" O.C.	#4 @ 6" O.C.	
144	18	#4 @ 6" O.C.	#4 @ 6" O.C.	

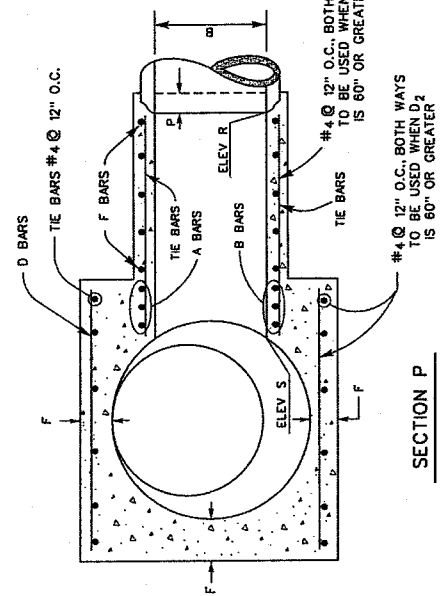
\* USE  $D_2$  OR  $D_1$ ,  
WHICHEVER  
IS GREATER, OR B

NOTES

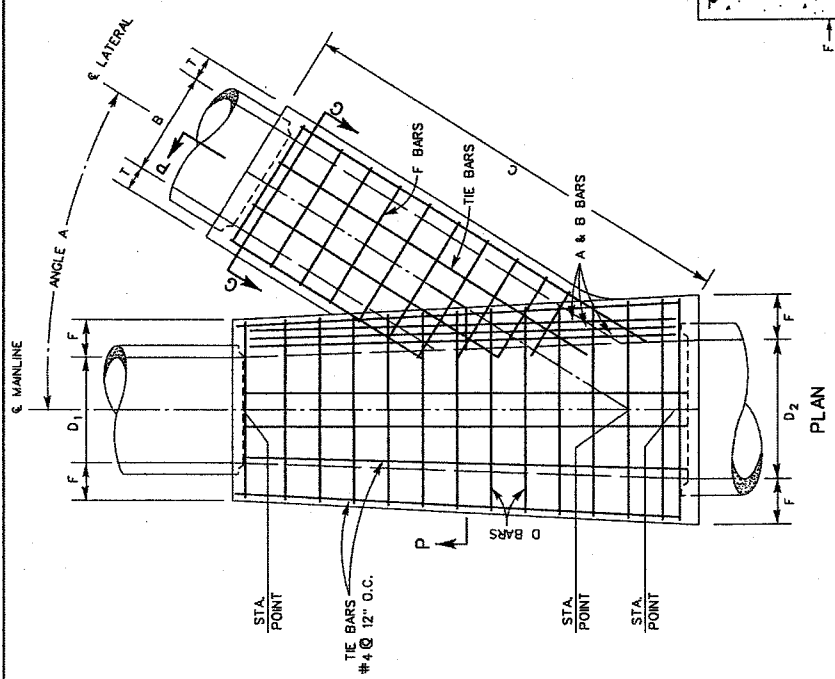
1. NUMBER OF A&B BARS SHOWN IS REPRESENTATIONAL. SEE TABLE FOR SPACING & BAR COUNT.
2. VALUES FOR A, B, C,  $D_1$ ,  $D_2$ , ELEV. B AND ELEV. S ARE GIVEN FOR APPROVED PANEL LENGTH OF THE STRUCTURE. DIMENSIONS MAY BE INCREASED TO MEET PIPE ENDS USING D BARS IN EXTENDED PORTION OF SAME DIMENSION AND SPACING AS SPECIFIED.
3. CONCRETE SHALL BE CLASS "A" FLOOR OF THE STRUCTURE SHALL BE STEEL-TROWLED TO SPRING LINE. STRUCTURE SHALL BE POURED IN ONE CONTINUOUS OPERATION, EXCEPT THAT THE CONTRACTOR SHALL HAVE THE OPTION OF PLACING AT THE SPRING LINE A CONSTRUCTION JOINT WITH A LONGITUDINAL KEYWAY.
4. REINFORCING STEEL CLEAR COVER SHALL BE 1/2" ON INSIDE. TIE BARS SHALL BE NO. 4 AND SPACED 12" C/C.
5. WHEN DIMENSION "C" IS NOT SPECIFIED THE SPUR SHALL NOT BE CONSTRUCTED AND A & B BARS SHALL BE OMITTED.
6. THE MAXIMUM COVER ABOVE THIS STRUCTURE SHALL BE 25" IF THE COVER EXCEEDS 25" A SPECIAL STRUCTURE SHALL BE DESIGNED FOR THE COVER AND DETAILED ON THE PROJECT DRAWINGS.



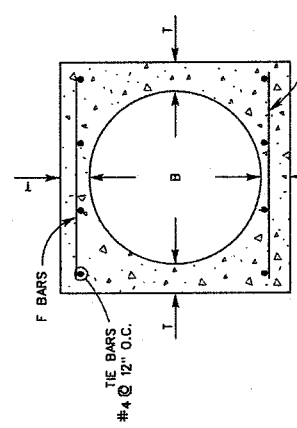
LONGITUDINAL SECTION



SECTION P



PLAN



SECTION G

TRANSITION STRUCTURE  
No. 3

STANDARD DRAWING NUMBER TS303

REVERSE COUNTY FLOOD CONTROL  
AND  
WATER CONSERVATION DISTRICT

APPROVED BY: *[Signature]*  
SHEET NUMBER: 1  
DATE: JANUARY 2011  
E.C. NO. 4484

COUNTY OF RIVERSIDE  
TRANSPORTATION AND LAND MANAGEMENT AGENCY  
Transportation Department  
Materials Laboratory

Form: ml.jmf.1

**CONTRACTOR JOB MIX FORMULA PROPOSAL**  
FOR HOT MIX ASPHALT

CONTRACTOR NAME, ADDRESS, PHONE NO. & FAX NO:	CONTRACT NO. / TRACT NO. / PERMIT NO. / OTHER:
	PROJECT INFORMATION (LOCATION, NAME AND PHASE NO):
SUBMITTED BY CONTRACTOR (PRINT NAME AND SIGN):	
DATE:	
HOT MIX ASPHALT (HMA) TYPE:	ASPHALT BINDER, ASPHALT MODIFIER AND CRUMB RUBBER MODIFIER (CRM) SUPPLIER / ASPHALT RUBBER BINDER PRODUCER:
HMA PRODUCER NAME, ADDRESS AND PHONE NO:	
PRODUCER MIX IDENTIFICATION NUMBER / NOTES:	GRADE OF ASPHALT BINDER / NOTES:

**JOB MIX FORMULA (JMF)**

Sieve Size	JMF Target Value (TV) (% passing)	TV Limits (% passing)	Project Specification Limits (TV± Tolerance)
1.50"			
1.00"			
0.75"			
0.50"			
0.375"			
No. 4			
No. 8			
No. 16			
No. 30			
No. 50			
No. 100			
No. 200			
RAP percentage (dwa)			
Asphalt binder percentage (dwa)			

Aggregate sources and California Mine and SMARA identification numbers for each bin:

Reclaimed asphalt pavement (RAP) source:

Note to Contractor:

Please include with your submittal all supporting HMA design data.

## **Appendix C**

### **Attachment “C” for Risk Level 1 Requirements**

## ATTACHMENT C RISK LEVEL 1 REQUIREMENTS

### A. Effluent Standards

*[These requirements are the same as those in the General Permit order.]*

1. Narrative – Risk Level 1 dischargers shall comply with the narrative effluent standards listed below:
  - a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
  - b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.
2. Numeric – Risk Level 1 dischargers are not subject to a numeric effluent standard.

### B. Good Site Management "Housekeeping"

1. Risk Level 1 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 1 dischargers shall implement the following good housekeeping measures:
  - a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
  - b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

- c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).
  - d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
  - e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.
2. Risk Level 1 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:
- a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.
  - b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.
  - c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.
  - d. Cover waste disposal containers at the end of every business day and during a rain event.
  - e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.
  - f. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.
  - g. Implement procedures that effectively address hazardous and non-hazardous spills.
  - h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:
    - i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

- ii. Appropriate spill response personnel are assigned and trained.
  - i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.
3. Risk Level 1 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:
- a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.
  - b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.
  - c. Clean leaks immediately and disposing of leaked materials properly.
4. Risk Level 1 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:
- a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.
  - b. Contain fertilizers and other landscape materials when they are not actively being used.
  - c. Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.
  - d. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.
  - e. Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.
5. Risk Level 1 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 1 dischargers shall do the following:

- a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.
  - b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.
  - c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.
  - d. Ensure retention of sampling, visual observation, and inspection records.
  - e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.
6. Risk Level 1 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

### **C. Non-Storm Water Management**

1. Risk Level 1 dischargers shall implement measures to control all non-storm water discharges during construction.
2. Risk Level 1 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.
3. Risk Level 1 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

#### **D. Erosion Control**

1. Risk Level 1 dischargers shall implement effective wind erosion control.
2. Risk Level 1 dischargers shall provide effective soil cover for inactive<sup>1</sup> areas and all finished slopes, open space, utility backfill, and completed lots.
3. Risk Level 1 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

#### **E. Sediment Controls**

1. Risk Level 1 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.
2. On sites where sediment basins are to be used, Risk Level 1 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

#### **F. Run-on and Runoff Controls**

Risk Level 1 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

#### **G. Inspection, Maintenance and Repair**

1. Risk Level 1 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment.
2. Risk Level 1 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended

---

<sup>1</sup> Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.



storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 1 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.
4. For each inspection required, Risk Level 1 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.
5. Risk Level 1 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:
  - a. Inspection date and date the inspection report was written.
  - b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.
  - c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.
  - d. A description of any BMPs evaluated and any deficiencies noted.
  - e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.
  - f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.
  - g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.
  - h. Photographs taken during the inspection, if any.
  - i. Inspector's name, title, and signature.

**H. Rain Event Action Plan**

Not required for Risk Level 1 dischargers.

## I. Risk Level 1 Monitoring and Reporting Requirements

**Table 1 - Summary of Monitoring Requirements**

Risk Level	Visual Inspection					Sample Collection	
	Quarterly non-Storm Water Discharge	Pre-Storm Event		Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
1	X	X		X	X		

### 1. Construction Site Monitoring Program Requirements

- a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.
- b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Programs to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Programs in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.
- c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

### 2. Objectives

The CSMP shall be developed and implemented to address the following objectives:

- a. To demonstrate that the site is in compliance with the Discharge Prohibitions;

- b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
- c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges; and
- d. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

**3. Risk Level 1 - Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**

- a. Risk Level 1 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.
- b. Risk Level 1 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.
- c. Risk Level 1 dischargers shall conduct visual observations (inspections) during business hours only.
- d. Risk Level 1 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.
- e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 1 dischargers shall visually observe (inspect):
  - i. All storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.
  - ii. All BMPs to identify whether they have been properly implemented in accordance with the SWPPP. If needed, the discharger shall implement appropriate corrective actions.

- iii. Any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.
- f. For the visual observations (inspections) described in e.i and e.iii above, Risk Level 1 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.
- g. Within two business days (48 hours) after each qualifying rain event, Risk Level 1 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.
- h. Risk Level 1 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

#### **4. Risk Level 1 – Visual Observation Exemptions**

- a. Risk Level 1 dischargers shall be prepared to conduct visual observation (inspections) until the minimum requirements of Section I.3 above are completed. Risk Level 1 dischargers are not required to conduct visual observation (inspections) under the following conditions:
  - i. During dangerous weather conditions such as flooding and electrical storms.
  - ii. Outside of scheduled site business hours.
- b. If no required visual observations (inspections) are collected due to these exceptions, Risk Level 1 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the visual observations (inspections) were not conducted.

#### **5. Risk Level 1 – Monitoring Methods**

Risk Level 1 dischargers shall include a description of the visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures in the CSMP.

#### **6. Risk Level 1 – Non-Storm Water Discharge Monitoring Requirements**

a. Visual Monitoring Requirements:

- i. Risk Level 1 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.
- ii. Risk Level 1 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).
- iii. Risk Level 1 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 1 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

**7. Risk Level 1 – Non-Visible Pollutant Monitoring Requirements**

- a. Risk Level 1 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.
- b. Risk Level 1 dischargers shall ensure that water samples are large enough to characterize the site conditions.
- c. Risk Level 1 dischargers shall collect samples at all discharge locations that can be safely accessed.
- d. Risk Level 1 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.
- e. Risk Level 1 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the

presence of pollutants identified in the pollutant source assessment required (Risk Level 1 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

- f. Risk Level 1 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.
- g. Risk Level 1 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.<sup>2</sup>
- h. Risk Level 1 dischargers shall keep all field /or analytical data in the SWPPP document.

#### **8. Risk Level 1 – Particle Size Analysis for Project Risk Justification**

Risk Level 1 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

#### **9. Risk Level 1 – Records**

Risk Level 1 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 1 dischargers shall retain all records on-site while construction is ongoing. These records include:

- a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.
- b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.
- c. The date and approximate time of analyses.
- d. The individual(s) who performed the analyses.

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<sup>2</sup> For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

- e. A summary of all analytical results from the last three years, the method detection limits and reporting units, and the analytical techniques or methods used.
- f. Rain gauge readings from site inspections.
- g. Quality assurance/quality control records and results.
- h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.6 above).
- i. Visual observation and sample collection exception records (see Section I.4 above).
- j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.



## **Appendix D**

### **Federal Prevailing Wage Decision**

**APPENDIX D**  
**Federal Prevailing Wage Decision**

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General Decision Number: CA130036 08/09/2013 CA36

Superseded General Decision Number: CA20120036

State: California

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

County: Riverside County in California.

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

Modification Number	Publication Date
0	01/04/2013
1	01/11/2013
2	03/01/2013
3	03/08/2013
4	03/22/2013
5	04/12/2013
6	05/10/2013
7	05/31/2013
8	07/05/2013
9	07/19/2013
10	08/09/2013

ASBE0005-002 06/28/2010

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems).....	\$ 32.79	16.31
Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls, floors, ceilings and curtain walls).....	\$ 24.21	13.76

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ASBE0005-004 06/28/2010

	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)....	\$ 18.70	8.65

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BOIL0092-003 10/01/2012

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

\* BRCA0004-011 05/01/2013

	Rates	Fringes
BRICKLAYER; MARBLE SETTER.....	\$ 36.41	11.32

\*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

BRCA0018-004 06/01/2012

	Rates	Fringes
MARBLE FINISHER.....	\$ 27.04	10.66
TILE FINISHER.....	\$ 22.37	9.19
TILE LAYER.....	\$ 33.55	13.55

BRCA0018-010 09/01/2009

	Rates	Fringes
TERRAZZO FINISHER.....	\$ 26.59	9.62
TERRAZZO WORKER/SETTER.....	\$ 33.63	10.46

CARP0409-001 07/01/2010

	Rates	Fringes
CARPENTER		
(1) Carpenter, Cabinet Installer, Insulation Installer, Hardwood Floor Worker and acoustical installer.....	\$ 37.35	11.08
(2) Millwright.....	\$ 37.85	11.08
(3) Piledriver/Derrick Bargeman, Bridge or Dock Carpenter, Heavy Framer, Rock Bargeman or Scowman, Rockslinger, Shingler (Commercial).....	\$ 37.48	10.58
(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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CARP0409-002 07/01/2008

	Rates	Fringes
Diver		
(1) Wet.....	\$ 663.68	9.82
(2) Standby.....	\$ 331.84	9.82
(3) Tender.....	\$ 323.84	9.82
(4) Assistant Tender.....	\$ 299.84	9.82

Amounts in "Rates" column are per day

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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.

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ELEC0440-001 11/26/2012

	Rates	Fringes
ELECTRICIAN		
INSIDE ELECTRICIAN.....	\$ 35.40	19.802
INTELLIGENT TRANSPORTATION SYSTEMS		
Electrician.....	\$ 35.40	19.952
Technician.....	\$ 26.55	19.686

ZONE PAY: Zone A: Free travel zone for all contractors performing work in Zone A.

Zone B: Any work performed in Zone (B) shall add \$12.00 per hour to the current wage scale. Zone (B) shall be the area from the eastern perimeter of Zone (A) to a line which runs north and south beginning at Little Morongo Canyon (San Bernardino/Riverside County Line), Southeast along the Coachella Tunnels, Colorado River Aqueduct and Mecca Tunnels to Pinkham Wash then South to Box Canyon Road, then southwest along Box Canyon Road to Highway 195 west onto 195 south to Highway 86 to Riverside/Imperial County Line.

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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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ELEV0018-001 01/01/2013

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 48.23	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 07/01/2012

	Rates	Fringes
OPERATOR: Power Equipment (All Other Work)		
GROUP 1.....	\$ 37.40	20.00
GROUP 2.....	\$ 38.18	20.00
GROUP 3.....	\$ 38.47	20.00
GROUP 4.....	\$ 39.96	20.00
GROUP 5.....	\$ 41.06	20.00
GROUP 6.....	\$ 40.18	20.00
GROUP 8.....	\$ 41.39	20.00
GROUP 9.....	\$ 40.41	20.00
GROUP 10.....	\$ 40.41	20.00
GROUP 11.....	\$ 40.58	20.00
GROUP 12.....	\$ 40.58	20.00
GROUP 13.....	\$ 40.68	20.00
GROUP 14.....	\$ 40.71	20.00
GROUP 15.....	\$ 40.79	20.00
GROUP 16.....	\$ 40.91	20.00
GROUP 17.....	\$ 41.08	20.00
GROUP 18.....	\$ 41.18	20.00
GROUP 19.....	\$ 41.29	20.00
GROUP 20.....	\$ 41.41	20.00
GROUP 21.....	\$ 41.58	20.00
GROUP 22.....	\$ 41.68	20.00
GROUP 23.....	\$ 41.79	20.00
GROUP 24.....	\$ 41.91	20.00
GROUP 25.....	\$ 42.08	20.00
OPERATOR: Power Equipment (Cranes, Piledriving & Hoisting)		
GROUP 1.....	\$ 38.75	20.00
GROUP 2.....	\$ 39.53	20.00
GROUP 3.....	\$ 39.82	20.00
GROUP 4.....	\$ 39.96	20.00
GROUP 5.....	\$ 40.18	20.00
GROUP 6.....	\$ 40.29	20.00
GROUP 7.....	\$ 40.41	20.00
GROUP 8.....	\$ 40.58	20.00
GROUP 9.....	\$ 40.75	20.00
GROUP 10.....	\$ 41.75	20.00
GROUP 11.....	\$ 42.75	20.00
GROUP 12.....	\$ 43.75	20.00
GROUP 13.....	\$ 44.75	20.00
OPERATOR: Power Equipment (Tunnel Work)		
GROUP 1.....	\$ 39.25	20.00
GROUP 2.....	\$ 40.03	20.00
GROUP 3.....	\$ 40.32	20.00
GROUP 4.....	\$ 40.46	20.00
GROUP 5.....	\$ 40.68	20.00
GROUP 6.....	\$ 40.79	20.00
GROUP 7.....	\$ 40.91	20.00

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-Textoma 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, PILEDRIVING 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, 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, SBM 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
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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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LABO0300-001 07/01/2012

	Rates	Fringes
Brick Tender.....	\$ 27.17	15.78

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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
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

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.

#### 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, cabletender; 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

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

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LABO0882-002 01/01/2010

	Rates	Fringes
Asbestos Removal Laborer.....	\$ 26.15	11.65

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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\* 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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LAB01414-001 08/01/2012

	Rates	Fringes
LABORER		
PLASTER CLEAN-UP LABORER....	\$ 26.65	15.95
PLASTER CLEAN-UP.....	\$ 27.45	15.98
PLASTER TENDER.....	\$ 30.00	15.98

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PAIN0036-001 03/01/2013

	Rates	Fringes
Painters: (Including Lead Abatement)		
(1) Repaint (excludes San Diego County).....	\$ 26.05	11.13
(2) All Other Work.....	\$ 29.32	11.13

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.

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PAIN0036-008 01/01/2013

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

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PAIN0036-015 06/01/2012

	Rates	Fringes
GLAZIER.....	\$ 38.95	19.83

FOOTNOTE: Additional \$1.25 per hour for work in a condor, from the third (3rd) floor and up Additional \$1.25 per hour for work on the outside of the building from a swing

stage or any suspended contrivance, from the ground up

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PAIN1247-002 05/01/2012

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 30.85	10.54

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PLAS0200-009 08/01/2011

	Rates	Fringes
PLASTERER.....	\$ 35.29	12.05

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PLAS0500-002 07/01/2013

	Rates	Fringes
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
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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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\* SFCA0669-002 07/01/2013

	Rates	Fringes
SPRINKLER FITTER.....	\$ 34.10	19.38

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SHEE0105-003 07/01/2012

LOS ANGELES (South of a straight line drawn between Gorman and Big Pines) and Catalina Island, INYO, KERN (Northeast part, East of Hwy 395), MONO ORANGE, RIVERSIDE, AND SAN BERNARDINO COUNTIES

	Rates	Fringes
SHEET METAL WORKER		
(1) Commercial - New Construction and Remodel work.....	\$ 41.45	20.41
(2) Industrial work including air pollution control systems, noise abatement, hand rails, guard rails, excluding aritechtrual sheet metal work, excluding A-C, heating, ventilating systems for human comfort....	\$ 35.75	26.41

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TEAM0011-002 07/01/2012

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 27.29	21.69
GROUP 2.....	\$ 27.44	21.69
GROUP 3.....	\$ 27.57	21.69
GROUP 4.....	\$ 27.76	21.69
GROUP 5.....	\$ 27.79	21.69
GROUP 6.....	\$ 27.82	21.69
GROUP 7.....	\$ 28.07	21.69
GROUP 8.....	\$ 28.32	21.69
GROUP 9.....	\$ 28.52	21.69
GROUP 10.....	\$ 28.82	21.69
GROUP 11.....	\$ 29.35	21.69
GROUP 12.....	\$ 29.75	21.69

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

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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



# **Appendix E**

## **Additional Federal Requirements Exhibits**

## **Additional Federal Requirements Exhibits**

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## Caltrans LAPM, Exhibit 12-E, Attachment A

### FEDERAL REQUIREMENTS FOR FEDERAL-AID CONSTRUCTION PROJECTS

**GENERAL.**—The work herein proposed will be financed in whole or in part with Federal funds, and therefore all of the statutes, rules and regulations promulgated by the Federal Government and applicable to work financed in whole or in part with Federal funds will apply to such work. The "Required Contract Provisions, Federal-Aid Construction Contracts, "Form FHWA 1273, are included in this Section. Whenever in said required contract provisions references are made to "SHA contracting officer", "SHA resident engineer", or "authorized representative of the SHA", such references shall be construed to mean "Engineer" as defined in the General Conditions.

**PERFORMANCE OF PREVIOUS CONTRACT.**—In addition to the provisions in Section II, "Nondiscrimination," and Section VI, "Subletting or Assigning the Contract," of the required contract provisions, the Contractor shall comply with the following:

The bidder shall execute the CERTIFICATION WITH REGARD TO THE PERFORMANCE OF PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO THE EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS located in the proposal. No request for subletting or assigning any portion of the contract in excess of \$10,000 will be considered under the provisions of Section VI of the required contract provisions unless such request is accompanied by the CERTIFICATION referred to above, executed by the proposed subcontractor.

**NON-COLLUSION PROVISION.**—The provisions in this section are applicable to all contracts except contracts for Federal Aid Secondary projects.

Title 23, United States Code, Section 112, requires as a condition precedent to approval by the Federal Highway Administrator of the contract for this work that each bidder file a sworn statement executed by, or on behalf of, the person, firm, association, or corporation to whom such contract is to be awarded, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the submitted bid. A form to make the non-collusion affidavit statement required by Section 112 as a certification under penalty of perjury rather than as a sworn statement as permitted by 28, USC, Sec. 1746, is included in the proposal.

**PARTICIPATION BY MINORITY BUSINESS ENTERPRISES IN SUBCONTRACTING.**—Part 26, Title 49, Code of Federal Regulations applies to this Federal-aid project. Pertinent sections of said Code are incorporated in part or in its entirety within other sections of these special provisions.

#### Schedule B—Information for Determining Joint Venture Eligibility

(This form need not be filled in if all joint venture firms are minority owned.)

1. Name of joint venture \_\_\_\_\_

2. Address of joint venture \_\_\_\_\_

3. Phone number of joint venture \_\_\_\_\_

4. Identify the firms, which comprise the joint venture. (The MBE partner must complete Schedule A.) \_\_\_\_\_

a. Describe the role of the MBE firm in the joint venture. \_\_\_\_\_

b. Describe very briefly the experience and business qualifications of each non-MBE joint venturer: \_\_\_\_\_

5. Nature of the joint venture's business \_\_\_\_\_

6. Provide a copy of the joint venture agreement.

7. What is the claimed percentage of MBE ownership? \_\_\_\_\_

8. Ownership of joint venture: (This need not be filled in if described in the joint venture agreement, provided by question 6.).

- a. Profit and loss sharing.
- b. Capital contributions, including equipment.
- c. Other applicable ownership interests.

9. Control of and participation in this contract. Identify by name, race, sex, and "firm" those individuals (and their titles) who are responsible for day-to-day management and policy decision-making, including, but not limited to, those with prime responsibility for:

a. Financial decisions \_\_\_\_\_

b. Management decisions, such as:

1. Estimating \_\_\_\_\_

2. Marketing and sales \_\_\_\_\_

3. Hiring and firing of management personnel \_\_\_\_\_

4. Purchasing of major items or supplies \_\_\_\_\_

c. Supervision of field operations \_\_\_\_\_

Note.—If, after filing this Schedule B and before the completion of the joint venture's work on the contract covered by this regulation, there is any significant change in the information submitted, the joint venture must inform the grantee, either directly or through the prime contractor if the joint venture is a subcontractor.

#### Affidavit

"The undersigned swear that the foregoing statements are correct and include all material information necessary to identify and explain the terms and operation of our joint venture and the intended participation by each joint venturer in the undertaking. Further, the undersigned covenant and agree to provide to grantee current, complete and accurate information regarding actual joint venture work and the payment therefore and any proposed changes in any of the joint venture arrangements and to permit the audit and examination of the books, records and files of the joint venture, or those of each joint venturer relevant to the joint venture, by authorized representatives of the grantee or the Federal funding agency. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under Federal or State laws concerning false statements."

Revised 3-95  
08-07-95  
Caltrans update June 29, 2012

_____	_____
Name of Firm	Name of Firm
_____	_____
Signature	Signature
_____	_____
Name	Name
_____	_____
Title	Title
_____	_____
Date	Date

Date \_\_\_\_\_

State of \_\_\_\_\_

County of \_\_\_\_\_

On this \_\_\_\_ day of \_\_\_\_\_, 19 \_\_, before me appeared (Name) \_\_\_\_\_, to me personally known, who, being duly sworn, did execute the foregoing affidavit, and did state that he or she was properly authorized by (Name of firm) \_\_\_\_\_ to execute the affidavit and did so as his or her free act and deed.

Notary Public \_\_\_\_\_

Commission expires \_\_\_\_\_

[Seal]

Date \_\_\_\_\_

State of \_\_\_\_\_

County of \_\_\_\_\_

On this \_\_\_\_ day of \_\_\_\_\_, 19 \_\_, before me appeared (Name) \_\_\_\_\_ to me personally known, who, being duly sworn, did execute the foregoing affidavit, and did state that he or she was properly authorized by (Name of firm) \_\_\_\_\_ to execute the affidavit and did so as his or her free act and deed.

Notary Public \_\_\_\_\_

Commission expires \_\_\_\_\_

[Seal]

**REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

**ATTACHMENTS**

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

**I. GENERAL**

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

**II. NONDISCRIMINATION**

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

**1. Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

**2. EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

**6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

**10. Assurance Required by 49 CFR 26.13(b):**

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

**11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

### III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

### IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

#### 1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or



will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

## **2. Withholding**

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

## **3. Payrolls and basic records**

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### 4. Apprentices and trainees

##### a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

##### b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility.**

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

**V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

**3. Withholding for unpaid wages and liquidated damages.** The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

## VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the

contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

## VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

## VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

#### **IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

#### **X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

##### **1. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

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## **2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

### **2. Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

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**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Participants:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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**XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS  
PREFERENCE FOR APPALACHIAN DEVELOPMENT  
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS  
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.



### Female and Minority Goals

To comply with Section II, "Nondiscrimination," of "Required Contract Provisions Federal-Aid Construction Contracts," the following female and minority utilization goals for Federal-aid construction contracts and subcontracts that exceed \$10,000.

The nationwide goal for female utilization is 6.9 percent.

The goals for minority utilization [45 Fed Reg 65984 (10/3/1980)] are as follows:

Minority Utilization Goals		Goal (Percent)
Economic Area		
174	Redding CA: Non-SMSA Counties: CA Lassen; CA Modoc; CA Plumas; CA Shasta; CA Siskiyou; CA Tehama	6.8
175	Eureka, CA Non-SMSA Counties: CA Del Norte; CA Humboldt; CA Trinity	6.6
176	San Francisco-Oakland-San Jose, CA: SMSA Counties: 7120 Salinas-Seaside-Monterey, CA	28.9
	CA Monterey	25.6
	7360 San Francisco-Oakland	
	CA Alameda; CA Contra Costa; CA Marin; CA San Francisco; CA San Mateo	
	7400 San Jose, CA	19.6
	CA Santa Clara, CA	
	7485 Santa Cruz, CA	14.9
	CA Santa Cruz	
	7500 Santa Rosa	9.1
	CA Sonoma	
177	8720 Vallejo-Fairfield-Napa, CA	17.1
	CA Napa; CA Solano	
	Non-SMSA Counties: CA Lake; CA Mendocino; CA San Benito	23.2
	Sacramento, CA: SMSA Counties: 6920 Sacramento, CA	16.1
	CA Placer; CA Sacramento; CA Yolo	
	Non-SMSA Counties	14.3
	CA Butte; CA Colusa; CA El Dorado; CA Glenn; CA Nevada; CA Sierra; CA Sutter; CA Yuba	
	Stockton-Modesto, CA: SMSA Counties: 5170 Modesto, CA	12.3
	CA Stanislaus	24.3
	8120 Stockton, CA	
178	CA San Joaquin	19.8
	Non-SMSA Counties	
	CA Alpine; CA Amador; CA Calaveras; CA Mariposa; CA Merced; CA Toulumne	
	Fresno-Bakersfield, CA SMSA Counties: 0680 Bakersfield, CA	19.1
	CA Kern	
	2840 Fresno, CA	26.1
	CA Fresno	
	Non-SMSA Counties:	23.6

	CA Kings; CA Madera; CA Tulare	
180	Los Angeles, CA: SMSA Counties: 0360 Anaheim-Santa Ana-Garden Grove, CA CA Orange 4480 Los Angeles-Long Beach, CA CA Los Angeles 6000 Oxnard-Simi Valley-Ventura, CA CA Ventura 6780 Riverside-San Bernardino-Ontario, CA CA Riverside; CA San Bernardino 7480 Santa Barbara-Santa Maria-Lompoc, CA CA Santa Barbara Non-SMSA Counties CA Inyo; CA Mono; CA San Luis Obispo	11.9    28.3  21.5  19.0  19.7  24.6
181	San Diego, CA: SMSA Counties 7320 San Diego, CA CA San Diego Non-SMSA Counties CA Imperial	16.9   18.2

For each July during which work is performed under the contract, you and each non-material-supplier subcontractor with a subcontract of \$10,000 or more must complete Form FHWA PR-1391 (Appendix C to 23 CFR 230). Submit the forms by August 15.

### Training

This section applies if a number of trainees or apprentices is specified in the special provisions.

As part of your equal opportunity affirmative action program, provide on-the-job training to develop full journeymen in the types of trades or job classifications involved.

You have primary responsibility for meeting this training requirement.

If you subcontract a contract part, determine how many trainees or apprentices are to be trained by the subcontractor.

Include these training requirements in your subcontract.

Where feasible, 25 percent of apprentices or trainees in each occupation must be in their 1st year of apprenticeship or training.

Distribute the number of apprentices or trainees among the work classifications on the basis of your needs and the availability of journeymen in the various classifications within a reasonable recruitment area.

Before starting work, submit to the City/County of \_\_\_\_\_:

1. Number of apprentices or trainees to be trained for each classification
2. Training program to be used
3. Training starting date for each classification

Obtain the City/County of \_\_\_\_\_'s approval for this submitted information before you start work. The City/County of \_\_\_\_\_ credits you for each apprentice or trainee you employ on the work who is currently enrolled or becomes enrolled in an approved program.

The primary objective of this section is to train and upgrade minorities and women toward journeymen status. Make every effort to enroll minority and women apprentices or trainees, such as conducting systematic and direct recruitment through public and private sources likely to yield minority and women apprentices or trainees, to the extent they are available within a reasonable recruitment area. Show that you have made the efforts. In making these efforts, do not discriminate against any applicant for training.

Do not employ as an apprentice or trainee an employee:

1. In any classification in which the employee has successfully completed a training course leading to journeyman status or in which the employee has been employed as a journeyman
2. Who is not registered in a program approved by the US Department of Labor, Bureau of Apprenticeship and Training

Ask the employee if the employee has successfully completed a training course leading to journeyman status or has been employed as a journeyman. Your records must show the employee's answers to the questions.

In your training program, establish the minimum length and training type for each classification. The City/County of \_\_\_\_\_ and FHWA approves a program if one of the following is met:

1. It is calculated to:
  - 1.1. Meet the your equal employment opportunity responsibilities
  - 1.2. Qualify the average apprentice or trainee for journeyman status in the classification involved by the end of the training period
2. It is registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training and it is administered in a way consistent with the equal employment responsibilities of federal-aid highway construction contracts

Obtain the State's approval for your training program before you start work involving the classification covered by the program.

Provide training in the construction crafts, not in clerk-typist or secretarial-type positions. Training is allowed in lower level management positions such as office engineers, estimators, and timekeepers if the training is oriented toward construction applications. Training is allowed in the laborer classification if significant and meaningful training is provided and approved by the division office. Off-site training is allowed if the training is an integral part of an approved training program and does not make up a significant part of the overall training.

The City/County of \_\_\_\_\_ reimburses you 80 cents per hour of training given an employee on this contract under an approved training program:

1. For on-site training
2. For off-site training if the apprentice or trainee is currently employed on a federal-aid project and you do at least one of the following:
  - 2.1. Contribute to the cost of the training
  - 2.2. Provide the instruction to the apprentice or trainee
  - 2.3. Pay the apprentice's or trainee's wages during the off-site training period
3. If you comply with this section.

Each apprentice or trainee must:

1. Begin training on the project as soon as feasible after the start of work involving the apprentice's or trainee's skill
2. Remain on the project as long as training opportunities exist in the apprentice's or trainee's work classification or until the apprentice or trainee has completed the training program

Furnish the apprentice or trainee:

1. Copy of the program you will comply with in providing the training
2. Certification showing the type and length of training satisfactorily completed

Maintain records and submit reports documenting your performance under this section.

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**See Instructions  
On Back**

<b>Categories:</b>	1) Specialty	2) Listed Under Fair Practices Act	3) Certified DBE/MBE/WBE/DVBE
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- The Standard Provisions for labor set forth in the contract apply to the subcontracted work.
- If applicable, (Federal Aid Projects only) Section 14 (Federal Requirements) of the Special Provisions have been inserted in the subcontracts and shall be incorporated in any lower-tier subcontract. Written contracts have been executed for the above noted subcontracted work.

CONTRACTOR'S SIGNATURE	DATE
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1.	Total of bid items.....		\$	_____
2.	Specialty items (previously requested) .....	\$	_____	
3.	Specialty items (this request) .....	\$	_____	
4.	Total (lines 2+3) .....	\$	_____	
5.	Contractor must perform with own forces (lines 1 minus 4) x _____%		\$	_____
6.	Bid items previously subcontracted .....	\$	_____	
7.	Bid items subcontracted ( this request) .....	\$	_____	
8.	Total (lines 6+7) .....	\$	_____	
9.	Balance of work Contractor to perform (lines 1 minus 8).....	\$		\$ _____

APPROVED	
RESIDENT ENGINEER'S SIGNATURE	DATE

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## INSTRUCTIONS FOR COMPLETING SUBCONTRACTING REQUEST FORM

*All First-tier subcontractors must be included on a subcontracting request.*

Submit in accordance with Section 8-1.01 of the Standard Specifications. Type or print requested information. Information copy is to be retained by the contractor. Submit other copies to project's Resident Engineer. After approval, the original will be returned to the contractor.

When an entire item is subcontracted, the value to be shown is the contractor's bid price.

When a portion of an item is subcontracted, describe the portion, and show the % of bid item and value.

### THIS FORM IS NOT TO BE USED FOR SUBSTITUTIONS.

Prior to submittal of a DC-CEM-1201 involving a replacement Subcontractor, submit a separate written request for approval to substitute a listed subcontractor. Section 4107 of the Government Code covers the conditions for substitution.

Submit a separate written request for approval of any DBE/MBE/WBE/DVBE substitution. Include appropriate backup information and state what efforts were made to accomplish the same dollar value of work by other certified DBE/MBE/WBE/DVBES.

**NOTE:** For contractors who will be performing work on railroad property, it is necessary for the contractor to complete and submit the Certificate of Insurance (State Form DH-OS-A10A) naming the subcontractor as insured. *No work shall be allowed which involves encroachment on railroad property until the specified insurance has been approved.*