

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

OFFICE ENGINEER

1727 30th Street MS-43

P.O. BOX 168041

SACRAMENTO, CA 95816-8041

FAX (916) 227-6214

www.dot.ca.gov/hq/esc/oe



*Serious Drought.
Help save water!*

March 17, 2016

07-LA,Ora-5-0.0/1.5, 44.3/44.4

07-2159U4

Project ID 0715000160

ACNHPI-005-2(981)N

DEMO06-6207(062)N

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for CONSTRUCTION ON STATE HIGHWAY IN LOS ANGELES AND ORANGE COUNTIES IN BUENA PARK, LA MIRADA, CERRITOS AND SANTA FE SPRINGS FROM ARTESIA BOULEVARD UNDERCROSSING TO NORTH FORK COYOTE CREEK to revise the project plans, and the *Notice to Bidders and Special Provisions*.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on Wednesday, April 27, 2016.

Project plan sheets 859, 870, 871, 872, 873, 874, 875, 876, 877, 878, 881 and 885 are replaced and attached for substitution for the like-numbered sheets.

Project plan sheet 572 is added and attached for addition to the project plans.

In the Special Provisions, Section 5-1.20D is replaced as attached.

In the Special Provisions, Section 86-2.06(A)1 is added as attached.

In the Special Provisions, Section 86-2.09E is replaced as attached.

In the Special Provisions, Section 86-2.11A is replaced as attached.

In the Special Provisions, Section 86-4.01E is added as attached.

In the Special Provisions, Section 86-5.01A(1) is added as attached.

In the Special Provisions, Section 86-6.11 is added as attached

In the Special Provisions, Section 86-6.11B(1) is added as attached.

Addendum No. 1
Page 2
March 17, 2016

07-LA,Ora-5-0.0/1.5, 44.3/44.4
07-2159U4
Project ID 0715000160
ACNHPI-005-2(981)N
DEMO06-6207(062)N

To *Bid* book holders:

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the *Notice to Bidders* section of the *Notice to Bidders and Special Provisions*.

Submit the *Bid* book as described in the *Electronic Bidding Guide* at the Bidders' Exchange website.

http://www.dot.ca.gov/hq/esc/oe/electronic_bidding/electronic_bidding.html

Inform subcontractors and suppliers as necessary.

This addendum and attachments are available for the Contractors' download on the Web site:

http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/07/07-2159U4

If you are not a *Bid* book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,


CARRIE BOWEN
District Director

Attachments

Replace section 5-1.20D with:

5-1.20D Occupied Improvements within the Right-of-Way

Occupied improvements are within the right-of-way at:

Parcel	Date available
Parcel 77047	10/30/2016
Parcel 77604	07/01/2016
Parcel 77605	12/31/2016
Parcel 77609	04/20/2016
Parcel 77794	06/12/2016
Parcel 79843	04/30/2016
Parcel 79850	12/31/2016
Parcel 79856	04/11/2016
Parcel 79857	04/11/2016
Parcel 79887	09/10/2016

Do not take any action that will result in unnecessary inconvenience or disproportionate injury to or that is coercive in nature to the occupants of the improvements.

Add to section 86-2.06A(1) of the RSS for section 86-2.06, after the 1st paragraph:

Cover marking must be as follows:

1. *SERVICE* for service circuits between service point and service disconnect
2. *SERVICE IRRIGATION* for circuits from service equipment enclosure to irrigation controller
3. *SERVICE BOOSTER PUMP* for circuits from service equipment enclosure to the booster pump
4. *TDC POWER* for circuits from service equipment enclosure to telephone demarcation cabinet
5. *LIGHTING* for lighting system
6. *SIGN ILLUMINATION* for sign illumination system
7. *SIGNAL AND LIGHTING* for signal and lighting system
8. *RAMP METER* for ramp metering system
9. *TMS* for traffic monitoring station
10. *FLASHING BEACON* for flashing beacon system
11. *CMS* for changeable message sign system
12. *INTERCONNECT* for interconnect conduit and cable system

Replace the 3rd paragraph in section 86-2.06A(2) of the RSS for section 86-2.06 with:

In a ground or sidewalk area, embed the bottom of a pull box in crushed rock.

Replace "Reserved" in section 86-2.06B of the RSS for section 86-2.06 with:

86-2.06B(1) General

86-2.06B(1)(a) Summary

Section 86-2.06B includes specifications for installing non-traffic-rated pull boxes.

86-2.06B(1)(b) Submittals

Before shipping pull boxes to the job site, submit a list of materials used to fabricate the pull boxes to METS. Include:

1. Contract number
2. Manufacturer's name
3. Manufacturer's installation instructions
4. Your contact information

Submit reports for pull boxes from an NRTL-accredited laboratory.

Before installing a pull box and cover, submit the manufacturer's replacement warranty for them.

86-2.06B(1)(c) Quality Control and Assurance

86-2.06B(1)(c)(i) Functional Testing

The pull box and cover must be tested under ANSI/SCTE 77, "Specification for Underground Enclosure Integrity."

86-2.06B(1)(c)(ii) Warranty

Provide a 2-year manufacturer's replacement warranty for the pull box and cover. The warranty period starts on the date of Contract acceptance.

Deliver replacement parts within 5 business days after you receive notification of a failed pull box, cover, or both to the Department's Maintenance Electrical Shop at: 1940 S Workman Mill Road, Whittier, CA 90601

86-2.06B(2) Materials

The pull box and cover must comply with ANSI/SCTE 77, "Specification for Underground Enclosure Integrity," for tier 22 load rating and must be gray or brown.

Each pull box cover must have an electronic marker cast inside.

A pull box extension must be made of the same material as the pull box and attached to the box to maintain the minimum combined depths.

Include recesses for a hanger if a transformer or other device must be placed in a pull box.

The bolts, nuts, and washers must be a captive design.

The captive bolt must be capable of withstanding a torque from 55 to 60 ft-lb and a minimum pull-out strength of 750 lb. Perform the test with the cover in place and the bolts torqued. The pull box and cover must not be damaged while performing the test.

Hardware must be stainless steel with 18 percent chromium and 8 percent nickel content.

Galvanize ferrous metal parts under section 75-1.05.

The manufacturer's instructions must include:

1. Quantity and size of entries that can be made without degrading the strength of the pull box below the tier 22 load rating
2. Locations where side entries cannot be made
3. Acceptable method for creating the entry

The tier 22 load rating must be labeled or stenciled by the manufacturer on the inside and outside of the pull box and on the underside of the cover.

86-2.06B(3) Construction

Do not install a pull box in curb ramps or driveways.

A pull box for a post or a pole standard must be located within 5 feet of the standard. Place the pull box adjacent to the back of the curb or edge of the shoulder. If this is impractical, place the pull box in a suitable, protected, and accessible location.

Replace the 1st paragraph of section 86-2.09E with:

Splices must be insulated by "Method B."

Delete the 6th and 7th paragraphs of section 86-2.09E.

Replace 8th & 9th paragraphs of section 86-2.09E with:

Splices must be insulated by "Method B."

Use Method B as follows:

1. Cover the splice area completely with an electrical insulating coating and allow it to dry
2. Apply 3 layers of half-lapped 80 mils PVC tape.
3. Apply 2 layers of 120 mils Butyl rubber stretchable tape with liner.
4. Apply 3 layers of half-lapped 6 mils PVC pressure-sensitive adhesive tape.
5. Cover the entire splice with an electrical insulating coating and allow it to dry.

Add to section 86-2.11A:

Each service must be provided with up to 2 main circuit breakers that will disconnect ungrounded service entrance conductors. Where the "Main" circuit breaker consists of 2 circuit breakers as described, each of the circuit breakers must have a minimum interrupting capacity of 10,000 A, rms.

Add to section 86-2.11A, after 5th paragraph:

The main and neutral busses of the enclosure must be made of tin-plated copper and rated for 125 A and be suitable for copper or aluminum conductors.

Identify each circuit breaker and component by description using an engraved phenolic nameplate.

The nameplate must be installed using stainless steel rivets or screws:

1. Adjacent to the breaker on the dead front panel. The characters must be a minimum of 1/8 inch high.
2. Adjacent to the component on the back panel. The characters must be a minimum of 1/8 inch high.
3. At the top exterior of the door panel. The nameplate must include the system number, voltage, and number of phases engraved in a minimum 3/16-inch-high characters.

A plastic-laminated wiring diagram must be attached inside the enclosure with brass eyelets by a UL listed or NRTL certified method.

Locate the foundation such that the minimum clearance around the front and back of the enclosure complies with NEC, Article 110.26, "Spaces About Electrical Equipment" (600 V, nominal or less).

The meter area must be have a sealable, lockable, weathertight cover that can be removed without the use of tools.

Service equipment enclosure must be factory wired.

The dead front panel on a Type III service equipment enclosure must have a continuous stainless steel or aluminum piano hinge. This panel or dead front panel must be secured with a latch or captive screws. No live part must be mounted on this panel or dead front panel.

The enclosures must be rated NEMA 3R and include a dead front panel and a hasp with a 7/16-inch-diameter hole for a padlock.

If a Type III enclosure houses a transformer of more than 1 kVA, the enclosure must have an effective screened ventilation louvers of no less than 50 sq. in for each louver. The framed screen must be stainless no. 304 with a no. 10 size mesh and secured with at least 4 bolts.

The fasteners on the exterior of an enclosure must be vandal-resistant and not removable. The exterior screws, nuts, bolts, and washers must be stainless steel.

Landing lugs must be sized for the incoming service utility conductors, be compatible with either copper or aluminum conductors and be copper or tin-plated aluminum. Live parts of the electrical equipment must be guarded against accidental contact.

The interior of the enclosure must accept plug-in circuit breakers. A minimum of 6 standard single pole circuit breakers, 3/4" nominal, must be provided for branch circuits. Circuit breakers for a service equipment enclosure must have interior made of copper.

For Type III-A, -B, and -C enclosures, the meter socket must be a 5-clip type and the landing lug must be suitable for multiple conductors.

For Type III-D enclosure, the meter socket must be a 7-clip type and the landing lug must be suitable for multiple conductors. The pedestal must comply with the Electric Utility Service Equipment Requirements Committee (EUSERC) drawing no. 308 or 309.

Install a grounding electrode for each cabinet, service equipment enclosure, and transformer. Attach a grounding conductor from the electrode to the equipment using either a ground clamp or exothermic weld. Connect the other end to the cabinet, service equipment enclosure and transformer.

Add to section 86-4.01E, after the 5th paragraph:

The metal backplate must be of 1/16" minimum thickness 3001-14 aluminum.

Add to section 86-5.01A(1):

Loop wire must be Type 2.

Loop detector lead-in cable must be Type B For Type E detector loops, sides of the slot must be vertical and the minimum radius of the slot entering and leaving the circular part of the loop must be 1-1/2 inches. Slot width must be a maximum of 5/8 inch. Loop wire for circular loops must be Type 2. Slots of circular loops must be filled with elastomeric sealant or hot-melt rubberized asphalt sealant.

Fill slots in concrete with elastomeric, hot-melt rubberized asphalt or epoxy sealant for loop detectors.

Install Type 1 or 2 inductive loop conductor except for Type E loops detectors use Type 2.

Install conductor continuous without splices except at the pull box.

Center the detectors in the traffic lanes.

Do not splice the detector conductor.

Mark the location of the inductive loop detectors so the distance between the side of the loop and a lead-in sawcut from an adjacent detector is at least 2 feet. The distance between lead-in sawcuts must be at least 6 inches.

Sawcut the slots. The slot bottoms must be smooth with no sharp edges. For Type E detector loops, saw the slots so the sides are vertical.

Do not allow residue from slot-cutting activities to flow across shoulders or lanes occupied by traffic. Remove the residue before it flows off the pavement surface and dispose of it.

Wash the slots clean using water and blow dry with compressed air to remove all moisture and debris.

Identify the start of the conductor.

Waterproof the ends of Type 2 loop conductor before installing it in the conduit to prevent moisture from entering the cable.

Install the loop conductor in the slots and lead-in sawcut using a 3/16- to 1/4-inch-thick wood paddle. Hold the conductors in place at the bottom of the slot with wood paddles during placement of the sealant.

Wind adjacent loops on the same sensor unit channel in opposite directions.

Twist the conductors for each loop into a pair consisting of a minimum of 2 turns per foot before placing them in the lead-in sawcut and the conduit leading to the pull box. Do not install more than 2 twisted pairs of conductors per lead-in sawcut.

Provide 5 feet of slack in the pull box.

Test each loop for continuity, circuit resistance, and insulation resistance before filling the slots with sealant.

Remove excess sealant from the adjacent road surface before it sets. Do not use solvents to remove the excess.

Identify the loop conductor pair in the pull box with the start with the letter *S* and the end with the letter *F*. Band conductors in pairs by lane in the pull box adjacent to the loops and in the cabinet. Identify each pair with detector designation and loop number.

All splices must be soldered using the hot iron, pouring, or dipping method. Do not perform open-flame soldering.

For Detector lead-in cable:

1. Waterproof the ends of the lead-in cable before installing it in the conduit to prevent moisture from entering the cable
2. Splice loop conductors for each direction of travel for the same phase, terminating in the same pull box, to a separate lead-in cable which must run from the pull box adjacent to the loop detector to a sensor unit mounted in the controller cabinet. Install lead-in cable continuous without splices except at the pull box.
3. Verify in the presence of the Engineer that the loops are operational before making the final splices between loop conductors and the lead-in cable
4. Identify and tag each lead-in cable with detector designation at the cabinet and pull box adjacent to the loops

Add to section 86-6.11, after 1st paragraph:

Internal conductors for photoelectric control unit must be 600 V(ac), 14 AWG (THHN) stranded machine tool wire. Where subject to flexing, 19 stranded wire must be used.

Add to section 86-6.11B(1):

Photoelectric units for illuminated signs must have a "turn-on" level between 20 and 30 foot-candles, corresponding to a switching level of approximately 40 to 60 foot-candles measured in the horizontal plane. "Turn-off" level must not exceed 3 times the "turn-on" level.