| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 801 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA

*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

## CEMENTATION

| Description | Criteria |
|---|---|
| Weak | Crumbles or breaks with handling or little finger pressure. |
| Moderate | Crumbles or breaks with considerable finger pressure. |
| Strong | Will not crumble or break with finger pressure. |

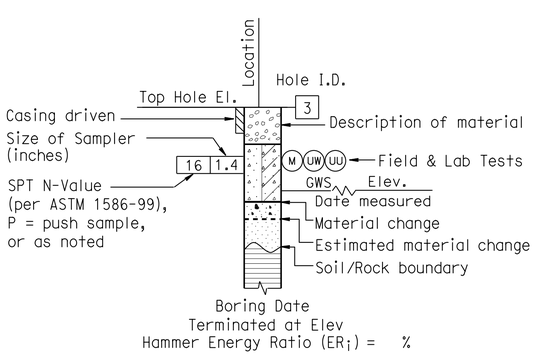
## BOREHOLE IDENTIFICATION

| Symbol | Hole Type | Description |
|---|---|---|
| Size | A | Auger Boring (hollow or solid stem bucket) |
| Size | R<br>RW<br>RC<br>P | Rotary drilled boring (conventional)<br>Rotary drilled with self-casing wire-line<br>Rotary core with continuously-sampled, self-casing wire-line<br>Rotary percussion boring (air) |
| Size | R<br>RC | Rotary drilled diamond core<br>Rotary drilled rock core |
| Size | HD<br>HA | Hand driven (1-inch soil tube)<br>Hand Auger |
| ● | D | Dynamic Cone Penetration Boring |
| ▲ | CPT | Cone Penetration Test (ASTM D 5778) |
| ⬚ | O | Other (note on LOTB) |

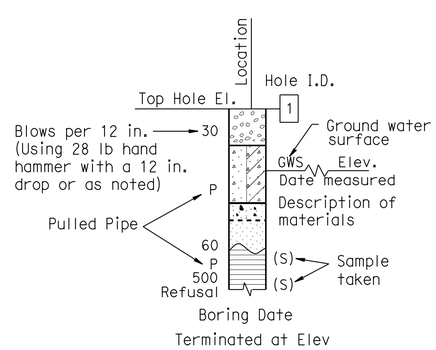
**Note: Size in inches.**

## CONSISTENCY OF COHESIVE SOILS

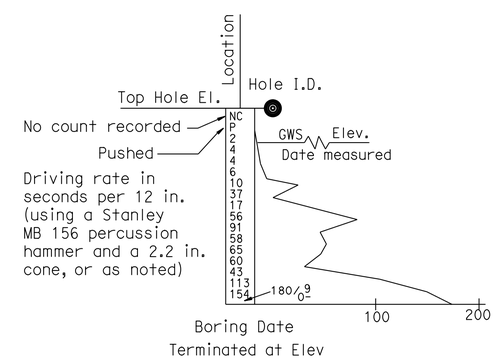
| Description | Shear Strength (tsf) | Pocket Penetrometer Measurement, PP, (tsf) | Torvane Measurement, TV, (tsf) | Vane Shear Measurement, VS, (tsf) |
|---|---|---|---|---|
| Very Soft | Less than 0.12 | Less than 0.25 | Less than 0.12 | Less than 0.12 |
| Soft | 0.12 - 0.25 | 0.25 - 0.5 | 0.12 - 0.25 | 0.12 - 0.25 |
| Medium Stiff | 0.25 - 0.5 | 0.5 - 1 | 0.25 - 0.5 | 0.25 - 0.5 |
| Stiff | 0.5 - 1 | 1 - 2 | 0.5 - 1 | 0.5 - 1 |
| Very Stiff | 1 - 2 | 2 - 4 | 1 - 2 | 1 - 2 |
| Hard | Greater than 2 | Greater than 4 | Greater than 2 | Greater than 2 |



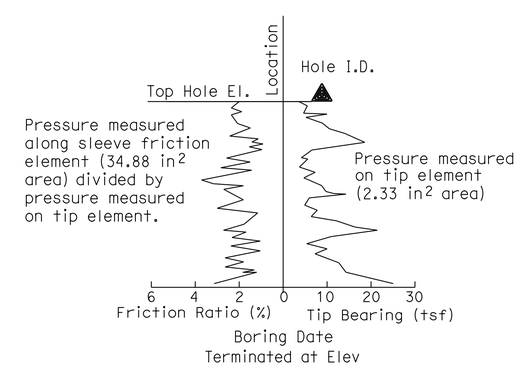

**ROTARY BORING**




**HAND BORING**




**DYNAMIC CONE PENETRATION BORING**




**CONE PENETRATION TEST (CPT) BORING**

**SW-83**

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1805 POST MILE 33.4/37.1 | SOUND WALL NO. 1805 LOG OF TEST BORINGS 2 OF 3 |
|---|---|---|---|---|---|
| | PREPARED BY: F. Nguyen | | | | |

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

| REVISION DATES | | | | SHEET | OF |
|---|---|---|---|---|---|
| 05-10-12 | | | | X | X |

FILE => 71170urp011.dgn

USERNAME => s12614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 802 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA

*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

## GROUP SYMBOLS AND NAMES

| Graphic/Symbol | Group Names | Graphic/Symbol | Group Names |
|---|---|---|---|
| GW | Well-graded GRAVEL<br>Well-graded GRAVEL with SAND | CL | Lean CLAY<br>Lean CLAY with SAND<br>Lean CLAY with GRAVEL<br>SANDY lean CLAY<br>SANDY lean CLAY with GRAVEL<br>GRAVELLY lean CLAY<br>GRAVELLY lean CLAY with SAND |
| GP | Poorly-graded GRAVEL<br>Poorly-graded GRAVEL with SAND | | |
| GW-GM | Well-graded GRAVEL with SILT<br>Well-graded GRAVEL with SILT and SAND | CL-ML | SILTY CLAY<br>SILTY CLAY with SAND<br>SILTY CLAY with GRAVEL<br>SANDY SILTY CLAY<br>SANDY SILTY CLAY with GRAVEL<br>GRAVELLY SILTY CLAY<br>GRAVELLY SILTY CLAY with SAND |
| GW-GC | Well-graded GRAVEL with CLAY (or SILTY CLAY)<br>Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) | | |
| GP-GM | Poorly-graded GRAVEL with SILT<br>Poorly-graded GRAVEL with SILT and SAND | ML | SILT<br>SILT with SAND<br>SILT with GRAVEL<br>SANDY SILT<br>SANDY SILT with GRAVEL<br>GRAVELLY SILT<br>GRAVELLY SILT with SAND |
| GP-GC | Poorly-graded GRAVEL with CLAY (or SILTY CLAY)<br>Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) | | |
| GM | SILTY GRAVEL<br>SILTY GRAVEL with SAND | OL | ORGANIC lean CLAY<br>ORGANIC lean CLAY with SAND<br>ORGANIC lean CLAY with GRAVEL<br>SANDY ORGANIC lean CLAY<br>SANDY ORGANIC lean CLAY with GRAVEL<br>GRAVELLY ORGANIC lean CLAY<br>GRAVELLY ORGANIC lean CLAY with SAND |
| GC | CLAYEY GRAVEL<br>CLAYEY GRAVEL with SAND | | |
| GC-GM | SILTY, CLAYEY GRAVEL<br>SILTY, CLAYEY GRAVEL with SAND | OL | ORGANIC SILT<br>ORGANIC SILT with SAND<br>ORGANIC SILT with GRAVEL<br>SANDY ORGANIC SILT<br>SANDY ORGANIC SILT with GRAVEL<br>GRAVELLY ORGANIC SILT<br>GRAVELLY ORGANIC SILT with SAND |
| SW | Well-graded SAND<br>Well-graded SAND with GRAVEL | | |
| SP | Poorly-graded SAND<br>Poorly-graded SAND with GRAVEL | CH | Fat CLAY<br>Fat CLAY with SAND<br>Fat CLAY with GRAVEL<br>SANDY fat CLAY<br>SANDY fat CLAY with GRAVEL<br>GRAVELLY fat CLAY<br>GRAVELLY fat CLAY with SAND |
| SW-SM | Well-graded SAND with SILT<br>Well-graded SAND with SILT and GRAVEL | | |
| SW-SC | Well-graded SAND with CLAY (or SILTY CLAY)<br>Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) | MH | Elastic SILT<br>Elastic SILT with SAND<br>Elastic SILT with GRAVEL<br>SANDY elastic SILT<br>SANDY elastic SILT with GRAVEL<br>GRAVELLY elastic SILT<br>GRAVELLY elastic SILT with SAND |
| SP-SM | Poorly-graded SAND with SILT<br>Poorly-graded SAND with SILT and GRAVEL | | |
| SP-SC | Poorly-graded SAND with CLAY (or SILTY CLAY)<br>Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) | OH | ORGANIC fat CLAY<br>ORGANIC fat CLAY with SAND<br>ORGANIC fat CLAY with GRAVEL<br>SANDY ORGANIC fat CLAY<br>SANDY ORGANIC fat CLAY with GRAVEL<br>GRAVELLY ORGANIC fat CLAY<br>GRAVELLY ORGANIC fat CLAY with SAND |
| SM | SILTY SAND<br>SILTY SAND with GRAVEL | | |
| SC | CLAYEY SAND<br>CLAYEY SAND with GRAVEL | OH | ORGANIC elastic SILT<br>ORGANIC elastic SILT with SAND<br>ORGANIC elastic SILT with GRAVEL<br>SANDY ORGANIC elastic SILT<br>SANDY ORGANIC elastic SILT with GRAVEL<br>GRAVELLY ORGANIC elastic SILT<br>GRAVELLY ORGANIC elastic SILT with SAND |
| SC-SM | SILTY, CLAYEY SAND<br>SILTY, CLAYEY SAND with GRAVEL | | |
| PT | PEAT | OL/OH | ORGANIC SOIL<br>ORGANIC SOIL with SAND<br>ORGANIC SOIL with GRAVEL<br>SANDY ORGANIC SOIL<br>SANDY ORGANIC SOIL with GRAVEL<br>GRAVELLY ORGANIC SOIL<br>GRAVELLY ORGANIC SOIL with SAND |
| | COBBLES<br>COBBLES and BOULDERS<br>BOULDERS | | |

## FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

## APPARENT DENSITY OF COHESIONLESS SOILS

| Description | SPT $N_{60}$ (Blows / 12 in.) |
|---|---|
| Very Loose | 0 - 5 |
| Loose | 5 - 10 |
| Medium Dense | 10 - 30 |
| Dense | 30 - 50 |
| Very Dense | Greater than 50 |

## MOISTURE

| Description | Criteria |
|---|---|
| Dry | No discernable moisture |
| Moist | Moisture present, but no free water |
| Wet | Visible free water |

## PERCENT OR PROPORTION OF SOILS

| Description | Criteria |
|---|---|
| Trace | Particles are present but estimated to be less than 5% |
| Few | 5% - 10% |
| Little | 15% - 25% |
| Some | 30% - 45% |
| Mostly | 50% - 100% |

## PARTICLE SIZE

| Description | | Size (in.) |
|---|---|---|
| Boulder | | Greater than 12 |
| Cobble | | 3 - 12 |
| Gravel | Coarse | 3/4 - 3 |
| | Fine | 1/5 - 3/4 |
| Sand | Coarse | 1/16 - 1/5 |
| | Medium | 1/64 - 1/16 |
| | Fine | 1/300 - 1/64 |
| Silt and Clay | | Less than 1/300 |

SW-84

ENGINEERING SERVICES

GEOTECHNICAL SERVICES
PREPARED BY: F. Nguyen

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. SW 1805
POST MILE 33.4/37.1

# SOUND WALL NO. 1805
# LOG OF TEST BORINGS 3 OF 3

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851
CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-10-12 | SHEET X | OF X

FILE => 71170urp012.dgn

USERNAME => s126614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 803 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

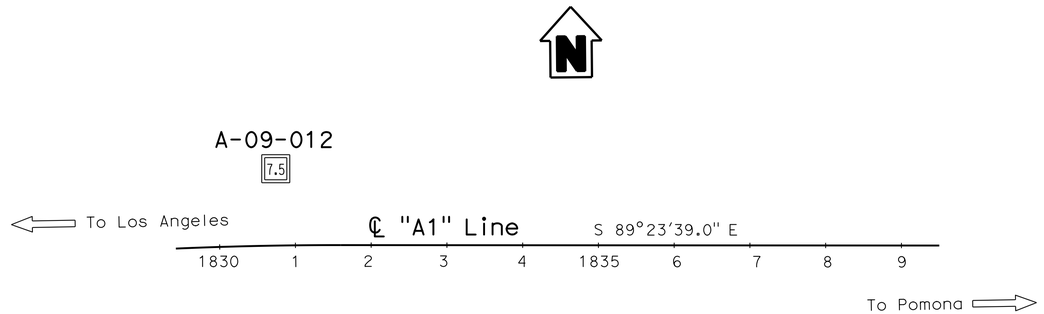
## BENCH MARK

BM #11-B-43 Elev 346.47′
Lead and conc nail in sidewalk of Auto Ct. cabin #825 on N. side Gavey Ave 200′± of Puente Ave, 71′ Lt Sta 181+30.5.

BM #12-B-43 Elev 352.54′
Lead and conc nail in W. end of p.c.c. porch step to frame house on N. side Gavey Ave, 91′ Lt Sta 193+81.

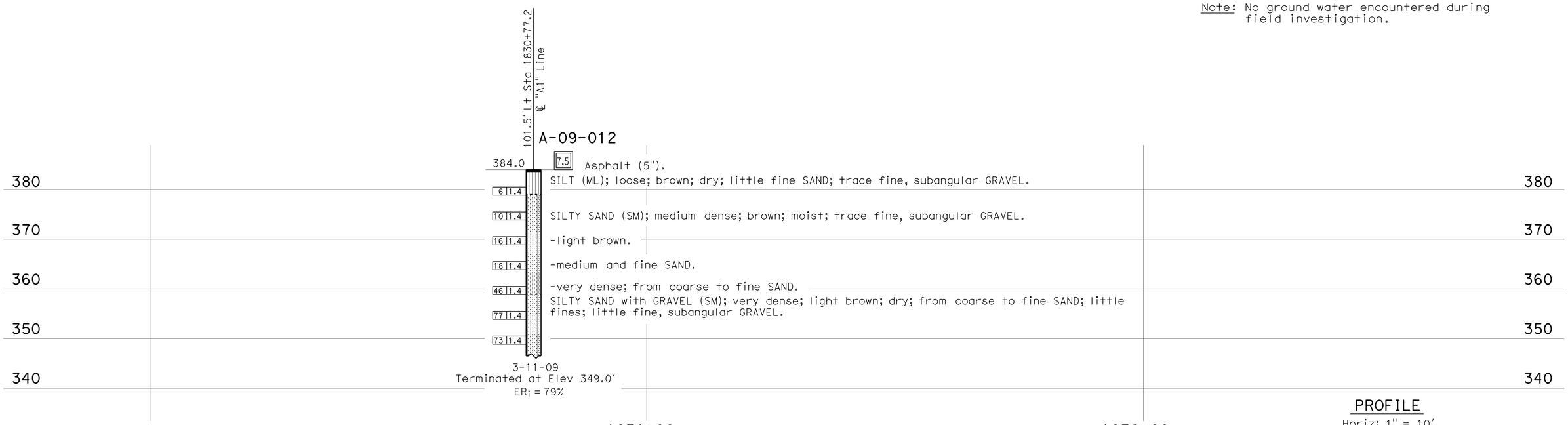
TBM Elev 341.93′
Chiseled knob on PCC wall, 33.4′ Rt Sta 168+35.

Vertical Datum: NAVD88




PLAN
1″ = 100′

Note: No ground water encountered during field investigation.




PROFILE
Horiz: 1″ = 10′
Vert: 1″ = 10′

**SW-85**

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1831 / POST MILE 33.4/37.1 | SOUND WALL NO. 1831 |
|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR NAME: D. Jang | DRAWN BY: F. Nguyen / CHECKED BY: S. Han | FIELD INVESTIGATION BY: S. Cho | | | LOG OF TEST BORINGS 1 OF 3 |

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES 04-17-12 07-26-12 07-13-12 SHEET X OF X

FILE => 71170urp013.dgn

USERNAME => s12614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 804 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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## CEMENTATION

| Description | Criteria |
|---|---|
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| Moderate | Crumbles or breaks with considerable finger pressure. |
| Strong | Will not crumble or break with finger pressure. |

## BOREHOLE IDENTIFICATION

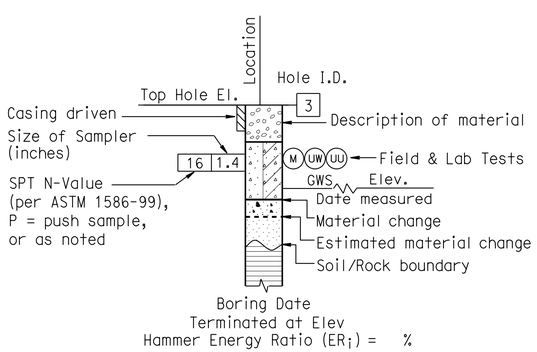
| Symbol | Hole Type | Description |
|---|---|---|
| Size | A | Auger Boring (hollow or solid stem bucket) |
| Size | R<br>RW<br>RC<br>P | Rotary drilled boring (conventional)<br>Rotary drilled with self-casing wire-line<br>Rotary core with continuously-sampled, self-casing wire-line<br>Rotary percussion boring (air) |
| Size | R<br>RC | Rotary drilled diamond core<br>Rotary drilled rock core |
| Size | HD<br>HA | Hand driven (1-inch soil tube)<br>Hand Auger |
| ● | D | Dynamic Cone Penetration Boring |
| ▲ | CPT | Cone Penetration Test (ASTM D 5778) |
| ⬚ | O | Other (note on LOTB) |

10-25-11

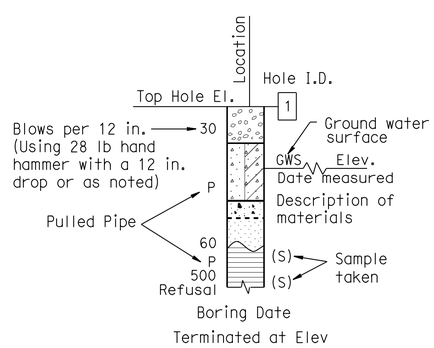
**Note: Size in inches.**

## CONSISTENCY OF COHESIVE SOILS

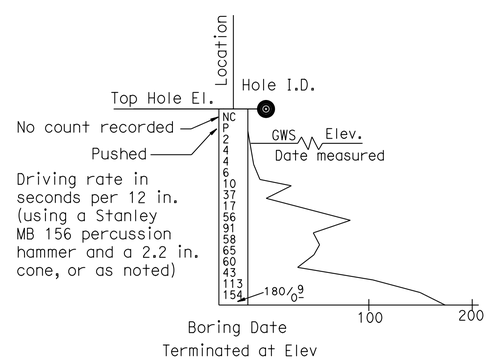
| Description | Shear Strength (tsf) | Pocket Penetrometer Measurement, PP, (tsf) | Torvane Measurement, TV, (tsf) | Vane Shear Measurement, VS, (tsf) |
|---|---|---|---|---|
| Very Soft | Less than 0.12 | Less than 0.25 | Less than 0.12 | Less than 0.12 |
| Soft | 0.12 - 0.25 | 0.25 - 0.5 | 0.12 - 0.25 | 0.12 - 0.25 |
| Medium Stiff | 0.25 - 0.5 | 0.5 - 1 | 0.25 - 0.5 | 0.25 - 0.5 |
| Stiff | 0.5 - 1 | 1 - 2 | 0.5 - 1 | 0.5 - 1 |
| Very Stiff | 1 - 2 | 2 - 4 | 1 - 2 | 1 - 2 |
| Hard | Greater than 2 | Greater than 4 | Greater than 2 | Greater than 2 |



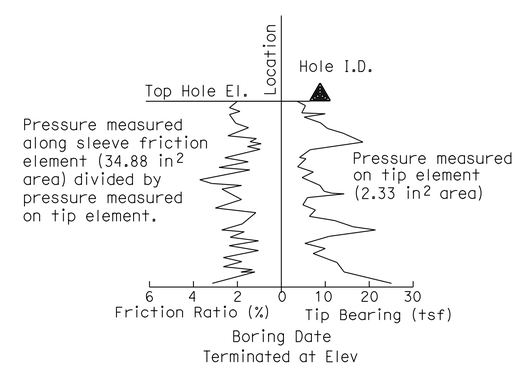

**ROTARY BORING**




**HAND BORING**




**DYNAMIC CONE PENETRATION BORING**




**CONE PENETRATION TEST (CPT) BORING**

SW-86

| ENGINEERING SERVICES | MATERIALS AND GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1831 / POST MILE 33.4/37.1 | SOUND WALL NO. 1831 LOG OF TEST BORINGS 2 OF 3 |
|---|---|---|---|---|---|
| | PREPARED BY: F. Nguyen | | | | |

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 04-11-12 07-10-12 SHEET X OF X

FILE => 71170urp014.dgn

USERNAME => s12614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

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6-10-13
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## GROUP SYMBOLS AND NAMES

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| GP | Poorly-graded GRAVEL<br>Poorly-graded GRAVEL with SAND | | |
| GW-GM | Well-graded GRAVEL with SILT<br>Well-graded GRAVEL with SILT and SAND | CL-ML | SILTY CLAY<br>SILTY CLAY with SAND<br>SILTY CLAY with GRAVEL<br>SANDY SILTY CLAY<br>SANDY SILTY CLAY with GRAVEL<br>GRAVELLY SILTY CLAY<br>GRAVELLY SILTY CLAY with SAND |
| GW-GC | Well-graded GRAVEL with CLAY (or SILTY CLAY)<br>Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) | | |
| GP-GM | Poorly-graded GRAVEL with SILT<br>Poorly-graded GRAVEL with SILT and SAND | ML | SILT<br>SILT with SAND<br>SILT with GRAVEL<br>SANDY SILT<br>SANDY SILT with GRAVEL<br>GRAVELLY SILT<br>GRAVELLY SILT with SAND |
| GP-GC | Poorly-graded GRAVEL with CLAY (or SILTY CLAY)<br>Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) | | |
| GM | SILTY GRAVEL<br>SILTY GRAVEL with SAND | OL | ORGANIC lean CLAY<br>ORGANIC lean CLAY with SAND<br>ORGANIC lean CLAY with GRAVEL<br>SANDY ORGANIC lean CLAY<br>SANDY ORGANIC lean CLAY with GRAVEL<br>GRAVELLY ORGANIC lean CLAY<br>GRAVELLY ORGANIC lean CLAY with SAND |
| GC | CLAYEY GRAVEL<br>CLAYEY GRAVEL with SAND | | |
| GC-GM | SILTY, CLAYEY GRAVEL<br>SILTY, CLAYEY GRAVEL with SAND | OL | ORGANIC SILT<br>ORGANIC SILT with SAND<br>ORGANIC SILT with GRAVEL<br>SANDY ORGANIC SILT<br>SANDY ORGANIC SILT with GRAVEL<br>GRAVELLY ORGANIC SILT<br>GRAVELLY ORGANIC SILT with SAND |
| SW | Well-graded SAND<br>Well-graded SAND with GRAVEL | | |
| SP | Poorly-graded SAND<br>Poorly-graded SAND with GRAVEL | CH | Fat CLAY<br>Fat CLAY with SAND<br>Fat CLAY with GRAVEL<br>SANDY fat CLAY<br>SANDY fat CLAY with GRAVEL<br>GRAVELLY fat CLAY<br>GRAVELLY fat CLAY with SAND |
| SW-SM | Well-graded SAND with SILT<br>Well-graded SAND with SILT and GRAVEL | | |
| SW-SC | Well-graded SAND with CLAY (or SILTY CLAY)<br>Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) | MH | Elastic SILT<br>Elastic SILT with SAND<br>Elastic SILT with GRAVEL<br>SANDY elastic SILT<br>SANDY elastic SILT with GRAVEL<br>GRAVELLY elastic SILT<br>GRAVELLY elastic SILT with SAND |
| SP-SM | Poorly-graded SAND with SILT<br>Poorly-graded SAND with SILT and GRAVEL | | |
| SP-SC | Poorly-graded SAND with CLAY (or SILTY CLAY)<br>Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) | OH | ORGANIC fat CLAY<br>ORGANIC fat CLAY with SAND<br>ORGANIC fat CLAY with GRAVEL<br>SANDY ORGANIC fat CLAY<br>SANDY ORGANIC fat CLAY with GRAVEL<br>GRAVELLY ORGANIC fat CLAY<br>GRAVELLY ORGANIC fat CLAY with SAND |
| SM | SILTY SAND<br>SILTY SAND with GRAVEL | | |
| SC | CLAYEY SAND<br>CLAYEY SAND with GRAVEL | OH | ORGANIC elastic SILT<br>ORGANIC elastic SILT with SAND<br>ORGANIC elastic SILT with GRAVEL<br>SANDY ORGANIC elastic SILT<br>SANDY ORGANIC elastic SILT with GRAVEL<br>GRAVELLY ORGANIC elastic SILT<br>GRAVELLY ORGANIC elastic SILT with SAND |
| SC-SM | SILTY, CLAYEY SAND<br>SILTY, CLAYEY SAND with GRAVEL | | |
| PT | PEAT | OL/OH | ORGANIC SOIL<br>ORGANIC SOIL with SAND<br>ORGANIC SOIL with GRAVEL<br>SANDY ORGANIC SOIL<br>SANDY ORGANIC SOIL with GRAVEL<br>GRAVELLY ORGANIC SOIL<br>GRAVELLY ORGANIC SOIL with SAND |
| | COBBLES<br>COBBLES and BOULDERS<br>BOULDERS | | |

## FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

## APPARENT DENSITY OF COHESIONLESS SOILS

| Description | SPT $N_{60}$ (Blows / 12 in.) |
|---|---|
| Very Loose | 0 - 5 |
| Loose | 5 - 10 |
| Medium Dense | 10 - 30 |
| Dense | 30 - 50 |
| Very Dense | Greater than 50 |

## MOISTURE

| Description | Criteria |
|---|---|
| Dry | No discernable moisture |
| Moist | Moisture present, but no free water |
| Wet | Visible free water |

## PERCENT OR PROPORTION OF SOILS

| Description | Criteria |
|---|---|
| Trace | Particles are present but estimated to be less than 5% |
| Few | 5% - 10% |
| Little | 15% - 25% |
| Some | 30% - 45% |
| Mostly | 50% - 100% |

## PARTICLE SIZE

| Description | | Size (in.) |
|---|---|---|
| Boulder | | Greater than 12 |
| Cobble | | 3 - 12 |
| Gravel | Coarse | 3/4 - 3 |
| | Fine | 1/5 - 3/4 |
| Sand | Coarse | 1/16 - 1/5 |
| | Medium | 1/64 - 1/16 |
| | Fine | 1/300 - 1/64 |
| Silt and Clay | | Less than 1/300 |

SW-87

ENGINEERING SERVICES

MATERIALS AND GEOTECHNICAL SERVICES
PREPARED BY: F. Nguyen

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. SW 1831
POST MILE 33.4/37.1

# SOUND WALL NO. 1831
# LOG OF TEST BORINGS 3 OF 3

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851
CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 04-17-12 07-10-12

SHEET X OF X

FILE => 71170urp015.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 806 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

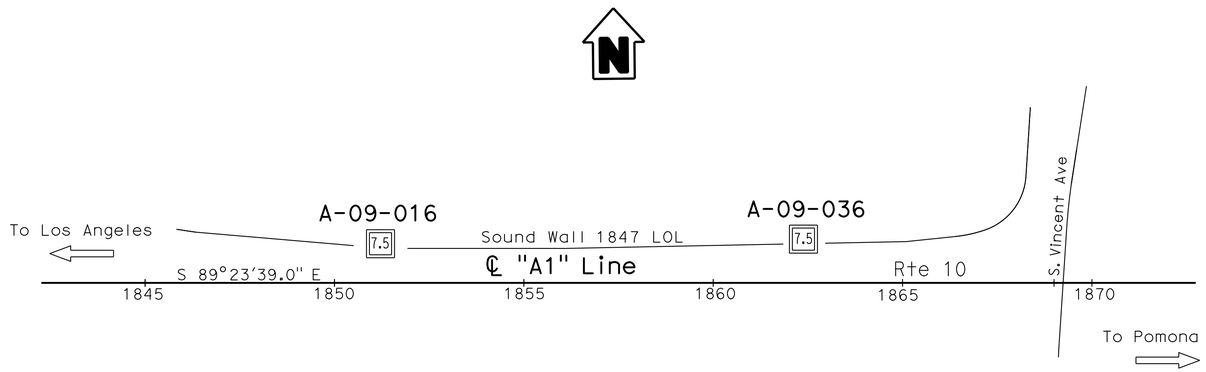
## BENCH MARK

BM #11-B-43 Elev 346.47′
Lead and conc nail in sidewalk of Auto Ct. cabin #825 on N. side Gavey Ave 200′± of Puente Ave, 71′ Lt Sta 181+30.5.

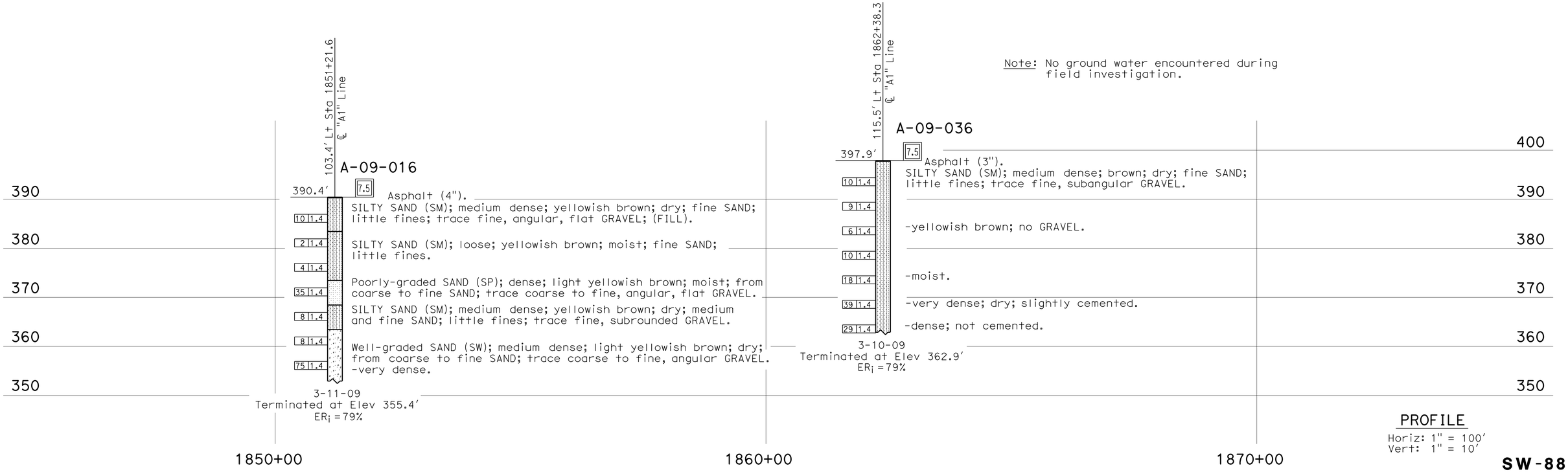
BM #12-B-43 Elev 352.54′
Lead and conc nail in W. end of p.c.c. porch step to frame house on N. side Gavey Ave, 91′ Lt Sta 193+81.

TBM Elev 341.93′
Chiseled knob on PCC wall, 33.4′ Rt Sta 168+35.

Vertical Datum: NAVD88




PLAN
1″ = 200′




Note: No ground water encountered during field investigation.

PROFILE
Horiz: 1″ = 100′
Vert: 1″ = 10′

SW-88

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1847 POST MILE 33.4/37.1 | SOUND WALL NO. 1847 LOG OF TEST BORINGS 1 OF 3 |
|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR NAME: D. Jang | DRAWN BY: C. Christian, I.G-Remmen CHECKED BY: S. Han | FIELD INVESTIGATION BY: S. Cho | | | |

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

| REVISION DATES | | | | SHEET | OF |
|---|---|---|---|---|---|
| 08-17-11 | 08-26-11 | 10-13-11 | 07-12-12 | X | X |

FILE => 71170urp016.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 807 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

## CEMENTATION

| Description | Criteria |
|---|---|
| Weak | Crumbles or breaks with handling or little finger pressure. |
| Moderate | Crumbles or breaks with considerable finger pressure. |
| Strong | Will not crumble or break with finger pressure. |

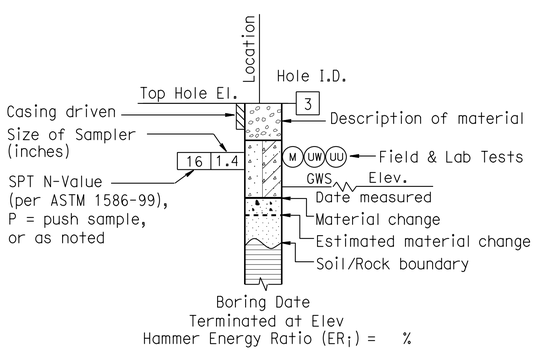
## BOREHOLE IDENTIFICATION

| Symbol | Hole Type | Description |
|---|---|---|
| Size | A | Auger Boring (hollow or solid stem bucket) |
| Size | R | Rotary drilled boring (conventional) |
| | RW | Rotary drilled with self-casing wire-line |
| | RC | Rotary core with continuously-sampled, self-casing wire-line |
| | P | Rotary percussion boring (air) |
| Size | R | Rotary drilled diamond core |
| | RC | Rotary drilled rock core |
| Size | HD | Hand driven (1-inch soil tube) |
| | HA | Hand Auger |
| ● | D | Dynamic Cone Penetration Boring |
| ▲ | CPT | Cone Penetration Test (ASTM D 5778) |
| ⬚ | O | Other (note on LOTB) |

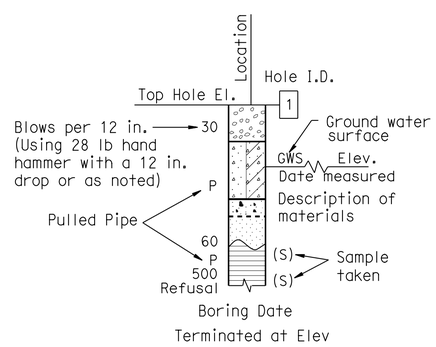
**Note: Size in inches.**

## CONSISTENCY OF COHESIVE SOILS

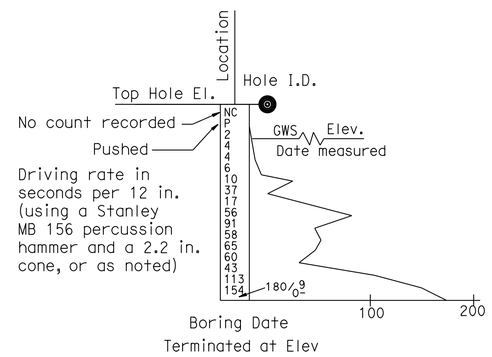
| Description | Shear Strength (tsf) | Pocket Penetrometer Measurement, PP, (tsf) | Torvane Measurement, TV, (tsf) | Vane Shear Measurement, VS, (tsf) |
|---|---|---|---|---|
| Very Soft | Less than 0.12 | Less than 0.25 | Less than 0.12 | Less than 0.12 |
| Soft | 0.12 - 0.25 | 0.25 - 0.5 | 0.12 - 0.25 | 0.12 - 0.25 |
| Medium Stiff | 0.25 - 0.5 | 0.5 - 1 | 0.25 - 0.5 | 0.25 - 0.5 |
| Stiff | 0.5 - 1 | 1 - 2 | 0.5 - 1 | 0.5 - 1 |
| Very Stiff | 1 - 2 | 2 - 4 | 1 - 2 | 1 - 2 |
| Hard | Greater than 2 | Greater than 4 | Greater than 2 | Greater than 2 |



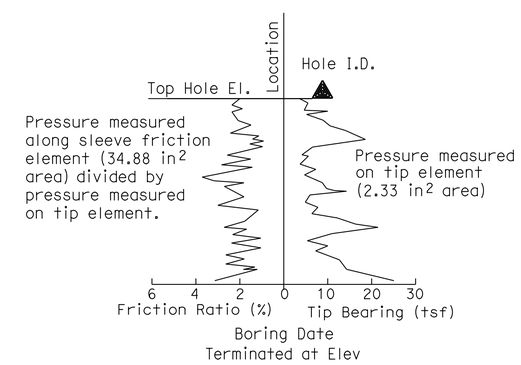

**ROTARY BORING**




**HAND BORING**




**DYNAMIC CONE PENETRATION BORING**




**CONE PENETRATION TEST (CPT) BORING**

**SW-89**

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1847 POST MILE 33.4/37.1 | SOUND WALL NO. 1847 LOG OF TEST BORINGS 2 OF 3 |
|---|---|---|---|---|---|
| | PREPARED BY: F. Nguyen | | | | |

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

| REVISION DATES | | | | SHEET | OF |
|---|---|---|---|---|---|
| 10-13-11 | | | | X | X |

FILE => 71170urp017.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 808 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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## GROUP SYMBOLS AND NAMES

| Graphic/Symbol | Group Names |
|---|---|
| GW | Well-graded GRAVEL<br>Well-graded GRAVEL with SAND |
| GP | Poorly-graded GRAVEL<br>Poorly-graded GRAVEL with SAND |
| GW-GM | Well-graded GRAVEL with SILT<br>Well-graded GRAVEL with SILT and SAND |
| GW-GC | Well-graded GRAVEL with CLAY (or SILTY CLAY)<br>Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) |
| GP-GM | Poorly-graded GRAVEL with SILT<br>Poorly-graded GRAVEL with SILT and SAND |
| GP-GC | Poorly-graded GRAVEL with CLAY (or SILTY CLAY)<br>Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) |
| GM | SILTY GRAVEL<br>SILTY GRAVEL with SAND |
| GC | CLAYEY GRAVEL<br>CLAYEY GRAVEL with SAND |
| GC-GM | SILTY, CLAYEY GRAVEL<br>SILTY, CLAYEY GRAVEL with SAND |
| SW | Well-graded SAND<br>Well-graded SAND with GRAVEL |
| SP | Poorly-graded SAND<br>Poorly-graded SAND with GRAVEL |
| SW-SM | Well-graded SAND with SILT<br>Well-graded SAND with SILT and GRAVEL |
| SW-SC | Well-graded SAND with CLAY (or SILTY CLAY)<br>Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) |
| SP-SM | Poorly-graded SAND with SILT<br>Poorly-graded SAND with SILT and GRAVEL |
| SP-SC | Poorly-graded SAND with CLAY (or SILTY CLAY)<br>Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) |
| SM | SILTY SAND<br>SILTY SAND with GRAVEL |
| SC | CLAYEY SAND<br>CLAYEY SAND with GRAVEL |
| SC-SM | SILTY, CLAYEY SAND<br>SILTY, CLAYEY SAND with GRAVEL |
| PT | PEAT |
| | COBBLES<br>COBBLES and BOULDERS<br>BOULDERS |

| Graphic/Symbol | Group Names |
|---|---|
| CL | Lean CLAY<br>Lean CLAY with SAND<br>Lean CLAY with GRAVEL<br>SANDY lean CLAY<br>SANDY lean CLAY with GRAVEL<br>GRAVELLY lean CLAY<br>GRAVELLY lean CLAY with SAND |
| CL-ML | SILTY CLAY<br>SILTY CLAY with SAND<br>SILTY CLAY with GRAVEL<br>SANDY SILTY CLAY<br>SANDY SILTY CLAY with GRAVEL<br>GRAVELLY SILTY CLAY<br>GRAVELLY SILTY CLAY with SAND |
| ML | SILT<br>SILT with SAND<br>SILT with GRAVEL<br>SANDY SILT<br>SANDY SILT with GRAVEL<br>GRAVELLY SILT<br>GRAVELLY SILT with SAND |
| OL | ORGANIC lean CLAY<br>ORGANIC lean CLAY with SAND<br>ORGANIC lean CLAY with GRAVEL<br>SANDY ORGANIC lean CLAY<br>SANDY ORGANIC lean CLAY with GRAVEL<br>GRAVELLY ORGANIC lean CLAY<br>GRAVELLY ORGANIC lean CLAY with SAND |
| OL | ORGANIC SILT<br>ORGANIC SILT with SAND<br>ORGANIC SILT with GRAVEL<br>SANDY ORGANIC SILT<br>SANDY ORGANIC SILT with GRAVEL<br>GRAVELLY ORGANIC SILT<br>GRAVELLY ORGANIC SILT with SAND |
| CH | Fat CLAY<br>Fat CLAY with SAND<br>Fat CLAY with GRAVEL<br>SANDY fat CLAY<br>SANDY fat CLAY with GRAVEL<br>GRAVELLY fat CLAY<br>GRAVELLY fat CLAY with SAND |
| MH | Elastic SILT<br>Elastic SILT with SAND<br>Elastic SILT with GRAVEL<br>SANDY elastic SILT<br>SANDY elastic SILT with GRAVEL<br>GRAVELLY elastic SILT<br>GRAVELLY elastic SILT with SAND |
| OH | ORGANIC fat CLAY<br>ORGANIC fat CLAY with SAND<br>ORGANIC fat CLAY with GRAVEL<br>SANDY ORGANIC fat CLAY<br>SANDY ORGANIC fat CLAY with GRAVEL<br>GRAVELLY ORGANIC fat CLAY<br>GRAVELLY ORGANIC fat CLAY with SAND |
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| OL/OH | ORGANIC SOIL<br>ORGANIC SOIL with SAND<br>ORGANIC SOIL with GRAVEL<br>SANDY ORGANIC SOIL<br>SANDY ORGANIC SOIL with GRAVEL<br>GRAVELLY ORGANIC SOIL<br>GRAVELLY ORGANIC SOIL with SAND |

## FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
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## PARTICLE SIZE

| Description | | Size (in.) |
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| Cobble | | 3 - 12 |
| Gravel | Coarse | 3/4 - 3 |
| | Fine | 1/5 - 3/4 |
| Sand | Coarse | 1/16 - 1/5 |
| | Medium | 1/64 - 1/16 |
| | Fine | 1/300 - 1/64 |
| Silt and Clay | | Less than 1/300 |

SW-90

ENGINEERING SERVICES

GEOTECHNICAL SERVICES

PREPARED BY: F. Nguyen

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X

BRIDGE NO. SW 1847

POST MILE 33.4/37.1

# SOUND WALL NO. 1847

# LOG OF TEST BORINGS 3 OF 3

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851
CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 10-13-11 | SHEET X | OF X

FILE => 71170urp018.dgn

USERNAME => s12614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 809 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

## BENCH MARK

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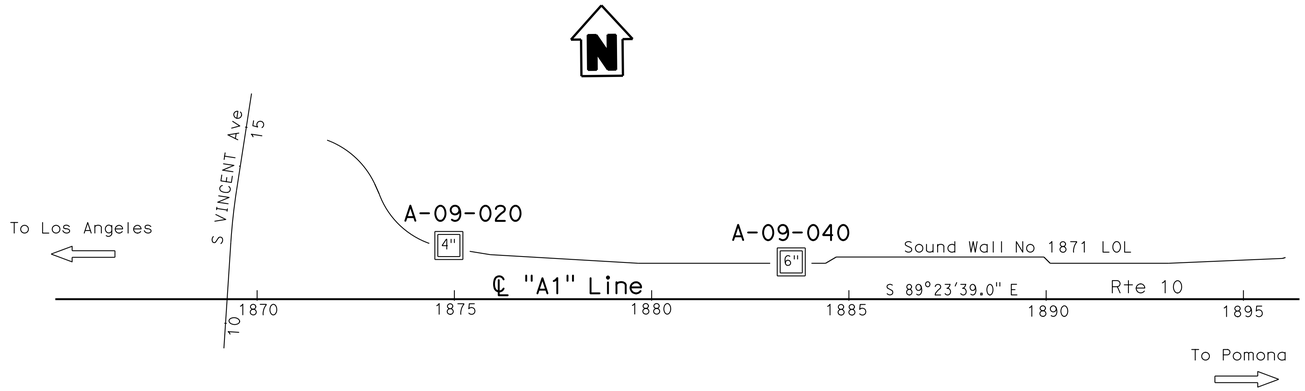
Lead and conc nail in sidewalk of Auto Ct. cabin #825 on N. side Gavey Ave 200′± of Puente Ave, 71′ Lt Sta 181+30.5.

BM #12-B-43 Elev 352.54′
Lead and conc nail in W. end of p.c.c. porch step to frame house on N. side Gavey Ave, 91′ Lt Sta 193+81.

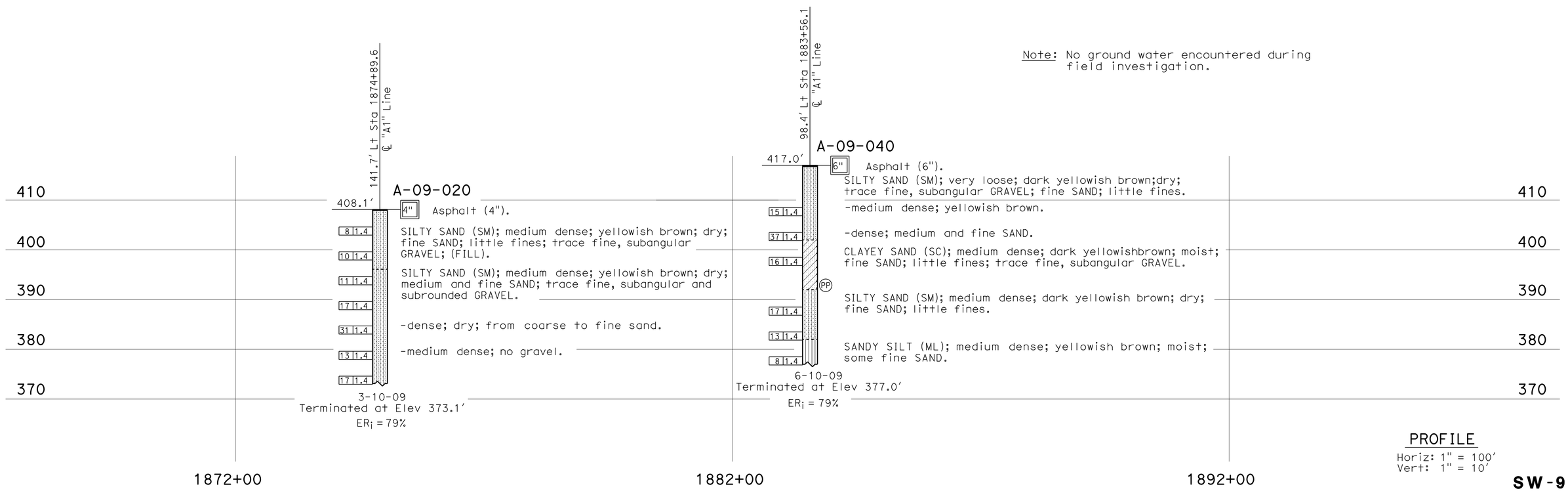
TBM Elev 341.93′
Chiseled knob on PCC wall, 33.4′ Rt Sta 168+35.

Vertical Datum: NAVD88




PLAN
1" = 200′

Note: No ground water encountered during field investigation.




PROFILE
Horiz: 1" = 100′
Vert: 1" = 10′

SW-91

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1871 / POST MILE 33.4/37.1 | SOUND WALL NO. 1871 LOG OF TEST BORINGS 1 OF 3 |
|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR NAME: D. Jang | DRAWN BY: C. Christian, I.G-Remmen / CHECKED BY: S. Han | FIELD INVESTIGATION BY: S. Cho | | | |

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 08-17-11 08-22-11 10-13-11 07-12-12 SHEET X OF X

FILE => 71170urp019.dgn

USERNAME => s12614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 810 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

## CEMENTATION

| Description | Criteria |
|---|---|
| Weak | Crumbles or breaks with handling or little finger pressure. |
| Moderate | Crumbles or breaks with considerable finger pressure. |
| Strong | Will not crumble or break with finger pressure. |

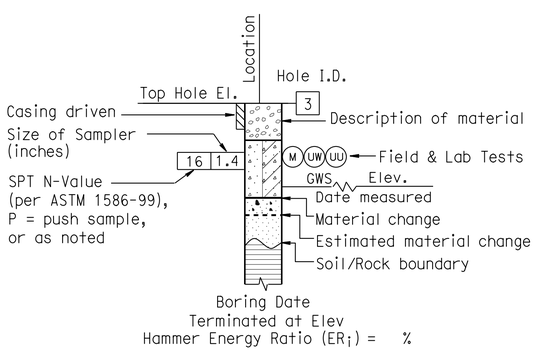
## BOREHOLE IDENTIFICATION

| Symbol | Hole Type | Description |
|---|---|---|
| Size | A | Auger Boring (hollow or solid stem bucket) |
| Size | R | Rotary drilled boring (conventional) |
| | RW | Rotary drilled with self-casing wire-line |
| | RC | Rotary core with continuously-sampled, self-casing wire-line |
| | P | Rotary percussion boring (air) |
| Size | R | Rotary drilled diamond core |
| | RC | Rotary drilled rock core |
| Size | HD | Hand driven (1-inch soil tube) |
| | HA | Hand Auger |
| ● | D | Dynamic Cone Penetration Boring |
| ▲ | CPT | Cone Penetration Test (ASTM D 5778) |
| ⬚ | O | Other (note on LOTB) |

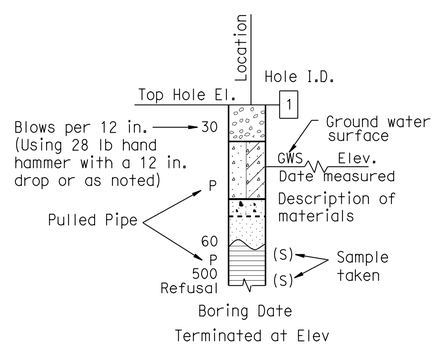
**Note: Size in inches.**

## CONSISTENCY OF COHESIVE SOILS

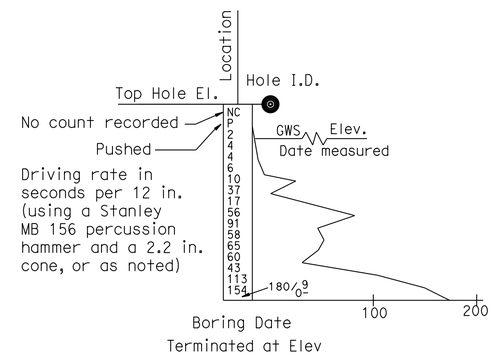
| Description | Shear Strength (tsf) | Pocket Penetrometer Measurement, PP, (tsf) | Torvane Measurement, TV, (tsf) | Vane Shear Measurement, VS, (tsf) |
|---|---|---|---|---|
| Very Soft | Less than 0.12 | Less than 0.25 | Less than 0.12 | Less than 0.12 |
| Soft | 0.12 - 0.25 | 0.25 - 0.5 | 0.12 - 0.25 | 0.12 - 0.25 |
| Medium Stiff | 0.25 - 0.5 | 0.5 - 1 | 0.25 - 0.5 | 0.25 - 0.5 |
| Stiff | 0.5 - 1 | 1 - 2 | 0.5 - 1 | 0.5 - 1 |
| Very Stiff | 1 - 2 | 2 - 4 | 1 - 2 | 1 - 2 |
| Hard | Greater than 2 | Greater than 4 | Greater than 2 | Greater than 2 |



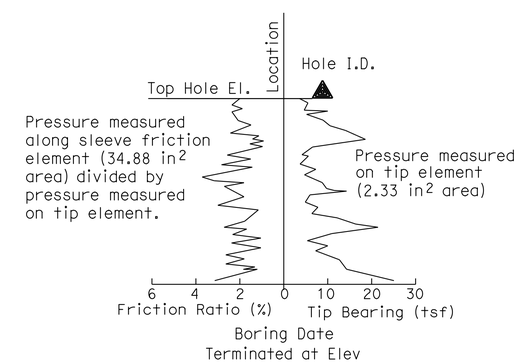

**ROTARY BORING**




**HAND BORING**




**DYNAMIC CONE PENETRATION BORING**




**CONE PENETRATION TEST (CPT) BORING**

**SW-92**

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1871 / POST MILE 33.4/37.1 | SOUND WALL NO. 1871 LOG OF TEST BORINGS 2 OF 3 |
|---|---|---|---|---|---|
| | PREPARED BY: I.G-Remmen | | | | |

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 10-13-11 | SHEET X | OF X

FILE => 71170urp020.dgn

USERNAME => s12614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 811 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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## GROUP SYMBOLS AND NAMES

| Graphic/Symbol | Group Names |
|---|---|
| GW | Well-graded GRAVEL<br>Well-graded GRAVEL with SAND |
| GP | Poorly-graded GRAVEL<br>Poorly-graded GRAVEL with SAND |
| GW-GM | Well-graded GRAVEL with SILT<br>Well-graded GRAVEL with SILT and SAND |
| GW-GC | Well-graded GRAVEL with CLAY (or SILTY CLAY)<br>Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) |
| GP-GM | Poorly-graded GRAVEL with SILT<br>Poorly-graded GRAVEL with SILT and SAND |
| GP-GC | Poorly-graded GRAVEL with CLAY (or SILTY CLAY)<br>Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) |
| GM | SILTY GRAVEL<br>SILTY GRAVEL with SAND |
| GC | CLAYEY GRAVEL<br>CLAYEY GRAVEL with SAND |
| GC-GM | SILTY, CLAYEY GRAVEL<br>SILTY, CLAYEY GRAVEL with SAND |
| SW | Well-graded SAND<br>Well-graded SAND with GRAVEL |
| SP | Poorly-graded SAND<br>Poorly-graded SAND with GRAVEL |
| SW-SM | Well-graded SAND with SILT<br>Well-graded SAND with SILT and GRAVEL |
| SW-SC | Well-graded SAND with CLAY (or SILTY CLAY)<br>Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) |
| SP-SM | Poorly-graded SAND with SILT<br>Poorly-graded SAND with SILT and GRAVEL |
| SP-SC | Poorly-graded SAND with CLAY (or SILTY CLAY)<br>Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) |
| SM | SILTY SAND<br>SILTY SAND with GRAVEL |
| SC | CLAYEY SAND<br>CLAYEY SAND with GRAVEL |
| SC-SM | SILTY, CLAYEY SAND<br>SILTY, CLAYEY SAND with GRAVEL |
| PT | PEAT |
| | COBBLES<br>COBBLES and BOULDERS<br>BOULDERS |

| Graphic/Symbol | Group Names |
|---|---|
| CL | Lean CLAY<br>Lean CLAY with SAND<br>Lean CLAY with GRAVEL<br>SANDY lean CLAY<br>SANDY lean CLAY with GRAVEL<br>GRAVELLY lean CLAY<br>GRAVELLY lean CLAY with SAND |
| CL-ML | SILTY CLAY<br>SILTY CLAY with SAND<br>SILTY CLAY with GRAVEL<br>SANDY SILTY CLAY<br>SANDY SILTY CLAY with GRAVEL<br>GRAVELLY SILTY CLAY<br>GRAVELLY SILTY CLAY with SAND |
| ML | SILT<br>SILT with SAND<br>SILT with GRAVEL<br>SANDY SILT<br>SANDY SILT with GRAVEL<br>GRAVELLY SILT<br>GRAVELLY SILT with SAND |
| OL | ORGANIC lean CLAY<br>ORGANIC lean CLAY with SAND<br>ORGANIC lean CLAY with GRAVEL<br>SANDY ORGANIC lean CLAY<br>SANDY ORGANIC lean CLAY with GRAVEL<br>GRAVELLY ORGANIC lean CLAY<br>GRAVELLY ORGANIC lean CLAY with SAND |
| OL | ORGANIC SILT<br>ORGANIC SILT with SAND<br>ORGANIC SILT with GRAVEL<br>SANDY ORGANIC SILT<br>SANDY ORGANIC SILT with GRAVEL<br>GRAVELLY ORGANIC SILT<br>GRAVELLY ORGANIC SILT with SAND |
| CH | Fat CLAY<br>Fat CLAY with SAND<br>Fat CLAY with GRAVEL<br>SANDY fat CLAY<br>SANDY fat CLAY with GRAVEL<br>GRAVELLY fat CLAY<br>GRAVELLY fat CLAY with SAND |
| MH | Elastic SILT<br>Elastic SILT with SAND<br>Elastic SILT with GRAVEL<br>SANDY elastic SILT<br>SANDY elastic SILT with GRAVEL<br>GRAVELLY elastic SILT<br>GRAVELLY elastic SILT with SAND |
| OH | ORGANIC fat CLAY<br>ORGANIC fat CLAY with SAND<br>ORGANIC fat CLAY with GRAVEL<br>SANDY ORGANIC fat CLAY<br>SANDY ORGANIC fat CLAY with GRAVEL<br>GRAVELLY ORGANIC fat CLAY<br>GRAVELLY ORGANIC fat CLAY with SAND |
| OH | ORGANIC elastic SILT<br>ORGANIC elastic SILT with SAND<br>ORGANIC elastic SILT with GRAVEL<br>SANDY ORGANIC elastic SILT<br>SANDY ORGANIC elastic SILT with GRAVEL<br>GRAVELLY ORGANIC elastic SILT<br>GRAVELLY ORGANIC elastic SILT with SAND |
| OL/OH | ORGANIC SOIL<br>ORGANIC SOIL with SAND<br>ORGANIC SOIL with GRAVEL<br>SANDY ORGANIC SOIL<br>SANDY ORGANIC SOIL with GRAVEL<br>GRAVELLY ORGANIC SOIL<br>GRAVELLY ORGANIC SOIL with SAND |

## FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

## APPARENT DENSITY OF COHESIONLESS SOILS

| Description | SPT $N_{60}$ (Blows / 12 in.) |
|---|---|
| Very Loose | 0 - 5 |
| Loose | 5 - 10 |
| Medium Dense | 10 - 30 |
| Dense | 30 - 50 |
| Very Dense | Greater than 50 |

## MOISTURE

| Description | Criteria |
|---|---|
| Dry | No discernable moisture |
| Moist | Moisture present, but no free water |
| Wet | Visible free water |

## PERCENT OR PROPORTION OF SOILS

| Description | Criteria |
|---|---|
| Trace | Particles are present but estimated to be less than 5% |
| Few | 5% - 10% |
| Little | 15% - 25% |
| Some | 30% - 45% |
| Mostly | 50% - 100% |

## PARTICLE SIZE

| Description | | Size (in.) |
|---|---|---|
| Boulder | | Greater than 12 |
| Cobble | | 3 - 12 |
| Gravel | Coarse | 3/4 - 3 |
| | Fine | 1/5 - 3/4 |
| Sand | Coarse | 1/16 - 1/5 |
| | Medium | 1/64 - 1/16 |
| | Fine | 1/300 - 1/64 |
| Silt and Clay | | Less than 1/300 |

SW-93

ENGINEERING SERVICES

GEOTECHNICAL SERVICES

PREPARED BY: I.G-Remmen

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X

BRIDGE NO. SW 1871

POST MILE 33.4/37.1

# SOUND WALL NO. 1871

# LOG OF TEST BORINGS 3 OF 3

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851
CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 10-13-11 SHEET X OF X

FILE => 71170urp021.dgn

USERNAME => s126614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 812 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

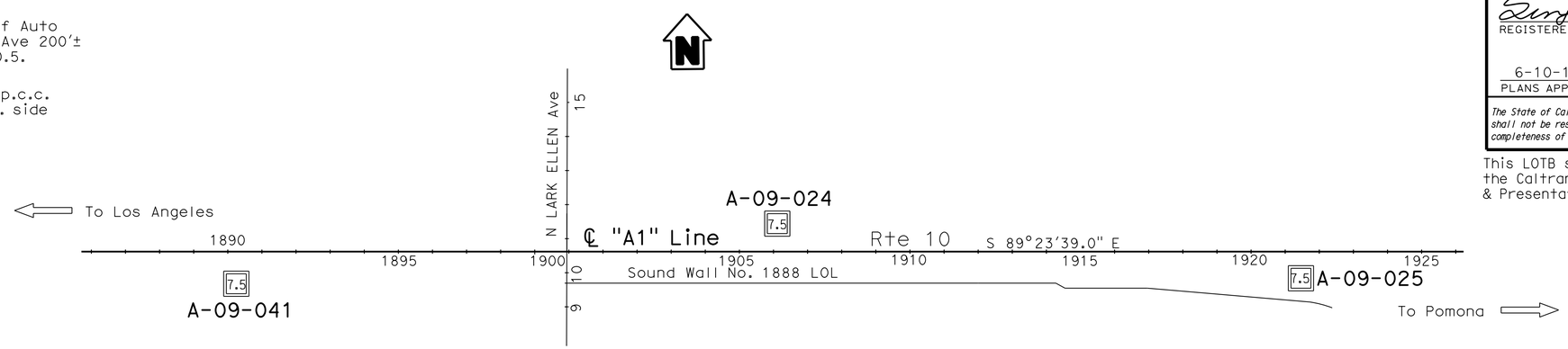
## BENCH MARK

BM #11-B-43 Elev 346.47′
Lead and conc nail in sidewalk of Auto Ct. cabin #825 on N. side Gavey Ave 200′± of Puente Ave, 71′ Lt Sta 181+30.5.

BM #12-B-43 Elev 352.54′
Lead and conc nail in W. end of p.c.c. porch step to frame house on N. side Gavey Ave, 91′ Lt Sta 193+81.

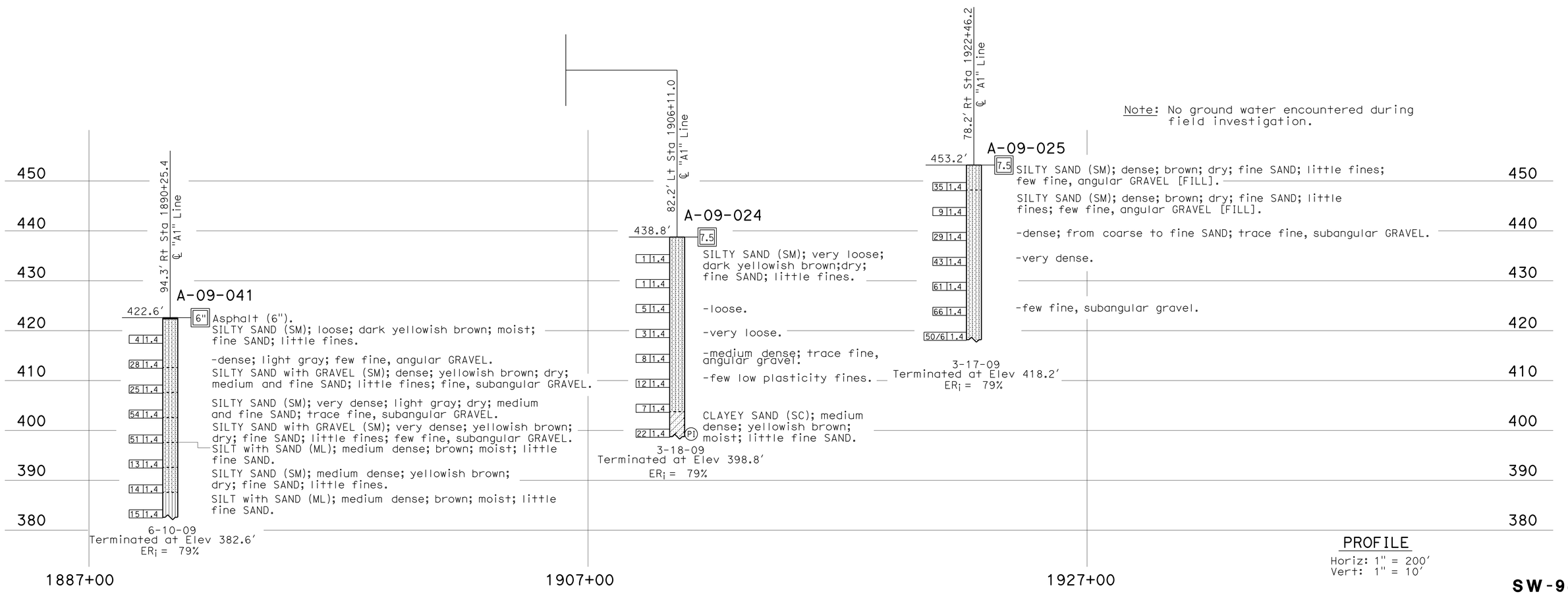
TBM Elev 341.93′
Chiseled knob on PCC wall, 33.4′ Rt Sta 168+35.

Vertical Datum: NAVD88




PLAN
1″ = 200′

Note: No ground water encountered during field investigation.




PROFILE
Horiz: 1″ = 200′
Vert: 1″ = 10′

SW-94

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1888 POST MILE 33.4/37.1 | SOUND WALL NO. 1888 LOG OF TEST BORINGS 1 OF 3 |
|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR NAME: D. Jang | DRAWN BY: F. Nguyen CHECKED BY: S. Han | FIELD INVESTIGATION BY: S. Cho | | | |

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

| REVISION DATES | | | | SHEET | OF |
|---|---|---|---|---|---|
| 08-17-11 | | 07-11-12 | 05-28-13 | X | X |

FILE => 71170urp022.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 813 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA

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## CEMENTATION

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| Size | HD<br>HA | Hand driven (1-inch soil tube)<br>Hand Auger |
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| ▲ | CPT | Cone Penetration Test (ASTM D 5778) |
| ⬚ | O | Other (note on LOTB) |

**Note: Size in inches.**

## CONSISTENCY OF COHESIVE SOILS

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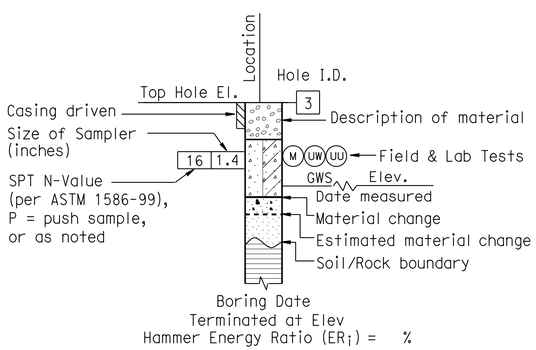
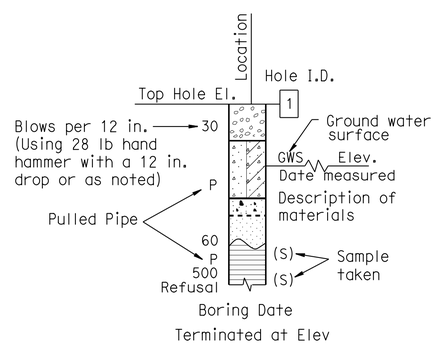
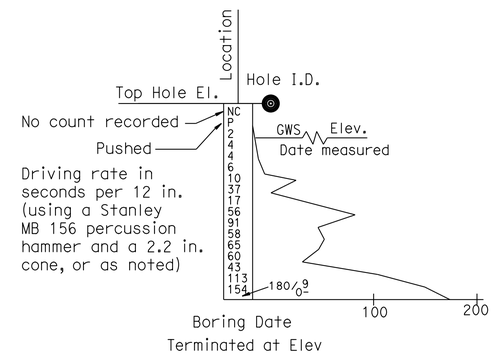
| Soft | 0.12 - 0.25 | 0.25 - 0.5 | 0.12 - 0.25 | 0.12 - 0.25 |
| Medium Stiff | 0.25 - 0.5 | 0.5 - 1 | 0.25 - 0.5 | 0.25 - 0.5 |
| Stiff | 0.5 - 1 | 1 - 2 | 0.5 - 1 | 0.5 - 1 |
| Very Stiff | 1 - 2 | 2 - 4 | 1 - 2 | 1 - 2 |
| Hard | Greater than 2 | Greater than 4 | Greater than 2 | Greater than 2 |



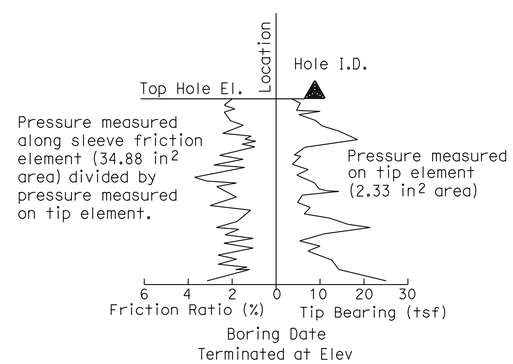

**ROTARY BORING**




**HAND BORING**




**DYNAMIC CONE PENETRATION BORING**




**CONE PENETRATION TEST (CPT) BORING**

SW-95

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1888 / POST MILE 33.4/37.1 | SOUND WALL NO. 1888 LOG OF TEST BORINGS 2 OF 3 |
|---|---|---|---|---|---|
| | PREPARED BY: F. nguyen | | | | |

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-10-12 SHEET X OF X

FILE => 71170urp023.dgn

USERNAME => s12614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
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| 07 | LA | 10 | 33.2/37.2 | 814 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA

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| SM | SILTY SAND<br>SILTY SAND with GRAVEL |
| SC | CLAYEY SAND<br>CLAYEY SAND with GRAVEL |
| SC-SM | SILTY, CLAYEY SAND<br>SILTY, CLAYEY SAND with GRAVEL |
| PT | PEAT |
| | COBBLES<br>COBBLES and BOULDERS<br>BOULDERS |

| Graphic/Symbol | Group Names |
|---|---|
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| CL-ML | SILTY CLAY<br>SILTY CLAY with SAND<br>SILTY CLAY with GRAVEL<br>SANDY SILTY CLAY<br>SANDY SILTY CLAY with GRAVEL<br>GRAVELLY SILTY CLAY<br>GRAVELLY SILTY CLAY with SAND |
| ML | SILT<br>SILT with SAND<br>SILT with GRAVEL<br>SANDY SILT<br>SANDY SILT with GRAVEL<br>GRAVELLY SILT<br>GRAVELLY SILT with SAND |
| OL | ORGANIC lean CLAY<br>ORGANIC lean CLAY with SAND<br>ORGANIC lean CLAY with GRAVEL<br>SANDY ORGANIC lean CLAY<br>SANDY ORGANIC lean CLAY with GRAVEL<br>GRAVELLY ORGANIC lean CLAY<br>GRAVELLY ORGANIC lean CLAY with SAND |
| OL | ORGANIC SILT<br>ORGANIC SILT with SAND<br>ORGANIC SILT with GRAVEL<br>SANDY ORGANIC SILT<br>SANDY ORGANIC SILT with GRAVEL<br>GRAVELLY ORGANIC SILT<br>GRAVELLY ORGANIC SILT with SAND |
| CH | Fat CLAY<br>Fat CLAY with SAND<br>Fat CLAY with GRAVEL<br>SANDY fat CLAY<br>SANDY fat CLAY with GRAVEL<br>GRAVELLY fat CLAY<br>GRAVELLY fat CLAY with SAND |
| MH | Elastic SILT<br>Elastic SILT with SAND<br>Elastic SILT with GRAVEL<br>SANDY elastic SILT<br>SANDY elastic SILT with GRAVEL<br>GRAVELLY elastic SILT<br>GRAVELLY elastic SILT with SAND |
| OH | ORGANIC fat CLAY<br>ORGANIC fat CLAY with SAND<br>ORGANIC fat CLAY with GRAVEL<br>SANDY ORGANIC fat CLAY<br>SANDY ORGANIC fat CLAY with GRAVEL<br>GRAVELLY ORGANIC fat CLAY<br>GRAVELLY ORGANIC fat CLAY with SAND |
| OH | ORGANIC elastic SILT<br>ORGANIC elastic SILT with SAND<br>ORGANIC elastic SILT with GRAVEL<br>SANDY ORGANIC elastic SILT<br>SANDY ORGANIC elastic SILT with GRAVEL<br>GRAVELLY ORGANIC elastic SILT<br>GRAVELLY ORGANIC elastic SILT with SAND |
| OL/OH | ORGANIC SOIL<br>ORGANIC SOIL with SAND<br>ORGANIC SOIL with GRAVEL<br>SANDY ORGANIC SOIL<br>SANDY ORGANIC SOIL with GRAVEL<br>GRAVELLY ORGANIC SOIL<br>GRAVELLY ORGANIC SOIL with SAND |

## FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

## APPARENT DENSITY OF COHESIONLESS SOILS

| Description | SPT $N_{60}$ (Blows / 12 in.) |
|---|---|
| Very Loose | 0 - 5 |
| Loose | 5 - 10 |
| Medium Dense | 10 - 30 |
| Dense | 30 - 50 |
| Very Dense | Greater than 50 |

## MOISTURE

| Description | Criteria |
|---|---|
| Dry | No discernable moisture |
| Moist | Moisture present, but no free water |
| Wet | Visible free water |

## PERCENT OR PROPORTION OF SOILS

| Description | Criteria |
|---|---|
| Trace | Particles are present but estimated to be less than 5% |
| Few | 5% - 10% |
| Little | 15% - 25% |
| Some | 30% - 45% |
| Mostly | 50% - 100% |

## PARTICLE SIZE

| Description | | Size (in.) |
|---|---|---|
| Boulder | | Greater than 12 |
| Cobble | | 3 - 12 |
| Gravel | Coarse | 3/4 - 3 |
| | Fine | 1/5 - 3/4 |
| Sand | Coarse | 1/16 - 1/5 |
| | Medium | 1/64 - 1/16 |
| | Fine | 1/300 - 1/64 |
| Silt and Clay | | Less than 1/300 |

SW-96

ENGINEERING SERVICES

GEOTECHNICAL SERVICES
PREPARED BY: F. nguyen

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. SW 1888
POST MILE 33.4/37.1

# SOUND WALL NO. 1888
# LOG OF TEST BORINGS 3 OF 3

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851
CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-10-12 | SHEET X | OF X

FILE => 71170urp024.dgn

USERNAME => s126614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 815 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

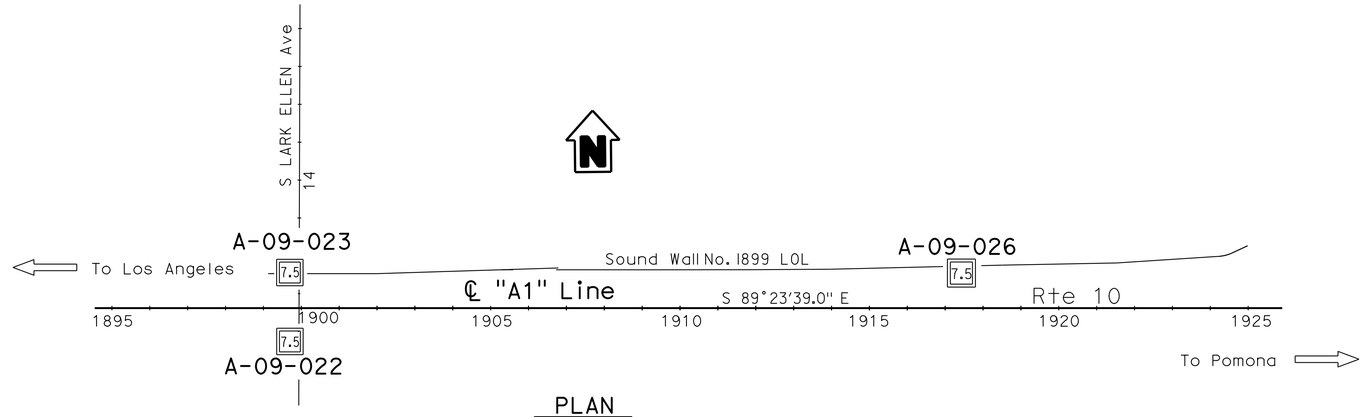
## BENCH MARK

BM #11-B-43 Elev 346.47′
Lead and conc nail in sidewalk of Auto Ct. cabin #825 on N. side Gavey Ave 200′± of Puente Ave, 71′ Lt Sta 181+30.5.

BM #12-B-43 Elev 352.54′
Lead and conc nail in W. end of p.c.c. porch step to frame house on N. side Gavey Ave, 91′ Lt Sta 193+81.

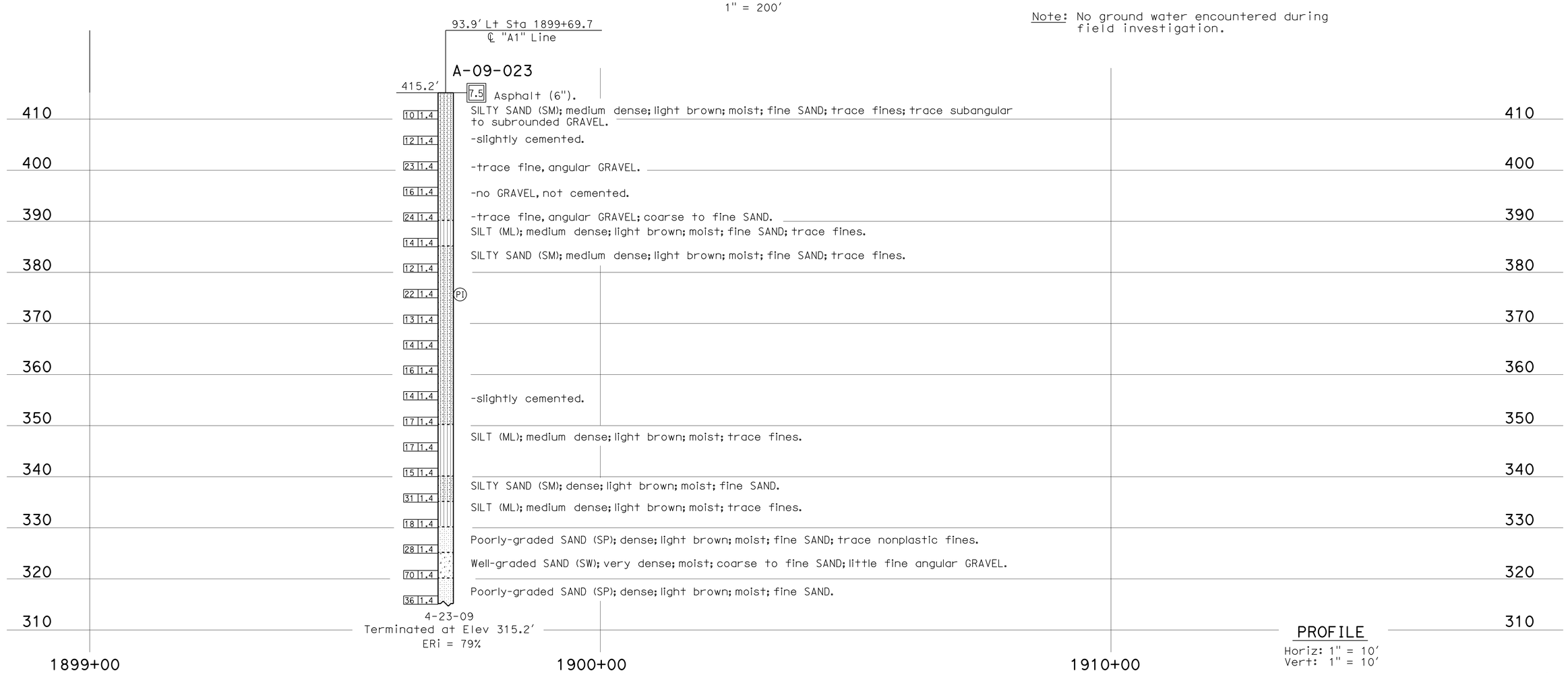
TBM Elev 341.93′
Chiseled knob on PCC wall, 33.4′ Rt Sta 168+35.

Vertical Datum: NAVD88




PLAN
1" = 200′

Note: No ground water encountered during field investigation.




PROFILE
Horiz: 1" = 10′
Vert: 1" = 10′

SW-97

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1899 POST MILE 33.4/37.1 | SOUND WALL NO. 1899 LOG OF TEST BORINGS 1 OF 4 |
|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR NAME: D. Jang | DRAWN BY: F. Nguyen CHECKED BY: S. Han | FIELD INVESTIGATION BY: S. Cho | | | |

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES 05-16-12 07-11-12 SHEET X OF X

FILE => 71170urp025.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 816 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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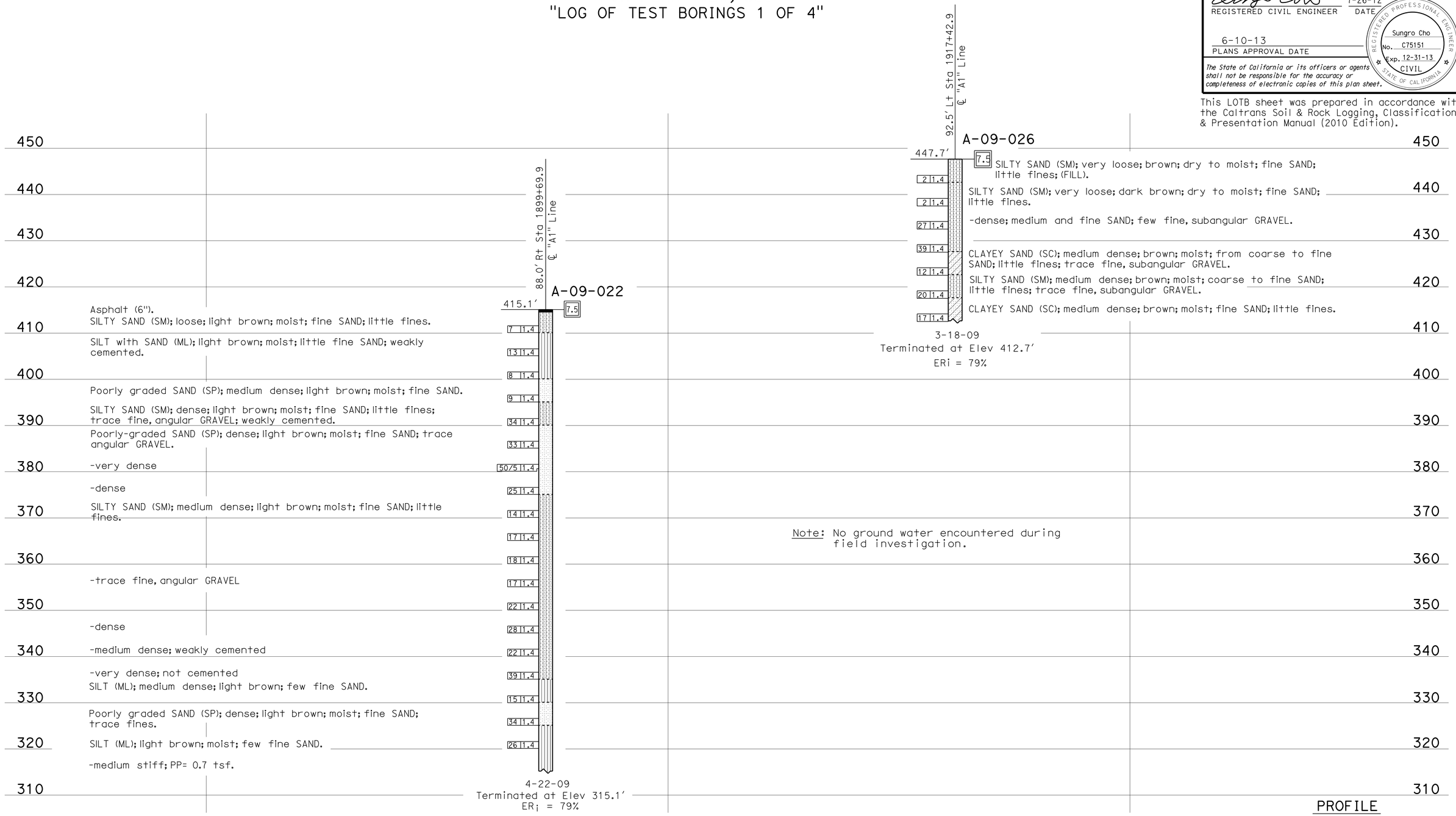
This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 4"




PROFILE
Horiz: 1" = 200'
Vert: 1" = 10'

**SW-98**

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1899 / POST MILE 33.4/37.1 | SOUND WALL NO. 1899 |
|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR NAME: D. Jang | DRAWN BY: F. Nguyen / CHECKED BY: S. Han | FIELD INVESTIGATION BY: S. Cho | | | LOG OF TEST BORINGS 2 OF 4 |

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES 05-18-12 07-11-12 SHEET X OF X

FILE => 71170urp026.dgn

USERNAME => s126614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 817 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA

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REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

## CEMENTATION

| Description | Criteria |
|---|---|
| Weak | Crumbles or breaks with handling or little finger pressure. |
| Moderate | Crumbles or breaks with considerable finger pressure. |
| Strong | Will not crumble or break with finger pressure. |

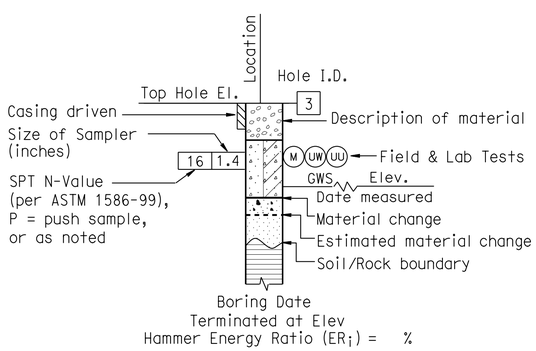
## BOREHOLE IDENTIFICATION

| Symbol | Hole Type | Description |
|---|---|---|
| Size | A | Auger Boring (hollow or solid stem bucket) |
| Size | R | Rotary drilled boring (conventional) |
| | RW | Rotary drilled with self-casing wire-line |
| | RC | Rotary core with continuously-sampled, self-casing wire-line |
| | P | Rotary percussion boring (air) |
| Size | R | Rotary drilled diamond core |
| | RC | Rotary drilled rock core |
| Size | HD | Hand driven (1-inch soil tube) |
| | HA | Hand Auger |
| ● | D | Dynamic Cone Penetration Boring |
| ▲ | CPT | Cone Penetration Test (ASTM D 5778) |
| ⬚ | O | Other (note on LOTB) |

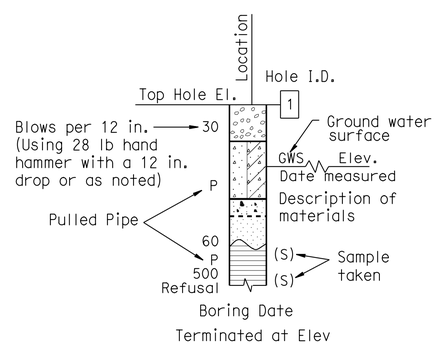
**Note: Size in inches.**

## CONSISTENCY OF COHESIVE SOILS

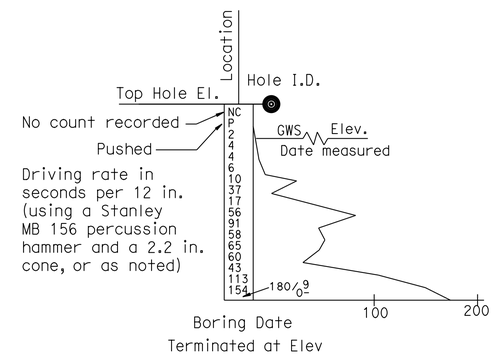
| Description | Shear Strength (tsf) | Pocket Penetrometer Measurement, PP, (tsf) | Torvane Measurement, TV, (tsf) | Vane Shear Measurement, VS, (tsf) |
|---|---|---|---|---|
| Very Soft | Less than 0.12 | Less than 0.25 | Less than 0.12 | Less than 0.12 |
| Soft | 0.12 - 0.25 | 0.25 - 0.5 | 0.12 - 0.25 | 0.12 - 0.25 |
| Medium Stiff | 0.25 - 0.5 | 0.5 - 1 | 0.25 - 0.5 | 0.25 - 0.5 |
| Stiff | 0.5 - 1 | 1 - 2 | 0.5 - 1 | 0.5 - 1 |
| Very Stiff | 1 - 2 | 2 - 4 | 1 - 2 | 1 - 2 |
| Hard | Greater than 2 | Greater than 4 | Greater than 2 | Greater than 2 |



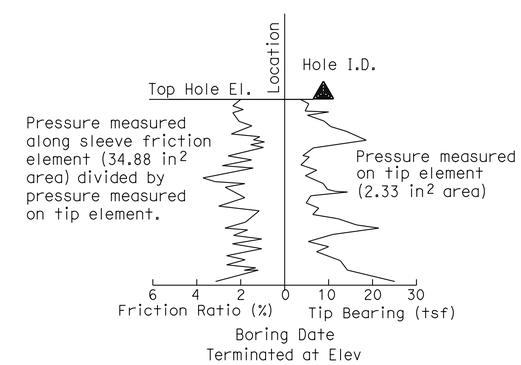

**ROTARY BORING**




**HAND BORING**




**DYNAMIC CONE PENETRATION BORING**




**CONE PENETRATION TEST (CPT) BORING**

**SW-99**

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1899 POST MILE 33.4/37.1 | SOUND WALL NO. 1899 LOG OF TEST BORINGS 3 OF 4 |
|---|---|---|---|---|---|
| | PREPARED BY: F. Nguyen | | | | |

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851
CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-10-12 | SHEET X | OF X

FILE => 71170urp027.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 818 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA

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## GROUP SYMBOLS AND NAMES

| Graphic/Symbol | Group Names |
|---|---|
| GW | Well-graded GRAVEL<br>Well-graded GRAVEL with SAND |
| GP | Poorly-graded GRAVEL<br>Poorly-graded GRAVEL with SAND |
| GW-GM | Well-graded GRAVEL with SILT<br>Well-graded GRAVEL with SILT and SAND |
| GW-GC | Well-graded GRAVEL with CLAY (or SILTY CLAY)<br>Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) |
| GP-GM | Poorly-graded GRAVEL with SILT<br>Poorly-graded GRAVEL with SILT and SAND |
| GP-GC | Poorly-graded GRAVEL with CLAY (or SILTY CLAY)<br>Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) |
| GM | SILTY GRAVEL<br>SILTY GRAVEL with SAND |
| GC | CLAYEY GRAVEL<br>CLAYEY GRAVEL with SAND |
| GC-GM | SILTY, CLAYEY GRAVEL<br>SILTY, CLAYEY GRAVEL with SAND |
| SW | Well-graded SAND<br>Well-graded SAND with GRAVEL |
| SP | Poorly-graded SAND<br>Poorly-graded SAND with GRAVEL |
| SW-SM | Well-graded SAND with SILT<br>Well-graded SAND with SILT and GRAVEL |
| SW-SC | Well-graded SAND with CLAY (or SILTY CLAY)<br>Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) |
| SP-SM | Poorly-graded SAND with SILT<br>Poorly-graded SAND with SILT and GRAVEL |
| SP-SC | Poorly-graded SAND with CLAY (or SILTY CLAY)<br>Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) |
| SM | SILTY SAND<br>SILTY SAND with GRAVEL |
| SC | CLAYEY SAND<br>CLAYEY SAND with GRAVEL |
| SC-SM | SILTY, CLAYEY SAND<br>SILTY, CLAYEY SAND with GRAVEL |
| PT | PEAT |
| | COBBLES<br>COBBLES and BOULDERS<br>BOULDERS |

| Graphic/Symbol | Group Names |
|---|---|
| CL | Lean CLAY<br>Lean CLAY with SAND<br>Lean CLAY with GRAVEL<br>SANDY lean CLAY<br>SANDY lean CLAY with GRAVEL<br>GRAVELLY lean CLAY<br>GRAVELLY lean CLAY with SAND |
| CL-ML | SILTY CLAY<br>SILTY CLAY with SAND<br>SILTY CLAY with GRAVEL<br>SANDY SILTY CLAY<br>SANDY SILTY CLAY with GRAVEL<br>GRAVELLY SILTY CLAY<br>GRAVELLY SILTY CLAY with SAND |
| ML | SILT<br>SILT with SAND<br>SILT with GRAVEL<br>SANDY SILT<br>SANDY SILT with GRAVEL<br>GRAVELLY SILT<br>GRAVELLY SILT with SAND |
| OL | ORGANIC lean CLAY<br>ORGANIC lean CLAY with SAND<br>ORGANIC lean CLAY with GRAVEL<br>SANDY ORGANIC lean CLAY<br>SANDY ORGANIC lean CLAY with GRAVEL<br>GRAVELLY ORGANIC lean CLAY<br>GRAVELLY ORGANIC lean CLAY with SAND |
| OL | ORGANIC SILT<br>ORGANIC SILT with SAND<br>ORGANIC SILT with GRAVEL<br>SANDY ORGANIC SILT<br>SANDY ORGANIC SILT with GRAVEL<br>GRAVELLY ORGANIC SILT<br>GRAVELLY ORGANIC SILT with SAND |
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| OH | ORGANIC fat CLAY<br>ORGANIC fat CLAY with SAND<br>ORGANIC fat CLAY with GRAVEL<br>SANDY ORGANIC fat CLAY<br>SANDY ORGANIC fat CLAY with GRAVEL<br>GRAVELLY ORGANIC fat CLAY<br>GRAVELLY ORGANIC fat CLAY with SAND |
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| OL/OH | ORGANIC SOIL<br>ORGANIC SOIL with SAND<br>ORGANIC SOIL with GRAVEL<br>SANDY ORGANIC SOIL<br>SANDY ORGANIC SOIL with GRAVEL<br>GRAVELLY ORGANIC SOIL<br>GRAVELLY ORGANIC SOIL with SAND |

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- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
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- (SG) Specific Gravity (AASHTO T 100)
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- (SW) Swell Potential (ASTM D 4546)
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| Trace | Particles are present but estimated to be less than 5% |
| Few | 5% - 10% |
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| Mostly | 50% - 100% |

## PARTICLE SIZE

| Description | | Size (in.) |
|---|---|---|
| Boulder | | Greater than 12 |
| Cobble | | 3 - 12 |
| Gravel | Coarse | 3/4 - 3 |
| | Fine | 1/5 - 3/4 |
| Sand | Coarse | 1/16 - 1/5 |
| | Medium | 1/64 - 1/16 |
| | Fine | 1/300 - 1/64 |
| Silt and Clay | | Less than 1/300 |

SW-100

ENGINEERING SERVICES

GEOTECHNICAL SERVICES
PREPARED BY: F. Nguyen

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. SW 1899
POST MILE 33.4/37.1

SOUND WALL NO. 1899
LOG OF TEST BORINGS 4 OF 4

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851
CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-10-12 | SHEET X | OF X

FILE => 71170urp028.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 819 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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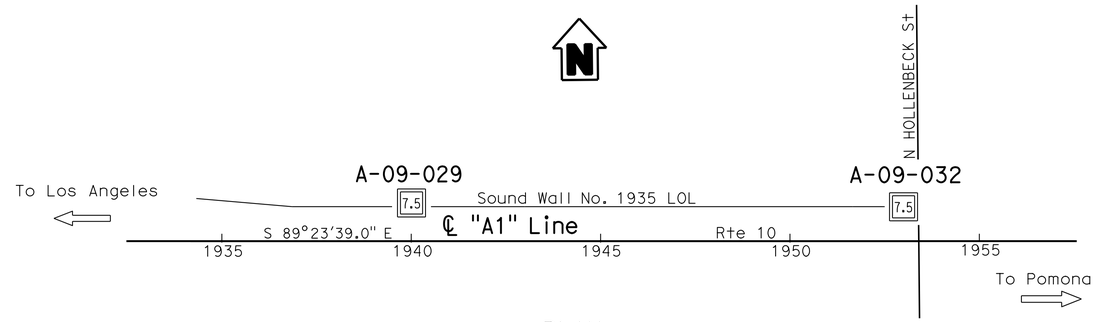
## BENCH MARK

BM #11-B-43 Elev 346.47′
Lead and conc nail in sidewalk of Auto Ct. cabin #825 on N. side Gavey Ave 200′± of Puente Ave, 71′ Lt Sta 181+30.5.

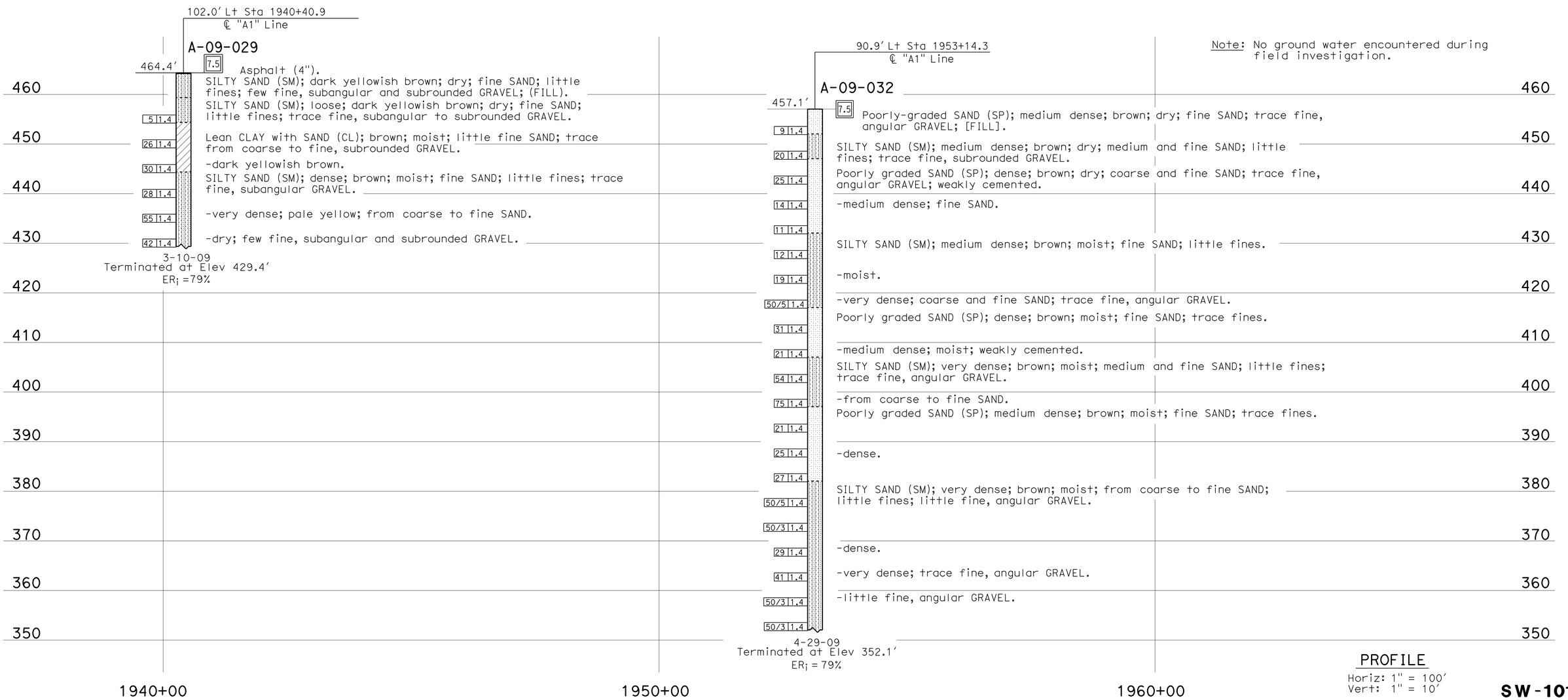
BM #12-B-43 Elev 352.54′
Lead and conc nail in W. end of p.c.c. porch step to frame house on N. side Gavey Ave, 91′ Lt Sta 193+81.

TBM Elev 341.93′
Chiseled knob on PCC wall, 33.4′ Rt Sta 168+35.

Vertical Datum: NAVD88




PLAN
1″ = 200′




Note: No ground water encountered during field investigation.

PROFILE
Horiz: 1″ = 100′
Vert: 1″ = 10′

**SW-101**

| ENGINEERING SERVICES | MATERIALS AND GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1935 POST MILE 35.4 | SOUND WALL NO. 1935 LOG OF TEST BORINGS 1 OF 3 |
|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR NAME: D. Jang | DRAWN BY: C. Christian, I.G-Remmen CHECKED BY: S. Han | FIELD INVESTIGATION BY: S. Cho | | | |

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES ~~08-17-11~~ 07-12-12 ~~05-30-13~~ SHEET X OF X

FILE => 71170urp029.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 820 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

## CEMENTATION

| Description | Criteria |
|---|---|
| Weak | Crumbles or breaks with handling or little finger pressure. |
| Moderate | Crumbles or breaks with considerable finger pressure. |
| Strong | Will not crumble or break with finger pressure. |

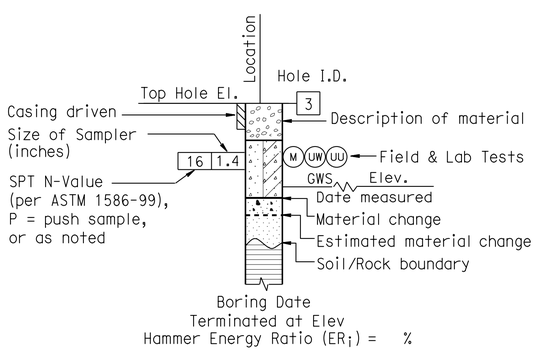
## BOREHOLE IDENTIFICATION

| Symbol | Hole Type | Description |
|---|---|---|
| Size | A | Auger Boring (hollow or solid stem bucket) |
| Size | R<br>RW<br>RC<br>P | Rotary drilled boring (conventional)<br>Rotary drilled with self-casing wire-line<br>Rotary core with continuously-sampled, self-casing wire-line<br>Rotary percussion boring (air) |
| Size | R<br>RC | Rotary drilled diamond core<br>Rotary drilled rock core |
| Size | HD<br>HA | Hand driven (1-inch soil tube)<br>Hand Auger |
| ● | D | Dynamic Cone Penetration Boring |
| ▲ | CPT | Cone Penetration Test (ASTM D 5778) |
| ⬚ | O | Other (note on LOTB) |

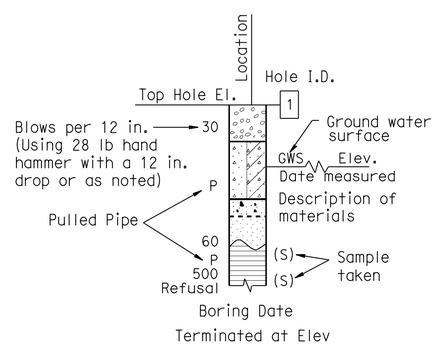
**Note: Size in inches.**

## CONSISTENCY OF COHESIVE SOILS

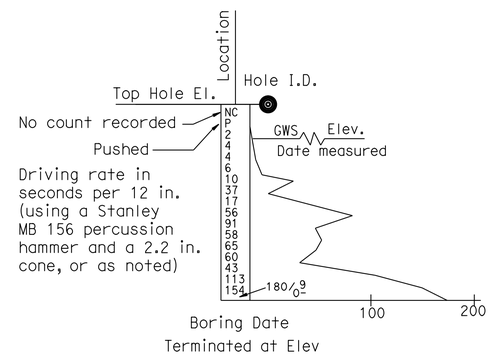
| Description | Shear Strength (tsf) | Pocket Penetrometer Measurement, PP, (tsf) | Torvane Measurement, TV, (tsf) | Vane Shear Measurement, VS, (tsf) |
|---|---|---|---|---|
| Very Soft | Less than 0.12 | Less than 0.25 | Less than 0.12 | Less than 0.12 |
| Soft | 0.12 - 0.25 | 0.25 - 0.5 | 0.12 - 0.25 | 0.12 - 0.25 |
| Medium Stiff | 0.25 - 0.5 | 0.5 - 1 | 0.25 - 0.5 | 0.25 - 0.5 |
| Stiff | 0.5 - 1 | 1 - 2 | 0.5 - 1 | 0.5 - 1 |
| Very Stiff | 1 - 2 | 2 - 4 | 1 - 2 | 1 - 2 |
| Hard | Greater than 2 | Greater than 4 | Greater than 2 | Greater than 2 |



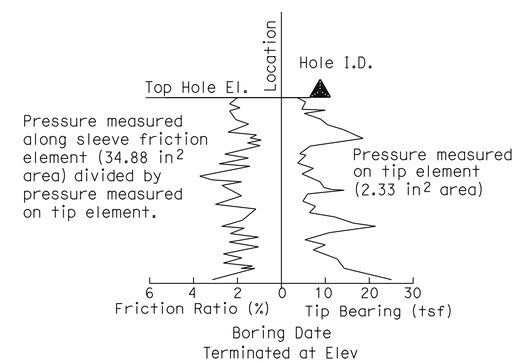

**ROTARY BORING**




**HAND BORING**




**DYNAMIC CONE PENETRATION BORING**




**CONE PENETRATION TEST (CPT) BORING**

**SW-102**

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1935 POST MILE 33.4/37.1 | SOUND WALL NO. 1935 LOG OF TEST BORINGS 2 OF 3 |
|---|---|---|---|---|---|
| | PREPARED BY: I.G-Remmen | | | | |

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

| REVISION DATES | | | | SHEET | OF |
|---|---|---|---|---|---|
| 05-10-12 | | | | X | X |

FILE => 71170urp030.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 821 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

## GROUP SYMBOLS AND NAMES

| Graphic/Symbol | Group Names |
|---|---|
| GW | Well-graded GRAVEL<br>Well-graded GRAVEL with SAND |
| GP | Poorly-graded GRAVEL<br>Poorly-graded GRAVEL with SAND |
| GW-GM | Well-graded GRAVEL with SILT<br>Well-graded GRAVEL with SILT and SAND |
| GW-GC | Well-graded GRAVEL with CLAY (or SILTY CLAY)<br>Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) |
| GP-GM | Poorly-graded GRAVEL with SILT<br>Poorly-graded GRAVEL with SILT and SAND |
| GP-GC | Poorly-graded GRAVEL with CLAY (or SILTY CLAY)<br>Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) |
| GM | SILTY GRAVEL<br>SILTY GRAVEL with SAND |
| GC | CLAYEY GRAVEL<br>CLAYEY GRAVEL with SAND |
| GC-GM | SILTY, CLAYEY GRAVEL<br>SILTY, CLAYEY GRAVEL with SAND |
| SW | Well-graded SAND<br>Well-graded SAND with GRAVEL |
| SP | Poorly-graded SAND<br>Poorly-graded SAND with GRAVEL |
| SW-SM | Well-graded SAND with SILT<br>Well-graded SAND with SILT and GRAVEL |
| SW-SC | Well-graded SAND with CLAY (or SILTY CLAY)<br>Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) |
| SP-SM | Poorly-graded SAND with SILT<br>Poorly-graded SAND with SILT and GRAVEL |
| SP-SC | Poorly-graded SAND with CLAY (or SILTY CLAY)<br>Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) |
| SM | SILTY SAND<br>SILTY SAND with GRAVEL |
| SC | CLAYEY SAND<br>CLAYEY SAND with GRAVEL |
| SC-SM | SILTY, CLAYEY SAND<br>SILTY, CLAYEY SAND with GRAVEL |
| PT | PEAT |
| | COBBLES<br>COBBLES and BOULDERS<br>BOULDERS |

| Graphic/Symbol | Group Names |
|---|---|
| CL | Lean CLAY<br>Lean CLAY with SAND<br>Lean CLAY with GRAVEL<br>SANDY lean CLAY<br>SANDY lean CLAY with GRAVEL<br>GRAVELLY lean CLAY<br>GRAVELLY lean CLAY with SAND |
| CL-ML | SILTY CLAY<br>SILTY CLAY with SAND<br>SILTY CLAY with GRAVEL<br>SANDY SILTY CLAY<br>SANDY SILTY CLAY with GRAVEL<br>GRAVELLY SILTY CLAY<br>GRAVELLY SILTY CLAY with SAND |
| ML | SILT<br>SILT with SAND<br>SILT with GRAVEL<br>SANDY SILT<br>SANDY SILT with GRAVEL<br>GRAVELLY SILT<br>GRAVELLY SILT with SAND |
| OL | ORGANIC lean CLAY<br>ORGANIC lean CLAY with SAND<br>ORGANIC lean CLAY with GRAVEL<br>SANDY ORGANIC lean CLAY<br>SANDY ORGANIC lean CLAY with GRAVEL<br>GRAVELLY ORGANIC lean CLAY<br>GRAVELLY ORGANIC lean CLAY with SAND |
| OL | ORGANIC SILT<br>ORGANIC SILT with SAND<br>ORGANIC SILT with GRAVEL<br>SANDY ORGANIC SILT<br>SANDY ORGANIC SILT with GRAVEL<br>GRAVELLY ORGANIC SILT<br>GRAVELLY ORGANIC SILT with SAND |
| CH | Fat CLAY<br>Fat CLAY with SAND<br>Fat CLAY with GRAVEL<br>SANDY fat CLAY<br>SANDY fat CLAY with GRAVEL<br>GRAVELLY fat CLAY<br>GRAVELLY fat CLAY with SAND |
| MH | Elastic SILT<br>Elastic SILT with SAND<br>Elastic SILT with GRAVEL<br>SANDY elastic SILT<br>SANDY elastic SILT with GRAVEL<br>GRAVELLY elastic SILT<br>GRAVELLY elastic SILT with SAND |
| OH | ORGANIC fat CLAY<br>ORGANIC fat CLAY with SAND<br>ORGANIC fat CLAY with GRAVEL<br>SANDY ORGANIC fat CLAY<br>SANDY ORGANIC fat CLAY with GRAVEL<br>GRAVELLY ORGANIC fat CLAY<br>GRAVELLY ORGANIC fat CLAY with SAND |
| OH | ORGANIC elastic SILT<br>ORGANIC elastic SILT with SAND<br>ORGANIC elastic SILT with GRAVEL<br>SANDY ORGANIC elastic SILT<br>SANDY ORGANIC elastic SILT with GRAVEL<br>GRAVELLY ORGANIC elastic SILT<br>GRAVELLY ORGANIC elastic SILT with SAND |
| OL/OH | ORGANIC SOIL<br>ORGANIC SOIL with SAND<br>ORGANIC SOIL with GRAVEL<br>SANDY ORGANIC SOIL<br>SANDY ORGANIC SOIL with GRAVEL<br>GRAVELLY ORGANIC SOIL<br>GRAVELLY ORGANIC SOIL with SAND |

## FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

## APPARENT DENSITY OF COHESIONLESS SOILS

| Description | SPT $N_{60}$ (Blows / 12 in.) |
|---|---|
| Very Loose | 0 - 5 |
| Loose | 5 - 10 |
| Medium Dense | 10 - 30 |
| Dense | 30 - 50 |
| Very Dense | Greater than 50 |

## MOISTURE

| Description | Criteria |
|---|---|
| Dry | No discernable moisture |
| Moist | Moisture present, but no free water |
| Wet | Visible free water |

## PERCENT OR PROPORTION OF SOILS

| Description | Criteria |
|---|---|
| Trace | Particles are present but estimated to be less than 5% |
| Few | 5% - 10% |
| Little | 15% - 25% |
| Some | 30% - 45% |
| Mostly | 50% - 100% |

## PARTICLE SIZE

| Description | | Size (in.) |
|---|---|---|
| Boulder | | Greater than 12 |
| Cobble | | 3 - 12 |
| Gravel | Coarse | 3/4 - 3 |
| | Fine | 1/5 - 3/4 |
| Sand | Coarse | 1/16 - 1/5 |
| | Medium | 1/64 - 1/16 |
| | Fine | 1/300 - 1/64 |
| Silt and Clay | | Less than 1/300 |

SW-103

ENGINEERING SERVICES

GEOTECHNICAL SERVICES

PREPARED BY: I.G-Remmen

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X

BRIDGE NO. SW 1935
POST MILE 33.4/37.1

# SOUND WALL NO. 1935
# LOG OF TEST BORINGS 3 OF 3

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851
CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-10-12 | SHEET X | OF X

FILE => 71170urp031.dgn

USERNAME => s126614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 822 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

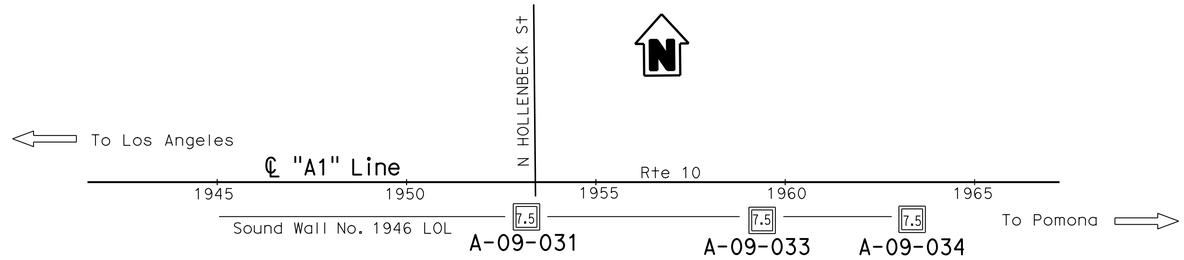
## BENCH MARK

BM #11-B-43 Elev 346.47′
Lead and conc nail in sidewalk of Auto Ct. cabin #825 on N. side Gavey Ave 200′± of Puente Ave, 71′ Lt Sta 181+30.5.

BM #12-B-43 Elev 352.54′
Lead and conc nail in W. end of p.c.c. porch step to frame house on N. side Gavey Ave, 91′ Lt Sta 193+81.

TBM Elev 341.93′
Chiseled knob on PCC wall, 33.4′ Rt Sta 168+35.

Vertical Datum: NAVD88




PLAN
1" = 200′

91.8′ Rt Sta 1953+16.7
℄ "A1" Line

Note: No ground water encountered during field investigation.

A-09-031

457.1′

| Elev | Blows | Description |
|---|---|---|
| | 7.5 | Asphalt (4"). |
| | 9 1.4 | SILTY SAND (SM); medium dense; yellowish brown; dry; fine SAND; little fines. |
| | 14 1.4 | -trace fine, subrounded GRAVEL. |
| | 5 1.4 | Lean CLAY (CL); yellowish brown; moist; few fine SAND; low plasticity. |
| | PI | Poorly graded SAND (SP); yellowish brown; moist; medium and fine SAND; trace fines; trace fine, subangular GRAVEL. |
| | 15 1.4 | SILTY SAND (SM); medium dense; yellowish brown; moist; fine SAND; little fines. |
| | 46 1.4 | -very dense; medium and fine SAND; trace fine, angular GRAVEL. |
| | 71 1.4 | -fine SAND; little from coarse to fine, angular GRAVEL. |
| | 33 1.4 | -dense; from coarse to fine SAND; trace fine, angular GRAVEL. |
| | 22 1.4 | -medium dense; dry; fine SAND. |
| | 85 1.4 | -very dense; from coarse to fine SAND; little fine, angular GRAVEL. |
| | 48 1.4 | Poorly graded SAND (SP); dense; yellowish brown; dry; fine SAND; trace fines. |
| | 32 1.4 | SILTY SAND with GRAVEL (SM); dense; yellowish brown; dry; medium and fine SAND; little fine, rounded GRAVEL; little fines. |
| | 32 1.4 | Poorly graded SAND (SP); very dense; yellowish brown; dry; medium and fine SAND; trace fine, subrounded GRAVEL. |
| | 57 1.4 | SILTY SAND (SM); very dense; yellowish brown; dry; from coarse to fine SAND; little fines; trace coarse, rounded GRAVEL. |
| | 50/6 1.4 | Poorly graded SAND (SP); very dense; yellowish brown; dry; from coarse to fine SAND; trace fine, angular GRAVEL. |
| | 67 1.4 | SILTY SAND (SM); medium dense; brown; dry; fine SAND; little fines; trace fine, angular GRAVEL. |
| | 24 1.4 | -PP=2.0 tsf. |
| | 31 1.4 | -dense. |
| | 50/3 1.4 | -very dense; from coarse to fine SAND; little fine, angular GRAVEL. |
| | 35 1.4 | -dense; fine SAND. |

4-28-09
Terminated at Elev 347.1′
$ER_i$ =79%

460 450 440 430 420 410 400 390 380 370 360 350 340

1953+00 1954+00 1955+00

PROFILE
Horiz: 1" = 10′
Vert: 1" = 10′

**SW-104**

| ENGINEERING SERVICES | MATERIALS AND GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1946 POST MILE 33.4/37.1 | SOUND WALL NO. 1946 LOG OF TEST BORINGS 1 OF 4 |
|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR NAME: D. Jang | DRAWN BY: C. Christian, I.G-Remmen CHECKED BY: S. Han | FIELD INVESTIGATION BY: S. Cho | | | |

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-14-12 07-13-12 SHEET X OF X

FILE => 71170urp032.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 823 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Sungro Cho
No. C75151
Exp. 12-31-13
CIVIL
STATE OF CALIFORNIA

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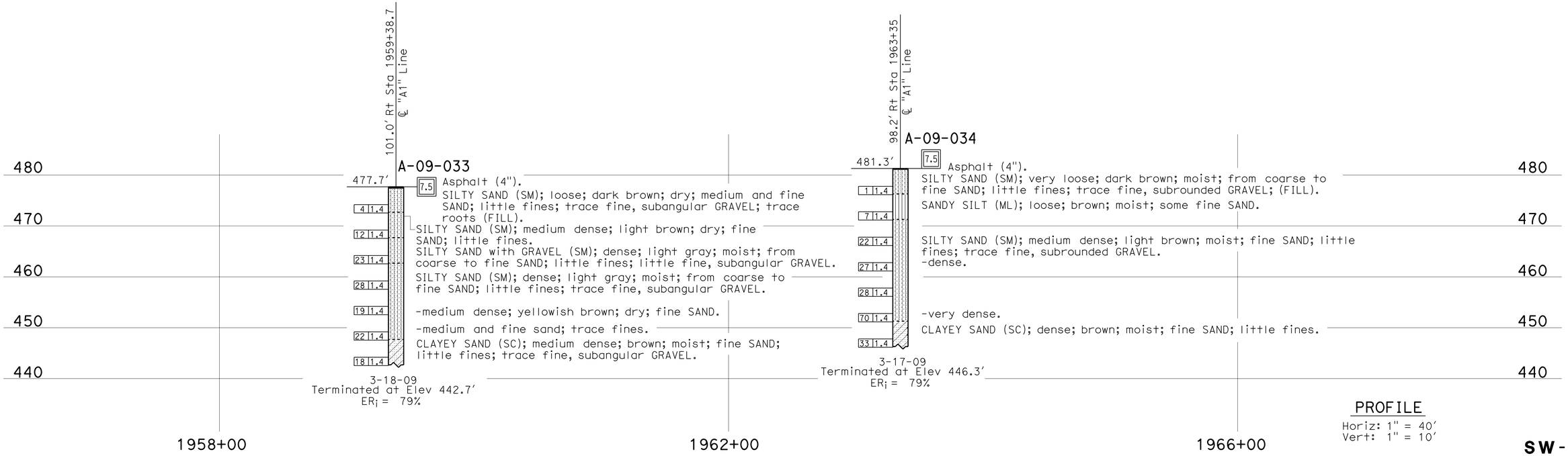
This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 4"

Note: No ground water encountered during field investigation.




PROFILE
Horiz: 1" = 40'
Vert: 1" = 10'

SW-105

| ENGINEERING SERVICES | MATERIALS AND GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1946 POST MILE 33.4/37.1 | SOUND WALL NO. 1946 LOG OF TEST BORINGS 2 OF 4 |
|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR NAME: D. Jang | DRAWN BY: C. Christian, I.G-Remmen CHECKED BY: S. Han | FIELD INVESTIGATION BY: S. Cho | | | |

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 08-17-11 07-13-12 05-17-12 SHEET X OF X

FILE => 71170urp033.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 824 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

## CEMENTATION

| Description | Criteria |
|---|---|
| Weak | Crumbles or breaks with handling or little finger pressure. |
| Moderate | Crumbles or breaks with considerable finger pressure. |
| Strong | Will not crumble or break with finger pressure. |

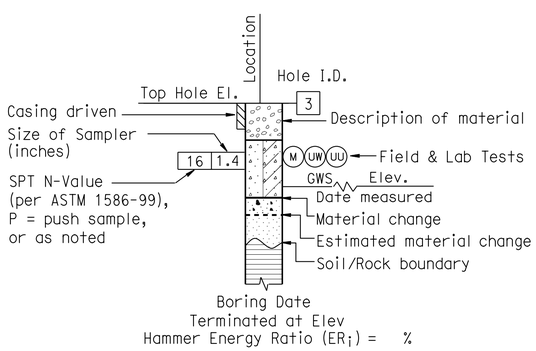
## BOREHOLE IDENTIFICATION

| Symbol | Hole Type | Description |
|---|---|---|
| Size | A | Auger Boring (hollow or solid stem bucket) |
| Size | R<br>RW<br>RC<br>P | Rotary drilled boring (conventional)<br>Rotary drilled with self-casing wire-line<br>Rotary core with continuously-sampled, self-casing wire-line<br>Rotary percussion boring (air) |
| Size | R<br>RC | Rotary drilled diamond core<br>Rotary drilled rock core |
| Size | HD<br>HA | Hand driven (1-inch soil tube)<br>Hand Auger |
| ● | D | Dynamic Cone Penetration Boring |
| ▲ | CPT | Cone Penetration Test (ASTM D 5778) |
| ⬚ | O | Other (note on LOTB) |

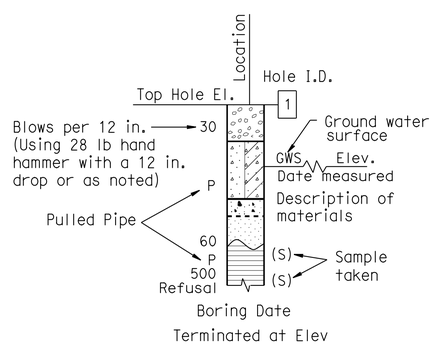
**Note: Size in inches.**

## CONSISTENCY OF COHESIVE SOILS

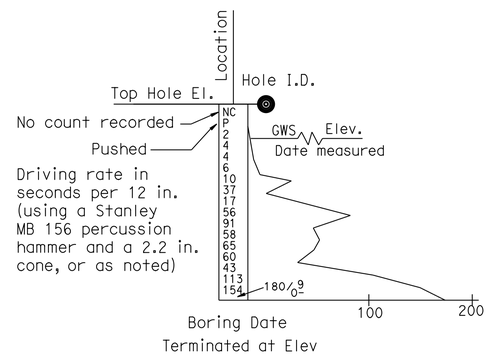
| Description | Shear Strength (tsf) | Pocket Penetrometer Measurement, PP, (tsf) | Torvane Measurement, TV, (tsf) | Vane Shear Measurement, VS, (tsf) |
|---|---|---|---|---|
| Very Soft | Less than 0.12 | Less than 0.25 | Less than 0.12 | Less than 0.12 |
| Soft | 0.12 - 0.25 | 0.25 - 0.5 | 0.12 - 0.25 | 0.12 - 0.25 |
| Medium Stiff | 0.25 - 0.5 | 0.5 - 1 | 0.25 - 0.5 | 0.25 - 0.5 |
| Stiff | 0.5 - 1 | 1 - 2 | 0.5 - 1 | 0.5 - 1 |
| Very Stiff | 1 - 2 | 2 - 4 | 1 - 2 | 1 - 2 |
| Hard | Greater than 2 | Greater than 4 | Greater than 2 | Greater than 2 |



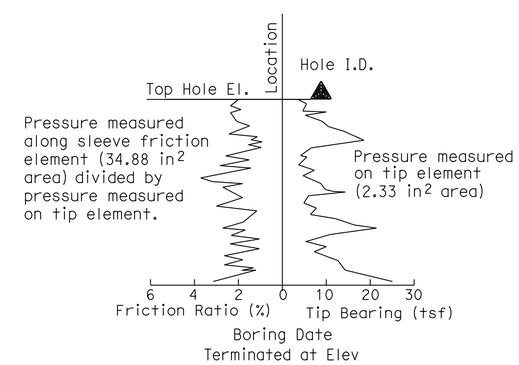

**ROTARY BORING**




**HAND BORING**




**DYNAMIC CONE PENETRATION BORING**




**CONE PENETRATION TEST (CPT) BORING**

**SW-106**

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1946 POST MILE 33.4/37.1 | SOUND WALL NO. 1946 LOG OF TEST BORINGS 3 OF 4 |
|---|---|---|---|---|---|
| | PREPARED BY: I.G-Remmen | | | | |

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851
CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-11-12 | SHEET X | OF X

FILE => 71170urp034.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 825 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

## GROUP SYMBOLS AND NAMES

| Graphic/Symbol | Group Names |
|---|---|
| GW | Well-graded GRAVEL<br>Well-graded GRAVEL with SAND |
| GP | Poorly-graded GRAVEL<br>Poorly-graded GRAVEL with SAND |
| GW-GM | Well-graded GRAVEL with SILT<br>Well-graded GRAVEL with SILT and SAND |
| GW-GC | Well-graded GRAVEL with CLAY (or SILTY CLAY)<br>Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) |
| GP-GM | Poorly-graded GRAVEL with SILT<br>Poorly-graded GRAVEL with SILT and SAND |
| GP-GC | Poorly-graded GRAVEL with CLAY (or SILTY CLAY)<br>Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) |
| GM | SILTY GRAVEL<br>SILTY GRAVEL with SAND |
| GC | CLAYEY GRAVEL<br>CLAYEY GRAVEL with SAND |
| GC-GM | SILTY, CLAYEY GRAVEL<br>SILTY, CLAYEY GRAVEL with SAND |
| SW | Well-graded SAND<br>Well-graded SAND with GRAVEL |
| SP | Poorly-graded SAND<br>Poorly-graded SAND with GRAVEL |
| SW-SM | Well-graded SAND with SILT<br>Well-graded SAND with SILT and GRAVEL |
| SW-SC | Well-graded SAND with CLAY (or SILTY CLAY)<br>Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) |
| SP-SM | Poorly-graded SAND with SILT<br>Poorly-graded SAND with SILT and GRAVEL |
| SP-SC | Poorly-graded SAND with CLAY (or SILTY CLAY)<br>Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) |
| SM | SILTY SAND<br>SILTY SAND with GRAVEL |
| SC | CLAYEY SAND<br>CLAYEY SAND with GRAVEL |
| SC-SM | SILTY, CLAYEY SAND<br>SILTY, CLAYEY SAND with GRAVEL |
| PT | PEAT |
| | COBBLES<br>COBBLES and BOULDERS<br>BOULDERS |

| Graphic/Symbol | Group Names |
|---|---|
| CL | Lean CLAY<br>Lean CLAY with SAND<br>Lean CLAY with GRAVEL<br>SANDY lean CLAY<br>SANDY lean CLAY with GRAVEL<br>GRAVELLY lean CLAY<br>GRAVELLY lean CLAY with SAND |
| CL-ML | SILTY CLAY<br>SILTY CLAY with SAND<br>SILTY CLAY with GRAVEL<br>SANDY SILTY CLAY<br>SANDY SILTY CLAY with GRAVEL<br>GRAVELLY SILTY CLAY<br>GRAVELLY SILTY CLAY with SAND |
| ML | SILT<br>SILT with SAND<br>SILT with GRAVEL<br>SANDY SILT<br>SANDY SILT with GRAVEL<br>GRAVELLY SILT<br>GRAVELLY SILT with SAND |
| OL | ORGANIC lean CLAY<br>ORGANIC lean CLAY with SAND<br>ORGANIC lean CLAY with GRAVEL<br>SANDY ORGANIC lean CLAY<br>SANDY ORGANIC lean CLAY with GRAVEL<br>GRAVELLY ORGANIC lean CLAY<br>GRAVELLY ORGANIC lean CLAY with SAND |
| OL | ORGANIC SILT<br>ORGANIC SILT with SAND<br>ORGANIC SILT with GRAVEL<br>SANDY ORGANIC SILT<br>SANDY ORGANIC SILT with GRAVEL<br>GRAVELLY ORGANIC SILT<br>GRAVELLY ORGANIC SILT with SAND |
| CH | Fat CLAY<br>Fat CLAY with SAND<br>Fat CLAY with GRAVEL<br>SANDY fat CLAY<br>SANDY fat CLAY with GRAVEL<br>GRAVELLY fat CLAY<br>GRAVELLY fat CLAY with SAND |
| MH | Elastic SILT<br>Elastic SILT with SAND<br>Elastic SILT with GRAVEL<br>SANDY elastic SILT<br>SANDY elastic SILT with GRAVEL<br>GRAVELLY elastic SILT<br>GRAVELLY elastic SILT with SAND |
| OH | ORGANIC fat CLAY<br>ORGANIC fat CLAY with SAND<br>ORGANIC fat CLAY with GRAVEL<br>SANDY ORGANIC fat CLAY<br>SANDY ORGANIC fat CLAY with GRAVEL<br>GRAVELLY ORGANIC fat CLAY<br>GRAVELLY ORGANIC fat CLAY with SAND |
| OH | ORGANIC elastic SILT<br>ORGANIC elastic SILT with SAND<br>ORGANIC elastic SILT with GRAVEL<br>SANDY ORGANIC elastic SILT<br>SANDY ORGANIC elastic SILT with GRAVEL<br>GRAVELLY ORGANIC elastic SILT<br>GRAVELLY ORGANIC elastic SILT with SAND |
| OL/OH | ORGANIC SOIL<br>ORGANIC SOIL with SAND<br>ORGANIC SOIL with GRAVEL<br>SANDY ORGANIC SOIL<br>SANDY ORGANIC SOIL with GRAVEL<br>GRAVELLY ORGANIC SOIL<br>GRAVELLY ORGANIC SOIL with SAND |

## FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

## APPARENT DENSITY OF COHESIONLESS SOILS

| Description | SPT $N_{60}$ (Blows / 12 in.) |
|---|---|
| Very Loose | 0 - 5 |
| Loose | 5 - 10 |
| Medium Dense | 10 - 30 |
| Dense | 30 - 50 |
| Very Dense | Greater than 50 |

## MOISTURE

| Description | Criteria |
|---|---|
| Dry | No discernable moisture |
| Moist | Moisture present, but no free water |
| Wet | Visible free water |

## PERCENT OR PROPORTION OF SOILS

| Description | Criteria |
|---|---|
| Trace | Particles are present but estimated to be less than 5% |
| Few | 5% - 10% |
| Little | 15% - 25% |
| Some | 30% - 45% |
| Mostly | 50% - 100% |

## PARTICLE SIZE

| Description | | Size (in.) |
|---|---|---|
| Boulder | | Greater than 12 |
| Cobble | | 3 - 12 |
| Gravel | Coarse | 3/4 - 3 |
| | Fine | 1/5 - 3/4 |
| Sand | Coarse | 1/16 - 1/5 |
| | Medium | 1/64 - 1/16 |
| | Fine | 1/300 - 1/64 |
| Silt and Clay | | Less than 1/300 |

SW-107

ENGINEERING SERVICES

GEOTECHNICAL SERVICES
PREPARED BY: I.G-Remmen

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. SW 1946
POST MILE 33.4/37.1

SOUND WALL NO. 1946
LOG OF TEST BORINGS 4 OF 4

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851
CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-11-12 SHEET X OF X

FILE => 71170urp035.dgn

USERNAME => s126614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 826 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

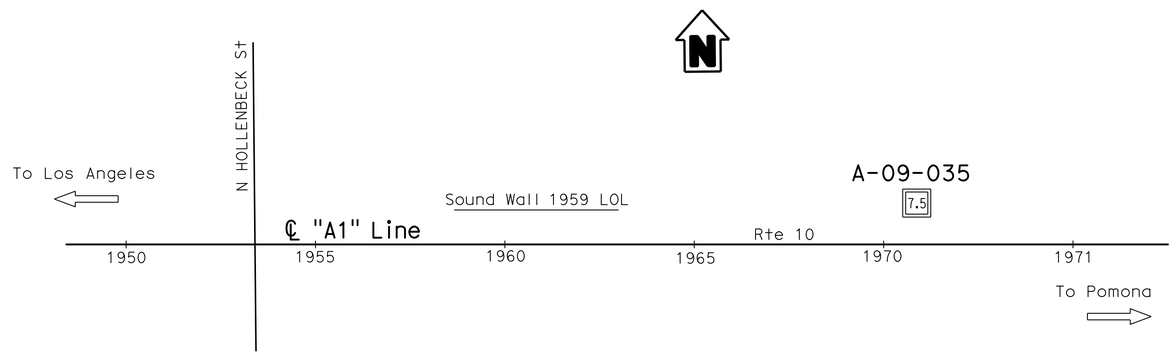
## BENCH MARK

BM #11-B-43 Elev 346.47′
Lead and conc nail in sidewalk of Auto Ct. cabin #825 on N. side Gavey Ave 200′± of Puente Ave, 71′ Lt Sta 181+30.5.

BM #12-B-43 Elev 352.54′
Lead and conc nail in W. end of p.c.c. porch step to frame house on N. side Gavey Ave, 91′ Lt Sta 193+81.

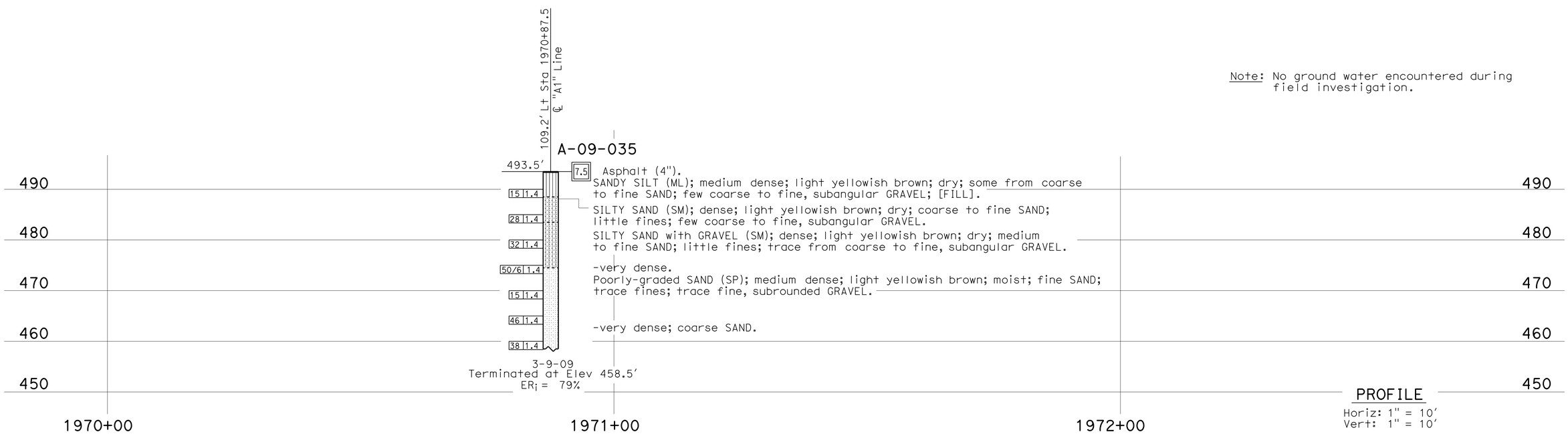
TBM Elev 341.93′
Chiseled knob on PCC wall, 33.4′ Rt Sta 168+35.

Vertical Datum: NAVD88




PLAN
1" = 200′

Note: No ground water encountered during field investigation.




PROFILE
Horiz: 1" = 10′
Vert: 1" = 10′

**SW-108**

| ENGINEERING SERVICES | MATERIALS AND GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN | BRIDGE NO. SW 1959 | SOUND WALL NO. 1959 |
|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR | DRAWN BY: C. Christian, I.G-Remmen | FIELD INVESTIGATION BY: | DESIGN BRANCH X | POST MILE 33.4/37.1 | LOG OF TEST BORINGS 1 OF 3 |
| NAME: D. Jang | CHECKED BY: S. Han | S. Cho | | | |

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 08-17-11 08-23-11 10-13-11 07-12-12 SHEET X OF X

FILE => 71170urp036.dgn

USERNAME => s121614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 827 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

## CEMENTATION

| Description | Criteria |
|---|---|
| Weak | Crumbles or breaks with handling or little finger pressure. |
| Moderate | Crumbles or breaks with considerable finger pressure. |
| Strong | Will not crumble or break with finger pressure. |

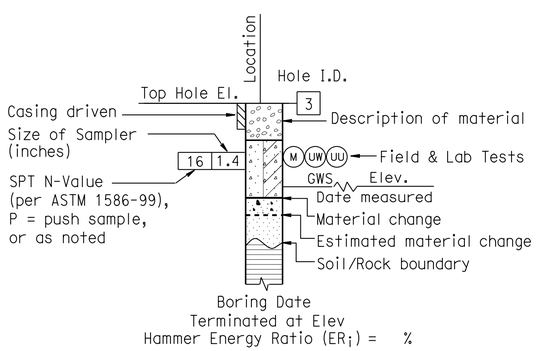
## BOREHOLE IDENTIFICATION

| Symbol | Hole Type | Description |
|---|---|---|
| Size | A | Auger Boring (hollow or solid stem bucket) |
| Size | R | Rotary drilled boring (conventional) |
| | RW | Rotary drilled with self-casing wire-line |
| | RC | Rotary core with continuously-sampled, self-casing wire-line |
| | P | Rotary percussion boring (air) |
| Size | R | Rotary drilled diamond core |
| | RC | Rotary drilled rock core |
| Size | HD | Hand driven (1-inch soil tube) |
| | HA | Hand Auger |
| ● | D | Dynamic Cone Penetration Boring |
| ▲ | CPT | Cone Penetration Test (ASTM D 5778) |
| ⬚ | O | Other (note on LOTB) |

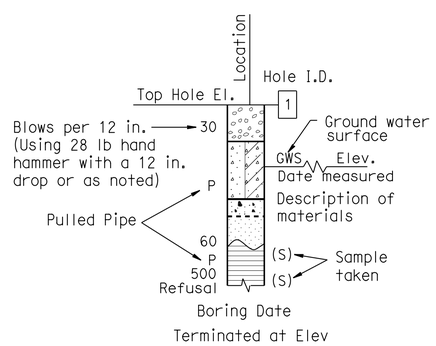
**Note: Size in inches.**

## CONSISTENCY OF COHESIVE SOILS

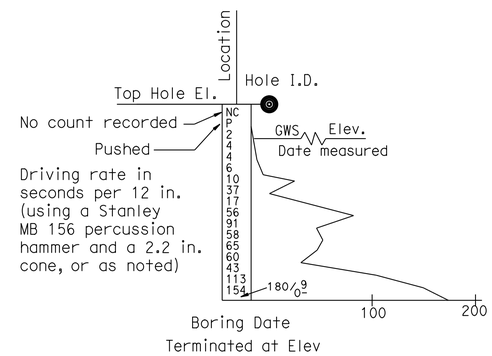
| Description | Shear Strength (tsf) | Pocket Penetrometer Measurement, PP, (tsf) | Torvane Measurement, TV, (tsf) | Vane Shear Measurement, VS, (tsf) |
|---|---|---|---|---|
| Very Soft | Less than 0.12 | Less than 0.25 | Less than 0.12 | Less than 0.12 |
| Soft | 0.12 - 0.25 | 0.25 - 0.5 | 0.12 - 0.25 | 0.12 - 0.25 |
| Medium Stiff | 0.25 - 0.5 | 0.5 - 1 | 0.25 - 0.5 | 0.25 - 0.5 |
| Stiff | 0.5 - 1 | 1 - 2 | 0.5 - 1 | 0.5 - 1 |
| Very Stiff | 1 - 2 | 2 - 4 | 1 - 2 | 1 - 2 |
| Hard | Greater than 2 | Greater than 4 | Greater than 2 | Greater than 2 |



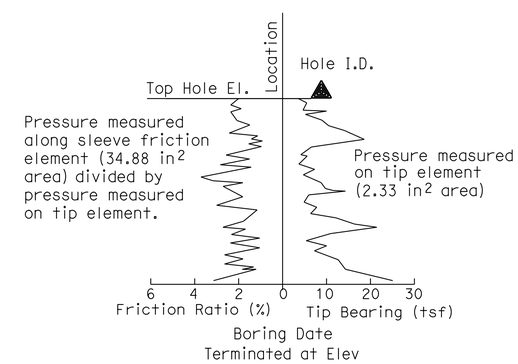

**ROTARY BORING**




**HAND BORING**




**DYNAMIC CONE PENETRATION BORING**




**CONE PENETRATION TEST (CPT) BORING**

**SW-109**

| ENGINEERING SERVICES | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE NO. SW 1959 / POST MILE 33.4/37.1 | SOUND WALL NO. 1959 LOG OF TEST BORINGS 2 OF 3 |
|---|---|---|---|---|---|
| | PREPARED BY: I.G-Remmen | | | | |

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851 CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

| REVISION DATES | | | | SHEET | OF |
|---|---|---|---|---|---|
| 05-10-12 | | | | X | X |

FILE => 71170urp037.dgn

USERNAME => s12614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 828 | 1475 |

REGISTERED CIVIL ENGINEER 7-26-12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Sungro Cho No. C75151 Exp. 12-31-13 CIVIL STATE OF CALIFORNIA

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REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

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| GW-GM | Well-graded GRAVEL with SILT<br>Well-graded GRAVEL with SILT and SAND |
| GW-GC | Well-graded GRAVEL with CLAY (or SILTY CLAY)<br>Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND) |
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| PT | PEAT |
| | COBBLES<br>COBBLES and BOULDERS<br>BOULDERS |

| Graphic/Symbol | Group Names |
|---|---|
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| CL-ML | SILTY CLAY<br>SILTY CLAY with SAND<br>SILTY CLAY with GRAVEL<br>SANDY SILTY CLAY<br>SANDY SILTY CLAY with GRAVEL<br>GRAVELLY SILTY CLAY<br>GRAVELLY SILTY CLAY with SAND |
| ML | SILT<br>SILT with SAND<br>SILT with GRAVEL<br>SANDY SILT<br>SANDY SILT with GRAVEL<br>GRAVELLY SILT<br>GRAVELLY SILT with SAND |
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| OL | ORGANIC SILT<br>ORGANIC SILT with SAND<br>ORGANIC SILT with GRAVEL<br>SANDY ORGANIC SILT<br>SANDY ORGANIC SILT with GRAVEL<br>GRAVELLY ORGANIC SILT<br>GRAVELLY ORGANIC SILT with SAND |
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| MH | Elastic SILT<br>Elastic SILT with SAND<br>Elastic SILT with GRAVEL<br>SANDY elastic SILT<br>SANDY elastic SILT with GRAVEL<br>GRAVELLY elastic SILT<br>GRAVELLY elastic SILT with SAND |
| OH | ORGANIC fat CLAY<br>ORGANIC fat CLAY with SAND<br>ORGANIC fat CLAY with GRAVEL<br>SANDY ORGANIC fat CLAY<br>SANDY ORGANIC fat CLAY with GRAVEL<br>GRAVELLY ORGANIC fat CLAY<br>GRAVELLY ORGANIC fat CLAY with SAND |
| OH | ORGANIC elastic SILT<br>ORGANIC elastic SILT with SAND<br>ORGANIC elastic SILT with GRAVEL<br>SANDY ORGANIC elastic SILT<br>SANDY ORGANIC elastic SILT with GRAVEL<br>GRAVELLY ORGANIC elastic SILT<br>GRAVELLY ORGANIC elastic SILT with SAND |
| OL/OH | ORGANIC SOIL<br>ORGANIC SOIL with SAND<br>ORGANIC SOIL with GRAVEL<br>SANDY ORGANIC SOIL<br>SANDY ORGANIC SOIL with GRAVEL<br>GRAVELLY ORGANIC SOIL<br>GRAVELLY ORGANIC SOIL with SAND |

## FIELD AND LABORATORY TESTING

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- (CL) Collapse Potential (ASTM D 5333)
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- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

## APPARENT DENSITY OF COHESIONLESS SOILS

| Description | SPT $N_{60}$ (Blows / 12 in.) |
|---|---|
| Very Loose | 0 - 5 |
| Loose | 5 - 10 |
| Medium Dense | 10 - 30 |
| Dense | 30 - 50 |
| Very Dense | Greater than 50 |

## MOISTURE

| Description | Criteria |
|---|---|
| Dry | No discernable moisture |
| Moist | Moisture present, but no free water |
| Wet | Visible free water |

## PERCENT OR PROPORTION OF SOILS

| Description | Criteria |
|---|---|
| Trace | Particles are present but estimated to be less than 5% |
| Few | 5% - 10% |
| Little | 15% - 25% |
| Some | 30% - 45% |
| Mostly | 50% - 100% |

## PARTICLE SIZE

| Description | | Size (in.) |
|---|---|---|
| Boulder | | Greater than 12 |
| Cobble | | 3 - 12 |
| Gravel | Coarse | 3/4 - 3 |
| | Fine | 1/5 - 3/4 |
| Sand | Coarse | 1/16 - 1/5 |
| | Medium | 1/64 - 1/16 |
| | Fine | 1/300 - 1/64 |
| Silt and Clay | | Less than 1/300 |

**SW-110**

ENGINEERING SERVICES

GEOTECHNICAL SERVICES

PREPARED BY: I.G-Remmen

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X

BRIDGE NO. SW 1959

POST MILE 33.4/37.1

# SOUND WALL NO. 1959

# LOG OF TEST BORINGS 3 OF 3

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000000851
CONTRACT NO.: 07-1170U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 05-10-12 | SHEET X | OF X

FILE => 71170urp038.dgn

USERNAME => s126614 DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:32

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 829 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
No. 5704
Signature
10-31-12
Renewal date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

# PLANT LIST AND PLANTING SPECIFICATIONS

| PLANT GROUP | PLANT No. | SYMBOL | BOTANICAL NAME | COMMON NAME | SIZE | QUANTITY EACH | HOLE SIZE (INCH) Dia | HOLE SIZE (INCH) DEPTH | BASIN TYPE | IRON SULFATE ① | SOIL AMEND ① | COMMERCIAL FERTILIZER ① PLANTING | COMMERCIAL FERTILIZER ① PLT ESTB | BASIN MULCH (CY) ① | STAKING | PLANTING LIMITS MINIMUM DISTANCE (ft) FROM ETW | Pvmt | FENCE | WALL | PAVED DITCH | EARTH DITCH | ON CENTER (ft) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 1 | | DISTICTIS BUCCINATORIA | BLOOD RED TRUMPET VINE | No. 1 | 591 | ③ | ③ | II | — | — | 4 Oz | 4 Oz | 0.05 CY | ④ | — | — | — | — | 4 | 15 | 10 | VINE |
| | 2 | | PARTHENOCISSUS TRICUSPIDATA | BOSTON IVY | No. 1 | 1795 | ③ | ③ | II | — | — | 4 Oz | 4 Oz | 0.05 CY | ④ | — | — | — | — | 4 | 15 | 10 | VINE |
| | 3 | | MUHLENBERGIA RIGENS | DEER GRASS | No. 1 | 6071 | ③ | ③ | II | — | — | — | — | — | — | — | — | — | — | — | — | 3 | GRASS IN BIOFILTRATION SWALE |
| B | 4 | | ACACIA REDOLENS 'DESERT CARPET' | PROSTATE ACACIA | No. 5 | 788 | ③ | ③ | II | — | — | 8 Oz | 8 Oz | 0.08 CY | — | — | 20 | 20 | 20 | 20 | 22 | 10 | SHRUB |
| | 5 | | PLUMBAGO AURICULATA 'IMPERIAL BLUE' | CAPE PLUMBAGO | No. 5 | 94 | ③ | ③ | II | — | — | 8 Oz | 8 Oz | 0.08 CY | — | — | 15 | 15 | 15 | 15 | 15 | 10 | SHRUB |
| | 6 | | ROSA 'ICEBERG' | ICEBERG ROSE | No. 5 | 131 | ③ | ③ | II | — | — | 8 Oz | 8 Oz | 0.08 CY | — | — | 8 | 8 | 8 | 8 | 10 | 5 | SHRUB |
| | 7 | | XYLOSMA CONGESTUM 'COMPACTUM' | COMPACT SHINEY XYLOSMA | No. 5 | 347 | ③ | ③ | II | — | — | 8 Oz | 8 Oz | 0.08 CY | — | — | 10 | 10 | 8 | 8 | 10 | 10 | SHRUB |
| H | 8 | | CARPOBROTUS EDULIS | HOTTENTOT FIG | CUTTINGS | 135,545 | — | — | — | — | — | 6 LBS/ 1000 SQFT | 6 LBS/ 1000 SQFT | — | — | — | 6 | 6 | 6 | 6 | 8 | 1.5 | GROUNDCOVER |
| U | 9 | | JACARANDA MIMOSIFOLIA | JACARANDA | No.15 | 124 | ③ | ③ | II | — | — | 10 Oz | 10 Oz | 0.16 CY | ④ | 30 | — | 20 | 20 | 10 | 12 | ⑦ | TREE |
| | 10 | | LAGERSTROEMIA INDICA F.'NATCHEZ' | CRAPE MYRTLE | No.15 | 144 | ③ | ③ | II | — | — | 10 Oz | 10 Oz | 0.16 CY | ④ | 30 | — | 15 | 15 | 15 | 17 | ⑦ | TREE |
| | 11 | | PINUS CANARIENSIS | CANARY ISLAND PINE | No.15 | 132 | ③ | ③ | II | — | — | 10 Oz | 10 Oz | 0.16 CY | ④ | 40 | — | 20 | 20 | 10 | 12 | ⑦ | TREE |
| | | | | | | | | | | | | | | | | | | | | | | | |
| F | 12 | | APTENIA CORDIFOLIA 'RED APPLE' | NO COMMON NAME | FLATS | 7552 | — | — | — | — | — | 6 LBS/ 1000 SQFT | 6 LBS/ 1000 SQFT | — | — | — | — | — | — | — | — | 1.5 | GROUNDCOVER |

## APPLICABLE WHEN CIRCLED:

① - QUANTITIES SHOWN ARE "PER PLANT" UNLESS SHOWN AS SQFT OR SQYD APPLICATION RATES
2 - BASIN MULCH IS INCLUDED WITH MULCH QUANTITIES SHOWN ON PLANTING PLAN
③ - SUFFICIENT TO RECEIVE ROOT BALL
④ - SEE DETAIL
5 - SEE SPECIAL PROVISIONS
6 - SEE STANDARD SPECIFICATIONS
⑦ - AS SHOWN ON PLANS
8 - UNLESS OTHERWISE SHOWN ON PLANS
9 - FOLIAGE PROTECTOR REQUIRED
10 - ROOT PROTECTOR REQUIRED
11 - ROOT BARRIER REQUIRED
12 - STATE-FURNISHED

## LEGEND

MULCH (3" DEPTH)
MINOR CONCRETE (STAMPED CONCRETE)
ROCK BLANKET
MAINTAIN EXISTING PLANTED AREAS

## NOTE:

UNDERLINED PORTIONS OF BOTANICAL NAME INDICATE ABBREVIATIONS USED ON PLANTING PLANS.

# PLANT LIST
# PL-1

REVISED BY | DATE REVISED
RICH KESTER | JENNIFER TAIRA
CALCULATED-DESIGNED BY | CHECKED BY
SENIOR LANDSCAPE ARCHITECT | JENNIFER TAIRA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 07:32

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 830 | 1475 |

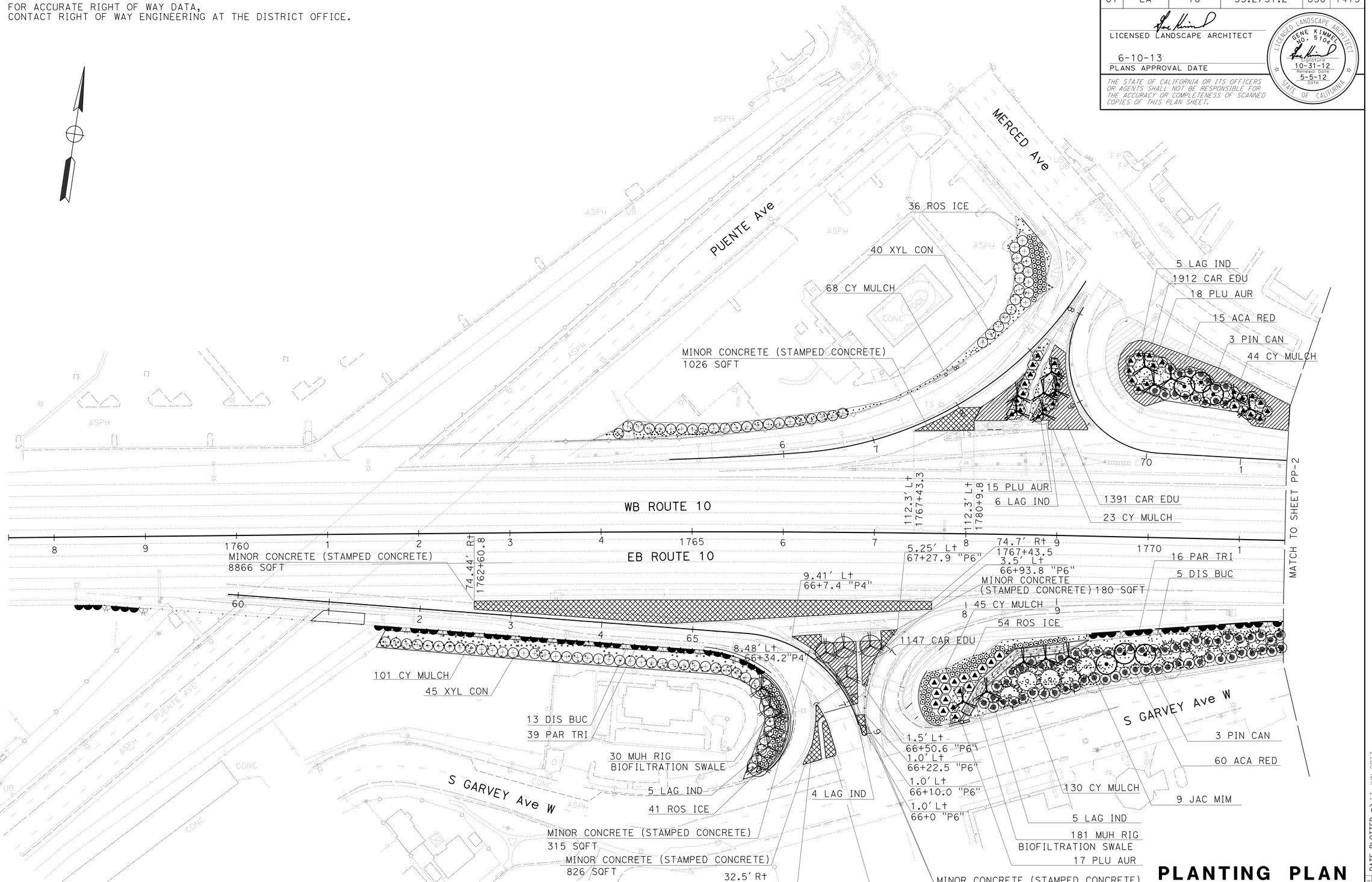
LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

**NOTE:** FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




# PLANTING PLAN

SCALE: 1" = 50'

**PP-1**

*APPROVED FOR PLANTING WORK ONLY*

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:32

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 831 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

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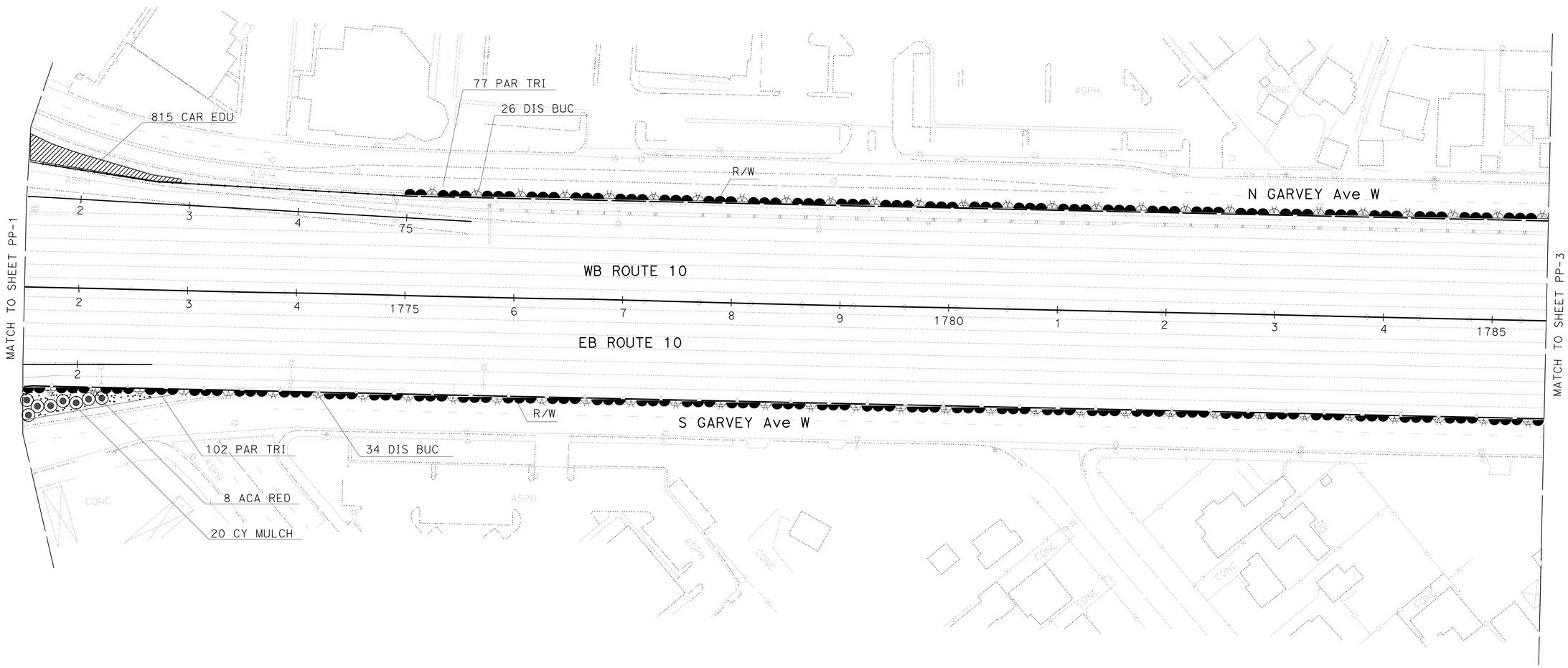


# PLANTING PLAN

SCALE: 1" = 50'

*APPROVED FOR PLANTING WORK ONLY*

**PP-2**

REVISED BY | DATE REVISED
RICH KESTER | JENNIFER TAIRA
CALCULATED-DESIGNED BY | CHECKED BY
SENIOR LANDSCAPE ARCHITECT | JENNIFER TAIRA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 07:32

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 832 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

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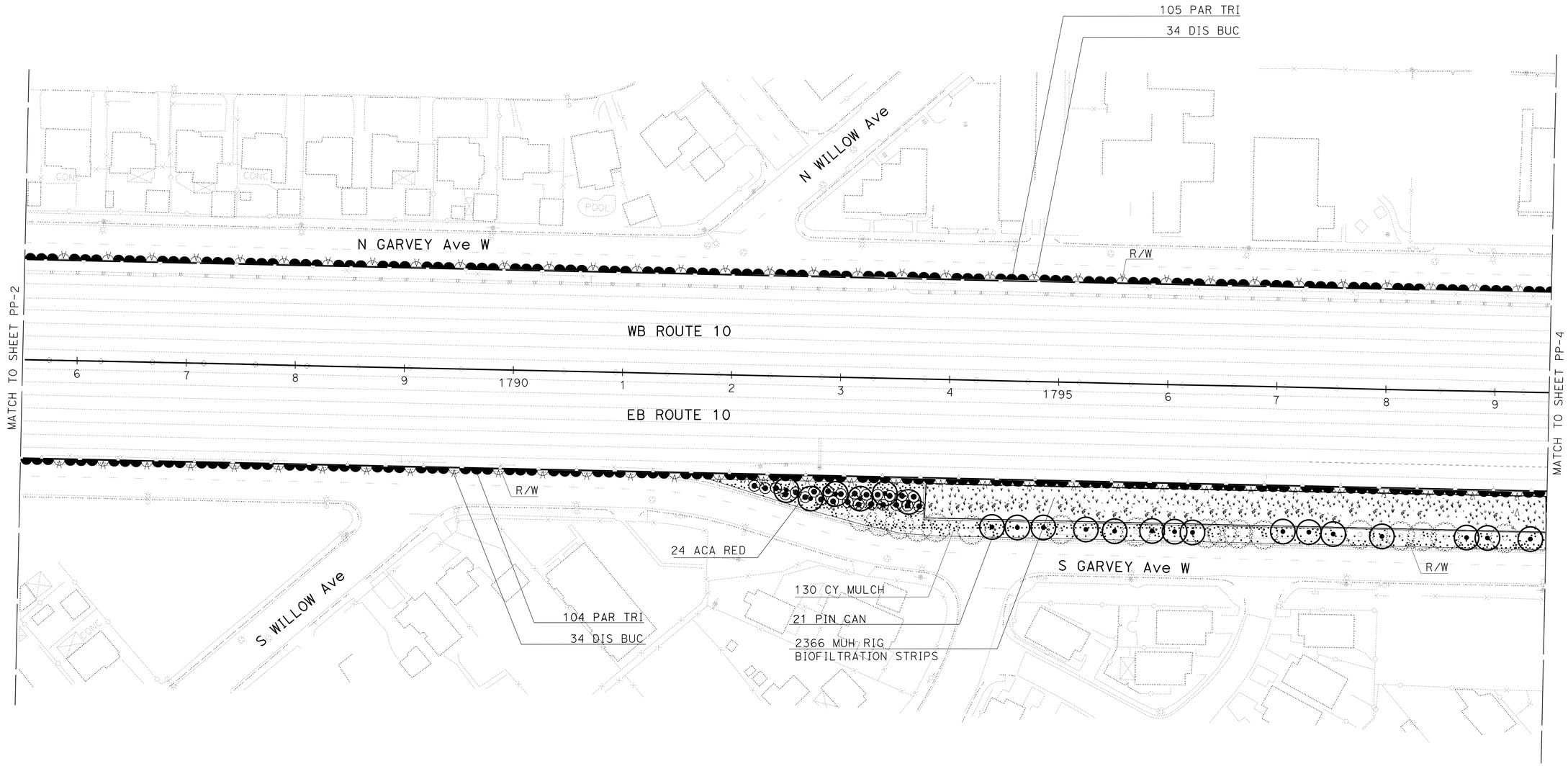



*APPROVED FOR PLANTING WORK ONLY*

# PLANTING PLAN

SCALE: 1" = 50'

**PP-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:32

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 833 | 1475 |

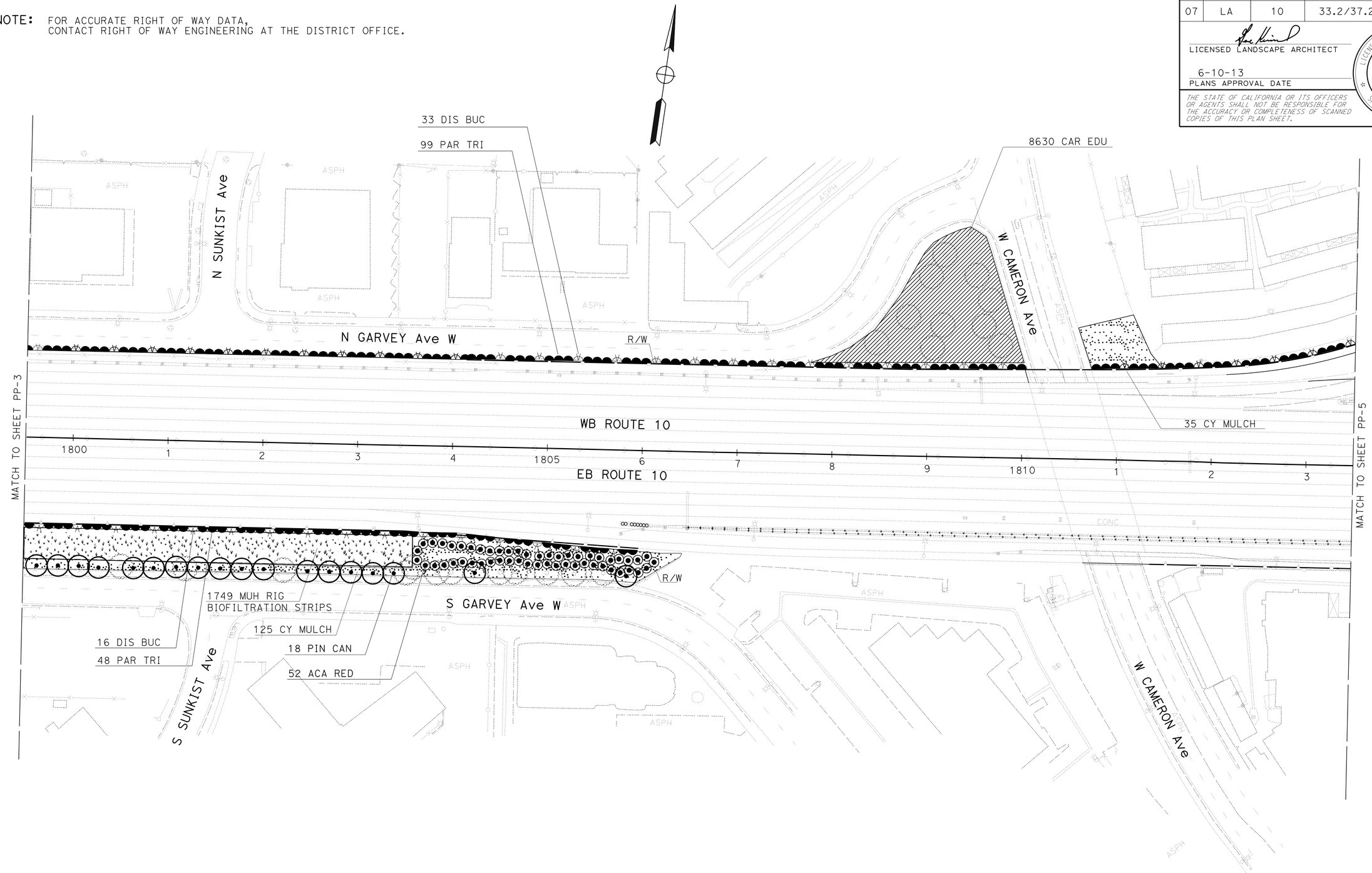
LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5104 Signature 10-31-12 Renewal Date 5-5-12 Date STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

**NOTE:** FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




# PLANTING PLAN

SCALE: 1" = 50'

**PP-4**

*APPROVED FOR PLANTING WORK ONLY*

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA
CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:32

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 834 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5104 Signature 10-31-12 Renewal Date 5-5-12 Date STATE OF CALIFORNIA

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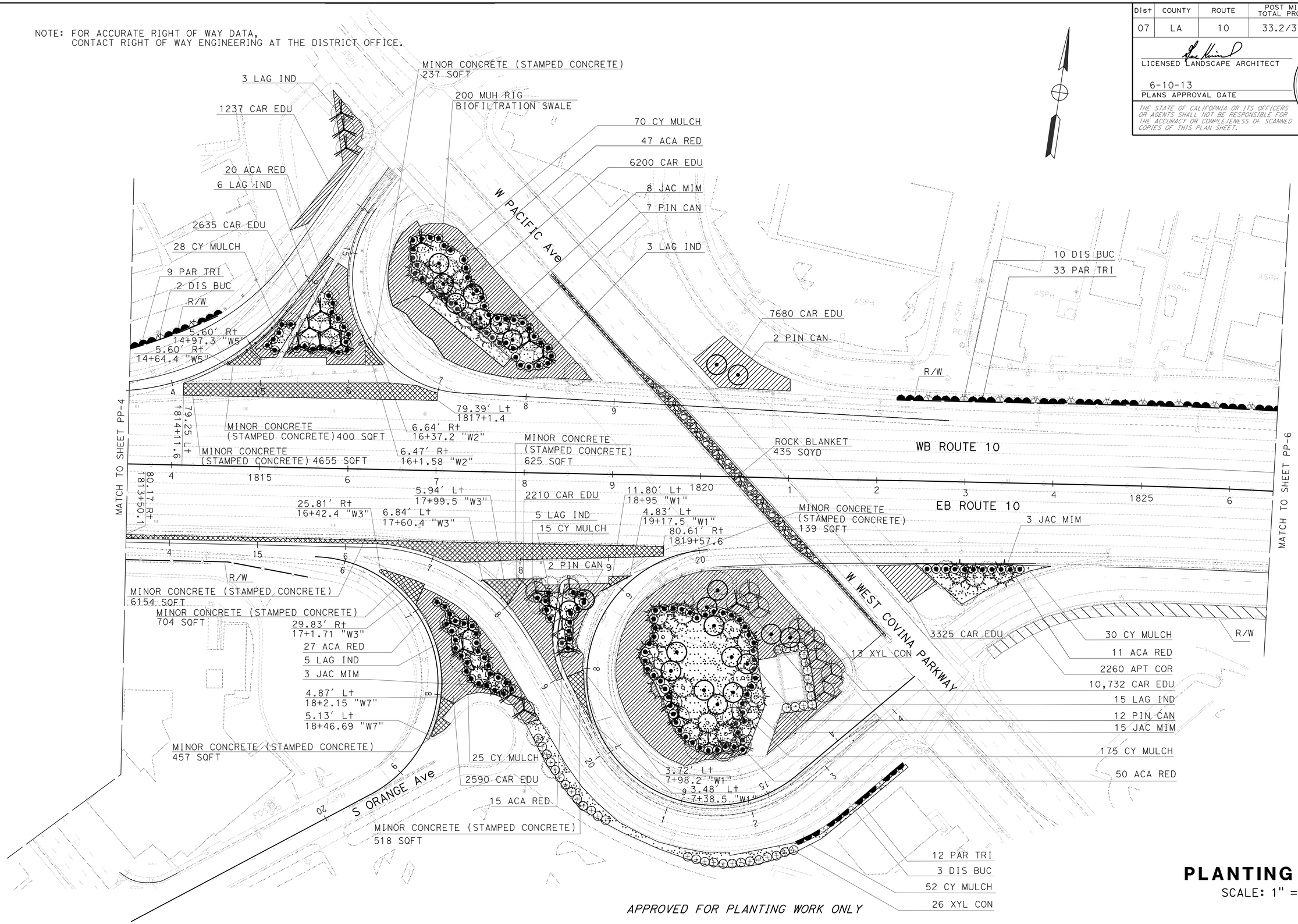



*APPROVED FOR PLANTING WORK ONLY*

# PLANTING PLAN

SCALE: 1" = 50'

**PP-5**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 07:32

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 835 | 1475 |

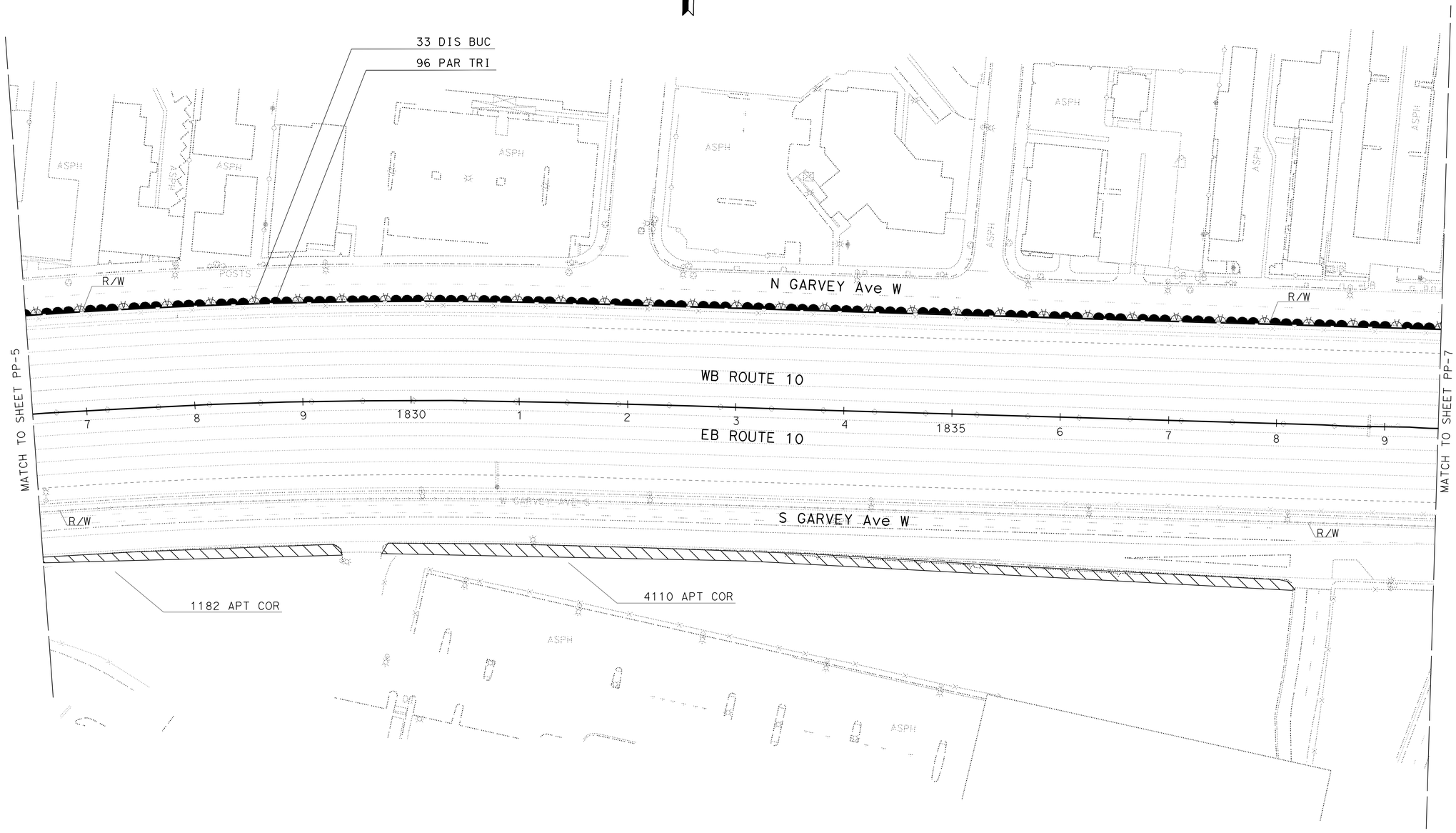
LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

NOTE: FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




*APPROVED FOR PLANTING WORK ONLY*

# PLANTING PLAN

SCALE: 1" = 50'

**PP-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:32

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 836 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

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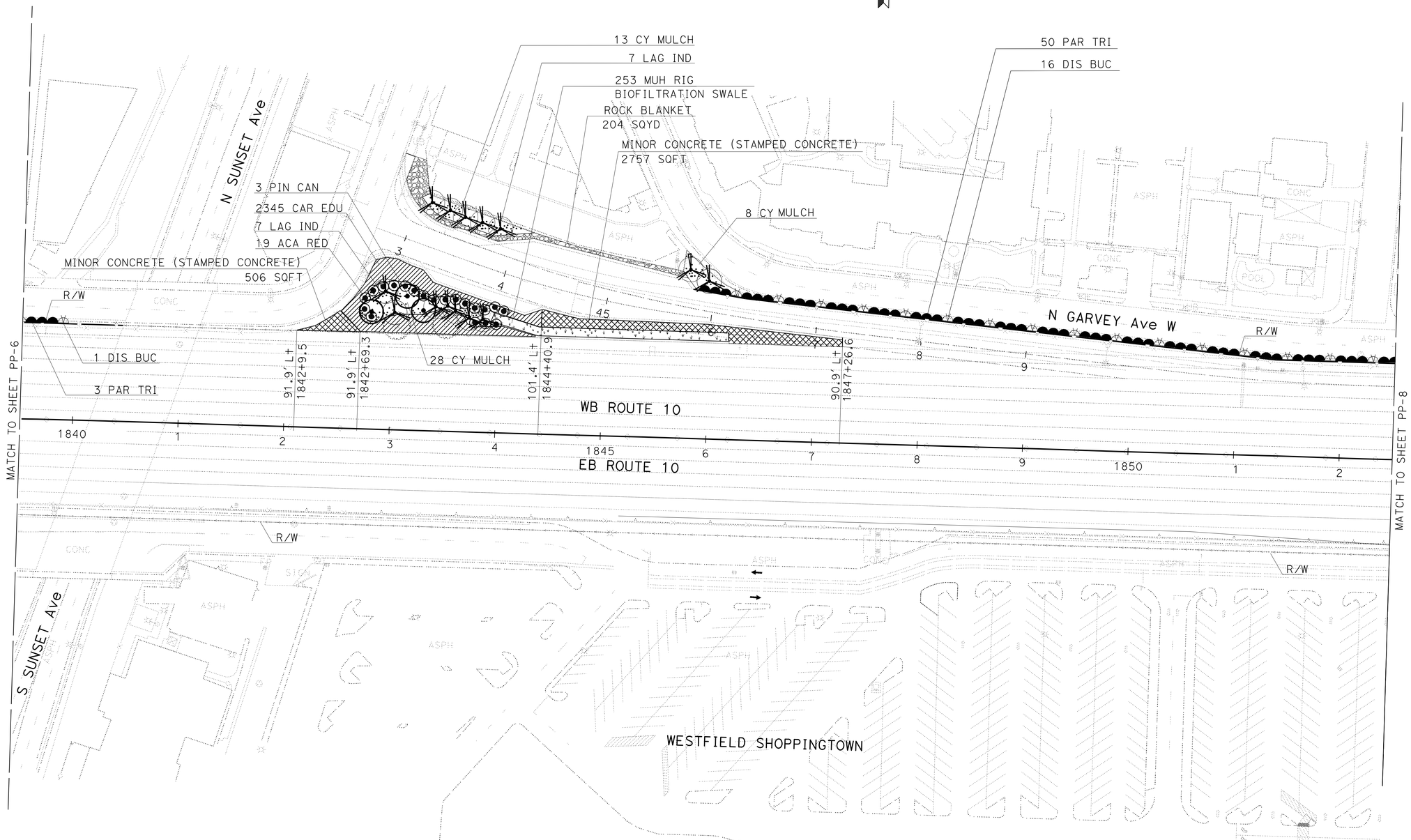


# PLANTING PLAN

SCALE: 1" = 50'

*APPROVED FOR PLANTING WORK ONLY*

**PP-7**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:32

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 837 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5104 Signature 10-31-12 Renewal date 5-5-12 Date STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

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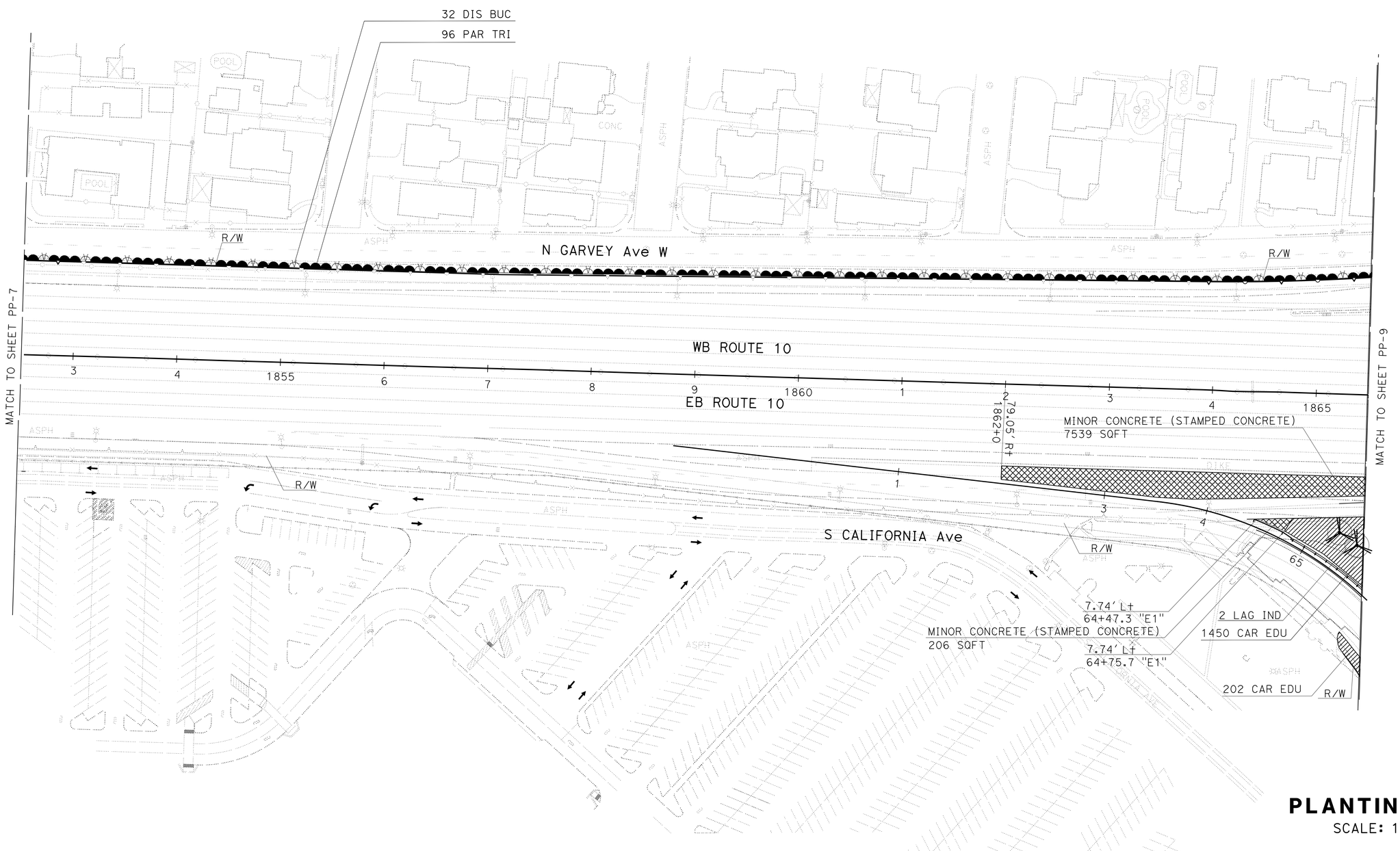


# PLANTING PLAN

SCALE: 1" = 50'

**PP-8**

*APPROVED FOR PLANTING WORK ONLY*

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:33

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 838 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5104 Registration 10-31-12 Renewal Date 5-5-12 Date STATE OF CALIFORNIA

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*APPROVED FOR PLANTING WORK ONLY*

# PLANTING PLAN

SCALE: 1" = 50'

**PP-9**

| REVISED BY | DATE REVISED |
|---|---|
| | |

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA
SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 07:33

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 839 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL No. 5104 Signature 10-31-12 Renewal date 5-5-12 Date STATE OF CALIFORNIA

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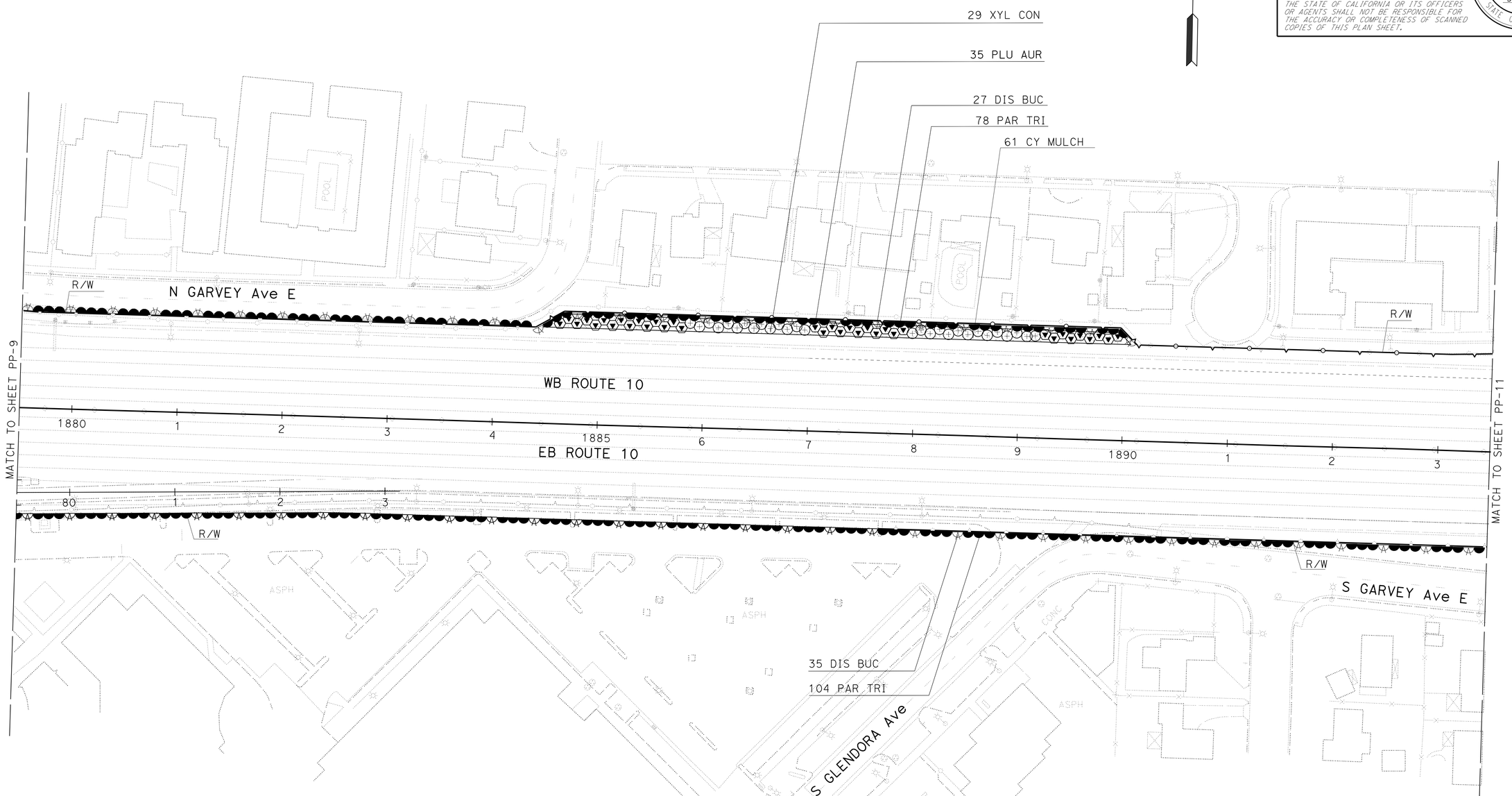


# PLANTING PLAN

SCALE: 1" = 50'

*APPROVED FOR PLANTING WORK ONLY*

**PP-10**

REVISED BY | DATE REVISED
RICH KESTER | JENNIFER TAIRA
CALCULATED-DESIGNED BY | CHECKED BY
SENIOR LANDSCAPE ARCHITECT | JENNIFER TAIRA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 TIME PLOTTED => 07:33

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 840 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal date
5-5-12
Date
STATE OF CALIFORNIA

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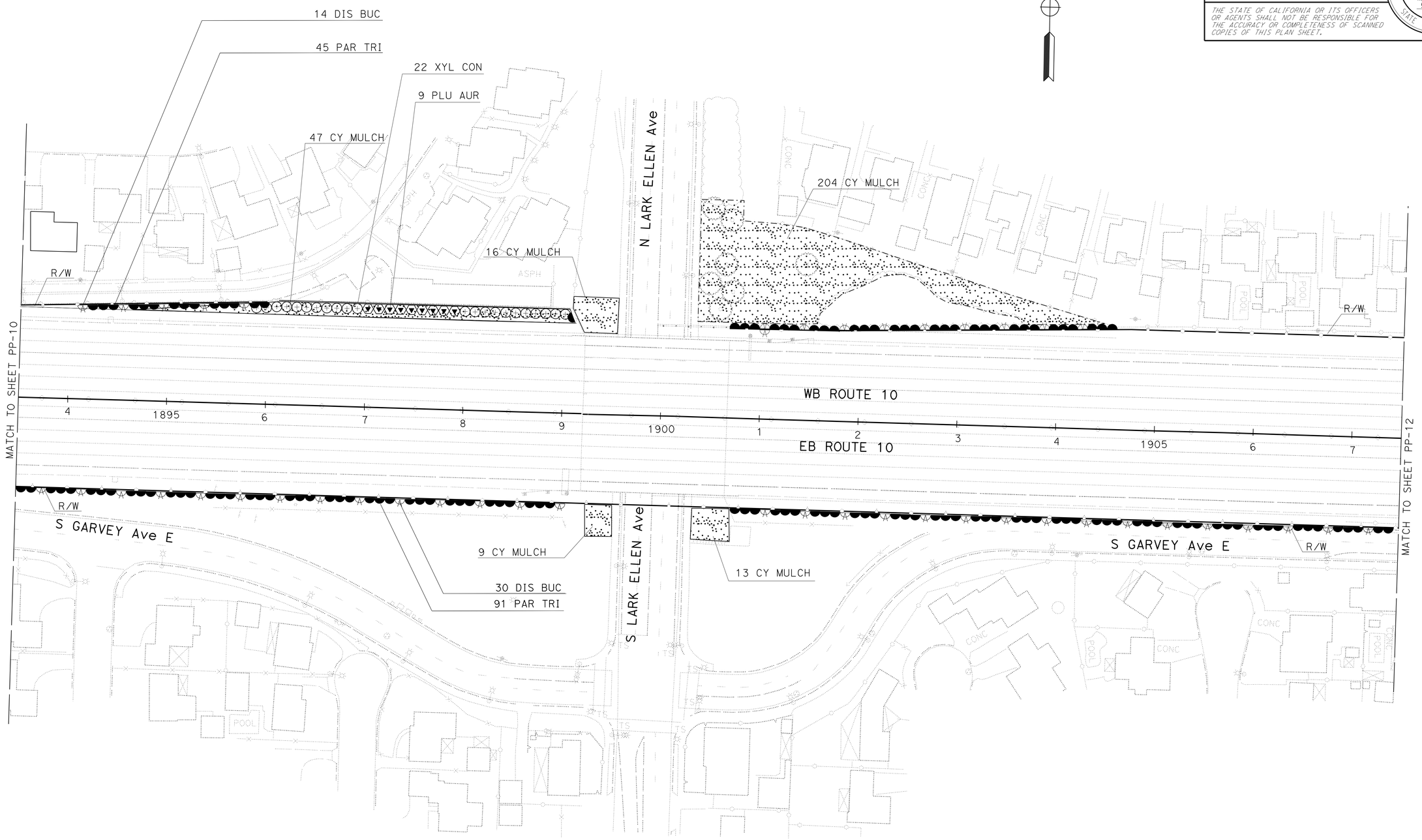


*APPROVED FOR PLANTING WORK ONLY*

# PLANTING PLAN

SCALE: 1" = 50'

**PP-11**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:33

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 841 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5104 Signature 10-31-12 Renewal Date 5-5-12 Date STATE OF CALIFORNIA

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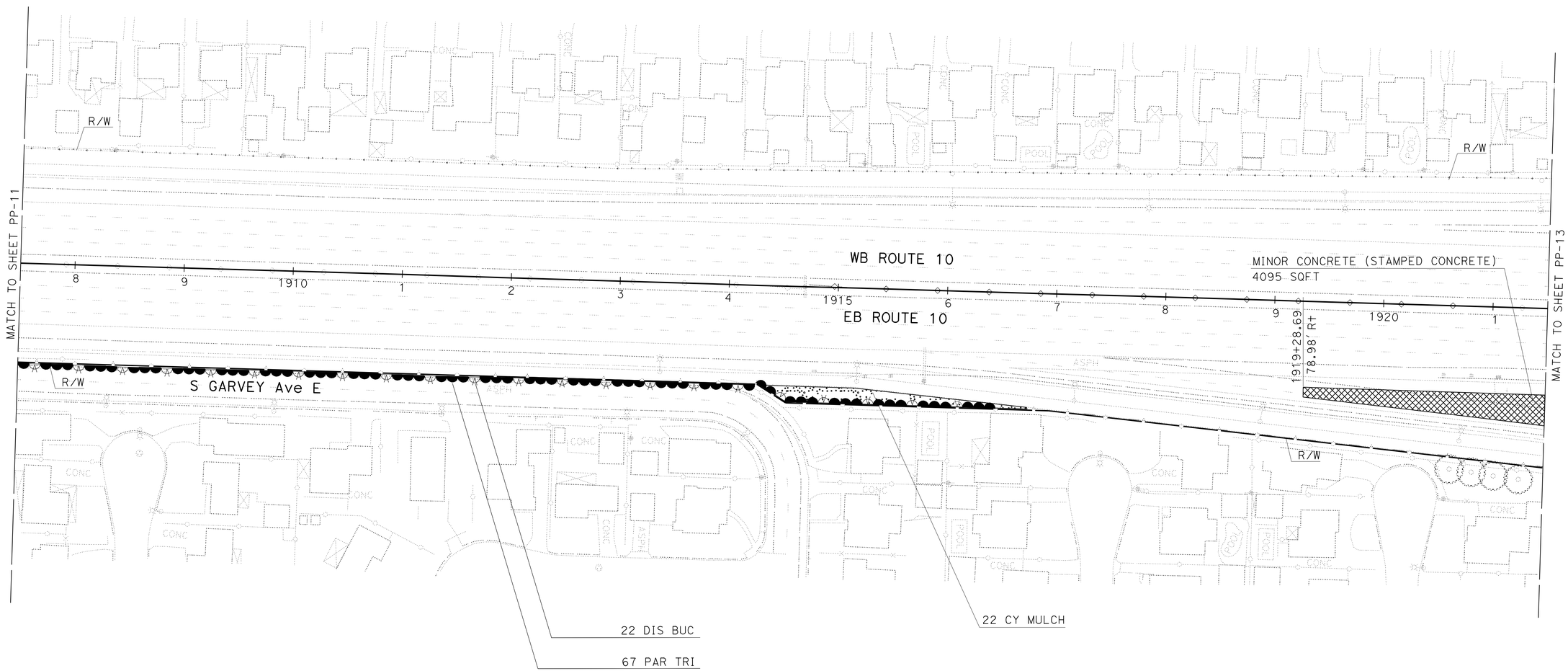


*APPROVED FOR PLANTING WORK ONLY*

# PLANTING PLAN

SCALE: 1" = 50'

**PP-12**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:33

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 842 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5104 Signature 10-31-12 Renewal date 5-5-12 Date STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

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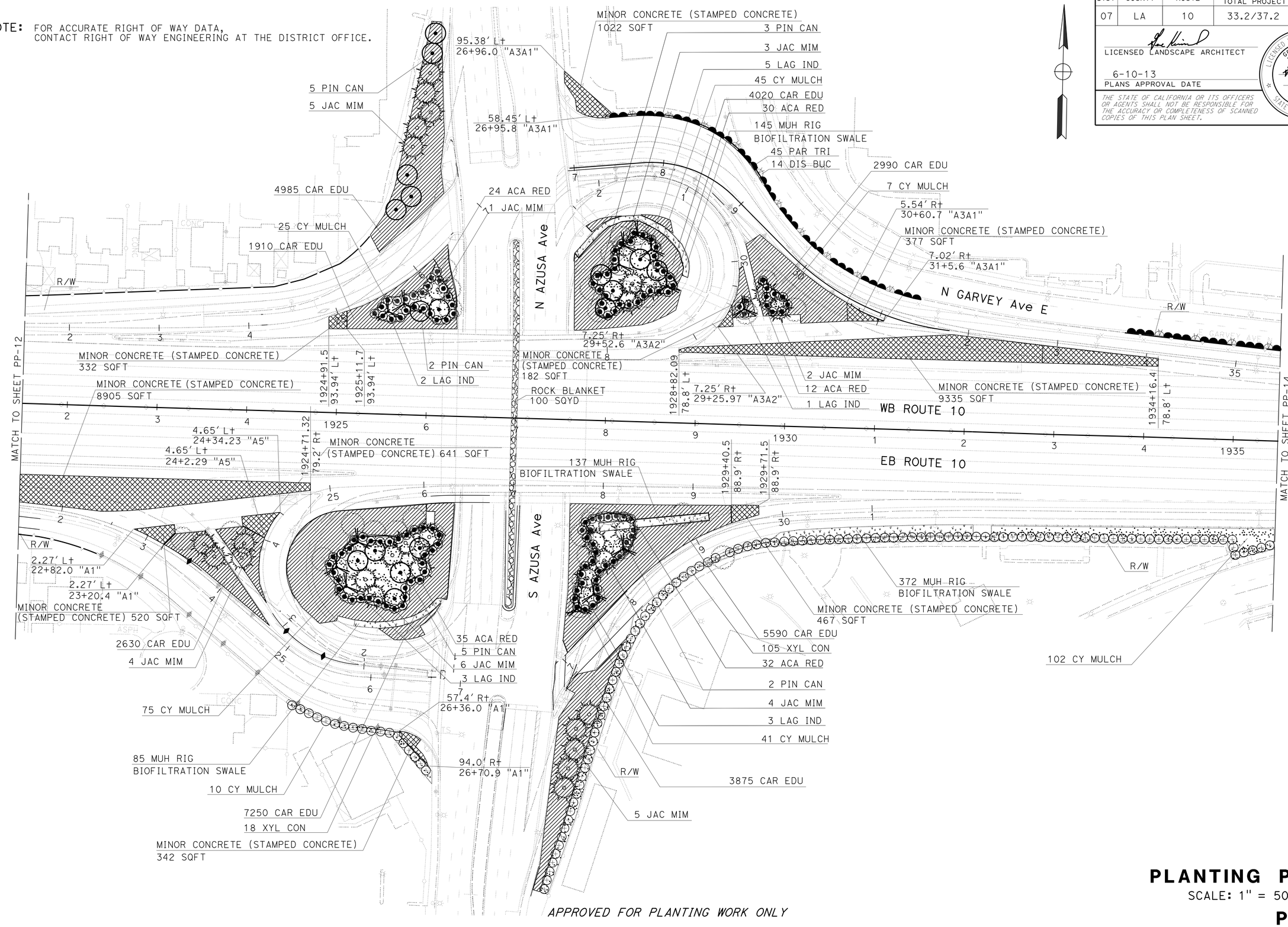



*APPROVED FOR PLANTING WORK ONLY*

# PLANTING PLAN

SCALE: 1" = 50'

**PP-13**

| REVISED BY | DATE REVISED |
|---|---|
| | |

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA
SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:33

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 843 | 1475 |

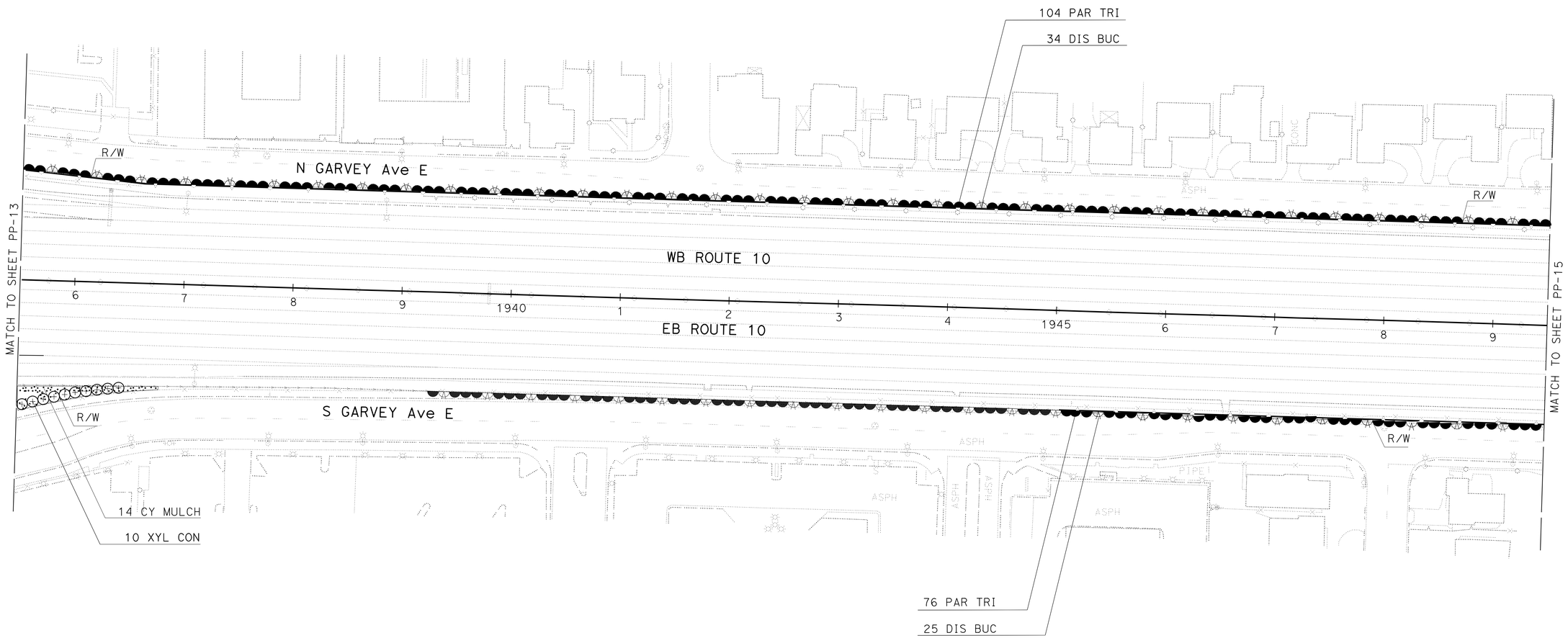
LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5109
Signature
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

NOTE: FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




# PLANTING PLAN

SCALE: 1" = 50'

**PP-14**

*APPROVED FOR PLANTING WORK ONLY*

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:33

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 844 | 1475 |

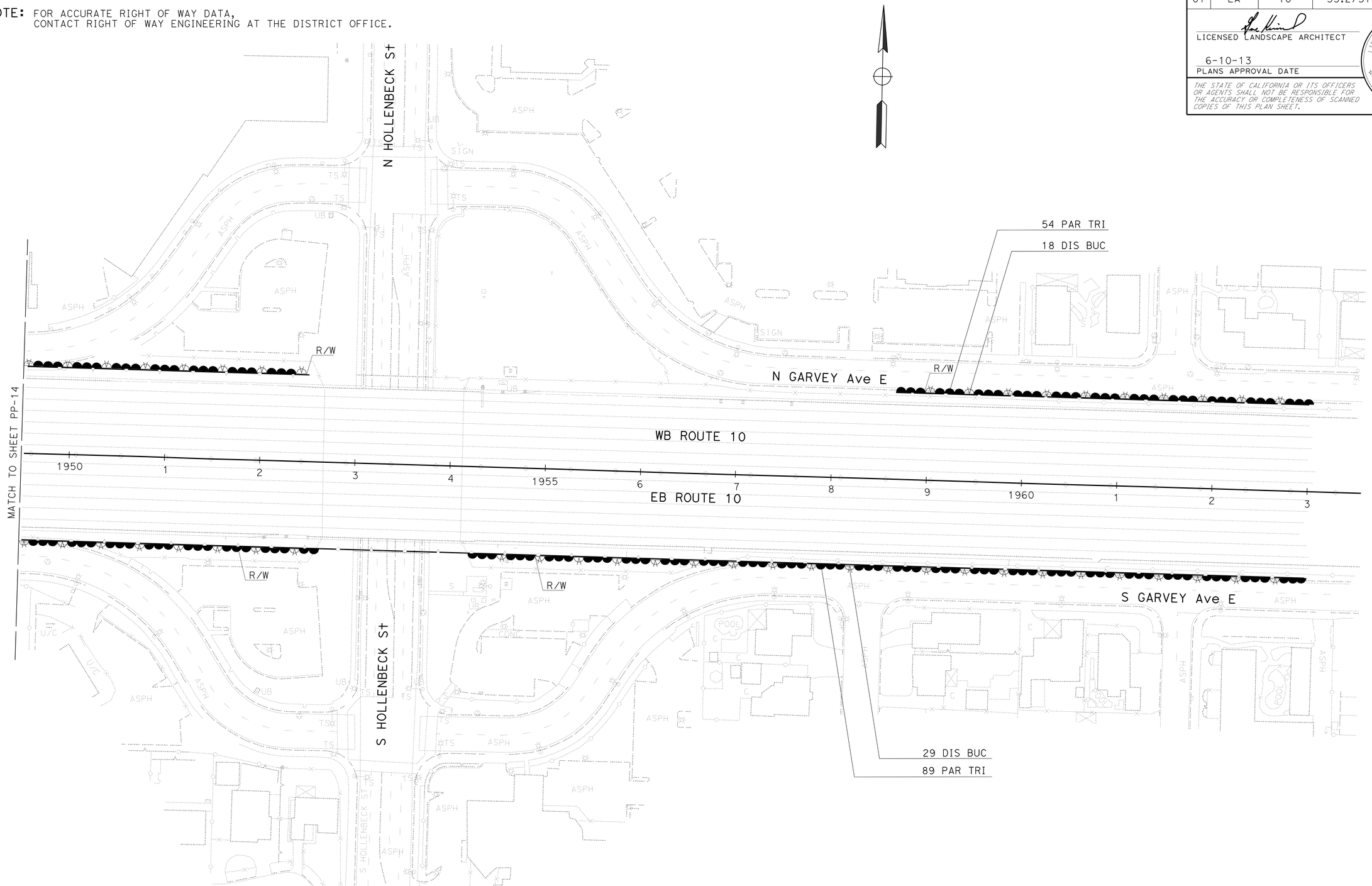
LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

NOTE: FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




*APPROVED FOR PLANTING WORK ONLY*

# PLANTING PLAN

SCALE 1" = 50'

**PP-15**

REVISED BY | DATE REVISED
RICH KESTER | JENNIFER TAIRA
CALCULATED-DESIGNED BY | CHECKED BY
SENIOR LANDSCAPE ARCHITECT | JENNIFER TAIRA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 07:33

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 845 | 1475 |

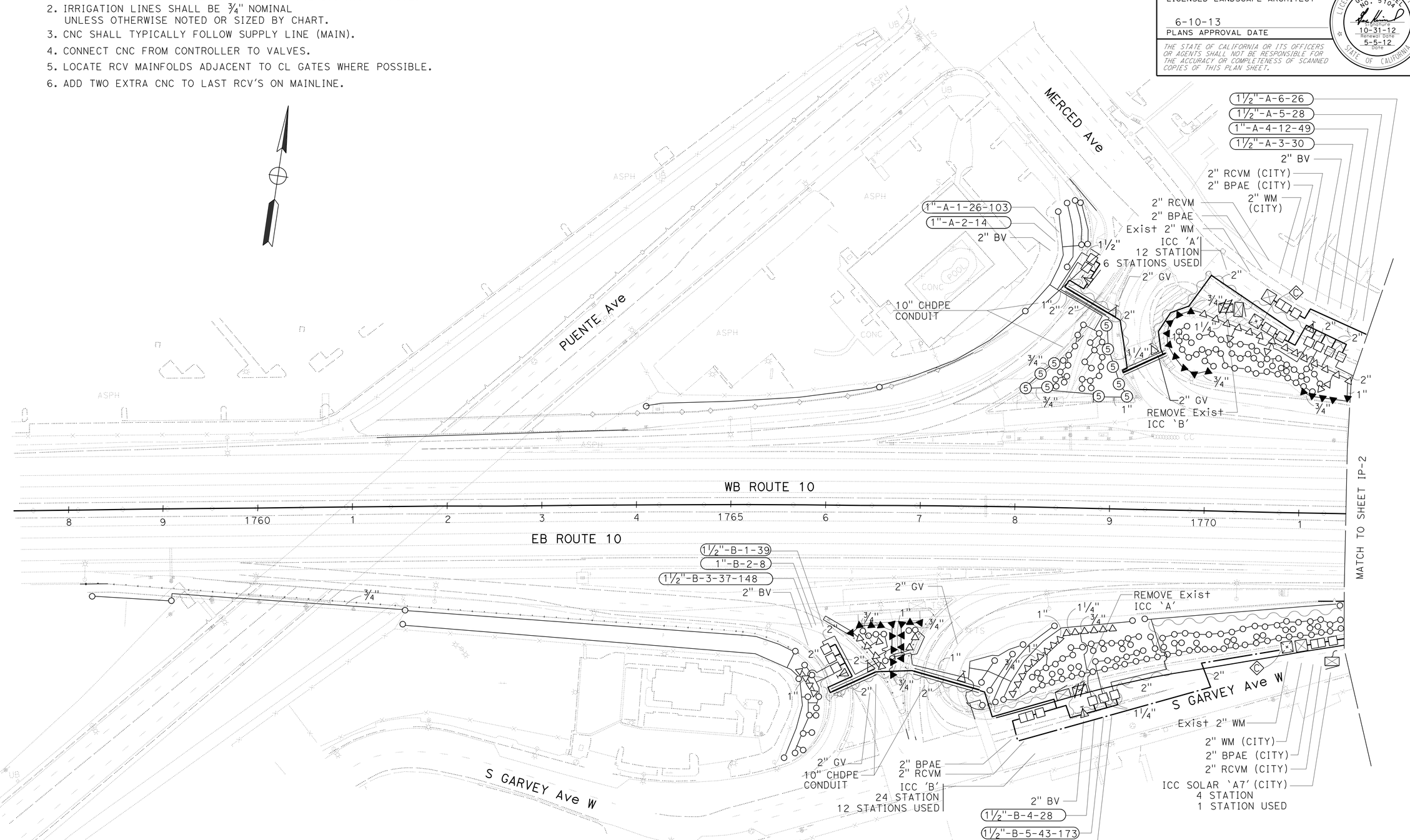
LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5704
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. IRRIGATION LINES SHALL BE ¾" NOMINAL UNLESS OTHERWISE NOTED OR SIZED BY CHART.
3. CNC SHALL TYPICALLY FOLLOW SUPPLY LINE (MAIN).
4. CONNECT CNC FROM CONTROLLER TO VALVES.
5. LOCATE RCV MAINFOLDS ADJACENT TO CL GATES WHERE POSSIBLE.
6. ADD TWO EXTRA CNC TO LAST RCV'S ON MAINLINE.




# IRRIGATION PLAN

SCALE: 1" = 50'

*APPROVED FOR IRRIGATION WORK ONLY*

**IP-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA
CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:54

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 846 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5104 Signature 10-31-12 Renewal date 5-5-12 Date STATE OF CALIFORNIA

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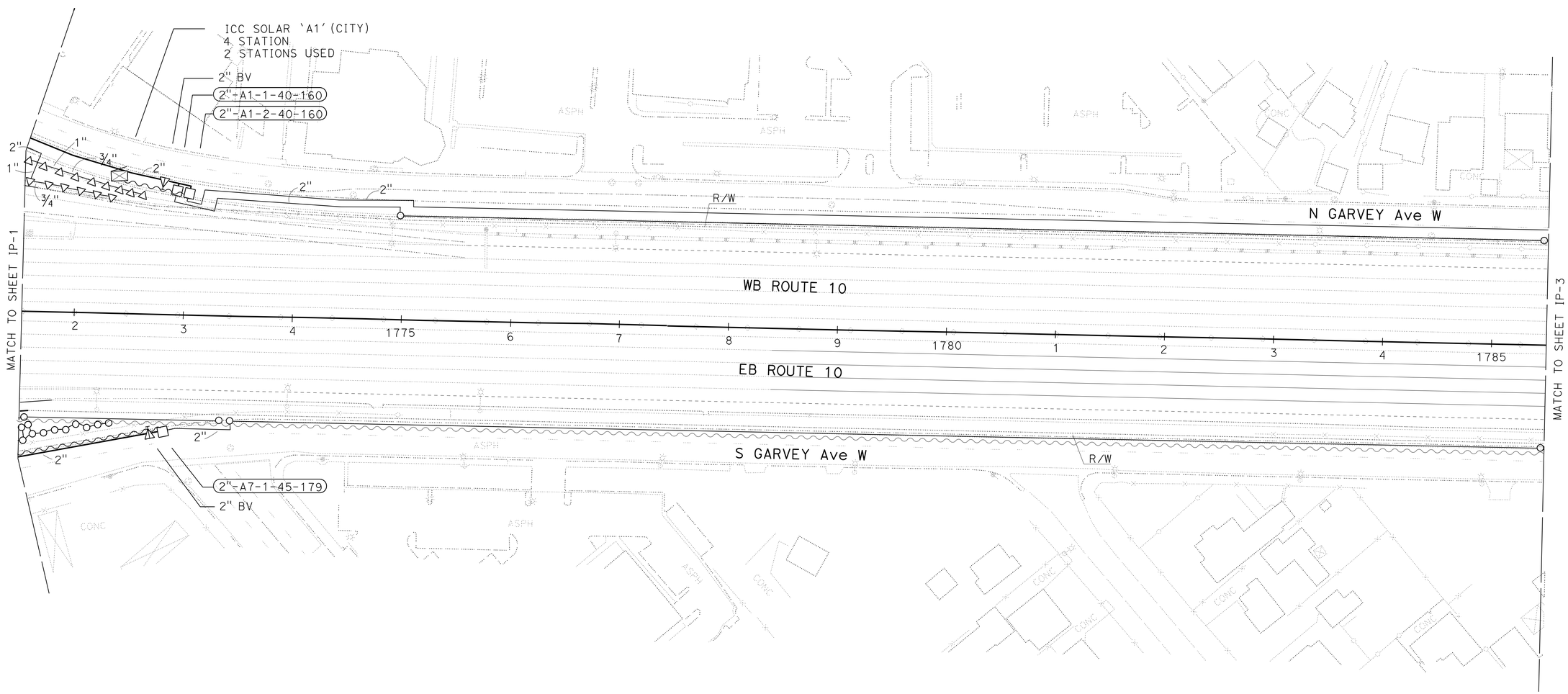
NOTE: FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




# IRRIGATION PLAN

SCALE: 1" = 50'

*APPROVED FOR IRRIGATION WORK ONLY*

**IP-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:54

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 847 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

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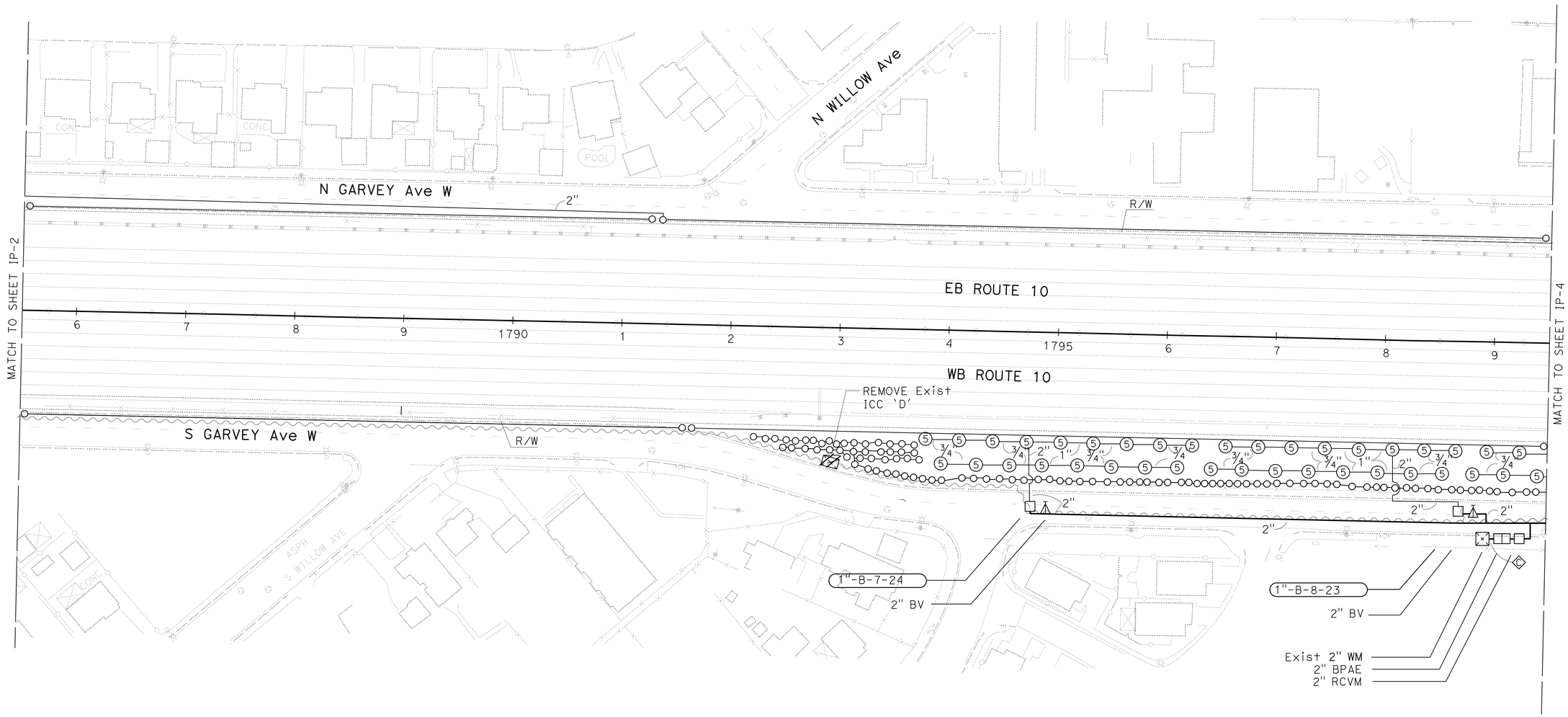


*APPROVED FOR IRRIGATION WORK ONLY*

# IRRIGATION PLAN

SCALE 1" = 50'

**IP-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:54

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 848 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5704
Signature
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

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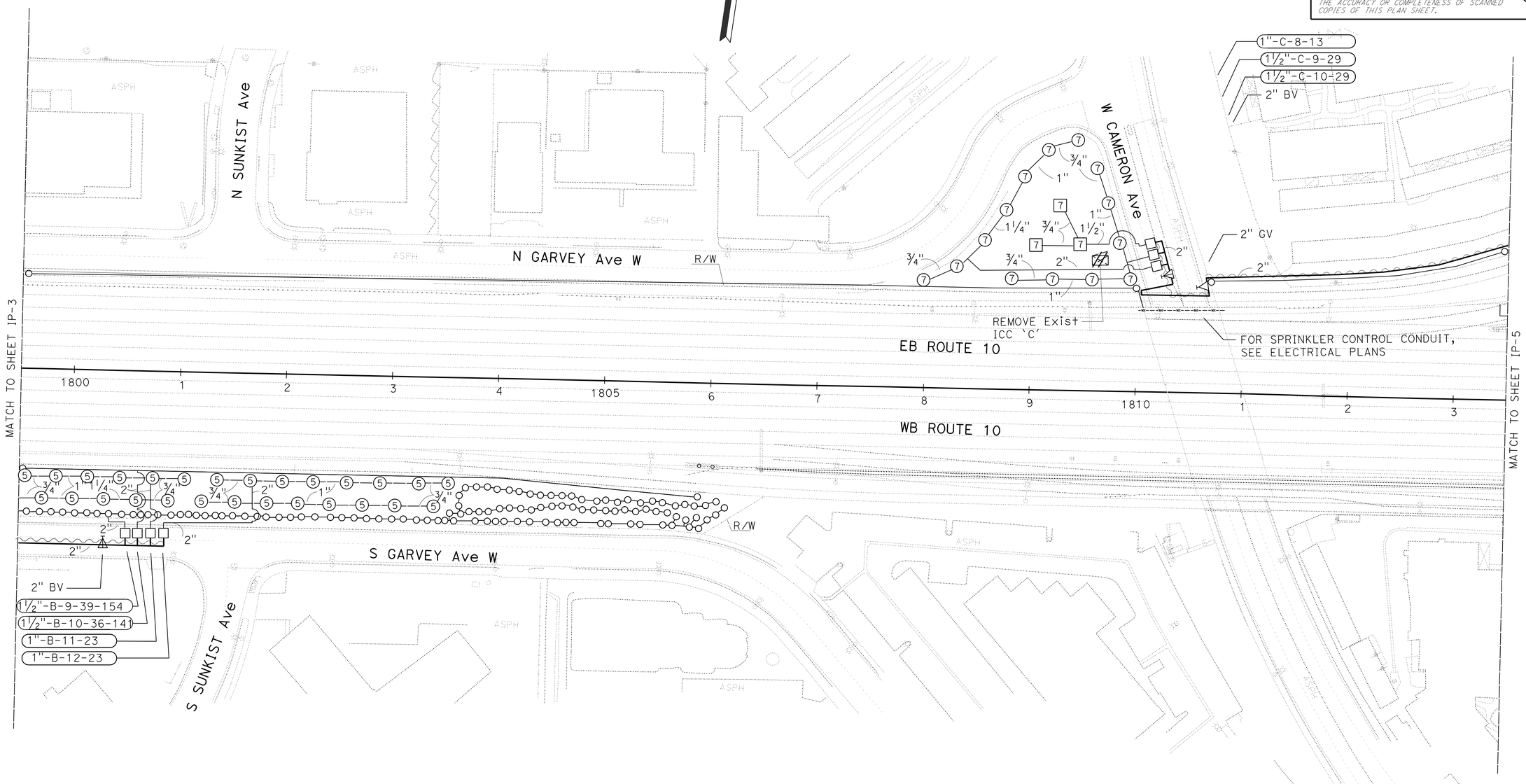


# IRRIGATION PLAN

SCALE: 1" = 50'

*APPROVED FOR IRRIGATION WORK ONLY*

**IP-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 09:54

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 849 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5104 Signature 10-31-12 Renewal Date 5-5-12 Date STATE OF CALIFORNIA

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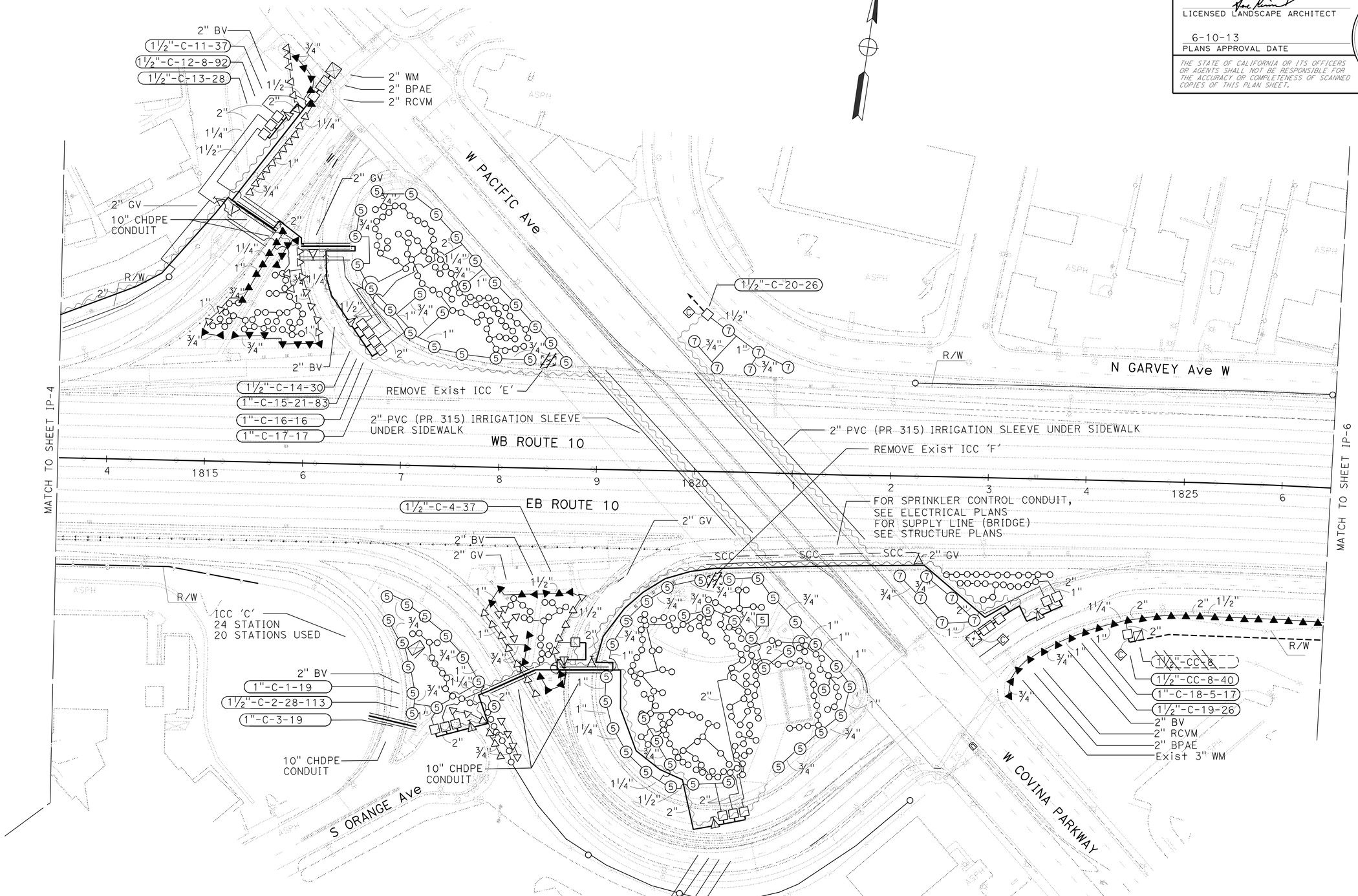


APPROVED FOR IRRIGATION WORK ONLY

# IRRIGATION PLAN

SCALE: 1" = 50'

IP-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA
CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:54

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 850 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal date
5-5-12
Date
STATE OF CALIFORNIA

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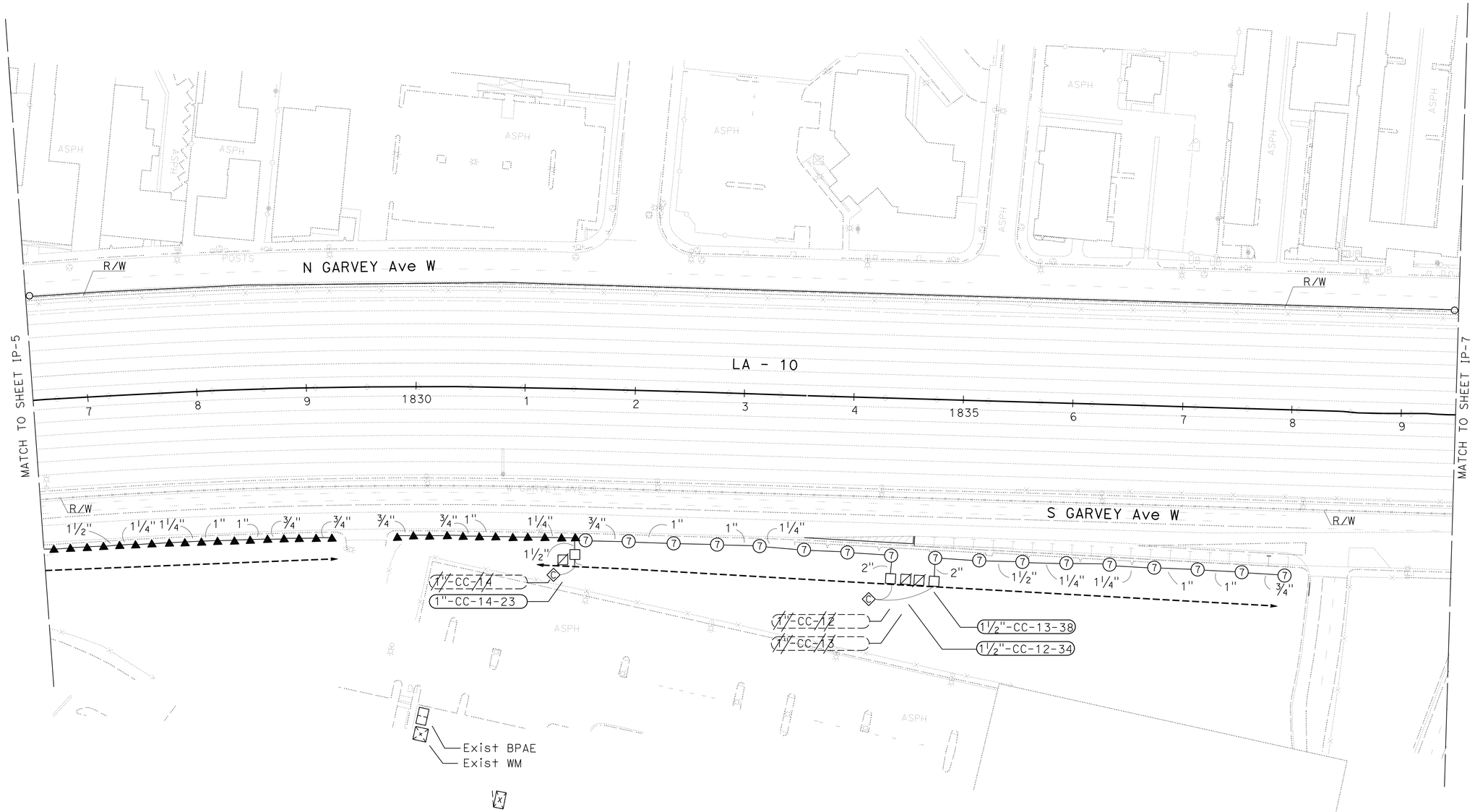


*APPROVED FOR IRRIGATION WORK ONLY*

# IRRIGATION PLAN

SCALE 1" = 50'

**IP-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:54

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 851 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal date
5-5-12
Date
STATE OF CALIFORNIA

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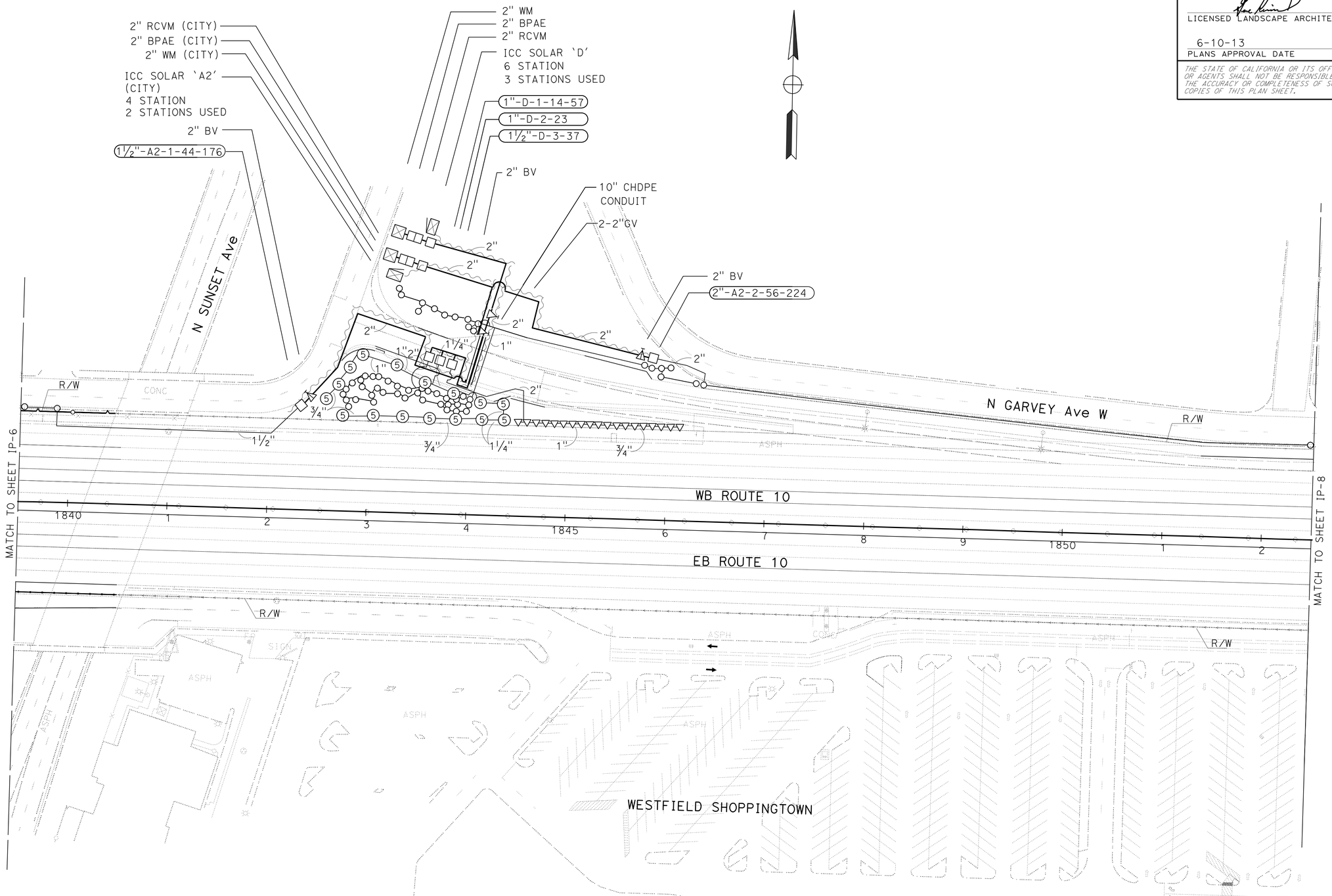


# IRRIGATION PLAN

SCALE: 1" = 50'

*APPROVED FOR IRRIGATION WORK ONLY*

**IP-7**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:54

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 852 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

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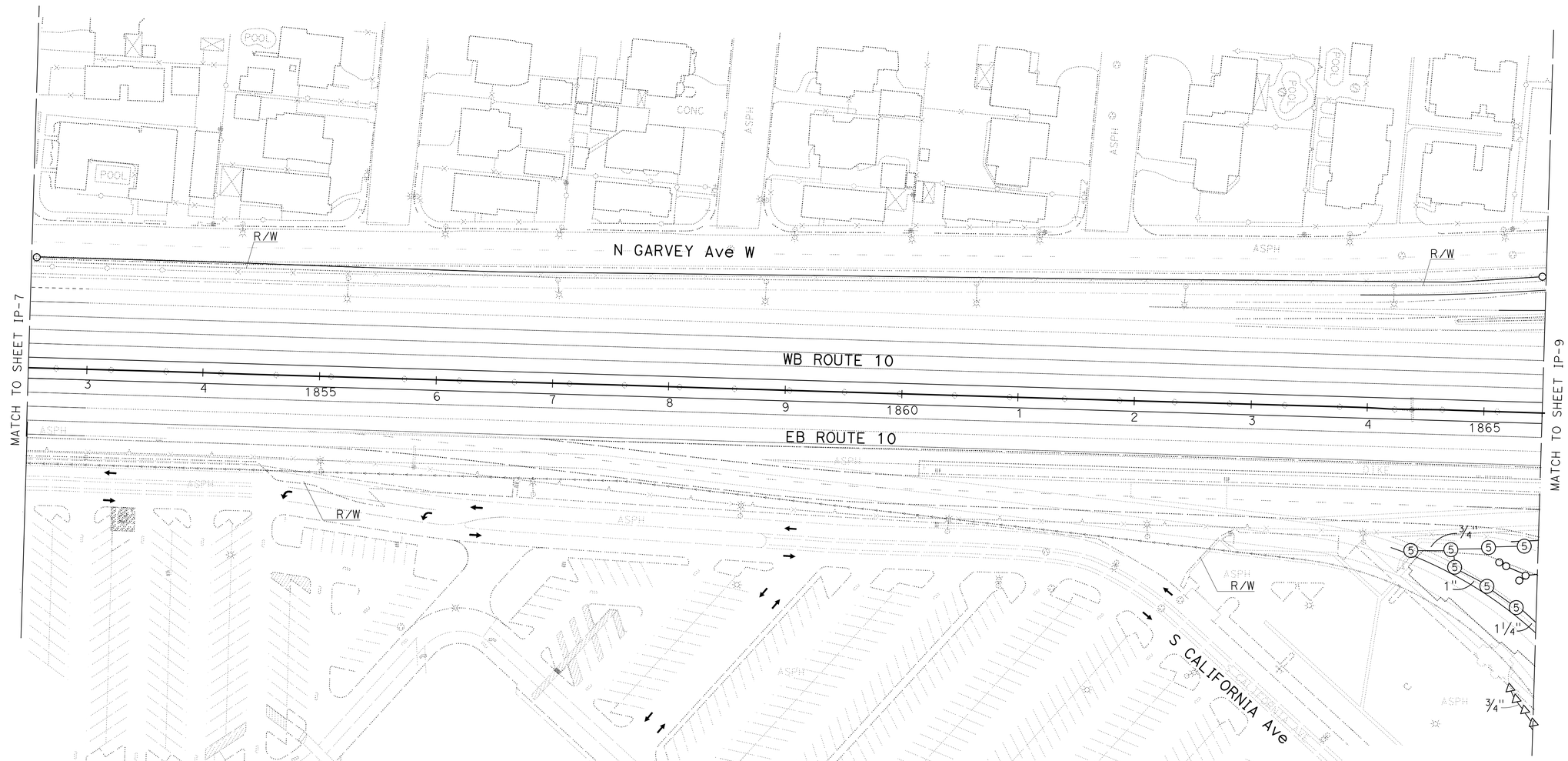


*APPROVED FOR IRRIGATION WORK ONLY*

# IRRIGATION PLAN

SCALE: 1" = 50'

**IP-8**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:54

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 853 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5104 Expiration Date 10-31-12 Renewal Date 5-5-12 Date STATE OF CALIFORNIA

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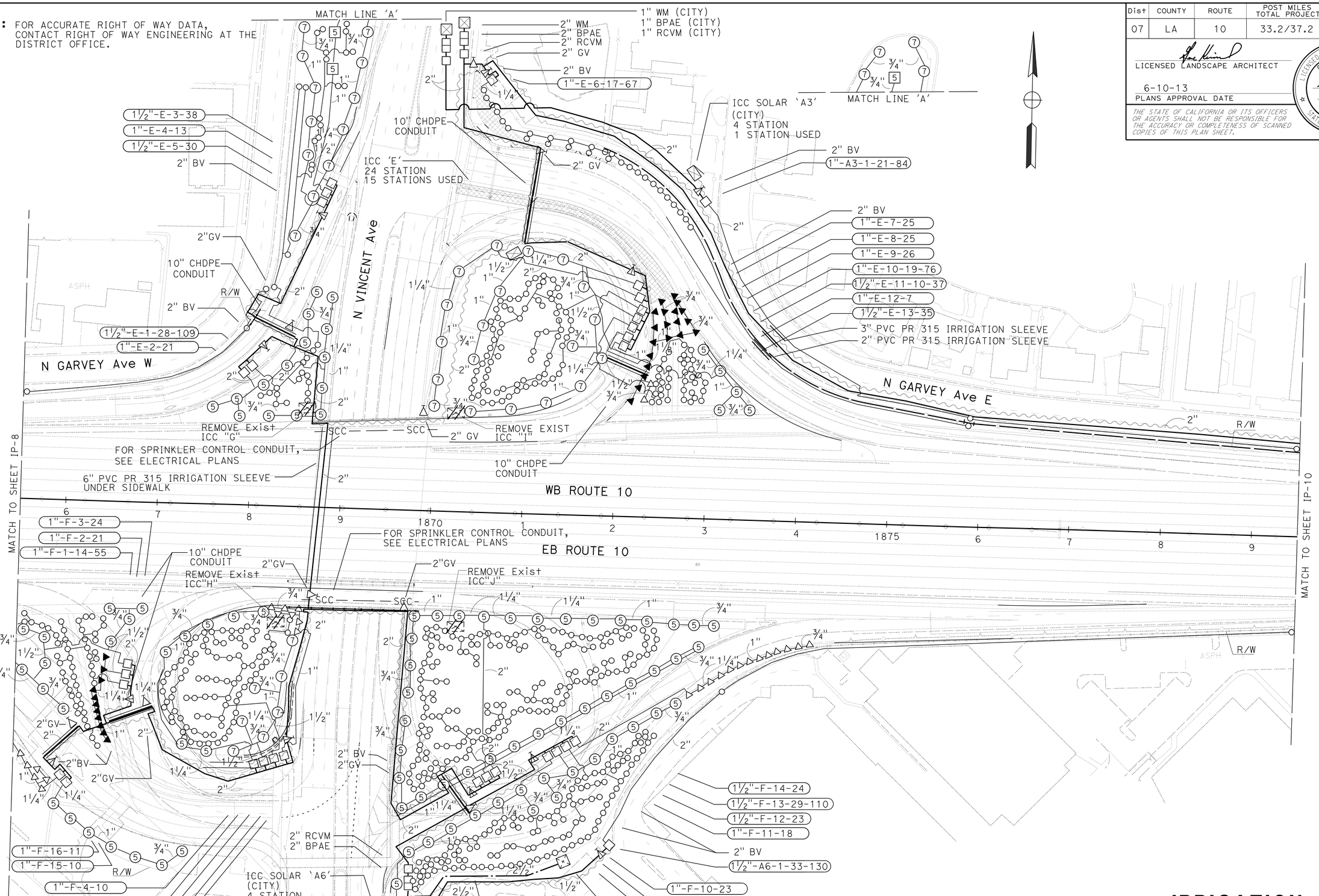


*APPROVED FOR IRRIGATION WORK ONLY*

# IRRIGATION PLAN

SCALE: 1" = 50'

**IP-9**

| REVISED BY | DATE REVISED |
|---|---|
| RICH KESTER | JENNIFER TAIRA |

CALCULATED-DESIGNED BY / CHECKED BY

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® LANDSCAPE ARCHITECTURE

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 09:54

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 854 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

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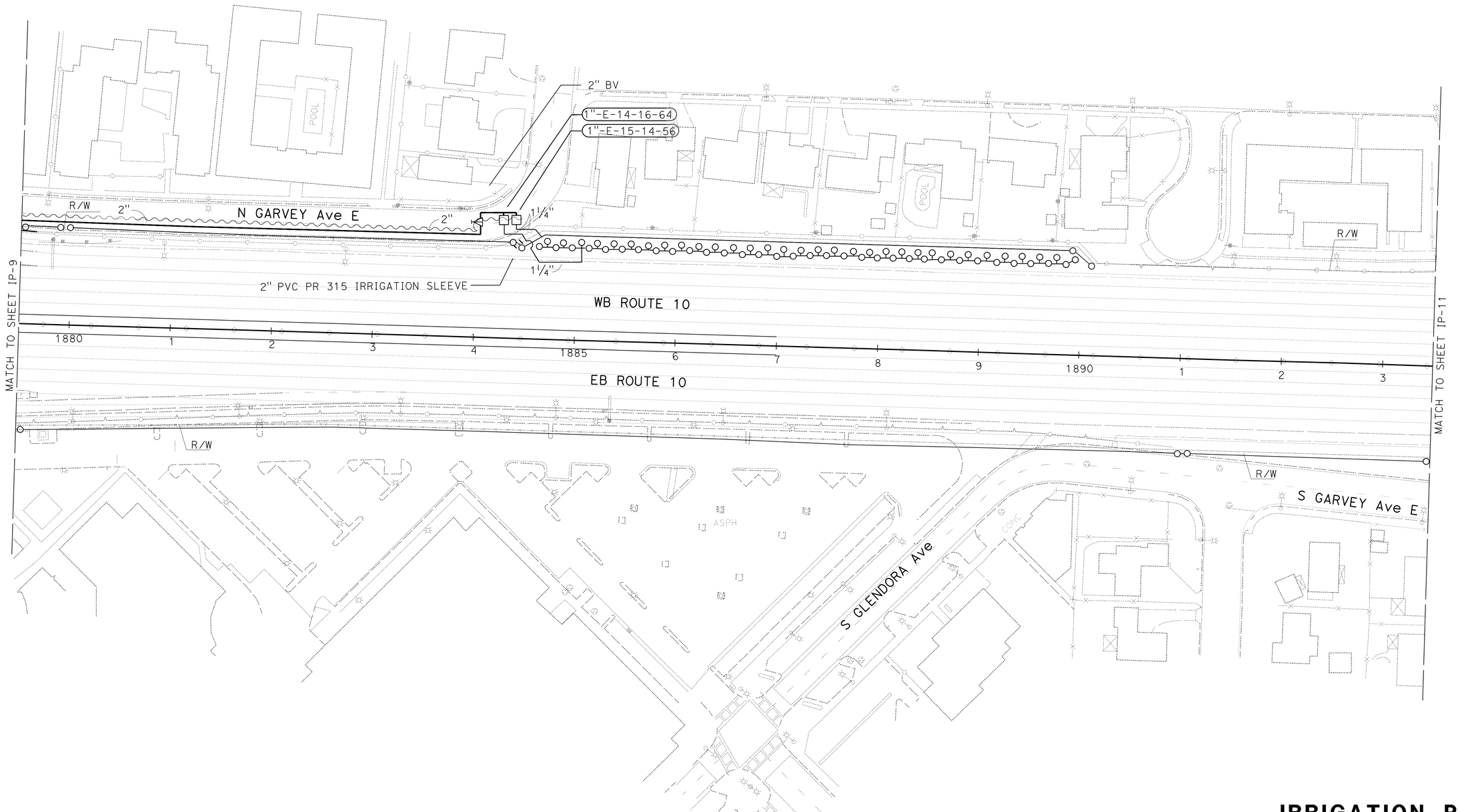


*APPROVED FOR IRRIGATION WORK ONLY*

# IRRIGATION PLAN

SCALE: 1" = 50'

**IP-10**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:54

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 855 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5704 Signature 10-31-12 Renewal date 5-5-12 Date STATE OF CALIFORNIA

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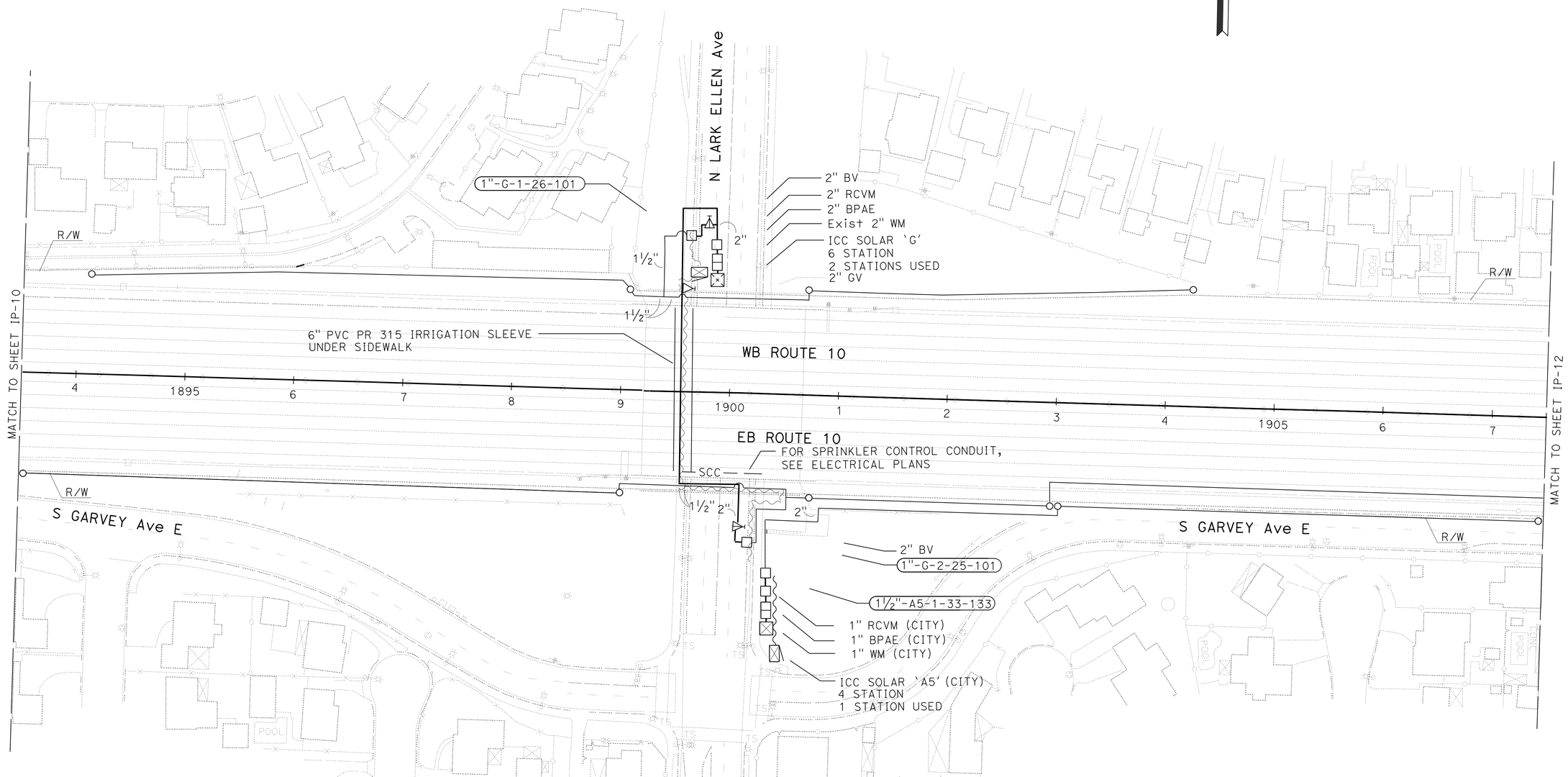



# IRRIGATION PLAN

SCALE: 1" = 50'

*APPROVED FOR IRRIGATION WORK ONLY*

**IP-11**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:54

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 856 | 1475 |

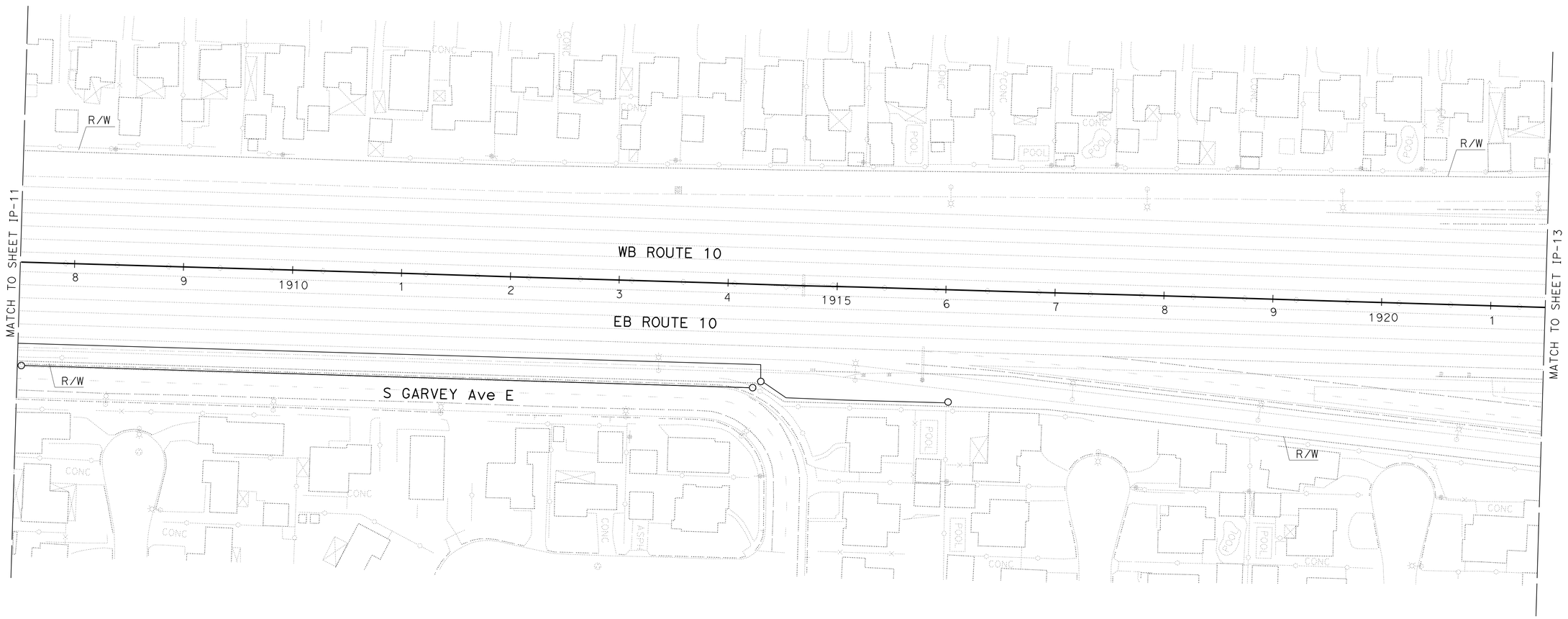
LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

NOTE: FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




# IRRIGATION PLAN

SCALE: 1" = 50'

**IP-12**

*APPROVED FOR IRRIGATION WORK ONLY*

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:55

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 857 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5704 Signature 10-31-12 Renewal date 5-5-12 Date STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

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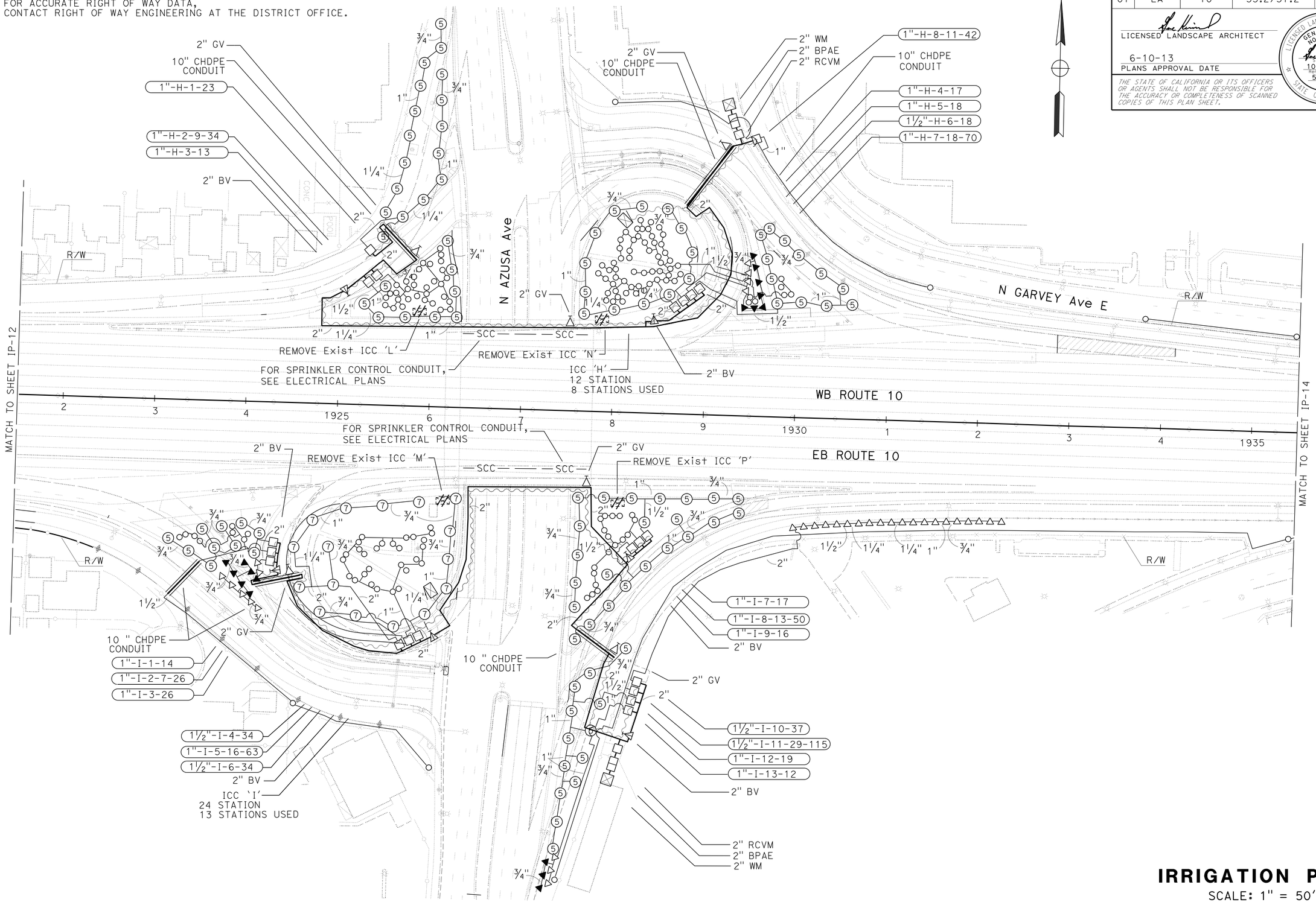


# IRRIGATION PLAN

SCALE: 1" = 50'

**IP-13**

*APPROVED FOR IRRIGATION WORK ONLY*

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 09:55

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 858 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5704
Signature
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

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**NOTE:** FOR ACCURATE RIGHT OF WAY DATA,
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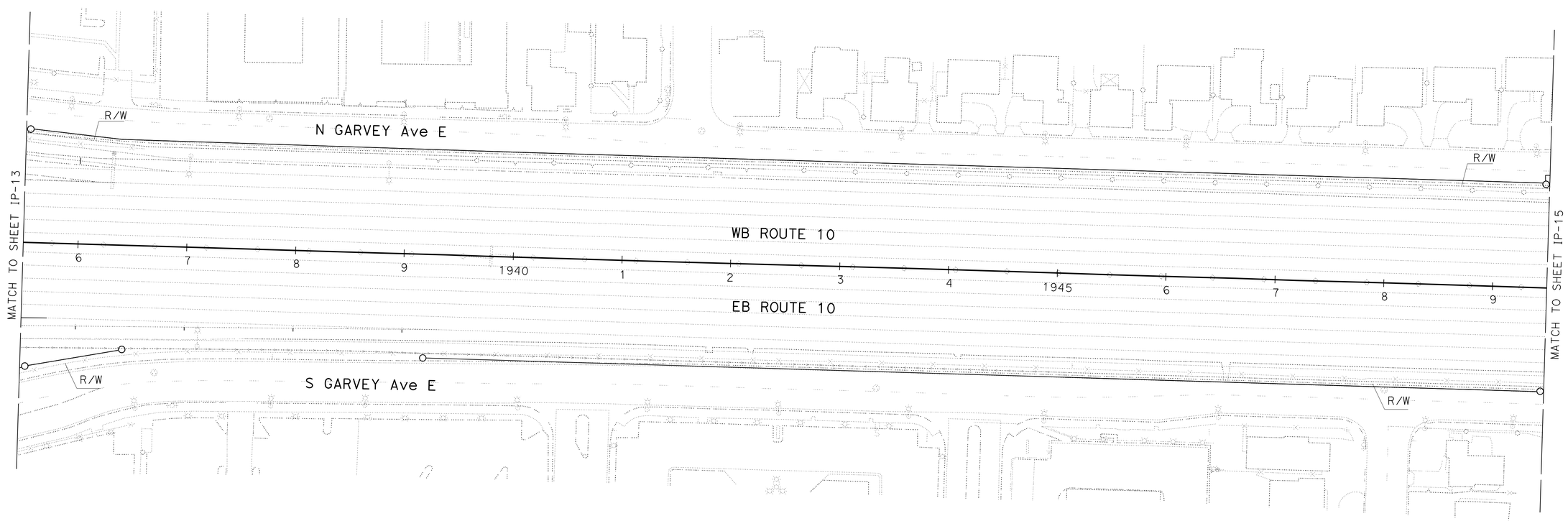


*APPROVED FOR IRRIGATION WORK ONLY*

# IRRIGATION PLAN

SCALE: 1" = 50'

**IP-14**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA

CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:55

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 859 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

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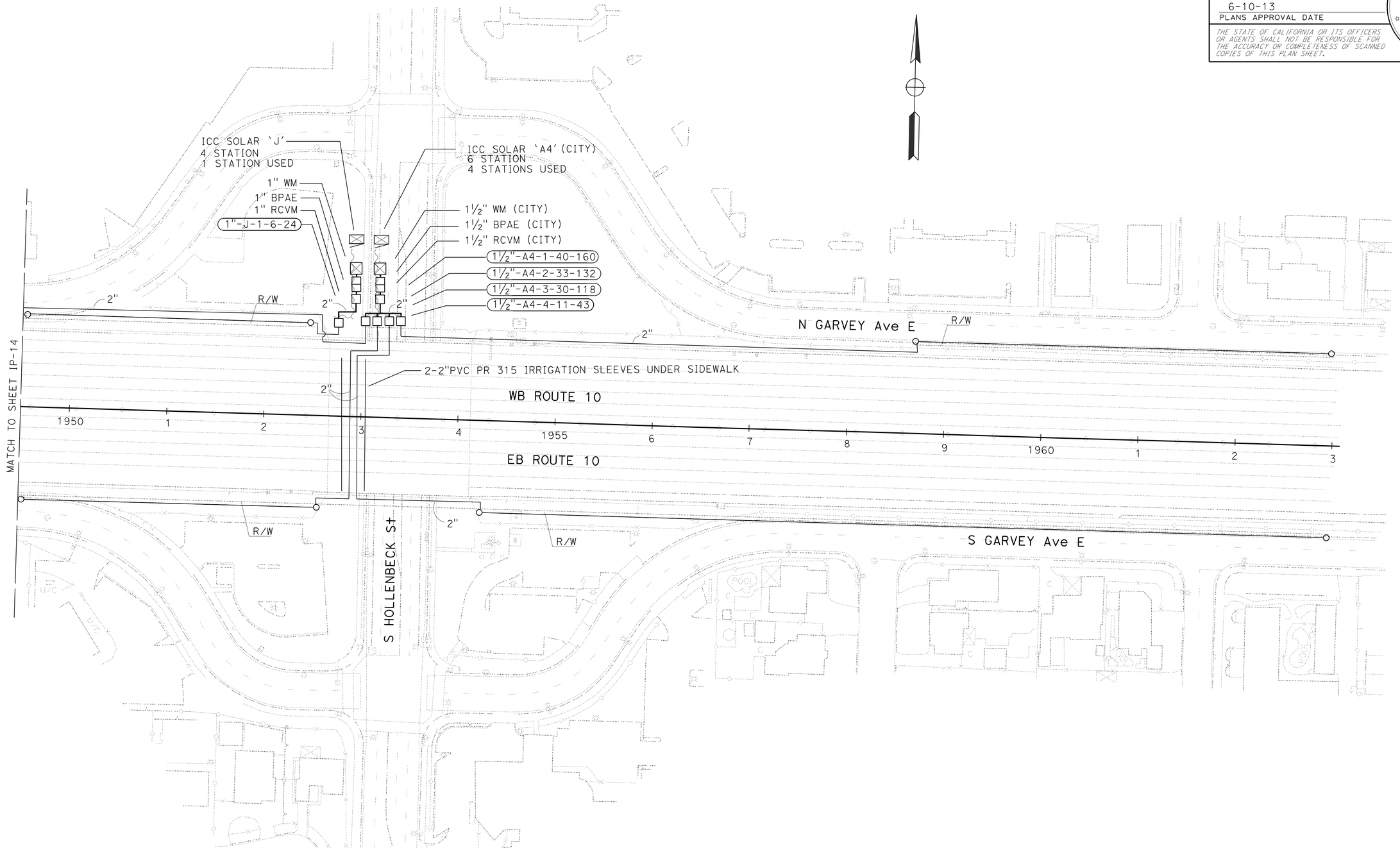



*APPROVED FOR IRRIGATION WORK ONLY*

# IRRIGATION PLAN

SCALE: 1" = 50'

**IP-15**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA
CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 09:55

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 860 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT GENE KIMMEL NO. 5704 Signature 10-31-12 Renewal Date 5-5-12 Date STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

## SPRINKLER SCHEDULE

| SYMBOL | TYPE | DESCRIPTION | SPRAY PATTERN | OPERATING PRESSURE (psi) | PRESSURE COMPENSATING | PLUS/MINUS 5% DISCHARGE: GALLONS PER MINUTE (GPM) | GALLONS PER HOUR (GPH) | RADIUS (ft) | WIDTH x LENGTH (ft) | MATERIAL | INLET CONNECTION (NPT INCH) | POSITIVE-LOCKING Adj ARC STOP | BACKSPLASH PREVENTER | DIFFUSER PIN | DISTANCE CONTROL FLAP | Adj DISCHARGE | RISER: TYPE | MATERIAL: PLASTIC | GALVANIZED | SIZE (IPS INCH) | HEIGHT (INCH) | FLOW SHUTOFF DEVICE | ⑤ SWING JOINT (TYPE) | RISER SUPPORT | SPRINKLER PROTECTOR (TYPE) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ⑤ | A-5 | GEAR DRIVEN | P | 35 | X | 1.4 | — | 31′ | — | PL | ¾" | — | — | — | — | X | IV | X | — | ½" | 18" | X | I | X | — | |
| 5 | A-5 | GEAR DRIVEN | F | 35 | X | 2.8 | — | 31′ | — | PL | ¾" | — | — | — | — | X | IV | X | — | ½" | 18" | X | I | X | — | |
| ⑦ | A-7 | GEAR DRIVEN | P | 35 | X | 4.20 | — | 40′ | — | PL | ¾" | — | — | — | — | X | IV | X | — | ½" | 18" | X | I | X | — | |
| 7 | A-7 | GEAR DRIVEN | F | 35 | X | 4.20 | — | 40′ | — | PL | ¾" | — | — | — | — | X | IV | X | — | ½" | 18" | X | I | X | — | |
| △ | B-1 | SHRUB SPRAY | P | 30 | X | .92 1.85 | — | 15′ | — | PL | ½" | — | — | — | — | X | IV | X | — | ½" | 12" | X | I | — | — | |
| ▲ | B-2 | SHRUB SPRAY | P | 30 | X | .92 1.85 | — | 15′ | — | PL | ½" | — | — | — | — | X | IV | X | — | ½" | 12" | X | I | — | — | |
| ○ | C-2 | BUBBLER | — | 30 | — | .25 | — | 5′ | — | PL | ½" | — | — | — | — | — | V | X | — | ½" | 4" | — | — | — | — | ONE 0.25 GPM PER SHRUB, VINE TWO 0.25 GPM PER TREE |

**APPLICABLE WHEN CIRCLED BELOW:**

1 - SEE SPECIAL PROVISIONS.
2 - IF A PRESSURE COMPENSATING DEVICE IS SPECIFIED, THE DISCHARGE AND RADII SHOWN REFLECT ITS USE.
3 - ARC STOP SHALL BE FITTED WITH A NUT AND BOLT.
4 - VINYL-COATED CAST IRON HOUSING.
⑤ - SWING JOINTS REQUIRED ADJACENT TO SHOULDERS, CURBS, SIDEWALKS, AND DIKES.
6 - UNLESS OTHERWISE SHOWN ON PLANS.

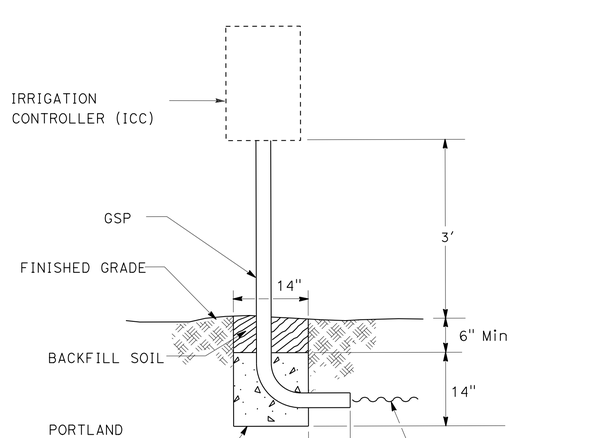
**X IN BOX DENOTES REQUIREMENT**

NOTE:

1. IRRIGATION LINES SHALL BE ¾" NOMINAL UNLESS OTHERWISE NOTED OR SIZED BY CHART
2. CNC SHALL FOLLOW SUPPLY LINE (MAIN) UNLESS OTHERWISE SHOWN.
3. CONNECT CNC FROM CONTROLLER TO VALVES.
4. LOCATE RCV MANIFOLDS ADJACENT TO CL GATES WHERE POSSIBLE
5. ADD TWO EXTRA CNC TO LAST RCV'S ON MAINLINE.

SPRINKLERS (C-2) SIZING CHART

| NUMBER OF SPRINKLERS | SIZE OF PIPE |
|---|---|
| 1 --- 40 | ¾" |
| 41 -- 60 | 1" |
| 61 -- 100 | 1¼" |
| 101-- 140 | 1½" |
| 141 -- 220 | 2" |




**SOLAR IRRIGATION CONTROLLER**
NOT TO SCALE

# LANDSCAPE DETAILS

**LD-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE
SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA
CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA
REVISED BY / DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 07:19

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 861 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal date
5-5-12
Date
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

## IRRIGATION CROSSOVERS

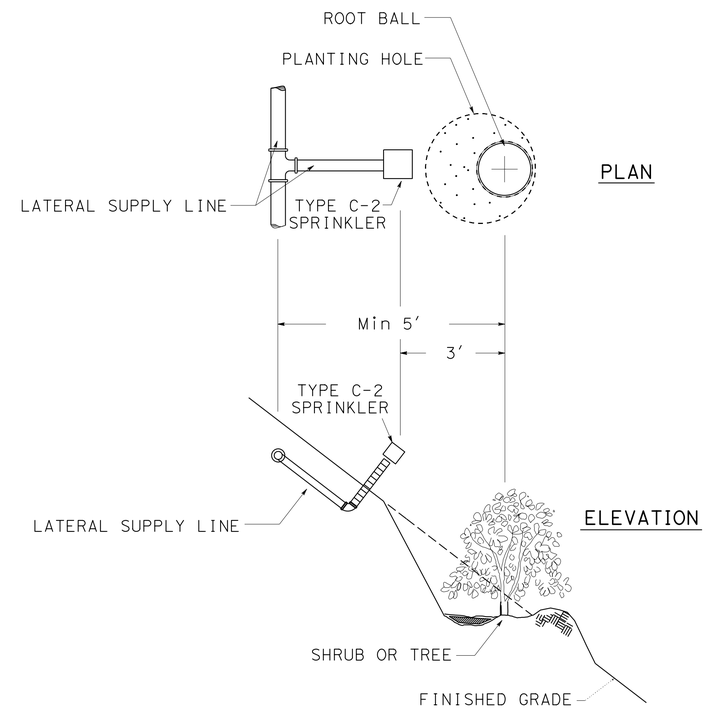
| LOCATION | | SIDE | | CONDUIT TYPE (3) | (N) WATER LINE CROSSOVER | (N) SPRINKLER CONTROL CROSSOVER |
|---|---|---|---|---|---|---|
| LINE | STATION | L† | R† | SIZE (INCH) 10 LENGTH (LF) | SIZE (INCH) | SIZE (INCH) |
| R | 1766+00 | - | X | 50 | 2,2 | 2 |
| R | 1767+00 | - | X | 50 | 2,1 | 2 |
| R | 1768+50 | X | - | 50 | 2(2),1½ | 2 |
| R | 1769+20 | X | - | 50 | 2 | 2 |
| R | 1815+25 | X | - | 40 | 2,1½ | 2 |
| R | 1816+00 | X | - | 50 | 2,1½ | 2½ |
| R | 1816+75 | - | X | 40 | 2 | 2½ |
| R | 1817+92 | - | X | 40 | 2 | 2½ |
| R | 1818+65 | - | X | 40 | 2 | 2½ |
| R | 1844+00 | X | - | 60 | 2 | 2½ |
| R | 1865+77 | - | X | 50 | 2 | 2 |
| R | 1866+45 | - | X | 50 | 2 | 2½ |
| R | 1868+17 | X | - | 45 | 2 | 2½ |
| R | 1870+17 | - | X | 45 | 2 | 2½ |
| R | 1871+00 | X | - | 110 | 2 | 2½ |
| R | 1872+00 | X | - | 45 | 2 | 2½ |
| R | 1923+14 | - | X | 50 | 2 | 2 |
| R | 1924+16 | - | X | 40 | 2 | 2½ |
| R | 1925+56 | X | - | 50 | 2 | 2½ |
| R | 1927+68 | - | X | 40 | 2 | 2 |
| R | 1928+80 | X | - | 90 | 2 | 2 |
| R | 1929+10 | X | - | 40 | 2(2),1½ | - |
| TOTAL | | | | 1125 | | |

(N) - NOT A SEPARATE PAY ITEM FOR INFORMATION ONLY
X - DENOTES REQUIREMENT

**CONDUIT TYPE:**

(Applicable when circled below and shown under the 'CONDUIT TYPE' column heading)

1 BITUMINOUS COATED CORRUGATED STEEL PIPE (0.064 INCH THICK)
2 CORRUGATED STEEL PIPE (0.064 INCH THICK)
(3) CORRUGATED HIGH DENSITY POLYETHYLENE PIPE
4 ALTERNATIVE CONDUIT
5 WELDED STEEL PIPE




## TYPE C-2 SPRINKLER PLACEMENT (SLOPE LOCATION)

# LANDSCAPE DETAILS

NO SCALE

**LD-2**

REVISED BY | DATE REVISED
RICH KESTER | JENNIFER TAIRA
CALCULATED-DESIGNED BY | CHECKED BY
SENIOR LANDSCAPE ARCHITECT | JENNIFER TAIRA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 07:19

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 862 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

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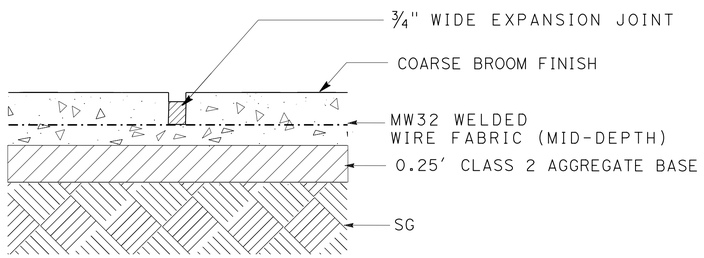
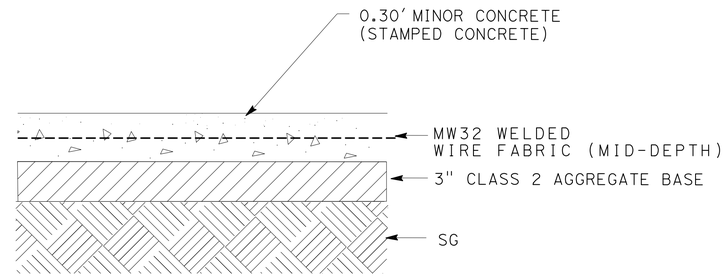
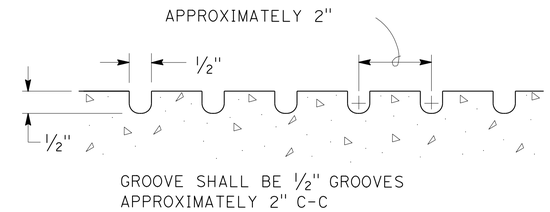


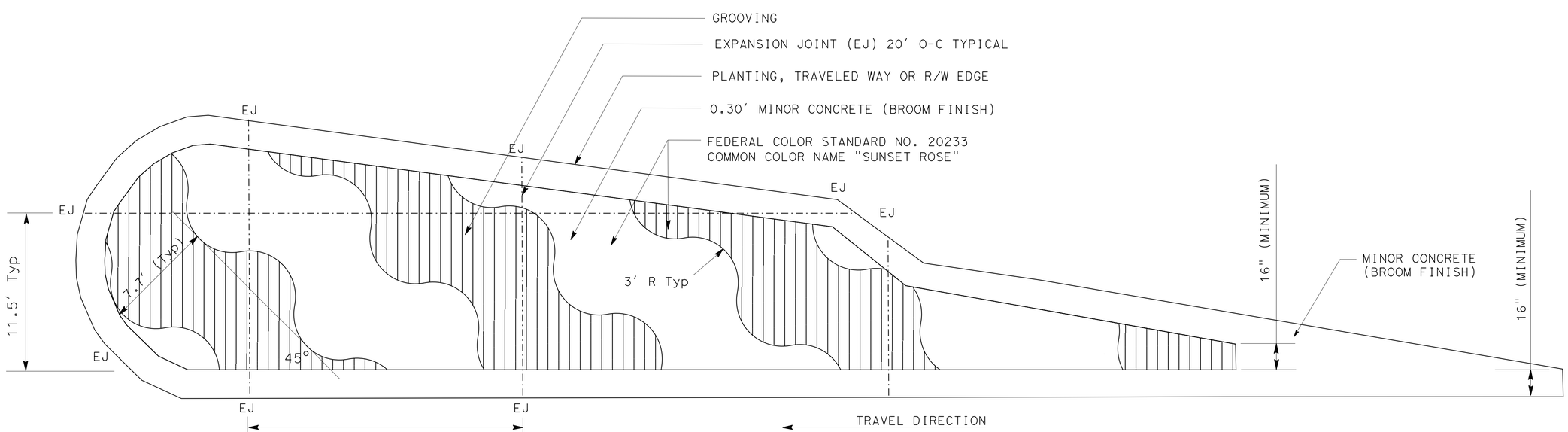

EXPANSION JOINT DETAIL (Typ)




SECTION (Typ)




GROOVING DETAIL




**MINOR CONCRETE (STAMPED CONCRETE)**

LAYOUT

**LANDSCAPE DETAILS**

NO SCALE

**LD-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA
CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:19

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 863 | 1475 |

LICENSED LANDSCAPE ARCHITECT

6-10-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GENE KIMMEL
NO. 5104
Signature
10-31-12
Renewal Date
5-5-12
Date
STATE OF CALIFORNIA

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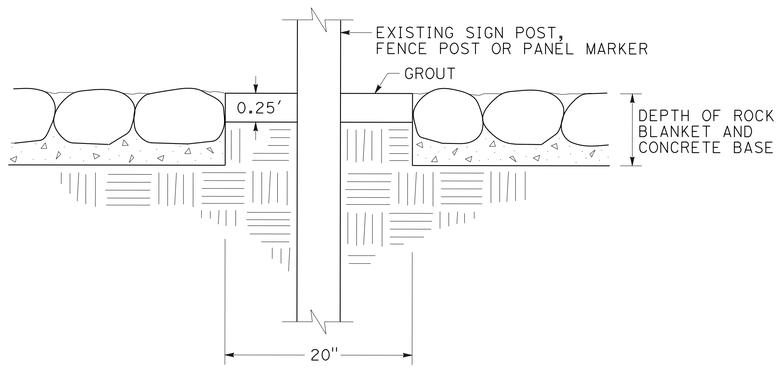
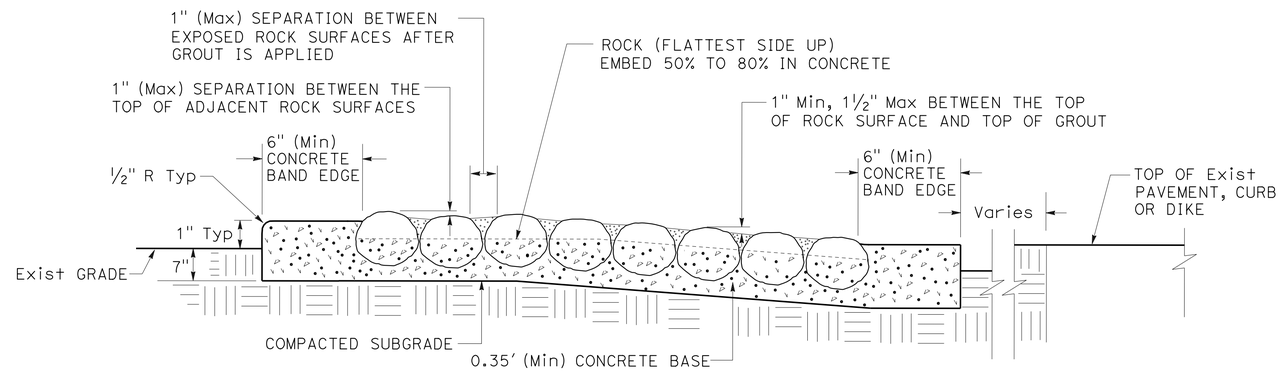
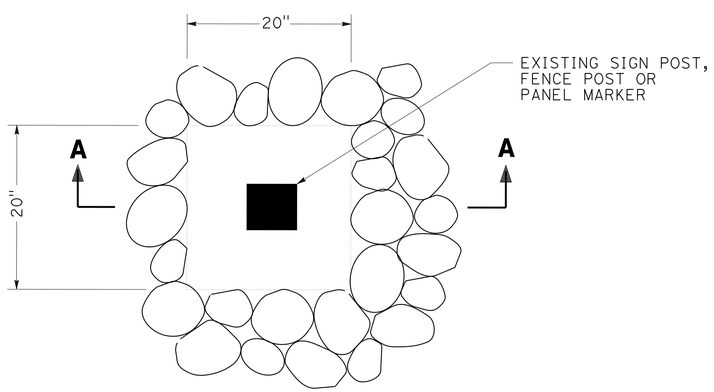



SECTION A-A




SECTION

**ROCK BLANKET**




PLAN

POST TREATMENT

# LANDSCAPE DETAILS

NO SCALE

**LD-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA
CALCULATED-DESIGNED BY: RICH KESTER
CHECKED BY: JENNIFER TAIRA
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 864 | 1475 |

5/30/12
REGISTERED ELECTRICAL ENGINEER DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

## GENERAL NOTES: (SHEETS E-1 TO E-51)

1. SEE STRUCTURE PLANS FOR LIGHTING STANDARD FOUNDATION AND ANCHORAGE DETAILS ON SOUND WALL.
2. NEW CONDUCTORS TO BE INSTALLED MUST BE 2#6,1#6G UNLESS NOTED OTHERWISE.
3. NEW LIGHTING CONDUIT TO BE INSTALLED MUST BE 2"C UNLESS NOTED OTHERWISE.
4. FOR TEMPORARY LIGHTING ON WOOD POLE (SEE DETAILS IN SHEET SES-1 TO SES-5).
5. SEE SOUND WALL PLANS FOR ELECTROLIER PEDESTAL DETAILS.

## ABBREVIATION: (SHEETS E-1 TO E-51)

SCE - SOUTHERN CALIFORNIA EDISON

## WIRING DIAGRAM LEGEND: (SHEETS E-1 TO E-51)

- EXISTING LAMP AND BALLAST TO REMAIN
- INSTALL 100 W HPS, PEDESTRIAN WALKWAY LIGHTING. FOR DETAILS SEE SHEETS E-51 AND SES-6
- INSTALL 235 W LED LUMINAIRE
- INSTALL 310 W, 240 V HPS LUMINAIRE ON WOOD POLE. FOR DETAILS SEE SHEET SES-1 TO SES-5.
- INSTALL ISL LAMPS AND INTEGRAL BALLAST AS NOTED
- RC SIGN LAMPS AND BALLAST
- RS LAMPS AND BALLAST
- INSTALL 2#6, 1#6G CONDUCTORS UNLESS NOTED OTHERWISE
- EXISTING CONDUCTOR
- RC CONDUCTOR
- SPLICE CONDUCTORS
- EXISTING SPLICE
- INSTALL OVERHEAD 2#6, 1#6G CONDUCTORS UNLESS NOTED OTHERWISE

## LIGHTING LEGEND: (SHEETS E-1 TO E-51)

- INSTALL WALKWAY LIGHTING (SEE DETAILS SHEETS E-51 AND SES-6)

# MODIFY LIGHTING AND SIGN ILLUMINATION

# E-1

REVISED BY | DATE REVISED
VUONG HONG | OSWALD ELIZONDO
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
OSWALD ELIZONDO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 865 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

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FOR ACCURATE RIGHT OF WAY DATA,
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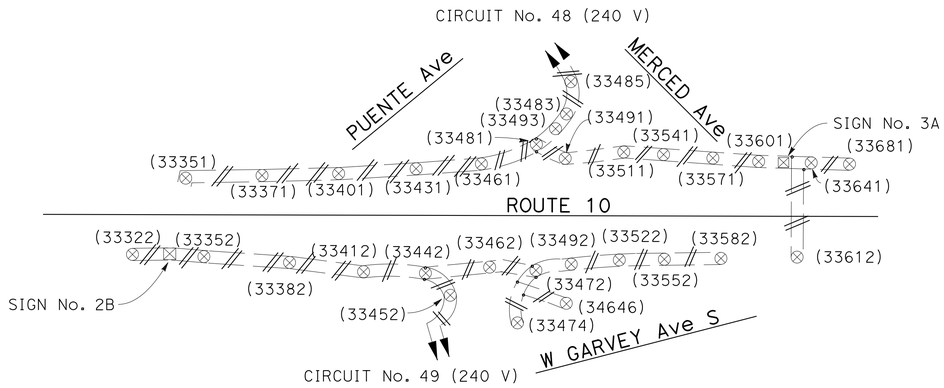
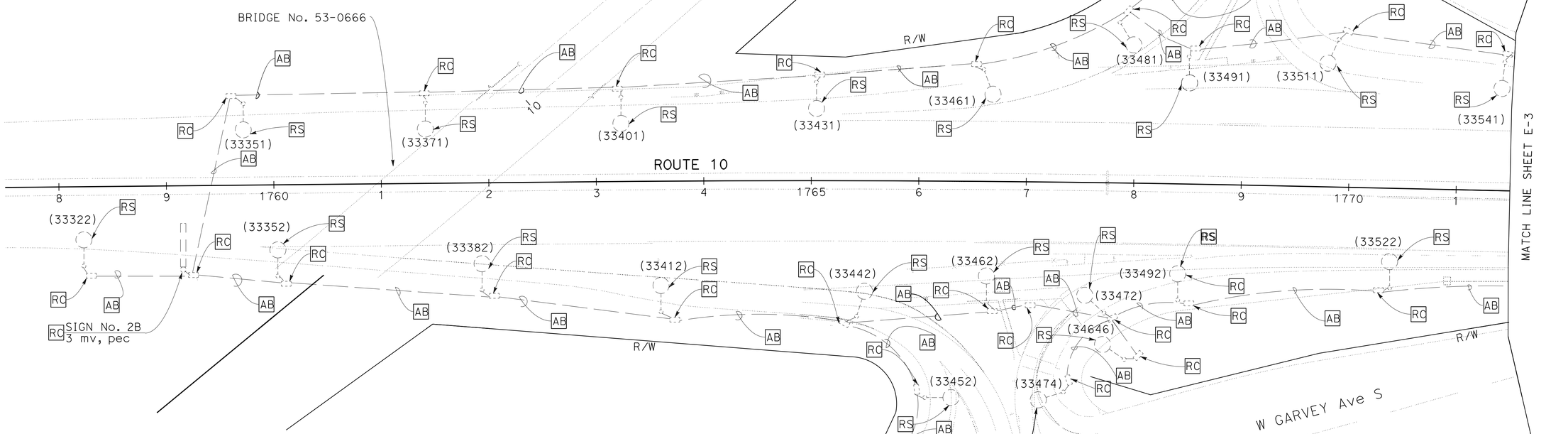



EXISTING WIRING DIAGRAM (SHEETS E-2 AND E-3)

NO SCALE

120/240 V TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH:
TYPE V PEC, LIGHTING SCE
100 A, 240 V, 2P, MAIN BREAKER
30 A, 240 V, 2P, CB FOR LIGHTING
30 A, 240 V, 2P, CB FOR LIGHTING
15 A, 120 V, 1P, CB FOR PEC
ID No. 07-53-010-033.460
ADDRESS: 14350½ BALDWIN PARK TOWN

EXISTING SCE MANHOLE




EXISTING SCE MANHOLE

120/240 V TYPE III-CF SERVICE EQUIPMENT
ENCLOSURE WITH:
TYPE V PEC, LIGHTING SCE
100 A, 240 V, 2P, MAIN BREAKER
30 A, 240 V, 2P, CB FOR LIGHTING
30 A, 240 V, 2P, CB FOR LIGHTING
15 A, 120 V, 1P, CB FOR PEC
ID No. 07-53-010-033.400
ADDRESS: 1461½ DALEWOOD, BALDWIN

TRAFFIC SIGNAL CIRCUIT

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION (REMOVAL)

SCALE: 1" = 50'

E-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 866 | 1475 |

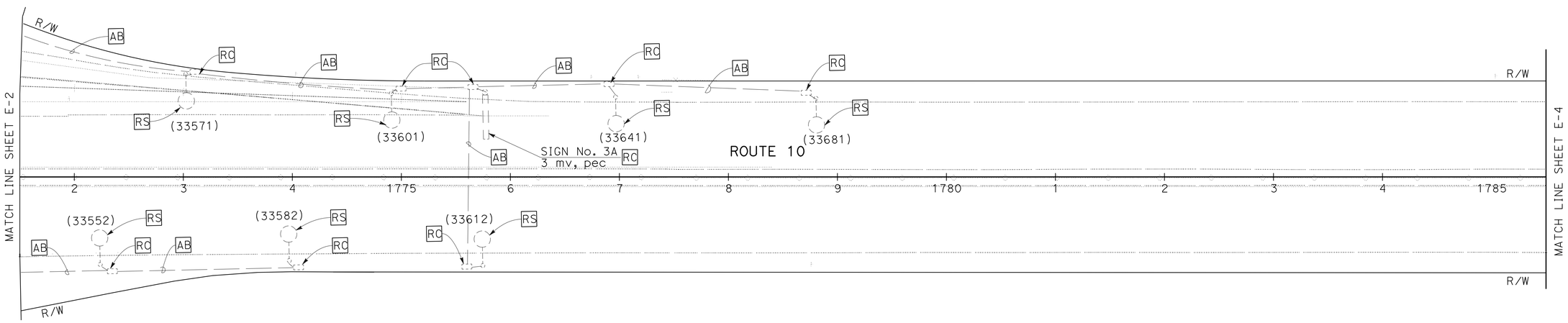
REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-2.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (REMOVAL)

SCALE: 1" = 50'

**E-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 867 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

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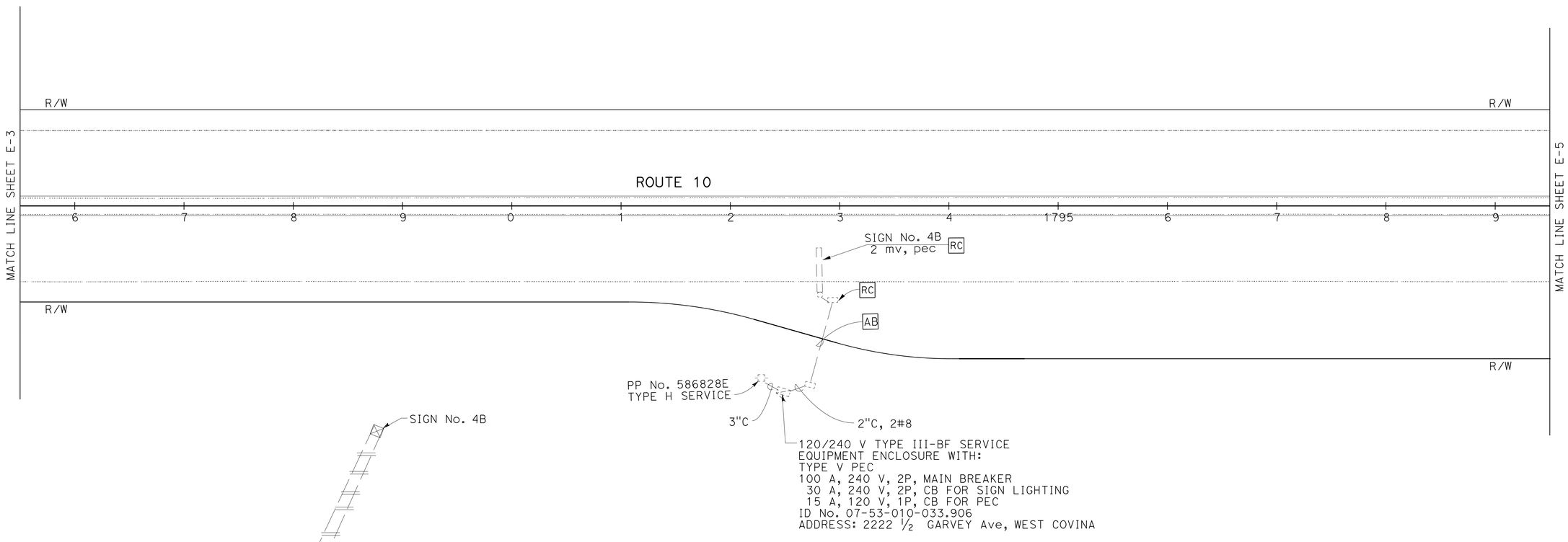
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




WIRING DIAGRAM
NO SCALE

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (REMOVAL)
SCALE: 1" = 50'

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

**E-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 868 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

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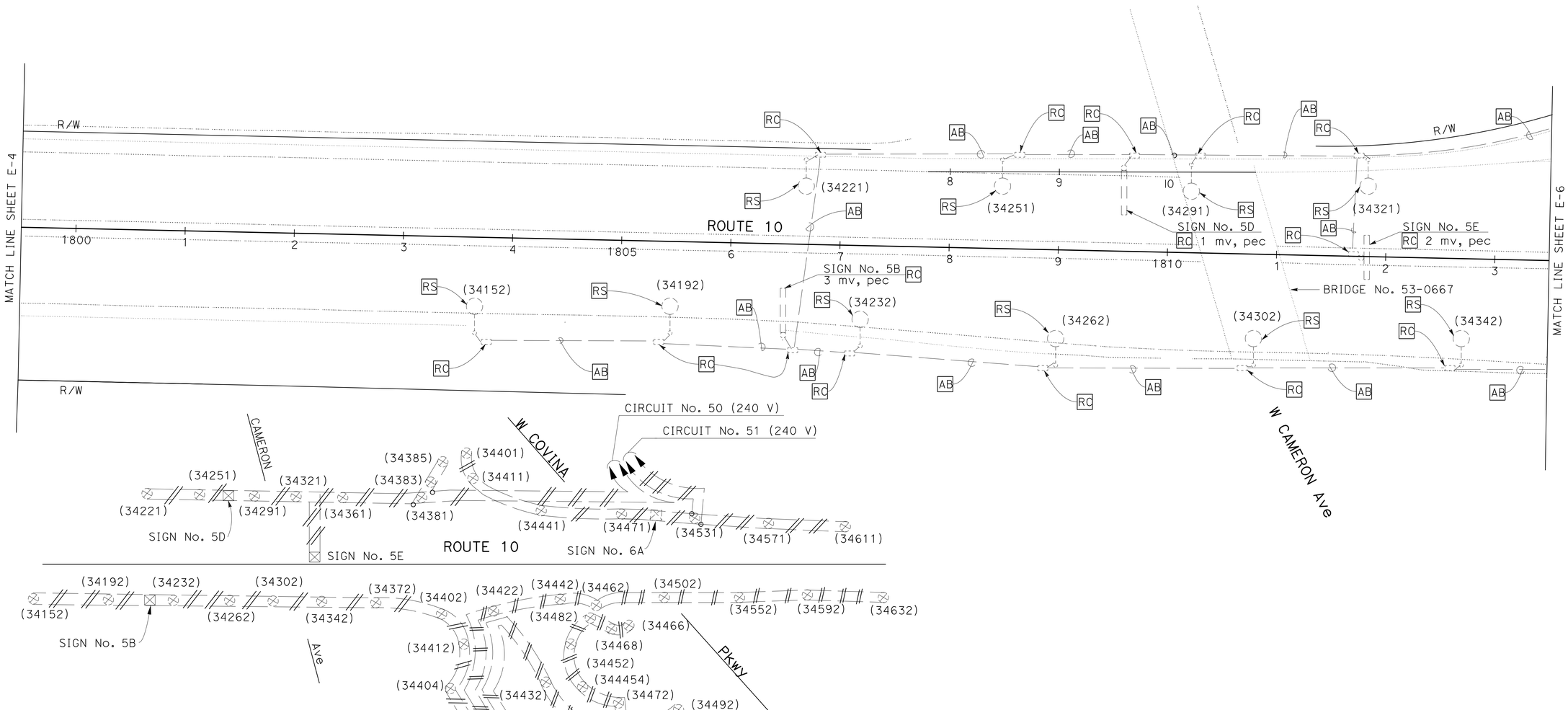
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




WIRING DIAGRAM (SHEETS E-5, E-6, E-7)
NO SCALE

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION (REMOVAL)

SCALE: 1" = 50'

**E-5**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 869 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

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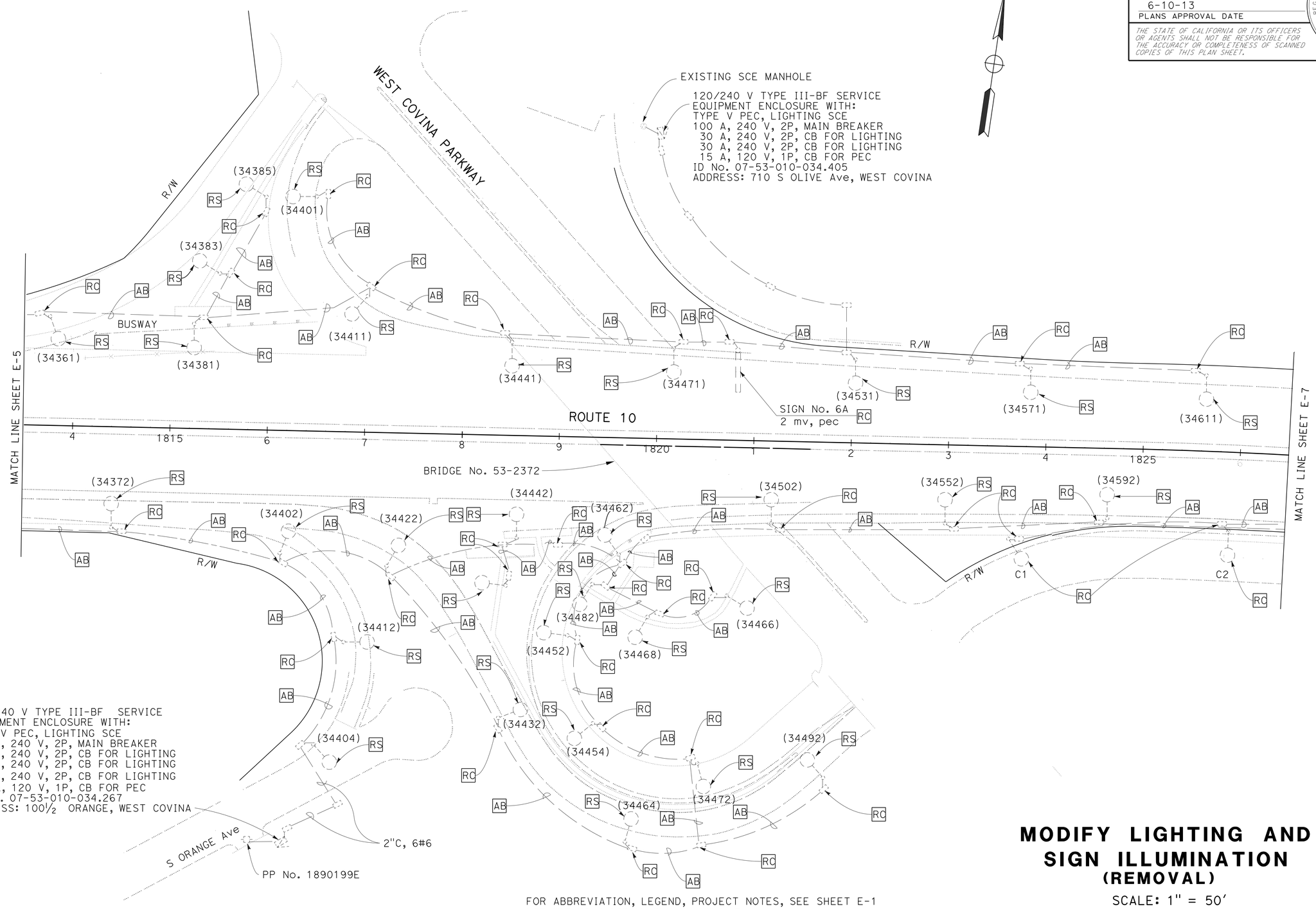
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1
FOR WIRING DIAGRAM, SEE SHEET E-5.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION (REMOVAL)

SCALE: 1" = 50'

**E-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 870 | 1475 |

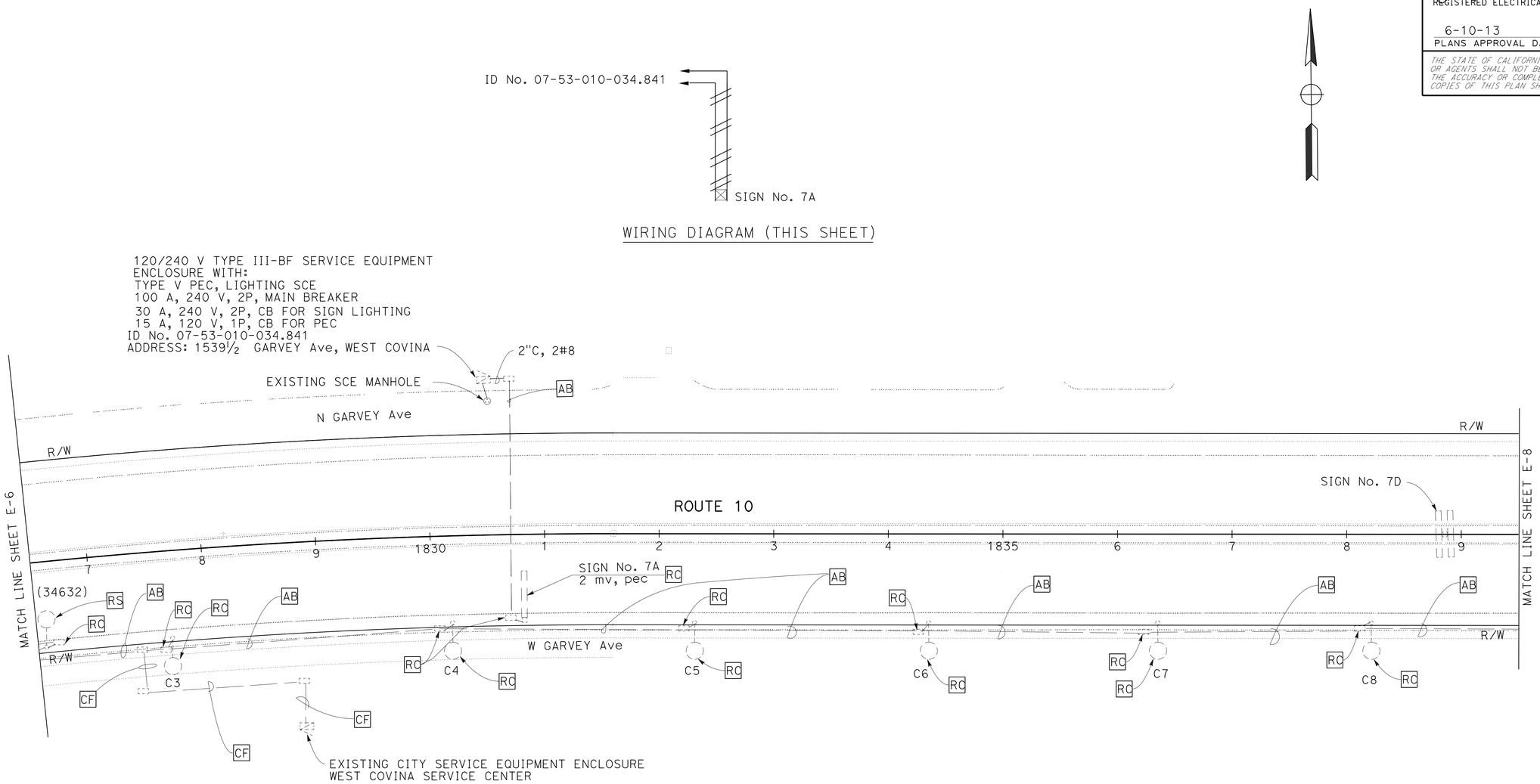
REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

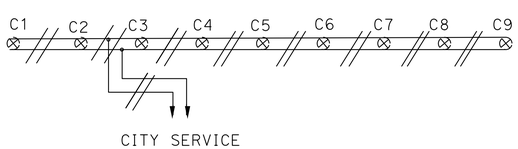
REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




WIRING DIAGRAM (THIS SHEET)




WIRING DIAGRAM (SHEETS E-6 TO E-8)

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (REMOVAL)

SCALE: 1" = 50'

**E-7**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 871 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

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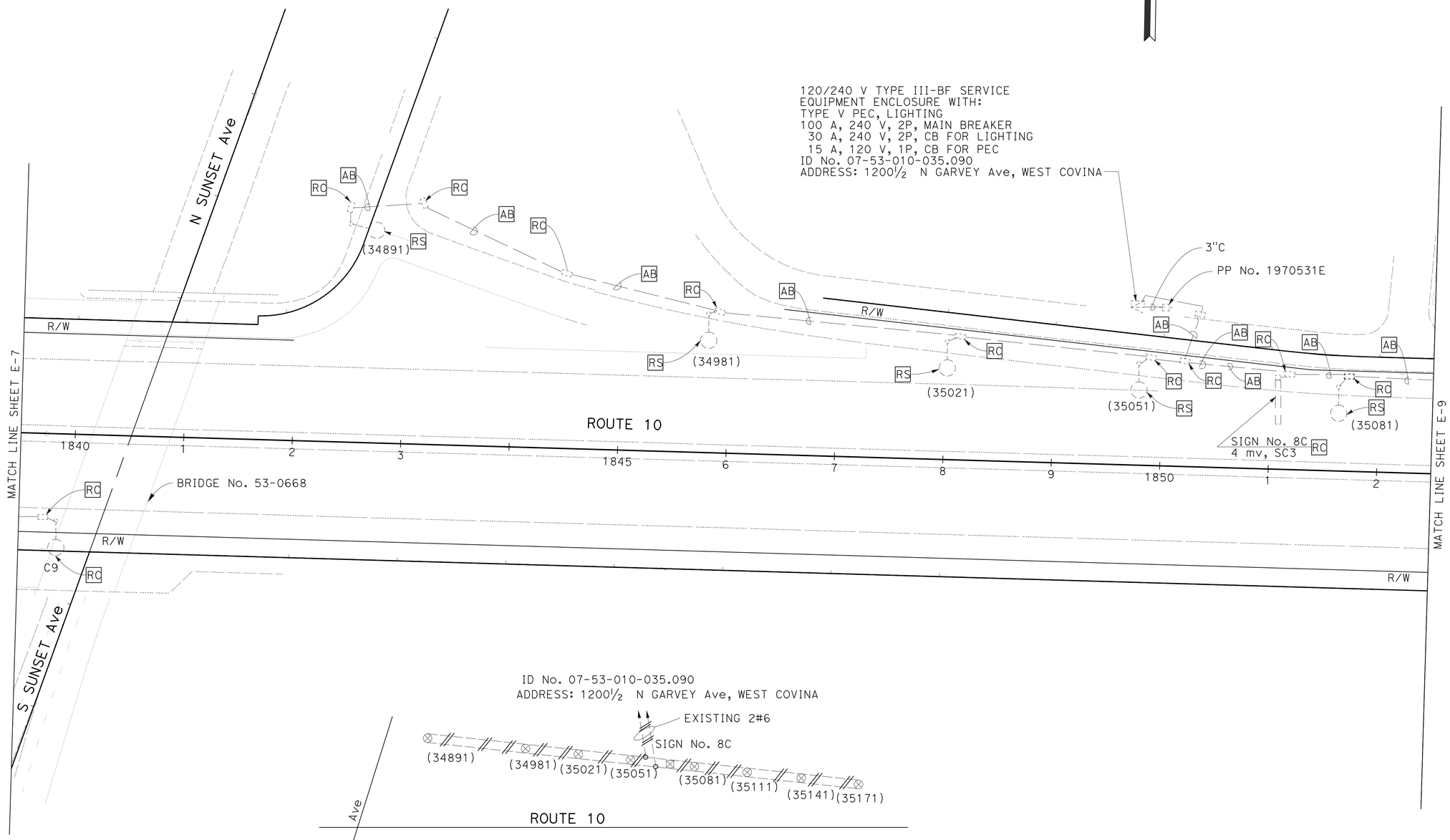
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




WIRING DIAGRAM (SHEETS E-8, E-9)
NO SCALE

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION (REMOVAL)

SCALE: 1" = 50'

**E-8**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 872 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

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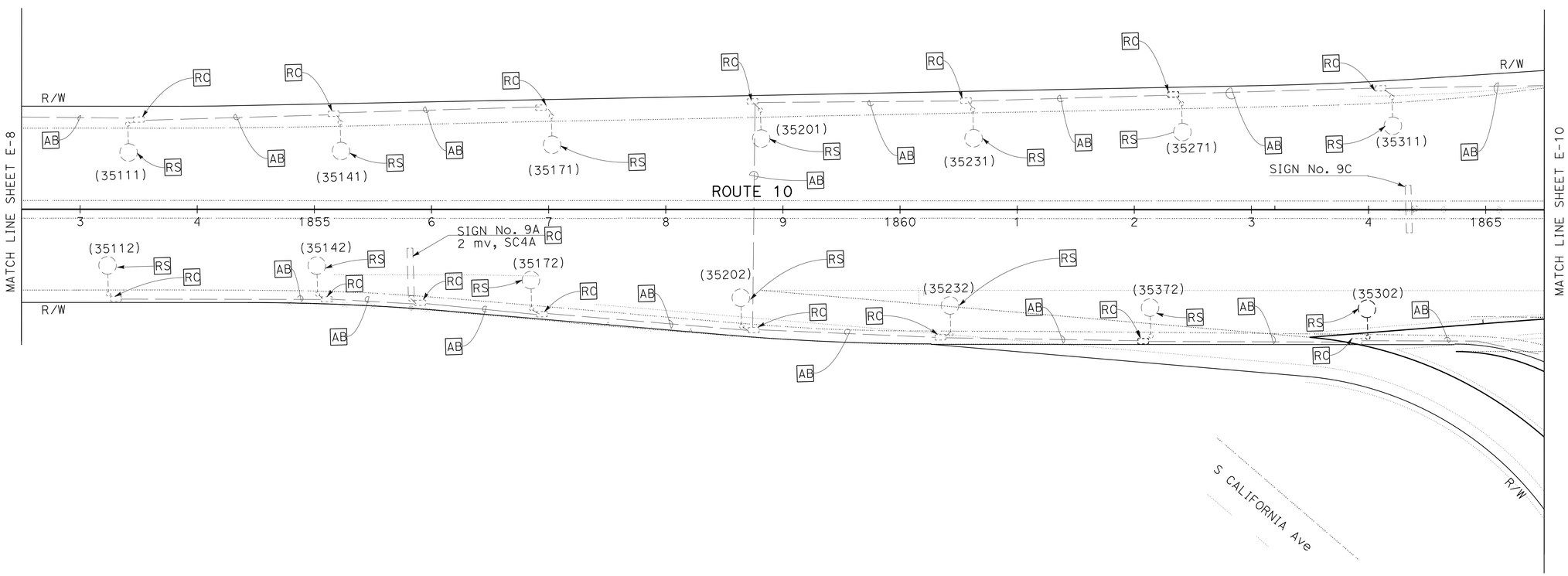
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-12.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (REMOVAL)

SCALE: 1" = 50'

**E-9**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
**TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 873 | 1475 |

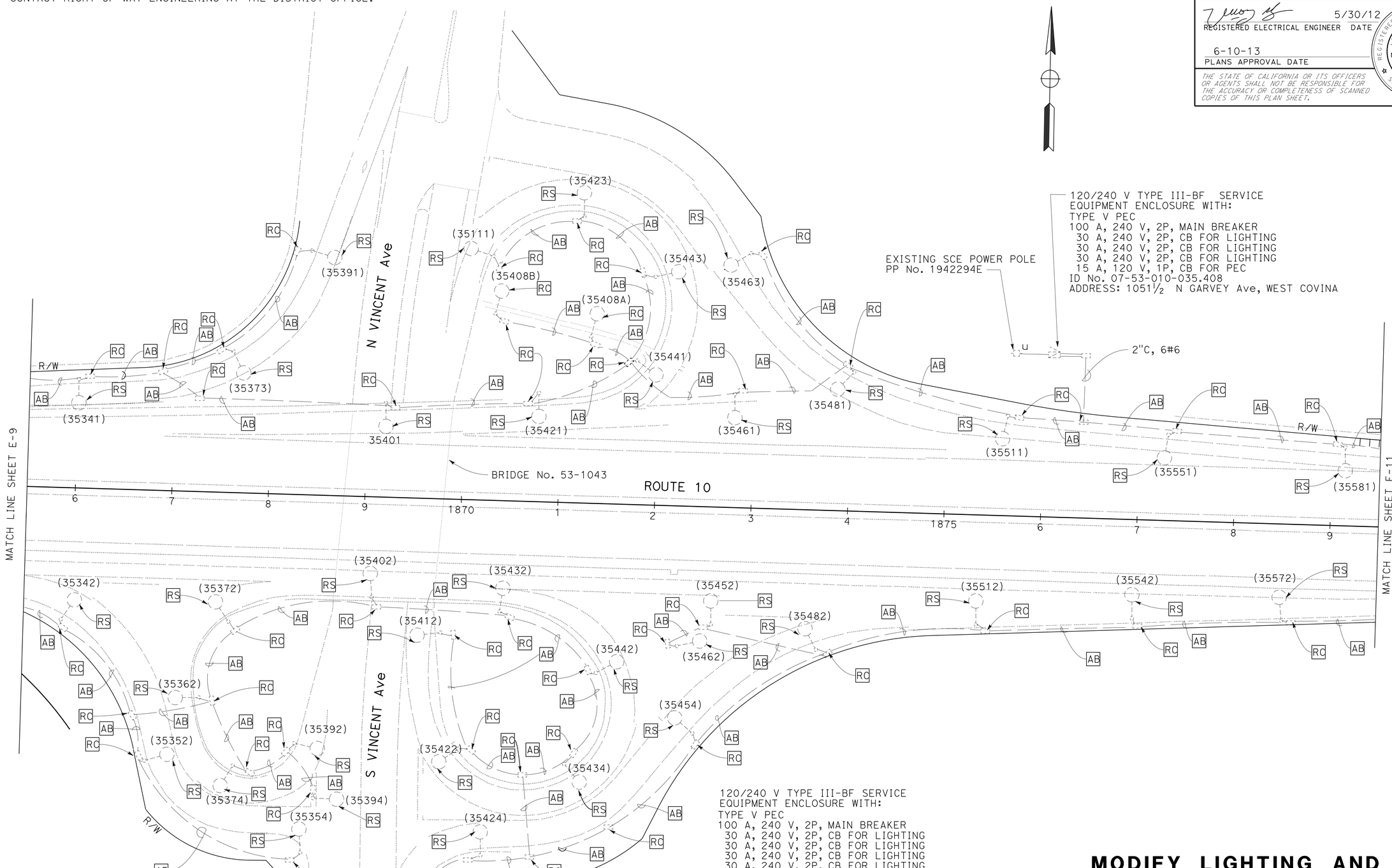
REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-12.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION (REMOVAL)

SCALE: 1" = 50'

**E-10**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 874 | 1475 |

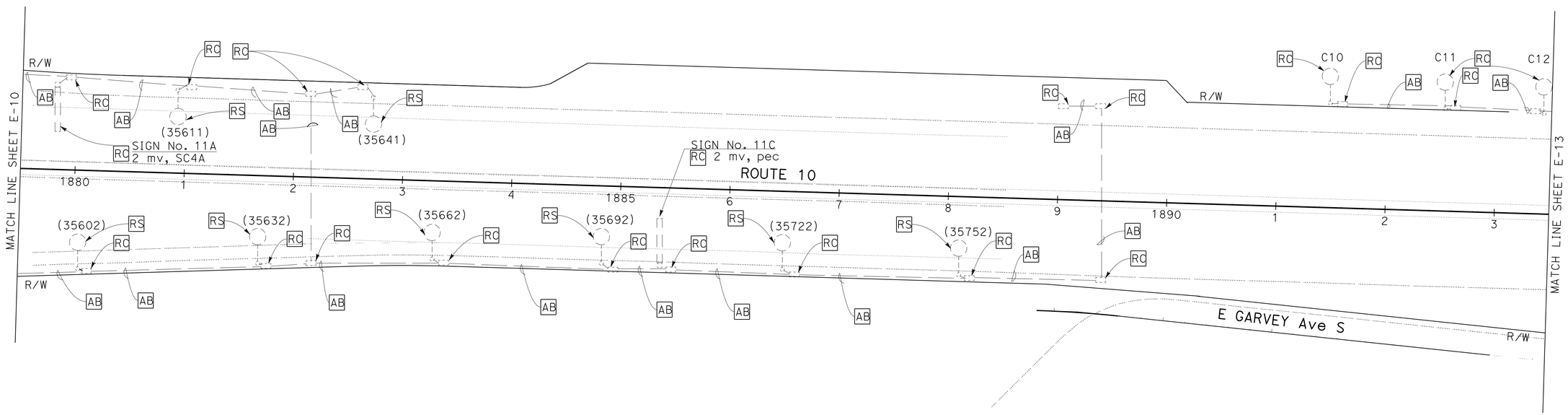
REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-12, E-13.
*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (REMOVAL)
SCALE: 1" = 50'

**E-11**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 875 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

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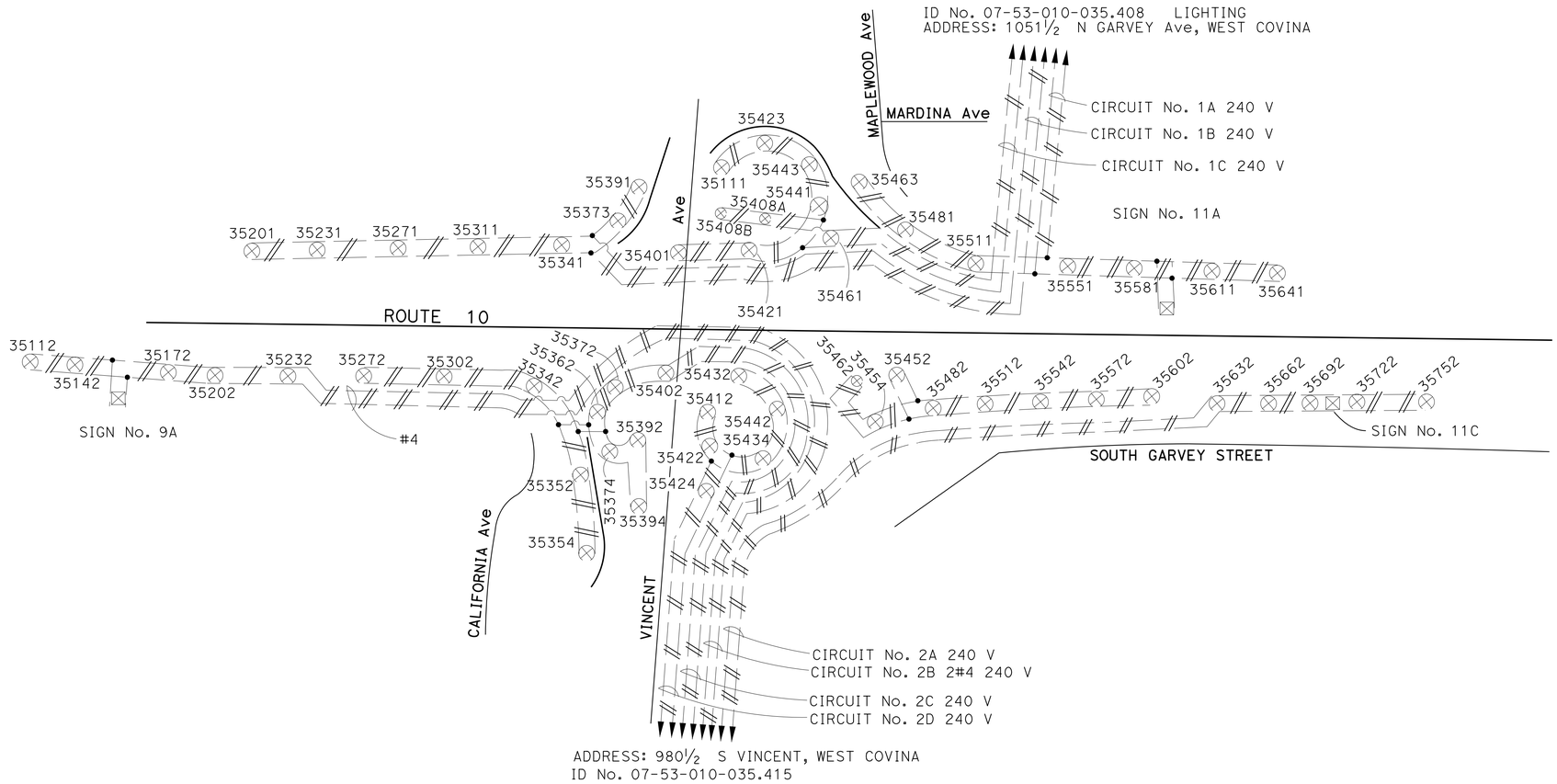



WIRING DIAGRAM (SHEETS E-9 TO E-11)

# MODIFY LIGHTING AND SIGN ILLUMINATION (REMOVAL)

NO SCALE

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1

*APPROVED FOR ELECTRICAL WORK ONLY*

**E-12**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 876 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

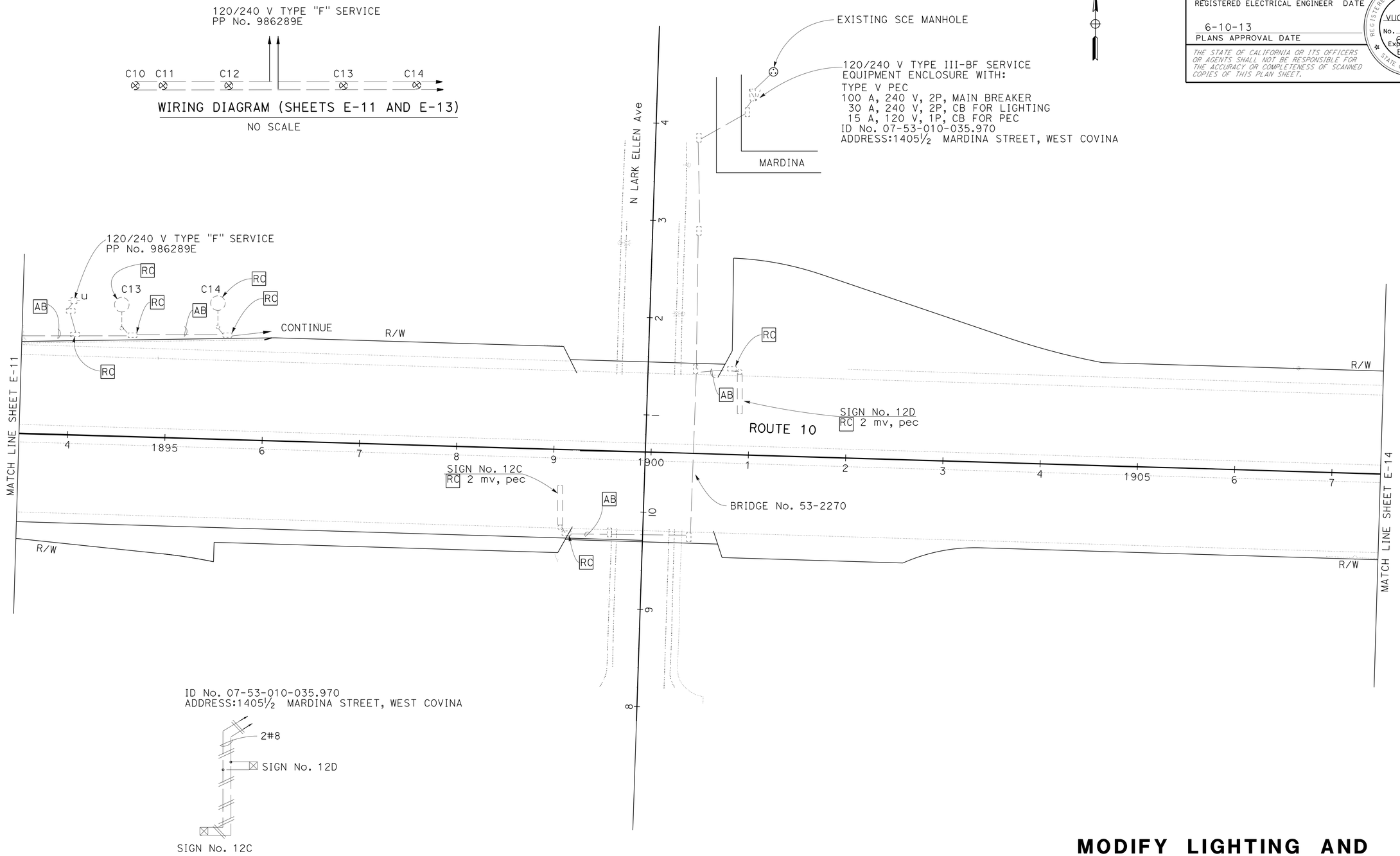
REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




WIRING DIAGRAM (SHEETS E-11 AND E-13)
NO SCALE




ID No. 07-53-010-035.970
ADDRESS:1405½ MARDINA STREET, WEST COVINA




WIRING DIAGRAM (THIS SHEET)
NO SCALE

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (REMOVAL)

SCALE: 1" = 50'

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
*APPROVED FOR ELECTRICAL WORK ONLY*

**E-13**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 877 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

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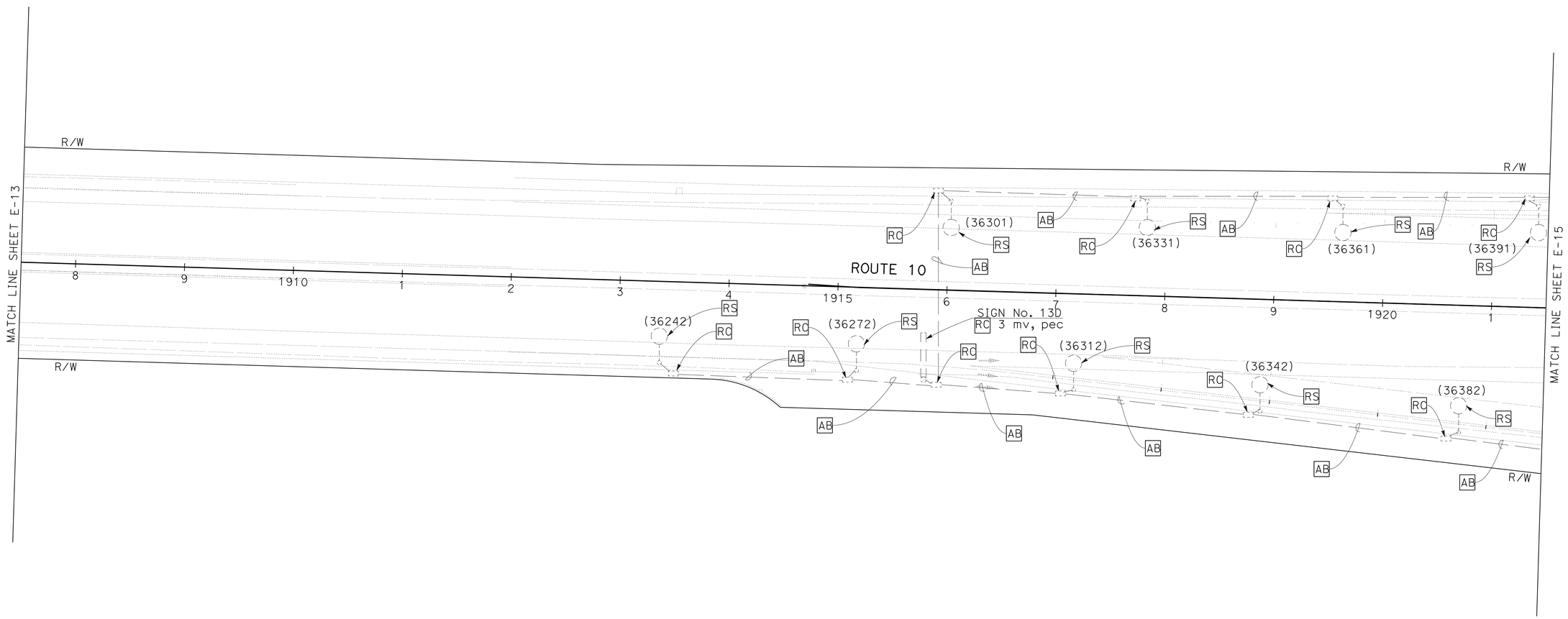
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-17.
*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (REMOVAL)

SCALE: 1" = 50'

**E-14**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 878 | 1475 |

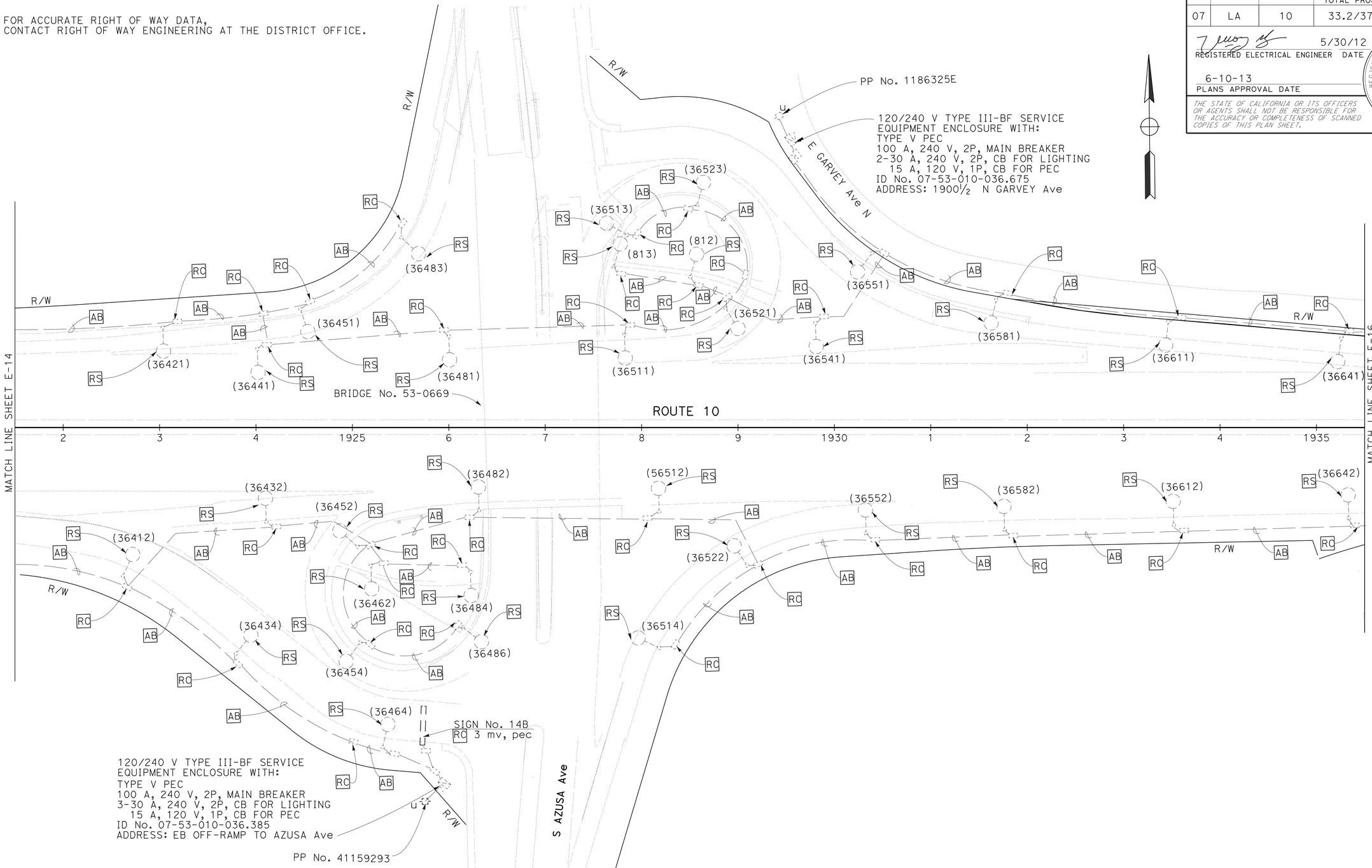
REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

PLANS APPROVAL DATE 6-10-13

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-17.
*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION

## (REMOVAL)

SCALE: 1" = 50'

**E-15**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 879 | 1475 |

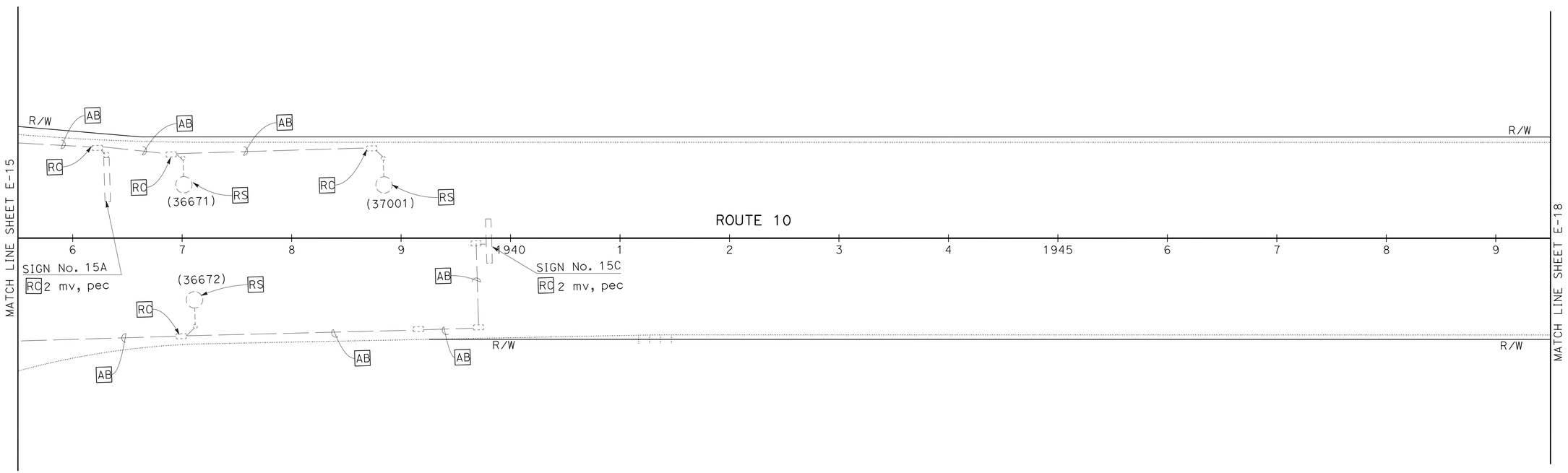
REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




# MODIFY LIGHTING AND SIGN ILLUMINATION
## (REMOVAL)

SCALE: 1" = 50'

FOR PROJECT NOTE, LEGEND, ABBREVIATION SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-17.
*APPROVED FOR ELECTRICAL WORK ONLY*

**E-16**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 07:20

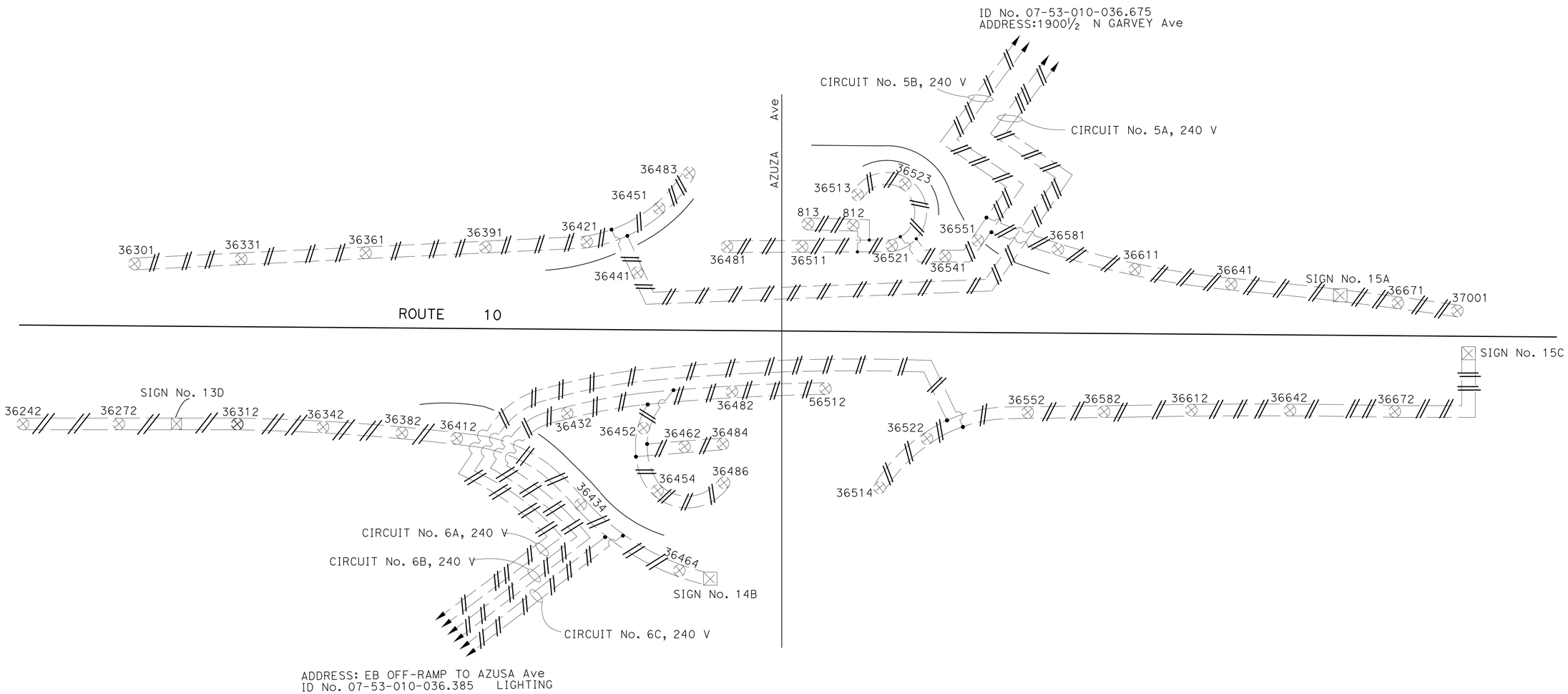
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 880 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*




# MODIFY LIGHTING AND SIGN ILLUMINATION (REMOVAL)

NO SCALE

E-17

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:25

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 881 | 1475 |

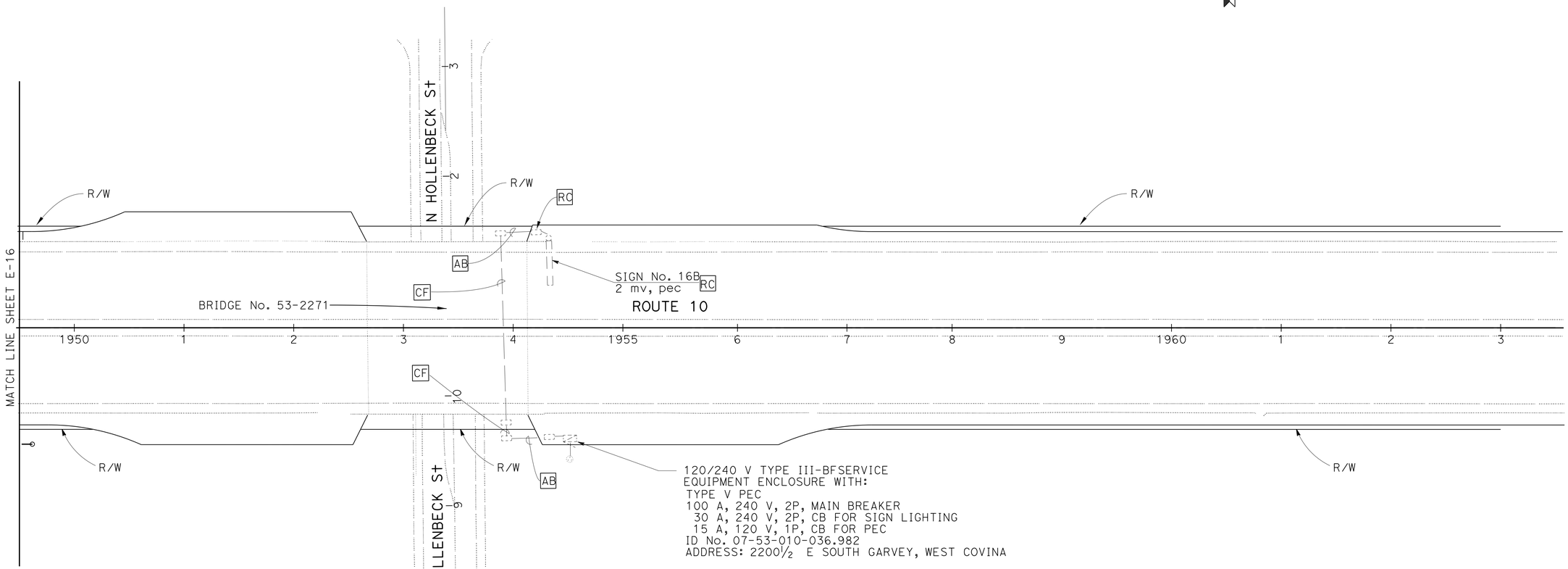
REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

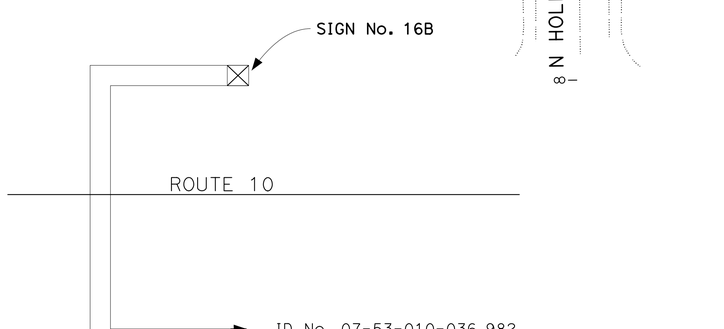
6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




WIRING DIAGRAM
NO SCALE

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION (REMOVAL)

SCALE: 1" = 50'

**E-18**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:25

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 882 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

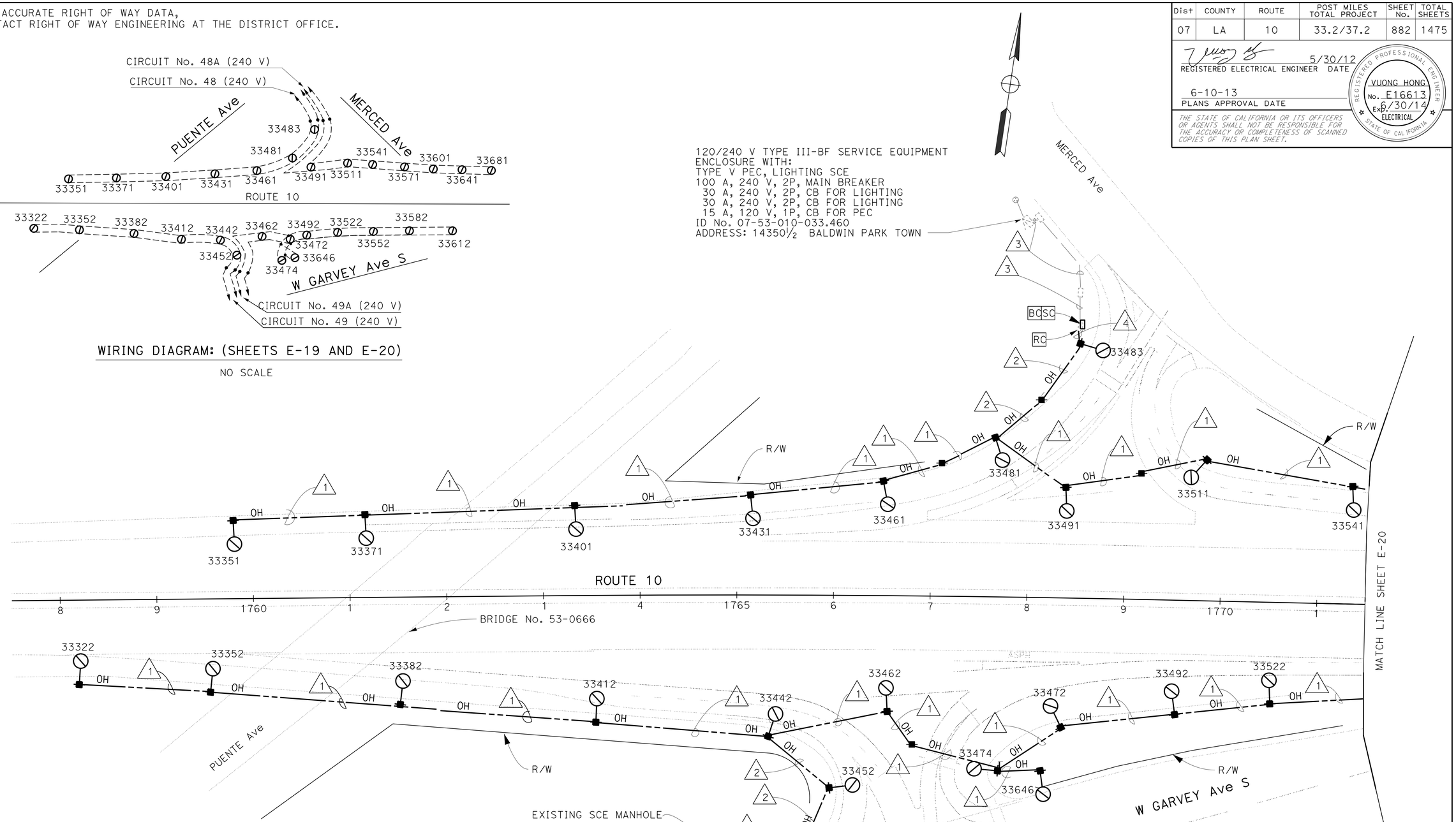
*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*




WIRING DIAGRAM: (SHEETS E-19 AND E-20)

NO SCALE

120/240 V TYPE III-BF SERVICE EQUIPMENT
ENCLOSURE WITH:
TYPE V PEC, LIGHTING SCE
100 A, 240 V, 2P, MAIN BREAKER
30 A, 240 V, 2P, CB FOR LIGHTING
30 A, 240 V, 2P, CB FOR LIGHTING
15 A, 120 V, 1P, CB FOR PEC
ID No. 07-53-010-033.460
ADDRESS: 14350½ BALDWIN PARK TOWN




| CONDUIT AND CONDUCTOR SCHEDULE | | | | | |
|---|---|---|---|---|---|
| AWG | DESCRIPTION | 1 | 2 | 3 | 4 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 | 4 | 4 | 4 |
| 6 | GROUND | 1 | 1 | 1 | 1 |
| CONDUIT SIZE | | - | - | 2"(E) | 2" |

EXISTING SCE MANHOLE

120/240 V TYPE III-CF SERVICE EQUIPMENT
ENCLOSURE WITH:
TYPE V PEC, LIGHTING SCE
100 A, 240 V, 2P, MAIN BREAKER
30 A, 240 V, 2P, CB FOR LIGHTING
30 A, 240 V, 2P, CB FOR LIGHTING
15 A, 120 V, 1P, CB FOR PEC
ID No. 07-53-010-033.400
ADDRESS: 1461½ DALEWOOD, BALDWIN

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION

## (TEMPORARY)

SCALE: 1" = 50'

E-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:25

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 883 | 1475 |

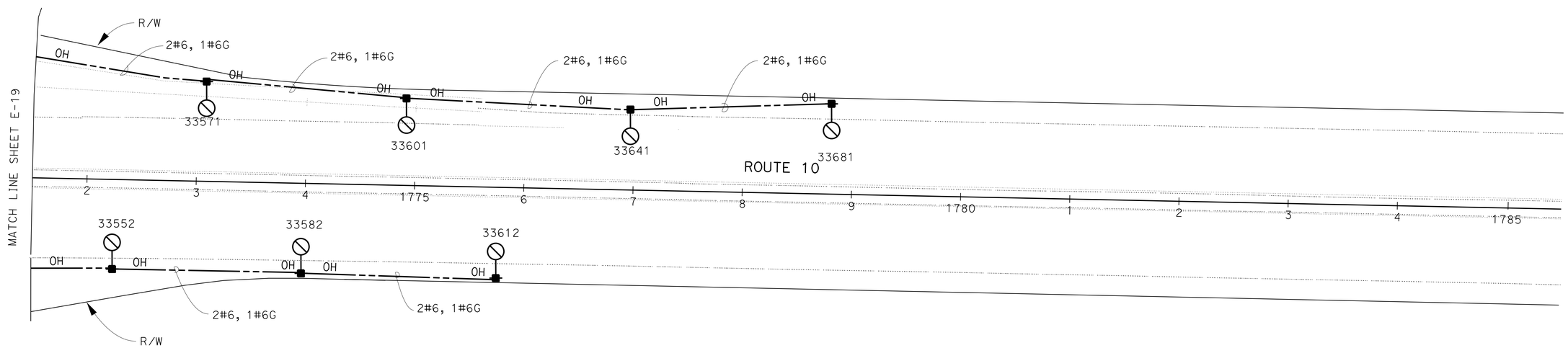
REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-19.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (TEMPORARY)

SCALE: 1" = 50'

**E-20**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:25

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 884 | 1475 |

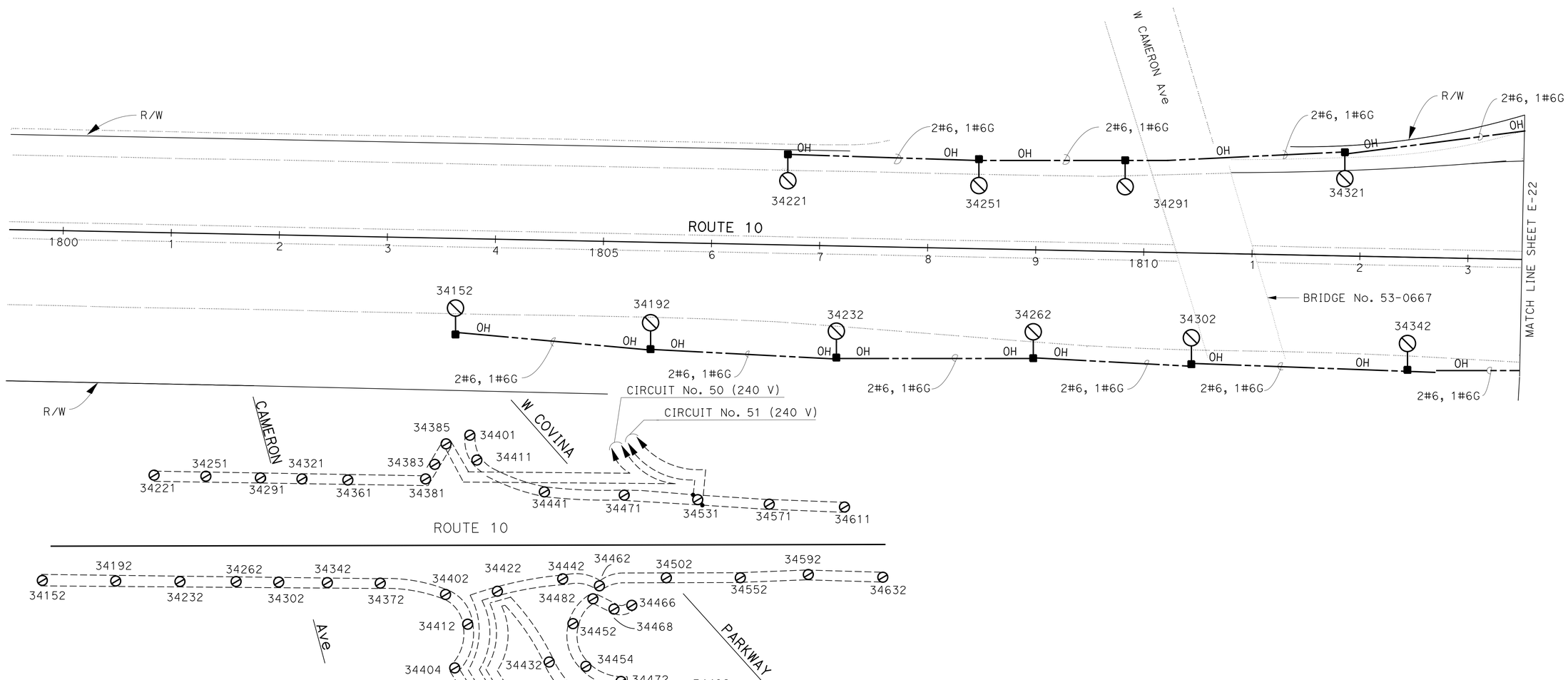
REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




WIRING DIAGRAM: (SHEETS E-21, E-22, E-23)
NO SCALE

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (TEMPORARY)

SCALE: 1" = 50'

**E-21**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:25

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 885 | 1475 |

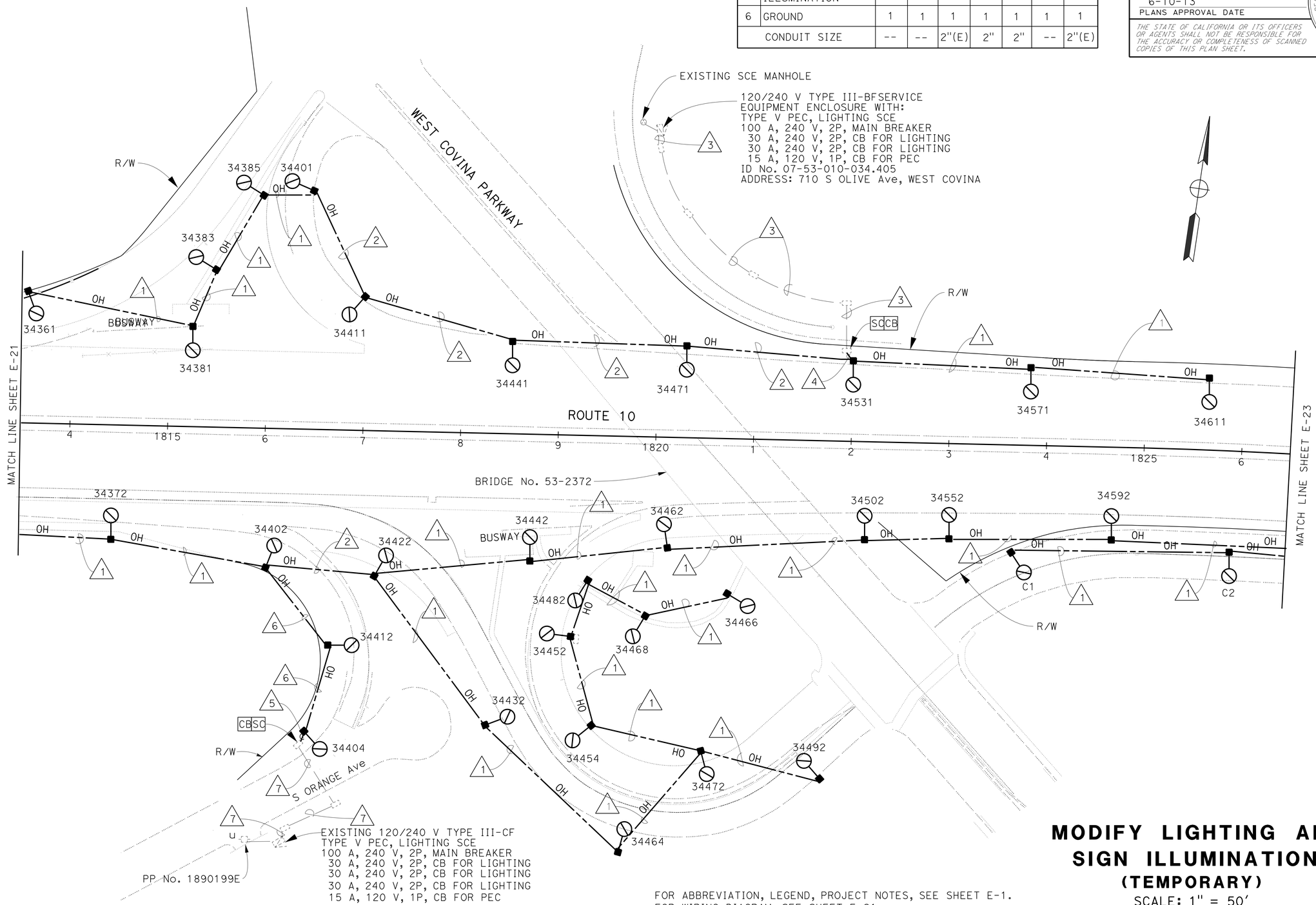
REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

| CONDUITS AND CONDUCTORS SCHEDULE (THIS SHEET) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| AWG | DESCRIPTION | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 | 4 | 4 | 4 | 6 | 6 | 6 |
| 6 | GROUND | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | CONDUIT SIZE | -- | -- | 2"(E) | 2" | 2" | -- | 2"(E) |




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-21.
*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (TEMPORARY)
SCALE: 1" = 50'

**E-22**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 08:25
00-00-00

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 886 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

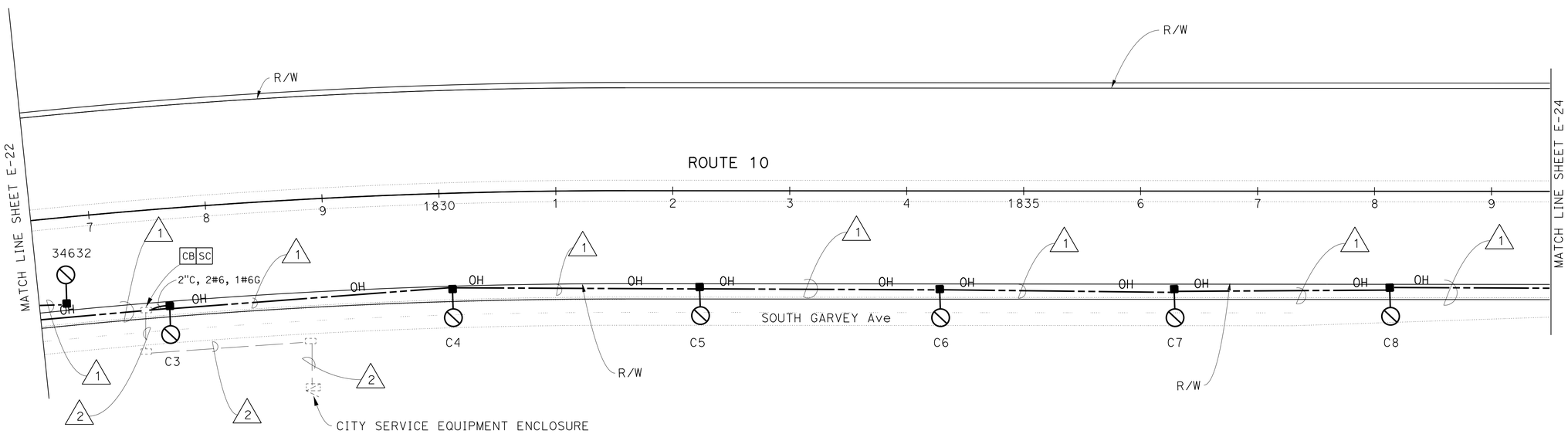
6-10-13
PLANS APPROVAL DATE

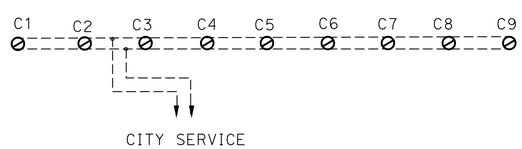
REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

| CONDUIT AND CONDUCTOR SCHEDULE | | | |
|---|---|---|---|
| AWG | DESCRIPTION | 1 | 2 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 | 2 |
| 6 | GROUND | 1 | 1 |
| CONDUIT SIZE | | - | 2"(E) |




WIRING DIAGRAM (SHEETS E-22 TO E-24)
NO SCALE

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-21.
*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (TEMPORARY)
SCALE: 1" = 50'

**E-23**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:25

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 887 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

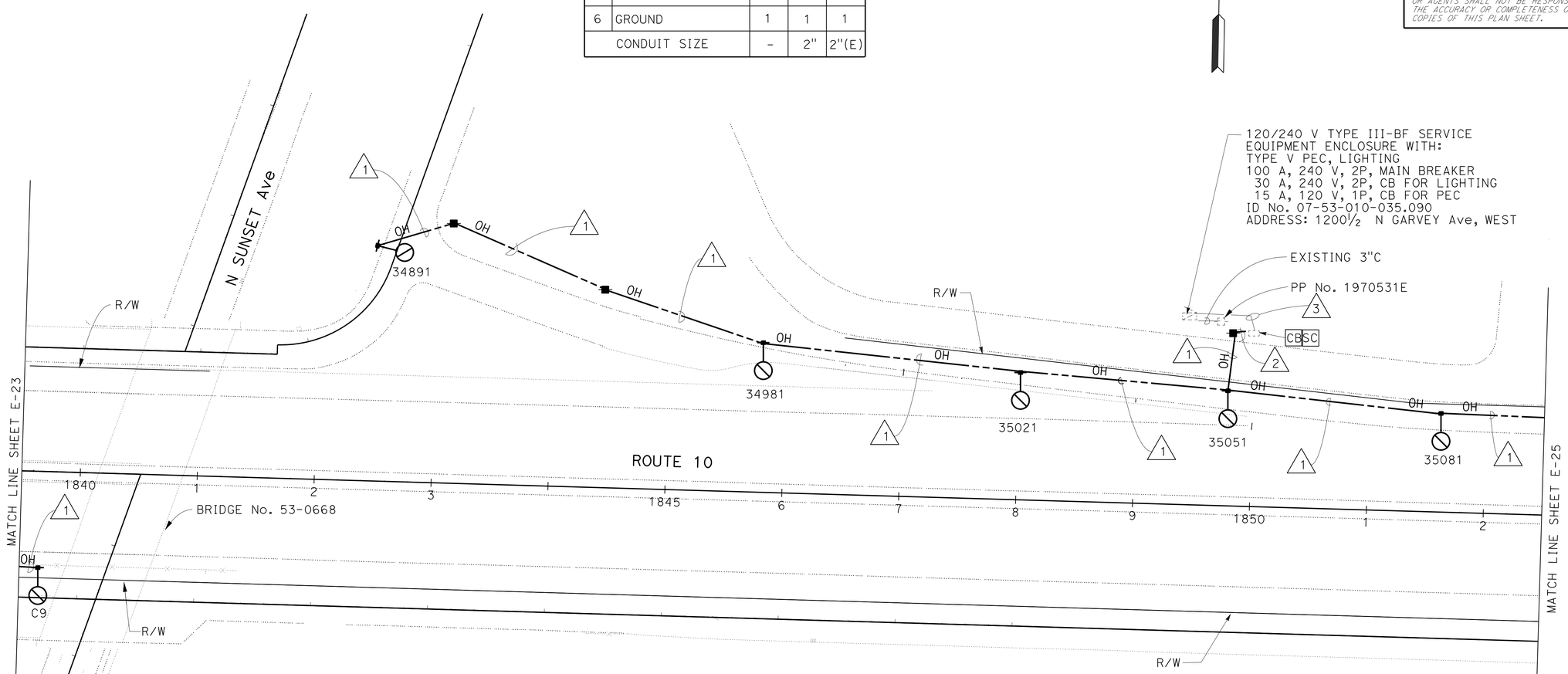
REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

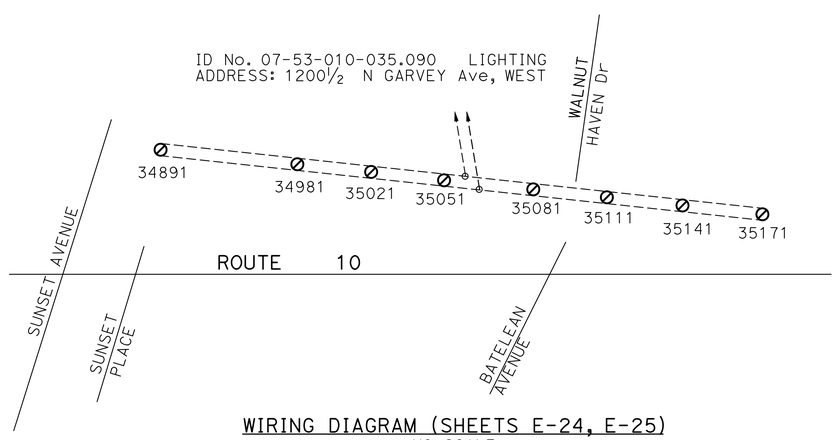
*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**CONDUIT AND CONDUCTOR SCHEDULE**

| AWG | DESCRIPTION | 1 | 2 | 3 |
|---|---|---|---|---|
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 | 2 | 2 |
| 6 | GROUND | 1 | 1 | 1 |
| | CONDUIT SIZE | - | 2" | 2"(E) |




WIRING DIAGRAM (SHEETS E-24, E-25)
NO SCALE

# MODIFY LIGHTING AND SIGN ILLUMINATION (TEMPORARY)

SCALE: 1" = 50'

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

**E-24**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:25

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 888 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

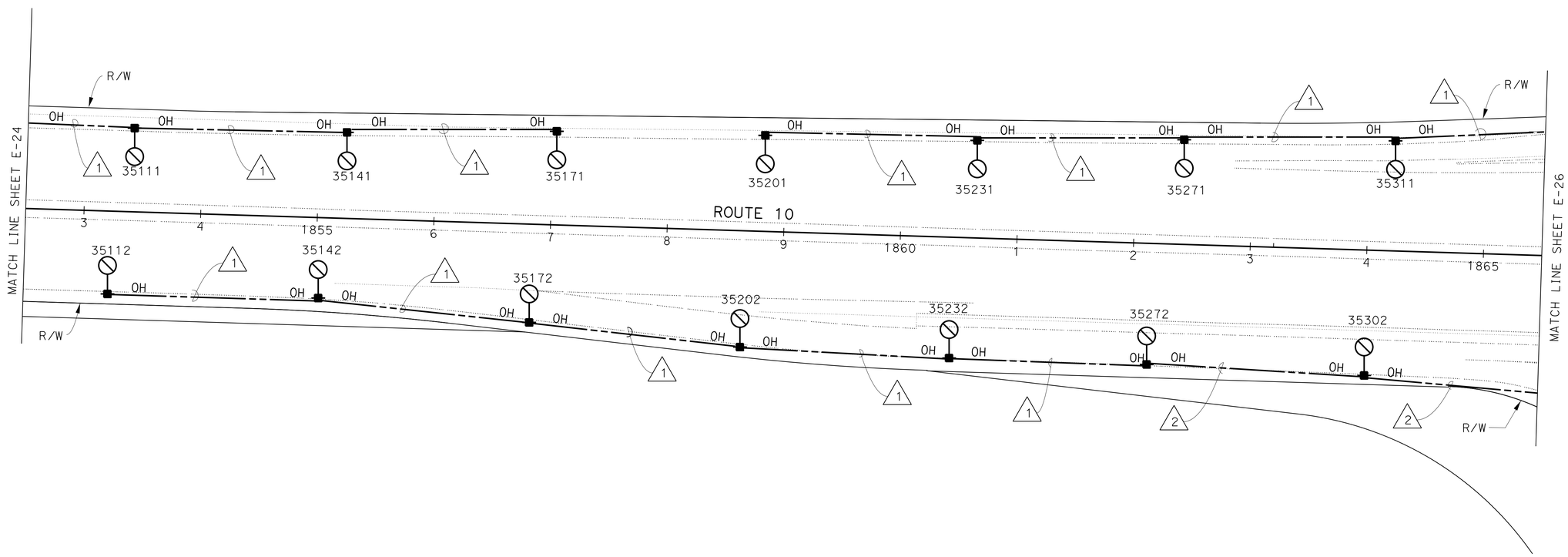
6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

| CONDUIT AND CONDUCTOR SCHEDULE | | | |
|---|---|---|---|
| AWG | DESCRIPTION | 1 | 2 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 | 4 |
| 6 | GROUND | 1 | 1 |
| CONDUIT SIZE | | - | - |




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-28.
*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (TEMPORARY)

SCALE: 1" = 50'

**E-25**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:25

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 889 | 1475 |

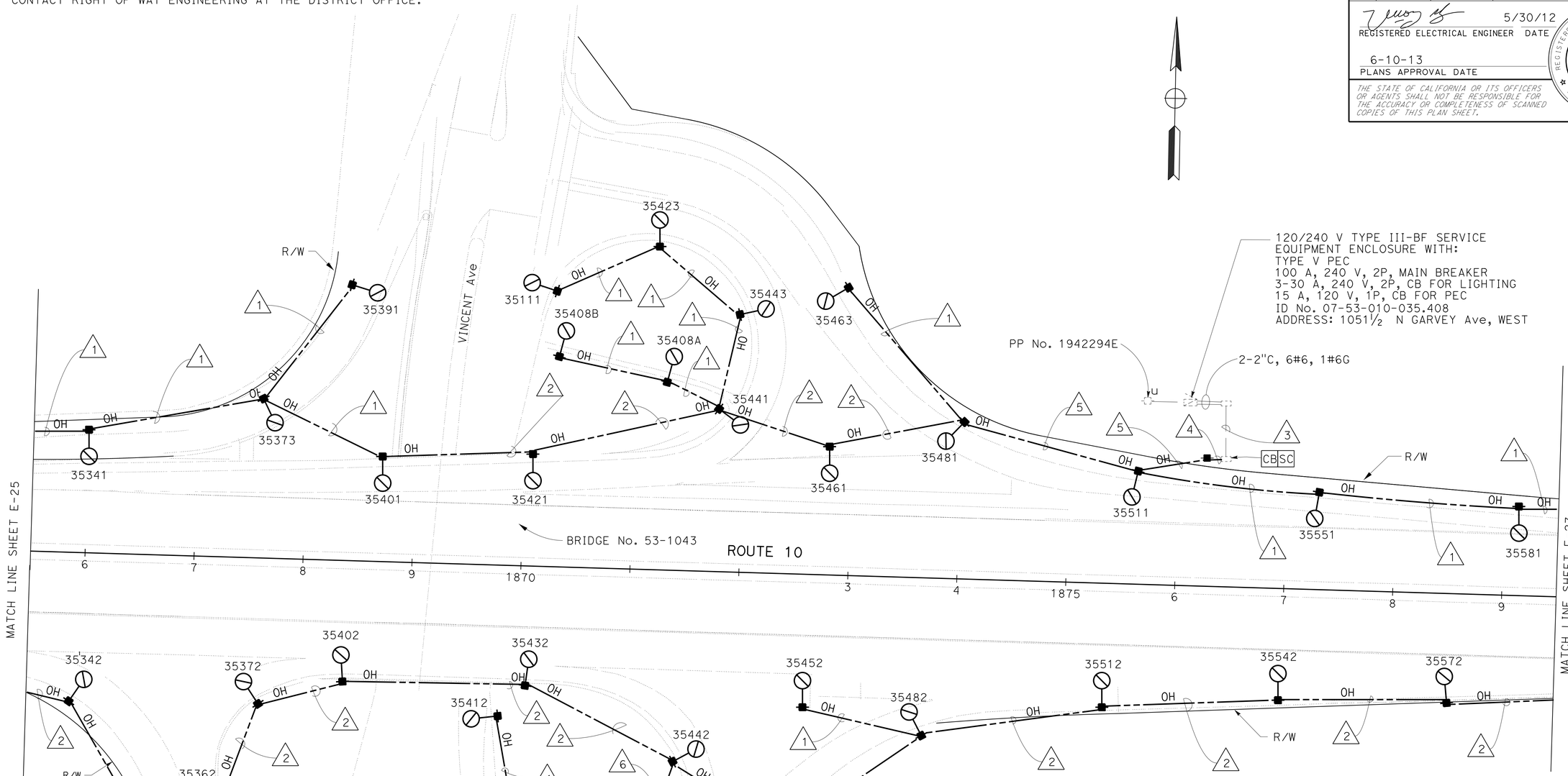
REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




| CONDUIT AND CONDUCTOR SCHEDULE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| AWG | DESCRIPTION | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 | 4 | 6(E) | 6 | 6 | 6 | 6(E) | 6 |
| 4 | LIGHTING AND SIGN ILLUMINATION | | | | | | 2 | 2(E) | 2 |
| 6 | GROUND | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| CONDUIT SIZE | | - | - | 2"(E) | 2" | - | - | 2"(E) | 2" |

120/240 V TYPE III-BF SERVICE
EQUIPMENT ENCLOSURE WITH:
TYPE V PEC
100 A, 240 V, 2P, MAIN BREAKER
4-30 A, 240 V, 2P, CB FOR LIGHTING
15 A, 120 V, 1P, CB FOR PEC
ID No. 07-53-010-035.415
ADDRESS: 980½ S VINCENT

SCE HANDHOLE

2-2"C, 6#6, 2#4, 1#6G

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-28.
*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (TEMPORARY)

SCALE: 1" = 50'

**E-26**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:25

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 890 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

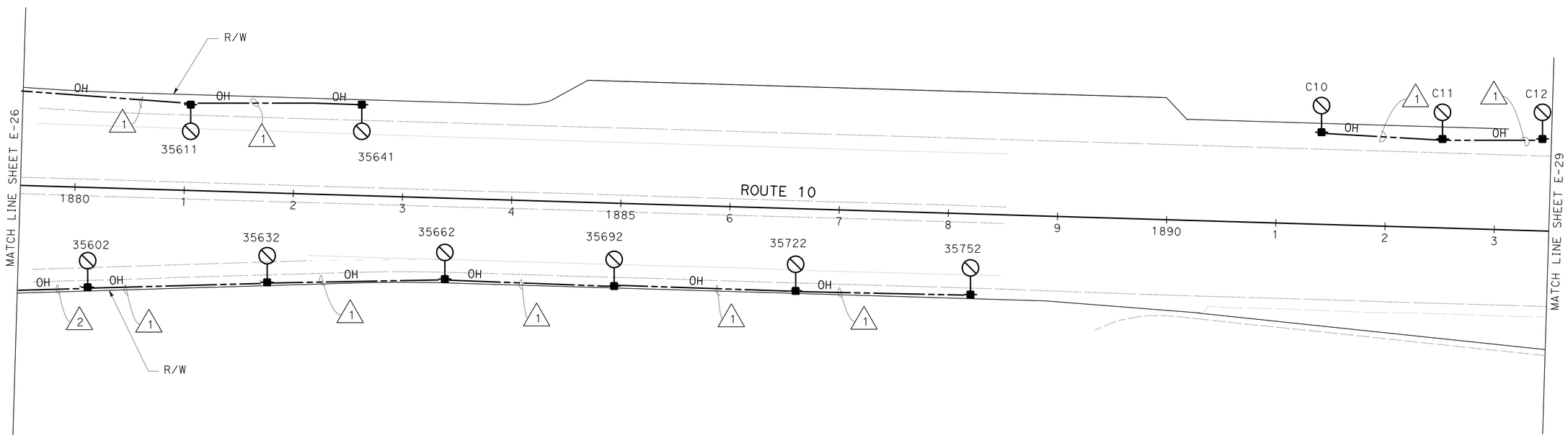
6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

| CONDUIT AND CONDUCTOR SCHEDULE | | | |
|---|---|---|---|
| AWG | DESCRIPTION | 1 | 2 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 | 4 |
| 6 | GROUND | 1 | 1 |
| CONDUIT SIZE | | - | - |




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-28.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (TEMPORARY)

SCALE: 1" = 50'

**E-27**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO

CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO

REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 08:25

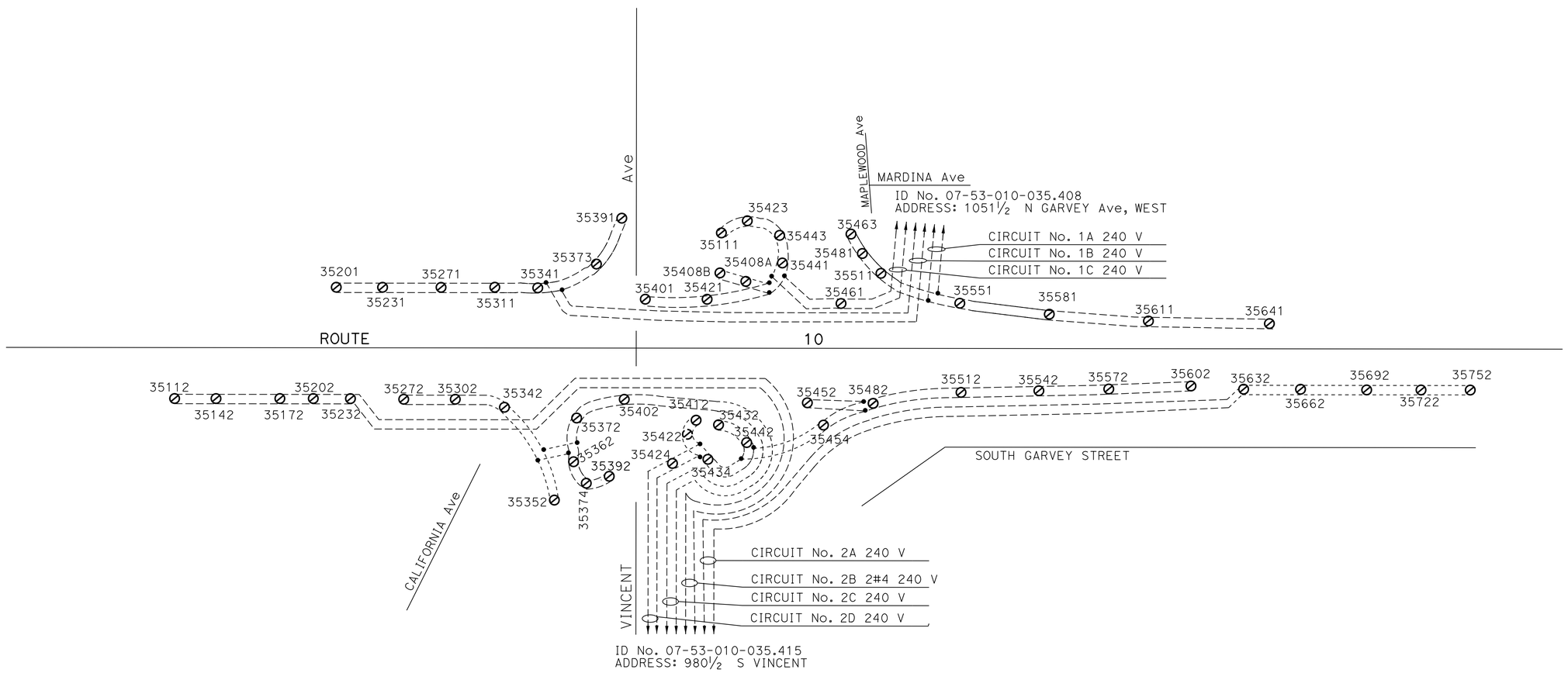
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 891 | 1475 |

REGISTERED ELECTRICAL ENGINEER 6/24/12 DATE

PLANS APPROVAL DATE 6-10-13

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*




WIRING DIAGRAM (SHEETS E-25 TO E-27)

# MODIFY LIGHTING AND SIGN ILLUMINATION

## (TEMPORARY)

NO SCALE

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY.*

**E-28**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO

CALCULATED-DESIGNED BY: VUONG HONG

CHECKED BY: OSWALD ELIZONDO

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 08:25

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 892 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

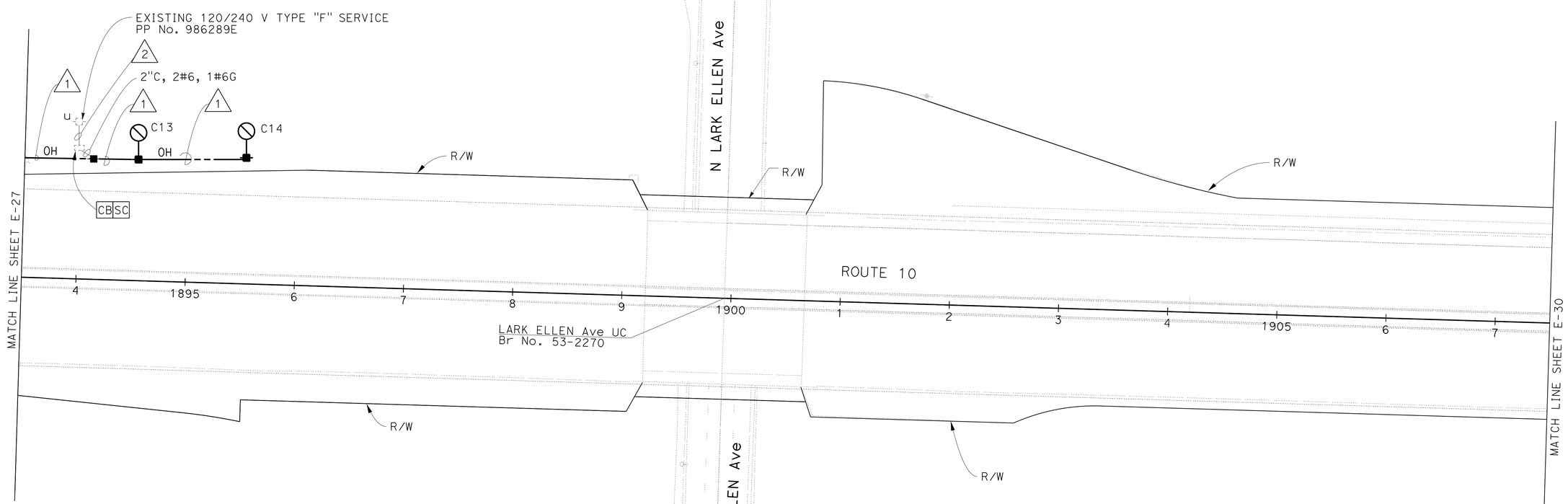
REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

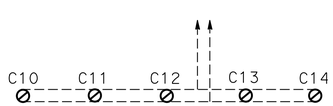
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**CONDUIT AND CONDUCTOR SCHEDULE**

| AWG | DESCRIPTION | 1 | 2 |
|---|---|---|---|
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 | 4 |
| 6 | GROUND | 1 | 1 |
| | CONDUIT SIZE | - | 2"(E) |




EXISTING 120/240 V TYPE "F" SERVICE
PP No. 986289E




WIRING DIAGRAM
(SHEETS E-25 TO E-27)

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIGY LIGHTING AND SIGN ILLUMINATION
## (TEMPORARY)

SCALE: 1" = 50'

**E-29**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:26

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 893 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

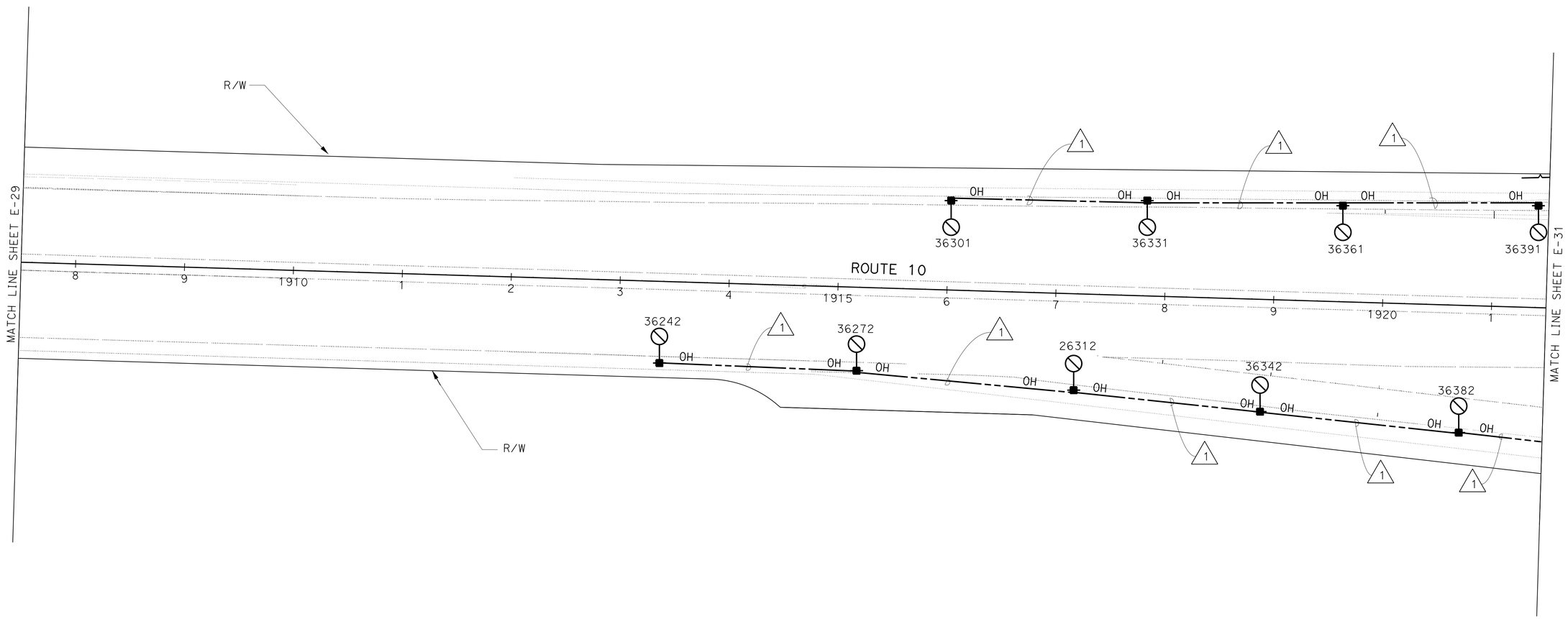
6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

| CONDUIT AND CONDUCTOR SCHEDULE | | |
|---|---|---|
| AWG | DESCRIPTION | 1 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 |
| 6 | GROUND | 1 |
| CONDUIT SIZE | | - |




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-33.
*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (TEMPORARY)

SCALE: 1" = 50'

**E-30**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:26

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 894 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

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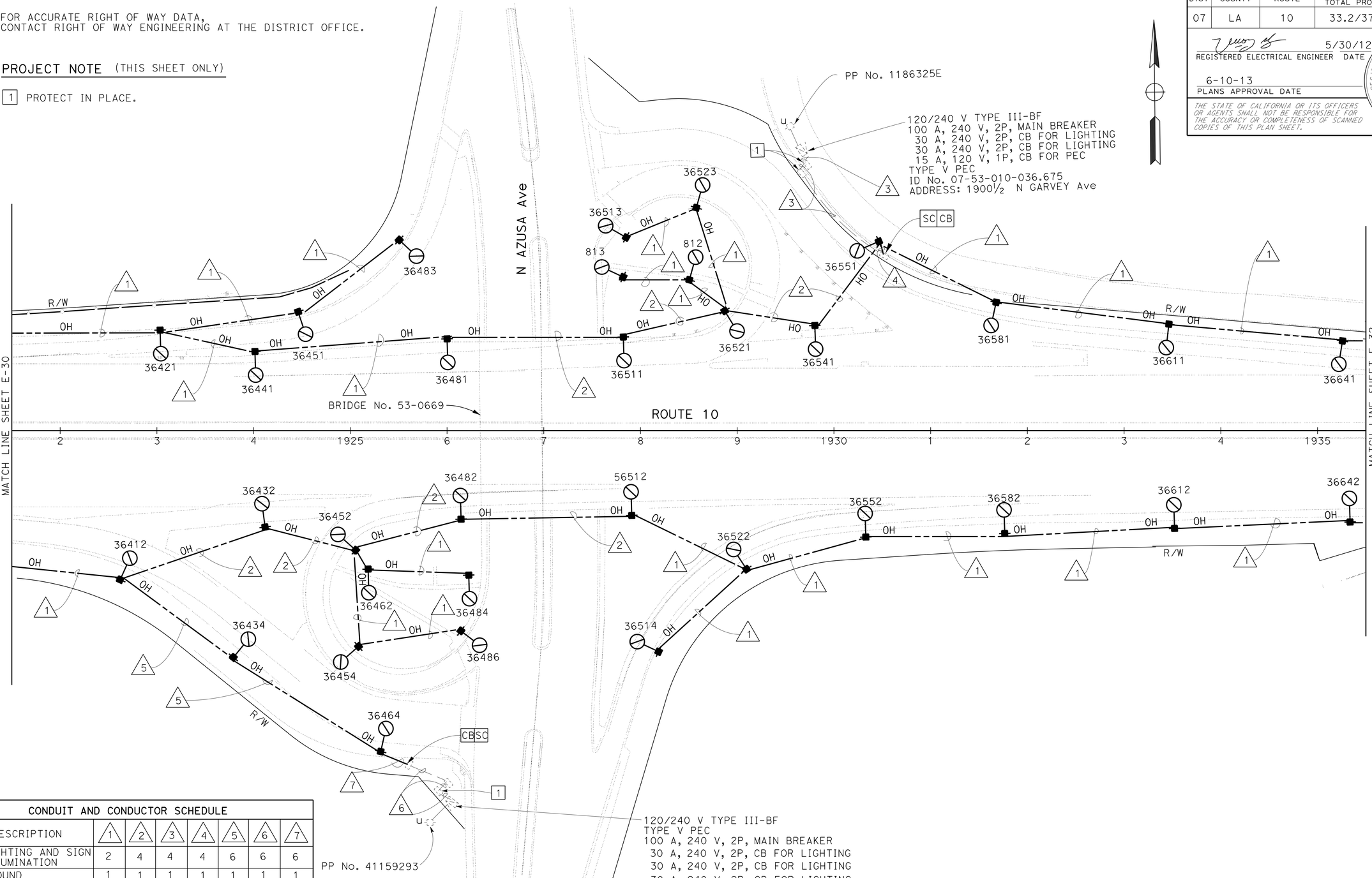
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTE (THIS SHEET ONLY)

1 PROTECT IN PLACE.




| CONDUIT AND CONDUCTOR SCHEDULE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| AWG | DESCRIPTION | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 | 4 | 4 | 4 | 6 | 6 | 6 |
| 6 | GROUND | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | CONDUIT SIZE | - | - | 2"(E) | 2" | - | 2"(E) | 2" |

FOR WIRING DIAGRAM, SEE SHEET E-33.

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION (TEMPORARY)

SCALE: 1" = 50'

E-31

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:26

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 895 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

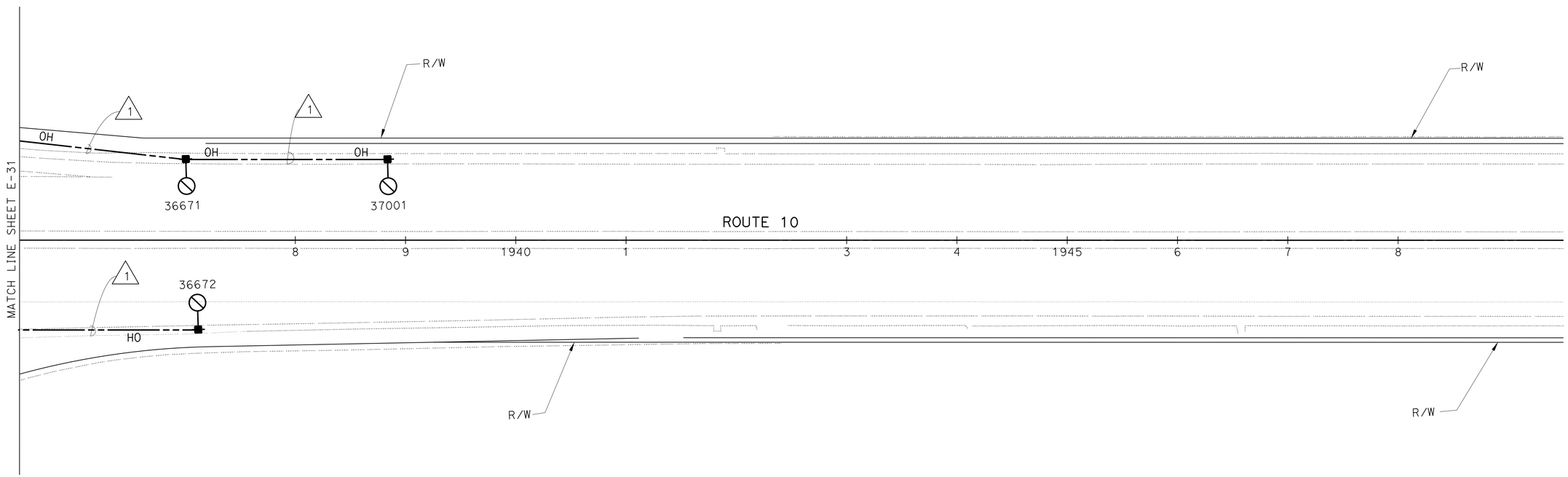
6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

| CONDUIT AND CONDUCTOR SCHEDULE | | |
|---|---|---|
| AWG | DESCRIPTION | 1 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 |
| 6 | GROUND | 1 |
| | CONDUIT SIZE | - |




FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.
FOR WIRING DIAGRAM, SEE SHEET E-33.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION
## (TEMPORARY)

SCALE: 1" = 50'

**E-32**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:26

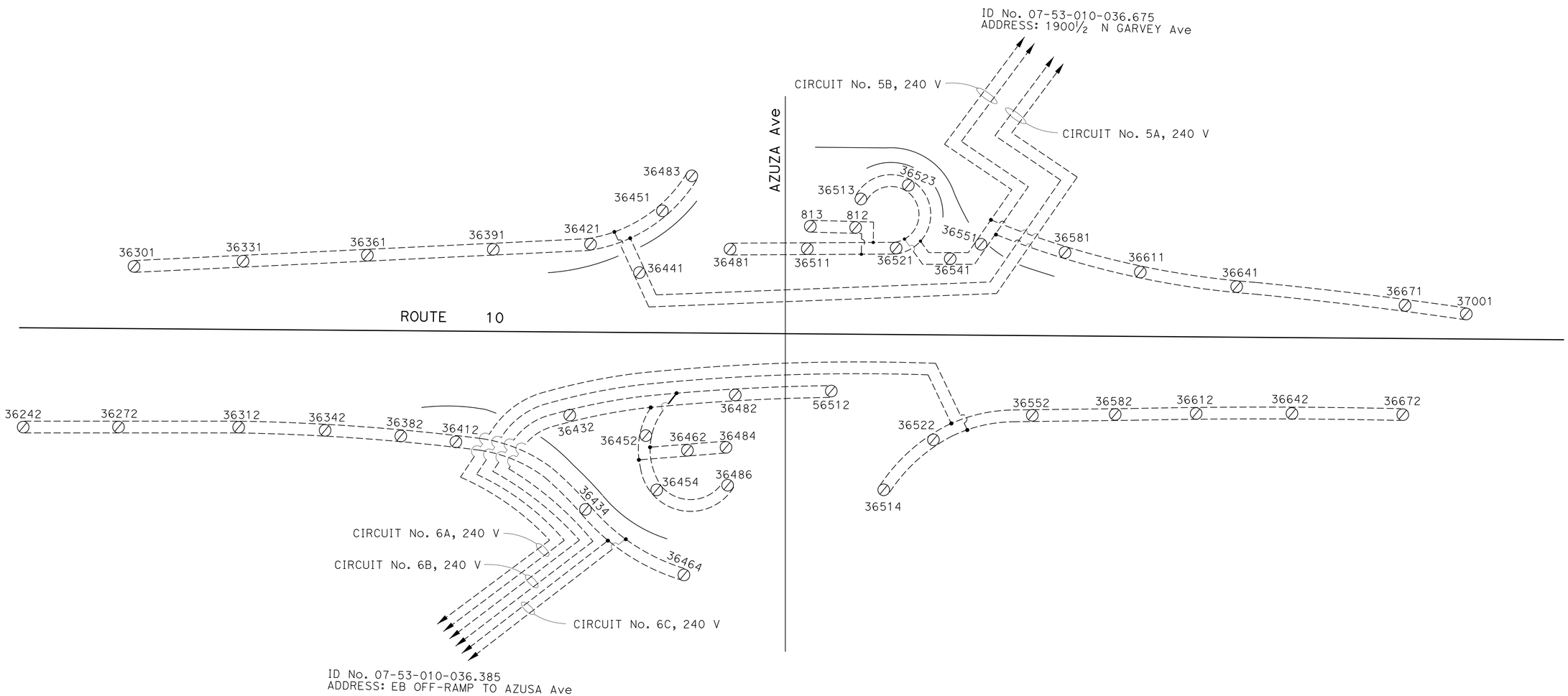
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 896 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

PLANS APPROVAL DATE 6-10-13

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*




WIRING DIAGRAM (SHEETS E-30 TO E-32)

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

# MODIFY LIGHTING AND SIGN ILLUMINATION (TEMPORARY)

NO SCALE

**E-33**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO

CALCULATED-DESIGNED BY: VUONG HONG

CHECKED BY: OSWALD ELIZONDO

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 13-JUN-2013

TIME PLOTTED => 08:26

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 897 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

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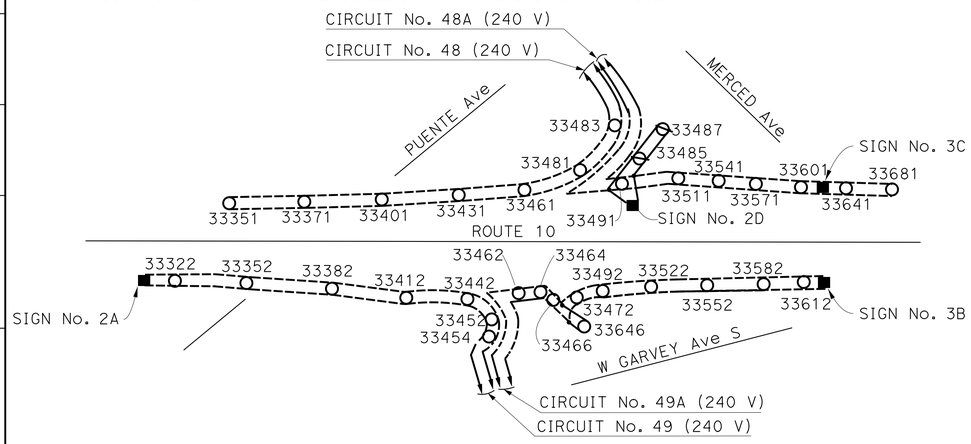
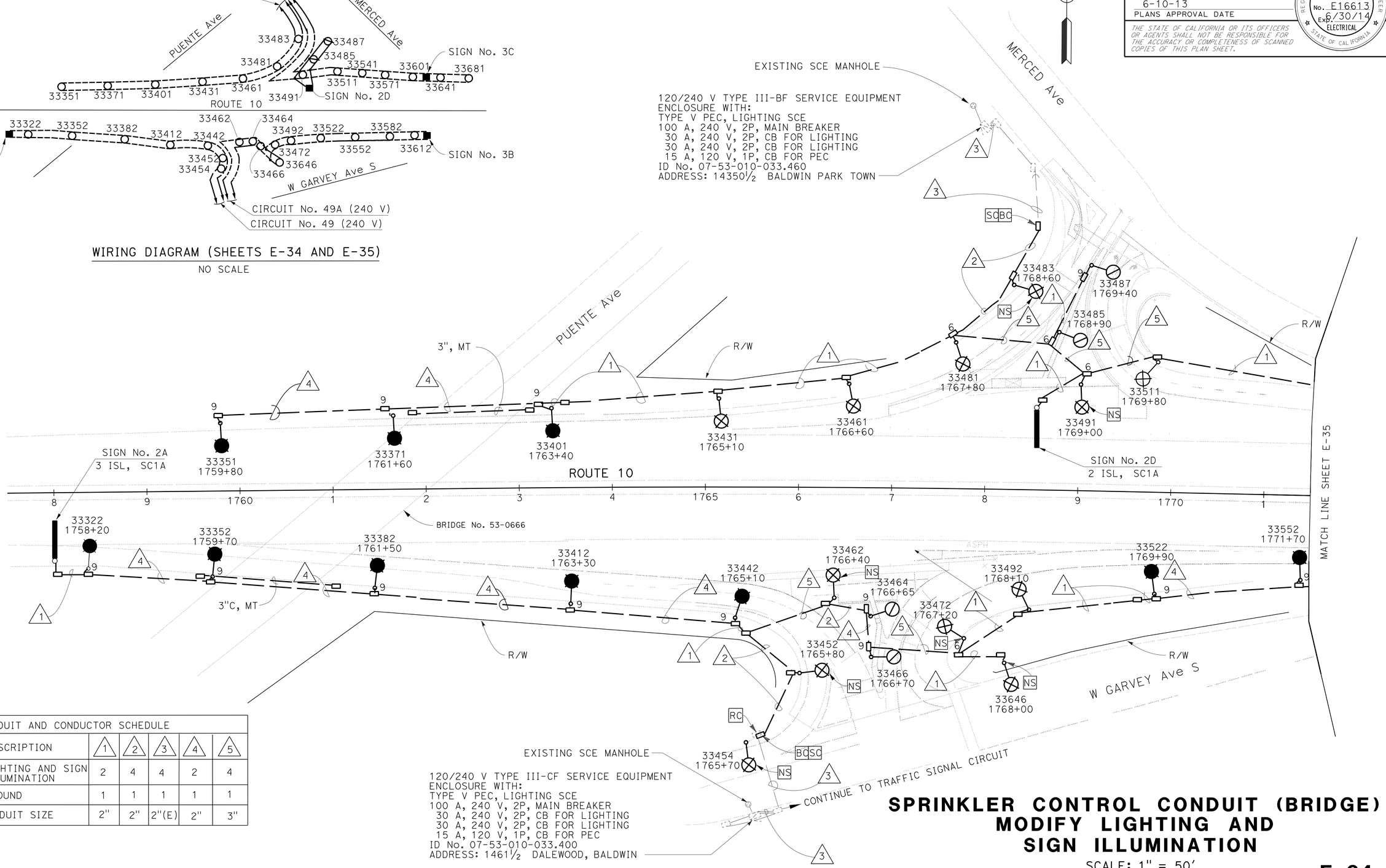
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




WIRING DIAGRAM (SHEETS E-34 AND E-35)

NO SCALE




| CONDUIT AND CONDUCTOR SCHEDULE | | | | | | |
|---|---|---|---|---|---|---|
| AWG | DESCRIPTION | 1 | 2 | 3 | 4 | 5 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 | 4 | 4 | 2 | 4 |
| 6 | GROUND | 1 | 1 | 1 | 1 | 1 |
| | CONDUIT SIZE | 2" | 2" | 2"(E) | 2" | 3" |

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

# SPRINKLER CONTROL CONDUIT (BRIDGE) MODIFY LIGHTING AND SIGN ILLUMINATION

SCALE: 1" = 50'

E-34

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
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LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:26

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 898 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
VUONG HONG
No. E16613
Exp. 6/30/14
ELECTRICAL
STATE OF CALIFORNIA

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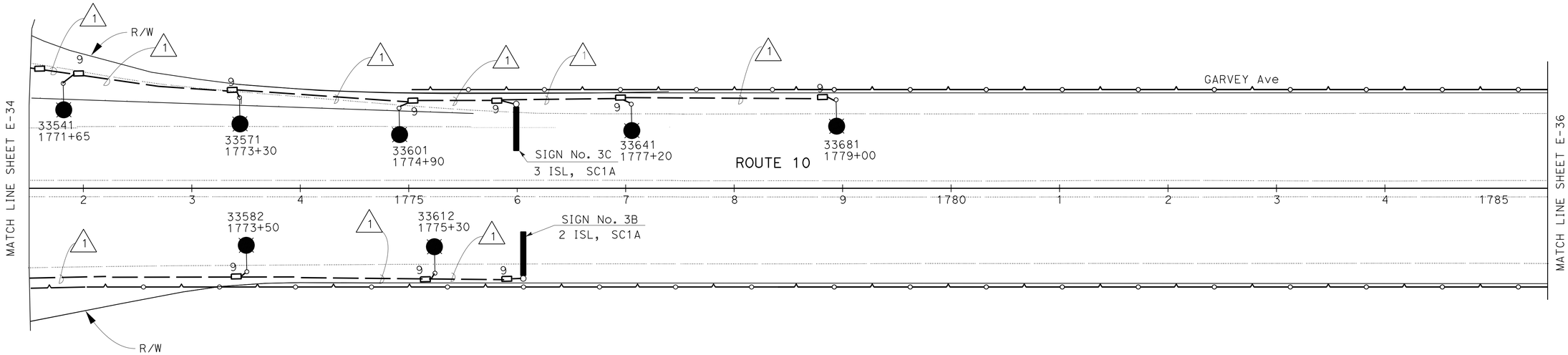
FOR ACCURATE RIGHT OF WAY,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

| CONDUIT AND CONDUCTOR SCHEDULE | | |
|---|---|---|
| AWG | DESCRIPTION | 1 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 |
| 6 | GROUND | 1 |
| CONDUIT SIZE | | 2" |




# MODIFY LIGHTING AND SIGN ILLUMINATION

SCALE: 1" = 50'

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

E-35

REVISED BY | DATE REVISED
VUONG HONG | OSWALD ELIZONDO
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | OSWALD ELIZONDO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 13-JUN-2013 | TIME PLOTTED => 08:26

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 899 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

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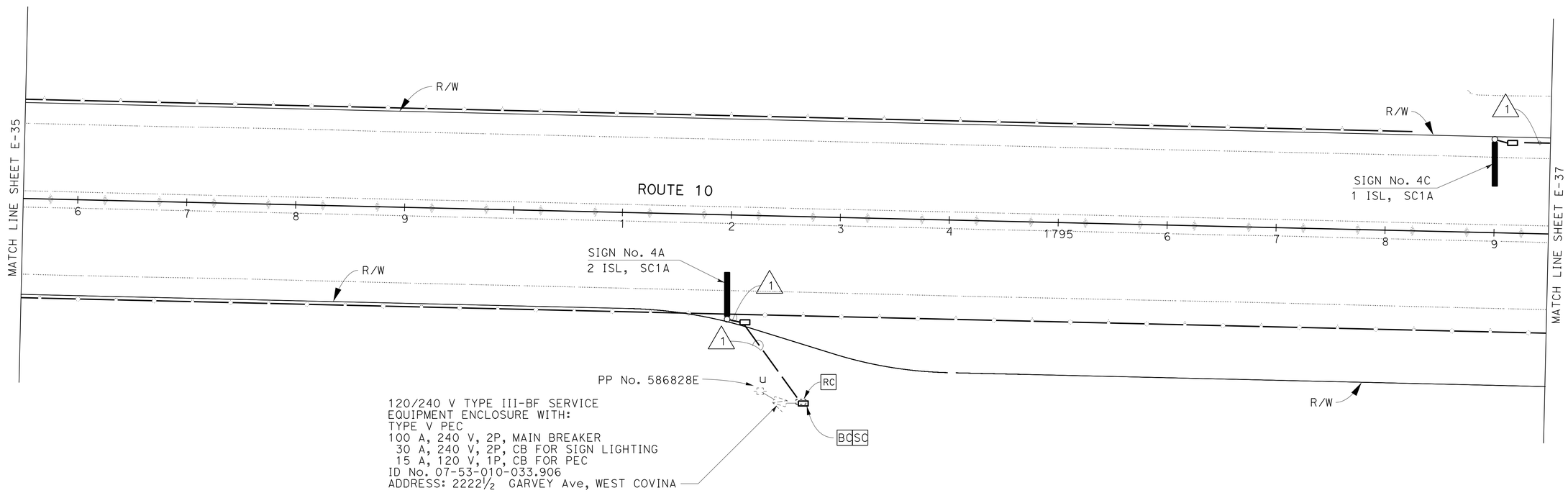
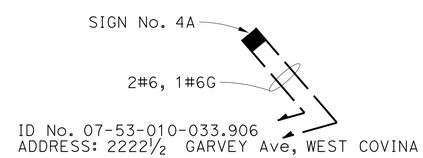
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

| CONDUIT AND CONDUCTOR SCHEDULE | | |
|---|---|---|
| AWG | DESCRIPTION | 1 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 |
| 6 | GROUND | 1 |
| CONDUIT SIZE | | 2" |




WIRING DIAGRAM (THIS SHEET ONLY)
NO SCALE

# MODIFY LIGHTING AND SIGN ILLUMINATION

SCALE: 1" = 50'

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

E-36

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:26

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 10 | 33.2/37.2 | 900 | 1475 |

REGISTERED ELECTRICAL ENGINEER 5/30/12 DATE

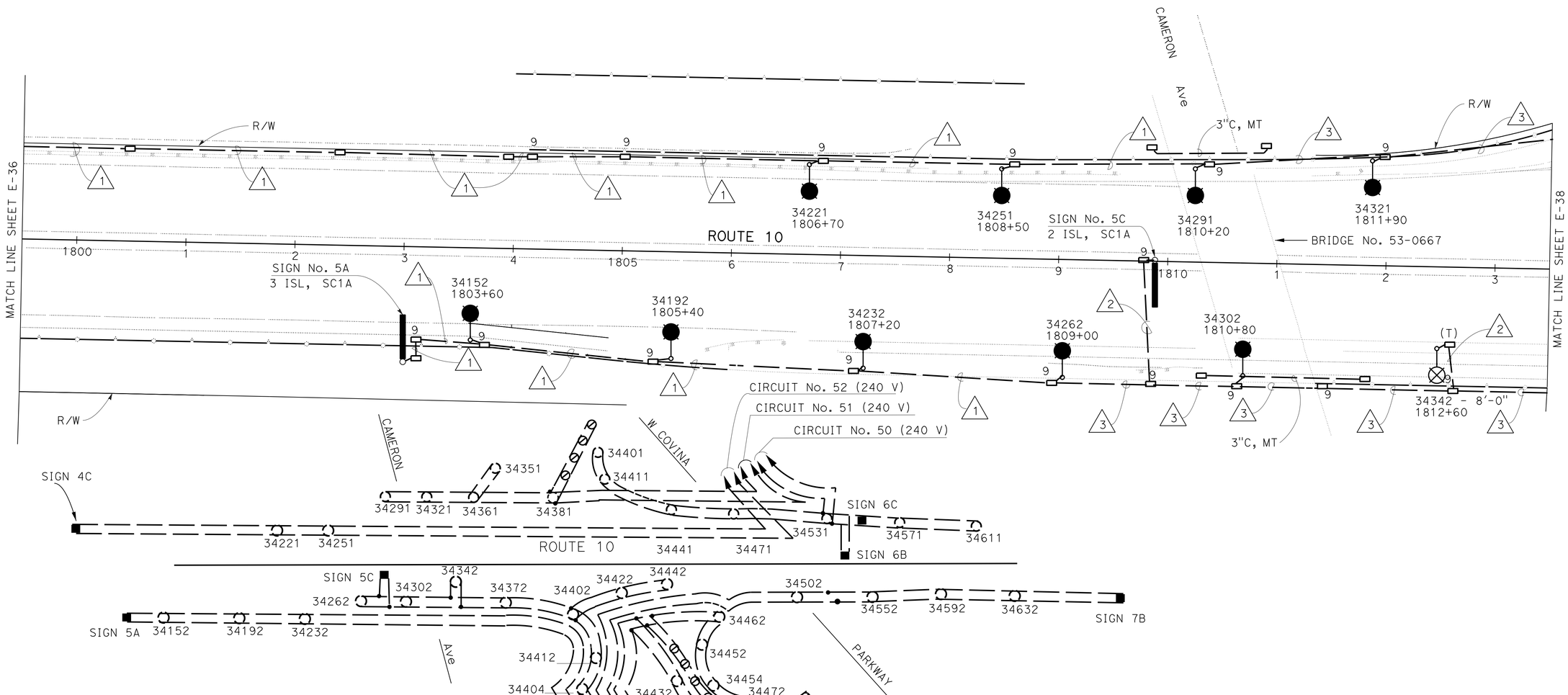
6-10-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER VUONG HONG No. E16613 Exp. 6/30/14 ELECTRICAL STATE OF CALIFORNIA

*THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.*

FOR ACCURATE RIGHT OF WAY,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

| CONDUIT AND CONDUCTOR SCHEDULE | | | | |
|---|---|---|---|---|
| AWG | DESCRIPTION | 1 | 2 | 3 |
| 6 | LIGHTING AND SIGN ILLUMINATION | 2 | 2 | 4 |
| 6 | GROUND | 1 | 1 | 1 |
| CONDUIT SIZE | | 2" | 3" | 2" |




WIRING DIAGRAM (SHEETS E-37, E-38, E-39)

NO SCALE

# SPRINKLER CONTROL CONDUIT (BRIDGE) MODIFY LIGHTING AND SIGN ILLUMINATION

SCALE: 1" = 50'

FOR ABBREVIATION, LEGEND, PROJECT NOTES, SEE SHEET E-1.

*APPROVED FOR ELECTRICAL WORK ONLY*

**E-37**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: VUONG HONG
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 13-JUN-2013
TIME PLOTTED => 08:26