

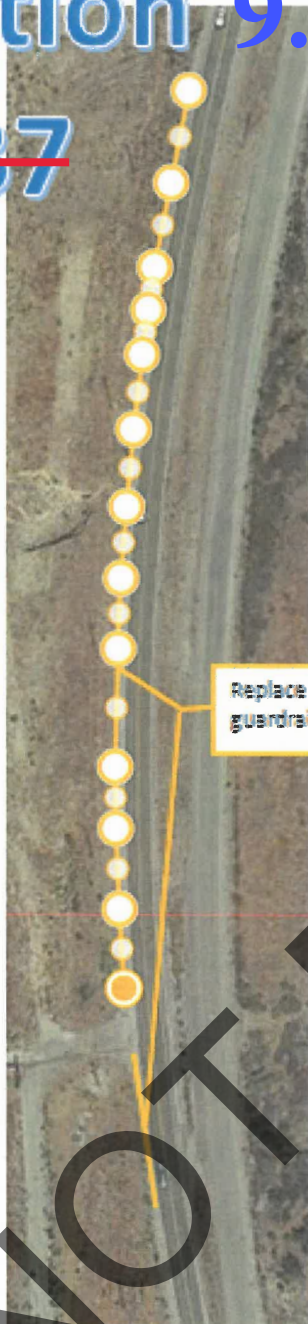


9.2) Devore Area: Cajon Blvd_ Culvert

Improvements: new MGS and AITS on the east side using skip post detail. Replace MBGR with MGS and add AITS on the west. Install steel posts at the headwall of the culvert.

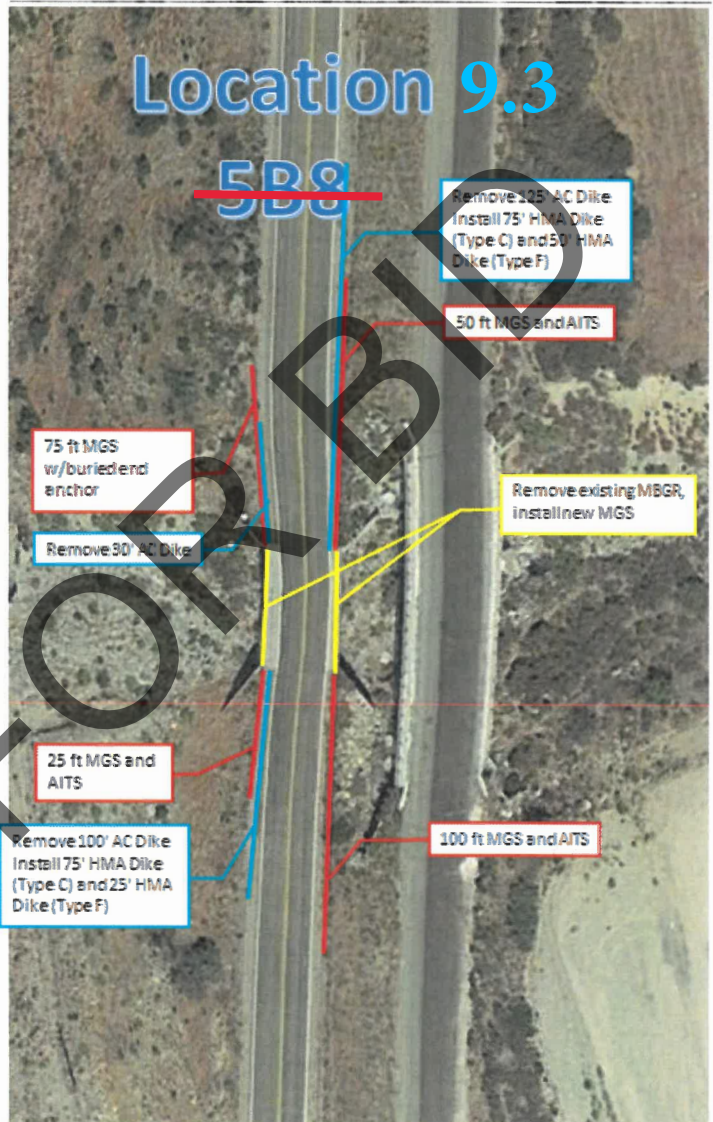
Location 9.4

~~5B7~~



Location 9.3

~~5B8~~



NOT FOR BIDDING



9.3) Devore Area: Cajon Blvd_ Culvert

Improvements: remove existing MBGR, install new MGS with steel posts at the headwalls of the culvert. Extend MGS limits and add AITS.
Replace dike and extend limits of new dike as needed.



9.4) Devore Area: Cajon Blvd_ Replace guardrail

Improvements: replace existing guardrail with steel posts, add AITS. Replace dike.

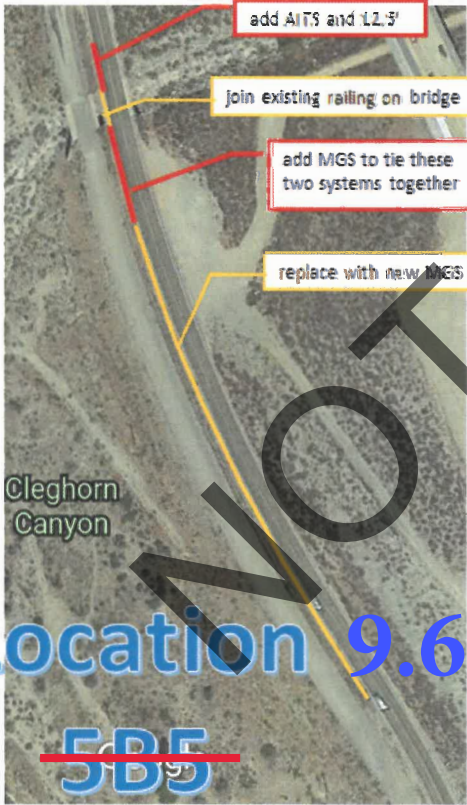
Location 9.7

~~5B4~~



Install MGS to
Protect Power poles

Remove 325' existing
free standing AC DIKE



add AITS and 12.5'

Join existing railing on bridge

add MGS to tie these
two systems together

replace with new MGS

Cleghorn
Canyon

Location 9.6

~~5B5~~



Location 9.5

~~5B6~~

Recommend
Remove
baricade



9.5) Devore Area: Cajon Blvd_ Remove barricade

Project improvements: existing c-type guardrail with wood posts to be removed. New guardrail will not be installed at this location. Existing holes from removed wood post will be filled with local borrow if available, or imported borrow.



9.6) Devore Area: Cajon Blvd_ Railing at Bridge

Improvements: replace guardrail on the east side. Recommend replacing railing on the west side: does not meet high requirement, burnt posts.



9.7) Devore Area: Cajon Blvd_ Protect Existing Utility Pole

Improvements: install new MGS, remove existing freestanding dike. Will pothole to identify underground utilities. Also remove broken utility pole.



9.8) Devore Area: Cajon Blvd_ At existing Wall

Improvements:

- Option 1: remove the wall, grade between the two roadways.
- Option 2 (county preferred): wall to remain, add MGS and AITS at each end along with the anchor block transition railing connection. Consider removing the 6" curb in front of the wall, replace with DG.

Location ~~5B2~~ 9.9

~~Option 1 - replace in same location~~

Option 2 - replace and protect PP
PREFERED

NOT FOR BIDD



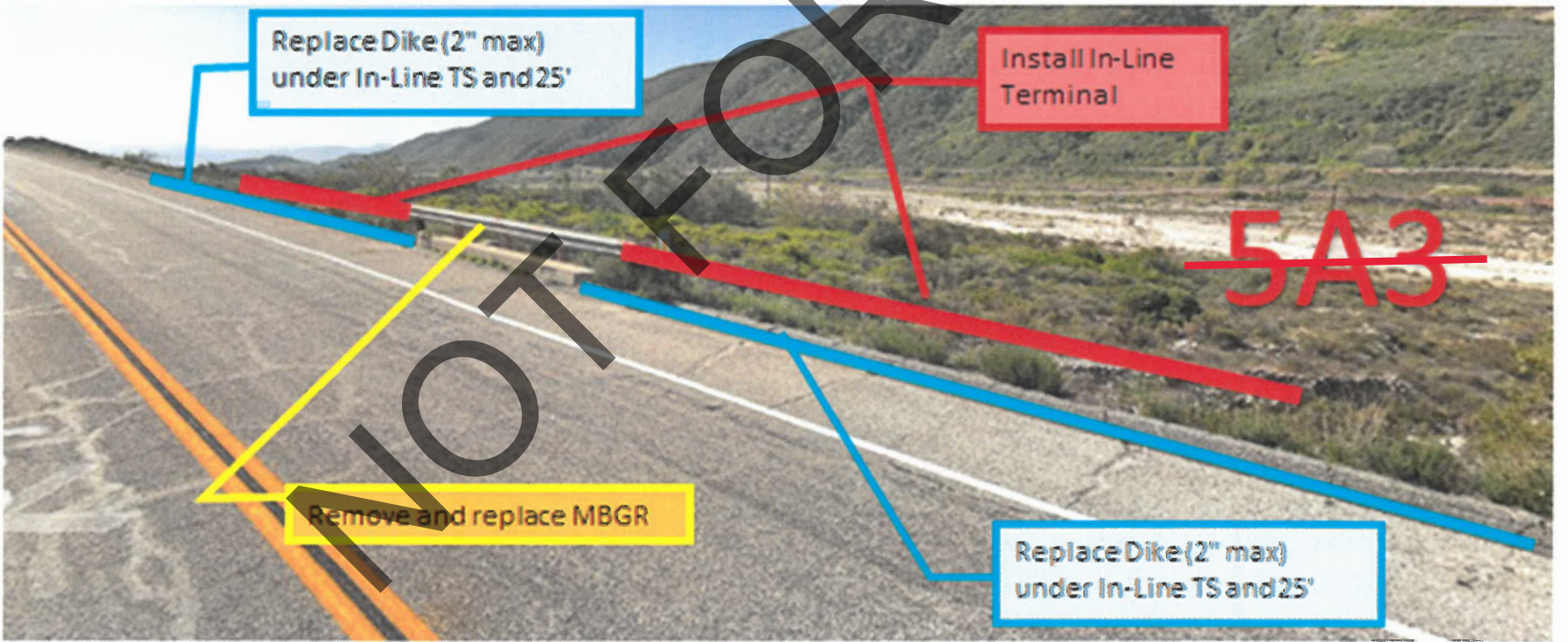


9.9) Devore Area: Cajon Blvd_ Masonry Wall and Existing Poles

Project Improvements: existing k-rail and guardrail to be removed. Project to install Transition Railing (Type WB-31 Mod) at both ends of the existing masonry wall. The Modified Transition Railing WB-31 is a standalone Midwest Guardrail System (MGS). There will be no connect to the existing masonry wall. New MGS west of power poles (in this photo, left of power poles) will be installed using 8' steel posts.



Location 9.11



ATTACHMENT 3 – GUARDRAIL SCOPE AND LOCATIONS





9.11) Devore Area: Cajon Blvd_ Existing guardrail at culvert

Improvements: install new MGS by attaching it to headwall, install AITS and replace dike.

**REPORT/RECOMMENDATION TO THE BOARD OF SUPERVISORS
OF SAN BERNARDINO COUNTY
AND RECORD OF ACTION**

February 6, 2024

FROM

**TREVOR LEJA, Assistant Executive Officer, Department of Public Works –
Transportation**

SUBJECT

California Environmental Quality Act Finding for the Guardrail Replacement at Various Locations on Cajon Boulevard Project in the Devore Area

RECOMMENDATION(S)

1. Find that the Guardrail Replacement at Various Locations on Cajon Boulevard Project in the Devore Area is exempt under the California Environmental Quality Act, Title 14 of the California Code of Regulations Section 15301(c) Class 1 (existing facilities) and Section 15303(d) Class 3 (New Construction or Conversion of Small Structures).
2. Approve the Guardrail Replacement at Various Locations on Cajon Boulevard Project in the Devore Area, as defined in the Notice of Exemption.
3. Direct the Department of Public Works to file the Notice of Exemption in accordance with the California Environmental Quality Act.

(Presenter: Noel Castillo, Director, 387-7906)

COUNTY AND CHIEF FLOOD CONTROL ENGINEER GOALS & OBJECTIVES

**Ensure Development of a Well-Planned, Balanced, and Sustainable County.
Provide for the Safety, Health and Social Service Needs of County Residents.**

FINANCIAL IMPACT

Approval of this item will not result in the use of Discretionary General Funding (Net County Cost). The Guardrail Replacement at Various Locations on Cajon Boulevard Project in the Devore Area (Project) will be funded with Measure I Local Streets Program – San Bernardino Valley Subarea funds. Sufficient appropriation and revenue are included in the Department of Public Works (Department) 2023-24 Measure I Local Streets Program – San Bernardino Valley Subarea budget (66500002142 17TX1799) and will be included in future recommended budgets.

BACKGROUND INFORMATION

The Project consists of replacing guardrails, asphalt concrete dikes and other minor incidental improvements as needed at various locations on Cajon Boulevard. This Project was prioritized by the San Bernardino County Board of Supervisors (Board) as part of the Measure “I” Local Street Pass-Through Funds Five-Year Capital Improvement Plan Project List for 2023-24 through 2027-28 on August 8, 2023 (Item No. 47).

On November 9, 2023, The Department’s environmental staff reviewed this Project and determined that a categorical exemption in accordance with the California Environmental

**California Environmental Quality Act Finding for the Guardrail
Replacement at Various Locations on Cajon Boulevard Project in the
Devore Area
February 6, 2024**

Quality Act (CEQA) Guidelines, Title 14 of the California Code of Regulations, Section 15301(c) Class 1 and Section 15303(d) Class 3 is appropriate. The Class 1 exemption allows for repair and maintenance activities on existing roads, sidewalks, gutters, and similar facilities that involve negligible or no expansion of use beyond that existing at the time of the lead agency's determination. The Class 3 exemption allows for the construction and location of limited numbers of new, small facilities, or structures including water main, sewage, electrical, gas, and other utility extensions, including street improvements of reasonable length to serve such construction. When the Board considers the environmental finding, the filing and posting of a Notice of Exemption, in accordance with the CEQA, is recommended.

The Project aligns with the County and the Chief Executive Officer's goals and objectives to ensure the development of a well-planned, balanced, and sustainable county and to provide for the safety of county residents.

PROCUREMENT

The Department plans to bring the Project's plans and specifications, as well as a recommendation to advertise for competitive bids, to the Board for consideration in Spring 2024.

REVIEW BY OTHERS

This item has been reviewed by County Counsel (Aaron Gest, Deputy County Counsel, 387-5455) on January 9, 2024; Finance (Carl Lofton, Administrative Analyst, 387-5404) on January 22, 2024; and County Finance and Administration (Paloma Hernandez-Barker, Deputy Executive Officer, 387-5423) on January 22, 2024.

NOT FOR BIDD

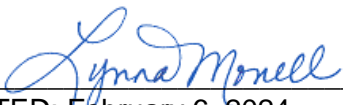
**California Environmental Quality Act Finding for the Guardrail
Replacement at Various Locations on Cajon Boulevard Project in the
Devore Area
February 6, 2024**

Record of Action of the Board of Supervisors
San Bernardino County

APPROVED (CONSENT CALENDAR)

Moved: Joe Baca, Jr. Seconded: Curt Hagman
Ayes: Col. Paul Cook (Ret.), Jesse Armendarez, Dawn Rowe, Curt Hagman, Joe Baca, Jr.

Lynna Monell, CLERK OF THE BOARD

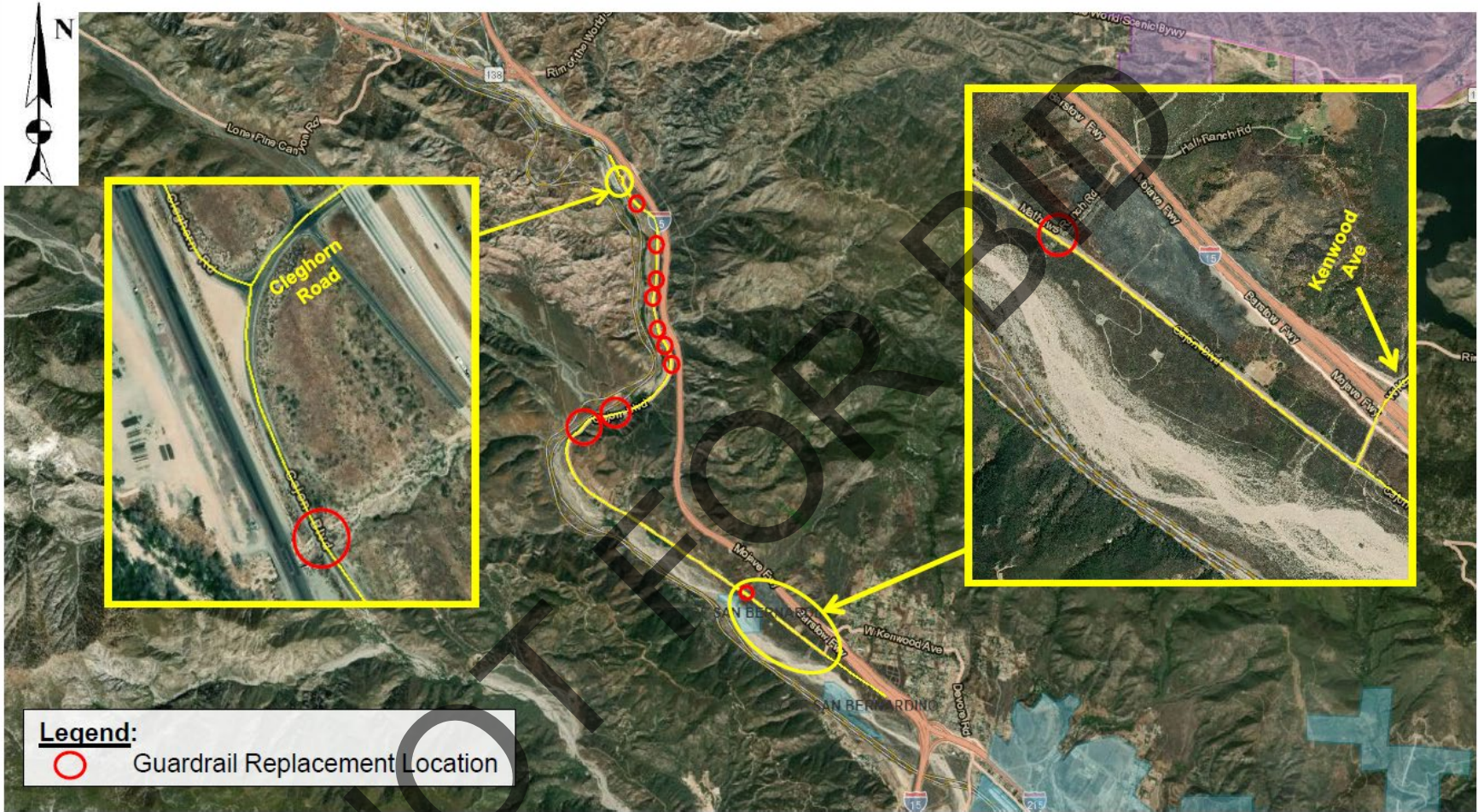
BY  _____
DATED: February 6, 2024



cc: File - Public Works/Trans w/attachment
MA 02/12/2024

NOT FOR BID

Devore Area



Legend:

○ Guardrail Replacement Location

SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS
DISTRICTS 1 AND 2
YARD 3
WO TX1799



LOCATION MAP
CAJON BOULEVARD
1.1Mi N, KENWOOD AVE N/0.15Mi S, CLEGHORN RD
Guardrail Replacement

*Standard and Special Drawings
(Green Pages)*

inserted here

NOT FOR BIDD

LIST OF STANDARD AND SPECIAL DRAWINGS (GREEN PAGES)

NOTICE TO RESIDENTS (English/Spanish)

SAN BERNARDINO COUNTY STANDARDS

303A

303B

305

CALTRANS STANDARD PLANS DATED 2018

A3A

A3B

A3C

A10A

A10B

A10C

A10D

A10E

RSP A20B

A73C

RSP A77L2

A77M1

A77N2

RSP A77N4

A77N5

A77N5A

A77N6

RSP A77P1

RSP A77S1

RSP A77U4

A87B

T3A

T3B

T9

T10

T13

RSP B11-81

RSP B11-82

CA MUTCD DATED 2014

FIGURE 2A-2 (CA)

FIGURE 2C-13 (CA)

SECTION 2C.65

NOT FOR BID



NOTICE TO THE RESIDENTS OF CAJON BOULEVARD

San Bernardino County Department of Public Works has contracted with (Company name) for the (type of work) of (name of road) in the (city) area. The construction shall include (detailed description of work).

This work will be performed between the dates of (start date) and (end date).

Normal working hours will be between the hours of _____ A.M. and _____ P.M. Monday through Friday.

There will be "No Parking Signs" posted on your street indicating the specific dates work will be performed on the street. During the time we are working, access to the public will be limited and we ask the following:

1. Do not park your vehicles on the roadway
2. Do not allow water to run on the roadway
3. Do not allow children to play in the roadway
4. Do not place trash cans or other debris on the roadway

We regret any inconvenience that this work may cause you and we thank you for your cooperation in assisting us in rebuilding your street.

Thank you.

(Company name)

(Company contact name)

(Company phone number)

If you need further assistance, contact the Department of Public Works at (909) 387-7920.



NOTIFICACIÓN A LOS RESIDENTES DE CAJON BOULEVARD

San Bernardino County Department of Public Works, a contratado con (Company name) para (type of work) la calle llamada (name of road) en la ciudad de (city). La construcción va a incluir (detailed description of work).

Este trabajo será hecho entre la fecha de (start date) y (end date). Las horas elegidas para hacer este trabajo serán entre las _____ de la mañana y _____ de la tarde de lunes a viernes.

Habrán letreros indicando que “No Habrá Estacionamiento” en la calle y especificando el horario cuando el trabajo será hecho. Durante el tiempo que estaremos trabajando en la calle, la entrada para el público será limitada y por esta razón pedimos lo siguiente:

1. No estacionen sus vehículos en la calle.
2. No permita que corra el agua hacia la calle.
3. No permita que los niños jueguen en la calle.
4. No ponga los botes de basura o cualquier otra basura en la calle.

Lamentamos la inconveniencia que causara este trabajo y les agradecemos por su cooperación y asistencia en el mejoramiento de su calle.

Muchas Gracias.

(Company name)

(Company contact name)

(Company phone number)

Si necesita asistencia favor de hablar al Public Works, (909) 387-7920.

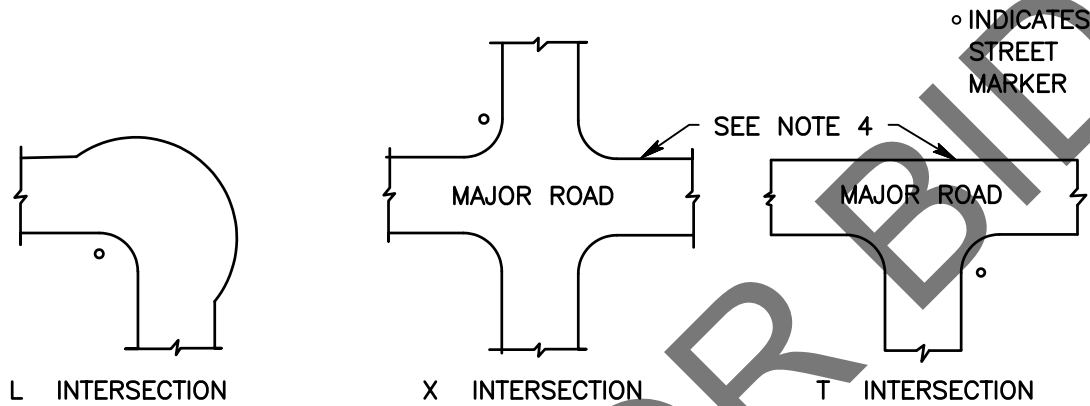
**SAN BERNARDINO COUNTY
STANDARDS**

NOT FOR BID

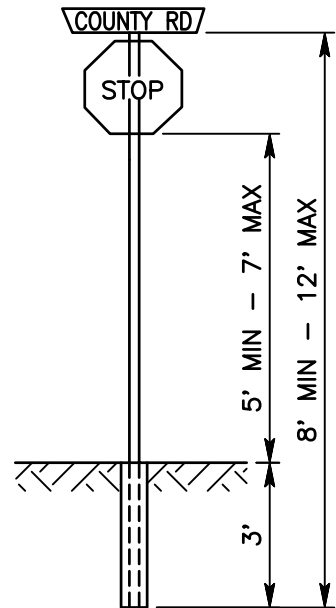
R/W = RIGHT OF WAY
 MAX = MAXIMUM
 MIN = MINIMUM



PLAN



TYPICAL LOCATION



ELEVATION

NOTES:

1. MARKER TO BE SET ON COUNTY RIGHT OF WAY.
2. LOCATION OF MARKER SHOWN IS APPROXIMATE.
3. MARKERS TO BE VISIBLE FOR A DISTANCE OF 150 FEET.
4. IF EITHER ROAD IS DIVIDED INTO 4 LANES OR MORE (MAJOR ROAD), ADDITIONAL MARKERS WILL BE REQUIRED.
5. STREET MARKERS LOCATED AT MAJOR ROADS WILL BE MOUNTED ON 12 FOOT POSTS TO ACCOMMODATE A STOP SIGN.

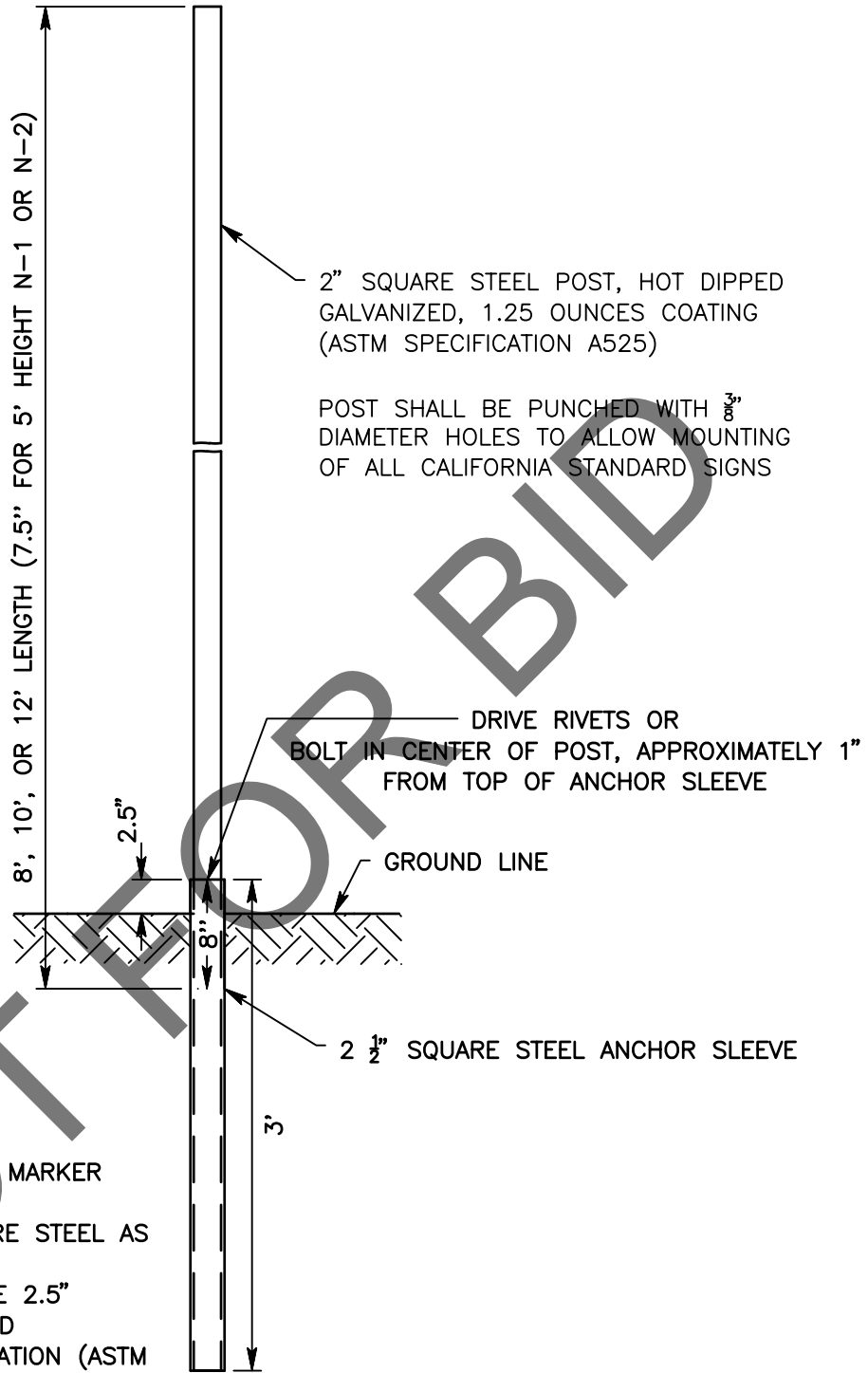


SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS

**STREET MARKER
 (TYPICAL LOCATION)**

BRENDON P. BIGGS, PE
 DIRECTOR OF PUBLIC
 WORKS/ROAD
 COMMISSIONER

303A



NOTES:

1. SEE STANDARD 303A FOR MARKER LOCATIONS.
2. POST SHALL BE 2" SQUARE STEEL AS SHOWN AND STATED.
3. ANCHOR SLEEVE SHALL BE 2.5" SQUARE STEEL HOT DIPPED GALVANIZED AFTER FABRICATION (ASTM SPECIFICATION A-123).
4. SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD 303.



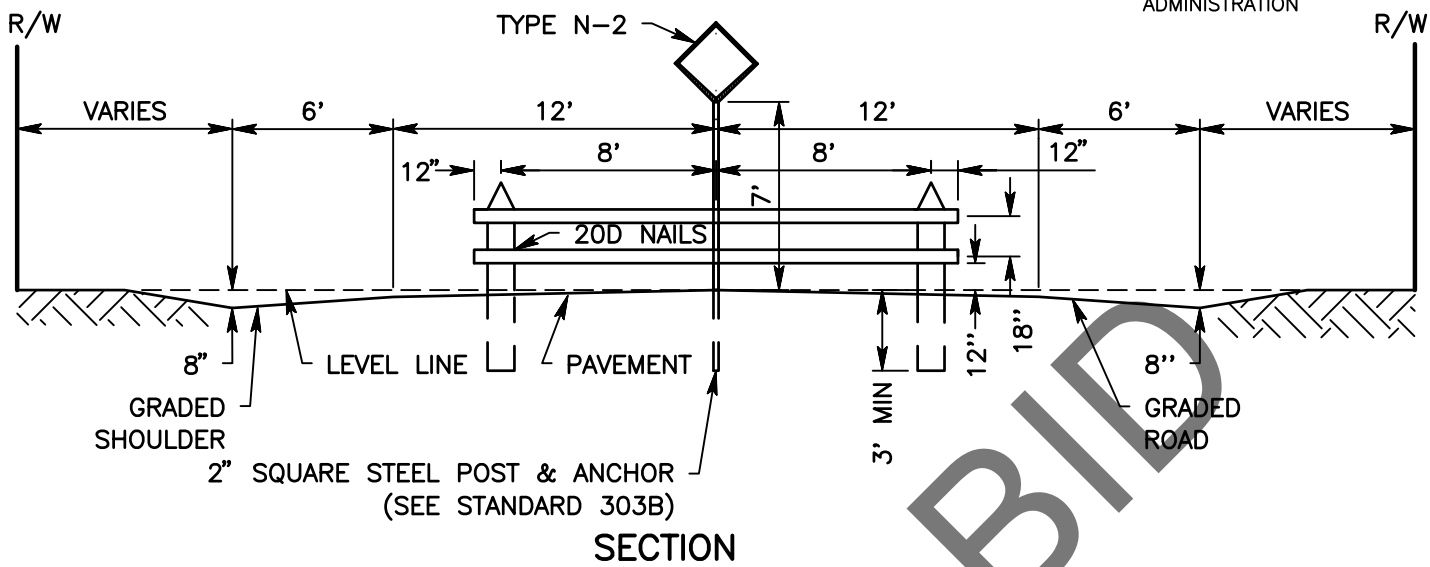
SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS

STREET MARKER INSTALLATION

BRENDON P. BIGGS, PE
DIRECTOR OF PUBLIC
WORKS/ROAD
COMMISSIONER

303B

R/W = RIGHT OF WAY
 MIN = MINIMUM
 MUTCD = MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
 FHWA = FEDERAL HIGHWAY ADMINISTRATION



WIDTH OF ROADWAY	NUMBER OF PANELS	TOTAL LENGTH OF PANELS
20' ALLEY	2	18'
36'	4	34'
44'	5	42'
64'	7	58'
DESERT ROAD	VARIES	VARIES

NOTES:

1. POSTS ARE TO BE CHAMFERED 6"x6"x6' CONSTRUCTION HEART REDWOOD, S4S TWO CROSS PLANKS ARE TO BE 2"x6" DOUGLAS FIR, CONSTRUCTION GRADE.
2. BARRICADE MATERIALS AND N-2 REFLECTOR SHALL CONFORM TO MUTCD STANDARD SPECIFICATIONS AND TO FHWA TYPE IIIA OR VISUAL IMPACT PERFORMANCE (VIP) REFLECTIVE SHEETING.
3. ALL EXPOSED WOOD SURFACES SHALL BE GIVEN 2 BRUSH COATS OF FUME-RESISTANT EXTERIOR WHITE PAINT CONFORMING TO CALTRANS STANDARD SPECIFICATIONS.
4. FOR RAIL TO POST CONNECTIONS, PROVIDE TWO EACH $\frac{3}{8}$ " CARRIAGE BOLTS WITH CUT WASHERS AND NUTS.



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS

BARRICADE URBAN AREA


BRENDON P. BIGGS, PE
 DIRECTOR OF PUBLIC
 WORKS/ROAD
 COMMISSIONER

305

CALTRANS STANDARD PLANS

2018

NOT FOR BID

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED CIVIL ENGINEER No. C49814 Exp. 9-30-18 CIVIL STATE OF CALIFORNIA					
May 31, 2018 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.					

A

AB AGGREGATE BASE
 ABBC ASBESTOS BONDED BITUMINOUS COATED
 ABM AIR-BLOWN MORTAR
 Abn ABANDON
 ABS ACRYLONITRILE-BUTADIENE-STYRENE
 Abut ABUTMENT
 AC ASPHALT CONCRETE
 AC+ UNGROUNDED CONDUCTOR
 ACB ASPHALT CONCRETE BASE
 ACC ARMOR-CLAD CONDUCTORS
 ACP ASBESTOS CEMENT PIPE
 Adj ADJUST, ADJUSTABLE, ADJACENT

ADL ADDED DEAD LOAD
 ADT AVERAGE DAILY TRAFFIC
 AFES ALTERNATIVE FLARED END SECTION
 Ahd AHEAD
 AIC AUXILIARY IRRIGATION CONTROLLER
 Alt ALTERNATE, ALTERNATIVE
 AM TIME FROM MIDNIGHT TO NOON
 Amend AMENDMENT
 AP ALTERNATIVE PIPE
 APC ALTERNATIVE PIPE CULVERT
 Approx APPROXIMATE
 APS ACCESSIBLE PEDESTRIAN SIGNAL
 APU ALTERNATIVE PIPE UNDERDRAIN
 ARS ACCELERATION RESPONSE SPECTRUM
 ARV AIR RELEASE VALVE
 AS AGGREGATE SUBBASE
 ASP ALTERNATIVE SLOTTED PIPE
 ASRP ALUMINUM SPIRAL RIB PIPE
 Assy ASSEMBLY
 ATPB ASPHALT TREATED PERMEABLE BASE
 ATPM ASPHALT TREATED PERMEABLE MATERIAL
 Auto AUTOMATIC
 Aux AUXILIARY
 AVB ATMOSPHERIC VACUUM BREAKER
 Ave AVENUE
 Avg AVERAGE

B

B & B BALLED AND BURLAPPED
 BAGR BRIDGE APPROACH GUARD RAILING
 Batt BATTERY
 BB BEGINNING OF BRIDGE
 B/B BRASS/BRONZE
 B/B/PI BRASS/BRONZE/PLASTIC
 B-B BACK-TO-BACK
 BBS BATTERY BACKUP SYSTEM
 BC BEGIN HORIZONTAL CURVE, BOLT CIRCLE
 BCR BEGIN CURB RETURN
 Beg BEGIN
 BFM BONDED FIBER MATRIX
 Bit Ctd BITUMINOUS COATED
 BK BACK
 Bkf BACKFILL
 Bldg BUILDING
 Blk BLACK
 BLM BRIDGE-LOG MILE
 Blvd BOULEVARD
 BM BENCH MARK
 BMP BEST MANAGEMENT PRACTICE
 Bot BOTTOM

B continued

BP BOOSTER PUMP, BYPASS
 BPA BACKFLOW PREVENTER ASSEMBLY
 BPB BICYCLE PUSH BUTTON
 BPE BACKFLOW PREVENTER ENCLOSURE
 B/PI BRASS/PLASTIC
 Br BRIDGE
 Brg BEARING
 BTU BRITISH THERMAL UNIT
 BV BALL VALVE
 BVC BEGIN VERTICAL CURVE
 BW BARBED WIRE

C

C CONDUIT, CHANNEL (STRUCTURAL STEEL SHAPE)
 CAA CABLE ANCHOR ASSEMBLY
 CAP CORRUGATED ALUMINUM PIPE
 CAPA CORRUGATED ALUMINUM PIPE ARCH
 CARV COMBINATION AIR RELEASE VALVE
 CAS CONSTRUCTION AREA SIGN
 CB CONCRETE BARRIER, CIRCUIT BREAKER, COUPLING BAND, COMPOST BERM
 CBW CONCRETE BLOCK WALL
 C-C CENTER TO CENTER
 CCA CAM COUPLER ASSEMBLY
 CCTV CLOSED CIRCUIT TELEVISION
 CEC CONTROLLER ENCLOSURE CABINET
 CG CENTER OF GRAVITY
 CHDPE CORRUGATED HIGH DENSITY POLYETHYLENE CHANNEL
 Cnl CAST IRON
 CIDH CAST-IN-DRILLED-HOLE
 CIP CAST-IN-PLACE, CAST IRON PIPE
 CIPCP CAST IN PLACE CONCRETE PIPE
 CISS CAST-IN-STEEL-SHELL
 CJP COMPLETE JOINT PENETRATION
 Ckt CIRCUIT
 CL CHAIN LINK
 CL-6 CHAIN LINK FENCE (6 FT)
 Cl CLASS
 Clr CLEAR, CLEARANCE
 CM CENTER MARGIN LIGHT
 CMP CORRUGATED METAL PIPE
 CMS CHANGEABLE MESSAGE SIGN
 CNC CONTROL AND NEUTRAL CONDUCTORS
 Cntl CONTROL
 Co COUNTY
 Col COLUMN
 Comm COMMUNICATION
 Conc CONCRETE
 Conn CONNECTOR
 Const CONSTRUCT, CONSTRUCTION
 Cont CONTINUOUS
 Coord COORDINATE
 CP CANDLEPOWER, COPPER PIPE

C continued

Cr CREEK
 CRCP CONTINUOUSLY REINFORCED CONCRETE PAVEMENT
 CRSP CONCRETED ROCK SLOPE PROTECTION
 CS COMPOST SOCK
 CSP CORRUGATED STEEL PIPE
 CSPA CORRUGATED STEEL PIPE ARCH
 CST CENTER STRIP
 Ct COURT
 CTB CEMENT TREATED BASE
 CTID CALTRANS IDENTIFICATION
 CTPB CEMENT TREATED PERMEABLE BASE
 CTPM CEMENT TREATED PERMEABLE MATERIAL
 Ctrs CENTERS
 Culv CULVERT
 CV CHECK VALVE

D

D DEPTH, DIRECTION (IN PERCENT) OF HEAVIER TRAFFIC FLOW
 Dbl DOUBLE
 DD DOWNDRAIN
 Deg DEGREE
 Del DELINEATOR
 Det DETAIL, DETOUR
 DF DOUGLAS FIR
 DG DECOMPOSED GRANITE
 DHV DESIGN HOURLY VOLUME
 DI DRAINAGE INLET, DROP INLET
 Dia DIAMETER
 Diaph DIAPHRAGM
 DIP DUCTILE IRON PIPE
 Dist DISTANCE, DISTRICT
 DIT DRIP IRRIGATION TUBING
 DLC LOOP DETECTOR LEAD-IN CABLE
 DMBB DOUBLE METAL BEAM BARRIER
 DN DIAMETER NOMINAL
 Dr DRIVE
 DTBB DOUBLE THRIE BEAM BARRIER
 DVA DRIP VALVE ASSEMBLY
 Dwy DRIVEWAY

E

E EAST
 Ease EASEMENT
 EB END OF BRIDGE, EASTBOUND
 EC END HORIZONTAL CURVE, EROSION CONTROL
 ECR END CURB RETURN
 ECTC EROSION CONTROL TECHNOLOGY COUNCIL
 ED EDGE DRAIN
 EDC EDGE DRAIN CLEANOUT
 EDO EDGE DRAIN OUTLET
 EDV EDGE DRAIN VENT
 Elec ELECTROLIER
 Elect ELECTRIC, ELECTRICAL
 Elev ELEVATION

E continued

EII ELBOW
 Emb EMBANKMENT
 EMS EXTINGUISHABLE MESSAGE SIGN
 Encl ENCLOSURE
 Engr ENGINEER
 EOD EDGE OF DECK
 EP EDGE OF PAVEMENT
 Eq EQUATION
 ERS EARTH RETAINING STRUCTURE
 ES EDGE OF SHOULDER
 ESA ENVIRONMENTALLY SENSITIVE AREA
 ESAL EQUIVALENT SINGLE AXLE LOADS
 EST END STRIP
 Estb ESTABLISHMENT
 ETW EDGE OF TRAVELED WAY
 EVC END VERTICAL CURVE
 EVUC EMERGENCY VEHICLE UNIT CABLE
 EVUD EMERGENCY VEHICLE UNIT DETECTOR
 EW ENDWALL
 Exc EXCAVATION
 Exist EXISTING
 Exp EXPANSION
 Exp Jt EXPANSION JOINT
 Ext EXTERIOR
 Exwy EXPRESSWAY

F

F FILL, FULL CIRCLE
 F & C FRAME AND COVER
 F & G FRAME AND GRATE
 FB FLOOR BEAM, FLASHING BEACON
 FBCA FLASHING BEACON CONTROL ASSEMBLY
 FBS FLASHING BEACON WITH SLIP BASE
 FCV FLOW CONTROL VALVE
 Fdn FOUNDATION
 FEBT FACING EASTBOUND TRAFFIC
 Fert FERTILIZER
 FES FLARED END SECTION
 FF FILTER FABRIC
 FG FINISH GRADE
 FH FIRE HYDRANT, FLEXIBLE HOSE
 Fig FIGURE
 FIPT FEMALE IRON PIPE THREAD
 FIS FERTILIZER INJECTOR SYSTEM
 FL FLOW LINE
 FNBT FACING NORTHBOUND TRAFFIC
 FO FIBER OPTIC
 FOB FREE ON BOARD
 FOC FACE OF CONCRETE
 F/P FULL/PART CIRCLE
 FR FIBER ROLL
 Fr Rd FRONTAGE ROAD
 FS FAR SIDE, FINISHED SURFACE, FLOW SENSOR
 FSBT FACING SOUTHBOUND TRAFFIC
 FSC FLOW SENSOR CABLE
 Ftg FOOTING
 FV FLUSH VALVE
 FWBT FACING WESTBOUND TRAFFIC
 Fwy FREEWAY

GENERAL RULES:

- Words are preferred over abbreviations and acronyms.
- Use words in notes, except where space is limited on the plan sheet.
- Do not use abbreviations or acronyms where the meaning may be in doubt.
- Abbreviations and acronyms may be used in callouts, dimensions, and tables.
- Use upper and lower case letters for abbreviation of a single word. e.g., Misc = miscellaneous and Bit Ctd = bituminous coated
- Use all upper case letters for acronyms. e.g., BCR = begin curb return

UNITS OF MEASUREMENT:

- See Tables A, B and C on Standard Plan A3C.
- Units of measurement are not part of abbreviations and acronyms. The above abbreviation and acronym general rules do not apply.

SYMBOLS:

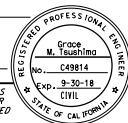
- See Table D on Standard Plan A3C.

SLOPES, FLARES, AND TAPERS:

- Side slopes:
X:Y - horizontal:vertical
- Flares and tapers:
X:Y - longitudinal:lateral

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ABBREVIATIONS
 (SHEET 1 OF 3)**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
<i>Shane N. Tushnet</i> REGISTERED CIVIL ENGINEER					
May 31, 2018 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.					



G	
G	GROOVE, EQUIPMENT GROUNDING CONDUCTOR
g	ACCELERATION DUE TO GRAVITY
Ga	GAUGE
Galv	GALVANIZED
GARV	GARDEN VALVE
GARVA	GARDEN VALVE ASSEMBLY
GB	GROUND BUS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GM	GRAVEL MULCH
GP	GRADING PLANE
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GUARD RAILING
Grn	GREEN
GSP	GALVANIZED STEEL PIPE
Gtr	GUTTER
GV	GATE VALVE
H	
H	HEIGHT, HALF CIRCLE
HAR	HIGHWAY ADVISORY RADIO
h, hr	HOUR
HD	HORIZONTAL DRAIN
HDPE	HIGH DENSITY POLYETHYLENE
hdw	HEADWALL
Hex	HEXAGONAL
Hex Hd	HEXAGONAL HEAD
HMA	HOT MIX ASPHALT
Horiz	HORIZONTAL
HOV	HIGH OCCUPANCY VEHICLE
HP	HINGE POINT, HORSEPOWER
HPL	HIGH PRESSURE LINE
HPS	HIGH PERFORMANCE STEEL, HIGH PRESSURE SODIUM
HS	HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SECTION
HW	HEADWALL, HIGH WATER
HWM	HIGH WATER MARK
Hwy	HIGHWAY
I	
IB	IMPORTED BORROW
IC	IRRIGATION CONTROLLER
ICC	IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET
ID	INSIDE DIAMETER
IF	INSIDE FACE
IFS	IRRIGATION FILTRATION SYSTEM
IISNS	INTERNALLY ILLUMINATED STREET NAME SIGN
Int	INTERIOR
Inv	INVERT
IPS	IRON PIPE SIZE
IPT	IRON PIPE THREAD
Irr	IRRIGATION
ISL	INDUCTION SIGN LIGHTING
J	
Jc+	JUNCTION
JP	JOINT POLE
JPCP	JOINTED PLAIN CONCRETE PAVEMENT
JS	JUNCTION STRUCTURE
J+	JOINT

K	
L	
L	LENGTH, ANGLE (STRUCTURAL STEEL SHAPE)
Lat	LATITUDE
LCB	LEAN CONCRETE BASE
LED	LIGHT EMITTING DIODE
LMA	LUMINAIRE MAST ARM
Ln	LANE
Loc	LOCATION
LOL	LAYOUT LINE
Long	LONGITUDE
Longit	LONGITUDINAL
LPS	LOW PRESSURE SODIUM
LS	LUMP SUM
L+	LEFT
Ltg	LIGHTING
Lum	LUMINAIRE
M	
M	METERED
Maint	MAINTENANCE
MAS	MAST ARM MOUNTING SIDE ATTACHMENT
MAT	MAST ARM MOUNTING TOP ATTACHMENT
Max	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
MBPS	MANUAL BYPASS SWITCH
MCV	MANUAL CONTROL VALVE
Med	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
MIC	MASTER IRRIGATION CONTROLLER
Min	MINIMUM
MIPT	MALE IRON PIPE THREAD
Misc	MISCELLANEOUS
Misc I & S	MISCELLANEOUS IRON AND STEEL
Mkr	MARKER
M/M	MULTIPLE TO MULTIPLE TRANSFORMER
Mod	MODIFIED, MODIFY
Mon	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EMBANKMENT
M+	MOUNTAIN, MOUNT
Mtg	MOUNTING
Mtl	MATERIAL
MV	MERCURY VAPOR LIGHTING FIXTURE
MVDS	MICROWAVE VEHICLE DETECTION SYSTEM
MVP	MAINTENANCE VEHICLE PULLOUT
N	
N	NORTH, NEUTRAL (GROUNDED CONDUCTOR)
NB	NORTHBOUND, NEUTRAL BUS
NC	NORMALLY CLOSE

N continued	
NCN	NO COMMON NAME
NL	NOZZLE LINE
NO	NORMALLY OPEN
No.	NUMBER (MUST HAVE PERIOD)
Nos.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NS	NEAR SIDE
NTS	NOT TO SCALE
O	
Obir	OBLITERATE
OC	OVERCROSSING
O/C	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OGFC	OPEN GRADED FRICTION COURSE
OH	OVERHEAD
OHWM	ORDINARY HIGH WATER MARK
OL	OVERLAP
O-O	OUT TO OUT
Opp	OPPOSITE
OSD	OVERSIDE DRAIN
P	
P	PAGE, FITCH, PART CIRCLE, NUMBER OF POLES FOR A CIRCUIT BREAKER
PAP	PERFORATED ALUMINUM PIPE
PB	RULL BOX
PBA	PUSH BUTTON ASSEMBLY
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PE	POLYETHYLENE
PEC	PERMIT TO ENTER AND CONSTRUCT, PHOTOELECTRIC CONTROL
Ped	PEDESTRIAN
Ped OC	PEDESTRIAN OVERCROSSING
Ped UC	PEDESTRIAN UNDERCROSSING
Perm Mtl	PERMEABLE MATERIAL
PEU	PHOTOELECTRIC UNIT
PG	PROFILE GRADE
PJ	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
Pkt	PACKET
Pkwy	PARKWAY

P continued	
PL	PLATE
PI	PLASTIC
P/L	PROPERTY LINE
PLS	PURE LIVE SEED
Pit	PLANT, PLANTING
Pit Estb	PLANT ESTABLISHMENT
PM	POST MILE, TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POC	POINT OF HORIZONTAL CURVE
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE, PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PR	PRESSURE RATED
PRC	POINT OF REVERSE CURVE
PRF	PAVEMENT REINFORCING FABRIC
PRLV	PRESSURE RELIEF VALVE
PRV	PRESSURE REGULATING VALVE
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS	PRESTRESSED
P/S	PRESTRESSED
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY, CONDUIT WITH PULL TAPE
PTR	POWER TRANSFER RELAY
PVC	POLYVINYL CHLORIDE
Pvmt	PAVEMENT
Q	
Q	QUARTER CIRCLE
QCV	QUICK COUPLING VALVE
Qty	QUANTITY
R	
R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RCV	REMOTE CONTROL VALVE
RCVM	REMOTE CONTROL VALVE (MASTER)
RCVMF	REMOTE CONTROL VALVE (MASTER) W/FLOW SENSOR
RCVP	REMOTE CONTROL VALVE W/PRESSURE REGULATOR
RCW	RECYCLED WATER
Rd	ROAD
Rdwy	ROADWAY
RE	RELOCATED EQUIPMENT
RECP	ROLLED EROSION CONTROL PRODUCT
Reinf	REINFORCED, REINFORCEMENT, REINFORCING

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ABBREVIATIONS
(SHEET 2 OF 3)

A3B

R continued

Rel	RELOCATE
Repl	REPLACEMENT
Req	REQUIRED
Ret	RETAINING
Rev	REVISED, REVISION
RHMA	RUBBERIZED HOT MIX ASPHALT
RICS	REMOTE IRRIGATION CONTROL SYSTEM
Riv	RIVER
RM	ROAD-MIXED, RAMP METERING
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN
Rt	RIGHT
Rte	ROUTE
RW	REDWOOD, RETAINING WALL
R/W	RIGHT OF WAY
RWIS	ROADSIDE WEATHER INFORMATION SYSTEM
Rwy	RAILWAY

S

S	SOUTH, SLIP, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
Salv	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND, SLIP BASE
SC	SAND CUSHION
S/C	SAW CUT LINE
Sch	SCHEDULE
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
Sec	SECOND, SECTION
Sep	SEPARATION
SG	SUBGRADE
Shld	SHOULDER
Sht	SHEET
SIC	SIGNAL INTERCONNECT CABLE
Sig	SIGNAL
Sim	SIMILAR
SM	SELECTED MATERIAL
SMA	SIGNAL MAST ARM
SNS	STREET NAME SIGN
SP	STAND PIPE, SERVICE POINT
Spec	SPECIAL, SPECIFICATION(S)
SPP	SLOTTED PLASTIC PIPE

S continued

Sq	SQUARE
SS	SLOPE STAKE
SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
SST	SIDE STRIP
St	STREET
Sta	STATION
STBB	SINGLE THRIE BEAM BARRIER
Std	STANDARD
Str	STRUCTURE
Surf	SURFACING
SW	SIDEWALK, SOUND WALL
Swr	SEWER
Sym	SYMMETRICAL
S4S	SURFACE 4 SIDES

T

T	SEMI-TANGENT, THIRD CIRCLE, THREAD, TRUCK TRAFFIC VOLUME (IN PERCENT) OF DESIGN HOURLY VOLUME
Tan	TANGENT
TB	TERMINAL BOARD
TBB	THRIE BEAM BARRIER
Tbr	TIMBER
T&B	TOP AND BOTTOM
TCB	TRAFFIC CONTROL BOX
TCE	TEMPORARY CONSTRUCTION EASEMENT
TDC	TELEPHONE DEMARCATION CABINET
Temp	TEMPORARY, TEMPERATURE, TEMPERED
TG	TOP OF GRADE
TI	TRAFFIC INDEX
TLS	TRUCK LOADING STAND PIPE
TMS	TRAFFIC MONITORING STATION
TOS	TRAFFIC OPERATIONS SYSTEM
ToT	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
TO	THREE-QUARTER CIRCLE
Trans	TRANSITION
TRM	TURF REINFORCEMENT MAT
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL
TT	TWO-THIRDS CIRCLE
TWSA	TREE WELL SPRINKLER ASSEMBLY
Typ	TYPICAL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
UPS	UNINTERRUPTIBLE POWER SUPPLY
UPSC	UNINTERRUPTIBLE POWER SUPPLY CONTROLLER
UPSM	UPS MODE

V

V	VALVE, DESIGN SPEED
Var	VARIABLE, VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Veh	VEHICLE
Vert	VERTICAL
Via	VIADUCT
VIVDS	VIDEO IMAGE VEHICLE DETECTION SYSTEM
Vol	VOLUME

W

W	WEST, WIDTH
W/	WITH
W/O	WITHOUT
WB	WESTBOUND
WH	WEEP HOLE
WhT	WHITE
WIM	WEIGH-IN-MOTION
WM	WIRE MESH, WATER METER
WS	WATER SURFACE, WYE STRAINER
WSA	WYE STRAINER ASSEMBLY
WSP	WELDED STEEL PIPE
Wt	WEIGHT
wv	WATER VALVE
WW	WINGWALL
WWLQ	WINGWALL LAYOUT LINE
WWM	WELDED WIRE MESH

X

Xfmr	TRANSFORMER
X Sec	CROSS SECTION
Xing	CROSSING

Y

Yr	YEAR
Yrs	YEARS

Z

UNITS OF MEASUREMENT:

Some of the units used in the project plan quantity tables and in the Bid Item List are:

TABLE A	
UNIT	DEFINITION
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
LNMI	LANE MILE
LS	LUMP SUM
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TON	2,000 POUNDS

Some of the units used in the plans other than in the project plan quantity tables are:

TABLE B	
UNIT	DEFINITION
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft ³ , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
oz	OUNCE
lb	POUND
kip	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

* For use on a sign panel only

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
<i>Alfred N. Tushnet</i> REGISTERED CIVIL ENGINEER					
May 31, 2018 PLANS APPROVAL DATE					
No. C49814 Exp. 9-30-18 CIVIL					
<small>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.</small>					

Some of the units used in the Electrical plans are:

TABLE C

UNIT	DEFINITION
A	AMPERE
bps	BITS PER SECOND
Bps	BYTES PER SECOND
FC	FOOT-CANDLE
Hz	HERTZ
k *	KILO
kV	KILOVOLT
kVA	KILOVOLT-AMPERE
kW	KILOWATT
M *	MEGA
m *	MILLI
mA	MILLIAMPERE
min	MINUTE
P *	PICO
s	SECOND
V	VOLT
VA	VOLT-AMPERE
V(ac)	VOLT (DIRECT CURRENT)
V(ac)	VOLT (ALTERNATING CURRENT)
W	WATT
Ω	OHM
μ *	MICRO

* Prefix to a unit

SYMBOLS:

Commonly used symbols for U.S. customary units

TABLE D

SYMBOL	DEFINITION
@	AT
CL	CENTERLINE
φ	NOMINAL DIAMETER, DIAMETER, PHASE
PL	PLATE
ST	STATIONLINE

STATE OF CALIFORNIA
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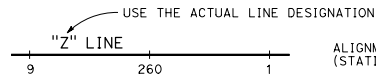
**ABBREVIATIONS
(SHEET 3 OF 3)**

A3C

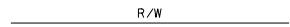
2018 STANDARD PLAN A3C

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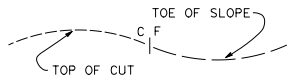
SYMBOLGY FOR DESIGN FEATURES



ALIGNMENT LINE
(STATION LINE)



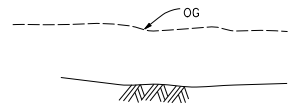
RIGHT OF WAY LINE
(POSITION LABEL OUTSIDE OF CALTRANS R/W)
(NO LEADER LINE OR ARROWHEAD IS NEEDED)



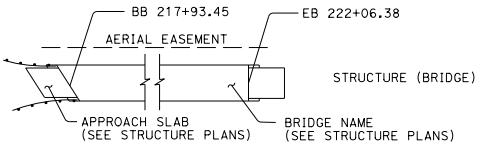
CATCH LINE FOR CUT AND FILL SLOPES



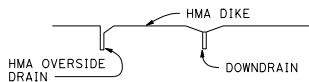
FINISHED GRADE LINE (USE SOLID LINE)



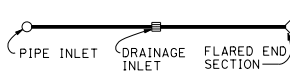
(USED FOR PROFILES AND TYPICAL SECTIONS)
ORIGINAL GROUND LINE
(MAY BE USED ON DETAIL SHEETS)



STRUCTURE (BRIDGE)



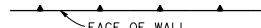
DIKE, DOWNDRAIN AND OVERSIDE DRAIN



PIPE CULVERT - SINGLE LINE
(36" OR LESS IN DIAMETER)
(PLUS - OTHER DRAINAGE FEATURES)



PIPE CULVERT - TWO LINES
(GREATER THAN 36" TO 6' IN DIAMETER
PLUS - OTHER DRAINAGE FEATURES)
(OVER 6' IN DIAMETER, DRAW TO SCALE)



WALL



WALL ON BARRIER



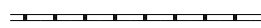
WALL ON RETAINING WALL



CONCRETE (MEDIAN) BARRIER



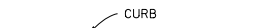
NEW GUARDRAIL



DOUBLE THRIE BEAM BARRIER



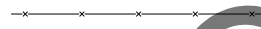
TEMPORARY RAILING (TYPE K)



CURB WITHOUT GUTTER



CURB WITH GUTTER
(CURB-LIP, FLOW LINE, TOP-BACK
OF CURB)



FENCE



EXISTING WALL - USE ONLY WHEN
WORK IS TO BE PERFORMED ON
EXISTING WALL (DO NOT DROP OUT)



EXISTING GUARDRAIL - USE ONLY
WHEN WORK IS TO BE PERFORMED ON
EXISTING RAILING (DO NOT DROP OUT)



EXISTING CONCRETE BARRIER - USE
ONLY WHEN WORK IS TO BE PERFORMED
ON EXISTING BARRIER (DO NOT DROP OUT)



SOLID TRAFFIC LINE



BROKEN TRAFFIC LINE



CURB RAMP



DIRECTION OF TRAFFIC
(ARROWS ARE TO BE HOLLOW)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Srinivasan S. Nujella
REGISTERED CIVIL ENGINEER

May 31, 2018
PLANS APPROVAL DATE

Srinivasan S. Nujella
No. CE8518
Exp. 9-30-19
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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STRIPING AND SIGNING



ROADSIDE SIGN - ONE POST, TWO POSTS (EMBEDDED)



ROADSIDE SIGN - ATTACHED TO ELECTROLIER, SIGNAL STANDARD,
SIGN STRUCTURE POST OR BARRIER



EXISTING ROADSIDE SIGN - ONE POST, TWO POSTS (EMBEDDED)



OVERHEAD SIGN - ONE POST



OVERHEAD SIGN - TWO POST



SYMBOL FOR ROADSIDE SIGN NUMBER



SYMBOL FOR OVERHEAD SIGN NUMBERING



SYMBOL FOR TRAFFIC LINE DETAIL



SYMBOL FOR DELINEATOR OR OBJECT MARKER



PAVEMENT MARKING ARROWS
(ARROWS ARE TO BE HATCHED)



BEGIN OR END OF TRAFFIC STRIPE



TRANSITION FROM ONE TRAFFIC STRIPE TO ANOTHER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

LEGEND
LINES AND SYMBOLS
(SHEET 1 OF 5)

NO SCALE

A10A

2018 STANDARD PLAN A10A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Subramanyam S. Nijelja
REGISTERED CIVIL ENGINEER

May 31, 2018
PLANS APPROVAL DATE

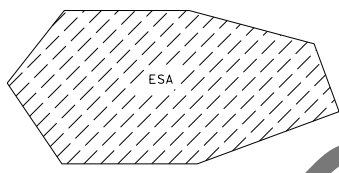
Subramanyam S. Nijelja
No. C88518
Exp. 9-30-19
CIVIL
STATE OF CALIFORNIA

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WATER POLLUTION CONTROL

- xx-xx-THVF-xx-xx-xx- Temp HIGH-VISIBILITY FENCE
- xx-xx-TSF-xx-xx-xx- Temp SILT FENCE
- xx-xx-TRSF-xx-xx-xx- Temp Reinf SILT FENCE
- ///////// TFR //////////// Temp FIBER ROLL
- TGBB ○○○○○○ Temp GRAVEL BAG BERM
- TSBB ○○○○○○ Temp STRAW BALE BARRIER
- ▷||||||| Temp SLOPE DRAIN FLEX PIPE
- ~~~~~ Temp EARTH BERM
- ←- - - - - Temp DITCH/SWALE
- WASH** Temp CONCRETE WASHOUT
- ⊙ Temp DRAINAGE INLET PROTECTION
- ▷ Temp DRAINAGE OUTLET PROTECTION
- Temp CHECK DAM
- ▨ Temp CONSTRUCTION ENTRANCE
- △ SP Temp STOCKPILE

ENVIRONMENTALLY SENSITIVE AREA (ESA)



DRAINAGE

- DIRECTION FLOW OF WATER
- ⬡ DRAINAGE SYSTEM SYMBOL
- DRAINAGE UNIT SYMBOL
- ≡ DRAINAGE INLET
- DITCH FLOW LINE

DRAFTING

- ⌋ TILDE - DESIGNATES AN AREA
- ↑ NORTH ARROW
- ⚠ ADDENDUM SHEET SYMBOL (ADDENDUM NUMBER IS INCLUDED INSIDE THE SYMBOL)
- — — — — MATCH LINE
- — — — — BREAK LINE

BOUNDARY LINE

- STATE OR COUNTRY
- COUNTY OR RESERVATION BOUNDARY
- CITY OR MILITARY BOUNDARY
- FOREST
- SUBDIVISION, SECTION, GRANT
- RANCHO

NOT FOR BID

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

LEGEND
LINES AND SYMBOLS
(SHEET 2 OF 5)

NO SCALE

A10B

2018 STANDARD PLAN A10B

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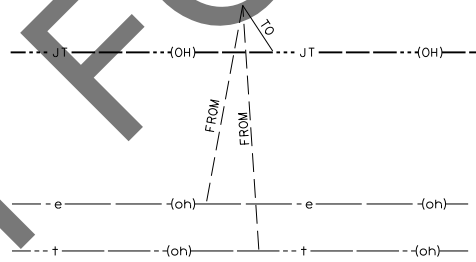
SUBSURFACE FACILITIES

— W ——— W ——— W ———	NEW WATER
— w ——— w ——— w ———	Exist WATER
— G ——— G ——— G ———	NEW NATURAL GAS
— g ——— g ——— g ———	Exist NATURAL GAS
— S ——— S ——— S ———	NEW SEWER
— s ——— s ——— s ———	Exist SEWER
— E ——— E ——— E ———	NEW ELECTRICAL
— e ——— e ——— e ———	Exist ELECTRICAL
— T ——— T ——— T ———	NEW TELEPHONE
— t ——— t ——— t ———	Exist TELEPHONE
— GS ——— GS ——— GS ———	NEW GASOLINE
— gs ——— gs ——— gs ———	Exist GASOLINE
— O ——— O ——— O ———	NEW OIL
— o ——— o ——— o ———	Exist OIL
— TV ——— TV ——— TV ———	NEW TELEVISION
— tv ——— tv ——— tv ———	Exist TELEVISION
— ST ——— ST ——— ST ———	NEW STEAM
— st ——— st ——— st ———	Exist STEAM
— TC ——— TC ——— TC ———	NEW TELEMETER CABLE
— tc ——— tc ——— tc ———	Exist TELEMETER CABLE
— SD ——— SD ——— SD ———	NEW STORM DRAIN
— sd ——— sd ——— sd ———	Exist STORM DRAIN
— FO ——— FO ——— FO ———	NEW FIBER OPTIC
— fo ——— fo ——— fo ———	Exist FIBER OPTIC
— JT ——— JT ——— JT ———	NEW JOINT TRENCH
— jt ——— jt ——— jt ———	Exist JOINT TRENCH
— RCW ——— RCW ——— RCW ———	NEW RECYCLED WATER
— rcw ——— rcw ——— rcw ———	Exist RECYCLED WATER
— Irr-c ——— Irr-c ——— Irr-c ———	Exist IRRIGATION CONDUIT
— es-c ——— es-c ——— es-c ———	Exist ELECTRICAL SYSTEMS CONDUIT

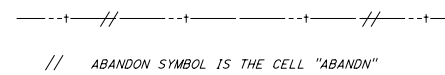
OVERHEAD FACILITIES

— E ——— (OH) ——— E ———	NEW ELECTRICAL
— e ——— (oh) ——— e ———	Exist ELECTRICAL
— TC ——— (OH) ——— TC ———	NEW TELEMETER CABLE
— tc ——— (oh) ——— tc ———	Exist TELEMETER CABLE
— T ——— (OH) ——— T ———	NEW TELEPHONE
— t ——— (oh) ——— t ———	Exist TELEPHONE
— TV ——— (OH) ——— TV ———	NEW TELEVISION
— tv ——— (oh) ——— tv ———	Exist TELEVISION
— FO ——— (OH) ——— FO ———	NEW FIBER OPTIC
— fo ——— (oh) ——— fo ———	Exist FIBER OPTIC
— JT ——— (OH) ——— JT ———	NEW JOINT OVERHEAD
— jt ——— (oh) ——— jt ———	Exist JOINT OVERHEAD

SHOWING THE RELOCATION OF EXISTING FACILITIES TO THE NEW LOCATION



ABANDONED FACILITY



THERE ARE LINE STYLES FOR ABANDONED UNDERGROUND UTILITIES IN THE CALTRANS LINE STYLE RESOURCE FILE (c:\style-553.rsc)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Subrahmanyam S. Nujella
REGISTERED CIVIL ENGINEER

May 31, 2018
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Subrahmanyam S. Nujella
No. CE8518
Exp. 9-30-19
CIVIL
STATE OF CALIFORNIA

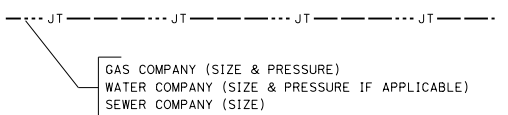
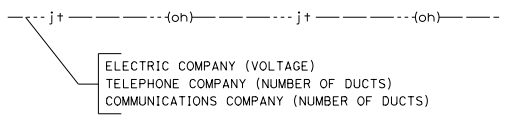
NOTE:

IDENTIFY (LABEL) THE OWNER OF EACH FACILITY PLUS THE SIZE, PRESSURE AND VOLTAGE (IF APPLICABLE) FOR ALL FACILITIES (WHETHER PART OF A JOINT OVERHEAD, JOINT TRENCH OR SOLO INSTALLATION).

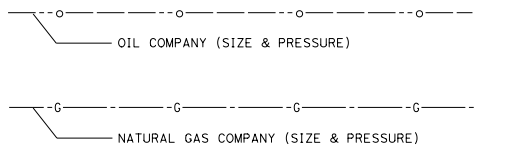
THE TYPE OF FACILITY IS IDENTIFIED BY THE SYMOLOGY OF THE LINE STYLE CHOSEN (SEE LINE STYLES ON THIS STANDARD PLAN SHEET).

WHEN USING THE JOINT OVERHEAD OR JOINT TRENCH SYMOLOGY (SEE THE CALTRANS LINE STYLES ON THIS PAGE), USE A BRACKET TO GROUP AND LABEL ALL THE FACILITIES ASSOCIATED WITH THE JOINT OVERHEAD OR TRENCH (SEE THE EXAMPLES BELOW).

JOINT OVERHEAD/TRENCH



SOLO FACILITY



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**LEGEND
LINES AND SYMBOLS
(SHEET 3 OF 5)**

NO SCALE

A10C













2018 STANDARD PLAN A10C

EXISTING UTILITY POINT FEATURES

THE LEVEL AND COLOR OF AN EXISTING UTILITY POINT FEATURE SYMBOL MATCHES THE UTILITY TYPE LINE STYLE THAT IT IS ASSOCIATED WITH. THE NAME OF THE STANDARD CELLS FOR EACH SYMBOL VARY SLIGHTLY ACCORDING TO THE FACILITY TYPE (e.g., UT-MH-SEWER, UT-MH-GAS). MULTIPLE VERSIONS OF A PARTICULAR SYMBOL REPRESENTING AN EXISTING UTILITY POINT FEATURE IS USED WHEN EACH IS ASSOCIATED WITH A DIFFERENT FACILITY (e.g., POWER POLE FOR OVERHEAD-ELECTRICAL, TELEPHONE, FIBER OPTIC, JOINT, ETC.). THIS DIFFERENTIATION FACILITATES ASSET MANAGEMENT OF EXISTING UTILITY FEATURES WITHIN THE CALTRANS RIGHT OF WAY.

EXISTING UTILITY CELL SYMBOLOGY REPRESENTING UTILITY POINT FEATURES

ATTRIBUTES (METADATA) FOR UTILITY FEATURES WILL BE LOCATED IN UTILITY DATABASE. ONLY AS-BUILT FACILITIES ARE IN THE UTILITY DATABASE. UTILITY DATABASE DOES NOT INCLUDE NEW FACILITIES TO BE CONSTRUCTED.

-  **CABINET:**
ELECTRICAL, FIBER OPTIC, TELECOMMUNICATION, TELEPHONE, TELEVISION
-  **DRAINAGE INLET:**
SEWER, STORM DRAIN
-  **FIRE HYDRANT:**
WATER
-  **LAMP POST:**
ELECTRICAL
-  **METER:**
ELECTRICAL, NATURAL GAS, WATER
-  **MANHOLE:**
ELECTRICAL, FIBER OPTIC, GAS, JOINT FACILITY, NATURAL GAS, OIL, RECYCLED WATER, SEWER, STEAM, STORM DRAIN, TELECOMMUNICATION, TELEPHONE, TELEVISION, WATER
-  **PULL BOX:**
ELECTRICAL, FIBER OPTIC, JOINT FACILITY, TELECOMMUNICATION, TELEPHONE, TELEVISION
-  **POWER POLE:**
ELECTRICAL, FIBER OPTIC, JOINT FACILITY, TELECOMMUNICATION, TELEPHONE, TELEVISION
-  **TRANSMISSION TOWER:**
ELECTRICAL, FIBER OPTIC, JOINT FACILITY, TELECOMMUNICATION, TELEPHONE, TELEVISION
-  **VALVE:**
WATER, NATURAL GAS
-  **VENT:**
GAS, NATURAL GAS, SEWER, STEAM
-  **VAULT:**
ELECTRICAL, JOINT FACILITY

NOT FOR BID

Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS



Sudhanshu S. Nijelle
REGISTERED CIVIL ENGINEER

May 31, 2018
PLANS APPROVAL DATE

PROFESSIONAL ENGINEER
Sudhanshu S. Nijelle
No. C68518
Exp. 9-30-19
CIVIL
STATE OF CALIFORNIA

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POSITIVE LOCATION

-  POSITIVE LOCATION SYMBOL IDENTIFYING THE POTHOLING NUMBER
-  POTHOLING SYMBOL MARKING THE EXACT LOCATION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
LEGEND
LINES AND SYMBOLS
(SHEET 4 OF 5)
NO SCALE

A10D

2018 STANDARD PLAN A10D

TOPOGRAPHIC MAPPING LINES AND SYMBOLS
TOPOGRAPHIC MAPPING IS DROPPED OUT ON FINAL CONTRACT PLANS

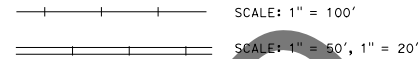
-----	CURB
- - - - -	LANE STRIPE
-----	EDGE OF TRAVELED WAY (STATE HIGHWAY)
-----	EDGE OF TRAVELED WAY (OTHER)
-----	EDGE OF ASPHALT (SHOULDER)
-----	CONCRETE
-----	GUARDRAIL
-----	MEDIAN BARRIER
-----	FENCE
-----	MASONRY WALL
-----	MASONRY WALL AND FENCE
-----	RETAINING WALL
-----	RETAINING WALL AND FENCE
-----	RETAINING WALL AND MASONRY WALL
-----	FLOWLINE (NATURAL AND MANMADE)
	EDGE OF BODY OF WATER, SURFACE HATCHED AND SPOT ELEVATION ON SURFACE
	DECK
	BUILDING
	COVERED PORCH OR PARKING
	DIRT PILE, ROCK
	POOL, SPA
	TREES, BRUSH, OR VEGETATION OVER 1/2 CONTOUR INTERVAL IN HEIGHT
	VINEYARD ROW
	CATTLE GUARD
	OVERHEAD SIGN - SINGLE POST
	OVERHEAD SIGN - TWO POST
	TRAIL
	DIRT ROAD

SYMBOLS ENLARGED FOR CLARITY

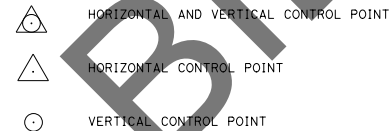
	LEFT TURN LANE ARROW
	HOV LANE (HIGH OCCUPANCY VEHICLE)
	DROP INLET, ROUND DROP INLET
	MANHOLE
	FIRE HYDRANT
	VALVE COVER, STAND PIPE, WELL, UTILITY BOX, RAILROAD CROSSING STANDARD
	UTILITY POLE, POLE AND WIRES, POLE WITH WIRES AND ANCHOR
	TRANSMISSION TOWER
	ELECTROLIER, ELECTROLIER ON POLE
	TRAFFIC SIGNAL, RAILROAD SIGNAL
	CALL BOX
	SIGNS - SINGLE POST, TWO POSTS
	SINGLE TREE, PALM
	MARSH OR SWAMP
	CRASH CUSHION
	TANK

VOID - OBSTRUCTED AREA, UNABLE TO OBTAIN GROUND INFORMATION PHOTOGRAMMETRICALLY

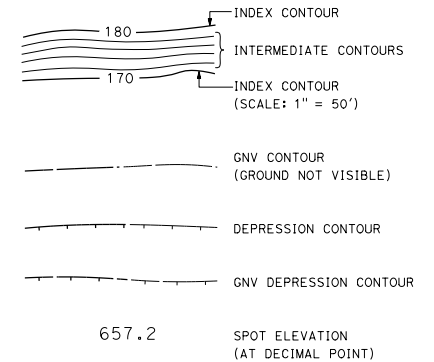
RAILROAD



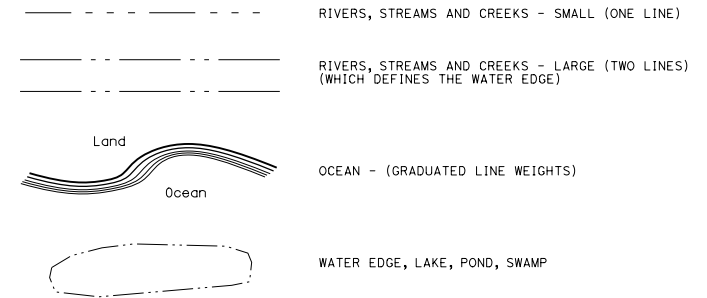
CONTROL POINTS



TOPOGRAPHY



WATER WAYS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

LEGEND
LINES AND SYMBOLS
(SHEET 5 OF 5)
 NO SCALE

A10E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Subrahmanyam S. Nujella
 REGISTERED CIVIL ENGINEER

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NOT FOR BIDD