



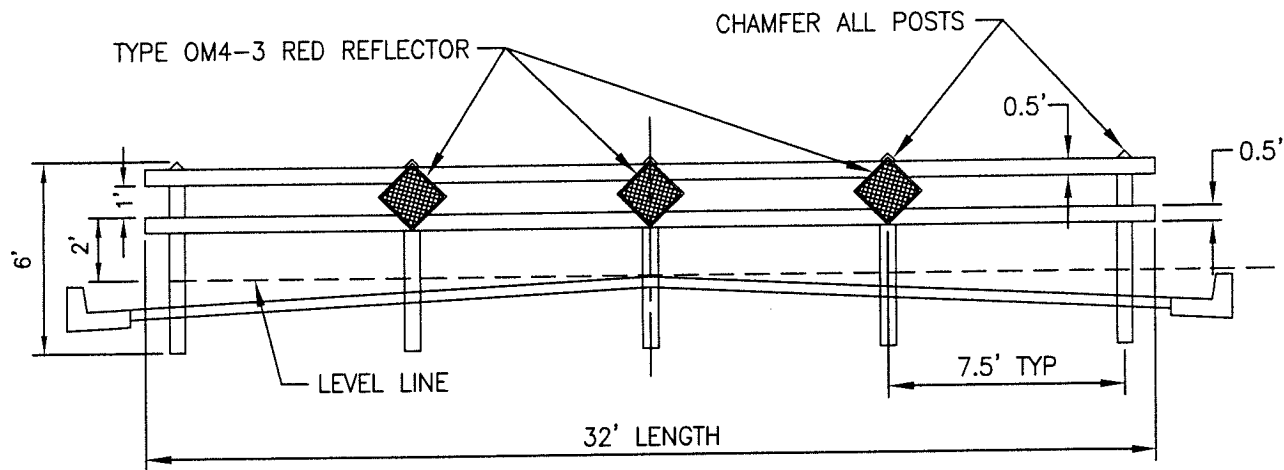
CITY OF FONTANA DESIGN STANDARDS

Link to Location on City Website:

<https://www.fontanaca.gov/3483/Design-and-Construction-Standards>

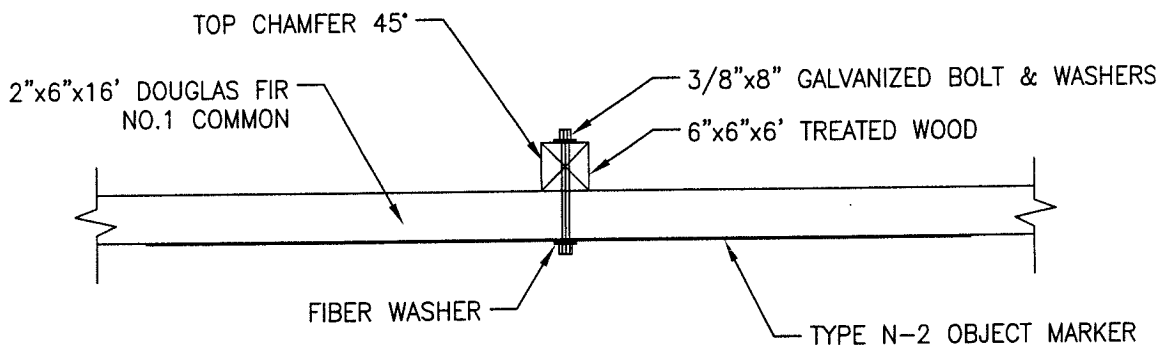
STD #	SHEETS	SECTION 4000 - TRAFFIC	DATE APPROVED
4000	1	Barricade, End-Of-Roadway	10/18/2006
4001	2	Speed Humps	7/20/2022
4002	N/A	Not Used	
4003	4	Sign Installation (Ground Mount)	2/24/2022

STD #	SHEETS	SECTION 4100 - TRAFFIC SIGNAL	DATE APPROVED
4100	1	Cabinet Foundation, Type R	12/10/2015
4101	2	Video Detection (Solo Terra, RVP2, Iteris)	7/20/2018
4102	6	Sign Installation (Overhead Street Name)	2/24/2022
4103	2	P48 Pull Box Details	11/13/2019
4104	1	CCTV Camera/Cable Installation and Orientation	4/7/2021
4105	1	Loop, Traffic Detection, Type QC	1/29/2018



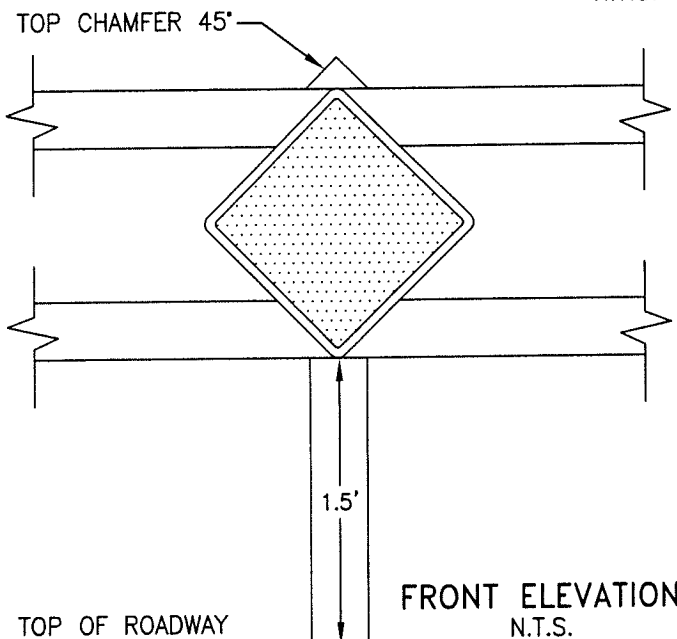
TYPICAL SECTION

SCALE: 1"=6'



TYPICAL SECTION

N.T.S.

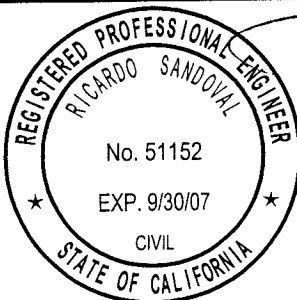


FRONT ELEVATION

N.T.S.

NOTES:

1. PROVISION FOR FIRE TRUCK/EMERGENCY VEHICLE TURN-AROUND SHALL BE REQUIRED AS SHOWN ON PLANS.
2. CONSTRUCTION METHODS AND STRUCTURAL MATERIALS USED SHALL MEET CALTRANS STD. SPECIFICATIONS, SECTIONS 57 & 58.
3. TWO COATS OF PREMIUM QUALITY WHITE PAINT SHALL BE APPLIED PER SECTION 59.
4. THREE GALVANIZED 20D NAILS SHALL BE USED TO SECURE END OF PLANK TO POSTS AT CENTERLINE AND FIVE 20D NAILS SHALL BE USED AT OTHER POSTS.
5. OVERALL WIDTH SHOWN IS FOR LOCAL RESIDENTIAL STREETS WITH 36 FT. CURB SEPARATION. FOR OTHER STREETS USE CURB SEPARATION LESS 4 FT.



APPROVED BY:

CITY ENGINEER
RICARDO SANDOVAL

REVIEWED BY: *DL*

REVISION NUMBER: _____

DATE

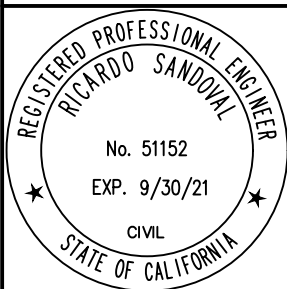
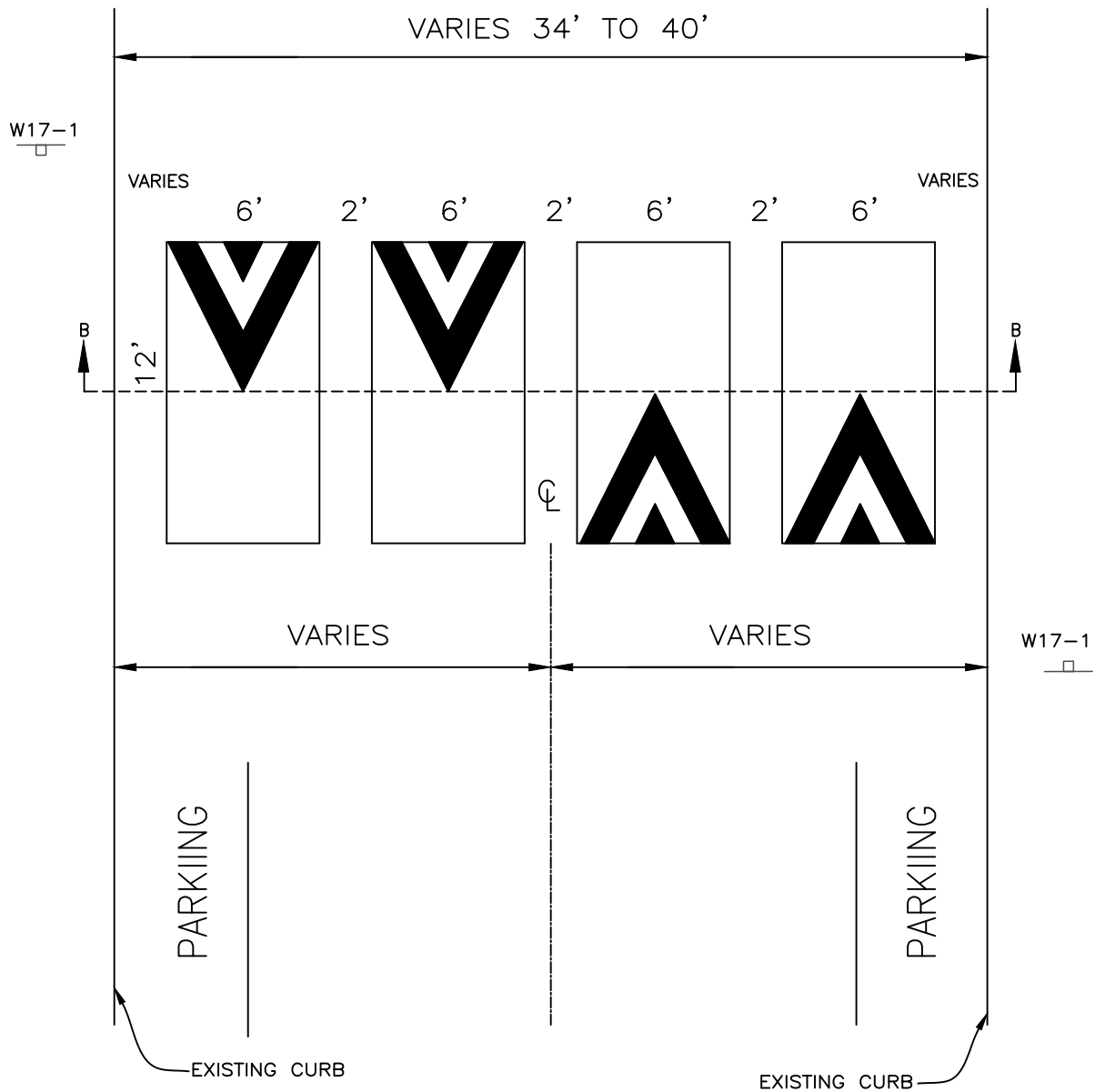
CITY OF FONTANA

**STANDARD
BARRICADE**

07/10/06

STD. PLAN NO. **4000**

SHT **1** OF **1**



APPROVED BY:

JK Ricardo Sandoval 4/22/20

CITY ENGINEER
RICARDO SANDOVAL

DATE

DRAWN BY: _____ LP

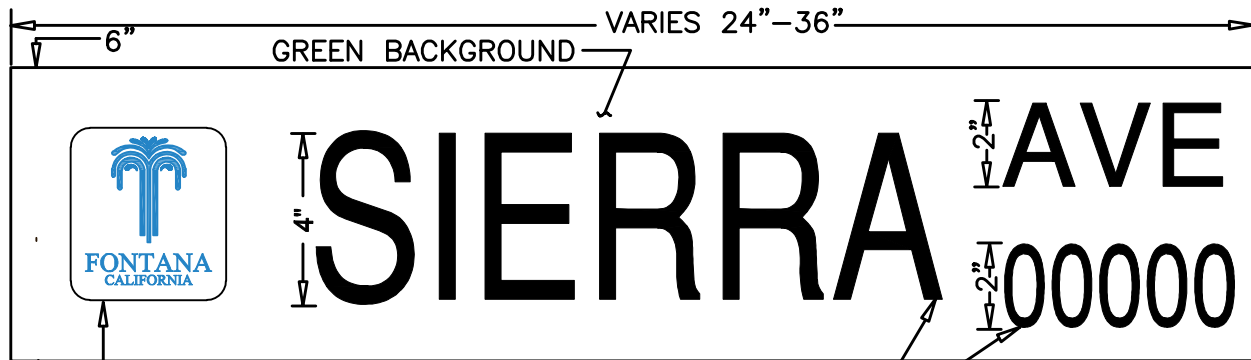
REVISION NUMBER: _____

CITY OF FONTANA

SPEED HUMP
LAYOUT

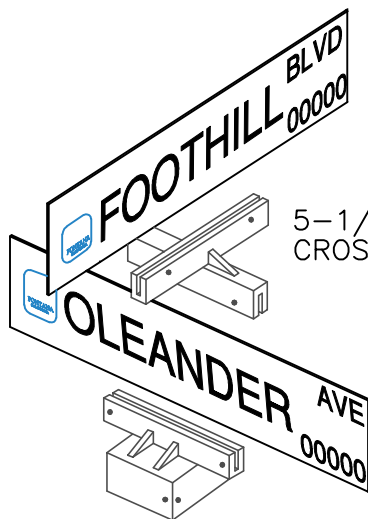
STD. PLAN NO. 4001

DWG. 2/2



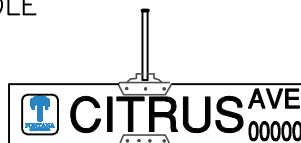
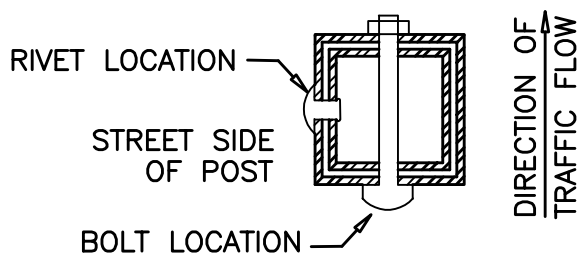
*SEE CDS 4102.2
FOR LOGO DETAILS

WHITE LETTERS/NUMBERS



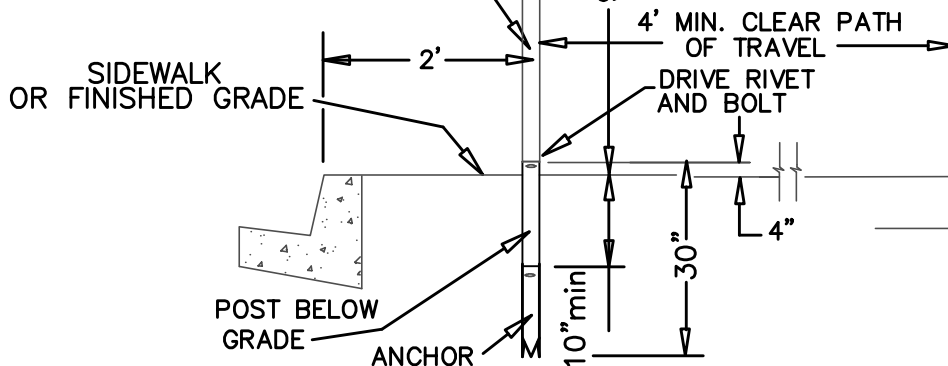
2" SQUARE x 5-1/4"
ALUMINUM CAP

2" SQUARE POST



NOTE:

EACH SIGN POST SHALL ACCOMPANY TWO STREET NAME SIGN BLADES. SEE SHEETS 2 AND 3 FOR COMPLETE SIGN SPECIFICATIONS.



APPROVED BY:

Ricardo Sandoval

2/24/22

CITY ENGINEER
RICARDO SANDOVAL

DATE

DRAWN BY:

DT

REVISION NUMBER:

5



CITY OF FONTANA

**SIGN INSTALLATION
DETAILS**

STD. PLAN NO. 4003.1

SIGN AND POST MATERIAL & INSTALLATION REQUIREMENTS:

1. REGULATORY, WARNING AND STREET NAME SIGN MATERIALS AND SIZES

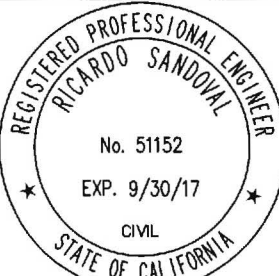
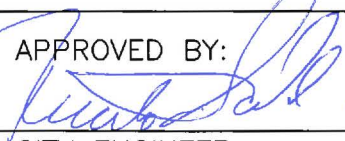
- A. SIGN BLANK MATERIAL SHALL BE EXTRUDED ALUMINUM, 5052-H38 ALLOY
- B. STREET NAME SIGN BLANKS SHALL BE 6" HIGH BY 24" TO 42" AS REQUIRED.
- C. STREET NAMES AND STREET NAME SUFFIXES SHALL BE WHITE FHWA SERIES C UPPER CASE.
- D. SIGN BACKGROUND SHEETING SHALL BE 3M DG3 SERIES 4000 RETROREFLECTIVE SHEETING OR APPROVED EQUIVALENT. SIGN LEGENDS SHALL BE 3M ELECTRO CUT FILM SERIES 1170 OR APPROVED EQUIVALENT. ALL GROUND MOUNTED SIGNS SHALL BE COATED WITH 3M SERIES 1160 ANTI GRAFFITI FILM OR APPROVED EQUIVALENT. SHEETING AND FILM(S) SHALL BE APPLIED AS A MATCHED COMPONENT SYSTEM (CONSISTING OF THE SAME MANUFACTURERS COMPONENTS) IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

2. SIGN INSTALLATION

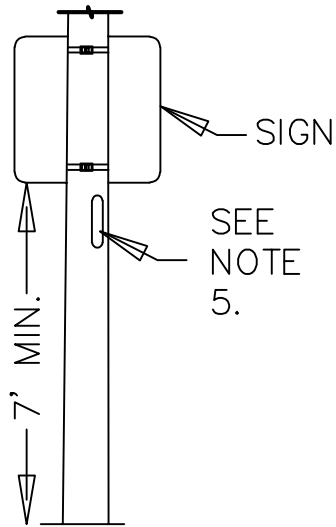
- A. SIGNS SHALL BE SECURED TO THE POST BY A 3" BY $\frac{5}{8}$ " COURSE THREAD STAINLESS STEEL BOLT WITH A 2" FENDER WASHER ON TOP AND A $\frac{3}{8}$ " DRIVE RIVET WITH A 2" FENDER WASHER ON THE BOTTOM. THE FENDER WASHER SHALL HAVE A MINIMUM THICKNESS OF .075"
- B. ALL SIGNS 30" OR GREATER SHALL HAVE A BACK BRACE INSTALLED.
- C. THE MOUNTING HEIGHT OF SIGNS SHALL BE IN ACCORDANCE WITH THE CA MUTCD.

3. POST MATERIALS AND INSTALLATION

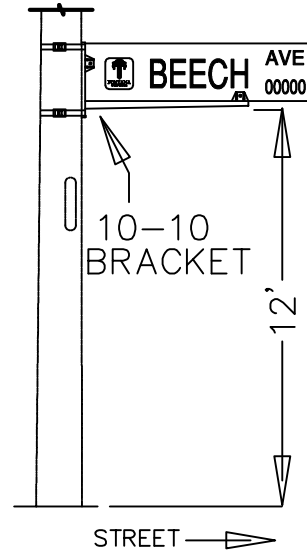
- A. SQUARE PREPUNCHED STEEL TUBE POSTS WITH ANCHORS SHALL BE USED FOR ALL REGULATORY, WARNING AND GUIDE SIGNS WITHIN THE RIGHT OF WAY. POSTS SHALL BE 2" SQUARE PRE-PUNCH AND HOT DIPPED GALVANIZED INSIDE AND OUTSIDE. THE ONE-PIECE ANCHOR SHALL BE AN 'ANCHORMATE' ANCHOR (2.5" X 2.5" X 30" GALVANIZED STEEL.
- B. THE NUMBER OF POSTS REQUIRED FOR SIGN INSTALLATION SHALL BE DETERMINED BY THE WIDTH OF THE SIGN OR THE COMBINATION OF SIGNS TO BE INSTALLED. A SINGLE POST SHALL BE USED WHERE THE SIGN WIDTH IS LESS THAN 48". DOUBLE POSTS SHALL BE USED WHERE THE SIGN WIDTH EQUALS OR EXCEEDS 48".
- C. THE ANCHOR SHALL BE DRIVEN UNTIL ONLY 4" REMAINS ABOVE GROUND LEVEL. IN CONCRETE, ANCHORS MAY BE CUT TO 20".
- D. ALL DIRT AND CONCRETE SHALL BE REMOVED FROM THE INSIDE TOP 10" MIN. OF THE ANCHOR TO ALLOW FOR INSTALLATION OF THE SIGN POST.
- E. THE SIGN POST SHALL BE INSTALLED A MINIMUM OF 10" INTO THE ANCHOR AND SECURED IN PLACE WITH ONE $\frac{3}{8}$ " DRIVE RIVET AND ONE 3" X $\frac{5}{8}$ " COURSE THREAD STAINLESS STEEL BOLT. THE RIVET SHALL BE INSTALLED ON THE SIDE FACING TRAFFIC AND THE BOLT INSTALLED PARALLEL TO TRAFFIC AS SHOWN ON SHEET 1.
- F. INSTALLATION ACCORDING TO THESE REQUIREMENTS IS ESSENTIAL TO MAINTAIN THE BREAK-AWAY CHARACTERISTICS OF THE POST SYSTEM. UNDER NO CIRCUMSTANCES SHALL THE ANCHOR ASSEMBLY BE SECURED IN CONCRETE FOOTINGS.
- C. SIGN POSTS SHALL BE A MINIMUM OF 2 FEET FROM THE CURB.

	APPROVED BY: 	CITY OF FONTANA	
	CITY ENGINEER RICARDO SANDOVAL	DATE 2-2-16	SIGN INSTALLATION DETAILS
	DRAWN BY: _____	DT _____	
	REVISION NUMBER: _____ 4	STD. PLAN NO. 4003 2 OF 4	

REGULATORY SIGN



STREET NAME SIGN



TYPICAL MARBELITE INSTALLATION

- 1.) THE MINIMUM VERTICAL CLEARANCE SHALL BE 7' FROM THE FINISHED SURFACE TO THE BOTTOM OF THE LOWEST SIGN ON THE MARBELITE.
- 2.) THE SIGN OR 10-10 BRACKET SHALL BE BANDED TO THE FLAT SURFACE OF THE MARBELITE THAT BEST ACCOMMODATES A 90 DEGREE ANGLE TO ONCOMING TRAFFIC (OR THE CURB) UNLESS OTHERWISE SPECIFIED.
- 3.) THE BAND SHALL BE TIGHTENED TO A POINT AT WHICH IT DOES NOT BREAK, YET PREVENTS MOVEMENT OF THE SIGN, BAND, OR BRACKET.
- 4.) ALL SIGNS BEING BANDED TO MARBELITE SHALL HAVE NO LESS THAN 2 BANDS (UPPER AND LOWER).
- 5.) UNDER NO CIRCUMSTANCES SHALL THE BANDS COVER THE IDENTIFICATION TAG ON THE MARBELITE.

BAND-IT - C206 STAINLESS STEEL TYPE 201 OR APPROVED EQUAL.
3/4" WIDTH AND .030" THICKNESS

BRACKET (REGULATORY SIGN): BAND-IT, D001 OR EQUAL. 1 BOLT
STRAIGHT LEG STAINLESS STEEL 3/4".

BRACKET (STREET NAME SIGN): 10-10 EXTRUDED ALUMINUM ALLOY.

BUCKLES - BAND-IT C456 OR EQUAL. EAR LOCKED
316 STAINLESS STEEL 3/4".

BOLTS - 1" x 5/16" COARSE THREAD STAINLESS STEEL.

WASHERS - ALL REGULATORY SIGNS SHALL BE INSTALLED WITH 5/16" X 2" ZINC COATED FENDER WASHERS WITH A MINIMUM THICKNESS OF .075"



APPROVED BY:

Ricardo Sandoval

2/24/22

CITY ENGINEER
RICARDO SANDOVAL

DATE

DRAWN BY:
REVISION NUMBER:

DT
4


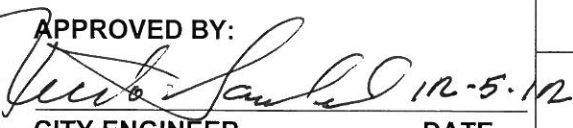
CITY OF FONTANA

SIGN INSTALLATION
DETAILS

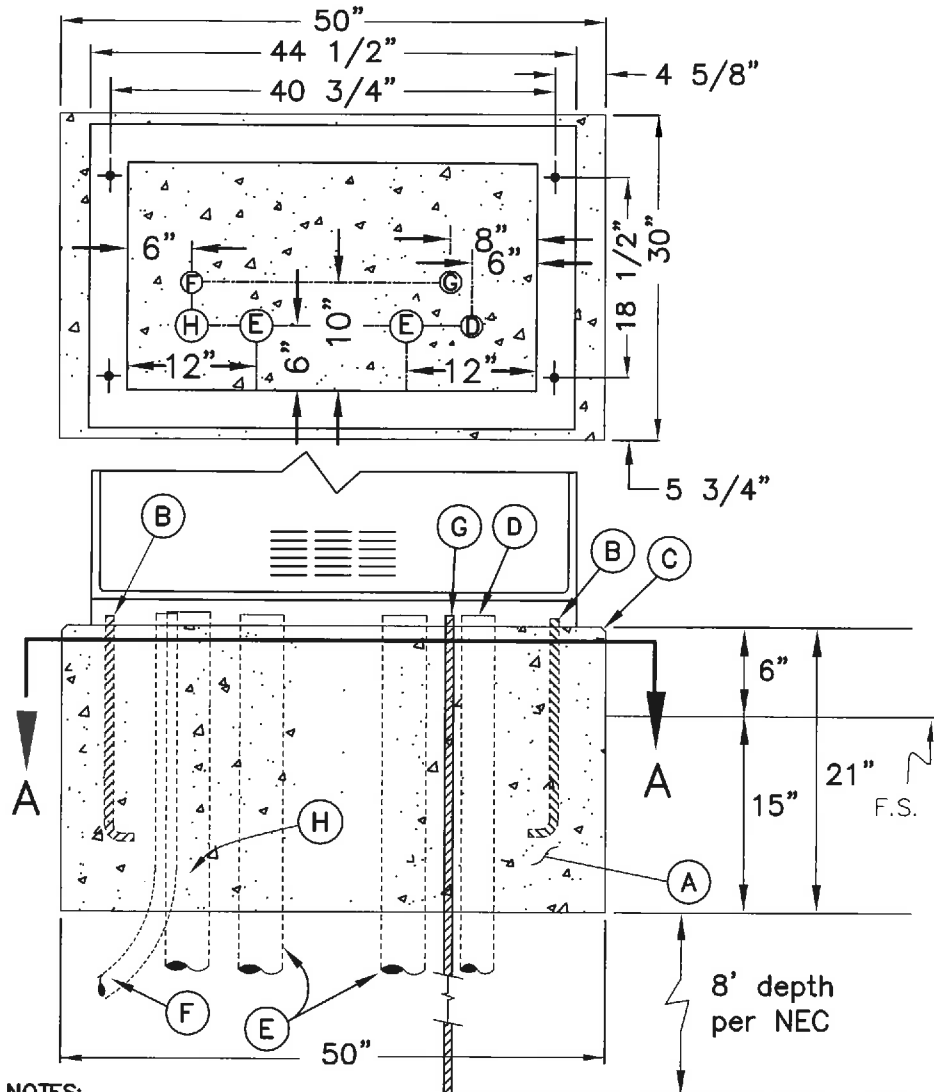
STD. PLAN NO. 4003.3

STANDARD ABBREVIATIONS

AVENUE/AVENIDA	AVE	LAKE/LAKES	LKS
BOULEVARD	BLVD	LANE	LN
CANYON	CYN	PARKWAY	PKWY
CENTER	CNTR	PLACE	PL
CIRCLE	CIR	ROAD	RD
COURT	CT	SQUARE	SQ
DRIVE	DR	STREET	ST
HEIGHTS	HTS	WAY	WY

	APPROVED BY:  CITY ENGINEER DATE RICARDO SANDOVAL	CITY OF FONTANA	
	DRAWN BY: DT REVISION NUMBER: 3	STREET NAME ABBREVIATIONS	
	STD. PLAN NO. 4003	SHT. 4 of 4	

SECTION A-A

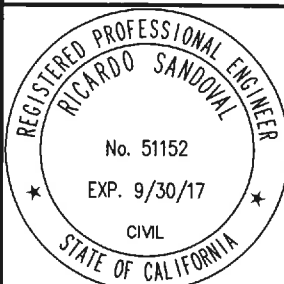


CONSTRUCTION NOTES:

- (A) 560-C-3250 PORTLAND CEMENT CONCRETE FOUNDATION.
- (B) 3/4" x 18" GALVANIZED ANCHOR BOLTS (ASTM A307).
- (C) 3/8" CHAMFER TYPICAL.
- (D) 2" SERVICE CONDUIT TO SERVICE ENCLOSURE.
- (E) (2) CONDUITS TO ADJACENT 6E PULL BOX.
- (F) 2" CONDUIT FOR SIGNAL INTERCONNECT, PHONE OR FUTURE FIBER OPTIC CABLE.
- (G) GROUND ROD, 8 FT. MIN. INTO EARTH, EXCLUDING CONCRETE (APPROX. 10.5' ROD)
- (H) CONDUIT FOR DETECTION (VIDEO OR LOOP) AND OPTICOM CABLES TO ADJACENT 6E PULLBOX.

GENERAL NOTES:

- 1. INSTALL IN ACCORDANCE WITH CALTRANS RSP ES-3A AND ES-3B.
- 2. TOP OF FOUNDATION SHALL BE 6" ABOVE FINISHED SURFACE.
- 3. FINAL LOCATION OF CONDUITS SHALL BE APPROVED PRIOR TO FOUNDATION POUR.
- 4. ALL CONDUITS IN CONTROLLER FOUNDATION SHALL BE HOT-DIPPED GALVANIZED RIGID STEEL.



APPROVED BY:

Ricardo Sandoval 12-10-15

CITY ENGINEER
RICARDO SANDOVAL

DATE

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REVISION NUMBER: 2

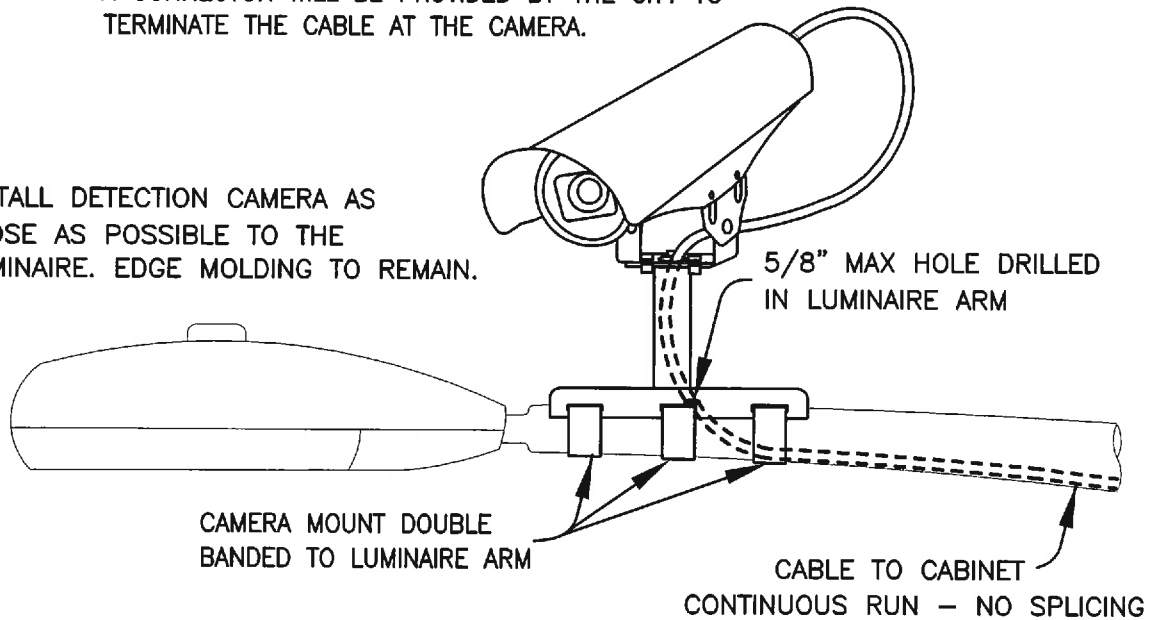
CITY OF FONTANA

TYPE R CONTROLLER
CABINET FOUNDATION
DETAIL

STD. PLAN NO. 4100 DWG. 1/1

RUN CAMERA CABLE THROUGH MOUNT, INTO LUMINAIRE
ARM AND DOWN POLE TO CONTROLLER CABINET.
A CONNECTOR WILL BE PROVIDED BY THE CITY TO
TERMINATE THE CABLE AT THE CAMERA.

INSTALL DETECTION CAMERA AS
CLOSE AS POSSIBLE TO THE
LUMINAIRE. EDGE MOLDING TO REMAIN.

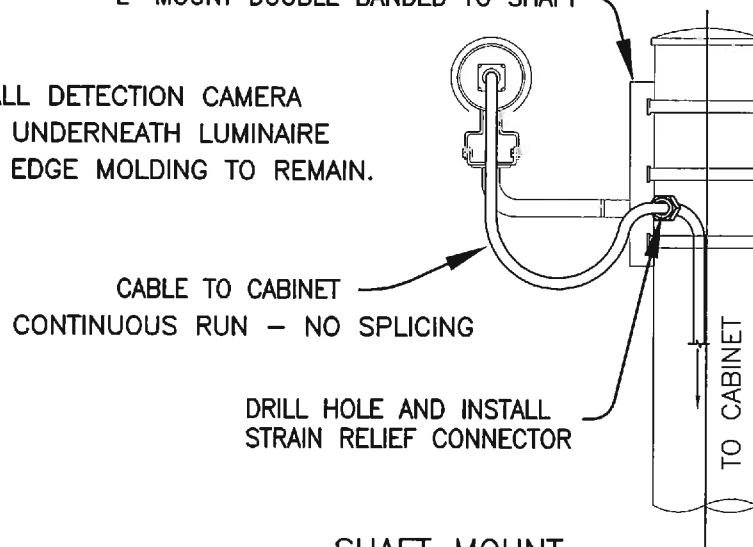


LUMINAIRE ARM MOUNT

NOT TO SCALE

"L" MOUNT DOUBLE BANDED TO SHAFT

INSTALL DETECTION CAMERA
JUST UNDERNEATH LUMINAIRE
ARM. EDGE MOLDING TO REMAIN.



SHAFT MOUNT

NOT TO SCALE



APPROVED BY:

CITY ENGINEER
RICARDO SANDOVAL

DRAWN BY: DT

REVISION NUMBER: 3

DATE

CITY OF FONTANA

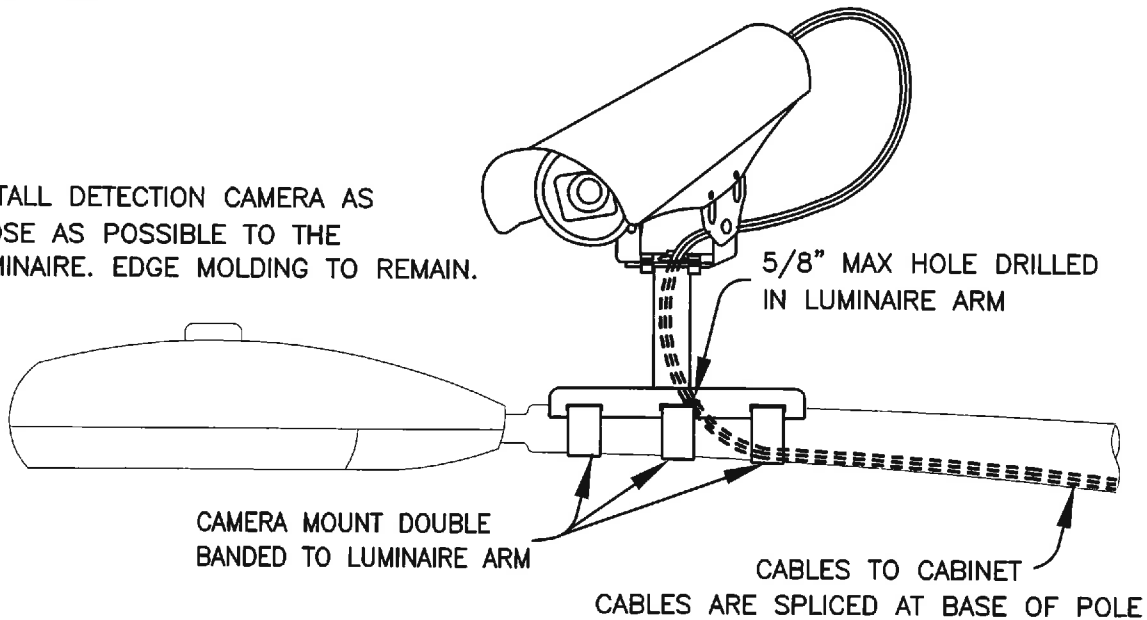
AUTOSCOPE
SOLO TERRA INSTALLATION
DETAILS

STD. PLAN NO. 4101

1/2

RUN CAMERA CABLES (VIDEO AND POWER) THROUGH MOUNT, INTO LUMINAIRE ARM AND DOWN POLE. SPLICE AT BASE OF POLE.

INSTALL DETECTION CAMERA AS CLOSE AS POSSIBLE TO THE LUMINAIRE. EDGE MOLDING TO REMAIN.



LUMINAIRE ARM MOUNT

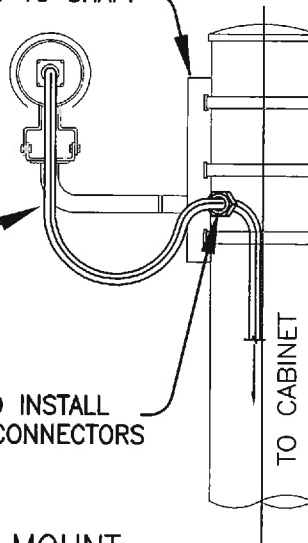
NOT TO SCALE

"L" MOUNT DOUBLE BANDED TO SHAFT

INSTALL DETECTION CAMERA JUST UNDERNEATH LUMINAIRE ARM. EDGE MOLDING TO REMAIN.

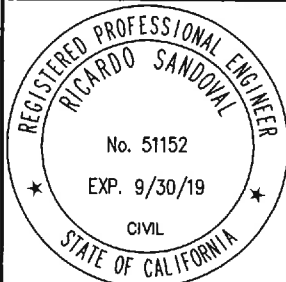
CABLES TO CABINET
CABLES ARE SPLICED AT BASE OF POLE.

DRILL HOLE AND INSTALL STRAIN RELIEF CONNECTORS



SHAFT MOUNT

NOT TO SCALE



APPROVED BY:

Ricardo Sandoval 7.10.18

CITY ENGINEER
RICARDO SANDOVAL

DATE

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REVISION NUMBER: 3

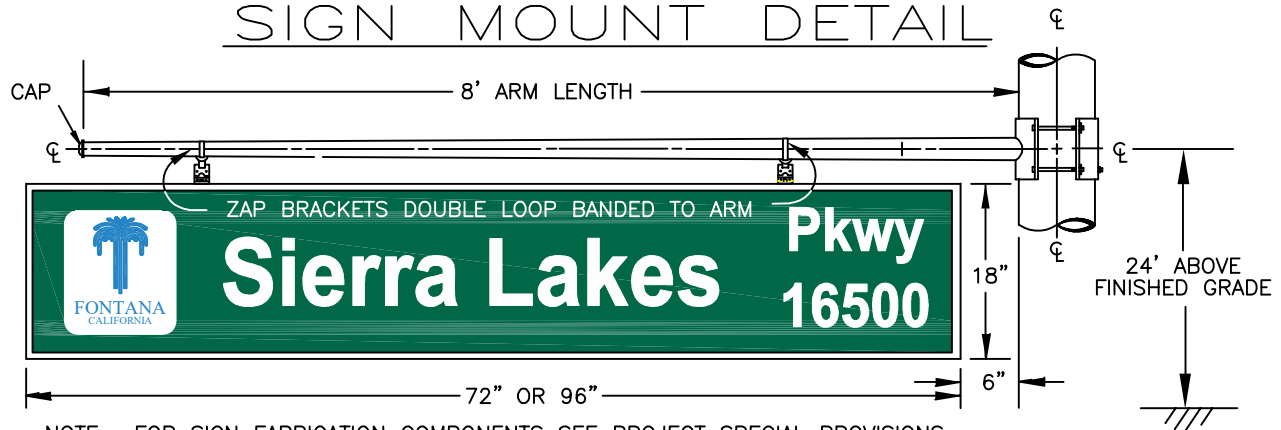
CITY OF FONTANA

AUTOSCOPE
RVP2 OR ITERIS
ADVANTAGE INSTALLATION
DETAILS

STD. PLAN NO. 4101

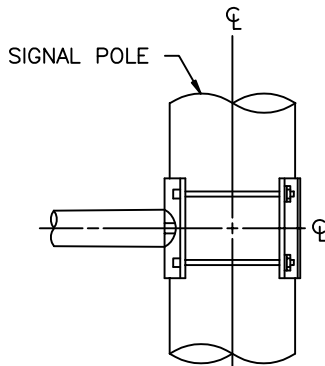
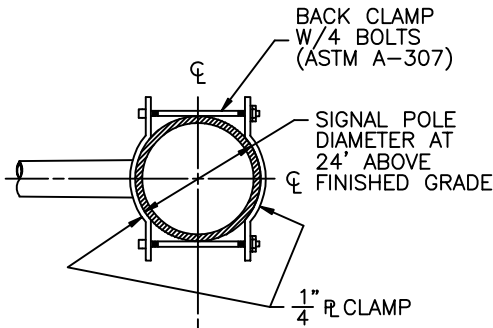
2/2

SIGN MOUNT DETAIL



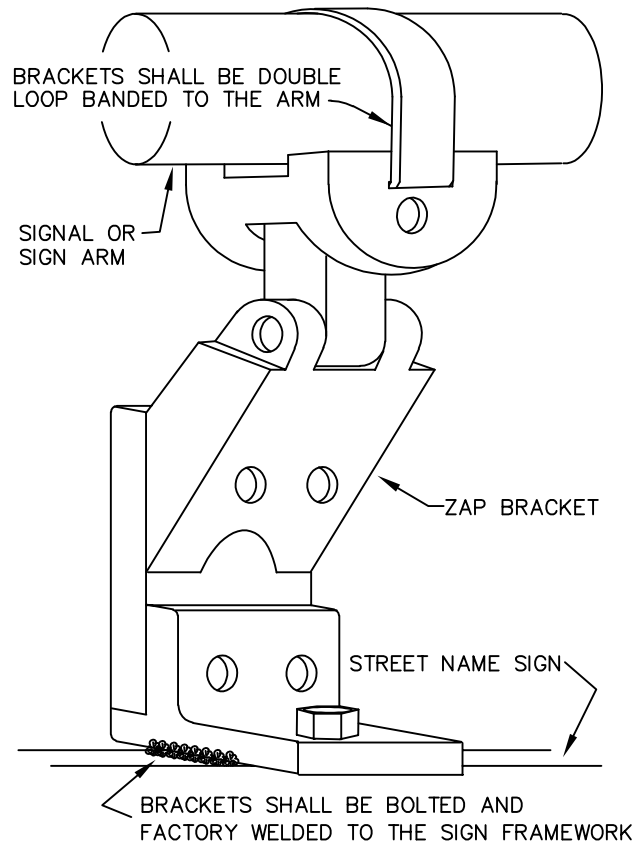
NOTE: FOR SIGN FABRICATION COMPONENTS SEE PROJECT SPECIAL PROVISIONS.

NOT TO SCALE



CLAMP DETAIL

NOT TO SCALE



ZAP BRACKET DETAIL

NOT TO SCALE



APPROVED BY:

Ricardo Sandoval 2/24/22

CITY ENGINEER
RICARDO SANDOVAL

DATE

DRAWN BY: _____ DT _____

REVISION NUMBER: _____ 5 _____

CITY OF FONTANA

OVERHEAD REFLECTIVE
STREET NAME SIGN
MOUNTING DETAIL

STD. PLAN NO. 4102.1

NOT TO SCALE

SIGN LEGEND DETAIL

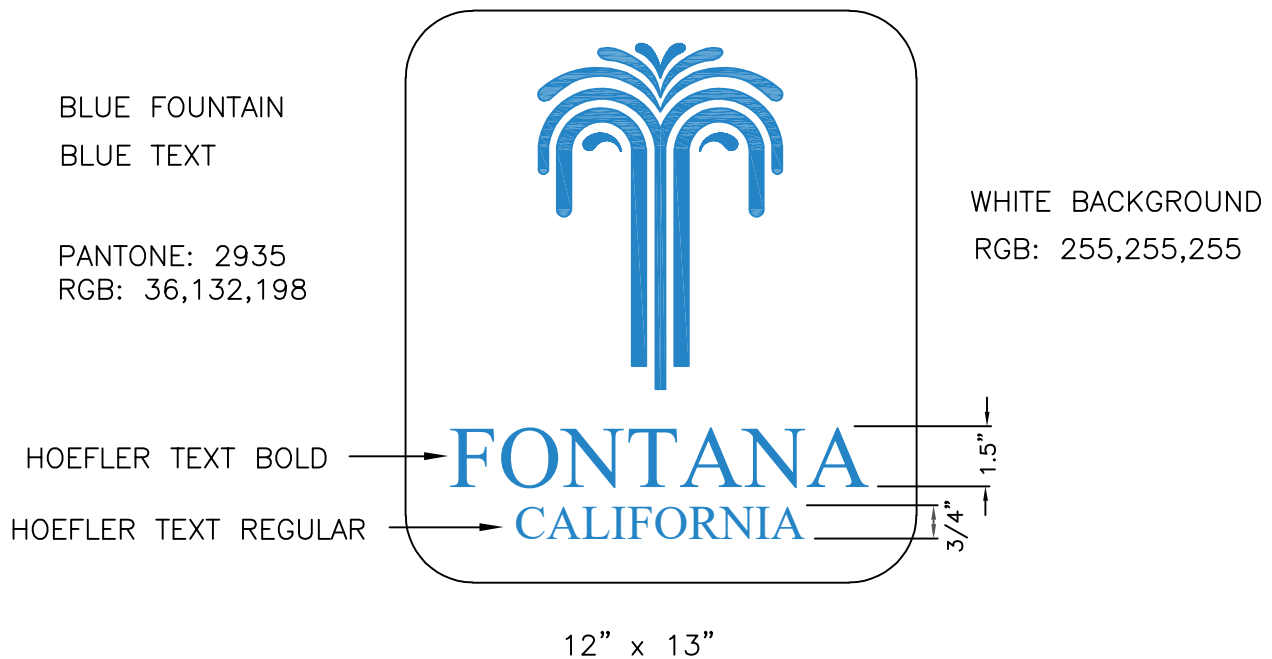


SIGN LENGTH IS EITHER 72" OR 96" DEPENDING ON STREET NAME

NOTE: SEE PROJECT SPECIAL PROVISIONS FOR SIGN FABRICATION COMPONENTS.

NOT TO SCALE

CITY LOGO DETAIL



APPROVED BY:

Ricardo Sandoval 2/15/22

CITY ENGINEER
RICARDO SANDOVAL

DATE

DRAWN BY: _____ DT

REVISION NUMBER: _____ 5



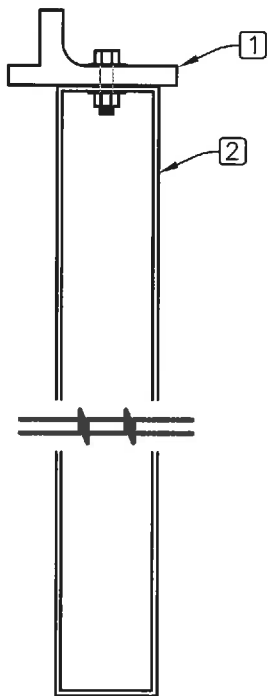
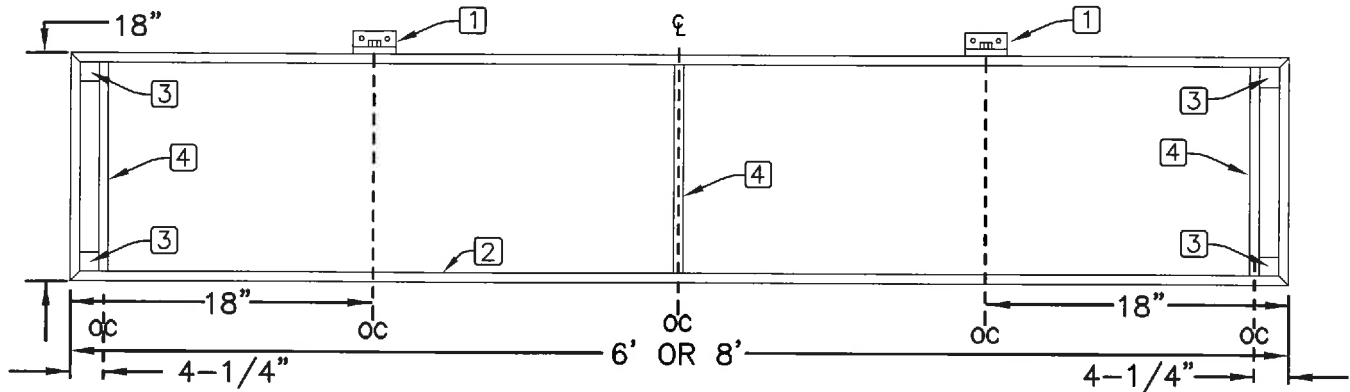
CITY OF FONTANA

OVERHEAD REFLECTIVE
STREET NAME SIGN
LEGEND DETAIL

STD. PLAN NO. 4102.2

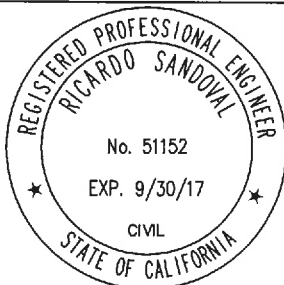
NOT TO SCALE

SIGN FRAME FABRICATION DETAIL



SIGN FRAMEWORK FABRICATION NOTES

- 1 ZAP MOUNTING BRACKET SHALL BE WELDED TO TOP OF ALUMINUM CHANNEL FRAMEWORK AND MECHANICALLY FASTENED WITH A 1/2" DIA. STAINLESS STEEL BOLT AND LOCKING NUT.
- 2 SIGN FRAMEWORK SHALL BE 1-1/4" X 1-1/4" X 1/8" WALL ALUMINUM CHANNEL WELDED TOGETHER AT CORNERS.
- 3 FRAMEWORK SHALL HAVE .040" THICK ALUMINUM BRACKETS WELDED TO INSIDE OF CORNERS AS SHOWN.
- 4 FRAMEWORK SHALL HAVE 1" X 1/8" WALL ALUMINUM SQ. TUBE VERTICAL SUPPORTS WELDED INSIDE AS SHOWN.

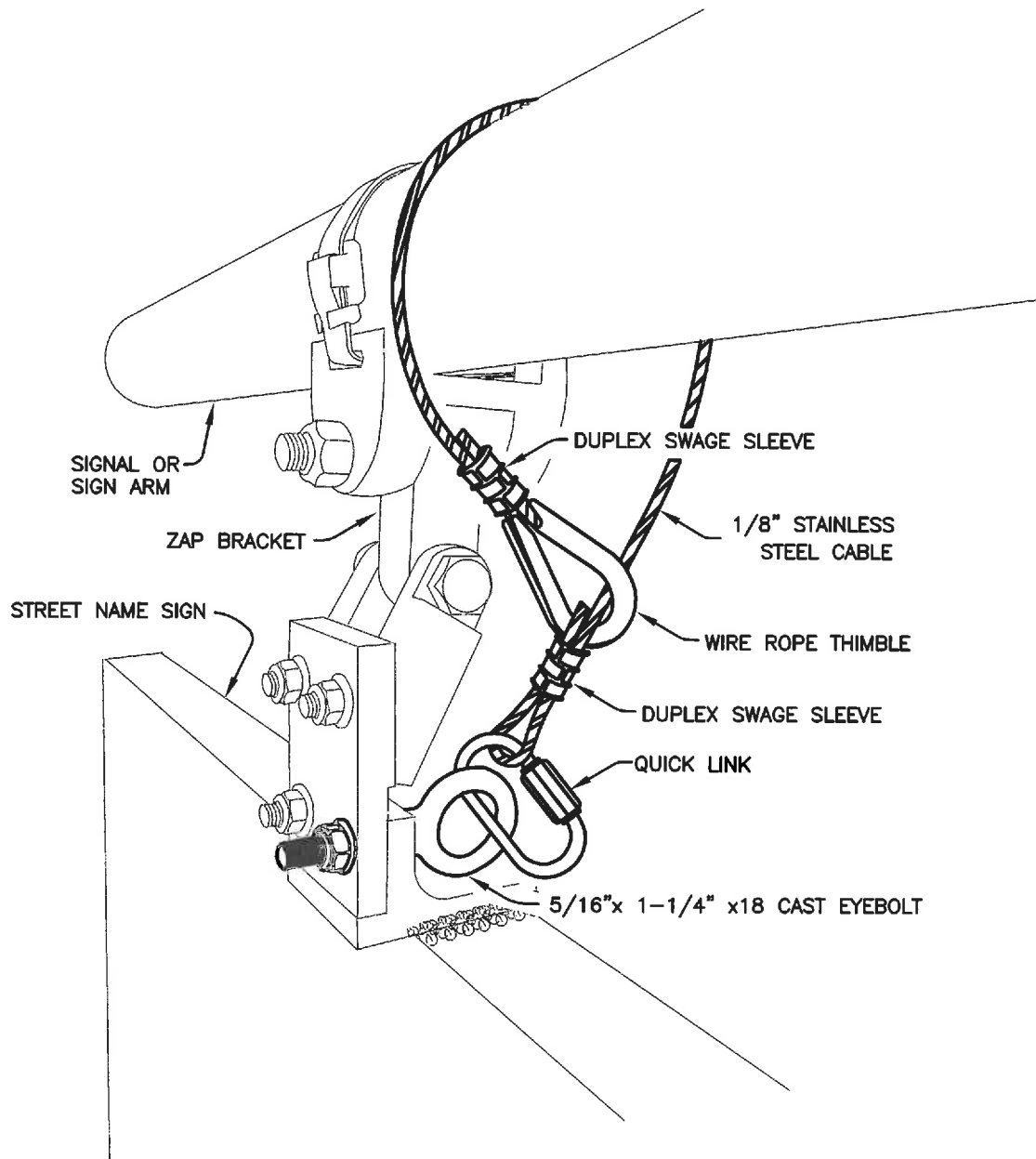


APPROVED BY: *Ricardo Sandoval* 1.19.16
CITY ENGINEER DATE
RICARDO SANDOVAL
DRAWN BY: _____ DT
REVISION NUMBER: 4

CITY OF FONTANA

OVERHEAD REFLECTIVE
STREET NAME SIGN
FABRICATION DETAIL

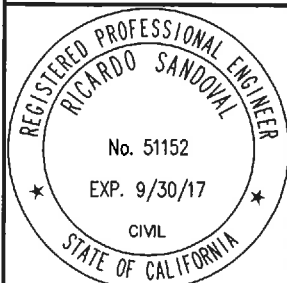
STD. PLAN NO. 4102.3



REINFORCING CABLE DETAIL

EACH OVERHEAD SIGN SHALL HAVE TWO CABLE ASSEMBLIES
INSTALLED, ONE AT EACH MOUNTING BRACKET.

NOT TO SCALE



APPROVED BY:

Ricardo Sandoval 11.19.15

CITY ENGINEER
RICARDO SANDOVAL

DATE

DRAWN BY: _____ DT

REVISION NUMBER: _____

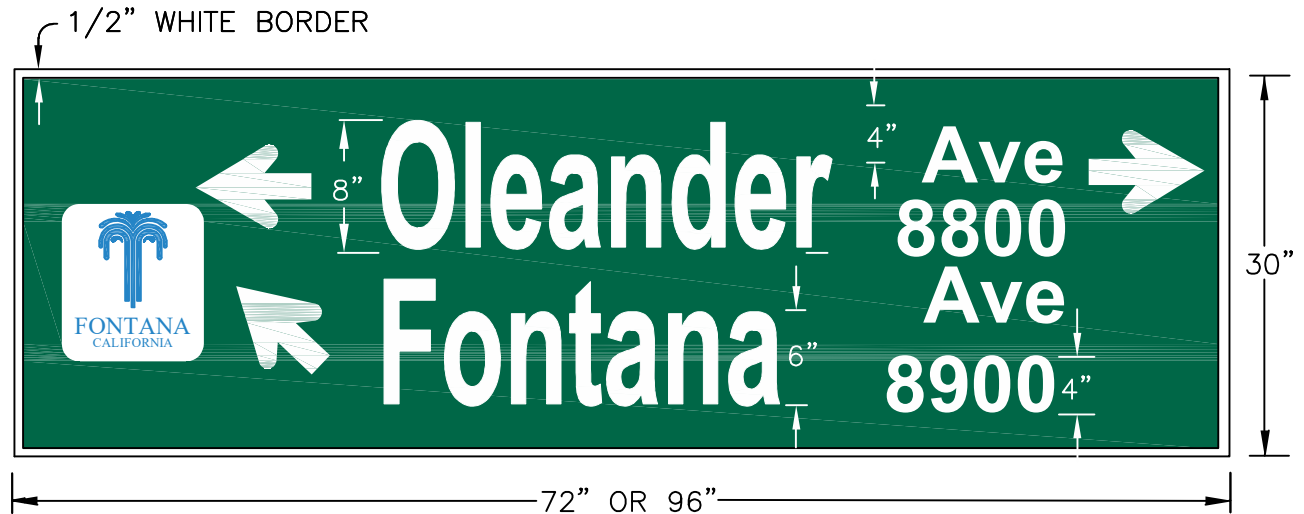
CITY OF FONTANA

OVERHEAD REFLECTIVE
STREET NAME SIGN
REINFORCING CABLE
DETAIL

STD. PLAN NO. 4102.4

NOT TO SCALE

SIGN LEGEND DETAIL

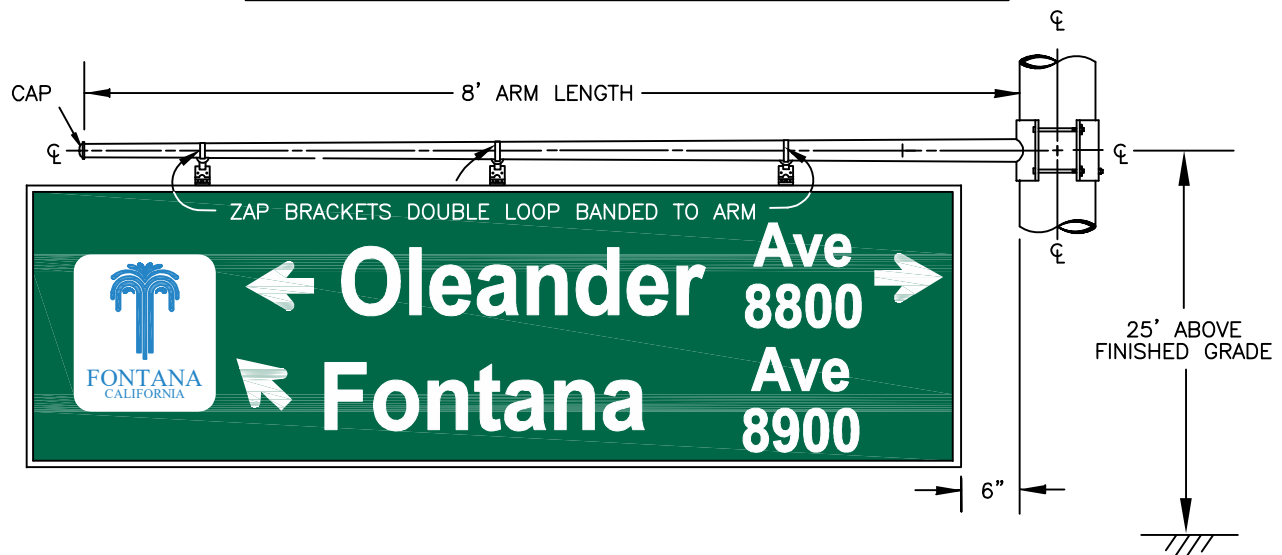


SEE STD. PLAN NO. 4102.2 FOR COLOR DETAIL

SEE PROJECT SPECIAL PROVISIONS FOR SIGN FABRICATION COMPONENTS.

NOT TO SCALE

SIGN MOUNT DETAIL



APPROVED BY:

Ricardo Sandoval

2/24/22

CITY ENGINEER
RICARDO SANDOVAL

DATE

DRAWN BY: _____ DT

REVISION NUMBER: 2



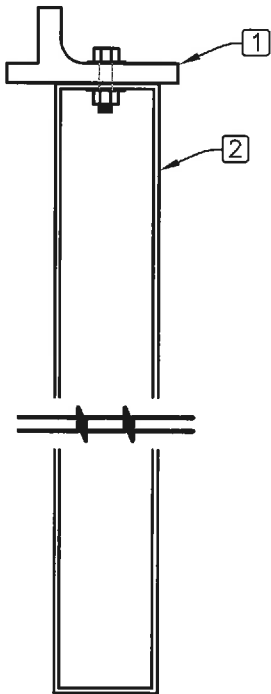
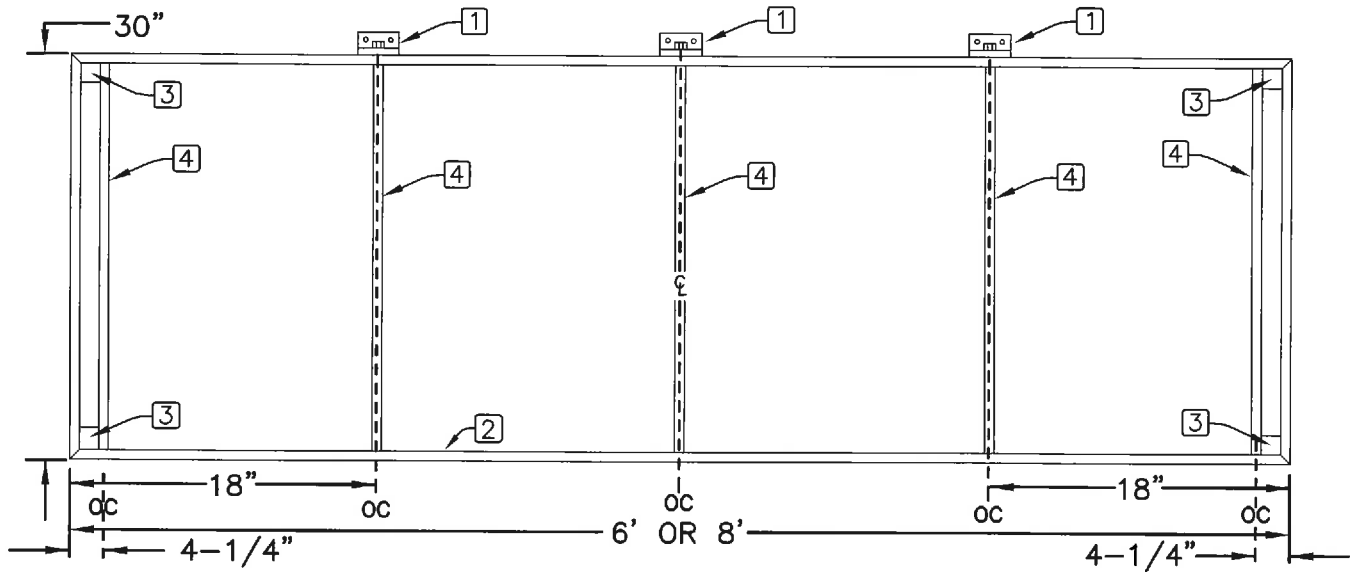
CITY OF FONTANA

OVERHEAD REFLECTIVE
STREET NAME SIGN
LEGEND AND MOUNT
DETAIL

STD. PLAN NO. 4102.5

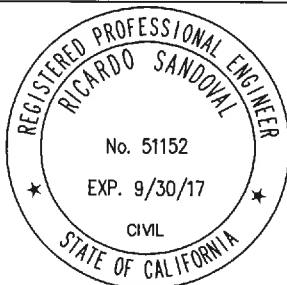
NOT TO SCALE

SIGN FRAME FABRICATION DETAIL



SIGN FRAMEWORK FABRICATION NOTES

- 1 ZAP MOUNTING BRACKET SHALL BE WELDED TO TOP OF ALUMINUM CHANNEL FRAMEWORK AND MECHANICALLY FASTENED WITH A 1/2" DIA. STAINLESS STEEL BOLT AND LOCKING NUT.
- 2 SIGN FRAMEWORK SHALL BE 1-1/4" X 1-1/4" X 1/8" WALL ALUMINUM CHANNEL WELDED TOGETHER AT CORNERS.
- 3 FRAMEWORK SHALL HAVE .040" THICK ALUMINUM BRACKETS WELDED TO INSIDE OF CORNERS AS SHOWN.
- 4 FRAMEWORK SHALL HAVE 1" X 1/8" WALL ALUMINUM SQ. TUBE VERTICAL SUPPORTS WELDED INSIDE AS SHOWN.



APPROVED BY:

CITY ENGINEER
RICARDO SANDOVAL

DRAWN BY: _____ DT

REVISION NUMBER: _____

DATE

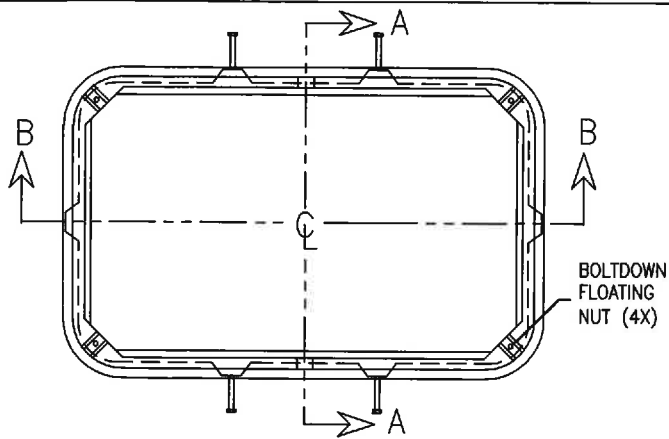
1.19.16

CITY OF FONTANA

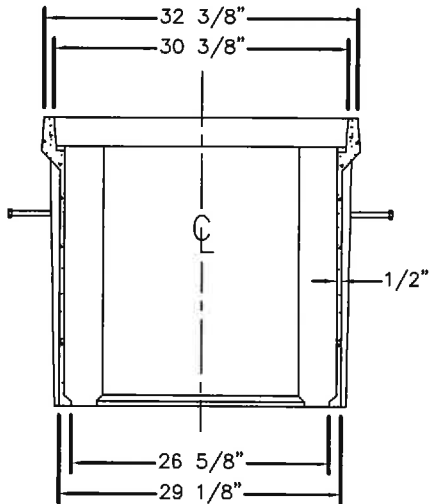
OVERHEAD REFLECTIVE
STREET NAME SIGN
FABRICATION DETAIL

STD. PLAN NO. 4102.6

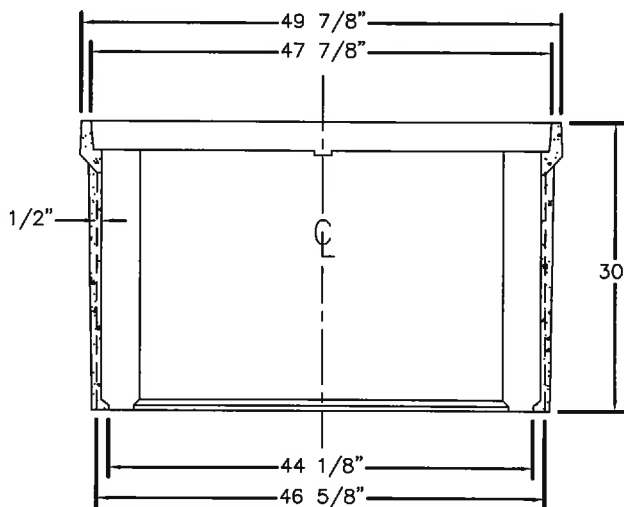
APPROX. WT. = 492 LBS.



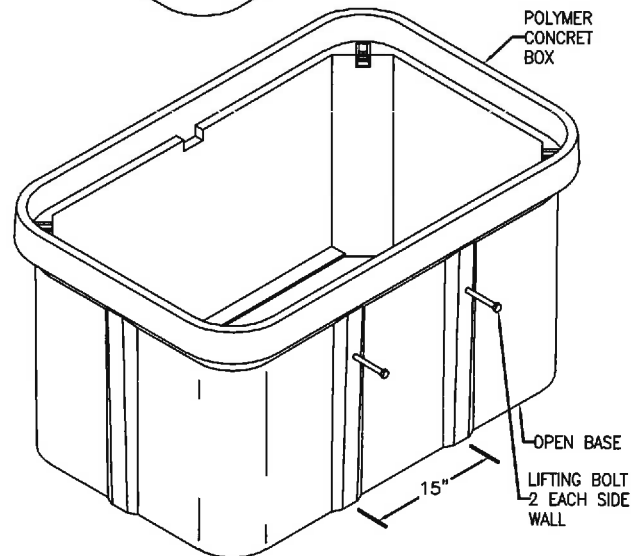
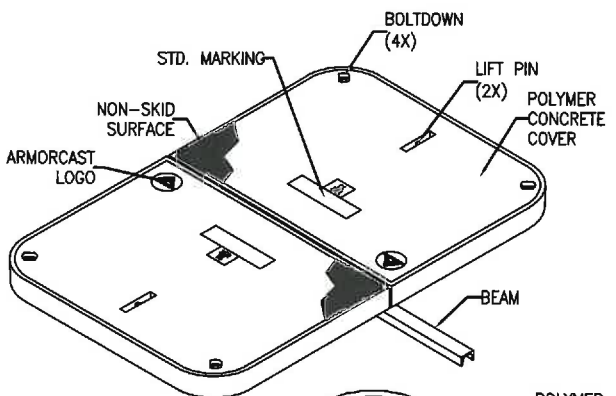
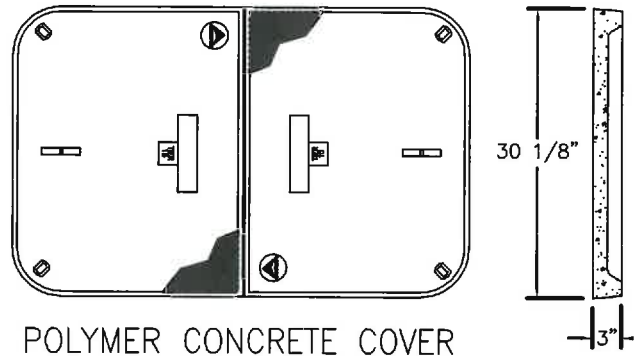
PLAN VIEW



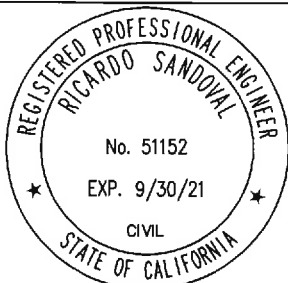
SECTION A-A



SECTION B-B



NOT TO SCALE



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RICARDO SANDOVAL

DATE

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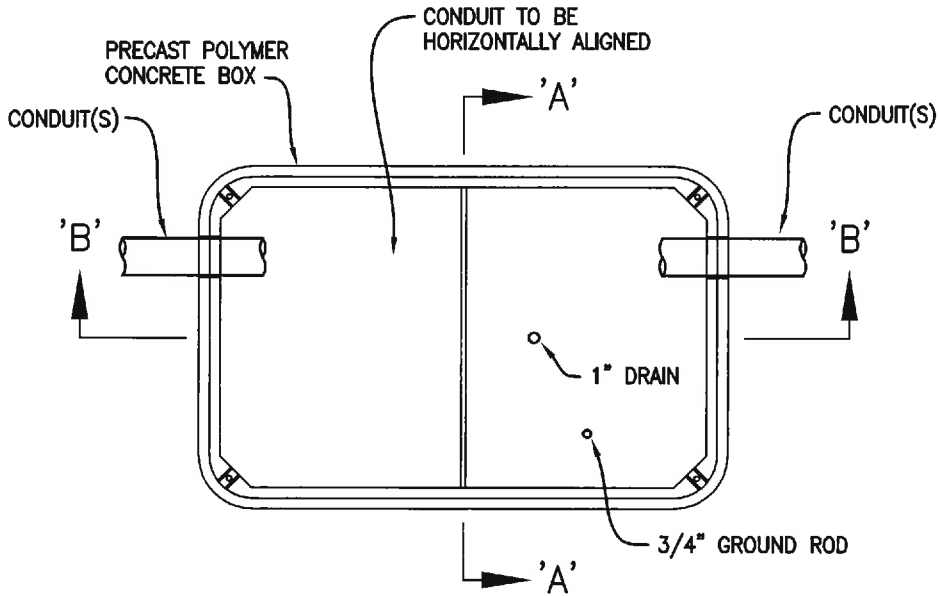
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CITY OF FONTANA

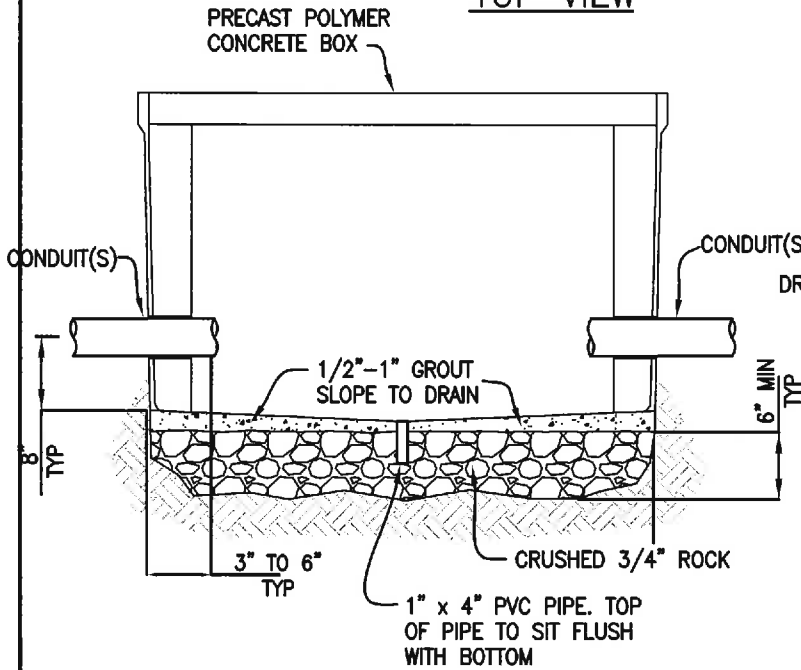
P48 PULLBOX DETAILS

STD. PLAN NO. 4103

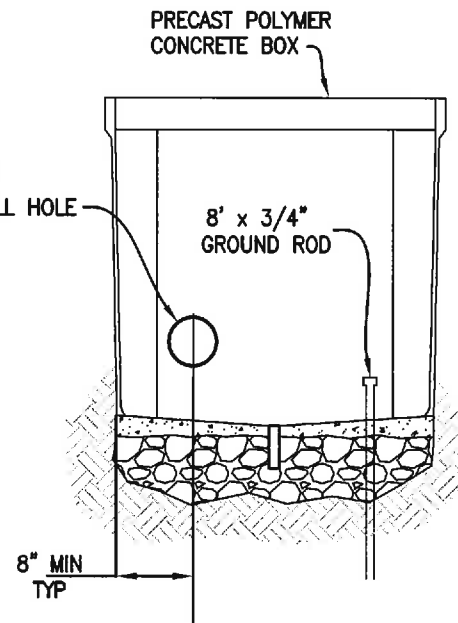
DWG. 1/2



TOP VIEW



SECTION 'A' - 'A'



SECTION 'B' - 'B'

COVERS SHALL BE LABELED "COMMUNICATIONS."



APPROVED BY:

CITY ENGINEER
RICARDO SANDOVAL

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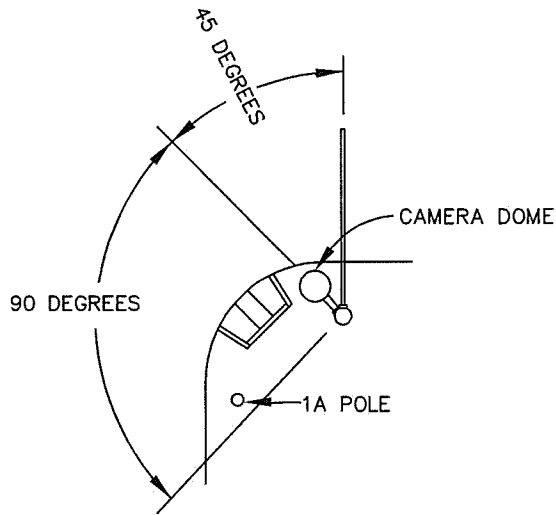
REVISION NUMBER: _____ 2

DATE

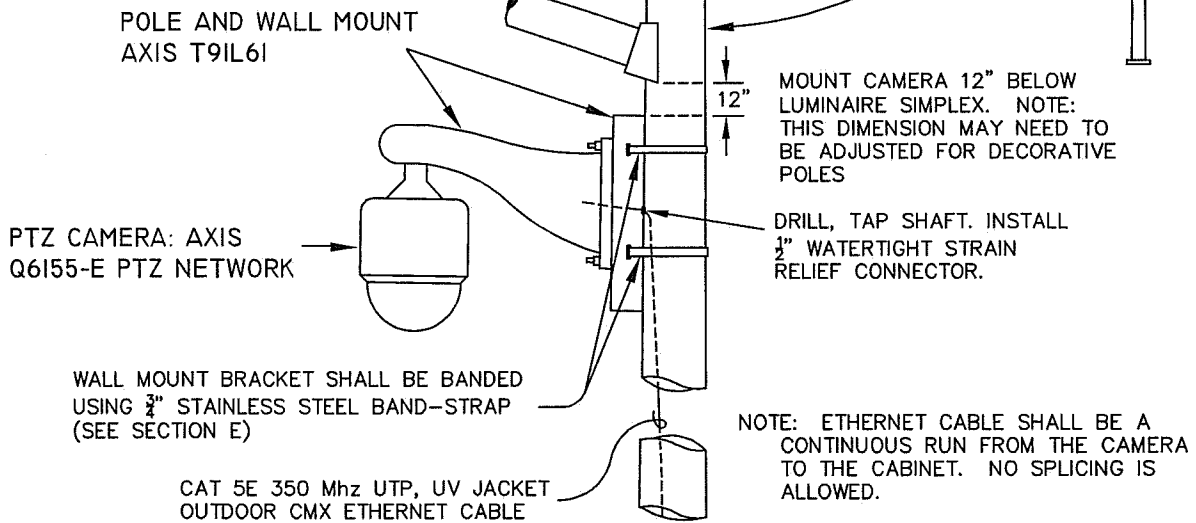
CITY OF FONTANA

P48 PULLBOX
INSTALLATION DETAILS

STD. PLAN NO. 4103 DWG. 2/2



PTZ CAMERA ORIENTATION



PTZ CAMERA AND CABLE INSTALLATION



APPROVED BY:

[Signature] 9.7.7

CITY ENGINEER
RICARDO SANDOVAL

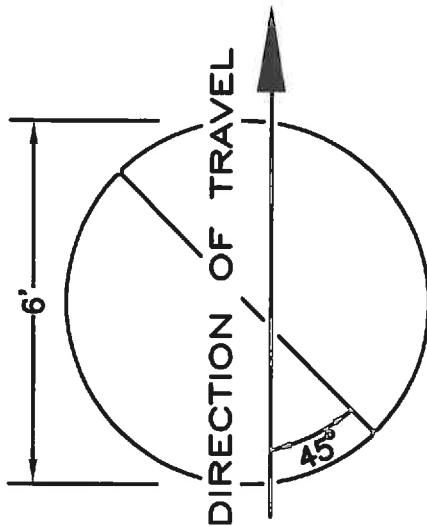
DATE

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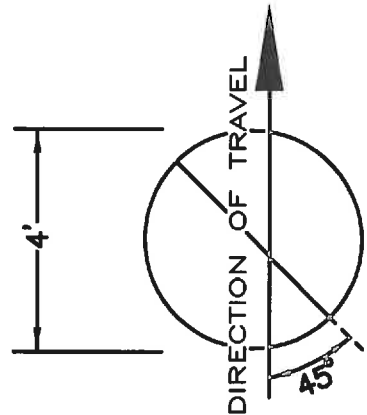
CITY OF FONTANA

PTZ CAMERA/CABLE
INSTALLATION AND
ORIENTATION

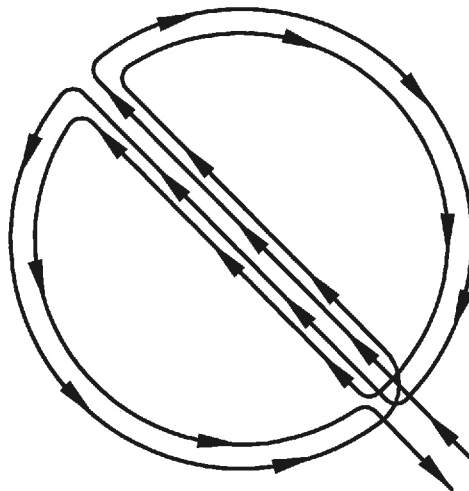
STD. PLAN NO. 4104 DWG. 1/1



SAWCUT DETAIL -
CONVENTIONAL LANE



SAWCUT DETAIL -
BICYCLE LANE



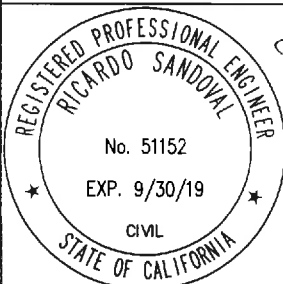
WINDING DETAIL

NOTES:

1. TYPE QC LOOPS FOR LIMIT
LINE DETECTION AND BICYCLE
LANES



SYMBOL



APPROVED BY:

Ricardo Sandoval
NO. *4105* DATE *1-29-18*

CITY ENGINEER
RICARDO SANDOVAL

DRAWN BY: _____ DT _____

REVISION NUMBER: _____

CITY OF FONTANA

TYPE QC LOOP
DETECTOR
CONFIGURATION

STD. PLAN NO. 4105 DWG. 1/1