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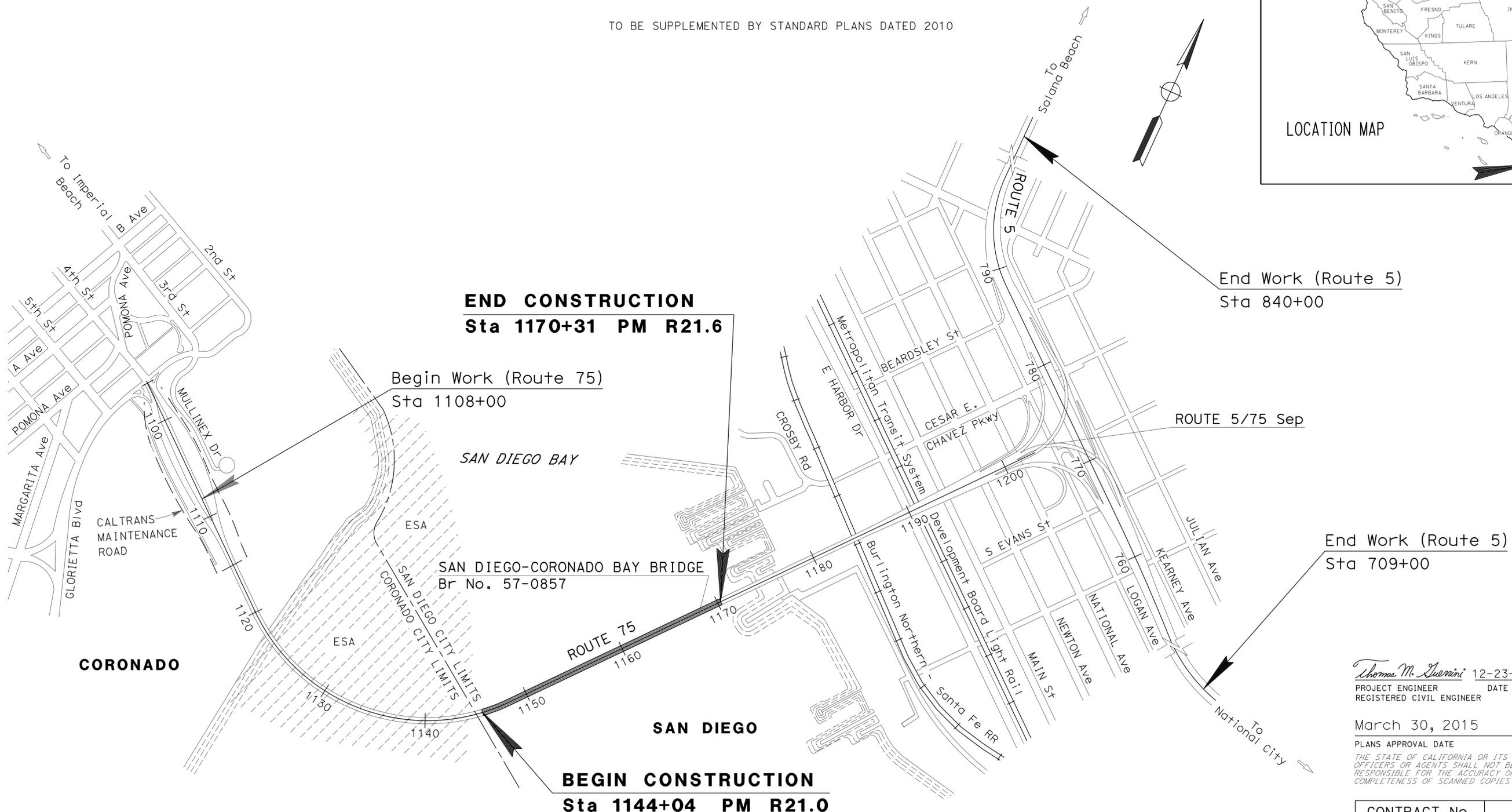
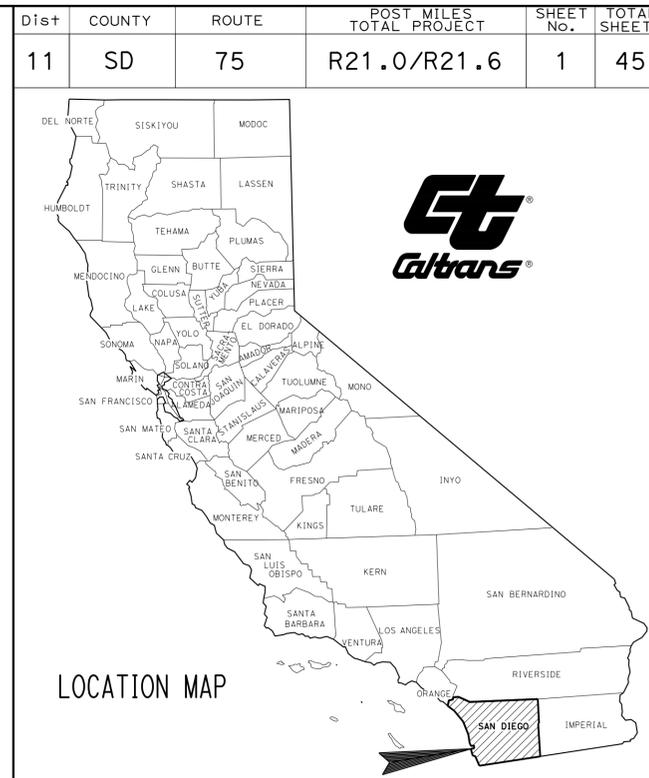
STRUCTURE PLANS

10-45 SAN DIEGO-CORONADO BAY BRIDGE, BR No. 57-0857

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA **ACSTPNH-P075(044)E**  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN SAN DIEGO COUNTY**  
**IN SAN DIEGO FROM 0.9 MILE NORTH TO**  
**1.5 MILES NORTH OF GLORIETTA BOULEVARD**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



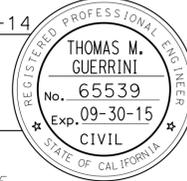
PROJECT MANAGER  
**BRUCE LAMBERT**

DESIGN ENGINEER  
**TOM GUERRINI**

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

*Thomas M. Guerrini* 12-23-14  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
 March 30, 2015  
 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.



CONTRACT No.	<b>11-409304</b>
PROJECT ID	<b>1112000070</b>

DATE PLOTTED => 01-APR-2015 TIME PLOTTED => 09:35

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: ED HAJJ  
 CALCULATED/DESIGNED BY: TOM GUERRINI  
 CHECKED BY: ANH NGUYEN  
 REVISED BY: [ ] DATE REVISED: [ ]

**TEMPORARY FENCE  
 (TYPE CL-6) QUANTITY**

LOCATION	TEMPORARY FENCE (TYPE CL-6)
	AREA FOR CONTRACTOR'S USE
TOTAL	180

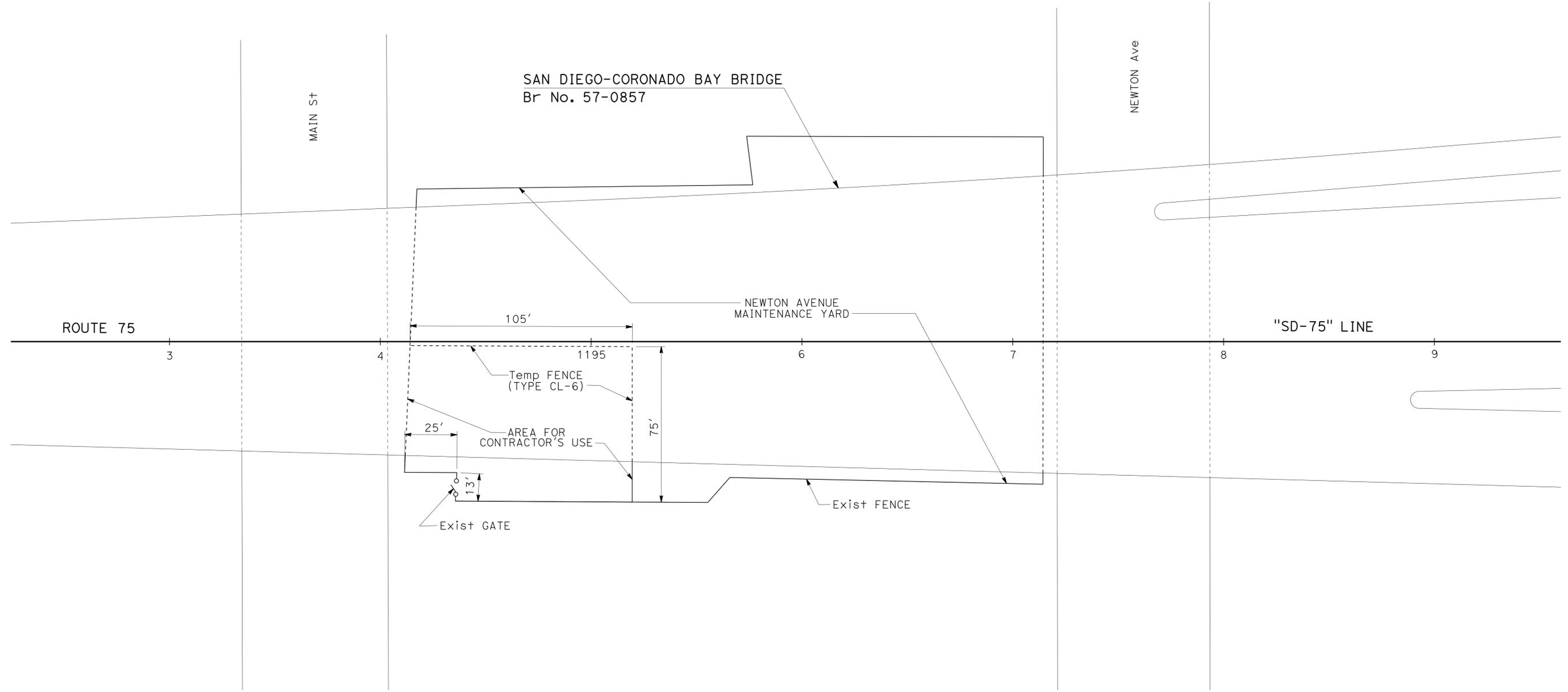
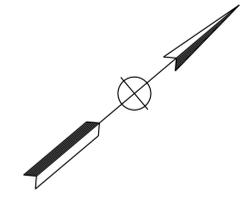
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	2	45

*Thomas M. Guerrini* 12-23-14  
 REGISTERED CIVIL ENGINEER DATE

03-30-15  
 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.

REGISTERED PROFESSIONAL ENGINEER  
 THOMAS M. GUERRINI  
 No. 65539  
 Exp. 09-30-15  
 CIVIL  
 STATE OF CALIFORNIA



**AREA FOR CONTRACTOR'S USE**

**CONSTRUCTION DETAILS  
 NO SCALE  
 C-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	3	45

 12-23-14  
 REGISTERED CIVIL ENGINEER DATE

03-30-15  
 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.

REGISTERED PROFESSIONAL ENGINEER  
 No. 54839  
 Exp. 06-30-16  
 CIVIL  
 STATE OF CALIFORNIA

**NOTES:**

1. EXACT LOCATION OF CONSTRUCTION AREA SIGNS WILL BE DETERMINED BY THE ENGINEER.
2. FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA), INDICATING CALIFORNIA SIGN SPECIFICATIONS ARE USED.
3. EXISTING UTILITIES ARE NOT SHOWN ON THESE PLAN SHEETS. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES AND ADJUST THE FIELD LOCATION OF THE SIGN POSTS IN CONSULTATION WITH THE ENGINEER.

**LEGEND:**

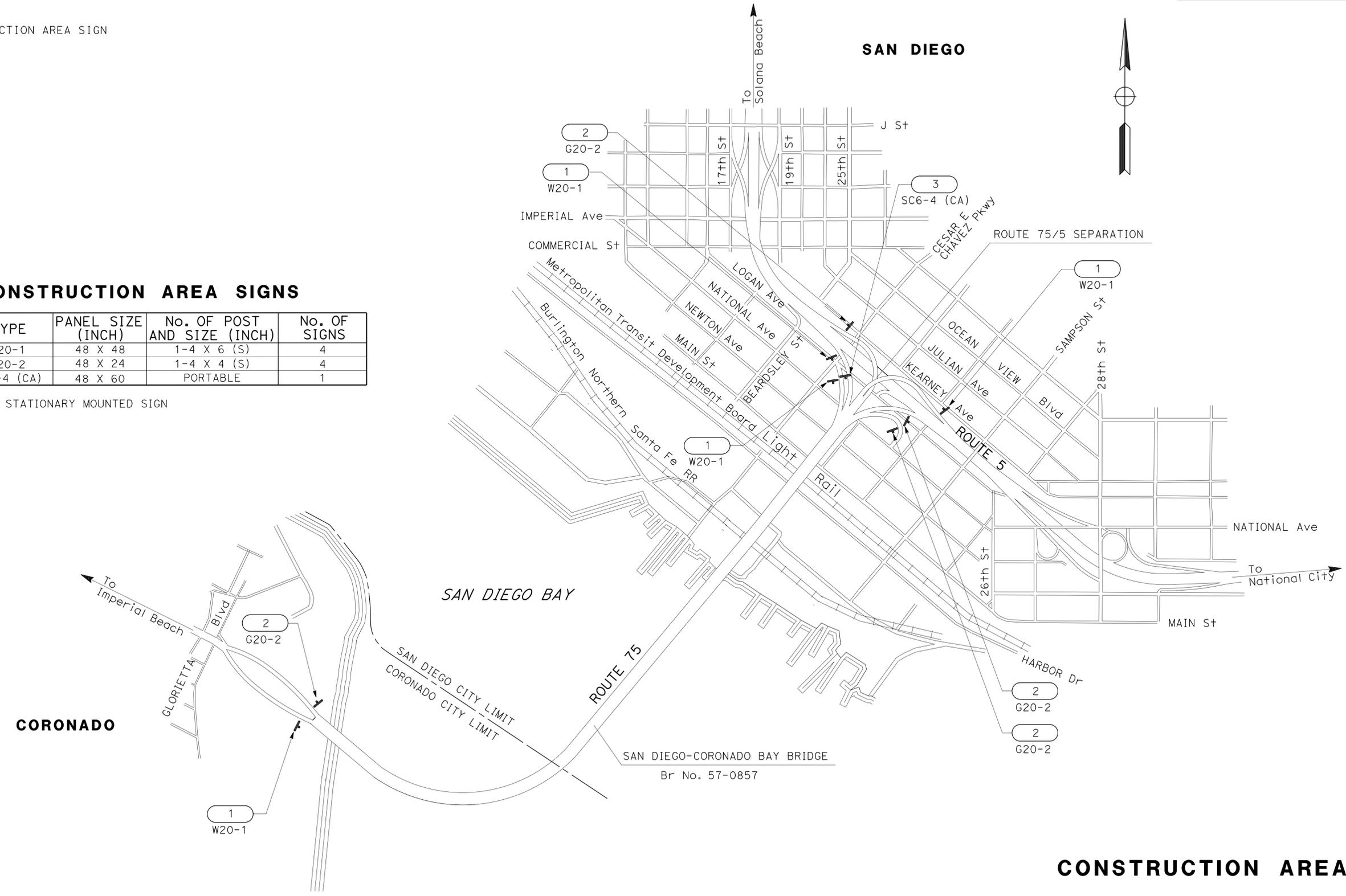
 = CONSTRUCTION AREA SIGN

**CONSTRUCTION AREA SIGNS**

SIGN No.	TYPE	PANEL SIZE (INCH)	No. OF POST AND SIZE (INCH)	No. OF SIGNS
1	W20-1	48 X 48	1-4 X 6 (S)	4
2	G20-2	48 X 24	1-4 X 4 (S)	4
3	SC6-4 (CA)	48 X 60	PORTABLE	1

(S) DENOTES STATIONARY MOUNTED SIGN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: CAMILLE ABOU FADEL  
 CALCULATED/DESIGNED BY: CHECKED BY:  
 ROBERT EDEJER SHAHIN ADIBI  
 REVISED BY: DATE REVISED:



**CONSTRUCTION AREA SIGNS**  
 NO SCALE  
**CS-1**

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

LAST REVISION DATE PLOTTED => 01-APR-2015  
 02-02-15 TIME PLOTTED => 09:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	4	45

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

Grace M. Tsushima  
No. C49814  
Exp. 9-30-14  
CIVIL  
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.

TO ACCOMPANY PLANS DATED 03-30-15

**UNIT OF MEASUREMENT SYMBOLS:**

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

**TABLE A**

SYMBOL USED	DEFINITIONS
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TAB	TABLET
TON	2,000 POUNDS

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

**TABLE B**

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft <sup>3</sup> , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
∅	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

\* For use on a sign panel only

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ABBREVIATIONS  
(SHEET 2 OF 2)**

NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B  
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

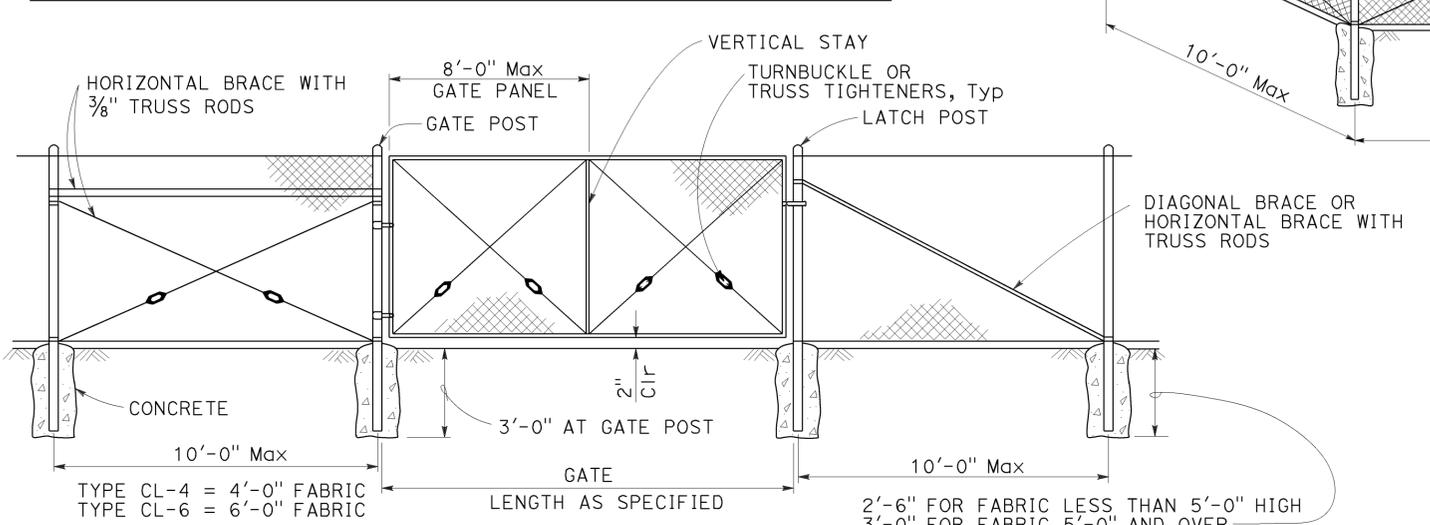
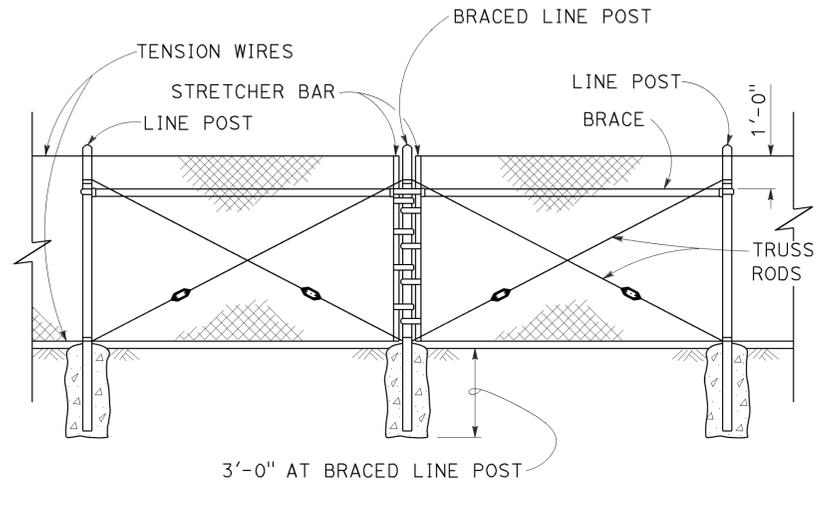
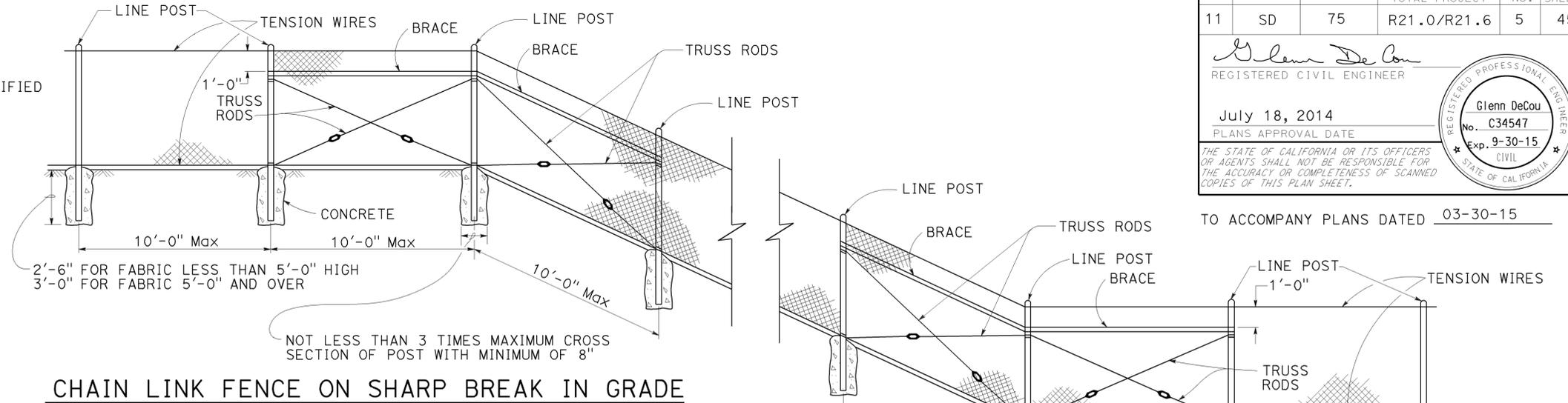
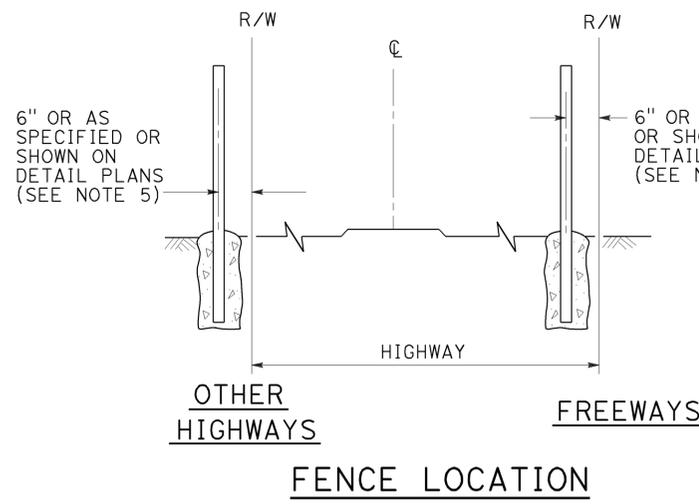
**REVISED STANDARD PLAN RSP A10B**

	<b>M</b>
Maint	MAINTENANCE
Max	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
Med	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
Min	MINIMUM
Misc	MISCELLANEOUS
Misc I & S	MISCELLANEOUS IRON AND STEEL
Mkr	MARKER
Mod	MODIFIED, MODIFY
Mon	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EMBANKMENT
Mt	MOUNTAIN, MOUNT
MtI	MATERIAL
MVP	MAINTENANCE VEHICLE PULLOUT
	<b>N</b>
N	NORTH
NB	NORTHBOUND
No.	NUMBER (MUST HAVE PERIOD)
Nos.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NSP	NEW STANDARD PLAN
NTS	NOT TO SCALE
	<b>O</b>
Obir	OBLITERATE
OC	OVERCROSSING
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
O-O	OUT TO OUT
Opp	OPPOSITE
OSD	OVERSIDE DRAIN
	<b>P</b>
p	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
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
PEC	PERMIT TO ENTER AND CONSTRUCT
Ped	PEDESTRIAN
Ped OC	PEDESTRIAN OVERCROSSING
Ped UC	PEDESTRIAN UNDERCROSSING
Perm MtI	PERMEABLE MATERIAL

	<b>P continued</b>
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
Pkwy	PARKWAY
PL, PL	PLATE
P/L	PROPERTY LINE
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
PRC	POINT OF REVERSE CURVE
PRF	PAVEMENT REINFORCING FABRIC
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
Pvmt	PAVEMENT
	<b>Q</b>
Qty	QUANTITY
	<b>R</b>
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
Rd	ROAD
Reinf	REINFORCED, REINFORCEMENT, REINFORCING
Rel	RELOCATE
Repl	REPLACEMENT
Ret	RETAINING
Rev	REVISED, REVISION
Rdwy	ROADWAY
RHMA	RUBBERIZED HOT MIX ASPHALT
Riv	RIVER
RM	ROAD-MIXED
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
Rwy	RAILWAY

	<b>S</b>
S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
Salv	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SAND CUSHION
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
Sec	SECOND, SECTION
Sep	SEPARATION
SG	SUBGRADE
Shld	SHOULDER
Sht	SHEET
Sim	SIMILAR
⊥	STATION LINE
SM	SELECTED MATERIAL
Spec	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
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
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
	<b>T</b>
T	SEMI-TANGENT
Tan	TANGENT
TBB	THRIE BEAM BARRIER
Tbr	TIMBER
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TCE	TEMPORARY CONSTRUCTION EASEMENT
TeI	TELEPHONE
Temp	TEMPORARY
TG	TOP OF GRADE
Tot	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
Trans	TRANSITION

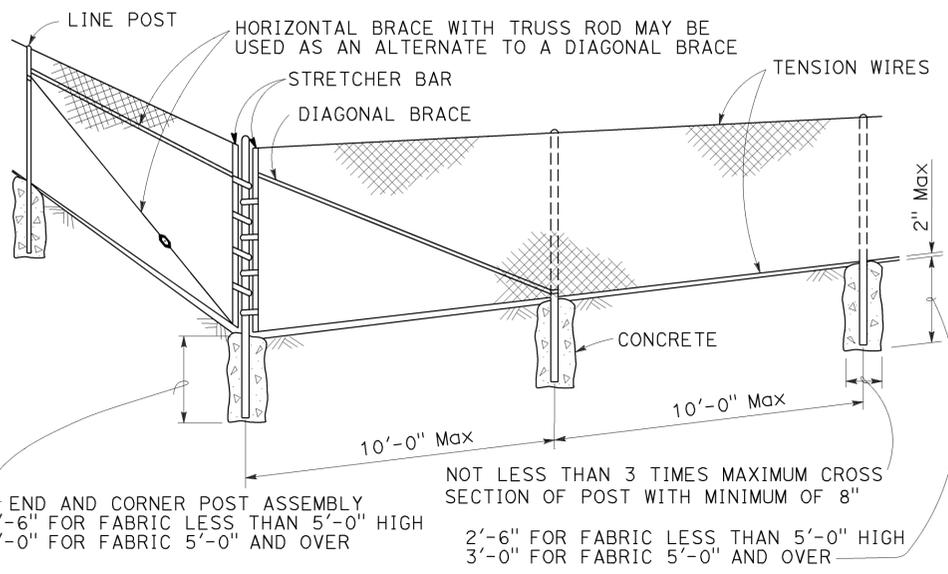
	<b>T continued</b>
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL
Typ	TYPICAL
	<b>U</b>
UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
	<b>V</b>
V	VALVE, DESIGN SPEED
Var	VARIABLE, VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Vert	VERTICAL
Via	VIADUCT
Vol	VOLUME
	<b>W</b>
W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
Wt	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE
	<b>X</b>
X Sec	CROSS SECTION
Xing	CROSSING
	<b>Y</b>
Yr	YEAR
Yrs	YEARS



GATE POST			
FENCE HEIGHT	GATE WIDTHS	ROUND OD PIPE	WEIGHT (lb/ft)
6'-0" AND LESS	UP THRU 6'-0"	2.875"	5.80
	OVER 6'-0" THRU 12'-0"	4.500"	10.80
	OVER 12'-0" THRU 18'-0"	5.563"	14.63
OVER 6'-0" TO 8'-0" Max	OVER 18'-0" TO 24'-0" Max	6.625"	18.99
	UP THRU 6'-0"	3.500"	7.58
	OVER 6'-0" THRU 12'-0"	5.563"	14.63
	OVER 12'-0" THRU 18'-0"	6.625"	18.99
	OVER 18'-0" TO 24'-0" Max	8.625"	28.58

Above post dimensions and weights are minimums. Larger sizes may be used upon approval.

- NOTES:**
- The table below shows minimum sized posts and braces complying with the specifications. Larger or heavier post and brace sizes may be used upon approval.
  - Sections shown in the tables must also comply with the strength requirements and other provisions of the Specifications.
  - Other sections which comply with the strength requirements and other provisions of the Specifications may be used upon approval.
  - Options exercised shall be uniform on any one project.
  - Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.
  - See Revised Standard Plan RSP A85B for Brace, Stretcher Bar, and Truss Tightener Details.



FENCE HEIGHT	TYPICAL MEMBER DIMENSIONS (See Notes)									
	LINE POSTS					END, LATCH AND CORNER POSTS		BRACES		
	ROUND OD PIPE	WEIGHT (lb/ft)	ROLL FORMED		ROUND OD PIPE	WEIGHT (lb/ft)	ROUND OD PIPE	WEIGHT (lb/ft)	ROLL FORMED	
			SECTION	WEIGHT (lb/ft)					SECTION	WEIGHT (lb/ft)
6'-0" AND LESS	1.900"	2.72	1.875" x 1.625"	1.85	2.375"	3.65	1.66"	2.27	1.625" x 1.25"	1.35
OVER 6'-0" TO 8'-0" Max	2.375"	3.65	2.25" x 1.70"	2.78	2.875"	5.80	1.66"	2.27	1.625" x 1.25"	1.35

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CHAIN LINK FENCE**

NO SCALE

RSP A85 DATED JULY 18, 2014 SUPERSEDES STANDARD PLAN A85  
DATED MAY 20, 2011 - PAGE 112 OF THE STANDARD PLANS BOOK DATED 2010.

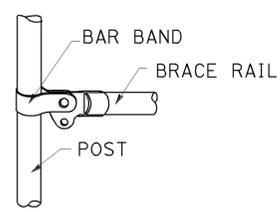
**REVISED STANDARD PLAN RSP A85**

2010 REVISED STANDARD PLAN RSP A85

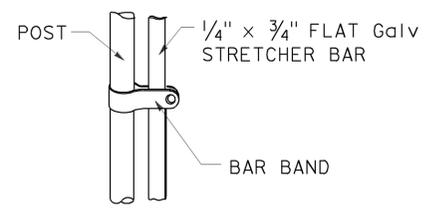
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	6	45

Glenn DeCou  
 REGISTERED CIVIL ENGINEER  
 October 19, 2012  
 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.

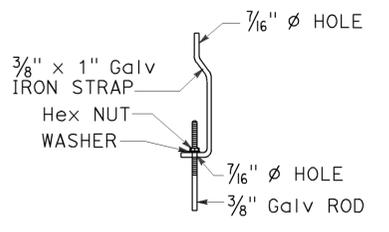
REGISTERED PROFESSIONAL ENGINEER  
 Glenn DeCou  
 No. C34547  
 Exp. 9-30-13  
 CIVIL  
 STATE OF CALIFORNIA



**BRACE RAIL**



**STRETCHER BAR**

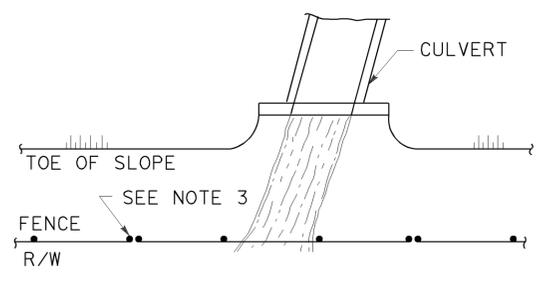


**TRUSS TIGHTENER**

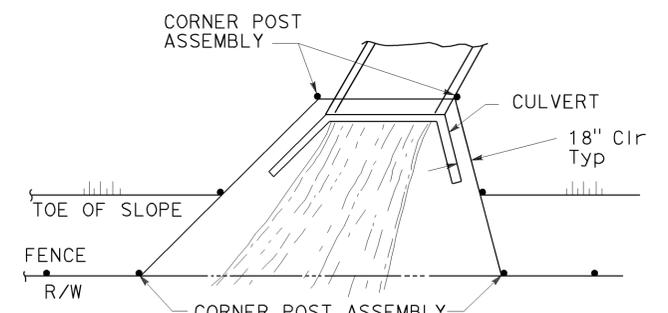
**NOTES:**

1. All material for abutment connection to be galvanized.
2. The chain link fabric shall be replaced by barbed wire strands at 12" maximum centers between the double posts.
3. When the width of the culvert makes it necessary to anchor a post to the top of the culvert, a cast iron shoe or other device approved by the Engineer shall be used.
4. Fencing over stream and around headwall may also use Barbed Wire or Wire Mesh fencing with either wood post or steel post installation.
5. See Standard Plan A85 for Chain Link fence dimensions. See Standard Plan A86 for Barbed Wire and Wire Mesh fence dimensions and for wood post and steel post installation.

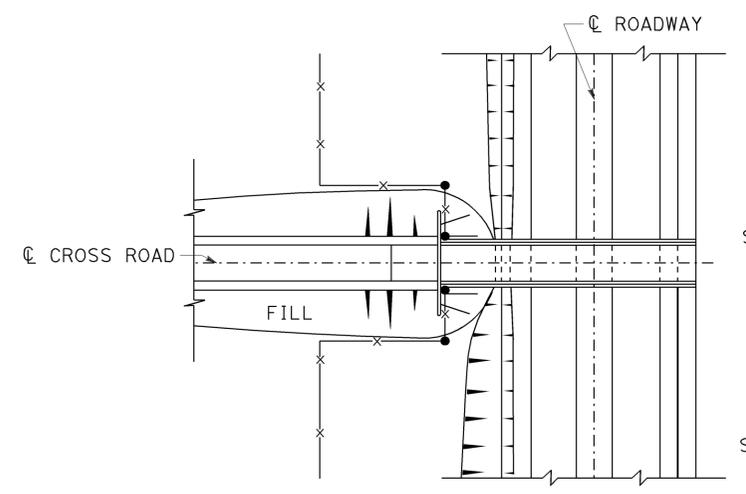
TO ACCOMPANY PLANS DATED 03-30-15



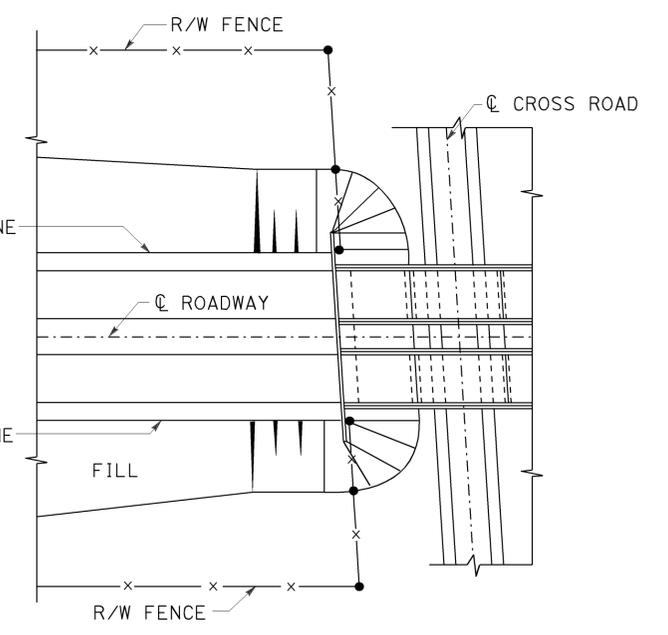
**PLAN**



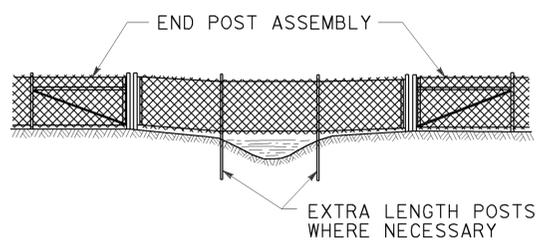
**PLAN**



**PLAN OF ROADWAY - OVERCROSSING**

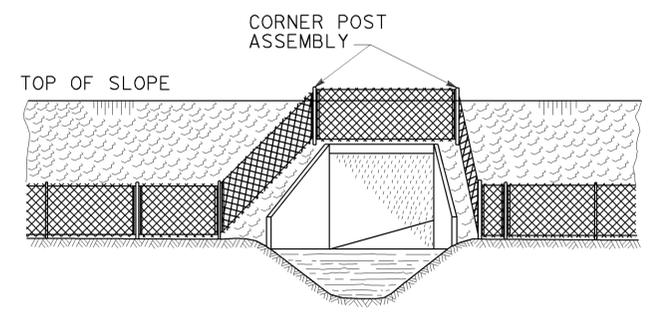


**PLAN OF ROADWAY - UNDERCROSSING**



**ELEVATION**

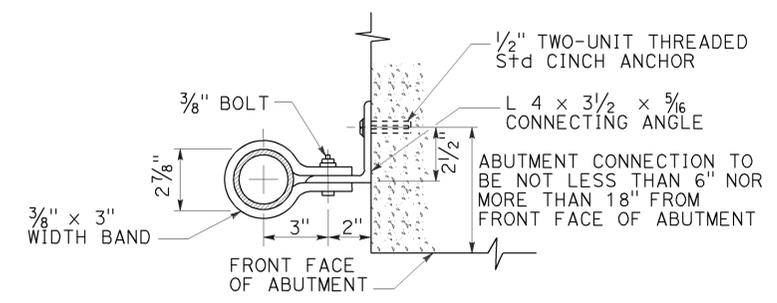
**INSTALLATION OVER STREAM**



**ELEVATION**

**INSTALLATION AROUND HEADWALL**

See Note 4



**ABUTMENT CONNECTION**

**TYPICAL INSTALLATION AT BRIDGES**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CHAIN LINK FENCE DETAILS**

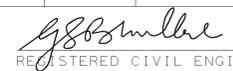
NO SCALE

RSP A85B DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A85B DATED MAY 20, 2011 - PAGE 114 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A85B**

2010 REVISED STANDARD PLAN RSP A85B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	7	45

  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 03-30-15

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING							
SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	Z **		
					TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

\* - For other offsets, use the following merging taper length formula for L:  
 For speed of 40 mph or less,  $L = WS^2/60$   
 For speed of 45 mph or more,  $L = WS$

Where: L = Taper length in feet  
 W = Width of offset in feet  
 S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING				
SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
		ft	ft	ft
mph	ft	ft	ft	ft
20	115	116	120	126
25	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

\* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph  
 \*\* - Longitudinal buffer space or flagger station spacing  
 \*\*\* - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING			
ROAD TYPE	DISTANCE BETWEEN SIGNS *		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

\* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommended distances.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM TABLES  
 FOR LANE AND RAMP CLOSURES**  
 NO SCALE

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

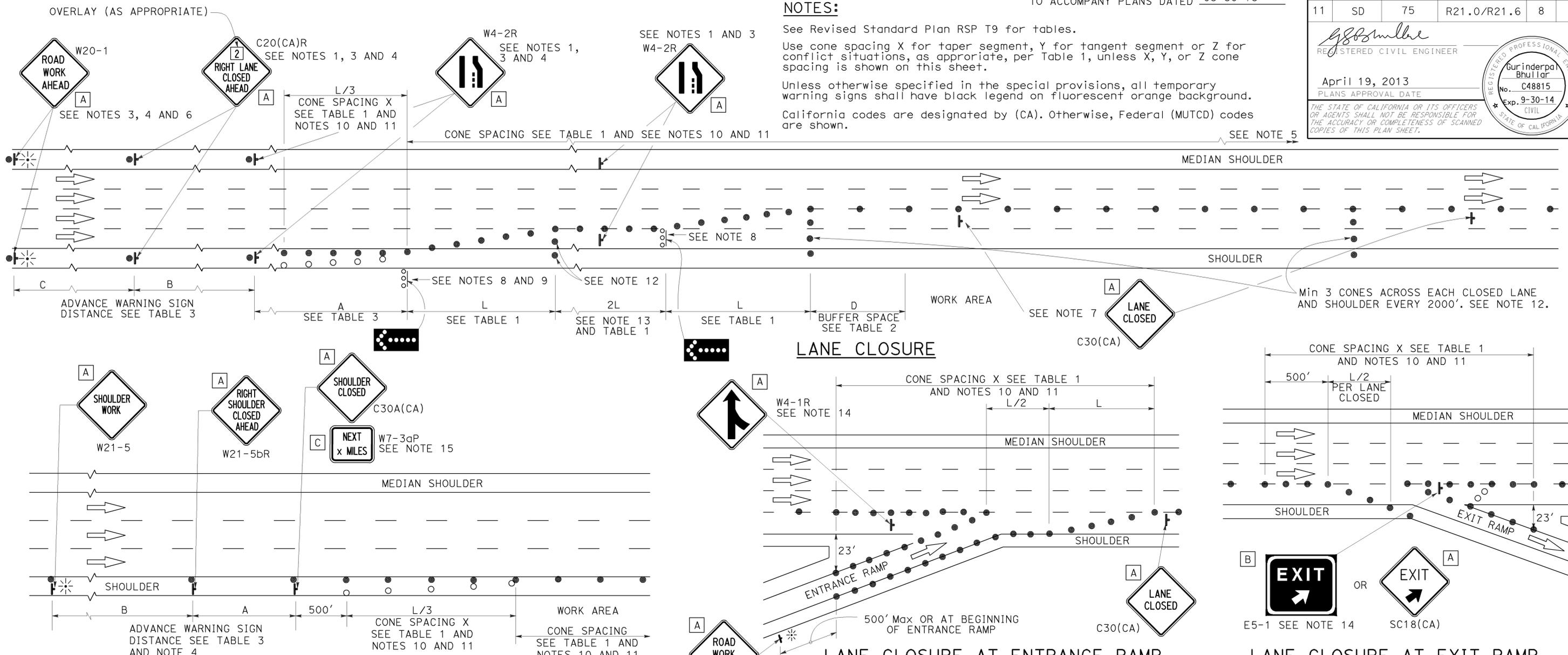
**REVISED STANDARD PLAN RSP T9**

2010 REVISED STANDARD PLAN RSP T9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	8	45

REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 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.

REGISTERED PROFESSIONAL ENGINEER  
 Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA



**NOTES:**

See Revised Standard Plan RSP T9 for tables.  
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.  
 Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.  
 California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

**NOTES:**

- Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
- Duplicate sign installations are not required:
  - On opposite shoulder if at least one-half of the available lanes remain open to traffic.
  - In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
- Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.

**SHOULDER CLOSURE**

- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA) sign for the first advance warning sign.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

**LANE CLOSURE AT ENTRANCE RAMP**

- Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
- Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
- A W7-3aP "NEXT \_\_\_\_\_ MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

**LEGEND**

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY TRAFFIC CONTROL SIGN
- ⬢ FLASHING ARROW SIGN (FAS)
- ▬ FAS SUPPORT OR TRAILER
- ⚡ PORTABLE FLASHING BEACON

**SIGN PANEL SIZE (Min)**

A	48" x 48"
B	72" x 60"
C	36" x 30"

**TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS**

NO SCALE  
 RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10

# TYPICAL RAMP CLOSURES

## SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 48" x 30"
- C 36" x 36"
- D 48" x 36"

## LEGEND

- TRAFFIC CONE
- † TEMPORARY TRAFFIC CONTROL SIGN
- ‡ BARRICADES
- ⚡ PORTABLE FLASHING BEACON

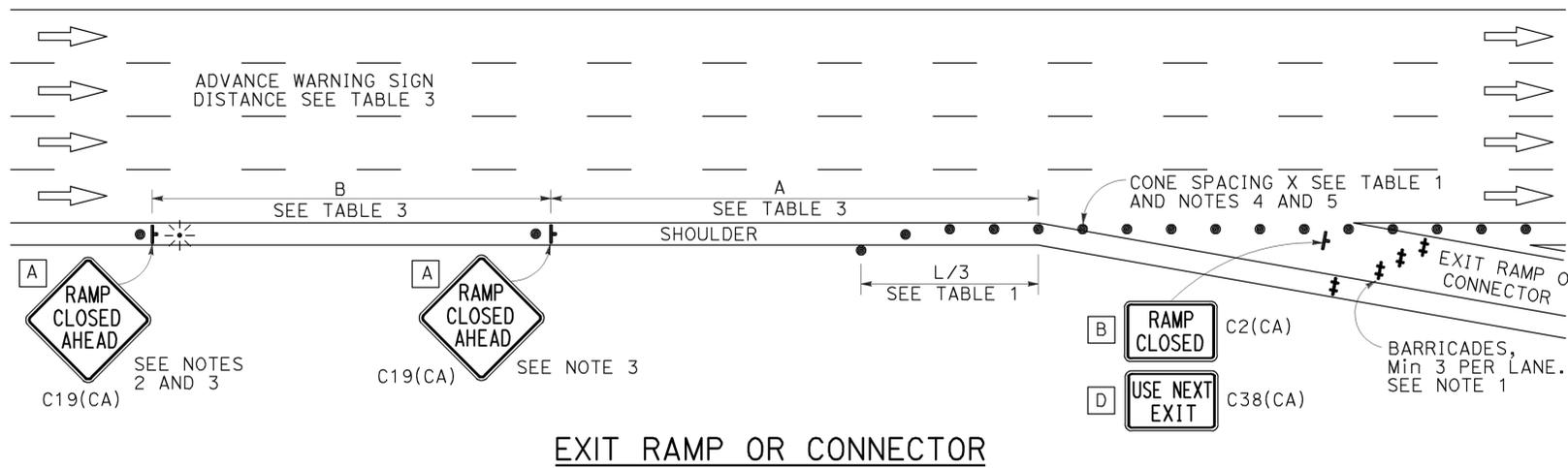
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	9	45

*Gurinderpal Bhullar*  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

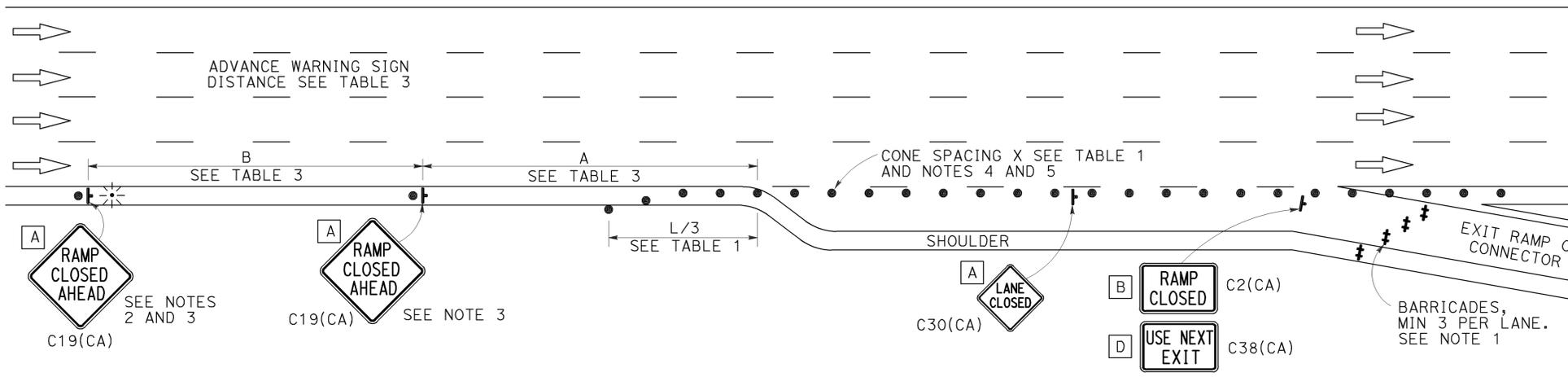
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TO ACCOMPANY PLANS DATED 03-30-15

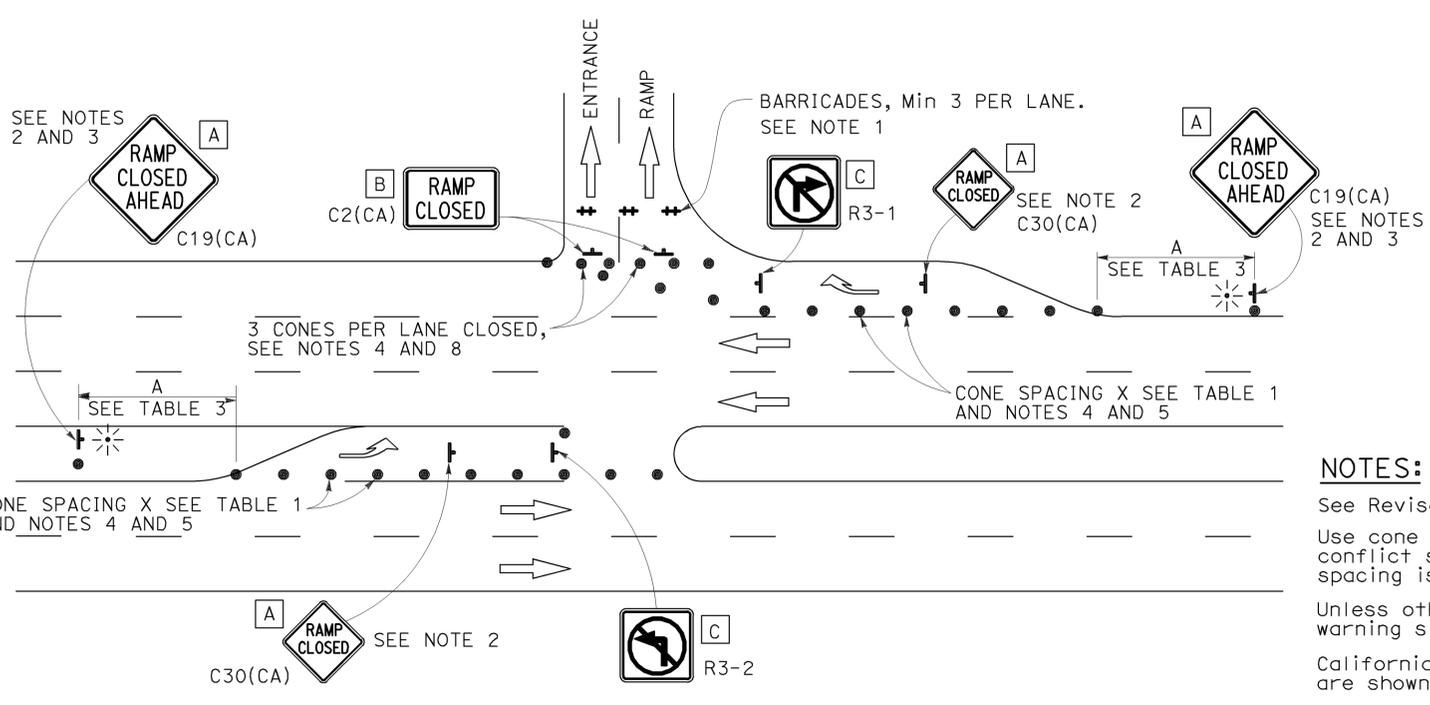
2010 REVISED STANDARD PLAN RSP T14



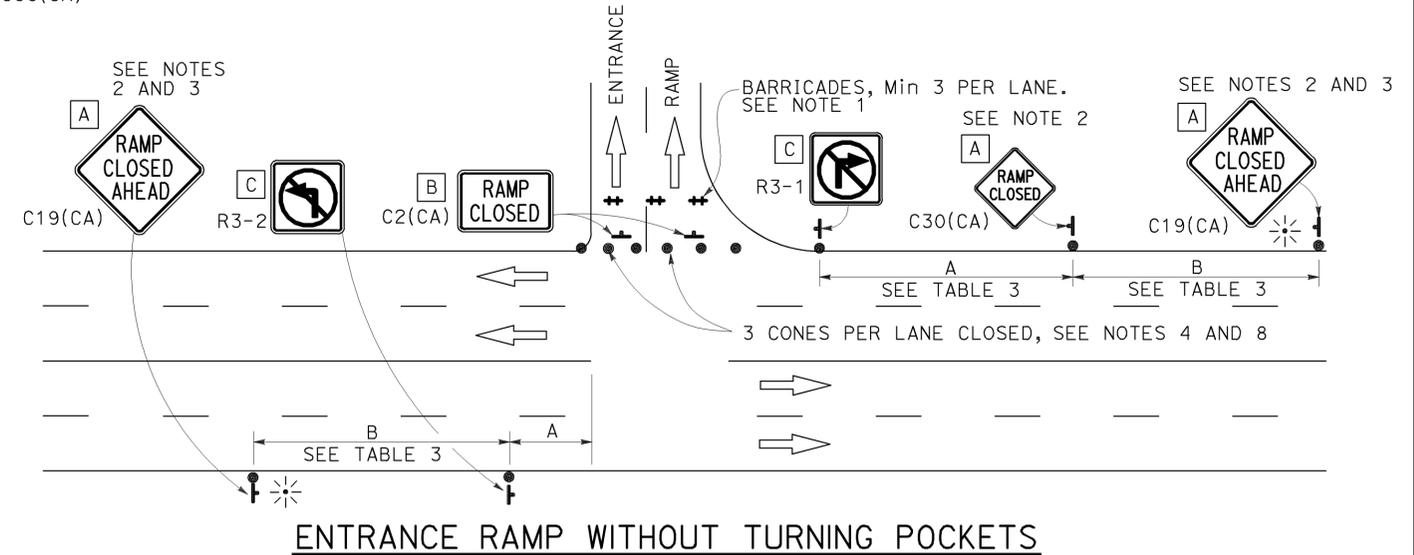
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

1. See Revised Standard Plan RSP T9 for tables.
2. Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
3. Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
4. California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

## NOTES:

1. Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
2. In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed by the Engineer, on all guide signs that refer to the closed ramp. The letter size on the overlay shall be the same as the guide sign.
3. Each advance C19(CA) "RAMP CLOSED AHEAD" sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. A flashing beacon shall be placed on top of the first C19(CA) sign during hours of darkness.
4. All cones used for ramp closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime ramp closures only.
6. At least one person shall be assigned to provide full time maintenance of traffic control devices, unless otherwise directed by the Engineer.
7. The existing "EXIT" signs shall be covered during ramp closures.
8. A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

### TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURE

NO SCALE

RSP T14 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T14 DATED MAY 20, 2011 - PAGE 242 OF THE STANDARD PLANS BOOK DATED 2010.

## REVISED STANDARD PLAN RSP T14

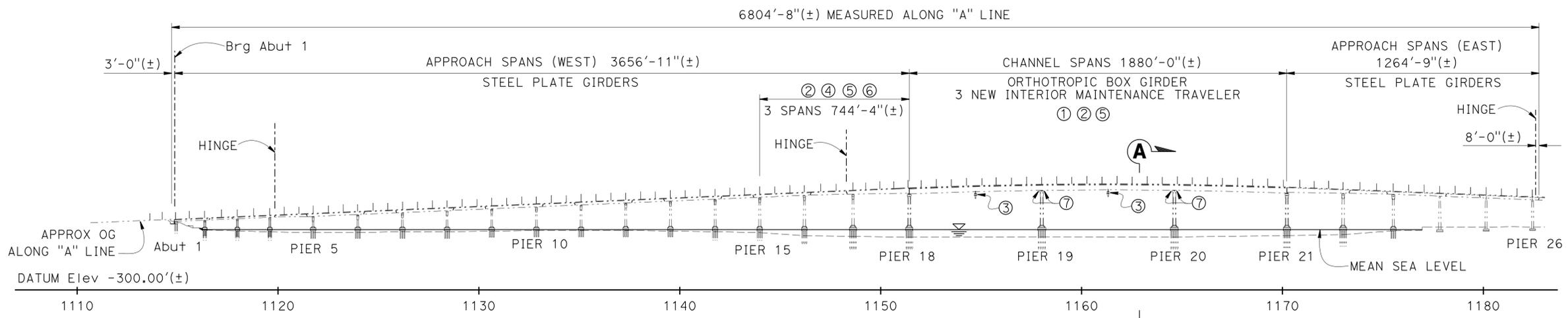
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	10	45

*Muthanna S. Omran* 12-19-14  
 REGISTERED CIVIL ENGINEER DATE

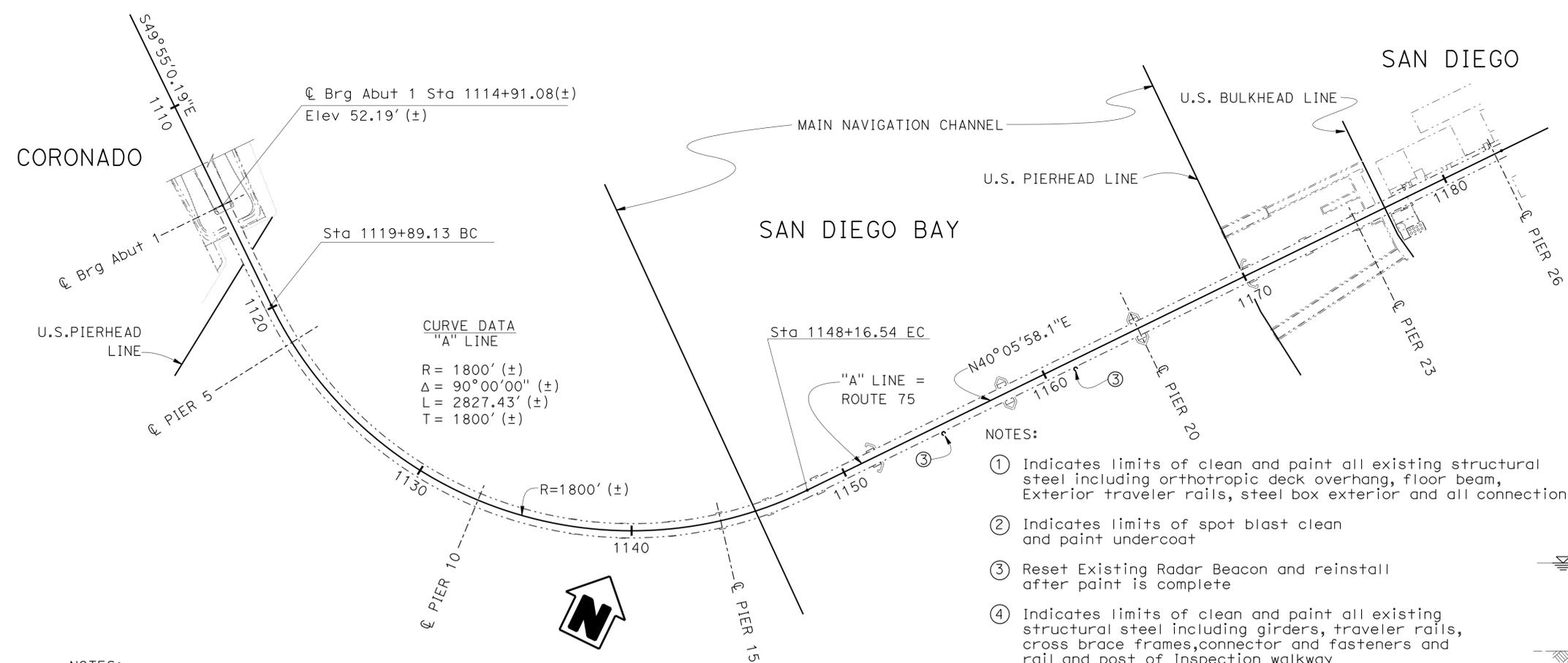
03-30-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 MUTHANNA OMRAN  
 No. 61637  
 Exp. 06-30-15  
 CIVIL  
 STATE OF CALIFORNIA

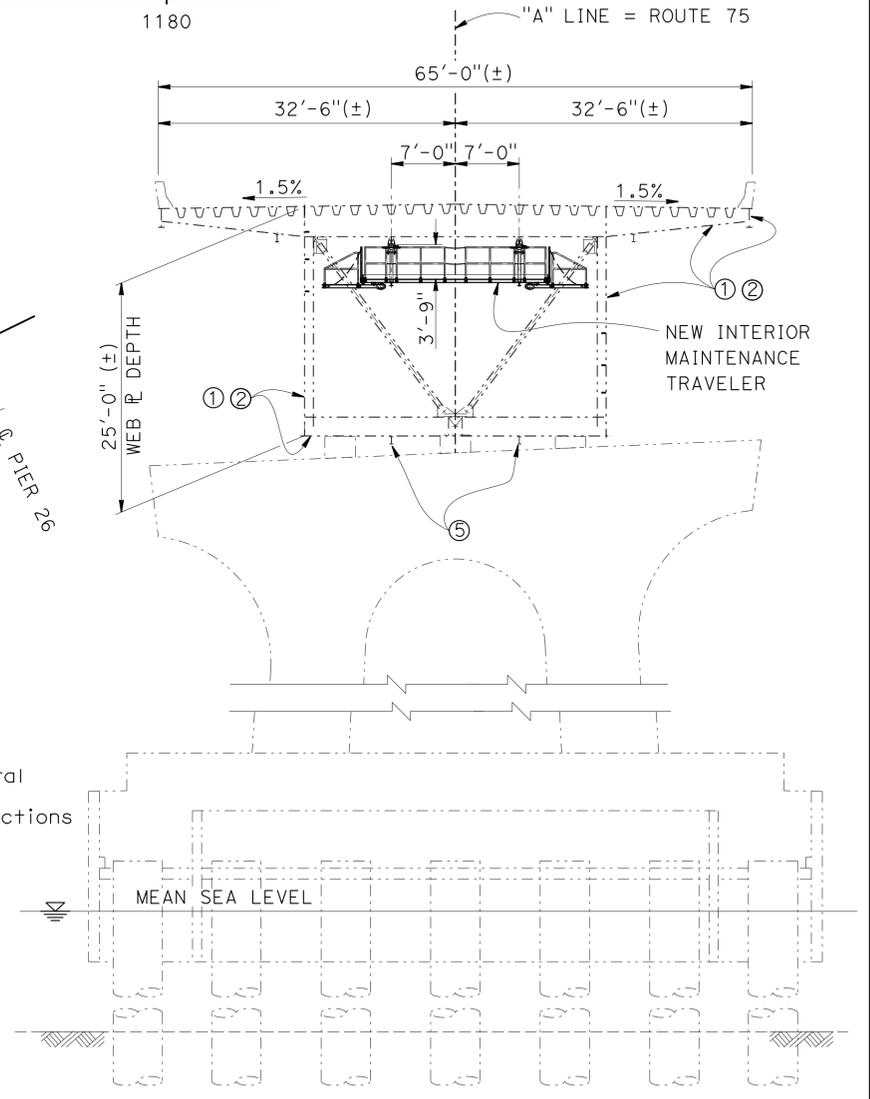
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**DEVELOPED ELEVATION**  
 1" = 300'



**PLAN**  
 1" = 300'



**SECTION A-A**  
 1" = 10'

- NOTES:
- ① Indicates limits of clean and paint all existing structural steel including orthotropic deck overhang, floor beam, Exterior traveler rails, steel box exterior and all connections
  - ② Indicates limits of spot blast clean and paint undercoat
  - ③ Reset Existing Radar Beacon and reinstall after paint is complete
  - ④ Indicates limits of clean and paint all existing structural steel including girders, traveler rails, cross brace frames, connector and fasteners and rail and post of Inspection walkway
  - ⑤ Indicates limits of 100% blast and zinc undercoat existing Exterior traveler rails
  - ⑥ Indicates limits of 100% blast, PWB coating for Existing Inspection Walkway Expanded metal Grating
  - ⑦ New Ladder see "ST" sheets

- NOTES:
- THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL
  - For "GENERAL NOTES" and "QUANTITIES" see "INDEX TO PLANS" sheet

*Mohamed Kaddoura*  
 XX-xx-2014 Mohamed Kaddoura  
 DESIGN ENGINEER

DESIGN	BY Muthanna Omran	CHECKED Ghiath Taleb-Agha
DETAILS	BY Min Yu	CHECKED Ghiath Taleb-Agha
QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omran

LOAD & RESISTANCE FACTOR DESIGN	BY N/A	CHECKED N/A
LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	BY Theresa Nedwick	PLANS AND SPECS COMPARED Theresa Nedwick

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 16**

BRIDGE NO.	57-0857
POST MILE	20.49

**SAN DIEGO-CORONADO BAY BRIDGE**  
**PAINTING AND MAINTENANCE TRAVELERS**  
**GENERAL PLAN**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	11	45

Muthanna S. Omeran 12-19-14  
REGISTERED CIVIL ENGINEER DATE

03-30-15  
PLANS APPROVAL DATE

MUTHANNA OMRAN  
No. 61637  
Exp. 06-30-15  
CIVIL  
STATE OF CALIFORNIA

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**INDEX TO PLANS**

SHEET NO.	TITLE
1	GENERAL PLAN
2	INDEX TO PLANS
3	SPAN 15
4	SPAN 16
5	SPAN 17
6	SPAN 18 ELEVATION
7	SPAN 19 ELEVATION
8	SPAN 20 ELEVATION
9	EXISTING PLATFORM-PIERS 18, 21
10	EXISTING PLATFORM-PIERS 19, 20
11	SPAN 18 GRIDER LAYOUT
12	SPAN 19 GRIDER LAYOUT
13	SPAN 20 GRIDER LAYOUT
14	TYPICAL CROSS SECTION
15	TRAVELER ELEVATION
16	TRAVELER PLAN
17	TRAVELER DETAILS NO. 1
18	TRAVELER DETAILS NO. 2
19	TRAVELER DETAILS NO. 3
20	TRAVELER RAILING DETAILS NO. 1
21	TRAVELER RAILING DETAILS NO. 2
22	(ST-1) LEGEND
23	(ST1-1) EXISTING PIER ELEVATIONS
24	(ST1-2) REMOVAL & LANDING PLANS
25	(ST1-3) EXISTING PIER 19 & 20 LANDING PLANS
26	(ST1-4) LADDER DETAILS
27	(ST1-5) MISCELLANEOUS FRAMING DETAILS NO. 1
28	(ST1-6) LANDING FRAMING DETAILS NO. 2
29	(M-0) SITE PLAN
30	(M-1) MECHANICAL LEGEND
31	(M-2) CHANNEL SPAN PIER 18 TO 19
32	(M-3) CHANNEL SPAN PIER 19 TO 20
33	(M-4) CHANNEL SPAN PIER 20 TO 21
34	(M-5) TRAVELER PIPING PLAN
35	(M-6) CONTROL DIAGRAM
36	(M-7) MECHANICAL DETAILS

**GENERAL NOTES**

DESIGN & LOADING:

CALTRANS DESIGN AND INSPECTION REQUIREMENTS FOR TRAVELLING SCAFFOLDS,  
Rev. May 7, 1991

DESIGN LOADING OF NEW INTERIOR TRAVELERS:

Uniform Dead Load = 10 PSF  
Uniform Live Load = 25 PSF  
Concentrated Force = 250 Lb for Traveler's Decking  
Moving Force = 1000 Lb for Traveler Main Supporting Elements

STRUCTURAL STEEL:

ELEMENT	TYPE
Plates	ASTM A36
Structural Shapes	ASTM A36
Pipe	ASTM A106 Type S Grade B
Bolts, Nuts and Washers	ASTM A325
Hollow Structural Sections	ASTM A500 Grade B

Spot Blast, Clean and Paint Under Coat	50,349 SF
--	-----------

**QUANTITIES**

LEAD COMPLIANCE PLAN	LUMP	SUM
WORK AREA MONITORING (BRIDGE)	LUMP	SUM
RESET BEACON	2	EA
MAINTENANCE TRAVELER	3	EA
FIBERGLASS REINFORCED GRATING	98	SQFT
CLEAN STRUCTURAL STEEL (EXISTING BRIDGE)	LUMP	SUM
PAINT STRUCTURAL STEEL (EXISTING BRIDGE)	LUMP	SUM
CLEAN AND PAINT STRUCTURAL STEEL (MAINTENANCE TRAVELER)	LUMP	SUM
CLEAN AND PAINT STRUCTURAL STEEL (EXISTING TRAVELER RAIL)	LUMP	SUM
CLEAN AND PAINT STRUCTURAL STEEL (EXISTING WALKWAY GRATING)	LUMP	SUM
SPOT BLAST CLEAN AND PAINT UNDERCOAT	50,349	SQFT
MISCELLANEOUS METAL (BRIDGE)	3,497	LB
MECHANICAL WORK	LUMP	SUM

**STANDARD PLANS 2010**

A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)



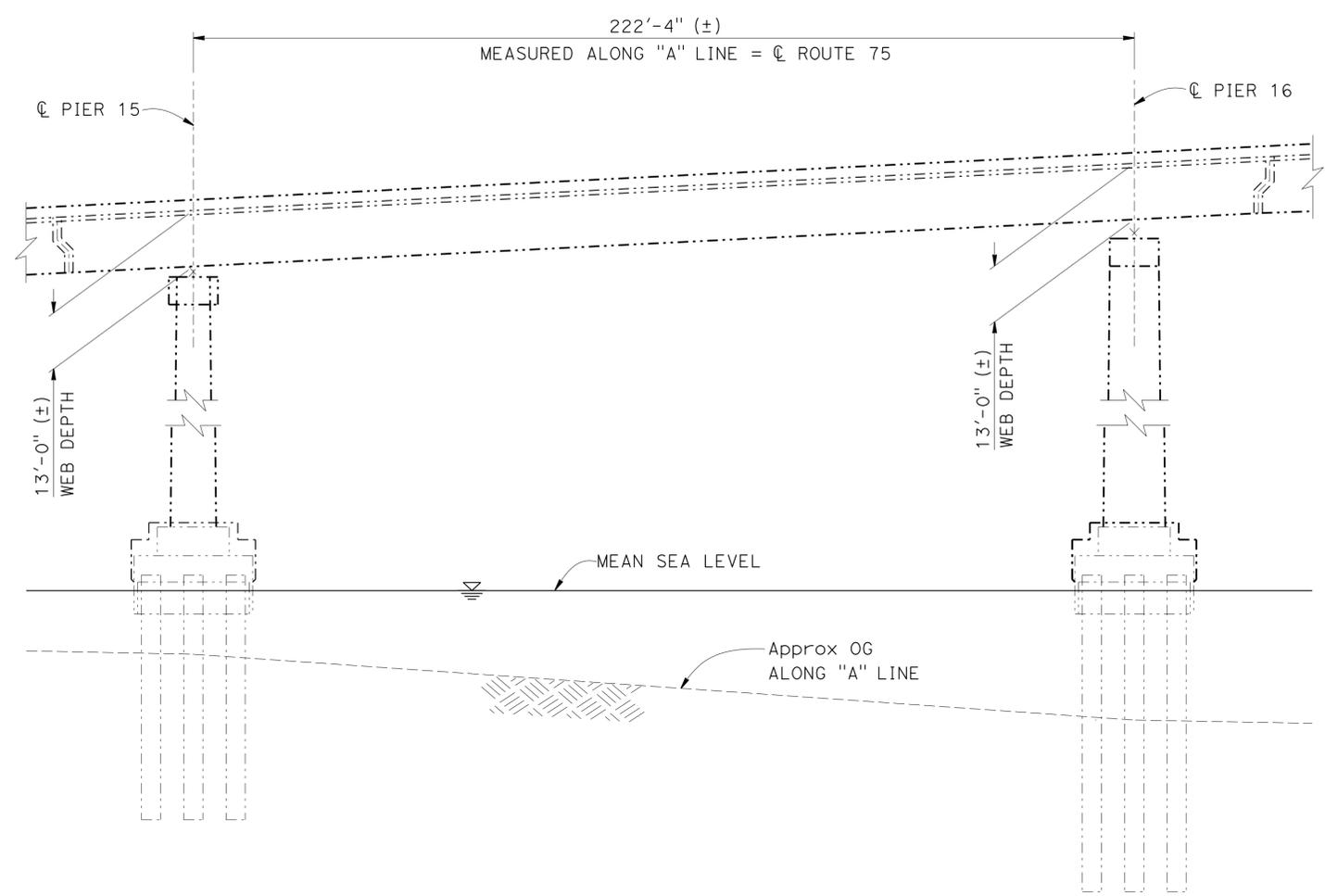
DESIGN BY Muthanna Omeran CHECKED Ghiath Taleb-Agha			STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN		BRIDGE NO. 57-0857		SAN DIEGO-CORONADO BAY BRIDGE PAINTING AND MAINTENANCE TRAVELERS					
DETAILS BY Min Yu CHECKED Ghiath Taleb-Agha			DEPARTMENT OF TRANSPORTATION		DESIGN BRANCH 16		POST MILE 20.49		INDEX TO PLANS					
QUANTITIES BY Ghiath Taleb-Agha CHECKED Muthanna Omeran			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3617 PROJECT NUMBER & PHASE: 11120000701		CONTRACT NO.: 11-409304		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET 2 OF 36	

TIME PLOTTED => 08:54  
DATE PLOTTED => 01-APR-2015  
USERNAME => s127400

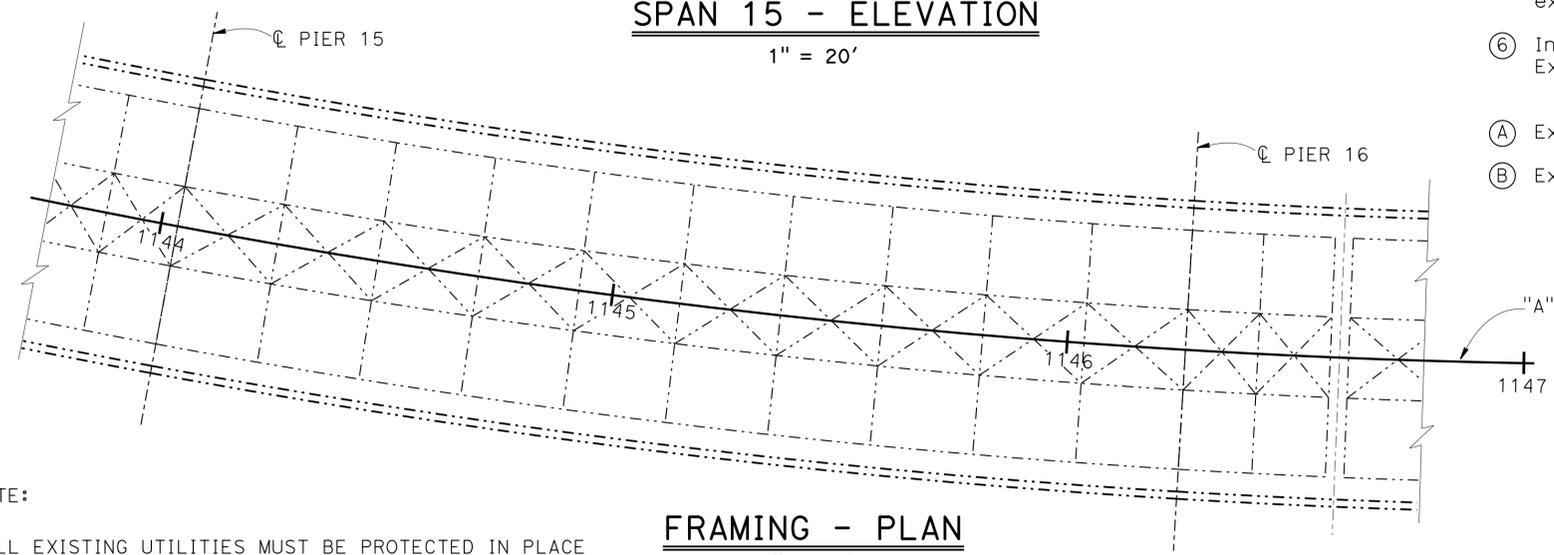
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	12	45

Muthanna S. Omrان 12-19-14  
 REGISTERED CIVIL ENGINEER DATE  
 03-30-15  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 MUTHANNA OMRAN  
 No. 61637  
 Exp. 06-30-15  
 CIVIL  
 STATE OF CALIFORNIA

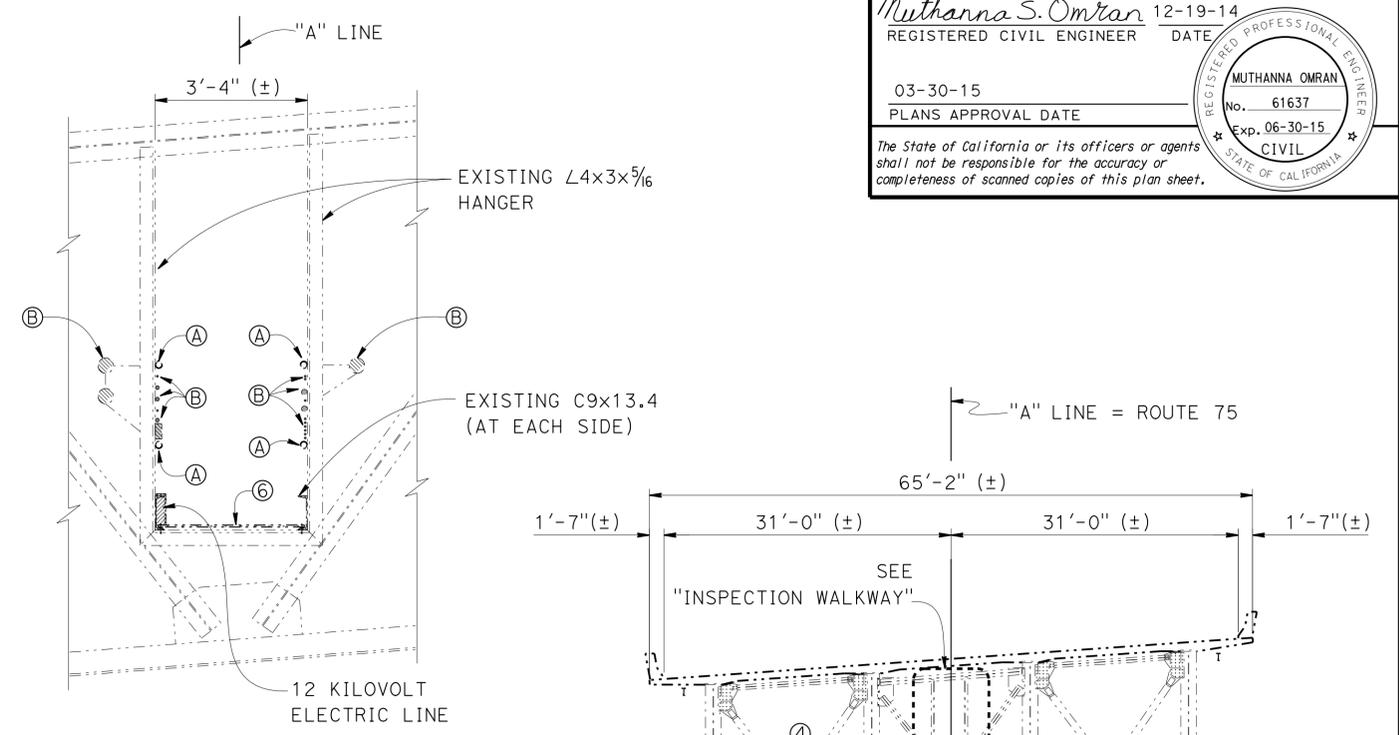


**SPAN 15 - ELEVATION**  
1" = 20'



NOTE:  
ALL EXISTING UTILITIES MUST BE PROTECTED IN PLACE

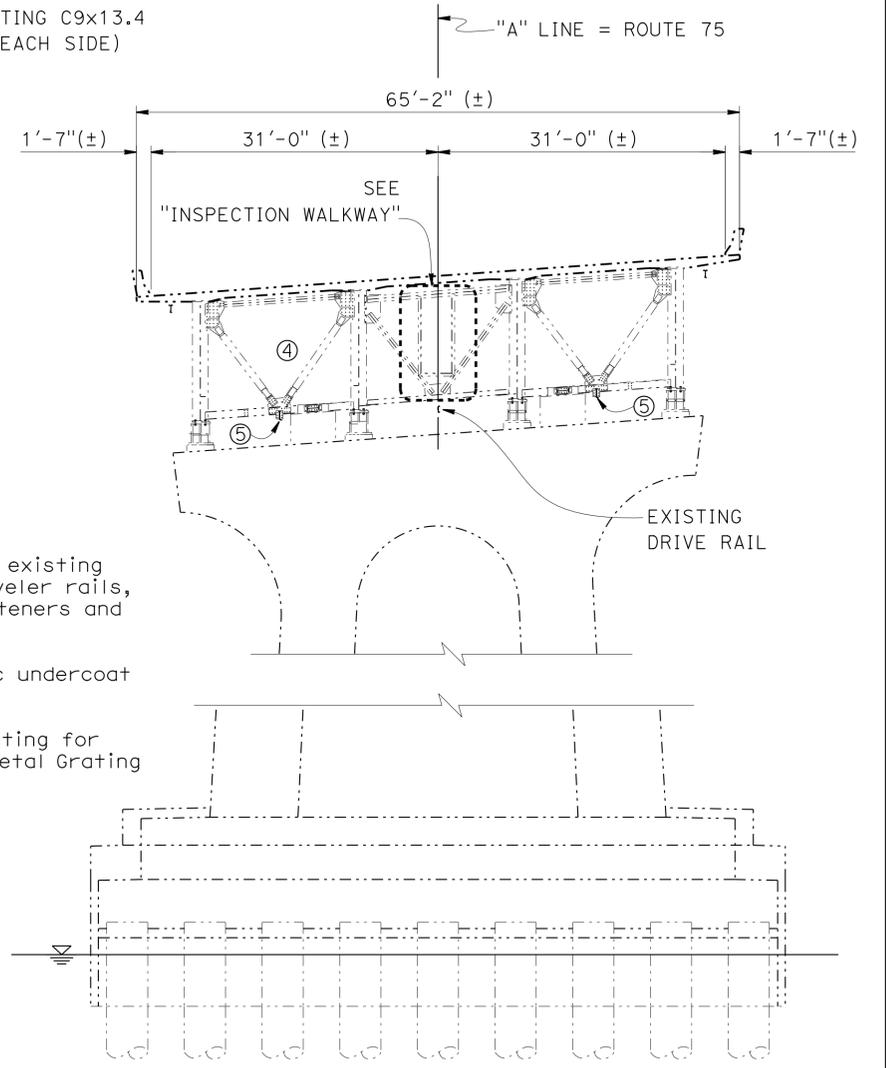
**FRAMING - PLAN**  
1" = 20'



**INSPECTION WALKWAY**  
1/2" = 1'-0"

NOTES:

- ④ Indicates limits of clean and paint all existing structural steel including girders, traveler rails, cross brace frames, connector and fasteners and rail and post of Inspection walkway
- ⑤ Indicates limits of 100% blast and zinc undercoat existing traveler rails
- ⑥ Indicates limits of 100% blast, PWB coating for Existing Inspection Walkway Expanded metal Grating
- Ⓐ Existing railing
- Ⓑ Existing Utilities



**SPAN 15 - TYPICAL SECTION**  
1" = 10'

DESIGN	BY Muthanna Omrان	CHECKED Ghiath Taleb-Agha
DETAILS	BY Min Yu	CHECKED Ghiath Taleb-Agha
QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omrان

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 16**

BRIDGE NO.	57-0857
POST MILE	20.49

**SAN DIEGO-CORONADO BAY BRIDGE**  
**PAINTING AND MAINTENANCE TRAVELERS**  
**SPAN 15**



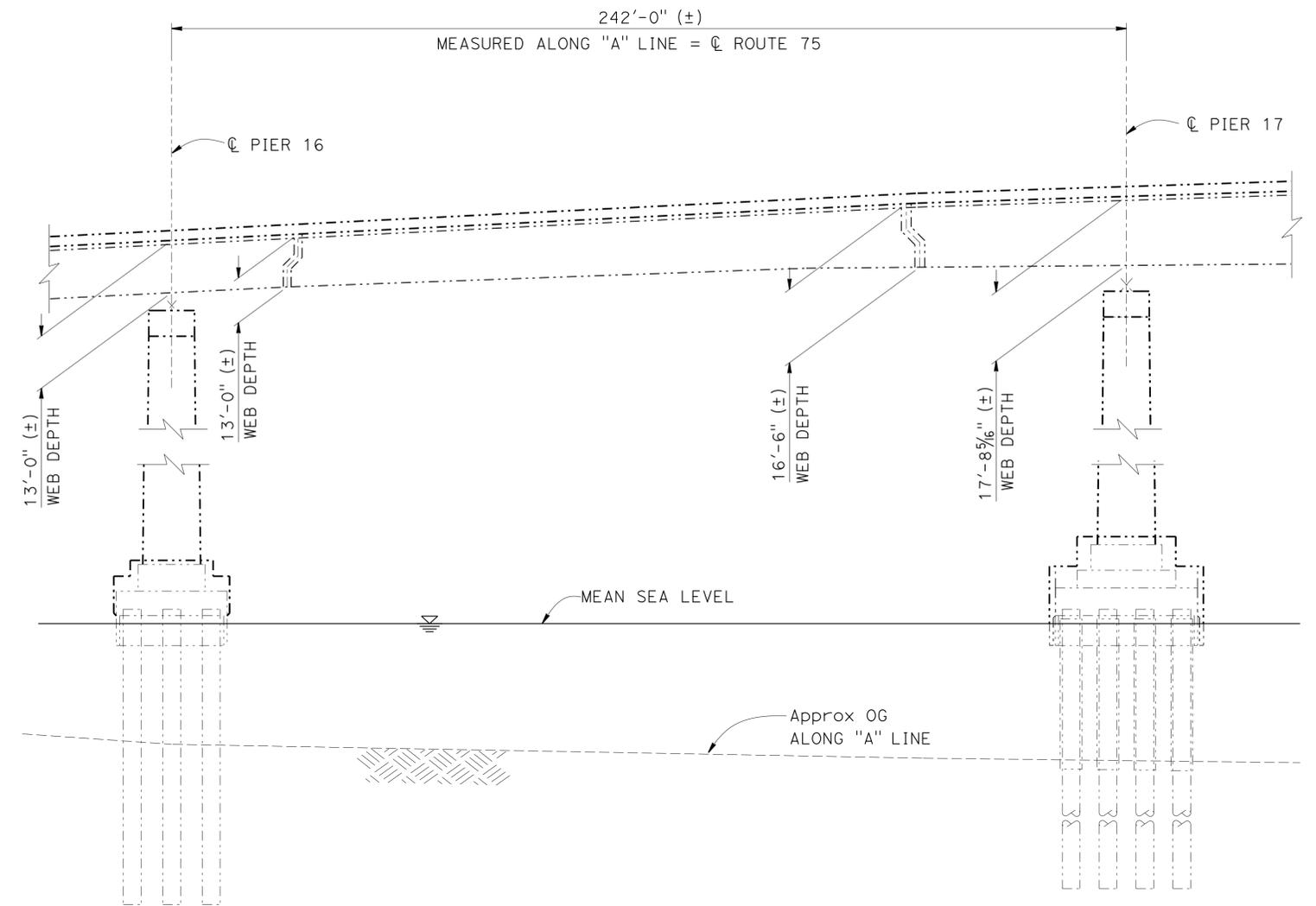
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11	SD	75	R21.0/R21.6	13	45

*Muthanna S. Omeran* 12-19-14  
 REGISTERED CIVIL ENGINEER DATE

03-30-15  
 PLANS APPROVAL DATE

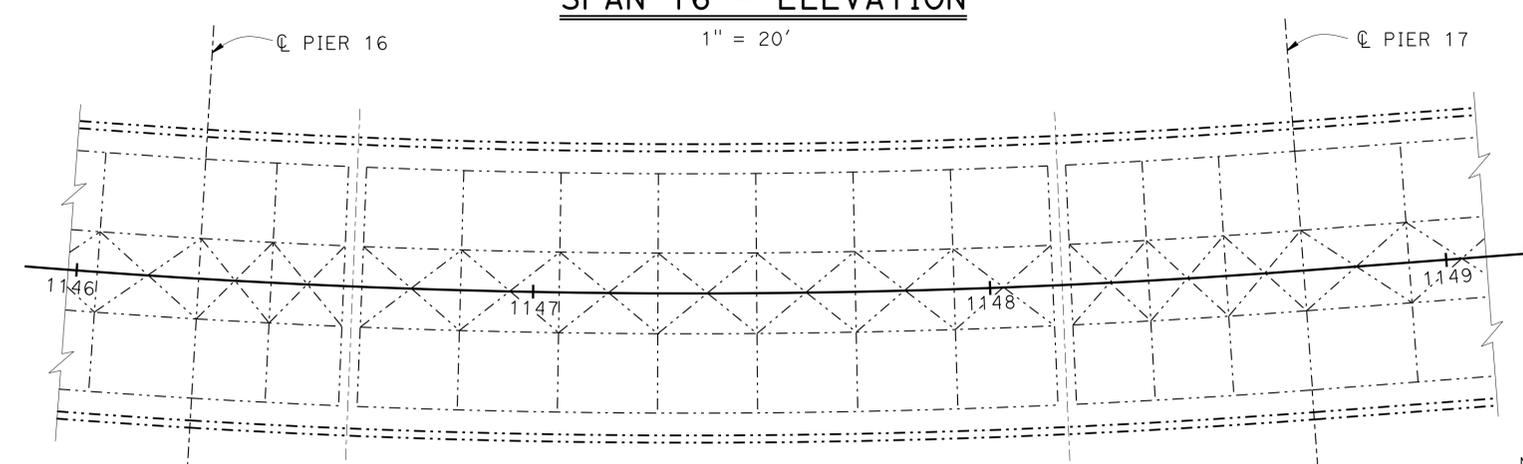
STATE OF CALIFORNIA REGISTERED PROFESSIONAL ENGINEER  
 MUTHANNA OMRAN  
 No. 61637  
 Exp. 06-30-15  
 CIVIL

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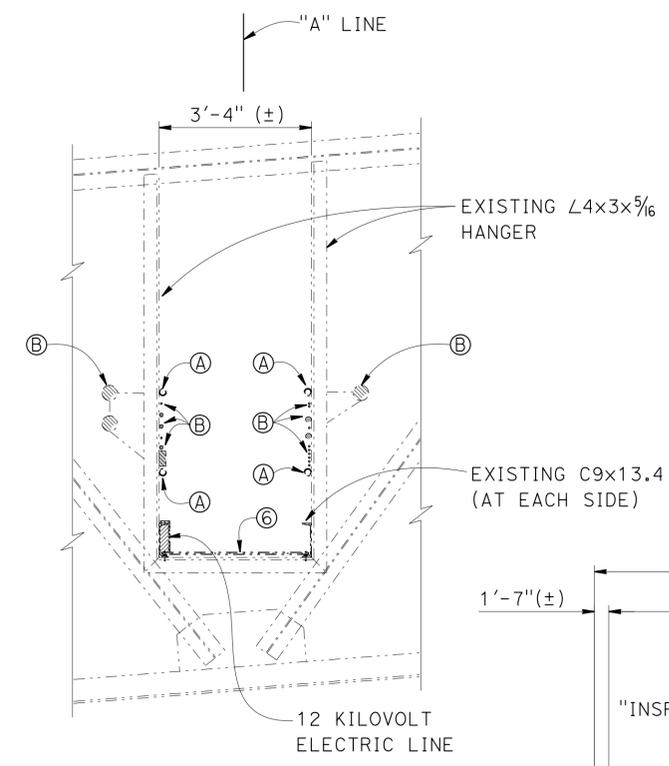


1146 1147 1148 1149

**SPAN 16 - ELEVATION**  
 1" = 20'



**FRAMING - PLAN**  
 1" = 20'



**INSPECTION WALKWAY**  
 1/2" = 1'-0"

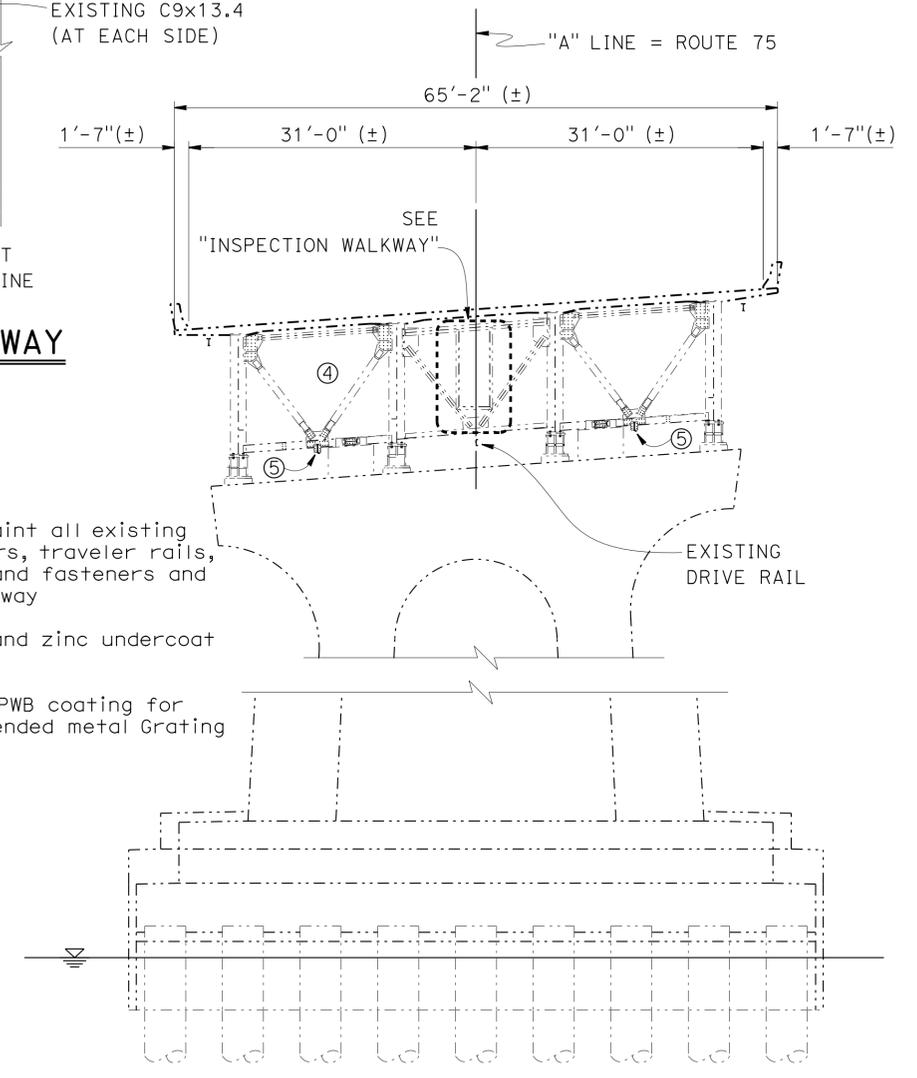
NOTES:

- ④ Indicates limits of clean and paint all existing structural steel including girders, traveler rails, cross brace frames, connector and fasteners and rail and post of inspection walkway
- ⑤ Indicates limits of 100% blast and zinc undercoat existing traveler rails
- ⑥ Indicates limits of 100% blast, PWB coating for Existing Inspection Walkway Expanded metal Grating
- Ⓐ Existing railing
- Ⓑ Existing Utilities

"A" LINE = ROUTE 75

NOTE:

ALL EXISTING UTILITIES MUST BE PROTECTED IN PLACE



**SPANS 16 - TYPICAL SECTION**  
 1" = 10'

DESIGN	BY Muthanna Omeran	CHECKED Ghiath Taleb-Agha
DETAILS	BY Min Yu	CHECKED Ghiath Taleb-Agha
QUANTITIES	BY Chiath Taleb-Agha	CHECKED Muthanna Omeran

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 16**

BRIDGE NO. 57-0857  
 POST MILE 20.49

**SAN DIEGO-CORONADO BAY BRIDGE**  
**PAINTING AND MAINTENANCE TRAVELERS**  
**SPAN 16**

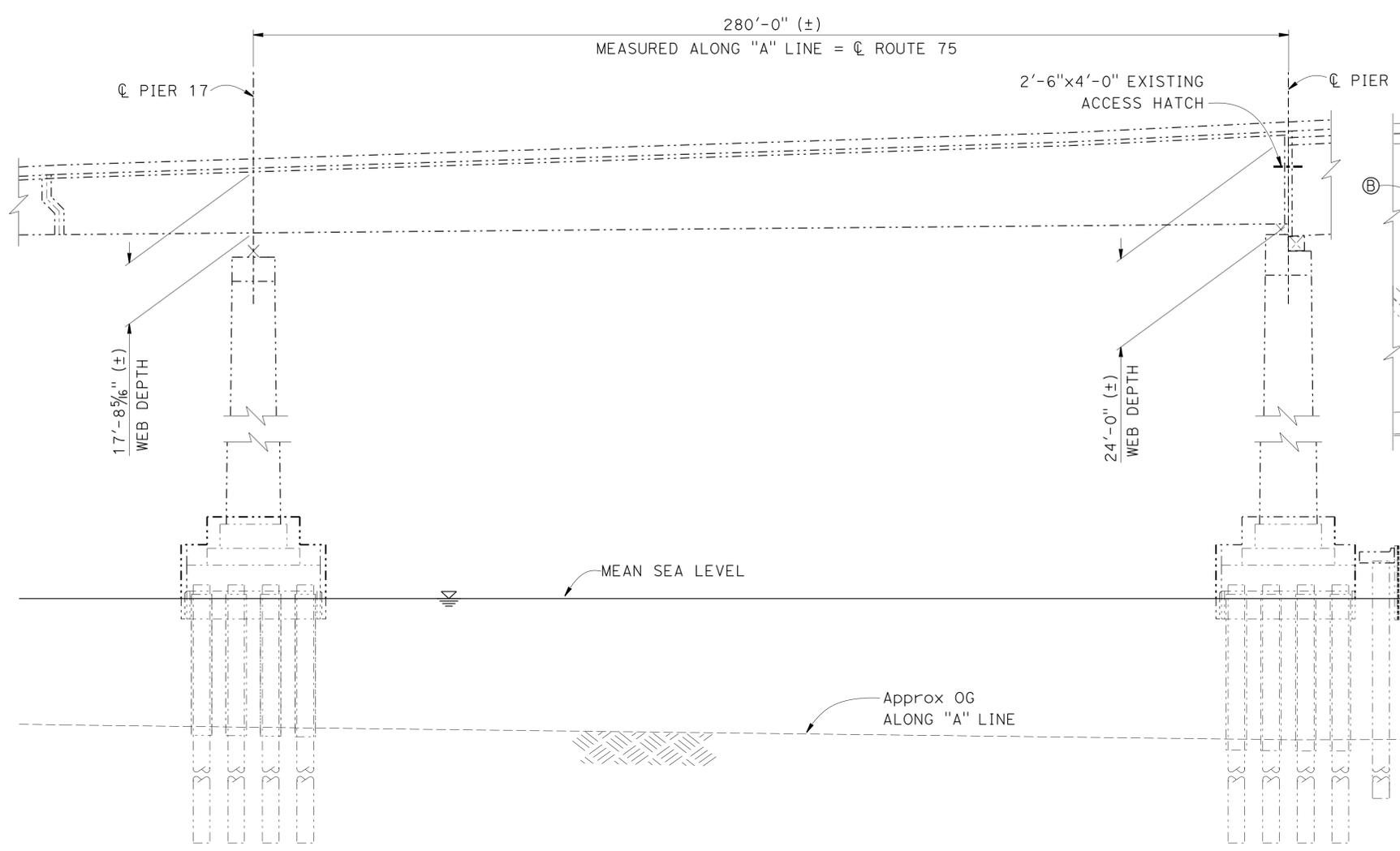
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	14	45

*Muthanna S. Omran* 12-19-14  
 REGISTERED CIVIL ENGINEER DATE

03-30-15  
 PLANS APPROVAL DATE

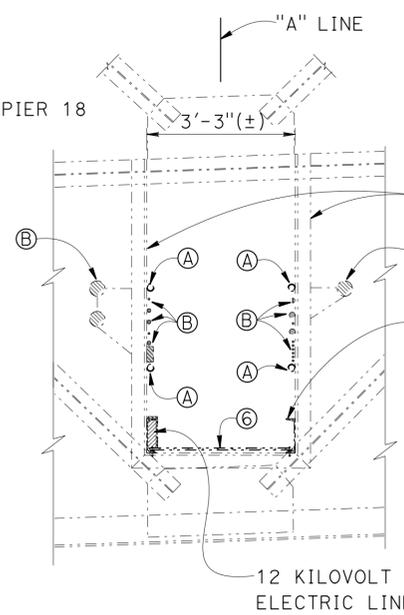
*MUTHANNA OMRAN*  
 No. 61637  
 Exp. 06-30-15  
 CIVIL  
 STATE OF CALIFORNIA

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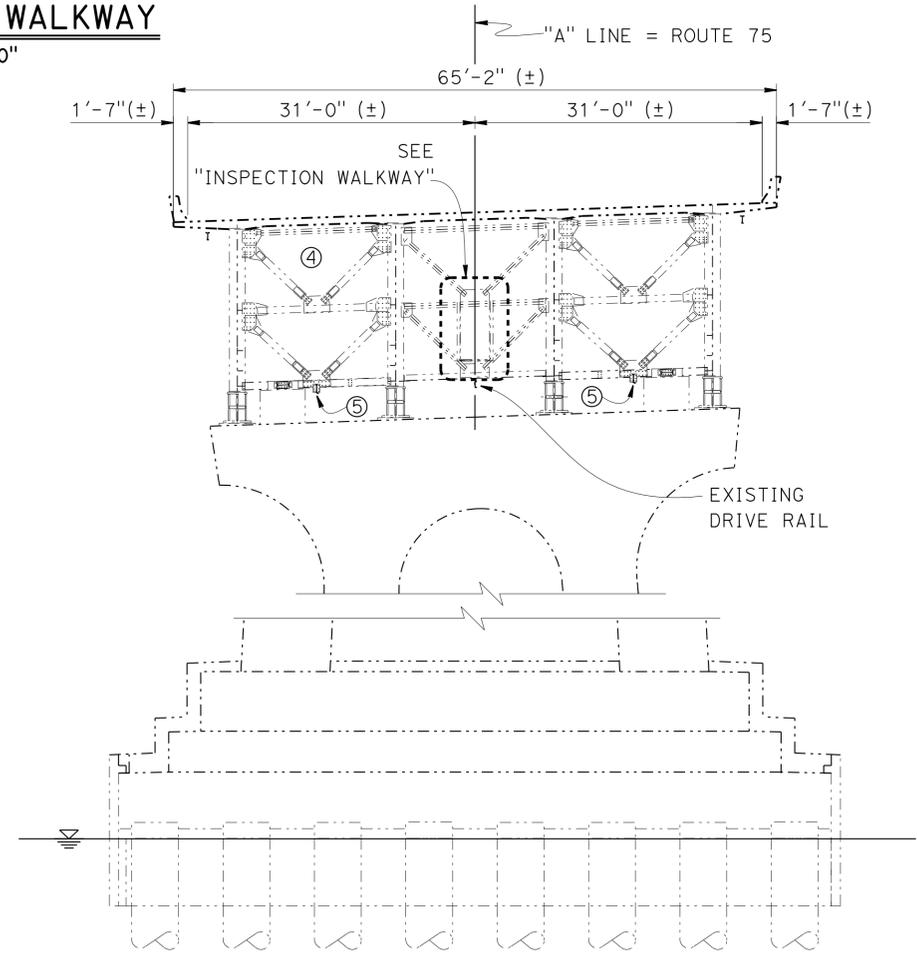
**SPAN 17 - ELEVATION**  
 1" = 20'

**FRAMING - PLAN**  
 1" = 20'



**INSPECTION WALKWAY**  
 1/2" = 1'-0"

- NOTES:
- ④ Indicates limits of clean and paint all existing structural steel including girders, traveler rails, cross brace frames, connector and fasteners and rail and post of inspection walkway
  - ⑤ Indicates limits of 100% blast and zinc undercoat existing traveler rails
  - ⑥ Indicates limits of 100% blast, PWB coating for Existing Inspection Walkway Expanded metal Grating
  - (A) Existing railing
  - (B) Existing Utilities



**SPAN 17 - TYPICAL SECTION**  
 1" = 10'

NOTE:  
 ALL EXISTING UTILITIES MUST BE PROTECTED IN PLACE  
 SUB-STATION ENCLOSURE AND EQUIPMENT MUST BE PROTECTED IN PLACE

DESIGN	BY Muthanna Omran	CHECKED Ghiath Taleb-Agha
DETAILS	BY Min Yu	CHECKED Ghiath Taleb-Agha
QUANTITIES	BY Chiath Taleb-Agha	CHECKED Muthanna Omran

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 16**

BRIDGE NO.	57-0857
POST MILE	20.49

**SAN DIEGO-CORONADO BAY BRIDGE**  
**PAINTING AND MAINTENANCE TRAVELERS**  
**SPAN 17**

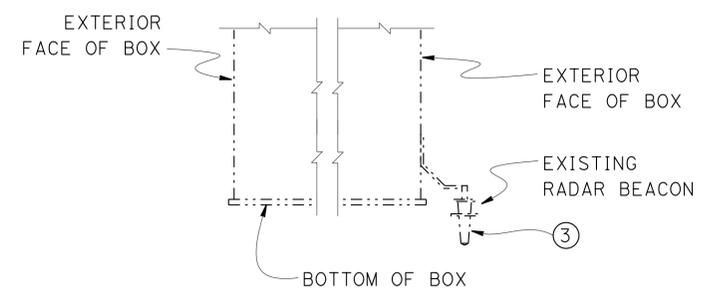
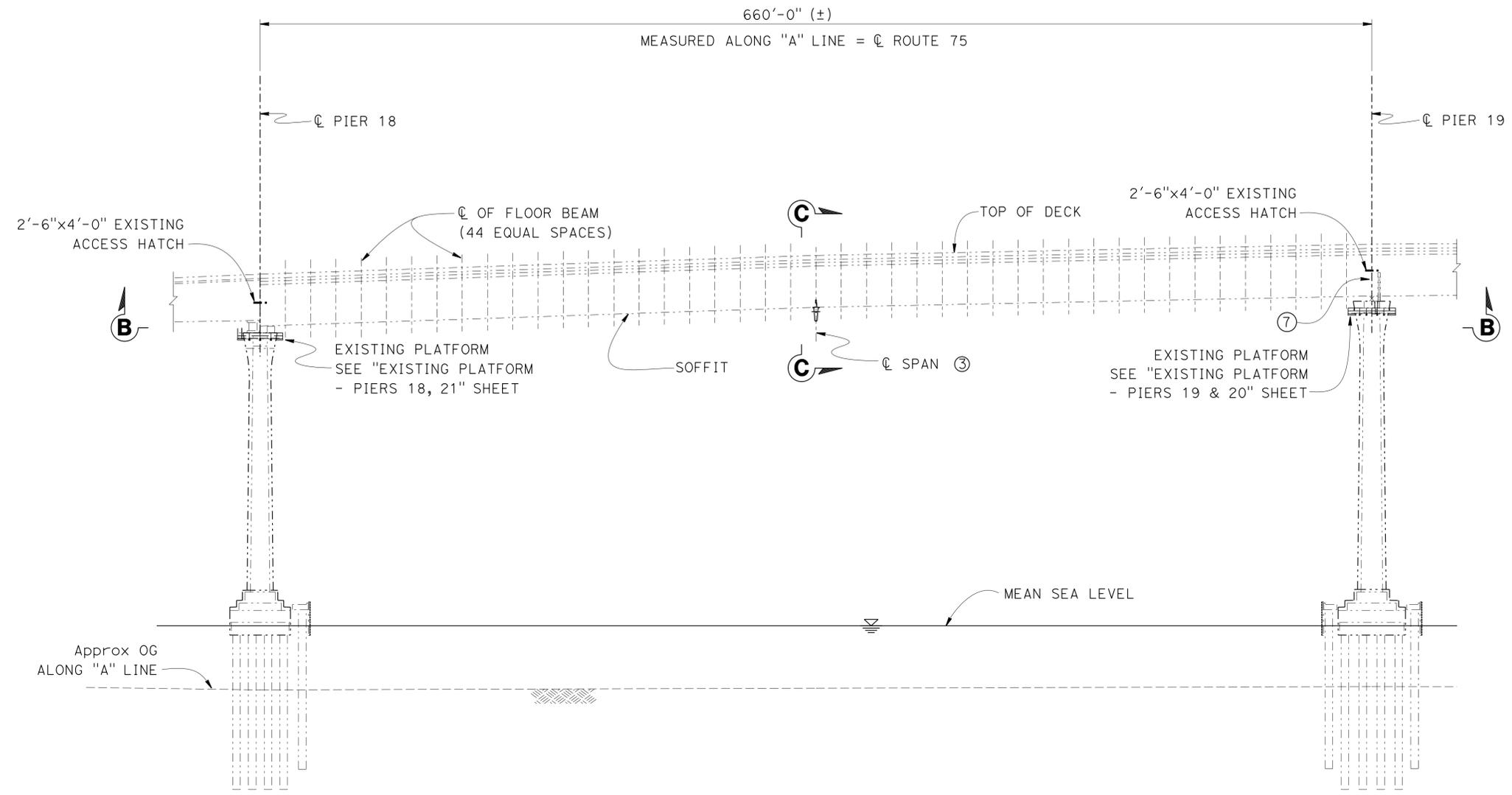
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	15	45

Muthanna S. Omeran 12-19-14  
REGISTERED CIVIL ENGINEER DATE

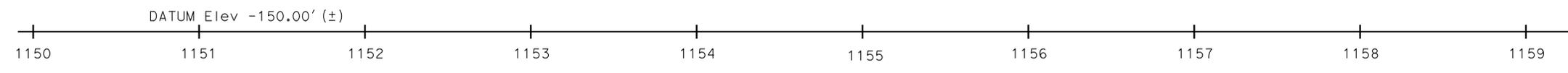
03-30-15  
PLANS APPROVAL DATE

MUTHANNA OMRAN  
No. 61637  
Exp. 06-30-15  
CIVIL  
STATE OF CALIFORNIA

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**PARTIAL SECTION C-C**  
1" = 10'



**SPAN 18 - ELEVATION**  
1" = 40'

- NOTES:
- A. See "SPAN 18 GIRDER LAYOUT" sheet for "VIEW B-B" details
  - B. "SECTION C-C" only shown partial view
  - C. See "TYPICAL CROSS SECTION" sheet for details
  - ③ Reset Existing Radar Beacon and Reinstall after paint is complete
  - ⑦ New Ladder see "ST" sheets

DESIGN	BY Muthanna Omeran	CHECKED Ghiath Taleb-Agha	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 16</b>	BRIDGE NO.	57-0857
DETAILS	BY Min Yu	CHECKED Ghiath Taleb-Agha			POST MILE	20.49
QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omeran				

**SAN DIEGO-CORONADO BAY BRIDGE**  
**PAINTING AND MAINTENANCE TRAVELERS**  
**SPAN 18 ELEVATION**

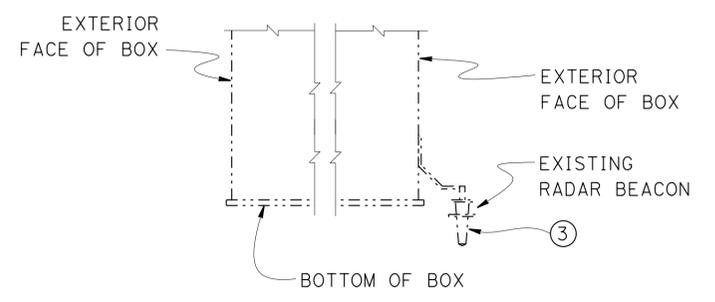
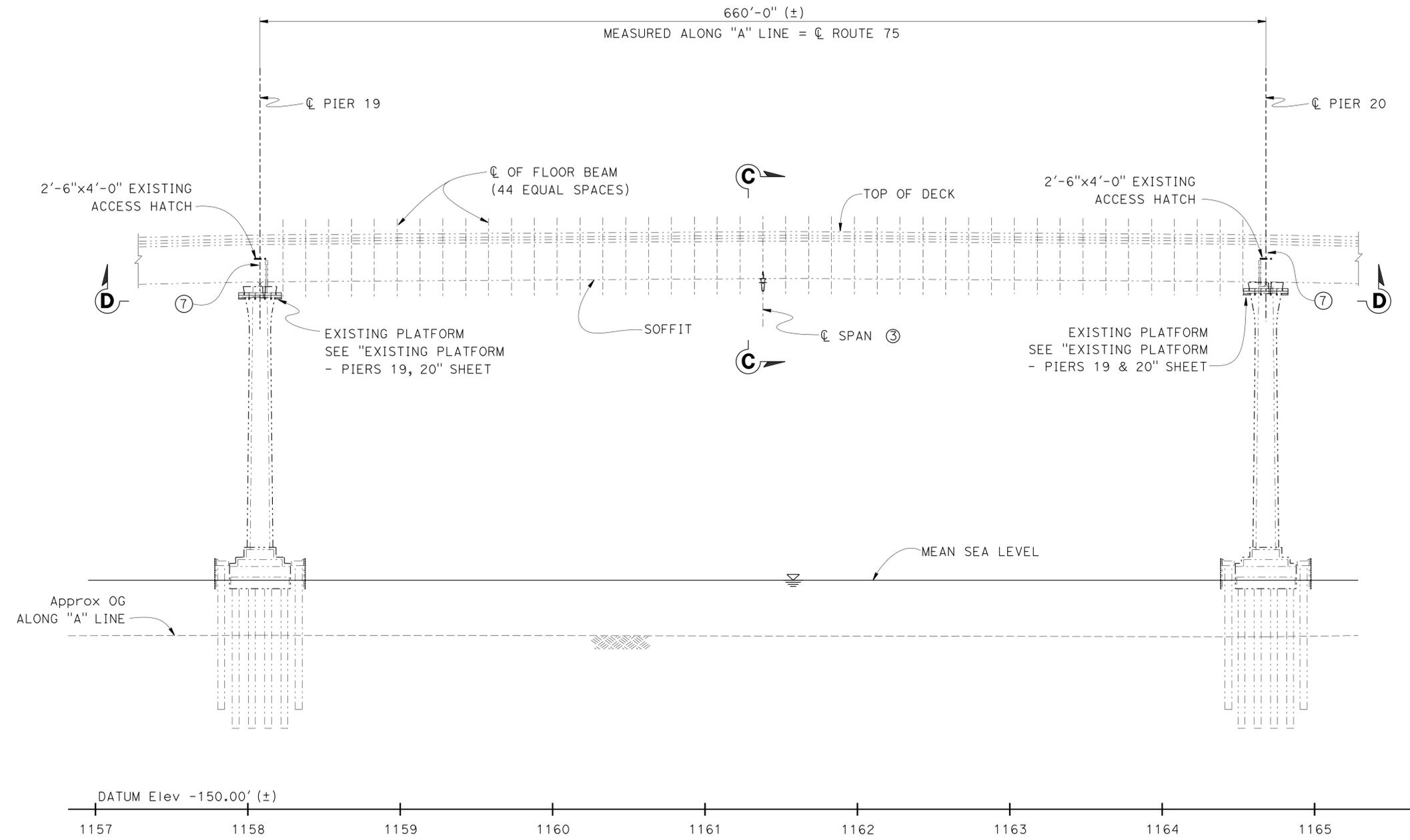
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11	SD	75	R21.0/R21.6	16	45

Muthanna S. Omeran 12-19-14  
REGISTERED CIVIL ENGINEER DATE

03-30-15  
PLANS APPROVAL DATE

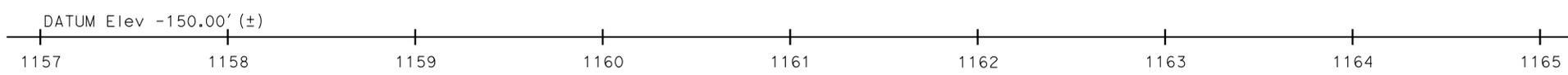
MUTHANNA OMRAN  
No. 61637  
Exp. 06-30-15  
CIVIL  
STATE OF CALIFORNIA

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**PARTIAL SECTION C-C**  
1" = 10'

- NOTES:
- A. See "SPAN 19 GIRDER LAYOUT" sheet for "VIEW D-D" details
  - B. "SECTION C-C" only shown partial view
  - C. See "TYPICAL CROSS SECTION" sheet for details
  - ③ Reset Existing Radar Beacon and Reinstall after paint is complete
  - ⑦ New Ladder see "ST" sheets



**SPAN 19 - ELEVATION**  
1" = 40'

DESIGN	BY	Muthanna Omeran	CHECKED	Ghiath Taleb-Agha	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 16</b>	BRIDGE NO.	57-0857	
	DETAILS	BY	Min Yu	CHECKED			Ghiath Taleb-Agha	POST MILE	20.49
	QUANTITIES	BY	Ghiath Taleb-Agha	CHECKED			Muthanna Omeran		

**SAN DIEGO-CORONADO BAY BRIDGE  
PAINTING AND MAINTENANCE TRAVELERS  
SPAN 19 ELEVATION**

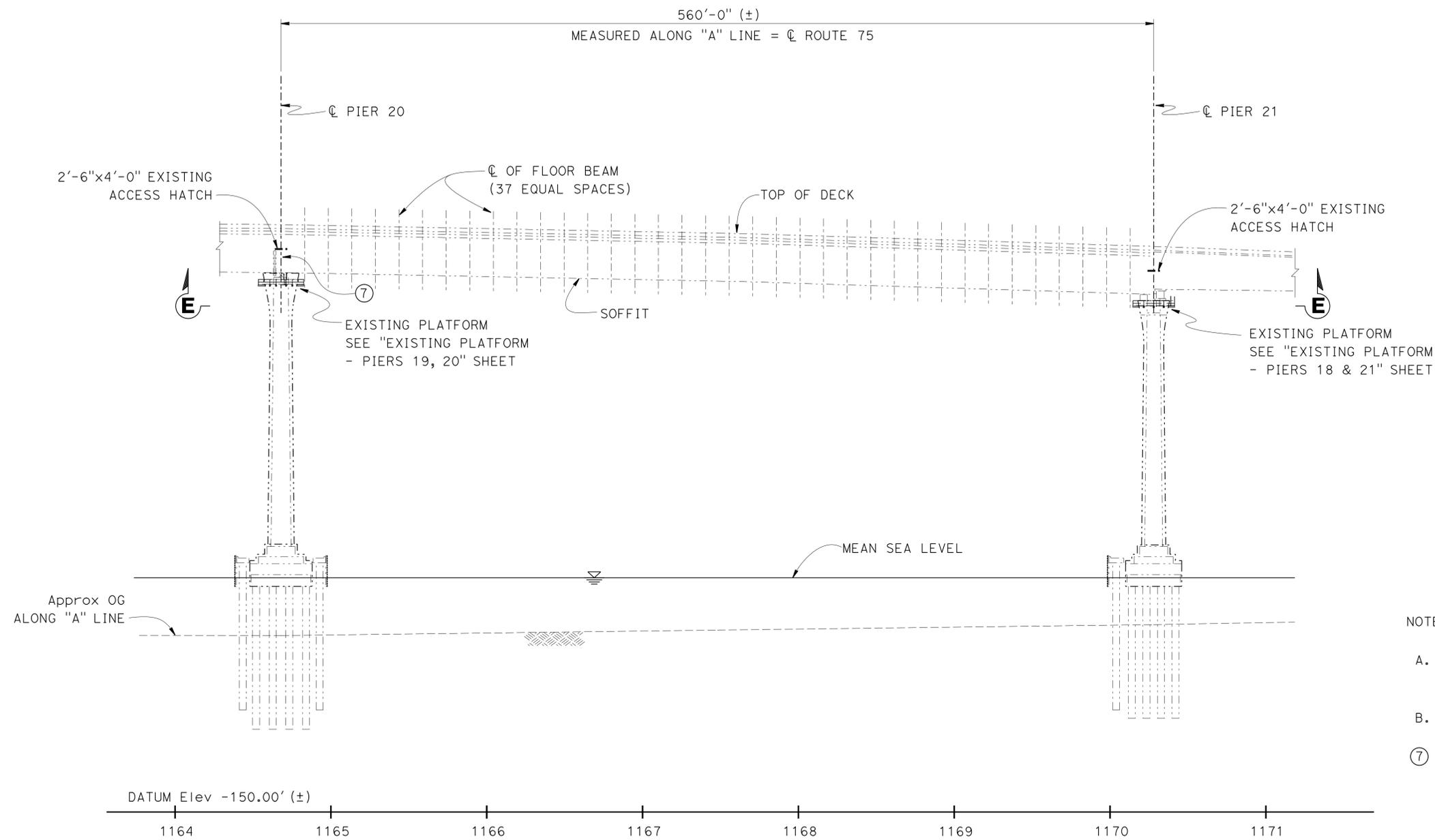
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	17	45

Muthanna S. Omeran 12-19-14  
REGISTERED CIVIL ENGINEER DATE

03-30-15  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
MUTHANNA OMRAN  
No. 61637  
Exp. 06-30-15  
CIVIL  
STATE OF CALIFORNIA

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- NOTES:
- A. See "SPAN 20 GIRDER LAYOUT" sheet for "VIEW E-E" details
  - B. See "TYPICAL CROSS SECTION" sheet for details
  - ⑦ New Ladder see "ST" sheets

**SPAN 20 - ELEVATION**  
1" = 40'

DESIGN	BY Muthanna Omeran	CHECKED Ghiath Taleb-Agha
DETAILS	BY Min Yu	CHECKED Ghiath Taleb-Agha
QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omeran

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 16**

BRIDGE NO.	57-0857
POST MILE	20.49

**SAN DIEGO-CORONADO BAY BRIDGE**  
**PAINTING AND MAINTENANCE TRAVELERS**  
**SPAN 20 ELEVATION**

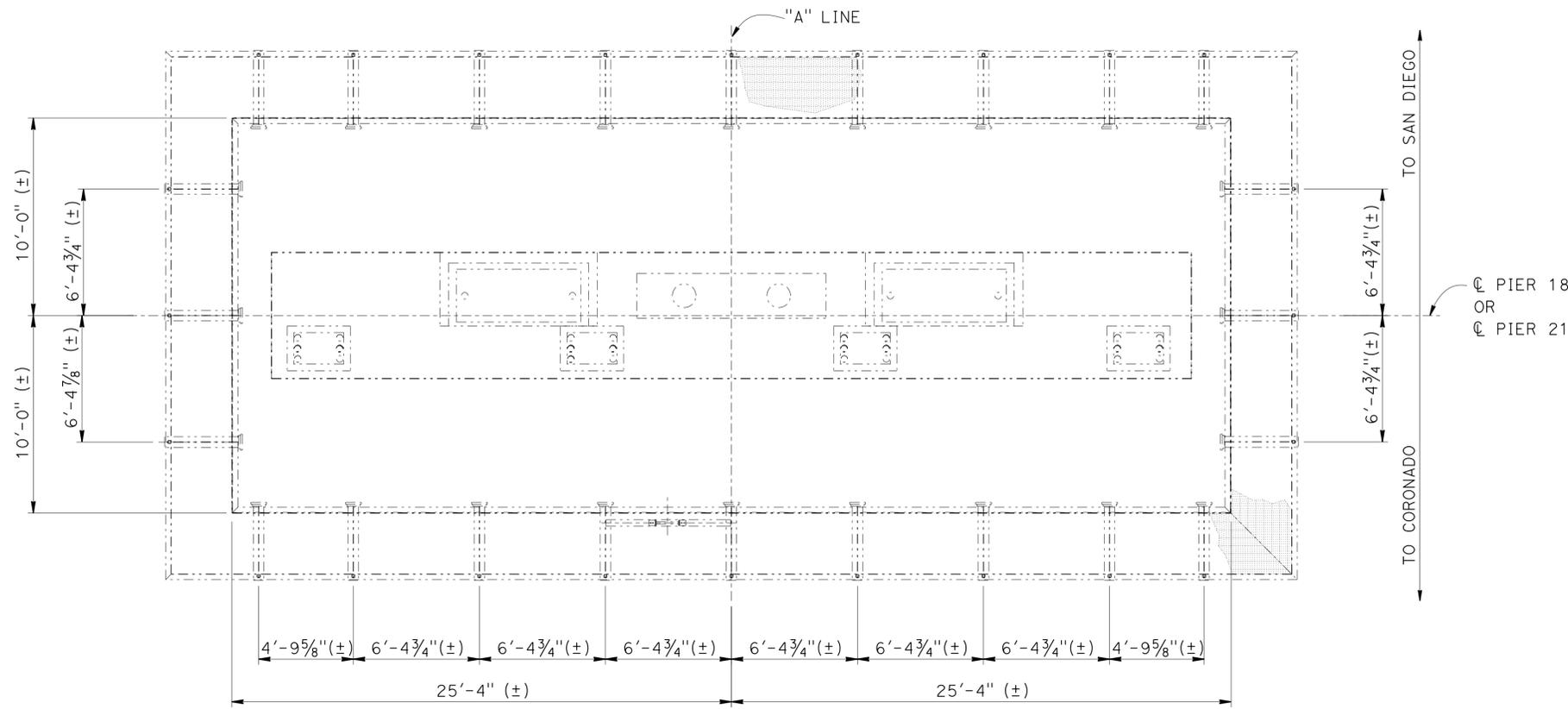
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	18	45

*Muthanna S. Omeran* 12-19-14  
 REGISTERED CIVIL ENGINEER DATE

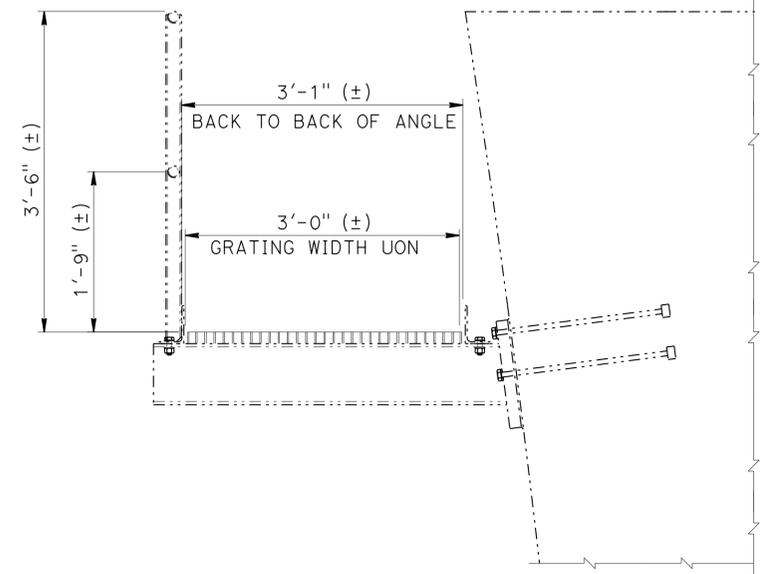
03-30-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 MUTHANNA OMRAN  
 No. 61637  
 Exp. 06-30-15  
 CIVIL  
 STATE OF CALIFORNIA

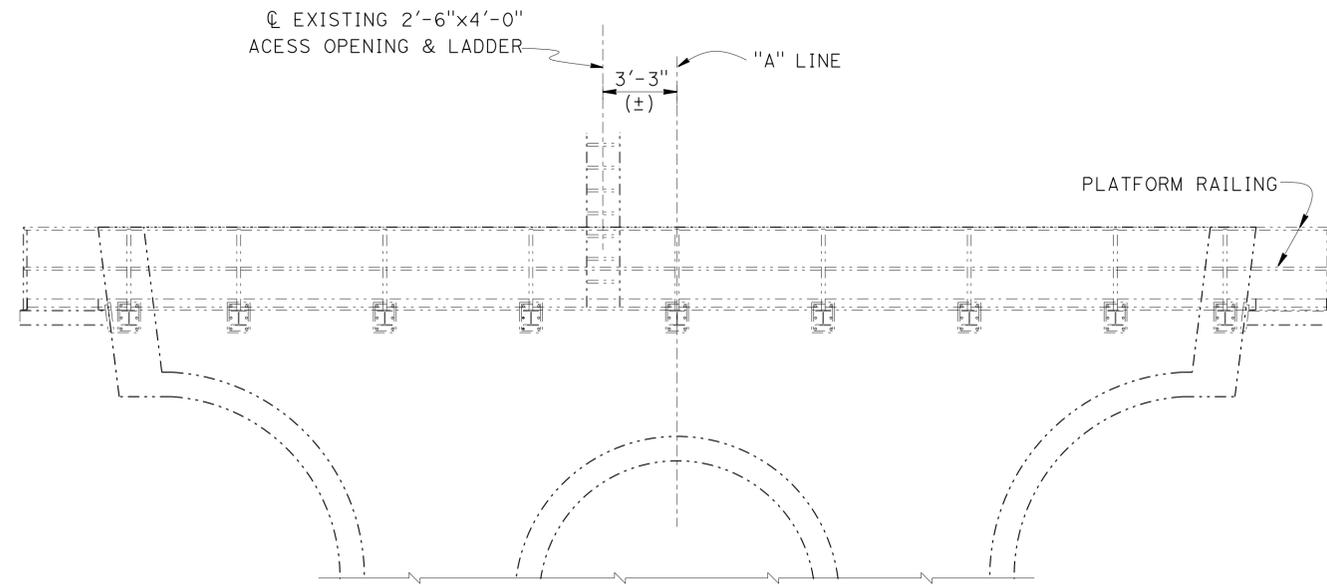
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.



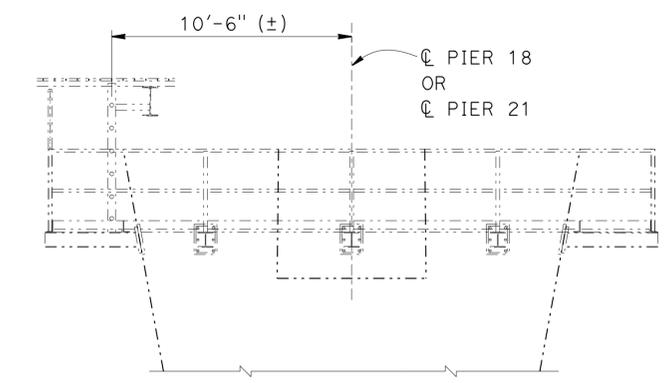
**PLAN**  
 1/4" = 1'-0"



**PARTIAL TYPICAL SECTION AT PIERS 18 & 21**  
 1" = 1'-0"



**ELEVATION**  
 1/4" = 1'-0"



**END VIEW**  
 1/4" = 1'-0"

DESIGN BY Muthanna Omeran CHECKED Ghiath Taleb-Agha DETAILS BY Min Yu CHECKED Ghiath Taleb-Agha QUANTITIES BY Ghiath Taleb-Agha CHECKED Muthanna Omeran			<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 16</b>	BRIDGE NO. 57-0857 POST MILE 20.49	<b>SAN DIEGO-CORONADO BAY BRIDGE</b> <b>PAINTING AND MAINTENANCE TRAVELERS</b> <b>EXISTING PLATFORM-PIERS 18,21</b>
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3617 PROJECT NUMBER & PHASE: 11120000701	CONTRACT NO.: 11-409304	DISREGARD PRINTS BEARING EARLIER REVISION DATES
			0 1 2 3	REVISION DATES: 01-28-14, 12-19-14, 12-22-14		SHEET 9 OF 36

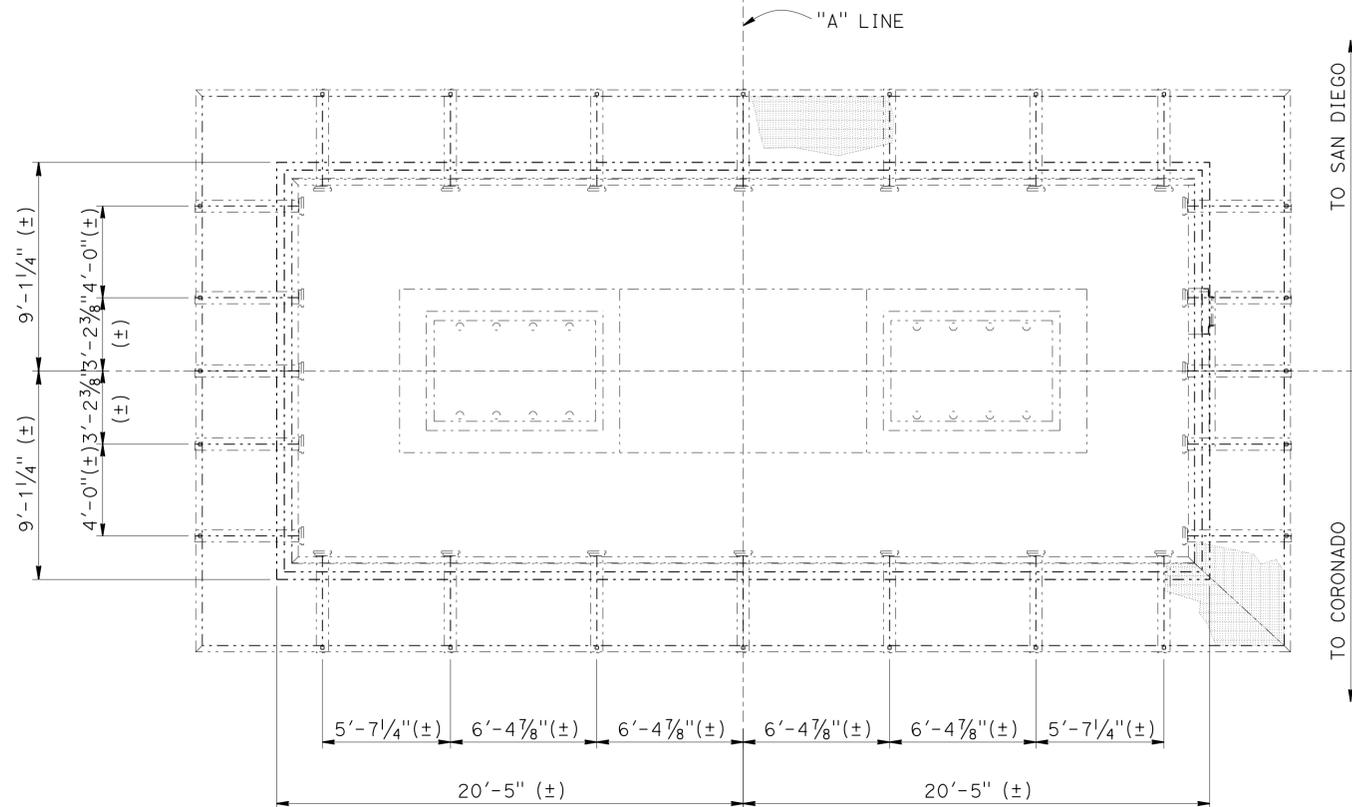
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	19	45

Muthanna S. Omrani 12-19-14  
 REGISTERED CIVIL ENGINEER DATE

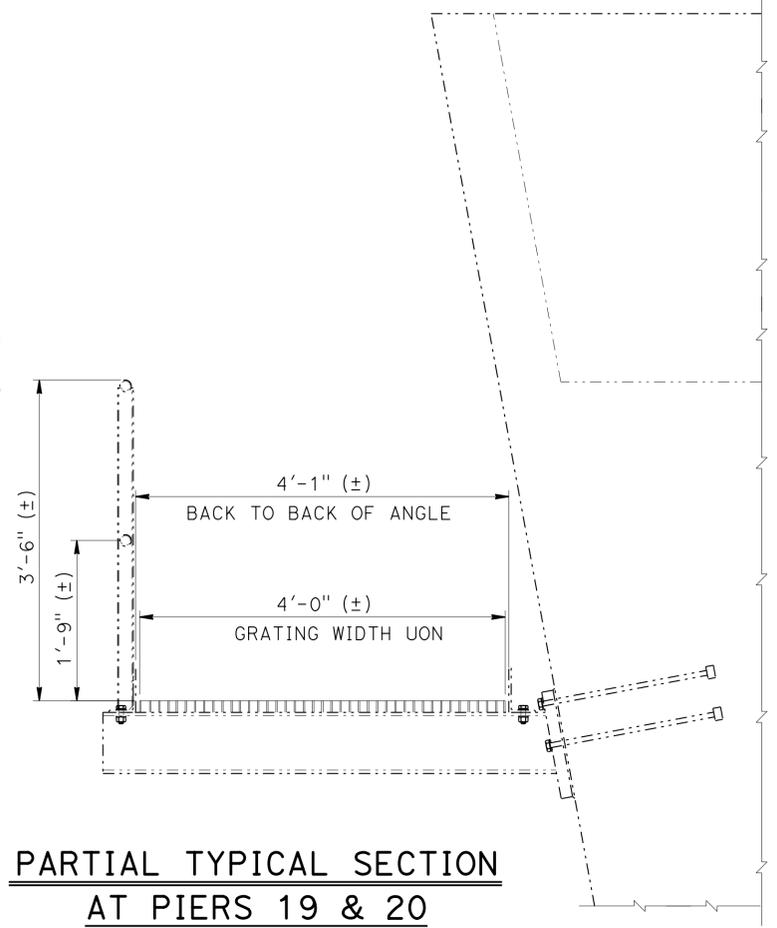
03-30-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 MUTHANNA OMRAN  
 No. 61637  
 Exp. 06-30-15  
 CIVIL  
 STATE OF CALIFORNIA

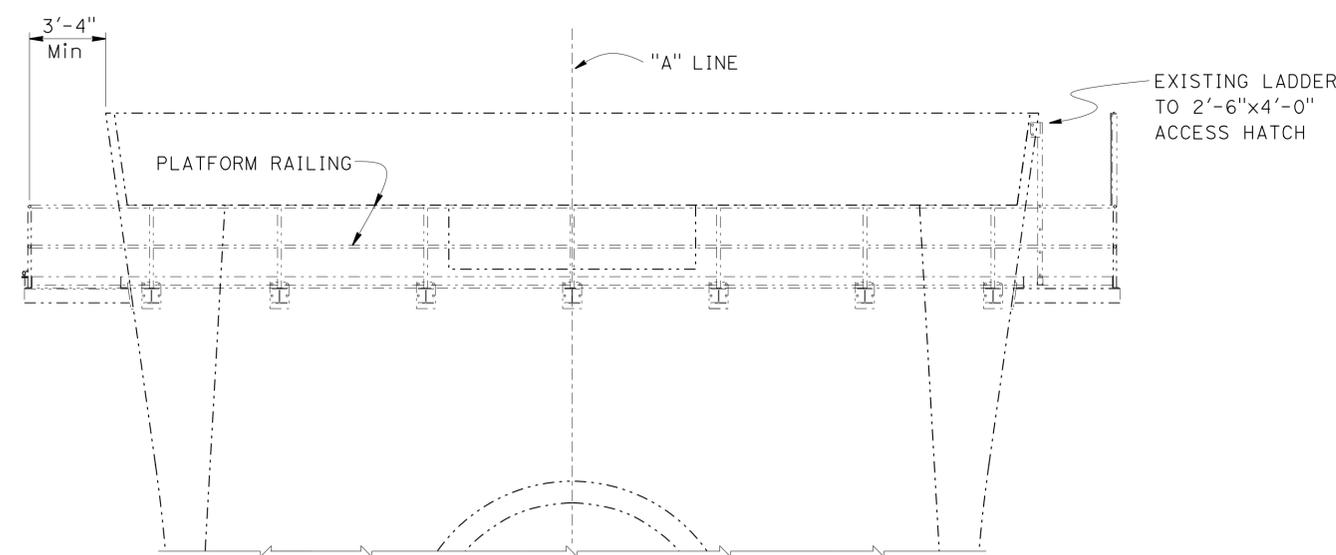
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.*



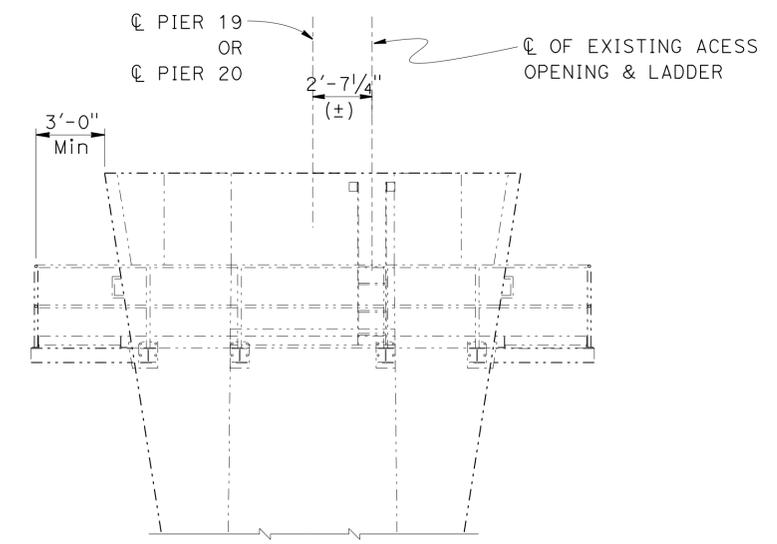
**PLAN**  
 1/4" = 1'-0"



**PARTIAL TYPICAL SECTION  
 AT PIERS 19 & 20**  
 1" = 1'-0"



**ELEVATION**  
 1/4" = 1'-0"



**END VIEW**  
 1/4" = 1'-0"

DESIGN	BY Muthanna Omrani	CHECKED Ghiath Taleb-Agha
DETAILS	BY Min Yu	CHECKED Ghiath Taleb-Agha
QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omrani

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

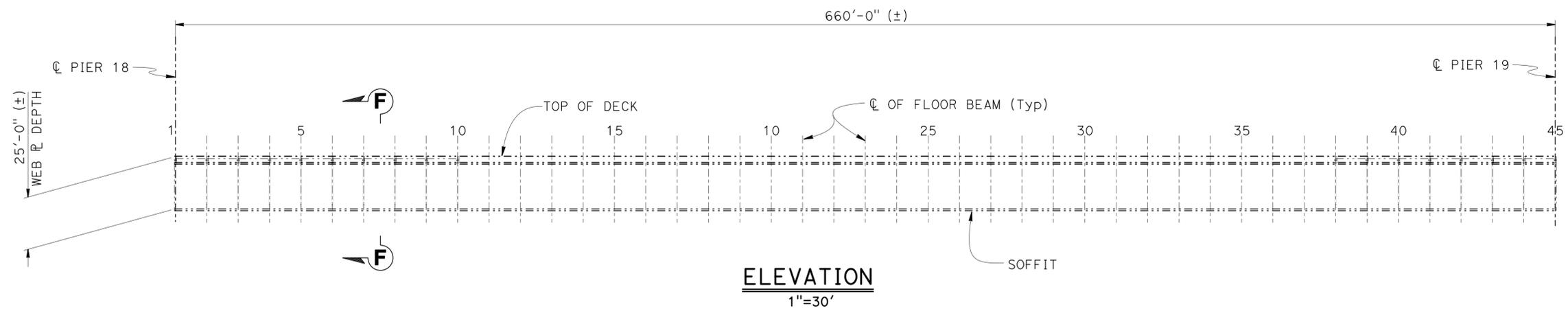
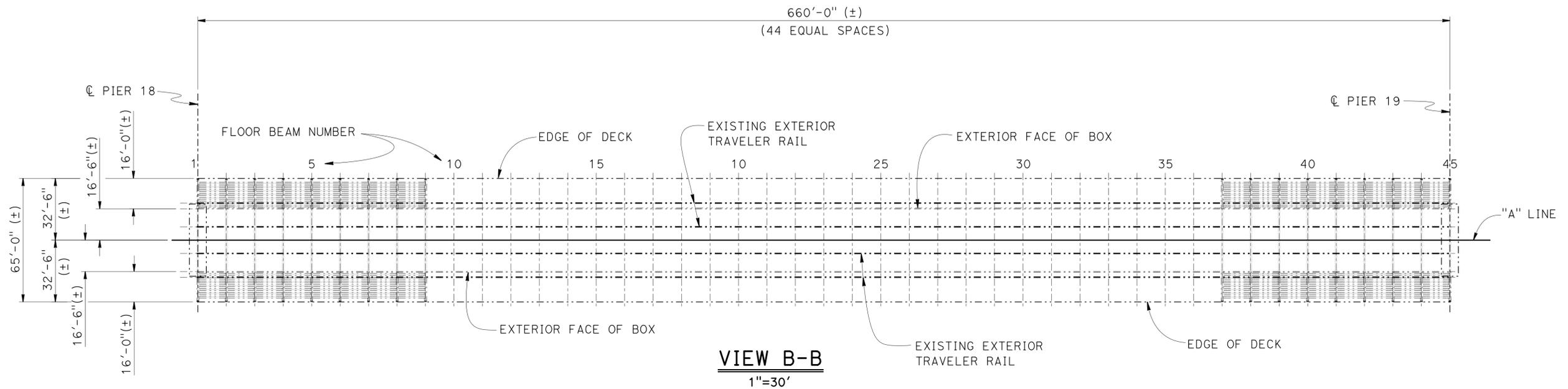
DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 16**

BRIDGE NO.	57-0857
POST MILE	20.49

**SAN DIEGO-CORONADO BAY BRIDGE  
 PAINTING AND MAINTENANCE TRAVELERS  
 EXISTING PLATFORM-PIERS 19,20**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	20	45

Muthanna S. Omrان 12-19-14  
 REGISTERED CIVIL ENGINEER DATE  
 03-30-15  
 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.



NOTE:  
See "TYPICAL CROSS SECTION" sheet for "SECTION F-F" and Details

DESIGN	BY Muthanna Omrان	CHECKED Ghiath Taleb-Agha
DETAILS	BY Min Yu	CHECKED Ghiath Taleb-Agha
QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omrان

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 16

BRIDGE NO.	57-0857
POST MILE	20.49

**SAN DIEGO-CORONADO BAY BRIDGE  
 PAINTING AND MAINTENANCE TRAVELERS  
 SPAN 18 GIRDER LAYOUT**



REVISION DATES	SHEET	OF
01-30-14	11	36
12-19-14		
12-22-14		

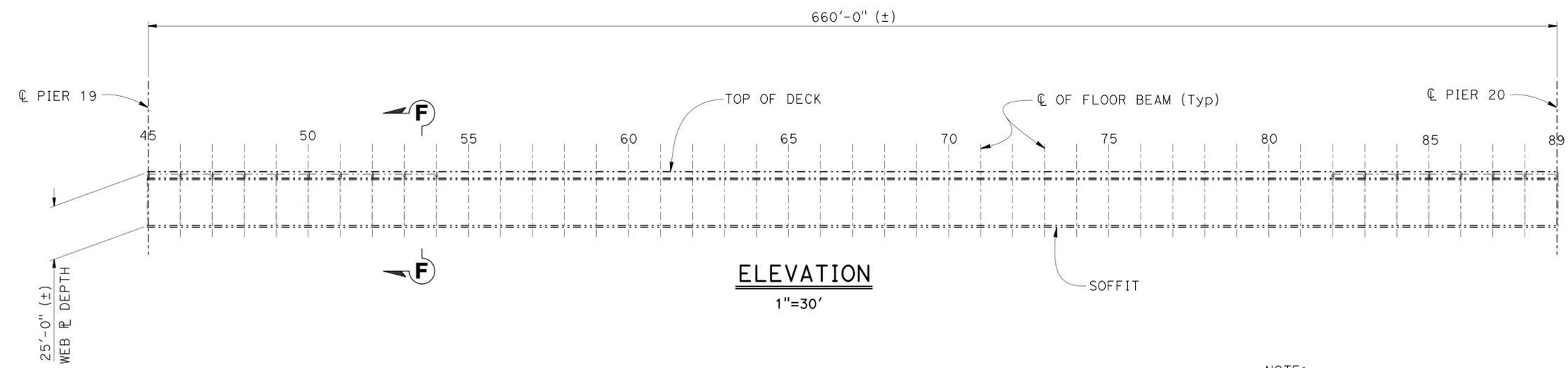
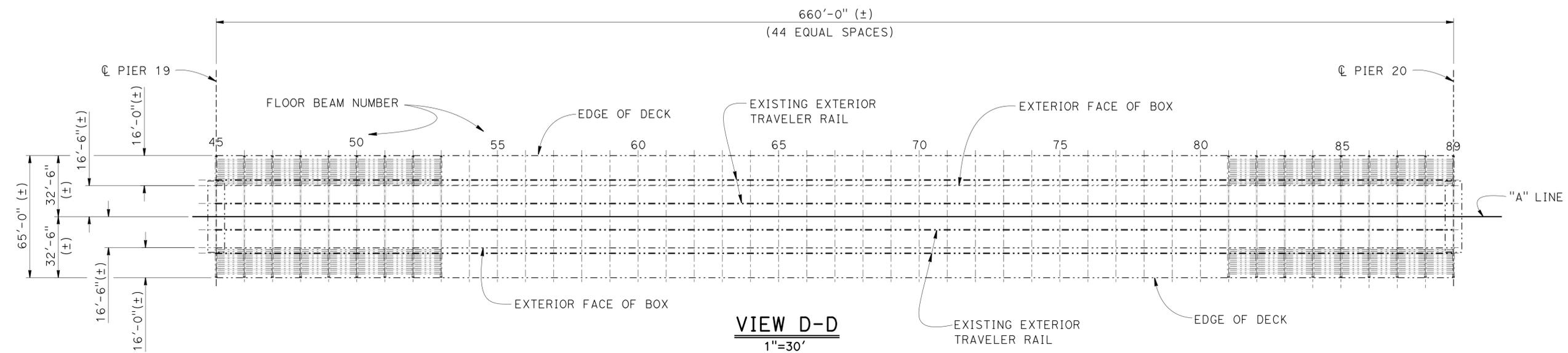
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	21	45

Muthanna S. Omeran 12-19-14  
 REGISTERED CIVIL ENGINEER DATE

03-30-15  
 PLANS APPROVAL DATE

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NOTE:  
See "TYPICAL CROSS SECTION" sheet for "SECTION F-F" and Details

DESIGN BY Muthanna Omeran CHECKED Ghiath Taleb-Agha			<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 16</b>	BRIDGE NO. 57-0857	<b>SAN DIEGO-CORONADO BAY BRIDGE</b> <b>PAINTING AND MAINTENANCE TRAVELERS</b> <b>SPAN 19 GIRDER LAYOUT</b>
DETAILS BY Min Yu CHECKED Ghiath Taleb-Agha					POST MILE 20.49	
QUANTITIES BY Ghiath Taleb-Agha CHECKED Muthanna Omeran						

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

UNIT: 3617  
 PROJECT NUMBER & PHASE: 11120000701  
 CONTRACT NO.: 11-409304

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
02-05-14	12	36
12-19-14		
12-22-14		

FILE => 57-0857-u-miscdrt10.dgn

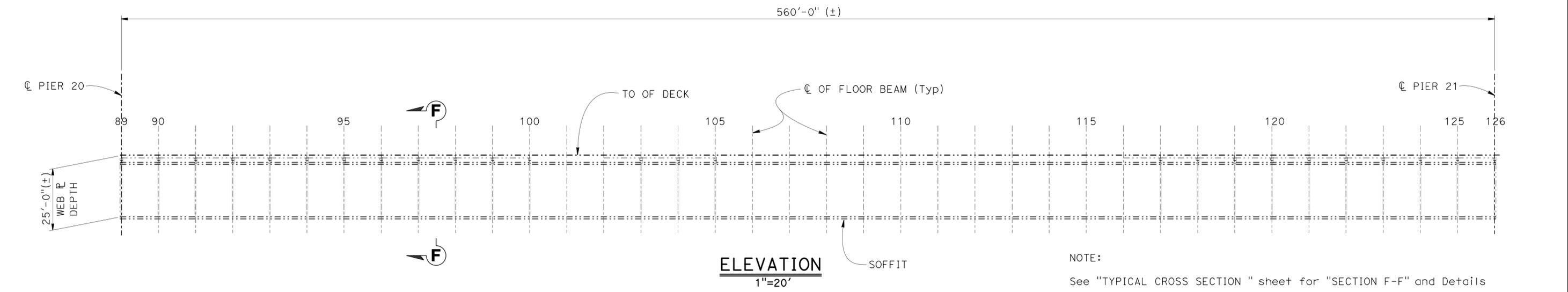
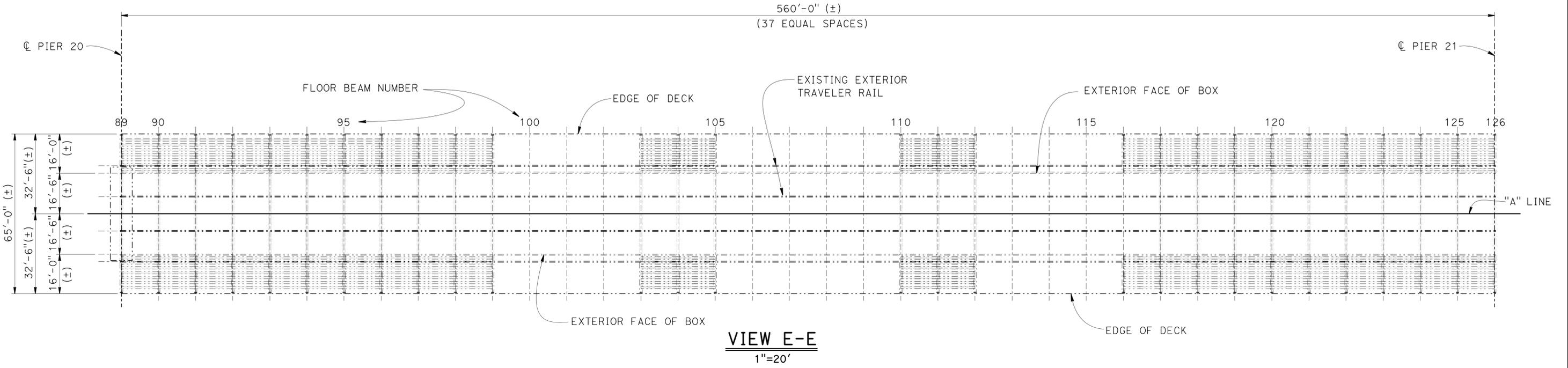
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	22	45

Muthanna S. Omeran 12-19-14  
REGISTERED CIVIL ENGINEER DATE

03-30-15  
PLANS APPROVAL DATE

MUTHANNA OMARAN  
No. 61637  
Exp. 06-30-15  
CIVIL  
STATE OF CALIFORNIA

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DESIGN	BY Muthanna Omeran	CHECKED Ghiath Taleb-Agha
DETAILS	BY Min Yu	CHECKED Ghiath Taleb-Agha
QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omeran

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 16**

BRIDGE NO.	57-0857
POST MILE	20.49

**SAN DIEGO-CORONADO BAY BRIDGE  
PAINTING AND MAINTENANCE TRAVELERS  
SPAN 20 GIRDER LAYOUT**

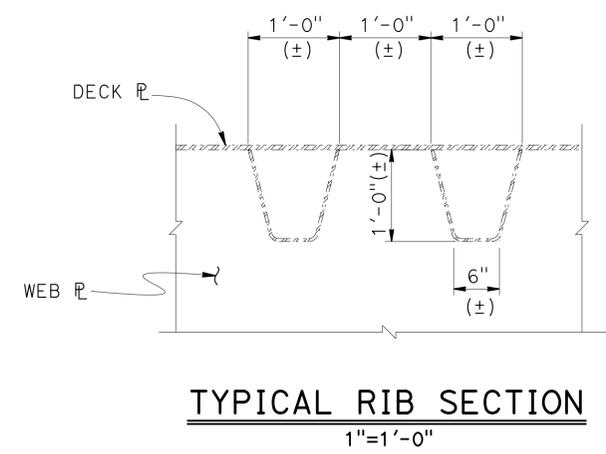
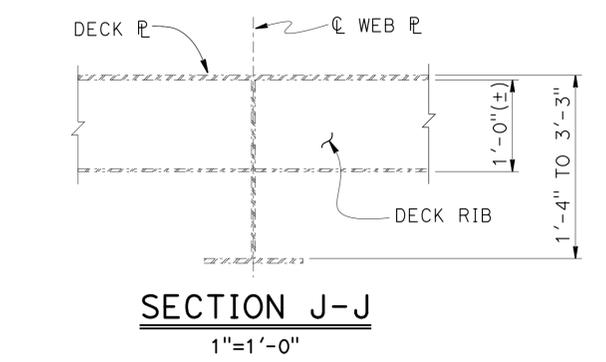
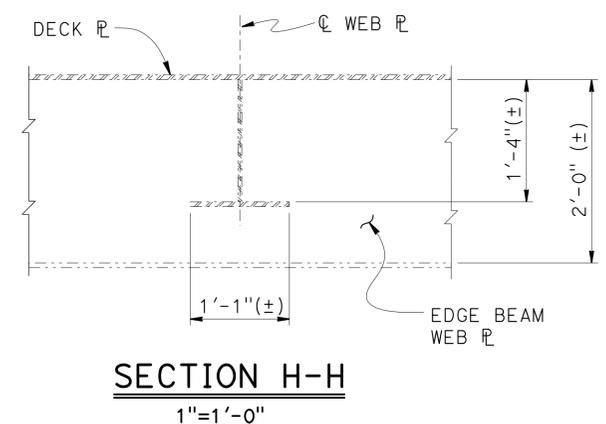
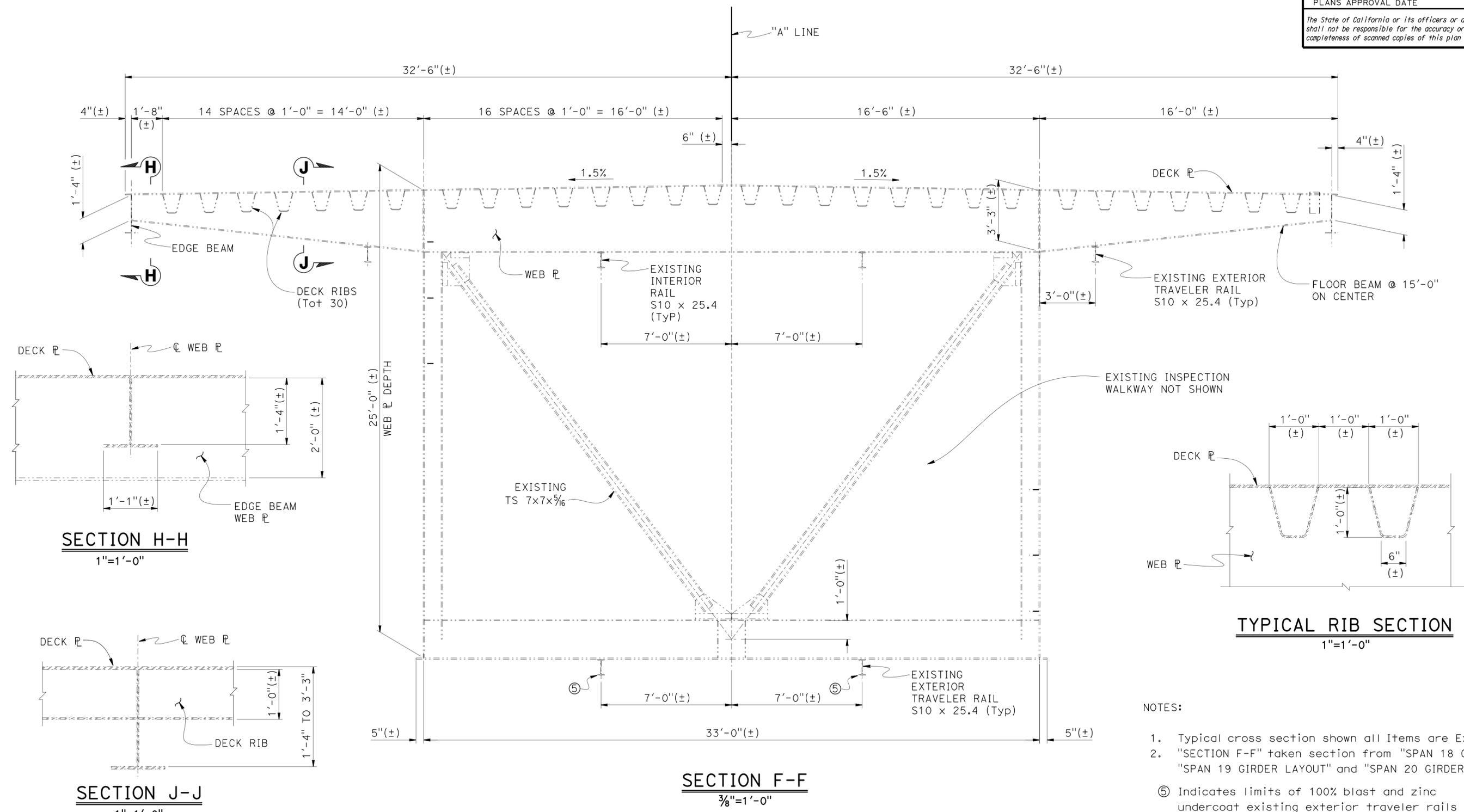
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	23	45

Muthanna S. Omran 12-19-14  
 REGISTERED CIVIL ENGINEER DATE

03-30-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 MUTHANNA OMRAN  
 No. 61637  
 Exp. 06-30-15  
 CIVIL  
 STATE OF CALIFORNIA

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- NOTES:
1. Typical cross section shown all items are Existing material
  2. "SECTION F-F" taken section from "SPAN 18 GIRDER LAYOUT", "SPAN 19 GIRDER LAYOUT" and "SPAN 20 GIRDER LAYOUT" sheets
- Ⓢ Indicates limits of 100% blast and zinc undercoat existing exterior traveler rails

DESIGN BY Muthanna Omran		CHECKED Ghiath Taleb-Agha	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 16</b>	BRIDGE NO. 57-0857	<b>SAN DIEGO-CORONADO BAY BRIDGE</b> <b>PAINTING AND MAINTENANCE TRAVELERS</b> <b>TYPICAL CROSS SECTION</b>		
DETAILS BY Min Yu		CHECKED Ghiath Taleb-Agha			POST MILE 20.49			
QUANTITIES BY Ghiath Taleb-Agha		CHECKED Muthanna Omran						
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3617 PROJECT NUMBER & PHASE: 11120000701	CONTRACT NO.: 11-049304	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 14 OF 36

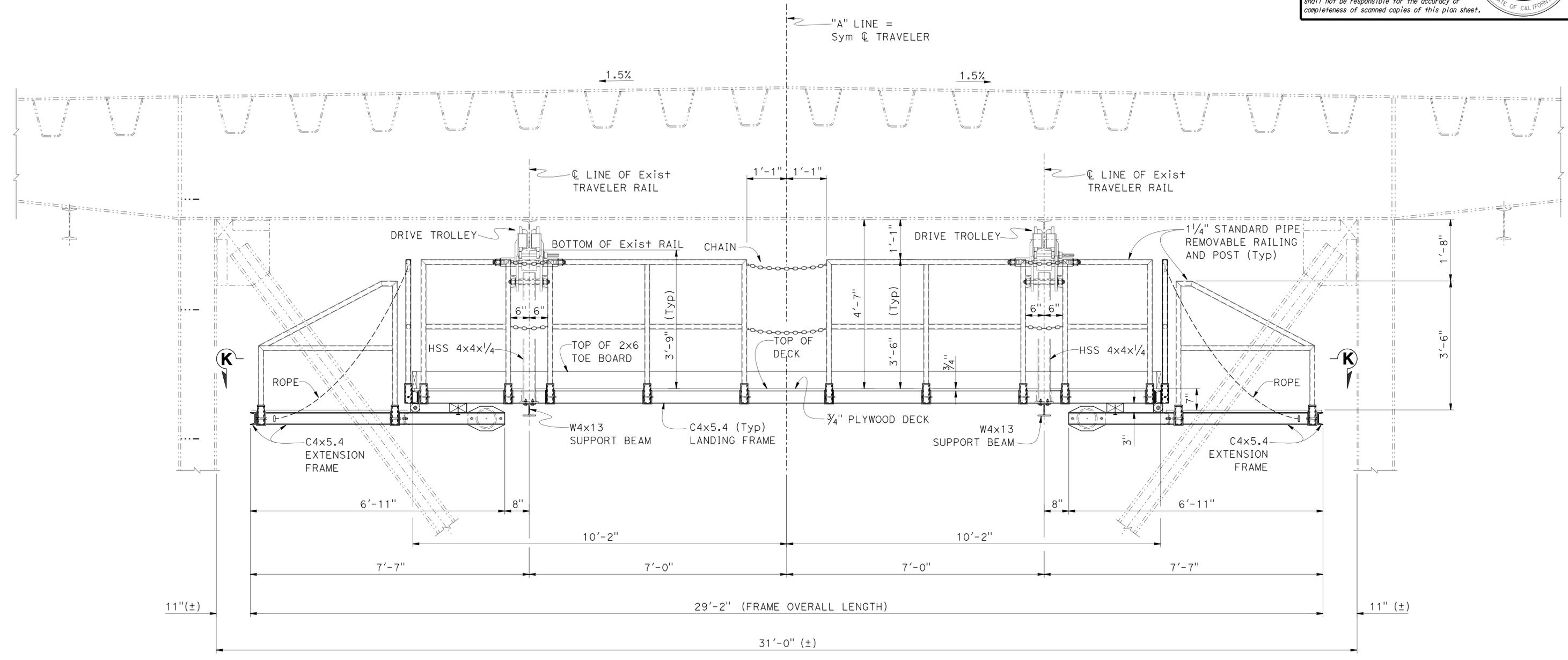
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	24	45

Muthanna S. Obran 12-19-14  
 REGISTERED CIVIL ENGINEER DATE

03-30-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 MUTHANNA OBRAN  
 No. 61637  
 Exp. 06-30-15  
 CIVIL  
 STATE OF CALIFORNIA

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NOTES:

- See "TRAVELER PLAN" sheet for "SECTION K-K" and details
- Removable Railing Post Sleeve see "TRAVELER DETAILS NO. 1" and "TRAVELER DETAILS NO. 3" sheets
- Four location of Chains with Turnbuckles Stops see "TRAVELER DETAILS NO. 1" sheet

**TRAVELER - ELEVATION**

3/4" = 1'-0"

NOTE:

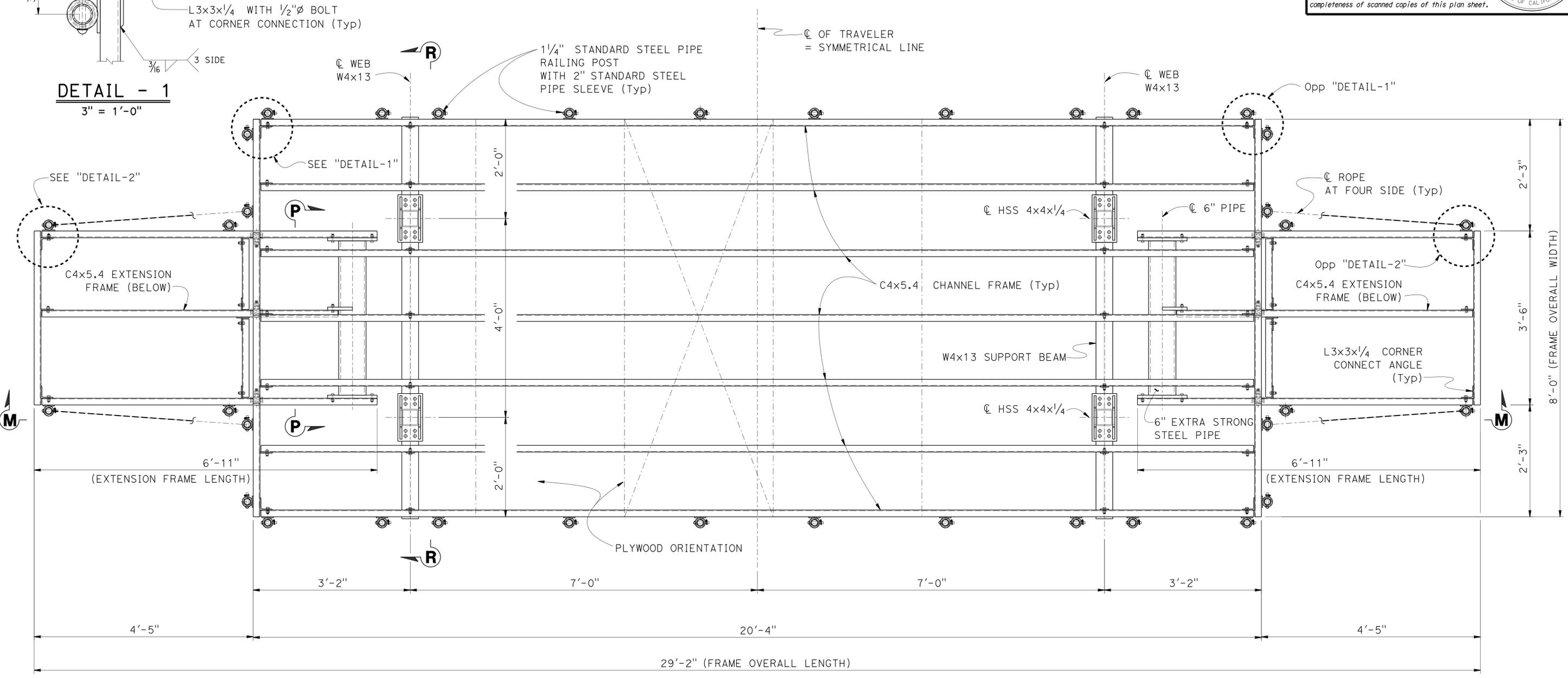
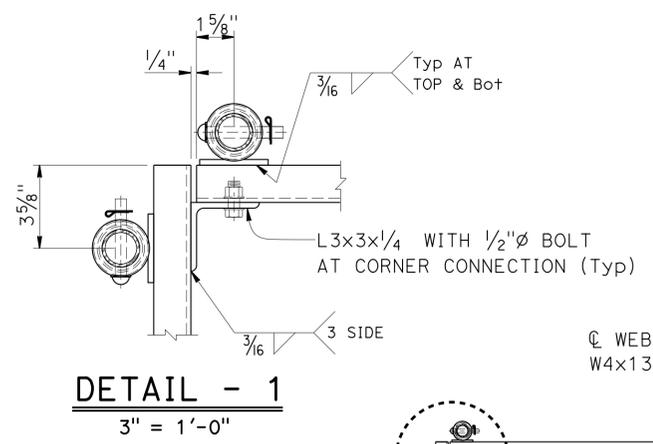
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Muthanna Obran	CHECKED Ghiath Taleb-Agha	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 16	BRIDGE NO.	57-0857	SAN DIEGO-CORONADO BAY BRIDGE PAINTING AND MAINTENANCE TRAVELERS TRAVELER ELEVATION
	DETAILS	BY Min Yu	CHECKED Ghiath Taleb-Agha			POST MILE	20.49	
	QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Obran			UNIT: 3617 PROJECT NUMBER & PHASE: 11120000701	CONTRACT NO.: 11-409304	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		REVISION DATES		SHEET 15 OF 36		
				03-28-14 12-22-14 12-19-14				

FILE => 57-0857-u-miscd113.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	25	45

Muthanna S. Omeran 12-19-14  
 REGISTERED CIVIL ENGINEER DATE  
 03-30-15  
 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.



- NOTES:
1. Plywood Decking, Lumbers Bumpers and Four Location of Chains with Turnbuckles Stops not shown
  2. See "TRAVELER DETAILS NO. 1" sheet for "SECTION M-M" and details
  3. See "TRAVELER DETAILS NO. 2" sheet for "SECTION R-R" and details
  4. See "TRAVELER DETAILS NO. 3" sheet for "SECTION P-P" and details
  5. Install Plywood with strong axis across the framing below

**SECTION K-K**  
1" = 1'-0"

DESIGN BY Muthanna Omeran CHECKED Ghiath Taaleb-Agh DETAILS BY Min Yu CHECKED Ghiath Taaleb-Agh QUANTITIES BY Ghiath Taaleb-Agh CHECKED Muthanna Omeran			<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 16</b>		BRIDGE NO. 57-0857 POST MILE 20.49		<b>SAN DIEGO-CORONADO BAY BRIDGE</b> <b>PAINTING AND MAINTENANCE TRAVELERS</b> <b>TRAVELER PLAN</b>								
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3										UNIT: 3617 PROJECT NUMBER & PHASE: 11120000701 CONTRACT NO.: 11-409304		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES: 03-28-14, 12-22-14, 12-19-14		SHEET 16 OF 36	



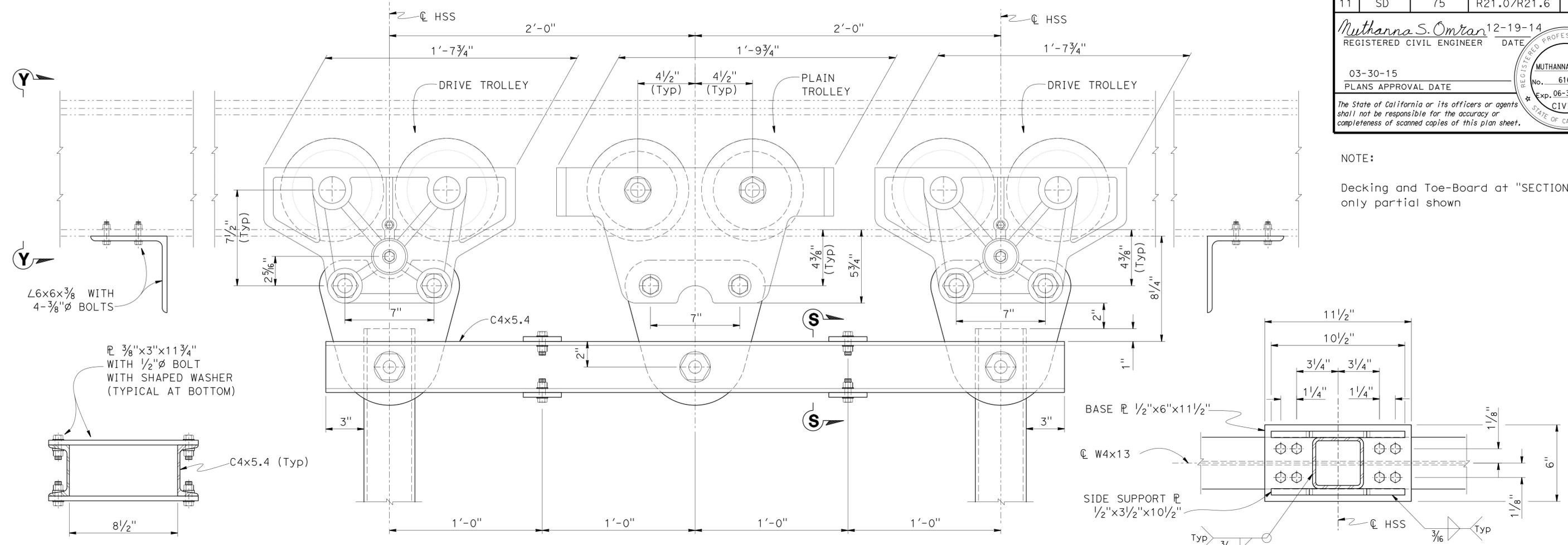
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	27	45

*Muthanna S. Omran* 12-19-14  
 REGISTERED CIVIL ENGINEER DATE

03-30-15  
 PLANS APPROVAL DATE

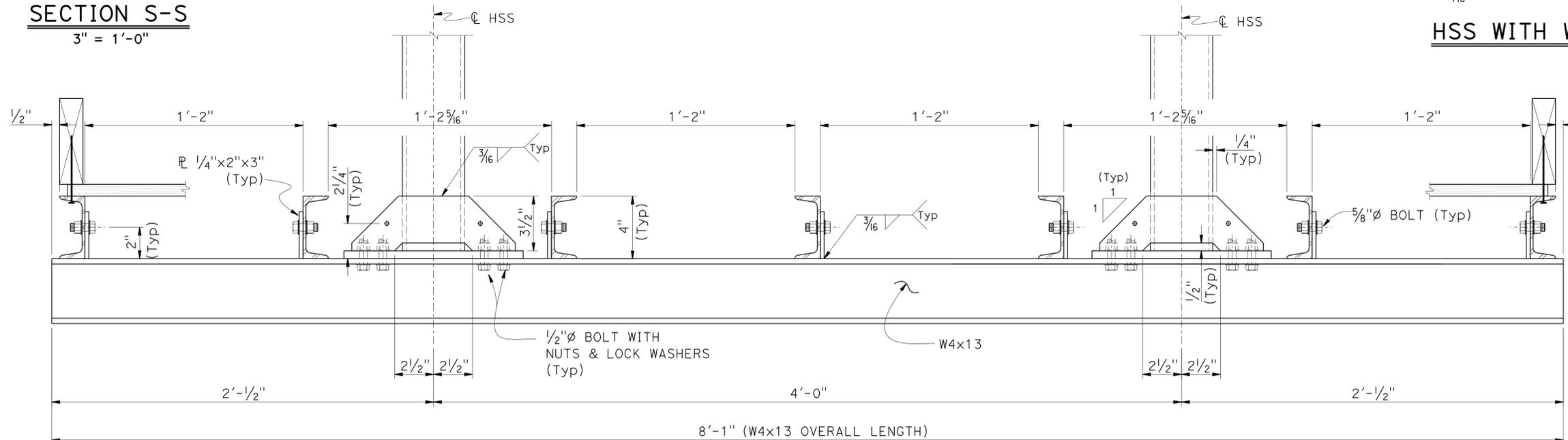
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REGISTERED PROFESSIONAL ENGINEER  
 MUTHANNA OMRAN  
 No. 61637  
 Exp. 06-30-15  
 CIVIL  
 STATE OF CALIFORNIA



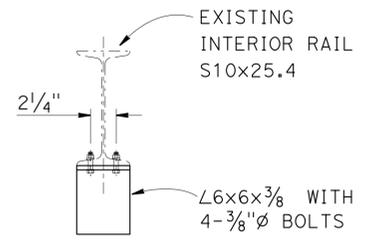
**SECTION S-S**  
 3" = 1'-0"

**HSS WITH W4 CONNECTION - PLAN**  
 3" = 1'-0"



**SECTION R-R**  
 3" = 1'-0"

SEE "TRAVELER DETAILS NO. 3" SHEET FOR TOE-BOARD CONNECTION DETAILS



**VIEW Y-Y**  
 3" = 1'-0"

DESIGN	BY Muthanna Omran	CHECKED Ghiath Taleb-Agha
DETAILS	BY Min Yu	CHECKED Ghiath Taleb-Agha
QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omran

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 16**

BRIDGE NO.	57-0857
POST MILE	20.49

**SAN DIEGO-CORONADO BAY BRIDGE**  
**PAINTING AND MAINTENANCE TRAVELERS**  
**TRAVELER DETAILS NO. 2**

REVISION DATES	SHEET	OF
03-28-14 12-22-14 12-19-14	18	36

USERNAME => s127400 DATE PLOTTED => 01-APR-2015 TIME PLOTTED => 08:54

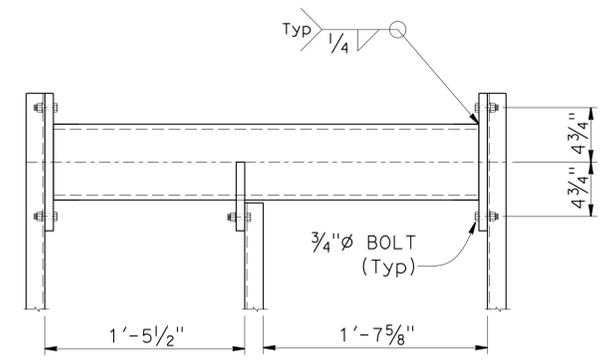
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	28	45

Muthanna S. Omran 12-19-14  
REGISTERED CIVIL ENGINEER DATE

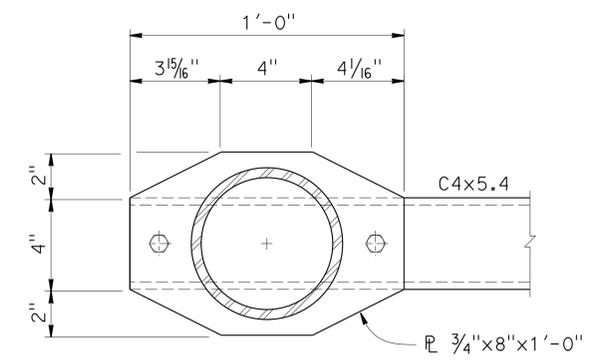
03-30-15  
PLANS APPROVAL DATE

STATE OF CALIFORNIA REGISTERED PROFESSIONAL ENGINEER  
MUTHANNA OMRAN  
No. 61637  
Exp. 06-30-15  
CIVIL

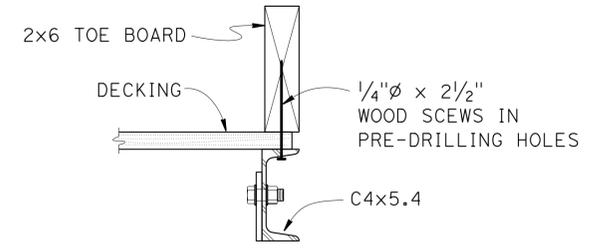
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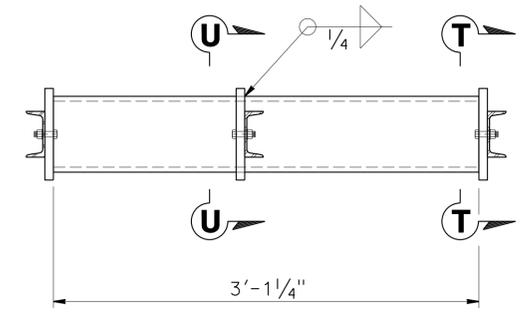
**PLAN**



**SECTION T-T**

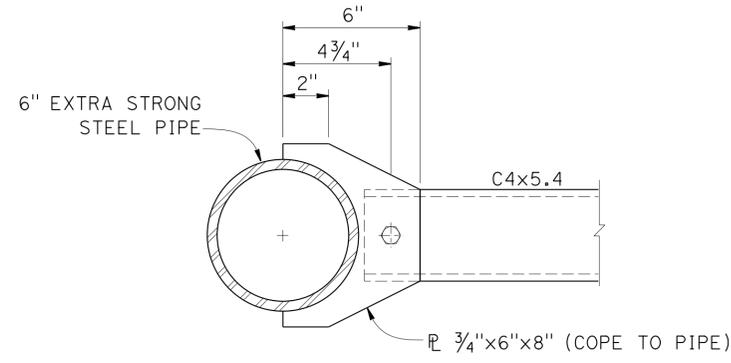


**TOE-BOARD CONNECTION**

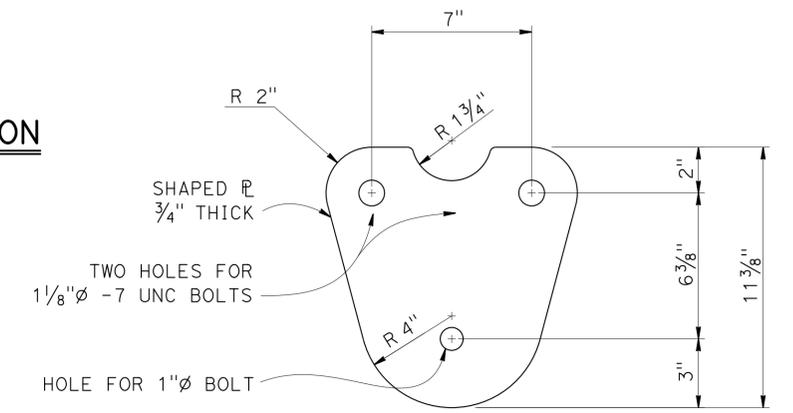


**SECTION P-P**

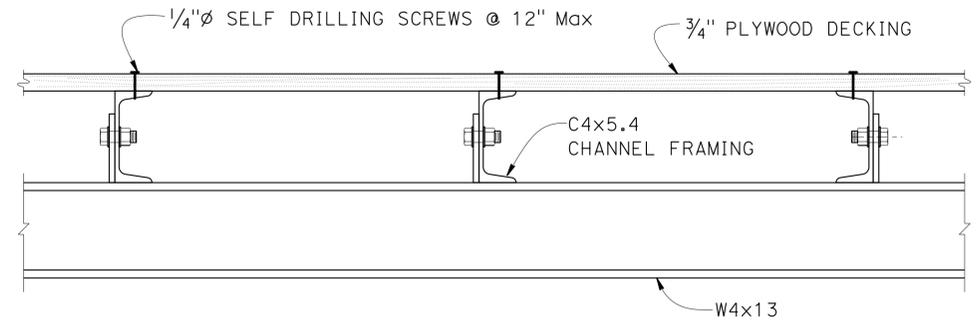
(TOP OF CHANNEL FRAMING, PLYWOOD DECKING AND CHAIN WITH TURNBUCKLE STOPS NOT SHOWN)



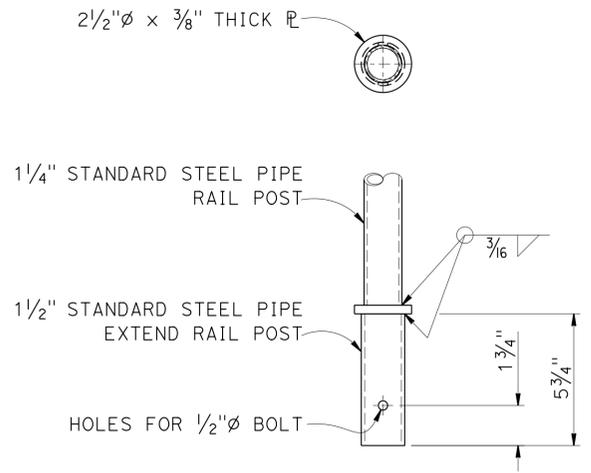
**SECTION U-U**



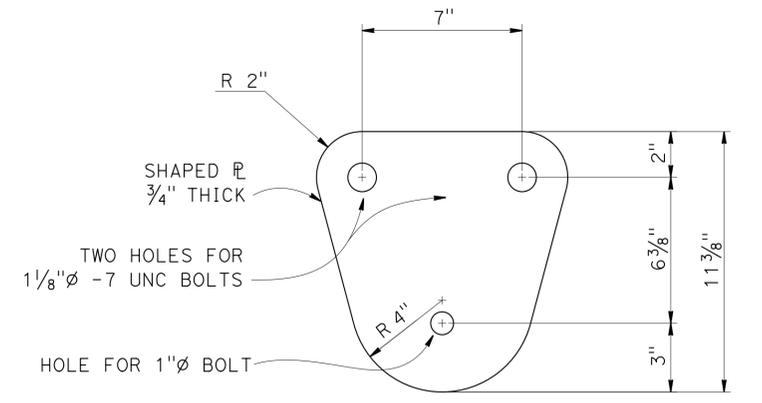
**DRIVE TROLLEY & TRAVELER CONNECTION PLATE**



**PLYWOOD DECKING & INTERIOR CHANNELS CONNECTION**



**REMOVABLE RAILING DETAIL**



**PLAN TROLLEY & TRAVELER CONNECTION PLATE**

DESIGN	BY	Ghiath Taleb-Agha	CHECKED	Muthanna Omran
DETAILS	BY	Min Yu	CHECKED	Muthanna Omran
QUANTITIES	BY	Ghiath Taleb-Agha	CHECKED	Muthanna Omran

<b>STATE OF CALIFORNIA</b>	
<b>DEPARTMENT OF TRANSPORTATION</b>	

<b>DIVISION OF ENGINEERING SERVICES</b>	
<b>STRUCTURE DESIGN</b>	
<b>DESIGN BRANCH 16</b>	

BRIDGE NO.	57-0857
POST MILE	20.49

**SAN DIEGO-CORONADO BAY BRIDGE  
PAINTING AND MAINTENANCE TRAVELERS  
TRAVELER DETAILS NO. 3**

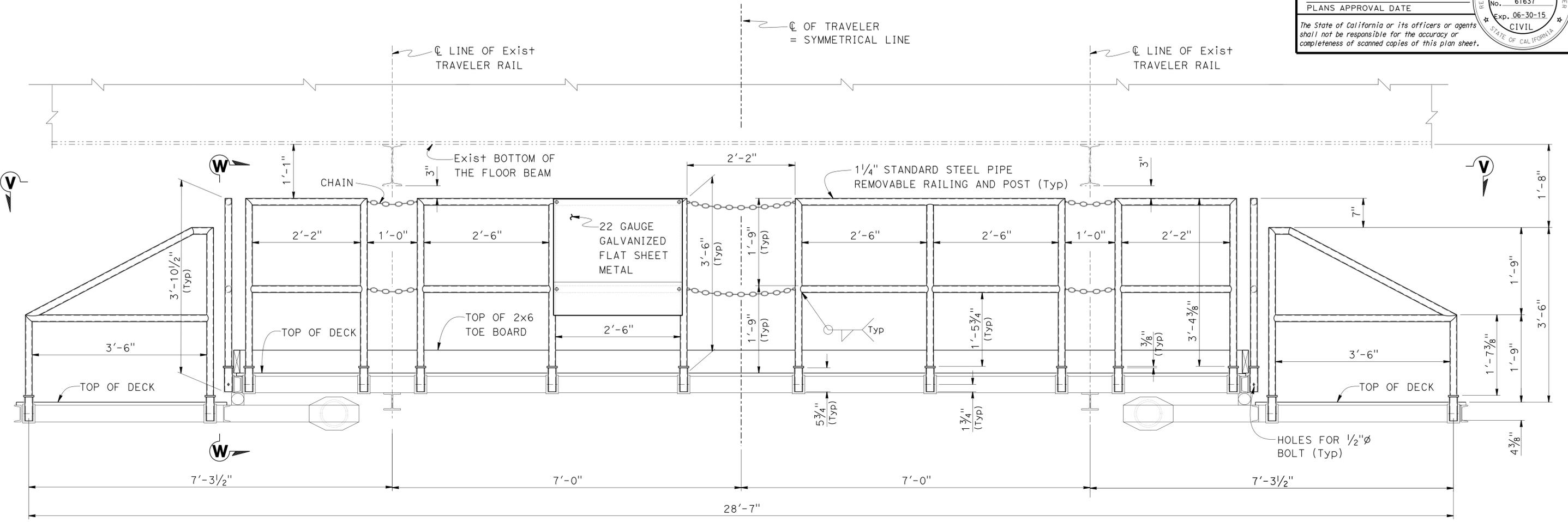
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	29	45

Muthanna S. Omrán 12-19-14  
REGISTERED CIVIL ENGINEER DATE

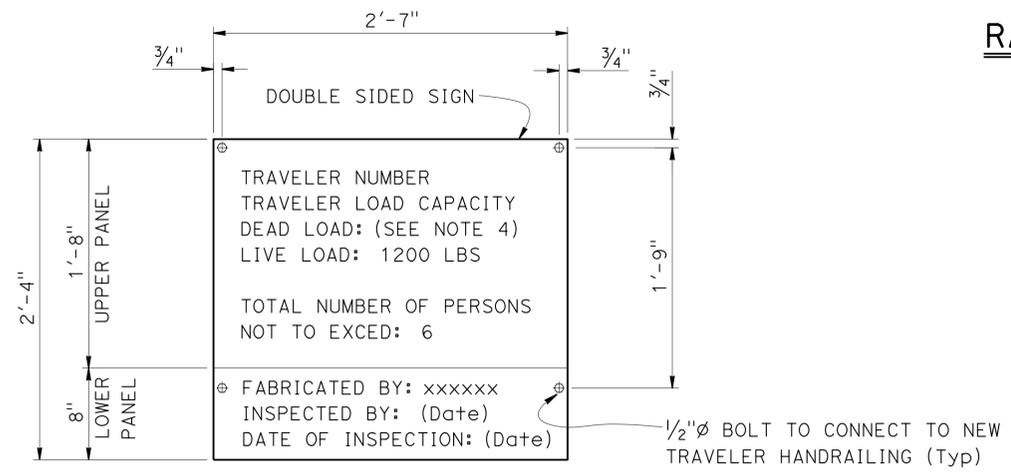
03-30-15  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
MUTHANNA OMRAN  
No. 61637  
Exp. 06-30-15  
CIVIL  
STATE OF CALIFORNIA



**RAILING ELEVATION**  
1" = 1'-0"



**LOAD SIGN DETAILS**  
1 1/2" = 1'-0"

**NOTES:**

1. See "TRAVELER RAILING DETAILS NO. 2" sheet for "VIEW V-V" and "VIEW W-W" details
2. Removable Railing field Bolt to 2" Standard steel Pipe Sleeve and lock with cotter hairpin
3. Grind all welds on reailing smooth and flush
4. Weight of Traveler obtained after shop assembly

DESIGN BY Muthanna Omrán CHECKED Ghiath Taleb-Agha DETAILS BY Min Yu CHECKED Ghiath Taleb-Agha QUANTITIES BY Ghiath Taleb-Agha CHECKED Muthanna Omrán			STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 16</b>	BRIDGE NO. 57-0857 POST MILE 20.49	<b>SAN DIEGO-CORONADO BAY BRIDGE</b> <b>PAINTING AND MAINTENANCE TRAVELERS</b> <b>TRAVELER RAILING DETAILS NO. 1</b>
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3617 PROJECT NUMBER & PHASE: 11120000701	CONTRACT NO.: 11-409304	DISREGARD PRINTS BEARING EARLIER REVISION DATES
				0 1 2 3	REVISION DATES: 03-28-14, 12-19-14, 12-22-14	SHEET 20 OF 36

FILE => 57-0857-u-miscdt18.dgn

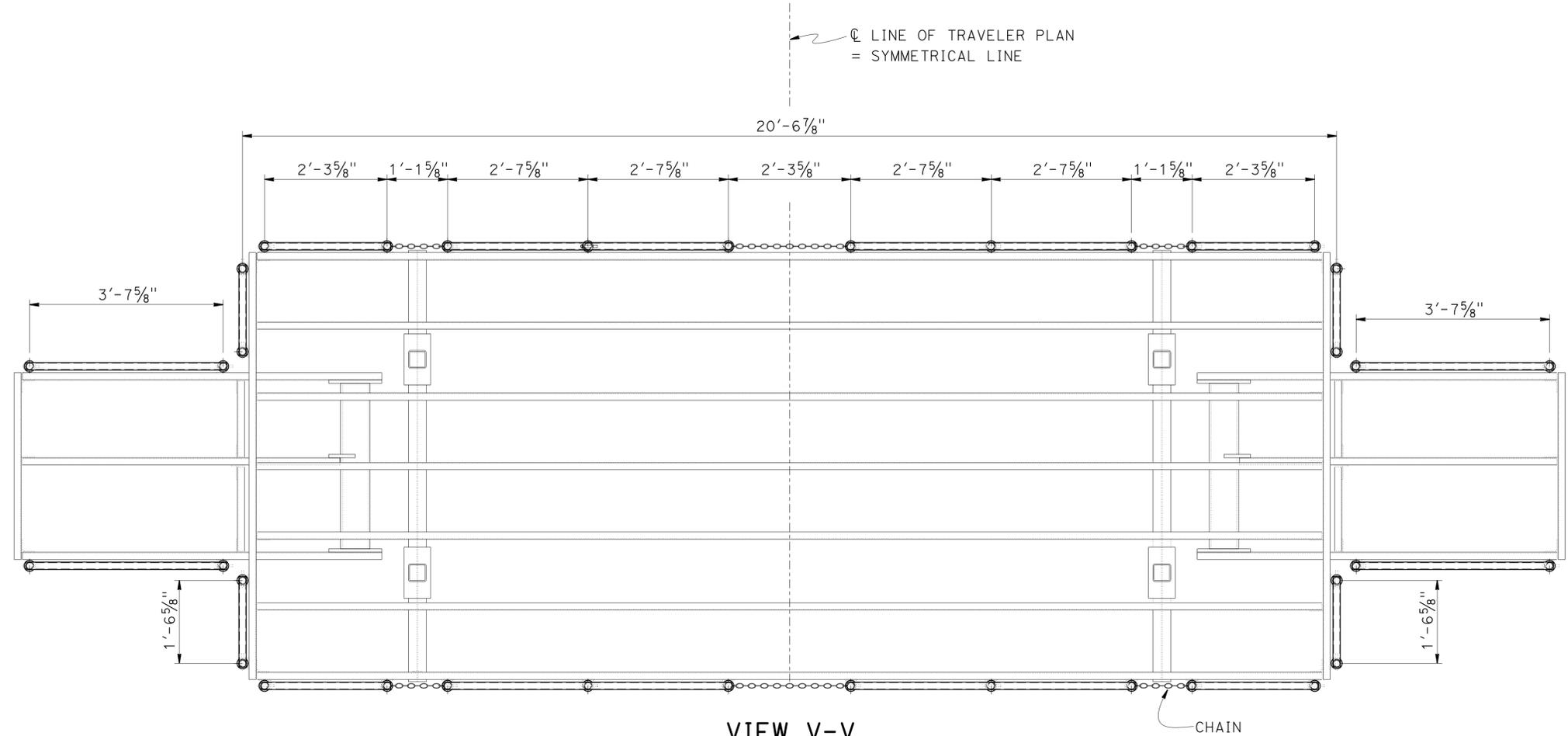
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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Muthanna S. Omeran 12-19-14  
 REGISTERED CIVIL ENGINEER DATE

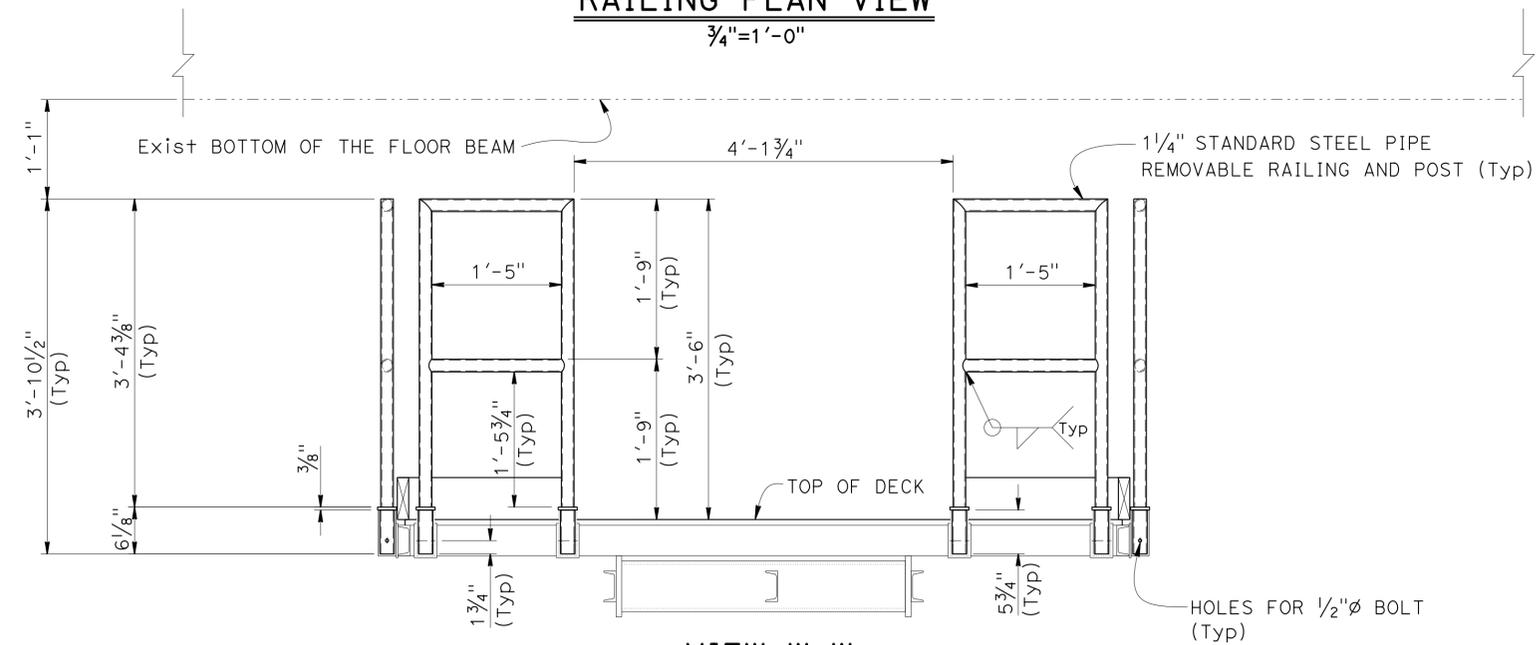
03-30-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 MUTHANNA OMRAN  
 No. 61637  
 Exp. 06-30-15  
 CIVIL  
 STATE OF CALIFORNIA

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**VIEW V-V**  
**RAILING PLAN VIEW**  
 3/4"=1'-0"



**VIEW W-W**  
 1"=1'-0"

NOTE:

Removable Railing field Bolt to 2" Standard steel Pipe Sleeve locked with cotter hairpin

DESIGN	BY Muthanna Omeran	CHECKED Ghiath Taleb-Agha
DETAILS	BY Min Yu	CHECKED Muthanna Omeran
QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omeran

<b>STATE OF CALIFORNIA</b>	
DEPARTMENT OF TRANSPORTATION	

<b>DESIGN BRANCH 16</b>	
BRIDGE NO.	57-0857
POST MILE	20.49

**SAN DIEGO-CORONADO BAY BRIDGE**  
**PAINTING AND MAINTENANCE TRAVELERS**  
**TRAVELER RAILING DETAILS NO. 2**

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	31	45

<i>Dailu</i>		12-22-14
REGISTERED CIVIL ENGINEER	DATE	

03-30-15
PLANS APPROVAL DATE

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### ABBREVIATIONS

AAD	ADHESIVE ANCHORAGE DEVICE	HD	HOLDOWN
AB	ANCHOR BOLT	Hex	HEXAGON
AC	ASPHALT CONCRETE	Horiz	HORIZONTAL
Alt	ALTERNATE	HSB	HIGH STRENGTH BOLT
APA	AMERICAN PLYWOOD ASSOCIATION	HSS	HOLLOW STRUCTURAL SECTION
APC	ALTERNATIVE PIPE CULVERT	Jt	JOINT
Bldg	BUILDING	LOL	LAYOUT LINE
Blkg	BLOCKING	LVL	LAMINATED VENEER LUMBER
BN	BOUNDARY NAILING	m	METER
Btm	BOTTOM	Max	MAXIMUM
CB	CARRIAGE BOLT	MEA	MECHANICAL EXPANSION ANCHOR
CIDH	CAST IN DRILLED HOLE	Mech	MECHANICAL
CJ	CONTROL JOINT	Mfr	MANUFACTURER
Clr	CLEAR	mm	MILLIMETER
CMU	CONCRETE MASONRY UNIT	Min	MINIMUM
Conc	CONCRETE	MIW	MALLEABLE IRON WASHER
Const	CONSTRUCTION	OC	ON CENTER
Cont	CONTINUOUS	OG	ORIGINAL GRADE
CP	COMPLETE PENETRATION WELD	OH	OPPOSITE HAND
Dbl	DOUBLE	Opt	OPTIONAL
DF	DOUGLAS FIR	P	PITCH
Dia	DIAMETER	PDF	POWER DRIVEN FASTENER
DIP	DUSTILE IRON PIPE	Plwd	PLYWOOD
DN	DIAMETER NOMINAL	PT	PRESSURE TREATED
do	DITTO	PW	PUDDLE WELD
(E)	EXISTING	PWB	PREFABRICATED WOOD I BEAM
Ea	EACH	RCP	REINFORCED CONCRETE PIPE
EL	ELEVATION	Reinf	REINFORCED, REINFORCING
Elec	ELECTRICAL	Req'd	REQUIRED
Embed	EMBEDMENT	SDSTS	SELF DRILL, SELF TAP SCREW
EN	EDGE NAIL	Sim	SIMILAR
Eq	EQUAL	SPS	STRUCTURAL PLYWOOD SHEATHING
Exp	EXPANSION	Sq	SQUARE
FDGM	FREE DRAINING GRANULAR MATERIAL	Stagg	STAGGERED
FG	FINISH GRADE	Std	STANDARD
FL	FLOW LINE	SW	STUD WELD
Fir	FLOOR	Sym	SYMMETRICAL
FN	FACE (FIELD) NAIL	T&G	TONGUE-AND-GROOVE
FOC	FACE OF CONCRETE	TN	TOE NAIL
FOM	FACE OF MASONRY	TS	TUBE STEEL
FOS	FACE OF STUD	Typ	TYPICAL
Ftg	FOOTING	UON	UNLESS OTHERWISE NOTED
Ga	GAGE	Vert	VERTICAL
Galv	GALVANIZED		
GLM	GLUE LAMINATED MEMBER		
Gyp Bd	GYPSUM BOARD		
GWT	GROUND WATER TABLE		

### SYMBOLS

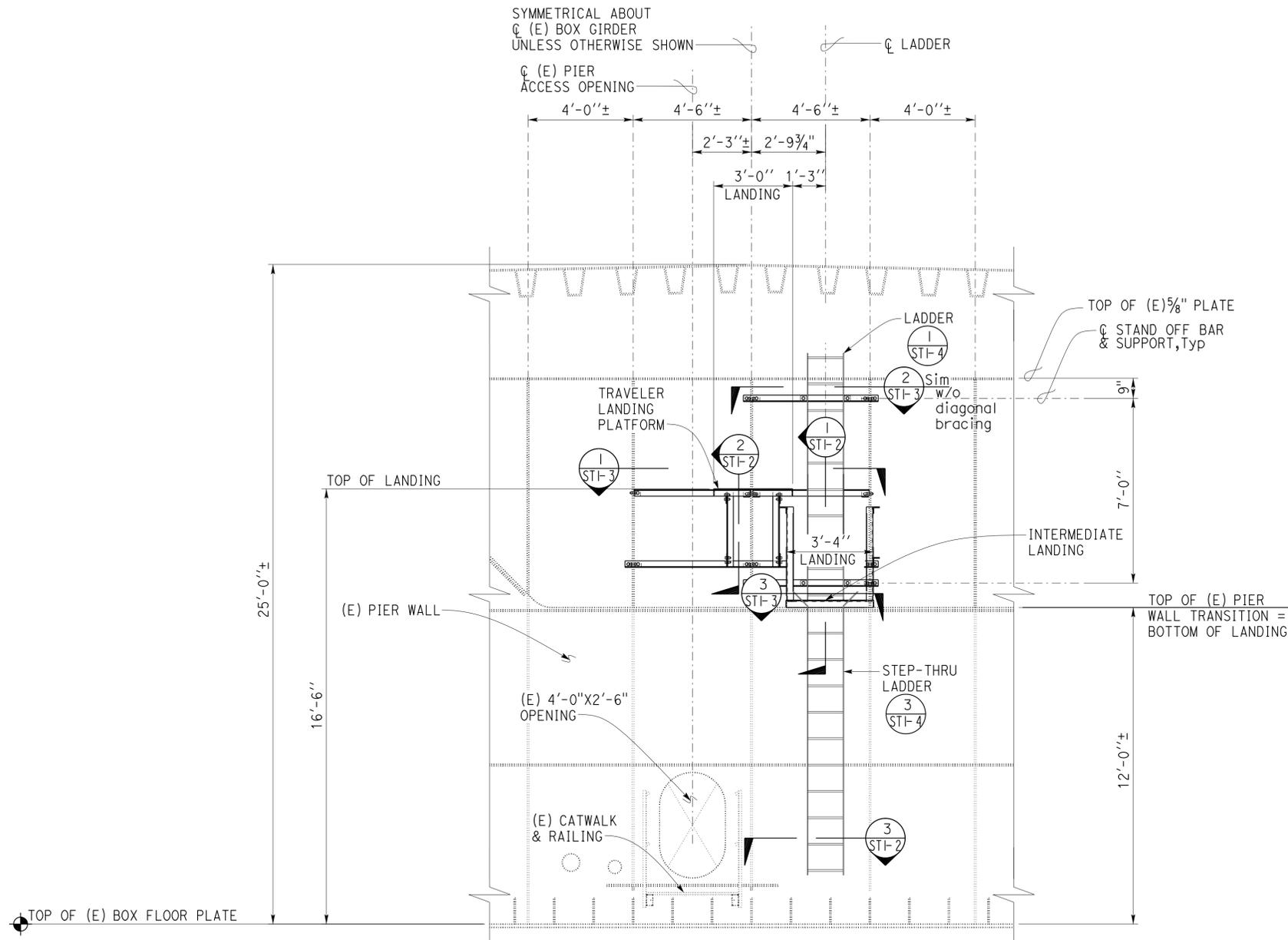
	BLOCKING IN SECTION OR ELEVATION		CMU WALL ON PLAN VIEWS
	CONTINUOUS MEMBER IN SECTION		DROPPED SLAB ON PLAN VIEWS
	END OF MEMBER		REINFORCED CONCRETE
	BEARING WALL		SAND
	SHEAR WALL		STRUCTURE BACKFILL
	LENGTH SHEARWALL SCHEDULE SYMBOL REFERENCE		STRUCTURE EXCAVATION
	GLUE LAMINATED MEMBER SECTION		ORIGINAL GROUND
	NORTH ARROW		LIMITS OF STRUCTURE BACKFILL (SHOWN ON PLAN VIEWS)
	PARTIAL SECTION CUT		FREE DRAINING GRANULAR MATERIAL
	FULL SECTION CUT		BOTTOM OF FOOTING
	REVISION CALLOUT		ELEVATION OR WORKING POINT
	GRID LINE INDICATOR		EXISTING FEATURES
	CENTER LINE		HOLDOWN, Typ (MANUFACTURERS ARE THOSE NOTED IN THE ORDER SHOWN)
	STATION LINE		FRAME CONNECTOR (MANUFACTURERS ARE THOSE NOTED IN THE ORDER SHOWN)
	STEEL PLATE		DETAIL NUMBER OR NOTE NUMBER ADDITIONAL REFERENCE (IF REQUIRED) SHEET NUMBER
	DIAMETER		
	SQUARE		

NOTE: SPECIFIC DETAILS OR NOTES ON OTHER SHEETS SHALL PREVAIL OVER STANDARD DETAILS AND NOTES ON THIS SHEET

FILE NO. XS-25-0		DESIGN BY <i>Sean Samuel</i>		CHECKED <i>Joe Glendon</i>		APPROVED <i>R.C. Travis</i>		BRIDGE NO.		SAN DIEGO-CORONADO BAY BRIDGE		SHEET	
DRAWING DATE 1-04		DETAILS BY <i>Peter F. von Savoye, II</i>		CHECKED <i>Sean Samuel</i>		DESIGN SUPERVISOR		POST MILE		PAINTING AND MAINTENANCE TRAVELERS		ST-1	
SUBMITTED BY <i>Sean Samuel</i>		DESIGN ENGINEER								LEGEND			
TAEMWW Imperial Rev. 7/10		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT PROJECT NUMBER & PHASE 3599 11120000701		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)		SHEET OF 22 36	
						EA xxxxxx				1-16-04 04-27-12 08-24-12 11-18-14		s10_01.dgn	

01-APR-2015 08:54

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	32	45
<i>Dai Lu</i> REGISTERED CIVIL ENGINEER			12-22-14 DATE		
03-30-15 PLANS APPROVAL DATE					
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**1** EXISTING PIER 19 & 20 ELEVATION  
 SCALE 3/8" = 1' - 0"

- A LANDING DESIGN NOTES**
- Design : Bridge Design Specifications 2004 AASHTO with interims and revisions by Caltrans.
    - Loads : Landings : Live Load 100 PSF
    - Miscellaneous Metal ( Working Stress Design ) : 36,000 PSI unless otherwise noted

- B DETAIL NOTES**
- Metal Work Notes :
    - All metal work shall be hot dip galvanized after fabrication
    - Secure metal to metal connections shown as / with a 5/8"Ø x 1 1/2" hex head machine bolt, lock washer and hex nut unless otherwise noted.
    - All lock washers shall be helical spring lock washers.
    - All Railing and Ladders shall have smooth edges.
    - Fiberglass Landing Grate:
      - Grate shall be molded Fiberglass of one piece construction.
      - Grate surface shall be non-slip.
      - Grate shall be a square mesh pattern with bi-directional rating
      - Spacing shall be 1 1/2" x 1 1/2" x 1 1/2" Deep
  - Grating Anchorage:
    - Grate shall be anchored to supports with 1/4"Ø threaded stud and "Saddle Clip" type fastener, as recomended by the manufacturer. Fasteners shall be installed , maximum 6" from ends, with 2 minimum per fixed grate support.
  - Grating Cuts:
    - All field fabricated grating cuts shall be coated with vinyl ester resin, by the contractor, in accordance with the manufacturer's instructions.

Note  
 The Contractor must verify all controlling field dimensions before ordering or fabricating any material.

DESIGN	BY Dai Lu	CHECKED
DETAILS	BY P. von Savoye	CHECKED
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 ARCHITECTURAL AND STRUCTURAL DESIGN

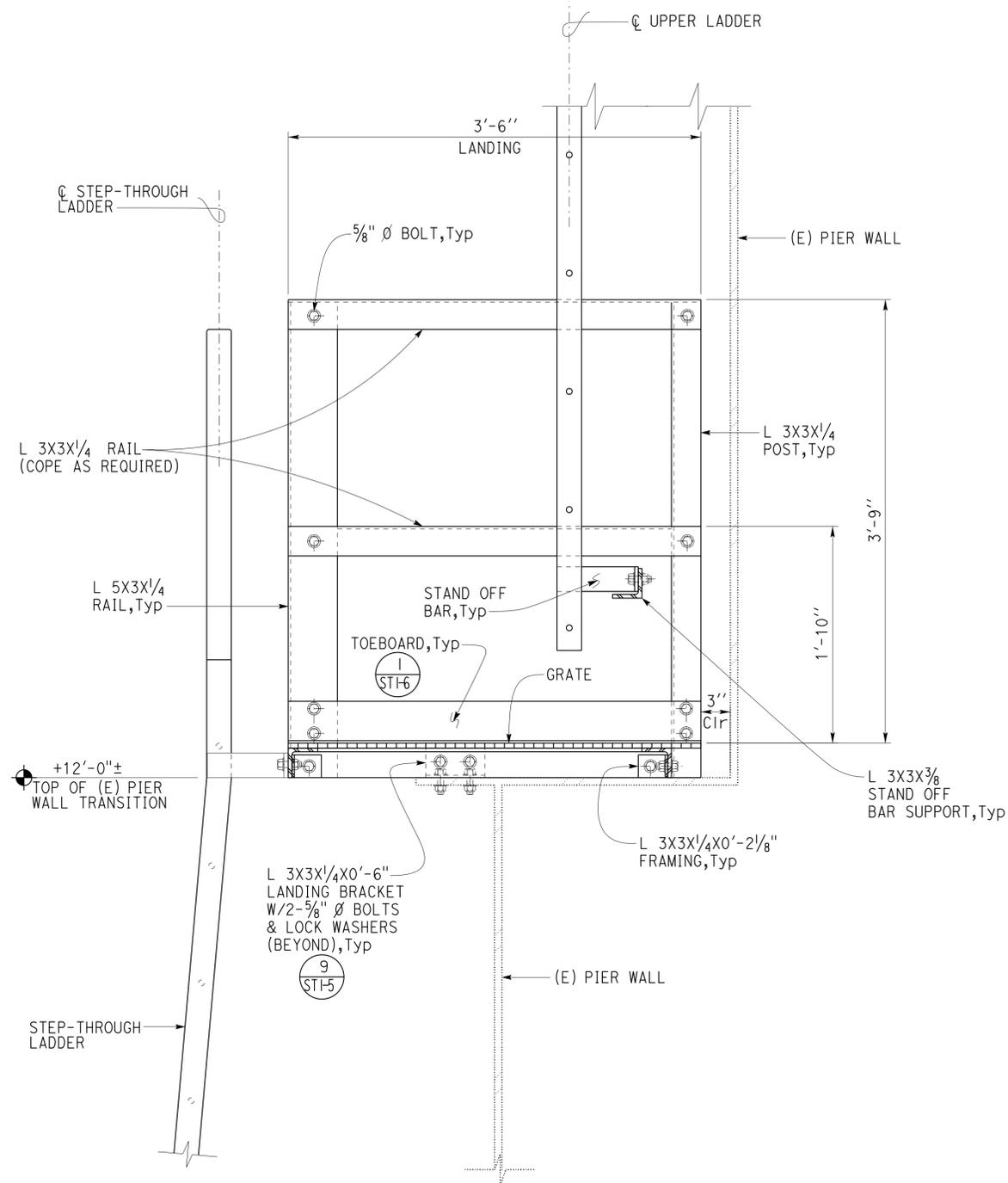
BRIDGE NO.  
 57-0857  
 POST MILE

SAN DIEGO-CORONADO BAY BRIDGE  
 PAINTING AND MAINTENANCE TRAVELERS

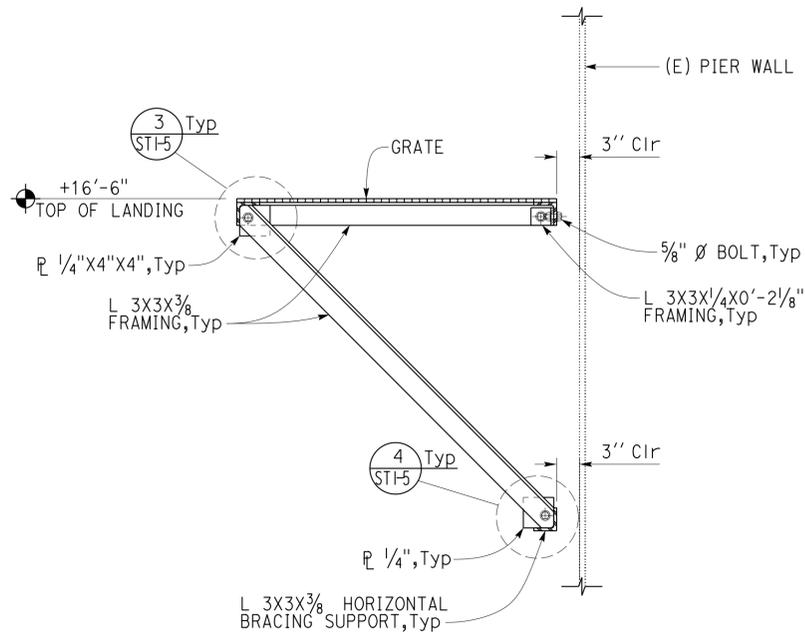
SHEET  
 ST1-1

EXISTING PIER ELEVATIONS

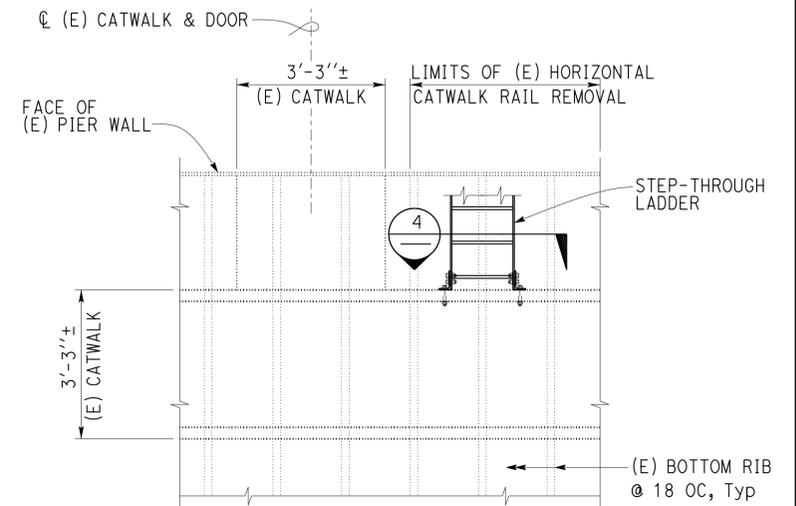
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	33	45
<i>Dai Lu</i> REGISTERED CIVIL ENGINEER			12-22-14 DATE		
03-30-15 PLANS APPROVAL DATE					
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**1 INTERMEDIATE LANDING SECTION**  
Scale 1 1/2" = 1' - 0"

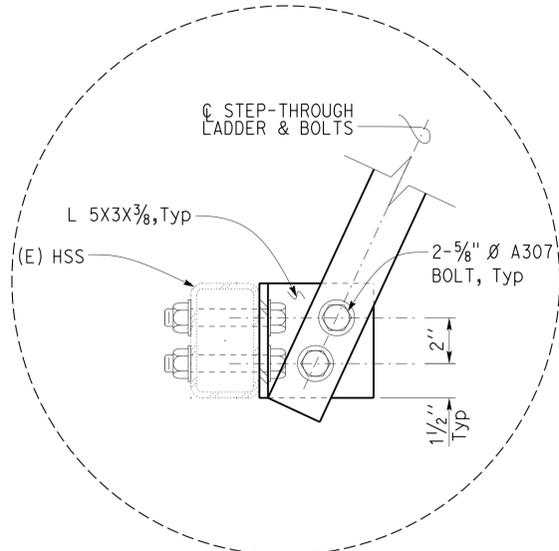


**2 UPPER LANDING SECTION**  
Scale 1" = 1' - 0"

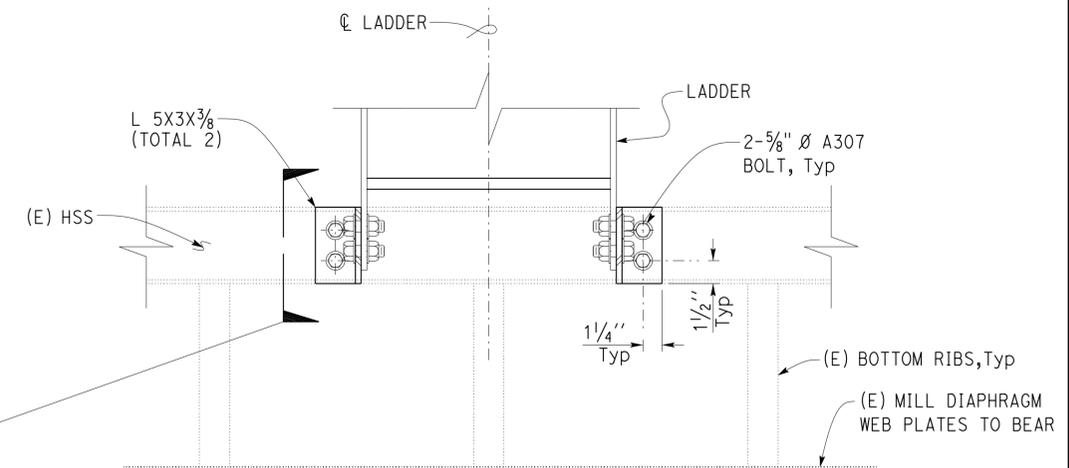


Note: Existing catwalk rails not shown for clarity.

**3 EXISTING CATWALK PLAN**  
Scale 1/2" = 1' - 0"



**4 STEP-THROUGH LADDER CONNECTION DETAIL**  
Scale 2" = 1' - 0"



Note  
The Contractor must verify all controlling field dimensions before ordering or fabricating any material.

DESIGN	BY Dai Lu	CHECKED
DETAILS	BY P. von Savoye	CHECKED
QUANTITIES	BY	CHECKED

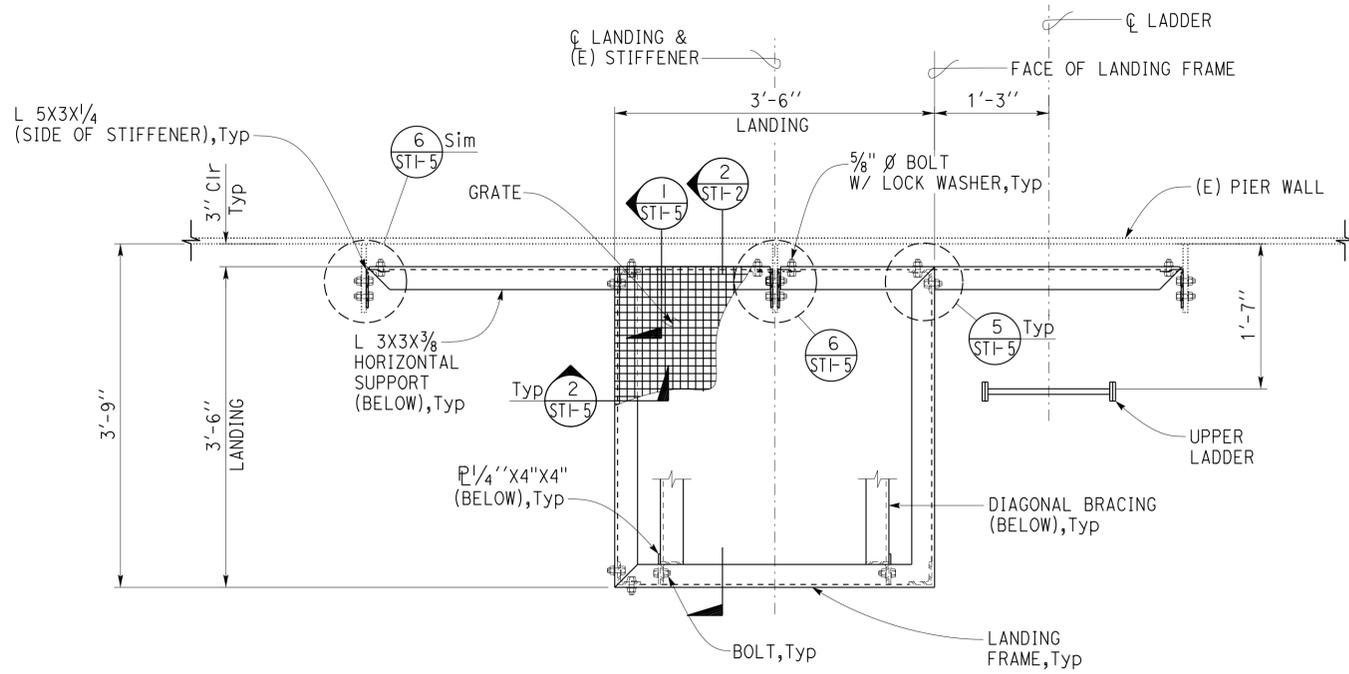
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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ARCHITECTURAL AND STRUCTURAL DESIGN

BRIDGE NO. 57-0857  
POST MILE

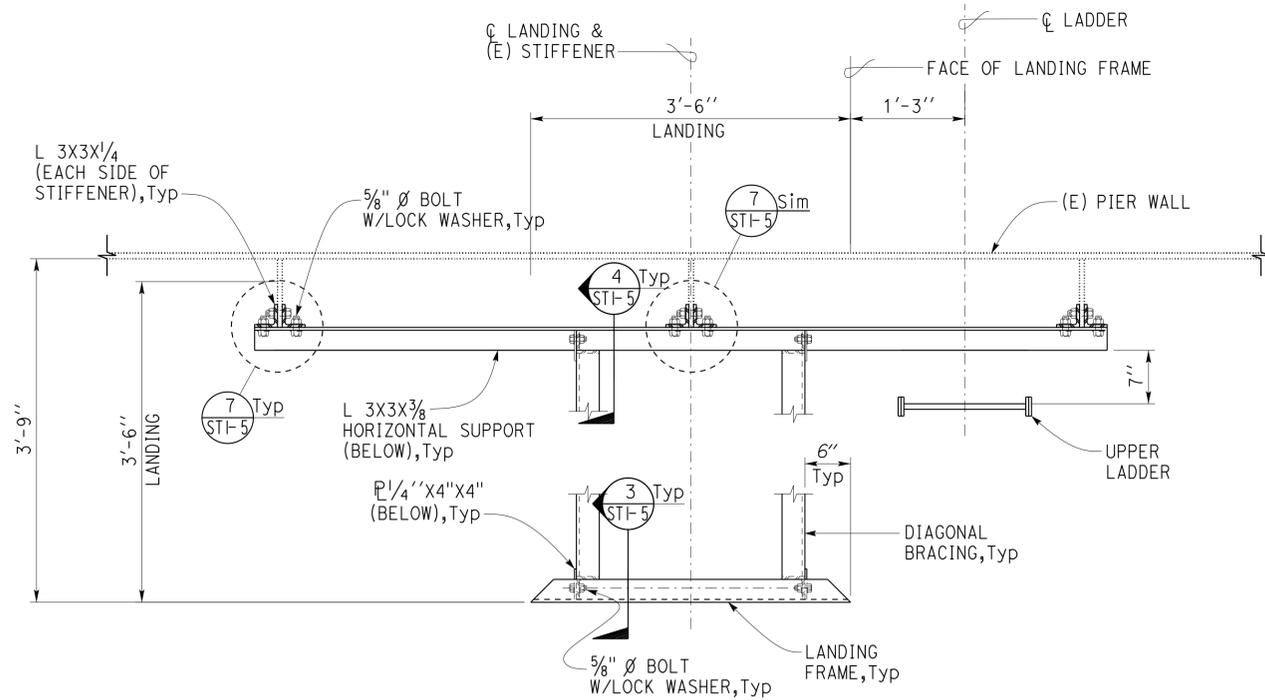
SAN DIEGO-CORONADO BAY BRIDGE  
PAINTING AND MAINTENANCE TRAVELERS  
REMOVAL & LANDING PLANS

SHEET ST1-2 OF 36



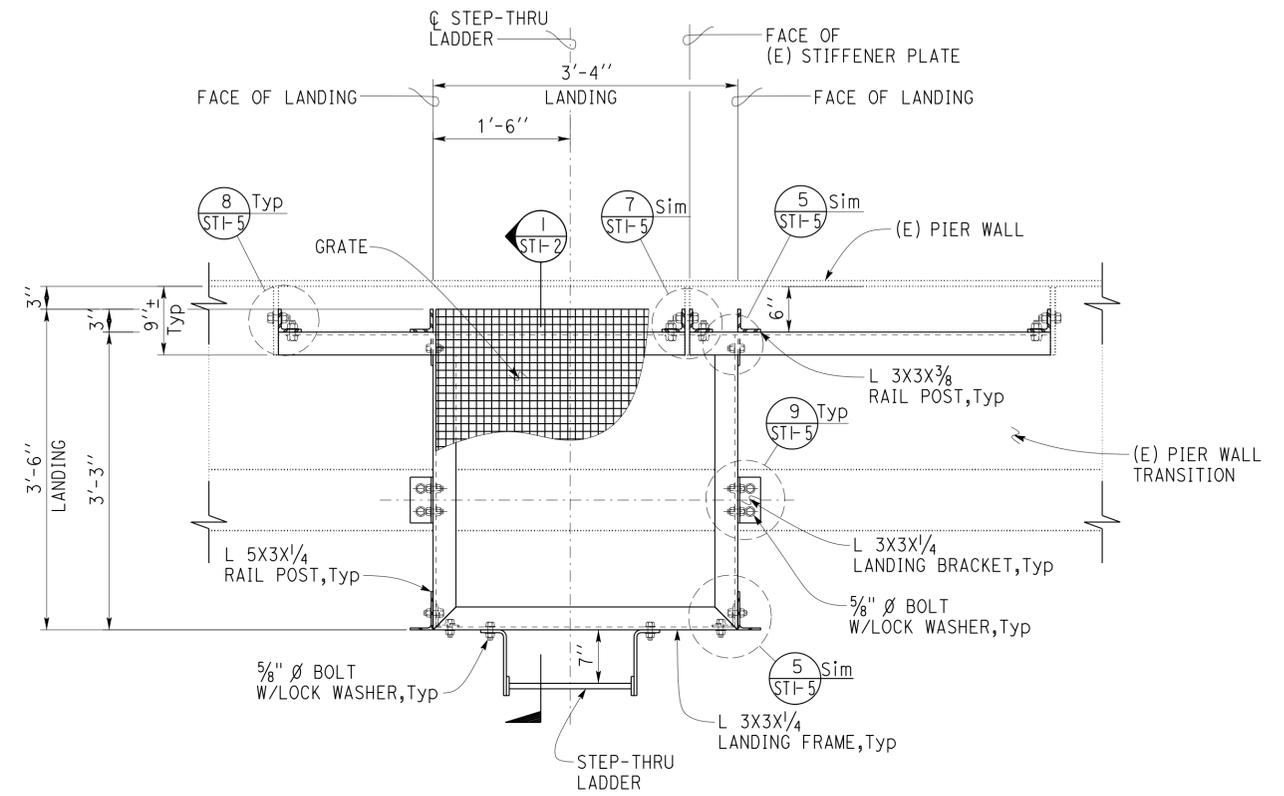
Note:  
For diagonal bracing details, see (2)

**1** EXISTING PIER 19 & 20 UPPER LANDING PLATFORM  
SCALE 1" = 1' - 0"



**2** EXISTING PIER 19 & 20 UPPER LANDING DIAGONAL BRACING PLAN  
SCALE 1" = 1' - 0"

Note  
The Contractor must verify all controlling field dimensions before ordering or fabricating any material.



Notes:  
1. For details not shown, see (1) Sim  
2. Upper ladder not shown for clarity.  
3. Railing & toeboard not shown for clarity.

**3** EXISTING PIER 19 & 20 INTERMEDIATE LANDING PLATFORM  
SCALE 1" = 1' - 0"

DESIGN	BY Dai Lu	CHECKED
DETAILS	BY P. von Savoye	CHECKED
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
ARCHITECTURAL AND STRUCTURAL DESIGN

BRIDGE NO. 57-0857  
POST MILE

**SAN DIEGO-CORONADO BAY BRIDGE PAINTING AND MAINTENANCE TRAVELERS**

EXISTING PIER 19 & 20 LANDING PLANS

SHEET OF  
**ST1-3**

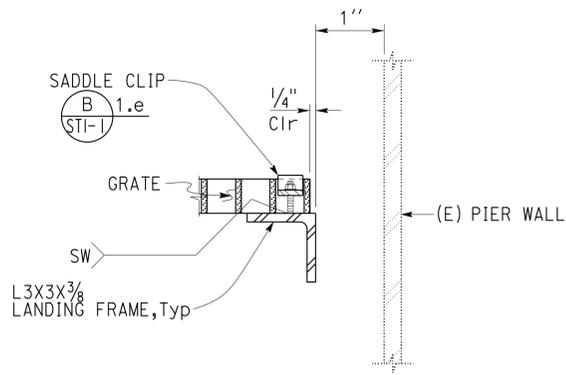


DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	36	45

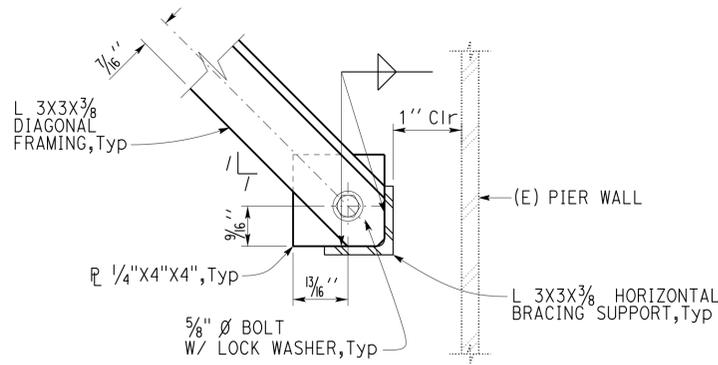
*Dai Lu*  
 REGISTERED CIVIL ENGINEER  
 DATE 12-22-14



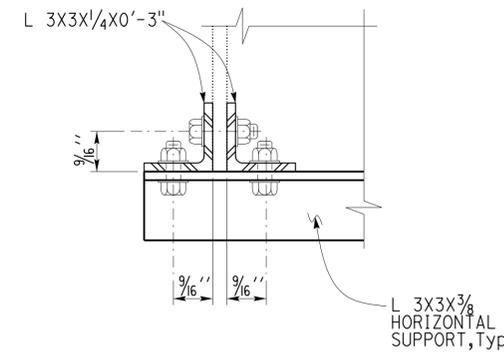
03-30-15  
 PLANS APPROVAL DATE  
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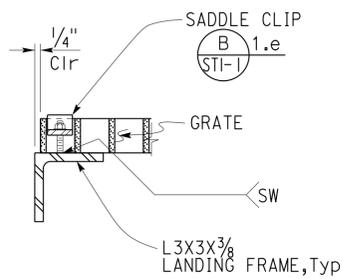
**1** GRATE DETAIL  
 Scale 3" = 1' - 0"



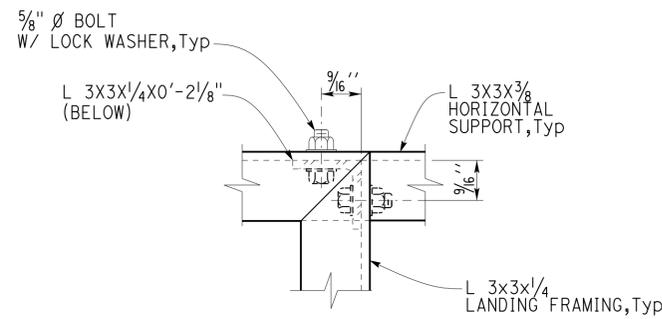
**4** DIAGONAL BRACE CONNECTION DETAIL  
 Scale 3" = 1' - 0"



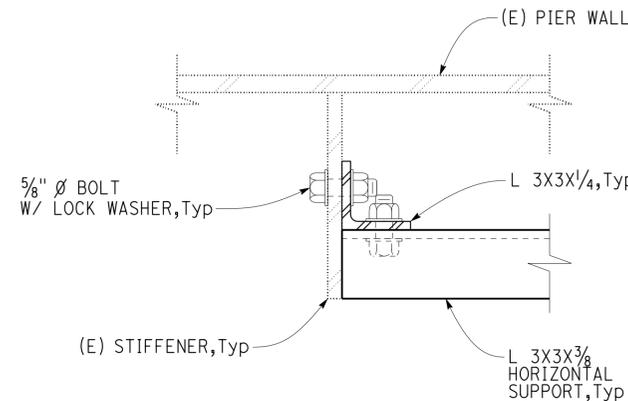
**7** HORIZONTAL SUPPORT DETAIL  
 Scale 3" = 1' - 0"



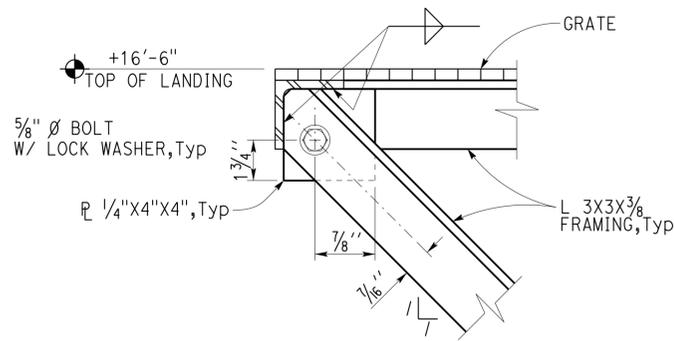
**2** GRATE DETAIL  
 Scale 3" = 1' - 0"



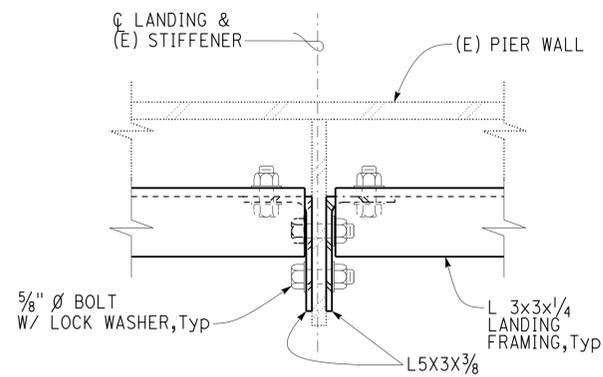
**5** LANDING DETAIL  
 Scale 3" = 1' - 0"



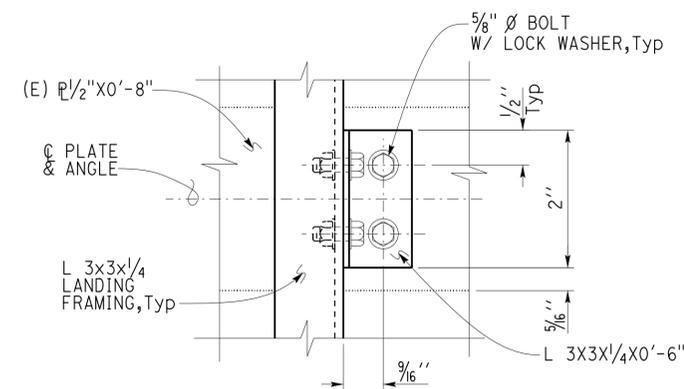
**8** HORIZONTAL SUPPORT DETAIL  
 Scale 3" = 1' - 0"



**3** DIAGONAL BRACE CONNECTION DETAIL  
 Scale 3" = 1' - 0"



**6** LANDING DETAIL  
 Scale 3" = 1' - 0"



**9** LANDING SUPPORT CONNECTION DETAIL  
 Scale 3" = 1' - 0"

Note  
 The Contractor must verify all controlling field dimensions before ordering or fabricating any material.

DESIGN	BY Dai Lu	CHECKED
DETAILS	BY P. von Savoye	CHECKED
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES  
 ARCHITECTURAL AND STRUCTURAL DESIGN

BRIDGE NO.	57-0857	SAN DIEGO-CORONADO BAY BRIDGE PAINTING AND MAINTENANCE TRAVELERS	SHEET OF ST1-5
POST MILE			
MISCELLANEOUS FRAMING DETAILS NO. I			

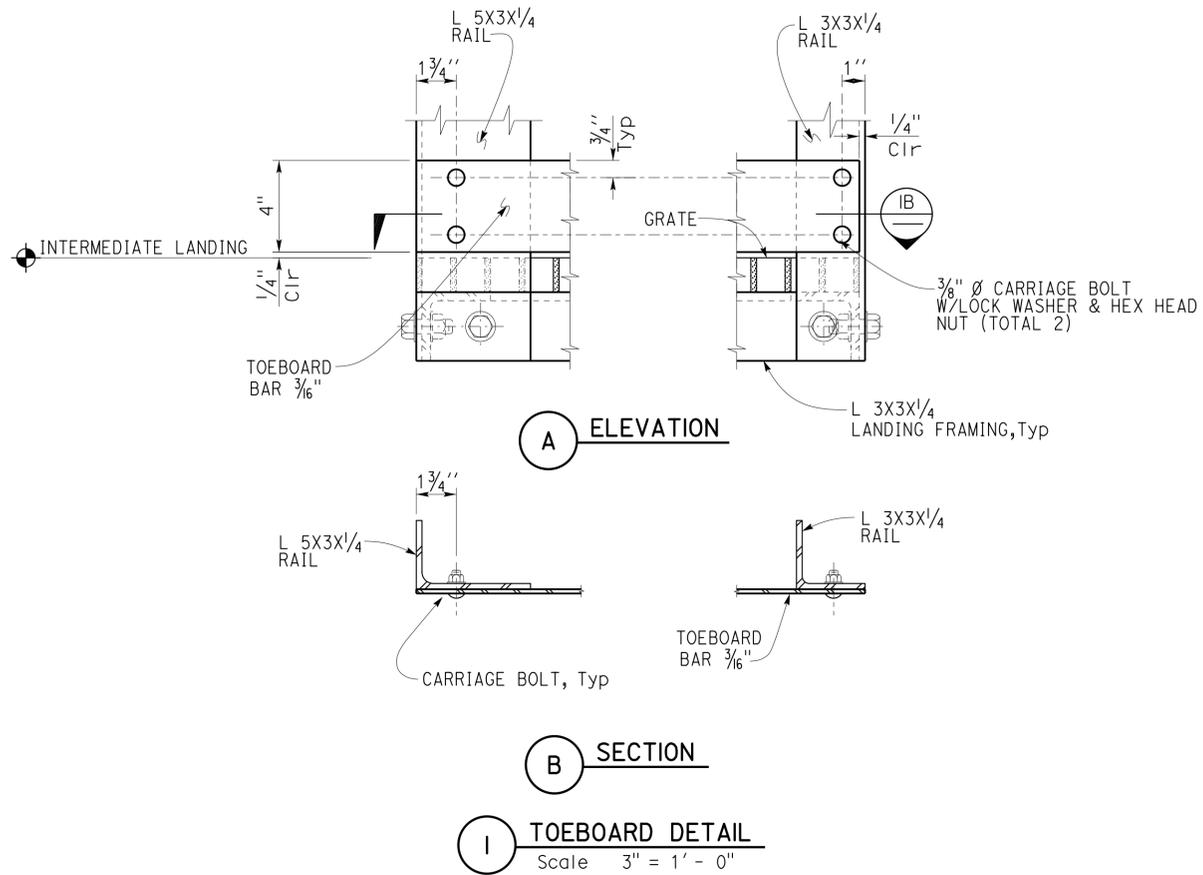
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	37	45

*Dai Lu*  
 REGISTERED CIVIL ENGINEER  
 12-22-14  
 DATE

03-30-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 No. 67416  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

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**Note**  
 The Contractor must verify all controlling field dimensions before ordering or fabricating any material.

DESIGN	BY Dai Lu	CHECKED
DETAILS	BY P. von Savoye	CHECKED
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 ARCHITECTURAL AND STRUCTURAL DESIGN

BRIDGE NO.	57-0857
POST MILE	

**SAN DIEGO-CORONADO BAY BRIDGE**  
**PAINTING AND MAINTENANCE TRAVELERS**  
 LANDING FRAMING DETAILS NO. 2

SHEET **ST1-6** OF

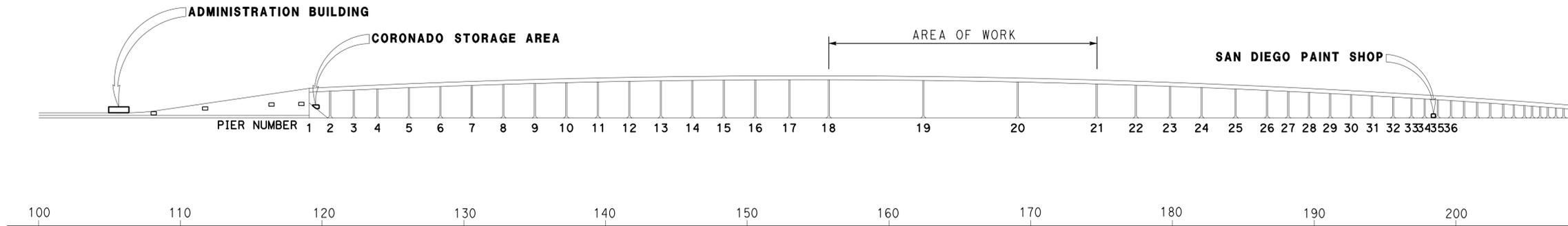
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	38	45

Christopher M. Faria 09-22-14  
 REGISTERED MECHANICAL ENGINEER DATE

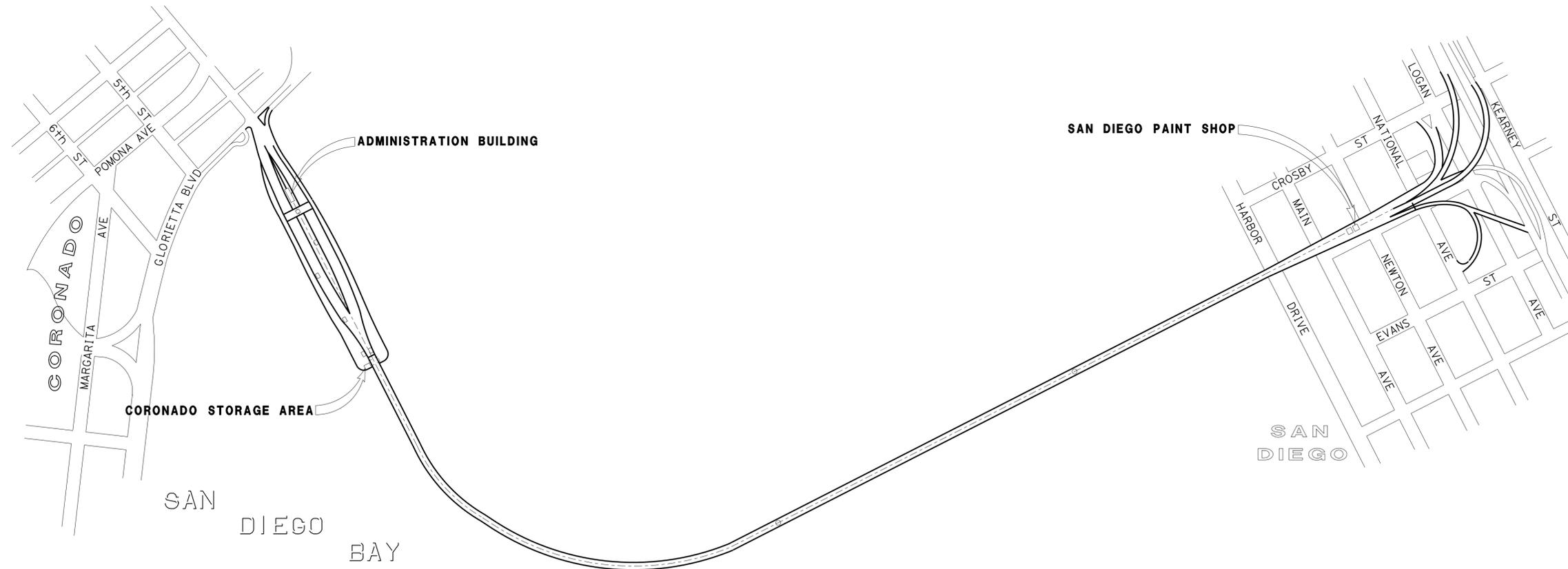
03-30-15  
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
 CHRISTOPHER FARIA  
 No. M30419  
 Exp. 12-31-15  
 MECH  
 STATE OF CALIFORNIA



**ELEVATION**



**SITE PLAN**

NO SCALE



APPROVED FOR MECHANICAL WORK ONLY

Design Supervisor: *Rudy Sarte*  
 Design Engineer: *Jack Wheeler*

DESIGN	BY Chria Faria	CHECKED Jack Wheeler
DETAILS	BY Rudy Sarte	CHECKED Jack Wheeler
QUANTITIES	BY Chria Faria	CHECKED Jack Wheeler

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN

BRIDGE No. 57-0857  
 POST MILE

SAN DIEGO CORONADO BAY BRIDGE  
 PAINTING & MAINTENANCE TRAVELER  
 SITE PLAN

SHEET M-0  
 OF 36



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	39	45

*Christopher M. Faria* 09-22-14  
 REGISTERED MECHANICAL ENGINEER DATE

03-30-15  
 PLANS APPROVAL DATE

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**PLUMBING**

- B — BRAKE TROLLEY AIR PIPE
- A — COMPRESSED AIR PIPE
- DTF — DRIVE TROLLEY FORWARD AIR PIPE
- DTR — DRIVE TROLLEY REVERSE AIR PIPE
- D — DRAIN PIPE

**MISCELLANEOUS**

- ∠ ANGLE
- ⊕ CENTERLINE
- ∅ DIAMETER
- SECTION/ELEVATION BY LETTERS SHEET NUMBER
- DETAILS BY NUMBER SHEET NUMBER

**PIPE FITTINGS AND VALVES**

- CAP, THREADED
- ELBOW, TURNED DOWN
- ELBOW, TURNED UP
- REDUCER, CONCENTRIC
- PRESSURE GAUGE (WITH GAGE COCK AND SNUBBER)
- STRAINER
- UNION
- UNION, INSULATING
- VALVE, BALL
- VALVE, CHECK
- VALVE, GAS
- VALVE, GATE
- VALVE, SAFETY RELIEF
- VALVE, PRESSURE REDUCING
- VALVE, PRESSURE/TEMPERATURE
- WATER HAMMER ARRESTOR

**MECHANICAL ABBREVIATIONS:**

- |        |   |      |   |        |                              |
|--------|---|------|---|--------|------------------------------|
| A/C    | AIR CONDITIONING                          | Ga   | GAUGE                                     | R      | RADIUS                       |
| ABS    | ACRYLONTIRLE BUTADIENE STYRENE            | Gal. | GALVANIZED                                | RH     | RADIANT HEATER               |
| AC     | ASPHALT CONCRETE                          | GH   | GROUND HYDRANT                            | Reg    | REGISTER                     |
| AD     | AIR DROP                                  | GV   | GLOBE VALVE                               | RCP    | REINFORCED CONCRETE PIPE     |
| AP     | ALTERNATIVE PIPE                          | GPM  | GALLONS PER MINUTE                        | RV     | RELIEF VALVE                 |
| ATF    | AUTOMATIC TRANSMISSION FLUID              | GSP  | GALVANIZED STEEL PIPE                     | Req.   | REQUIRED                     |
|        |   | GV   | GATE VALVE                                | RA     | RETURN AIR                   |
| BFP    | BACKFLOW PREVENTER                        | GW   | GAS WATER HEATER                          | RD     | ROOF DRAIN                   |
| Bldg.  | BUILDING                                  | Gyp. | GYPSUM                                    |        |                              |
| BT     | BRAKE TROLLEY                             |      |   | SDS    | SANITARY DUMP STATION        |
| BTU    | BRITISH THERMAL UNIT                      | H    | HEIGHT                                    | SS     | SANITARY SEWER               |
| BTUH   | BRITISH THERMAL UNIT PER HOUR             | HB   | HYDRANT BOX                               | Sch    | SCHEDULE                     |
| BV     | BALANCING VALVE                           | H/C  | HOT WATER, HIGH PRESSURE CLEANER          | S/S    | SERVICE SINK                 |
|        |   | HF   | HOSE FAUCET                               | SHR    | SHOWER                       |
| C      | CONDUIT                                   | HVAC | HEATING, VENTILATING AND AIR CONDITIONING | Std.   | STANDARD                     |
| Cap.   | CAPACITY                                  | HW   | HOT WATER                                 | S.P.   | STATIC PRESSURE              |
| CHLF   | COMBINATION HEAT LAMP, LIGHT AND FAN UNIT | HZ   | HERTZ                                     | Sta.   | STATION                      |
| CI     | CAST-IRON                                 |      |   | SA     | SUPPLY AIR                   |
| CO     | CLEANOUT                                  | ID   | INSIDE DIAMETER                           | SF     | SUPPLY FAN                   |
| COTF   | CLEANOUT THROUGH FLOOR                    | IE   | INVERT ELEVATION                          |        |                              |
| COTG   | CLEANOUT THROUGH GRADE                    | In   | INCH                                      | TCV    | TEMPERATURE CONTROL VALVE    |
| CV     | CHECK VALVE                               | IPS  | INTERNATIONAL PIPE STANDARD               | TP     | TRAP PRIMER                  |
| CW     | COLD WATER                                |      |   | Tot.   | TOTAL                        |
| CFM    | CUBIC FEET PER MINUTE                     | KS   | KITCHEN SINK                              | TS     | TIME SWITCH                  |
|        |   | Kw   | KILOWATT                                  | Typ.   | TYPICAL                      |
| D      | DEPTH                                     | LAV  | LAVATORY                                  | UH     | UNIT HEATER                  |
| Di.    | DIAMETER                                  | LPG  | LIQUIFIED PETROLEUM GAS                   | UR     | URINAL                       |
| DWV    | DRAIN/WASTE/VENT                          | L/s  | LIITERS PER SECOND                        |        |                              |
| DB     | DRY BULB                                  |      |   | V      | VENT                         |
| DF     | DRINKING FOUNTAIN                         | Max. | MAXIMUM                                   | VAC    | VOLTAGE, ALTERNATING CURRENT |
| DH     | DUCT HEATER                               | MH   | MANHOLE                                   | VR     | VENT RISER                   |
| DT     | DRIVE TROLLEY                             | Min. | MINIMUM                                   | VTR    | VENT THRU ROOF               |
| DTF    | DRIVE TROLLEY FORWARD                     | MS   | MOP SINK                                  |        |                              |
| DTR    | DRIVE TROLLEY TRVERSE                     |      |   | W      | WIDTH                        |
|        |   | (N)  | NEW                                       | W/     | WITH                         |
| (E)    | EXISTING                                  | NIC  | NOT IN CONTRACT                           | W/O    | WITHOUT                      |
| EA     | EXHAUST AIR                               | No.  | NUMBER                                    | WB     | WET BULB                     |
| EEW    | EMERGENCY EYEWASH AND SHOWER              | NPT  | NATIONAL PIPE THREAD                      | WC     | WATER CLOSET                 |
| EF     | EXHAUST FAN                               | NST  | NATIONAL STANDARD THREAD                  | W.C.   | WATER COLUMN                 |
| Elev.  | ELEVATION                                 | NPS  | NOMINAL PIPE SIZE                         | W.H.   | WALL HYDRANT                 |
| Elect. | ELECTRICAL                                |      |   | W.H.A. | WATER HAMMER ARRESTOR        |
| ESP    | EXTERNAL STATIC PRESSURE                  | OA   | OUTSIDE AIR                               | WLS    | WATER LEVEL SWITCH           |
| EWC    | ELECTRIC WATER COOLER                     | OC   | ON CENTER                                 | WP     | WEATHERPROOF                 |
| EWH    | ELECTRIC WATER HEATER                     | OD   | OUTSIDE DIAMETER                          | WSI    | WASH SINK                    |
|        |   | OG   | ORIGINAL GROUND                           | WSP    | WELDED STEEL PIPE            |
| °F     | FARENHEIT                                 |      |   |        |                              |
| FC     | FLEXIBLE CONNECTION                       | Ph   | PHASE                                     |        |                              |
| FD     | FLOOR DRAIN                               | POC  | POINT OF CONNECTION                       |        |                              |
| FDC    | FIRE DEPARTMENT CONNECTION                | PVC  | POLYVINYL CHLORIDE                        |        |                              |
| FE     | FIRE EXTINGUISHER                         | PCC  | PORTLAND CEMENT CONCRETE                  |        |                              |
| FG     | FINISH GRADE                              | PSI  | POUNDS PER SQUARE INCH                    |        |                              |
| FL     | FLOW LINE                                 | PRV  | PRESSURE REDUCING VALVE                   |        |                              |
| FH     | FIRE HYDRANT                              |      |   |        |                              |
| FS     | FLOW SWITCH                               |      |   |        |                              |
| FTR    | FLUE THRU ROOF                            |      |   |        |                              |

APPROVED FOR MECHANICAL WORK ONLY

DESIGN	BY	Chria Faria	CHECKED	Jack Wheeler	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE No.	<b>SAN DIEGO CORONADO BAY BRIDGE PAINTING &amp; MAINTENANCE TRAVELER</b>	SHEET <b>M-1</b> OF	
	DETAILS	BY	Rudy Sarte	CHECKED			Jack Wheeler			57-0857
	QUANTITIES	BY	Chria Faria	CHECKED			Jack Wheeler			POST MILE

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

UNIT: 3580 CONTRACT No.: 409301 PROJECT NUMBER & PHASE: 11120000701

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 02-03-14, 03-25-14, 04-21-14, 09-22-14

SHEET 30 OF 36

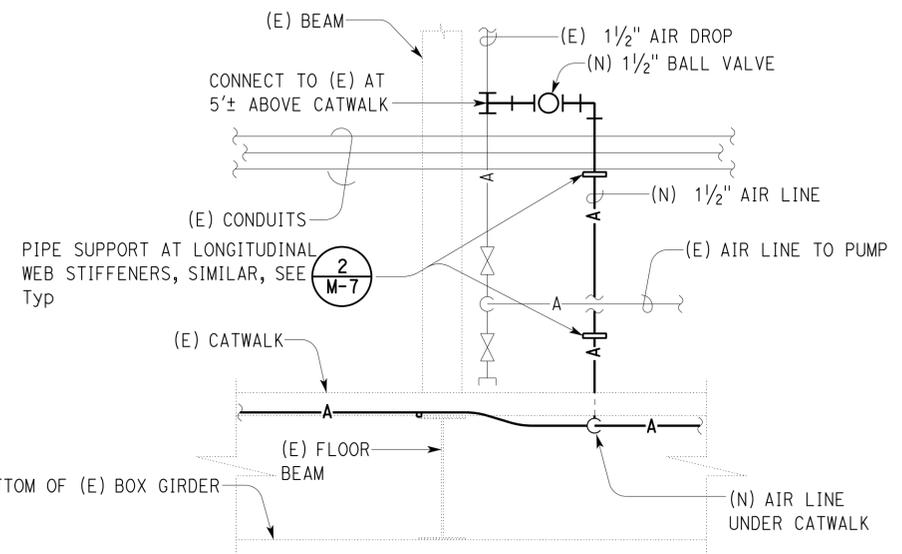
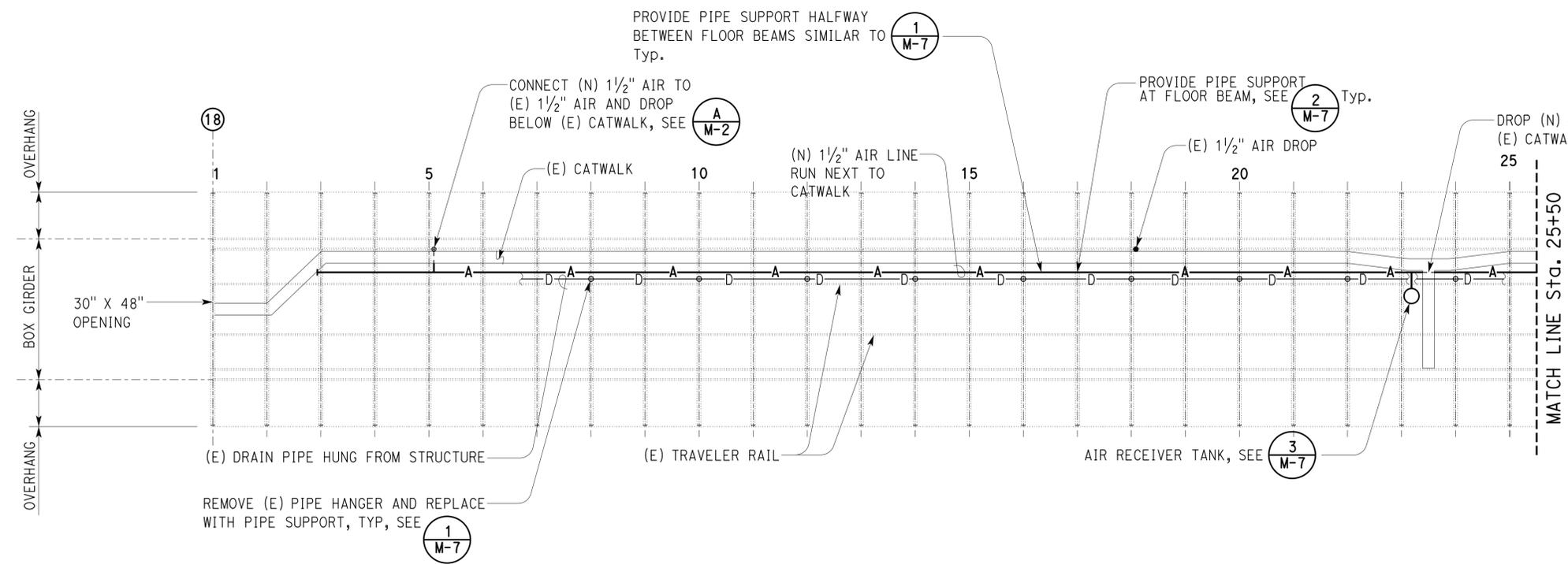
TAEWW Imperial - CCSC Rev. 01/13

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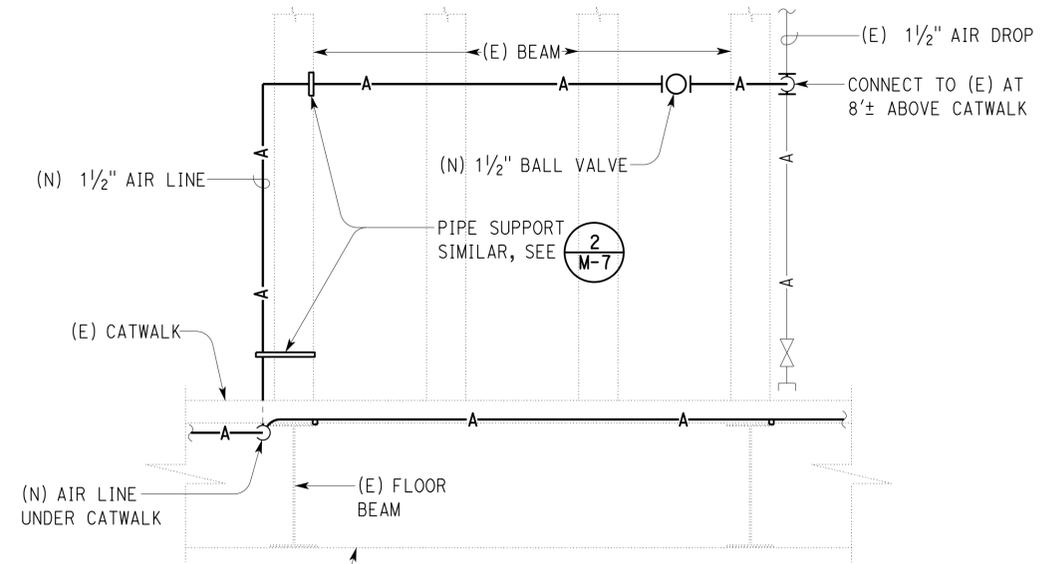
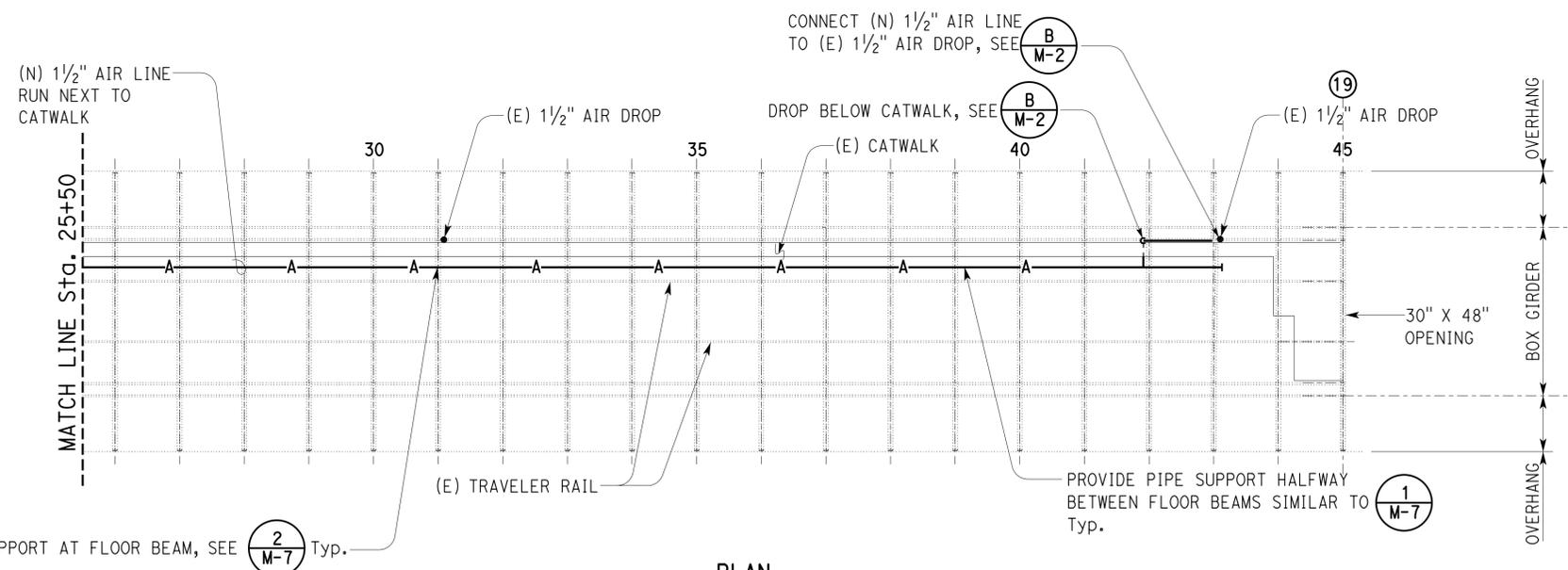
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	40	45

Christopher M. Faria 09-22-14  
 REGISTERED MECHANICAL ENGINEER DATE  
 03-30-15  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
**CHRIS FARIA**  
 No. M30419  
 Exp. 12-31-15  
 MECH  
 STATE OF CALIFORNIA



**A ELEVATION**  
NO SCALE



**B ELEVATION**  
NO SCALE

**PLAN**  
**SPAN 18**

1" = 20'-0"

NOTES:

- The distance from Pier 18 to 19 is 660'.
- Provide Air Riser with Quick Coupling on new 1/2" Air Line at 30' Max. from ends of Box Girder and 50' Max between Air Risers. See (4) M-7
- See sheet M-5 for traveler piping and trolleys.

APPROVED FOR MECHANICAL WORK ONLY

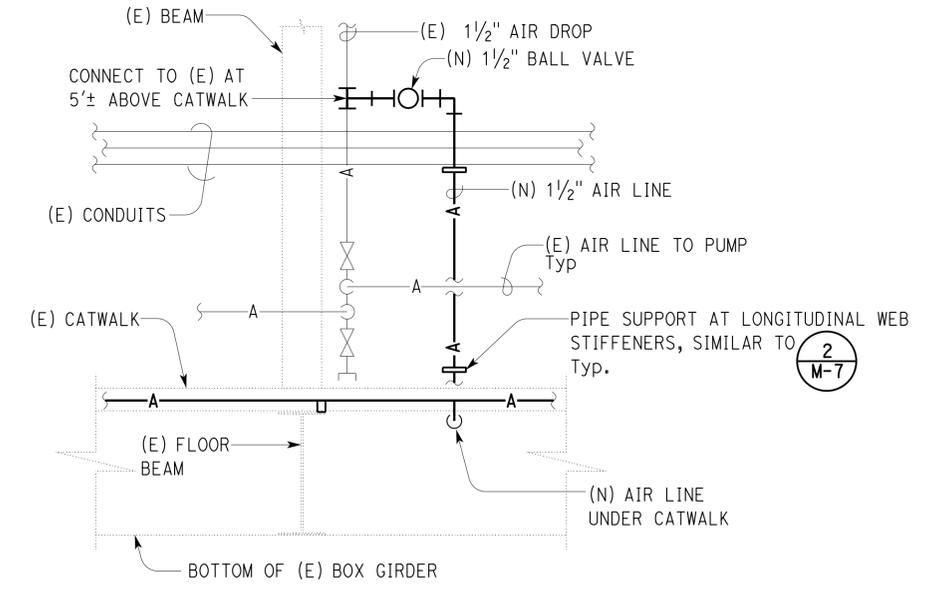
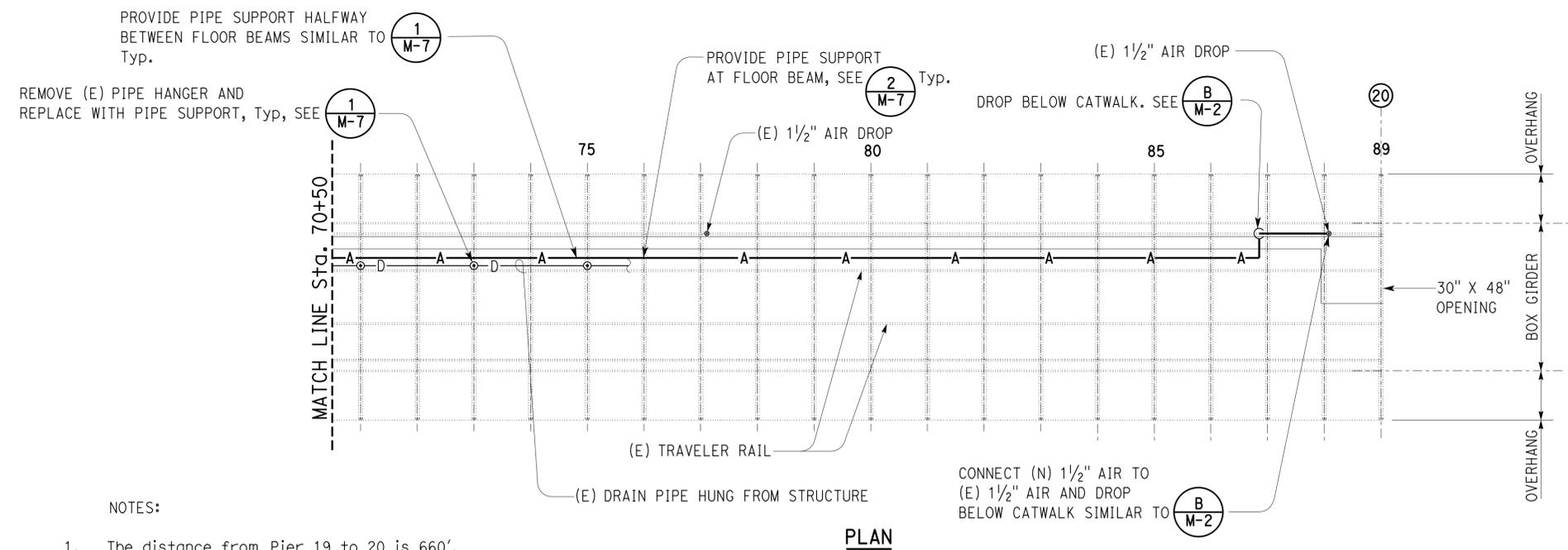
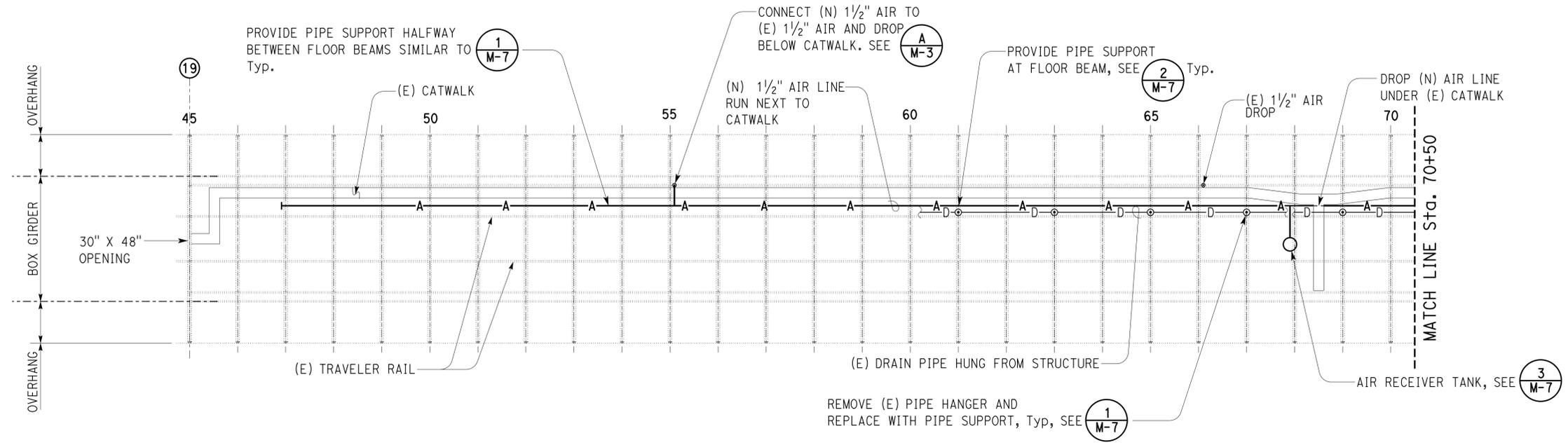
DESIGN	BY	Chria Faria	CHECKED	Jack Wheeler	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE No. 57-0857 POST MILE	SAN DIEGO CORONADO BAY BRIDGE PAINTING & MAINTENANCE TRAVELER CHANNEL SPAN PIER 18 TO 19	SHEET M-2
	DETAILS	BY	Rudy Sarte	CHECKED					
QUANTITIES	BY	Chria Faria	CHECKED	Jack Wheeler	UNIT: 3580 CONTRACT No.: 409301 PROJECT NUMBER & PHASE: 11120000701		DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET OF 31 36

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3  
 REVISION DATES (PRELIMINARY STAGE ONLY): 02-03-14, 03-25-14, 04-24-14, 09-22-14  
 TAEWW Imperial - CCSC Rev. 01/13  
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	41	45

Christopher M. Faria 09-22-14  
 REGISTERED MECHANICAL ENGINEER DATE  
 03-30-15  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
**CHRIS FARIA**  
 No. M30419  
 Exp. 12-31-15  
 MECH  
 STATE OF CALIFORNIA



**A ELEVATION**  
NO SCALE

NOTES:

- The distance from Pier 19 to 20 is 660'.
- Provide Air Riser with Quick Coupling on new 1/2" Air Line at 30' Max. from ends of Box Girder and 50' Max between Air Risers. See (4 M-7) for Air Riser Details.
- See sheet M-5 for traveler piping and trolleys.

**PLAN**  
**SPAN 19**  
1" = 20'-0"

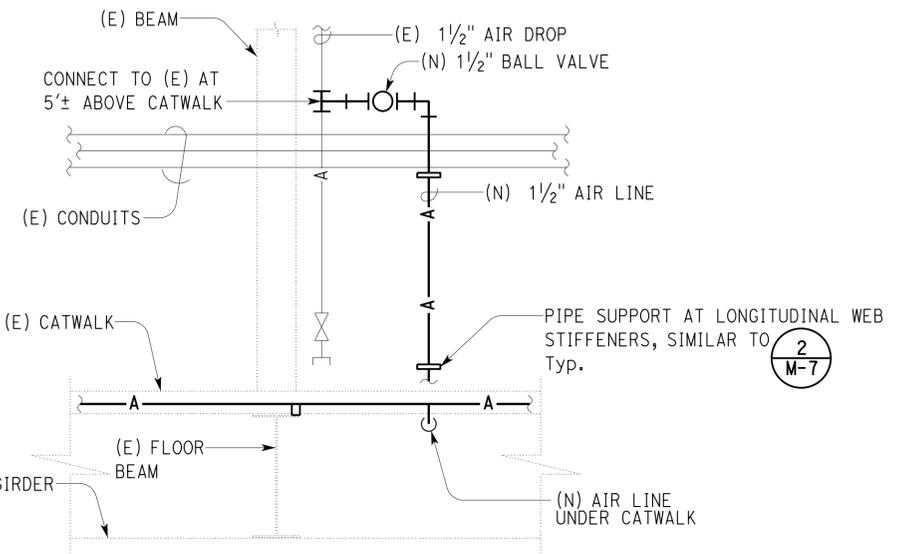
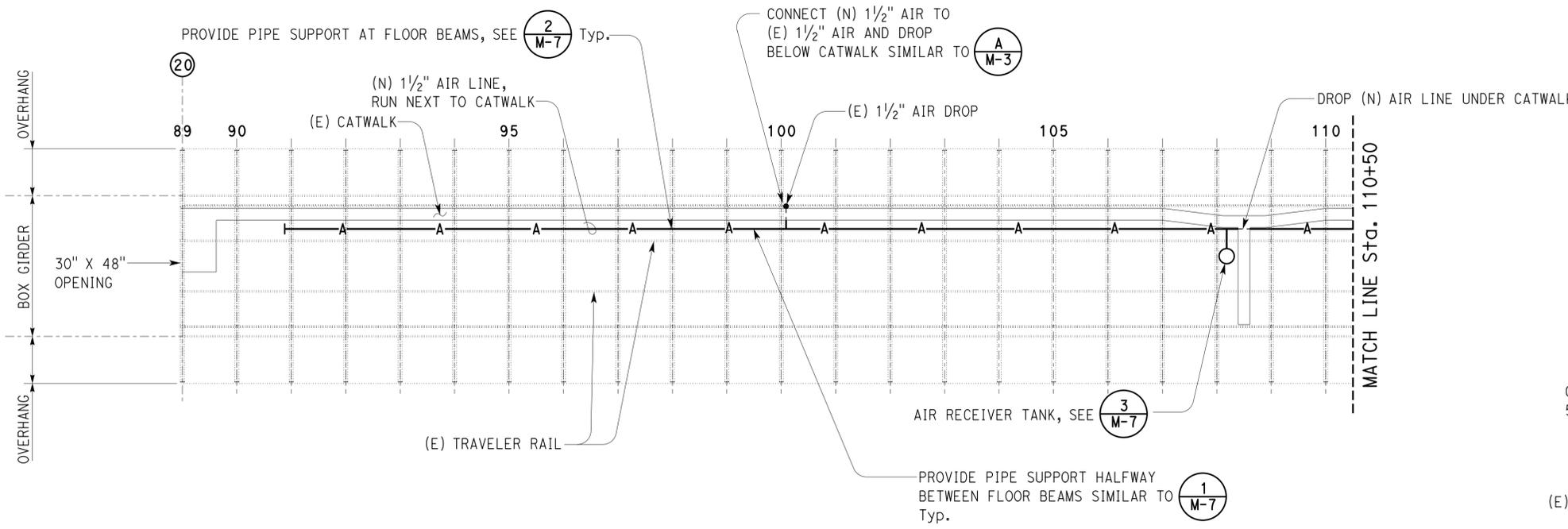
DESIGN	BY	Chria Faria	CHECKED	Jack Wheeler	BRIDGE No. 57-0857	SAN DIEGO CORONADO BAY BRIDGE PAINTING & MAINTENANCE TRAVELER	SHEET <b>M-3</b>	
	DETAILS	BY	Rudy Sarte	CHECKED				Jack Wheeler
QUANTITIES	BY	Chria Faria	CHECKED	Jack Wheeler	POST MILE	CHANNEL SPAN PIER 19 TO 20		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3580 CONTRACT No.: 409301 PROJECT NUMBER & PHASE: 11120000701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
							32 36	

TAEWW Imperial - CCSC Rev. 01/13  
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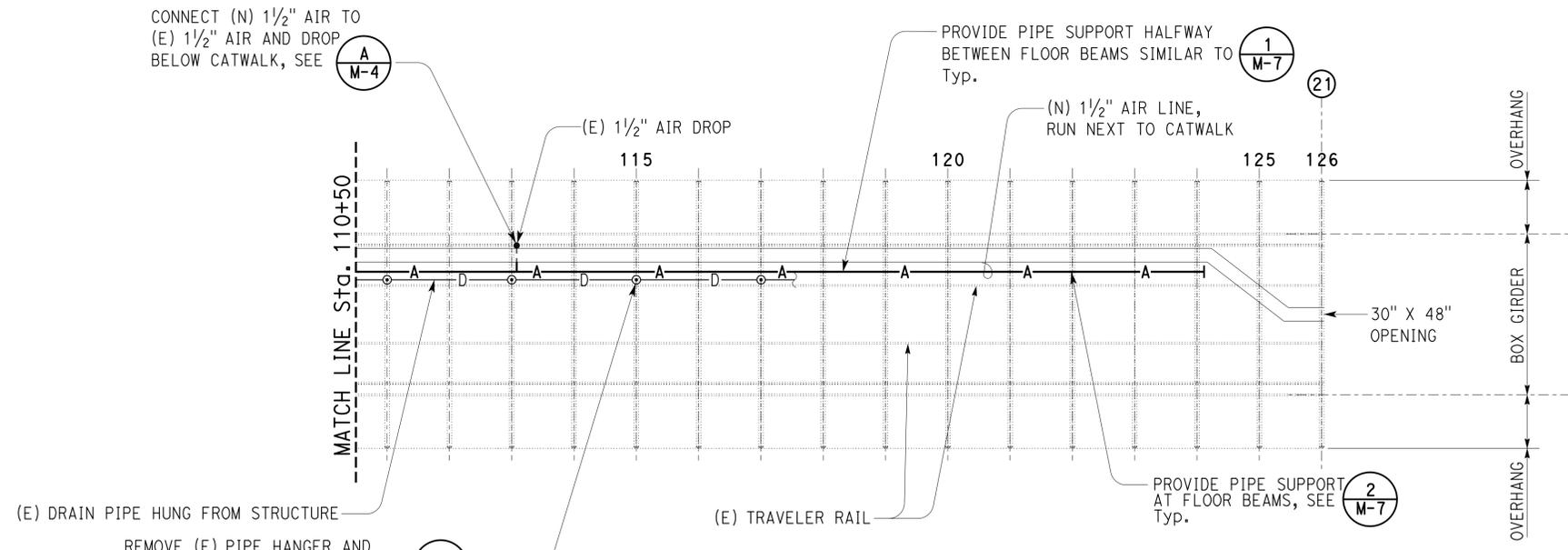
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	42	45

Christopher M. Faria 09-22-14  
 REGISTERED MECHANICAL ENGINEER DATE  
 03-30-15  
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REGISTERED PROFESSIONAL ENGINEER  
 CHRIS FARIA  
 No. M30419  
 Exp. 12-31-15  
 MECH  
 STATE OF CALIFORNIA



**A ELEVATION**  
NO SCALE



**PLAN**  
**SPAN 20**

1" = 20'-0"

**NOTES:**

- The distance from Pier 20 to 21 is 560'.
- Provide Air Riser with Quick Coupling on new 1/2" Air Line at 30' Max. from ends of Box Girder and 50' Max. between Air Risers. See **4 M-7**.
- See sheet M-5 for traveler piping and trolleys.

APPROVED FOR MECHANICAL WORK ONLY

DESIGN	BY Chria Faria	CHECKED Jack Wheeler
DETAILS	BY Rudy Sarte	CHECKED Jack Wheeler
QUANTITIES	BY Chria Faria	CHECKED Jack Wheeler

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN

BRIDGE No. 57-0857  
POST MILE

SAN DIEGO CORONADO BAY BRIDGE  
PAINTING & MAINTENANCE TRAVELER  
CHANNEL SPAN PIER 20 TO 21

SHEET M-4 OF 33



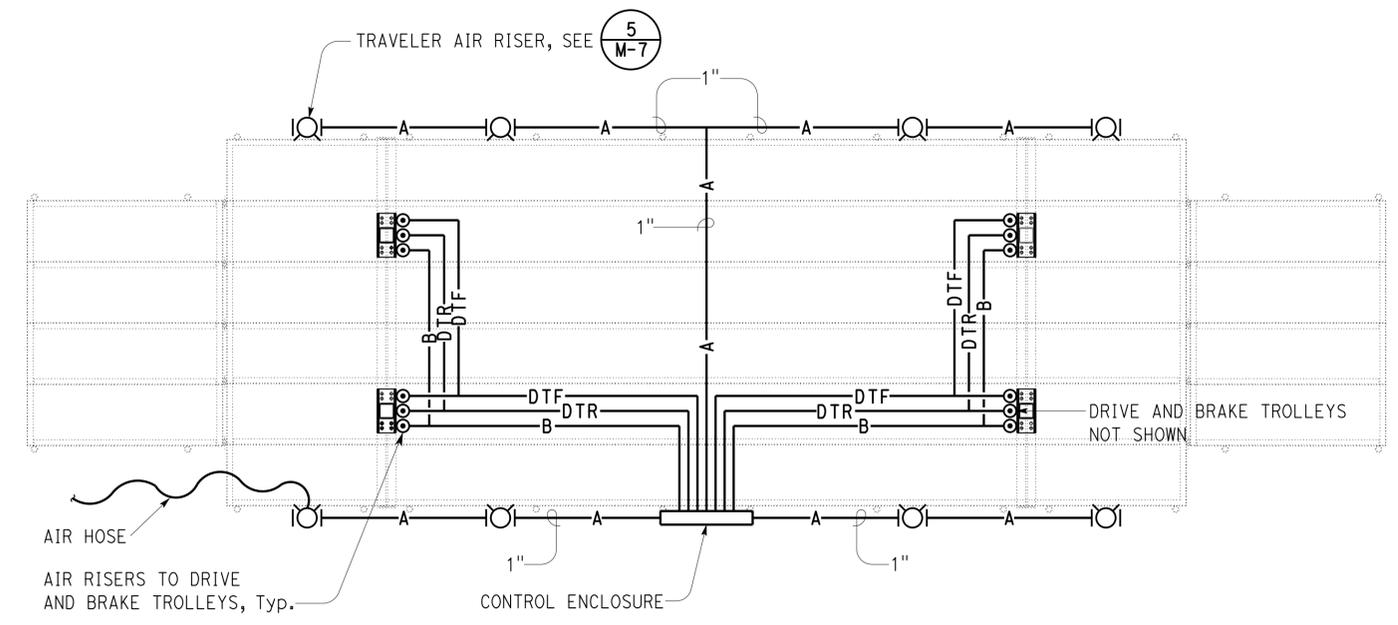
REVISION DATES (PRELIMINARY STAGE ONLY)	
02-03-14	03-25-14
04-21-14	09-22-14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	43	45

Christopher M. Faria 09-22-14  
 REGISTERED MECHANICAL ENGINEER DATE  
 03-30-15  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 CHRIS FARIA  
 No. M30419  
 Exp. 12-31-15  
 MECH  
 STATE OF CALIFORNIA

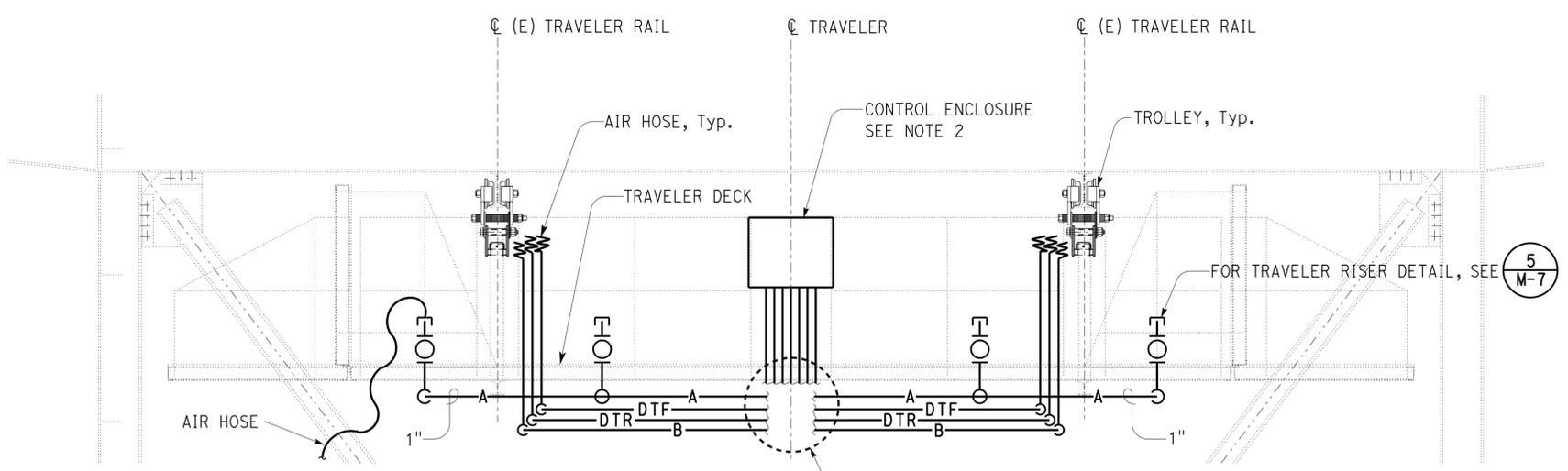
- Notes
- All piping and mechanical components shown here occur at three different travelers in three different box girders.
  - Mount control enclosure on traveler railing with stainless steel fasteners



**TRAVELER PLAN**

1/2" = 1'-0"

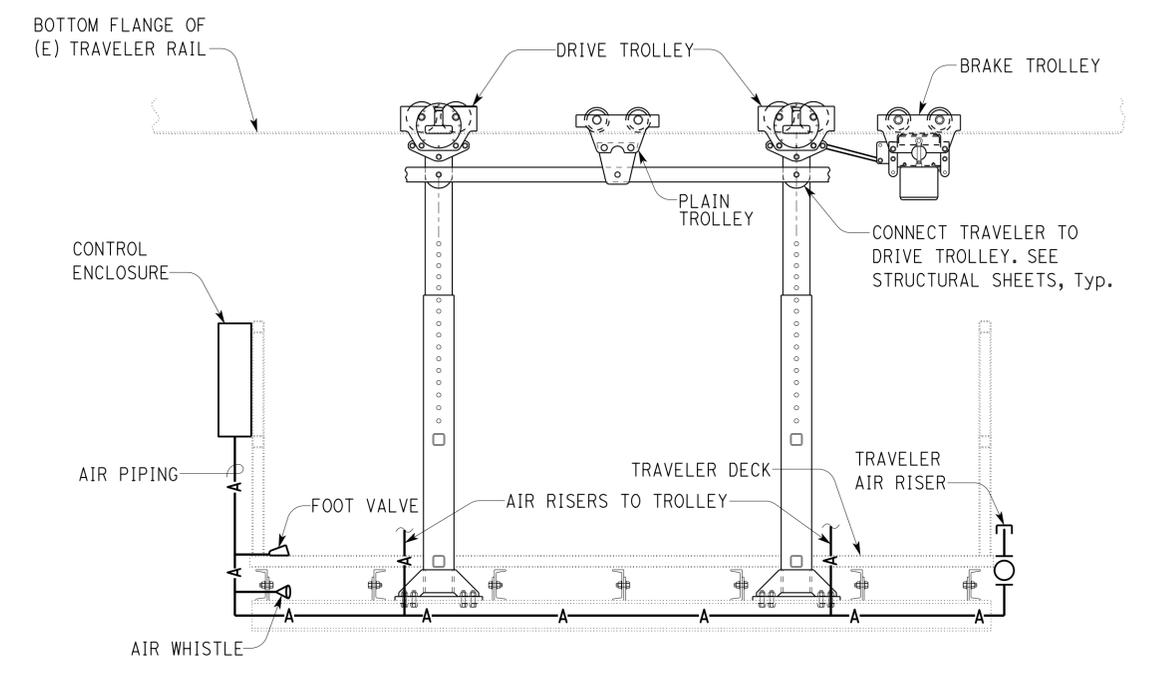
NOTE:  
REFER TO CONTROL DIAGRAM FOR DRIVE AND BRAKE TROLLEY PIPE SIZES, SEE



**LONGITUDINAL ELEVATION**

1/2" = 1'-0"

NOTE:  
PROVIDE A 100' LONG 1" DIAMETER AIR HOSE TO SUPPLY AIR FROM THE (N) AIR RISERS AT THE (E) CATWALK TO THE (N) TRAVELER.



**TRANSVERSE ELEVATION**

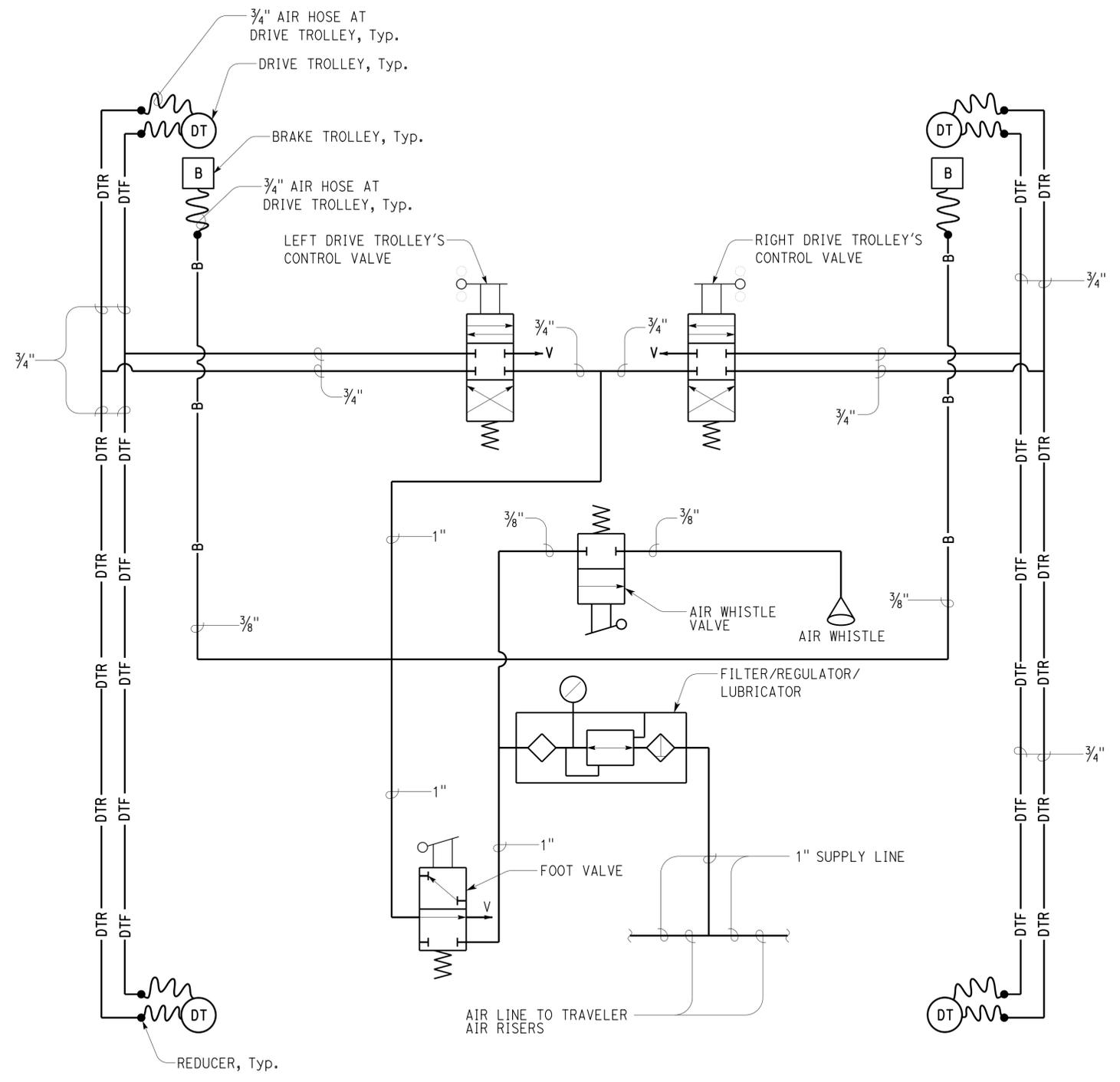
1" = 1'-0"

NOTE:  
PROVIDE DRIVE AND BRAKE TROLLEY EXHAUST LINES. EXHAUST LINES TO BE FULL SIZE AND TERMINATE BELOW THE TRAVELER DECK WITH A MUFFLER.

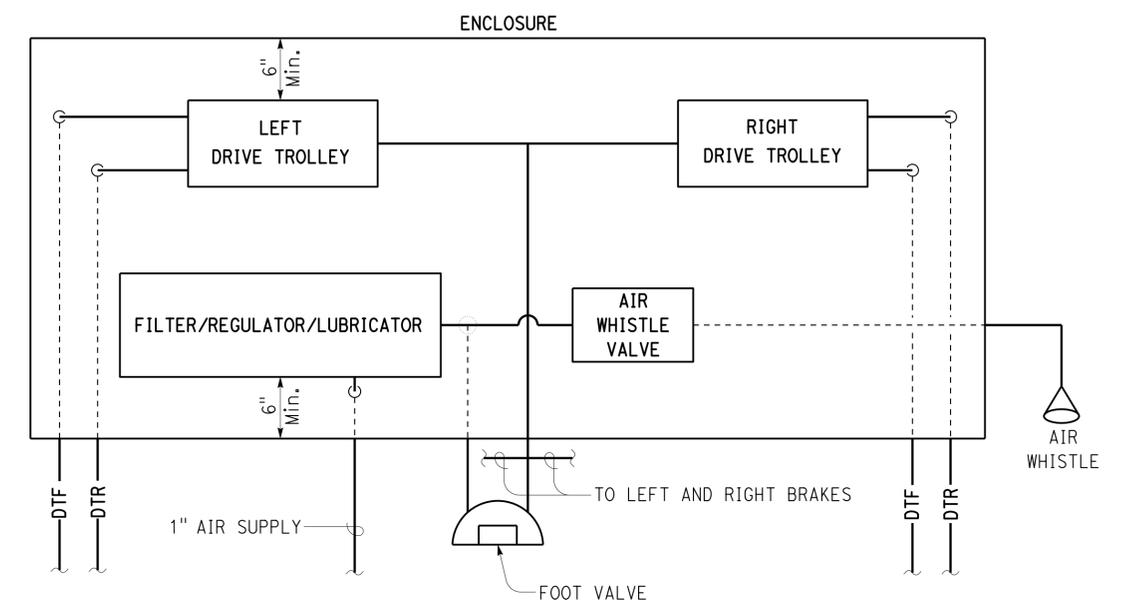
APPROVED FOR MECHANICAL WORK ONLY

DESIGN BY Chria Faria CHECKED Jack Wheeler DETAILS BY Rudy Sarte CHECKED Jack Wheeler QUANTITIES BY Chria Faria CHECKED Jack Wheeler	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE No. 57-0857	SAN DIEGO CORONADO BAY BRIDGE PAINTING & MAINTENANCE TRAVELER TRAVELER PIPING PLAN	SHEET M-5
			POST MILE		REVISION DATES (PRELIMINARY STAGE ONLY) 02-03-14 03-25-14 04-24-14 09-22-14
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3		UNIT: 3580 CONTRACT No.: 409301 PROJECT NUMBER & PHASE: 11120000701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	TAEWW Imperial - CCSC Rev. 01/13 D:\MincADD\EA-11-409301_San Diego_Oct_2013\someone.dgn Files-12-22-2014\m_5.dgn	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	44	45
Christopher M. Faria		09-22-14		REGISTERED MECHANICAL ENGINEER DATE	
03-30-15		PLANS APPROVAL DATE			
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**CONTROL DIAGRAM**



**CONTROL ENCLOSURE**

Notes:

1. Mount foot valve on top of traveler deck under Control Enclosure.
2. Mount Air Whistle below traveler deck under Control Enclosure.
3. Trolley Control Valves shall be mounted in the Control Enclosure such that valve lever can be operated back and forth with no interferences.

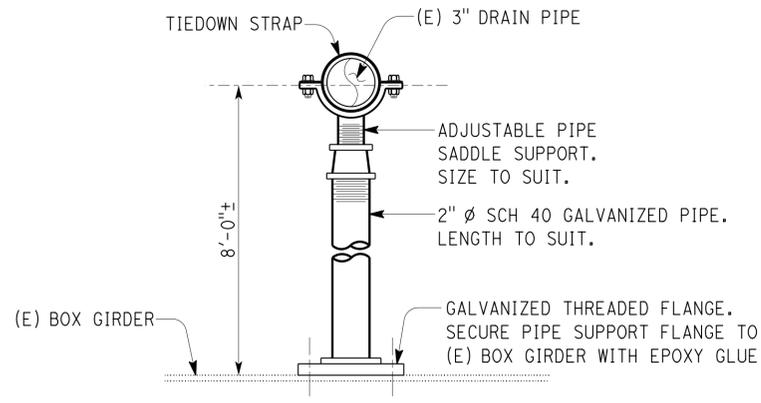
APPROVED FOR MECHANICAL WORK ONLY

DESIGN BY Chria Faria CHECKED Jack Wheeler DETAILS BY Rudy Sarte CHECKED Jack Wheeler QUANTITIES BY Chria Faria CHECKED Jack Wheeler	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE No. 57-0857 POST MILE	SAN DIEGO CORONADO BAY BRIDGE PAINTING & MAINTENANCE TRAVELER CONTROL DIAGRAM	SHEET M-6 OF 35
	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: 3580 CONTRACT No.: 409301 PROJECT NUMBER & PHASE: 11120000701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY) 02-03-14 03-25-14 04-21-14 09-22-14	SHEET OF 35 36
	TAEWW Imperial - CCSC Rev. 01/13 D:\MincADD\EA-11-409301_San Diego_Oct_2013\someone.dgn files-12-22-2014\m_6.dgn				

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	75	R21.0/R21.6	45	45

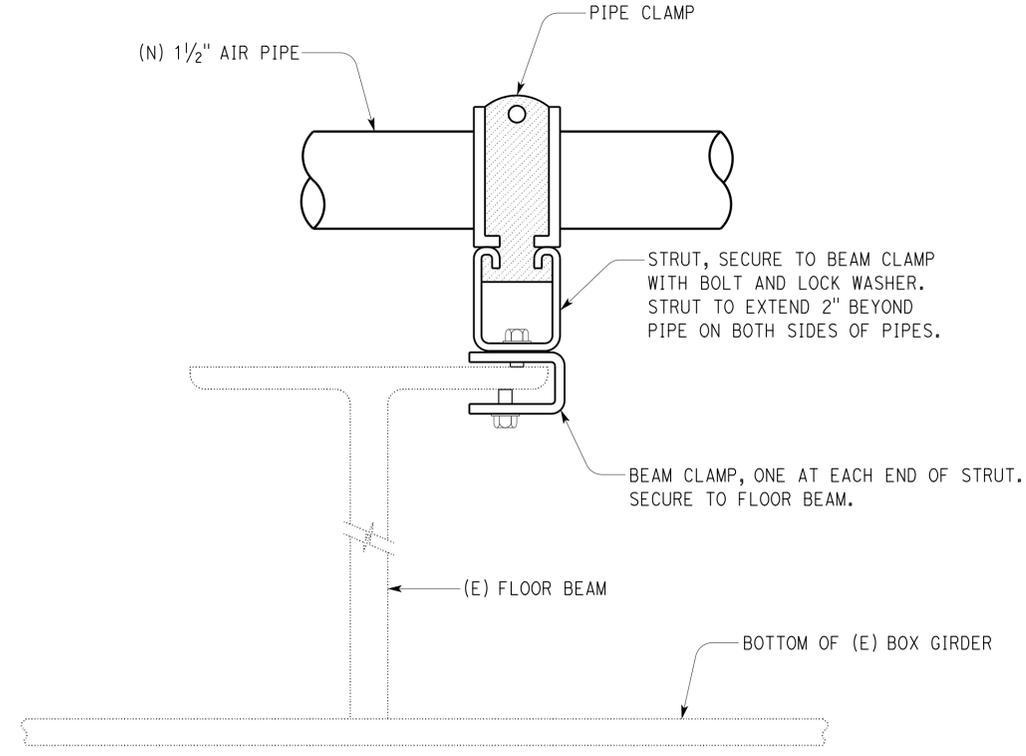
Christopher M. Faria 09-22-14  
 REGISTERED MECHANICAL ENGINEER DATE  
 03-30-15  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER  
 CHRIS FARIA  
 No. M30419  
 Exp. 12-31-15  
 MECH  
 STATE OF CALIFORNIA



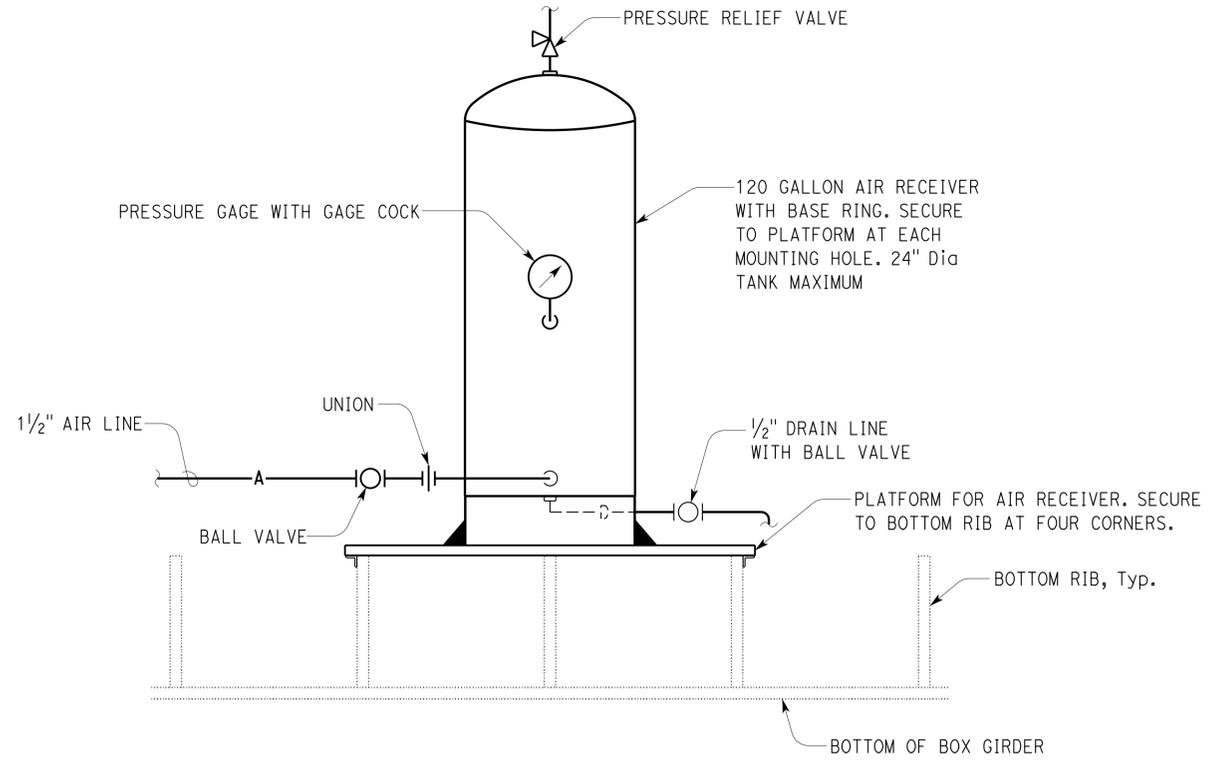
**1 PIPE SUPPORT DETAIL NO. 1**

NOTE  
THE PIPE SUPPORT FOR THE (N) 1/2" AIR PIPE IS APPROXIMATELY 24" TALL.

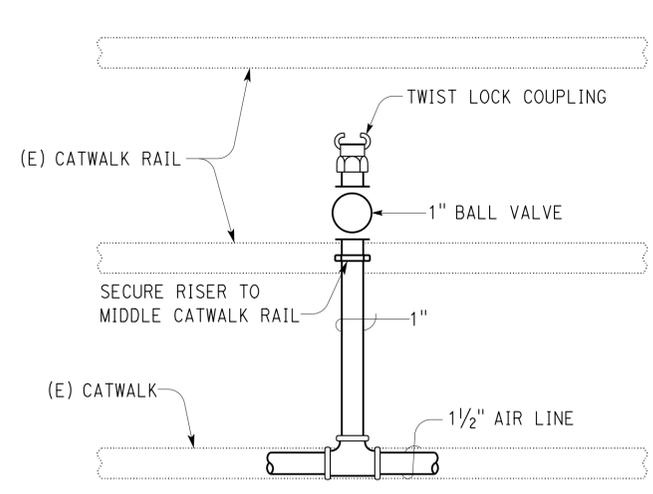


**2 PIPE SUPPORT DETAIL NO. 2**

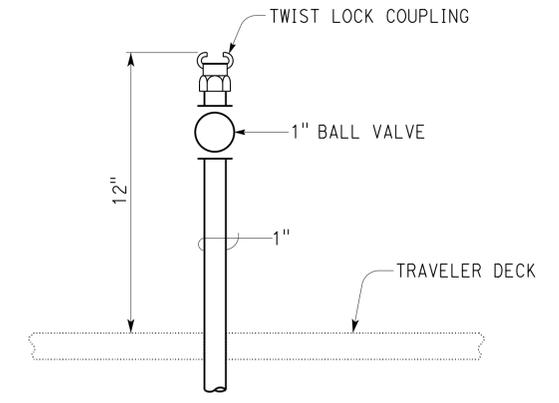
NOTE:  
NO WELDING/DRILLING IS ALLOWED TO ATTACH (N) PIPE SUPPORT TO (E) STEEL. ATTACHMENT TO (E) STEEL MUST BE CLAMP TYPE.



**3 AIR RECEIVER TANK DETAIL**



**4 CATWALK AIR RISER DETAIL**



**5 TRAVELER AIR RISER DETAIL**

APPROVED FOR MECHANICAL WORK ONLY

NO SCALE

DESIGN BY Chria Faria CHECKED Jack Wheeler	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE No. 57-0857	SAN DIEGO CORONADO BAY BRIDGE PAINTING & MAINTENANCE TRAVELER MECHANICAL DETAILS	SHEET OF M-7 36 36
			POST MILE		
DETAILS BY Rudy Sarte CHECKED Jack Wheeler	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3580 CONTRACT No.: 409301 PROJECT NUMBER & PHASE: 11120000701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	
QUANTITIES BY Chria Faria CHECKED Jack Wheeler	0 1 2 3			02-03-14 03-25-14 04-21-14 09-22-14	

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