

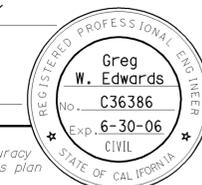


DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	201	384

Greg W. Edwards
REGISTERED CIVIL ENGINEER

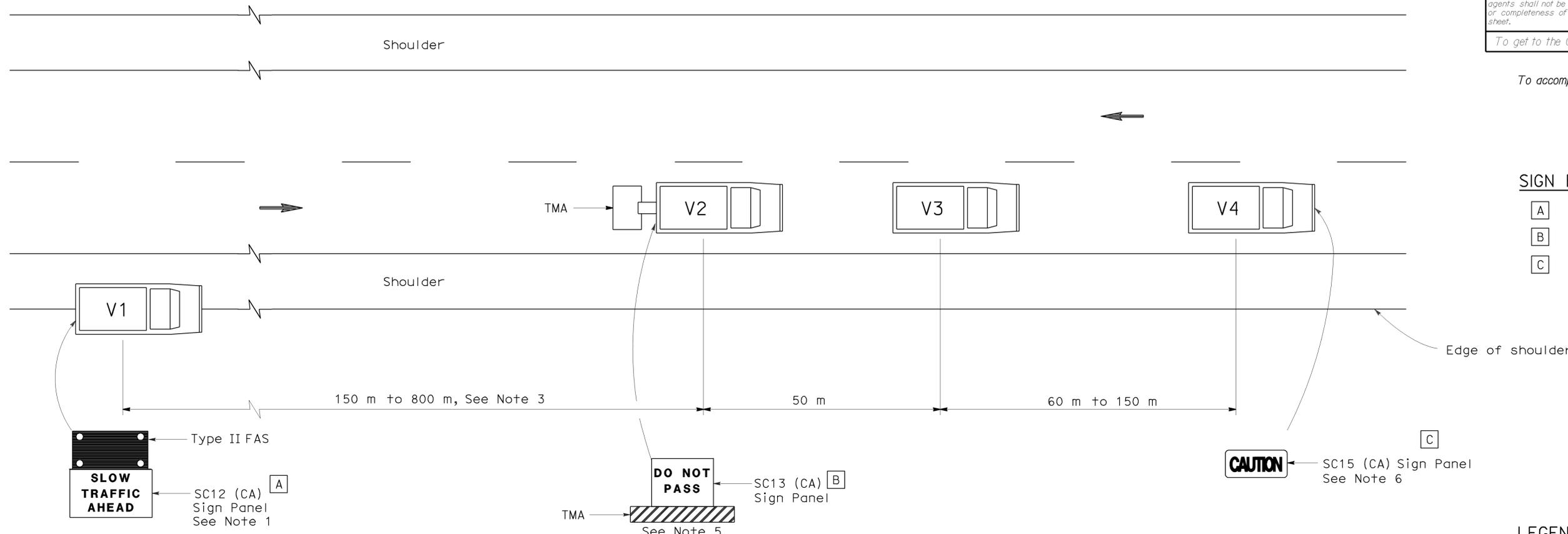
April 28, 2005
PLANS APPROVAL DATE

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To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

To accompany plans dated 3-2-09



SIGN PANEL SIZE (Min)

- A 1829 mm x 1067 mm
- B 1372 mm x 1067 mm
- C 1372 mm x 610 mm

LEGEND

- V1 Sign Vehicle
- V2 Shadow Vehicle
- V3 Work/Application Vehicle
- V4 Sign Vehicle
- TMA Truck-Mounted Attenuator
- Direction of Travel
- Flashing Arrow Sign (FAS) in flashing caution mode

NOTES

1. Either a changeable message sign or a SC12 (CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V1. A Type II flashing arrow sign may be used with the SC12 (CA) sign panel.
2. Sign vehicle V1 should be positioned where highly
3. If traffic queues develop, sign vehicle V1 should be
4. Vehicle-mounted sign panels shall be Type III, IV, VII, VIII, or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 150 mm minimum series D letters per Caltrans sign specifications.
5. Gross Vehicle Weight of shadow vehicle shall be a minimum of 9000 kilograms and shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.
7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 0.6 m or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. This plan shall not be used where workers would be on foot in the work area. Use a stationary type lane closure (Revised Standard Plan RSP T13) for this condition.
11. When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM
FOR MOVING LANE CLOSURE
ON TWO LANE HIGHWAYS**

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

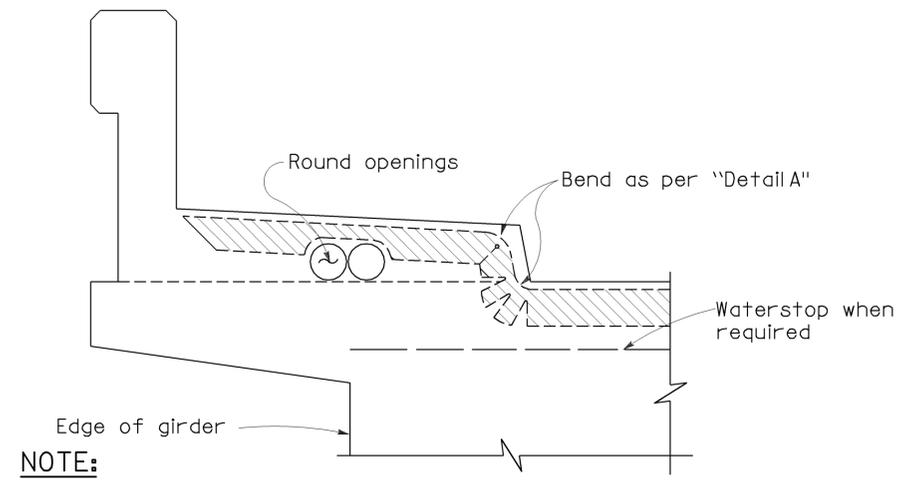
RSP T17 DATED APRIL 28, 2005 SUPERSEDES STANDARD PLAN T17
DATED JULY 1, 2004-PAGE 226 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP T17

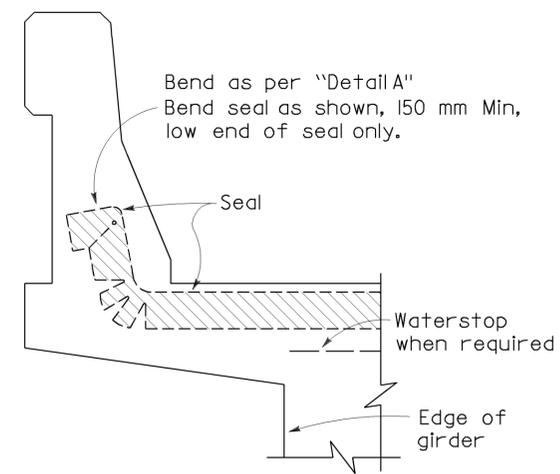
2004 REVISED Std PLAN RSP T17



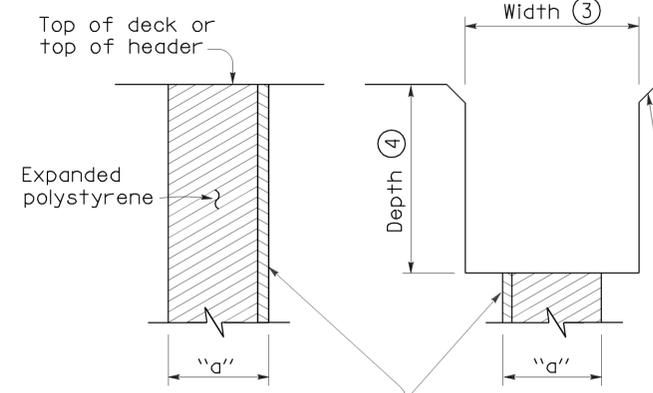
To accompany plans dated 3-2-09



NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend Type "A" seals 75 mm up into curb or barrier rail on only the low end of the seal.



CONCRETE BARRIER



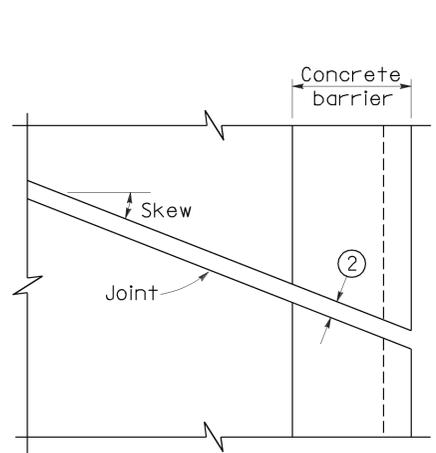
3 mm Max thickness hardboard protection on concrete placement side, or sides.

FORMING DETAIL

SAWCUT DETAIL

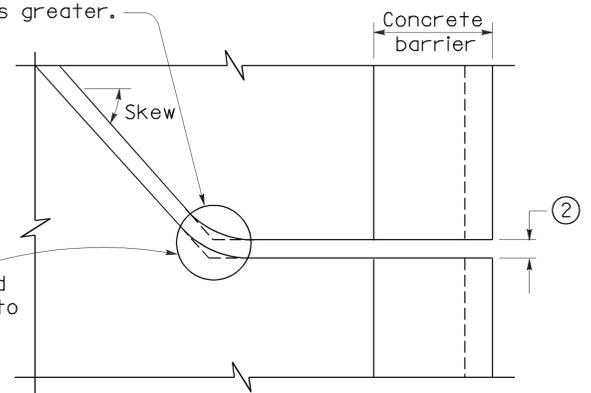
NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

JOINT SEALS DETAILS



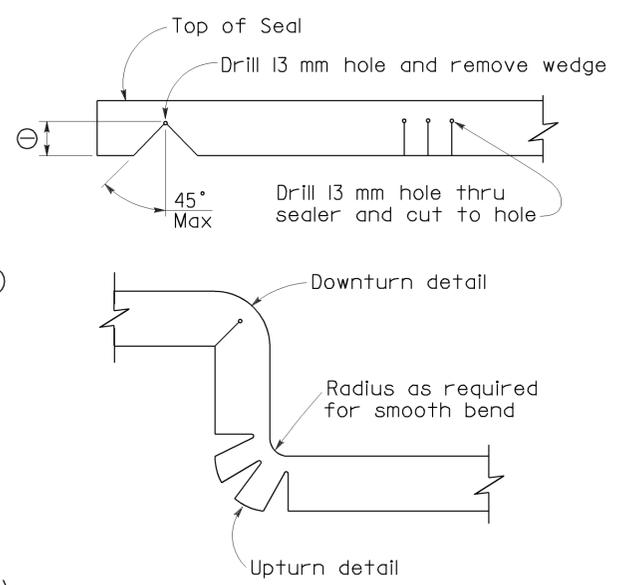
PLAN OF JOINT (SKEW ≤ 20°)

Min ϕ radius to be 4 times uncompressed width of seal or as recommended by the manufacturer, whichever is greater.



PLAN OF JOINT (SKEW > 20°)

In lieu of saw cutting, this area may be blocked out and reconstructed to match saw cutting on both sides.



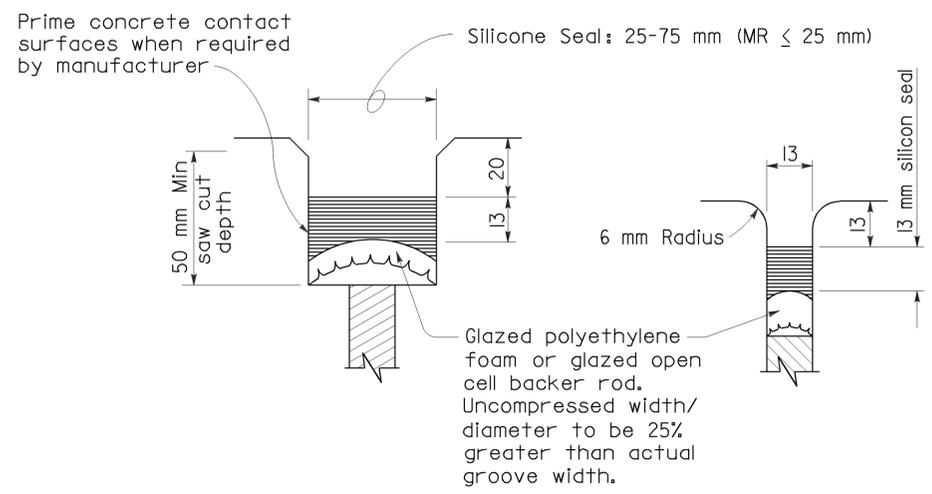
DETAIL A

- NOTES:**
- Make smooth cuts from the bottom of seal to 40 mm clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
 - Opening in barrier to match width of sawn deck joint.
 - Sawcut groove widths shall be as ordered by the Engineer.
 - Depth of sawcut: Type A - Depth to be 50 mm minimum. Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W_2) plus dimensions shown above.
 - MR (movement rating) as shown on other plan sheets.
 - Other depths must be approved by the Engineer.

DIMENSIONS "a" OF JOINT REQUIRED

Movement Rating (MR) (5)	Bridge Type	"a" Dimension		
		Deck Concrete Placed		
		Winter	Fall-Spring	Summer
50 mm	All except CIP/PS	40 mm	30 mm	20 mm
	CIP/PS	30 mm	25 mm	13 mm
40 mm	All except CIP/PS	30 mm	25 mm	13 mm
	CIP/PS	25 mm	20 mm	13 mm
25 mm	All except CIP/PS	25 mm	20 mm	13 mm
	CIP/PS	20 mm	13 mm	13 mm
13 mm	All except CIP/PS	20 mm	20 mm	13 mm
	CIP/PS	13 mm	13 mm	13 mm

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINT SEALS
(MAXIMUM MOVEMENT RATING = 50 mm)
 NO SCALE

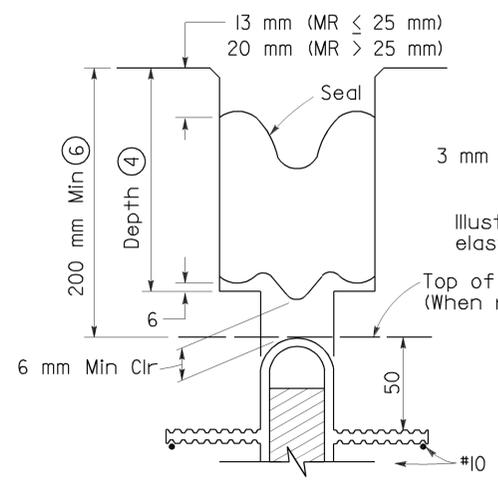


TYPE A SEAL

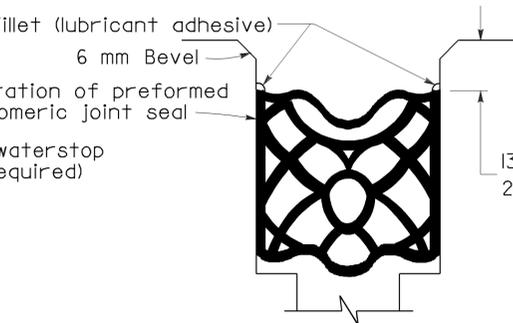
Movement rating : Silicone = 25 mm Max

TYPE AL SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W_2)



TYPE B SEAL

Movement Rating ≤ 50 mm

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
 RSP B6-21 DATED OCTOBER 5, 2007 SUPERSEDES RSP B6-21 DATED JANUARY 26, 2005 AND STANDARD PLAN B6-21 DATED JULY 1, 2004-PAGE 258 OF THE STANDARD PLANS BOOK DATED JULY 2004.

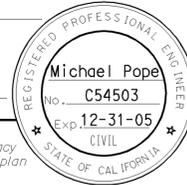


DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	203	384

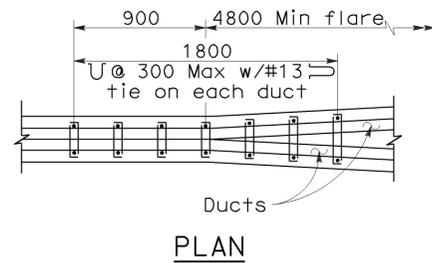
Michael Pope
REGISTERED CIVIL ENGINEER

April 28, 2005
PLANS APPROVAL DATE

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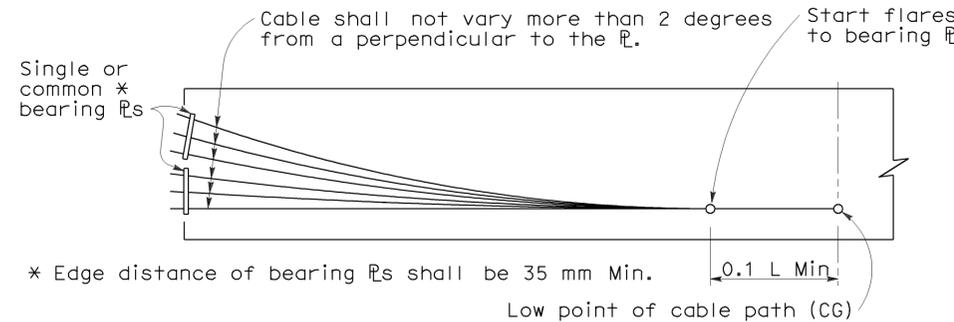
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>



#13 Duct ties

NOTE

Place closed end of duct ties in direction of flare.



BEARING PLATE PRESTRESSING PATH

NOTES

Distribution of prestressing force:

Unless otherwise noted, the prestressing force shall be distributed with an approximately equal amount in each girder and shall be placed symmetrically about the center line of the structure. In slabs, the prestressing force shall be uniformly distributed across the slab.

Stressing sequence:

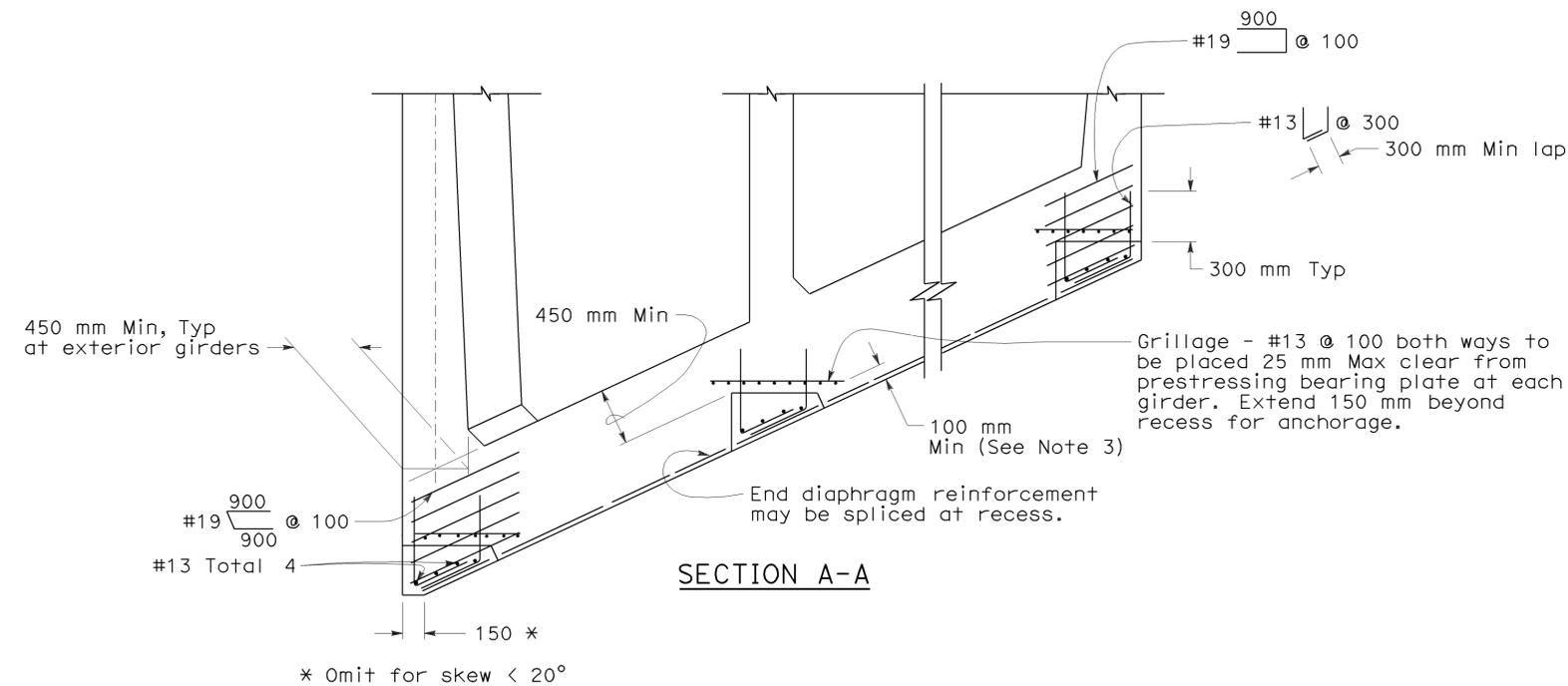
No more than 1/2 of the prestressing force in any girder may be applied before an equal force is applied in the adjacent girders. The maximum force variation between girders shall also not exceed the prestressing force of the largest tendon used in all girders. At no time during stressing operations will more than 1/6 of total prestressing force be applied eccentrically about the centerline of the structure.

Girder stem may be flared near anchorage to provide clearances for the particular anchorage system.

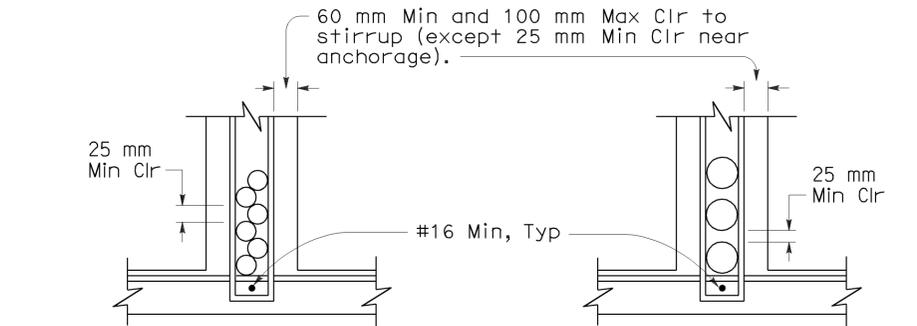
Place duct ties, as shown for flare girder stem, at each location where ducts change horizontal direction.

Bar reinforcement interfering with the prestressing tendon alignment shall be adjusted, as approved by the Engineer.

STIRRUP REINFORCEMENT AT FLARE OF GIRDER STEM



SECTION A-A



DUCTS 114 mm OD AND LESS DUCTS OVER 114 mm OD

CLEARANCE REQUIREMENTS FOR DUCTS

NOTES

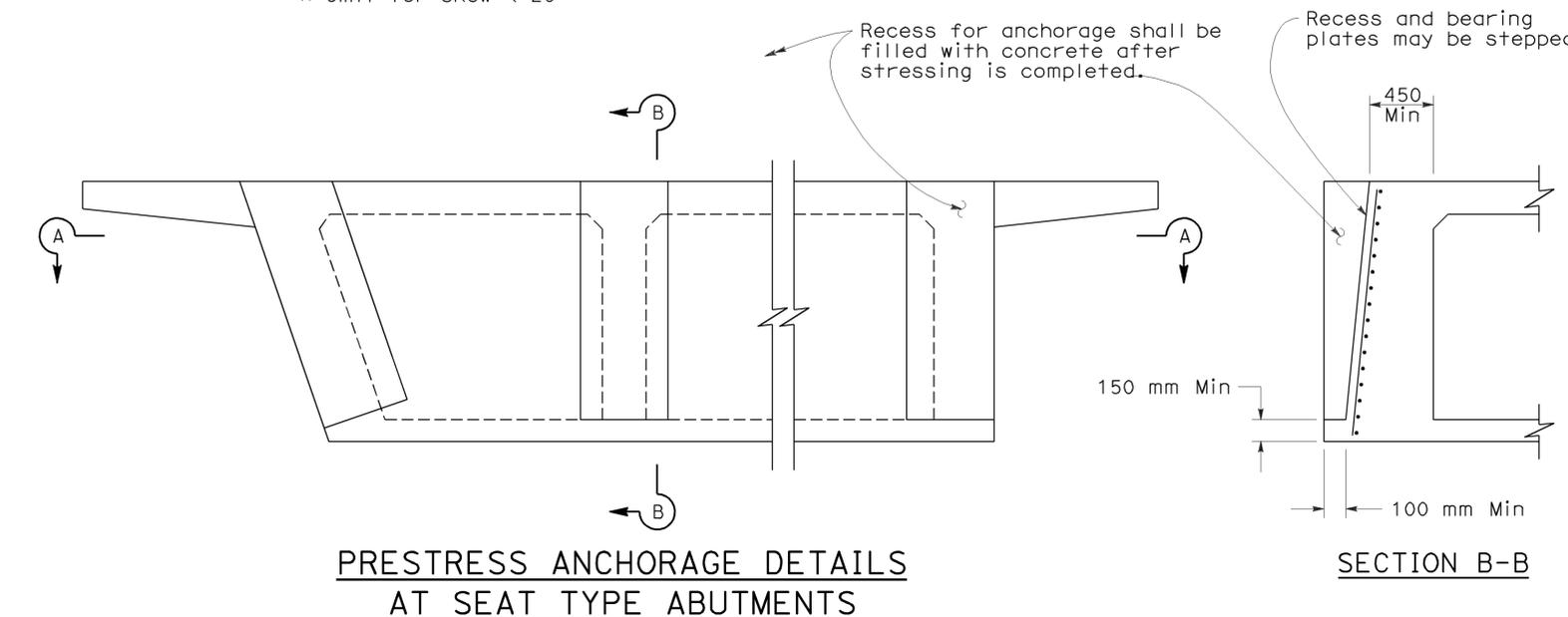
1. Duct patterns shown are for a 300 mm wide girder stem. For other widths the minimum clearances must be maintained.
2. Stirrups may also be used. For continuous stirrups in girder stems greater than 400 mm wide (ie: at flares) use 2-#16 minimum or U.
3. 100 mm minimum is not required if this detail is used at hinge location.
4. For additional details, see Standard Plan B7-1.
5. Approval of the Engineer is required for deviations.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CAST-IN-PLACE
PRESTRESSED GIRDER DETAILS**
NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP B8-5 DATED APRIL 28, 2005 SUPERSEDES STANDARD PLAN B8-5 DATED JULY 1, 2004-PAGE 266 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP B8-5

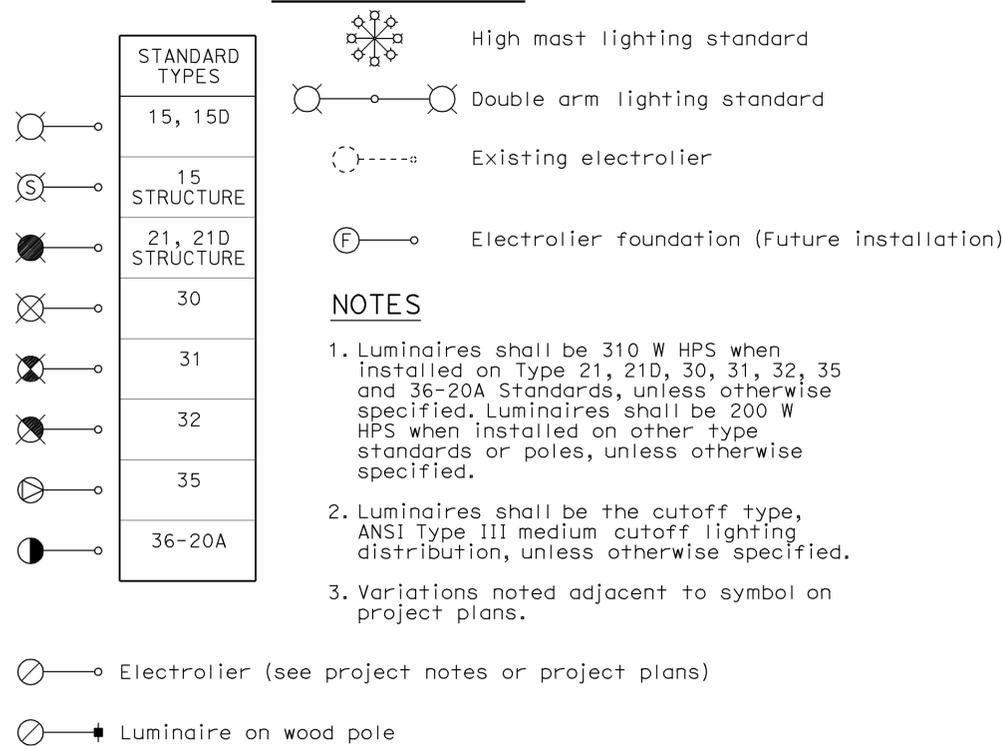


**PRESTRESS ANCHORAGE DETAILS
AT SEAT TYPE ABUTMENTS**

SECTION B-B

2004 REVISED STD PLAN RSP B8-5

ELECTROLIERS



STANDARD NOTES

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast. Tape disconnects.
- TSP** Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounted vehicle signal faces, top attachment
MAS	mas	Mast arm mounted vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounted vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounted vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL	RL	Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		204	384

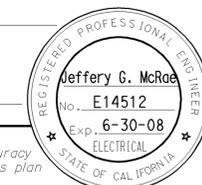
Jeffery B. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007

PLANS APPROVAL DATE

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To accompany plans dated 3-2-09

SOFFIT AND WALL MOUNTED LUMINAIRES

- Pendant, 70 W HPS unless otherwise specified.
- Flush, 70 W HPS unless otherwise specified.
- Wall surface, 70 W HPS unless otherwise specified.
- Existing soffit or wall luminaire to remain unmodified.
- Existing soffit or wall luminaire to be modified as specified.

NOTE

Arrow indicates "street side" of luminaire.

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED JULY 1, 2004-PAGE 413 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-1A

2004 REVISED STD PLAN RSP ES-1A

CONDUIT

PROPOSED

EXISTING

		Lighting conduit, unless otherwise indicated or noted
		Traffic signal conduit
		Communication conduit
		Telephone conduit
		Fire alarm conduit
		Fiber optic conduit
		Conduit termination
		Conduit riser in/on structure or Service pole

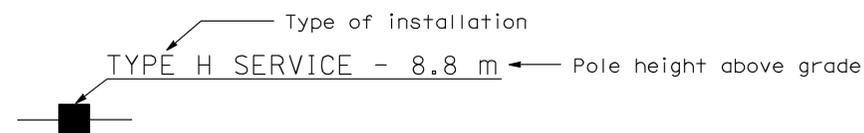
SERVICE EQUIPMENT

PROPOSED

EXISTING

		Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy-with anchor
		Utility transformer-ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

PROPOSED

EXISTING

		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT

PROPOSED

EXISTING

		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" Indicates all non-arrow sections louvered "LG" Indicates louvered green section only "PV" Indicates 300 mm programmed visibility sections "200" indicates all 200 mm sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
		Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency vehicle detector



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10	Mer	140	58.7/60.5		205	384

REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

October 5, 2007
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To accompany plans dated 3-2-09

NOTES

1. All signal sections shall be 300 mm unless shown otherwise.
2. Signal heads shall be provided with backplates unless shown otherwise.
3. Signal indication shall be LED.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)**

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-1B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1B
DATED JULY 1, 2004-PAGE 414 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-1B

2004 REVISED STD PLAN RSP ES-1B



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		206	384

REGISTERED ELECTRICAL ENGINEER
Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

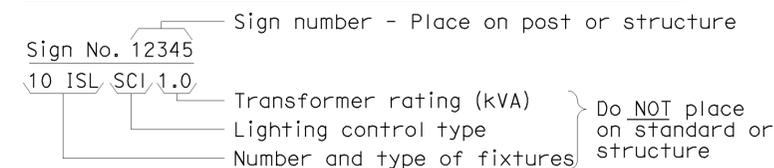
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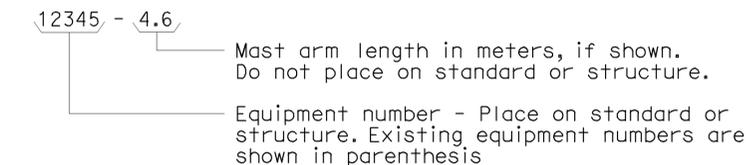
To accompany plans dated 3-2-09

EQUIPMENT IDENTIFICATION

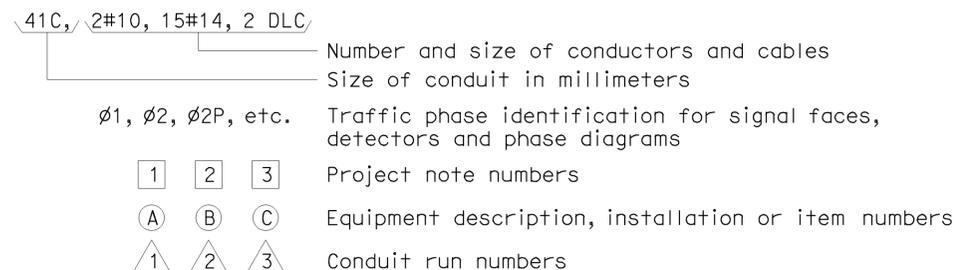
ILLUMINATED SIGN IDENTIFICATION NUMBER:



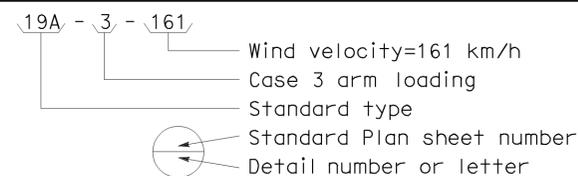
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



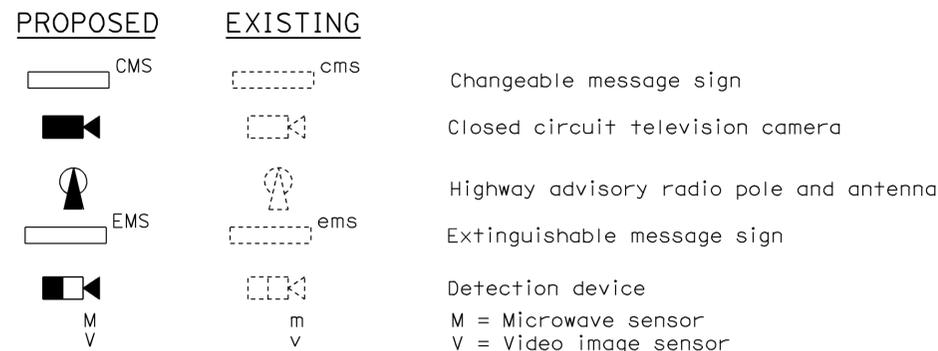
CONDUIT AND CONDUCTOR IDENTIFICATION:



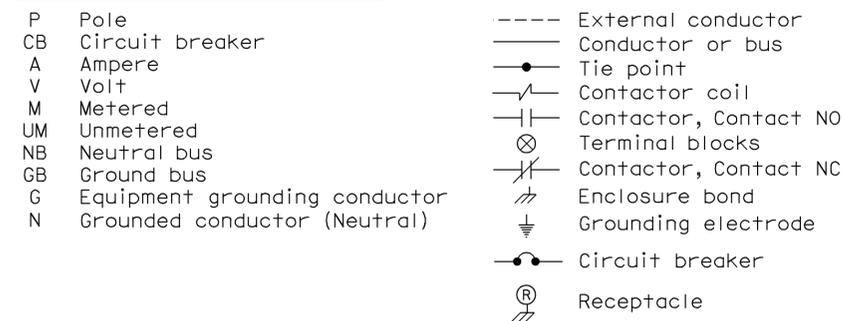
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



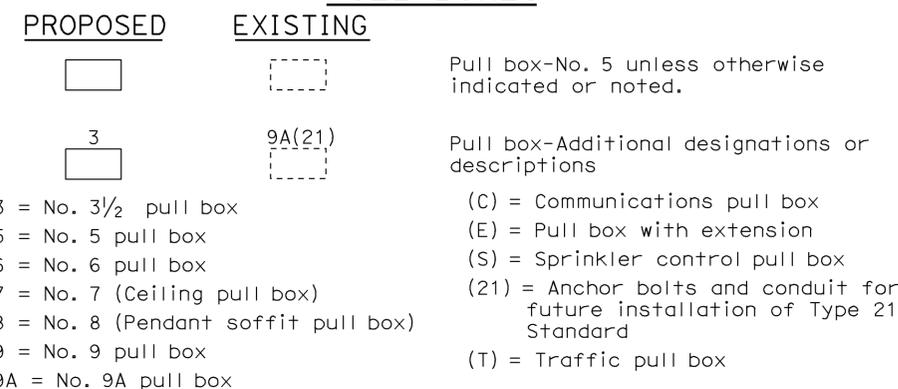
MISCELLANEOUS EQUIPMENT



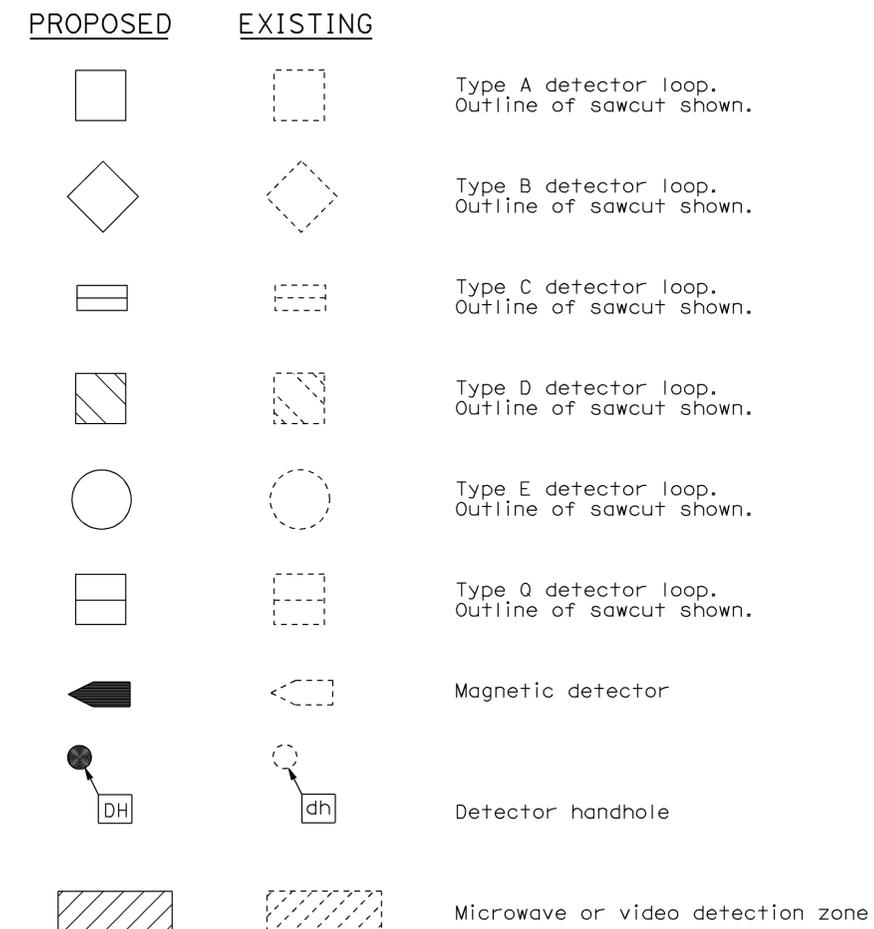
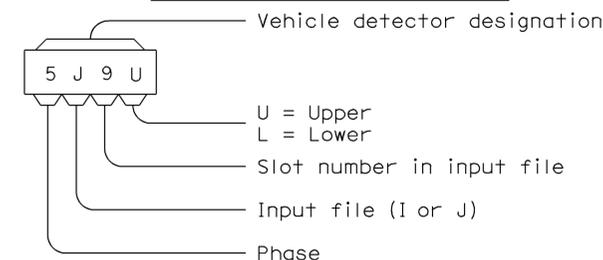
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE
 ALL DIMENSIONS ARE IN
 MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-1C DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1C
 DATED JULY 1, 2004-PAGE 415 OF THE STANDARD PLANS BOOK DATED JULY 2004.

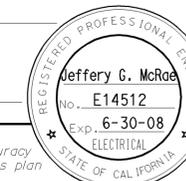
REVISED STANDARD PLAN RSP ES-1C

2004 REVISED STD PLAN RSP ES-1C



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10	Mer	140	58.7/60.5		207	384

Jeffery B. McRae
REGISTERED ELECTRICAL ENGINEER

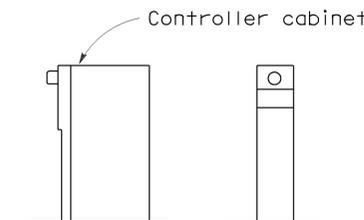


October 5, 2007
PLANS APPROVAL DATE

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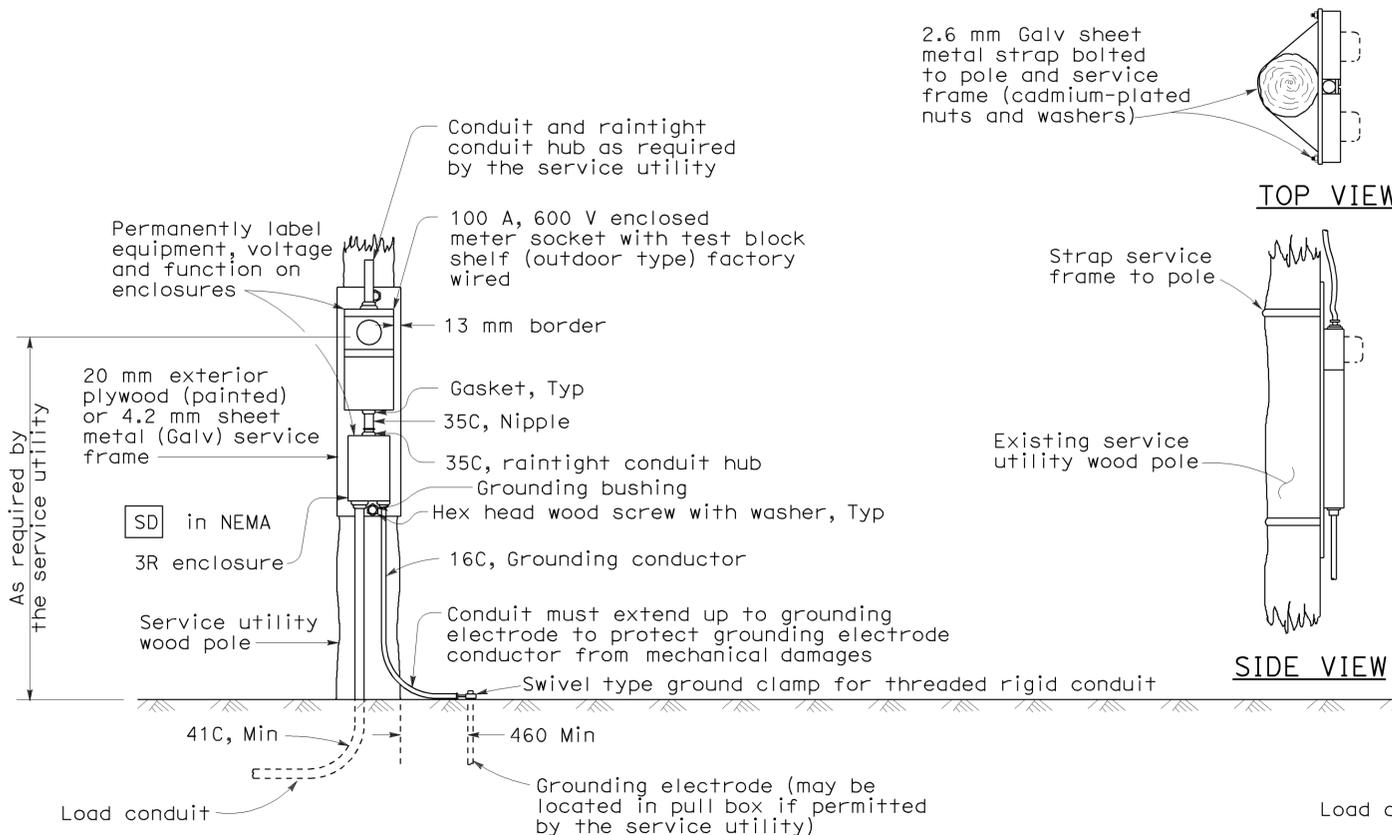
To accompany plans dated 3-2-09



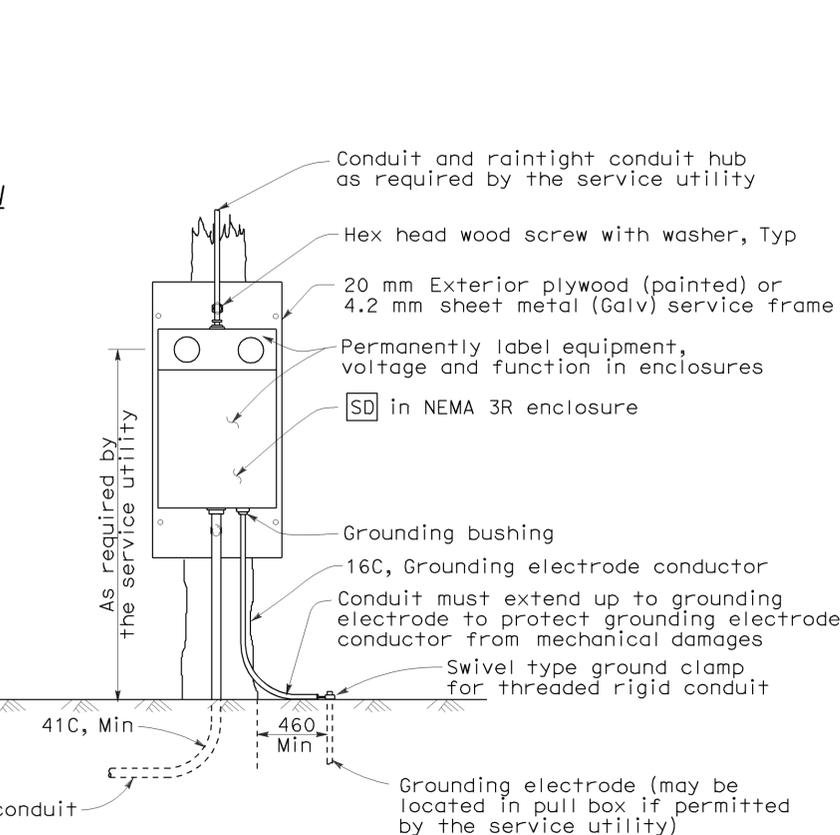
TYPE II TYPE III

TYPE OF SERVICE (TYPICAL)

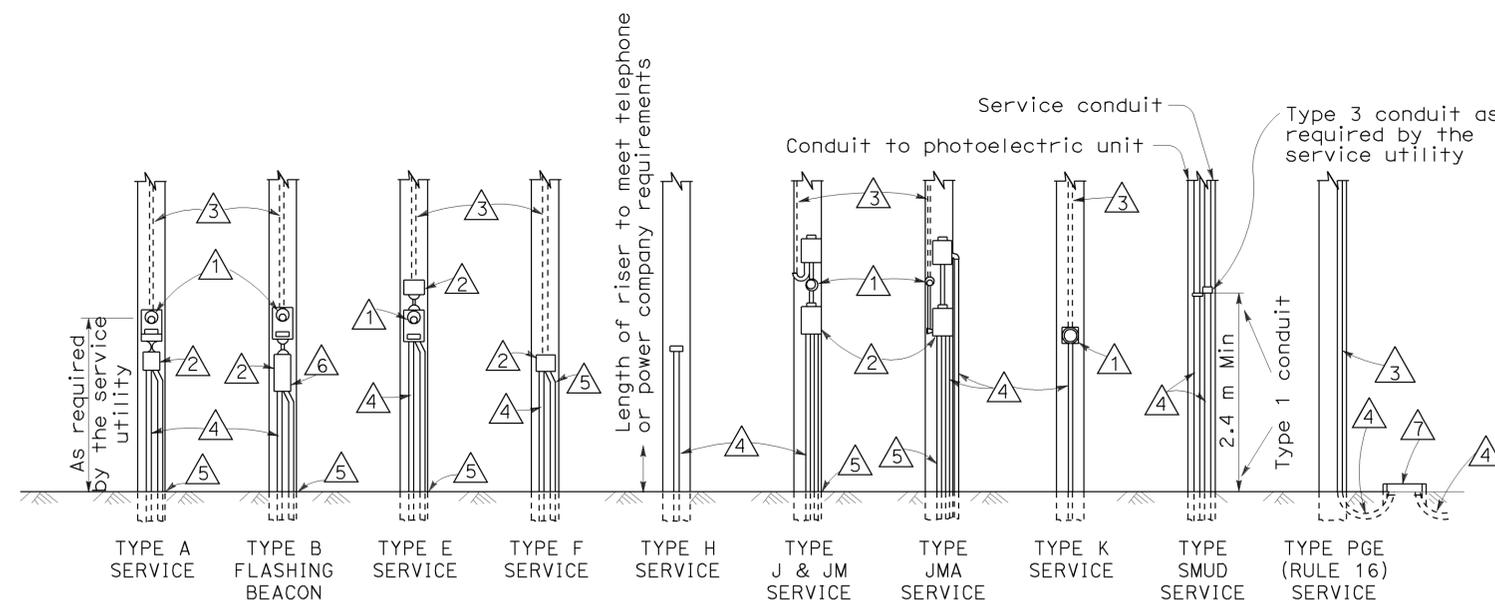
Type II service equipment enclosure mounted on a side of a controller cabinet.
Type III complete free-standing service equipment enclosure.



TYPE SCE-1 SERVICE



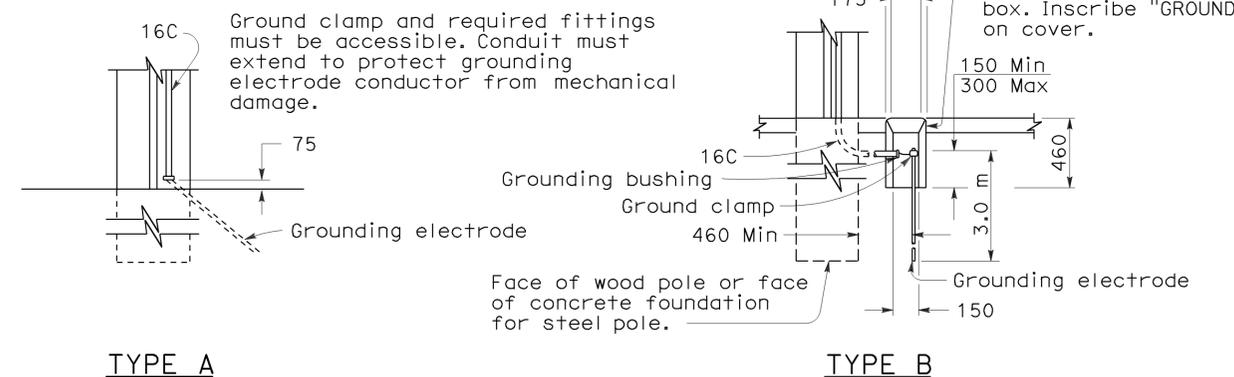
TYPE SCE-2 SERVICE



NOTES

- ① Meter socket.
- ② Service enclosure with a minimum 60 A rated main circuit breaker, unless otherwise shown.
- ③ (a) Utility owned pole. The service utility will furnish and install required service riser, PEU with conductors and other equipment as needed.
(b) State owned pole. The Contractor shall furnish and install required service riser and equipment.
- ④ Conduit, length and size as required.
- ⑤ 16C, 1#6. See "Service Grounding" detail.
- ⑥ Flashing beacon control assembly.
- ⑦ Service pull box, No. 5 unless otherwise noted, furnished and installed by the Contractor. Service utility shall determine the exact location.

POLE MOUNTED SERVICE INSTALLATIONS



TYPE A

TYPE B

Use where service utility requires 460 mm clearance between grounding electrode and the pole or service equipment enclosure. Installation shown is for sidewalk or paved areas. In unpaved areas, omit special service pull box and locate ground clamp above ground or locate ground clamp in nearest pull box.

SERVICE GROUNDING

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SERVICE EQUIPMENT)**

NO SCALE

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MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-2A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-2A
DATED JULY 1, 2004-PAGE 416 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-2A

2004 REVISED STD PLAN RSP ES-2A



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	208	384

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

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NOTES-TYPE III SERVICE EQUIPMENT ENCLOSURES:

1. Service equipment enclosure and metering equipment shall meet the requirements of the service utility. The meter area shall have a sealable, lockable, weathertight cover that can be removed without the use of tools.
2. Service equipment enclosures shall be factory wired and conform to NEMA standards.
3. Dimensions of service equipment enclosures shall meet the requirements of the service utility.
4. The dead front panels on Type III-A service equipment enclosures shall have a continuous stainless steel or aluminum piano hinge. The panel in front of the breakers shall be secured with a latch or captive screws. No live parts shall be mounted on the dead front panel.
5. The exterior door shall have provisions for padlocking. The padlock hole shall be a minimum diameter of 11 mm.
6. Enclosures housing transformers of more than one kVA shall have effective screened ventilation louvers of not less than 32 000 mm². Screen shall be stainless steel No. 304, with a No. 10 size mesh. Framed screen shall be secured with at least four bolts.
7. Fasteners on the exterior of the enclosure shall be vandal-resistant and shall not be removable from the exterior. Screws, nuts, bolts and washers shall be stainless steel.
8. Landing lugs for incoming service conductors shall be compatible with either copper or aluminum conductors sized to suit the conductors shown on the plan. Landing lugs shall be copper or tin-plated aluminum. Neutral bus shall be rated for 125 A and be suitable for copper or aluminum conductors unless otherwise specified. The terminal shall include but not be limited to:
 - a) Incoming terminals (landing lugs)
 - b) Neutral lugs
 - c) Solid neutral terminal strip
9. At least 6 standard single pole circuit breaker spaces, 20 mm nominal, shall be provided for branch circuits. Circuit breaker interiors shall be copper. Interiors of enclosure shall accept plug-in or cable-in/cable-out circuit breakers.
10. Control wiring shall be 600 V, 14 stranded machine tool wire. Where subject to flexing, 19 strand wire shall be used.
11. Main bus shall be rated for 125 A and shall be tin-plated copper.
12. A plastic laminated wiring diagram shall be provided with brass mounting eyelets and attached to the inside of the enclosure and the wiring diagram shall affixed to the interior with a UL or ETL approved method.
13. An engraved phenolic nameplate on the dead front panel indicating the function of each circuit or device shall be installed with stainless steel rivets or stainless steel screws:
 - a) Adjacent to the breaker or device with character size a minimum of 3 mm.
 - b) At the top of the exterior door panel indicating system number, voltage level and number of phases with character size a minimum of 5 mm.
14. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.
15. In unpaved areas a raised portland cement concrete pad 600 mm x 100 mm x width of foundation shall be constructed in front of new service equipment enclosure installation. Pad shall be set to elevation of foundation.
16. Foundation shall extend 50 mm minimum beyond edge of service equipment enclosure.
17. Internal bus, where shown, is typical only. Alternative design of proposed service equipment enclosure shall be submitted to the Engineer for approval.
18. Plug-in circuit breakers may be mounted in the vertical or horizontal position. Cable-in/cable-out circuit breakers shall be mounted in the vertical position.
19. Type III-AF and Type III-BF service equipment enclosures shall have the meter viewing windows located on the front side of the service equipment enclosures.
20. Type III-AR and Type III-BR service equipment enclosures shall be similarly constructed as Type III-AF and Type III-BF respectively, except the meter viewing windows shall be located on the back side of the service equipment enclosures.
21. Minimum clearance shall be required for front and back of service equipment enclosure per National Electrical Code, Article 110.26, "Spaces About Electric Equipment (600 Volts, Nominal, or Less)".

To accompany plans dated 3-2-09

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT NOTES TYPE III SERIES)

NO SCALE

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RSP ES-2C DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-2C
DATED JULY 1, 2004-PAGE 418 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-2C

2004 REVISED Std PLAN RSP ES-2C



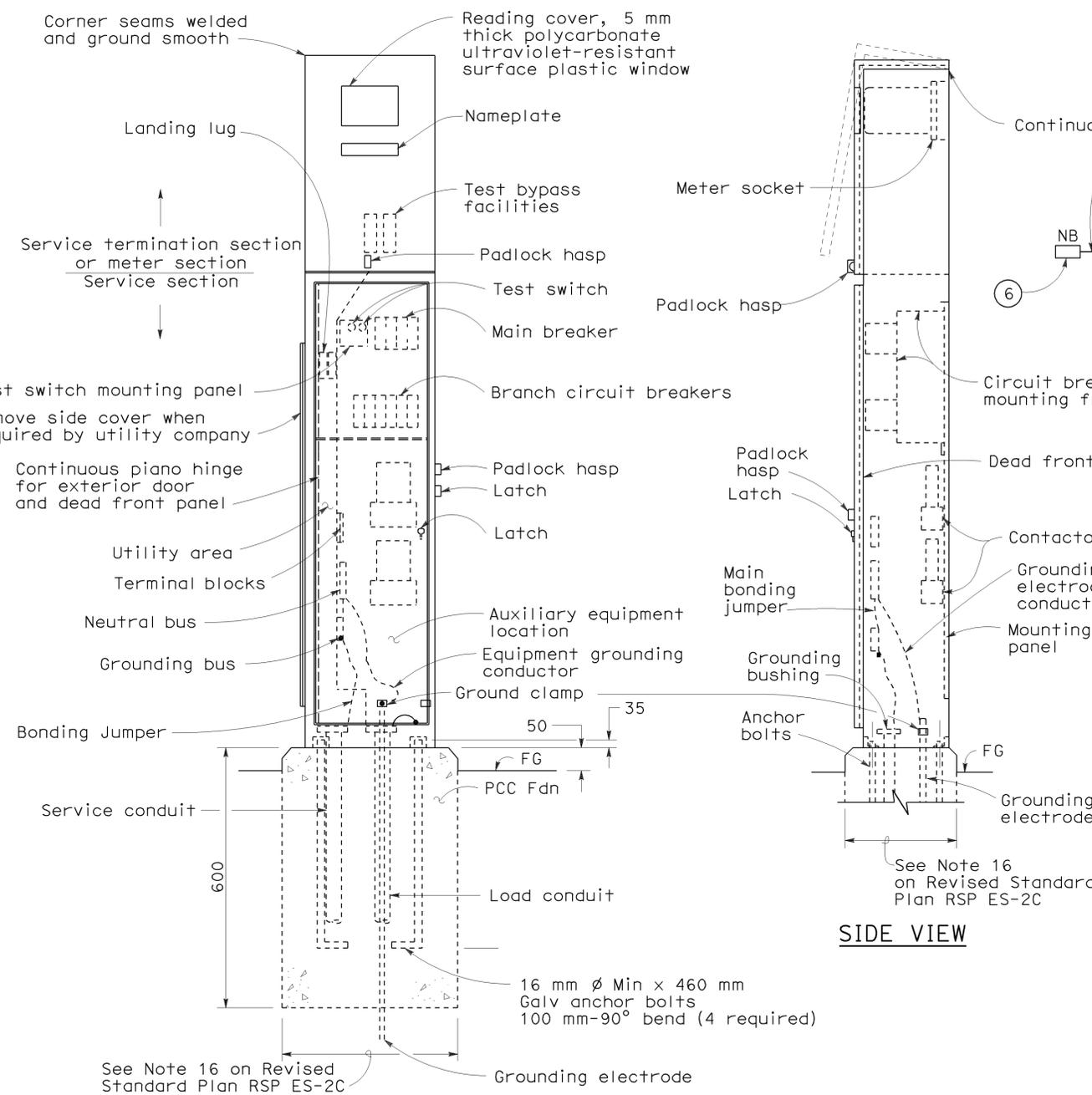
DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		209	384

REGISTERED ELECTRICAL ENGINEER
Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

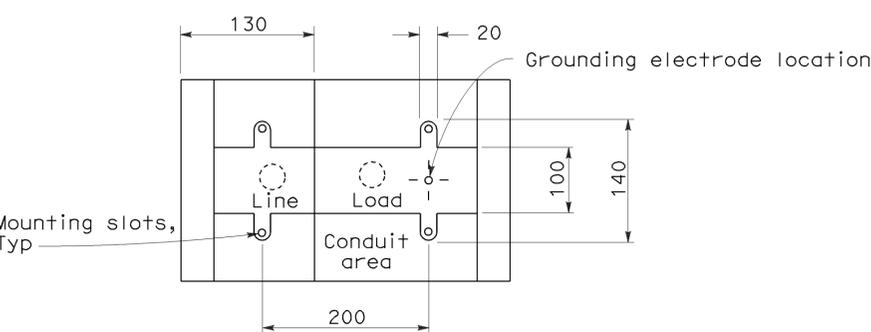
October 5, 2007
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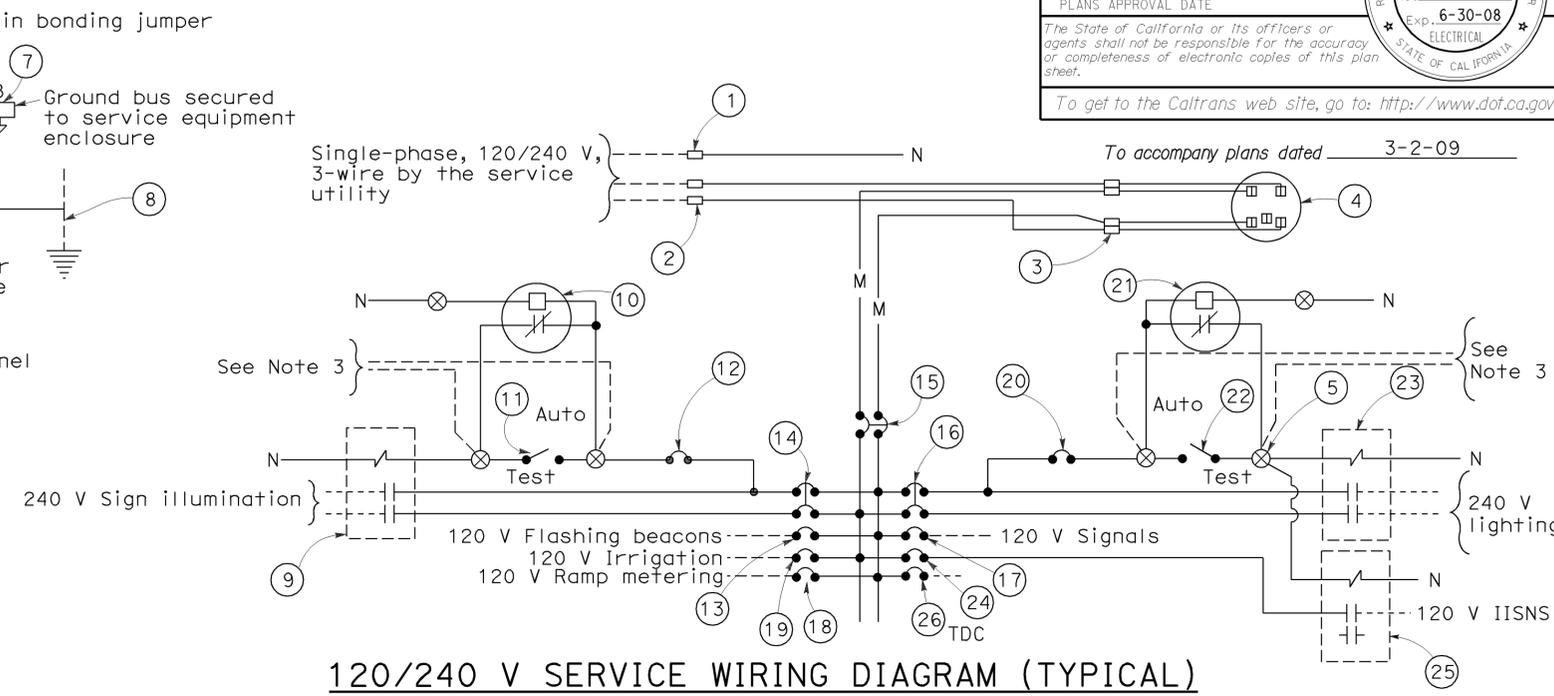
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TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)



BASE FOR TYPE III-A SERVICE EQUIPMENT ENCLOSURE



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

TYPE III-A SERVICE (120/240 V) EQUIPMENT LEGEND					
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
①	Neutral lug		⑭	30 A, 240 V, 2P, CB	Sign Illumination
②	Landing lug (Note 6)		⑮	100 A, 240 V, 2P, CB	Main Breaker
③	Test bypass facility		⑯	30 A, 240 V, 2P, CB	Lighting
④	Meter socket and support		⑰	50 A, 120 V, 1P, CB	Signals
⑤	Terminal blocks		⑱	30 A, 120 V, 1P, CB	Ramp Metering
⑥	Neutral bus		⑲	20 A, 120 V, 1P, CB	Irrigation
⑦	Ground bus		⑳	15 A, 120 V, 1P, CB	Lighting Control
⑧	Grounding electrode		㉑	Photoelectric unit (Note 7)	
⑨	30 A, 2PNO Contactor	Sign Illumination	㉒	15 A, 1P, Test switch	Lighting Test Switch
⑩	Photoelectric unit (Note 7)		㉓	60 A, 2PNO Contactor	Lighting
⑪	15 A, 1P, Test switch	Sign Illumination Test Switch	㉔	15 A, 120 V, 1P, CB	IISNS
⑫	15 A, 120 V, 1P, CB	Sign Illumination Control	㉕	30 A, 2PNO Contactor	IISNS
⑬	15 A, 120 V, 1P, CB	Flashing Beacon	㉖	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet

NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)

- Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
- Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
- Connect to remote test switch mounted on lighting standards, sign post or structure when required.
- Items No. ① and ⑥ shall be isolated from the service equipment enclosure.
- Meter sockets shall be 5 clip type.
- The landing lug shall be suitable for multiple conductors.
- Type V photoelectric control shall be used unless otherwise indicated on the plans.

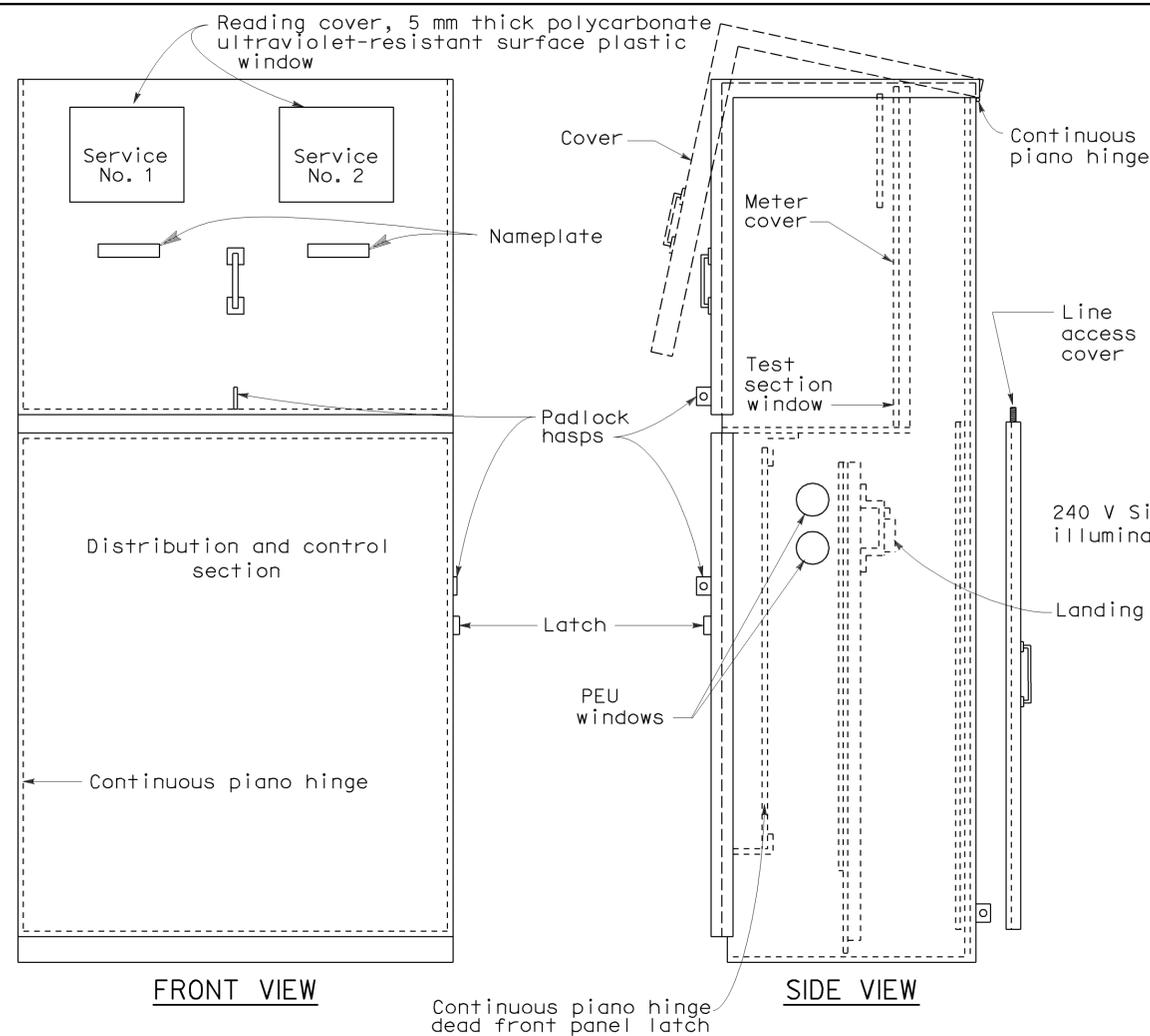
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT AND TYPICAL WIRING DIAGRAM, TYPE III - A SERIES)

NO SCALE
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RSP ES-2D DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-2D DATED JULY 1, 2004-PAGE 419 OF THE STANDARD PLANS BOOK DATED JULY 2004.

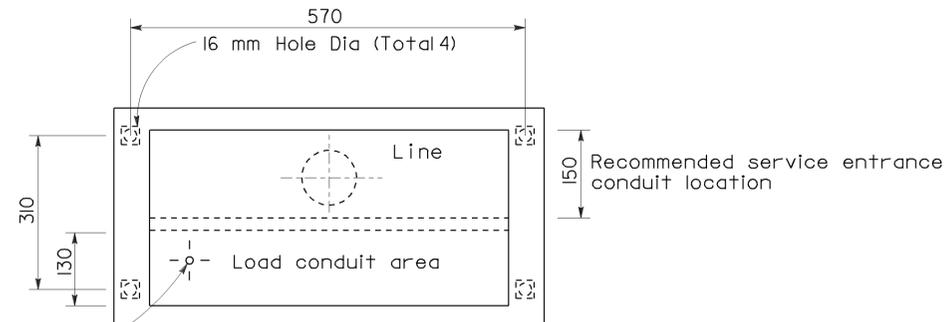
2004 REVISED Std PLAN RSP ES-2D



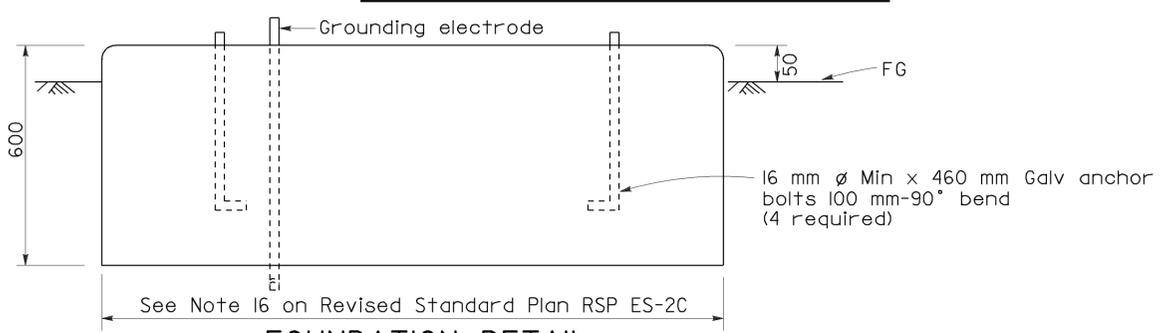
FRONT VIEW

SIDE VIEW

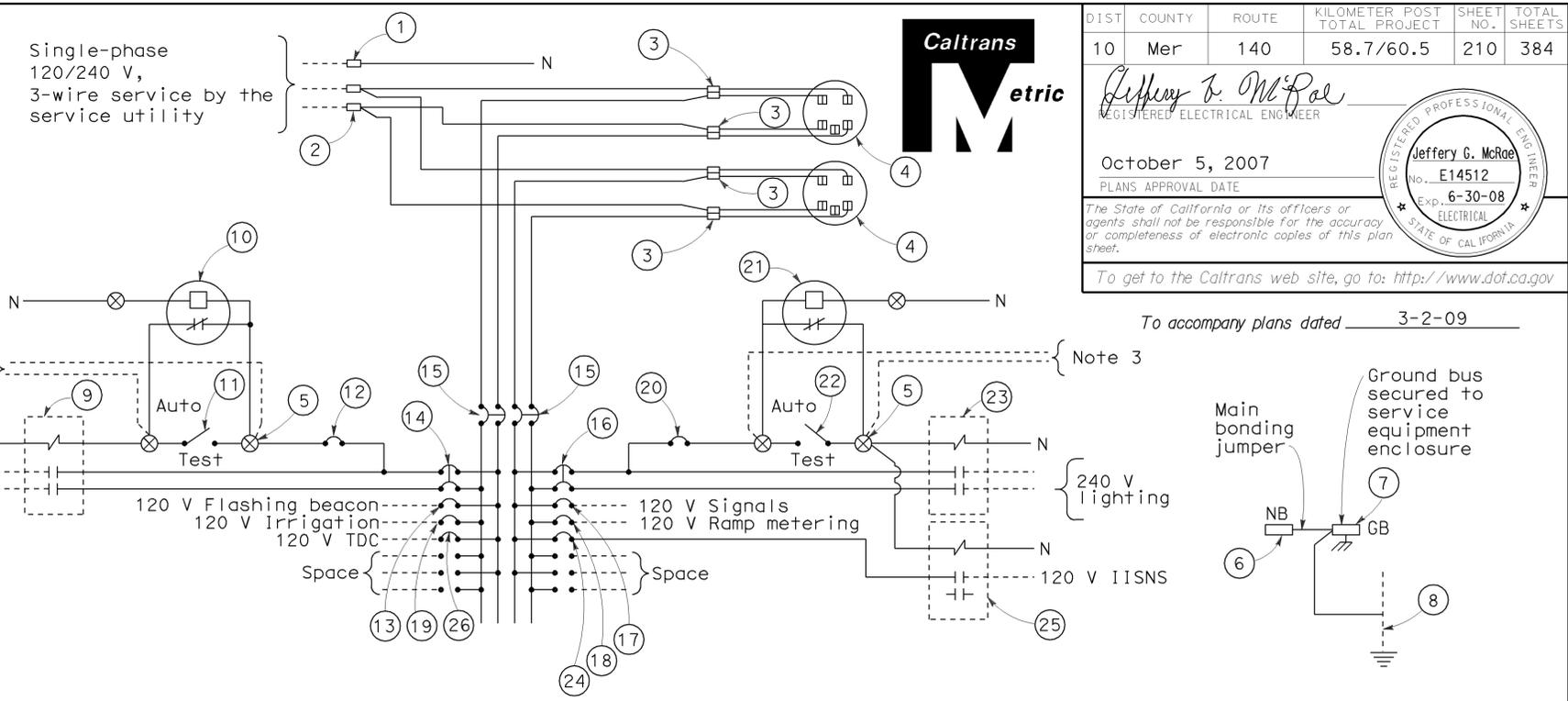
TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR TWO 100 A METERS (TYPICAL)



BASE FOR TYPE III-C SERVICE EQUIPMENT ENCLOSURE



FOUNDATION DETAIL



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

TYPE III-C SERVICE (120/240 V) EQUIPMENT LEGEND					
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
1	Neutral lug		14	30 A, 240 V, 2P, CB	Sign Illumination
2	Landing lug (Note 6)		15	100 A, 240 V, 2P, CB	Main Breaker
3	Test bypass facility		16	30 A, 240 V, 2P, CB	Lighting
4	Meter socket and support		17	50 A, 120 V, 1P, CB	Signals
5	Terminal blocks		18	30 A, 120 V, 1P, CB	Ramp Metering
6	Neutral bus		19	20 A, 120 V, 1P, CB	Irrigation
7	Ground bus		20	15 A, 120 V, 1P, CB	Lighting Control
8	Grounding electrode		21	Photoelectric unit (Note 7)	
9	30 A, 2PNO, Contactor	Sign Illumination	22	15 A, 1P, Test switch	Lighting Control
10	Photoelectric unit (Note 7)		23	60 A, 2PNO Contactor	Lighting
11	15 A, 1P, Test switch	Sign Illumination Test Switch	24	15 A, 120 V, 1P, CB	IISNS
12	15 A, 120 V, 1P, CB	Sign Illumination Control	25	30 A, 2PNO Contactor	IISNS
13	15 A, 120 V, 1P, CB	Flashing Beacon	26	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet

NOTES (FOR SERVICE EQUIPMENT ENCLOSURE)

1. Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
2. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
3. Connect to remote test switch mounted on lighting standards, sign post or structure when required.
4. Items No. 1 and 6 shall be isolated from the service equipment enclosure.
5. Meter sockets shall be 5 clip type.
6. The landing lug shall be suitable for multiple conductors.
7. Type V photoelectric control shall be used unless otherwise indicated on the plans.



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST NO.	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	210	384	

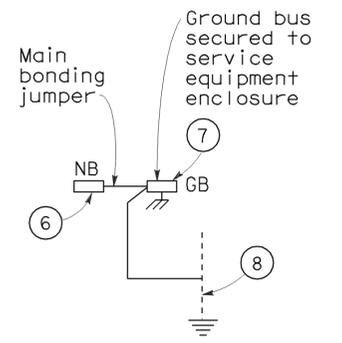
REGISTERED ELECTRICAL ENGINEER
Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated 3-2-09



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT AND
 TYPICAL WIRING DIAGRAM
 TYPE III - C SERIES)**
 NO SCALE
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RSP ES-2F DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-2F DATED JULY 1, 2004-PAGE 421 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-2F

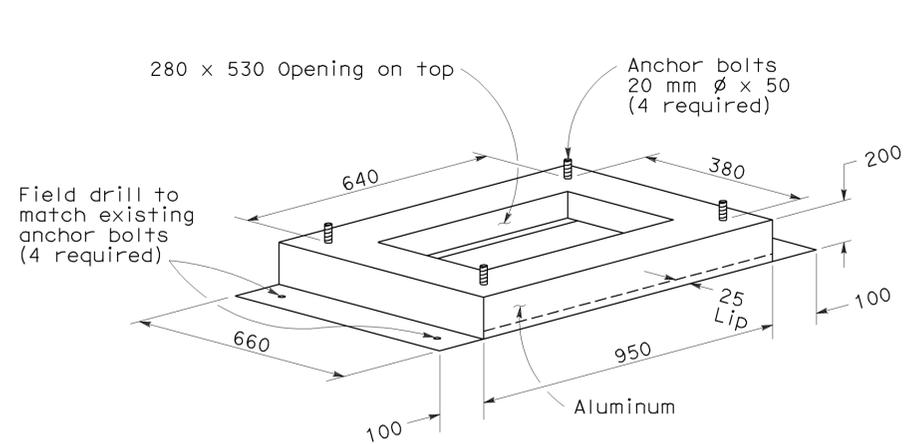
2004 REVISED STD PLAN RSP ES-2F



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST NO.	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	211	384	

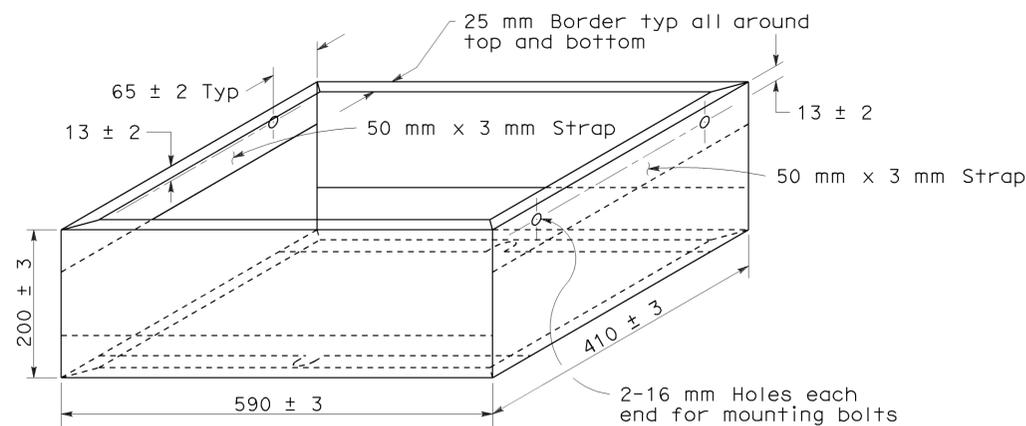
REGISTERED ELECTRICAL ENGINEER
Jeffery B. McRae
 REGISTERED PROFESSIONAL ENGINEER
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

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TYPE PR CABINET ADAPTER

1. Material: 4.78 thickness aluminum plate.
2. Mount adapter on Type P or Type R cabinet foundation.

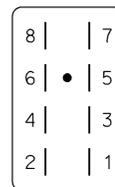


TYPE M CABINET ADAPTER

1. Mount adapter on Type M cabinet foundation.
2. Mounting bolts shall be 10 mm ϕ minimum size.
3. Aluminum (4.78 mm thickness).

The flasher transfer relay shall intermate with a CINCH-JONES Socket S-408-SB or equal connected as follows:

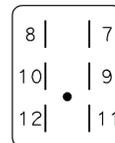
Pin No.	Circuit	Pin No.	Circuit
1	Coil	5	Common, Circuit #1
2	Coil	6	Common, Circuit #2
3	NC Circuit #1	7	NO Circuit #1
4	NC Circuit #2	8	NO Circuit #2



CONNECTOR SOCKET FLASH TRANSFER RELAY

The flasher shall intermate with a CINCH-JONES Socket S-406-SB or equal connected as follows:

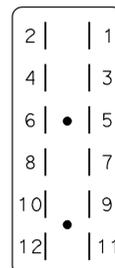
Pin No.	Circuit	Pin No.	Circuit
7	Load, Circuit #1	10	ac+
8	Load, Circuit #2	11	ac-
9	Chassis Ground	12	Not used



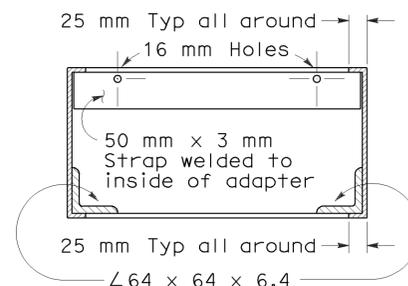
CONNECTOR SOCKET SOLID STATE FLASHER UNIT

The Solid-state switching device shall intermate with a CINCH-JONES Socket S-2412-SB or equal connected as follows:

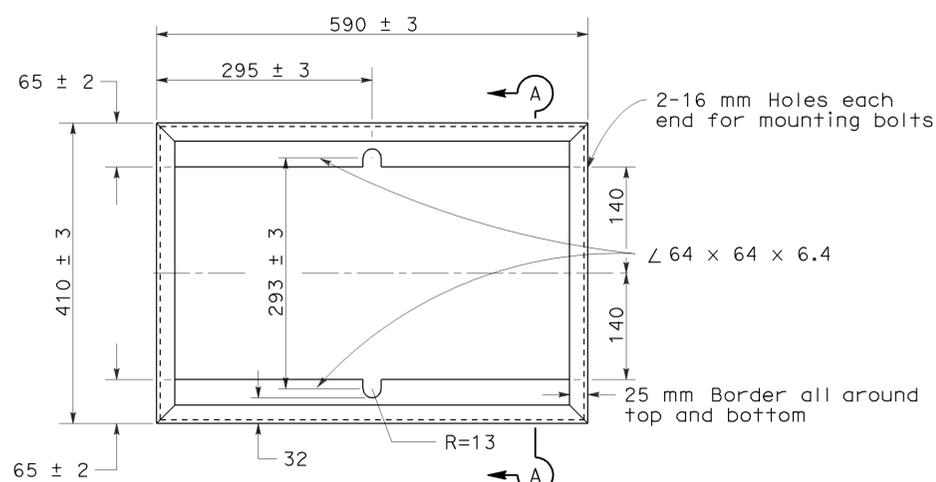
Pin No.	Circuit	Pin No.	Circuit
1	ac + Lights	7	Green or Walk Output
2	Chassis Ground	8	Yellow Input
3	Red or Don't Walk Output	9	dc+ (15 to 24 V)
4	Not used	10	Green or Walk Input
5	Yellow Output	11	ac-
6	Red or Don't Walk Input	12	Not used



CONNECTOR SOCKET SOLID STATE SWITCHING DEVICE

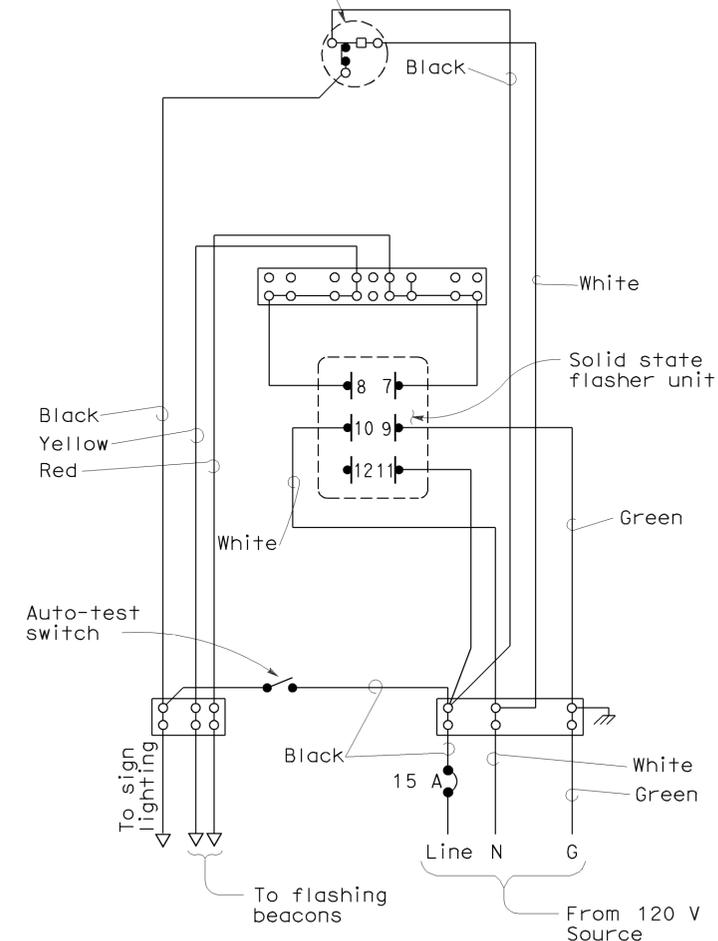


SECTION A-A



TOP VIEW

PEU socket. Install on top of enclosure unless otherwise shown



WIRING DIAGRAM LED FLASHING BEACON CONTROL ASSEMBLY

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (CONTROLLER CABINET
 DETAILS)**

NO SCALE
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RSP ES-3B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-3B
 DATED JULY 1, 2004-PAGE 424 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-3B

2004 REVISED STD PLAN RSP ES-3B



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		212	384

REGISTERED ELECTRICAL ENGINEER
Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

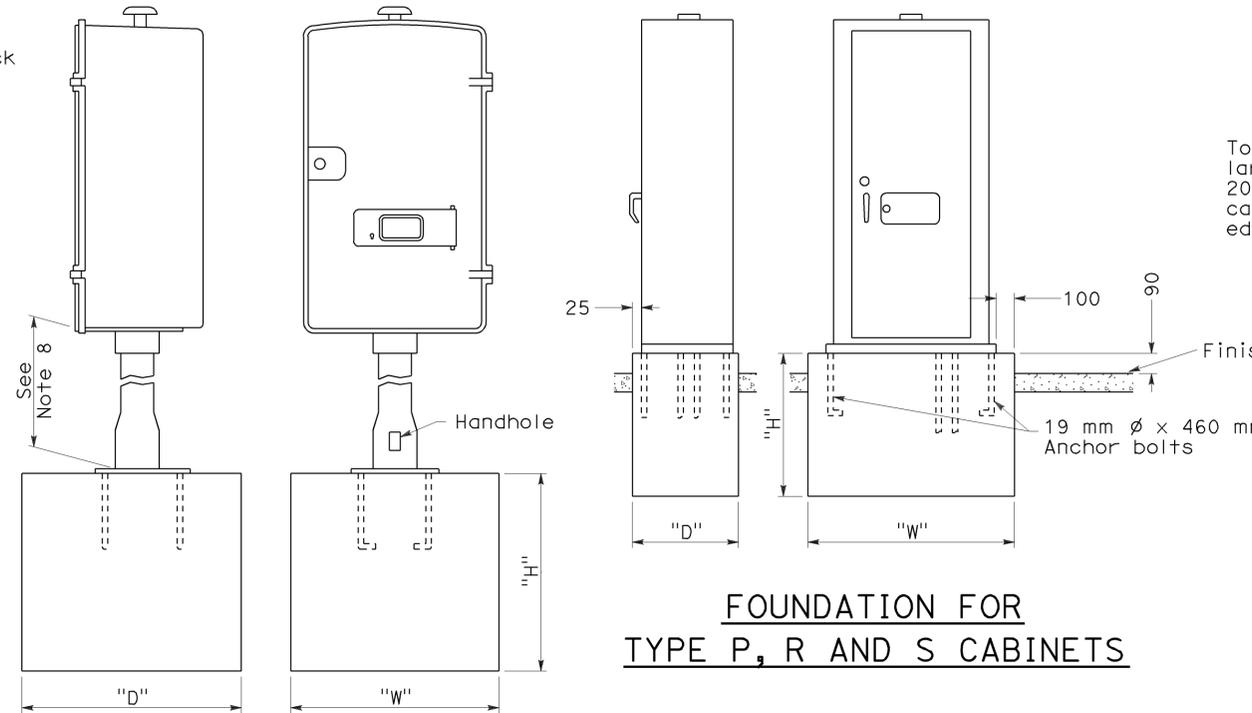
October 5, 2007
 PLANS APPROVAL DATE

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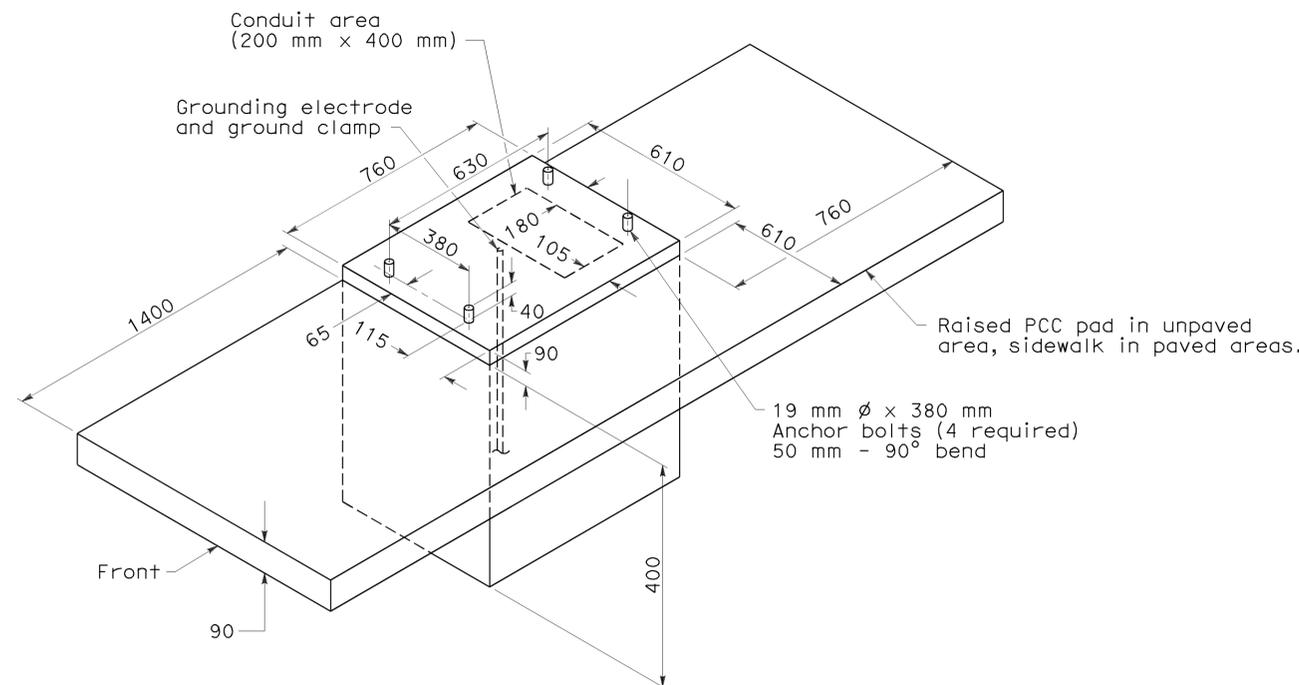
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NOTES - CONTROLLER CABINETS

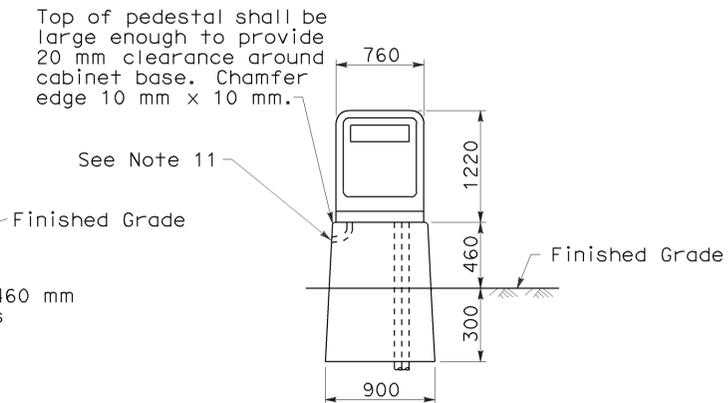
- Cabinet dimensions are nominal.
- Foundations shall be located to provide 600 mm minimum clearance between face of curb and any portion of cabinet.
- Type G, M, P, R, S and Model 336 cabinets shall be installed with the back toward the nearest lane of traffic.
- The controller cabinet ground bus shall be bonded to the controller equipment enclosure.
- In unpaved areas, a raised portland cement concrete pad shall be constructed in front of each controller cabinet. Pad shall be 900 mm x 900 mm x 100 mm for Type G cabinets and shall be 900 mm x 100 mm thick x width of foundation for Types M, P, R, S and Model 336 cabinets.
- In unpaved areas, the top of foundation for Type G, P, R and S cabinets shall be 150 mm above surrounding grade. Top of foundation for Type M or Model 336 cabinet shall be 460 mm above surrounding grade.
- In sidewalks and other paved areas, top of foundation for Type G cabinet shall be level with surrounding grade. Top of foundation for Type P, R and S cabinets shall be 90 mm above surrounding grade.
- The steel pedestal, base plate, bolt circle and foundation for Type G cabinet shall be the same as that shown for a Type 1-C Standard. Pedestal shall be 640 mm - 760 mm in length. Anchor bolts shall be 19 mm ϕ x 460 mm with a 50 mm - 90° bend. Four bolts required per cabinet.
- Type G cabinet shall be provided with a slipfitter to permit mounting an 114 mm outside diameter pedestal. Slipfitter shall be bolted to bottom of the cabinet.
- Type G cabinet shall be provided with 8 screened, raintight holes, 13 mm diameter or larger, in the bottom of the cabinet.
- A 25 mm drain shall be provided through the foundation of a Type M or Model 336 cabinet. Drain pipe shall be screened.
- See Table for cabinet and foundation dimensions; "D" = Depth, "H" = Height and "W" = Width.
- Cabinet shelves shall be adjustable for vertical spacing and shall be removable. Type M, P, R and S cabinets shall be provided with a minimum of two shelves.
- Anchor bolts for Type M, P, R, S and Model 336 cabinets shall be 19 mm ϕ x 460 mm with a 50 mm - 90° bend.
- An approved mastic or caulking compound shall be placed on the foundation prior to placing the cabinet to seal openings between bottom of cabinet and foundation.
- Controller units, plug-mounted equipment, shelf-mounted equipment and wall-mounted equipment shall be located to permit safe and easy removal or replacement without removing any other piece of equipment.
- Cabinet fan may be installed at an alternate location near the top of the cabinet when approved by the Engineer.
- Where telephone interconnect is required, a minimum of 130 mm clear vertical space shall be provided inside the cabinet for the equipment.
- Telephone interconnect conductors shall be enclosed in a 21C or larger conduit through the foundation. Type 4 metal conduit shall be used to separate telephone and power conductors in cabinets and pedestals.
- For Model 332, 334 and 336 cabinet details, see "Traffic signal controller equipment specifications".



FOUNDATION FOR TYPE G CABINET



FOUNDATION DETAILS
For Model 332 and 334 cabinets



PEDESTAL FOUNDATION FOR TYPE M OR MODEL 336 CABINET

CABINET	FOUNDATION			
	TYPE/ MODEL	H (mm)	W (mm)	D (mm)
G		900	600	600
M 336		760	900	560
P		460	1330	710
R		460	1330	710
S		460	1820	710

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (CONTROLLER CABINET DETAILS)

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RSP ES-3C DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-3C DATED JULY 1, 2004-PAGE 425 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-3C

2004 REVISED STD PLAN RSP ES-3C



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		213	384

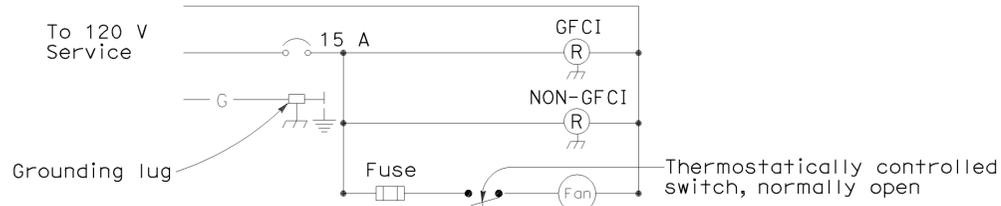
Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

October 5, 2007
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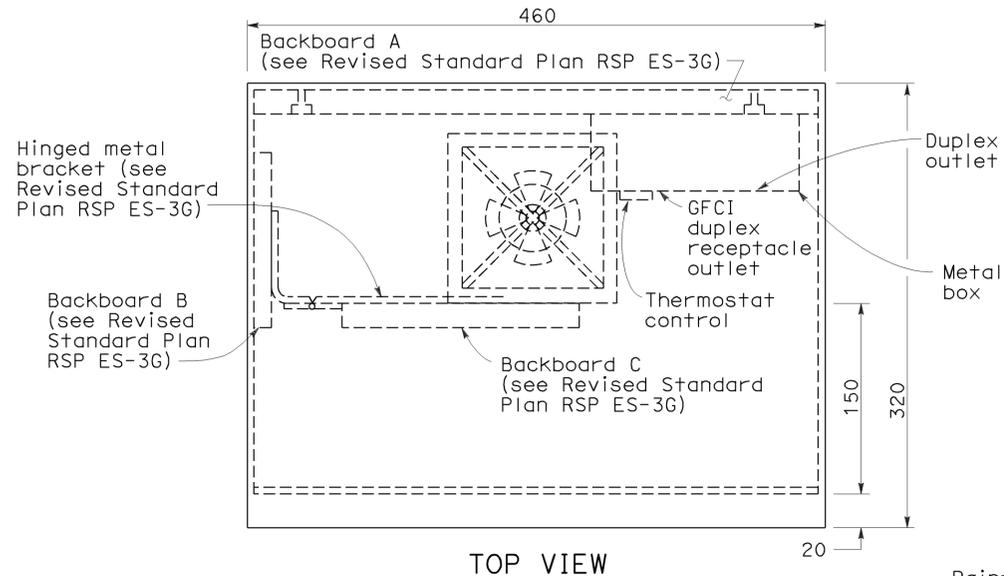
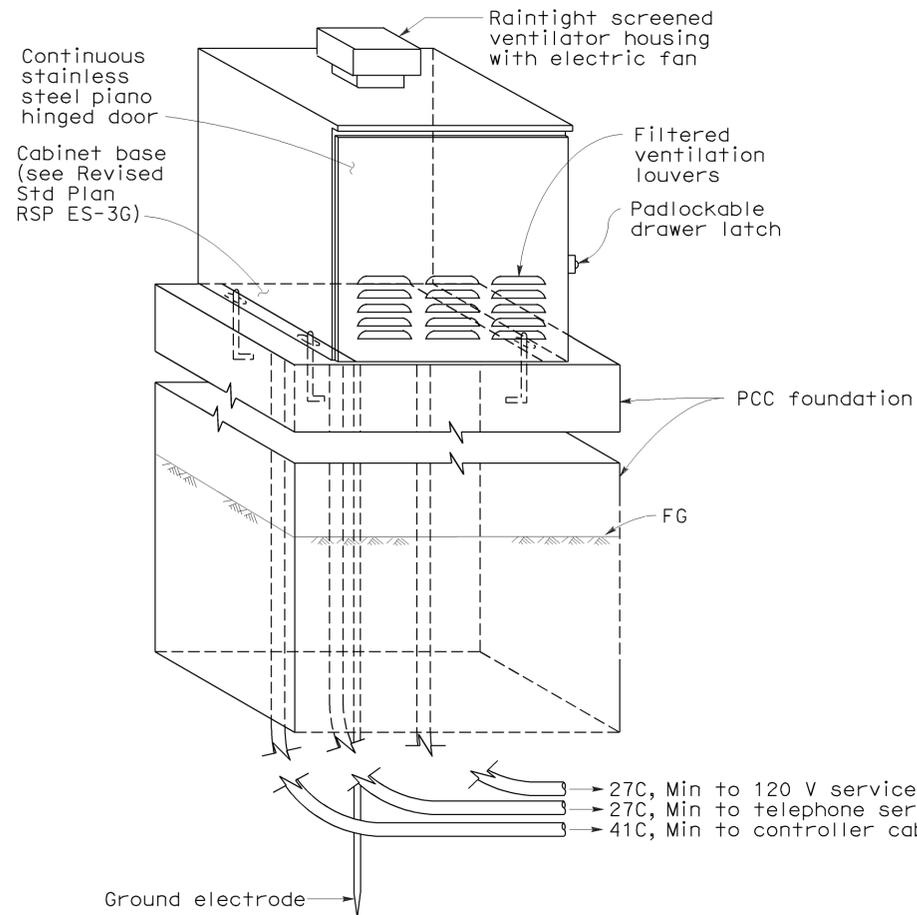
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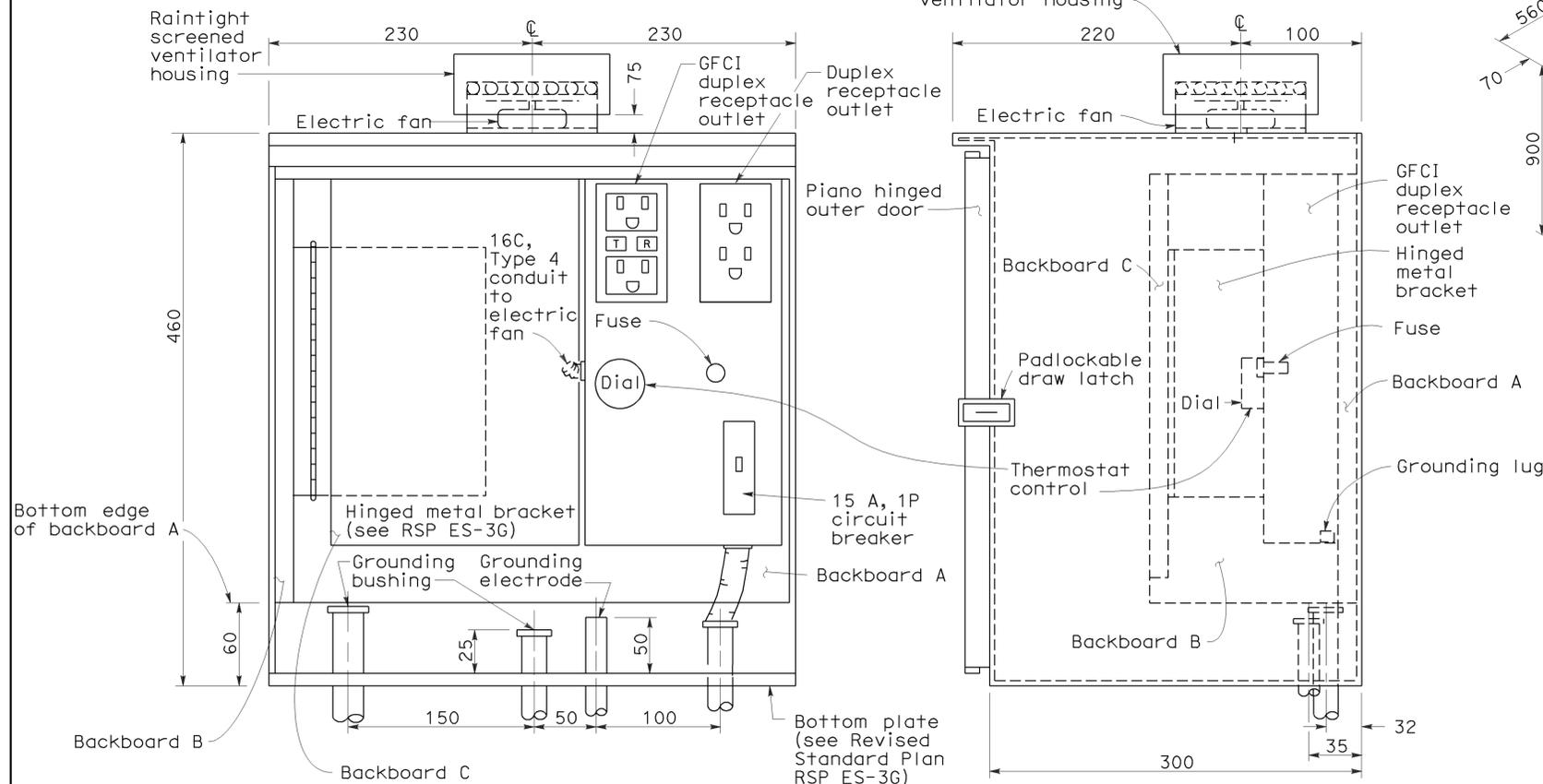
To accompany plans dated 3-2-09



WIRING DIAGRAM

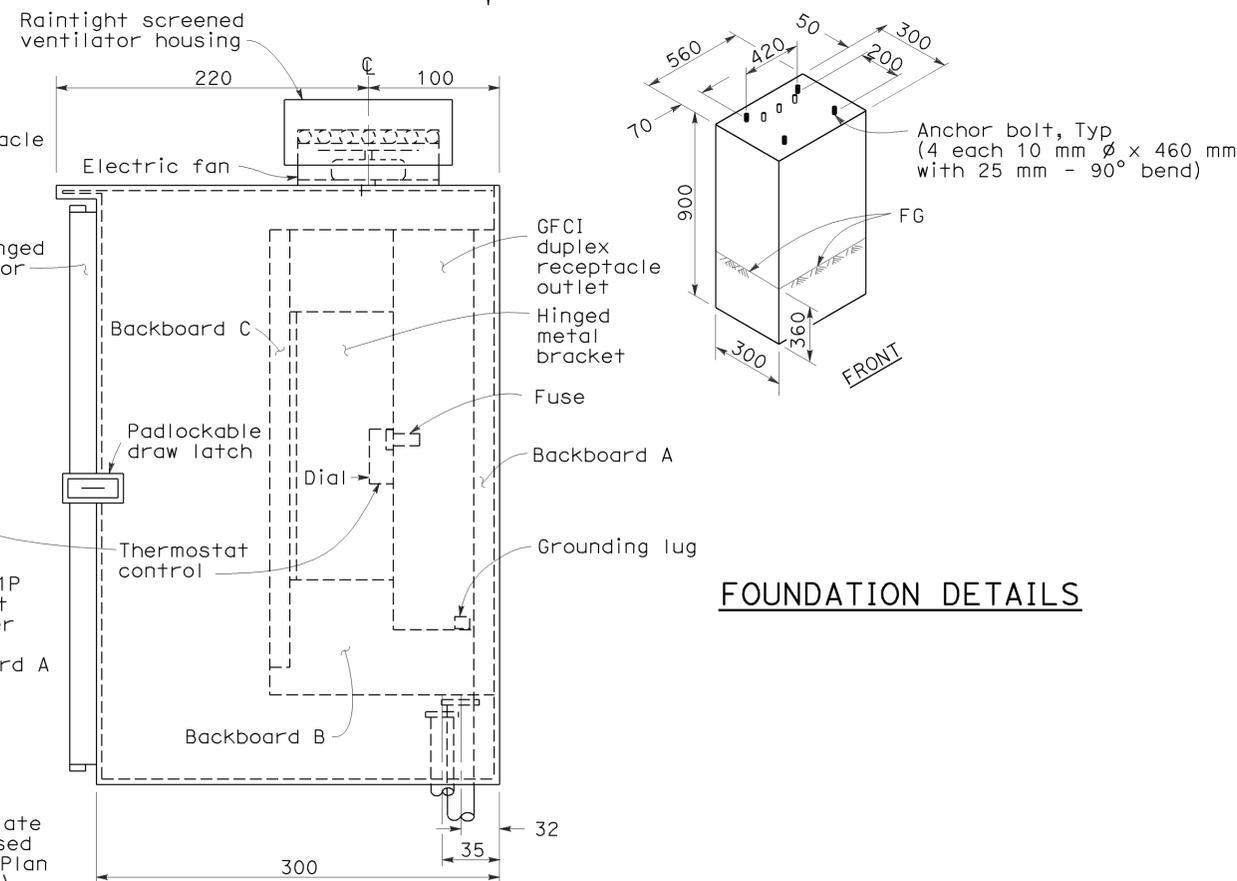


TOP VIEW

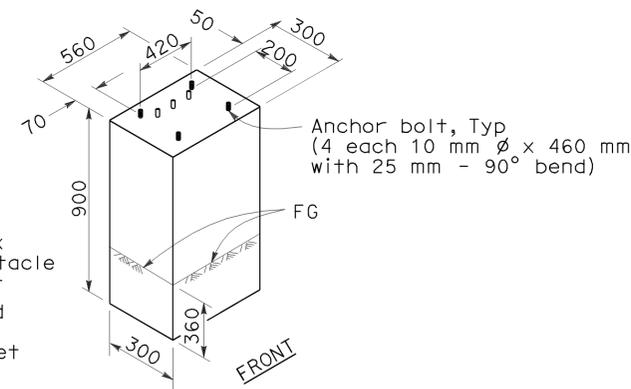


FRONT VIEW

(Outer door removed)



FOUNDATION DETAILS



NOTES

- Telephone demarcation cabinet shall be furnished with mounting boards, thermostat, fan, outlet box, circuit breaker and outlet plate. Dimensions are nominal.
- An approved mastic or caulking compound shall be placed on the foundation prior to placing the cabinet to seal openings between bottom of cabinet and foundation.
- In unpaved areas, a raised PCC pad shall be placed in front of the telephone demarcation cabinet. Pad shall be 560 mm x 900 mm x 100 mm thick, with 50 mm above the finished grade.
- All conduits shall be bonded to the enclosure.
- Telephone demarcation cabinet:
 - Material shall be anodized aluminum (3.2 mm thick).
 - Fabrication shall conform to the requirements of the Standard Specifications.
 - Ventilation louvers shall be located in door.
 - Door shall be lockable with padlock.
 - Fan shall be mounted in a ventilator housing.
 - Fan capacity shall be at least 0.7 m³ per minute.
 - Fan shall be thermostatically controlled and adjustable to turn on between 32°C and 65°C.
 - Fan circuit shall be fused at 175 percent of the fan motor capacity.
- Hardware for fastening of mounting boards:
 - Fasten backboard A and backboard B to telephone demarcation cabinet with 5 mm diameter x 20 mm stainless steel carriage bolts (8 required).
 - Fasten hinged metal bracket to backboard B and backboard C to hinged metal bracket with number 10 mm x 20 mm wood screws (9 required).

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (TELEPHONE DEMARICATION
 CABINET, TYPE C)**

NO SCALE
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RSP ES-3F DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-3F
 DATED JULY 1, 2004-PAGE 428 OF THE STANDARD PLANS BOOK DATED JULY 2004.

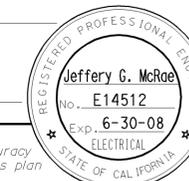
REVISED STANDARD PLAN RSP ES-3F

2004 REVISED Std PLAN RSP ES-3F



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		214	384

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

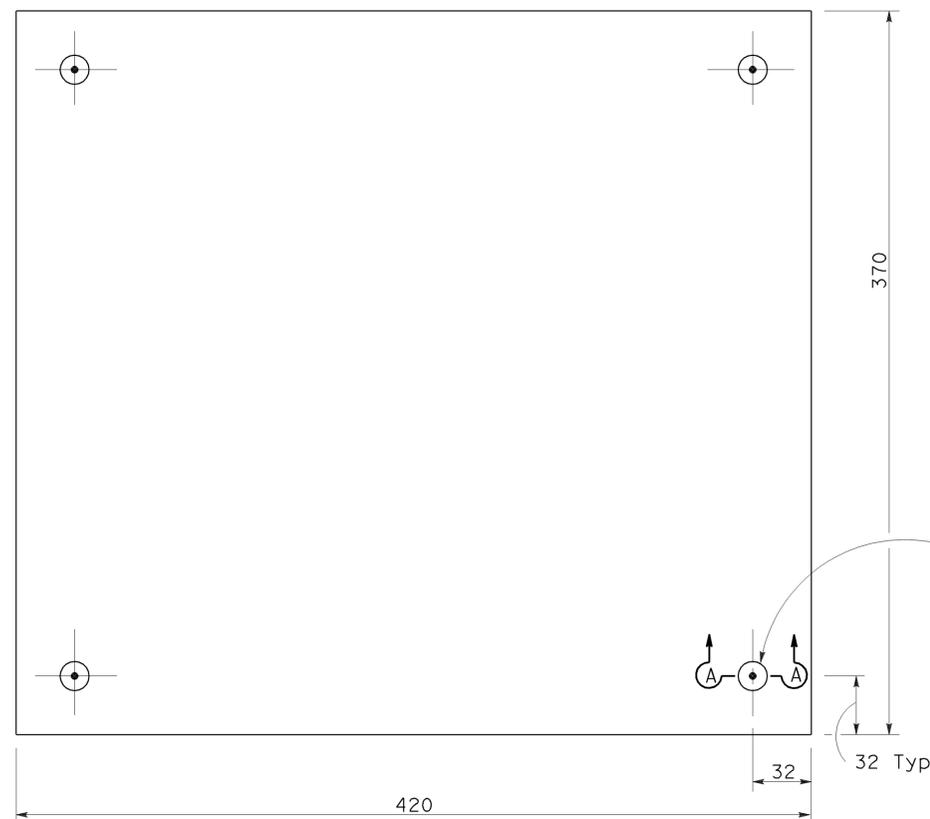


October 5, 2007
PLANS APPROVAL DATE

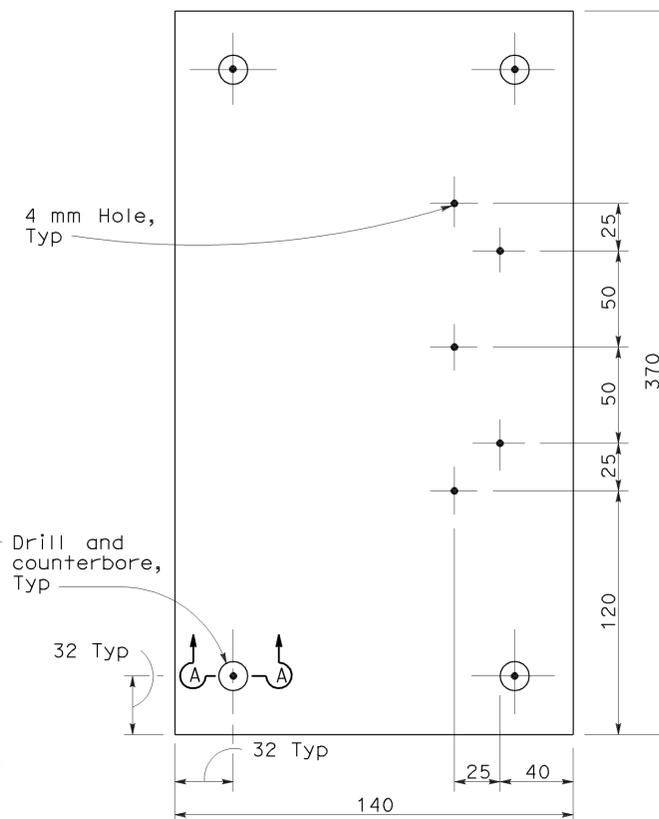
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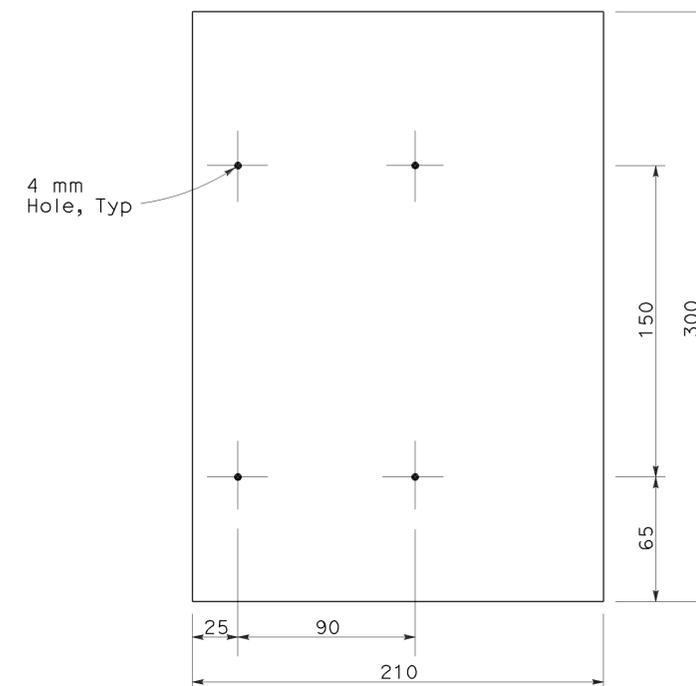
To accompany plans dated 3-2-09



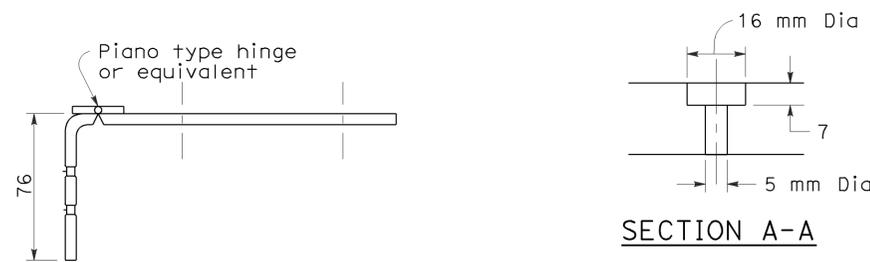
BACKBOARD A
(Material: 18 mm A-C plywood)



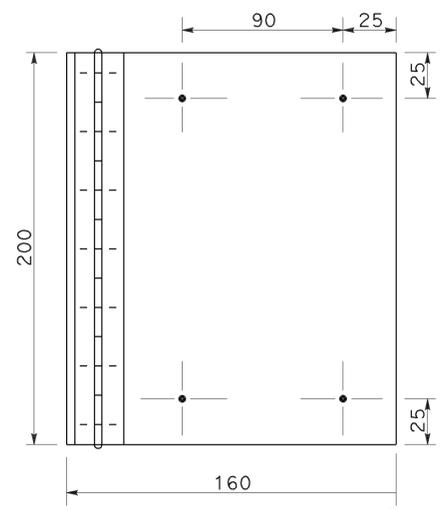
BACKBOARD B
(Material: 18 mm A-C plywood)



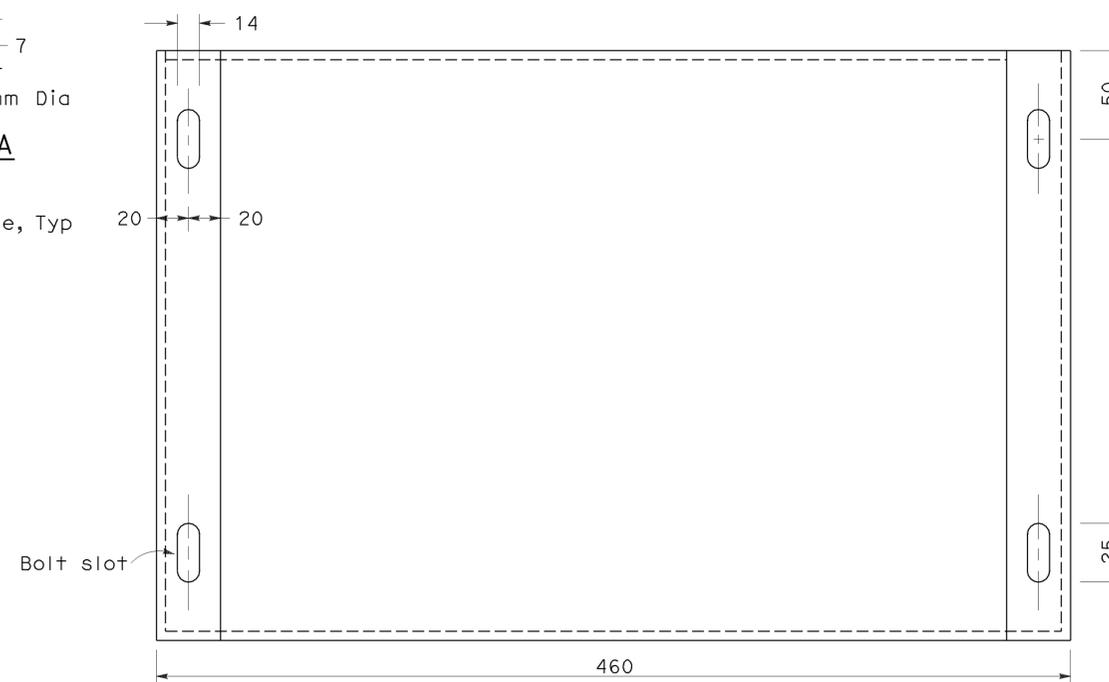
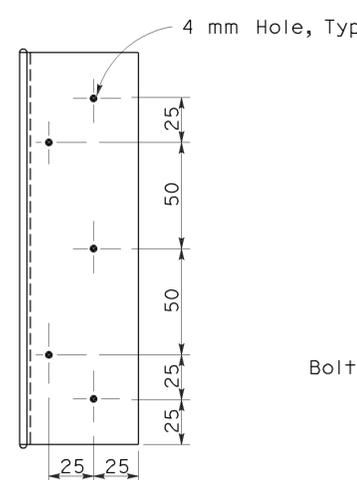
BACKBOARD C
(Material: 18 mm A-C plywood)



SECTION A-A



HINGED METAL BRACKET



CABINET BASE
(Material: 3.42 mm Galvanized Steel)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(TELEPHONE DEMARCATION
CABINET, TYPE C DETAILS)**

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RSP ES-3G DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-3G
DATED JULY 1, 2004-PAGE 429 OF THE STANDARD PLANS BOOK DATED JULY 2004.

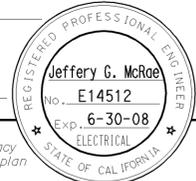
REVISED STANDARD PLAN RSP ES-3G

2004 REVISED Std PLAN RSP ES-3G



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	215	384

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

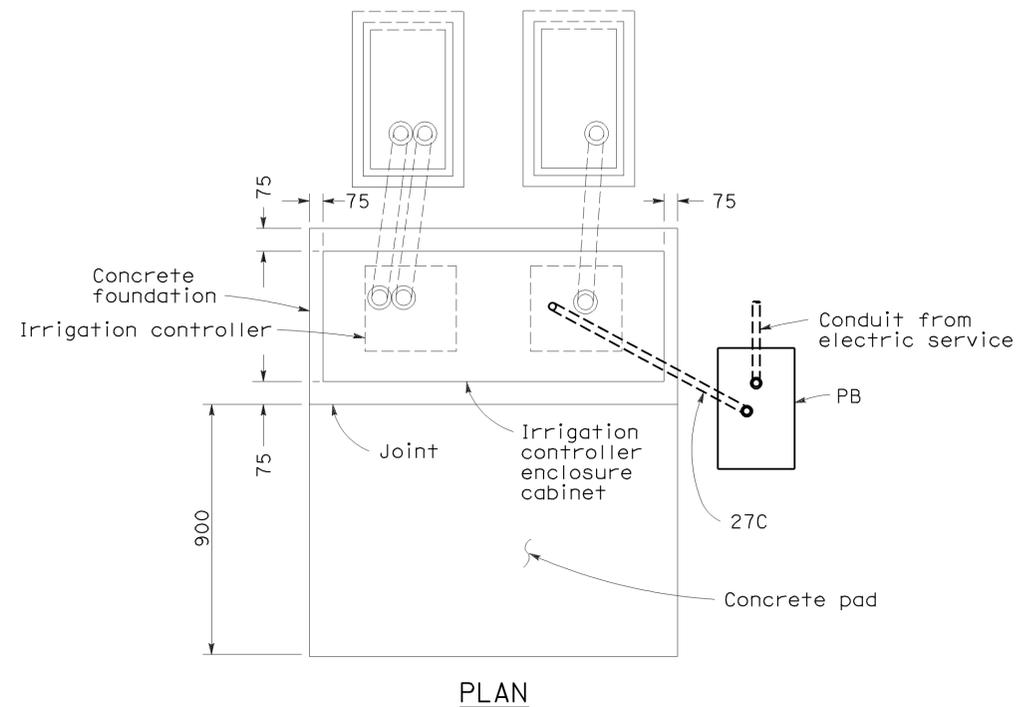


October 5, 2007
PLANS APPROVAL DATE

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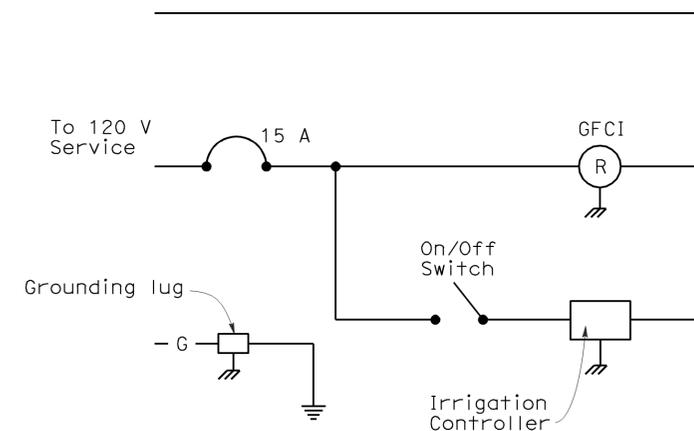
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

To accompany plans dated 3-2-09

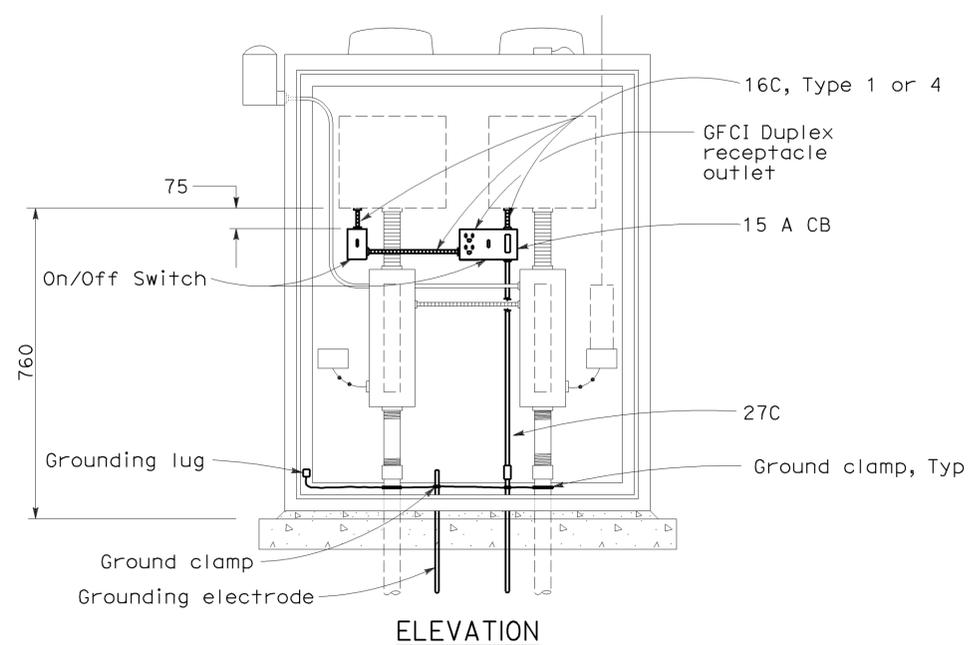


NOTE:

See Standard Plan H10 for other details.



**IRRIGATION CONTROLLER
ENCLOSURE CABINET
WIRING DIAGRAM
(TYPICAL)**



STATE OF CALIFORNIA
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**ELECTRICAL SYSTEMS
(IRRIGATION CONTROLLER
ENCLOSURE CABINET)**

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RSP ES-3H DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-3H
DATED JULY 1, 2004-PAGE 430 OF THE STANDARD PLANS BOOK DATED JULY 2004.

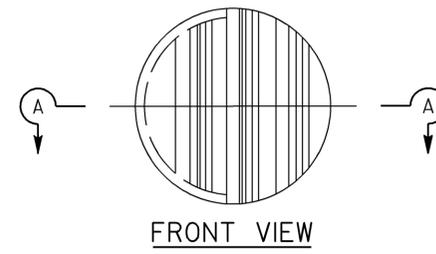
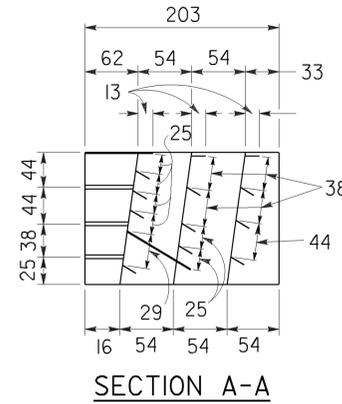
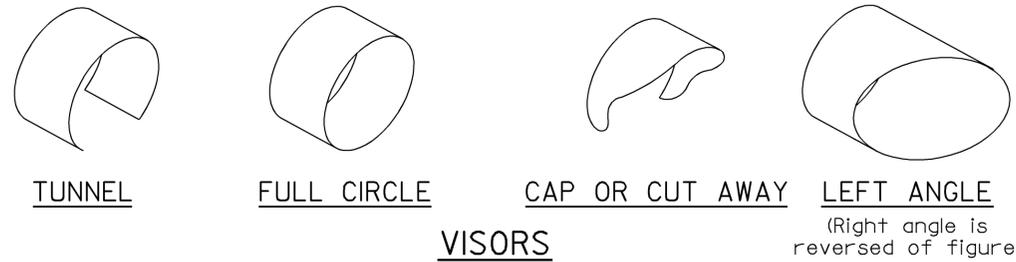
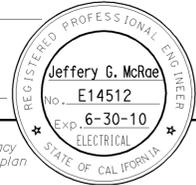
REVISED STANDARD PLAN RSP ES-3H

2004 REVISED Std PLAN RSP ES-3H

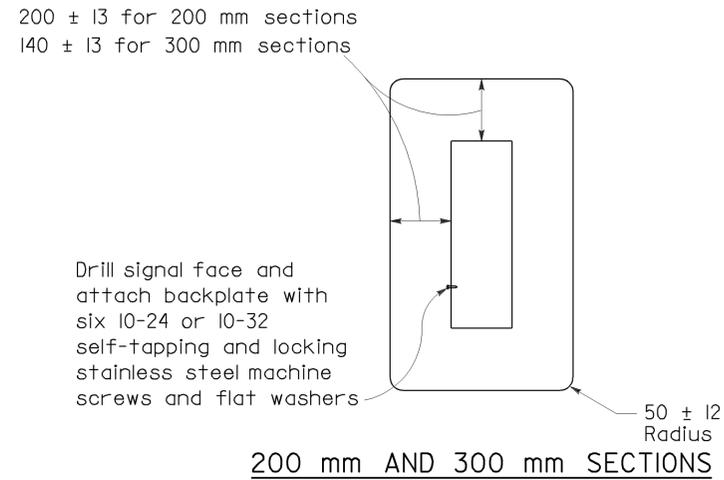


DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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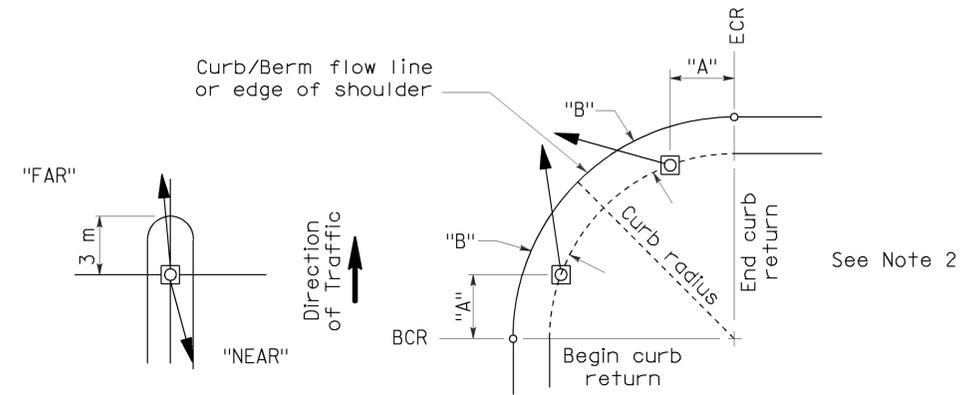
June 6, 2008
 PLANS APPROVAL DATE
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DIRECTIONAL LOUVER
 Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.

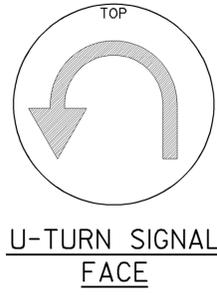
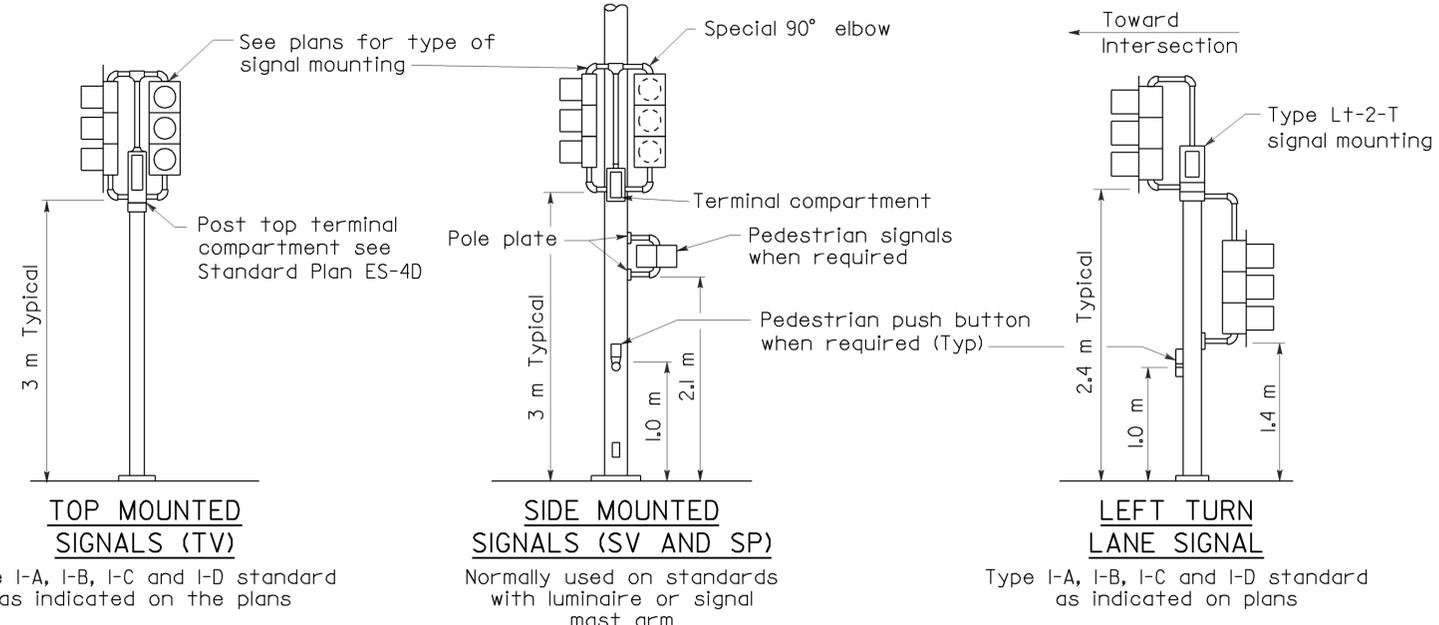


BACKPLATE
 1.5 mm minimum thickness
 300I-14 aluminum, or plastic when specified



- NOTES:**
1. Typical signal pole placement unless dimensioned on plans.
 2. For "A" and "B" dimensions, see Pole Schedule, or as directed by the Engineer.

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE
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RSP ES-4C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN ES-4C DATED July 1, 2004 - PAGE 433 OF THE STANDARD PLANS BOOK DATED July 2004.

REVISED STANDARD PLAN RSP ES-4C

2004 REVISED STD PLAN RSP ES-4C



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		217	384

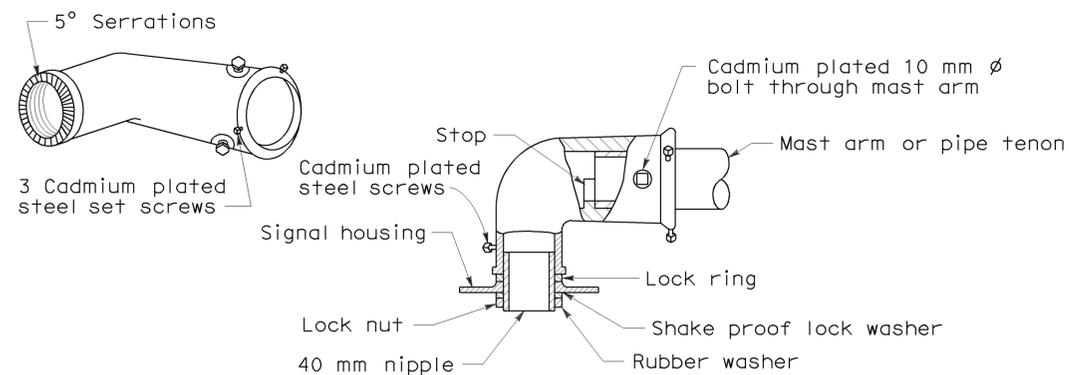
REGISTERED ELECTRICAL ENGINEER
Jeffery G. McRae
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

June 6, 2008
 PLANS APPROVAL DATE

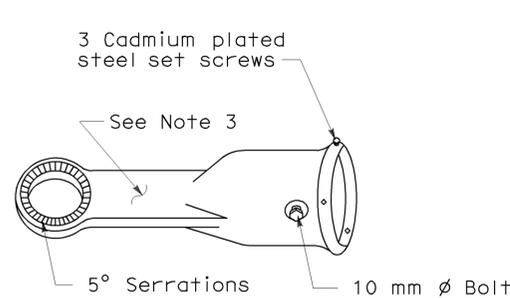
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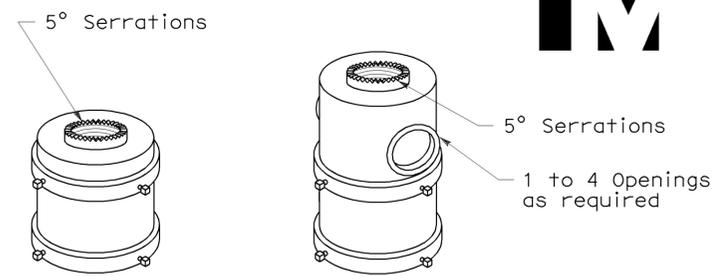
To accompany plans dated 3-2-09



MAST ARM MOUNTING - TYPE "MAT"
For 2 NPS pipe, see Note 1.

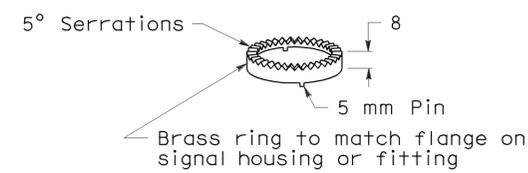


MAST ARM MOUNTING - TYPE "MAS"
For 2 NPS pipe. See Note 1.

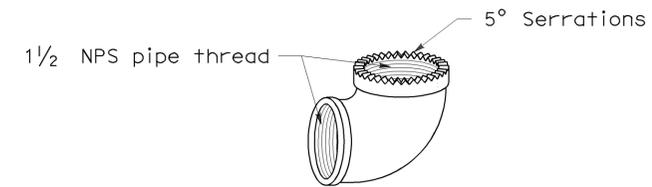


For one mounting For multiple mountings
TOP MOUNTINGS
For 4 NPS pipe, see Note 2.

SIGNAL SLIP FITTERS

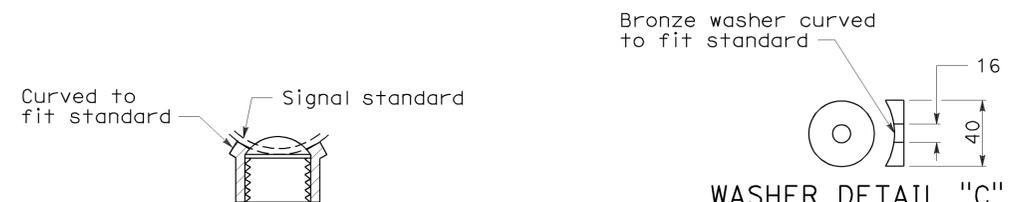


LOCK RING
Use where locking ring is not integral with signal housing or fitting.

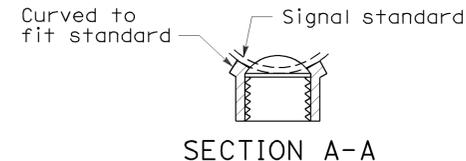


SPECIAL 90° ELBOW
One for each signal head, except those with special slip fitter mounting

MISCELLANEOUS MOUNTING HARDWARE



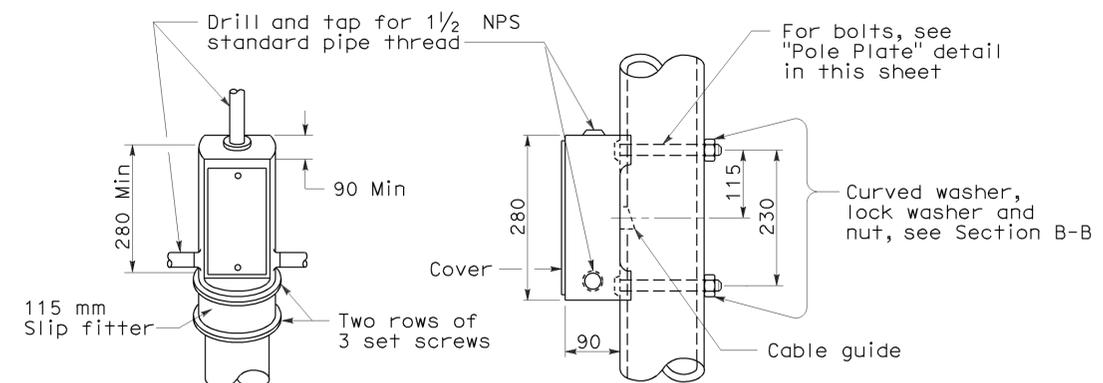
WASHER DETAIL "C"



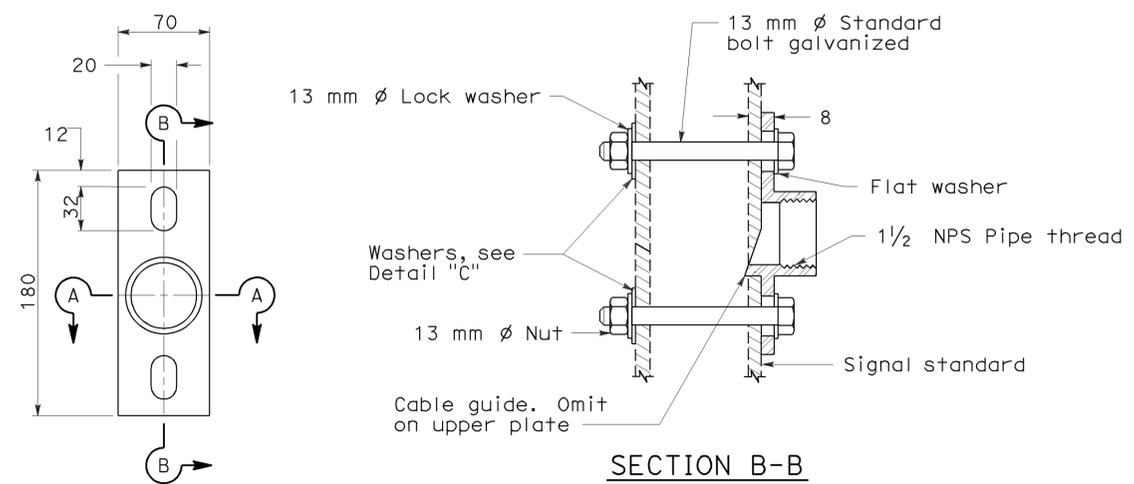
SECTION A-A

NOTES

- After mast arm signal has been plumbed and secured, drill 11 mm hole through mast arm tenon in line with slip fitter hole. Place a cadmium plated 10 mm ϕ galvanized bolt with washer under bolt head through hole and secure with washer, nut, and locknut. Seal openings between mast arm mountings and mast arm with mastic.
- (a) Threaded top mounted slip fitter openings shall be 1/2 NPS.
(b) Serrations in fittings shall match those on bottom of signal heads or in lock ring.
(c) Top opening shall be offset when backplate is used.
- Wireway shall have a cross section area of 600 mm² minimum. Minimum width of 13 mm.



TOP MOUNTING SIDE MOUNTING
TERMINAL COMPARTMENTS



POLE PLATE
For side mountings

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL HEADS AND MOUNTINGS)**

NO SCALE
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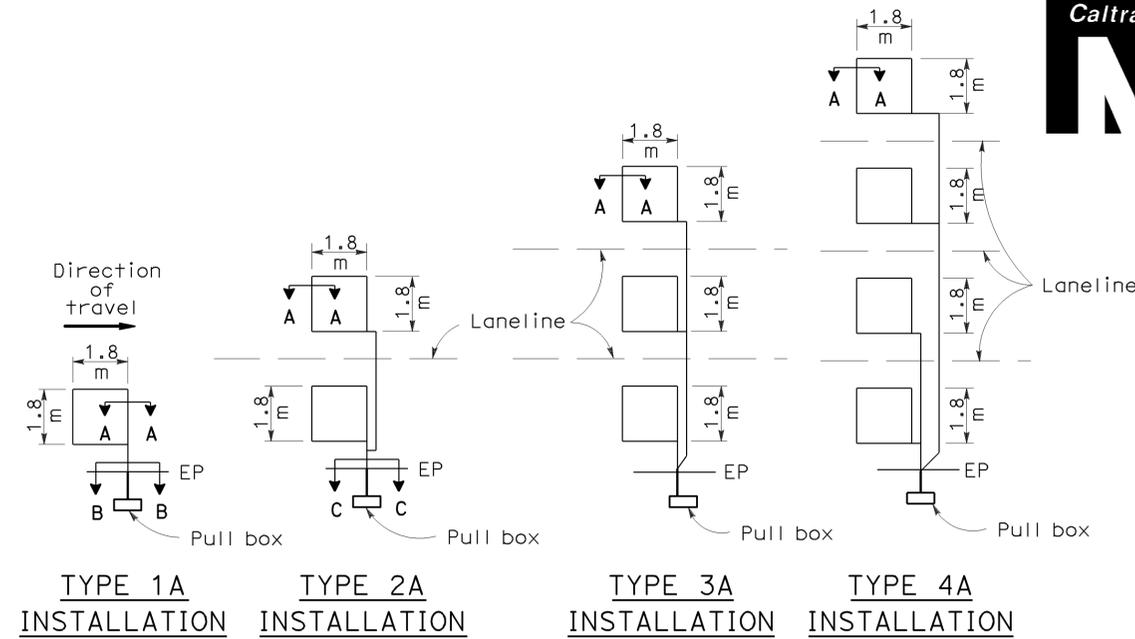
RSP ES-4D DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN ES-4D DATED July 1, 2004 - PAGE 434 OF THE STANDARD PLANS BOOK DATED July 2004.

REVISED STANDARD PLAN RSP ES-4D

2004 REVISED Std PLAN RSP ES-4D

LOOP INSTALLATION PROCEDURE

1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 600 mm minimum. Distance between lead-in saw cuts shall be 150 mm minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
8. Install loop conductor in slot using a 5 mm to 6 mm thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 1.5 m of slack length of conductor for the lead-in run to pull box.
11. The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per meter minimum) before being placed in the slot and conduit leading to pull box.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in cable. Splices shall be soldered.
15. End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.

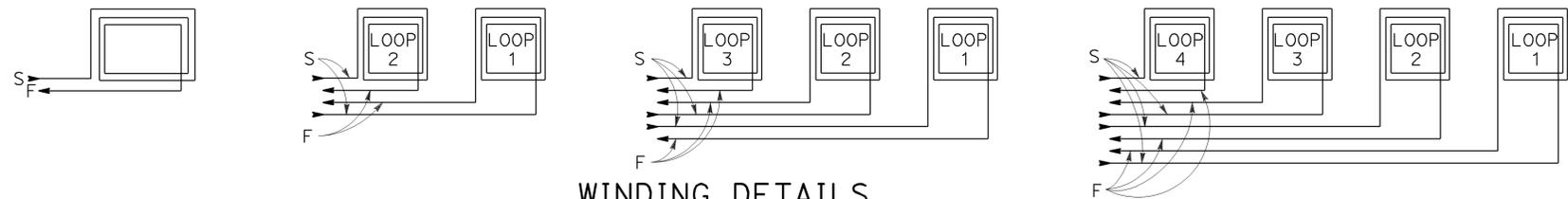


TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION

SAWCUT DETAILS

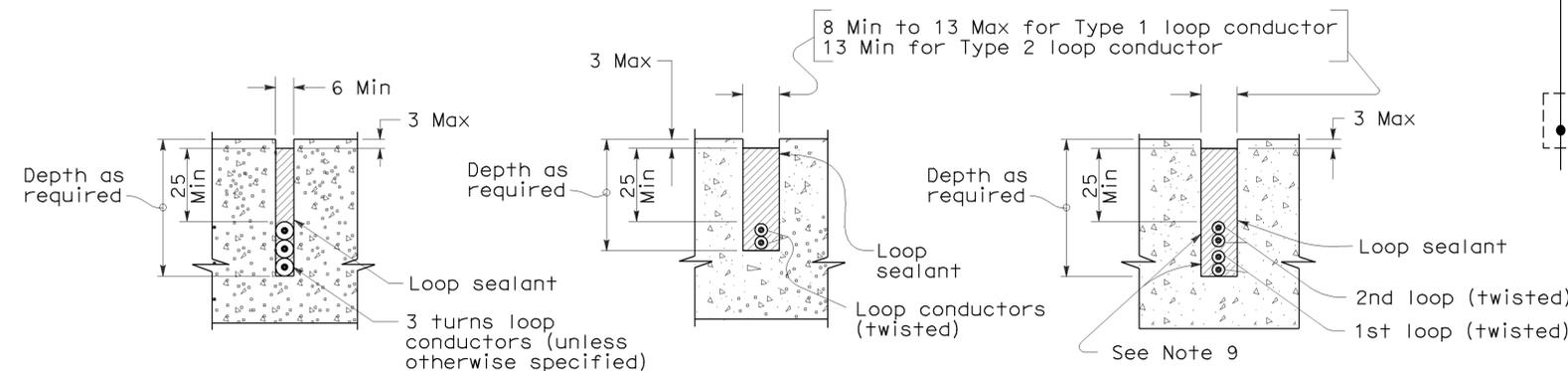
(Type A loop detector configurations illustrated)

1. 1A thru 4A = 1 Type A loop configuration in each lane.
 2. 1B thru 4B = 1 Type B loop configuration in each lane.
 3. 1C = 1 Type C loop configuration entering lanes as required.
 4. 1D thru 4D = 1 Type D loop configuration in each lane.
 5. 1E thru 4E = 1 Type E loop configuration in each lane.
 6. 1Q thru 4Q = 1 Type Q loop configuration in each lane.
- (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)

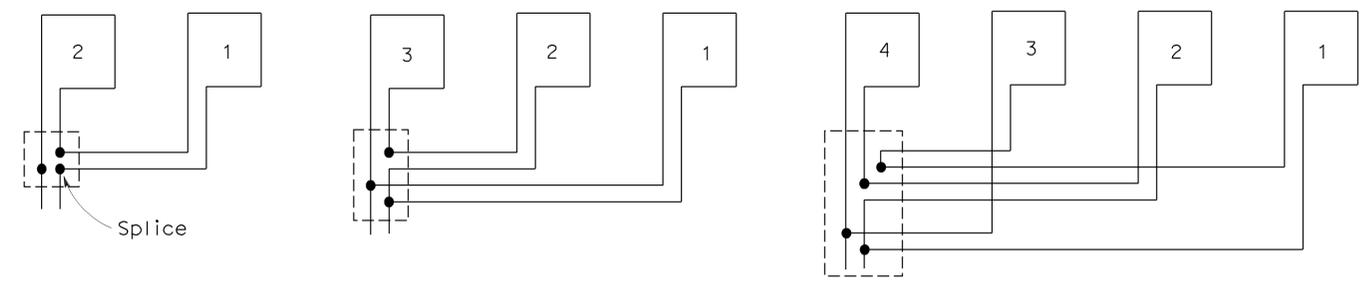


WINDING DETAILS

See Notes 6 and 7



SECTION A-A SECTION B-B SECTION C-C
SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(DETECTORS)**

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RSP ES-5A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-5A
DATED JULY 1, 2004-PAGE 436 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-5A

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	218	384

Caltrans
Metric

REGISTERED ELECTRICAL ENGINEER
Jeffery G. McRae
No. E14512
Exp. 6-30-08
STATE OF CALIFORNIA

October 5, 2007
PLANS APPROVAL DATE

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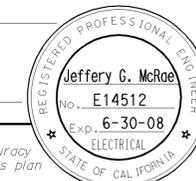
To accompany plans dated 3-2-09

2004 REVISED STD PLAN RSP ES-5A



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		219	384

Jeffery B. McRae
REGISTERED ELECTRICAL ENGINEER

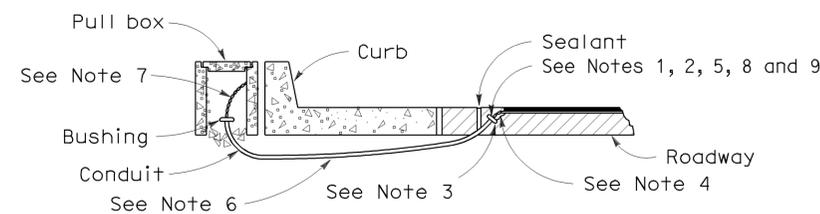


October 5, 2007
PLANS APPROVAL DATE

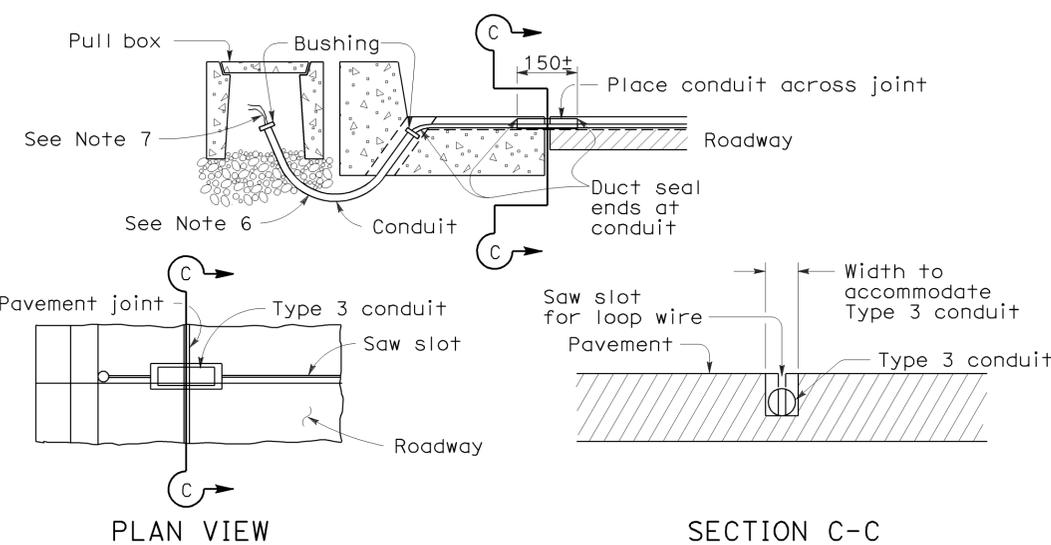
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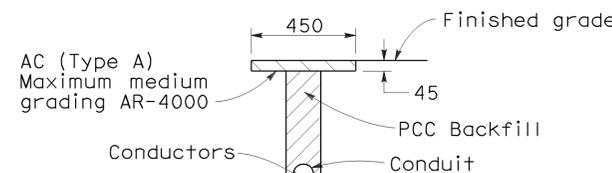
To accompany plans dated 3-2-09



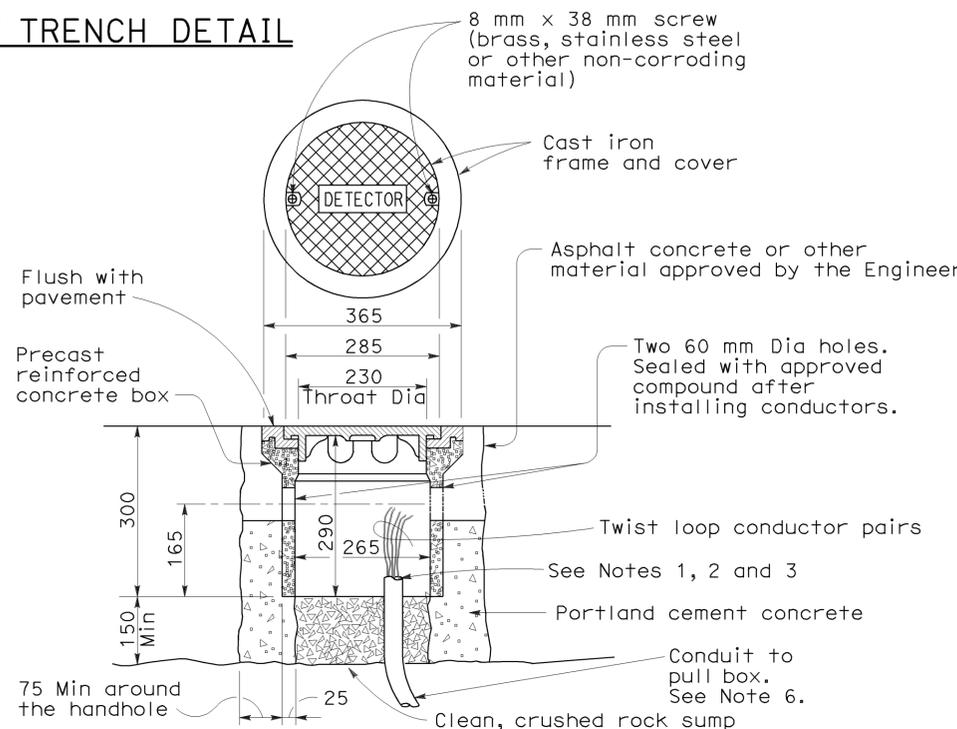
**TYPE A
CURB TERMINATION DETAIL**



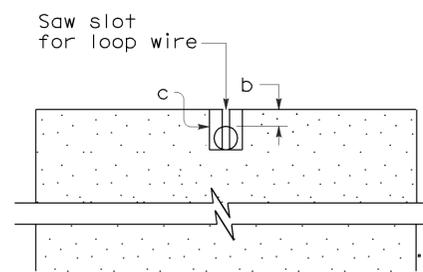
**TYPE B
CURB TERMINATION DETAILS**



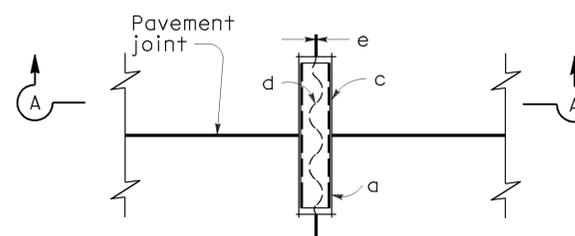
"T" TRENCH DETAIL



DETECTOR HANDHOLE DETAILS

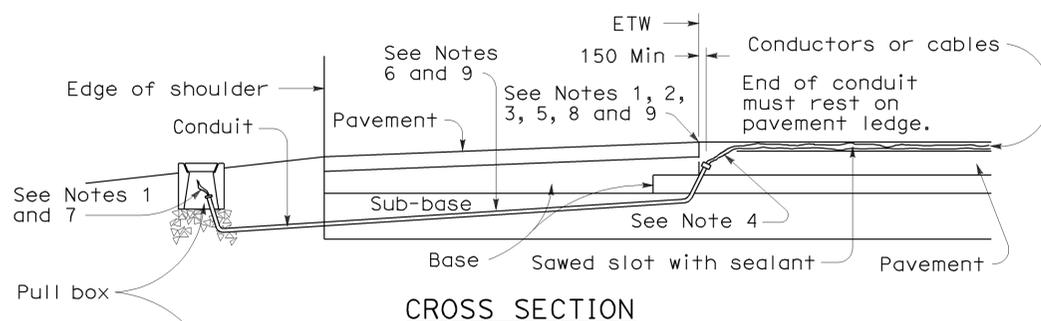


SECTION A-A



PLAN VIEW

**TYPICAL LOOP LEAD-IN DETAILS
AT PAVEMENT JOINT**



CROSS SECTION



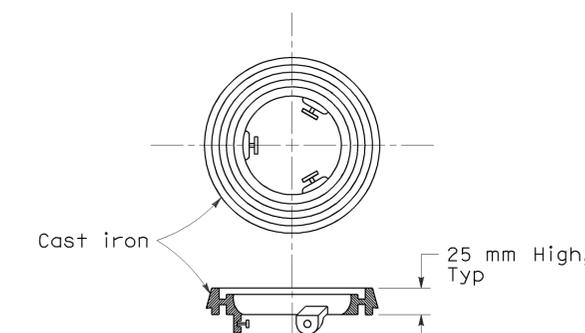
**PLAN VIEW
SHOULDER TERMINATION DETAILS**

NOTES (This sheet only):

- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 75 mm each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 80 mm below roadway surface.
- Conduit size Loop Conductors
27C Minimum 1 to 2 pairs
41C Minimum 3 to 4 pairs
53C Minimum 5 or more pairs
- Splice detector conductors or cables to lead-in-cable run to controller cabinet.
- Location of detector handhole when shown on plans.
- When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 600 mm into the shoulder pavement.

NOTES:

- 21C, Type 3 conduit 150 mm long minimum, plug both ends with caulking compound to keep out sealant.
- 13 mm minimum between top of conduit and pavement surface.
- Saw cut shall not exceed 25 mm in width and 3 mm longer than conduit to be installed.
- Conductors with 13 mm minimum slack inside conduit.
- Inductive loop detector saw slot.



NOTE:

Use for Type A detector handhole on pavement resurfacing only.

LOCKING GRADE RING

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(DETECTORS)**

NO SCALE

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RSP ES-5D DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-5D
DATED JULY 1, 2004-PAGE 439 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-5D

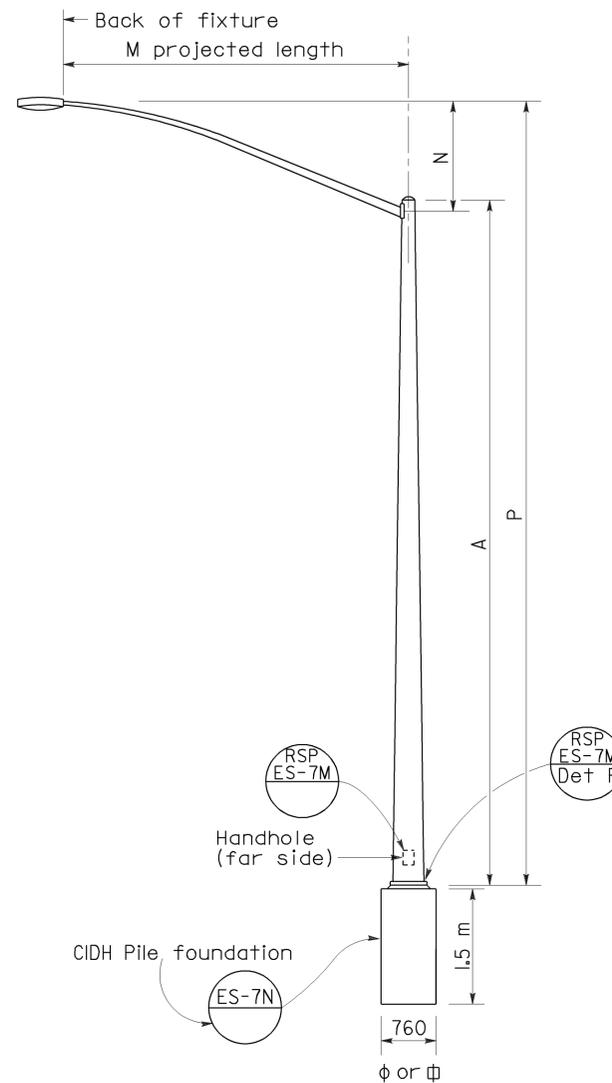
2004 REVISED STD PLAN RSP ES-5D



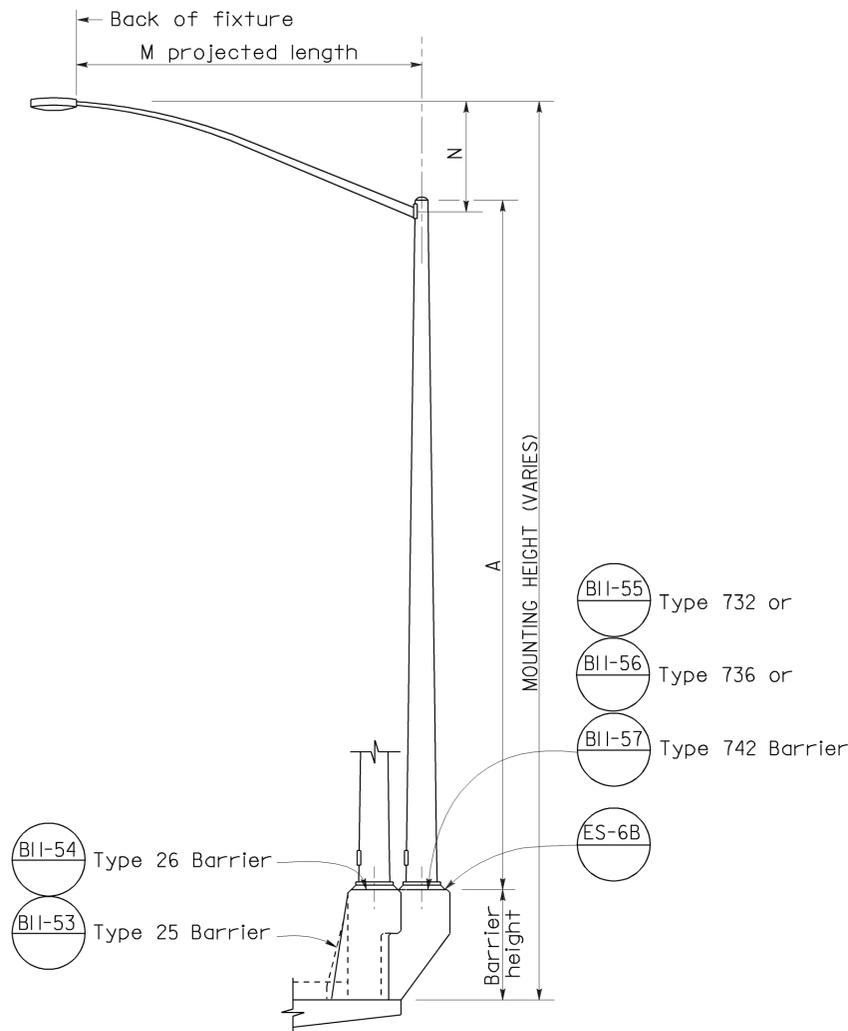
DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		220	384

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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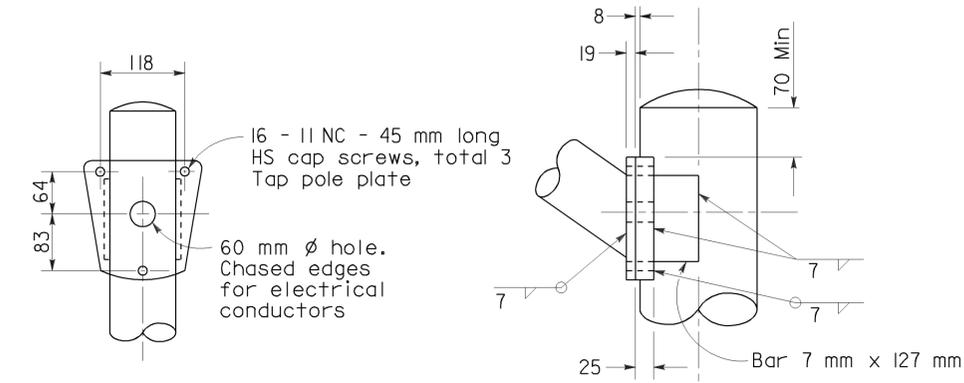
To accompany plans dated 3-2-09



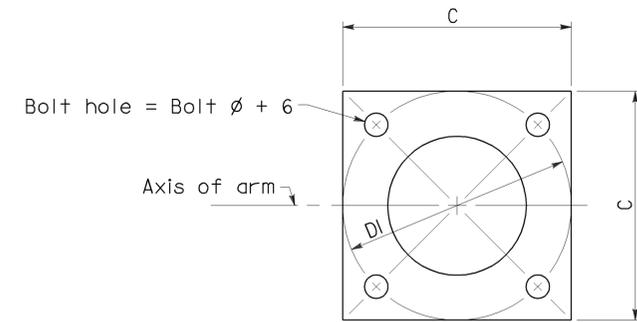
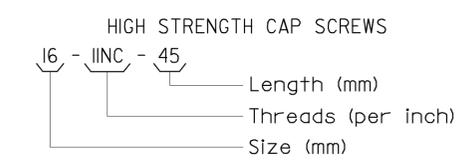
ELEVATION
TYPE 15 AND TYPE 21



ELEVATION
TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED



DETAIL R
LUMINAIRE ARM CONNECTION



BASE PLATE

POLE TYPE	POLE DATA				BASE PLATE DATA				LUMINAIRE ARM
	A Height	Min OD		Wall Thickness	C	DI Bolt Circle	Thick-ness	Anchor Bolts Size	
		Base	Top						
15	9.1	203	98	3.04	305	305	25	25 ϕ x 915 x 102*	1.8-4.6 3.7
21	10.7	219	98	3.04	305	305	25	See ES-6B	1.8-4.6 3.7

LUMINAIRE ARM DATA					
M Projected Length	N Rise	Min OD At Pole	Nominal Thickness	P	
				Type 15	Type 21
m	mm	mm	mm	m	m
1.8	610 \pm	83	3.04	9.5 \pm	11.2 \pm
2.4	760 \pm	89	3.04	9.7 \pm	11.3 \pm
3.1	990 \pm	98	3.04	9.9 \pm	11.5 \pm
3.7	1290 \pm	98	3.04	10.2 \pm	11.8 \pm
4.6	1450 \pm	108	3.04	10.3 \pm	11.9 \pm

*For barrier rail bolts, see Standard Plan ES-6B.

NOTES:

- Indicates arm length to be used unless otherwise noted on the plans.
- For Type 15-SB, use Type 15 standard with Type 30 base plate details, see Standard Plan ES-6F.
- For additional notes, see Revised Standard Plan RSP ES-7M and ES-7N.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(LIGHTING STANDARD
TYPES 15 AND 21)

NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-6A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-6A DATED JULY 1, 2004-PAGE 440 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-6A

2004 REVISED Std PLAN RSP ES-6A

NOTES

1. Pipe dimensions for pedestrian push button post are nominal. See ASTM A6M.
2. For additional details and data for Type 15TS Standard, see Standard Plan ES-6A.



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	221	384

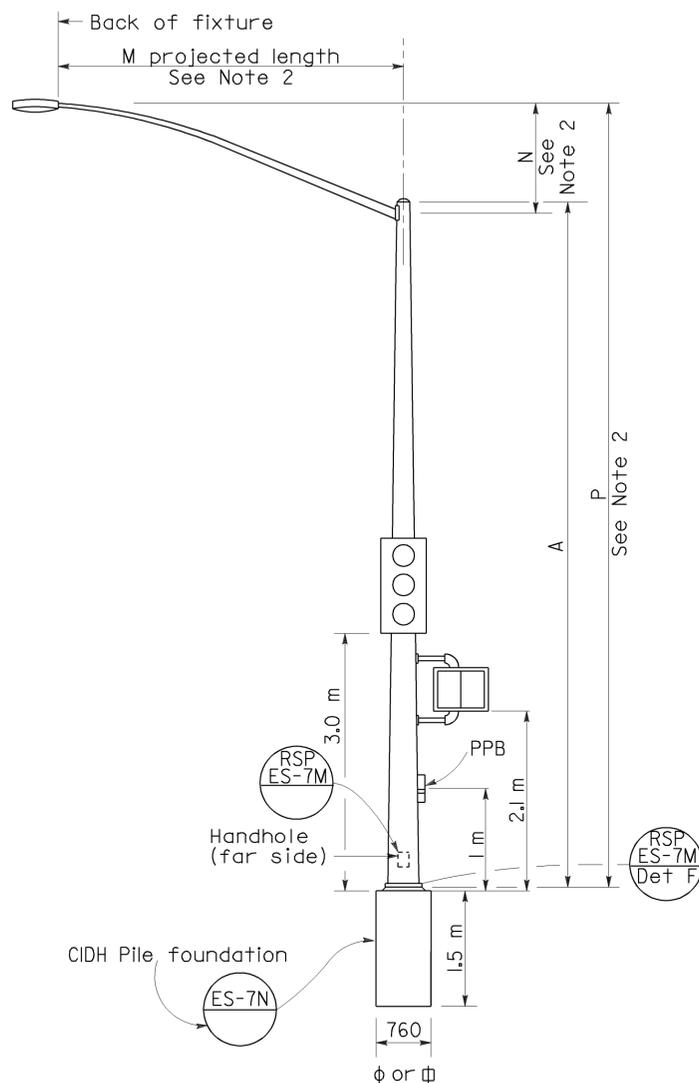
REGISTERED CIVIL ENGINEER
 Tiliat Sattar
 No. C42892
 Exp. 03-31-06
 CIVIL
 STATE OF CALIFORNIA

January 24, 2005
 PLANS APPROVAL DATE

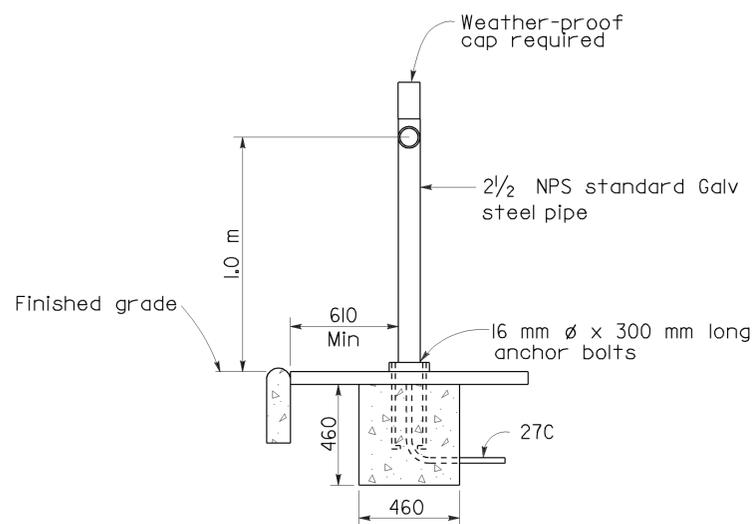
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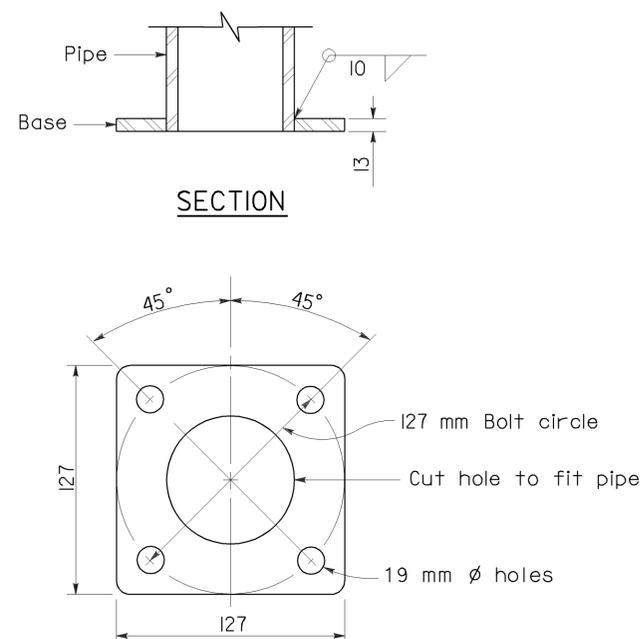
To accompany plans dated 3-2-09



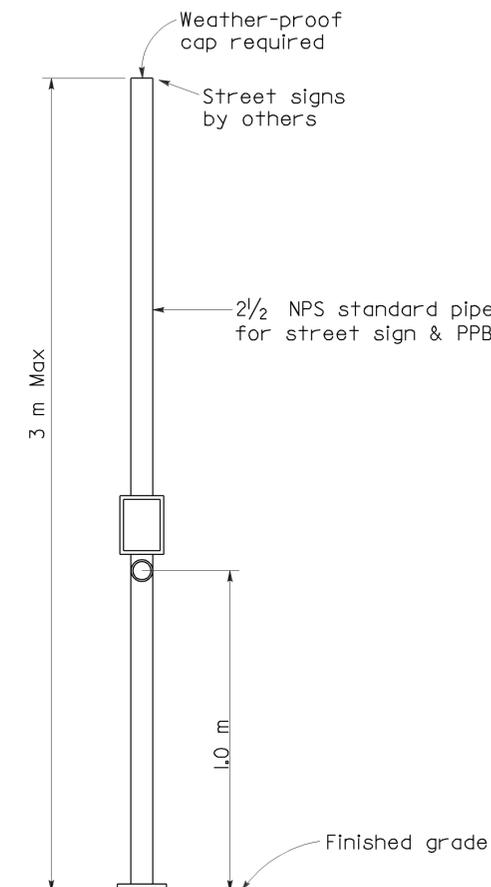
ELEVATION
TYPE 15TS STANDARD
 See Note 2



ELEVATION
PEDESTRIAN PUSH BUTTON POST



SECTION
BASE PLATE
PPB POST



ELEVATION
COMBINED STREET SIGN
PEDESTRIAN PUSH BUTTON POST

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
 (SIGNAL STANDARDS
 PUSH BUTTON POSTS
 AND TYPE 15TS STANDARD)**

NO SCALE

ALL DIMENSIONS ARE IN
 MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-7A DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN ES-7A
 DATED JULY 1, 2004-PAGE 451 OF THE STANDARD PLANS BOOK DATED JULY 2004.

TYPE 15TS STANDARD (See Note 2)

A Height	POLE DATA			C	BASE PLATE DATA		
	Min OD		Wall Thickness		DI Bolt Circle	Thick- ness	Anchor Bolts Size
	Base	Top					
m	mm	mm	mm		mm		
9.1	203	98	4.55	305	305	25	32 Ø x 915 x 152

To accompany plans dated 3-2-09



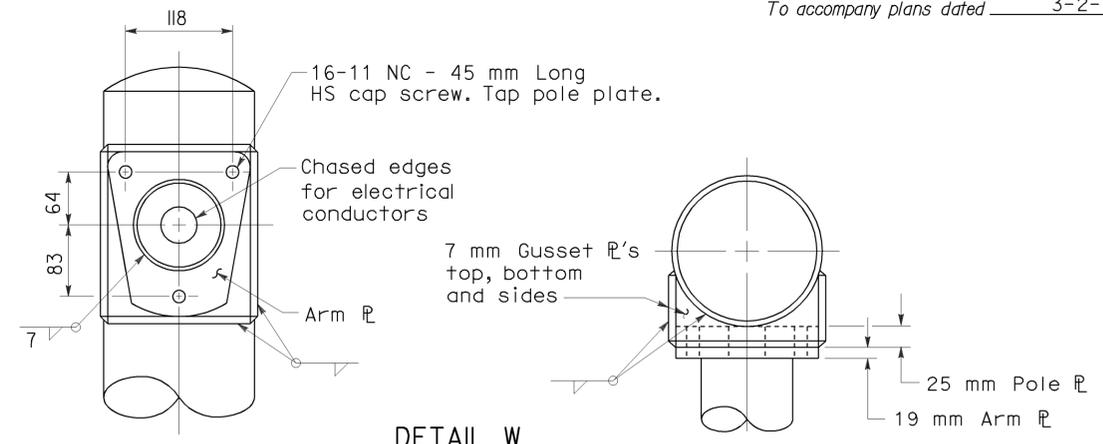
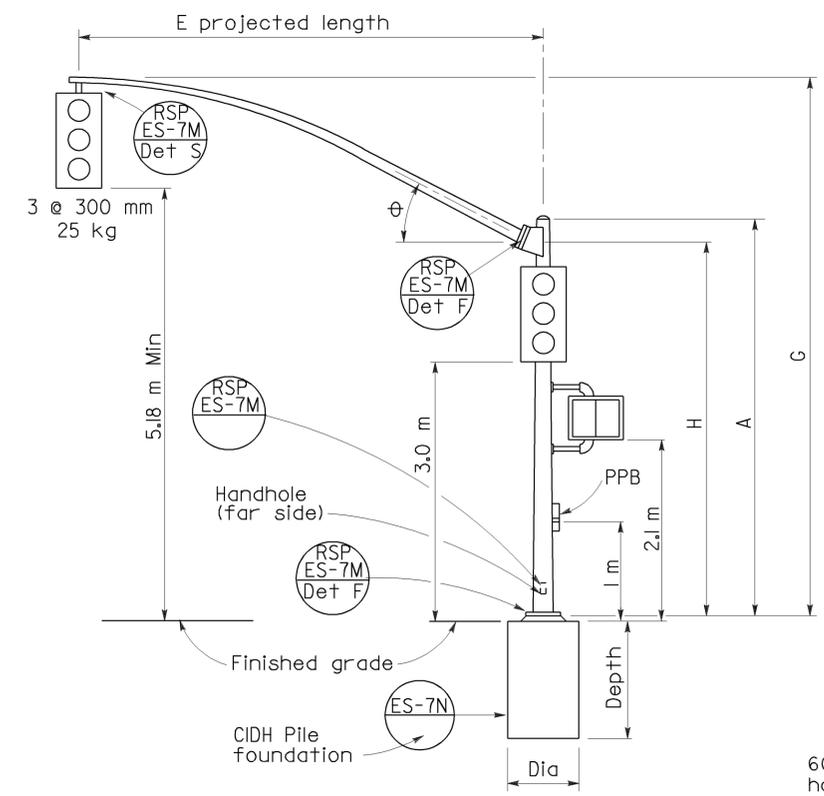
DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		223	384

October 5, 2007
PLANS APPROVAL DATE

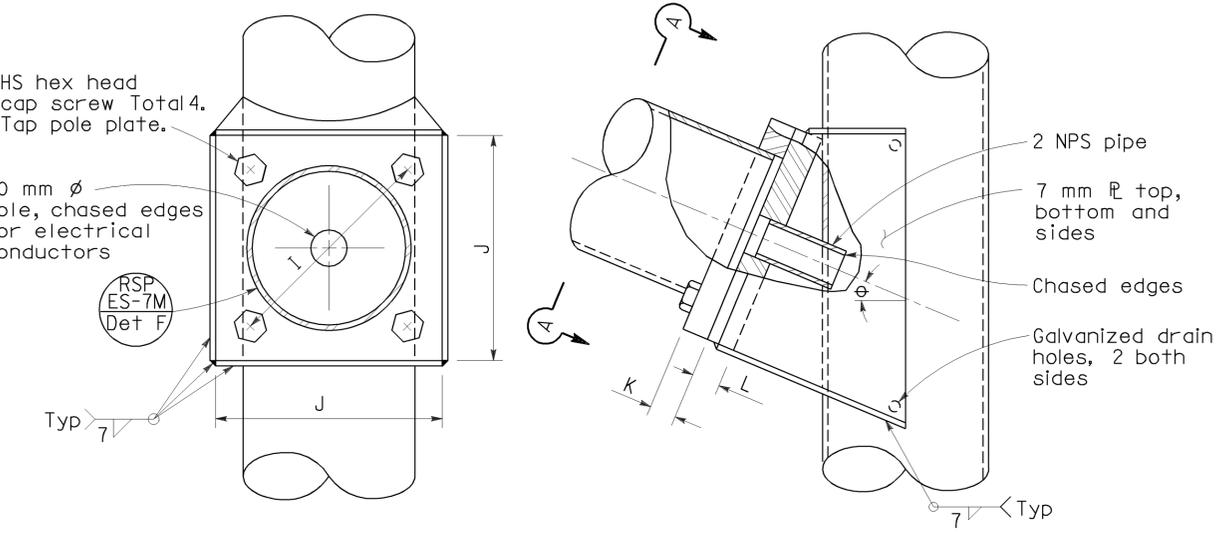
Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C57793
Exp. 03-31-08
STATE OF CALIFORNIA

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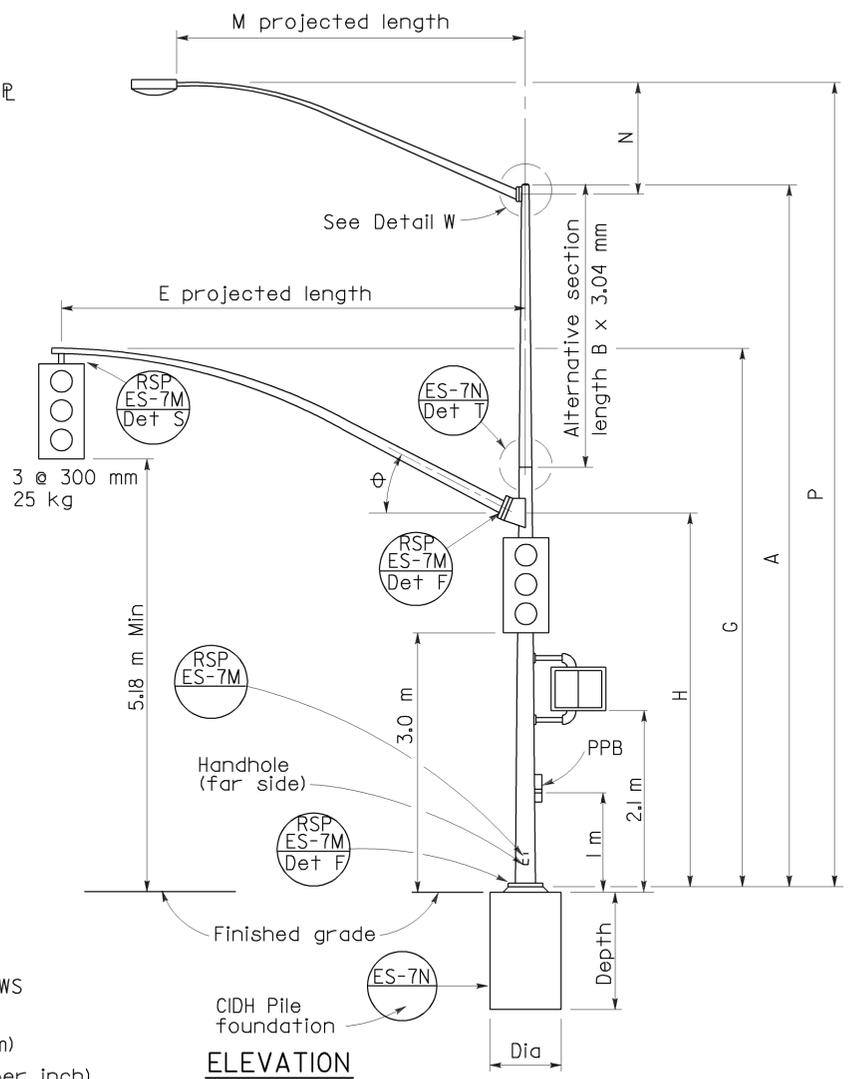
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>



DETAIL W
LUMINAIRE ARM CONNECTION

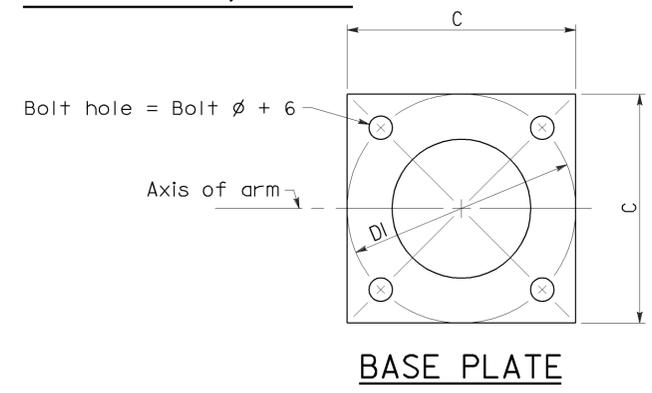


SECTION A-A
ELEVATION
SIGNAL ARM CONNECTION DETAILS



ELEVATION
TYPE 19-I-161, 19A-I-161

ELEVATION
TYPE 16-I-161, 18-I-161



BASE PLATE

E Projected Length	G Mounting Height	H	Min OD At Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm R Thickness	L Pole R Thickness	φ
m		mm								
4.6	6.6 ±	5.3	178	3.04	305	32-7NC-76	305	32	38	23°
6.1	6.6 ±		181							
7.6	6.9 ±	4.9	186							
9.1	7.0 ±		203							

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height	
m		mm		9.1 Pole	10.7 Pole
1.8	610 ±	83	3.04	9.5 ±	11.1 ±
2.4	760 ±	89		9.7 ±	11.3 ±
3.1	990 ±	98		9.9 ±	11.5 ±
3.7	1290 ±			10.2 ±	11.8 ±
4.6	1450 ±	108		10.4 ±	12.0 ±

HIGH STRENGTH CAP SCREWS
 16 - IINC - 45
 Length (mm)
 Threads (per inch)
 Size (mm)

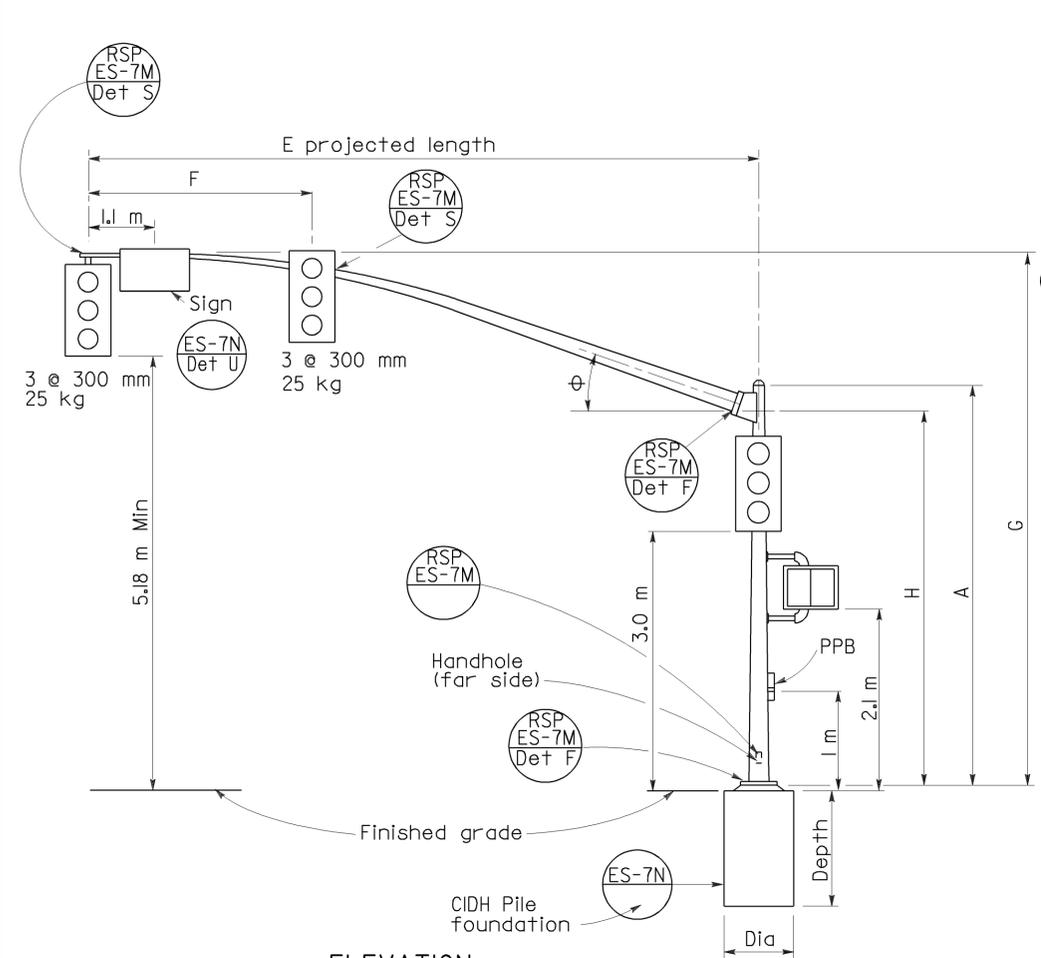
Pole Type	Load Case	Wind Velocity km/h	POLE DATA				BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION					
			A Height	Min OD		Thickness	Alternative Section			C			D Bolt Circle	Thickness	Anchor Bolts Size	Diameter	Depth	Reinforced
				Base	Top		B Length	Bottom	Top									
16-I-161	I	161	5.6	273	210	4.55	None	203	168	457	445	32	38 φ x 925 x 152	760	2.2	Yes		
18-I-161			5.2		214		None											
19-I-161			9.1		168		3.0										151	4.6
19A-I-161			10.7		151		4.6											

□ Indicates arm length to be used unless otherwise noted on plans.

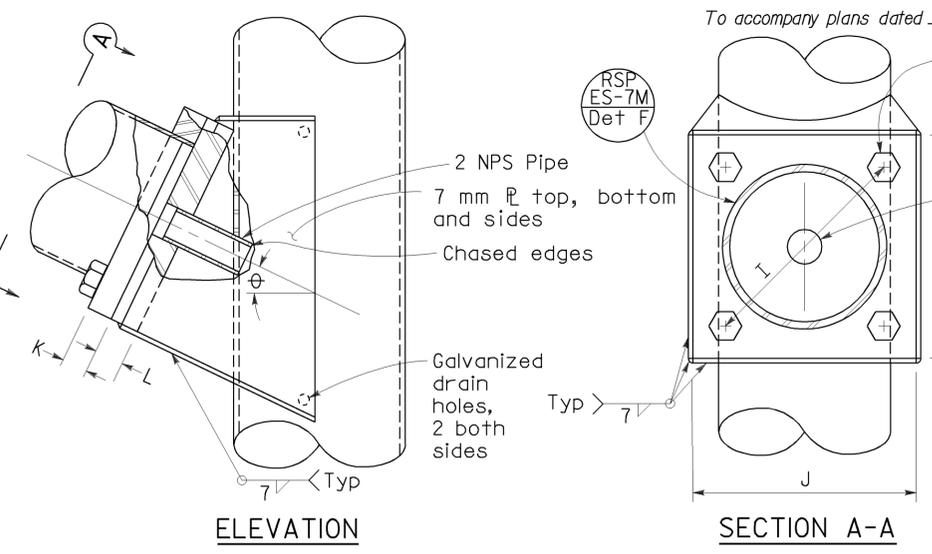
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 1 ARM LOADING
WIND VELOCITY=161 km/h
ARM LENGTHS 4.6 m TO 9.1 m)
 NO SCALE
 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
 RSP ES-7C DATED OCTOBER 5, 2007 SUPERSEDES
 RSP ES-7C DATED JANUARY 24, 2005 AND STANDARD PLAN ES-7C
 DATED JULY 1, 2004-PAGE 453 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7C

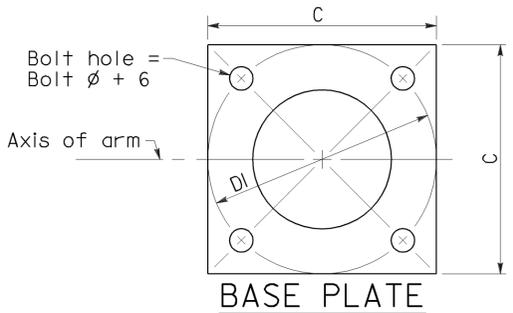
2004 REVISED Std PLAN RSP ES-7C



ELEVATION
TYPE 16-3-16l, 18-3-16l,
23-3-16l, 27-3-16l

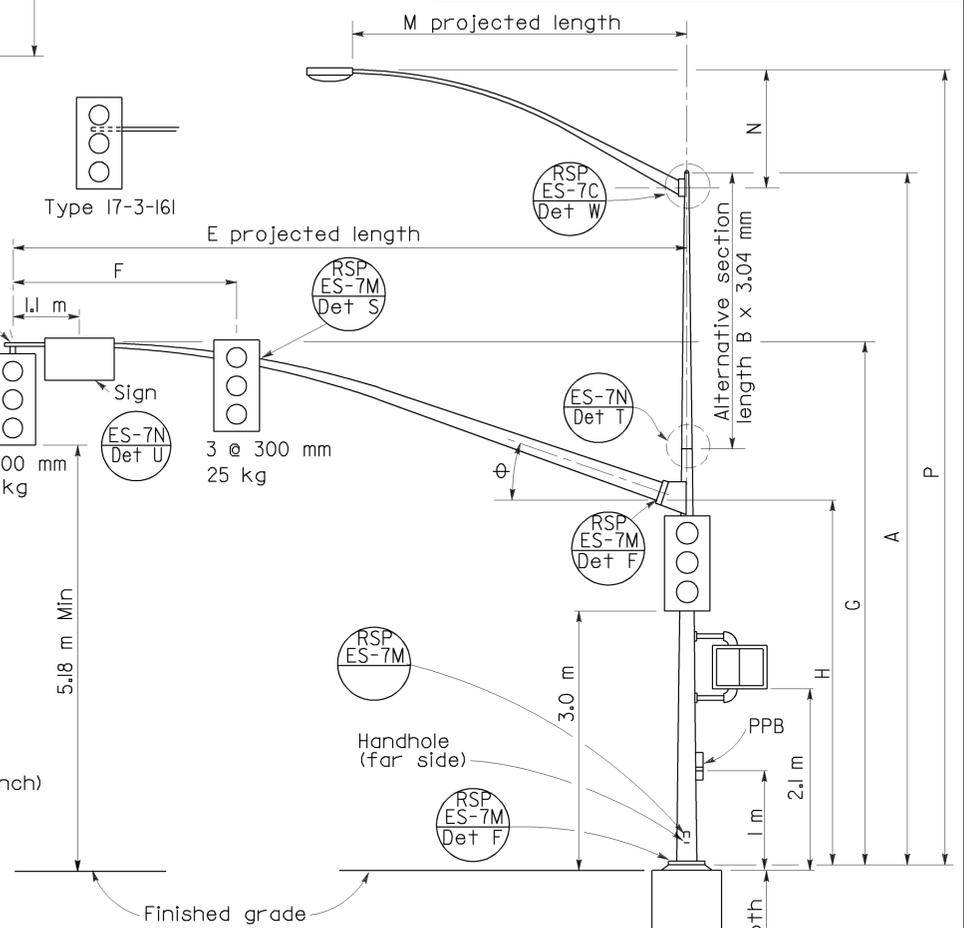


ELEVATION
SECTION A-A
SIGNAL ARM CONNECTION DETAILS



BASE PLATE

HIGH STRENGTH CAP SCREWS
16 - IINC - 45
Length (mm)
Threads (per inch)
Size (mm)



ELEVATION
TYPE 17-3-16l, 19-3-16l,
19A-3-16l, 24-3-16l,
24A-3-16l, 26-3-16l, 26A-3-16l

SIGNAL ARM DATA											
E Projected Length	F Min Spacing	G Mounting Height	H	Min OD at Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm R Thickness	L Pole R Thickness	φ
m			mm								
4.6		6.6 ±	5.3	168	4.55	305	32-7NC-76	305	32	38	23°
6.1	2.4	6.6 ±		178							
7.6		6.9 ±		186							
9.1	3.7	7.0 ±	4.9	203	6.07	330		330	38	45	21°
10.7	4.3	7.0 ±		222							
12.2		7.2 ±		238							
13.7	4.6	7.2 ±		256							15°

LUMINAIRE ARM DATA					
M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height	
m			mm	9.1 Pole	10.7 Pole
1.8	610 ±	83	3.04	9.5 ±	11.1 ±
2.4	760 ±	89		9.7 ±	11.3 ±
3.1	990 ±	98		9.9 ±	11.5 ±
3.7	1290 ±			10.2 ±	11.8 ±
4.6	1450 ±	108		10.4 ±	12.0 ±

Pole Type	Load Case	Wind Velocity km/h	POLE DATA					BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION				
			A Height	Min OD		Thickness	Alternative Section			C	DI Bolt Circle			Thickness	Anchor Bolts Size	Diameter	Depth	Reinforced
				Base	Top		B Length	Bottom	Top									
16-3-16l	3	161	5.6	273	210	4.55	None	203	186	457	445	38	51 Ø x 1067 x 152	914	2.7	Yes		
17-3-16l			9.1		168	3.1	203										186	None
18-3-16l			5.2	214	None			None										
19-3-16l			9.1	200	3.1	235	200	1.8-4.6 [3.7]	7.6, [9.1]									
19A-3-16l			10.7	183	4.6	235	183	1.8-4.6 [4.6]										
23-3-16l			5.2	305	245	6.07	None		None									
24-3-16l			9.1	200	3.1	235	200	1.8-4.6 [3.7]	10.7									
24A-3-16l			10.7	183	4.6	235	183	1.8-4.6 [4.6]										
26-3-16l			9.1	203	3.1	238	203	1.8-4.6 [3.7]										
26A-3-16l			10.7	308	186	7.94	4.6	238	186								1.8-4.6 [4.6]	12.2, [13.7]
27-3-16l			5.2	248	None			None										

□ Indicates arm length to be used unless otherwise noted on plans.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 3 ARM LOADING
WIND VELOCITY=161 km/h
ARM LENGTHS 4.6 m TO 13.7 m)**

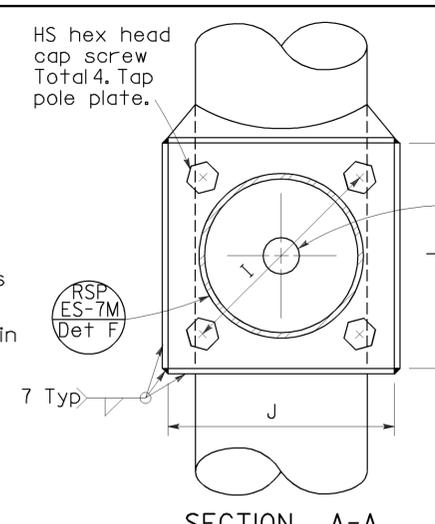
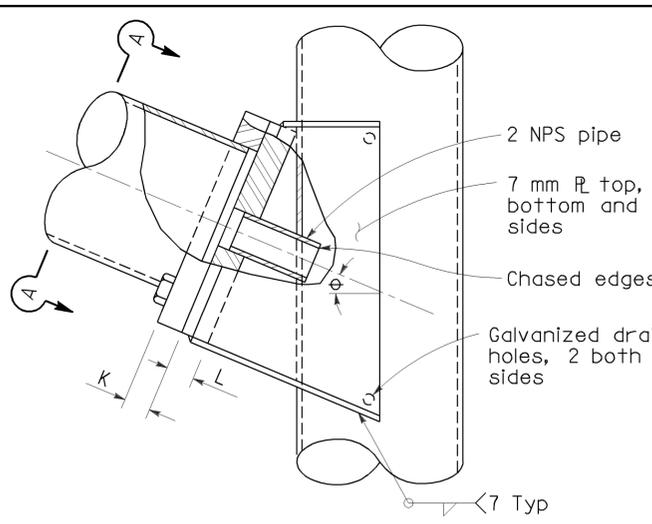
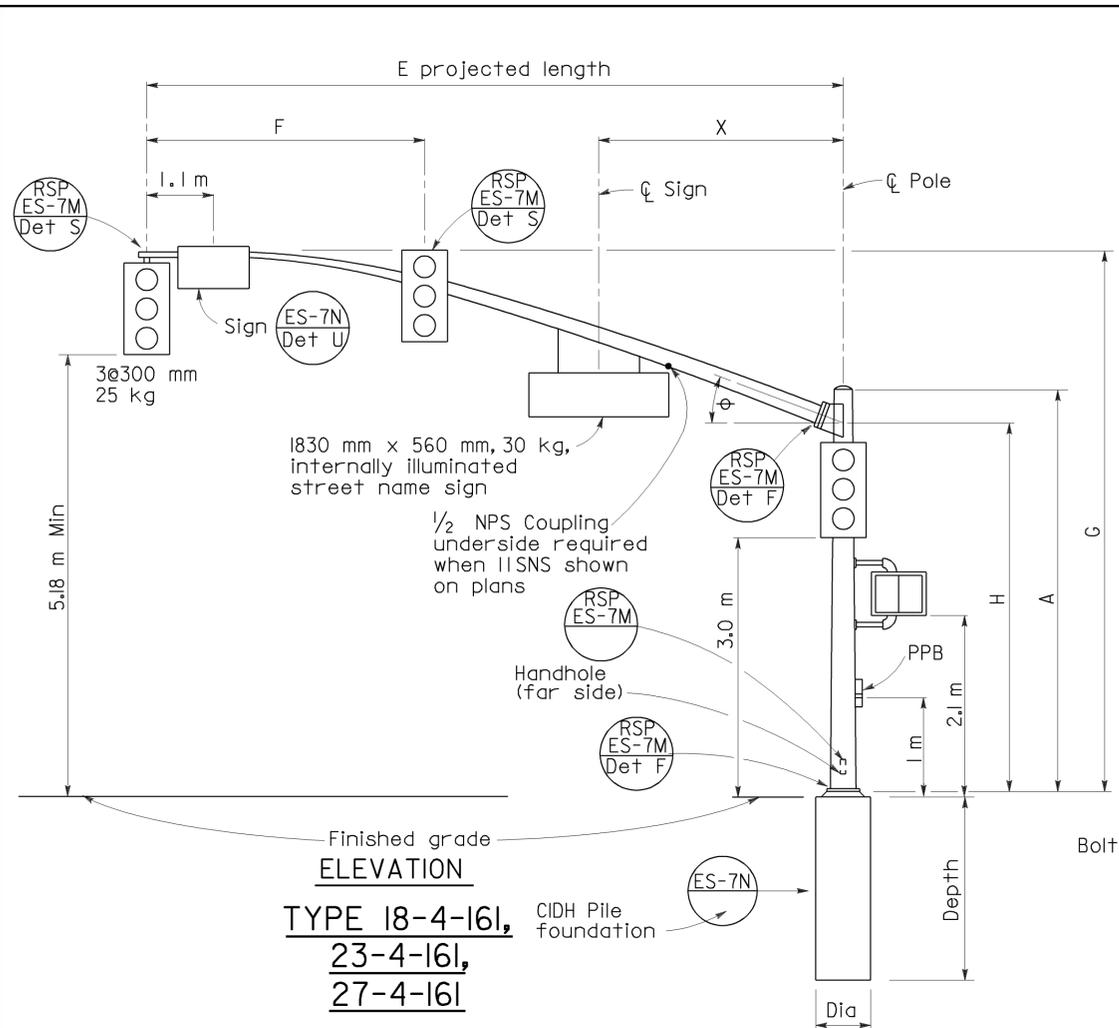
NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

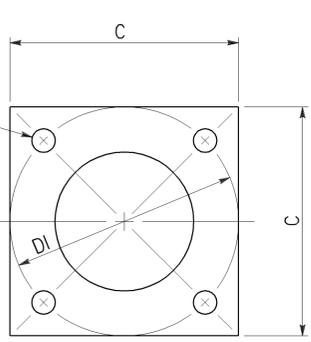
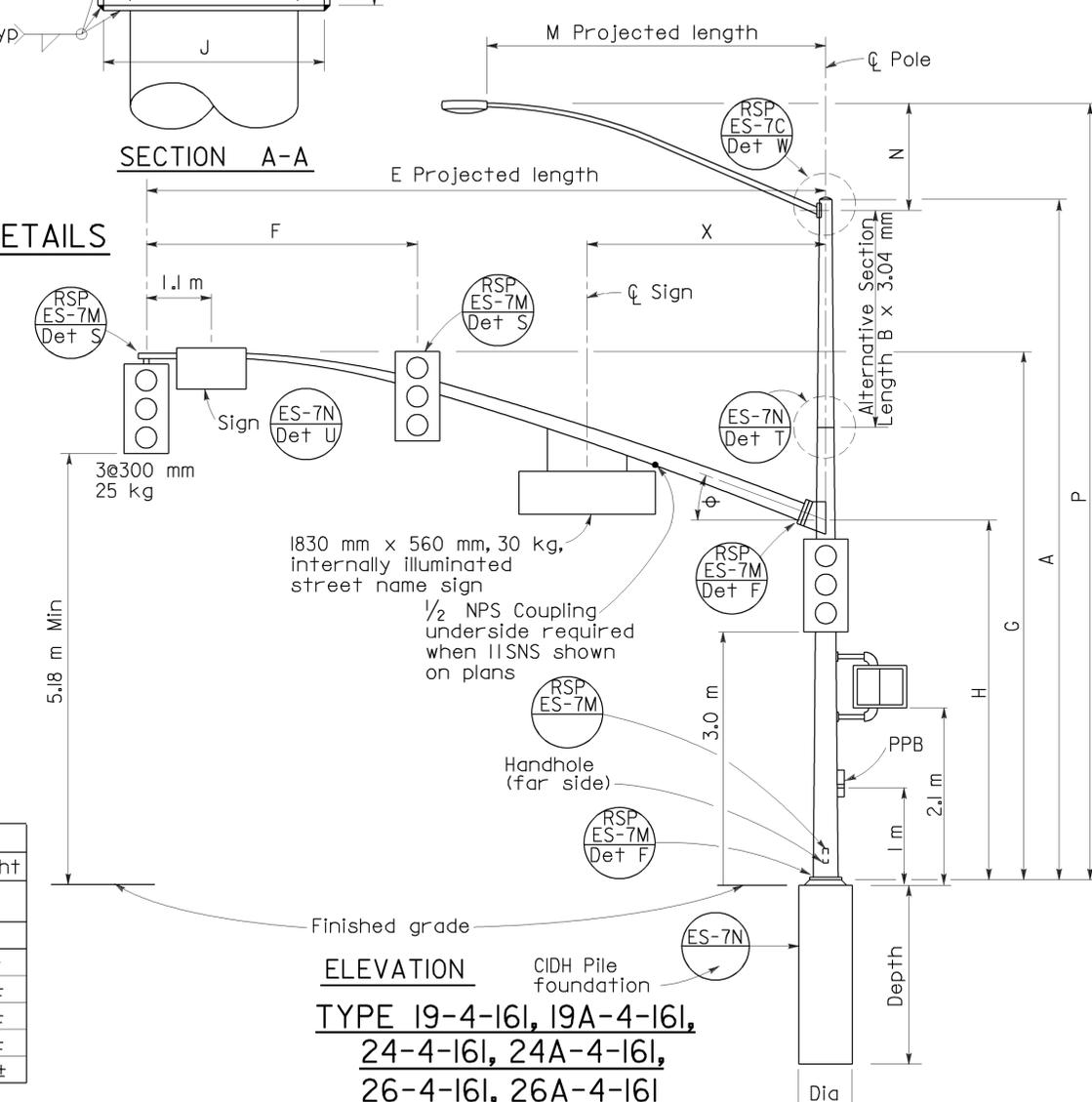
RSP ES-7E DATED OCTOBER 5, 2007 SUPERSEDES RSP ES-7E DATED JANUARY 24, 2005 AND STANDARD PLAN ES-7E DATED JULY 1, 2004-PAGE 455 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7E

2004 REVISED STD PLAN RSP ES-7E



SIGNAL ARM CONNECTION DETAILS



HIGH STRENGTH CAP SCREWS

16 - UNC - 45

Length (mm)

Threads (per inch)

Size (mm)

SIGNAL ARM DATA												
E Projected Length	F Min Spacing	G Mounting Height	H	Min OD at Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm R Thickness	L Pole R Thickness	X Max	
m			mm									m
7.6	3.1	6.9 ±	4.9	186	6.07	305	32-7NC-76	305	32	38	23°	
9.1	3.7	7.0 ±		203							3.2	
10.7	4.3	7.0 ±		221							21°	
12.2	4.6	7.2 ±		238							15°	
13.7				260							343	343

LUMINAIRE ARM DATA					
M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height	
m	mm	mm	mm	9.1 Pole	10.7 Pole
1.8	610 ±	83	3.04	9.5 ±	11.1 ±
2.4	760 ±	89		9.7 ±	11.3 ±
3.1	990 ±	98		9.9 ±	11.5 ±
3.7	1290 ±	108		10.2 ±	11.8 ±
4.6	1450 ±			10.4 ±	12.0 ±

Pole Type	Load Case	Wind Velocity km/h	POLE DATA						BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION							
			A Height	Min OD		Thickness	Alternative Section			C	DI Bolt Circle	Thickness			Anchor Bolts Size	Diameter	Depth	Reinforced				
				Base	Top		B Length	Bottom	Top													
18-4-16I	4	161	5.2	305	6.07	None	457	457	38	51ø x 1067 x 152	m	m	mm	m	m	Yes						
19-4-16I			9.1			229											None	238	203	None	1.8-4.6 [3.7]	7.6, [9.1]
19A-4-16I			10.7			186											4.6					
23-4-16I			5.2			229											None	238	203	None	1.8-4.6 [3.7]	10.7
24-4-16I			9.1			203											3.1					
24A-4-16I			10.7			186											4.6	186	1.8-4.6 [3.7]			
26-4-16I			9.1			203											3.1	248		1.8-4.6 [4.6]		
26A-4-16I			10.7			186											4.6	196	None			
27-4-16I	5.2	248	None																			

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 4 ARM LOADING
WIND VELOCITY=161 km/h
ARM LENGTHS 7.6 m TO 13.7 m)**

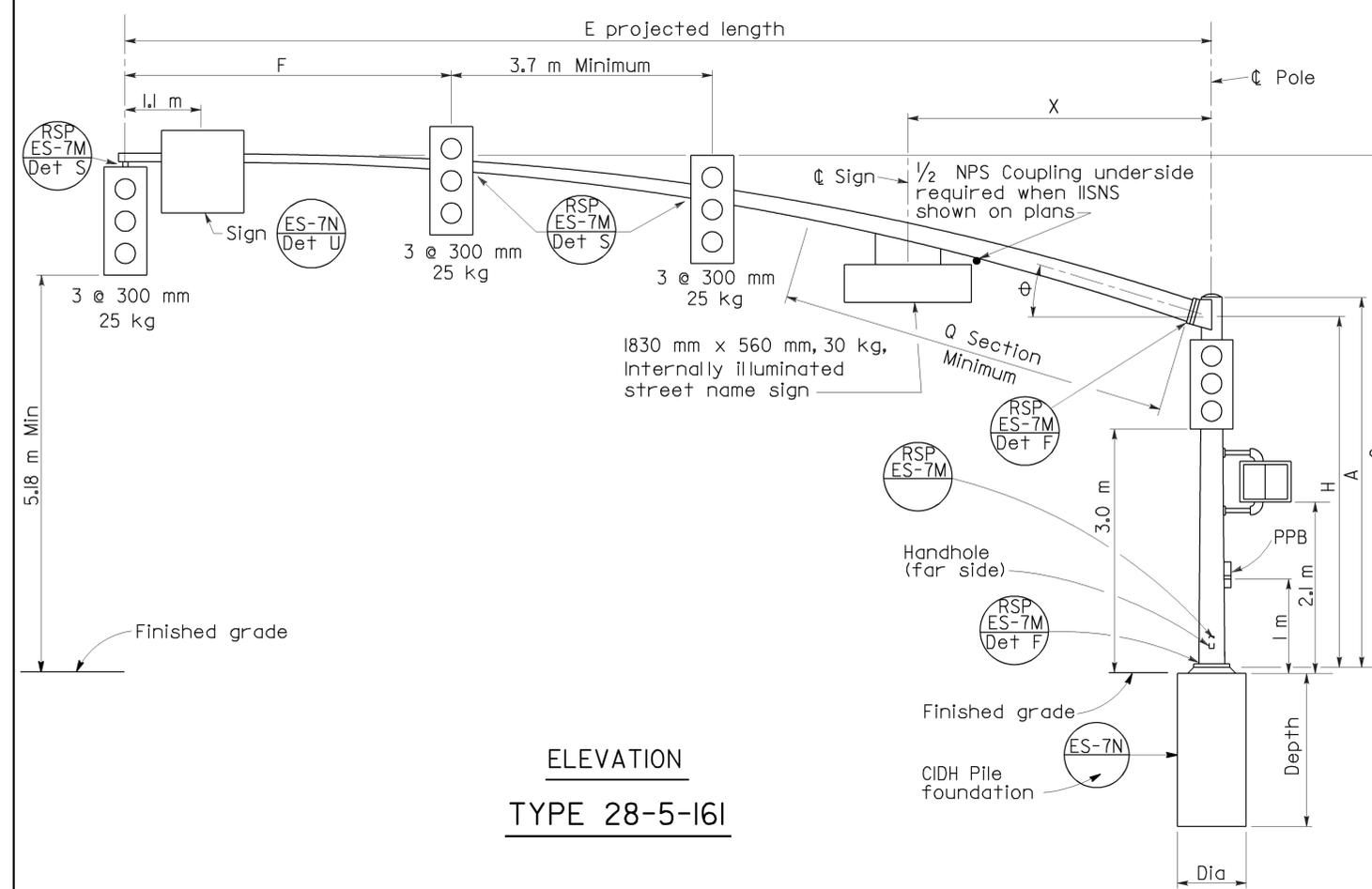
NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

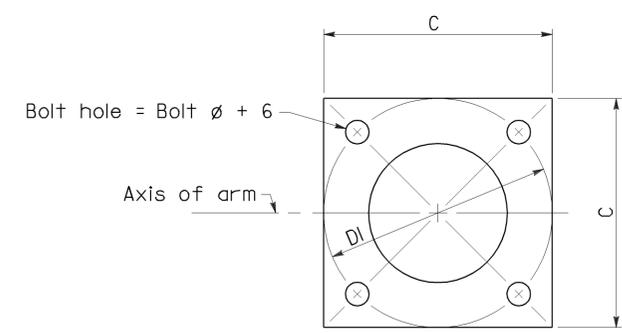
RSP ES-7F DATED OCTOBER 5, 2007 SUPERSEDES RSP ES-7F DATED JANUARY 24, 2005 AND STANDARD PLAN ES-7F DATED JULY 1, 2004-PAGE 456 OF THE STANDARD PLANS BOOK DATED JULY 2004.

□ Indicates arm length to be used unless otherwise noted on plans.

2004 REVISED STD PLAN RSP ES-7F



ELEVATION
TYPE 28-5-16I



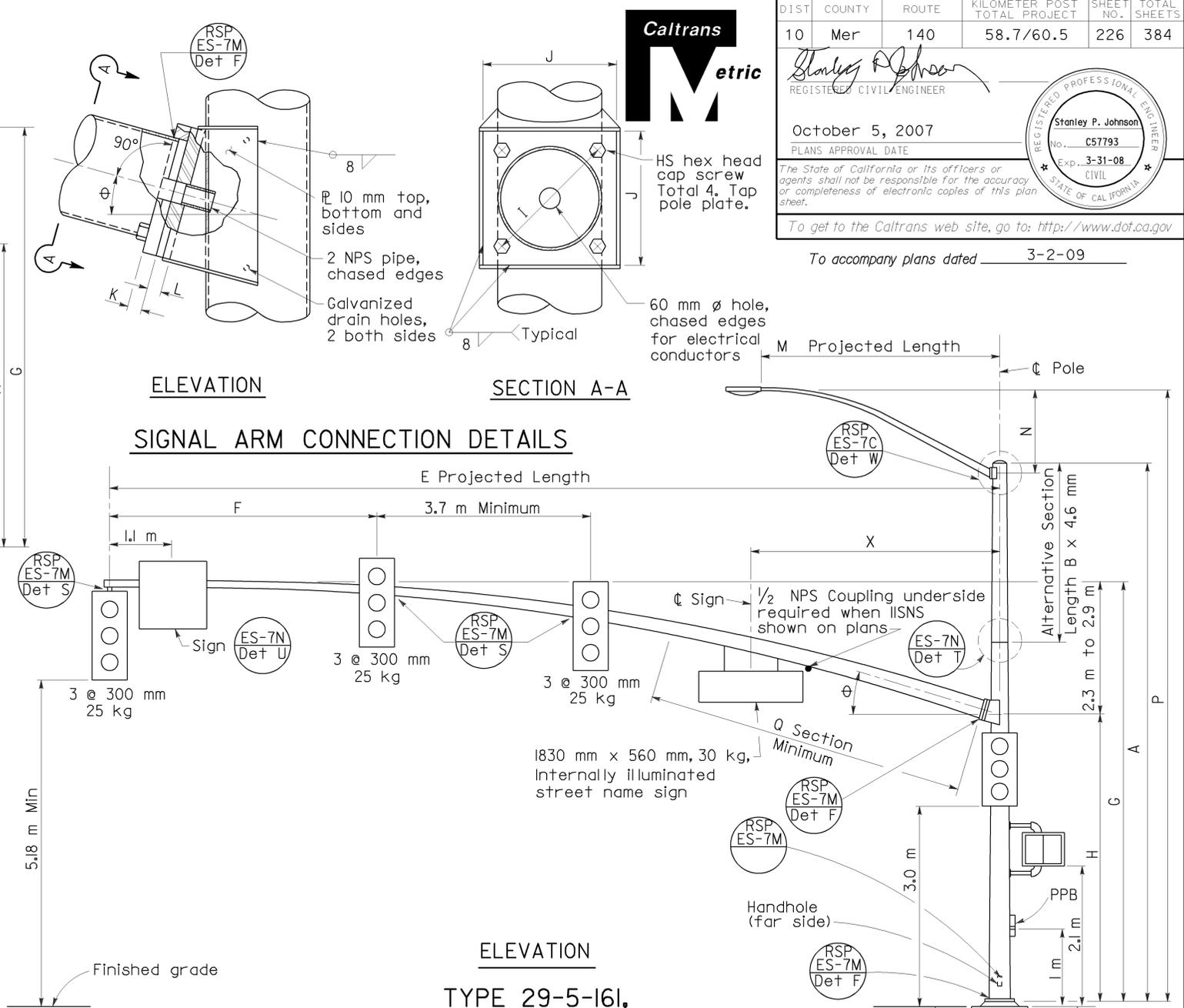
BASE PLATE

HIGH STRENGTH CAP SCREWS
16 - IINC - 45
Length (mm)
Threads (per inch)
Size (mm)

E Projected Length	F Min Spacing	G Mounting Height	H	Min OD At Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm P Thickness	L Pole P Thickness	φ	Q SECTION		X Max
												Length	Thickness	
15.2	4.6	7.2 to 7.8	4.9	291	4.6	406	38-6NC-83	406	45	45	15°	5.5	6.1	4.3
16.8				311								7.0		

Pole Type	Load Case	Wind Velocity km/h	POLE DATA						BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION					
			A Height	Min OD		Thickness	Alternative Section			C	DI Bolt Circle	Thickness			Anchor Bolts		Diameter	Depth	Reinforced	
				Base	Top		B Length	Bottom	Top						Size					
28-5-16I	5	161	5.2	297	7.94	None	3.1	286	251	533	533	45	51ø x 1067 x 152	914	2.8	Yes				
29-5-16I			9.1			356											251	251	533	533
29A-5-16I			10.7			233											4.6	286	233	584

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height	
				9.1 Pole	10.7 Pole
1.8	610 ±	83	3.04	9.5 ±	11.1 ±
2.4	760 ±	89		9.7 ±	11.3 ±
3.1	990 ±	98		9.9 ±	11.5 ±
3.7	1290 ±	98		10.2 ±	11.8 ±
4.6	1450 ±	108		10.4 ±	12.0 ±



ELEVATION
TYPE 29-5-16I,
29A-5-16I

ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 5 ARM LOADING
WIND VELOCITY=161 km/h
ARM LENGTHS 15.2 m TO 16.8 m)

NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN
RSP ES-7G DATED OCTOBER 5, 2007 SUPERSEDES RSP ES-7G
DATED JANUARY 24, 2005 AND STANDARD PLAN ES-7G
DATED JULY 1, 2004-PAGE 457 OF THE STANDARD PLANS BOOK DATED JULY 2004.

□ Indicates arm length to be used unless otherwise noted on plans.

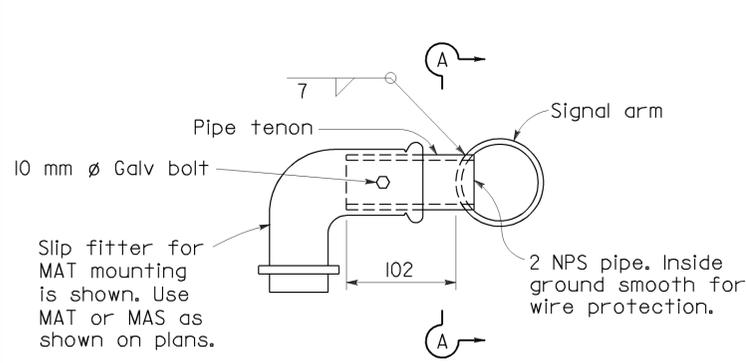
REVISED STANDARD PLAN RSP ES-7G

2004 REVISED Std PLAN RSP ES-7G

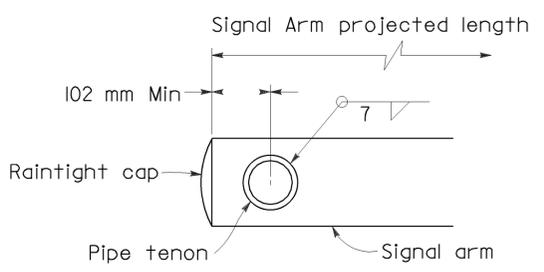


DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		228	384

REGISTERED CIVIL ENGINEER	
April 28, 2005	
PLANS APPROVAL DATE	
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To get to the Caltrans web site, go to: http://www.dot.ca.gov	



DETAIL S-SIDE TENON



SECTION A-A

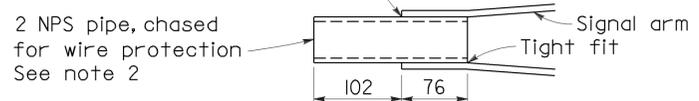
IDENTIFICATION NUMBER

Attach a stamped metal tag with each pole's identification number to shaft above handhole. 7 mm high number minimum. A similar tag shall be attached to the top of the signal mast arm near the pole plate.

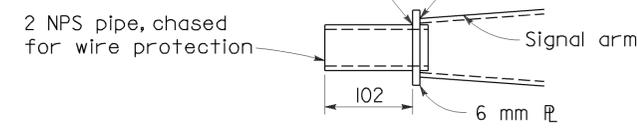
Sample Identification Number

Type Load case Design wind velocity (km/h) Signal arm length maximum (m) Standard plan year Only for poles with fatigue resistant welds
 19A - 3 - 161 - 9.1 - 04 - F
 Use SL for special load case

PIPE TENONS

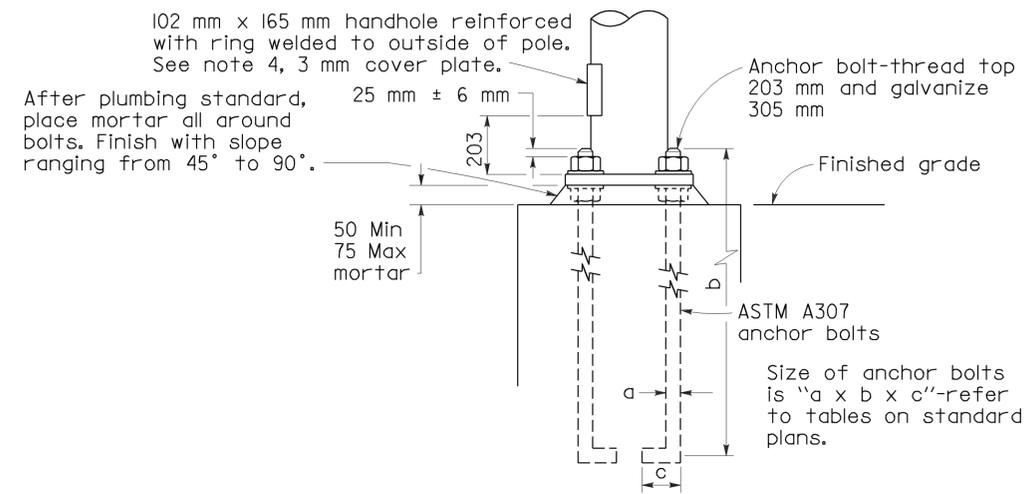


DETAIL TS-TIP TENON



DETAIL TL-TIP TENON

This detail supersedes Detail S when so designated



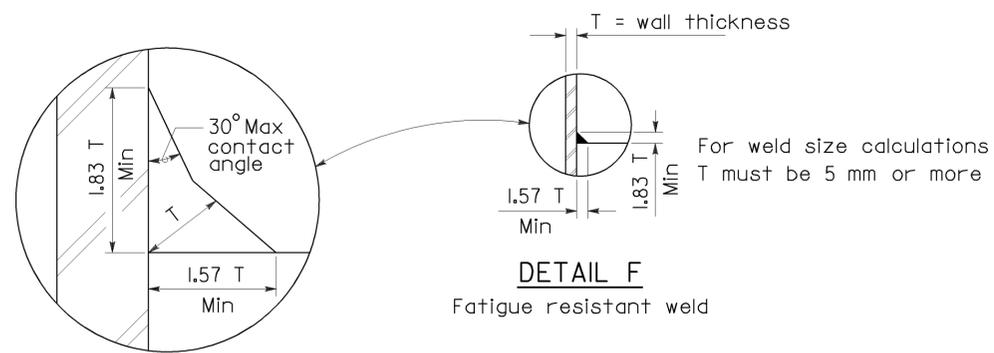
HANDHOLE AND ANCHORAGE DETAILS

GENERAL NOTES

- SPECIFICATIONS**
 DESIGN : AASHTO Standard specifications for structural supports for highway signs, luminaires and traffic signals dated 2001.
- Loading**
 WIND LOADINGS : 161 km/h
 Unit Stresses
 STRUCTURAL STEEL : $f_y = 330$ MPa tapered steel tube
 $f_y = 250$ MPa unless otherwise noted
- CONSTRUCTION** : Standard Specifications and the Special Provisions

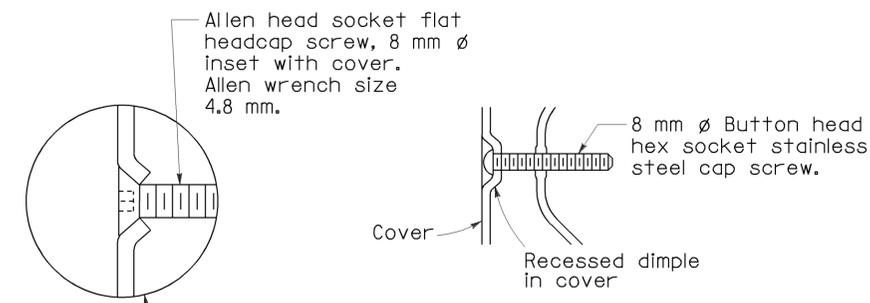
NOTES

- ASTM A307 anchor bolts are required for each pole. Provide a hex nut, leveling nut and 2 washers for each bolt.
- Luminaire arms shall be round, tapered steel tubes, taper of 11.45 mm/m to 11.66 mm/m with an end section 60 mm OD for mounting hardware. Extensions of 2 NPS Standard pipe and 178 mm long may be used at the option of the manufacturer. When low pressure sodium luminaires are required, the extension shall be 381 mm.
- Signal arms shall be round, tapered steel tubes, maximum taper 11.66 mm/m.
- Handhole reinforcement ring shall be 6 mm x 51 mm for 3.04 mm to 6.07 mm poles, 10 mm x 51mm for 7.94 mm.
- Handholes for lighting standards shall be located on the downstream side of the pole unless otherwise noted on the plans.
- Detail F, fatigue resistant weld, is required at signal arm plate and pole base plate.
- Cap screws shall be tightened by the turn-of-nut method 1/3 turn to form a snug tight condition. No washer will be required.
- During pole erection, the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
- When Project Plans show a lesser number of signs and signals, the Project Plans shall prevail.
- Outside diameter, wall thickness, and corresponding section properties at the base of traffic signal poles and arms as shown in the Standard Plans are minimums. Unless otherwise specified, alternative sections require approval by the Engineer.



DETAIL F

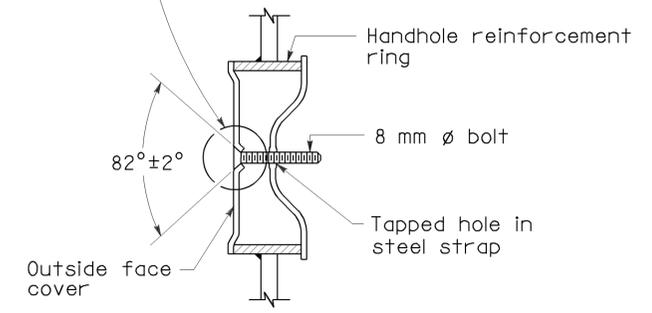
Fatigue resistant weld



ALTERNATIVE DETAIL

Pole or Arm	Weld Size	Wall Thickness
See Detail F	7	3.04
	8	4.55
	10	6.07
	11	7.94
ELEVATION A	4	3.04
	5	4.55
	7	6.07
	8	7.94

ELEVATION A



TAMPER RESISTANT HANDHOLE COVER

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARDS
DETAILS No. 1)

NO SCALE
 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-7M DATED APRIL 28, 2005 SUPERSEDES RSP ES-7M DATED JANUARY 24, 2005 AND STANDARD PLAN ES-7M DATED JULY 1, 2004-PAGE 463 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7M

2004 REVISED STD PLAN RSP ES-7M

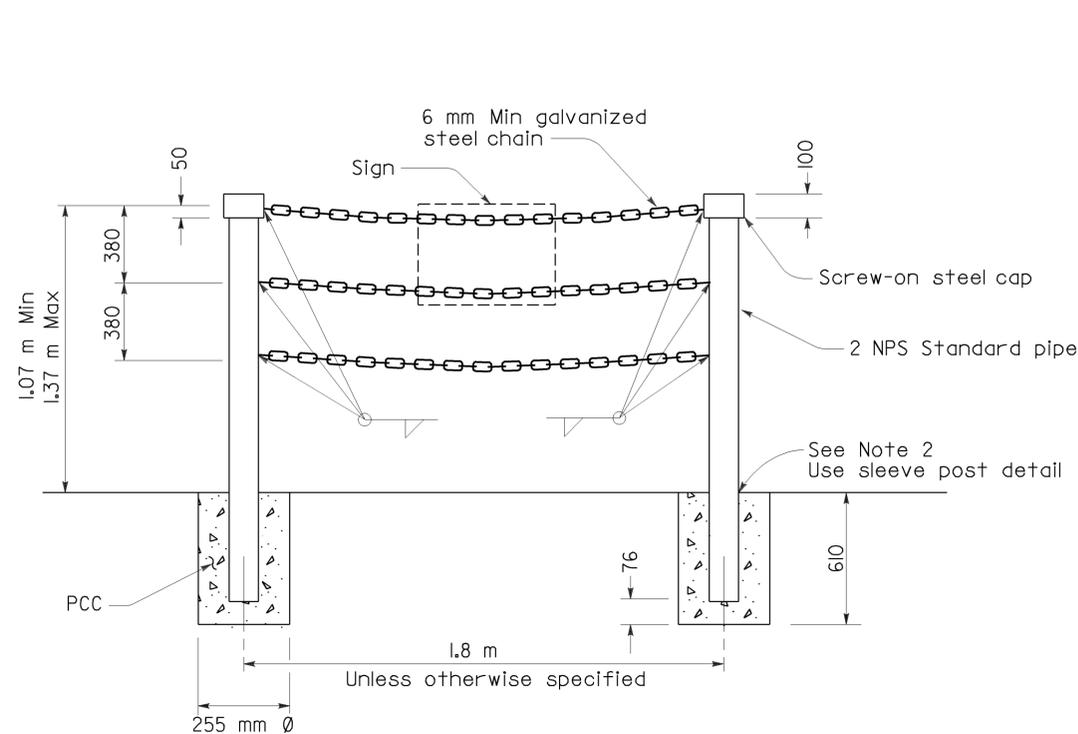


DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	229	384

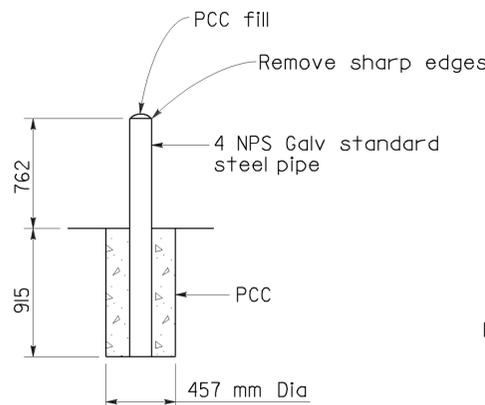
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 No. C57793
 Exp. 03-31-08
 CIVIL
 STATE OF CALIFORNIA
 REGISTERED PROFESSIONAL ENGINEER

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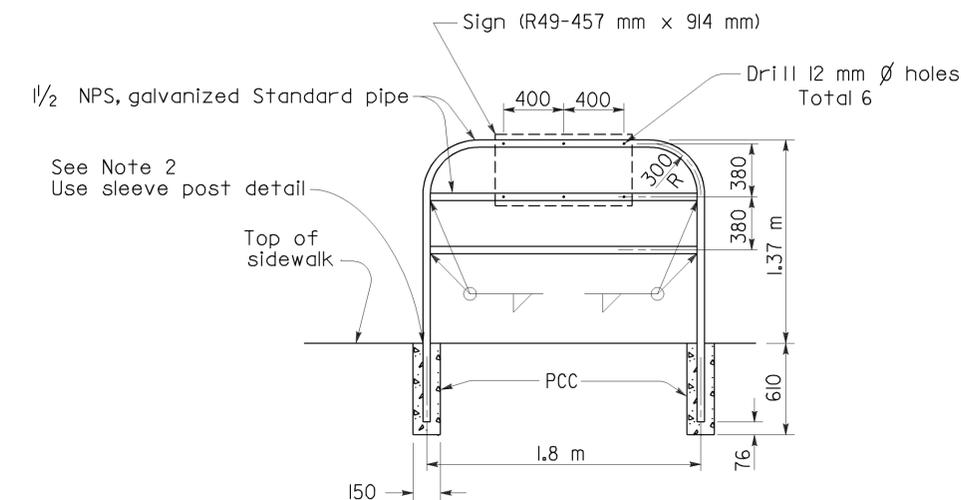
To accompany plans dated 3-2-09



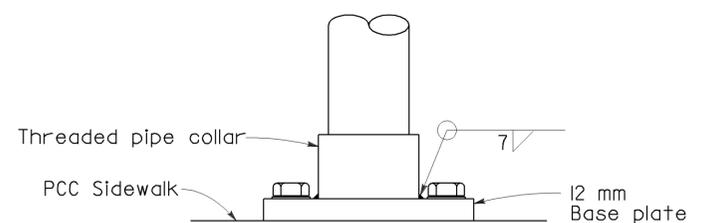
TYPE II



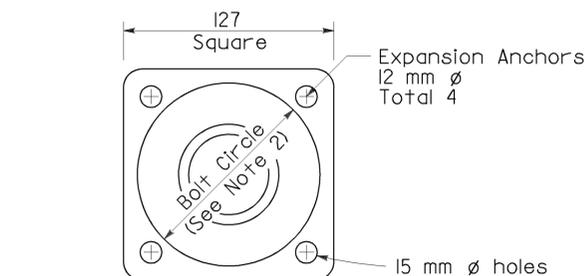
GUARD POST



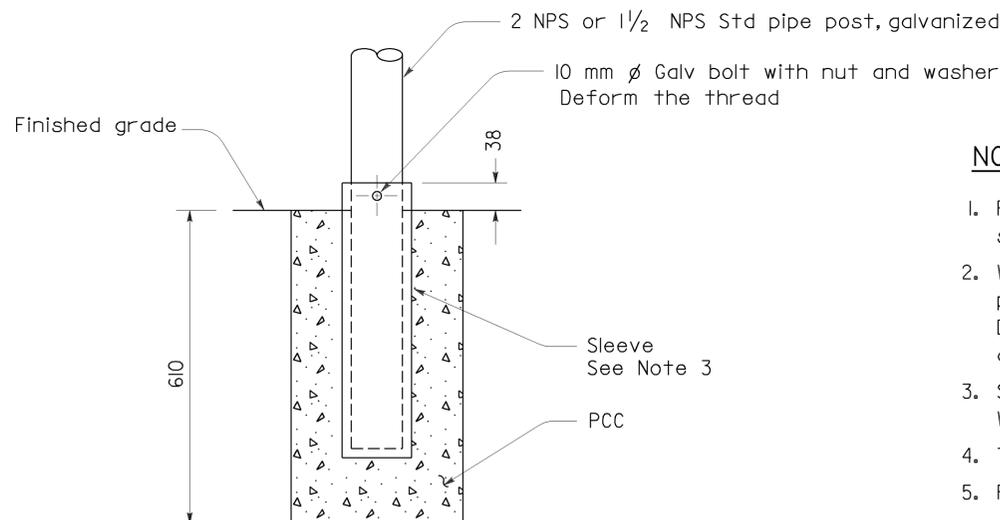
TYPE I



ELEVATION



PLAN POST ANCHORAGE DETAIL



SLEEVE POST DETAIL

Use unless otherwise specified or shown on plans

NOTES:

1. Pipe post to be set 460 mm back from face of curb unless otherwise specified.
2. Where barricade posts are installed in existing concrete sidewalk, the post may be anchored to the sidewalk as shown in the "Post Anchorage Detail". Bolt circle diameter shall be 102 mm minimum for Type I barricade and 127 mm minimum for Type II barricade.
3. Steel sleeve to be constructed with a diameter 2.5 mm larger than post. Wall thickness of sleeve to be same as post or larger.
4. The Contractor may submit alternative details for approval by the Engineer.
5. For minimum pipe diameters and wall thickness refer to ASTM A6M.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(PEDESTRIAN BARRICADES)**

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RSP ES-7P DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-7P
DATED JULY 1, 2004-PAGE 466 OF THE STANDARD PLANS BOOK DATED JULY 2004.

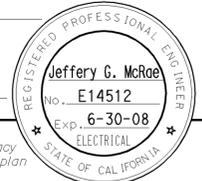
REVISED STANDARD PLAN RSP ES-7P

2004 REVISED STD PLAN RSP ES-7P



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	230	384

Jeffrey B. McRae
REGISTERED ELECTRICAL ENGINEER

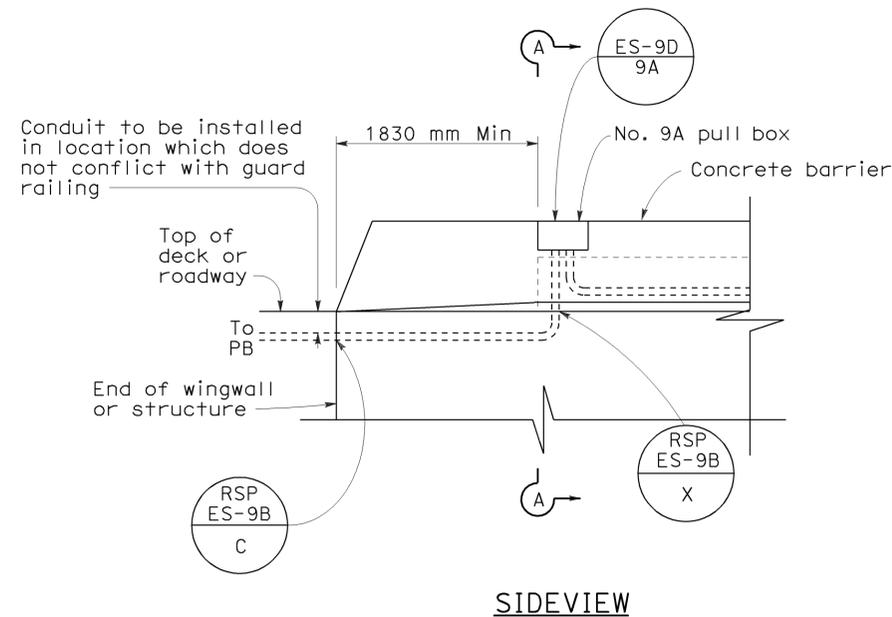


October 5, 2007
PLANS APPROVAL DATE

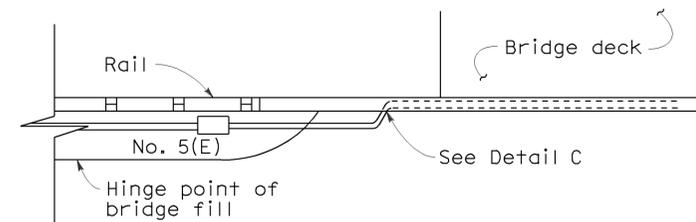
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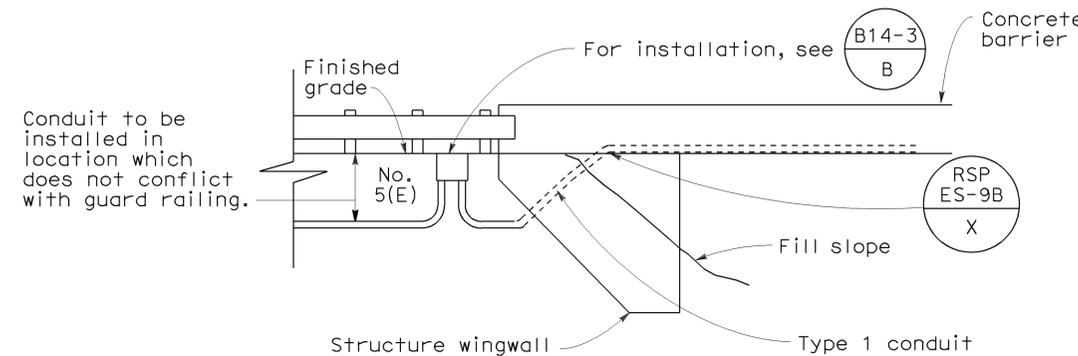
To accompany plans dated 3-2-09



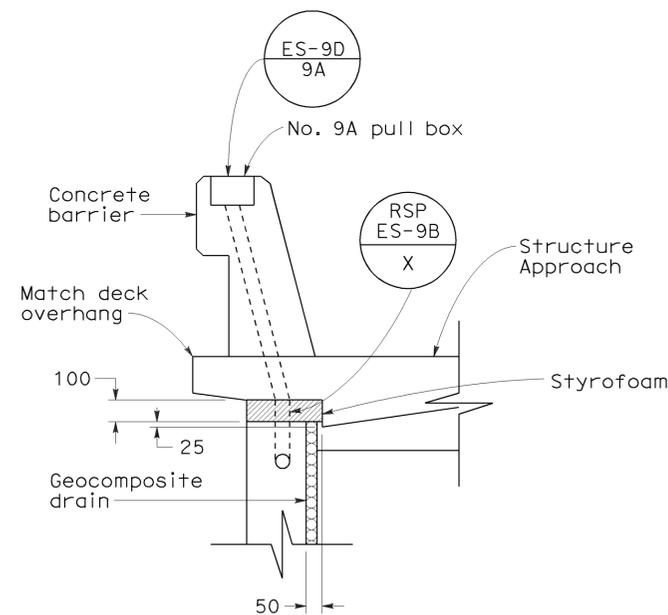
SIDEVIEW



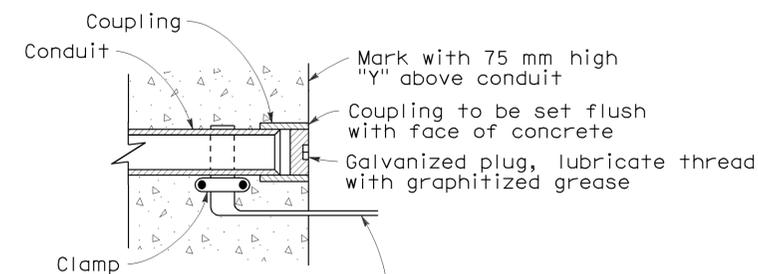
TOP VIEW



**SIDE VIEW
DETAIL I
CONDUIT TERMINATION**



**SECTION A-A
DETAIL A
CONDUIT TERMINATION**



**DETAIL C
CONDUIT TERMINATION**

Copper bonding strap install only at structure construction joint, extend at least 150 mm from face of concrete

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(ELECTRICAL DETAILS
STRUCTURE INSTALLATIONS)**

NO SCALE
ALL DIMENSIONS ARE IN
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RSP ES-9A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-9A
DATED JULY 1, 2004-PAGE 468 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-9A

2004 REVISED Std PLAN RSP ES-9A



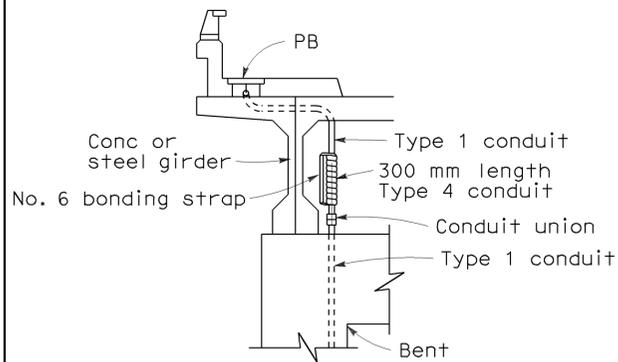
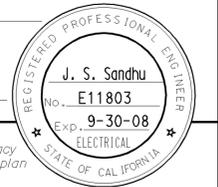
DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		231	384

Jaswinder K. Toonder
REGISTERED ELECTRICAL ENGINEER

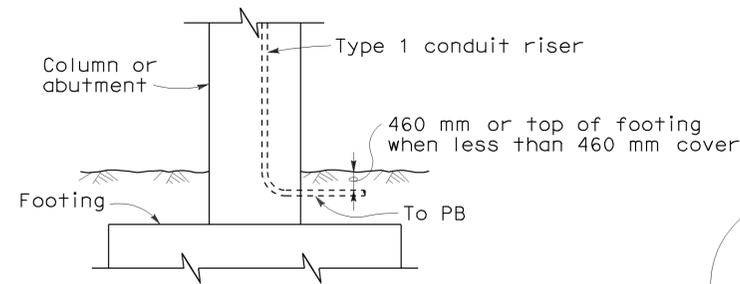
October 5, 2007
PLANS APPROVAL DATE

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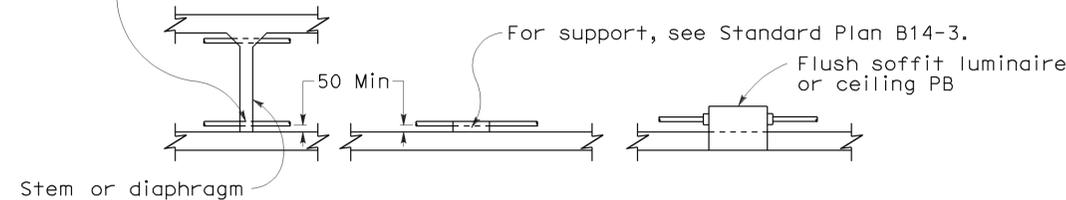


DETAIL R
CONDUIT RISER CONNECTION

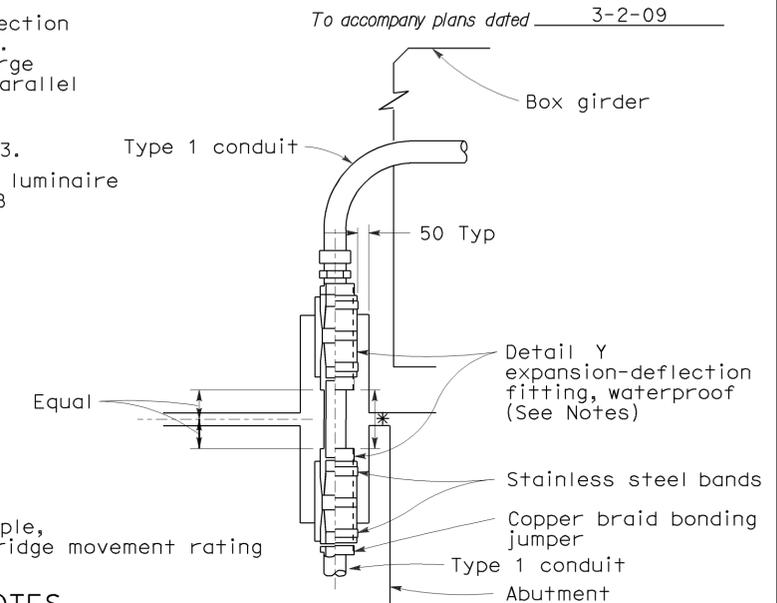


DETAIL T
LOWER END OF CONDUIT RISER AT COLUMN OR ABUTMENT

Conduit passing through girder or diaphragm of box girder section shall be either cast into concrete or passed through opening. Opening shall not be drainage opening and shall be only as large as required to install conduit. Conduit shall be run either parallel to or at right angles to girders.

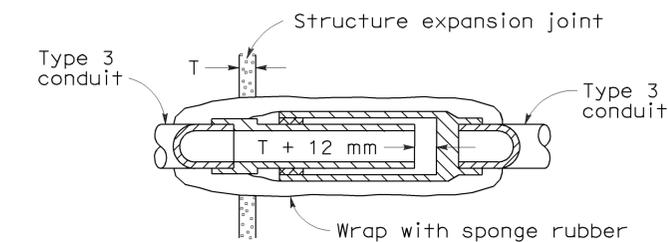


DETAIL S
CONDUIT INSTALLATION WITHIN BOX GIRDER SECTIONS



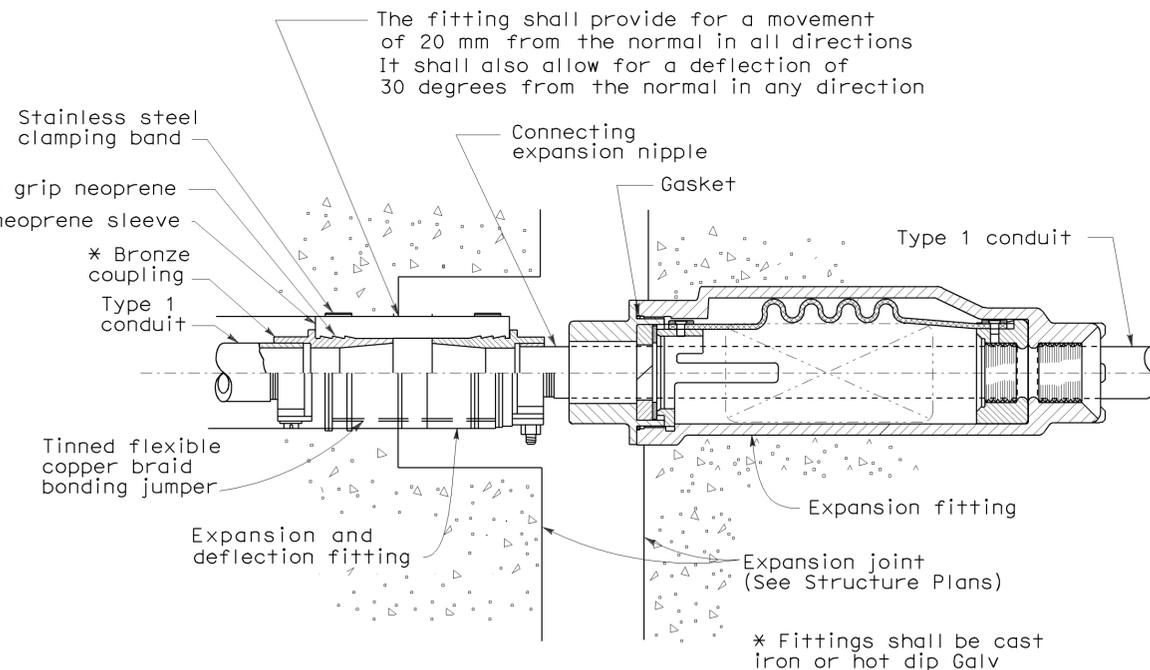
NOTES

1. Fitting and pocket required only where movement can occur between girder and abutment.
2. Fill pocket around fitting with resilient waterproof compound.



NON-METALLIC CONDUIT EXPANSION FITTING INSTALLATION DETAIL

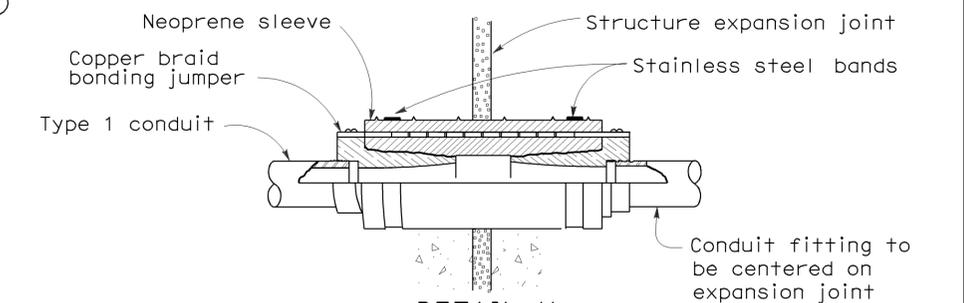
(To be used only when shown or specified on Project Plans)



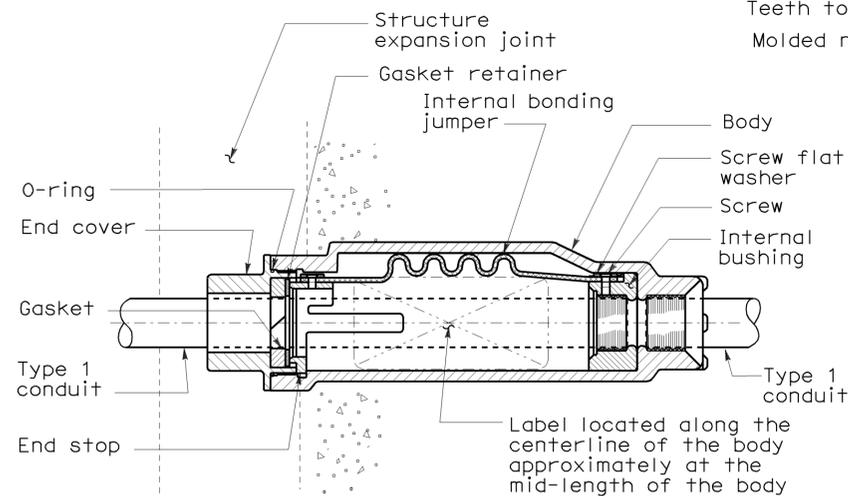
DETAIL XY
COMBINATION EXPANSION-DEFLECTION FITTINGS METALLIC CONDUIT INSTALLATION

* Conduit nipple, Length = Bridge movement rating

DETAIL U
CONDUIT RISER CONNECTION AT COLUMN, ABUTMENT OR STRUCTURE WING WALL



DETAIL Y
CONDUIT EXPANSION-DEFLECTION FITTING



DETAIL X
CONDUIT EXPANSION FITTINGS

NOTES

1. Except for sidewalk joints, a conduit expansion fitting or expansion-deflection fitting shall be installed at each 13 mm or greater structure joint, hinge or abutment.
2. Fittings or combination of fittings shall be installed to accommodate the movement rating as shown on the structure plans.
3. Fittings shall be installed parallel to superstructure girders.
4. Where lateral movement greater than 6 mm may occur, a neoprene sleeve expansion-deflection fitting shall be installed straddling the joint.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (ELECTRICAL DETAILS STRUCTURE INSTALLATIONS)

NO SCALE
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
RSP ES-9B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-9B DATED JULY 1, 2004-PAGE 469 OF THE STANDARD PLANS BOOK DATED JULY 2004.

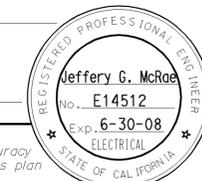
REVISED STANDARD PLAN RSP ES-9B

2004 REVISED Std PLAN RSP ES-9B



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		232	384

Jeffery B. McRae
REGISTERED ELECTRICAL ENGINEER

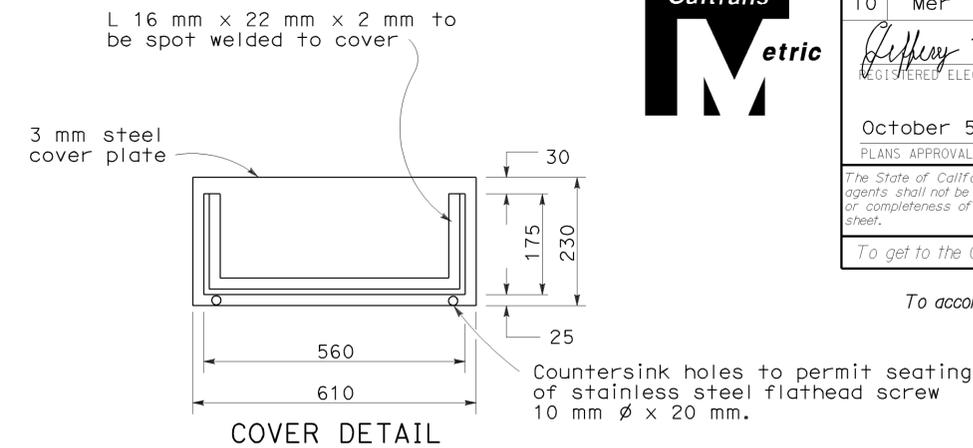
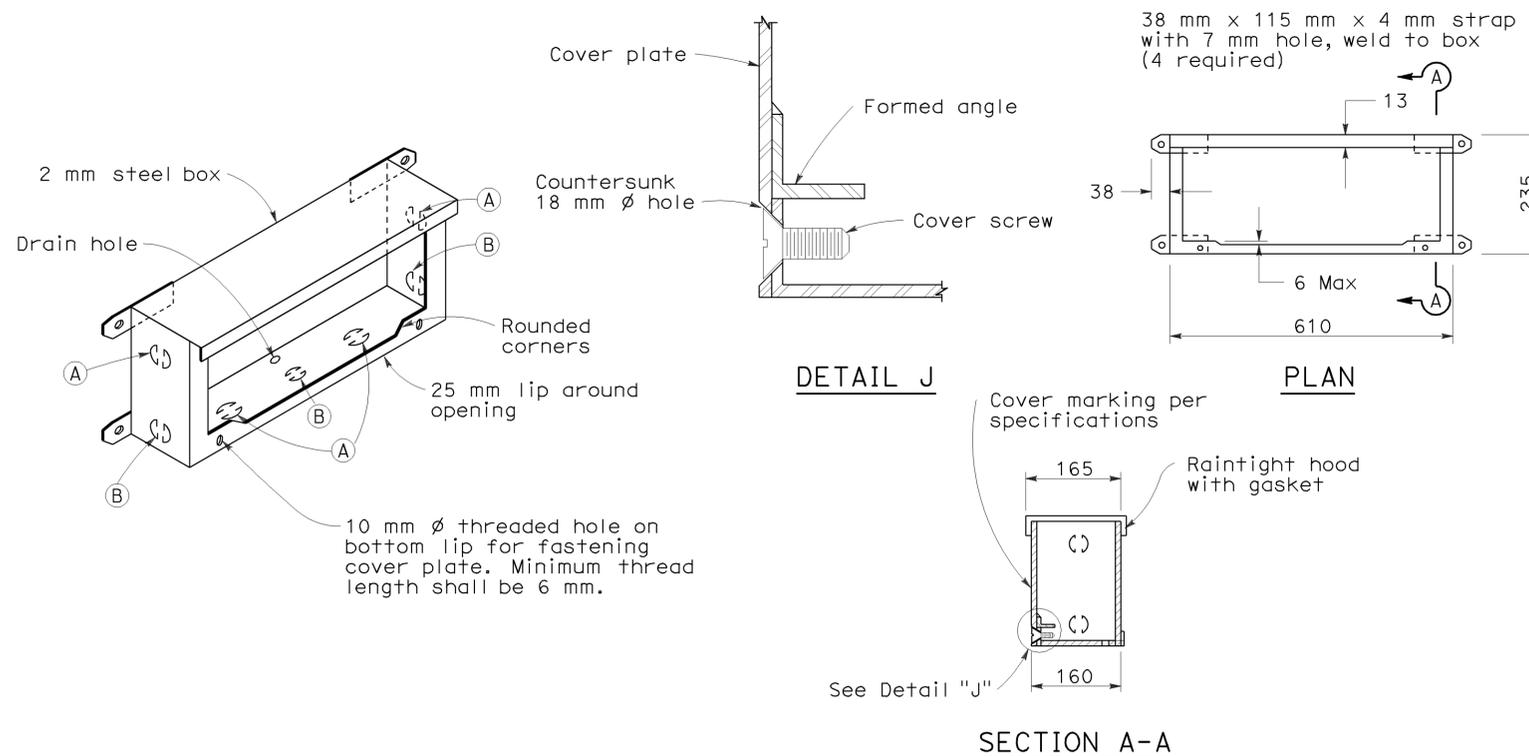


October 5, 2007
PLANS APPROVAL DATE

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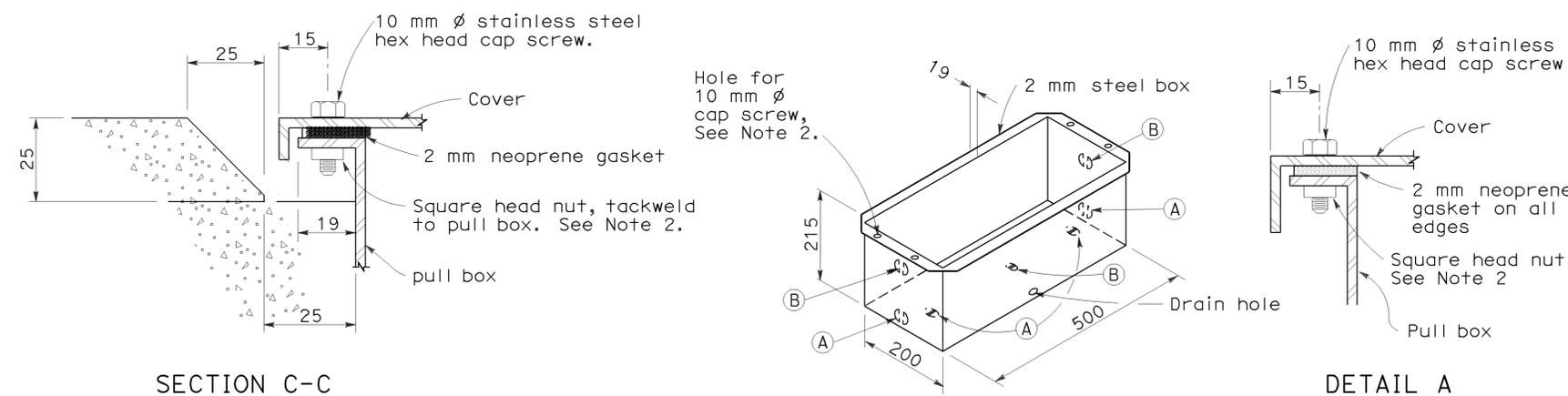
To accompany plans dated 3-2-09



INSTALLATION NOTE

Box shall be parallel to top of railing. Close cover box during pouring with 6 mm plywood of sufficient size to provide 1:1 chamfer on 3 sides of cover. Upper edge of plywood shall fit against lower edge of raintight hood.

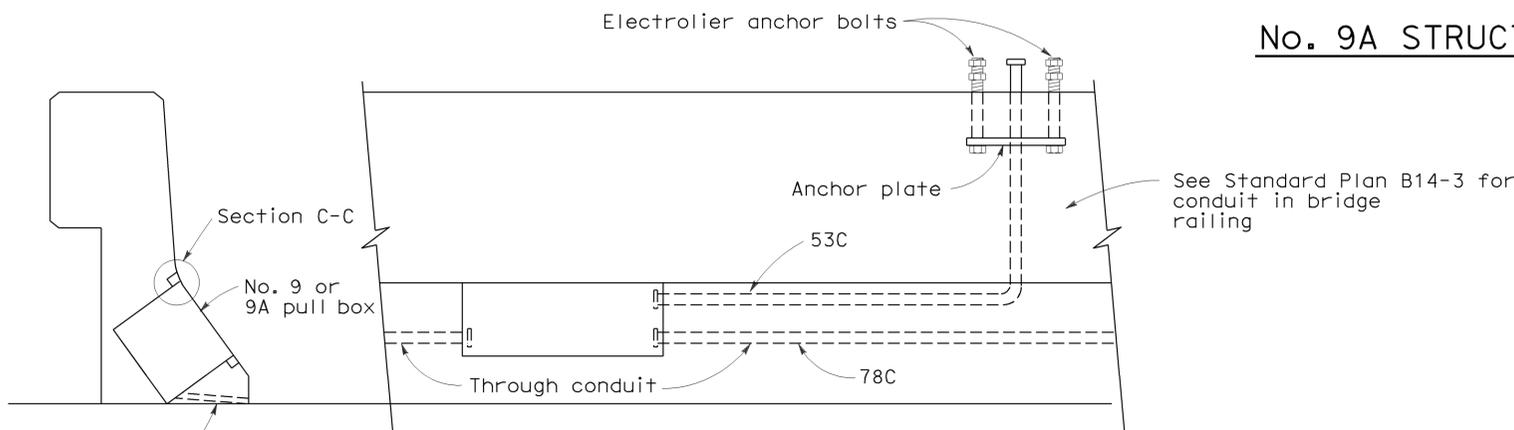
No. 9 STRUCTURE PULL BOX



NOTES: No. 9 and 9A Pull Box

- Corner joints shall be lapped and secured by spot welding or riveting.
- Where cap screws are used to attach cover to box, either of the following methods of providing adequate threading may be used:
 - Tack weld square nut to bottom of flange (Total 4), or
 - Tack weld a 6 mm x 16 mm x 200 mm bar beneath flange (Total 2).
- Pound knockouts flat after punching.
- Multiple size knockouts shall not be permitted.
- Pull box covers shall be marked as shown on Revised Standard Plan RSP ES-8.

No. 9A STRUCTURE PULL BOX



INSTALLATION IN SLOPING PARAPETS

For reinforcement in area of electrolier, see railing sheets. For electrolier anchor bolts, see Standard Plan ES-6B.

**KNOCKOUT SCHEDULE
No. 9 AND 9A PULL BOX**

- (A) 53C, 1 each end, 2 on bottom.
- (B) 78C, 1 each end, 1 on bottom.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(ELECTRICAL DETAILS
STRUCTURE INSTALLATIONS)**

NO SCALE

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RSP ES-9C DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-9C
DATED JULY 1, 2004-PAGE 470 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-9C

2004 REVISED STD PLAN RSP ES-9C

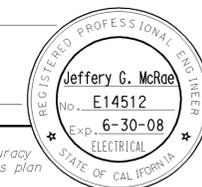


DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		233	384

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

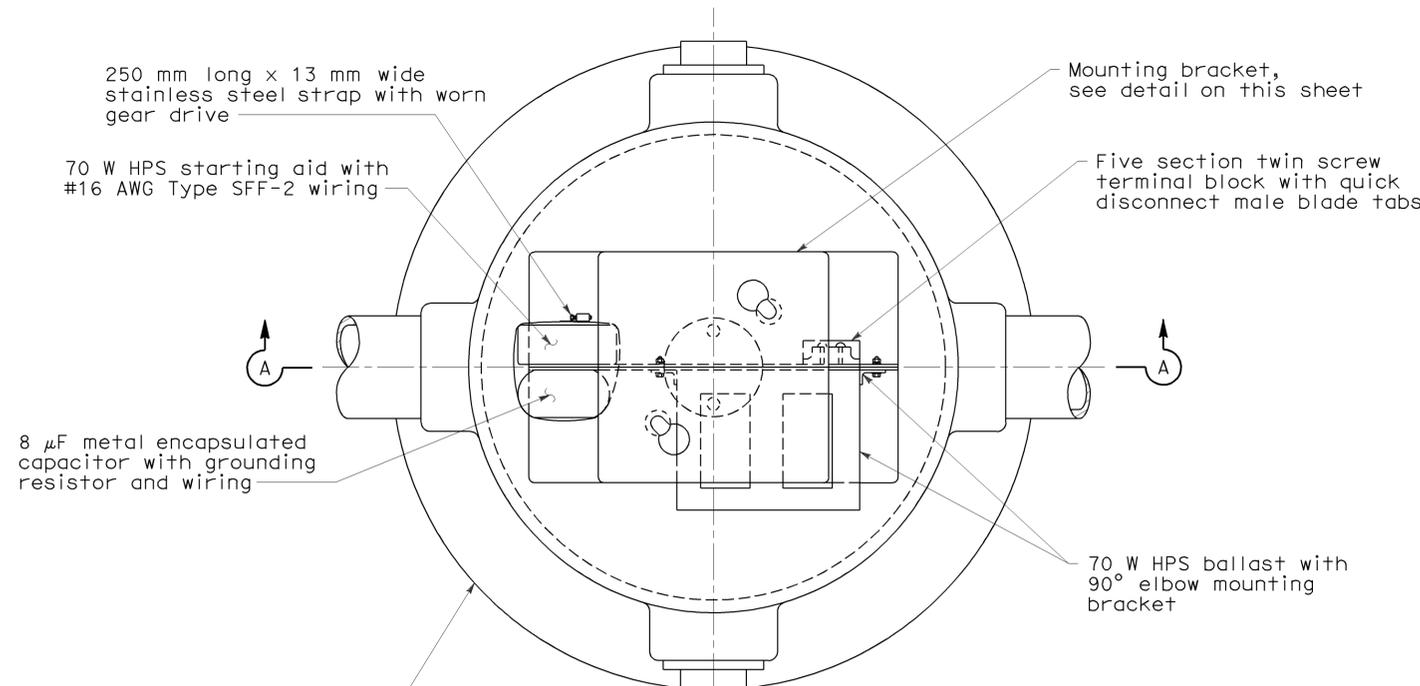
October 5, 2007
PLANS APPROVAL DATE

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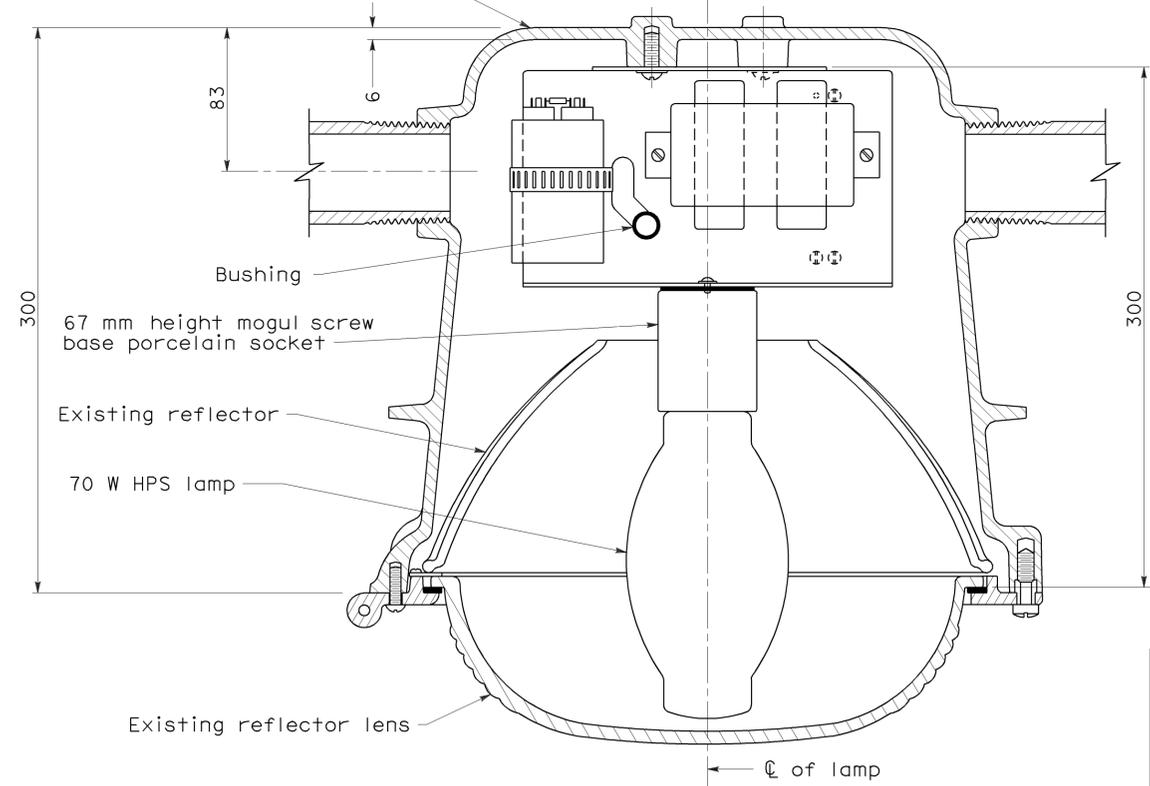


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To accompany plans dated 3-2-09

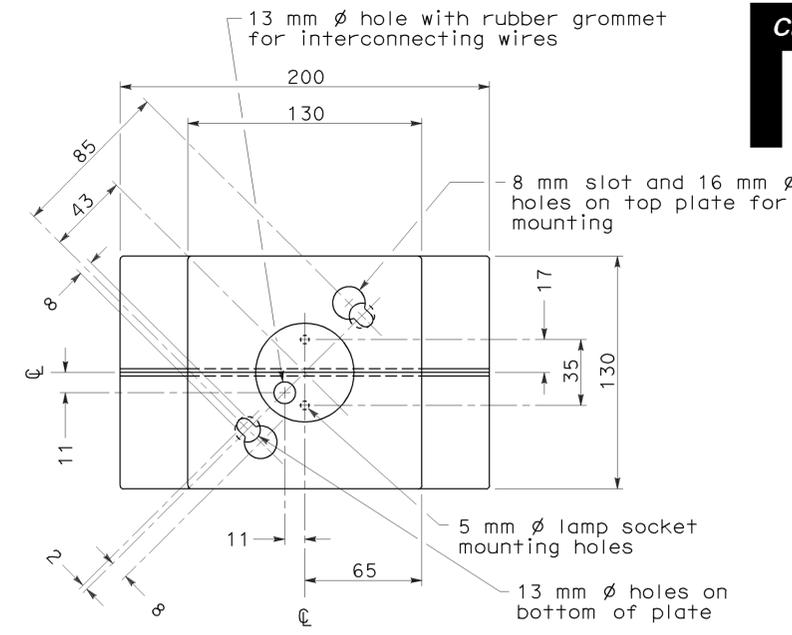


PLAN

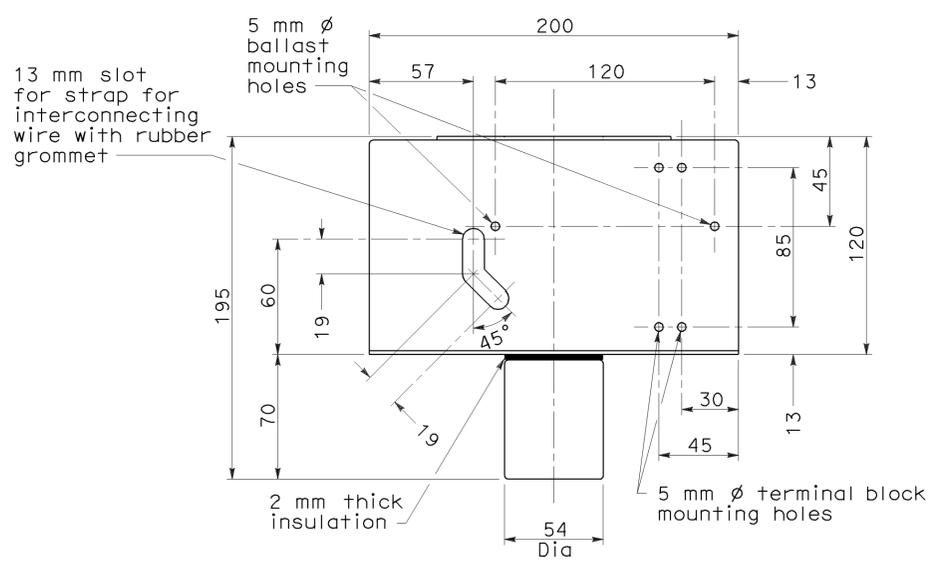


SECTION A-A

FLUSH SOFFIT LUMINAIRE ASSEMBLY

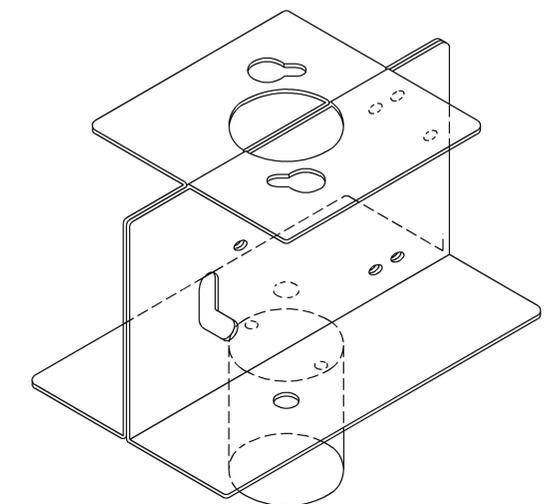


TOP VIEW

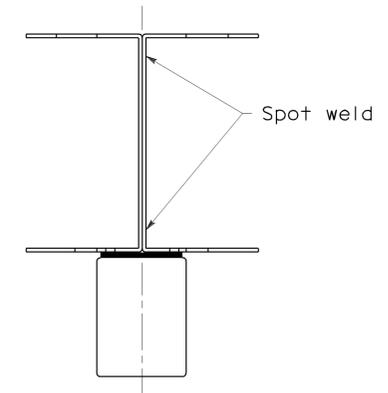


FRONT VIEW

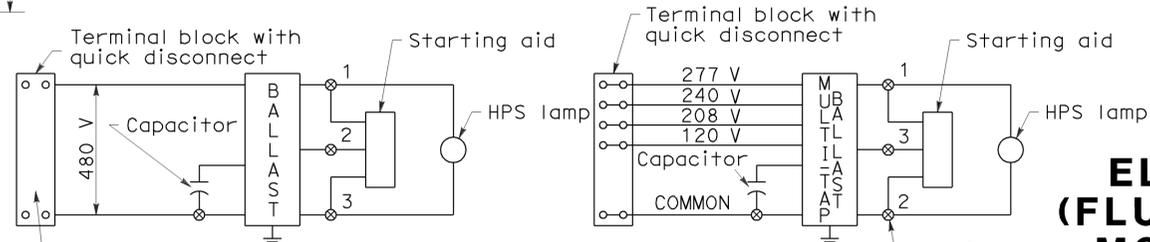
MOUNTING BRACKET DETAILS



Preform two sheets 1.6 mm mild steel as shown, spotweld together in each corner with four spotwelds.



SIDE VIEW



WIRING DIAGRAM

Permanent marker for voltage rating

NOTES

1. Fixture wiring shall be Type SFF-2.
2. Use 4.2 mm ⌀ machine screws, lockwashers and nuts for mounting ballast and terminal strips.
3. In-line fuse as required on Revised Standard Plan RSP ES-13B.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(FLUSH SOFFIT LUMINAIRE
MODIFICATION DETAILS
STRUCTURE INSTALLATIONS)**

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RSP ES-9F DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-9F
DATED JULY 1, 2004-PAGE 473 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-9F

2004 REVISED Std PLAN RSP ES-9F

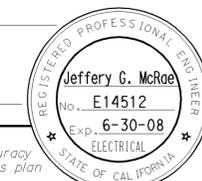


DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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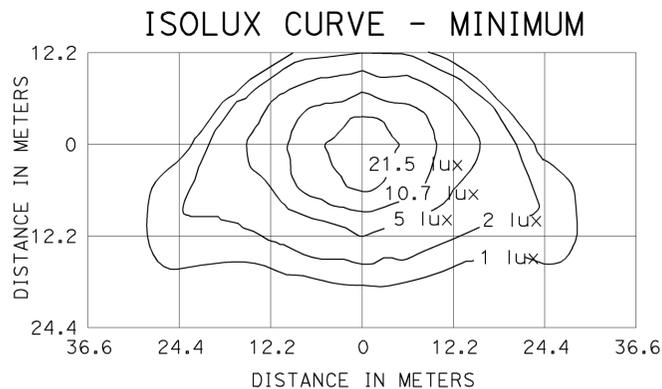
October 5, 2007
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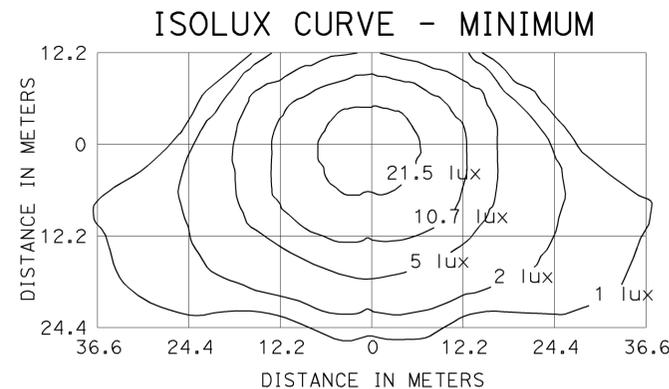


To accompany plans dated 3-2-09



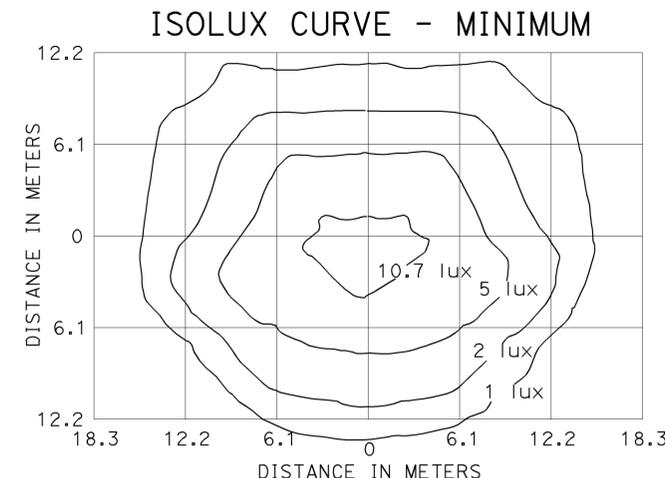
TYPE III MEDIUM CUTOFF

Cutoff Luminaire
10.4 m Mounting Height
LAMP OPERATED AT 22 000 lm
200 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S66



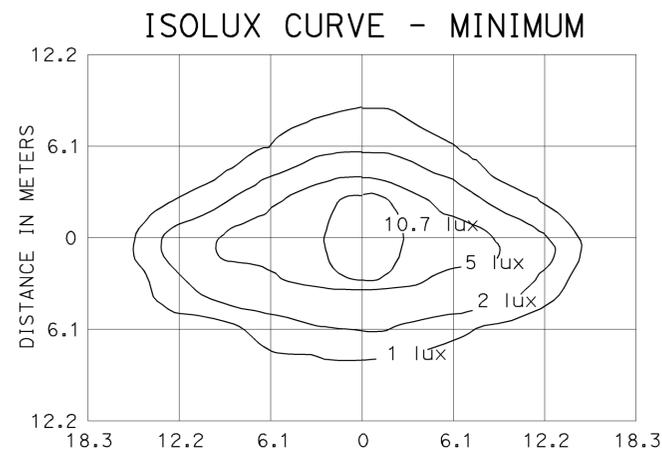
TYPE III MEDIUM CUTOFF

Cutoff Luminaire
12.2 m Mounting Height
LAMP OPERATED AT 37 000 lm
310 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S67



FLUSH SOFFIT LUMINAIRE

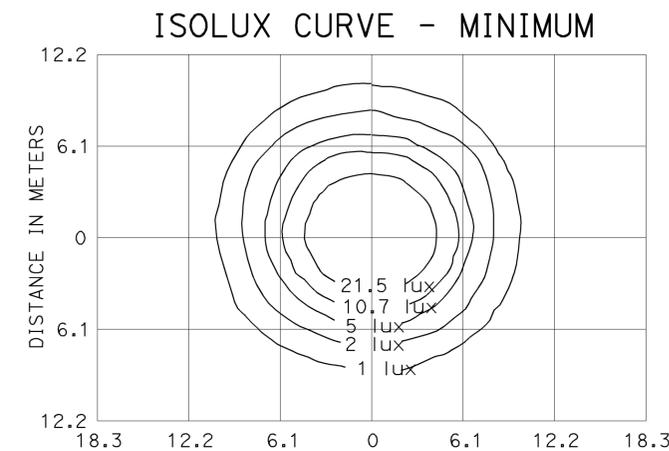
5.2 m Mounting Height
LAMP OPERATED AT 5800 lm
70 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S62



PENDANT SOFFIT LUMINAIRE

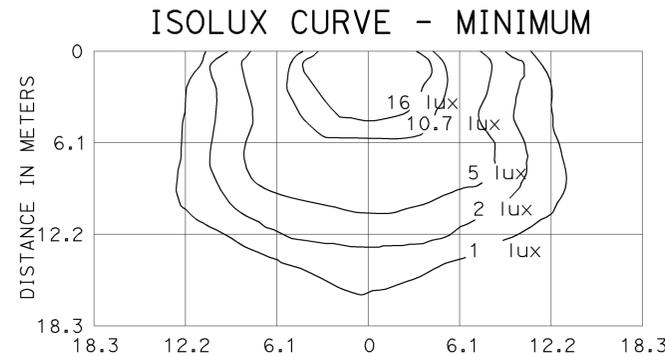
TYPE III SHORT

5.2 m Mounting Height
LAMP OPERATED AT 5800 lm
70 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S62



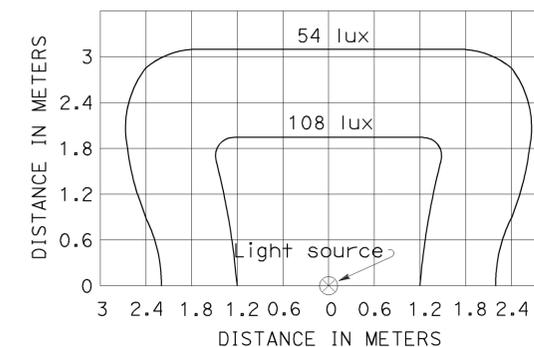
PENDANT SOFFIT LUMINAIRE

5.2 m Mounting Height
LAMP OPERATED AT 5800 lm
70 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S62



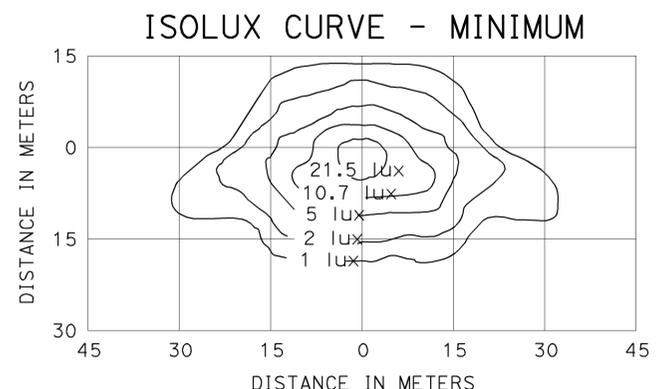
DETAIL "W" WALL LUMINAIRE

4.6 m Mounting Height
LAMP OPERATED AT 9500 lm
100 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S54



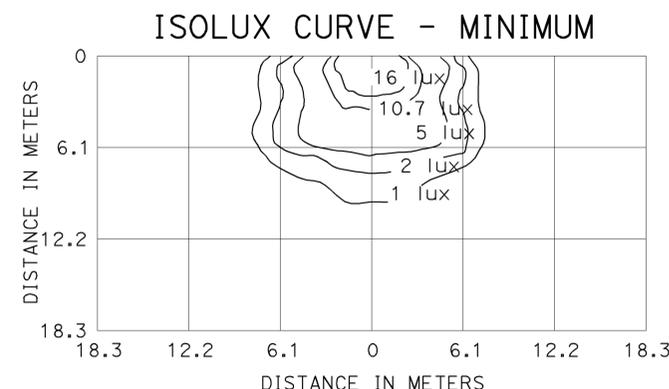
SIGN LIGHTING FIXTURE ISOLUX DIAGRAM

1. Curves represent the minimum lux of initial illumination on a 3 m x 6 m panel.
2. The lux shown are with the fixture attached to the light fixture mounting channel which places the center of the source 1420 mm in front of panel and 300 mm below the bottom edge.
3. Applicable lamp: 85-W fluorescent phosphor coated induction lamp.



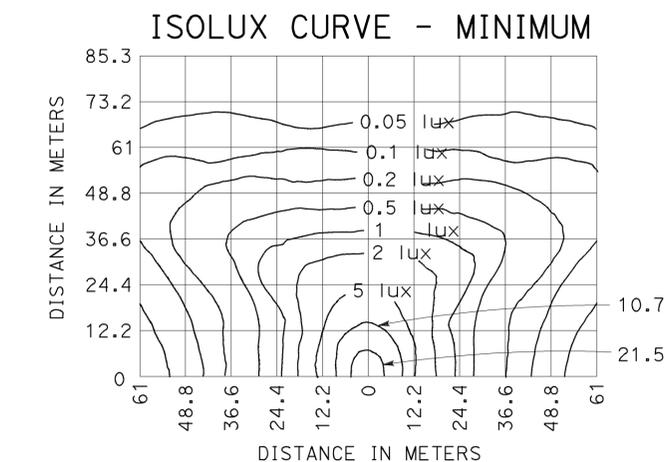
TYPE III MEDIUM CUTOFF

Cutoff Luminaire
9.1 m Mounting Height
LAMP OPERATED AT 16 000 lm
150 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S55



WALL LUMINAIRE

4.6 m Mounting Height
LAMP OPERATED AT 5800 lm
70 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S62



LOW PRESSURE SODIUM LUMINAIRE

12.2 m Mounting Height
LAMP OPERATED AT 33 000 lm
180 W LOW PRESSURE SODIUM LAMP

NOTE

Isolux diagrams show the minimum horizontal lux required.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(ISOLUX DIAGRAMS)**

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-10 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-10
DATED JULY 1, 2004-PAGE 474 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-10

2004 REVISED STD PLAN RSP ES-10

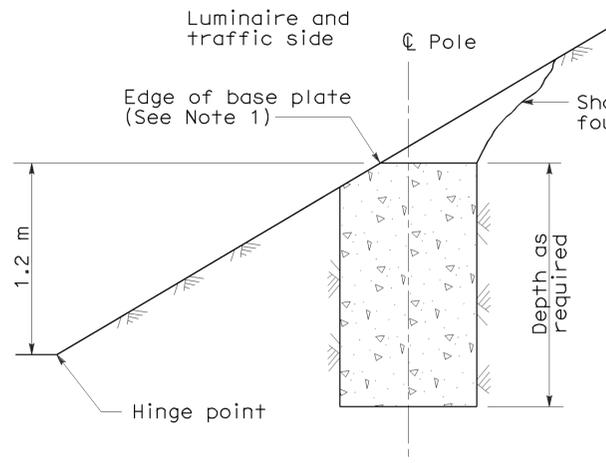


DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	235	384

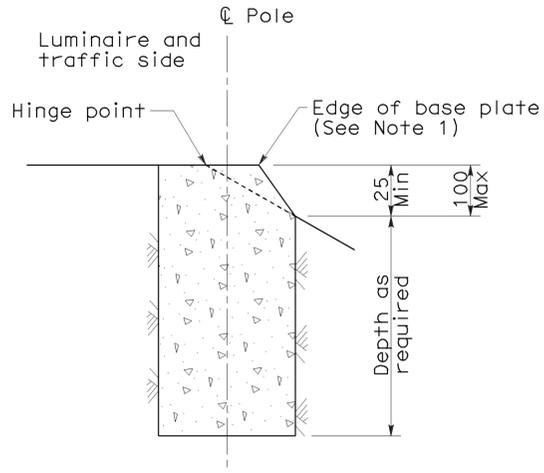

 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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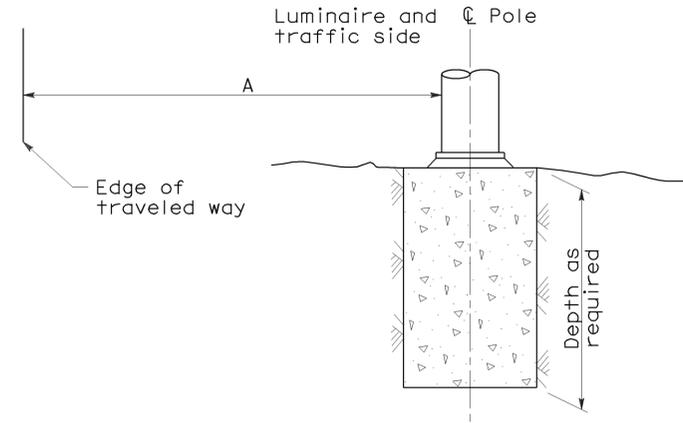
To accompany plans dated 3-2-09



**CUT SLOPES
STEEPER THAN 1:4**
See Note 2



**FILL SLOPES
STEEPER THAN 1:4**
See Note 2



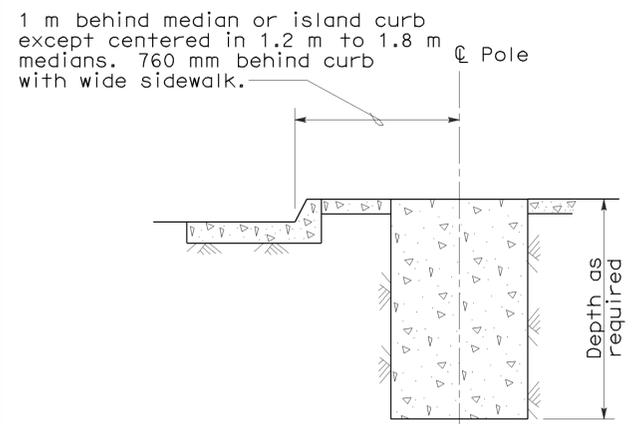
**FLAT SECTIONS, CUT OR FILL SLOPES
1:4 OR FLATTER**

STANDARD TYPE	SETBACK (DIMENSION A)
32	9 m Min
31, 36-20A	6 m Min
15, 15D, 15-SB, 21, 21D, 30	Mast Arm Length (Min)

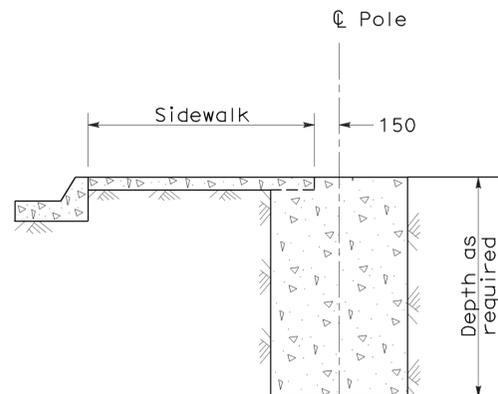
**FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS**

NOTES:

- Where a portion of the foundation is above grade, the top edges shall have a 25 mm chamfer.
- Horizontal setbacks on cut and fill slopes steeper than 1:4 shall not exceed the distance shown for flat sections.



**MEDIAN, ISLAND
OR WIDE SIDEWALK**
(2 m wide and wider)



NARROW SIDEWALK
(Less than 2 m wide)

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(FOUNDATION INSTALLATIONS)**

NO SCALE
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MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-11 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-11
DATED JULY 1, 2004-PAGE 475 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-11

2004 REVISED Std PLAN RSP ES-11

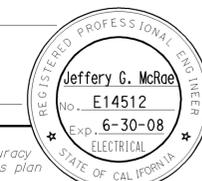


DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5		236	384

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

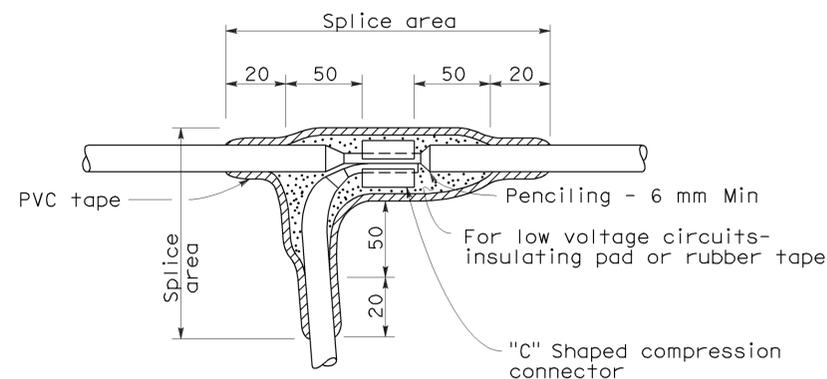
October 5, 2007
PLANS APPROVAL DATE

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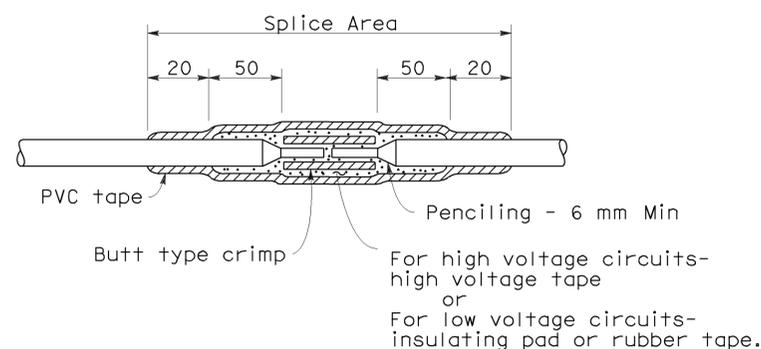
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

To accompany plans dated 3-2-09



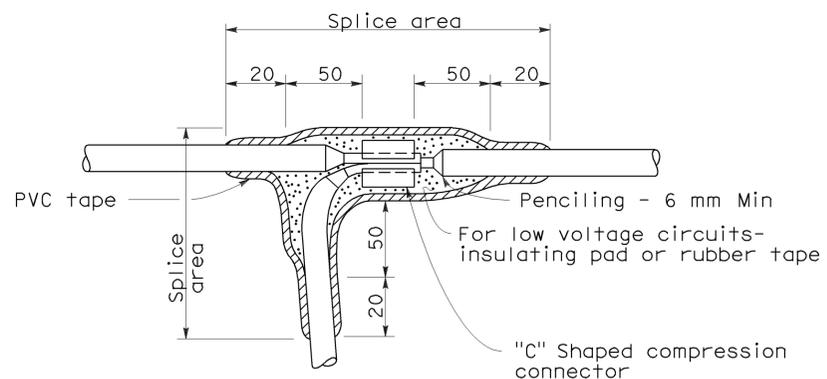
TYPE "C" SPLICE

Between 1 free-end and 1 through conductor



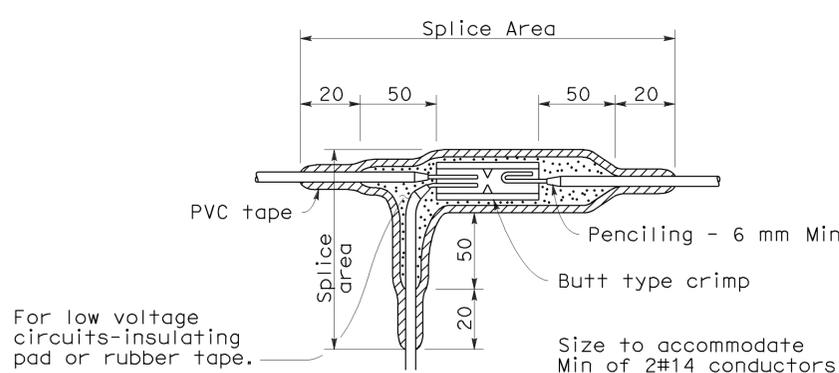
TYPE "S" SPLICE

Between 2 free-ends



TYPE "T" SPLICE

For 3 free-ends



TYPE "ST" SPLICE

NOTES:

1. Dimensions are minimum.
2. Rubber tapes shall be rolled after application.

INSULATION METHODS

Low Voltage Circuits (0-600 V)

METHOD "B"

1. Completely cover the splice area with electrical insulating coating and allow to dry.
2. Apply 2 layers of electrical insulating pad with minimum thickness of 4 mm each layer or 2 layers, half lapped, synthetic oil resistant, self fusing rubber tape.
3. Apply 3 layers half lapped polyvinyl chloride tape.
4. Cover entire splice with electrical insulating coating and allow to dry.

High Voltage Circuits (Over 600 V)

1. Completely cover the splice area with electrical insulating coating and allow to dry.
2. Apply high voltage tape to a minimum thickness equal to original insulation.
3. Apply 3 layers half lapped polyvinyl chloride tape.
4. Cover entire splice with electrical insulating coating and allow to dry.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SPLICING DETAILS)**

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-13A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-13A
DATED JULY 1, 2004-PAGE 478 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-13A

2004 REVISED STD PLAN RSP ES-13A



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	140	58.7/60.5	237	384

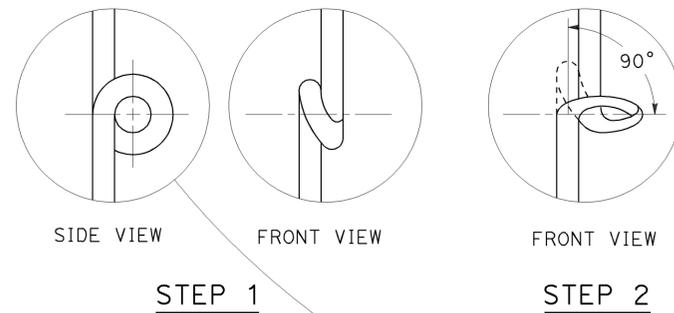
REGISTERED ELECTRICAL ENGINEER
Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

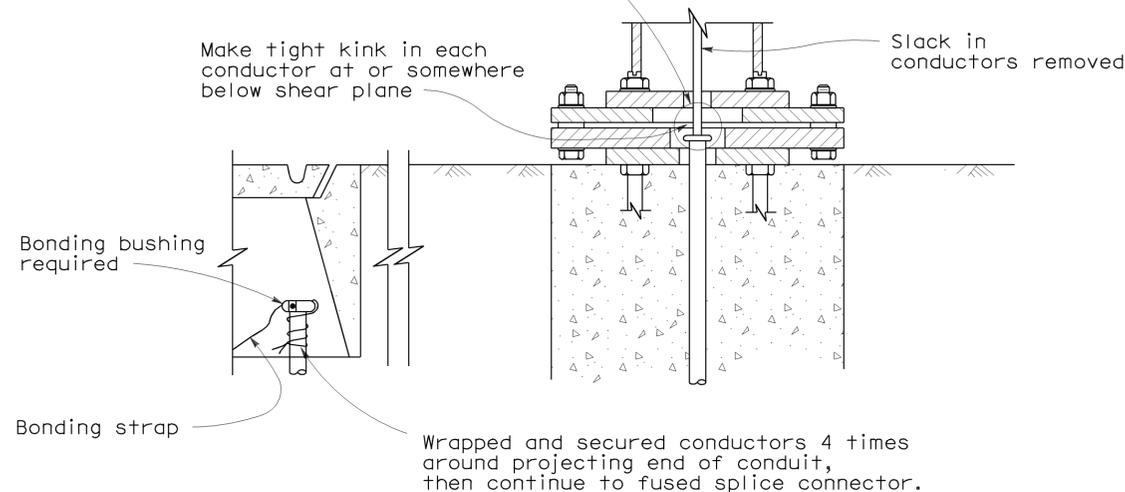
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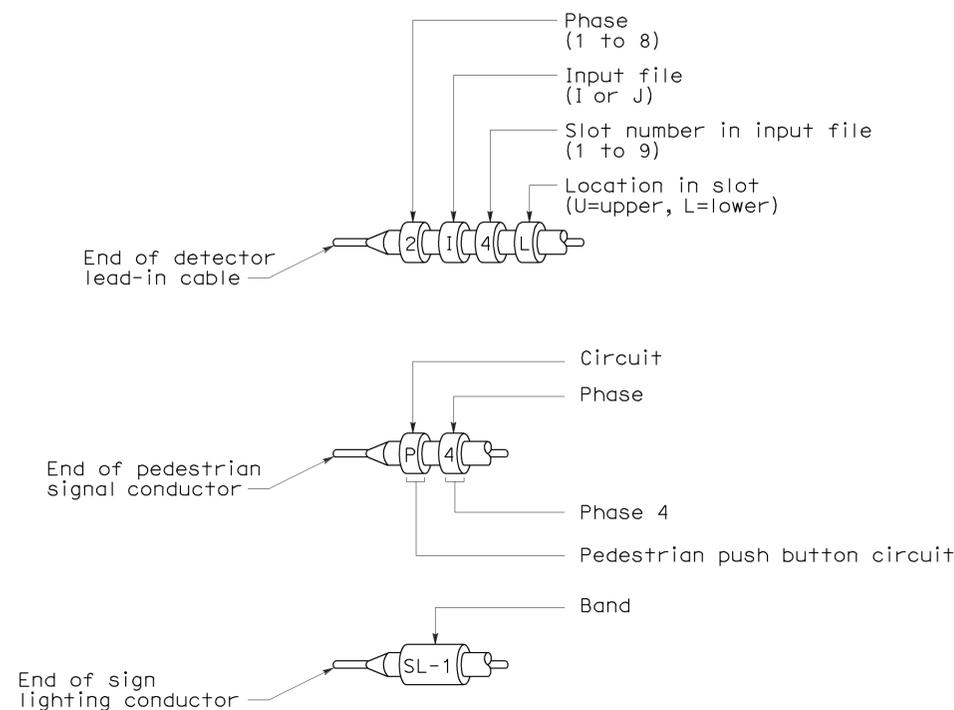
To accompany plans dated 3-2-09



Continue kink to at least 90° position as indicated in step 2.



KINKING DETAIL FOR SLIP BASE STANDARDS



TYPICAL BANDING OF CONDUCTOR ENDS

Primary lines of multiple ballasts shall be provided with fused connectors. Fuse ratings shall be as noted below.

CIRCUIT VOLTAGE	FUSE VOLTAGE RATING	FUSE CURRENT RATING																
		HPS LAMP BALLAST								LOW PRESSURE SODIUM BALLAST					INDUCTION SIGN LIGHTING	SINGLE PHASE (TWO WIRE) TRANSFORMERS (PRIMARY SIDE)		
		70 W	100 W	150 W	200 W	250 W	310 W	400 W	1000 W	35 W	55 W	90 W	135 W	180 W	85 W	1 kVA	2 kVA	3 kVA
120 V	250 V	5	5	5	5	5	5	5	-	5	5	5	5	5	5	10	20	30
240 V	250 V	5	5	5	5	5	5	5	5	3	3	3	5	5	5	6	10	20
480 V	500-600 V	5	5	5	5	5	5	5	5	2	2	2	3	3	1*	3	6	10

* See Revised Standard Plan RSP ES-15D, Type SC3 Control.

**FUSE RATINGS FOR FUSED CONNECTORS
LUMINAIRE BALLAST FUSING**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(WIRING DETAILS AND
FUSE RATINGS)**

NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-13B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-13B
DATED JULY 1, 2004-PAGE 479 OF THE STANDARD PLANS BOOK DATED JULY 2004.

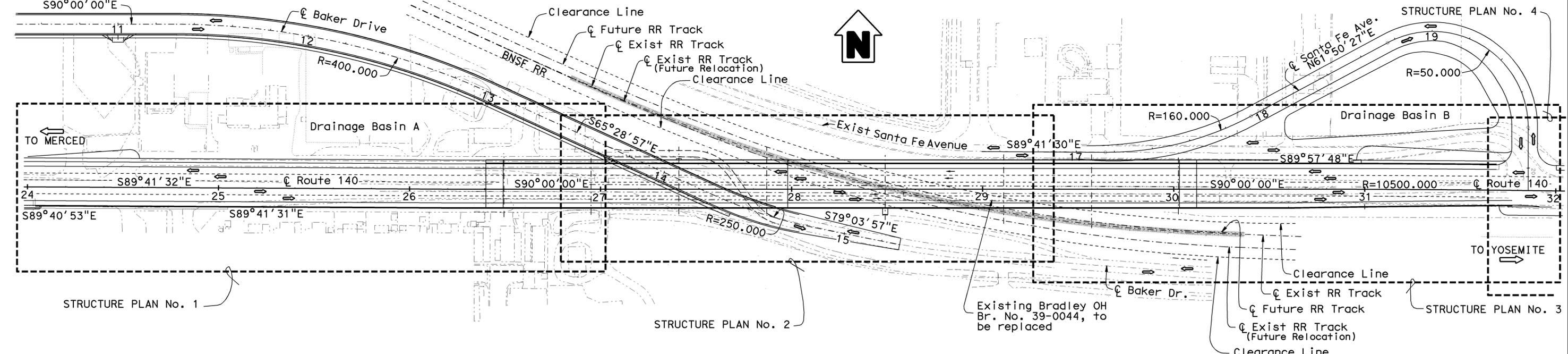
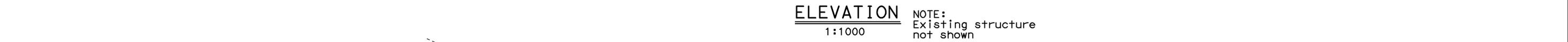
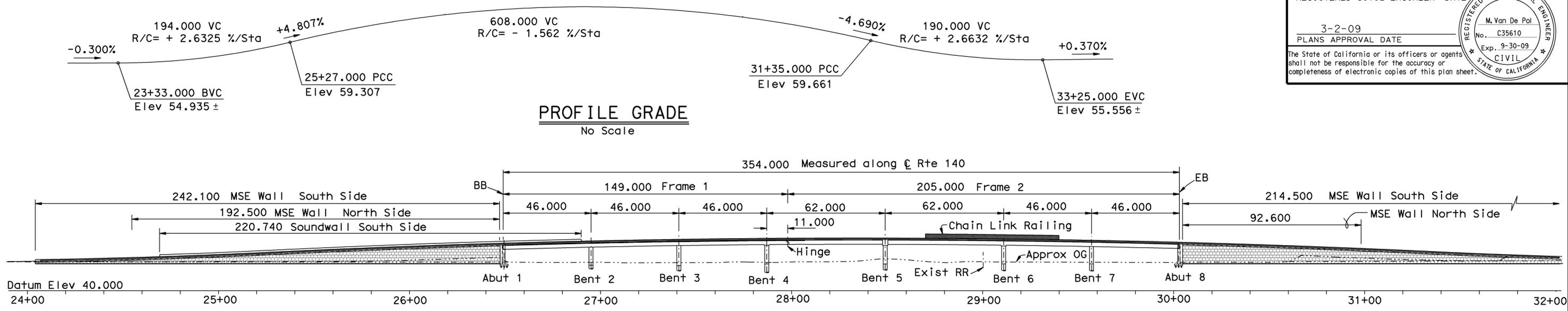
REVISED STANDARD PLAN RSP ES-13B

2004 REVISED STD PLAN RSP ES-13B

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	238	384

9-30-08
 REGISTERED CIVIL ENGINEER DATE
 3-2-09
 PLANS APPROVAL DATE
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M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA



NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NOTES:
 For Quantities, Index To Plans, and Standard Plans list, see "Index To Plans" sheet
 For General Notes, see "Deck Contours No. 1" sheet
 For "Typical Sections", see "Structure Plan No. 4" sheet
 For additional details, see "Structure Plan" sheets
 Temporary Railing not shown, see "Stage Construction" sheet and "Road Plans"

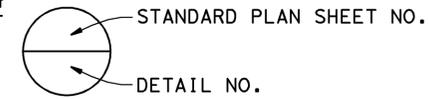
For Curve Data, see "Structure Plan" sheets
 For points of minimum vertical clearance, see "Structure Plan" sheets
 For Retaining Wall Details, see Other Plans this Contract

----- Denotes existing
 _____ Denotes new construction

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) GENERAL PLAN	
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LAYOUT	BY M. VAN DE POL 04-03			CHECKED P. NORBOE 11-05	KILOMETER POST		59.66
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05	SPECIFICATIONS	BY TANYA KERSHELL			CHECKED TANYA KERSHELL	PLANS AND SPECS COMPARED		TANYA KERSHELL

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN
 ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS
 CU 10 EA 3A66U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES
 SHEET 1 OF 94
 STRUCTURES DESIGN GENERAL PLAN SHEET (METRIC) (REV.03-17-04)

STANDARD PLANS Dated July 2004



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	239	384

REGISTERED CIVIL ENGINEER DATE 11-18-08
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

PLANS APPROVAL DATE 3-2-09

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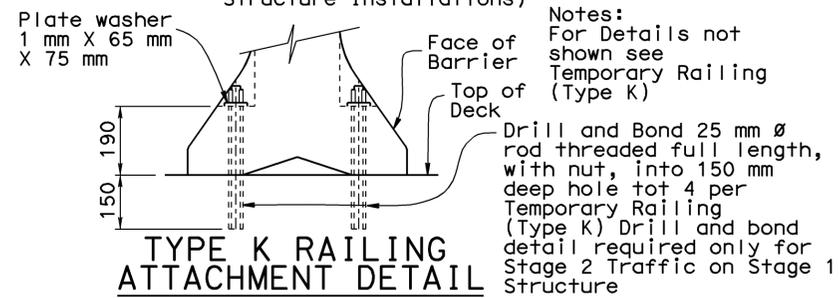
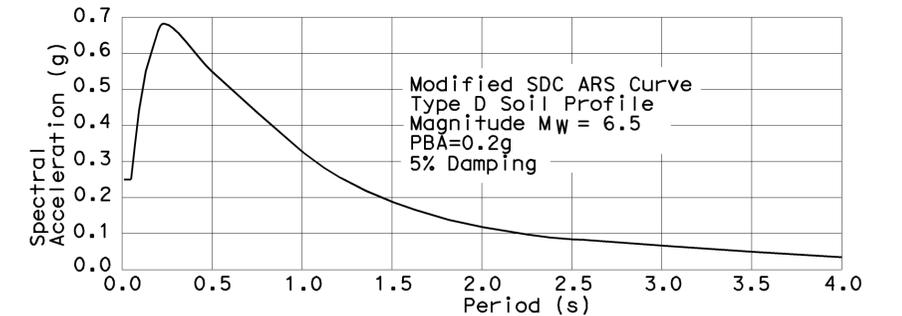
INDEX TO PLANS

Sheet No.	Description	Sheet No.	Description
1.	General Plan	51.	Typical Section No. 1
2.	Index To Plans	52.	Typical Section No. 2
3.	Structure Plan No. 1	53.	Girder Layout No. 1
4.	Structure Plan No. 2	54.	Girder Layout No. 2
5.	Structure Plan No. 3	55.	Girder Layout No. 3
6.	Structure Plan No. 4	56.	Girder Reinforcement No. 1
7.	Deck Contours No. 1	57.	Girder Reinforcement No. 2
8.	Deck Contours No. 2	58.	Girder Reinforcement No. 3
9.	Deck Contours No. 3	59.	Girder Reinforcement No. 4
10.	Foundation Plan No. 1	60.	Girder Reinforcement No. 5
11.	Foundation Plan No. 2	61.	Camber Diagram
12.	Foundation Plan No. 3	62.	Hinge Layout
13.	Foundation Plan No. 4	63.	Hinge Details No. 1
14.	Foundation Plan No. 5	64.	Hinge Details No. 2
15.	Foundation Plan No. 6	65.	Hinge Details No. 3
16.	Staged Construction No. 1	66.	Hinge Details No. 4
17.	Staged Construction No. 2	67.	Cable Restrainer Unit - Type 2
18.	Staged Construction No. 3	68.	Cable Restrainer Unit - Type 2 Details
19.	Abutment Layout No. 1	69.	Abutment Joint Seal Details
20.	Abutment Layout No. 2	70.	Hinge Joint Seal Details
21.	Abutment Details No. 1	71.	PTFE/Elastomeric Bearing Details No. 1
22.	Abutment Details No. 2	72.	PTFE/Elastomeric Bearing Details No. 2
23.	Abutment Details No. 3	73.	PTFE/Spherical Expansion Bearing Details No. 1
24.	Abutment Details No. 4	74.	PTFE/Spherical Expansion Bearing Details No. 2
25.	Abutment Details No. 5	75.	Temporary Support - Bent 3 Stage 1
26.	Abutment Details No. 6	76.	Temporary Support - Bent 4 Stage 1
27.	Bent Layout No. 1	77.	Temporary Support - Bent 5 Stage 1
28.	Bent Layout No. 2	78.	Existing Outrigger Bent Support Details
29.	Bent Layout No. 3	79.	Soundwall Details No. 1
30.	Bent Layout No. 4	80.	Soundwall Details No. 2
31.	Bent Layout No. 5	81.	Drainage Details No. 1
32.	Bent Details No. 1	82.	Drainage Details No. 2
33.	Bent Details No. 2	83.	Bridge Architectural Details
34.	Bent Details No. 3	84.	Miscellaneous Details
35.	Bent Details No. 4	85.	Chain Link Railing Type 7 (Mod)
36.	Bent Details No. 5	86.	Removal Details
37.	Bent Details No. 6	87.	Lighting Details No. 1
38.	Bent Details No. 7	88.	Structure Approach Type N(9S)
39.	Bent Details No. 8	89.	Structure Approach Details
40.	Bent Details No. 9	90.	Structure Approach Drainage Details
41.	Bent Details No. 10	91.	Log of Test Borings 1 of 4
42.	Bent Details No. 11	92.	Log of Test Borings 2 of 4
43.	Bent Details No. 12	93.	Log of Test Borings 3 of 4
44.	Bent Details No. 13	94.	Log of Test Borings 4 of 4
45.	Bent Details No. 14		
46.	Bent Details No. 15		
47.	Bent Details No. 16		
48.	Bent Details No. 17		
49.	Bent Details No. 18		
50.	Bent Details No. 19		

- A10A Acronyms and Abbreviations (A-L)
- A10B Acronyms and Abbreviations (M-Z)
- A10C Symbols (Sheet 1 of 2)
- A10D Symbols (Sheet 2 of 2)
- A62-B Limits of Payment for Excavation and Backfill Bridge
- A62-C Limits of Payment for Excavation and Backfill Retaining Wall
- A77J3 Metal Beam Guard Railing Connection to Abutments and Walls
- A77J4 Metal Beam Guard Railing Transition Railing (Type WB) Temporary Railing (Type K)
- T3 Bridge Details
- B0-1 Bridge Details
- B0-3 Bridge Details
- B0-5 Bridge Details
- B0-13 Bridge Details
- B2-3 400mm and 600mm Cast-In-Drilled-Hole Concrete Pile
- B3-2 Retaining Wall Type 1 H-9700 through 10 900
- B3-8 Retaining Wall Details No. 1
- B3-9 Retaining Wall Details No. 2
- RSP B6-21 Joint Seals (Maximum Movement Rating=50mm)
- B7-1 Box Girder Details
- B7-6 Deck Drains Types D-1 and D-2
- B7-8 Deck Drain Details
- B7-10 Utility Openings-Box Girder
- RSP B8-5 Cast-In-Place Prestressed Girder Details
- B11-55 Concrete Barrier Type 732
- B14-3 Communications and Sprinkler Control Conduits (Less than Size 103)
- B14-4 Water Supply Line (Bridge) (Pipe Less than NPS 4)
- B14-5 Water Supply Line (Details) (Pipe Sizes Less Than NPS 4)
- RSP ES-6A Electrical Systems (Lighting Standards Type 15 and 21)
- ES-6B Electrical Systems (Lighting Standards Type 15 and 21 Barrier Rail Mounted Details)
- RSP ES-7M Electrical Systems (Signal and Lighting Standards Details No. 1)
- RSP ES-9A Electrical Systems (Electrical Details Structure Installations)
- RSP ES-9B Electrical Systems (Electrical Details Structure Installations)
- ES-9E Electrical Systems (Electrical Details Structure Installations)
- RSP ES-9F Electrical Systems (Electrical Details Structure Installations)

QUANTITIES

	LUMP	SUM
TEMPORARY SUPPORT		
REMOVE CONCRETE DECK SURFACE	6	m ²
PREPARE CONCRETE BRIDGE DECK SURFACE	10	m ²
BRIDGE REMOVAL		LUMP SUM
STRUCTURE EXCAVATION (BRIDGE)	930	m ³
STRUCTURE BACKFILL (BRIDGE)	1310	m ³
NPS 1/4 SUPPLY LINE (BRIDGE)	370	m
NPS 1/2 SUPPLY LINE (BRIDGE)	370	m
600 MM CAST-IN-DRILLED-HOLE CONCRETE PILING	1170	m
2.1 m CAST-IN-DRILLED-HOLE CONCRETE PILING	330	m
PRESTRESSING CAST-IN-PLACE CONCRETE		LUMP SUM
PRESTRESSING CAST-IN-PLACE CONCRETE (TRANSVERSE)		LUMP SUM
STRUCTURAL CONCRETE, BRIDGE FOOTING	300	m ³
STRUCTURAL CONCRETE, BRIDGE	7540	m ³
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	120	m ³
ARCHITECTURAL TREATMENT(COBBLESTONE TEXTURE)	500	m ²
FURNISH POLYESTER CONCRETE OVERLAY	0.2	m ³
PLACE POLYESTER CONCRETE OVERLAY	10	m ²
SOUND WALL (MASONRY BLOCK)	180	m ²
PTFE BEARING	16	EA
PTFE SPHERICAL BEARING	8	EA
JOINT SEAL ASSEMBLY (MR 101 MM - 160 MM)	50	m
JOINT SEAL ASSEMBLY (MR 161 MM - 240 MM)	25	m
BAR REINFORCING STEEL (BRIDGE)	1 487 000	kg
PREPARE AND STAIN CONCRETE	740	m ²
WELDED STEEL PIPE CASING (BRIDGE)	24	m
MISCELLANEOUS METAL (RESTRAINER - PIPE TYPE)	3100	kg
MISCELLANEOUS METAL (RESTRAINER - CABLE TYPE)	3100	kg
BRIDGE DECK DRAINAGE SYSTEM	5500	kg
CHAIN LINK RAILING (TYPE 7 MODIFIED)	370	m
CONCRETE BARRIER (TYPE 732 MODIFIED)	718	m



PILE DATA TABLE

Support Location	Pile Type CIDH Concrete Pile	Design Loading (kN)	Nominal Resistance (kN)		Cut-Off Elevation (m)	Design Tip Elevation (m)	Specified Tip Elevation (m)
			Compression	Tension			
Abut 1	600 mm	900	1800	0	53.075	42.750	42.750
Bent 2	2150 mm	—	26000	0	53.500	26.000	26.000
Bent 3	2150 mm	—	26000	0	53.500	26.000	26.000
Bent 4	2150 mm	—	26000	0	53.500	26.000	26.000
Bent 5	2150 mm	—	26000	0	53.500	26.000	26.000
Bent 6	2150 mm	—	26000	0	53.500	26.000	26.000
Bent 7	2150 mm	—	26000	0	53.500	26.000	26.000
Abut 8	600 mm	900	1800	0	52.575	42.750	42.750

Design Tip Elevation is Controlled by Compression
 For Pile Cut-Off Locations, see "Bent Layout" Sheets

CONCRETE STRENGTH AND TYPE LIMITS

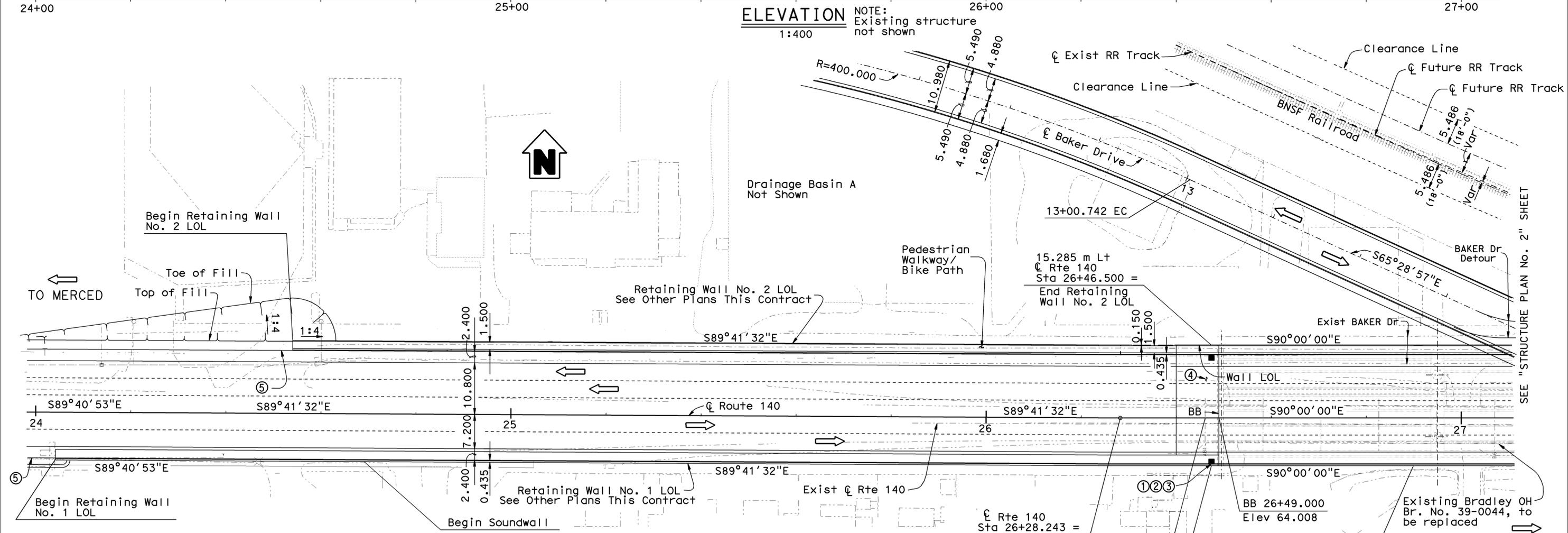
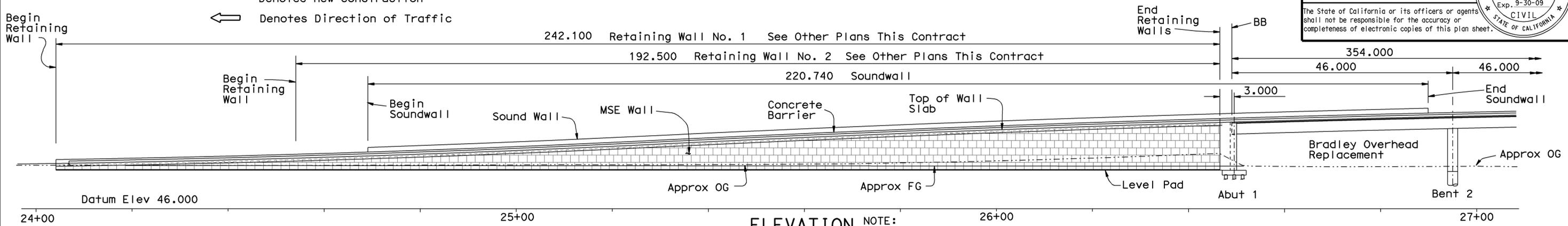
- No Scale
- Structural Concrete, Bridge (35 MPa at 28 days) B5 Cap (42 MPa at 28 days)
 - Structural Concrete, Bridge (28 MPa at 28 days)
 - Structural Concrete, Bridge Footing (28 MPa at 28 days)
 - CIDH Concrete Pile (28 MPa at 28 days)
 - MSE Retaining Wall, See Other Plans This Contract

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) INDEX TO PLANS
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN			QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05	CU 10 EA 3A66U1		REVISION DATES
ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS					DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET 2 OF 94 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)	

DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5		240	384

M. Van de Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
 PLANS APPROVAL DATE
 M. VAN DE POL
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

NOTES:
 For "Typical Sections", see "Structure Plan No. 4" sheet
 ----- Denotes existing
 _____ Denotes new construction
 ← Denotes Direction of Traffic



ELEVATION
 1:400
 NOTE: Existing structure not shown

PART PLAN
 1:400

- Notes:
- ① Paint "Br. No. 39-0044"
 - ② Paint "BRADLEY OVERHEAD"
 - ③ Paint "140 Mer 37.00"
 - ④ Structure Approach Type N(9S)
 - ⑤ Metal Beam Guard Rail, see "Road Plans" ■ Denotes Drainage Inlet

NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) STRUCTURE PLAN No. 1
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LAYOUT	BY M. VAN DE POL 04-03			CHECKED P. NORBOE 11-05	KILOMETER POST	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05	SPECIFICATIONS	BY TANYA KERSHELL					

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN
 ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS
 CU 10 EA 3A66U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES
 SHEET 3 OF 94
 STRUCTURES DESIGN GENERAL PLAN SHEET (METRIC) (REV.03-17-04)

NOTES:

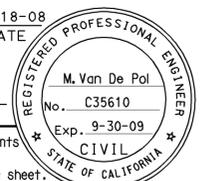
For "Typical Sections", see "Structure Plan No. 4" sheet
 Temporary Railing not shown, see "Stage Construction" sheets and "Road Plans"
 - - - - - Denotes existing structure
 _____ Denotes new construction

← Denotes Direction of Traffic

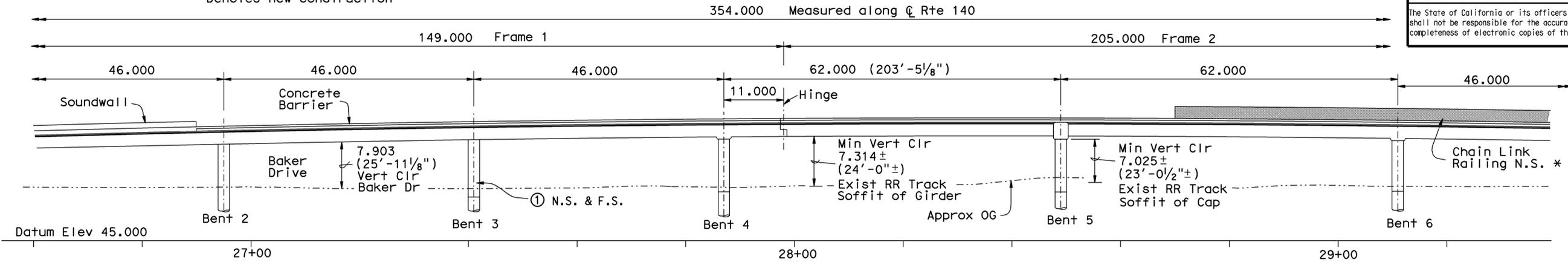
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	241	384


 11-18-08
 REGISTERED CIVIL ENGINEER DATE

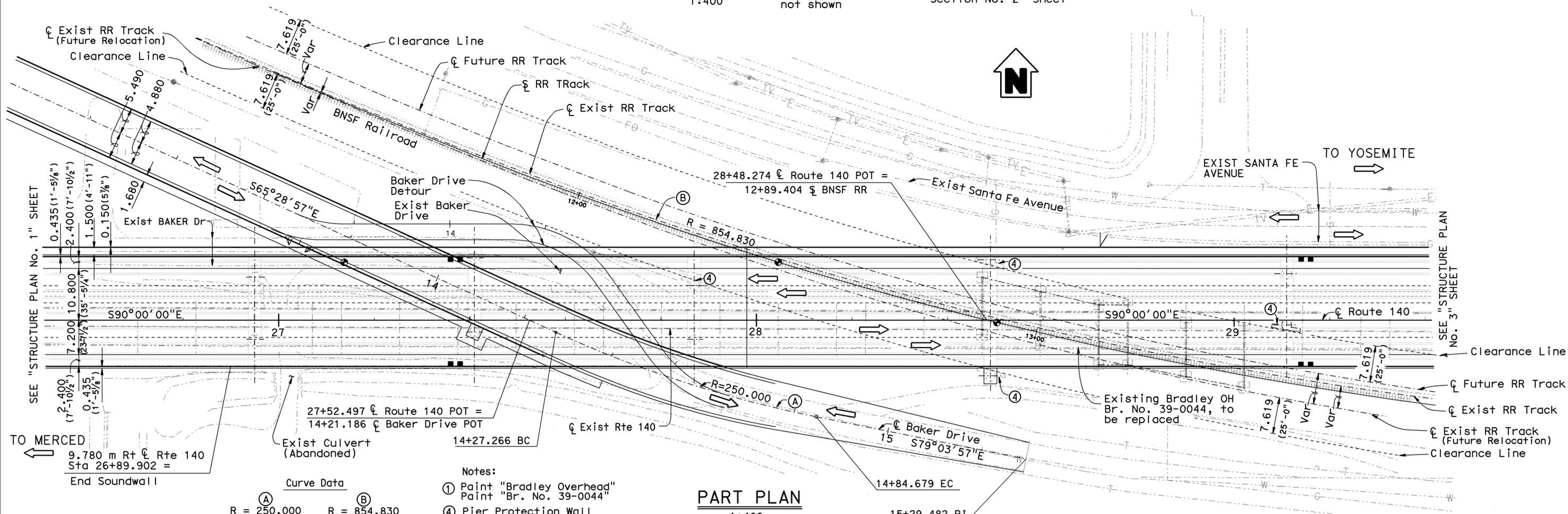
3-2-09
 PLANS APPROVAL DATE



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



ELEVATION
 1:400
 NOTE: Existing structure and crash walls not shown * For Limits, see "Typical Section No. 2" Sheet



PART PLAN
 1:400

NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Curve Data

(A)	(B)
R = 250.000	R = 854.830
Δ = 13°09'29"	Δ = 15°03'00"
L = 57.413	L = 224.540
T = 28.830	T = 112.920

- Notes:
- ① Paint "Bradley Overhead"
Paint "Br. No. 39-0044"
 - ④ Pier Protection Wall
 - Denotes Deck Drain
 - ⊕ Denotes Point of Minimum Vertical Clearance

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) STRUCTURE PLAN No. 2		
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LAYOUT	BY M. VAN DE POL 04-03			CHECKED P. NORBOE 11-05	KILOMETER POST		59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05	SPECIFICATIONS	BY TANYA KERSHELL			PLANS AND SPECS COMPARED TANYA KERSHELL	CU 10 EA 3A66U1		REVISION DATES	<table border="1"> <tr> <td>11-18-08</td> <td>11-18-08</td> <td>11-18-08</td> <td>11-18-08</td> </tr> </table>
11-18-08	11-18-08	11-18-08	11-18-08									

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

SHEET 4 OF 94

NOTES:

For "Typical Sections", see "Structure Plan No. 4" sheet
 Temporary Railing not shown, see "Stage Construction" sheet and "Road Plans"

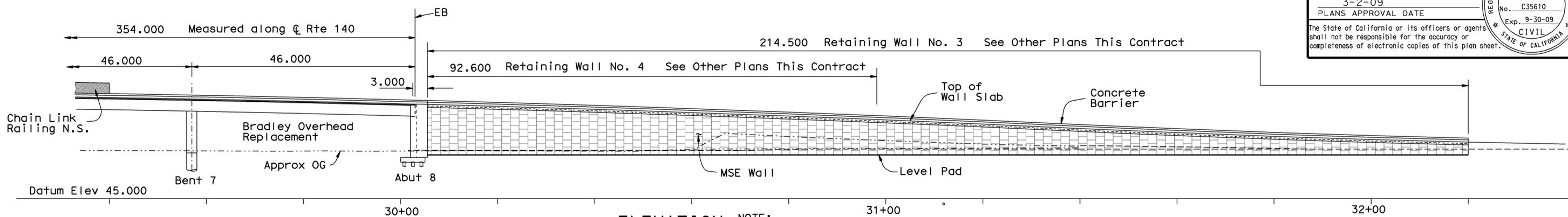
----- Denotes existing
 _____ Denotes new construction
 ← Denotes Direction of Traffic

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	242	384

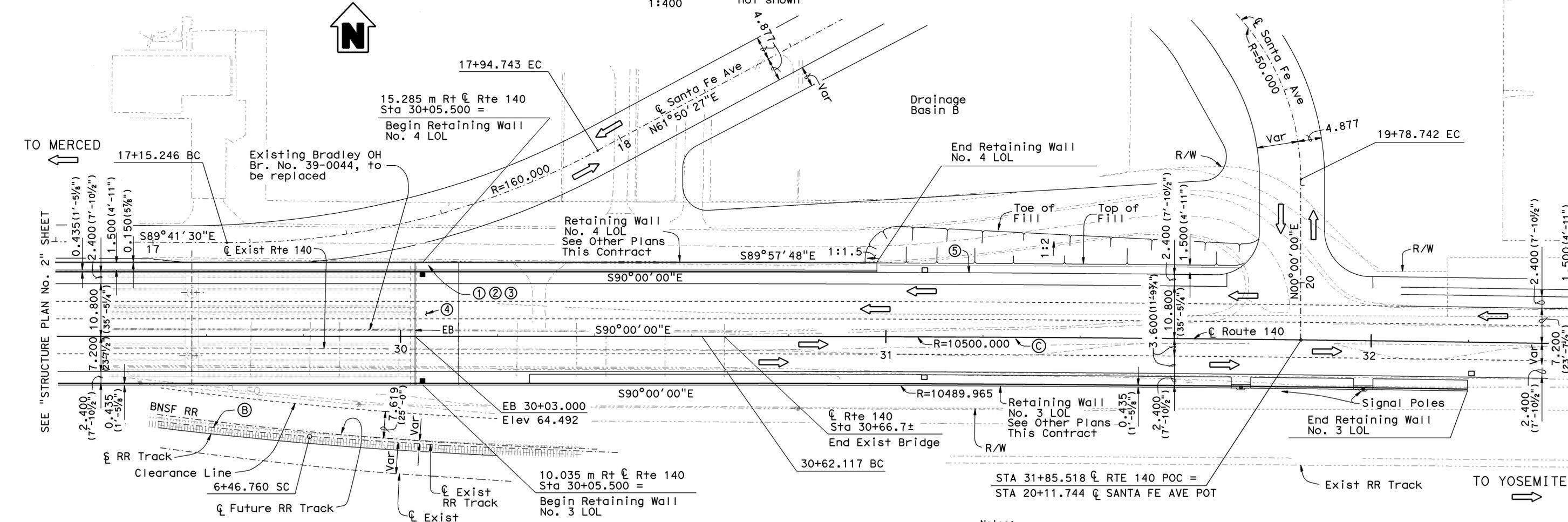
REGISTERED CIVIL ENGINEER DATE 9-30-08
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

3-2-09
 PLANS APPROVAL DATE

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



ELEVATION
 1:400
 NOTE: Existing structure not shown



PART PLAN
 1:400

NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Curve Data	(B)	(C)
R =	854.830	10500.000
Δ =	15°03'00"	1°19'12"
L =	224.540	241.883
T =	112.920	120.947

- Notes:
- ① Paint "Br. No.39-0044"
 - ② Paint "BRADLEY OVERHEAD"
 - ③ Paint "140 Mer 37.00"
 - ④ Structure Approach Type N(9S)
 - ⑤ MBGR See "Road Plans"
- Denotes Deck Drain

	DESIGN BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO. 39-0044	BRADLEY OVERHEAD (REPLACE) STRUCTURE PLAN No. 3
	DETAILS BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LAYOUT BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05		DESIGN BRANCH 9	KILOMETER POST 59.66	
QUANTITIES BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05	SPECIFICATIONS BY TANYA KERSHELL	PLANS AND SPECS COMPARED TANYA KERSHELL		CU 10 EA 3A66U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 5 OF 94

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

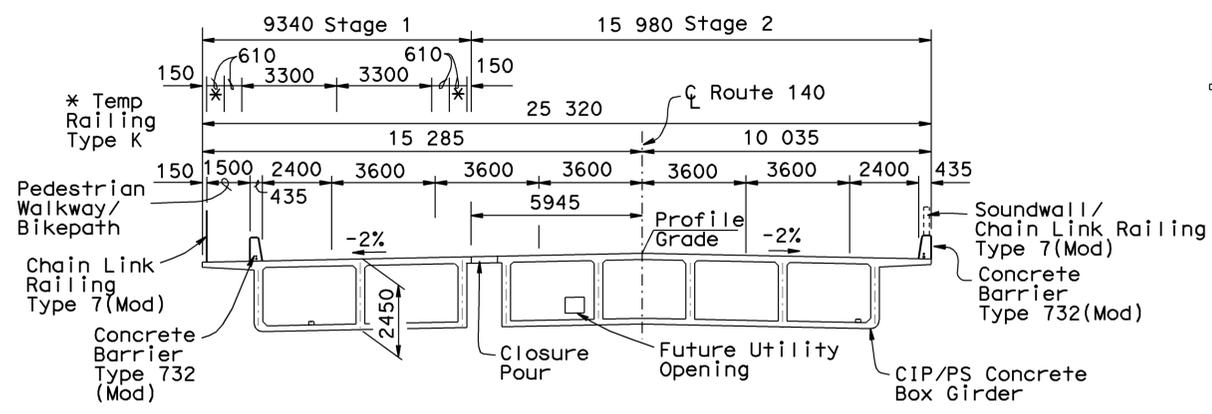
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STRUCTURES DESIGN GENERAL PLAN SHEET (METRIC) (REV.03-17-04)

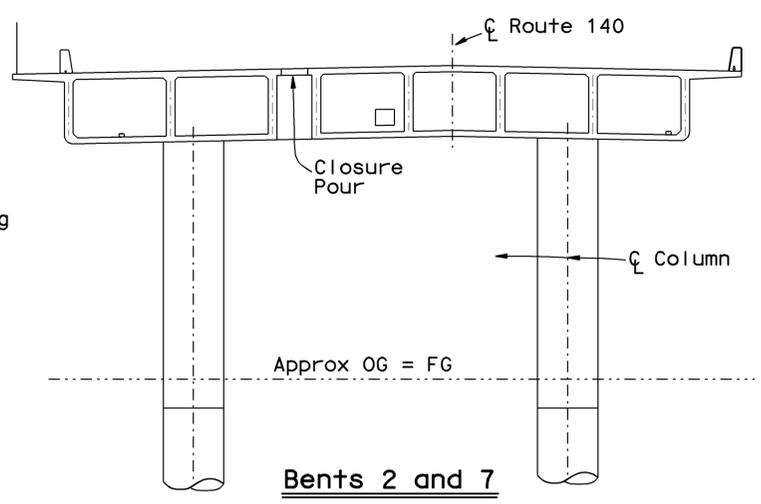
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	243	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 11-18-08
 3-2-09
 PLANS APPROVAL DATE
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

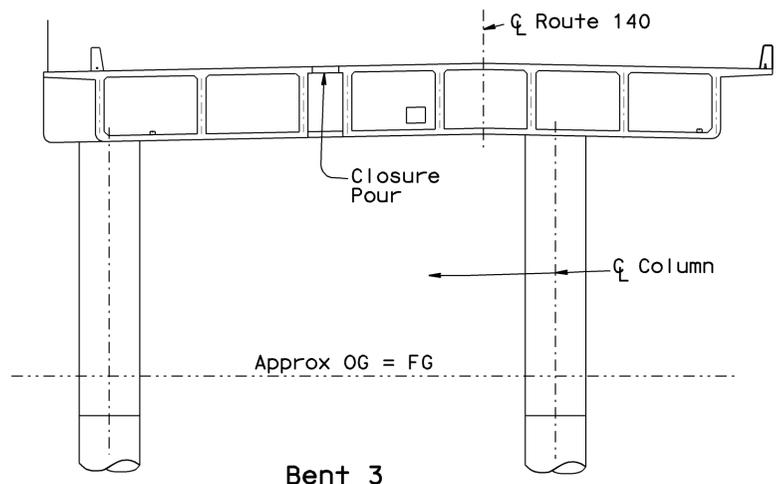
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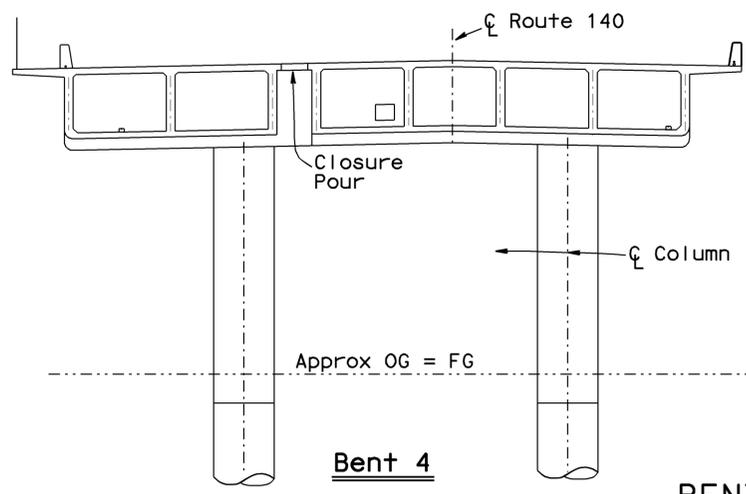
TYPICAL SECTION
1:125



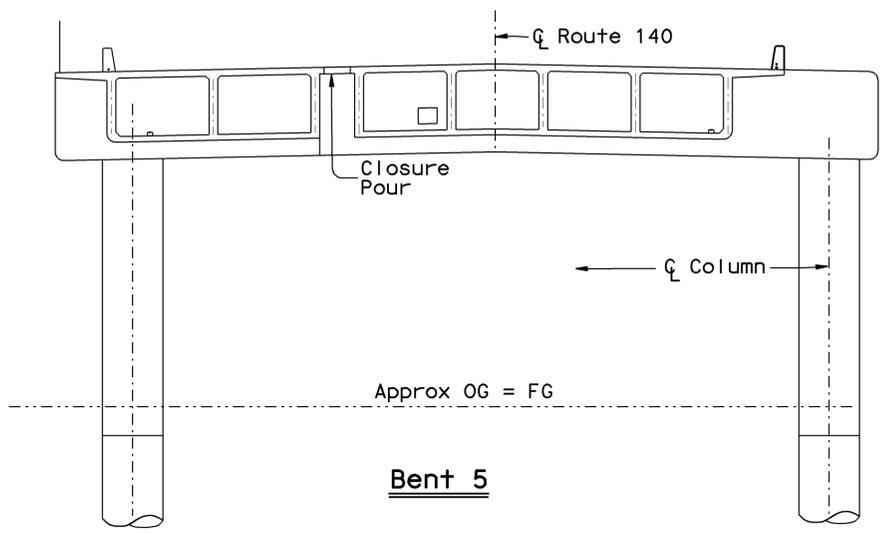
Bents 2 and 7



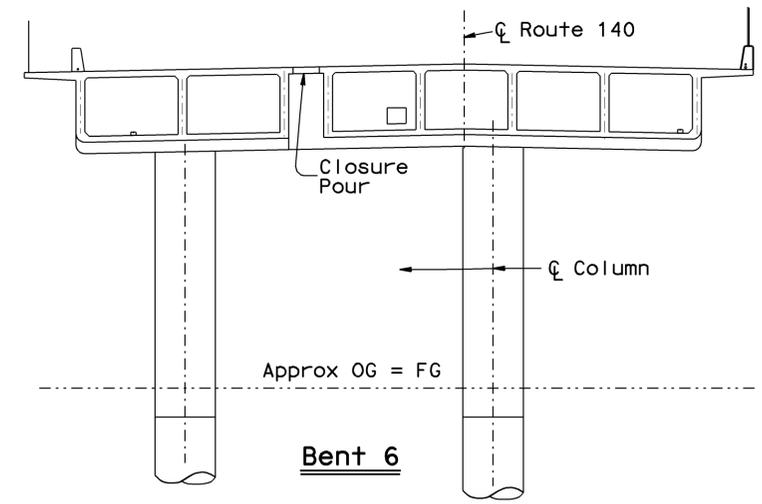
Bent 3



Bent 4



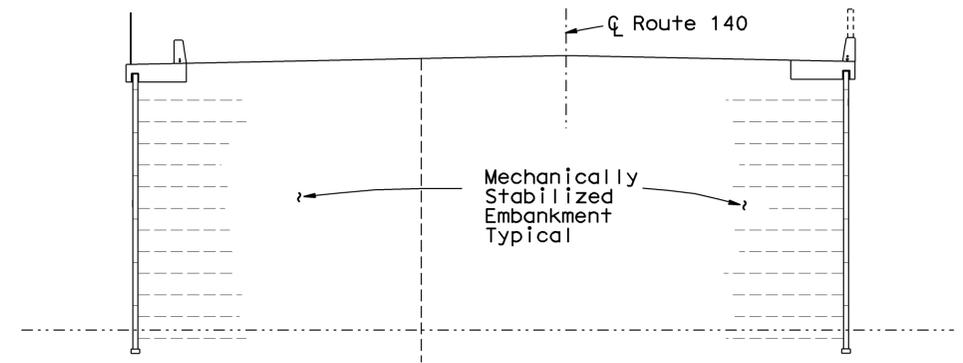
Bent 5



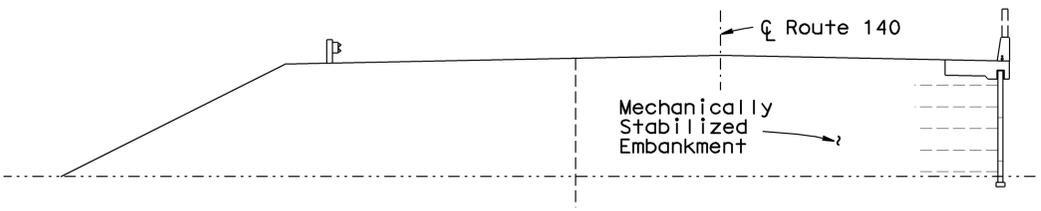
Bent 6

BENT ELEVATIONS
1:125

NOTES:
 Pier Protection Walls not shown
 For Construction Staging, see "Stage Construction" Sheets



For Approach MSE Wall Details, see Other Plans This Contract



APPROACH SECTIONS
1:125

Notes:
 For additional details, see "Typical Section" sheets
 * Temporary Railing not shown. For stage construction details, see "Stage Construction" sheets and "Road Plans"
 Existing structure not shown



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LAYOUT	BY M. VAN DE POL 04-03
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05	SPECIFICATIONS	BY TANYA KERSHELL

DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	LAYOUT	BY M. VAN DE POL 04-03
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05	SPECIFICATIONS	BY TANYA KERSHELL

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
 STRUCTURE PLAN No. 4

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN



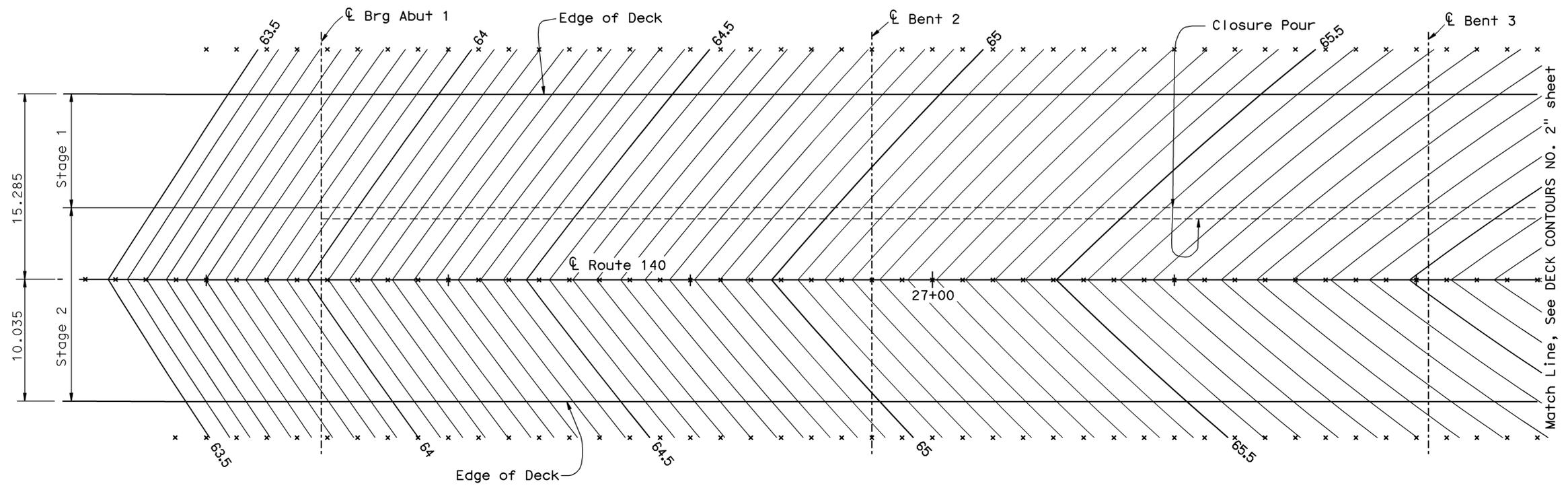
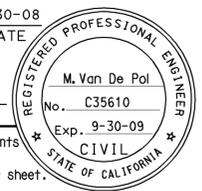
CU 10 EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES					
	11-18-08				
SHEET	6	OF	94		

USERNAME => HSTFK DATE PLOTTED => 11-MAR-2009 TIME PLOTTED => 07:20

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	244	384
			9-30-08		
			REGISTERED CIVIL ENGINEER DATE		
			3-2-09		
			PLANS APPROVAL DATE		
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GENERAL NOTES LOAD FACTOR DESIGN

DESIGN: CALTRANS BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO with Interims and Revisions by CALTRANS)

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC), Version 1.4 June 2006

DEAD LOAD: Includes 1676 Pa for future wearing surface.

LIVE LOADING: HS20-44 and alternative design load; permit design load

SEISMIC LOADING: SDC Modied ARS Curve For Soil Profile D (M=6.5 ± .25) Peak Horizontal Bedrock Acceleration = 0.2 g

REINFORCED CONCRETE: $f_y = 420$ MPa
 $f'_c = 35$ MPa (Superstructure, Caps, Hinge and Diaphragms)
 $f'_c = 28$ MPa (Abutments, Abutment Footings, Columns, CIDH Piles, Return Walls, Pier Protection Walls and Anchor Wall)
 $n = 9$
 Transverse Deck Slabs (Working Stress Design)
 $f_s = 138$ MPa
 $f_c = 8$ MPa
 $n = 10$

SOUNDWALL: For Notes, see "Wall Details No. 9" Sheet

PRESTRESSED CONCRETE: See "Prestressing Notes" on "Girder Layout No. 1" and "Girder Layout No. 3" Sheets

STRUCTURAL STEEL: $f_y = 250$ MPa

PLAN
1:200

NOTES:

- x - 2.5 m intervals along station line
- Contours do not include camber
- Contour interval = 0.050 m

For Construction Stage 2, match existing grade at edge of deck and cross slope of Stage 1

Match Line, See DECK CONTOURS NO. 2" sheet



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
DECK CONTOURS No. 1

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



CU 10
EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

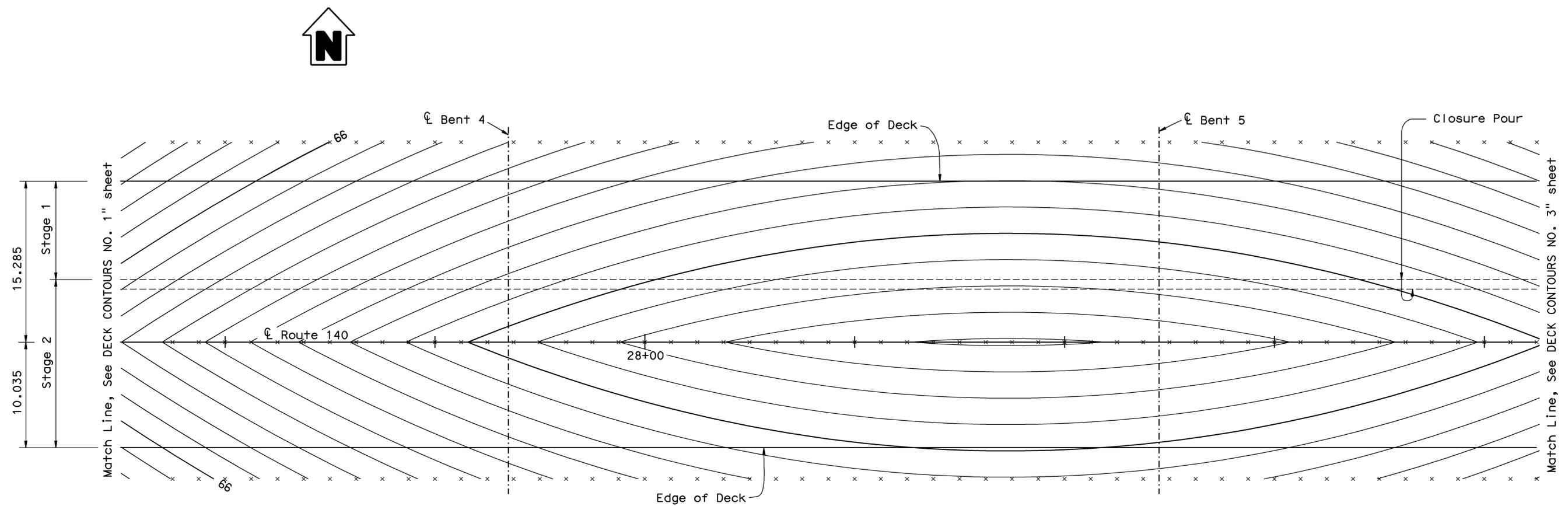
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	10-11-05	11-29-05			
SHEET	7				OF 94

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	245	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 PLANS APPROVAL DATE 3-2-09
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

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PLAN
1:200

- NOTES:
- x - 2.5 m intervals along station line
 - Contours do not include camber
 - Contour interval = 0.050 m
- For Construction Stage 2, match existing grade at edge of deck and cross slope of Stage 1

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	BRADLEY OVERHEAD (REPLACE) DECK CONTOURS No. 2
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			39-0044	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05			59.66	

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
 ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS: 0 10 20 30 40 50 60 70 80 90 100
 CU 10 EA 3A66U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 10-14-05, 11-29-05
 SHEET 8 OF 94
 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

USERNAME => hnmr1ok DATE PLOTTED => 04-MAR-2009 TIME PLOTTED => 15:46

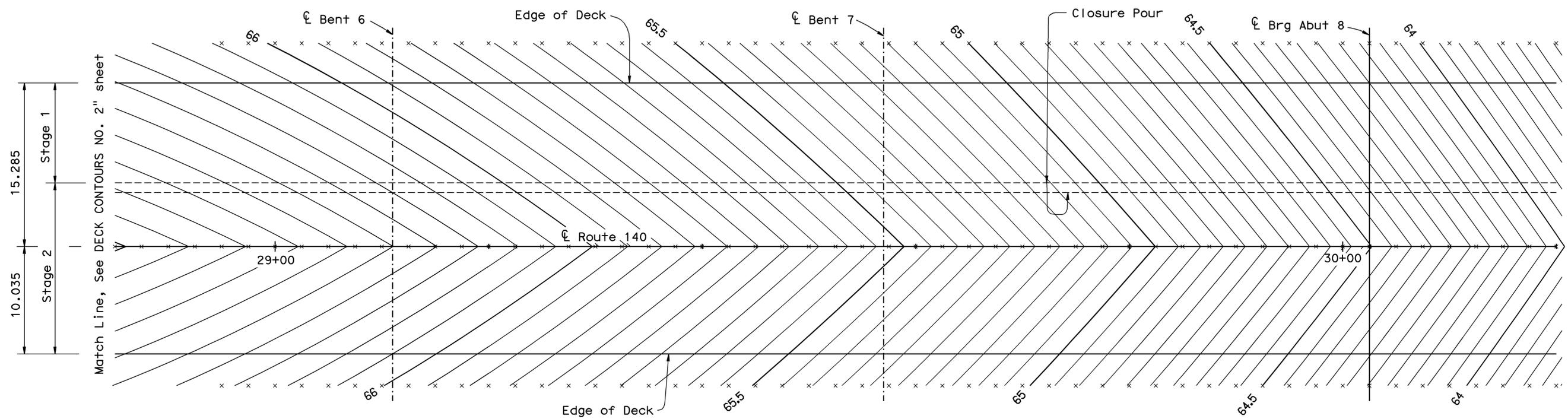
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	246	384

M. Van De Pol 9-30-08
REGISTERED CIVIL ENGINEER DATE

3-2-09
PLANS APPROVAL DATE

M. Van De Pol
No. C35610
Exp. 9-30-09
REGISTERED PROFESSIONAL ENGINEER
CIVIL
STATE OF CALIFORNIA

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



PLAN
1:200

- NOTES:
- x - 2.5 m intervals along station line
 - Contours do not include camber
 - Contour interval = 0.050 m
- For Construction Stage 2,
match existing grade at edge
of deck and cross slope of
Stage 1



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-29-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-29-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-29-05

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
DECK CONTOURS No. 3

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

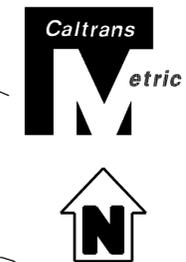


CU 10
EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES										
	10-14-05	11-29-05								
SHEET	9								OF	94

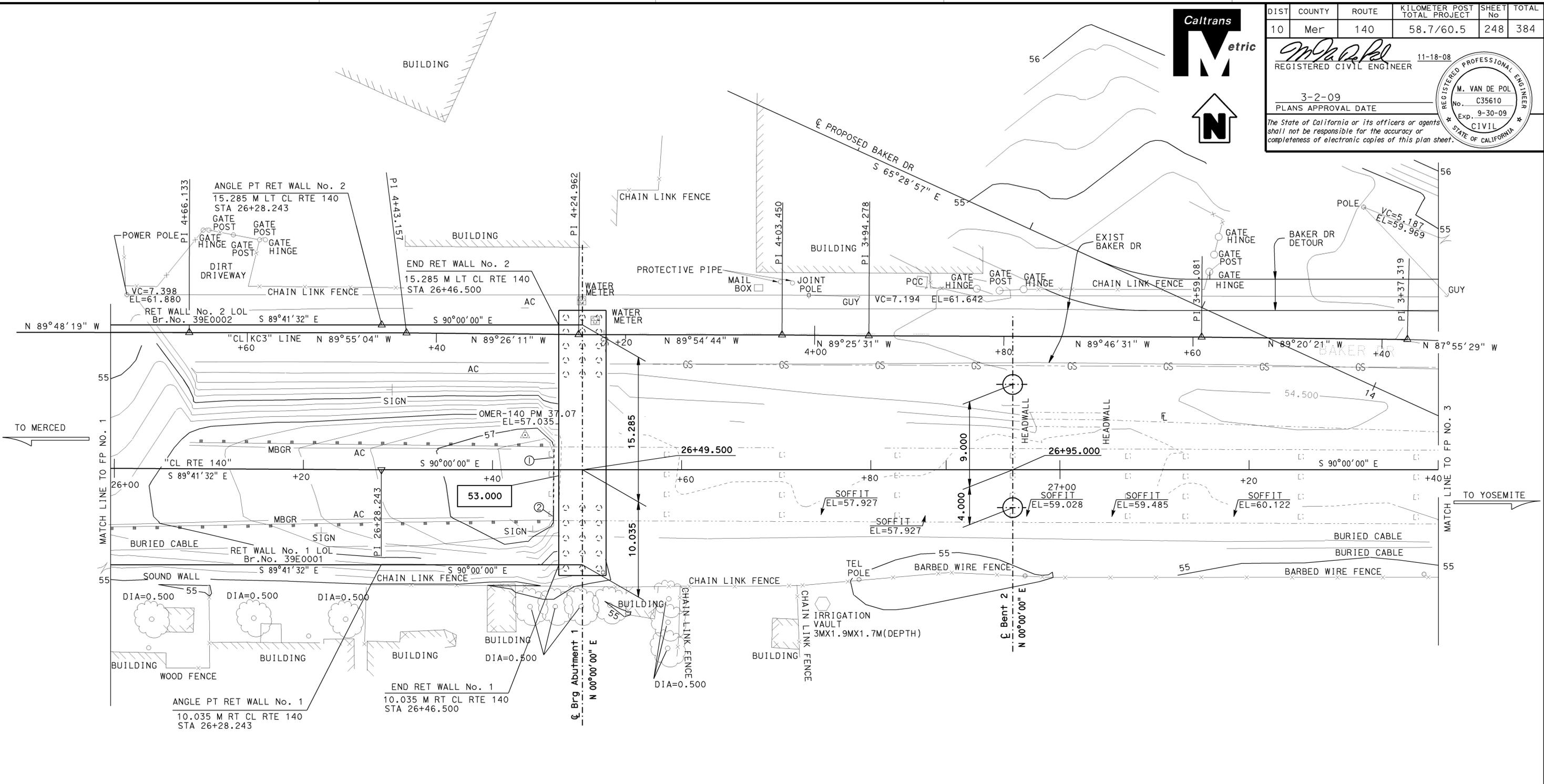
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL
10	Mer	140	58.7/60.5	248	384

11-18-08
 REGISTERED CIVIL ENGINEER
 M. VAN DE POL
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

3-2-09
 PLANS APPROVAL DATE
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Bridge Location

①	-	1.291 Lt. C,	Sta. 26+46.368,	Elev.=57.471 ±
②	-	4.903 Rt. C,	Sta. 26+46.368,	Elev.=57.474 ±
③	-	0.601 Lt. C,	Sta. 30+68.896,	Elev.=58.440 ±
④	-	6.748 Rt. C,	Sta. 30+66.591,	Elev.=58.453 ±

- NOTES:
- Denotes bottom footing elevation
 - Denotes existing structure
 - All Piles Not Shown
 - Denotes new structure

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PRELIMINARY INVESTIGATION SECTION				DESIGN BY M. VAN DE POL 08-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF STRUCTURES STRUCTURE DESIGN 9	BRIDGE No. 39-0044	BRADLEY OVERHEAD (REPLACE) FOUNDATION PLAN No. 2
SCALE 1:200	VERT. DATUM 1929	PHOTOGRAMMETRY AS OF:	DETAILS BY M. VAN DE POL 08-03	CHECKED P. NORBOE 11-05	KILOMETER POST 58.2/61.1				
ALIGNMENT TIES	DIST. TRAVERSE SHEET	FIELD CHECKED BY W. WILSON 2/03	CHECKED BY F. BANDA 5/03	QUANTITIES BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05				

STRUCTURES FOUNDATION PLAN SHEET (METRIC) (REV. 4/20/00) ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

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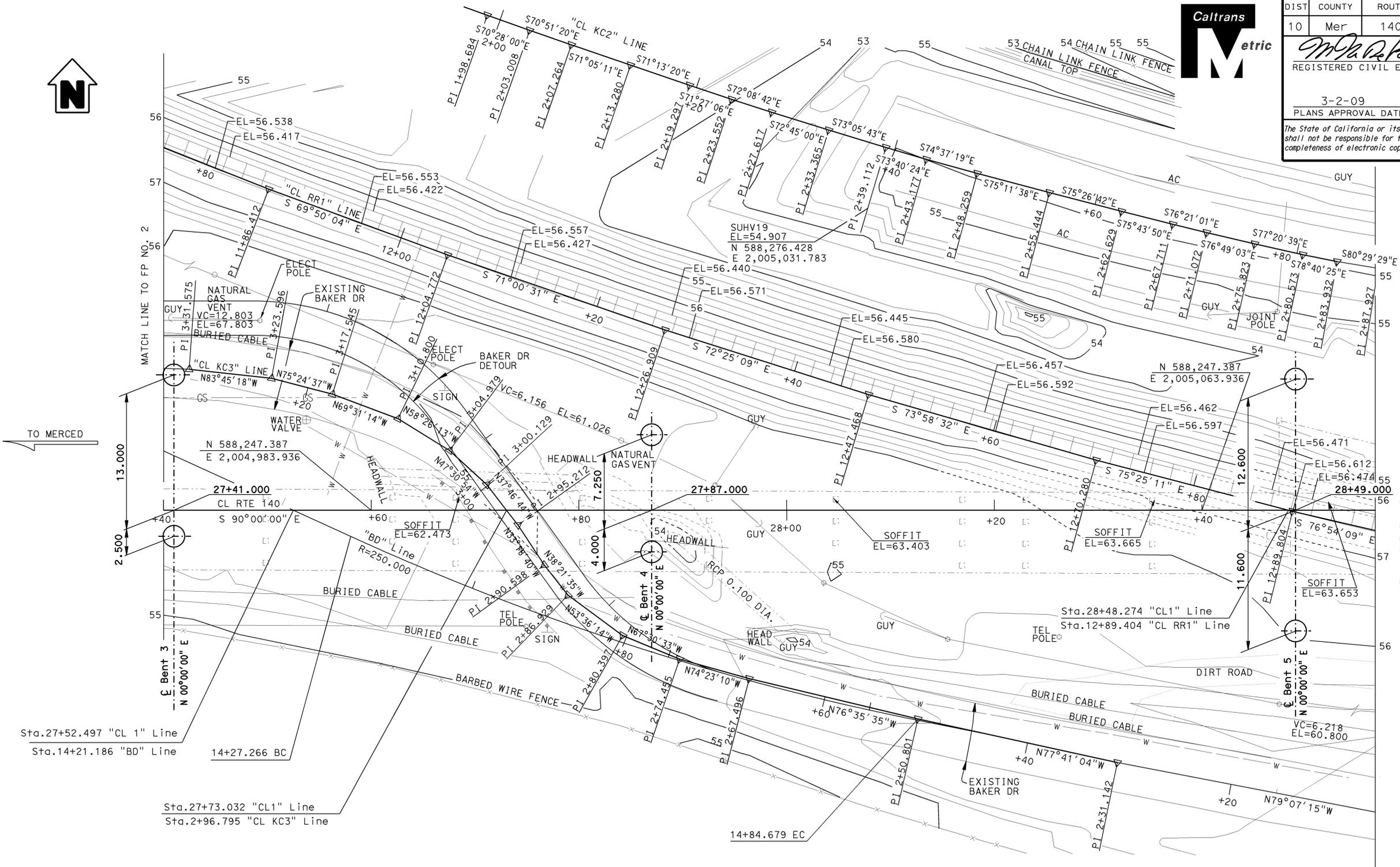
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL
10	Mer	140	58.7/60.5	249	384

9-30-08
 REGISTERED CIVIL ENGINEER
 M. VAN DE POL
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

3-2-09
 PLANS APPROVAL DATE
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TO MERCED

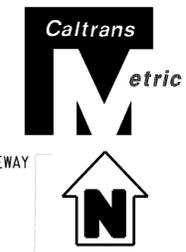
TO YOSEMITE

NOTE:
 - - - - - Denotes existing structure
 ———— Denotes new structure
 ———— Crash Walls Not Shown

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PRELIMINARY INVESTIGATION SECTION				DESIGN	BY M. Van De Pol 8-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION DIVISION OF STRUCTURES STRUCTURE DESIGN 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) FOUNDATION PLAN No. 3		
SCALE	VERT. DATUM	NGVD 29	PHOTOGRAMMETRY AS OF:	DETAILS	BY M. Van De Pol 8-03	CHECKED P. NORBOE 11-05		KILOMETER POST	58.2/61.1			
1:200	HORIZ. DATUM	NAD 83(1991.35)	SURVEYED BY N. JONES 2/03	DRAFTED	BY N. KELLEY 5/03	CHECKED P. NORBOE 11-05						
ALIGNMENT TIES DIST. TRAVERSE SHEET FIELD CHECKED BY				CHECKED	BY F. BANDA 5/03	QUANTITIES	BY M. Van De Pol 11-05	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET	OF
STRUCTURES FOUNDATION PLAN SHEET (METRIC) (REV. 4/20/00)				ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS				CU 10 EA 3A66U1	8-26-03 11-29-05		12	94

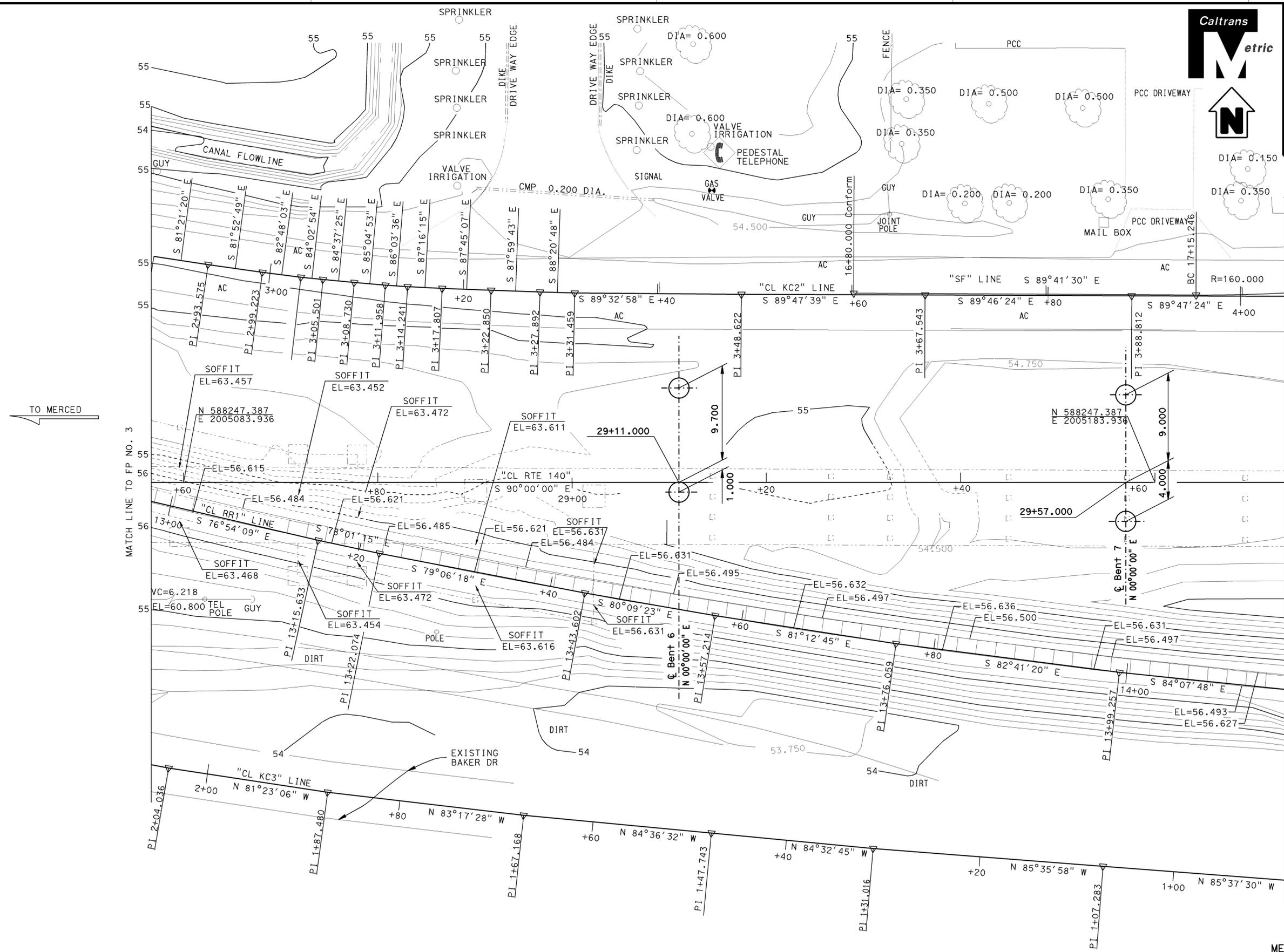
USERNAME => HRTIGHT DATE PLOTTED => 04-MAR-2009 TIME PLOTTED => 15:51



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL
10	Mer	140	58.7/60.5	250	384

9-30-08
 REGISTERED CIVIL ENGINEER
 M. VAN DE POL
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

3-2-09
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



MATCH LINE TO FP NO. 5

TO YOSEMITE

NOTE:
 - - - - - Denotes existing structure
 ——— Denotes new structure
 Crash Walls Not Shown

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PRELIMINARY INVESTIGATION SECTION			
SCALE	VERT. DATUM	NGVD 29	PHOTOGRAMMETRY AS OF:
1:200	HORZ. DATUM	NAD 83(1991.35)	SURVEYED BY N. JONES 2/03
ALIGNMENT TIES	DIST. TRAVERSE SHEET	FIELD CHECKED BY W. WILSON 2/03	DRAFTED BY N. KELLEY 5/03
			CHECKED BY F. BANDA 5/03

DESIGN	BY M. VAN DE POL	08-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL	08-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL	11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 9

BRIDGE NO.	39-0044
KILOMETER POST	58.2/61.1

BRADLEY OVERHEAD (REPLACE)
FOUNDATION PLAN No. 4

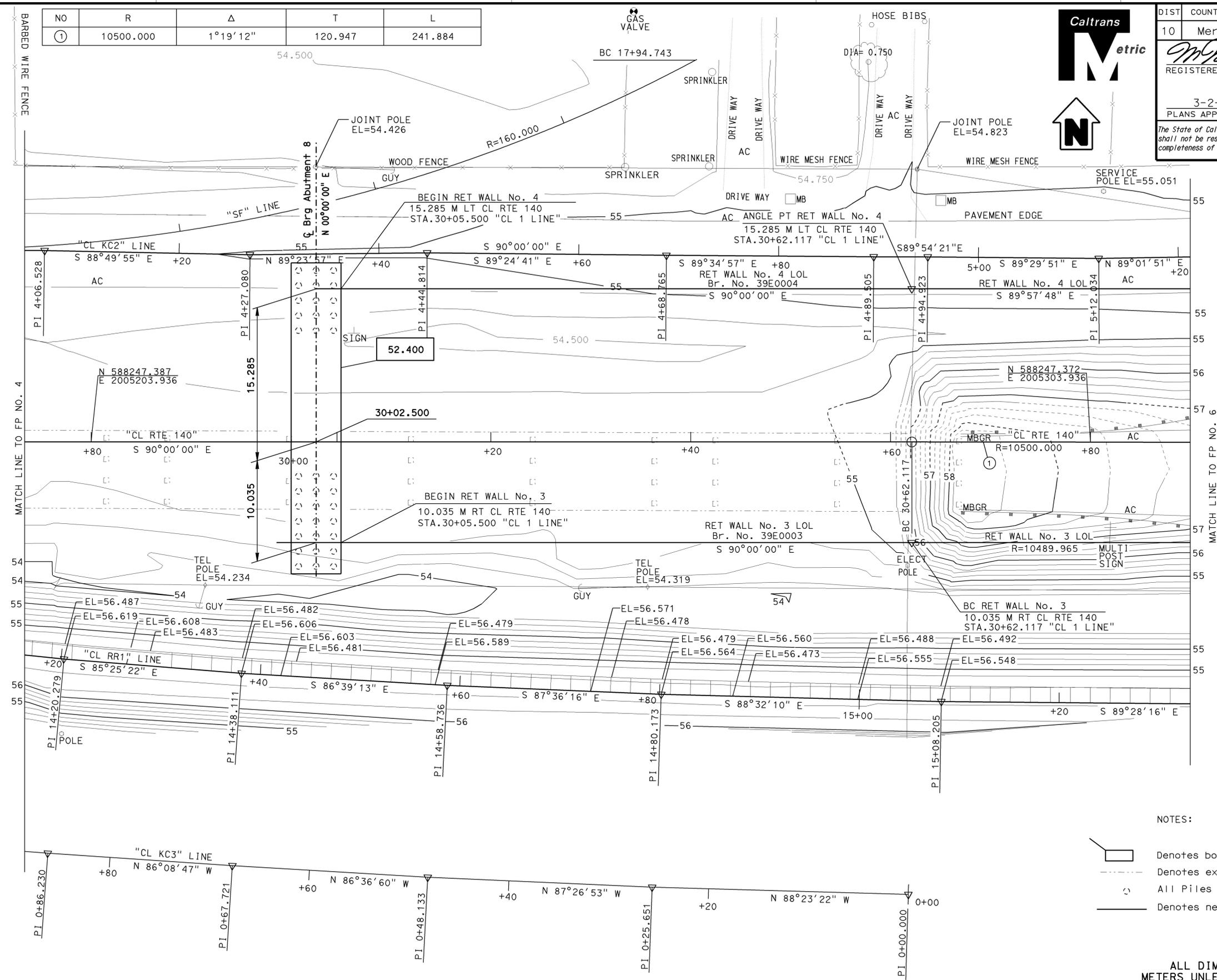
NO	R	Δ	T	L
①	10500.000	1°19'12"	120.947	241.884

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL
10	Mer	140	58.7/60.5	251	384

Caltrans
Metric

 11-18-08
 REGISTERED CIVIL ENGINEER
 M. VAN DE POL
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

3-2-09
 PLANS APPROVAL DATE
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- NOTES:
-  Denotes bottom footing elevation
 -  Denotes existing structure
 -  All Piles Not Shown
 -  Denotes new structure

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PRELIMINARY INVESTIGATION SECTION				DESIGN BY M. VAN DE POL 08-03 CHECKED P. NORBOE 11-05 DETAILS BY M. VAN DE POL 08-03 CHECKED P. NORBOE 11-05 QUANTITIES BY M. VAN DE POL 11-05 CHECKED P. NORBOE 11-05		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF STRUCTURES STRUCTURE DESIGN 9		BRIDGE NO. 39-0044 KILOMETER POST 58.3/61		BRADLEY OVERHEAD (REPLACE) FOUNDATION PLAN No. 5	
SCALE 1:200	VERT. DATUM NGVD 29	PHOTOGRAMMETRY AS OF:		BY N. JONES 2/03		DRAFTED BY N. KELLEY 5/03		BY W. WILSON 2/03		CHECKED BY B. BANDA 5/03		ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 	
STRUCTURES FOUNDATION PLAN SHEET (METRIC) (REV. 4/20/00)										CU 10 EA 3A66U1		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
FILE => 39-0044-e-fnd05.dgn										REVISION DATES (PRELIMINARY STAGE ONLY)		SHEET 14 OF 94	

NO	R	Δ	T	L
①	10500.000	1°19'12"	120.947	241.884



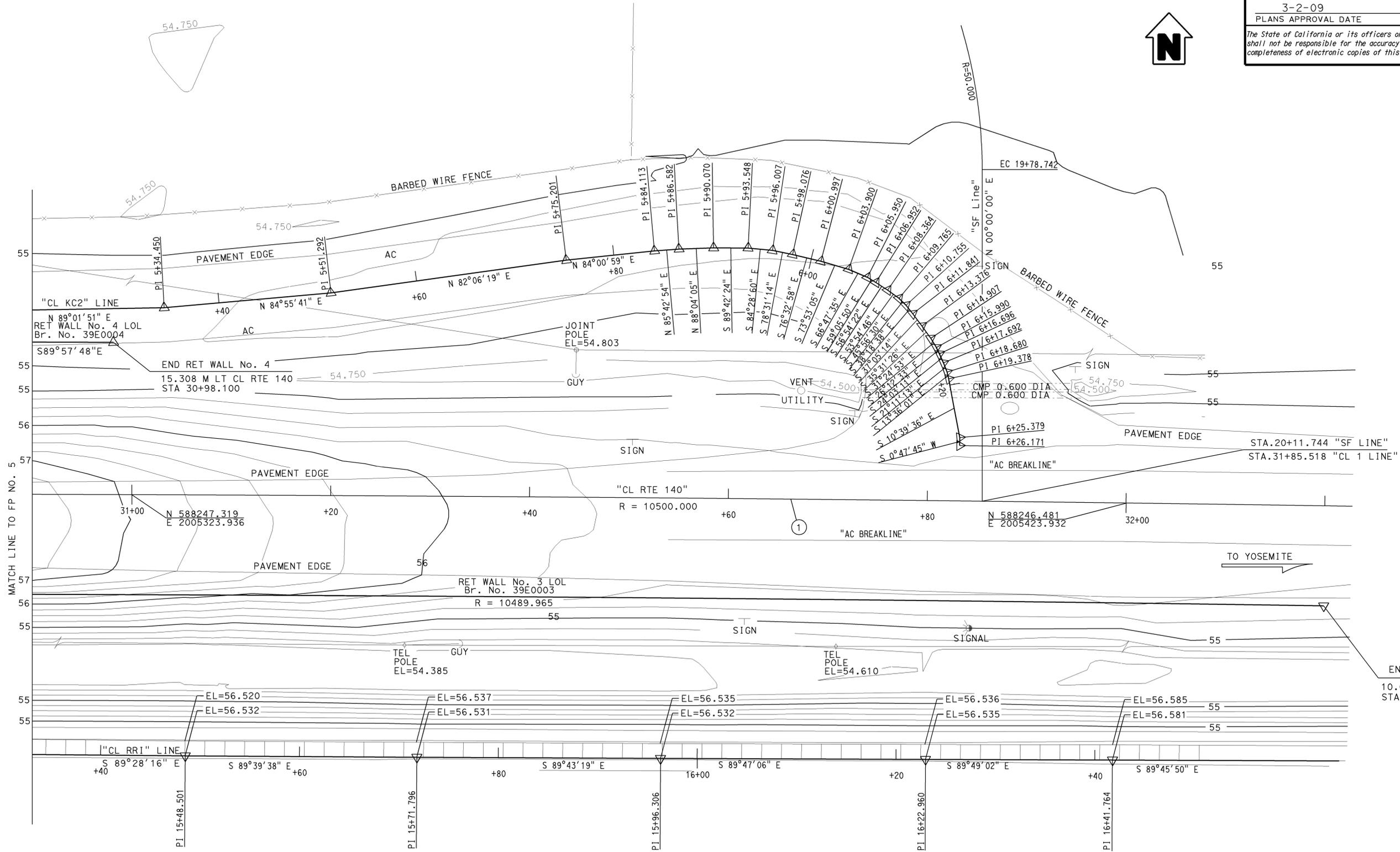
DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST No	SHEET No	TOTAL
10	Mer	140	58.7/60.5	252	384	

REGISTERED CIVIL ENGINEER
 M. VAN DE POL
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

9-30-08
 PLANS APPROVAL DATE

3-2-09
 PLANS APPROVAL DATE

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SEE OTHER PLANS THIS CONTRACT

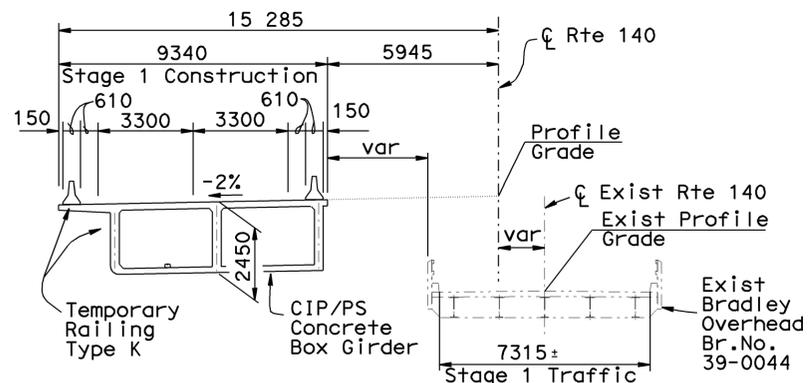
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PRELIMINARY INVESTIGATION SECTION				DESIGN		BY		CHECKED		STATE OF CALIFORNIA		DIVISION OF STRUCTURES		BRIDGE No.		FOUNDATION PLAN No. 6				
SCALE	VERT. DATUM	NGVD 29	PHOTOGRAMMETRY AS OF:	BY	M. VAN DE POL	08-03	CHECKED	P. NORBOE	11-05	DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN 9		39-0044		BRADLEY OVERHEAD (REPLACE)				
1:200	HORIZ. DATUM	NAD 83(1991.35)	SURVEYED	BY	N. JONES	2/03	DRAFTED	BY	N. KELLEY	5/03			KILOMETER POST		58.2/61.1		FOUNDATION PLAN No. 6			
ALIGNMENT TIES	DIST.	TRAVERSE SHEET	FIELD CHECKED	BY	W. WILSON	2/03	CHECKED	BY	F. BANDA	5/03										
STRUCTURES FOUNDATION PLAN SHEET (METRIC) (REV. 4/20/00)										ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS					CU 10 EA 3A66U1		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	
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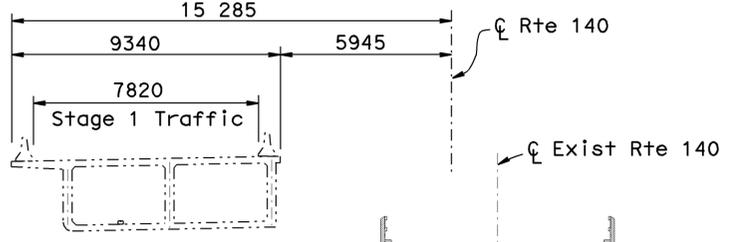
DATE PLOTTED => 04-MAR-2009 TIME PLOTTED => 15:51 USERNAME => HRTIGHT

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	253	384

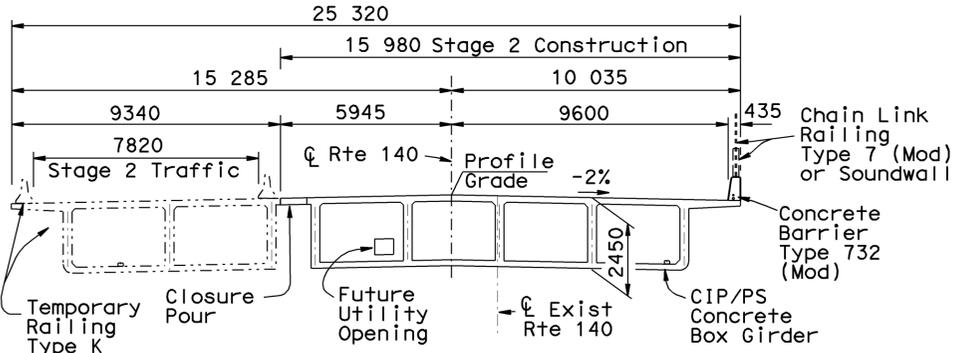
M. Van De Pol 11-18-08
 REGISTERED CIVIL ENGINEER DATE
 3-2-09
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



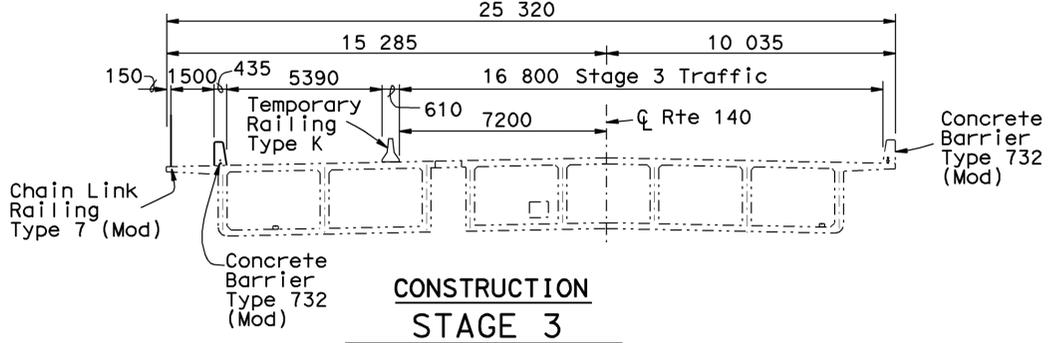
CONSTRUCTION STAGE 1



REMOVAL STAGE 1



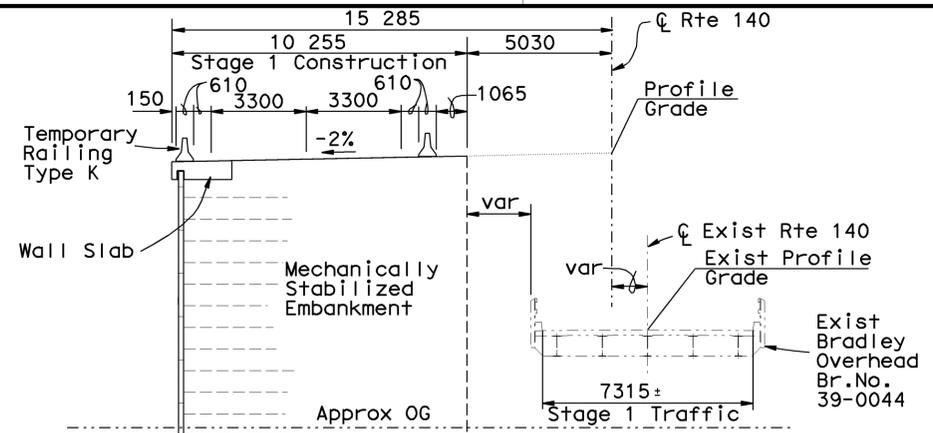
CONSTRUCTION STAGE 2



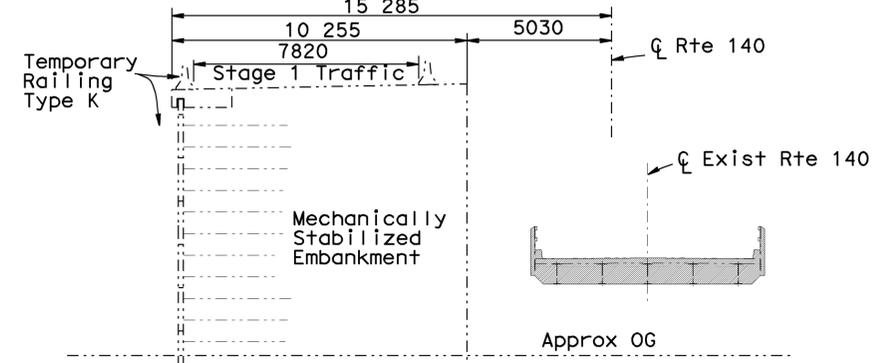
CONSTRUCTION STAGE 3

BRIDGE

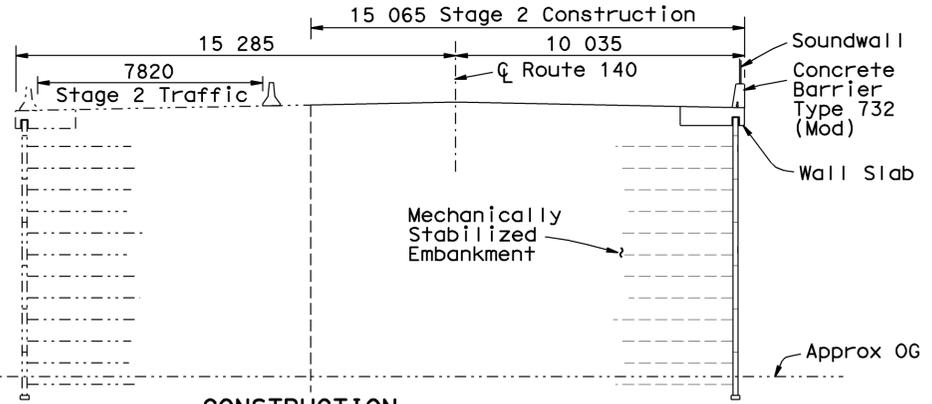
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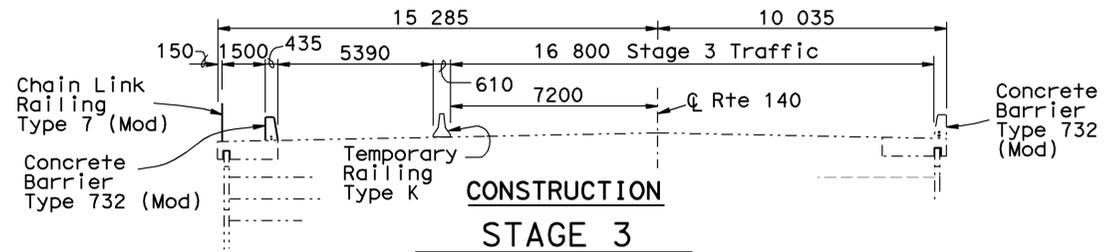
CONSTRUCTION STAGE 1



REMOVAL STAGE 1



CONSTRUCTION STAGE 2



CONSTRUCTION STAGE 3

BRIDGE APPROACHES

1:125

--- Denotes Existing Structure
 ——— Denotes New Construction

For Additional Approach Stage Construction Details, See Other Plans This Contract

NOTES:
 ■ Denotes Limits of Removal of Existing Structure, see "Removal Details" Sheet
 For details not shown, see "Typical Section No. 1", "Typical Section No. 2"



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
STAGE CONSTRUCTION No. 1

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



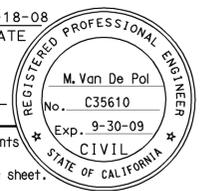
CU 10
 EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

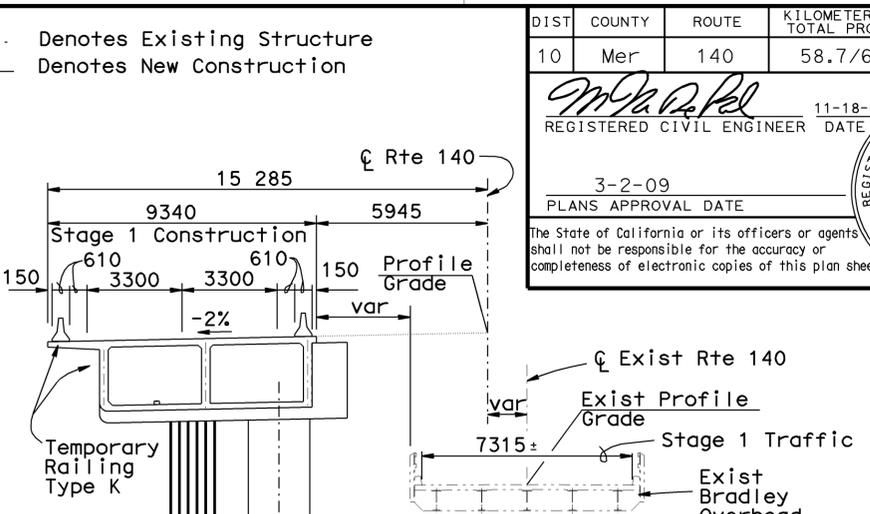
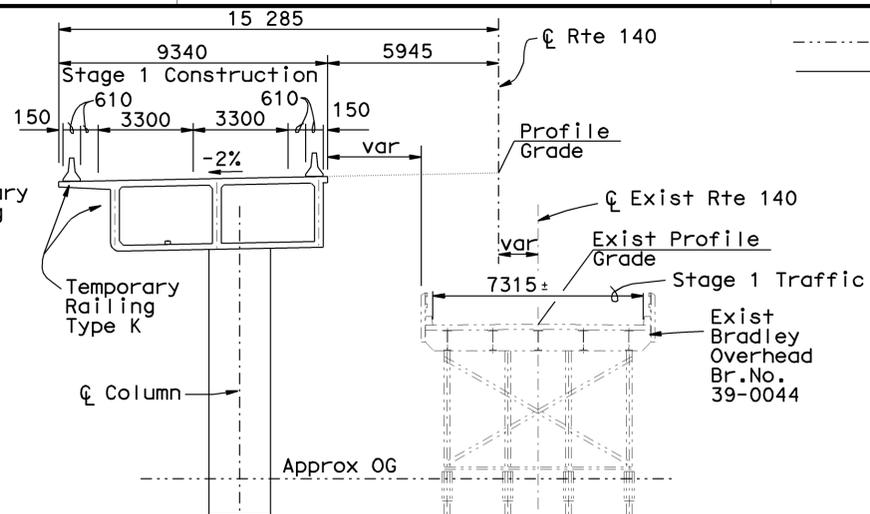
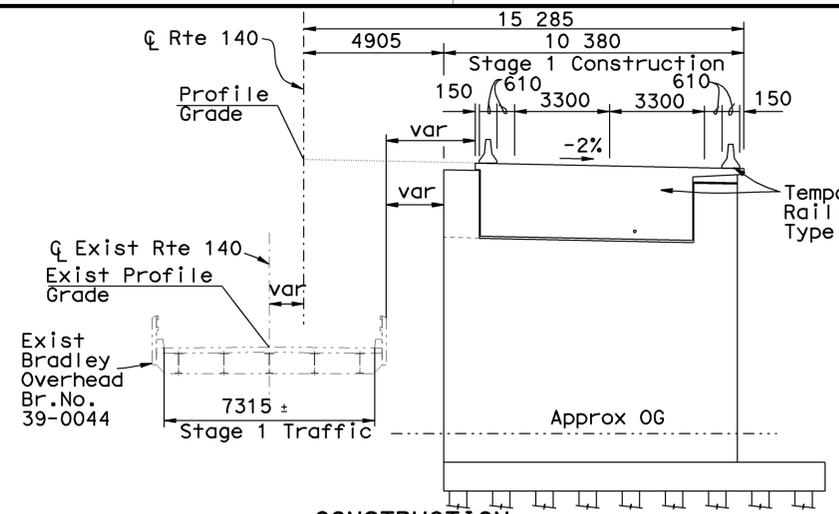
REVISION DATES	SHEET	OF
03-11-05 11-18-08	16	94

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	254	384

11-18-08
 REGISTERED CIVIL ENGINEER DATE
 3-2-09
 PLANS APPROVAL DATE
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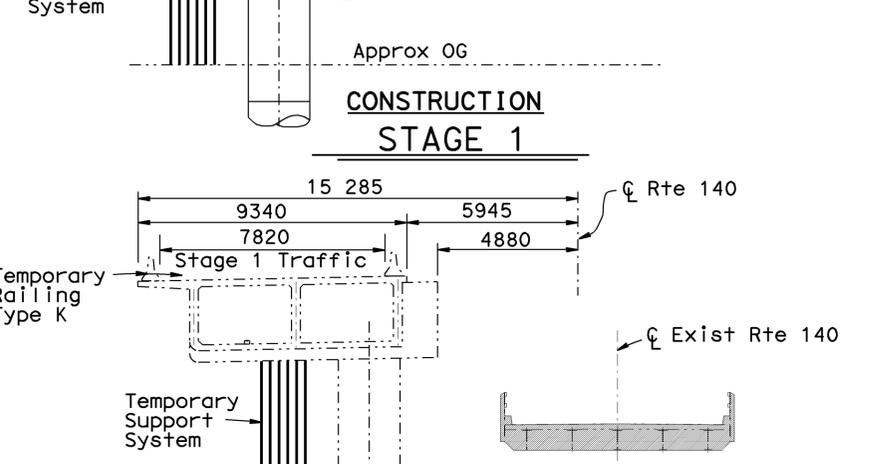
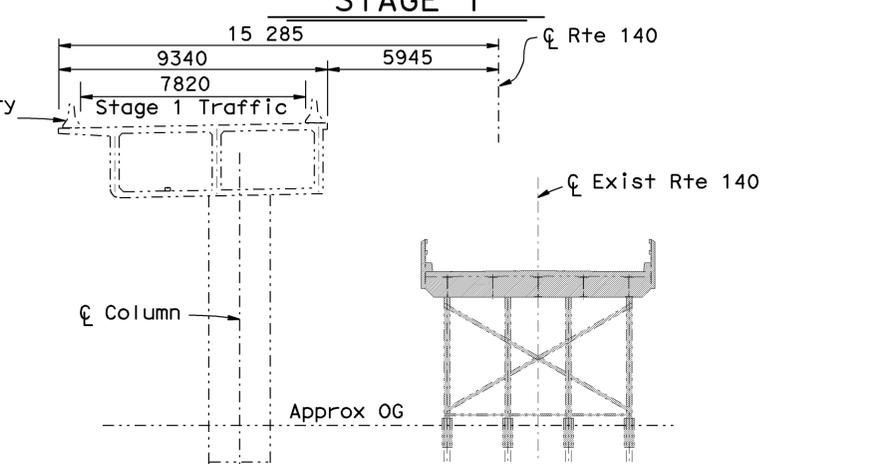
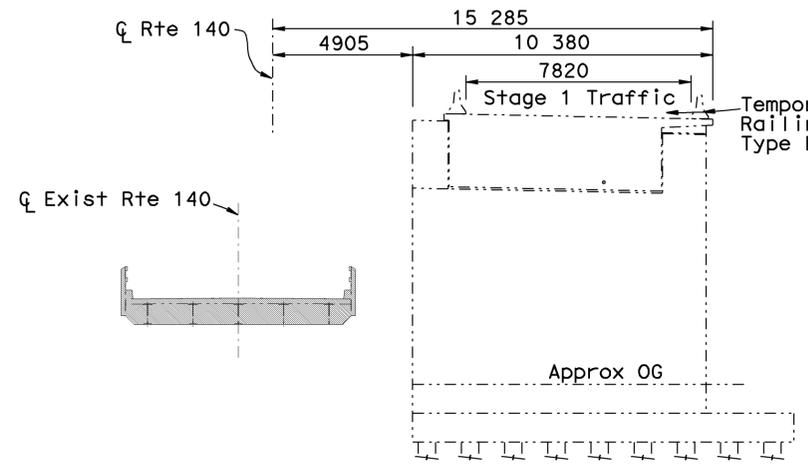
----- Denotes Existing Structure
 _____ Denotes New Construction



CONSTRUCTION STAGE 1

CONSTRUCTION STAGE 1

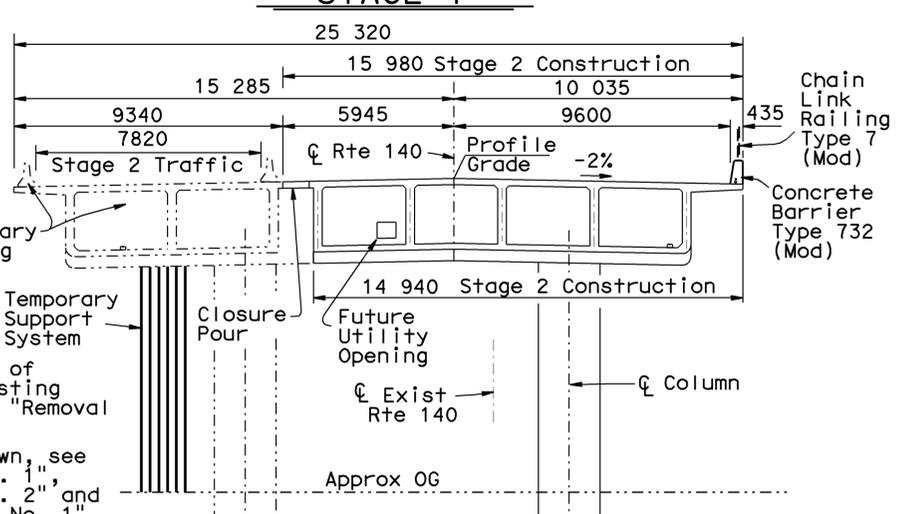
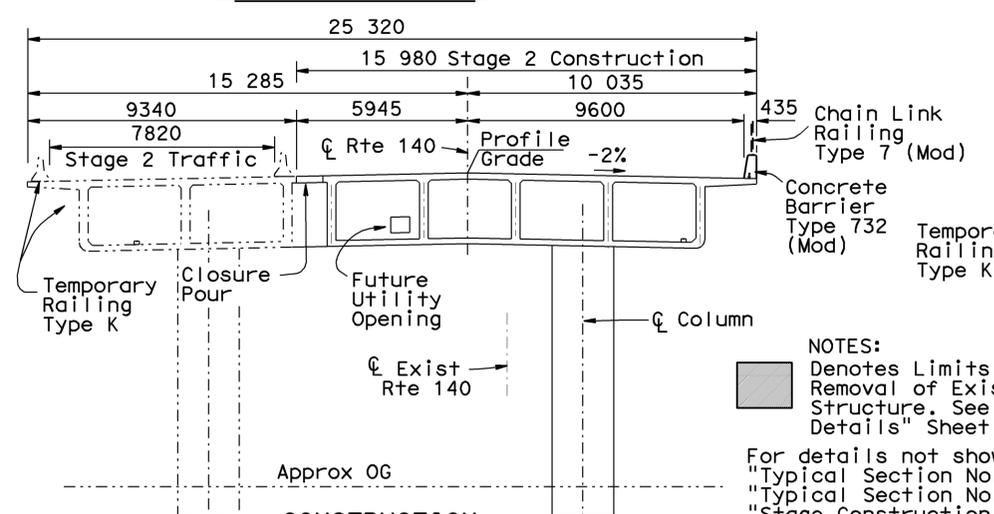
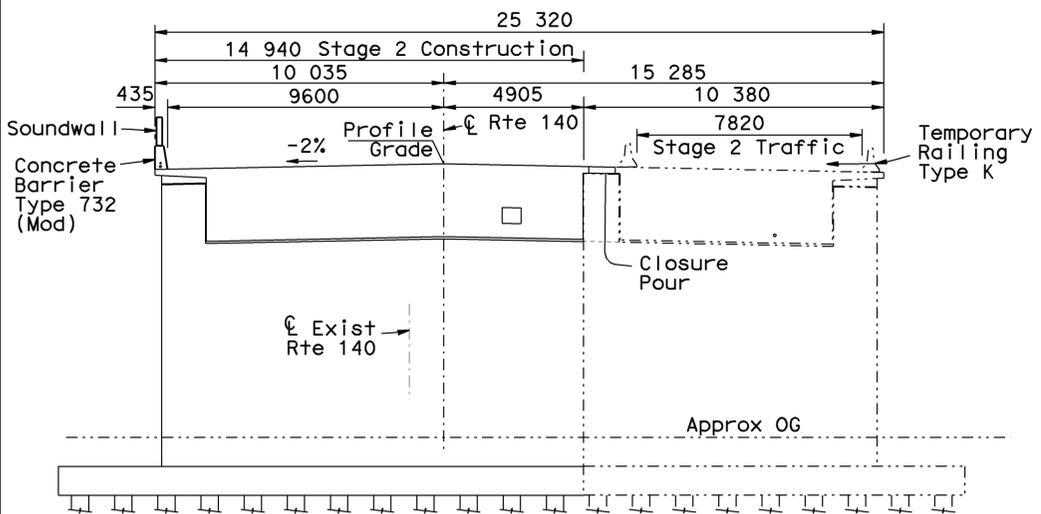
CONSTRUCTION STAGE 1



REMOVAL STAGE 1

REMOVAL STAGE 1

REMOVAL STAGE 1



CONSTRUCTION STAGE 2

CONSTRUCTION STAGE 2

CONSTRUCTION STAGE 2

ABUTMENTS

BENTS 2, 6, 7

BENT 4

1:125

1:125

1:125

NOTES:
 Abutment 1 shown,
 Abutment 8 similar

NOTE:
 Bents 2 and 7
 Shown, Bent 6
 Similar

NOTES:
 Denotes Limits of
 Removal of Existing
 Structure. See "Removal
 Details" Sheet
 For details not shown, see
 "Typical Section No. 1",
 "Typical Section No. 2" and
 "Stage Construction No. 1"
 Sheets
 For Stage 3 Construction,
 see "Stage Construction
 No. 1" sheet
 For Temporary Support Details,
 see "Temporary Support-Bent 4
 Stage 1" Sheet



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF
CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
STAGE CONSTRUCTION No. 2

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

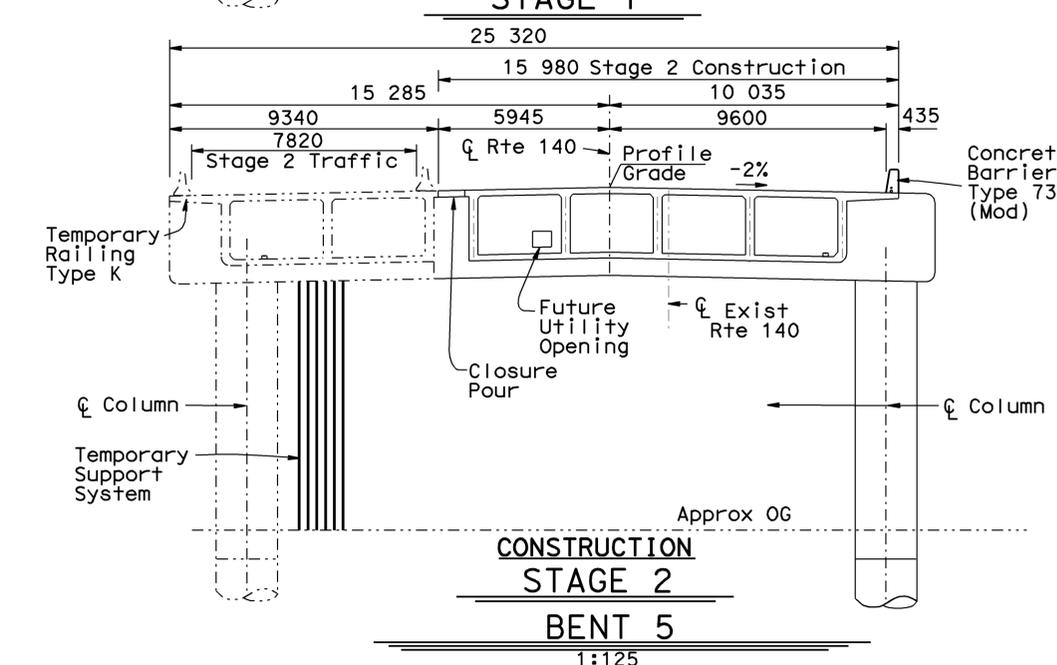
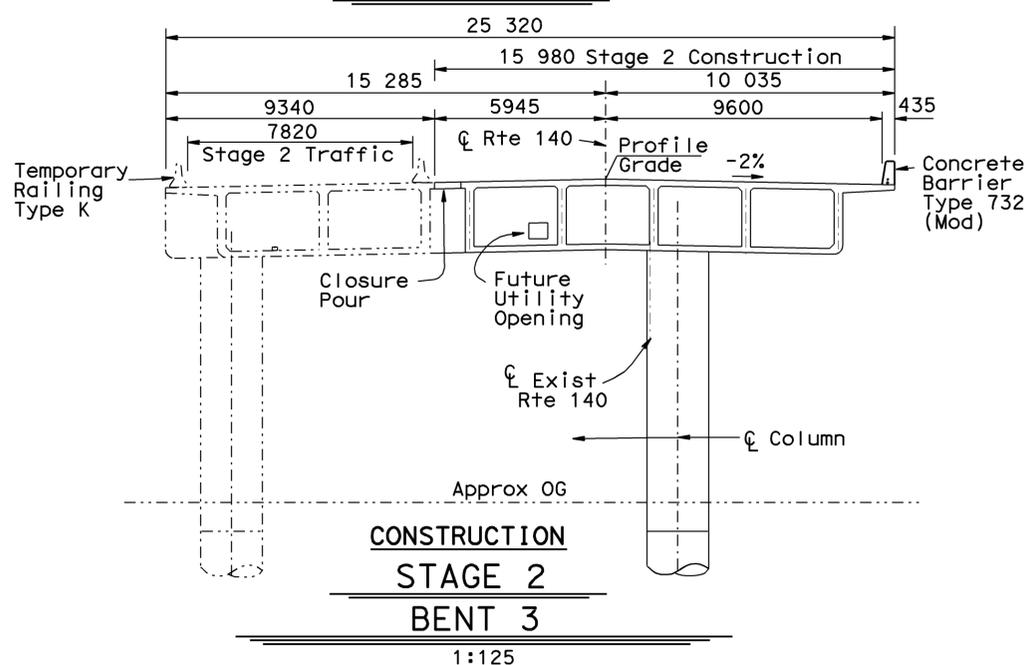
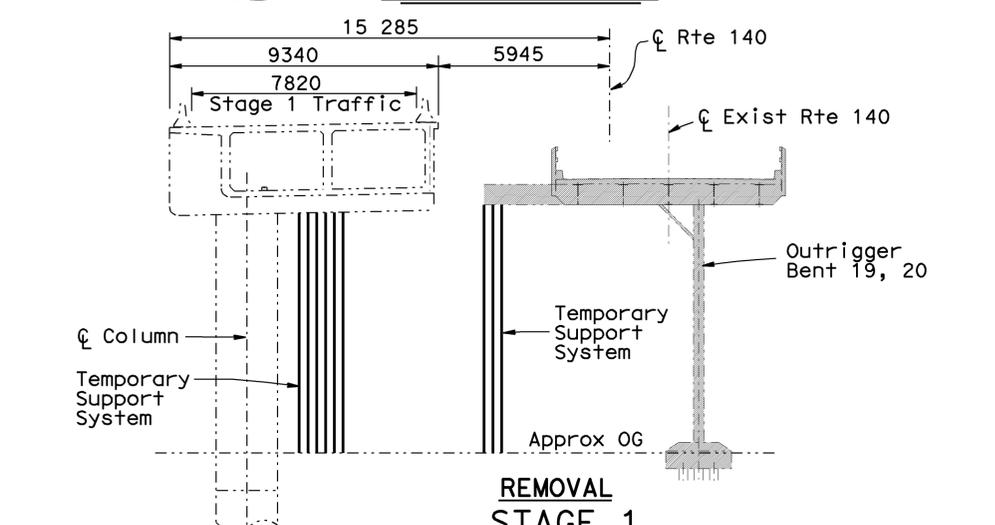
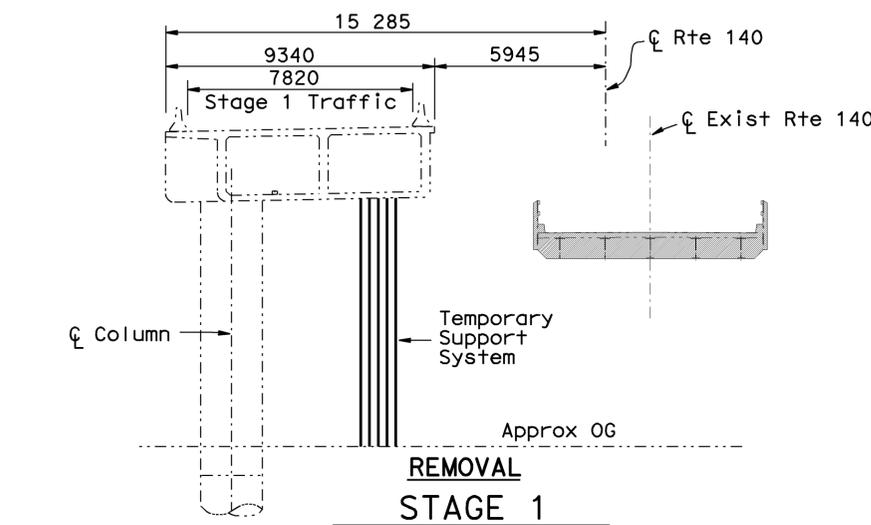
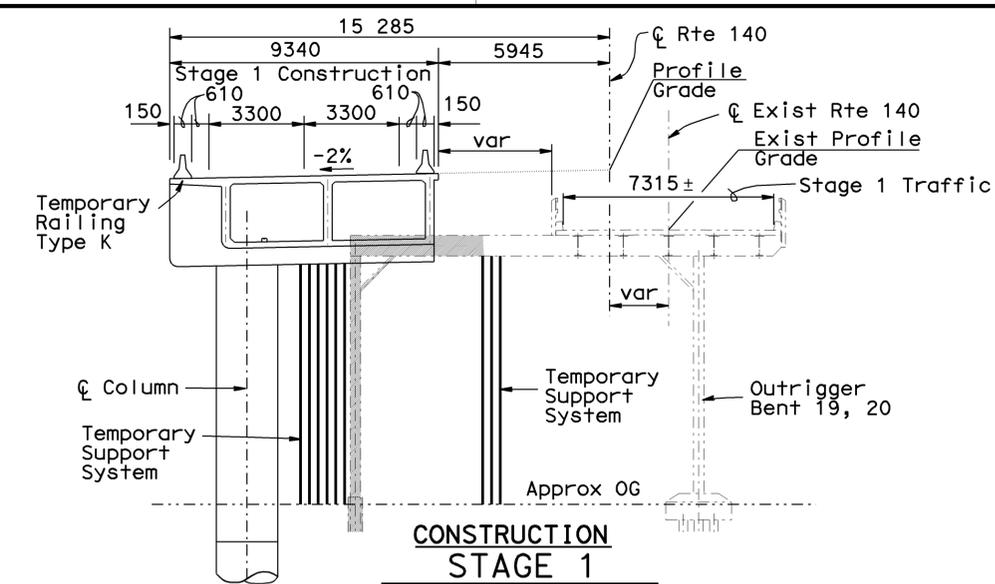
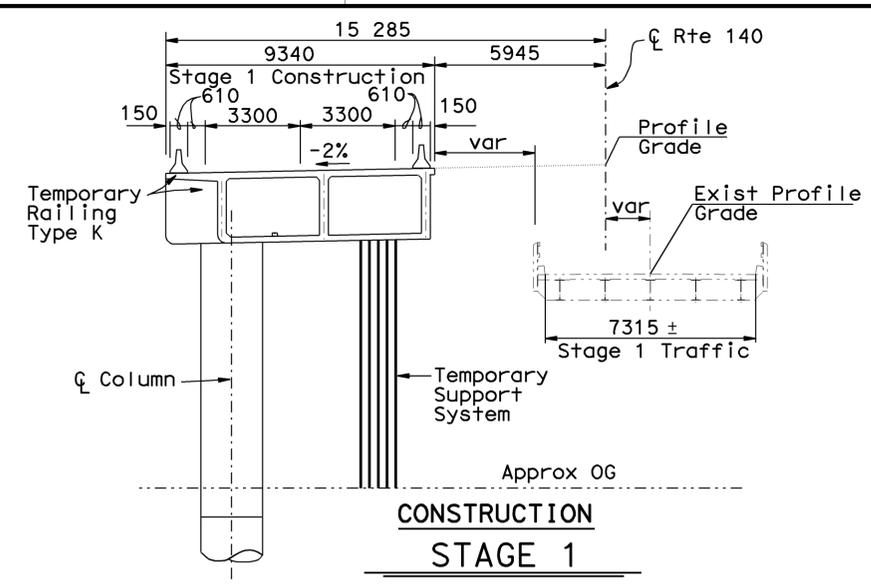
CU 10 EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET 17	OF 94
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DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5		255	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 11-18-08
 3-2-09
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



----- Denotes Existing Structure
 _____ Denotes New Construction

NOTES:
 ■ Denotes Limits of Removal of Existing Structure, see "Removal Details" Sheet
 For details not shown, see "Typical Section No. 1", "Typical Section No. 2", and "Stage Construction No. 1" Sheets
 For Stage 3 Construction, see "Stage Construction No. 1" sheet
 For Temporary Support Details, see "Temporary Support-Bent 3 Stage 1", "Temporary Support-Bent 5 Stage 1", and "Existing Outrigger Bent Support Details" Sheets

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) STAGE CONSTRUCTION No. 3
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05			CU 10 EA 3A66U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	

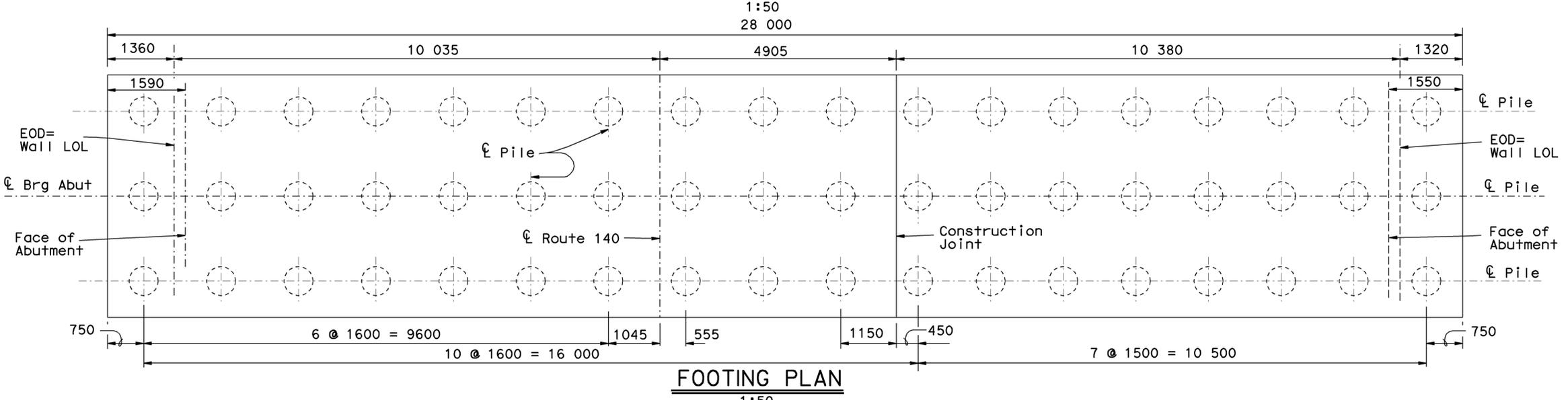
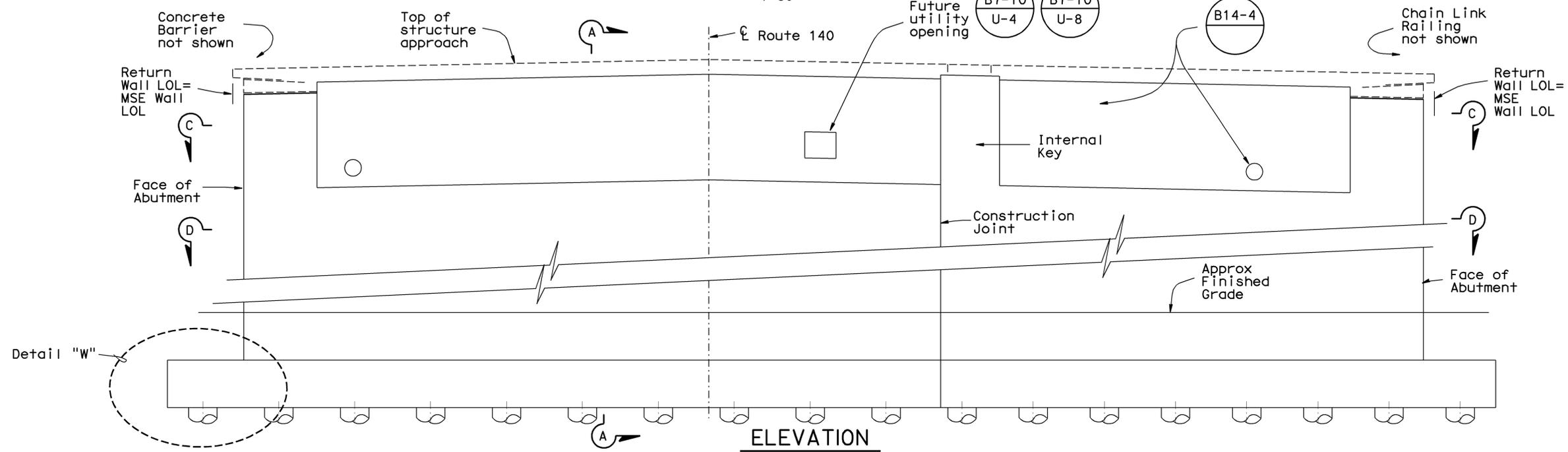
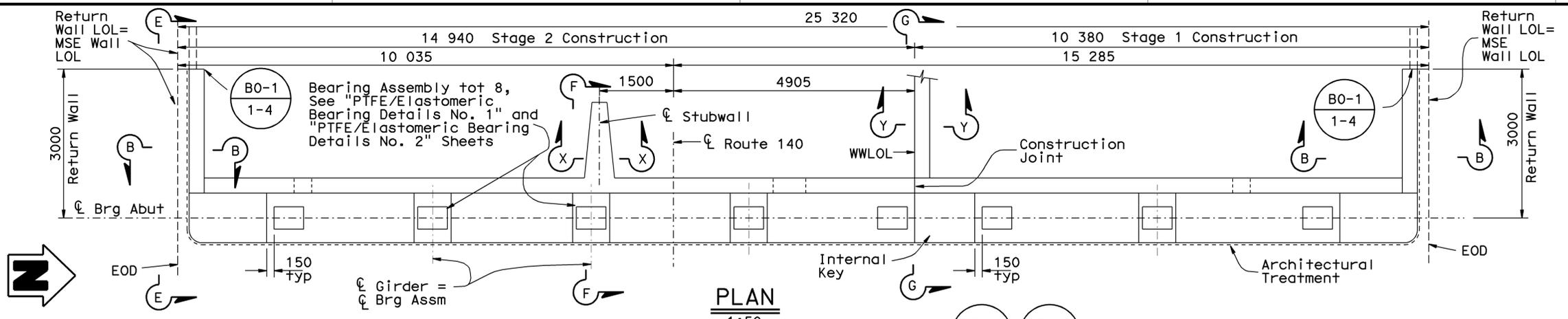
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	256	384

REGISTERED CIVIL ENGINEER
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

9-30-08 DATE
 3-2-09 PLANS APPROVAL DATE

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NOTES:
 For Section A-A and B-B see "Abutment Detail No. 1" sheet
 For Section C-C, and D-D see "Abutment Detail No. 2" sheet
 For Section E-E, F-F, and G-G, see "Abutment Details No. 3" sheet
 For Section X-X and Y-Y see "Abutment Detail No. 3" sheet
 For architectural details, see "Bridge Architectural Details" Sheet
 For Detail "W", see "Abutment Detail No. 1" sheet

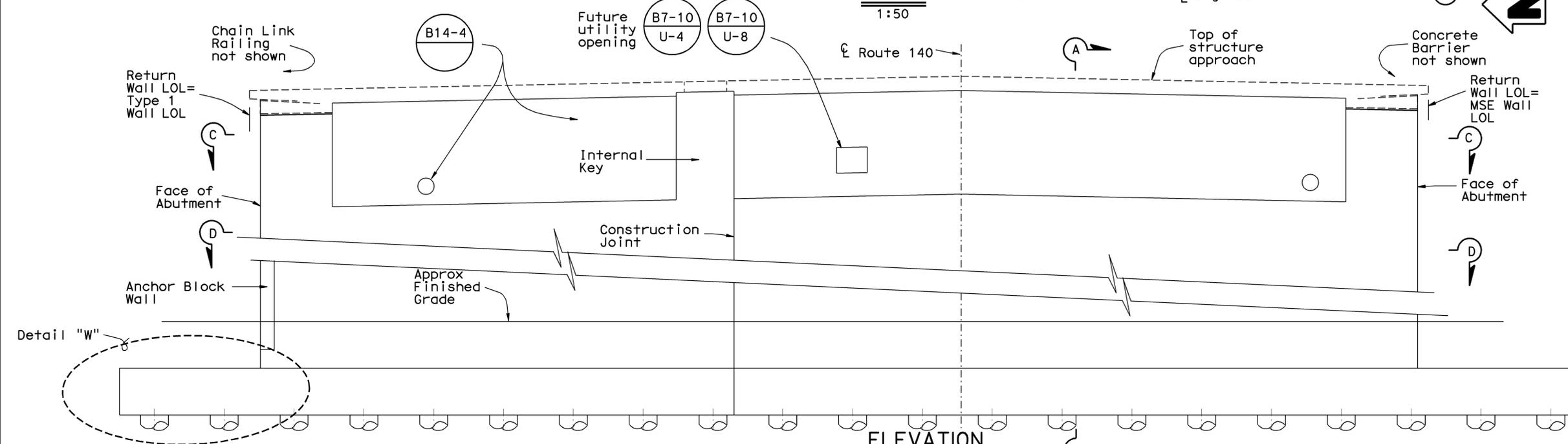
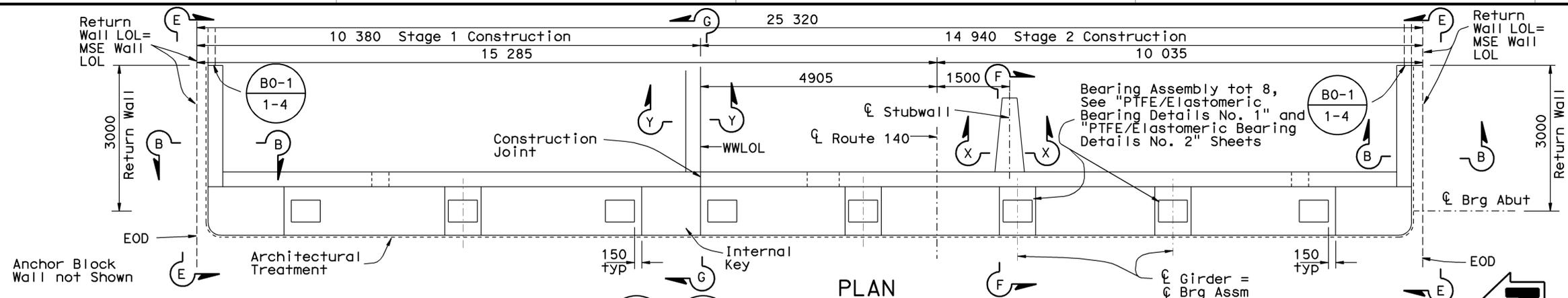
⦿ Denotes 600mm Dia CIDH Pile

	DESIGN BY M. VAN DE POL 04-03 CHECKED P. NORBOE 11-05 DETAILS BY M. VAN DE POL 04-03 CHECKED P. NORBOE 11-05 QUANTITIES BY M. VAN DE POL 11-05 CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION DESIGN BRANCH 9	BRIDGE NO. 39-0044 KILOMETER POST 59.66	BRADLEY OVERHEAD (REPLACE) ABUTMENT LAYOUT No. 1		
	ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN		ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS		CU 10 EA 3A66U1 FILE => 39-0044-f-abaly01.dgn	DISREGARD PRINTS BEARING EARLIER REVISION DATES
	REVISION DATES				SHEET 19 OF 94	

STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	257	384

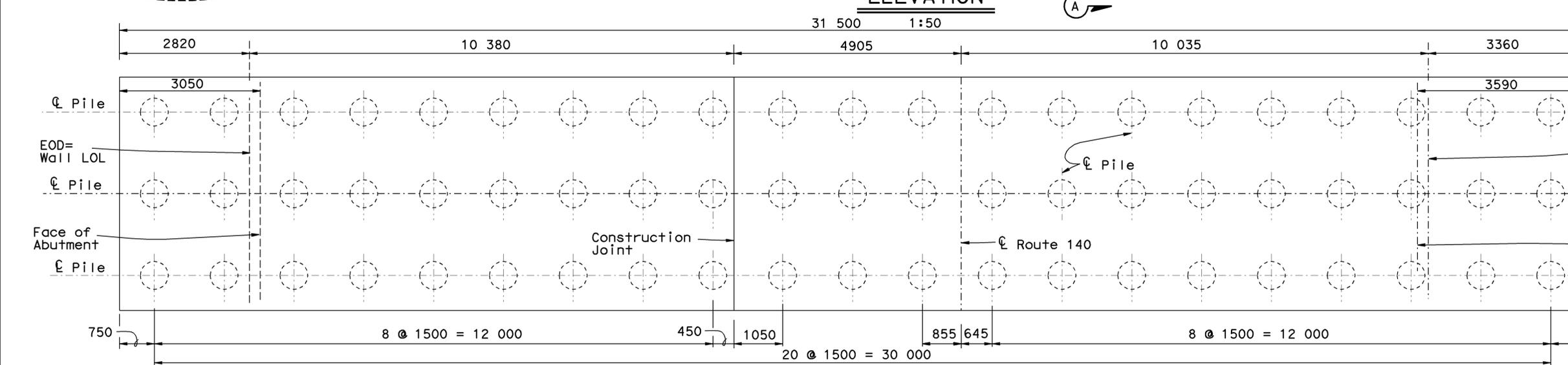
M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 11-18-08
 3-2-09
 PLANS APPROVAL DATE
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NOTES:

- For Section A-A and B-B see "Abutment Detail No. 1" sheet
- For Section C-C, and D-D see "Abutment Detail No. 2" sheet
- For Section E-E, F-F, G-G and H-H, see "Abutment Details No. 3" sheet
- For Section X-X and Y-Y see "Abutment Detail No. 3" sheet
- For architectural details, see "Bridge Architectural Details" Sheet
- For Detail "W", see "Abutment Detail No. 1" sheet
- For Anchor Block Wall Details, see "Miscellaneous Details" sheet

Denotes 600mm Dia CIDH Pile



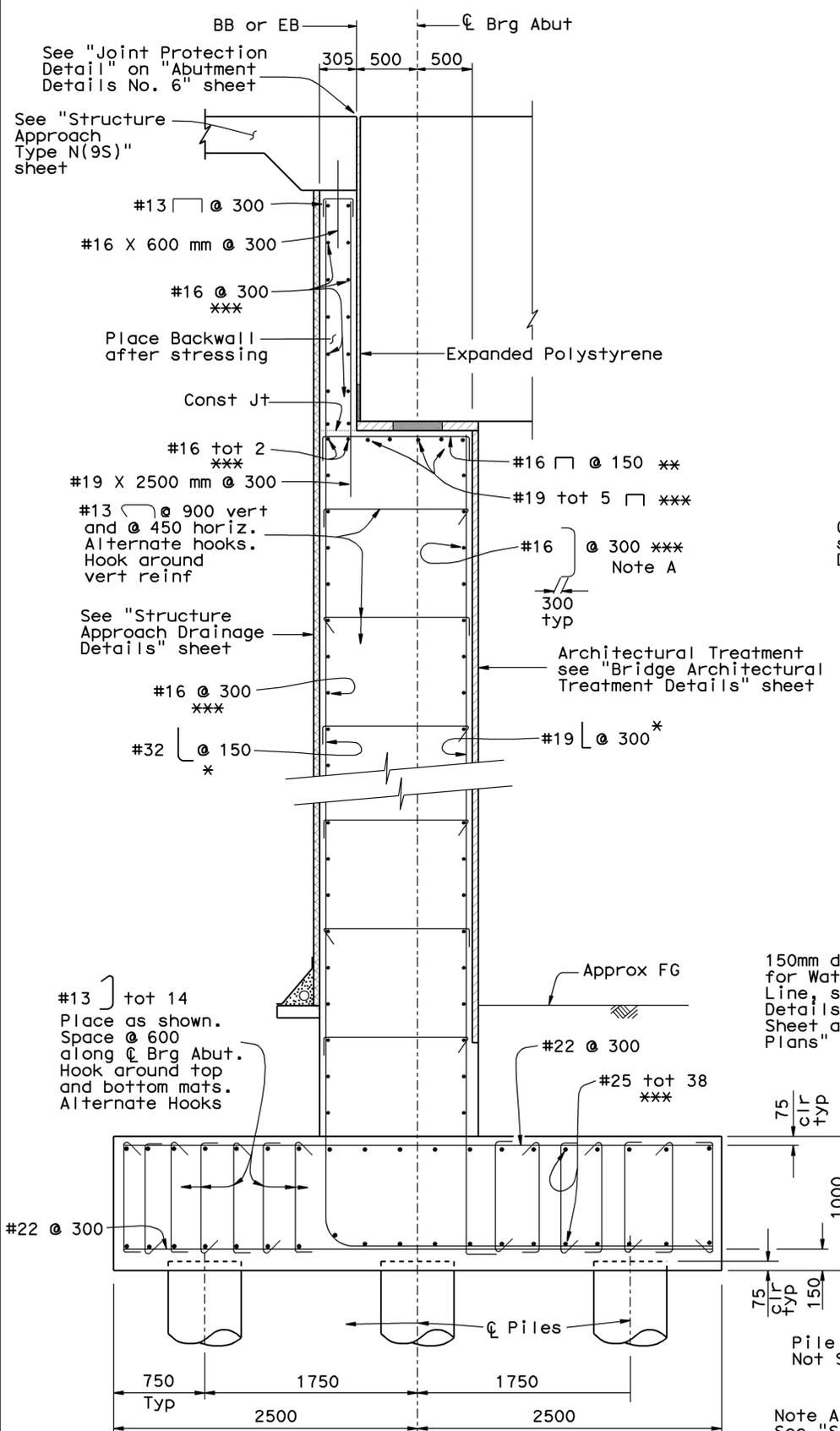
FOOTING PLAN
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	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) ABUTMENT LAYOUT No. 2
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	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05					

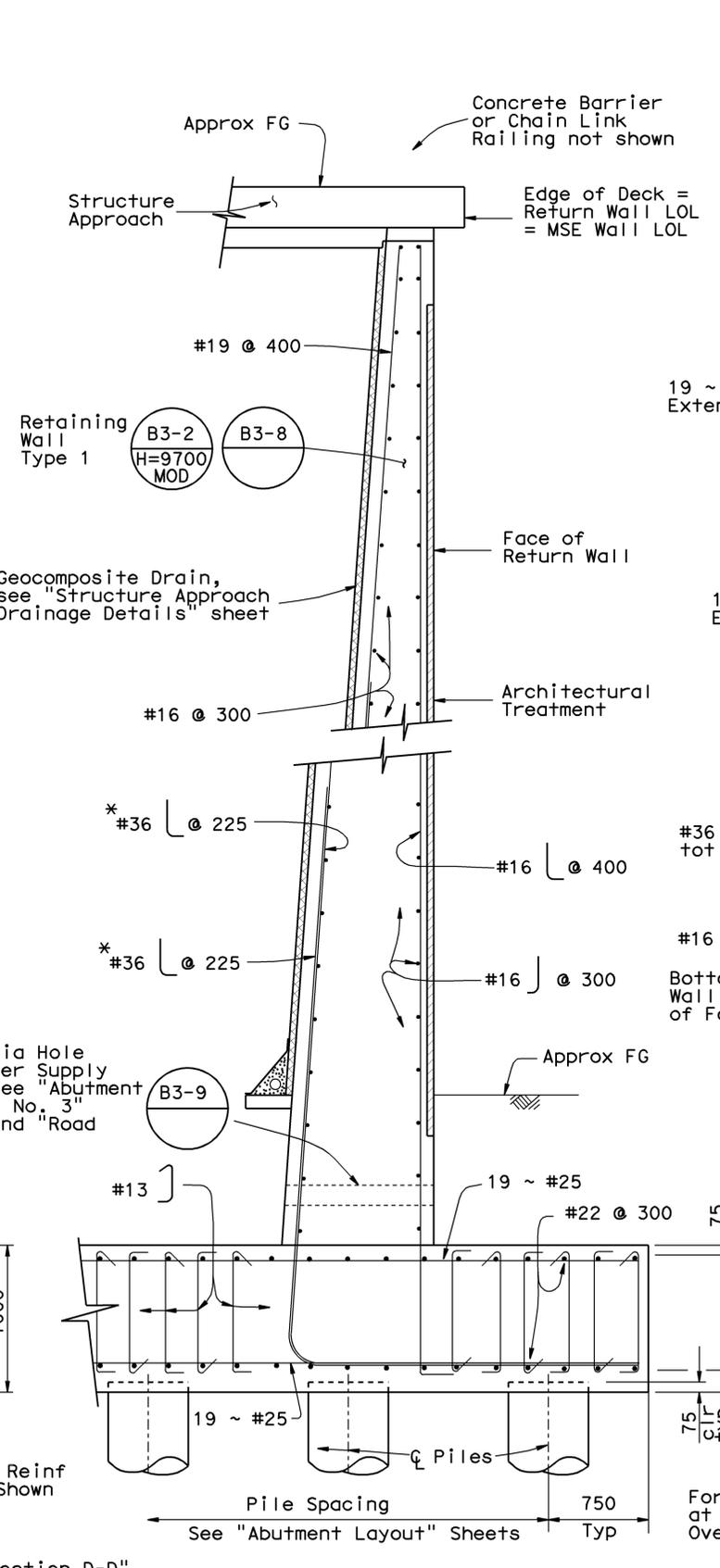
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
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 CU 10 EA 3A66U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 10-14-05, 11-29-05, 11-18-08
 SHEET 20 OF 94
 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	258	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
 PLANS APPROVAL DATE
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

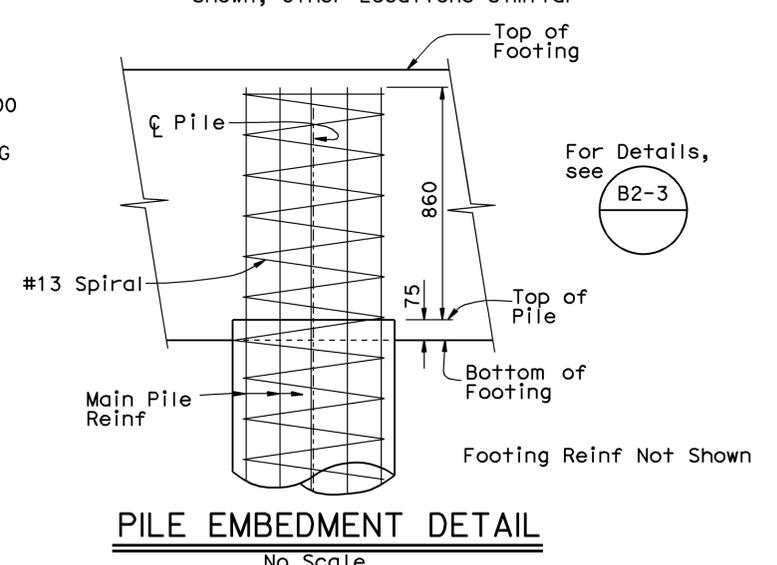
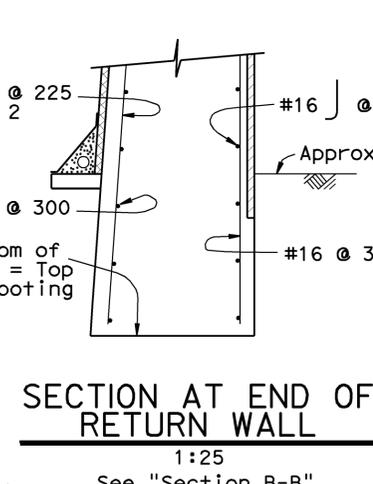
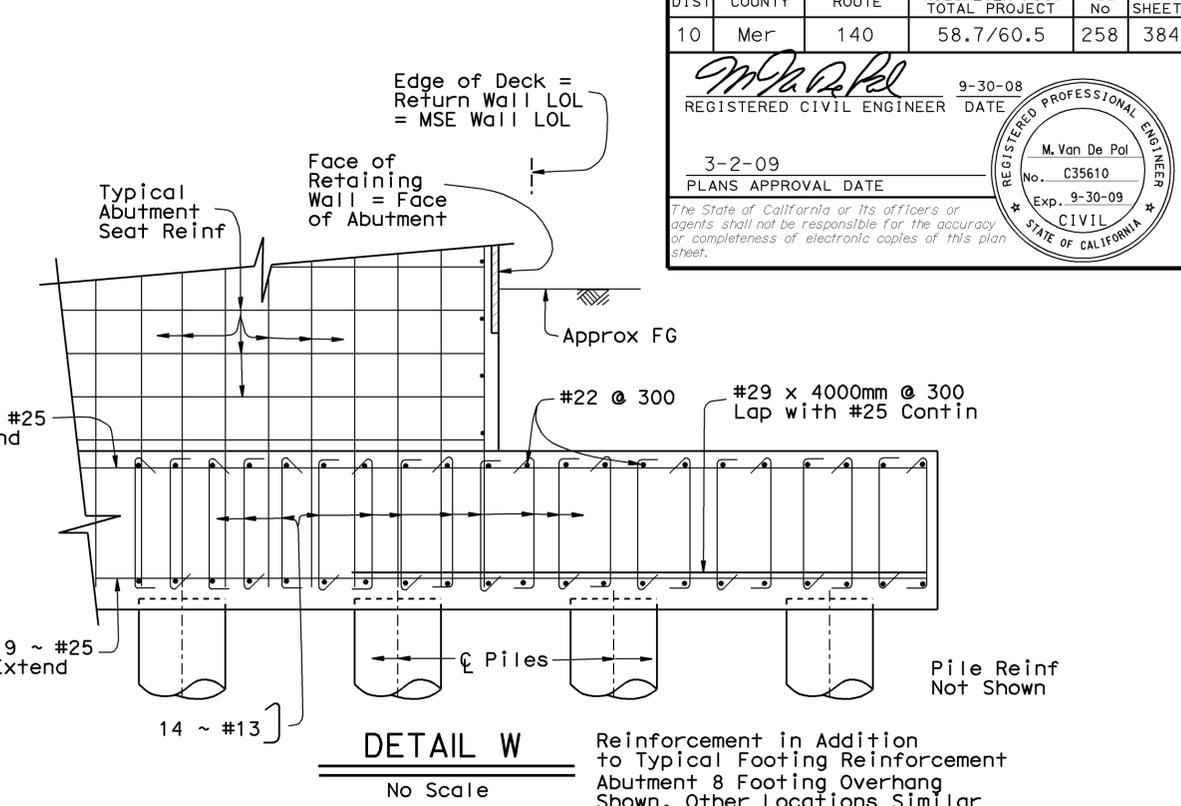


SECTION A-A
1:25



SECTION B-B
1:25

Abutment 1 Left Side Shown, Other Locations Similar



NOTES:

- * Bundle with Bottom Footing Reinforcement
- ** Place Parallel to @ Girder and Space Along @ Brg Abutment
- *** Lap Splice or Mechanically Couple at Construction Joint

Abut 1 shown, Abutment 8 similar

For Locations of Sections A-A, Section B-B and Detail W, see "Abutment Layout No. 1" and "Abutment Layout No. 2" sheets

For Details of Drain Pipe Through Return Wall, see "Drainage Details No. 1" and "Drainage Details No. 3" sheets

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) ABUTMENT DETAILS No. 1
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05			CU 10 EA 3A66U1	REVISION DATES	

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

0 10 20 30 40 50 60 70 80 90 100

CU 10 EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

FILE => 39-0044-f-abdt01.dgn

STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

SHEET 21 OF 94

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	259	384

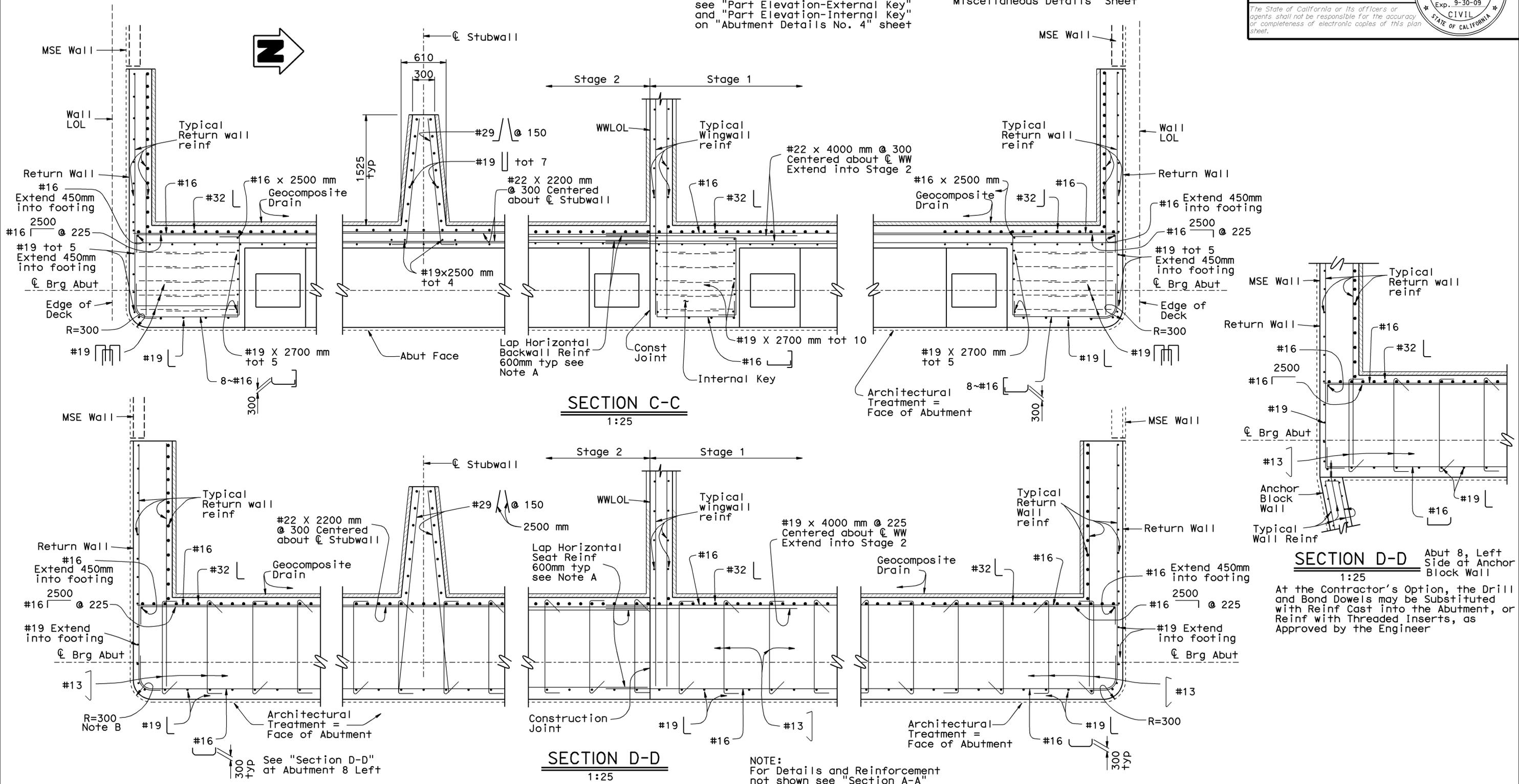
11-18-08
 REGISTERED CIVIL ENGINEER DATE
 3-2-09
 PLANS APPROVAL DATE
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
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NOTE A:
 Mechanical connection may be used instead of Lap Splice as approved by the Engineer

NOTE B:
 Radius at Abutment 8 Left Side is Discontinued at MBGR Anchor Block Wall. See "Miscellaneous Details" Sheet

NOTES:
 Abut 1 shown Abutment 8 similar
 For Locations of Sections C-C and D-D see "Abutment Layout No.1" and "Abutment Layout No. 2" sheets
 For Additional information see "Part Elevation-External Key" and "Part Elevation-Internal Key" on "Abutment Details No. 4" sheet

At the Contractor's Option, the Interior Wingwall (Shown Between Construction Stages) May be Substituted with a Stubwall, as Approved by the Engineer
 For Anchor Block Wall Details, See "Miscellaneous Details" Sheet



SECTION D-D Abut 8, Left Side at Anchor Block Wall
 1:25
 At the Contractor's Option, the Drill and Bond Dowels may be Substituted with Reinf Cast into the Abutment, or Reinf with Threaded Inserts, as Approved by the Engineer

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	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05			CU 10 EA 3A66U1	REVISION DATES	
10-14-05	11-29-05	11-18-08						

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
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DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5		260	384

M. Van De Pol
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 PLANS APPROVAL DATE
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 No. C35610
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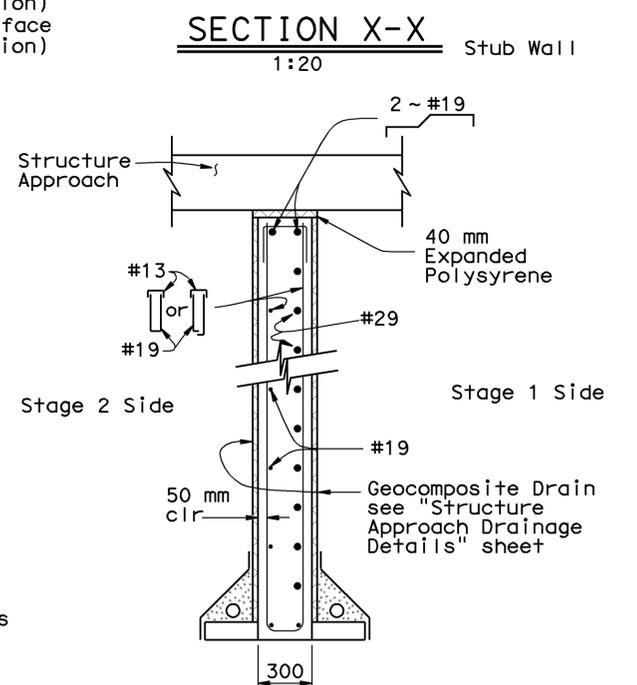
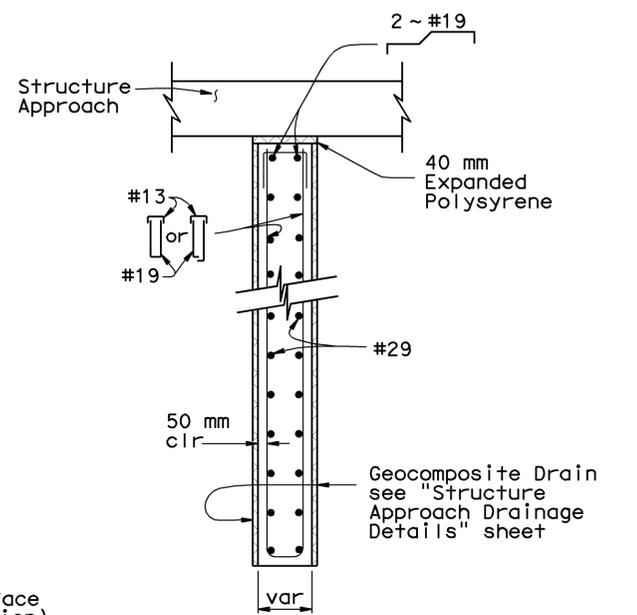
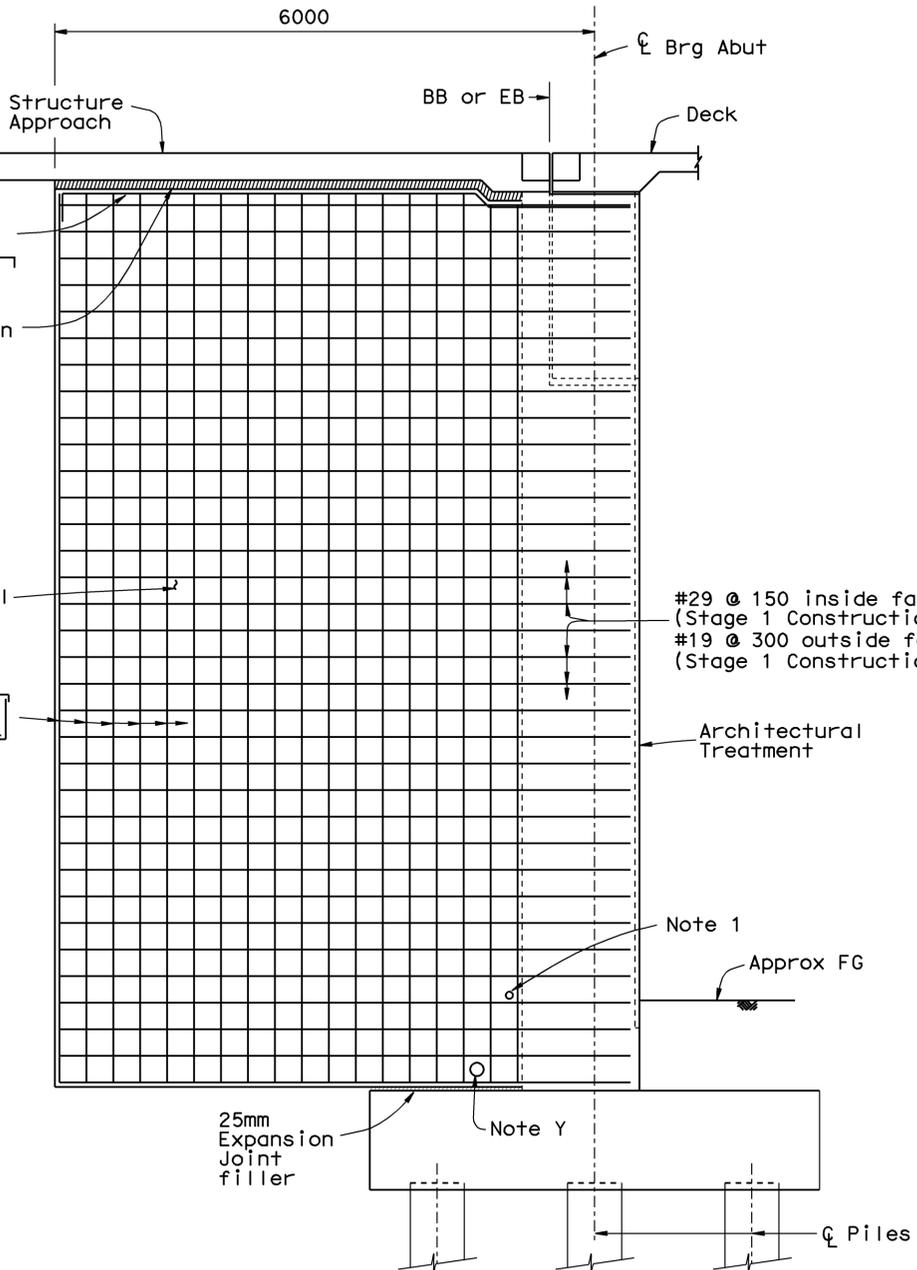
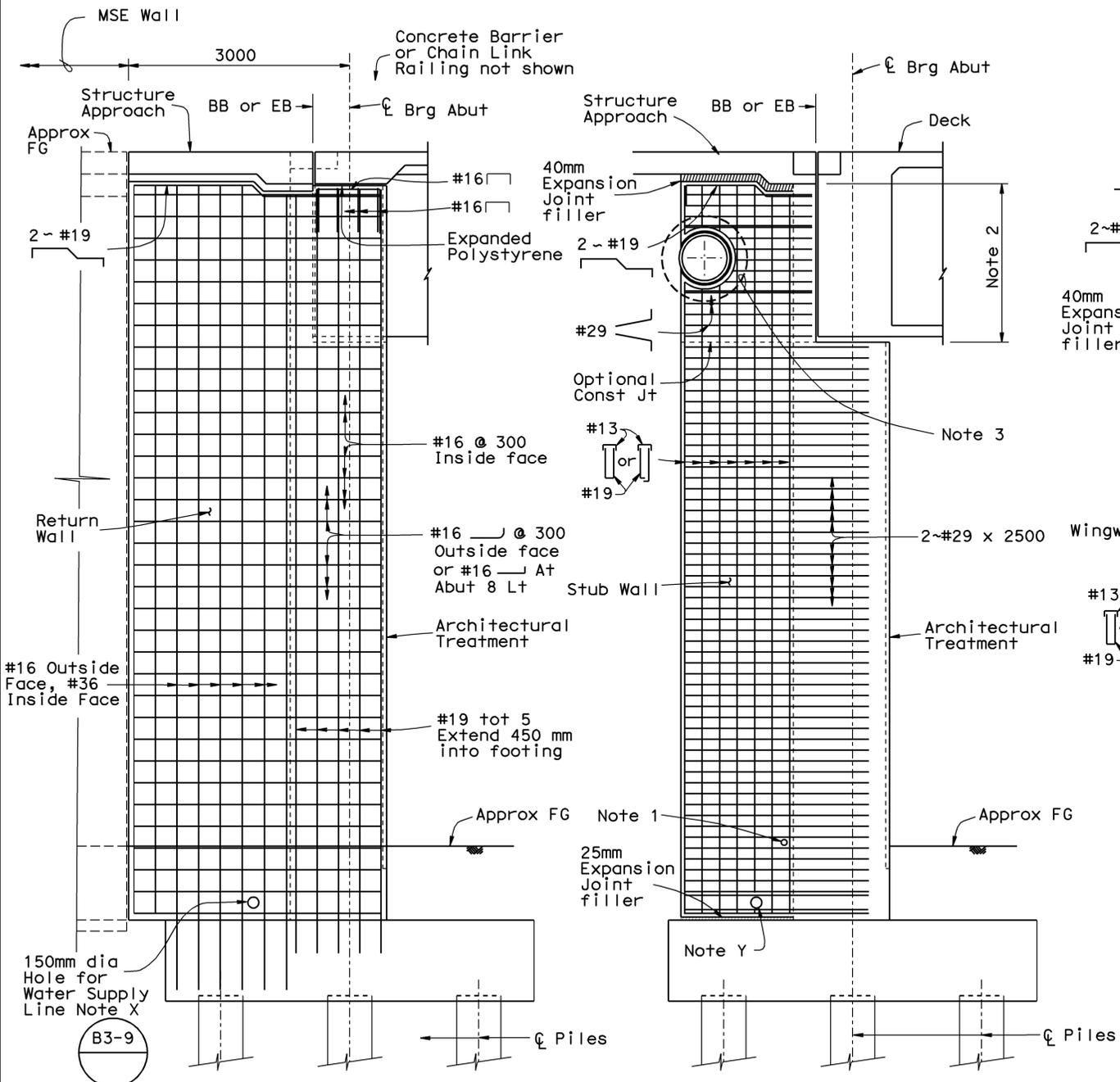
NOTES:

- Provide hole through stubwall and internal wingwall to allow for passage of structure approach drain pipe
- Stubwall may be placed along with the backwall, after stressing is complete.
- Drain Pipe not shown. For drainage details, see "Drainage Details No. 1" sheet
- Abut 1 shown Abutment 8 similar
- For Locations of Sections E-E through G-G, see "Abutment Layout" Sheets
- For Locations of Sections X-X and Y-Y, see "Abutment Layout" Sheets

Note
 At the Contractor's Option, the Interior Wingwall (Shown Between Construction Stages) May be Substituted with a Stubwall, as Approved by the Engineer

Note X
 Holes for Water Supply Lines, Located at Abutment 1 Left Return Wall and at Abutment 8 Left and Right Return Walls. See "Abutment Details No. 1" Sheet and "Road Plans"

Note Y
 Holes for Water Supply Lines, Through Stub Wall And Wingwall, Located at Abutment 1 Only



SECTION E-E
1:40

SECTION F-F
1:40

SECTION G-G
1:40

SECTION Y-Y Wingwall
1:20



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DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
ABUTMENT DETAILS No. 3

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CU 10
EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES					
	10-11-05	12-01-05			
SHEET	23	OF	94		

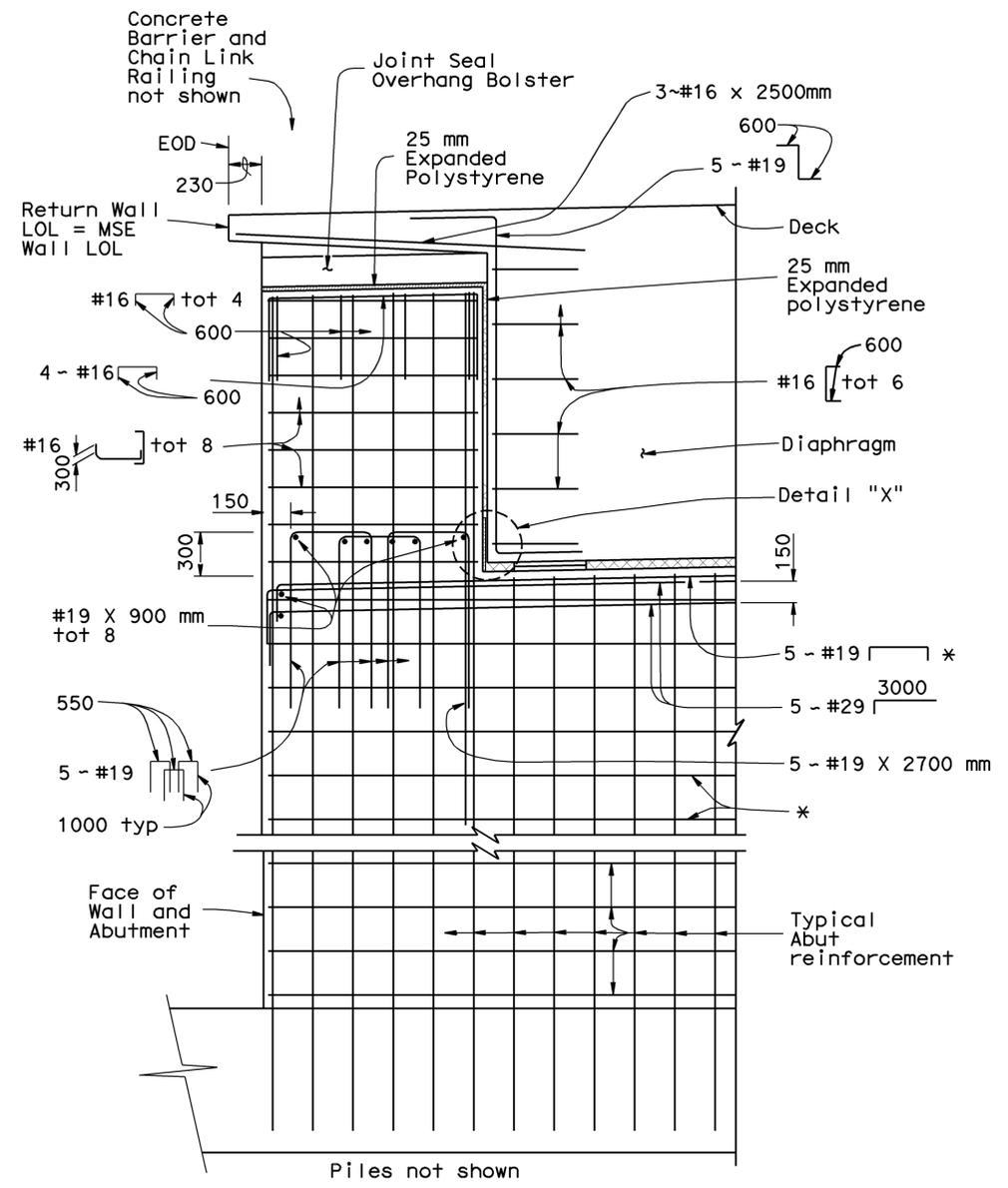
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 REGISTERED CIVIL ENGINEER DATE

3-2-09
 PLANS APPROVAL DATE

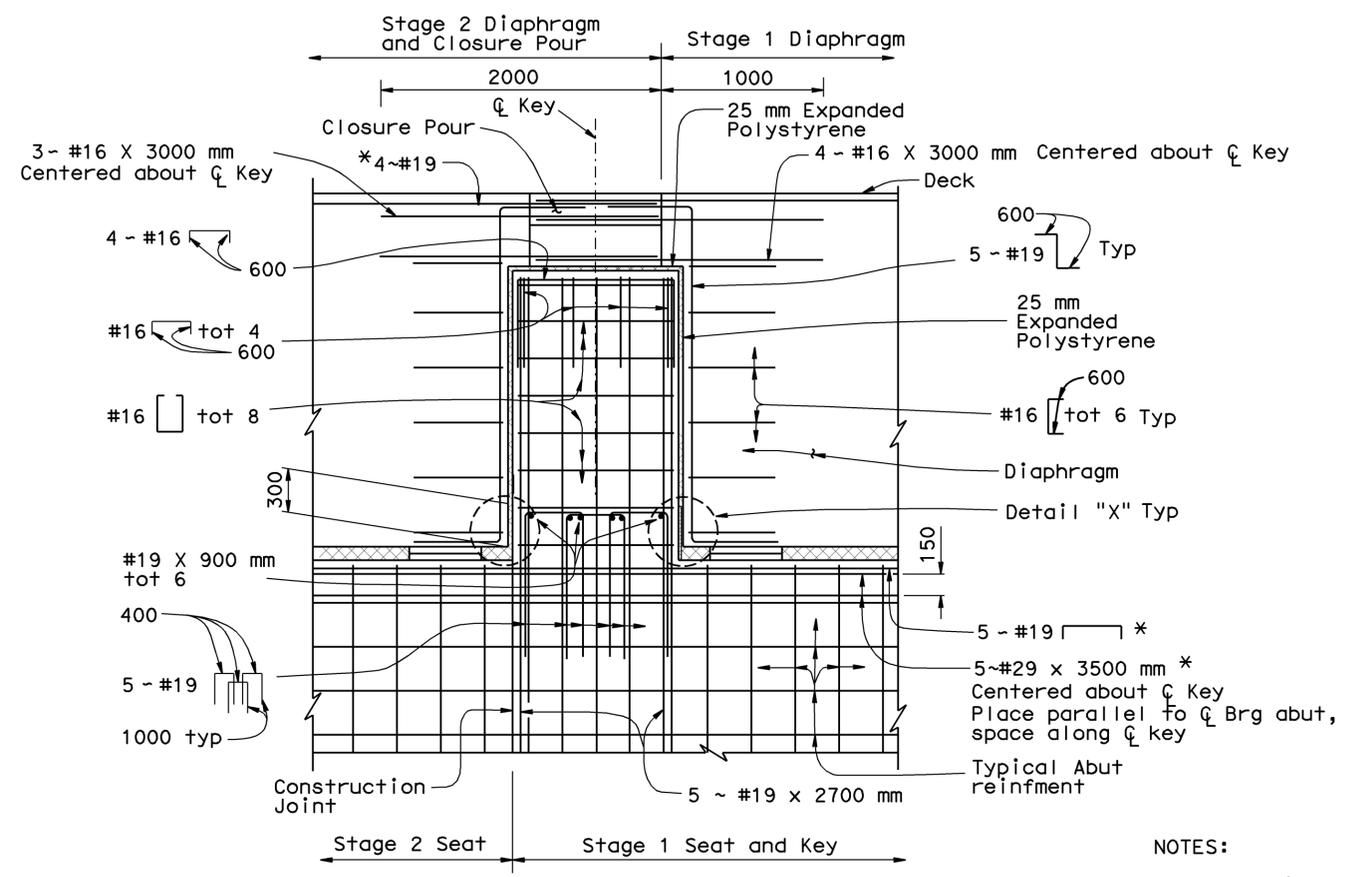
REGISTERED PROFESSIONAL ENGINEER
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
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PART ELEVATION-EXTERNAL KEY
No Scale

Note:
For additional details, see "Structure Approach Details" sheets



PART ELEVATION - INTERNAL KEY
No Scale

Notes:
Abutment 1 shown, Abutment 8 similar by opposite hand
Construction Joint in Seat not shown

NOTES:
* Lapped spliced or Mechanically coupled at Construction Joint. See "Abutment Details No. 5" Sheet
For "Detail X", see "Abutment Details No. 6" sheet
Construct Internal Key in Stage 1
Longitudinal Closure Pour Reinforcement not shown



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DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
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DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044
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BRADLEY OVERHEAD (REPLACE)
ABUTMENT DETAILS No. 4

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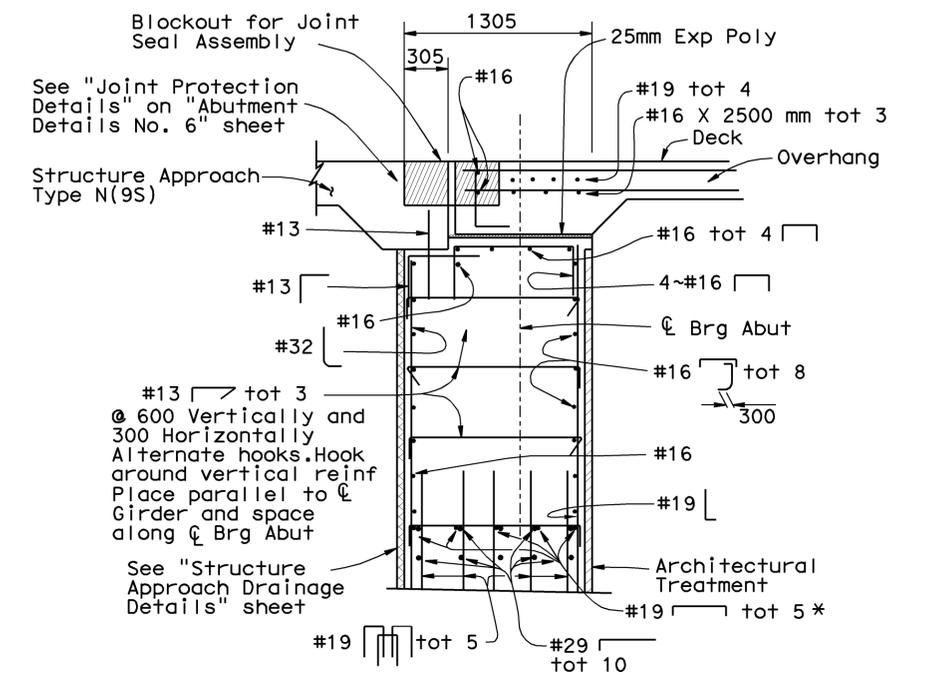
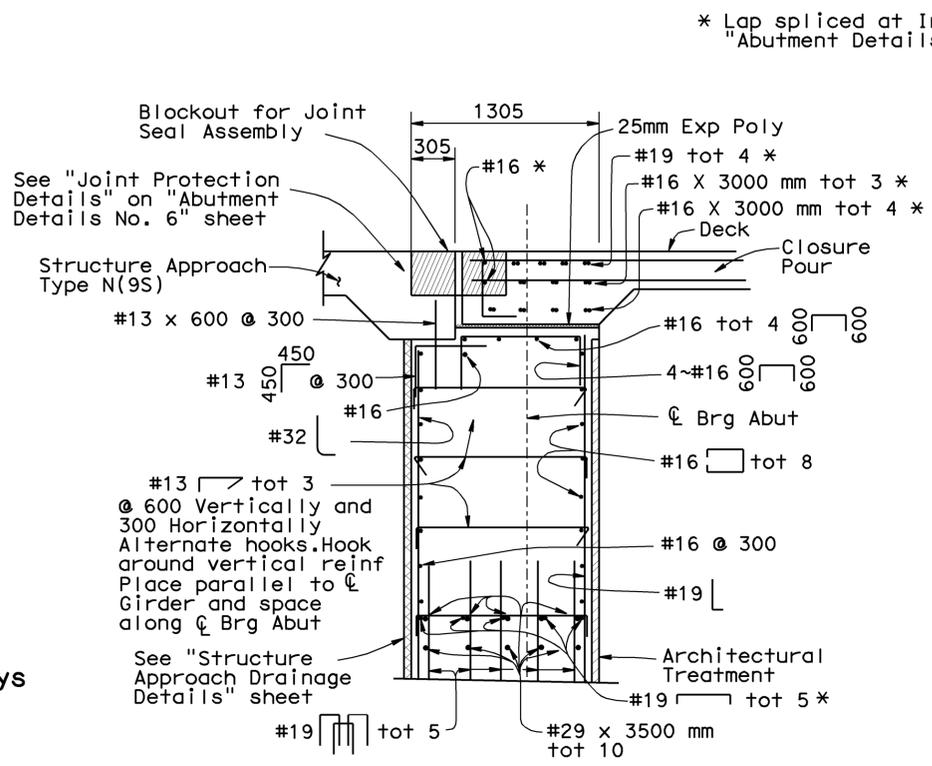
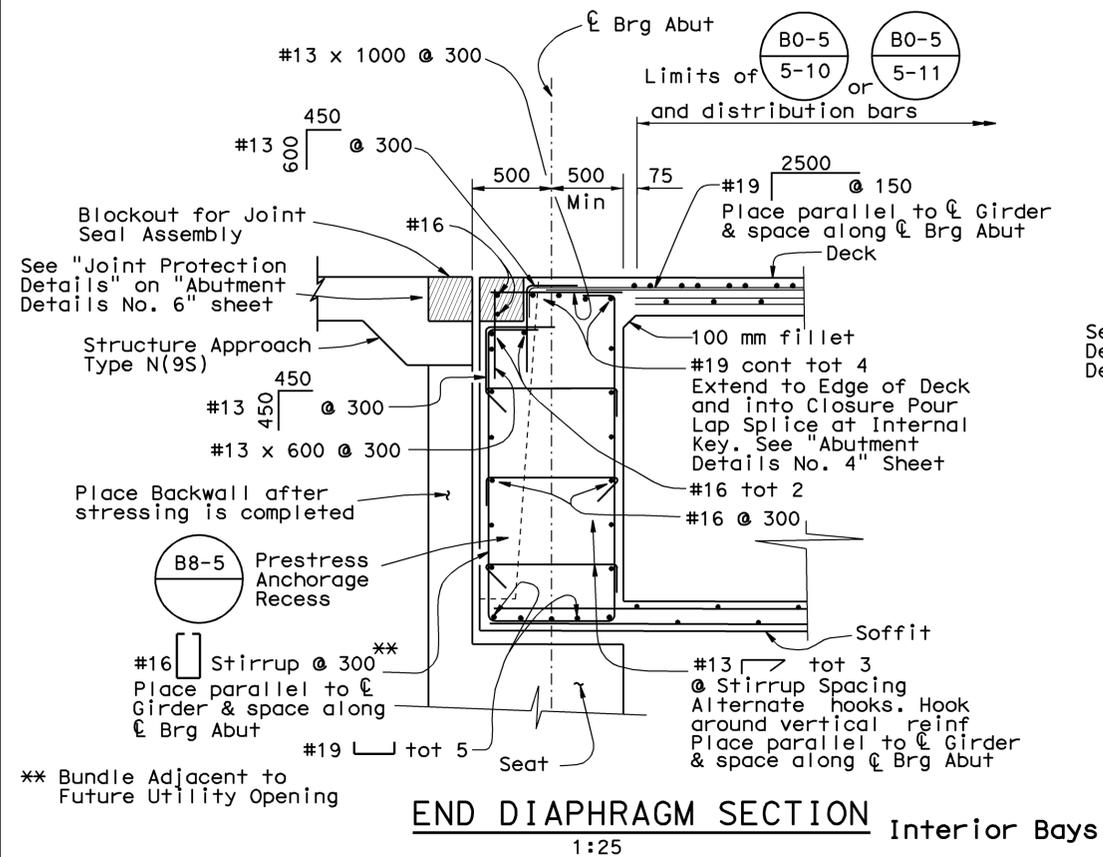
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REVISION DATES					
	10-14-05	12-1-05			
SHEET	24	OF	94		

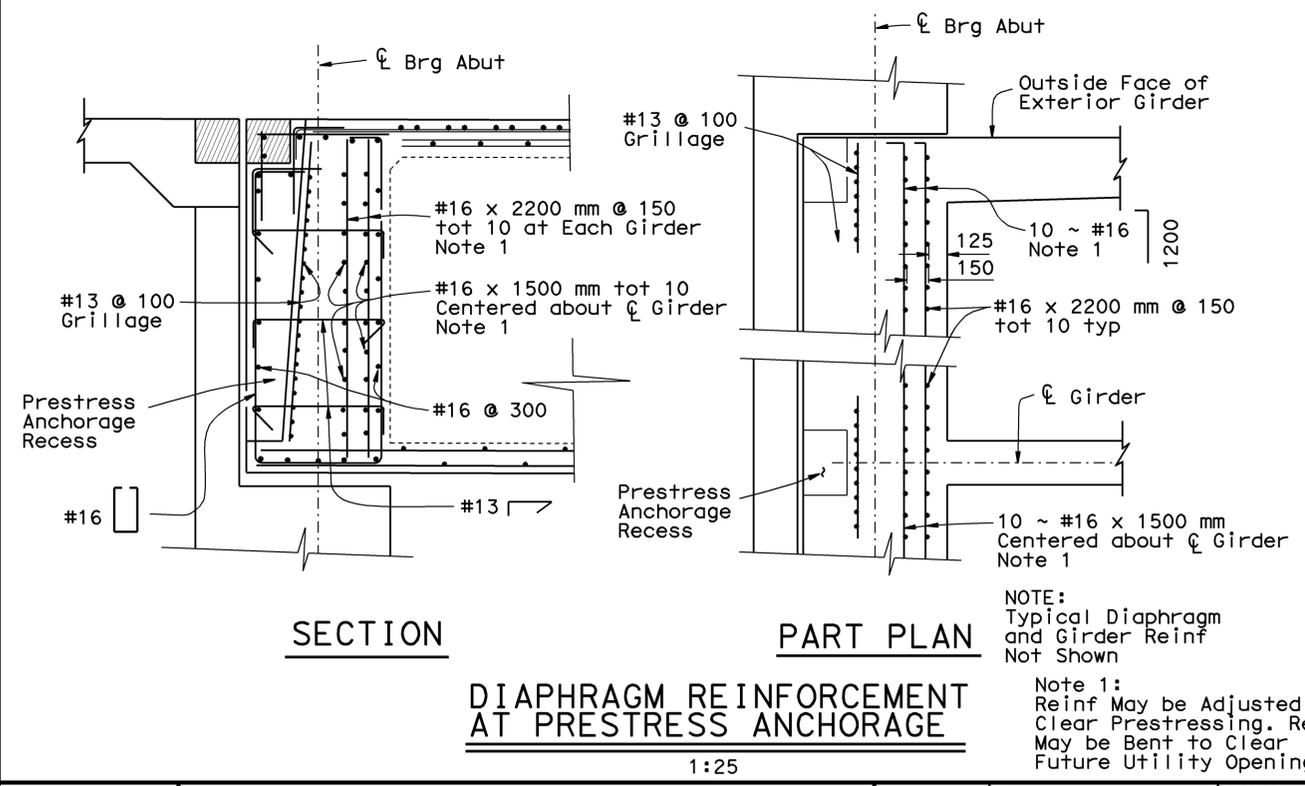
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	262	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
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 PLANS APPROVAL DATE
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* Lap spliced at Internal Key, see "Abutment Details No. 4" Sheet



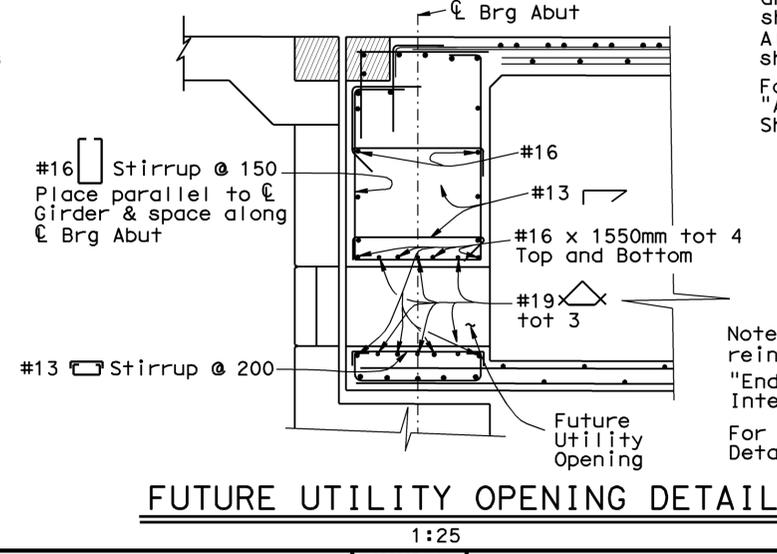
ABUTMENT SECTION @ INTERNAL KEY
1:25

Notes: For details and reinf not shown see, "Section A-A" on "Abutment Details No. 1" sheet and "Elevation-Internal Key" on "Abutment Details No. 4" sheet.
All Closure Pour reinf not shown

NOTES:
For Additional Details see "Abutment Details No. 2" and "Abutment Details No. 4" sheets
For "Backwall Base Detail" see "Abutment Details No. 6" sheet

ABUTMENT SECTION @ OVERHANG
1:25

Notes: For details and reinf not shown see, "Part Elevation -External Key" on "Abutment Details No. 4" sheet and "Structure Approach N(9S)" sheet
All overhang reinf not shown
For Additional Details, see "Abutment Joint Seal Details" Sheet



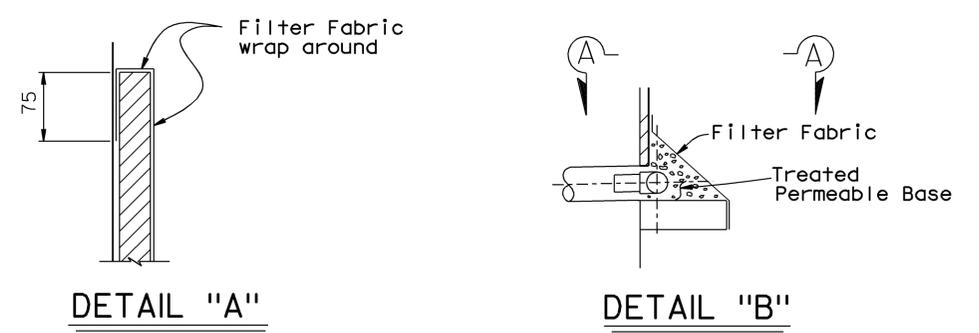
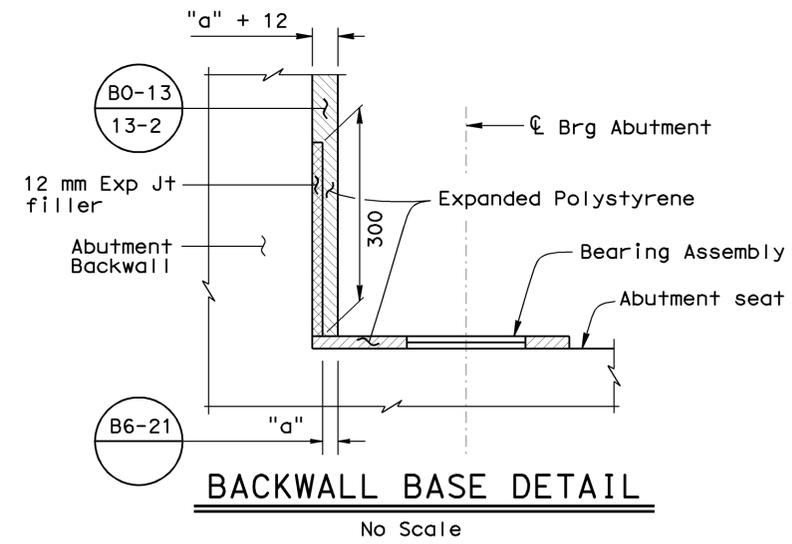
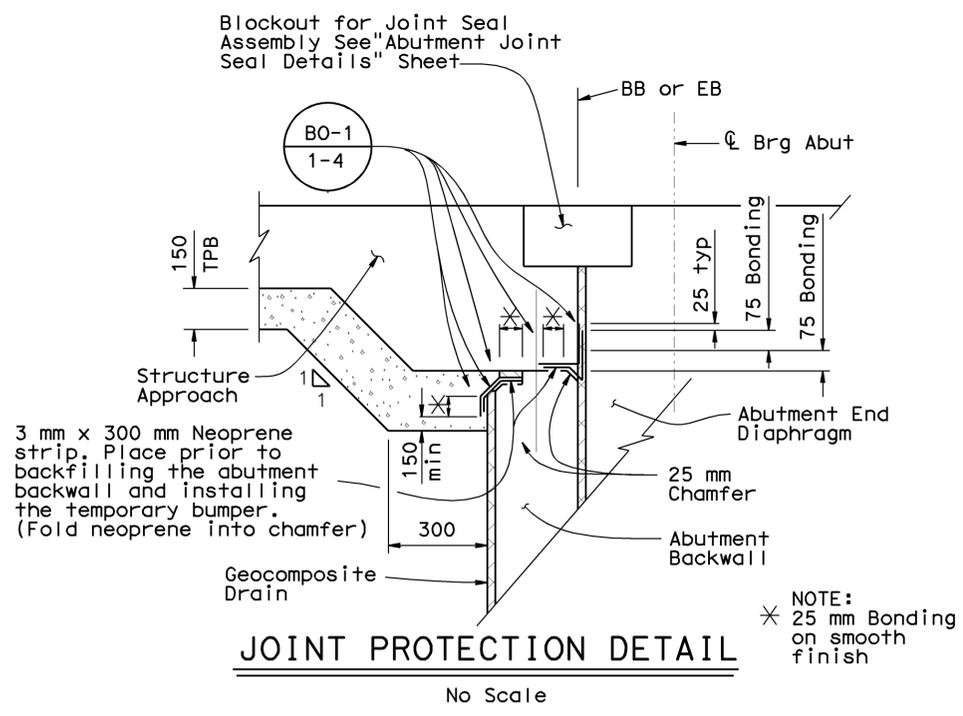
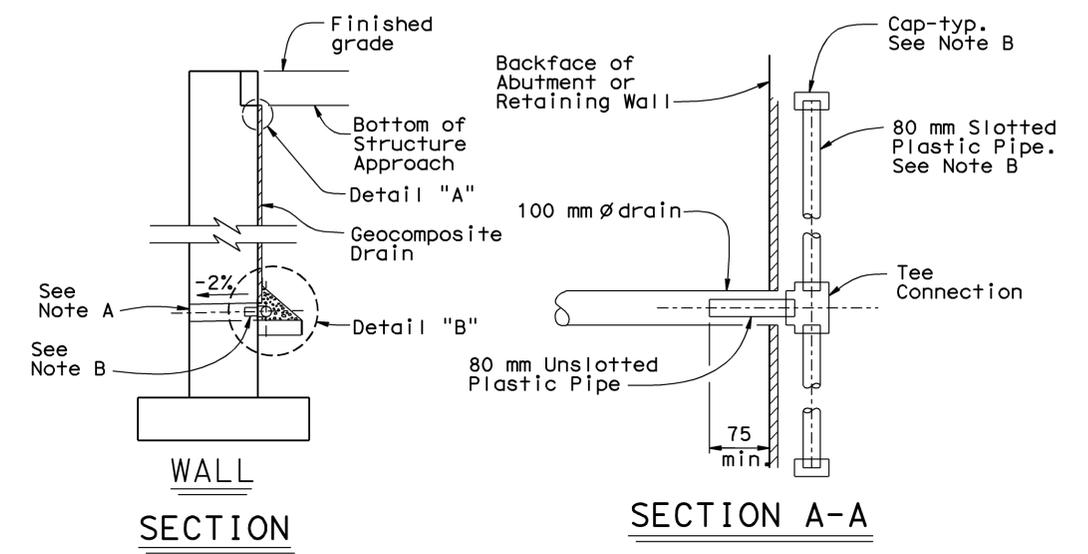
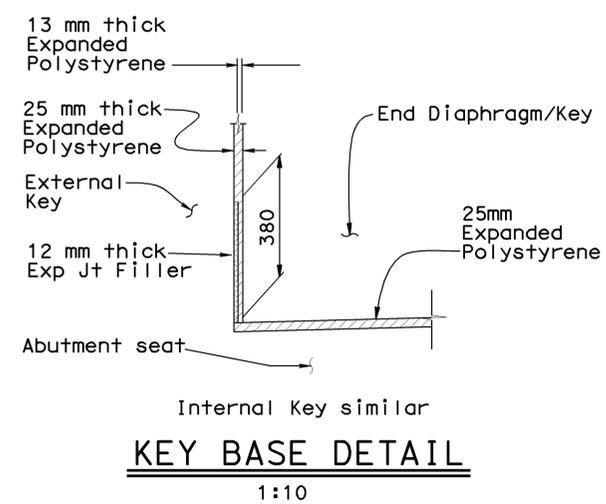
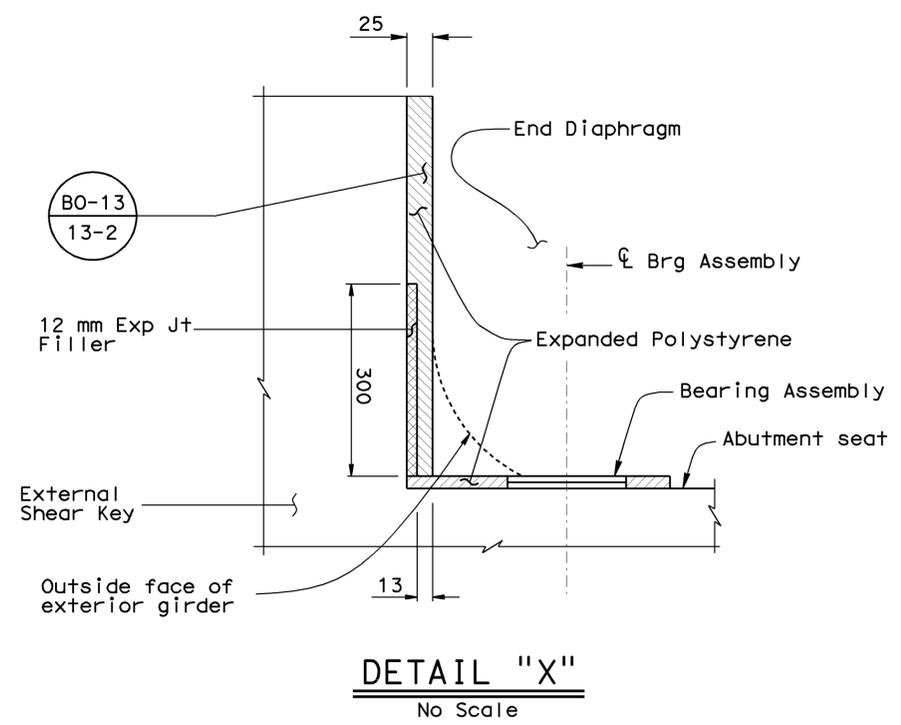
Notes: For details and reinf not shown see, "End Diaphragm Section Interior Bays"
For Additional Details, see B7-10 U-4

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) ABUTMENT DETAILS No. 5
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05			CU 10 EA 3A66U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
 ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100
 FILE => 39-0044-f-abdt05.dgn
 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	263	384

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 PLANS APPROVAL DATE
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WEEP HOLE AND GEOCOMPOSITE DRAIN
No Scale

- Notes:
- A. 100mmØ drains at 4.60 meters center to center
 - B. Geocomposite drain, cement treated permeable base, and 80 mmØ slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 100 mmØ drain.
 - C. Connect the low end of plastic pipe to the main outlet pipe as applicable.
 - D. For additional details, see "Structure Approach Drainage Details" sheet

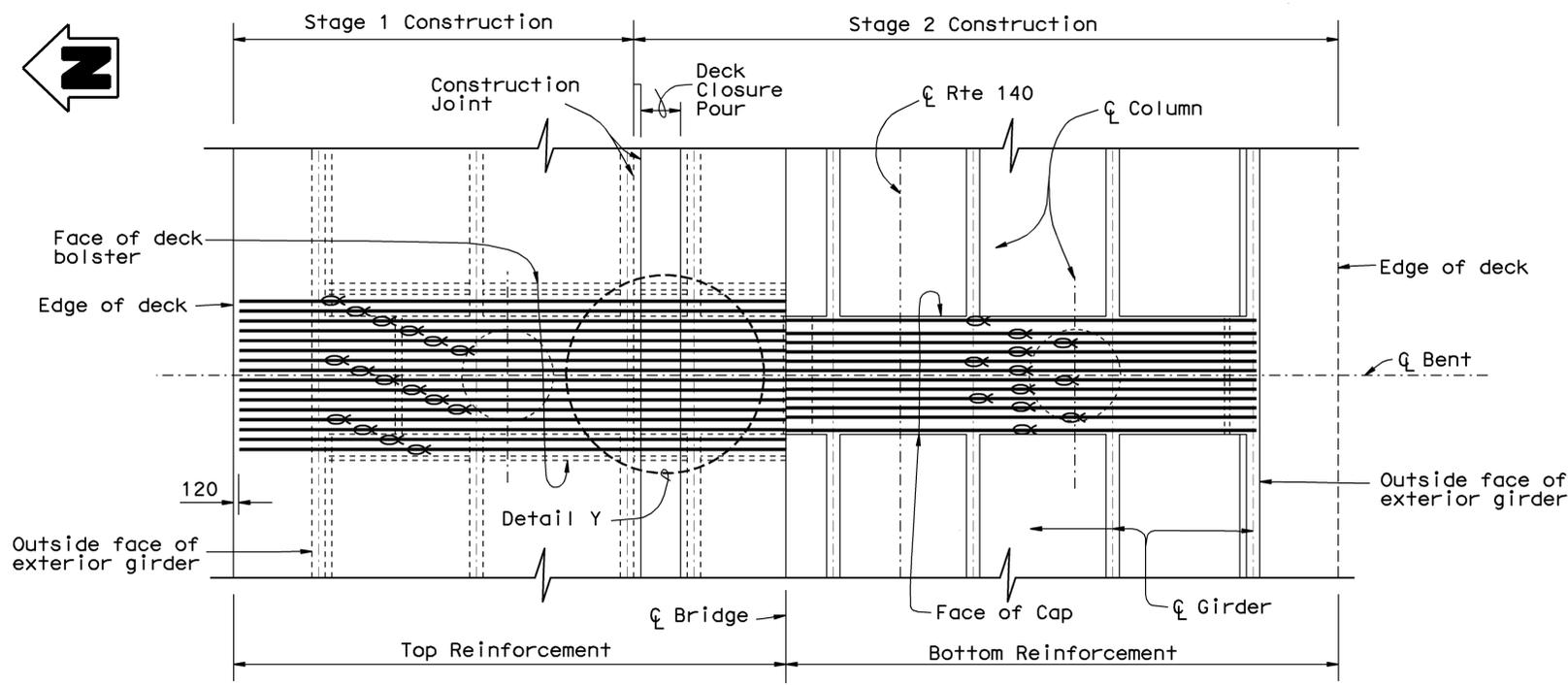
NOTES:
 For Locations of Detail "X", "Key Base Detail" and "Backwall Base Detail" see "Abutment Detail" sheets
 Architectural treatment not shown

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	264	384

M. Van De Pol
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 3-2-09
 PLANS APPROVAL DATE

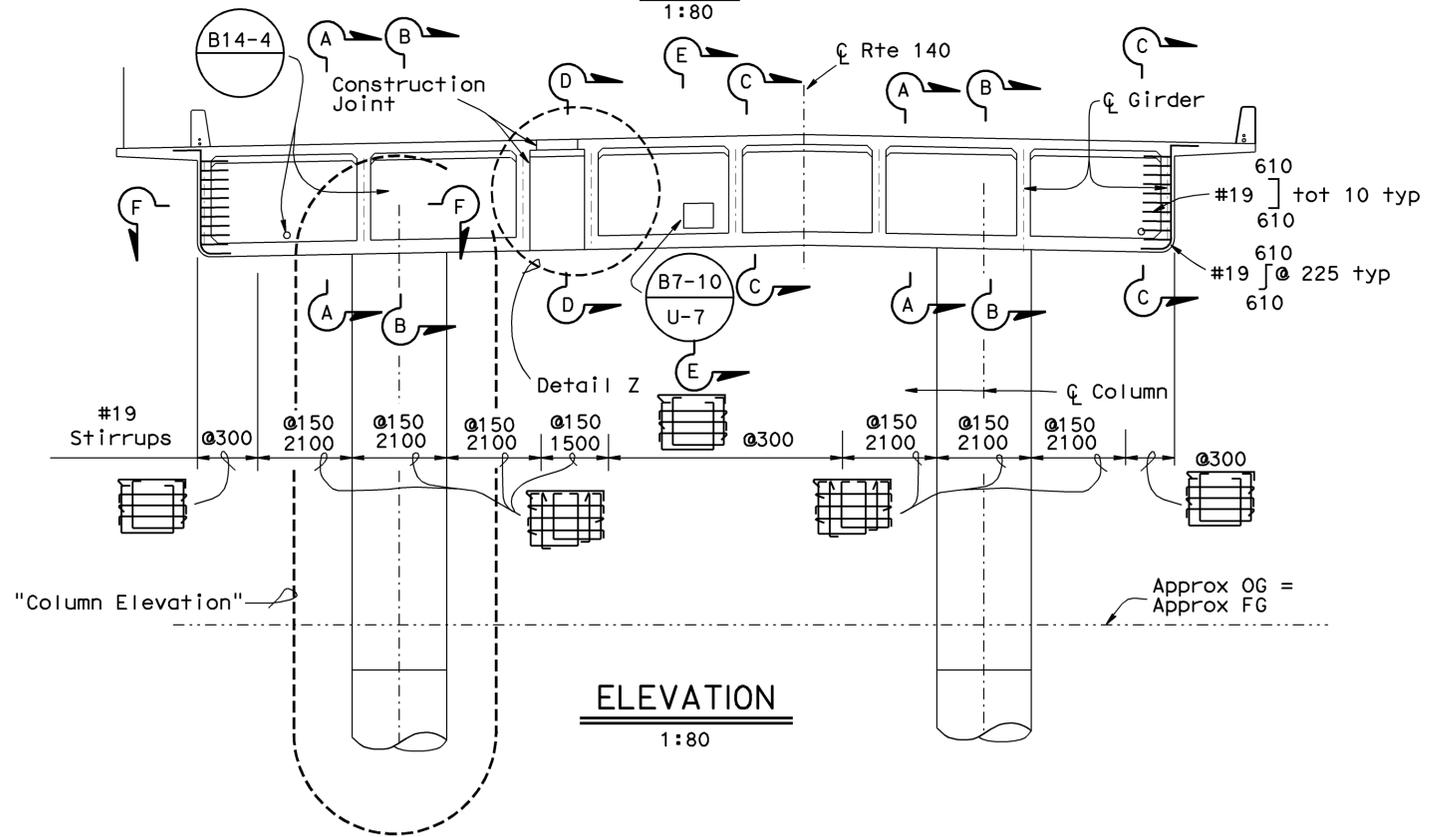
REGISTERED PROFESSIONAL ENGINEER
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PLAN NOTE: Deck drains not shown
 1:80

- NOTES:
- For Sections A-A, B-B, C-C and D-D See "Bent Details No. 1" sheet
 - For Section E-E, see "Bent Details No. 5" sheet
 - For Section F-F, see "Bent Details No. 6" sheet
 - For Detail Y, see "Bent Details No. 10" sheet
 - For Detail Z, see "Bent Details No. 10" sheet
 - For "Column Elevation", See "Bent Details No. 17" sheet
- Details and reinforcement are symmetrical about ϕ Bridge except as noted
- denotes reinf bundled horizontally
- All main cap reinforcement is #43, except as noted



ELEVATION
 1:80

BENTS 2 and 7



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 9

BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE)
KILOMETER POST	59.66	
		BENT LAYOUT No. 1

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



CU 10
 EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 27 OF 94
	10-11-05 12-1-05	

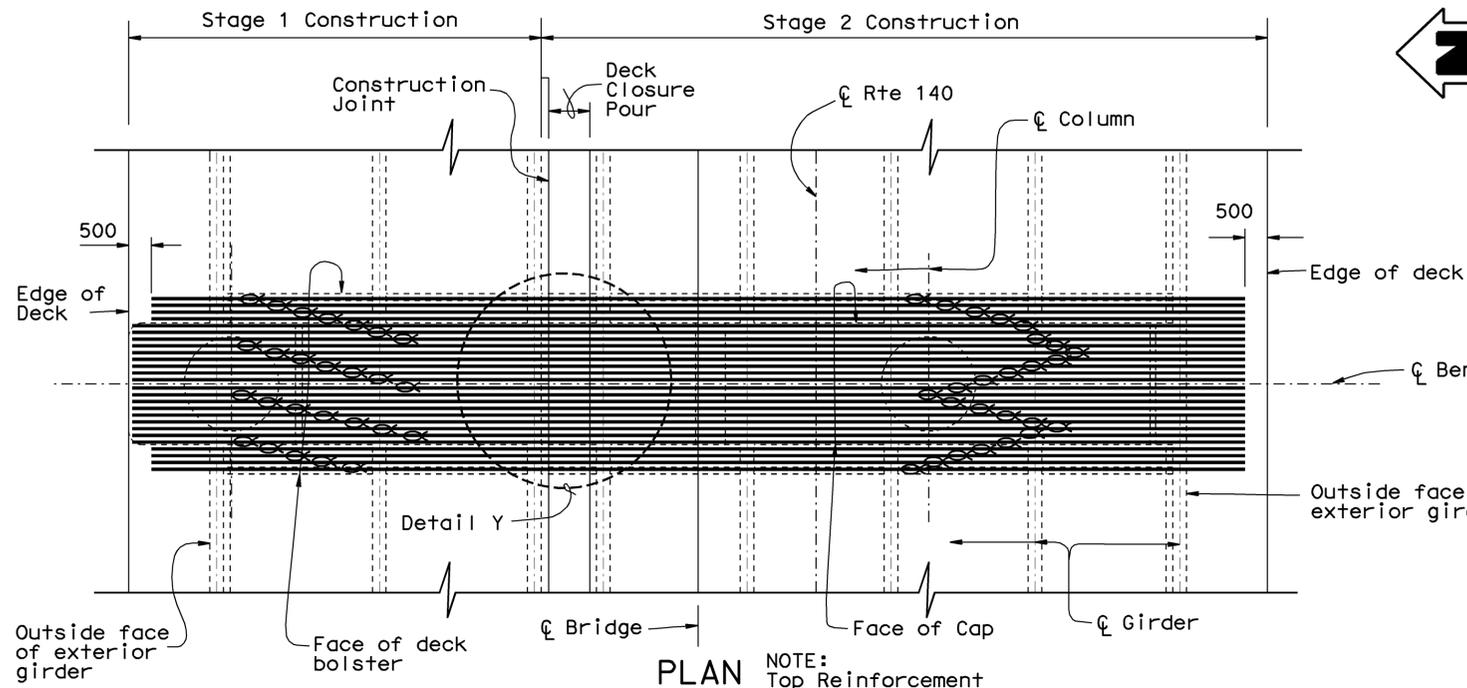
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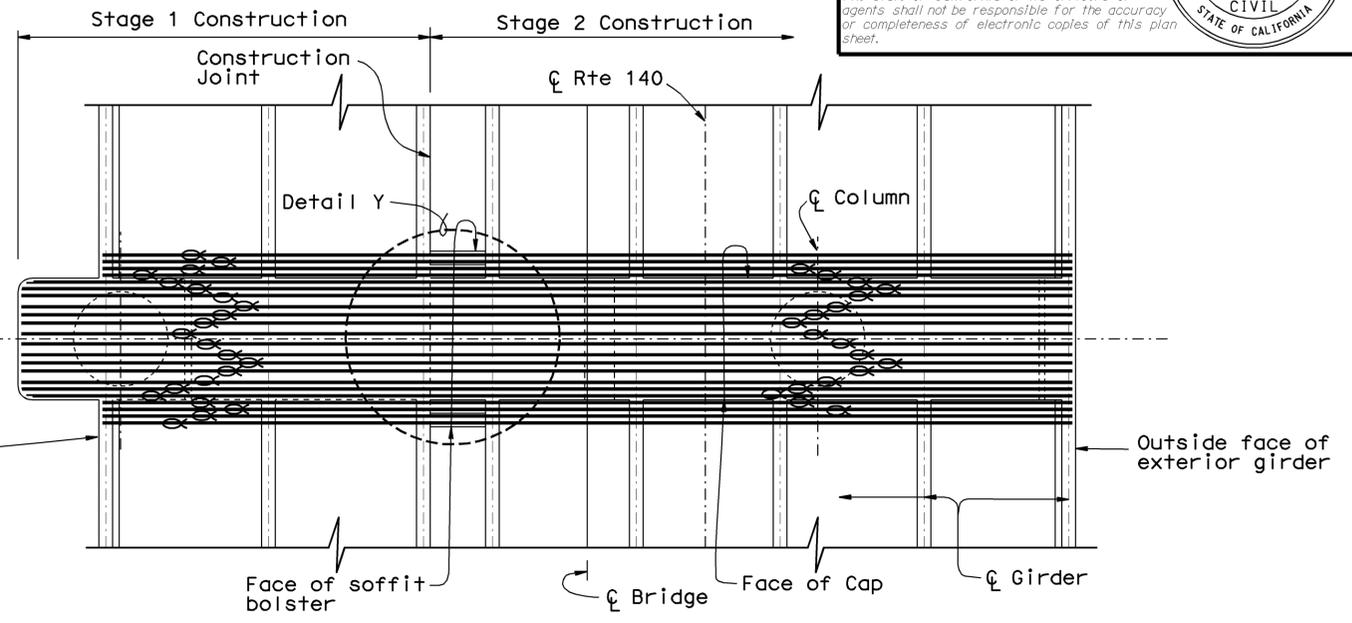
REGISTERED CIVIL ENGINEER DATE 9-30-08
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
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3-2-09
 PLANS APPROVAL DATE

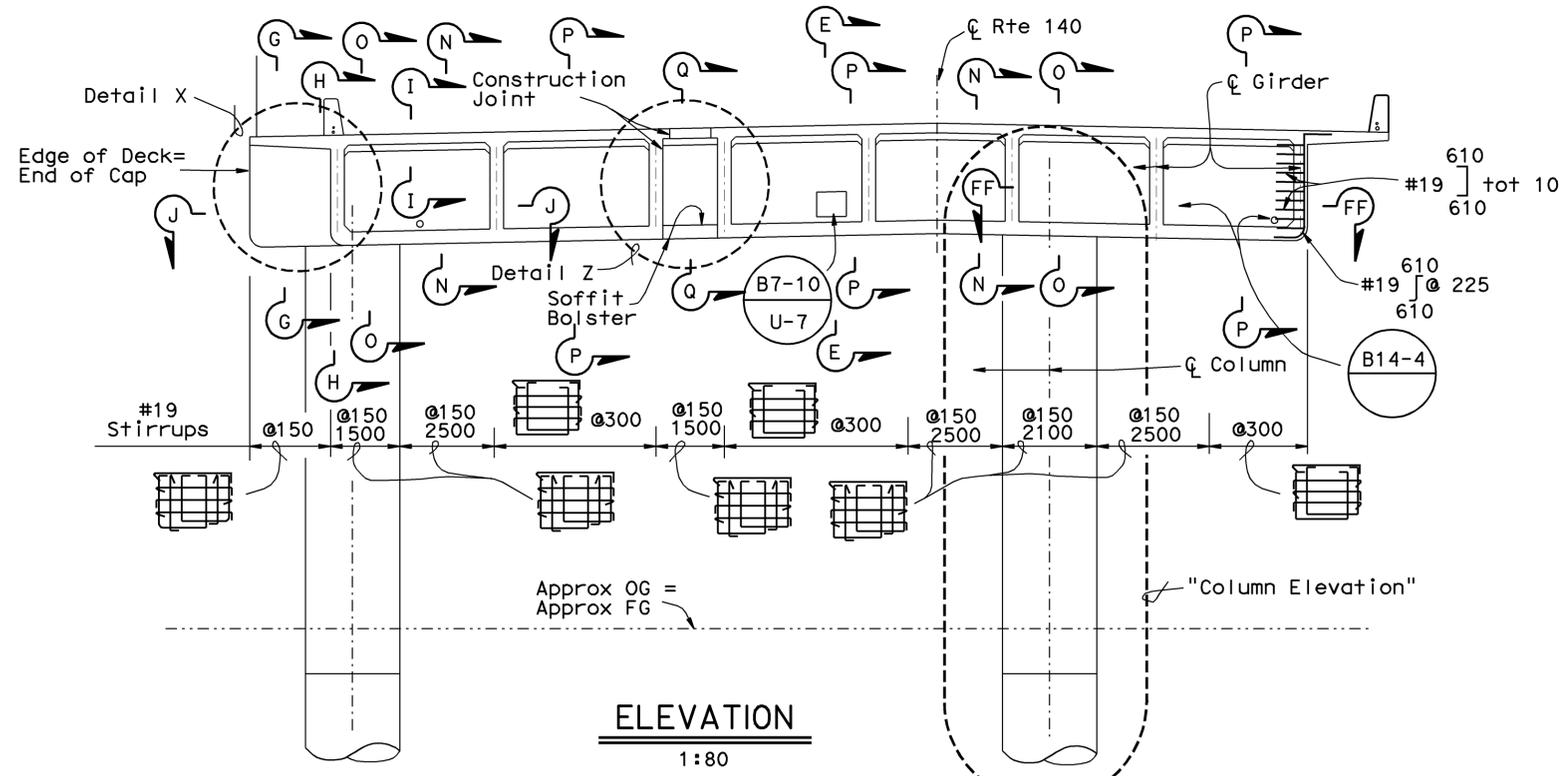
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PLAN
1:80
NOTE:
Top Reinforcement
Deck drains not shown



PLAN
1:80
NOTE:
Bottom Reinforcement
Deck drains not shown



ELEVATION
1:80

BENT 3

- NOTES:**
- For Sections N-N, O-O, P-P and Q-Q See "Bent Details No. 2" sheet
 - For Sections E-E, see "Bent Details No. 5" sheet
 - For Sections FF-FF, see "Bent Details No. 6" sheet
 - For Sections G-G, H-H, see "Bent Details No. 9" sheet
 - For Section I-I, see "Bent Details No. 9" sheet
 - For Sections J-J, See "Bent Details No. 7" sheet
 - For Detail X, see "Bent Details No. 7" Sheet
 - For Detail Y, see "Bent Details No. 10" Sheet
 - For Detail Z, see "Bent Details No. 10" sheet
 - For "Column Elevation", See "Bent Details No. 17" sheet
 - Denotes reinf bundled vertically
 - All cap reinforcement is #43, except as noted
 - Soffit Mounted Luminaires Not Shown



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
BENT LAYOUT No. 2

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

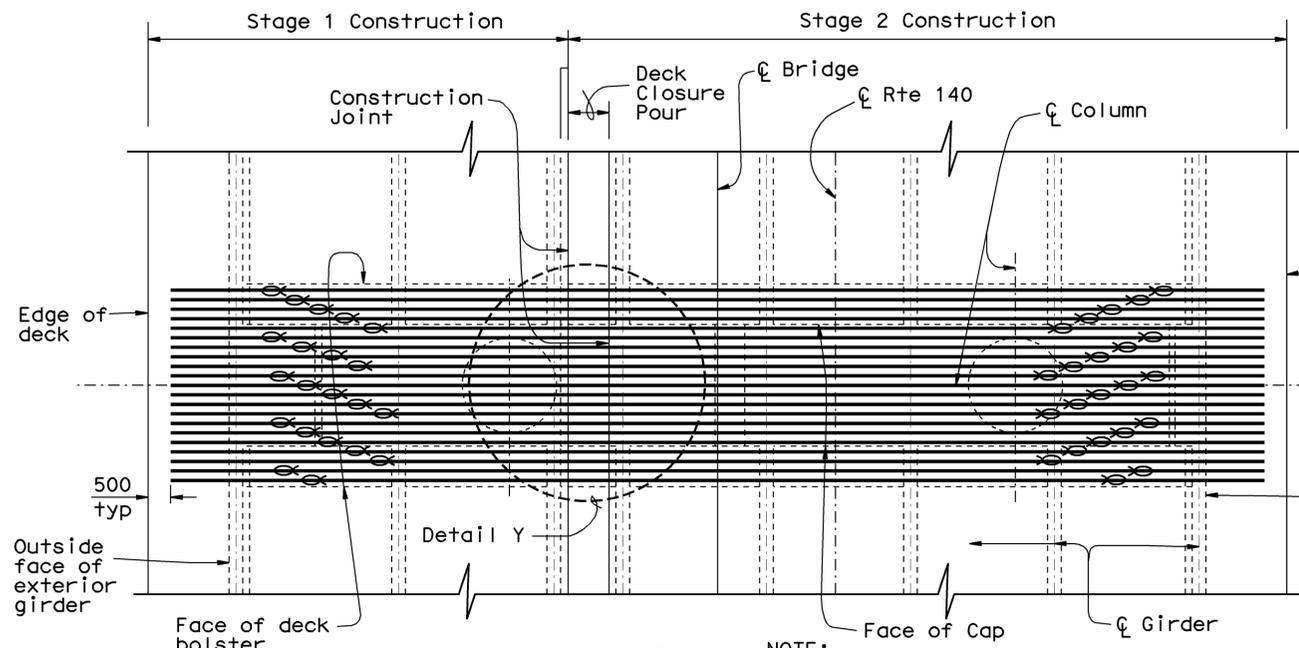


CU 10
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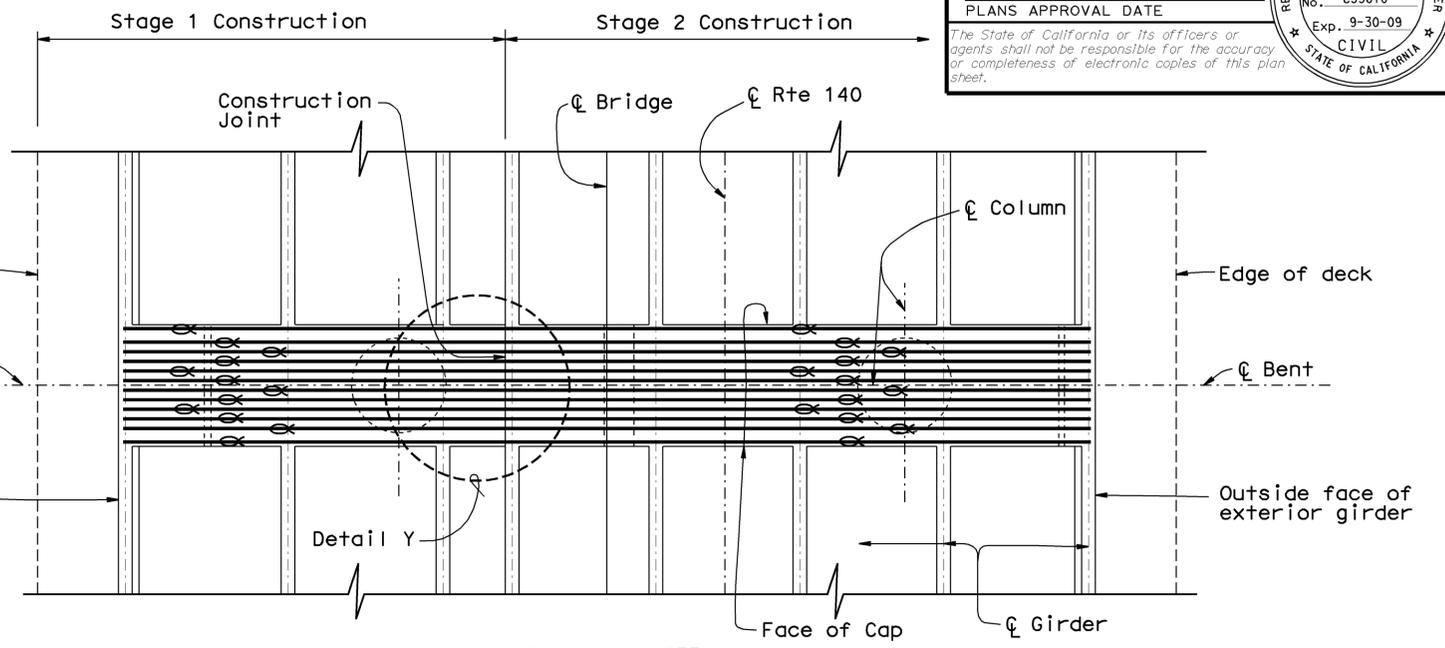
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REVISION DATES	10-11-05	12-1-05							
SHEET	28								
OF	94								

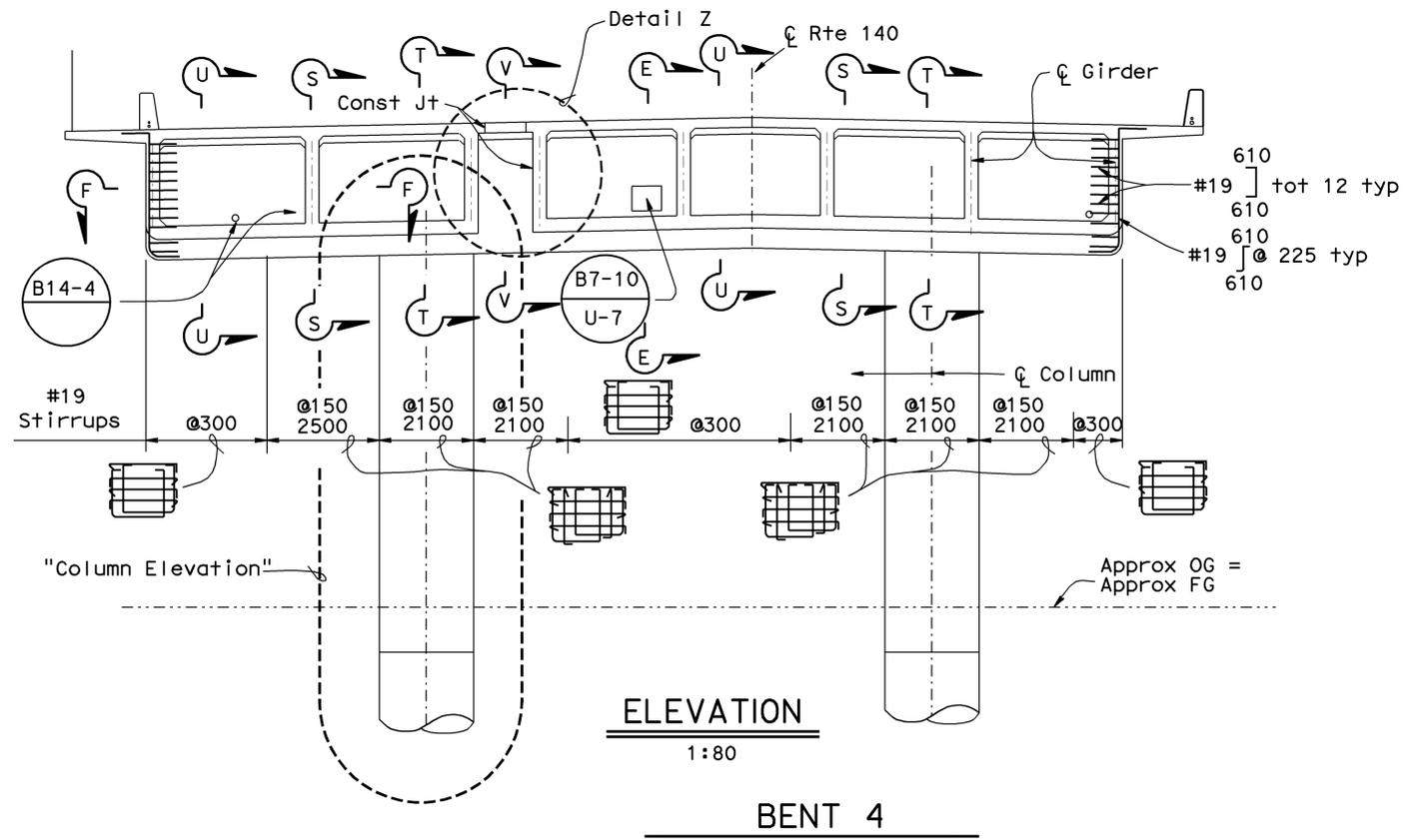
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	266	384
			11-18-08		
			REGISTERED CIVIL ENGINEER DATE		
			3-2-09		
			PLANS APPROVAL DATE		



PLAN
1:80
NOTE:
Top reinforcement shown
Deck drains not shown



PLAN
1:80
NOTE:
Bottom reinforcement shown
Deck drains not shown



ELEVATION
1:80
BENT 4

- NOTES:**
- For Sections S-S Through Section V-V See "Bent Details No. 3" sheet.
 - For Section E-E, see "Bent Details No. 5" sheet.
 - For Section F-F, see "Bent Details No. 6" sheet
 - For "Detail Y", see "Bent Details No. 11" Sheet
 - For Detail Z, see "Bent Details No. 11" sheet
 - For "Column Elevation", See "Bent Details No. 17" sheet.
 - Denotes bundled reinforcement. Top reinf bundled vertically. Bottom reinf bundled horizontally
 - All main cap top reinforcement is #57, all main cap bottom reinforcement is #43, except as noted
 - Soffit Mounted Luminaires Not Shown
 - For Pier Protection Wall Details, see See "Bent Details No. 19" sheet.
 - For Camber Diagram, see "Bent Details No. 16" Sheet



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DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) BENT LAYOUT No. 3
KILOMETER POST	59.66	

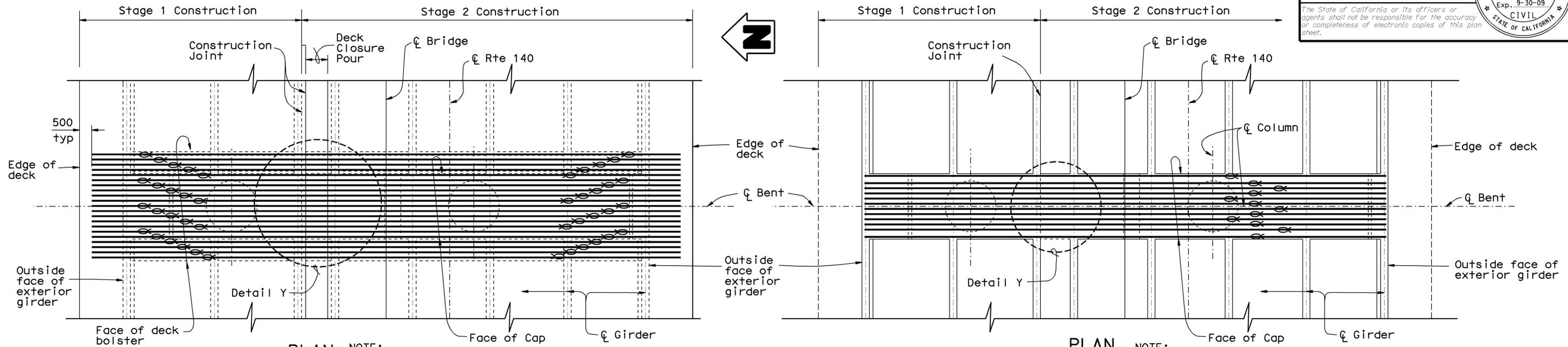
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EA 3A66U1

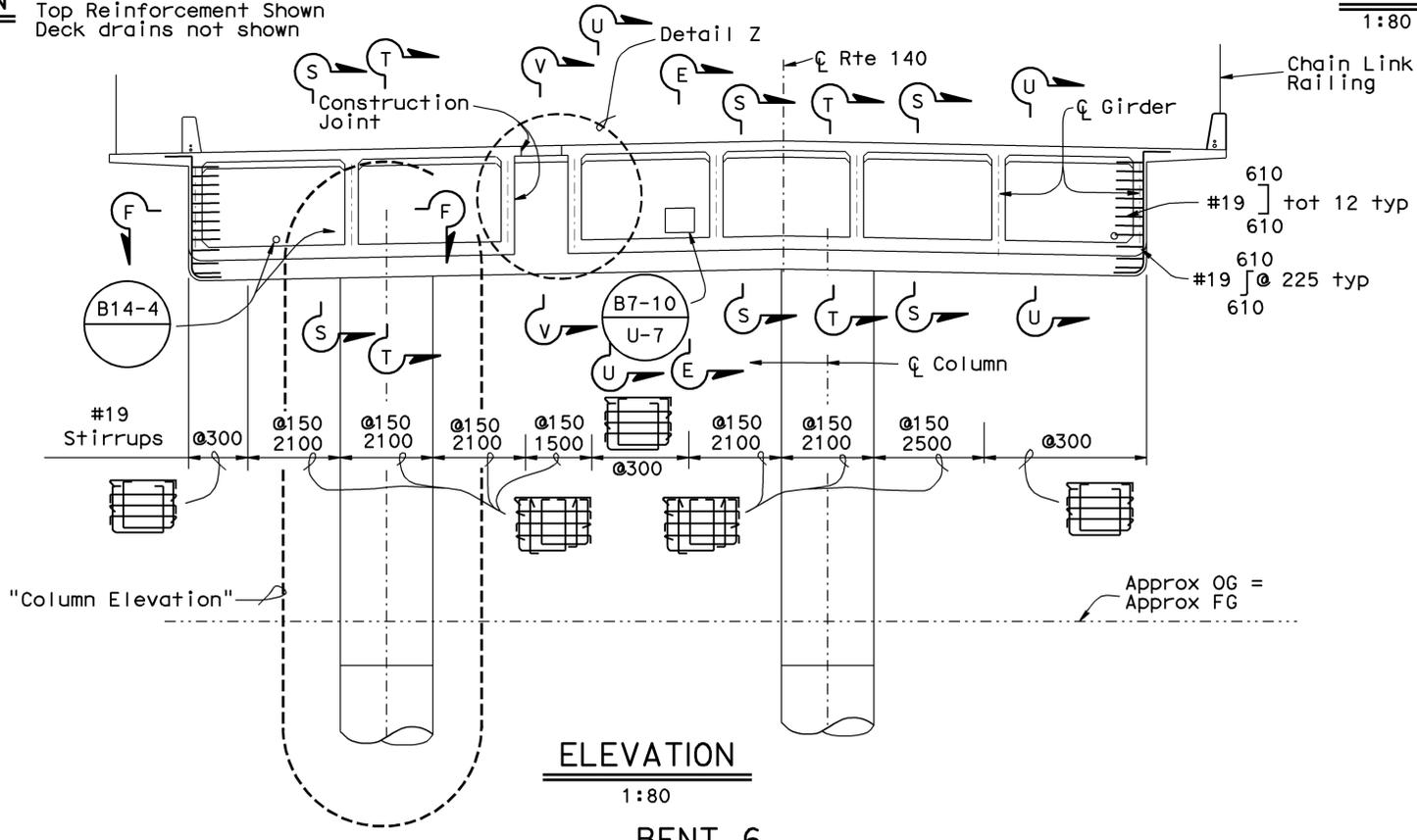
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	267	384
			11-18-08		
			REGISTERED CIVIL ENGINEER DATE		
			3-2-09		
			PLANS APPROVAL DATE		



PLAN
1:80
NOTE: Top Reinforcement Shown
Deck drains not shown

PLAN
1:80
NOTE: Bottom Reinforcement Shown
Deck drains not shown



ELEVATION
1:80
BENT 6

NOTES:

- For Sections S-S Through Section V-V See "Bent Details No. 3" sheet.
- For Section E-E, see "Bent Details No. 5" sheet.
- For Section F-F, see "Bent Details No. 6" sheet
- For "Detail Y", see "Bent Details No. 10" and "Bent Details No. 11" Sheets
- For "Detail Z", see "Bent Details No. 10" and "Bent Details No. 11" Sheets
- For "Column Elevation", See "Bent Details No. 17" sheet.
- Denotes bundled reinforcement. Top reinf bundled vertically. Bottom reinf bundled horizontally
- All main cap top reinforcement is #57, all main cap bottom reinforcement is #43, except as noted
- For Pier Protection Wall Details, see See "Bent Details No. 19" sheet.
- For Camber Diagram, see "Bent Details No. 16" sheet.



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE)
KILOMETER POST	59.66	
		BENT LAYOUT No. 4

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

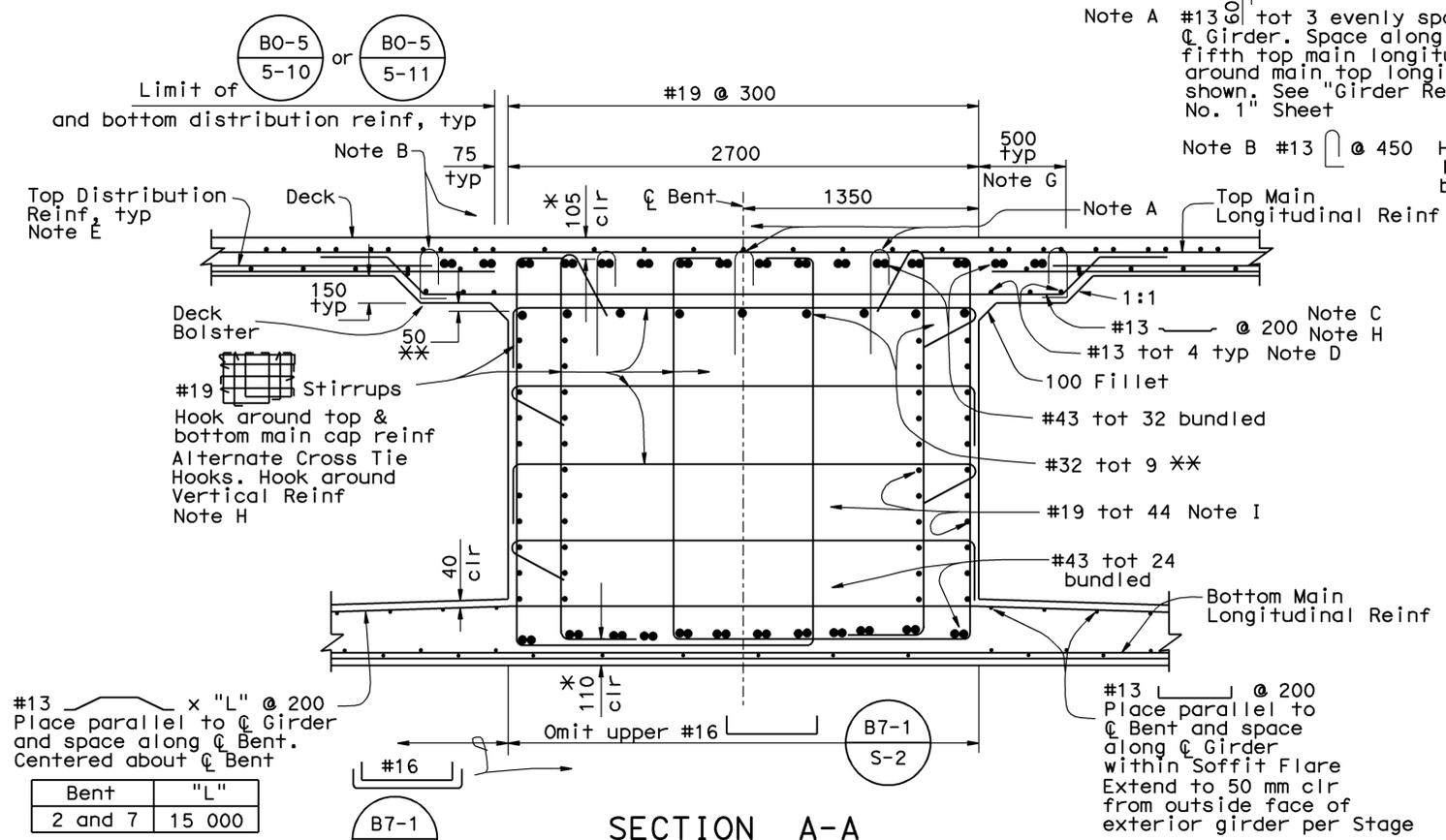
CU 10
EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES	10-1-05	12-1-05	11-18-08	SHEET 30 OF 94
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	269	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
 PLANS APPROVAL DATE
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

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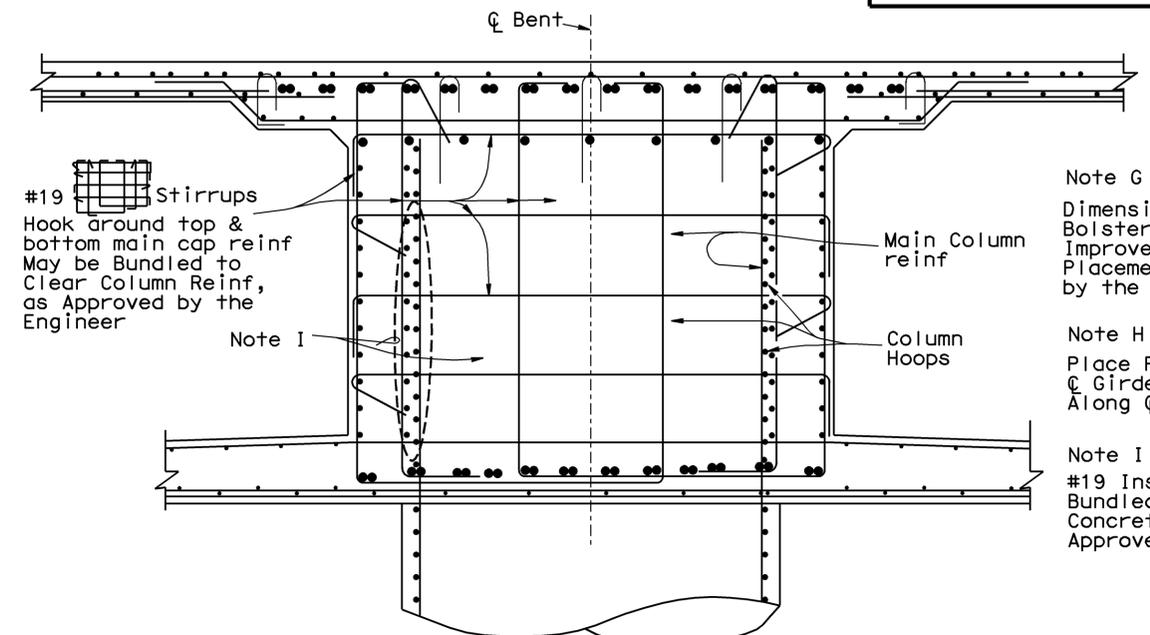


SECTION A-A
1:20

Place to 50 mm clr from outside face of exterior girder per Stage

Bent	"L"
2 and 7	15 000

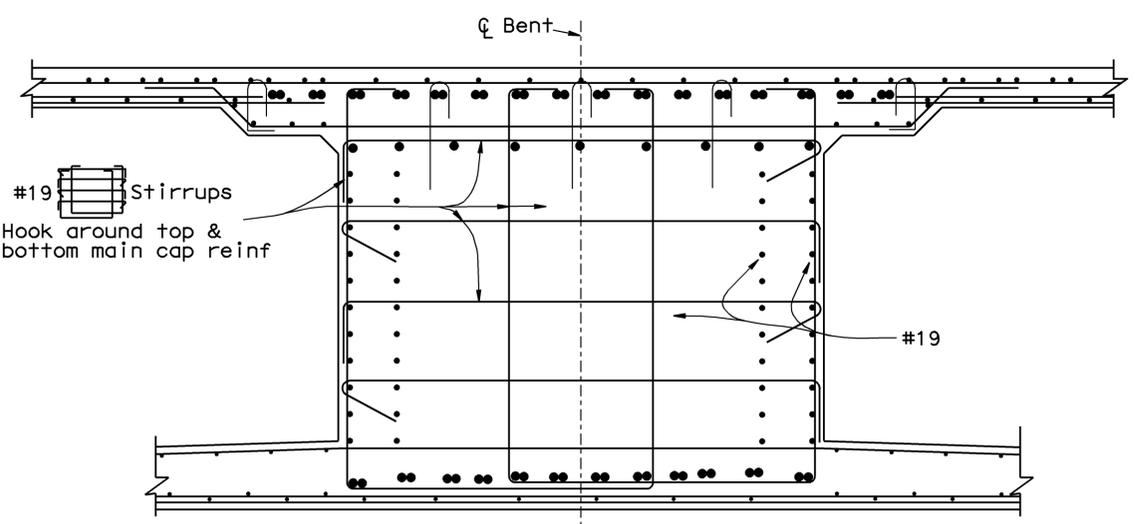
- NOTES:
- * Clearance to main cap reinforcement
 - ** Reinforcement may be lowered to clear Prestressing ducts. Place as high as Prestressing ducts will allow



SECTION B-B
1:20

NOTE: For details not shown, see Section A-A

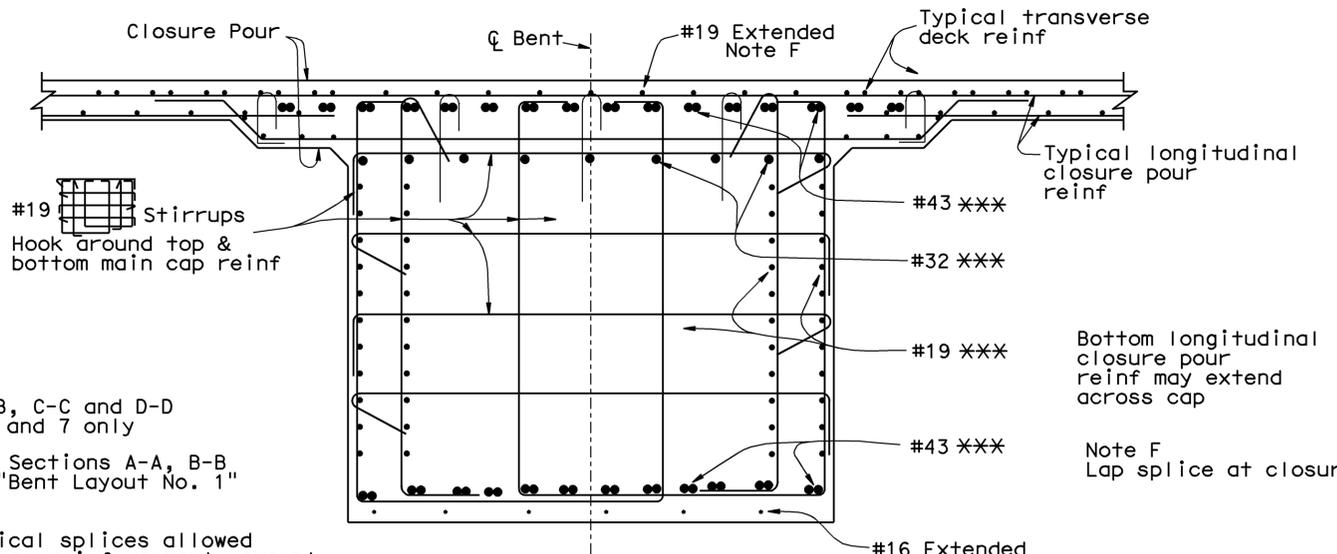
- Note G
Dimension of Deck Bolster may Vary, to Improve Concrete Placement, as Approved by the Engineer
- Note H
Place Parallel to ϕ Girder and Space Along ϕ Bent
- Note I
#19 Inside Mat may be Bundled, to Improve Concrete Placement, as Approved by the Engineer



SECTION C-C
1:20

NOTE: For details not shown, see Section A-A

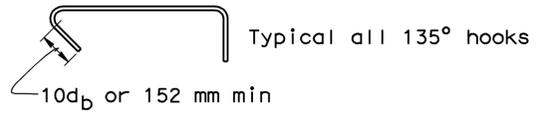
NOTE:
CARE SHALL BE TAKEN IN THE PLACEMENT OF THE MAIN COLUMN REINFORCEMENT AT THE BENT CAP INTERFACE, TO ALLOW FOR CORRECT ALIGNMENT AND SPACING OF THE BOTTOM MAIN CAP REINFORCEMENT AS SHOWN. FOR DETAILS, SEE SECTION F-F ON "BENT DETAILS No. 6" SHEET



SECTION D-D
1:20

NOTE: For details not shown, see Section A-A
*** Mechanically connected between Stage 1 and Stage 2. See "Bent Details No. 10" Sheet

- NOTES:
- Sections A-A, B-B, C-C and D-D apply to Bents 2 and 7 only
 - For locations of Sections A-A, B-B, C-C and D-D see "Bent Layout No. 1" sheet
 - No lap or mechanical splices allowed in longitudinal cap reinforcement, except at construction joint. Adjust to clear main column reinforcement



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
BENT DETAILS No. 1

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



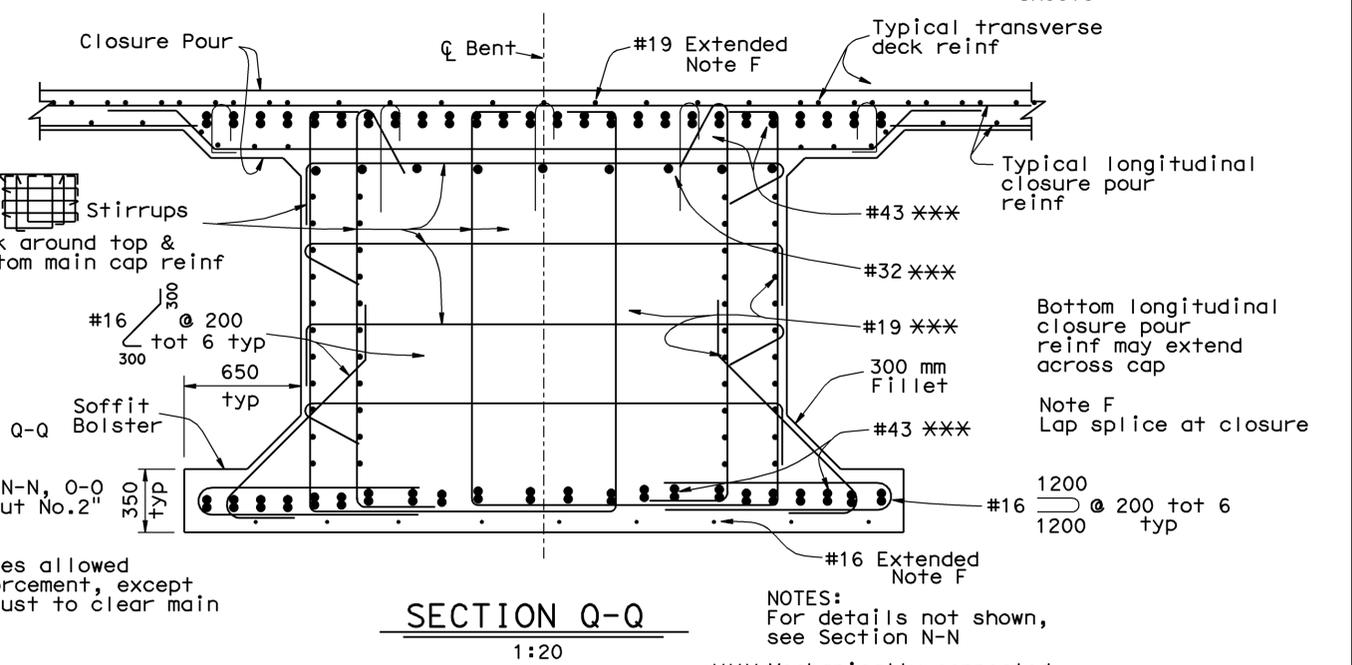
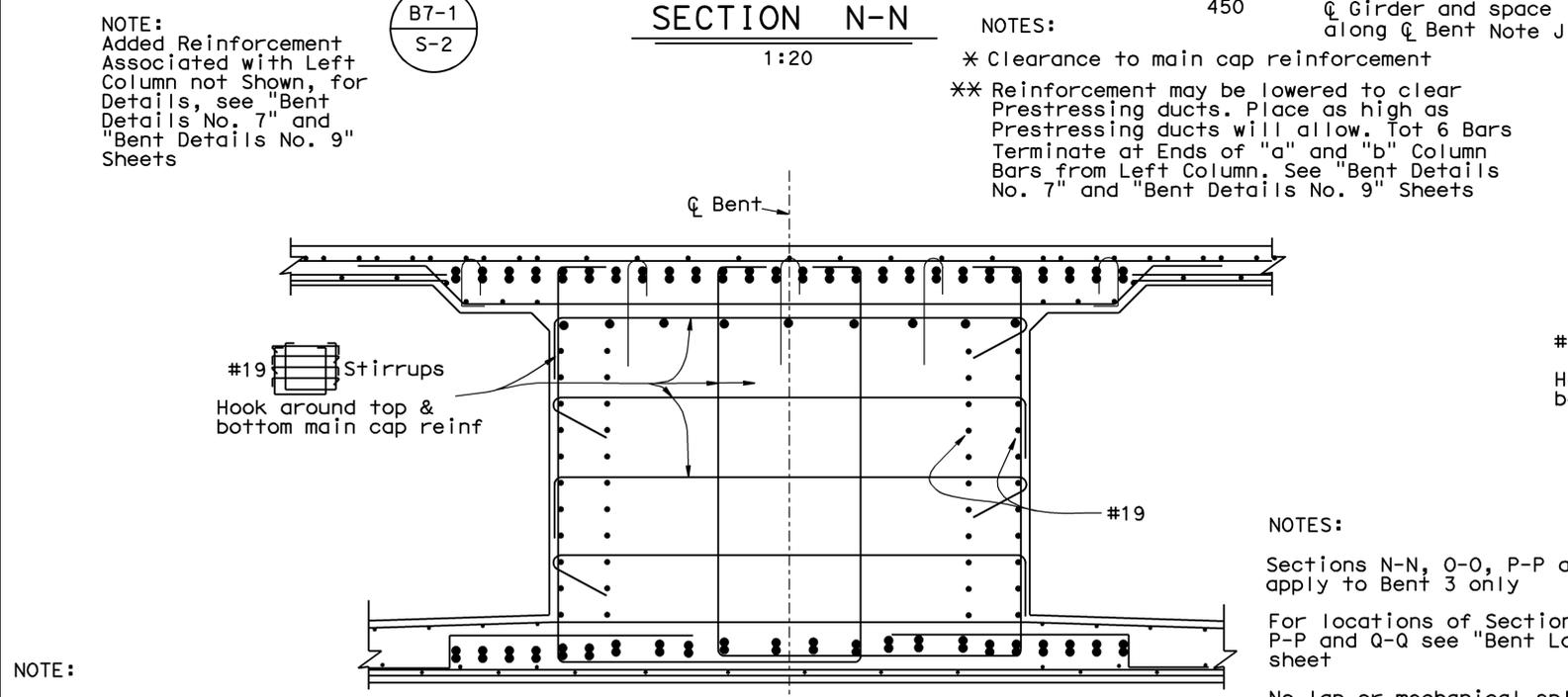
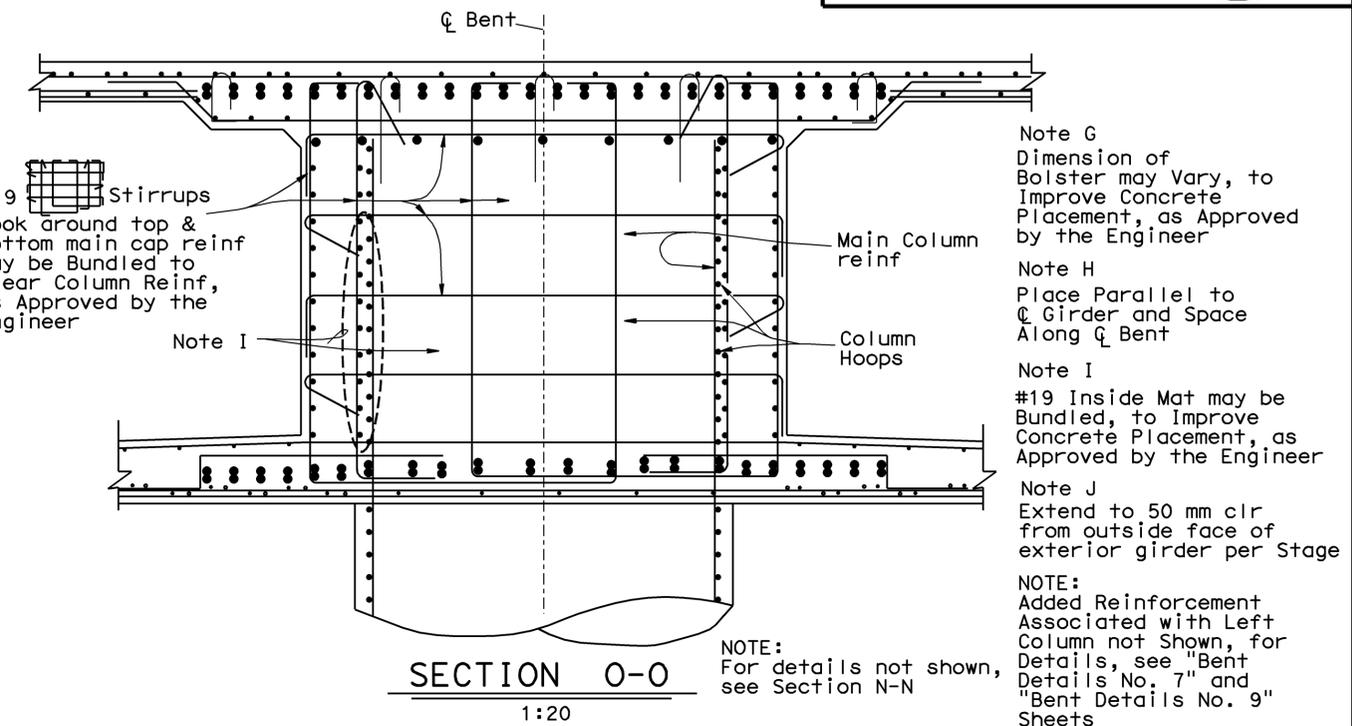
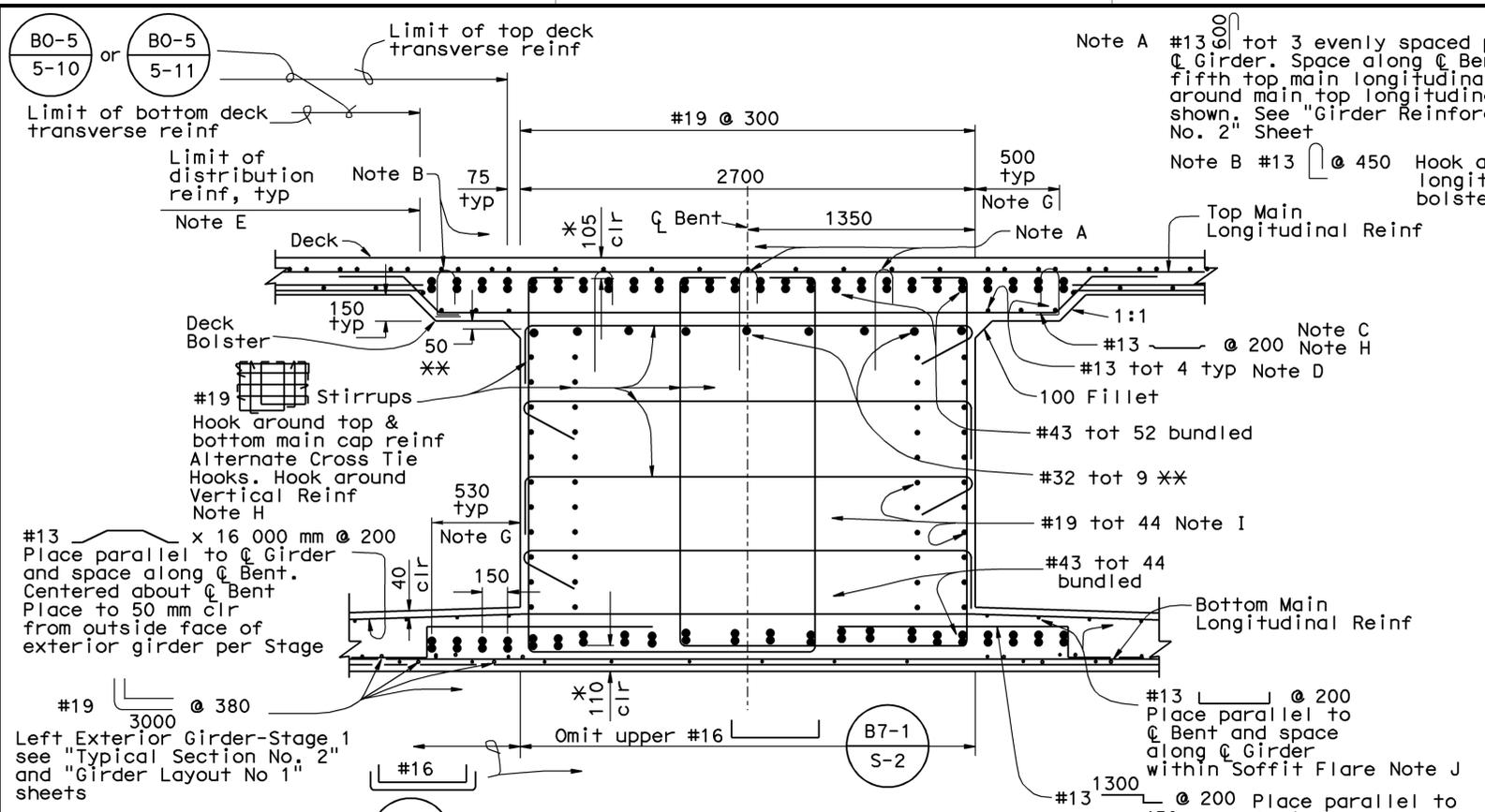
CU 10
EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET 32	OF 94
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	270	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
 PLANS APPROVAL DATE
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA



NOTE:
Added Reinforcement Associated with Left Column not Shown, for Details, see "Bent Details No. 7" and "Bent Details No. 9" Sheets

NOTE:
* Clearance to main cap reinforcement
** Reinforcement may be lowered to clear Prestressing ducts. Place as high as Prestressing ducts will allow. Tot 6 Bars Terminate at Ends of "a" and "b" Column Bars from Left Column. See "Bent Details No. 7" and "Bent Details No. 9" Sheets

NOTE:
CARE SHALL BE TAKEN IN THE PLACEMENT OF THE MAIN COLUMN REINFORCEMENT AT THE BENT CAP INTERFACE, TO ALLOW FOR CORRECT ALIGNMENT AND SPACING OF THE BOTTOM MAIN CAP REINFORCEMENT AS SHOWN. FOR DETAILS, SEE SECTION FF-FF ON "BENT DETAILS No. 6" AND SECTION J-J ON "BENT DETAILS No. 7" SHEET

NOTE:
For details not shown, see Section N-N

NOTE:
For details not shown, see Section N-N

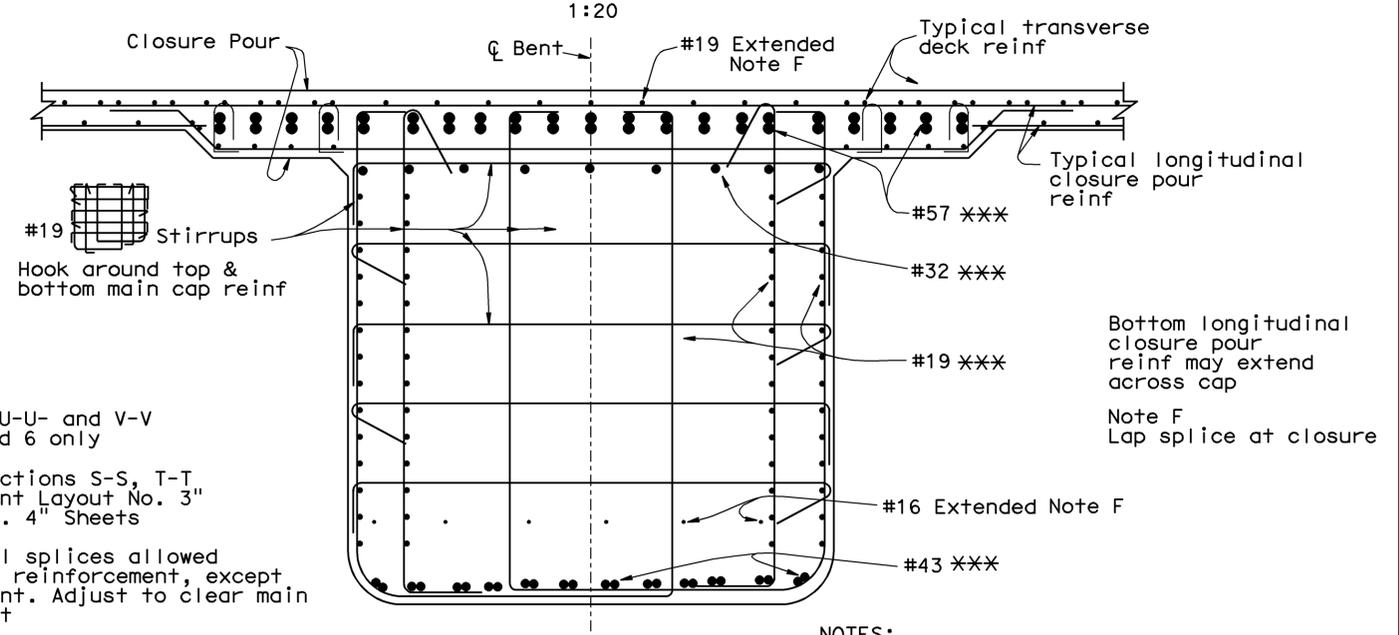
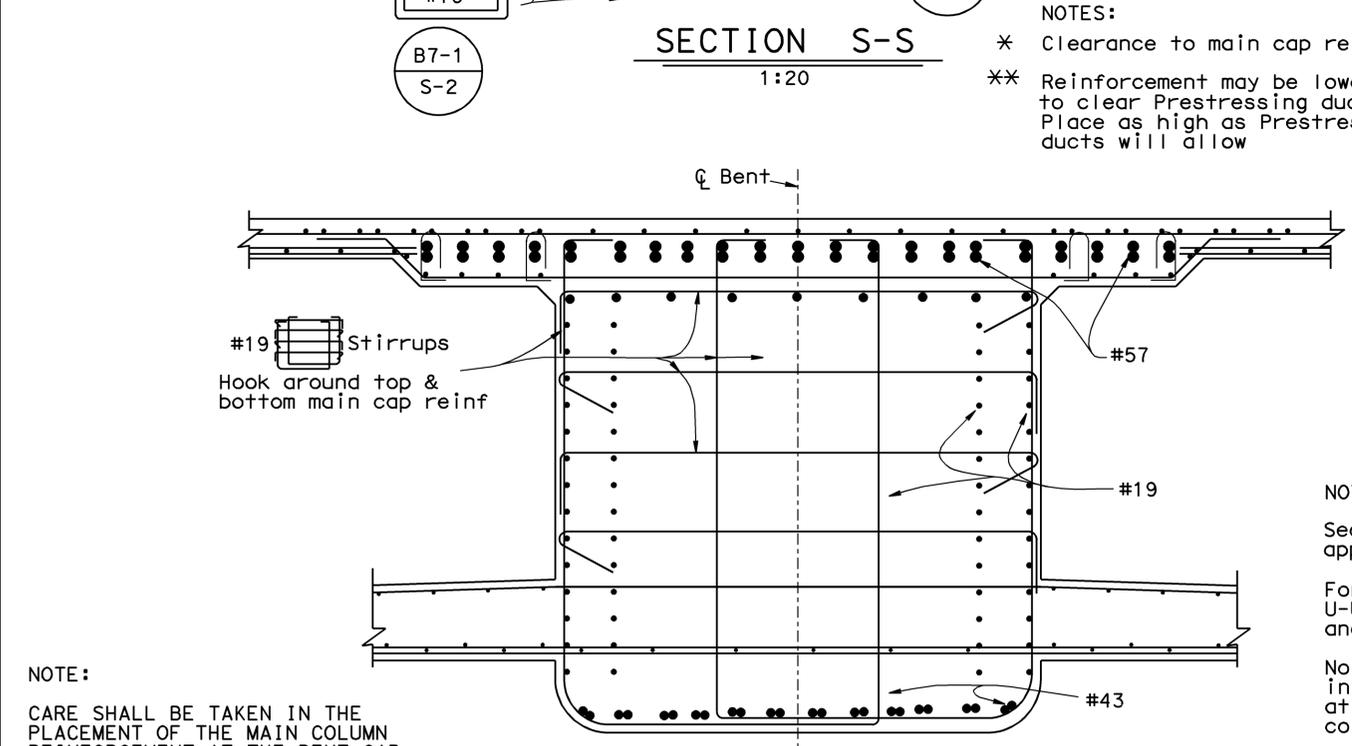
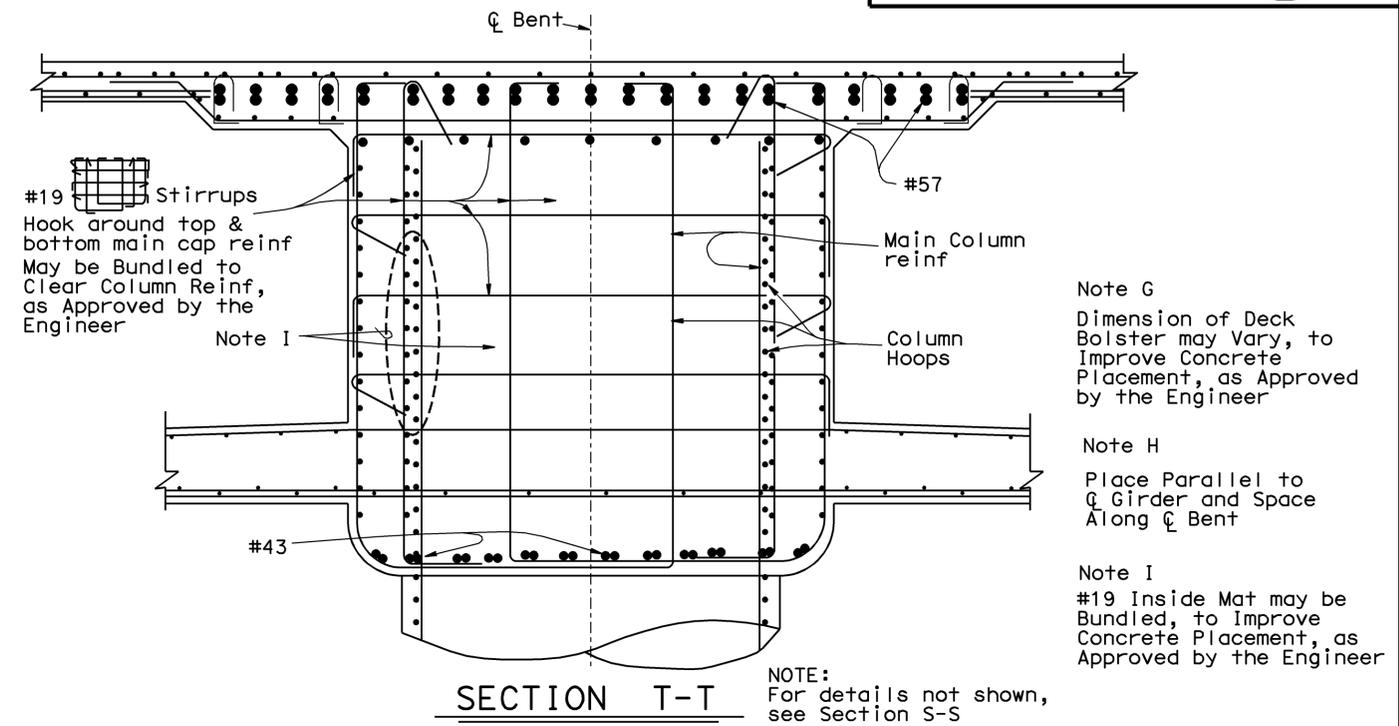
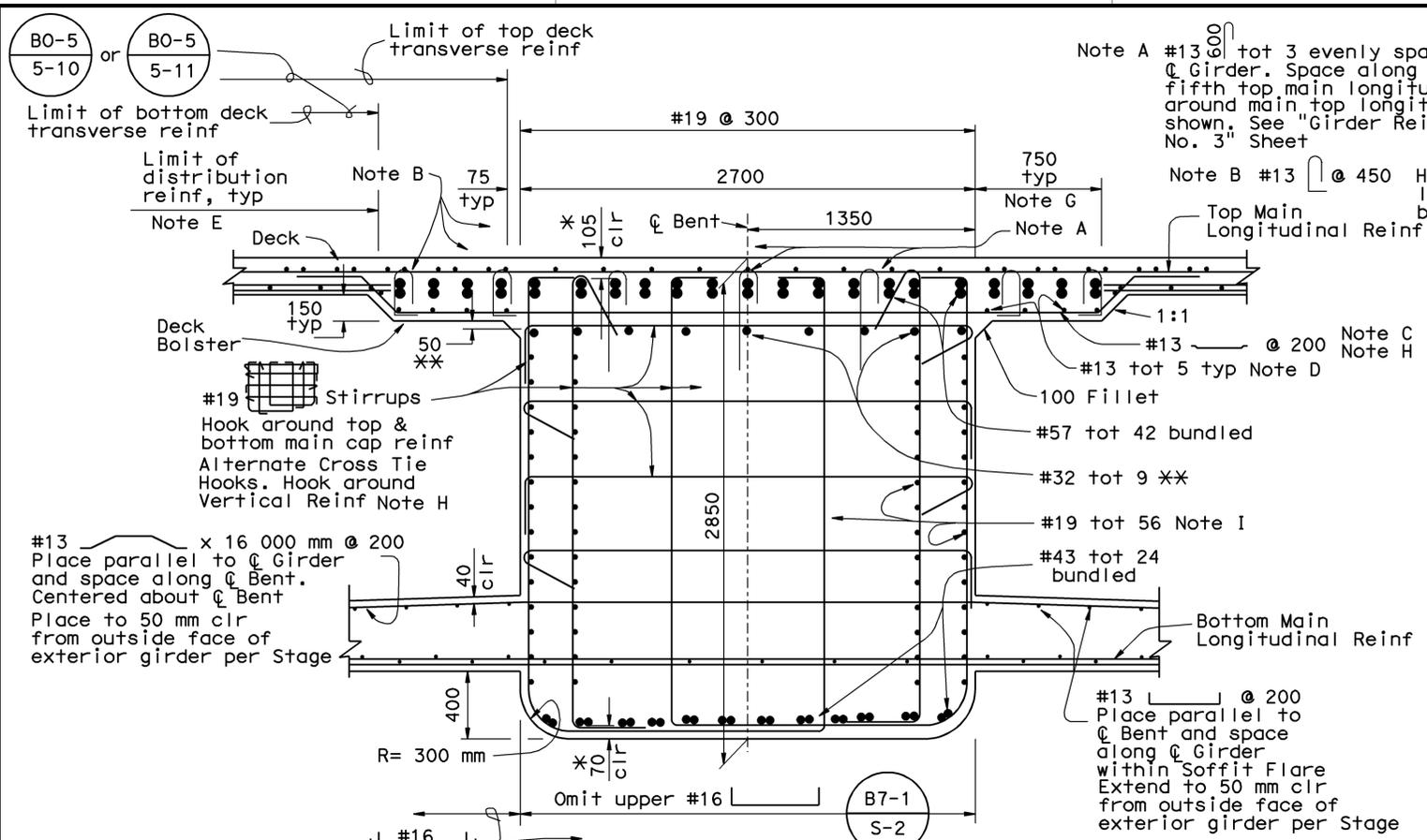
NOTE:
*** Mechanically connected between Stage 1 and Stage 2. See "Bent Details No. 10" Sheet

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) BENT DETAILS No. 2
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05					

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
 ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS
 CU 10 EA 3A66U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES
 SHEET 33 OF 94
 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	271	384

9-30-08
 REGISTERED CIVIL ENGINEER DATE
 3-2-09
 PLANS APPROVAL DATE
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA



NOTE:
 CARE SHALL BE TAKEN IN THE PLACEMENT OF THE MAIN COLUMN REINFORCEMENT AT THE BENT CAP INTERFACE, TO ALLOW FOR CORRECT ALIGNMENT AND SPACING OF THE BOTTOM MAIN CAP REINFORCEMENT AS SHOWN. FOR DETAILS, SEE SECTION F-F ON "BENT DETAILS No. 7" SHEET

NOTE:
 For details not shown, see Section S-S

NOTE:
 Sections S-S, T-T, U-U and V-V apply to Bents 4 and 6 only
 For locations of Sections S-S, T-T, U-U and V-V see "Bent Layout No. 3" and "Bent Layout No. 4" Sheets
 No lap or mechanical splices allowed in longitudinal cap reinforcement, except at construction joint. Adjust to clear main column reinforcement

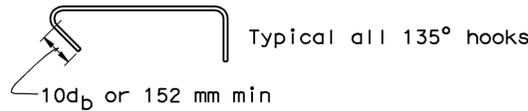
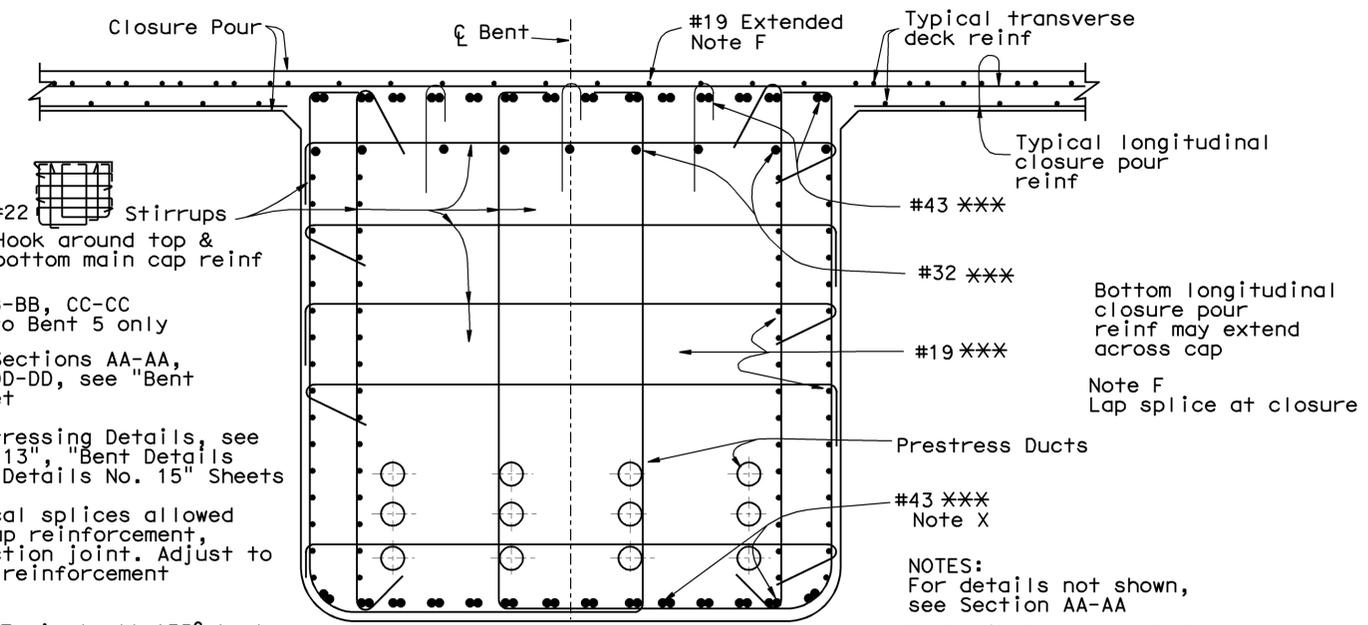
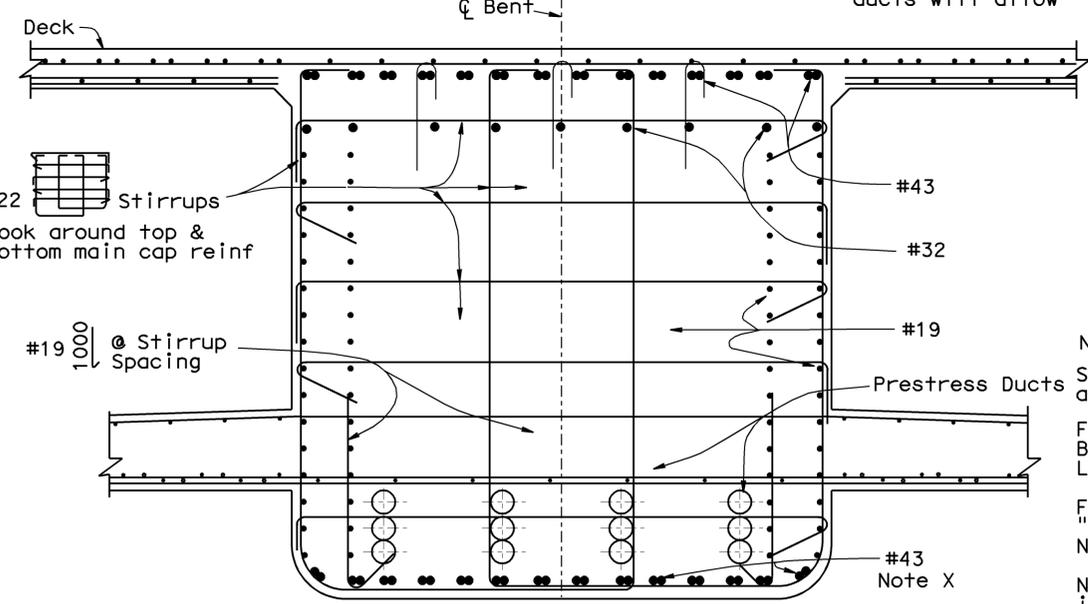
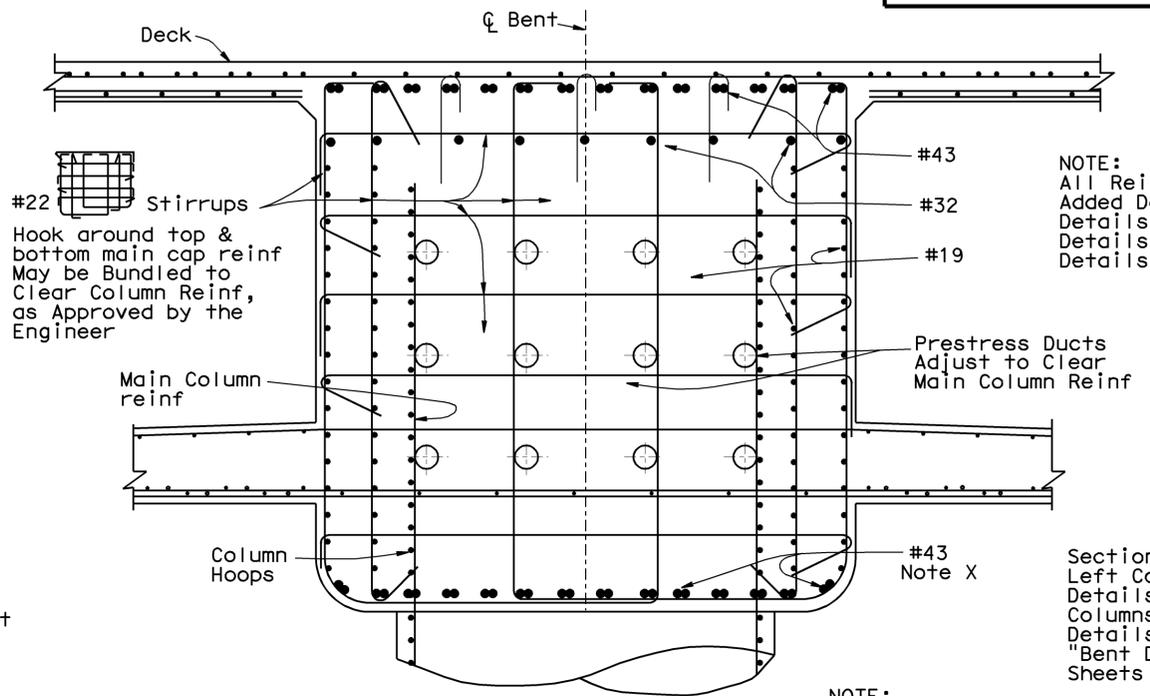
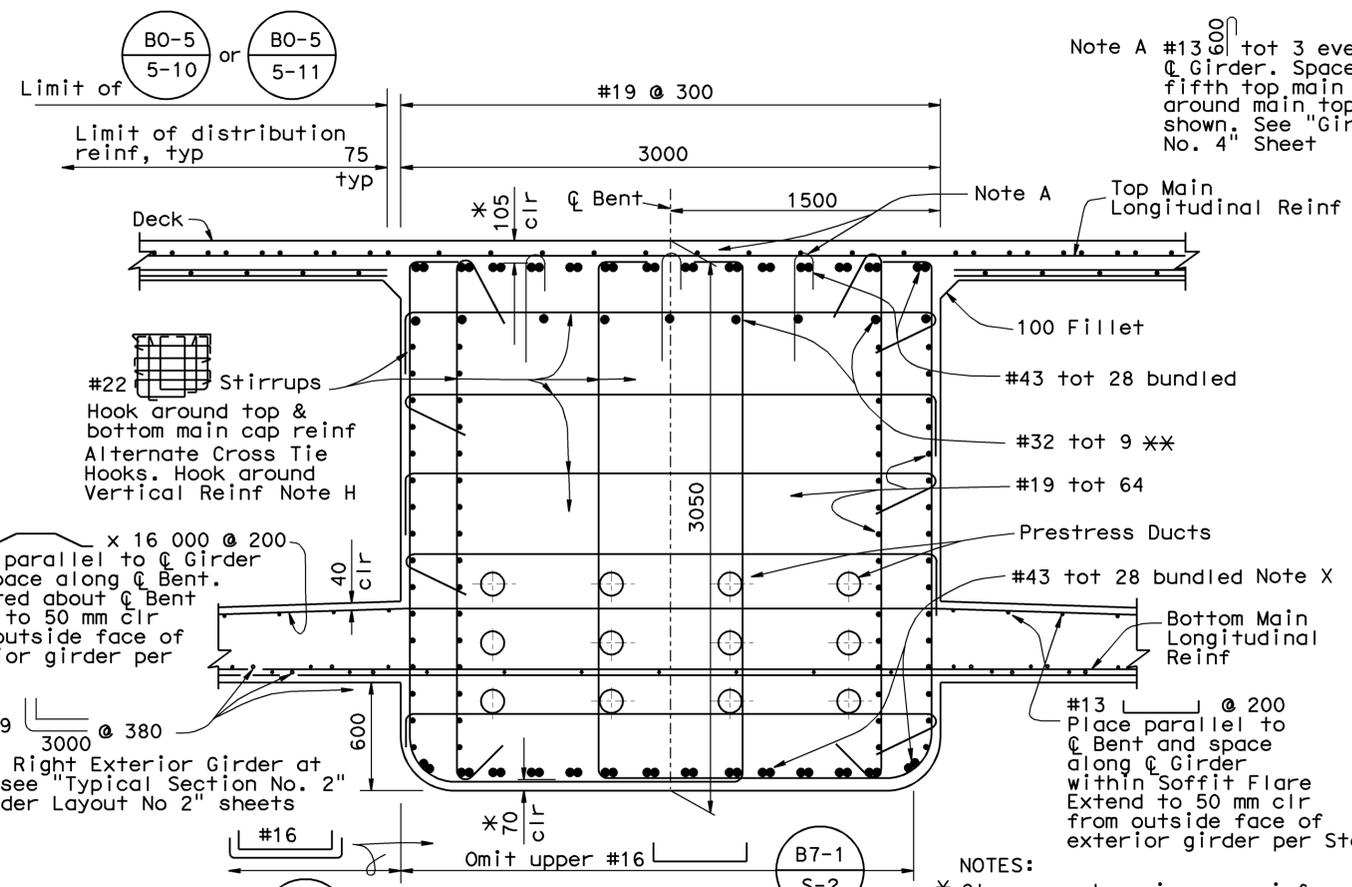
Typical all 135° hooks
 10d_b or 152 mm min

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) BENT DETAILS No. 3
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05					

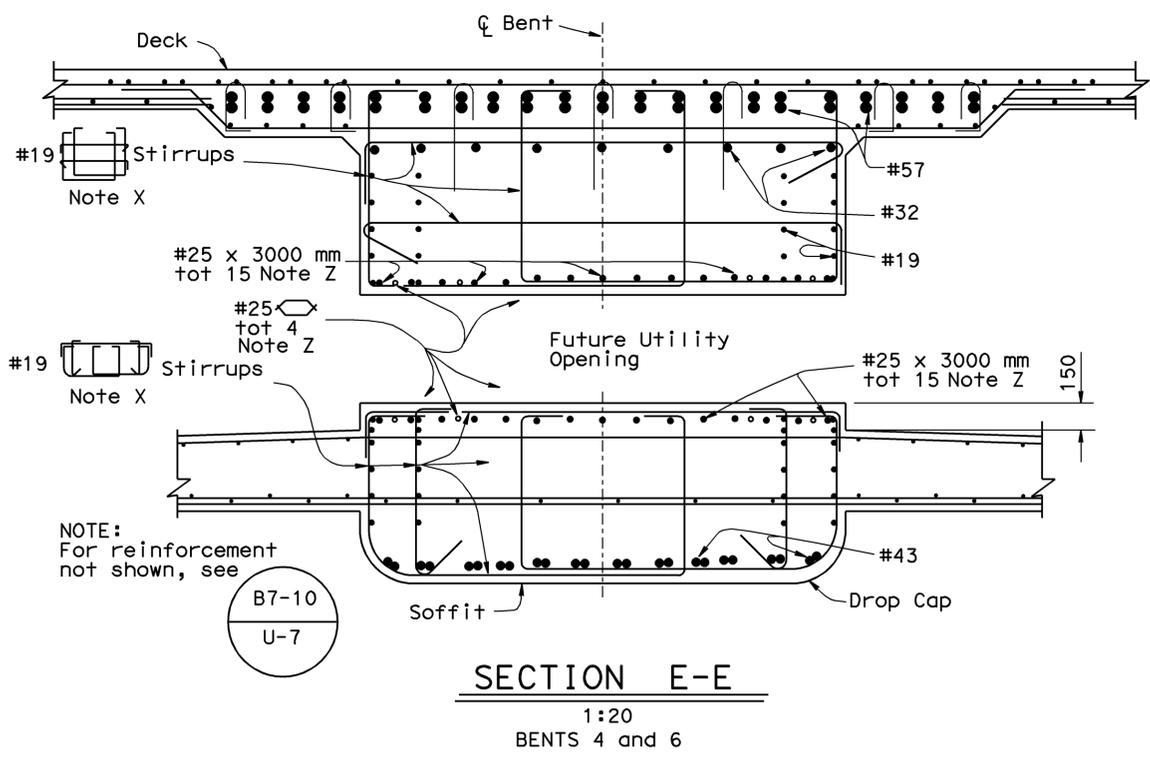
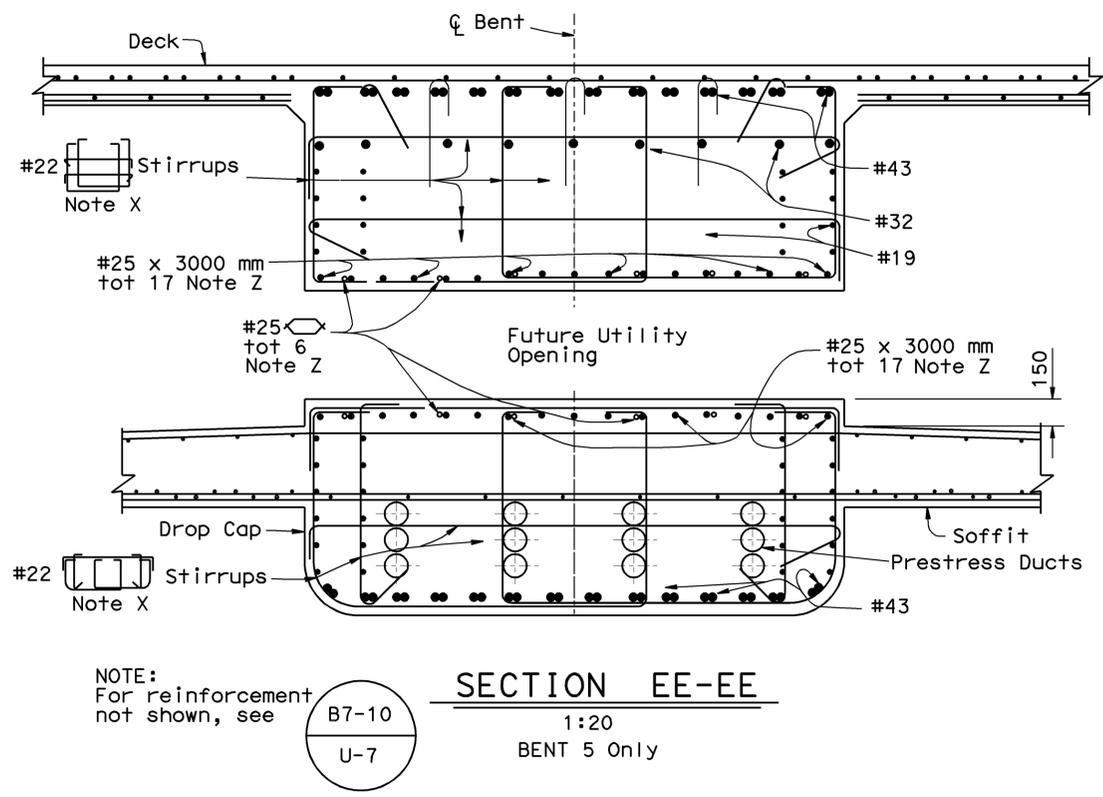
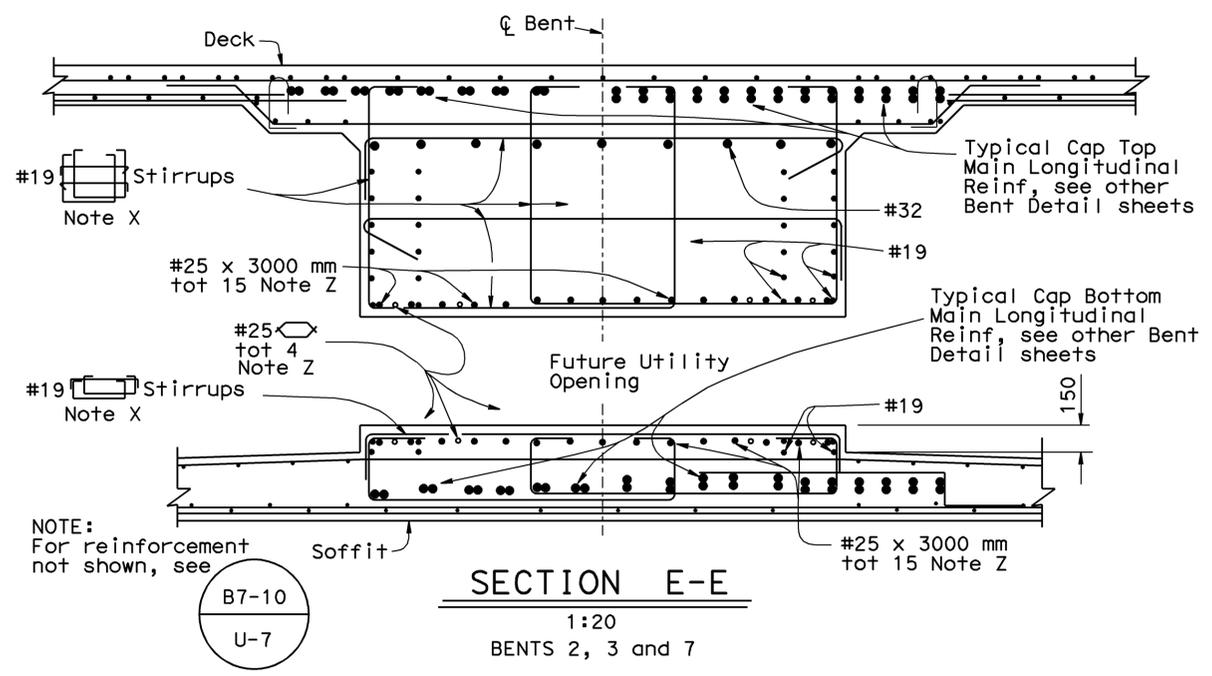
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
 ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS
 CU 10 EA 3A66U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES
 SHEET 34 OF 94
 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	272	384

11-18-08
 REGISTERED CIVIL ENGINEER DATE
 3-2-09
 PLANS APPROVAL DATE
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	273	384
			9-30-08	DATE	
			3-2-09	PLANS APPROVAL DATE	



NOTES:

For locations of Section E-E, see "Bent Layout No. 1", "Bent Layout No. 2", "Bent Layout No. 3" and "Bent Layout No. 4" sheets

For location of Section EE-EE, see "Bent Layout No. 5" sheet

No lap or mechanical splices allowed in longitudinal cap reinforcement, except at construction joint. Adjust to clear main column reinforcement

For details not shown, see other Bent Details sheets

Note X
Place at Main Stirrup Spacing. Hook Around Top Main Longitudinal Cap Reinf and Longit Opening Reinf. Alternate Cross Tie Hooks. Hook Around Vertical Reinf. Place Parallel to ϕ Girder and Space Along ϕ Bent

Note Z
Utility Opening Reinf may be Bundled to Improve Concrete Placement, as Approved by the Engineer



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) BENT DETAILS No. 5
KILOMETER POST	59.66	

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

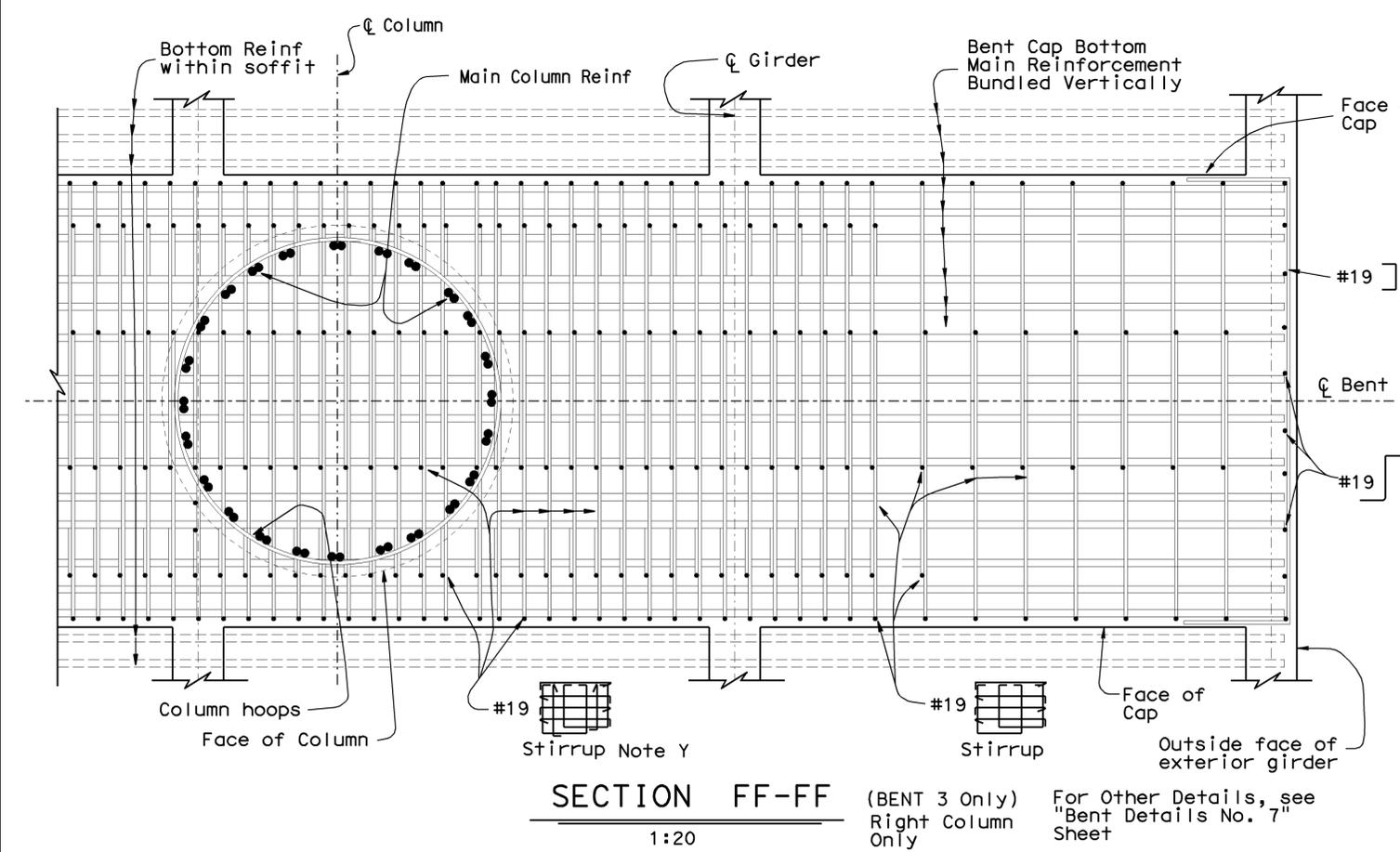
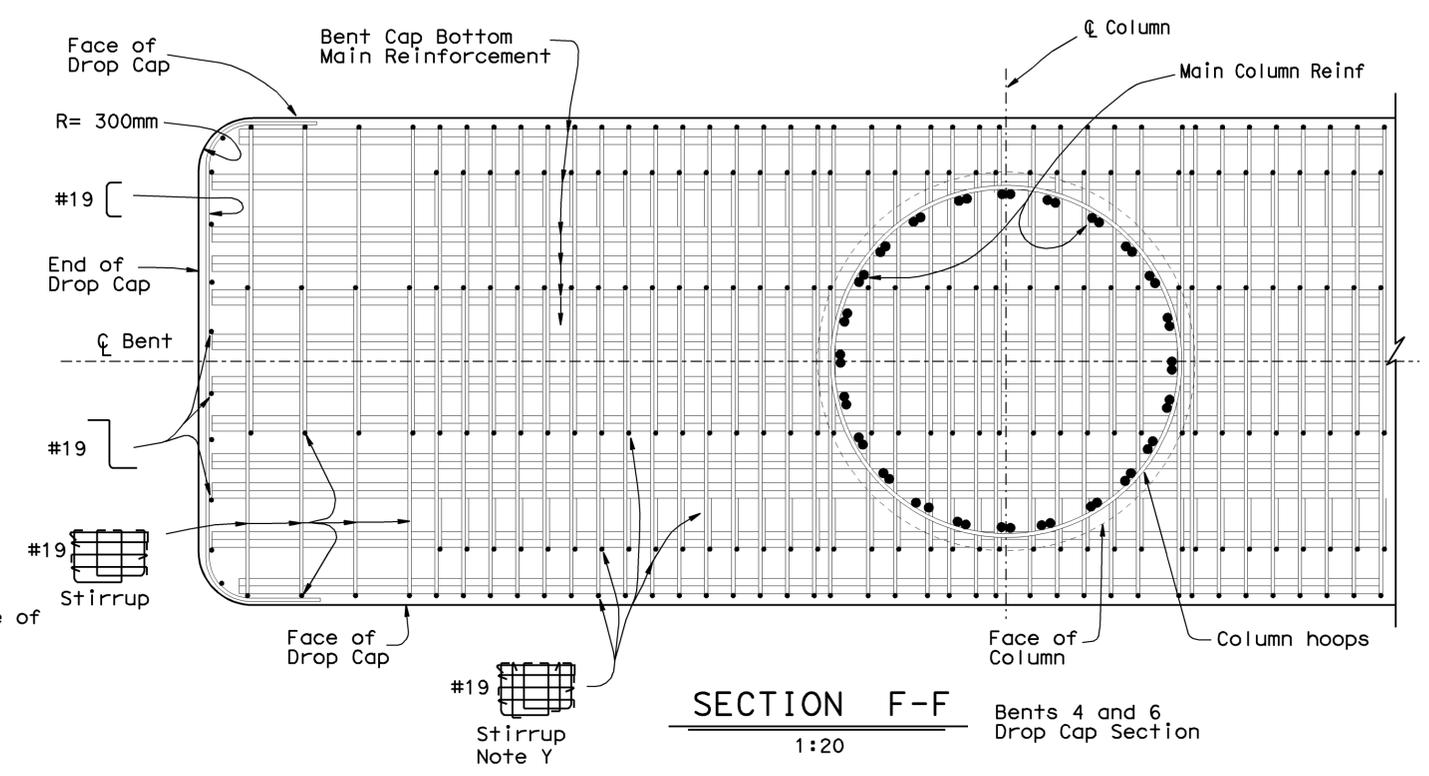
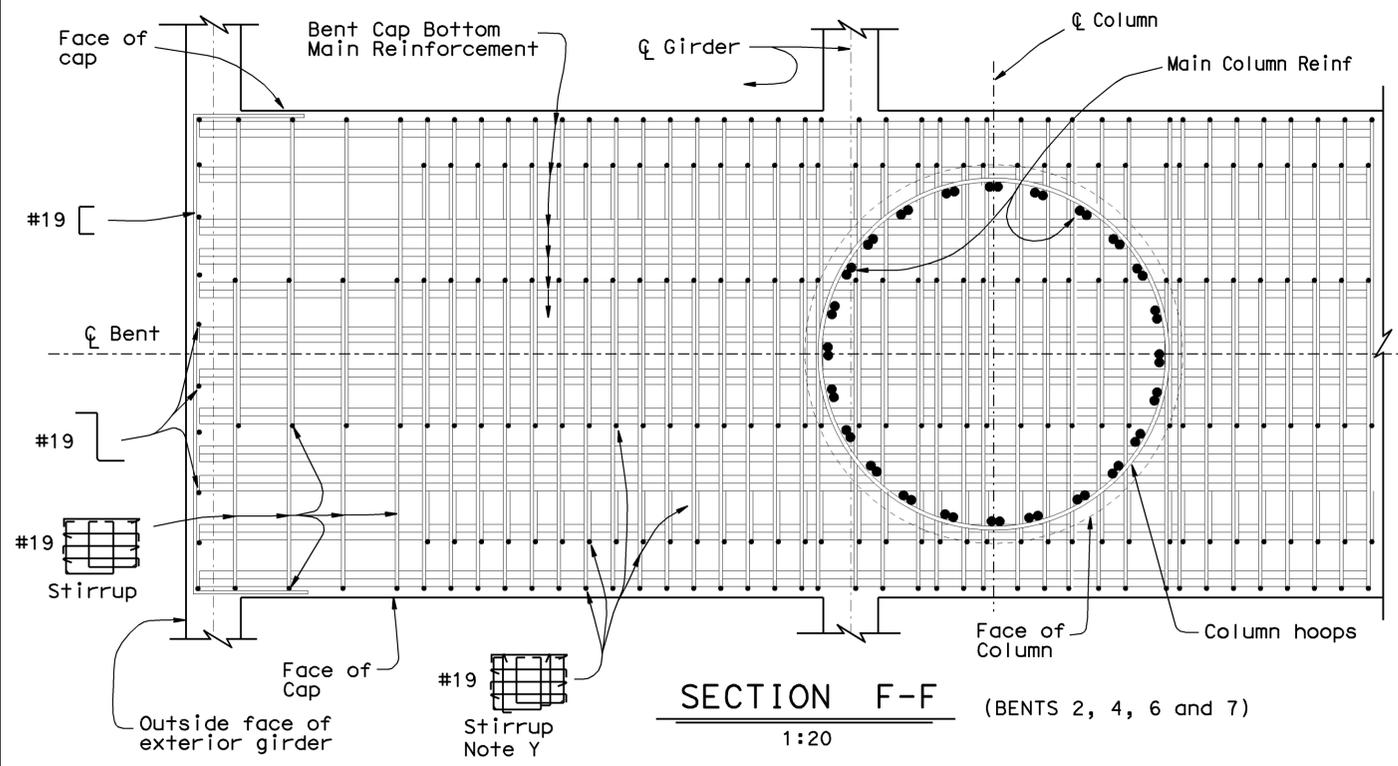


CU 10
EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 36 OF 94
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	274	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
 PLANS APPROVAL DATE
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA



NOTE:

CARE SHALL BE TAKEN IN THE PLACEMENT OF THE MAIN COLUMN REINFORCEMENT AT THE BENT CAP INTERFACE, TO ALLOW FOR CORRECT ALIGNMENT AND SPACING OF THE BOTTOM MAIN CAP REINFORCEMENT AS SHOWN. FOR DETAILS, SEE SECTIONS THROUGH CAP-COLUMN INTERFACES, ON BENT LAYOUT SHEETS

Note Y
Stirrups may be Bundled in Column Region to Clear Column Reinforcement

NOTES:

For locations of Section F-F, see "Bent Layout No. 1", "Bent Layout No. 2", "Bent Layout No. 3" and "Bent Layout No. 4" sheets

For location of Section FF-FF, see "Bent Layout No. 5" sheet

No lap or mechanical splices allowed in longitudinal cap reinforcement, except at construction joint. Adjust to clear main column reinforcement

For Details at Bent 5, see "Bent Details No. 8" and "Bent Details No. 14" Sheets

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) BENT DETAILS No. 6
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05			CU 10 EA 3A66U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	

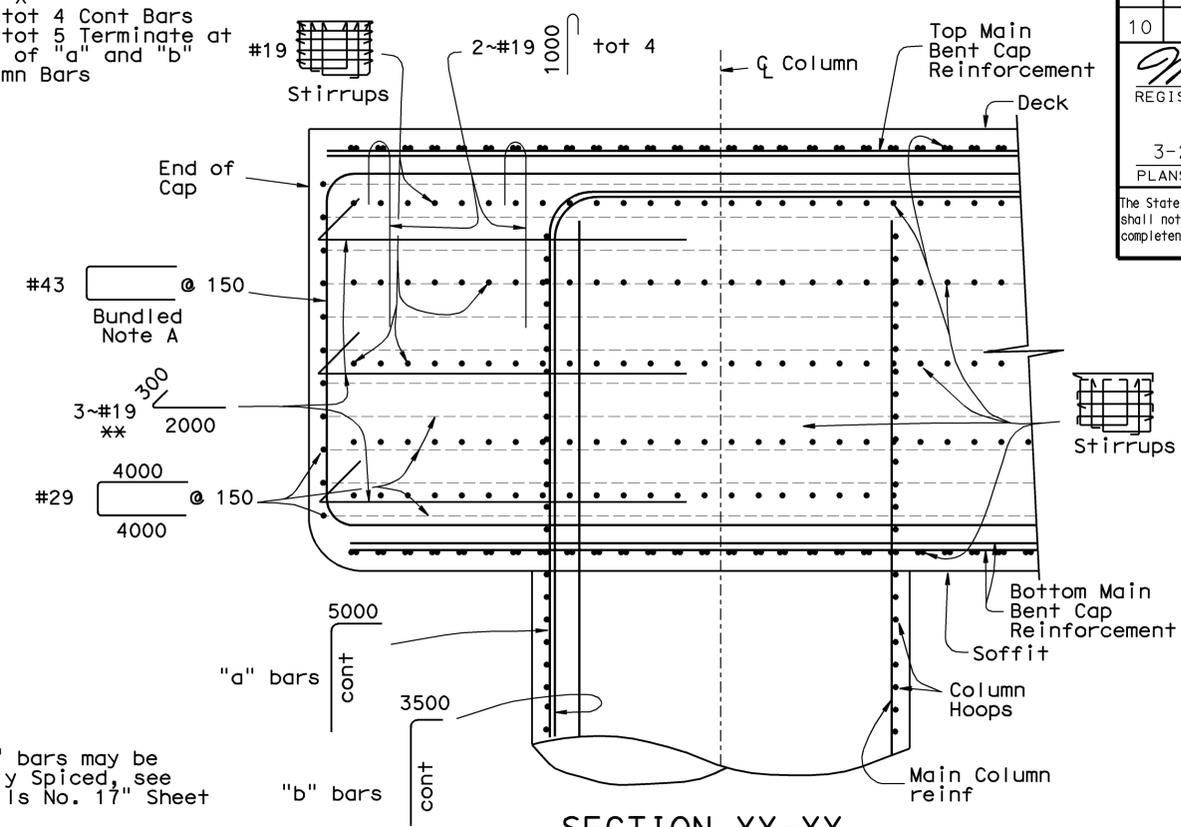
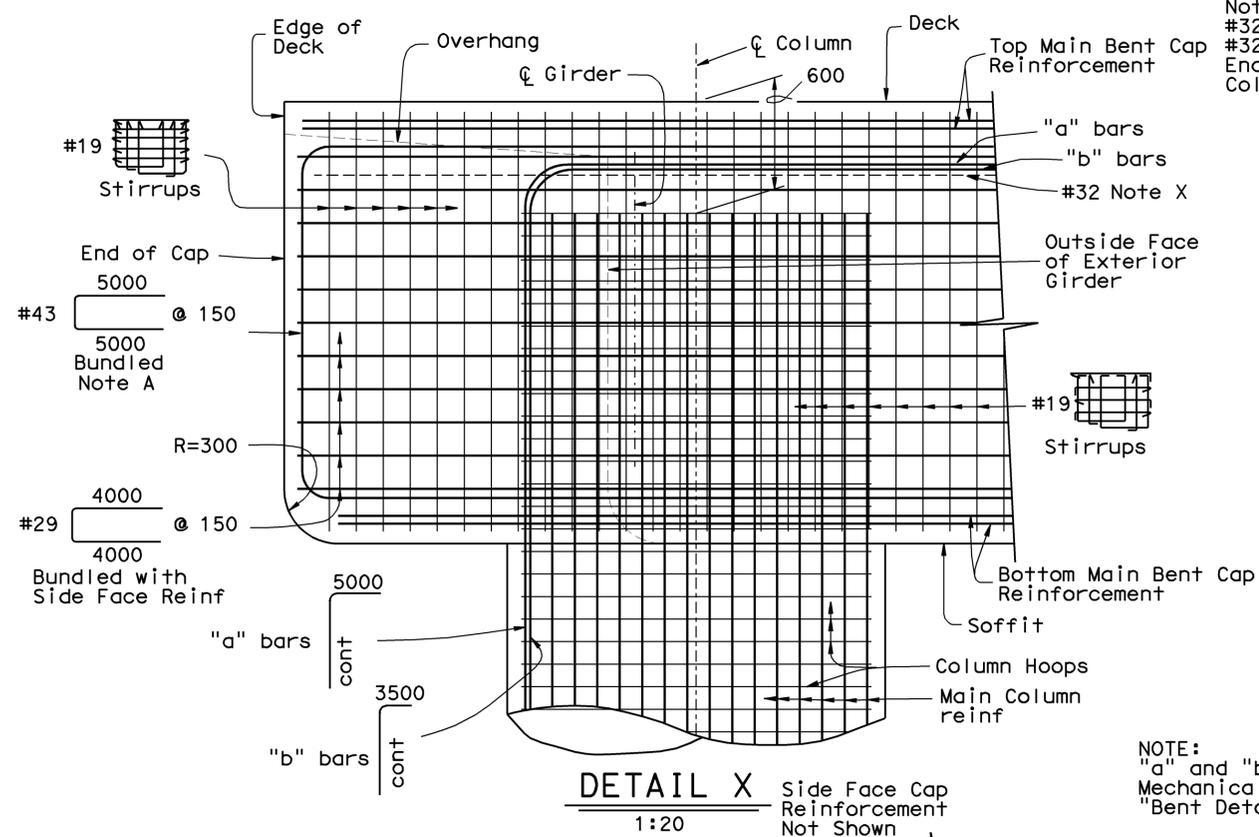
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
 ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100
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 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	275	384

9-30-08
 REGISTERED CIVIL ENGINEER DATE
 3-2-09
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

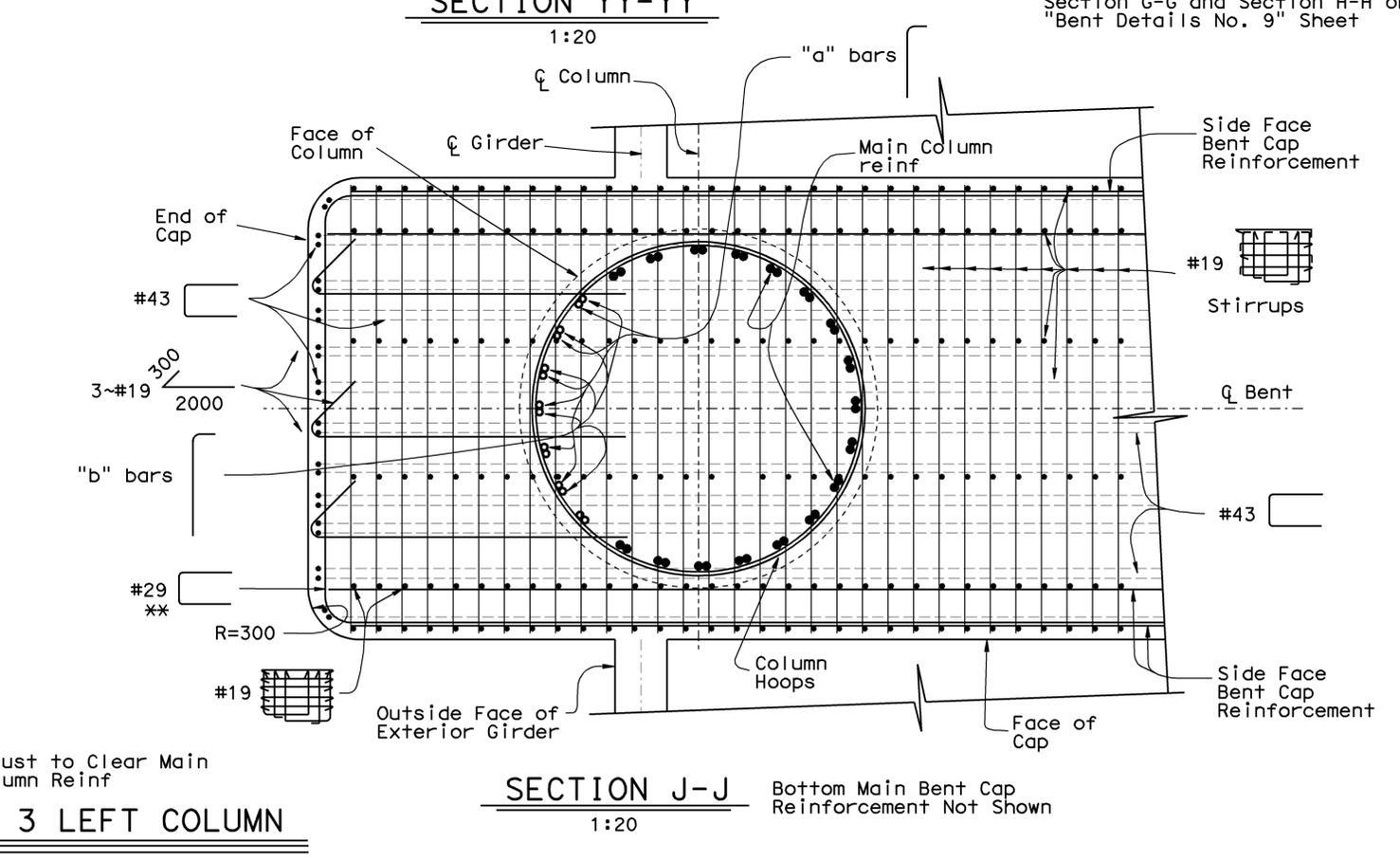
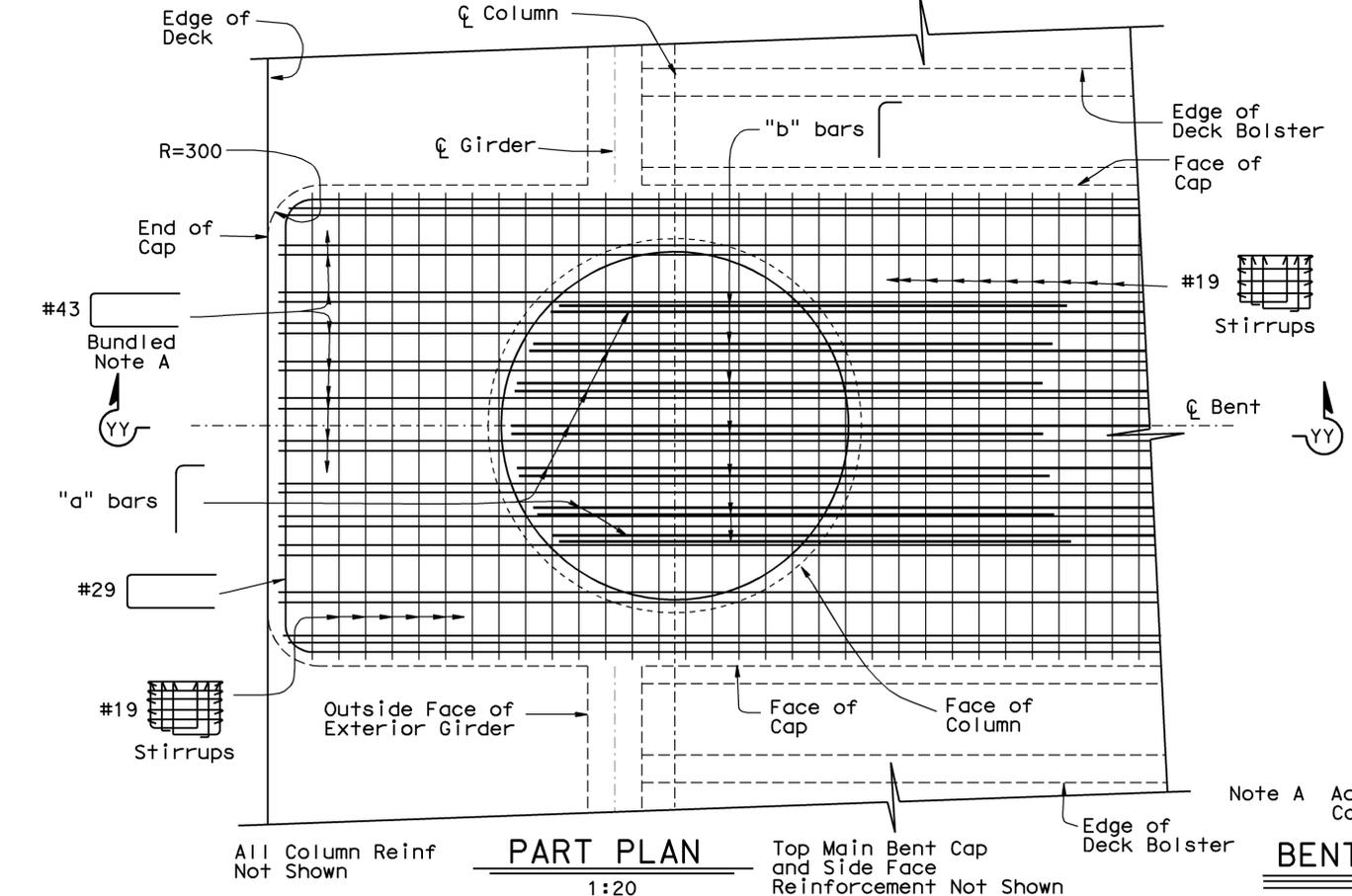
REGISTERED PROFESSIONAL ENGINEER
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

Note X
 #32 tot 4 Cont Bars
 #32 tot 5 Terminate
 Ends of "a" and "b"
 Column Bars



NOTE:
 CARE SHALL BE TAKEN IN THE PLACEMENT OF THE MAIN COLUMN REINFORCEMENT AT THE BENT CAP INTERFACE, TO ALLOW FOR CORRECT ALIGNMENT AND SPACING OF THE BOTTOM MAIN AND END OF CAP REINFORCEMENT. FOR DETAILS, SEE "BENT DETAILS No. 9" SHEET

NOTES:
 For Location of "Detail X", see "Bent Layout No. 2" sheet
 For Location of Section J-J, see "Bent Layout No. 2" sheet
 Utility Opening Not Shown
 Deck, Soffit and Girder reinforcement not Shown
 For Additional Information, see Section G-G and Section H-H on "Bent Details No. 9" Sheet



NOTE:
 "a" and "b" bars may be Mechanically Spiced, see "Bent Details No. 17" Sheet

Note A Adjust to Clear Main Column Reinf



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 9

BRIDGE NO. 39-0044
 KILOMETER POST 59.66

BRADLEY OVERHEAD (REPLACE)
 BENT DETAILS No. 7

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



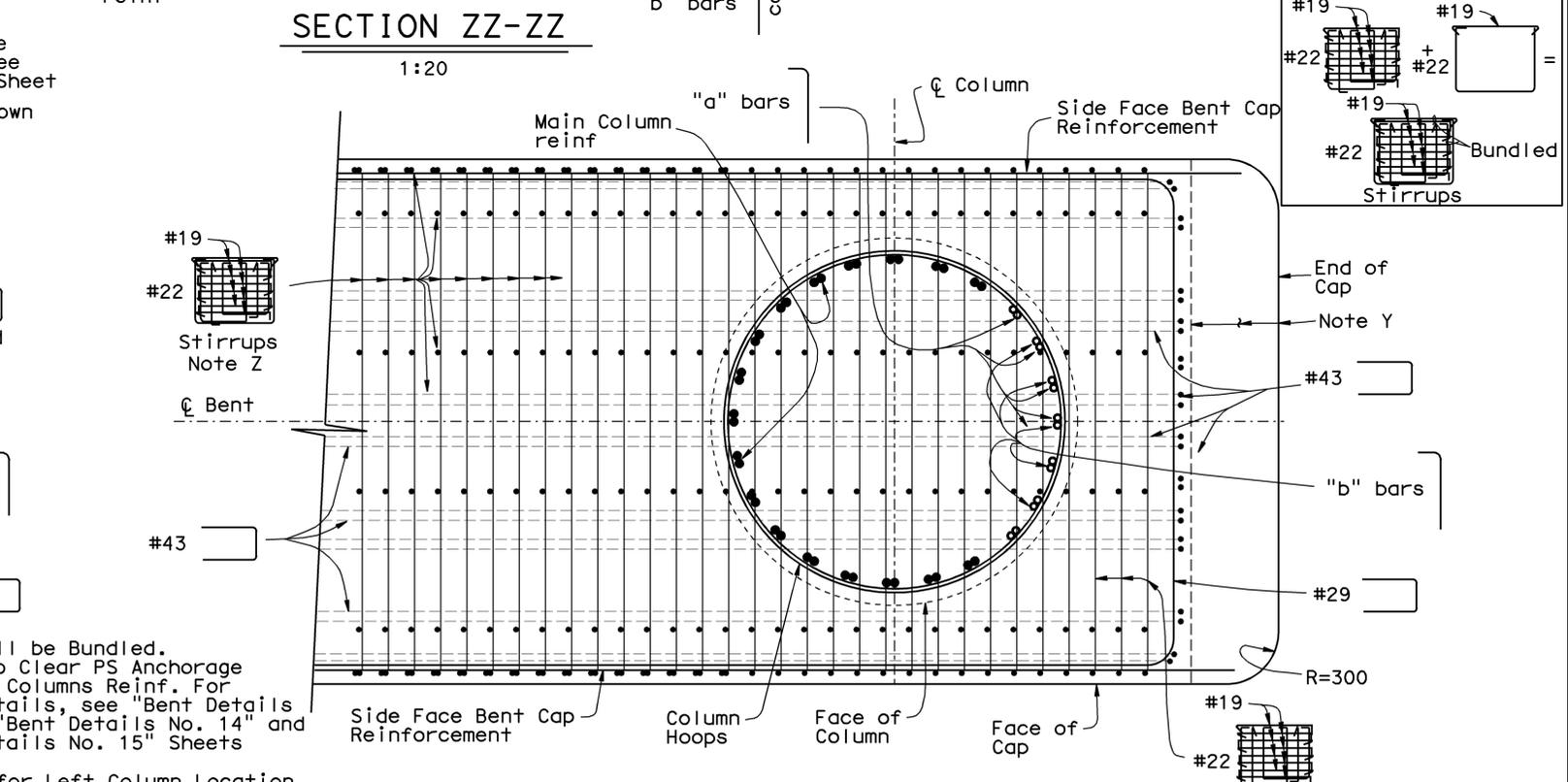
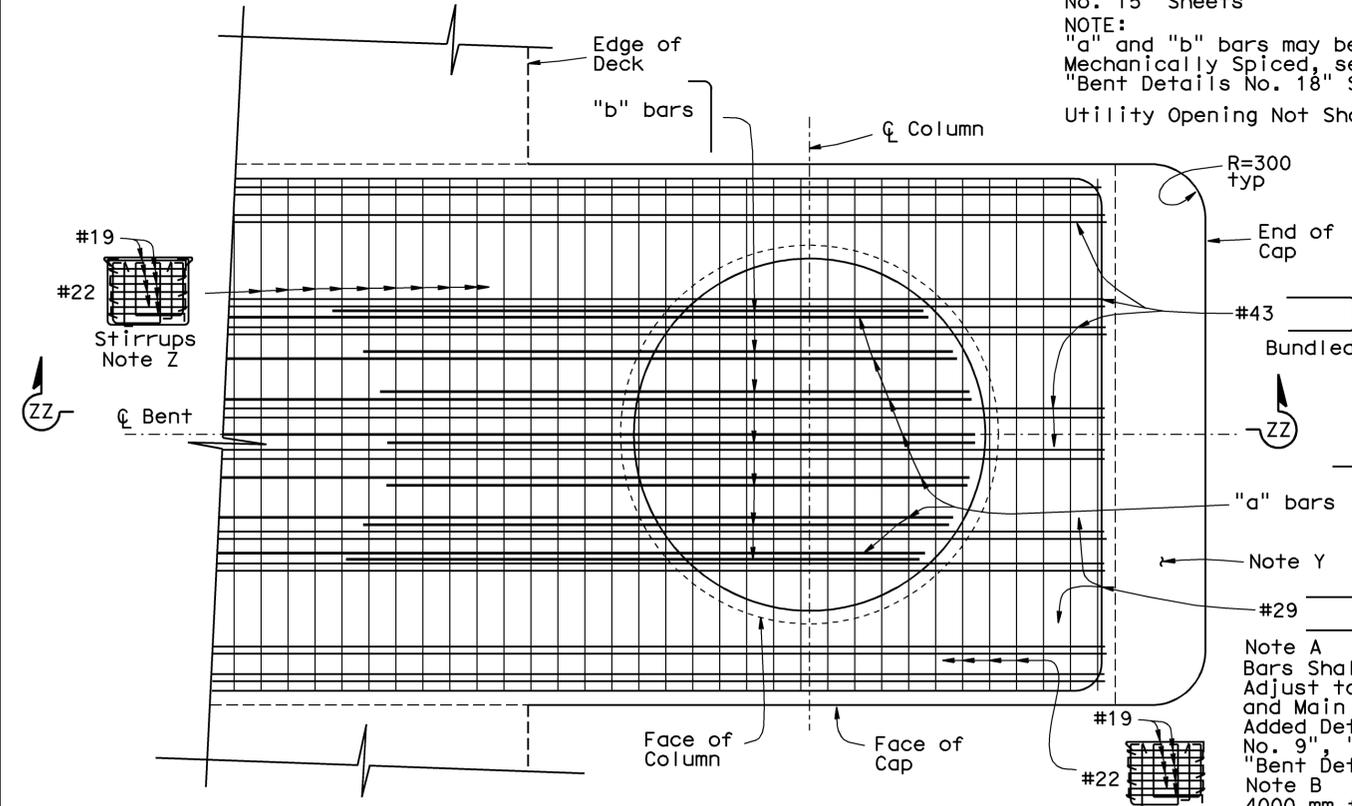
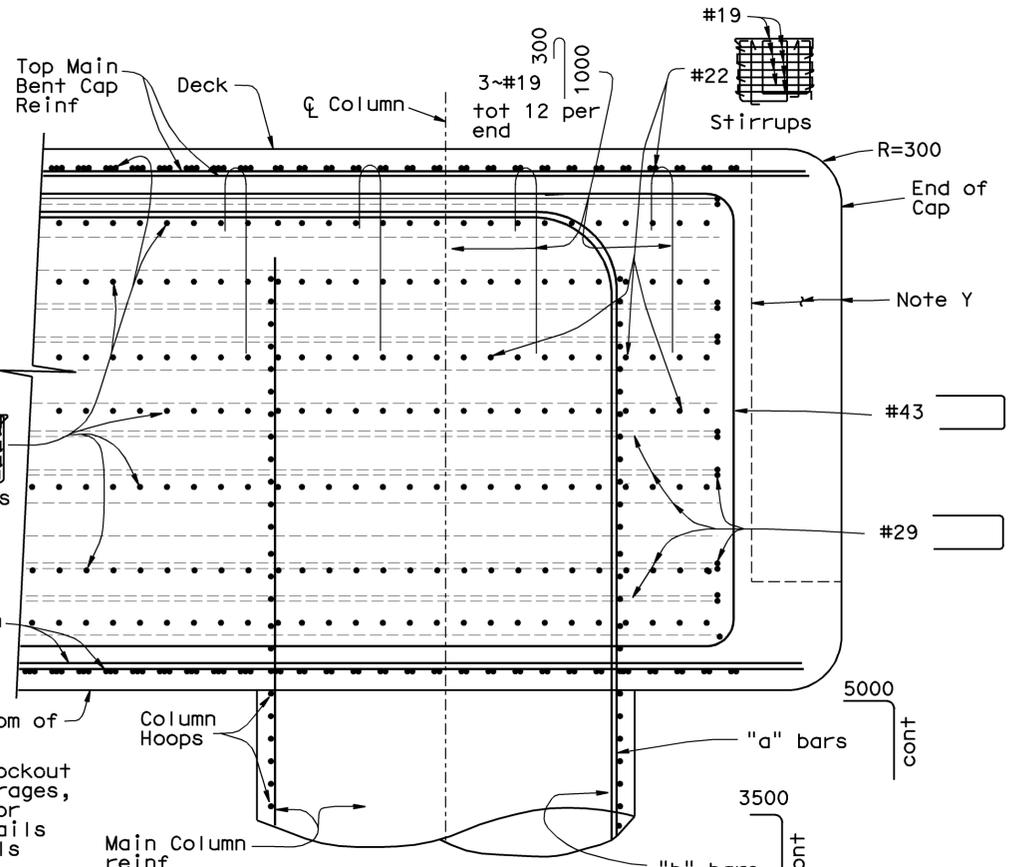
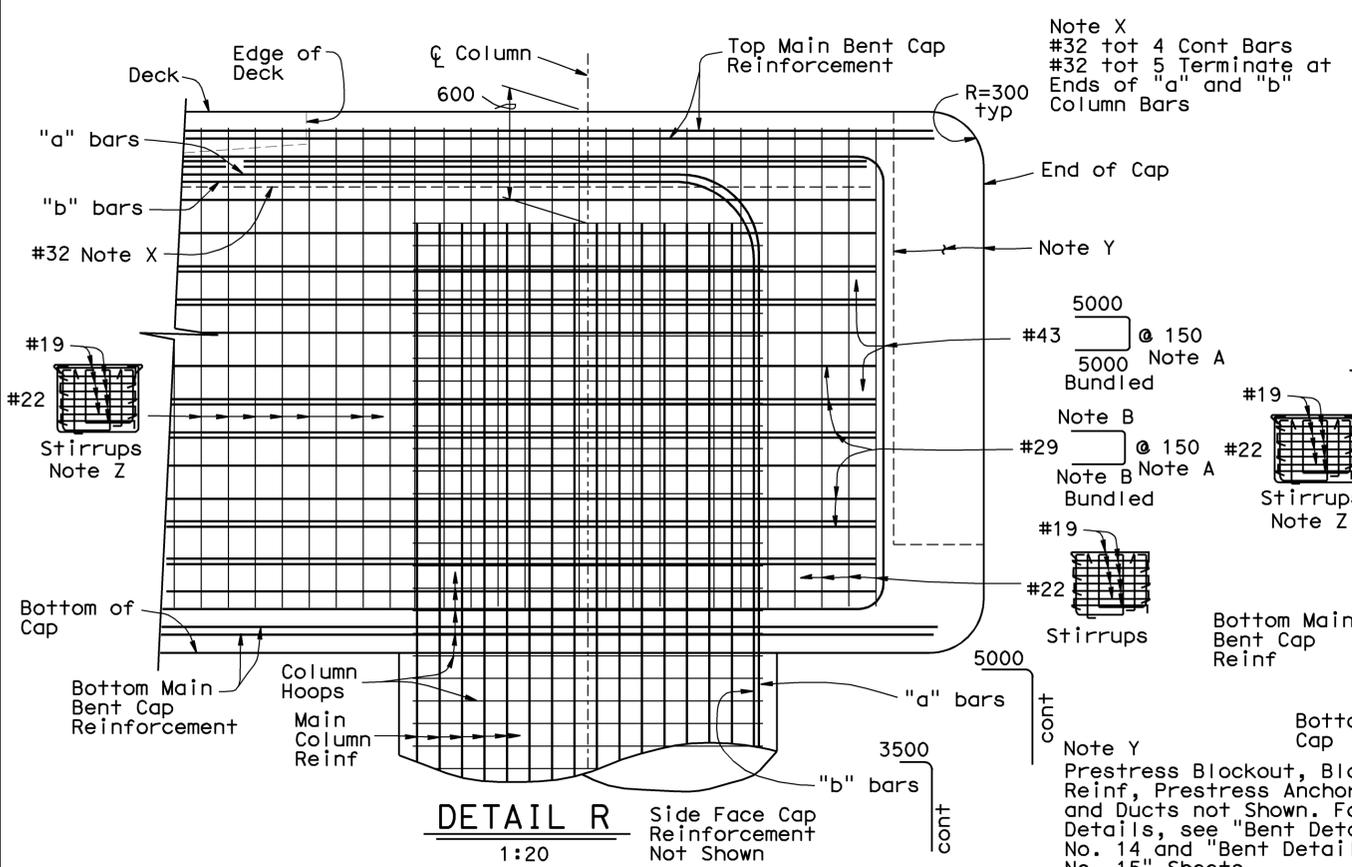
CU 10 EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET 38 OF 94
----------------	----------------

DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5		276	384

11-18-08
 REGISTERED CIVIL ENGINEER DATE
 3-2-09
 PLANS APPROVAL DATE
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA



DETAIL R
1:20
Side Face Cap Reinforcement Not Shown

SECTION ZZ-ZZ
1:20

PART PLAN
1:20
All Column Reinf Not Shown

SECTION JJ-JJ
1:20
Right Column Location Shown, Left Column Location Similar

BENT 5 COLUMNS
Top Main Bent Cap and Side Face Reinforcement Not Shown

SECTION JJ-JJ
1:20
Bottom Main Bent Cap Reinforcement Not Shown

Note X
#32 tot 4 Cont Bars
#32 tot 5 Terminate at Ends of "a" and "b" Column Bars

Note Y
#43 @ 150 Bundled
#29 @ 150 Bundled
#19 and #22 Stirrups

Note Z
#19 and #22 Stirrups

Note A
Bars Shall be Bundled. Adjust to Clear PS Anchorage and Main Columns Reinf. For Added Details, see "Bent Details No. 9", "Bent Details No. 14" and "Bent Details No. 15" Sheets

Note B
4000 mm for Left Column Location, 6000 mm for Right Column Location

NOTE:
"a" and "b" bars may be Mechanically Spiced, see "Bent Details No. 18" Sheet
Utility Opening Not Shown

NOTES:
CARE SHALL BE TAKEN IN THE PLACEMENT OF THE MAIN COLUMN REINFORCEMENT AT THE BENT CAP INTERFACE, TO ALLOW FOR CORRECT ALIGNMENT AND SPACING OF THE BOTTOM MAIN AND END OF CAP REINFORCEMENT. FOR DETAILS, SEE "BENT DETAILS No. 9" SHEET

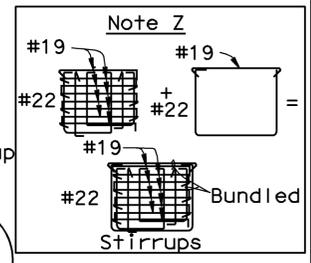
For Added Reinforcement and Prestress Anchorage Details, see "Bent Details No. 14" and "Bent Details No. 15" Sheets

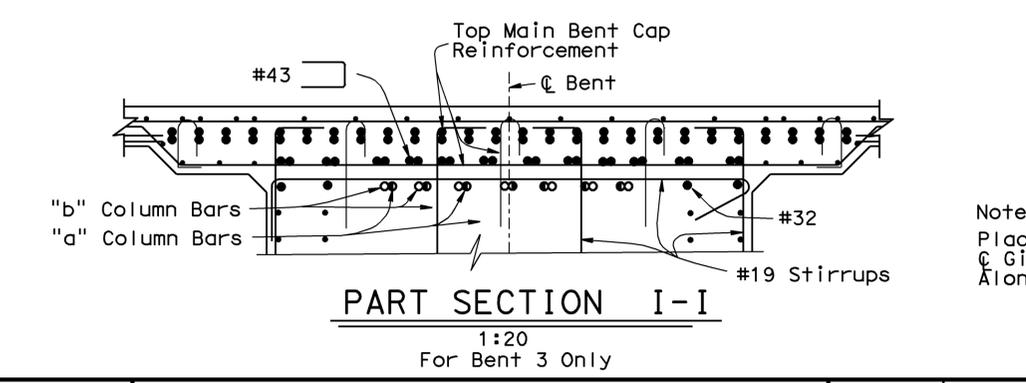
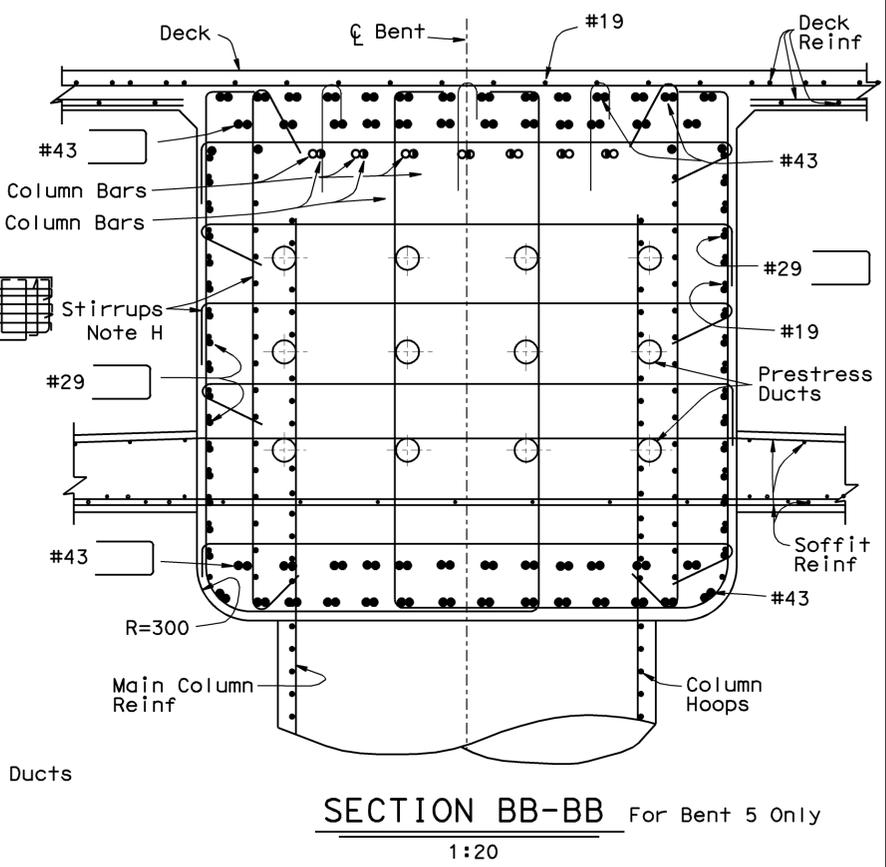
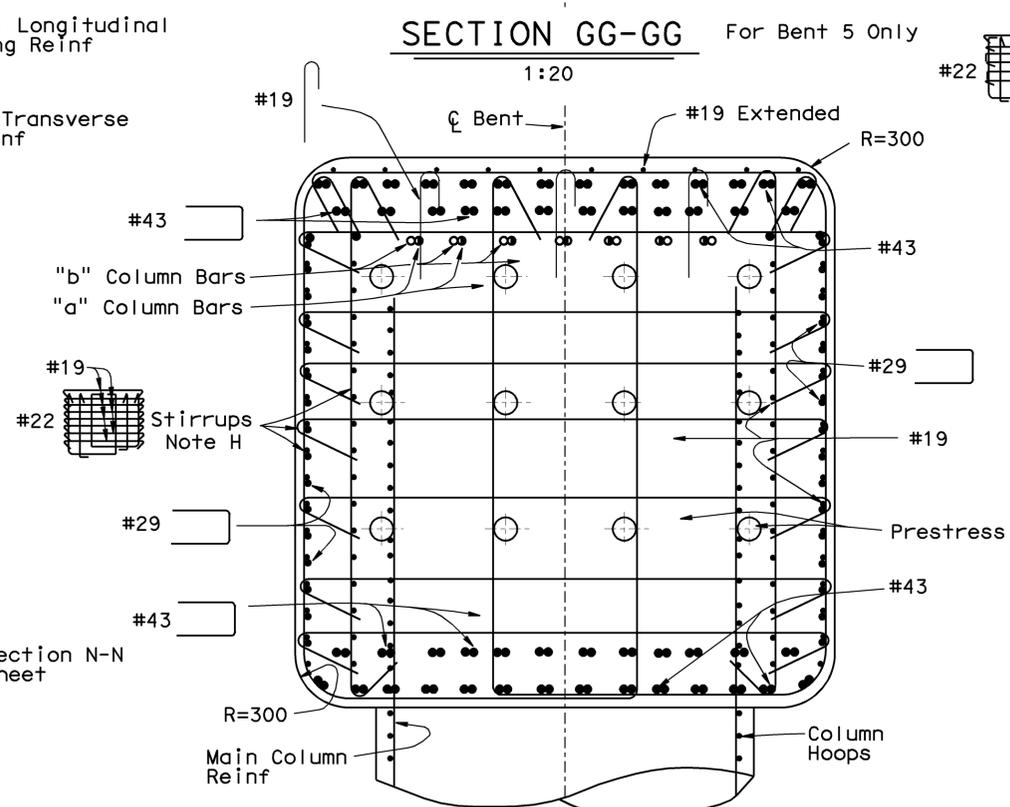
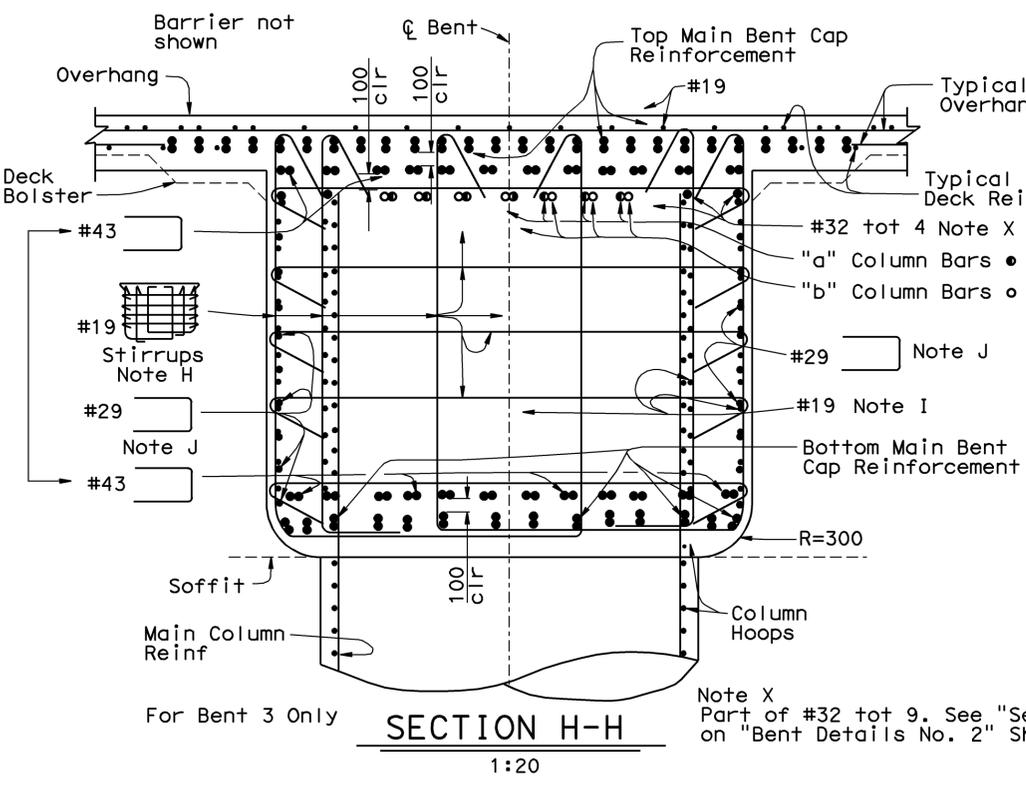
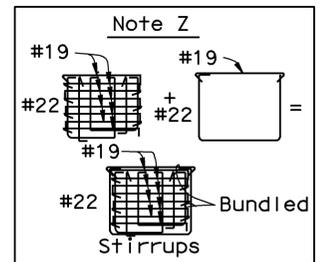
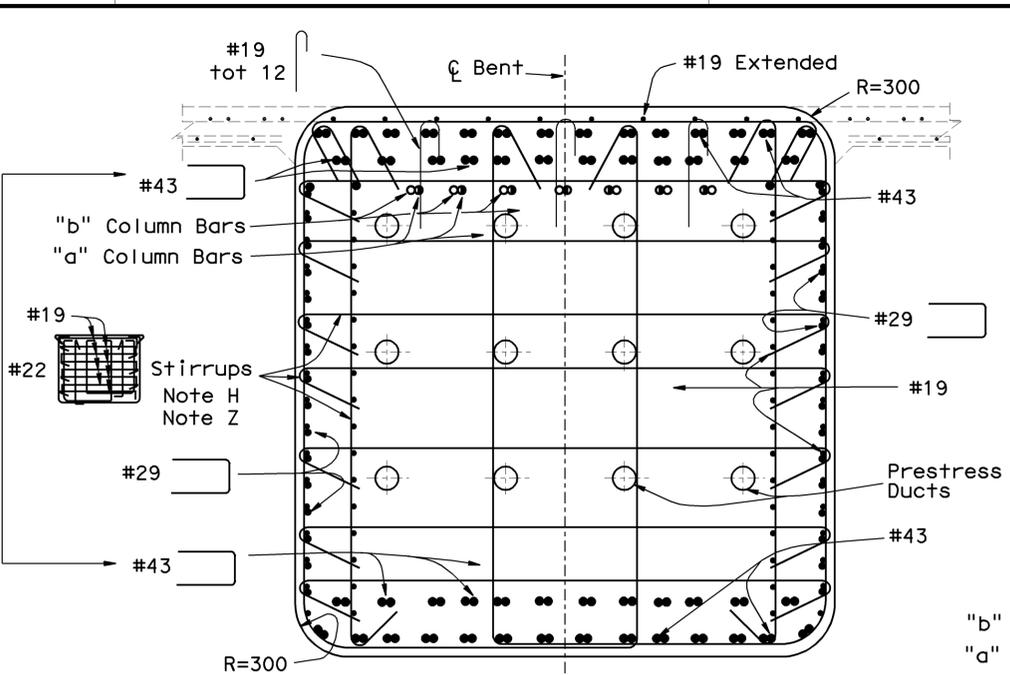
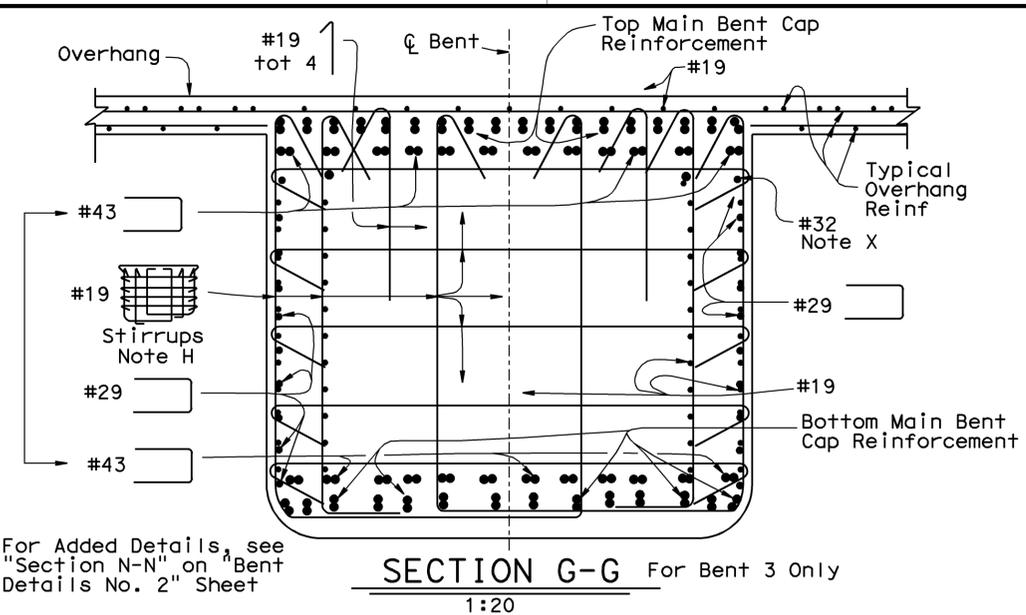
For Location of "Detail R", see "Bent Layout No. 5" sheet

For Location of Section JJ-JJ, see "Bent Layout No. 5" sheet

Deck, Soffit and Girder reinforcement not Shown

For Additional Information, see Section GG-GG and Section HH-HH on "Bent Details No. 9" Sheet





For Added Details, see "Section AA-AA" on "Bent Details No. 4" Sheet

Note I
#19 Inside Mat may be Bundled, to Improve Concrete Placement, as Approved by the Engineer

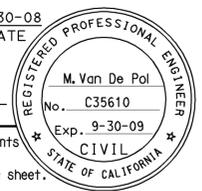
Note J
#29 Bars Shall be Bundled with #19 Side Face Bars

Note H
Place Parallel to ϕ Girder and Space Along ϕ Bent

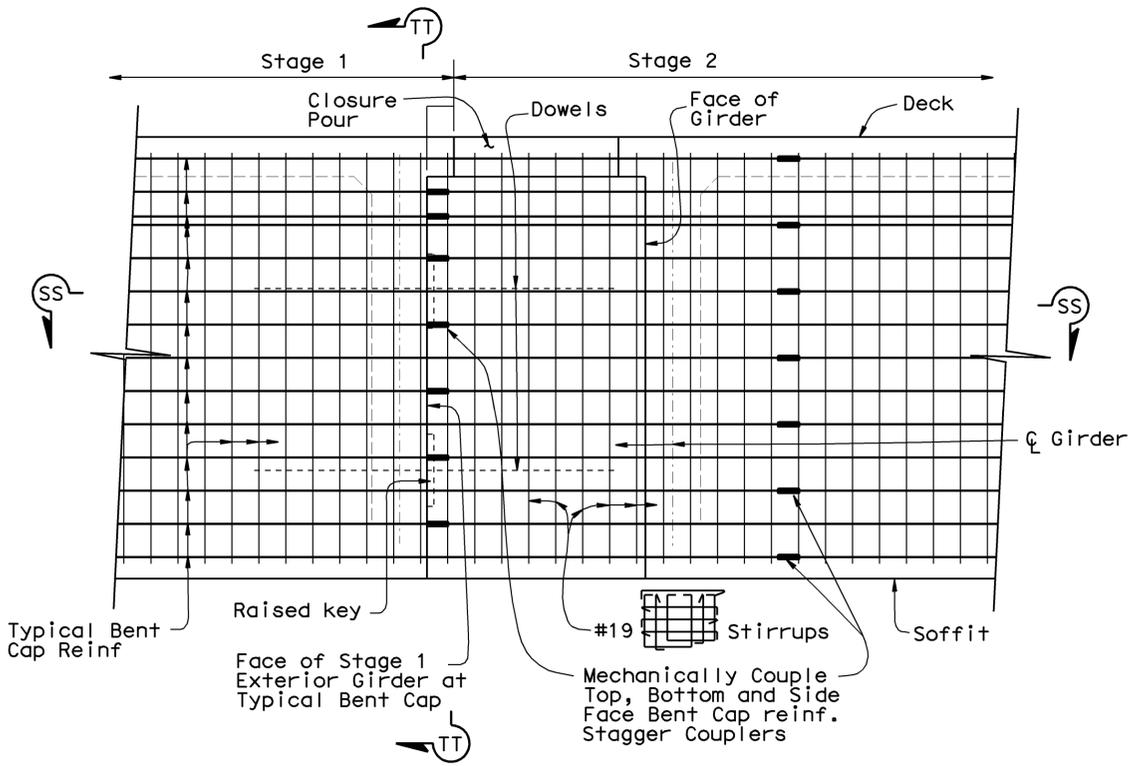
NOTE:
CARE SHALL BE TAKEN IN THE PLACEMENT OF THE MAIN COLUMN REINFORCEMENT AT THE BENT CAP INTERFACE, TO ALLOW FOR CORRECT ALIGNMENT AND SPACING OF THE BOTTOM MAIN AND END OF CAP REINFORCEMENT. FOR DETAILS, SEE "BENT DETAILS No. 7" AND "BENT DETAILS No. 8" SHEET

NOTES:
 For location of Section G-G Through Section I-I, see "Bent Layout No. 2" sheet
 For location of Section GG-GG and Section HH-HH, see "Bent Layout No. 5" sheet
 No lap or mechanical splices allowed in longitudinal cap reinforcement, except at construction joint. Adjust to clear main column reinforcement
 For "a" and "b" Column Bars, see "Bent Details No. 17" and "Bent Details No. 18" Sheets
 For Added Details, see "Bent Details No. 7", "Bent Details No. 8", "Bent Details No. 9", "Bent Details No. 14" and "Bent Details No. 15" Sheets

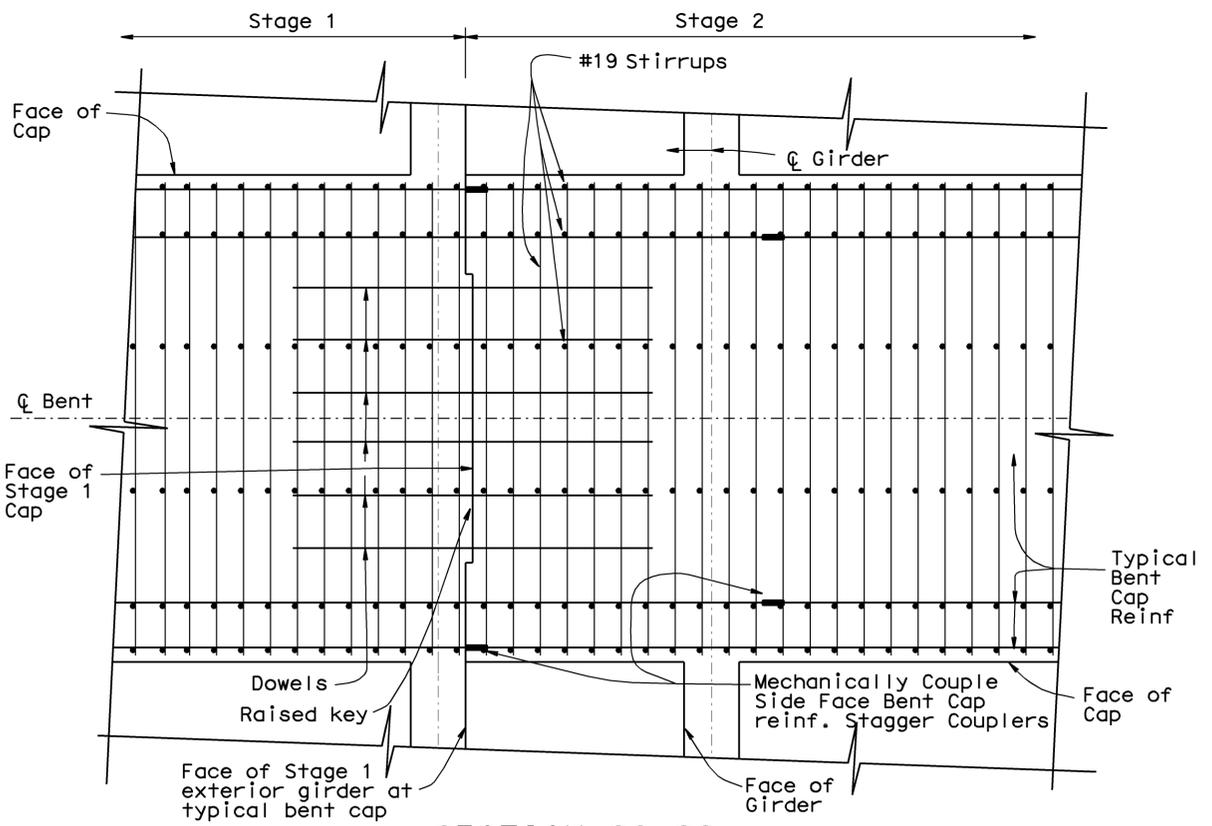
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10	Mer	140	58.7/60.5	278	384
			REGISTERED CIVIL ENGINEER	DATE	
			3-2-09		
			PLANS APPROVAL DATE		
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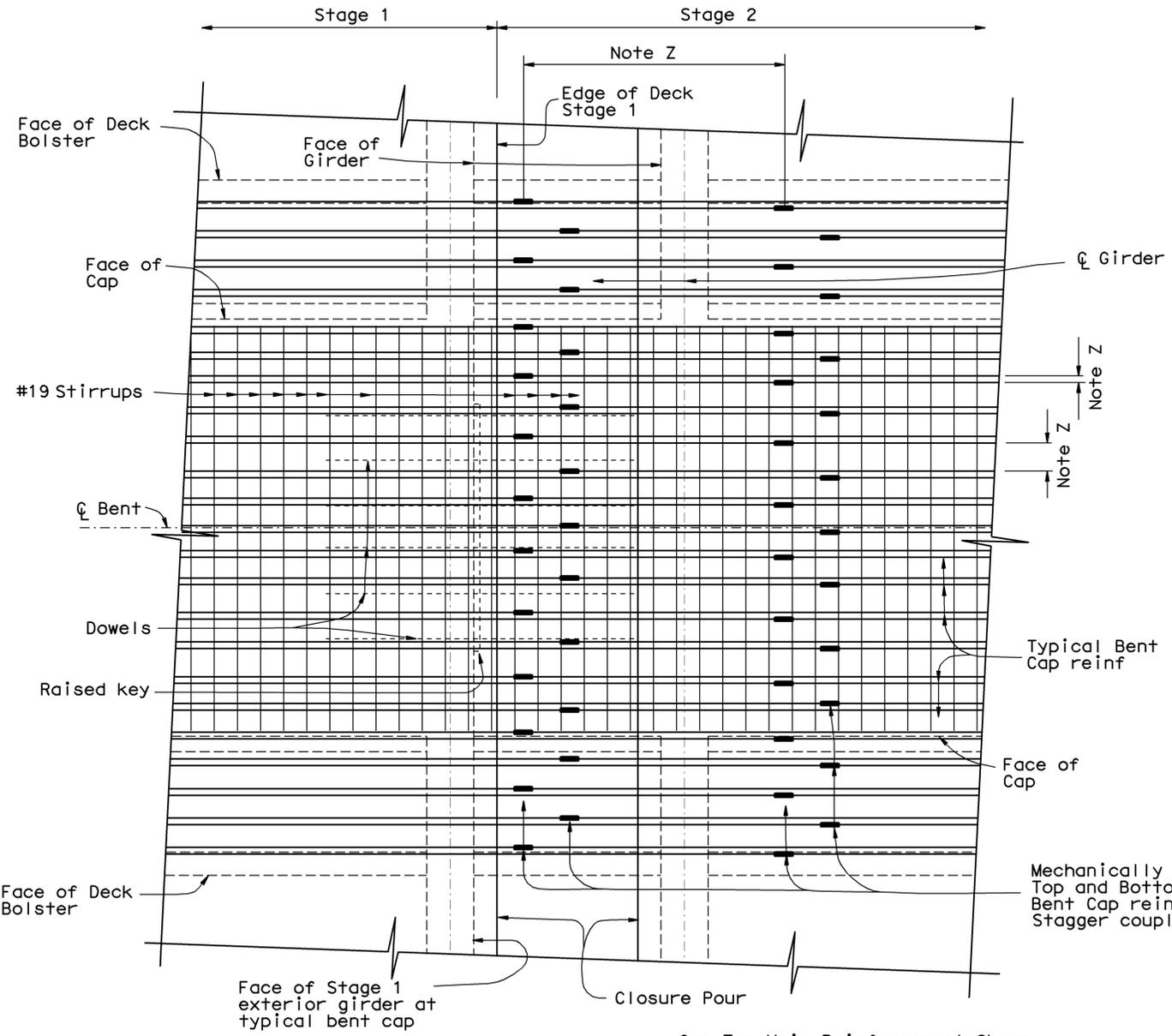
NOTES:
 For Locations of "Detail Y" and "Detail Z", see "Bent Layout No. 1", "Bent Layout No. 2", "Bent Layout No. 4" and "Bent Layout No. 5" sheets
 For "Section TT-TT", see "Bent Details No. 12" sheet
 Girder, Deck and Soffit Reinforcement Not Shown
 Ultimate Splice for Top and Bottom Main Cap Reinforcement
 Service Splice for Side face Cap Reinforcement
 Transverse Deck Reinforcement and Transverse Soffit Reinforcement may be Lap Spliced
 Stagger Locations of Mechanical Couplers to Maintain Bundled Bar Positions and Alignments
 — Denotes Mechanical Coupler



DETAIL Z
 1:20
 Bents 2, 3 and 7 Shown
 Bents 5 and 6 Similar



SECTION SS-SS
 1:20
 Bents 2, 3 and 7 Shown
 Bents 5 and 6 Similar



DETAIL Y
 1:20
 Cap Top Main Reinforcement Shown
 Cap Bottom Main Reinforcement Similar
 Bent 6 shown, Bents 2, 3, 5 and 7 Similar

BENTS 2, 3, 5, 6 AND 7

Note Z
 Mechanical Coupler Stagger Distance Sufficient to Minimize Space Between Bars within a Bundle and Maximize the Space Between Adjacent Bar Bundles



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
 BENT DETAILS No. 10

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

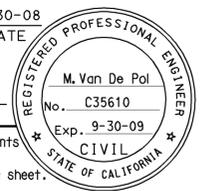


CU 10
 EA 3A66U1

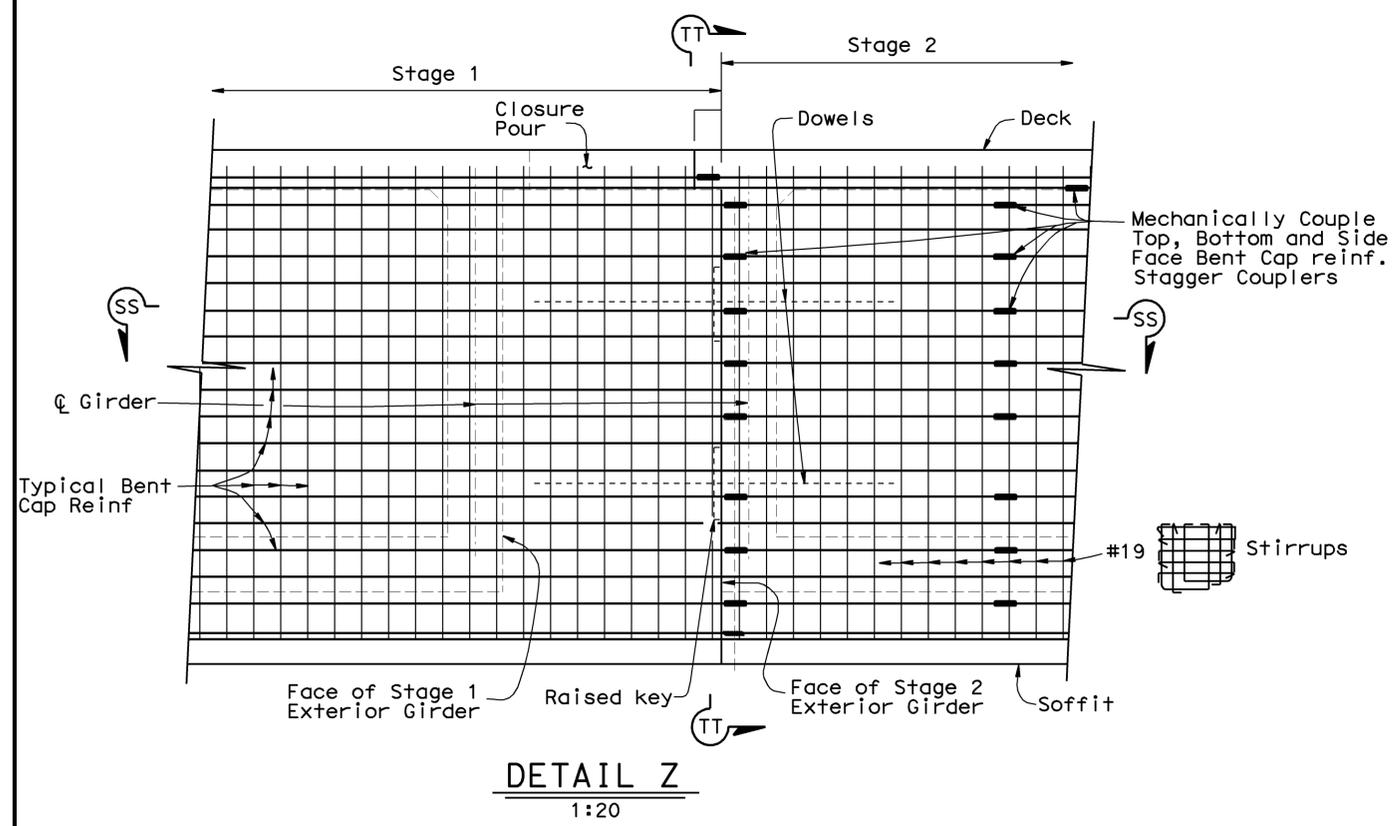
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES					
	9-24-03	12-1-05			
SHEET	41	OF	94		

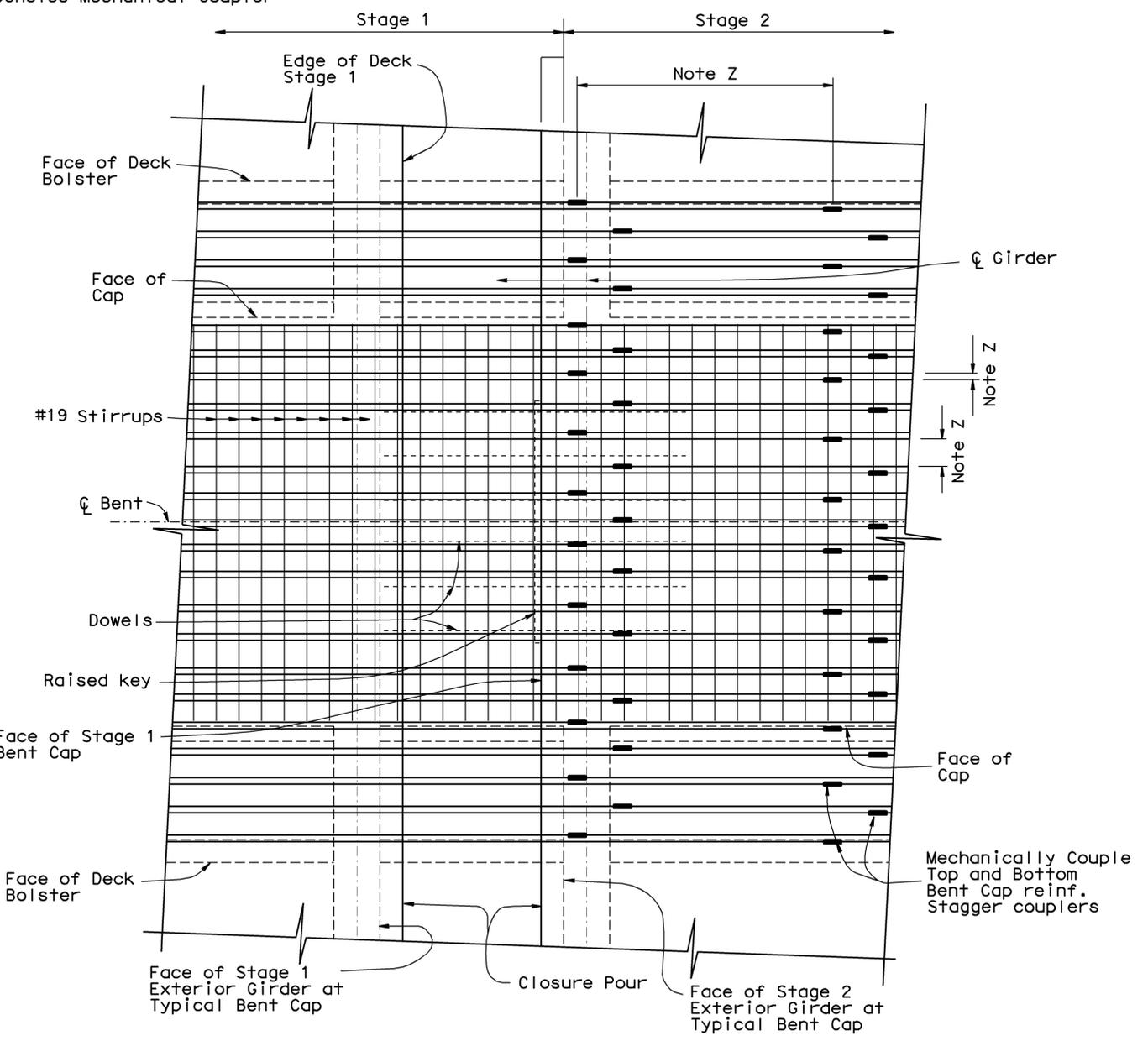
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10	Mer	140	58.7/60.5	279	384
			9-30-08 REGISTERED CIVIL ENGINEER DATE		
			3-2-09 PLANS APPROVAL DATE		
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NOTES:
 For Locations of "Detail Y" and "Detail Z", see "Bent Layout No. 3" sheet
 For "Section TT-TT", see "Bent Details No. 12" sheet
 Girder, Deck and Soffit Reinforcement Not Shown
 Ultimate Splice for Top and Bottom Main Cap Reinforcement
 Service Splice for Side face Cap Reinforcement
 Transverse Deck Reinforcement and Transverse Soffit Reinforcement may be Lap Spliced
 Stagger Locations of Mechanical Couplers to Maintain Bundled Bar Positions and Alignments
 ■ Denotes Mechanical Coupler



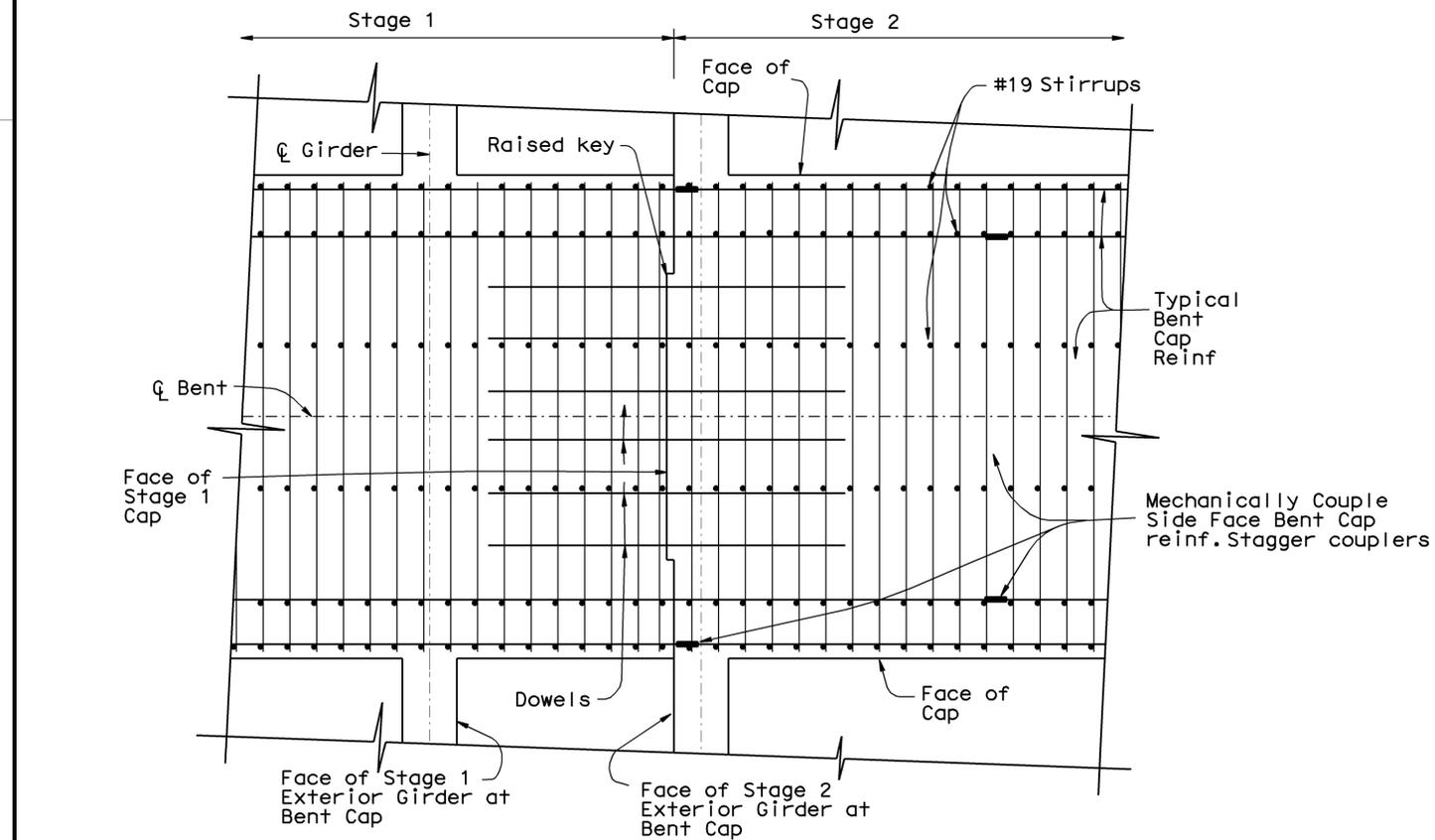
DETAIL Z
1:20



DETAIL Y
1:20

Deck Level Reinforcement Shown

Note Z
 Mechanical Coupler Stagger Distance Sufficient to Minimize Space Between Bars within a Bundle and Maximize the Space Between Adjacent Bar Bundles



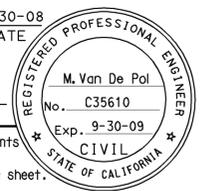
SECTION SS-SS
1:20

BENT 4

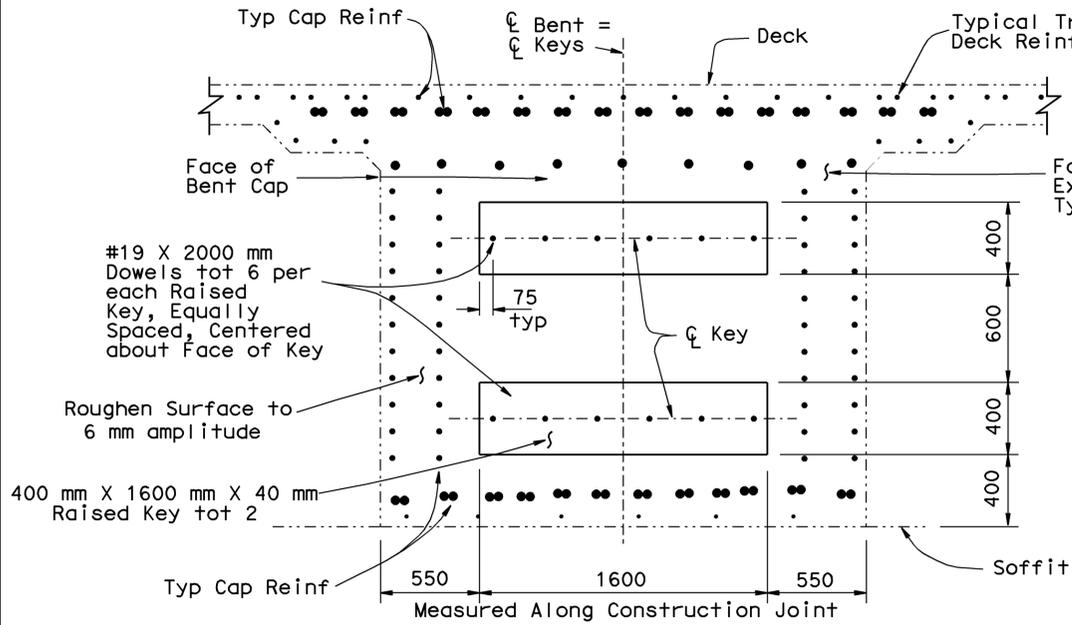
	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) BENT DETAILS No. 11
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05			CU 10 EA 3A66U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN				ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100		REVISION DATES		SHEET 42 OF 94

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
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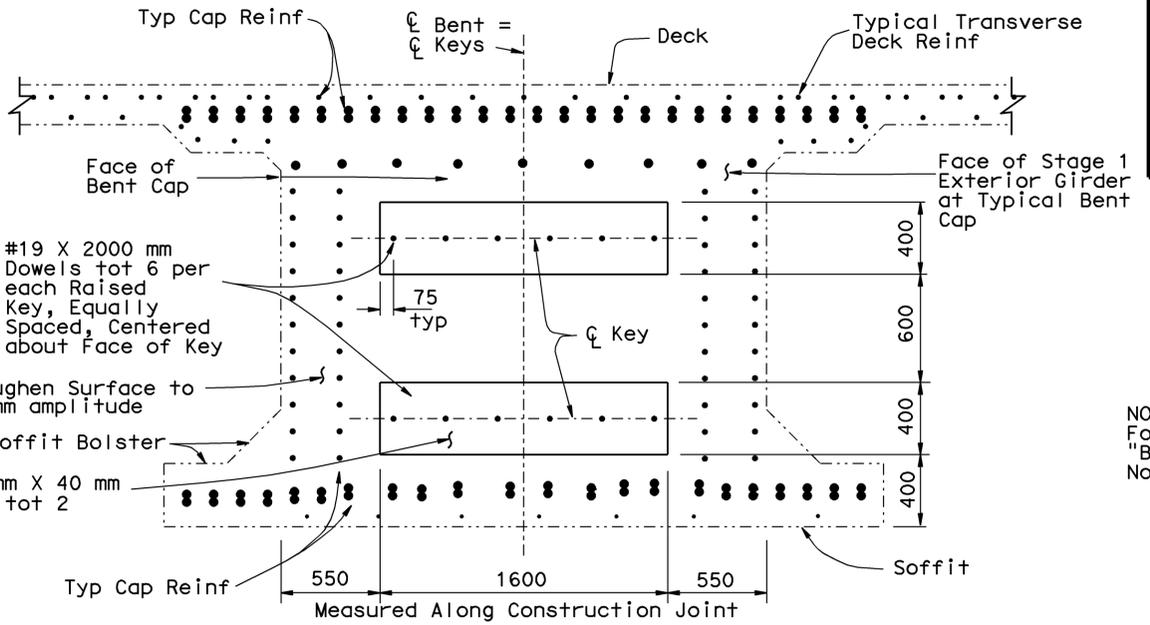


 REGISTERED CIVIL ENGINEER DATE 9-30-08
 PLANS APPROVAL DATE 3-2-09
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SECTION TT-TT (Bents 2 and 7)
1:20

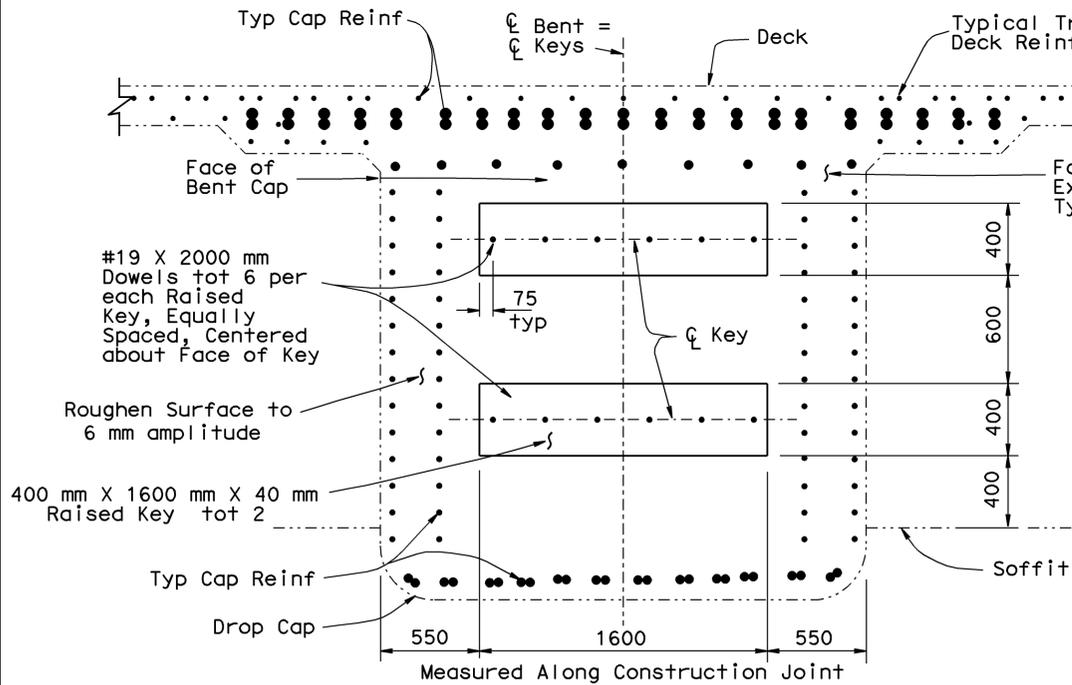
NOTE:
For Details not Shown,
see Section D-D on
"Bent Details No. 1"
sheet



SECTION TT-TT (Bents 3)
1:20

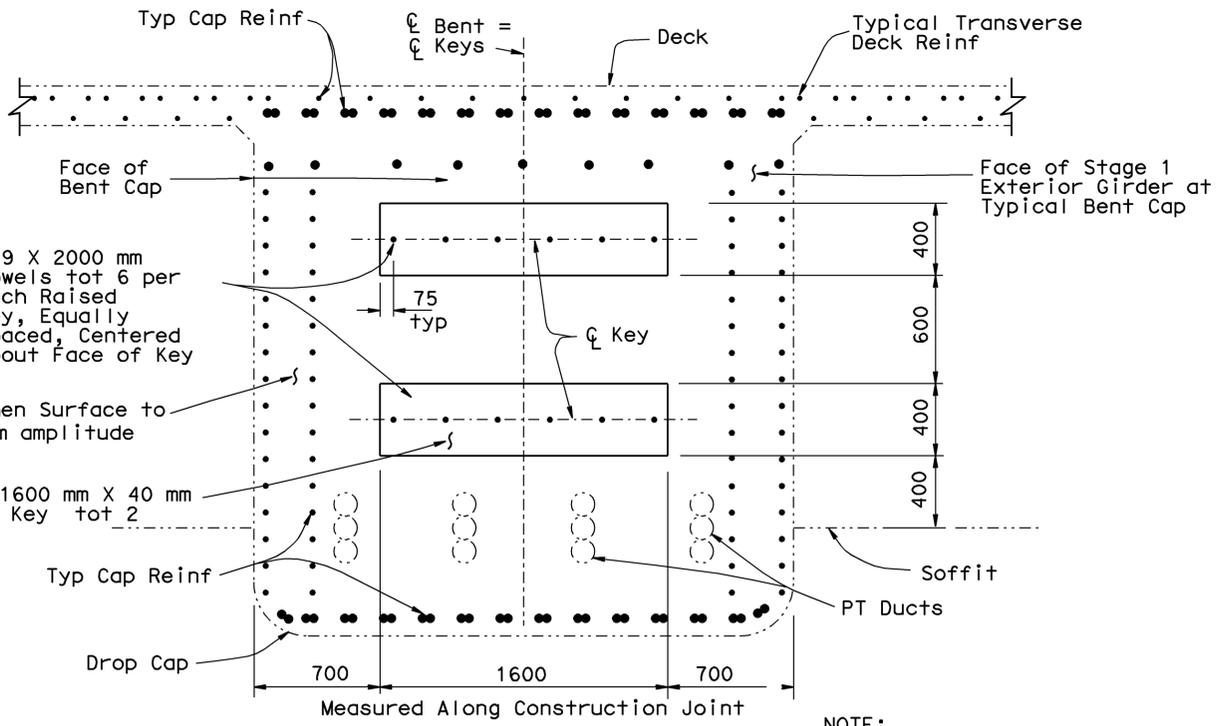
NOTE:
For Details not Shown,
see Section Q-Q on
"Bent Details No. 2"
sheet

NOTE:
For locations of Section TT-TT, see
"Bent Details No.10" and "Bent Details
No. 11" sheets



SECTION TT-TT (Bents 4 and 6)
1:20

NOTE:
For Details not Shown,
see Section V-V on
"Bent Details No. 3"
sheet



SECTION TT-TT (Bent 5)
1:20

NOTE:
For Details not Shown,
see Section DD-DD on
"Bent Details No. 4"
sheet



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DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
BENT DETAILS No. 12

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

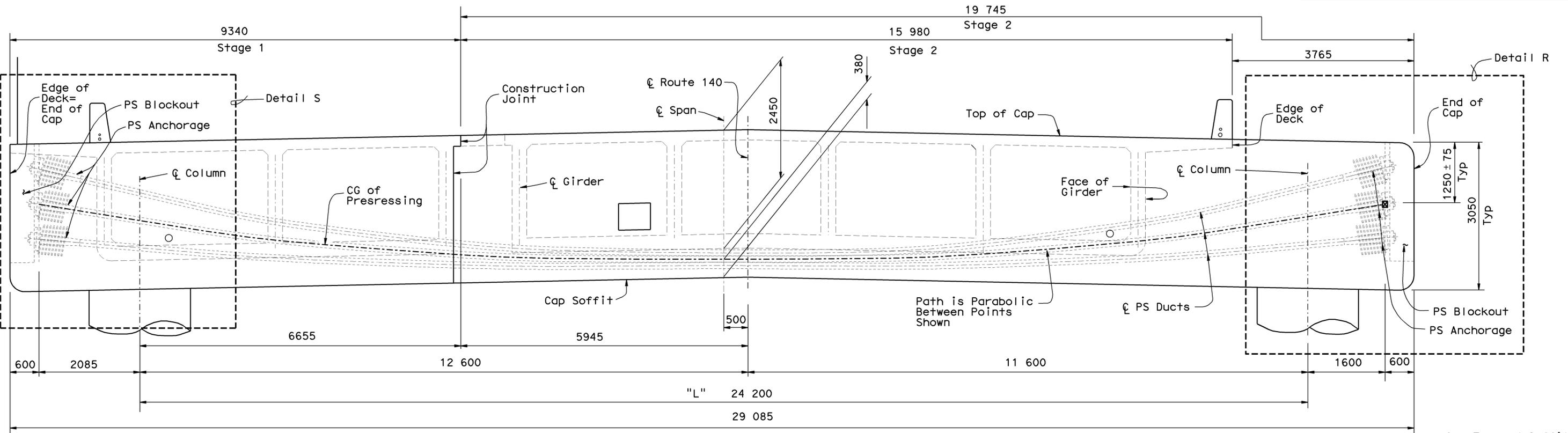


CU 10
EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	9-24-03	12-1-05	SHEET 43	OF 94
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LONGITUDINAL SECTION

1:40

For Temporary Support Details, see "Temporary Support-Bent 5 Stage 1" Sheet

PRESTRESSING NOTES

270 Ksi Low Relaxation Strand:
 $P_{jack} = 80100 \text{ KN Per Cap}$
 Anchor Set = 10 mm
 Total Number of Paths Per Cap = 4 *
 Distribution of prestress force (P_{jack}) between Paths shall be equal
 Concrete: $f'_c = 42 \text{ MPa @ 28 Days}$
 Typ Cap $f'_{ci} = 28 \text{ MPa @ time of stressing}$
 Contractor shall submit elongation calculations based on initial stress at $\lambda = 0.908$ times jacking stress
 One end stressing shall be performed from the Left End

No more than $1/2$ of the prestressing force in any Path may be applied before an equal force is applied in the adjacent path. The maximum force variation between paths shall also not exceed the prestressing force of the largest tendon used in all paths. At no time during stressing will more than $1/6$ of total prestressing force be applied eccentrically about the center line of the Bent Diaphragm
 The prestressing force shall be distributed symmetrically about the centerline of the bent cap
 The working drawing shall include any additions or rearrangement of reinforcing steel from that shown on the plans. Sufficient points shall be shown on the working drawings to place the ducts accurately

L = Length measured along ϕ cap
 □ Point of theoretical no movement for two end stressing

Notes

- For Details Not Shown, see other "Bent Layout No. 5" Sheet
- For Detail R and Detail S, see "Bent Details No. 14" Sheet
- Bent Cap Stirrups Shall be Adjusted to Clear PS Ducts and Anchorage. Stirrup Reinf May be Cut and Spliced, as Approved by the Engineer
- Main Column Reinforcement and Hoops Shall be Placed to Provide Clearance for Bent Cap PS Ducts and Anchorages. Bundle Hoops
- Main Bent Cap Reinforcement May be Bent, Cut and Spliced, to Allow for Stressing, as Approved by the Engineer
- For Additional Prestressing Details, see "Bent Details No. 8" Sheet
- For Longitudinal Stressing Notes, see "Girder Layout No. 1" Sheet
- Bent 5 Cap Prestressing Shall be Performed Before Longitudinal Stressing of Stage 2 Frame
- For Additional Details, see **B8-5**

Cap Top and Soffit Follow Deck Cross Slope = -2%

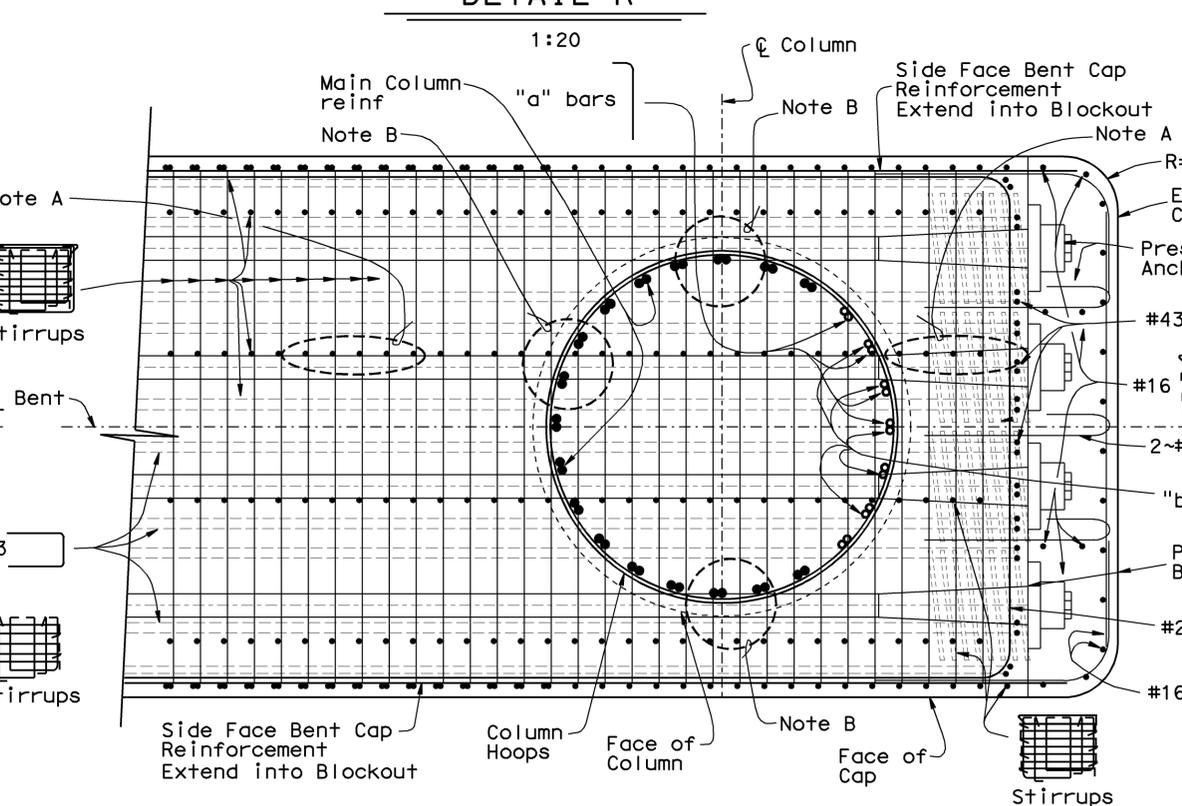
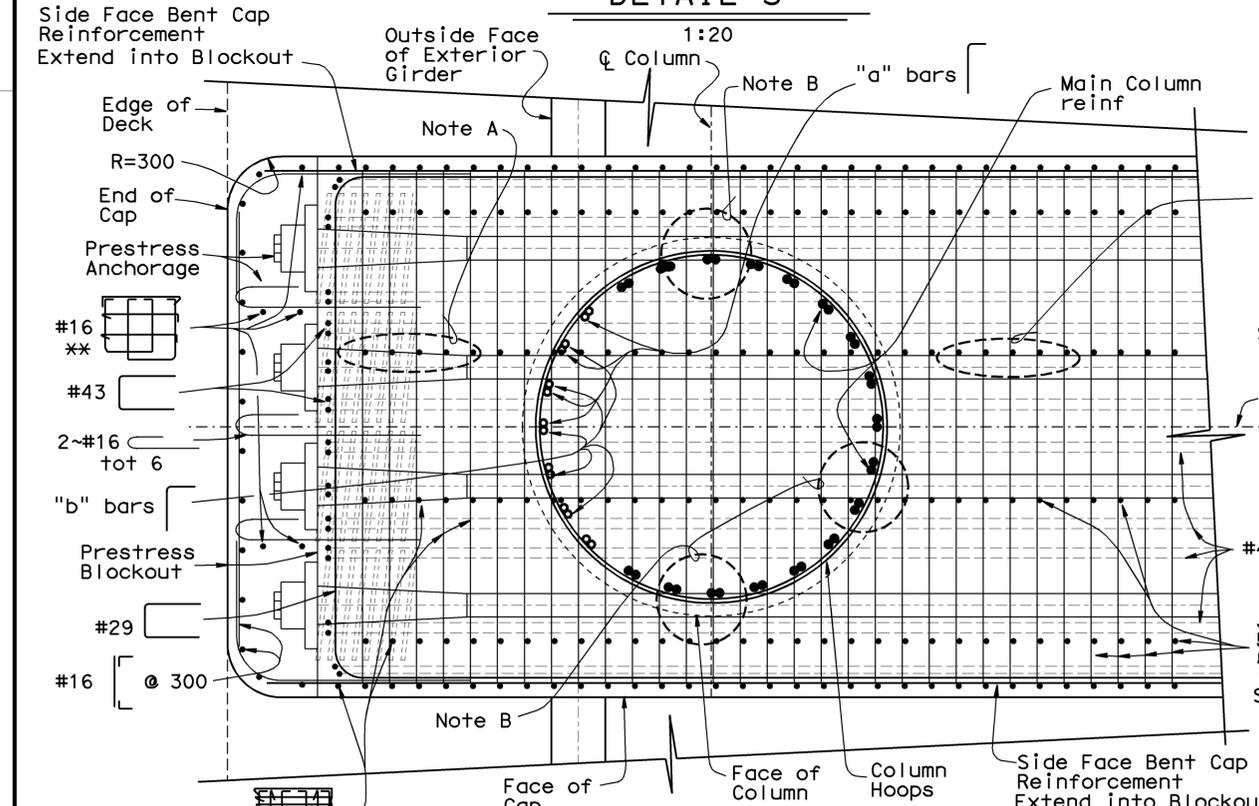
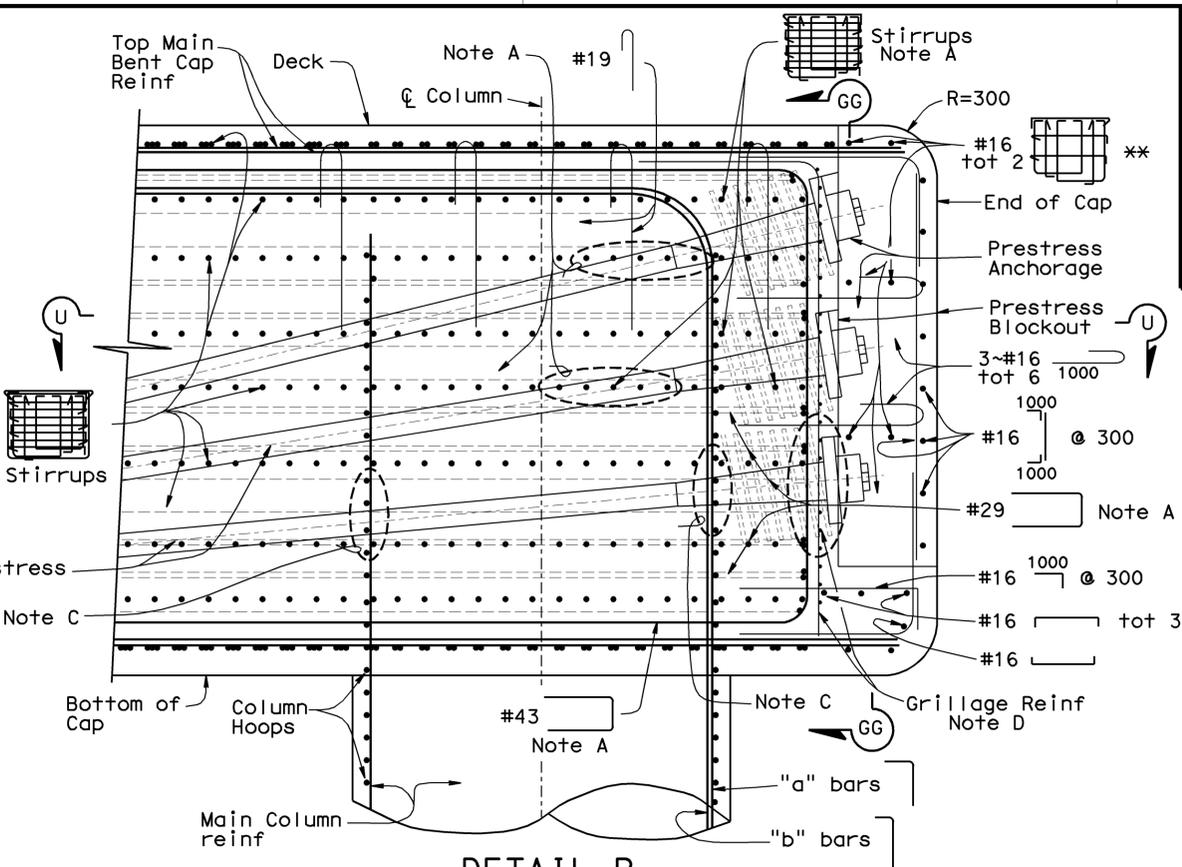
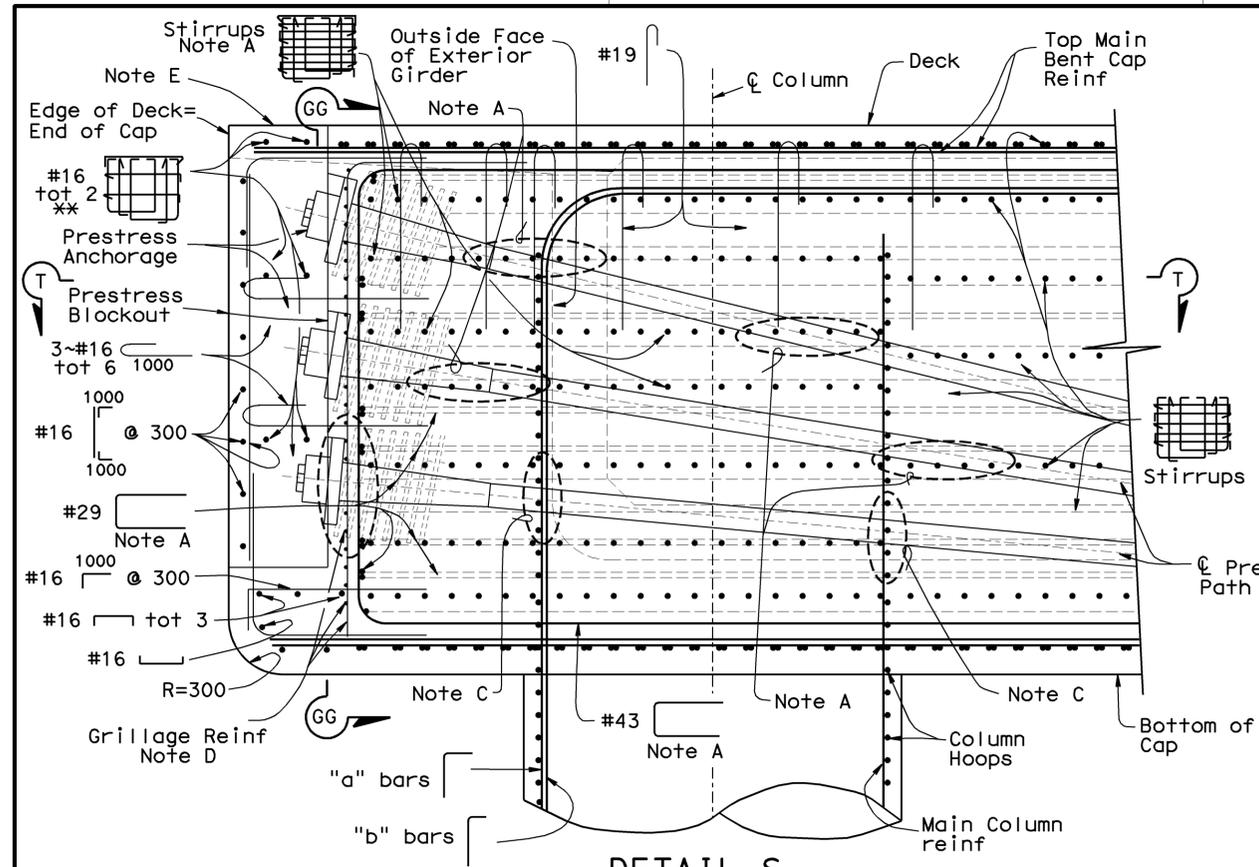
BENT 5 CAP PRESTRESSING DETAILS

* 4 Prestress Paths Shown, 3 Prestress Paths May be Used by the Contractor, as Approved by the Engineer

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	282	384

11-18-08
 REGISTERED CIVIL ENGINEER DATE
 3-2-09
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA



NOTE:

CARE SHALL BE TAKEN IN THE PLACEMENT OF THE MAIN COLUMN REINFORCEMENT AT THE BENT CAP INTERFACE, TO ALLOW FOR CORRECT ALIGNMENT AND SPACING OF THE BOTTOM MAIN REINFORCEMENT, END OF CAP REINFORCEMENT AND PRESTRESS ANCHORAGES AND DUCTS. FOR DETAILS, SEE "BENT DETAILS No. 8" AND "BENT DETAILS No. 9" SHEETS

Notes

Note A
Adjust Reinforcement to Clear Prestress Anchorages and Ducts

Note B
Adjust Prestress Ducts to Clear Main Column Reinforcement

Note C
Adjust Column Hoops to Clear Prestress Ducts.

Note D
Grillage Reinforcement:
#13 @ 100 Vertical Note A
#13 @ 100 Horizontal

Note E
Portion of Deck Overhang Cast with Prestress Blockout

For Location of Detail R, and Detail S see "Bent Layout No. 5" and "Bent Details No. 13" Sheets

Utility Opening Not Shown

Deck, Soffit and Girder reinforcement not Shown

For Additional Information, see Section GG-GG and Section HH-HH on "Bent Details No. 9" Sheet



	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) BENT DETAILS No. 14		
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66			
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05			CU 10 EA 3A66U1	REVISION DATES		<table border="1"> <tr> <td>11-18-08</td> <td>12-1-08</td> <td>11-18-08</td> </tr> </table>	11-18-08
11-18-08	12-1-08	11-18-08								
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN								ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 45 OF 94

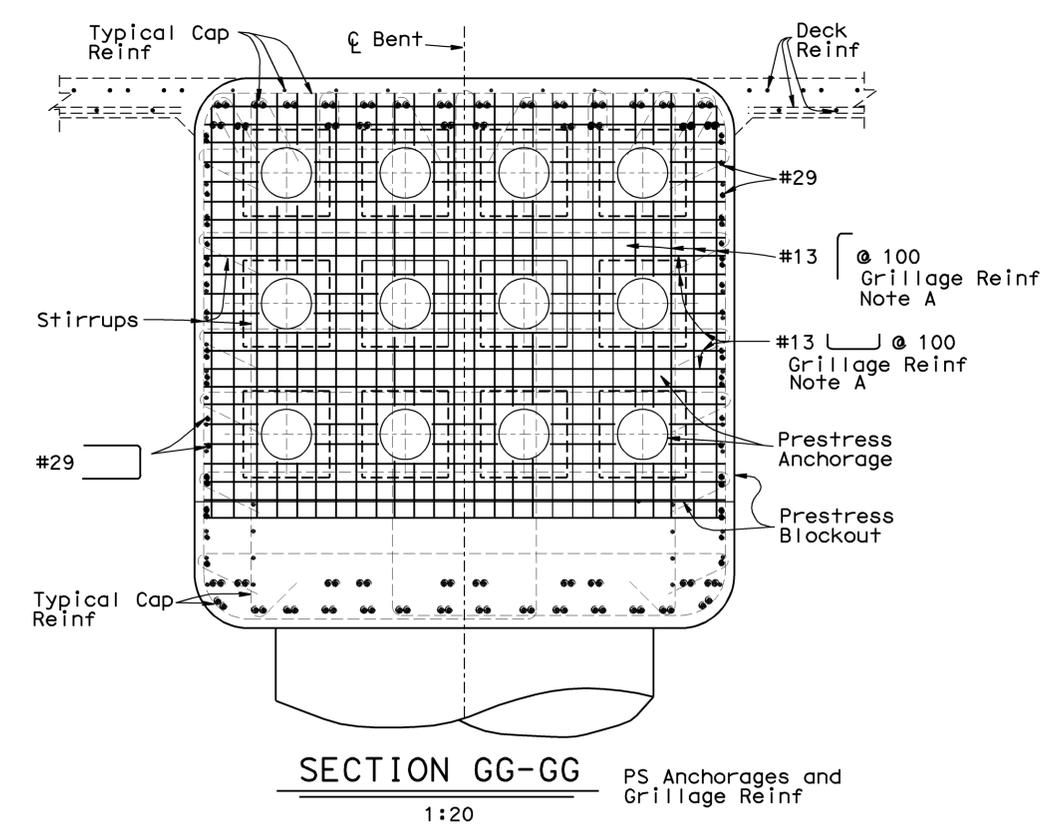
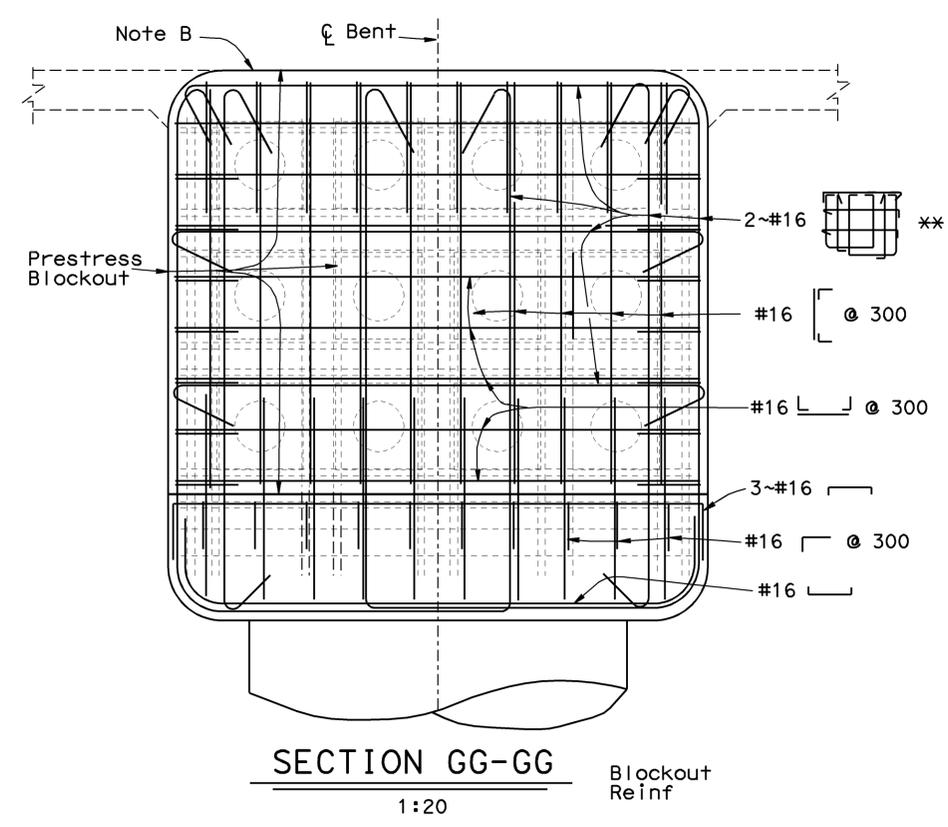
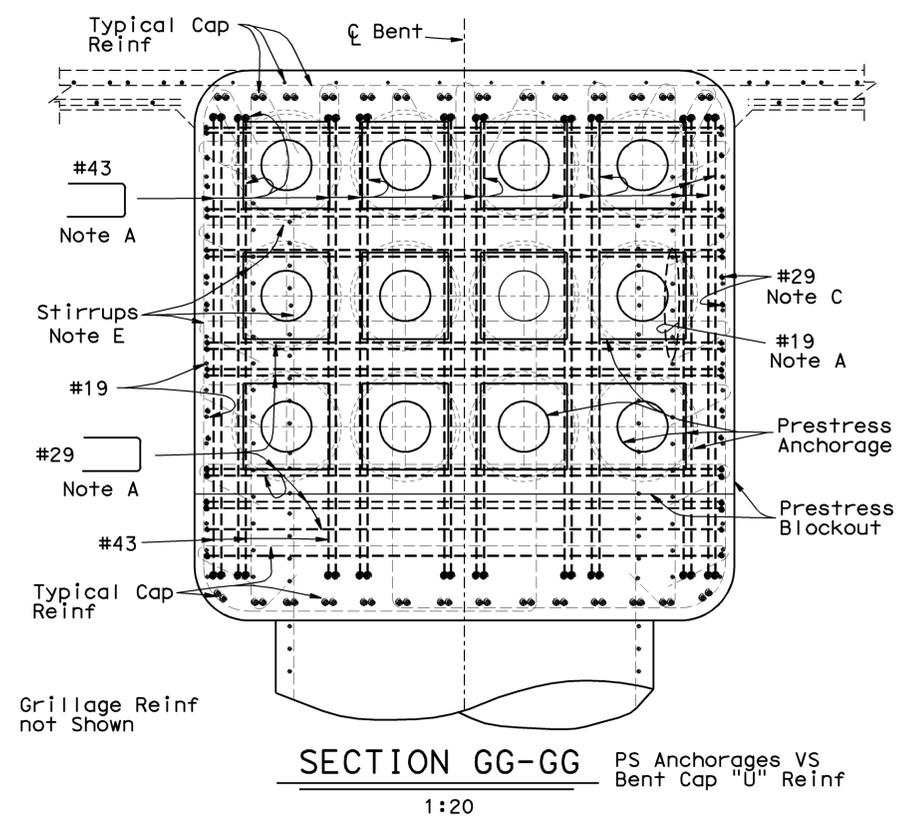
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STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	283	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
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REGISTERED PROFESSIONAL ENGINEER
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA



Notes

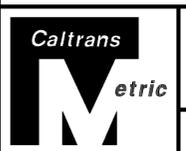
Note A
 Adjust Reinforcement to Clear Prestress Anchorages and Ducts

Note B
 Portion of Deck Overhang Cast with Prestress Blockout

Note C
 Where #29 "U" Reinf will Conflict with Pretress Anchorage, use #29 x 4000 mm Straight Bars. Bundle with Side Face #19 Bars

For Location of "Section GG-GG", see "Bent Layout No. 5" and "Bent Details No. 14" sheets

For Additional Details, see "Bent Details No. 9" Sheet



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DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
 BENT DETAILS No. 15

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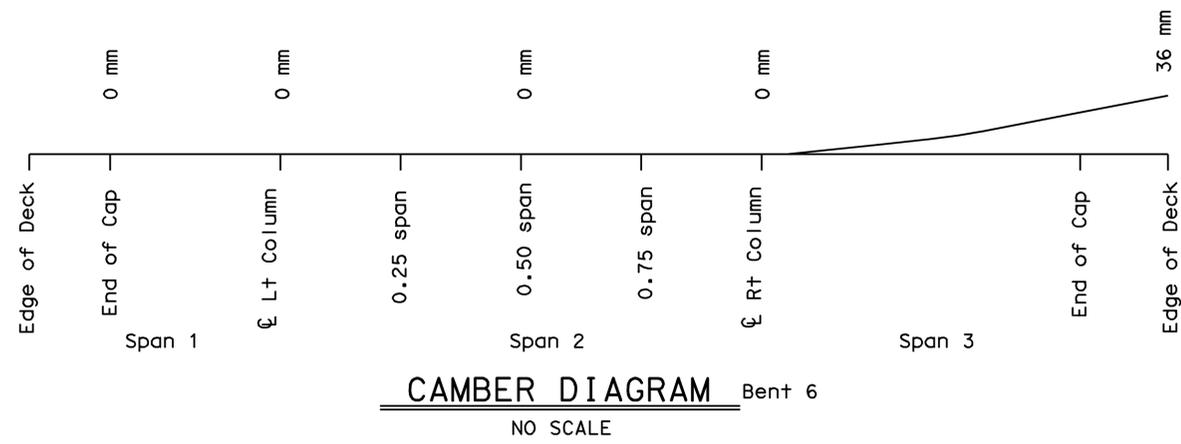
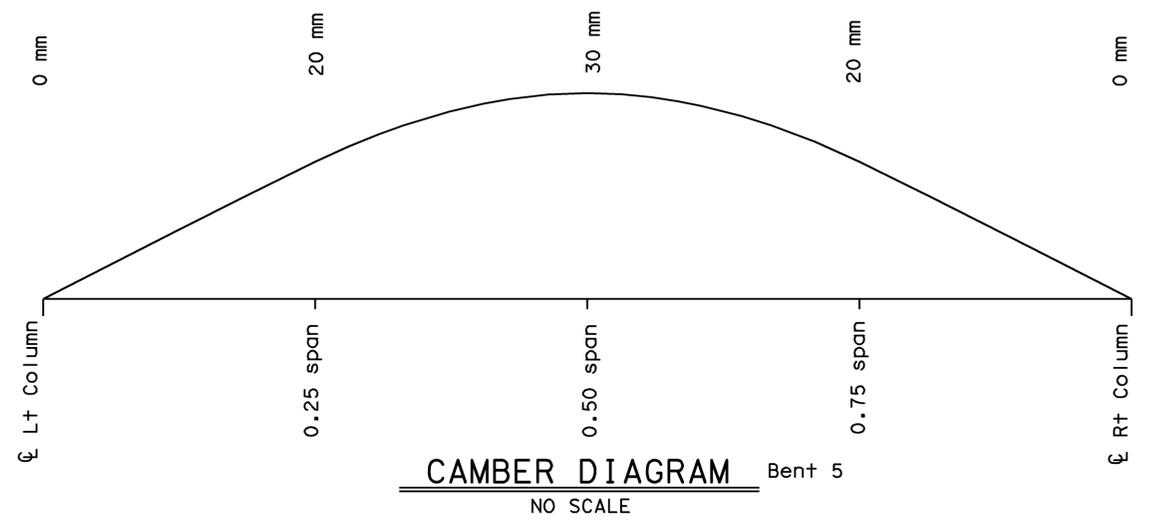
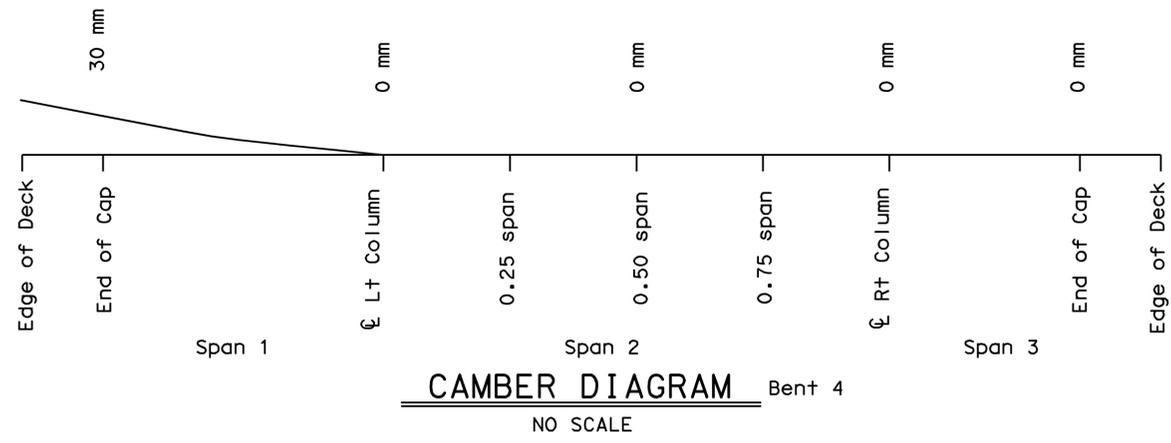
CU 10
 EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	9-24-03	12-1-05								
SHEET	46								OF	94

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	284	384


 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
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 No. C35610
 Exp. 9-30-09
 CIVIL
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Does Not Include Allowance
For Falsework Settlement
Stage 1 and Stage 2
Construction



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DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
BENT DETAILS No. 16

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



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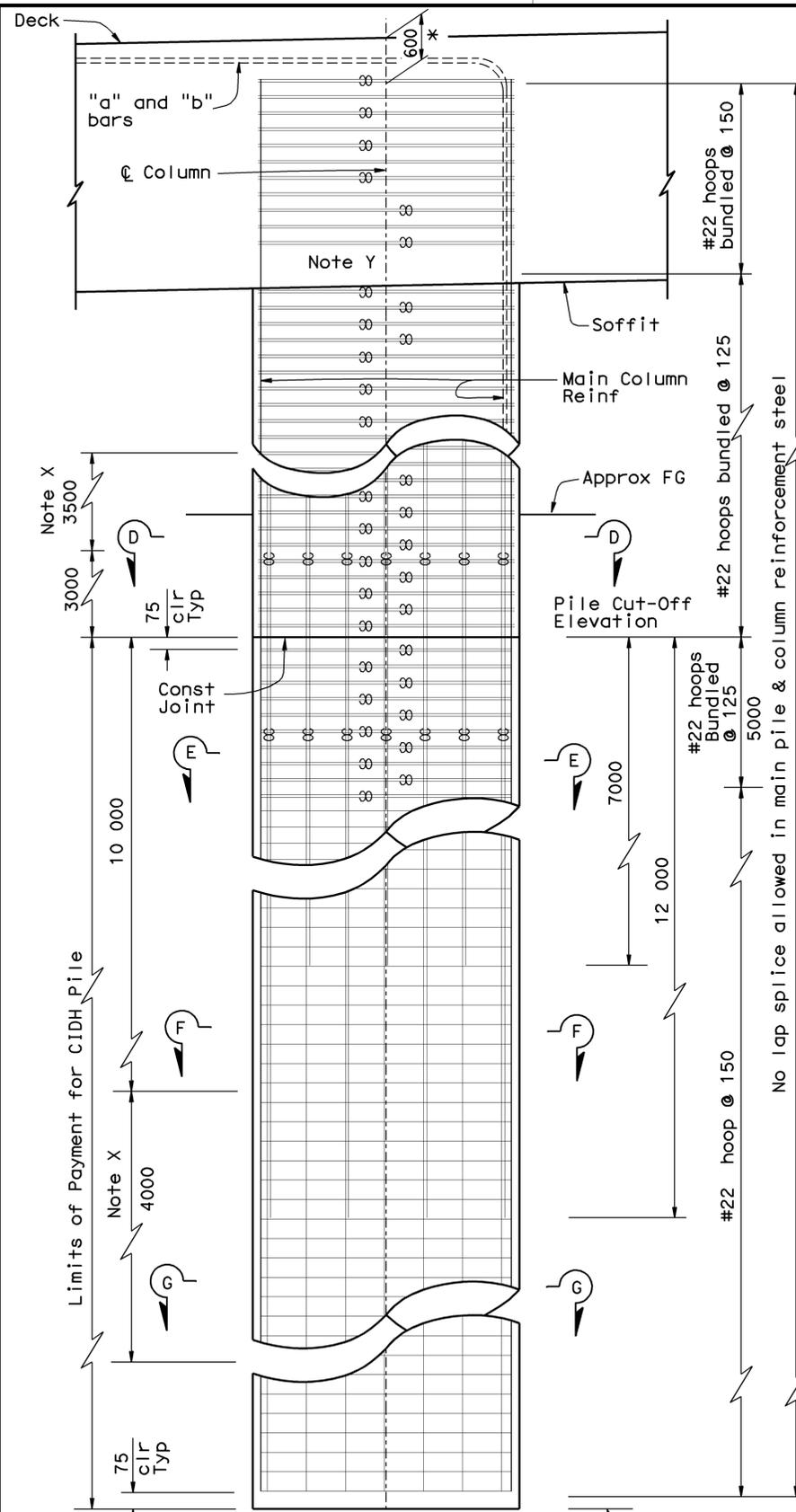
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	9-24-03	12-1-05								
SHEET	47	OF	94							

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DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5		285	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
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COLUMN ELEVATION
No Scale

NOTE:
 CARE SHALL BE TAKEN IN THE PLACEMENT OF THE MAIN COLUMN REINFORCEMENT AT THE BENT CAP INTERFACE, TO ALLOW FOR CORRECT ALIGNMENT AND SPACING OF THE BOTTOM MAIN CAP REINFORCEMENT. FOR DETAILS, SEE "BENT DETAILS No. 6", "BENT DETAILS No. 7" AND "BENT DETAILS No. 9" SHEETS

NOTE X
 Region where main column and pile reinforcement may be mechanically spliced. Ultimate splices shall be used

Note Y
 Adjust Spacing of Hoops to Provide Clearance for Placement of Main Bottom Cap Reinforcement

NOTES:
 For locations of "Column Elevation", see "Bent Layout No. 1" through "Bent Layout No. 5" sheets

For Pile Cut-off and Specified Tip Elevations, see "Pile Data Table" on "Index To Plans" sheet

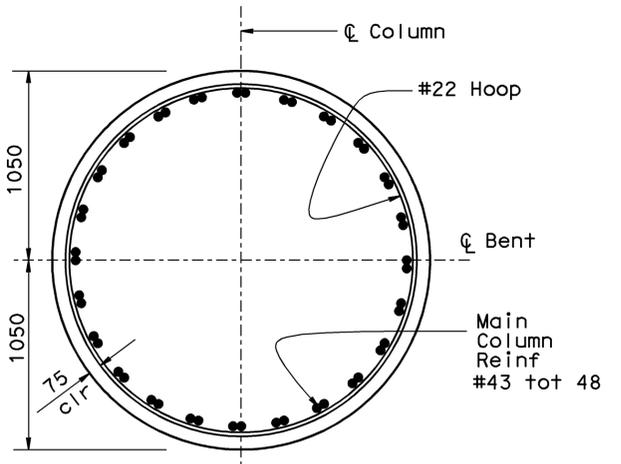
* Main column reinforcement may be cut as required to allow for placement of prestress ducts as approved by the engineer

For column reinforcement ("a" and "b" bars) extending into bent caps, see "Bent Details No. 7" and "Bent Details No. 9" sheets

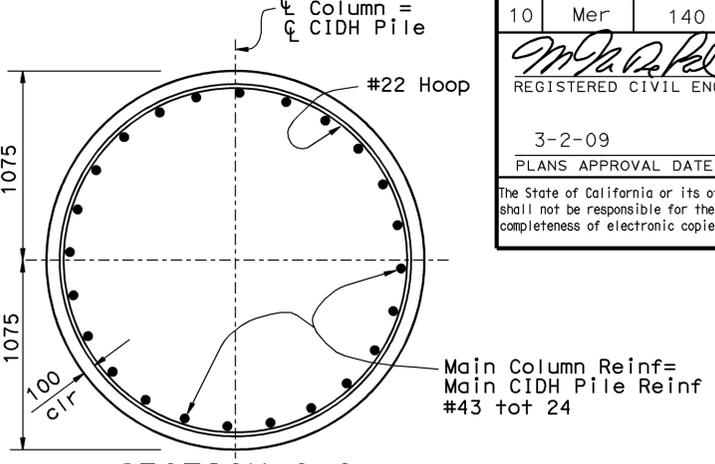
Column Hoops may be adjusted as required to allow for placement of main bent cap reinforcement and prestress ducts as approved by the engineer

Drain Pipes Not Shown

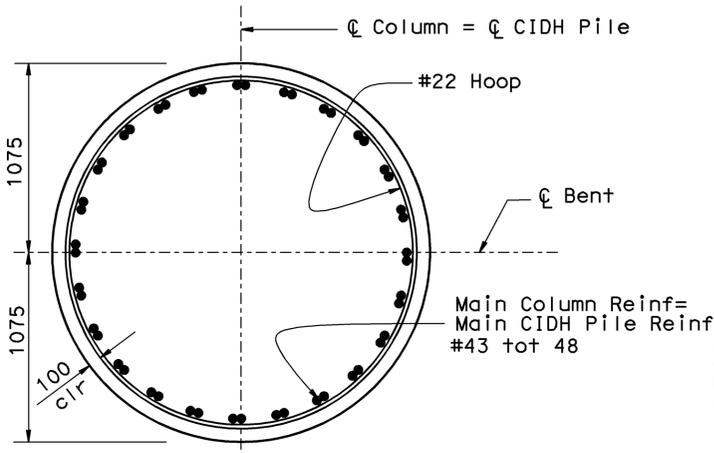
⊗ Denotes Bundled Reinforcement



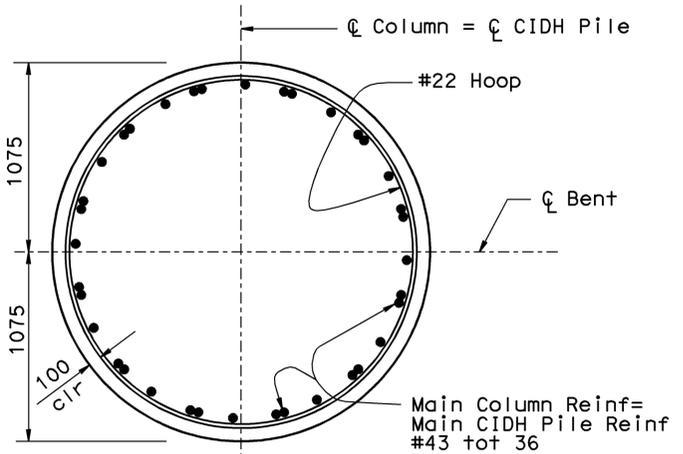
SECTION D-D
1:20



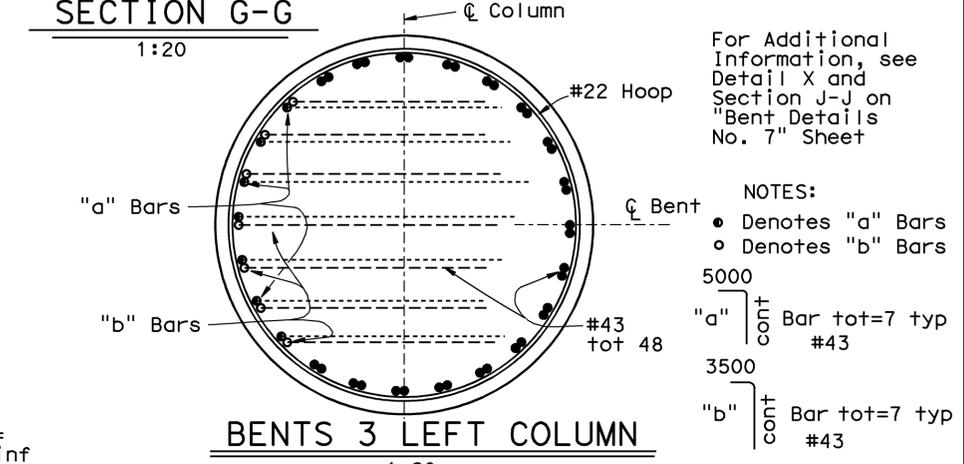
SECTION G-G
1:20



SECTION E-E
1:20



SECTION F-F
1:20



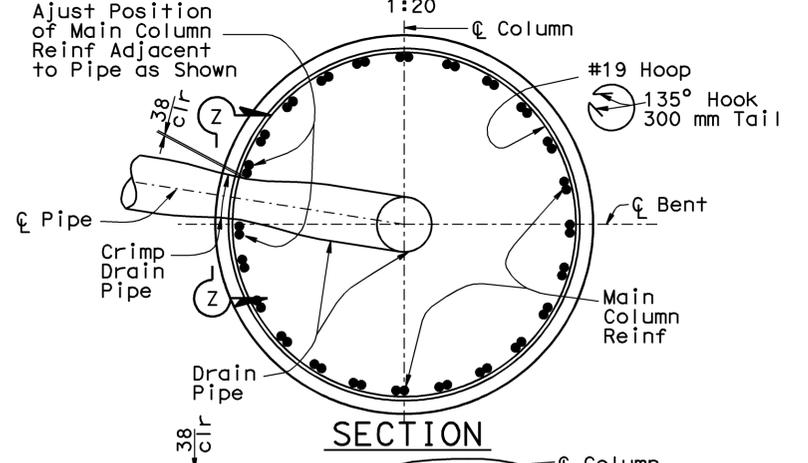
BENTS 3 LEFT COLUMN
1:20

For Additional Information, see Detail X and Section J-J on "Bent Details No. 7" Sheet

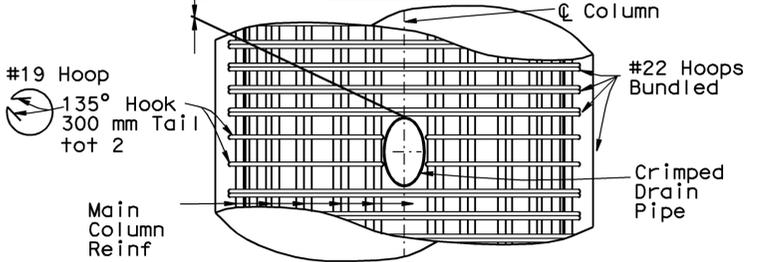
NOTES:
 • Denotes "a" Bars
 ○ Denotes "b" Bars

5000
 "a" cont Bar tot=7 typ #43

3500
 "b" cont Bar tot=7 typ #43



SECTION



ELEVATION Z-Z
DETAILS AT DRAIN PIPES Bents 2 and 7 Left Column
1:20



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
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DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
 BENT DETAILS No. 17

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



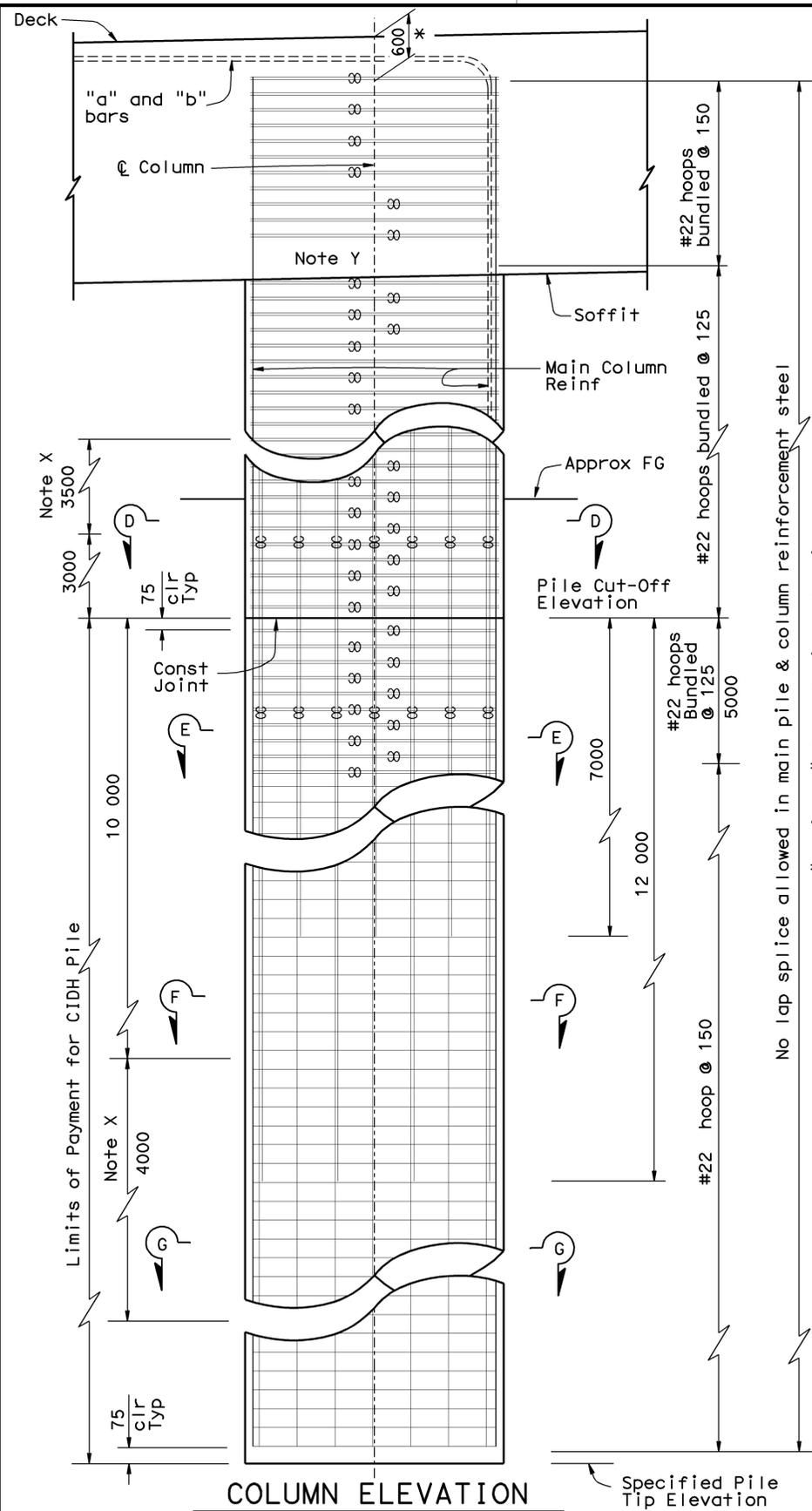
CU 10
 EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES		SHEET 48	OF 94
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	286	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
 PLANS APPROVAL DATE
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
 CIVIL
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NOTE:
 CARE SHALL BE TAKEN IN THE PLACEMENT OF THE MAIN COLUMN REINFORCEMENT AT THE BENT CAP INTERFACE, TO ALLOW FOR CORRECT ALIGNMENT AND SPACING OF THE BOTTOM MAIN CAP REINFORCEMENT. FOR DETAILS, SEE "BENT DETAILS NO. 6", "BENT DETAILS NO. 8" AND "BENT DETAILS NO. 9" SHEETS

NOTE X
 Region where main column and pile reinforcement may be mechanically spliced. Ultimate splices shall be used

Note Y
 Adjust Spacing of Hoops to Provide Clearance for Placement of Main Bottom Cap Reinforcement

NOTES:
 For locations of "Column Elevation", see "Bent Layout No. 5" sheet

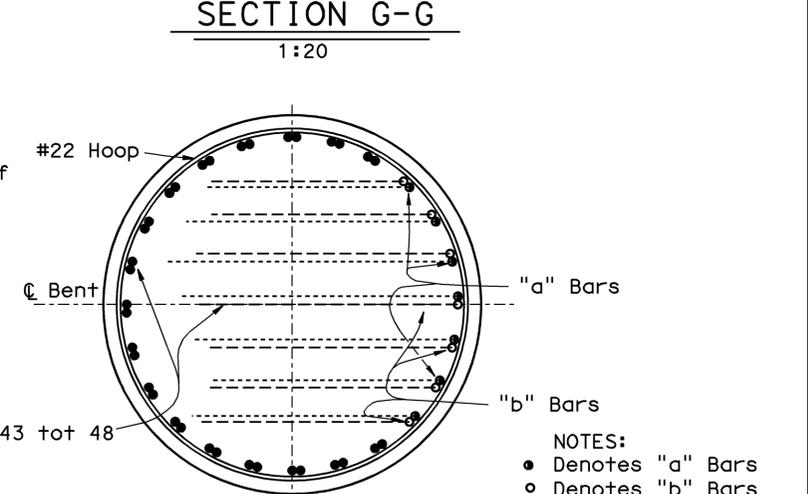
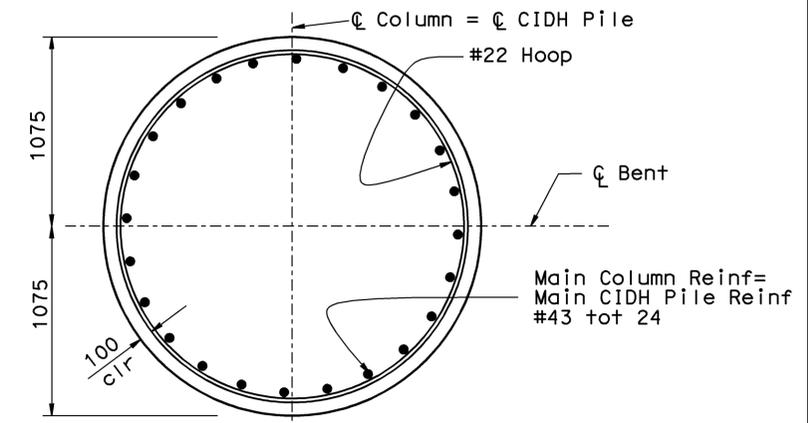
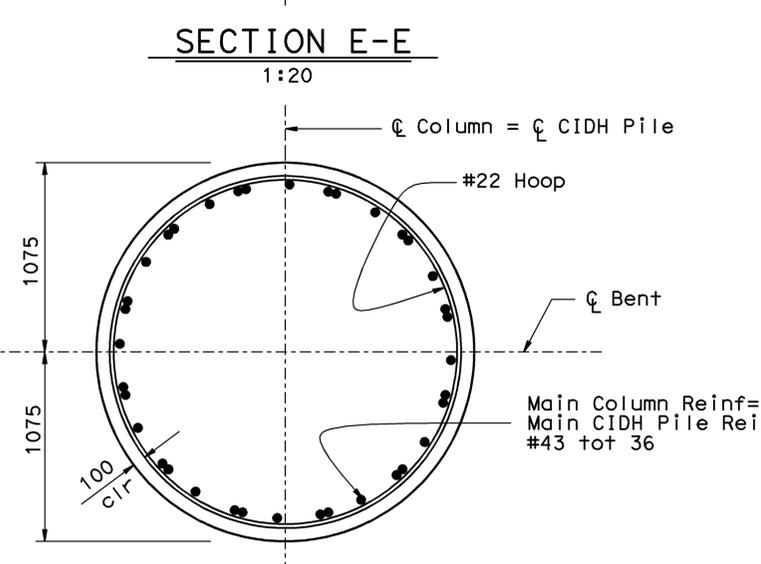
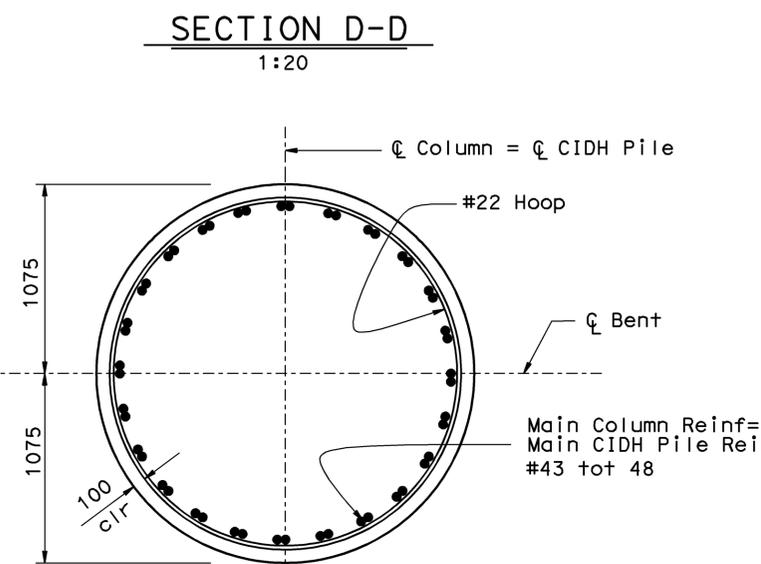
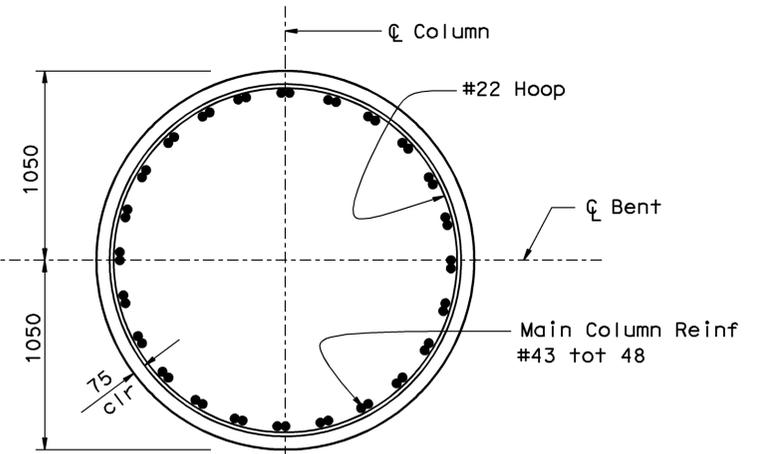
For Pile Cut-off and Specified Tip Elevations, see "Pile Data Table" on "Index To Plans" sheet

* Main column reinforcement may be cut as required to allow for placement of prestress ducts as approved by the engineer

For column reinforcement ("a" and "b" bars) extending into bent caps, see "Bent Details No. 8", "Bent Detail No. 9" and "Bent Details No. 14" sheets

Column Hoops may be adjusted as required to allow for placement of main bent cap reinforcement and prestress ducts as approved by the engineer

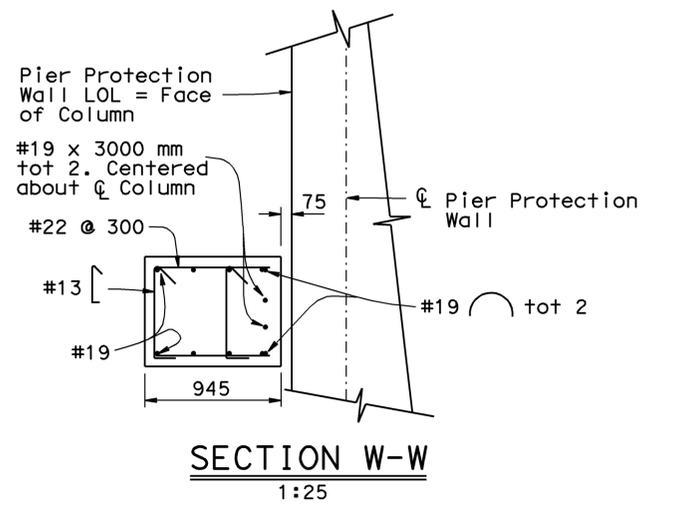
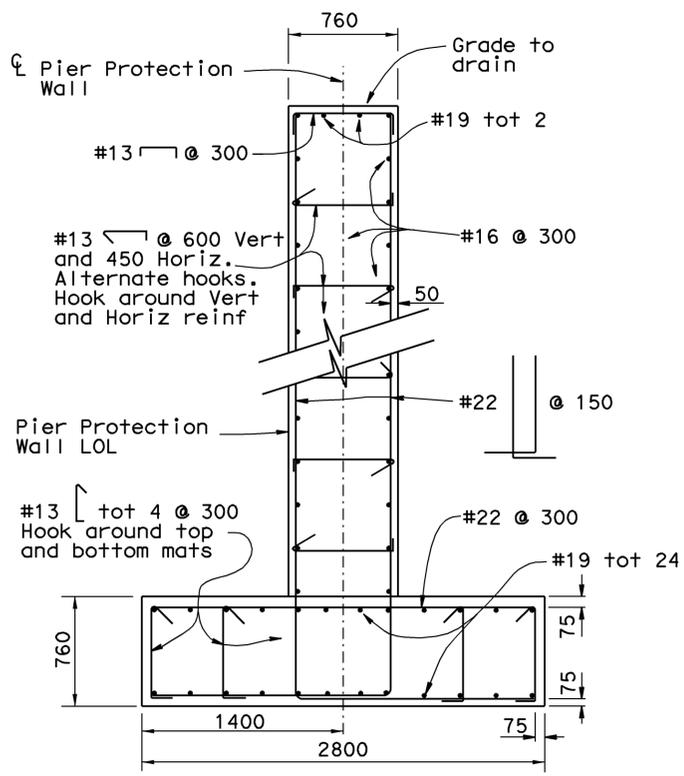
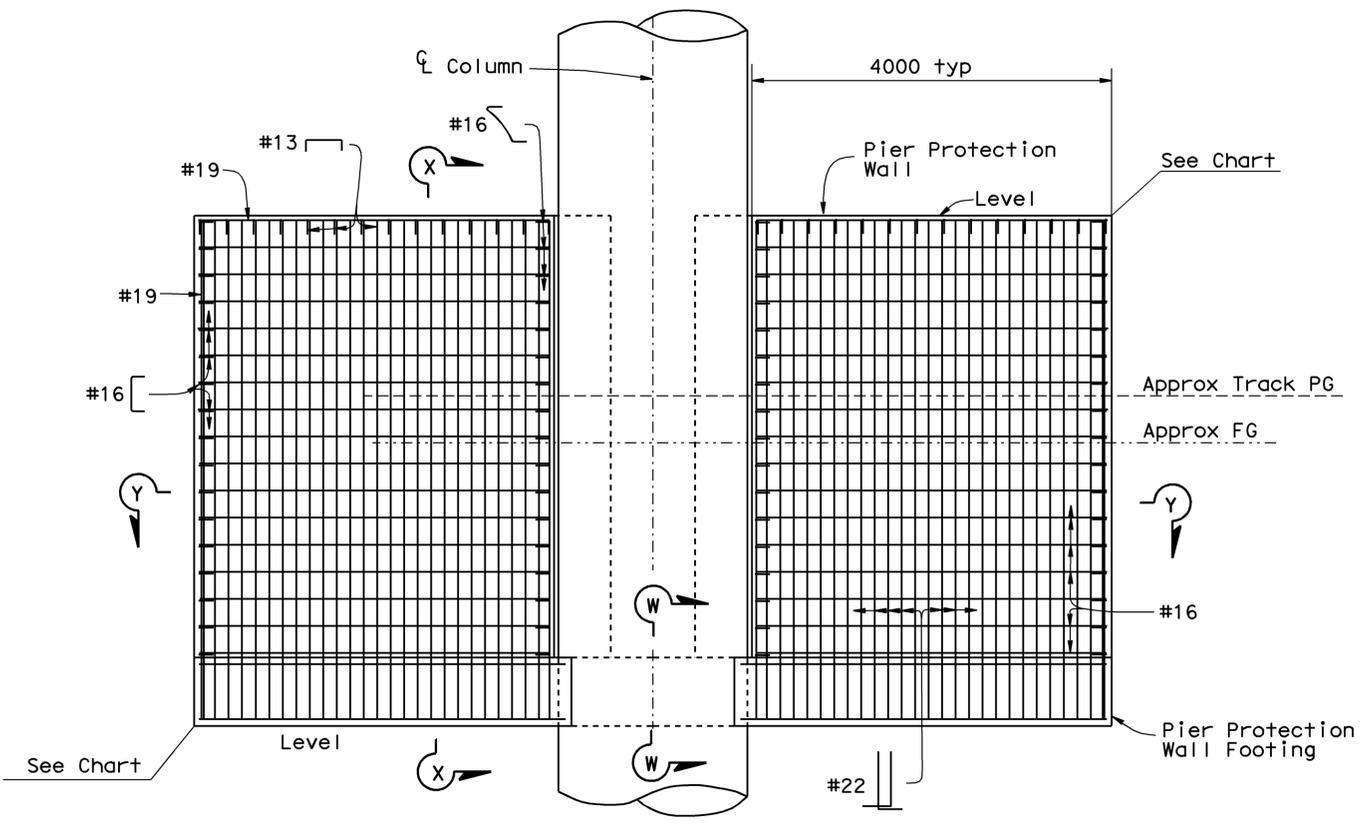
Drain Pipes Not Shown
 ⊕ Denotes Bundled Reinforcement



COLUMN ELEVATION
 No Scale

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) BENT DETAILS No. 18
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05					

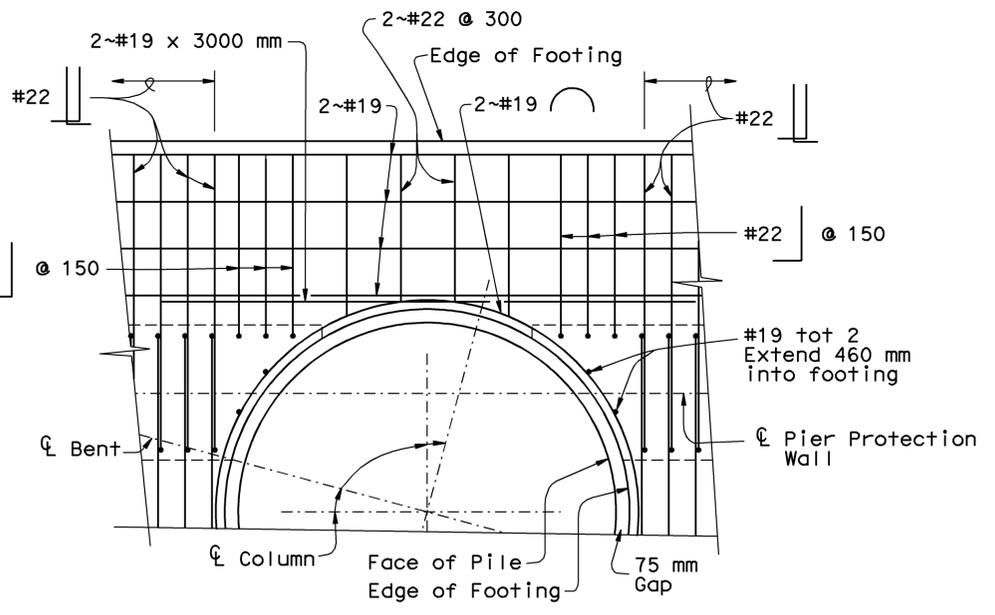
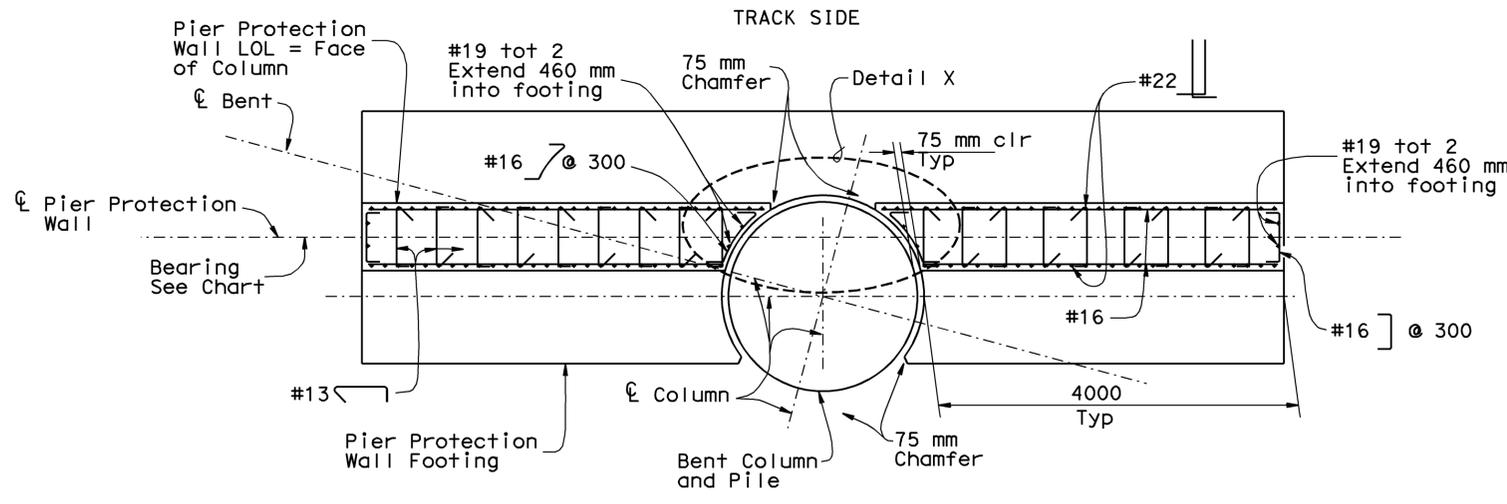
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
 ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS
 CU 10 EA 3A66U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES
 SHEET 49 OF 94
 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)



PART ELEVATION-PIER PROTECTION WALL
1:40

SECTION X-X
1:25

SECTION W-W
1:25



DATA CHART

Bent No.	Location	∅ Bearing	Top of Wall Elevation	Bottom of Ftg Elevation
4	Lt Column	S72°25'00"E	58.400	53.350
5	Lt Column	S76°25'00"E	58.500	52.750
5	Rt Column	S76°54'00"E	58.500	53.650
6	Rt Column	S80°10'00"E	58.400	53.650

Notes:
 For Locations of Pier Protection Walls, see "Structure Plan No. 2" Sheet
 Bearing of Pier Protection Wall is Parallel to ∅ of Railroad Track at Column Location
 For Additional Details, see "Bent Detail" Sheets

CRASH WALL DETAILS



DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05

STATE OF CALIFORNIA
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DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 9

BRIDGE No.
 39-0044
 KILOMETER POST
 59.66

BRADLEY OVERHEAD (REPLACE)
BENT DETAILS No. 19

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ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

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DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES
 SHEET 50 OF 94

Falsework Release Notes

Falsework shall be released as soon as permitted by the Specifications
 Deck Closure Pour shall not be placed sooner than 30 days after the falsework for the last stage of the structure has been released

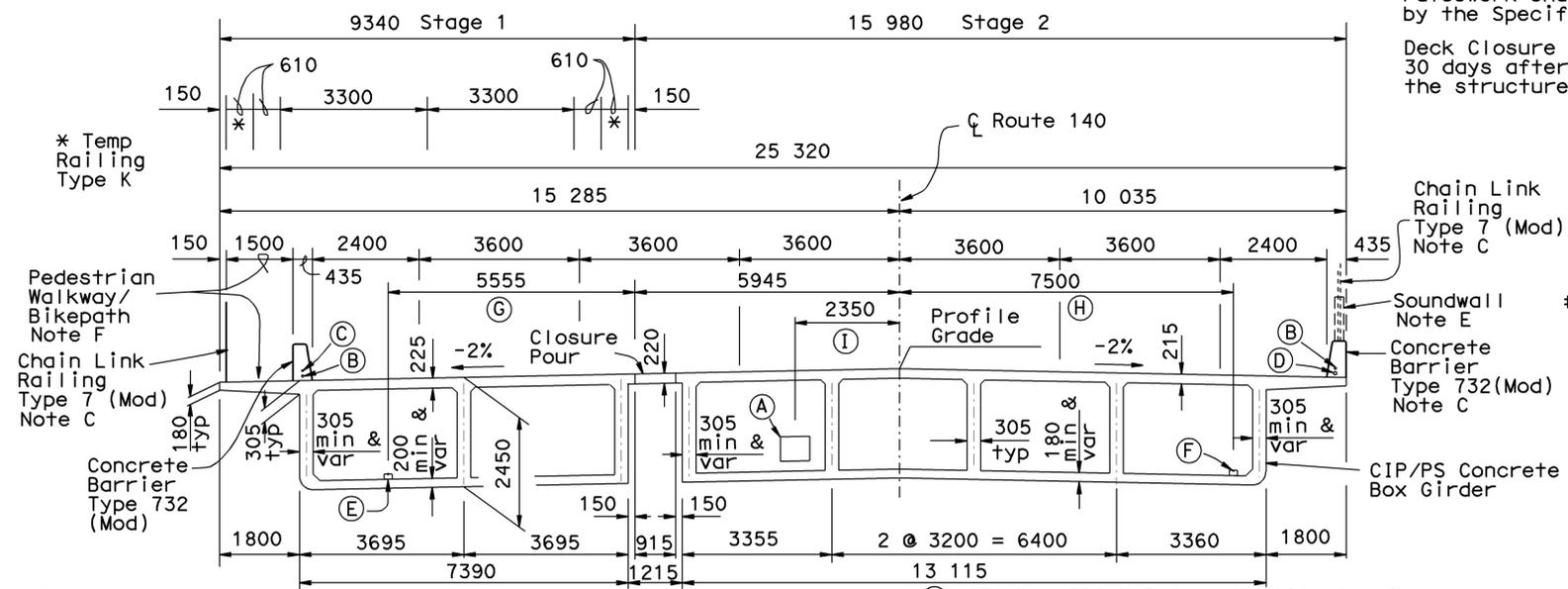
** Rods and U Bolts Shall be Threaded into Couplers a Minimum of 25mm Each

DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5		288	384

11-18-08
 REGISTERED CIVIL ENGINEER DATE

3-2-09
 PLANS APPROVAL DATE

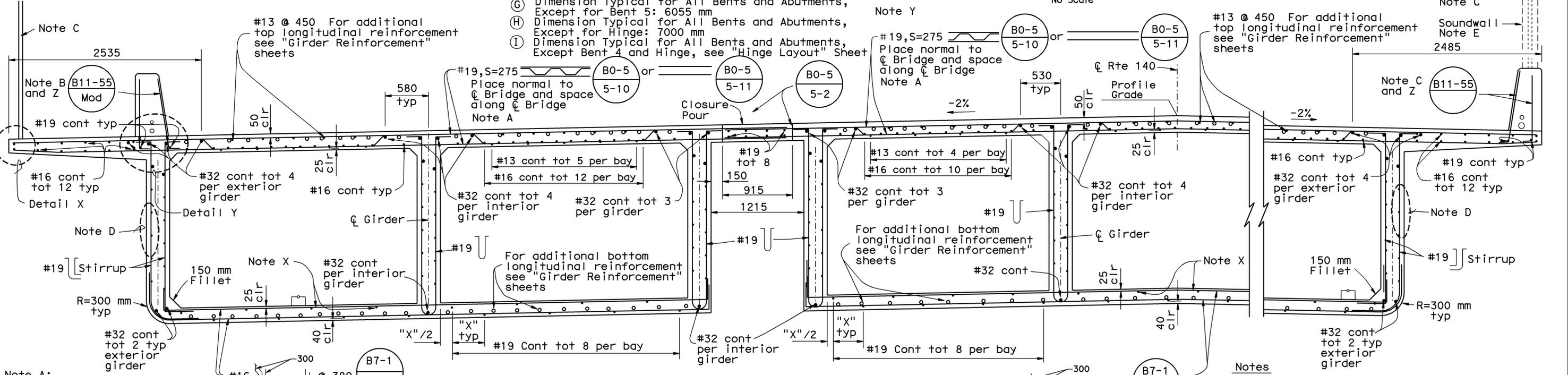
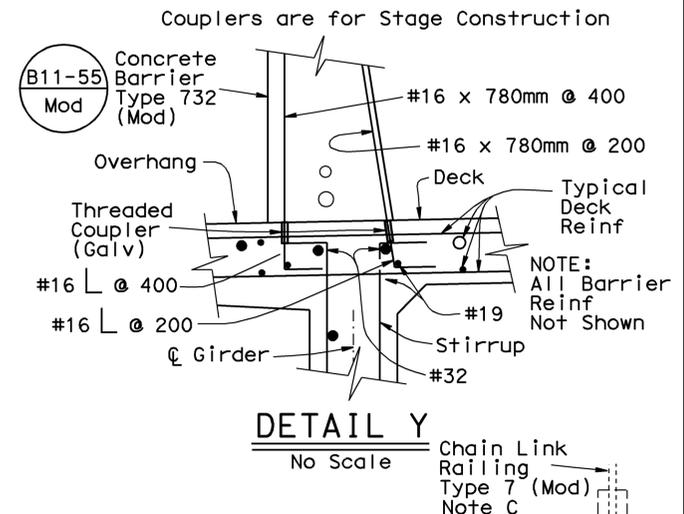
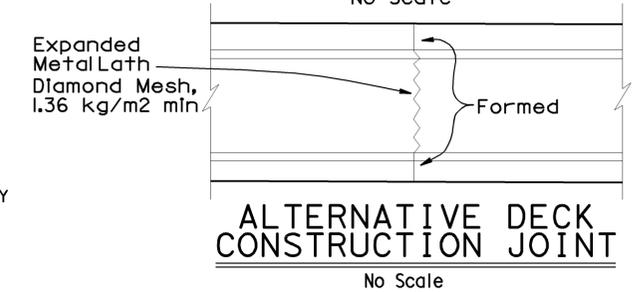
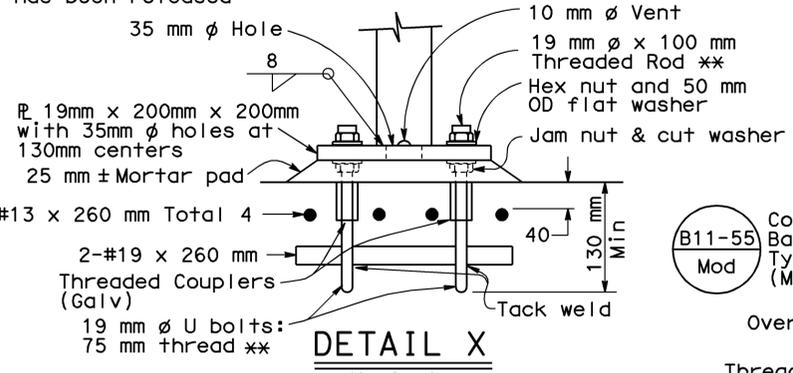
REGISTERED PROFESSIONAL ENGINEER
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
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 STATE OF CALIFORNIA



NOTES:
 Existing structure not shown
 Temporary Railing not shown
 For stage construction details, see "Stage Construction" sheets and "Road Plans"

TYPICAL SECTION
 1:80

- (A) 650 W x 550 H Future Utility Opening
- (B) Size 53 Lighting Conduit, see Note H and Y
- (C) Size 41 Lighting Conduit, see Note H
- (D) Size 78 Communication Conduit, see Note H
- (E) NPS 1/4" Water Supply Line, see Note H
- (F) NPS 1/2" Water Supply Line, see Note H
- (G) Dimension Typical for All Bents and Abutments, Except for Bent 5: 6055 mm
- (H) Dimension Typical for All Bents and Abutments, Except for Hinge: 7000 mm
- (I) Dimension Typical for All Bents and Abutments, Except Bent 4 and Hinge, see "Hinge Layout" Sheet



Note A: Lap reinforcement in Closure Pour
Note B: For Barrier details at Barrier Slab, see Wall Details in Other Plans this Contract
Note C: For Details of Modified Chain Link Railing and Modified Barriers, see "Typical Section No. 2" and "Chain Link Railing Type 7 (Mod)" Sheets
Note D: For Added Soffit and Stem Reinforcement at Exterior Girders at Bents 3 and 5, see "Typical Section No. 2" Sheet
Note E: For Soundwall Limits, see "Structure Plan No. 1" and "Structure Plan No. 2" Sheets

PART TYPICAL SECTION
 1:25

Note F: For Details of Walkway/Bikepath Landings, see "Miscellaneous Details" Sheet
Note H: For Added Details off the Structure, see "Road Plans"

Note X: For Added Top Soffit Reinforcement at Supporting Side of Hinge in Span 4, see "Girder Layout No. 2" Sheet

Note Y: For Limits of 41mm Conduit for Soffit Mounted Luminaires, see "Girder Layout No. 1", "Girder Layout No. 2" and "Road Plans"

Note Z: For Barrier Reinforcement Details at Deck Joints, see "Abutment Joint Seal Details" and "Hinge Joint Seal Details" Sheets

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) TYPICAL SECTION No. 1
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05					

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS: 0 10 20 30 40 50 60 70 80 90 100

CU 10 EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 11-18-08

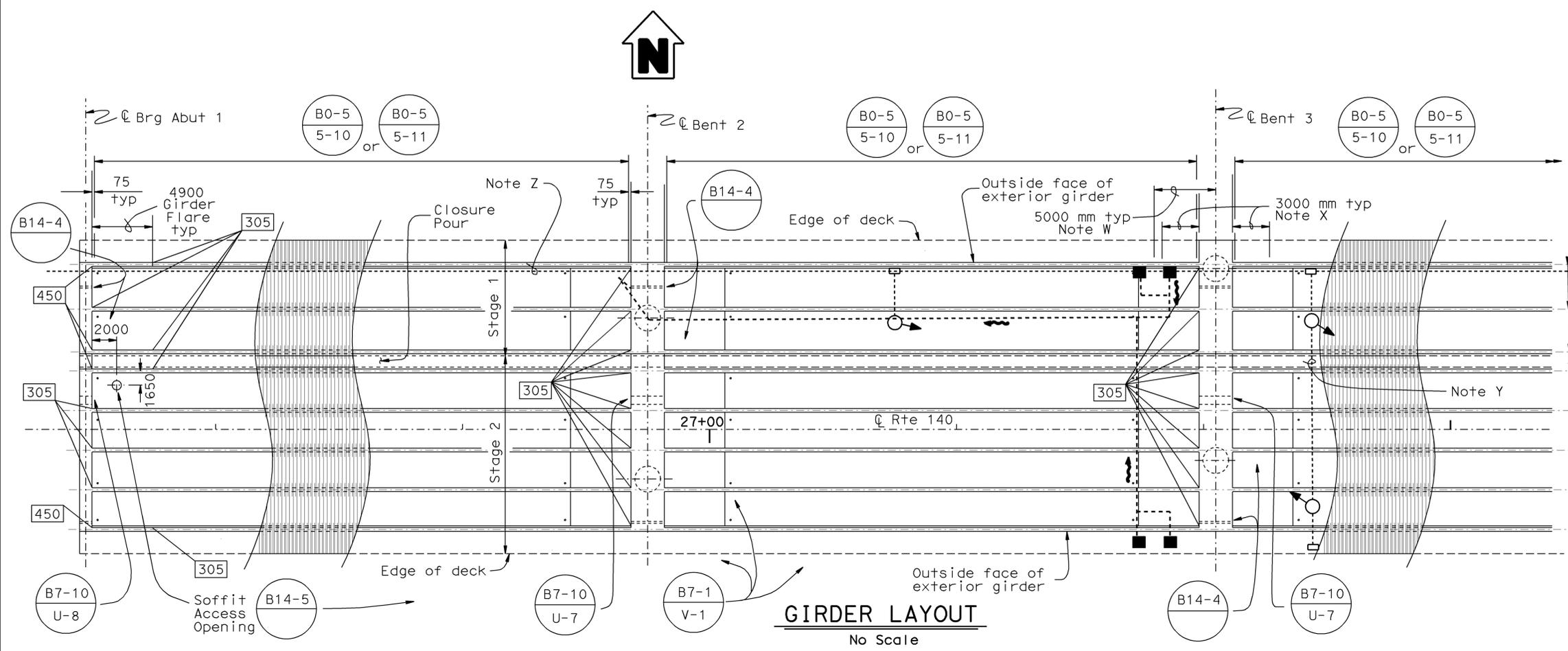
SHEET 51 OF 94

STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	290	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
 PLANS APPROVAL DATE
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PRESTRESSING NOTES
(FRAME 1)

1865 MPa Low Relaxation Strand:

$P_{jack} = 38900 \text{ kN}$ (Stage 1)

$P_{jack} = 60300 \text{ kN}$ (Stage 2)

Anchor Set = 10 mm

Total Number of Girders = 3 (Stage 1)

Total Number of Girders = 5 (Stage 2)

Distribution of prestress force (P_{jack}) between girders shall not exceed the ratio of 3:2. Maximum final force variation between girders shall not exceed 3225 kN

Concrete: $f'_c = 35 \text{ MPa}$ @ 28 days

$f'_{ci} = 25 \text{ MPa}$ @ time of stressing

Contractor shall submit elongation calculations based on initial stress at

$\lambda = 0.908$ times jacking stress.

Two end stressing shall be performed

Notes:

- Denotes girder stem width in millimeters
- L = Length measured along ϕ girder
- Denotes direction of flow
- For Deck Drain Details, see "Drainage Details No. 2" Sheet
- Denotes Drain Pipe
- Denotes Deck Drain

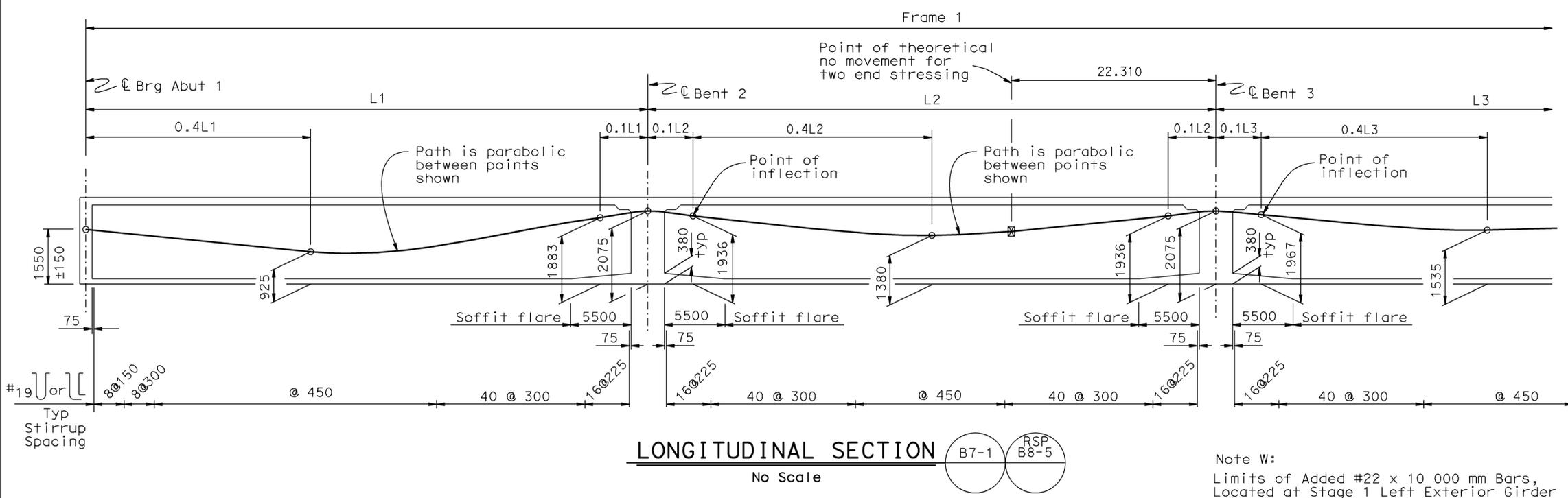
Note X:
Limit of Added #19 $\phi 3000$ @ 380, see "Typical Section No. 2" Sheet

- Denotes Soffit Mounted Luminaire, for Details, see "Road Plans"
- Denotes Conduit for Soffit Mounted Luminaire
- Denotes Approximate Pullbox Location

Note Y:
Conduit for Soffit Mounted Luminaires may be Suspended Under Deck Closure Pour or Routed Through Bent Cap

Note Z:
Conduit for Soffit Mounted Luminaires Routed Through Concrete Barrier Type 732. See "Road Plans"

Water Supply Lines Not Shown



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	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05					

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS: 0 10 20 30 40 50 60 70 80 90 100

CU 10 EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES

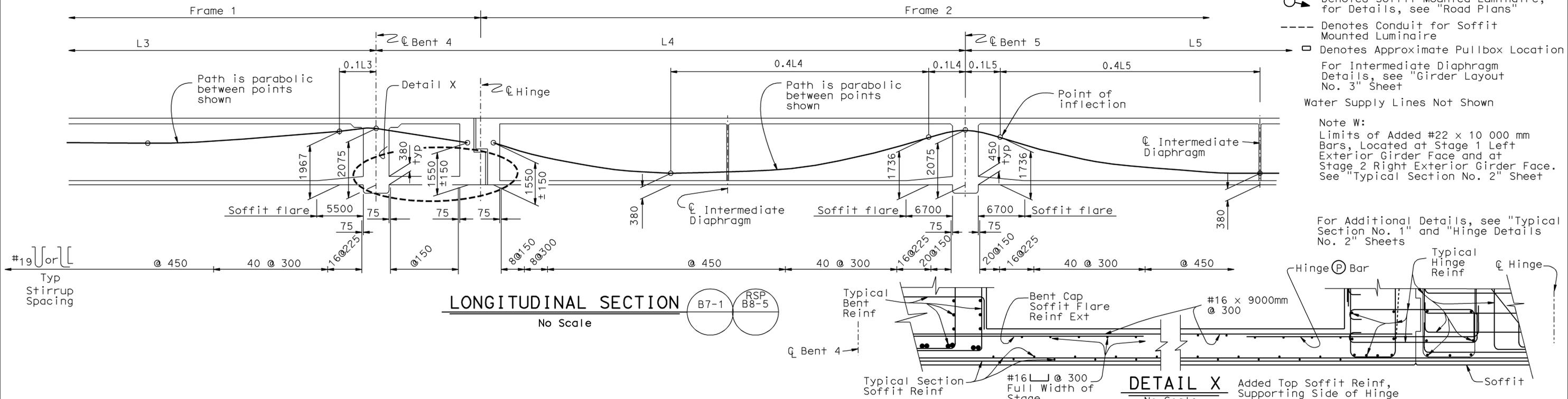
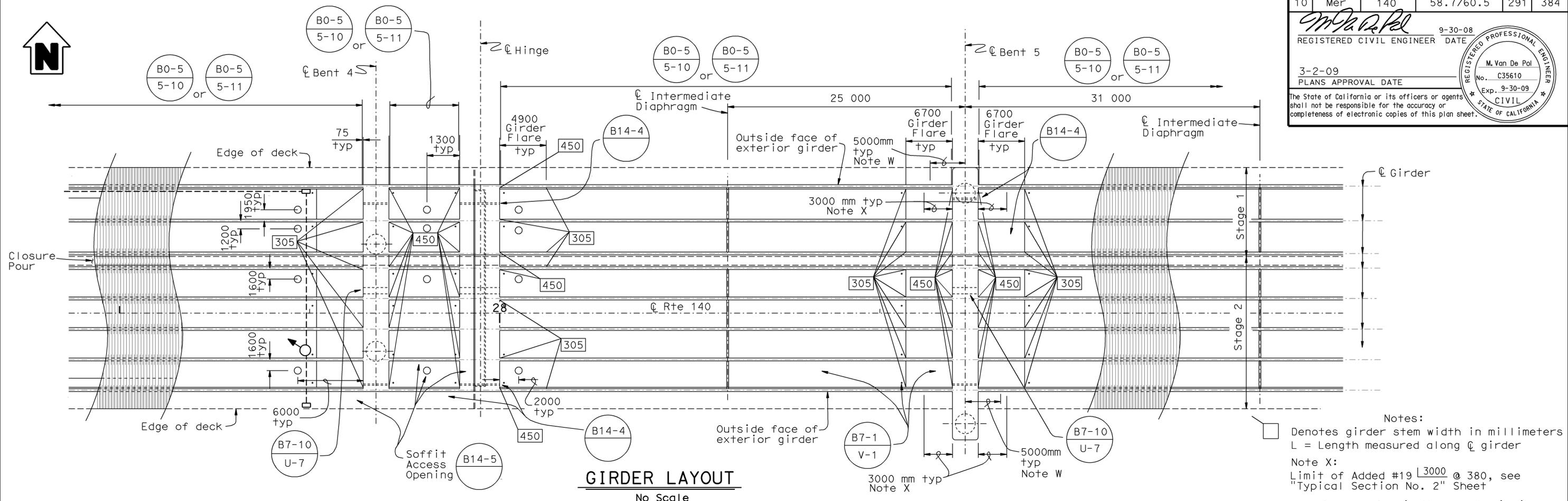
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SHEET 53 OF 94

STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5		291	384

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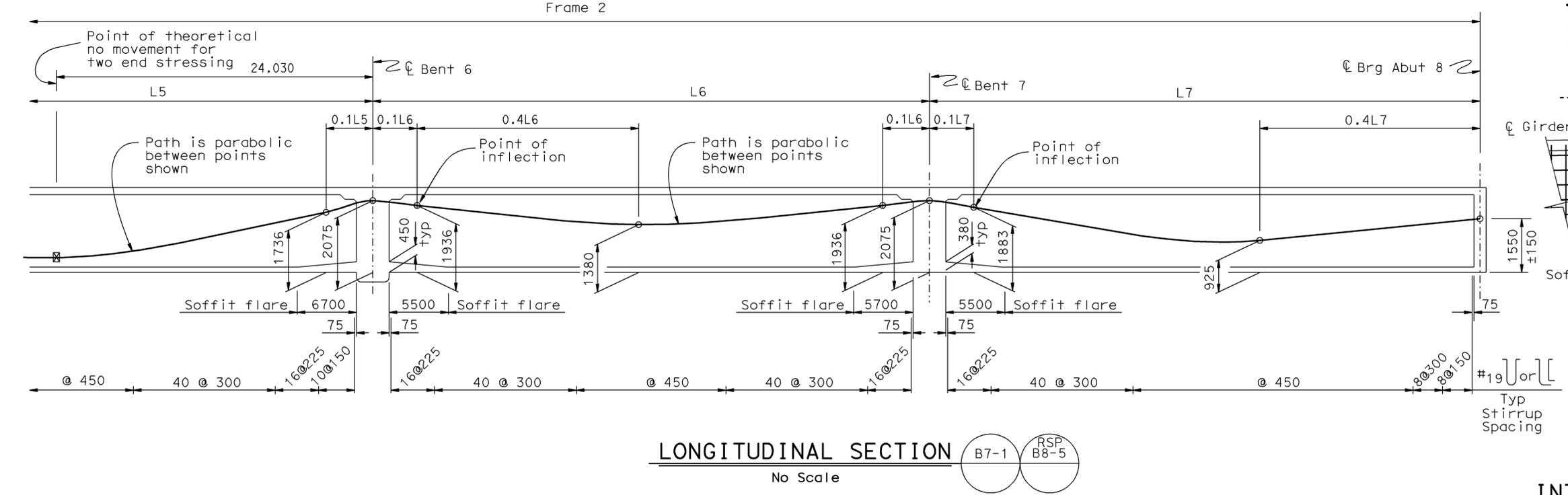
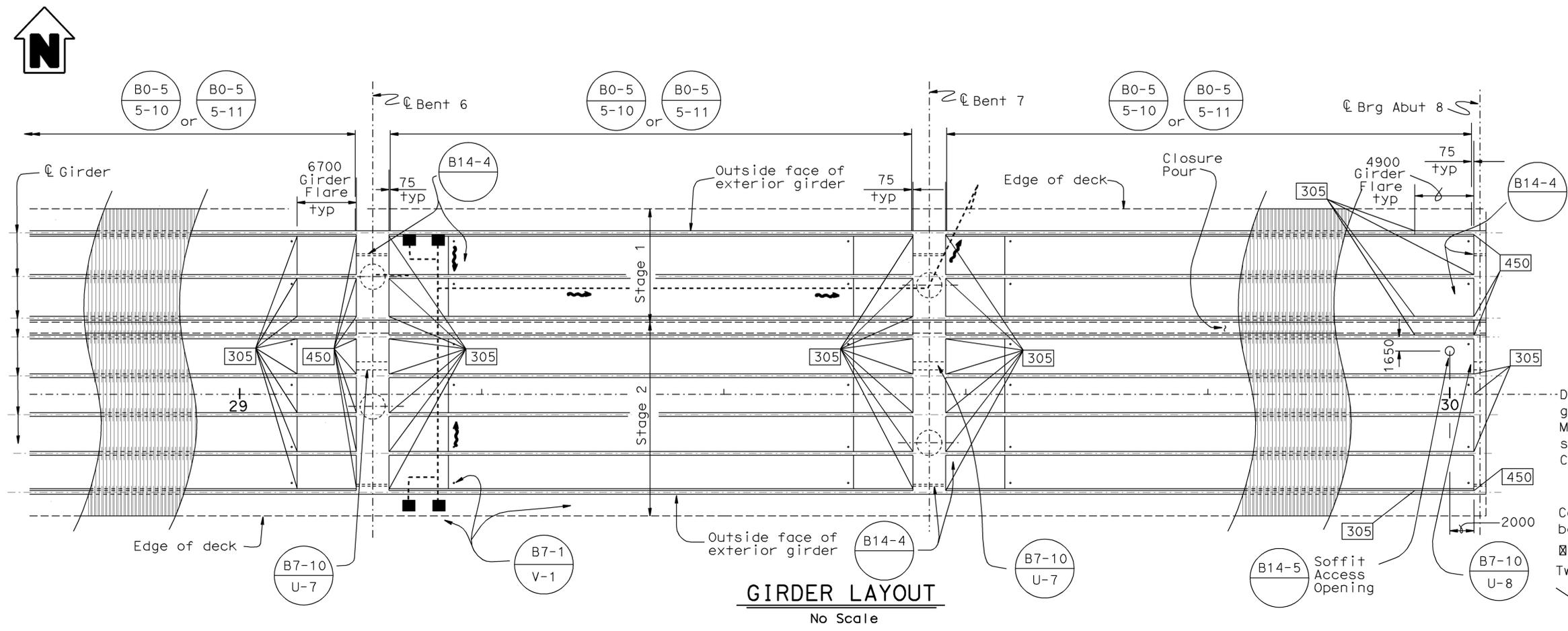


	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) GIRDER LAYOUT No. 2
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05					

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 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES
 SHEET 54 OF 94
 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	292	384

REGISTERED CIVIL ENGINEER DATE 9-30-08
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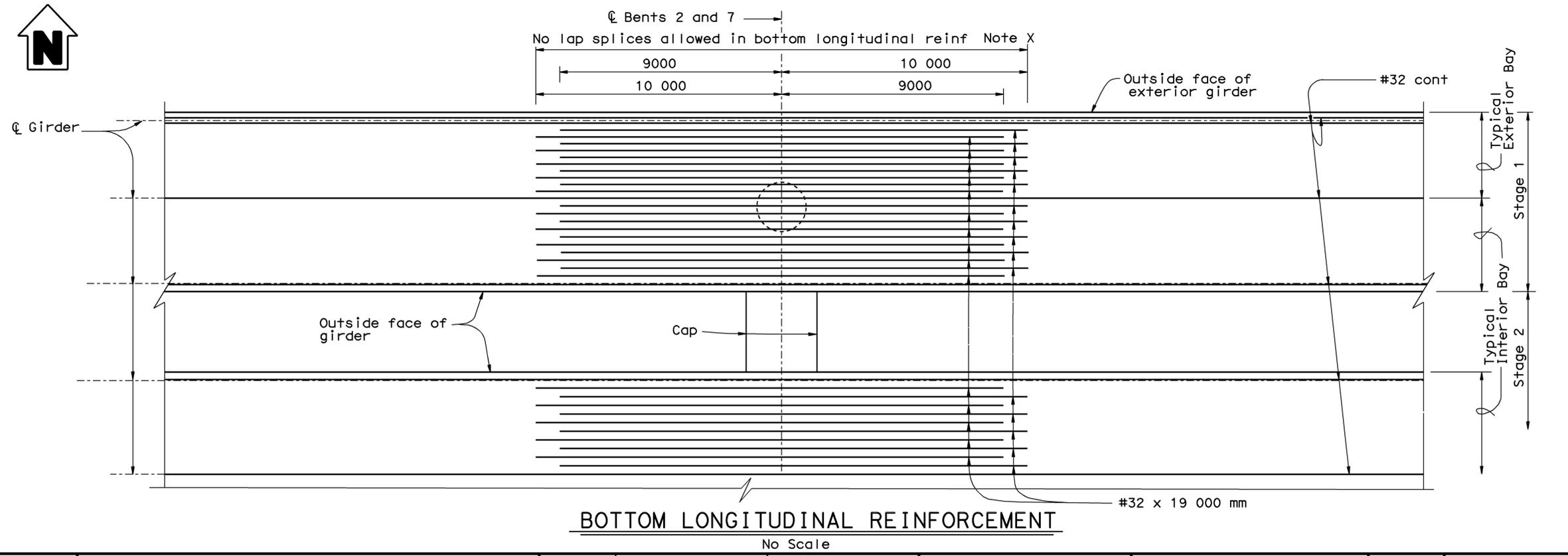
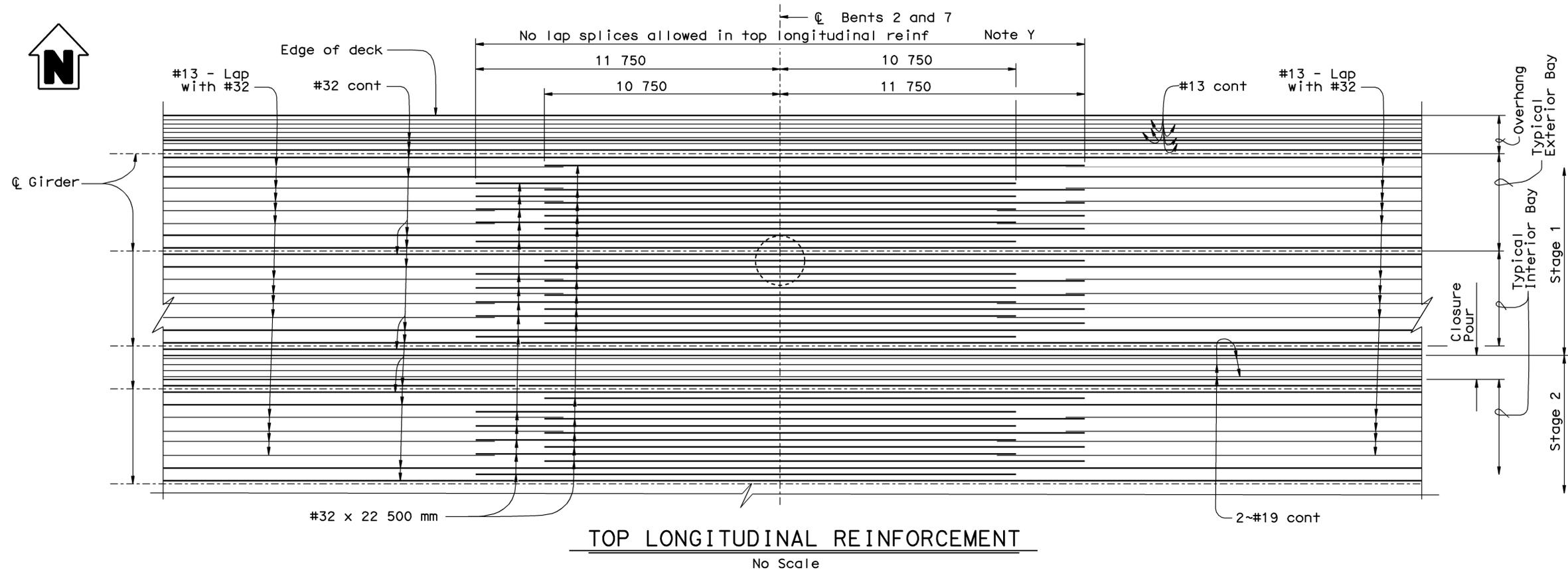


	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) GIRDER LAYOUT No. 3
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05					

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 CU 10 EA 3A66U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES
 SHEET 55 OF 94
 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	293	384

M. Van De Pol
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 3-2-09
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NOTE:
 For additional information see "Typical Section No. 1" sheet
 Ultimate Splices shall be used for main reinforcement
 Note X
 No Lap Splices Allowed in #19 Continuous Longitudinal Soffit Reinforcement. Reinforcement not Shown, see "Typical Section No. 1" Sheet
 Note Y
 Including OH Reinf

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	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 11-05			39-0044	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 11-05			KILOMETER POST	
						59.66	

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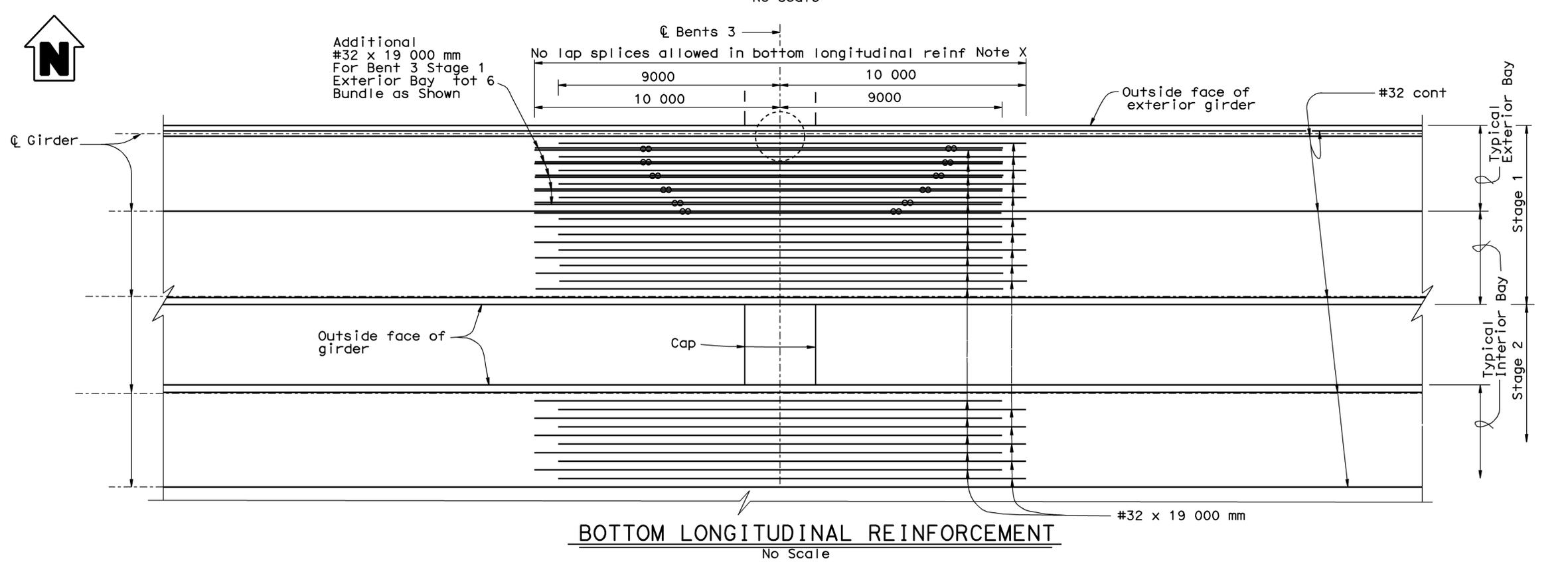
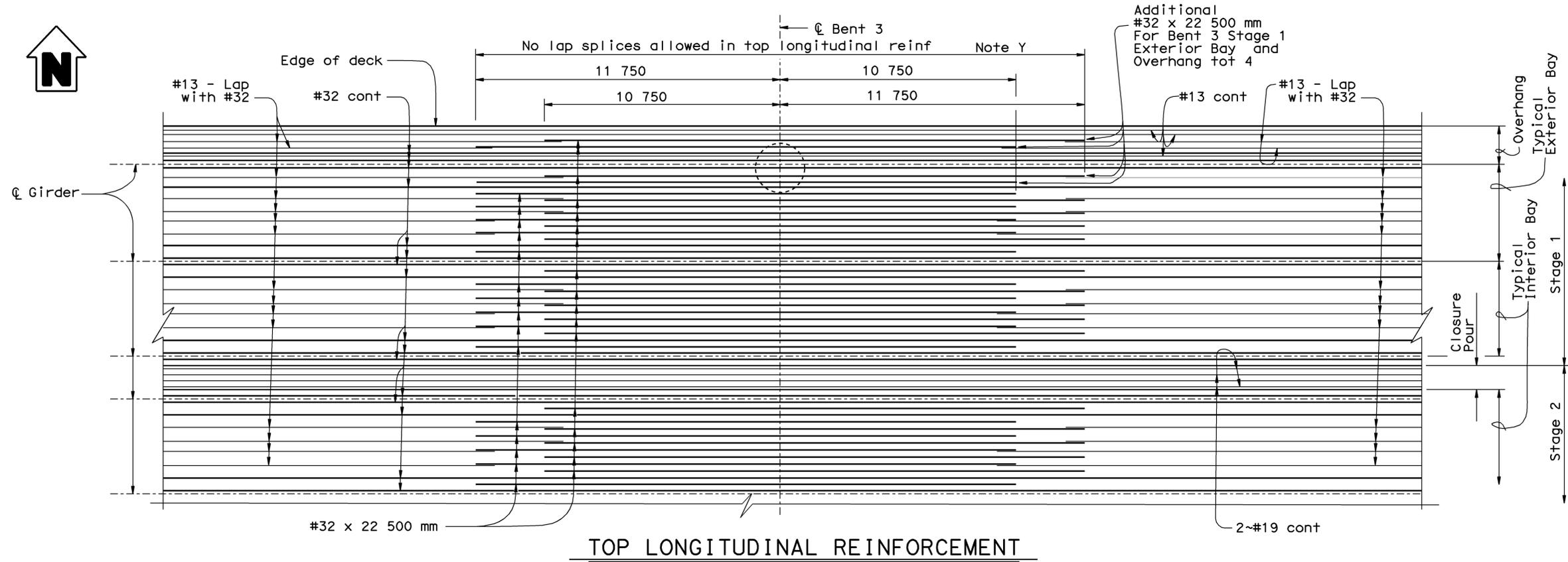
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CU 10 EA 3A66U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES
 SHEET 56 OF 94
 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	294	384

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NOTE:

For Additional Information see "Typical Section No. 1" Sheet

Denotes Bundled Reinforcement

Ultimate Splices shall be used for main reinforcement

Note X
No Lap Splices Allowed in #19 Continuous Longitudinal Soffit Reinforcement. Reinforcement not Shown, see "Typical Section No. 1" Sheet

Note Y
Including OH Reinf

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	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 12-05			39-0044	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 12-05			KILOMETER POST 59.66	
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN				ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 		DISREGARD PRINTS BEARING EARLIER REVISION DATES 8-15-03 12-6-05	
				CU 10 EA 3A66U1 FILE => 39-0044-1-grmdt02.dgn		SHEET 57 OF 94 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)	

USERNAME => hpierce DATE PLOTTED => 05-MAR-2009 TIME PLOTTED => 05:50

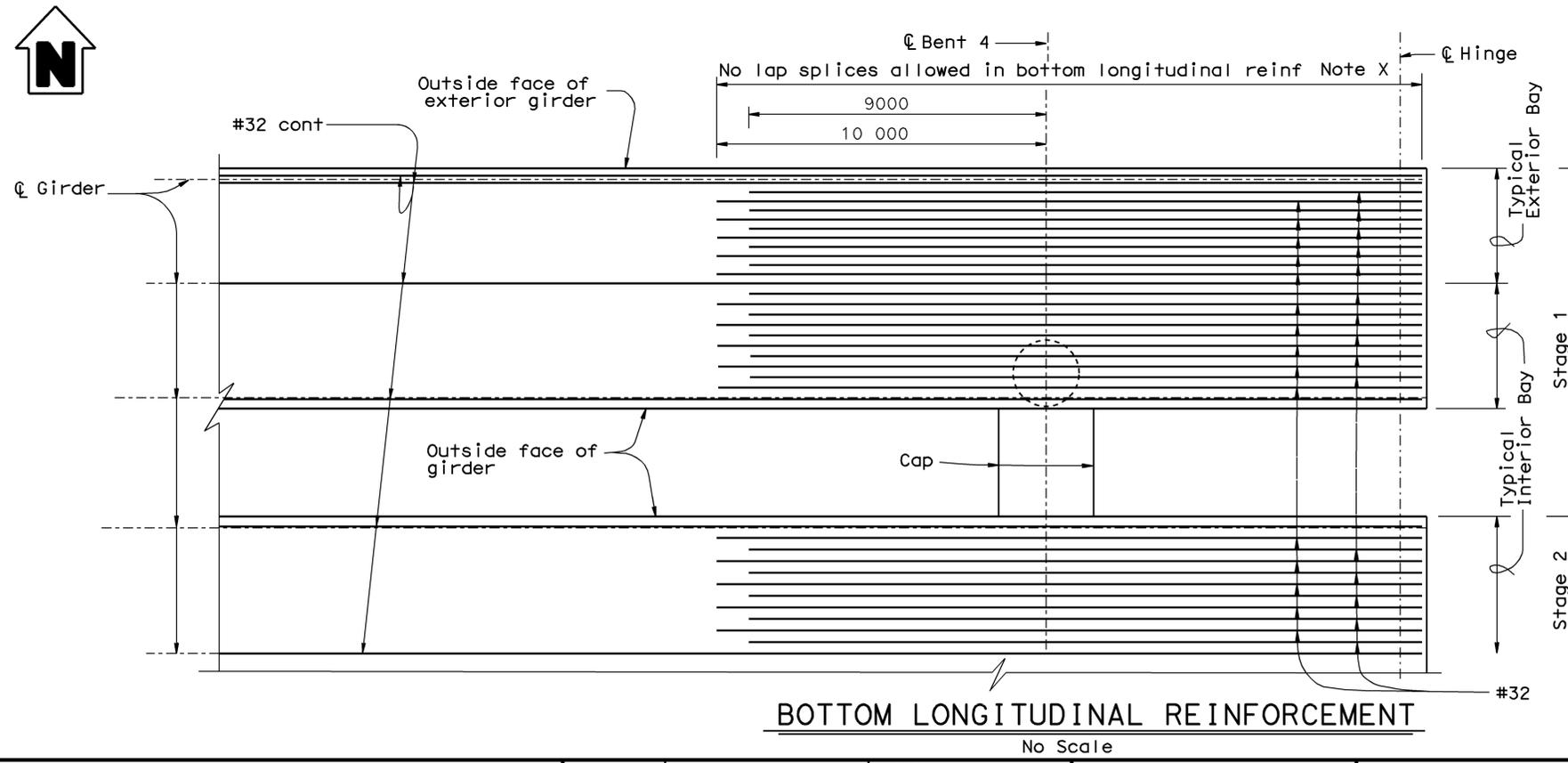
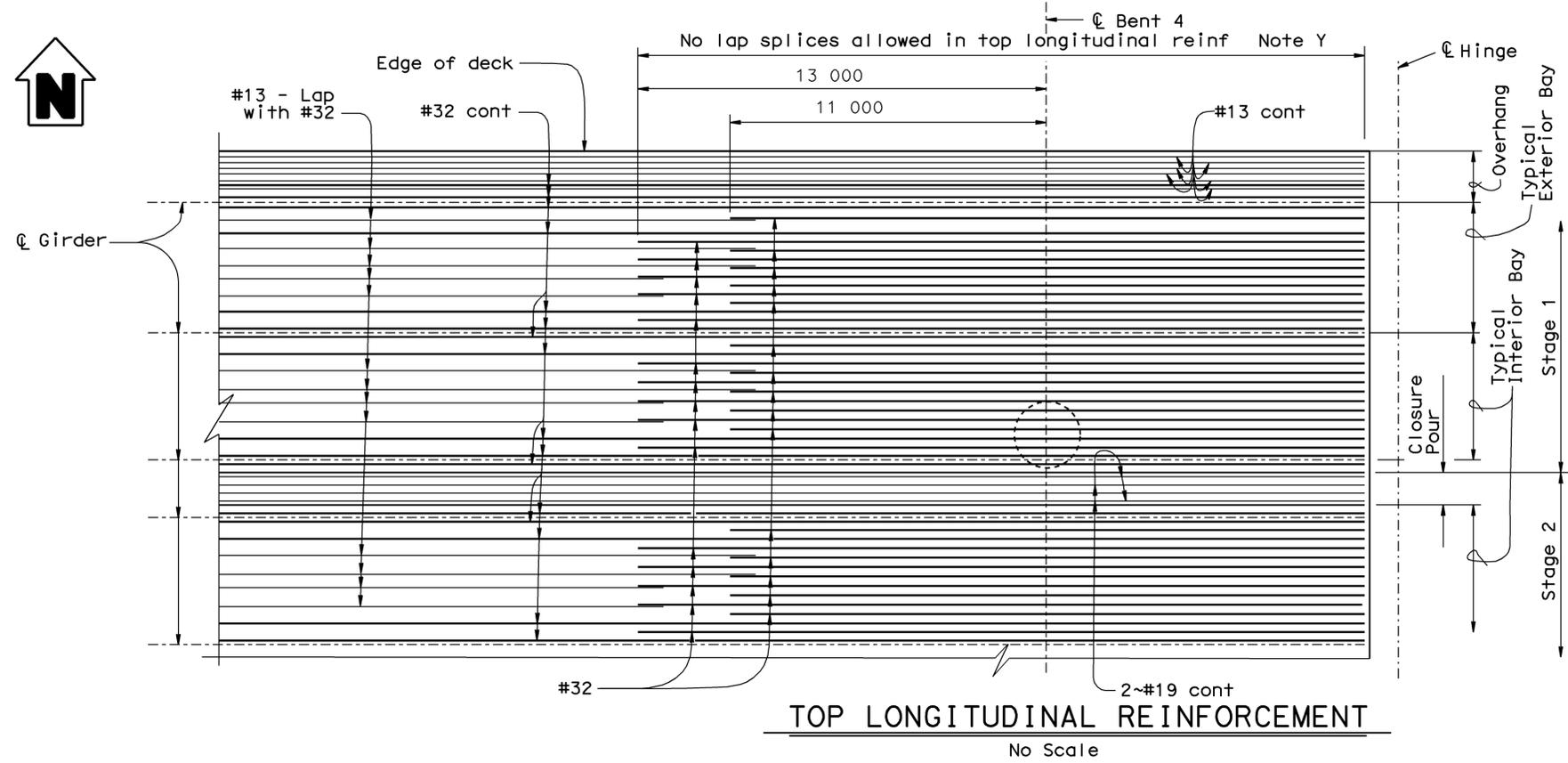
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	295	384

M. Van De Pol 9-30-08
REGISTERED CIVIL ENGINEER DATE

3-2-09
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
M. Van De Pol
No. C35610
Exp. 9-30-09
CIVIL
STATE OF CALIFORNIA



NOTE:

For additional information see "Typical Section No. 1" sheet

Ultimate Splices shall be used for main reinforcement

Note X
No Lap Splices Allowed in #19 Continuous Longitudinal Soffit Reinforcement. Reinforcement not Shown, see "Typical Section No. 1" Sheet

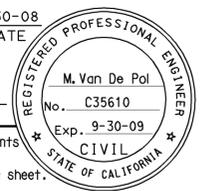
Note Y
Including OH Reinf

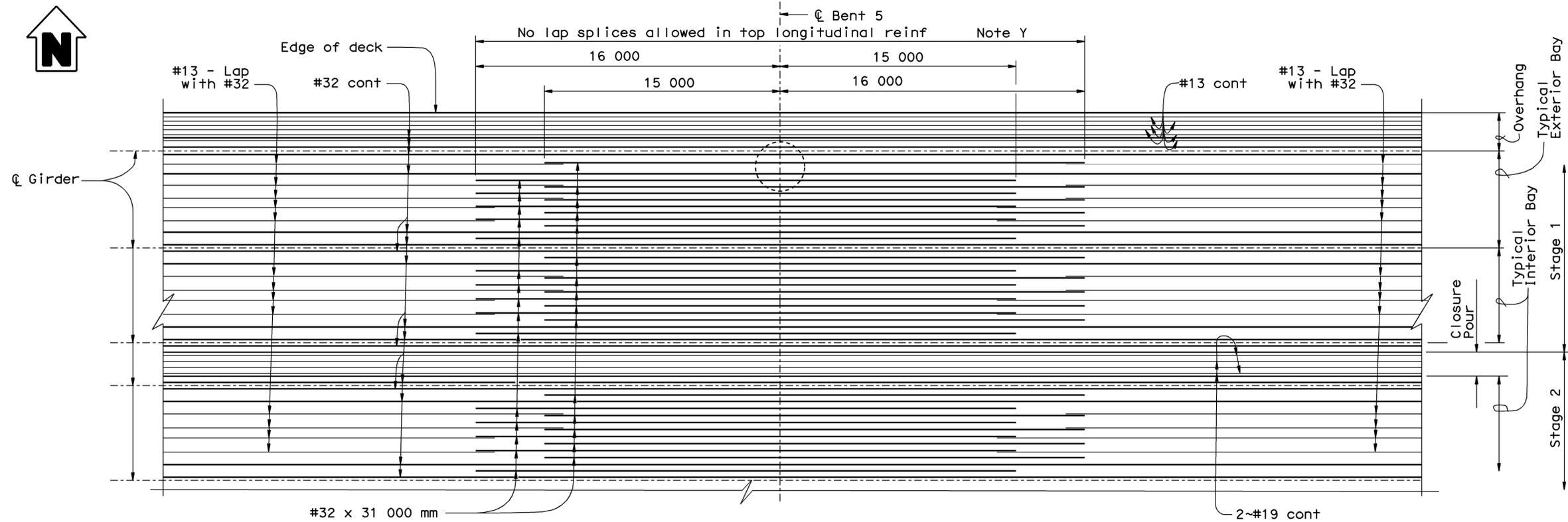
	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 12-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	BRADLEY OVERHEAD (REPLACE) GIRDER REINFORCEMENT No. 3			
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 12-05			39-0044				
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 12-05			59.66				
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN				ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100		CU 10 EA 3A66U1		DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 8-15-03 12-6-05	SHEET 58 OF 94

STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

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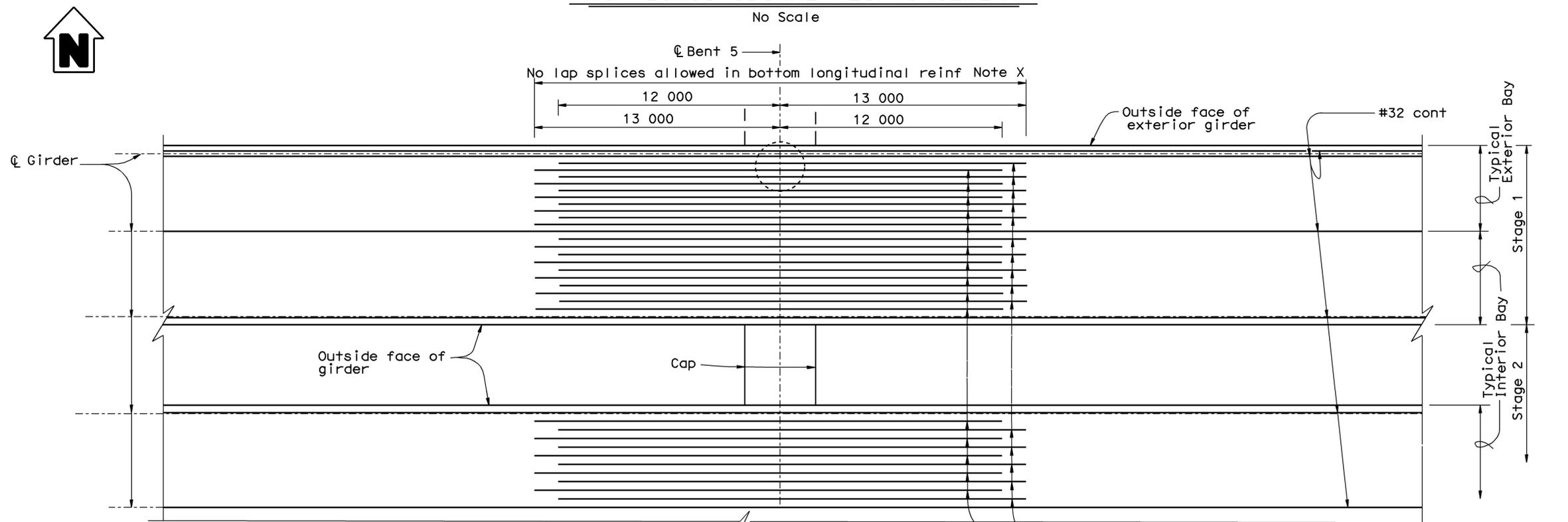
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	296	384


 9-30-08
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 3-2-09
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TOP LONGITUDINAL REINFORCEMENT

No Scale



BOTTOM LONGITUDINAL REINFORCEMENT

No Scale

NOTE:
 For Additional Information see "Typical Section No. 1" Sheet
 Ultimate Splices shall be used for main reinforcement
 Note X
 No Lap Splices Allowed in #19 Continuous Longitudinal Soffit Reinforcement. Reinforcement not Shown, see "Typical Section No. 1" Sheet
 Note Y
 Including OH Reinf



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DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 12-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 12-05

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	39-0044
KILOMETER POST	59.66

BRADLEY OVERHEAD (REPLACE)
GIRDER REINFORCEMENT No. 4

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



CU 10 EA 3A66U1

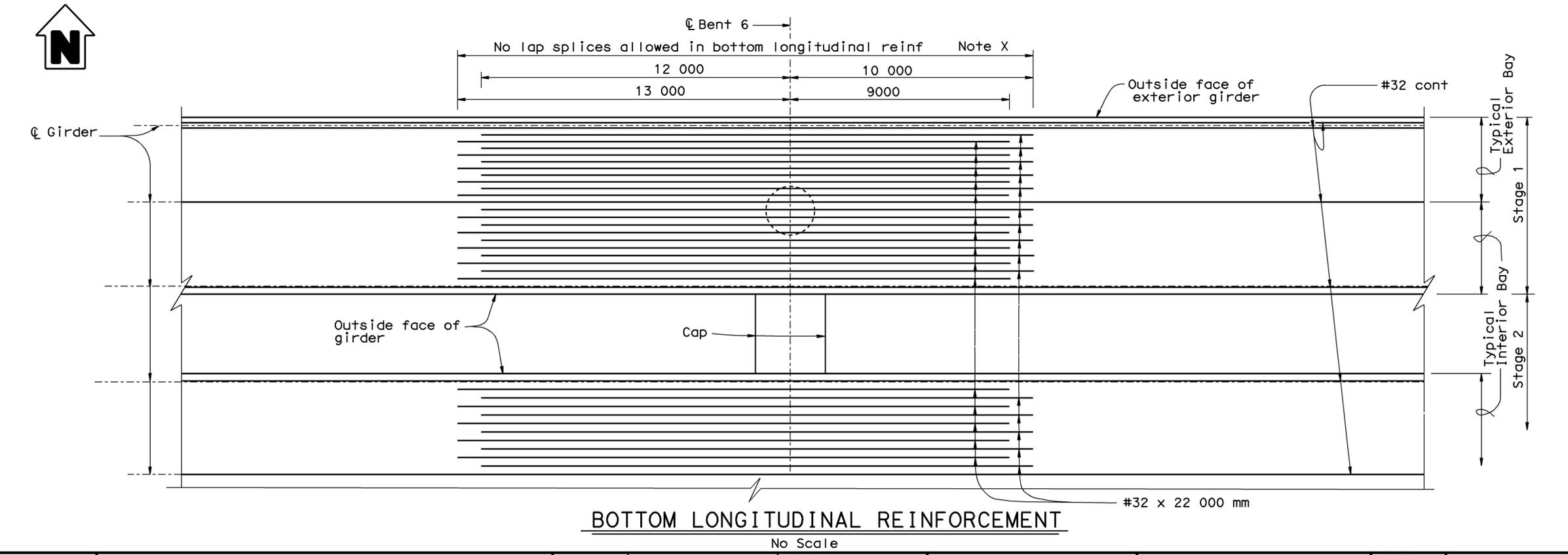
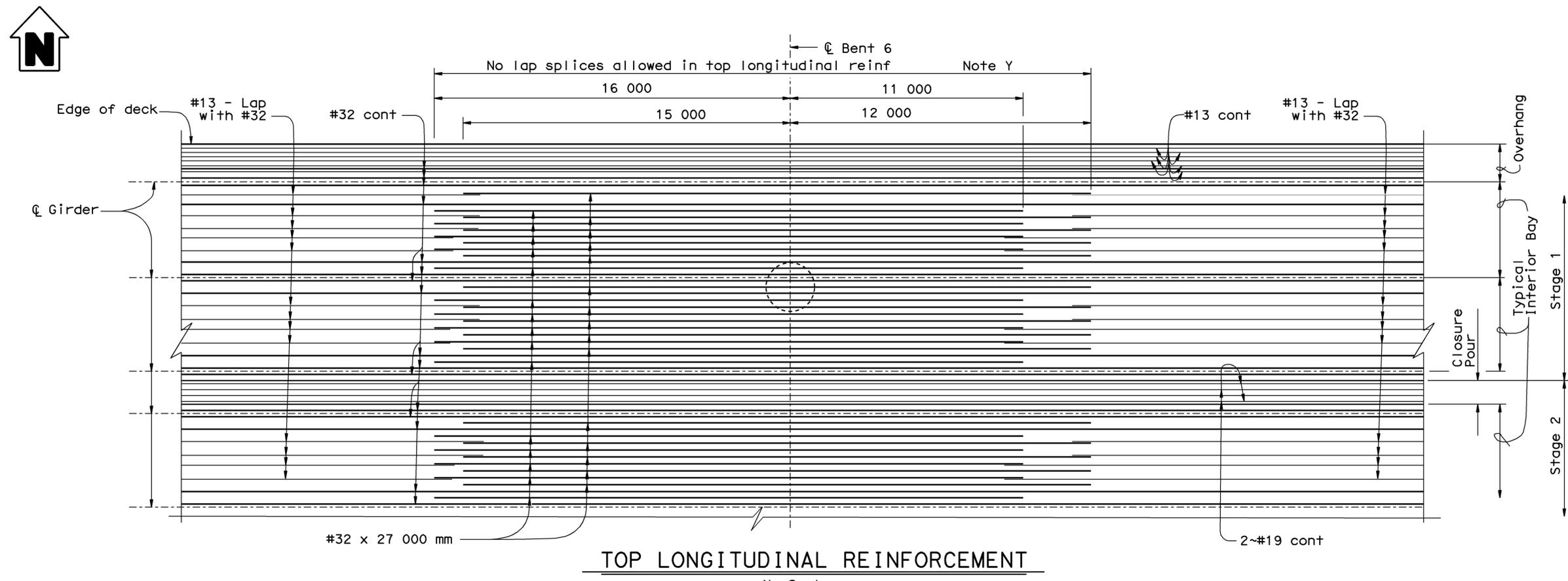
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES					
	12-6-05				
SHEET	59	OF	94		

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	297	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
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 STATE OF CALIFORNIA

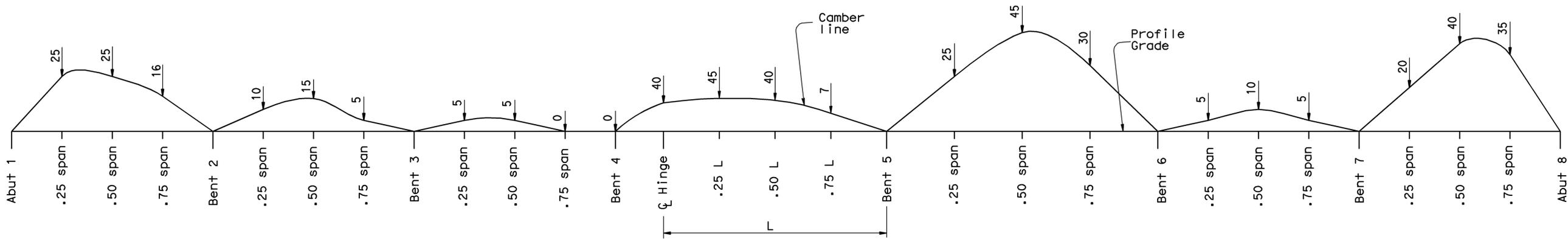


NOTE:
 For Additional Information see "Typical Section No. 1" Sheet
 Ultimate Splices shall be used for main reinforcement
 Note X
 No Lap Splices Allowed in #19 Continuous Logitudinal Soffit Reinforcement. Reinforcement not Shown, see "Typical Section No. 1" Sheet
 Note Y
 Including OH Reinf

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 12-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	BRADLEY OVERHEAD (REPLACE) GIRDER REINFORCEMENT No. 5
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 12-05			39-0044	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 12-05			KILOMETER POST 59.66	
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN				ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS		CU 10 EA 3A66U1 <small>FILE => 39-0044-1-grmdt05.dgn</small>	
						DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES SHEET 60 OF 94 <small>STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)</small>	

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	298	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
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 M. Van De Pol
 No. C35610
 Exp. 9-30-08
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 STATE OF CALIFORNIA
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CAMBER DIAGRAM

NO SCALE
 NOTE:
 Does Not Include Allowance
 For Falsework Settlement
 Stage 1 and Stage 2
 Construction

NOTES:
 Camber Values Shown in Millimeters
 Positive Camber Values Represent Upward Adjustments



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DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 12-05
QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 12-05

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 9

BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) CAMBER DIAGRAM
KILOMETER POST	59.66	

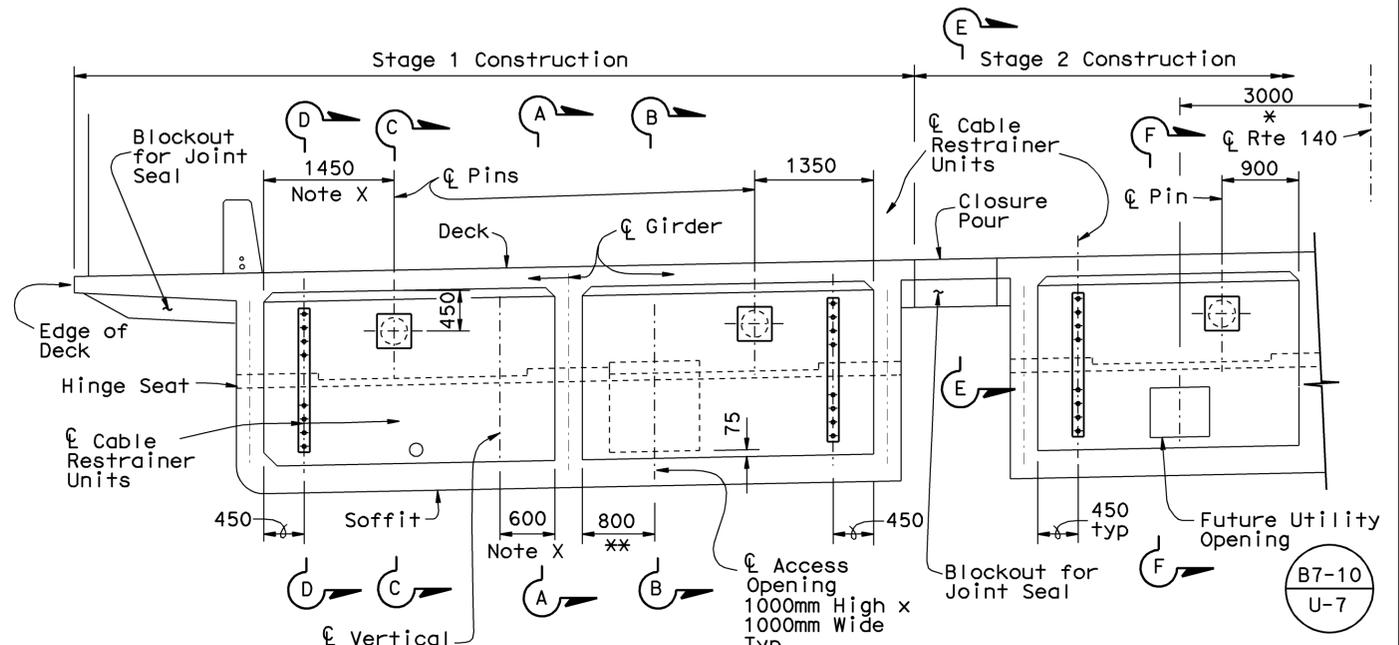
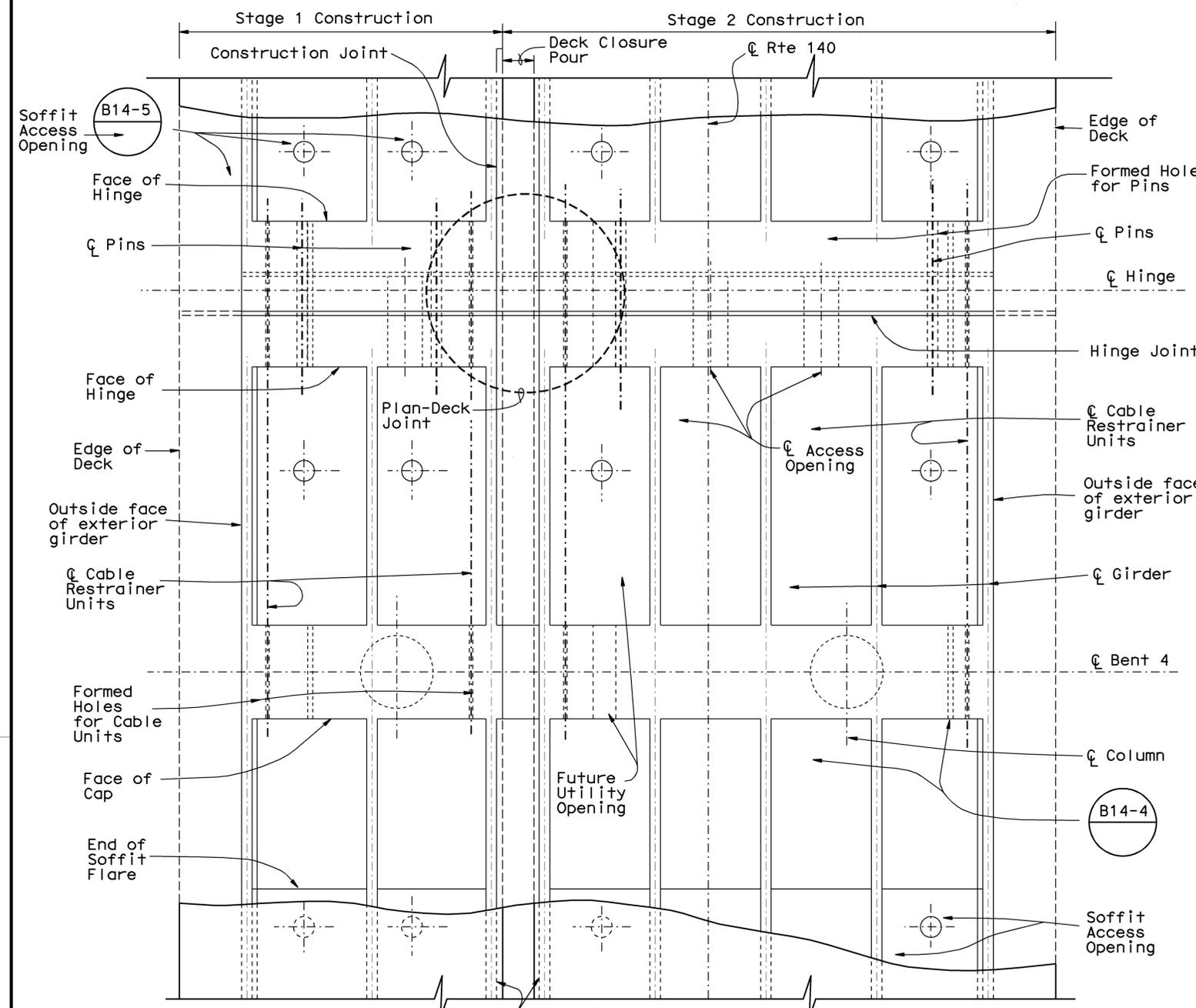
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



CU 10
EA 3A66U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 61 OF 94
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USERNAME => HSTFK DATE PLOTTED => 11-MAR-2009 TIME PLOTTED => 07:20



PLAN
1:80

DETAIL X
1:40

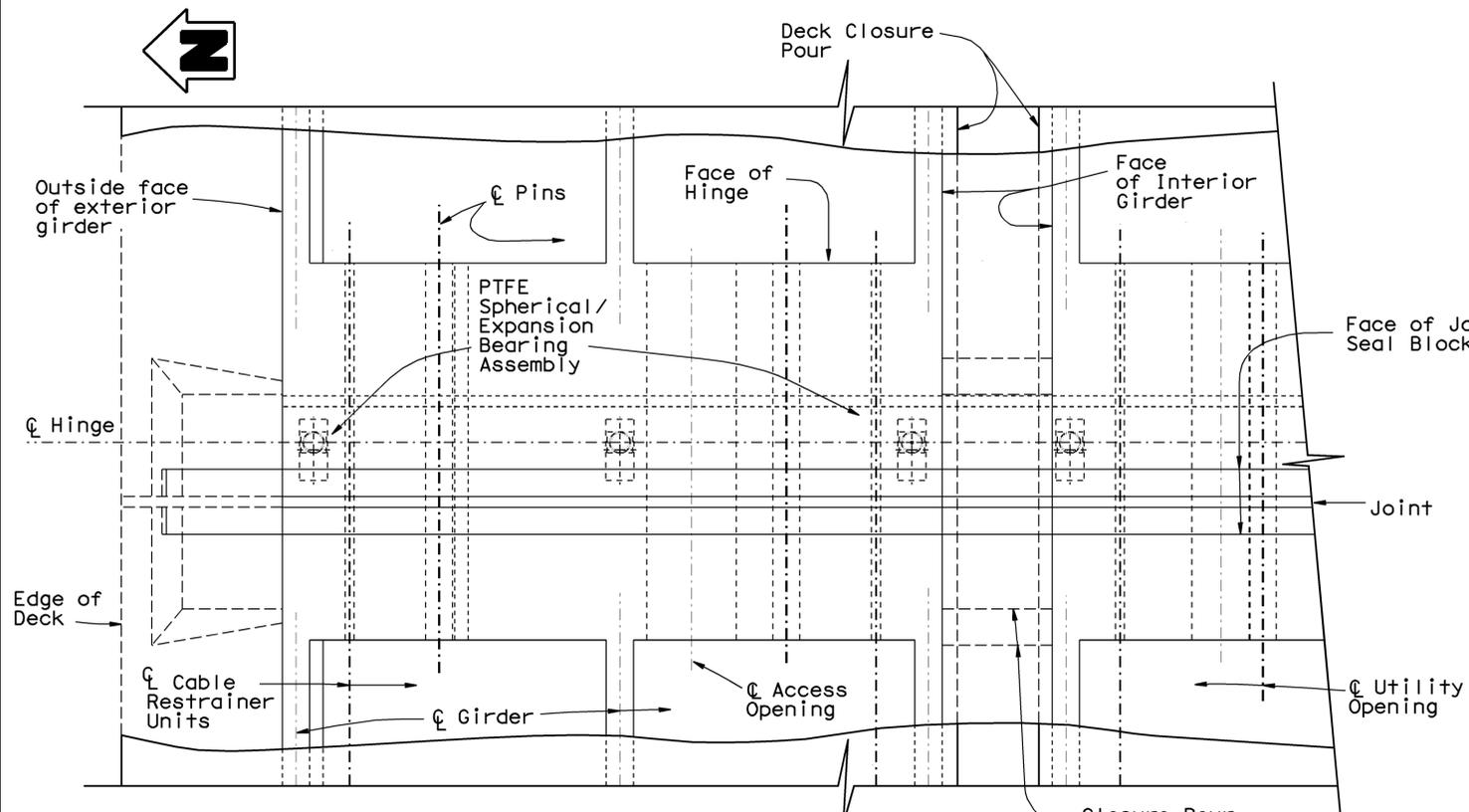
ELEVATION
1:80

- NOTES:**
- For Sections A-A through C-C see "Hinge Detail No. 2" sheet
 - For Sections D-D through F-F, see "Hinge Detail No. 4" sheet
 - For Shear Pins, see "Hinge Details No. 1" sheet
 - For Cable Restrainer Units, see "Cable Restrainer Unit - Type 2" sheet
 - For additional details, see "Typical Section No. 1 and "Girder Layout" sheets
 - For "Plan-Deck Joint", see "Hinge Details No. 3" and "Hinge Details No. 4" sheet
 - For additional details, see "Hinge Joint Seal Details Maximum Movement Rating 100 mm" sheet
 - For PTFE Spherical Bearing Details, see "Hinge Details No. 1", "PTFE/Spherical Expansion Bearing Details No. 1" and "PTFE/Spherical Expansion Bearing Details No. 2" sheets

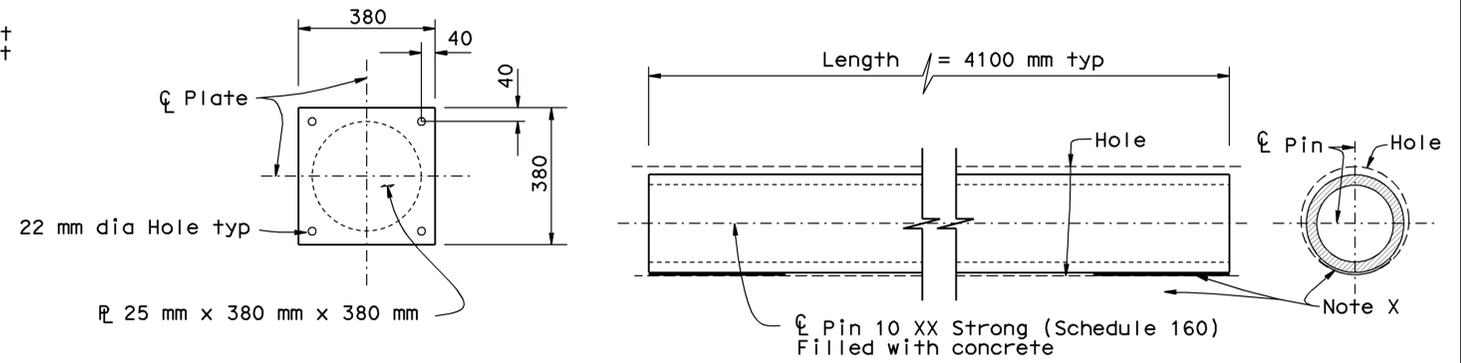
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	140	58.7/60.5	300	384

M. Van De Pol
 REGISTERED CIVIL ENGINEER DATE 9-30-08
 3-2-09
 PLANS APPROVAL DATE
 M. Van De Pol
 No. C35610
 Exp. 9-30-09
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 STATE OF CALIFORNIA

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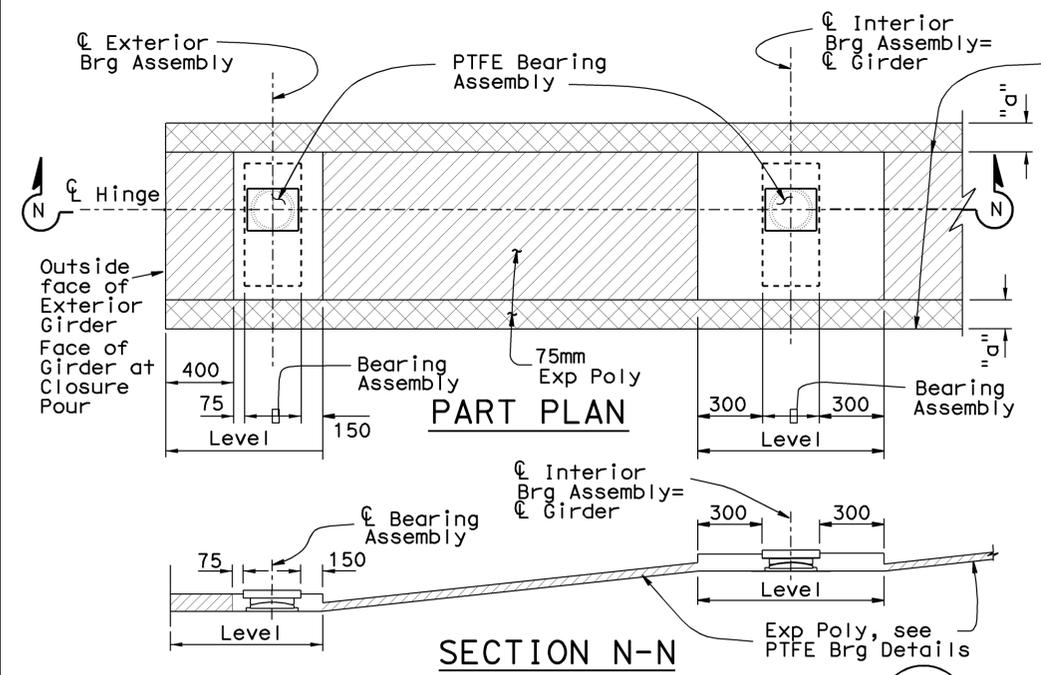


PART PLAN
1:40
NOTES:
Pins and Cables not Shown
Bearing and Cover Plates not Shown



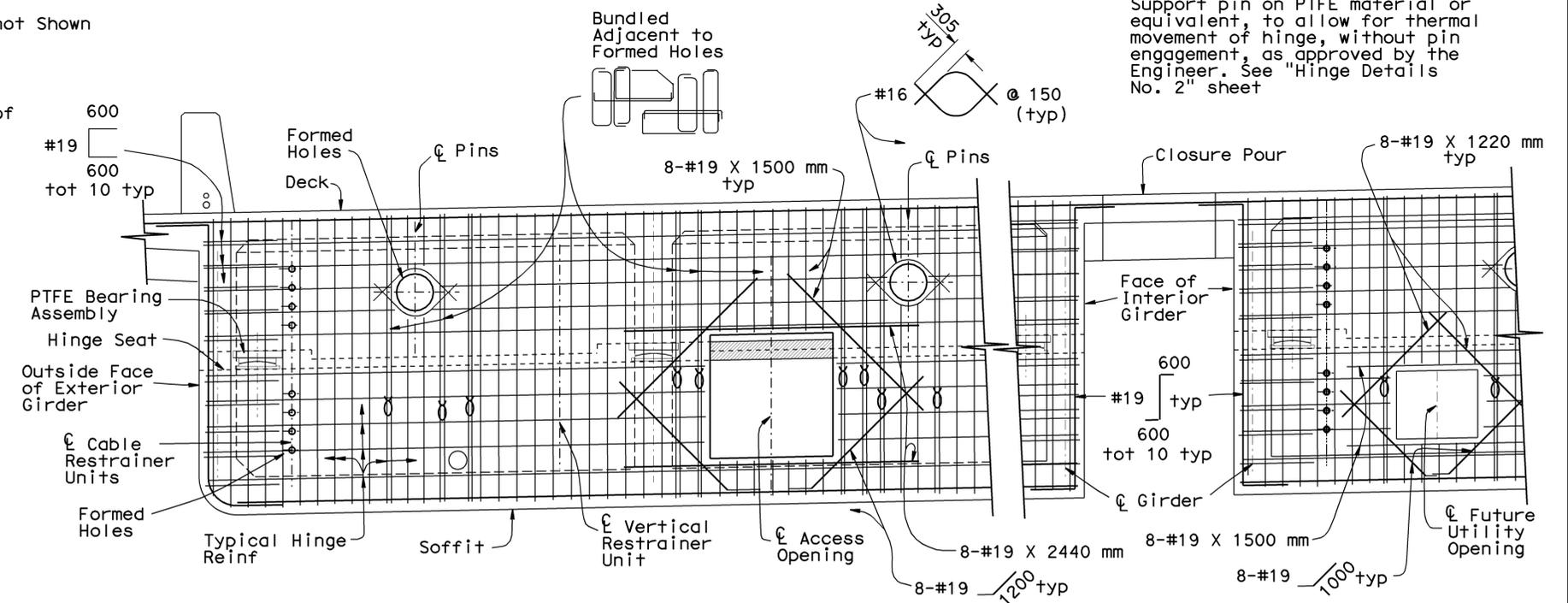
COVER PLATE
SHEAR PIN DETAILS
1:10

Notes:
 Attach cover plates to face of hinge with 19 mm dia expansion anchors
 Shear Pins to be placed parallel to ϕ adjacent Girder at ϕ Hinge
 Note X:
 Support pin on PTFE material or equivalent, to allow for thermal movement of hinge, without pin engagement, as approved by the Engineer. See "Hinge Details No. 2" sheet



PART PLAN
SECTION N-N
BEARING ASSEMBLY DETAILS
1:25

NOTES:
 All Reinf not Shown
 For Locations of Pin and Cable Restrainer Unit see "Hinge Layout" Sheet
 For Cable Restrainer Units, see "Cable Restrainer Unit - Type 2" sheet
 For Additional Details, see "Typical Section No. 1 and "Girder Layout" Sheets



PART ELEVATION
1:25

Notes:
 For Details see "Section A-A", "Section B-B" and "Section C-C" on "Hinge Details No. 2" Sheet
 For Details see "Section F-F", on "Hinge Details No. 4" Sheet
 \times Denotes bundled reinf

	DESIGN	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 12-05	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	39-0044	BRADLEY OVERHEAD (REPLACE) HINGE DETAILS No. 1
	DETAILS	BY M. VAN DE POL 04-03	CHECKED P. NORBOE 12-05			KILOMETER POST	59.66	
	QUANTITIES	BY M. VAN DE POL 11-05	CHECKED P. NORBOE 12-05			CU 10 EA 3A66U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	

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 FILE => 39-0044-n-hngdt01.dgn
 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)