ORANGE COUNTY

RESOURCES AND DEVELOPMENT MANAGEMENT DEPARTMENT

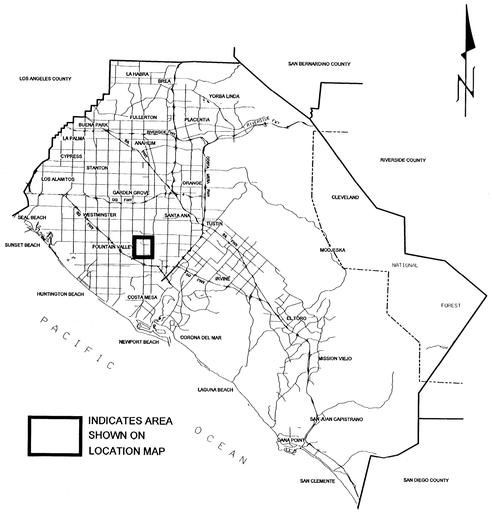
SANTA ANA, CALIFORNIA

BRYAN SPEEGLE, DIRECTOR

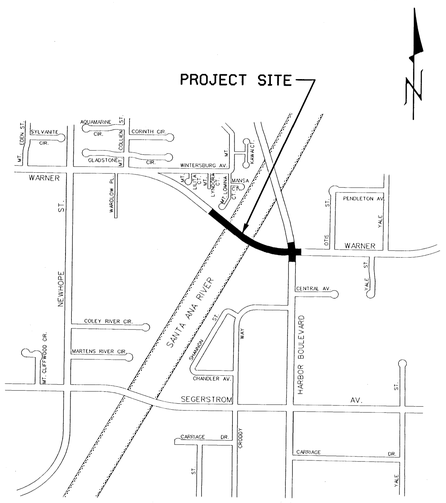
PLANS FOR THE
CONSTRUCTION OF

WARNER AVENUE WIDENING

FROM
HARBOR BOULEVARD
TO
236 FEET WEST OF CITY OF FOUNTAIN VALLEY/OCFCD BOUNDARY
INCLUDING
BRIDGE WIDENING OVER SANTA ANA RIVER CHANNEL
(BRIDGE NO. 55C-0148)
JUNE 2005



VICINITY MAP
NO SCALE



LOCATION MAP
NO SCALE

INDEX OF SHEETS

SHEET	DESCRIPTION	SHEET DESIGNATION
1	Title Sheet	-
2	Typical Sections	TX
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4	Horizontal Control	HC
5-6A	Roadway Layouts	L
7	Roadway Profile	P
8	Storm Drain Plan and Profile	D-1
8A	Storm Drain Plan and Profile ALT A	D-1A
9	Flap Gate Outlet Details	D-2
10	Retaining Wall Plan and Profile	R-1
11-12	Bike/Pedestrian Trail Detour	DT
13	Bike Trail Profile	EX-1
14	Driveway Profile	EX-2
15	Channelization Plan	CH
16	Lighting Plan	LT-1
17-19	Traffic Control Plans	TH
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ABBREVIATIONS

AC -	ASPHALT CONCRETE
CAB -	CRUSHED AGGREGATE BASE
CL -	CENTERLINE
C&G -	CURB AND GUTTER
DG -	DISINTEGRATED GRANITE
E/P -	EDGE OF PAVEMENT
FL -	FLOW LINE
FS -	FINISHED SURFACE
MH -	MANHOLE
MR/BW -	MAINTENANCE ROAD/BIKEWAY
OCFCD -	ORANGE COUNTY FLOOD CONTROL DISTRICT
OCSD -	ORANGE COUNTY SANITATION DISTRICT
OCWD -	ORANGE COUNTY WATER DISTRICT
PCC -	PORTLAND CEMENT CONCRETE
R/W -	RIGHT OF WAY
TC -	TOP OF CURB

DESIGN DEVIATION

1) NON-STANDARD MEDIAN HEIGHT WITHIN UNICORPORATED AREA IS NEEDED TO MATCH CITY OF SANTA ANA STANDARDS.
2) NON-STANDARD LANE WIDTHS WITHIN THE UNINCORPORATED AREA ARE NEEDED TO ALIGN WITH CITY OF FOUNTAIN VALLEY AND CITY OF SANTA ANA LANE WIDTHS.
3) WARNER AVENUE CENTERLINE RADIUS OF 1000' FROM STA 13+02.25 TO STA 104+88.82 IS NEEDED TO MATCH EXISTING APPROACHES FROM CITY OF FOUNTAIN VALLEY AND CITY OF SANTA ANA.

APPROVED: H. Nakasone 7/18/05
DIRECTOR PUBLIC WORKS / CHIEF ENGINEER — DATE

UTILITY OWNER	PHONE NO.	CONTACT
CITY OF SANTA ANA	(714) 647-5664	JASON GABRIEL
SO. CAL EDISON CO.	(714) 934-0847	JENNIFER WARD
THE GAS CO.	(714) 634-3267	DAVE BALDWIN
SBC (PACIFIC BELL)	(714) 237-6165	CHRIS COOK
ORANGE COUNTY SANITATION DISTRICT	(714) 593-7348	BOB CHENOWITH
CITY OF FOUNTAIN VALLEY	(714) 593-4517	TEMO GALVEZ
USA "DIG TICKET"	(800) 422-4133	

BENCH MARK:

O.C.S. BM. #1L-48-82
ELEV. = 61.409'
NGVD 1929
(1995 O.C.S. ADJUSTMENT)
LEVELED 1999

BASIS OF BEARINGS:

THE BASIS OF BEARINGS HEREON IS THE GRID INVERSE BETWEEN OCS GPS STATIONS #6085 AND #4175 , BEING N69 41'48"W.

FUNDED BY: ROAD FUNDS, MEASURE M, CITY OF SANTA ANA

MAINTAINED BY: THE COUNTY WILL OWN AND MAINTAIN THE BRIDGE AND STREET IMPROVEMENTS WITHIN UNINCORPORATED COUNTY LIMITS. AT PROJECT'S NOTICE OF COMPLETION, THE CITY OF SANTA ANA WILL OWN AND MAINTAIN IMPROVEMENTS WITHIN THEIR RESPECTIVE CITY LIMITS AS NOTED IN AGREEMENT D03-046.

APPROVALS

APPROVED FOR WORK WITHIN THE CITY OF SANTA ANA LIMITS

APPROVED: Dean Wehy 6-22-05
CITY ENGINEER — DATE

APPROVED FOR WORK WITHIN THE CITY OF FOUNTAIN VALLEY LIMITS

APPROVED: 6/22/05
CITY ENGINEER — DATE

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT

SUBMITTED: Edward Kwan 7/7/05
ROAD CAPITAL PROJECTS MANAGER — DATE

RECOMMENDED: V.P. Road 7/18/05
ROAD DIVISION MANAGER — DATE

APPROVED: H. Nakasone 7/18/05
DIRECTOR PUBLIC WORKS / CHIEF ENGINEER — DATE

PREPARED BY

McLean & Schultz
Architects - Structural Engineers
3848 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

REGISTERED PROFESSIONAL ENGINEER — STRUCTURAL — NO. S 4898 EXP. 3/31/06 — STATE OF CALIFORNIA

DMS 6/22/05
DATE

KPM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

REGISTERED PROFESSIONAL ENGINEER — RICK KREUZER — No. 42407 — Cert. 3-31-06 — CIVIL — STATE OF CALIFORNIA

6/22/05
DATE

NO.	DESCRIPTION	SHT.	APPROVED	DATE

REVISIONS

W. O. NO. ER08941
DWG. NO.

SHEET 1 OF 70

Last Modified 17-Feb-2005

File Name: $DGN-FILE-NAME$
Date Plotted: dd-mmm-yyyy hh:mm

CONSTRUCTION NOTES

(1) CONSTRUCT 2" ARHM OVERLAY.

(2) COLD PLANE 2" EXISTING AC PAVEMENT.

(4) CONSTRUCT 8" AC PAVEMENT OVER 6" AB. LEAVE 2" BELOW PROPOSED FINISH SURFACE.

(7) CONSTRUCT PCC SIDEWALK PER CITY OF SANTA ANA STD. NO. 1104 CASE 3.

(9) CONSTRUCT CURB AND GUTTER PER RDMD STD PLAN NO. 120-0-0C.

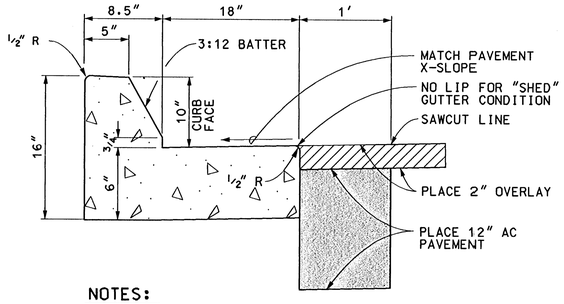
(10) CONSTRUCT MEDIAN CURB B-1 PER CITY OF SANTA ANA STD. NO. 1101.

(11) CONSTRUCT MEDIAN CURB WITH GUTTER B-1 PER CITY OF SANTA ANA STD. NO. 1101 AS MODIFIED PER DETAIL ON SHEET 2.

(12) CONSTRUCT 4" MEDIAN STAMP PATTERN CONCRETE PER CITY OF SANTA ANA STD. NO. 1118.

(19) CONSTRUCT CONCRETE BARRIER (25A) AND TUBULAR HAND RAILING PER CALTRANS STD. NO. B11-51.

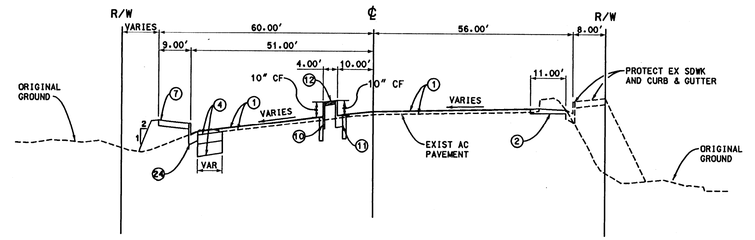
(24) CONSTRUCT CURB AND GUTTER PER CITY OF SANTA ANA STD. NO. 1101 CASE A-2-8.



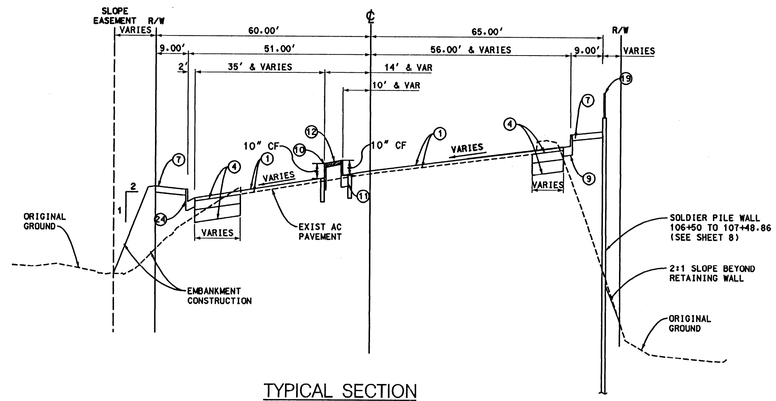
NOTES:

1. THE GUTTER SLOPE SHALL FOLLOW THE CROSS SLOPE OF THE STREET PAVEMENT.
2. SEE NOTES ON CITY OF SANTA ANA STD. PLAN NO. 1101 FOR ADDITIONAL DETAILS AND NOTES.

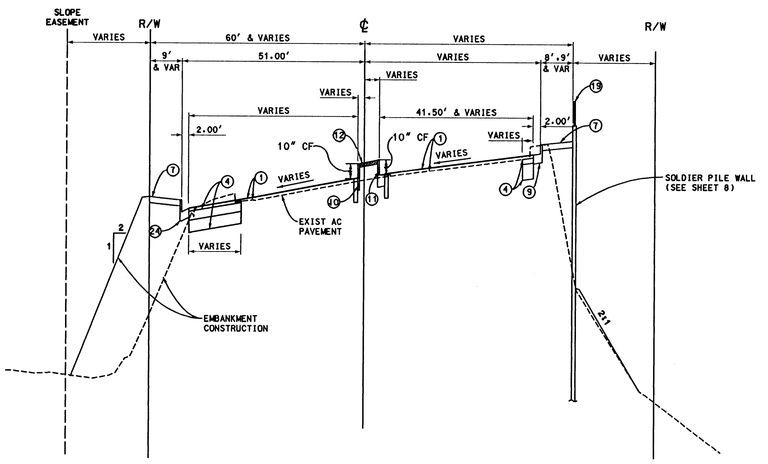
MODIFIED TYPE B-1 CURB DETAIL (A)
N.T.S.



TYPICAL SECTION
STA 108+06.81 TO STA 109+15
NOT TO SCALE



TYPICAL SECTION
STA 106+50 TO STA 108+06.81
NOT TO SCALE



TYPICAL SECTION
STA 104+38.95 TO STA 106+50
NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.A. Kreuzer 6-21-05
R.C.E. NO. 42407 DATE

No.	DATE	ITEM

REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

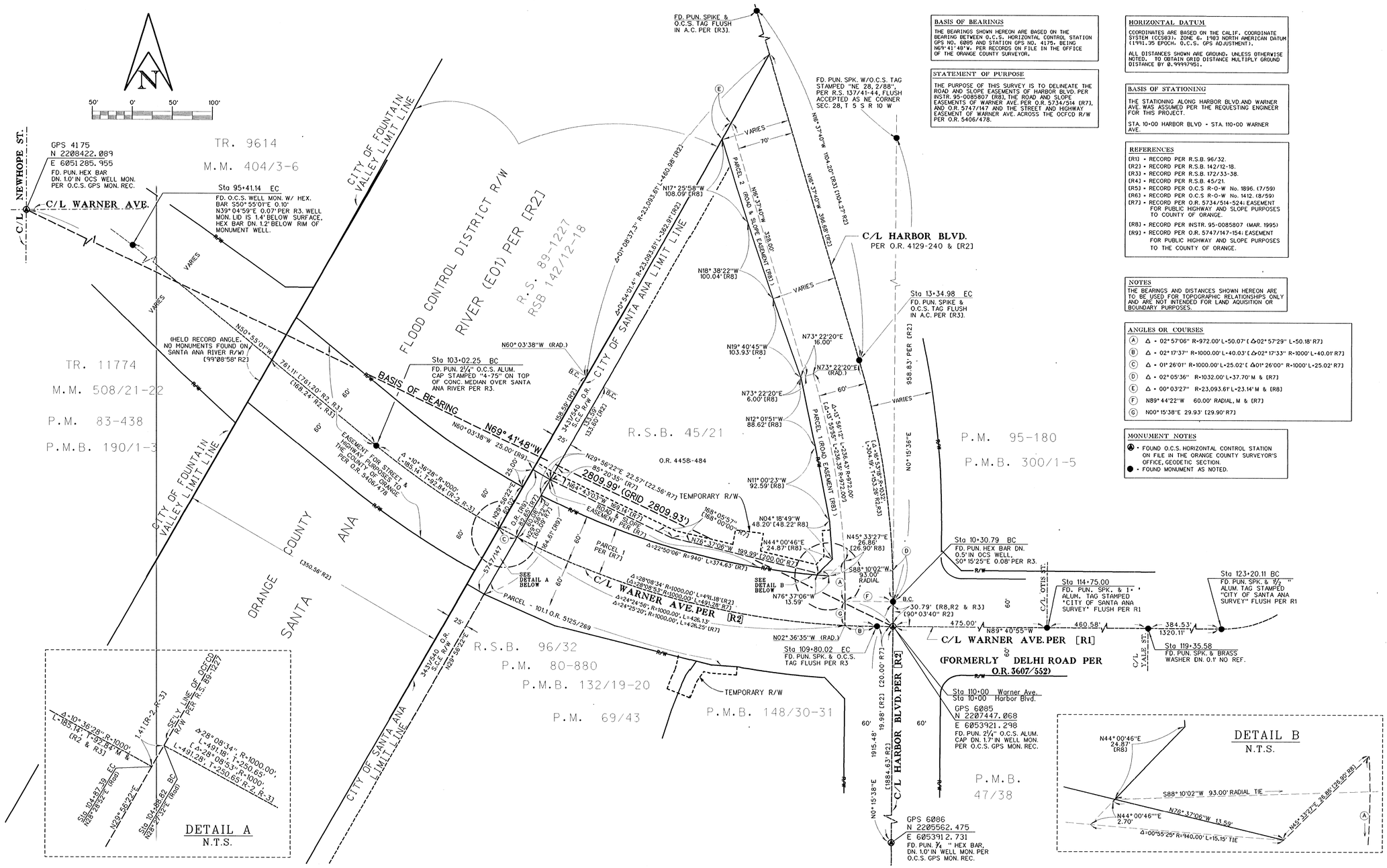
WARNER AVENUE WIDENING

TYPICAL SECTIONS & DETAILS
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
DRAWN BY:
CHECKED BY:

SHEET NO. TX-1

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

DGN FILE: <USER>
DATE PLOTTED: <DATE>
TIME PLOTTED: <TIME>



BASIS OF BEARINGS

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN O.C.S. HORIZONTAL CONTROL STATION GPS NO. 6085 AND STATION GPS NO. 4175, BEING N69°41'49"W, PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

STATEMENT OF PURPOSE

THE PURPOSE OF THIS SURVEY IS TO DELINEATE THE ROAD AND SLOPE EASEMENTS OF HARBOR BLVD. PER INSTR. 95-0085807 (R8), THE ROAD AND SLOPE EASEMENTS OF WARNER AVE. PER O.R. 5734/514 (R7), AND O.R. 5747/147 AND THE STREET AND HIGHWAY EASEMENT OF WARNER AVE. ACROSS THE OCFCD R/W PER O.R. 5406/478.

HORIZONTAL DATUM

COORDINATES ARE BASED ON THE CALIF. COORDINATE SYSTEM (CCS83), ZONE 6, 1983 NORTH AMERICAN DATUM (1991.35 EPOCH, O.C.S. GPS ADJUSTMENT).

ALL DISTANCES SHOWN ARE GROUND, UNLESS OTHERWISE NOTED. TO OBTAIN GRID DISTANCE MULTIPLY GROUND DISTANCE BY 0.99997951.

BASIS OF STATIONING

THE STATIONING ALONG HARBOR BLVD.AND WARNER AVE. WAS ASSUMED PER THE REQUESTING ENGINEER FOR THIS PROJECT.

STA. 10+00 HARBOR BLVD = STA. 110+00 WARNER AVE.

REFERENCES

(R1) - RECORD PER R.S.B. 96/32.
(R2) - RECORD PER R.S.B. 142/12-18.
(R3) - RECORD PER R.S.B. 172/33-38.
(R4) - RECORD PER R.S.B. 45/21.
(R5) - RECORD PER O.C.S R-O-W No. 1896. (7/59)
(R6) - RECORD PER O.C.S R-O-W No. 1412. (8/59)
(R7) - RECORD PER O.R. 5734/514-524; EASEMENT FOR PUBLIC HIGHWAY AND SLOPE PURPOSES TO COUNTY OF ORANGE.
(R8) - RECORD PER INSTR. 95-0085807 (MAR. 1995)
(R9) - RECORD PER O.R. 5747/147-154; EASEMENT FOR PUBLIC HIGHWAY AND SLOPE PURPOSES TO THE COUNTY OF ORANGE.

NOTES

THE BEARINGS AND DISTANCES SHOWN HEREON ARE TO BE USED FOR TOPOGRAPHIC RELATIONSHIPS ONLY AND ARE NOT INTENDED FOR LAND AQUISITION OR BOUNDARY PURPOSES.

ANGLES OR COURSES

(A) Δ = 02°57'06" R=972.00' L=50.07' [Δ=02°57'29" L=50.18' R7]
(B) Δ = 02°17'37" R=1000.00' L=40.03' [Δ=02°17'33" R=1000' L=40.01' R7]
(C) Δ = 01°26'01" R=1000.00' L=25.02' [Δ01°26'00" R=1000' L=25.02' R7]
(D) Δ = 02°05'36" R=1032.00' L=37.70' M & [R7]
(E) Δ = 00°03'27" R=23,093.61' L=23.14' M & [R8]
(F) N89°44'22"W 60.00' RADIAL, M & [R7]
(G) N00°15'38"E 29.93' [29.90' R7]

MONUMENT NOTES

④ - FOUND O.C.S. HORIZONTAL CONTROL STATION ON FILE IN THE ORANGE COUNTY SURVEYOR'S OFFICE, GEODETIC SECTION.
● - FOUND MONUMENT AS NOTED.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER — RICK KREUZER — No. 42407 — Exp. 12-31-06 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — 6-21-05 DATE

No.	DATE	ITEM
REVISIONS		

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

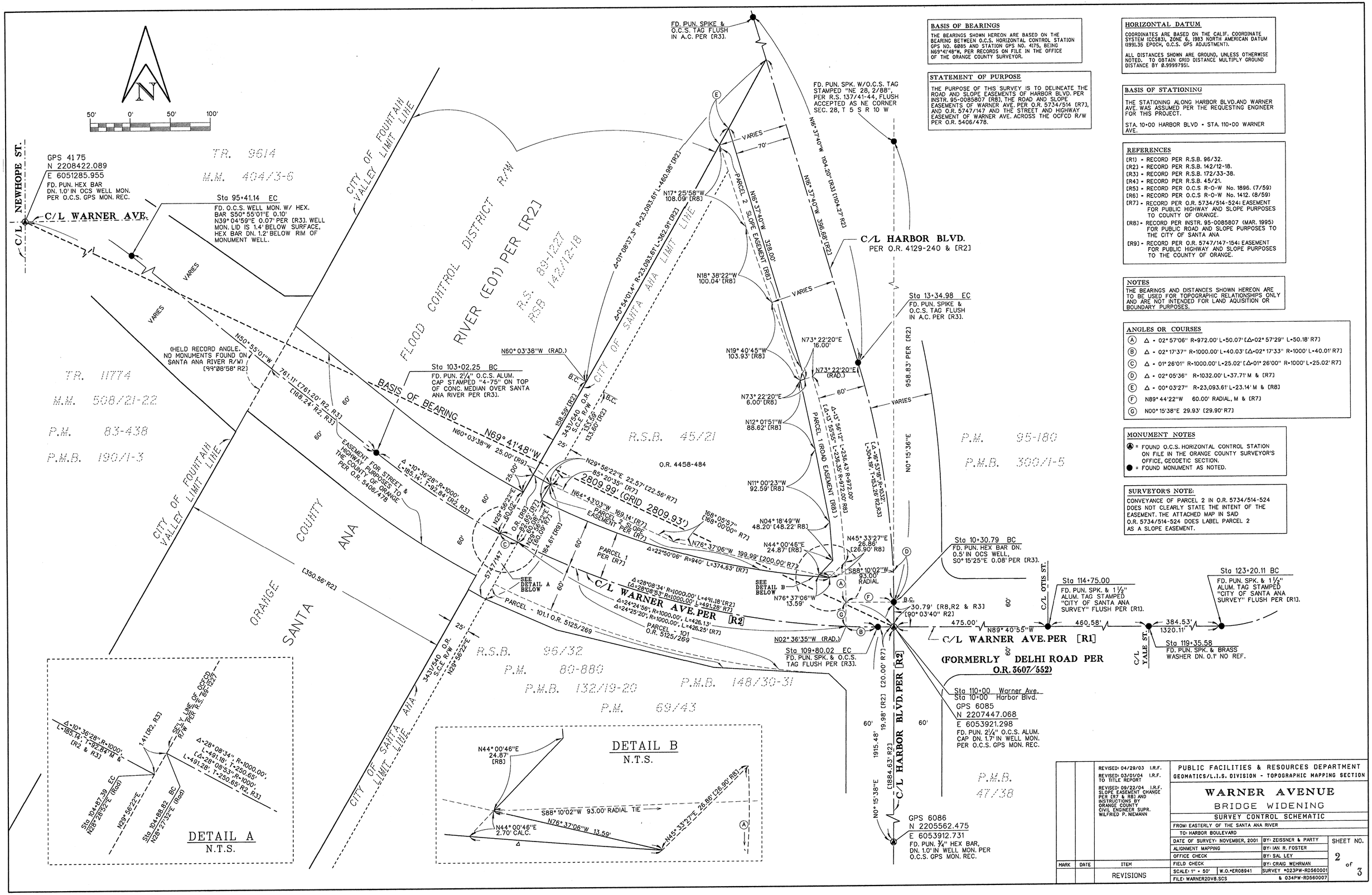
SURVEY CONTROL
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. SC-1

DRAWN BY:
CHECKED BY:

3 of 70

DGN: PLAN-ARRIVISTRP — DATE PLOTTED: 6/6/05 — TIME PLOTTED: 14:51:16



BASIS OF BEARINGS

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN O.C.S. HORIZONTAL CONTROL STATION GPS NO. 6085 AND STATION GPS NO. 4175, BEING N69°41'48"W, PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

STATEMENT OF PURPOSE

THE PURPOSE OF THIS SURVEY IS TO DELINEATE THE ROAD AND SLOPE EASEMENTS OF HARBOR BLVD. PER INSTR. 95-0085807 [R8], THE ROAD AND SLOPE EASEMENTS OF WARNER AVE. PER O.R. 5734/514 [R7], AND O.R. 5747/147 AND THE STREET AND HIGHWAY EASEMENT OF WARNER AVE. ACROSS THE OCFCD R/W PER O.R. 5406/478.

HORIZONTAL DATUM

COORDINATES ARE BASED ON THE CALIF. COORDINATE SYSTEM (CCS83), ZONE 6, 1983 NORTH AMERICAN DATUM (1991.35 EPOCH, O.C.S. GPS ADJUSTMENT).

ALL DISTANCES SHOWN ARE GROUND, UNLESS OTHERWISE NOTED. TO OBTAIN GRID DISTANCE MULTIPLY GROUND DISTANCE BY 0.99997951.

BASIS OF STATIONING

THE STATIONING ALONG HARBOR BLVD.AND WARNER AVE. WAS ASSUMED PER THE REQUESTING ENGINEER FOR THIS PROJECT.

STA. 10+00 HARBOR BLVD = STA. 110+00 WARNER AVE.

REFERENCES

- [R1] - RECORD PER R.S.B. 96/32.
- [R2] - RECORD PER R.S.B. 142/12-18.
- [R3] - RECORD PER R.S.B. 172/33-38.
- [R4] - RECORD PER R.S.B. 45/21.
- [R5] - RECORD PER O.C.S R-O-W No. 1896. (7/59)
- [R6] - RECORD PER O.C.S R-O-W No. 1412. (8/59)
- [R7] - RECORD PER O.R. 5734/514-524; EASEMENT FOR PUBLIC HIGHWAY AND SLOPE PURPOSES TO COUNTY OF ORANGE.
- [R8] - RECORD PER INSTR. 95-0085807 (MAR. 1995) FOR PUBLIC ROAD AND SLOPE PURPOSES TO THE CITY OF SANTA ANA
- [R9] - RECORD PER O.R. 5747/147-154; EASEMENT FOR PUBLIC HIGHWAY AND SLOPE PURPOSES TO THE COUNTY OF ORANGE.

NOTES

THE BEARINGS AND DISTANCES SHOWN HEREON ARE TO BE USED FOR TOPOGRAPHIC RELATIONSHIPS ONLY AND ARE NOT INTENDED FOR LAND AQUISITION OR BOUNDARY PURPOSES.

ANGLES OR COURSES

- (A) Δ = 02°57'06" R=972.00' L=50.07' [Δ=02°57'29" L=50.18' R7]
- (B) Δ = 02°17'37" R=1000.00' L=40.03' [Δ=02°17'33" R=1000' L=40.01' R7]
- (C) Δ = 01°26'01" R=1000.00' L=25.02' [Δ=01°26'00" R=1000' L=25.02' R7]
- (D) Δ = 02°05'36" R=1032.00' L=37.71' M & [R7]
- (E) Δ = 00°03'27" R=23,093.61' L=23.14' M & [R8]
- (F) N89°44'22"W 60.00' RADIAL, M & [R7]
- (G) N00°15'38"E 29.93' [29.90' R7]

MONUMENT NOTES

- (A) = FOUND O.C.S. HORIZONTAL CONTROL STATION ON FILE IN THE ORANGE COUNTY SURVEYOR'S OFFICE, GEODETIC SECTION.
- ● = FOUND MONUMENT AS NOTED.

SURVEYOR'S NOTE:

CONVEYANCE OF PARCEL 2 IN O.R. 5734/514-524 DOES NOT CLEARLY STATE THE INTENT OF THE EASEMENT. THE ATTACHED MAP IN SAID O.R. 5734/514-524 DOES LABEL PARCEL 2 AS A SLOPE EASEMENT.

MARK	DATE	ITEM
		REVISIONS

REVISED: 04/29/03 I.R.F.
REVISED: 03/01/04 I.R.F. TO TITLE REPORT
REVISED: 09/22/04 I.R.F. SLOPE EASEMENT CHANGE PER [R7 & R8] AND INSTRUCTIONS BY ORANGE COUNTY CIVIL ENGINEER SUPR. WILFRIED P. NIEMANN

PUBLIC FACILITIES & RESOURCES DEPARTMENT
GEOMATICS/L.I.S. DIVISION - TOPOGRAPHIC MAPPING SECTION

WARNER AVENUE
BRIDGE WIDENING
SURVEY CONTROL SCHEMATIC

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BOULEVARD

DATE OF SURVEY: NOVEMBER, 2001		BY: ZEISSNER & PARTY
ALIGNMENT MAPPING		BY: IAN R. FOSTER
OFFICE CHECK		BY: SAL LEY
FIELD CHECK		BY: CRAIG WEHRMAN
SCALE: 1" = 50'	W.O.#ER08941	SURVEY #023PW-RD560001
FILE: WARNER2DV8.SCS		& 034PW-RD560007

SHEET NO. 2 of 3

CITY OF FOUNTAIN VALLEY

CITY OF SANTA ANA

WARNER AVENUE

HARBOR BLVD

SANTA ANA RIVER (E01)

EDISON EASEMENT

SLOPE EASEMENT

TEMPORARY R/W

OCFCD R/W

R/W

STA 102+92.64 ℄ WARNER AVE.
STA 333+53.32 ℄ SANTA ANA RIVER
℄ INTERSECTION

STA 110+00 ℄ WARNER AVE.
STA 10+00 ℄ HARBOR BLVD.
℄ INTERSECTION

STA 101+25 (42'LT) JOIN EXISTING
STA 101+40.44 (42'LT) ANGLE PT.
STA 101+54.72 ℄ DWY; W=14'
STA 101+63.43 (46'LT) ANGLE PT.
STA 101+77.49 (46'LT) BEGIN BRIDGE

STA 101+23.57 (2.5'LT) JOIN EXISTING MEDIAN

STA 101+23.57 (2.5'RT) JOIN EXISTING MEDIAN

STA 101+50 (42'RT) JOIN EXISTING
STA 101+58.13 (42'RT) ANGLE PT.
STA 101+91.95 ℄ DWY; W=14'
STA 101+81.13 (46'RT) ANGLE PT.
STA 101+92.20 (46'RT) BEGIN BRIDGE

STA 103+02.25 (46'LT) EC
STA 103+00 (2.5'LT) BC MEDIAN
STA 103+02.25 (℄) BC

STA 103+02.25 (46'RT) BC
STA 103+02.25 (2.5'RT) BC MEDIAN

STA 104+37.90 (46'LT) END BRIDGE; ANGLE PT.; BC
STA 104+52.84 ℄ DWY; W=14'
STA 104+88.82 (51.00'LT) EC; ANGLE PT.

STA 104+87.39 (℄) EC
STA 104+88.82 (℄) BC

STA 104+38.95 (℄) END BRIDGE/MEDIAN

STA 104+39.90 (2.5'RT) PCC MEDIAN

STA 104+39.90 (46'RT) END BRIDGE; PCC

STA 104+57.33 ℄ DWY; W=14'

STA 10+00.00 WALL
STA 104+68.60 STREET (55.31'RT) BEGIN WALL

STA 107+48.94 (14'LT) PCC MEDIAN

STA 108+01.71 ℄ DWY; W=28'

STA 108+38.43 (51'LT) ECR; BC

STA 109+91.74 (61'LT) EC; BCR

STA 11+17.73 (61'LT) JOIN EXIST BC

STA 10+30.79 (℄) EC

STA 109+15.26 (14'LT) BC MEDIAN

STA 109+80.02 (℄) EC

STA 109+15.26 (10'LT) EC MEDIAN

STA 106+05.00 (6.03'RT) PCC MEDIAN
STA 106+04.00 (49.52'RT) PRC

STA 106+34.07 (33.45'RT) EC MEDIAN
STA 106+34.07 (52.64'RT) PRC

STA 106+89.71 (56'RT) PCC
STA 107+12.22 (9.23'LT) BC MEDIAN
STA 107+25.00 (10'LT) PRC MEDIAN

STA 12+95.74 WALL
STA 107+48.86 STREET (65.12'RT) END WALL

STA 106+06.81 (56'RT) EC; JOIN EX.
STA 107+51.28 ℄ DWY; W=28'

TEMPORARY R/W

R=1032.00'
N89°40'55"W
N00°15'38"E

CURVE DATA				
⬡	DELTA	RADIUS	LENGTH	TANGENT
A	10°36'28"	1,000.00'	185.14'	92.84'
B	7°46'20"	954.00'	129.41'	64.81'
C	24°27'16"	1012.42'	432.11'	219.39
D	7°49'46"	1,002.50'	136.99'	68.60'
E	7°53'12"	1,046.00'	143.98'	72.10'
F	28°08'37"	1,000.00'	491.20'	250.66'
G	23°22'25"	949.00'	387.14'	196.30'
H	NOT USED			
I	8°01'47"	1179.58'	165.31'	82.79'
J	8°01'47"	1216.53'	170.49'	85.38'
K	14°31'00"	116.00'	29.39'	14.77'
L	4°08'02"	553.85'	39.96'	19.99'
M	10°21'59"	280.00'	50.66'	25.40'
N	6°15'47"	116.00'	12.68'	6.35'
O	6°42'20"	1056.00'	123.52'	61.87'
P	10°51'20"	990.00'	187.57'	94.07'
Q	9°28'58"	986.00'	163.00'	81.78'
R	180°00'00"	2.00'	6.28'	---
S	98°06'04"	32.00'	54.79'	36.88'
T	1°26'55"	971.00'	24.55'	12.28'

SCALE: 1 = 40'

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER — RICK KREUZER — No. 42407 — Exp. 12-31-06 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — DATE 6-21-05

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

HORIZONTAL CONTROL

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

DRAWN BY:
CHECKED BY:

SHEET NO. HC-1

DATE PLOTTED: 6/21/2005
TIME PLOTTED: 07:15
DGN FILE: HERKUZER

CITY OF FOUNTAIN VALLEY

SCALE: 1 = 20'

WARNER AVENUE

OCFCD R/W

78" GROUND WATER REPLENISHMENT PIPELINE

84"RCP

78"RCP

R/W

FENCE

SAWCUT LINE

TRANSITION EXISTING TOP OF CURB TO MATCH EXISTING (20' TRANSITION)

STA 101+23.57 JOIN EXISTING

STA 101+23.57 MATCH EXISTING PAVEMENT

STA 101+23.57 JOIN EXISTING

84" SEWER

ELE

TEL

TEL-39.5'RT

TEL-37'RT

DETAILS SEE SHEET S-31 FOR BRIDGE MEDIAN

FOR OUTLET DETAILS SEE SHEET D-2

FOR BRIDGE PLANS SEE SHEETS S-1 TO S-33

SANTA ANA RIVER (E01)

EX. GATE

EDISON EASEMENT

TEMPORARY R/W

APPROX. TOE OF SLOPE

SLOPE EASEMENT

STA 104+65.68 BEGIN GUARD RAIL

STA 104+65.68 ANGLE PT. GUARD RAIL

ELEC

MATCH LINE STA 106+00.00 SEE SHEET 6

SOLDIER PILE WALL (SEE SHEET R-1 & S-35)

POWER POLE

TRANS

VAR

CITY OF SANTA ANA

CONSTRUCTION NOTES

1. CONSTRUCT 2" ARHM OVERLAY.
2. COLD PLANE VARIES 1" TO 2" EXISTING AC PAVEMENT.
3. COLD PLANE VARIES 0" TO 1" EXISTING AC PAVEMENT.
4. CONSTRUCT 8" AC PAVEMENT OVER 6" AB. LEAVE 2" BELOW PROPOSED FINISH SURFACE.
5. SAWCUT, REMOVE EXISTING ROADWAY AND CONSTRUCT 6" AC PAVEMENT SECTION OVER COMPACTED NATIVE (95% RELATIVE).
6. RECONSTRUCT CONCRETE SLOPE IN KIND.
7. CONSTRUCT PCC SIDEWALK PER CITY OF SANTA ANA STD. NO. 1104 CASE 3.
9. CONSTRUCT CURB AND GUTTER PER RDMD STD PLAN NO. 120-0-OC (A3-8)
10. CONSTRUCT MEDIAN CURB TYPE B-1 PER CITY OF SANTA ANA STD. NO. 1101
11. CONSTRUCT MEDIAN CURB WITH GUTTER B-1 PER CITY OF SANTA ANA STD. NO. 1101 AS MODIFIED PER DETAIL A/2.
12. CONSTRUCT 4" MEDIAN STAMP PATTERN CONCRETE PER CITY OF SANTA ANA STD. NO. 1118
18. CONSTRUCT 3'X3' TREE WELL AT BACK OF CURB PER CITY OF SANTA ANA STD. NO. 1124.
19. CONSTRUCT CONCRETE BARRIER (25A) AND TUBULAR HAND RAILING PER CALTRANS STD. NO. B11-51.
21. CONSTRUCT DRIVEWAY PER RDMD STD. PLAN NO. 1210, W=14'
23. CONSTRUCT CHAIN LINK FENCE GATE PER RDMD STD. PLAN NO. 600-0-OC.
24. CONSTRUCT CURB AND GUTTER PER CITY OF SANTA ANA STD. NO. 1101, CASE A-2-8.
25. REMOVE AND RELOCATE CONFLICTING PORTION OF EXISTING 6" IRRIGATION LINE WITH THE BRIDGE WIDENING.
27. CONSTRUCT CHAIN LINK FENCE PER RDMD STD. PLAN NO. 600-0-OC.

DISPOSITION NOTES

1. PROTECT IN PLACE.
2. RELOCATE.
3. REMOVE EXISTING TREE OR STUMP.
4. RELOCATE (BY OTHERS).
5. SAWCUT AND REMOVE PORTION OF CONCRETE SLOPE.
6. SAWCUT AND REMOVE EXISTING IMPROVEMENTS.
8. SAWCUT AND REMOVE CURB AND GUTTER.
11. REMOVE EXISTING GUARD RAIL.
12. REMOVE EXISTING BRIDGE MEDIAN.
13. REMOVE EXISTING CHAIN LINK FENCE

LEGEND

- REMOVE AND REPLACE
- VARIES 0" TO 1" COLD PLANE AND OVERLAY
- VARIES 1" TO 2" COLD PLANE AND OVERLAY
- STAMP PATTERN CONCRETE

UTILITY LEGEND

UTILITY	OWNER
A ELECTRICAL	EDISON
B TELEPHONE	SBC (PACIFIC BELL)
C 8" WATER	CITY OF SANTA ANA
D 84" SEWER	ORANGE COUNTY SANITATION DISTRICT
E 18" PROPOSED STORM DRAIN	CITY OF SANTA ANA
F 24" PROPOSED STORM DRAIN	CITY OF SANTA ANA
H 2" WATER SERVICE	CITY OF SANTA ANA
I STREET LIGHT	EDISON
K 6" IRRIGATION	OCFCD
L 3" ELECTRICAL IRRIGATION	OCFCD
O 78" GROUND WATER REPLENISHMENT PIPLINE	OCWD

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER — RICK KREUZER — No. 42407 — Exp. 12-31-06 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — DATE 6-21-05

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

ROADWAY LAYOUT

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

DRAWN BY:
CHECKED BY:

SHEET NO. L-1

DGN FILE: <I:\9905\D\D07>
DATE PLOTTED: <4:17pm>
TIME PLOTTED: <6/21/05>

CITY OF FOUNTAIN VALLEY

"ALTERNATE A"

SCALE: 1 = 20'

OCFCD R/W

[O] 78" GROUND WATER REPLENISHMENT PIPELINE

84"RCP

78"RCP

R/W

[1] FENCE

SAWCUT LINE

TRANSITION EXISTING TOP OF CURB TO MATCH EXISTING (20' TRANSITION)

STA 101+23.57 JOIN EXISTING

STA 101+23.57 MATCH EXISTING PAVEMENT

STA 101+23.57 JOIN EXISTING

[1 D] 84" SEWER

WARNER AVENUE

100 101 102 103 104

ELE [A 1]

TEL [B 1]

TEL-39.5'RT

TEL-37'RT

DETAILS SEE SHEET S-31 FOR BRIDGE MEDIAN

43.5'

20'

14'

5'

[1] EX. GATE

SANTA ANA RIVER (E01)

FOR BRIDGE PLANS SEE SHEETS S1-S33

EDISON EASEMENT

[L 1] ELEC

TEMPORARY R/W

APPROX. TOE OF SLOPE

SLOPE EASEMENT

[FENCE 1]

STA 104+65.68 BEGIN GUARD RAIL

STA 104+65.68 ANGLE PT. GUARD RAIL

MATCH LINE STA 106+00.00 SEE SHEET 6

105+62

105+27

105+92

104+92

105+47

105+54

105+84

30'

51'

VAR

9'

8'

1'

[K 1]

[B 1]

[A 1]

[2 I]

[A 4] POWER POLE

SOLDIER PILE WALL (SEE SHEET R-1 & S-35)

14' TRANS

EDISON EASEMENT

CITY OF SANTA ANA

OCFCD R/W

EX. GATE [1]

CONSTRUCTION NOTES

1. CONSTRUCT 2" ARHM OVERLAY.
2. COLD PLANE VARIES 1" TO 2" EXISTING AC PAVEMENT.
3. COLD PLANE VARIES 0" TO 1" EXISTING AC PAVEMENT.
4. CONSTRUCT 8" AC PAVEMENT OVER 6" AB. LEAVE 2" BELOW PROPOSED FINISH SURFACE.
5. SAWCUT, REMOVE EXISTING ROADWAY AND CONSTRUCT 6" AC PAVEMENT SECTION OVER COMPACTED NATIVE (95% RELATIVE).
6. RECONSTRUCT CONCRETE SLOPE IN KIND.
7. CONSTRUCT PCC SIDEWALK PER CITY OF SANTA ANA STD. NO. 1104 CASE 3.
9. CONSTRUCT CURB AND GUTTER PER RDMD STD PLAN NO. 120-O-OC (A3-8)
10. CONSTRUCT MEDIAN CURB TYPE B-1 PER CITY OF SANTA ANA STD. NO. 1101
11. CONSTRUCT MEDIAN CURB WITH GUTTER B-1 PER CITY OF SANTA ANA STD. NO. 1101 AS MODIFIED PER DETAIL (A/2).
12. CONSTRUCT 4" MEDIAN STAMP PATTERN CONCRETE PER CITY OF SANTA ANA STD. NO. 1118
18. CONSTRUCT 3'X3' TREE WELL AT BACK OF CURB PER CITY OF SANTA ANA STD. NO. 1124.
19. CONSTRUCT CONCRETE BARRIER (25A) AND TUBULAR HAND RAILING PER CALTRANS STD. NO. B11-51.
21. CONSTRUCT DRIVEWAY PER RDMD STD. PLAN NO. 1210. W=14'
23. CONSTRUCT CHAIN LINK FENCE GATE PER RDMD STD. PLAN NO. 600-0-0C.
24. CONSTRUCT CURB AND GUTTER PER CITY OF SANTA ANA STD. NO. 1101, CASE A-2-8.
25. REMOVE AND RELOCATE CONFLICTING PORTION OF EXISTING 6" IRRIGATION LINE WITH THE BRIDGE WIDENING.
27. CONSTRUCT CHAIN LINK FENCE PER RDMD STD. 600-0-0C.

DISPOSITION NOTES

1. PROTECT IN PLACE.
2. RELOCATE.
3. REMOVE EXISTING TREE OR STUMP.
4. RELOCATE (BY OTHERS).
5. SAWCUT AND REMOVE PORTION OF CONCRETE SLOPE.
6. SAWCUT AND REMOVE EXISTING IMPROVEMENTS.
8. SAWCUT AND REMOVE CURB AND GUTTER.
11. REMOVE EXISTING GUARD RAIL.
12. REMOVE EXISTING BRIDGE MEDIAN
13. REMOVE EXISITNG CHAIN LINK FENCE

LEGEND

- REMOVE AND REPLACE
- VARIES 0" TO 1" COLD PLANE AND OVERLAY
- VARIES 1" TO 2" COLD PLANE AND OVERLAY
- STAMP PATTERN CONCRETE

UTILITY LEGEND

UTILITY	OWNER
[A] ELECTRICAL	EDISON
[B] TELEPHONE	SBC (PACIFIC BELL)
[C] 8" WATER	CITY OF SANTA ANA
[D] 84" SEWER	ORANGE COUNTY SANITATION DISTRICT
[E] 18" PROPOSED STORM DRAIN	CITY OF SANTA ANA
[F] 24" PROPOSED STORM DRAIN	CITY OF SANTA ANA
[H] 2" WATER SERVICE	CITY OF SANTA ANA
[I] STREET LIGHT	EDISON
[K] 6" IRRIGATION	OCFCD
[L] 3" ELECTRICAL IRRIGATION	OCFCD
[O] 78" GROUND WATER REPLENISHMENT PIPELINE	OCWD

REGISTERED PROFESSIONAL ENGINEER — RICK KREUZER — No. 42407 — Exp. 12-31-06 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.A. Kreuzer 6-21-05
R.C.E. NO. 42407 DATE

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

ROADWAY LAYOUT — SHEET NO. L-1A

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
DRAWN BY:
CHECKED BY:

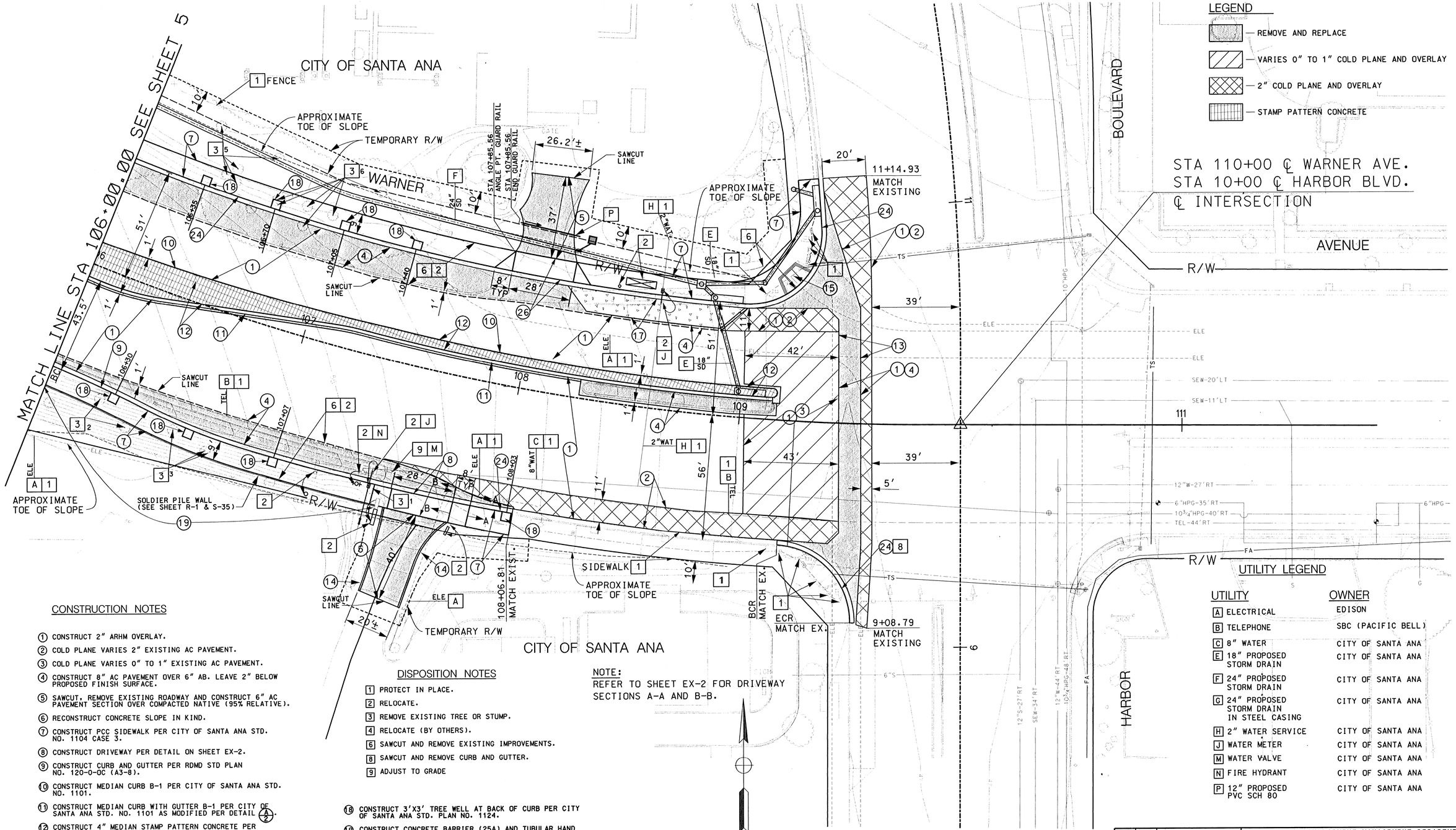
5A of 70

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

DATE PLOTTED =6JAN

TIME PLOTTED =1:51AM

DWG FILE = 4800X36.DWF



LEGEND

- REMOVE AND REPLACE
- VARIES 0" TO 1" COLD PLANE AND OVERLAY
- 2" COLD PLANE AND OVERLAY
- STAMP PATTERN CONCRETE

CONSTRUCTION NOTES

1. CONSTRUCT 2" ARHM OVERLAY.
2. COLD PLANE VARIES 2" EXISTING AC PAVEMENT.
3. COLD PLANE VARIES 0" TO 1" EXISTING AC PAVEMENT.
4. CONSTRUCT 8" AC PAVEMENT OVER 6" AB. LEAVE 2" BELOW PROPOSED FINISH SURFACE.
5. SAWCUT, REMOVE EXISTING ROADWAY AND CONSTRUCT 6" AC PAVEMENT SECTION OVER COMPACTED NATIVE (95% RELATIVE).
6. RECONSTRUCT CONCRETE SLOPE IN KIND.
7. CONSTRUCT PCC SIDEWALK PER CITY OF SANTA ANA STD. NO. 1104 CASE 3.
8. CONSTRUCT DRIVEWAY PER DETAIL ON SHEET EX-2.
9. CONSTRUCT CURB AND GUTTER PER RDMD STD PLAN NO. 120-0-OC (A3-8).
10. CONSTRUCT MEDIAN CURB B-1 PER CITY OF SANTA ANA STD. NO. 1101.
11. CONSTRUCT MEDIAN CURB WITH GUTTER B-1 PER CITY OF SANTA ANA STD. NO. 1101 AS MODIFIED PER DETAIL (A/2).
12. CONSTRUCT 4" MEDIAN STAMP PATTERN CONCRETE PER CITY OF SANTA ANA STD. NO. 1118
13. SAWCUT AND REMOVE EXISTING CONCRETE CROSS GUTTER.
14. CONSTRUCT TYPE A AC DIKE PER APWA/RDMD STD-120-0-OC/A-3-8.
15. CONSTRUCT WHEEL CHAIR ACCESS RAMP PER CITY OF SANTA ANA STD. NO. 1122A.
17. CONSTRUCT CONCRETE BUS PAD PER CITY OF SANTA ANA STD. NO. 1108.
18. CONSTRUCT 3'X3' TREE WELL AT BACK OF CURB PER CITY OF SANTA ANA STD. PLAN NO. 1124.
19. CONSTRUCT CONCRETE BARRIER (25A) AND TUBULAR HAND RAILING PER CALTRANS STD. NO. B11-51.
20. 12" PVC SCH 80 EQUALIZER PIPE AT LOW POINT.
24. CONSTRUCT PCC CURB & GUTTER PER CTY OF SANTA ANA STD NO. 1101 CASE A-2-8.
26. CONSTRUCT DRIVEWAY PER CITY OF SANTA ANA STD 1112 CASE 2.

DISPOSITION NOTES

1. PROTECT IN PLACE.
2. RELOCATE.
3. REMOVE EXISTING TREE OR STUMP.
4. RELOCATE (BY OTHERS).
6. SAWCUT AND REMOVE EXISTING IMPROVEMENTS.
8. SAWCUT AND REMOVE CURB AND GUTTER.
9. ADJUST TO GRADE

NOTE:
REFER TO SHEET EX-2 FOR DRIVEWAY SECTIONS A-A AND B-B.

SCALE: 1 = 20'

UTILITY LEGEND

UTILITY	OWNER
A ELECTRICAL	EDISON
B TELEPHONE	SBC (PACIFIC BELL)
C 8" WATER	CITY OF SANTA ANA
E 18" PROPOSED STORM DRAIN	CITY OF SANTA ANA
F 24" PROPOSED STORM DRAIN	CITY OF SANTA ANA
G 24" PROPOSED STORM DRAIN IN STEEL CASING	CITY OF SANTA ANA
H 2" WATER SERVICE	CITY OF SANTA ANA
J WATER METER	CITY OF SANTA ANA
M WATER VALVE	CITY OF SANTA ANA
N FIRE HYDRANT	CITY OF SANTA ANA
P 12" PROPOSED PVC SCH 80	CITY OF SANTA ANA

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PLOT DATE: 6/21/05 PLOT TIME: 14:04:07
DGN FILE: <RDMD>SHEET

REGISTERED PROFESSIONAL ENGINEER — RICK KREUZER — No. 42407 — Exp. 12-31-06 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. •300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — DATE 6-21-05

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

ROADWAY LAYOUT

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. L-2

DRAWN BY:
CHECKED BY:

6 of 70

CITY OF SANTA ANA

SCALE: 1 = 20'

"ALTERNATE A"

MATCH LINE STA 106+00.00 SEE SHEET 5

1 FENCE

TEMPORARY R/W

APPROXIMATE TOE OF SLOPE

WARNER

GATE

26.2'±

SAWCUT LINE

11+17.73 MATCH EXISTING

APPROXIMATE TOE OF SLOPE

R/W

8' TYP

28'

51'

43.5'

107

108

109

JOIN EXIST CROSS GUTTER

111

BOULEVARD

AVENUE

APPROXIMATE TOE OF SLOPE

SOLDIER PILE WALL (SEE SHEET R-1 & S-35)

TEMPORARY R/W

SIDEWALK 1

108+06.81 MATCH EXIST.

SAWCUT LINE

TEMPORARY R/W

CITY OF SANTA ANA

HARBOR

R/W

SIGN

4.0' 1.5'

6"

1.5% 3%

MEDIAN EDGE

CONCRETE CLASS SHALL BE 520-C-2500 PER GREENBOOK STANDARD SPEC.

RIBBON GUTTER A-A HEREON

N.T.S.

STA 110+00 ℄ WARNER AVE.
STA 10+00 ℄ HARBOR BLVD.
℄ INTERSECTION

CONSTRUCTION NOTES

1. CONSTRUCT 2" ARHM OVERLAY.
2. COLD PLANE 2" EXISTING AC PAVEMENT.
3. COLD PLANE VARIES 0" TO 1" EXISTING AC PAVEMENT.
4. CONSTRUCT 8" AC PAVEMENT OVER 6" AB. LEAVE 2" BELOW PROPOSED FINISH SURFACE.
5. SAWCUT, REMOVE EXISTING ROADWAY AND CONSTRUCT 6" AC PAVEMENT SECTION OVER COMPACTED NATIVE (95% RELATIVE).
6. RECONSTRUCT CONCRETE SLOPE IN KIND.
7. CONSTRUCT PCC SIDEWALK PER CITY OF SANTA ANA STD. NO. 1104 CASE 3.
8. CONSTRUCT DRIVEWAY PER DETAIL ON SHEET EX-2.
9. CONSTRUCT CURB AND GUTTER PER RDMD STD PLAN NO. 120-0-OC (A3-8).
10. CONSTRUCT MEDIAN CURB B-1 PER CITY OF SANTA ANA STD. NO. 1101.
11. CONSTRUCT MEDIAN CURB WITH GUTTER B-1 PER CITY OF SANTA ANA STD. NO. 1101 AS MODIFIED PER DETAIL (A/2).
12. CONSTRUCT 4" MEDIAN STAMP PATTERN CONCRETE PER CITY OF SANTA ANA STD. NO. 1118
13. SAWCUT AND REMOVE EXISTING CONCRETE CROSS GUTTER.
14. CONSTRUCT TYPE A AC DIKE PER APWA/RDMD STD-120-0-OC/A-3-8.
15. CONSTRUCT WHEEL CHAIR ACCESS RAMP PER CITY OF SANTA ANA STD. NO. 1122A.
17. CONSTRUCT CONCRETE BUS PAD PER CITY OF SANTA ANA STD. NO. 1108.
18. CONSTRUCT 3'X3' TREE WELL AT BACK OF CURB PER CITY OF SANTA ANA STD. PLAN NO. 1124.
19. CONSTRUCT CONCRETE BARRIER (25A) AND TUBULAR HAND RAILING PER CALTRANS STD. NO. B11-51.
20. 12" PVC SCH 80 EQUALIZER PIPE AT LOW POINT.
24. CONSTRUCT PCC CURB & GUTTER PER CTY OF SANTA ANA STD NO. 1101 CASE A-2-8.
26. CONSTRUCT DRIVEWAY PER CITY OF SANTA ANA STD 1112 CASE 2.

DISPOSITION NOTES

1. PROTECT IN PLACE.
2. RELOCATE.
3. REMOVE EXISTING TREE OR STUMP.
4. RELOCATE (BY OTHERS).
6. SAWCUT AND REMOVE EXISTING IMPROVEMENTS.
8. SAWCUT AND REMOVE CURB AND GUTTER.
9. ADJUST TO GRADE

NOTE:
REFER TO SHEET EX-2 FOR DRIVEWAY SECTIONS A-A AND B-B.

LEGEND

- REMOVE AND REPLACE
- VARIES 0" TO 1" COLD PLANE AND OVERLAY
- 2" COLD PLANE AND OVERLAY
- STAMP PATTERN CONCRETE
- PCC PAVEMENT

UTILITY LEGEND

UTILITY	OWNER
A ELECTRICAL	EDISON
B TELEPHONE	SBC (PACIFIC BELL)
C 8" WATER	CITY OF SANTA ANA
E 18" PROPOSED STORM DRAIN	CITY OF SANTA ANA
H 2" WATER SERVICE	CITY OF SANTA ANA
J WATER METER	CITY OF SANTA ANA
K 6" IRRIGATION	OCFCD
M WATER VALVE	CITY OF SANTA ANA
N FIRE HYDRANT	CITY OF SANTA ANA
P 12" PROPOSED PVC SCH 80	CITY OF SANTA ANA

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. •300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — 6-21-05 DATE

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

ROADWAY LAYOUT

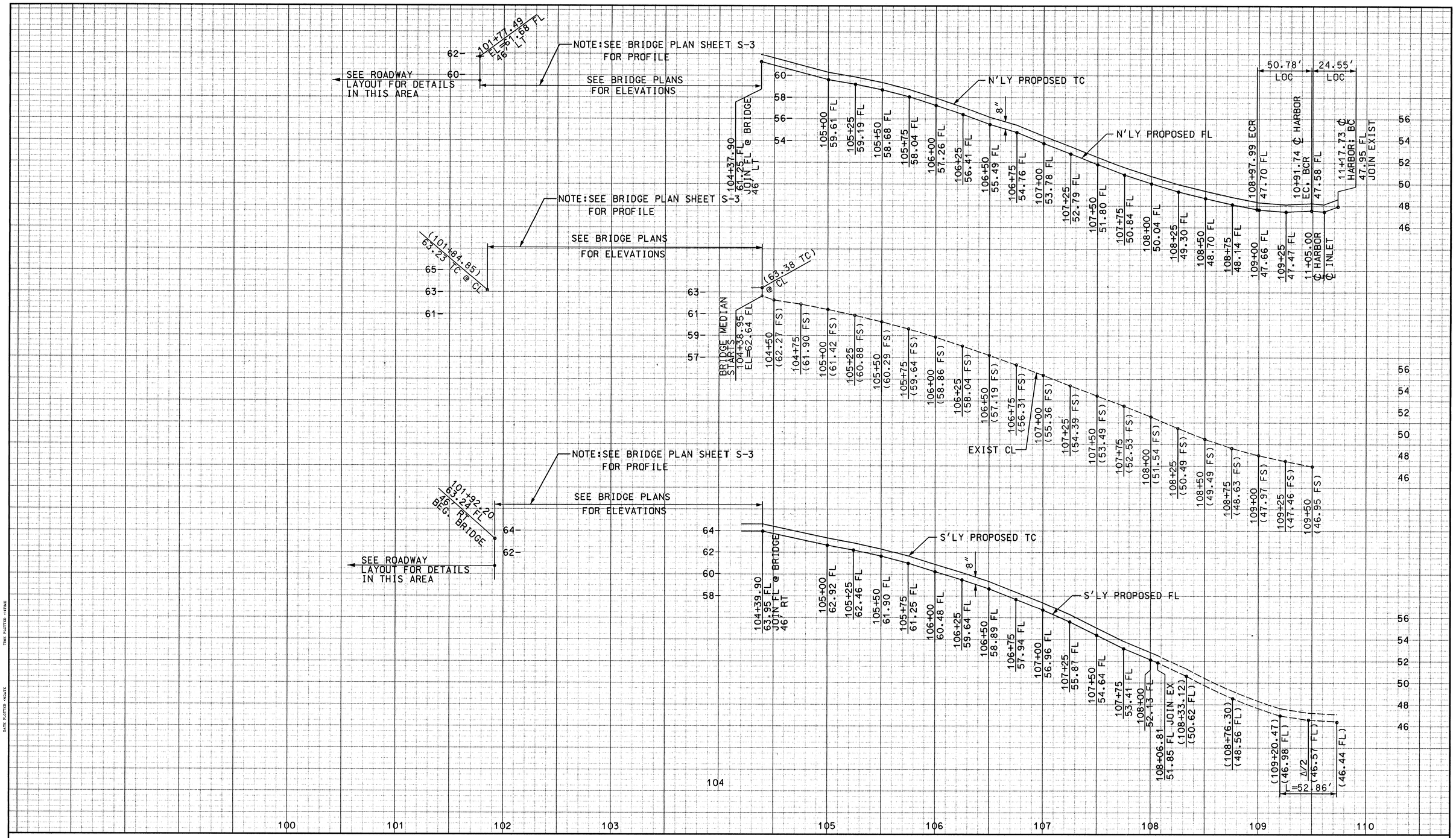
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. L-2A

DRAWN BY:
CHECKED BY:

6A of 70

DGN FILE: A-ROADWAY
DATE PLOTTED: 6/21/05
TIME PLOTTED: 17:57:16



FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TIME PLOTTED =TIME
DATE PLOTTED =DATE
DGN FILE =RRDUCOST

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — 6-21-05 DATE

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

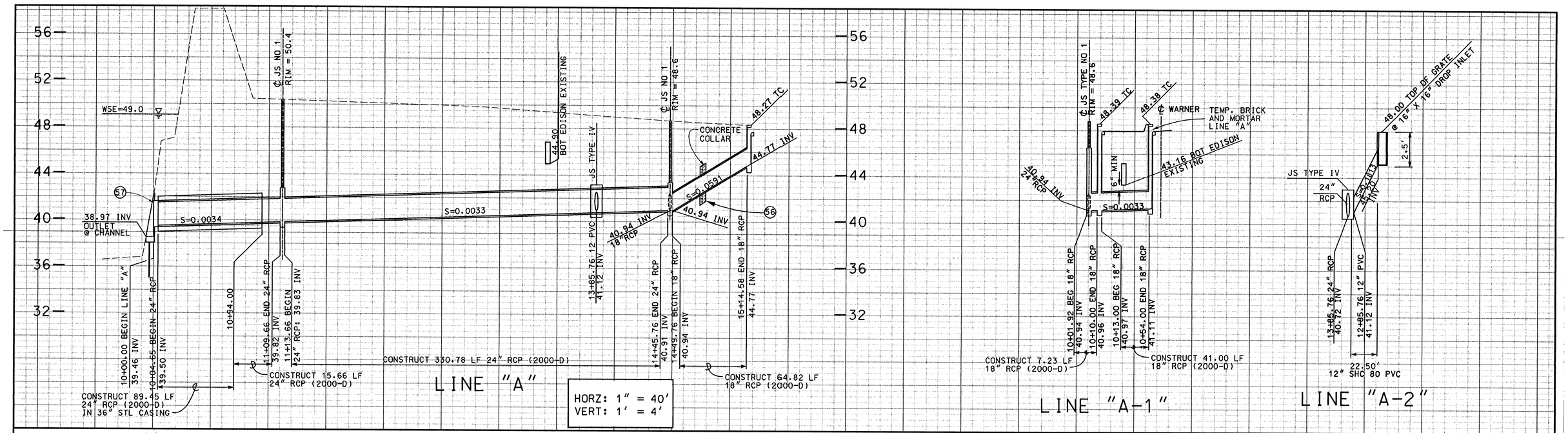
ROADWAY PROFILE

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

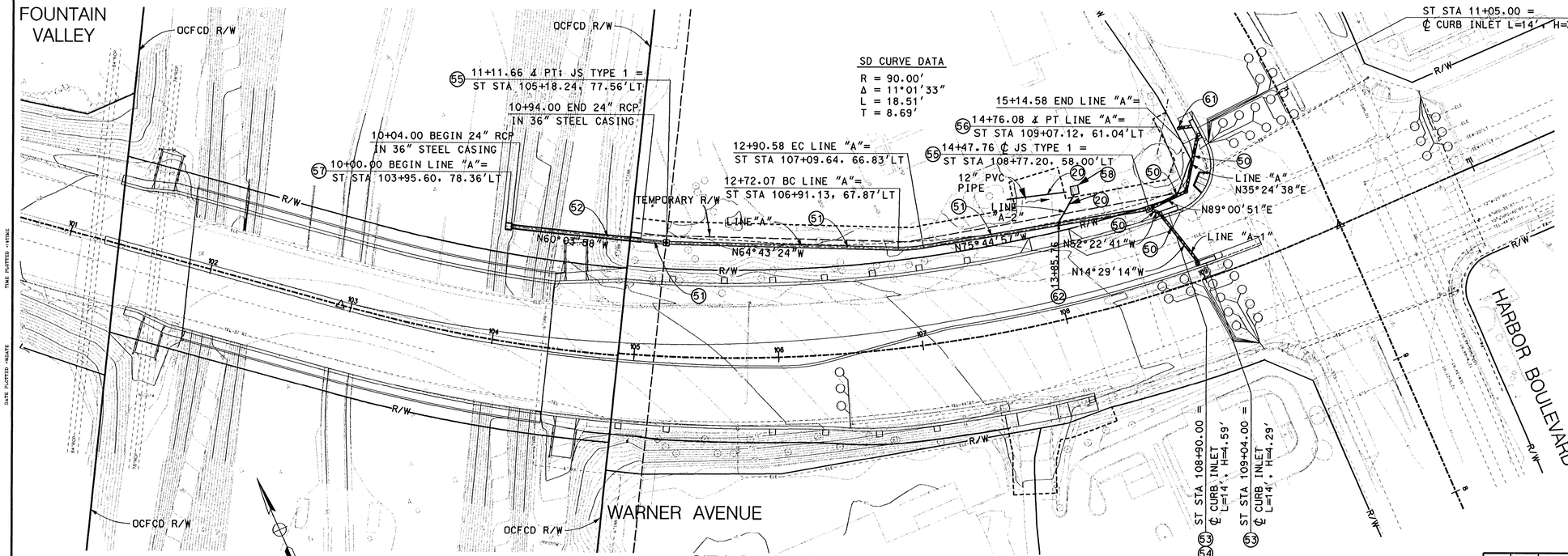
DRAWN BY:
CHECKED BY:

SHEET NO. P-1

7 of 70



CITY OF FOUNTAIN VALLEY



STORM DRAIN CONSTRUCTION NOTES

20. 12" PVC SCH 80 DRAIN PIPE.
50. FURNISH & INSTALL 18" RCP (2000-D) PER RDMD STD. PLAN NO. 1319.
51. FURNISH & INSTALL 24" RCP (2000-D) PER RDMD STD. PLAN NO. 1319.
52. FURNISH & INSTALL 36" STEEL (XXS) CASING BY JACKING AND INSTALL 24" RCP (2000-D) THRU JACKED PIPE.
53. CONSTRUCT CURB INLET TYPE B PER SANTA ANA STD. PLAN NO. 302 ("L" AND "H" PER PLAN).
54. CONSTRUCT LOCAL DEPRESSION PER SANTA ANA STD. PLAN NO. 305.
55. CONSTRUCT J.S. TYPE I PER RDMD STD. PLAN NO. 1310.
56. CONSTRUCT CONCRETE COLLAR PER RDMD STD. PLAN NO. 1317.
57. CONSTRUCT OUTLET STRUCTURE PER DETAIL SHEET D-2.
58. FURNISH & INSTALL 16" SQ DROP INLET W/ TRAFFIC GRATE W/FLOAT (JENSEN MODEL 1616-HD1, OR EQUIVALENT).
61. CONSTRUCT PARKWAY CULVERT TYPE C PER RDMD STD. PLAN NO. 1309.
62. CONSTRUCT J.S. TYPE IV PER RDMD STD. PLAN NO. 1313

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
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26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838
6-21-05
R.C.E. NO. 42407 DATE

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

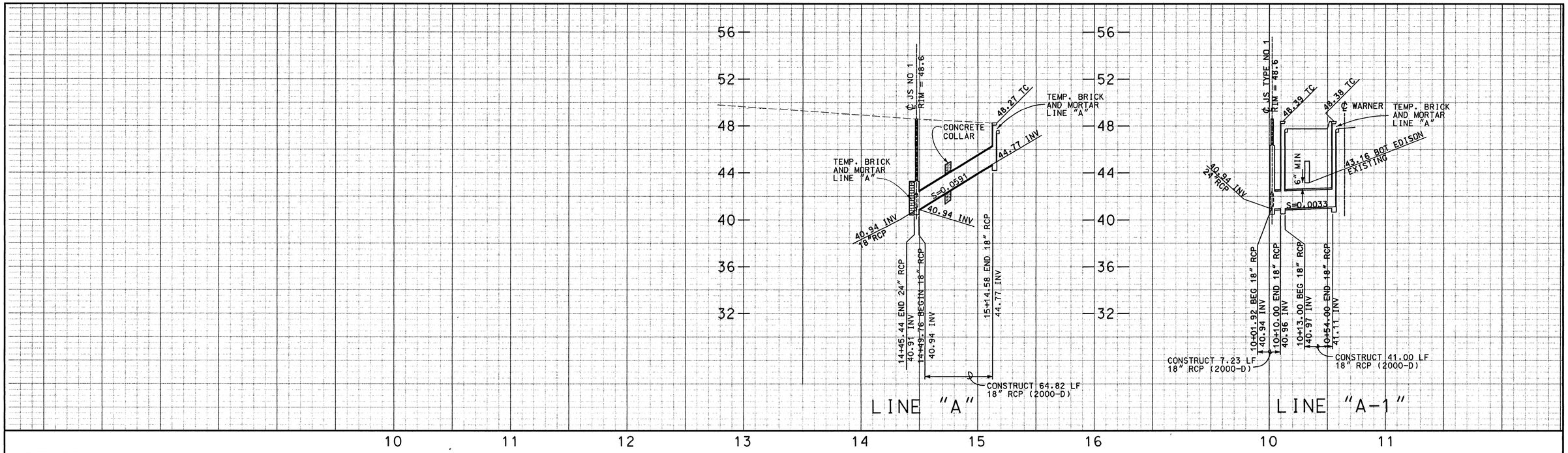
STORM DRAIN PLAN AND PROFILE — SHEET NO. D-1

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
DRAWN BY:
CHECKED BY:

8 of 70

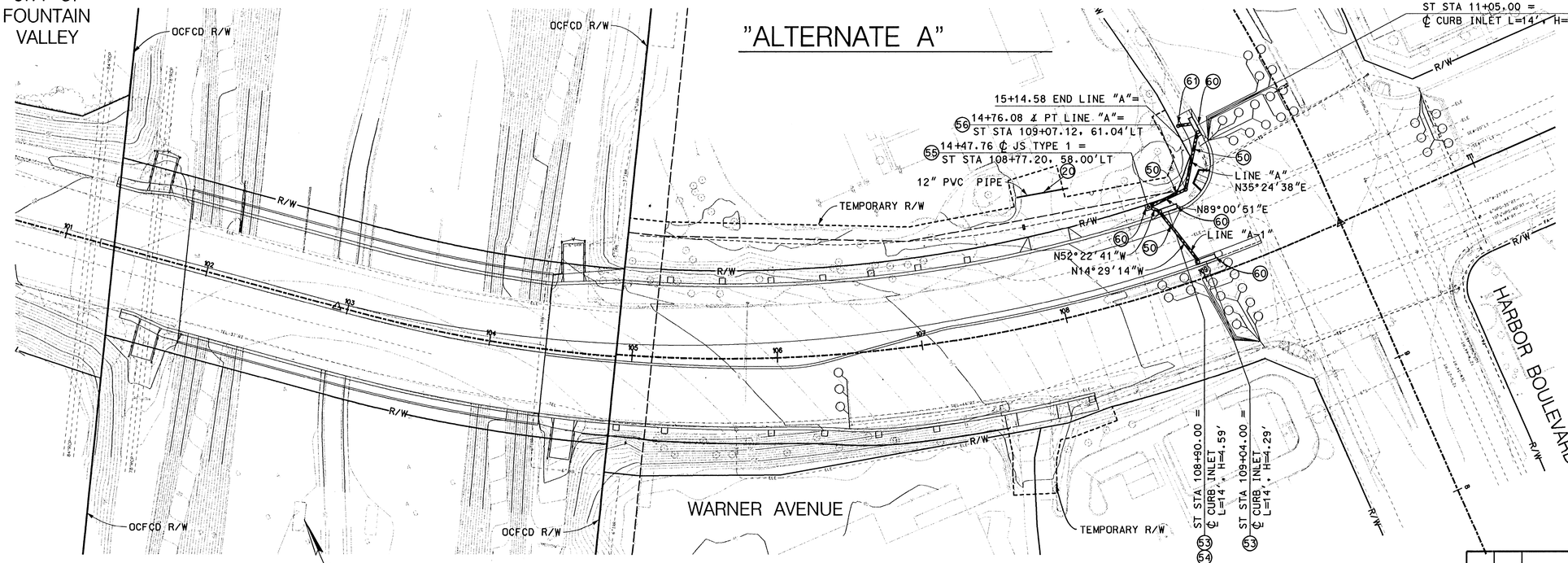
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TIME PLOTTED: <TIME>
DATE PLOTTED: <DATE>
DGN FILE: <MICROSTATION>



CITY OF FOUNTAIN VALLEY

"ALTERNATE A"



SCALE: 1 = 40'

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

STORM DRAIN CONSTRUCTION NOTES

(20) 12" PVC SCH 80 (EQUALIZER) DRAIN PIPE.

(50) FURNISH & INSTALL 18" RCP (2000-D) PER RDMD STD. PLAN NO. 1319.

(53) CONSTRUCT CURB INLET TYPE B PER SANTA ANA STD. PLAN NO. 302 ("L" AND "H" PER PLAN).

(54) CONSTRUCT LOCAL DEPRESSION PER SANTA ANA STD. PLAN NO. 305.

(55) CONSTRUCT J.S. TYPE I PER RDMD STD. PLAN NO. 1310.

(56) CONSTRUCT CONCRETE COLLAR PER RDMD STD. PLAN NO. 1317.

(58) FURNISH & INSTALL 16" SQ DROP INLET W/ TRAFFIC GRATE W/FLOAT (JENSEN MODEL 1616-HD1, OR EQUIVALENT

(60) CONSTRUCT BRICK AND MORTAR CAP AT END OF PIPE AND INLETS. FOR FUTURE CONSTRUCTION (TO BE INCLUDED IN RCP COAT FOR CONSTRUCTION).

(61) CONSTRUCT PARKWAY CULVERT TYPE C PER RDMD STD. PLAN NO. 1309.

REGISTERED PROFESSIONAL ENGINEER — RICK KREUZER — No. 42407 — Exp. 12-31-06 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — DATE 6-21-05

NO.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

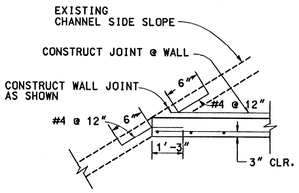
STORM DRAIN PLAN AND PROFILE — SHEET NO. D-1A

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

DRAWN BY:
CHECKED BY:

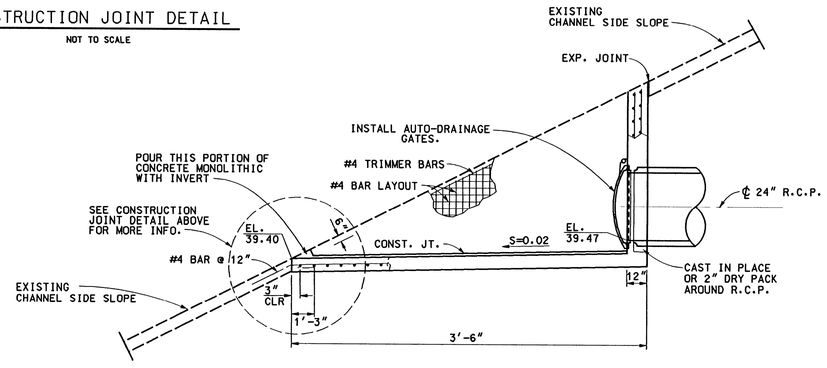
8A of 70

TIME PLOTTED: 13TIME
DATE PLOTTED: 06JUN
DGN FILE: 13A0001207



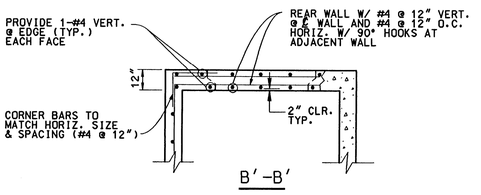
CONSTRUCTION JOINT DETAIL

NOT TO SCALE

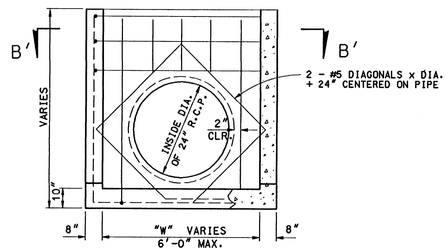


SECTION A-A

NOT TO SCALE

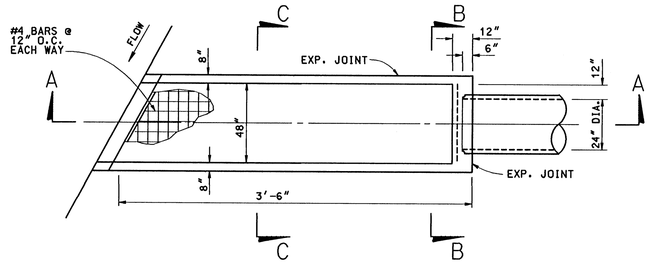


B'-B'



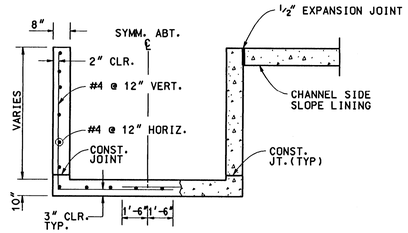
SECTION B-B

(W @ 6'-0")



PLAN

NOT TO SCALE



SECTION C-C

NOT TO SCALE

OUTLET STRUCTURE TYPE ''A''

NOT TO SCALE

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

DATE PLOTTED =8JAN

TIME PLOTTED =11:56

DGN FILE =WARDOUT

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:

KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. | DATE

6-21-05

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

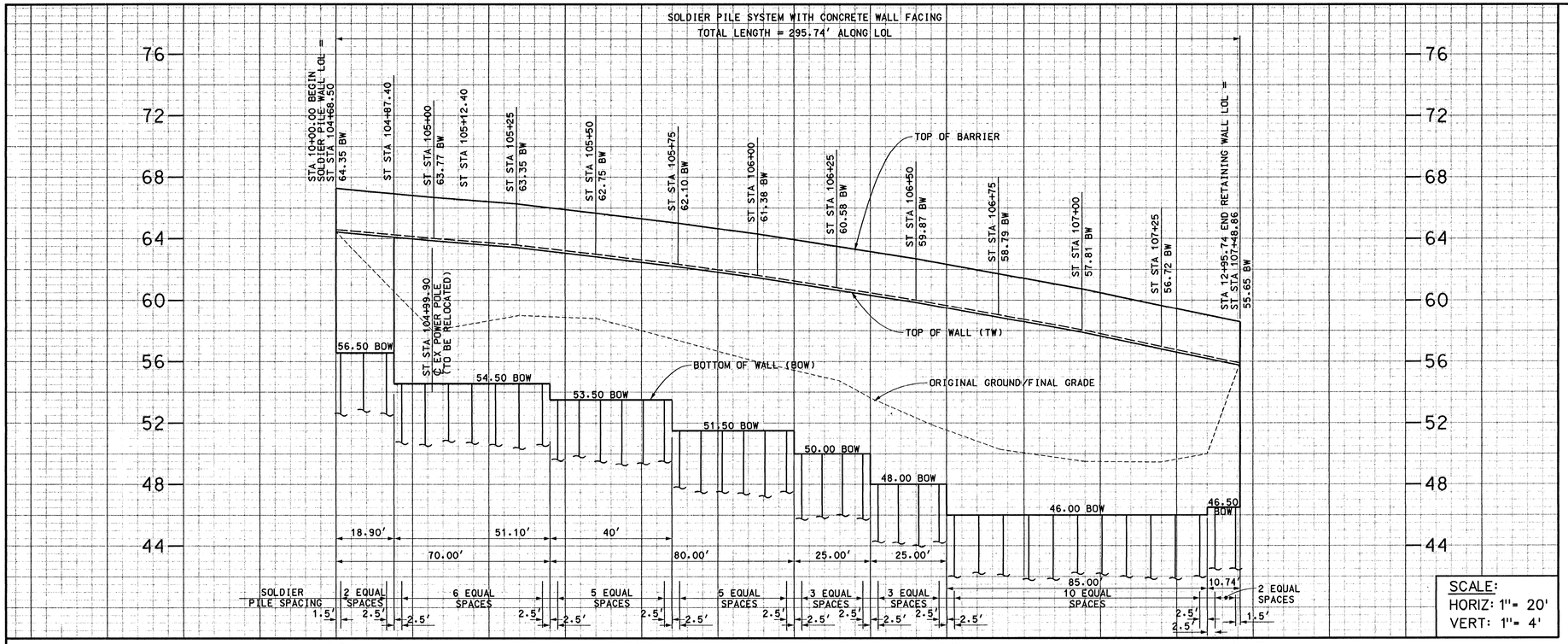
WARNER AVENUE WIDENING

FLAP GATE OUTLET STRUCTURE

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

DRAWN BY:
CHECKED BY:

SHEET NO. D-2



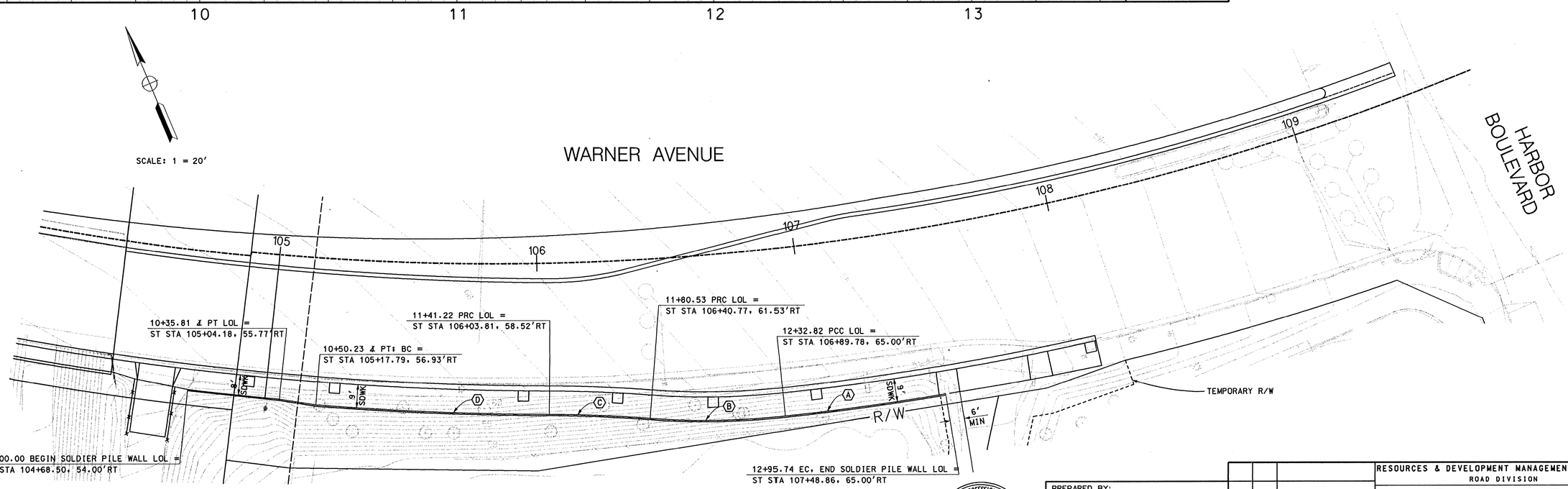
SCALE:
HORIZ: 1"= 20'
VERT: 1"= 4'

WALL CURVE DATA

	DELTA	RADIUS	LENGTH	TANGENT
A	03°23'06"	1065.00'	62.92'	31.47'
B	10°22'00"	289.00'	52.29'	26.22'
C	04°08'02"	544.85'	39.31'	19.66'
D	04°15'14"	1225.53'	90.99'	45.52'

SOLDIER PILE WALL GENERAL NOTES

1. ALL STRUCTURAL DIMENSIONS & STEEL REINFORCEMENT, DESIGN CONDITIONS & DESIGN DATA SHALL BE AS INDICATED ON "SOLDIER PILE WALL" (SHEET NO. S-35).
2. EXPANSION JOINTS SHALL BE PLACED AT A MAXIUM SPACING OF 72'.
3. VERTICAL WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED @ MAXIMUM SPACING OF 24' COINCIDENT WITH WEEPHOLE.



FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
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R.C.E. NO. 42407 — DATE 6-21-05

NO.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

SOLDIER PILE PLAN & PROFILE — SHEET NO. R-1

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

DRAWN BY:
CHECKED BY:

10 of 70

TIME PLOTTED =STIME
DATE PLOTTED =SDATE
DGN FILE =SRDGNFILENAME

SANTA ANA RIVER BIKEWAY AT WARNER AVENUE CLOSED FROM (DATE) TO (DATE)

(1) SPECIAL A
BLACK ON ORANGE
NO SCALE

BIKEWAY
DETOUR

(2) C5 (LT OR RT)
BLACK ON ORANGE
NO SCALE

BIKEWAY
DETOUR

(3) C5 (STRAIGHT)
BLACK ON ORANGE
NO SCALE

BIKEWAY CLOSED

(5) MODIFIED C2
BLACK ON WHITE
NO SCALE

END DETOUR

(4) C7
BLACK ON ORANGE
NO SCALE

SANTA ANA RIVER TRAIL AT WARNER AVENUE CLOSED FROM (DATE) TO (DATE)

(6) SPECIAL B
BLACK ON ORANGE
NO SCALE

TRAIL
DETOUR

(7) C5 (STRAIGHT)
BLACK ON ORANGE
NO SCALE

TRAIL
DETOUR

(8) C5 (LT OR RT)
BLACK ON ORANGE
NO SCALE

TRAIL CLOSED

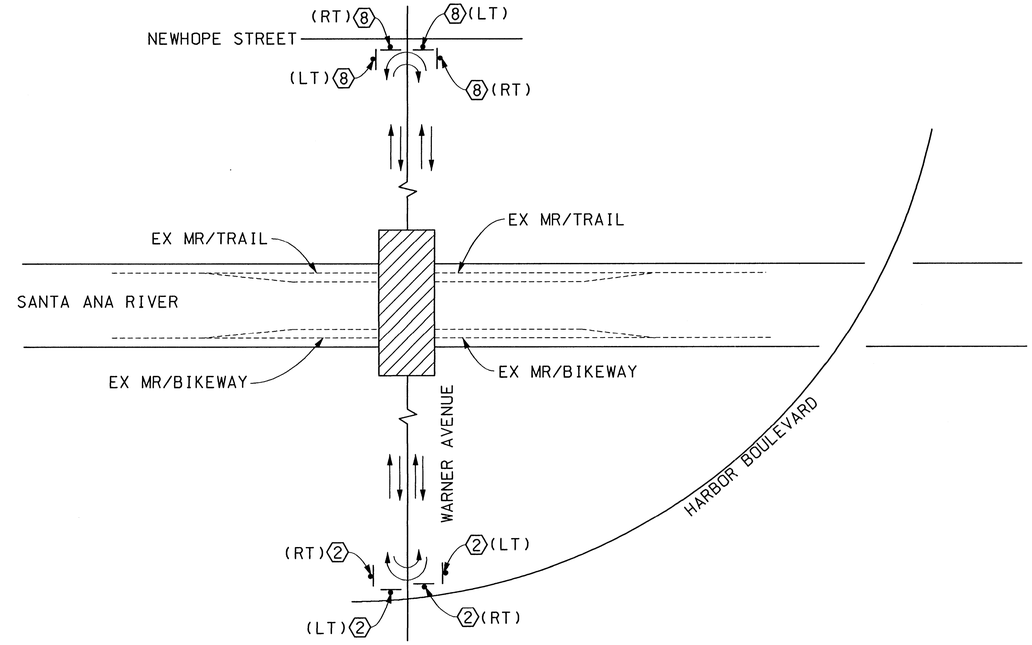
(9) MODIFIED C2
BLACK ON WHITE
NO SCALE

GENERAL NOTES

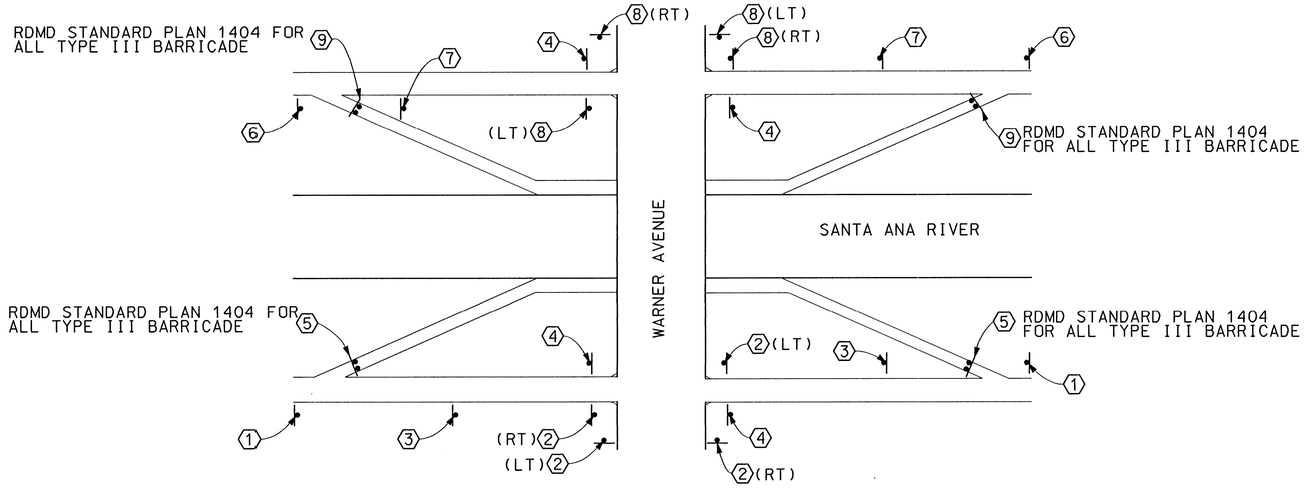
1. EXACT SIGN LOCATION SHALL BE DETERMINED BY THE ENGINEER.
2. SIGNS, BARRICADES, ETC. SHALL COMPLY WITH THE CALTRANS TRAFFIC MANUAL, LATEST EDITION, AND THE "WATCH" MANUAL, LATEST EDITION.
3. SIGN SIZE SHALL BE APPROVED BY THE ENGINEER.

LEGEND:

- BIKEWAY & TRAIL DETOUR
- C2 — CALTRANS SIGN DESIGNATION (UNLESS OTHERWISE NOTED)
- SIGN ON POST
- TYPE III BARRICADE
- WORK ZONE
- MR — MAINTENANCE ROAD



DETOUR PLAN
NOT TO SCALE



WARNER AVENUE CIRCULATION DETAIL
NOT TO SCALE

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER — ED MILLER JR — No. 47615 — Exp. 12-31-05 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 47615 — 6-21-05 DATE

No.	DATE	ITEM
REVISIONS		

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
BRIDGE WIDENING

SANTA ANA RIVER BIKEWAY DETOUR PLAN — SHEET NO. DT-1
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
DRAWN BY:
CHECKED BY:

11 of 70

DGN FILE: <RDMD\DT\DT1.DGN>
DATE PLOTTED: <DATE>
TIME PLOTTED: <STIME>

SANTA ANA RIVER RIDING AND HIKING TRAIL BETWEEN SEGERSTROM AND HARBOR CLOSED FROM (DATE) TO (DATE)

① SPECIAL A
BLACK ON ORANGE
NO SCALE

TRAIL
DETOUR

② C5 (LT. OR RT.)
BLACK ON ORANGE
NO SCALE

TRAIL
DETOUR

③ C5 (STRAIGHT)
BLACK ON ORANGE
NO SCALE

END
DETOUR

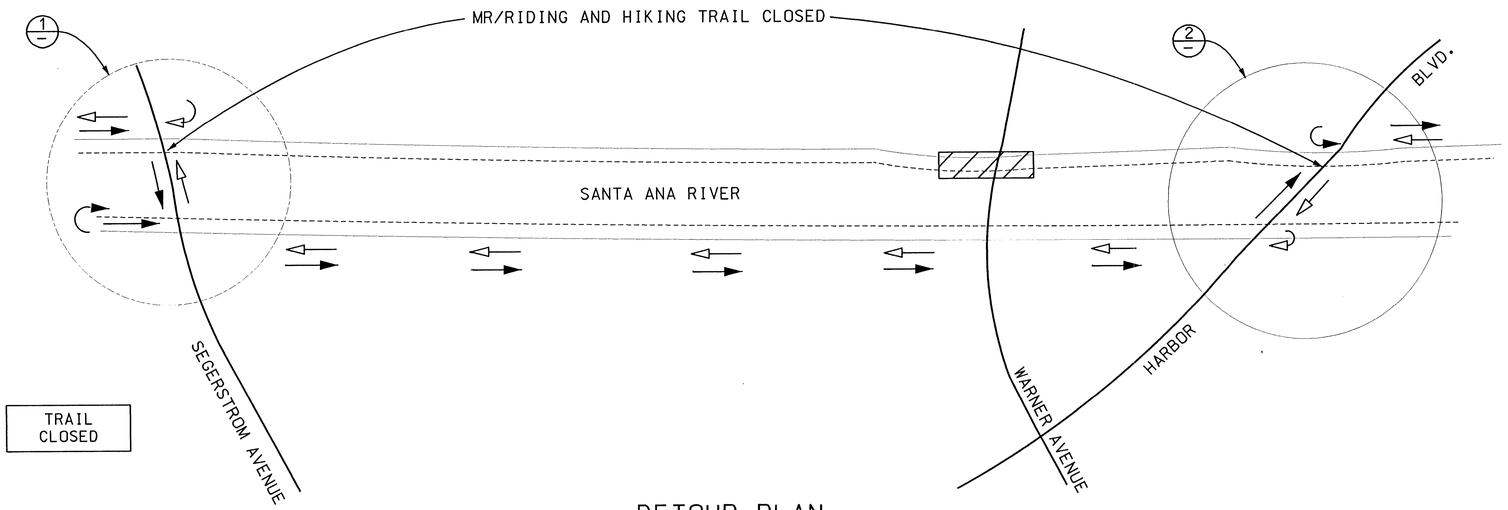
④ C7
BLACK ON ORANGE
NO SCALE

TRAIL
CLOSED

⑤ MODIFIED C2
BLACK ON WHITE
NO SCALE

BICYCLIST SHALL DISMOUNT AND WALK BIKE ACROSS BRIDGE

⑥ SPECIAL B
BLACK ON ORANGE
NO SCALE



DETOUR PLAN
NOT TO SCALE

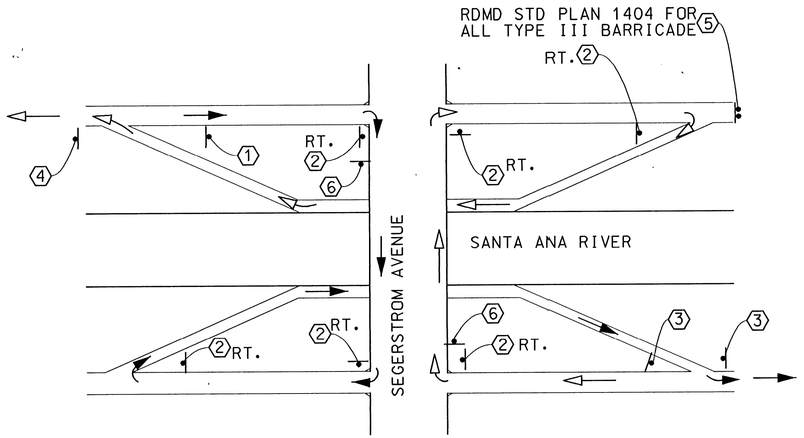
GENERAL NOTES

1. EXACT SIGN LOCATION SHALL BE DETERMINED BY THE ENGINEER.
2. SIGNS, BARRICADES, ETC. SHALL COMPLY WITH THE CALTRANS TRAFFIC MANUAL, LATEST EDITION, AND THE "WATCH" MANUAL, LATEST EDITION.
3. SIGN SIZE SHALL BE APPROVED BY THE ENGINEER.

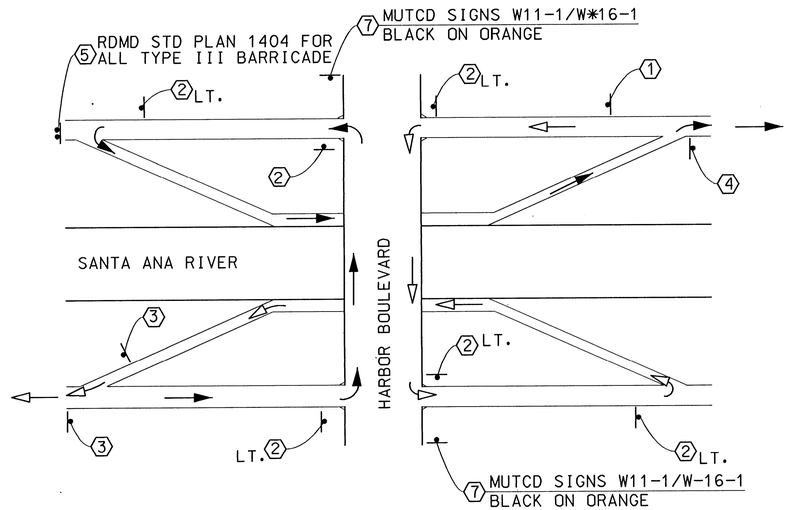
LEGEND:

- NORTHBOUND TRAIL DETOUR
- SOUTHBOUND TRAIL DETOUR
- MUTCD — MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FEDERAL HIGHWAY ADMINSTRATION
- C2 — CALTRANS SIGN DESIGNATION (UNLESS OTHERWISE NOTED)
- SIGN ON POST
- TYPE III BARRICADE
- WORK ZONE
- MR — MAINTENANCE ROAD

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4



① SEGERSTROM AVE. CIRCULATION DETAIL
NO TO SCALE



② HARBOR BLVD. CIRCULATION DETAIL
NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
ED MILLER JR.
No. 47615
Exp. 12-31-05
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

6-21-05
R.C.E. NO. 47615 DATE

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

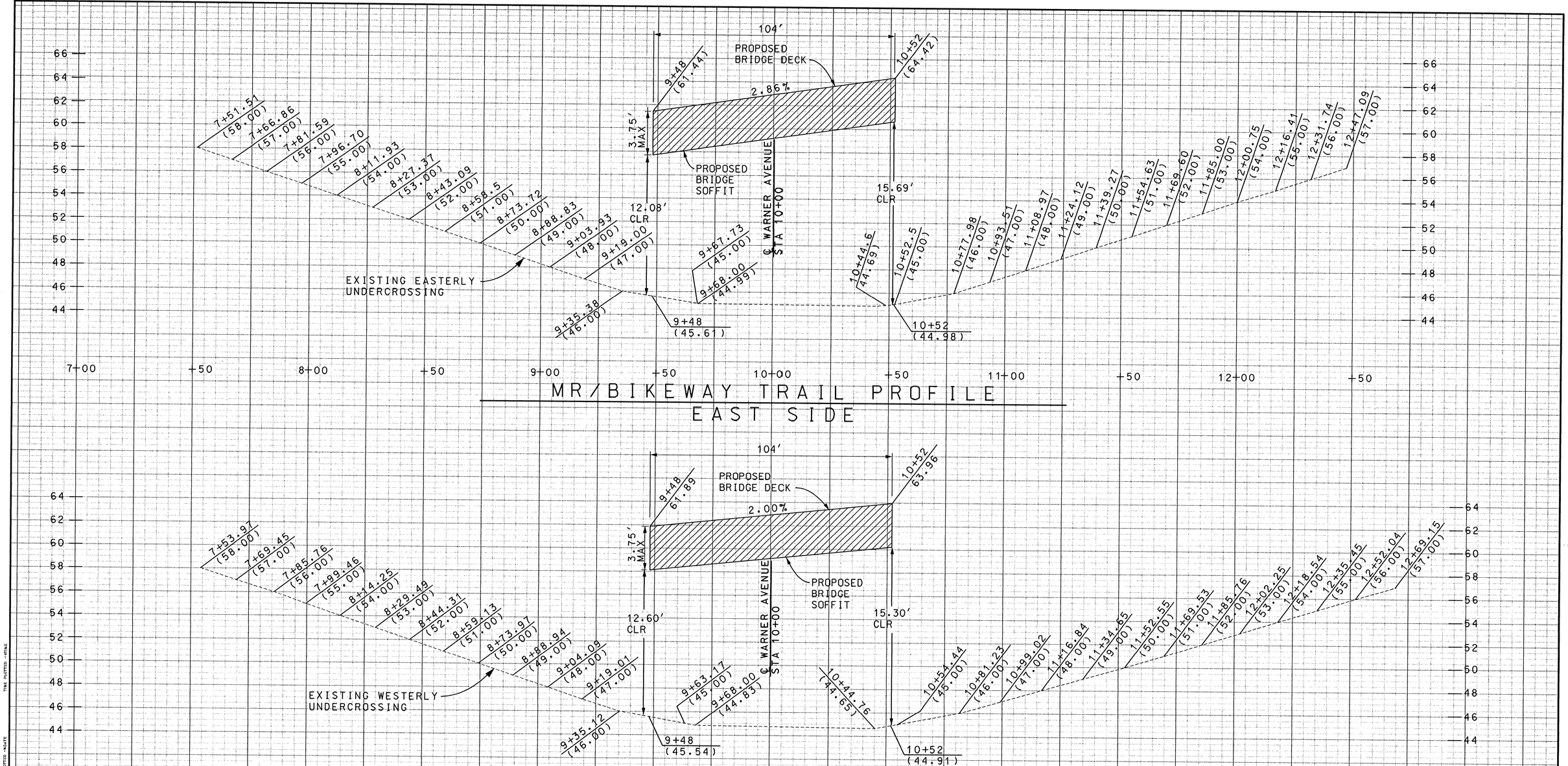
SANTA ANA RIVER MR/RIDING AND HIKING DETOUR PLAN
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. DT-3

DRAWN BY:
CHECKED BY:

12 of 70

DATE PLOTTED =5FEB
TIME PLOTTED =07:15
DGN FILE =MR0013DT



MR/BIKEWAY TRAIL PROFILE
EAST SIDE

MR/RIDING AND HIKING TRAIL PROFILE
WEST SIDE

SCALE:
HORIZ: 1"= 20'
VERT: 1"= 4'

TIME PLOTTED =TIME
DATE PLOTTED =DATE
DGN FILE =ENGLIGHT

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER
ED MILLER Jr.
No. 47615
Exp. 12-31-05
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

6-21-05
R.C.E. NO. 47615 DATE

No.	DATE	ITEM

REVISIONS

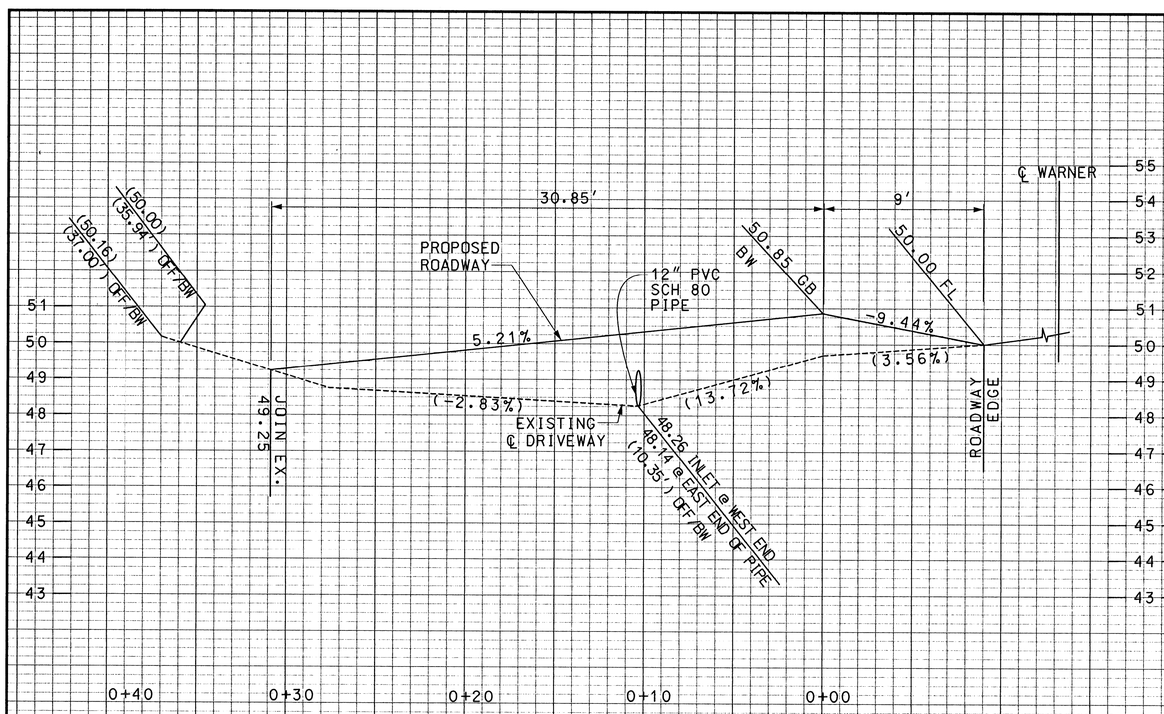
RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

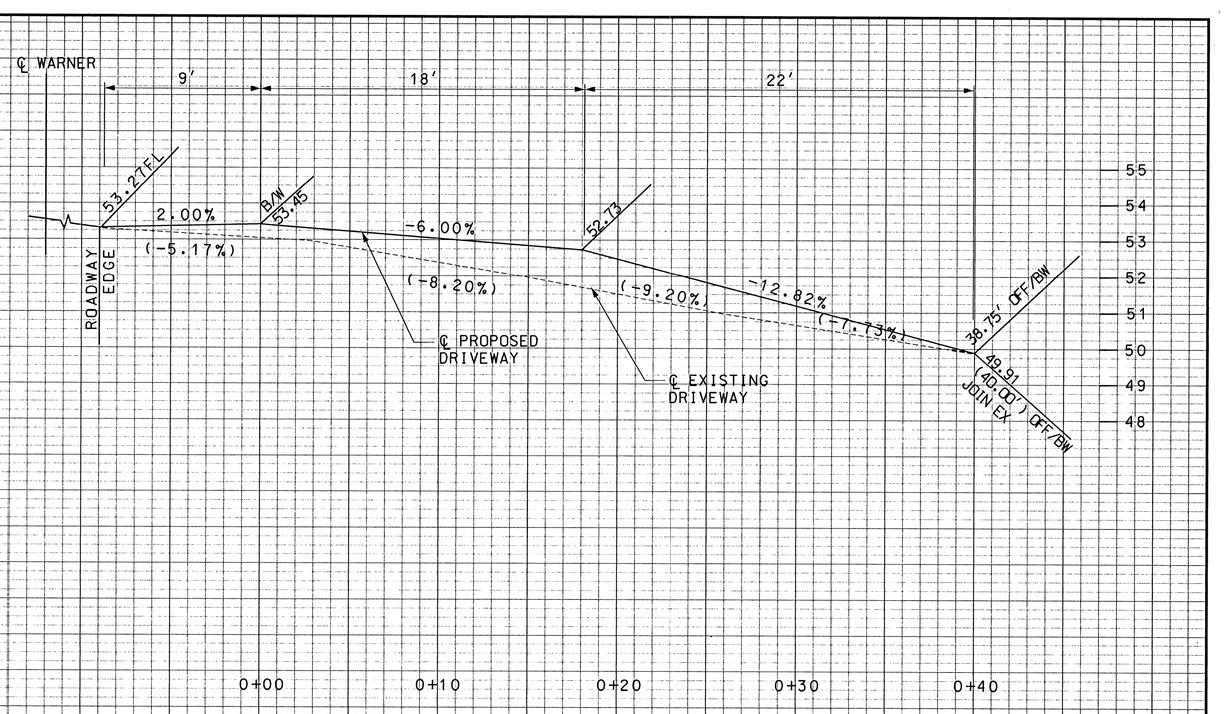
SANTA ANA RIVER TRAIL PROFILE
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. EX-1

DRAWN BY:
CHECKED BY:

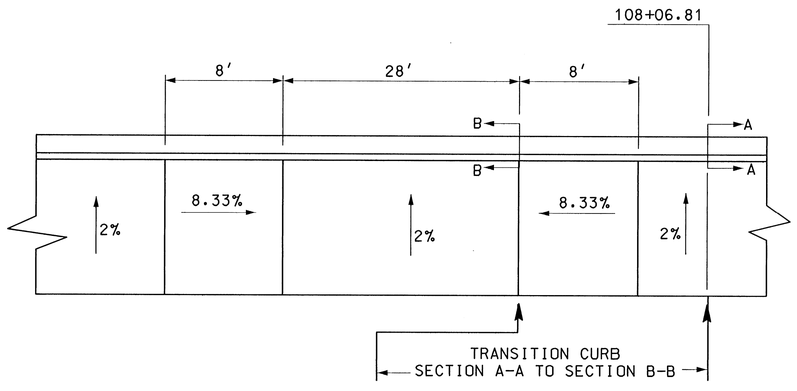


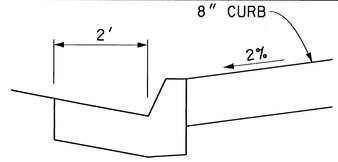
NORTH DRIVEWAY PROFILE (EDISON)
STA 108+01.49



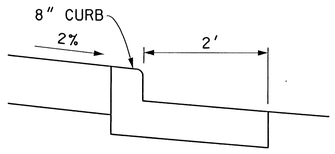
SOUTH DRIVEWAY PROFILE (EBERHARD/ADAMS)
107+65.51

SCALE:
HORIZ: 1"= 4'
VERT: 1"= 2'





SECTION A-A CURB AND GUTTER
CITY OF SANTA ANA. STD PLAN
NO. 1101 (A-2-8)



SECTION B-B CURB AND GUTTER
RDMD STD PLAN 120-0-0C
(A3-8)

SOUTH DRIVEWAY APPROACH PLAN DETAIL (EBERHARD/ADAMS)
STA 107+46.60 TO 108+06.81

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.A. Kreuzer 6-21-05
R.C.E. NO. 42407 DATE

No.	DATE	ITEM

REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

DRIVEWAY PROFILES
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. EX-2

DRAWN BY:
CHECKED BY:

14 of 70

DGN FILE = 1600X1037
DATE PLOTTED =30JAN
TIME PLOTTED =11:19

CITY OF FOUNTAIN VALLEY CONSTRUCTION NOTES

① PAINT 4" SKIP WHITE LANE LINE PER DETAIL 11 AND INSTALL RAISED PAVEMENT MARKERS PER DETAIL 13, CALTRANS STANDARD PLAN A20A JULY 2002 EDITION.

② INSTALL BIKE LANE PER DETAIL 39, CALTRANS STANDARD PLAN A20D, JULY 2002 EDITION.

③ INSTALL ONE WAY YELLOW REFLECTORIZED PAVEMENT MARKERS IN ACCORDANCE WITH THE SPECIFICATIONS AND DETAIL "A" HEREON.

LEGEND

— SIGN WITH POST

SC — SPLICE NEW TO EXISTING CONDUCTORS

CITY OF SANTA ANA CONSTRUCTION NOTES

1 INSTALL WHITE LANE LINE PER CITY OF SANTA ANA STD. PLAN NO. 1125B-1, DETAIL 1.

2 INSTALL TURN LANE LINE PER CITY OF SANTA ANA STD. PLAN NO 1125B-1, DETAIL 2.

3 INSTALL RAISED MEDIAN ISLAND R.P.M.'S PER CITY OF SANTA ANA STD. PLAN NO. 1125B-2, DETAIL 10.

4 PAINT MEDIAN NOSE YELLOW INSTALL FLEXIBLE TYPE "K" MARKER AND TYPE "H" RPM'S EVENLY SPACE ON TOP OF THE MEDIAN NOSE CURB AS DIRECTED BY ENGINEER.

5 INSTALL SIGN AND POST PER CALTRANS STD R2(45).

6 INSTALL CROSSWALK LINE, 12" WIDE @ 11' O.C., WHITE EXCEPT AS NOTED OTHERWISE.

7 REMOVE EXISTING STRIPING, PAVEMENT LEGENDS, CURB MARKINGS, AND RPM'S.

8 INSTALL LEGEND AS SHOWN.

9 INSTALL NEW LANE EXTENSION PER CITY OF SANTA ANA STD. PLAN NO. 1125B-2, DETAIL 9.

10 INSTALL NEW SIGN AND POST PER CITY OF SANTA ANA STANDARD.

11 PROTECT IN PLACE.

12 REPLACE EXISTING MAST ARM SIGN WITH R73-5 (36"x36")

13 RELOCATE EXISTING PHASE 4 MAST ARM TRAFFIC SIGNAL HEAD IN ACCORDANCE WITH CALTRANS STANDARD ES-7H AND AS DIRECTED BY THE ENGINEER. SPLICE CONDUCTORS AS REQUIRED AND AS DIRECTED BY THE ENGINEER.

14 INSTALL NEW PHASE 4 MAST ARM TRAFFIC SIGNAL HEAD IN ACCORDANCE WITH CALTRANS STANDARD ES-7H AND AS DIRECTED BY THE ENGINEER. SPLICE CONDUCTORS AS REQUIRED AND AS DIRECTED BY THE ENGINEER.

15 RELOCATE EXISTING PHASE 8 MAST ARM TRAFFIC SIGNAL HEAD IN ACCORDANCE WITH CALTRANS STANDARD ES-7H AND AS DIRECTED BY THE ENGINEER. SPLICE CONDUCTORS AS REQUIRED AND AS DIRECTED BY THE ENGINEER.

16 INSTALL NEW PHASE 8 MAST ARM TRAFFIC SIGNAL HEAD IN ACCORDANCE WITH CALTRANS STANDARD ES-7H AND AS DIRECTED BY THE ENGINEER. SPLICE CONDUCTORS AS REQUIRED AND AS DIRECTED BY THE ENGINEER.

17 INSTALL 2" CONDUIT AND PULL BOXES AS DIRECTED BY THE ENGINEER.

18 INSTALL TRAFFIC LOOPS DETECTORS. SPLICE CONDUCTORS AS REQUIRED AND AS DIRECTED BY THE ENGINEER.

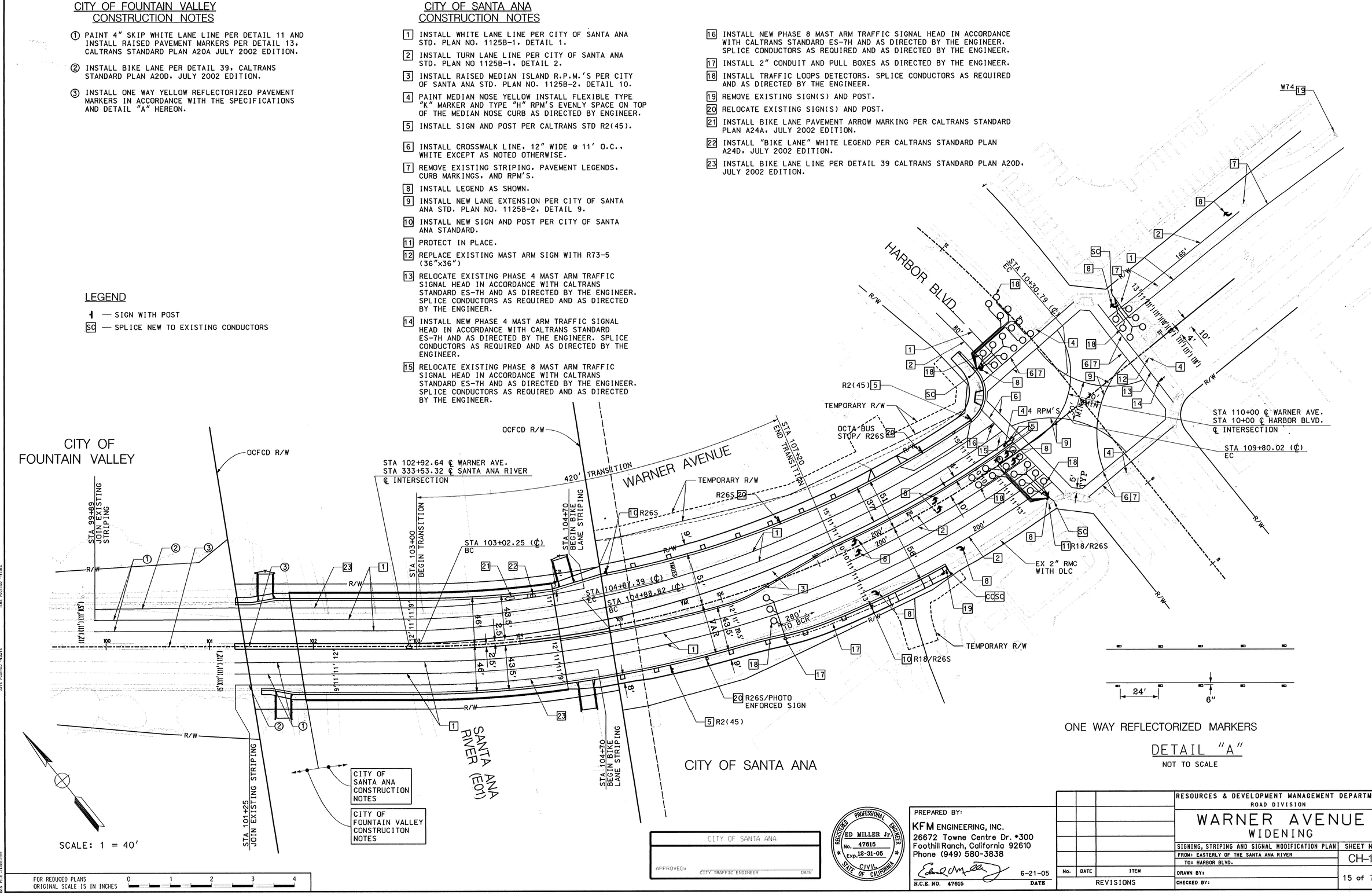
19 REMOVE EXISTING SIGN(S) AND POST.

20 RELOCATE EXISTING SIGN(S) AND POST.

21 INSTALL BIKE LANE PAVEMENT ARROW MARKING PER CALTRANS STANDARD PLAN A24A, JULY 2002 EDITION.

22 INSTALL "BIKE LANE" WHITE LEGEND PER CALTRANS STANDARD PLAN A24D, JULY 2002 EDITION.

23 INSTALL BIKE LANE LINE PER DETAIL 39 CALTRANS STANDARD PLAN A20D, JULY 2002 EDITION.



ONE WAY REFLECTORIZED MARKERS

DETAIL "A"

NOT TO SCALE

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

CITY OF SANTA ANA

APPROVED: CITY TRAFFIC ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER — ED MILLER Jr. — No. 47615 — Exp. 12-31-05 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 47615 — 6-21-05 DATE

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

SIGNING, STRIPING AND SIGNAL MODIFICATION PLAN

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. CH-1

DRAWN BY:
CHECKED BY:

15 of 70

TIME PLOTTED: <STIME>
DATE PLOTTED: <SDATE>
DGN FILE: <SMODLIST>

GENERAL NOTES

1. LIGHTING PLANS ARE PREPARED BASED ON CALTRANS STANDARD PLANS,LATEST EDITION.
2. PROTECT ALL EXISTING UTILITIES IN PLACE.
3. SEE CALTRANS STANDARD PLANS ES-1A, ES-1B AND ES-1C FOR LEGENDS AND ABBREVIATIONS.
4. CONTRACTOR TO VERIFY ELECTRICAL SERVICE POINTS WITH SOUTHERN CALIFORNIA EDISION REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK.

CONSTRUCTION NOTES (THIS SHEET):

① RELOCATE EXISTING POLE, MAST ARM AND LUMMINARE, REMOVE EXISTING FOUNDATION TO 6" BELOW FINISHED SURFACE. CONSTRUCT CIDH PILE FOUNDATION IN ACCORDANCE WITH CALTRANS STANDARDS.

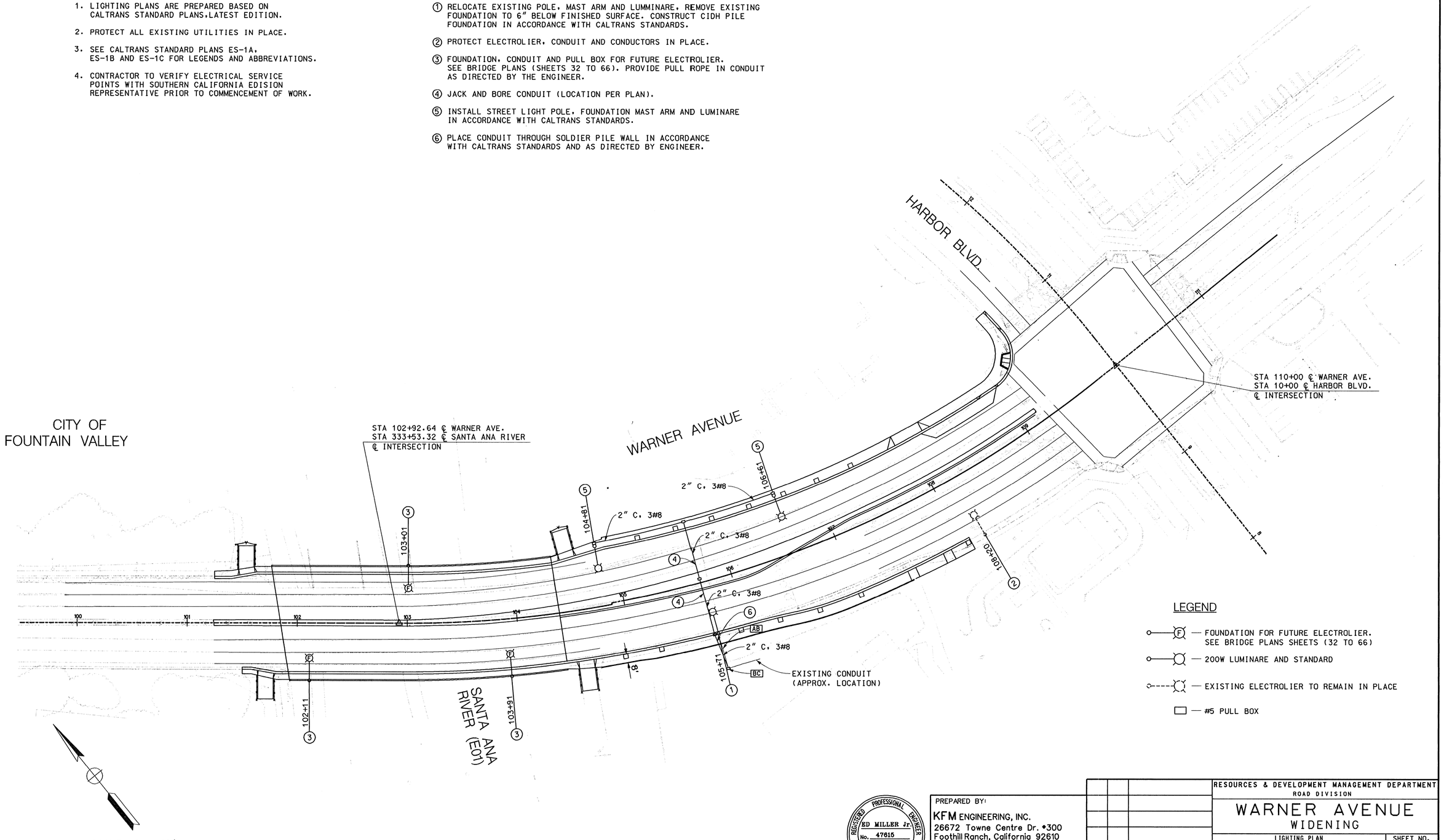
② PROTECT ELECTROLIER, CONDUIT AND CONDUCTORS IN PLACE.

③ FOUNDATION, CONDUIT AND PULL BOX FOR FUTURE ELECTROLIER. SEE BRIDGE PLANS (SHEETS 32 TO 66). PROVIDE PULL ROPE IN CONDUIT AS DIRECTED BY THE ENGINEER.

④ JACK AND BORE CONDUIT (LOCATION PER PLAN).

⑤ INSTALL STREET LIGHT POLE, FOUNDATION MAST ARM AND LUMINARE IN ACCORDANCE WITH CALTRANS STANDARDS.

⑥ PLACE CONDUIT THROUGH SOLDIER PILE WALL IN ACCORDANCE WITH CALTRANS STANDARDS AND AS DIRECTED BY ENGINEER.



LEGEND

- (F) — FOUNDATION FOR FUTURE ELECTROLIER. SEE BRIDGE PLANS SHEETS (32 TO 66)
- — 200W LUMINARE AND STANDARD
- — EXISTING ELECTROLIER TO REMAIN IN PLACE
- — #5 PULL BOX

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

REGISTERED PROFESSIONAL ENGINEER — ED MILLER JR. — No. 47615 — Exp. 12-31-05 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
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Phone (949) 580-3838

6-21-05
R.C.E. NO. 47615 DATE

No.	DATE	ITEM

REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

LIGHTING PLAN
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
DRAWN BY:
CHECKED BY:

SHEET NO. LT-1

16 of 70

TIME PLOTTED →TIME
DATE PLOTTED →DATE
DGN FILE →DESIGNFILE

TRAFFIC CONTROL GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH), LATEST EDITION, AND THE CALTRANS MANUAL, SECTION 5, 1992 EDITION, AND THIS CITY OF SANTA ANA STANDARD PLAN NO. 1125F. IN CASE OF DISCREPANCY, THE CITY OF SANTA ANA STANDARD PLAN NO. 1125F TAKES PRECEDENCE OVER WATCH, WHICH TAKES PRECEDENCE OVER THE CALTRANS MANUAL, SECTION 5. WATCH IS PUBLISHED BY BUILDING NEWS, INC.

2. THE 85TH PERCENTILE SPEED SHALL BE USED TO DETERMINE DETOUR TAPER LENGTHS AND SIGN/DELINEATOR SPACING. THIS INFORMATION WILL BE SUPPLIED BY THE COUNTY TRAFFIC ENGINEERING SECTION UPON REQUEST.

3. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO ABUTTIN PROPERTY OWNERS AND COMMUTERS.

4. THE CONTRACTOR SHALL HAVE ALL SIGNS, DELINEATORS, BARRICADES, ETC. PROPERLY INSTALLED PRIOR TO COMMENCING CONSTRUCTION AND SHALL NOT ATTEMPT TO SWITCH TO A SUBSEQUENT PHASE DURING WORKING HORS. ALL TRAFFIC DETOURS SHALL BE APPROVED BY THE COUNTY TRAFFIC

5. THE CONTRACTOR SHALL MAINTAIN, ON A 24-HOUR BASIS, ALL SIGNS, DELINEATORS, BARRICADES, ETC., TO ENSURE PROPER FLOW AND TRAFFIC SAFETY.

6. THE CONTRACTOR SHALL UTILIZE FLAGGERS DURING WORK HOURS, AS DEEMED NECESSARY BY THE COUNTY.

7. FLASHING ARROW BOARDS SHALL BE USED ON ALL PRIMARY AND SECONDARY ARTERIAL STREETS, OR WHERE DEEMED NECESSARY BY THE CITY TRAFFIC ENGINEER. THE FLASHING ARROW BOARD SHALL BE STATIONARY AND KEPT IN PLACE AT ALL TIMES. IN OR NEAR RESIDENTIAL AREAS, THE FLASHING ARROW BOARD SHALL BE SOLAR-POWERED.

8. THE COUNTY TRAFFIC ENGINEERING SECTION AND THE INSPECTOR RESERVE THE RIGHT TO OBSERVE THE TRAFFIC CONTROL PLANS IN USE AND REQUIRE THE CONTRACTOR TO MAKE ANY NECESSARY CHANGES AS FIELD CONDITIONS WARRANT.

9. SPEED LIMIT SIGNS:

   A. "ROAD WORK SPEED LIMIT 25" (C17(25)) SIGNS SHALL BE POSTED APPROXIMATELY EVERY 300 FEET THROUGHOUT THE CONSTRUCTION ZONE AND AFTER EACH INTERSECTION, STARTING AT THE "ROAD CONSTRUCTION AHEAD" (C18) SIGNS. "END 25 SPEED LIMIT" ((C17 (BACK)) SIGNS SHALL BE POSTED AT THE ENDS OF THE CONSTRUCTION ZONE.

   B. IF THE POSTED SPEED LIMIT IS GREATER THAN 35 MPH, "REDUCED SPEED AHEAD" (R2-5) SIGNS SHALL BE POSTED WITH THE C18SIGNS, AND THE FIRST C17(25) SIGNS SHALL BE POSTED WITH THE "RT/LT LANE CLOSED AHEAD" (C20) SIGNS.

   C. ANY EXISTING SPEED LIMIT SIGNS OR OTHER CONFLICTING SIGNS IN THE CONSTRUCTION ZONE SHALL BE COVERED DURING CONSTRUCTION WITH BLACK HEAVY DUTY PLASTIC BAGS, WHICH ARE SECURED WITH TAPE TO THE SIGN POST BELOW THE SIGN. IN NO CASE SHALL TAPE BE APPLIED TO ANY SIGN.

10. WARNING SIGNS:

   A. ALL ADVANCE WARNING SIGN INSTALLATIONS SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES.

   B. ALL SIGNS SHALL BE REFLECTORIZED AND OF STANDARD SIZE.

11. STRIPING:

   A. FOR DELINEATION TO INDICATE THE NEW REQUIRED VEHICLE PATH, PRESSURE SENSITIVE CONSTRUCTION GRADE TRAFFIC MARKING TAPE AND/OR TYPICAL STRIPING PAINT AND/OR RAISED PAVEMENT MARKERS SHALL BE USED TO SUPPLEMENT THE CHANNELING DEVICES, DELINEATORS, REFLECTORIZED SIGNS, AND BARRICADES. TAPE MARKINGS SHALL CLEARLY REPRESENT LANE MARKINGS.

   B. ALL CONFLICTING STRIPES, PAVEMENT MARKINGS AND LEGEND SHALL BE COMPLETELY REMOVED BY ABRASIVE BLAST CLEANING PRIOR TO ANY CHANGE IN THE TRAFFIC PATTERN. WITH THE INSPECTOR'S APPROVAL, GRINDING MAY BE USED TO REMOVE THERMOPLASTIC, AND THE CONTRACTOR SHALL PATCH THE PAVEMENT IN KIND, AS NECESSARY, TO THE INSPECTOR'S SATISFACTION. WHEN RAISED PAVEMENT MARKERS (RPMS) ARE REMOVED, THE CONTRACTOR SHALL PATCH THE PAVEMENT IN KIND TO THE SATISFACTION OF THE INSPECTOR.

   C. THE CONTRACTOR SHALL REPLACE STRIPING AND LEGENDS TO THEIR ORIGINAL STATE OR PER CITY-APPROVED CHANNELIZATION PLAN AFTER COMPLETION OF CONSTRUCTION.

   D. ALL STREETS WITH STRIPING SHALL BE CAT-TRACKED WITH PAINT OR TEMPORARY FLEXIBLE PAVEMENT MARKERS THE NEXT DAY FOLLOWING FINAL PAVING AND PERMANENT STRIPING SHALL BE INSTALLED WITHIN TWO WEEKS STARTING FROM THE DAY THE STREET IS CAT-TRACKED.

12. BARRICADES AND DELINEATORS:

   A. ALL DELINEATORS SHALL BE 36" MINIMUM PORTABLE, REFLECTORIZED RUBBER GUIDE POST TUBES, ORANGE IN COLOR, WITH WEIGHTED BASSES OR SANDBAG RINGS AND SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES, AND SHALL BE REPAIRED, REPLACE, OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY

   B. TYPEI OR I1 BARRICADES MAY BE USED IN ADDITON TO THE RUBBER GUIDE POST, AT THE DISCRETION OF THE CONTRACTOR, WHEN THEY ARE INTENDED TO PROVIDE ADDITIONAL EMPHASIS IN AREAS WHERE WORKERS ARE PRESENT.

   C. TEMPORARY PROTECTIVE FENCING SHALL BE PLACED AREOUND AN OPEN TRENCH DURING HOURS OF NONCONSTRUCTION OPERSATIONS, IF REQIURED BY THE COUNTY TRAFFIC ENGINEER.

13. LIGHTING:

   A. WHERE LIGHTS ARE USED TO DELINEATE THE TRAVELED WAY THROUGH AND AROUND THE WORK AREA, THEY SHALL BE TYPE "C" - STEADY BURN LAMPS.

   B. FLASHERS SHALL NOT BE USED TO CHANNELIXE, SEPARATE OR DELINEATE THE PATH THAT TRAFFIC IS TO FLOW.

   C. FLASHING YELLOW BEACONS, TYPE "B", AS SPECIFIED IN SECTION 7-6 OF THE WATCH MANUAL, LATEST EDITION, SHALL BE USED ON THE C18 SIGNS FOR NIGHT CLOSURES.

14. FINAL INSPECTION:

   A. BEFORE FINAL INSPECTION OF THE WORK, THE CONTRACTOR SHALL CLEAR THE RIGHT-OF-WAY AND ALL GROUNDS OCCUPIED BY HIM IN CONNECTION WITH THE WORK, OF ALL RUBBISH, EXCESS MATERIALS, EQUIPMENT, SIGNS, DELINEATORS, ETC. ALL PARTS OF THE WORK AREA SHALL BE LEFT IN A NEAT AND PRESENTABLE CONDITION.

   B. WHEN THE WORK HAS BEEN COMPLETED, THE COUNTY CONSTRUCTION ENGINEER AND/OR THE INSPECTOR SHALL MAKE THE FINAL INSPECTION.

15. THER PROVISIONS OF A TRAFFIC CONTROL PLAN SHALL APPLY UNTIL COMPLETION OF ALL PHASES OF THE WORK WITHIN THE PUBLIC RIGHT-OF-WAY.

16. NOTIFY BUSINESSES ADJACENT TO THE WORK AREA 7 DAYS PRIOR TO THE START OF WORK.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING RESIDENTS AND BUSINESSES IN WRITING 7 DAYS IN ADVANCE OF ANY WORK THAT INVOLVES LIMITED ACCESS. THE CONTRACTOR SHALL PROVIDE WRITTEN VERIFICATION TO THE ENGINEER THAT THIS HAS BEEN ACCOMPLISHED.

18. COORDINATE WITH THE ORANGE COUNTY TRANSPORTATION AUTHORITY TO ENSURE SAFE OPERATION OF BUSES AND ACCESS TO BUS STOPS IN THE CONSTRUCTION AREA (714) 265-4333.

STREET CLOSURE

1. WHEN A STREET CLOSURE IS APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL NOTIFY THE POLICE DEPARTMENT,FIRE DEPARTMENT, OCTA BUS SERVICE, AND AFFECTED RESIDENTS, SCHOOLS AND BUSINESSES AT LEAST FIVE WORKING DAYS IN ADVANCE, AND SHALL PROVIDE DOCUMENTATION OF SUCH NOTIFICATION TO THE ENGINEER PRIOR TO CLOSURE.

2. ACCESS FOR LOCAL TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.

3. A MINIMUM 4' PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES, UNLESS APPROVED OTHER WISE BY THE INSPECTOR.

4. AT SIGNALIZED INTERSECTIONS, PEDESTRIAN ACCCESS (MINIMUM 4') SHALL BE MAINTAINED ACROSS AT LEAST THREE LEGS OF AN INTERSECTION.

TEMPORARY "NO STOPPING ANY TIME"

1. WHEN A TEMPORARY "NO STOPPING ANY TIME" ZONE IS APPROVED BY THE COUNTY TRAFFIC ENGINEER, THE CONTRACTOR SHALL NOTIFY THE POLICE DEPARTMENT AT LEAST THREE WORKING DAYS IN ADVANCE AND POST "TOW AWAY TEMPORARY NO STOPPING ANY TIME" SIGNS AT LEAST 48 HOURS IN ADVANCE OF WHEN THEY TAKE AFFECT.

2. THE DURATION OF THE TEMPORARY PARKING RESTRICTION SHALL BE INDICATED ON THE SIGNS.

LEGEND

- WORK ZONE
- CHANNELIZERS
- DIRECTION OF TRAVEL
- TYPE III BARRICADE
- SIGN
- FLASHING ARROW PANEL

SIGN LEGEND

C13 - END CONSTRUCTION

C17(25) - CONSTRUCTION ZONE SPEED LIMIT 25 MPH

C18 - ROAD CONSTRUCTION AHEAD

C20(RT) - RIGHT LANE CLOSED AHEAD

C20(RT) - LEFT LANE CLOSED AHEAD

C30 - LANE CLOSED

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT

APPROVED: _____ COUNTY TRAFFIC ENGINEER _____ DATE

REGISTERED PROFESSIONAL ENGINEER — ED MILLER JR. — No. 47615 — Exp. 12-31-05 — CIVIL — STATE OF CALIFORNIA

PREPARED BY:

KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

6-21-05
R.C.E. NO. 47615 DATE

No.	DATE	ITEM

REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

TRAFFIC CONTROL PLAN - GENERAL NOTES — SHEET NO.

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD. — TH-1

DRAWN BY:

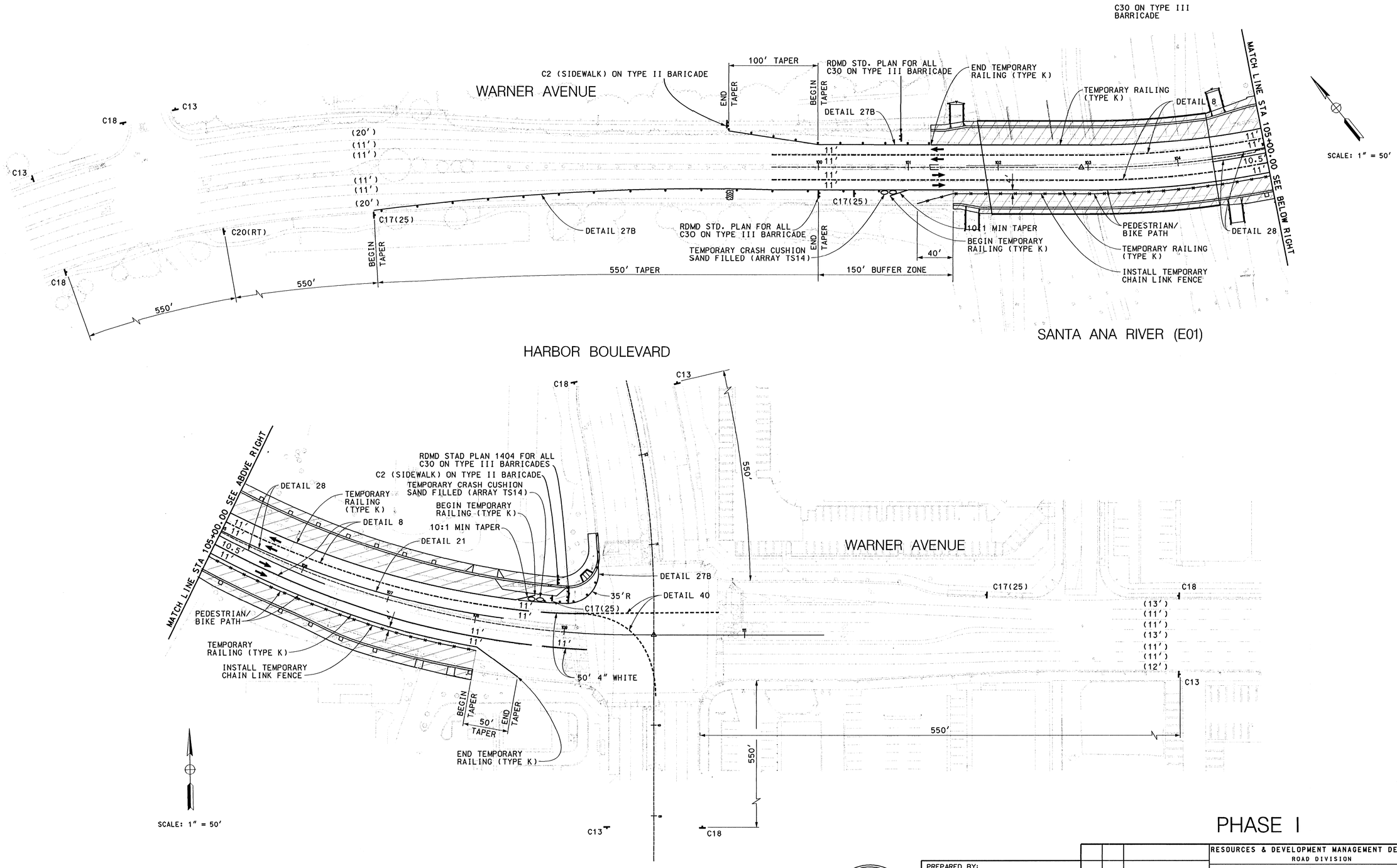
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TIME PLOTTED =%TIME%



PHASE I

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT

APPROVED: _____ COUNTY TRAFFIC ENGINEER _____ DATE

REGISTERED PROFESSIONAL ENGINEER
ED MILLER Jr
No. 47615
Exp. 12-31-05
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
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6-21-05
R.C.E. NO. 47615 DATE

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ROAD DIVISION

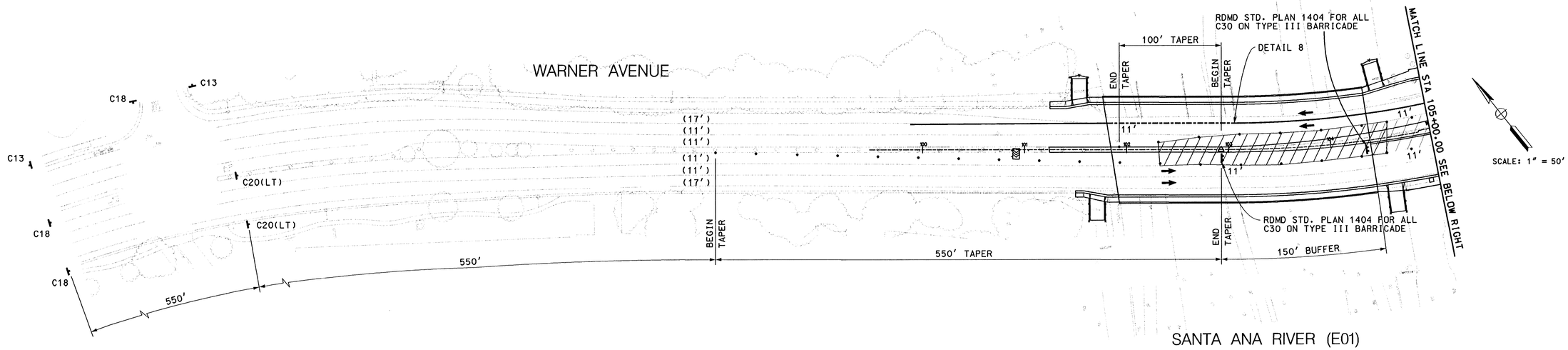
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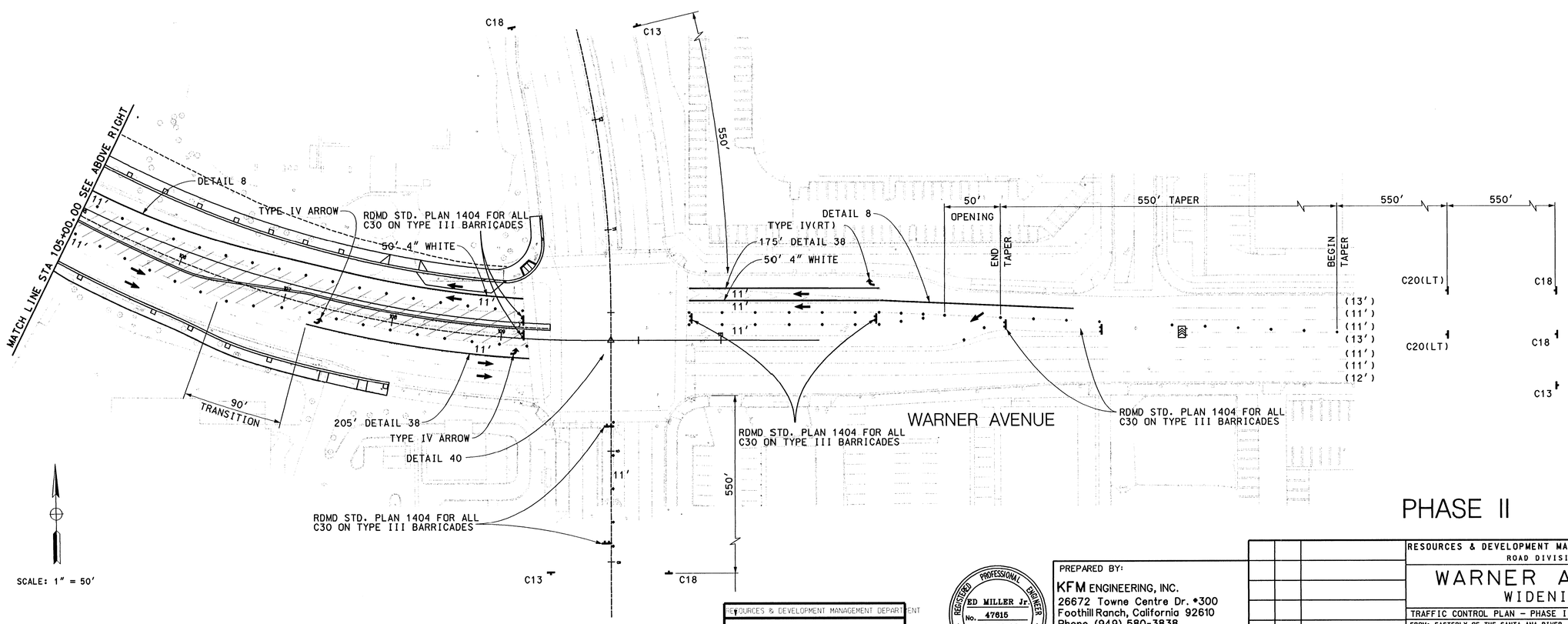
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FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
DRAWN BY:
CHECKED BY:

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PHASE II

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT

APPROVED: _____ COUNTY TRAFFIC ENGINEER _____ DATE

REGISTERED PROFESSIONAL ENGINEER — ED MILLER Jr. — No. 47615 — Exp. 12-31-05 — CIVIL — STATE OF CALIFORNIA

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6-21-05
R.C.E. NO. 47615 DATE

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ROAD DIVISION

WARNER AVENUE
WIDENING

TRAFFIC CONTROL PLAN – PHASE II — SHEET NO. TH-3

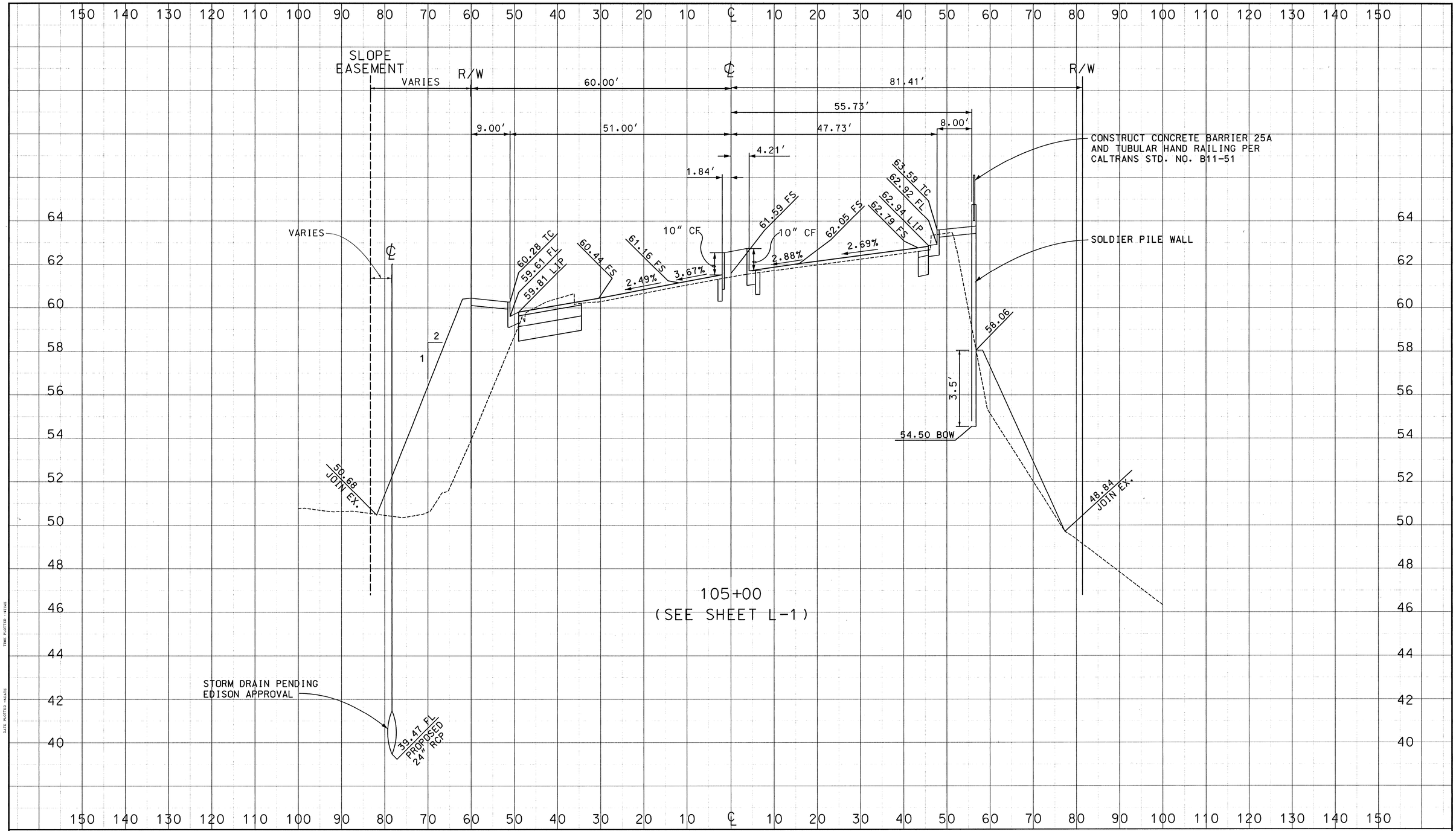
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TO: HARBOR BLVD.

DRAWN BY:
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19 of 70

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DATE PLOTTED: <DATE>
TIME PLOTTED: <TIME>



REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
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26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — DATE 6-21-05

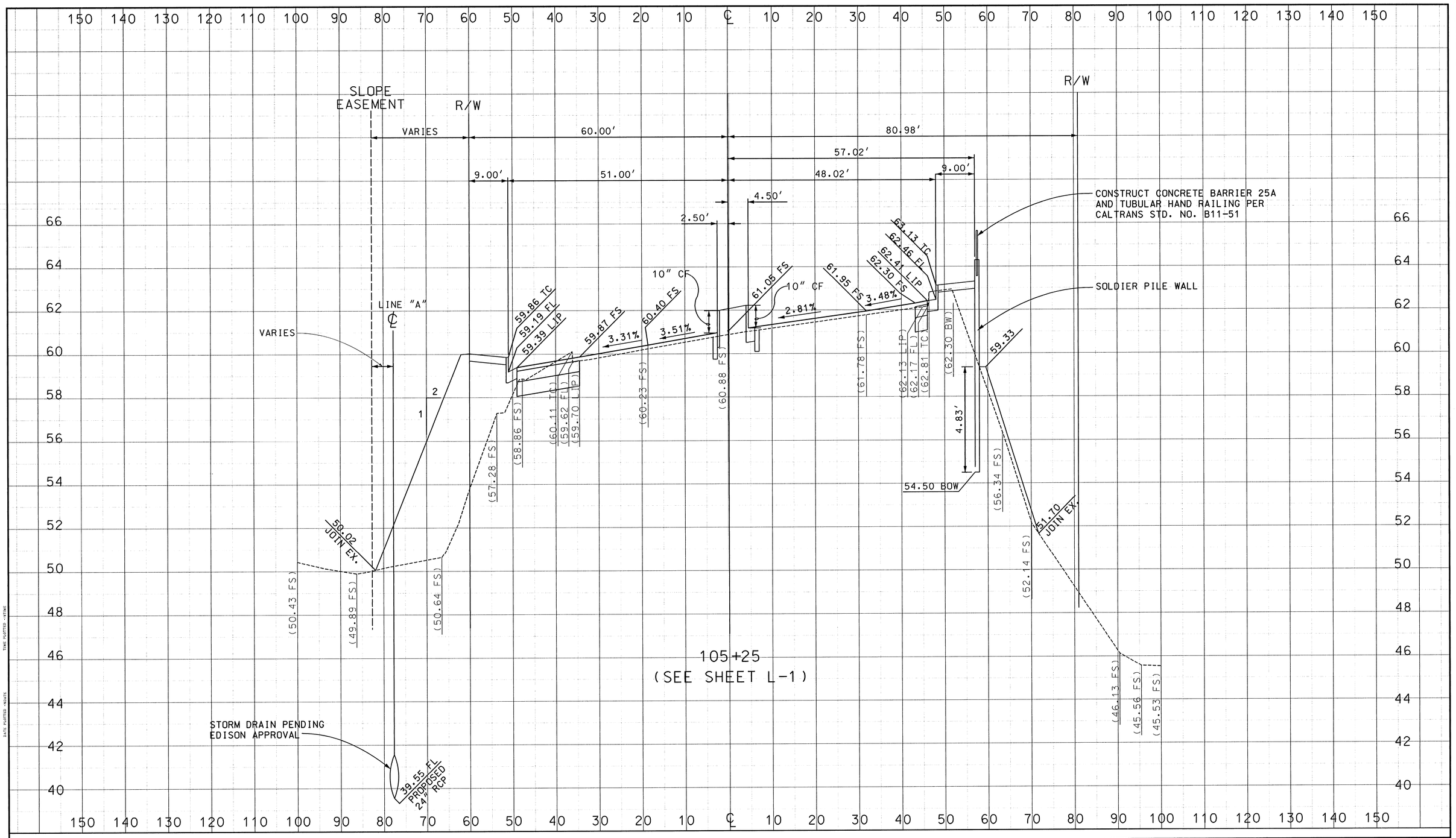
No.	DATE	ITEM
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RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS — SHEET NO. XS-1
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
APPROVE BY:
CITY ENGINEER R.C.E. NO. DATE
DRAWN BY: PM
CHECKED BY: JL

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DATE PLOTTED =SDATE
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DATE PLOTTED = 18-JAN-06
TIME PLOTTED = 07:56

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
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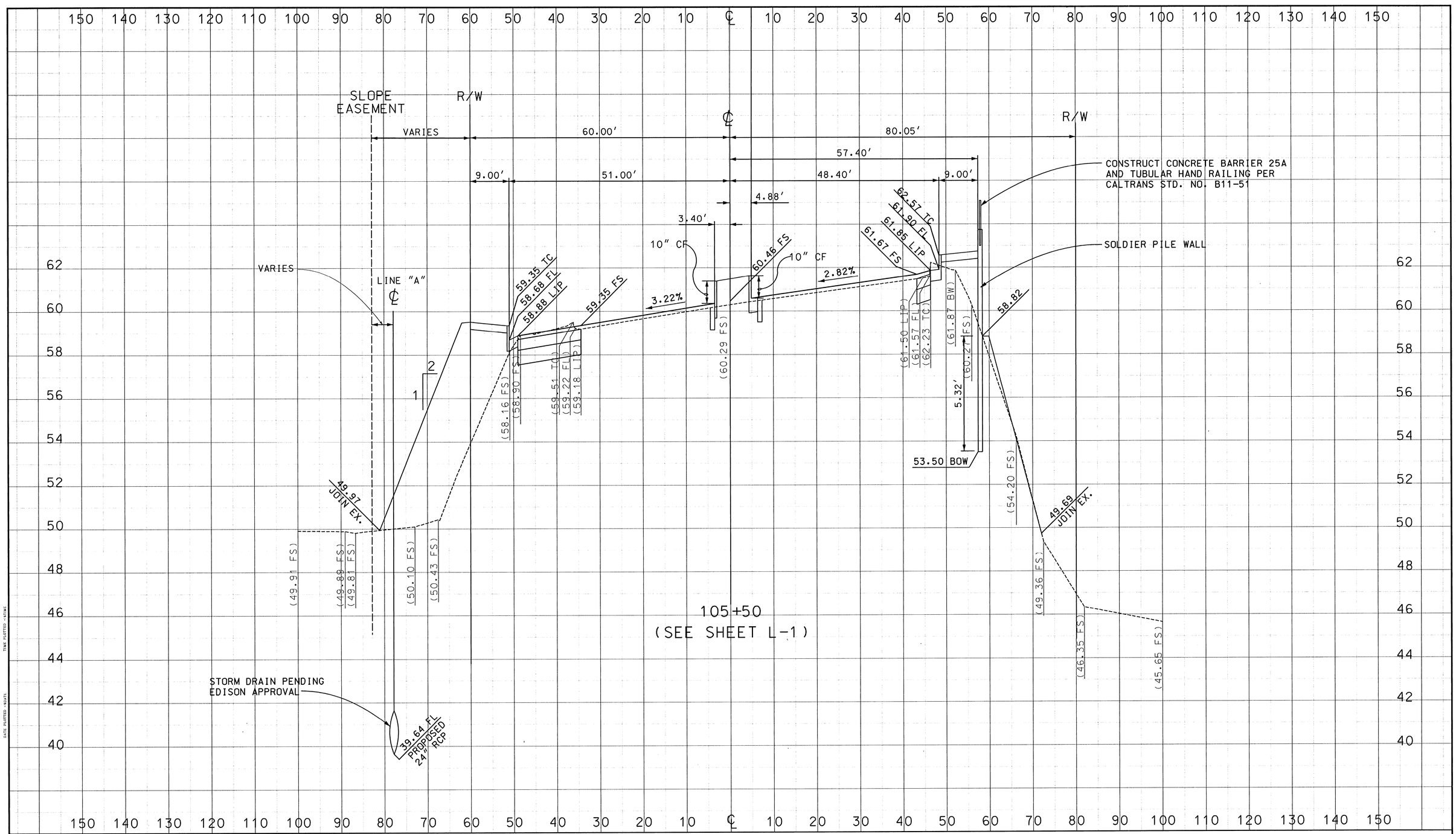
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RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS — SHEET NO. XS-2
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
APPROVE BY:
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CHECKED BY: JL
CITY ENGINEER R.C.E. NO. DATE



TIME PLOTTED =TIME
DATE PLOTTED =DATE
DGN FILE =BRIDGE1

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
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STATE OF CALIFORNIA

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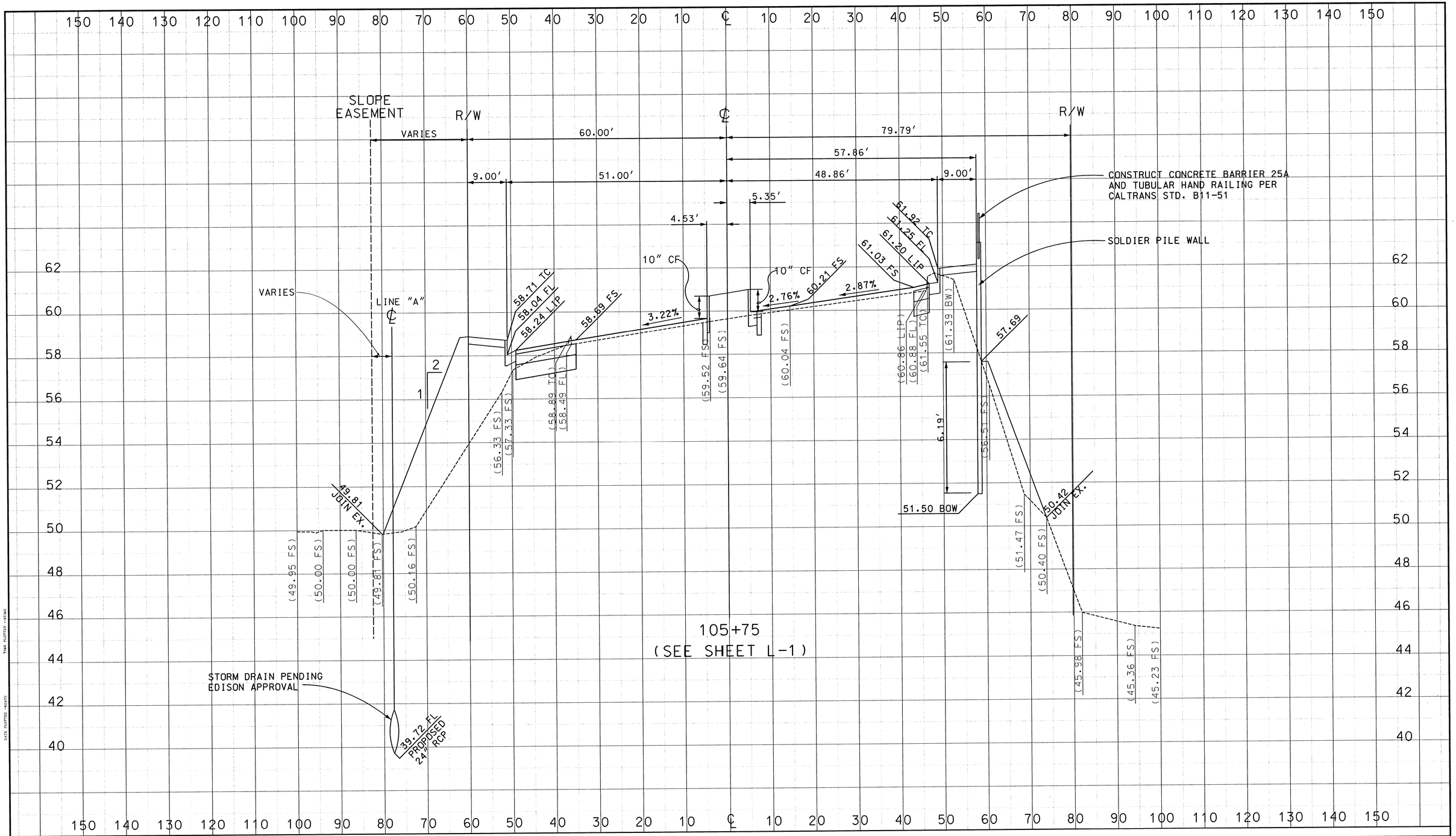
R.C.E. NO. 42407 — DATE 6-21-05

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RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS — SHEET NO. XS-3
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
APPROVE BY: — DRAWN BY: PM — CHECKED BY: JL
CITY ENGINEER R.C.E. NO. DATE



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RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
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BRIDGE WIDENING

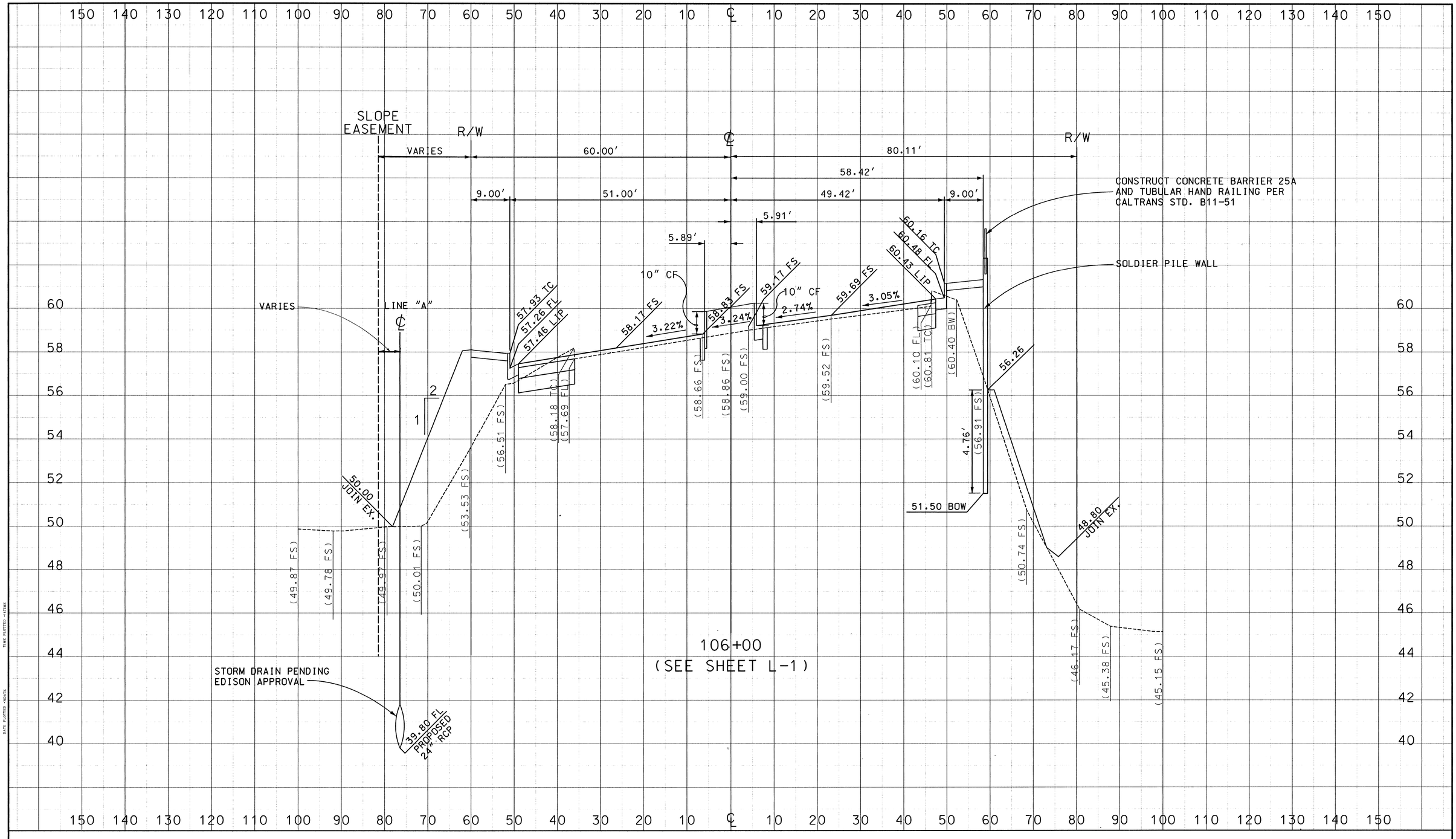
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TO: HARBOR BLVD.

SHEET NO. XS-4

APPROVE BY: — CITY ENGINEER R.C.E. NO. — DATE
DRAWN BY: PM
CHECKED BY: JL

23 of 70

DATE PLOTTED: 6/21/05
TIME PLOTTED: 1:57AM
DGN FILE: 1-MISC\XS57



TIME PLOTTED =TIME
DATE PLOTTED =DATE
DGN FILE =DGNFILE

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

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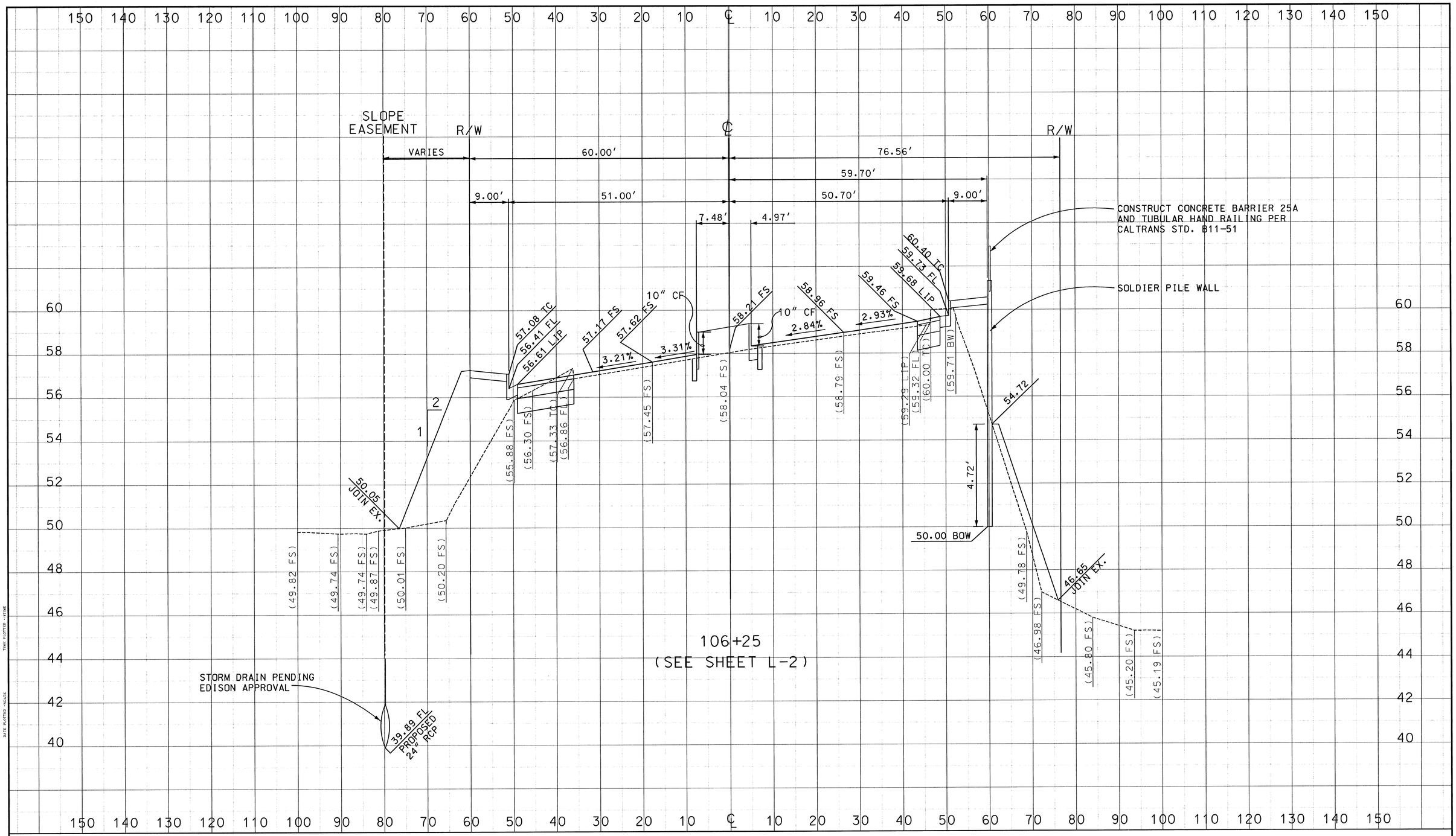
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CROSS SECTIONS — SHEET NO. XS-5
FROM: EASTERLY OF THE SANTA ANA RIVER
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APPROVE BY: — DRAWN BY: PM
CITY ENGINEER R.C.E. NO. DATE — CHECKED BY: JL



TIME PLOTTED =ATIME
DATE PLOTTED =BDATE
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REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
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Foothill Ranch, California 92610
Phone (949) 580-3838
R.A. Kreuzer 6-21-05
R.C.E. NO. 42407 DATE

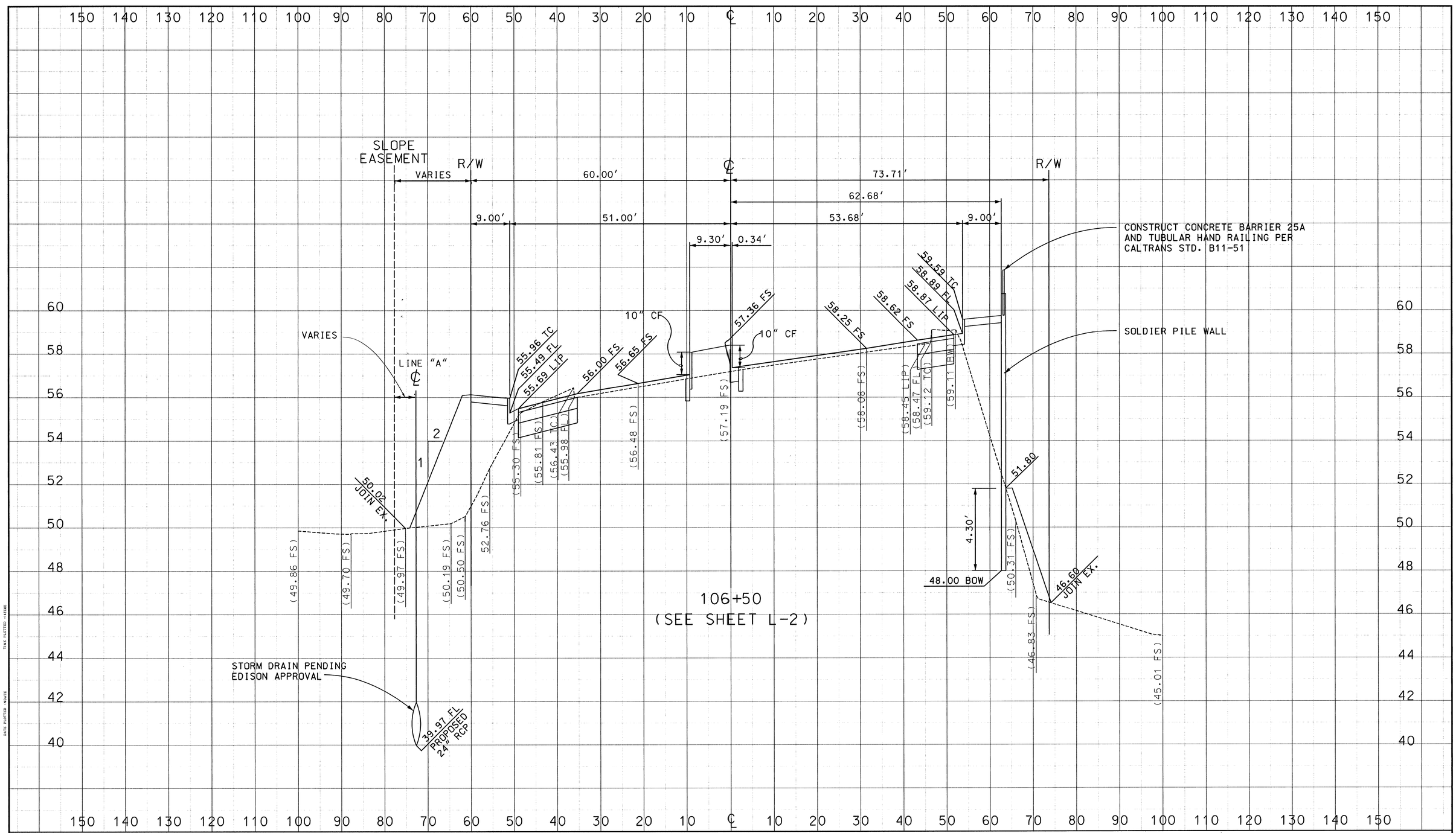
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REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS — SHEET NO.
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD. — XS-6
APPROVE BY: — DRAWN BY: PM
CITY ENGINEER R.C.E. NO. DATE — CHECKED BY: JL
26 of 70



TIME PLOTTED =TIME
DATE PLOTTED =DATE
DGN FILE =$DGNFILE

REGISTERED PROFESSIONAL ENGINEER
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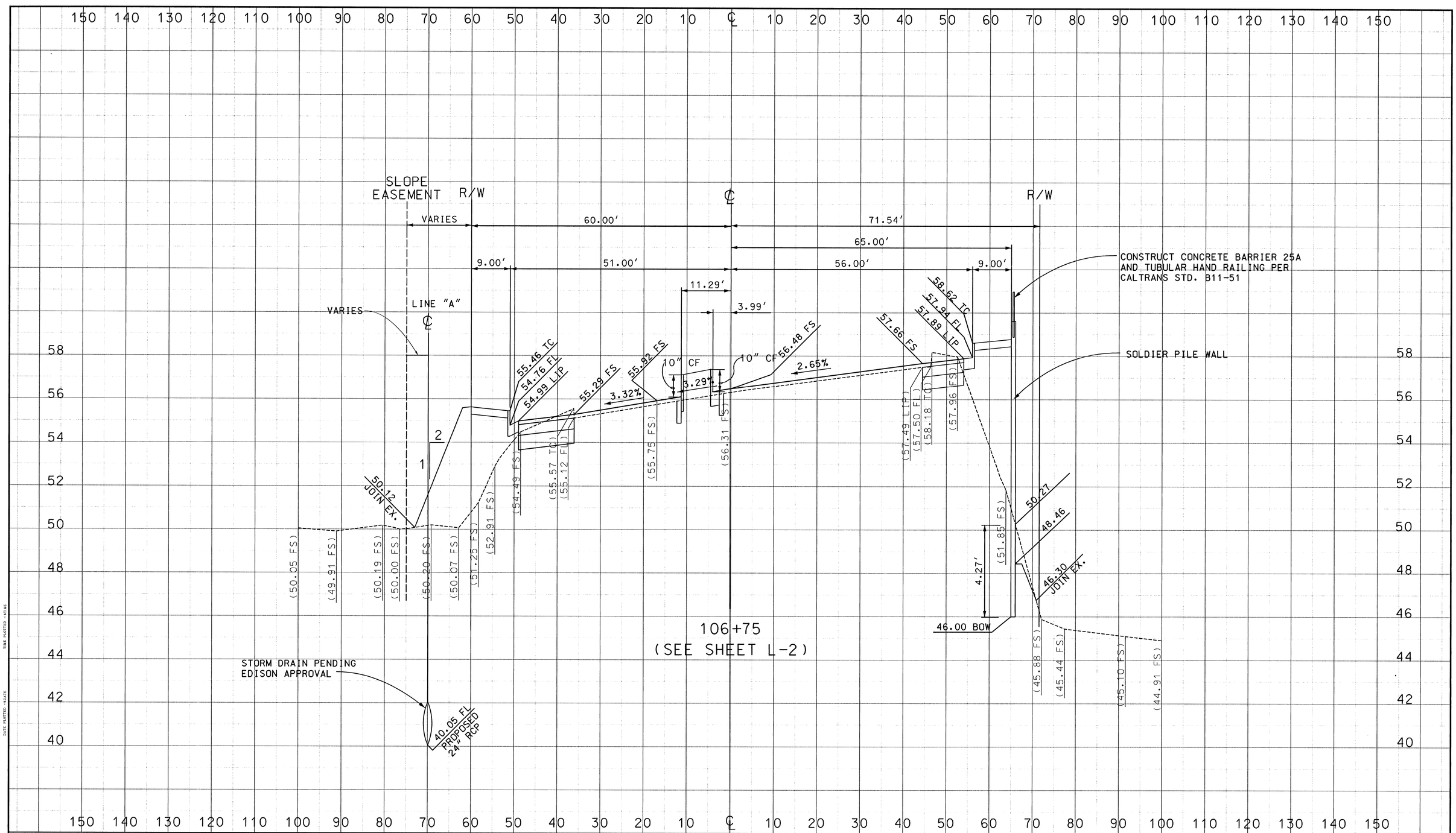
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WARNER AVENUE
BRIDGE WIDENING

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APPROVE BY:
CITY ENGINEER R.C.E. NO. DATE
DRAWN BY: PM
CHECKED BY: JL

SHEET NO. XS-7



DATE PLOTTED: 9:43:AM
TIME PLOTTED: 14:17:PM
DWG FILE: ABSOLUTE

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. •300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.A. Kreuzer 6-21-05
R.C.E. NO. 42407 DATE

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
APPROVE BY:
CITY ENGINEER R.C.E. NO. DATE

DRAWN BY: PM
CHECKED BY: JL

SHEET NO. XS-8

SLOPE EASEMENT
VARIES
R/W
℄
R/W
60.00′
70.04′
65.00′
9.00′
51.00′
56.00′
9.00′
12.81′
7.66′
CONSTRUCT CONCRETE BARRIER 25A AND TUBULAR HAND RAILING PER CALTRANS STD. B11-51
VARIES
LINE "A"
℄
54.45 TC
53.78 FL
53.98 LIP
54.25 FS
3.63%
10" CF
55.23 FS
10" CF
55.33 FS
2.57%
56.23 FS
56.68 FS
2.50%
57.63 TC
56.96 FL
56.91 LIP
(56.06 FS)
(56.51 LIP)
(56.54 FL)
(57.21 TC)
(56.93 BW)
(54.19 TC)
(54.59 FL)
(55.06 FS)
(55.36 FS)
(51.96 FS)
49.71
JOIN EX.
(50.24 FS)
(50.15 FS)
(50.31 FS)
(49.74 FS)
(49.71 FS)
(50.04 FS)
32.67 FS
3.54′
49.54
48.58
47.00
JOIN EX.
46.00 BOW
(46.17 FS)
(45.40 FS)
(45.03 FS)
107+00
(SEE SHEET L-2)
STORM DRAIN PENDING EDISON APPROVAL
40.36 FL
PROPOSED
24" CRCP

PLOT SCALE = 1.0000 / PLOT UNITS = INCHES
DATE PLOTTED = 6/21/05
TIME PLOTTED = 07:56

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. •300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.A. Kreuzer 6-21-05
R.C.E. NO. 42407 DATE

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS — SHEET NO. XS-9
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
APPROVE BY:
CITY ENGINEER R.C.E. NO. DATE
DRAWN BY: PM
CHECKED BY: JL

SLOPE EASEMENT
R/W
VARIES
60.00'
69.22'
65.00'
9.00'
51.00'
56.00'
9.00'
13.71'
10.00'
R/W
CONSTRUCT CONCRETE BARRIER 25A AND TUBULAR HAND RAILING PER CALTRANS STD. B11-51
SOLDIER PILE WALL
VARIES
LINE "A"
℄
53.46 TC
52.79 FL
52.99 LIP
53.41 FS
53.96 FS
3.24%
10" CF
10" CF
3.16%
54.56 FS
2.26%
55.34 FS
55.59 FS
2.50%
56.54 TC
55.87 FL
55.82 LIP
(55.84 BW)
(55.17 FS)
(55.42 LIP)
(55.47 FL)
(56.13 TC)
(52.57 FS)
49.89 JOIN EX.
49.51
48.46
46.60 JOIN EX.
3.51'
46.00 BOW
(50.46 FS)
(50.32 FS)
(49.75 FS)
(49.84 FS)
(49.80 FS)
(49.58 FS)
(50.97 FS)
(52.11 FS)
(53.58 TC)
(53.24 FL)
(53.79 FS)
(54.39 FS)
(46.60 FS)
(45.68 FS)
(45.55 FS)
(45.36 FS)
STORM DRAIN PENDING EDISON APPROVAL
40.44 FL PROPOSED 24" RCP
107+25
(SEE SHEET L-2)

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

56 54 52 50 48 46 44 42 40

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DATE PLOTTED =DATE
DGN FILE =DGNFILE

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-08
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

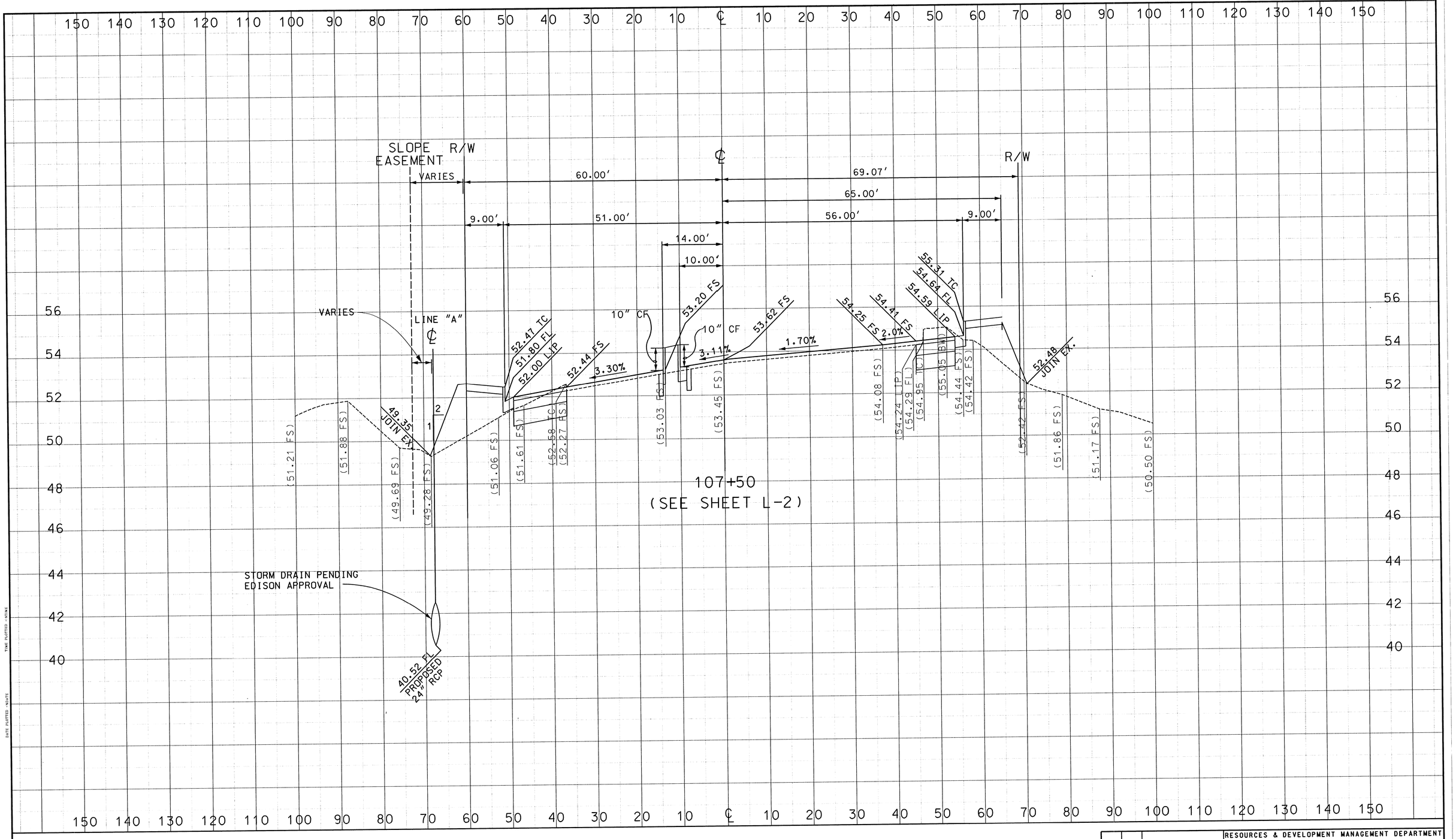
6-21-05
R.C.E. NO. 42407 DATE

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS — SHEET NO. XS-10
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
APPROVE BY:
CITY ENGINEER R.C.E. NO. DATE
DRAWN BY: PM
CHECKED BY: JL



DATE PLOTTED - 9:51:47

TIME PLOTTED - 9:31:46

DGN FILE - XS11.DGN

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:

KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — DATE 6-21-05

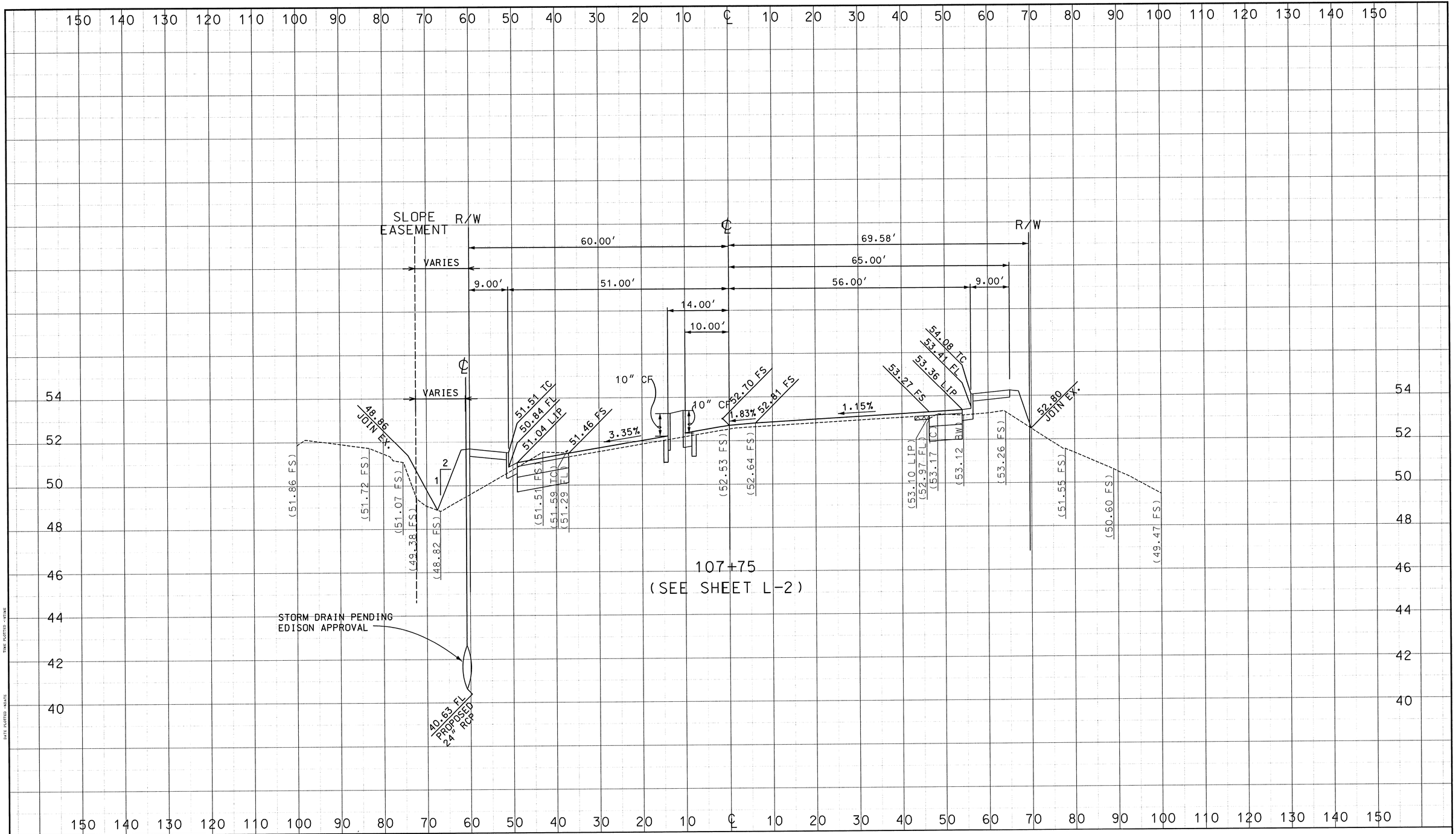
No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
APPROVE BY:
DRAWN BY: PM
CITY ENGINEER R.C.E. NO. DATE
CHECKED BY: JL

SHEET NO. XS-11



PLOT PLOTTED =ATIME

DATE PLOTTED =ADATE

DGN FILE =ARUNFILEST

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

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KFM ENGINEERING, INC.
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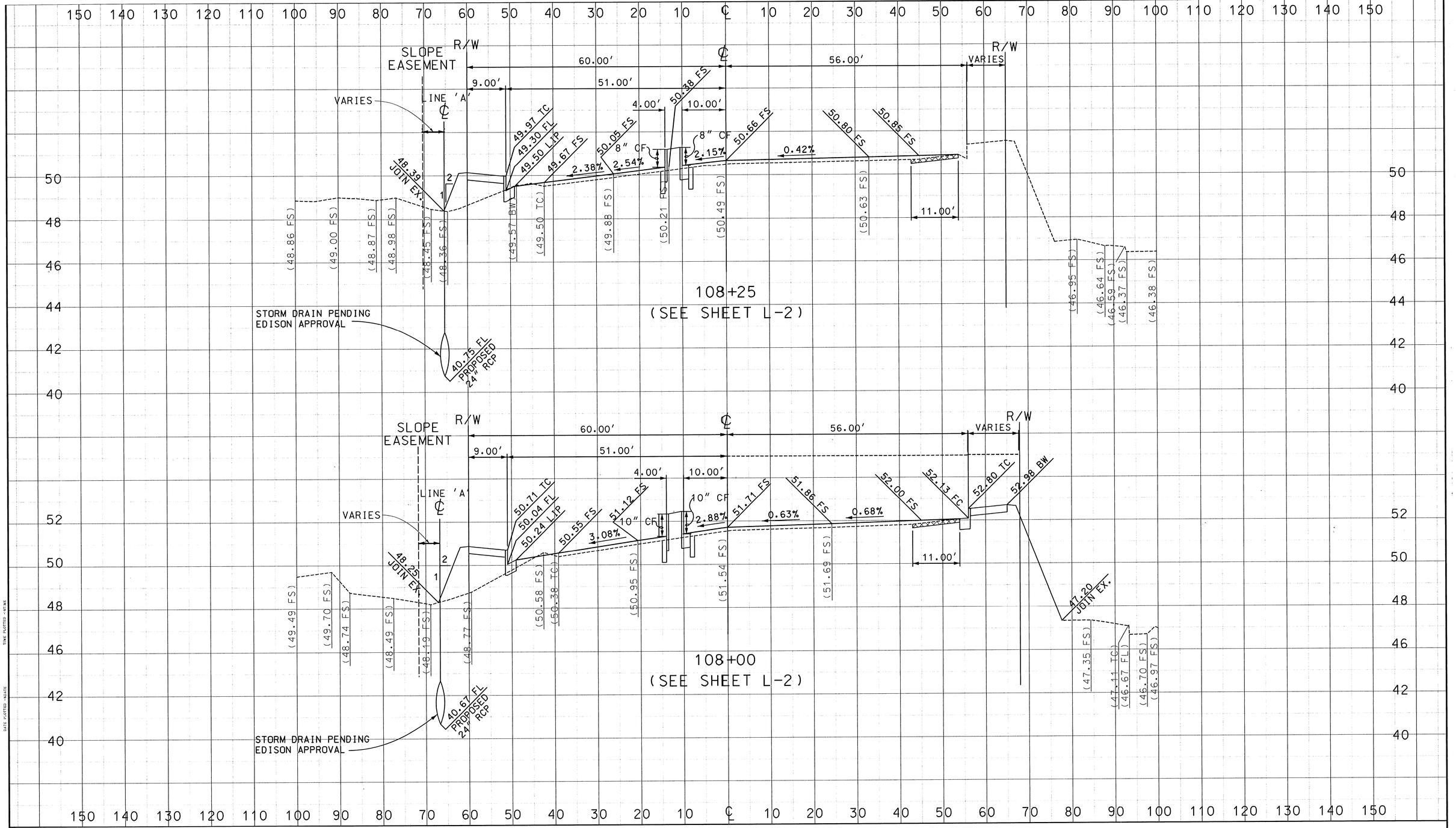
R.A. Kreuzer 6-21-05
R.C.E. NO. 42407 DATE

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS — SHEET NO.
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD. — XS-12
APPROVE BY:
DRAWN BY: PM
CITY ENGINEER R.C.E. NO. DATE
CHECKED BY: JL
32 of 70



PLOT TIME - AT ME
DATE PLOTTED - 4/21/05
DGN FILE - L-XSROUTE

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. •300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — 6-21-05 DATE

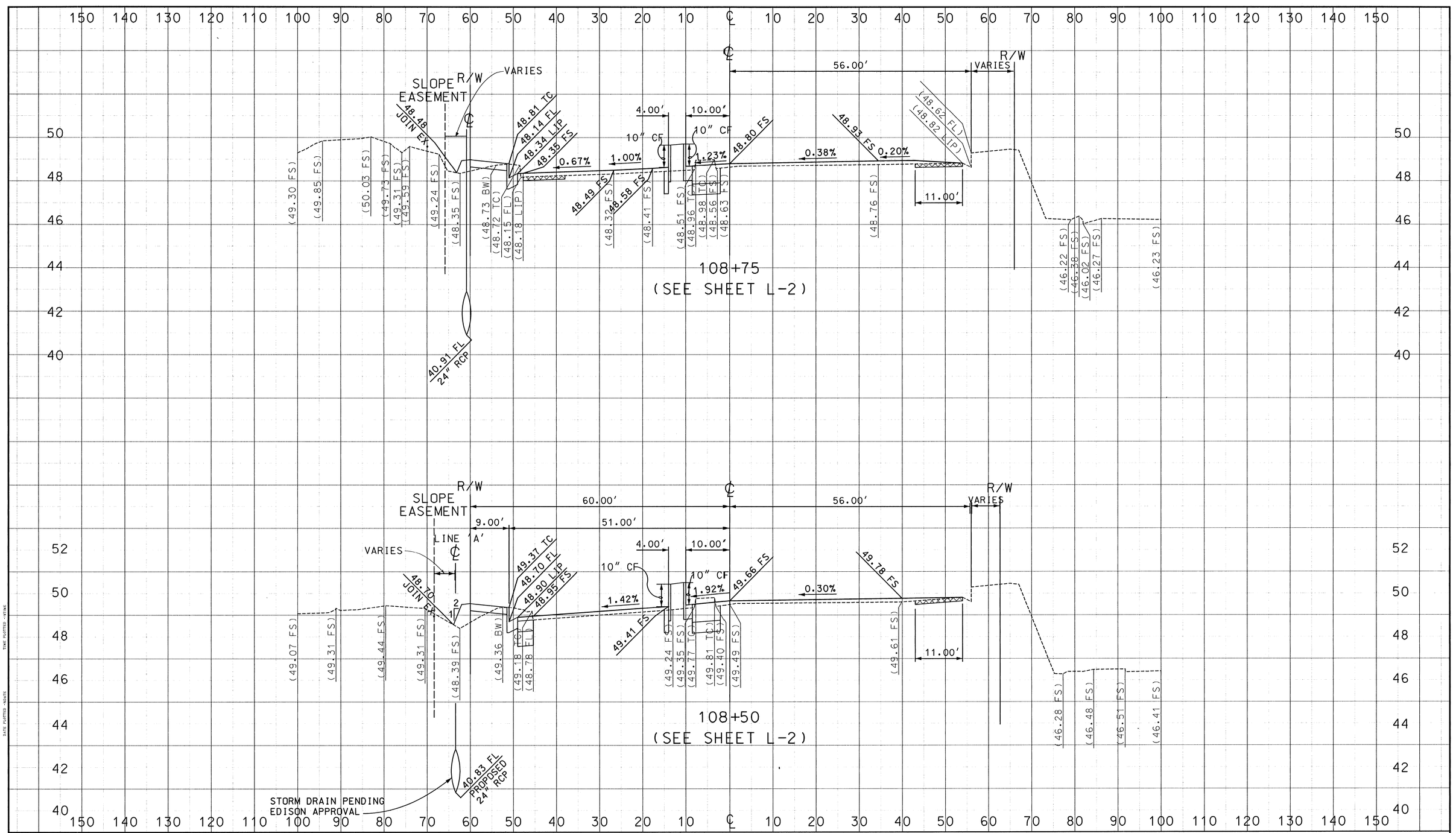
No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
APPROVE BY:
CITY ENGINEER R.C.E. NO. DATE

SHEET NO. XS-13
DRAWN BY: PM
CHECKED BY: JL
33 of 70



TIME PLOTTED: =TIME

DATE PLOTTED: =DATE

DGN FILE - MASTER.DGN

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:

KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — DATE 6-21-05

No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

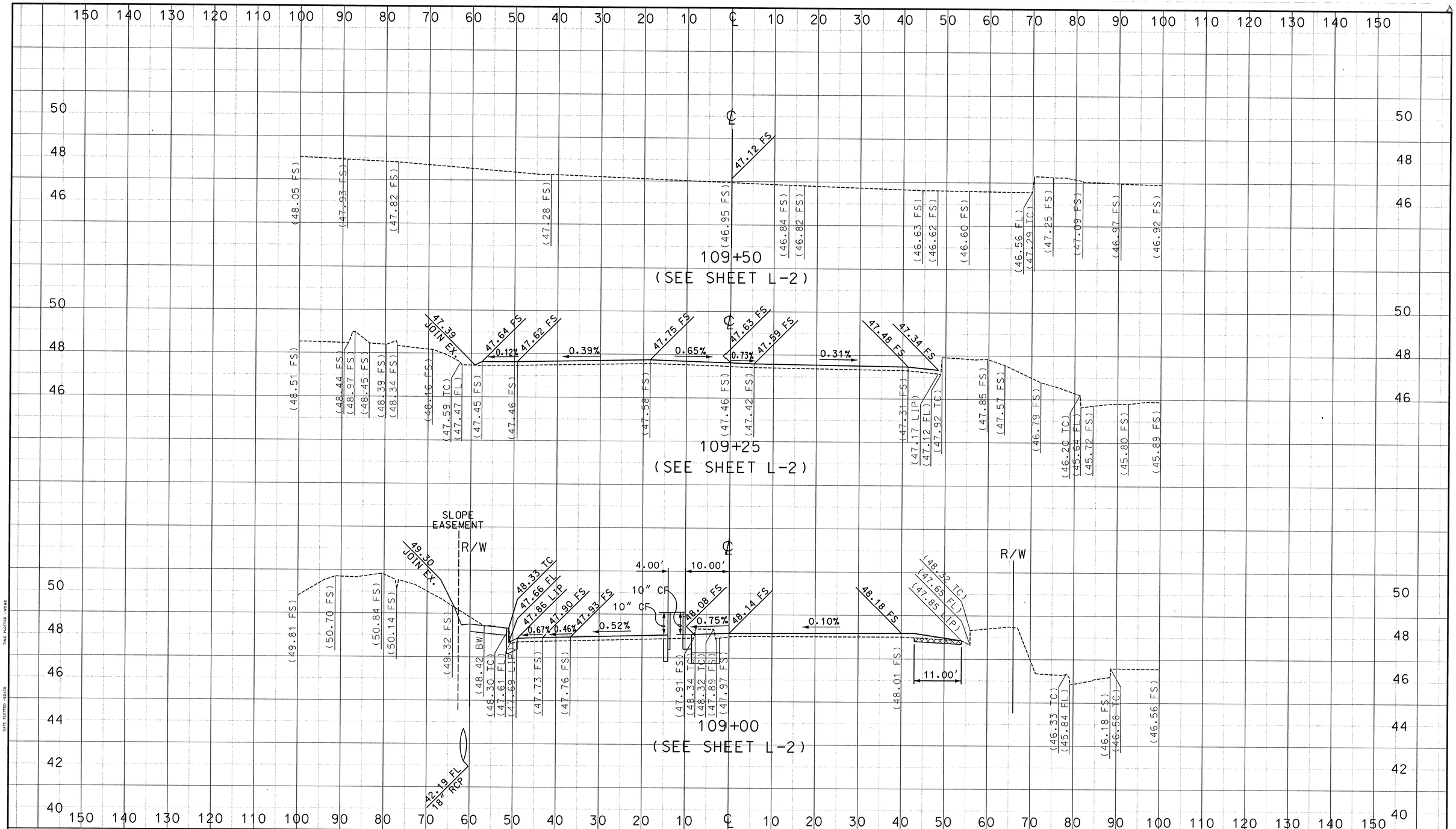
WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS — SHEET NO. XS-14

FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

APPROVE BY: — DRAWN BY: PM

CITY ENGINEER R.C.E. NO. DATE — CHECKED BY: JL



PLOT FILE =1SQUIGGLY
DATE PLOTTED =DATE
TIME PLOTTED =TIME

REGISTERED PROFESSIONAL ENGINEER
RICK KREUZER
No. 42407
Exp. 12-31-06
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
KFM ENGINEERING, INC.
26672 Towne Centre Dr. #300
Foothill Ranch, California 92610
Phone (949) 580-3838

R.C.E. NO. 42407 — DATE 6-21-05

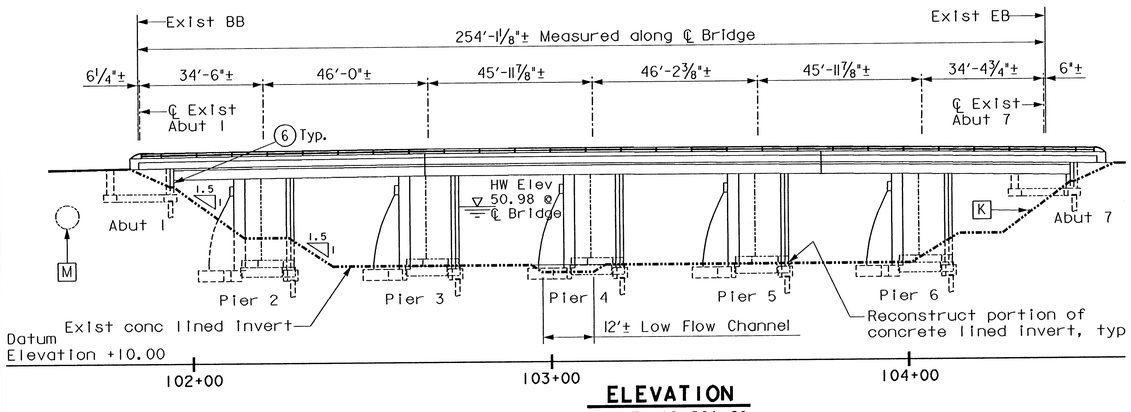
No.	DATE	ITEM
		REVISIONS

RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT
ROAD DIVISION

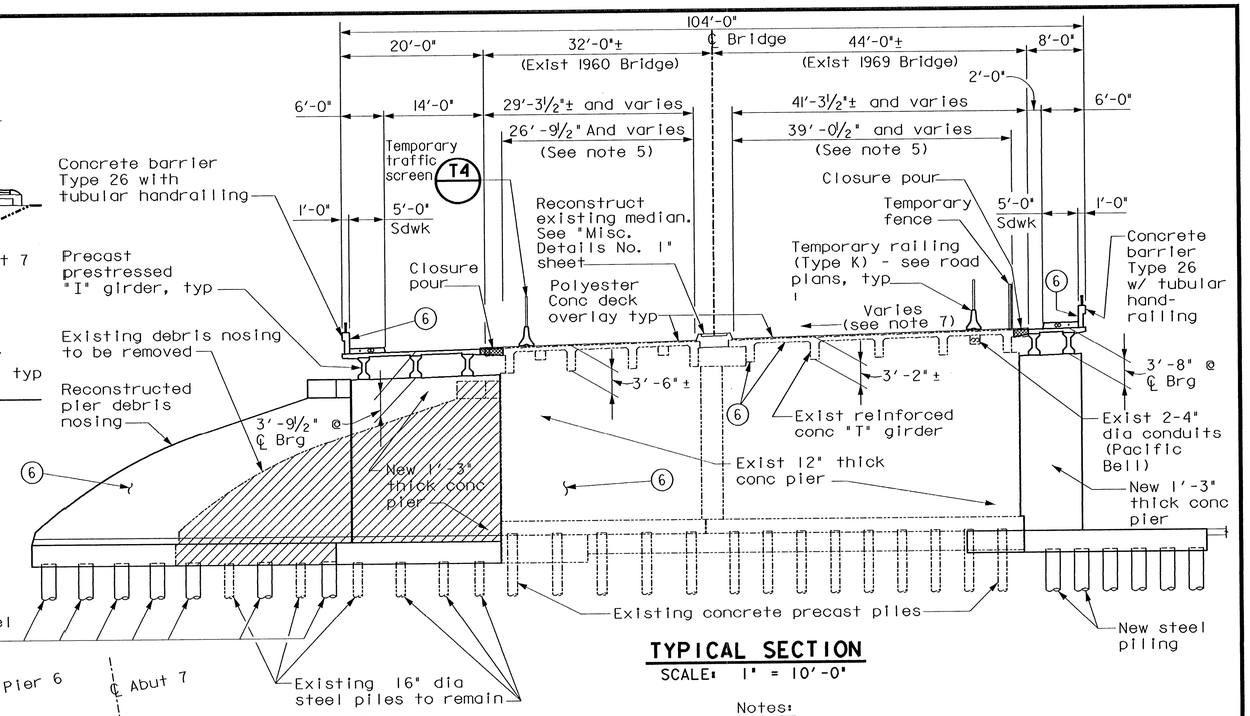
WARNER AVENUE
BRIDGE WIDENING

CROSS SECTIONS
FROM: EASTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
APPROVE BY:
CITY ENGINEER R.C.E. NO. DATE
DRAWN BY: PM
CHECKED BY: JL

SHEET NO. XS-15



ELEVATION
SCALE: 1"=20'-0"



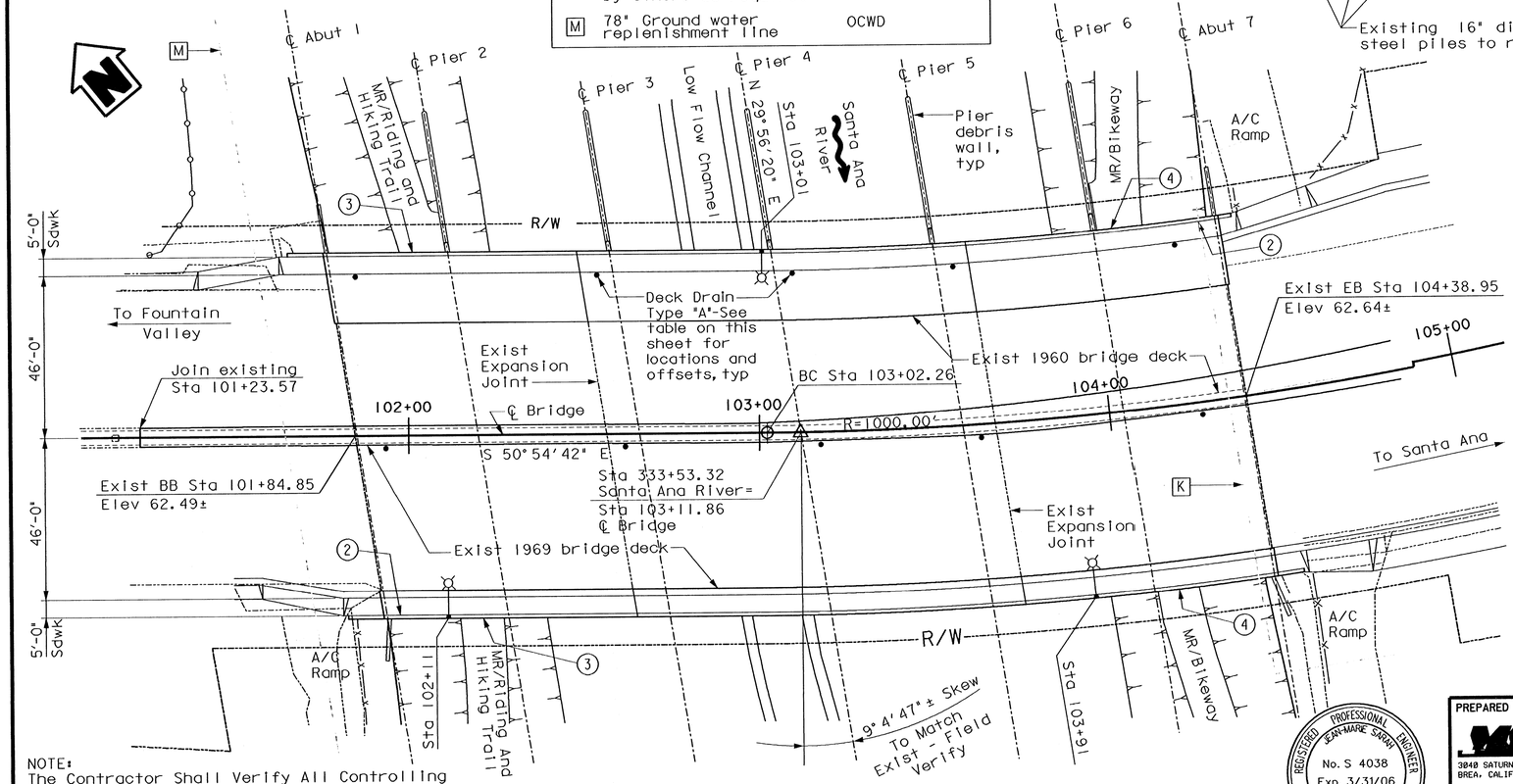
TYPICAL SECTION
SCALE: 1" = 10'-0"

Legend

- Denotes new structure
- Denotes existing structure
- Indicates direction of traffic

Utility Legend

	Utility	Owner
A	Existing electrical line to remain	Edison
B	Existing telephone line to remain	SBC (Pacific Bell)
K	Existing 6" irrigation line to be relocated by others as required	OCFCD
M	78" Ground water replenishment line	OCWD



PLAN
SCALE: 1"=20'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

Deck drain Type "A" (Modified), location, (Standard Plans, B7-5/7-1), See "Drain Pipe Details" on Miscellaneous Details No. 1" sheet	
Station	Offset *
101+85.13	45.20 Lt
102+53.90	45.20 Lt
103+10.00	45.20 Lt
103+57.98	45.20 Lt
104+24.15	45.20 Lt
101+93.54	Per 'Drain Pipe Details'
102+61.76	
103+17.46	
103+63.04	
104+25.99	

* Offsets are measured to the centerline of the drain

Denotes future bridge luminaire locations

Notes:

For "General Notes", "Index to Bridge Plans", "Hydraulic Summary" and "Standard Plans" see "General Notes And Criteria" sheet. For all utilities location, see "Foundation Plan" sheet.

(1) - Remove existing overhang and MBGR barrier. Provide closure pour. Match existing deck grade and cross slope.

(2) - Paint "Warner Bridge" and "Bridge No.55C-0148"

(3) - Paint along mid-depth of external girder, above ℄ trail, in block letters

VERTICAL CLEARANCE | 2' - 7"

"VERTICAL CLEARANCE" shall be 5 inches high and "12'-7"" shall be 10 inches high

(4) - Paint along mid-depth of external girder, above ℄ access road, in block letters

VERTICAL CLEARANCE | 2' - 1"

"VERTICAL CLEARANCE" shall be 5 inches high and "12'-0"" shall be 10 inches high

(5) - Limits of prepare concrete deck surface and 1" polyester concrete deck overlay.

(6) - Apply anti-graffiti coating to the soffit of existing bridge, and to all the exposed surfaces of existing and new pier walls, debris walls, barrier rails, and abutments.

(7) - Refer to "Deck Profile Grade" sheet

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARAT No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz Architects - Structural Engineers
3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

R.C.E. NO. 6/29/05 DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

GENERAL PLAN

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-1

DRAWN BY:
CHECKED BY:

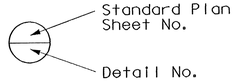
36 of 70

GENERAL NOTES LOAD FACTOR DESIGN

DESIGN:	BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO with Interims and Revisions by CALTRANS)
DEAD LOAD:	Includes 35 psf for future wearing surface.
LIVE LOADING:	HS20-44 and alternative and permit design loads
REINFORCED CONCRETE:	fy = 60,000 psi f'c = 4,000 psi n = 8 Transverse Deck Slabs (Working Stress Design) fs = 20,000 psi fc = 1,200 psi n = 10
PRESTRESSED CONCRETE	See "Prestressed I Girder No. 1" sheet
SEISMIC LOADING:	Peak Ground Acceleration = 0.5g ARS curve for an earthquake magnitude of 7.0. Soil profile Type D. See Site Specific ARS curve.

STANDARD PLANS DATED JULY, 2002

A10A	Abbreviations and Acronyms
A10B	Symbols
A62C	Limits of Payment for Excavation and Backfill Bridge
B0-1	Bridge Details
B0-3	Bridge Details
B0-5	Bridge Details
B0-13	Bridge Details
B3-8	Retaining Wall Detail No. 1
B6-21	Joint Seals (Max Movement Rating = 2")
B7-5	Deck Drains
B11-47	Cable Railing
B11-51	Tubular Hand Railing
B11-54	Concrete Barrier Type 26
ES-6B	Lighting Standards
T-4	Temporary traffic screen



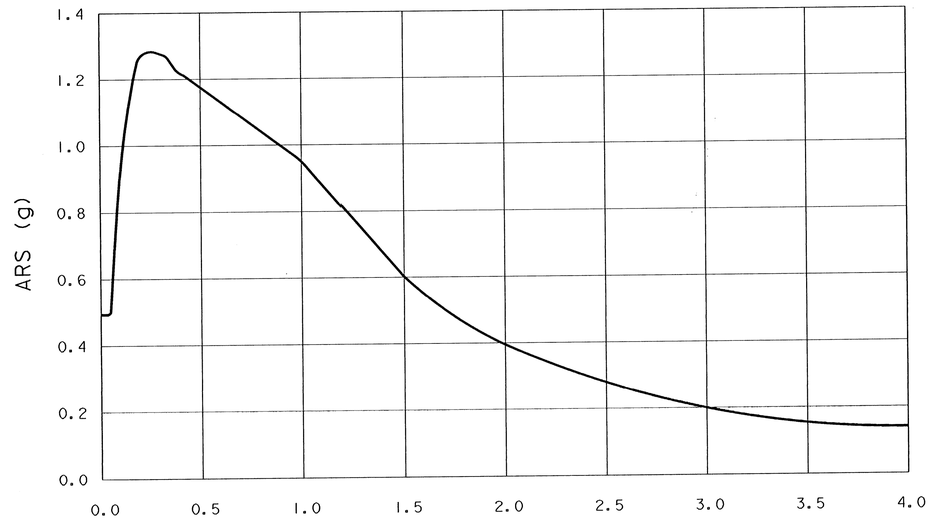
NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

HYDRAULIC SUMMARY

	Design Flood (192 Year, 50% Confidence)	Levee Overtopping Discharge
Discharge	46,000 ft^3/s	60,000 ft^3/s
Water Surface Elevation at Bridge	50.98 ft	53.24 ft

Flood plain data are based upon information available when the plans were prepared and are shown to meet federal requirements. The accuracy of said information is not warranted by the County of Orange and interested or affected parties should make their own investigation.



ARS CURVE

PILE DATA TABLE - 24" Diameter Steel Pipe Pile

Locations	Design Loading Service - Tons	Nominal Resistance (Kips)		Design Tip Elevation (FT)	Specified Tip Elevation (FT)
		Compression	Tension		
Abutment 1	35	140	25	-38(1)	-38(1)(2)(4)
Piers 2 thru 6, Left Widen, Debris Walls	35	140	50	-25(1)	-25(1)(3)(4)
Piers 2 thru 6, Right Widen	45	180	50	-25(1)	-25(1)(3)(4)
Abutment 7	35	140	25	-38(1)	-38(1)(2)(4)

Design Tip Elevations are controlled by the following demands:

1. Tip elevations conrolled by compressive loads.
2. Tip elevations controlled by liquefaction (elevation 40 to 2).
3. Tip elevations controlled by liquefaction (elevation 37 to -2).
4. Specified tip elevation should not be raised.

REGISTERED PROFESSIONAL ENGINEER — JEAN-MARIE SARAH — No. S 4038 — Exp. 3/31/06 — STRUCTURAL — STATE OF CALIFORNIA

INDEX TO PLANS

Sheet No	Title
S-1	GENERAL PLAN
S-2	GENERAL NOTES AND CRITERIA
S-3	DECK PROFILE GRADE
S-4	FOUNDATION PLAN
S-5	ABUTMENT 1 AND 7 LAYOUT
S-6	ABUTMENT DETAILS NO. 1
S-7	ABUTMENT DETAILS NO. 2
S-8	ABUTMENT DETAILS NO. 3
S-9	PIERS 2 AND 6 LEFT
S-10	PIERS 2 AND 6 RIGHT
S-11	PIERS 3, 4 AND 5 LEFT
S-12	PIERS 3, 4 AND 5 RIGHT
S-13	PIER DEBRIS WALL
S-14	PIER DETAILS NO.1
S-15	PIER DETAILS NO.2
S-16	TYPICAL SECTION LEFT
S-17	TYPICAL SECTION RIGHT
S-18	GIRDER LAYOUT NO. 1
S-19	GIRDER LAYOUT NO. 2
S-20	LONGITUDINAL DECK REINFORCEMENT NO. 1
S-21	LONGITUDINAL DECK REINFORCEMENT NO. 2
S-22	LONGITUDINAL DECK REINFORCEMENT NO. 3
S-23	PRESTRESSED I GIRDER NO. 1
S-24	PRESTRESSED I GIRDER NO. 2
S-25	PRESTRESSED I GIRDER NO. 3
S-26	PRESTRESSED I GIRDER NO. 4
S-27	HINGE DETAILS NO. 1
S-28	HINGE DETAILS NO. 2
S-29	HINGE DETAILS NO. 3
S-30	HINGE DETAILS NO. 4
S-31	MISCELLANEOUS DETAILS NO.1
S-32	LIMITS OF EXCAVATION AND BACKFILL NO. 1
S-33	LIMITS OF EXCAVATION AND BACKFILL NO. 2
S-34	LOG OF TEST BORINGS
S-35	SOLDIER PILE WALL

PREPARED BY:
McLean & Schultz
Architects - Structural Engineers
3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

JMS
R.C.E. NO. 6/29/05 DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

GENERAL NOTES AND CRITERIA — SHEET NO. S-2

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

DRAWN BY:
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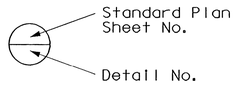
37 of 70

GENERAL NOTES LOAD FACTOR DESIGN

DESIGN:	BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO with Interims and Revisions by CALTRANS)
DEAD LOAD:	Includes 35 psf for future wearing surface.
LIVE LOADING:	HS20-44 and alternative and permit design loads
REINFORCED CONCRETE:	fy = 60,000 psi f'c = 4,000 psi n = 8 Transverse Deck Slabs (Working Stress Design) fs = 20,000 psi fc = 1,200 psi n = 10
PRESTRESSED CONCRETE	See "Prestressed I Girder No. 1" sheet
SEISMIC LOADING:	Peak Ground Acceleration = 0.5g ARS curve for an earthquake magnitude of 7.0. Soil profile Type D. See Site Specific ARS curve.

STANDARD PLANS DATED JULY, 2002

A10A	Abbreviations and Acronyms
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B7-5	Deck Drains
B11-47	Cable Railing
B11-51	Tubular Hand Railing
B11-54	Concrete Barrier Type 26
ES-6B	Lighting Standards
T-4	Temporary traffic screen

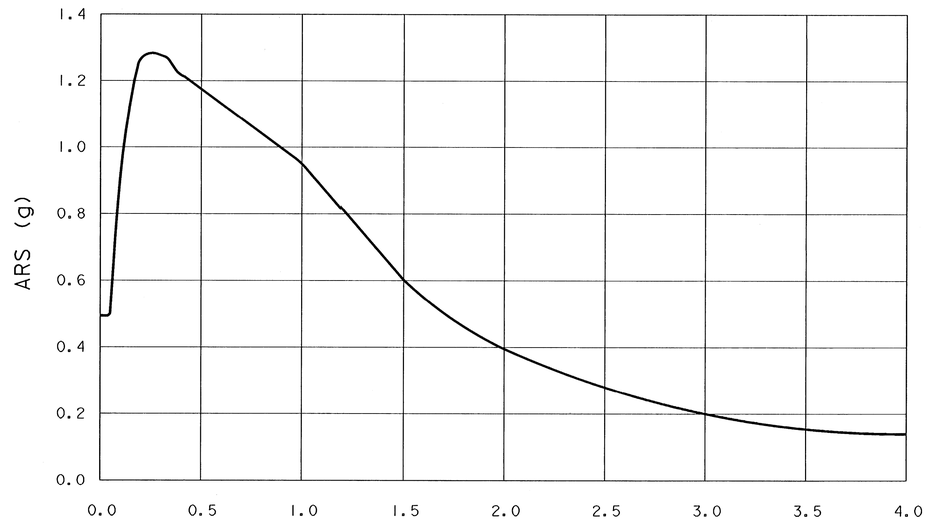


NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

HYDRAULIC SUMMARY		
	Design Flood (192 Year, 50% Confidence)	Levee Overtopping Discharge
Discharge	46,000 ft^3/s	60,000 ft^3/s
Water Surface Elevation at Bridge	50.98 ft	53.24 ft

Flood plain data are based upon information available when the plans were prepared and are shown to meet federal requirements. The accuracy of said information is not warranted by the County of Orange and interested or affected parties should make their own investigation.



ARS CURVE

PILE DATA TABLE - STEEL HP 14 X 117					
Locations	Design Loading Service - Tons	Nominal Resistance (Kips)		Design Tip Elevation (FT)	Specified Tip Elevation (FT)
		Compression	Tension		
Abutment 1	35	140	25	-45(1)	-45(1)(2)(4)
Piers 2 thru 6, Left Widen, Debris Walls	35	140	50	-35(1)	-35(1)(3)(4)
Piers 2 thru 6, Right Widen	45	180	50	-40(1)	-40(1)(3)(4)
Abutment 7	35	140	25	-45(1)	-45(1)(2)(4)

Design Tip Elevations are controlled by the following demands:

1. Tip elevations conrolled by compressive loads.
2. Tip elevations controlled by liquefaction (elevation 40 to 2).
3. Tip elevations controlled by liquefaction (elevation 37 to -2).
4. Specified tip elevation should not be raised.

REGISTERED PROFESSIONAL ENGINEER
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R.C.E. NO. C51155 — 11/23/05 DATE

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S-33A	LIMITS OF EXCAVATION AND BACKFILL NO. 2
S-34	LOG OF TEST BORINGS
S-35	SOLDIER PILE WALL

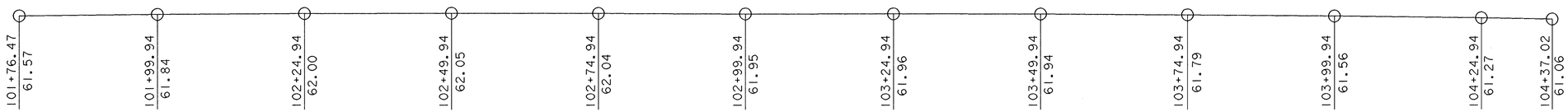
DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

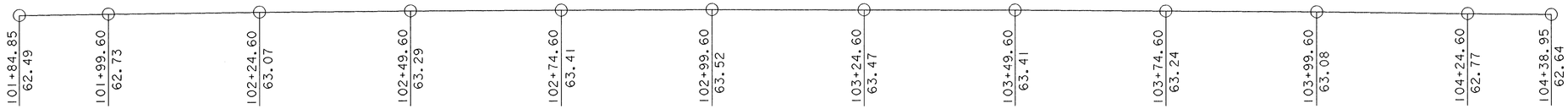
GENERAL NOTES AND CRITERIA — SHEET NO. S-2A
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

DRAWN BY:
CHECKED BY:

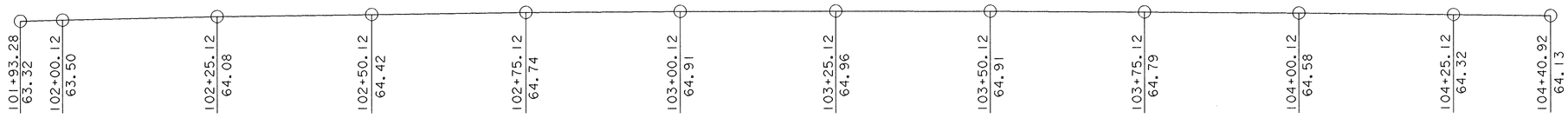
37A of 70



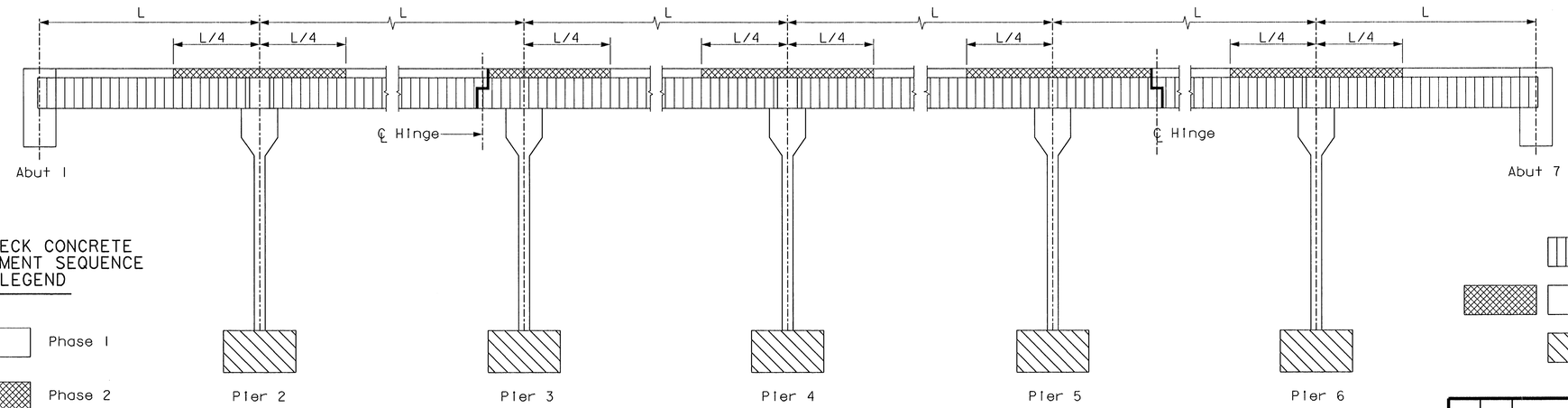
PROFILE GRADE
AT NORTHERLY EDGE OF DECK
No Scale



PROFILE GRADE
AT BRIDGE CENTERLINE
No Scale



PROFILE GRADE
AT SOUTHERLY EDGE OF DECK
No Scale



NOTE: Profile grade elevations are for top of new concrete deck at widenings and top of 1" overlay over existing structure.

TOP DECK CONCRETE PLACEMENT SEQUENCE LEGEND

Phase 1

Phase 2

LEGEND

Precast Prestressed Concrete Girder (f'c per prestressing notes on "Prestressed I Girder No. 1" sheet)

Structural Concrete, Bridge (f'c = 4,000 psi @ 28 days)

Structural Concrete, Bridge Footing (f'c = 3,600 psi @ 28 days)

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

CONCRETE STRENGTH AND TYPE LIMITS
No Scale

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JEAN-MARIE SARAH
No. S 4038
Exp. 3/31/06
STRUCTURAL
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JMS
R.C.E. NO.

5/21/05
DATE

No.	DATE	ITEM

REVISIONS

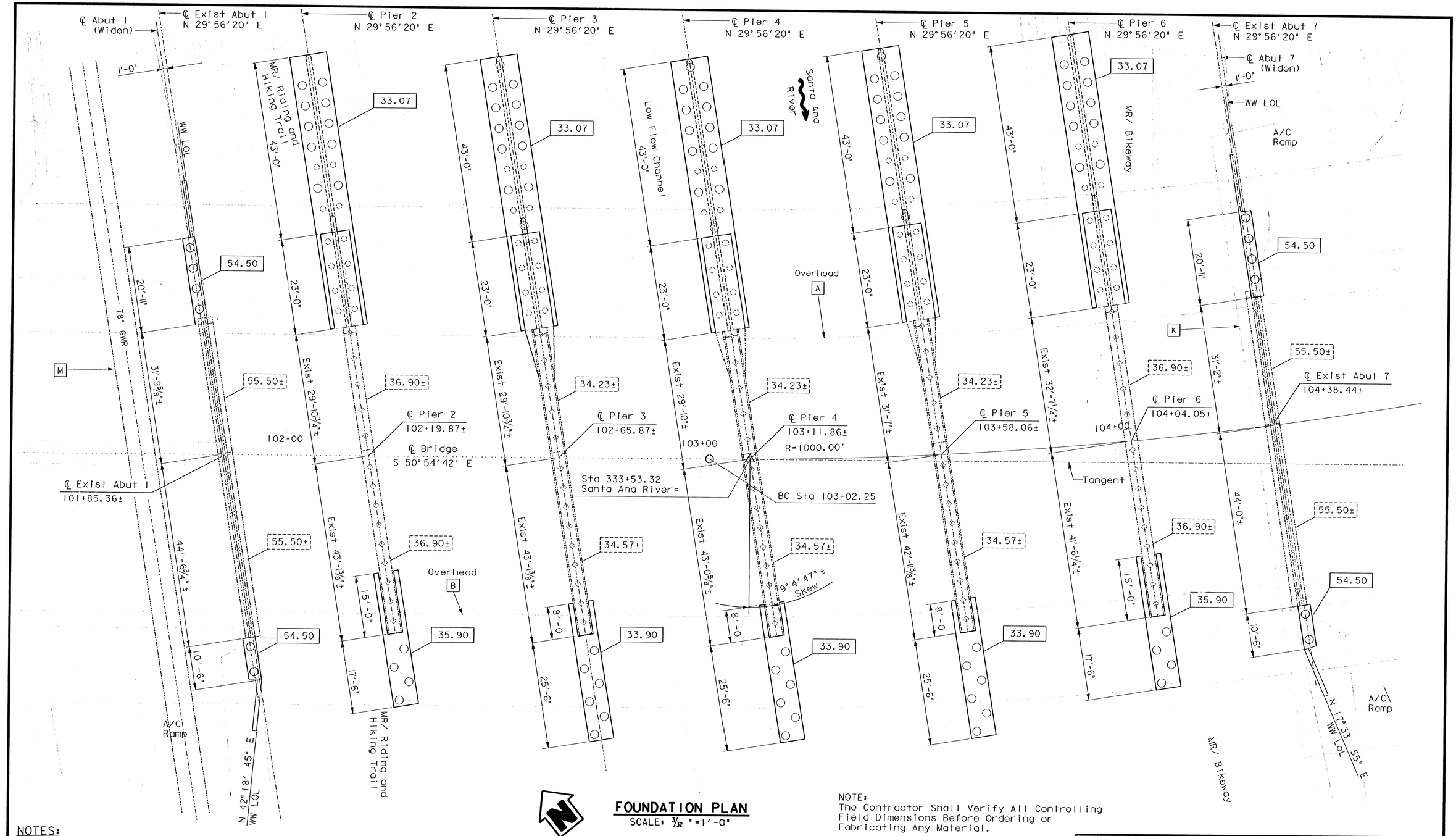
DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

DECK PROFILE GRADE
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-3

DRAWN BY:
CHECKED BY:



FOUNDATION PLAN

SCALE: 3/32 "=1'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

NOTES:

——— Denotes new footing

- - - - - - Denotes exist footing

Refer to 'General Plan' sheet for utility legend

00.00 Denotes bottom of widened footing elevation

00.00± Denotes bottom of exist footing elevation

○ Denotes new 24" diameter steel driven piles

◌ Denotes existing 16" diameter steel driven piles

◇ Denotes existing 12" square precast concrete piles

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

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PREPARED BY:

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DMS 6/29/05
R.C.E. NO. DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

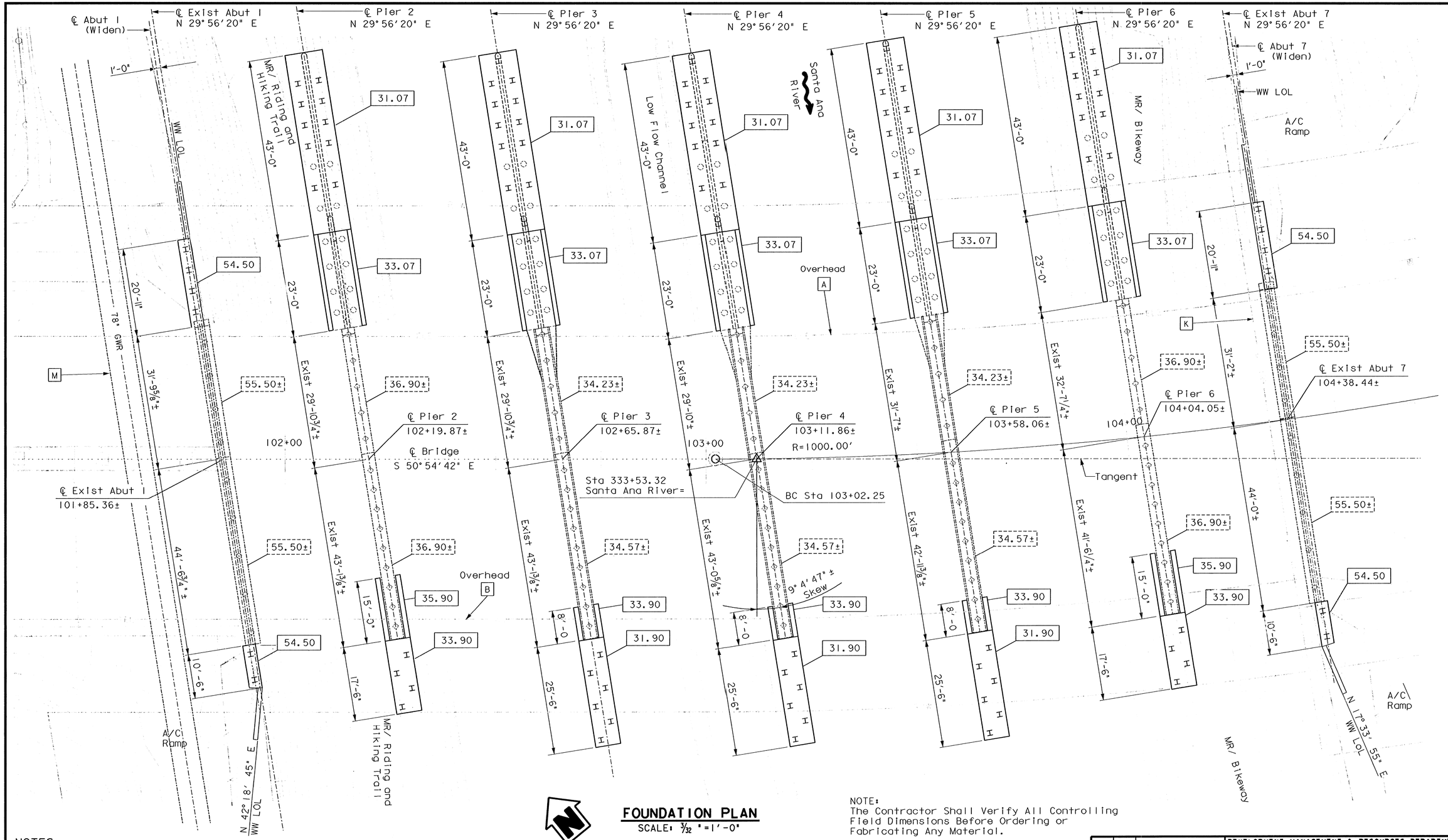
WARNER AVENUE WIDENING

FOUNDATION PLAN — SHEET NO. S-4

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

DRAWN BY:
CHECKED BY:

39 of 70



FOUNDATION PLAN

SCALE: 3/32" = 1'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

NOTES:

——— Denotes new footing

- - - - - - Denotes exist footing

Refer to "General Plan" sheet for utility legend

00.00 Denotes bottom of widened footing elevation

00.00± Denotes bottom of exist footing elevation

I Denotes new HP 14 X 117 steel driven piles

○ Denotes existing 16" diameter steel driven piles

◇ Denotes existing 12" square precast concrete piles

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

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R.C.E. NO. C51155 — 11/23/05 DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

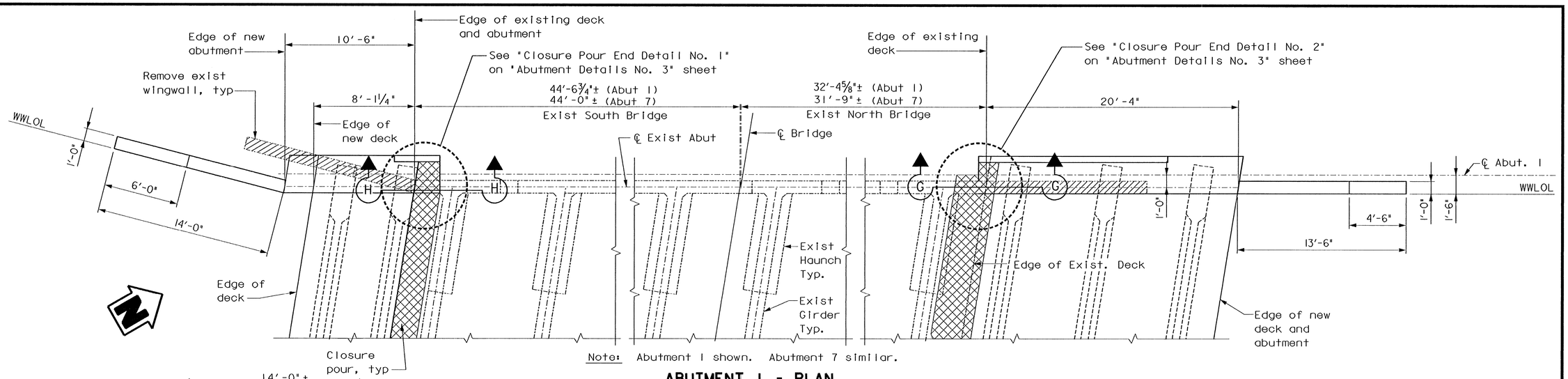
WARNER AVENUE WIDENING

FOUNDATION PLAN — SHEET NO. S-4A

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

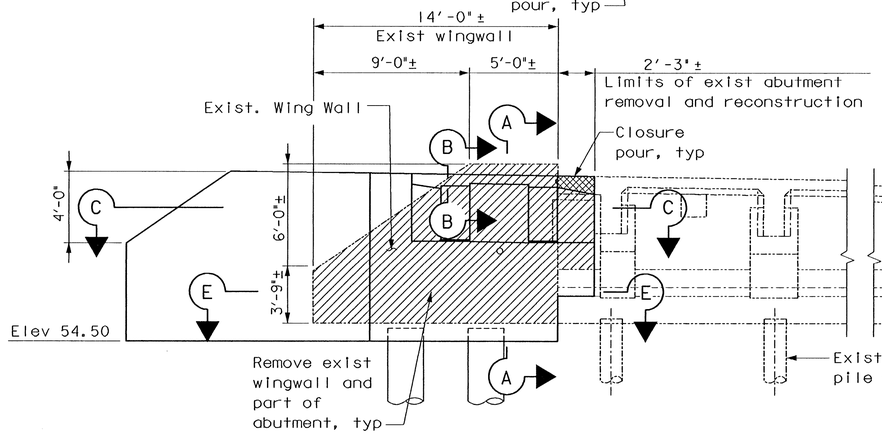
DRAWN BY:
CHECKED BY:

39A of 70

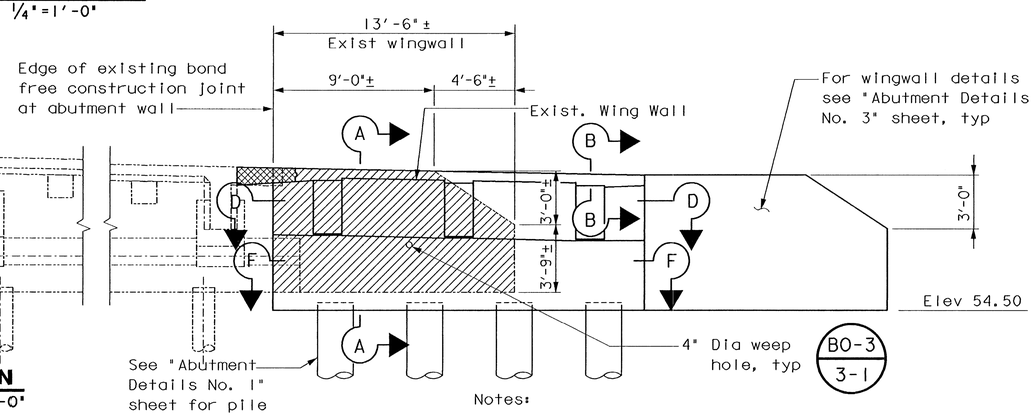


Note: Abutment 1 shown. Abutment 7 similar.

ABUTMENT 1 - PLAN
SCALE: ¼" = 1'-0"

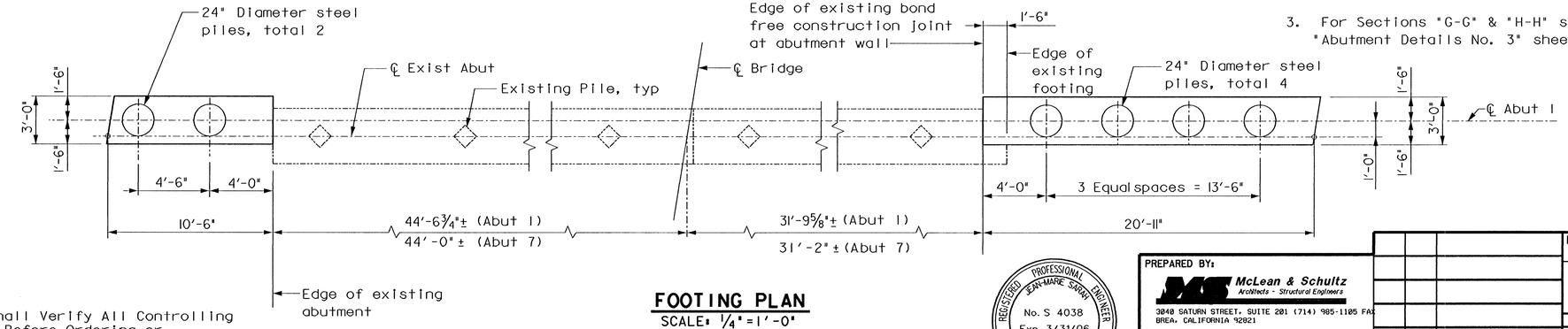


ELEVATION
SCALE: ¼" = 1'-0"



Notes:

1. For Sections "A-A" & "B-B" see "Abutment Details No. 1" sheet.
2. For Sections "C-C", "D-D", "E-E" & "F-F" see "Abutment Details No. 2" sheet.
3. For Sections "G-G" & "H-H" see "Abutment Details No. 3" sheet.



FOOTING PLAN
SCALE: ¼" = 1'-0"

LEGEND

- Closure pour
- Bridge removal (portion)
- New construction
- Existing construction
- New steel pile
- Existing pile

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER — JEAN-MARIE SARKIS — No. S 4038 — Exp. 3/31/06 — STRUCTURAL — STATE OF CALIFORNIA

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R.C.E. NO. — DATE 6/21/05

NO.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

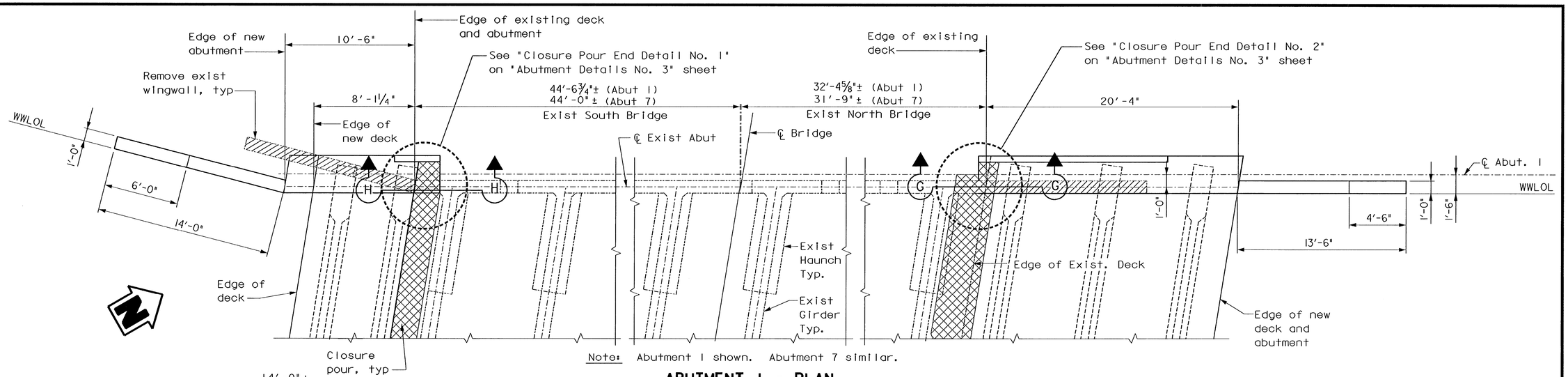
WARNER AVENUE
WIDENING

ABUTMENT 1 AND 7 LAYOUT
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-5

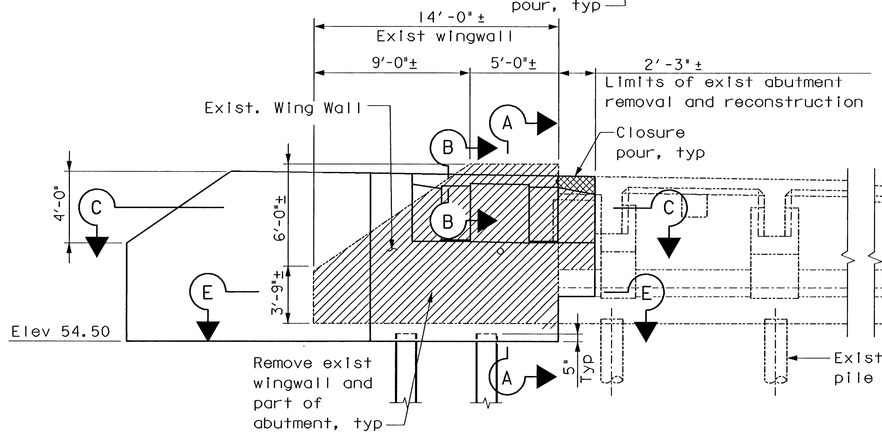
DRAWN BY:
CHECKED BY:

40 of 70

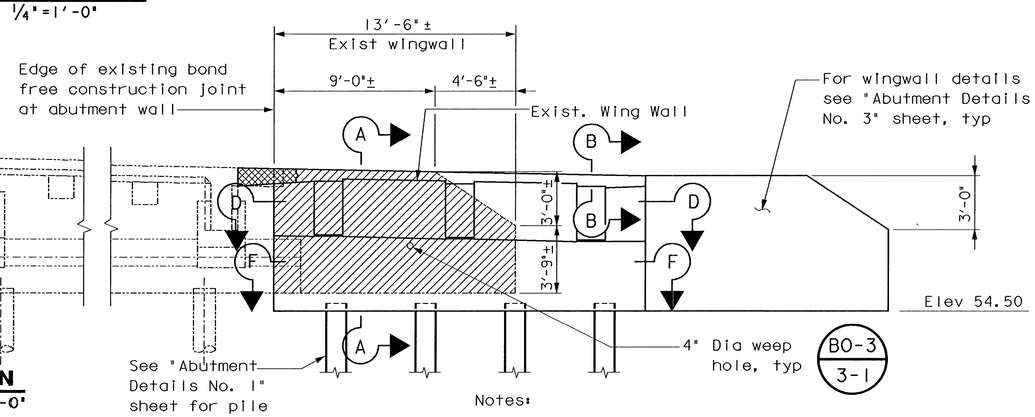


Note: Abutment 1 shown. Abutment 7 similar.

ABUTMENT 1 - PLAN
SCALE: ¼" = 1'-0"

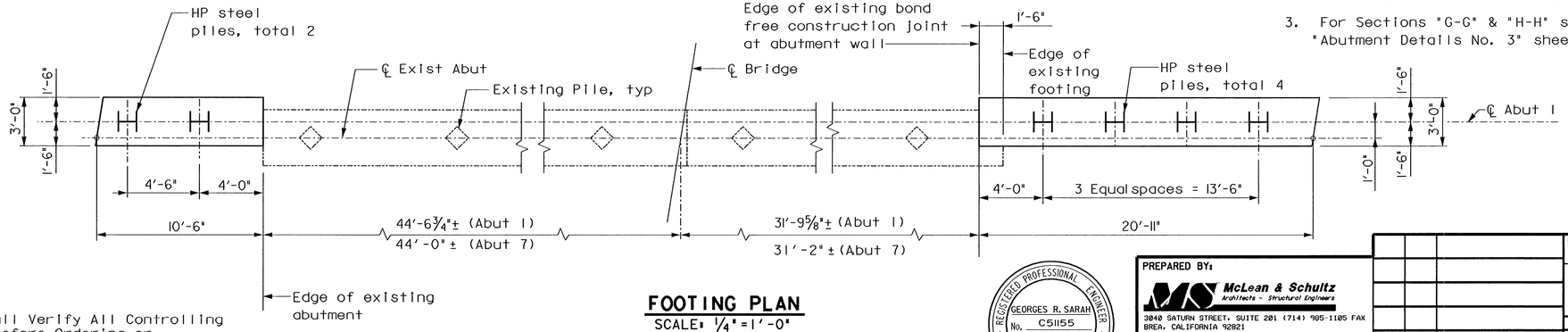


ELEVATION
SCALE: ¼" = 1'-0"



Notes:

1. For Sections "A-A" & "B-B" see "Abutment Details No. 1" sheet.
2. For Sections "C-C","D-D","E-E" & "F-F" see "Abutment Details No. 2" sheet.
3. For Sections "G-G" & "H-H" see "Abutment Details No. 3" sheet.



FOOTING PLAN
SCALE: ¼" = 1'-0"

LEGEND

- Closure pour
- Bridge removal (portion)
- New construction
- Existing construction
- New steel pile
- Existing pile

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

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GEORGES R. SARAH
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R.C.E. NO. C51155 — 11/23/05 DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

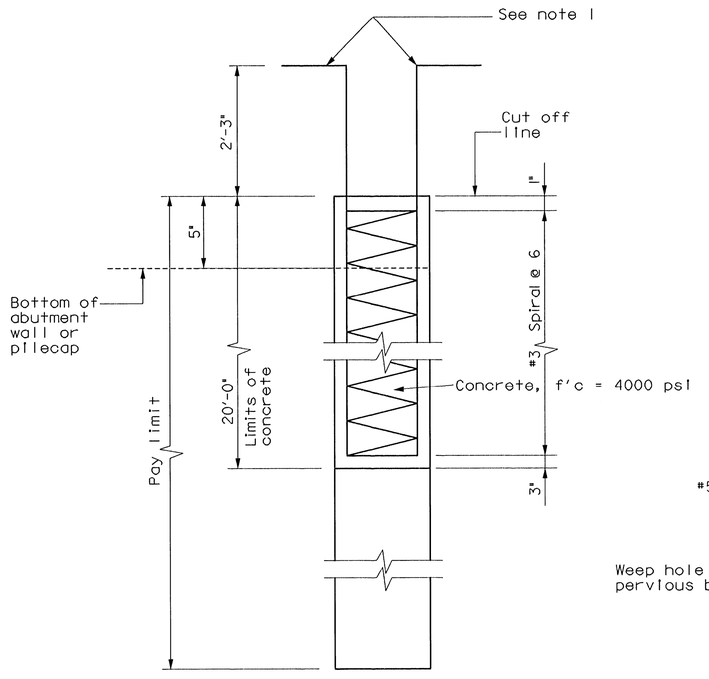
ABUTMENT 1 AND 7 LAYOUT

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-5A

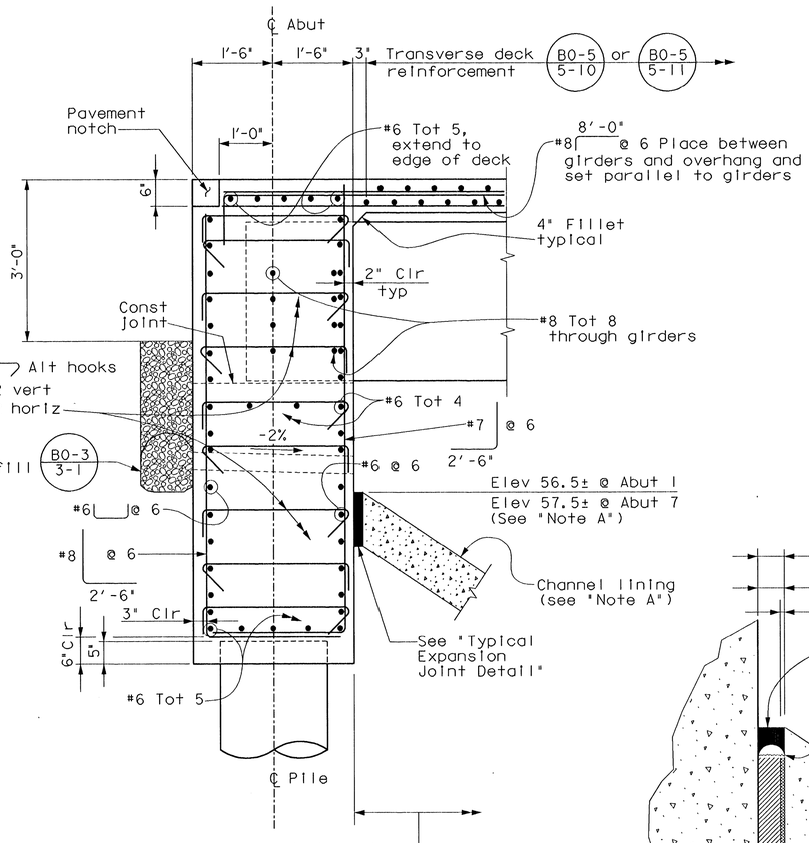
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40A of 70



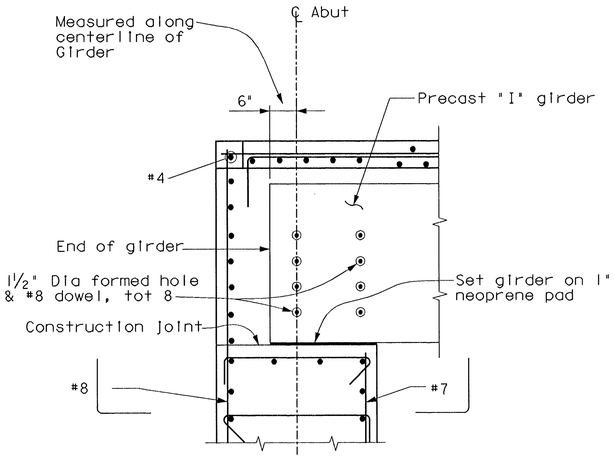
24" DIAMETER STEEL PILE DETAIL

NO SCALE



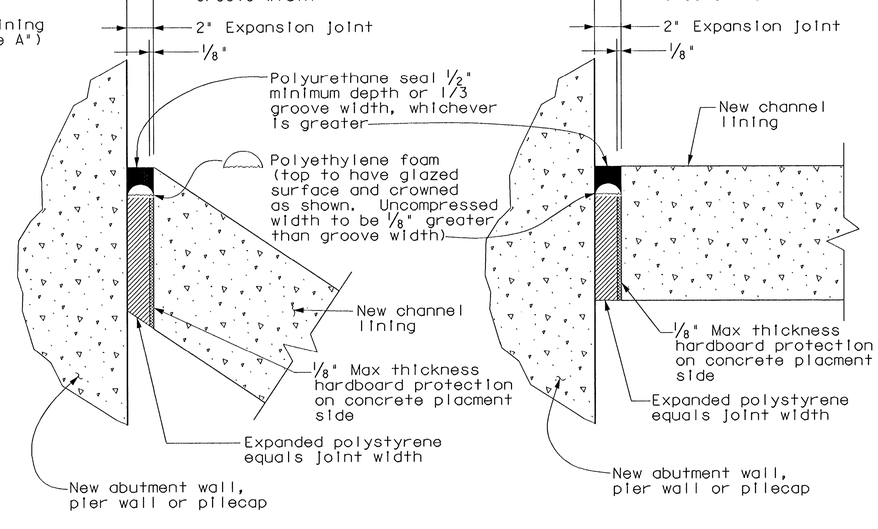
SECTION A-A

SCALE: 3/4" = 1'-0"



SECTION B-B

SCALE: 3/4" = 1'-0"



TYPICAL EXPANSION JOINT DETAIL

NO SCALE

Notes:

1. Reinforcement extending into abutment and pilecap shall be hooked and oriented as required to provide required clearance to edge of concrete.
2. Lapped splices in spiral pile reinforcement shall be lapped at least 80 wire diameters. Spiral pile reinforcement at splices and at ends shall be terminated with a 135° hook with a 6" tail hooked around a longitudinal bar.
3. Piles shall be extended only in accordance with details shown in the project plans.
4. Piles shall be inspected and certified by the soils engineer prior to concrete placement.

Note A:

Elevations shown are at center of existing bridge. Elevations and slope of reconstructed channel lining to match existing conditions.

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARAH No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

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BREA, CALIFORNIA 92821

R.C.E. NO. 8/21/05 DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

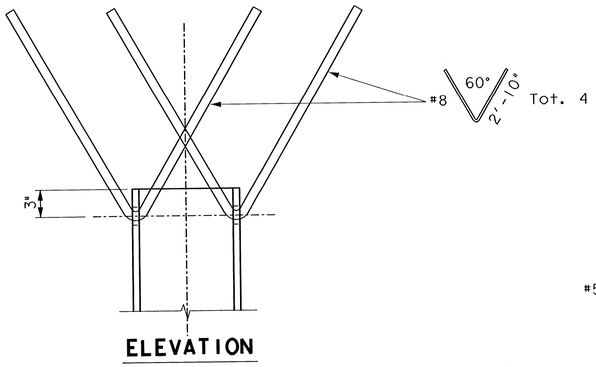
WARNER AVENUE
WIDENING

ABUTMENT DETAILS NO. 1
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

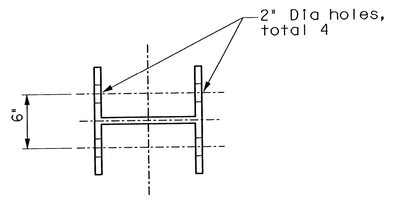
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SHEET NO. S-6

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ELEVATION



PLAN

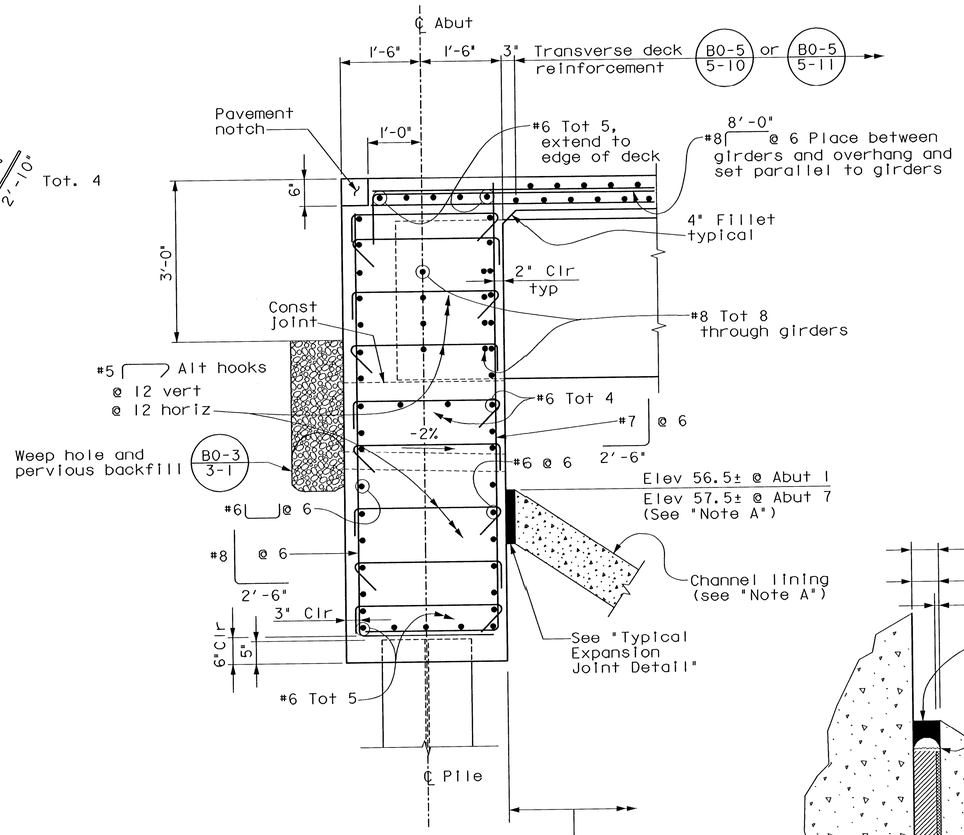
HP STEEL PILE ANCHOR
NO SCALE

Notes:

1. Steel pile anchor bars shall be epoxy coated.
2. Field bending of anchor bars shall not be allowed.
3. Steel pile anchor bars extending into a footing shall be placed or required to provide clearance to top of footing.

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

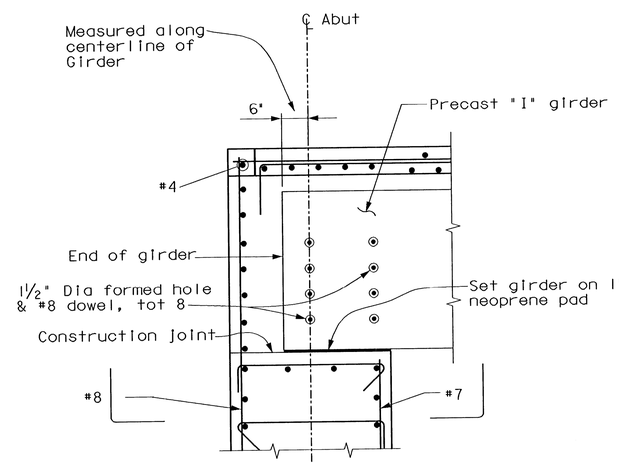
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4



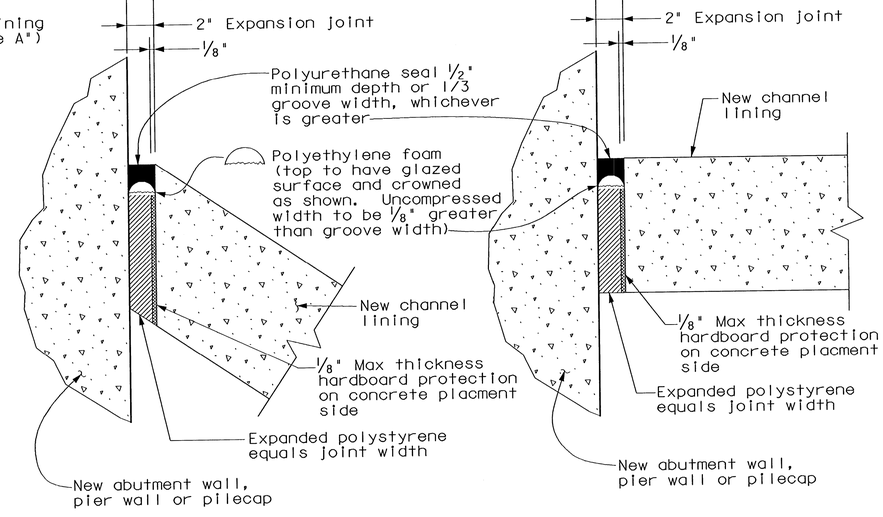
SECTION A-A
SCALE: 3/4" = 1'-0"

Note A:

Elevations shown are at center of existing bridge. Elevations and slope of reconstructed channel lining to match existing conditions.



SECTION B-B
SCALE: 3/4" = 1'-0"



TYPICAL EXPANSION JOINT DETAIL
NO SCALE

REGISTERED PROFESSIONAL ENGINEER
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R.C.E. NO. C51155 — 11/23/05 DATE

NO.	DATE	ITEM
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DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

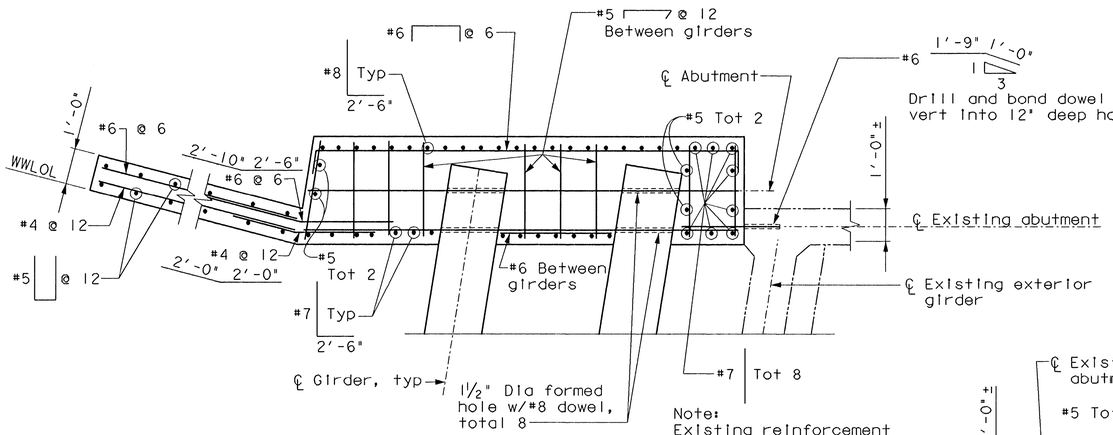
WARNER AVENUE
WIDENING

ABUTMENT DETAILS NO. 1
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

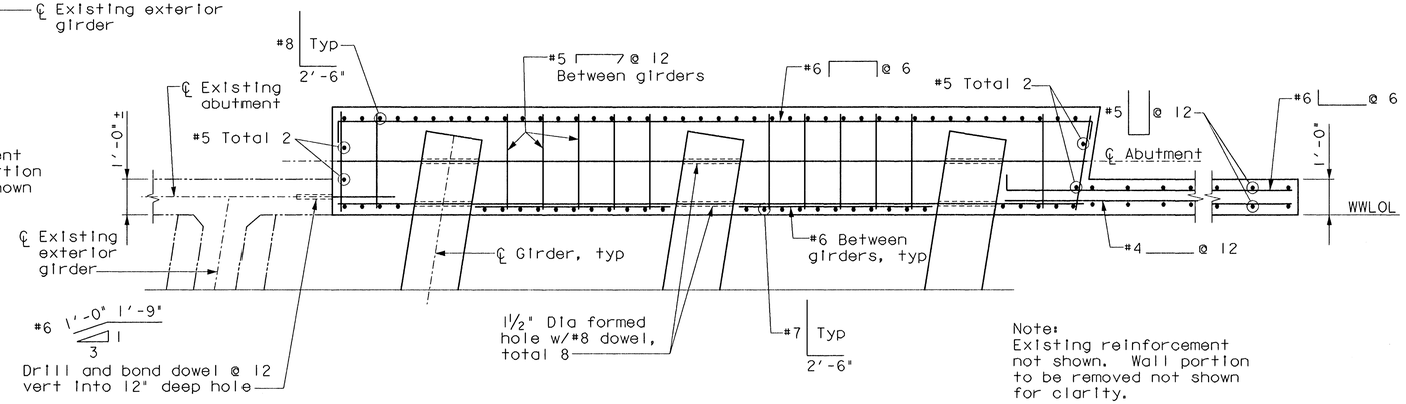
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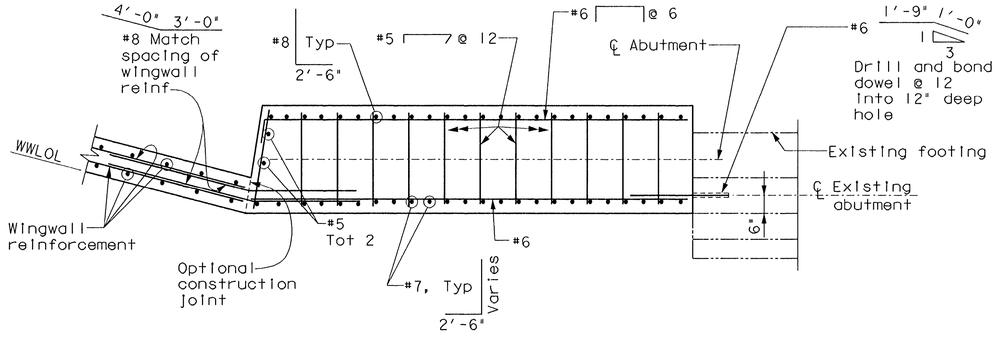
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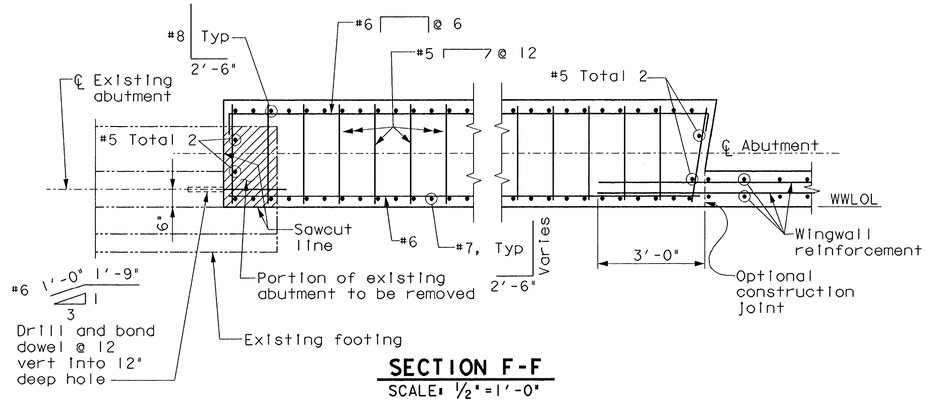
SECTION C-C
SCALE: ½"=1'-0"



SECTION D-D
SCALE: ½"=1'-0"



SECTION E-E
SCALE: ½"=1'-0"



SECTION F-F
SCALE: ½"=1'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

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No. S 4038
Exp. 3/31/06
STRUCTURAL
STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz
Architects - Structural Engineers
3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

JMS
R.C.E. NO.

6/21/05
DATE

No.	DATE	ITEM
		REVISIONS

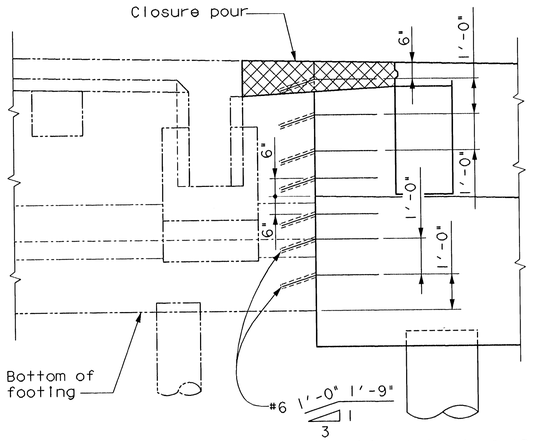
DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

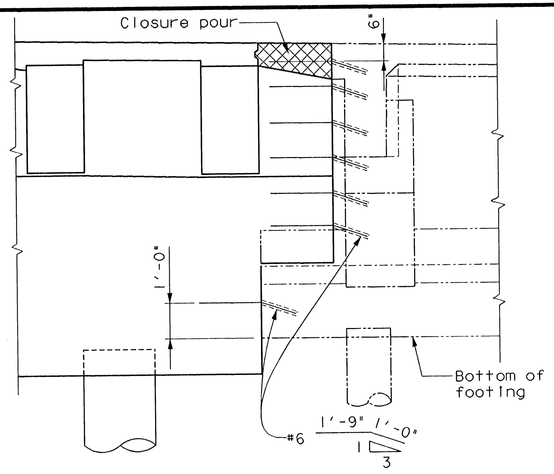
ABUTMENT DETAILS NO. 2
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-7

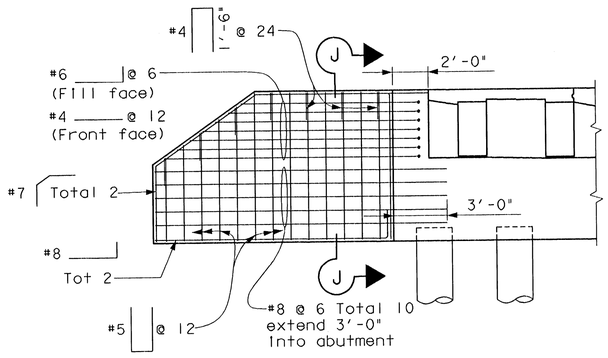
DRAWN BY:
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Drill and bond dowels @ 12 vertical into 12" deep hole as shown (total 7), typ



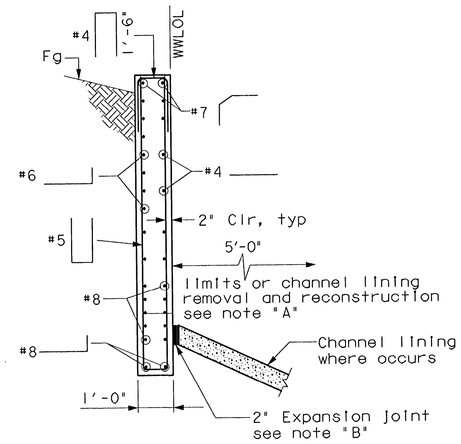
Drill and bond dowels @ 12 vertical into 12" deep hole as shown (total 7), typ



Note:
Abutment 7 wingwall,
south end, opposite hand.

ABUTMENT 1 WINGWALL - SOUTH END

SCALE: 1/4" = 1'-0"

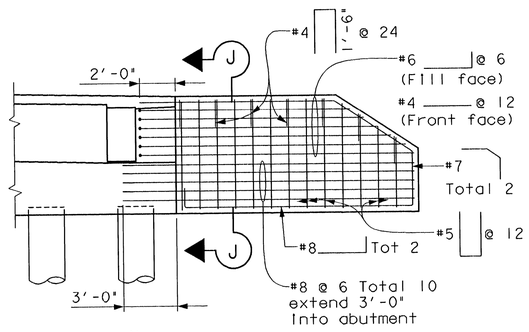


SECTION J-J

SCALE: 1/2" = 1'-0"

SECTION G-G

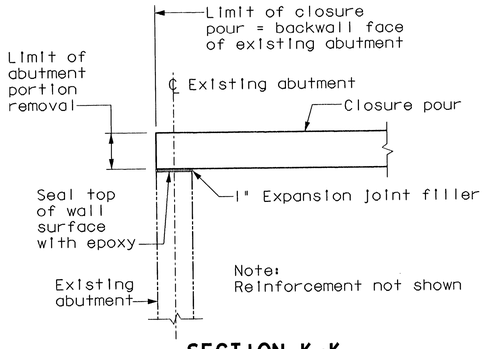
SCALE: 1/2" = 1'-0"



Note:
Abutment 7 wingwall,
north end, opposite hand.

ABUTMENT 1 WINGWALL - NORTH END

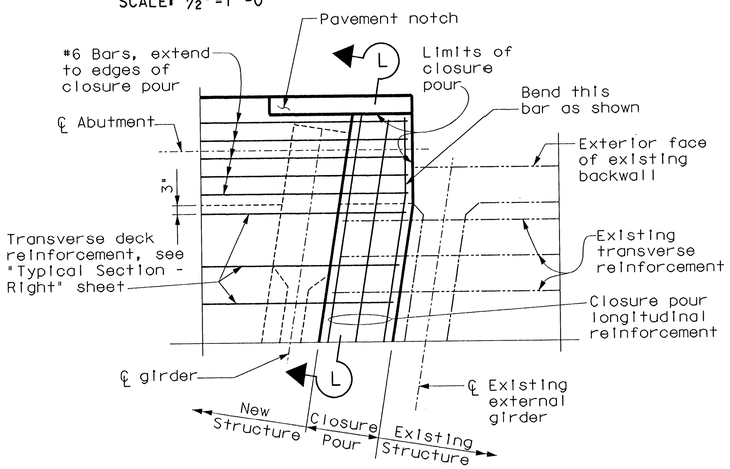
SCALE: 1/4" = 1'-0"



SECTION K-K

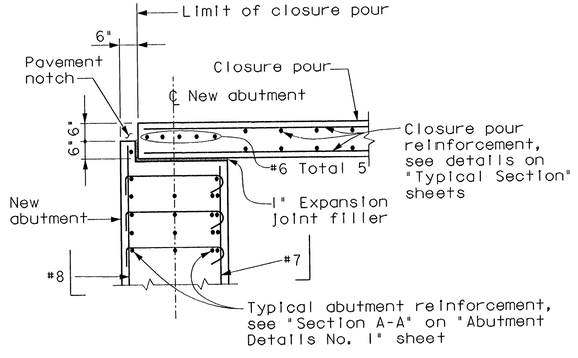
SCALE: 1/2" = 1'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.



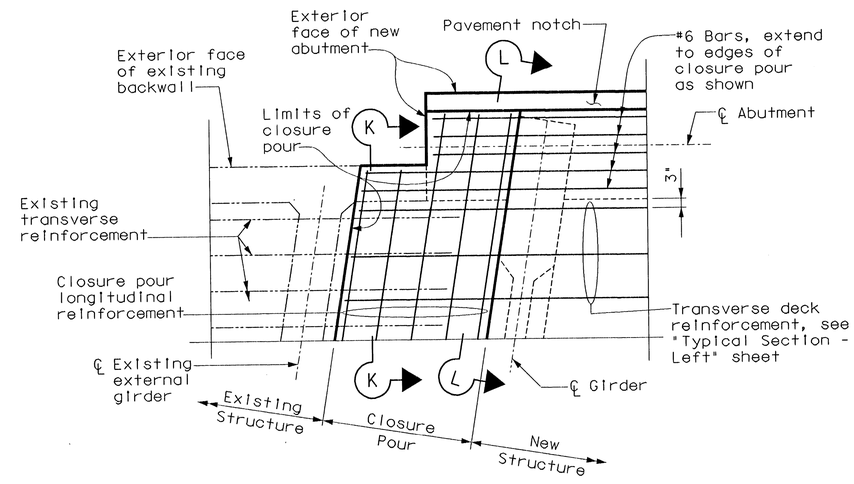
CLOSURE POUR END DETAIL NO. 1

SCALE: 1/2" = 1'-0"



SECTION L-L

SCALE: 1/2" = 1'-0"



CLOSURE POUR END DETAIL NO. 2

SCALE: 1/2" = 1'-0"

Notes:

A. See "Section L-L" on "Pier Debris Wall" sheet for channel lining reconstruction, details, reinforcement and notes.

B. See "Typical Expansion Joint Detail" on "Abutment Details No. 1" sheet.

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DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

ABUTMENT DETAILS NO. 3

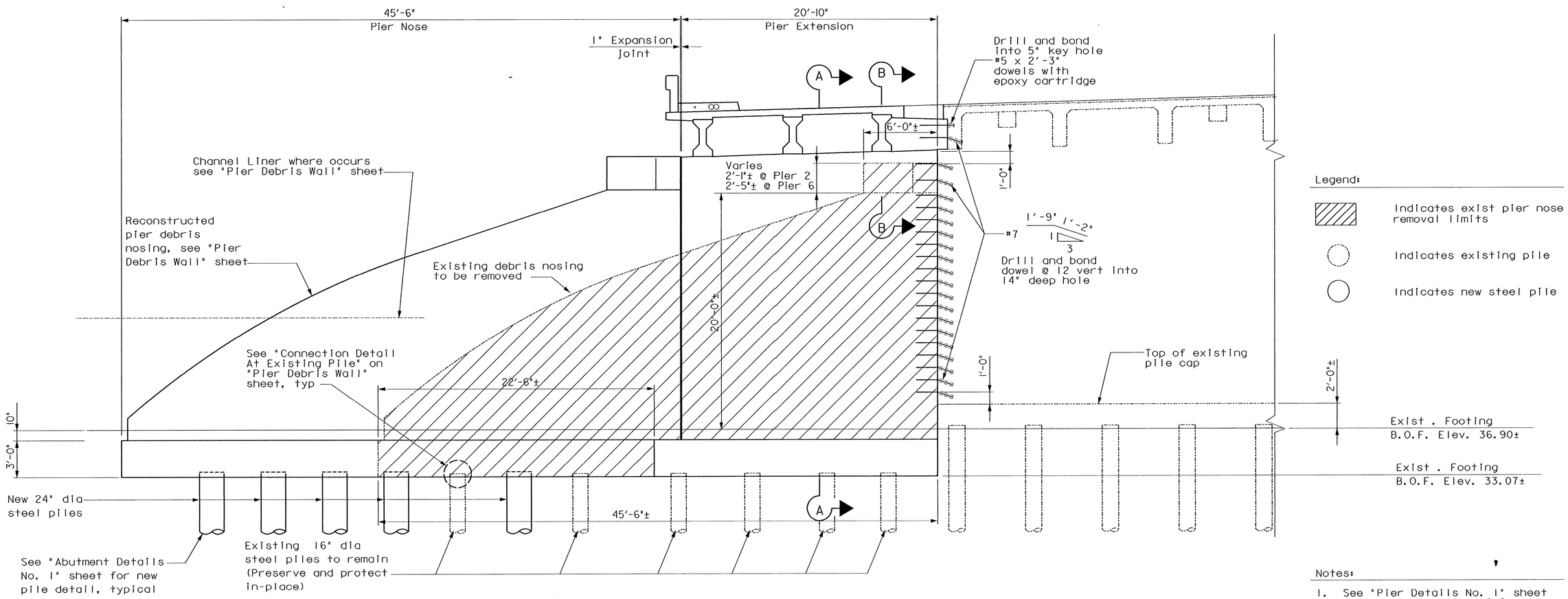
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

DRAWN BY:
CHECKED BY:

SHEET NO. S-8

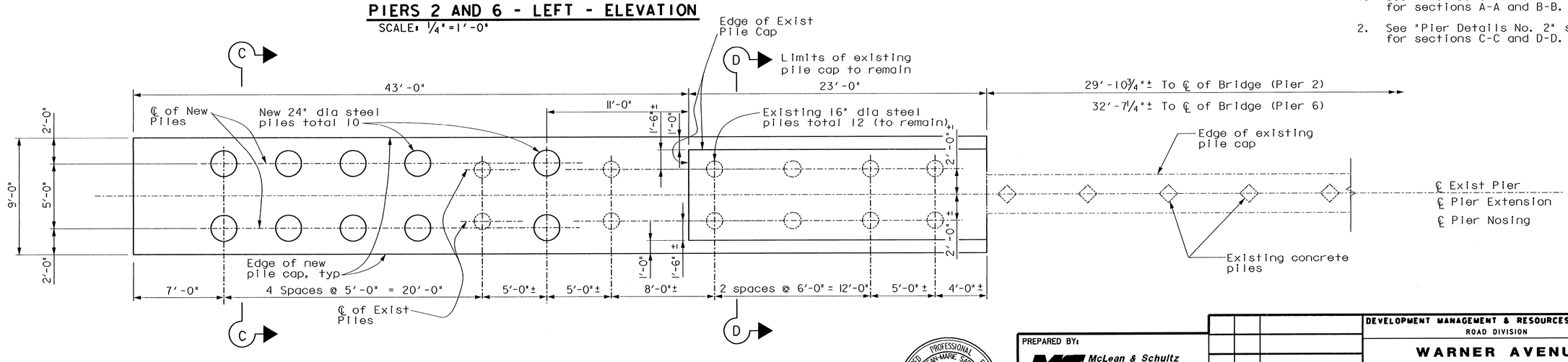
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FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4



PIERS 2 AND 6 - LEFT - ELEVATION

SCALE: 1/4"=1'-0"



PIERS 2 AND 6 - LEFT - FOUNDATION PLAN

SCALE: 1/4"=1'-0"

Notes:

1. See "Pier Details No. 1" sheet for sections A-A and B-B.
2. See "Pier Details No. 2" sheet for sections C-C and D-D.

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARKIS No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

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R.C.E. NO. 6/29/05 DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

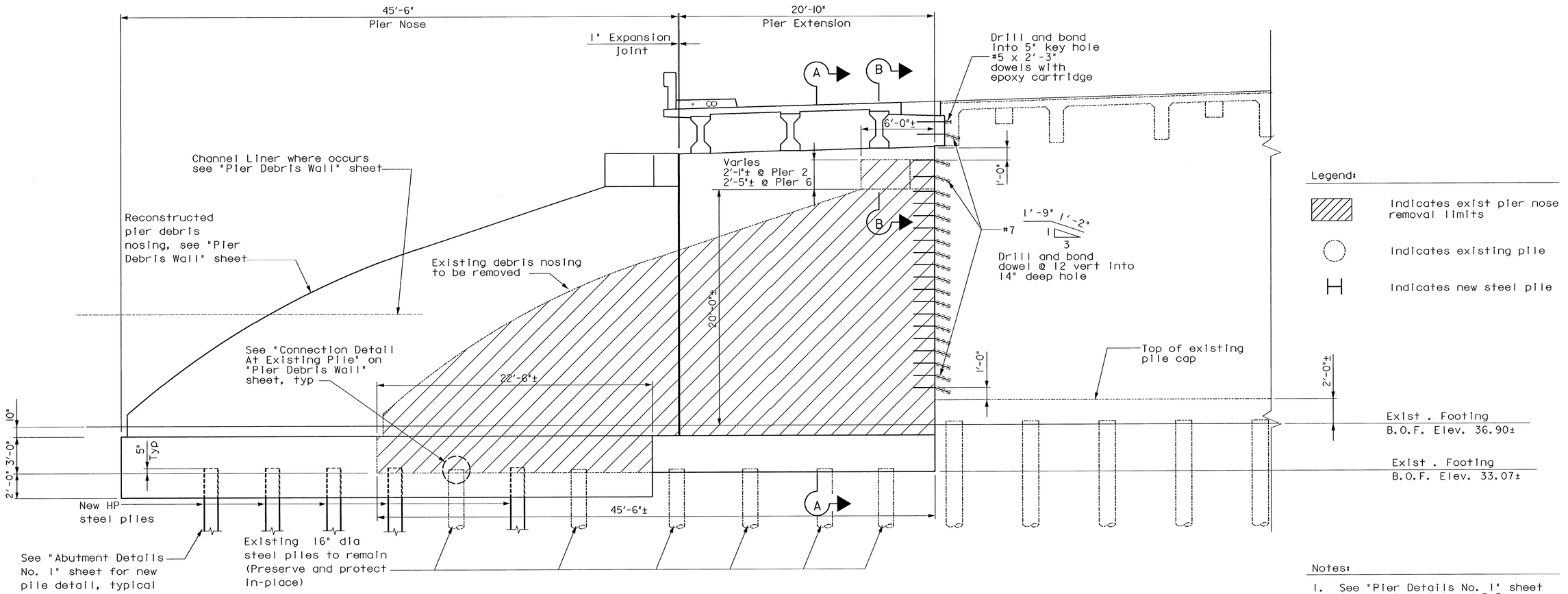
WARNER AVENUE
WIDENING

PIERS 2 AND 6 - LEFT
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-9

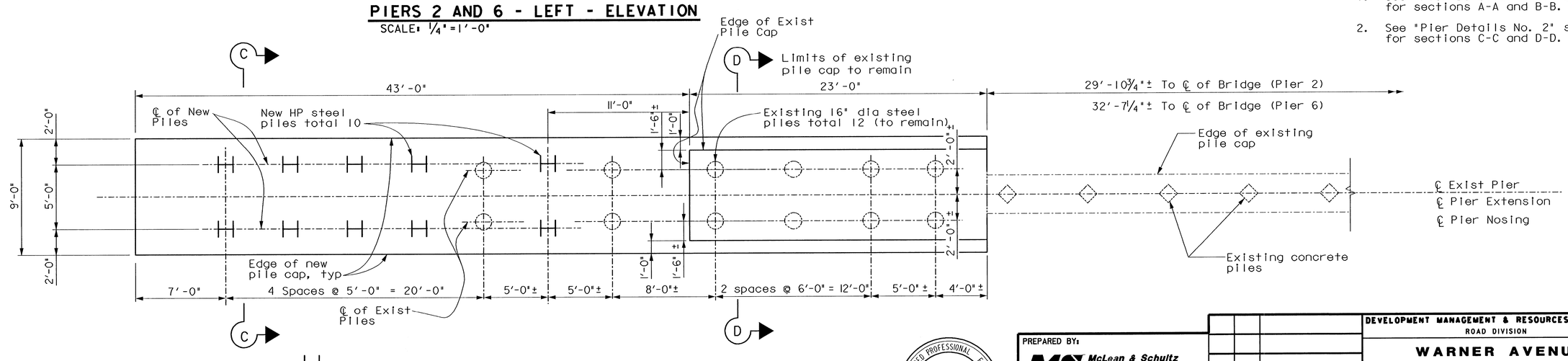
DRAWN BY:
CHECKED BY:

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PIERS 2 AND 6 - LEFT - ELEVATION

SCALE: 1/4"=1'-0"



PIERS 2 AND 6 - LEFT - FOUNDATION PLAN

SCALE: 1/4"=1'-0"

Notes:

1. See "Pier Details No. 1" sheet for sections A-A and B-B.
2. See "Pier Details No. 2" sheet for sections C-C and D-D.

NOTE:
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FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER
GEORGES R. SARAH
No. C51155
Exp. 9-30-07
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BREA, CALIFORNIA 92821

R.C.E. NO. C51155 — DATE 11/23/05

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DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

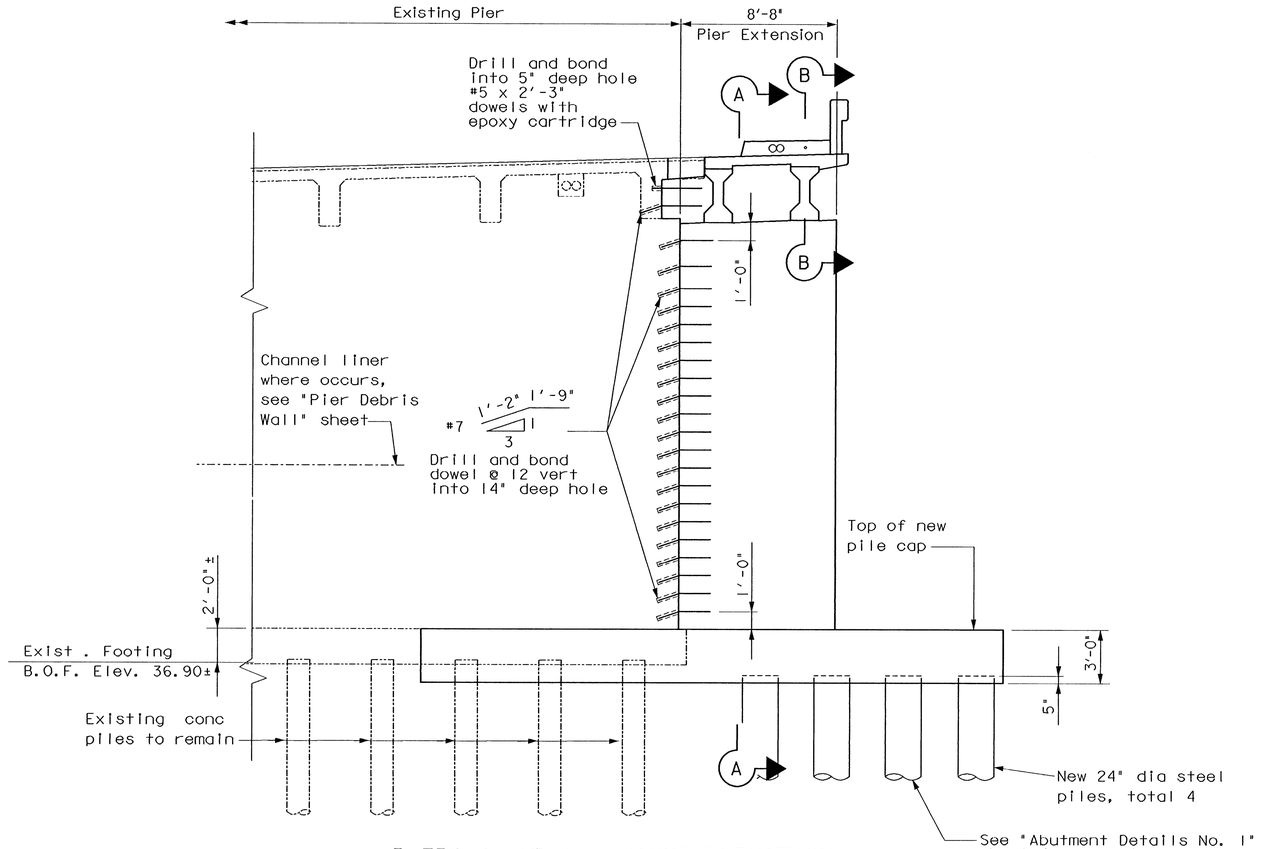
PIERS 2 AND 6 - LEFT

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-9A

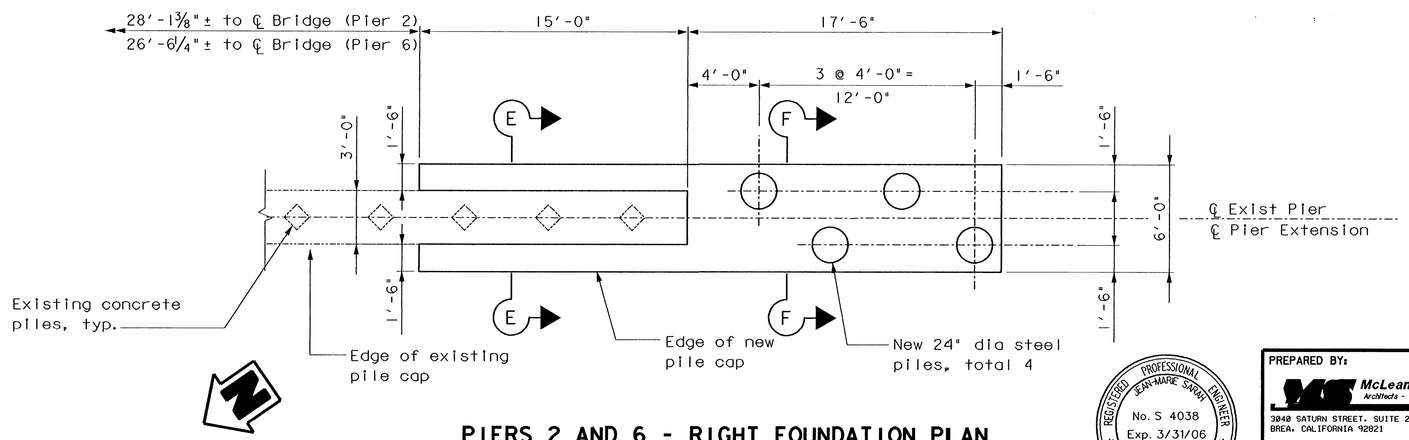
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CHECKED BY:

44A of 70



PIERS 2 AND 6 - RIGHT ELEVATION

SCALE: 1/4"=1'-0"



PIERS 2 AND 6 - RIGHT FOUNDATION PLAN

SCALE: 1/4"=1'-0"

Notes:

1. See "Pier Details No. 1" sheet for sections A-A and B-B.
2. See "Pier Details No. 2" sheet for sections "E-E" and "F-F".

Legend:

◇ Indicates existing pile

○ Indicates new steel pile

NOTE:
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REGISTERED PROFESSIONAL ENGINEER
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No. S 4038
Exp. 3/31/06
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BREA, CALIFORNIA 92821

R.C.E. NO. 6/29/05 DATE

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		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

PIERS 2 AND 6 - RIGHT

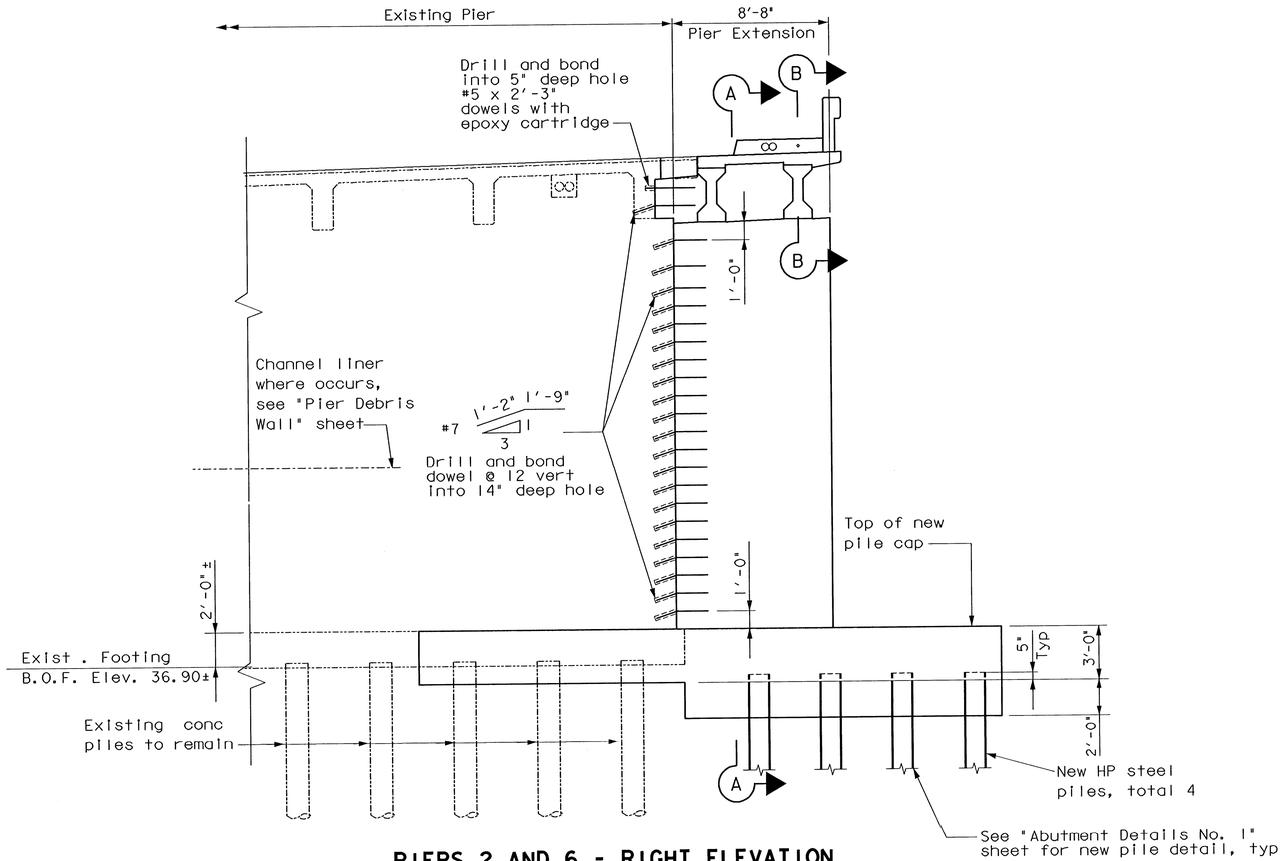
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-10

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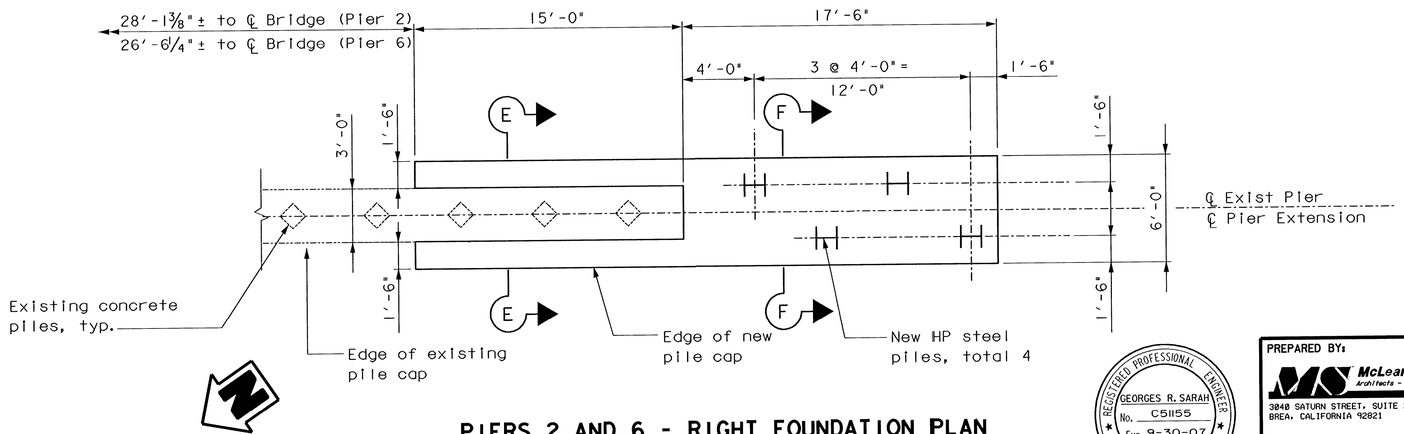
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FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4



PIERS 2 AND 6 - RIGHT ELEVATION

SCALE: 1/4"=1'-0"



PIERS 2 AND 6 - RIGHT FOUNDATION PLAN

SCALE: 1/4"=1'-0"

Notes:

1. See "Pier Details No. 1" sheet for sections A-A and B-B.
2. See "Pier Details No. 2" sheet for sections "E-E" and "F-F".

Legend:

◇ Indicates existing pile

⊢ Indicates new steel pile

NOTE:
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REGISTERED PROFESSIONAL ENGINEER
GEORGES R. SARAH
No. C51155
Exp. 9-30-07
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No.	DATE	ITEM
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DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

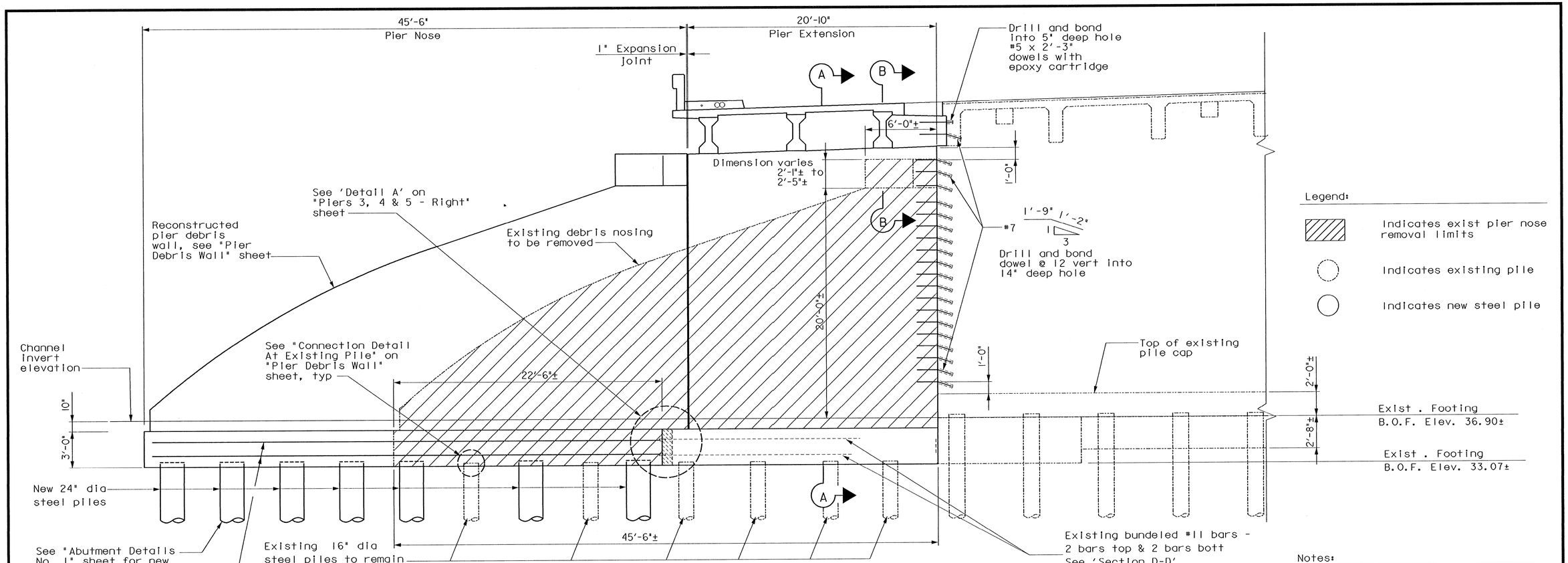
PIERS 2 AND 6 - RIGHT — SHEET NO. S-10A

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

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45A of 70

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

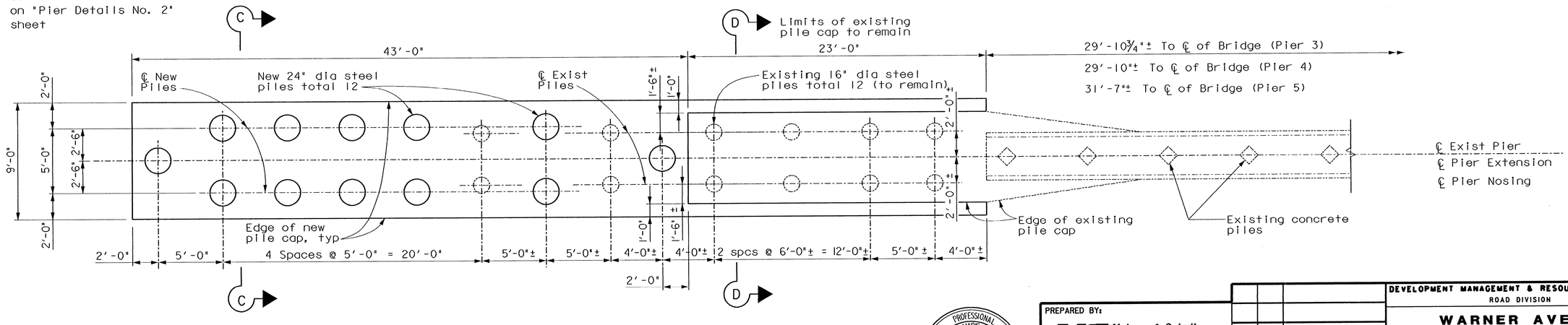


PIERS 3, 4 AND 5 - LEFT - ELEVATION

SCALE: 1/4" = 1'-0"

Notes:

1. See "Pier Details No. 1" sheet for sections A-A and B-B.
2. See "Pier Details No. 2" sheet for sections C-C and D-D.



PIERS 3, 4 AND 5 - LEFT - FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER — JEAN-MARIE SARAH — No. S 4038 — Exp. 3/31/06 — STRUCTURAL — STATE OF CALIFORNIA

PREPARED BY:
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BREA, CALIFORNIA 92821

R.C.E. NO. — DATE 6/29/05

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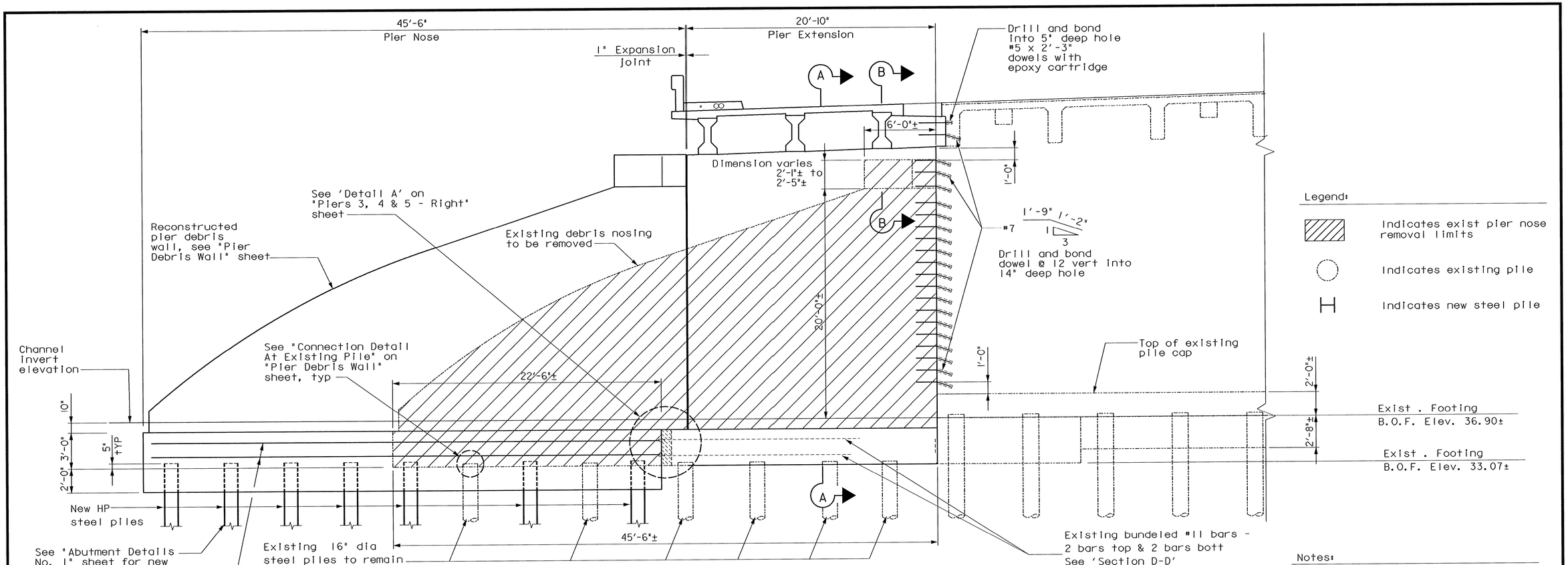
DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

PIERS 3, 4 AND 5 - LEFT
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-11

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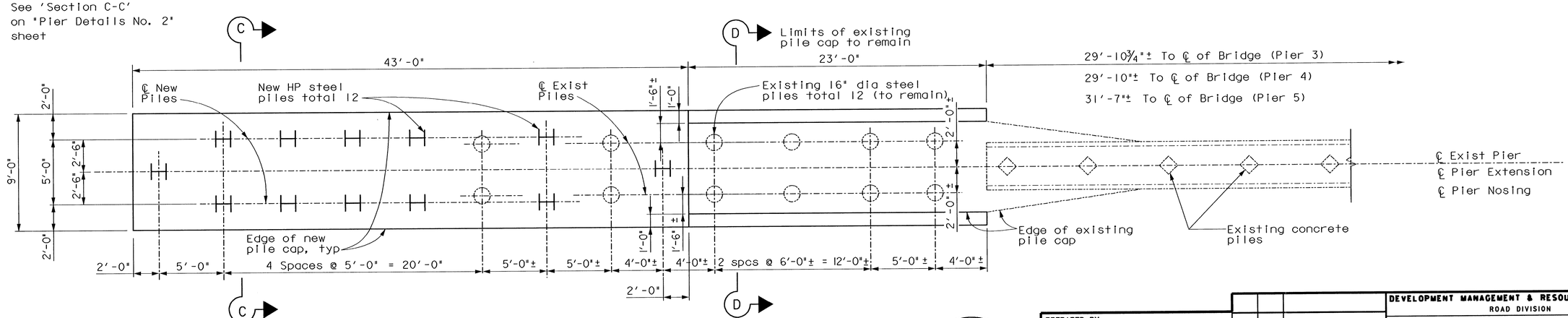


PIERS 3,4 AND 5 - LEFT - ELEVATION

SCALE: 1/4"=1'-0"

Notes:

1. See "Pier Details No. 1" sheet for sections A-A and B-B.
2. See "Pier Details No. 2" sheet for sections C-C and D-D.



PIERS 3,4 AND 5 - LEFT - FOUNDATION PLAN

SCALE: 1/4"=1'-0"

NOTE:
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FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER
GEORGES R. SARAH
No. C51155
Exp. 9-30-07
CIVIL
STATE OF CALIFORNIA

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BREA, CALIFORNIA 92821

R.C.E. NO. C51155 — DATE 11/23/05

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DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

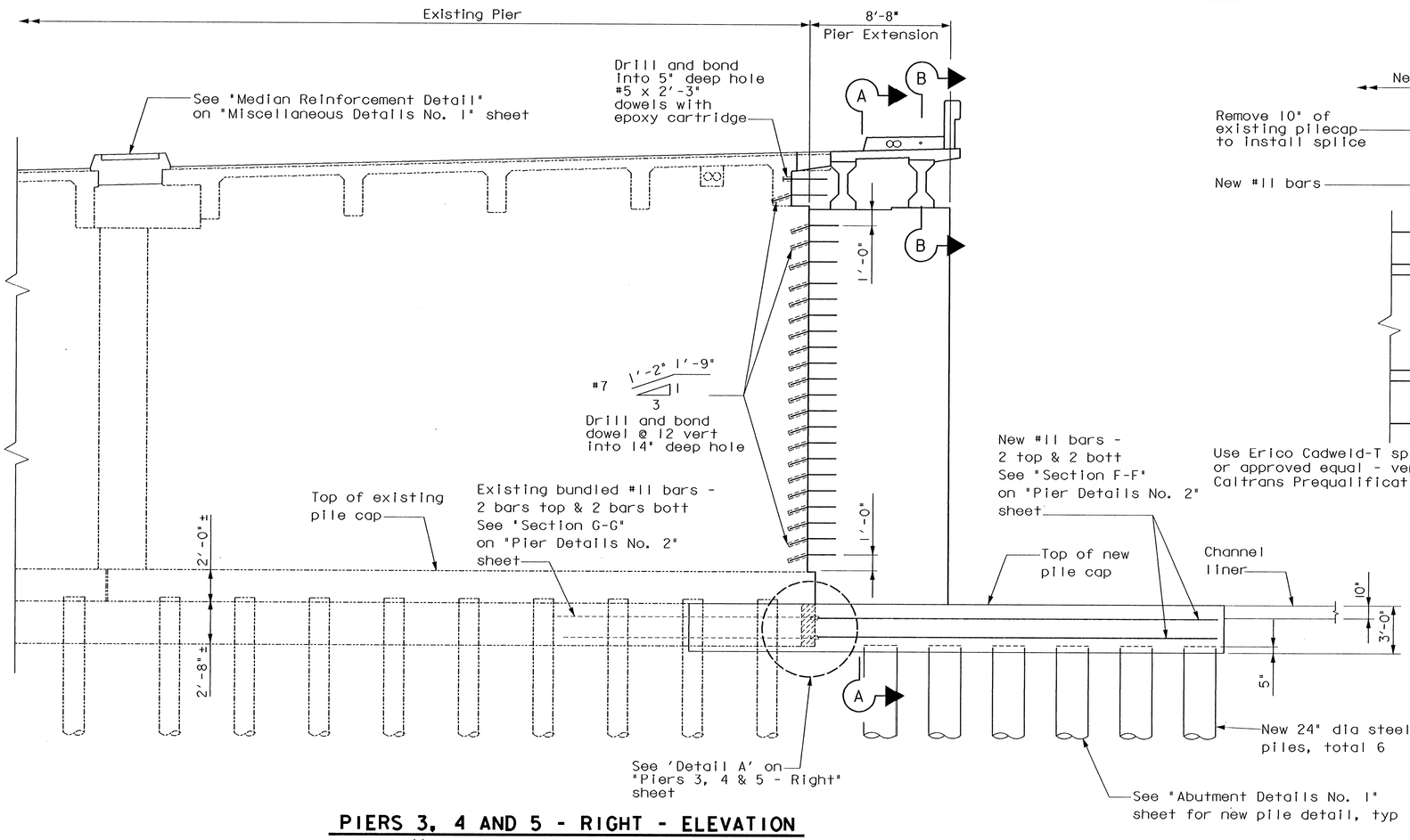
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WIDENING

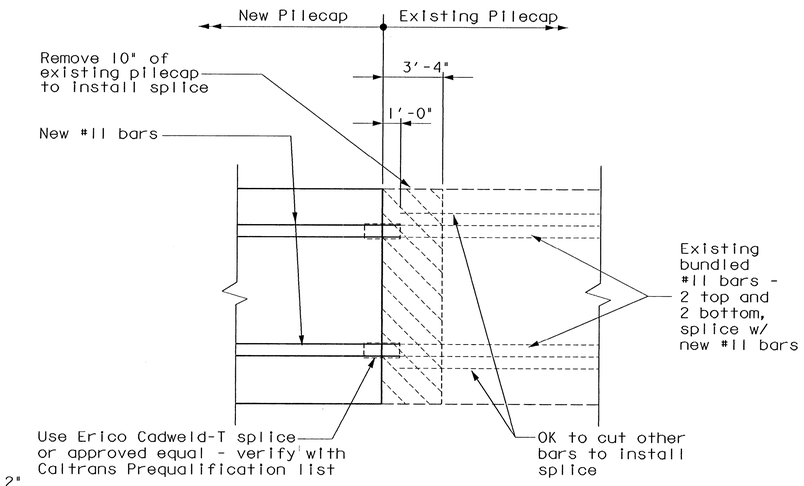
PIERS 3, 4 AND 5 - LEFT
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-11A

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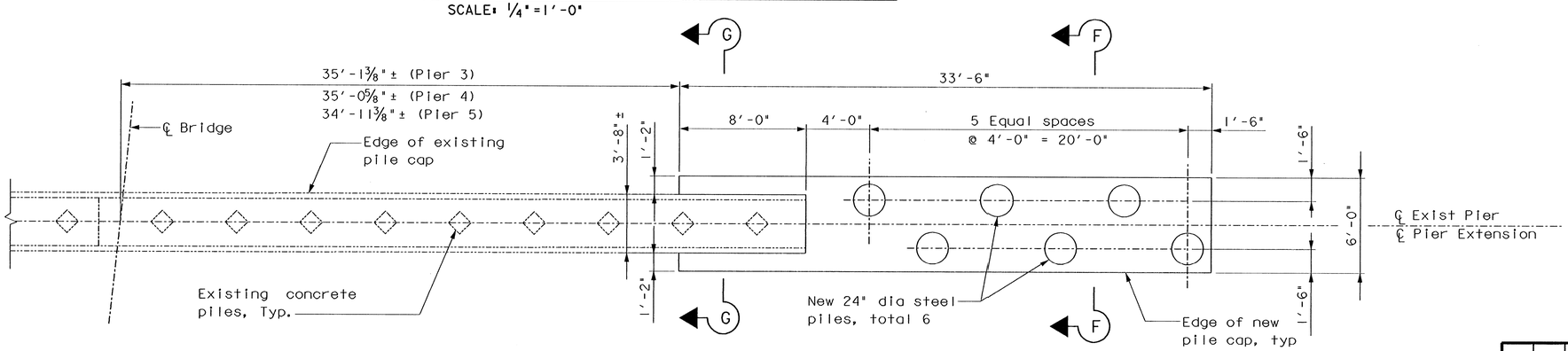


DETAIL A

SCALE: 1"=1'-0"

PIERS 3, 4 AND 5 - RIGHT - ELEVATION

SCALE: 1/4"=1'-0"



PIERS 3, 4 AND 5 - RIGHT - FOUNDATION PLAN

SCALE: 1/4"=1'-0"

Notes:

1. See "Pier Details No. 1" sheet for sections A-A and B-B.
2. See "Pier Details No. 2" sheet for sections G-G and F-F.

Legend:

- ○ Indicates new steel pile
- ◇ Indicates existing pile

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARRE No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

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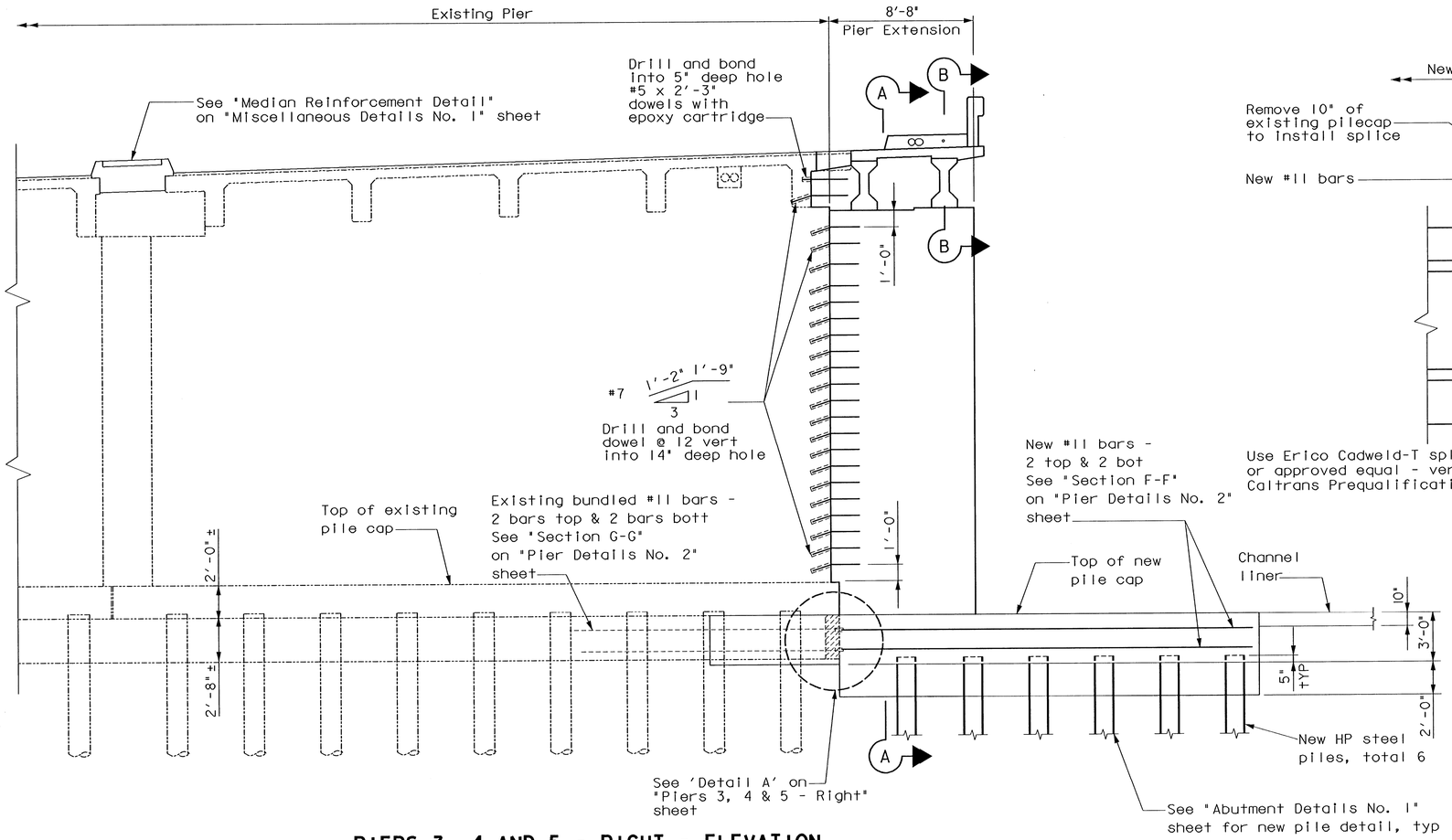
PIERS 3, 4 AND 5 - RIGHT

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-12

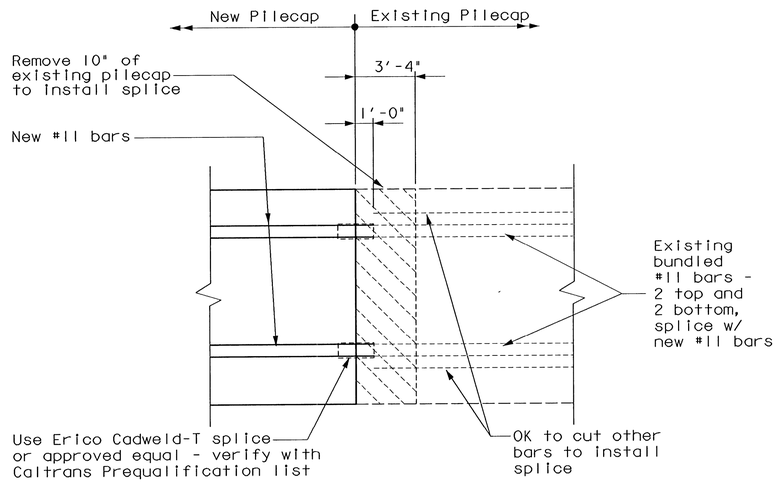
DRAWN BY:
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47 of 70



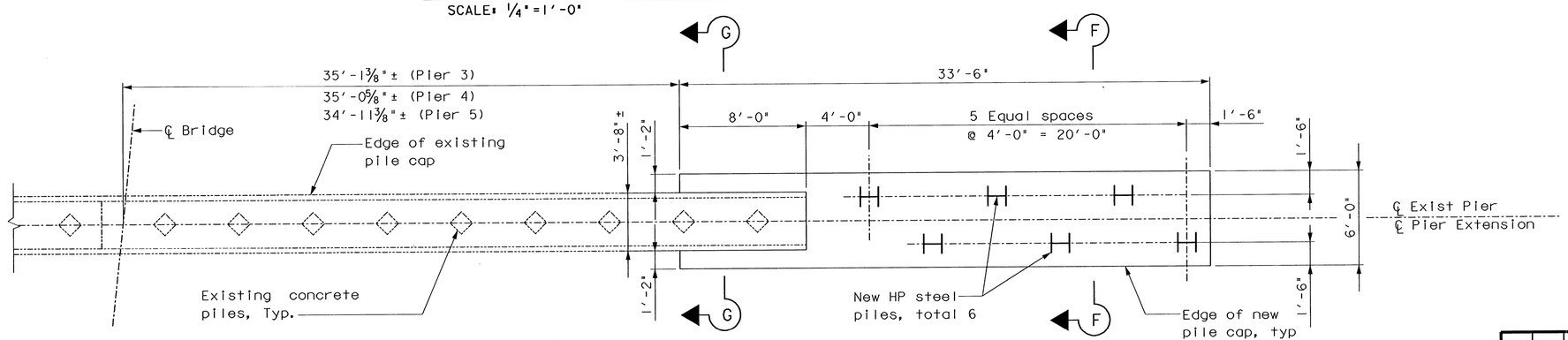
PIERS 3, 4 AND 5 - RIGHT - ELEVATION

SCALE: 1/4"=1'-0"



DETAIL A

SCALE: 1"=1'-0"



PIERS 3,4 AND 5 - RIGHT - FOUNDATION PLAN

SCALE: 1/4"=1'-0"

Notes:

1. See "Pier Details No. 1" sheet for sections A-A and B-B.
2. See "Pier Details No. 2" sheet for sections G-G and F-F.

Legend:

H — Indicates new steel pile

◇ — Indicates existing pile

NOTE:
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REGISTERED PROFESSIONAL ENGINEER
GEORGES R. SARAH
No. C51155
Exp. 9-30-07
CIVIL
STATE OF CALIFORNIA

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BREA, CALIFORNIA 92821
R.C.E. NO. C51155
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DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

PIERS 3, 4 AND 5 - RIGHT

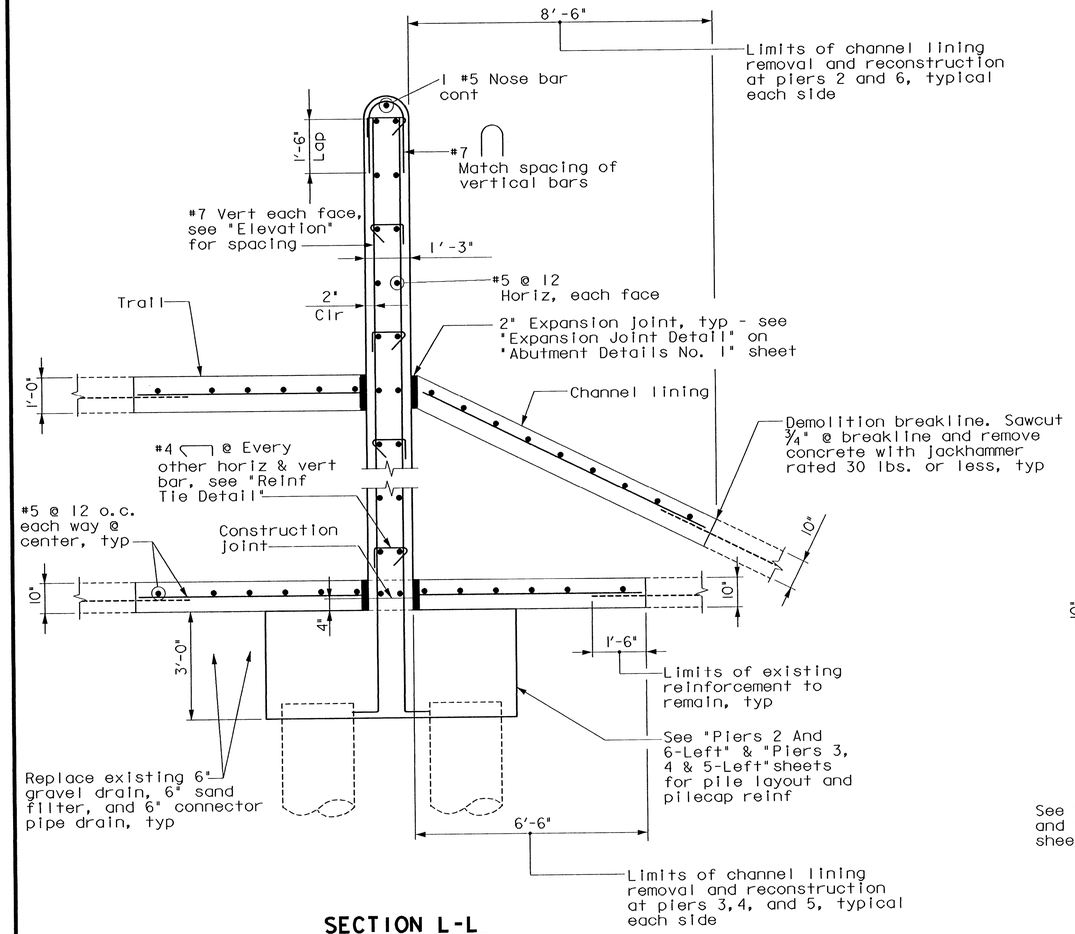
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SHEET NO. S-12A

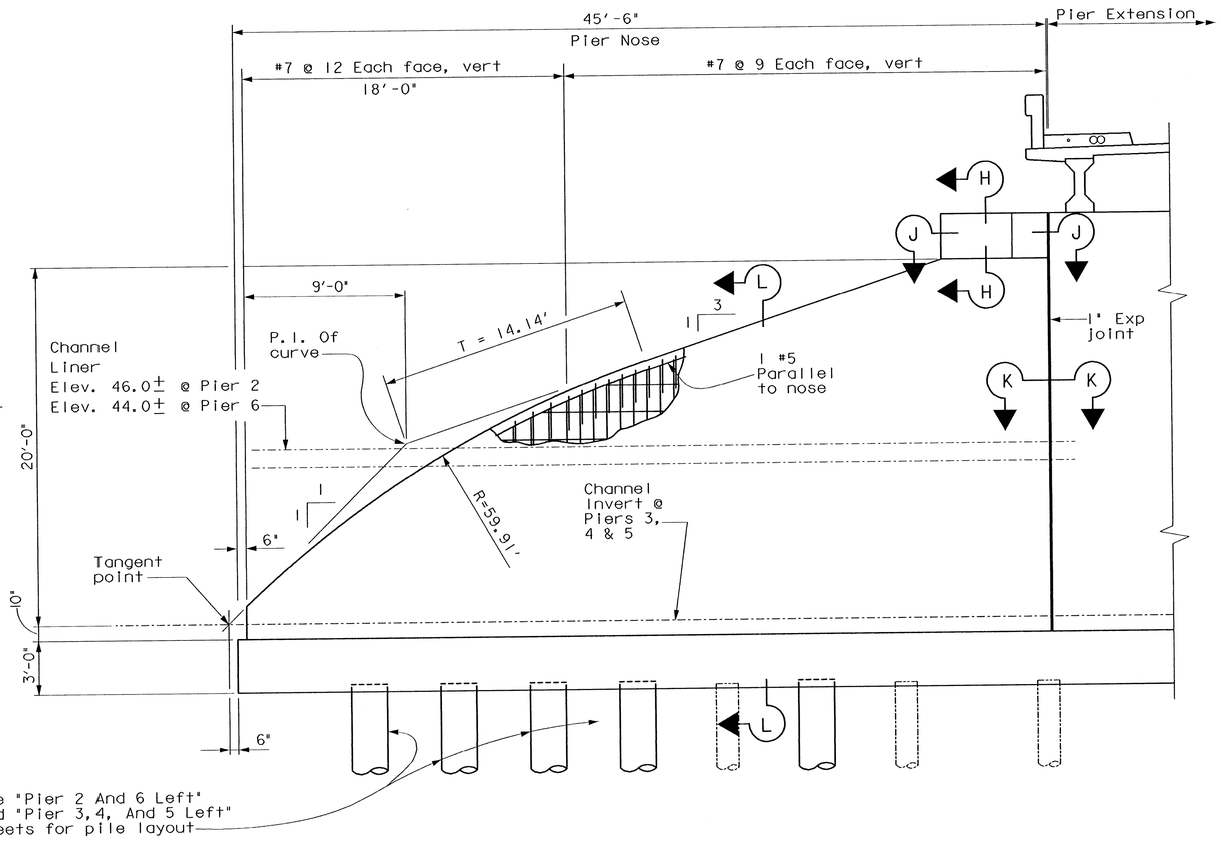
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CHECKED BY:

47A of 70

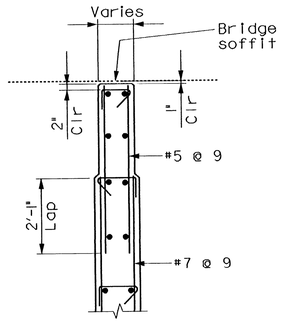
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4



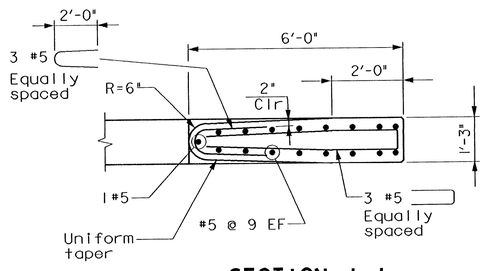
SECTION L-L
SCALE: 1/2"=1'-0"



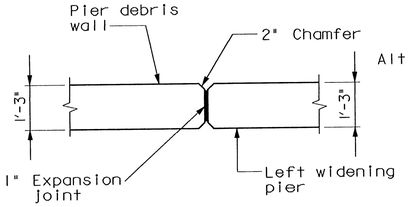
PIERS 2 & 6 - LEFT - ELEVATION (PIERS 3,4 & 5 SIM)
SCALE: 1/4"=1'-0"



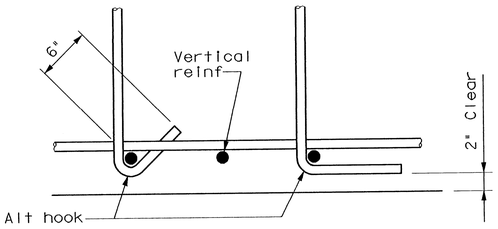
SECTION H-H
SCALE: 1/2"=1'-0"



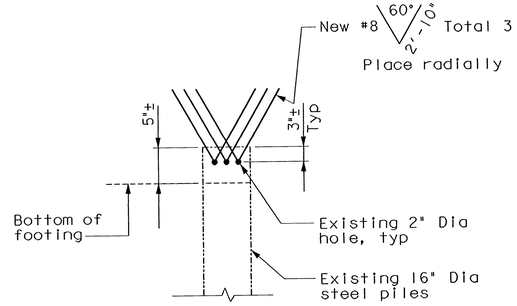
SECTION J-J
SCALE: 1/2"=1'-0"



SECTION K-K
SCALE: 1/2"=1'-0"



REINFORCEMENT TIE DETAIL
NO SCALE



CONNECTION DETAIL AT EXISTING PILE
NO SCALE

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARAH No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz
Architects - Structural Engineers
3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

JMS 6/29/05
R.C.E. NO. DATE

NO.	DATE	ITEM
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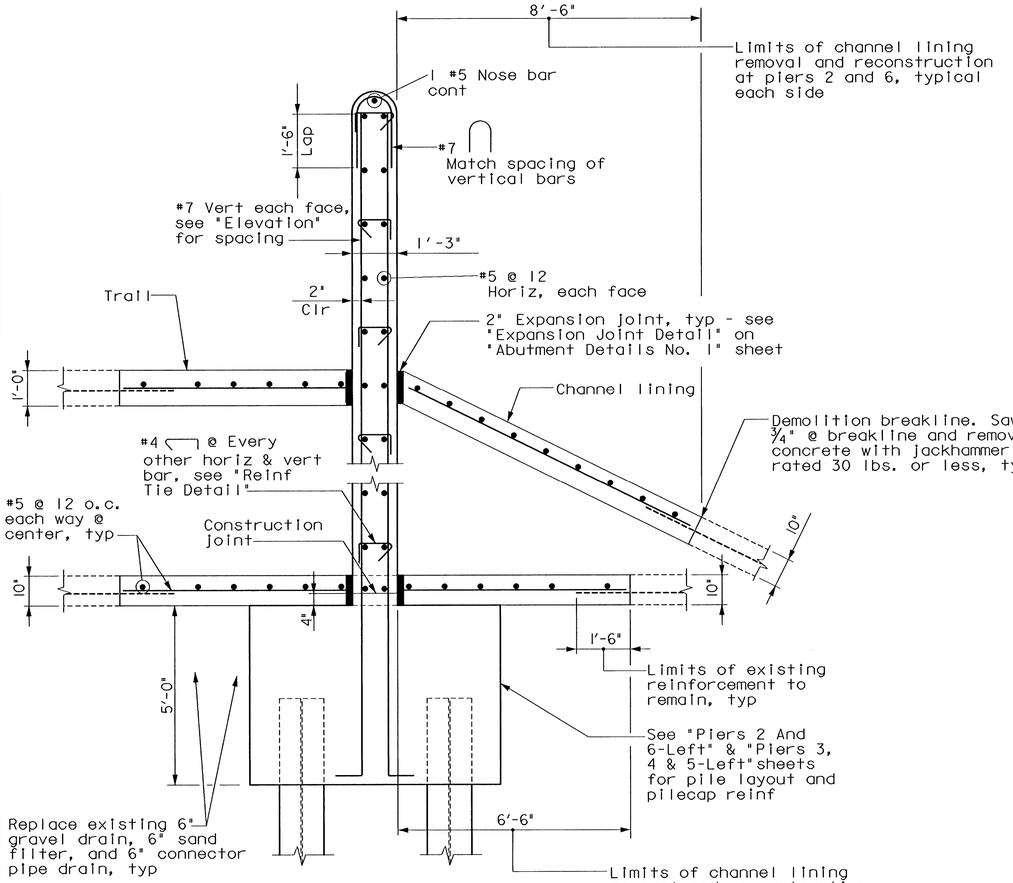
DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

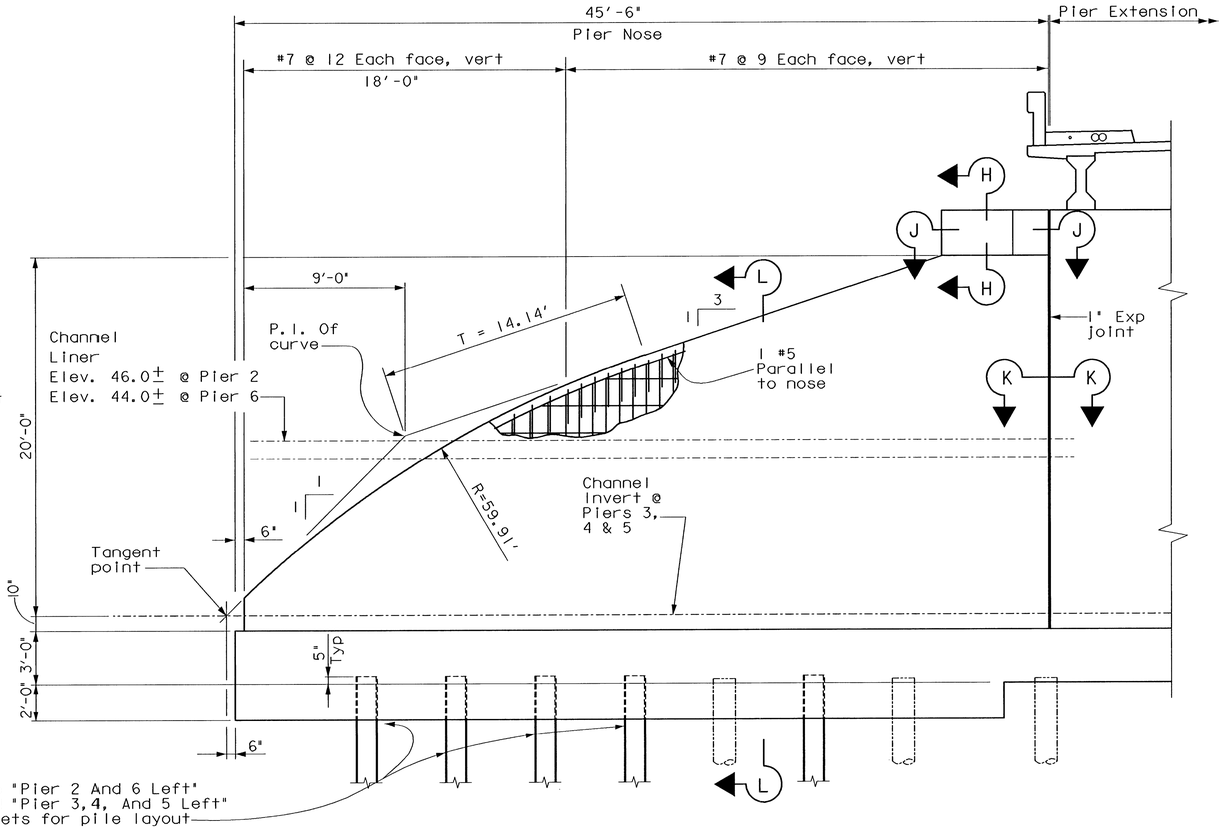
PIER DEBRIS WALL — SHEET NO. S-13

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

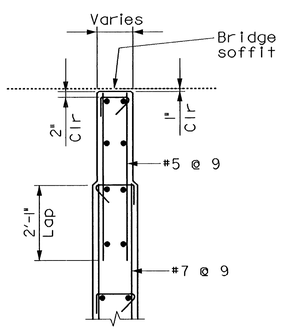
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CHECKED BY:



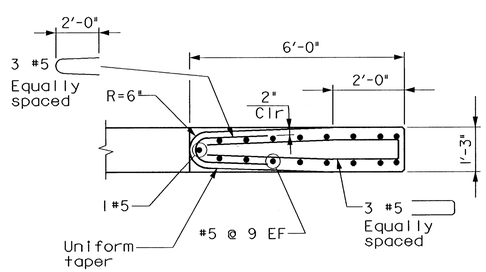
SECTION L-L
SCALE: 1/2" = 1'-0"



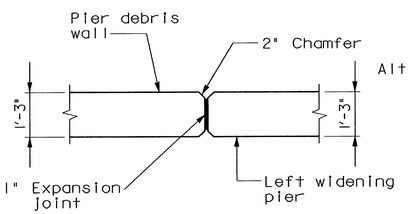
PIERS 2 & 6 - LEFT - ELEVATION (PIERS 3, 4 & 5 SIM)
SCALE: 1/4" = 1'-0"



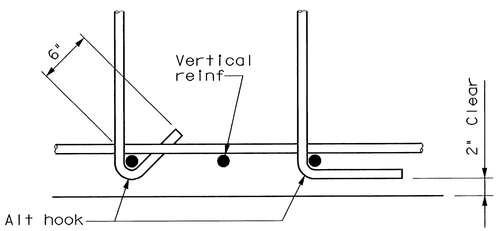
SECTION H-H
SCALE: 1/2" = 1'-0"



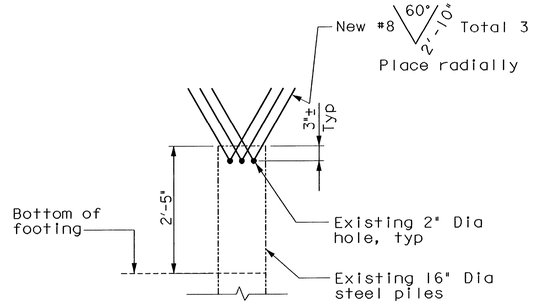
SECTION J-J
SCALE: 1/2" = 1'-0"



SECTION K-K
SCALE: 1/2" = 1'-0"



REINFORCEMENT TIE DETAIL
NO SCALE



CONNECTION DETAIL AT EXISTING PILE
NO SCALE

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER
GEORGES R. SARAH
No. C51155
Exp. 9-30-07
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz
Architects - Structural Engineers
3848 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

R.C.E. NO. C51155 — 11/23/05 DATE

NO.	DATE	ITEM

REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

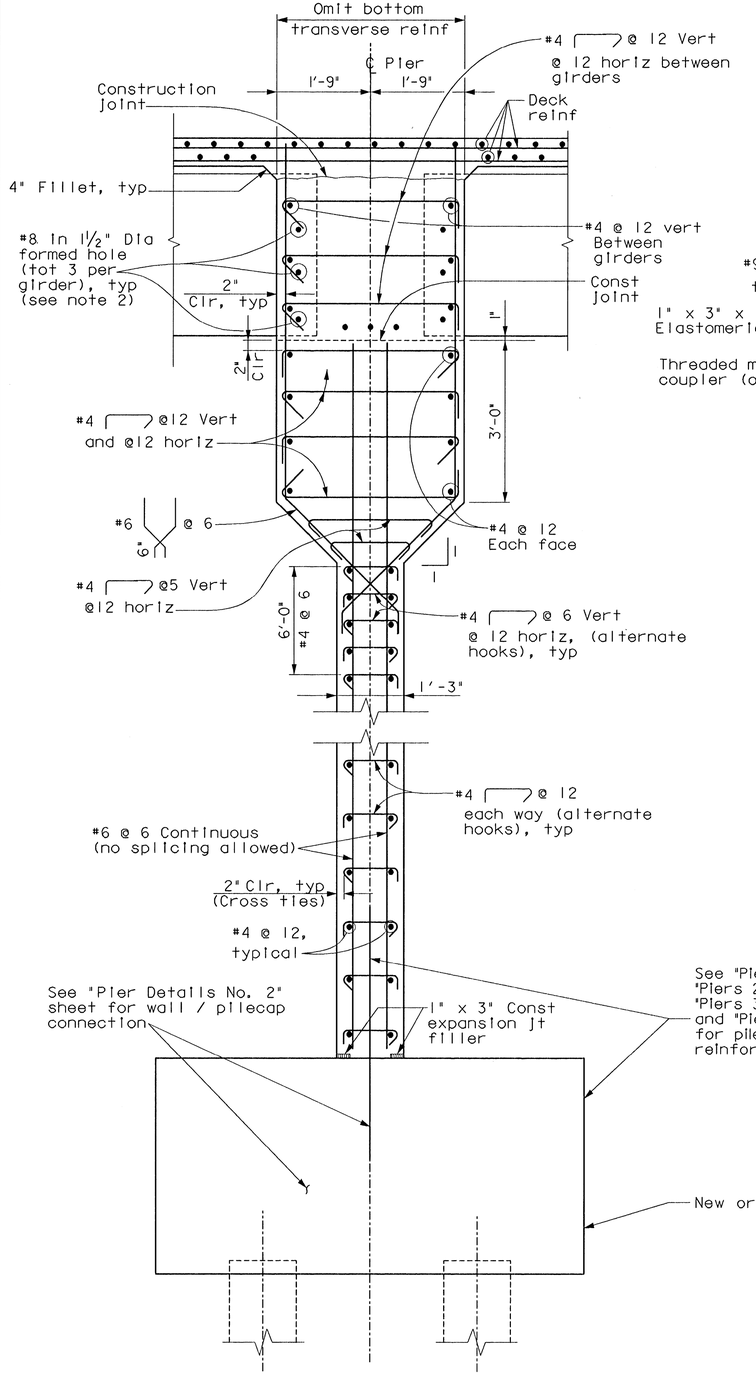
PIER DEBRIS WALL

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-13A

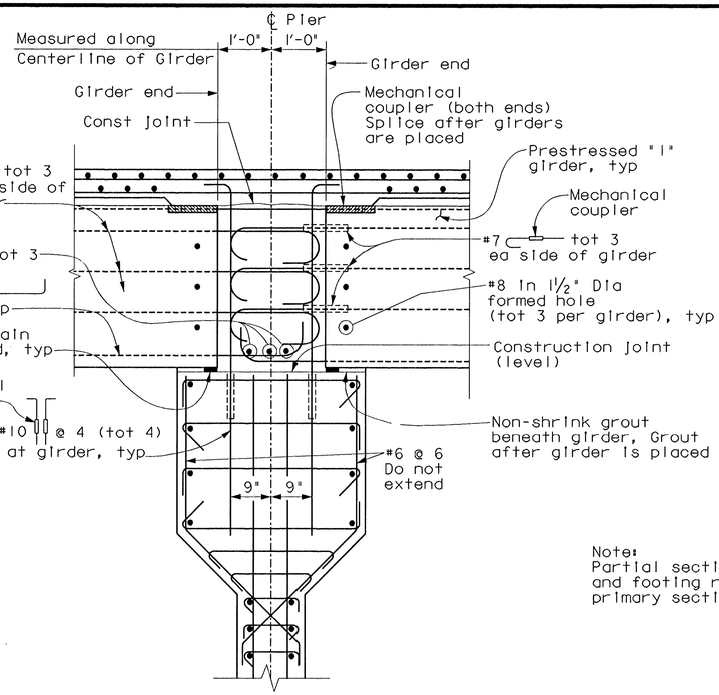
DRAWN BY:
CHECKED BY:

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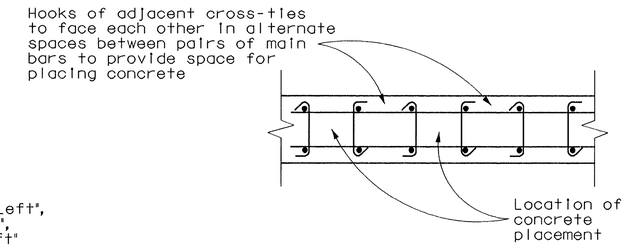
SECTION A-A PIERS 2, 4, AND 6

SCALE: ¾" = 1'-0"



PIERS 2, 4, AND 6

SCALE: ¾" = 1'-0"



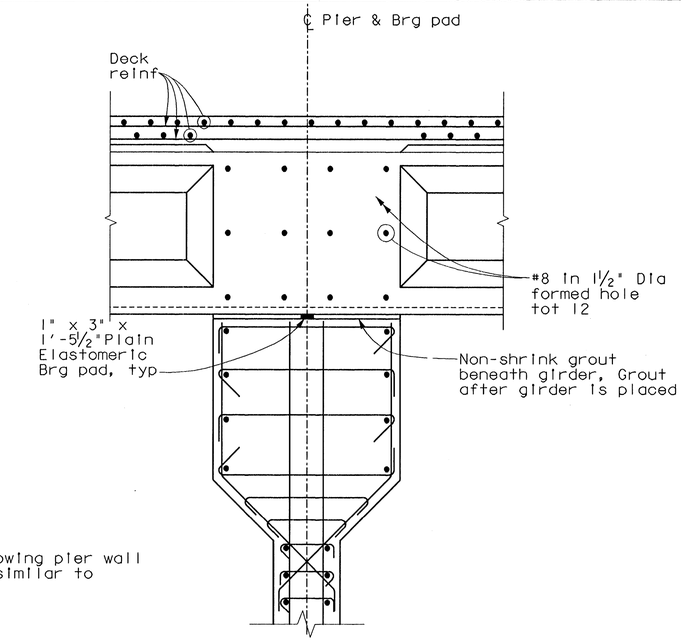
REBAR DETAIL

SCALE: ¾" = 1'-0"

Notes:

1. Contractor to provide temporary support for Pier Wall until girders are erected and all diaphragms over Pier Wall are completed before the wet season.
2. See "Prestressed I Girder No. 3" sheet for information not shown, typ.

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.



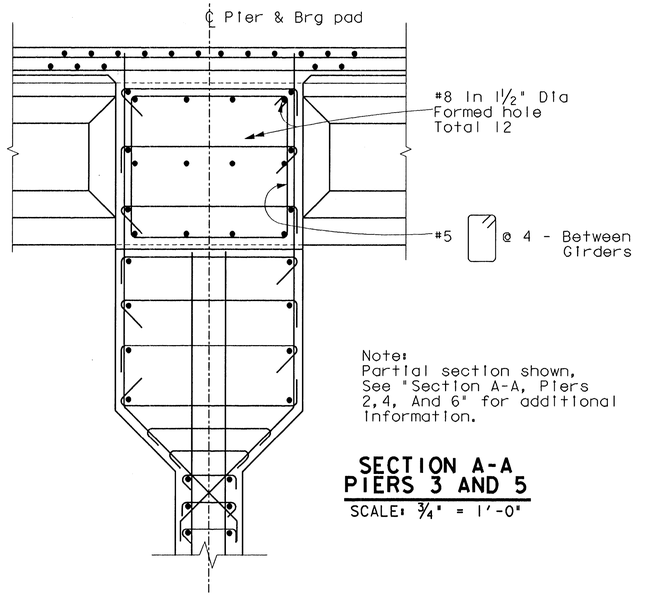
PIERS 3 AND 5

SCALE: ¾" = 1'-0"

Note:
Partial section showing pier wall and footing reinf similar to primary section.

SECTION B-B

SCALE: ¾" = 1'-0"



Note:
Partial section shown, See "Section A-A, Piers 2, 4, And 6" for additional information.

SECTION A-A PIERS 3 AND 5

SCALE: ¾" = 1'-0"

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARAT No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

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BREA, CALIFORNIA 92821

JMS
R.C.E. NO.

6/21/05
DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

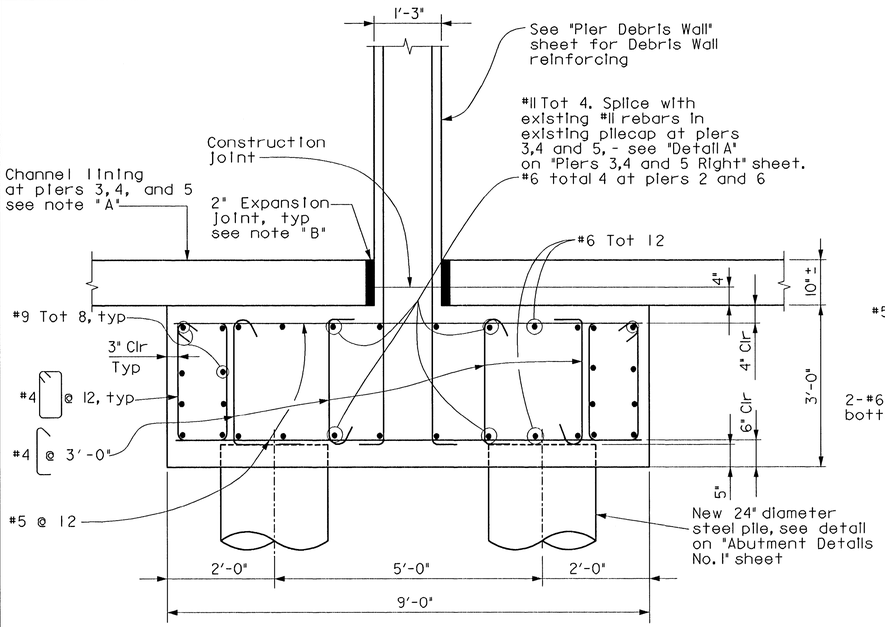
PIER DETAILS NO.1

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

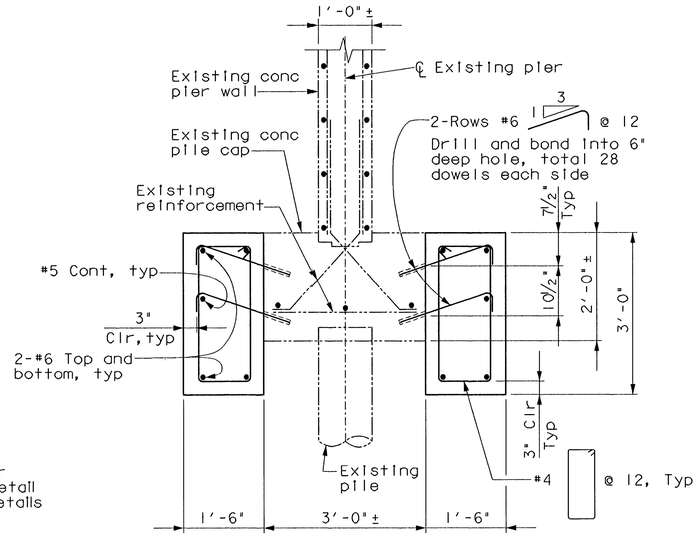
SHEET NO. S-14

DRAWN BY:
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SECTION C-C
(PIERS 2, 3, 4, 5 AND 6)
SCALE: 3/4" = 1'-0"



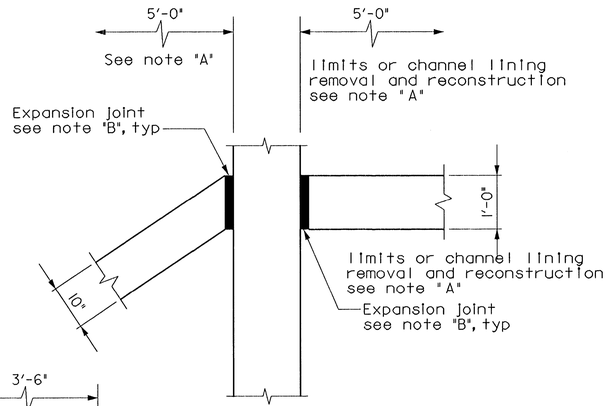
SECTION E-E
(PIERS 2 AND 6)
SCALE: 3/4" = 1'-0"

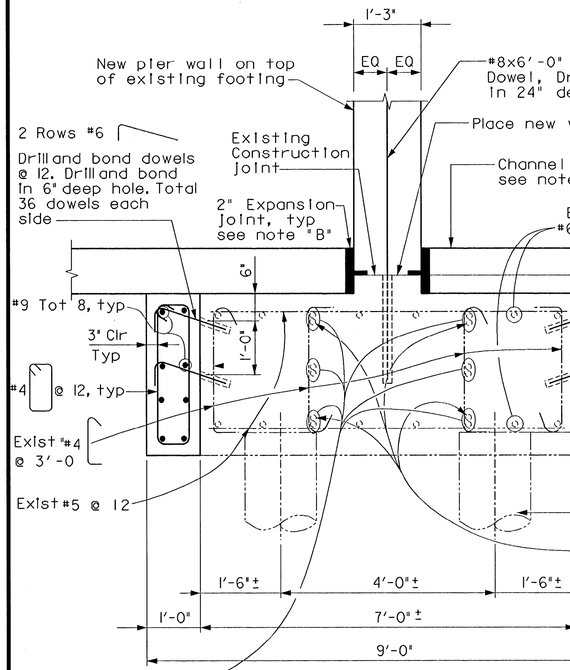
Note: For limits of channel lining reconstruction above see "Section F-F"

Notes:

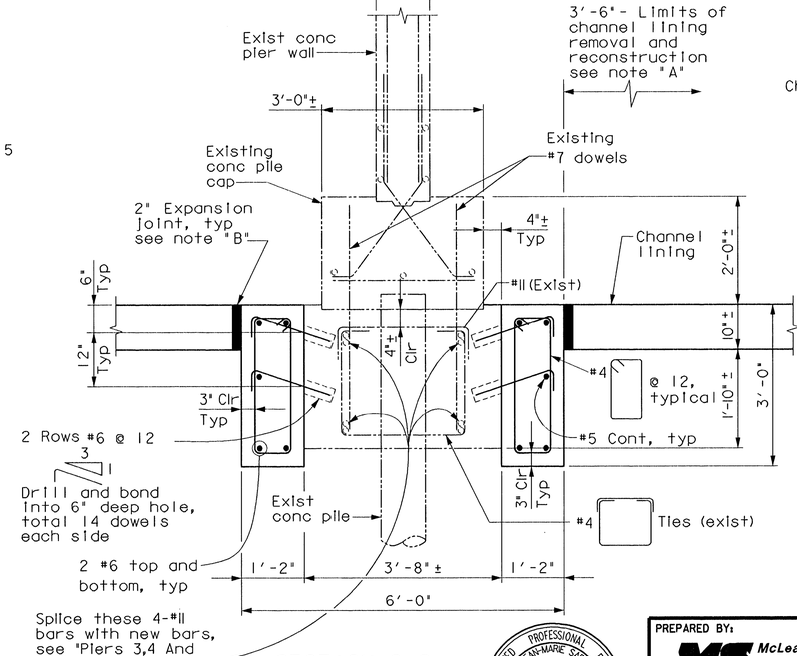
A. See "Section L-L" on Pier Debris Wall" sheet for channel lining reconstruction, details, reinforcement and notes.

B. See "Typical Expansion Joint Detail" on "Abutment Details No. 1" sheet.

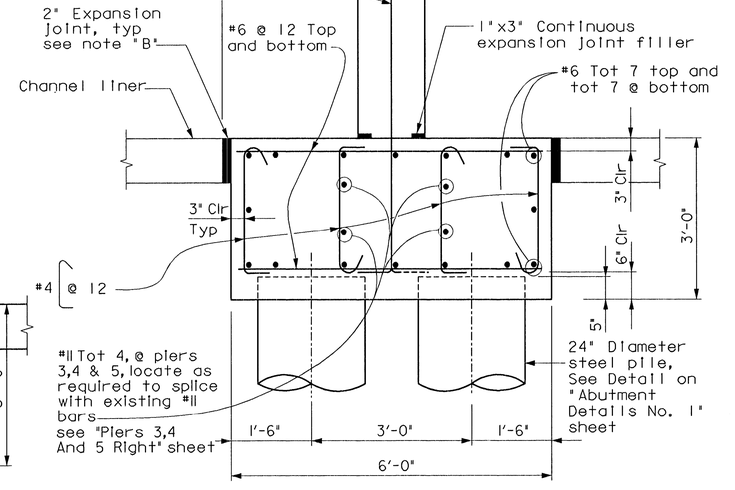




SECTION D-D
(PIERS 2, 3, 4, 5 AND 6)
SCALE: 3/4" = 1'-0"



SECTION G-G
(PIERS 3, 4 AND 5)
SCALE: 3/4" = 1'-0"



SECTION F-F
(PIERS 2, 3, 4, 5 AND 6)
SCALE: 3/4" = 1'-0"

NOTE:
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FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER — JEAN-MARIE SARAH — No. S 4038 — Exp. 3/31/06 — STRUCTURAL — STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz
Architects · Structural Engineers
3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

JMS — R.C.E. NO.
6/21/05 — DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

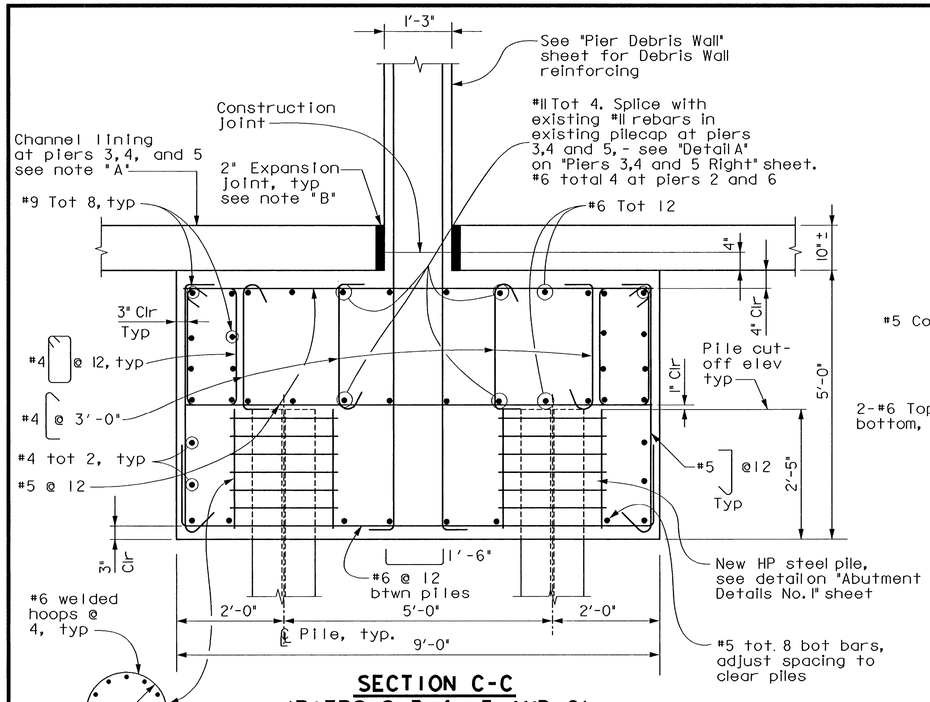
PIER DETAILS NO. 2

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

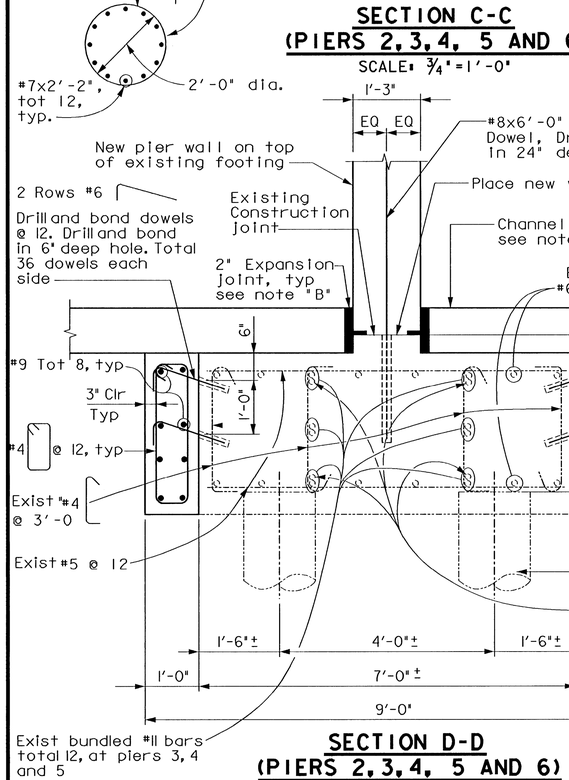
SHEET NO. S-15

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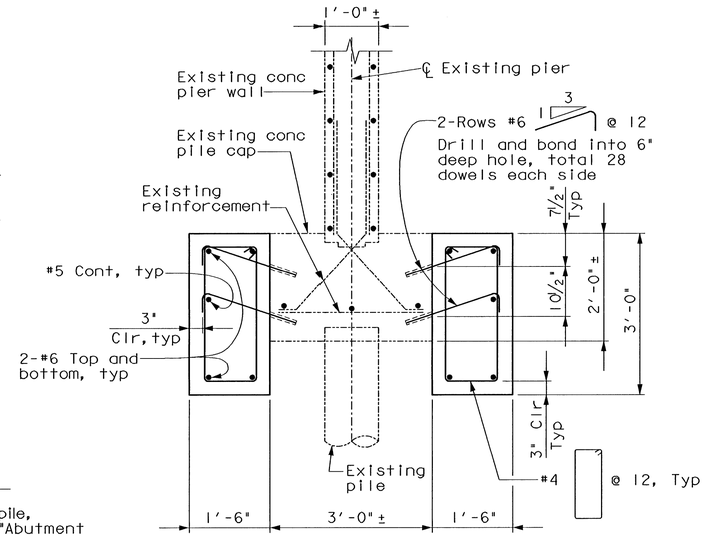
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SECTION C-C
(PIERS 2, 3, 4, 5 AND 6)
SCALE: 3/4"=1'-0"

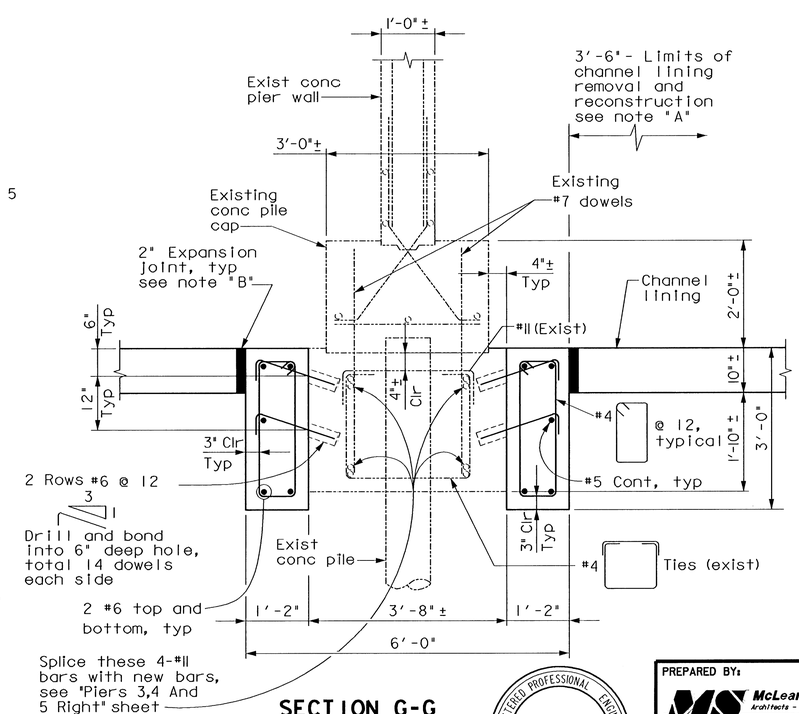


SECTION D-D
(PIERS 2, 3, 4, 5 AND 6)
SCALE: 3/4"=1'-0"



SECTION E-E
(PIERS 2 AND 6)
SCALE: 3/4"=1'-0"

Note: For limits of channel lining reconstruction above see "Section F-F"



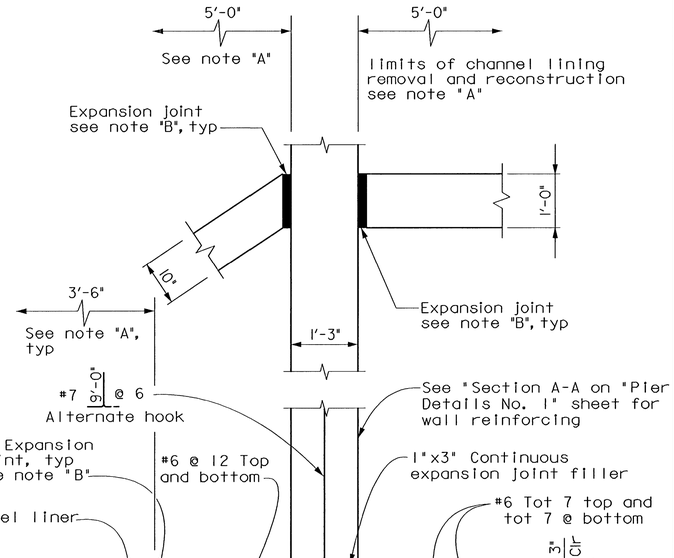
SECTION G-G
(PIERS 3, 4 AND 5)
SCALE: 3/4"=1'-0"

REGISTERED PROFESSIONAL ENGINEER
GEORGES R. SARAH
No. C51155
Exp. 9-30-07
CIVIL
STATE OF CALIFORNIA

Notes:

A. See "Section L-L" on "Pier Debris Wall" sheet for channel lining reconstruction, details, reinforcement and notes.

B. See "Typical Expansion Joint Detail" on "Abutment Details No. 1" sheet.



SECTION F-F
(PIERS 2, 3, 4, 5 AND 6)
SCALE: 3/4"=1'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PREPARED BY:
McLean & Schultz Architects - Structural Engineers
3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821
R.C.E. NO. C51155 — 11/23/05 DATE

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ROAD DIVISION

WARNER AVENUE
WIDENING

PIER DETAILS NO. 2
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-15A

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CHECKED BY:

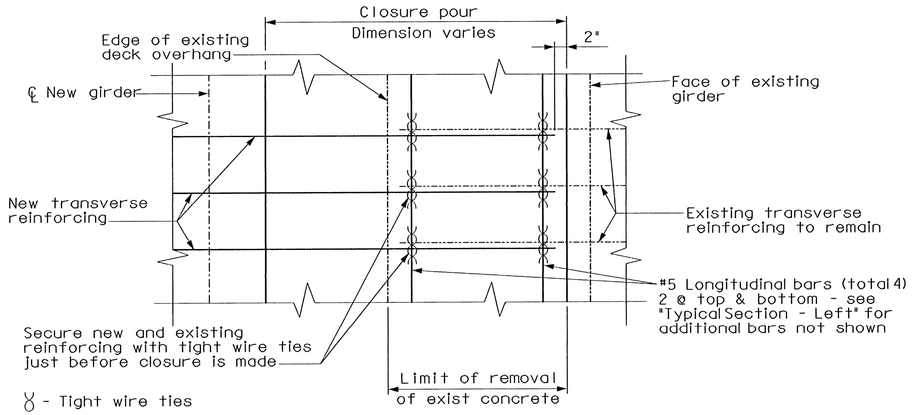
50A of 70

NOTES:

1. For deck longitudinal reinforcement not indicated, see "Longitudinal Deck Reinforcement No.3" sheet.
2. Remove exist deck overhang along a straight line. Protect all existing transverse reinforcement. Only ½" sawcut allowed before concrete removal.
3. Protect all existing transverse reinforcement while removing overhang portion. Lap and secure new transverse reinforcement to existing transverse reinforcement.
4. Existing longitudinal reinforcement at closure pour shall be replaced as shown.
5. Prepare concrete surface and place 1" polyester concrete overlay.
6. See "Longitudinal Deck Reinforcement No.1, No.2, and No.3" sheets for additional longitudinal reinforcement information.
7. Coordinate location of handrail posts between electrolier anchor bolts.

LEGEND:

- Indicates limits of bridge removal (portion)
- Indicates existing structure
- Indicates new construction

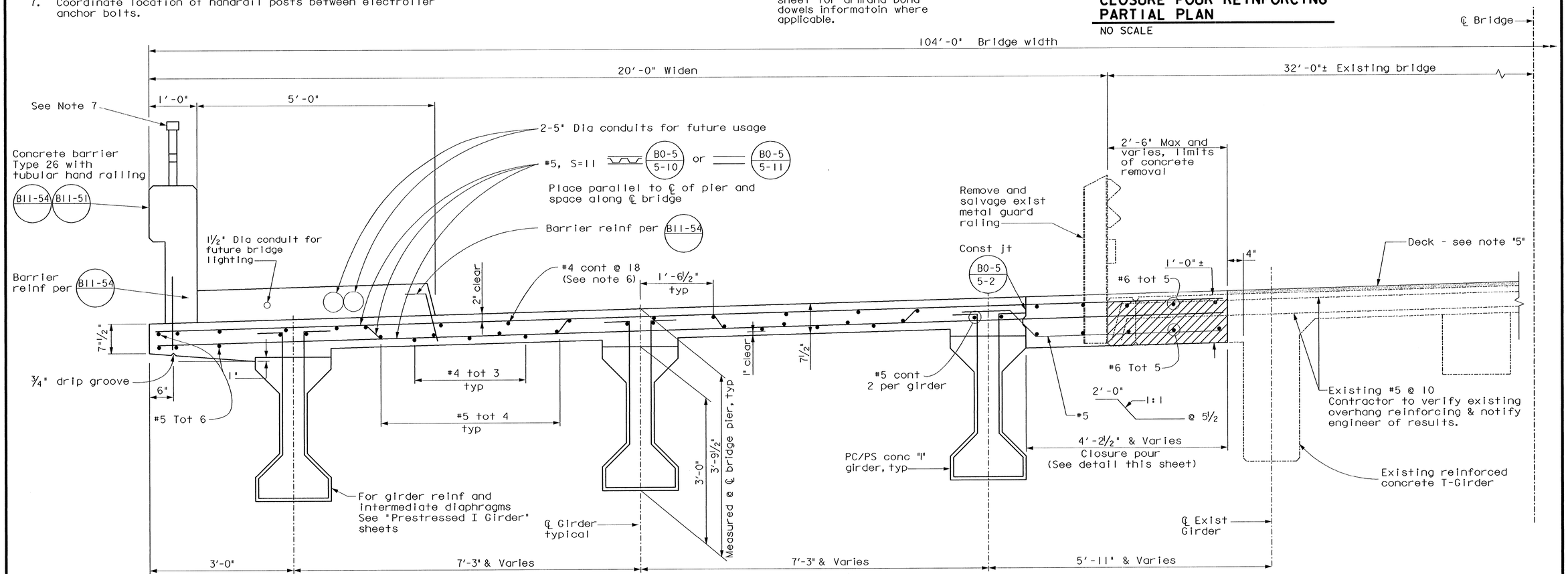


NOTE:

This detail occurs between abutment land pier 4. See "Longitudinal Deck Reinforcement No.3" sheet for drill and bond dowels informatoin where applicable.

CLOSURE POUR REINFORCING PARTIAL PLAN

NO SCALE



TYPICAL SECTION - LEFT

SCALE: 1"=1'-0"

B0-5 B11-51 B11-54 ES-6B

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARKAR No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:

McLean & Schultz Architects - Structural Engineers

3840 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

R.C.E. NO. 6/29/05 DATE

NO.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

TYPICAL SECTION - LEFT

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-16

DRAWN BY:
CHECKED BY:

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LEGEND:

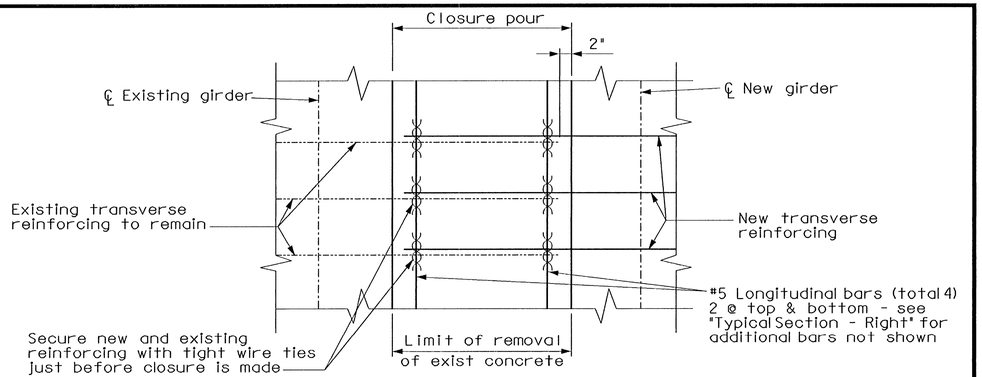
Indicates limits of bridge removal (portion)

Indicates existing structure

Indicates new construction

NOTES:

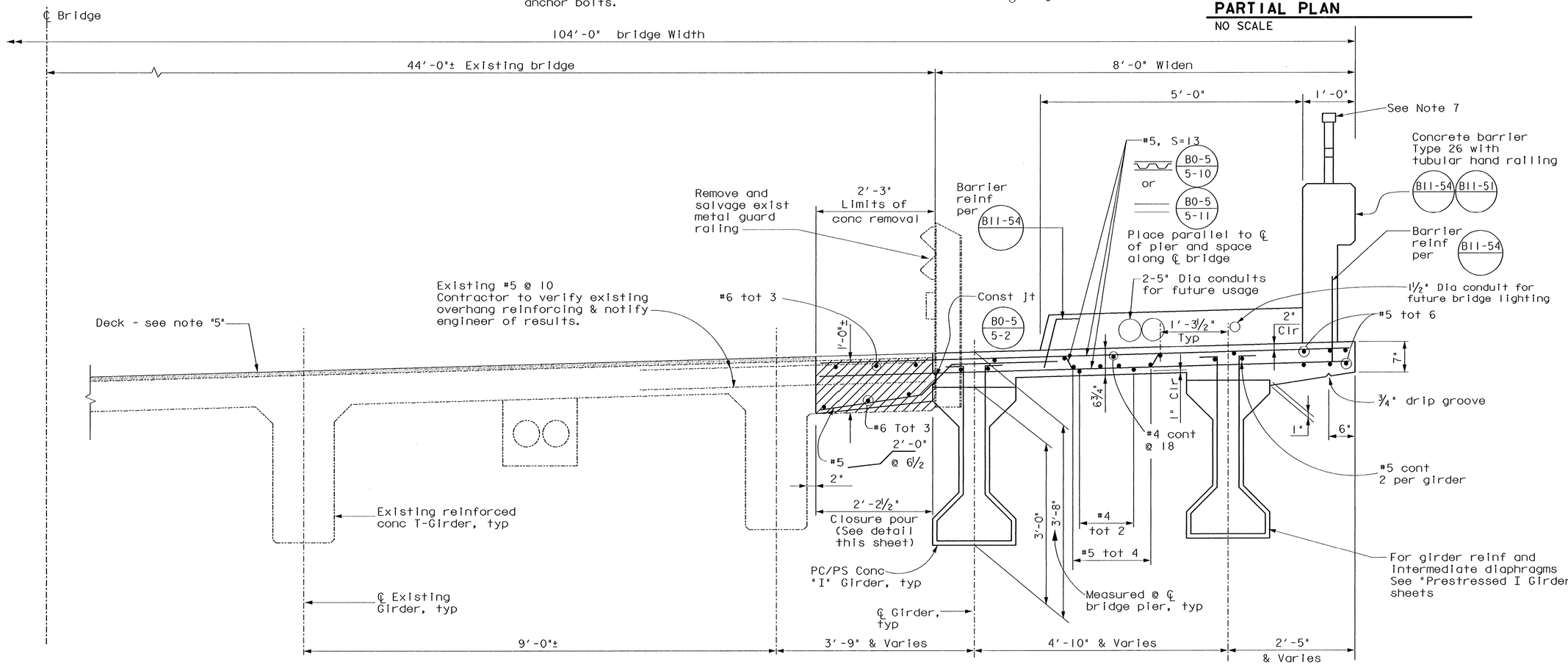
1. For deck longitudinal reinforcement not indicated, see "Longitudinal Deck Reinforcement No.3" sheet.
2. Remove exist deck overhang along a straight line. Protect all existing transverse reinforcement. Only ½" sawcut allowed before concrete removal.
3. Protect all existing transverse reinforcement while removing overhang portion. Lap and secure new transverse reinforcement to existing transverse reinforcement.
4. Existing longitudinal reinforcement at closure pour shall be replaced as shown.
5. Prepare concrete deck surface and place 1" polyester concrete overlay.
6. See "Longitudinal Deck Reinforcement No.1, No.2, and No.3" sheet for additional longitudinal reinforcement information.
7. Coordinate location of handrail posts between electrolier anchor bolts.



⊗ - Tight wire ties

CLOSURE POUR REINFORCING PARTIAL PLAN

NO SCALE



TYPICAL SECTION - RIGHT

SCALE: 1"=1'-0"

B0-5 B11-51 B11-54 ES-6B

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARAH No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz Architects - Structural Engineers
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BREA, CALIFORNIA 92821

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No.	DATE	ITEM
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DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

TYPICAL SECTION - RIGHT

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-17

DRAWN BY:
CHECKED BY:

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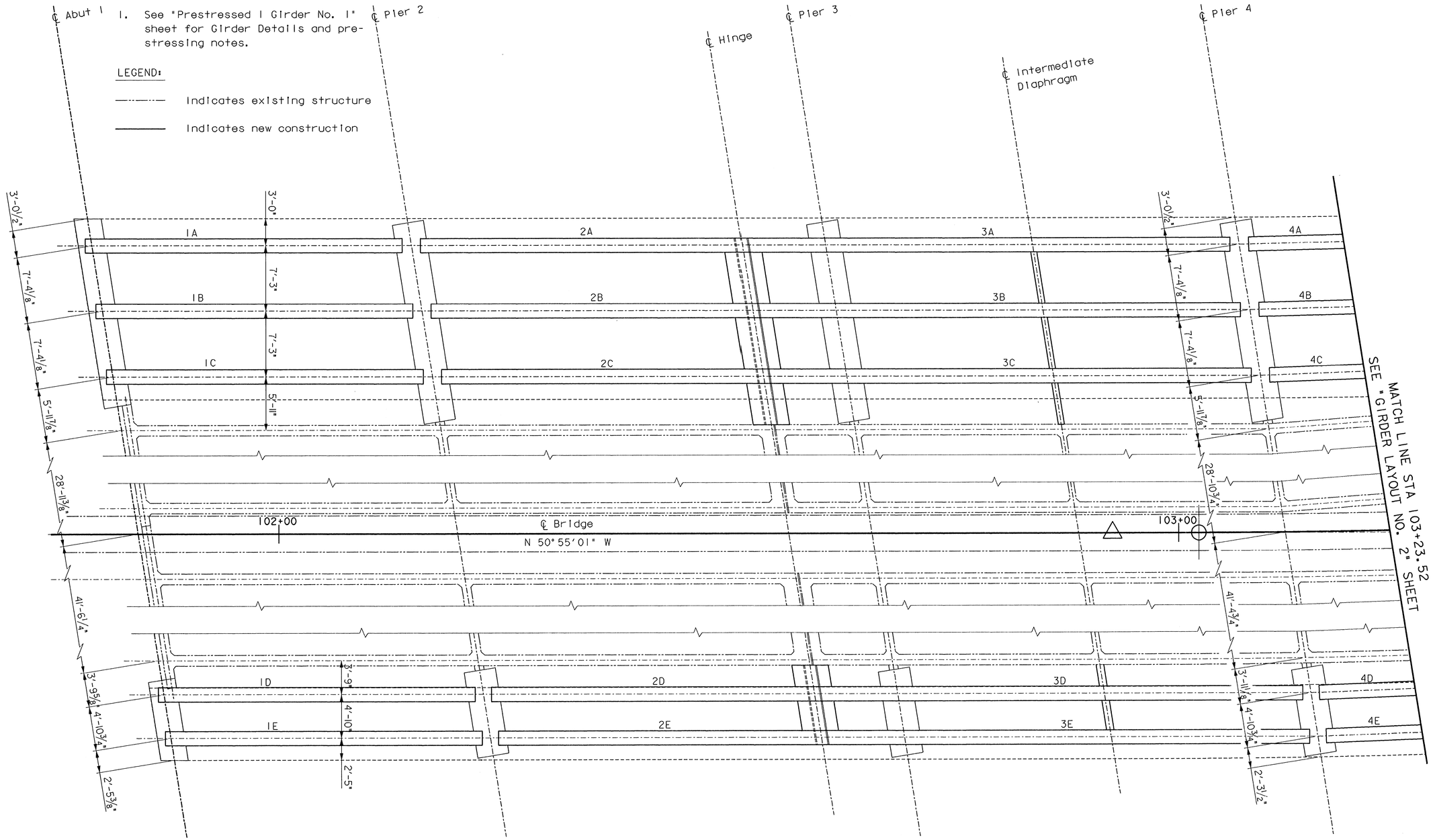
NOTES:

1. See "Prestressed I Girder No. 1" sheet for Girder Details and prestressing notes.

LEGEND:

——·——·—— Indicates existing structure

——————— Indicates new construction



GIRDER LAYOUT B0-5

SCALE: 3/16" = 1'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARAT No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz Architects - Structural Engineers
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BREA, CALIFORNIA 92821

R.C.E. NO. DATE 6/21/05

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

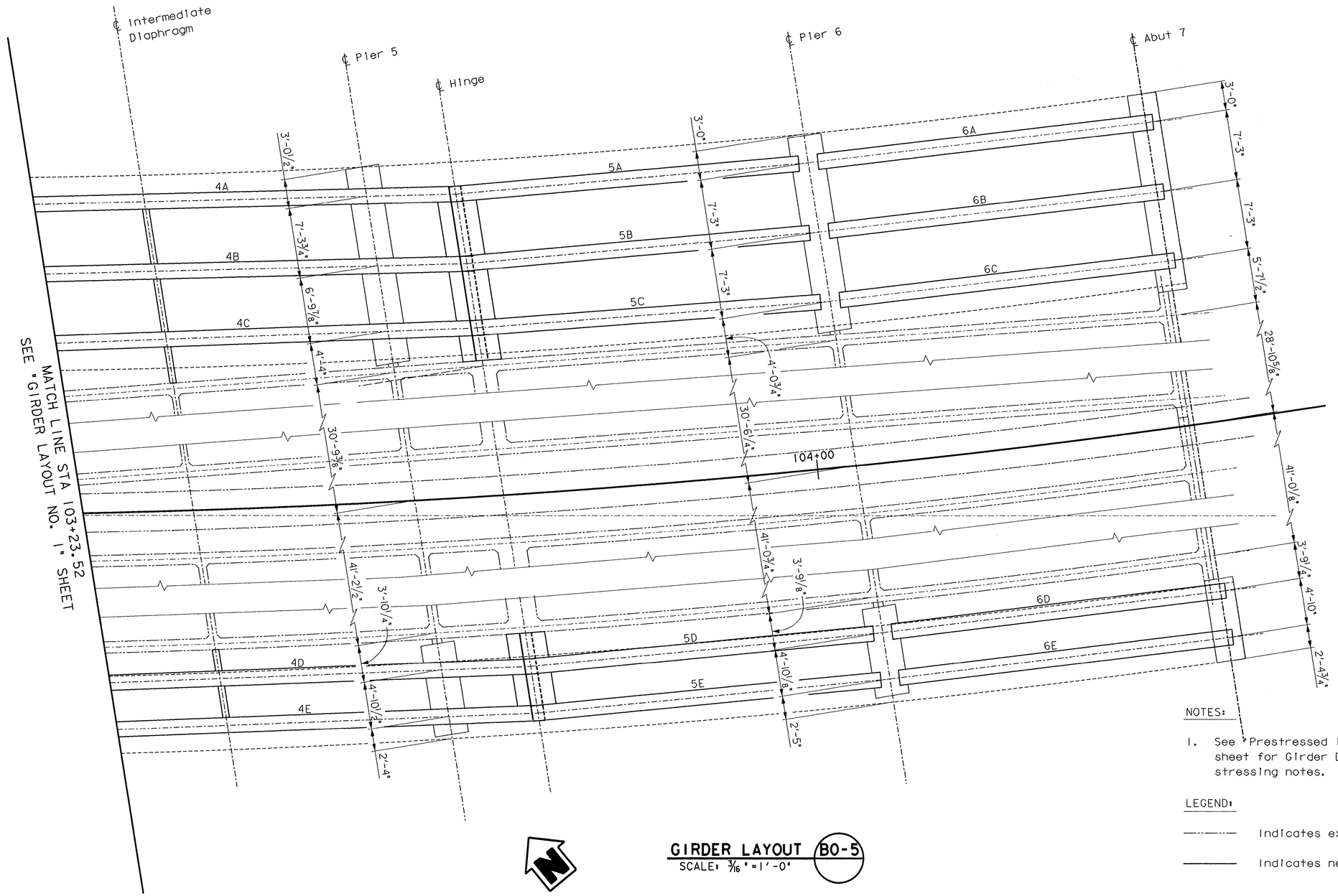
GIRDER LAYOUT NO. 1

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-18

DRAWN BY:
CHECKED BY:

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NOTES:

1. See "Prestressed I Girder No. 1" sheet for Girder Details and prestressing notes.

LEGEND:

———·——·—— Indicates existing structure

——————— Indicates new construction

GIRDER LAYOUT B0-5

SCALE: 3/16"=1'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARAH No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
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WARNER AVENUE
WIDENING

GIRDER LAYOUT NO. 2
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-19

DRAWN BY:
CHECKED BY:

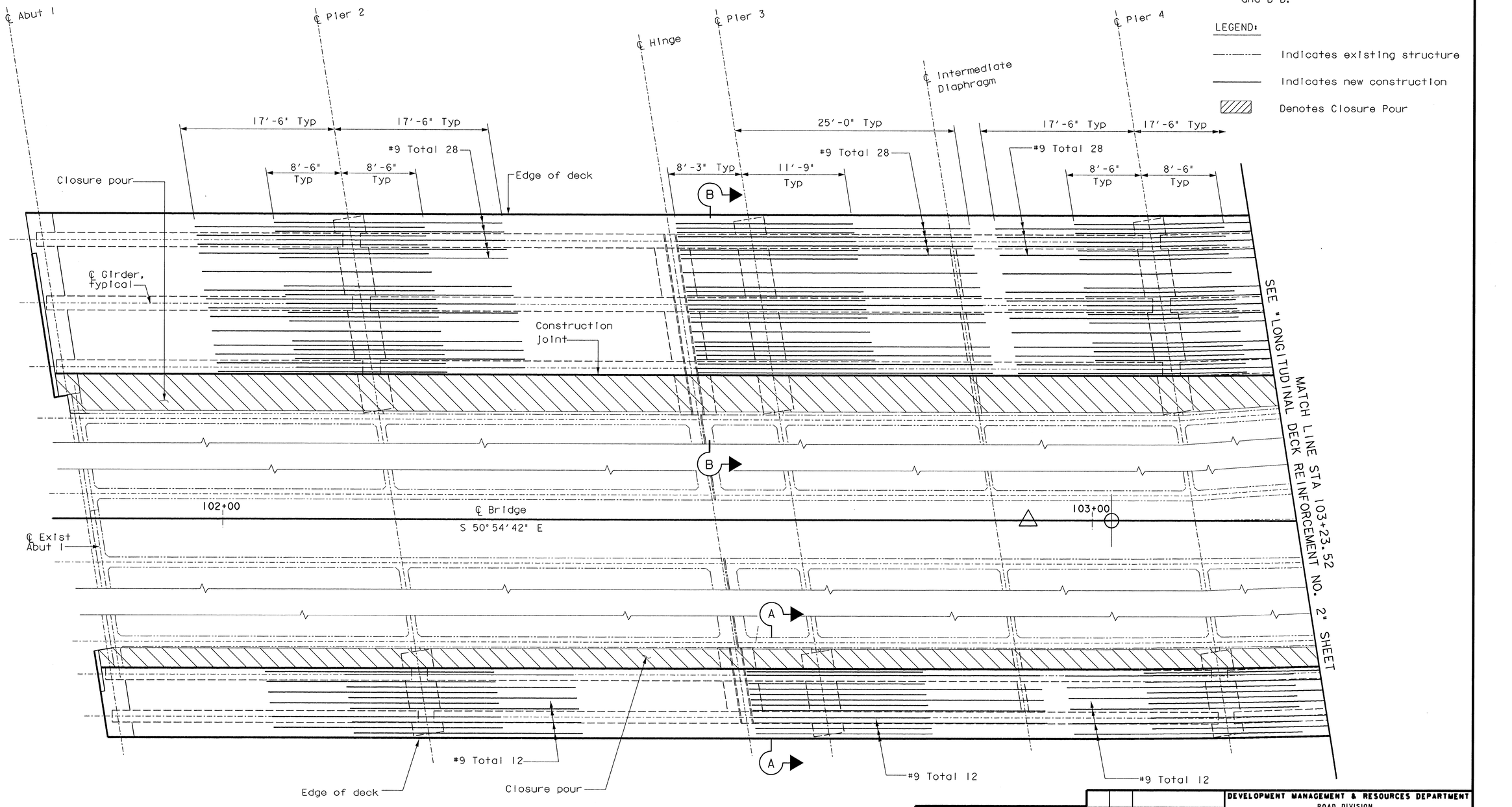
54 of 70

NOTES:

1. See "Longitudinal Deck Reinforcement No. 3" sheet for Sections A-A and B-B.

LEGEND:

- Indicates existing structure
- Indicates new construction
- Denotes Closure Pour



NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

DECK REINFORCEMENT

SCALE: 3/16" = 1′-0"

B0-5

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R.C.E. NO. — DATE

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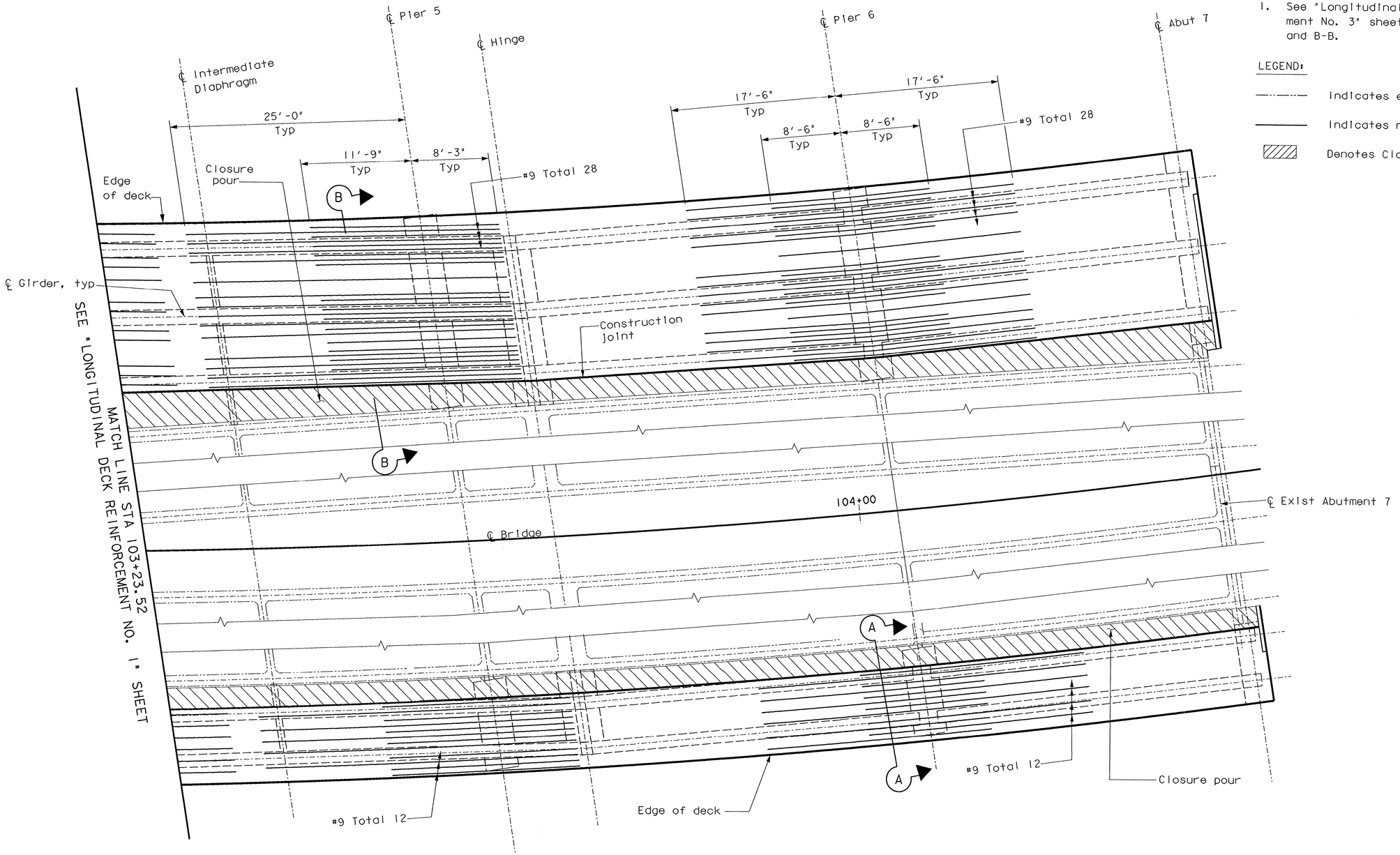
DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

LONGITUDINAL DECK REINFORCEMENT NO. 1
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-20

DRAWN BY:
CHECKED BY:



NOTES:

1. See "Longitudinal Deck Reinforcement No. 3" sheet for Sections A-A and B-B.

LEGEND:

- Indicates existing structure
- Indicates new construction
- Denotes Closure Pour

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

DECK REINFORCEMENT

SCALE: 3/16" = 1'-0"

B0-5

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARAH No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
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3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92021

R.C.E. NO. DATE 6/21/05

No.	DATE	ITEM

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ROAD DIVISION

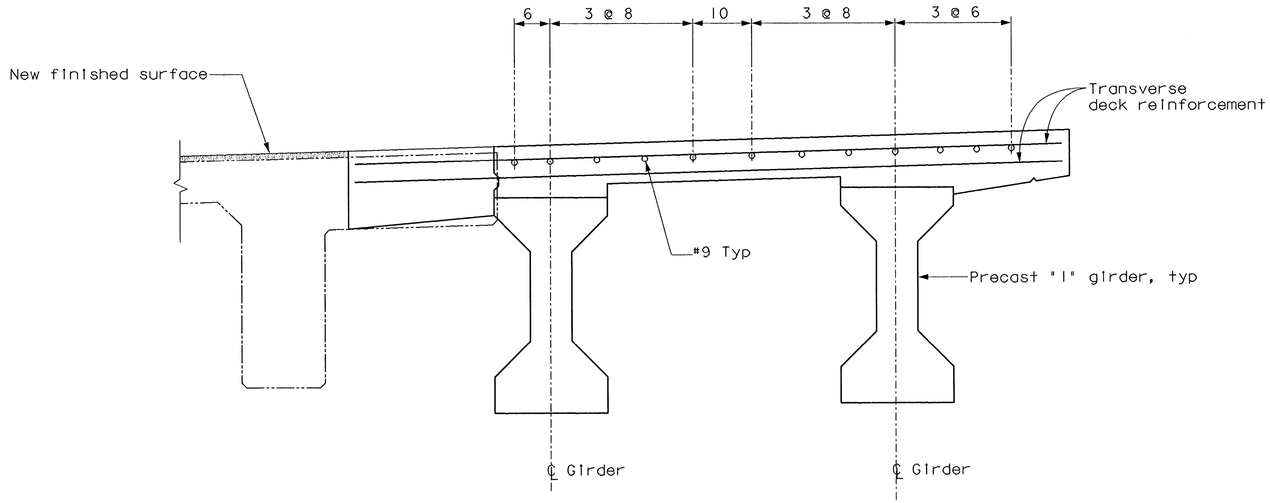
WARNER AVENUE
WIDENING

LONGITUDINAL DECK REINFORCEMENT NO. 2
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-21

DRAWN BY:
CHECKED BY:

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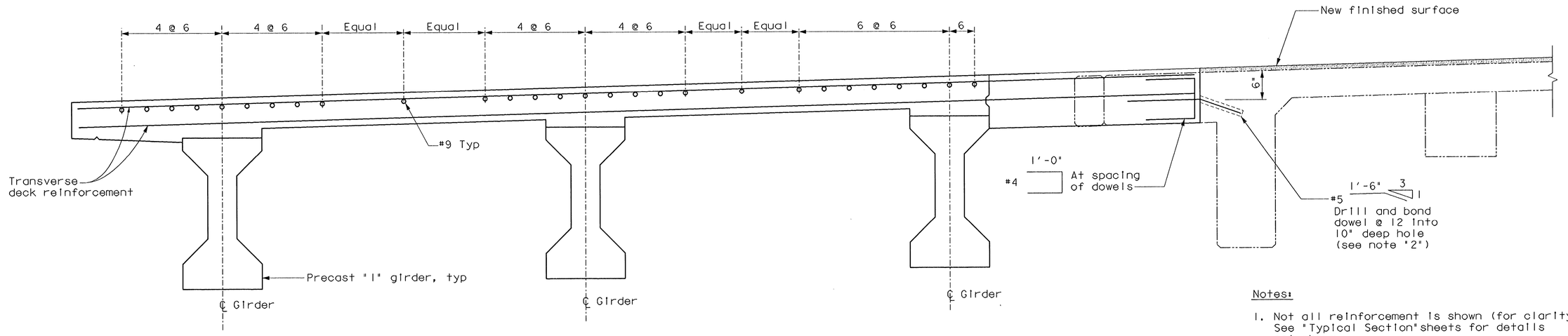
SECTION A-A
SCALE: 1"=1'-0"

LEGEND:

——·——·—— Indicates existing structure

———————— Indicates new construction

o Denotes additional longitudinal reinforcement See "Longintudinal Deck Reinforcement No. 1 and No. 2" sheets



SECTION B-B
SCALE: 1"=1'-0"

Notes:

1. Not all reinforcement is shown (for clarity). See "Typical Section" sheets for details not shown.
2. Occurs between pier 4 and abutment 7.

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARAH No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

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BREA, CALIFORNIA 92821

JMS 6/21/05
R.C.E. NO. DATE

No.	DATE	ITEM

REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

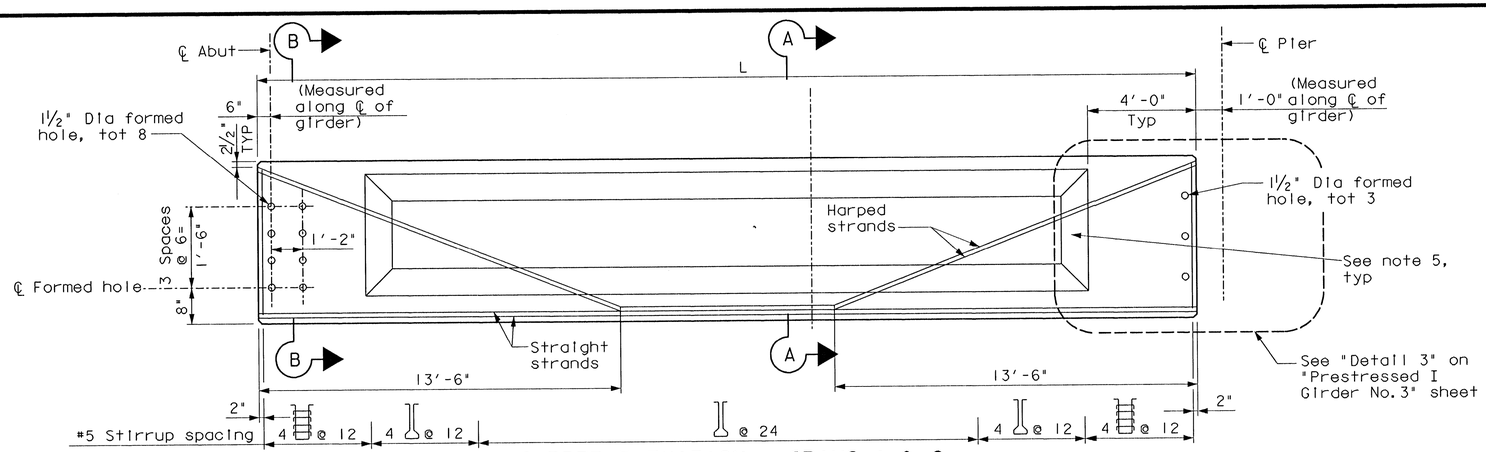
WARNER AVENUE
WIDENING

LONGITUDINAL DECK REINFORCEMENT NO. 3 — SHEET NO. S-22

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

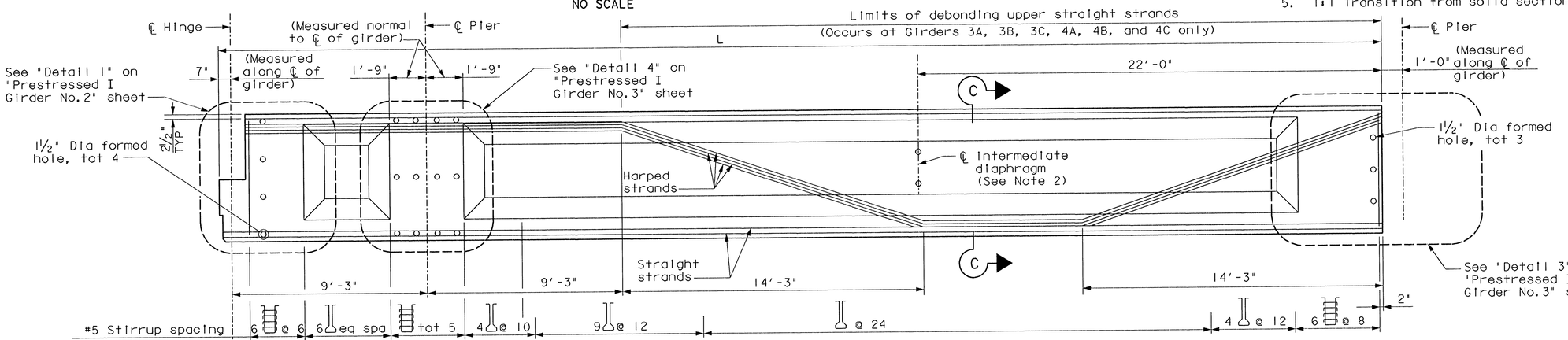
DRAWN BY:
CHECKED BY:

57 of 70



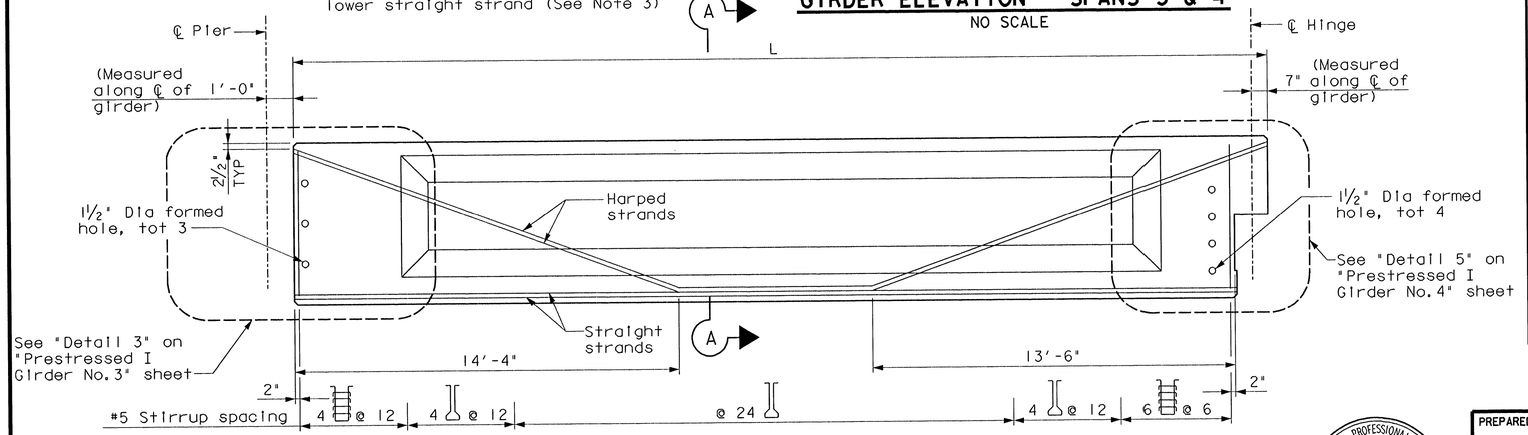
GIRDER ELEVATION - SPANS 1 & 6

NO SCALE



GIRDER ELEVATION - SPANS 3 & 4

NO SCALE



GIRDER ELEVATION - SPANS 2 & 5

NO SCALE

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PRESTRESSING NOTES

Working Force: The force required at center of span after all losses, per girder.

Concrete Strength: f'ci is at the time of initial stressing, f'c at 28 days, psi.

Deflection Components: Informational - to be used in setting screed line elevations.

Screed line elevations for deck concrete will be determined by the Engineer.

NOTES:

1. For Sections "A-A", "B-B" & "C-C" see "Prestressed I Girder No. 2" sheet.
2. For "Intermediate Diaphragm Details", see "Prestressed I Girder No. 4" sheet.
3. See Section "E-E" on "Prestressed I Girder No. 2" sheet for debonded strands.
4. See "Girder Layout No. 1" and "Girder Layout No. 2" sheets for girder designation and location.
5. 1:1 Transition from solid section to typical I girder section.

Girder Designation and Length "L" (feet)	P = Working Force in kips	Concrete Strength (psi)		Deflection Components in feet (At ℄ of span)	
		f'ci	f'c	1 Deck DL	2 Barrier DL
1A, 1B, 1C, 1D & 1E (35'-2⅝")	217	4,500	6,000	0.00	0.00
2A, 2B & 2C (36'-4") 2D & 2E (36'-5")	217	4,500	6,000	0.01	0.00
3A, 3B & 3C (54'-10")	402	4,500	6,000	0.01	0.00
3D & 3E (54'-11")	360				
4A & 4B (55'-1¼") 4C (55"-0½")	402	4,500	6,000	0.01	0.00
4D & 4E (55' 1½")	360				
5A & 5B (36'-3½") 5C, 5D & 5E (36'-4")	217	4,500	6,000	0.01	0.00
6A, 6B & 6C (35'-1¼") 6D & 6E (34'-11¼")	217	4,500	6,000	0.00	0.00

Note: Girder lengths measured along centerlines.

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BREA, CALIFORNIA 92821

R.C.E. NO. — DATE 6/21/05

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ROAD DIVISION

WARNER AVENUE WIDENING

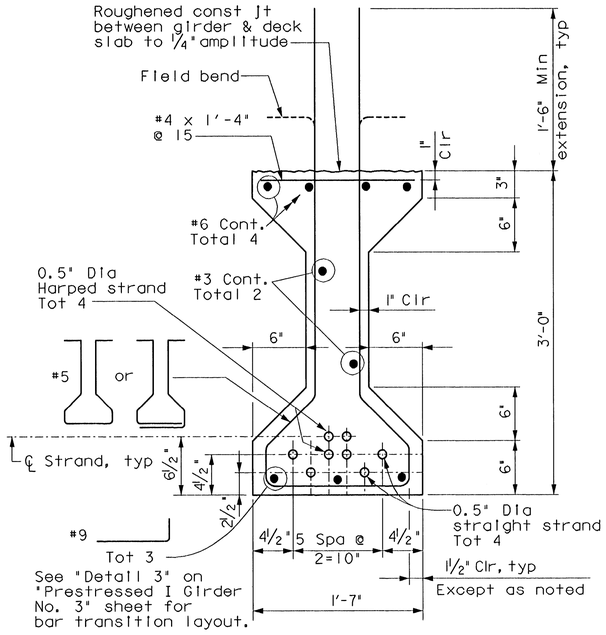
PRESTRESSED I GIRDER NO. 1

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

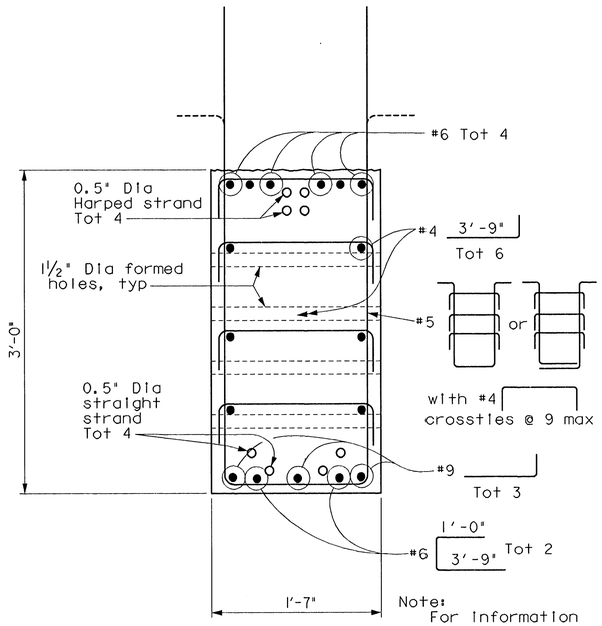
SHEET NO. S-23

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CHECKED BY:

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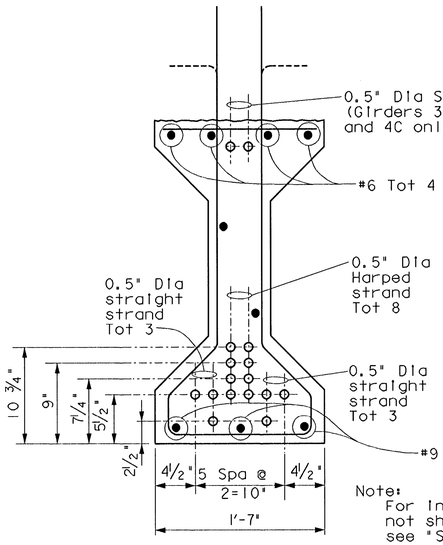


SECTION A-A
SCALE: 1½"=1'-0"



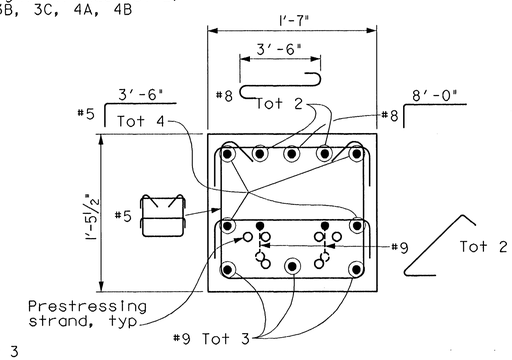
Note:
For information not shown, see "Section A-A"

SECTION B-B
SCALE: 1½"=1'-0"

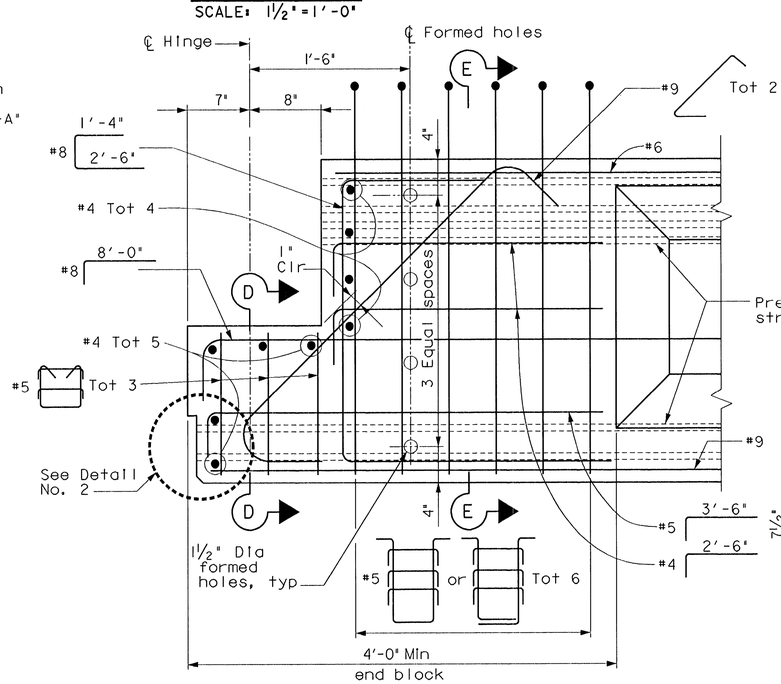


Note:
For information not shown, see "Section A-A"

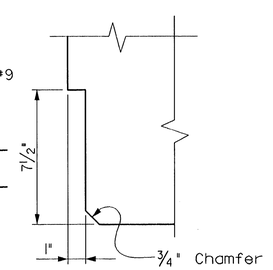
SECTION C-C
SCALE: 1½"=1'-0"



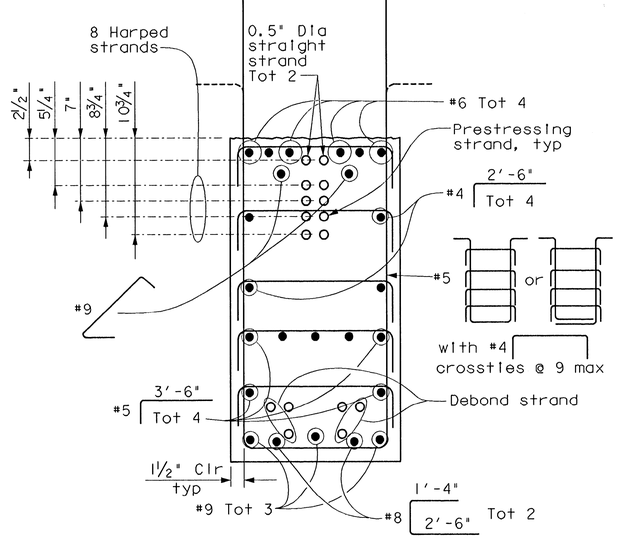
SECTION D-D
SCALE: 1½"=1'-0"



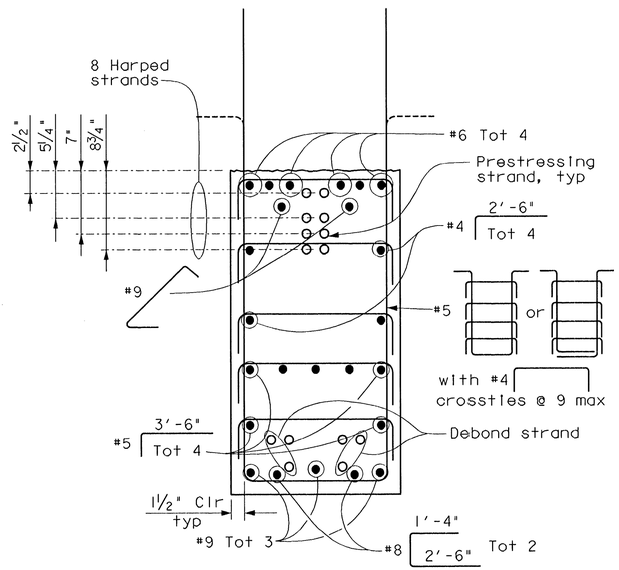
DETAIL 1
SCALE: 1½"=1'-0"



DETAIL 2
No Scale



SECTION E-E
(GIRDERS 3A, 3B, 3C, 4A, 4B, & 4C)
SCALE: 1½"=1'-0"



SECTION E-E
(GIRDERS 3D, 3E, 4D, & 4E)
SCALE: 1½"=1'-0"

NOTE:
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FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

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PREPARED BY:
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BREA, CALIFORNIA 92821

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ROAD DIVISION

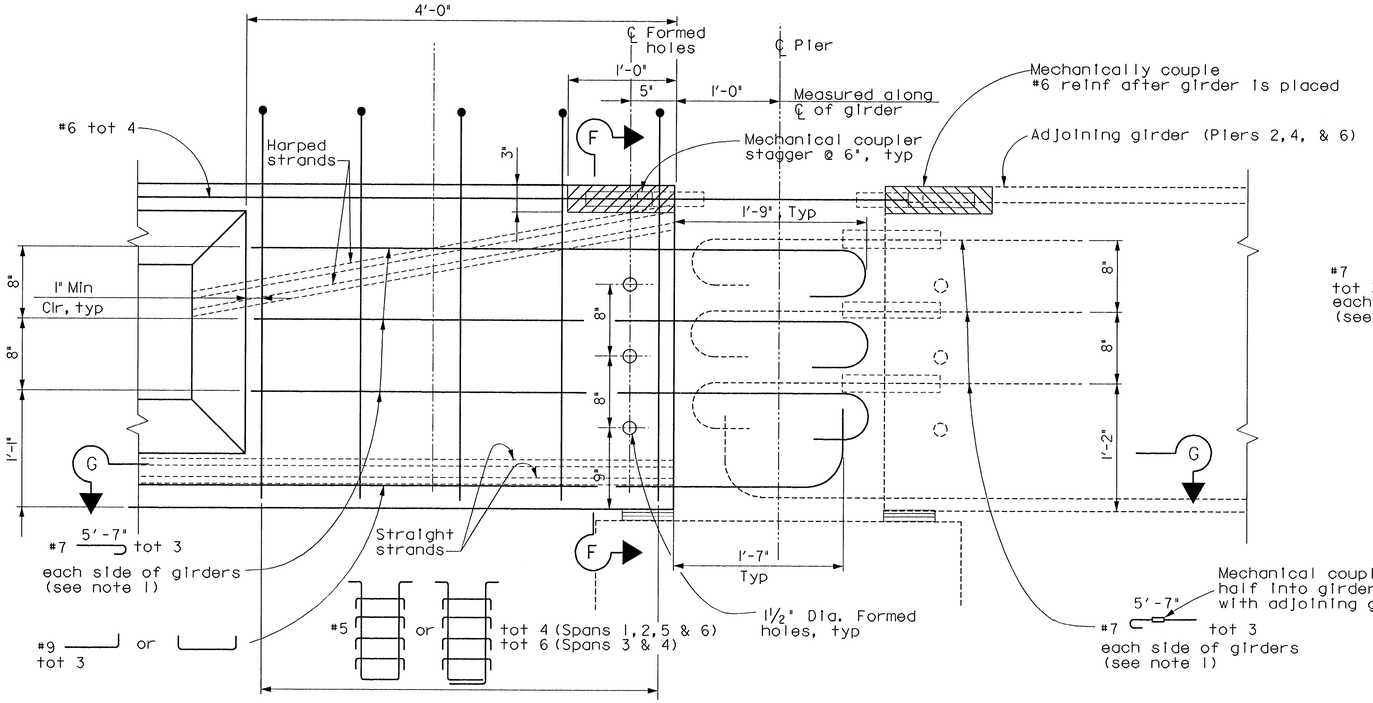
WARNER AVENUE
WIDENING

PRESTRESSED I GIRDER NO. 2 — SHEET NO. S-24

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TO: HARBOR BLVD.

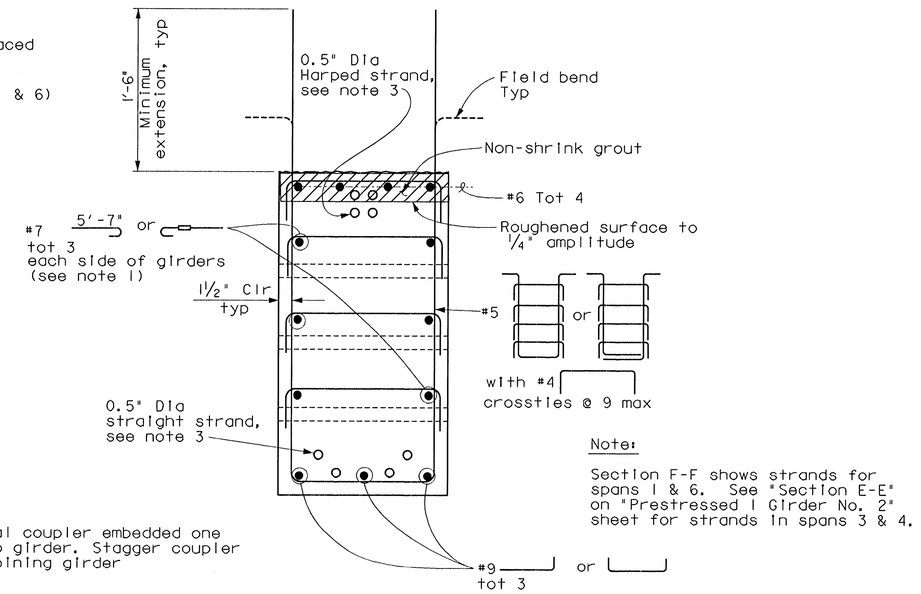
DRAWN BY:
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59 of 70



DETAIL 3

SCALE: 1½" = 1'-0"

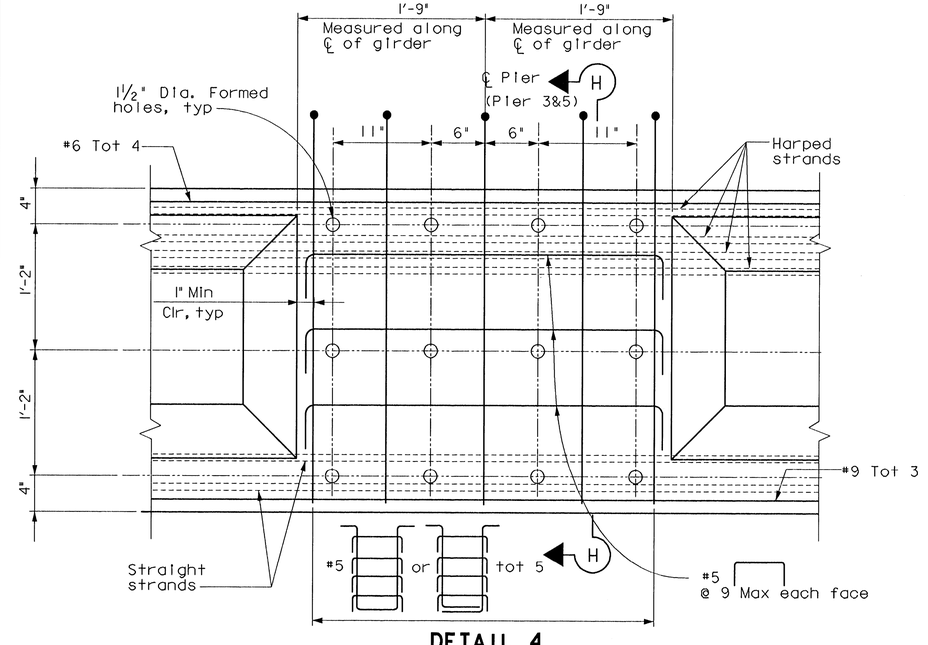


Note:

Section F-F shows strands for spans 1 & 6. See "Section E-E" on "Prestressed I Girder No. 2" sheet for strands in spans 3 & 4.

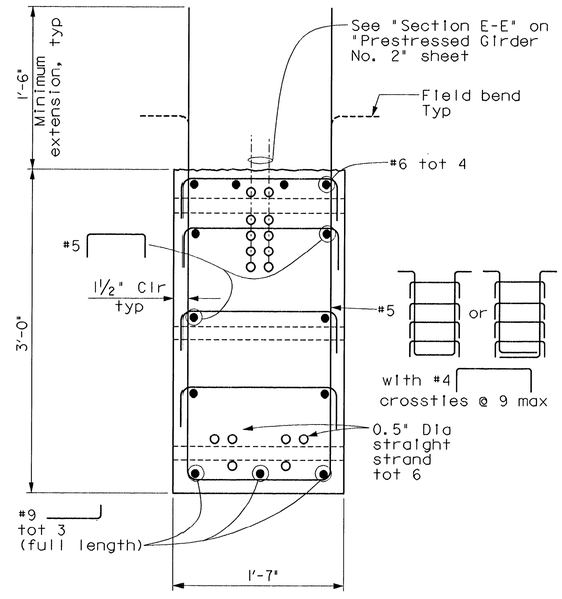
SECTION F-F

SCALE: 1½" = 1'-0"



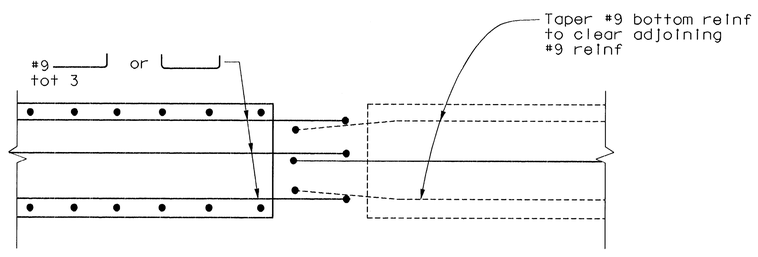
DETAIL 4

SCALE: 1½" = 1'-0"



SECTION H-H

SCALE: 1½" = 1'-0"



SECTION G-G

SCALE: 1" = 1'-0"

NOTES:

1. Provide mechanical coupler at one end of girder to facilitate placement of girders. Hooks to be turned inward to clear adjoining reinf.
2. Contractor to provide drawings to Engineer indicating location and type of mechanical couplers to be used. Provide 1" minimum concrete cover to coupler.
3. For harped and straight strands layout, see "Prestressed I Girder No. 1 & No. 2" sheets.

NOTE:
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FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PREPARED BY:
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Architects - Structural Engineers
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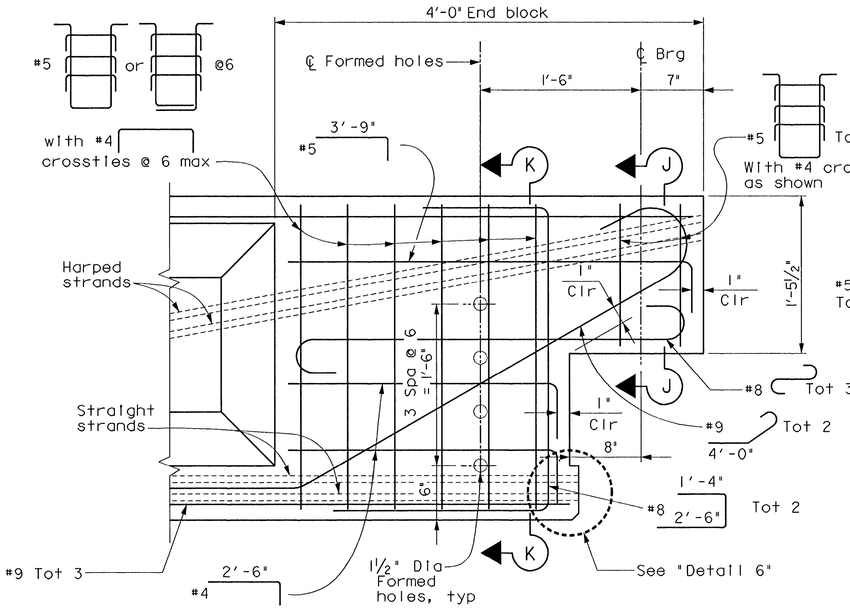
WARNER AVENUE
WIDENING

PRESTRESSED I GIRDER NO. 3
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

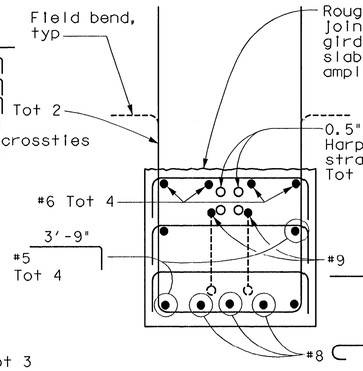
SHEET NO. S-25

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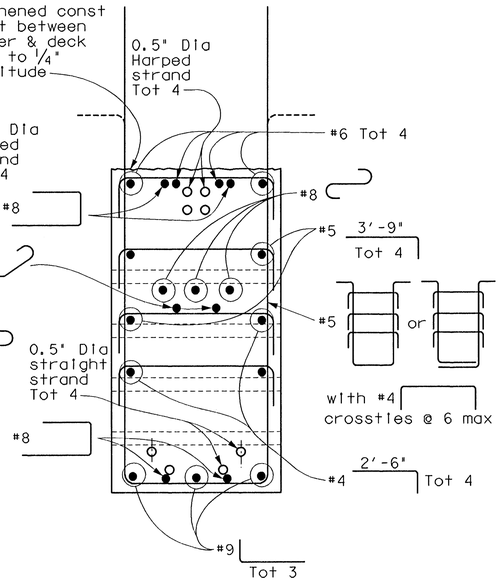
60 of 70



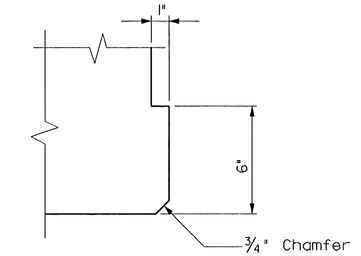
DETAIL 5
SCALE: 1½" = 1'-0"



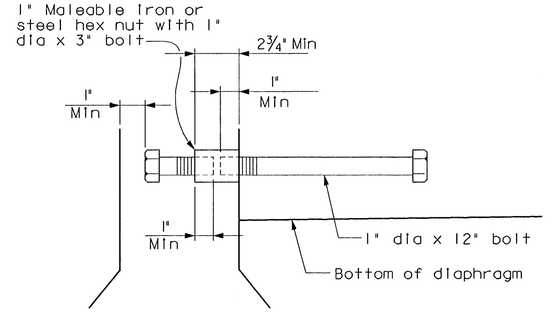
SECTION J-J
SCALE: 1½" = 1'-0"



SECTION K-K
SCALE: 1½" = 1'-0"



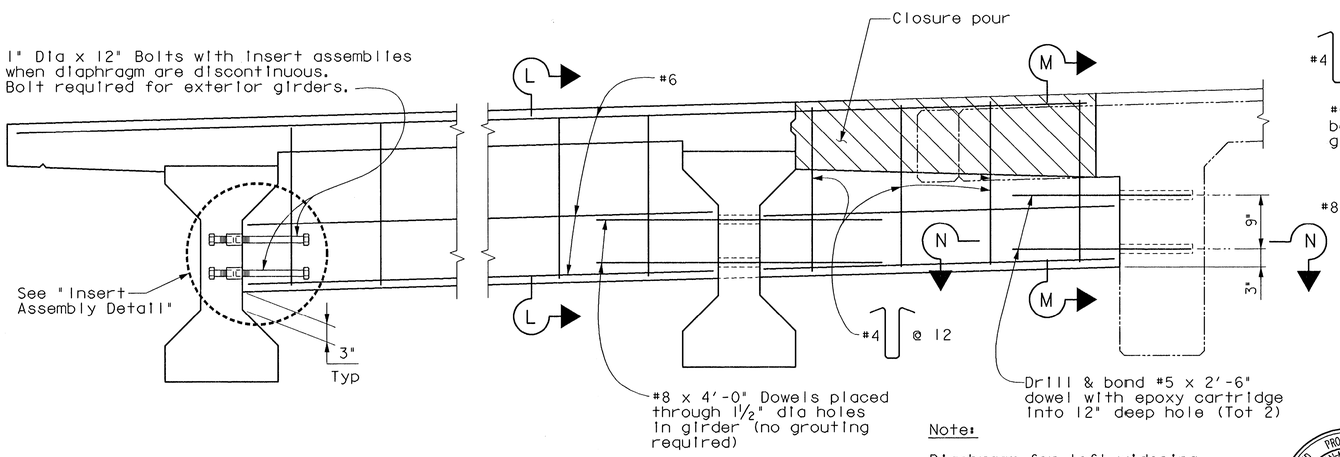
DETAIL 6
No Scale



INSERT ASSEMBLY DETAIL
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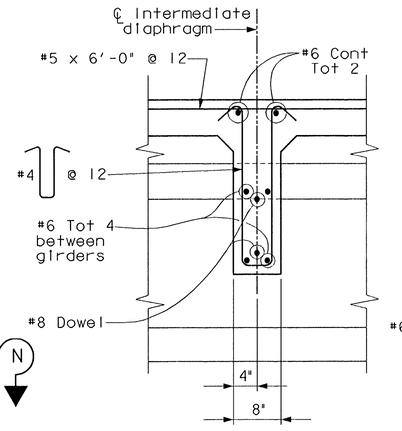
LEGEND:

- Indicates existing structure
- Indicates new construction
- Denotes Closure Pour

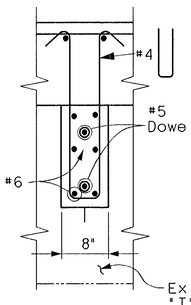


Note:
Diaphragm for left widening shown. Right widening similar.

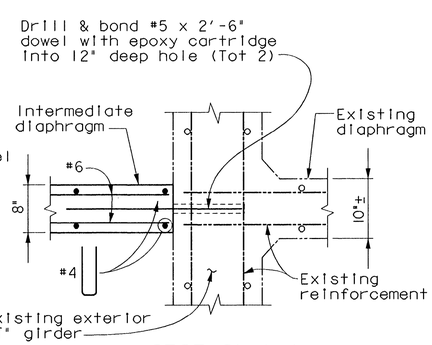
INTERMEDIATE DIAPHRAGM DETAILS
SCALE: 1" = 1'-0"



SECTION L-L
SCALE: 1" = 1'-0"



SECTION M-M
SCALE: 1" = 1'-0"



SECTION N-N
SCALE: 1" = 1'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER — JEAN-MARIE SARAH — No. S 4038 — Exp. 3/31/06 — STRUCTURAL — STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz
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3848 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

R.C.E. NO. — DATE 6/21/05

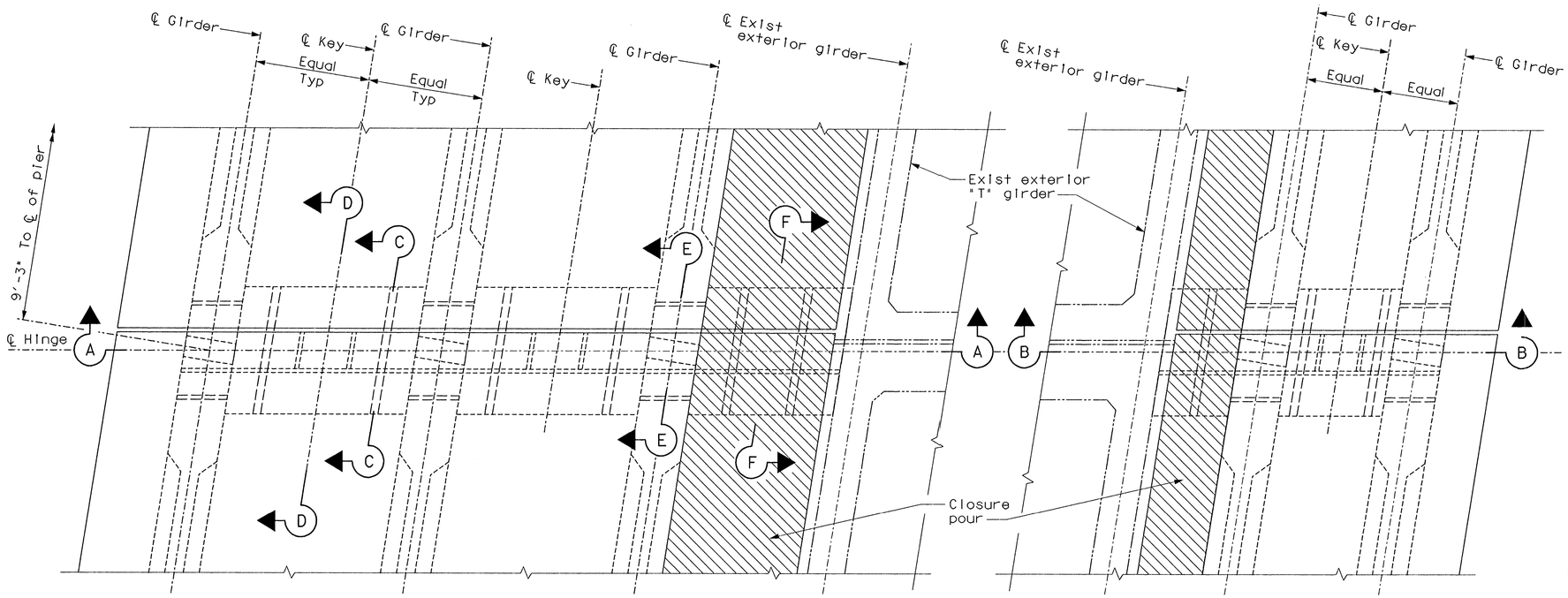
No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

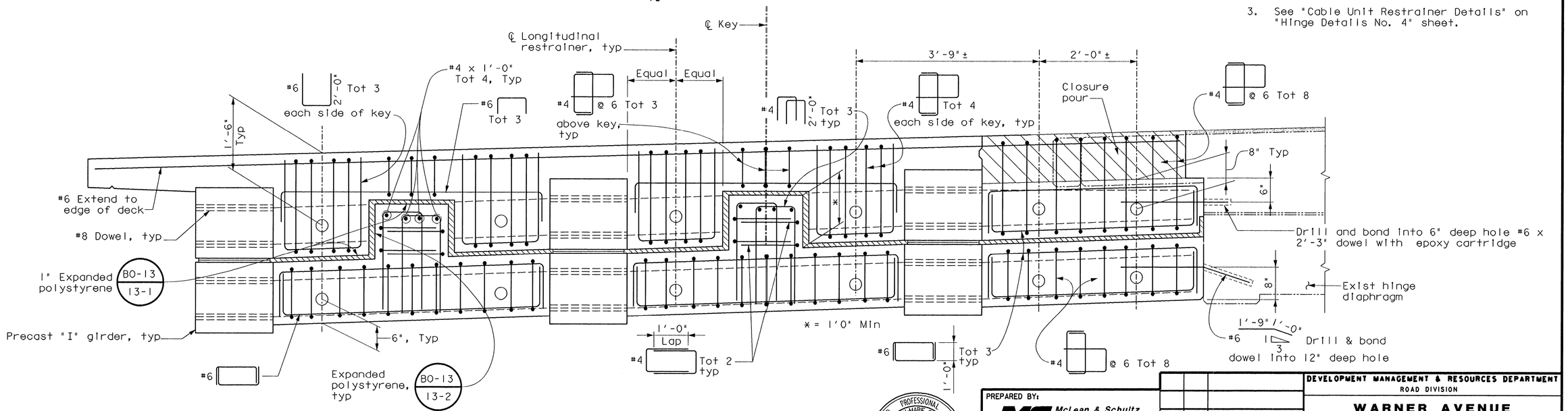
WARNER AVENUE
WIDENING

PRESTRESSED I GIRDER NO. 4 — SHEET NO. S-26
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
DRAWN BY:
CHECKED BY:

61 of 70



HINGE PLAN
SCALE: 1/2" = 1'-0"



SECTION A-A
SCALE: 1" = 1'-0"

LEGEND:

- Indicates existing structure
- Indicates new construction
- Denotes Closure Pour

Notes:

1. For sections "B-B", "C-C", "D-D" & "E-E" see "Hinge Details No. 2" sheet.
2. For Section "F-F" see "Hinge Details No. 3" sheet.
3. See "Cable Unit Restrainer Details" on "Hinge Details No. 4" sheet.

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER — JEAN-MARIE SAORY — No. S 4038 — Exp. 3/31/06 — STRUCTURAL — STATE OF CALIFORNIA

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R.C.E. NO. — DATE 6/21/05

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

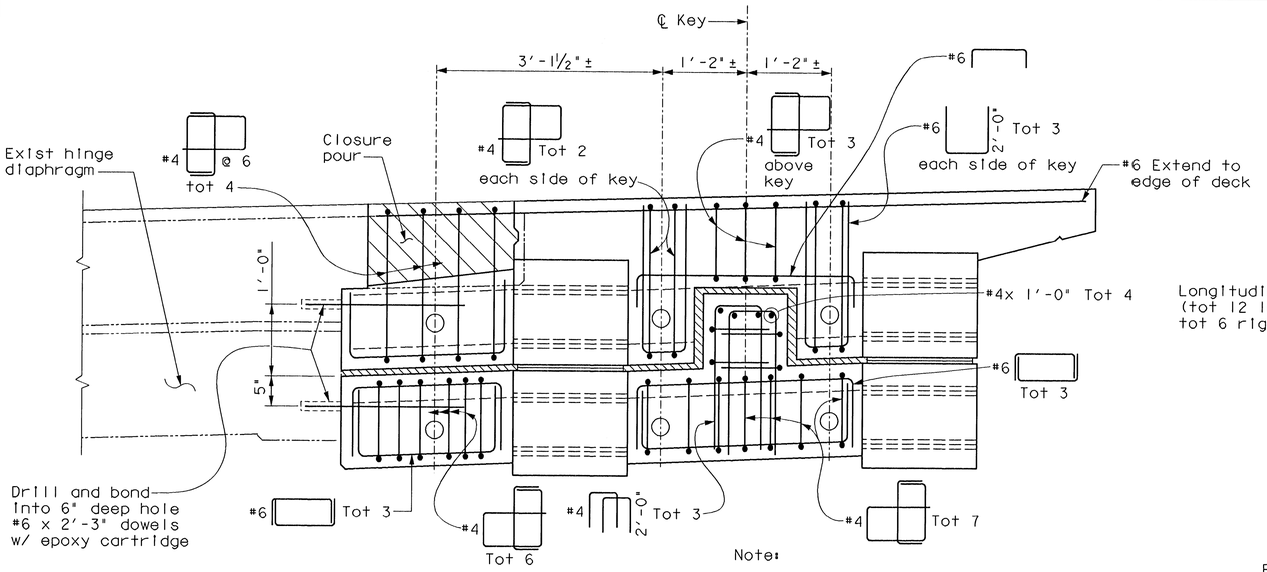
WARNER AVENUE
WIDENING

HINGE DETAILS NO. 1 — SHEET NO. S-27

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

DRAWN BY:
CHECKED BY:

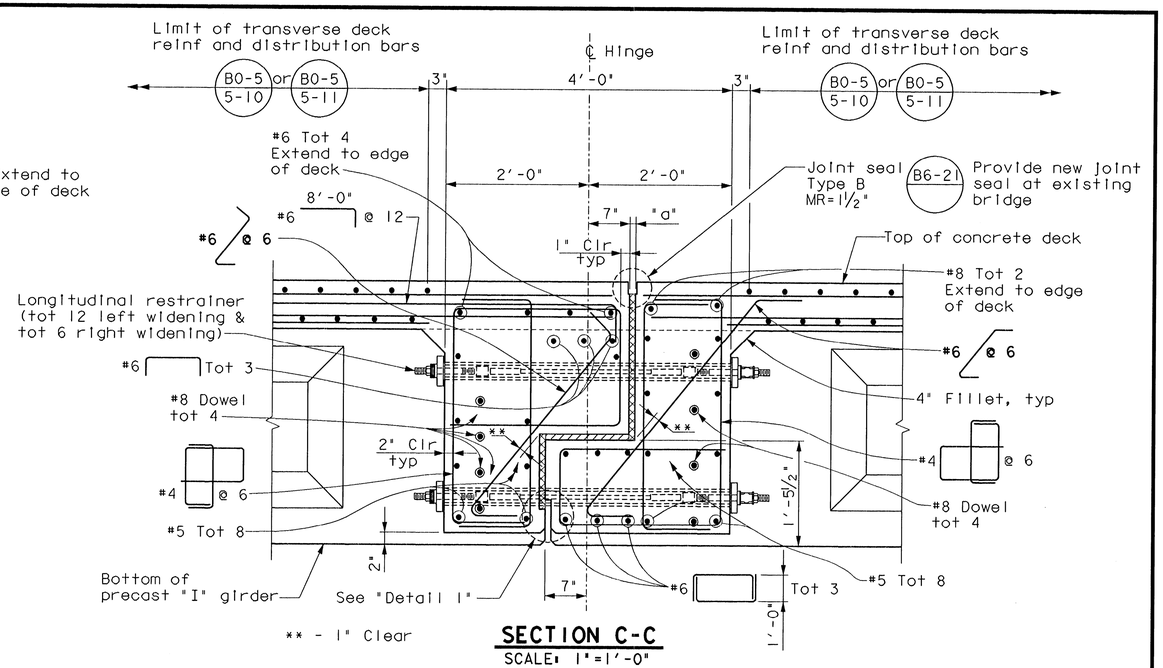
62 of 70



Note:

For information not shown see "Section A-A" on "Hinge Details No. 1" sheet. (similar but opposite hand)

SECTION B-B
SCALE: 1"=1'-0"



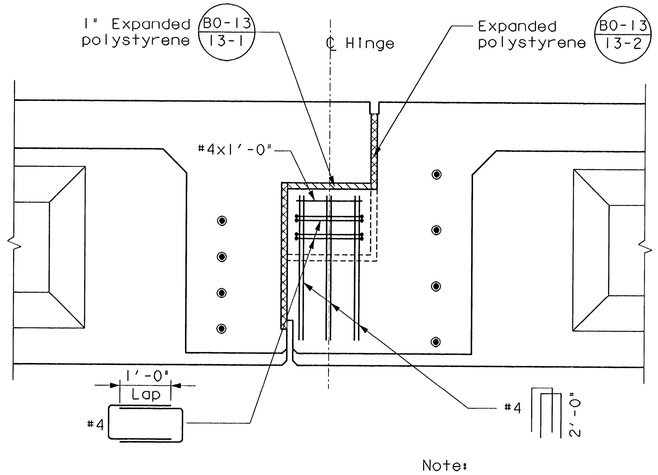
** - 1" Clear

SECTION C-C
SCALE: 1"=1'-0"

Note:

See "Cable Unit Restrainer Details" on "Hinge Details No. 4" sheet.

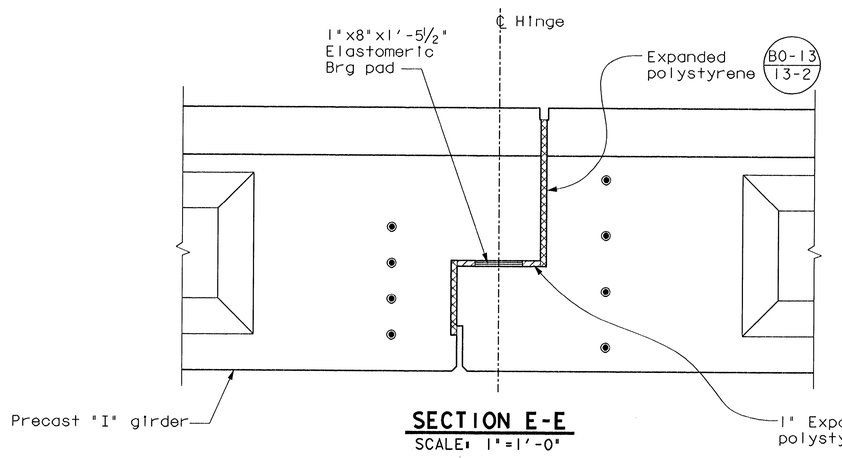
Joint Information		"a" Dimension		
Location	Movement Rating (MR)	Winter <40°	Spring & Fall >40°, <80°	Summer >80°
Hinge	1½"	1⅜"	1"	¾"



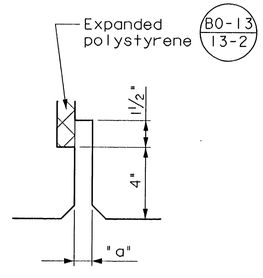
Note:

For information not shown see "Section C-C"

SECTION D-D
SCALE: 1"=1'-0"



SECTION E-E
SCALE: 1"=1'-0"



DETAIL 1
No Scale

LEGEND:

- Indicates existing structure
- Indicates new construction
- Denotes Closure Pour

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARRAT No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
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BREA, CALIFORNIA 92821

JMS
R.C.E. NO.

6/21/05
DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

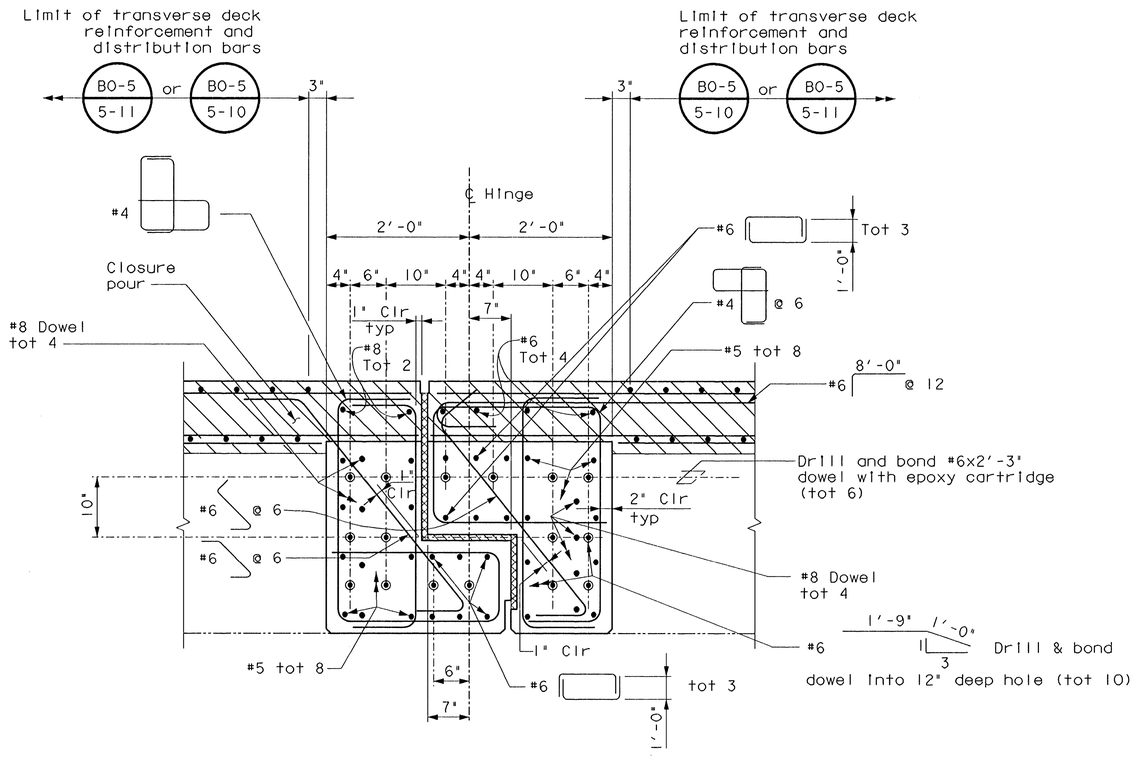
HINGE DETAILS NO. 2

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-28

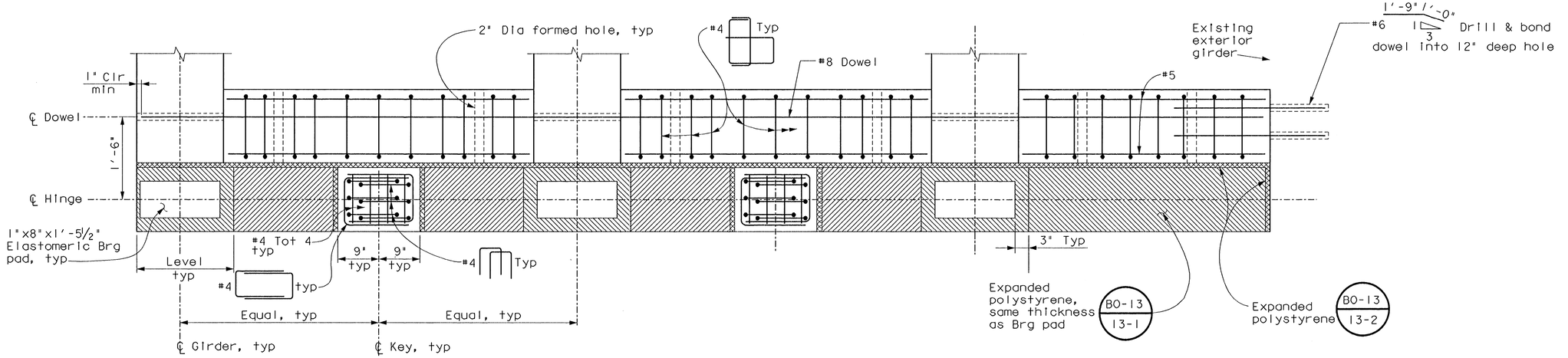
DRAWN BY:
CHECKED BY:

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SECTION F-F

SCALE: 1"=1'-0"



Note: Left side shown - Right side similar

BEARING PLAN

SCALE: 1"=1'-0"

LEGEND:

- Indicates existing structure
- Indicates new construction
- Denotes Closure Pour

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARAH No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
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BREA, CALIFORNIA 92821

JMS 6/21/05
R.C.E. NO. DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

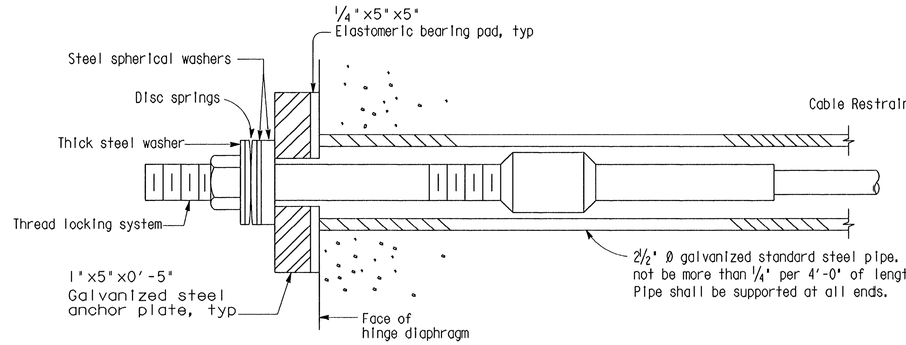
WARNER AVENUE
WIDENING

HINGE DETAILS NO. 3
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

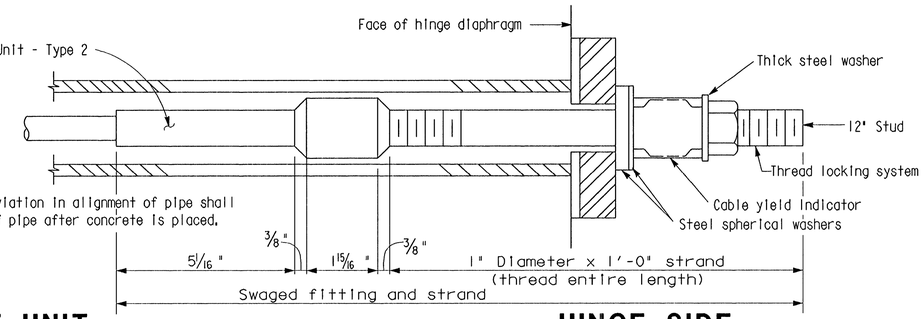
SHEET NO. S-29

DRAWN BY:
CHECKED BY:

64 of 70

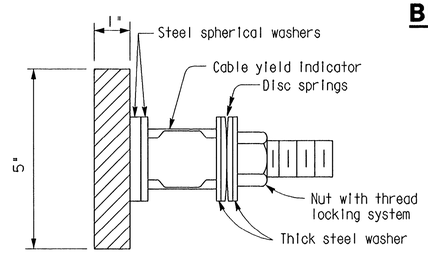


BENT SIDE



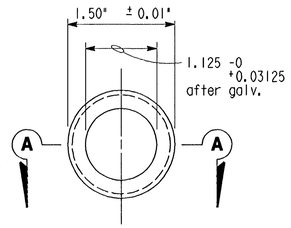
CABLE UNIT

HINGE SIDE

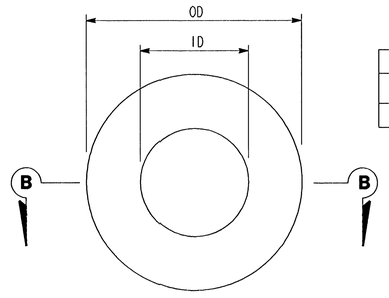


ADJUSTMENT END

(New construction shown)



END VIEW



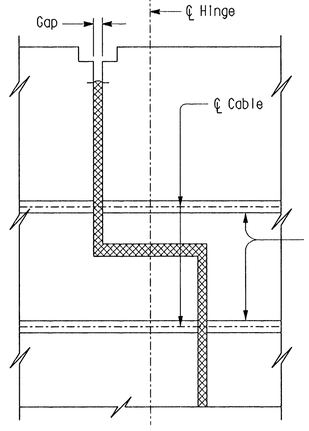
PLAN

DISC SPRINGS AND WASHERS

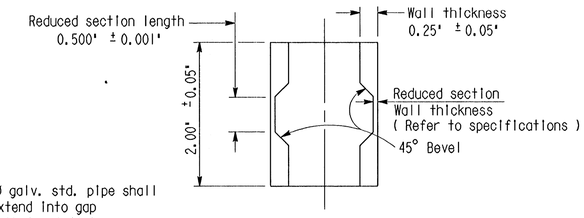
All dimensions in inches, except as noted

	DISC SPRING					STEEL SPHERICAL WASHER			THICK WASHER		
L (FT)	ID	OD	†	H	COLOR CODE	ID	OD	Nom thick.	ID	OD	†
00.0 - 25.0	1.00	2.00	0.065	0.130	WHITE	1.19	2.25	0.50	1.03	2.00	0.25

Note: All OD and ID dimensions for washers and disc springs shall meet the dimensional tolerances for harden steel washers, ASTM F436



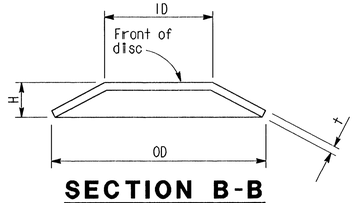
HINGE DETAIL



SECTION A-A

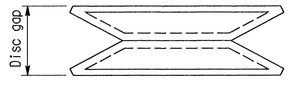
CABLE YIELD INDICATOR

All dimensions are before galvanizing except as noted.



SECTION B-B

(Single spring)



AS INSTALLED ON STUD

DISC SPRING

Note: For dimensions not shown, see table

RESTRAINER UNIT INSTALLATION PROCEDURE

NEW CONSTRUCTION:

1. Install Cable Yield Indicator, spherical washers, disc springs, nut and washers on the hinge side of restrainers as shown in 'Adjustment End' detail. Disc springs shall be installed front to front as shown in 'Disc Spring' detail.
2. Place only nut and washer on bent side of restrainers. Place thread locking system on bent side stud prior to installing nut and washers, and prior to setting the cable.
3. Tighten nut on the cable from the adjustment end of restrainer until the disc springs collapse and there is no disc gap remaining between the discs. The cable should be approximately straight with no sag.

NOTES:

A. The ends of pipe shall be covered or capped to prevent concrete and debris from entering the pipe until hinge concrete is placed.

B. Care should be taken to align the pipes on each side of the hinge.

C. All ends of pipes must be flush with or slightly recessed from the concrete. The inside edges of the pipes must be smooth to prevent fraying of cables.

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER
JEAN-MARIE SARAT
No. S 4038
Exp. 3/31/06
STRUCTURAL
STATE OF CALIFORNIA

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JMS 6/21/05
R.C.E. NO. DATE

NO.	DATE	ITEM

REVISIONS

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ROAD DIVISION

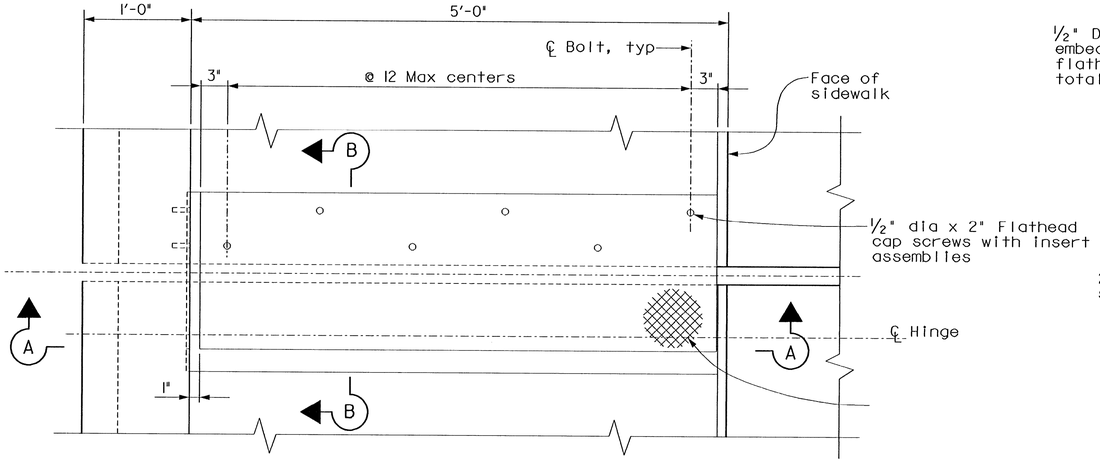
WARNER AVENUE
WIDENING

HINGE DETAILS NO. 4
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-30

DRAWN BY:
CHECKED BY:

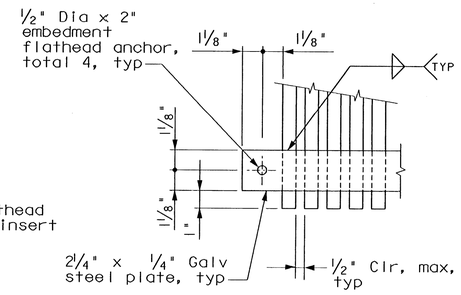
65 of 70



SIDEWALK EXPANSION JOINT ARMOR

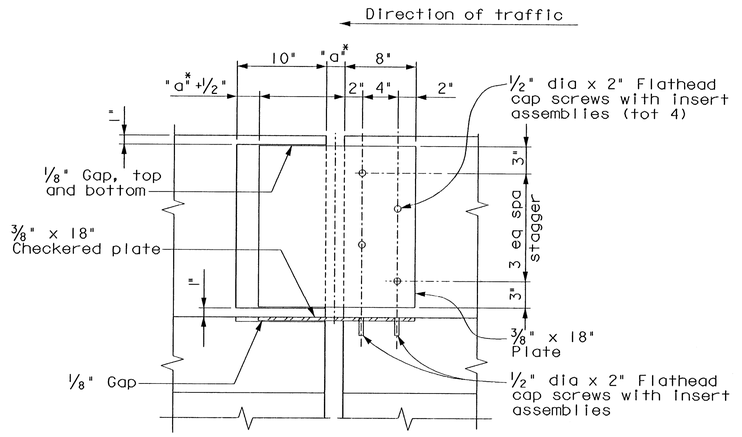
PLAN

SCALE: 1½" = 1'-0"



DETAIL C

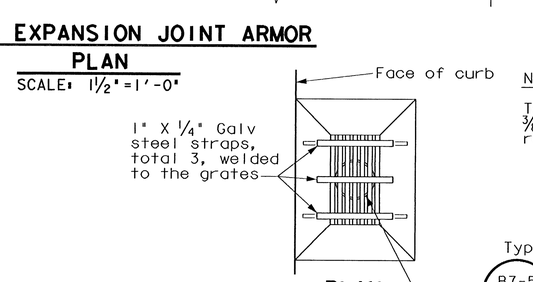
SCALE: 3" = 1'-0"



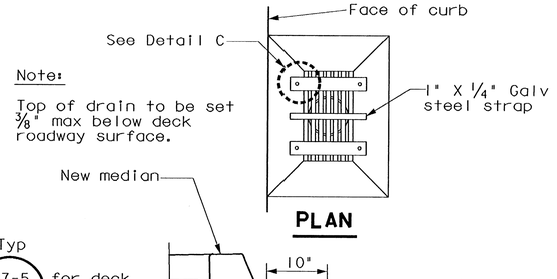
* See "Hinge Details No. 2" sheet for "a" dimension.

SECTION B-B

SCALE: 1½" = 1'-0"



PLAN



Note:

Top of drain to be set ⅜" max below deck roadway surface.

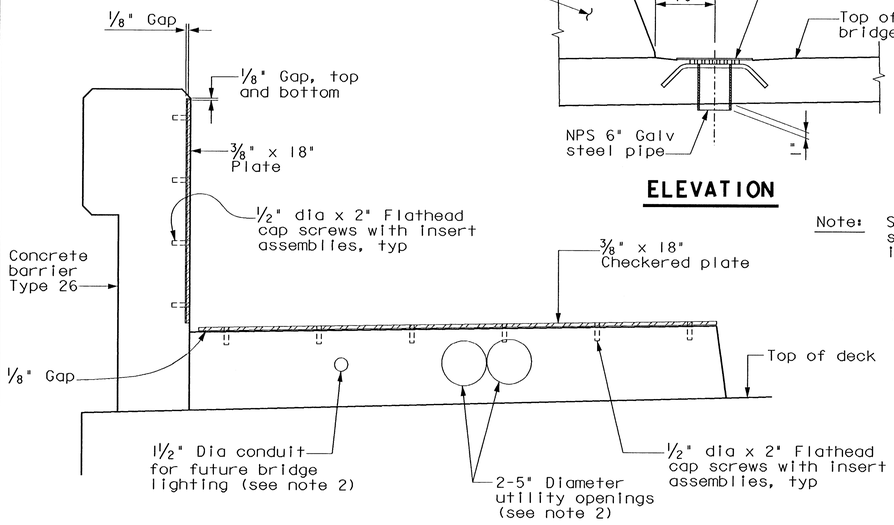
ELEVATION

ELEVATION

Note: Standard deck drain detail shall be modified as shown to include bicycle proof grates.

DRAIN PIPE DETAILS

SCALE: 1" = 1'-0"



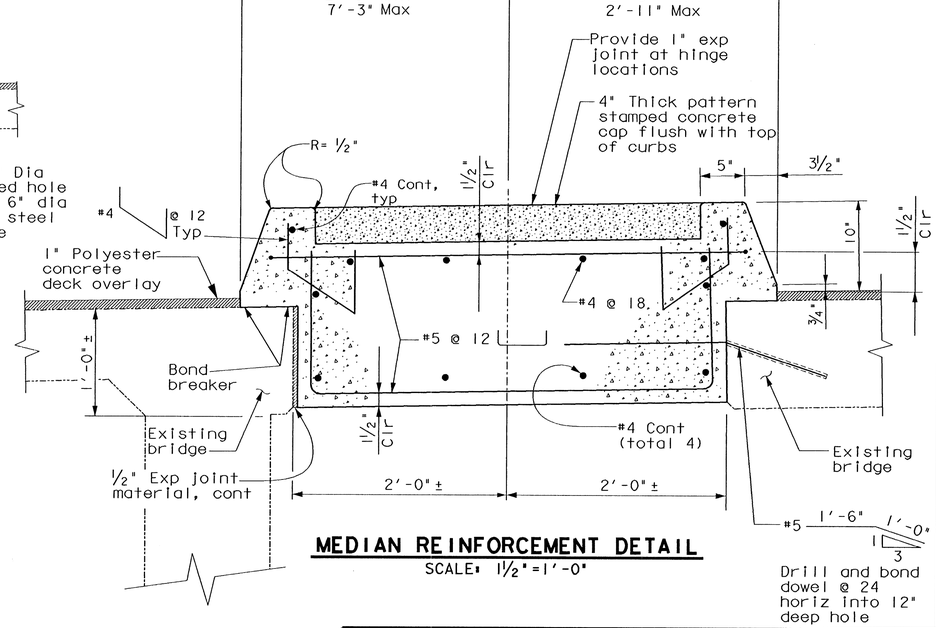
SECTION A-A

SCALE: 1½" = 1'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

Notes:

1. Galvanize all steel parts after fabrication.
2. Provide expansion coupler at joint.



MEDIAN REINFORCEMENT DETAIL

SCALE: 1½" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER — JEAN-MARIE SARAH — No. S 4038 — Exp. 3/31/06 — STRUCTURAL — STATE OF CALIFORNIA

PREPARED BY:

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Architects - Structural Engineers
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BREA, CALIFORNIA 92821

R.C.E. NO. — 6/29/05 DATE

No.	DATE	ITEM
		REVISIONS

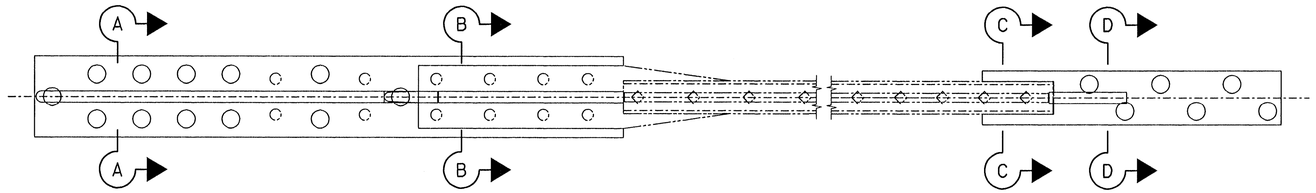
DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

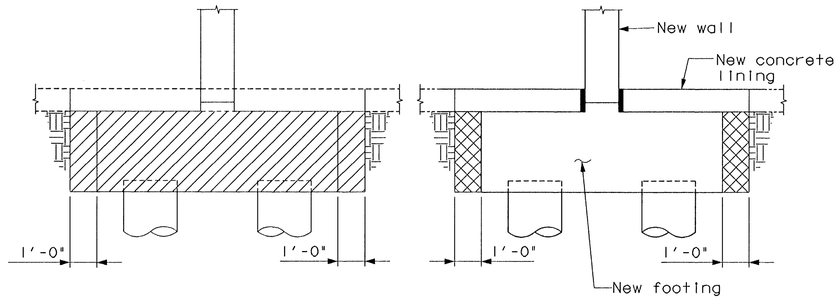
MISCELLANEOUS DETAILS NO. 1 — SHEET NO. S-31
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.
DRAWN BY:
CHECKED BY:

66 of 70

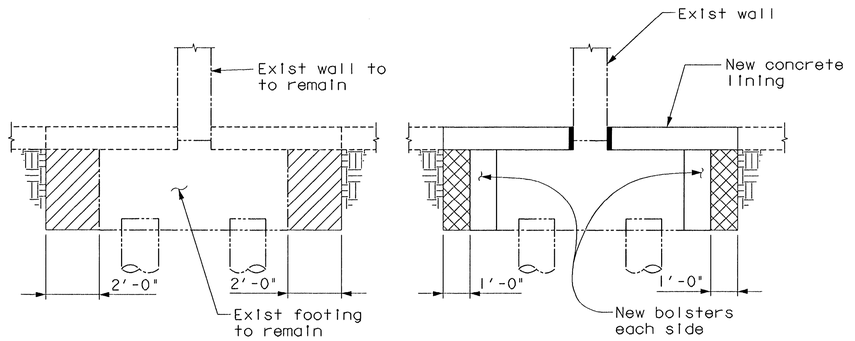
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4



PIERS 3, 4 & 5
SCALE: 1/8" = 1'-0"

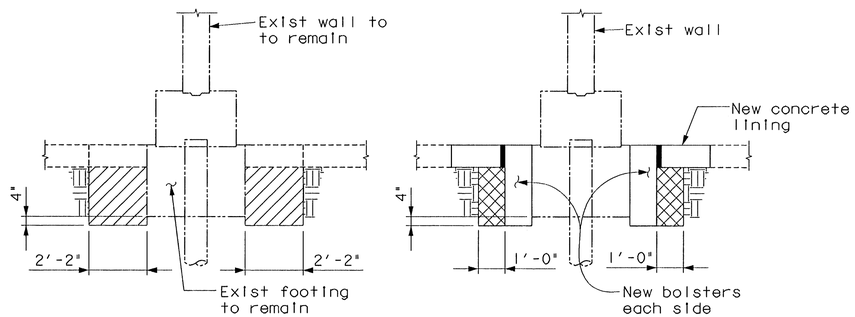


EXCAVATION BACKFILL



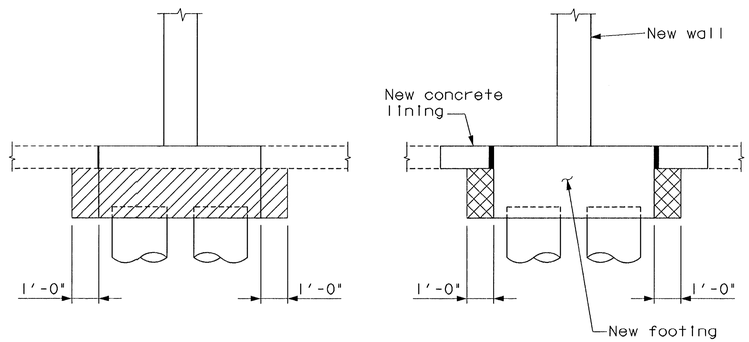
EXCAVATION BACKFILL

SECTION A-A
SCALE: 3/8" = 1'-0"



EXCAVATION BACKFILL

SECTION B-B
SCALE: 3/8" = 1'-0"



EXCAVATION BACKFILL

Note A:

See "Abutment Details No. 1", "Abutment Details No. 3, "Pier Debris Wall" and "Pier Details No. 2" sheets for limits of removal and reconstruction of channel lining.

LEGEND:

- Denotes existing structure
- Denotes new construction
- Denotes structure excavation
- Denotes structure backfill

SECTION C-C
SCALE: 3/8" = 1'-0"

SECTION D-D
SCALE: 3/8" = 1'-0"

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARKIS No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz
Architects · Structural Engineers
3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

R.C.E. NO. DATE 6/21/05

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		REVISIONS

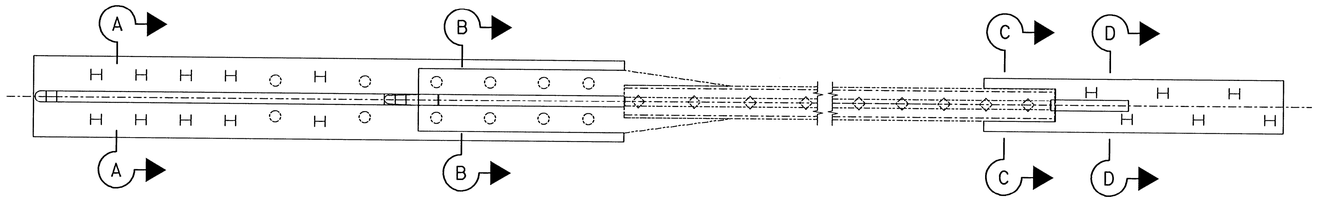
DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE
WIDENING

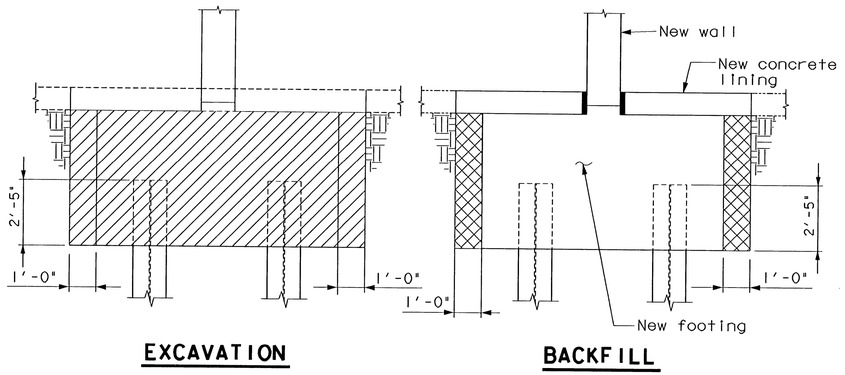
LIMITS OF EXCAVATION & BACKFILL NO. 1
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-32

DRAWN BY:
CHECKED BY:

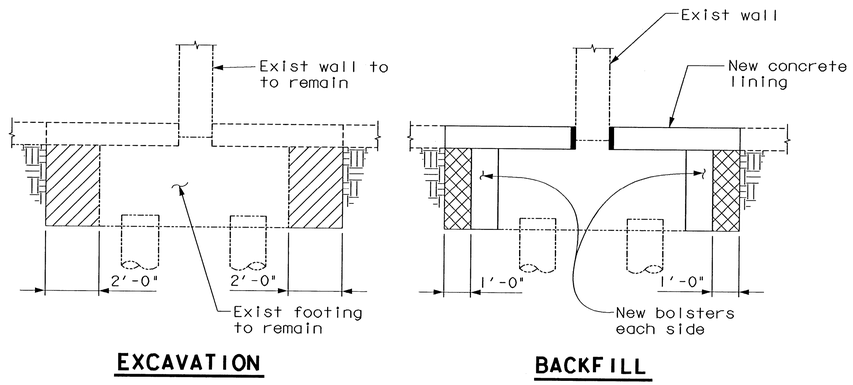


PIERS 3, 4 & 5
SCALE: 1/8" = 1'-0"



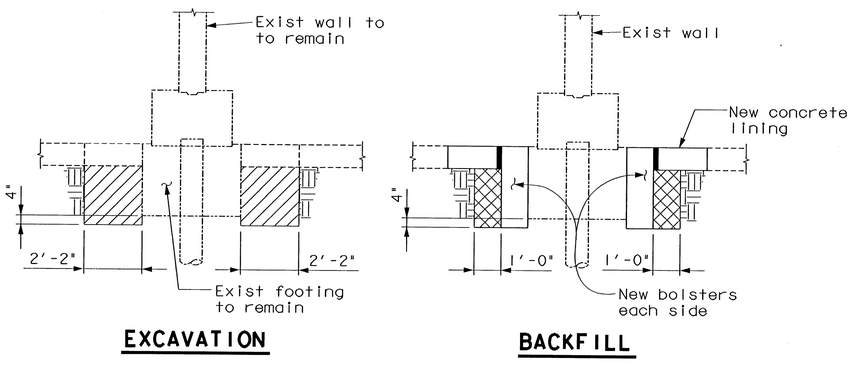
EXCAVATION BACKFILL

SECTION A-A
SCALE: 3/8" = 1'-0"



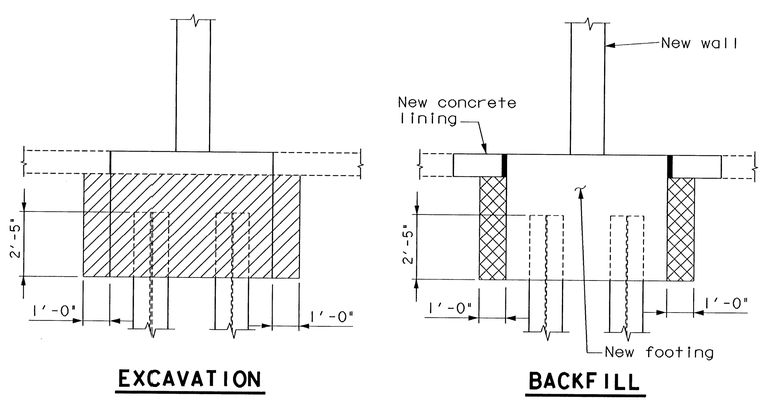
EXCAVATION BACKFILL

SECTION B-B
SCALE: 3/8" = 1'-0"



EXCAVATION BACKFILL

SECTION C-C
SCALE: 3/8" = 1'-0"



EXCAVATION BACKFILL

SECTION D-D
SCALE: 3/8" = 1'-0"

Note A:

See "Abutment Details No. 1", "Abutment Details No. 3, "Pier Debris Wall" and "Pier Details No. 2" sheets for limits of removal and reconstruction of channel lining.

LEGEND:

- Denotes existing structure
- Denotes new construction
- Denotes structure excavation
- Denotes structure backfill

NOTE:
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER
GEORGES R. SARAH
No. C51155
Exp. 9-30-07
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz
Architects - Structural Engineers
3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

R.C.E. NO. C51155 11/23/05 DATE

No.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

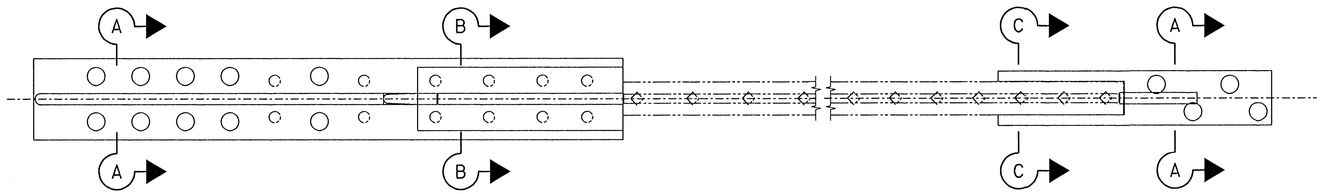
WARNER AVENUE WIDENING

LIMITS OF EXCAVATION & BACKFILL NO. 1
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-32A

DRAWN BY:
CHECKED BY:

67A of 70



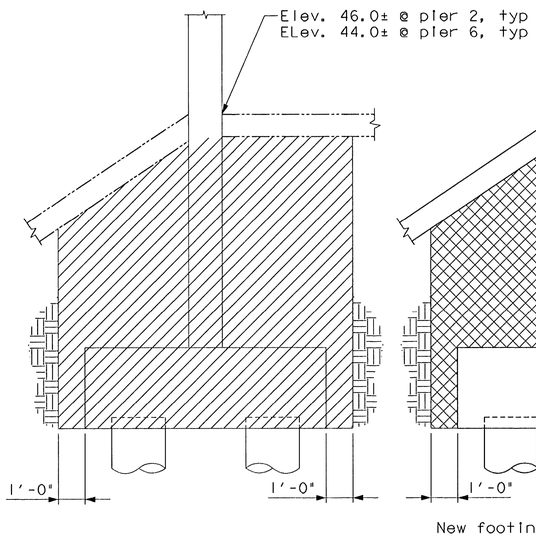
PIERS 2 & 6
SCALE: 1/8" = 1'-0"

Note A:

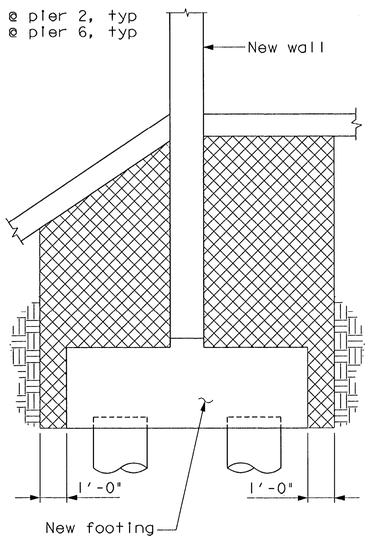
See "Abutment Details No. 1", "Abutment Details No. 3, "Pier Debris Wall" and "Pier Details No. 2" sheets for limits of removal and reconstruction of channel lining.

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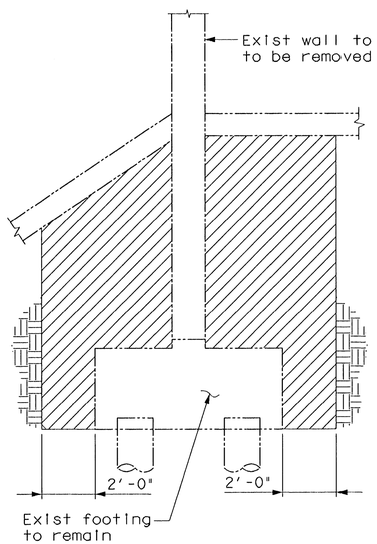


EXCAVATION

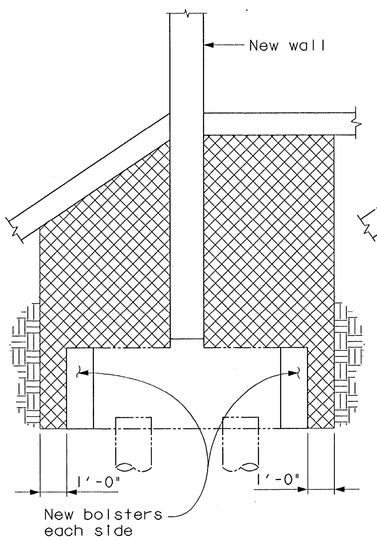


BACKFILL

SECTION A-A
SCALE: 3/8" = 1'-0"

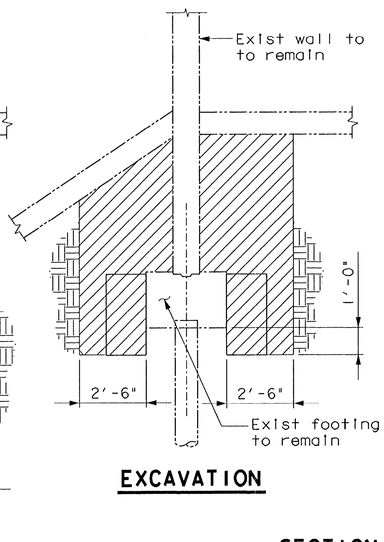


EXCAVATION

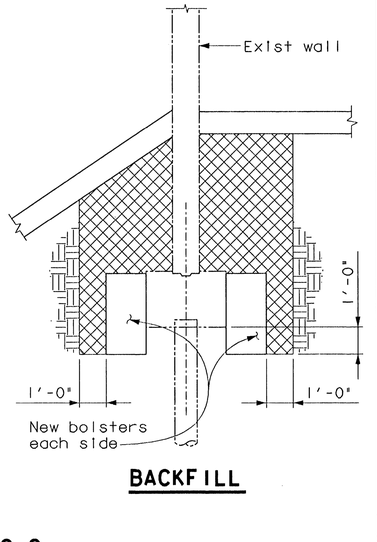


BACKFILL

SECTION B-B
SCALE: 3/8" = 1'-0"



EXCAVATION



BACKFILL

SECTION C-C
SCALE: 3/8" = 1'-0"

NOTE:
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FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER JEAN-MARIE SARKIS No. S 4038 Exp. 3/31/06 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz Architects - Structural Engineers
3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

R.C.E. NO. — DATE 6/21/05

No.	DATE	ITEM

REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

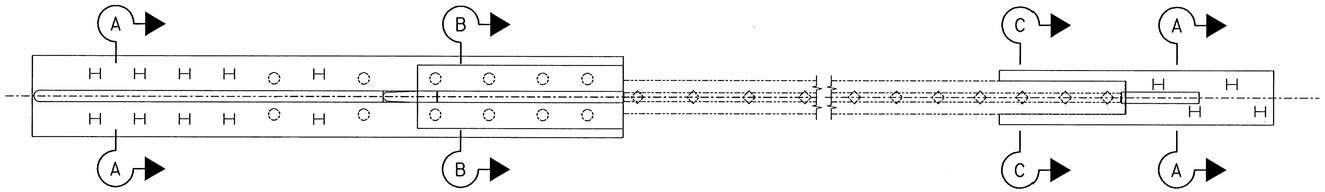
WARNER AVENUE
WIDENING

LIMITS OF EXCAVATION & BACKFILL NO. 2
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-33

DRAWN BY:
CHECKED BY:

68 of 70



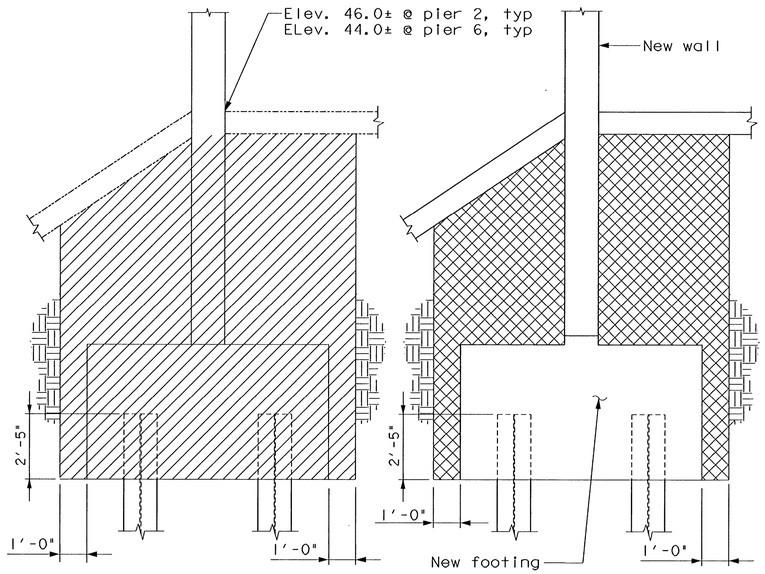
PIERS 2 & 6
SCALE: 1/8"=1'-0"

Note A:

See "Abutment Details No. 1", "Abutment Details No. 3, "Pier Debris Wall" and "Pier Details No. 2" sheets for limits of removal and reconstruction of channel lining.

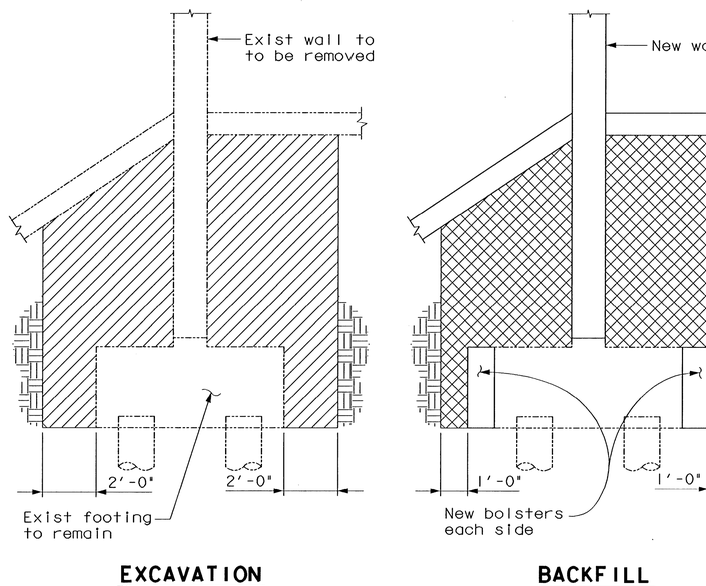
LEGEND:

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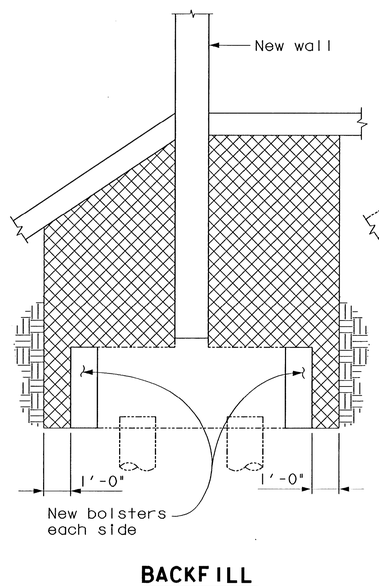


EXCAVATION BACKFILL

SECTION A-A
SCALE: 3/8"=1'-0"

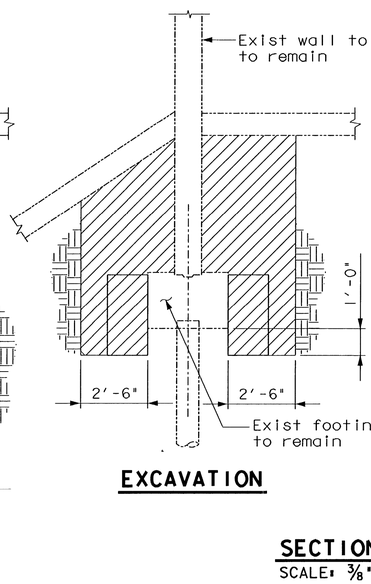


EXCAVATION

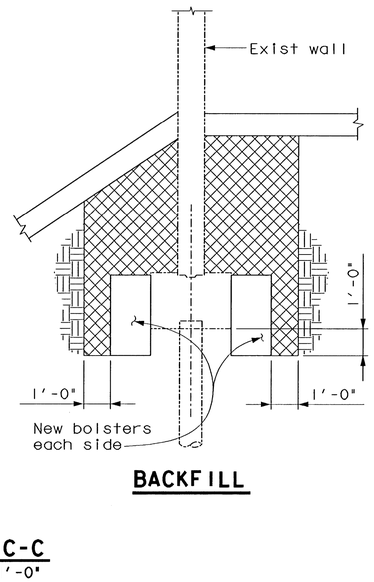


BACKFILL

SECTION B-B
SCALE: 3/8"=1'-0"



EXCAVATION



BACKFILL

SECTION C-C
SCALE: 3/8"=1'-0"

NOTE:
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FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER
GEORGES R. SARAH
No. C51155
Exp. 9-30-07
CIVIL
STATE OF CALIFORNIA

PREPARED BY:
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Architects - Structural Engineers
3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

R.C.E. NO. C51155 — 11/23/05 DATE

No.	DATE	ITEM

REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

LIMITS OF EXCAVATION & BACKFILL NO. 2
FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-33A

DRAWN BY:
CHECKED BY:

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
--	OR	--	--		

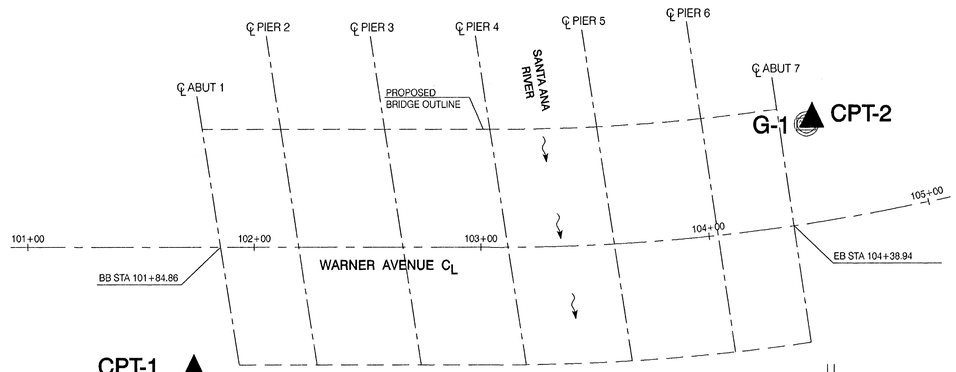
REGISTERED ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER BRIAN D. CONSTANT No. GE 2278 Exp. 3-31-06 GEOTECHNICAL STATE OF CALIFORNIA

CDI Constant & Dickey, Inc. GEOSCIENCE
3921A E. La Palma Ave. Anaheim, Ca 92807

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
SCALE: 1"=30'

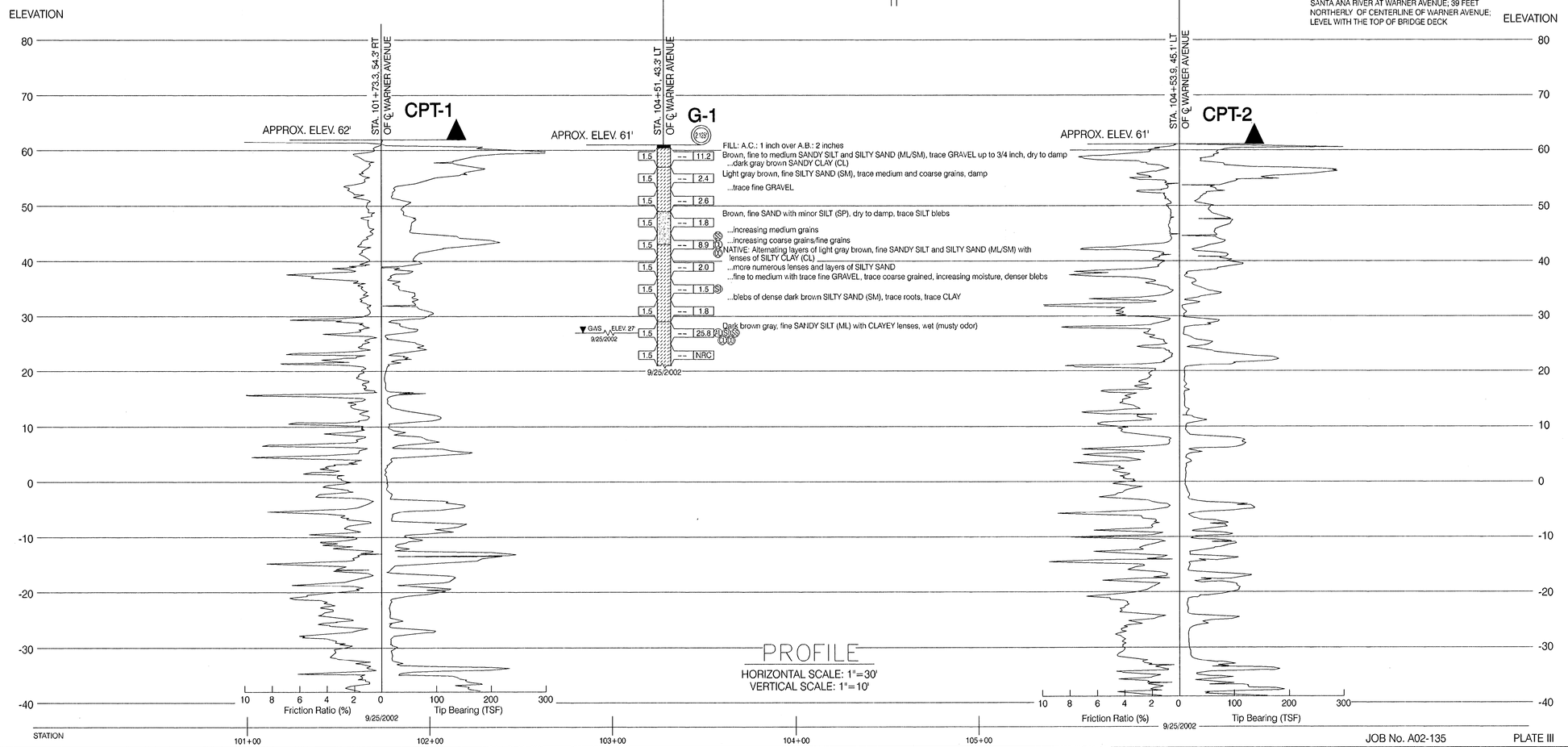
NOTES:

1.) ELEVATIONS ESTIMATED FROM COUNTY OF ORANGE PUBLIC FACILITIES AND RESOURCES DEPARTMENT TOPOGRAPHIC MAP, DATE OF SURVEY NOVEMBER 2001.

2.) BORINGS LOGGED BY C.D. STEELE, STAFF ENGINEER.

3.) BENCHMARK - O.C.S.BM #1L-48-82 ELEV. 61.409' NGVD 1929 (1995 O.C.S. ADJUSTMENT)LEVELED 1999.

SET IN THE TOP OF THE CONCRETE ABUTMENT FOR THE NORTHEAST CORNER OF THE BRIDGE OVER THE SANTA ANA RIVER AT WARNER AVENUE; 39 FEET NORTHERLY OF CENTERLINE OF WARNER AVENUE; LEVEL WITH THE TOP OF BRIDGE DECK



PROFILE
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=10'

JOB No. A02-135 PLATE III

LEGEND OF BORING OPERATIONS

ROTARY SAMPLE BORING (WET)
CAMP 2-1/4" CONE PENETRATION BORING
ELECTRIC CONE PENETRATION TEST

LEGEND OF EARTH MATERIALS

GRAVEL, SAND, SILT, CLAY, SANDY CLAY or CLAYEY SAND, SANDY SILT or SILTY SAND, SILTY CLAY, CLAYEY SILT, PEAT and/or ORGANIC MATTER, FILL MATERIAL, IGNEOUS ROCK, SEDIMENTARY ROCK, METAMORPHIC ROCK

CONSISTENCY CLASSIFICATION FOR SOILS
According to the Standard Penetration Test (ASTM D-1586)

SPT N-Value (Blows/Ft)	Granular	SPT N-Value (Blows/Ft)	Cohesive
0-4	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-30	Medium Dense	5-8	Firm
31-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very stiff
		>30	Hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

DESIGN OVERSIGHT	DRAWN BY	CDS	
SIGN OFF DATE	CHECK BY	B.D. CONSTANT	
C.D. STEELE			
FIELD INVESTIGATOR			
DATE SEPTEMBER 25, 2002			

PREPARED FOR THE
COUNTY OF ORANGE
PUBLIC FACILITIES & RESOURCES DEPARTMENT

PROJECT ENGINEER

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

BRIDGE NO. --
POST MILE --

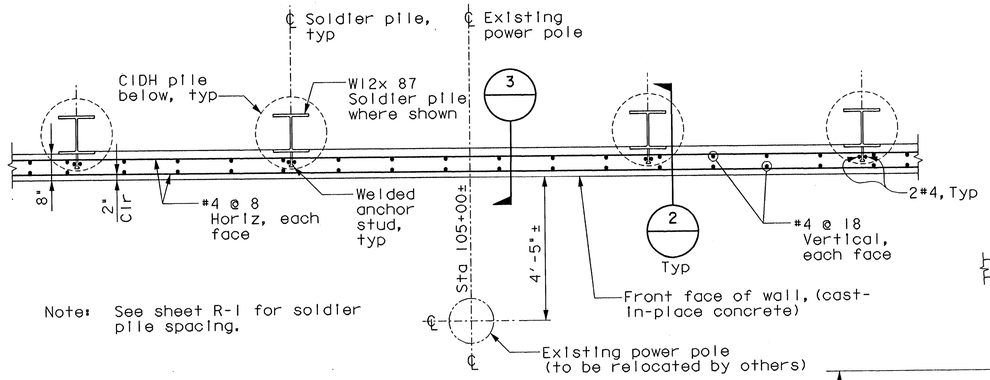
WARNER AVENUE BRIDGE WIDENING
LOG OF TEST BORINGS

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 69 OF 70

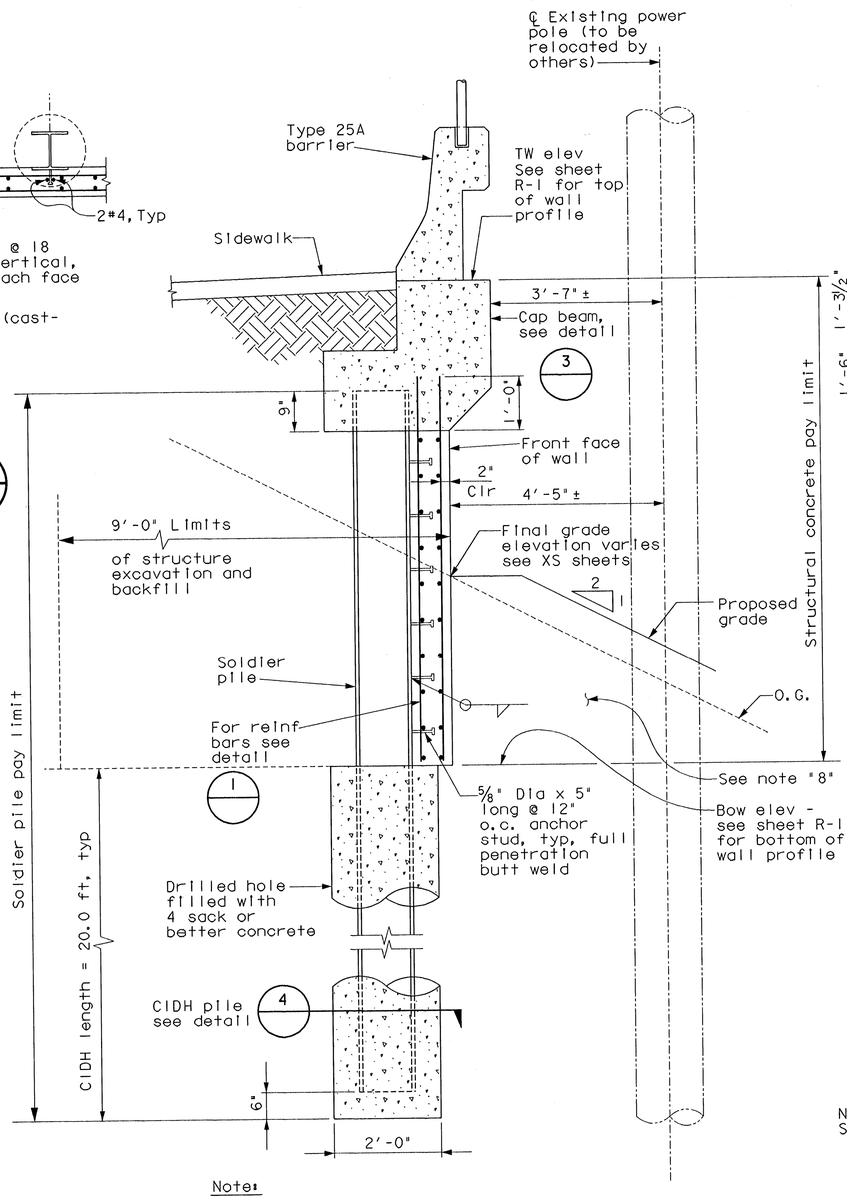
FILE: A02135LOTB PLOT DATE: 6-17-2003



Note: See sheet R-1 for soldier pile spacing.

SOLDIER PILE WALL PARTIAL LAYOUT PLAN (1)

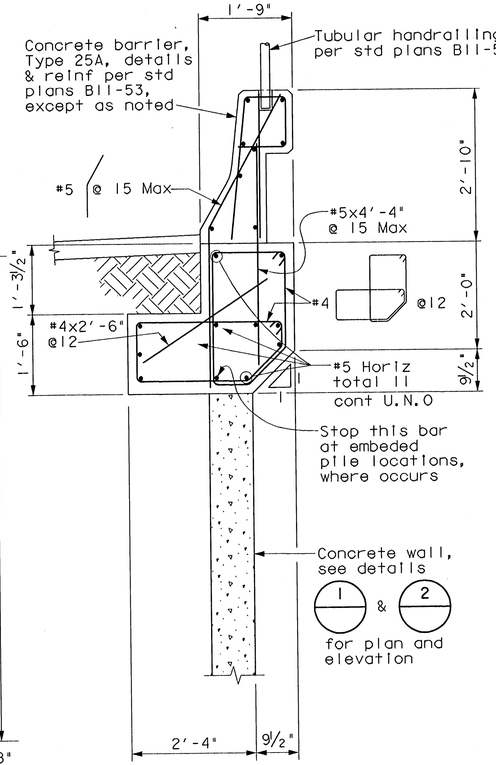
NO SCALE



Note:
For pervious material and weepholes see sheet R-1

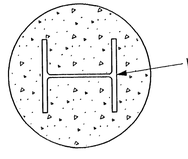
SOLDIER PILE WALL ELEVATION (2)

SCALE: 3/4" = 1'-0"



PILE CAP SECTION (3)

SCALE: 3/4" = 1'-0"



Note:
See details 1 & 2 for layout and elevation, and sheet R-1 for location in plan.

CIDH PILE SECTION (4)

SCALE: 1" = 1'-0"

Design Notes:

1. Cast-in-place concrete wall shall be f'c = 2500 psi @ 28 days.
2. Cast-in-place concrete cap beam shall be f'c = 3600 psi @ 28 days.
3. Structural steel piles shall ASTM A992 grade 50
4. Soil data: Soil density above water table — 120 pcf for active, 116 pcf for passive
   Buoyant unit weight — 64 pcf
   Friction angle 32° — ka = 0.30; kp = 1.3 above elev 50.0', = 3.3 below elev 50.0'
5. Loading: Soil Active Pressure — 36 psf/ft
   Soil Surcharge — 2 ft
6. Casing of CIDH pile may be required due to caving soils and/or ground water.
7. Soils engineer shall inspect drilled holes before soldier piles are installed.
8. Backfill excavated soils for concrete wall construction with slurry up to 1'-0" from finished grade.

NOTE:
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FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER — JEAN-MARIE SARAT — No. S 4038 — Exp. 3/31/06 — STRUCTURAL — STATE OF CALIFORNIA

PREPARED BY:
McLean & Schultz Architects - Structural Engineers
3040 SATURN STREET, SUITE 201 (714) 985-1105 FAX
BREA, CALIFORNIA 92821

JTMS
R.C.E. NO.

6/21/05
DATE

NO.	DATE	ITEM
		REVISIONS

DEVELOPMENT MANAGEMENT & RESOURCES DEPARTMENT
ROAD DIVISION

WARNER AVENUE WIDENING

SOLDIER PILE WALL

FROM: WESTERLY OF THE SANTA ANA RIVER
TO: HARBOR BLVD.

SHEET NO. S-35

DRAWN BY:
CHECKED BY:

70 of 70