

INDEX TO BRIDGE RETROFIT PLANS

INDEX OF BRIDGE RETROFIT PLANS

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EMA - PUBLIC WORKS

REGISTERED PROFESSIONAL ENGINEER
VINCENT P. GRAYLES
No. 30829
Exp. 3-31-94
CIVIL
STATE OF CALIFORNIA

SUBMITTED: Vincent P. Grayles 2-25-93
ROAD DESIGN CHIEF DATE

REGISTERED PROFESSIONAL ENGINEER
JOHN R. ARIAS
No. 51963
Exp. 9-30-93
STRUCTURAL
STATE OF CALIFORNIA

RECOMMENDED: William K. Young 2-25-93
DESIGN DIVISION MANAGER DATE

REGISTERED PROFESSIONAL ENGINEER
WILLIAM K. YOUNG
No. 53000
Exp. 2-25-95
STRUCTURAL
STATE OF CALIFORNIA

APPROVED: William K. Young 2-25-93
DIRECTOR OF PUBLIC WORKS DATE

WARNER AVENUE

PREPARED UNDER SUPERVISION OF:

REGISTERED PROFESSIONAL ENGINEER
JOHN R. ARIAS
No. 51963
Exp. 9-30-93
STRUCTURAL
STATE OF CALIFORNIA

John R. Arias 2/24/93
DATE

McLEAN & SHULTZ
2000 E. CHAPMAN AVE.
FULLERTON, CA. 92631
(714) 871-7370

SLATER/SEGERSTROM & EDINGER BRIDGES

PREPARED UNDER SUPERVISION OF:

REGISTERED PROFESSIONAL ENGINEER
PAUL R. YOUNG
No. 53000
Exp. 2-25-95
STRUCTURAL
STATE OF CALIFORNIA

Paul R. Young 2/24/93
DATE

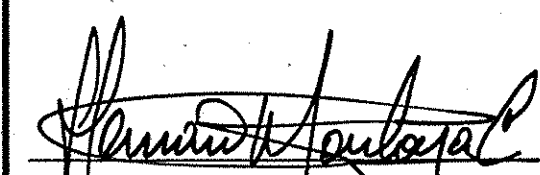
ROBERT BEIN, WILLIAM FROST & ASSOCIATES
14725 ALTON PARKWAY
IRVINE, CA. 92718
(714) 472-3505

COMPUTER
AIDED
DESIGN &
DRAFTING
DESIGN FILE NAME:

REV. FNDN. ELEV., SLATER BR.; SHT. R-3	4-93	APPROVAL
SYMBOL	DESCRIPTIONS	DATE
REVISIONS		
ROBERT BEIN, WILLIAM FROST & ASSOC. 14725 ALTON PARKWAY IRVINE, CALIFORNIA 92718		
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS		
SANTA ANA RIVER MAINSTEM INCLUDING SANTIAGO CREEK, CALIFORNIA		
LOWER SANTA ANA RIVER CHANNEL (SAN DIEGO FREEWAY TO RIVER VIEW GOLF COURSE)		
RETROFITTING OF COUNTY BRIDGES		
DESIGNED BY:		
DRAWN BY:		
J.L.S.		
CHECKED BY:		
SUBMITTED BY:	DATE:	SPEC. NO. DACW09-93-B-
		DISTRICT FILE NO. 239/796
		SHEET R-1 OF R-16 SHEETS

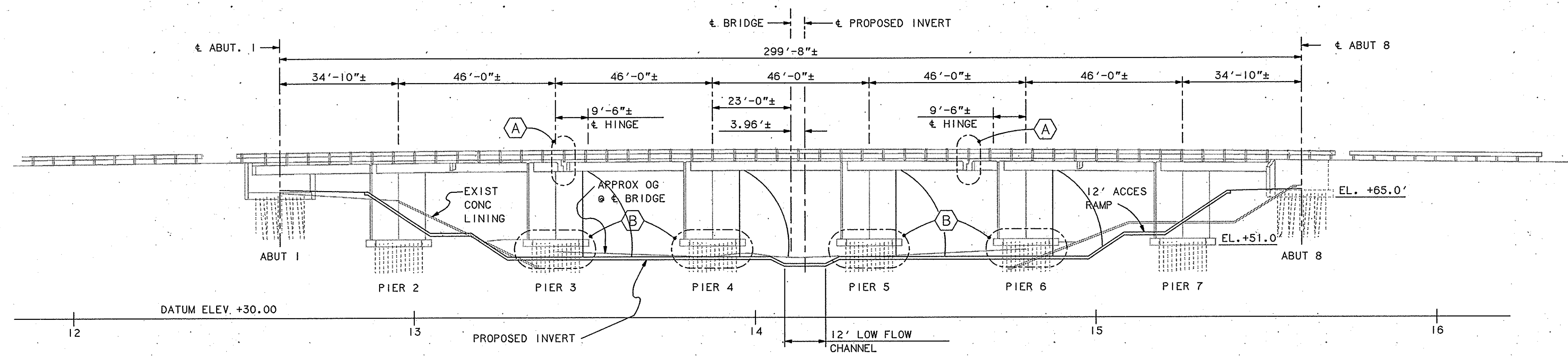
SAFETY PAYS

ENVIRONMENTAL
ENHANCEMENT
THRU ENGINEERING

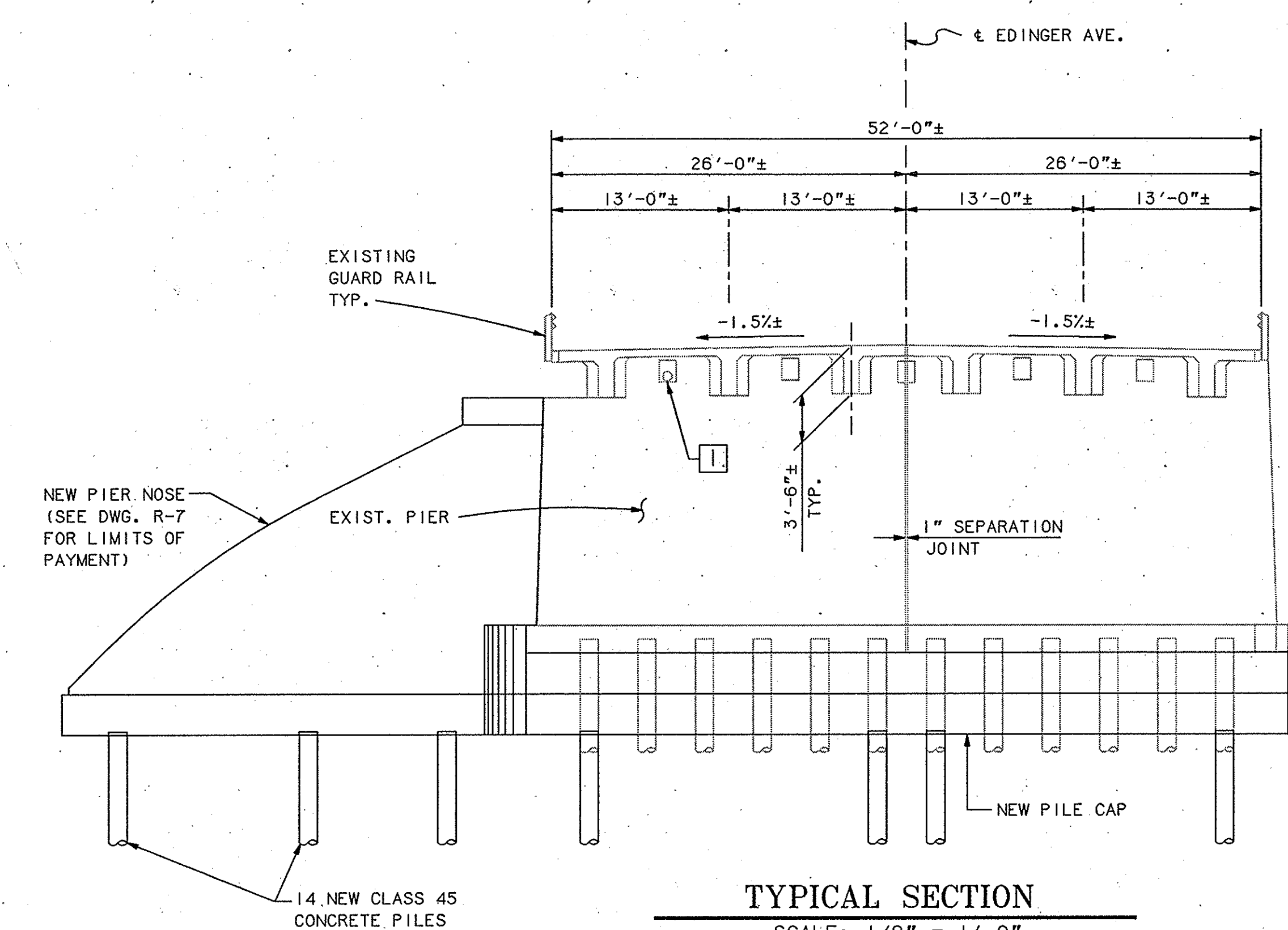
PREPARED UNDER THE SUPERVISION OF
PAUL R. YOUNG, PROJECT MANAGER
REGISTERED STRUCTURAL ENGINEER
PROJECT ENGINEER:
REGISTERED STRUCTURAL ENGINEER

PLANS APPROVAL

2-24-93
DATE

REGISTERED PROFESSIONAL ENGINEER
HERNAN MONTOYA
No. S002819
Exp. 6-30-96
STRUCTURAL
STATE OF CALIFORNIA



PILE DATA			
CLASS 45 PILES			
ALTERNATIVE "U" OR "V" SHALL BE USED			
LOCATION	DESIGN LOAD (SERVICE LOAD)	SPECIFIED PILE TIP ELEV.	PROBABLE PILE TIP ELEV.
PIER 3	45 TONS	-0.40'	-5.40'
PIER 4	45 TONS	-0.70'	-5.70'
PIER 5	45 TONS	-0.70'	-5.70'
PIER 6	45 TONS	-0.40'	-5.40'



UTILITIES

- 1 - SOUTHERN CALIFORNIA GAS COMPANY
3"Ø PIPE WITHIN 6" Ø CASING
- 2 - 84" R.C.P. SEWER
- 3 - TELEPHONE (ENDS)

RETROFIT CODES

- (A) RESTRAINER / SHEAR KEY RETROFIT, SEE SHEET R-8
- (B) FOUNDATION RETROFIT - PILES AND PILE CAP
SEE SHEET R-7

SYMBOLS

- (---) INDICATES LOCATION OF WORK
- (---) INDICATES EXISTING STRUCTURE
- (---) DETAIL NO.
- (---) STANDARD PLAN SHEET NO.

INDEX TO EDINGER BRIDGE PLANS

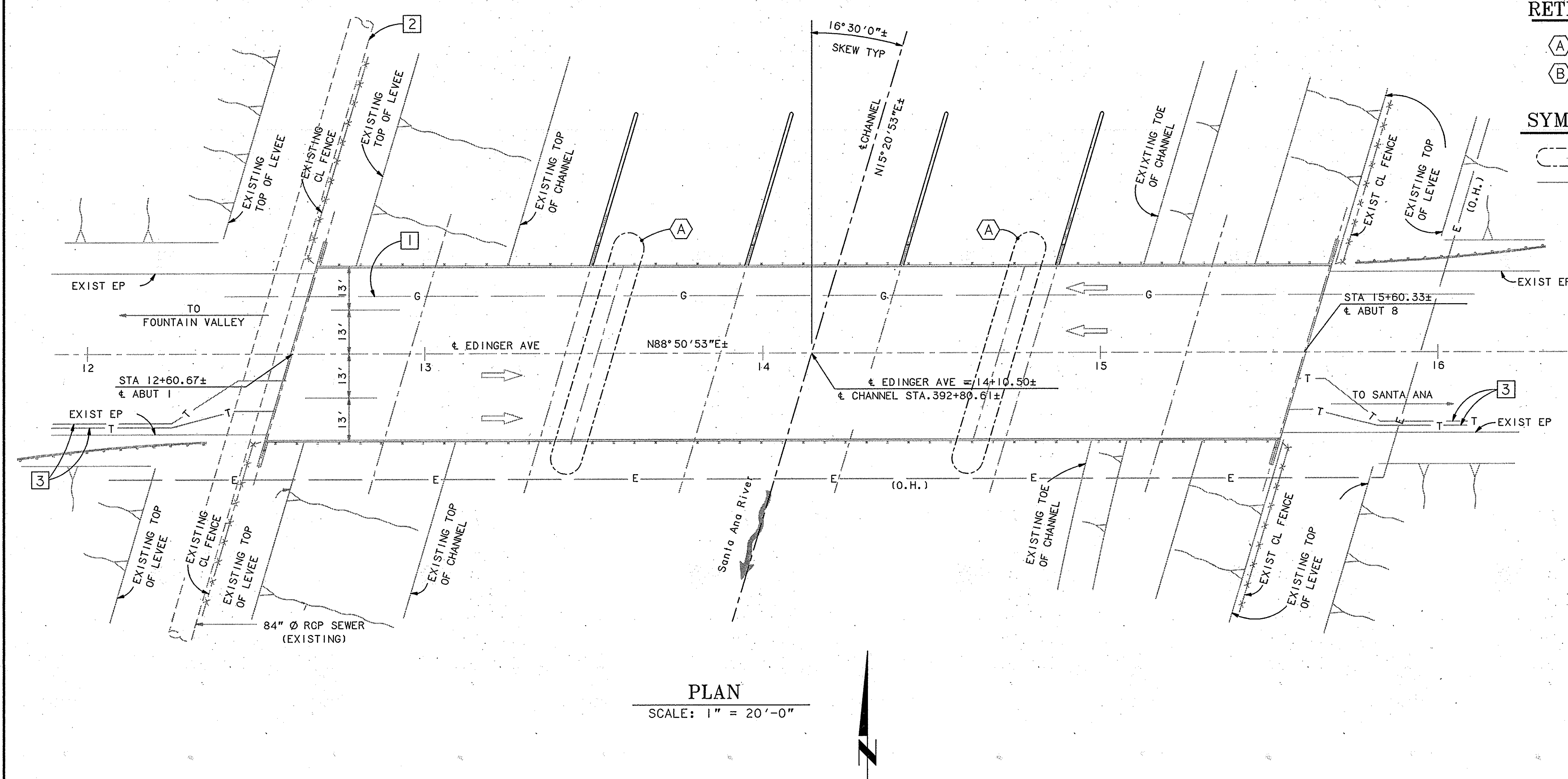
- R-6 GENERAL PLAN
- R-7 FOUNDATION RETROFIT DETAILS
PIERS 3, 4, 5, & 6
- R-8 HINGE RESTRAINER DETAILS
- R-9 LIMITS OF PAYMENT,
EXCAVATION AND BACKFILL
- R-10 LOG OF TEST BORINGS

CALTRAN STANDARD PLANS DATED JULY, 1992

- A-10A ABBREVIATIONS
- A-10B SYMBOLS
- B2-5 PILE DETAILS, CLASS 45

GENERAL NOTES:

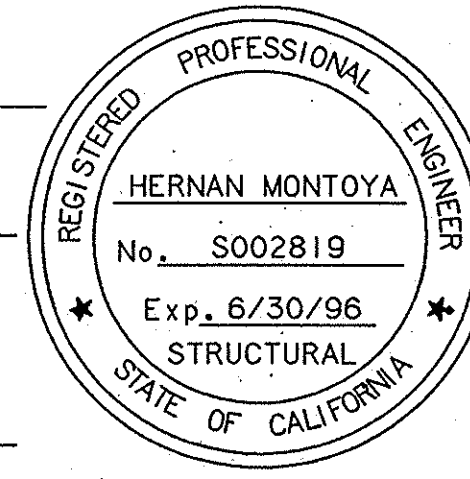
- 1- ALL EXISTING BRIDGE ELEVATIONS AND DIMENSIONS ARE BASED UPON AS BUILT BRIDGE PLANS PROVIDED BY O.C.E.M.A. ALL NEW CHANNEL AND FOUNDATION ELEVATIONS ARE BASED UPON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929, REFERENCE SHEET 5 OF THE LOWER SANTA ANA RIVER CHANNEL PLANS
- 2- CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD ELEVATIONS AND DIMENSIONS ON THE JOB SITE PRIOR TO ORDERING OR FABRICATING ANY MATERIAL.
- 3- LOAD FACTOR DESIGN:
DESIGN: BRIDGE DESIGN SPECIFICATIONS (1983 AASHTO WITH INTERIMS AND REVISIONS BY CALTRANS)
CONSTRUCTION: CONSTRUCTION SHALL BE IN ACCORDANCE WITH STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED JULY 1992 AND THE PROJECT SPECIAL PROVISIONS.
REINFORCED CONCRETE:
EXISTING CONCRETE (ASSUMED): f'c = 5,000 psi
fy = 44,000 psi
NEW CONCRETE (BRIDGE): f'c = 3,250 psi
fy = 60,000 psi
n = 9
SEISMIC DESIGN : PEAK ROCK ACCELERATION, A = 0.4g
DEPTH OF ALLUVION > 150'



SYMBOL	DESCRIPTIONS	DATE	APPROVAL
REVISIONS			
ROBERT BEIN, WILLIAM FROST & ASSOC. 14725 ALTON PARKWAY IRVINE, CALIFORNIA 92718		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DESIGNED BY: H.M.	SANTA ANA RIVER MAINSTEM INCLUDING SANTIAGO CREEK, CALIFORNIA		
DRAWN BY: J.L.S.	LOWER SANTA ANA RIVER CHANNEL (SAN DIEGO FREEWAY TO RIVER VIEW GOLF COURSE)		
CHECKED BY: HIM/PRY	EDINGER AVENUE BRIDGE GENERAL PLAN		
SUBMITTED BY:	DATE:	SPEC. NO. DACW09- 93-B-	SHEET R-6 OF R-16 SHEETS
		DISTRICT FILE NO. 239/796	

COMPUTER
AIDED
DESIGN &
DRAFTING
DESIGN FILENAME:

PREPARED UNDER THE SUPERVISION OF
PAUL R. YOUNG, PROJECT MANAGER
REGISTERED STRUCTURAL ENGINEER
PROJECT ENGINEER:
REGISTERED STRUCTURAL ENGINEER



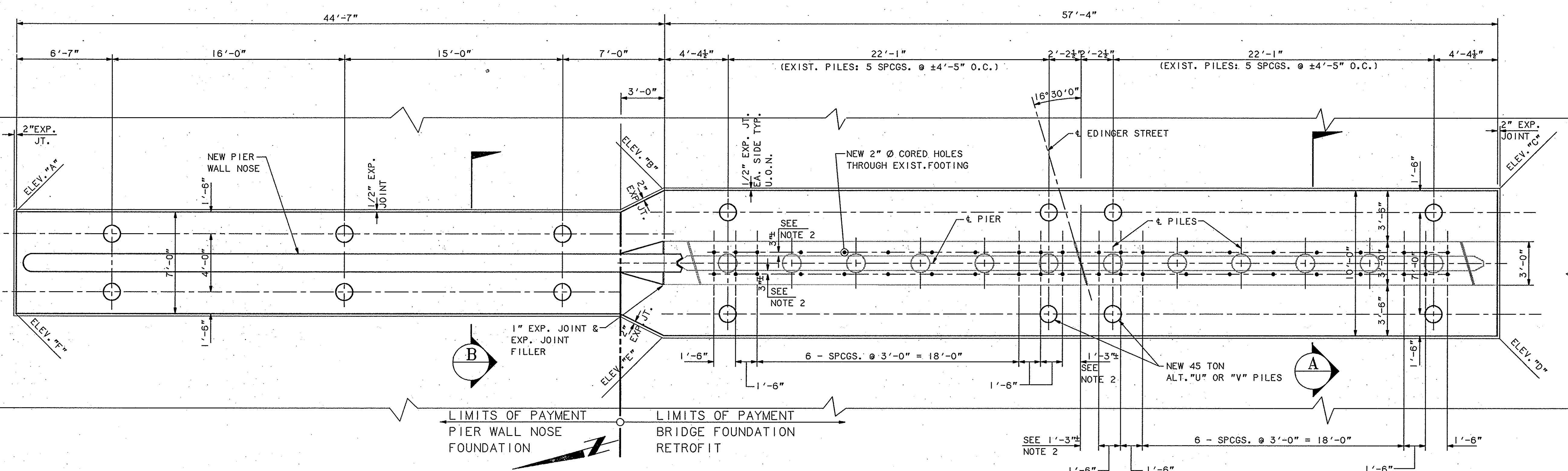
PLANS APPROVAL *Hernan Montoya* 2-24-93 DATE

NOTES:

- CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS PRIOR TO ORDERING OR FABRICATING ANY MATERIAL.
- CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF EXISTING PIER DOWELS AND FOOTING REBAR BY PACHOMETER TESTING AND PROBING TO AVOID CUTTING REBAR DURING CORING.
- DOWELS SHALL BE GROUTED IN PLACE WITH SIKAGROUT 212 OR APPROVED EQUAL. INSTALLATION AND GROUT PREPARATION SHALL BE PER GROUT MANUFACTURER RECOMMENDATIONS.
- ALL CONCRETE SURFACES AGAINST WHICH NEW CONCRETE IS TO BE PLACED SHALL BE CLEAN (FREE FROM LAITANCE, DIRT AND OTHER BOND-INHIBITING SUBSTANCE), SOUND AND ROUGHENED TO 1/4" DEPTH TO PROMOTE MECHANICAL ADHESION PRIOR TO POURING NEW CONCRETE. EXISTING CONCRETE SURFACE SHALL BE MOISTENED TO A SATURATED SURFACE-DRY CONDITION.
- SEE DRAWING S-3 FOR CHANNEL CONCRETE LINING INFORMATION.

ELEVATION - PIERS #3, #4, #5, & #6

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

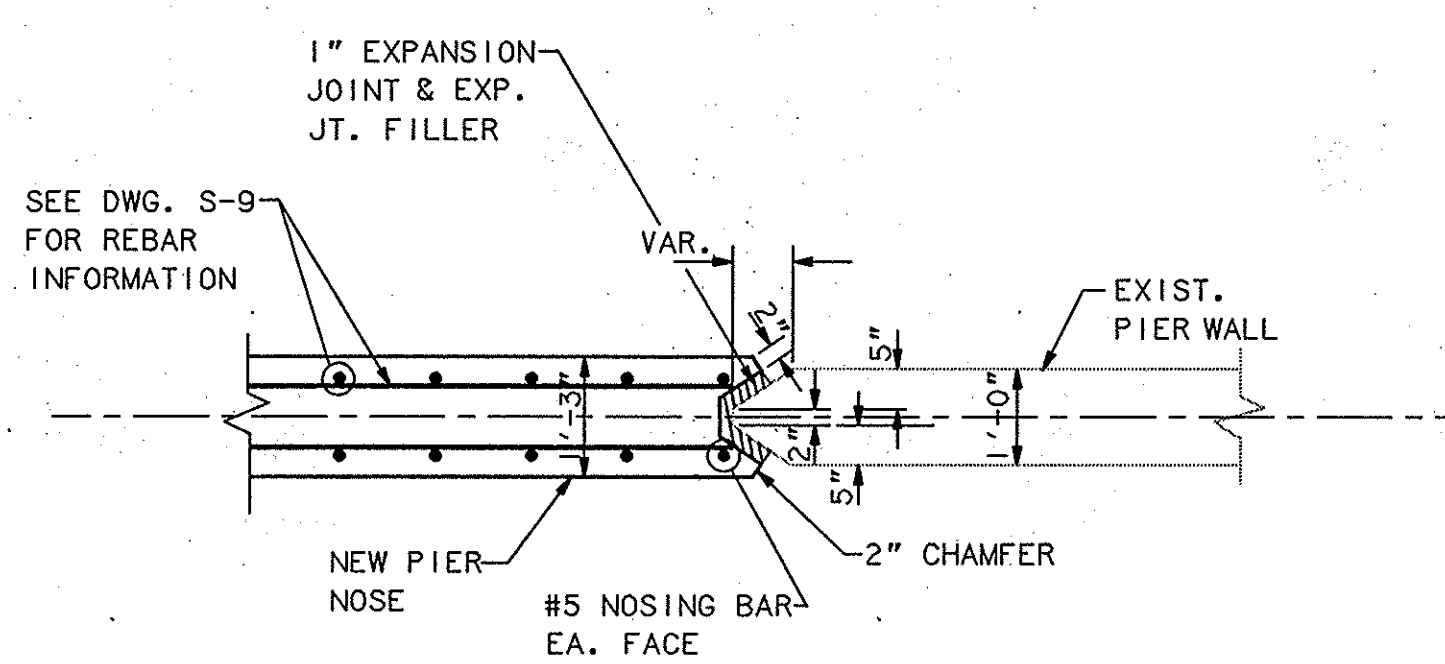


PLAN-PIERS #3, #4, #5, & #6

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

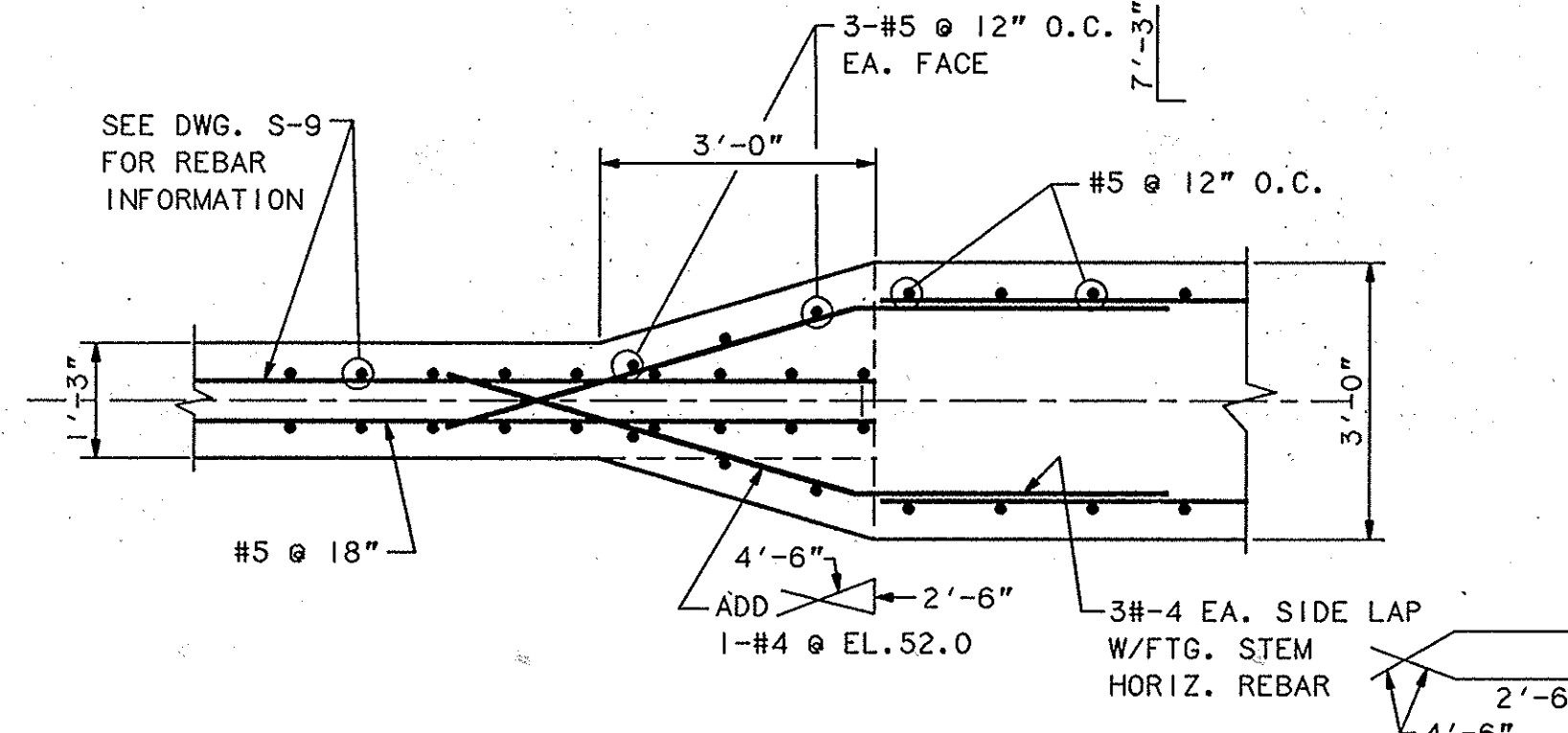
TOP OF FOUNDATION ELEVATIONS

PIER NO.	A	B	C	D	E	F	G
3	47.83	47.72	47.60	47.68	47.80	47.89	44.60
4	47.55	47.44	47.32	47.40	47.52	47.61	44.30
5	47.70	47.61	47.49	47.41	47.53	47.64	44.30
6	47.97	47.88	47.76	47.68	47.80	47.91	44.60



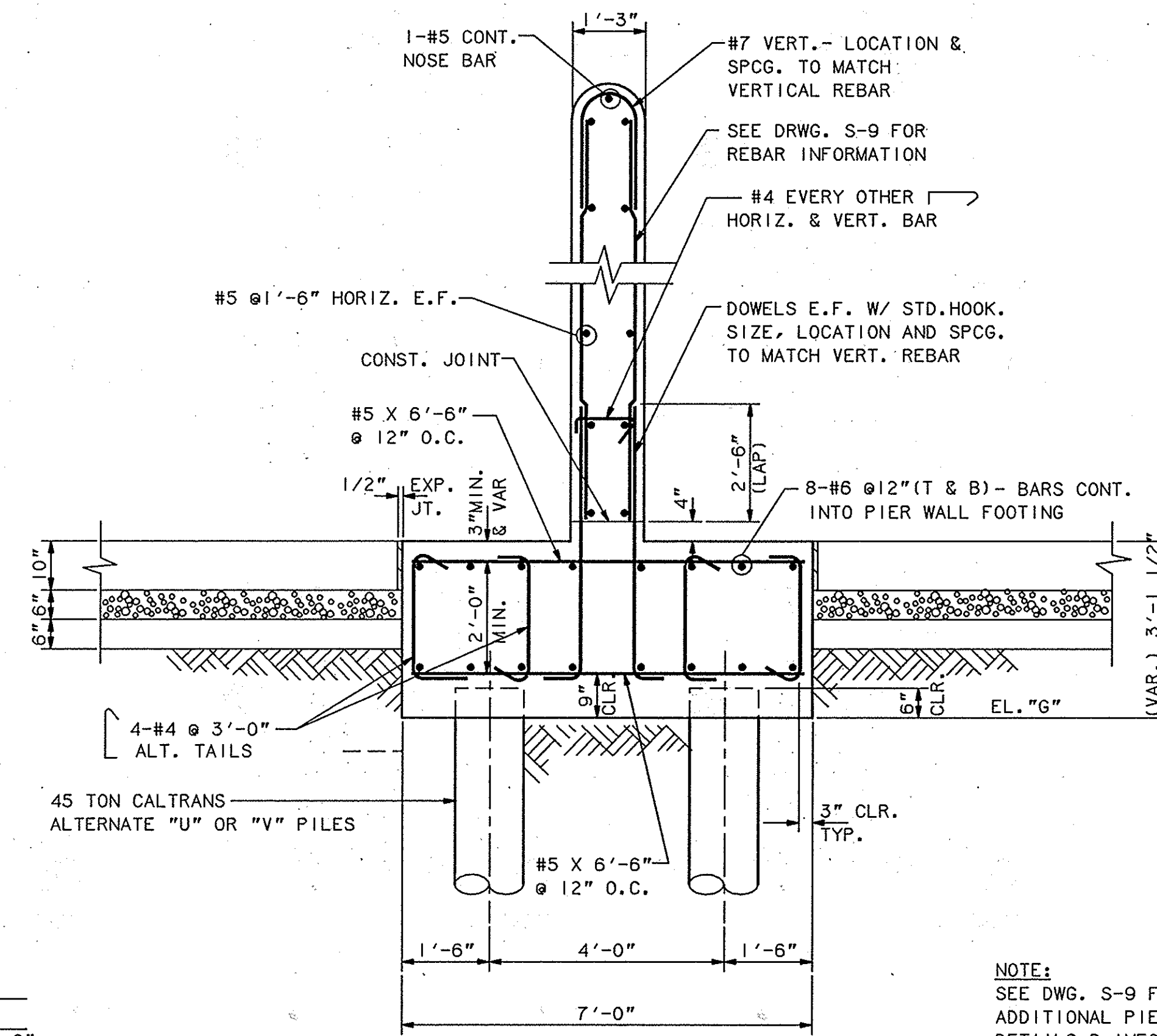
SECTION D

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



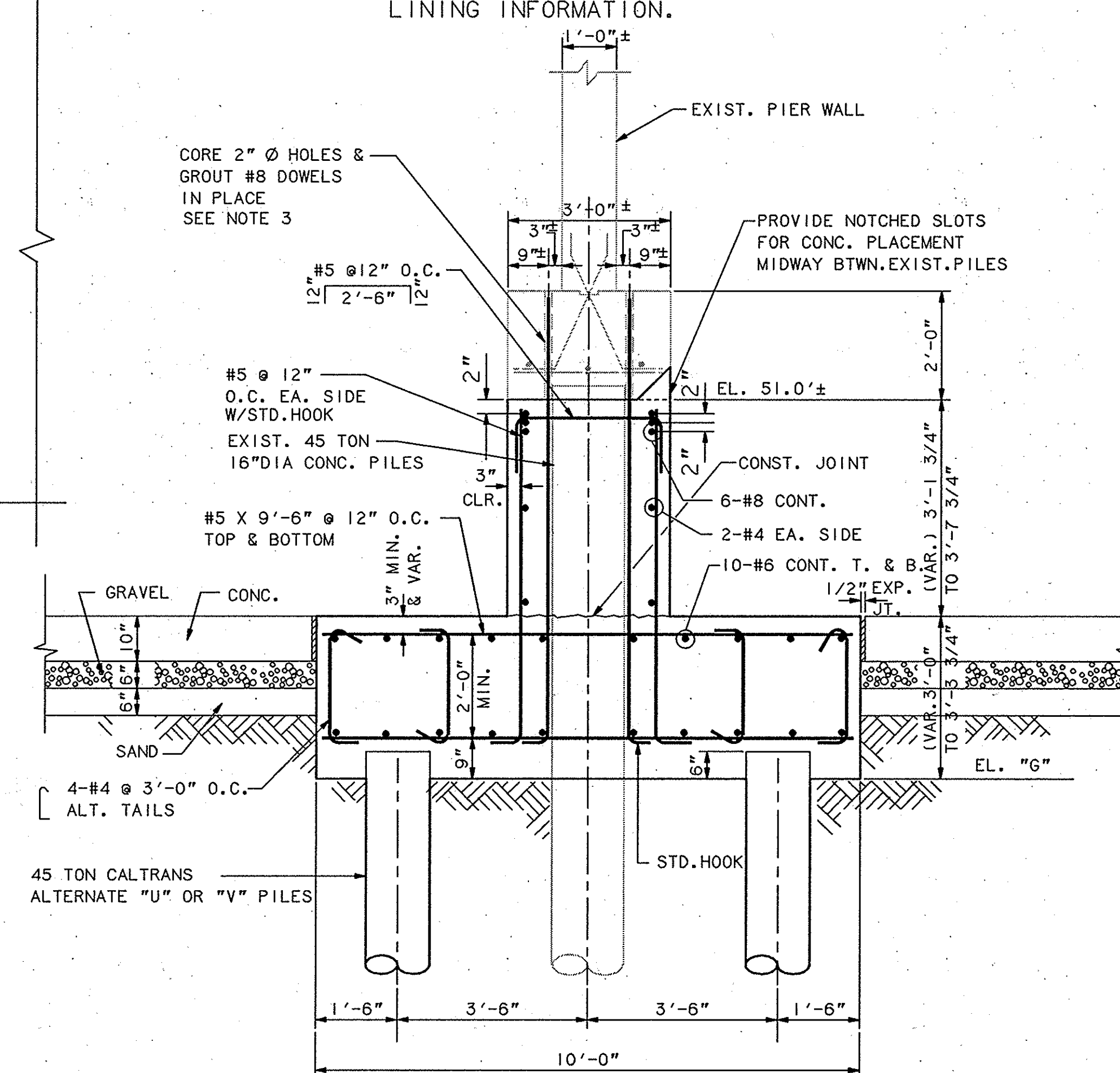
SECTION C

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



TYPICAL SECTION B

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



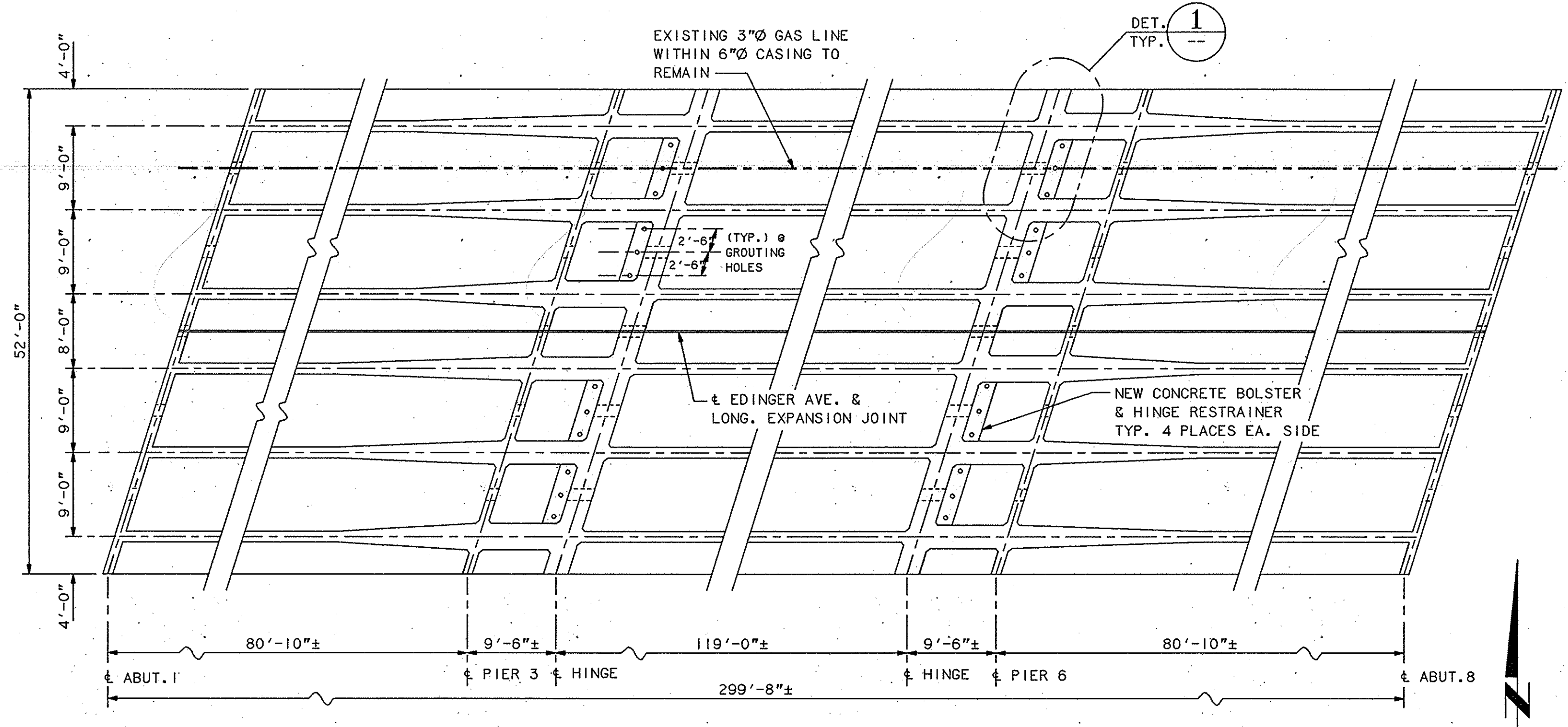
TYPICAL SECTION A

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

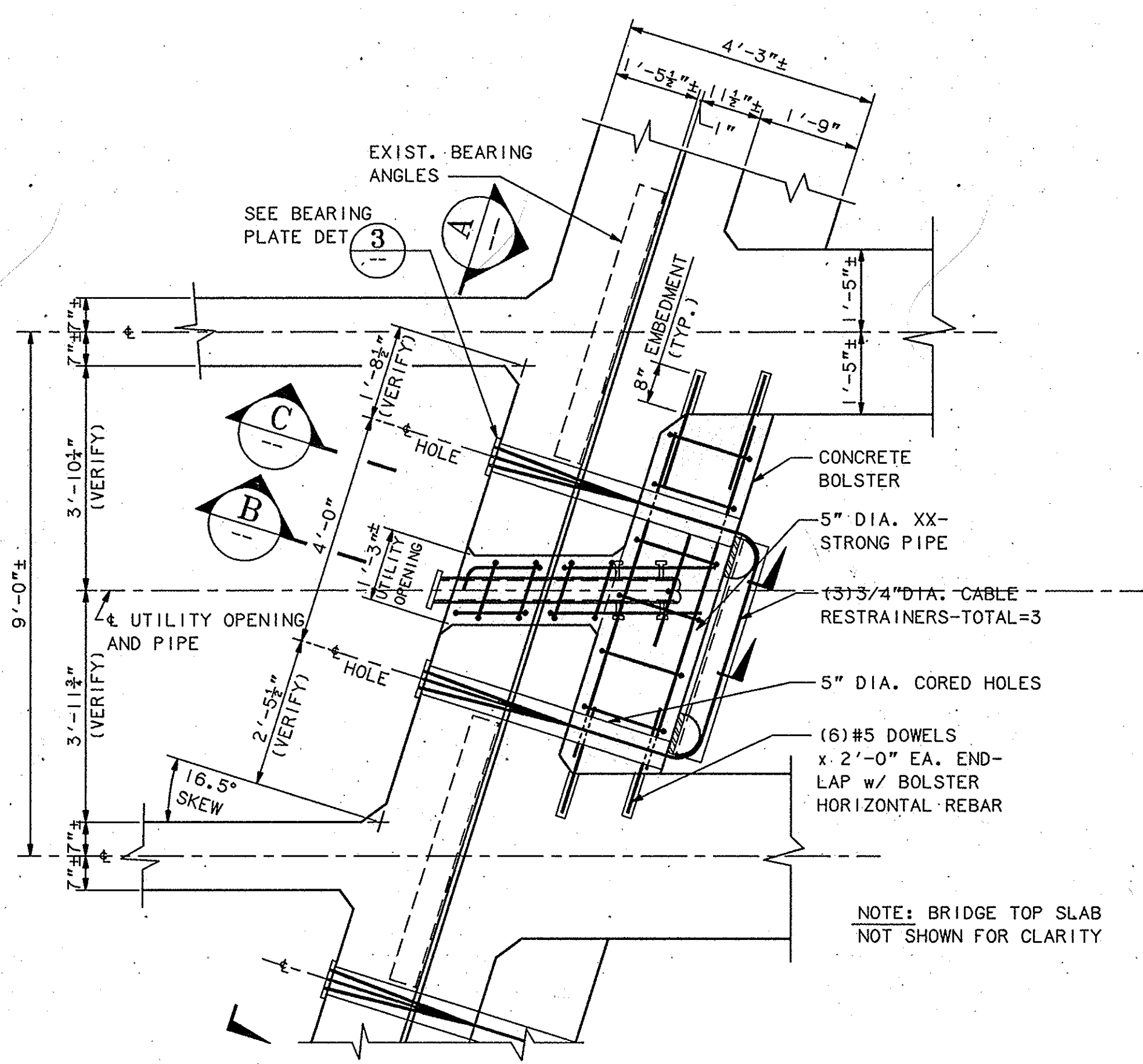
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REVISIONS			
ROBERT BEIN, WILLIAM FROST & ASSOC. 14725 ALTON PARKWAY IRVINE, CALIFORNIA 92718		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DESIGNED BY:	H.M.	SANTA ANA RIVER MAINSTEM INCLUDING SANTIAGO CREEK, CALIFORNIA	
DRAWN BY:	J.L.S.	LOWER SANTA ANA RIVER CHANNEL (SAN DIEGO FREEWAY TO RIVER VIEW GOLF COURSE)	
CHECKED BY:	HIM/PRY	EDINGER AVENUE BRIDGE FOUNDATION RETROFIT DETAILS PIERS #3, #4, #5 & #6	
SUBMITTED BY:		DATE:	SHEET R-7 OF R-16 SHEETS
		SPEC. NO. DACW09-93-B-	DISTRICT FILE NO. 239/796

COMPUTER
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DESIGN &
DRAFTING
DESIGN FILE NAME:

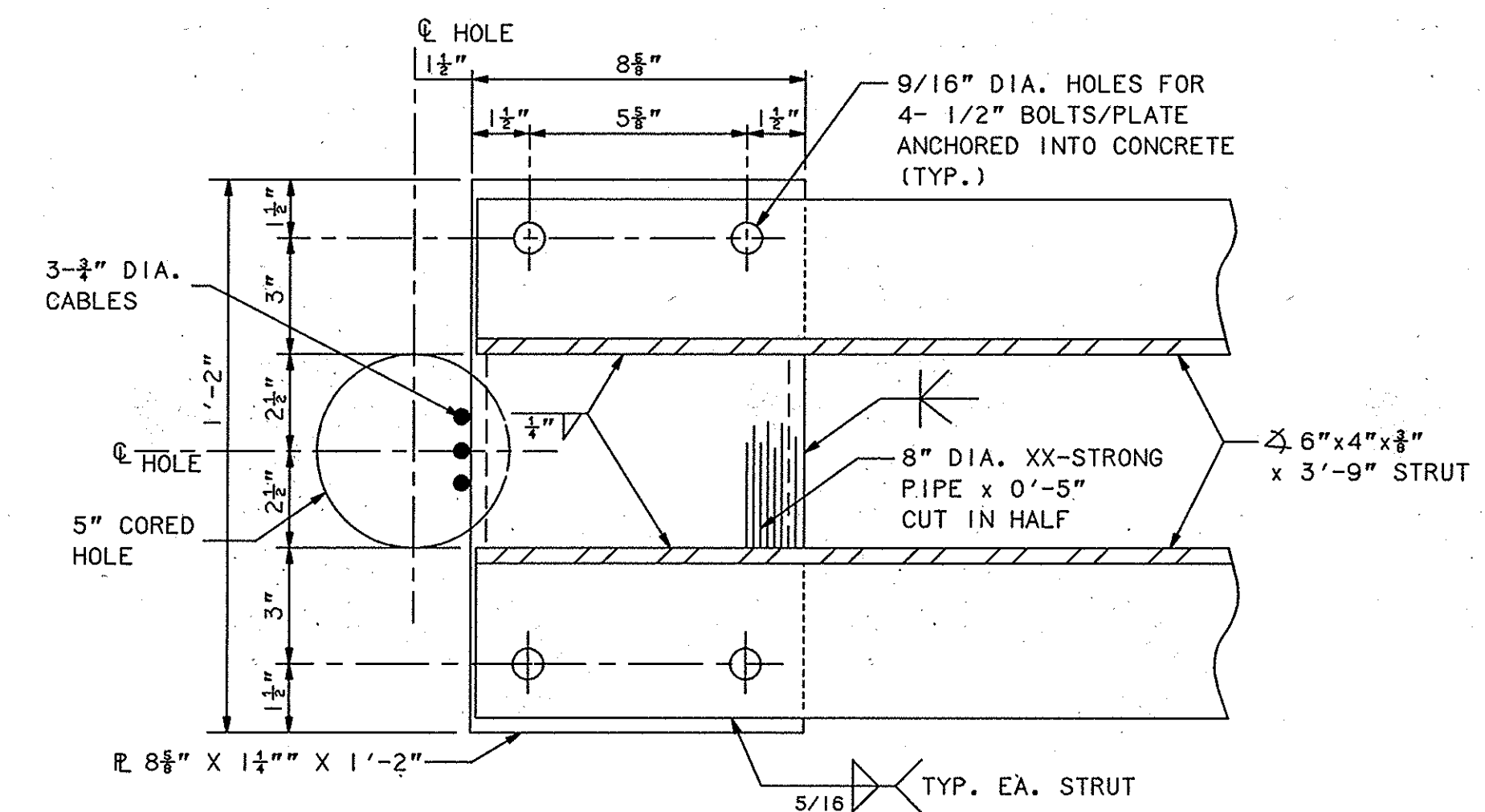
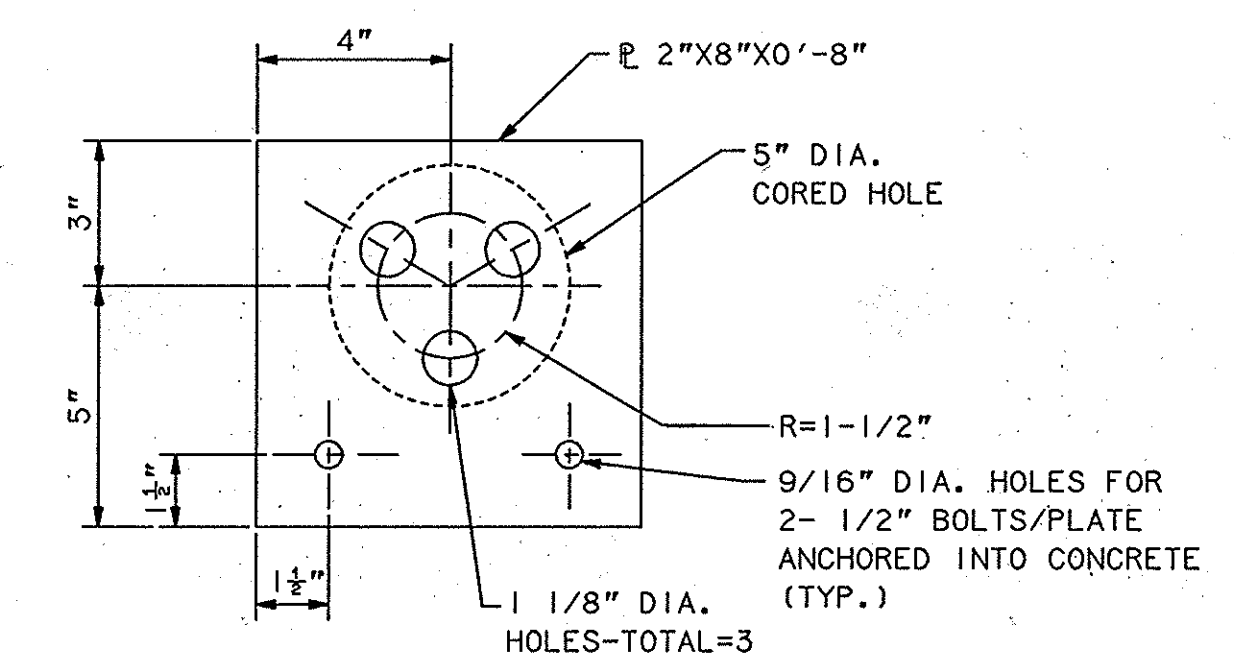
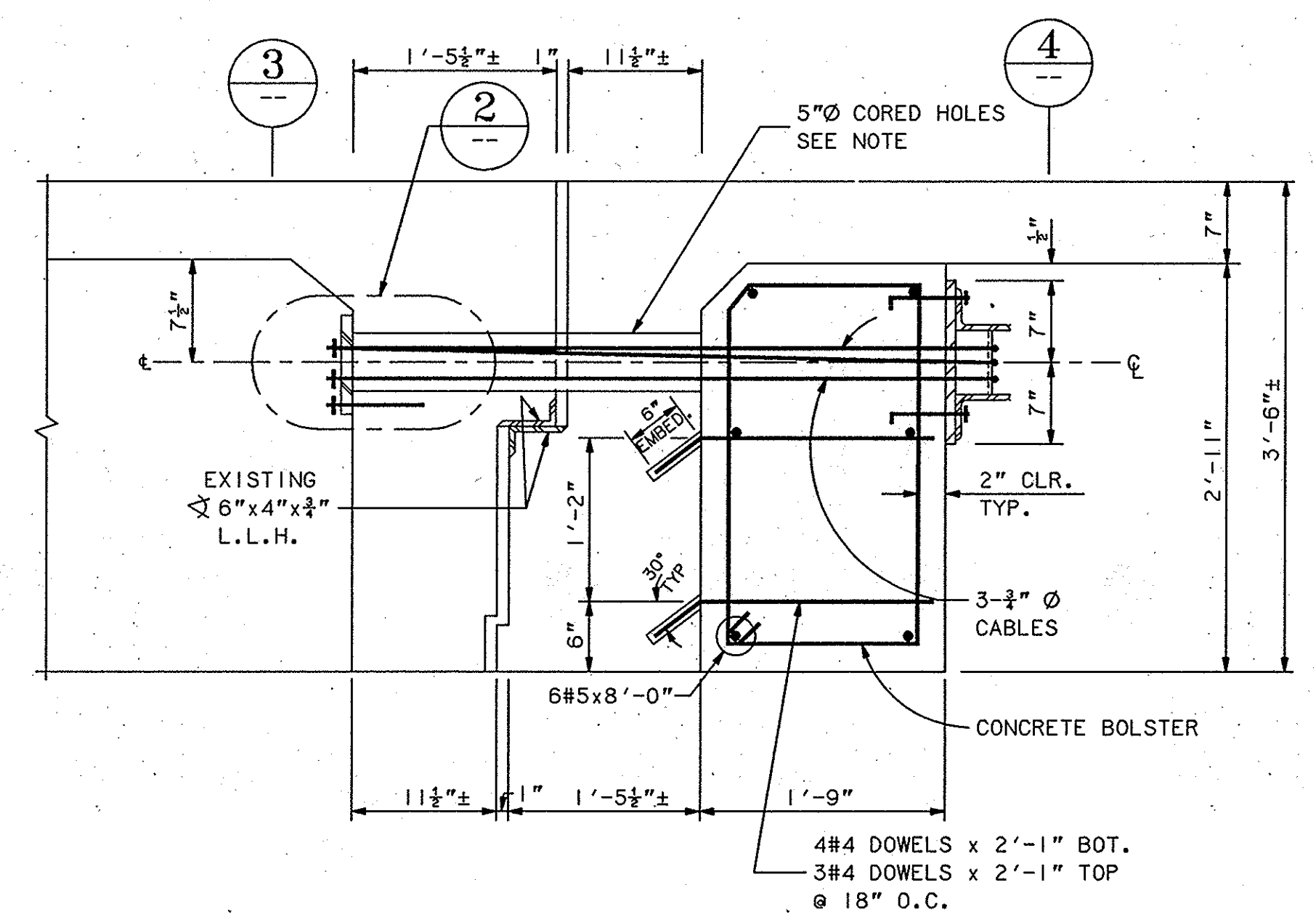
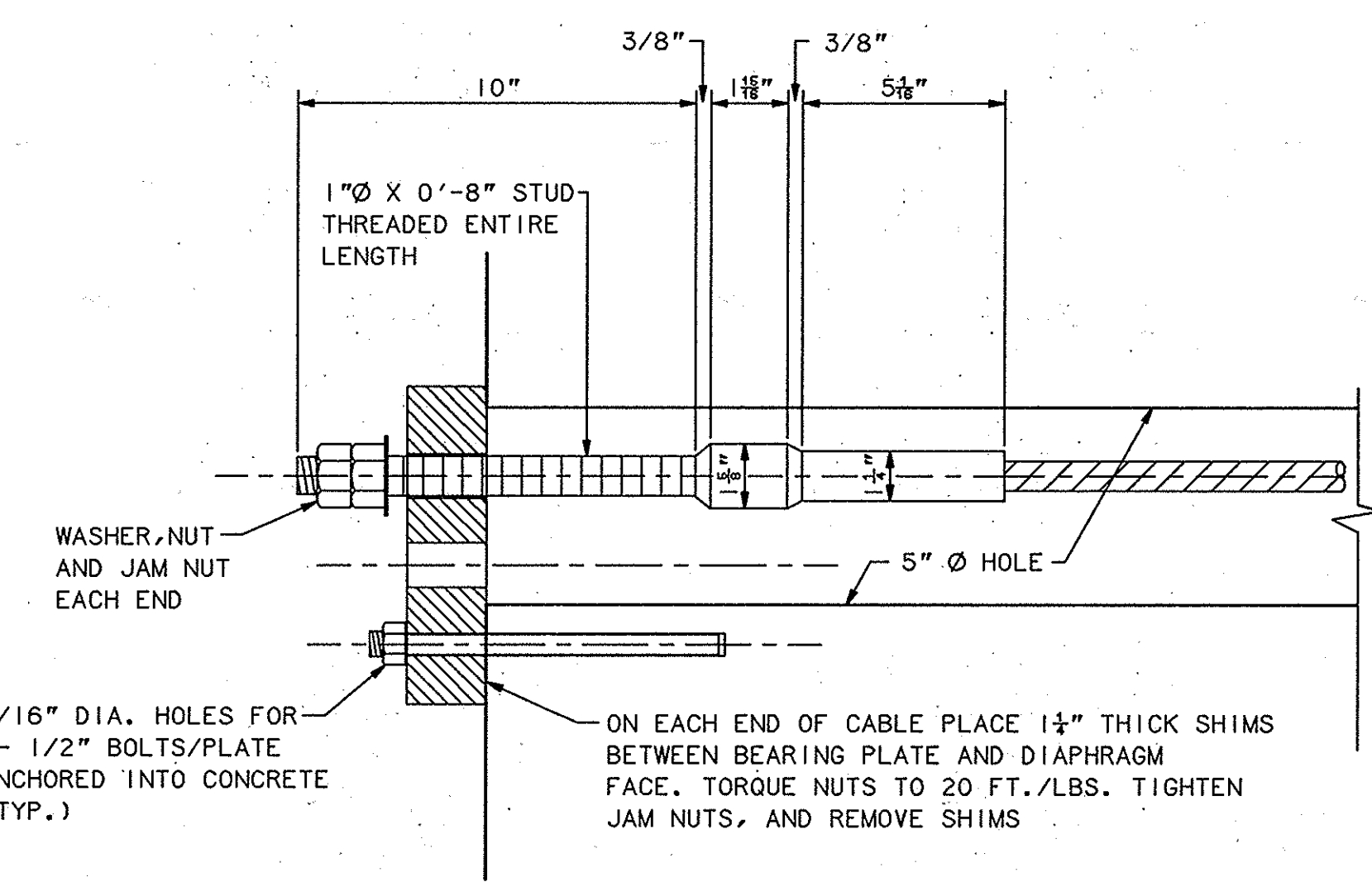
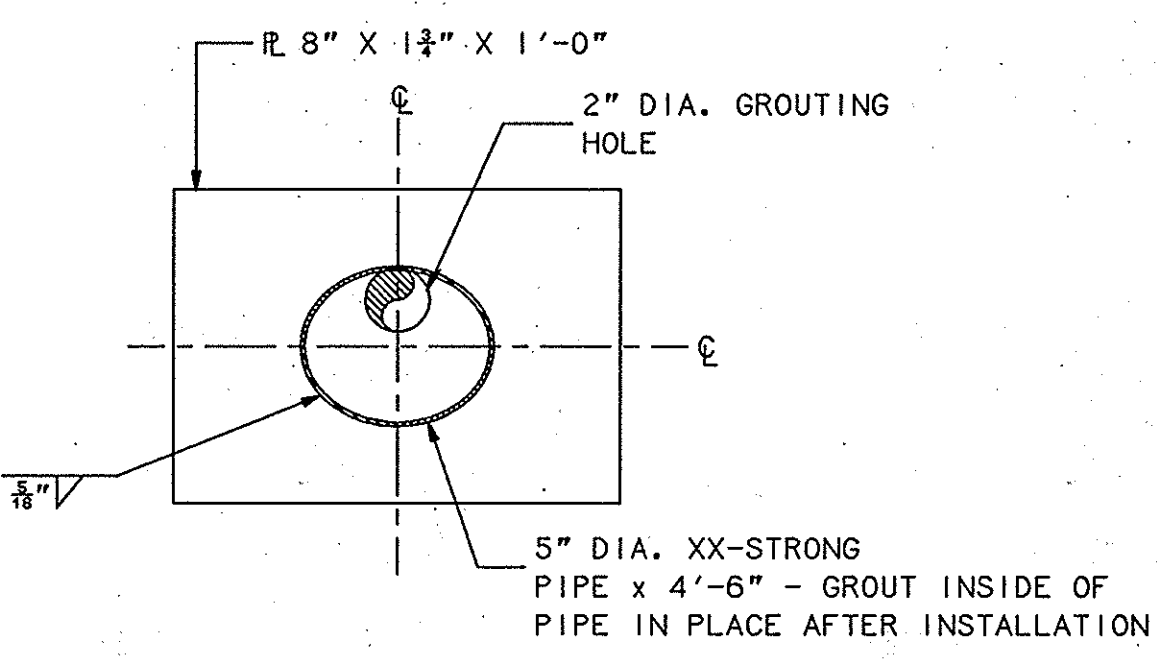
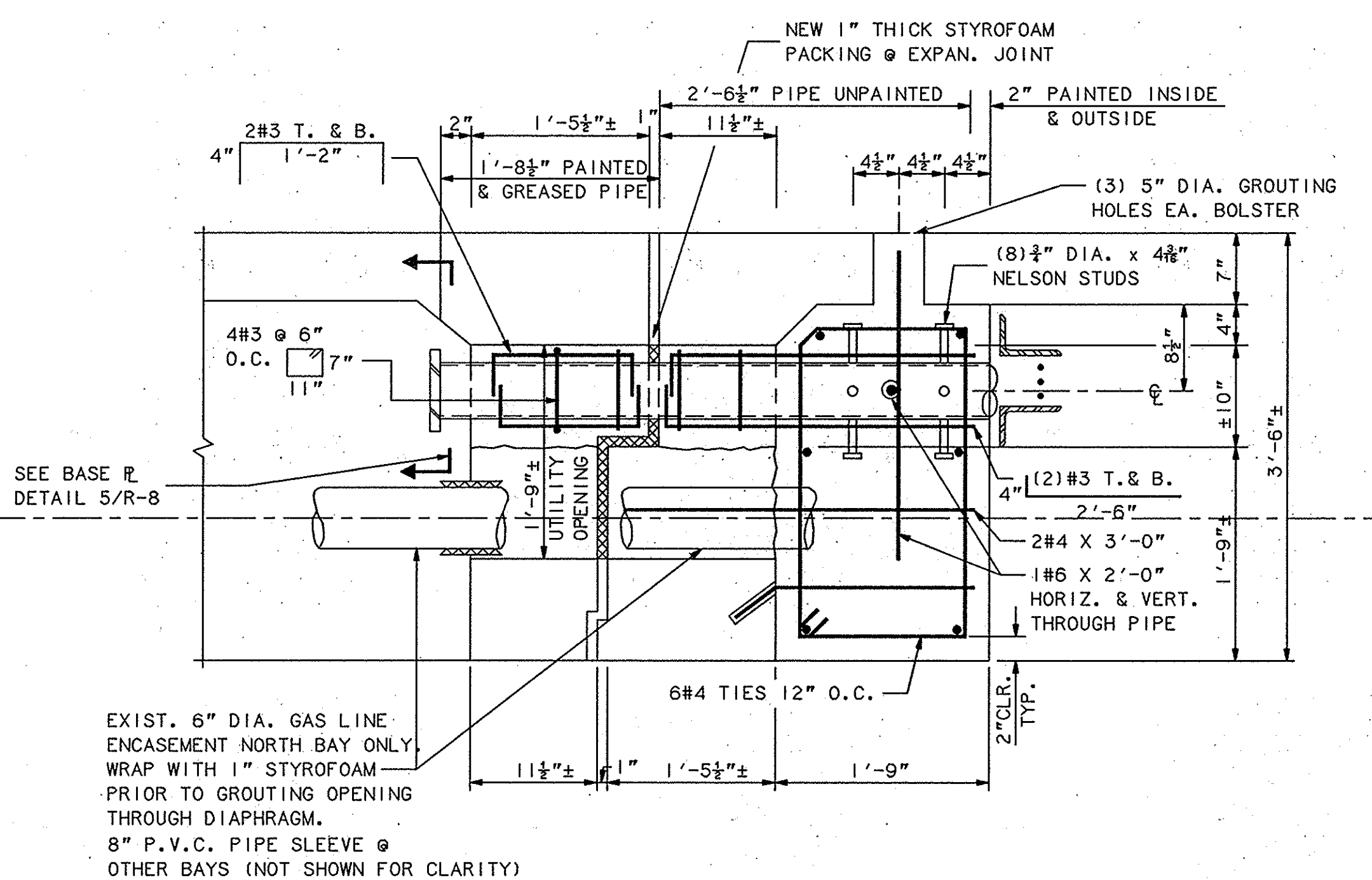
NOTE:
SEE DWG. S-9 FOR
ADDITIONAL PIER NOSE
DETAILS & INFORMATION



HINGE RESTRAINER LOCATION PLAN



RESTRAINER PLAN VIEW



COMPUTER AIDED DESIGN & DRAFTING

PREPARED UNDER THE SUPERVISION OF
PAUL R. YOUNG, PROJECT MANAGER
REGISTERED STRUCTURAL ENGINEER
PROJECT ENGINEER:
REGISTERED STRUCTURAL ENGINEER

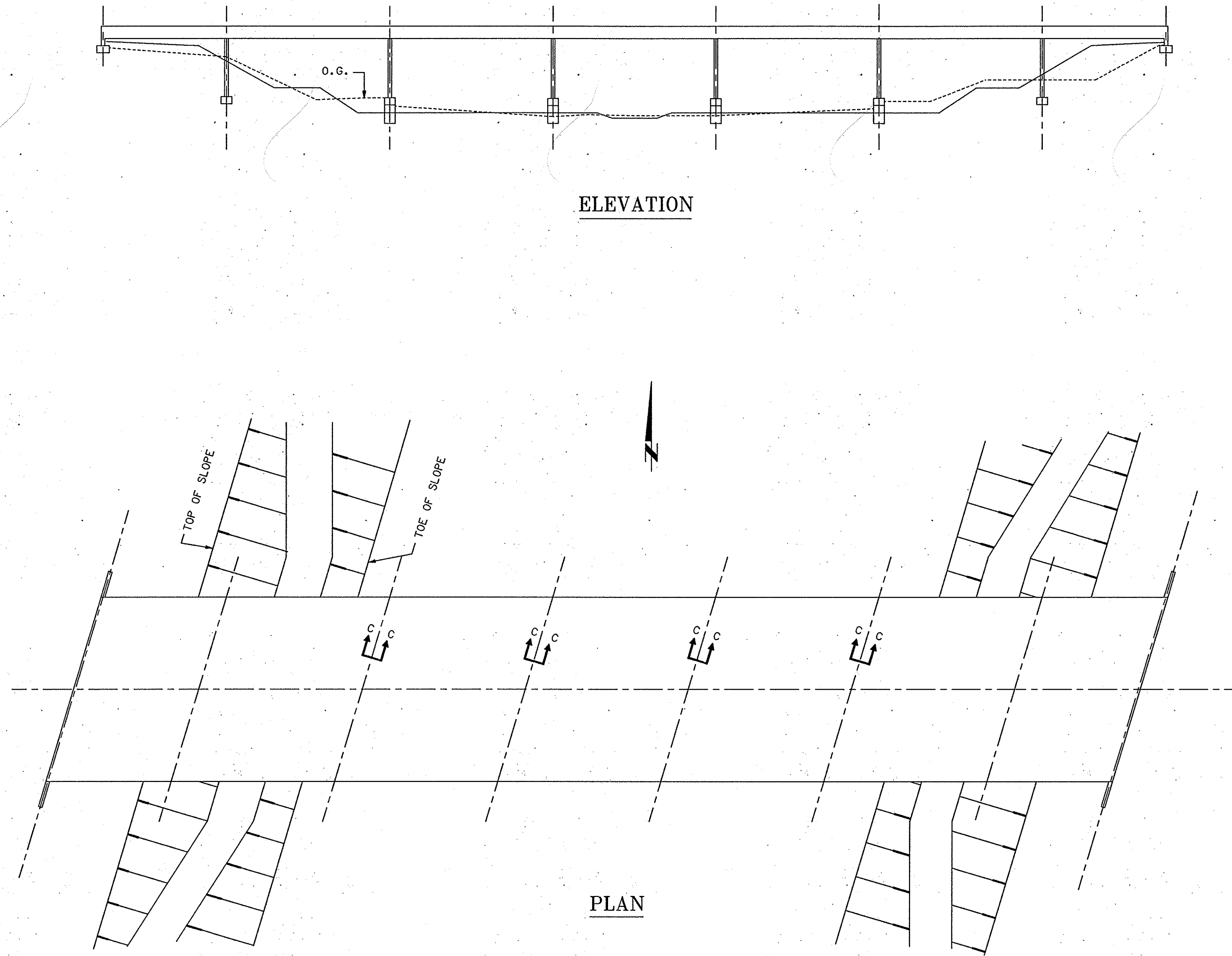
HERNAN MONTOYA
No. S002819
Exp. 6/30/96
STRUCTURAL
STATE OF CALIFORNIA

PLANS APPROVAL 2-24-93 DATE

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
REVISIONS			
ROBERT BEIN, WILLIAM FROST & ASSOC. 14725 ALTON PARKWAY IRVINE, CALIFORNIA 92718		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DESIGNED BY: H.M.		SANTA ANA RIVER MAINSTEM INCLUDING SANTIAGO CREEK, CALIFORNIA	
DRAWN BY: J.S./G.F.		LOWER SANTA ANA RIVER CHANNEL (SAN DIEGO FREEWAY TO RIVER VIEW GOLF COURSE)	
CHECKED BY: H.I.M./ P.R.Y.		EDINGER AVENUE BRIDGE HINGE RESTRAINER DETAILS	
SUBMITTED BY:		DATE:	SHEET R-8 OF R-16 SHEETS
		SPEC. NO. DACW09-93-B-	DISTRICT FILE NO. 239/796

ENVIRONMENTAL
ENHANCEMENT
THRU ENGINEERING

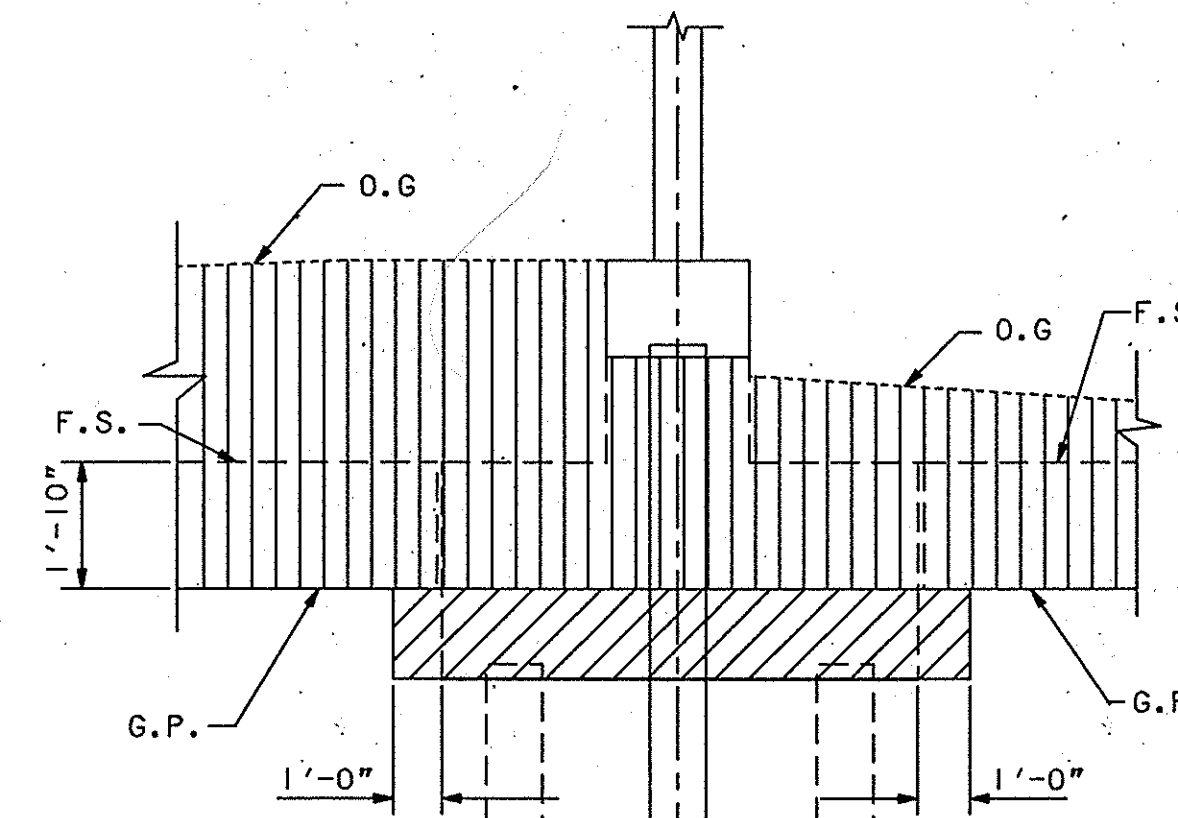
ENVIRONMENTAL
ENHANCEMENT
THRU ENGINEERING



ELEVATION

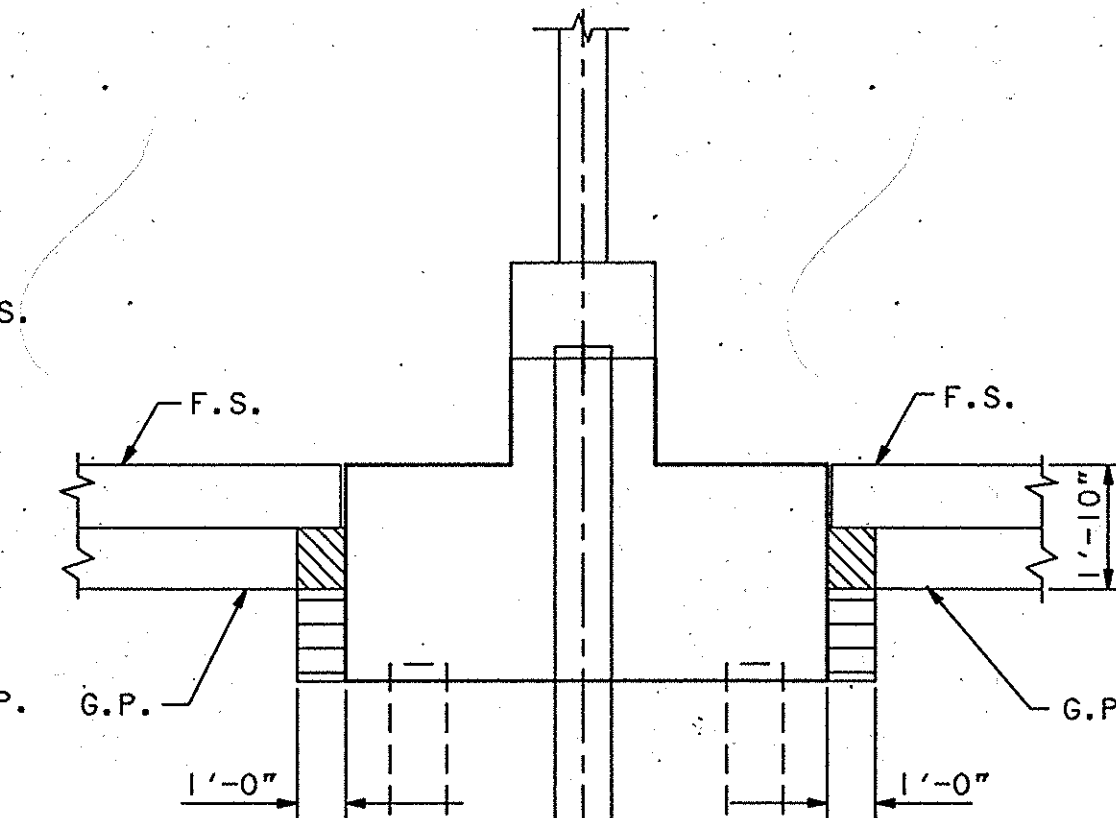
PLAN

EXCAVATION



SECTION C-C

BACKFILL



SECTION C-C

PREPARED UNDER THE SUPERVISION OF
PAUL R. YOUNG, PROJECT MANAGER
REGISTERED STRUCTURAL ENGINEER
PROJECT ENGINEER:
REGISTERED STRUCTURAL ENGINEER
PLANS APPROVAL
DATE



ABBREVIATIONS

- O.G. ORIGINAL GROUND
F.S. PLANNED FINISHED SURFACE
G.P. PLANNED GRADING PLANE

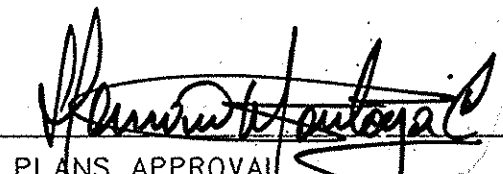
LEGEND

- STRUCTURE EXCAVATION
STRUCTURE BACKFILL
CHANNEL EXCAVATION (BY CHANNEL CONTRACTOR)
CHANNEL FILL (BY CHANNEL CONTRACTOR)

CONTRACTOR SHALL VERIFY ALL CONTROLLING
FIELD DIMENSIONS PRIOR TO ORDERING OR
FABRICATING ANY MATERIAL

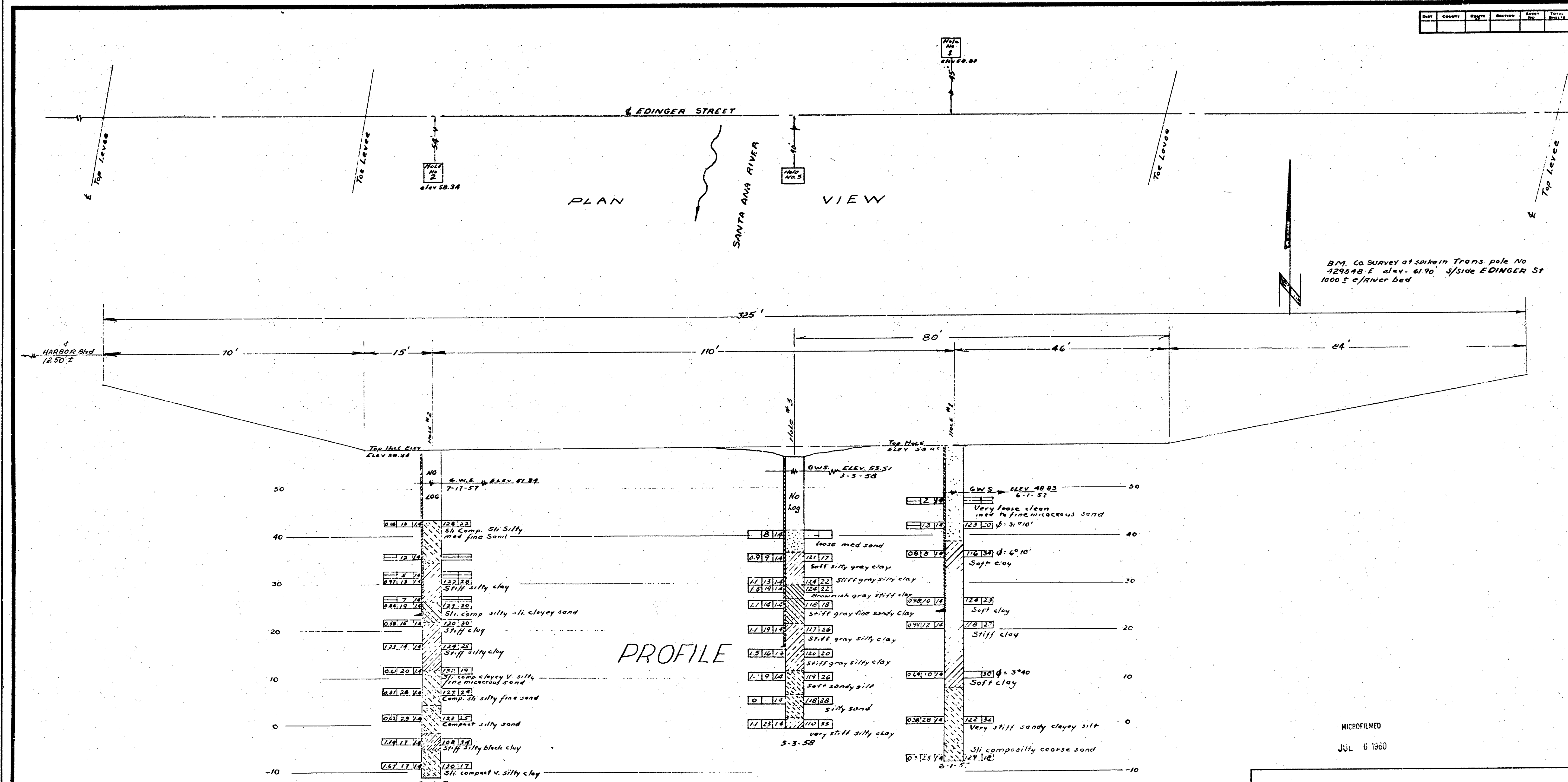
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DESIGN &
DRAFTING
DESIGN FILE NAME:

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
REVISIONS			
ROBERT BEIN, WILLIAM FROST & ASSOC. 14725 ALTON PARKWAY IRVINE, CALIFORNIA 92718		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DESIGNED BY: H.M.	SANTA ANA RIVER MAINSTEM INCLUDING SANTIAGO CREEK, CALIFORNIA		
DRAWN BY: J.L.S.	LOWER SANTA ANA RIVER CHANNEL (SAN DIEGO FREEWAY TO RIVER VIEW GOLF COURSE)		
CHECKED BY: HIM/PRY	EDINGER AVENUE BRIDGE EXCAVATION AND BACKFILL PAY LIMITS		
SUBMITTED BY:	DATE:	SPEC. NO. DACW09-93-B- DISTRICT FILE NO. 239/796	SHEET R-9 OF R-16 SHEETS

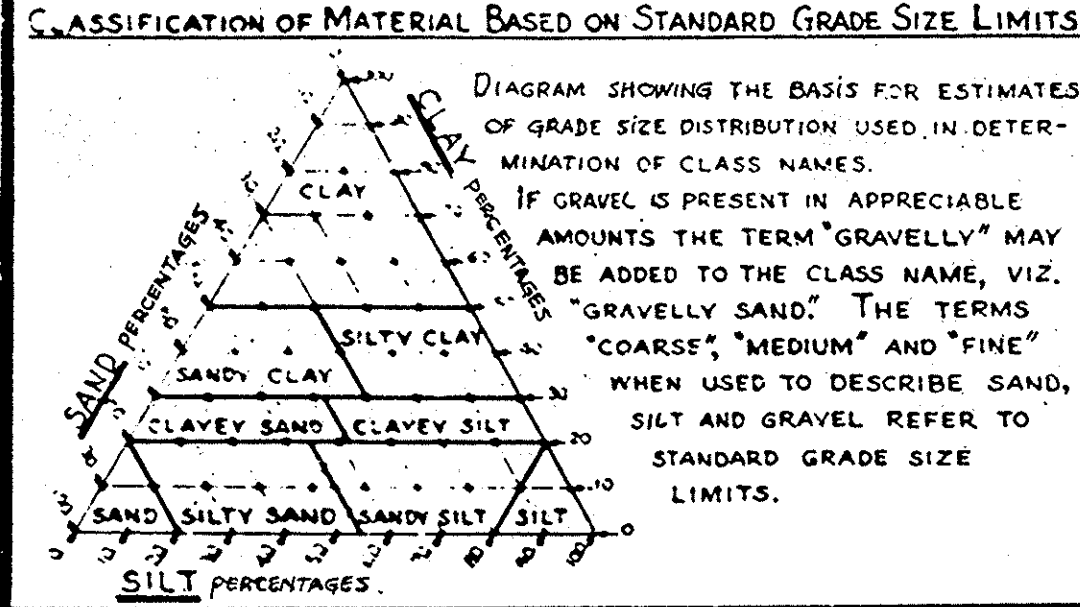
PREPARED UNDER THE SUPERVISION OF
PAUL R. YOUNG, PROJECT MANAGER
REGISTERED CIVIL ENGINEER
PROJECT ENGINEER:
REGISTERED STRUCTURAL ENGINEER

PLANS APPROVAL

2-24-13
DATE

REGISTERED PROFESSIONAL ENGINEER
HERNAN MONTOYA
No. S002819
Exp. 6/30/96
STRUCTURAL
STATE OF CALIFORNIA



NOTE:
1. THIS LOG OF TEST BORINGS WAS REPRODUCED FROM THE ORIGINAL BRIDGE PLANS (1960) AT THE REQUEST OF THE ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY.
2. REFER TO SHEETS C-11 AND G-15 FOR ADDITIONAL GEOTECHNICAL INFORMATION

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS


LEGEND OF EARTH MATERIALS

GRAVEL	SILTY CLAY OR CLAYEY SILT
SAND	PEAT AND/OR ORGANIC MATTER
SILT	FILL MATERIAL
CLAY	IGNEOUS ROCK
SANDY CLAY OR CLAYEY SAND	SEDIMENTARY ROCK
SANDY SILT OR SILTY SAND	METAMORPHIC ROCK

LEGEND OF BORING OPERATIONS

PLAN OF ANY BORING	Penetration Boring
PENETROMETER	Rotary Boring (Wet)
2 1/2" CONE PENETROMETER	Auger Boring (Dry)
SAMPLER BORING (DRY)	Jet Boring
ROTARY BORING (WET)	Core Boring
AUGER BORING (DRY)	Test Pit

NOTES
The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.
Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

**EDINGER ST. CROSSING
SANTA ANA RIVER
LOG OF TEST BORINGS**
SCALE 1" = 10' BRIDGE S.A. 27 FILE DRAWING JBEWLES
SHEET 11 OF 13 SHEETS

COMPUTER AIDED DESIGN & DRAFTING
DESIGN FILENAME

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
REVISIONS			
ROBERT BEIN, WILLIAM FROST & ASSOC. 14725 ALTON PARKWAY IRVINE, CALIFORNIA 92718		U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
DESIGNED BY: H.M.		SANTA ANA RIVER MAINSTEM INCLUDING SANTIAGO CREEK, CALIFORNIA	
DRAWN BY: J.L.S.		LOWER SANTA ANA RIVER CHANNEL (SAN DIEGO FREEWAY TO RIVER VIEW GOLF COURSE)	
CHECKED BY: H.M./P.R.Y.		EDINGER AVENUE BRIDGE LOG OF TEST BORINGS	
SUBMITTED BY:		DATE:	SPEC. NO. DACW09-93-B- DISTRICT FILE NO. 239/796
			SHEET R-10 OF R-16 SHEETS