

LAS VIRGENES MUNICIPAL  
WATER DISTRICT  
LOS ANGELES COUNTY

TRIUNFO COUNTY  
SANITATION DISTRICT  
VENTURA COUNTY

CONTRACT DOCUMENTS  
FOR CONSTRUCTION OF

SECONDARY TREATMENT & SOLIDS HANDLING FACILITIES

CONTRACT NO. C-2

LAS VIRGENES MUNICIPAL WATER DISTRICT

BOARD OF DIRECTORS

ANN DORGELLO — PRESIDENT

A. MACNEIL STELLE  
GEORGE R. LONG

HAROLD V. HELSLEY  
GLEN PETERSON

Approved by the Board of Directors

on this 10<sup>th</sup> day of August, 1987

BY: *Ann Dorgello*  
ANN DORGELLO — PRESIDENT

BY: *George R. Long*  
GEORGE R. LONG — SECRETARY

RECOMMENDED  
BY: *Edward E. McCombs*  
EDWARD E. McCOMBS

BY: *H. W. Stokes*  
H. W. STOKES

APPROVED AS TO FORM

BY: *Dauphine Sommers*  
COUNSEL

TAPIA WATER RECLAMATION FACILITY  
EXPANSION III

VOLUME 2 OF 2 — PLANS

 KALEX ENGINEERS

Hatsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

TRIUNFO COUNTY SANITATION DISTRICT

BOARD OF DIRECTORS

RONALD STARK — CHAIRMAN

NORMA CALLERO  
MADGE SCHAEFER

ALEX FIORE  
JOHN FLYNN

Approved by the Board of Directors

on this 27<sup>th</sup> day of July, 1987

CHAIRMAN

BY: *Ronald Stark*  
RONALD STARK

ATTEST

BY: *Sherrill Smith*  
SHERRILL SMITH

RECOMMENDED

BY: *Wayne A. Bruce*  
WAYNE A. BRUCE

LEGAL COUNSEL TO TRIUNFO

BY: *John M. Matthews*  
JOHN M. MATTHEWS

03917

SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION		
<b>GENERAL</b>		<b>STRUCTURAL</b>		<b>BOYLE ENGINEERING</b>		<b>YARD PIPING</b>			
G1 - 1	TITLE SHEET	S2 - 10	PRIMARY SEDIMENTATION TANK NOS. 4 AND 5 SECTIONS AND DETAILS, SHEET 5	S - 13	REINFORCEMENT SECTIONS - I/V - TANK NOS. 6 & 7	YP - 2	EAST-WEST & NORTH-SOUTH GALLERY AREA, PLAN		
G1 - 2	INDEX SHEET - I	S2 - 11	PRIMARY SEDIMENTATION TANK NOS. 4 AND 5 SECTIONS AND DETAILS, SHEET 6	S - 14	REINFORCEMENT SECTIONS - II/V - TANK NOS. 6 & 7	YP - 3	PRIMARY TANK AREA, PLAN		
G1 - 3	INDEX SHEET - II	S3 - 1	AERATION TANK NOS. 5 AND 6 AND VICINITY FOUNDATION PLAN	S - 15	REINFORCEMENT SECTIONS - III/V - TANK NOS. 6 & 7	YP - 4	AERATION TANK AREA, PLAN - I		
G1 - 4	SITE PLAN, LOCATION & VICINITY MAP	S3 - 2	AERATION TANK NOS. 5 AND 6 AND VICINITY TOP PLAN	S - 16	REINFORCEMENT SECTIONS - IV/V - TANK NOS. 6 & 7	YP - 5	AERATION TANK AREA, PLAN - II		
G2 - 1	GENERAL PLANT FLOW SCHEMATIC	S3 - 3	AERATION TANK NOS. 5 AND 6 AND VICINITY SELECTOR CHANNEL PLANS, DEMOLITION	S - 17	REINFORCEMENT SECTIONS - V/V - TANK NOS. 6 & 7	YP - 6	FINAL SEDIMENTATION TANK AREA, PLAN		
G3 - 1	PROCESS SCHEMATIC - I	S3 - 4	AERATION TANK NOS. 5 AND 6 AND VICINITY ELEVATIONS, SHEET 1	S - 18	EMBEDDED ITEMS - PLANS AND DEMOLITION DETAILS - TANK NOS. 4, 6 & 7	YP - 7	NORTH-SOUTH GALLERY, ELEVATION		
G3 - 2	PROCESS SCHEMATIC - II	S3 - 5	AERATION TANK NOS. 5 AND 6 AND VICINITY ELEVATIONS, SHEET 2	S - 19	EMBEDDED ITEMS - SECTIONS - TANK NOS. 4, 6 & 7	YP - 8	EAST-WEST GALLERY, ELEVATION - I		
G3 - 3	PROCESS SCHEMATIC - III	S3 - 6	AERATION TANK NOS. 5 AND 6 AND VICINITY SECTIONS AND DETAILS, SHEET 1	S - 20	TYPICAL STRUCTURAL DETAILS - TANK NOS. 4, 6 & 7	YP - 9	EAST-WEST GALLERY, ELEVATION - II		
G3 - 4	PROCESS SCHEMATIC - IV	S3 - 7	AERATION TANK NOS. 5 AND 6 AND VICINITY SECTIONS AND DETAILS, SHEET 2	S - 21	TYPICAL JOINT DETAILS - TANK NOS. 4, 6 & 7	YP - 10	INFLUENT FORCE MAIN		
G3 - 5	PROCESS SCHEMATIC - V	S3 - 8	AERATION TANK NOS. 5 AND 6 AND VICINITY SECTIONS AND DETAILS, SHEET 3	S - 22	TREAD PLATE, GRATING & STOP LOG NOTCH DETAILS - TANK NOS. 4, 6 & 7	YP - 11	GRIT LINE - I		
G4 - 1	HYDRAULIC PROFILE	S3 - 9	AERATION TANK NOS. 5 AND 6 AND VICINITY SECTIONS AND DETAILS, SHEET 4	<b>MISCELLANEOUS METALS</b> MM - 1 PRIMARY SEDIMENTATION TANKS, GENERAL LAYOUT MM - 2 AERATION TANKS, GENERAL LAYOUT MM - 3 FINAL SEDIMENTATION TANKS, GENERAL LAYOUT MM - 4 AEROBIC DIGESTER NOS. I & II, GENERAL LAYOUT MM - 5 AEROBIC DIGESTER NOS. III, IV, V & VI, GENERAL LAYOUT MM - 6 PRIMARY SEDIMENTATION TANK COVER, GENERAL MM - 7 PRIMARY SEDIMENTATION TANK COVER, LAYOUT MM - 8 PRIMARY SEDIMENTATION TANK COVER, DETAILS - I MM - 9 PRIMARY SEDIMENTATION TANK COVER, DETAILS - II MM - 10 PRIMARY SEDIMENTATION TANK COVER, DETAILS - III MM - 11 PRIMARY SEDIMENTATION TANK COVER, DETAILS - IV MM - 12 PRIMARY SEDIMENTATION TANK COVER, DETAILS - V MM - 13 PRIMARY SEDIMENTATION TANK COVER, DETAILS - VI MM - 14 PRIMARY SEDIMENTATION TANK COVER, DETAILS - VII MM - 15 TYPICAL TREAD PLATE DETAILS MM - 16 TREAD PLATES MM - 17 TYPICAL GRATING DETAILS MM - 18 TREAD PLATE & GRATING DETAILS - I MM - 19 TREAD PLATE & GRATING DETAILS - II MM - 20 TYPICAL HANDRAIL DETAILS - I MM - 21 TYPICAL HANDRAIL DETAILS - II MM - 22 TYPICAL HANDRAIL DETAILS - III MM - 23 TYPICAL HANDRAIL DETAILS - IV MM - 24 ALUMINUM STAIRWAYS MM - 25 LADDER & HATCH DETAILS MM - 26 ALUMINUM PLATFORM MM - 27 SLIDE GATE DETAILS - I MM - 28 SLIDE GATE DETAILS - II MM - 29 SLIDE GATE DETAILS - III MM - 30 SLIDE GATE DETAILS - IV MM - 31 SLIDE GATE DETAILS - V MM - 32 STOP LOG & NOTCH, TYPICAL DETAILS MM - 33 STOP LOG & NOTCH, DETAILS MM - 34 LAUNDER DETAILS - I MM - 35 LAUNDER DETAILS - II MM - 36 EFFLUENT CHANNEL		YP - 12	GRIT LINE - II		
<b>CIVIL</b>		S3 - 10	AERATION TANK NOS. 5 AND 6 AND VICINITY SECTIONS AND DETAILS, SHEET 5			<b>YARD PIPING</b> YP - 1 YARD PIPING KEY PLAN		YP - 13	INFLUENT FORCE MAIN & EMERGENCY SLUDGE TRANSFER LINE, PROFILE
C1 - 1	GENERAL CONSTRUCTION PLAN	S3 - 11	AERATION TANK NOS. 5 AND 6 AND VICINITY SECTIONS AND DETAILS, SHEET 6					YP - 14	RETURN ACTIVATED SLUDGE & SECONDARY EFFLUENT LINE, PROFILE
C2 - 1	SITE WORK & GRADING PLAN - I	S3 - 12	AERATION TANK NOS. 5 AND 6 AND VICINITY SECTIONS AND DETAILS, SHEET 7					<b>MECHANICAL</b>	
C2 - 2	SITE WORK & GRADING PLAN - II	S4 - 1	ELECTRICAL AND PROCESS AIR BUILDINGS BASEMENT AND FOUNDATION PLAN					<b>HEADWORKS</b>	
C2 - 3	SITE WORK DETAILS	S4 - 2	ELECTRICAL AND PROCESS AIR BUILDINGS PLAN AT ELEVATION 476.30					M1 - 1	SCREENING & DEGRITTING ROOM, PLAN
C3 - 1	MISCELLANEOUS YARD DETAILS	S4 - 3	ELECTRICAL AND PROCESS AIR BUILDINGS ROOF PLAN					M1 - 2	SCREENING & DEGRITTING ROOM, SECTION - I
C4 - 1	PRIMARY AREA EXCAVATION, PLAN	S4 - 4	ELECTRICAL AND PROCESS AIR BUILDINGS ELEVATIONS, SHEET 1					M1 - 3	SCREENING & DEGRITTING ROOM, SECTION - II
C4 - 2	PRIMARY AREA EXCAVATION, SECTIONS	S4 - 5	ELECTRICAL AND PROCESS AIR BUILDINGS SECTIONS AND DETAILS, SHEET 2					M1 - 4	HEADWORKS CHANNEL AERATION, PLAN
C4 - 3	AERATION AREA EXCAVATION, PLAN - I	S4 - 6	ELECTRICAL AND PROCESS AIR BUILDINGS SECTIONS AND DETAILS, SHEET 3					M1 - 5	HEADWORKS CHANNEL AERATION, PLAN SECTION
C4 - 4	AERATION AREA EXCAVATION, PLAN - II	S4 - 7	ELECTRICAL AND PROCESS AIR BUILDINGS SECTIONS AND DETAILS, SHEET 4					M1 - 6	HEADWORKS CHANNEL AERATION, SECTION - I
C4 - 5	AERATION AREA EXCAVATION, SECTIONS - I	S4 - 8	ELECTRICAL AND PROCESS AIR BUILDINGS SECTIONS AND DETAILS, SHEET 5					M1 - 7	HEADWORKS CHANNEL AERATION, SECTION - II
C4 - 6	AERATION AREA EXCAVATION, SECTIONS - II	S5 - 1	MISCELLANEOUS STRUCTURES RAS PUMP STATION					M1 - 8	HEADWORKS CHANNEL AERATION, SECTION - III
C4 - 7	AERATION AREA EXCAVATION, SECTIONS - III	S5 - 2	MISCELLANEOUS STRUCTURES PLANT BYPASS CHAMBER					M1 - 9	HEADWORKS CHANNEL AERATION, SECTION - IV
C4 - 8	FINAL AREA EXCAVATION - PLAN	S5 - 3	MISCELLANEOUS STRUCTURES VALVE VAULT					M1 - 10	CHANNEL AERATION SECTIONS & PLANT RETURN FLOW DIVERSION
C4 - 9	FINAL AREA EXCAVATION - SECTIONS	<b>BOYLE ENGINEERING</b>						M1 - 11	CRANE RAIL, PLAN
C4 - 10	ELECTRICAL & PROCESS AIR BUILDING AREA EXCAVATION - PLAN	S - 1	GENERAL PLAN - TANK NOS. 4, 6 & 7	M1 - 12	<del>CRANE RAIL, SECTIONS - I</del> <b>MONORAIL</b>				
C4 - 11	ELECTRICAL & PROCESS AIR BUILDING AREA EXCAVATION - SECTIONS	S - 2	NOT USED	M1 - 13	<del>CRANE RAIL, SECTIONS - II</del> <b>MONORAIL</b>				
C4 - 12	RETURN ACTIVATED SLUDGE PUMP STATION EXCAVATION - SECTIONS	S - 3	NOT USED	M1 - 14	<del>CRANE RAIL, SECTIONS - III</del> <b>MONORAIL</b>				
<b>STRUCTURAL</b>		S - 4	PLAN - TANK NO. 4	M1 - 15	INFLUENT PUMP ROOM, EXISTING PLAN				
S1 - 1	GENERAL NOTES	S - 5	GENERAL SECTIONS - I/II - TANK NO. 4	M1 - 16	INFLUENT PUMP ROOM, EXISTING ELEVATION				
S1 - 2	TYPICAL DETAILS, SHEET 1	S - 6	GENERAL SECTIONS - II/II - TANK NO. 4	M1 - 17	INFLUENT PUMP NOS. 2 & 3, PLAN				
S1 - 3	TYPICAL DETAILS, SHEET 2	S - 7	REINFORCEMENT SECTIONS - I/IV - TANK NO. 4	M1 - 18	INFLUENT PUMP NOS. 2 & 3, ELEVATION				
S1 - 4	TYPICAL DETAILS, SHEET 3	S - 8	REINFORCEMENT SECTIONS - II/IV - TANK NO. 4	M1 - 19	INFLUENT PUMP NOS. 2 & 3, SECTION				
S1 - 5	TYPICAL DETAILS, SHEET 4	S - 9	REINFORCEMENT SECTIONS - III/IV - TANK NO. 4	<b>PRIMARY SEDIMENTATION</b>					
S2 - 1	PRIMARY SEDIMENTATION TANK NOS. 4 AND 5 FOUNDATION PLAN, SHEET 1	S - 10	REINFORCEMENT SECTIONS - IV/IV - TANK NO. 4	M2 - 1	PRIMARY SEDIMENTATION TANK & VICINITY, LAYOUT				
S2 - 2	PRIMARY SEDIMENTATION TANK NOS. 4 AND 5 FOUNDATION PLAN, SHEET 2	S - 11	PLAN - TANK NOS. 6 & 7	M2 - 2	GENERAL SECTIONS				
S2 - 3	PRIMARY SEDIMENTATION TANK NOS. 4 AND 5 TOP PLAN, SHEET 1	S - 12	GENERAL SECTIONS - TANK NOS. 6 & 7	M2 - 3	CHANNEL NO. 1 & VICINITY, PLAN				
S2 - 4	PRIMARY SEDIMENTATION TANK NOS. 4 AND 5 TOP PLAN, SHEET 2			M2 - 4	CHANNEL & PIPE GALLERY NO. 1, PLAN & SECTION				
S2 - 5	PRIMARY SEDIMENTATION TANK NOS. 4 AND 5 ELEVATIONS			M2 - 5	CHANNEL & PIPE GALLERY NO. 1, SECTION				
S2 - 6	PRIMARY SEDIMENTATION TANK NOS. 4 AND 5 SECTIONS AND DETAILS, SHEET 1			M2 - 6	INFLUENT FORCE MAIN, EXHAUST AIR & VENTILATION DETAILS				
S2 - 7	PRIMARY SEDIMENTATION TANK NOS. 4 AND 5 SECTIONS AND DETAILS, SHEET 2			M2 - 7	INFLUENT FORCE MAIN DETAILS				
S2 - 8	PRIMARY SEDIMENTATION TANK NOS. 4 AND 5 SECTIONS AND DETAILS, SHEET 3			M2 - 8	EXHAUST AIR SCRUBBING FACILITY				
S2 - 9	PRIMARY SEDIMENTATION TANK NOS. 4 AND 5 SECTIONS AND DETAILS, SHEET 4			M2 - 9	EXHAUST AIR & PRIMARY EFFLUENT LINES - I				

△ \* SEE SHEET G1-3 FOR ADDITIONAL SHEETS ADDED

03918

SCALE: <b>1/8" = 1'-0"</b> DESIGNED: <b>YK/CS</b> DRAWN: <b>CL</b> CHECKED: <b>YK</b>		SUBMITTED: <b>Katsura Consulting Engineers</b> 14038 <b>8-7-87</b> R.C.E. NO. DATE		<b>KALEX ENGINEERS</b> Katsura Consulting Engineers / Alexander Engineers Ventura, California Glendora, California		<b>LAS VIRGENES MUNICIPAL WATER DISTRICT</b> <b>TAPIA WATER RECLAMATION FACILITY EXPANSION III</b>		SHEET <b>G1-2</b>	
REV DATE BY DESCRIPTION		ADDITIONAL SHEETS		813 ALEXANDER ENGINEERS R.C.E. NO. DATE		RECORD DRAWINGS No. 14038 Exp. 3-31-88 CIVIL STATE OF CALIFORNIA		INDEX SHEET-I	

SHEET NO. DESCRIPTION

AERATION

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include M3-1 AERATION TANK & VICINITY, LAYOUT; M3-2 GENERAL SECTIONS; M3-3 SELECTOR CHANNEL & CHANNEL NO. 2, PLAN - I; M3-4 SELECTOR CHANNEL & CHANNEL NO. 2, PLAN - II; M3-5 SELECTOR CHANNEL, SECTIONS - I; M3-6 SELECTOR CHANNEL, SECTIONS - II; M3-7 SELECTOR CHANNEL, PIPING DETAILS - I; M3-8 SELECTOR CHANNEL, PIPING DETAILS - II; M3-9 EXISTING RETURN ACTIVATED SLUDGE & EXHAUST AIR LINES, PLAN & SECTIONS; M3-10 MODIFICATIONS TO RETURN ACTIVATED SLUDGE & EXHAUST AIR LINES, PLAN & SECTIONS; M3-11 PIPE GALLERY NO. 2, PLAN & SECTION - I; M3-12 PIPE GALLERY NO. 2, PLAN & SECTION - II; M3-13 AERATION EQUIPMENT; M3-14 MISCELLANEOUS DETAILS.

FINAL SEDIMENTATION & RETURN ACTIVATED SLUDGE

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include M4-1 FINAL SEDIMENTATION TANK & VICINITY, LAYOUT; M4-2 GENERAL SECTIONS; M4-3 CHANNEL NO. 3, PLAN & SECTION; M4-4 PIPE GALLERY NO. 3, PLAN & SECTION - I; M4-5 PIPE GALLERY NO. 3, PLAN & SECTION - II; M4-6 PIPE GALLERY NO. 3, SECTIONS; M4-7 CHANNEL NO. 4, PLAN; M4-8 PIPE GALLERY NO. 4, PLAN SECTION; M4-9 SECONDARY EFFLUENT & RETURN ACTIVATED SLUDGE - PIPING; M4-10 PIPE GALLERY NO. 4, SECTIONS; M4-11 SECONDARY EFFLUENT & RETURN ACTIVATED SLUDGE - SECTIONS; M4-12 SLUDGE COLLECTION MECHANISM - PLAN; M4-13 SLUDGE COLLECTION MECHANISM - ANCHOR BOLTS; M4-14 SLUDGE COLLECTION MECHANISM - SECTION; M4-15 RETURN ACTIVATED SLUDGE PUMP STATION - PLAN; M4-16 RETURN ACTIVATED SLUDGE PUMP STATION - SECTIONS.

AEROBIC DIGESTION

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include M5-1 AEROBIC DIGESTER NOS. I & II, PLAN; M5-2 GENERAL SECTION; M5-3 AEROBIC DIGESTER NOS. I & II, DETAILS - I; M5-4 AEROBIC DIGESTER NOS. I & II, DETAILS - II; M6-1 AEROBIC DIGESTER NOS. III, IV, V & VI, PLAN; M6-2 GENERAL SECTIONS; M6-3 PIPE GALLERY NO. 5 VICINITY, PLAN; M6-4 PIPE GALLERY NO. 5 VICINITY, ELEVATION; M6-5 PIPE GALLERY NO. 5 VICINITY, SECTIONS - I; M6-6 PIPE GALLERY NO. 5 VICINITY, SECTIONS - II; M6-7 PIPE GALLERY NO. 6 VICINITY, PLAN; M6-8 PIPE GALLERY NO. 6 VICINITY, SECTIONS - I; M6-9 PIPE GALLERY NO. 6 VICINITY, SECTIONS - II; M6-10 EMERGENCY SLUDGE STORAGE TRANSFER LINE, PLAN & ELEVATIONS; M6-11 EMERGENCY SLUDGE STORAGE TRANSFER LINE, SECTIONS.



SEE THIS SHT. FOR ADDITIONAL SHEETS ADDED

SHEET NO. DESCRIPTION

PROCESS AIR

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include M7-1 PROCESS AIR COMPRESSOR NO. 3A, PLAN; M7-2 PROCESS AIR COMPRESSOR NO. 3A, SECTION; M7-3 PROCESS AIR COMPRESSOR NO. 3A, SECTION & DETAIL; M7-4 PROCESS AIR COMPRESSOR NO. 1A, 2A & 3A, CRANE RAIL & HOIST.

ENGINE-GENERATOR

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include M8-1 ENGINE-GENERATOR NO. 3, PLAN; M8-2 ENGINE-GENERATOR NO. 3, SECTIONS - I; M8-3 ENGINE-GENERATOR NO. 3, SECTIONS - II; M8-4 ENGINE-GENERATOR NO. 3, DETAILS.

STORAGE BUILDING

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include M9-1 STORAGE BUILDING, PLAN & SECTIONS; M9-2 STORAGE BUILDING, DETAILS.

MISCELLANEOUS

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include M10-1 WASH WATER CONNECTION DETAILS - I; M10-2 WASH WATER CONNECTION DETAILS - II; M11-1 PIPE SUPPORT DETAILS - I; M11-2 PIPE SUPPORT DETAILS - II; M11-3 PIPE SUPPORT DETAILS - III; M11-4 PIPE SUPPORT DETAILS - IV; M11-5 PIPE SUPPORT DETAILS - V; M11-6 PIPE SUPPORT DETAILS - VI; M12-1 MISCELLANEOUS DETAILS - CHANNEL AERATION; M12-2 MISCELLANEOUS DETAILS - MATERIAL HANDLING.

ELECTRICAL

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include E-1 ELECTRICAL SYMBOLS AND ABBREVIATION; E-2 ELECTRICAL SITE PLAN SHEET 1 OF 2; E-3 ELECTRICAL SITE PLAN SHEET 2 OF 2; E-4 ELECTRICAL DISTRIBUTION SYSTEM SINGLELINE DIAGRAM; E-5 MCC-1A/MCC-1B SINGLELINE DIAGRAM & ELEVATION; E-6 MCC-2A/2B SINGLELINE DIAGRAM & WEST ELEVATION; E-7 MCC-2A/2B SINGLELINE DIAGRAM & EAST ELEVATION; E-8 MCC-5 SINGLELINE DIAGRAM & ELEVATION; E-9 ENGINE GENERATOR SWITCHGEAR REFERENCE DRAWING; E-10 I & C/ELECTRICAL INTERFACE; E-11 INFLUENT PUMP STATION POWER PLAN AND DETAILS; E-12 SUBSTATION & ELECTRICAL ROOM AREA POWER PLAN; E-13 POWER AND LIGHTING PLAN ENGINE-GENERATOR NO. 3 AND CONTROL ROOM NO. 2; E-14 POWER & LIGHTING PLAN PROCESS AIR COMPRESSOR PAC-3A; E-15 GALLERY NO. 5 & ADJACENT AREAS POWER PLAN & DETAILS; E-16 FINAL & AERATION TANK POWER & LIGHTING PLAN; E-17 GALLERY NO. 1 POWER PLAN & DETAILS; E-18 POWER PLAN - GALLERY NO. 2; E-19 GALLERY NO. 3 POWER PLAN; E-20 GALLERY NO. 1, NO. 2 & NO. 3 LIGHTING PLAN; E-21 CONTROL BLDG. AREA POWER & LIGHTING; E-22 ELECTRICAL DETAILS & SECTIONS.

SHEET NO. DESCRIPTION

ELECTRICAL

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include E-23 ELECTRICAL DETAILS & SCHEDULES; E-24 SCHEMATIC WIRING DIAGRAMS; E-25 INTERFACE WIRING DIAGRAM; E-26 INTERFACE WIRING DIAGRAMS; E-27 SCHEMATIC DIAGRAMS & DETAILS.

INSTRUMENTATION

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include I-1 P & ID SYMBOLS AND ABBREVIATIONS; I-2 I & C SITE PLAN; I-3 I & C SITE PLAN; I-4 PROCESS & INSTRUMENTATION DIAGRAM INFLUENT & RAS PUMP STATIONS; I-5 PROCESS AIR COMPRESSOR; I-6 PROCESS & INSTRUMENTATION DIAGRAMS & DETAILS PAC STATION "B" AND AERATION TANKS; I-7 P & ID RAW SLUDGE SYSTEM; I-8 MIP-A GRAPHIC DISPLAY; I-9 CP-101 GRAPHIC DISPLAY; I-10 CP-500 GRAPHIC DISPLAY SHEET 1 OF 2; I-11 CP-500 GRAPHIC DISPLAY SHEET 2 OF 2; I-12 CP-700/800 GRAPHIC DISPLAY; I-13 SCHEMATIC WIRING DIAGRAMS; I-14 SCHEMATIC WIRING DIAGRAMS; I-15 SCHEMATIC WIRING DIAGRAMS; I-16 SCHEMATIC WIRING DIAGRAMS & DETAILS; I-17 SCHEMATIC WIRING DIAGRAMS & DETAILS; I-18 MISC. DETAILS & SECTIONS; I-19 PANEL ELEVATIONS & DETAILS; I-20 WIRING CONNECTION DIAGRAMS.

LANDSCAPING

Table with 2 columns: SHEET NO., DESCRIPTION. Row includes L-1 LANDSCAPING.

ARCHITECTURAL

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include A-1 TYPICAL ARCHITECTURAL DETAILS; A-2 ELECTRICAL BUILDING ARCHITECTURAL ELEVATIONS; A-3 PROCESS AIR BUILDING ARCHITECTURAL ELEVATIONS; A-4 ARCHITECTURAL ELEVATIONS; A-5 ARCHITECTURAL ELEVATIONS & DETAILS.

STRUCTURAL

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include S4-9 ELECTRICAL AND PROCESS AIR BUILDINGS SECTIONS AND DETAILS, SHEET 4; S4-10 ELECTRICAL AND PROCESS AIR BUILDINGS SECTIONS AND DETAILS, SHEET 5.

ADDITIONAL SHEETS

SHEET NO.

DESCRIPTION

STRUCTURAL

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include S3-13 MISCELLANEOUS DETAILS; S3-14 GALLERY TWO STAIRS; S5-4 MISC. DETAILS.

BOYLE ENGINEERING

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include S-23 MISC. DETAILS; S-24 MISC. DETAILS.

MISCELLANEOUS METALS

Table with 2 columns: SHEET NO., DESCRIPTION. Row includes MM-37 MISC. DETAILS.

YARD PIPING

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include YP-16 MISC. DETAILS; YP-18 MISC. DETAILS; YP-17 MISC. DETAILS.

HEADWORKS

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include M1-20 PFD UTILITY & EXCAVATION PLAN; M1-21 FOUNDATION PIERS.

AERATION

Table with 2 columns: SHEET NO., DESCRIPTION. Row includes M3-16 MISC. DETAILS.

AEROBIC DIGESTION

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include M6-5 MISC. DETAILS; M6-12 MISC. DETAILS.

MISCELLANEOUS

Table with 2 columns: SHEET NO., DESCRIPTION. Rows include M11-7 PIPE SUPPORT DETAILS; M11-8 PIPE SUPPORT DETAILS; M12-3 MISC. DETAILS.

03919

RECORD DRAWINGS... KATSURA CONSULTING ENGINEERS



Table with 4 columns: REV, DATE, BY, DESCRIPTION. Includes a row for 'ADDITIONAL SHEETS'.

SCALE:

YK/CS DESIGNED CL DRAWN YK CHECKED

SUBMITTED 14038 8-1-07 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE ALEXANDER ENGINEERS R.C.E. NO. DATE

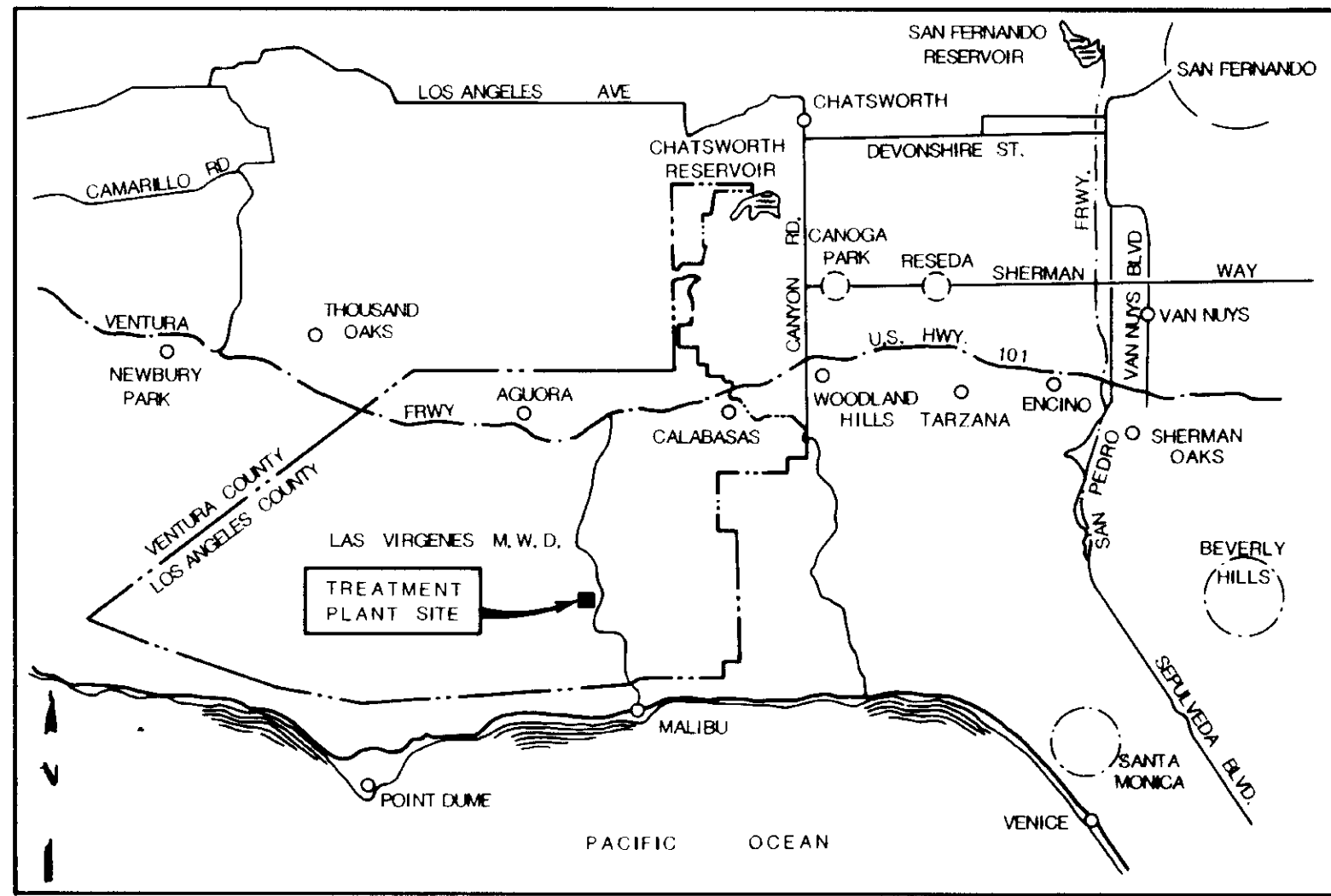


Katsura Consulting Engineers / Alexander Engineers Ventura, California Glendora, California

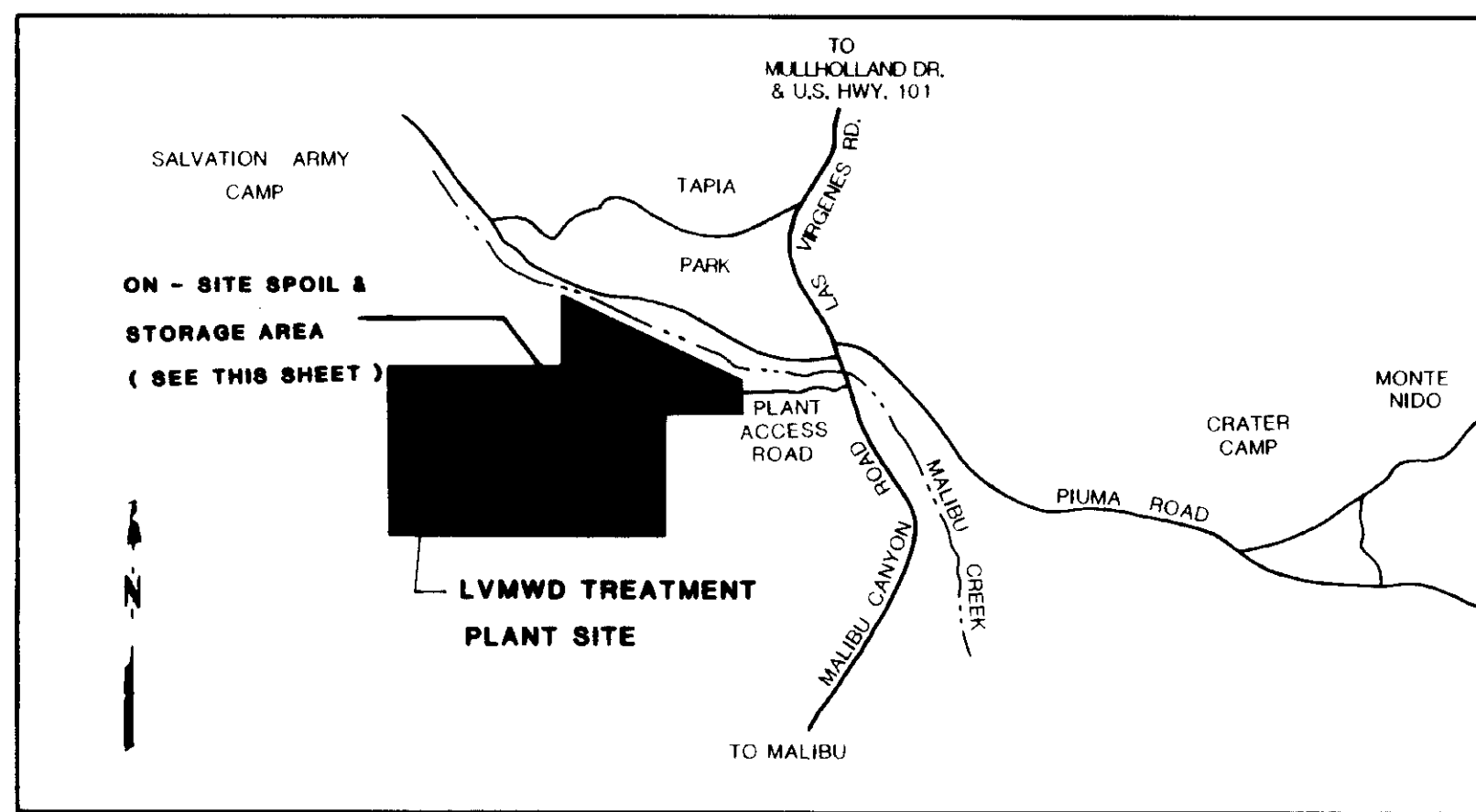
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III

INDEX SHEET-II

SHEET G1-3



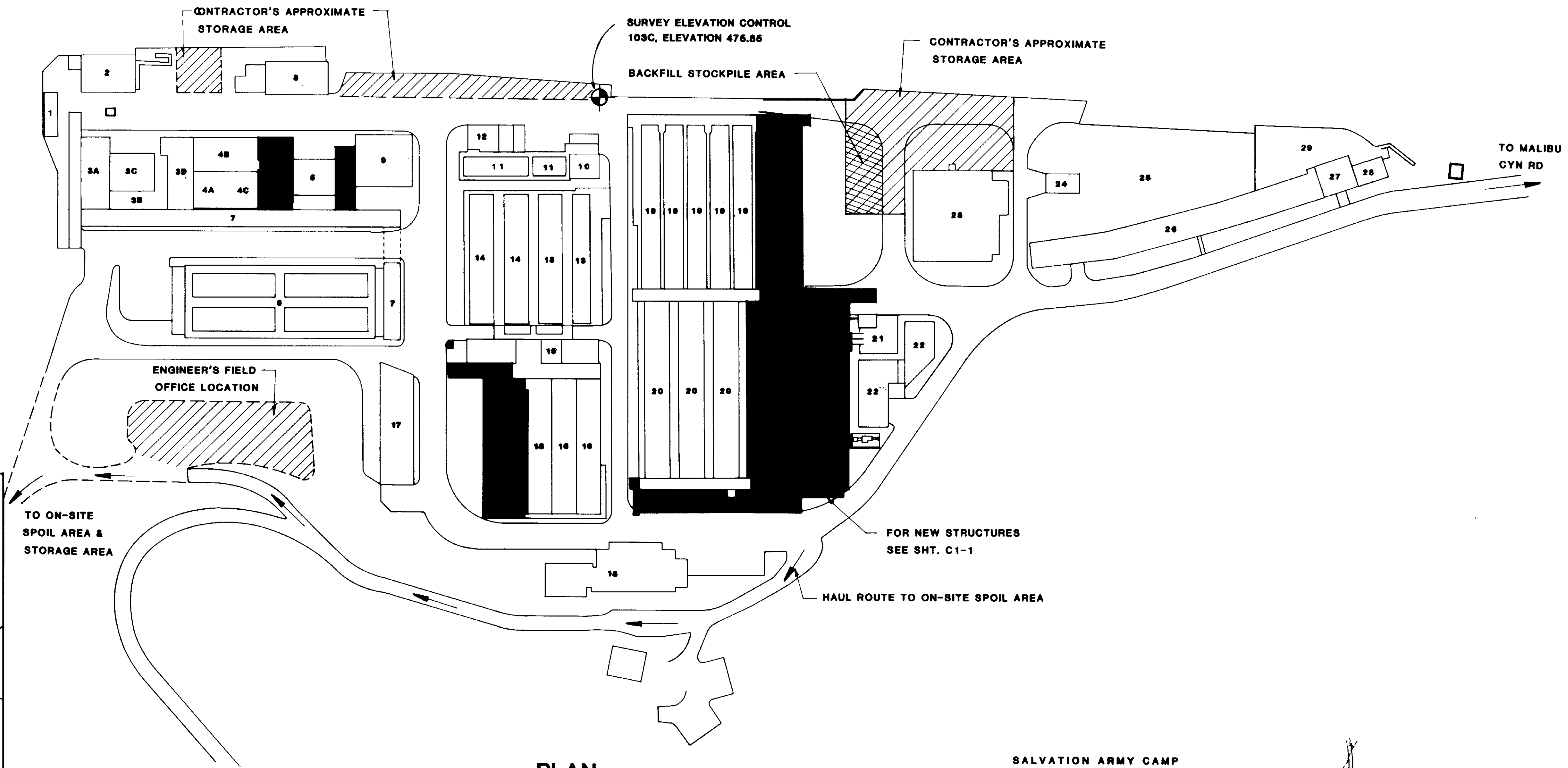
VICINITY MAP



LOCATION MAP

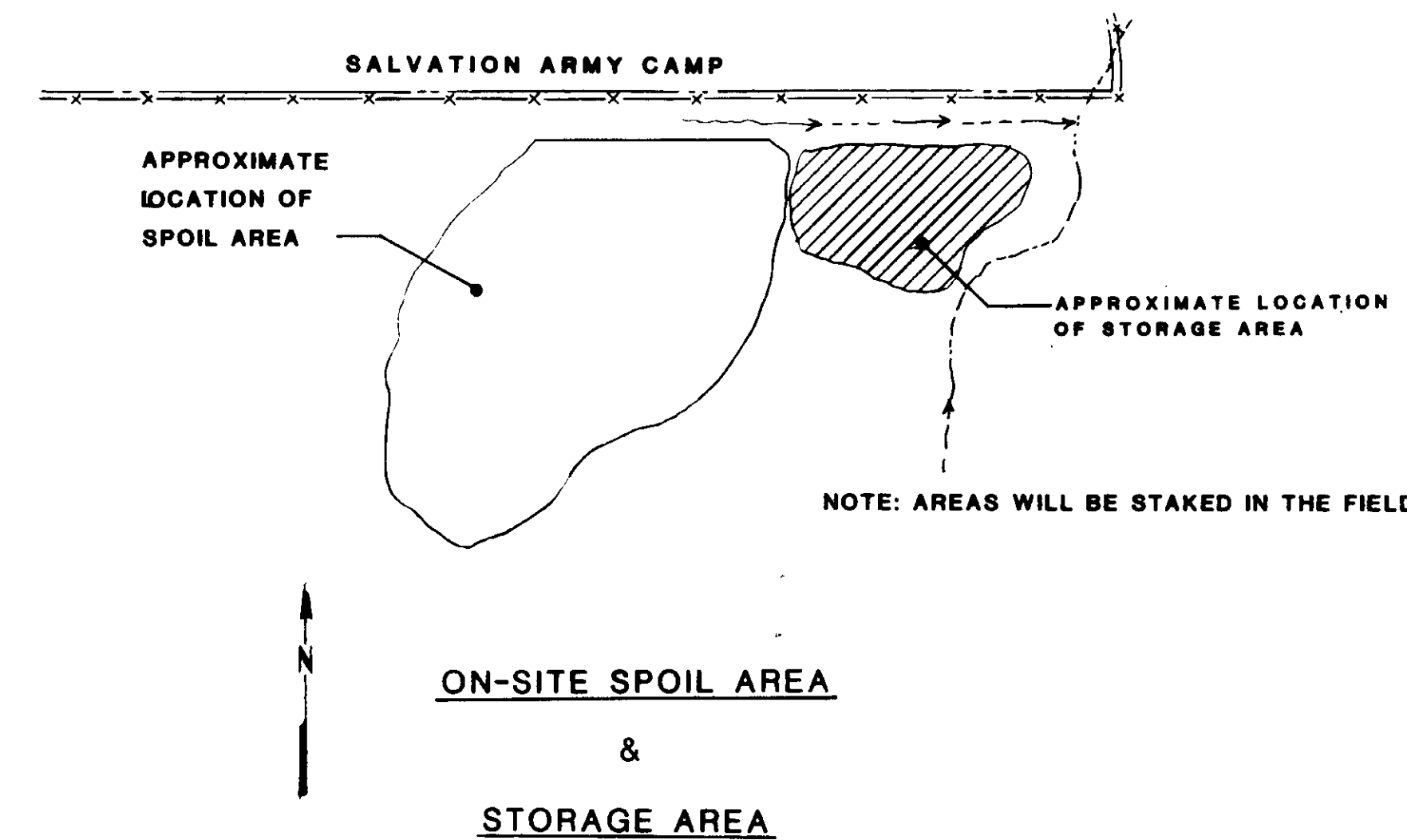
KEY TO STRUCTURES

- |                                   |  |
|-----------------------------------|--|
| (1) S.C.E. SUBSTATION             | (12) SLUDGE PUMPING STATION NO. 1                |
| (2) SLUDGE DEWATERING FACILITY    | (13) REAERATION TANK NO. 1 & 2                   |
| (3) HEADWORKS                     | (14) AEROBIC DIBESTER'S NO. III & IV             |
| (A) SCREENING                     | (15) STANDBY PAC & ELECTRICAL/CONTROLS           |
| (B) GRIT CHAMBER                  | (16) PRIMARY SEDIMENTATION TANKS NO. 1, 2 & 3    |
| (C) GRIT PUMPS                    | (17) SHOP & MAINTENANCE BUILDING                 |
| (D) INFLUENT PUMPS                | (18) CONTROL BUILDING                            |
| (4) ELECTRICAL                    | (19) FINAL SEDIMENTATION TANKS 1, 2, 3, 4 & 5    |
| (A) ELECTRICAL ROOM               | (20) AERATION TANKS NO. 1, 2 & 3                 |
| (B) ELECTRICAL SUBSTATION         | (21) WASTE WASHWATER HOLDING TANK & PUMP STATION |
| (C) EMERGENCY GENERATORS          | (22) CHEMICAL BUILDING & STORAGE                 |
| (5) PROCESS AIR COMPRESSORS (PAC) | (23) EFFLUENT FILTERS                            |
| (6) AEROBIC DIBEST'S NO. I & II   | (24) FILTER INFLUENT PUMPS                       |
| (7) PIPE GALLERIES                | (25) BALANCING POND                              |
| (8) STORAGE BUILDING              | (26) CHLORINE CONTACT TANK                       |
| (9) CHEM AND LUBE STORAGE         | (27) EFFLUENT PUMP STATION                       |
| (10) SLUDGE SCREENING FACILITY    | (28) OVERFLOW STRUCTURE                          |
| (11) SLUDGE WET WELLS             | (29) EFFLUENT POND                               |



PLAN

APPROXIMATE SCALE: 1" = 60'



ON-SITE SPOIL AREA & STORAGE AREA

03920

RECORD DRAWINGS  
 PREPARED BY: KALEX ENGINEERS  
 DATE: 8-7-87



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:  
NONE

DESIGNED: Y.K.  
 DRAWN: J.K.  
 CHECKED: Y.K.

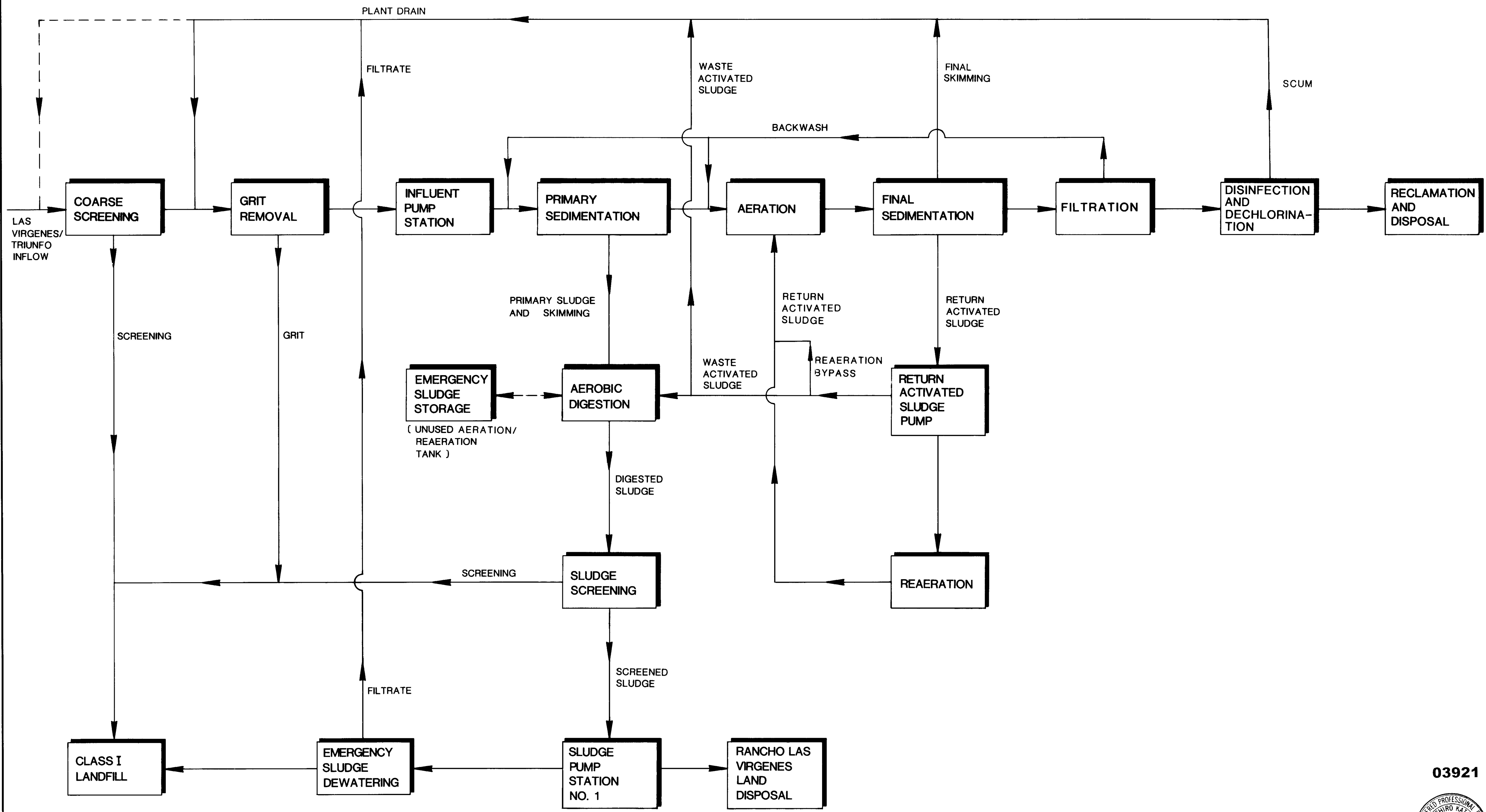
SUBMITTED: *[Signature]*  
 KATSURA CONSULTING ENGINEERS  
 14038 8-7-87  
 R.C.E. NO. DATE  
 513  
 ALEXANDER ENGINEERS R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 SITE PLAN, LOCATION & VICINITY MAP

SHEET  
G1-4





03921

RECORD DRAWINGS  
 PREPARED BY: KALEX ENGINEERS  
 No. 14038  
 Exp. 3-31-89  
 CIVIL  
 STATE OF CALIFORNIA  
 KALEX CONSULTING ENGINEERS JUNE 1984



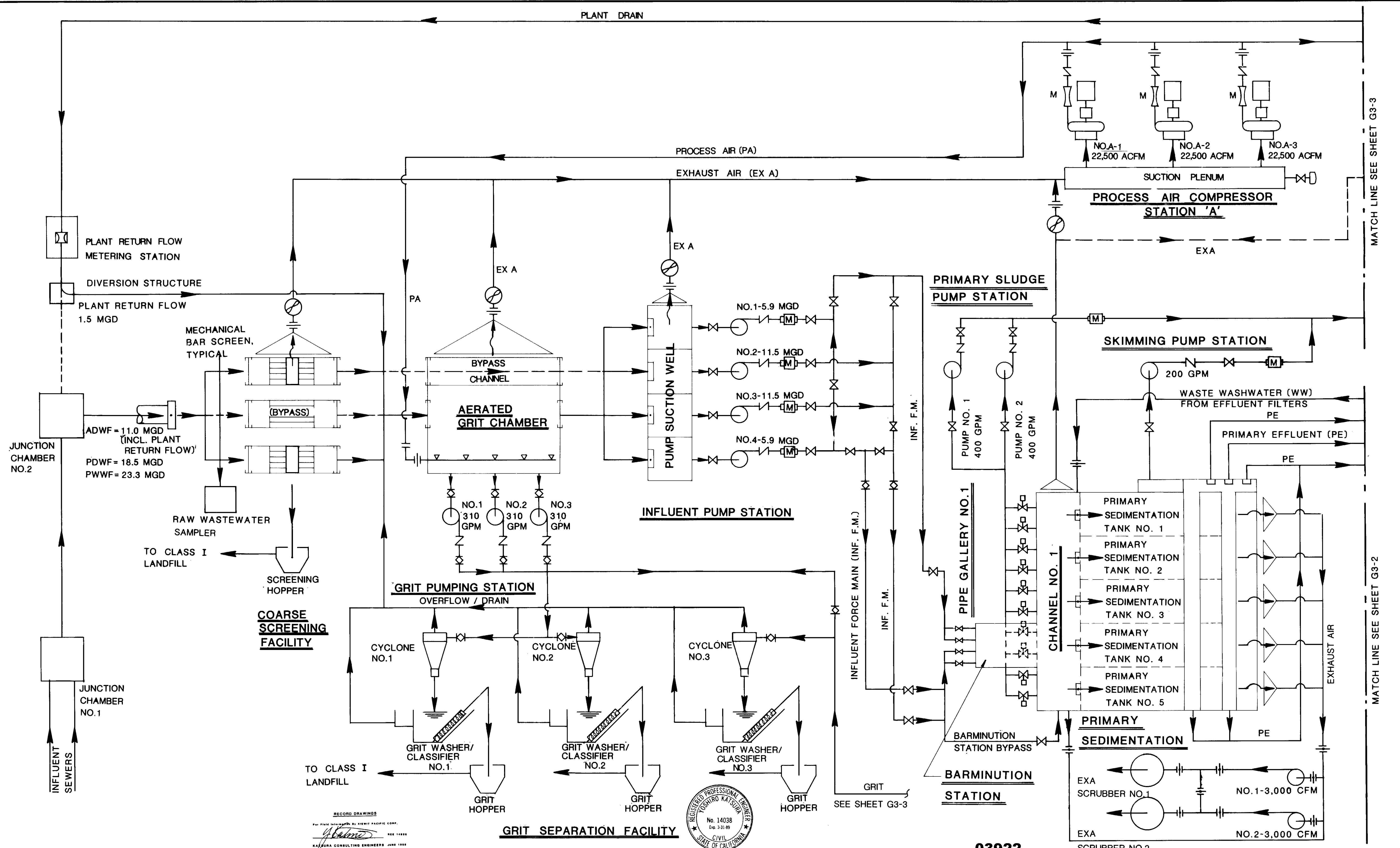
REV	DATE	BY	DESCRIPTION

SCALE:	NO SCALE
DESIGNED	Y. K.
DRAWN	R. K.
CHECKED	Y. K.
SUBMITTED	14038 8-7-87
	KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE
	513
	ALEXANDER ENGINEERS R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 GENERAL PLANT FLOW SCHEMATIC

SHEET  
**G2-1**



RECORD DRAWINGS  
 KATSURA CONSULTING ENGINEERS JUNE 1989



03922

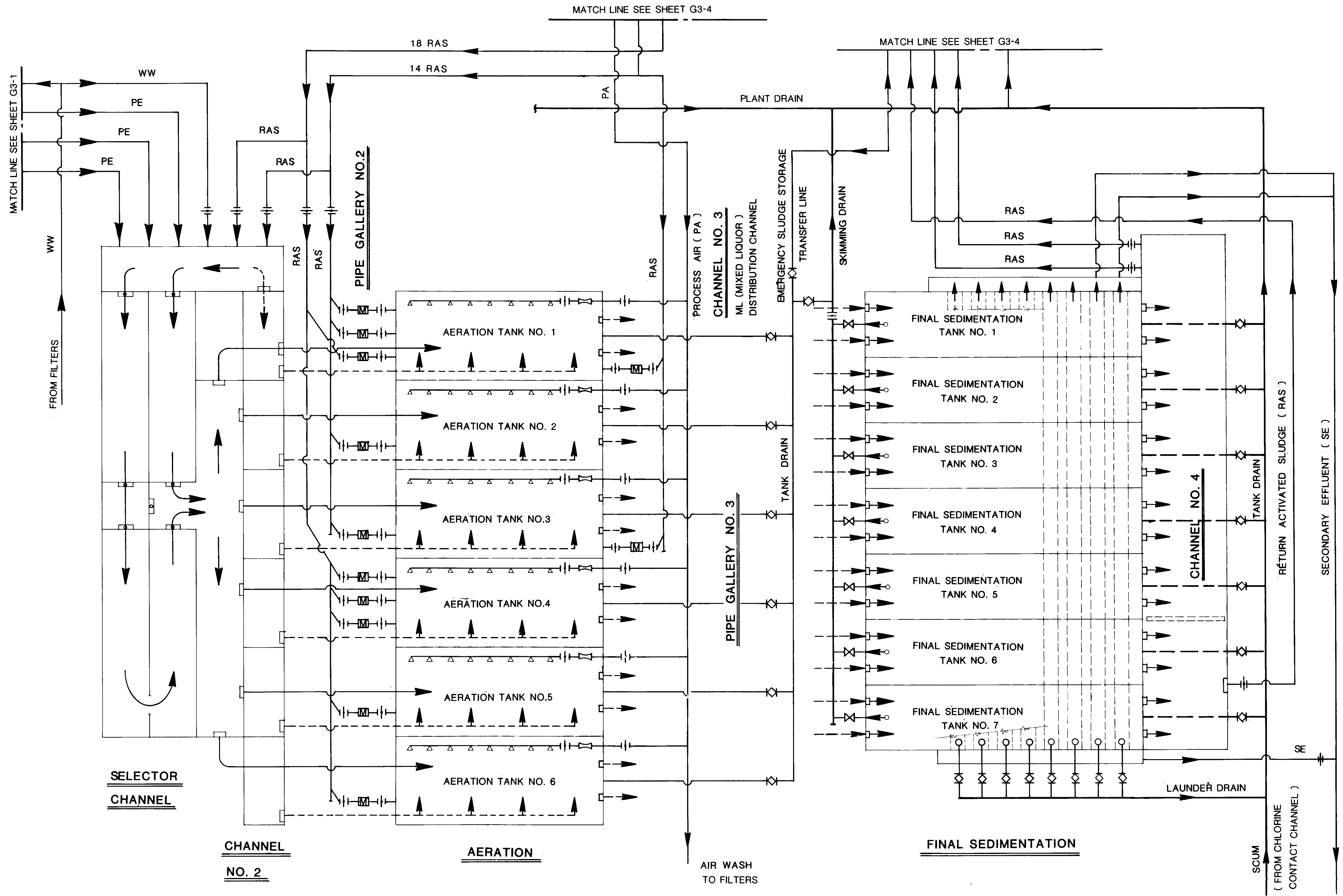
REV	DATE	BY	DESCRIPTION

SCALE:	Y. K.
NO	DESIGNED KOH
SCALE	DRAWN Y. K.
	CHECKED

SUBMITTED	14038	8-7-87
KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
	513	
ALEXANDER ENGINEERS	R.C.S.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PROCESS SCHEMATIC - I



03923

RECORD DRAWINGS  
 PREPARED BY KALEX ENGINEERS  
 KATSURA CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	Y. K.	SUBMITTED	14038	0-1-81
NO	DESIGNED S. K O H	KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
SCALE	DRAWN Y. K.	ALEXANDER ENGINEERS	513	
	CHECKED		R.C.S.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

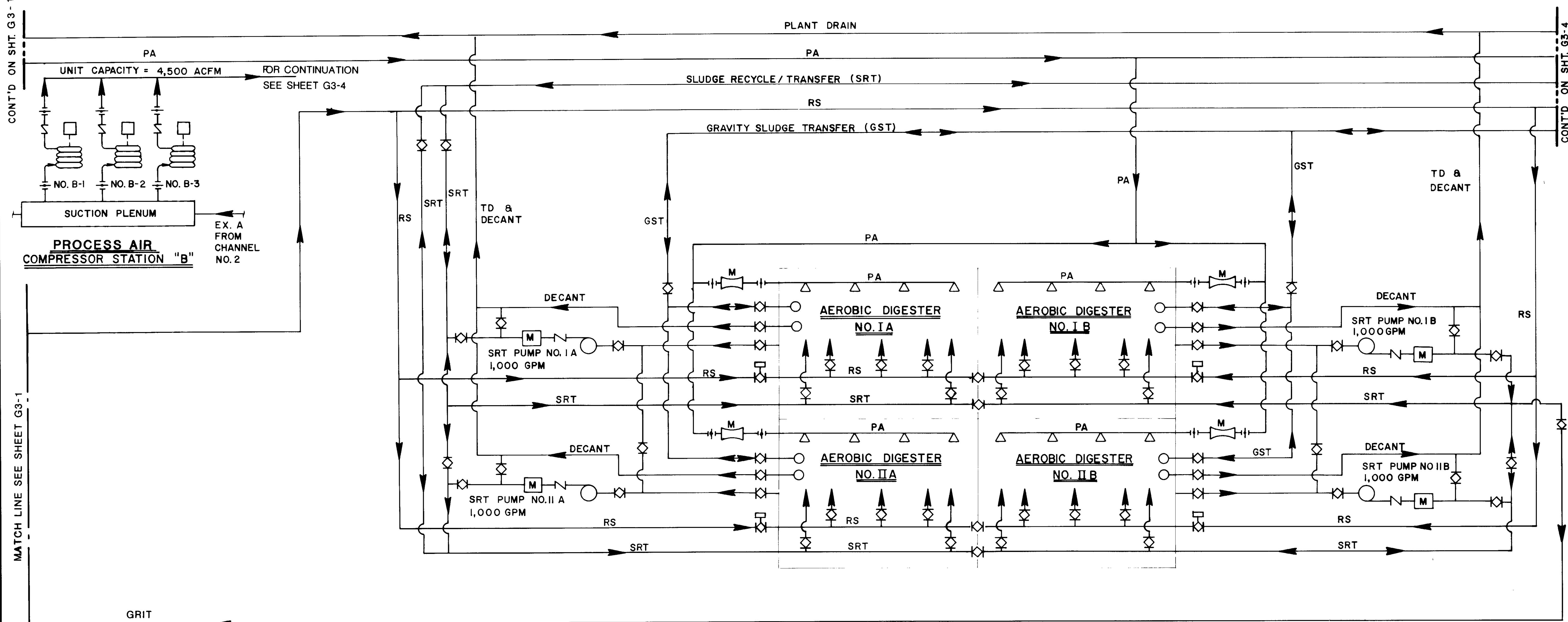
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

PROCESS SCHEMATIC - II

SHEET G3-2

CONT'D ON SHT. G3-1

CONT'D ON SHT. G3-4



**AEROBIC DIGESTION**

03924

RECORD DRAWINGS  
 PREPARED BY HERBERT PACIFIC CORP.  
 KATSURA CONSULTING ENGINEERS JUNE 1989



REV	DATE	BY	DESCRIPTION

SCALE:	Y. K.
DESIGNED	KOH
DRAWN	Y. K.
CHECKED	

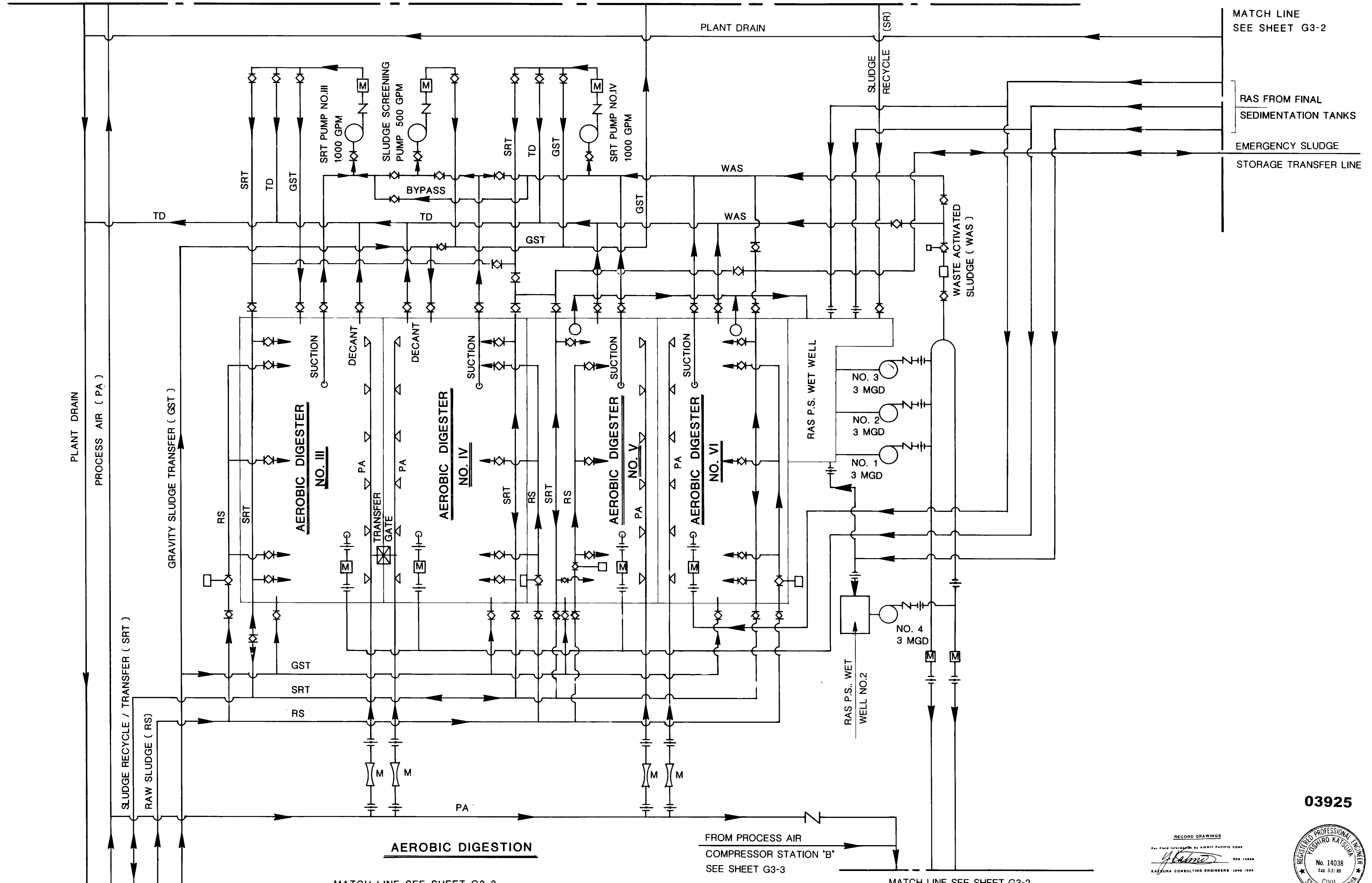
SUBMITTED	14038	8-7-87
KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
ALEXANDER ENGINEERS	513	
	R.C.S.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California      Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**PROCESS SCHEMATIC - III**

SHEET  
**G3-3**





RAS FROM FINAL  
SEDIMENTATION TANKS  
EMERGENCY SLUDGE  
STORAGE TRANSFER LINE

PLANT DRAIN  
PROCESS AIR ( PA )

SLUDGE RECYCLE / TRANSFER ( SRT )  
RAW SLUDGE ( RS )

GRAVITY SLUDGE TRANSFER ( GST )

**AEROBIC DIGESTION**

FROM PROCESS AIR  
COMPRESSOR STATION 'B'  
SEE SHEET G3-3

MATCH LINE SEE SHEET G3-2

MATCH LINE SEE SHEET G3-3

03925

RECORD DRAWINGS  
No. 14038  
Exp. 3-31-89  
KATSURA CONSULTING ENGINEERS JUNE 1988

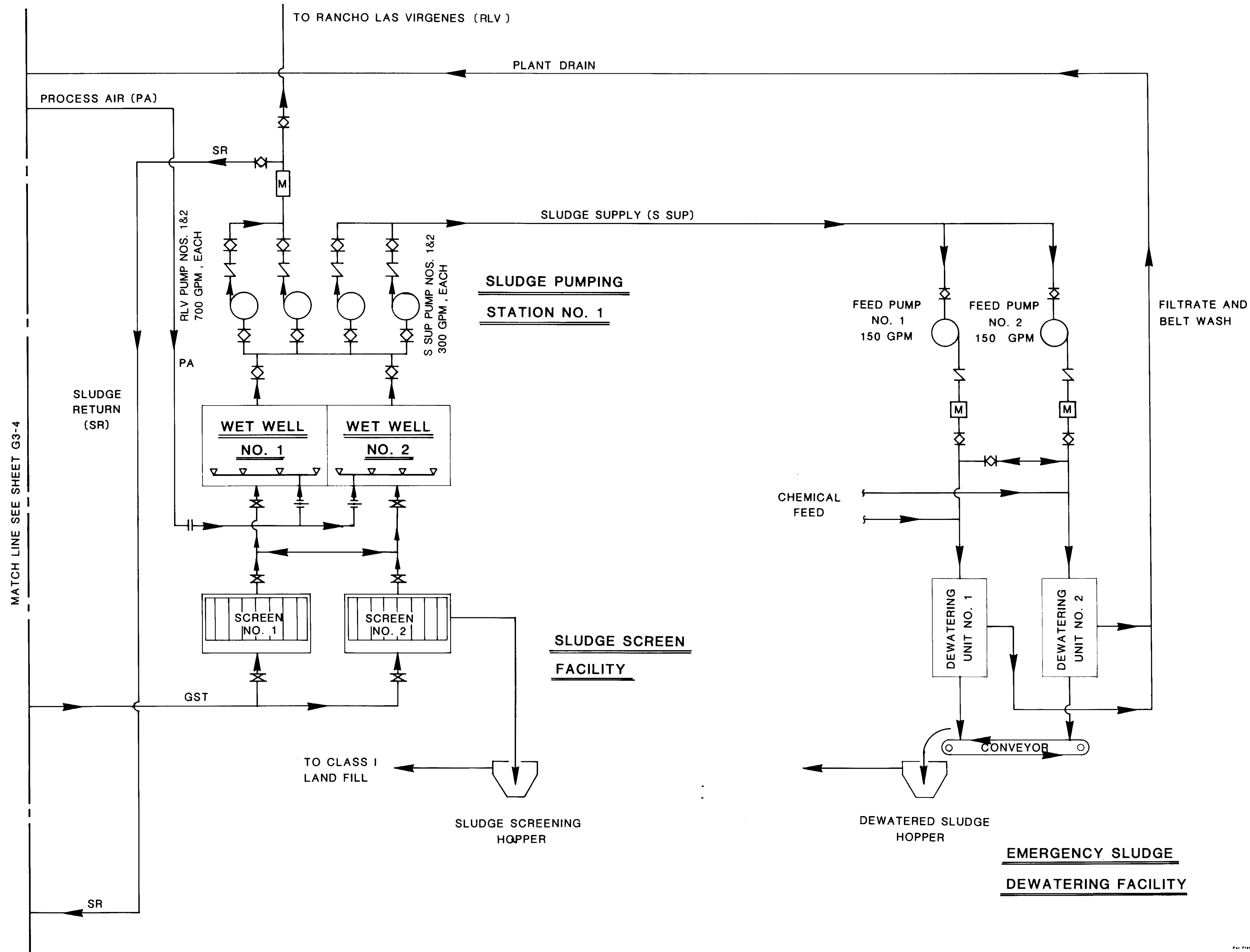


REV	DATE	BY	DESCRIPTION

SCALE:	Y. K.	SUBMITTED	14038	8-7-81
NO	DESIGNED KOH	KA7SURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
SCALE	DRAWN Y. K.			
	CHECKED		513	
		ALEXANDER ENGINEERS	R.C.S.E. NO.	DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
PROCESS SCHEMATIC - IV  
SHEET G3-4



03926

RECORD DRAWINGS  
KATSURA CONSULTING ENGINEERS  
JUNE 1988



REV	DATE	BY	DESCRIPTION

SCALE:	Y. K.	SUBMITTED	14038	8-7-87
NO	DESIGNED KOH	KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
SCALE	DRAWN Y. K.	ALEXANDER ENGINEERS	513	DATE
	CHECKED	ALEXANDER ENGINEERS	R.C.S.E. NO.	DATE

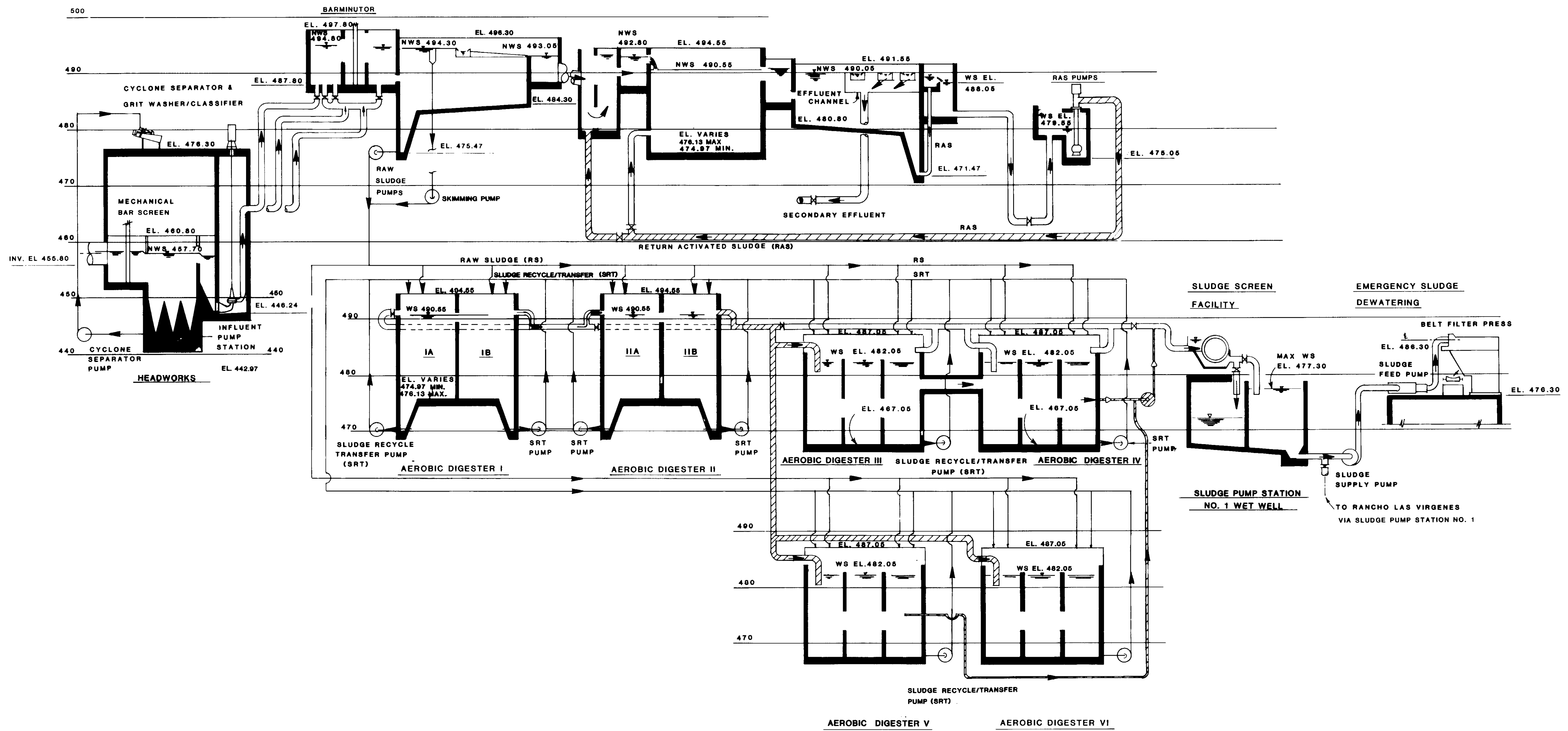
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III**

PROCESS SCHEMATIC - V

SHEET  
G3-5

PRIMARY SEDIMENTATION TANKS      SELECTOR CHANNELS      AERATION TANKS      FINAL SEDIMENTATION TANKS      RAS PUMP STATION



03927

RECORD DRAWINGS  
 PREPARED BY: KIEWIT PACIFIC CORP.  
 Y. K. Katsura  
 KATSURA CONSULTING ENGINEERS JUNE 1989



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

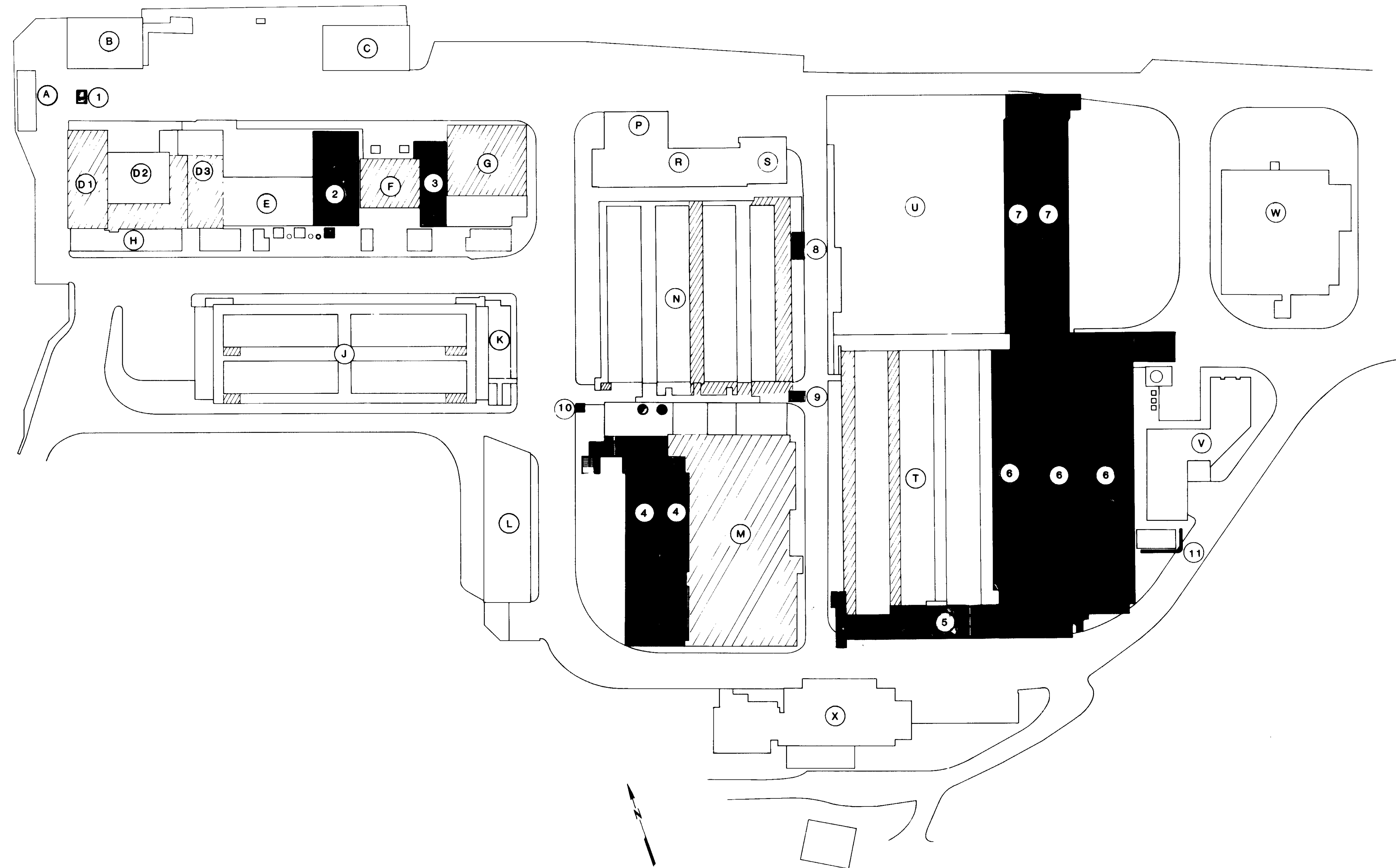
SCALE: NO SCALE  
 DESIGNED: Y.K.  
 S.K.  
 DRAWN: Y.K.  
 CHECKED: Y.K.

SUBMITTED: 14038 8-7-91  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 513  
 ALEXANDER ENGINEERS R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 HYDRAULIC PROFILE

SHEET G4-1



**KEY TO STRUCTURES**

**NEW STRUCTURES**

- (1) PLANT RETURN FLOW DIVERSION VAULT
- (2) ENGINE GENERATOR NO. 3
- (3) PROCESS AIR COMPRESSOR NO. 3
- (4) PRIMARY SEDIMENTATION TANK NOS. 4 & 5
- (5) SELECTOR CHANNEL
- (6) AERATION TANK NOS. 4, 5 & 6
- (7) FINAL SEDIMENTATION TANK NOS. 6 & 7
- (8) RETURN ACTIVATED SLUDGE PUMPING STATION
- (9) PROCESS AIR VALVE VAULT
- (10) INFLUENT FORCE MAIN VALVE VAULT
- (11) SCREEN WALL

**EXISTING STRUCTURES**

- (A) S.C.E. SUBSTATION
- (B) SLUDGE DEWATERING BUILDING
- (C) STORAGE BUILDING I
- (D) HEADWORKS
  - 1) SCREENING & GRIT BUILDING
  - 2) GRIT PUMP ROOM
  - 3) INFLUENT PUMP STATION
- (E) ELECTRICAL BUILDING
- (F) PROCESS AIR COMPRESSOR BUILDING
- (G) STORAGE BUILDING II
- (H) EAST-WEST PIPE GALLERY
- (J) AEROBIC DIGESTER NOS. IA, IB, IIA & IIB
- (K) NORTH-SOUTH PIPE GALLERY
- (L) SHOP & MAINTENANCE BUILDING
- (M) PRIMARY SEDIMENTATION TANK NOS. 1, 2 & 3
- (N) AEROBIC DIGESTER NOS. III, IV, V, & VI
- (P) SLUDGE PUMPING STATION
- (R) WET WELL NOS. 1 & 2
- (S) SLUDGE SCREENING FACILITY
- (T) AERATION TANK NOS. 1, 2 & 3
- (U) FINAL SEDIMENTATION TANK NOS. 1, 2, 3, 4 & 5
- (V) CHEMICAL & STORAGE BUILDING
- (W) EFFLUENT FILTERS BUILDING
- (X) ADMINISTRATION BUILDING

**GENERAL CONSTRUCTION PLAN**

SCALE : NONE

**LEGEND**

- NEW STRUCTURE **03928**
- MODIFICATION / UPGRADE AREAS

RECORD DRAWINGS  
 PREPARED BY: KATSUMI CONSULTING ENGINEERS  
 DATE: 8-7-87  
 KATSUMI CONSULTING ENGINEERS JUNE 1984

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:  
NONE

DESIGNED: *Y. K.*  
 J.K./AR  
 DRAWN: *Y. K.*  
 CHECKED: *Y. K.*

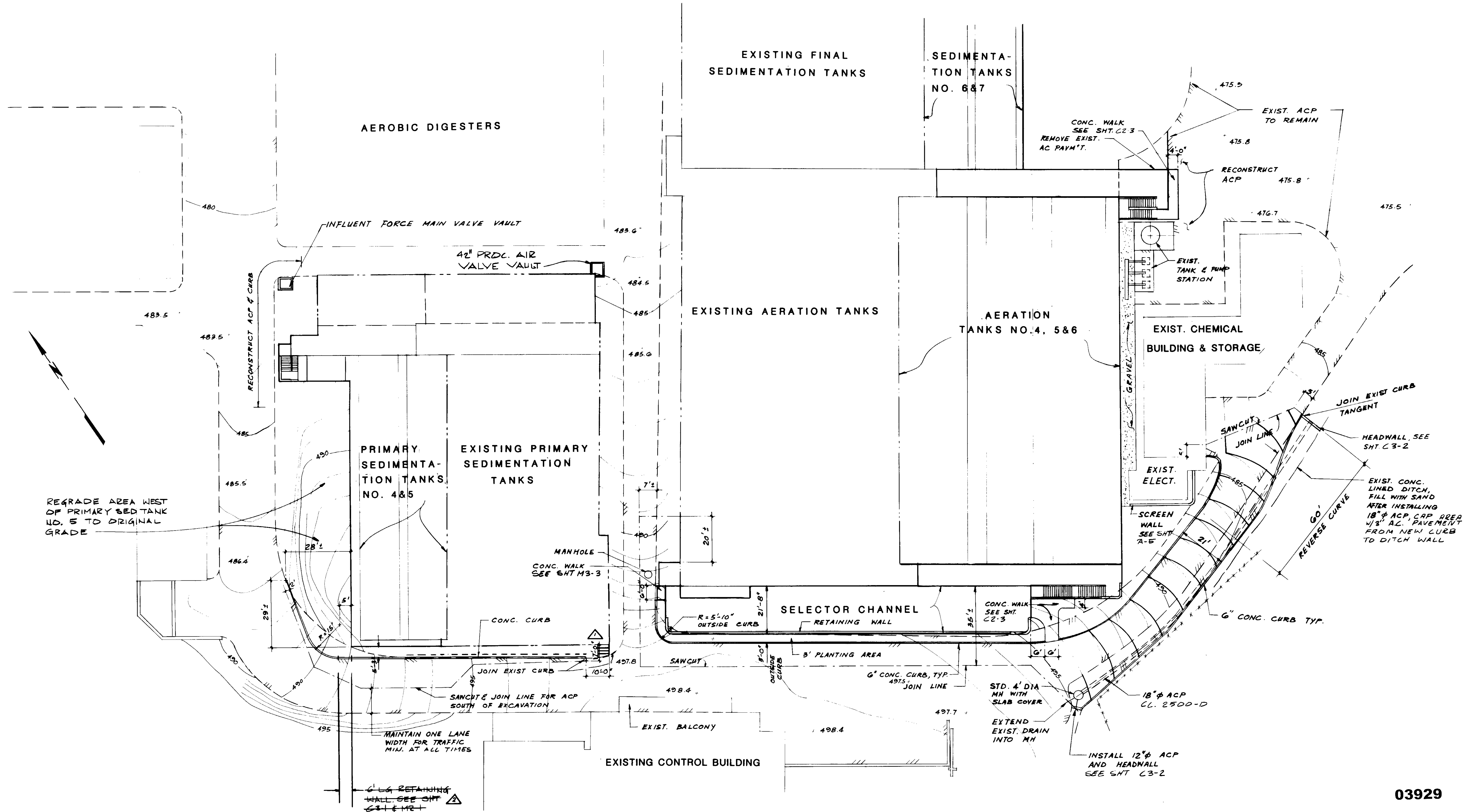
SUBMITTED: *[Signature]* 14038 8-7-87  
 KATSUMI CONSULTING ENGINEERS R.C.E. NO. DATE  
 513  
 ALEXANDER ENGINEERS R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 GENERAL CONSTRUCTION PLAN

SHEET  
C1-1





# PLAN

03929

RECORD DRAWINGS  
 For Plans Prepared by KATSUMI KATSURA & ASSOCIATES, INC.  
 KATSUMI KATSURA & ASSOCIATES, INC.  
 KATSUMI KATSURA & ASSOCIATES, INC. ENGINEERS JUNE 1988



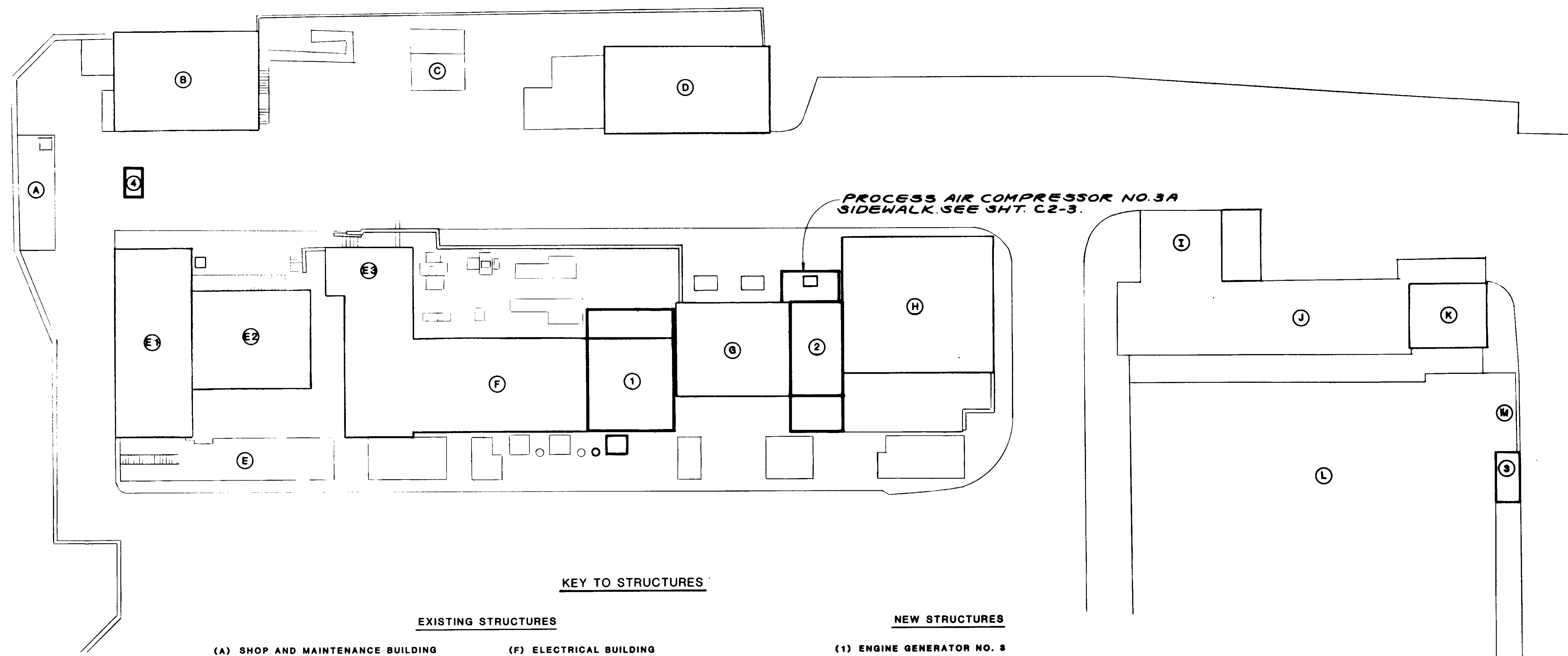
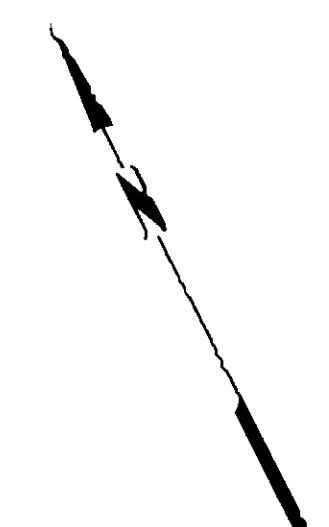
REV	DATE	BY	DESCRIPTION

SCALE: 1" = 20'-0"	DESIGNED: KOH	SUBMITTED: <i>Yoshiro Katsura</i> 8-7-87
DRAWN: YK	CHECKED: <i>Yoshiro Katsura</i>	KATSUMI CONSULTING ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 SITE WORK & GRADING PLAN - I

SHEET  
 C2-1



**KEY TO STRUCTURES**

**EXISTING STRUCTURES**

- (A) SHOP AND MAINTENANCE BUILDING
- (B) SOLIDS DEWATERING FACILITY
- (C) INFLUENT PUMP STATION
- (D) STORAGE BUILDING I
- (E) HEADWORKS
- 1) SCREENING AND GRIT BUILDING
- 2) GRIT PUMP CHAMBER
- 3) INFLUENT PUMP BUILDING

- (F) ELECTRICAL BUILDING
- (G) PROCESS AIR COMPRESSOR NOS. 1A & 2A
- (H) STORAGE BUILDING II
- (I) SLUDGE PUMPING STATION
- (J) SLUDGE WET WELLS
- (K) SLUDGE SCREENING FACILITY
- (L) AEROBIC DIGESTERS
- (M) RAS PUMP NOS. 1, 2 & 3

**NEW STRUCTURES**

- (1) ENGINE GENERATOR NO. 3
- (2) PROCESS AIR COMPRESSOR NO. 3A
- (3) RAS PUMP NO. 4
- (4) PLANT RETURN FLOW DIVERSION STRUCTURE
- (5) PROCESS AIR VALVE VAULT

03930

RECORD DRAWING  
 PREPARED BY: KATSUMI KATSURA  
 No. 14038  
 Exp. 3-31-88  
 CIVIL  
 STATE OF CALIFORNIA  
 KATSURA CONSULTING ENGINEERS JUNE 1987



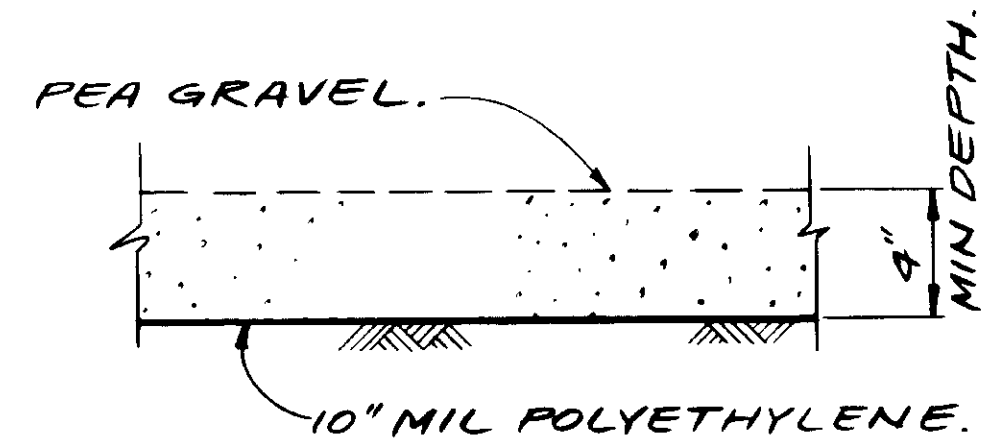
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: 1"=20'	DESIGNED Y.K./KOH	SUBMITTED <i>[Signature]</i> 14038 8-7-87
DRAWN S.K.	CHECKED Y.K.	KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

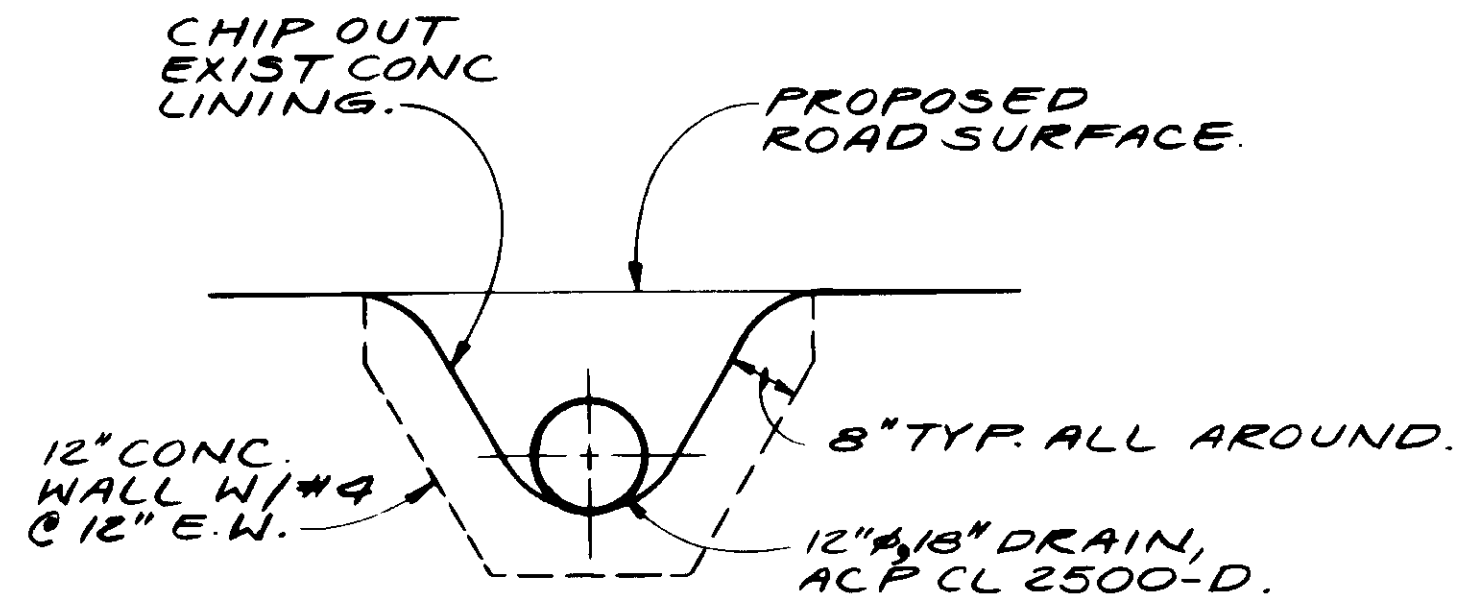
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 SITE WORK & GRATING PLAN - II

SHEET  
C2-2

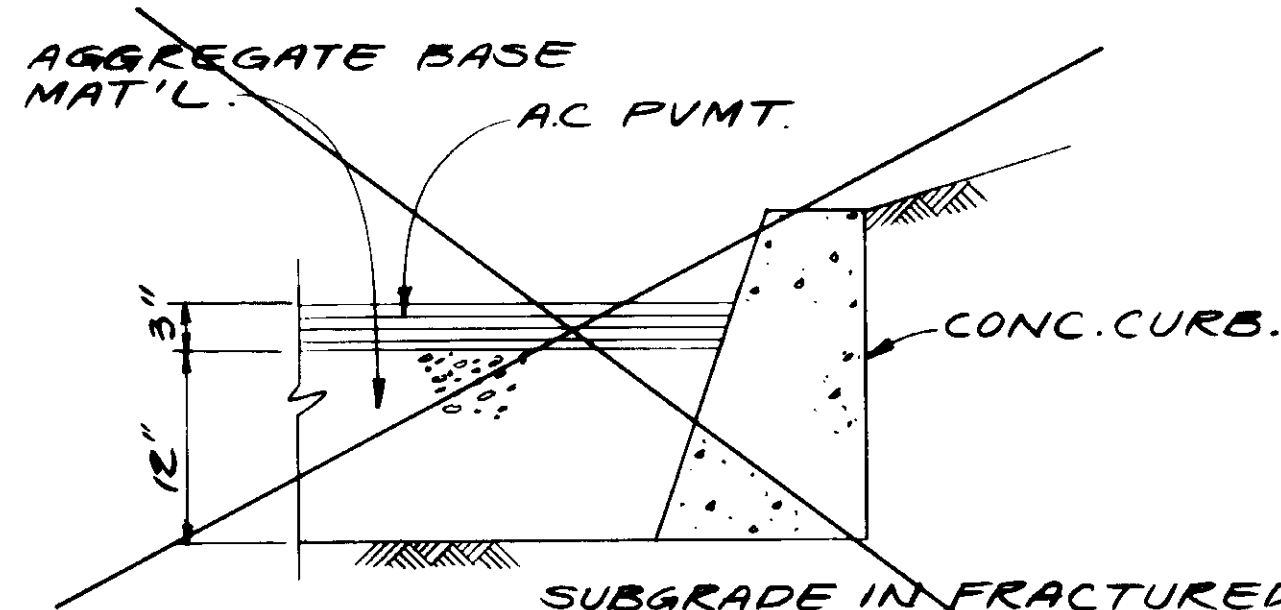


**GRAVEL AREA.**  
NO SCALE.

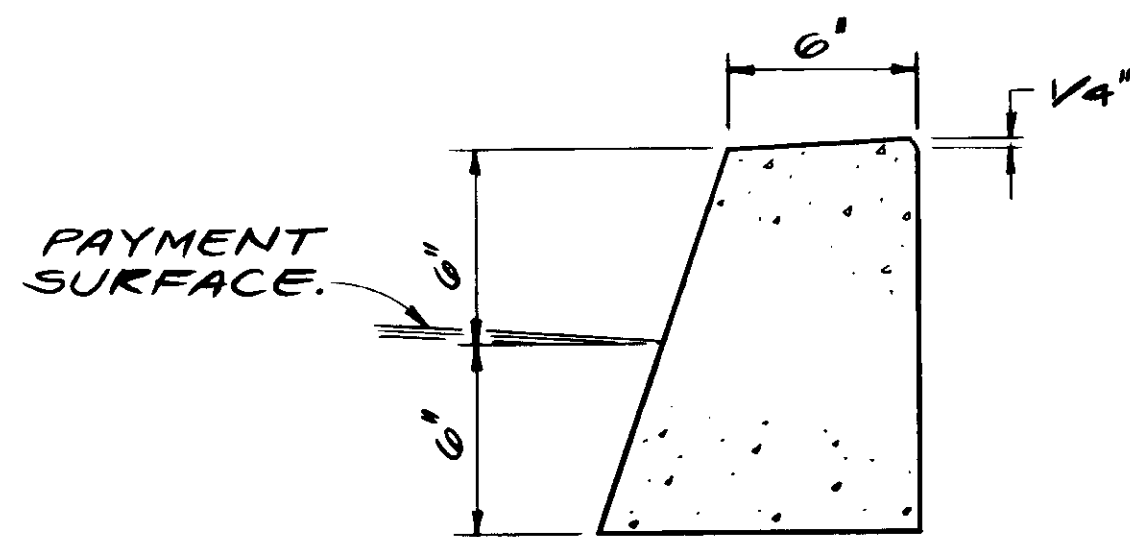
**NOTE:**  
APPLY HERBICIDE PER SPECS PRIOR TO INSTALLING POLY-ETHYLENE.



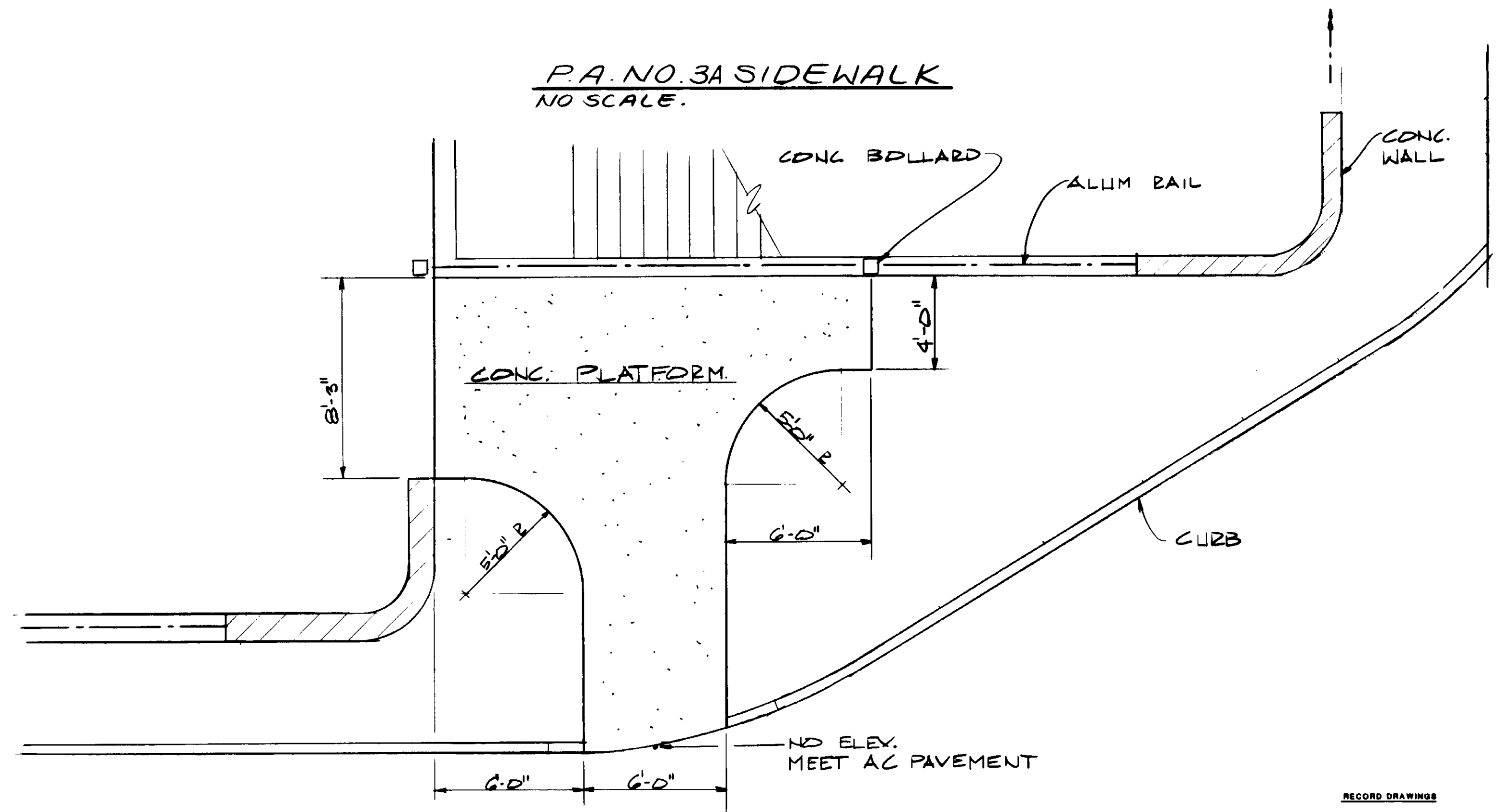
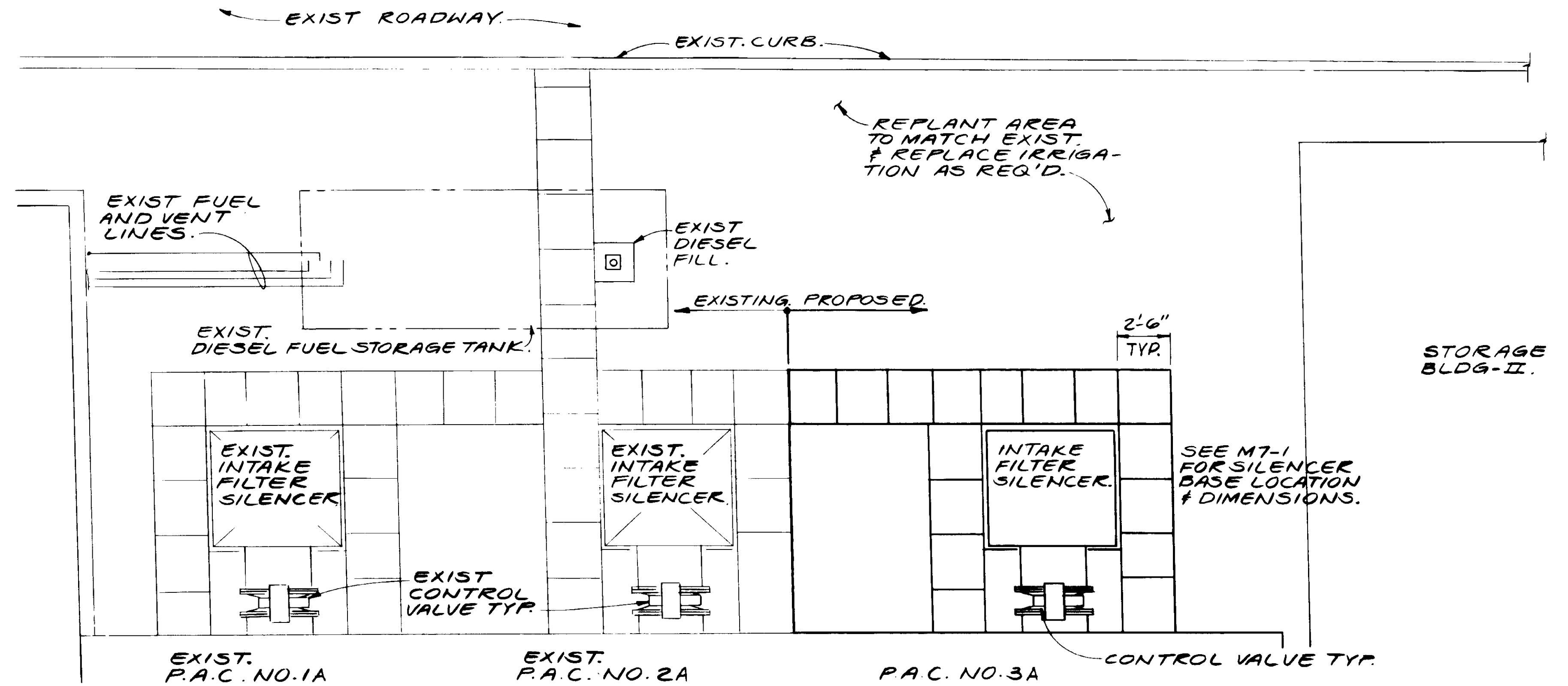
**DRAIN HEADWALL.**  
NO SCALE.



**TYPICAL ROADWAY CROSS SECTION DETAIL.**  
1"=1'-0"



**TYPICAL CONCRETE CURB.**  
1"=0'-6"



**CONCRETE PLATFORM DETAIL**  
NO SCALE

03931

RECORD DRAWING  
FOR FINAL APPROVAL BY THE CITY ENGINEER  
*[Signature]*  
KATSURA CONSULTING ENGINEERS JUNE 1988



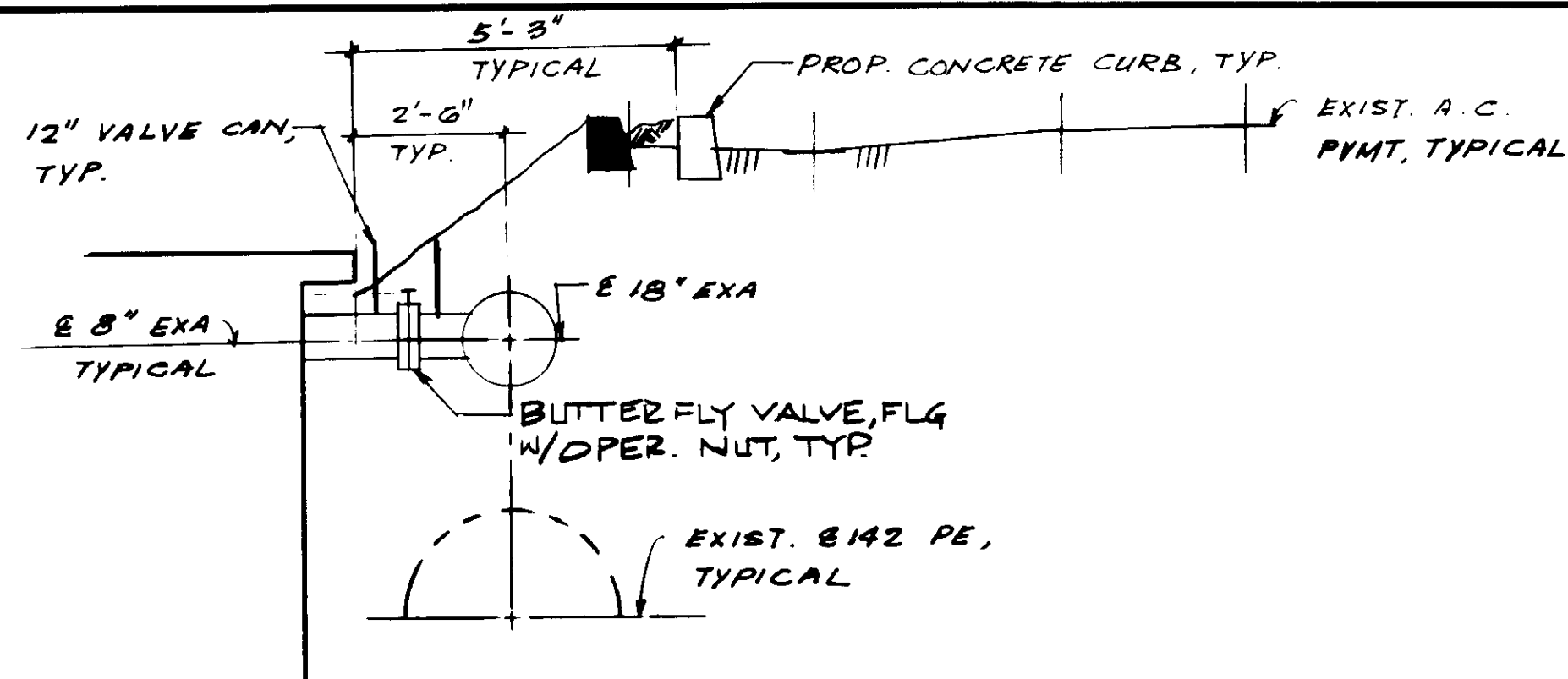
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	D.N./Y.K.	SUBMITTED	14038	8-7-87
AS NOTED	DESIGNED D.N.	KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
	DRAWN Y.K.			
	CHECKED	ALEXANDER ENGINEERS	R.C.E. NO.	DATE

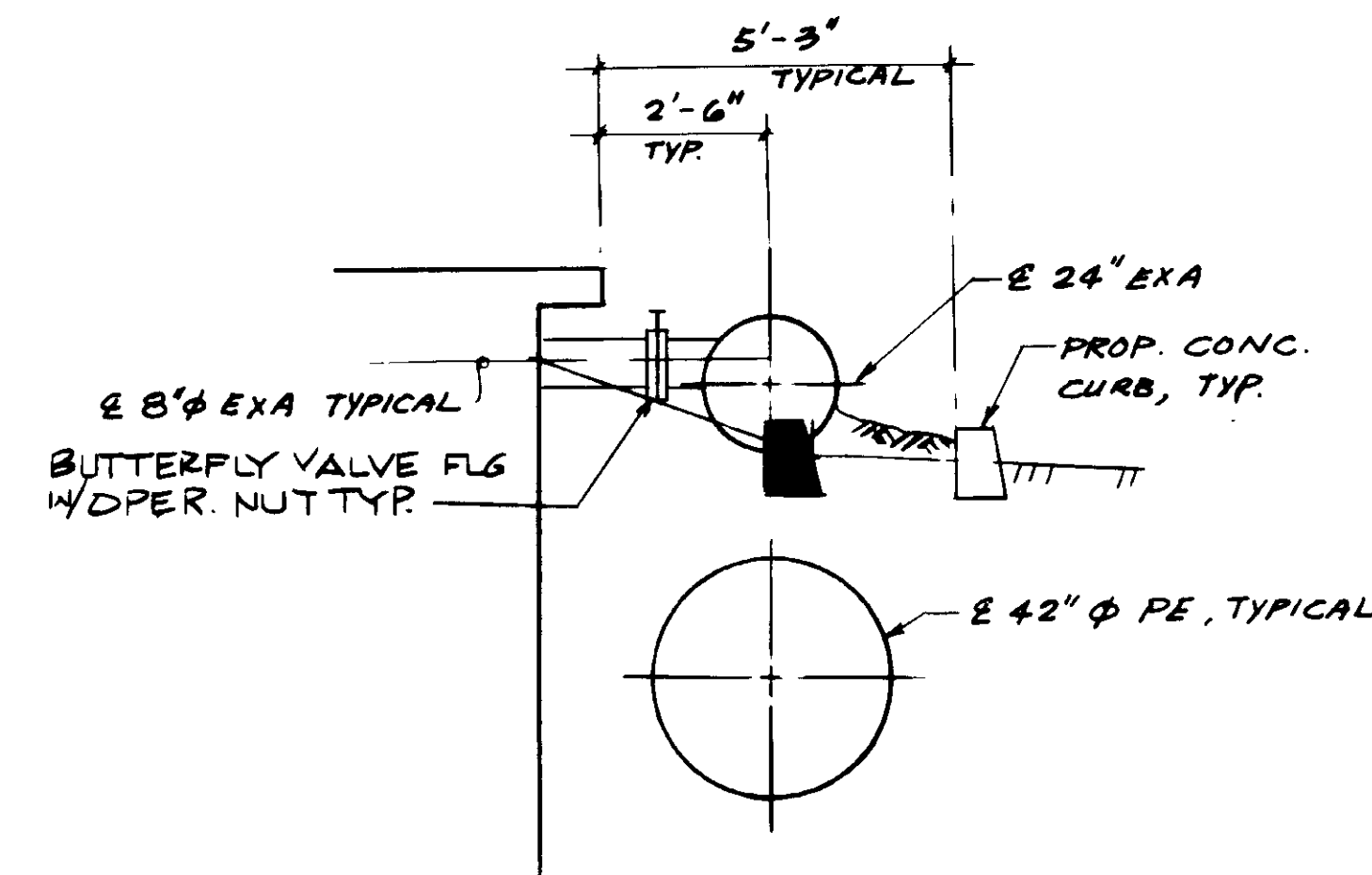
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SITE WORK DETAILS

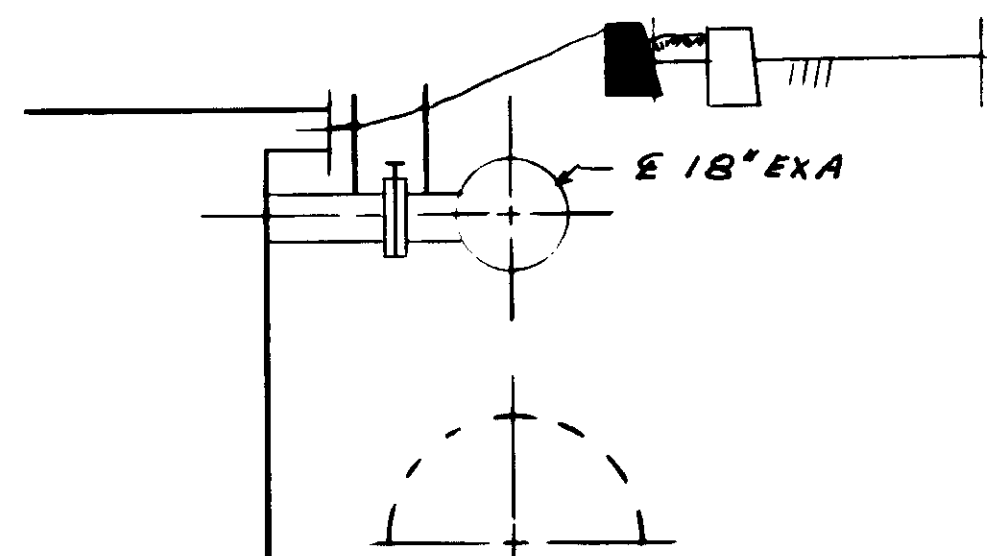
SHEET  
C2-3



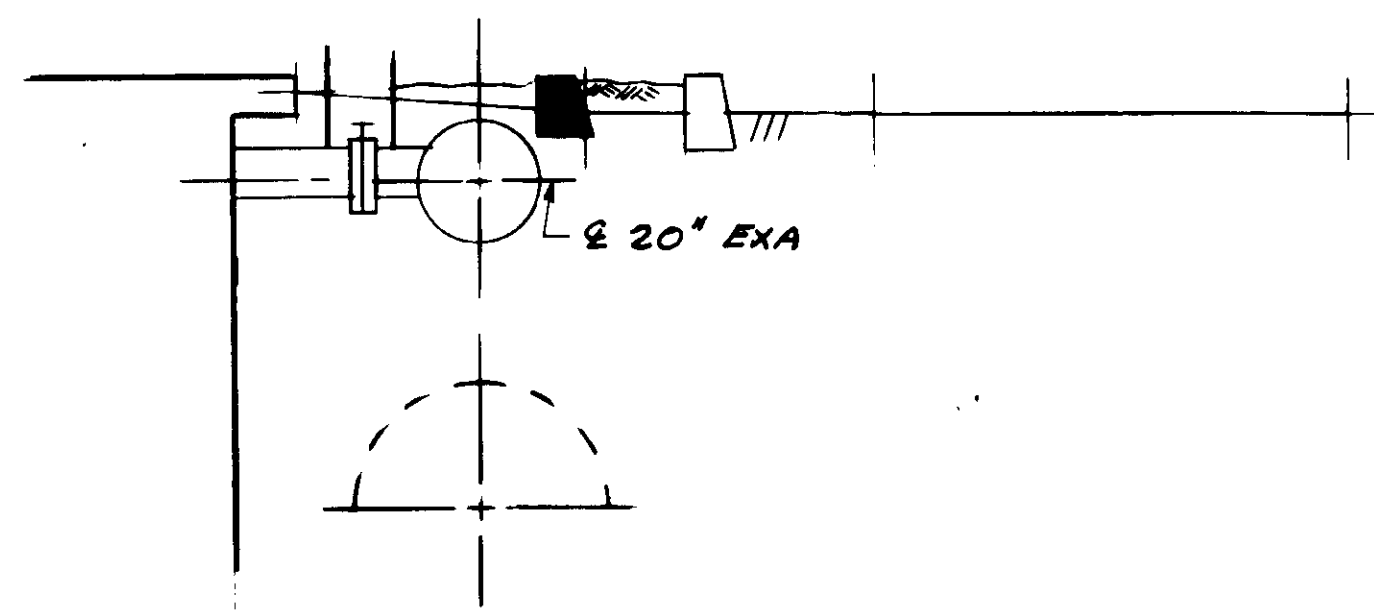
18 PRIMARY SED. TANK No.1



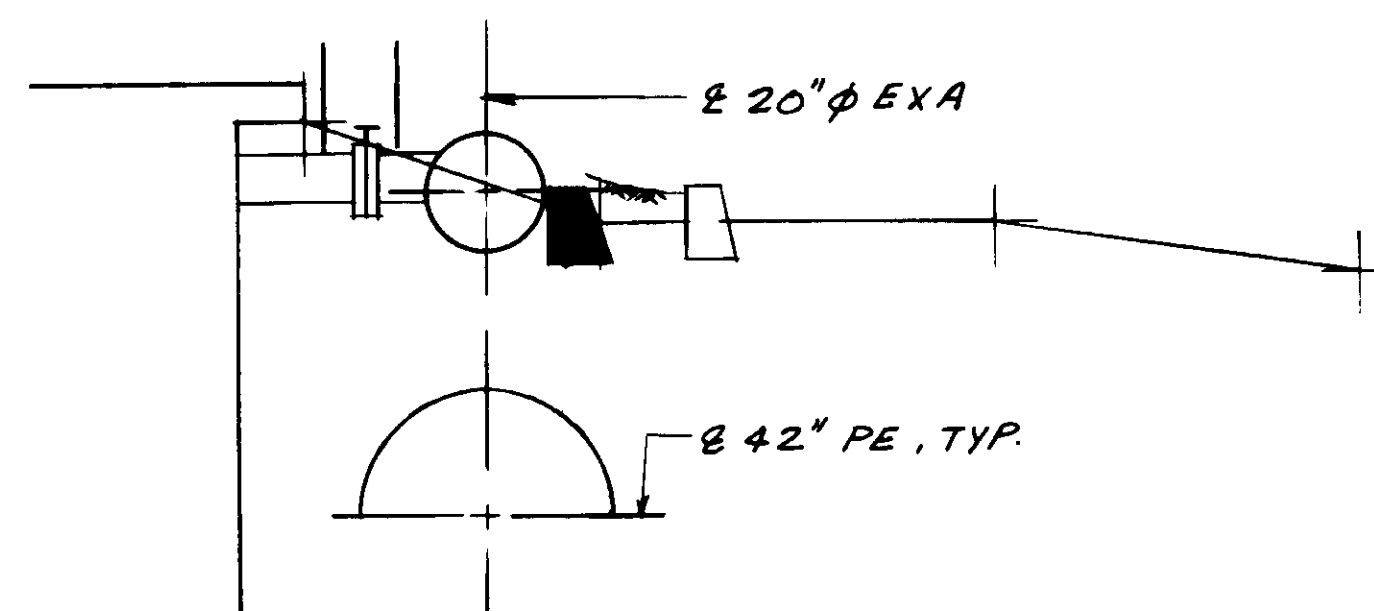
24 PRIMARY SED. TANK No. 5



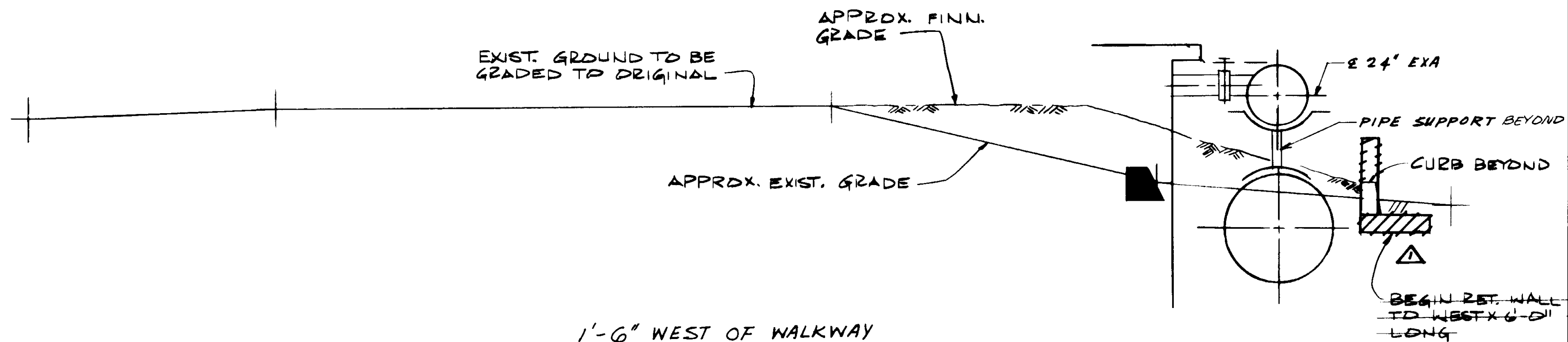
18 PRIMARY SED. TANK No. 2



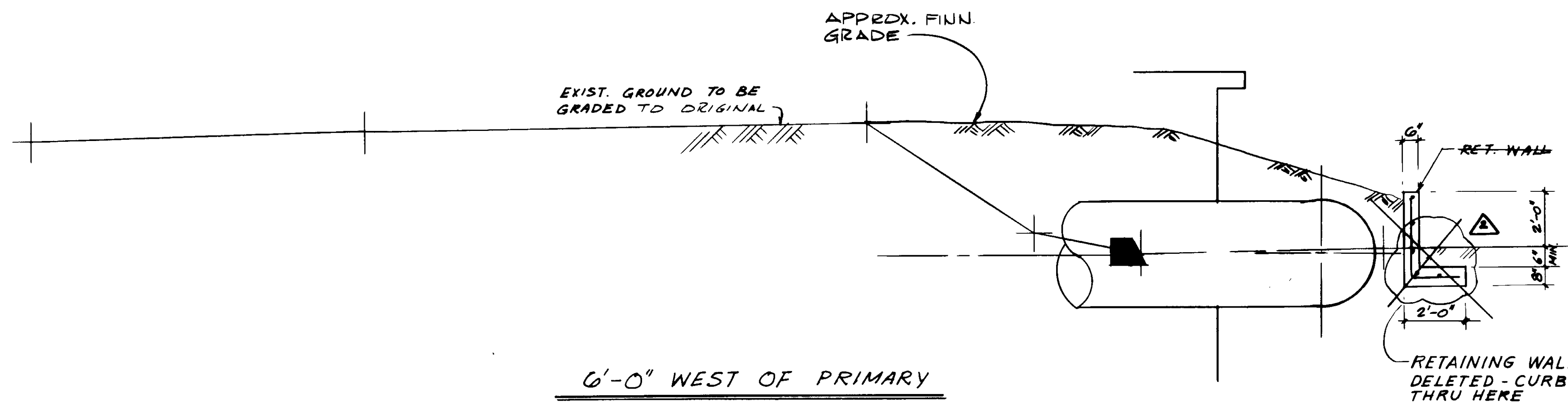
20 PRIMARY SED. TANK No.3



20 PRIMARY SED. TANK No. 4



1'-6" WEST OF WALKWAY  
PRIMARY SED. TANK No. 5



6'-0" WEST OF PRIMARY  
SED. TANK No. 5

03932

RECORD DRAWING  
KATSUMURA CONSULTING ENGINEERS



REV	DATE	BY	DESCRIPTION

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

DESIGNED Y.K.  
AR/KOH  
DRAWN Y.K.  
CHECKED

SUBMITTED *Yasuhiro Katsumura* 14038 8-7-87  
KATSUMURA CONSULTING ENGINEERS R.C.E. NO. DATE  
ALEXANDER ENGINEERS 613 R.C.S.E. NO. DATE

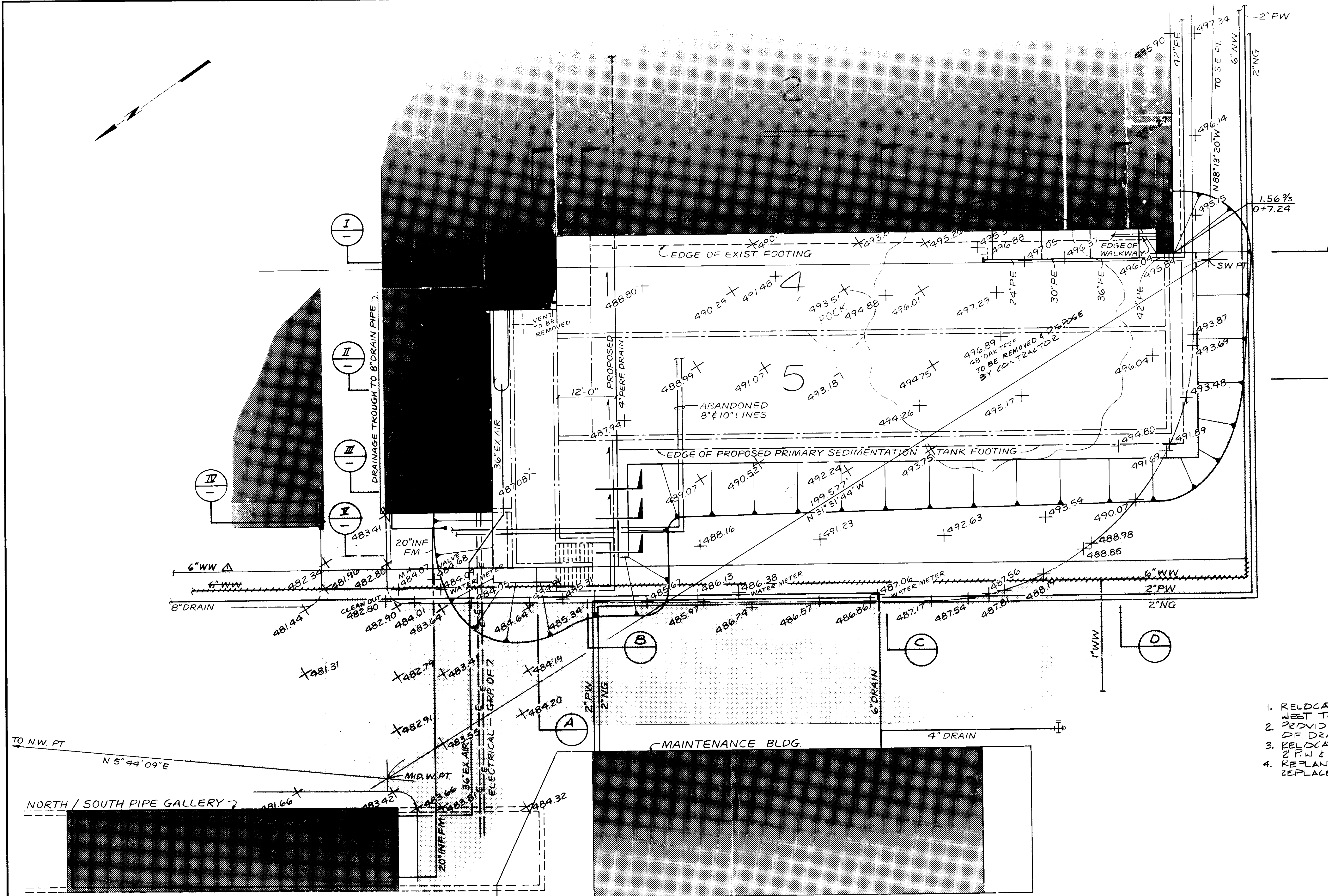
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III**

MISCELLANEOUS YARD DETAILS

SHEET  
C3-1





- NOTES**
1. RELOCATE 6" WW & 8" DRAIN TO WEST TO CLEAR CONSTRUCTION
  2. PROVIDE CLEANSOUT AT EACH BEND OF DRAIN LINE
  3. RELOCATE OR SUPPORT & MAINTAIN 2" PW & 2" NG
  4. REPLANT AREA TO MATCH EXISTING. REPLACE IRRIGATION PIPING AS REQ'D

**PLAN**

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'	DESIGNED: Y.K.	SUBMITTED: <i>[Signature]</i> 14038 8-7-87
CHECKED: Y.K.	DRAWN: J.K.	KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS 519 R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

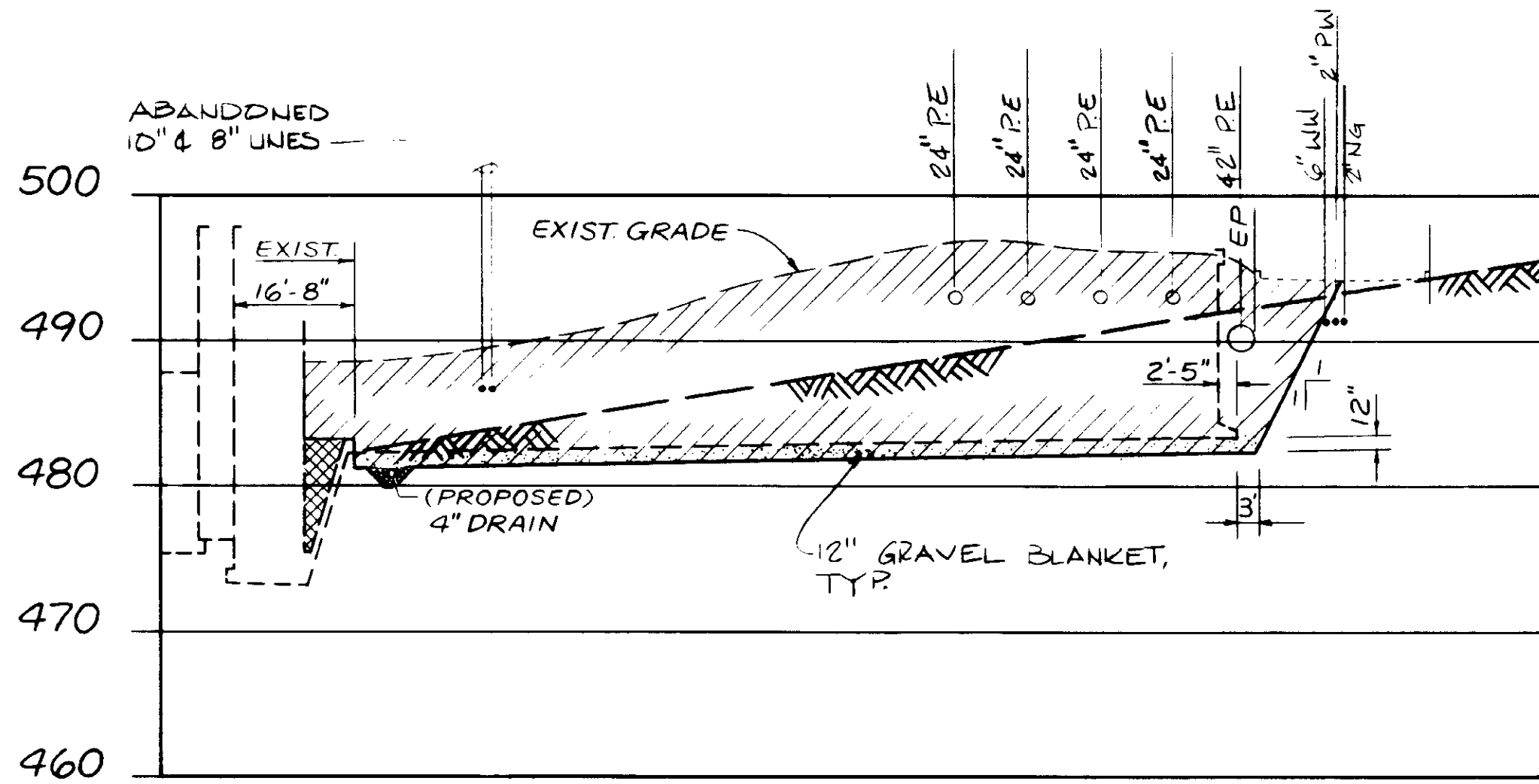
PRIMARY AREA EXCAVATION, PLAN

SHEET C4-1

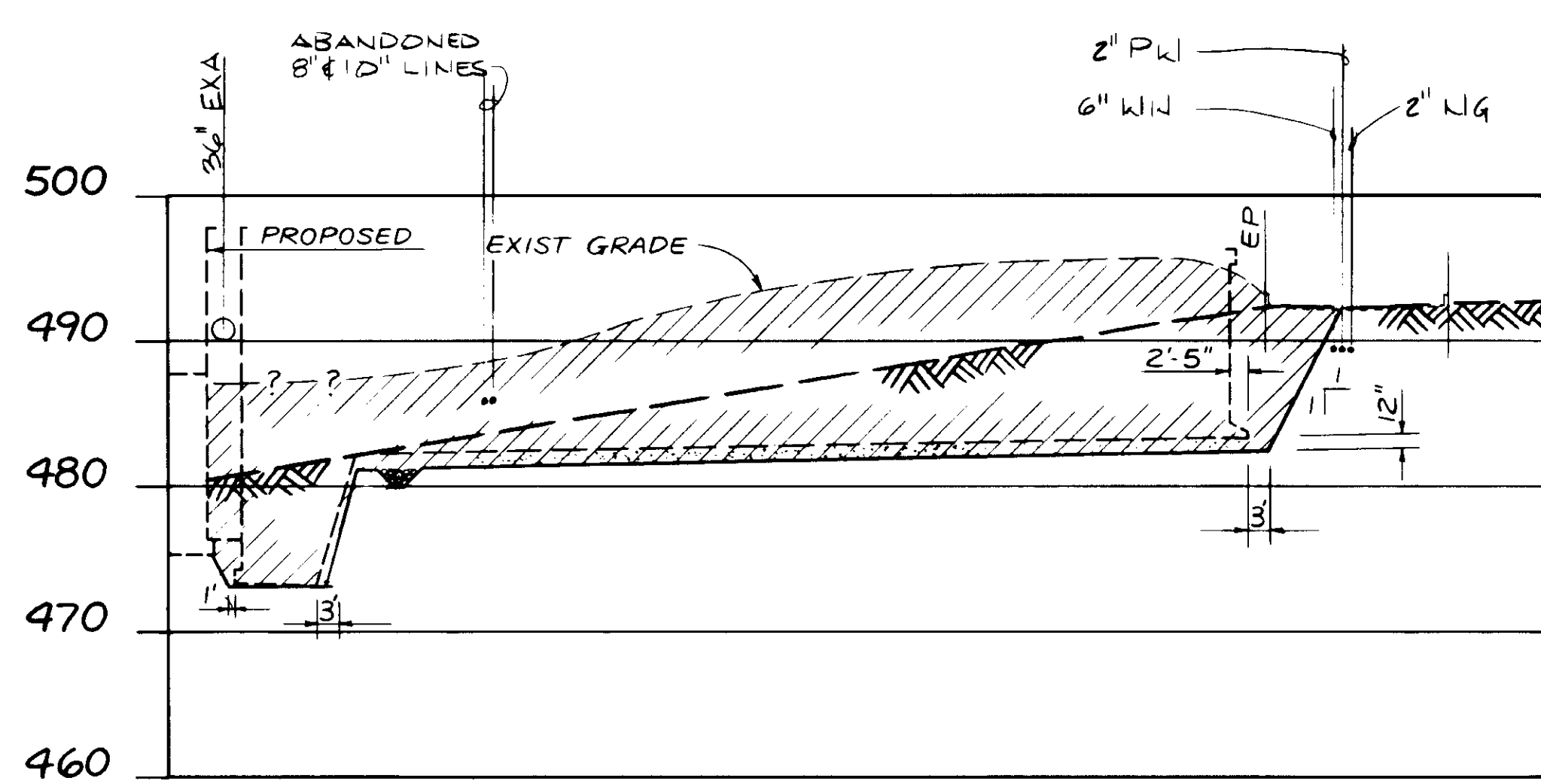
RECORD DRAWINGS  
 PREPARED BY: KALEX ENGINEERS  
 DATE: 8/7/87



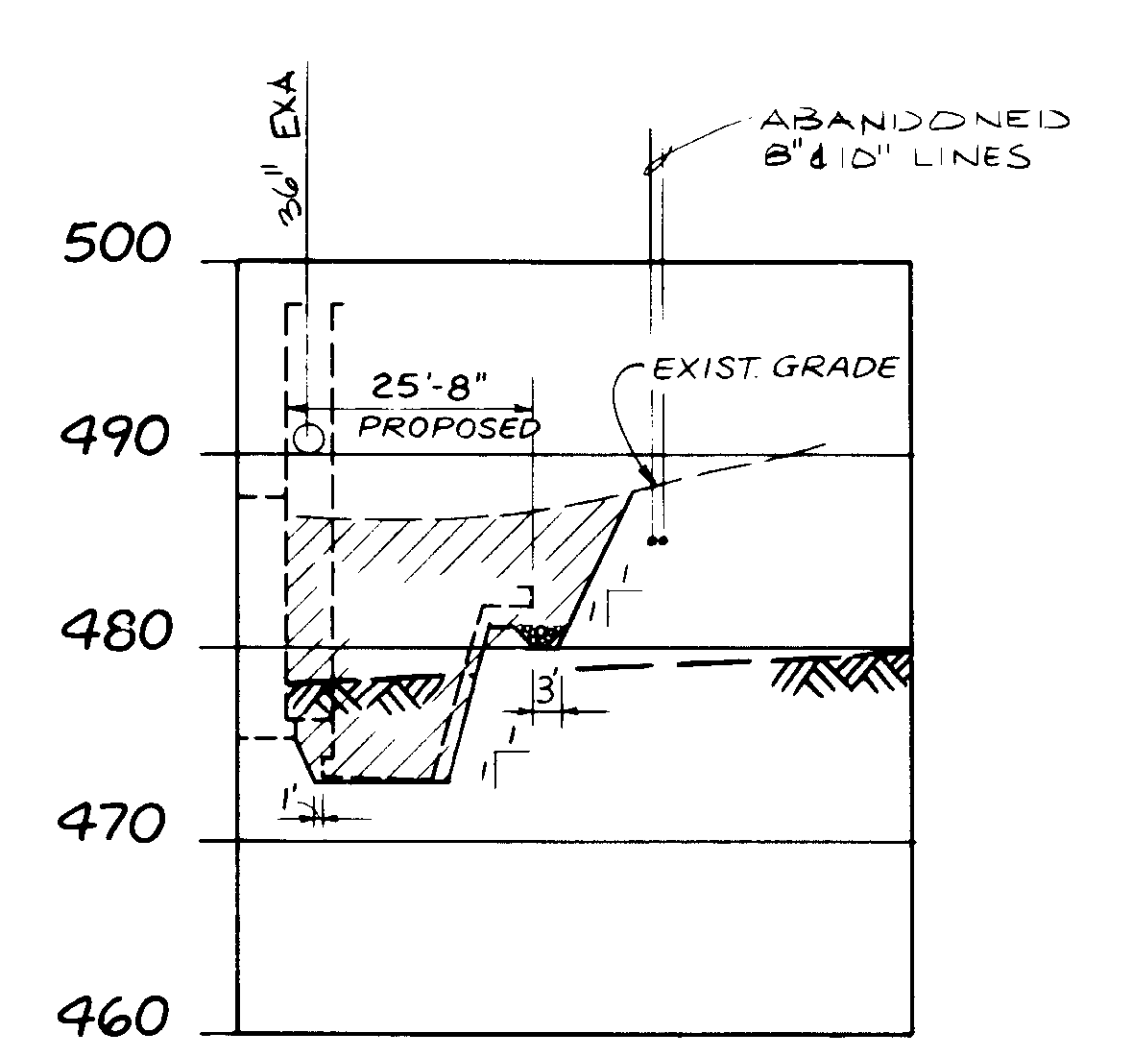
BL 6 3/4



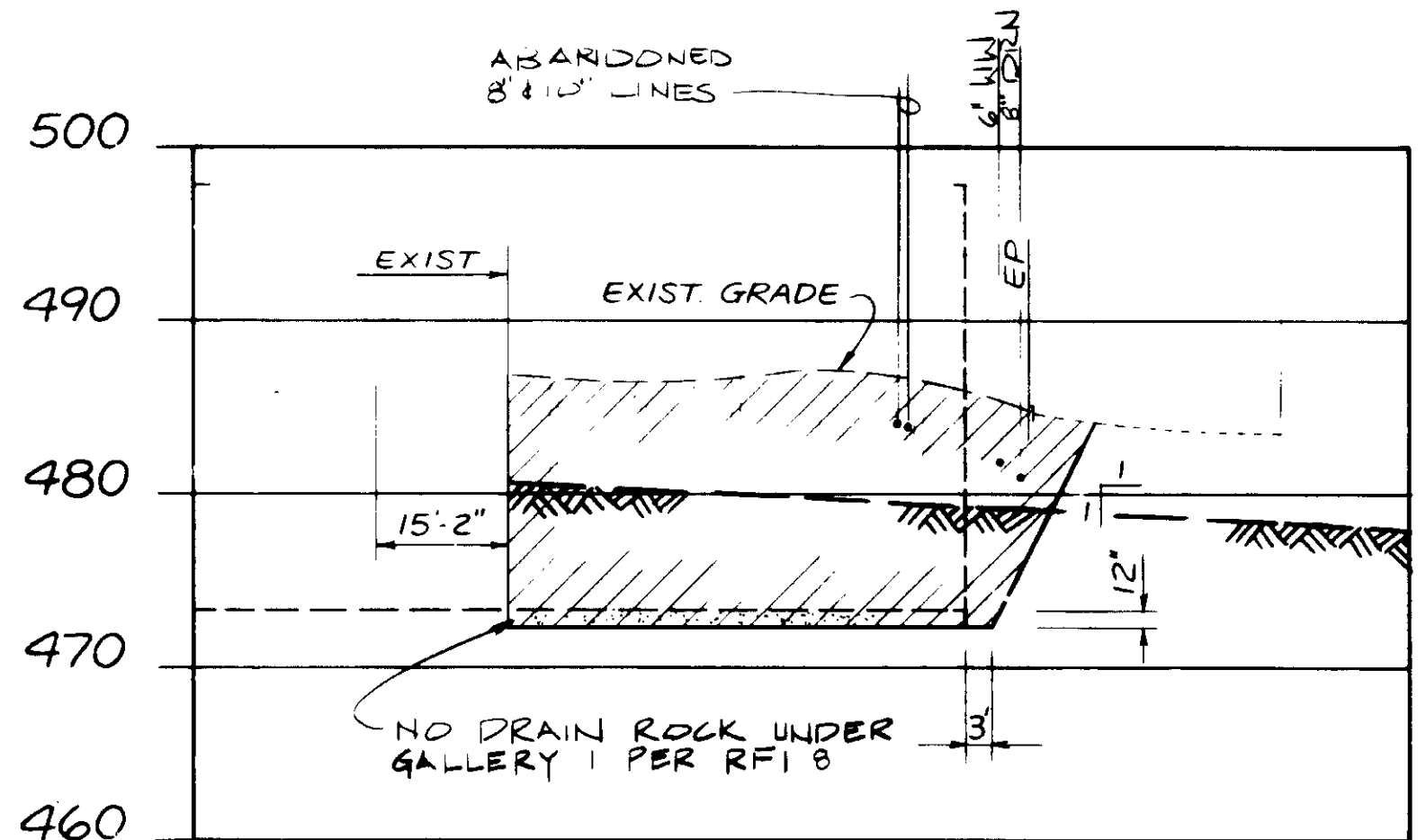
SECTION I



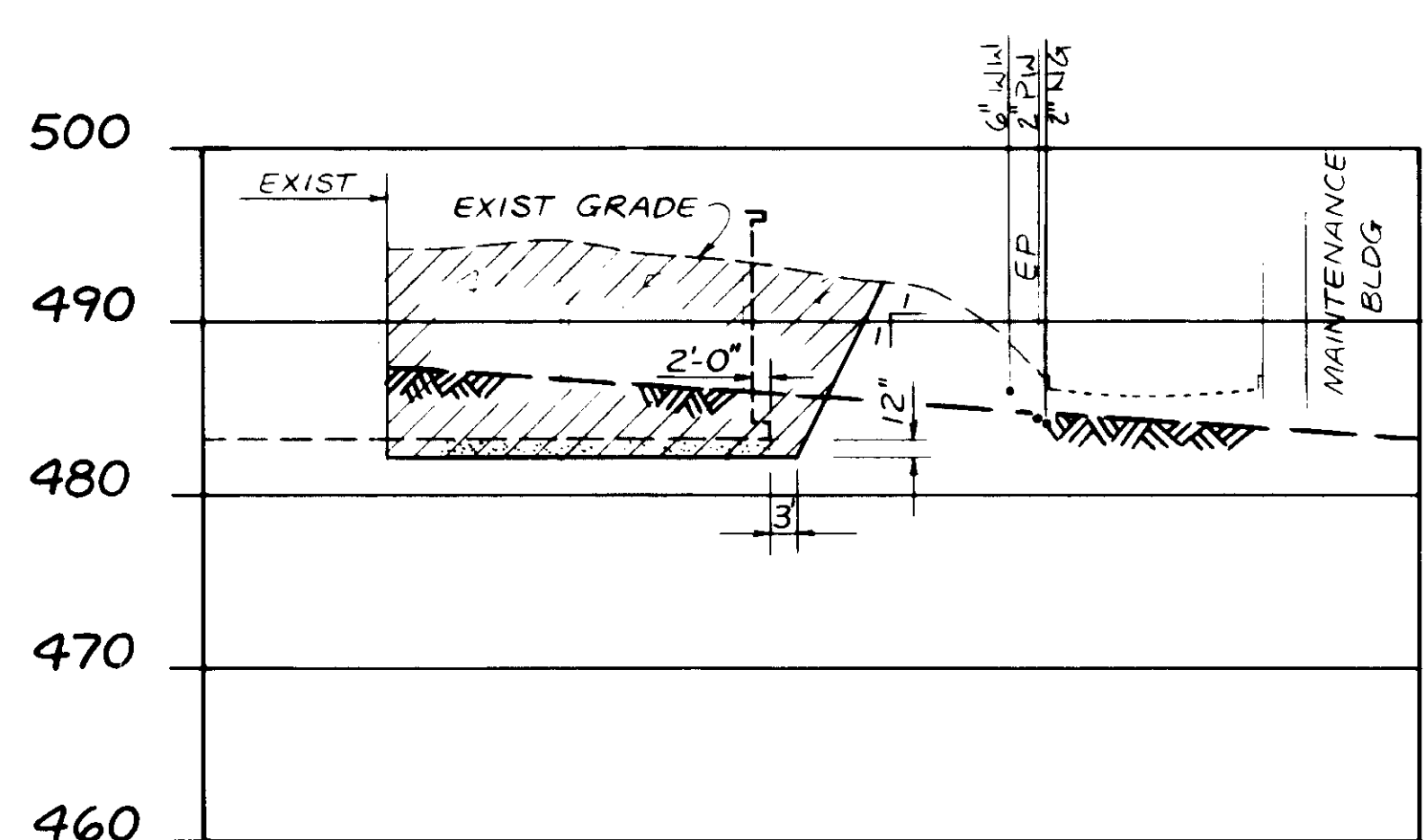
SECTION II



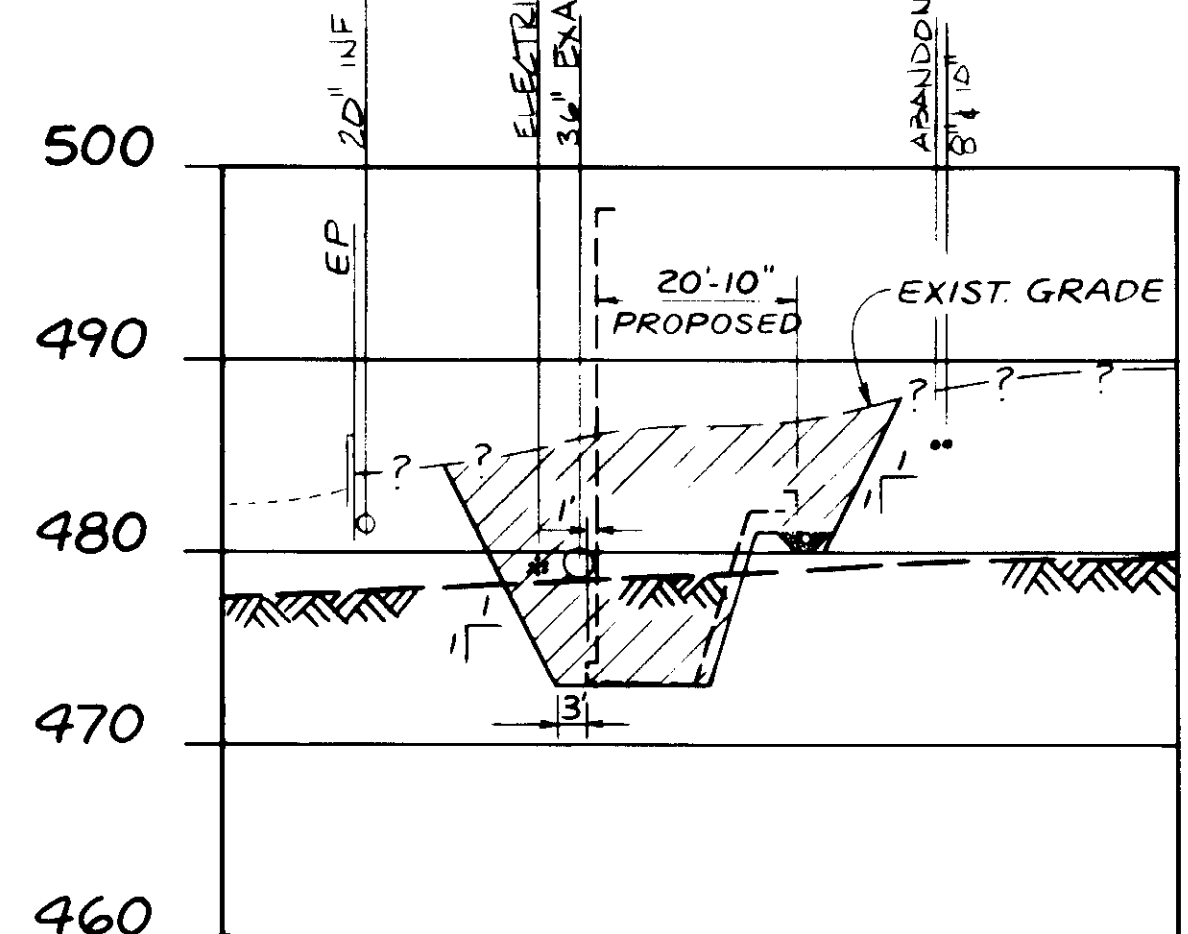
SECTION III



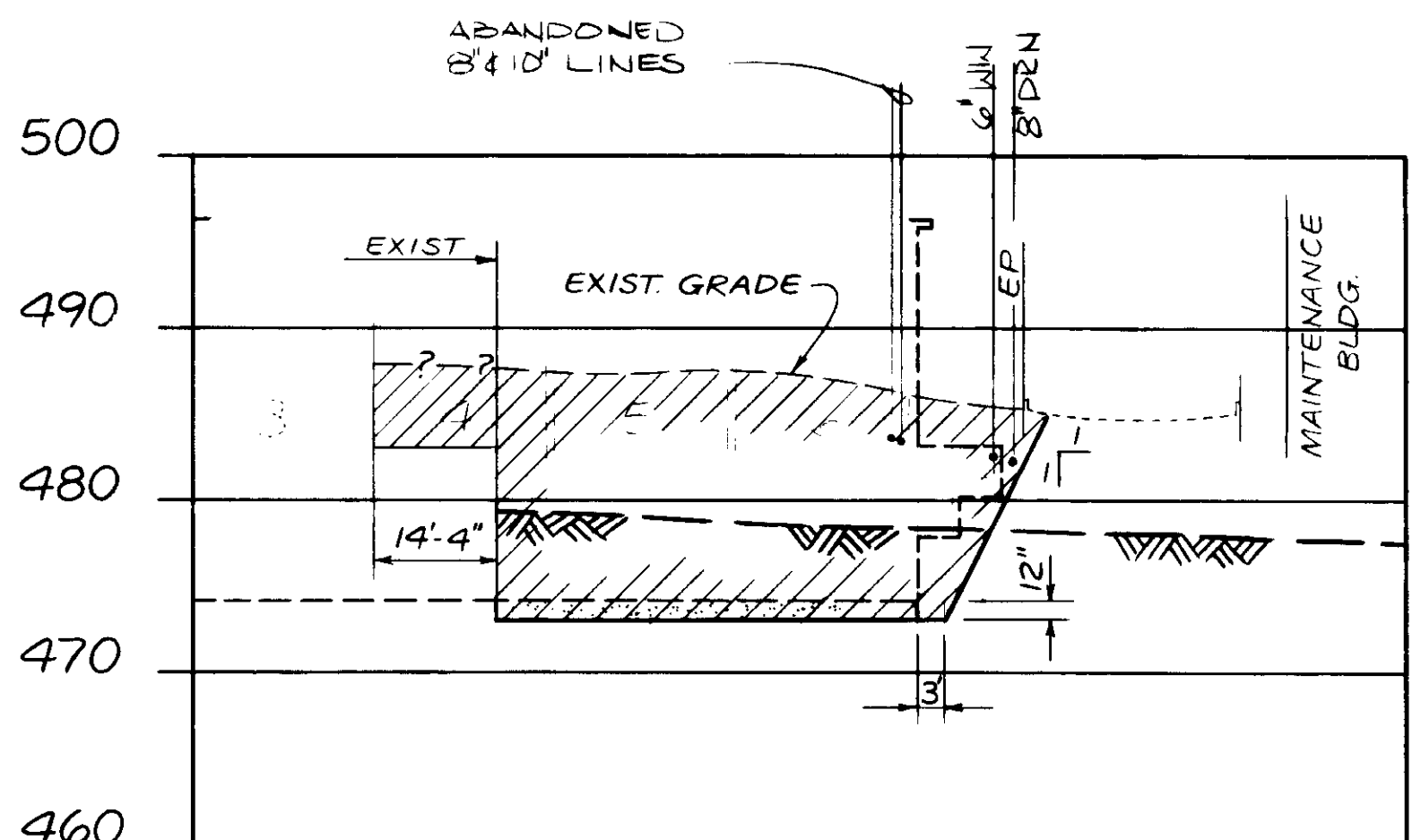
SECTION A



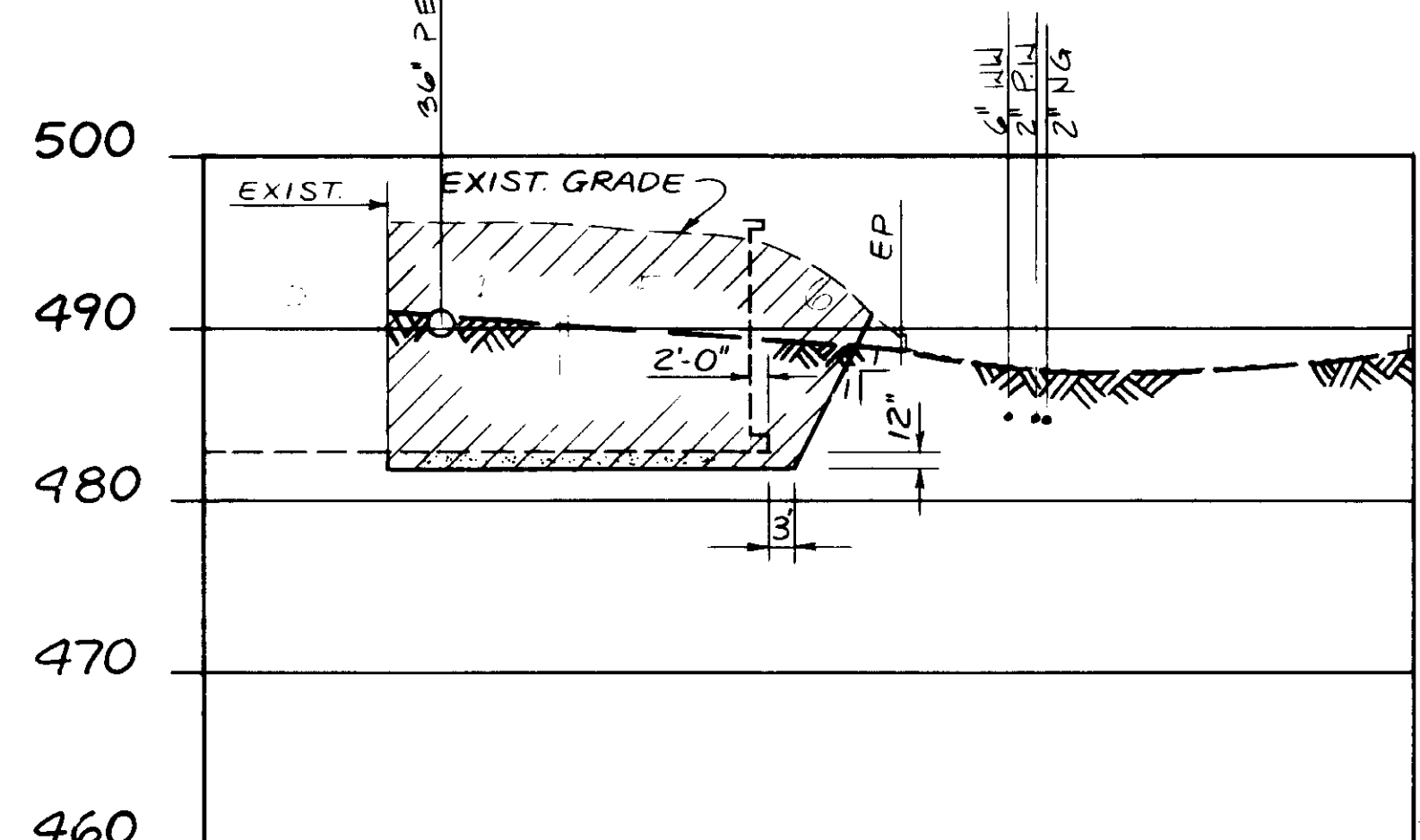
SECTION C



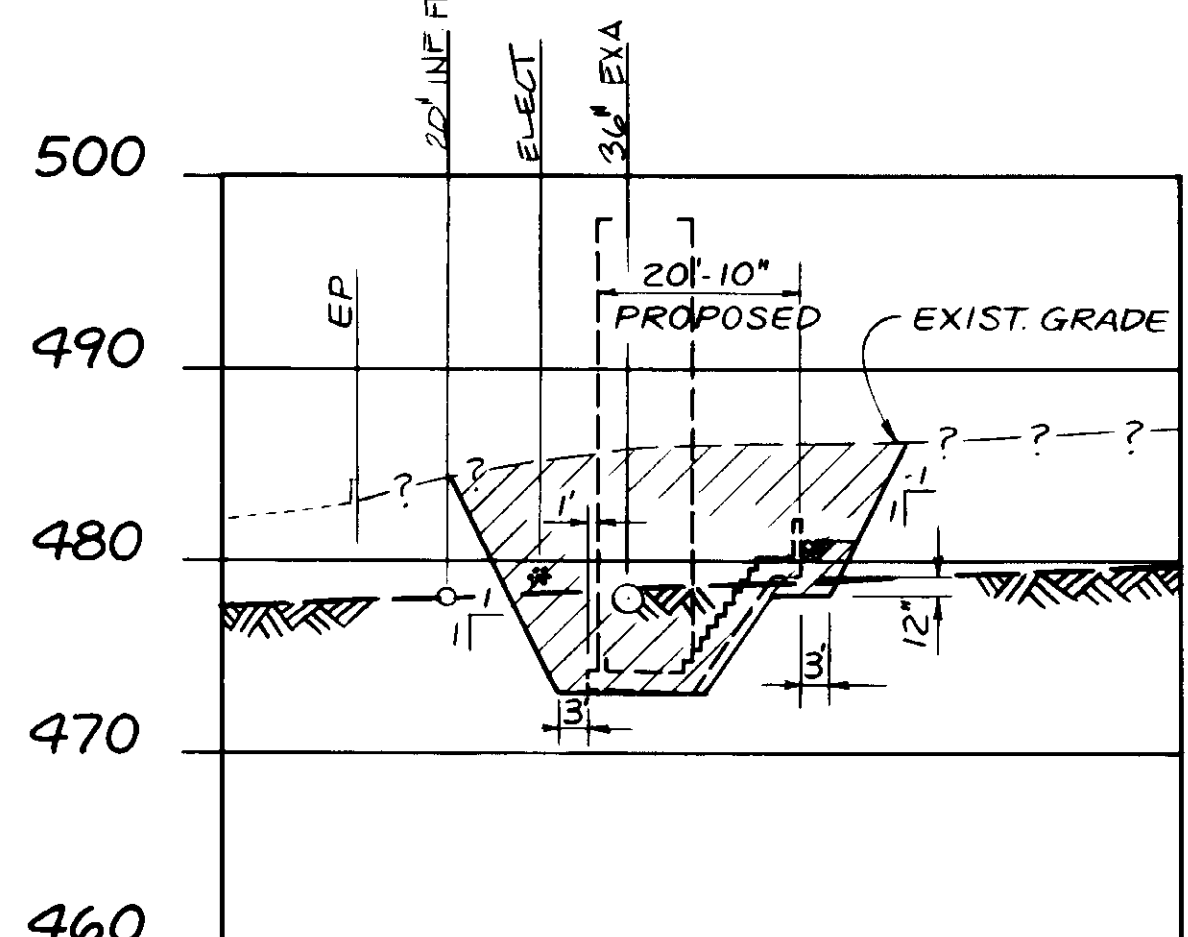
SECTION III



SECTION B



SECTION D



SECTION IV

03934

RECORD DRAWINGS  
 PREPARED BY: KALEX ENGINEERS  
 KATSURA CONSULTING ENGINEERS  
 JUNE 1988



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: VER. 1"=10" HOR. 1"=20"	DESIGNED Y.K.	SUBMITTED KATSURA CONSULTING ENGINEERS	14038	8-7-87
DRAWN Y.K.	CHECKED	ALEXANDER ENGINEERS	R.C.S.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PRIMARY AREA EXCAVATION, SECTIONS

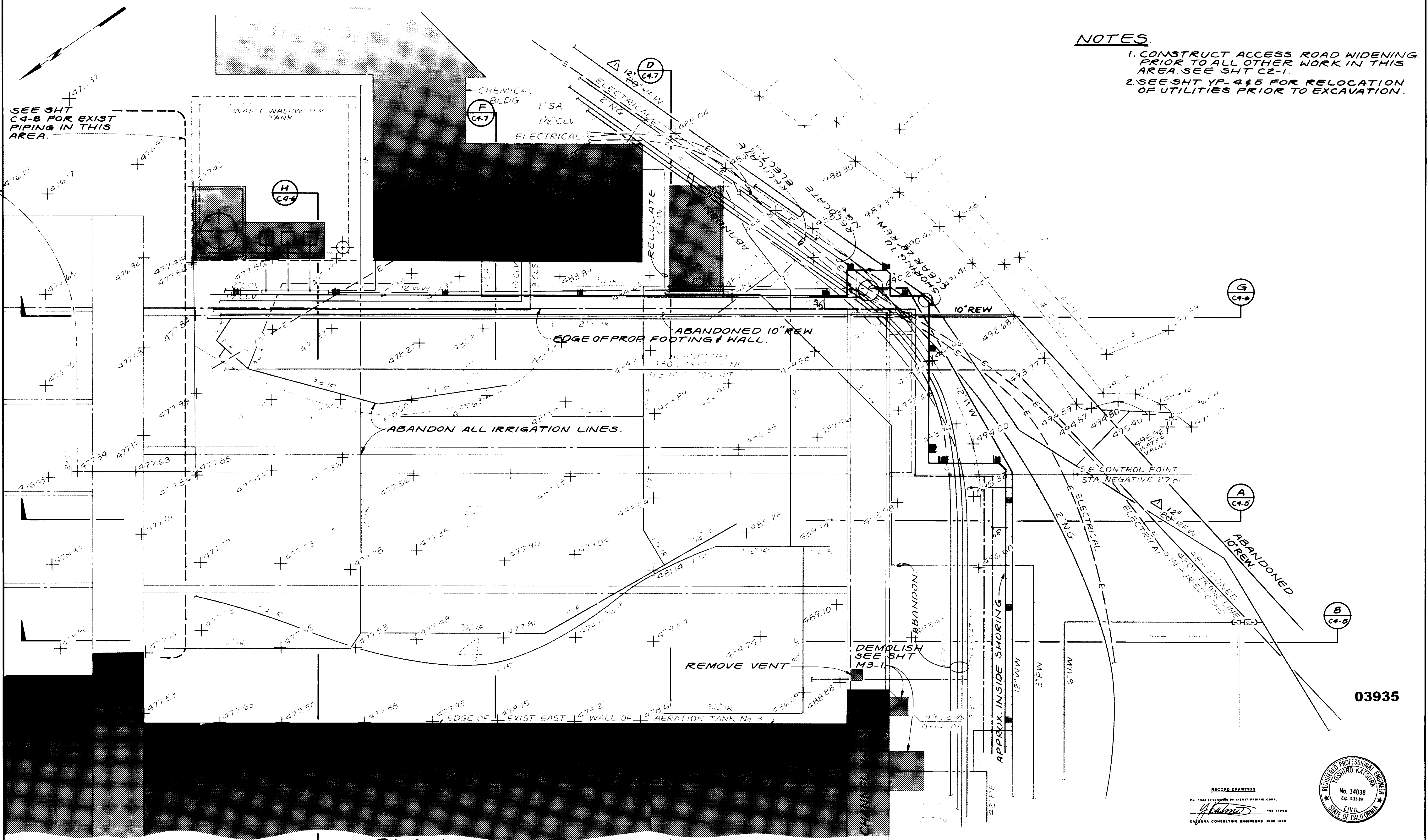
SHEET  
C4-2

BL 0.8



**NOTES.**

1. CONSTRUCT ACCESS ROAD WIDENING PRIOR TO ALL OTHER WORK IN THIS AREA. SEE SHT C2-1.
2. SEE SHT YP-4&5 FOR RELOCATION OF UTILITIES PRIOR TO EXCAVATION.



SEE SHT C4-8 FOR EXIST PIPING IN THIS AREA.

**PLAN.**

REV	DATE	BY	DESCRIPTION

SCALE: 1"=10'-0"

DESIGNED: Y.K. / JK/DN  
 DRAWN: Y.K.  
 CHECKED: Y.K.

SUBMITTED: *Yoshitiro Katsumi* 14038 8-7-87  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE

513  
 ALEXANDER ENGINEERS R.C.S.E. NO. DATE

**KALEX ENGINEERS**

Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

AERATION AREA EXCAVATION PLAN - I

SHEET C4-3

RECORD DRAWINGS

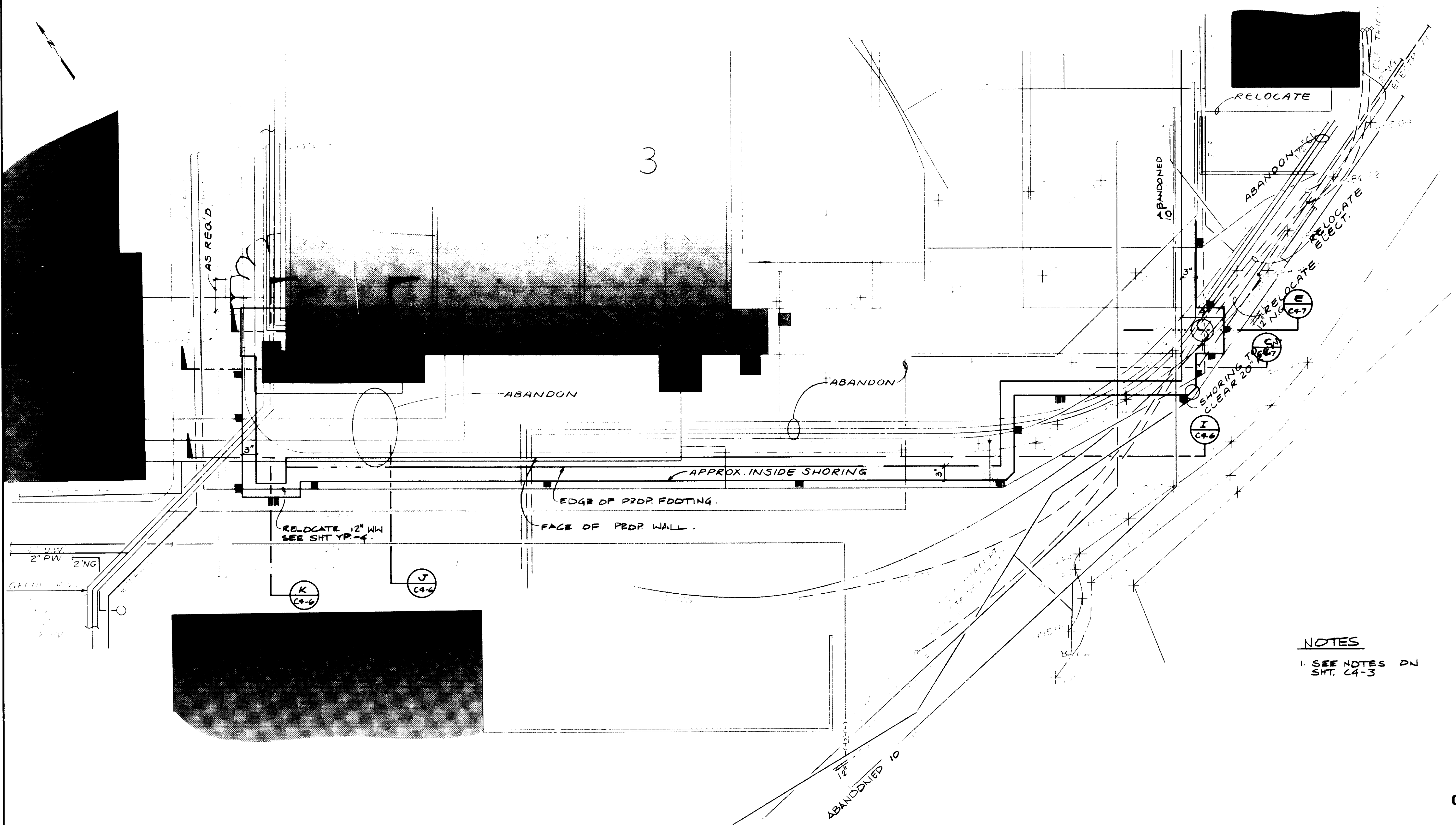
For Plans Prepared by KALEX ENGINEERS

*Yoshitiro Katsumi*

REGISTERED PROFESSIONAL ENGINEER  
 YOSHITIRO KATSUMI  
 No. 14038  
 Exp. 3-31-89  
 CIVIL  
 STATE OF CALIFORNIA

KATSURA CONSULTING ENGINEERS JUNE 1988

03935



**NOTES**  
 1. SEE NOTES ON SHT. C4-3

PLAN.

03936

RECORD DRAWINGS  
 PREPARED BY: KATSUMI KATSURA  
 KATSUMI KATSURA  
 CIVIL ENGINEER  
 STATE OF CALIFORNIA



REV	DATE	BY	DESCRIPTION

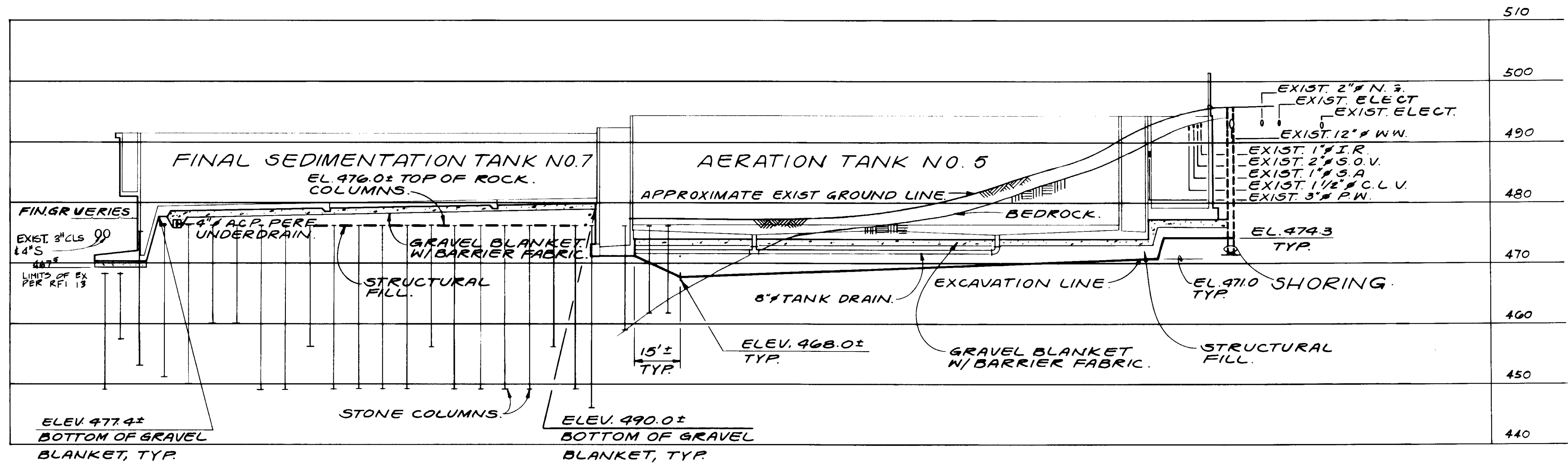
SCALE: 1" = 10'	DESIGNED Y.K. JK/DN	SUBMITTED <i>[Signature]</i> KATSUMI KATSURA CONSULTING ENGINEERS	14038 R.C.E. NO.	8-7-87 DATE
	DRAWN Y.K.		513 R.C.S.E. NO.	
	CHECKED	ALEXANDER ENGINEERS		

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California      Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 AERATION AREA EXCAVATION, PLAN - II

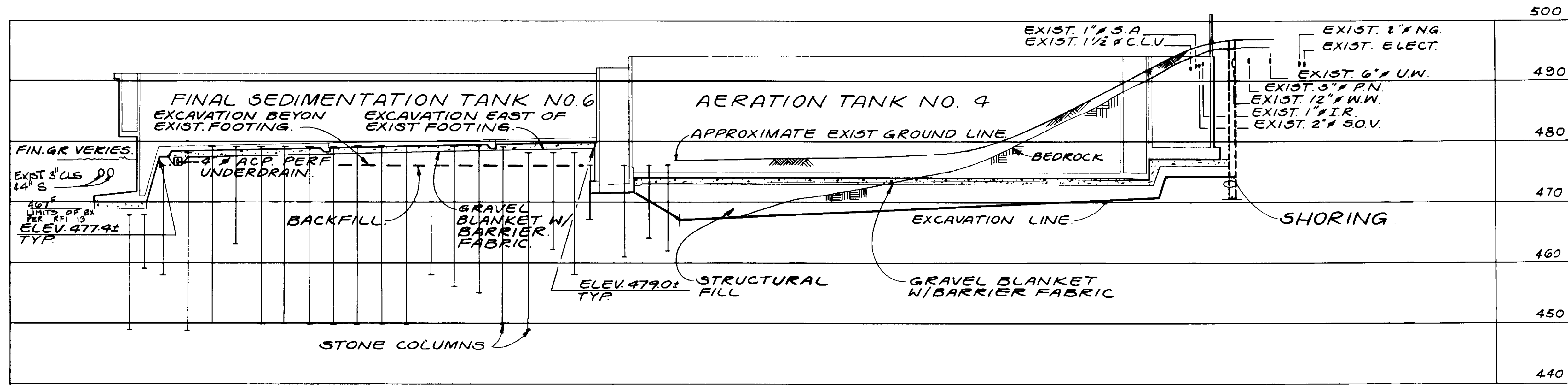
SHEET  
C4-4





- NOTE.**
1. GRAVEL BLANKET DEPTH SHALL BE 12" MIN. UNDER AERATION TANKS AND SELECTOR CHANNEL.
  2. GRAVEL BLANKET DEPTH SHALL BE 6" MIN. UNDER WALL FOOTINGS AND 12" MIN UNDER SLABS.

SECTION A



SECTION B

03937

RECORD DRAWING  
 For Field Information by Survey Party Only  
 KATSUNA CONSULTING ENGINEERS 1988 10000



REV	DATE	BY	DESCRIPTION

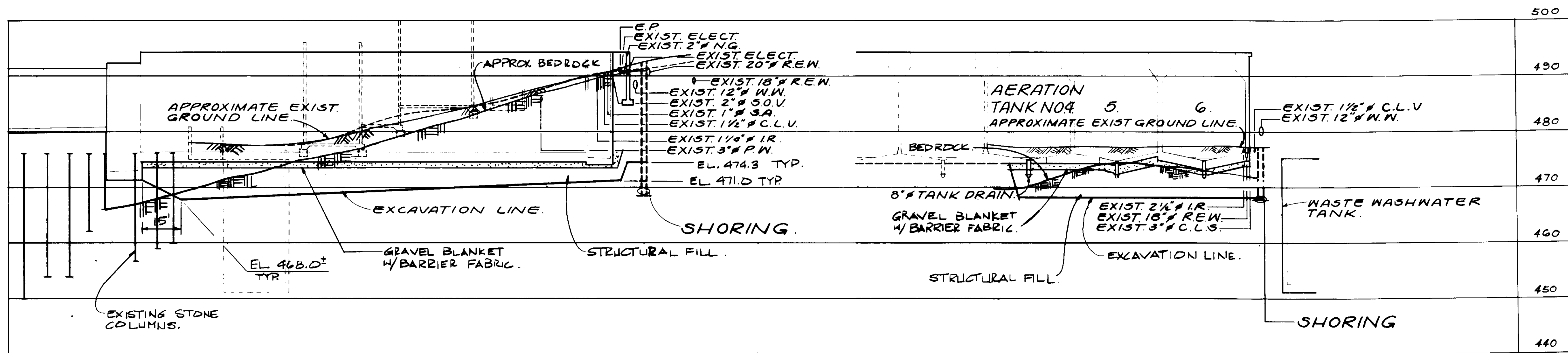
SCALE:  
 DESIGNED Y.K.  
 DRAWN D.N.  
 CHECKED Y.K.  
 VER. 1/2"=10'  
 HOR. 1/2"=20'

SUBMITTED: *[Signature]* 8-7-87  
 KATSUNA CONSULTING ENGINEERS R.C.E. NO. 44038 DATE  
 ALEXANDER ENGINEERS R.C.E. NO. 513 DATE

**KALEX ENGINEERS**  
 Katsuna Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

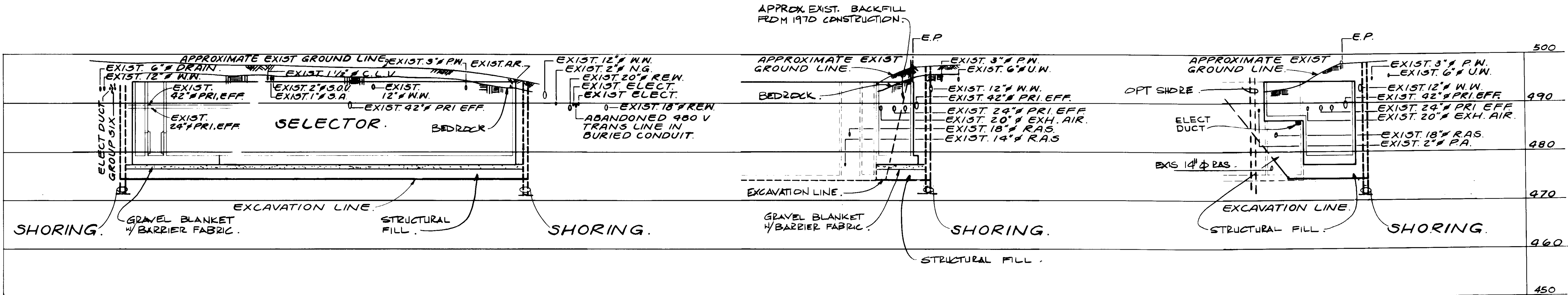
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 AERATION AREA EXCAVATION, SECTIONS - I

SHEET  
**04-5**



SECTION G

SECTION H



SECTION I

SECTION J

SECTION K

RECORD DRAWINGS  
 PREPARED BY KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS JUNE 1988



03938

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

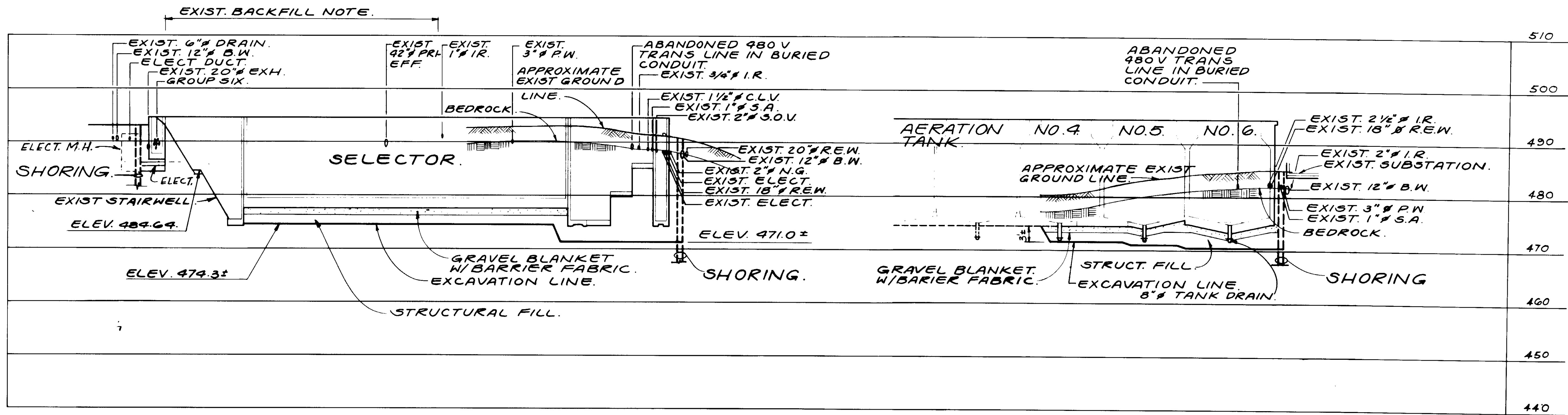
SCALE: VER. 1"=10' HOR. 1"=20'	DESIGNED Y.K. DN.	DRAWN Y.K.	CHECKED	SUBMITTED KATSURA CONSULTING ENGINEERS ALEXANDER ENGINEERS	14038 R.C.E. NO.	8-7-87 DATE
--------------------------------------	-------------------------	---------------	---------	--	---------------------	----------------

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT  
 TAPIA WATER RECLAMATION FACILITY EXPANSION III**

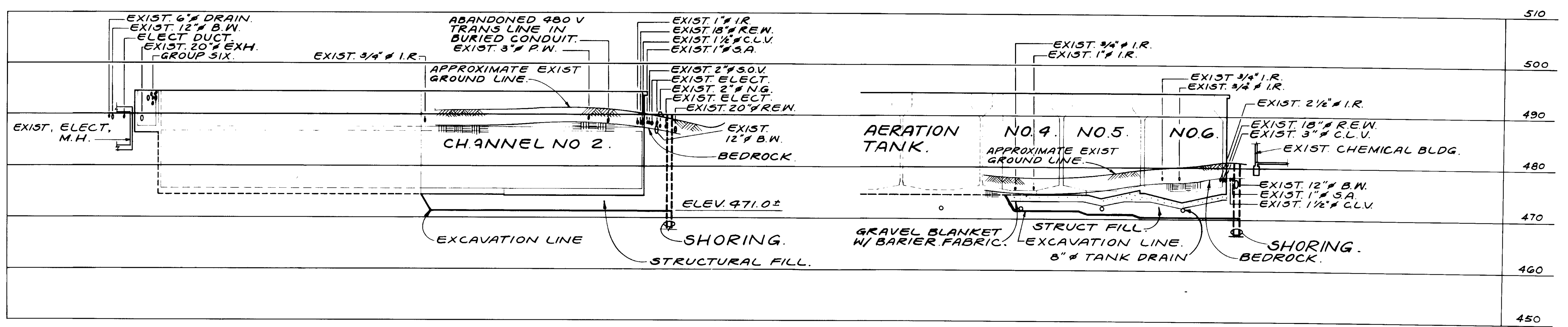
AERATION AREA EXCAVATION, SECTIONS - II

SHEET  
**C4-6**



SECTION C

SECTION D



SECTION E

SECTION F

03939

RECORD DRAWING  
 FOR THIS DRAWING BY KIEWIT PACIFIC CORP.  
*[Signature]*  
 KATSURA CONSULTING ENGINEERS JUNE 1988



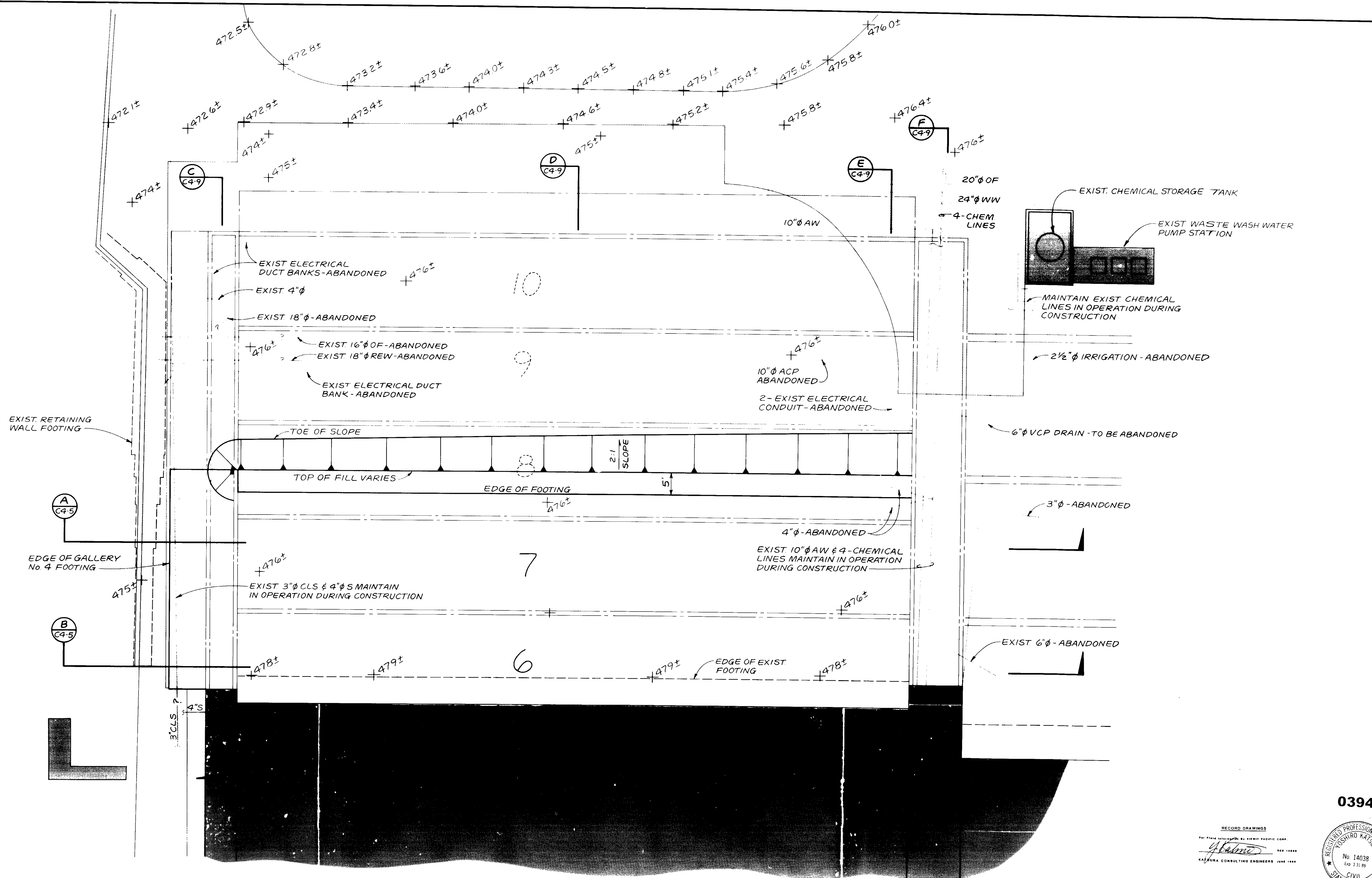
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: VER. 1"=10' HOR. 1"=20'	DESIGNED Y.K.	CHECKED D.N.	DRAWN Y.K.
SUBMITTED <i>[Signature]</i> KATSURA CONSULTING ENGINEERS	NO. 14038	DATE 8-7-87	R.C.E. NO.
ALEXANDER ENGINEERS	513	DATE	R.C.E. NO.

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 AERATION AREA EXCAVATION, SECTIONS - III

SHEET  
**C4-7**



03940

RECORD DRAWINGS  
 PREPARED BY KATSUMI PACIFIC CORP.  
 KATSUMI PACIFIC CORP.  
 KATSUMI CONSULTING ENGINEERS, JUNE 1988



REV	DATE	BY	DESCRIPTION

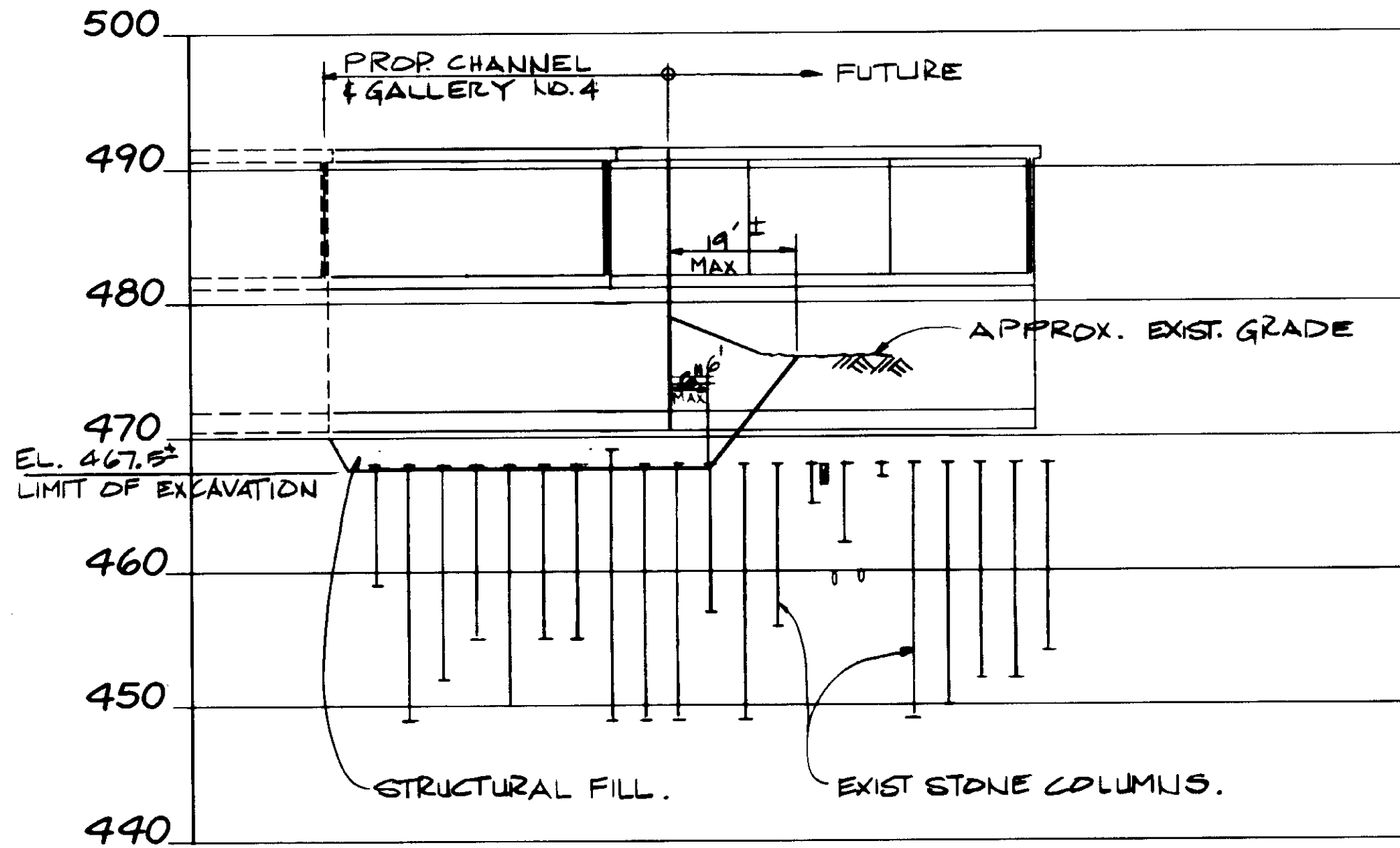
SCALE:	DESIGNED YK	SUBMITTED	14038	8-7-87
	DRAWN JK	KATSUMI CONSULTING ENGINEERS	R.C.E. NO.	DATE
	CHECKED YK	ALEXANDER ENGINEERS	513	
			R.C.S.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

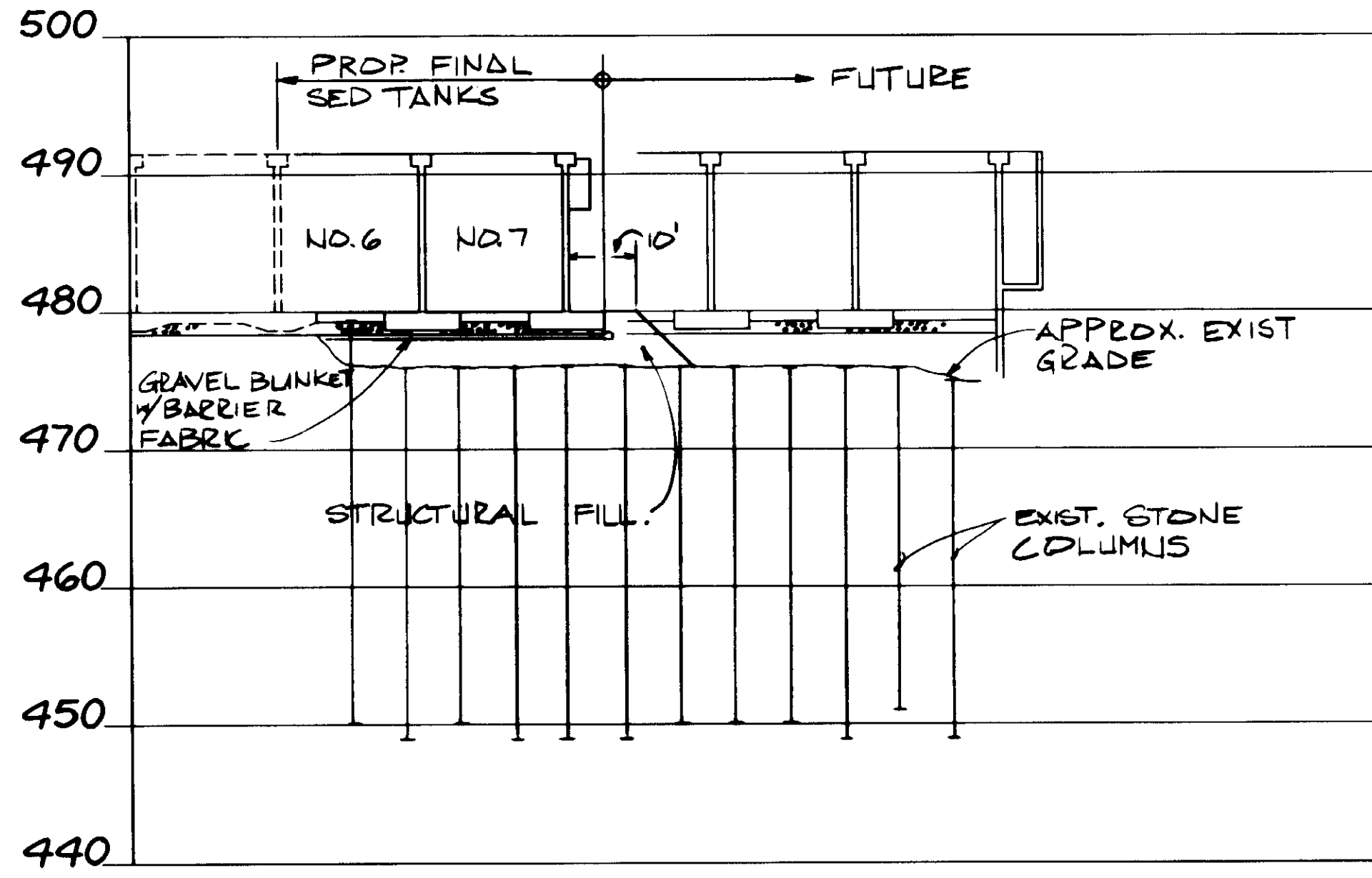
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 FINAL AREA EXCAVATION - PLAN

SHEET  
 C4-8

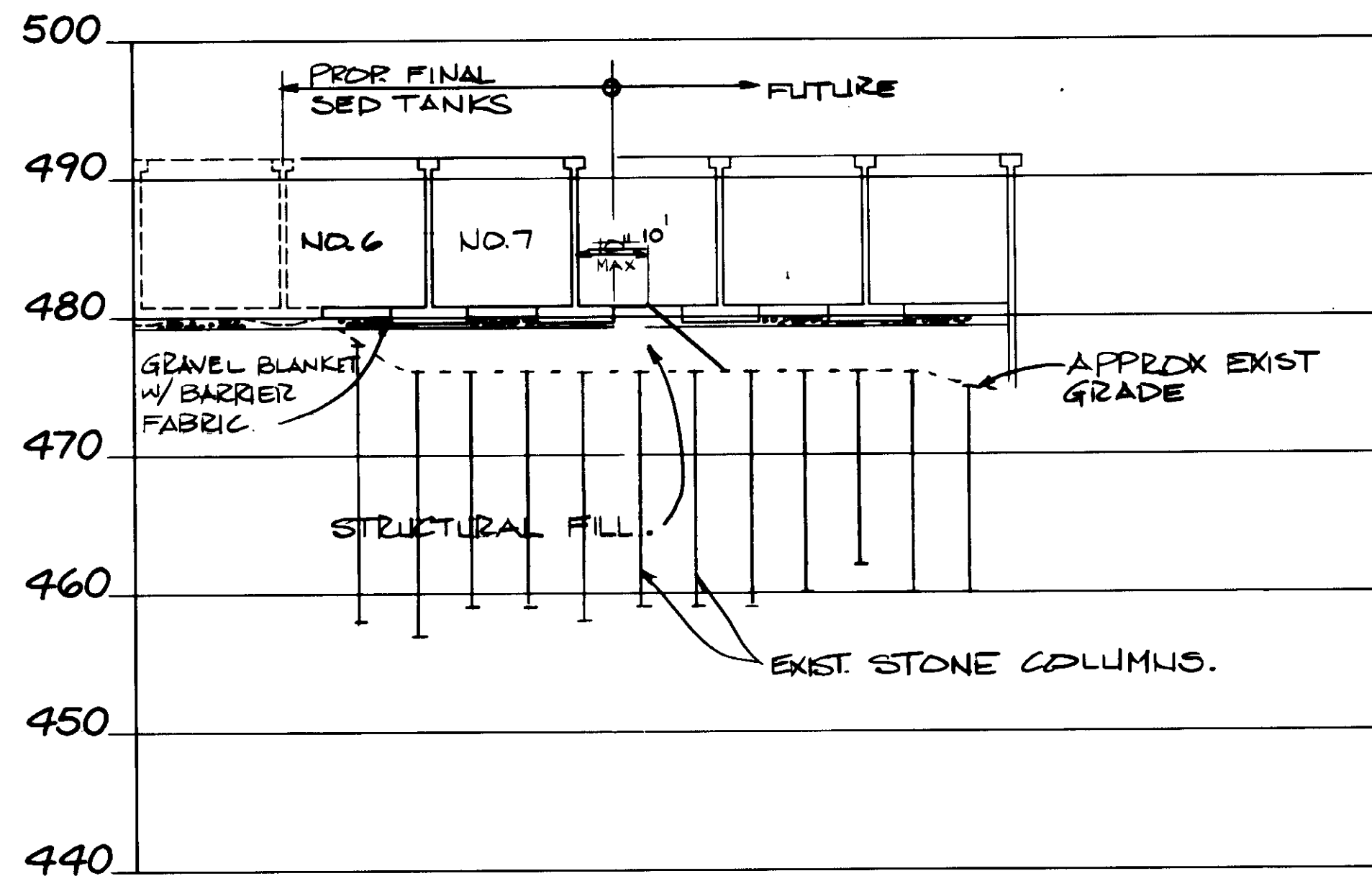




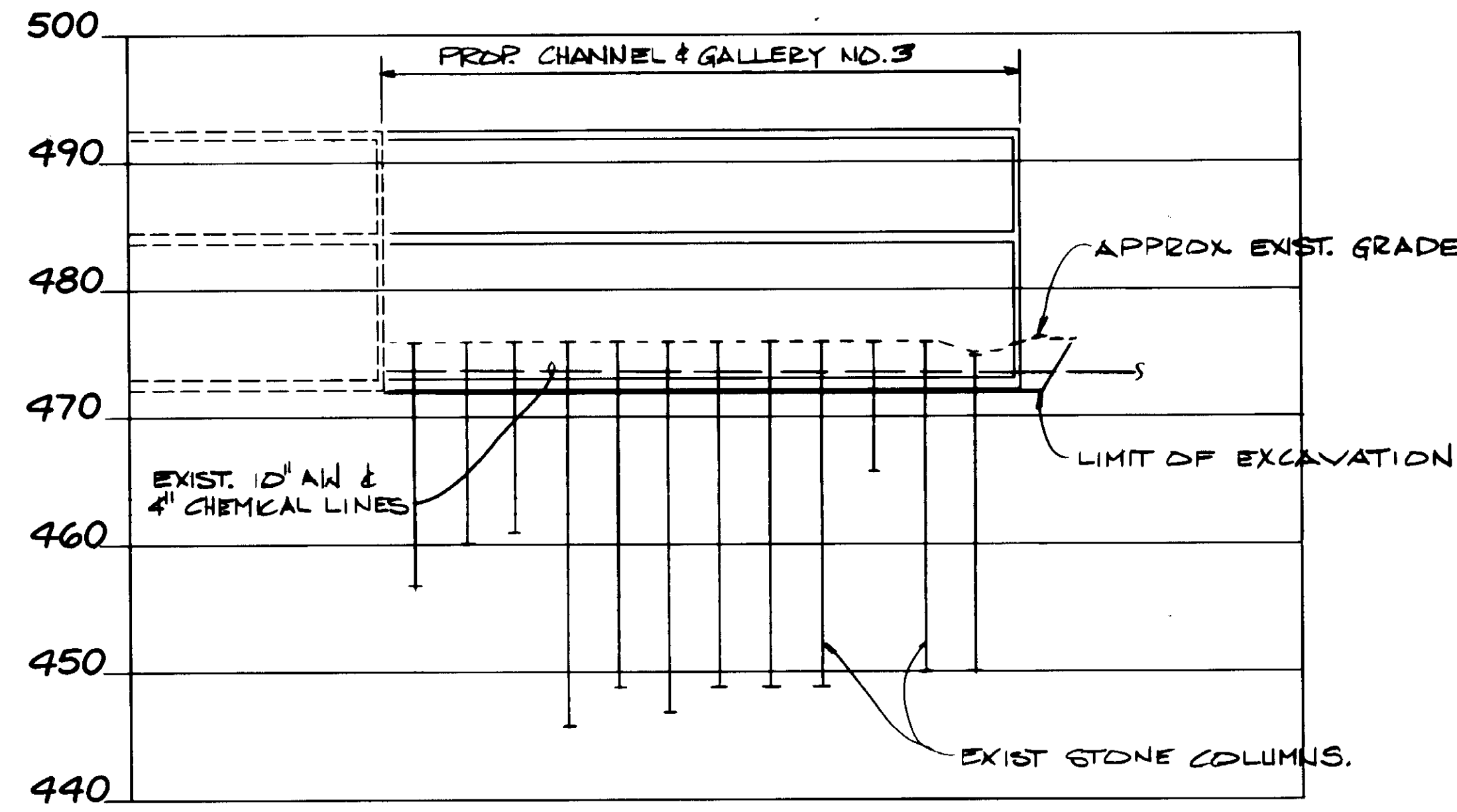
SECTION C



SECTION D



SECTION E



SECTION F

03941

RECORD DRAWINGS  
 PREPARED BY KATSUMA CONSULTING ENGINEERS  
 KATSUMA CONSULTING ENGINEERS JUNE 1988



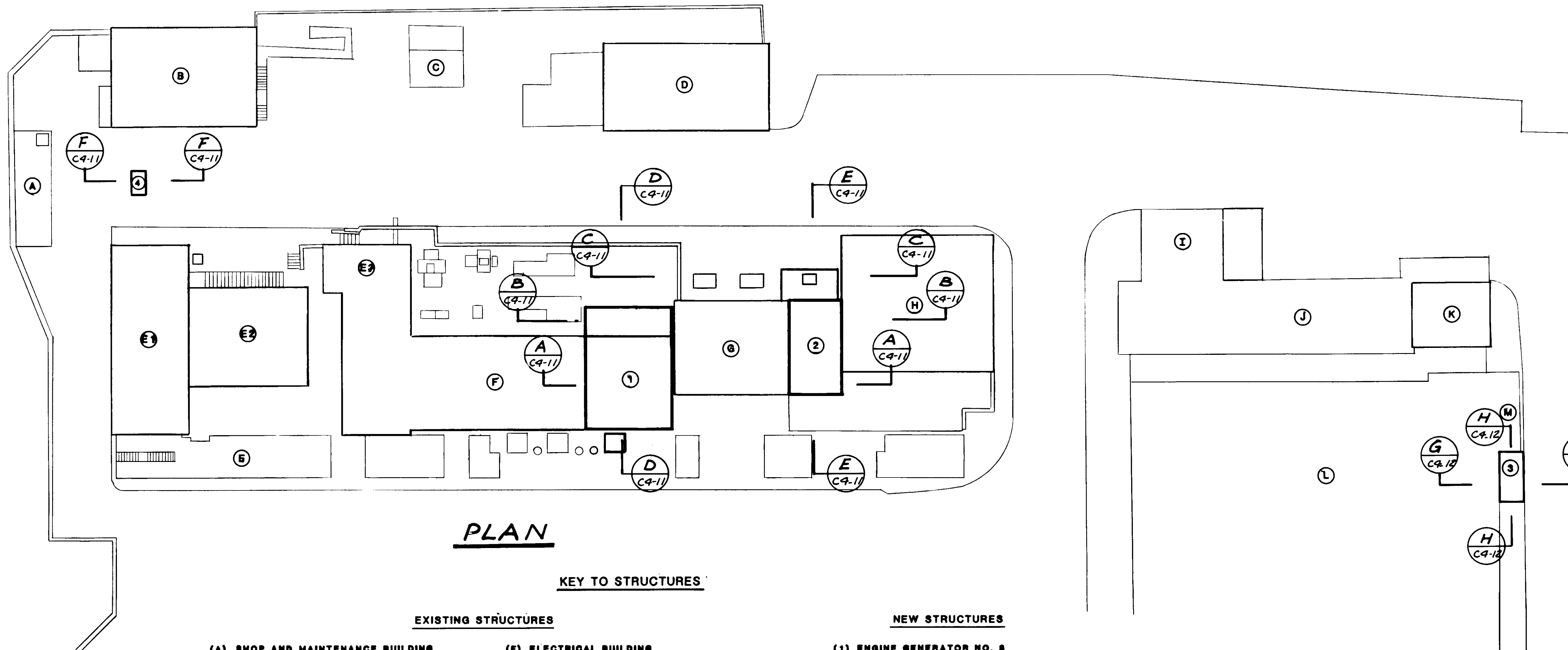
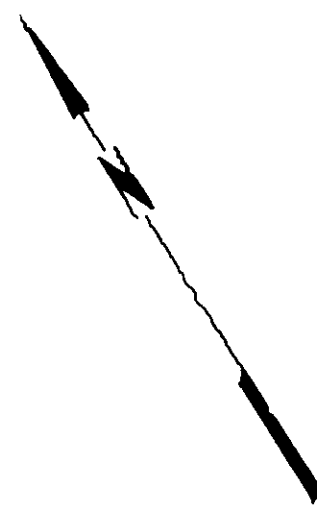
REV	DATE	BY	DESCRIPTION

SCALE:	DESIGNED	SUBMITTED	14038	8-7-87
VER. 1"=10'	S.K./U.K.	KATSUMA CONSULTING ENGINEERS	R.C.E. NO.	DATE
HOR. 1"=20'	DRAWN	ALEXANDER ENGINEERS	513	
	CHECKED		R.C.S.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 FINAL AREA EXCAVATION - SECTIONS

SHEET  
 C4-9



**PLAN**

**KEY TO STRUCTURES**

- | EXISTING STRUCTURES               |   | NEW STRUCTURES                        |
|-----------------------------------|---|---------------------------------------|
| (A) SHOP AND MAINTENANCE BUILDING | (F) ELECTRICAL BUILDING                 | (1) ENGINE GENERATOR NO. 8            |
| (B) SOLIDS DEWATERING FACILITY    | (G) PROCESS AIR COMPRESSOR NOS. 2A & 2B | (2) PROCESS AIR COMPRESSOR NO. 3      |
| (C) INFLUENT PUMP STATION         | (H) STORAGE BUILDING II                 | (3) RAS PUMP NO. 4                    |
| (D) STORAGE BUILDING I            | (I) SLUDGE PUMPING STATION              | (4) PLANT RETURN FLOW DIVERSION VAULT |
| (E) HEADWORKS                     | (J) SLUDGE WET WELLS                    | (5) PROCESS AIR VALVE VAULT           |
| 1) SCREENING AND GRIT BUILDING    | (K) SLUDGE SCREENING FACILITY           |                                       |
| 2) GRIT PUMP CHAMBER              | (L) AEROBIC DIGESTERS                   |                                       |
| 3) INFLUENT PUMP BUILDING         | (M) RAS PUMP NOS. 1, 2 & 3              |                                       |

03942

RECORD DRAWINGS  
 For Plans Issued Pursuant to Permit No. 14038  
 KATSUMA CONSULTING ENGINEERS JUNE 1988



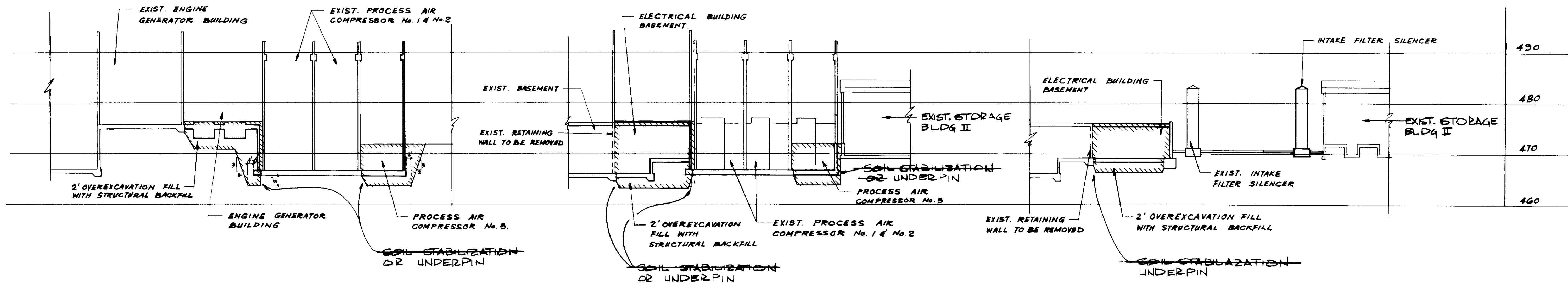
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: 1" = 20'	DESIGNED: y.k./koh	SUBMITTED: 14038 8-7-87
DRAWN: KOH	CHECKED: YK	KATSUMA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 ELECTRICAL & PROCESS AIR BUILDING AREA  
 EXCAVATION - PLAN

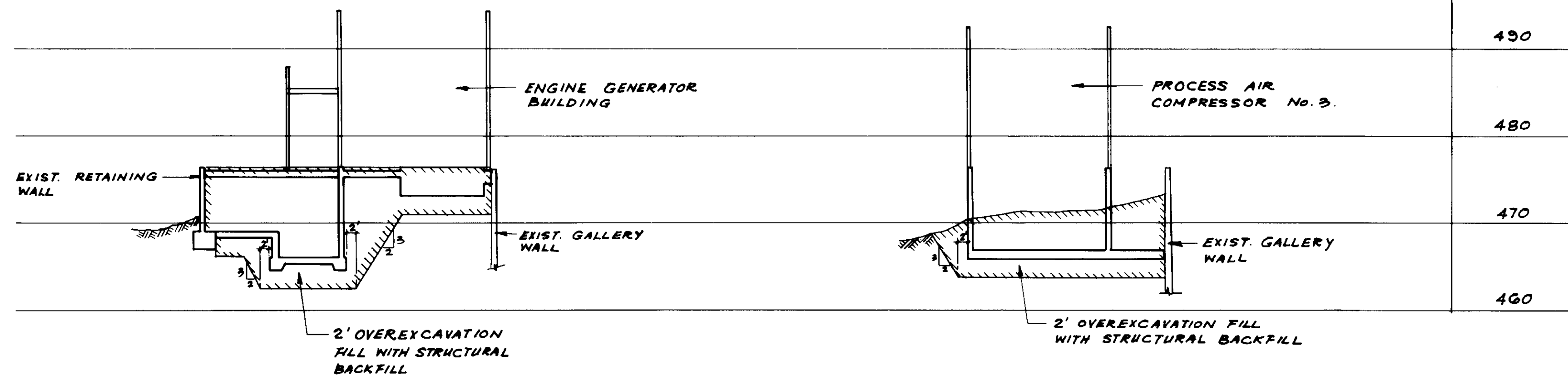
SHEET  
**C4-10**



**SECTION A**  
 VERT. 1" = 10'-0"  
 HORIZ. 1" = 20'-0"

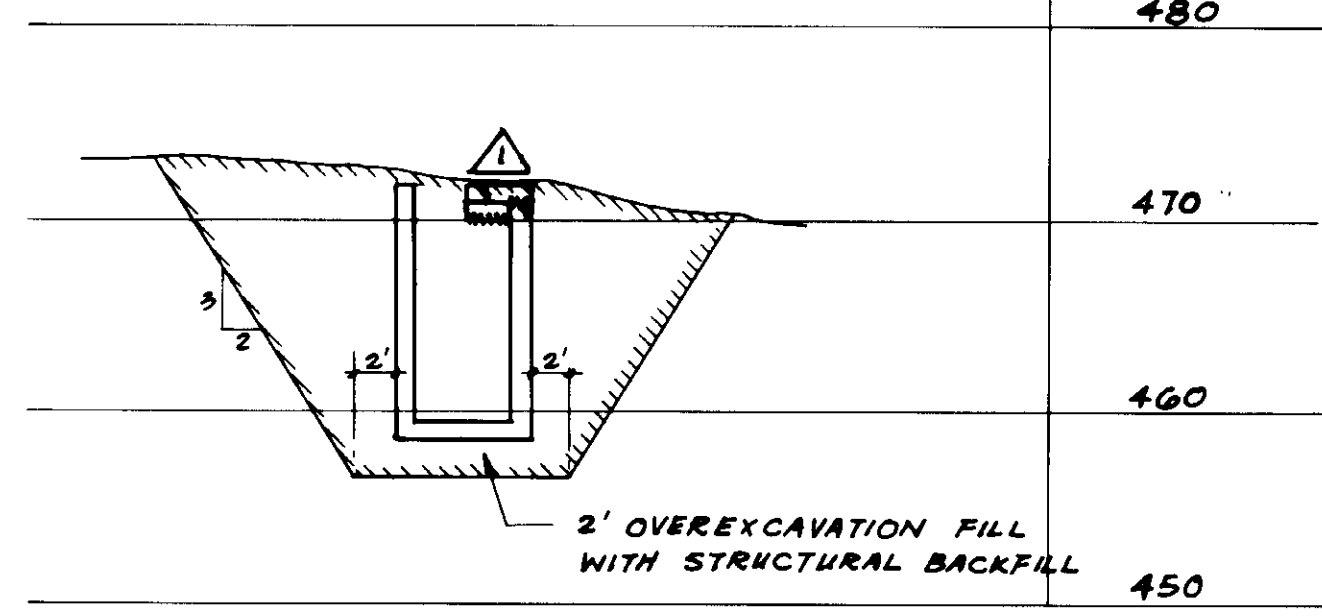
**SECTION B**  
 VERT. 1" = 10'-0"  
 HORIZ. 1" = 20'-0"

**SECTION C**  
 VERT. 1" = 10'-0"  
 HORIZ. 1" = 20'-0"



**SECTION D**  
 VERT. 1" = 10'-0"  
 HORIZ. 1" = 20'-0"

**SECTION E**  
 VERT. 1" = 10'-0"  
 HORIZ. 1" = 20'-0"



**SECTION F**  
 VERT. 1" = 10'-0"  
 HORIZ. 1" = 10'-0"

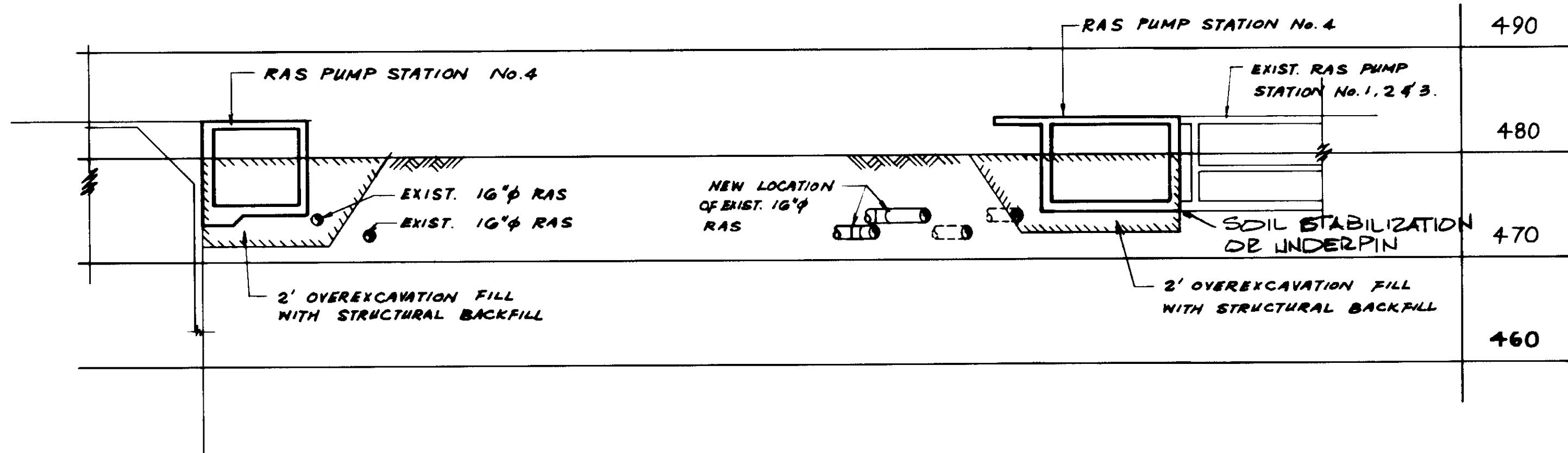
NOTE:  
 FOR FLOOD PROTECTION  
 SEE SHT. M12-3

RECORD DRAWINGS  
 KATSURA CONSULTING ENGINEERS

03943

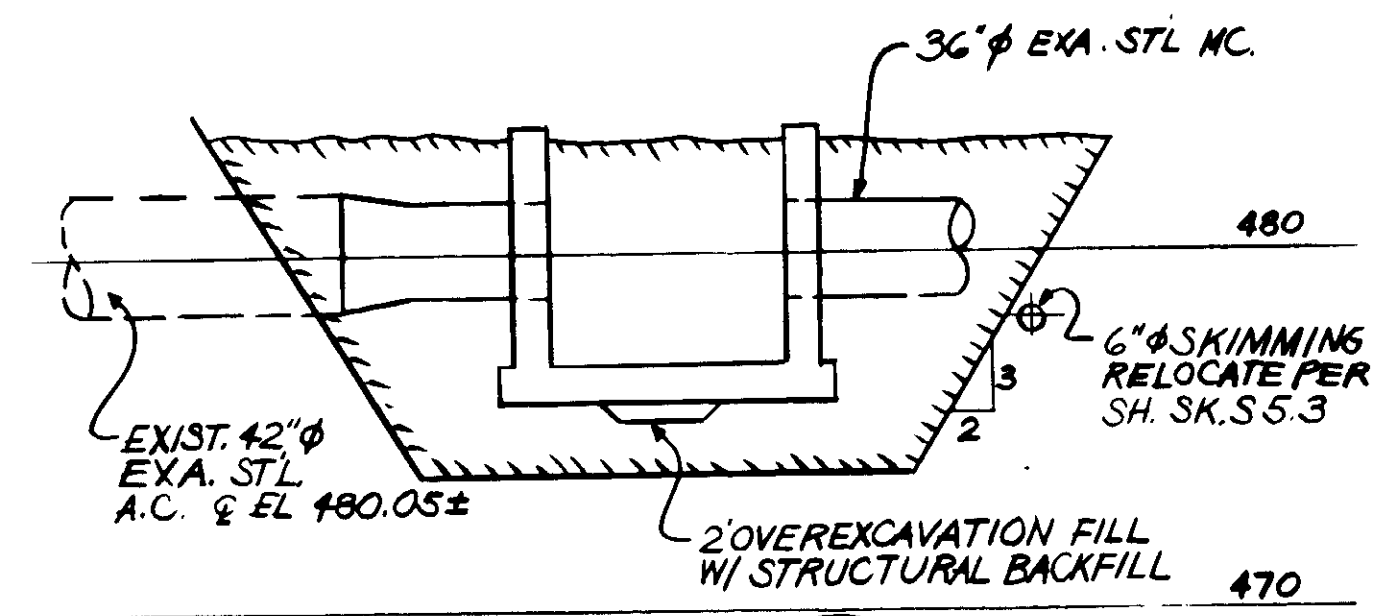


DESIGNED S. KOH	SCALE: AS NOTED	DATE 8-7-87	<b>KALEX ENGINEERS</b> Katsura Consulting Engineers / Alexander Engineers Ventura, California / Glendora, California	<b>LAS VIRGENES MUNICIPAL WATER DISTRICT</b> <b>TAPIA WATER RECLAMATION FACILITY EXPANSION III</b> ELECTRICAL & PROCESS AIR BUILDING AREA EXCAVATION - SECTIONS	SHEET <b>C4-11</b>
DRAWN YK	SUBMITTED KATSURA CONSULTING ENGINEERS ALEXANDER ENGINEERS	R.C.E. NO. 14038 513			
REV. DATE BY DESCRIPTION 5-3-87 A.B. REV. BY K.P.C.	REV. DATE BY DESCRIPTION	CHECKED ALEXANDER ENGINEERS	DATE	R.C.E. NO.	DATE

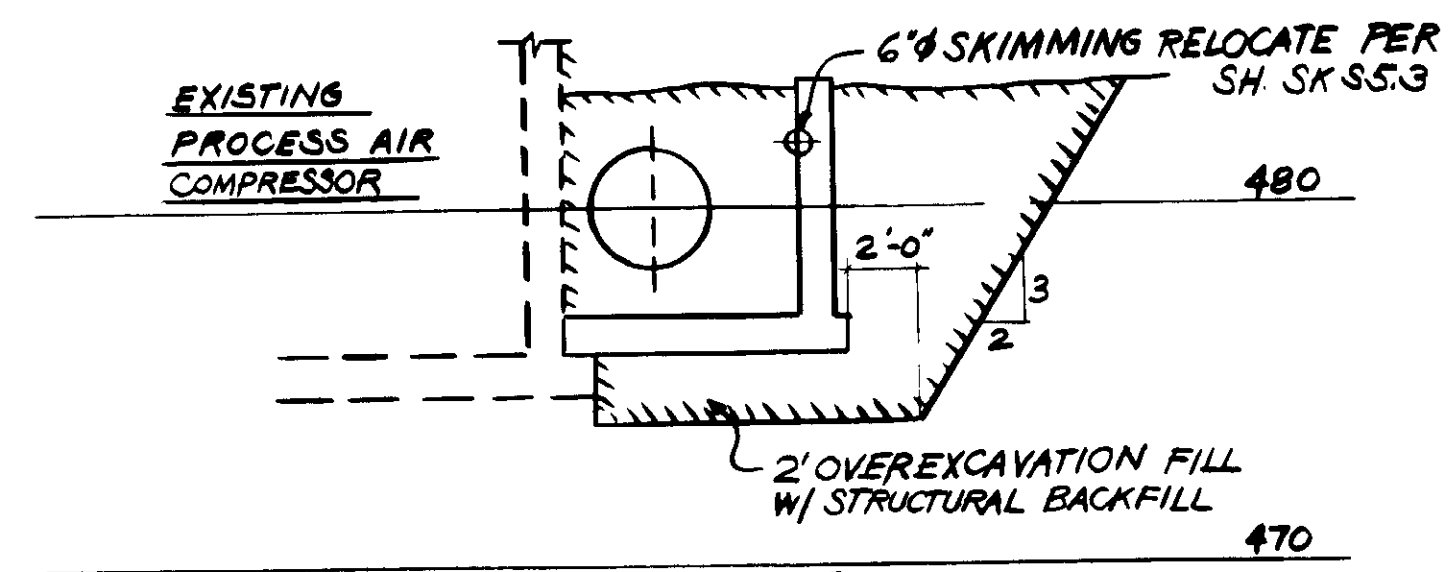


**SECTION G**  
 VERT. 1" = 10'-0"  
 HORIZ. 1" = 10'-0"

**SECTION H**  
 VERT. 1" = 10'-0"  
 HORIZ. 1" = 10'-0"



**SECTION A**  
 S5-3



**SECTION B**  
 S5-3

**PROCESS AIR VALVE VAULT EXCAVATION** SKETCH SKC4-12

03944

RECORD DRAWINGS  
 For Plans Issued by WEST PACIFIC CORP.  
 KATSUNA CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION

SCALE:	AS NOTED
DESIGNED:	Y. K. / KOH
DRAWN:	KOH
CHECKED:	YK

SUBMITTED:	8-7-87
KATSUNA CONSULTING ENGINEERS	R.C.E. NO. 4038
ALEXANDER ENGINEERS	R.C.E. NO. 513

**KALEX ENGINEERS**  
 Katsuna Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 RETURN ACTIVATED SLUDGE PUMP STATION  
 EXCAVATION - SECTIONS

SHEET  
 C4-12



# GENERAL NOTES

## REINFORCING STEEL (FOR CONCRETE & MASONRY)

- ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE 'BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE' (ACI-318 LATEST APPROVED EDITION), AND THE 'MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION' (LATEST APPROVED EDITION) BY THE C.R.S.I. AND THE W.C.R.S.I., AS MODIFIED BY THE PROJECT DRAWINGS AND SPECIFICATIONS.
- REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615 GRADE 60.
- WELDING OF REINFORCING STEEL SHALL BE DONE BY AN OPERATOR CERTIFIED BY THE BUILDING DEPARTMENT FOR REINFORCING STEEL WELDING. WELDING OF REINFORCING STEEL SHALL BE IN STRICT CONFORMANCE WITH THE REQUIREMENTS OF UBC STANDARD 26-8, 1982 EDITION AND WITH AMERICAN WELD SOCIETY AWS D1.4-79. SEE SPECIFICATIONS.
- SHOP WELDING OF REINFORCING STEEL SHALL BE DONE IN THE SHOP OF A LICENSED FABRICATOR APPROVED BY THE BUILDING DEPARTMENT.
- ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.
- MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6 INCHES OR ONE FULL MESH, PLUS 2 INCHES, WHICHEVER IS GREATER.
- REINFORCING SPLICES SHALL BE MADE ONLY WHERE INDICATED ON THE DRAWINGS.
- DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY.
- ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
- CONTRACTOR SHALL PROVIDE FOR AN ALLOWANCE OF 1% OF REINFORCING BARS TO BE FURNISHED, FABRICATED AND PLACED DURING PROGRESS OF WORK AS MAY BE DIRECTED BY THE STRUCTURAL ENGINEER, IN ADDITION TO ALL STEEL INDICATED ON THE DRAWINGS. THE UNUSED PORTION SHALL BE CREDITED TO THE OWNER AT THE COMPLETION OF CONCRETE WORK.
- REMOVE EXISTING CONCRETE ENCASUREMENT AROUND EXISTING REINFORCEMENT WHICH IS TO BE EMBEDDED IN FRESH CONCRETE OR SPLICED WITH NEW REINFORCEMENT. CLEAN EXISTING REINFORCEMENT TO BARE METAL BY SANDBLASTING AND STRAIGHTEN AS REQUIRED BY COLD BENDING. AFTER CLEANING AND STRAIGHTENING, VISUALLY INSPECT FOR CRACKS AND OTHER DAMAGES. ANY CRACKED OR DAMAGED REINFORCING SHALL BE REPLACED.

## FOUNDATION

- FOUNDATION DESIGN BASED ON SOIL REPORT BY STAAL, GARDNER & DUNNE, INC., DATED AUGUST 1986. COPIES ARE AVAILABLE FOR REVIEW AT THE DISTRICT REPRESENTATIVE'S OFFICE.
- FOOTINGS ARE DESIGNED BASED ON ALLOWABLE SOIL PRESSURE OF 2000 PSF.
- CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE.
- CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANKS.
- EXCAVATION FOR FOOTINGS SHALL BE APPROVED BY THE FOUNDATION ENGINEER PRIOR TO PLACING THE CONCRETE AND REINFORCING. CONTRACTOR TO NOTIFY FOUNDATION ENGINEER WHEN INSPECTION OF EXCAVATION IS READY. FOUNDATION ENGINEER TO SUBMIT LETTER OF COMPLIANCE TO THE DISTRICT REPRESENTATIVE.
- ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL BUILDING AND PIT WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHING FLOOR ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS AND INSTALLATION OF SUCH BRACING.
- FOOTINGS SHALL BE PLACED AND ESTIMATED ACCORDING TO DEPTHS SHOWN ON DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY THE FOUNDATION ENGINEER, FOOTING ELEVATIONS WILL BE ALTERED BY CHANGE ORDER.
- FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS, TO THE APPROVAL OF THE FOUNDATION ENGINEER. FLOODING WILL NOT BE PERMITTED.
- ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
- NEW FOOTING MUST EXTEND INTO UNDISTURBED SOILS, PROPERLY COMPACTED ENGINEERED BACKFILL OR PROPERLY IMPROVED EXISTING SOILS.

## STRUCTURAL STEEL, STEEL DECKING

- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERRECTED IN ACCORDANCE WITH THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (LATEST EDITION AND SUPPLEMENTS).
- ALL SHOP FABRICATION SHALL BE DONE IN THE SHOP OF A LICENSED FABRICATOR APPROVED BY THE BUILDING DEPARTMENT.
- ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION A-36 UNLESS OTHERWISE NOTED.
- PIPE COLUMNS SHALL CONFORM TO ASTM DESIGNATION A-53 GRADE 'B'. ALL STEEL TUBES SHALL CONFORM TO ASTM A-500 GRADE 'B'.
- ALL BOLTS SHALL CONFORM TO ASTM A325-F HIGH STRENGTH BOLTS EXCEPT AS NOTED. INSTALLATION OF HIGH STRENGTH BOLTS SHALL BE IN ACCORDANCE WITH "STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" ADOPTED BY AISC USING THE TURN OF THE NUT OR DIRECT TENSION INDICATOR PROCEDURE.
- BOLT HOLES IN STEEL SHALL BE 1/16 INCH LARGER DIAMETER THAN NOMINAL SIZE OF BOLT USED, EXCEPT AS NOTED.
- ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE OR MASONRY SHALL BE LEFT UNPAINTED.
- ALL WELDS SHALL BE IN CONFORMITY WITH THE CODE FOR WELDING IN BUILDING CONSTRUCTION (AWS D1.1-REV. 2-77) OF THE AMERICAN WELDING SOCIETY. SEE SPECIFICATIONS.
- WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED.
- WELDING TESTS AND INSPECTIONS - SEE SPECIFICATIONS.
- THE STEEL DECKING SHALL BE OF TYPE AND GAUGE AS CALLED FOR ON DRAWINGS. DECKING AND ALL ACCESSORIES SHALL BE FORMED FROM STEEL SHEETS HAVING A MINIMUM YIELD STRENGTH OF 33,000 PSI AND CONFORMING TO ASTM A-446, GRADE A. THE STEEL SHALL HAVE A METAL PROTECTIVE COATING OF ZINC CONFORMING TO LIGHT COMMERCIAL COATING. DECK UNITS SHALL SPAN OVER THREE OR MORE SUPPORTS.
- MINIMUM BEARING OF DECKING ON SUPPORTS SHALL BE 2 INCHES. SHEETS SHALL BE ATTACHED TO ALL SUPPORTING STEEL MEMBERS BY WELDING AS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. UPON COMPLETION OF ERECTION, ALL WELDS IN EXPOSED DECK AREAS SHALL HAVE TOUCH-UP, DE-SLAG, CLEAN AND PRIME WITH A ZINC RICH PRIMER. THE SIDE LAP OF EACH PANEL SHALL BE FASTENED BY 1 INCH LONG FILLET WELDS OR APPROVED FUSION WELDS AT 3 FT. ON CENTER MAXIMUM, EXCEPT AS NOTED.
- SEE DRAWINGS FOR DETAIL OF DECK OPENINGS. SEE MECHANICAL, ELECTRICAL DRAWINGS, ETC., FOR SIZE AND LOCATION OF REQUIRED OPENINGS.
- ALL EXPOSED STRUCTURAL STEEL AND MISCELLANEOUS METAL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
- ALL ANCHOR BOLTS SHALL CONFORM TO ASTM A307, UNLESS NOTED OTHERWISE.
- THE STRUCTURAL STEEL FABRICATOR AND STEEL DECKING FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STEEL AND STEEL DECKING, RESPECTIVELY, FOR REVIEW BEFORE FABRICATION.

## SPECIAL INSPECTION

- SPECIAL INSPECTION BY A REGISTERED DEPUTY BUILDING INSPECTOR, APPROVED BY THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT, SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK. SEE PROJECT SPECIFICATIONS FOR SPECIFIC REQUIREMENTS.
  - ALL CONCRETE WORK, INCLUDING REINFORCEMENT IN PLACE PRIOR TO PLACEMENT OF CONCRETE, AS WELL AS CONCRETE PLACEMENT ITSELF.
  - ALL STRUCTURAL STEEL FIELD WELDING.
  - ALL REINFORCING STEEL FIELD WELDING.
  - HIGH STRENGTH BOLTING.
  - STEEL FLOOR AND ROOF DECK WELDING.
  - SHOP WELDING PROCEDURES AND MULTIPLE PASS WELDS.
  - ALL MASONRY WORK.



JOB No. 492b  
STRUCTURAL ENGINEERS  
**JOHN A. MARTIN & ASSOCIATES, INC.**  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483-0490

## CONCRETE

- ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE 'BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE' (ACI 318 LATEST APPROVED EDITION) AS MODIFIED BY ACI 350R-83 'CONCRETE SANITARY ENGINEERING STRUCTURES'.
- REINFORCED CONCRETE DESIGN IS BY THE 'ULTIMATE STRENGTH DESIGN METHOD'.
- CONCRETE MIXES SHALL BE DESIGNED IN ACCORDANCE WITH ACI 301 AND ACI 211 BY A QUALIFIED TESTING LABORATORY AND REVIEWED BY THE STRUCTURAL ENGINEER.
- CONCRETE 28 DAY STRENGTH AND TYPES SHALL BE AS FOLLOWS:
 

STRUCTURAL CONCRETE	4000 PSI HARDBLOCK
LEAN CONCRETE FILL	2000 PSI HARDBLOCK
- PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE I OR TYPE II.
- AGGREGATE FOR HARDBLOCK CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TEST OF ASTM C-33 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH PERMISSION OF THE STRUCTURAL ENGINEER.
- FORMS FOR CONCRETE SHALL BE LAID OUT AND CONSTRUCTED TO PROVIDE THE SPECIFIED CAMBERS SHOWN ON THE DRAWINGS, IN ACCORDANCE WITH ACI STANDARD 347.
- DRY PACK UNDER BASEPLATES, EQUIPMENT BASES, SILL PLATES, ETC., SEE SPECIFICATIONS.
- CONCRETE MIXING OPERATION, ETC., SHALL CONFORM TO ASTM C-94.
- PLACEMENT OF CONCRETE SHALL CONFORM TO ACI STANDARD 304 AND PROJECT SPECIFICATIONS.
- IF COLUMNS AND WALLS ARE PLACED WITH FLOOR, TWO HOURS MUST ELAPSE BETWEEN END OF COLUMN OR WALL POUR AND BEGINNING OF FLOOR POUR.
- CLEAR COVERAGE OF CONCRETE OVER OUTER REINFORCING BARS, STIRRUPS OR TIES SHALL BE AS FOLLOWS, UNLESS NOTED ON DRAWINGS:
 

A. CONCRETE POURED DIRECTLY AGAINST EARTH	3"
B. CONCRETE EXPOSED TO EARTH, WEATHER, OR LIQUIDS:	
NO. 6 AND LARGER	2"
NO. 5, #31 OR #31, AND SMALLER	1 1/2"
C. CONCRETE NOT EXPOSED TO WEATHER, LIQUIDS, OR IN CONTACT WITH EARTH:	
WALLS	1 1/2"
STRUCTURAL SLABS (TOP & BOTTOM)	1"
COLUMNS AND BEAMS:	
PRIMARY REINFORCING, TIES,	
STIRRUPS, SPIRALS	1 1/2"

## INSULATING VERMICULITE CONCRETE

- MIX DESIGN SHALL BE 1 (ONE) PART CEMENT TO 6 (SIX) PARTS AGGREGATE WITH 27 CUBIC FEET (MINIMUM) OF AGGREGATE PER CUBIC YARD OF CONCRETE. THE MIX SHALL HAVE THE FOLLOWING CHARACTERISTICS:
  - WET DENSITY: 60 LBS./CUBIC FEET MAXIMUM
  - DRY DENSITY: 28 LBS./CUBIC FEET MAXIMUM
  - COMPRESSIVE STRENGTH: 140 LBS./SQUARE INCH MINIMUM
- PORTLAND CEMENT SHALL CONFORM WITH ASTM C150, TYPE I, II OR III. USE ONLY ONE TYPE OF CEMENT FOR ALL VERMICULITE CONCRETE.
- VERMICULITE AGGREGATES SHALL CONFORM WITH ASTM C332, GROUP 1, WITH A UNIT WEIGHT BETWEEN 6 LBS. AND 10 LBS. PER CUBIC FOOT.
- CURING COMPOUND SHALL BE APPROVED BY AGGREGATE MANUFACTURER.
- REINFORCING SHALL BE WIRE MESH, 2 INCH HEXAGONS WEIGHING 1.2 POUNDS PER SQUARE YARD WITH STRAIGHT NO. 16 GAUGE GALVANIZED STEEL WIRE WOVEN INTO THE MESH AT 3 INCH CENTERS AND SHALL BE LOCATED APPROXIMATELY 1/2 INCH BELOW TOP OF CONCRETE.

### LEGEND

- EXISTING CONSTRUCTION
- NEW PROPOSED CONSTRUCTION BY B.E.C.
- NEW CMU
- EXISTING CONSTRUCTION TO BE DEMOLISHED

## MASONRY (CONCRETE BLOCK)

- CONCRETE BLOCK SHALL BE HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS CONFORMING TO ASTM C98-75, GRADE N. USE OPEN END UNITS AT VERTICAL REINFORCING AND BOND BEAM UNITS AT HORIZONTAL REINFORCING.
- CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
- REINFORCING BARS - SEE NOTES UNDER 'REINFORCING STEEL' FOR REQUIREMENTS. ASTM 615, GRADE 60, EXCEPT WHERE NOTED.
- MORTAR MIX SHALL CONFORM TO REQUIREMENTS FOR UNIFORM BUILDING CODE, TABLE 24-A, TYPE S, AND PROJECT SPECIFICATIONS. MORTAR SHALL ATTAIN A COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS. ADMIXTURE SHALL BE ONE PINT OF SIKKA RED LABEL PER SACK OF CEMENT.
- GROUT SHALL CONFORM TO REQUIREMENTS OF SECTION 2403 OF U.B.C. FOR COARSE GROUT. USE SUFFICIENT WATER FOR GROUT TO FLOW INTO ALL JOINTS OF THE MASONRY WITHOUT SEGREGATION. ADMIXTURE TO BE 6 POUNDS OF SIKKA GROUT AID PER YARD. GROUT SHALL ATTAIN A COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
- PROVIDE A MINIMUM OF 1/2 IN. GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.
- LOW LIFT CONSTRUCTION, MAXIMUM GROUT POUR HEIGHT IS 4 FT.
- HIGH LIFT GROUTED CONSTRUCTION MAY BE USED IN CONFORMANCE WITH PROJECT SPECIFICATIONS AND SECTIONS 2414 AND 2415 OF UNIFORM BUILDING CODE.
- ALL CELLS IN CONCRETE BLOCKS SHALL BE FILLED SOLID WITH GROUT, EXCEPT AS NOTED IN THE DRAWINGS OR SPECIFICATIONS.
- CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CORES CONTAINING REINFORCING STEEL.

## GENERAL

- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE DISTRICT REPRESENTATIVE SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
- DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS.
- WHERE NOTES AND DETAILS ON DRAWINGS ARE IN CONFLICT WITH THESE GENERAL NOTES AND TYPICAL DETAILS, THE MOST STRINGENT SHALL APPLY.
- WHERE NOTES AND DETAILS ON DRAWINGS AND THESE GENERAL NOTES AND TYPICAL DETAILS ARE IN CONFLICT WITH THE PROJECT SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY.
- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODE:
 

THE COUNTY OF LOS ANGELES BUILDING CODE (TITLE 26), 1984 EDITION, AS MODIFIED BY ACI 350R-83, "CONCRETE SANITARY ENGINEERING STRUCTURES", AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
- SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR THE SIZE AND LOCATION OF THE FOLLOWING:
  - PIPE RUNS, SPOOLS, STOP LOGS AND NOTCHES, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.
  - ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS, CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
  - SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.
- SEE MISCELLANEOUS METALS DRAWINGS FOR GRATING, TREAD PLATES, PLATFORMS, METAL STAIRS, TANK COVERS, HANDRAILS, AND STOP LOG AND NOTCH DETAILS.
- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
- OPENINGS, POCKETS, ETC. LARGER THAN 6 INCHES SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, BEAMS, JOISTS, COLUMNS, WALLS, ETC. UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6 INCHES NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS.
- ASTM SPECIFICATIONS NOTED ON THE DRAWINGS AND THE PROJECT SPECIFICATIONS SHALL BE OF THE LATEST REVISION.
- CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
- DESIGN LIVE LOADS:
 

ROOF AREAS (REDUCED)	20 PSF
PRIMARY SEDIMENTATION TANK COVERS (REDUCED)	20 PSF
SERVICE CATWALKS	100 PSF
ELECTRICAL ROOM	125 PSF
PROCESS AIR COMPRESSOR ROOM	250 PSF
RETAINED LIQUIDS	65 PCF
- SEE DRAWINGS S-4 THROUGH S-22 PREPARED BY BOYLE ENGINEERING CORPORATION (NOTED ON DRAWINGS AS "B.E.C.") FOR AERATION TANK NO. 4, FINAL SEDIMENTATION TANK NOS. 6 AND 7, AND PARTIAL GALLERY/CHANNEL NOS. 2, 3, AND 4.
- THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND ELEVATIONS FOLLOWED BY AN ASTERISK (\*) WITH EQUIPMENT MANUFACTURER.
- ALL DIMENSIONS AND ELEVATIONS FOLLOWED BY A DOUBLE ASTERISK (\*\*) REFER TO EXISTING CONSTRUCTION AND ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY DIMENSIONS PER NOTE 1 ABOVE.

03945

**LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III**

GENERAL NOTES

SHEET  
S1.1

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

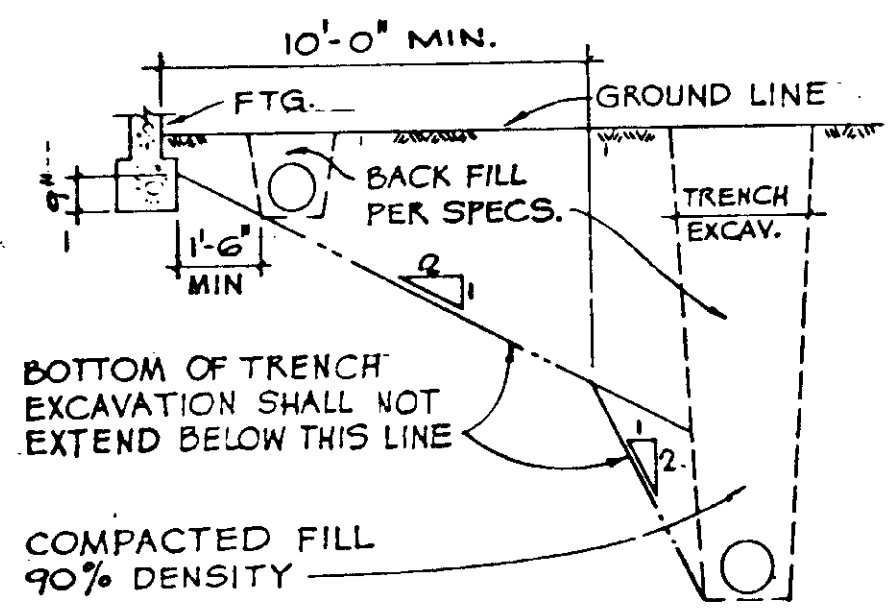
SCALE:  
NONE

DESIGNED BY: R. LEE  
CHECKED BY: R. OKUDA  
DRAWN BY: K. BENUKA

SUBMITTED BY: [Signature] 1400 8-7-87  
DESIGNED BY: [Signature] R.C.E. NO. DATE  
DRAWN BY: [Signature]  
CHECKED BY: [Signature]

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

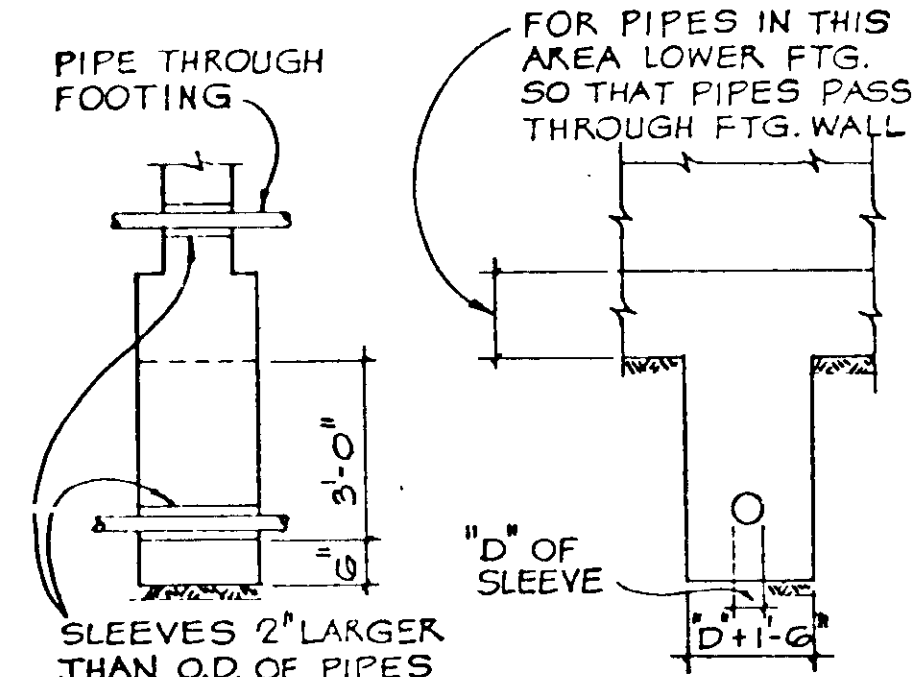




NOTE: THE CONTRACTOR SHALL COORDINATE ALL EXCAVATION OPERATIONS WITH BUILDING FOUNDATION REQUIREMENTS.

EXCAVATION PARALLEL TO FOOTINGS

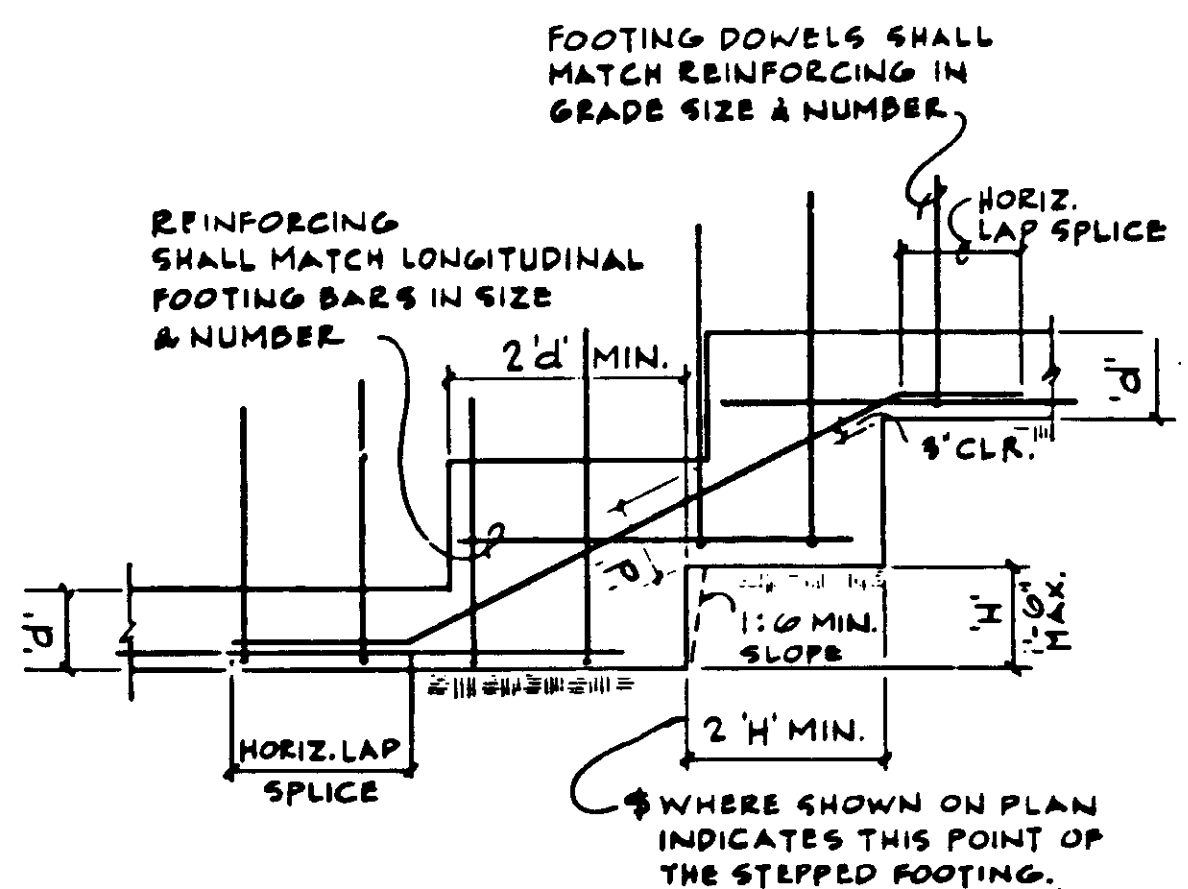
5



EXCAVATION PERPENDICULAR TO FOOTINGS

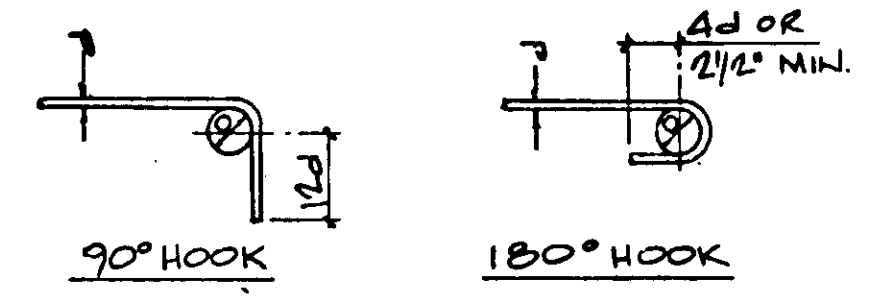
EXCAVATION PERPENDICULAR TO FOOTINGS

4



STEPPED FOOTING

3



D = 6d FOR #3 TO #8  
D = 8d FOR #9 TO #11  
D = 10d FOR #14 & #18

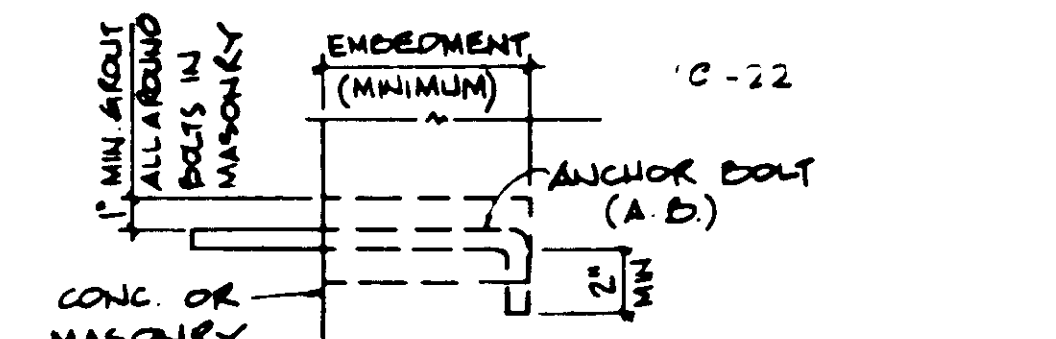
PRINCIPAL REINFORCING

MIN. D = 1 1/2" FOR #3  
MIN. D = 2" FOR #4  
MIN. D = 2 1/2" FOR #5

TIE OR STIRRUP  
NOTES:  
1. ALL BENDS SHALL BE MADE COLD.  
2. #14 & #18 BARS SHALL BE BEND TESTED & LAB APPROVED PRIOR TO BENDING

BAR BENDS

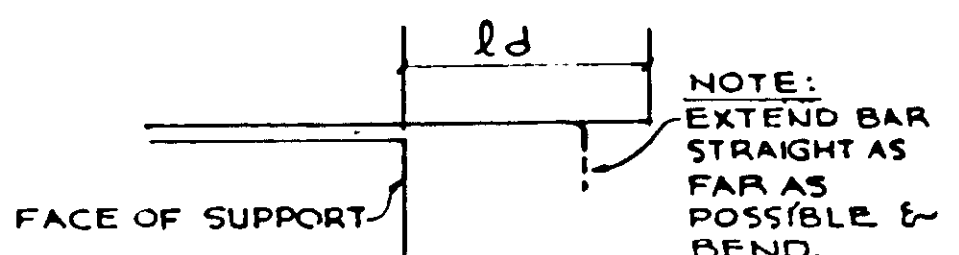
2



BOLT SIZE	HORIZ. EMBEDMENT	VERT. EMBEDMENT
1/2"	4"	6"
3/8"	5"	7"
3/4"	6"	8"
1"	7"	9"

BOLT EMBEDMENT SCHEDULE

1



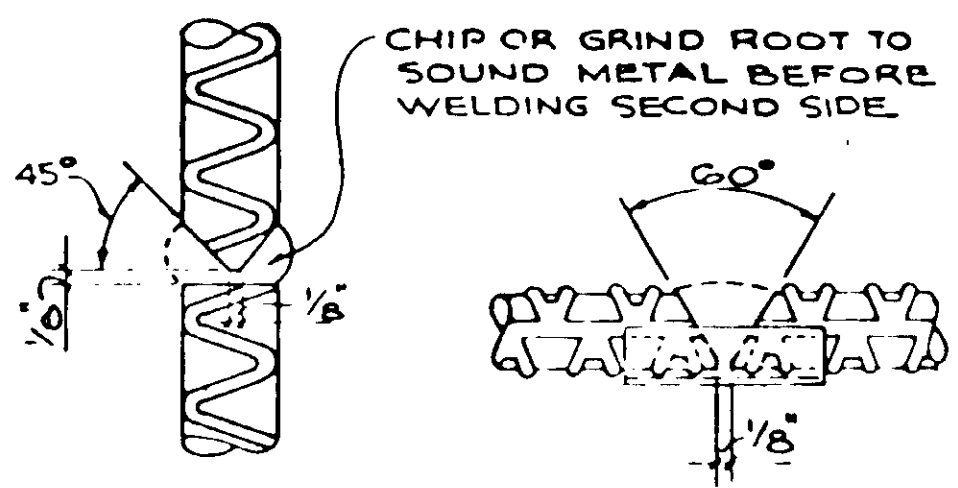
TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR

BAR DEVELOPMENT LENGTH (ld) SCHEDULE

BAR SIZE	f'c = 3,000 P.S.I.		f'c = 4,000 P.S.I.		f'c = 5,000 P.S.I.	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	13	12	13	12	13	12
#4	17	12	17	12	17	12
#5	21	15	21	15	21	15
#6	27	19	25	18	25	18
#7	37	26	32	23	29	21
#8	48	35	42	30	38	27
#9	61	44	53	38	48	34
#10	78	56	67	48	60	43
#11	96	68	83	59	74	53

BAR DEVELOPMENT LENGTH

8



VERTICAL BARS CADWELL C-SERIES MAY BE SUBSTITUTED FOR THIS VERT. COL. SPLICE.  
HORIZONTAL BARS CADWELL T-SERIES MAY BE SUBSTITUTED FOR HORIZ. BAR SPLICE.

NOTE: A PRE-QUALIFICATION TENSION TEST SHALL BE MADE BY AN APPROVED TESTING LABORATORY ON SAMPLES OF EVERY SIZE BAR BEING WELDED UTILIZING MATERIALS, CONDITIONS AND WELDING PROCEDURES TO COMPLY WITH 1985 UNIFORM BUILDING CODE AND GOVERNING INSPECTION AGENCY.

BUTT WELDING REINF. BARS

7

SCHEDULE "A"

LOCATION IN STRUCT.	CONC. f'c	STEEL GRADE	BAR SIZE									
			3	4	5	6	7	8	9	10	11	
BOTT BARS OF BEAMS, JOISTS AND SPANDRELS	2500	60	12	16	20	28	38	49	63	79	96	
SLAB BARS	3000	60	16	16	20	25	34	45	57	72	89	
VERTICAL WALL STEEL	4000	60	16	16	20	24	30	39	49	63	77	
	5000	60	16	16	20	24	27	35	44	56	69	

NOTES:  
1. THE SCHEDULES SHOWN ON THIS SHEET APPLY TO REGULAR WEIGHT CONCRETE 145-150#/CU.FT.  
2. ALL SPLICES SHALL BE STAGGERED AS SHOWN IF MORE THAN 50% OF THE REINFORCING IS LAP SPLICED WITHIN THE REQUIRED LAP SPLICE LENGTH. THE LAP SPLICE LENGTH SHALL BE INCREASED 33%.  
3. LAP SPLICES LISTED IN THE SCHEDULE ARE CLASS "B" LAPS  
4. SMALLER BAR LAP LENGTH SHALL BE USED WHEN SPLICING DIFFERENT SIZE BARS.

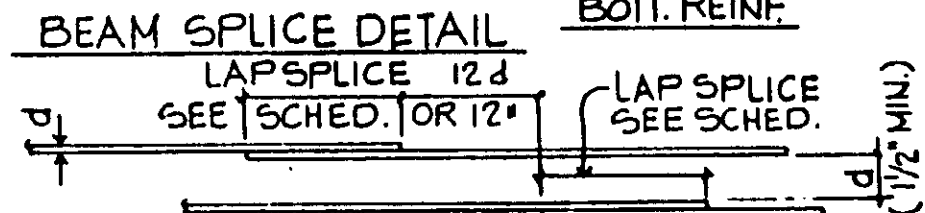
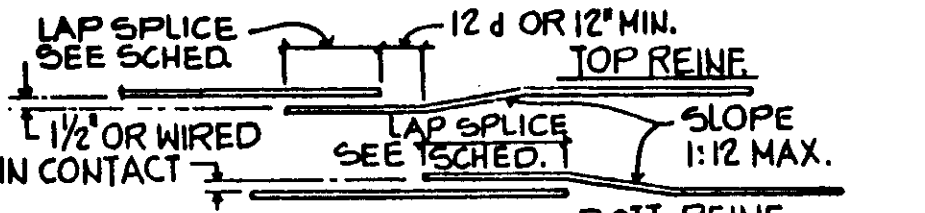
SCHEDULE "B"

LOCATION IN STRUCT.	CONC. f'c	STEEL GRADE	BAR SIZE									
			3	4	5	6	7	8	9	10	11	
TOP BARS # OF BEAMS, JOISTS AND SPANDRELS	2500	60	16	22	27	39	53	69	88	111	134	
	3000	60	16	22	27	35	48	63	80	101	124	
	4000	60	16	22	27	33	41	55	69	88	108	
HORIZONTAL WALL STEEL	5000	60	16	22	27	33	38	49	62	78	96	

5. LAP LENGTHS SPECIFICALLY DETAILED ON DRAWINGS SHALL GOVERN IN LIEU OF LAP LENGTHS SCHEDULED.  
6. CONTRACTOR MAY AT HIS OPTION USE A BUTT WELDED SPLICE IN LIEU OF THE LAP SPLICE SHOWN - SEE DETAIL  
7. TOP BARS ARE HORIZONTAL BARS SO THAT PLACED 12" OR MORE OF CONCRETE IS CAST IN MEMBER BELOW THE BAR. USE SCHEDULE "B" FOR LAP LENGTHS, FOR TOP SLAB BARS WHERE MORE THAN 12" OF CONCRETE CAST BELOW THEM.

REGULAR WEIGHT CONCRETE REINFORCING - LAP SPLICE SCHEDULE

6



WALL OR SLAB SPLICE DETAIL

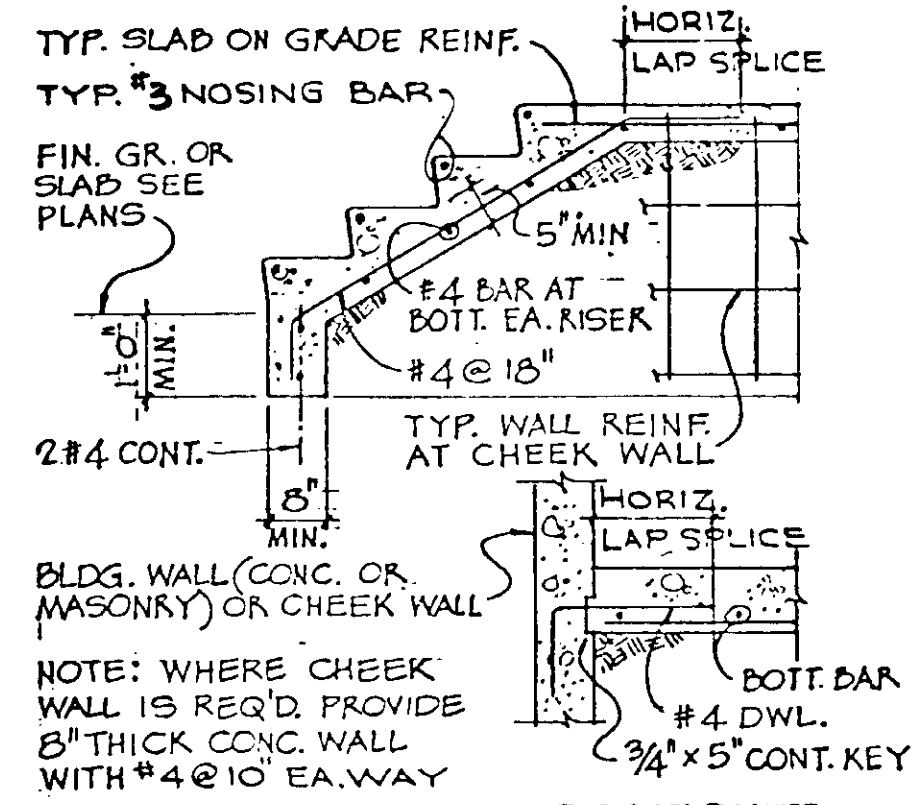
8. ALL DETAILING & PLACING OF REINFORCING SHALL BE COMPLY W/ THE SPLICE LAP SCHEDULE & DETAILS UNLESS SPECIFICALLY DETAILED ON DRAWINGS  
9. BUNDLED BAR SPLICES:  
a) INDIVIDUAL BAR SPLICES WITHIN THE BUNDLE SHALL NOT OVERLAP EACH OTHER.  
b) INCREASE LAP LENGTH 33% FOR A (4-BARS BUNDLE.)  
10. LAP SPLICED BARS SHALL NOT BE PLACED TRANSVERSELY FURTHER APART THAN 20% OF THE REQUIRED LAP LENGTH NOT MORE THAN 6".

6

PROFESSIONAL ENGINEER  
JOHN A. MARTIN, INC.  
No. 1956  
Exp. 12-31-88  
STRUCTURAL  
STATE OF CALIFORNIA  
Job No. 492B  
STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483-6490

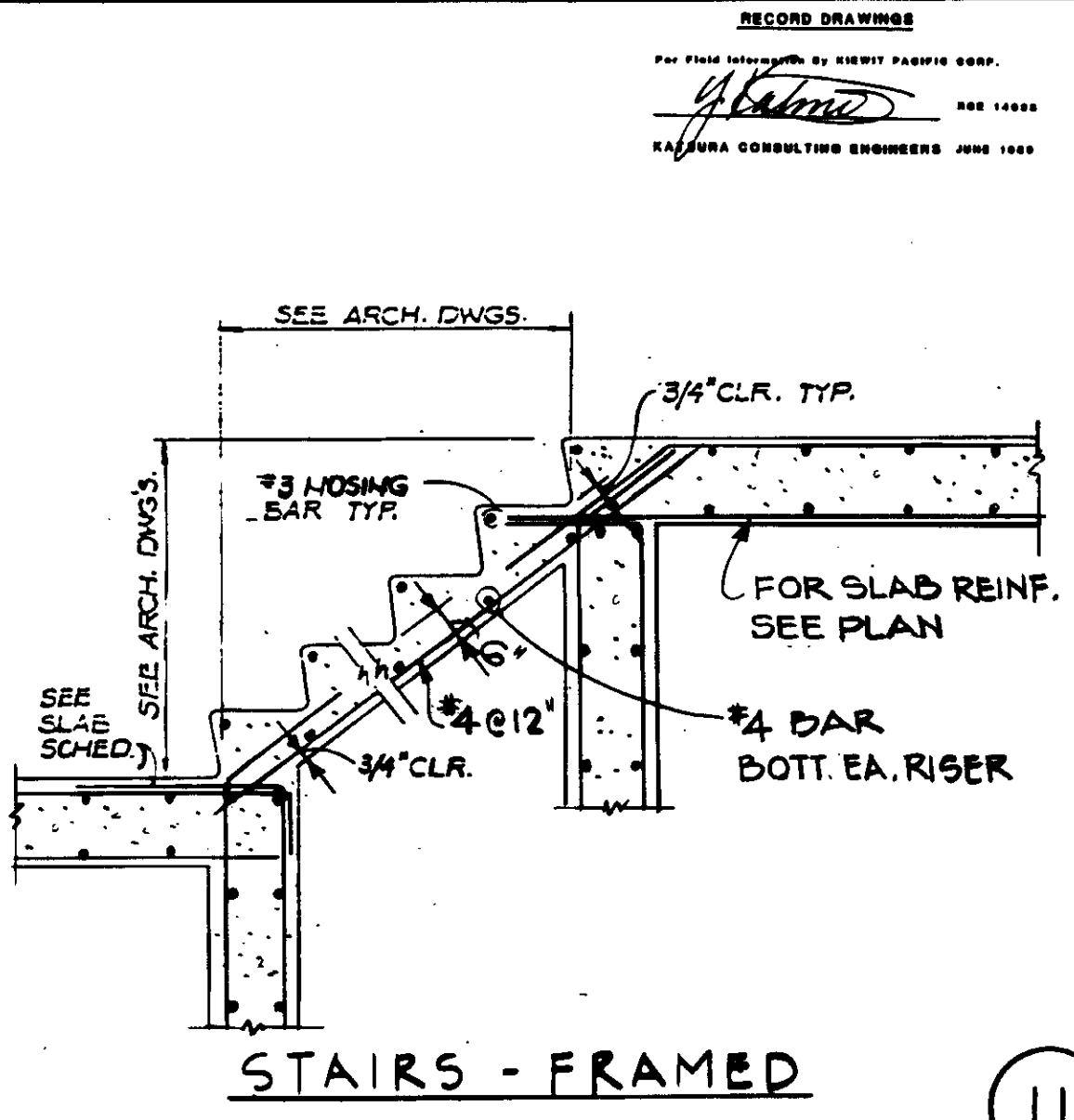
STEP IN SLAB ON GRADE

13



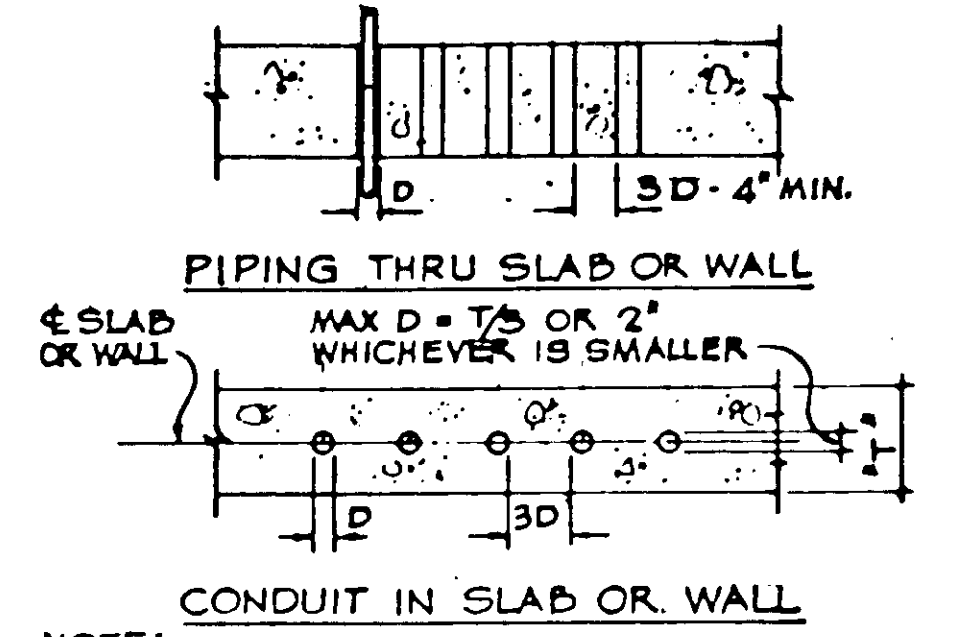
CONCRETE STAIR ON GRADE

12



STAIRS - FRAMED

11



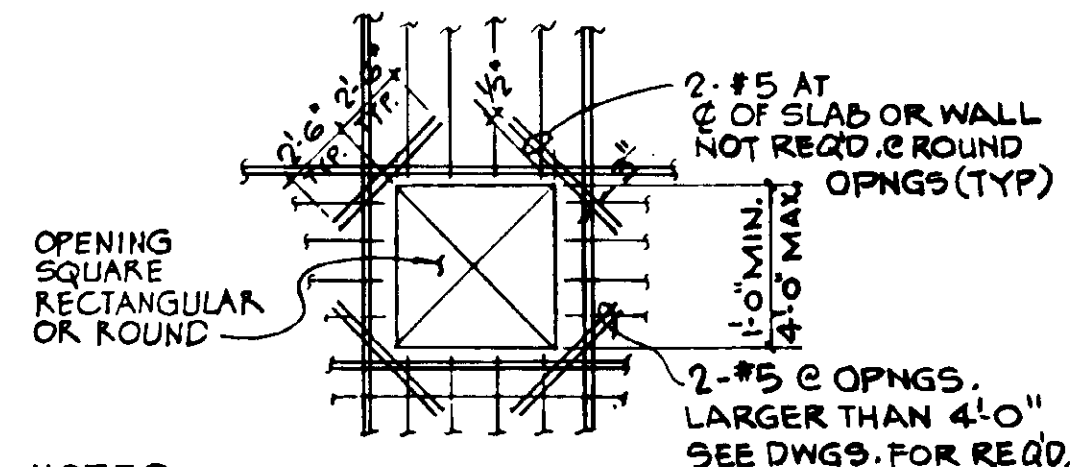
NOTE: WHERE CLEAR DISTANCE BETWEEN GLEEVE IS IMPOSSIBLE THIS AREA SHALL BE TREATED AS A SLAB OPENING AS PER TYPICAL DETAIL "REINFORCING AROUND STRUCTURAL SLAB OPENING"

PIPING & CONDUIT IN OR THRU SLAB OR WALL

03946

10

3. FOR OPENINGS 1'-6" OR LESS, INTERRUPTED RE-BARS MAY BE SPREAD TO CLEAR OPENINGS. MAX. SLOPE 1:6.



NOTES  
1. EACH CURTAIN OF REINF BARS INTERRUPTED BY THE OPENING SHALL BE REPLACED WITH ADDN'L. REINF. EQUAL TO THAT INTERRUPTED. PLACE HALF OF THE ADDN'L. REINF. ON EACH SIDE OF OPENING AND EXTEND IT SAME LENGTH AS REQ'D. FOR THE INTERRUPTED REINF. U.N.O. ON DWGS.  
2. BOXED OUT OPENINGS, RECESSED BOXES & PIPE SLEEVE CLUSTERS SHALL BE TREATED AS FRAMED OPENINGS.

REINFORCING AROUND STRUCTURAL SLAB OR WALL OPENING

9

SCALE: NONE

DESIGNED R. LEE  
R. OKUDA  
DRAWN K. PENUSKA  
CHECKED

SUBMITTED 14038 8-7-87  
KALEX ENGINEERS R.C.E. NO. DATE  
ALEXANDER ENGINEERS R.C.E. NO. DATE

KALEX ENGINEERS  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III

TYPICAL DETAILS, SHEET 1

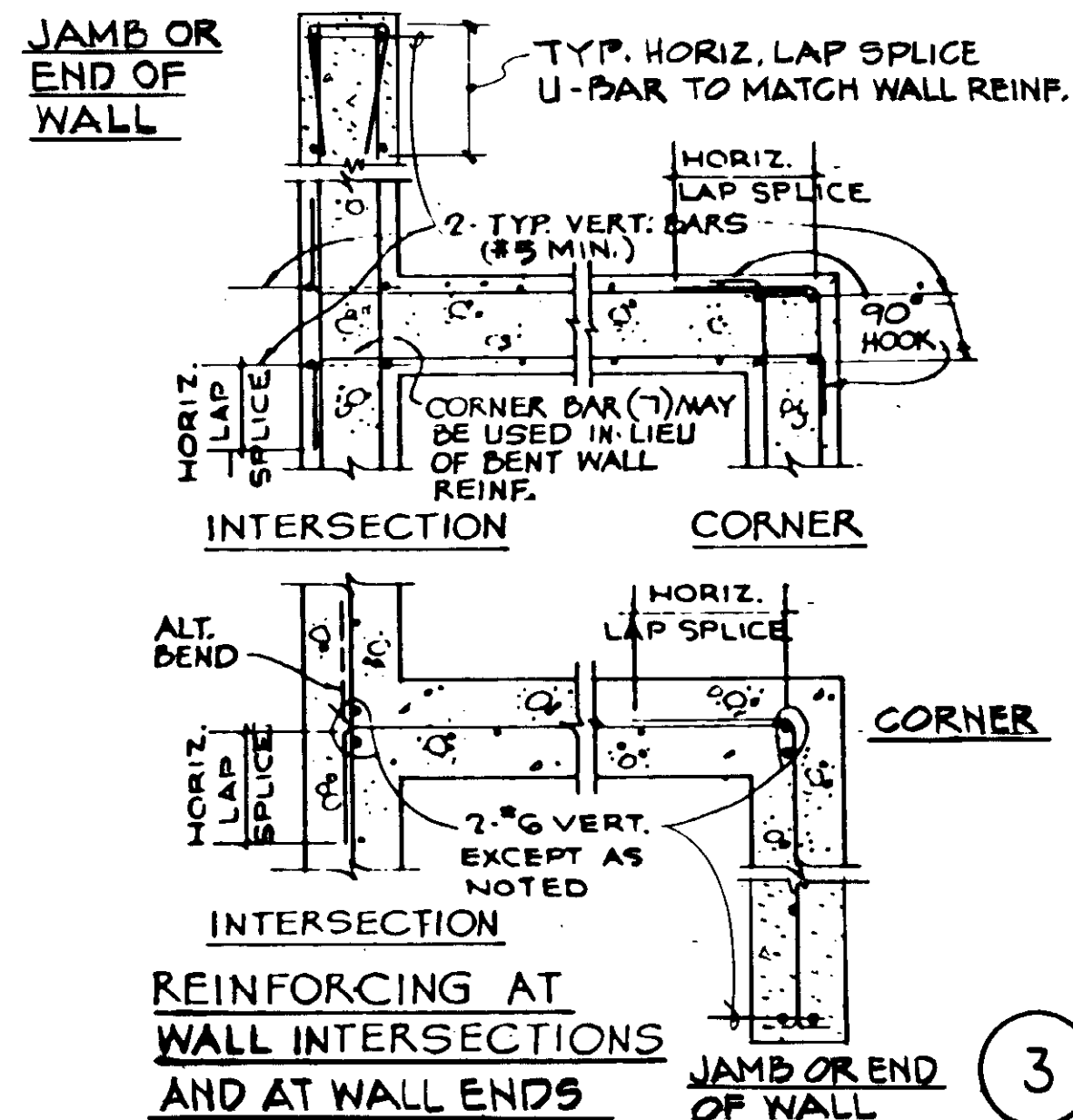
SHEET S12

REV	DATE	BY	DESCRIPTION

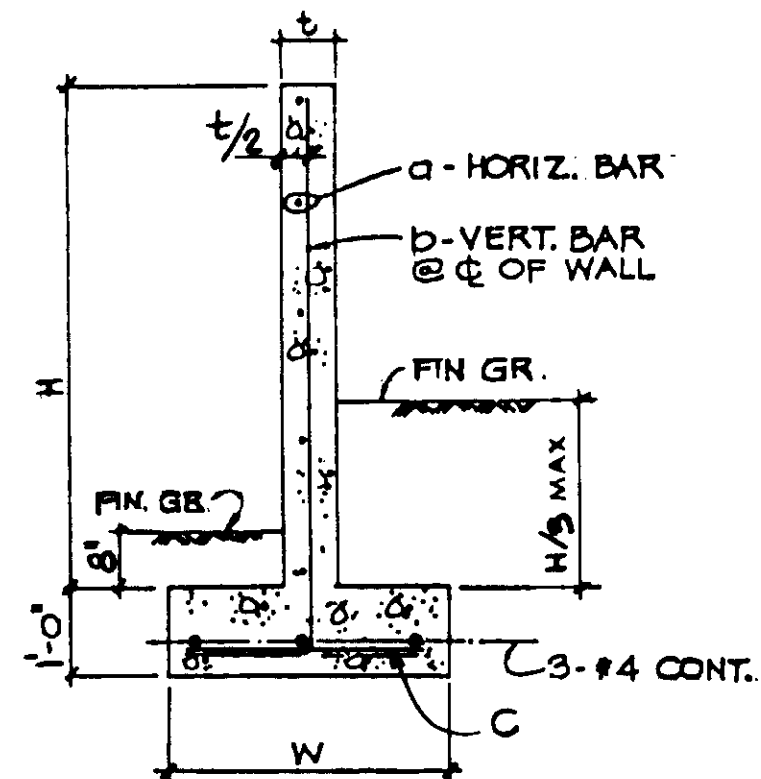
WALL THICKNESS	BAR SIZE & SPACING EACH MAT		REMARKS
	HORIZ. BARS	VERT. BARS	
4"	#4 @ 18"	#4 @ 18"	SINGLE MAT
4 1/2" TO 6"	#4 @ 13"	#4 @ 13"	SINGLE MAT
6 1/2" TO 8"	#4 @ 10"	#4 @ 10"	SINGLE MAT
8 1/2" TO 10"	#4 @ 10"	#4 @ 10"	DOUBLE MAT
10 1/2" TO 12"	#5 @ 18"	#5 @ 18"	DOUBLE MAT
12" TO 14"	#5 @ 18"	#5 @ 18"	DOUBLE MAT

NOTES  
 1. THE ABOVE SHALL BE MINIMUM REINF. FOR ALL WALLS & SLABS OF PITS & TRENCHES  
 2. SINGLE MAT REINFORCING SHALL BE IN CENTER OF WALL UNLESS OTHERWISE DETAILED.

**MINIMUM CONCRETE WALL REINFORCING SCHEDULE**



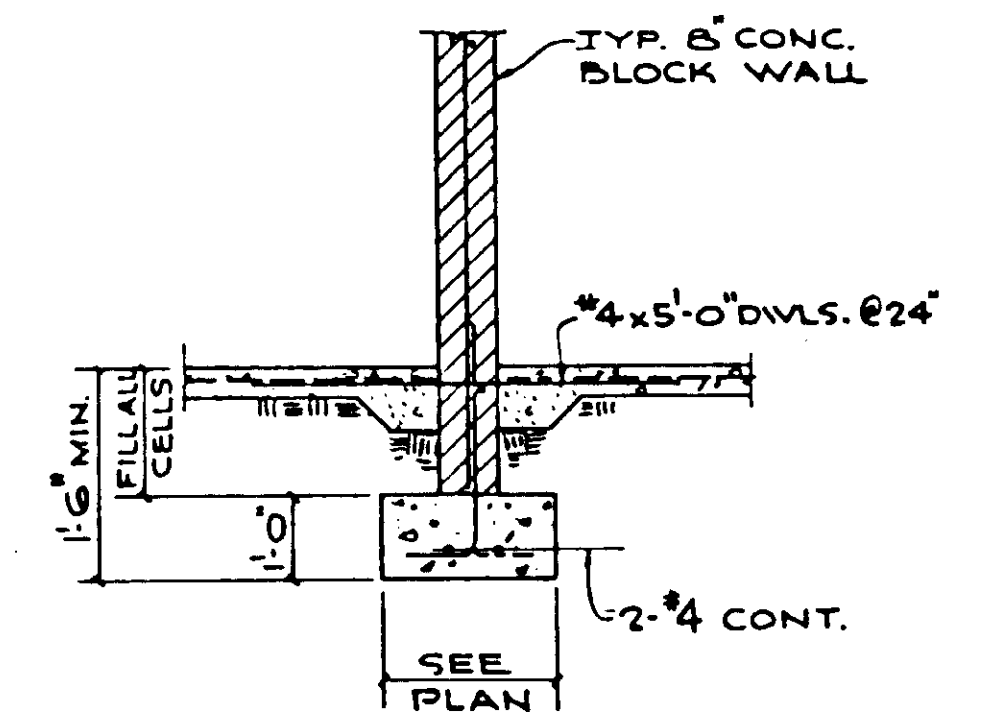
**REINFORCING AT WALL INTERSECTIONS AND AT WALL ENDS**



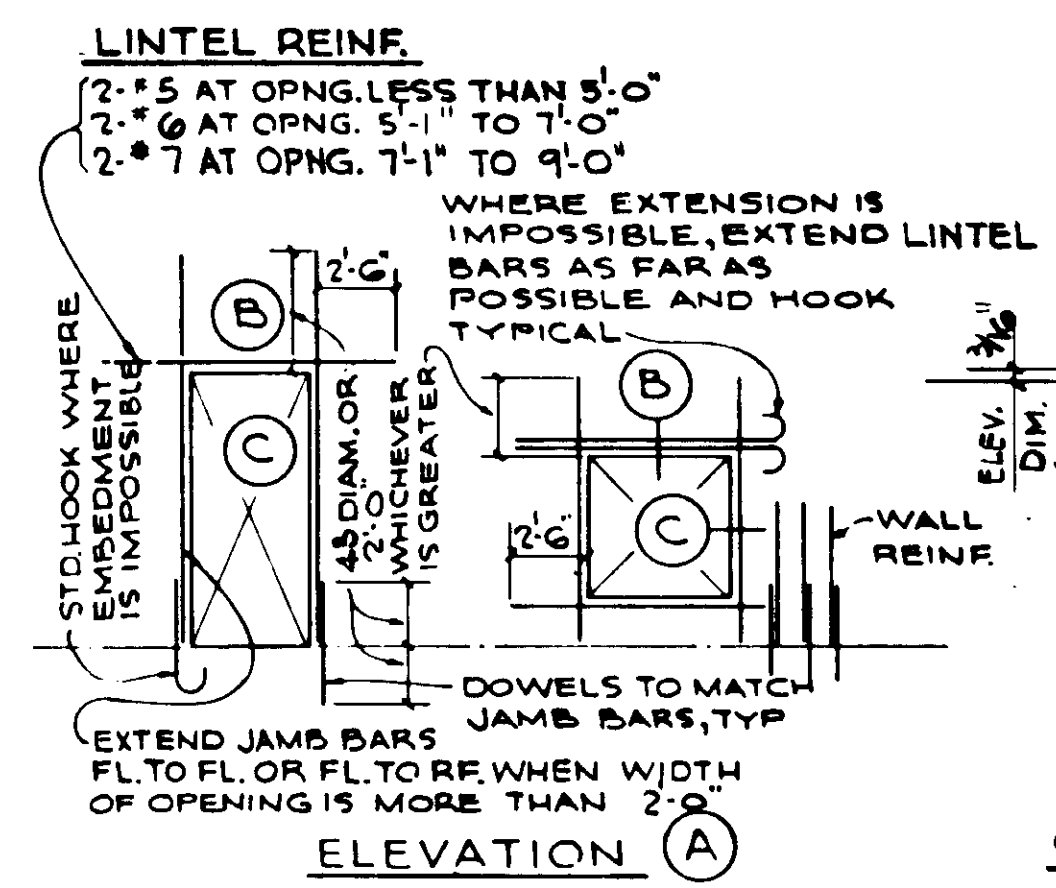
**FREESTANDING CONCRETE WALL SCHEDULE**

H	W	a	b	c	t
1'-0" TO 2'-0"	1'-0"	#4 @ 18"	#4 @ 18"	—	6"
2'-1" TO 3'-0"	1'-3"	#4 @ 13"	#4 @ 13"	—	6"
3'-1" TO 4'-0"	1'-6"	#5 @ 16"	#4 @ 16"	—	8"
4'-1" TO 5'-0"	2'-0"	#5 @ 16"	#4 @ 16"	—	8"
5'-1" TO 6'-0"	2'-6"	#5 @ 16"	#4 @ 16"	#4 @ 24"	8"
6'-1" TO 7'-0"	3'-0"	#5 @ 16"	#4 @ 16"	#4 @ 24"	8"
7'-1" TO 8'-0"	3'-4"	#5 @ 16"	#4 @ 16"	#4 @ 16"	8"
8'-1" TO 10'-0"	3'-6"	#5 @ 16"	#5 @ 16"	#4 @ 16"	8"

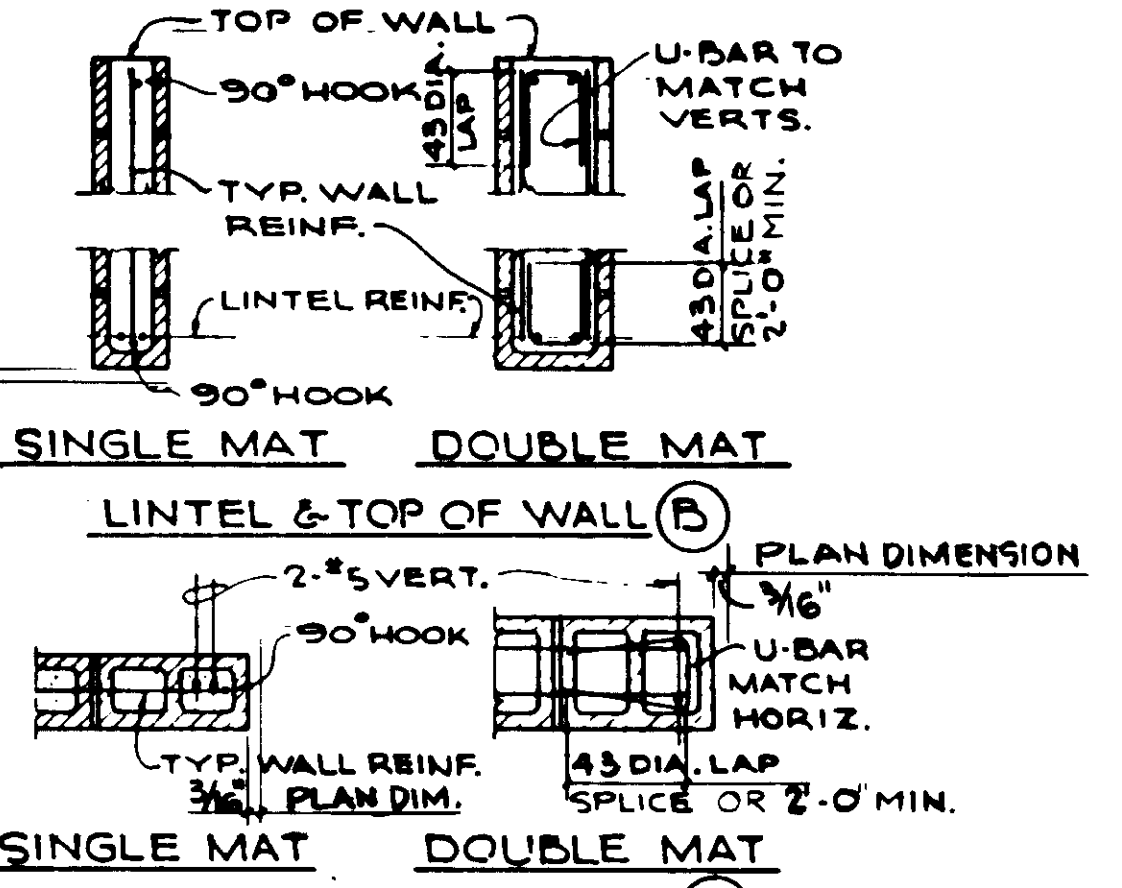
RECORD DRAWINGS  
 PREPARED BY: KALEX ENGINEERS  
 KATSURA CONSULTING ENGINEERS  
 JUNE 1999



**TYP. INTERIOR MASONRY WALL**



**CONCRETE BLOCK MINIMUM REINFORCING AT WALL OPENINGS**



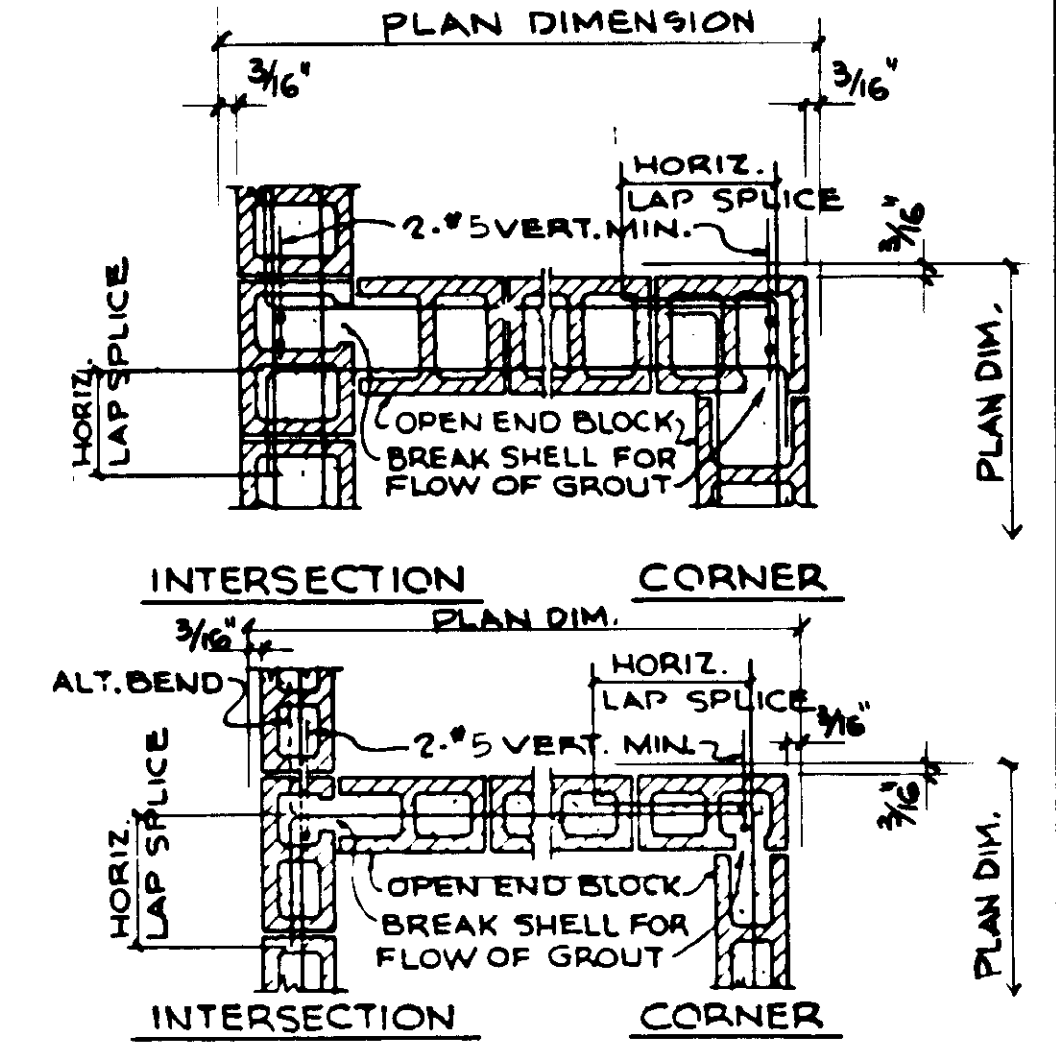
**JAMB OR END OF WALL**

MASONRY WALL REINF. SCHED.

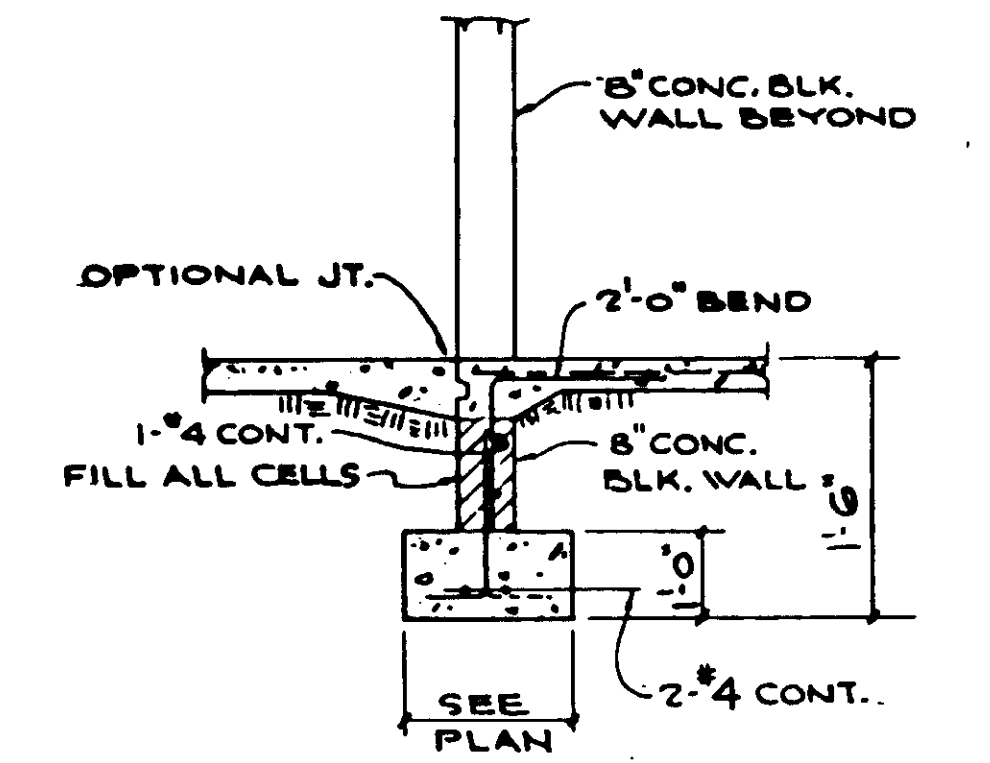
WALL THICK.	HORIZ.	VERT.	REMARKS
6" CONC. BLOCK	#4 @ 24"	#4 @ 24"	SINGLE MAT
8" CONC. BLOCK	#5 @ 24"	#5 @ 24"	SINGLE MAT
12" CONC. BLOCK	#4 @ 24"	#4 @ 24"	DOUBLE MAT
8"-10" BRICK	#4 @ 20"	#4 @ 20"	SINGLE MAT
10 1/2"-11" BRICK	#5 @ 24"	#5 @ 24"	SINGLE MAT
11 1/2"-12" BRICK	#5 @ 24"	#5 @ 32"	DOUBLE MAT

NOTES  
 1. THE ABOVE SHALL BE MINIMUM REINF. FOR ALL MASONRY ELEMENTS.  
 2. SINGLE MAT REINFORCING SHALL BE IN CENTER OF WALL UNLESS OTHERWISE DETAILED.

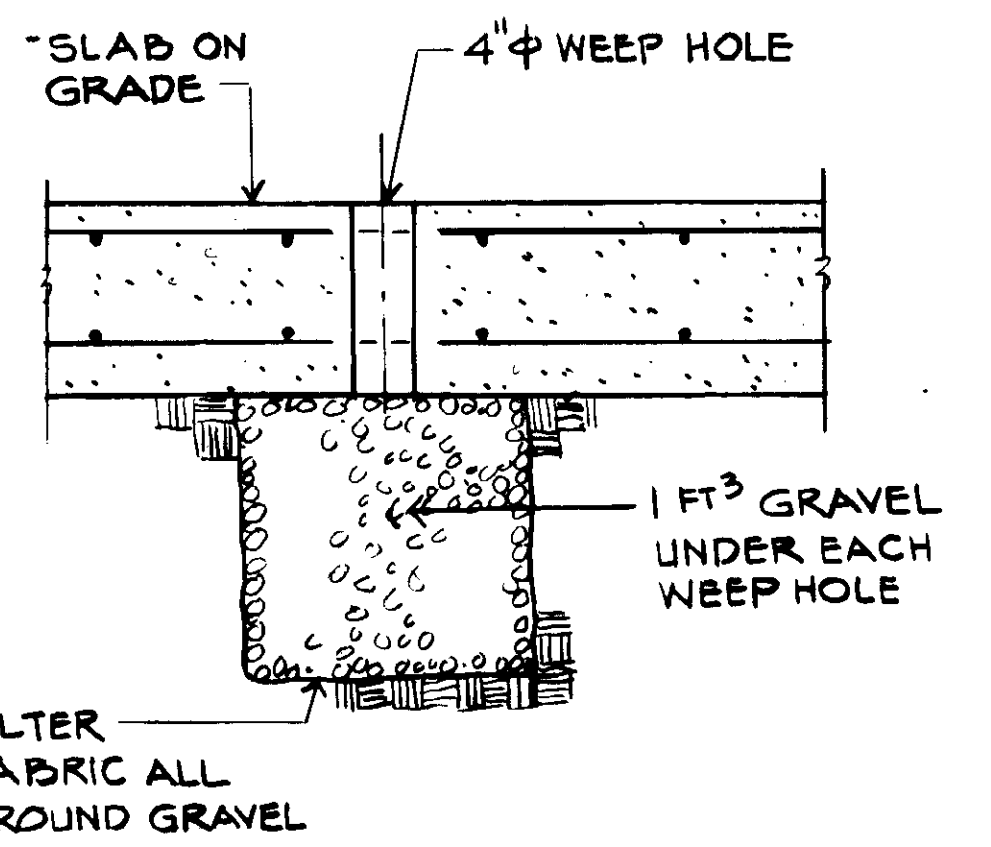
**MINIMUM MASONRY WALL REINF. SCHEDULE**



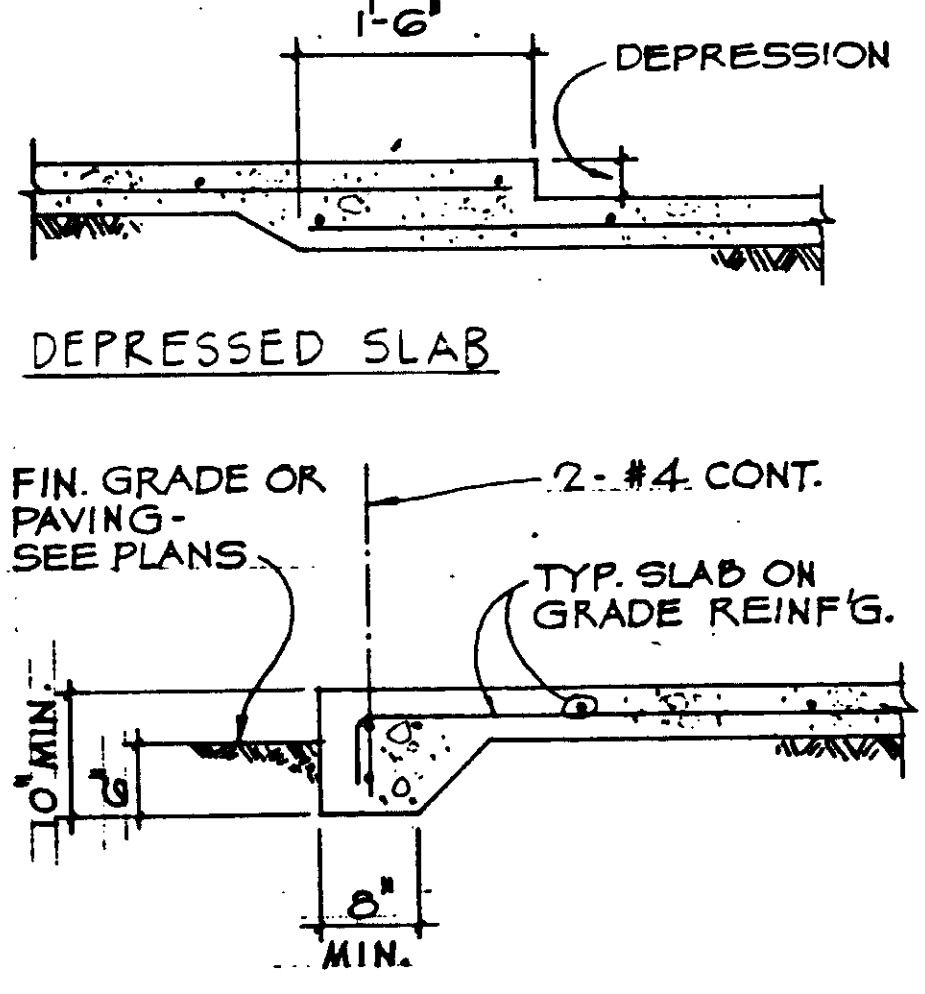
**CONCRETE BLOCK WALL INTERSECTIONS**



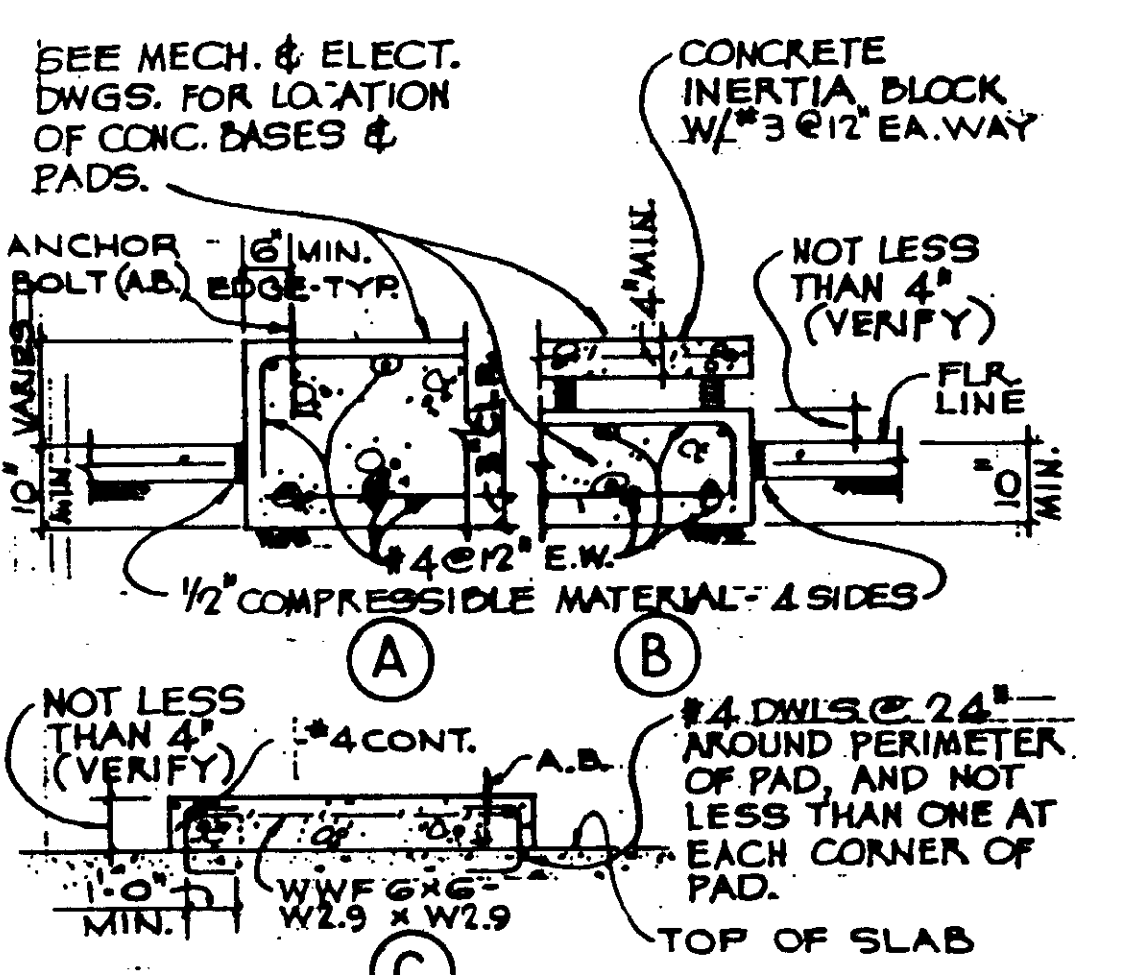
**TYP. EXTERIOR WALL OPENING**



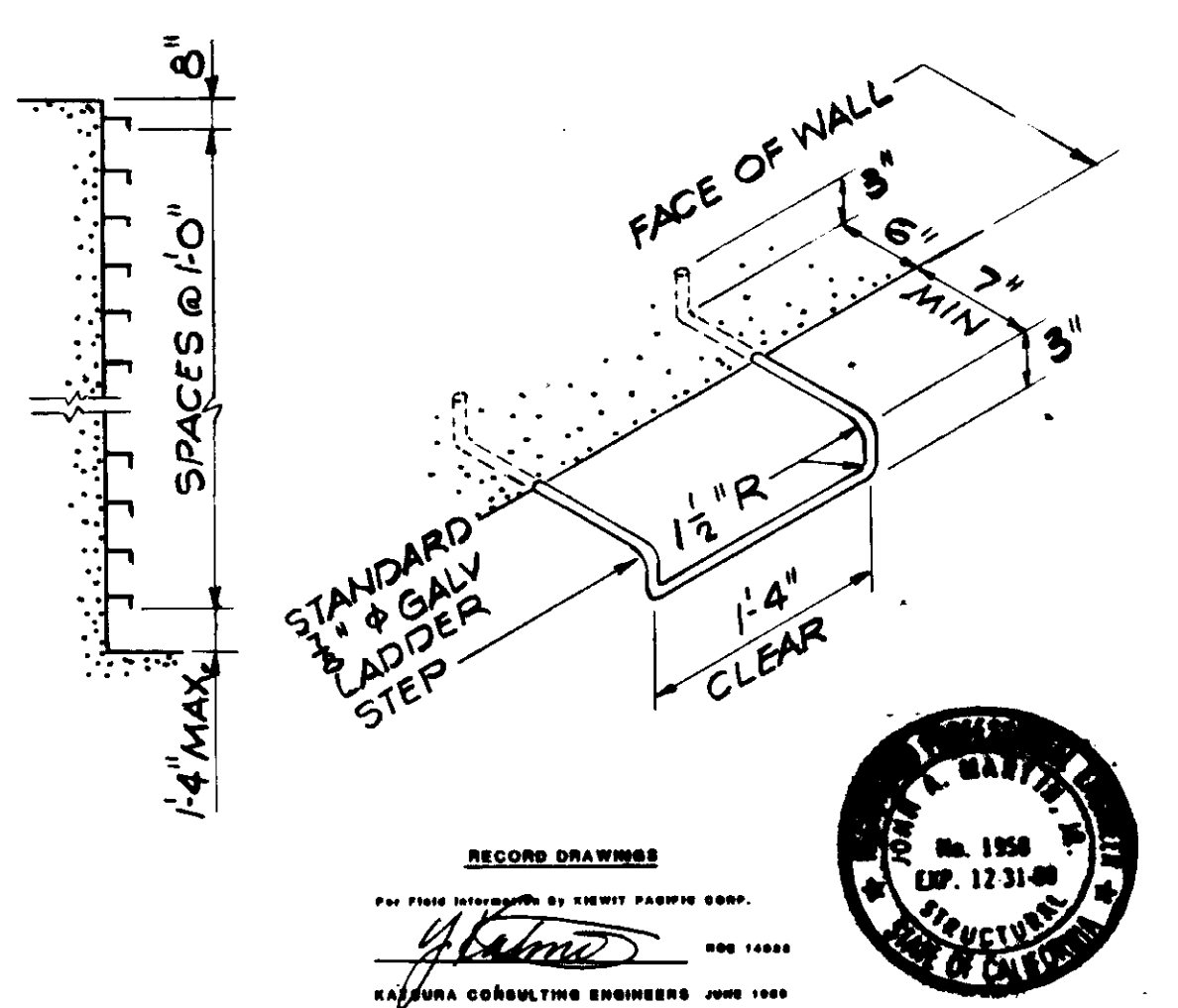
**SLAB WEEP HOLE**



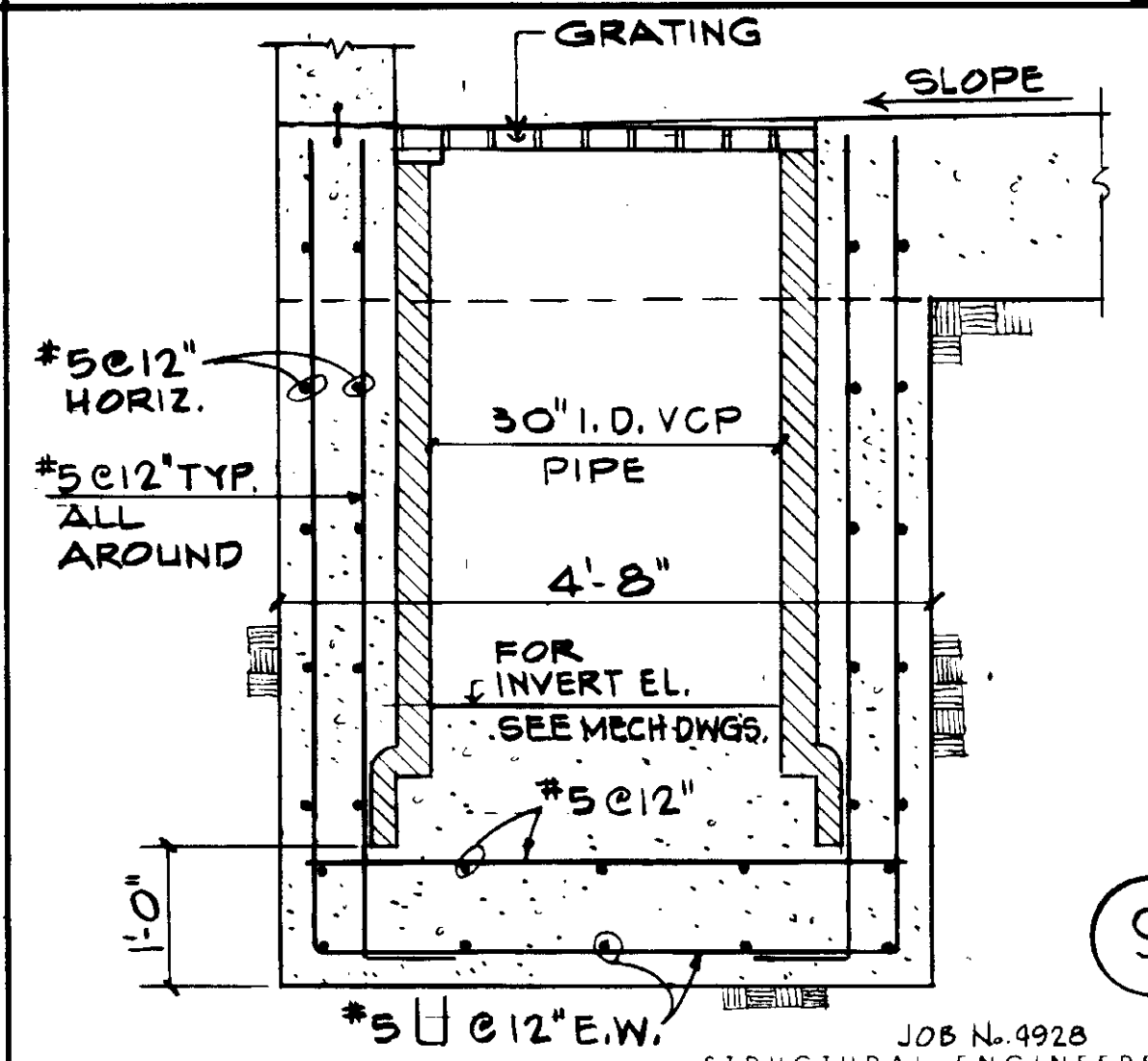
**DEPRESSED SLAB & SLAB EDGE**



**CONC. BASE & CONC. PAD FOR EQUIPMENT**



**LADDER RUNG**



**TYP. SUMP DETAIL**

REV	DATE	BY	DESCRIPTION

SCALE: NONE  
 R. LEE  
 DESIGNED R. OKUDA  
 DRAWN K. DENUSKA  
 CHECKED

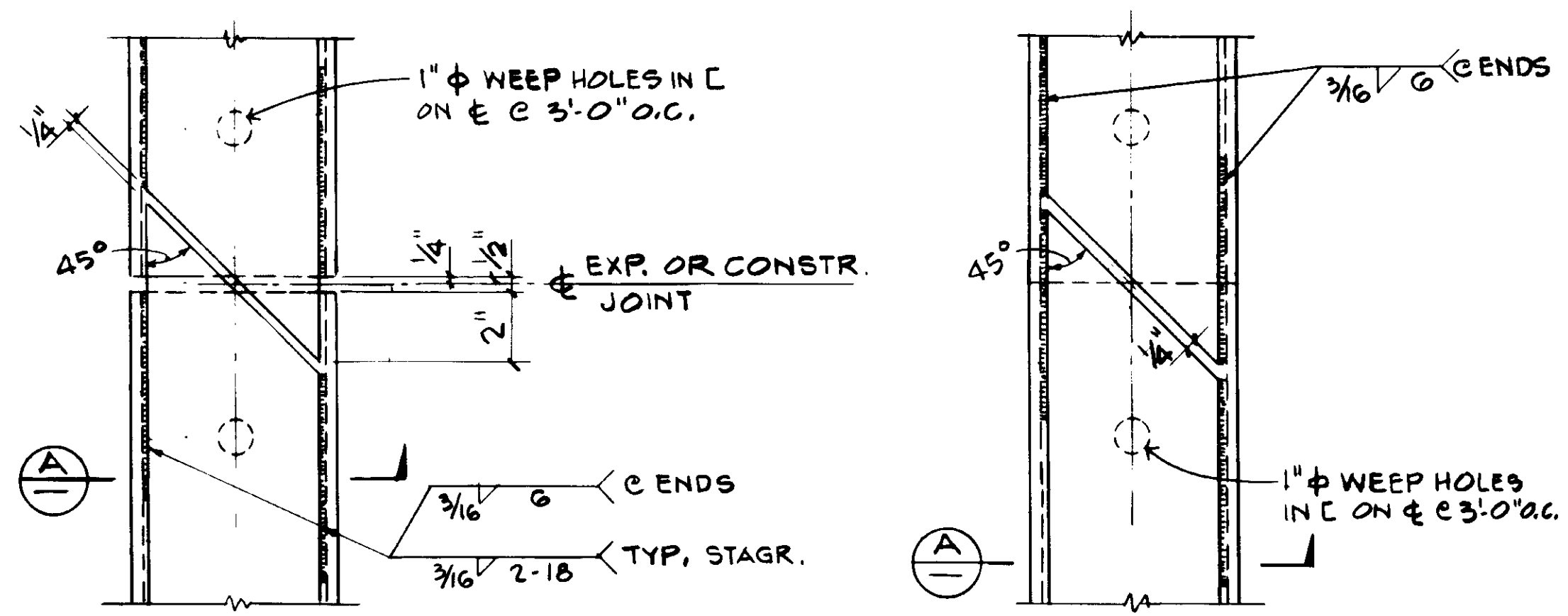
SUBMITTED: 14038 8-7-87  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

KALEX ENGINEERS 03947  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

LAS VIRGENES MUNICIPAL WATER DISTRICT  
 TAPIA WATER RECLAMATION FACILITY EXPANSION III  
 TYPICAL DETAILS, SHEET 2

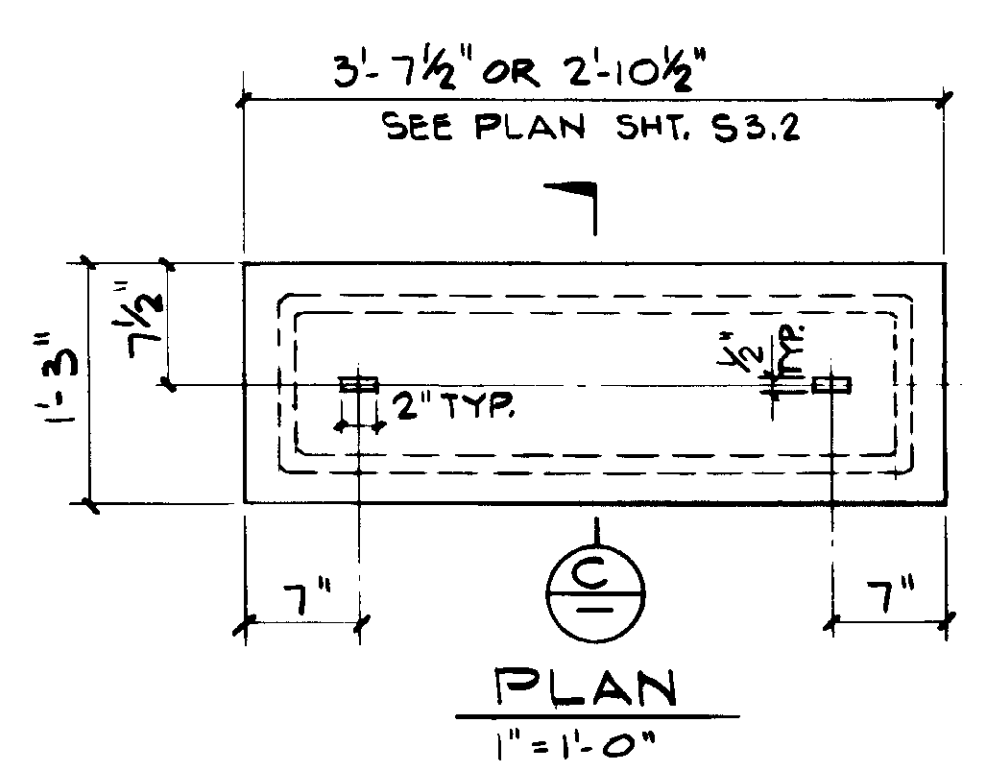
SHEET S1.3



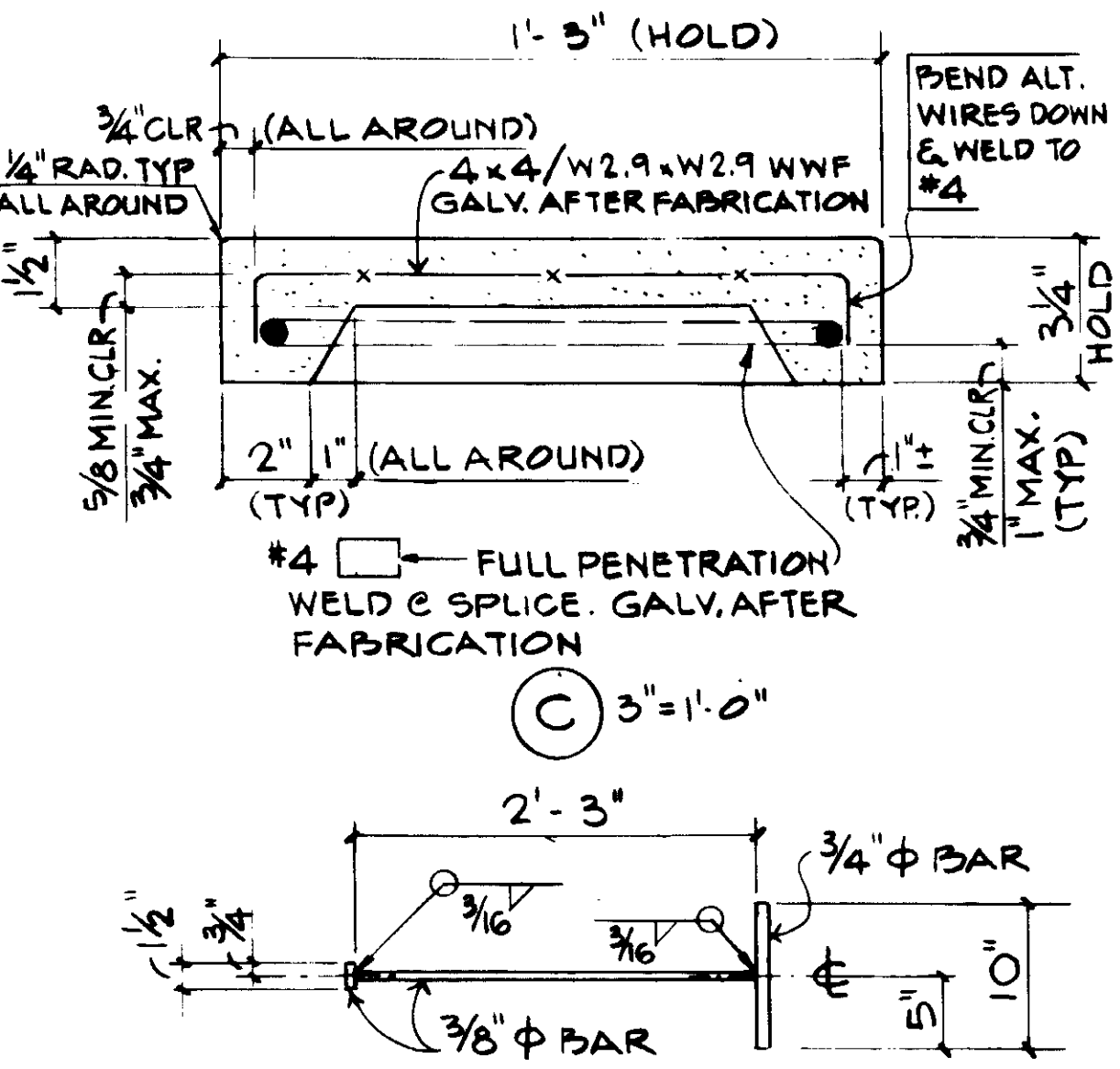


PLAN AT EXP. JOINT

PLAN AT SPLICE

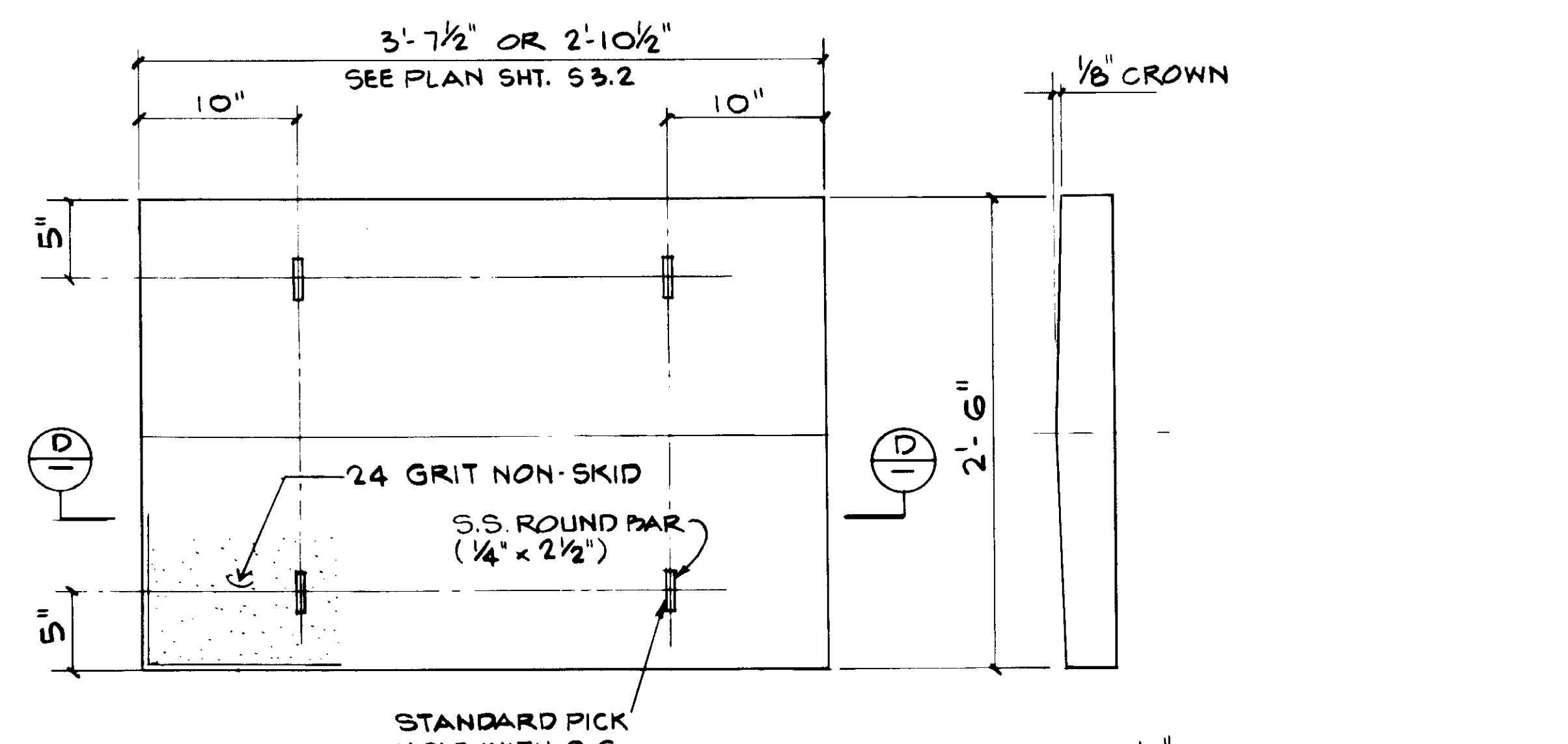


PLAN

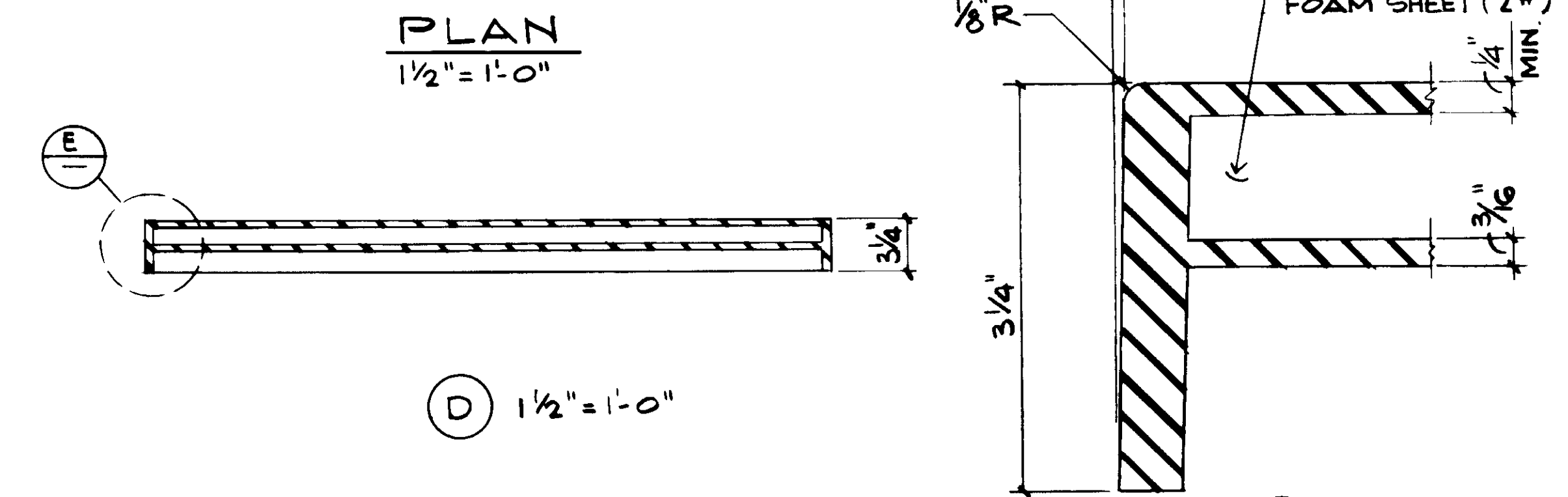


STEEL LIFTING HANDLE DETAIL

TYP. PRECAST CONCRETE PLANK DETAILS

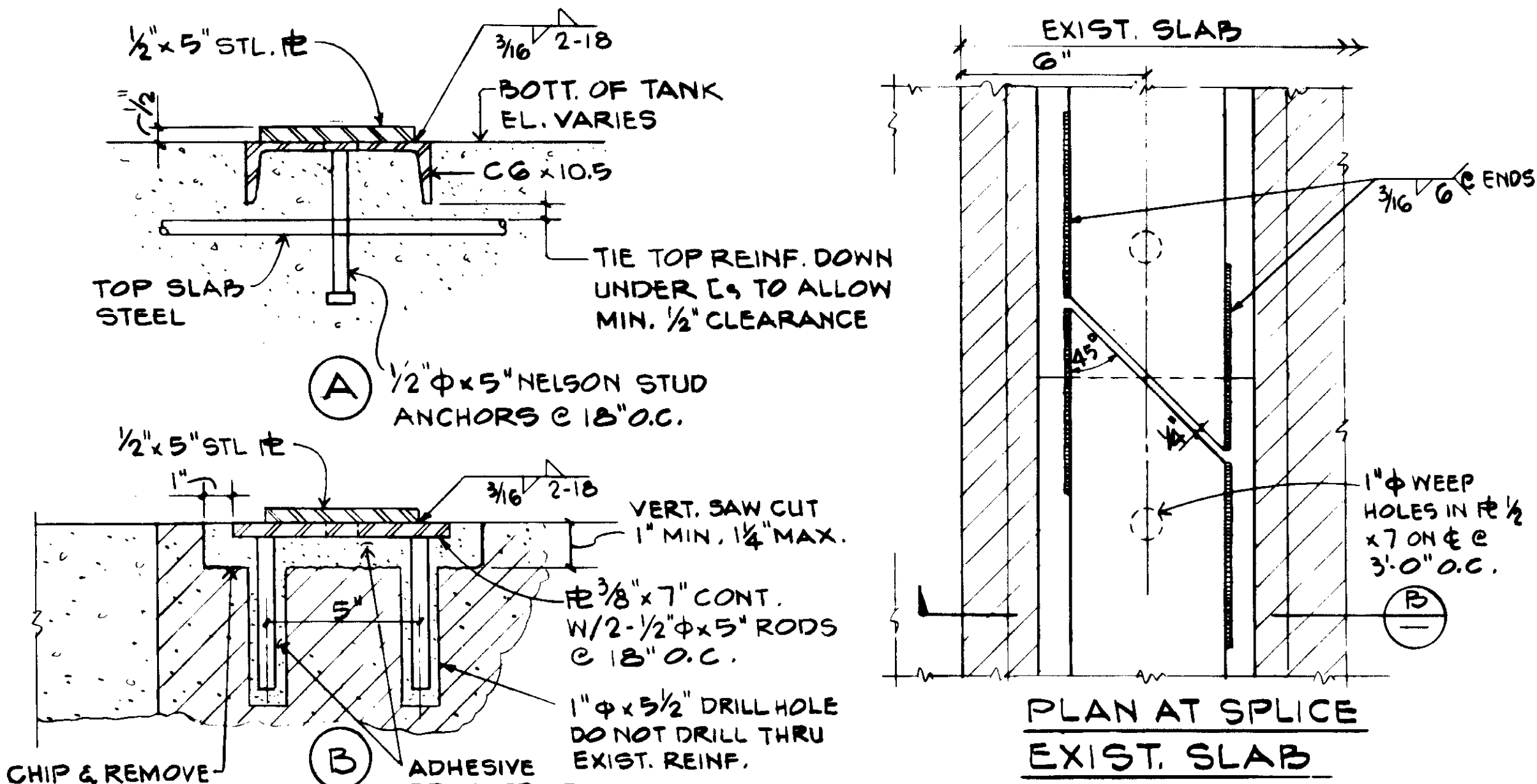


PLAN



TYP. FIBERGLASS REINFORCED PLASTIC PLANK DETAILS

- NOTES:  
 1. ALL DIMS TO TOP SURFACE BEFORE DRAFT.  
 2. PAD CROWN TO MAX. OF 1/8" ALONG LENGTH.  
 3. 1/4" R UNLESS SPECIFIED.

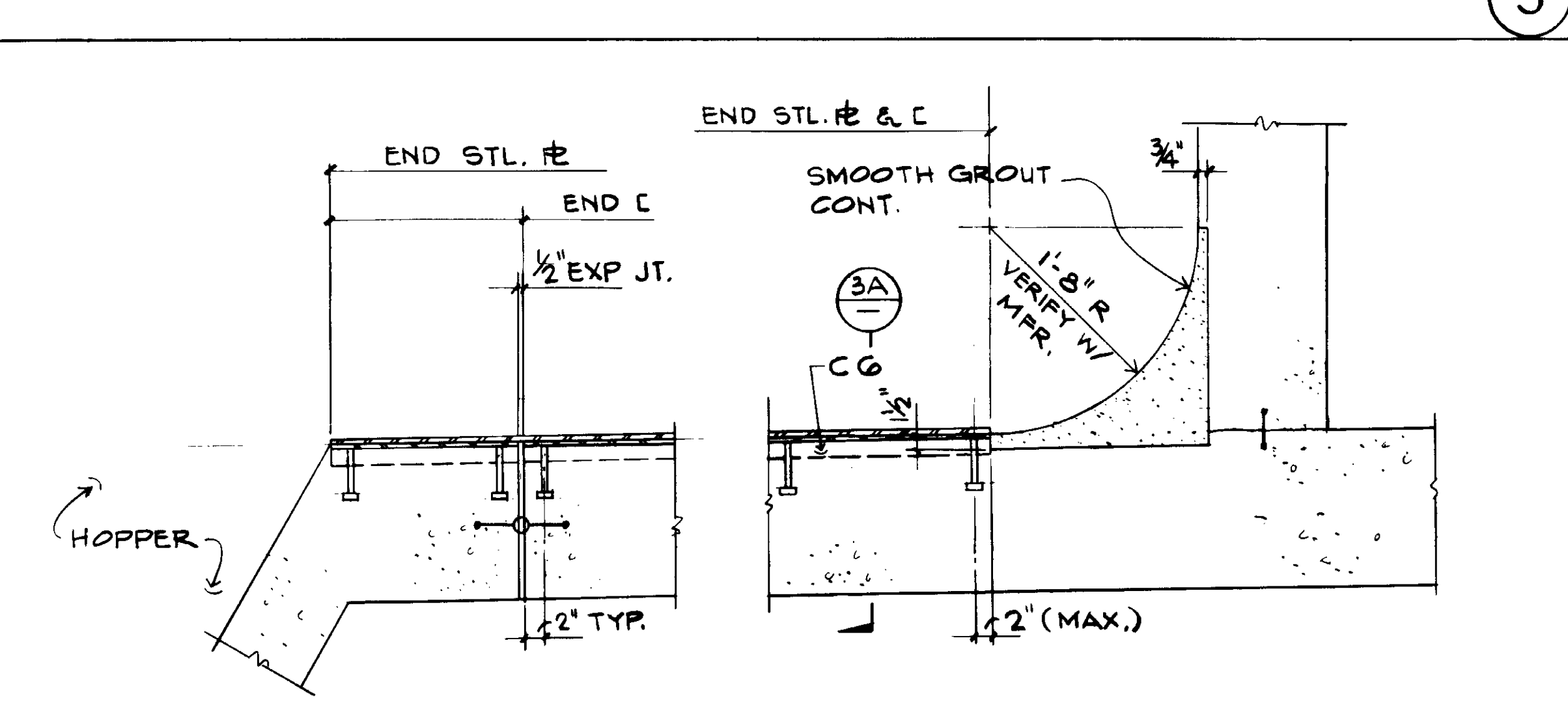


WEARING RAIL DETAILS

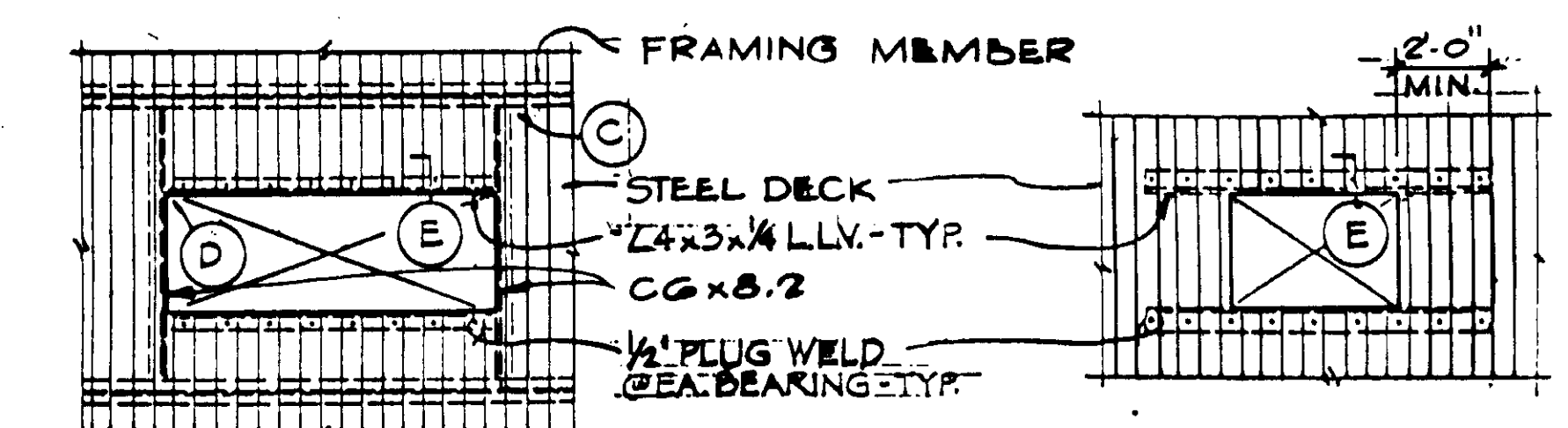
PLAN AT SPLICE EXIST. SLAB

CHIP & REMOVE EXISTING CONCRETE. DO NOT CUT EXISTING REINF.

WEARING RAIL & GROUT FILLET DETAIL

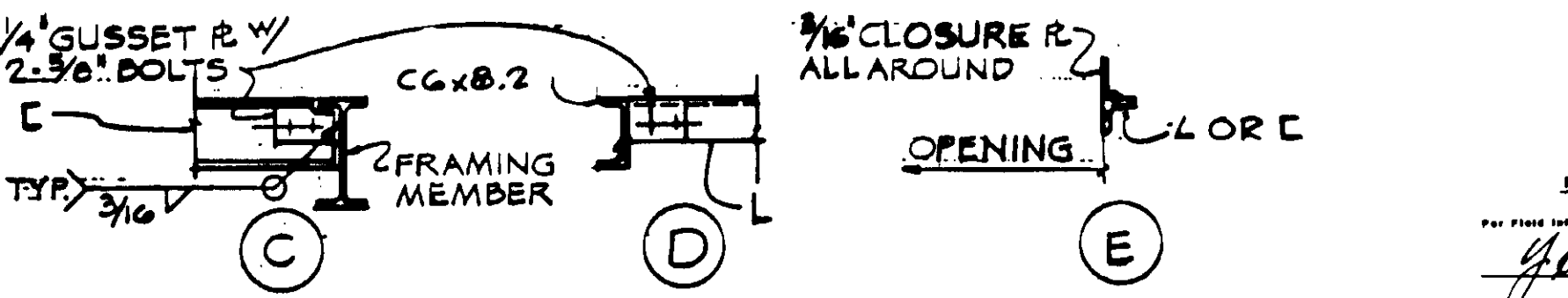


WEARING RAIL & GROUT FILLET DETAIL

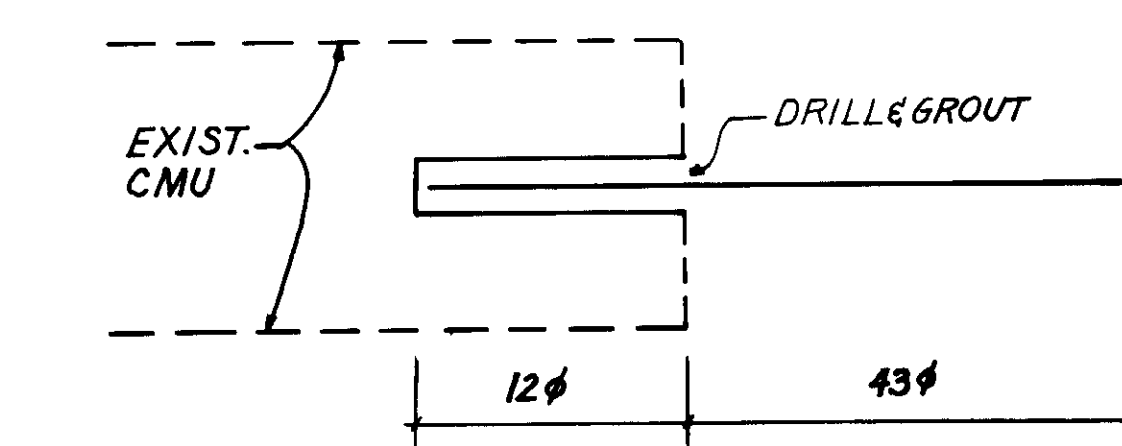


PLAN-OPENING 30" TO 60" (A)

PLAN-OPENING 30" TO 12" (B)



OPENINGS IN METAL DECK



NEW TO EXIST. DOWELL DET. RFI 211A

3

2

1

6

7

REV	DATE	BY	DESCRIPTION

SCALE:	AS NOTED
DESIGNED:	R. OKUDA
DRAWN:	R. PENUSKA
CHECKED:	

SUBMITTED:	14098	0-7-07
DATE:		
R.C.E. NO.:		
DATE:		

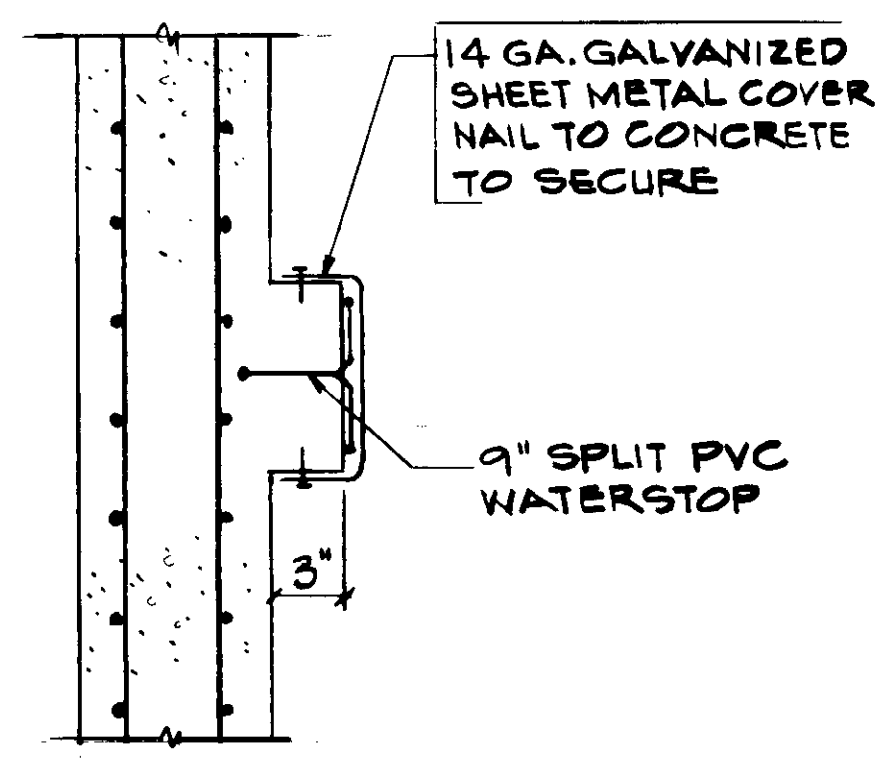
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 TYPICAL DETAILS, SHEET 3

SHEET  
**S1.4**

03948  
 JOB No. 4928  
 STRUCTURAL ENGINEERS  
**JOHN A. MARTIN & ASSOCIATES, INC.**  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 283 0490

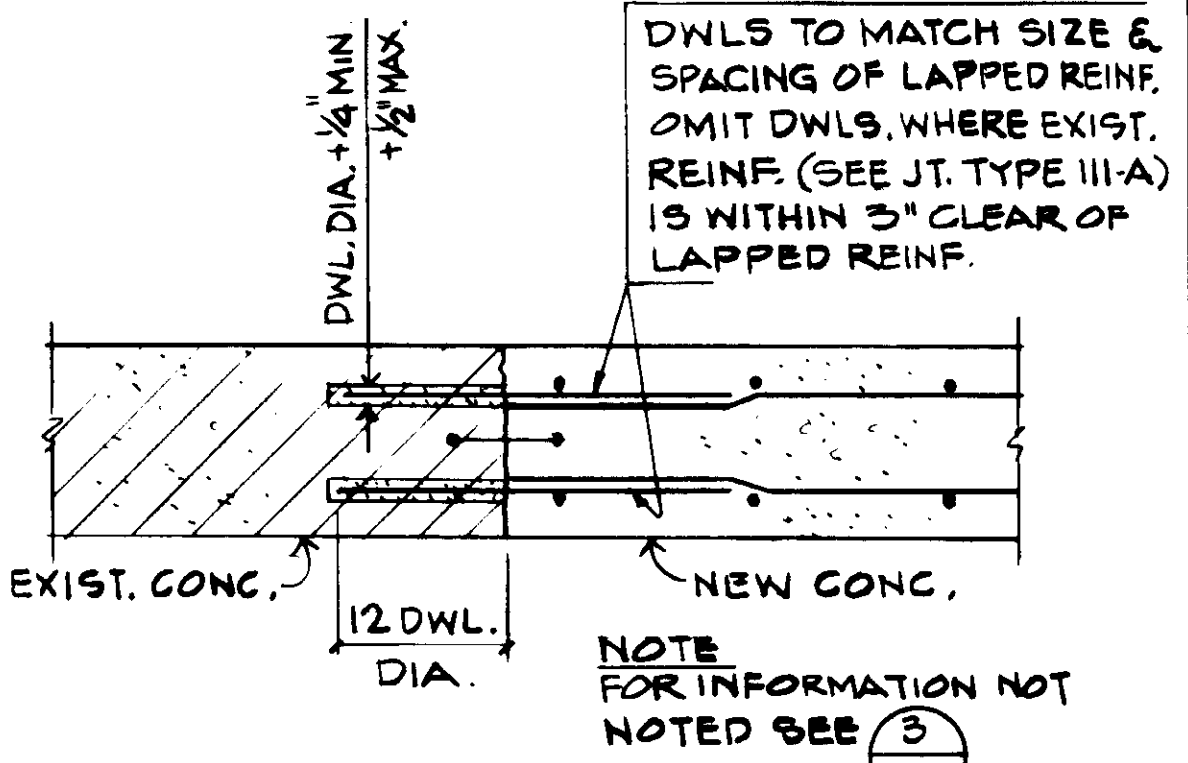




VERTICAL EXP. JT. AT FUTURE EXPANSION

EXPANSION JOINT TYPE III

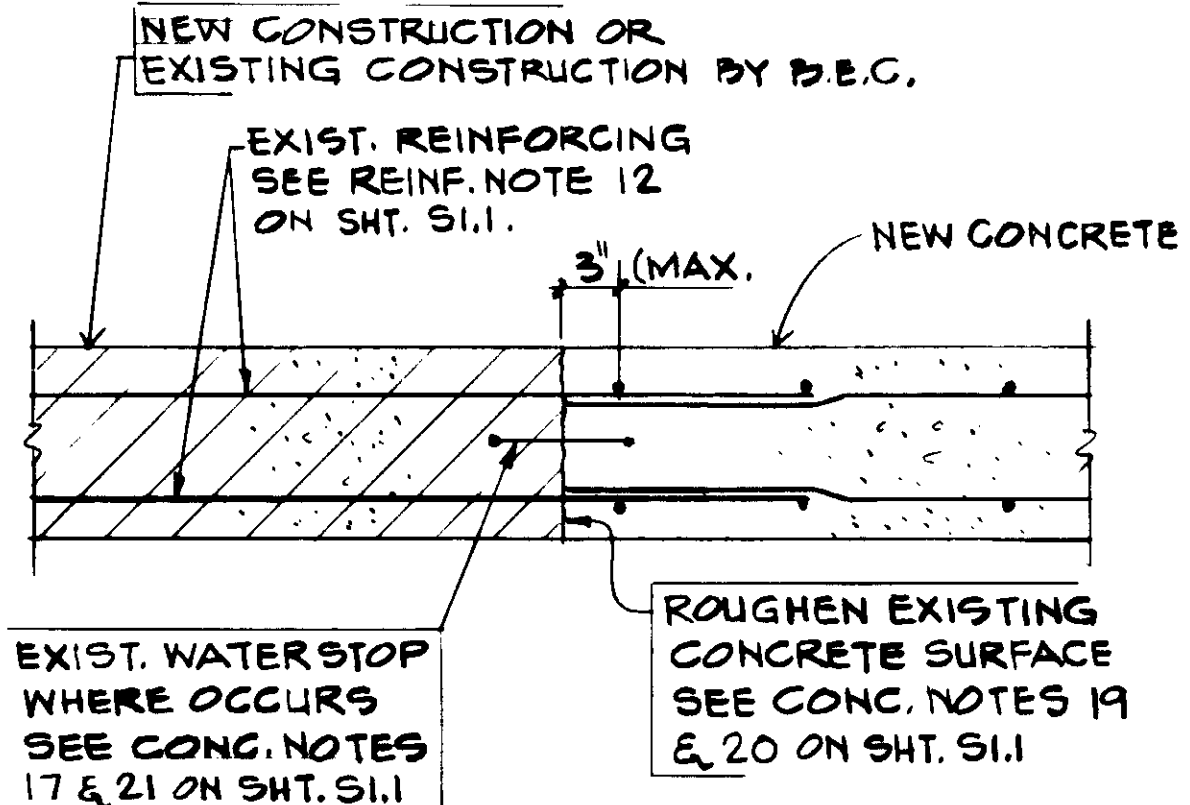
5



EXISTING CONCRETE TO NEW CONCRETE

CONSTRUCTION JOINT III-B

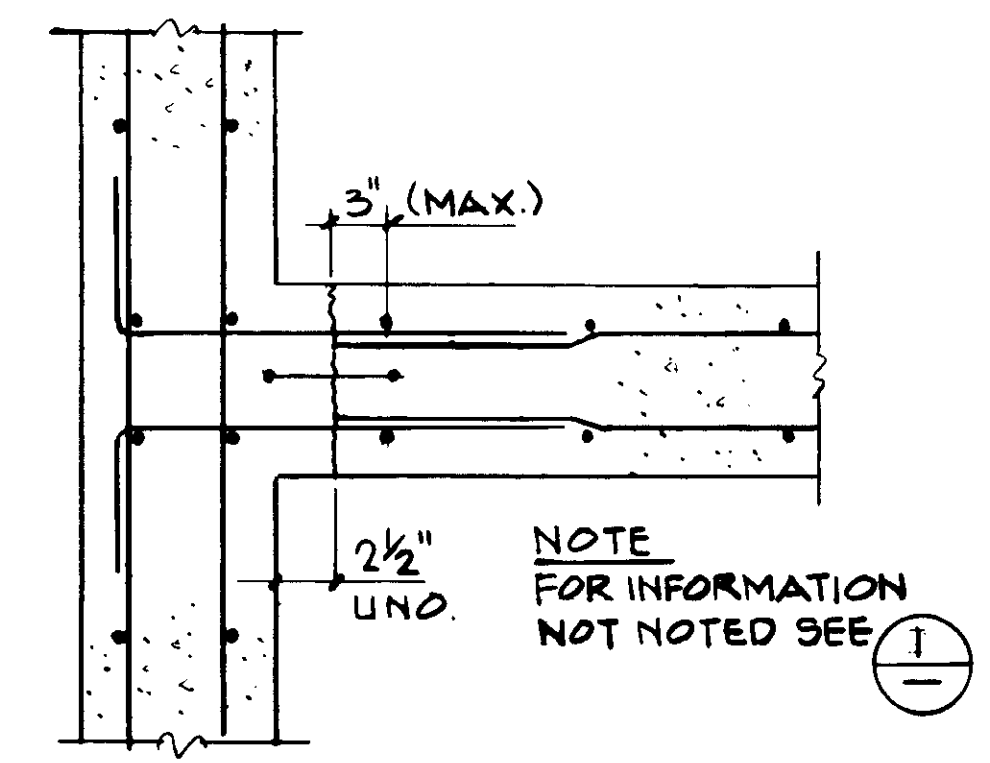
4



EXISTING CONCRETE TO NEW CONCRETE

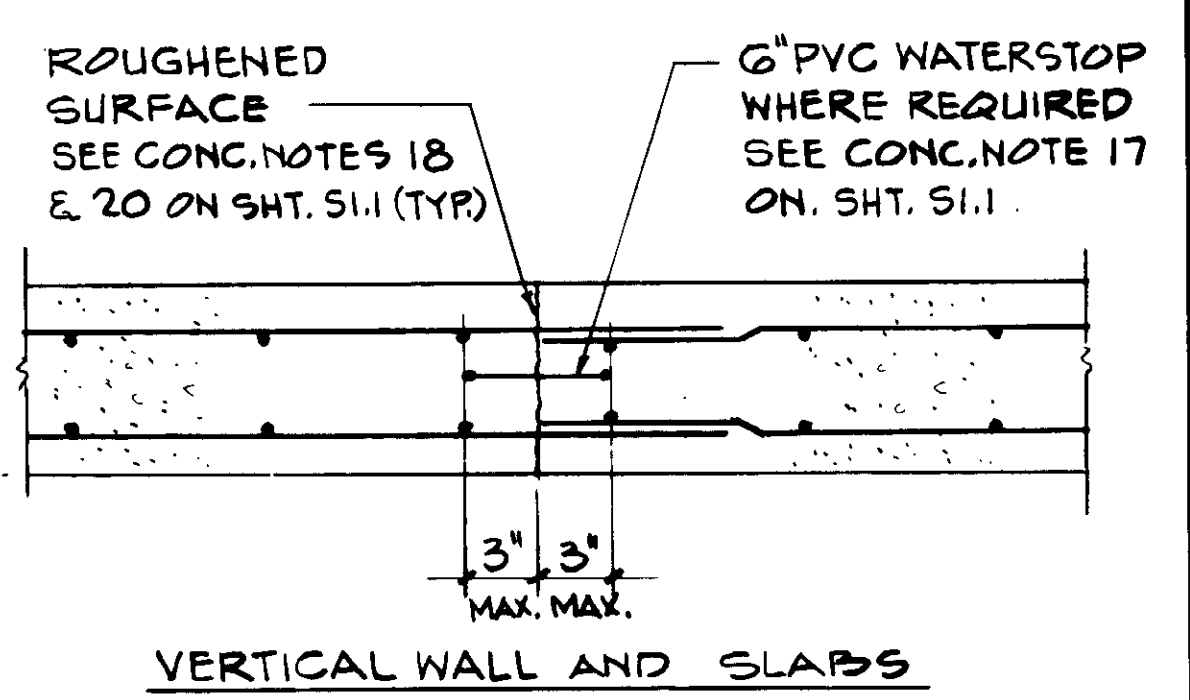
CONSTRUCTION JOINT III-A

3



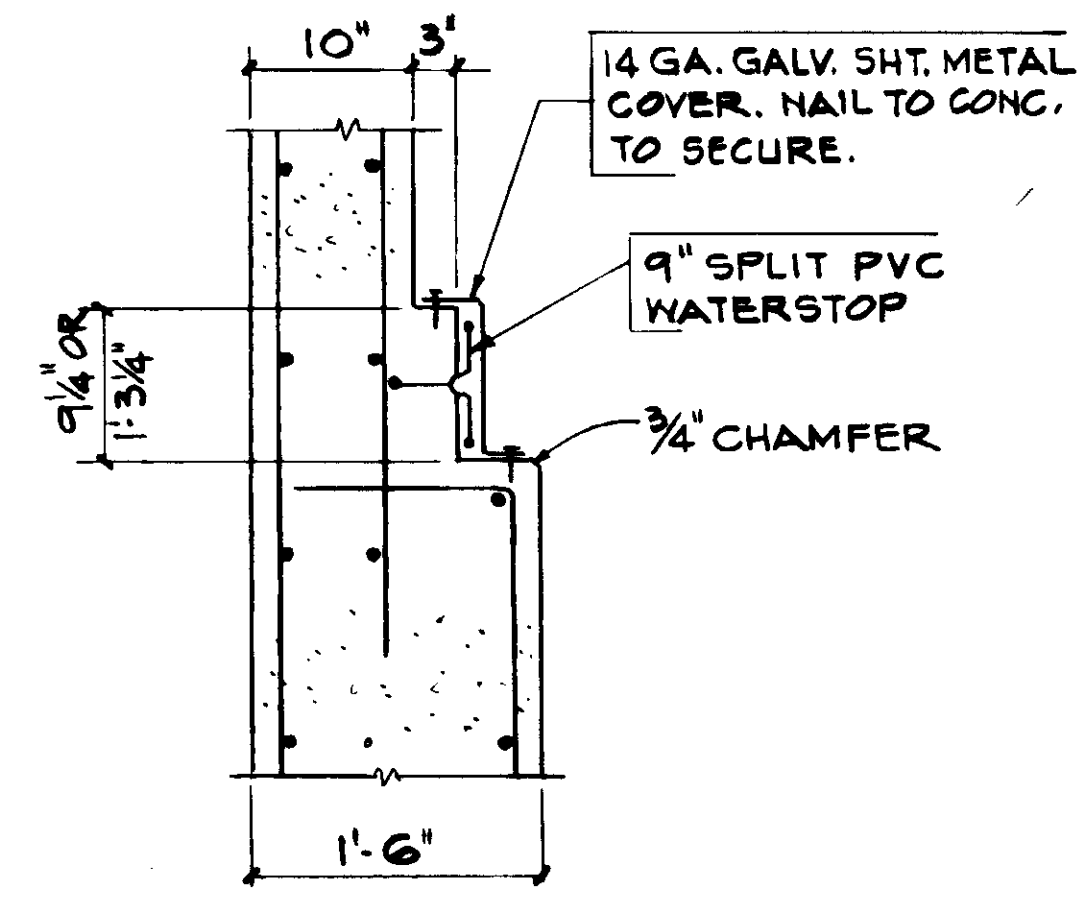
CONSTRUCTION JOINT TYPE II

2



CONSTRUCTION JOINT TYPE I

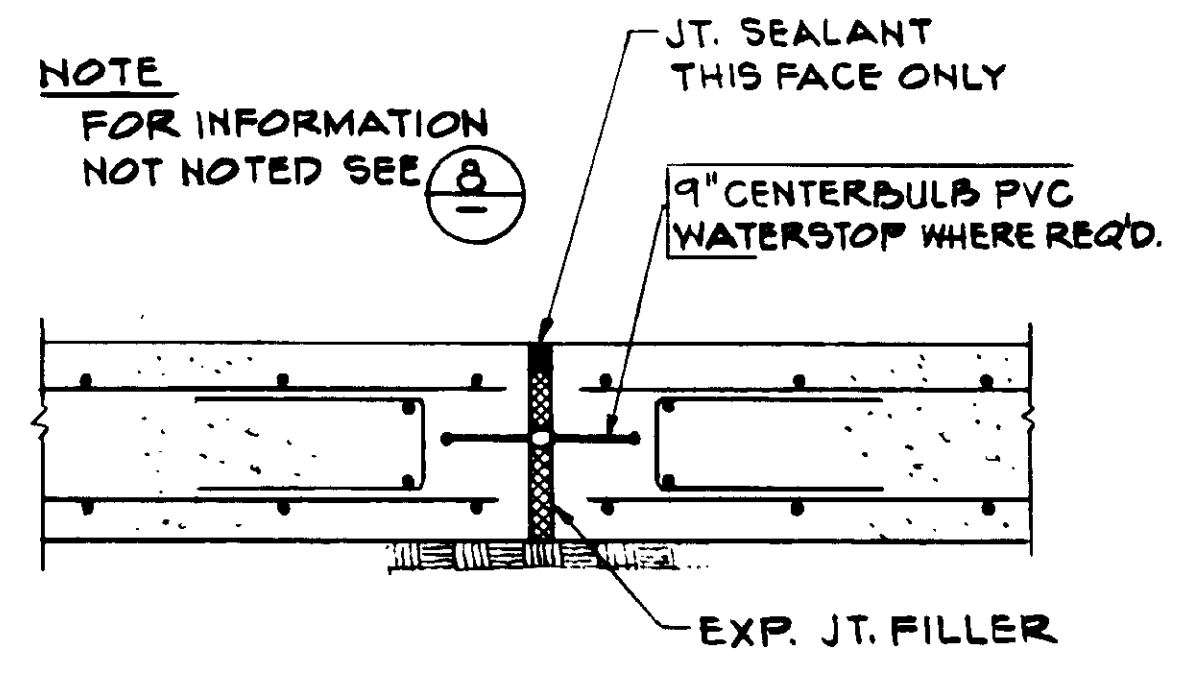
1



HORIZ. EXP. JT. AT FUTURE EXPANSION

EXPANSION JOINT TYPE IV

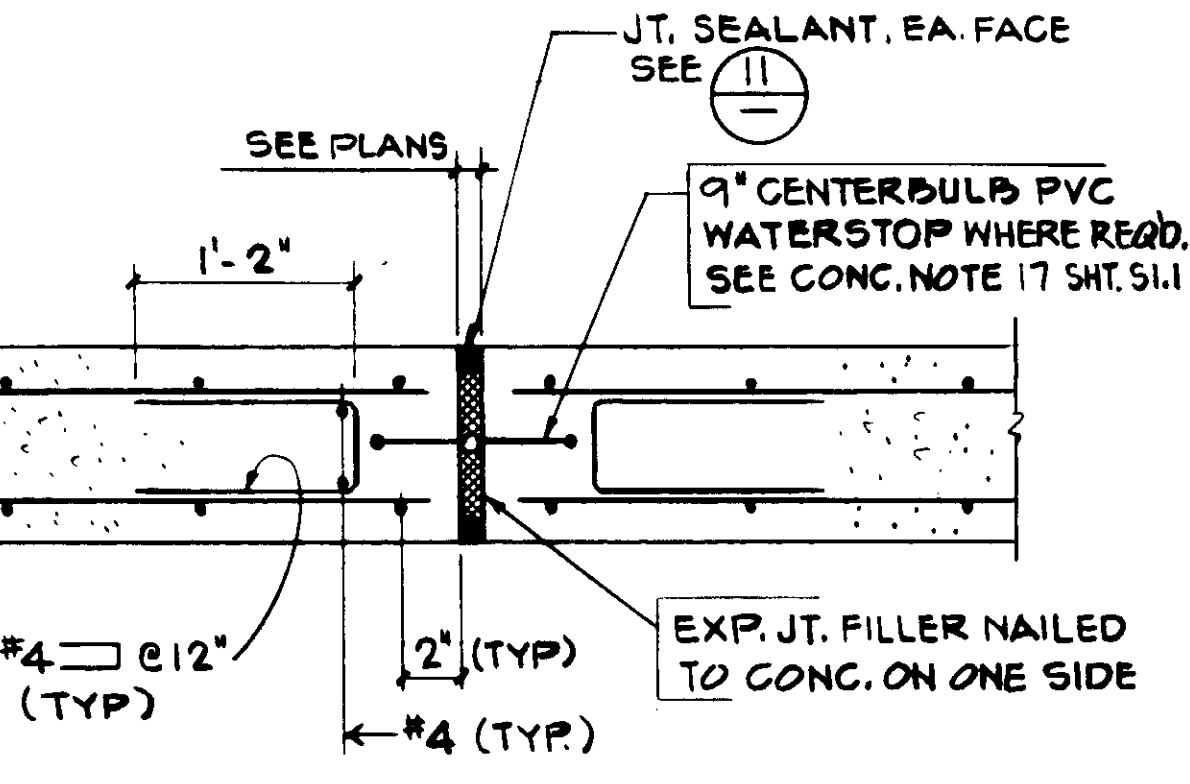
10



SLAB ON GRADE EXP. JT.

EXPANSION JOINT TYPE II

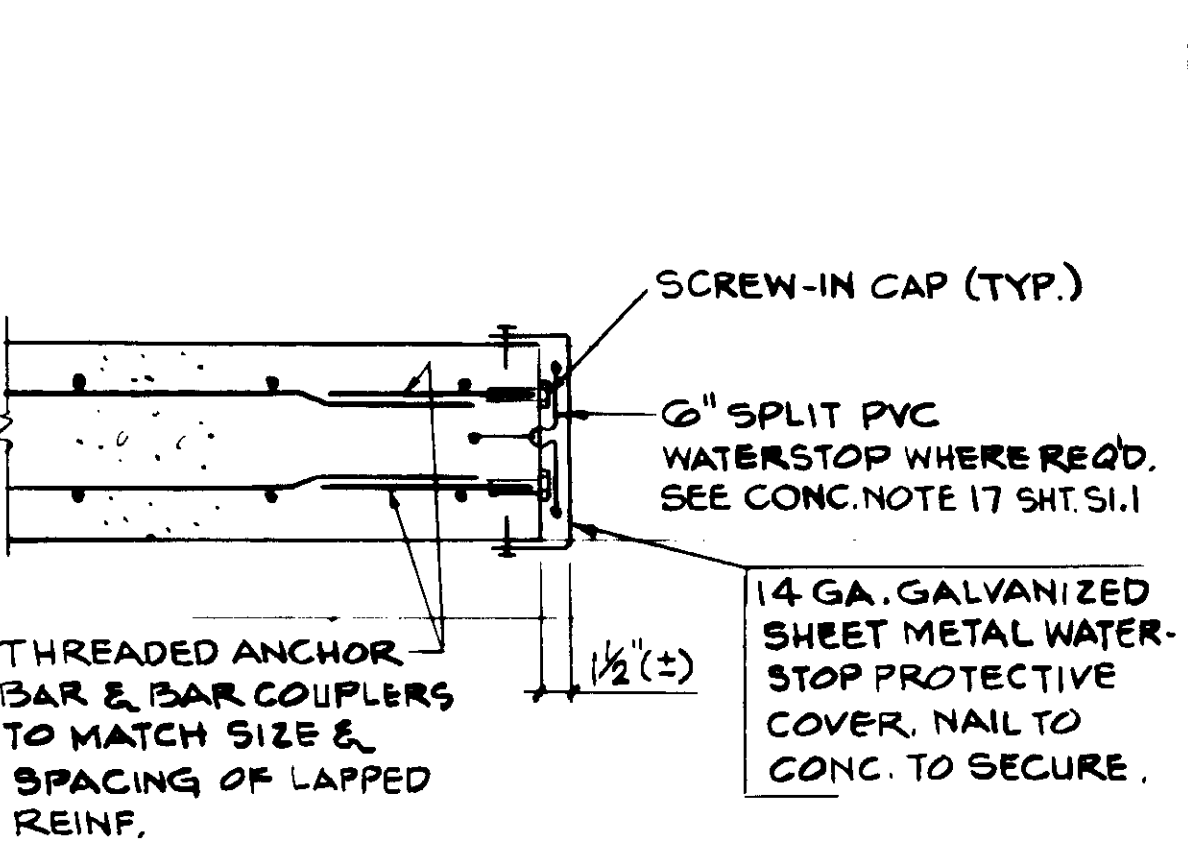
9



VERT. WALL OR ELEVATED SLAB

EXPANSION JOINT TYPE I

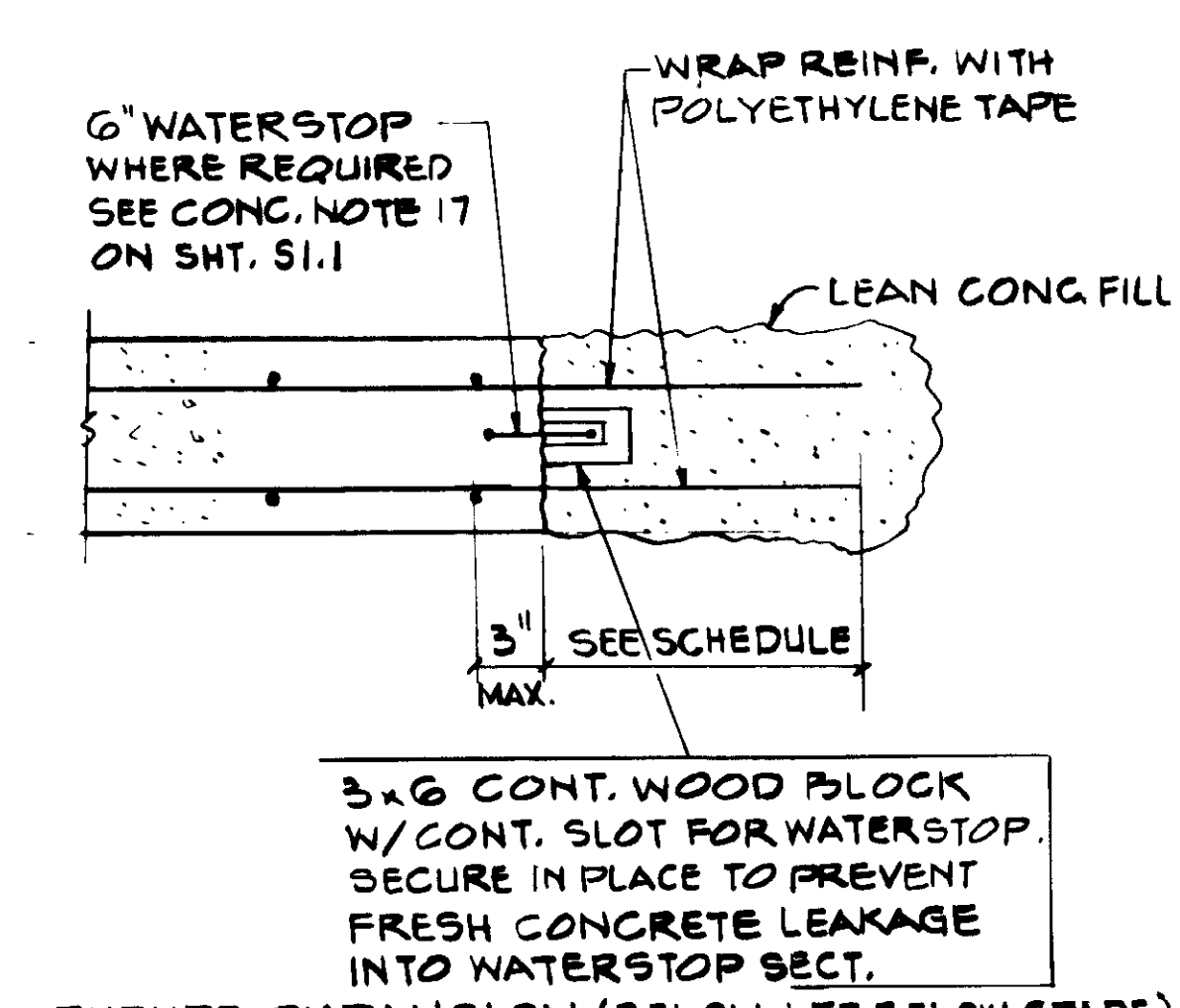
8



FUTURE EXPANSION ABOVE 1 FT. BELOW GRADE

CONSTRUCTION JOINT TYPE V

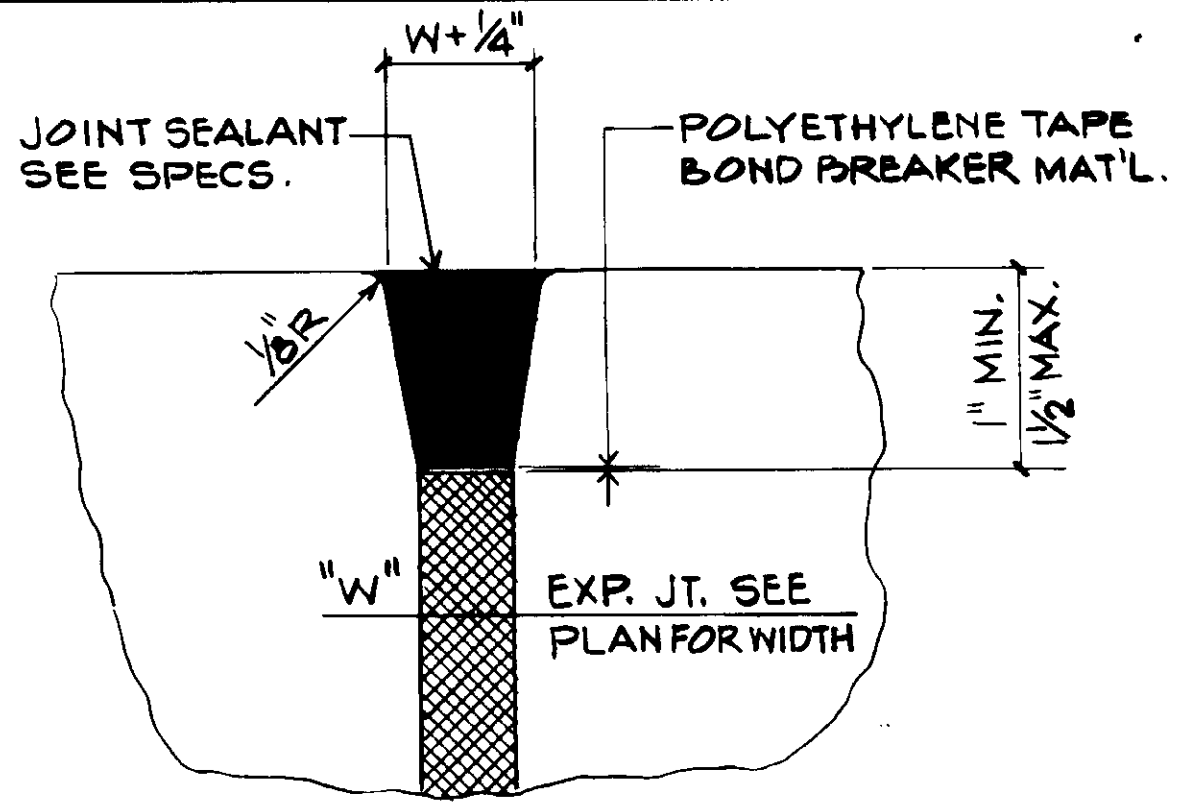
7



FUTURE EXPANSION (BELOW 1 FT. BELOW GRADE)

CONSTRUCTION JOINT TYPE IV

6



JOINT SEALANT DETAIL

11

RECORD DRAWINGS  
 PREPARED BY: KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: NONE

DESIGNED: R. LEE

DRAWN: B. OKUDA

CHECKED: K. BENUSKA

SUBMITTED: *[Signature]* 14038 2-7-87

KALEX CONSULTING ENGINEERS R.C.E. NO. DATE

ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**

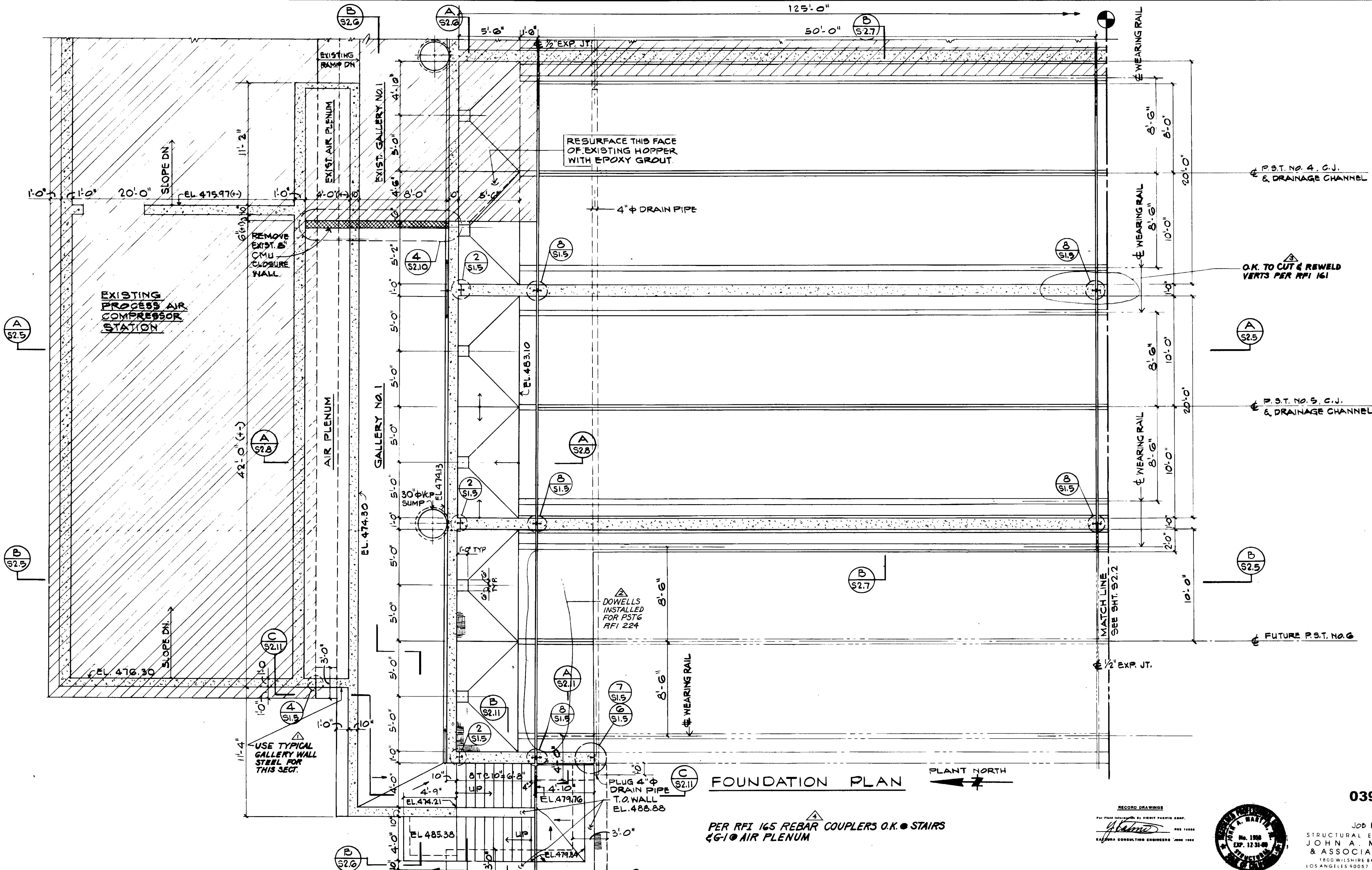
Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

03949

TYPICAL DETAILS, SHEET 4

SHEET S1.5



**FOUNDATION PLAN** PLANT NORTH

PER RFI 165 REBAR COUPLERS O.K. • STAIRS  
 4G-10 AIR PLENUM

03950

RECORD DRAWING  
 PREPARED BY: ERIC PASCIO  
 KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS



Job N. 4928  
 STRUCTURAL ENGINEERS  
**JOHN A. MARTIN & ASSOCIATES, INC.**  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483-0490

REV	DATE	BY	DESCRIPTION
1	5-3-87	A.B.	REV. PER K.P.C.
2	5-3-87	A.B.	REV. PER K.P.C.
3	5-3-87	A.B.	REV. PER K.P.C.
4	5-3-87	A.B.	REV. PER K.P.C.

SCALE: 1/4" = 1'-0"	DESIGNED BY: R. OKUDA	DATE: 8-7-87
CHECKED BY: K. PENUSKA	PROJECT NO.: 14038	R.C.E. NO.:
APPROVED BY: <i>[Signature]</i>	DATE: 8-7-87	

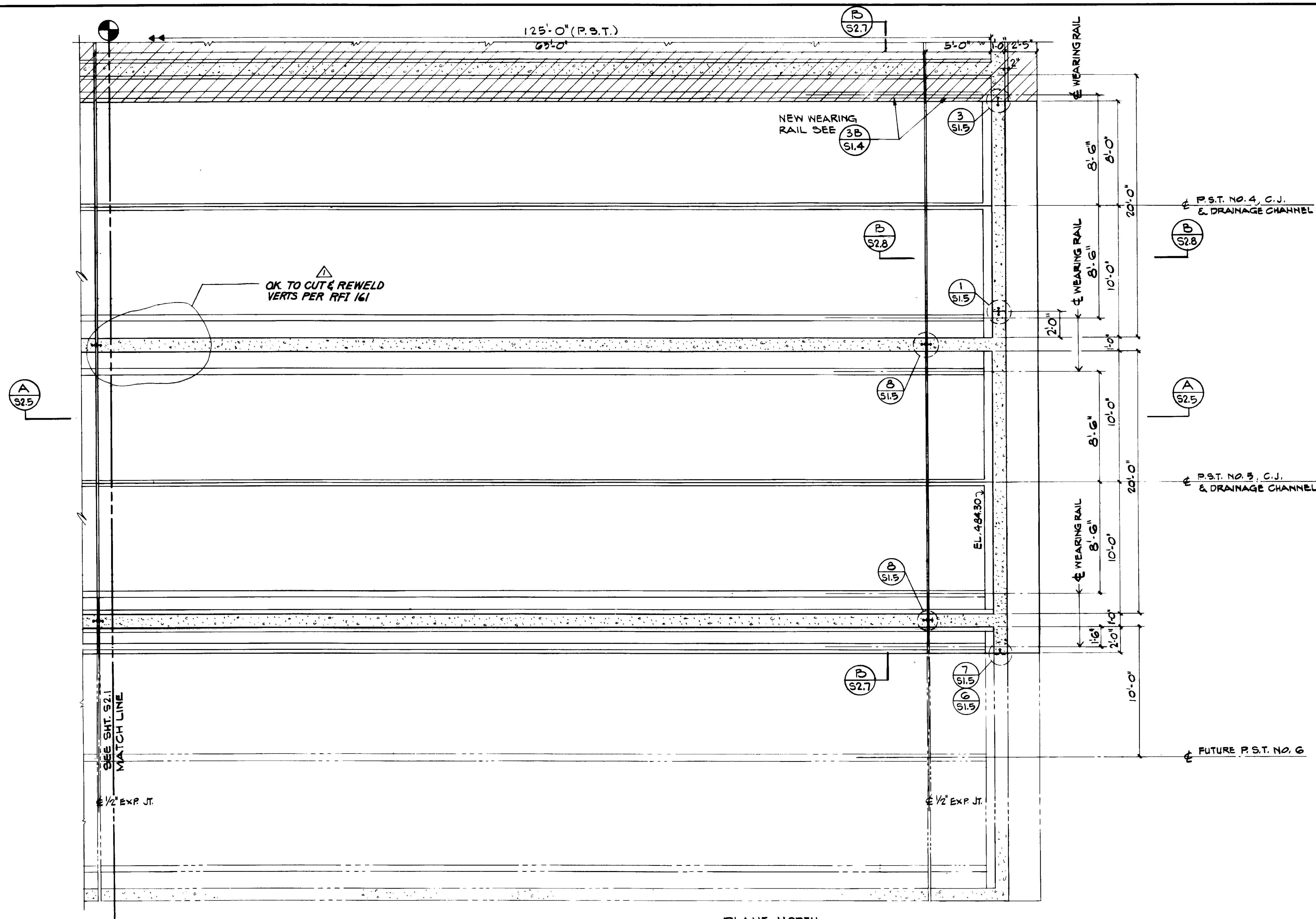
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**PRIMARY SEDIMENTATION TANK NOS. 4 AND 5**  
**FOUNDATION PLAN, SHEET 1**

SHEET  
**S2.1**

NOTES:

- 1. DO NOT OPERATE PRIMARY SEDIMENTATION TANKS WHEN BACKFILL IS NOT IN PLACE.

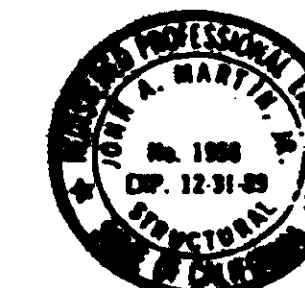


FOUNDATION PLAN



03951

RECORD DRAWING  
 For Field Use Only. By SHERIFF PACIFIC CORP.  
 12-31-89  
 KATSURA CONSULTING ENGINEERS JUNE 1989



Job No. 4928  
 STRUCTURAL ENGINEERS  
 JOHN A. MARTIN  
 & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483 6490

REV	DATE	BY	DESCRIPTION

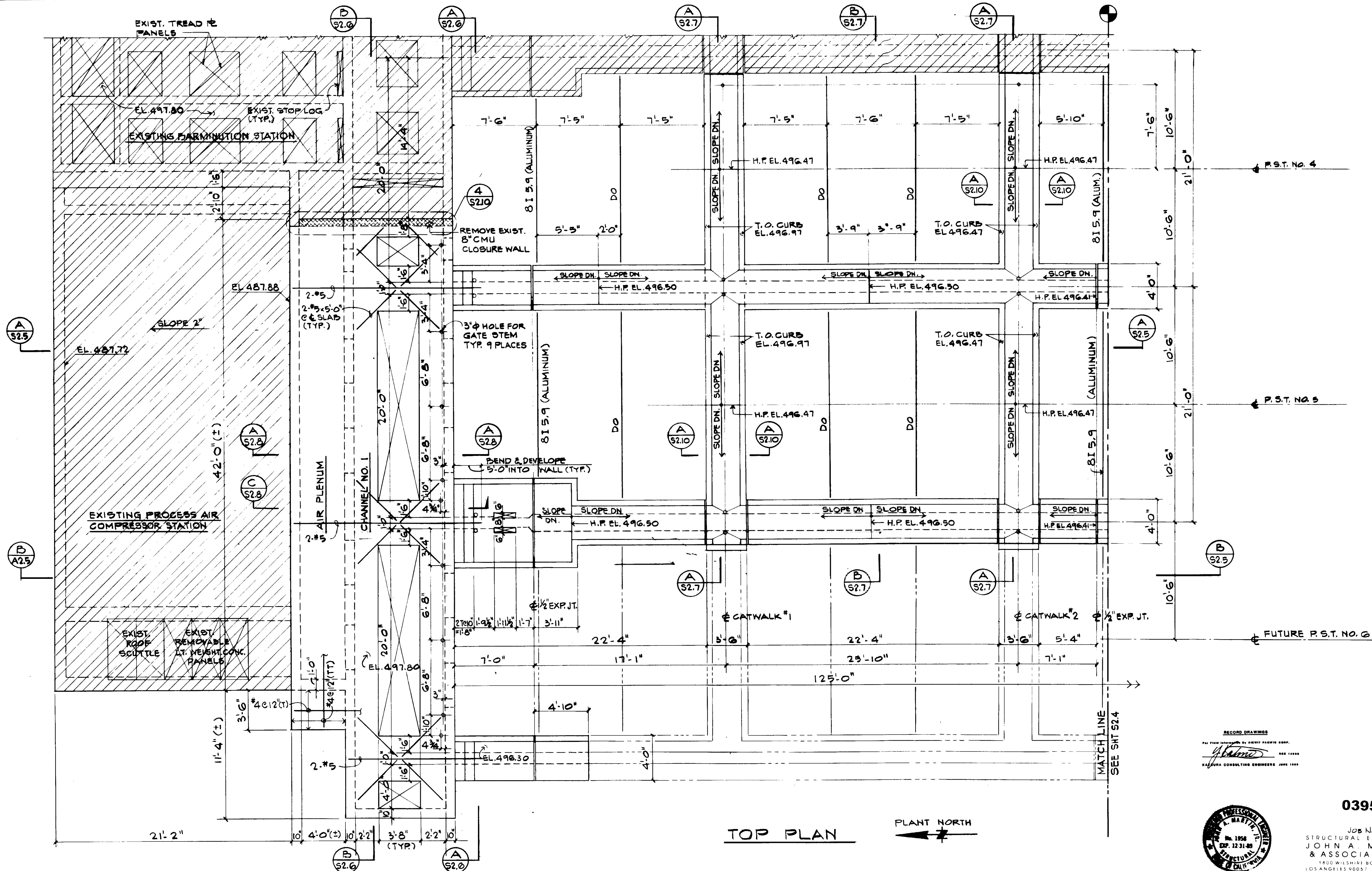
SCALE: 1/4" = 1'-0"	DESIGNED R. LEE	SUBMITTED <i>[Signature]</i>	14030	DATE 2-7-87
	DRAWN K. DENUSKA	CHECKED ALEXANDER ENGINEERS	513	R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

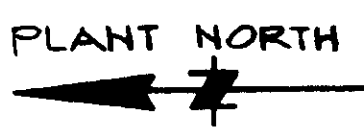
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**PRIMARY SEDIMENTATION TANK NOS. 4 AND 5**  
**FOUNDATION PLAN, SHEET 2**

SHEET S2.2





TOP PLAN



RECORD DRAWINGS  
 PREPARED BY: KATYURA CONSULTING ENGINEERS  
 JOHN A. MARTIN & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483 6490



03952

Job No. 4925  
 STRUCTURAL ENGINEERS  
 JOHN A. MARTIN & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483 6490

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

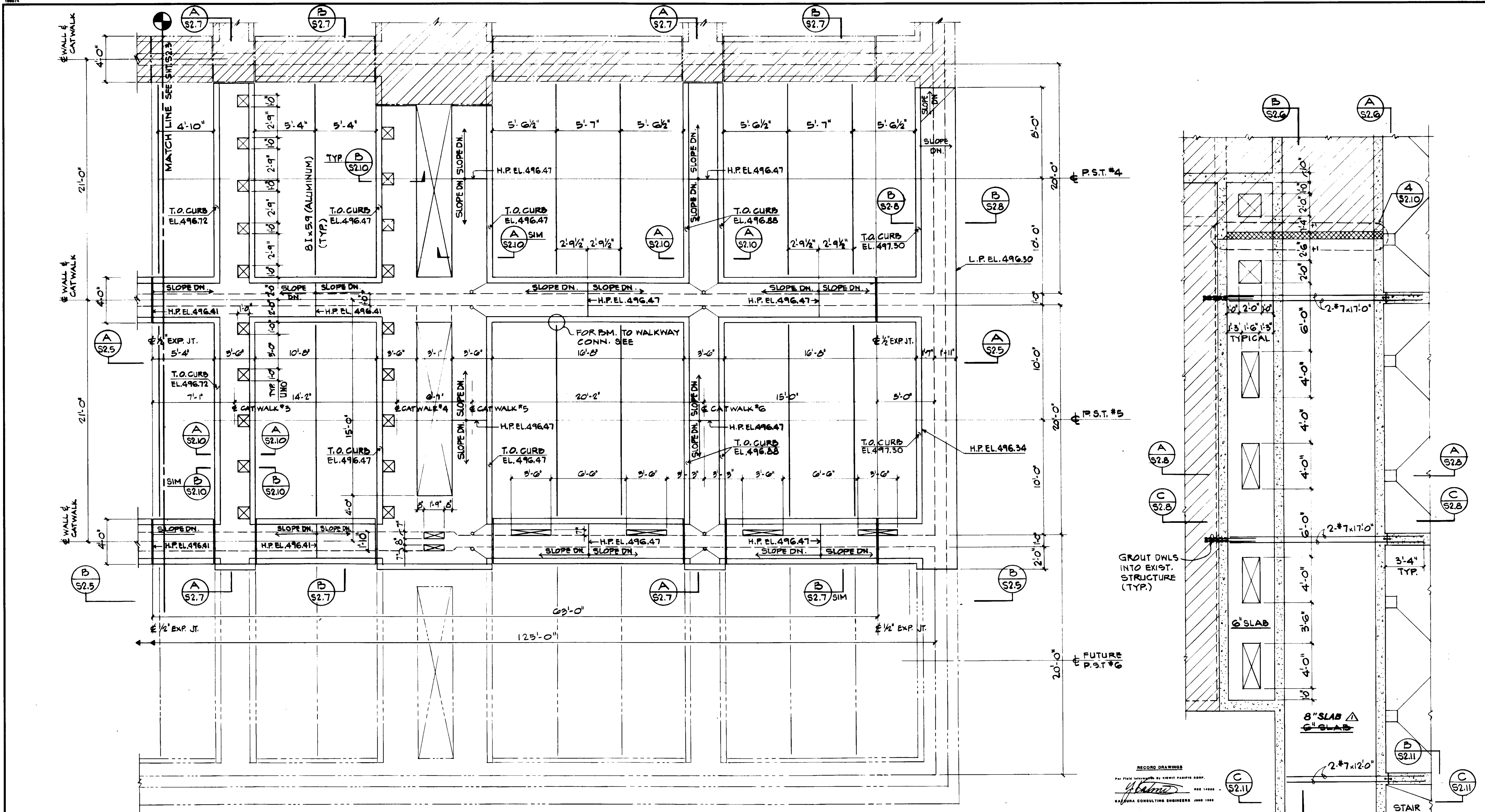
SCALE: 1/4" = 1'-0"	DESIGNED R. LEE	SUBMITTED <i>Katya</i> 14038 8-7-87
DRAWN K. DENUSKA	CHECKED	KATYURA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

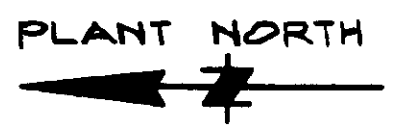
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**PRIMARY SEDIMENTATION TANK NOS. 4 AND 5**  
**TOP PLAN, SHEET 1**

SHEET S2.3





TOP PLAN



RECORD DRAWING  
 PREPARED BY JOHN A. MARTIN  
 JOHN A. MARTIN & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483 6490



Job No. 4928  
 STRUCTURAL ENGINEERS  
 JOHN A. MARTIN  
 & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483 6490

03953

PARTIAL PLAN  
 AT EL. 487.80

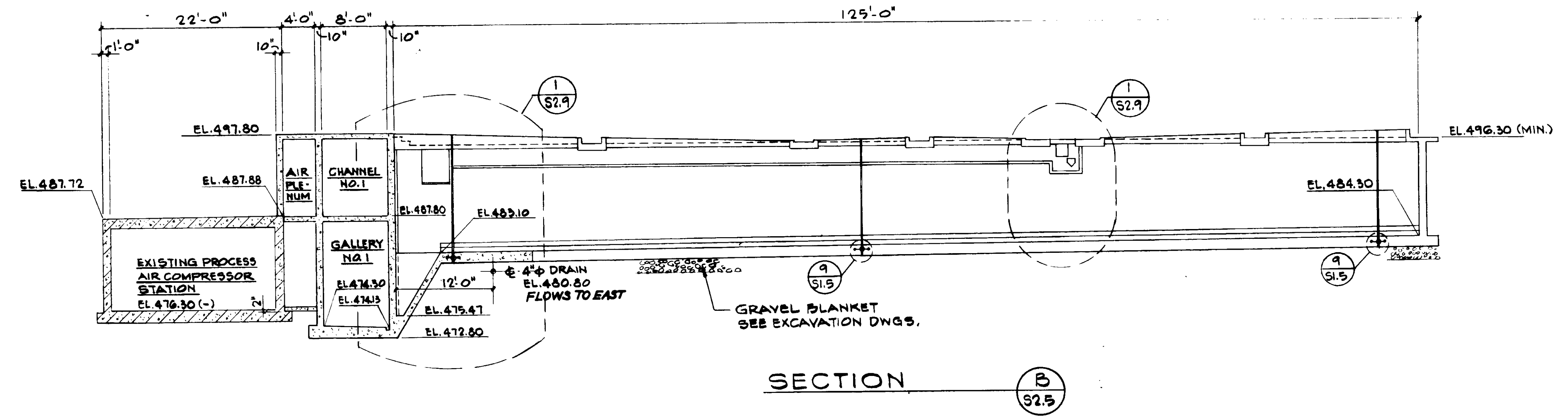
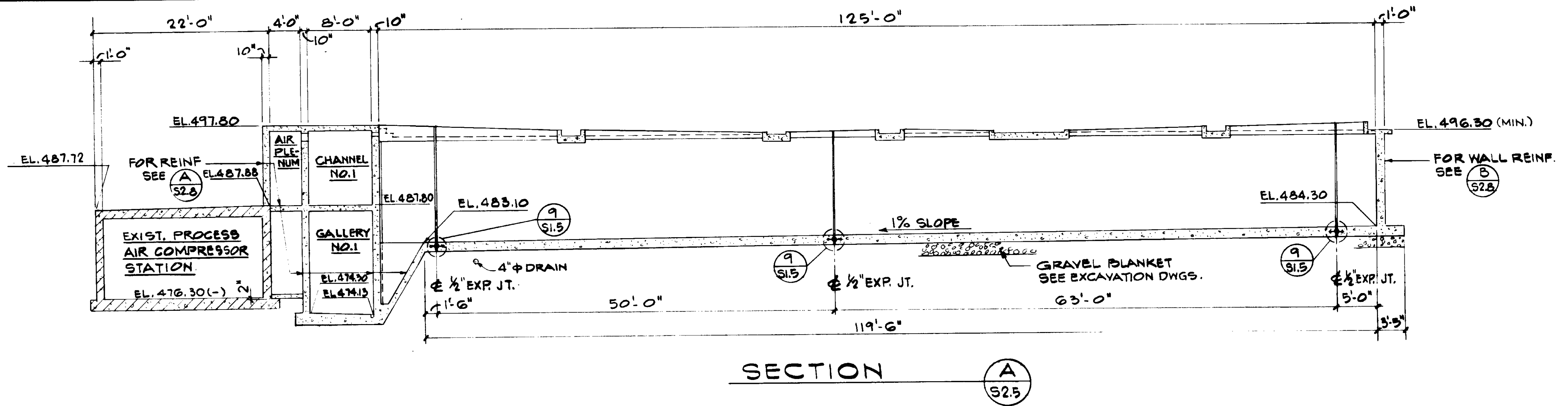
REV	DATE	BY	DESCRIPTION

SCALE: 1/4" = 1'-0"	DESIGNED R. OKUDA	SUBMITTED <i>[Signature]</i> 14038 8-7-87
	DRAWN K. PENUSKA	KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE
	CHECKED	ALEXANDER ENGINEERS R.C.E. NO. DATE

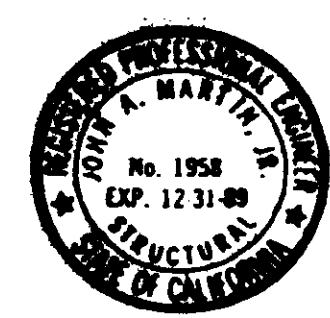
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PRIMARY SEDIMENTATION TANK NOS. 4 AND 5  
 TOP PLAN, SHEET 2

SHEET  
**S2.4**



RECORD DRAWING  
 PREPARED BY: KATSUMI  
 KATSUMI CONSULTING ENGINEERS JUNE 1987



03954

JOB No. 492B  
 STRUCTURAL ENGINEERS  
 JOHN A. MARTIN & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483 6490

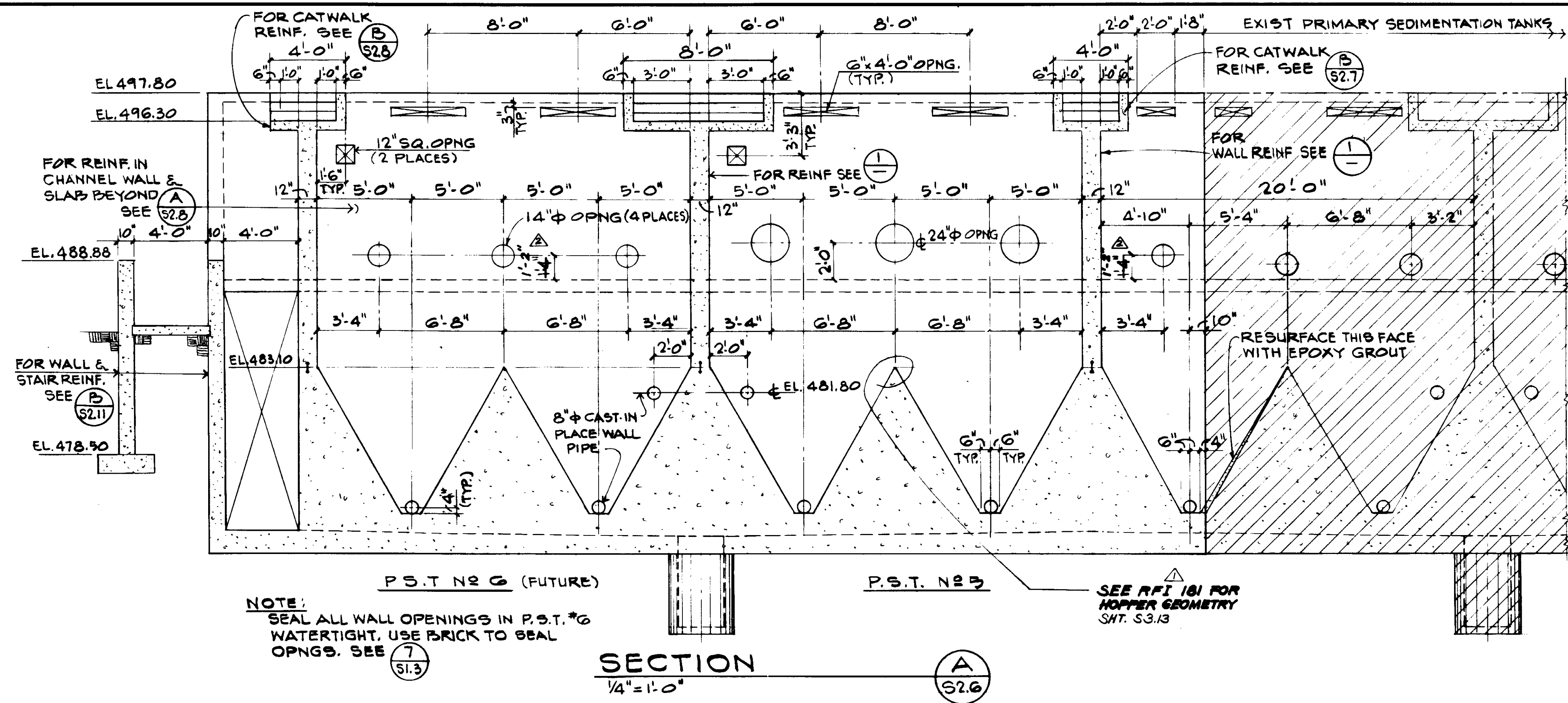
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: 1/8" = 1'-0"	DESIGNED R. OKUDA	SUBMITTED <i>Katsumi</i> 14038 8-7-87
DRAWN K. DENUSKA	CHECKED	KATSUMI CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS 813 R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

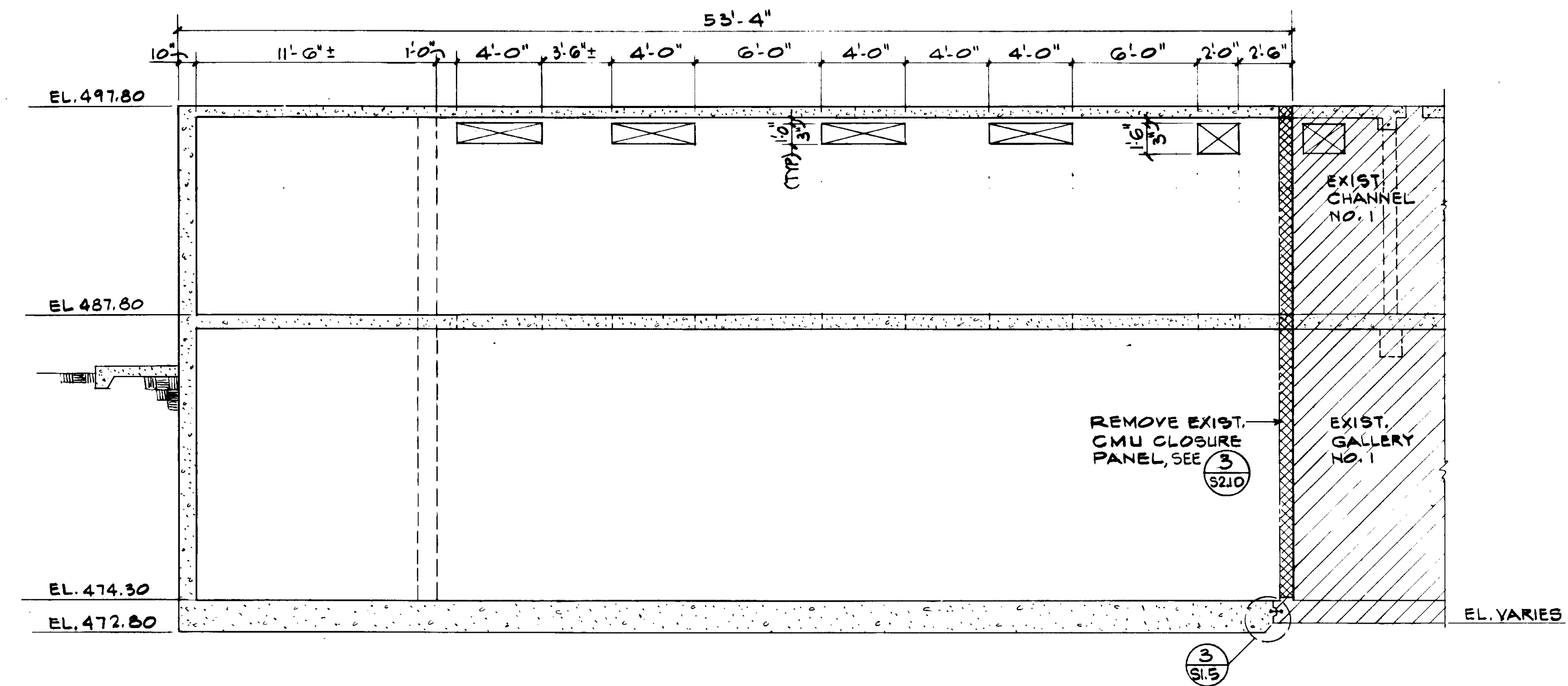
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**PRIMARY SEDIMENTATION TANK NOS. 4 AND 5**  
**ELEVATIONS**

SHEET  
**S2.5**

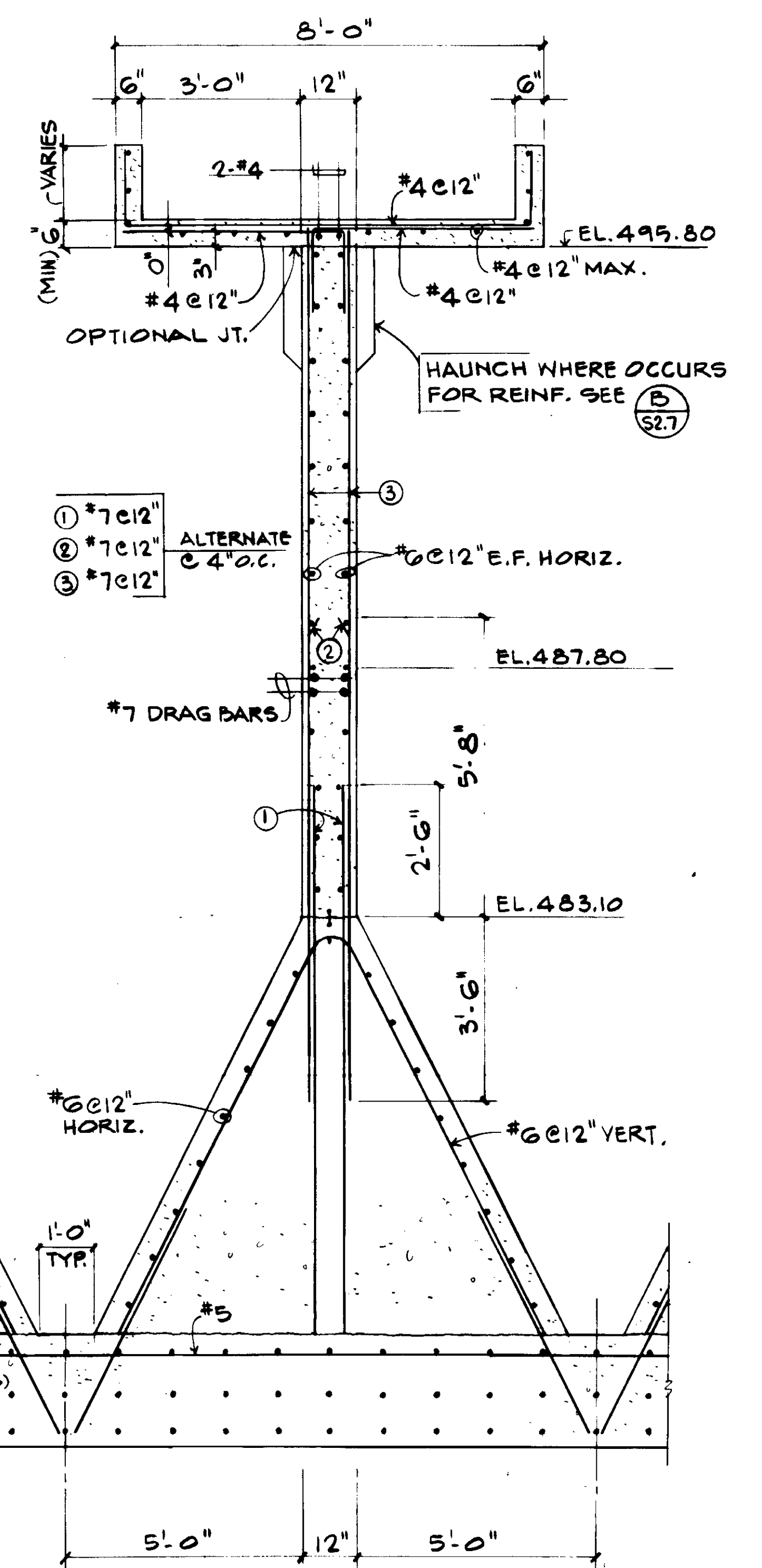


NOTE:  
SEAL ALL WALL OPENINGS IN P.S.T. #6  
WATERTIGHT. USE BRICK TO SEAL  
OPNGS. SEE 7/S1.3

SECTION A  
1/4" = 1'-0"

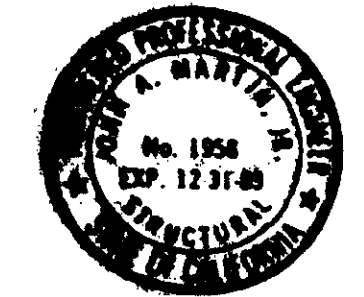


SECTION B  
1/4" = 1'-0"



DETAIL 1  
1/2" = 1'-0"

RECORD DRAWING  
KALEX ENGINEERS  
KATSURA CONSULTING ENGINEERS



Job No. 4928  
STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483 6490

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED	DESIGNED R. OKUDA	CHECKED K. PENUSKA

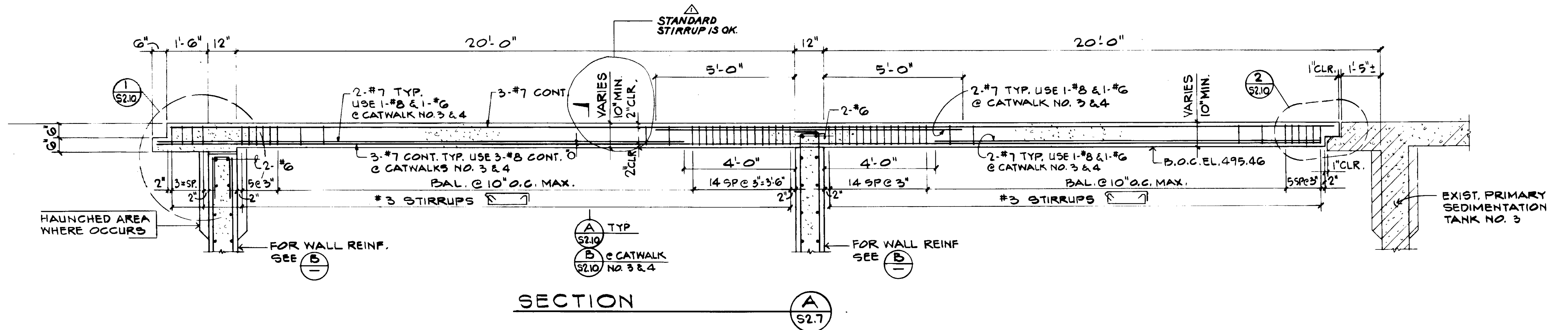
SUBMITTED: *[Signature]* 14036 8-7-87  
KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

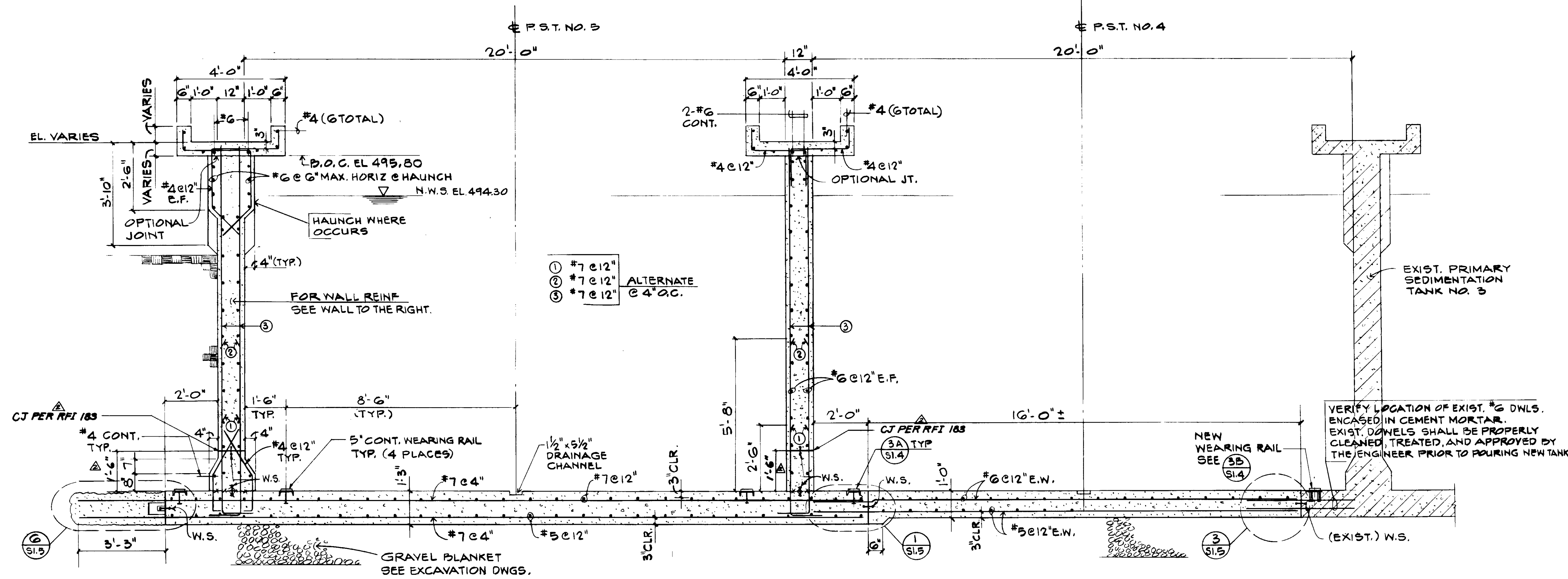
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**PRIMARY SEDIMENTATION TANK NOS. 4 AND 5**  
**SECTIONS AND DETAILS, SHEET 1**

SHEET S2.6





SECTION A  
S2.7



SECTION B  
S2.7

03956

RECORD DRAWINGS  
No. 1558  
DATE 12-31-80  
KATSURA CONSULTING ENGINEERS / JUNE 1980



Job No. 4928  
STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90017 483 0490

REV	DATE	BY	DESCRIPTION

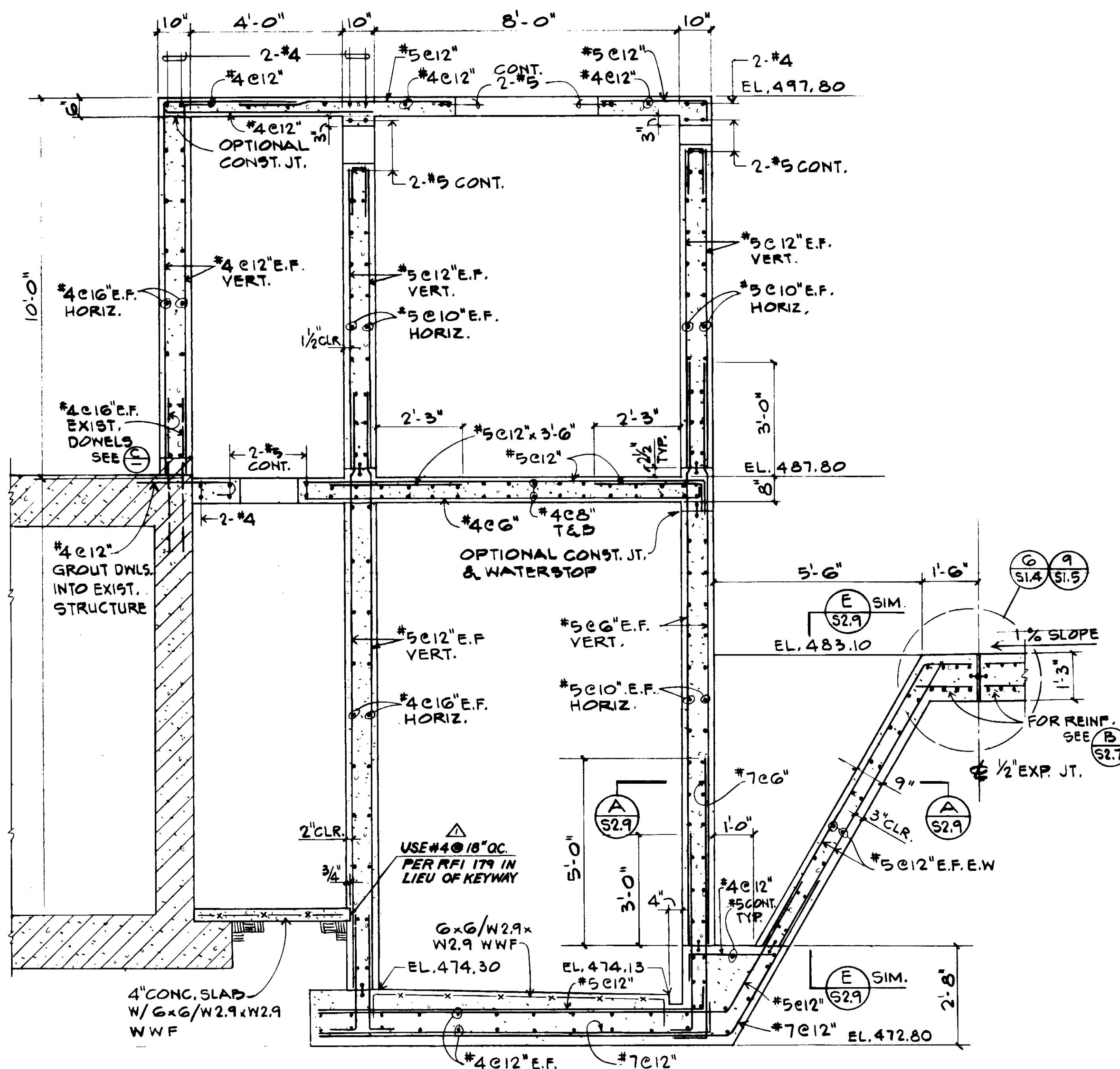
SCALE: 1/2" = 1'-0"  
DESIGNED: K. DENUSKA  
R. OKUDA  
DRAWN: R. LEE  
CHECKED: ALEXANDER ENGINEERS

SUBMITTED: *[Signature]*  
KATSURA CONSULTING ENGINEERS  
14088 8-7-87  
R.C.E. NO. DATE

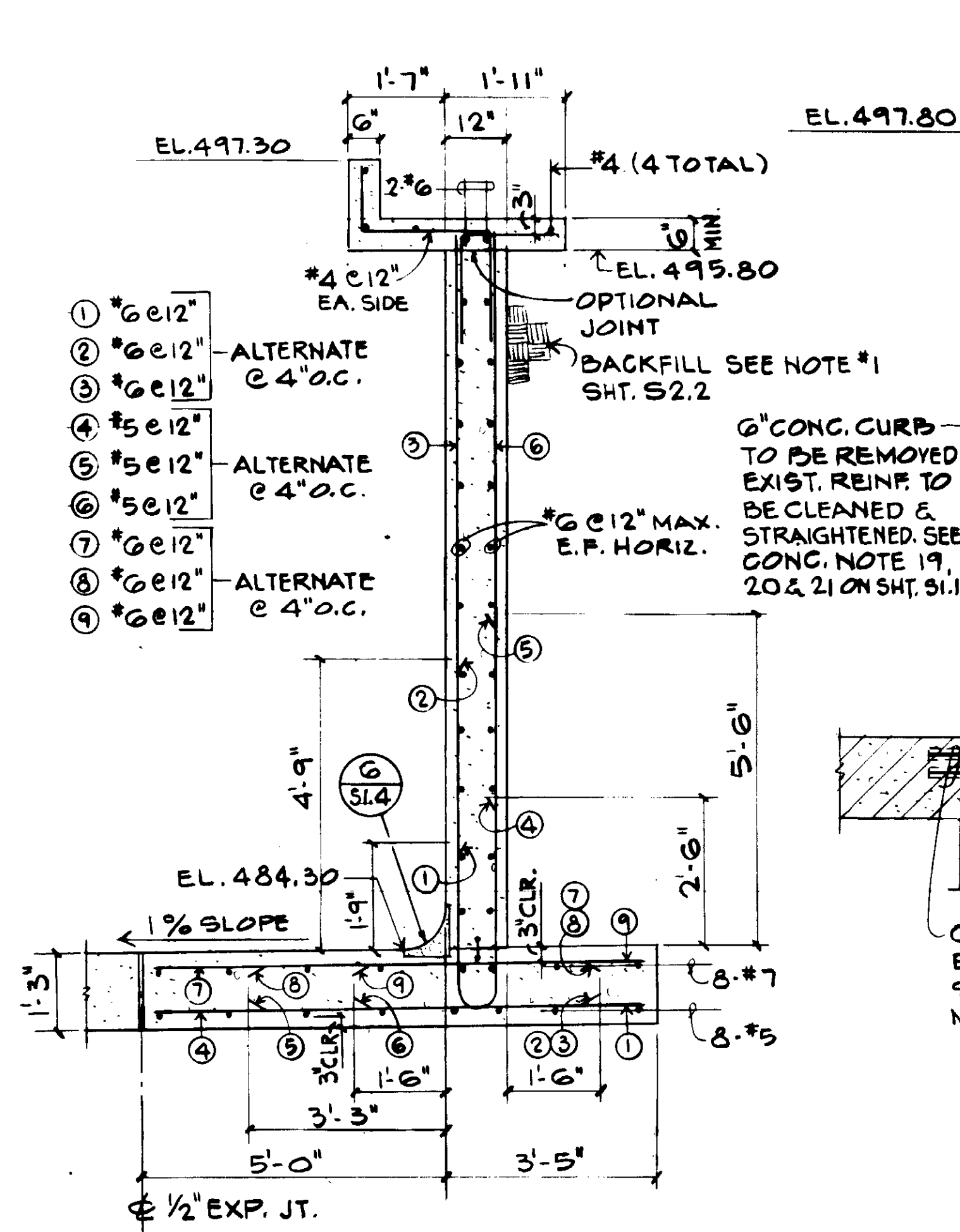
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**PRIMARY SEDIMENTATION TANK NOS. 4 AND 5**  
**SECTIONS AND DETAILS, SHEET 2**

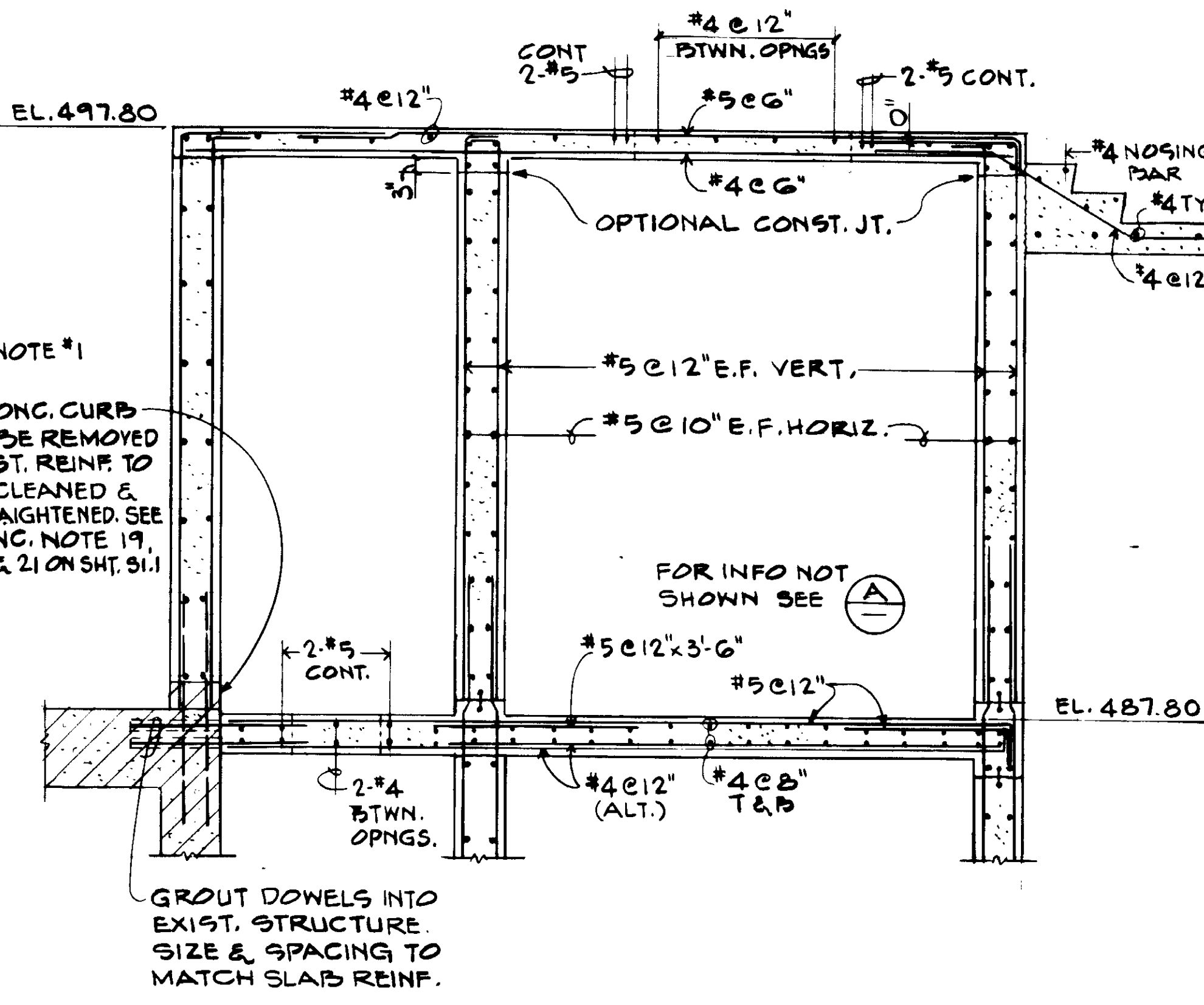
SHEET  
S2.7



SECTION A  
S2.8



SECTION B  
S2.8



SECTION C  
S2.8

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

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

DESIGNED BY: K. DENUSKA  
 CHECKED BY: R. OKUDA  
 DRAWN BY: R. LEE

SUBMITTED: *[Signature]* 14028 8-7-87  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE

513  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

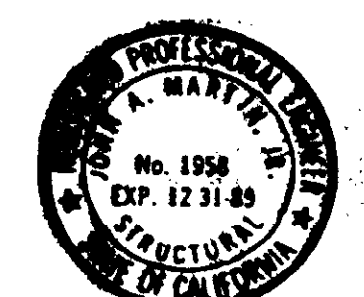
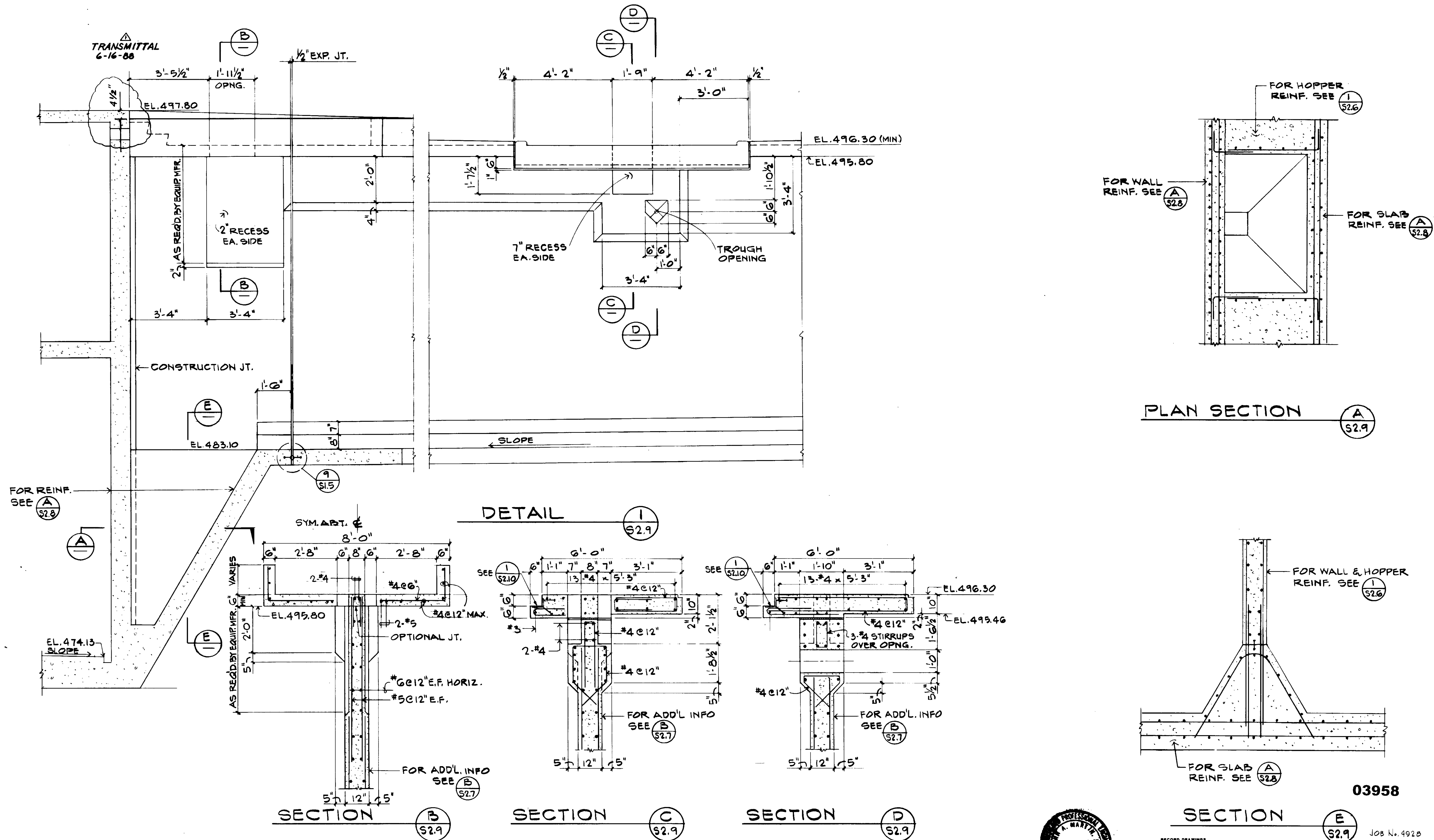
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

RECORD DRAWINGS  
 No. 1950 EXP. 12/31/86  
 KATSURA CONSULTING ENGINEERS JUNE 1986

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**PRIMARY SEDIMENTATION TANK NOS. 4 AND 5**  
**SECTIONS AND DETAILS, SHEET 3**

03957  
 JOB N. 4928  
 STRUCTURAL ENGINEERS  
**JOHN A. MARTIN & ASSOCIATES, INC.**  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483 6490

SHEET S2.8



RECORD DRAWING  
 No. 1958  
 EXP. 12-31-85  
 JOHN A. MARTIN  
 STRUCTURAL ENGINEER  
 JOHN A. MARTIN & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483-6490

03958

REV	DATE	BY	DESCRIPTION

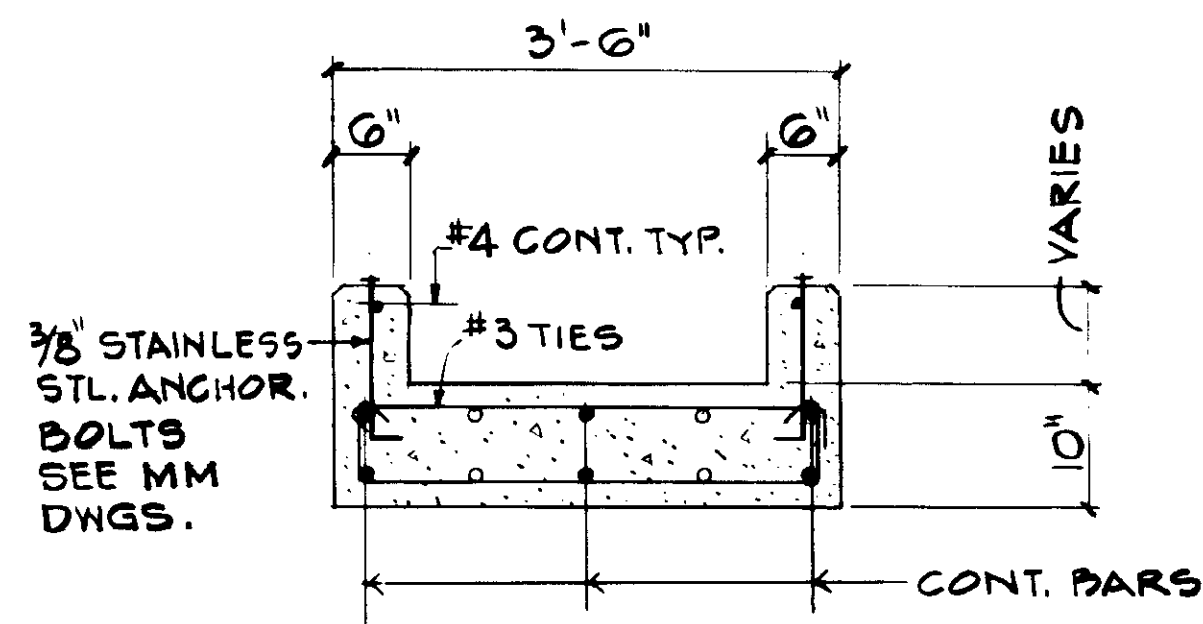
SCALE: 1/2" = 1'-0"	DESIGNED K. BENUSKA	SUBMITTED <i>[Signature]</i> 14038 8-7-87
CHECKED R. LEE	DATE R.C.E. NO.	DATE
	ALEXANDER ENGINEERS	R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

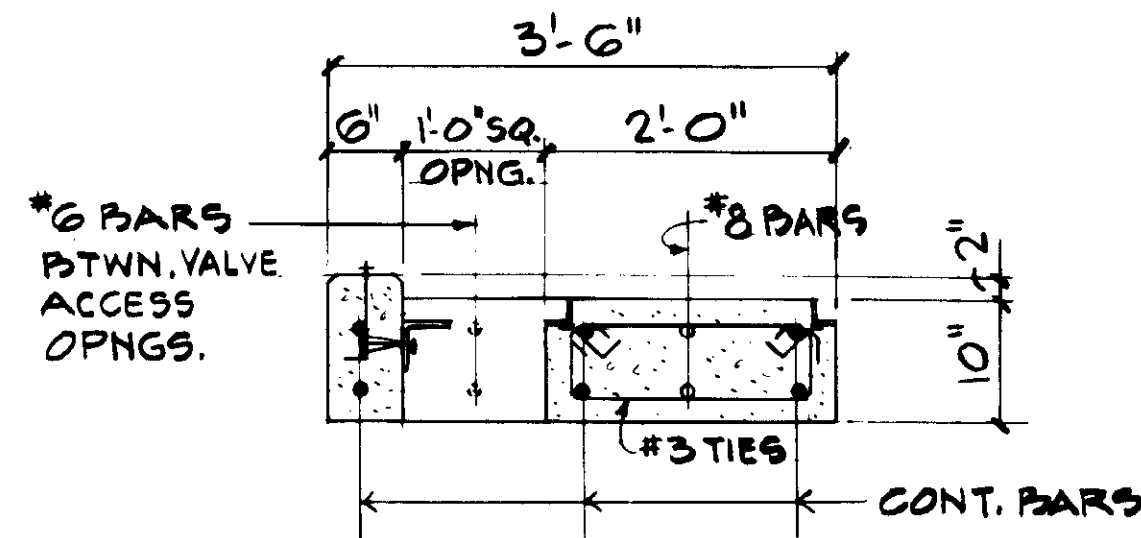
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**PRIMARY SEDIMENTATION TANK NOS. 4 AND 5**  
**SECTIONS AND DETAILS, SHEET 4**

SHEET  
S2.9

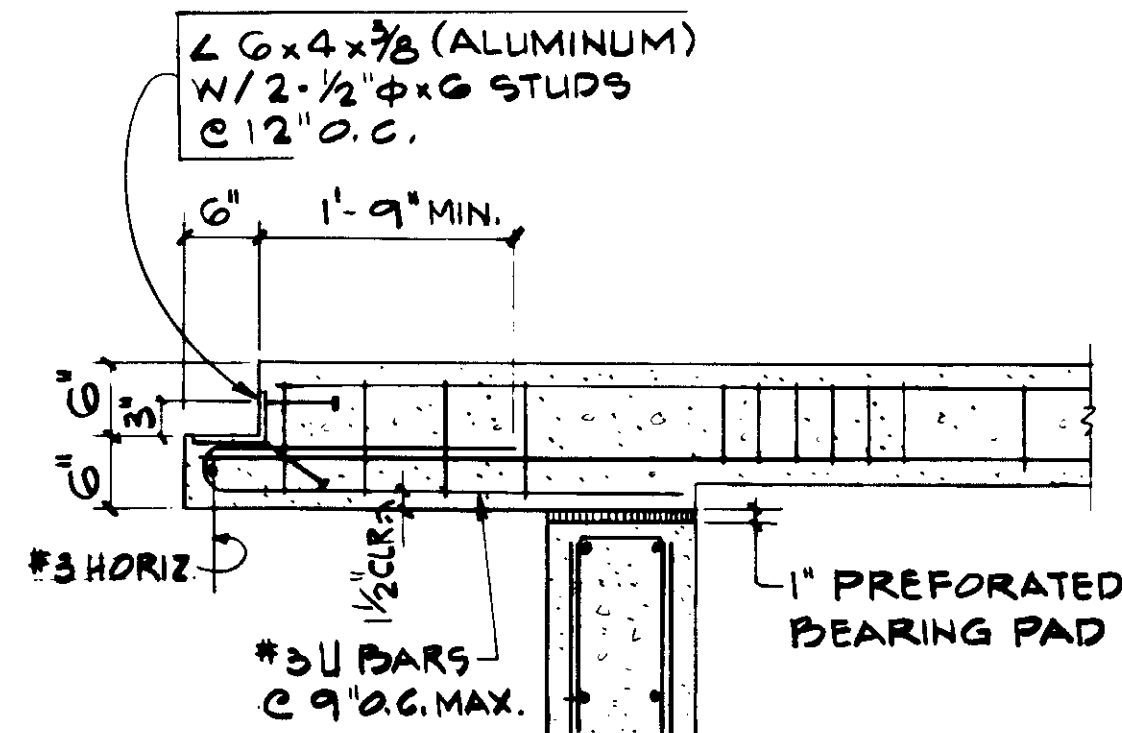




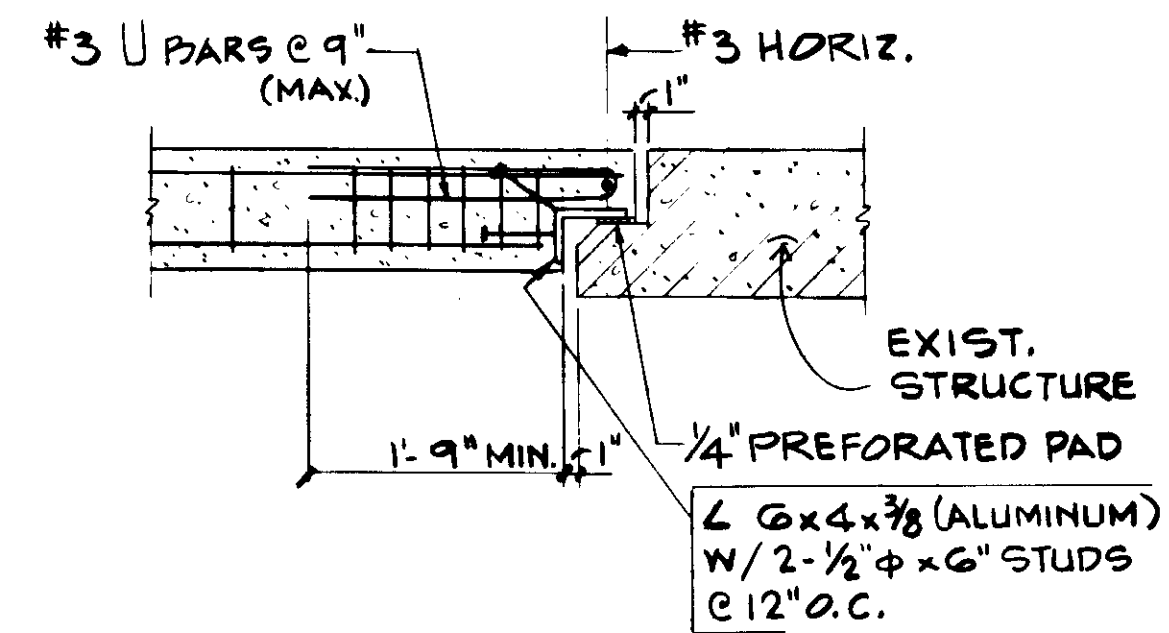
SECTION A  
S2.10



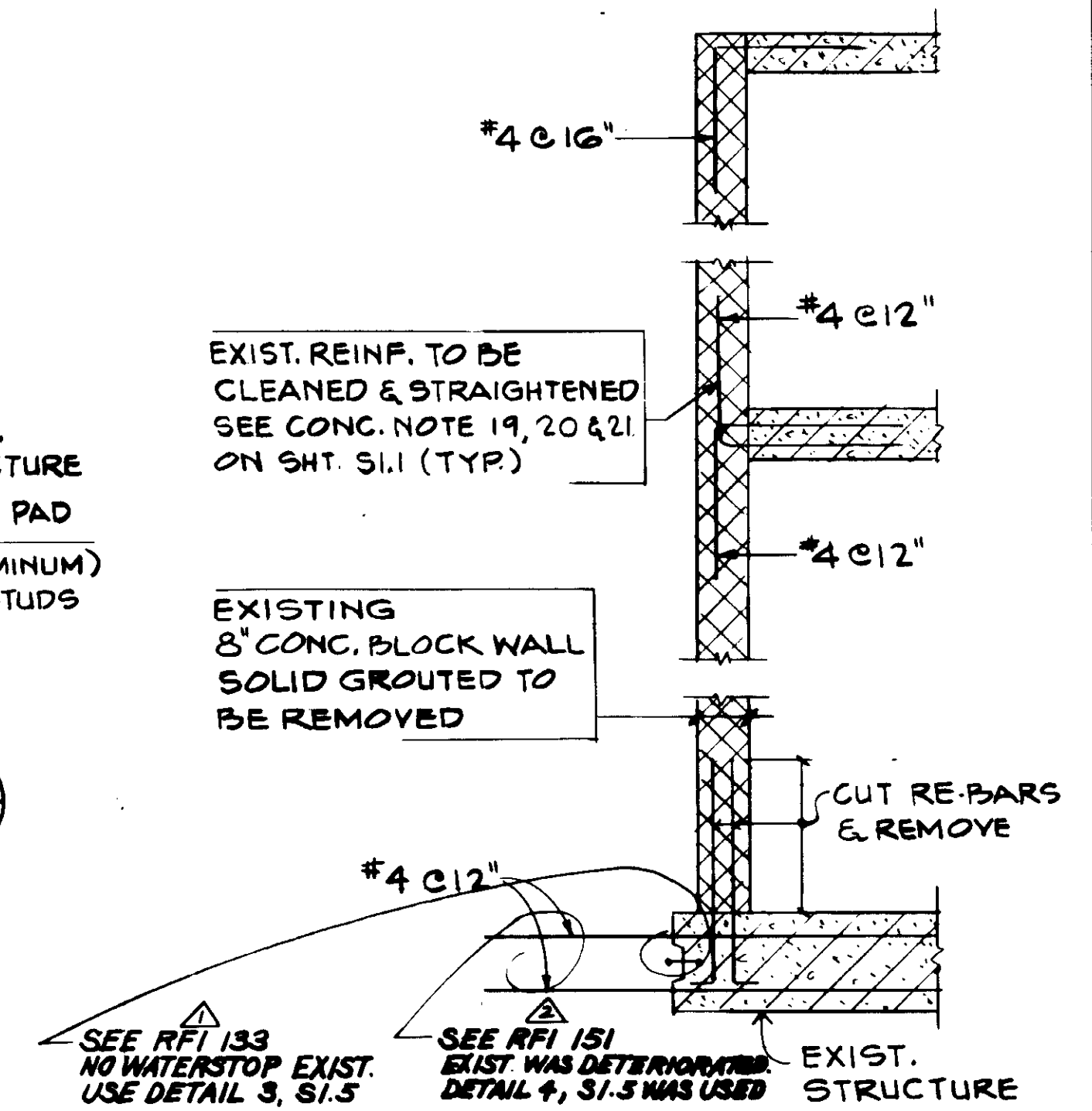
SECTION B  
S2.10



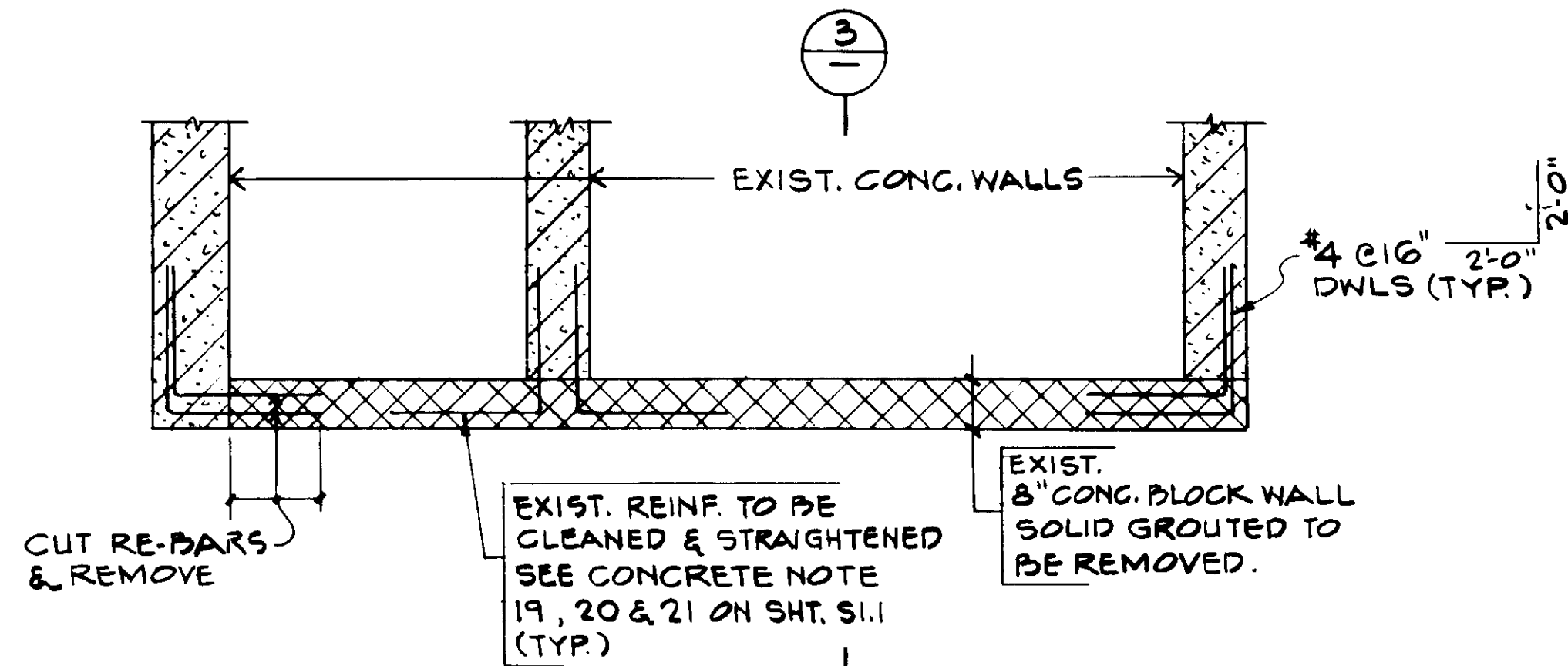
SECTION 1  
S2.10



SECTION 2  
S2.10



DETAIL 3  
1/2" = 1'-0"  
S2.10



DETAIL 4  
1/2" = 1'-0"  
S2.10

03959

RECORD DRAWINGS  
PAID FILING FEE TO COUNTY CLERK'S OFFICE  
KATSUMA CONSULTING ENGINEERS 2006 1000



JOB No. 4925  
STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483 6490

REV	DATE	BY	DESCRIPTION
5-4-87	A.B.	REV. PER K.P.C.	
5-4-87	A.B.	REV. PER K.P.C.	

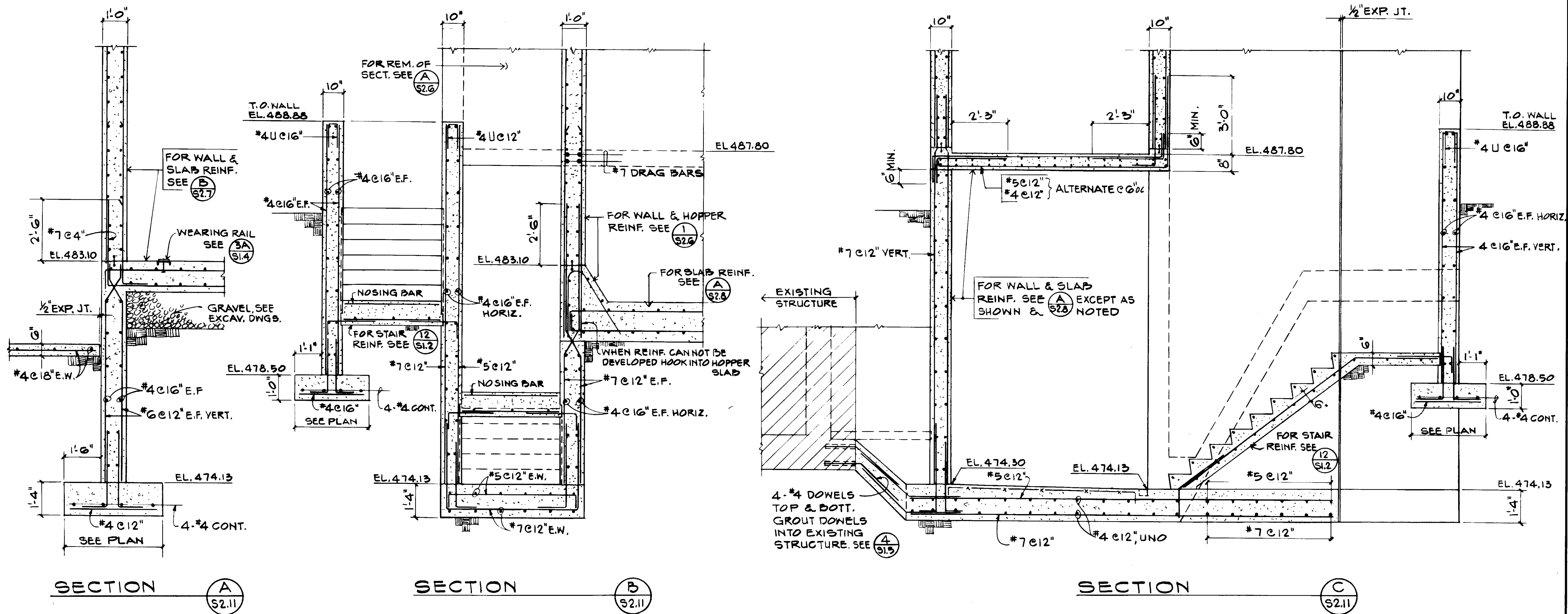
SCALE: 3/4" = 1'-0" U.N.O.	DESIGNED R. OKUDA	CHECKED R. LEE
----------------------------------	----------------------	-------------------

SUBMITTED <i>[Signature]</i>	14038	8-7-87
KATSUMA CONSULTING ENGINEERS	R.C.E. NO.	DATE
ALEXANDER ENGINEERS	513	DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
PRIMARY SEDIMENTATION TANK NOS. 4 AND 5  
SECTIONS AND DETAILS, SHEET 5

SHEET  
S2.10



03960

Job No. 4928  
 STRUCTURAL ENGINEERS  
 JOHN A. MARTIN & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483-0490



RECORD DRAWINGS  
 PAID FILE MAINTAINED BY NEWLY PRINTED COOP.  
 KATSURA CONSULTING ENGINEERS JUN 1984

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

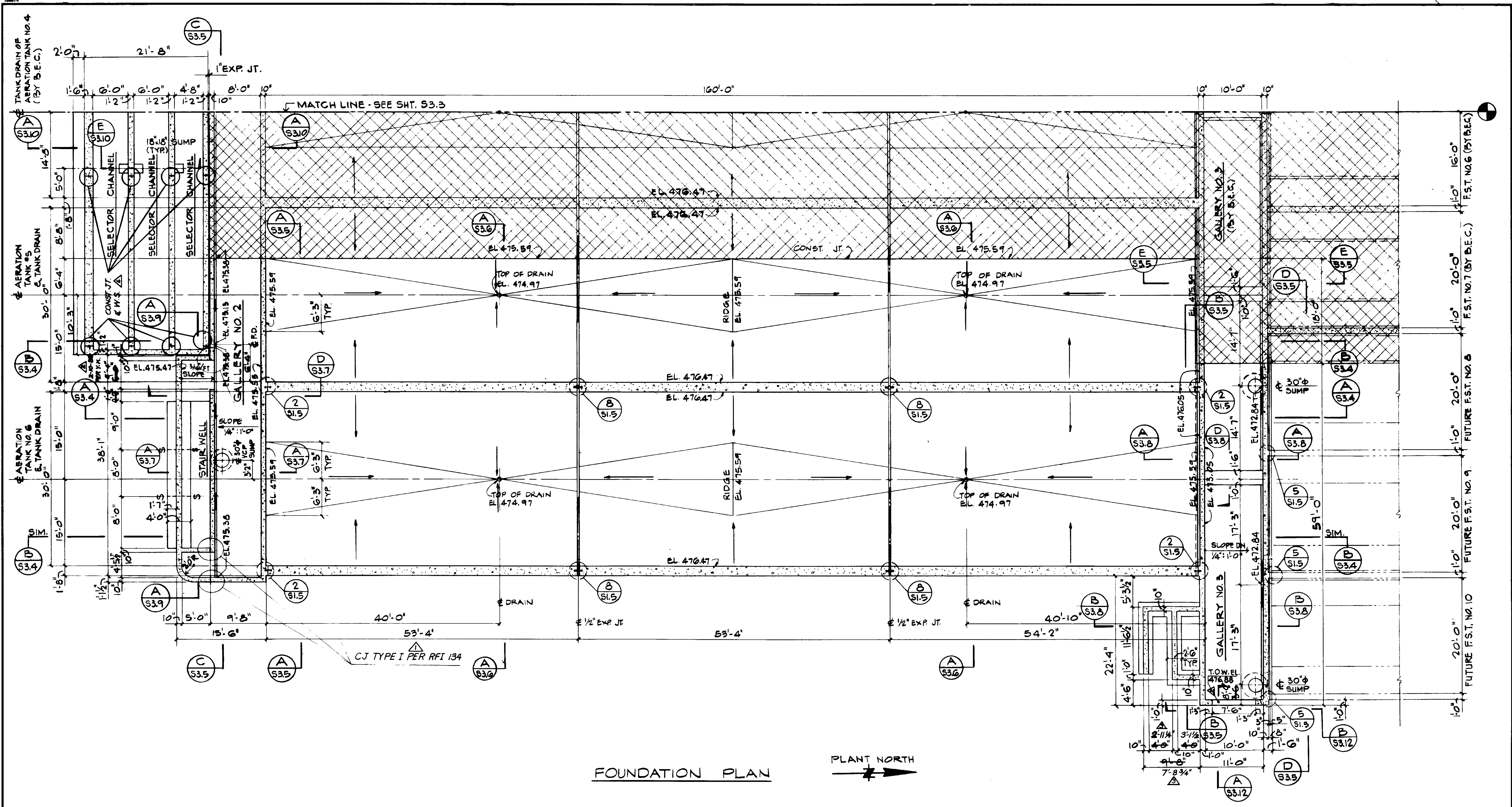
SCALE: 1/2" = 1'-0"  
 DESIGNED BY: R. OKUDA  
 DRAWN BY: R. LEE  
 CHECKED BY: K. BENUSKA

SUBMITTED: 14038 8-7-87  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

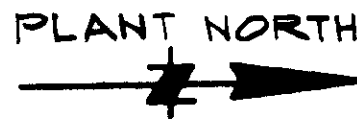
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**PRIMARY SEDIMENTATION TANK NOS. 4 & AND 5**  
**SECTIONS AND DETAILS, SHEET 6**

SHEET S2.11



FOUNDATION PLAN



03961

RECORD DRAWING  
 PREPARED BY: KALEX ENGINEERS  
 DATE: 8-7-87



Job No. 4928  
 STRUCTURAL ENGINEERS  
 JOHN A. MARTIN & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483 0490

REV	DATE	BY	DESCRIPTION
1	5-1-87	A.B.	REV. PER K.P.C.
2	5-4-87	A.B.	REV. PER K.P.C.
3	5-4-87	A.B.	REV. PER K.P.C.
4	5-1-87	A.B.	REV. PER K.P.C.

SCALE: 1/8" = 1'-0"	R. LEE DESIGNED
	R. OKUDA DRAWN
	K. DENUSKA CHECKED

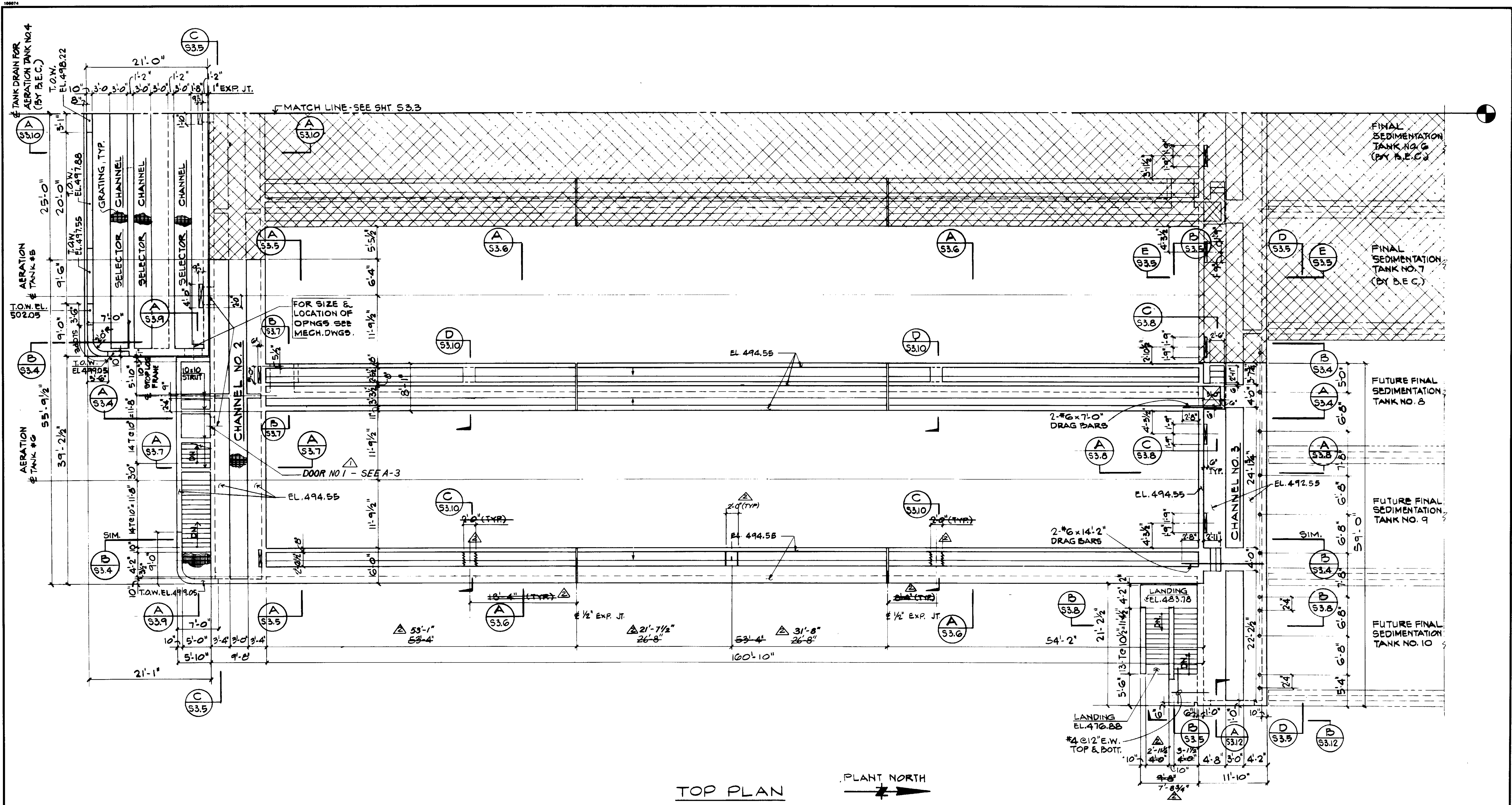
SUBMITTED <i>Katsura</i>	14038	8-7-87
KATSUMI CONSULTING ENGINEERS	R.C.E. NO.	DATE
ALEXANDER ENGINEERS	513	
	R.C.S.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

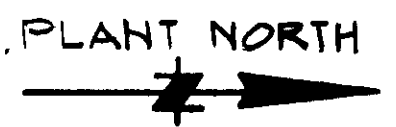
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**AERATION TANK NOS. 5 AND 6 AND VICINITY**  
**FOUNDATION PLAN**

SHEET  
S3.1





TOP PLAN



03962

Job No. 4928  
 STRUCTURAL ENGINEERS  
 JOHN A. MARTIN & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90017 483 0490



RECORD DRAWING  
 PREPARED BY: KALEX ENGINEERS  
 DATE: 8-7-87

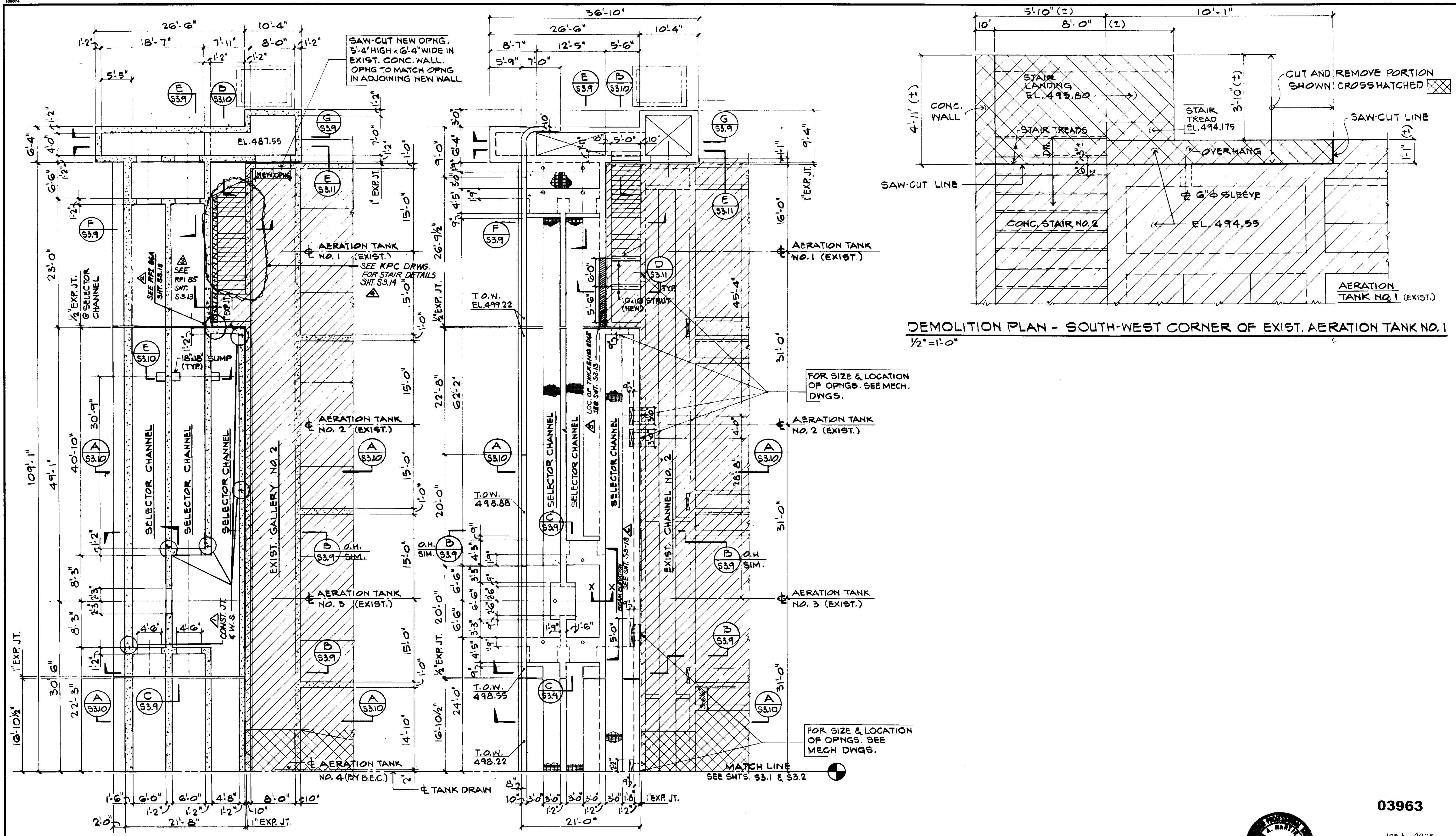
REV	DATE	BY	DESCRIPTION

SCALE: 1/8" = 1'-0"	R. LEE DESIGNED R. OKUDA DRAWN K. BENUKA CHECKED	SUBMITTED <i>[Signature]</i> KATSURA CONSULTING ENGINEERS 14038 R.C.E. NO. DATE 8-7-87
------------------------	---	--

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 AERATION TANK NOS. 5 AND 6 AND VICINITY  
 TOP PLAN

SHEET  
**S3.2**

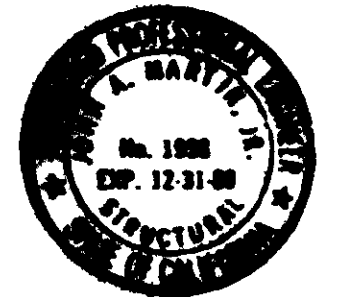


DEMOLITION PLAN - SOUTH-WEST CORNER OF EXIST. AERATION TANK NO. 1  
 1/2" = 1'-0"

FOUNDATION PLAN  
 1/8" = 1'-0"

TOP PLAN  
 1/8" = 1'-0"

03963



Job No. 4926  
 STRUCTURAL ENGINEERS  
**JOHN A. MARTIN & ASSOCIATES, INC.**  
 1780 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483 6490

RECORD DRAWINGS  
 For files maintained by WEST PACIFIC CORP.  
*[Signature]*  
 KATSUMA CONSULTING ENGINEERS JUNE 1988

**KALEX ENGINEERS**  
 Katsuma Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

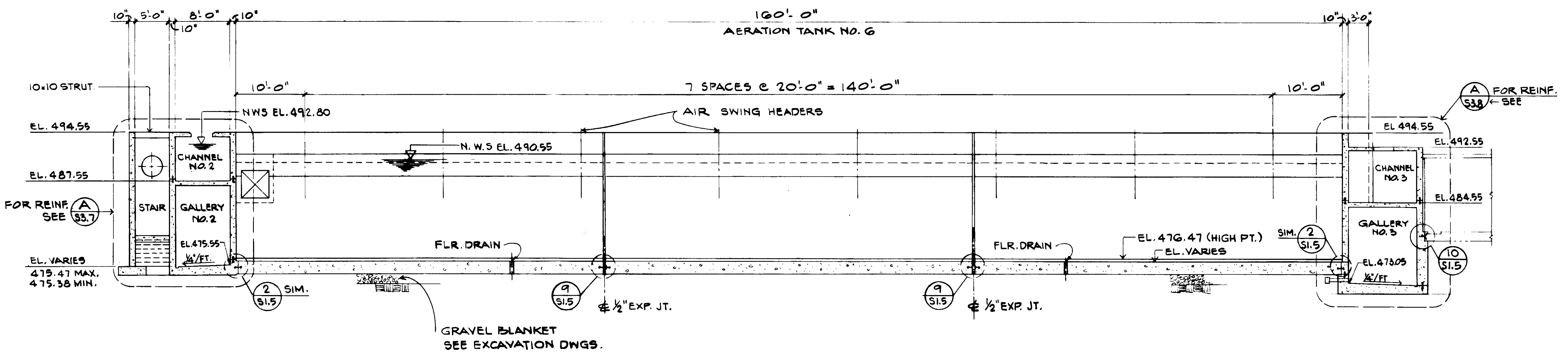
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**AERATION TANK NOS. 5 AND 6 AND VICINITY**  
**SELECTOR CHANNEL PLANS, DEMOLITION**

SHEET  
**S3.3**

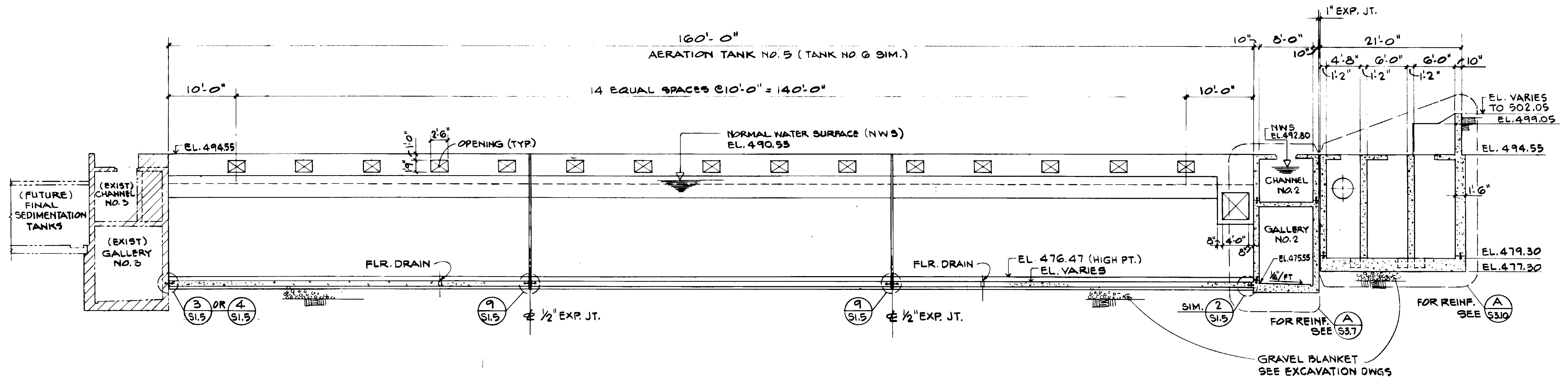
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
5-5-81	A.B.	REV. PER K.P.C.		5-5-81	A.B.	REV. PER K.P.C.	
5-5-81	A.B.	REV. PER K.P.C.		5-5-81	A.B.	REV. PER K.P.C.	
5-5-81	A.B.	REV. PER K.P.C.		5-5-81	A.B.	REV. PER K.P.C.	

SCALE: AS NOTED	DESIGNED <b>R. LEE</b>	SUBMITTED <i>[Signature]</i> 8-7-87
DRAWN <b>K. PENUSKA</b>	CHECKED <b>R. OKUDA</b>	KATSUMA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS R.C.E. NO. DATE





SECTION A  
S3.4



SECTION B  
S3.4

03964



RECORD DRAWINGS  
KATSURA CONSULTING ENGINEERS

Job N. 4928  
STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483 6490

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

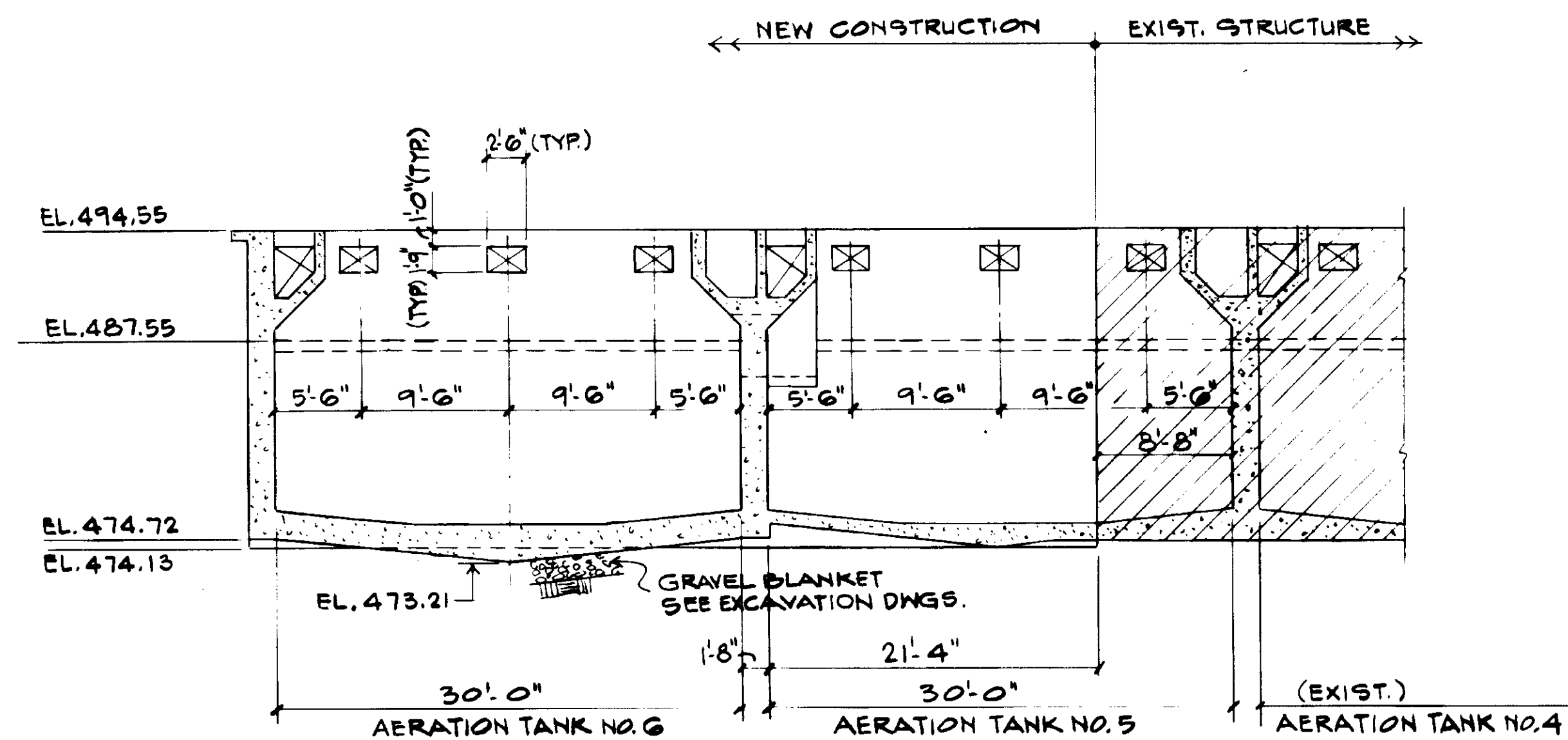
SCALE: 1/8" = 1'-0"	DESIGNED R. OKUDA	SUBMITTED <i>[Signature]</i> 14036 8-7-87
CHECKED K. PENUSKA	DATE	R.C.E. NO.
ALEXANDER ENGINEERS	DATE	R.C.E. NO.

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

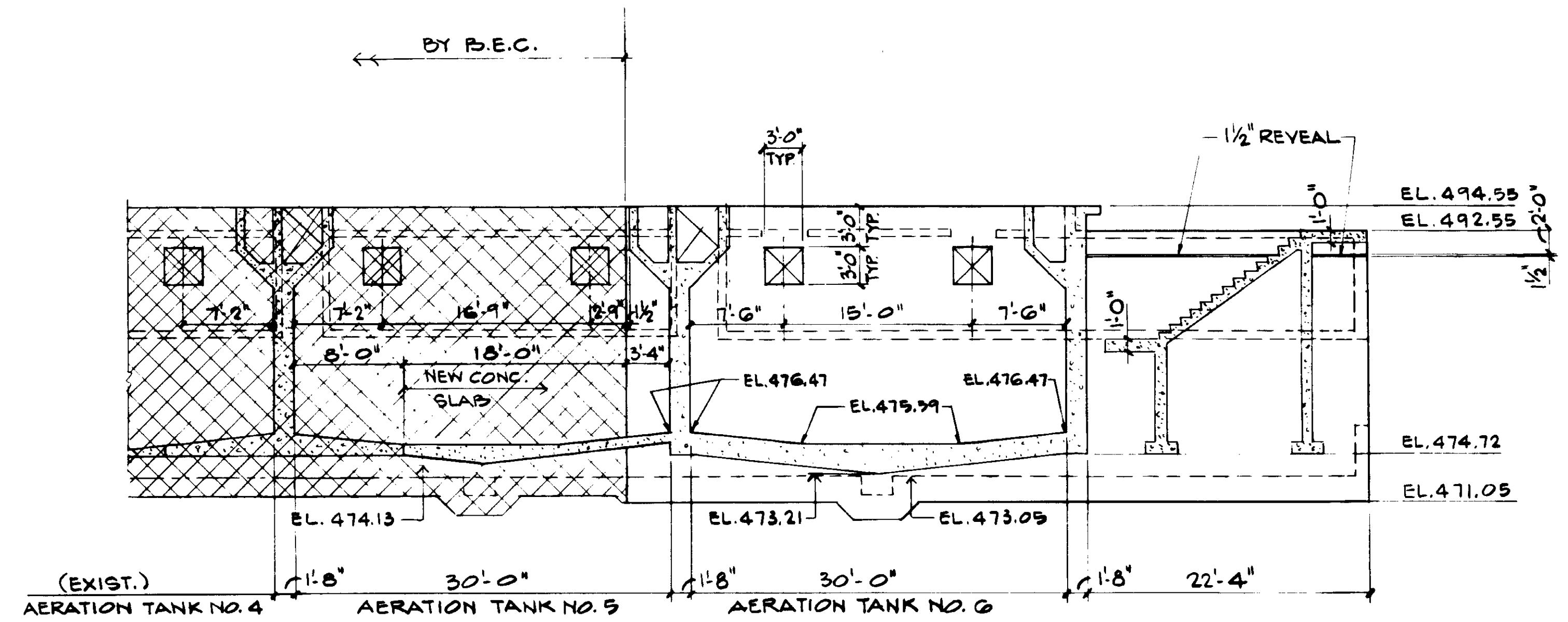
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**AERATION TANK NOS. 5 AND 6 AND VICINITY**  
**ELEVATIONS, SHEET 1**

SHEET  
**S3.4**

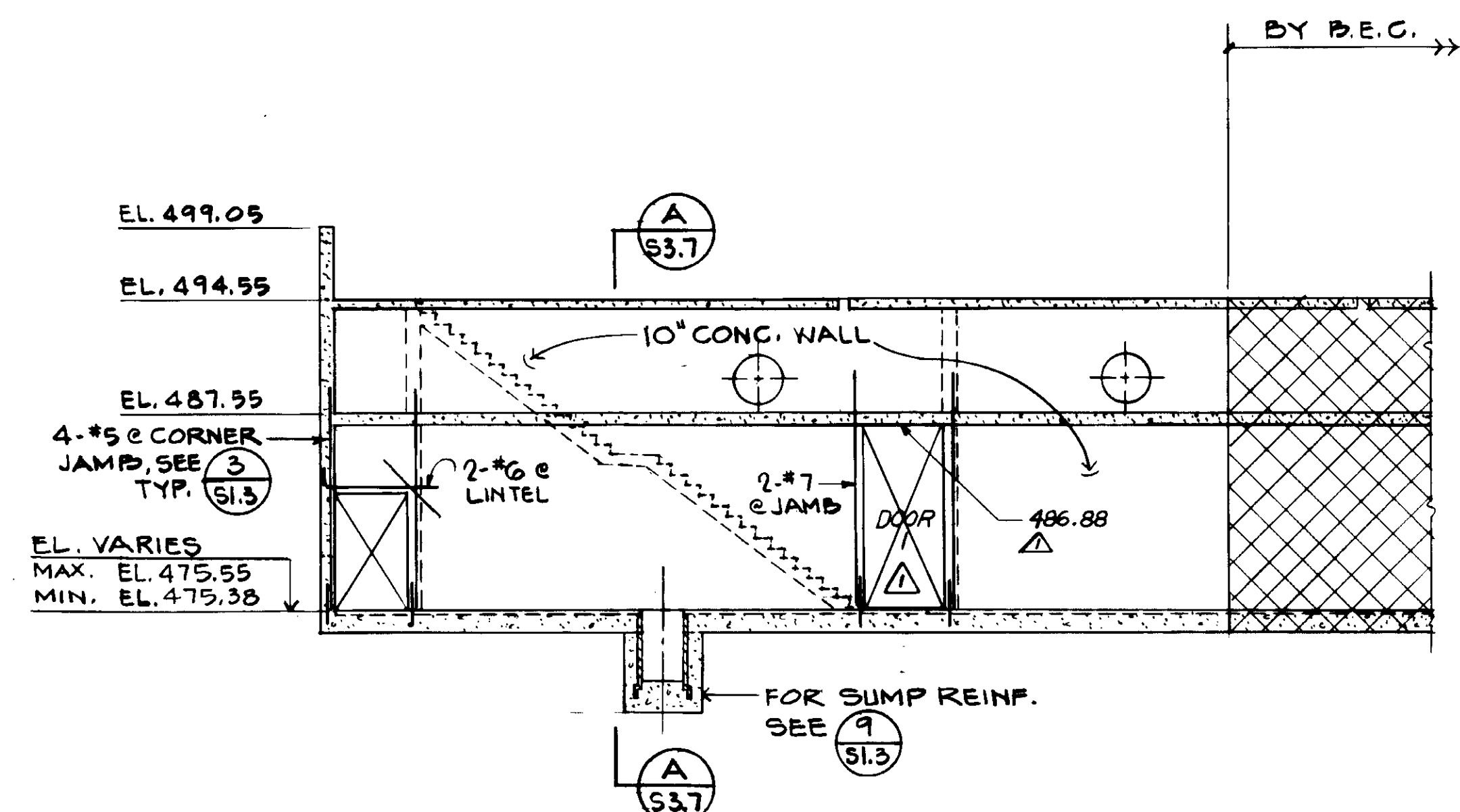




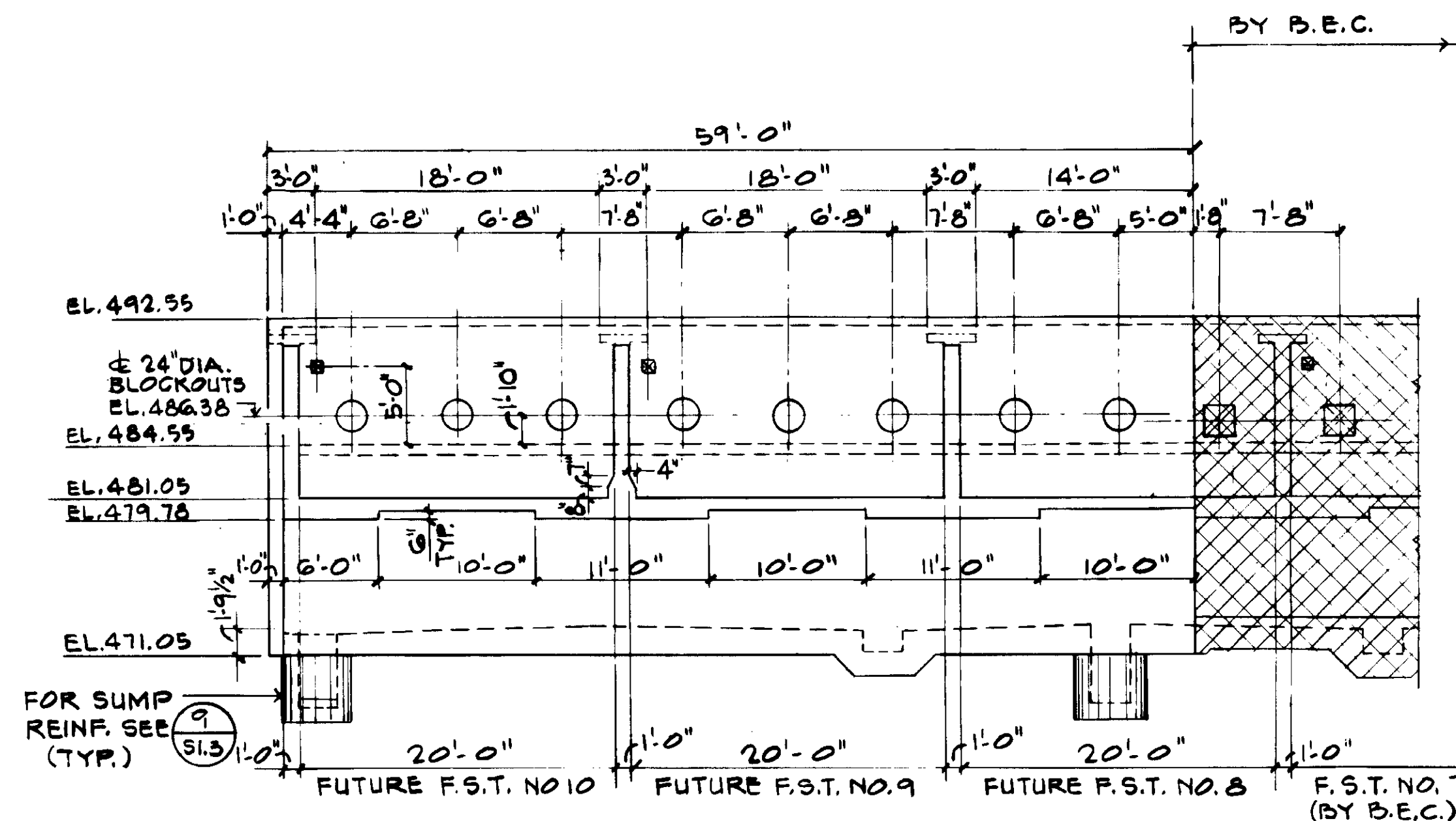
SECTION A S3.5



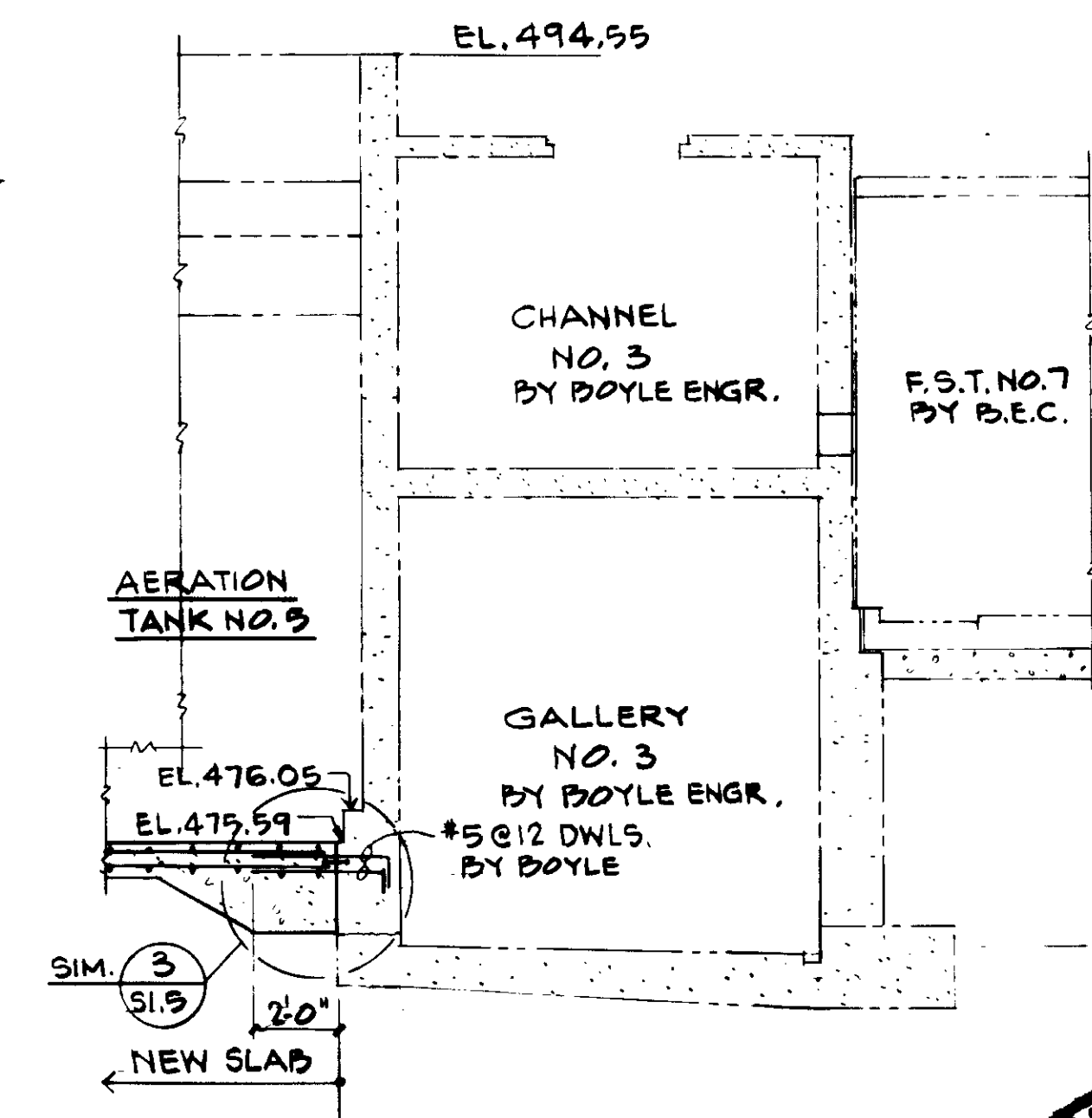
SECTION B S3.5



SECTION C S3.5



SECTION D S3.5



SECTION E S3.5

03965



REV	DATE	BY	DESCRIPTION

SCALE: 1/8" = 1'-0" U.N.O.	DESIGNED R. LEE	DRAWN K. BENUSKA	CHECKED 
----------------------------------	--------------------	---------------------	-------------

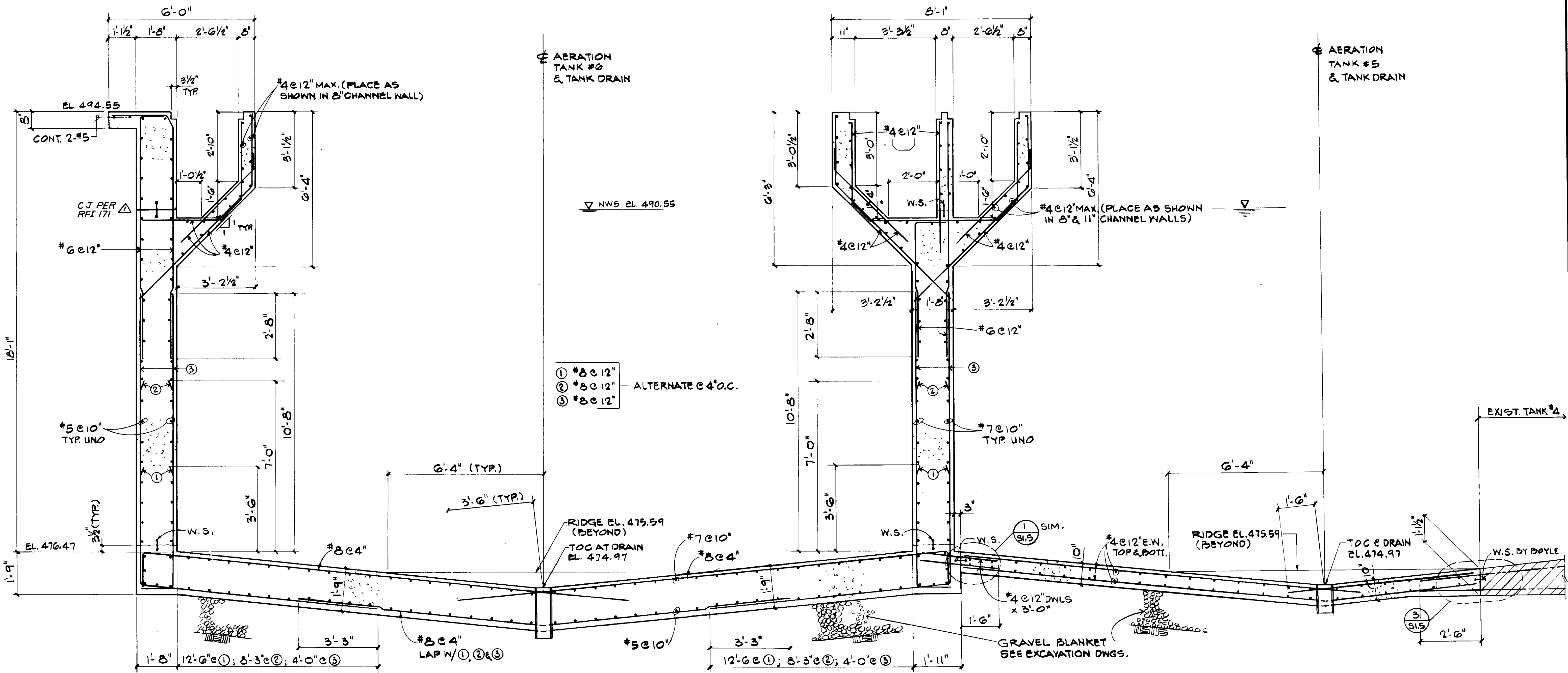
SUBMITTED <i>[Signature]</i> KATSURA CONSULTING ENGINEERS	14038 R.C.E. NO.	8-7-97 DATE
	513 R.C.S.E. NO.	

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**AERATION TANK NOS. 5 AND 6 AND VICINITY**  
**ELEVATIONS, SHEET 2**

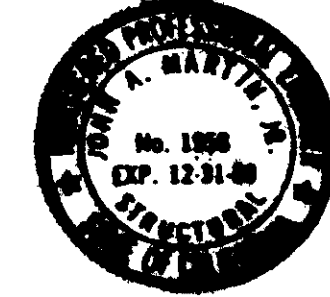
SHEET S3.5

RECORD DRAWING  
JOB No. 4928  
STRUCTURAL ENGINEERS  
**JOHN A. MARTIN & ASSOCIATES, INC.**  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483 0490



SECTION A  
S3.6

03966



RECORD DRAWING  
KATSUMA CONSULTING ENGINEERS

JOB No. 4928  
STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90025 483 0490

REV	DATE	BY	DESCRIPTION

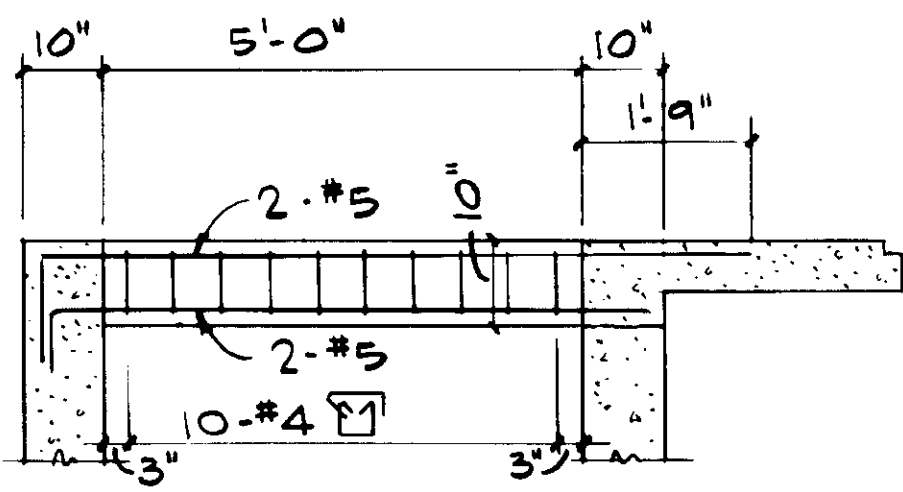
SCALE: 1/2" = 1'-0"  
DESIGNED: R. LEE  
DESIGNED: R. OKUDA  
DRAWN: K. PENUSKA  
CHECKED: K. PENUSKA

SUBMITTED: *[Signature]* 14038 8-7-07  
KATSUMA CONSULTING ENGINEERS R.C.E. NO. DATE  
ALEXANDER ENGINEERS R.C.E. NO. DATE

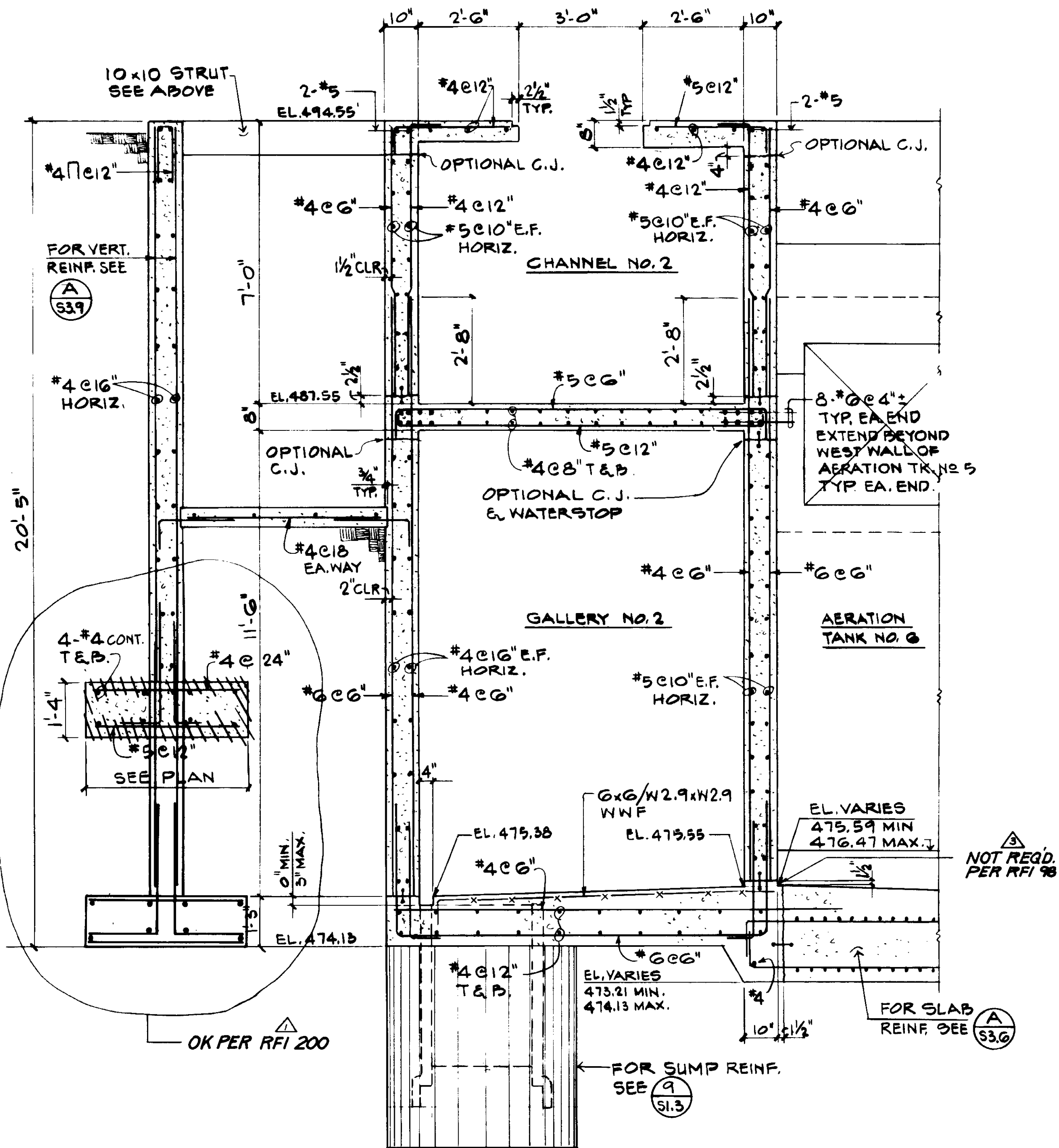
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**AERATION TANK NOS. 5 AND 6 AND VICINITY**  
**SECTIONS AND DETAILS, SHEET 1**

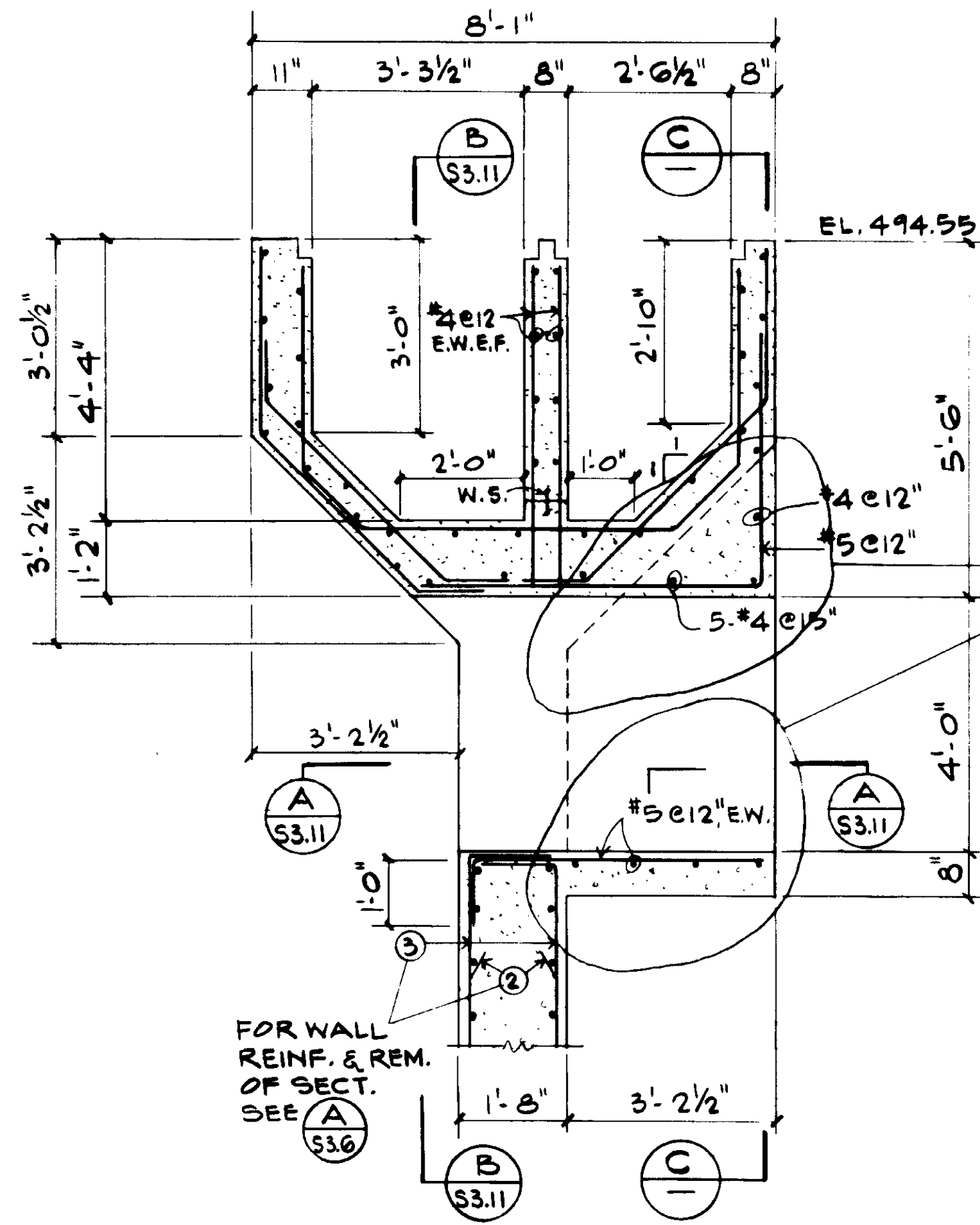
SHEET  
S3.6



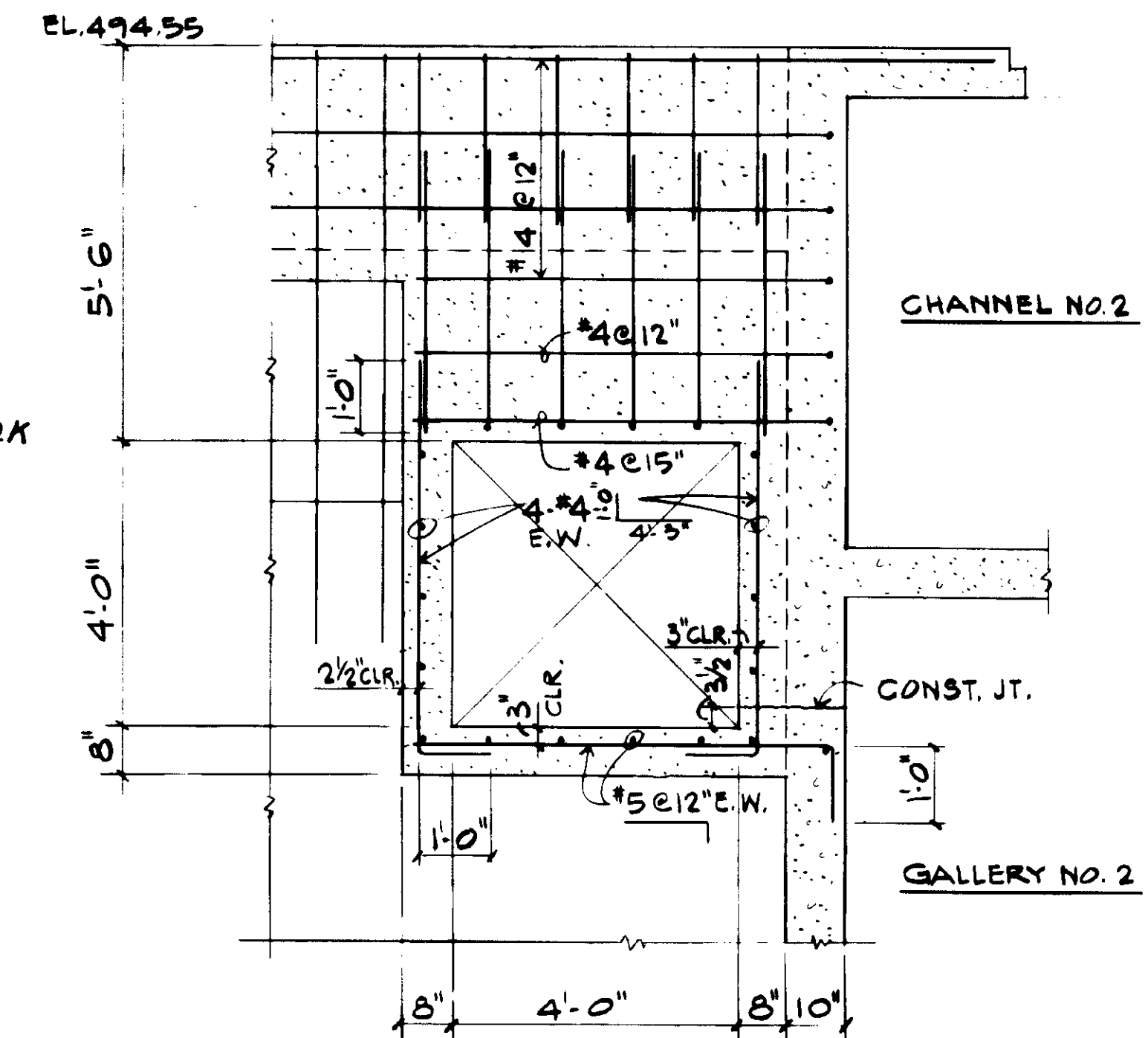
10x10 STRUT



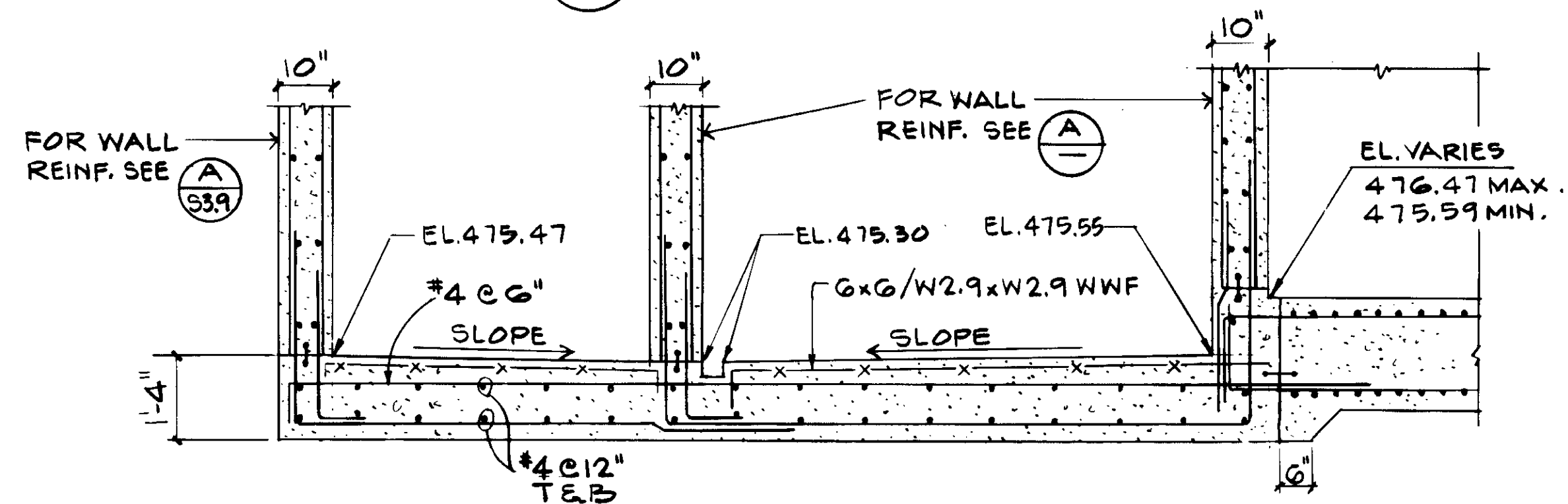
SECTION A 33.7



SECTION B 33.7



SECTION C 33.7



SECTION D 33.7

REV	DATE	BY	DESCRIPTION

REV	DATE	BY	DESCRIPTION

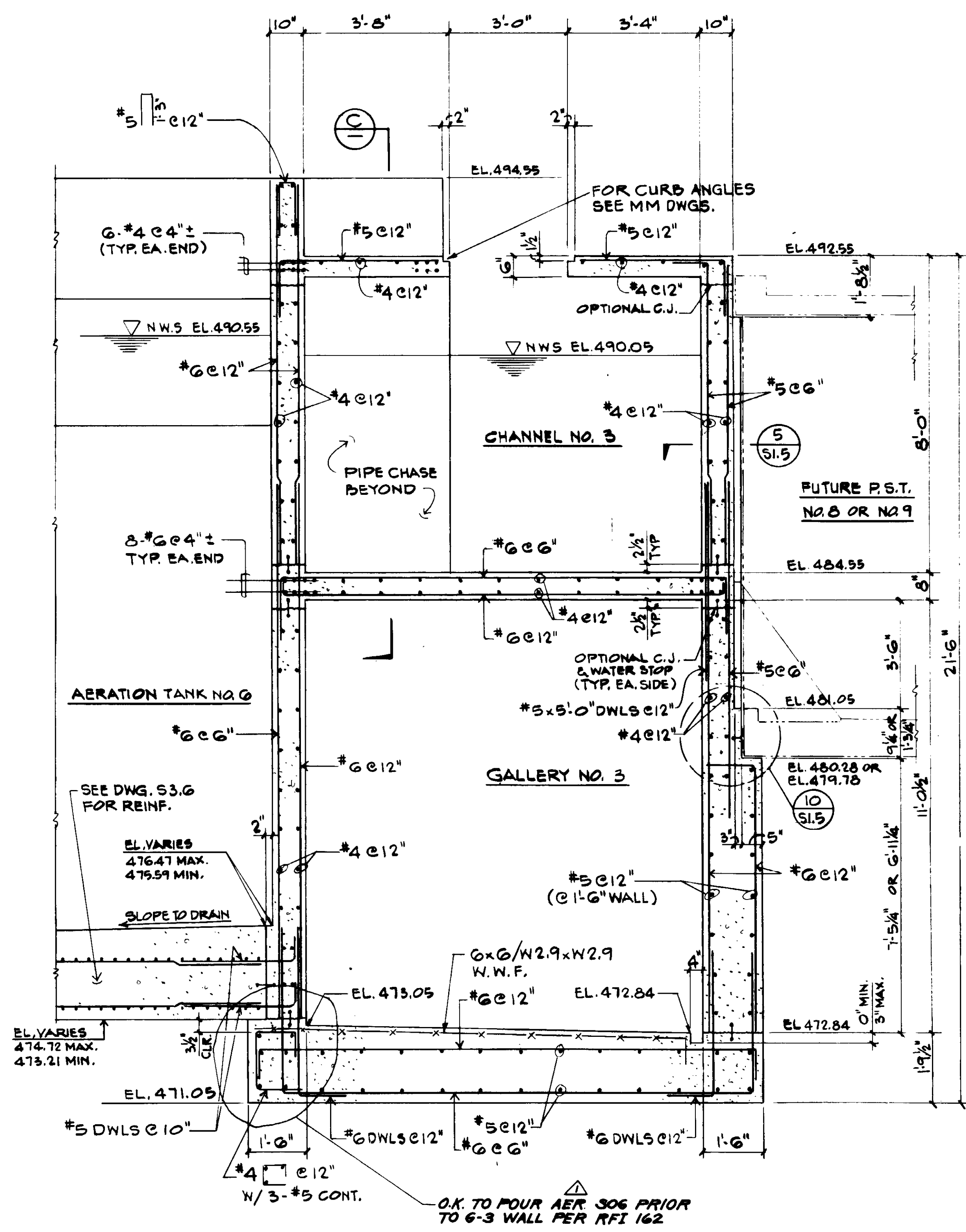
DESIGNED	K. BENUSKA
DRAWN	R. OKUDA
CHECKED	B. LEE
DATE	8-7-87

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

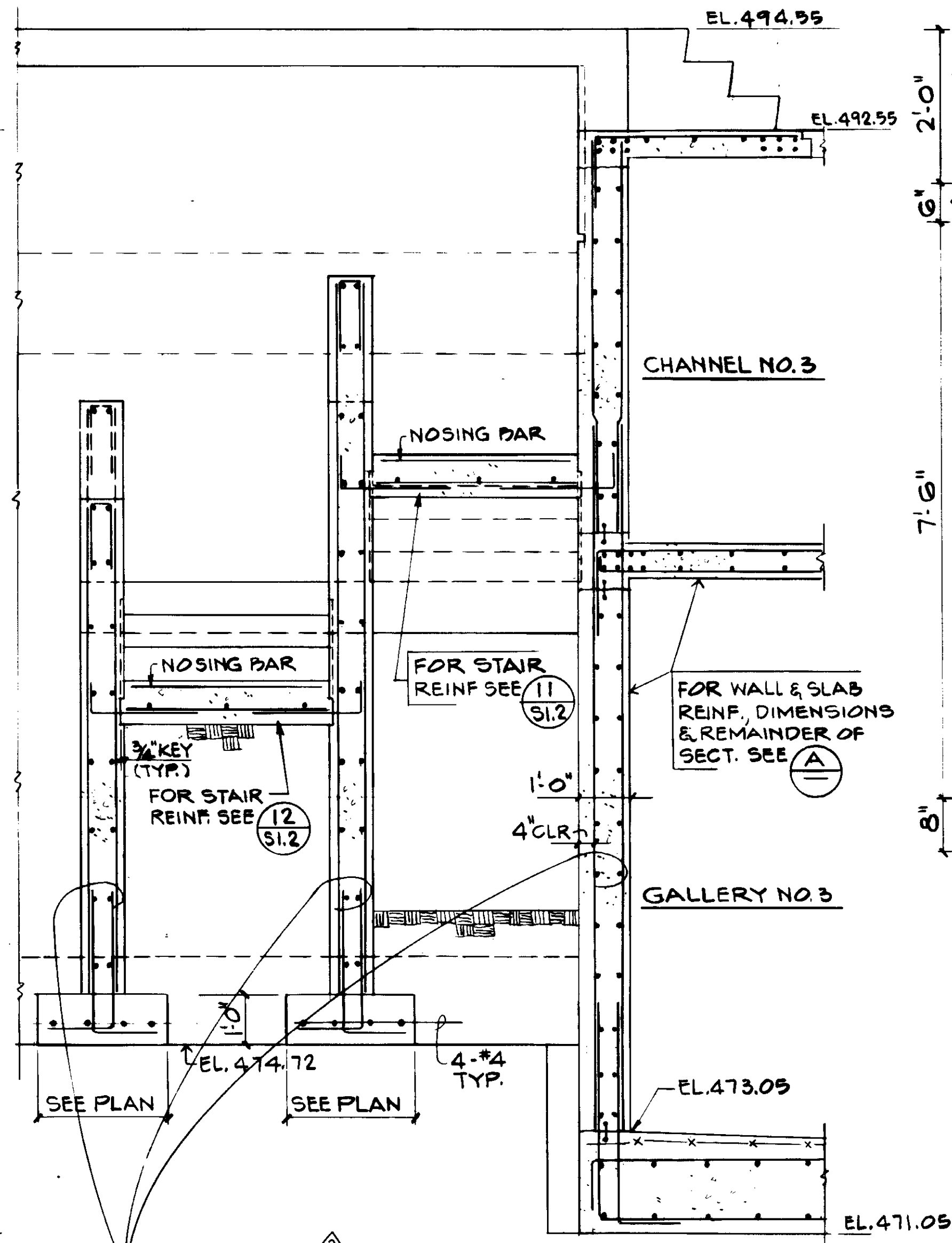
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**AERATION TANK NOS. 5 AND 6 AND VICINITY**  
**SECTIONS AND DETAILS, SHEET 2**

03967  
 RECORD DRAWING  
 JOB NO. 4925  
 STRUCTURAL ENGINEERS  
**JOHN A. MARTIN & ASSOCIATES, INC.**  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483 6490

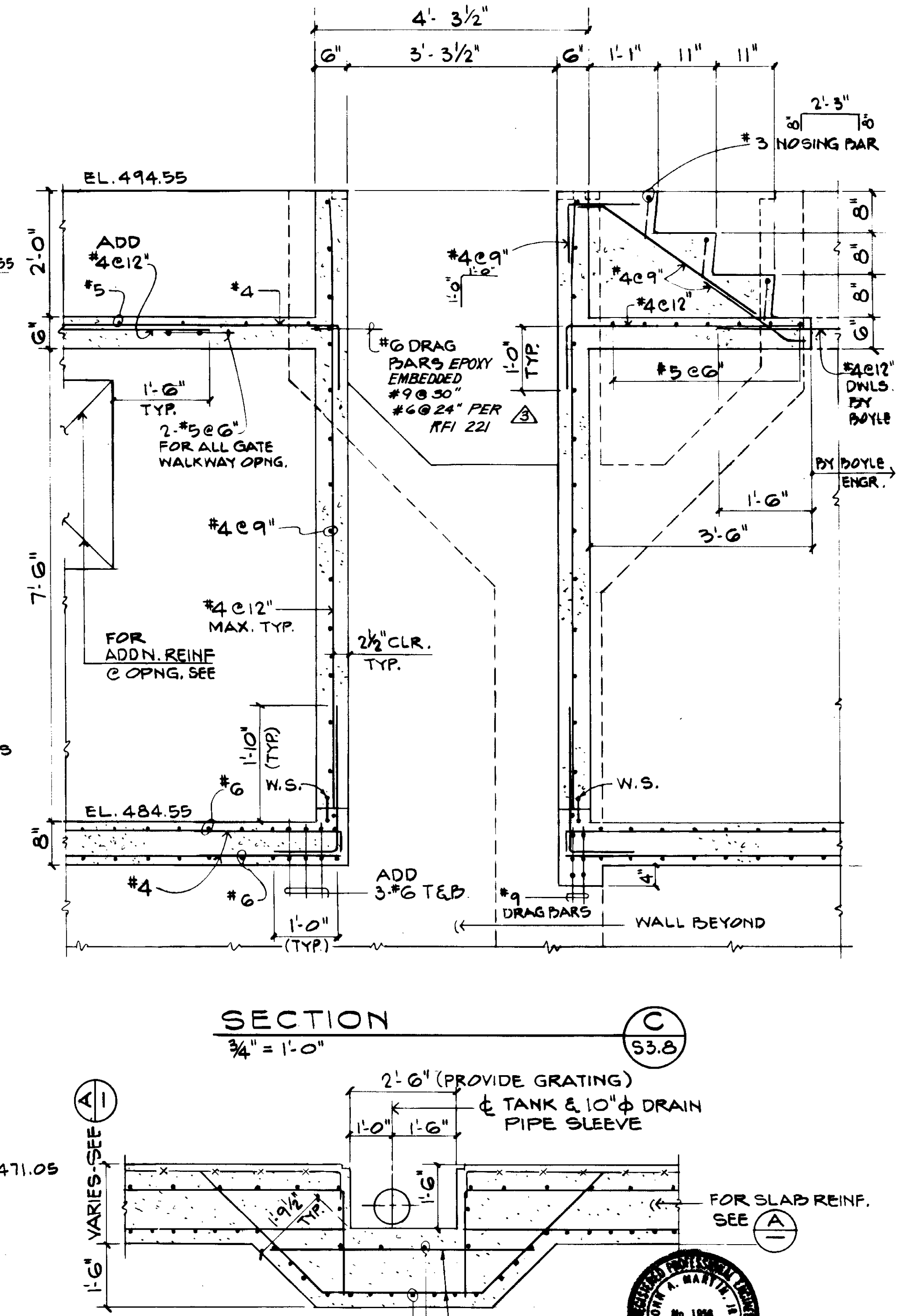




**SECTION A**  
1/2" = 1'-0"  
S3.8



**SECTION B**  
1/2" = 1'-0"  
S3.8



**SECTION C**  
3/4" = 1'-0"  
S3.8

**SECTION D**  
1/2" = 1'-0"  
S3.8

THIS SECT. ON THE WALL NOT SHOWN CONNECTS TO FUTURE P.S.T. NO. 10.

RECORD DRAWING  
KALEX ENGINEERS  
KATSUMURA CONSULTING ENGINEERS



Job No. 4925  
STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483 0490

03968

REV	DATE	BY	DESCRIPTION

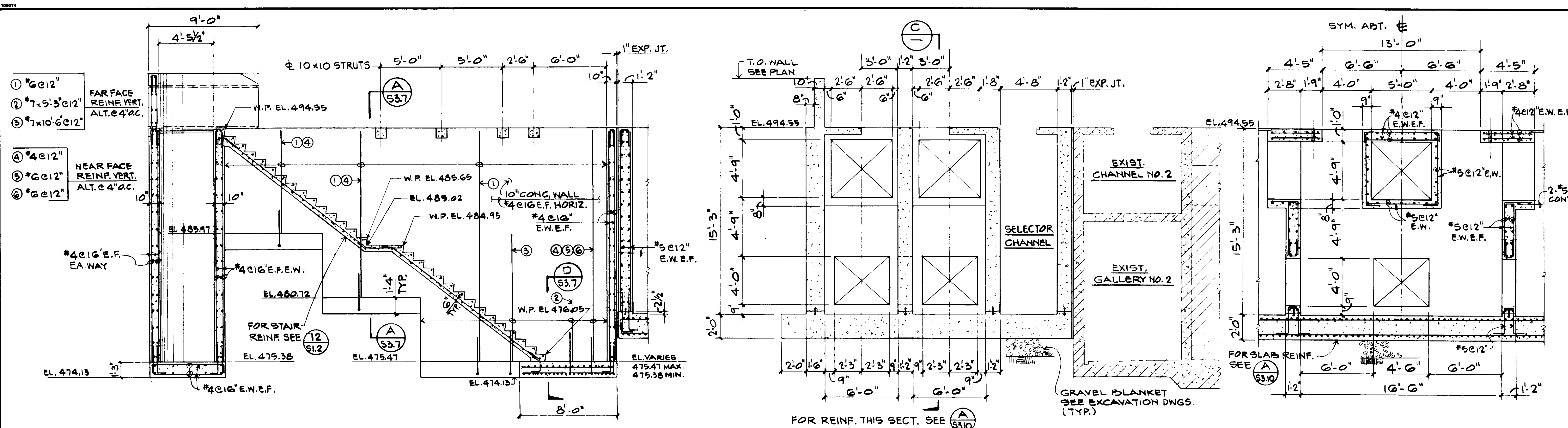
SCALE: AS NOTED	R. LEE DESIGNED B. OKUDA DRAWN K. BENUSKA CHECKED
--------------------	--

SUBMITTED <i>Katsumura</i> KATSUMURA CONSULTING ENGINEERS	14038 R.C.E. NO.	8-7-07 DATE
ALEXANDER ENGINEERS	513 R.C.E. NO.	

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
AERATION TANK NOS. 5 AND 6 AND VICINITY  
SECTIONS AND DETAILS, SHEET 3

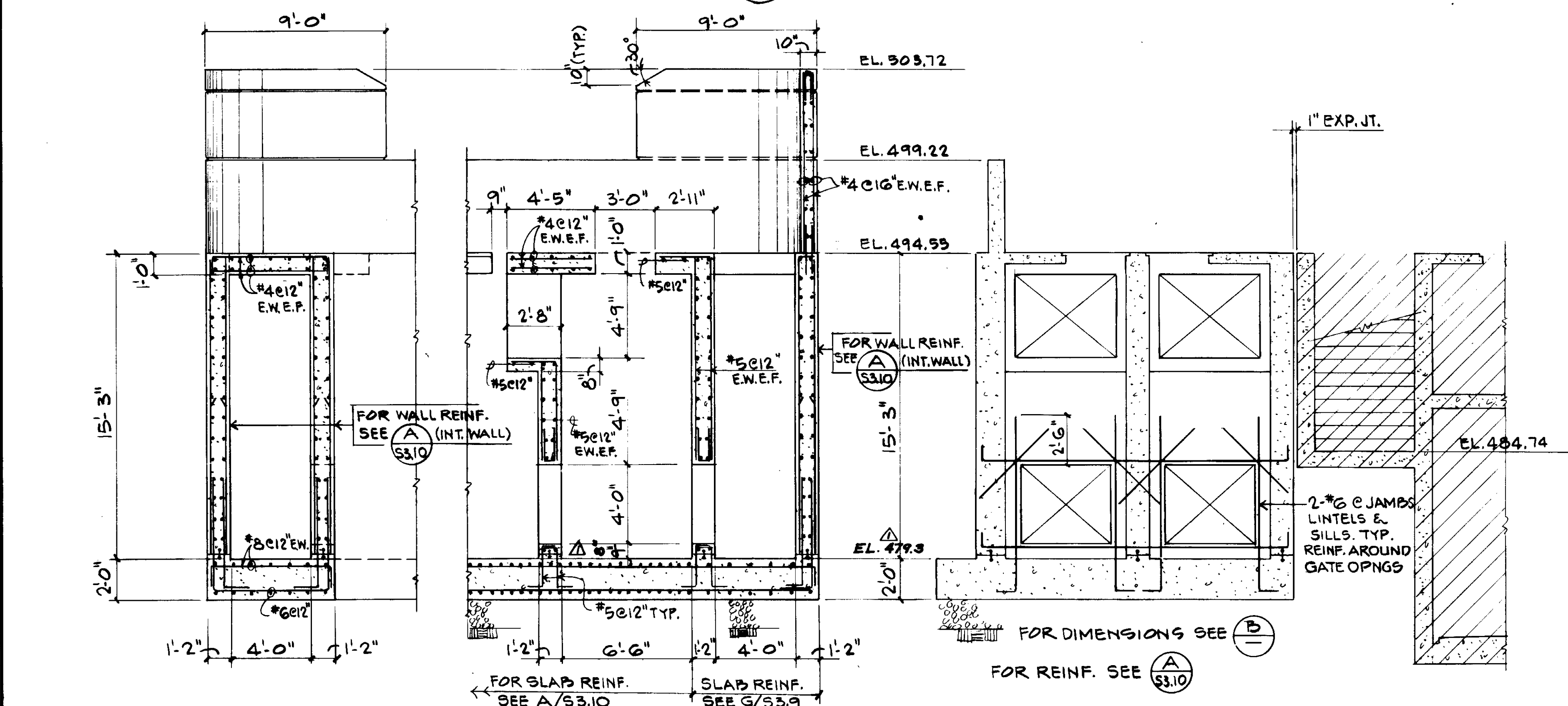
SHEET  
S3.8



SECTION A 53.9

SECTION B 53.9

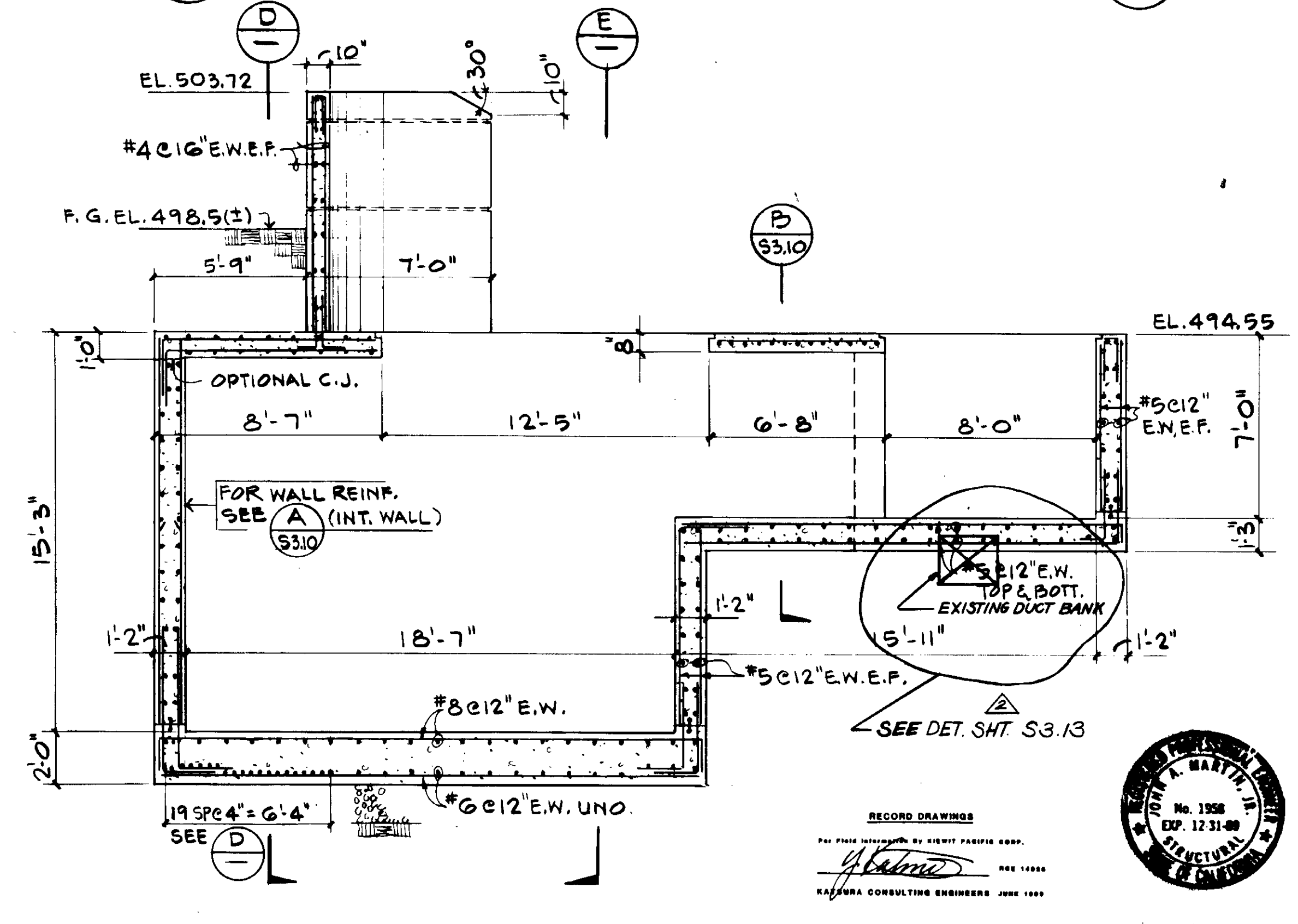
SECTION C 53.9



SECTION D 53.9

SECTION E 53.9

SECTION F 53.9



SECTION G 53.9

REV	DATE	BY	DESCRIPTION
53-89	A.B.	REV. PER K.P.C.	
53-89	A.B.	REV. PER K.P.C.	

SCALE: 1/4" = 1'-0"	DESIGNED: R. OKUDA	CHECKED: R. LEE
1K. BENUSKA	14038	8-7-87
DESIGNED: KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
DRAWN: R. LEE	513	
CHECKED: ALEXANDER ENGINEERS	R.C.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**AERATION TANK NOS. 5 AND 6 AND VICINITY**  
**SECTIONS AND DETAILS, SHEET 4**

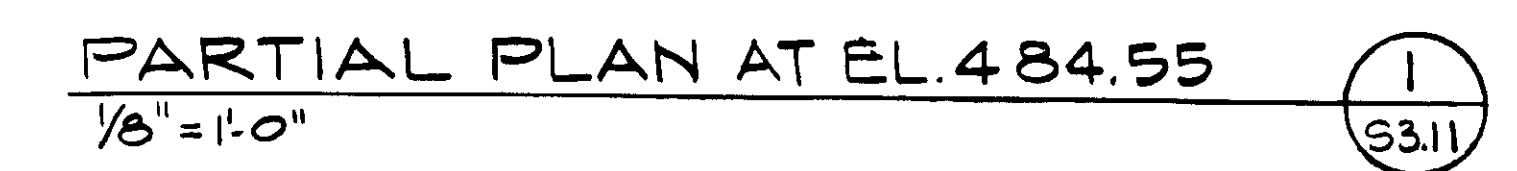
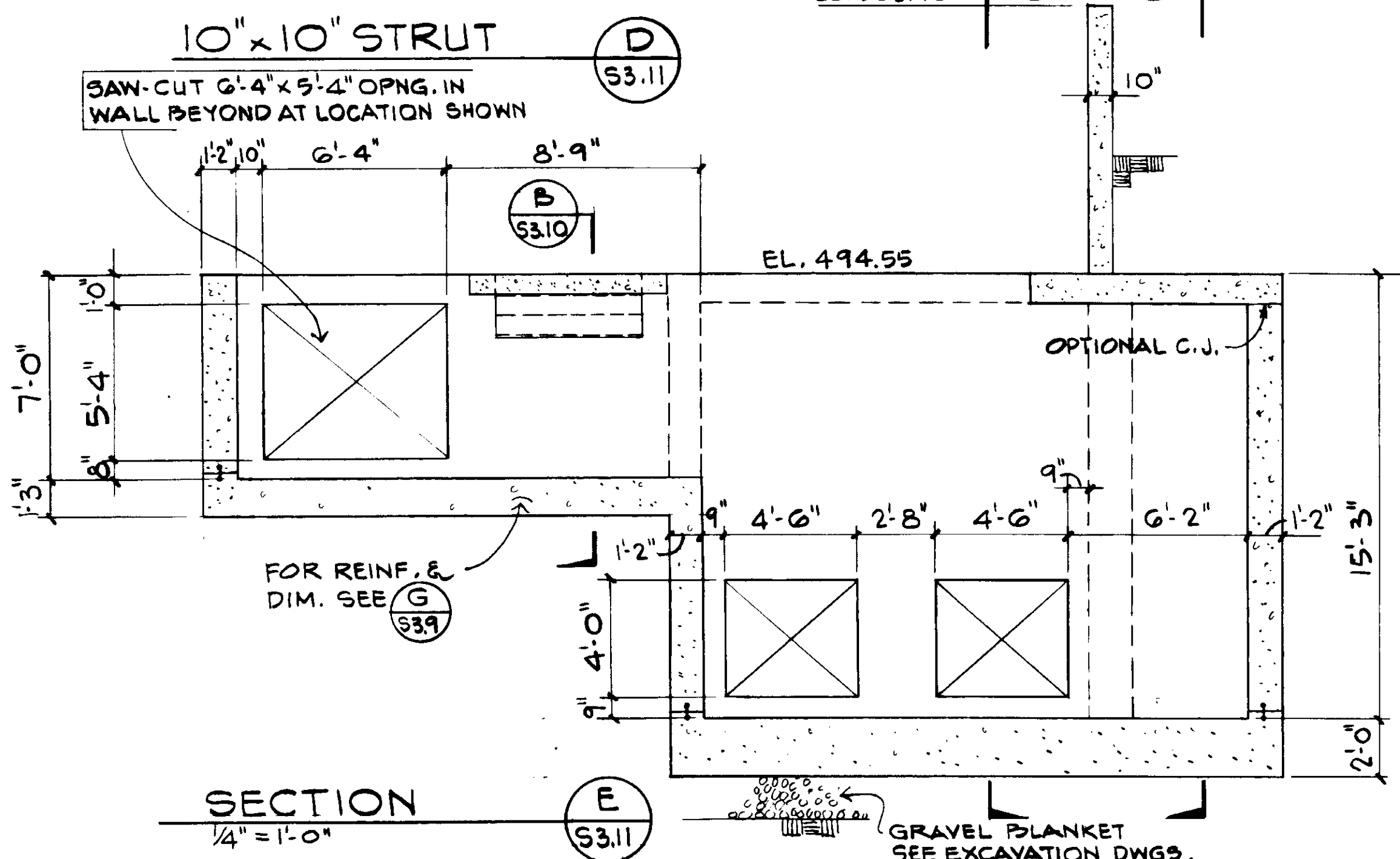
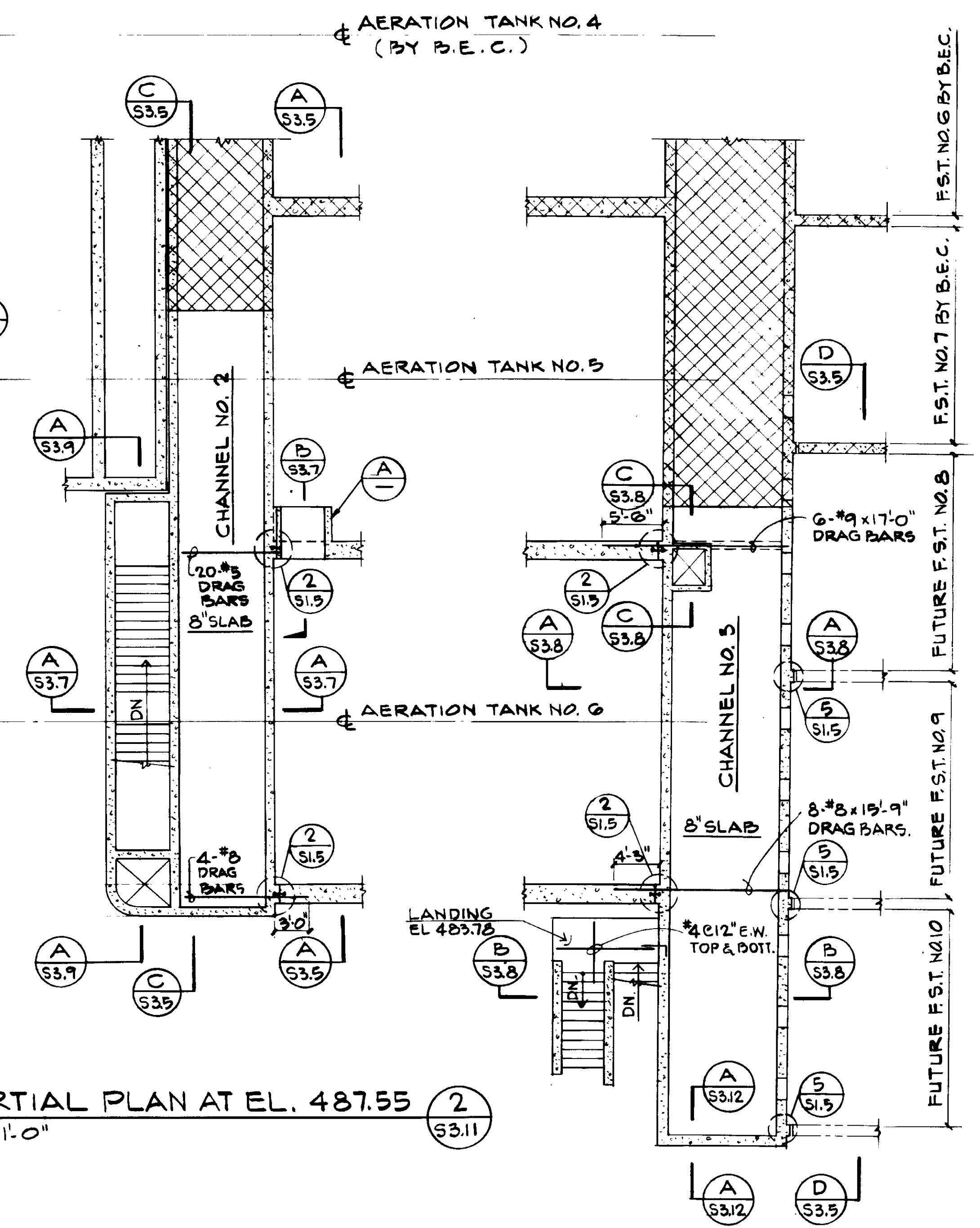
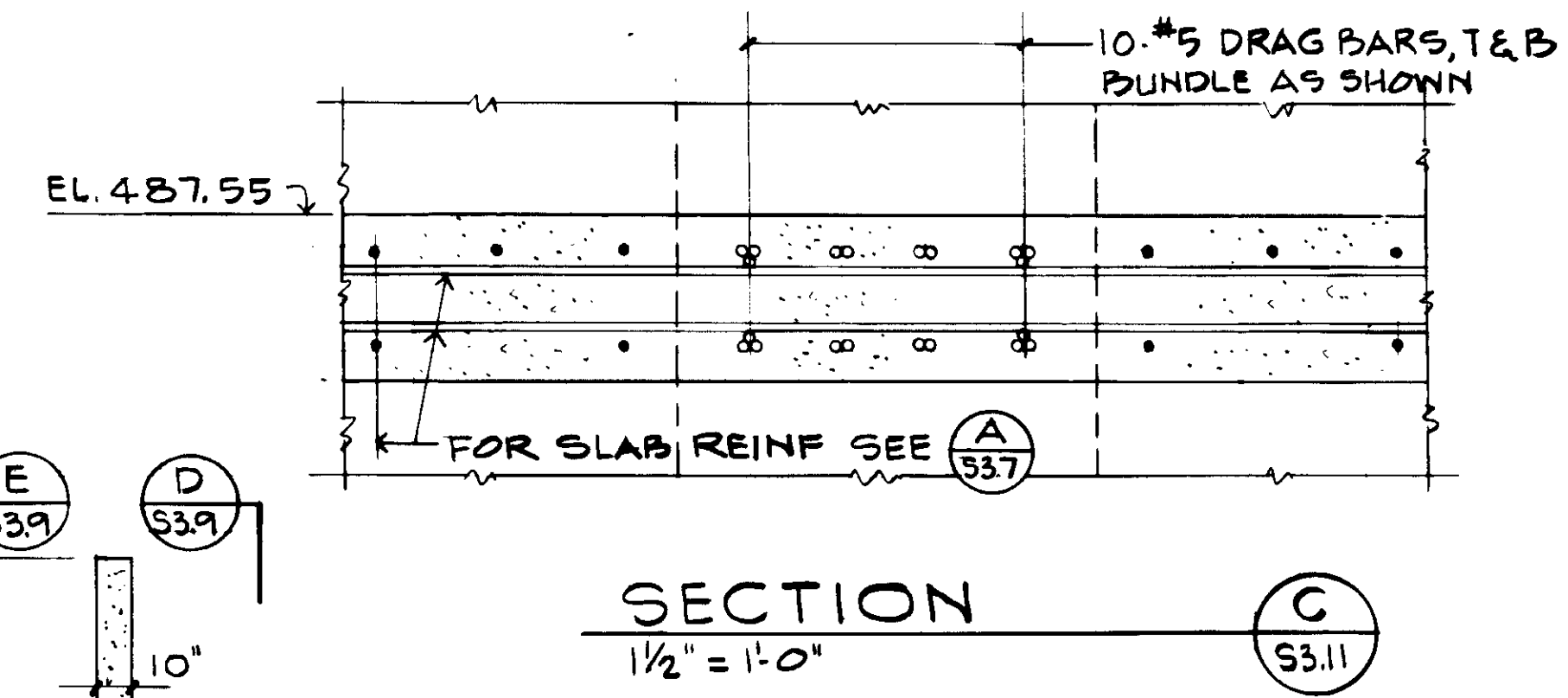
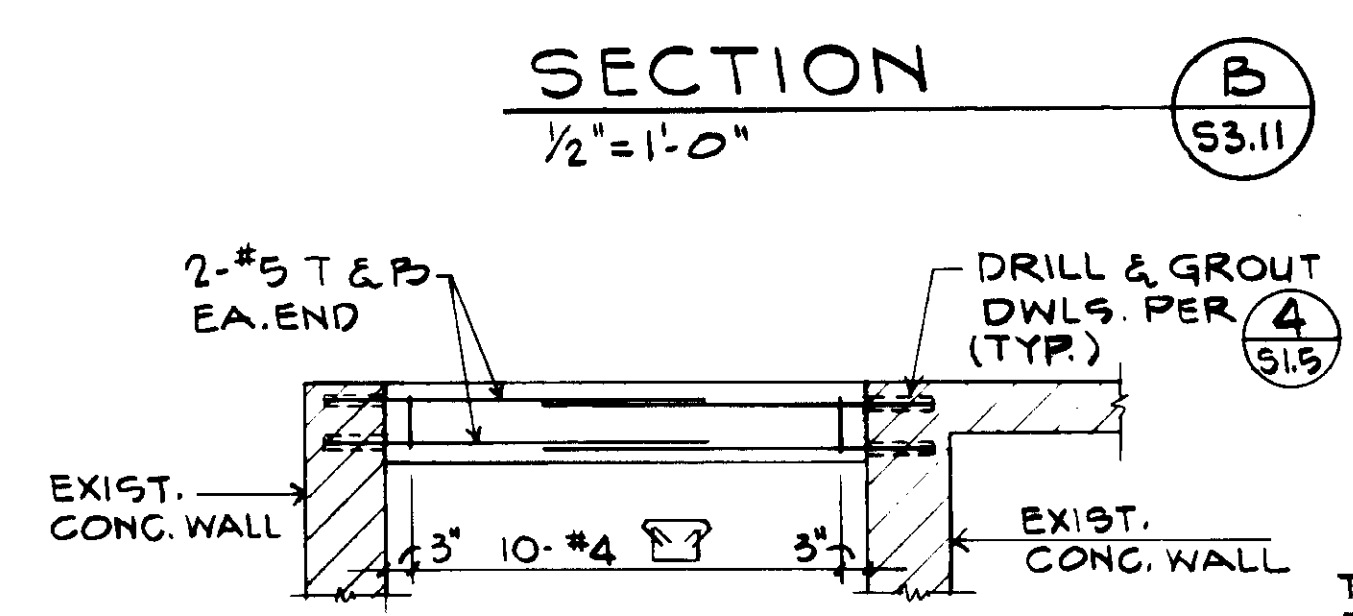
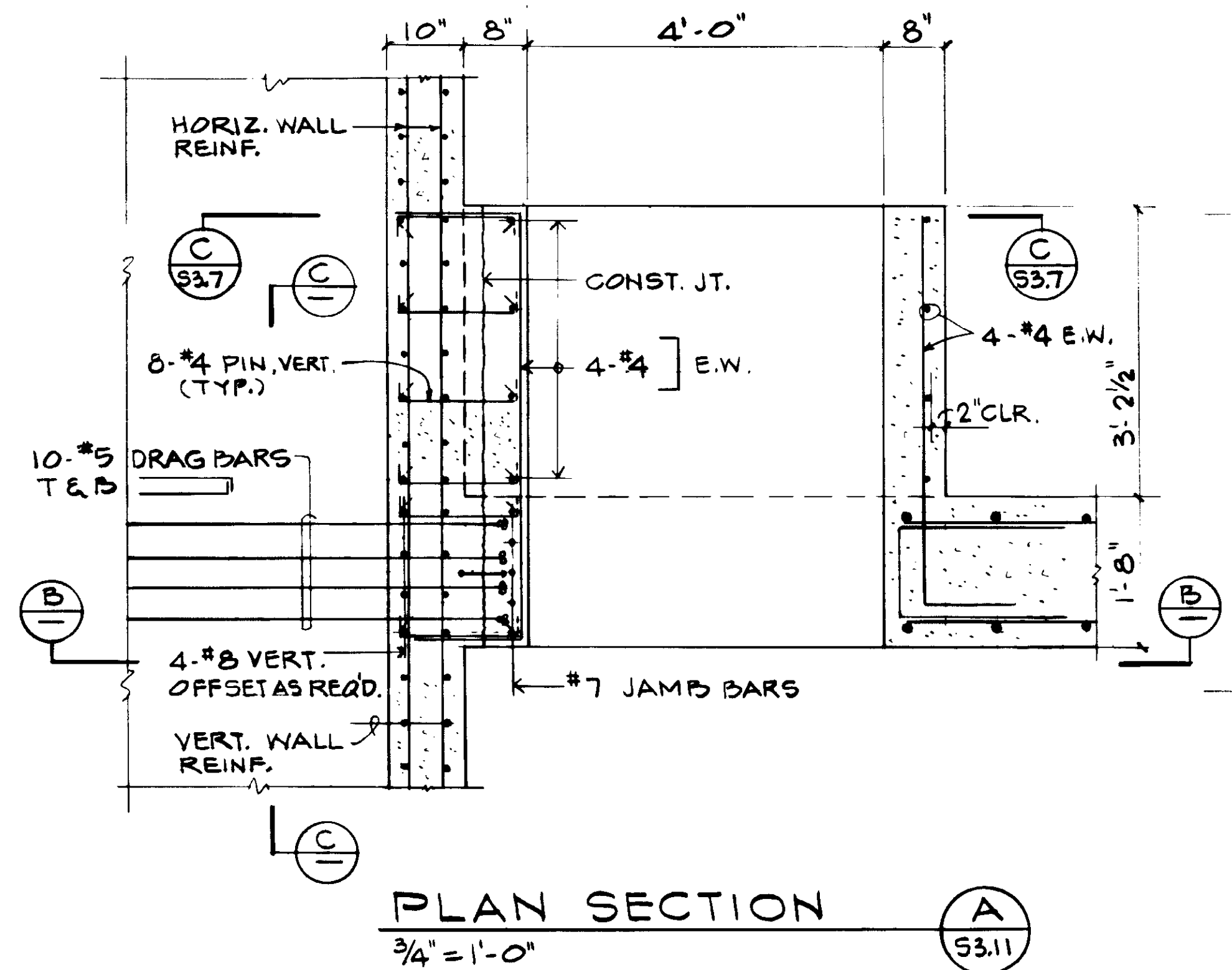
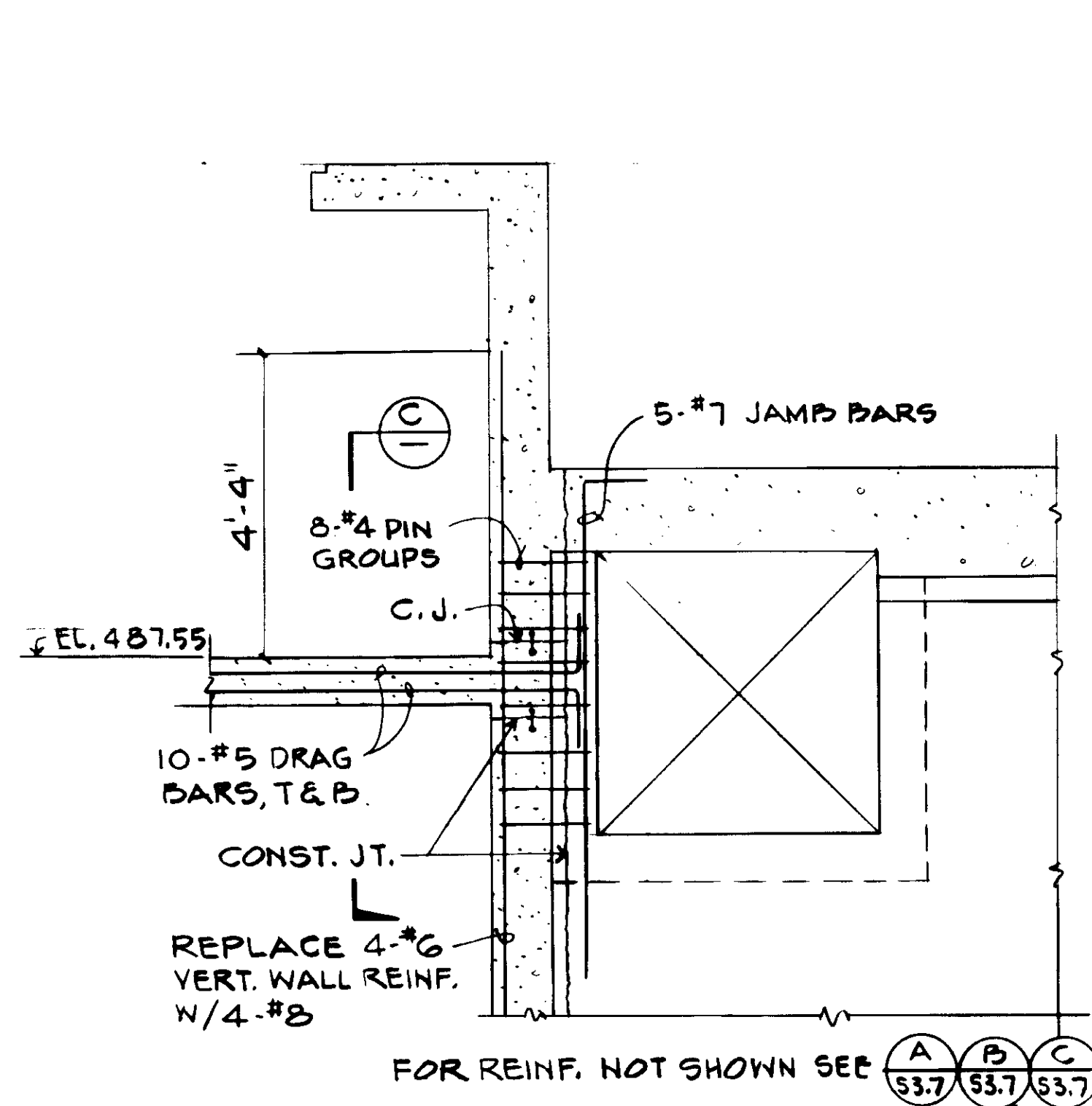
Job No. 4928  
 STRUCTURAL ENGINEERS  
**JOHN A. MARTIN & ASSOCIATES, INC.**  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483 6490

RECORD DRAWINGS  
 PREPARED BY: JOHN A. MARTIN  
 DATE: 8/19/87  
 KALEX ENGINEERS

SHEET **53.9**







REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

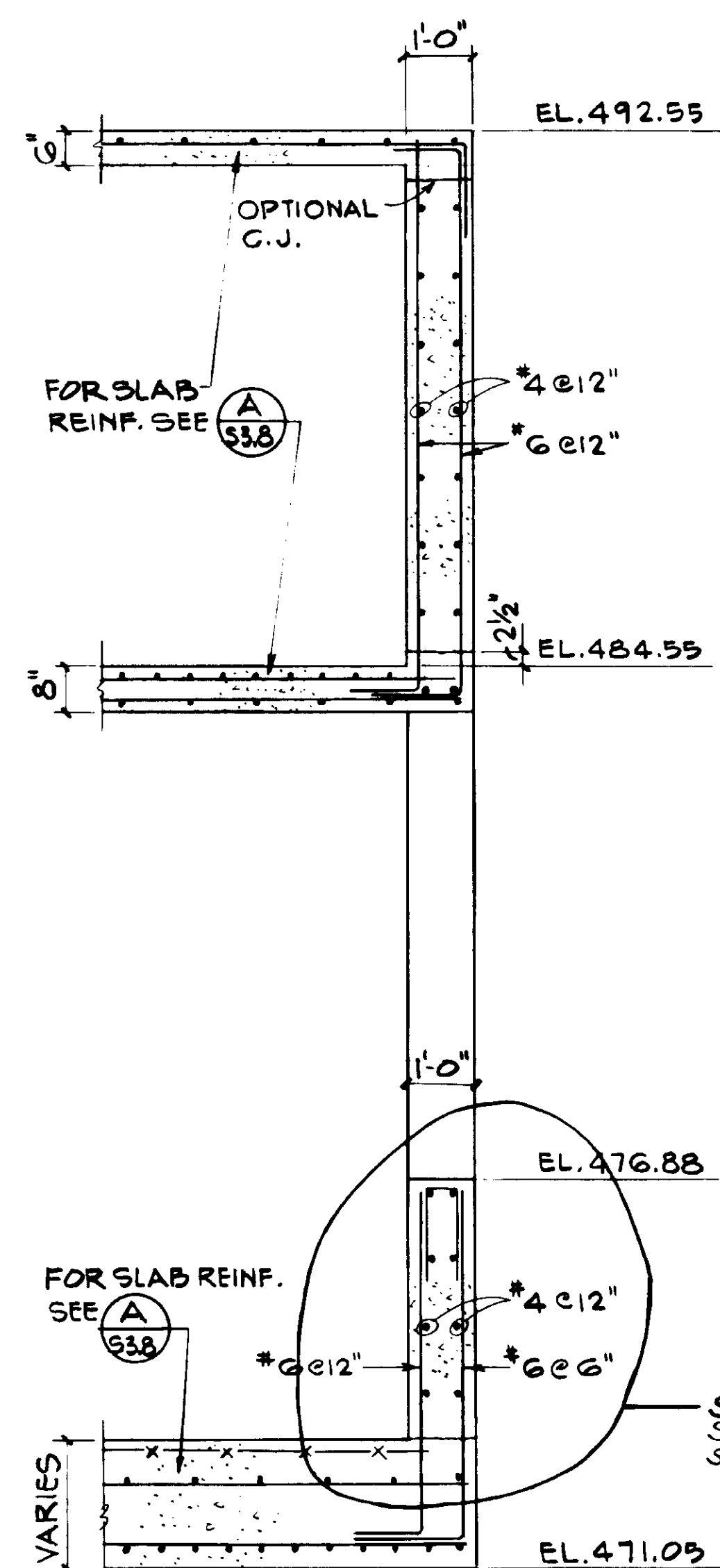
SCALE: AS NOTED	DESIGNED: K. DENUSKA	SUBMITTED: [Signature]
DRAWN: R. LEE	CHECKED: [Signature]	DATE: 8-7-87

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

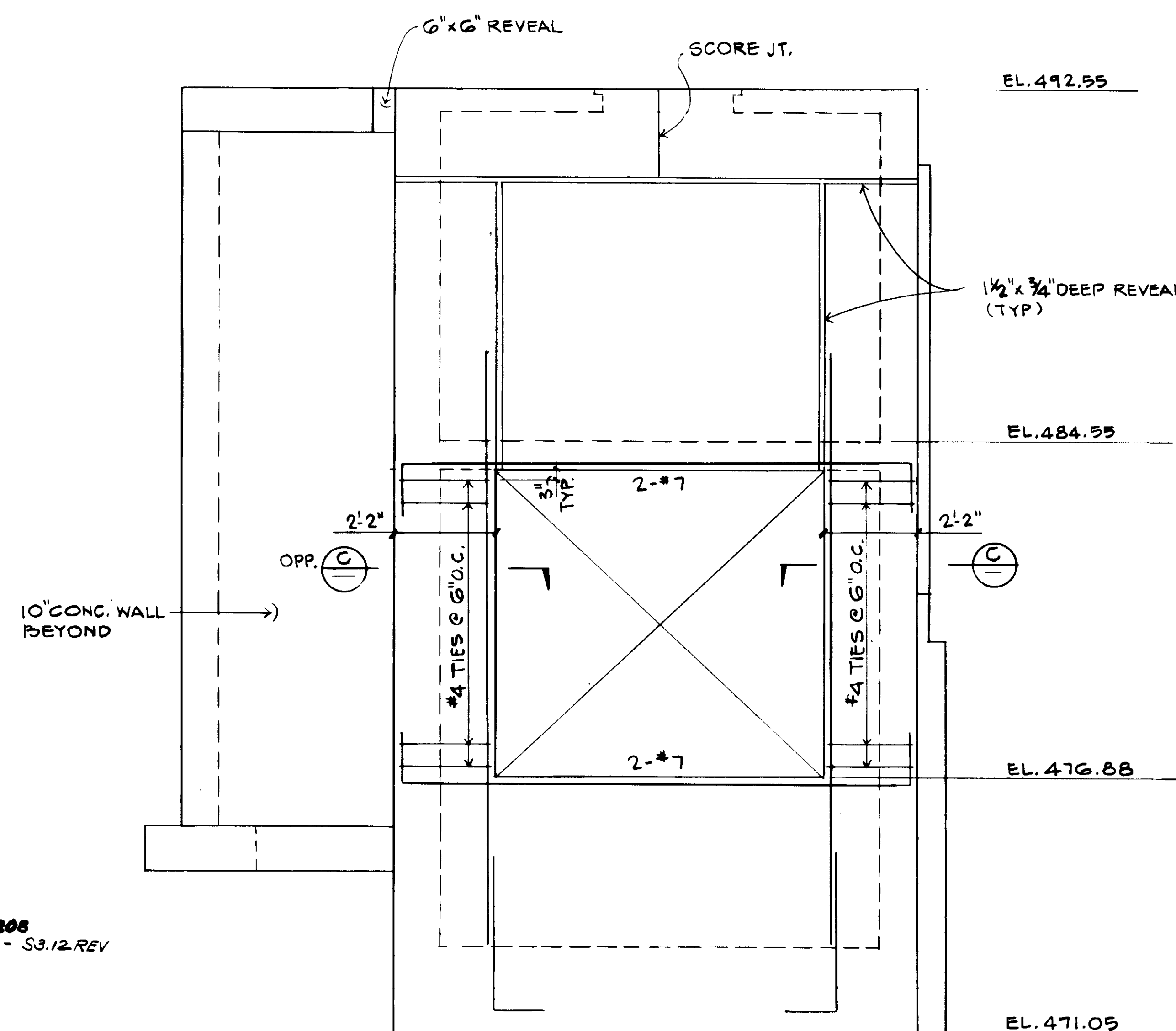
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
TAPIA WATER RECLAMATION FACILITY EXPANSION III  
AERATION TANK NOS. 5 AND 6 AND VICINITY  
SECTIONS AND DETAILS, SHEET 8

SHEET  
S3.11

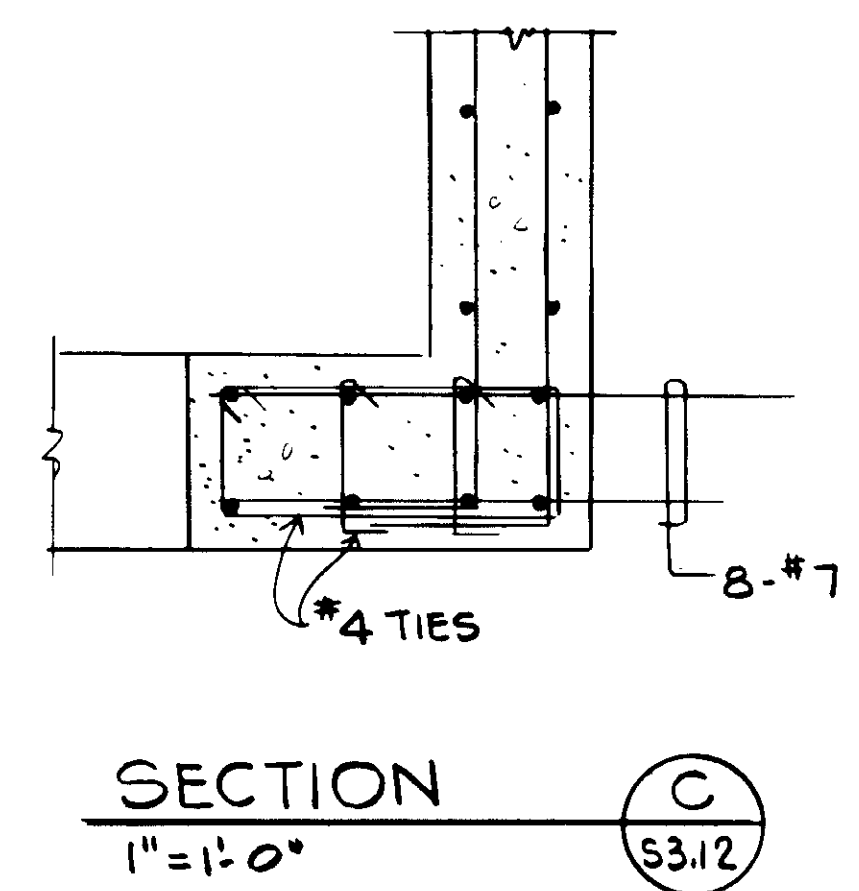
03971  
JOB NO. 4928  
STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483-6490



SECTION A  
S3.12



SECTION B  
S3.12



SECTION C  
S3.12

REV	DATE	BY	DESCRIPTION

SCALE: 1/2" = 1'-0"	DESIGNED R. LEE	SUBMITTED <i>[Signature]</i> 14038 8-7-87
	DRAWN K. BENUSKA	KATSUKA CONSULTING ENGINEERS R.C.E. NO. DATE
	CHECKED	ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsuka Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
AERATION TANK NOS. 5 AND 6 AND VICINITY  
SECTIONS AND DETAILS, SHEET 7

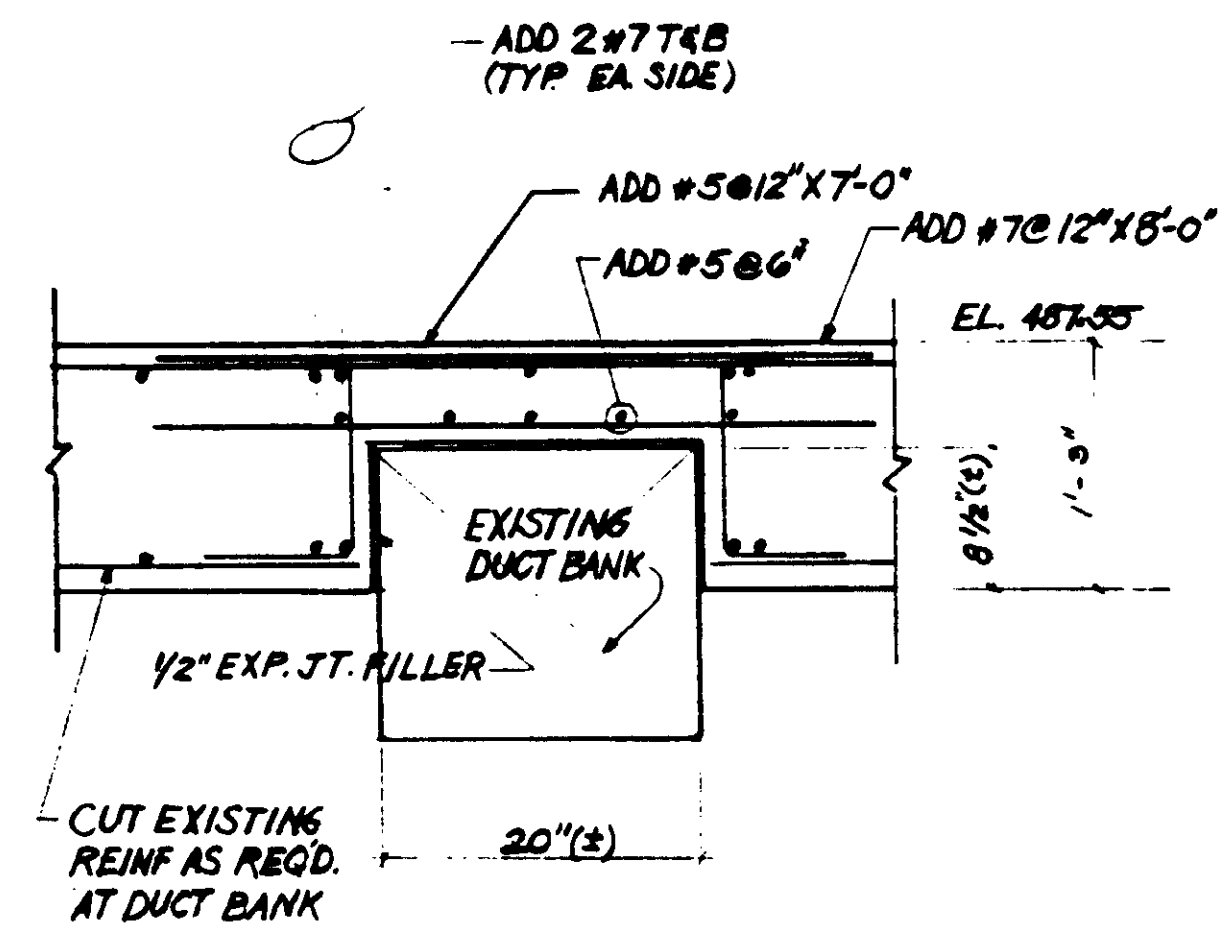
SHEET  
S3.12



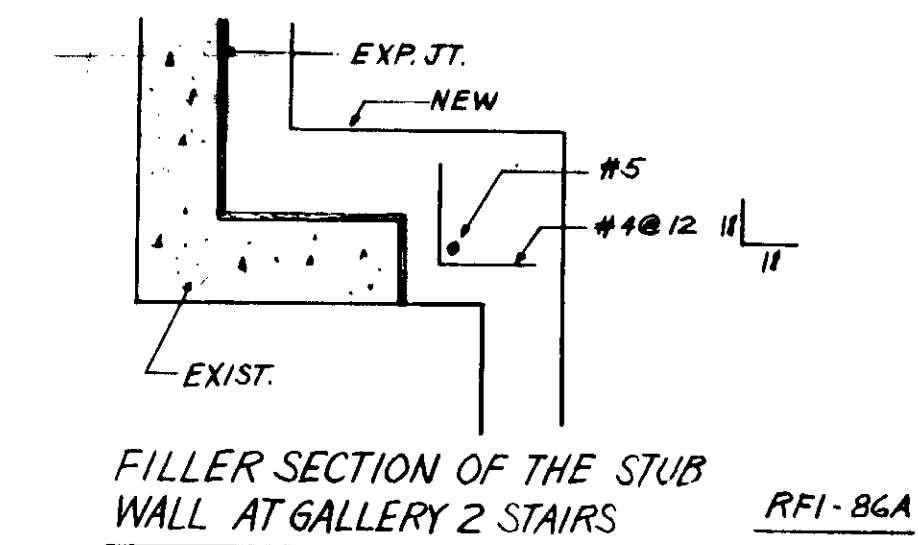
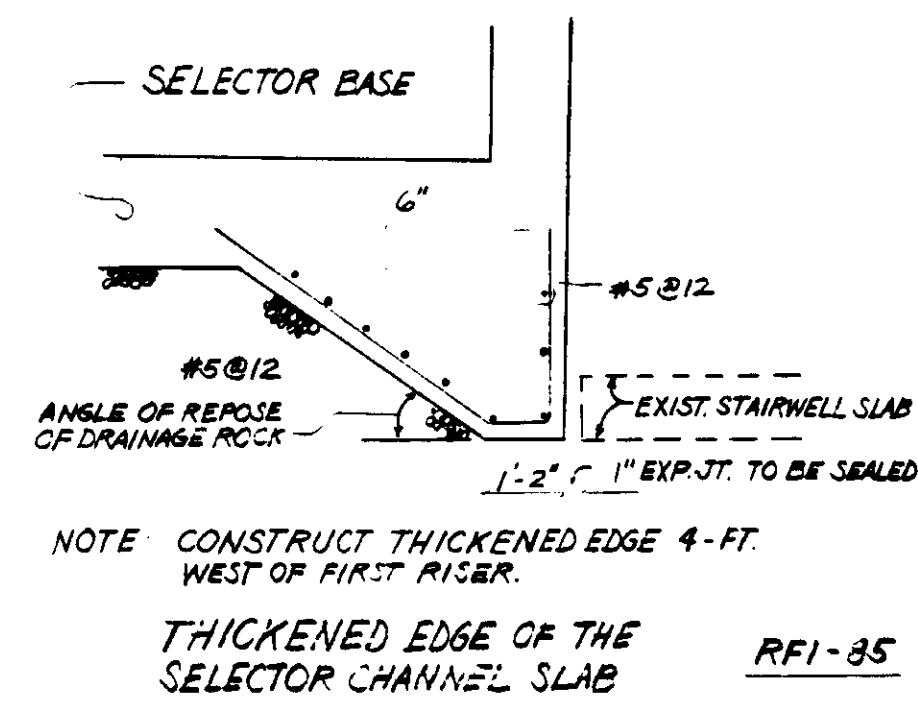
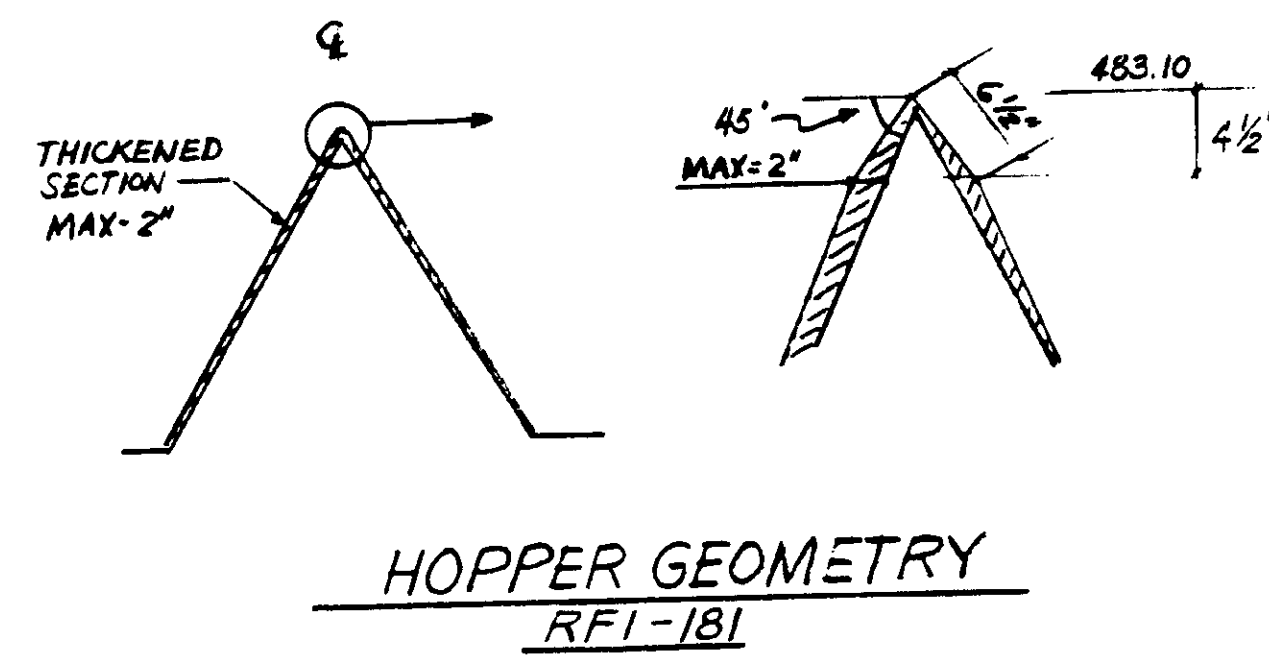
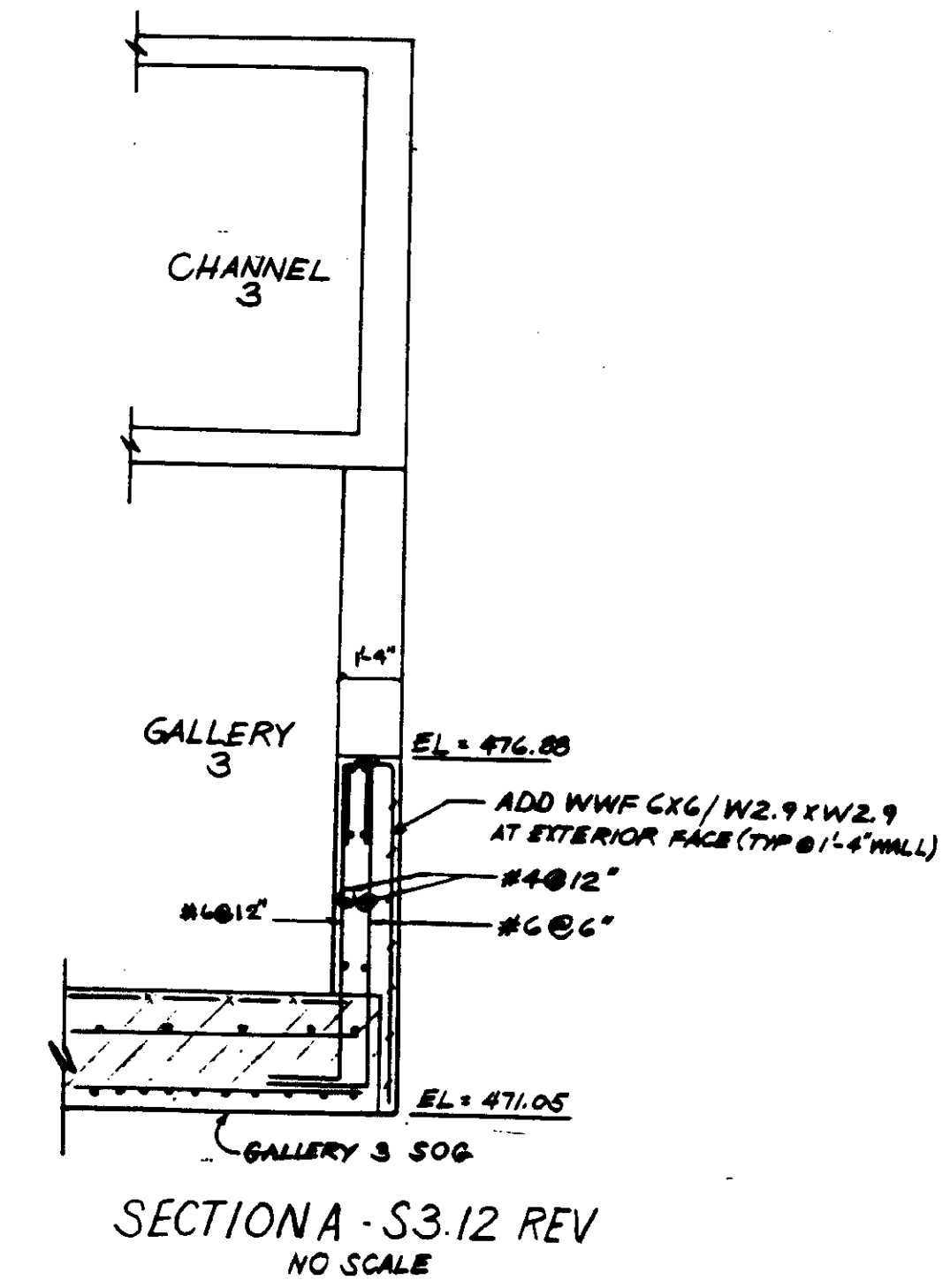
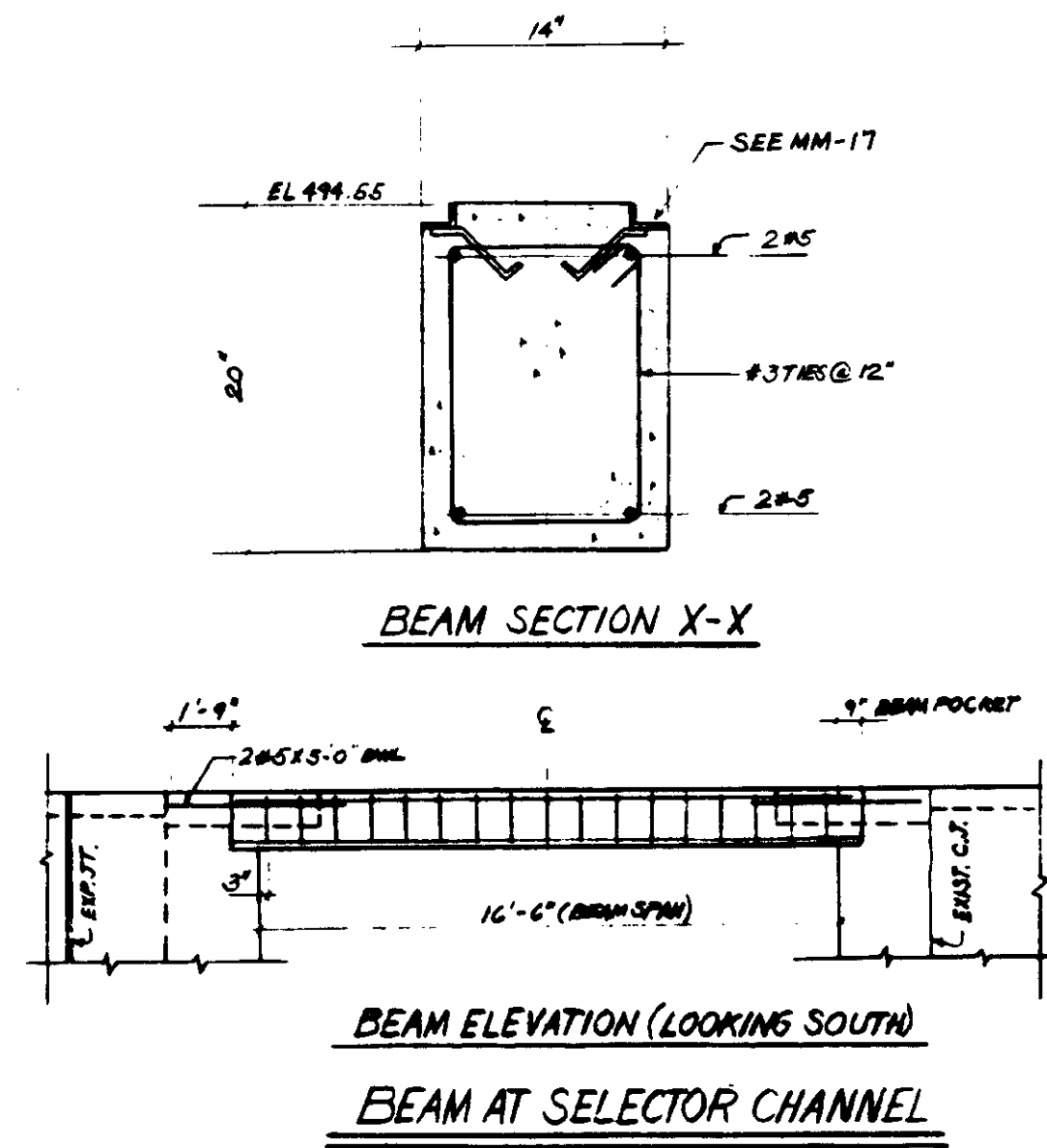
03972

JOHN A. MARTIN  
STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483 6490

RECORD DRAWINGS  
No. 1958  
EXP. 12-31-86  
KATSUKA CONSULTING ENGINEERS 1988 1989



SELECTOR CHANNEL INLET AT EXIST. ELECTRICAL DUCT BANK

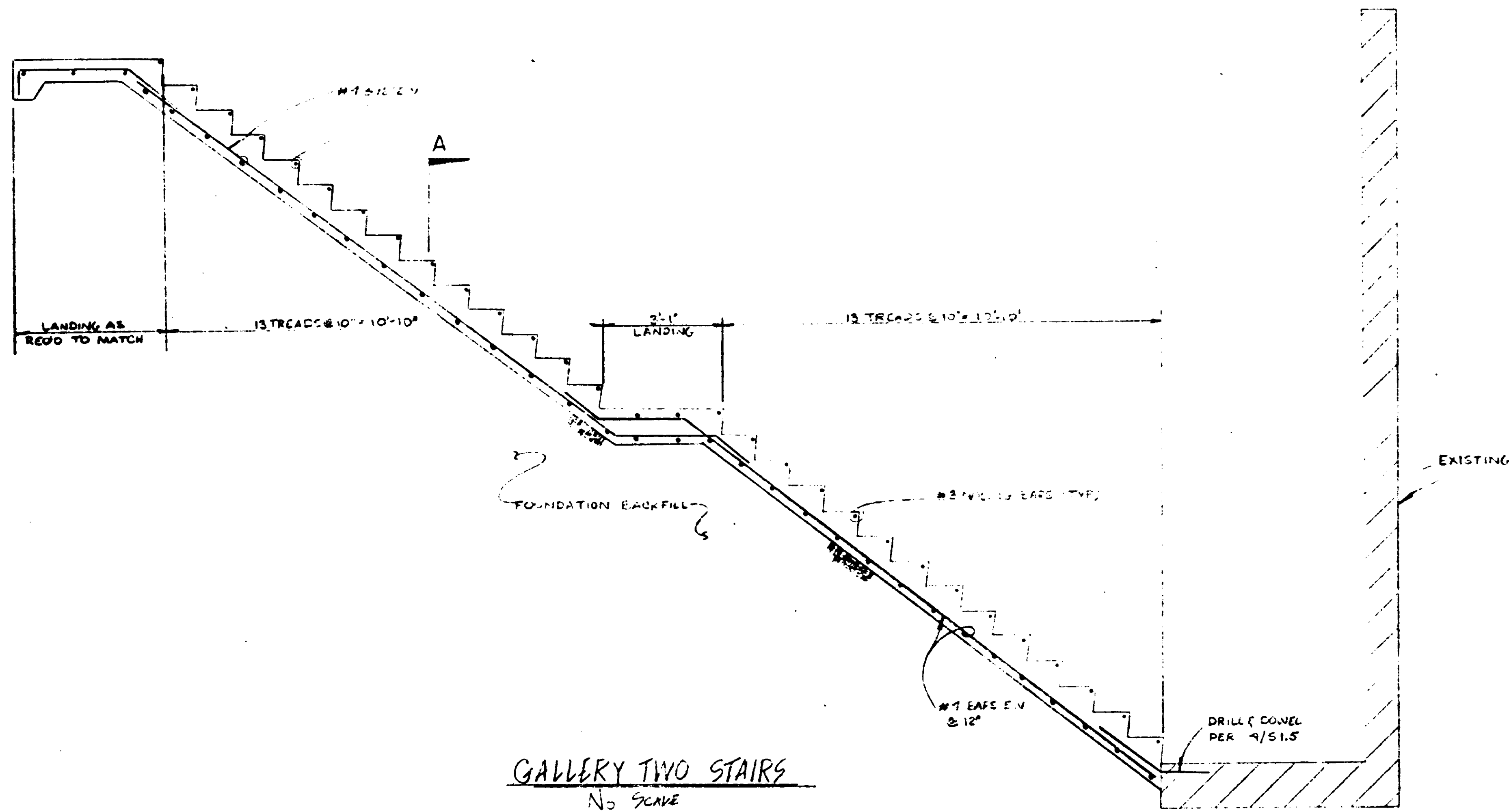


03973

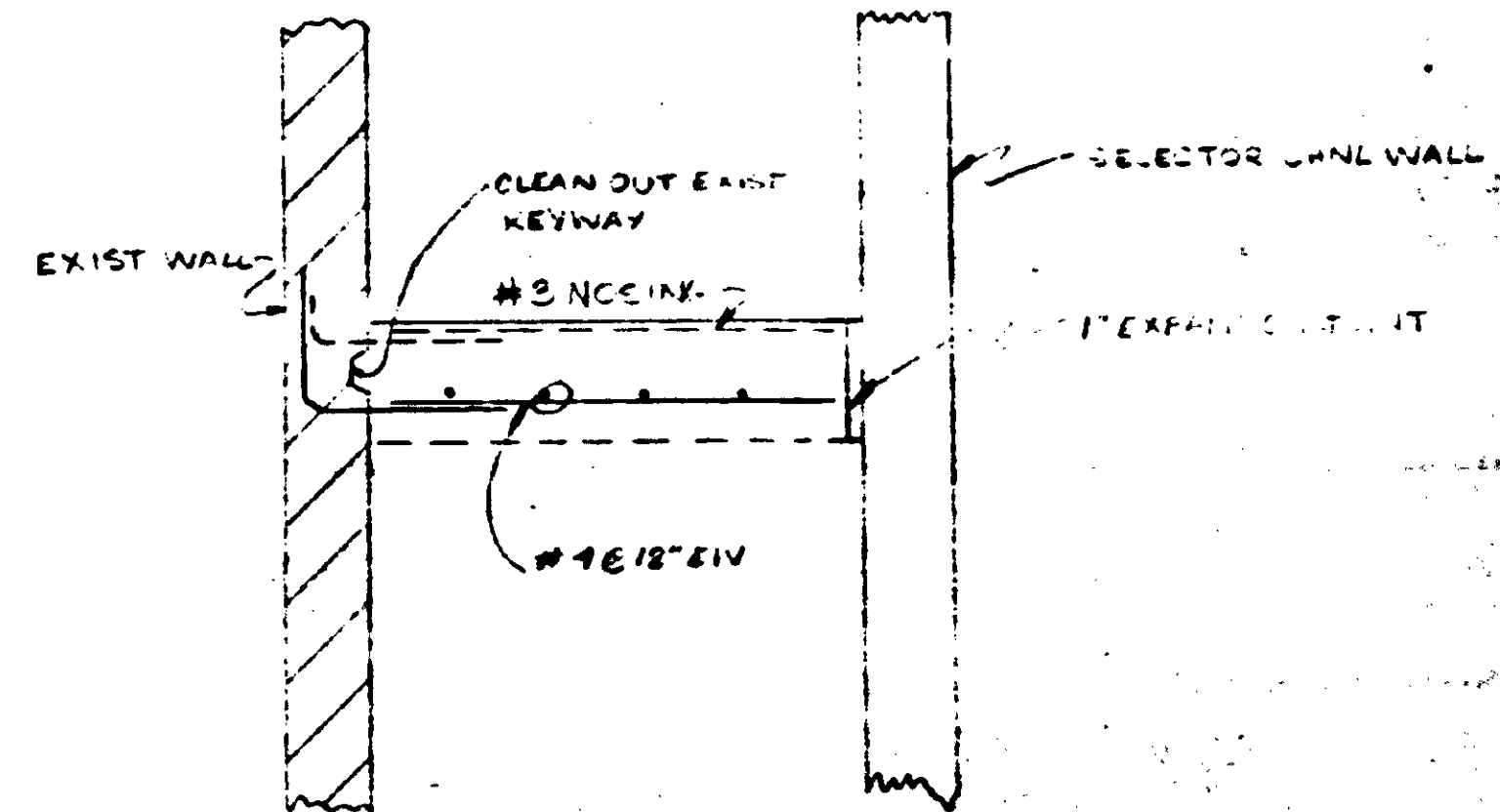
BRUCE MATHES  
 FOR FIRM: MATHES & ASSOCIATES, INC.  
 1000 N. GARDEN AVENUE, SUITE 100  
 DENVER, CO 80202  
 (303) 733-1111  
 FAX: (303) 733-1112  
 WWW.MATHES.COM

SHEET  
 03.13





GALLERY TWO STAIRS  
NO SCALE

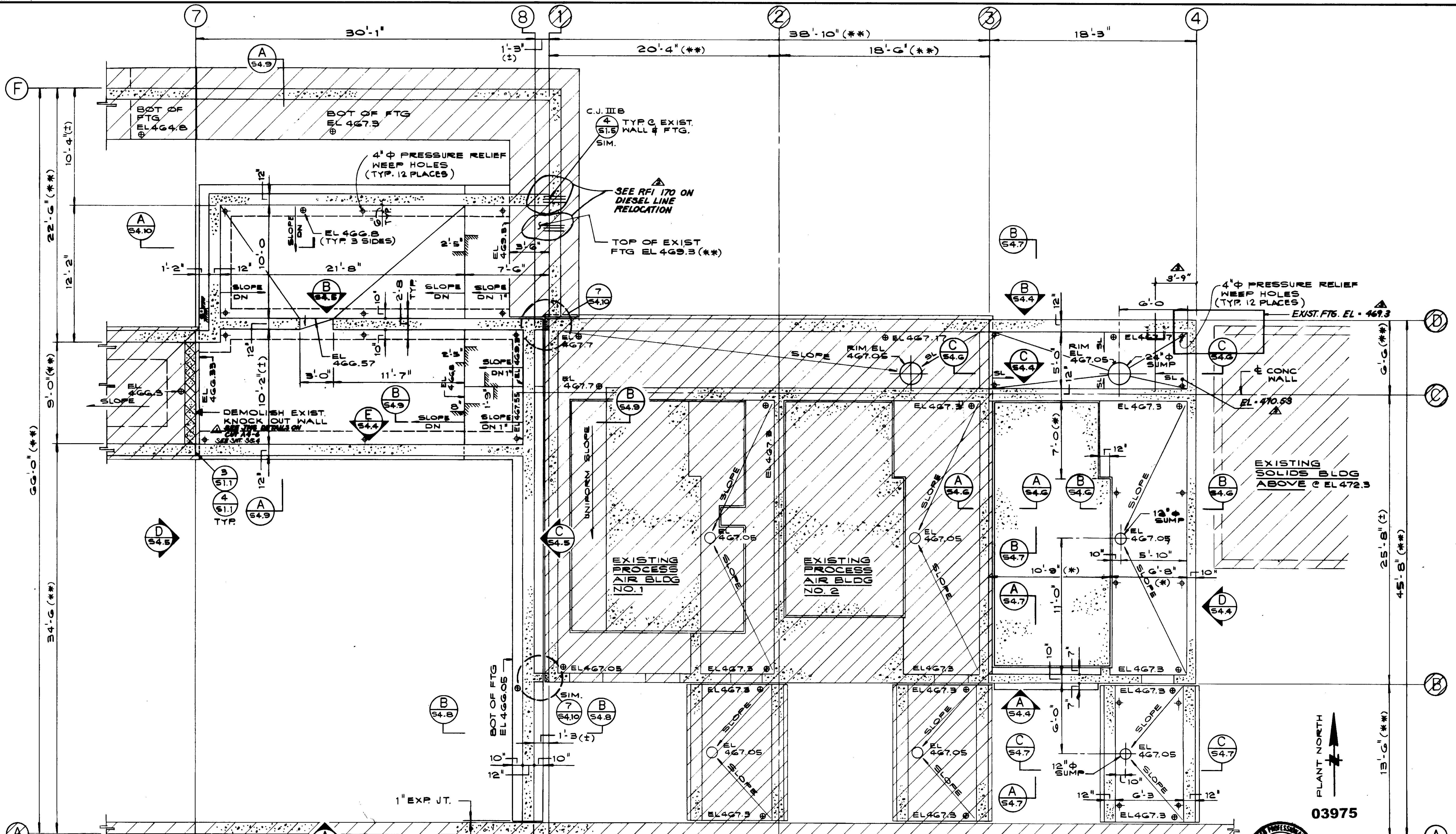


SECTION A  
NO SCALE

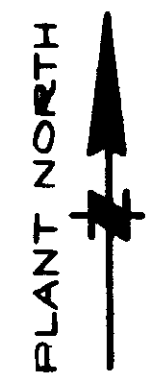
APPROVED PER RFI 65A

03974

KIEWIT PACIFIC	
GALLERY TWO STAIRS	
APPROVED BY	
DATE	



03975



EXISTING EAST-WEST PIPE GALLERY

**BASEMENT AND FOUNDATION PLAN**



JOB NO. 4928  
 STRUCTURAL ENGINEERS  
**JOHN A. MARTIN & ASSOCIATES, INC.**  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483-6490

REV	DATE	BY	DESCRIPTION
5-9-81	A.B.	REV. PER K.P.C.	
5-9-81	A.B.	REV. PER K.P.C.	
5-9-81	A.B.	REV. PER K.P.C.	

SCALE: 1/4" = 1'-0"	DESIGNED: P. HAMARATA	SUBMITTED: <i>[Signature]</i> 10038 8-7-87
CHECKED: R. BEUSKA	DRAWN: R. BEUSKA	KATSUNA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**

Katsuna Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ELECTRICAL AND PROCESS AIR BUILDINGS**  
**BASEMENT AND FOUNDATION PLAN**

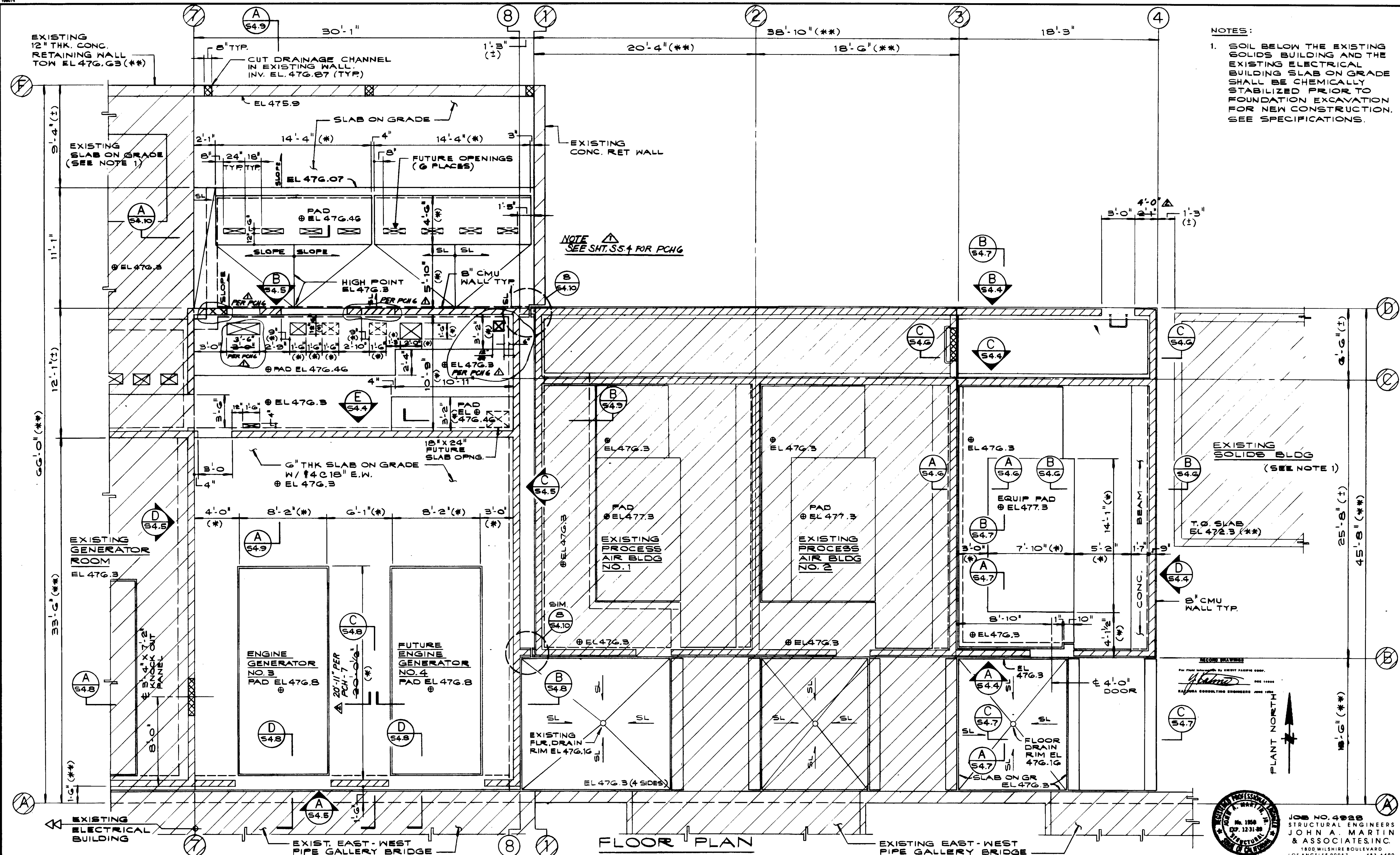
SHEET **84.3**



EXISTING 12" THK. CONC. RETAINING WALL TOW EL 476.63 (\*\*)

NOTES:  
1. SOIL BELOW THE EXISTING SOLIDS BUILDING AND THE EXISTING ELECTRICAL BUILDING SLAB ON GRADE SHALL BE CHEMICALLY STABILIZED PRIOR TO FOUNDATION EXCAVATION FOR NEW CONSTRUCTION. SEE SPECIFICATIONS.

NOTE SEE SHT. S5.4 FOR PCHG



FLOOR PLAN

REV	DATE	BY	DESCRIPTION

SCALE: 1/4" = 1'-0"	DESIGNED BY: R. LEE	SUBMITTED: 14038 8-7-87
	DRAWN BY: R. HAMADATA	
	CHECKED BY: K. PENUSKA	

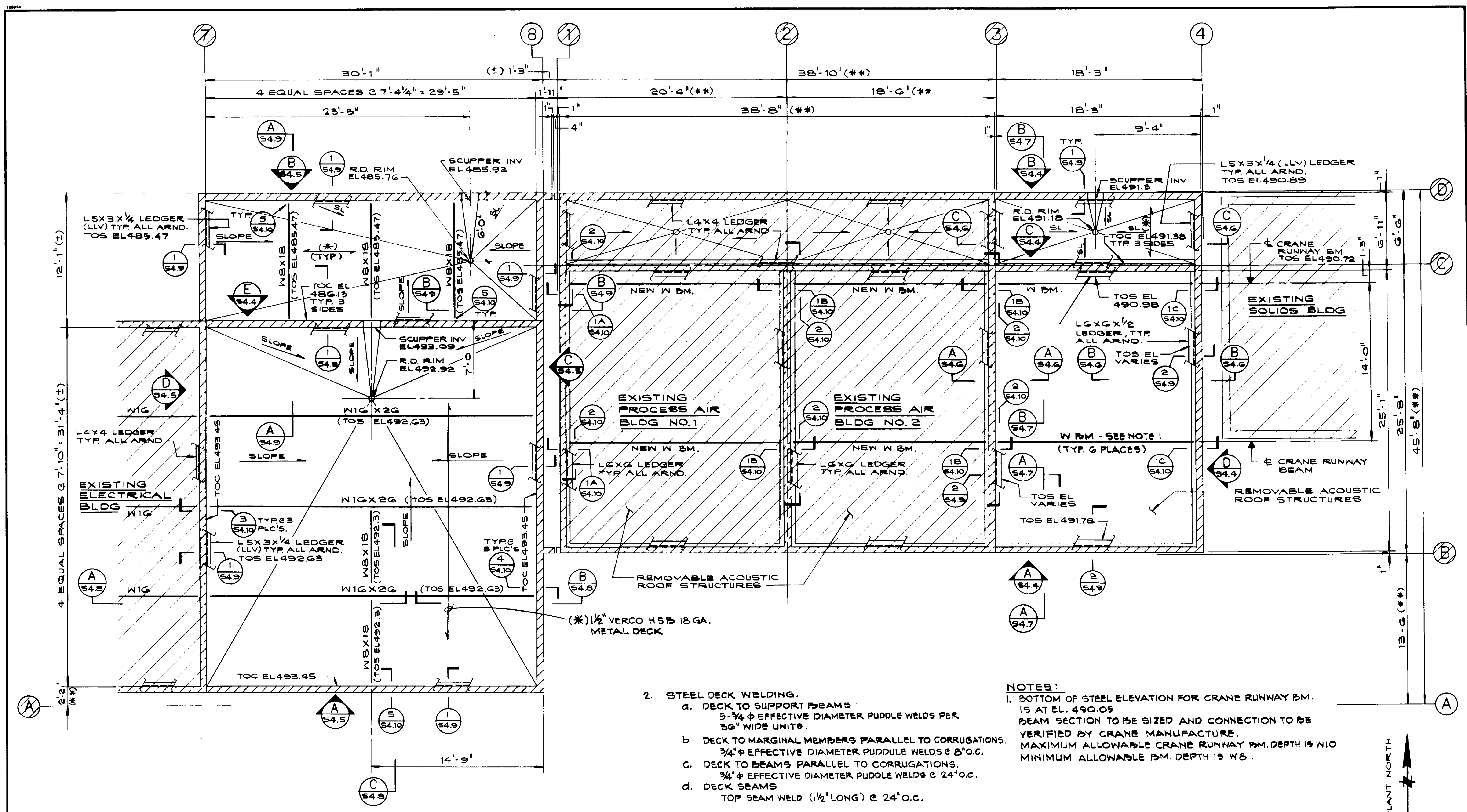
**KALEX ENGINEERS** 03976  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ELECTRICAL AND PROCESS AIR BUILDINGS**  
**PLAN AT ELEVATION 476.30**

**JOHN A. MARTIN & ASSOCIATES, INC.**  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483-6490

SHEET 84.2





2. STEEL DECK WELDING.
- a. DECK TO SUPPORT BEAMS  
5- $\frac{3}{4}$ "  $\phi$  EFFECTIVE DIAMETER PUDDLE WELDS PER 36" WIDE UNITS.
  - b. DECK TO MARGINAL MEMBERS PARALLEL TO CORRUGATIONS.  
 $\frac{3}{4}$ "  $\phi$  EFFECTIVE DIAMETER PUDDLE WELDS @ 8" O.C.
  - c. DECK TO BEAMS PARALLEL TO CORRUGATIONS.  
 $\frac{3}{4}$ "  $\phi$  EFFECTIVE DIAMETER PUDDLE WELDS @ 24" O.C.
  - d. DECK SEAMS  
TOP SEAM WELD (1/2" LONG) @ 24" O.C.

NOTES:  
1. BOTTOM OF STEEL ELEVATION FOR CRANE RUNWAY BM. IS AT EL. 490.05  
BEAM SECTION TO BE SIZED AND CONNECTION TO BE VERIFIED BY CRANE MANUFACTURE. MAXIMUM ALLOWABLE CRANE RUNWAY BM. DEPTH IS W10 MINIMUM ALLOWABLE BM. DEPTH IS W8.

**ROOF PLAN**

03977



JOB NO. 4928  
STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483-6490

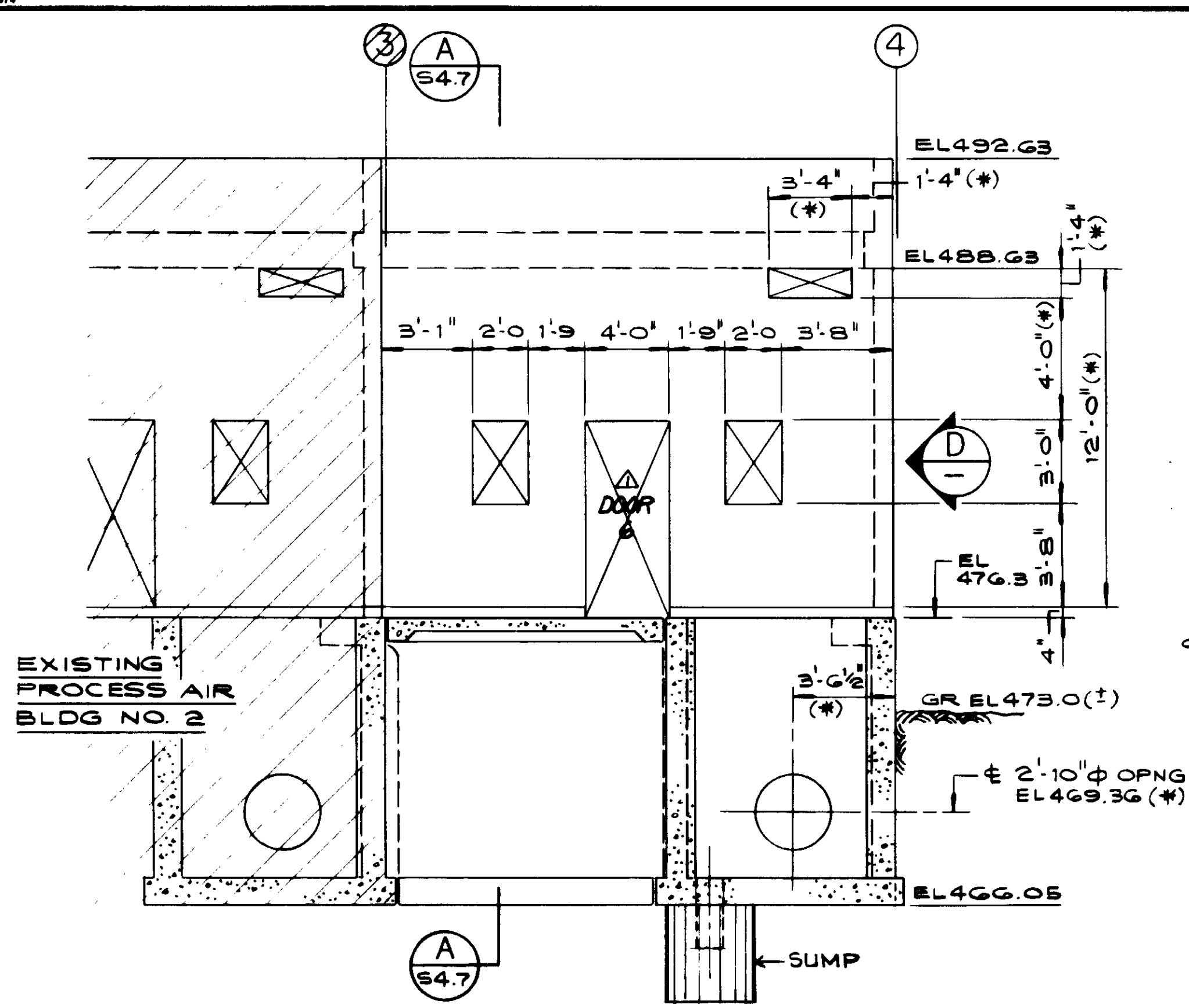
REV	DATE	BY	DESCRIPTION

SCALE: 1/4" = 1'-0"	DESIGNED: E. LEE	SUBMITTED: <i>[Signature]</i>	DATE: 6-7-87
	DRAWN: R. HANABATA		
	CHECKED: E. BELUSKA		
		ALEXANDER ENGINEERS	R.C.E. NO. DATE

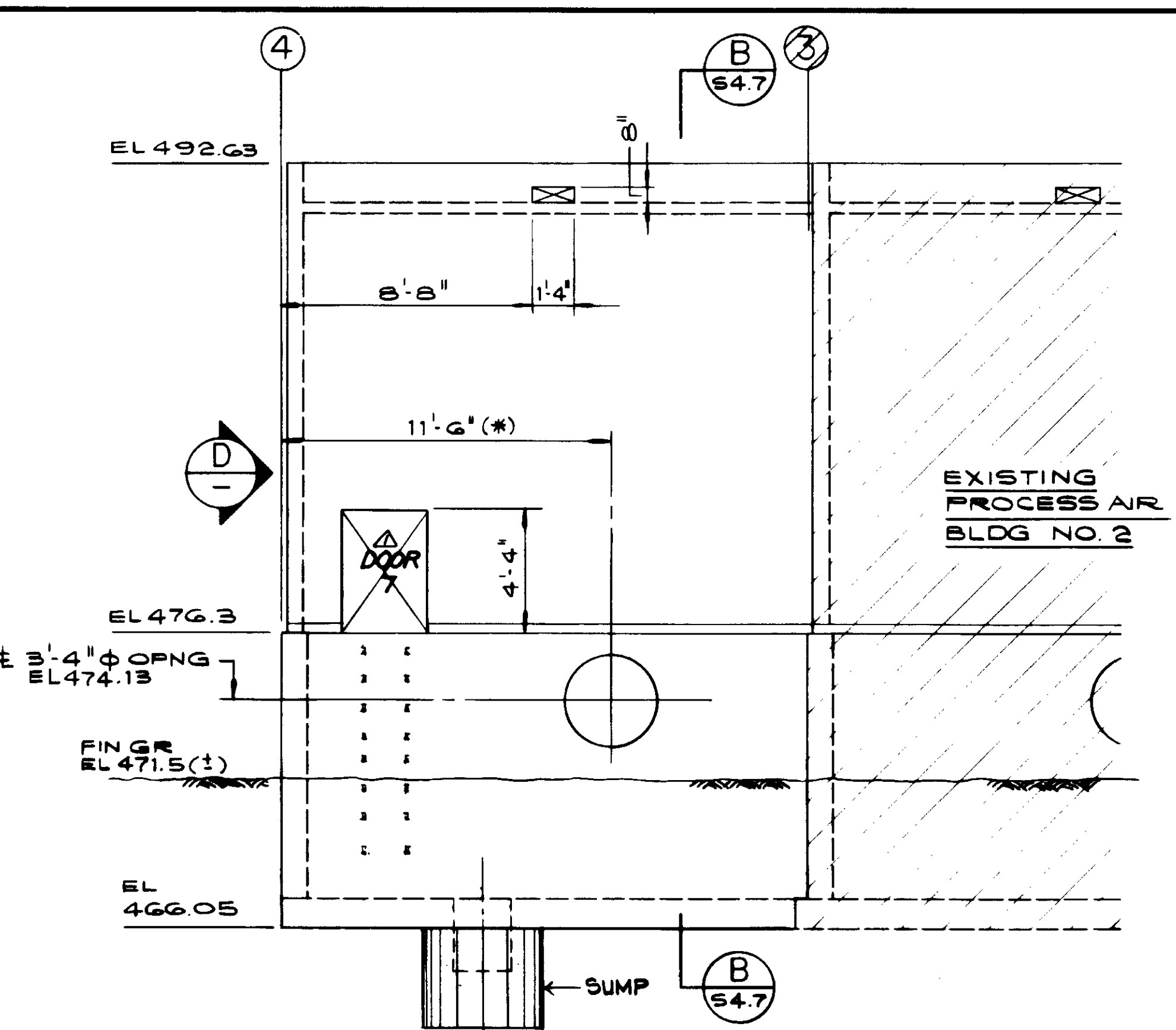
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
TAPIA WATER RECLAMATION FACILITY EXPANSION III  
ELECTRICAL AND PROCESS AIR BUILDINGS  
ROOF PLAN

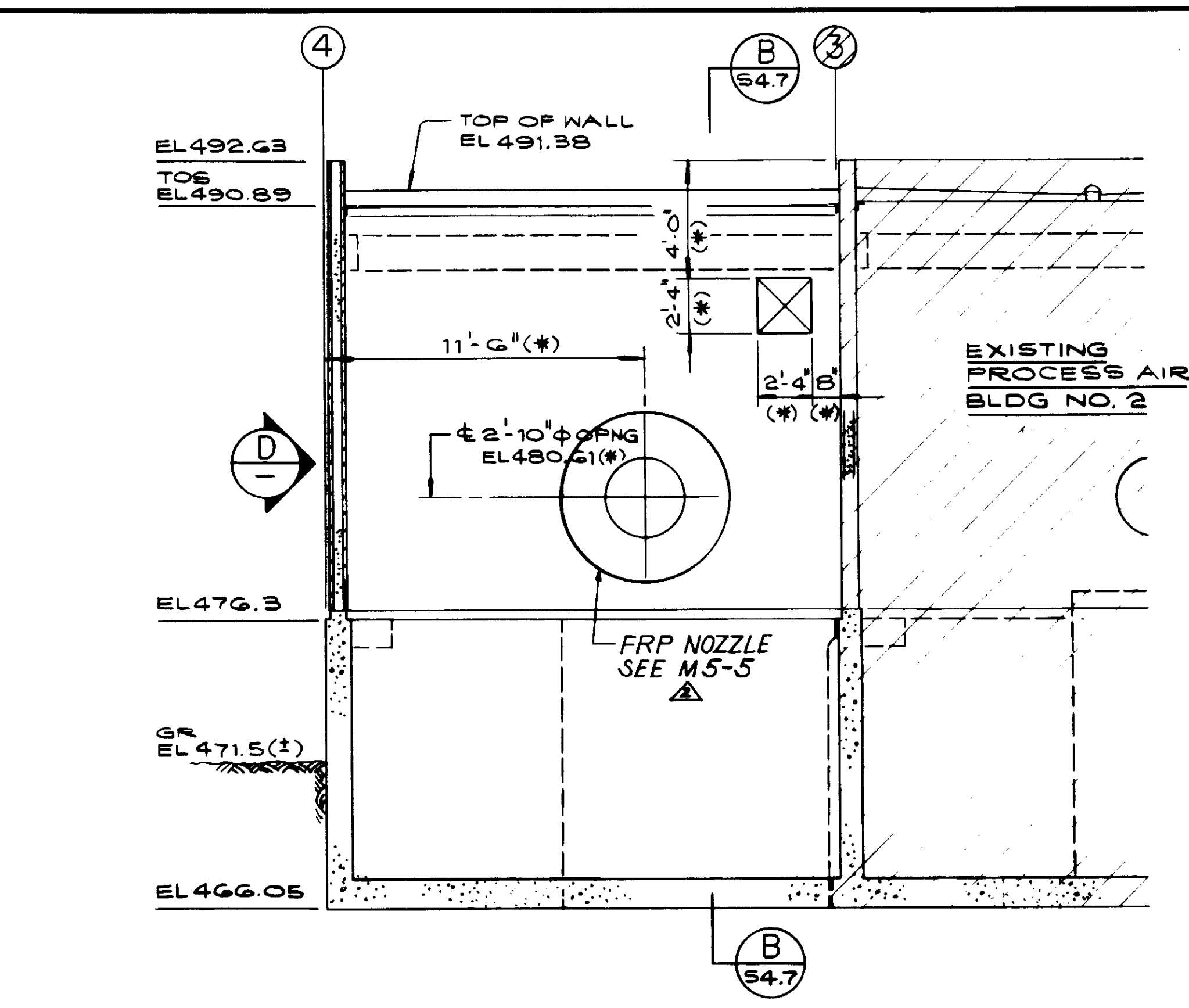
SHEET  
S4.3



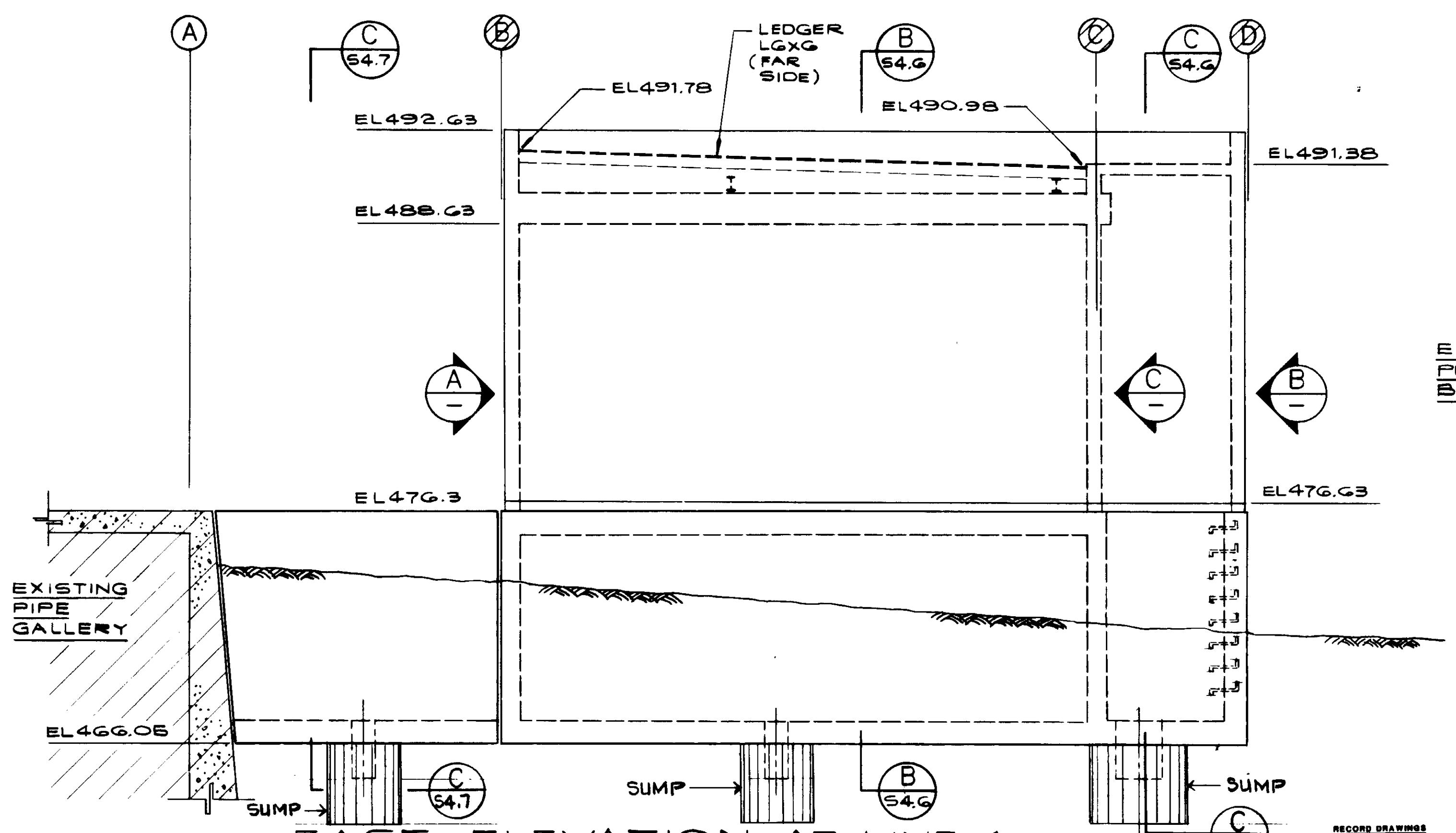
SOUTH ELEVATION AT LINE B  
PROCESS AIR BUILDING



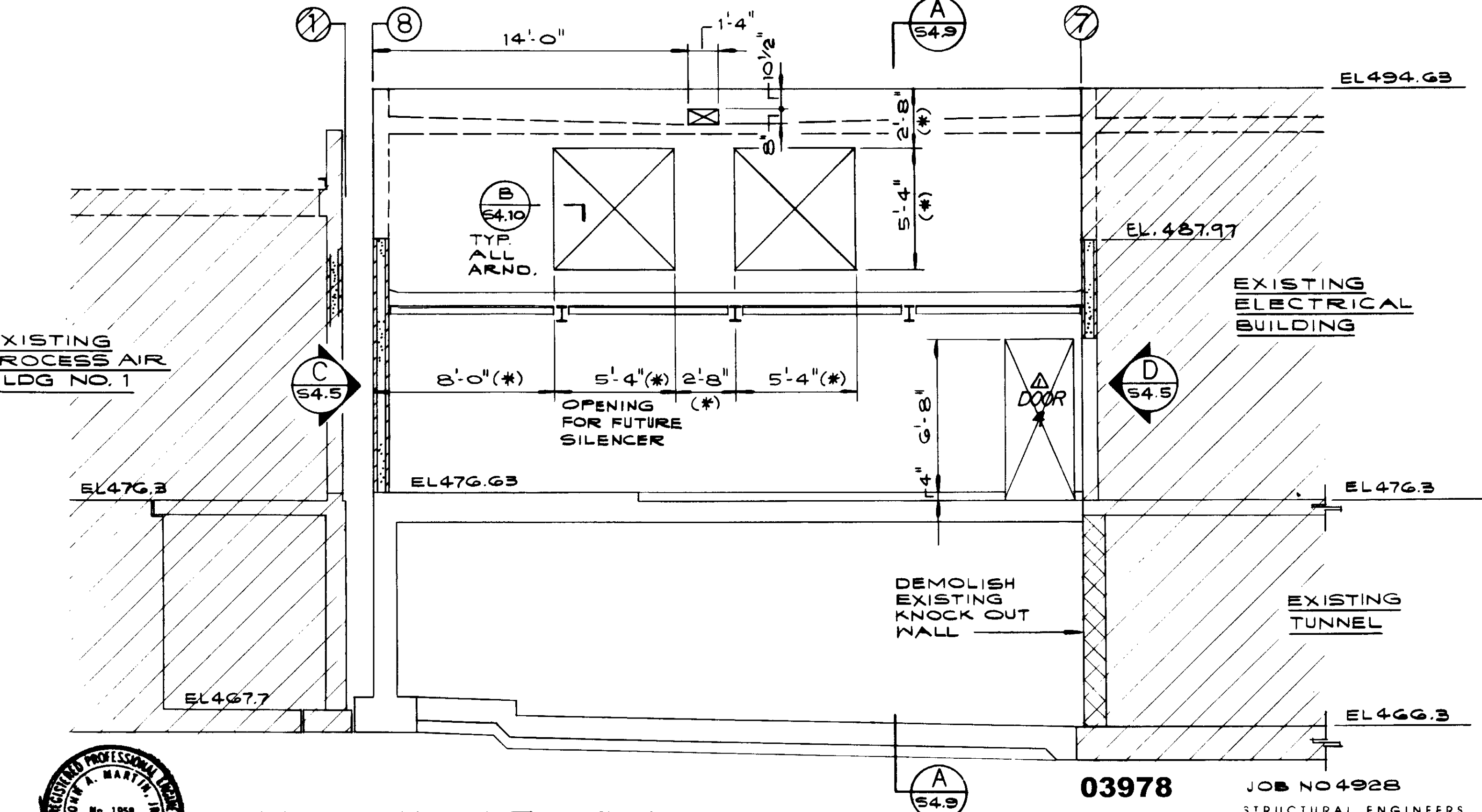
NORTH ELEVATION AT LINE D  
PROCESS AIR BUILDING



NORTH ELEVATION AT LINE C  
PROCESS AIR BUILDING



EAST ELEVATION AT LINE 4  
AIR PROCESS BUILDING



NORTH ELEVATION  
ELECTRICAL BUILDING

REV	DATE	BY	DESCRIPTION
5-8-01	A.S.		REV. PER K.P.C.
5-8-01	A.S.		REV. PER K.P.C.

SCALE:	1/4" = 1'-0"
DESIGNED:	P. HAMABATA
DRAWN:	K. BENUSKA
CHECKED:	
SUBMITTED:	8-7-01
DATE:	
PROJECT NO.:	14038
R.C.E. NO.:	
DATE:	
PROJECT:	TAPIA WATER RECLAMATION FACILITY EXPANSION III
PROJECT NO.:	03978
PROJECT:	ELECTRICAL AND PROCESS AIR BUILDINGS
PROJECT NO.:	14038
PROJECT:	ELEVATIONS, SHEET 1



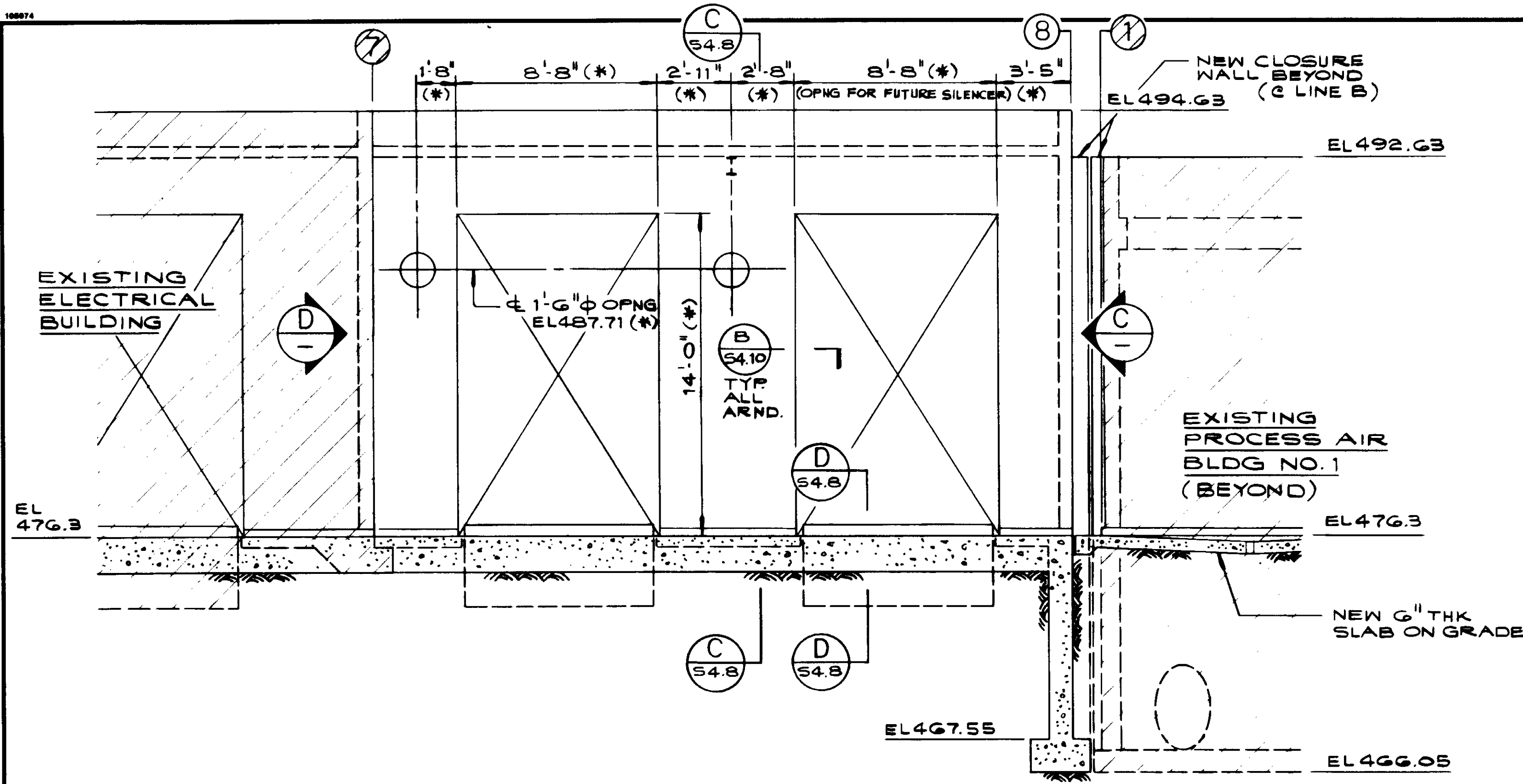
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ELECTRICAL AND PROCESS AIR BUILDINGS**  
**ELEVATIONS, SHEET 1**

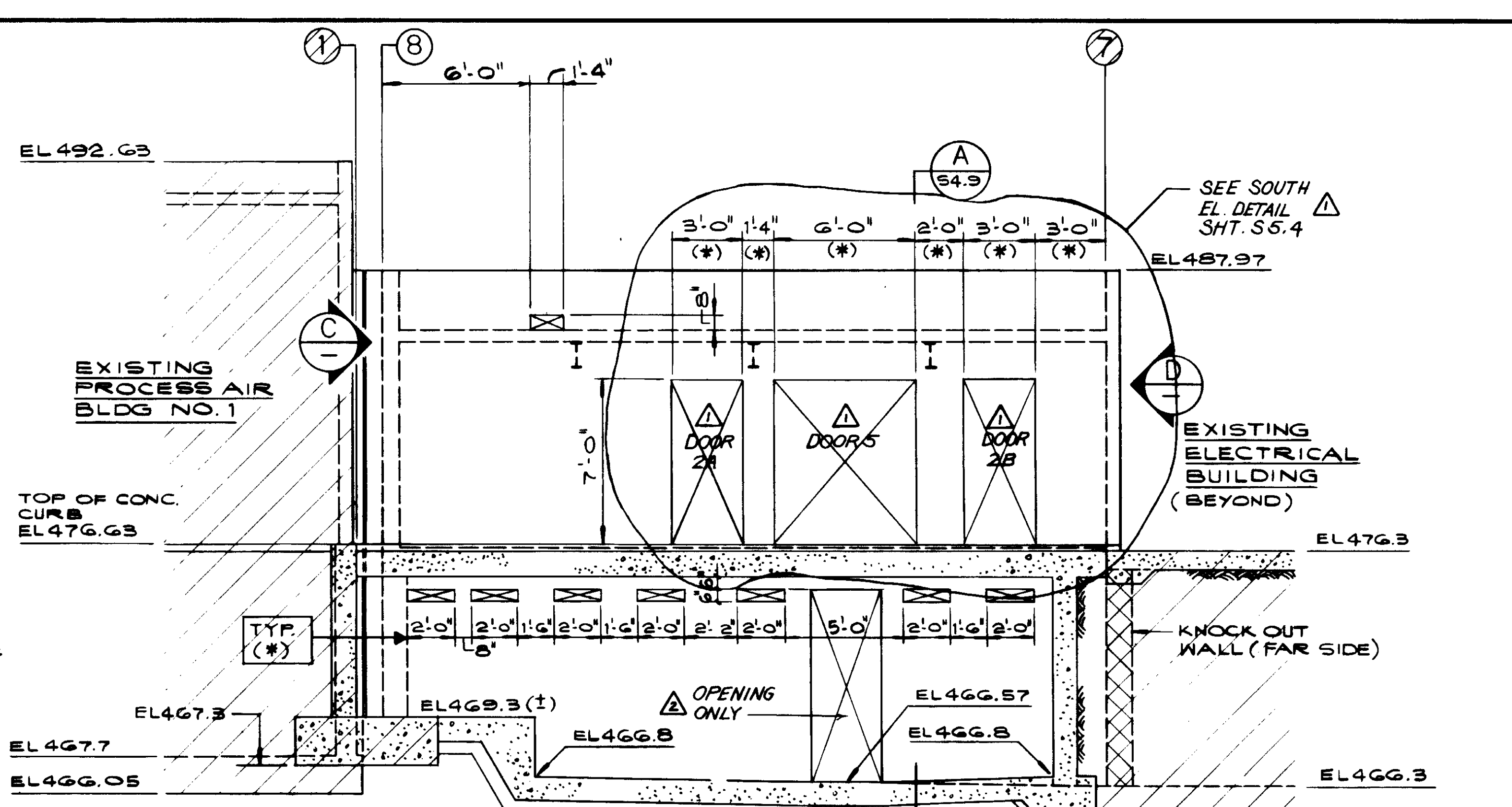
JOB NO 4928  
STRUCTURAL ENGINEERS  
**JOHN A. MARTIN & ASSOCIATES, INC.**  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483-0490

SHEET  
**S4.4**

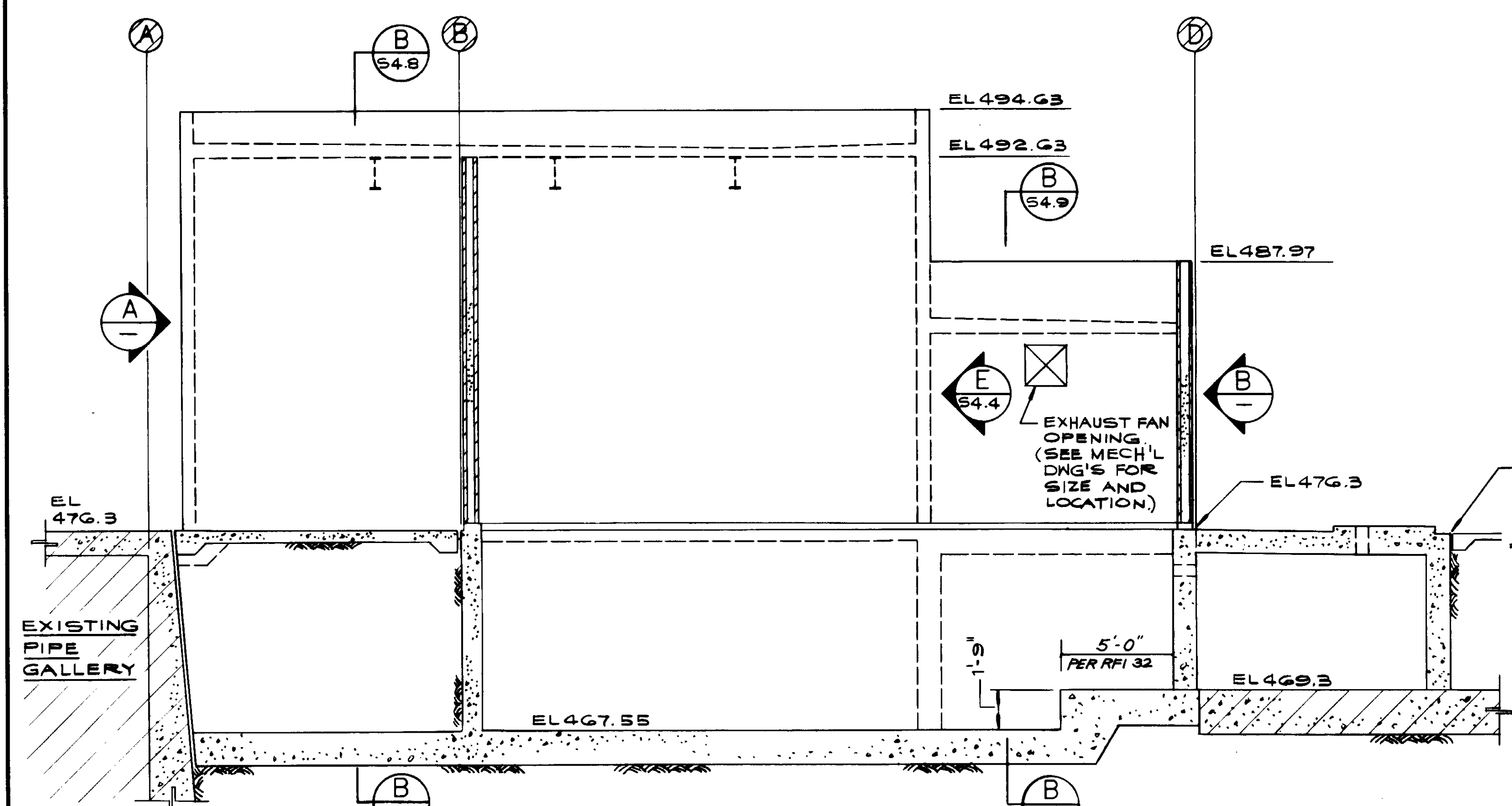




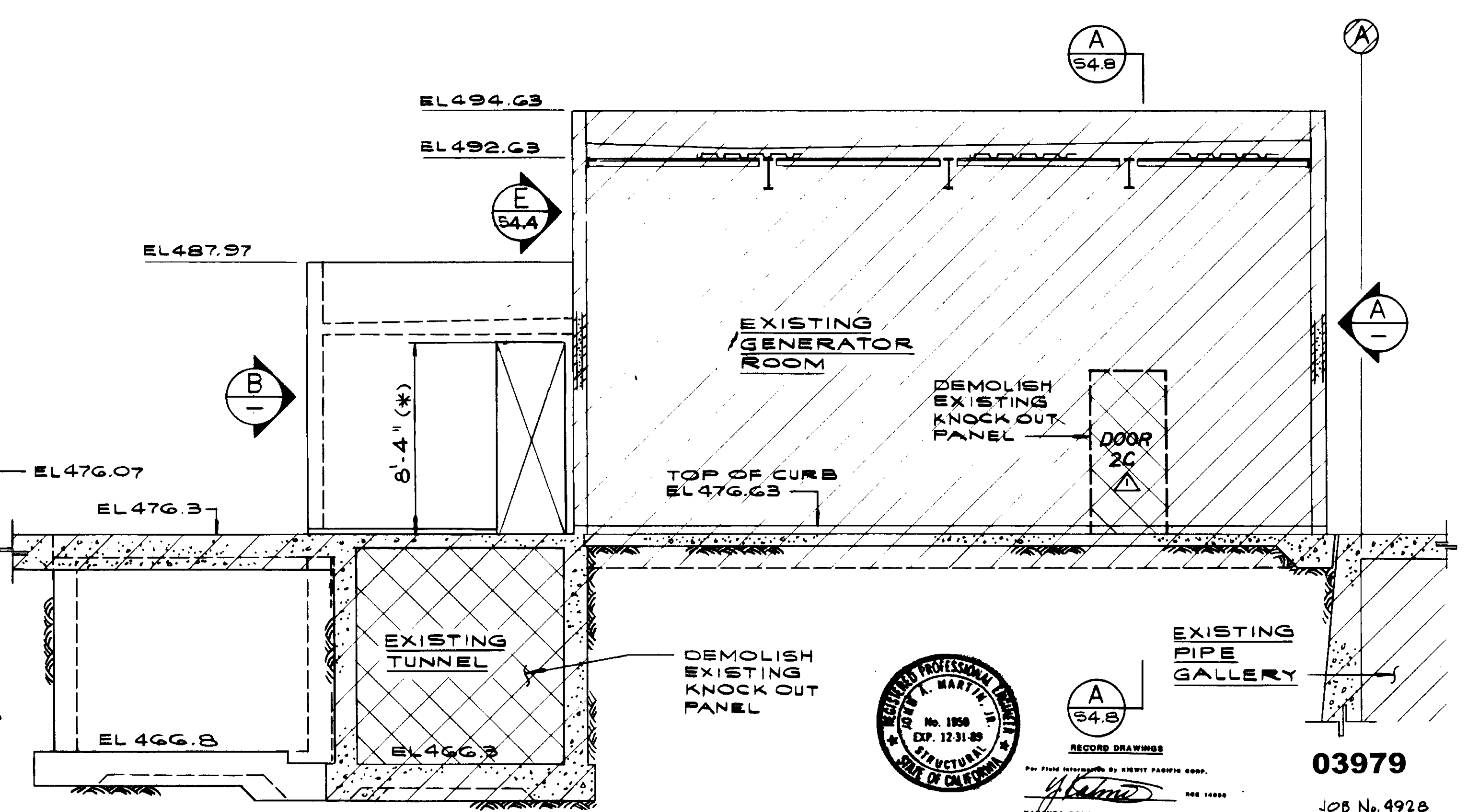
SOUTH ELEVATION AT LINE A  
ELECTRICAL BUILDING



NORTH ELEVATION @ LINE D  
ELECTRICAL BUILDING



EAST ELEVATION @ LINE 8  
ELECTRICAL BUILDING



WEST ELEVATION AT LINE 7  
ELECTRICAL BUILDING



RECORD DRAWINGS  
KALEX CONSULTING ENGINEERS

03979

JOB No. 492B

STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483-0490

REV	DATE	BY	DESCRIPTION
1	6-11-89	A.B.	REV. PER K.P.C.
2	5-11-89	A.B.	REV. PER K.P.C.

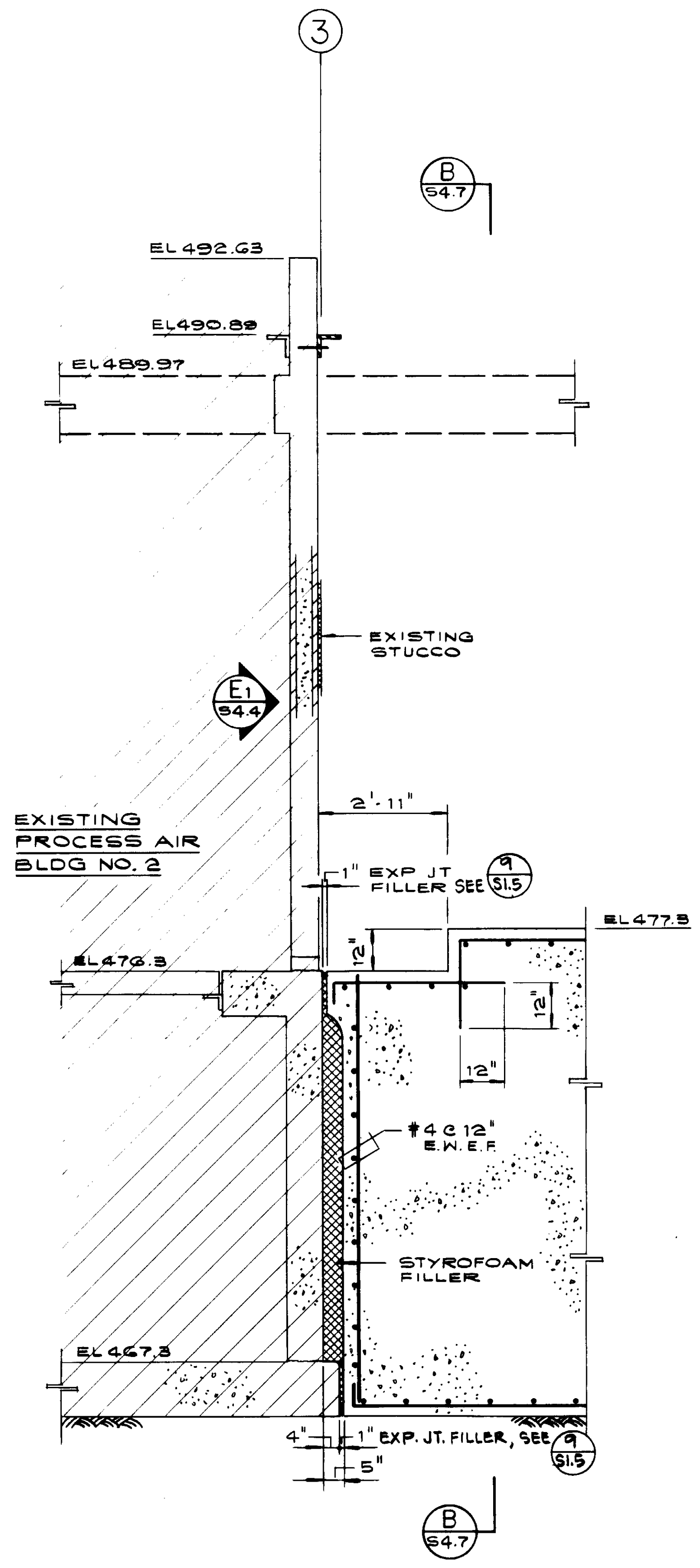
SCALE: 1/4" = 1'-0"	DESIGNED: R. LEE	SUBMITTED: [Signature]
	DRAWN: P. MIYABATA	DATE: 8-7-87
	CHECKED: K. BELUSEA	R.C.E. NO. 513
		DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

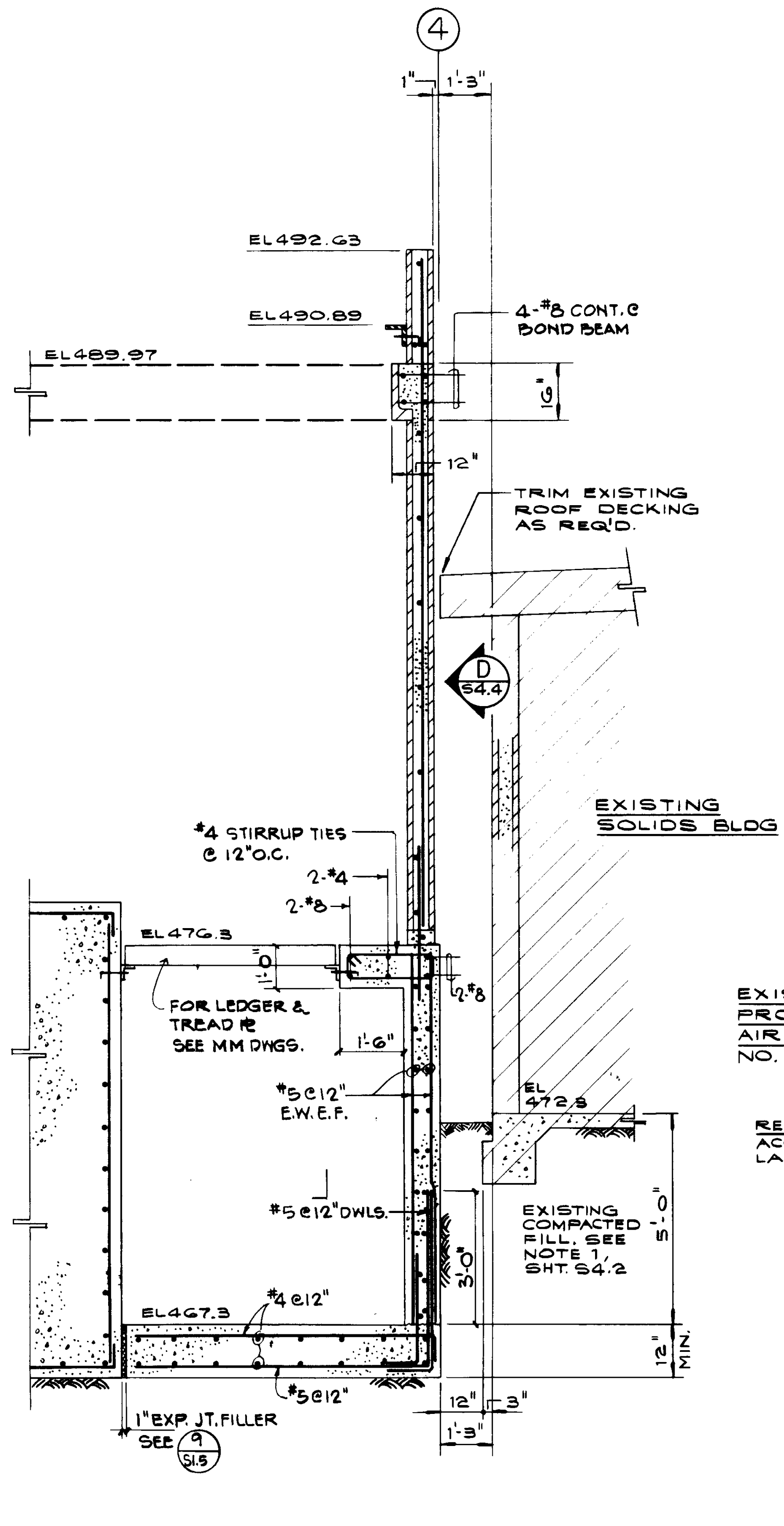
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ELECTRICAL AND PROCESS AIR BUILDINGS**  
**ELEVATIONS, SHEET 2**

SHEET 84.5

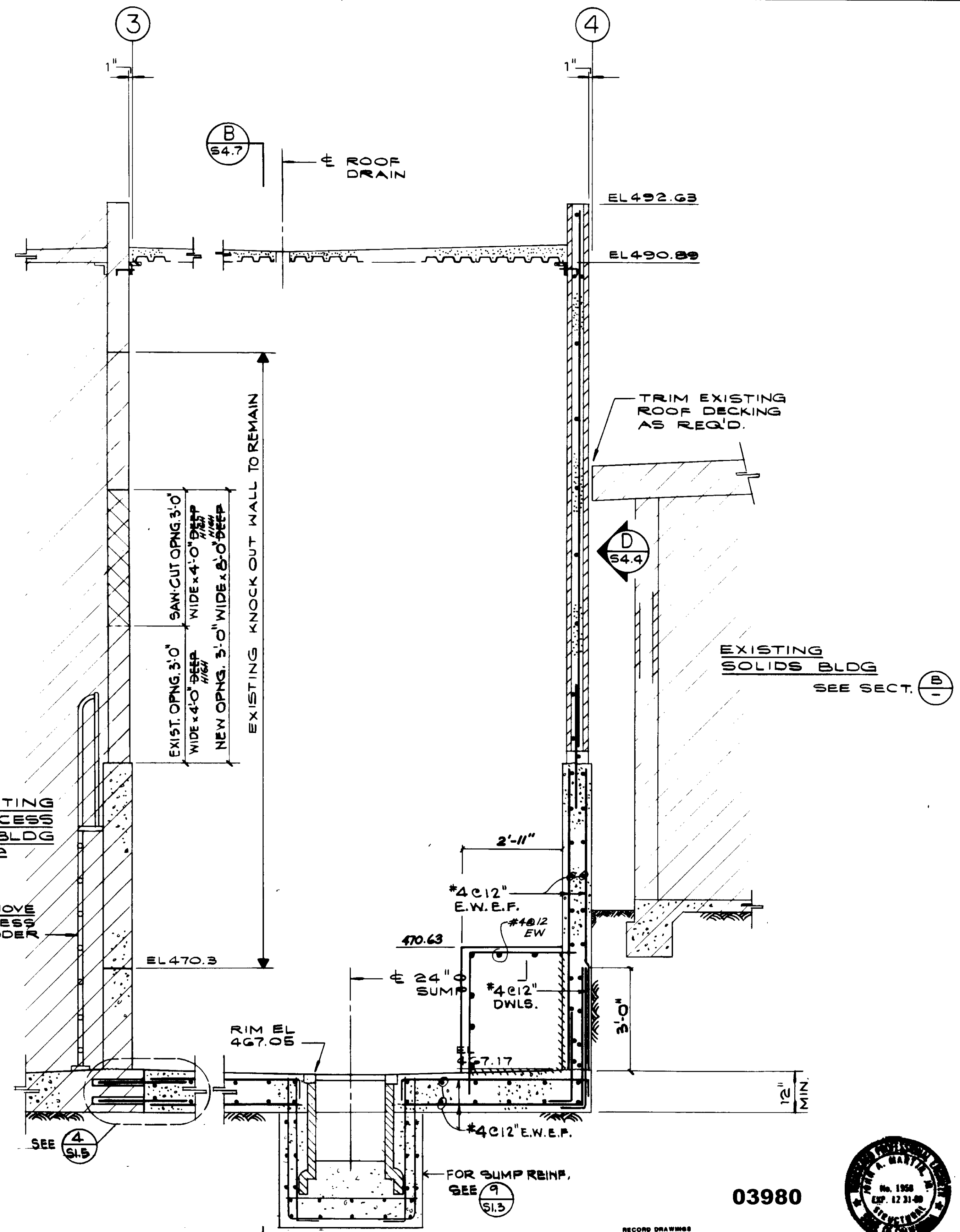




SECTION A  
PROCESS AIR BLDG. S4.6



SECTION B  
PROCESS AIR BLDG. S4.6



SECTION C  
PROCESS AIR BLDG. S4.6

03980



RECORD DRAWING  
 For Plans Prepared by or under the supervision of  
 J. A. Martin  
 KATSUMA CONSULTING ENGINEERS JUNE 1987

Job No. 4928  
 STRUCTURAL ENGINEERS  
 JOHN A. MARTIN & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483-0490

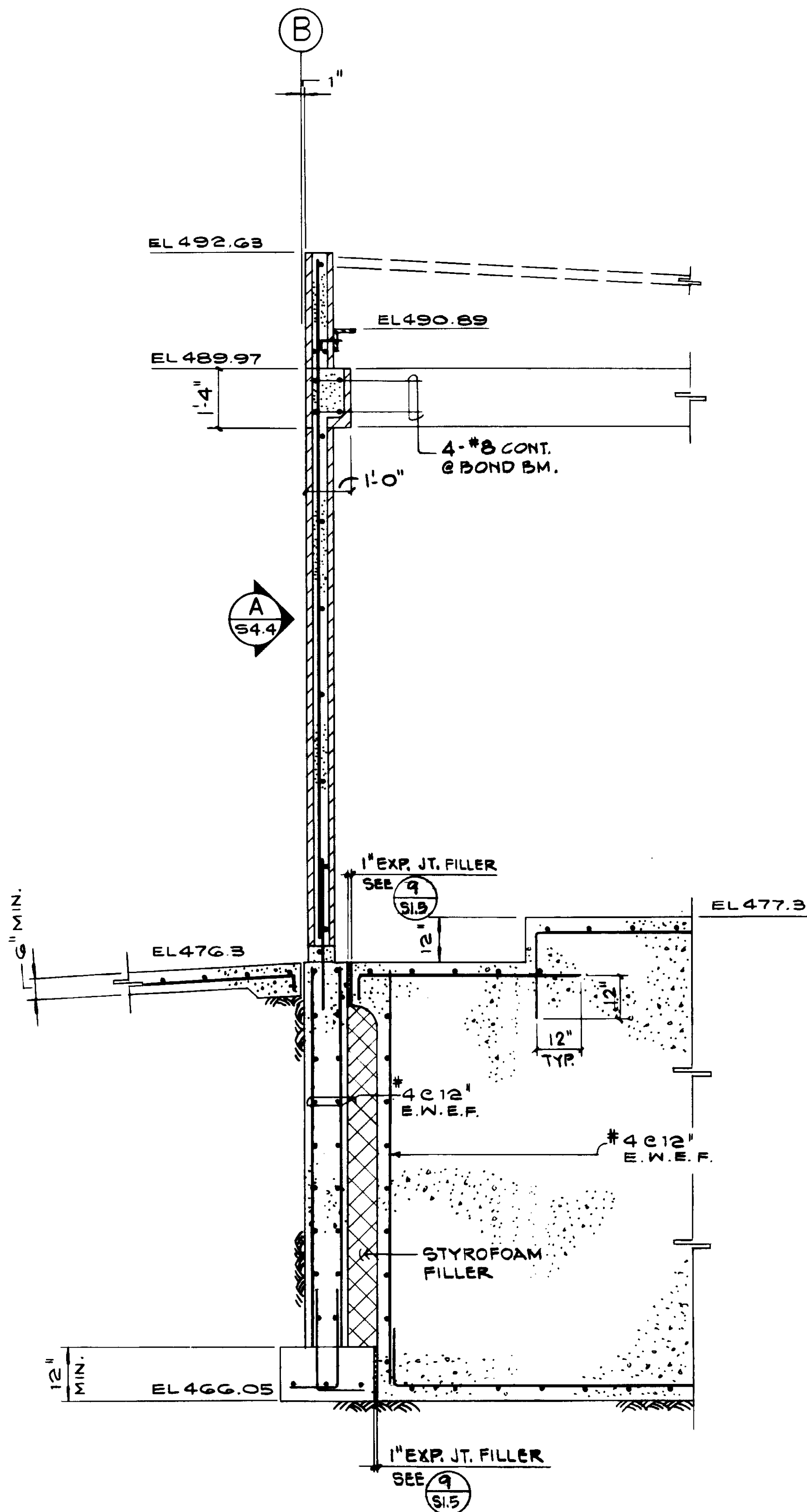
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: 1/2" = 1'-0"	DESIGNED D. HAMASATA	SUBMITTED KATSUMA CONSULTING ENGINEERS	10000 8-7-87
CHECKED R. LEE	DATE	R.C.E. NO.	DATE
ALEXANDER ENGINEERS	513	R.C.E. NO.	DATE

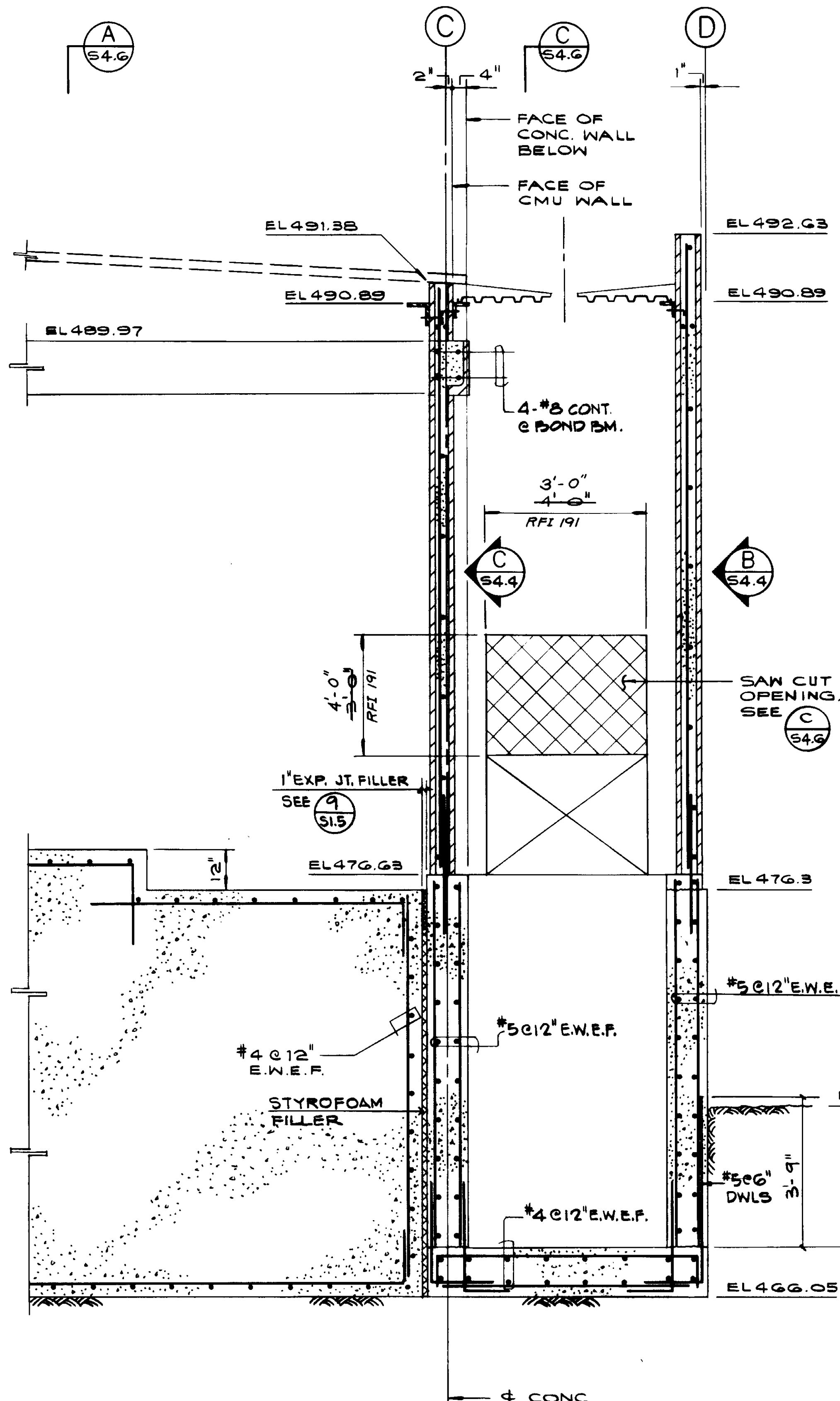
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ELECTRICAL AND PROCESS AIR BUILDINGS**  
 SECTIONS, SHEET 1

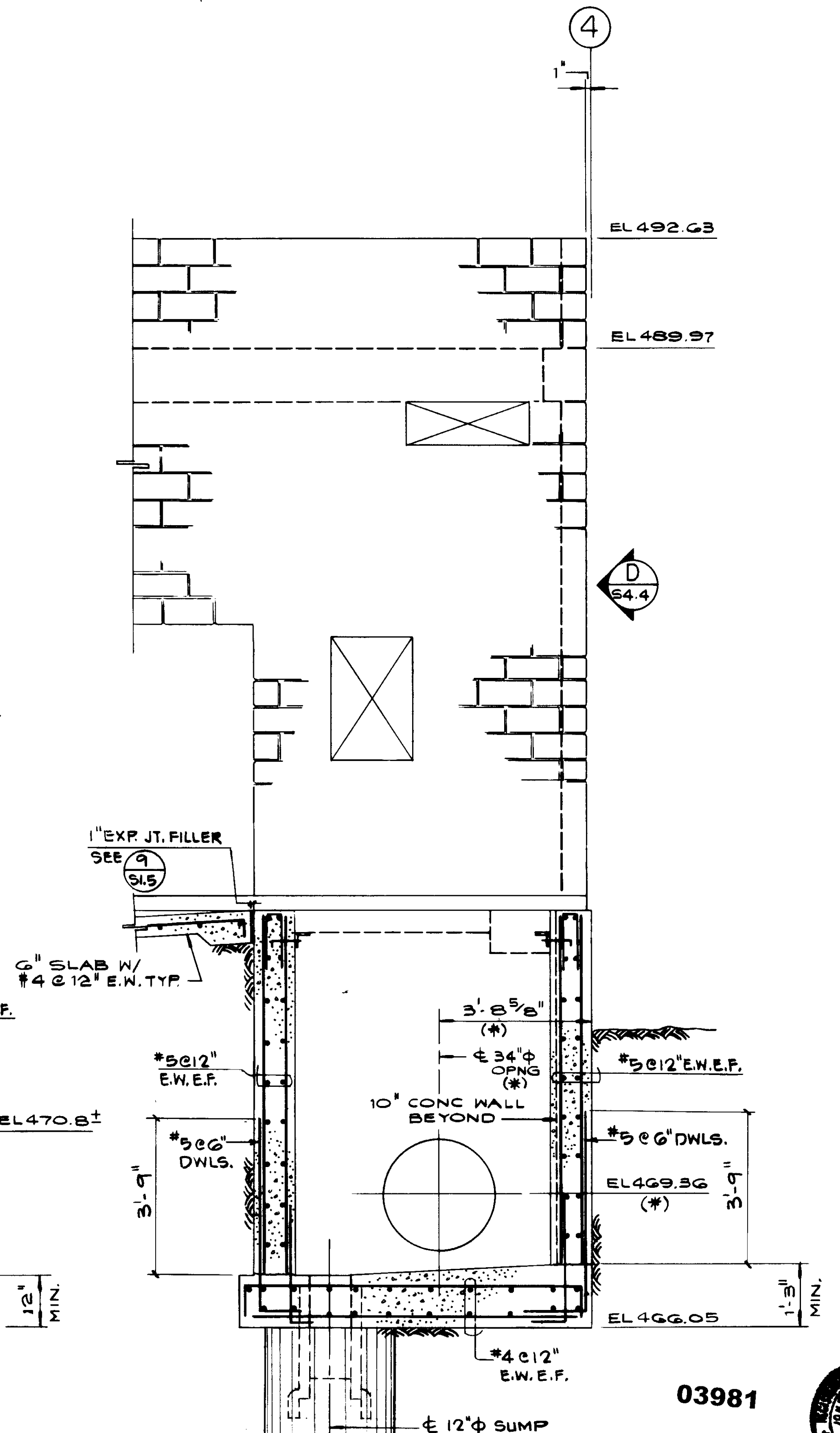
SHEET  
**S4.6**



SECTION A  
PROCESS AIR BLDG. S4.7



SECTION B  
PROCESS AIR BLDG. S4.7



SECTION C  
PROCESS AIR BLDG. S4.7

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: 1/2" = 1'-0"	DESIGNED BY K. BENSKA	DESIGNED BY P. HAMABATA	DRAWN BY K. LEE	CHECKED
SUBMITTED	DATE	R.C.E. NO.	DATE	
	8-7-87			
ALEXANDER ENGINEERS				

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California      Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ELECTRICAL AND PROCESS AIR BUILDINGS**  
**SECTIONS, SHEET 2**

03981

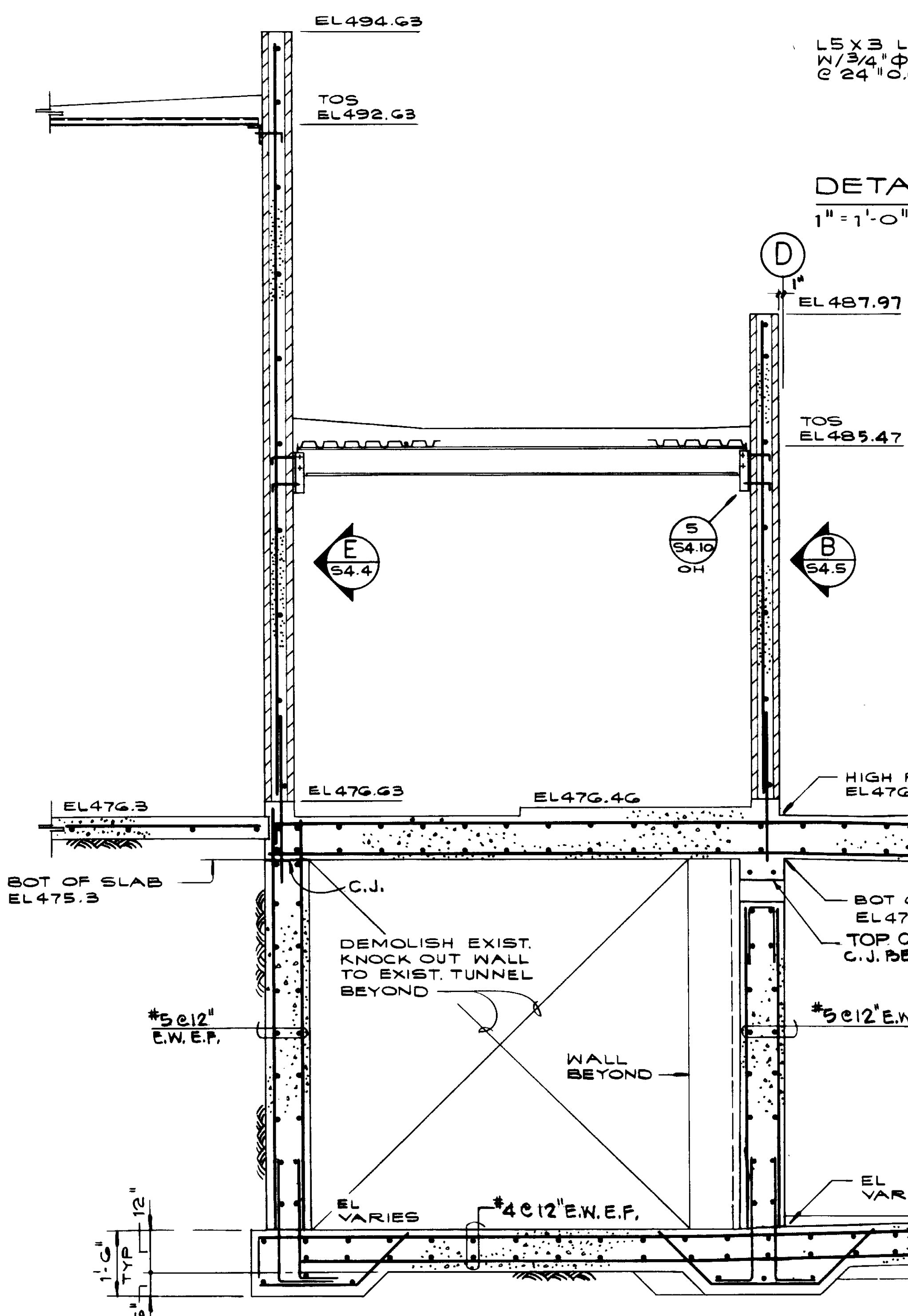
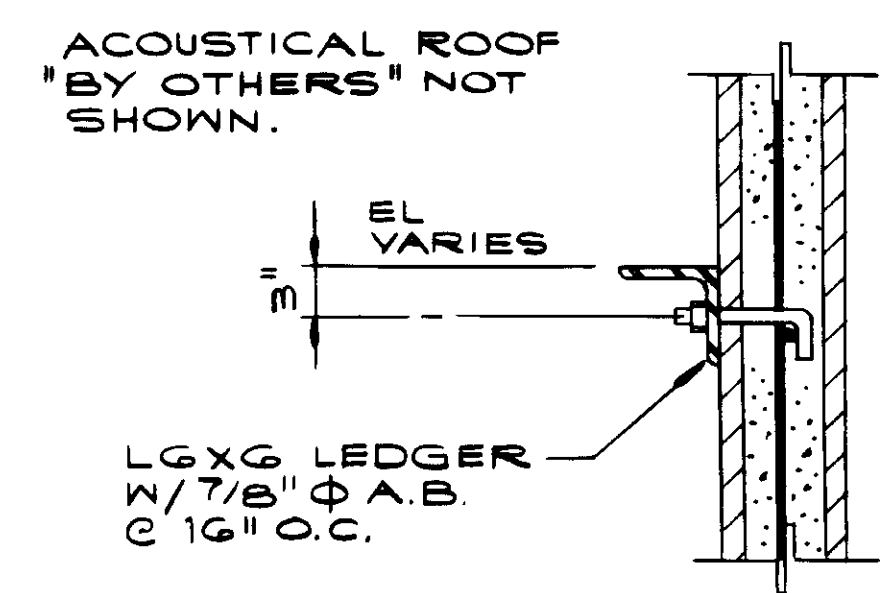
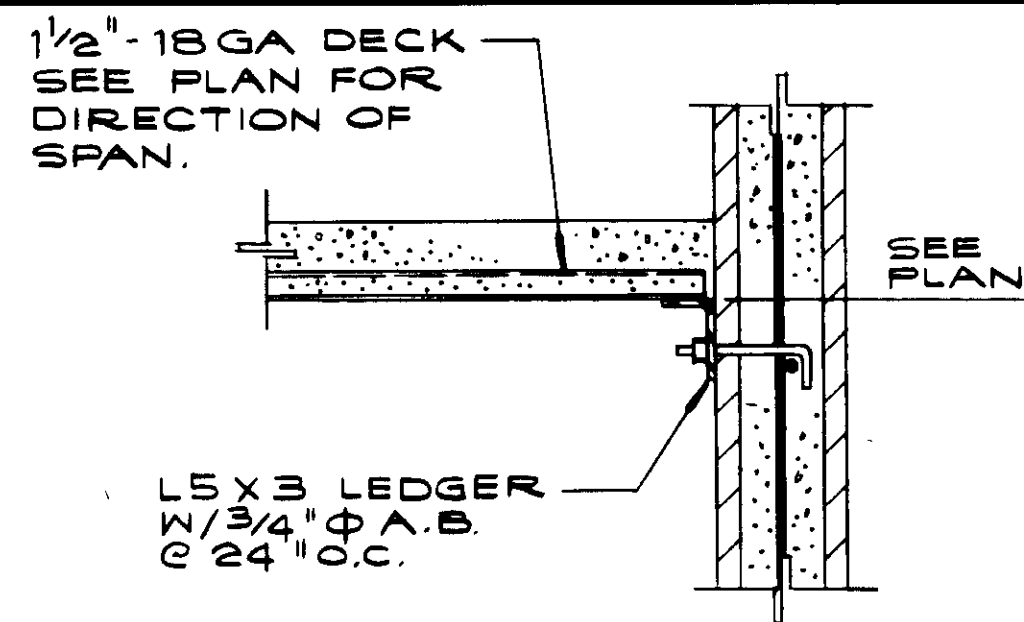
Job N. 4928  
STRUCTURAL ENGINEERS  
**JOHN A. MARTIN & ASSOCIATES, INC.**  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483-6490

EXP. 12-31-88

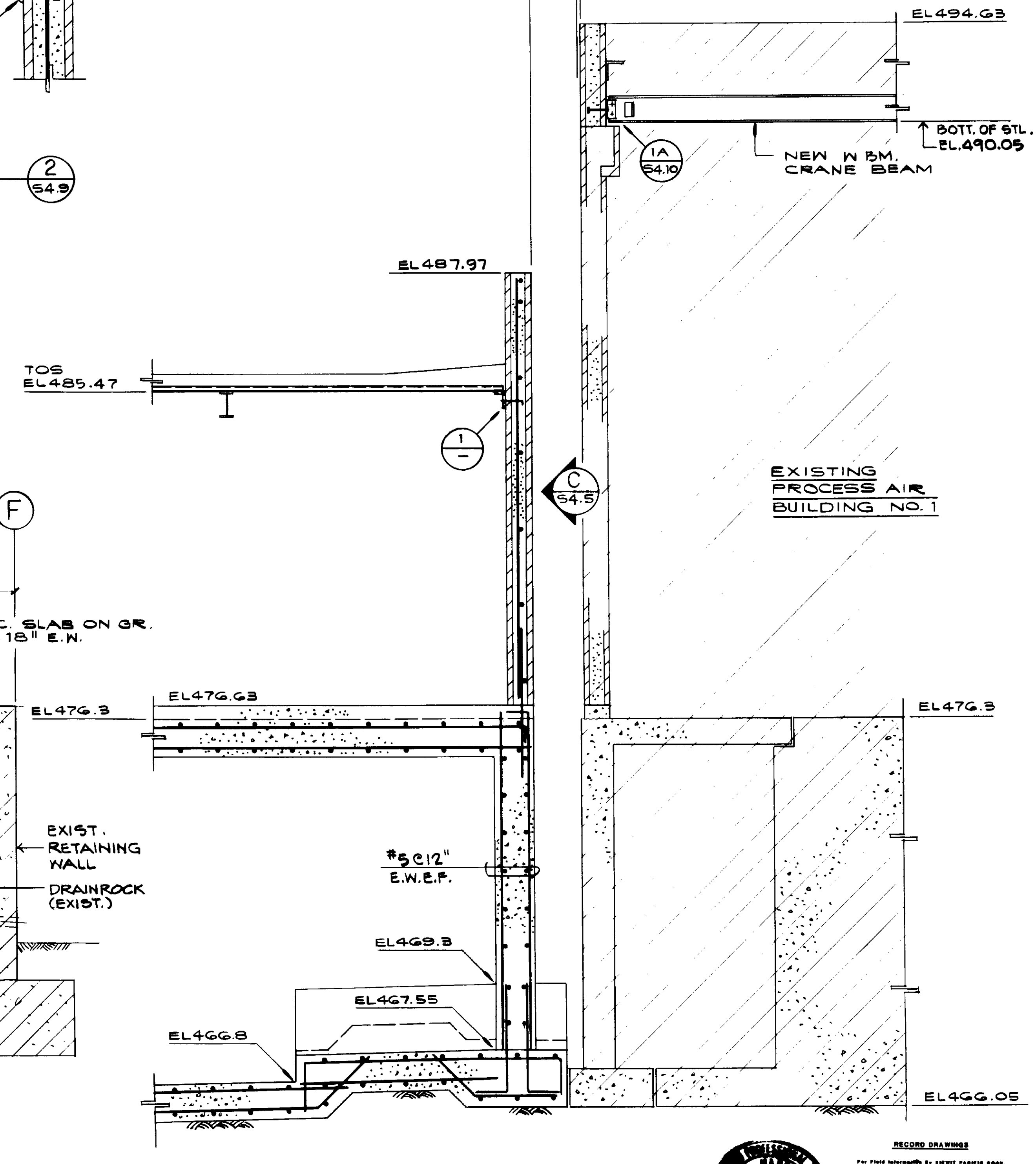
SHEET S4.7







SECTION A  
ELECTRICAL BLDG.



SECTION B  
ELECTRICAL BLDG.



RECORD DRAWING  
 PAID FROM DEPOSITED BY SHEET PAPERING SHOP.  
 No. 1856  
 EXP. 12-31-89  
 JOHN A. MARTIN  
 CONSULTING ENGINEERS JUNE 1988  
 JOB No. 4920  
 STRUCTURAL ENGINEERS  
 JOHN A. MARTIN  
 & ASSOCIATES, INC.  
 1800 WILSHIRE BOULEVARD  
 LOS ANGELES 90057 483-0490

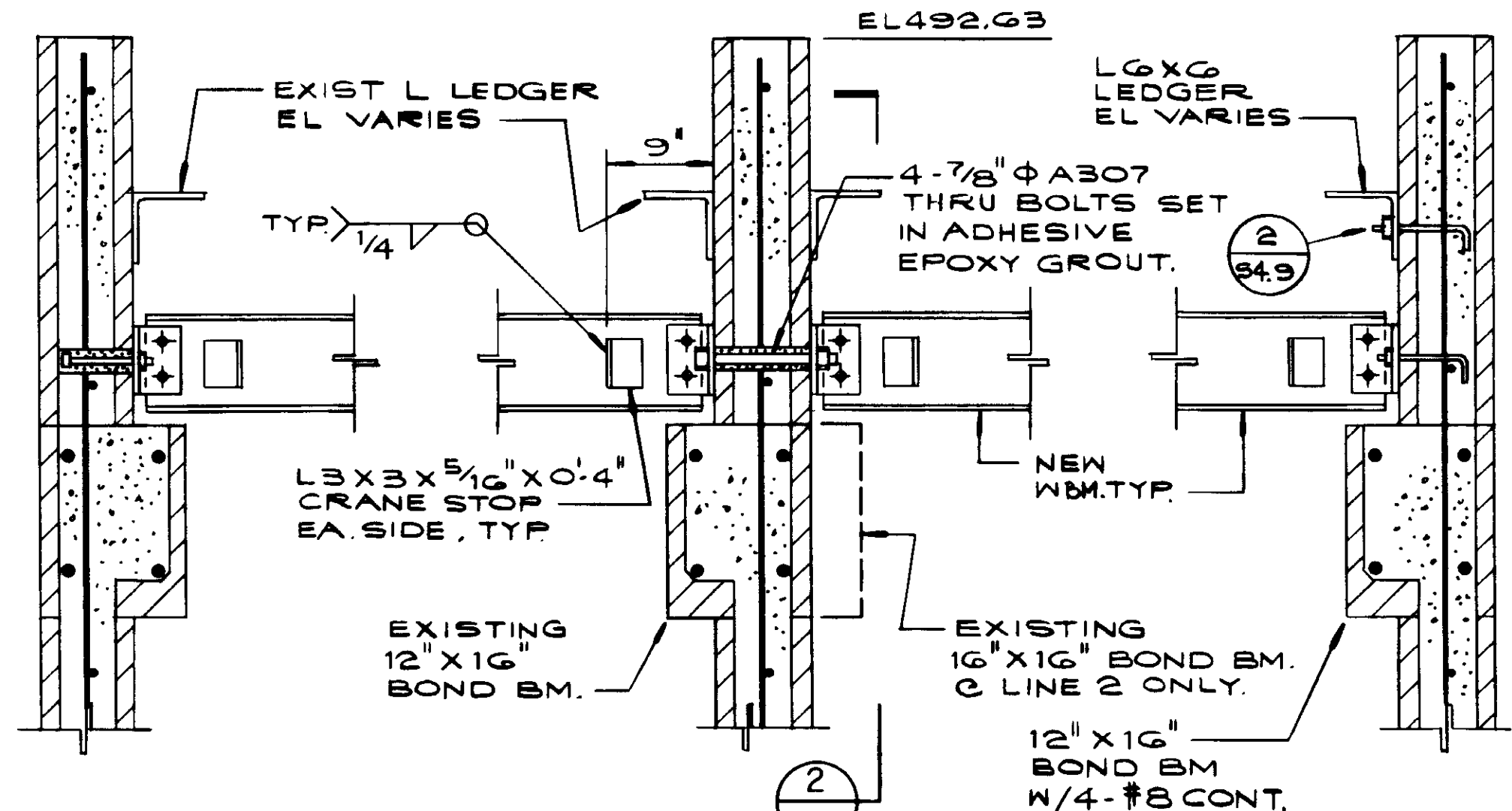
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: 1/2" = 1'-0"	DESIGNED P. HADABATA	SUBMITTED KATSUMURA CONSULTING ENGINEERS	DATE 8-1-87
DRAWN E. TEE	CHECKED	513 ALEXANDER ENGINEERS	R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ELECTRICAL AND PROCESS AIR BUILDINGS**  
**SECTIONS AND DETAILS, SHEET 4**

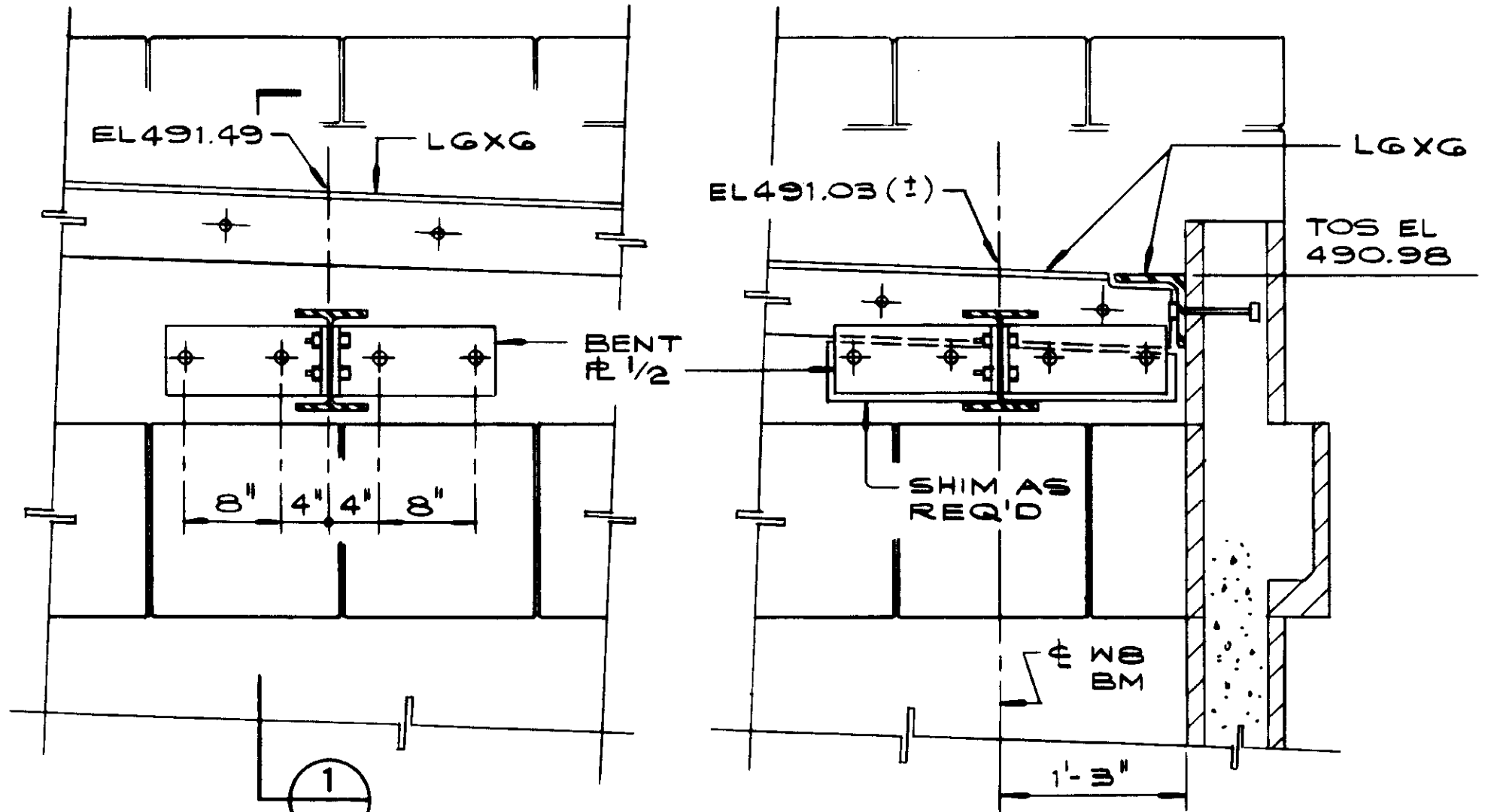
SHEET  
S4.9



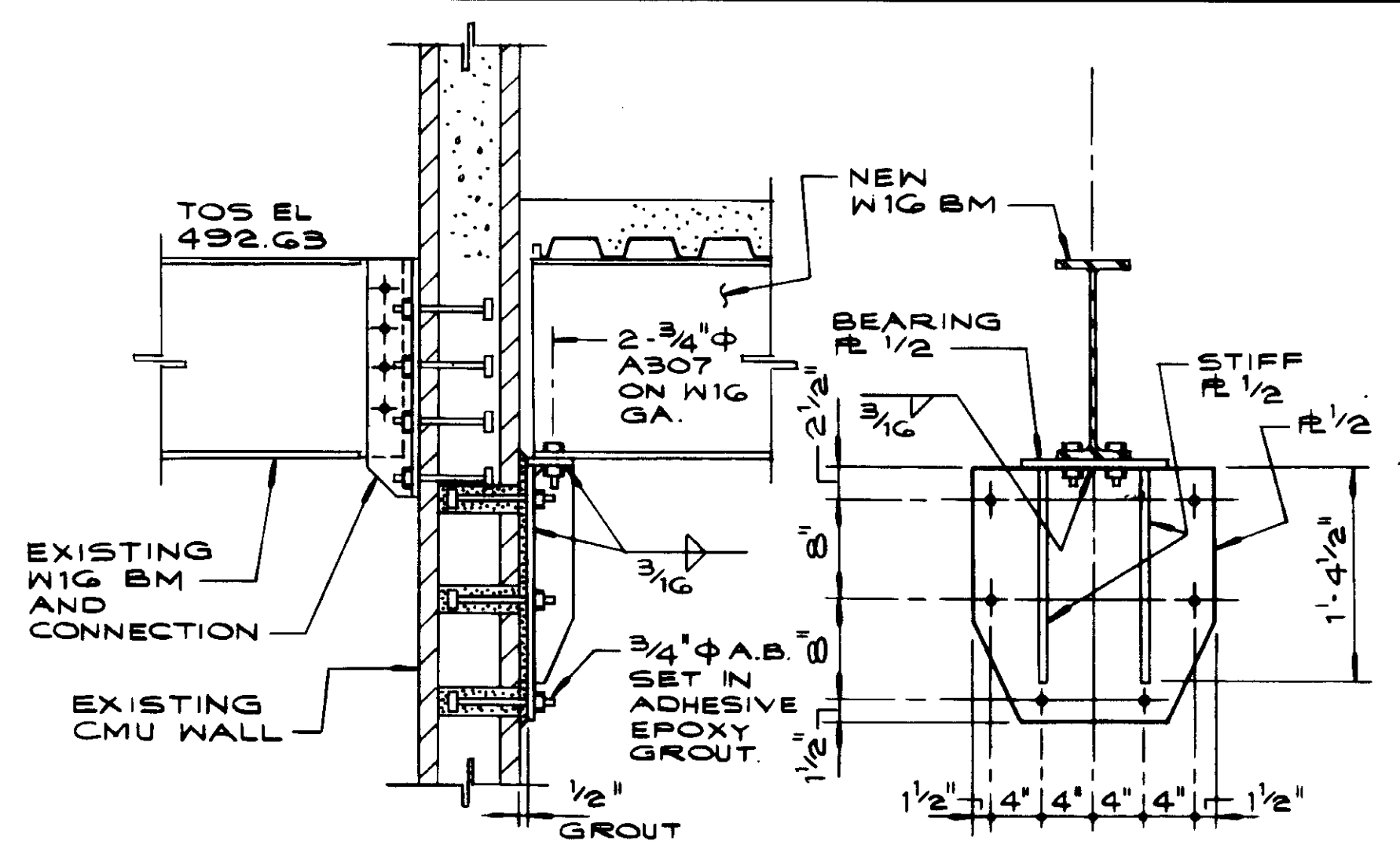
1A LINE 1  
EXISTING WALL

1B LINES 2 & 3  
EXISTING WALL

1C LINE 4  
NEW WALL

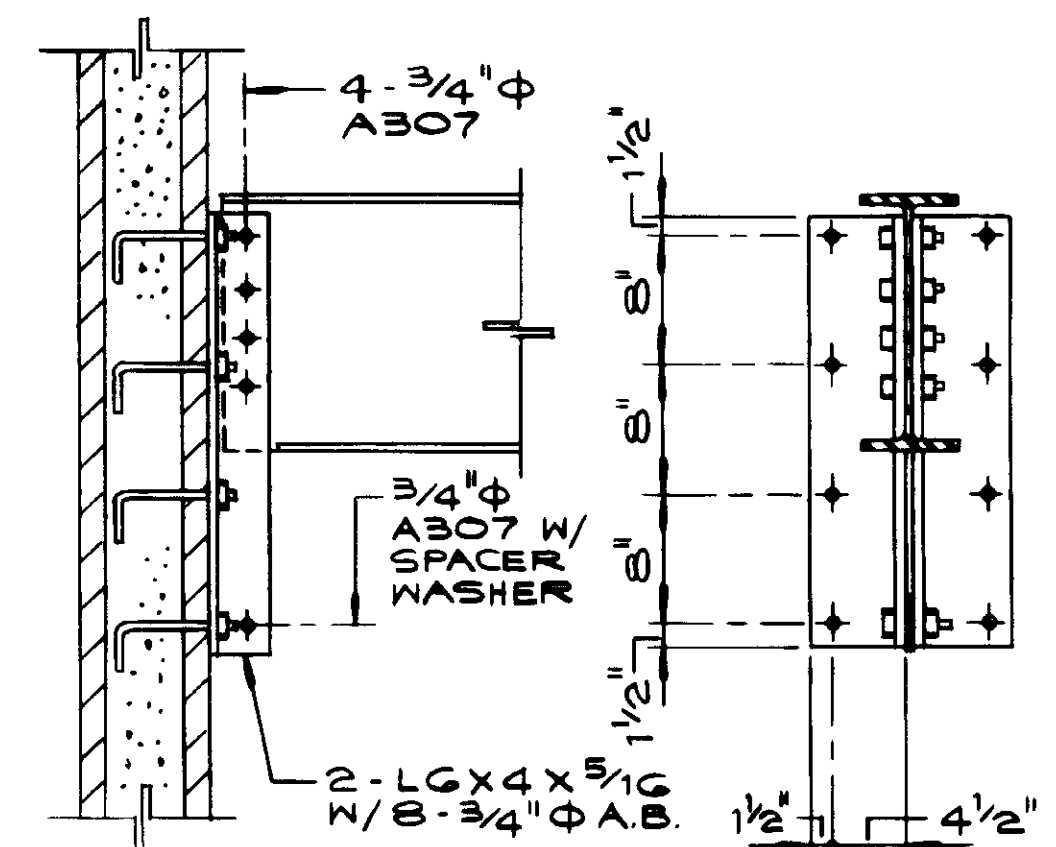


DETAIL 2  
1" = 1'-0"

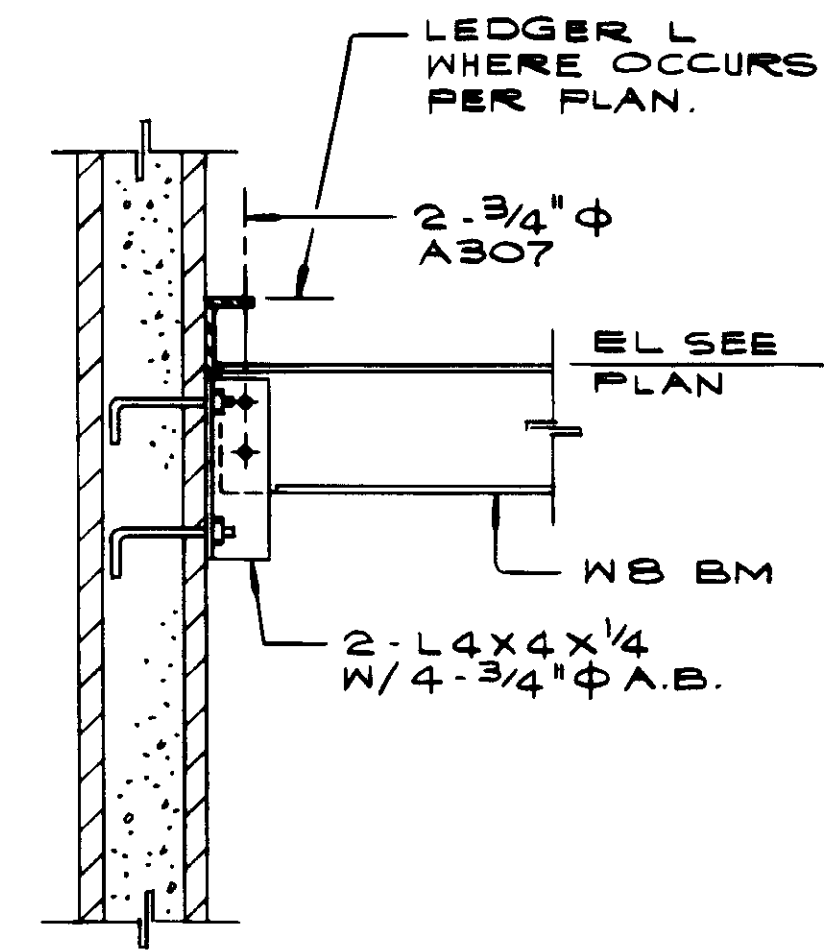


DETAIL 3  
1" = 1'-0"

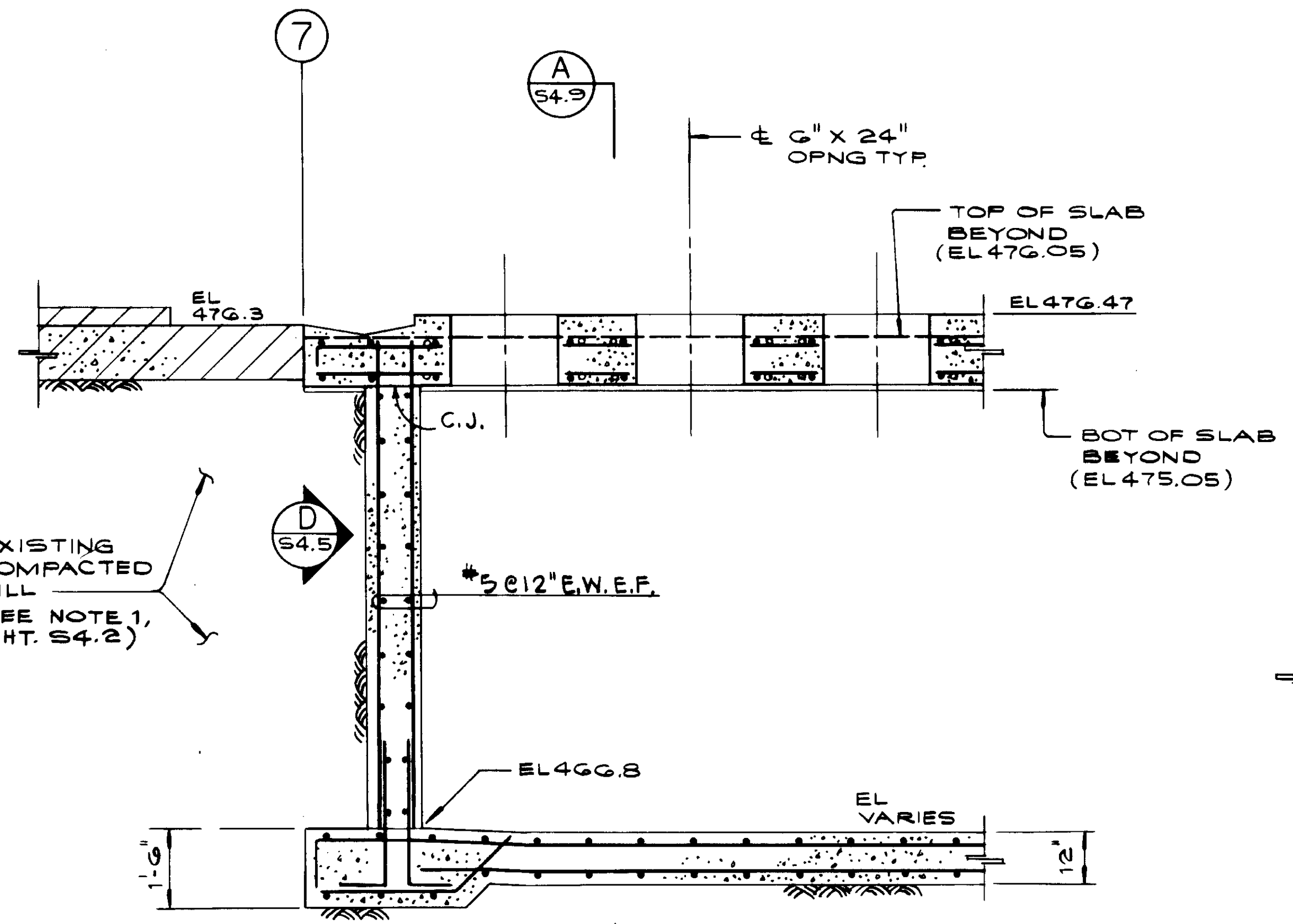
DETAIL 1  
1" = 1'-0"



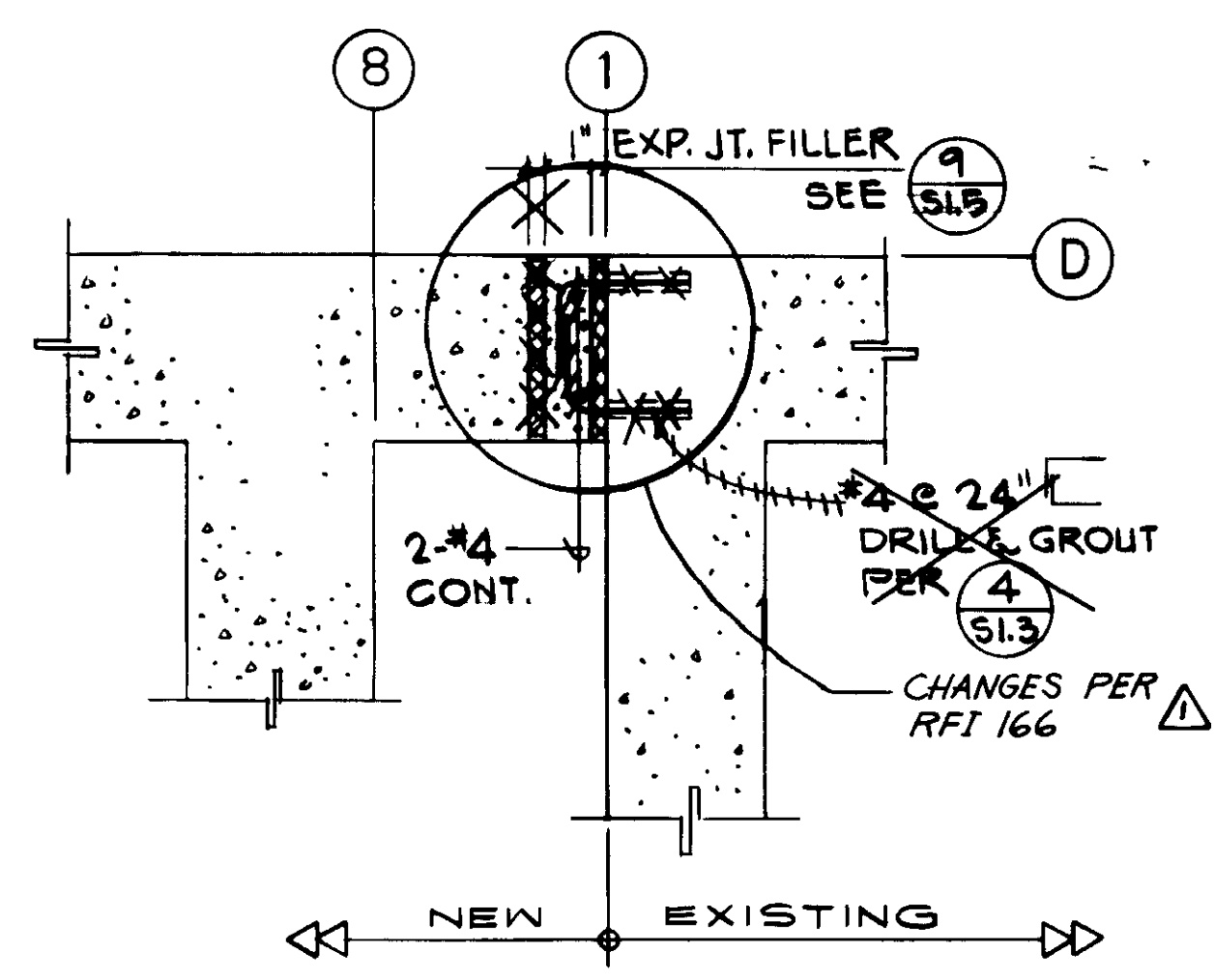
DETAIL 4  
1" = 1'-0"



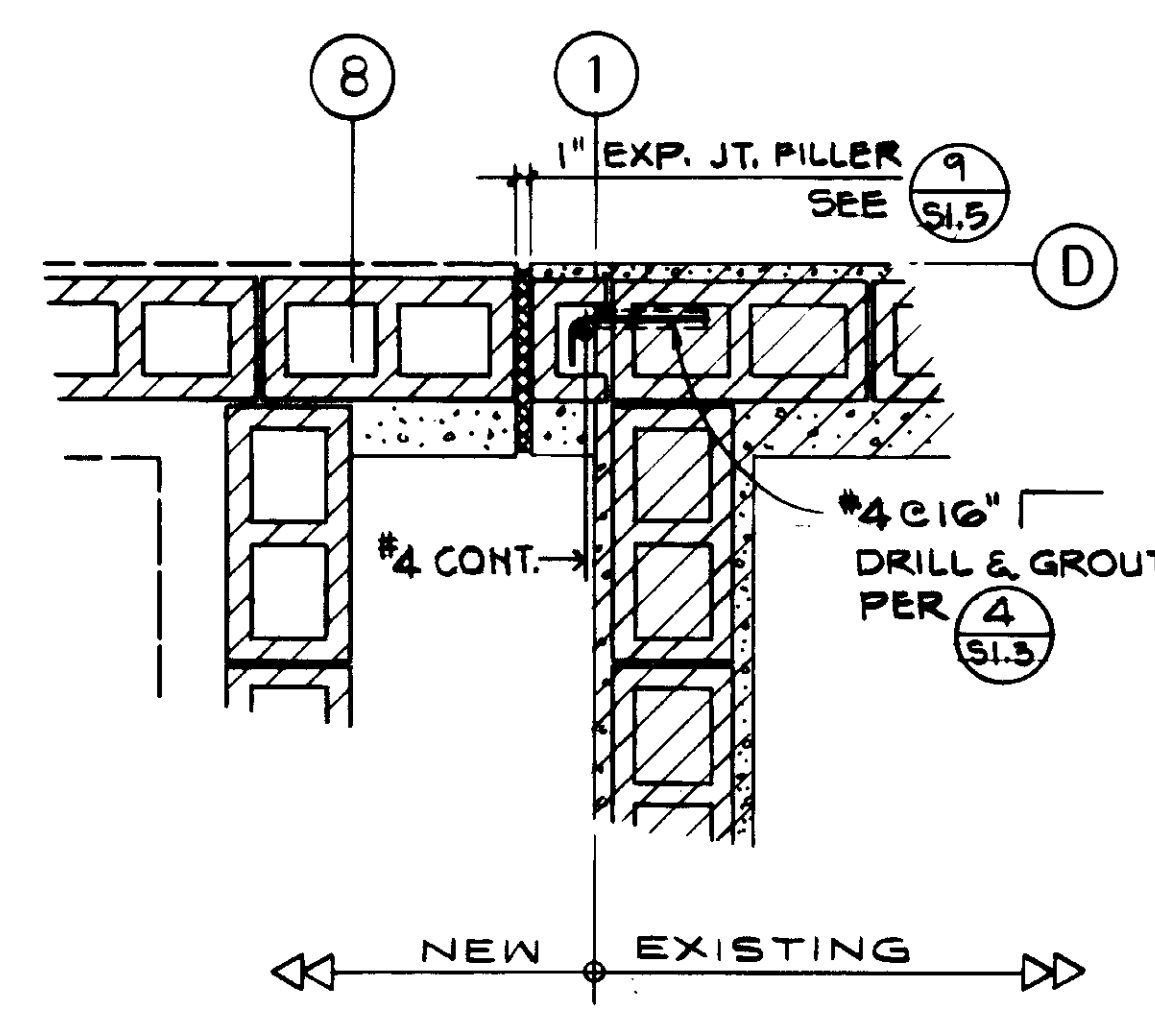
DETAIL 5  
1" = 1'-0"



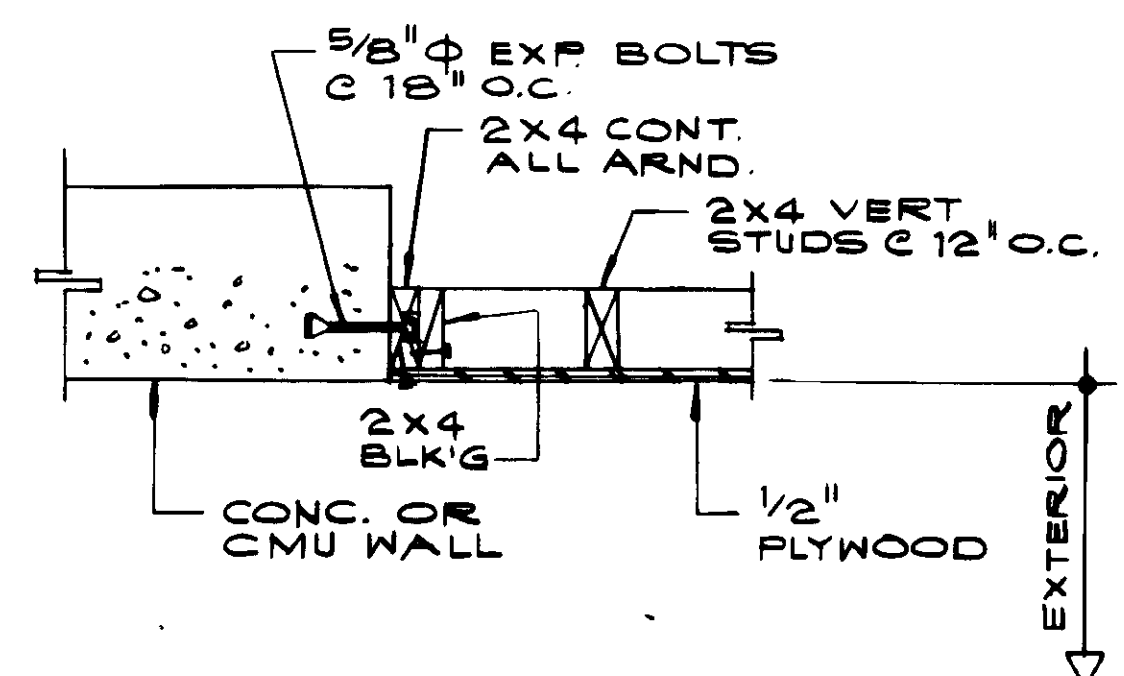
SECTION A  
ELECTRICAL BLDG.  
1/2" = 1'-0"



PLAN 7  
1" = 1'-0"



PLAN 8  
1" = 1'-0"



PLAN-SECTION B  
1" = 1'-0"

03984

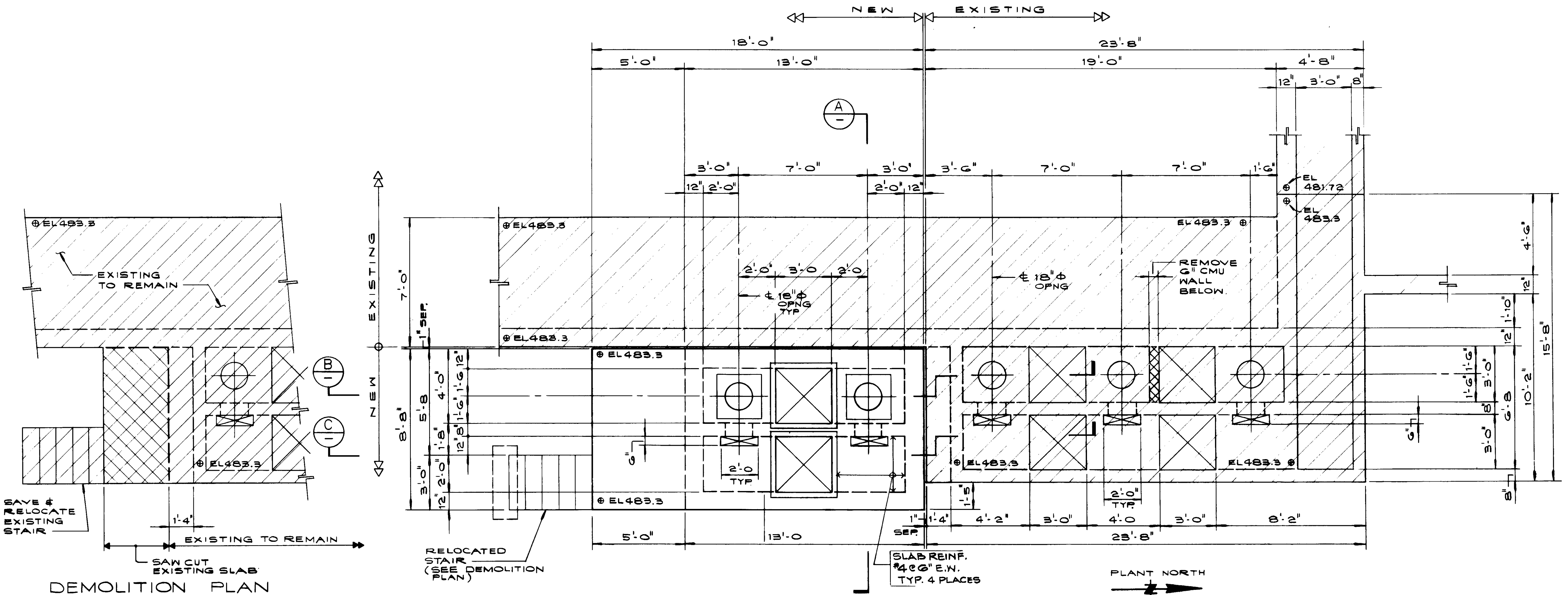
REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED	R. LEE DESIGNED D. HAMAGATA DRAWN R. BELUSKA CHECKED	SUBMITTED <i>Katsura</i> KATSURA CONSULTING ENGINEERS 14886 R.C.E. NO. DATE 513 ALEXANDER ENGINEERS R.C.E. NO. DATE
--------------------	---	---

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

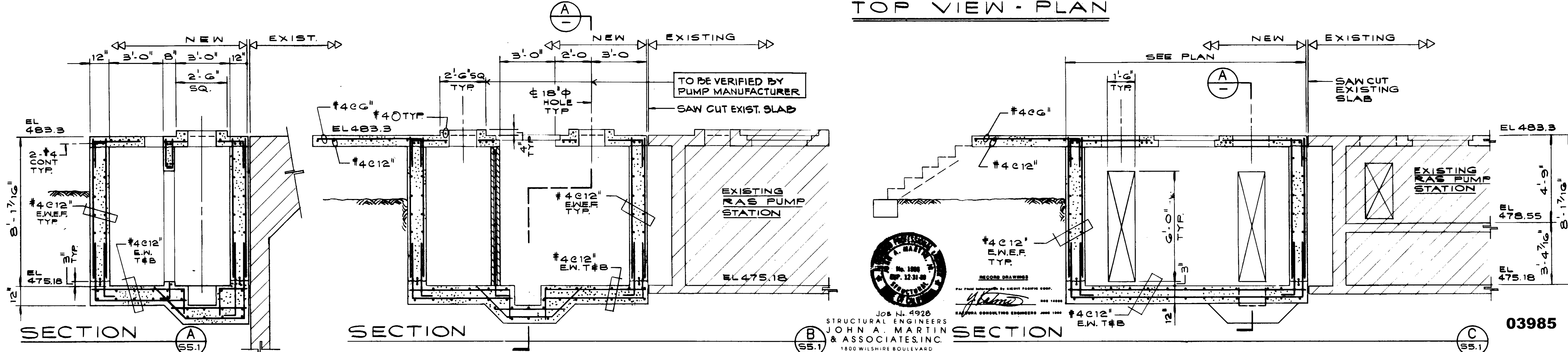
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
TAPIA WATER RECLAMATION FACILITY EXPANSION III  
ELECTRICAL AND PROCESS AIR BUILDINGS  
SECTIONS AND DETAILS, SHEET 5

SHEET  
S4.10



DEMOLITION PLAN

TOP VIEW - PLAN



SECTION A

SECTION B

SECTION C

03985

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

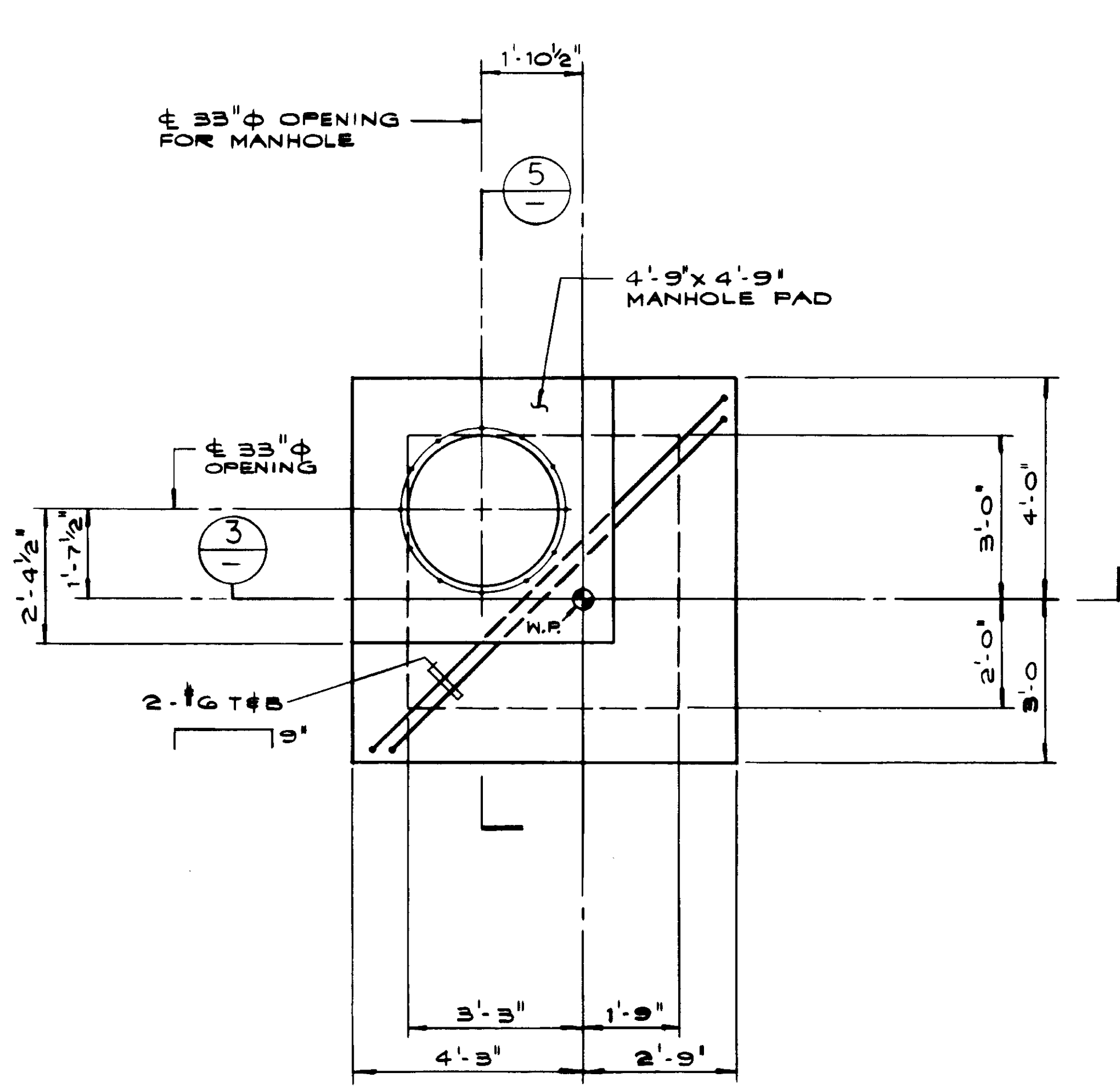
SCALE: 3/8" = 1'-0"	DESIGNED BY: K. BENUSKA DESIGNED BY: S. HAMABATA DRAWN BY: R. LEE CHECKED: [Signature]	SUBMITTED BY: [Signature] KATSURA CONSULTING ENGINEERS R.C.E. NO. 14928 DATE: 8-7-07
------------------------	---	---

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

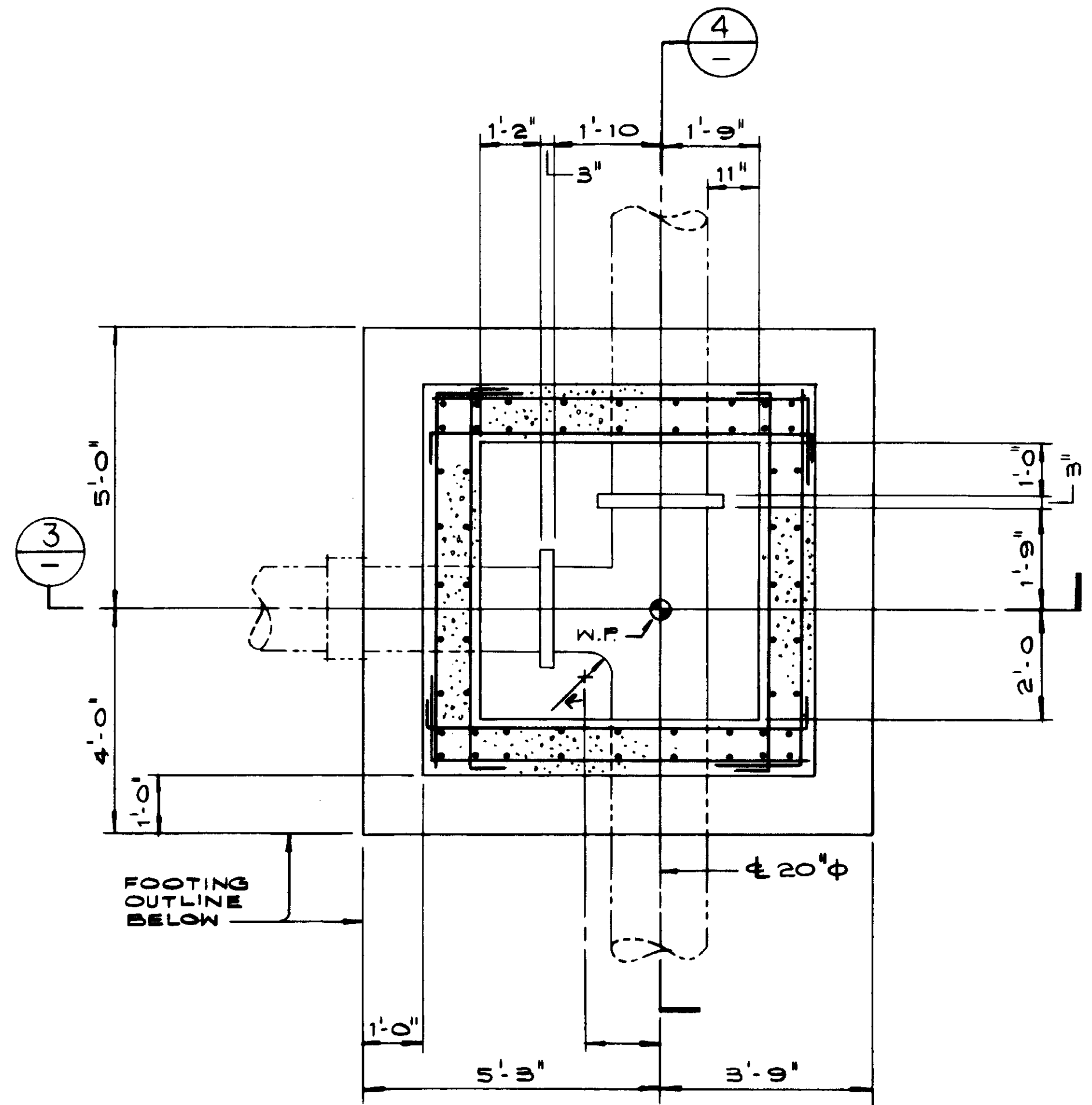
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**MISCELLANEOUS STRUCTURES**  
**RAS PUMP STATION**

SHEET **35.1**

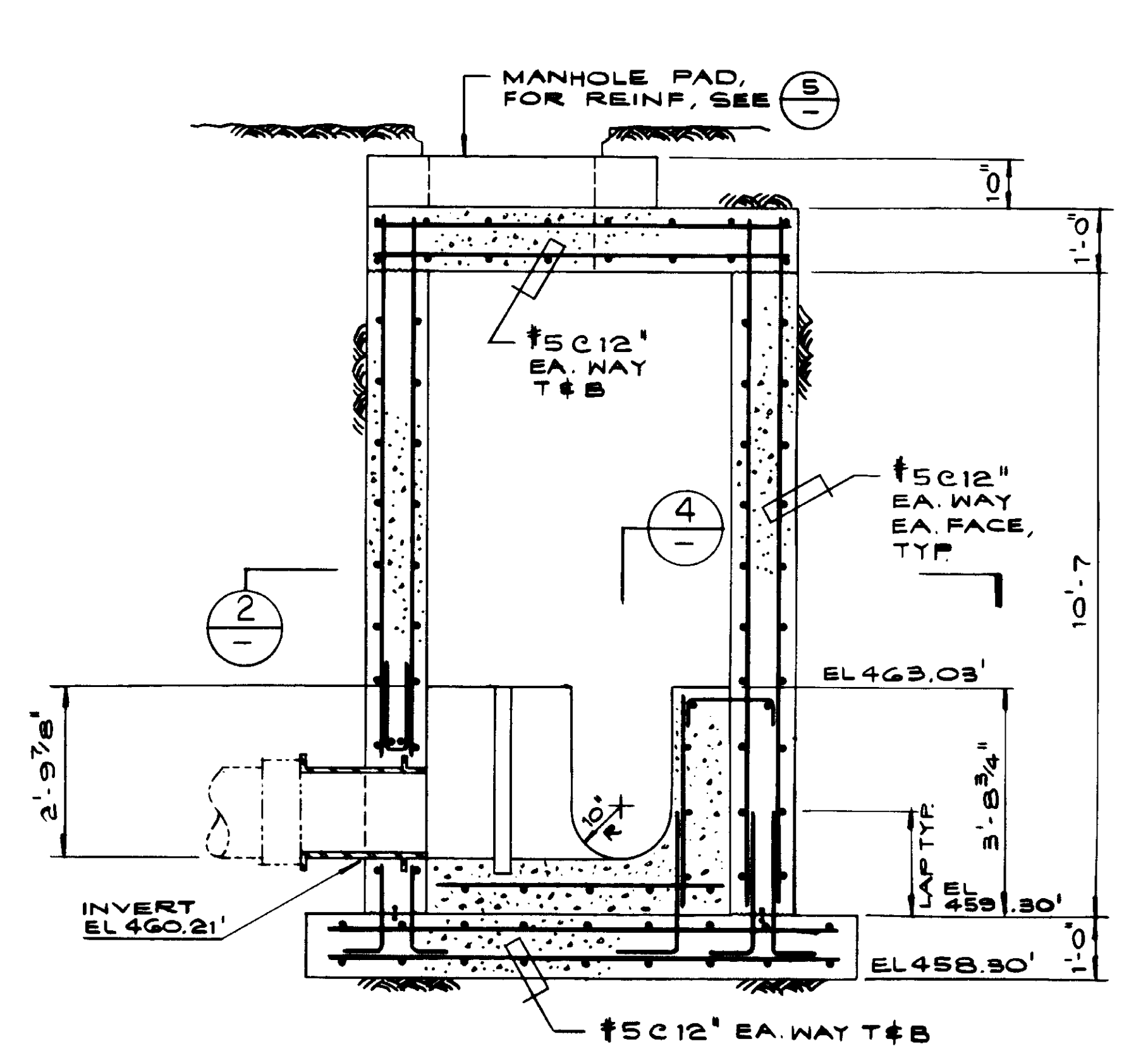




TOP PLAN 1  
SS.2



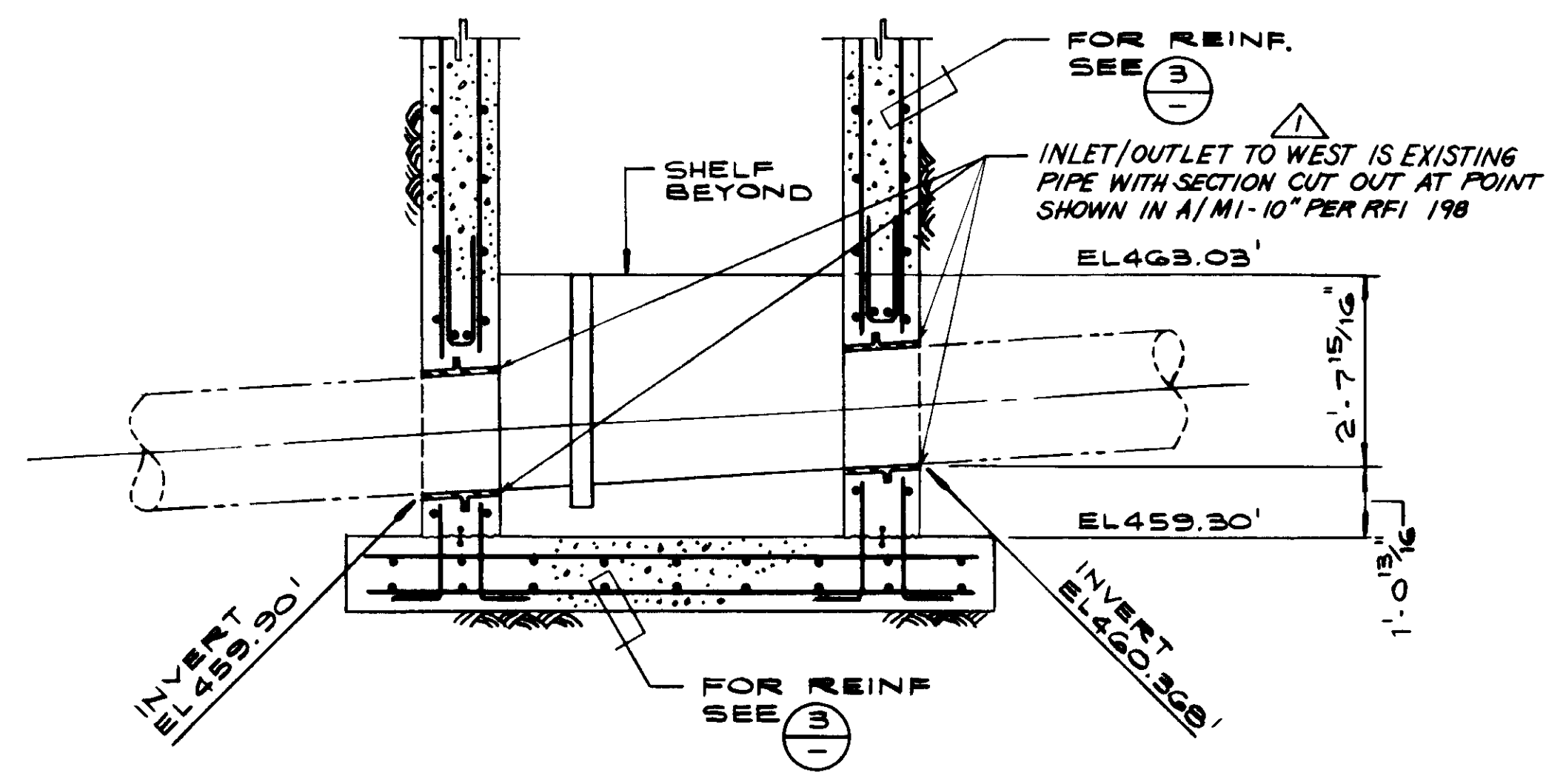
PLAN SECTION 2  
SS.2



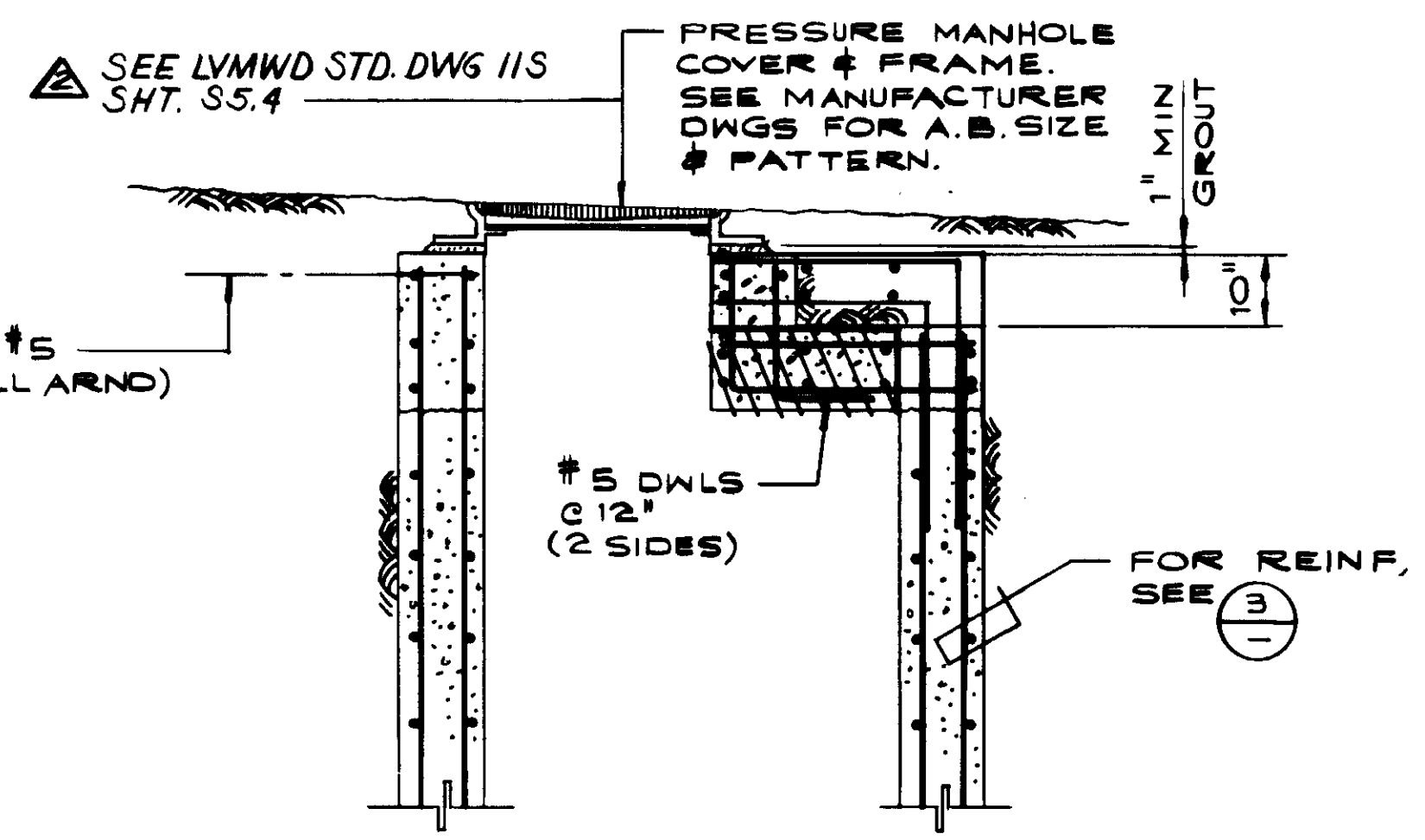
SECTION 3  
SS.2

PROVIDE 4" WATERSTOPS @ ALL HORIZONTAL CONSTRUCTION JOINTS.

DOWELS TO MATCH NO. & SIZE VERTS, TYP.



SECTION 4  
SS.2



SECTION 5  
SS.2

03986

RECORD DRAWING  
No. 1528  
EXP. 12-31-88  
KALEX CONSULTING ENGINEERS JUNE 1988



Job No. 4925  
STRUCTURAL ENGINEERS  
JOHN A. MARTIN & ASSOCIATES, INC.  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483 6490

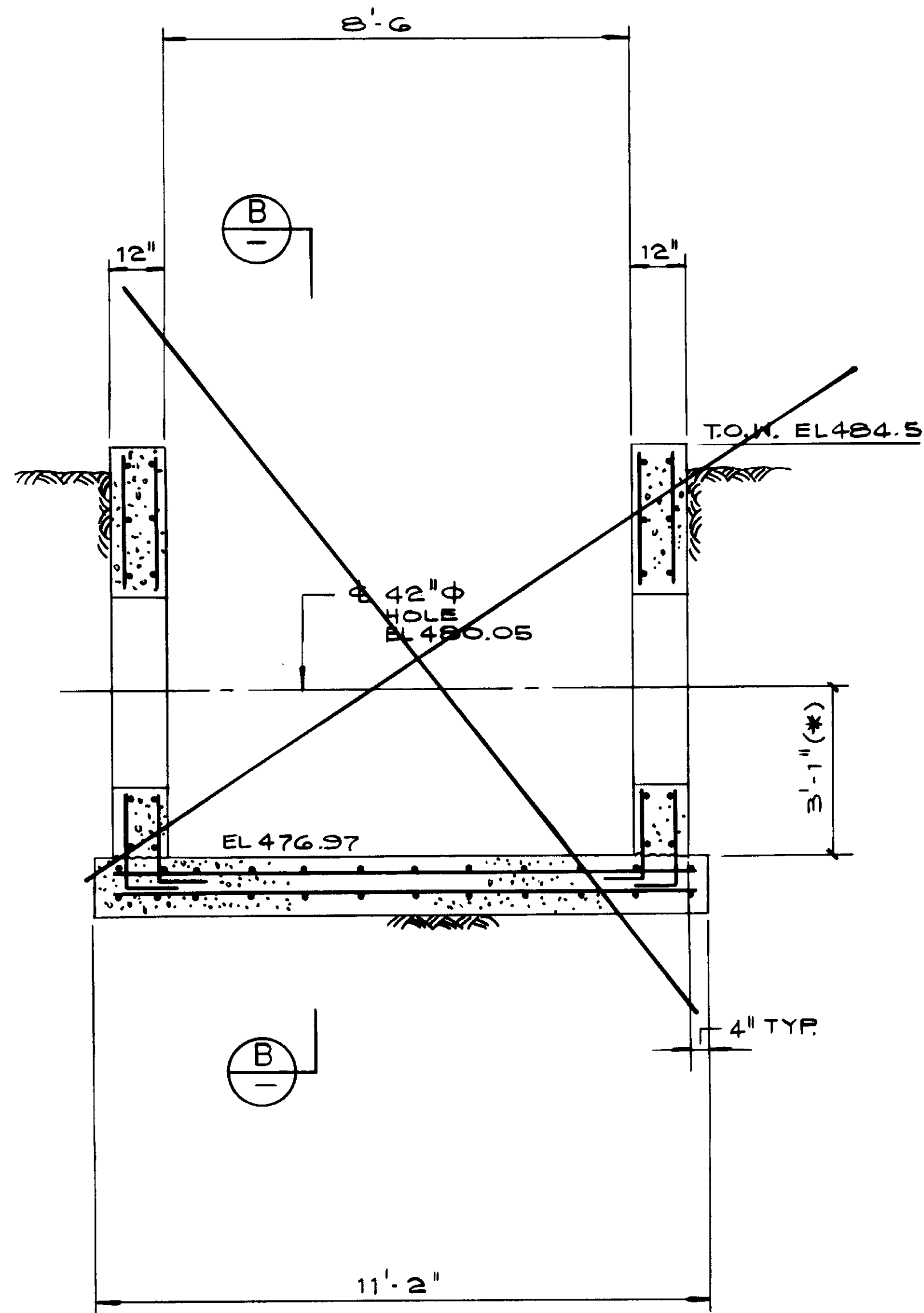
REV	DATE	BY	DESCRIPTION

SCALE: 1/2" = 1'-0"	DESIGNED BY D. HAMABATA	CHECKED BY R. LEE
SUBMITTED BY KATEMIA CONSULTING ENGINEERS	DATE 8-7-87	R.C.E. NO. 513
DESIGNED BY K. BENUSKA	DATE	R.C.E. NO.
REV. PER K.P.C. 5-9-81 A.B.		
REV. PER K.P.C. 5-9-81 A.B.		

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

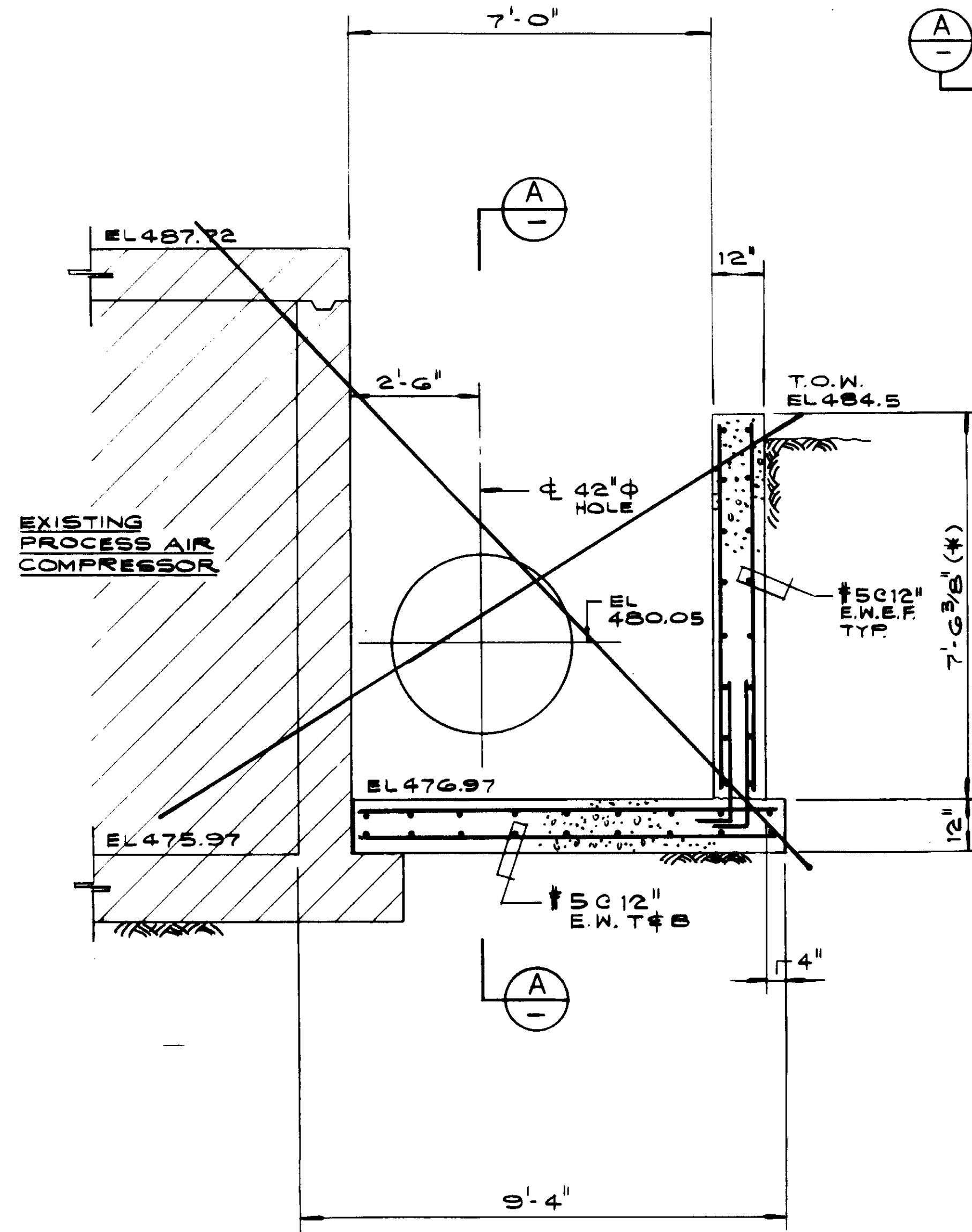
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
MISCELLANEOUS STRUCTURES  
PLANT BYPASS CHAMBER

SHEET  
35.2



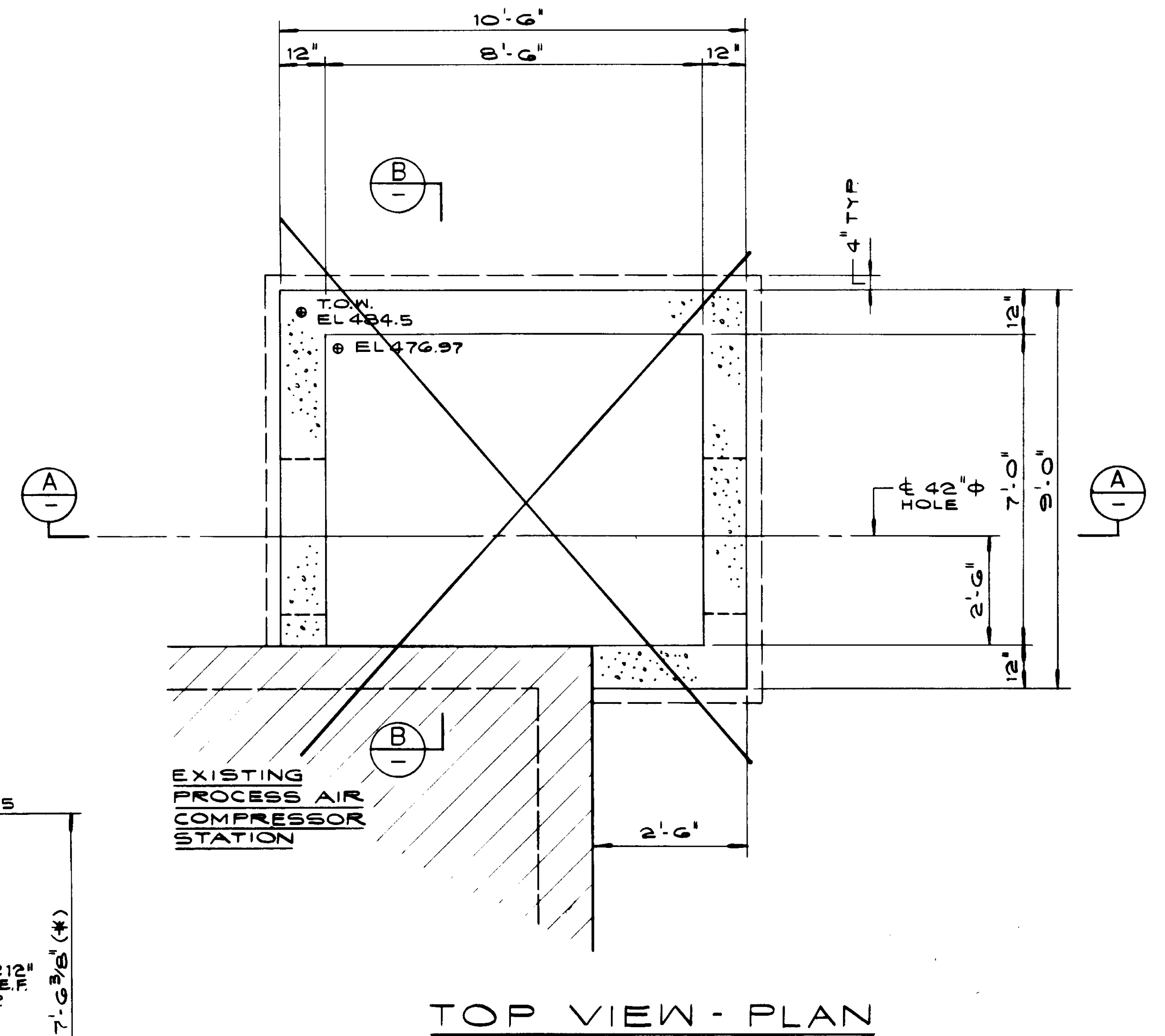
SECTION A

SS.3



SECTION B

SS.3



TOP VIEW - PLAN

SEE SKETCH SKS5.3  
SHTS.5.4

03987

REV	DATE	BY	DESCRIPTION

SCALE:	1/2" = 1'-0"		
DESIGNED BY:	K. BENUSKA		
CHECKED BY:	D. HAMABATA		
DRAWN BY:	R. LEE		
REV	DATE	BY	DESCRIPTION
5-12-87	A.B.		REV PER K.P.C.

SUBMITTED BY:	<i>W. K. Lee</i>	DATE:	0-7-87
DESIGNED BY:	KATSURA CONSULTING ENGINEERS	R.C.E. NO.:	14000
CHECKED BY:	ALEXANDER ENGINEERS	R.C.E. NO.:	512

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**MISCELLANEOUS STRUCTURES VALVE VAULT**

SHEET  
36.3

RECORD DRAWING  
No. 1998  
EXP. 12-31-89  
KATSURA CONSULTING ENGINEERS JUNO 1988

**JOHN A. MARTIN & ASSOCIATES, INC.**  
1800 WILSHIRE BOULEVARD  
LOS ANGELES 90057 483-6490

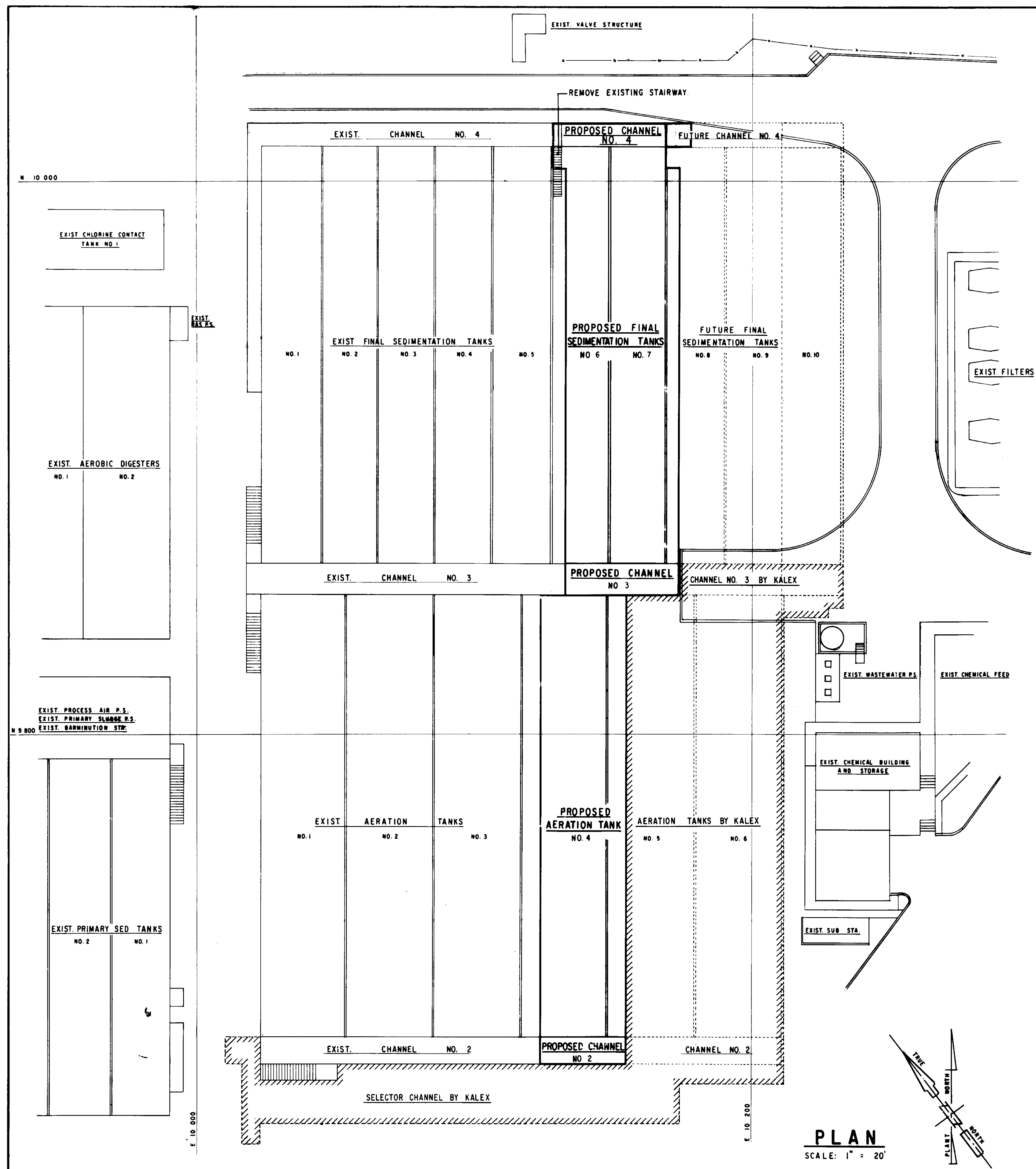




INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
S-1	GENERAL PLAN - TANK NOS. 4, 6 & 7
<del>S-2</del>	<del>EXCAVATION PLAN - TANK NOS. 4, 6 &amp; 7 (NOT USED)</del>
<del>S-3</del>	<del>EXCAVATION SECTIONS - TANK NOS. 4, 6 &amp; 7 (NOT USED)</del>
S-4	PLAN - TANK NO. 4
S-5	GENERAL SECTIONS I OF II - TANK NO. 4
S-6	GENERAL SECTIONS II OF II - TANK NO. 4
S-7	REINFORCEMENT SECTIONS I OF II - TANK NO. 4
S-8	REINFORCEMENT SECTIONS II OF II - TANK NO. 4
S-9	REINFORCEMENT SECTIONS III OF II - TANK NO. 4
S-10	REINFORCEMENT SECTIONS IV OF II - TANK NO. 4
S-11	PLAN - TANK NOS. 6 & 7
S-12	GENERAL SECTIONS - TANK NOS. 6 & 7
S-13	REINFORCEMENT SECTIONS I OF II - TANK NOS. 6 & 7
S-14	REINFORCEMENT SECTIONS II OF II - TANK NOS. 6 & 7
S-15	REINFORCEMENT SECTIONS III OF II - TANK NOS. 6 & 7
S-16	REINFORCEMENT SECTIONS IV OF II - TANK NOS. 6 & 7
S-17	REINFORCEMENT SECTIONS V OF II - TANK NOS. 6 & 7
S-18	EMBEDDED ITEMS - PLANS AND DEMOLITION DETAILS - TANK NOS. 4, 6 & 7
S-19	EMBEDDED ITEMS - SECTIONS - TANK NOS. 4, 6 & 7
S-20	TYPICAL STRUCTURAL DETAILS - TANK NOS. 4, 6 & 7
S-21	TYPICAL JOINT DETAILS - TANK NOS. 4, 6 & 7
S-22	TREAD PLATE, GRATING & STOP LOG NOTCH DETAILS - TANK NOS. 4, 6 & 7
<del>E-23</del>	<del>ELECTRICAL PLAN AND SECTION - TANK NO. 4 (NOT USED)</del>
<del>E-24</del>	<del>ELECTRICAL PLAN AND SECTION - TANK NOS. 6 &amp; 7 (NOT USED)</del>
<del>E-25</del>	<del>ELECTRICAL DETAILS - TANK NOS. 4, 6 &amp; 7 (NOT USED)</del>

NOTE:  
ALL WORK SHALL BE IN ACCORDANCE WITH CONTRACT SPECIFICATIONS EXCEPT AS MODIFIED ON THESE DRAWINGS.



PLAN  
SCALE: 1" = 20'

03989

RECORD DRAWING  
FOR FILE WITH PERMITS BY CITY ENGINEER  
*[Signature]*  
KALVIA CONSULTING ENGINEERS JUNE 1983

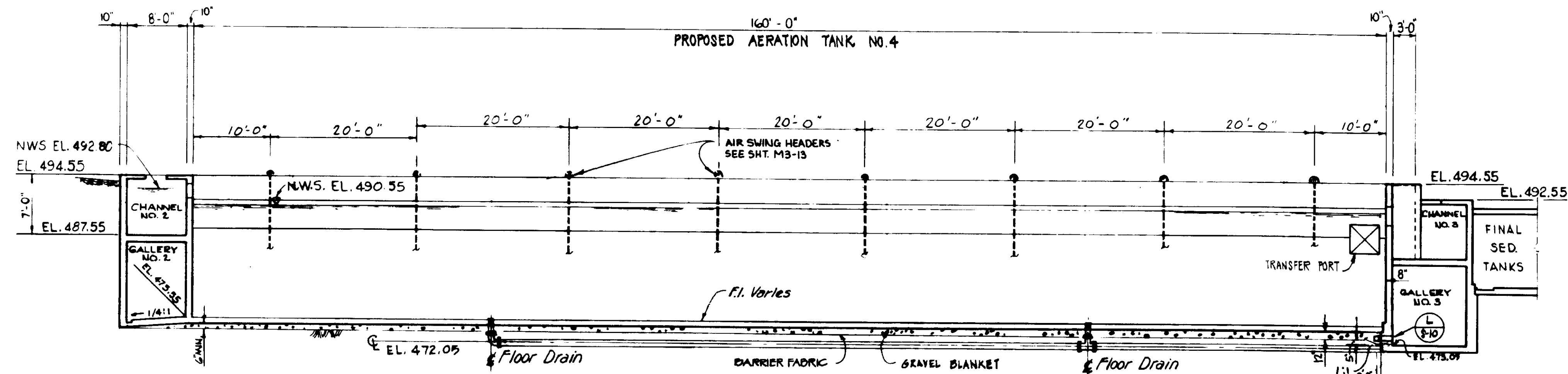
LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY  
THREE CONCRETE TANKS  
TANK NOS. 4, 6 & 7  
GENERAL PLAN

REVISION	DATE	DESCRIPTION	APP.
8/10/87		RE-ISSUED FOR CONSTRUCTION BIDDING	DTM

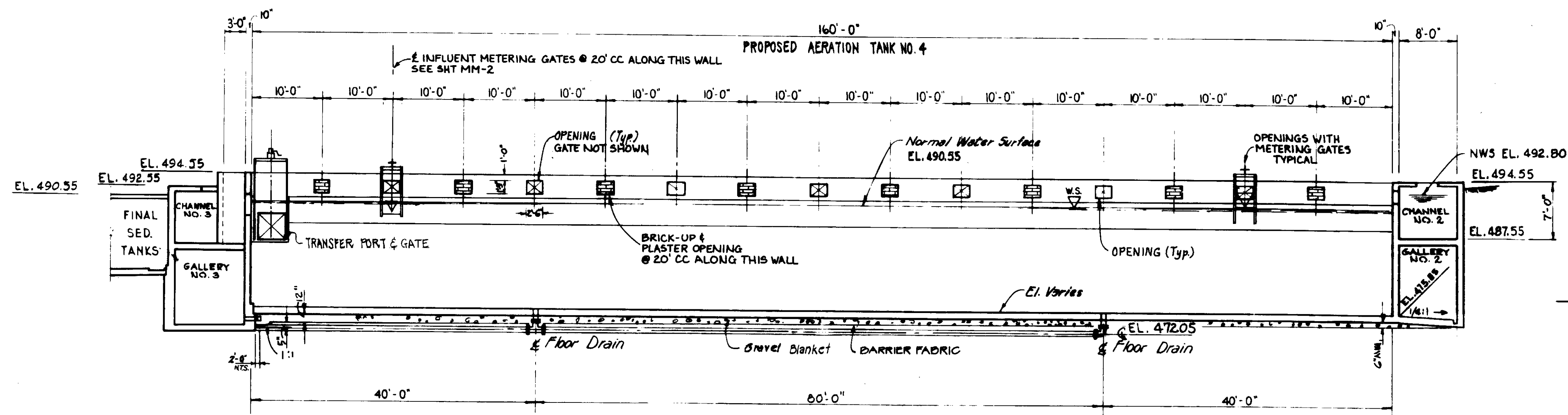
DESIGNER: A.S.P.  
 CHECKED: H.R.  
 DATE: 5-13-83  
 R.C.E. 15540

SHEET NO. S-1  
 OF 25 SHEETS  
 VT-102-901-80  
 (REV. NO. 2-80)

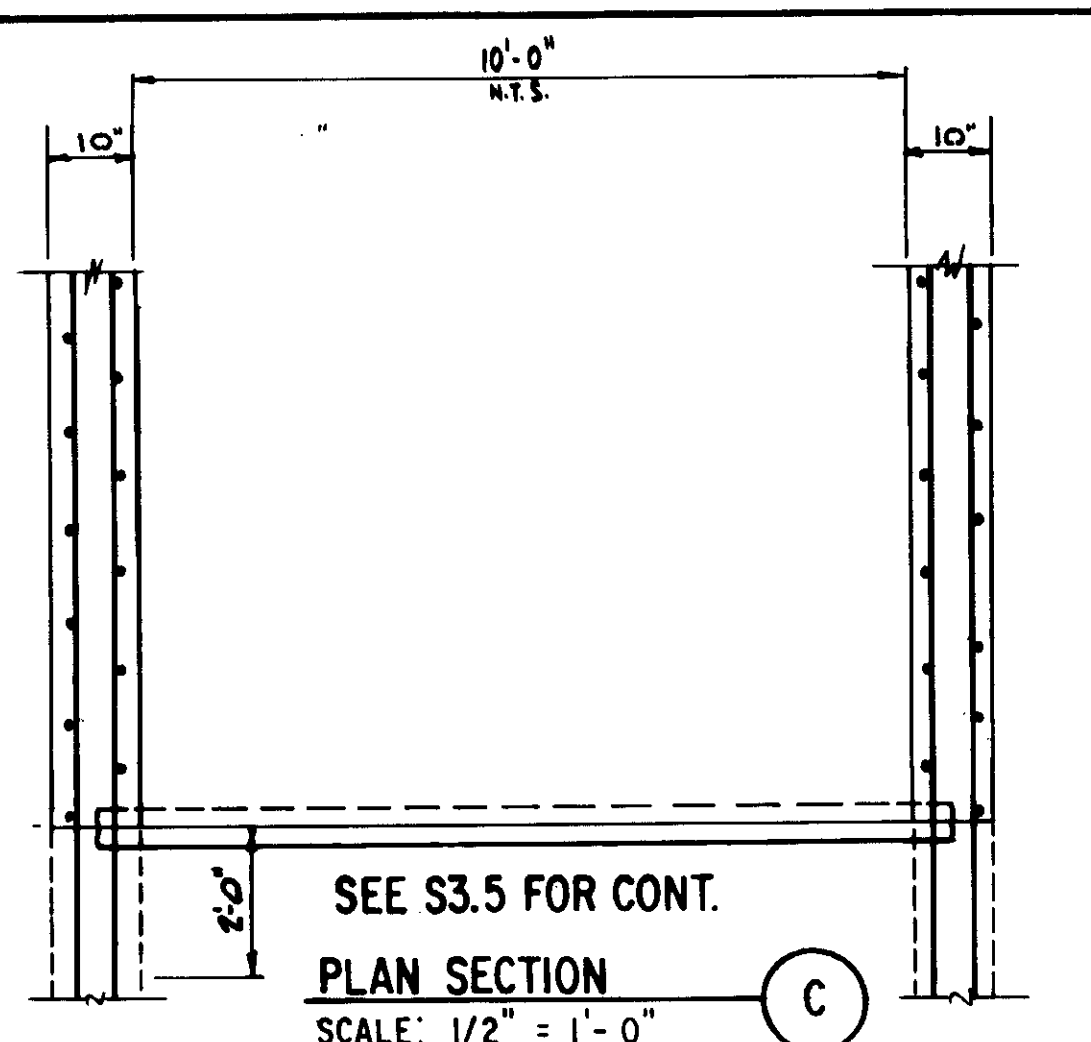




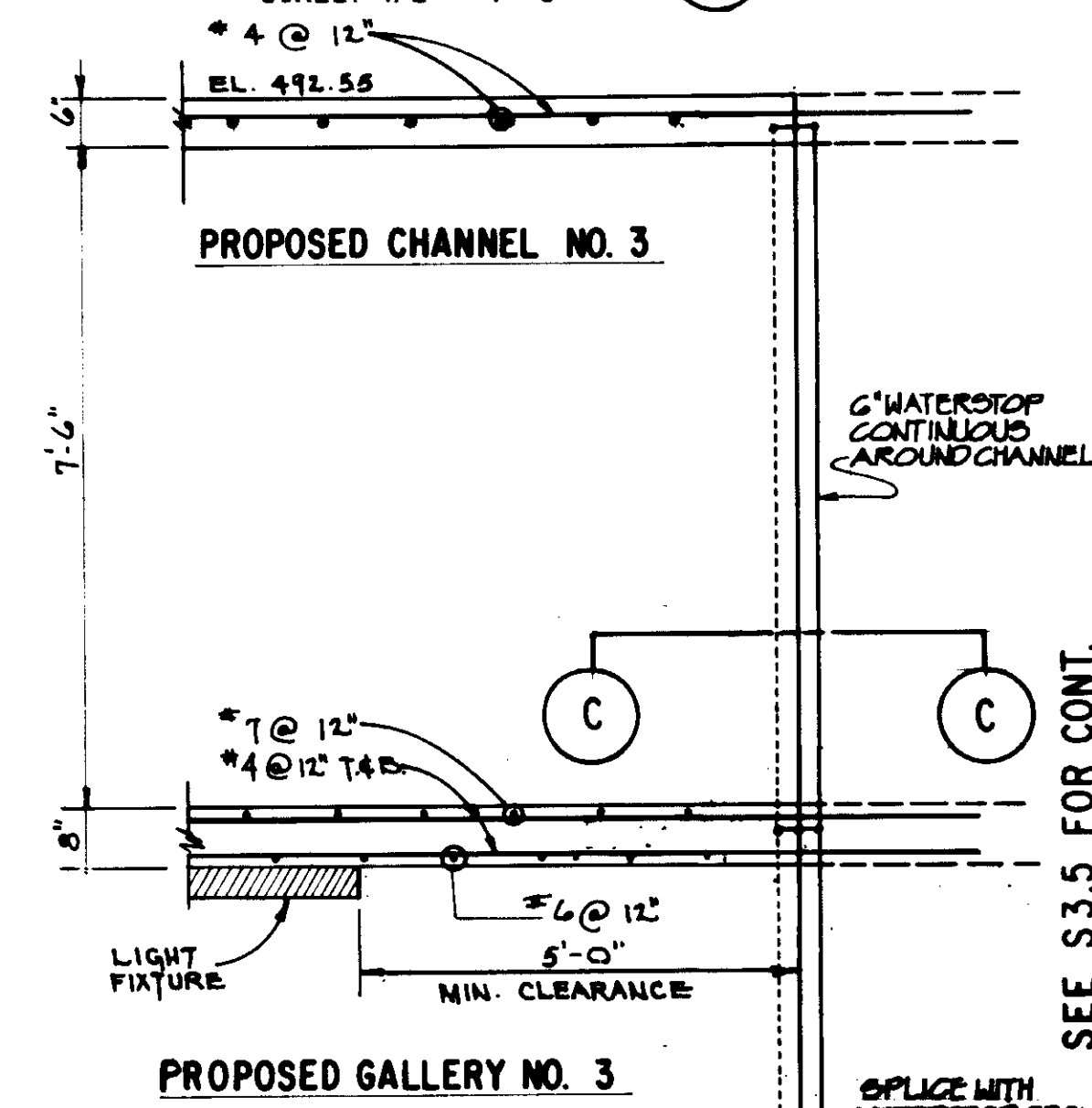
**SECTION A**  
SCALE: 1" = 10'



**SECTION B**  
SCALE: 1" = 10'



**PLAN SECTION C**  
SCALE: 1/2" = 1'-0"



**SECTION C**  
SCALE: 1/2" = 1'-0"  
NOTE: DO NOT USE SECTION M FOR REINFORCING USE SECTION G PER RFI 26

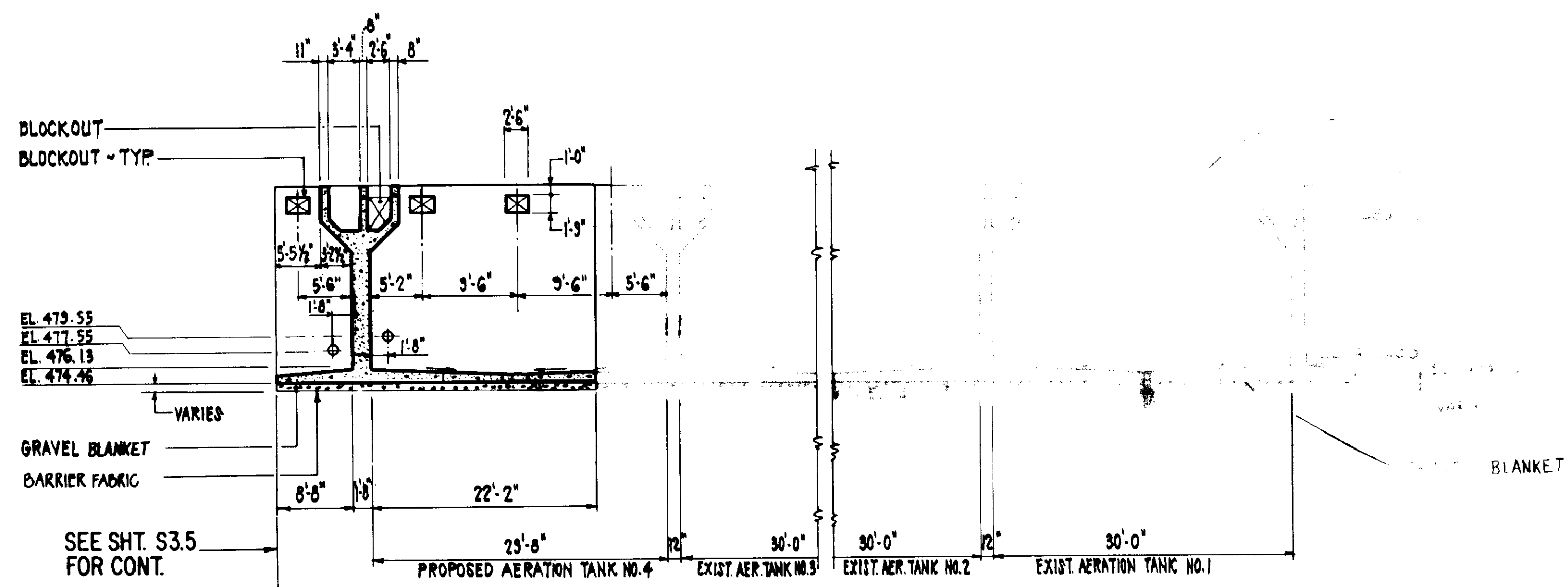
03991

RECORD DRAWING  
FOR FILE MAINTAINED BY CIVIL ENGINEERING DEPT.  
*[Signature]*  
SANTA BARBARA CONSULTING ENGINEERS JUNE 1988

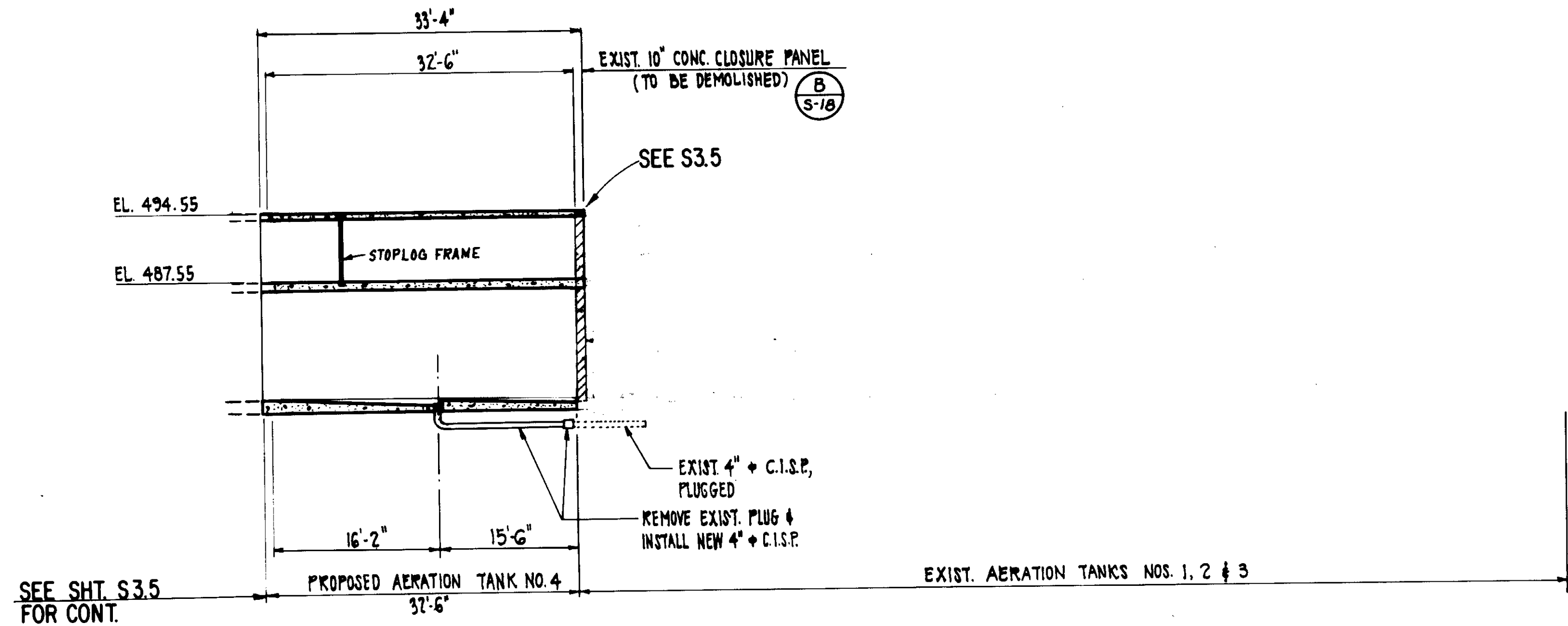
LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY  
THREE CONCRETE TANKS  
TANK NO. 4  
GENERAL SECTIONS  
I OF II

DESIGN	A.S.P.	DATE	5-22-89	REVISION	REV. PER K.P.C.
CHECKED	M.P.	DATE	8-10-87	REVISION	RE-ISSUED FOR CONSTRUCTION BIDDING
APPROVED	J.W.B.	DATE		REVISION	

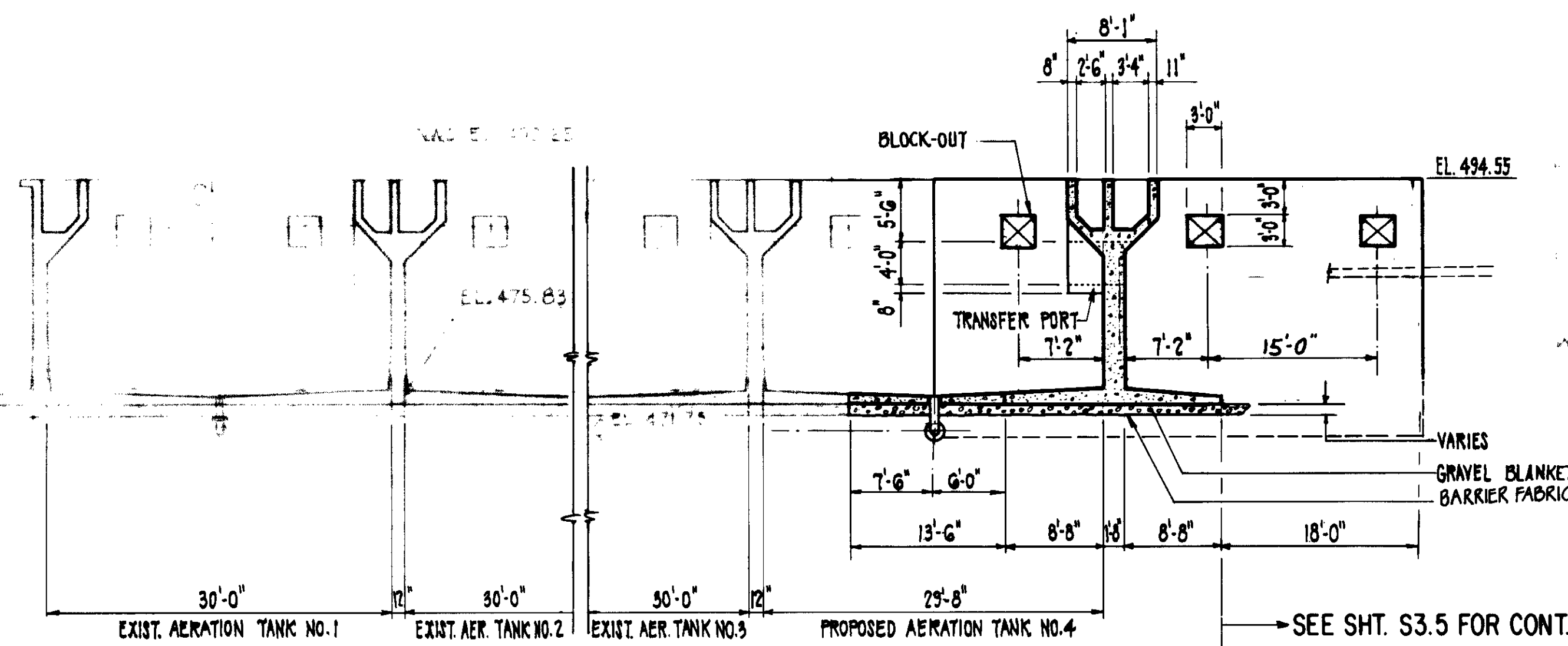




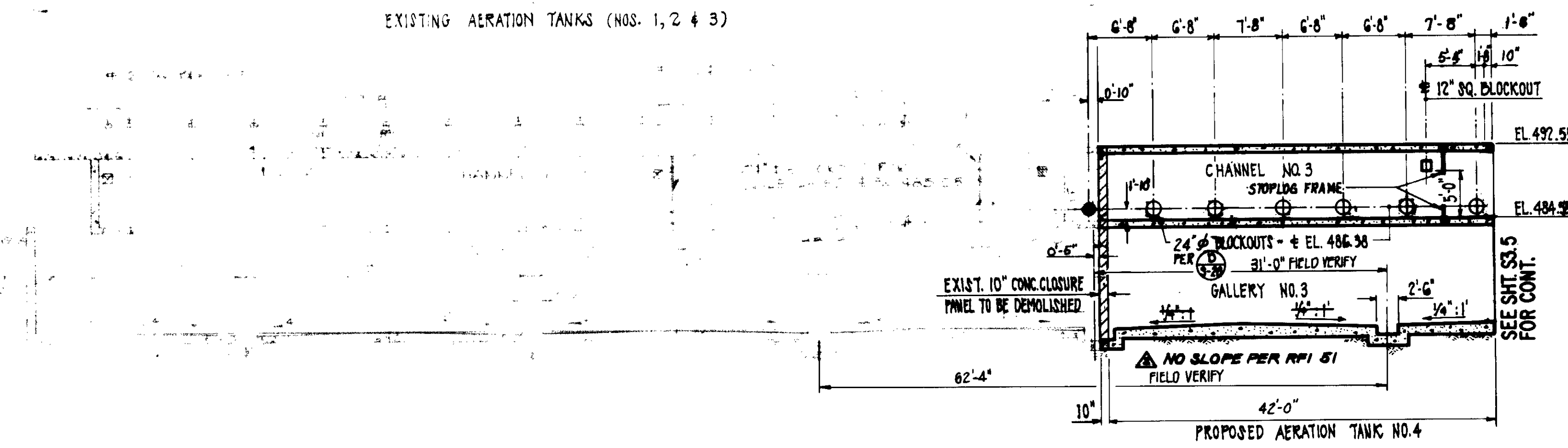
SECTION C  
SCALE: 1" = 10'



SECTION E  
SCALE: 1" = 10'



SECTION D  
SCALE: 1" = 10'



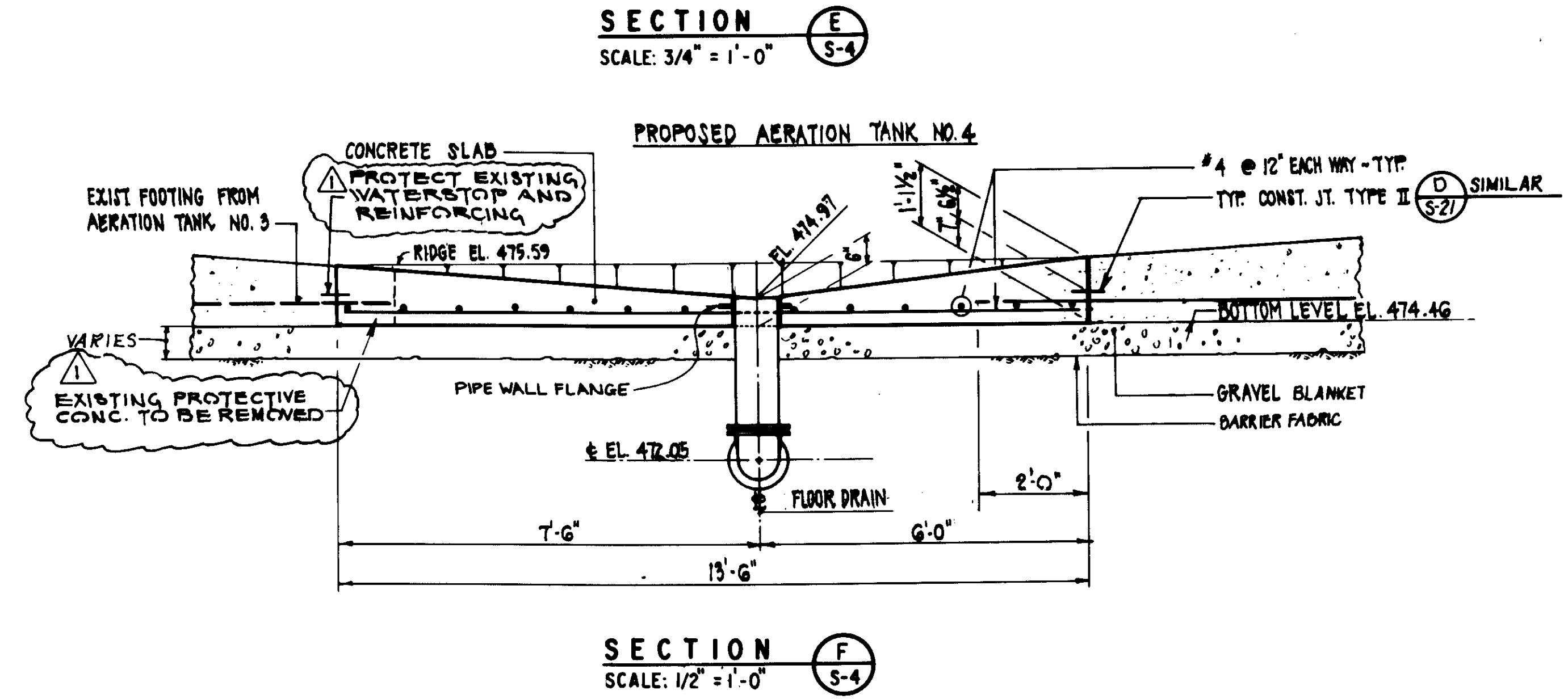
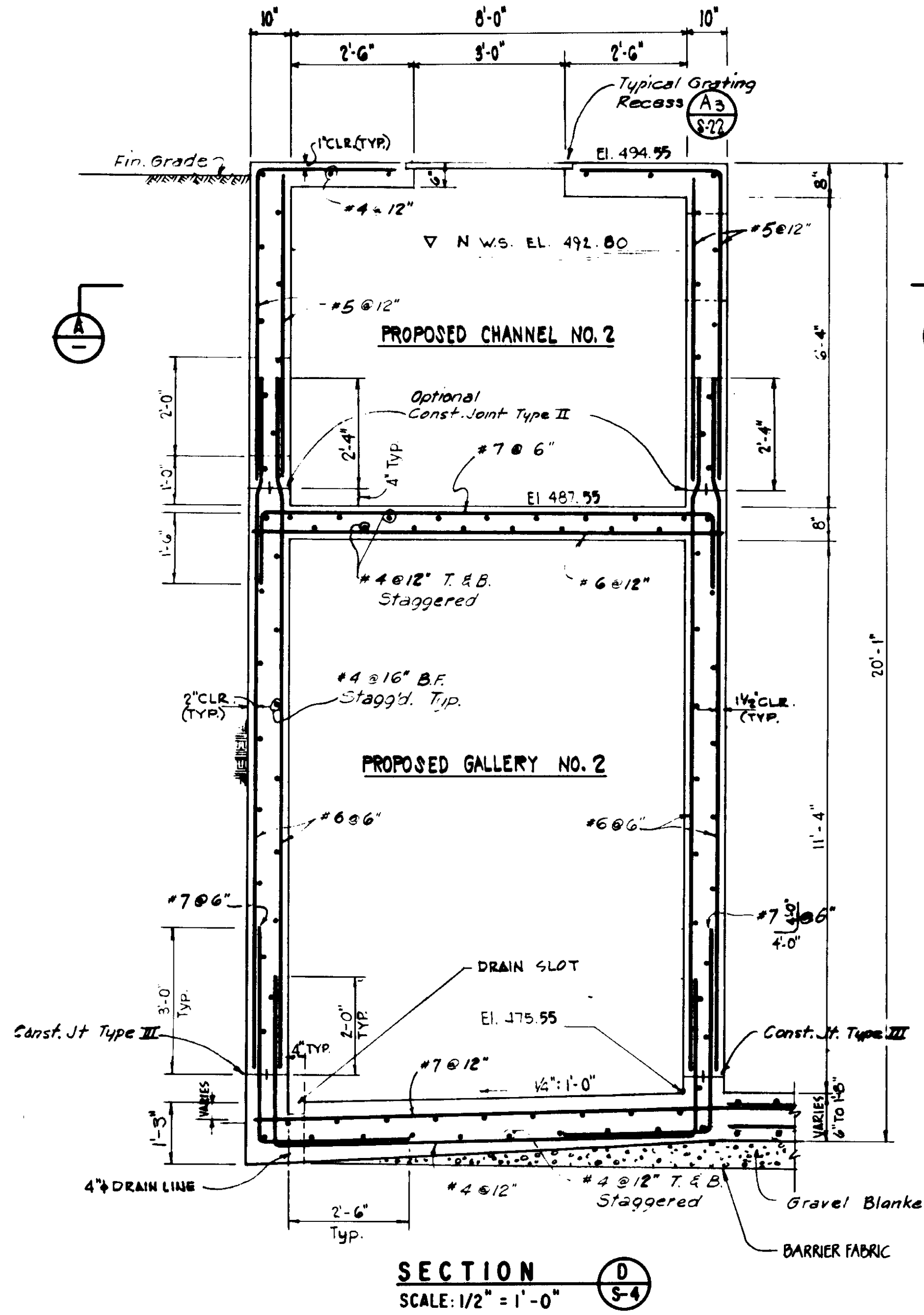
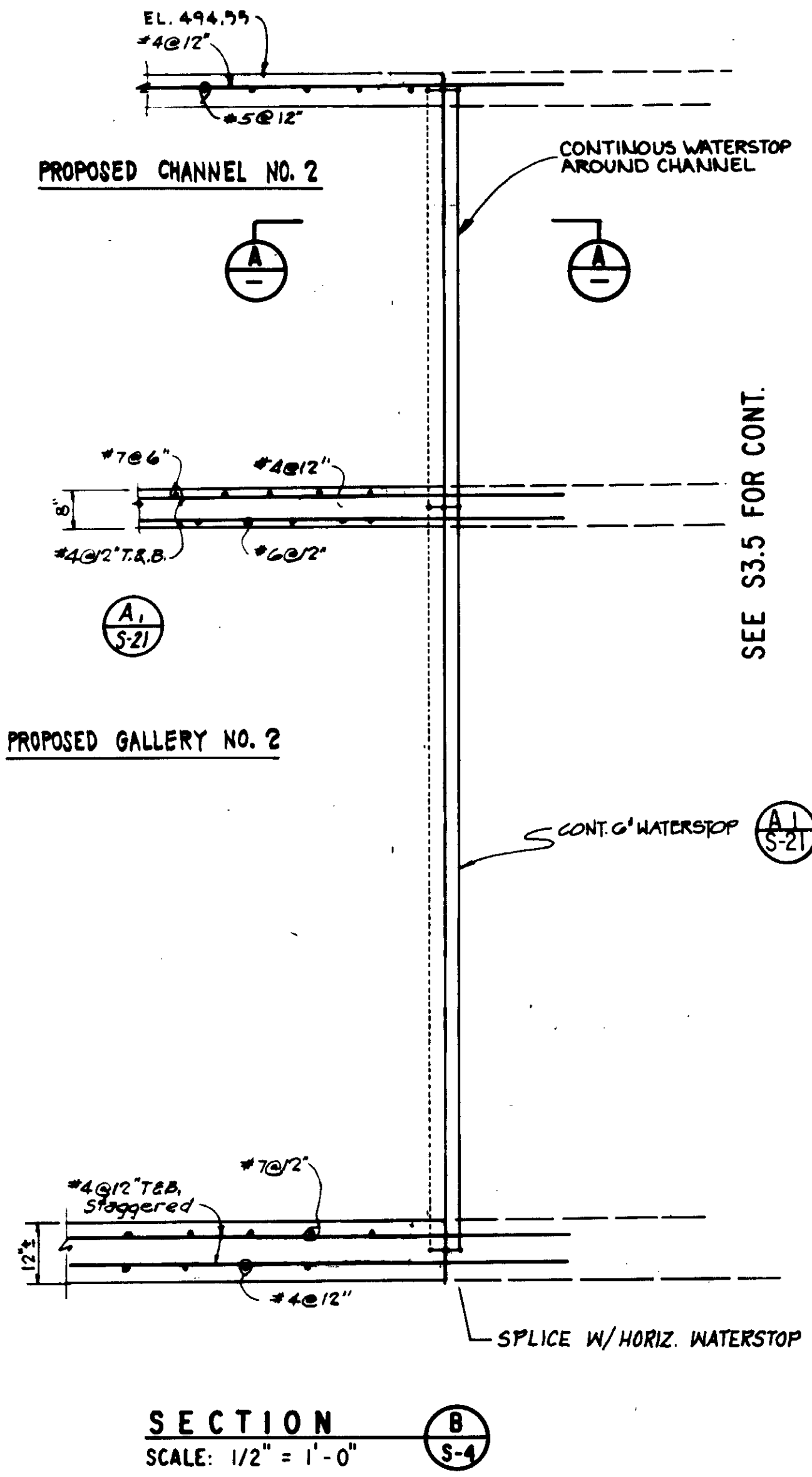
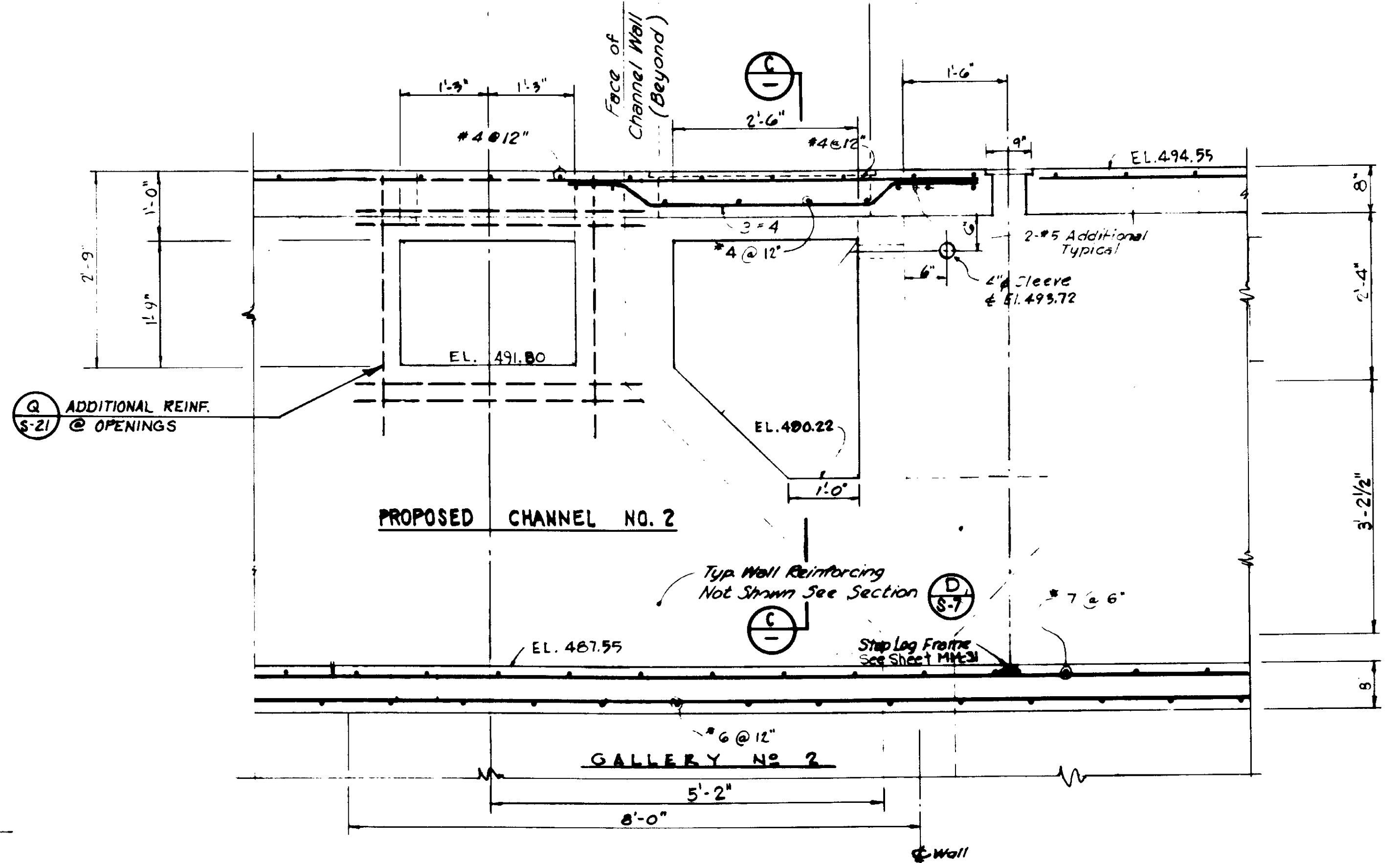
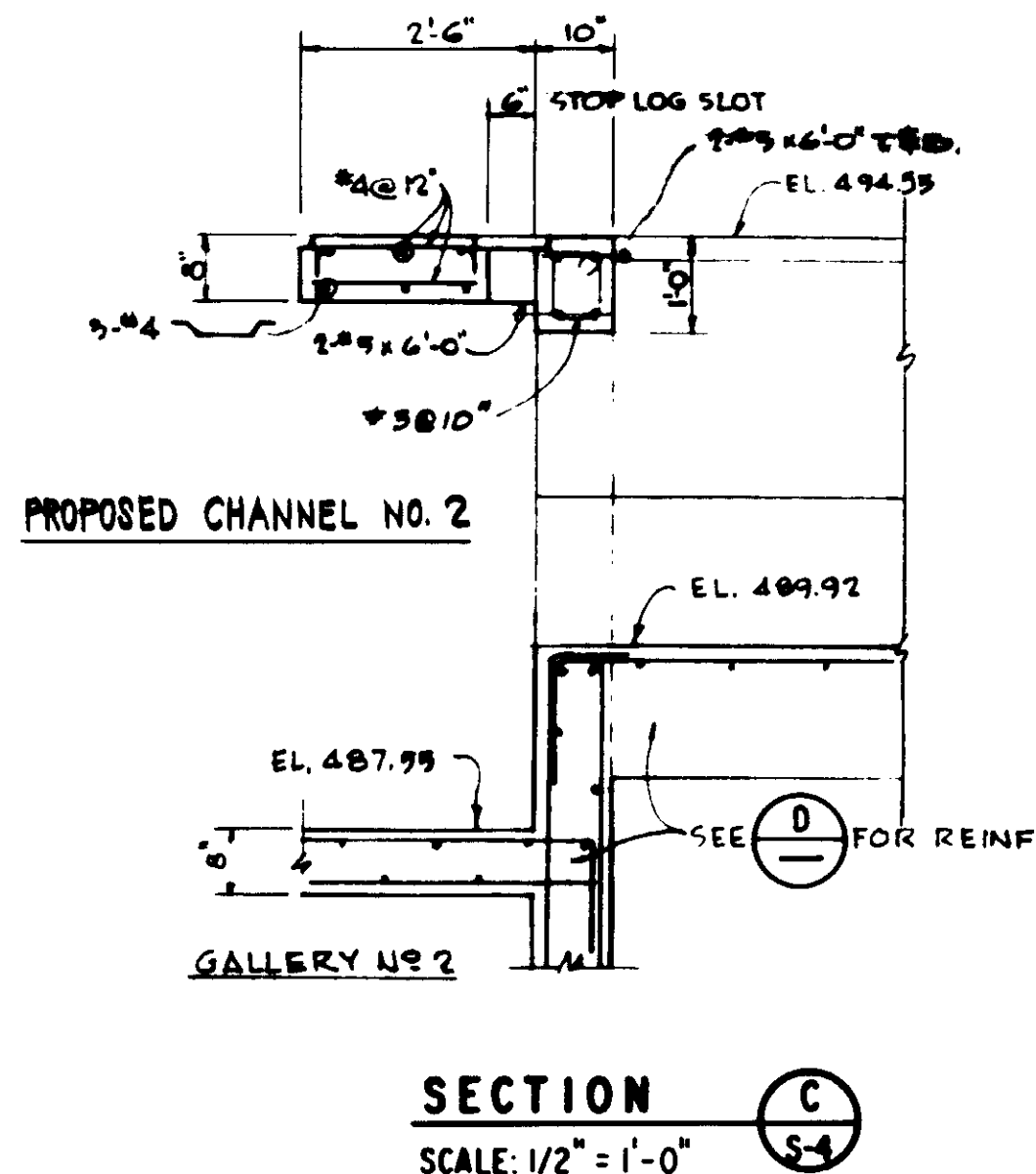
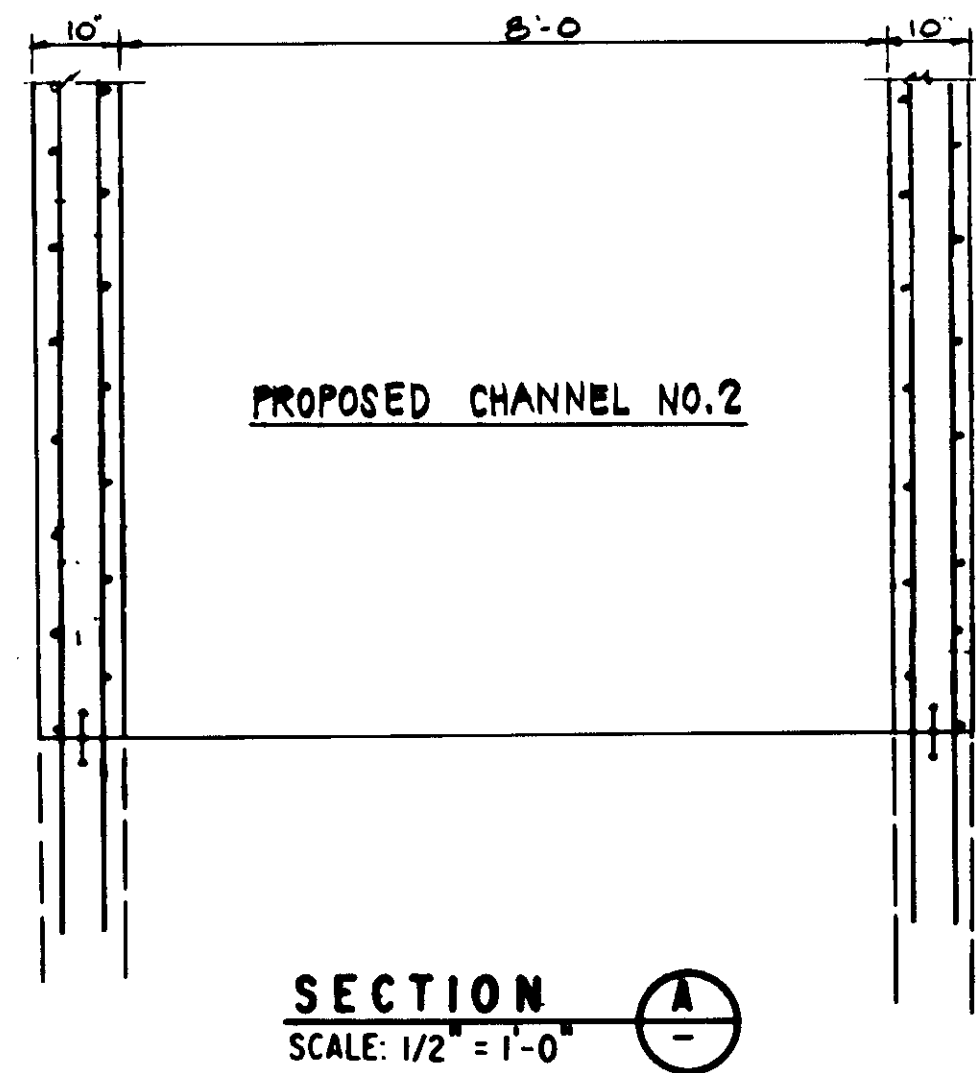
SECTION F  
SCALE: 1" = 10'

RECORD DRAWING  
 DESIGNED BY: J. B. BROWN  
 CHECKED BY: J. M. B.  
 DATE: 8-10-67

03992  
 LAS VIRGENES MUNICIPAL WATER DISTRICT  
 TAPIA WATER RECLAMATION FACILITY  
 THREE CONCRETE TANKS  
 TANK NO. 4  
 GENERAL SECTIONS  
 II OF II

REV.	DATE	DESCRIPTION	APP.
5-24-67		REV. PER K.P.C.	
8-10-67		RE-ISSUED FOR CONSTRUCTION BIDDING	

SOLO ENGINEERING CORPORATION  
 CONSULTING ENGINEERS / ARCHITECTS  
 VENTURA, CA.  
 SHEET NO. S-6  
 OF 23  
 VT-L-00-0000



03993

LAS VIRGENES MUNICIPAL WATER DISTRICT  
 TAPIA WATER RECLAMATION FACILITY  
 THREE CONCRETE TANKS  
 TANK NO. 4  
 REINFORCEMENT SECTIONS

REV	DATE	DESCRIPTION
1	8-10-87	Re-issued for construction bidding
2	6-15-83	Existing concrete removal & protection of exist. rebar.

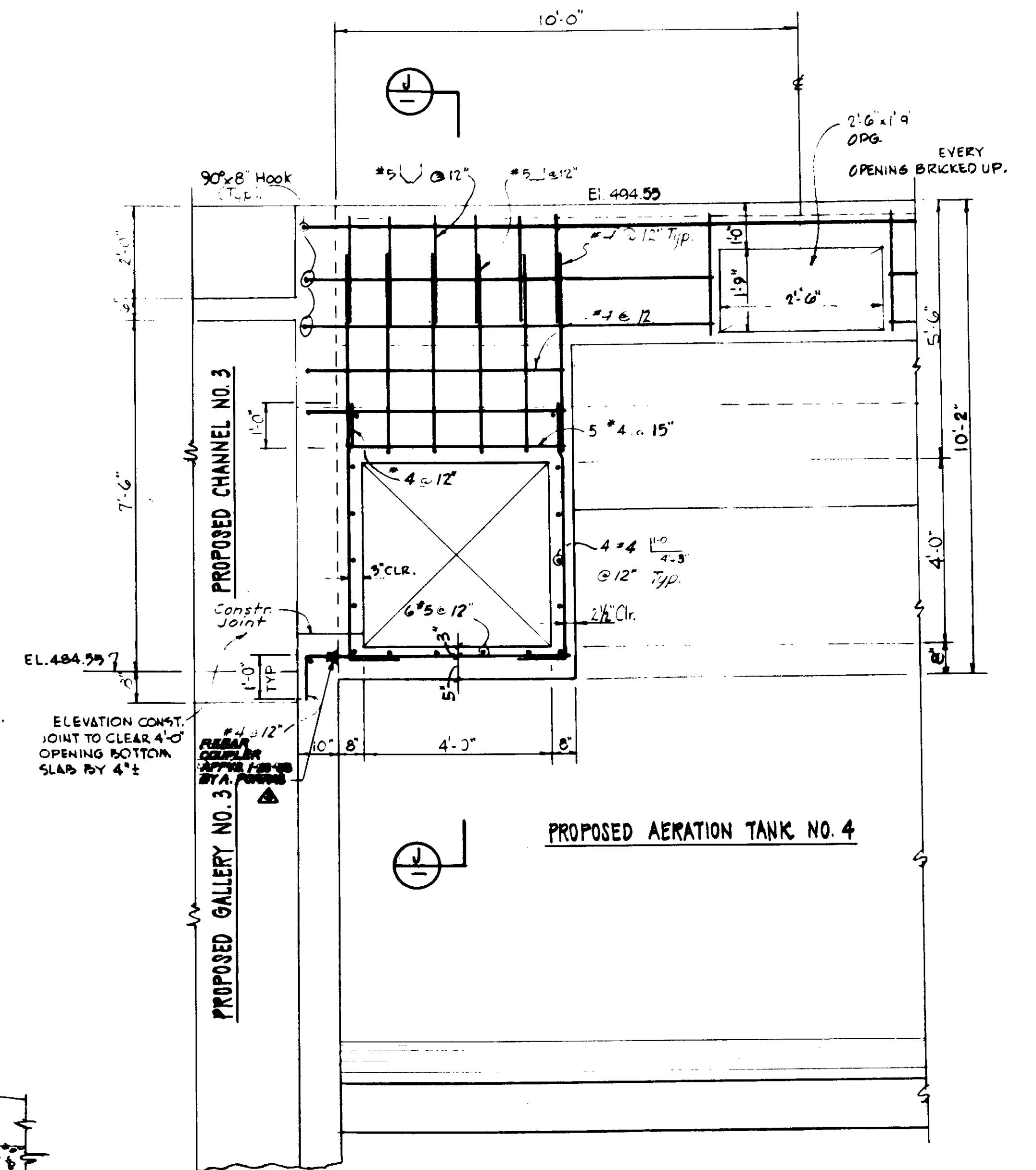
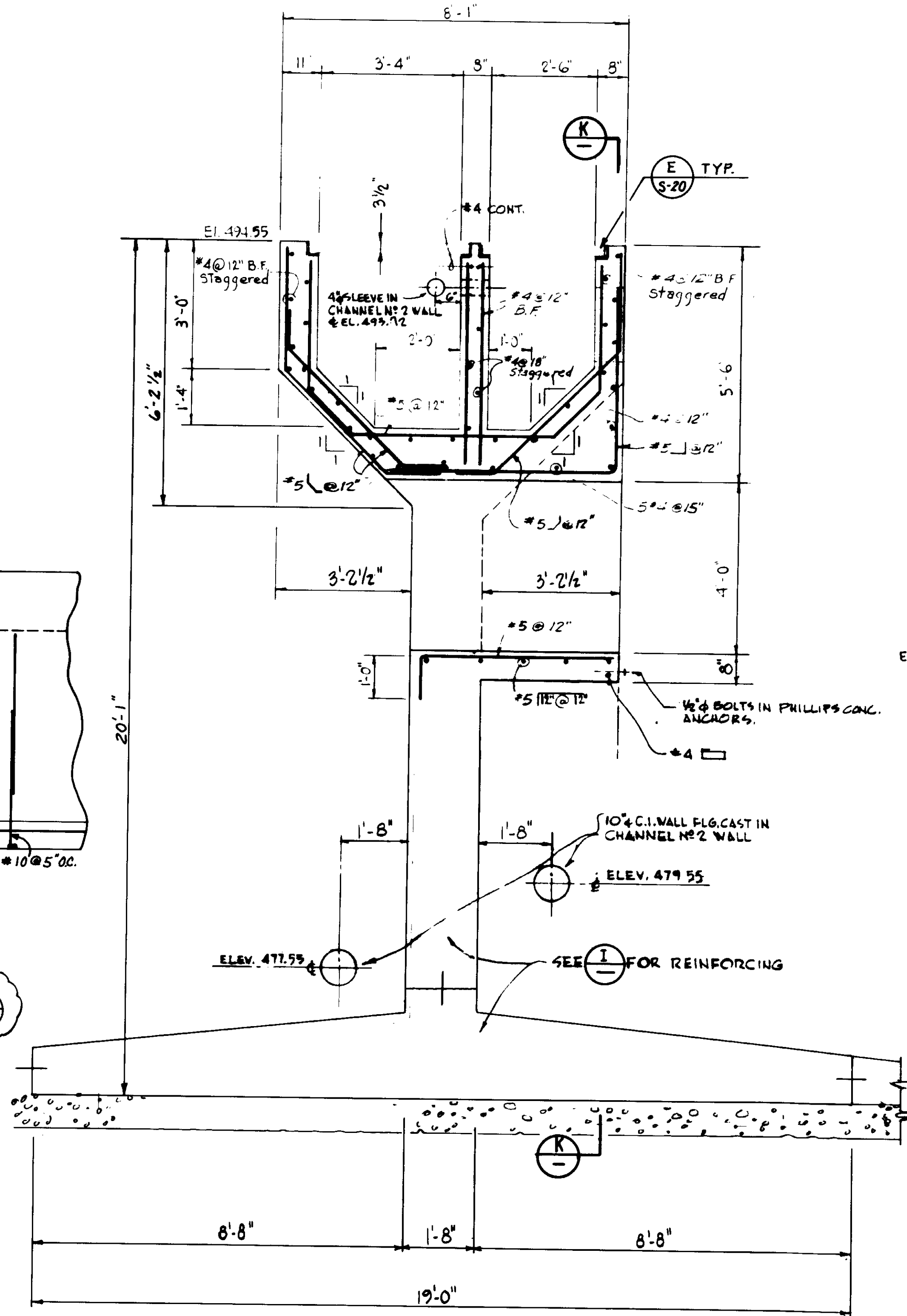
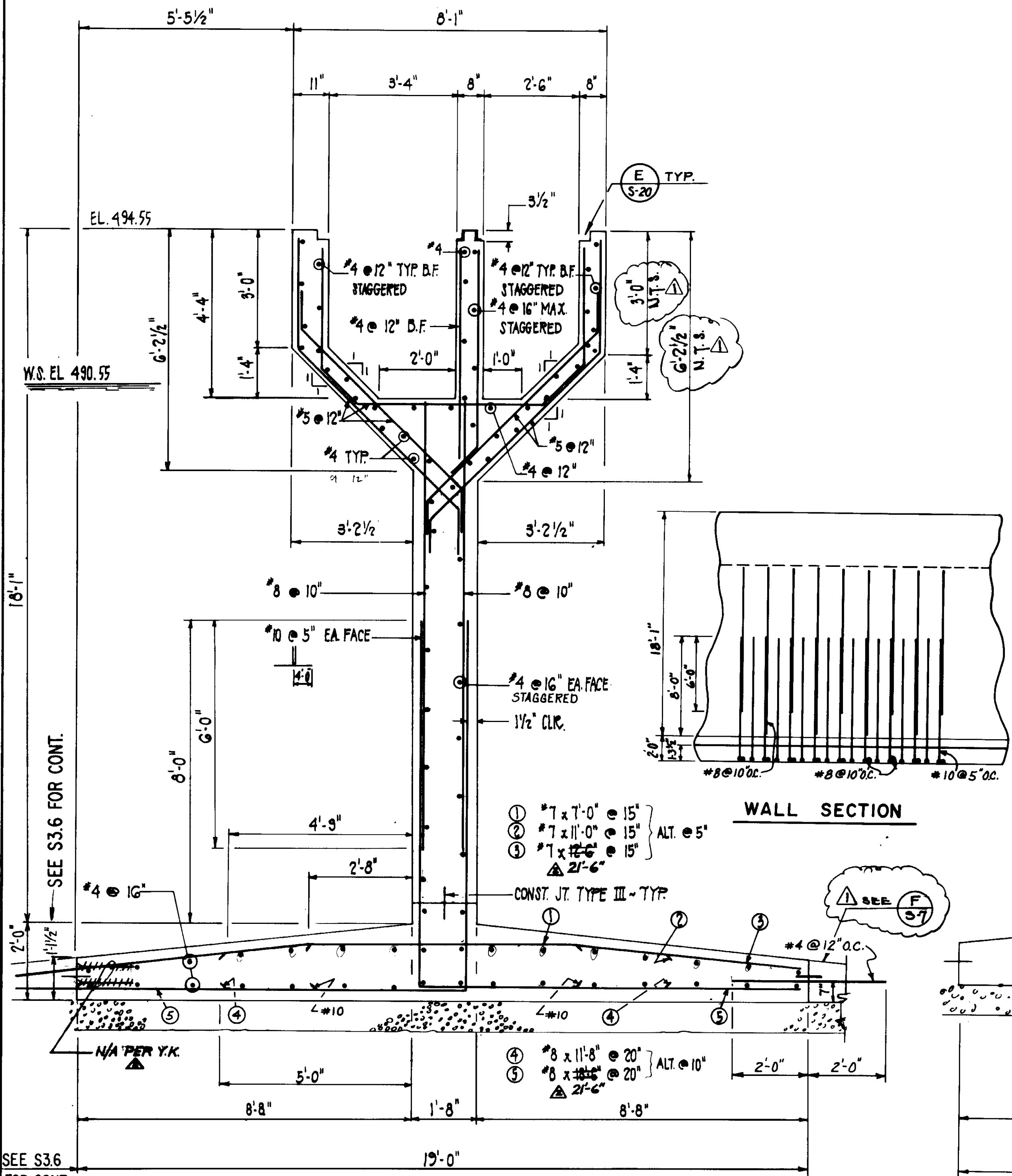
DESIGN: AP.M.T.  
 DRAWN: J.M.B.  
 CHECKED: J.M.B.  
 DATE: 4/2/83

SOUS Engineering Corporation  
 CONSULTING ENGINEERS / ARCHITECTS  
 VENTURA, CA.

SHEET NO. S-7







SEE S3.6 FOR CONT.

**SECTION I**  
SCALE: 1/2" = 1'-0"

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

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

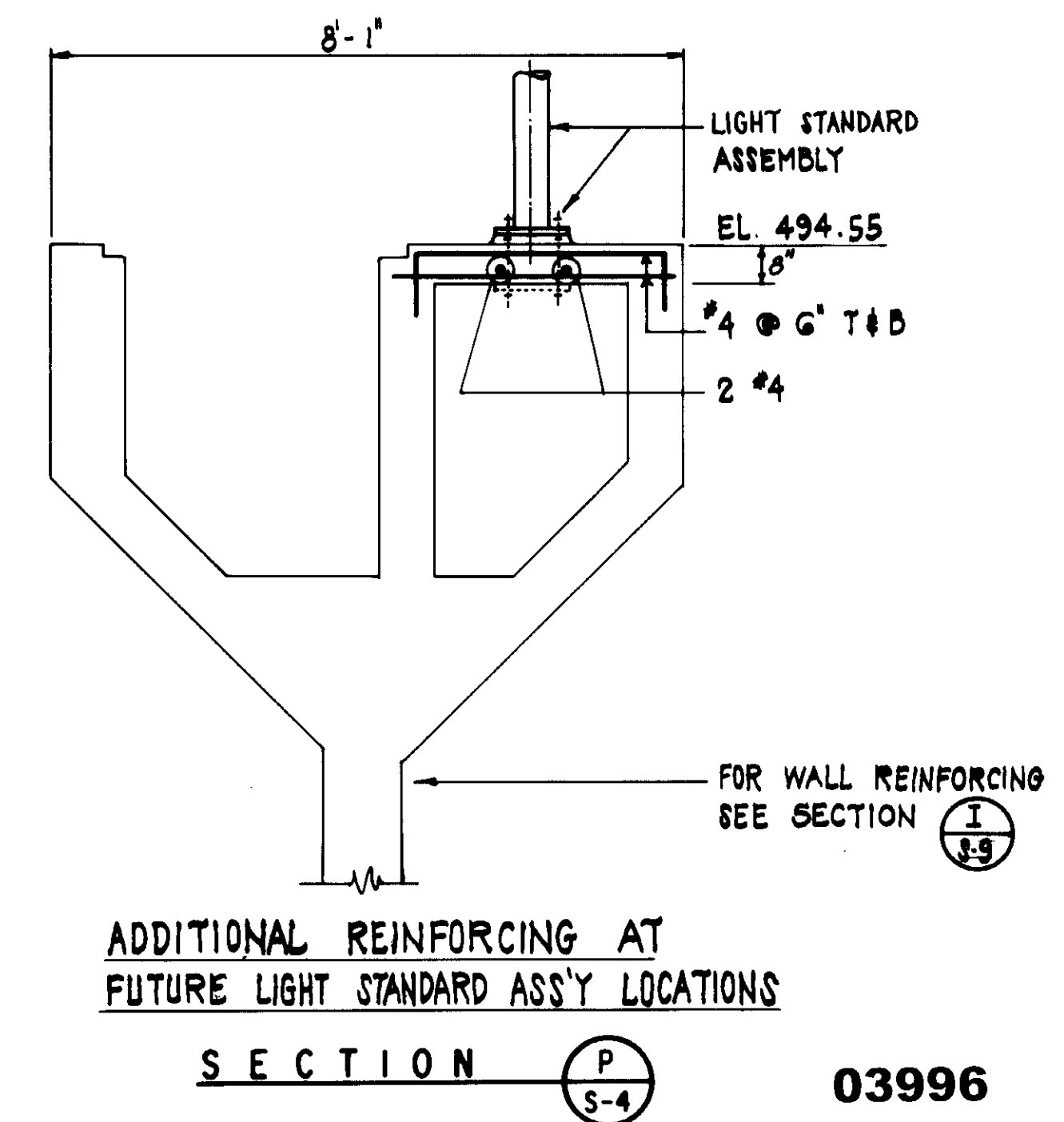
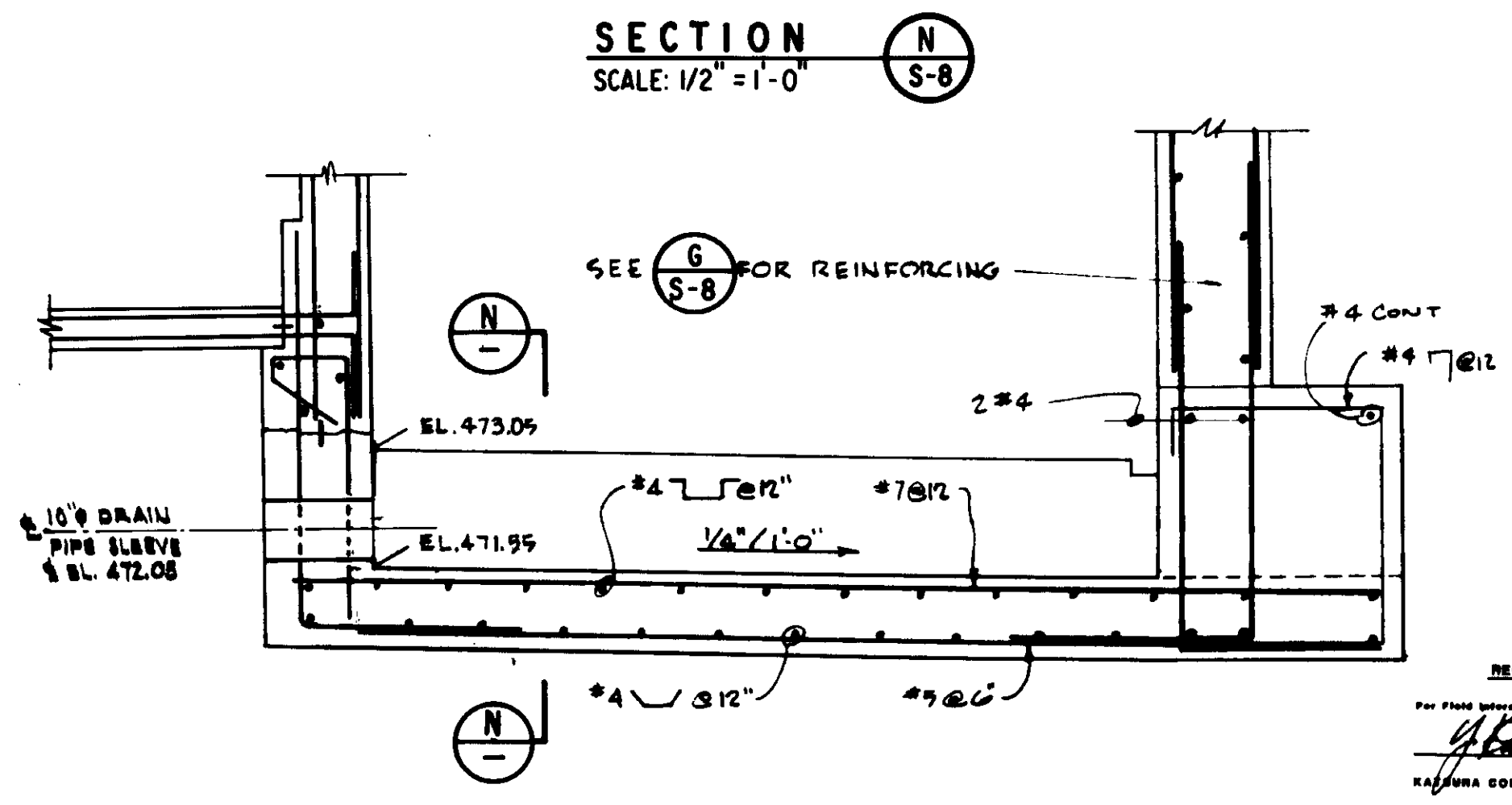
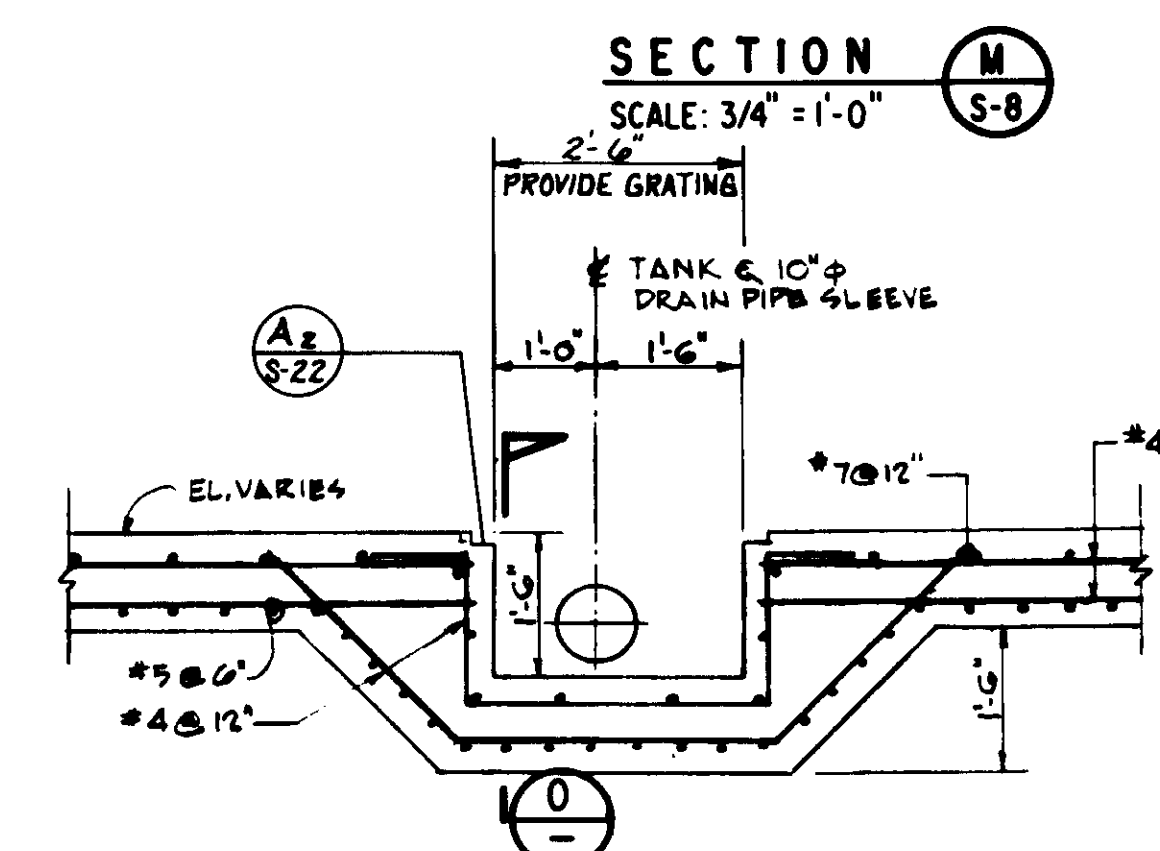
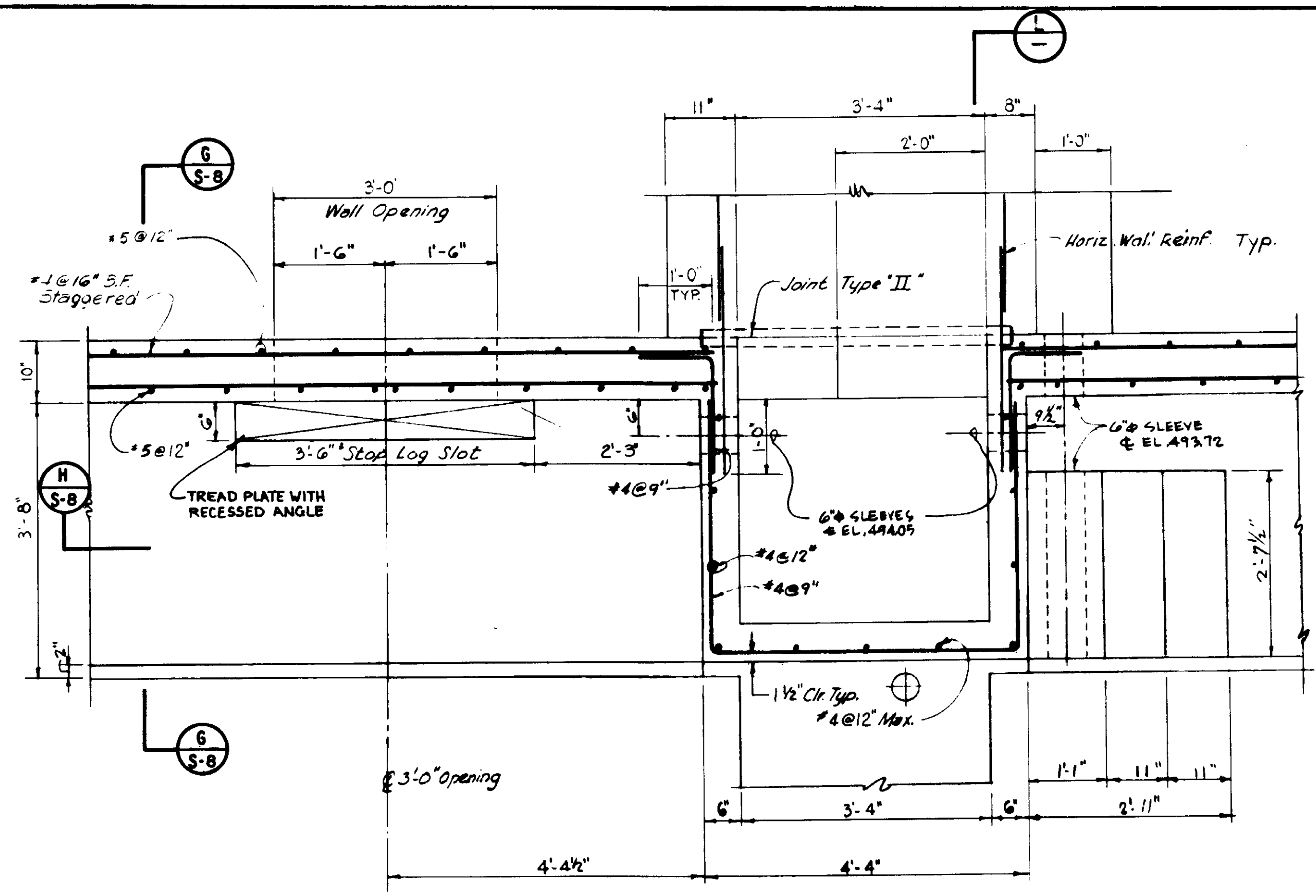
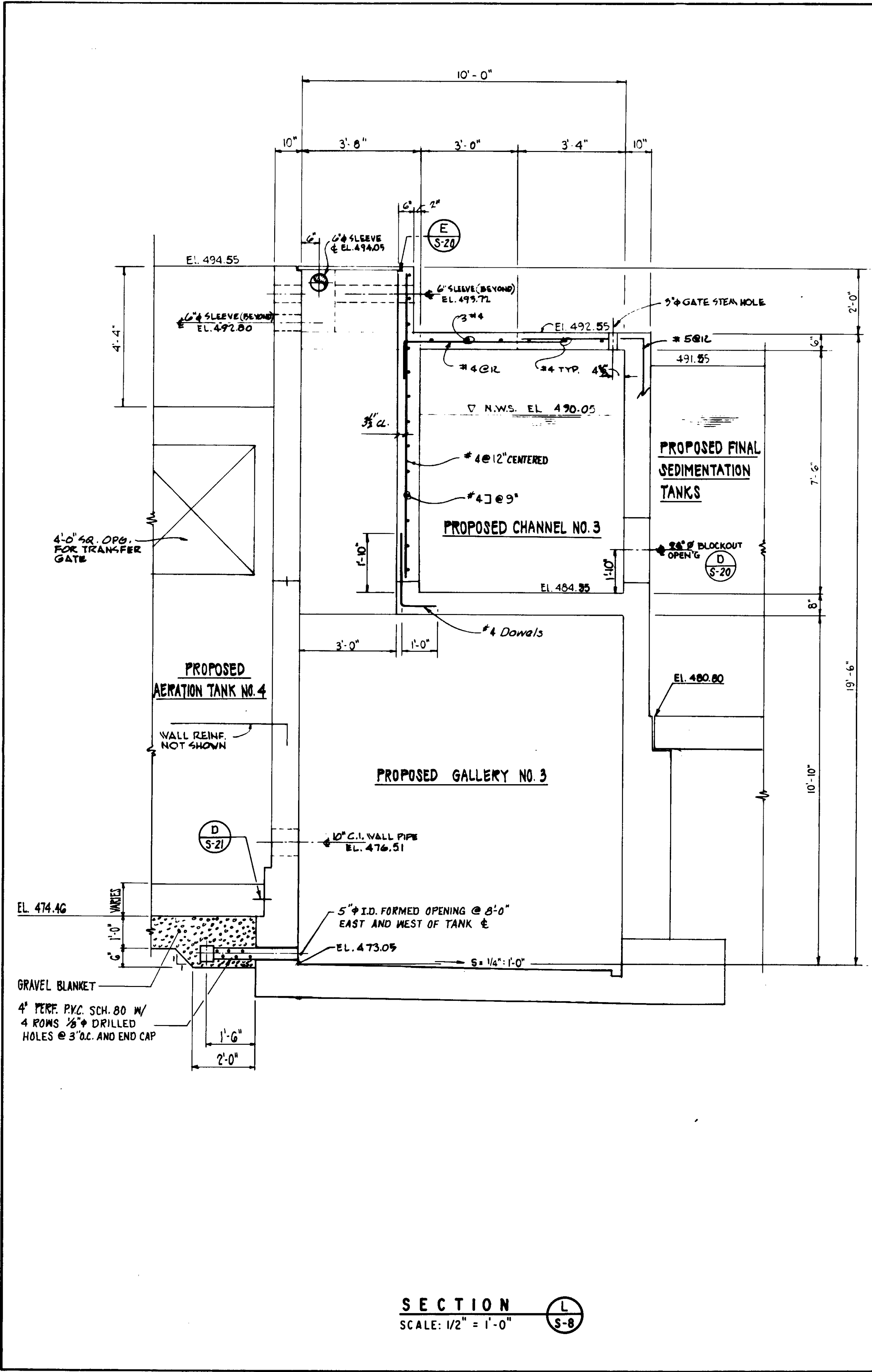
03995

RECORD DRAWING  
FOR FILING SUBMITTED BY ERNST FARRING CORP.  
J. K. Kasper  
KASPER CONSULTING ENGINEERS JUNE 1983

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY  
THREE CONCRETE TANKS  
TANK NO. 4  
REINFORCEMENT SECTIONS  
III OF IV

REV.	DATE	DESCRIPTION
1	5-24-83	REV. PER K.P.C.
2	5-26-83	REV. PER K.P.C.
3	8/10/87	RE-ISSUED FOR CONSTRUCTION BIDDING
4	6-15-83	Clarified Sides of footing.

STATION: AP/MIT  
DATE: 8/10/87  
CHECKED: J.W.B.  
DATE: 5/18/88  
SCALE: 1/2" = 1'-0"  
SHEET NO. S-9  
TOTAL SHEETS: 23



SECTION L-S-8  
SCALE: 1/2" = 1'-0"

SECTION O-S-8  
SCALE: 1/2" = 1'-0"

REV.	DATE	DESCRIPTION
1	8/10/87	RE-ISSUED FOR CONSTRUCTION BIDDING

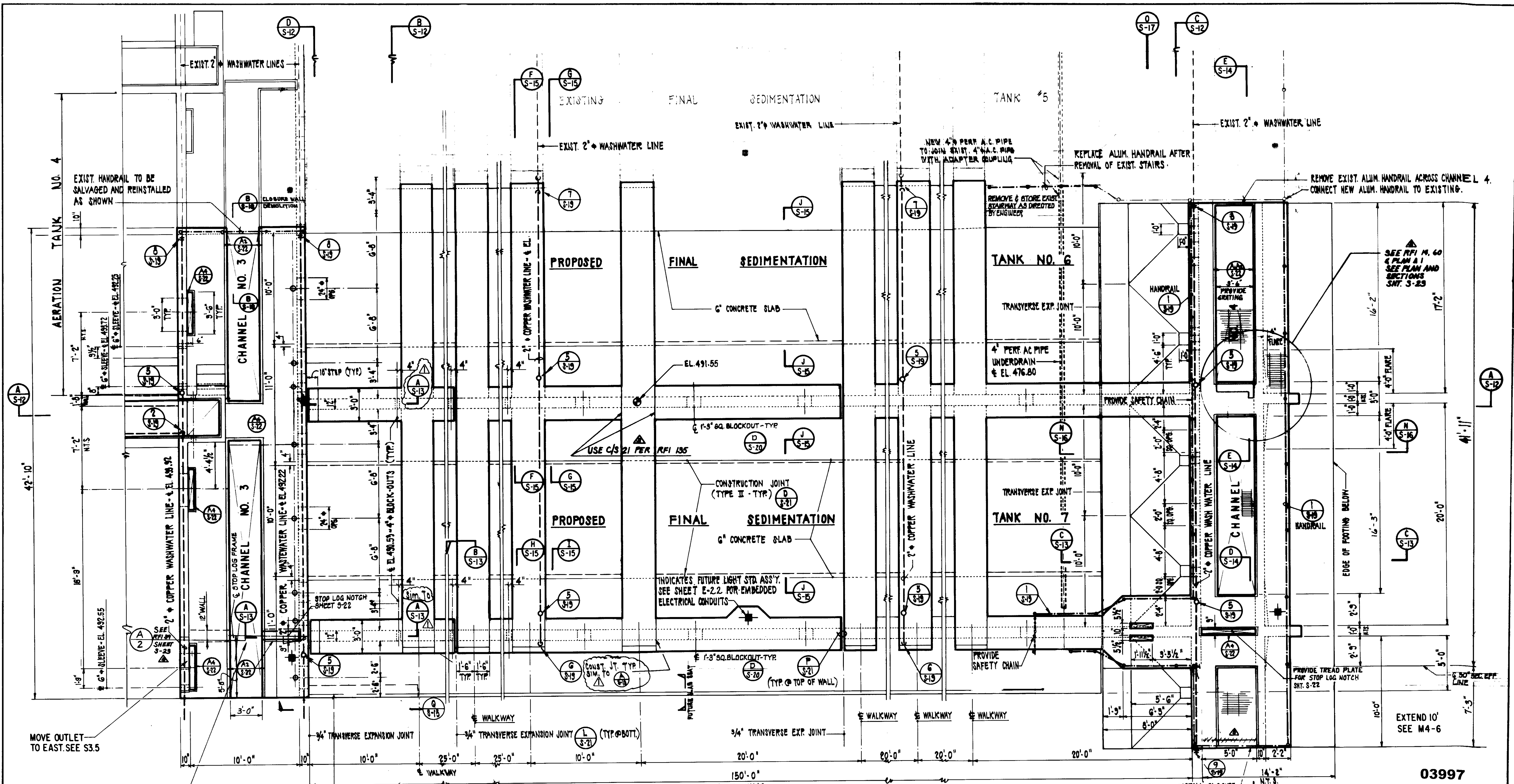
03996

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY  
THREE CONCRETE TANKS  
TANK NO. 4  
REINFORCEMENT SECTIONS  
IV OF IV

DESIGN: AR/MT  
DRAWN: H.P.  
CHECKED: J.M.B.  
DATE: 2/2/88

BOYLE Engineering Corporation  
CONSULTING ENGINEERS / ARCHITECTS  
VENTURA, CA

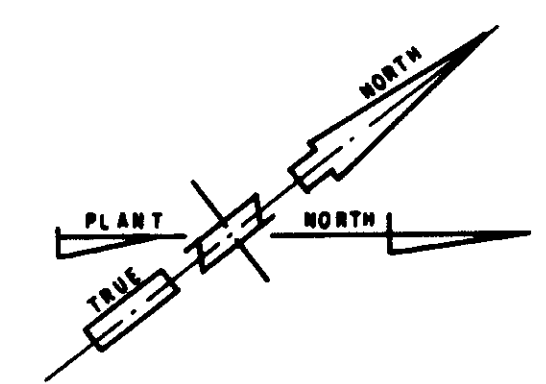
SHEET NO. S-10



03997

LAS VIRGENES MUNICIPAL WATER DISTRICT  
 TAPIA WATER RECLAMATION FACILITY  
 THREE CONCRETE TANKS  
 TANK NOS. 6 & 7  
**PLAN**

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



RECORD DRAWING  
 PREPARED BY: [Signature]  
 DATE: [Date]

REV.	DATE	DESCRIPTION
5-27-81		REV. PER K.P.C.
5-27-81		REV. PER K.P.C.
5-27-81		REV. PER K.P.C.
8/10/87		RE-ISSUED FOR CONSTRUCTION BIDDING
6-16-83		Clarified construction joint.

DESIGN: A.S.P.  
 DRAWN: [Signature]  
 CHECKED: [Signature]  
 APP. J.M.B.

**Boyle Engineering Corporation**  
 CONSULTING ENGINEERS / ARCHITECTS  
 VENTURA, CA.

PROJECT NO. S-11

SEE SECTION A/J-S-11 FOR LAGGING AT EAST END PST 7, SHEET S-23

MOVE OUTLET TO EAST SEE S3.5

SEE M4-3 & M4-6

PROVIDE TREAD PLATE FOR STOP LOG NOTCH SHT. S-22

INDICATES FUTURE LIGHT STD. ASS'Y. SEE SHEET E-2.2 FOR EMBEDDED ELECTRICAL CONDUITS

USE C/S 21 PER RFI 135

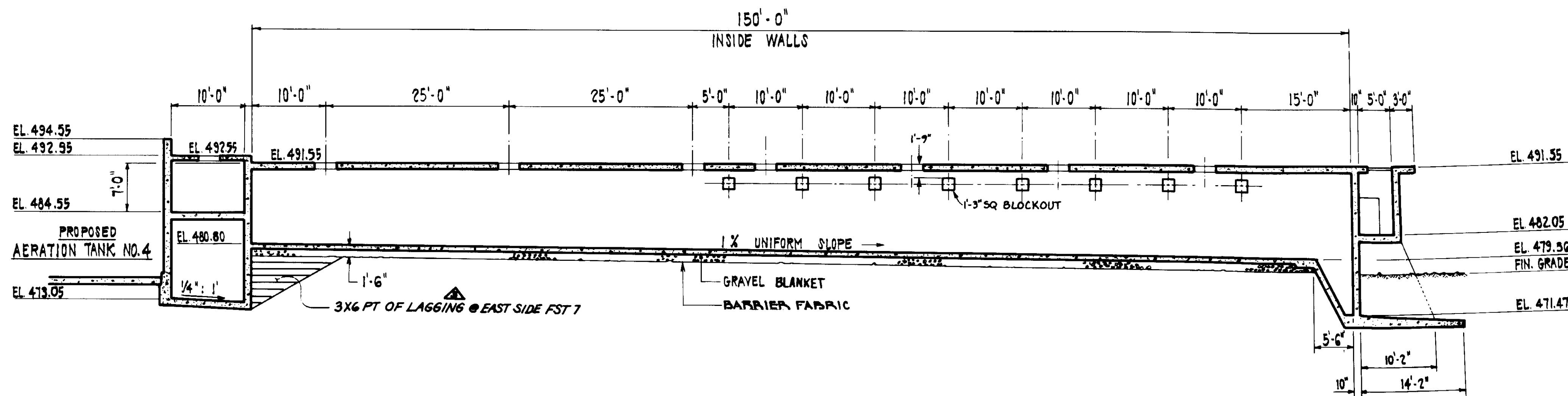
CONSTRUCTION JOINT (TYPE II - TYP.)

REMOVE & STORE EXIST. STAIRWAY AS DIRECTED BY ENGINEER

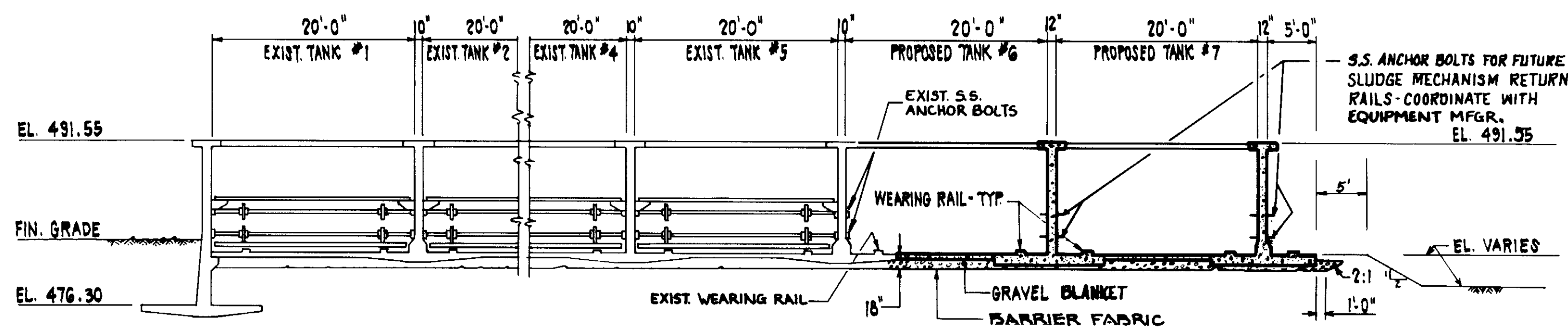
REPLACE ALUM. HANDRAIL AFTER REMOVAL OF EXIST. STAIRS.

REMOVE EXIST. ALUM. HANDRAIL ACROSS CHANNEL 4. CONNECT NEW ALUM. HANDRAIL TO EXISTING.

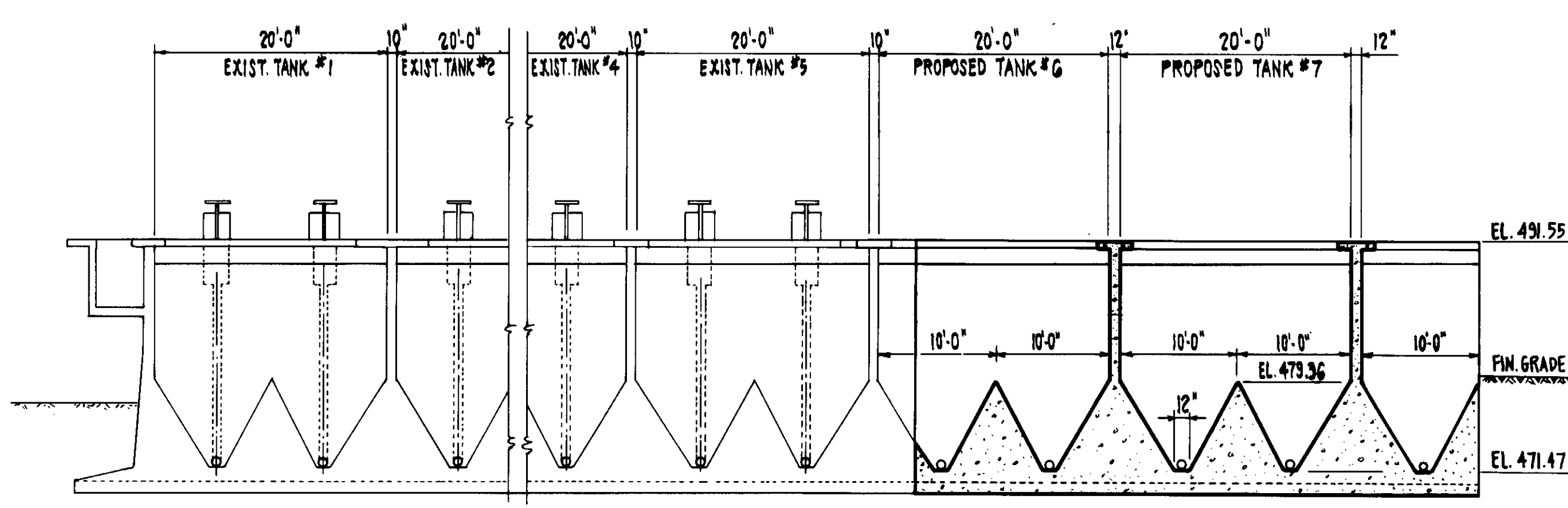




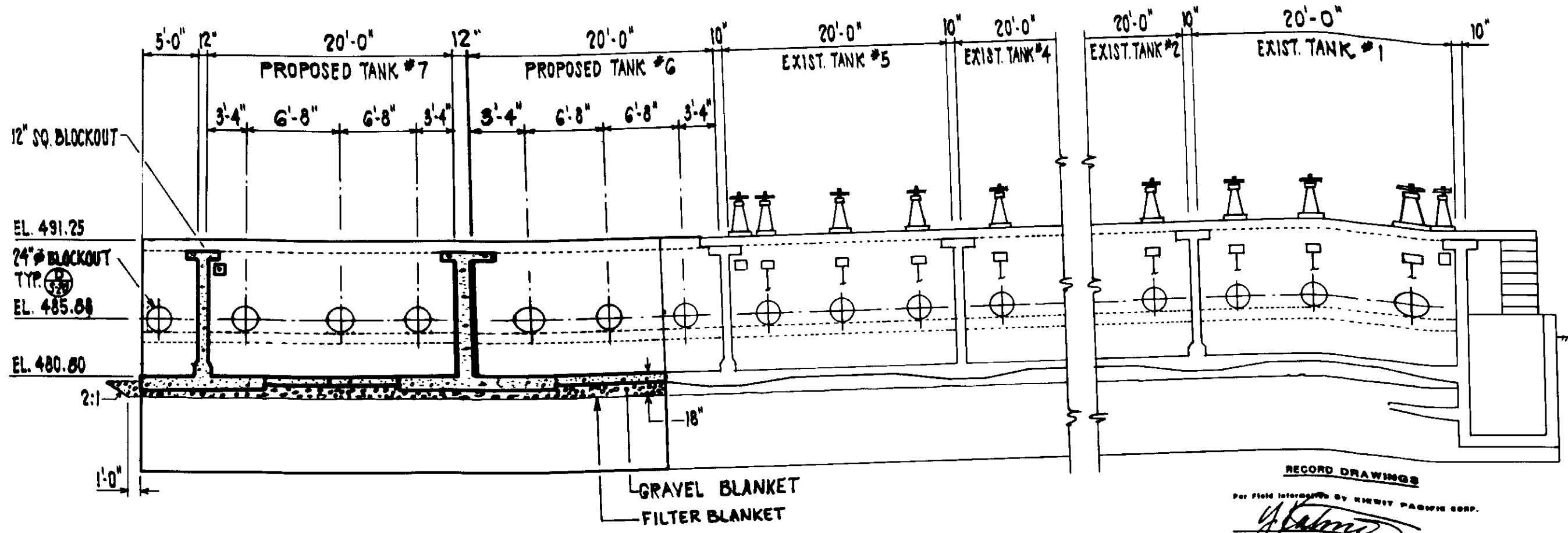
**SECTION A**  
SCALE: 1" = 10'



**SECTION B**  
SCALE: 1" = 10'



**SECTION C**  
SCALE: 1" = 10'



**SECTION D**  
SCALE: 1" = 10'

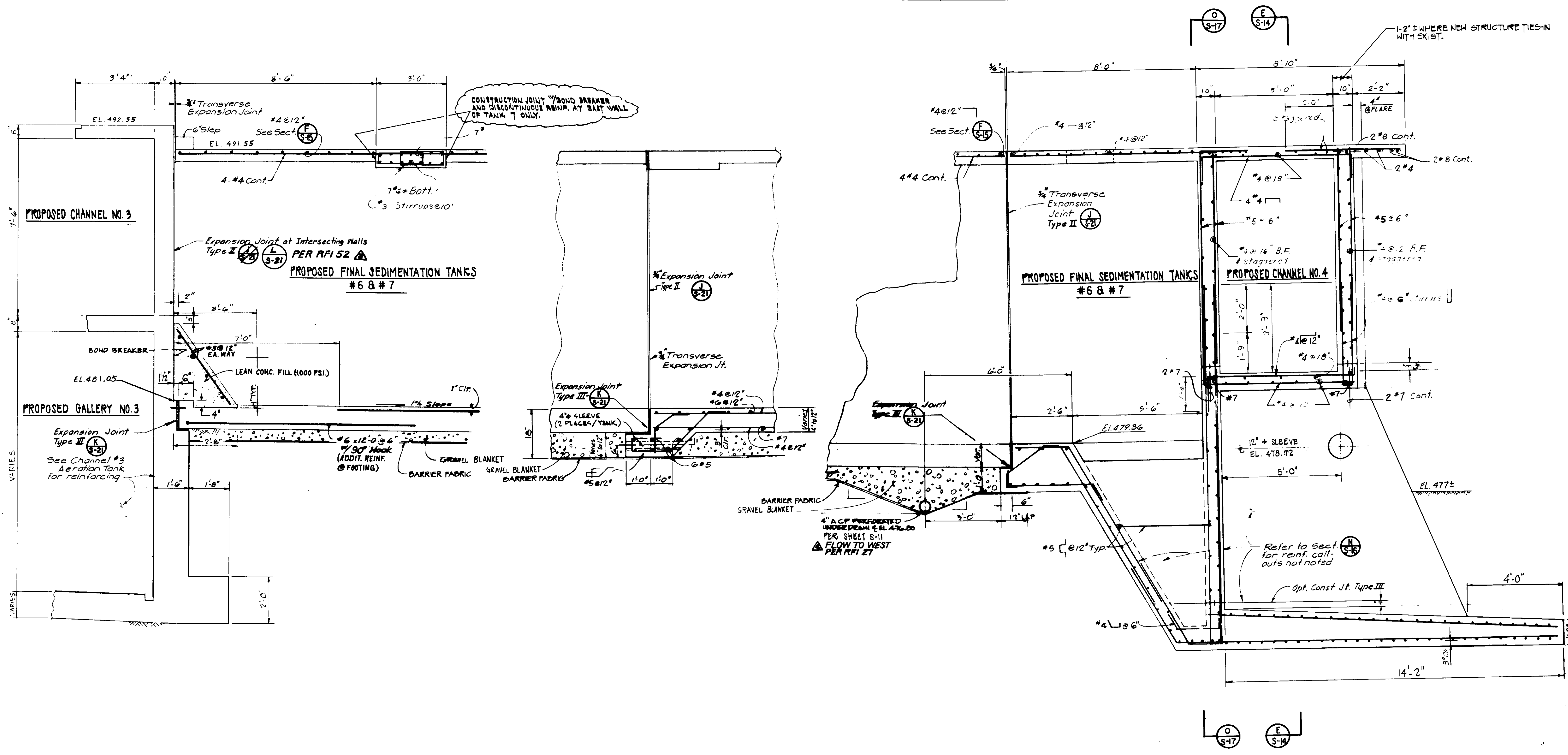
03998

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY  
THREE CONCRETE TANKS  
TANK NOS 6 & 7  
GENERAL SECTIONS

REV.	DATE	DESCRIPTION	DESIGN	CHECKED	APP.
1	5/21/81	REV. PER K.P.C.			
2	8/10/81	RE-ISSUED FOR CONSTRUCTION BIDDING			

**Bouie Engineering Corporation**  
 CONSULTING ENGINEERS / ARCHITECTS  
 VENTURA, CA

SHEET NO. **S-12**  
 OF 25 SHEETS  
 PROJECT NO. **WT-102-901-200**  
 DRAWING NO. **3-2004**



**SECTION A**  
SCALE: 1/2" = 1'-0"  
S-11

**SECTION B**  
SCALE: 1/2" = 1'-0"  
S-11

**SECTION C**  
SCALE: 1/2" = 1'-0"  
S-11

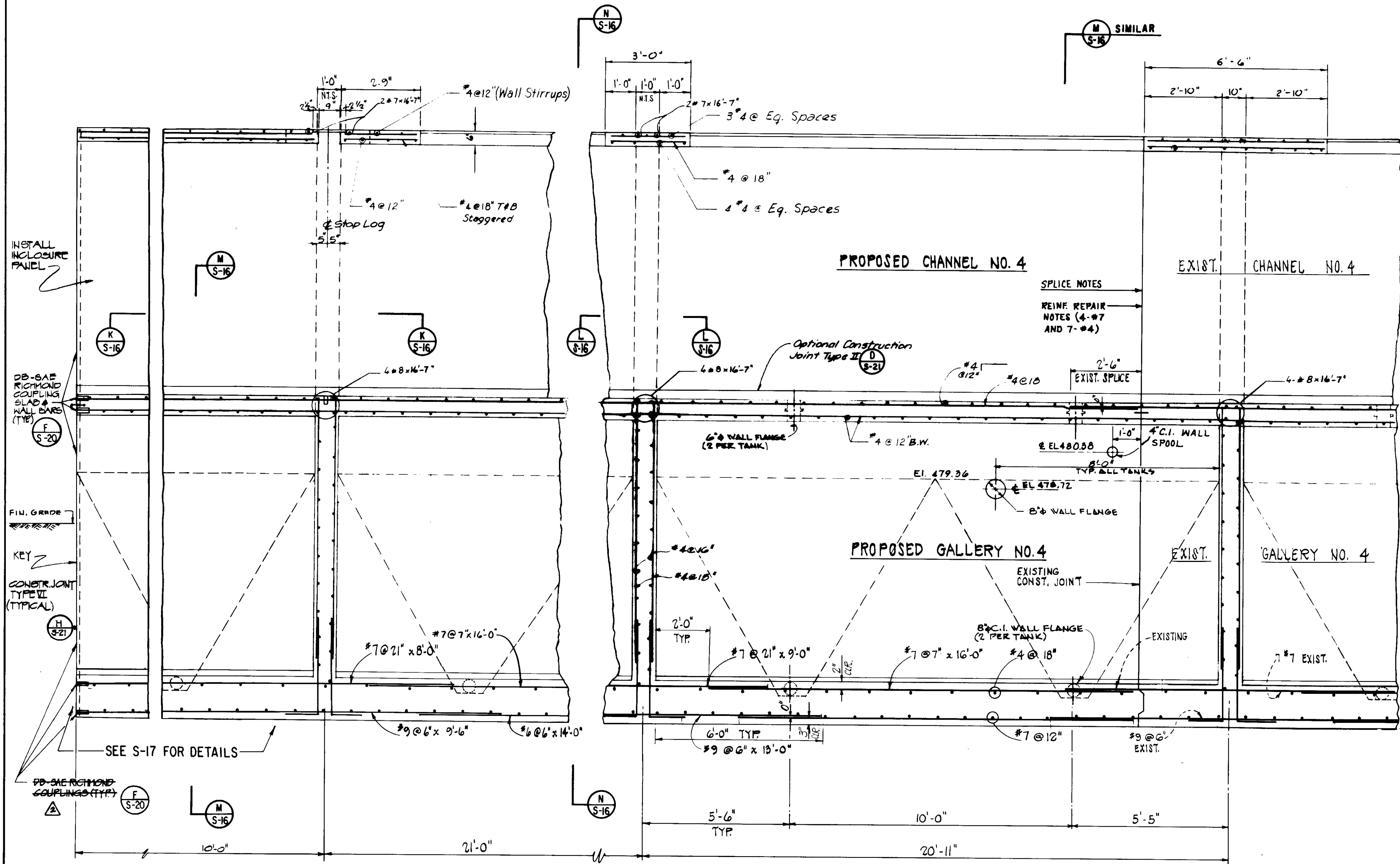
03999

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY  
THREE CONCRETE TANKS  
TANK NOS. 6 & 7  
REINFORCEMENT SECTIONS  
I OF V

RECORD DRAWING FOR FILE MAINTAINED BY SHAW PARRISH CORP. J. W. B. 002 10000 LAS VEGAS CONSULTING ENGINEERS JUNE 1999	DESIGN AP/M.T. 8-10-87 Re-issued for construction bidding 6-16-83 Clarified construction joints.	REVISIONS 5-24-81 REV. PER K.P.C. 5-24-81 REV. PER K.P.C. 8-10-87 Re-issued for construction bidding 6-16-83 Clarified construction joints.	DATE 8/2/88 8/2/88 9/7/88 6/16/83	DESCRIPTION REV. PER K.P.C. REV. PER K.P.C. Re-issued for construction bidding Clarified construction joints.	DATE 8/2/88 8/2/88 9/7/88 6/16/83	DATE 8/2/88	DATE 8/2/88	DATE 8/2/88	DATE 8/2/88
---	---	---	---	---	---	----------------	----------------	----------------	----------------

**Boyle Engineering Corporation**  
CONSULTING ENGINEERS / ARCHITECTS  
VENTURA, CA  
J.W.B.  
8/2/88

SHEET NO. S-13



**SPLICE NOTES**

Projecting Bars from east end of existing channel and gallery walls and slabs/footing shall be blast cleaned of all mastic coating. Bars shall be carefully straightened for splicing with new bars.

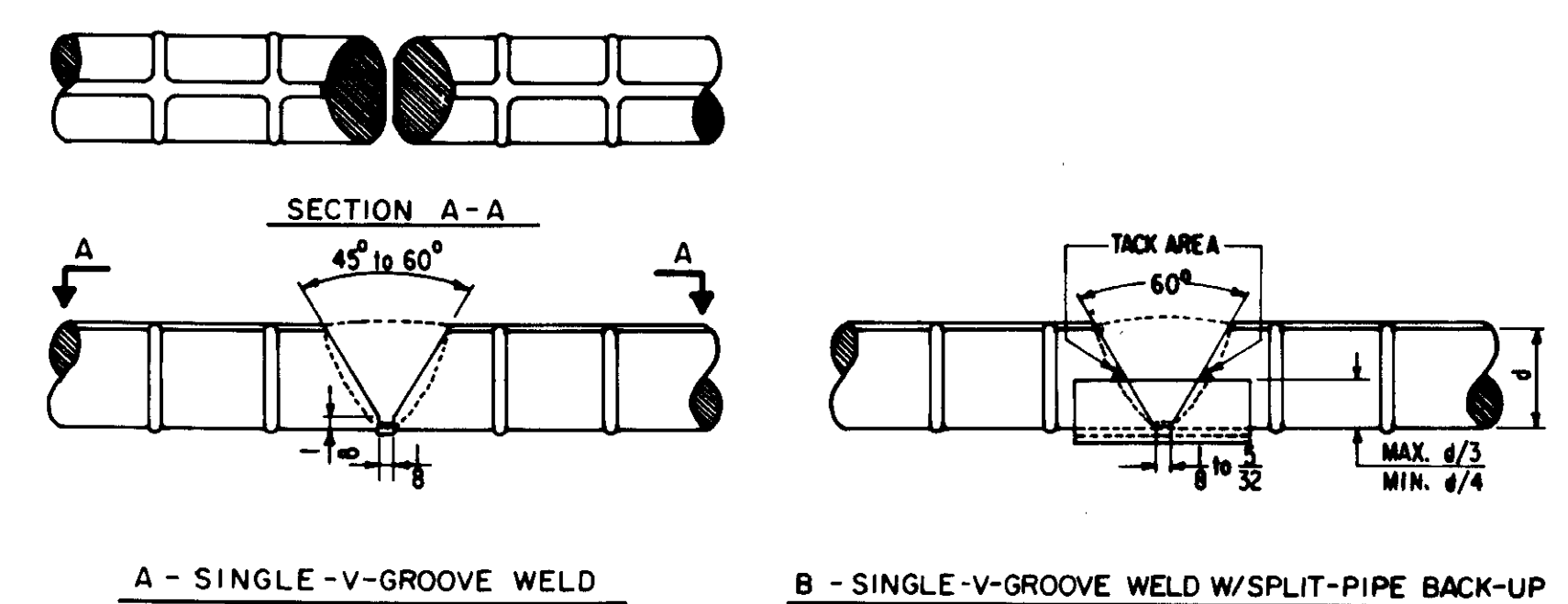
**REINFORCING REPAIR NOTES**

Reinforcing repairs for 4 - #7 and 7 - #4 dowels are not a part of the contract change order. These dowels were cut by the Contractor during installation of aluminum stairs at east end of channel #4 and welded splice repairs of these bars are at the expense of the Contractor.

The 4 - #7 and 7 - #4 existing bars are within 4 inches of vertical face of existing concrete. These bars shall be blast cleaned and new splice bars 3'-0" long shall be welded to the existing bars as follows:

- Welded Splices**
1. New bars that are spliced to the cut bars shall be ASTM A615 Grade 40 bars with carbon equivalent not greater than 0.40 percent. Chemical tests shall be performed on the #4 and #7 splice bars for carbon equivalent at the Contractors expense. Provide report to the Owners Representative.
  2. Splices shall be Single Vee Groove Weld, Type A or B as indicated below.
  3. Bars shall be preheated to 100°F prior to welding.
  4. Welding electrodes shall be low hydrogen type E70XX series suitable for horizontal position welds.
  5. Remove existing concrete to provide at least 5 inches of bar projection for welding. Protect exposed concrete surface during welding operations.
  6. Welded bars shall not be bent after welding.
  7. All welding shall be performed by qualified welders and shall be visually inspected by a qualified welding inspector at the expense of the Contractor.

- Concrete Repairs**
- Concrete areas that were removed to provide weld splice clearance shall be repaired as follows:
1. Remove all loose concrete down to aggregate firmly embedded in mortar matrix.
  2. Sandblast surface to remove all laitance.
  3. Apply epoxy bonding agent immediately before drypacking.
  4. Drypack depressed areas out to flush face with existing concrete using epoxy mortar. Cure drypack with concrete curing compound.
  5. Remove all curing compound by sandblast prior to placing adjacent concrete.
- Protection**
1. Protect existing waterstops during construction of splices.



**WELDED SPLICE REBAR 04000**

**SECTION D**  
SCALE: 1/2" = 1'-0"

**SECTION E**  
SCALE: 1/2" = 1'-0"

**LAS VIRGENES MUNICIPAL WATER DISTRICT**

**TAPIA WATER RECLAMATION FACILITY**

**THREE CONCRETE TANKS**

**TANK NOS. 6 & 7**

**REINFORCEMENT SECTIONS**

**II OF V**

**S-14**

RECORD DRAWINGS

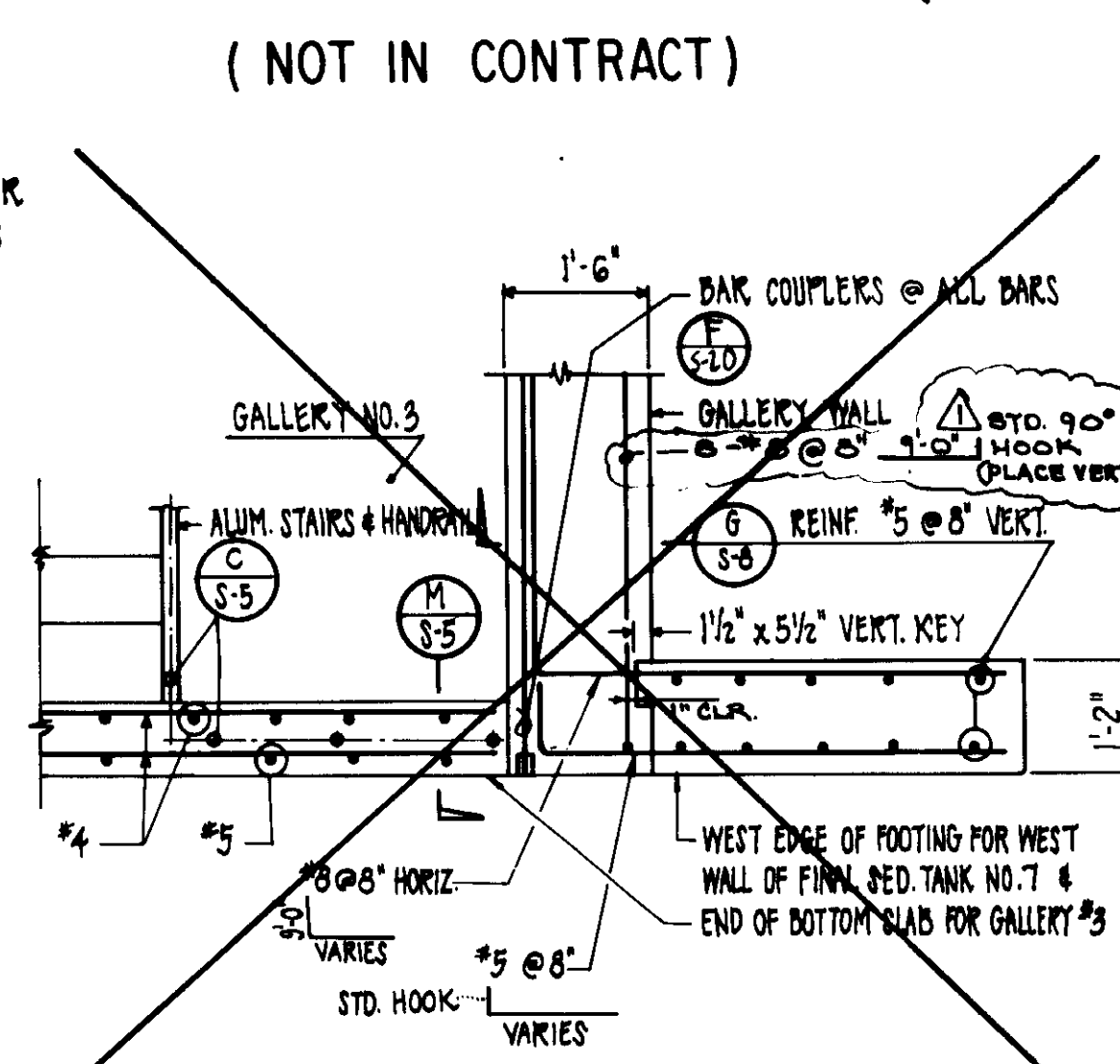
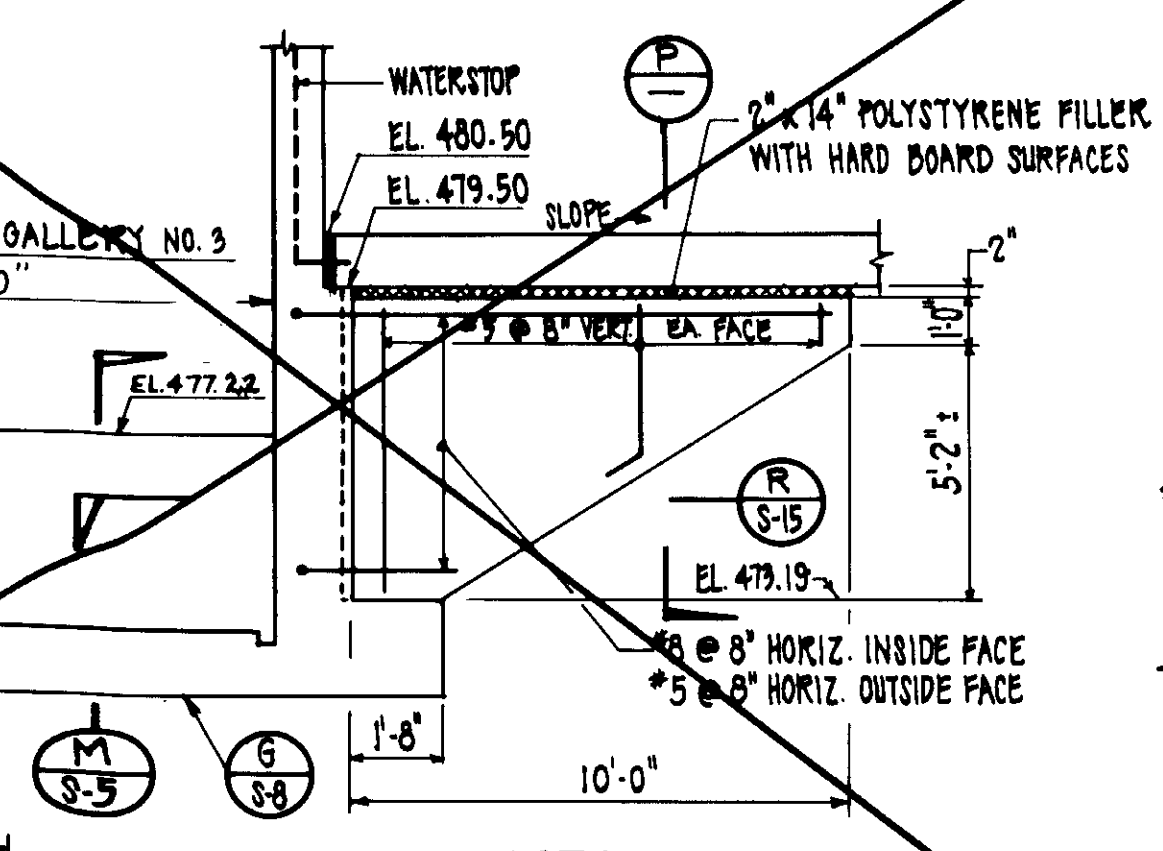
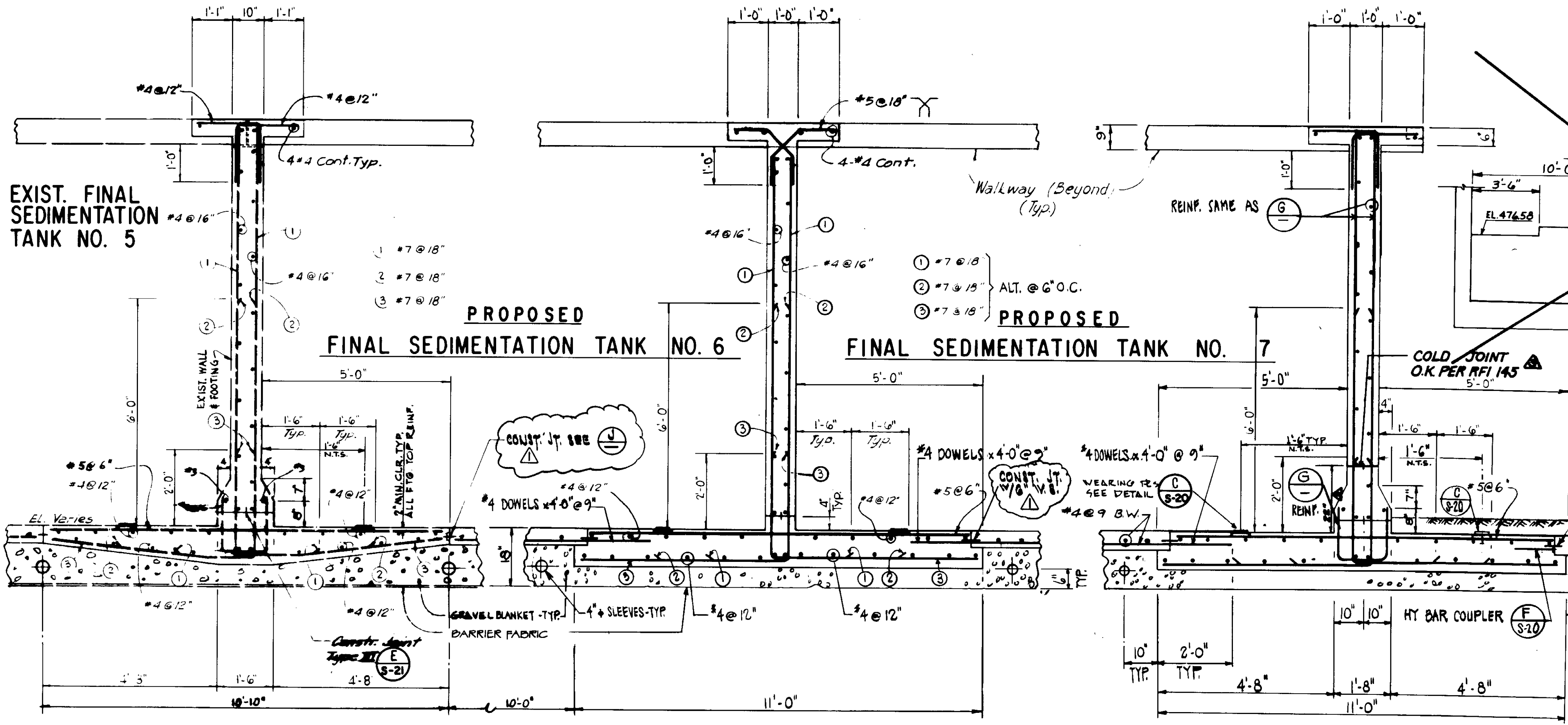
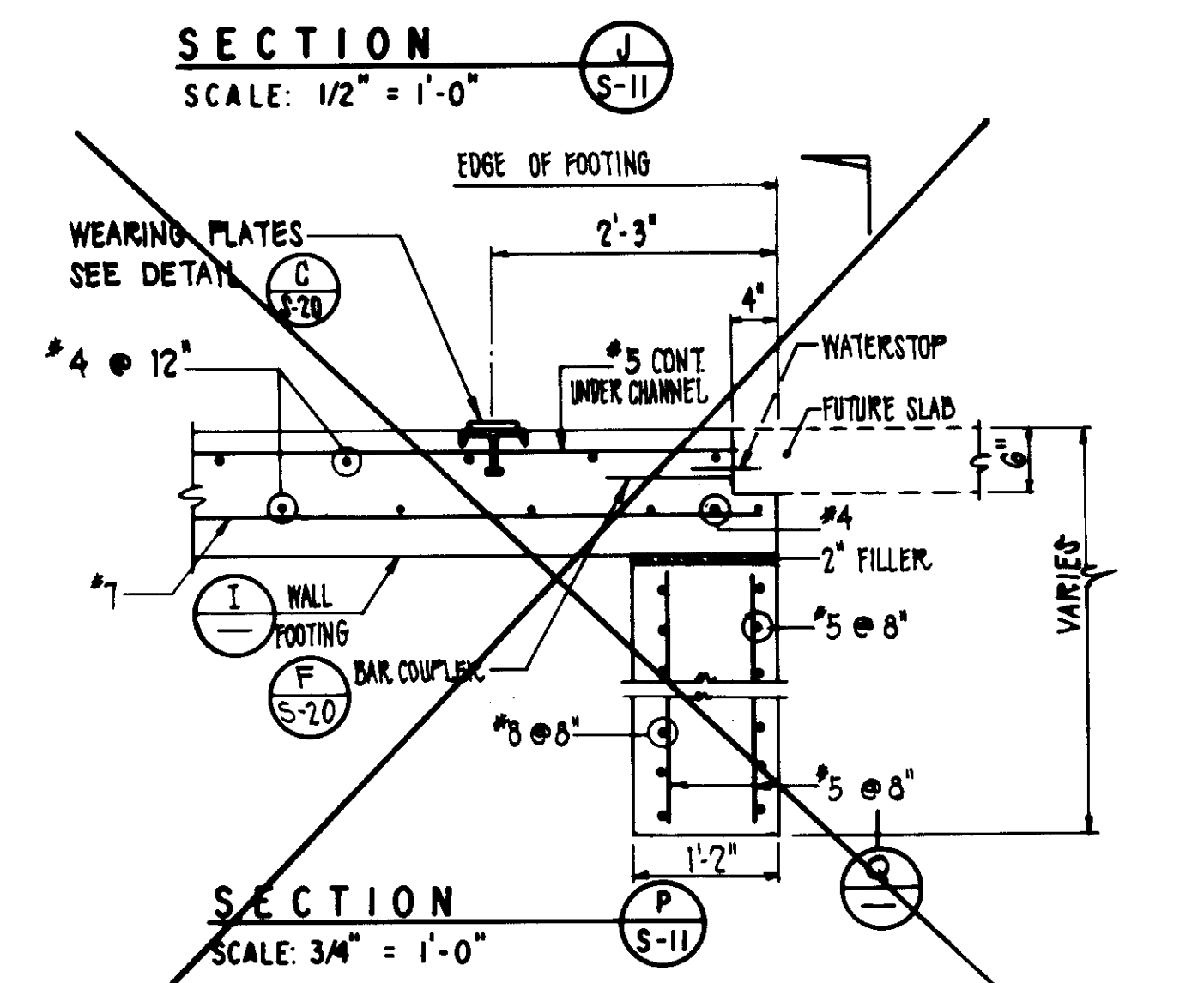
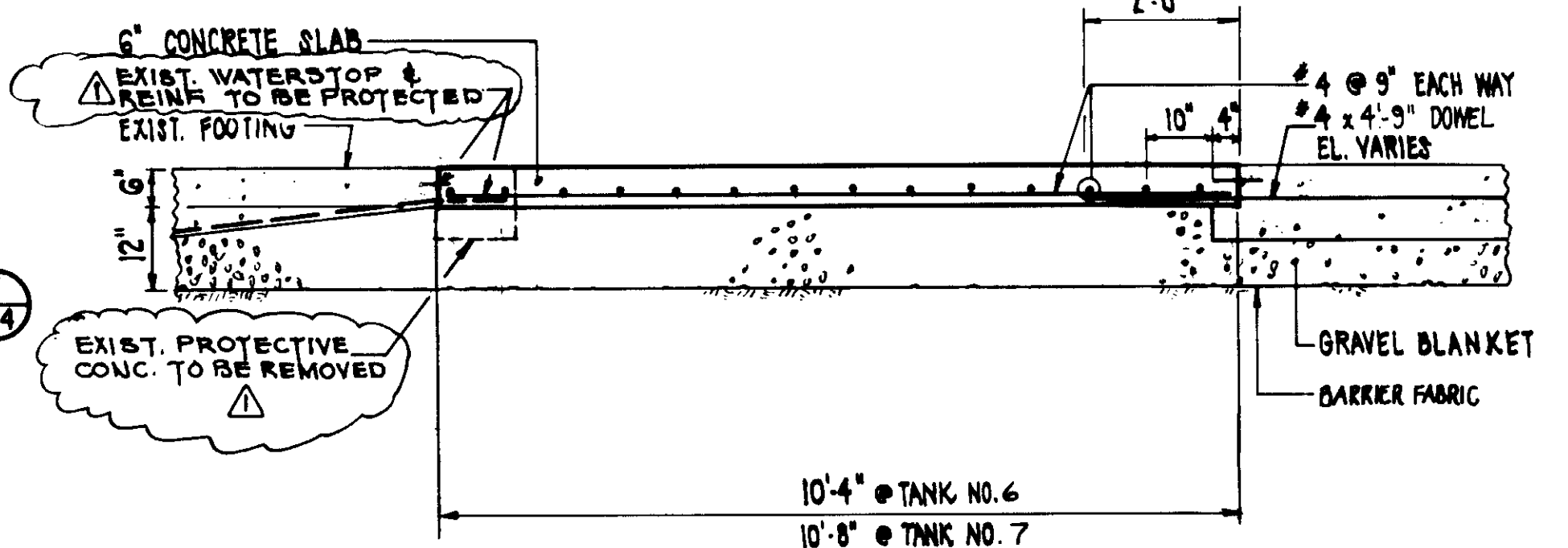
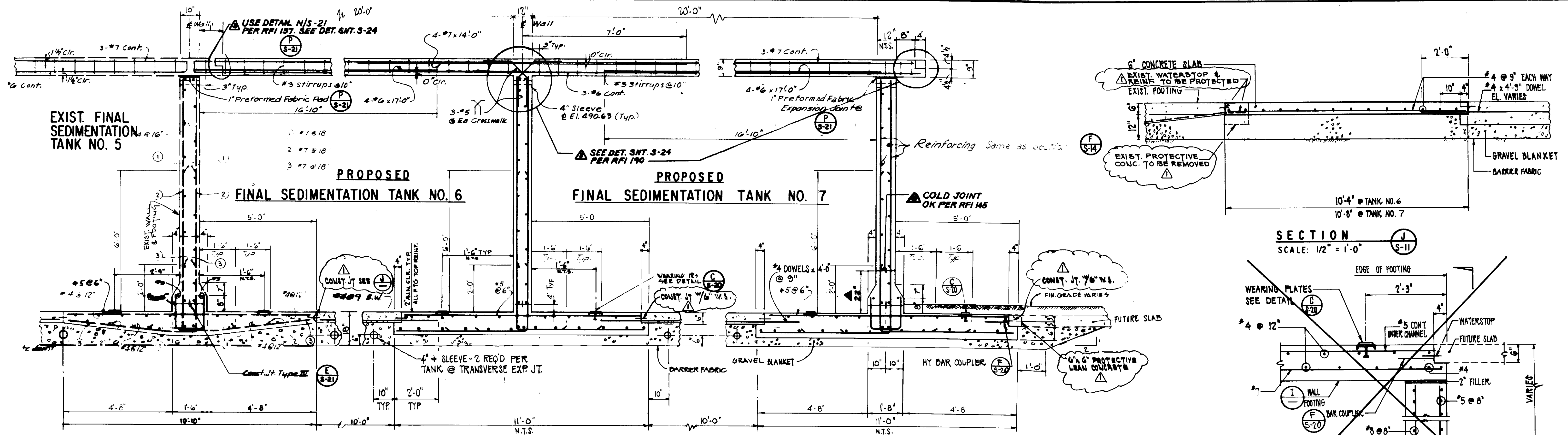
REV. PER K.P.C.

RE-ISSUED FOR CONSTRUCTION BIDDING

DATE: 5/2/12

DATE: 5/2/12





(NOT IN CONTRACT)  
ELEVATION Q  
SCALE: 1/4" = 1'-0"

(NOT IN CONTRACT)  
PLAN SECTION R  
SCALE: 1/2" = 1'-0"

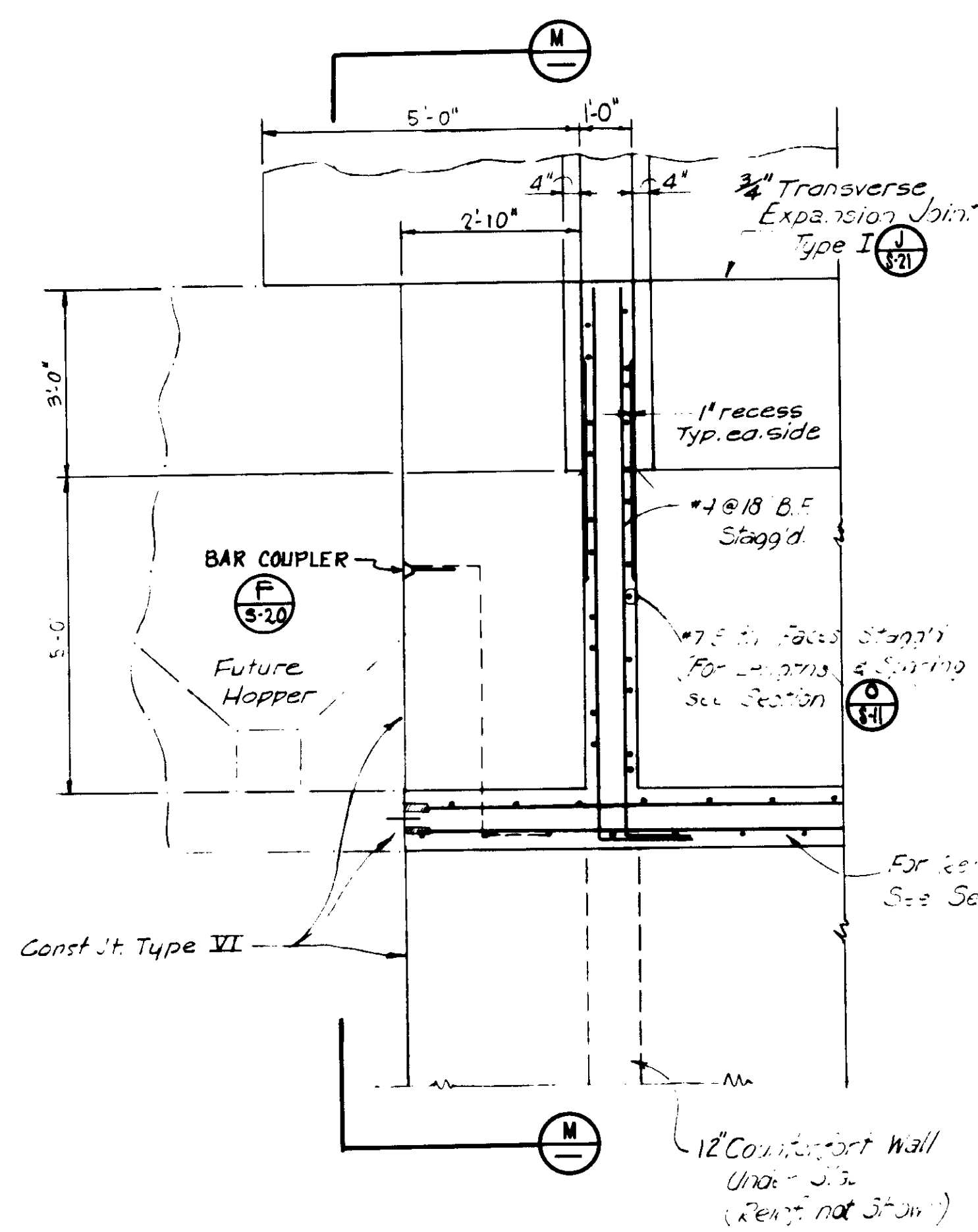
RECORD DRAWINGS  
FOR THIS DRAWING BY CHECKED DRAWING COPY.  
KALPANA CONSULTING ENGINEERS 1998 1200

REV.	DATE	DESCRIPTION
5-21-81		REV. PER R.P.C.
8-10-87		Re-issued for construction bidding.
6-15-83		Change elev., added reinforcing & clarified const. joints.

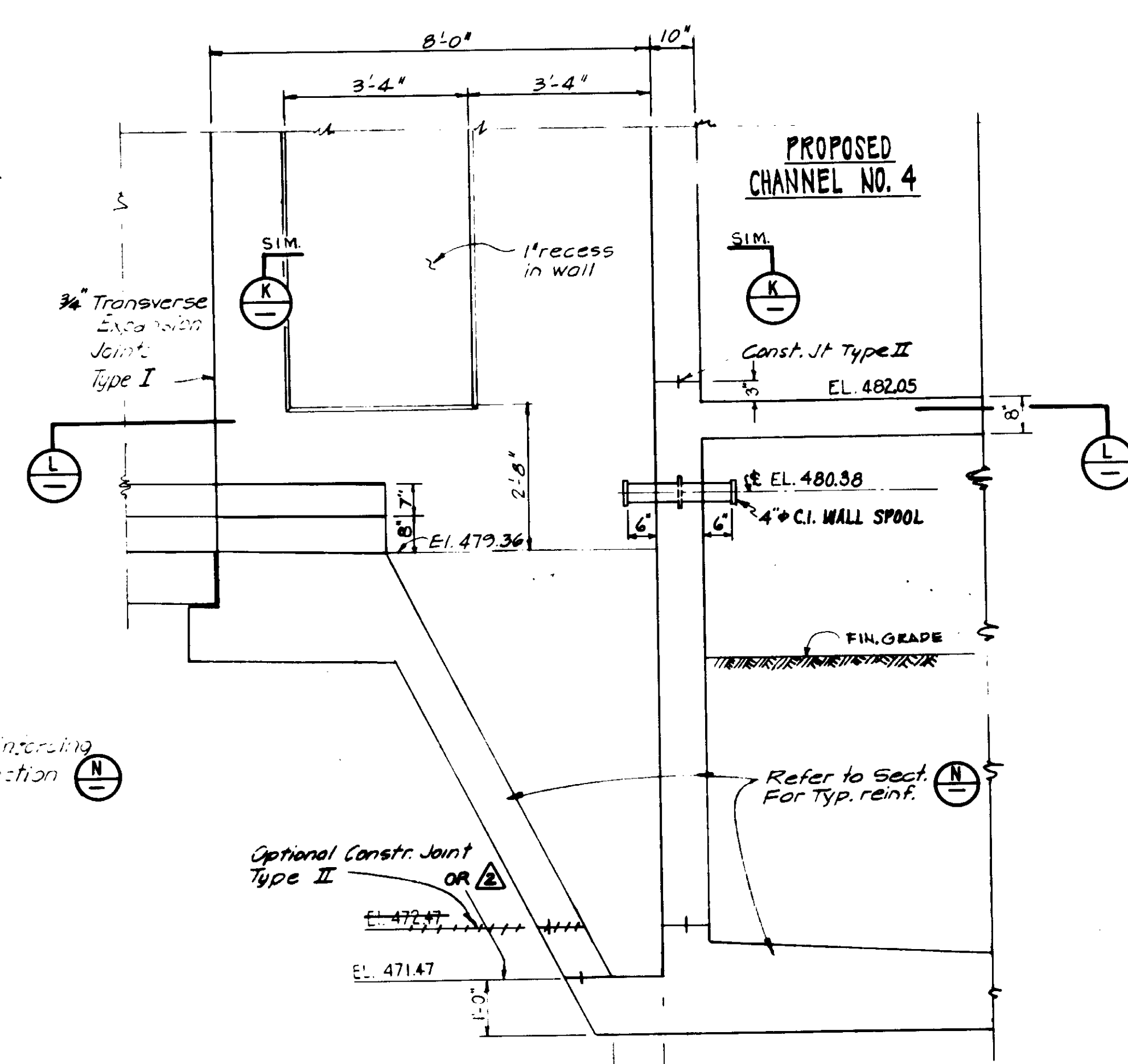
04001

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY  
THREE CONCRETE TANKS  
TANK NOS. 6 & 7  
REINFORCEMENT SECTIONS  
III OF IV

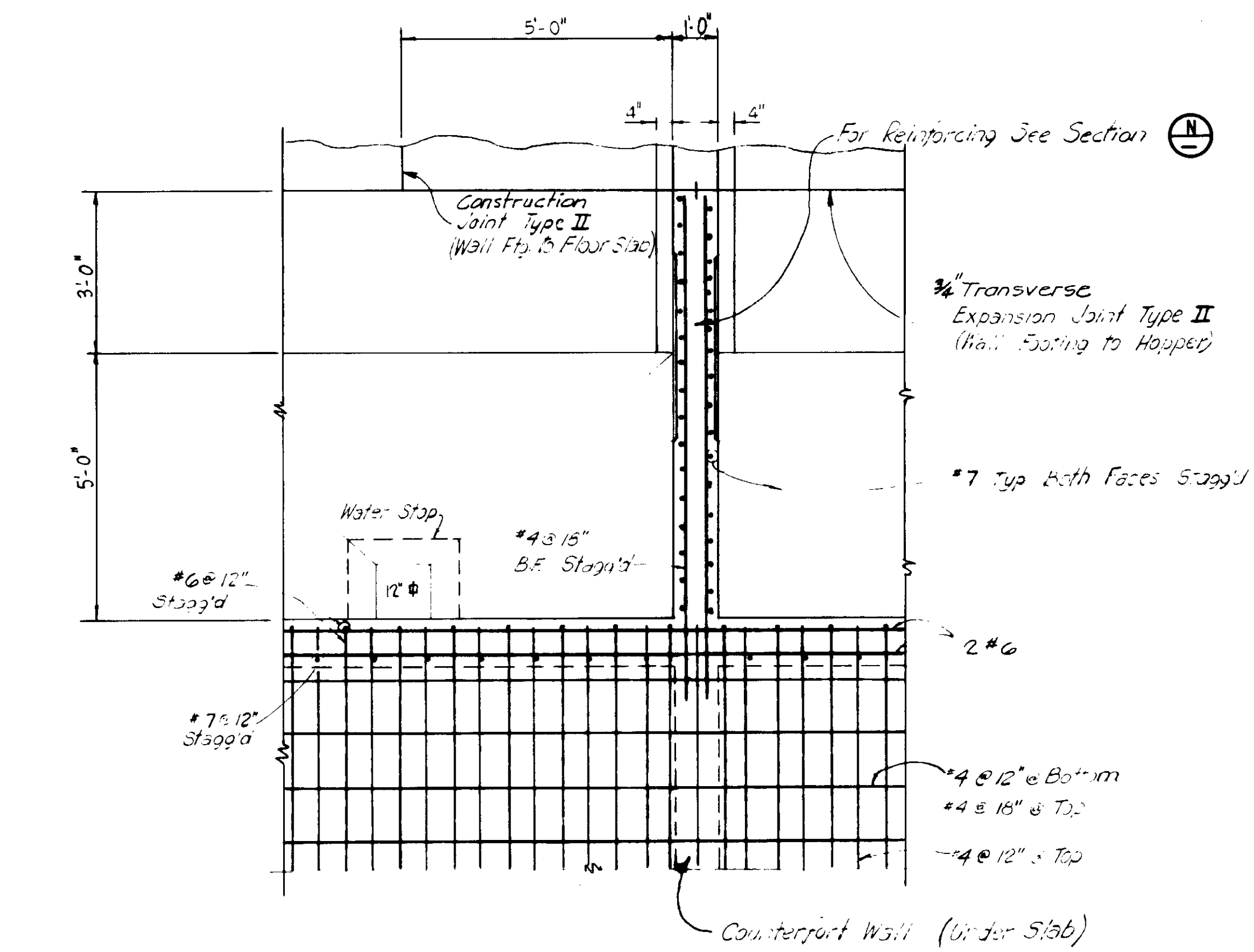
REV.	DATE	DESCRIPTION	APP.	DATE
5-21-81		REV. PER R.P.C.		
8-10-87		Re-issued for construction bidding.		
6-15-83		Change elev., added reinforcing & clarified const. joints.		



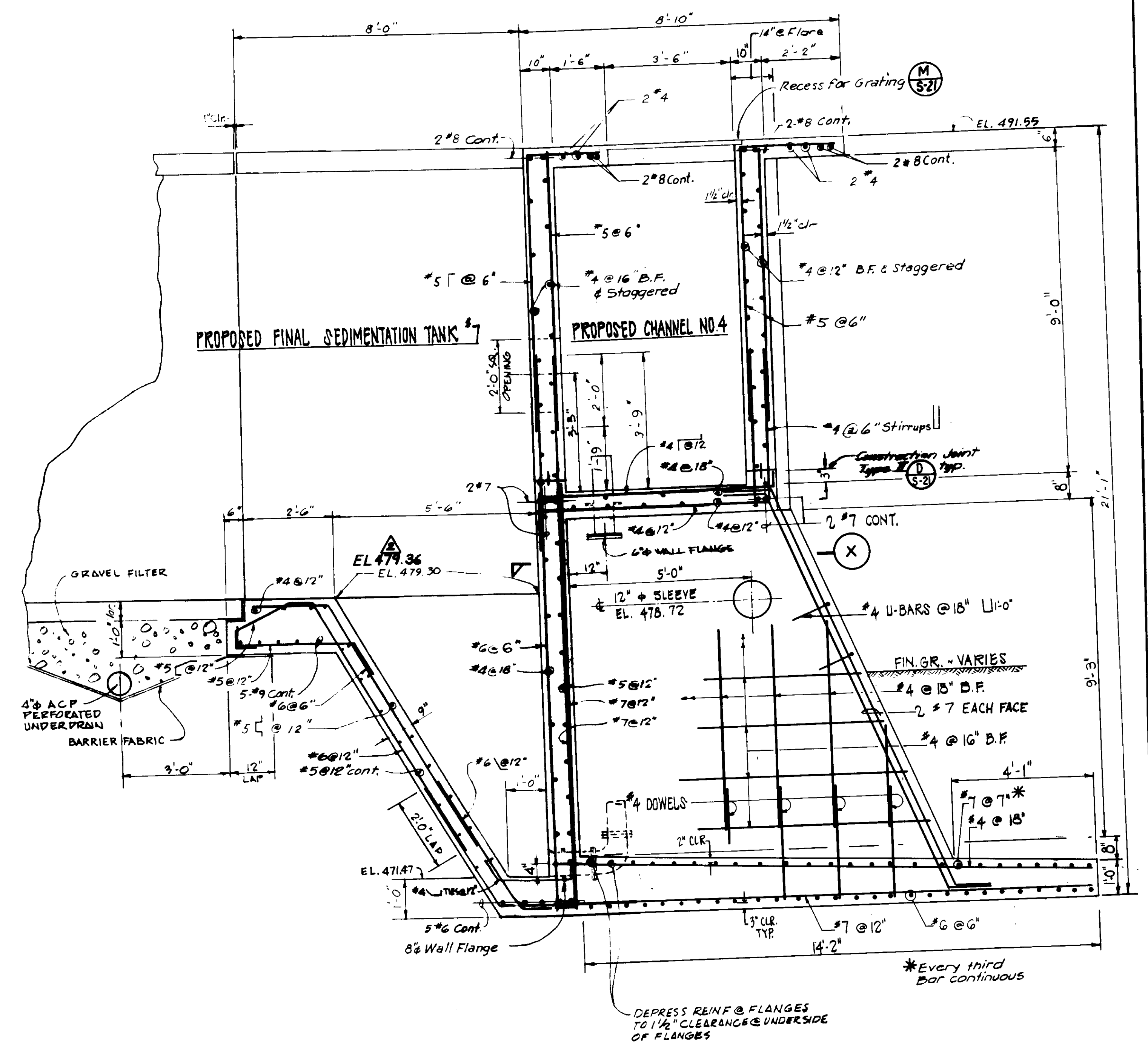
SECTION K  
SCALE: 1/2" = 1'-0"



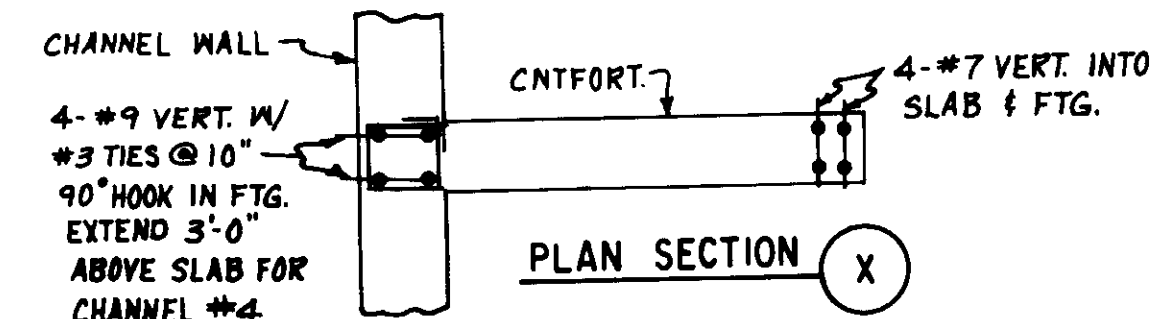
SECTION M  
SCALE: 1/2" = 1'-0"



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



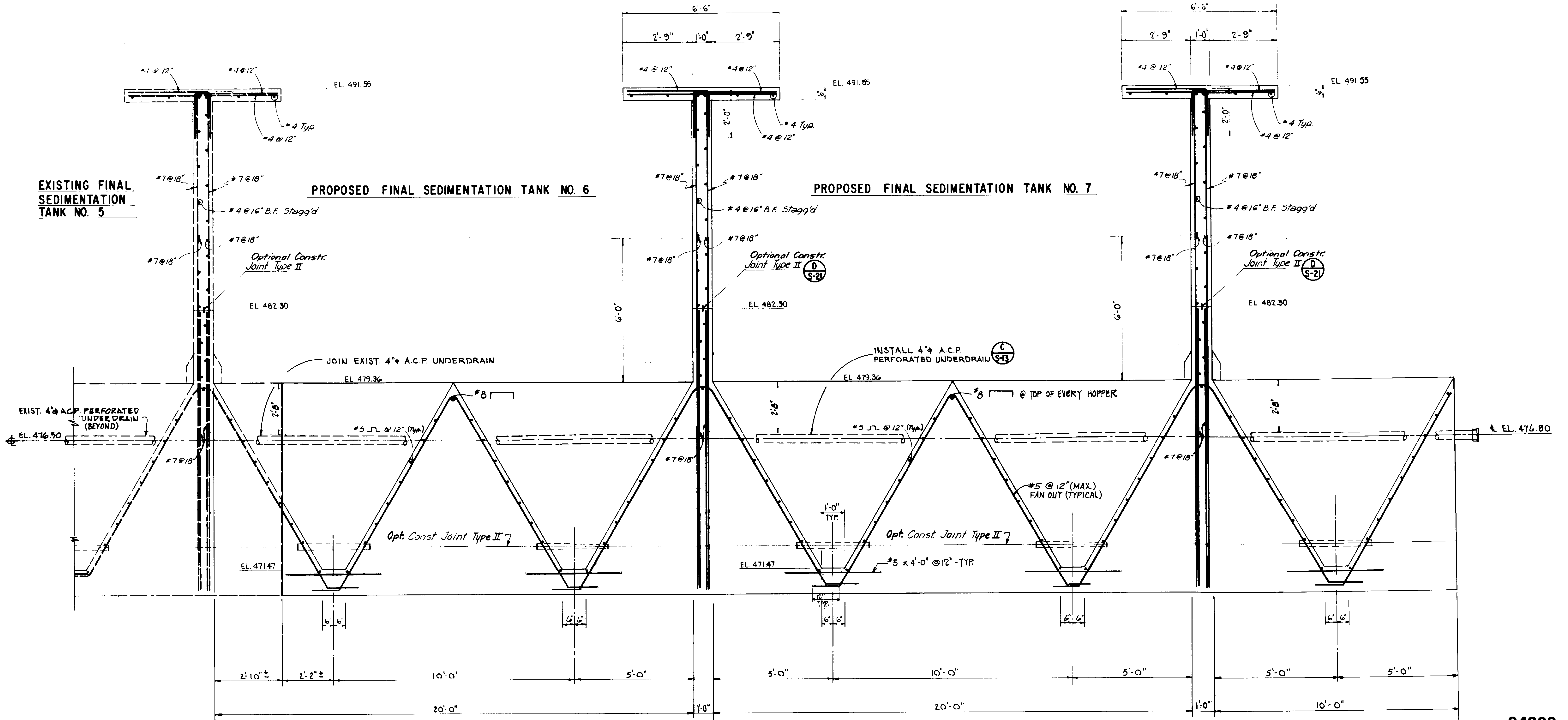
SECTION N  
SCALE: 1/2" = 1'-0"



04002

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY  
THREE CONCRETE TANKS  
TANK NOS. 6 & 7  
REINFORCEMENT SECTIONS  
IV OF IV

DESIGNER A.P./M.T.	RECORD DRAWING FOR FINAL INSPECTION BY CIVILIT FABRIC CORP.	DATE 5/25/88	PROJECT NO. 04002
DATE 5/25/88	REV. PER K.P.C.	DATE 5/25/88	PROJECT NO. 04002
DATE 5/25/88	8/10/87 RE-ISSUED FOR CONSTRUCTION BIDDING	DATE 5/25/88	PROJECT NO. 04002
DATE 5/25/88	DESCRIPTION	DATE 5/25/88	PROJECT NO. 04002



EXISTING FINAL  
SEDIMENTATION  
TANK NO. 5

PROPOSED FINAL SEDIMENTATION TANK NO. 6

PROPOSED FINAL SEDIMENTATION TANK NO. 7

SECTION 0  
SCALE: 1/2" = 1'-0" S-11

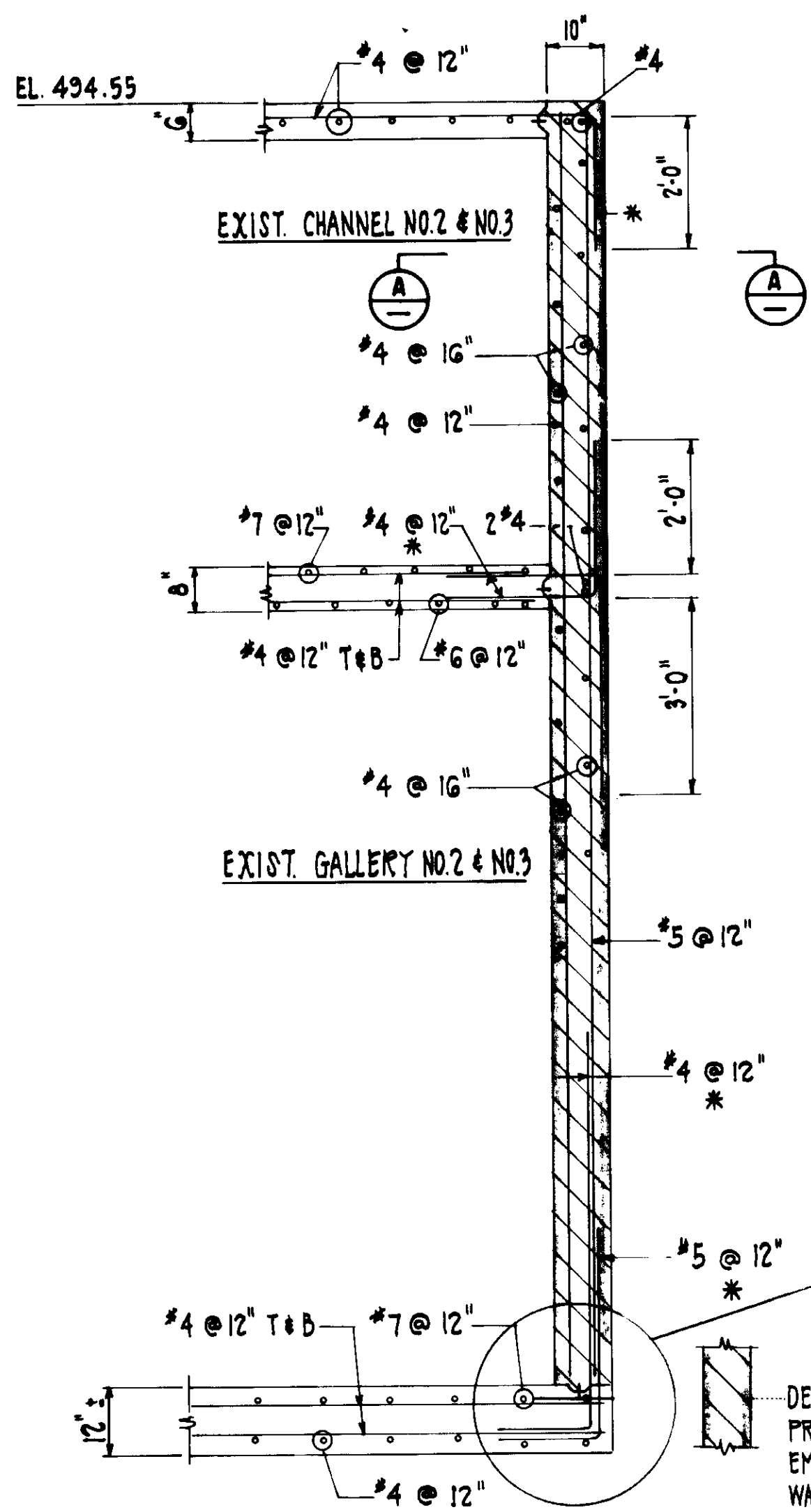
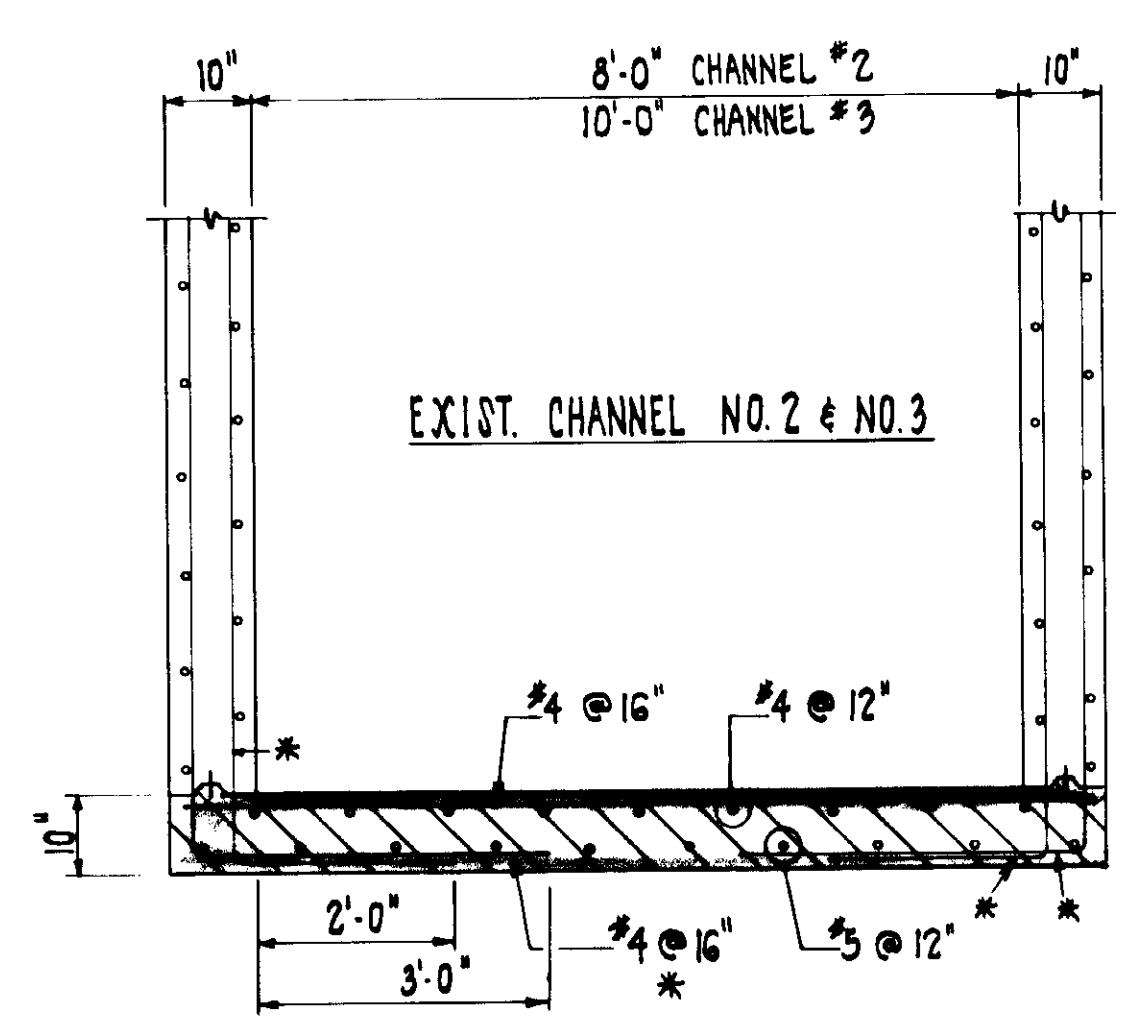
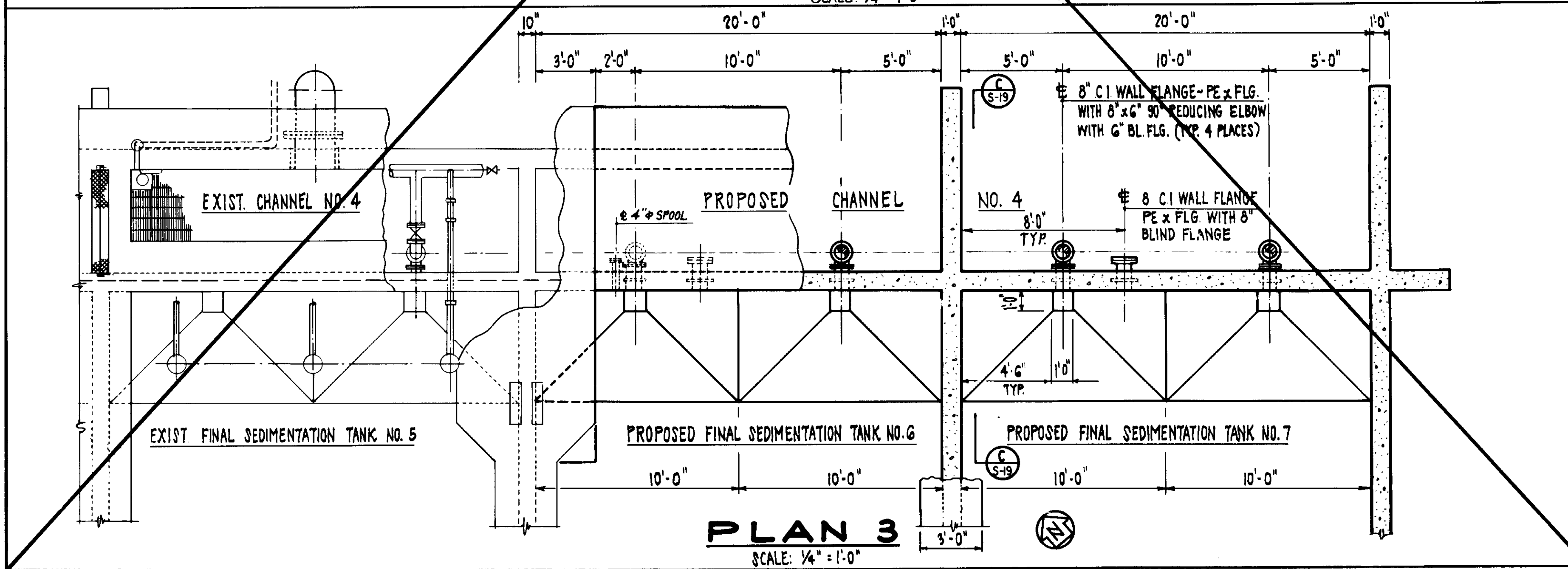
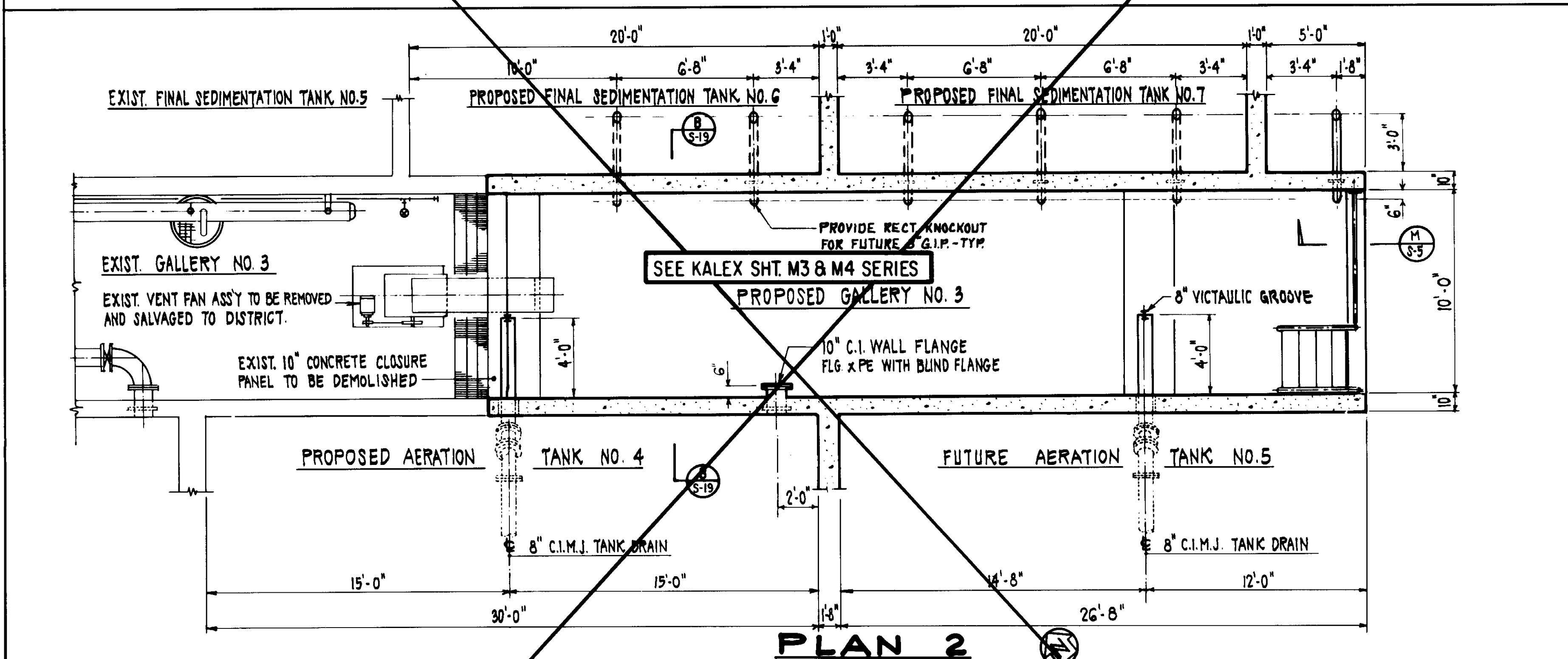
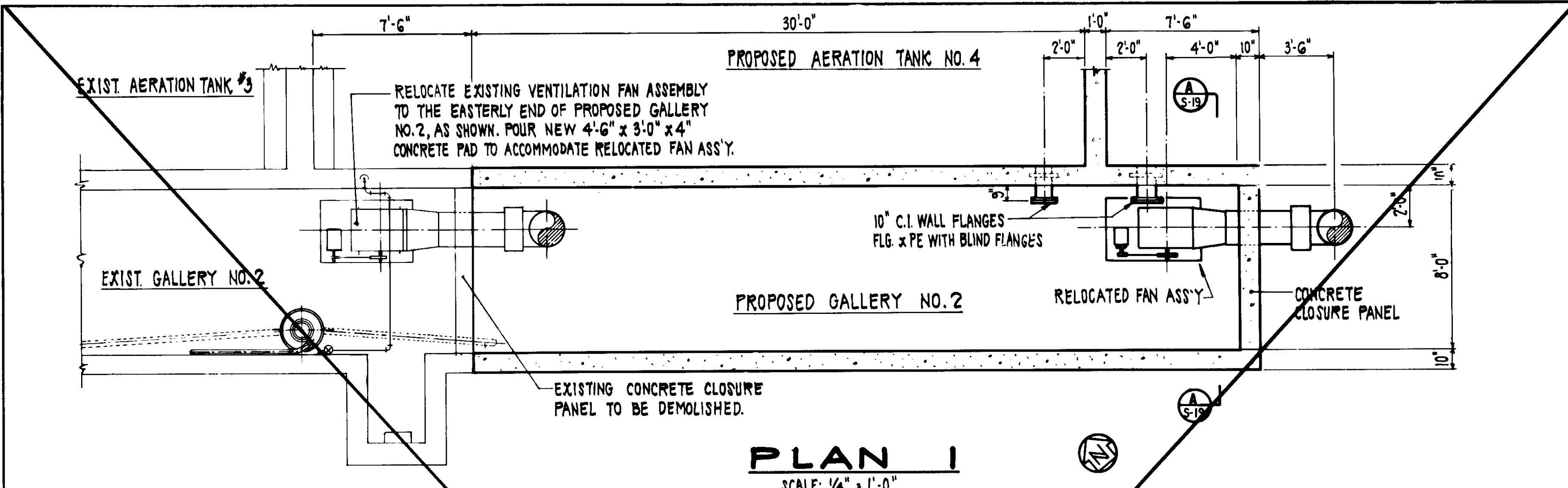
04003

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY  
THREE CONCRETE TANKS  
TANK NOS. 6 & 7  
REINFORCEMENT SECTIONS  
V OF V

DESIGN	A.R./M.T.	DATE	8/10/84	RE-ISSUED FOR CONSTRUCTION BIDDING	APP.	J.W.B.	DATE	8/22/84	
CHECKED	J.W.B.	DATE	8/22/84	BY	J.W.B.	DATE	8/22/84	BY	J.W.B.
PROJECT	LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY			SHEET NO.	S-17				
DATE	8/10/84			TOTAL SHEETS	25				
SCALE	1/2" = 1'-0"			PROJECT NO.	VT-102-901-20				
APP.	J.W.B.			DATE	8/22/84				

RECORD DRAWING  
FOR FILE MAINTAINED BY HENRY PASCHE GROUP  
HAYMAA CONSULTING ENGINEERS JUNE 1984





**LEGEND**

- DEMOLISH EXISTING CONCRETE CLOSURE WALL. PROTECT EXISTING WATERSTOP FOR EMBEDMENT INTO NEW CHANNEL AND GALLERY WALLS AND SLABS.
- \* PROTECT BENT BARS FOR EMBEDMENT INTO NEW CHANNEL AND GALLERY WALLS AND SLABS. REMOVE ALL CONCRETE FROM BARS AND BLAST CLEAN. COLD BEND IN FIELD FOR EMBEDMENT IN NEW CONCRETE.

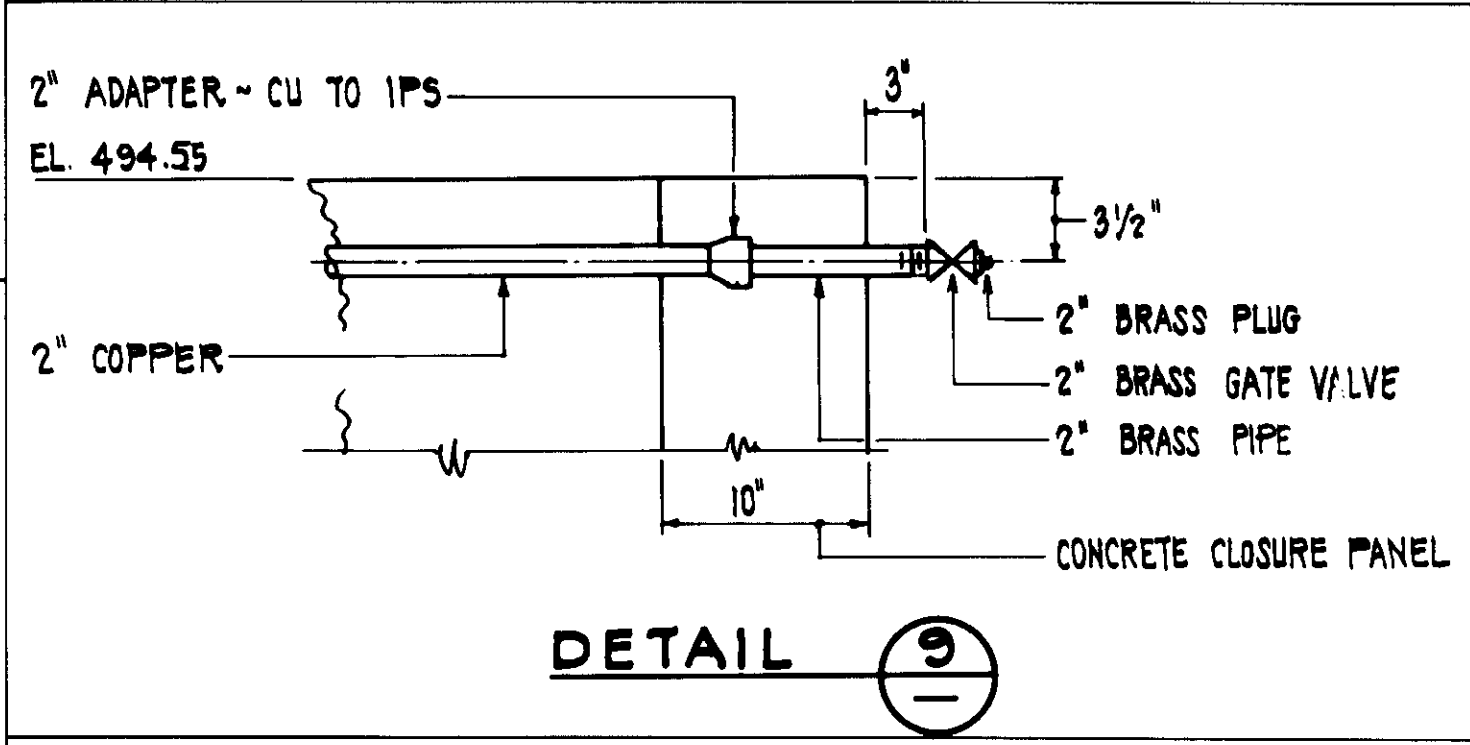
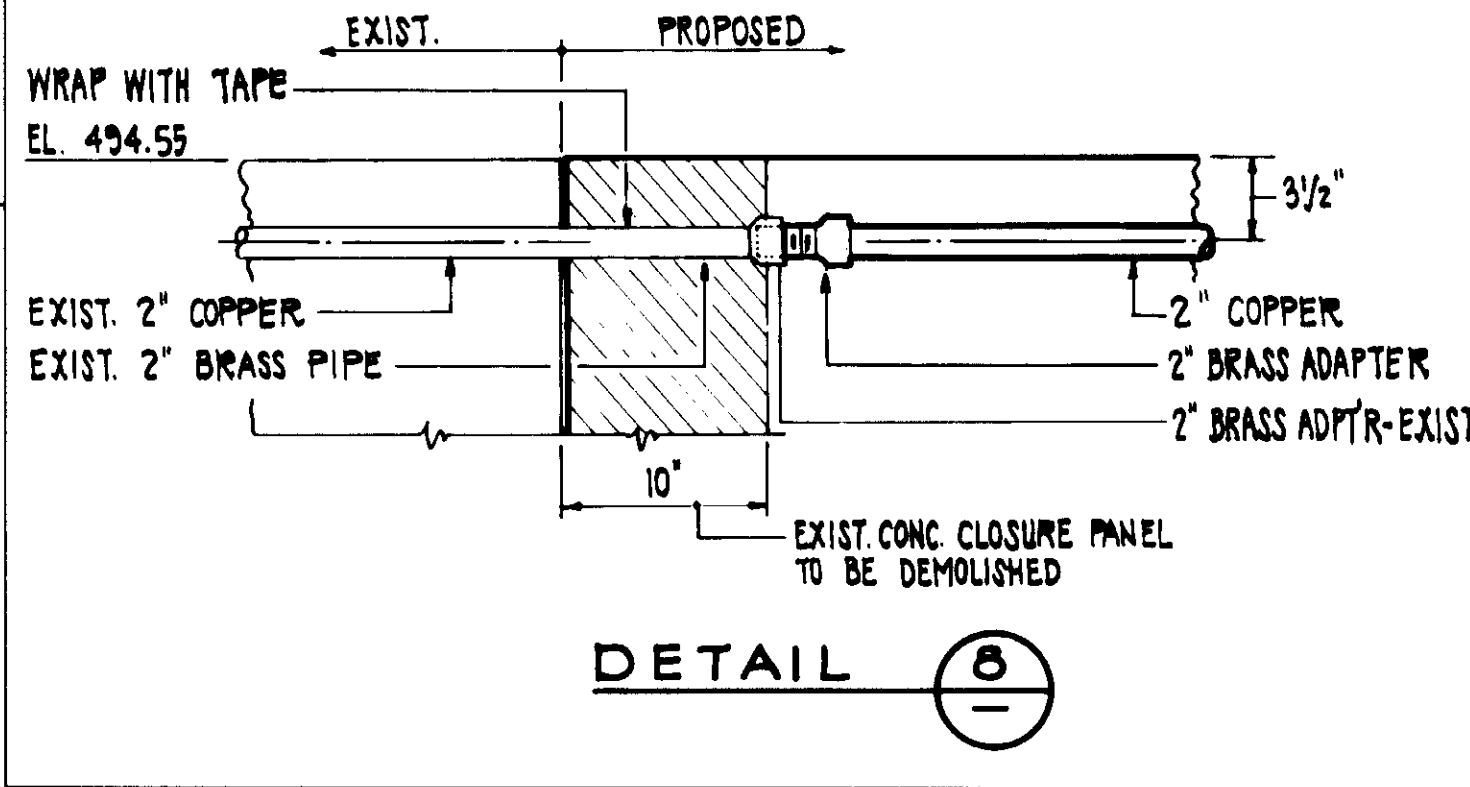
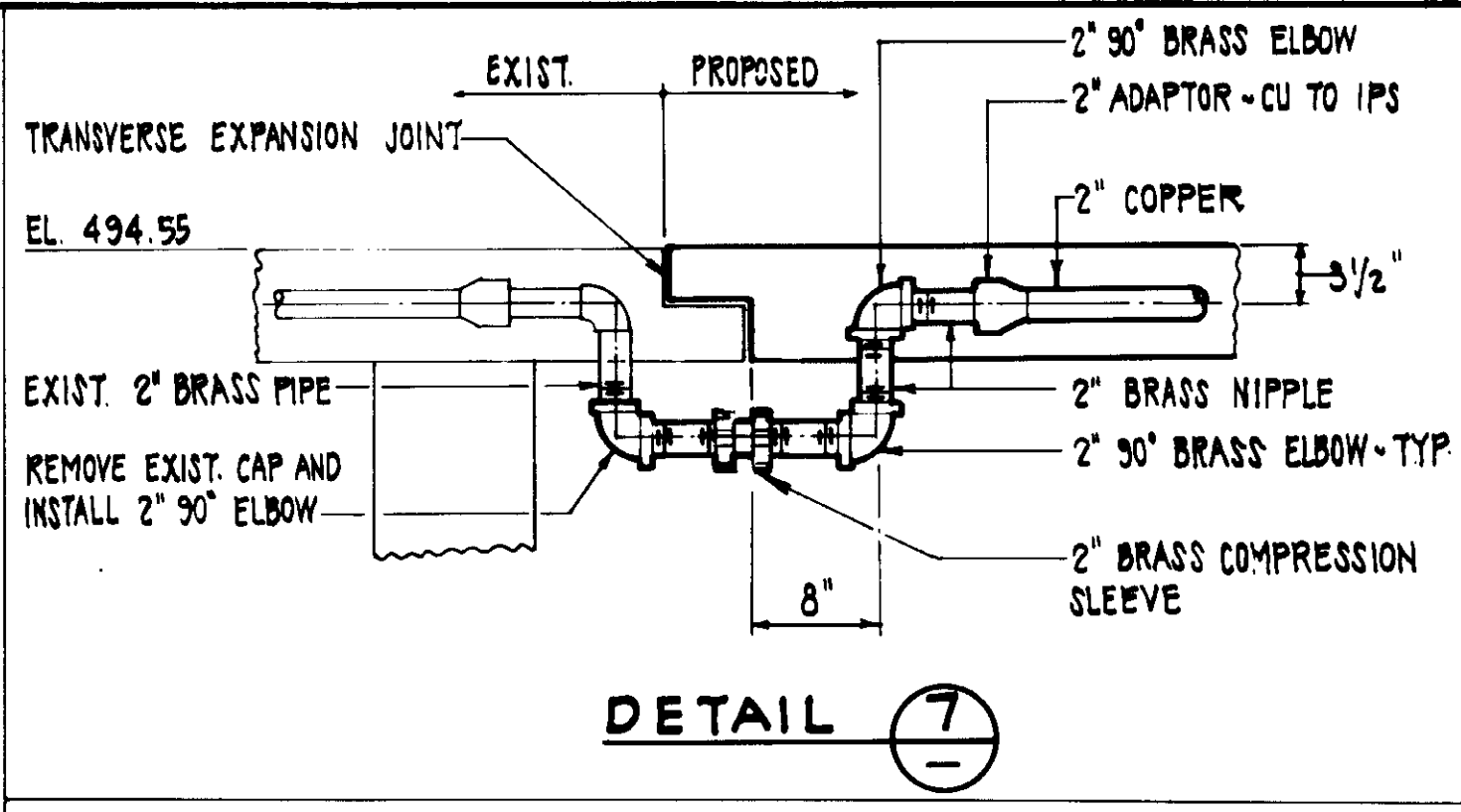
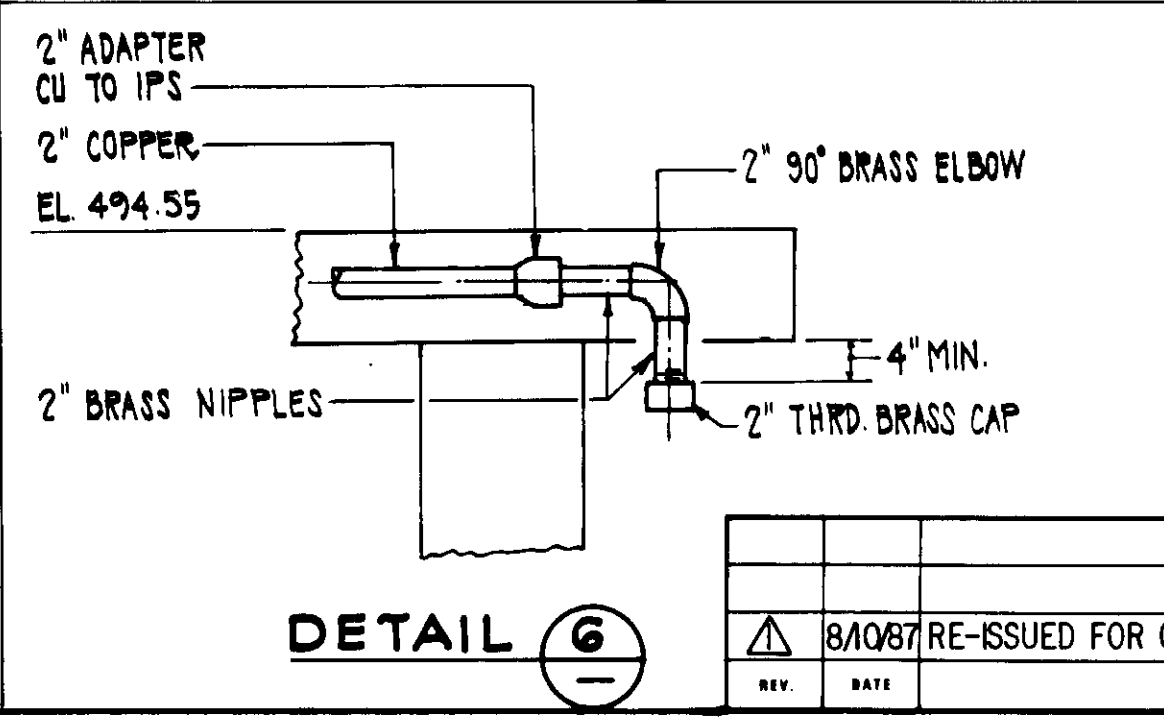
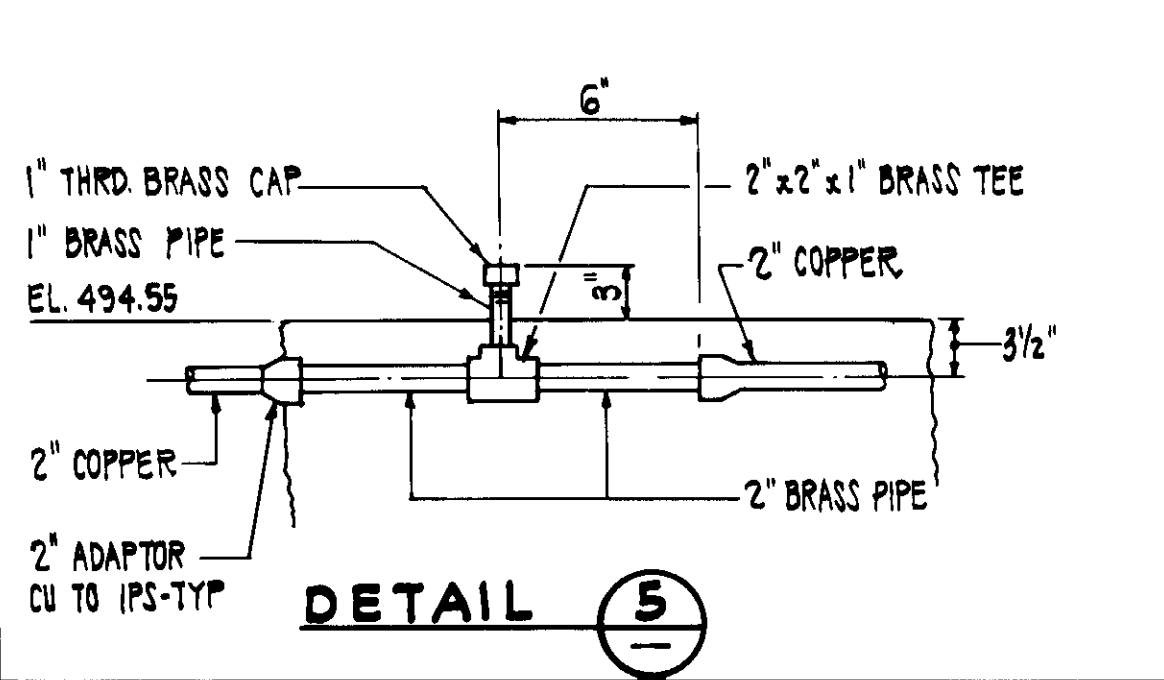
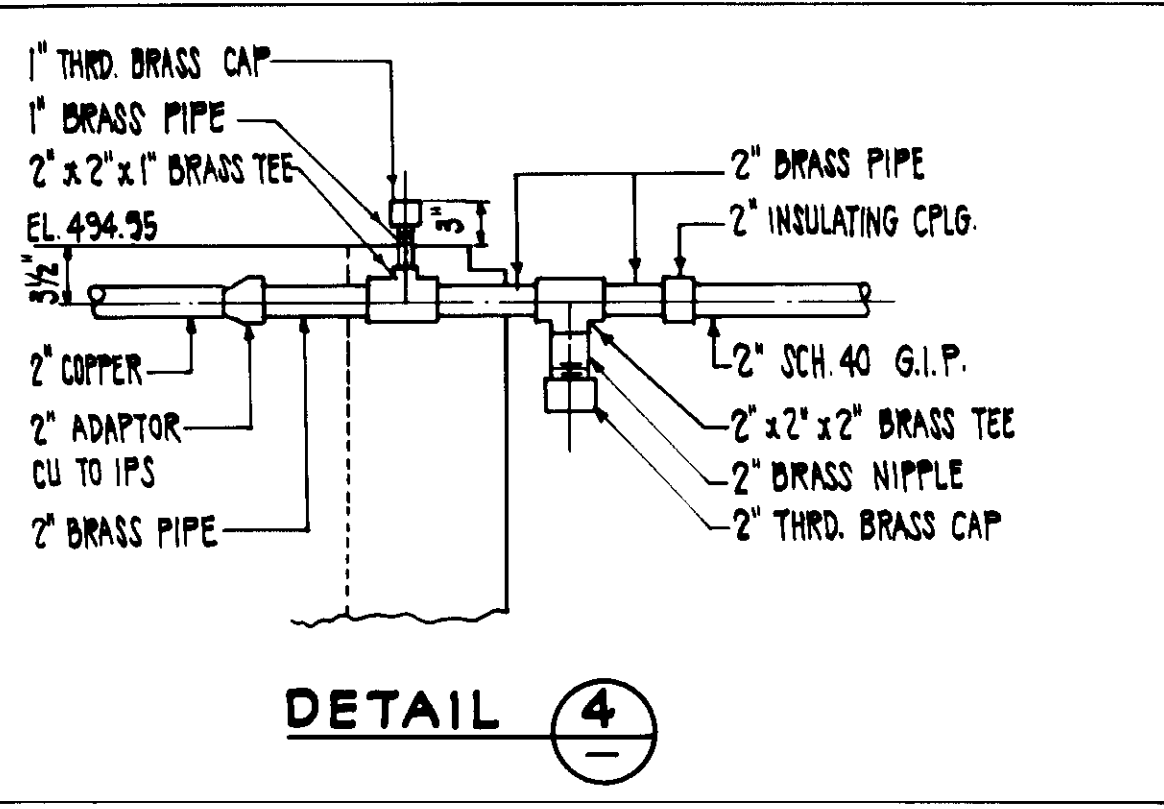
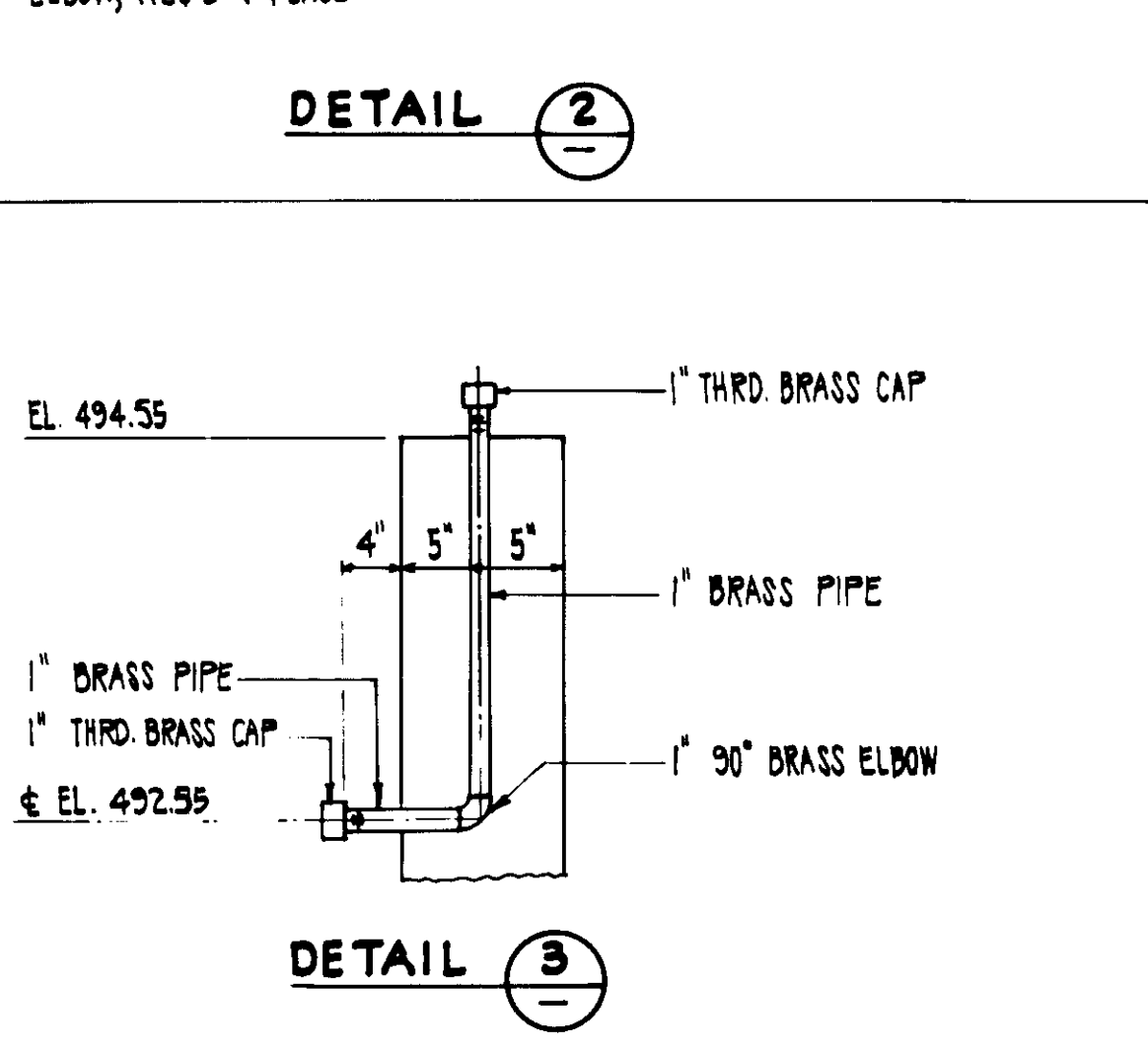
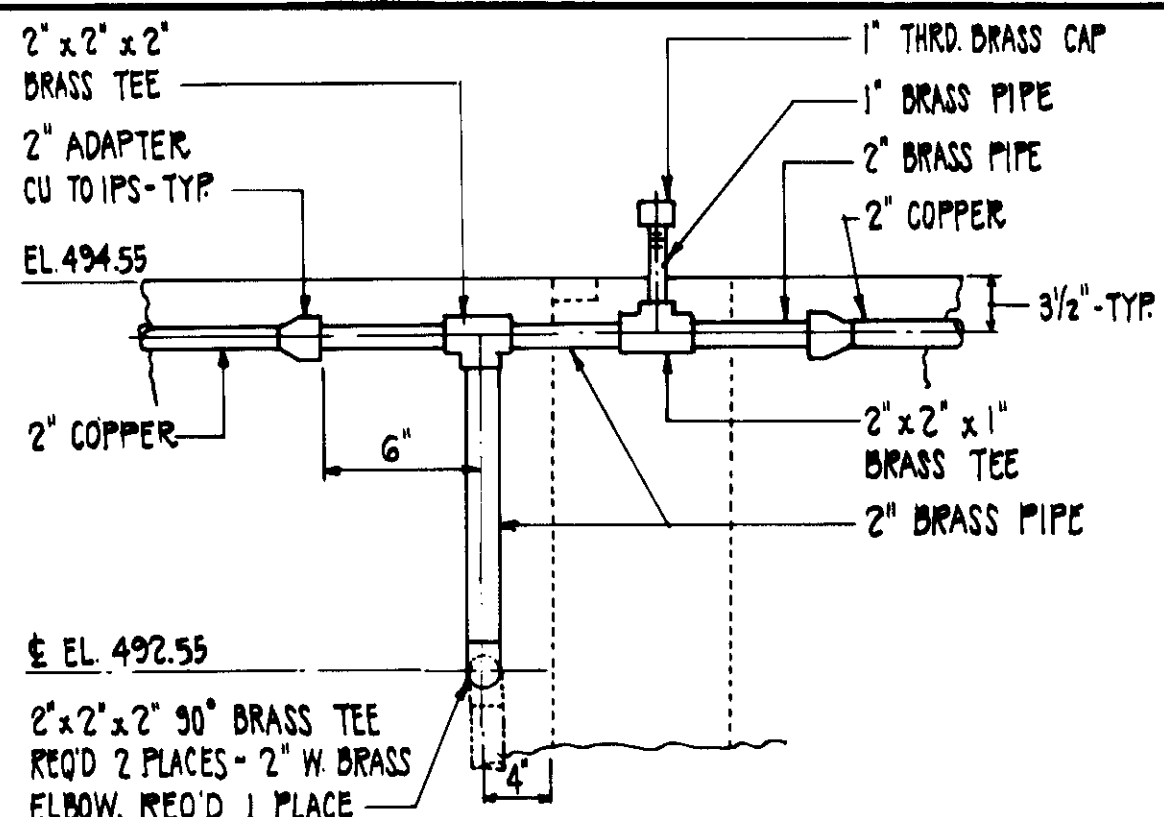
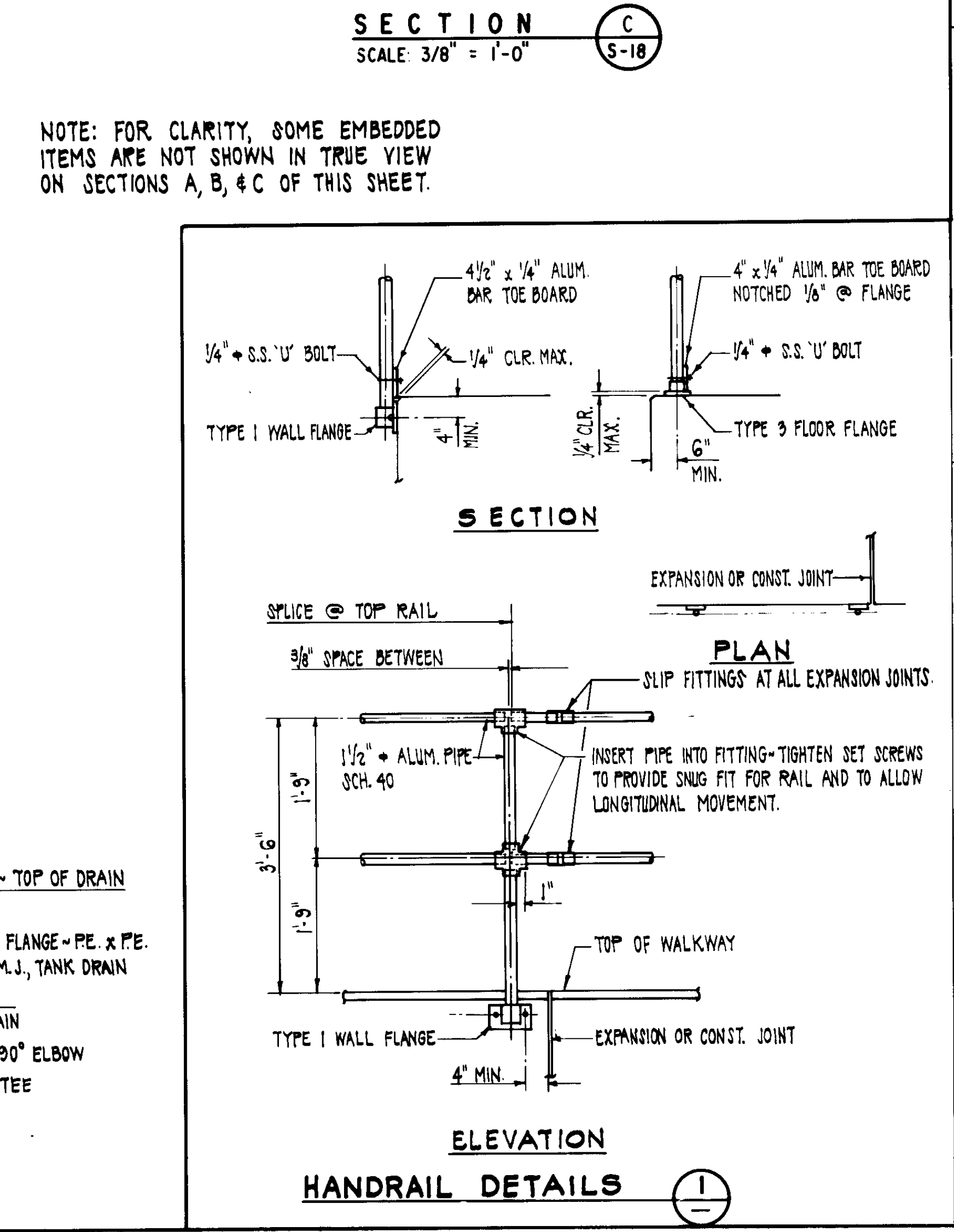
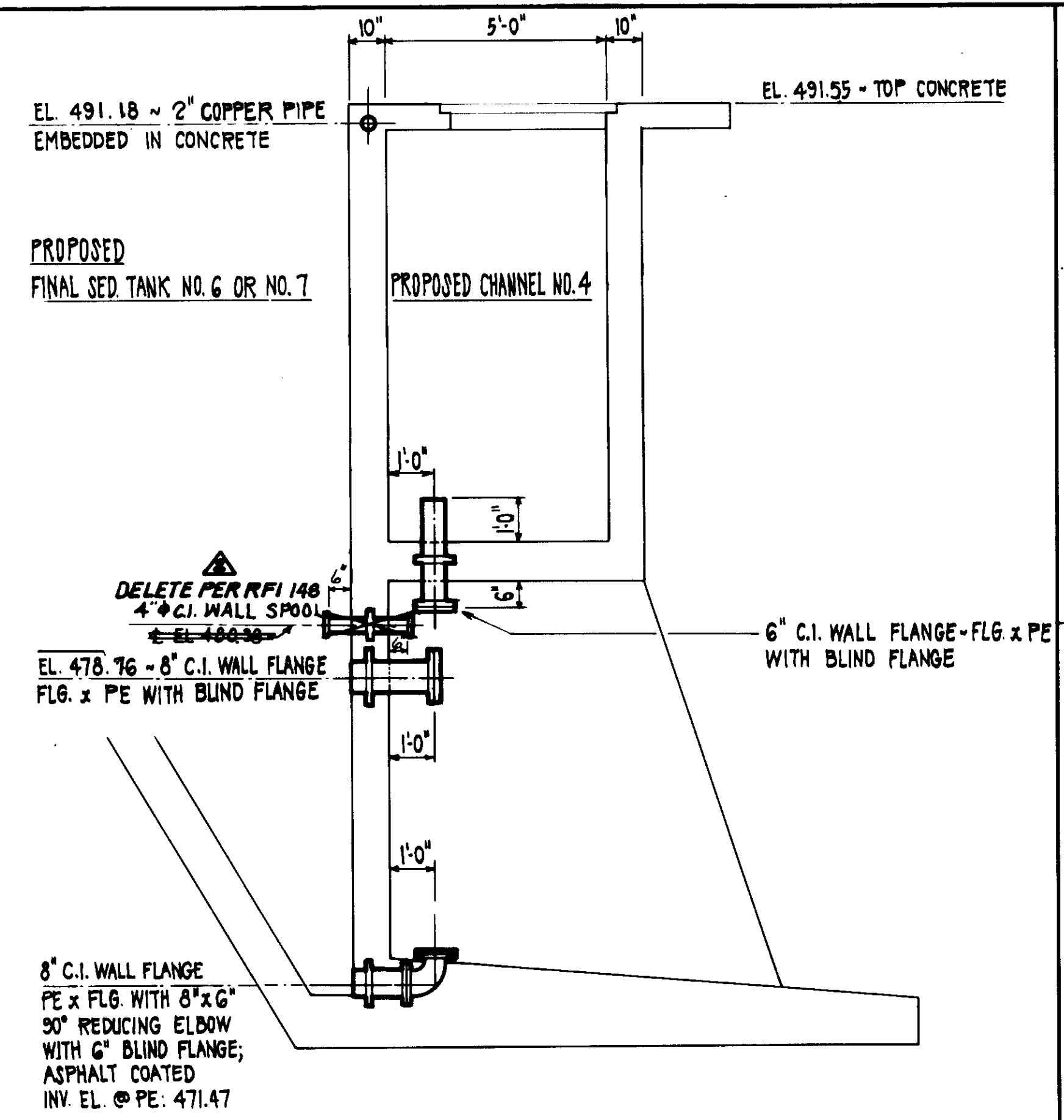
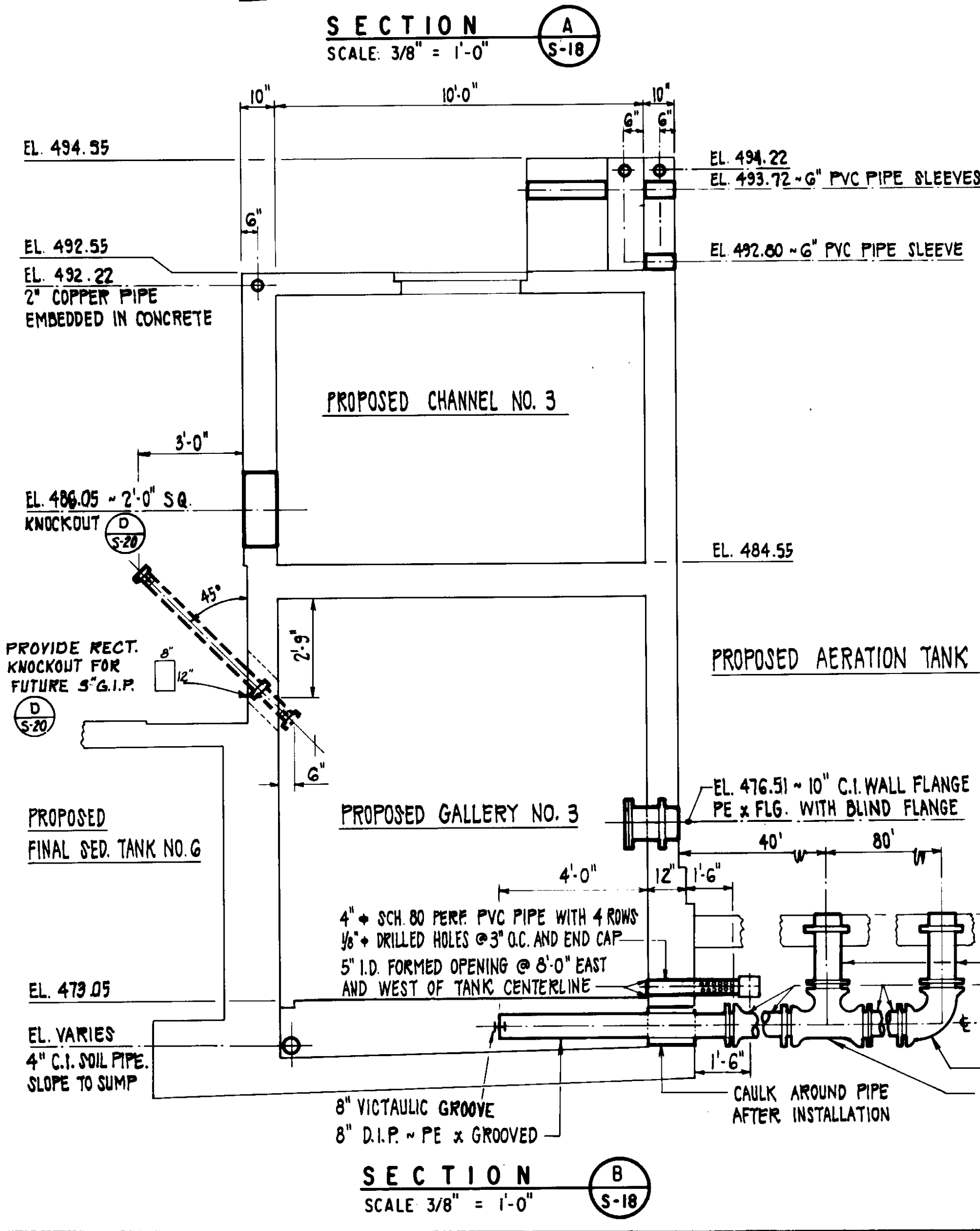
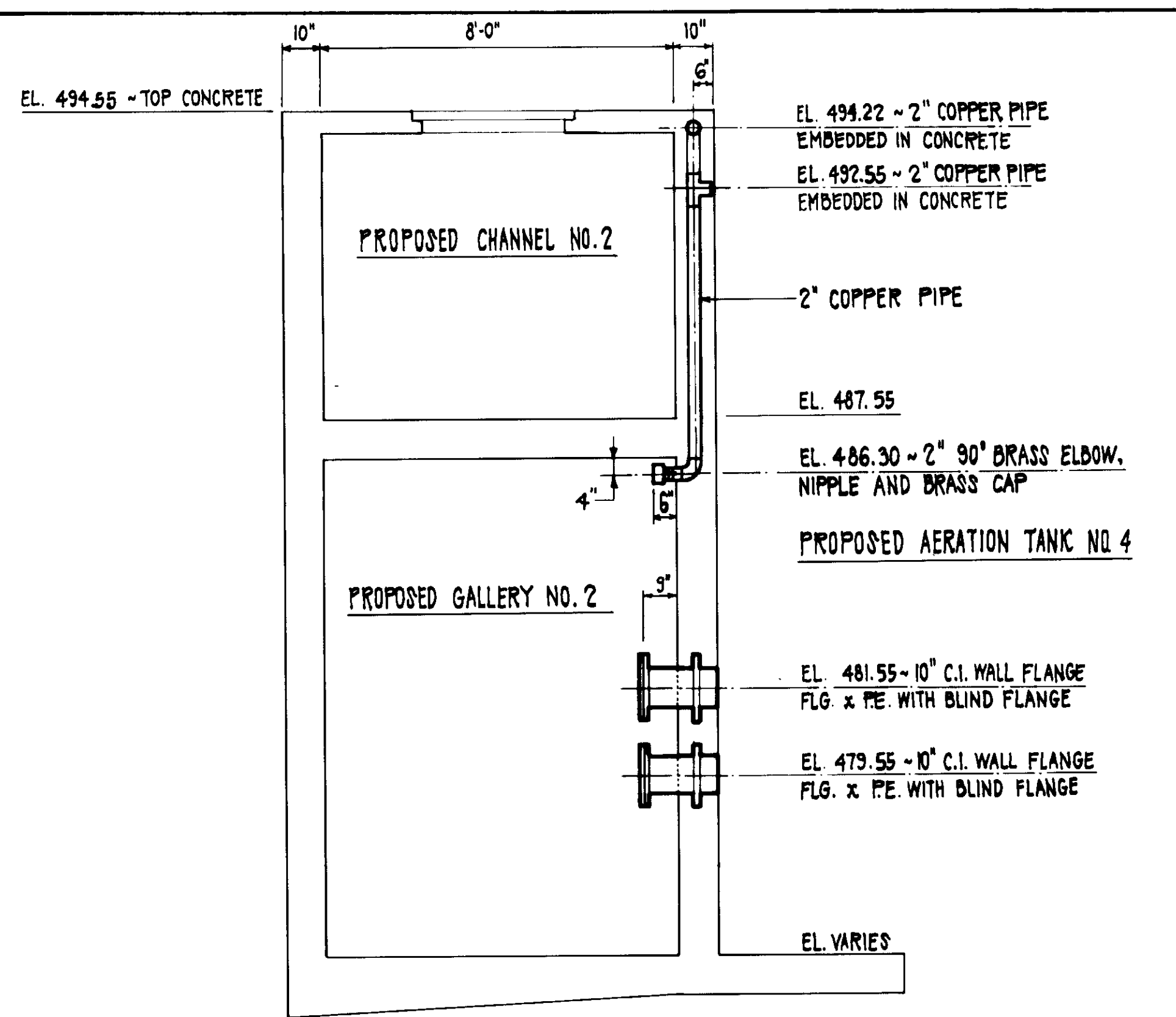
04004

RECORD DRAWINGS  
DESIGNED BY: *[Signature]*  
KALPANA CONSULTING ENGINEERS JUNE 1999

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY**  
**THREE CONCRETE TANKS**  
**TANK NOS. 4, 6 & 7**  
**EMBEDDED ITEMS - PLANS AND DEMOLITION DETAILS**

DESIGN	8/24/01	REV PER K.P.C.	
DRAWN	8/10/01	RE-ISSUED FOR CONSTRUCTION BIDDING	
CHECKED	J.W.B.		

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



- NOTES**
1. ALL HANDRAIL FITTINGS ARE SLIP-ON "SPEEDRAIL" TYPE, OR, "NO RAIL" TYPE AS MANUFACTURED BY HOLLANDER MFG. CO., OR APPROVED EQUAL.
  2. PLACE CENTER OF POST ANCHOR & HANDRAIL 6" FROM EDGE OF CONCRETE UNLESS OTHERWISE NOTED.
  3. ALL MATERIAL EXCEPT FASTENERS AND ANCHORS SHALL BE ALUMINUM ALLOY 6061-T6.
  4. ALL WELDS SHALL BE MADE WITH ALUMINUM ALLOY 4043.
  5. ALL ALUMINUM SURFACES THAT COME IN CONTACT WITH STEEL OR CONCRETE SHALL BE COATED WITH ZINC CHROMATE PRIMER.
  6. STAINLESS STEEL BOLTS SHALL BE ASTM TYPE A 193, GRADE B 8 M.
  7. CONCRETE ANCHORS SHALL BE PHILLIPS ZINC CHROMATE CONCRETE WEDGE ANCHORS. TOP OF ANCHORS SHALL BE SET FLUSH WITH THE CONCRETE.

**04005**

RECORD DRAWINGS

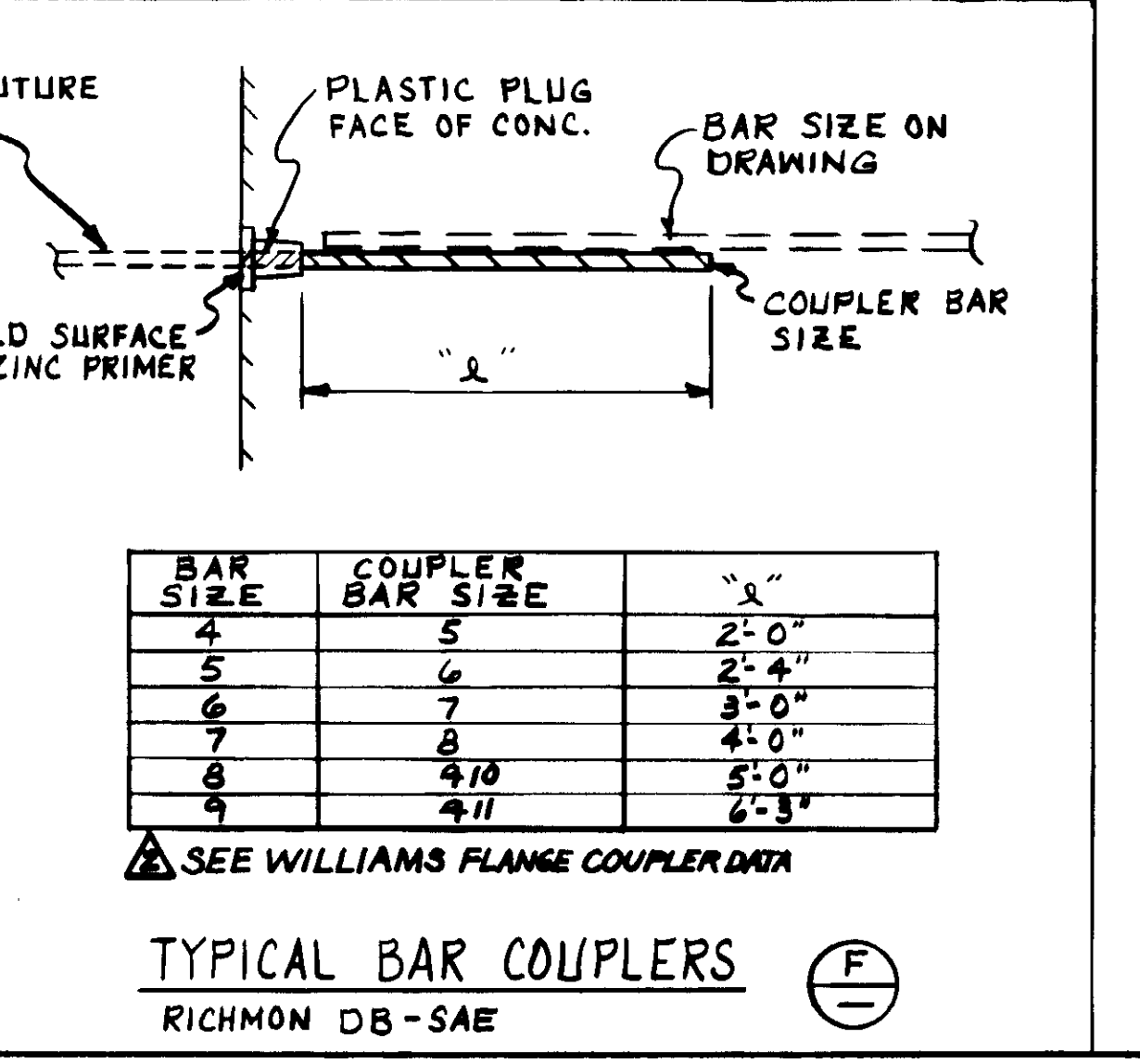
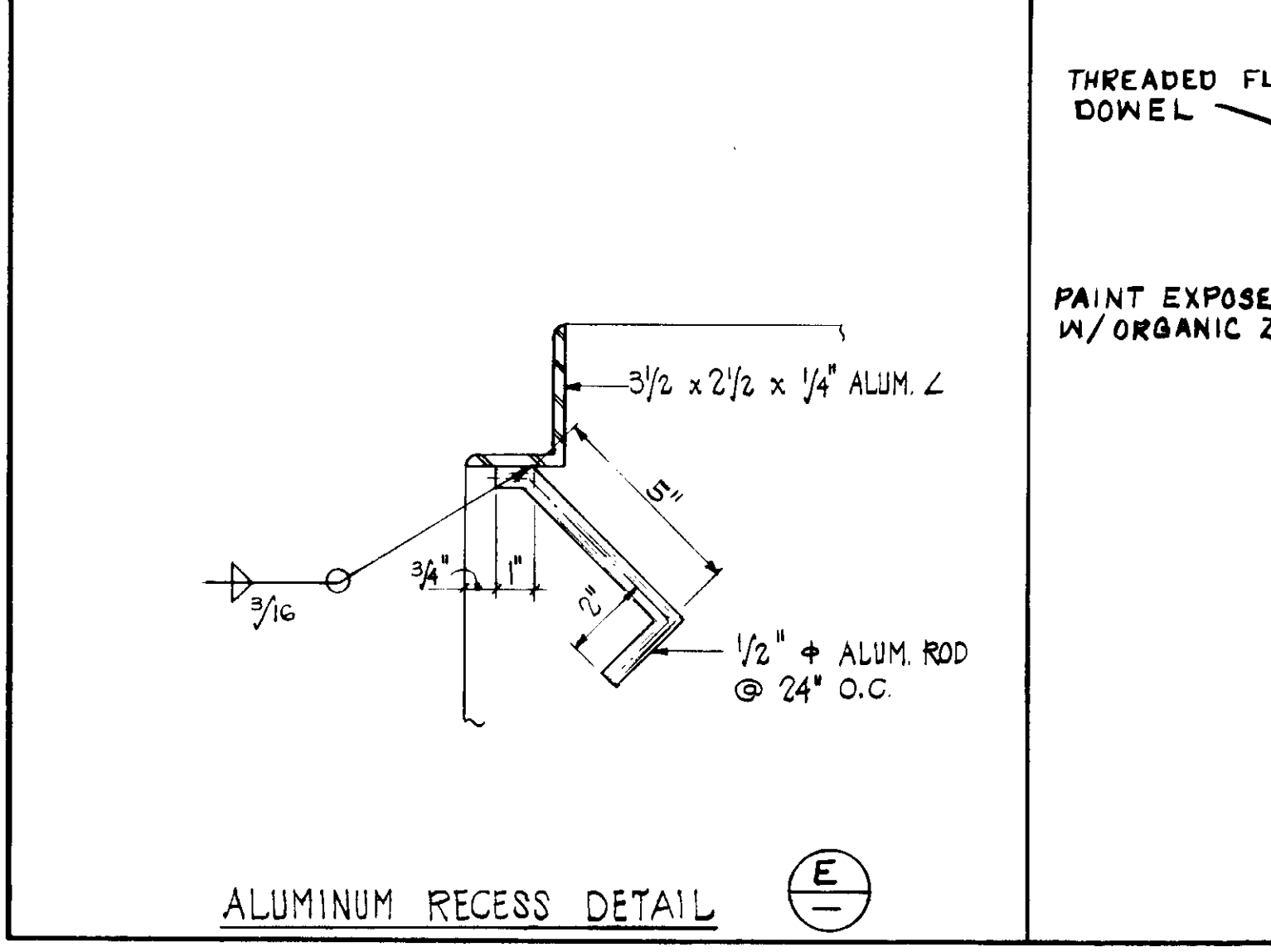
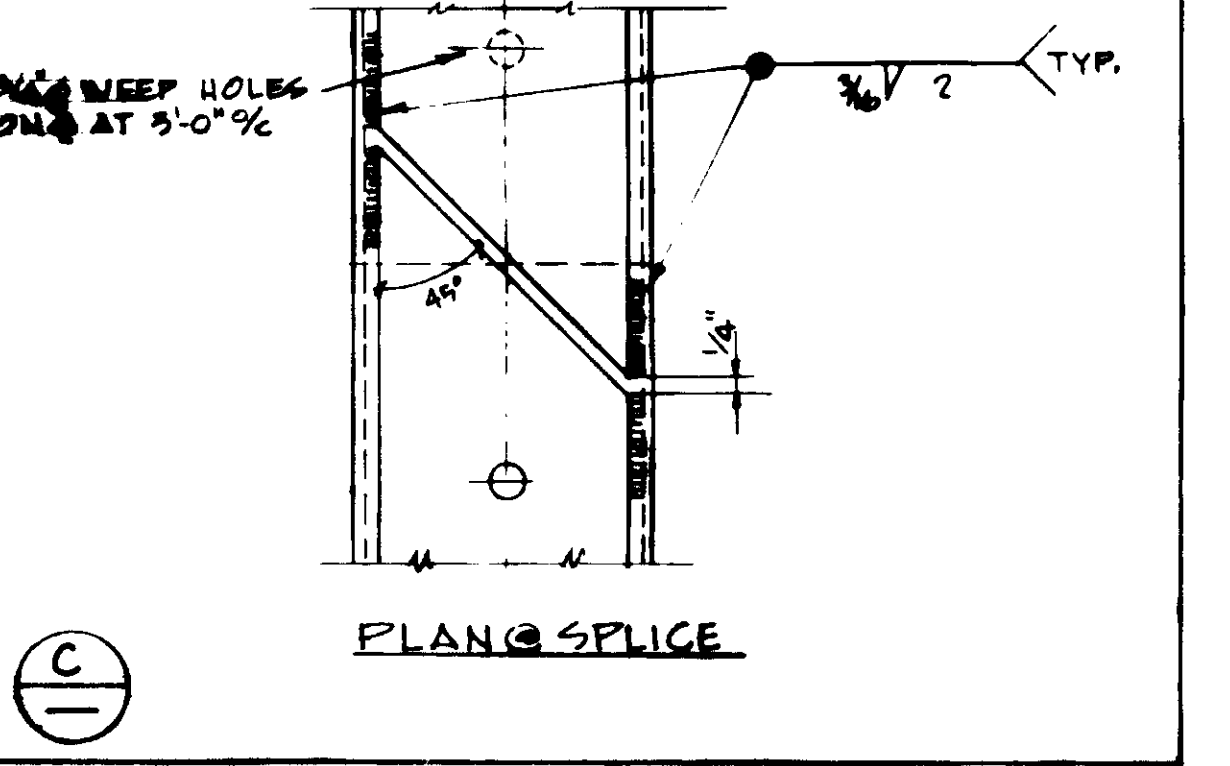
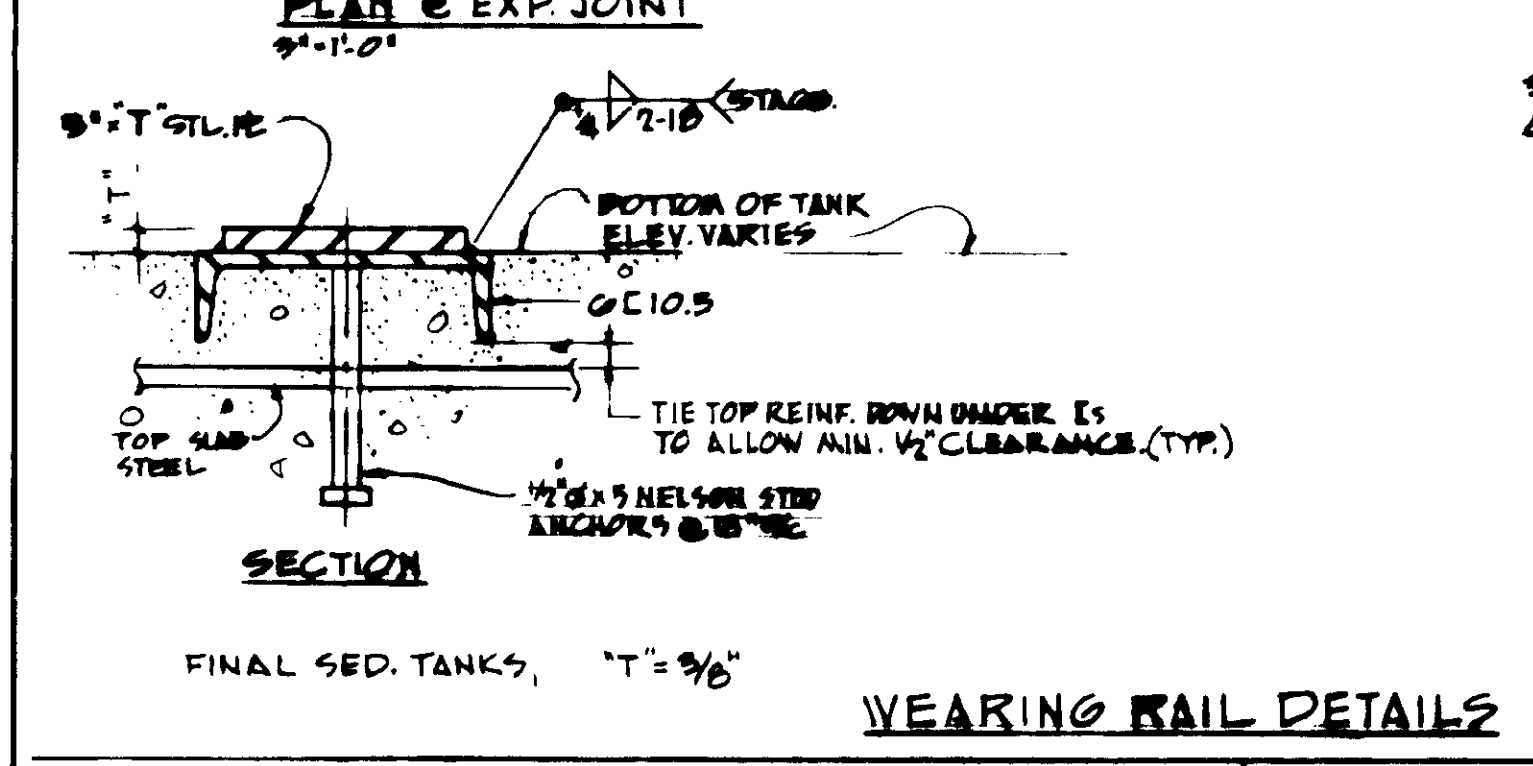
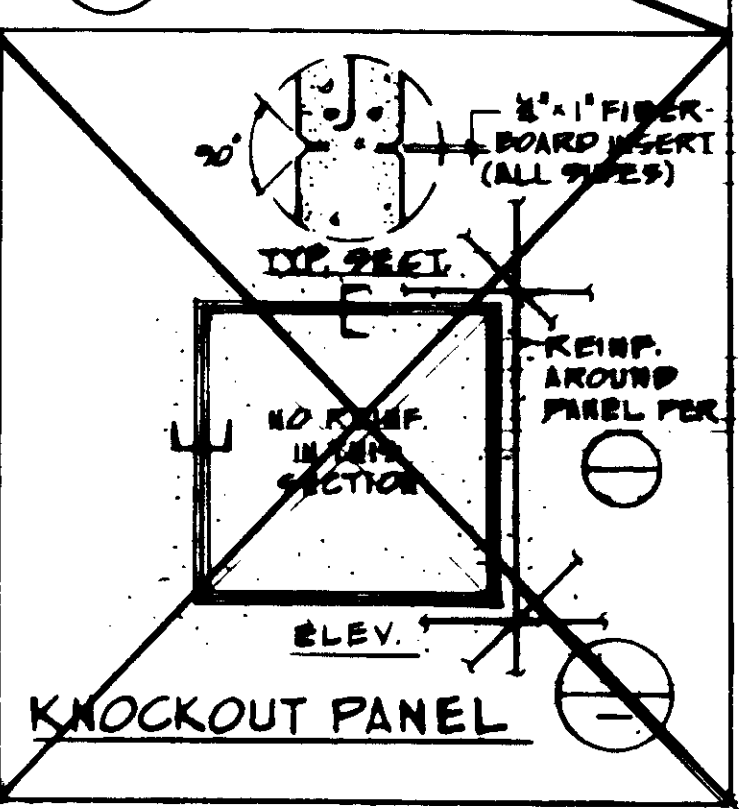
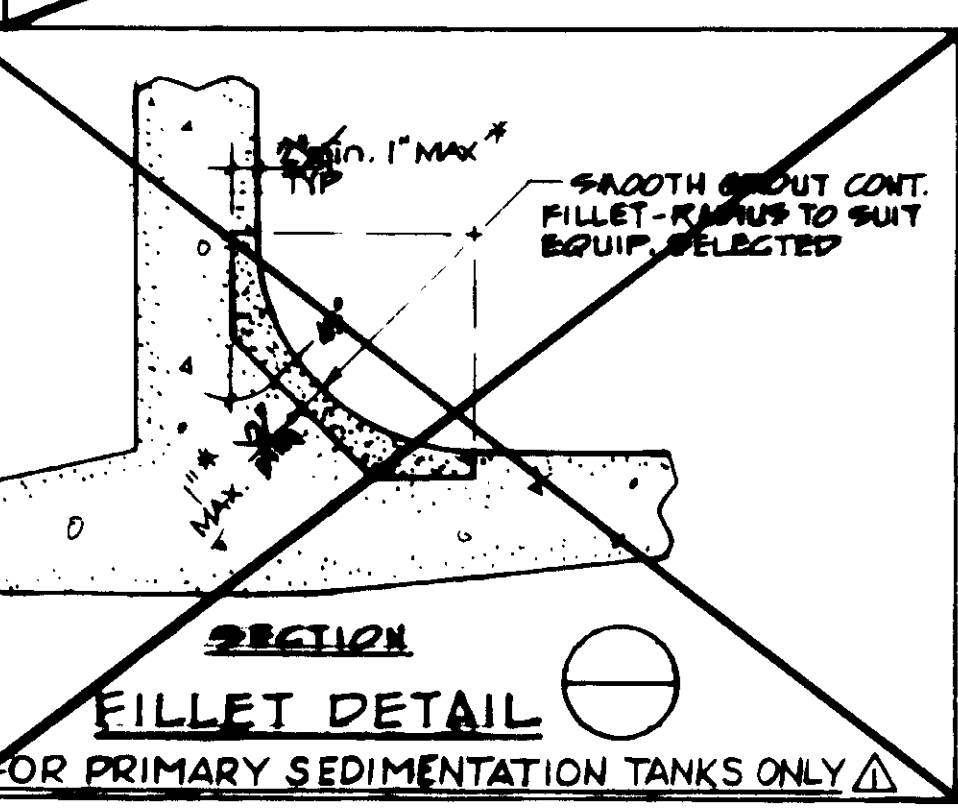
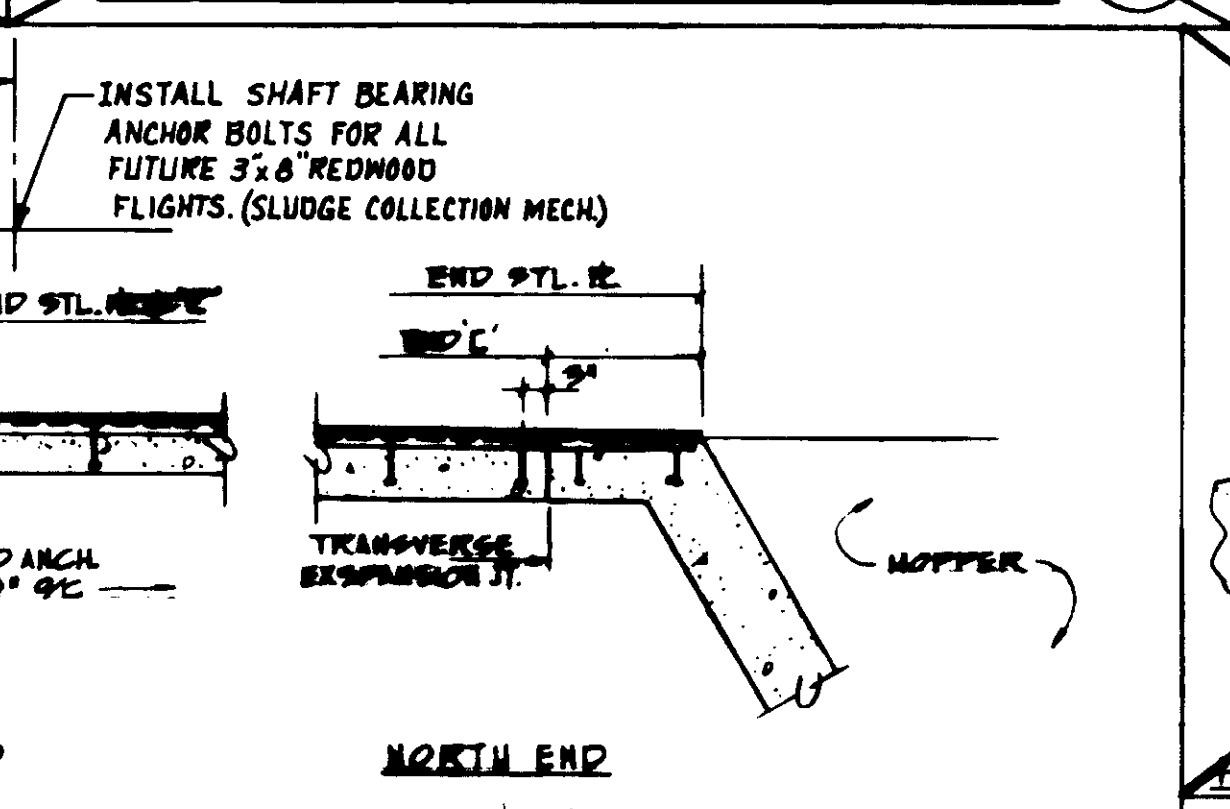
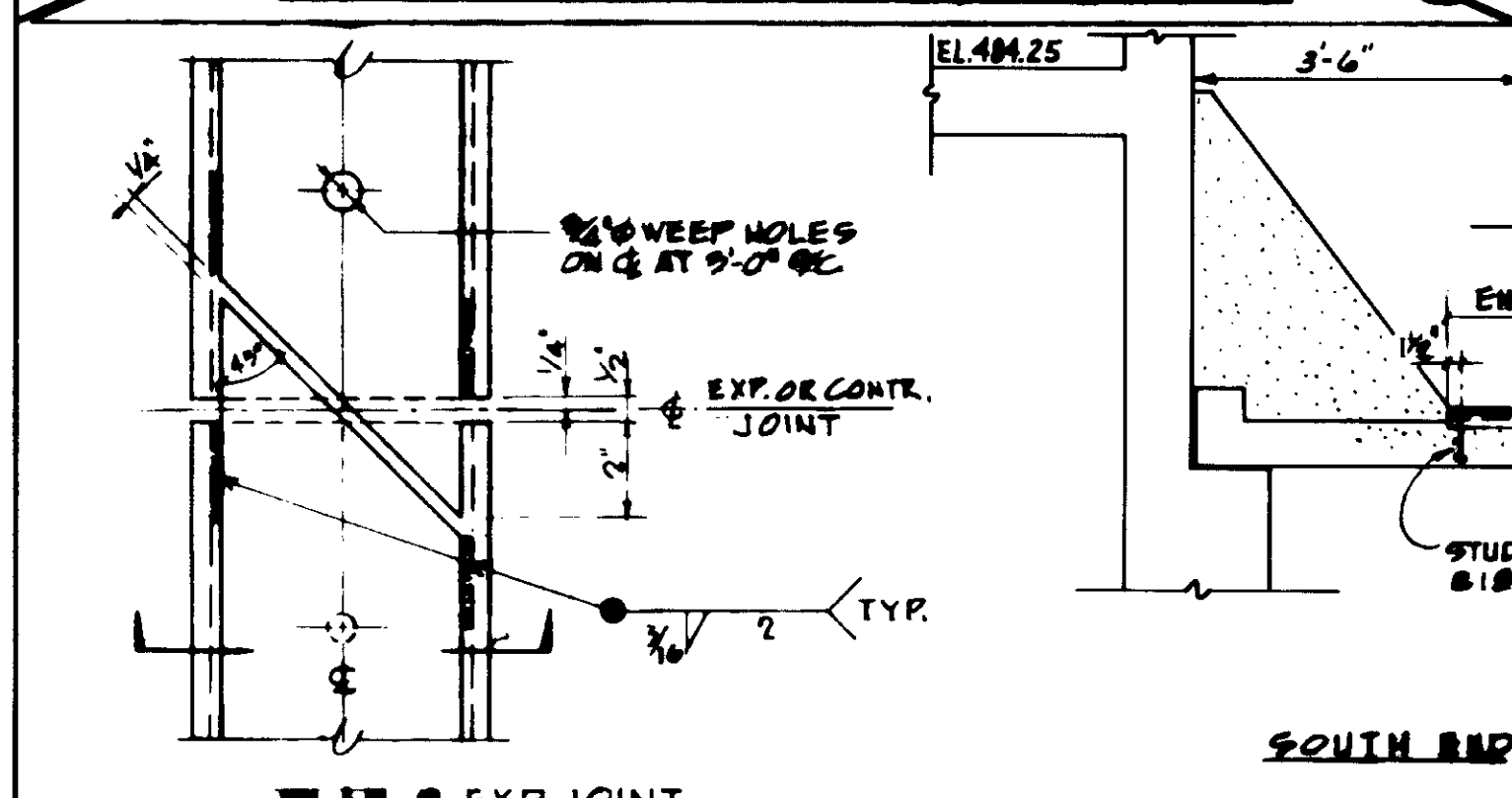
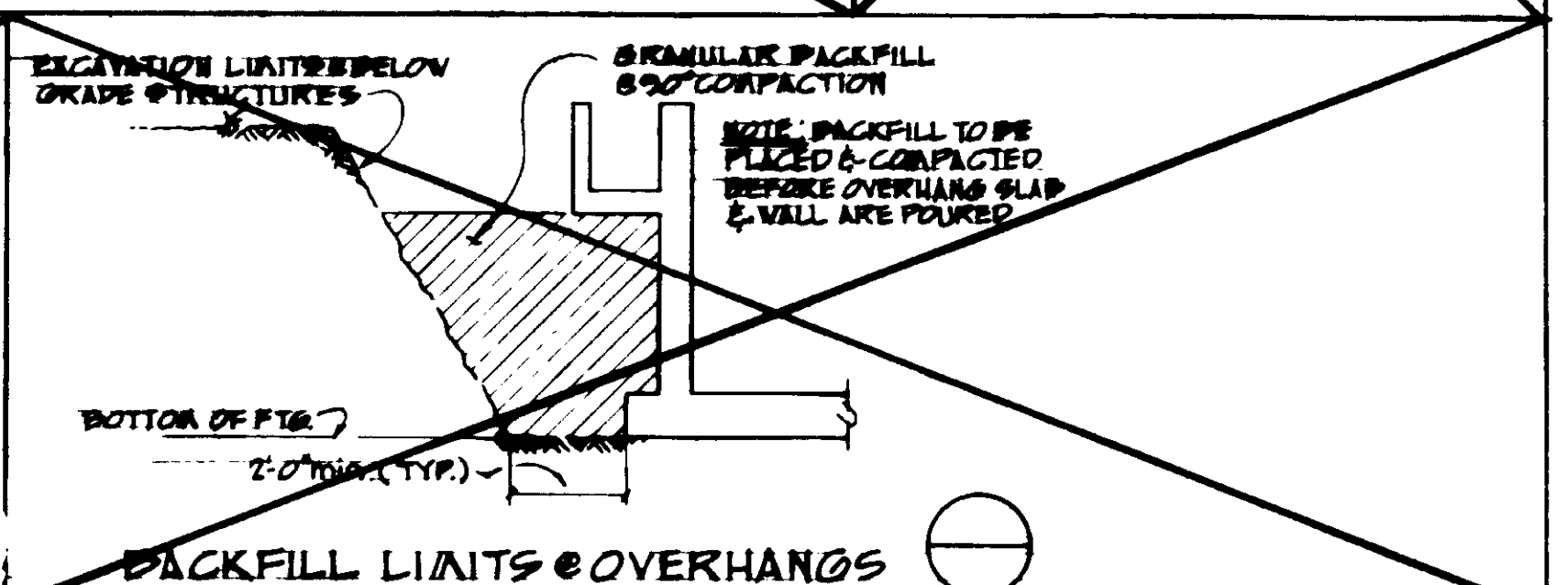
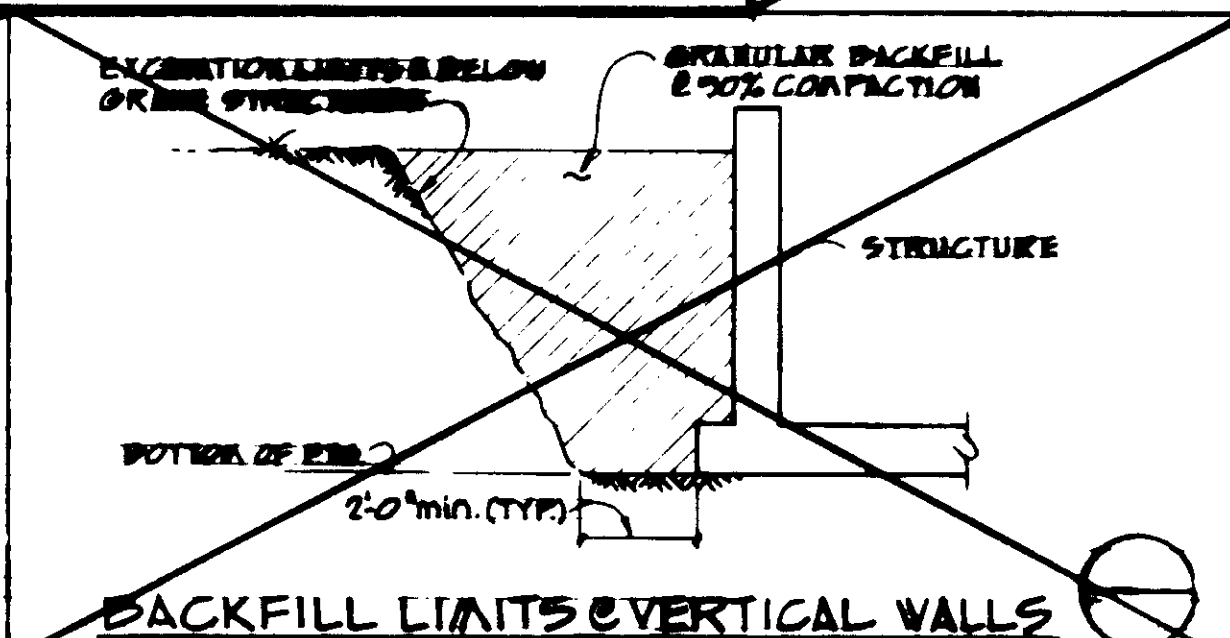
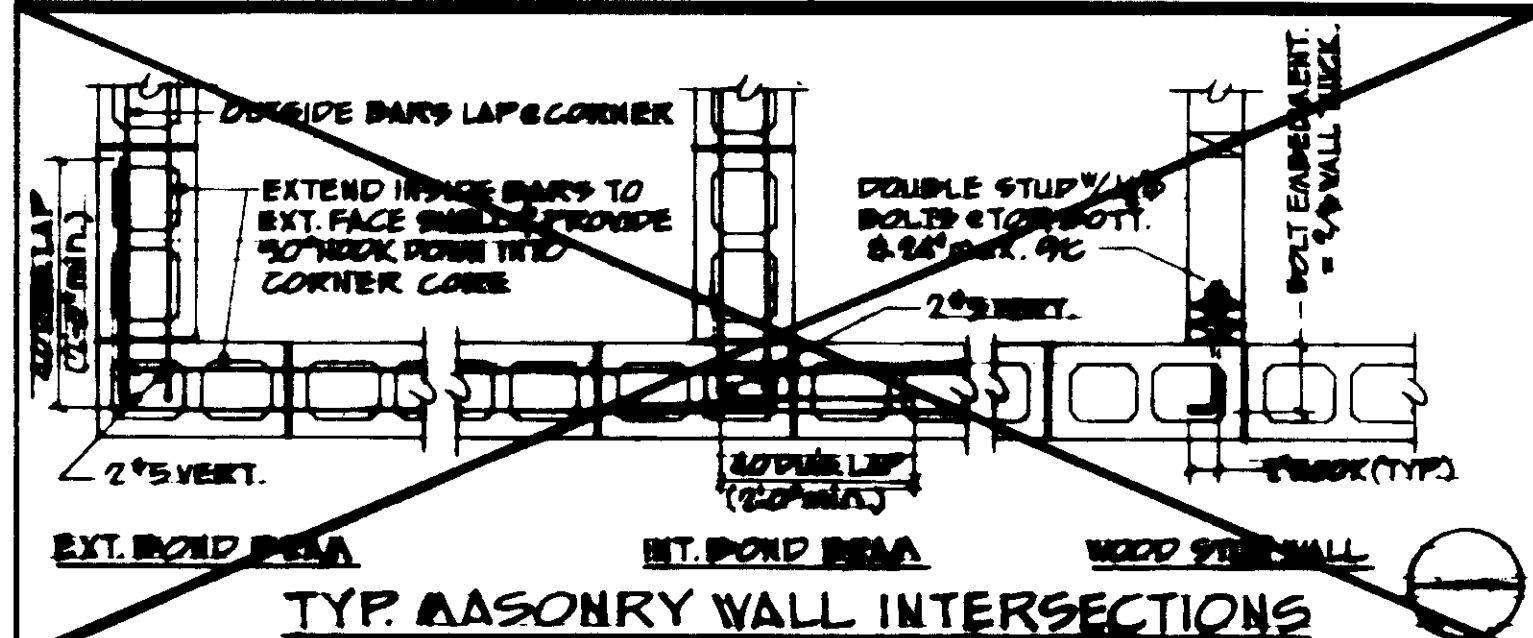
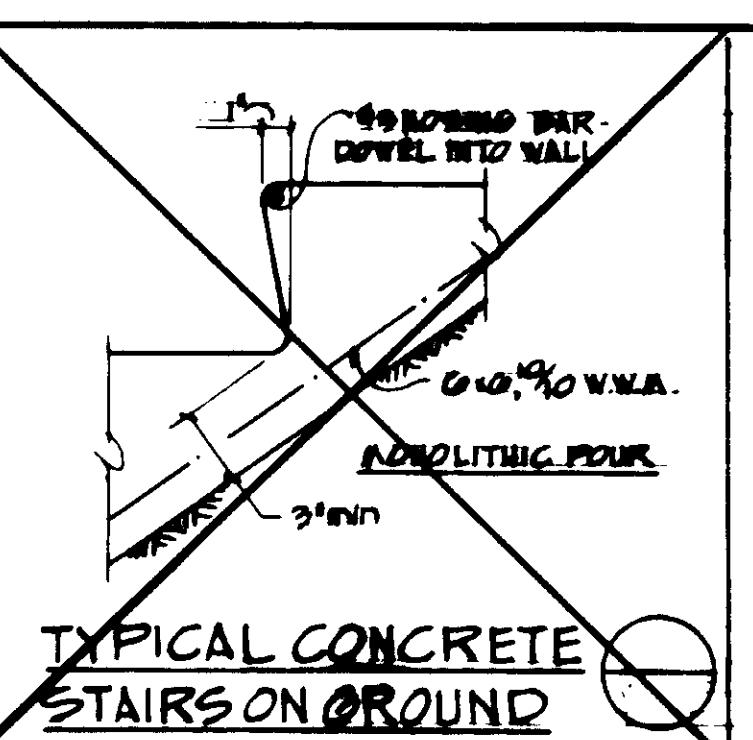
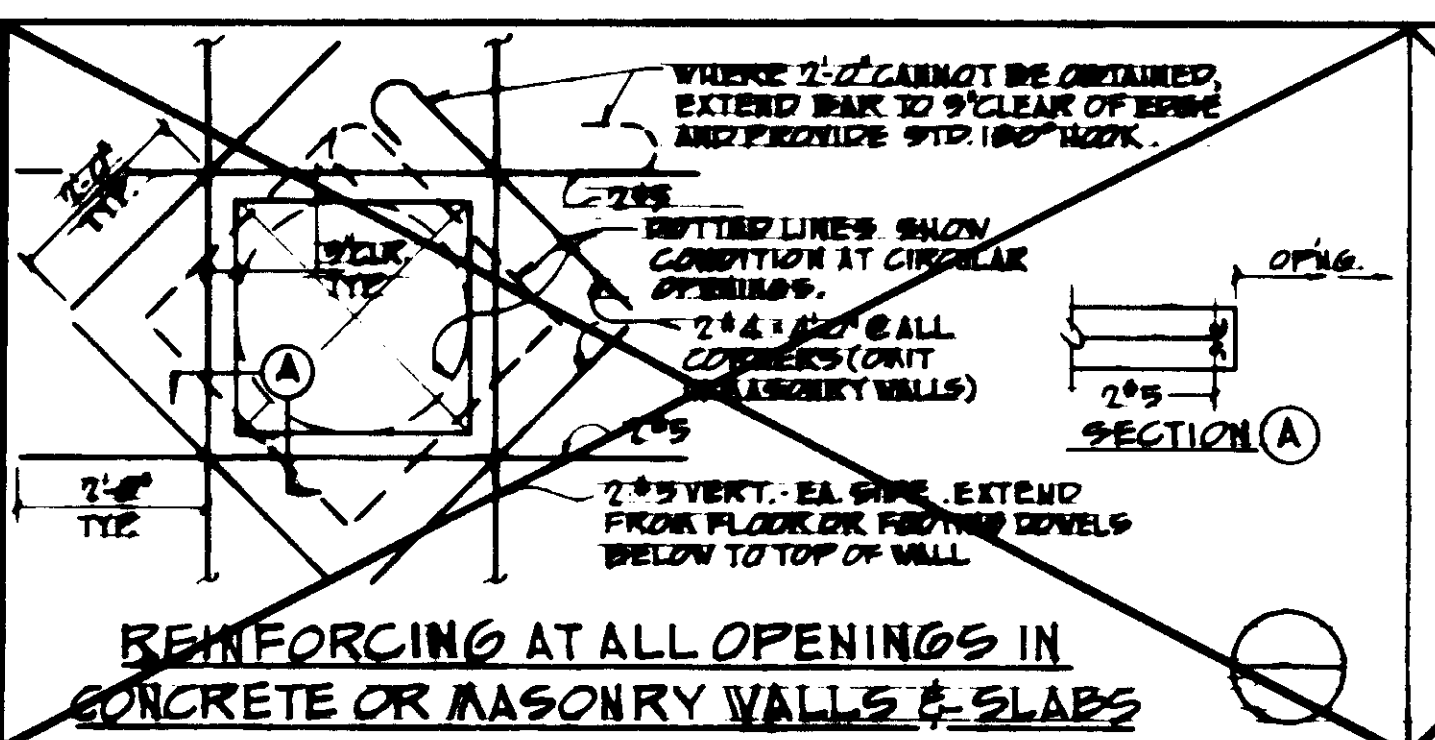
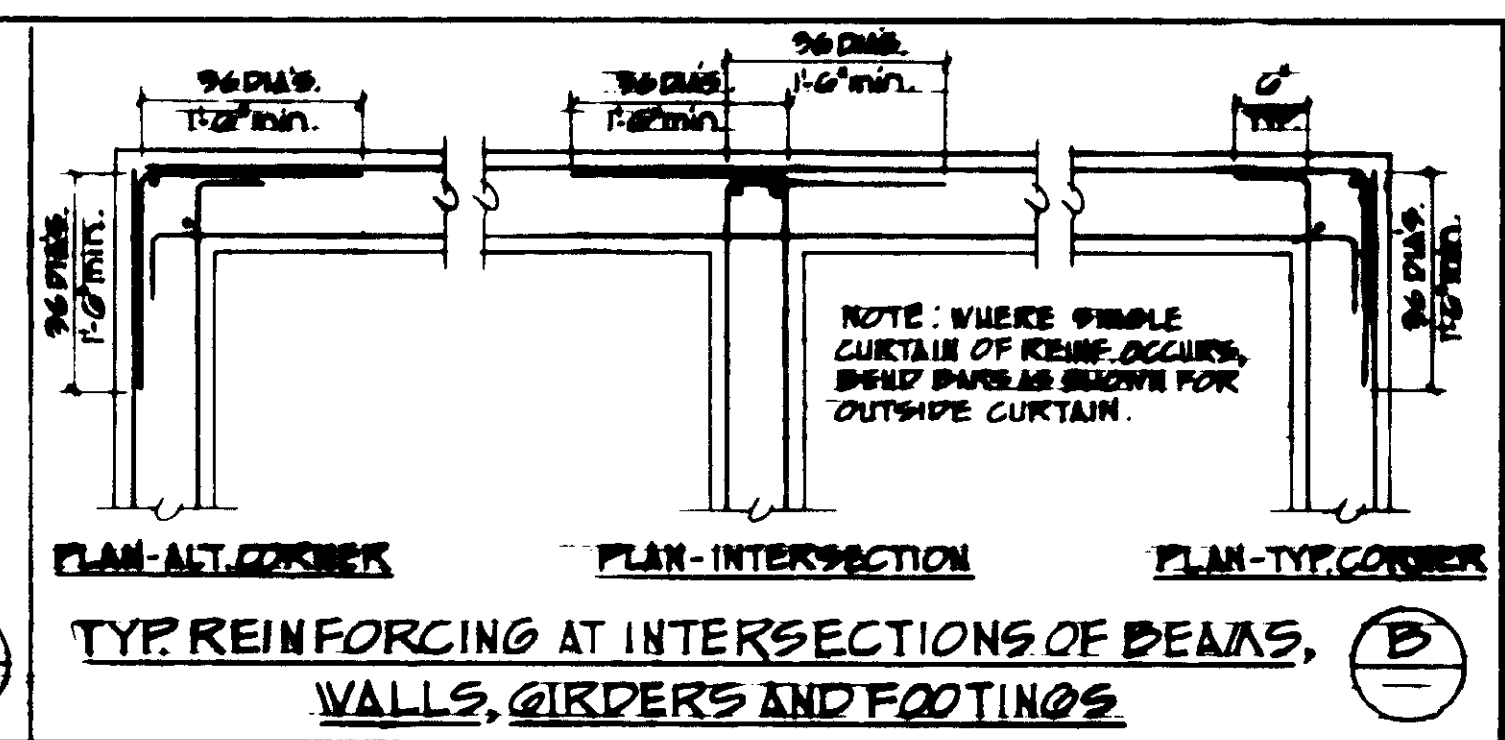
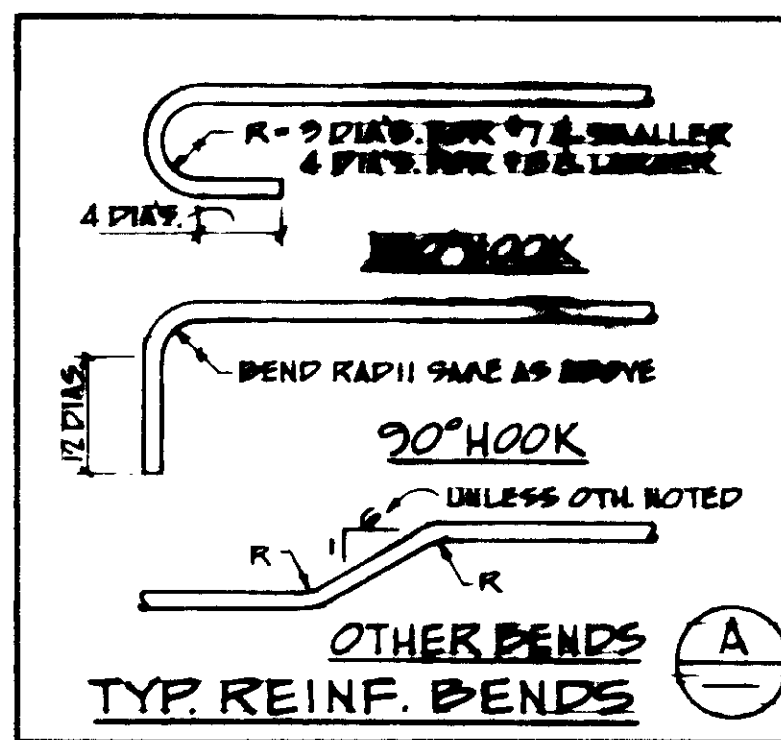
BY: *[Signature]*  
DATE: 5/1/13

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY  
THREE CONCRETE TANKS  
TANK NOS. 4, 6 & 7  
**EMBEDDED ITEMS - SECTIONS**

REV.	DATE	DESCRIPTION	BY	DATE

SHEET NO. **S-19**  
OF 25 SHEETS

8/087RE-ISSUED FOR CONSTRUCTION BIDDING



**WILLIAMS FLANGE COUPLER DATA**

STANDARD REINFORCING (NON-THREADS) ASTM A-615 GRADE 60				FLANGE COUPLER SPlice STRENGTHS (THREADED) ASTM A-615 GRADE 60 REBAR			
BAR SIZE	YIELD (LBS.)	ULTIMATE (LBS.)	MIN. YIELD (LBS.)	MIN. ULTIMATE (LBS.)	FLANGE COUPLER OD x LENGTH	TENSILE STRESS AREA (IN <sup>2</sup> )	ROLLED THREAD SIZE
4	12,000	15,000	8,500	15,000	3/4" x 1-3/4"	1.12	1/2" x 13 NC
5	18,000	23,250	13,000	24,000	7/8" x 2-1/4"	1.56	5/8" x 11 NC
6	24,000	30,500	18,000	33,000	1-1/8" x 3-1/4"	2.28	3/4" x 10 NC
7	30,000	45,000	27,000	48,000	1-1/4" x 4-1/2"	3.14	7/8" x 9 NC
8	36,000	52,500	38,000	60,000	1-1/2" x 5-1/2"	4.24	1" x 8 NC
9	42,000	60,000	48,000	78,000	1-3/4" x 6-3/4"	5.61	1-1/8" x 7 NC
10	48,000	75,000	58,000	96,000	2-1/8" x 8-1/2"	7.63	1-1/4" x 7 NC
11	54,000	90,000	67,000	123,000	2-1/2" x 10-1/2"	10.42	1-3/8" x 6 UN
14	72,000	126,750	90,000	180,000	3-1/2" x 15-1/2"	21.90	2-1/4" x 5 UN

**STRUCTURAL NOTES**

**GENERAL**

- The Contractor shall verify all dimensions in the field before starting work and shall immediately notify the District Representative of any discrepancies.
- Notes and details on the drawings shall take precedence over the general notes and typical details in case of conflict.
- Where no construction details are shown or noted for any part of the work, details shall be the same as for other similar work.
- All Construction shall be in accordance with Contract Specifications.

**REINFORCED CONCRETE**

- Concrete shall have a minimum ultimate compressive strength of 4000 psi @ 28 days.
- Reinforcement shall be ASTM A615 Grade 60 except as noted for welded splice bars at east end of channel and gallery 4.
- All splices shall be 40 bar diameters except as noted.
- Provide 3/4 inch chanfer on all exposed corners above grade.

**EARTHWORK**

Refer to Sheet S-3 for earthwork notes and specifications.

Hydraulic Structure testing shall conform to Division 216 - Testing and Disinfecting of the Specification.

04006

LAS VIRGENES MUNICIPAL WATER DISTRICT  
 TAPIA WATER RECLAMATION FACILITY  
 THREE CONCRETE TANKS  
 TANK NOS. 4, 6 & 7  
 TYPICAL STRUCTURAL DETAILS

RECORD DRAWINGS

DESIGNED BY: JAMES W. TAPPA  
 CHECKED BY: J.W.B.  
 DATE: 10/87

REVISIONS:

REV.	DATE	DESCRIPTION
5-21-87		REV. PER K.P.C.
8/10/87		RE-ISSUED FOR CONSTRUCTION BIDDING

SCALE: AS SHOWN

PROJECT NO. S-20

DATE: 07-25-2012

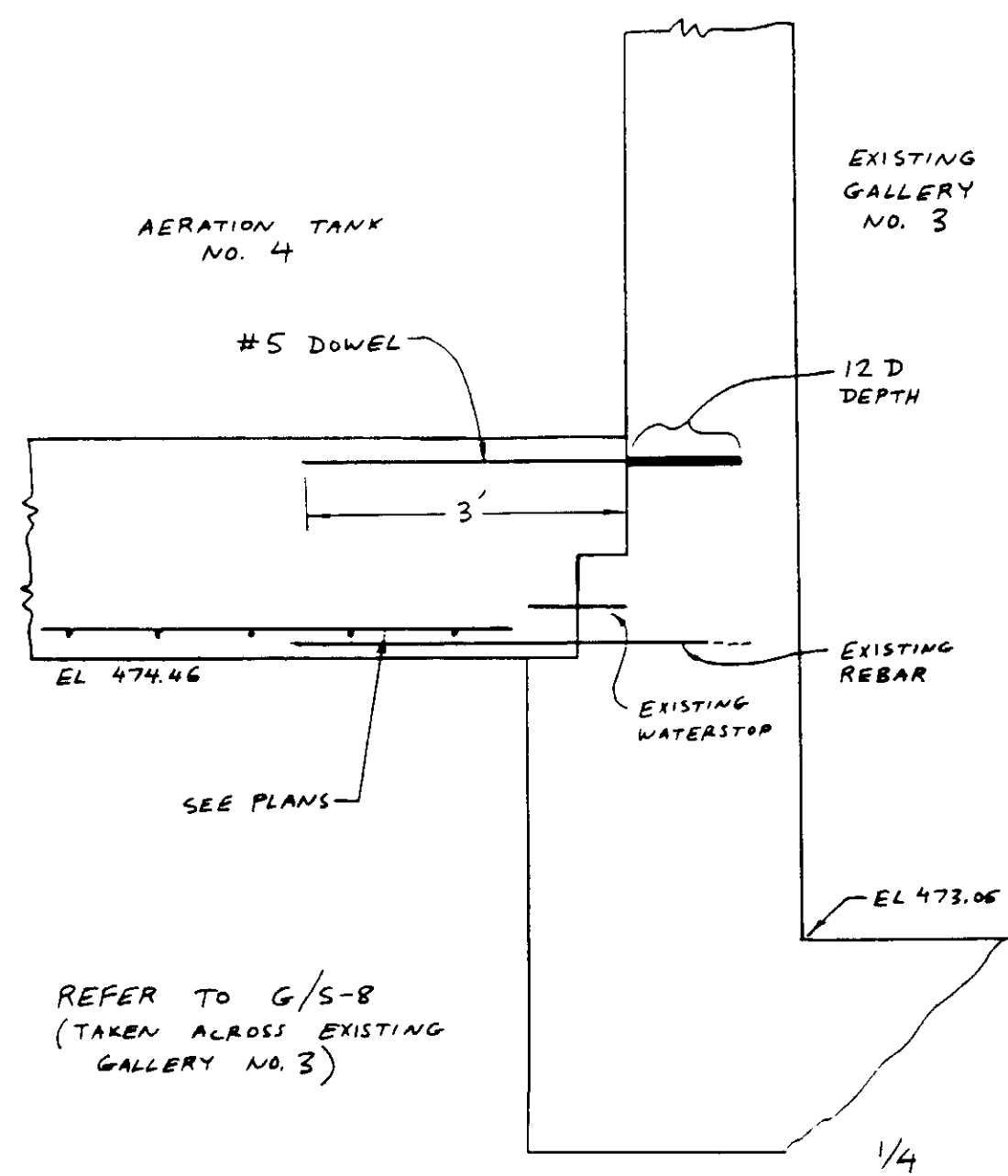
BY: J.W.B.

NO. 108

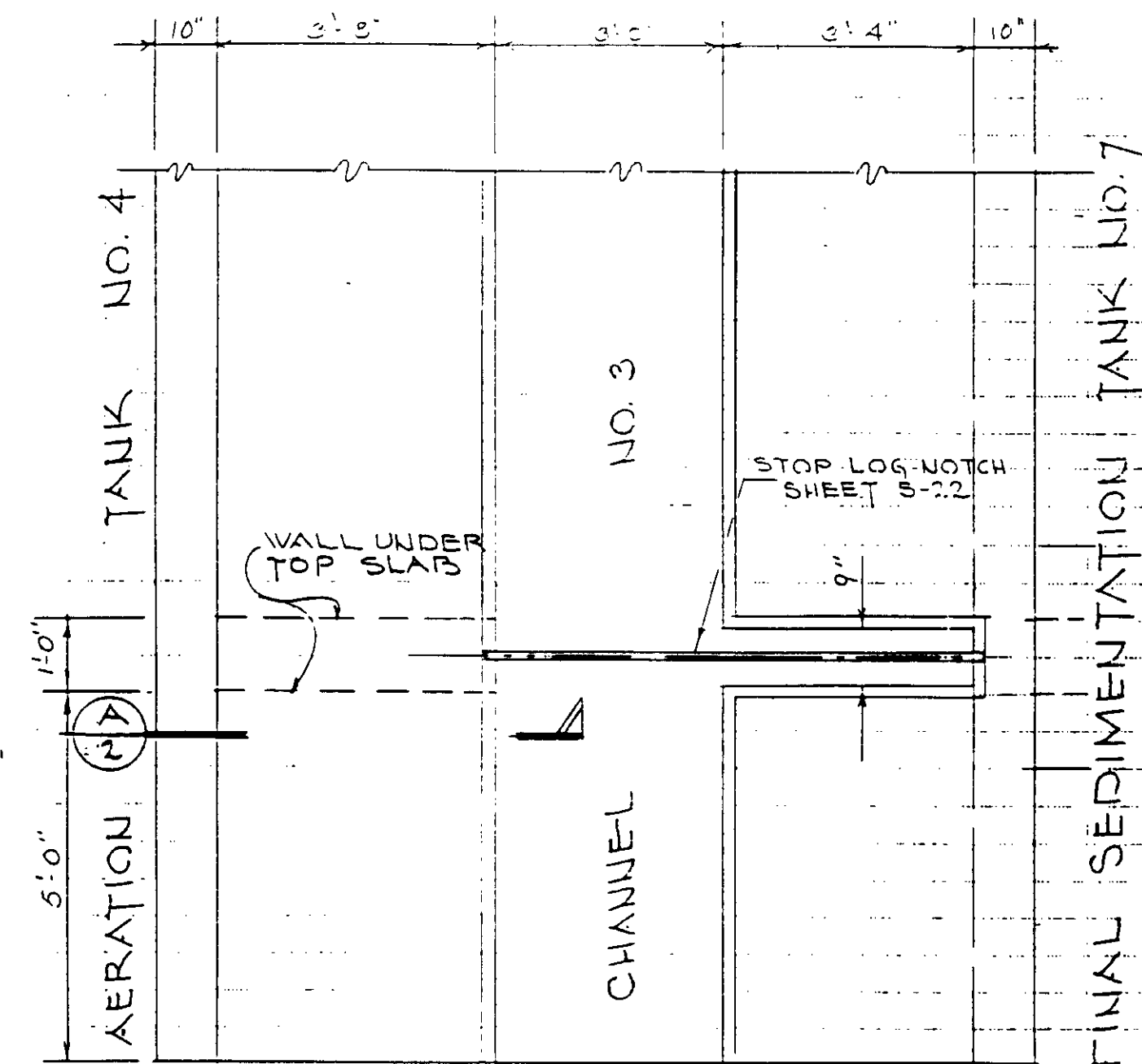






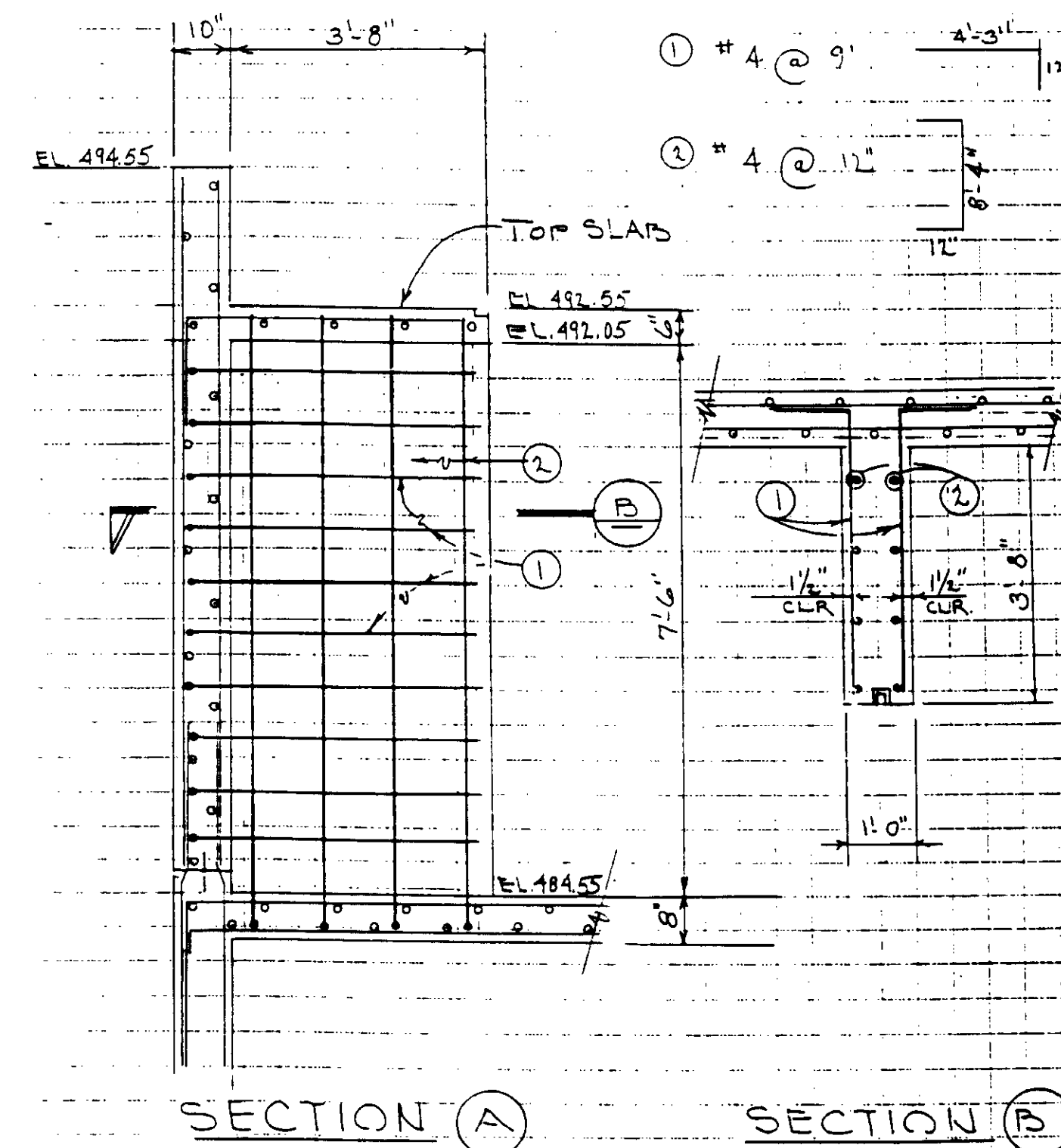


DETAIL 1



PLAN AT STOPLOG

REF. S-11



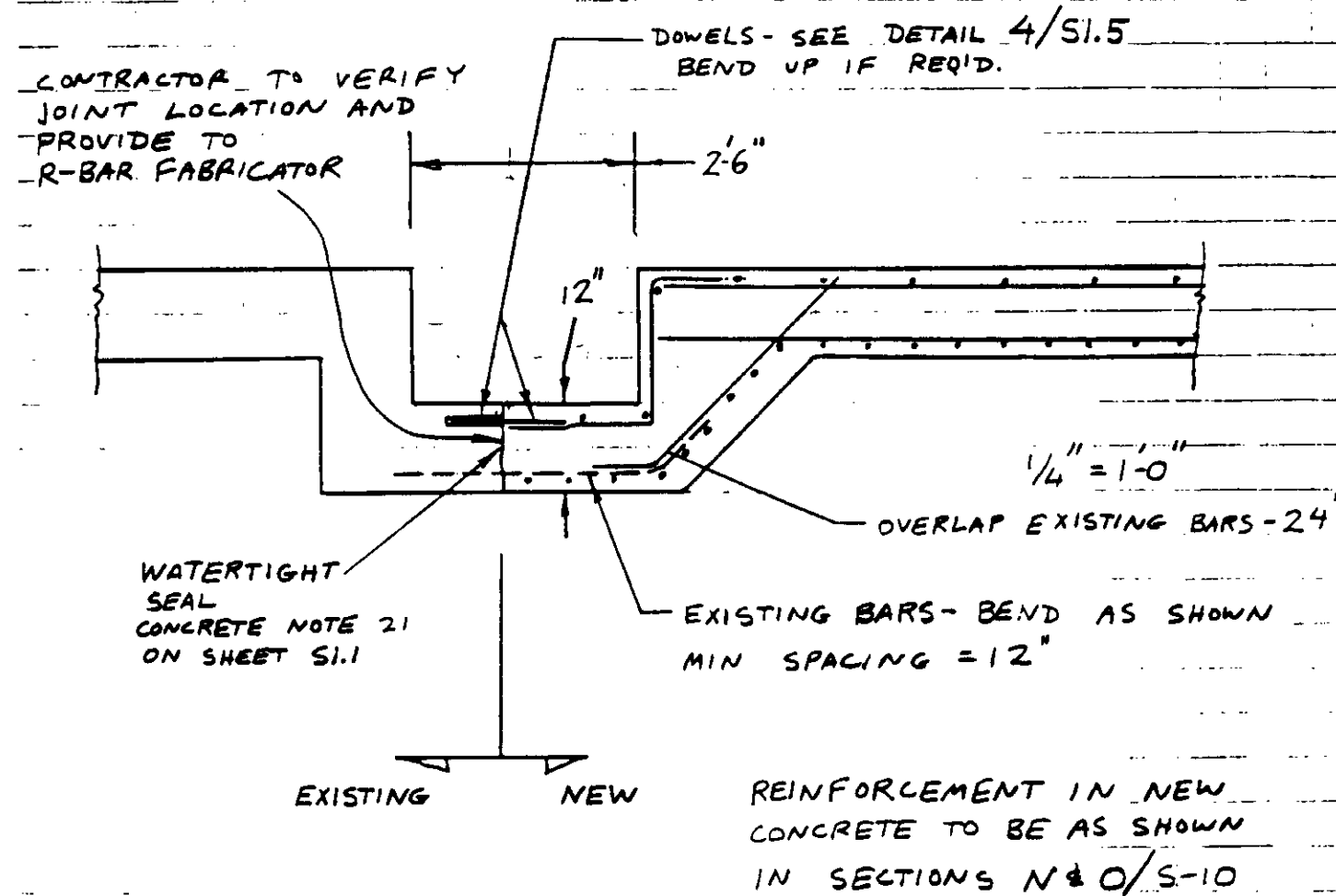
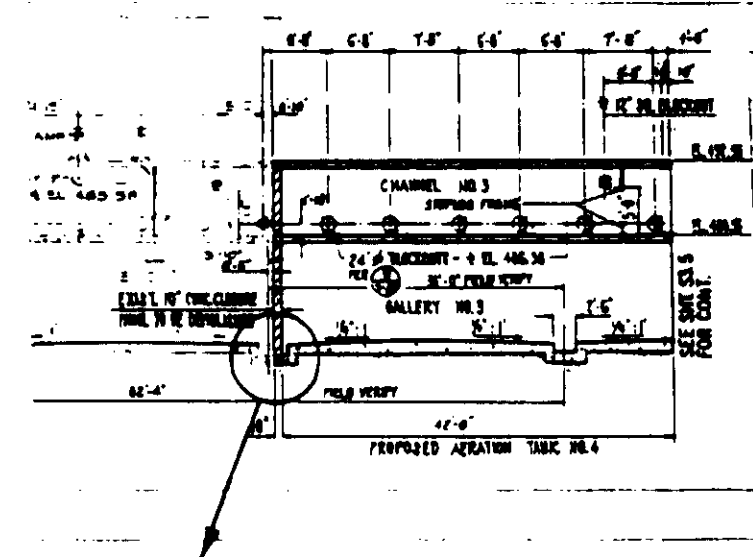
SECTION A

SECTION B

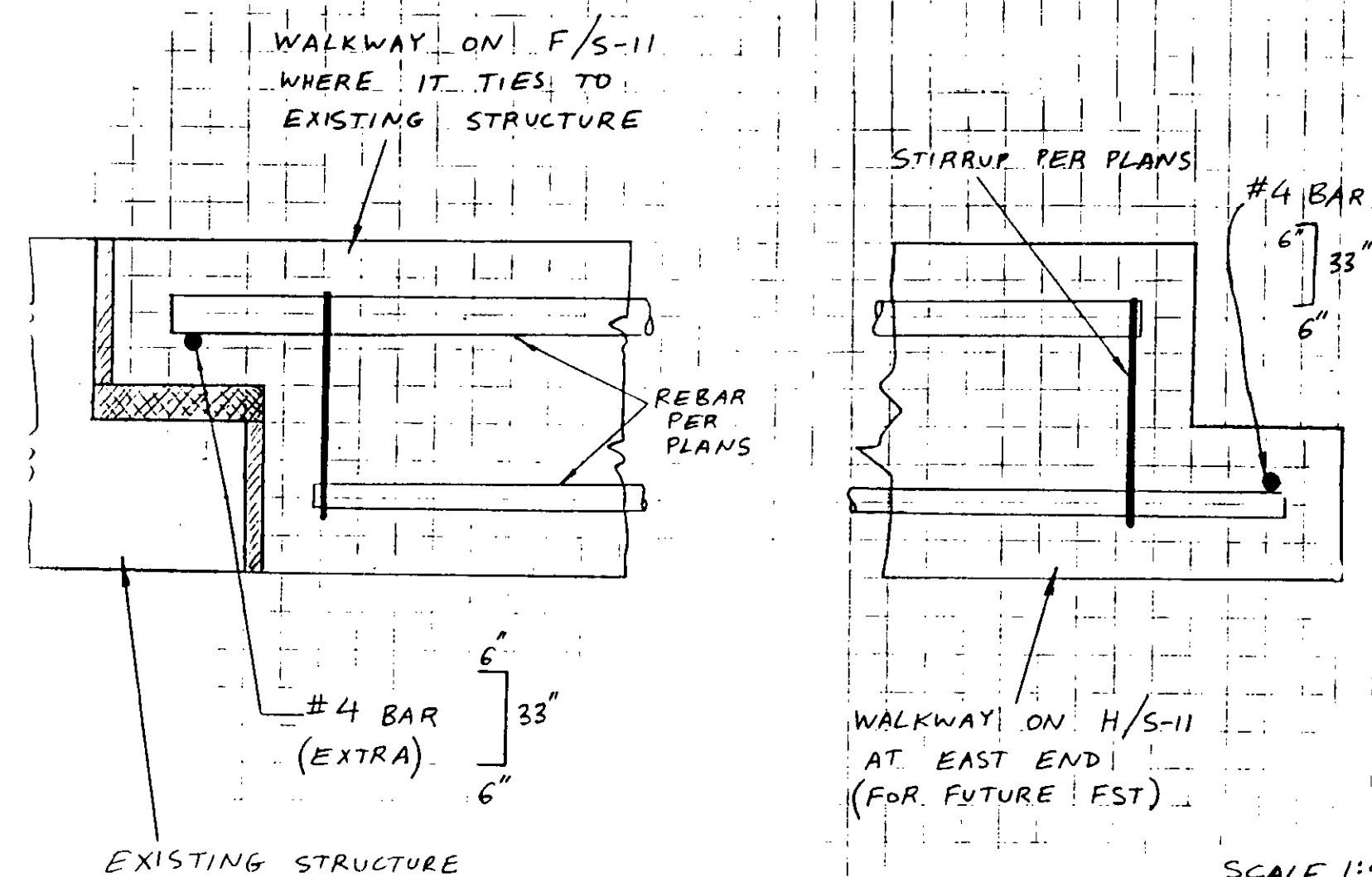
LOCATION

SECTION F/S-6

KEIWI PACIFIC CO.  
JAN 07 1988  
CALABAS, CA

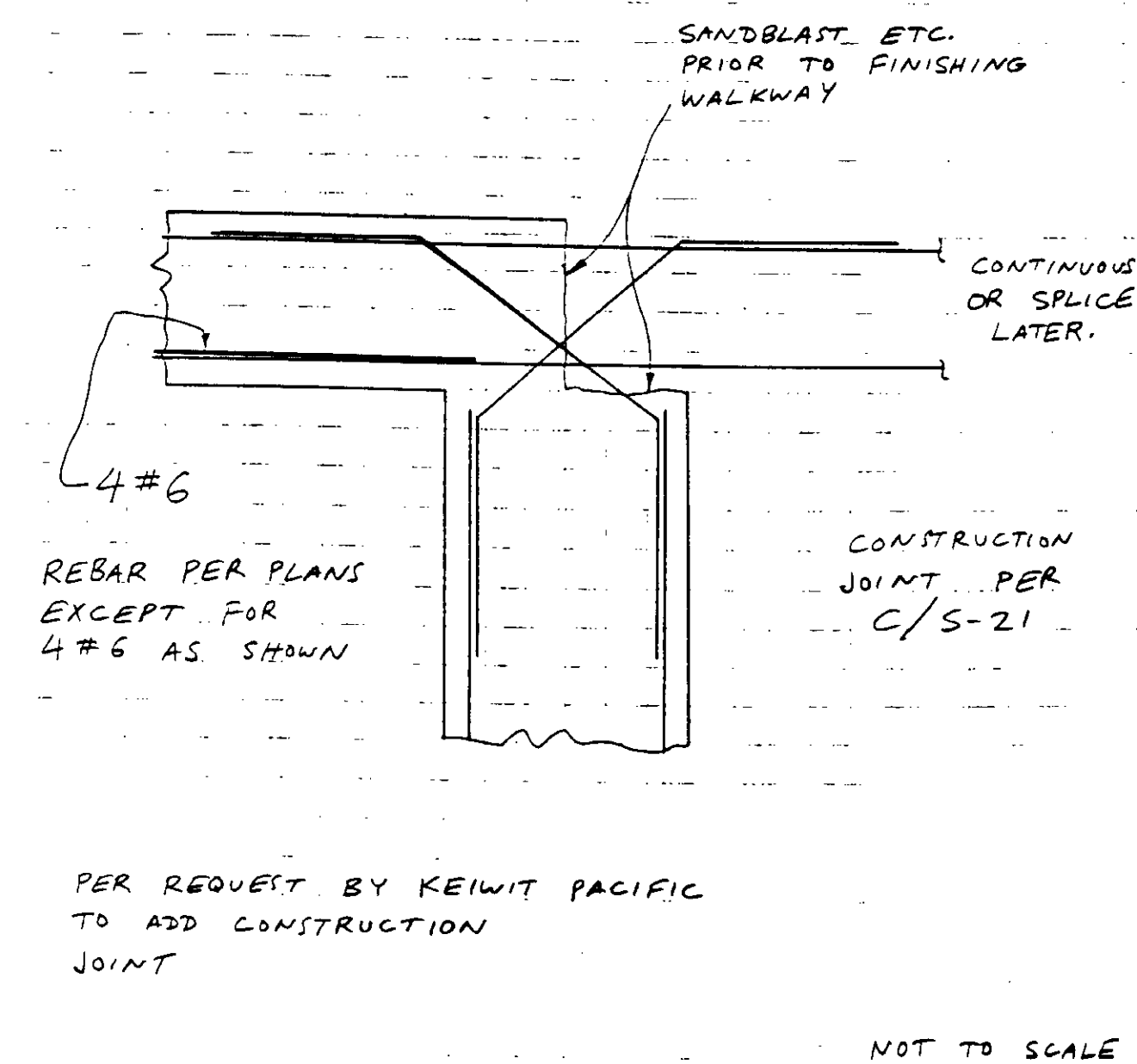


ADDITIONAL REBAR IN NOTCH



SCALE 1:4

CENTER WALL CONSTRUCTION JOINT FROM F/S-15



04009





REPLACE EXIST GRATING COVER WITH SOLID COVER, TYP.

EXISTING PRIMARY SEDIMENTATION TANK No. 1

REMOVE EXISTING ALUM. COVERS FOR TANKS 1 & 2 & INSTALL NEW ALUM. COVERS SEE DETAIL SHT. MM-6

EXISTING PRIMARY SEDIMENTATION TANK No. 2

RESEAL EXISTING TANK COVERS FOR EXISTING TANK No. 3 SEE DETAIL SHT. MM-10

EXISTING PRIMARY SEDIMENTATION TANK No. 3

PRIMARY SEDIMENTATION TANK COVERS NOT SHOWN (TYP) SEE SHT. MM-7

EXIST. HANDRAIL TO BE SALVAGED & RELOCATED AS SHOWN

PROPOSED PRIMARY SEDIMENTATION TANK No. 4

CONNECT TO EXISTING SEE HANDRAIL DETAIL-G

2" Ø DRAIN W/ SOLID COVER (TYPICAL)

EXP. JT.

3'-1" SPAN

ALUM. VALVE BOX & COVER

PRIMARY EFFLUENT LAUNDERS - SEE SHT. MM-33

EXISTING HANDRAIL TO BE SALVAGED & RELOCATED AS SHOWN

EXIST. HANDRAIL TO BE SALVAGED AND RELOCATED AS SHOWN

TYPE-3 FLOOR FLANGE

PROPOSED PRIMARY SEDIMENTATION TANK No. 5

CONSTRUCTION JOINT - (TYP)

EXP. JT.

1'x1' (TYP)

ALUM. VALVE BOX & COVER

SEE HANDRAIL DETAIL-A

24" Ø INFLUENT SLIDE GATE TYPICAL OF TANK 5 SEE SHEET MM-27

SEE HANDRAIL DETAIL-B

DOWNWARD SLUICE GATE SEE SHT. MM-27

3/8" ALUM. TREAD P. SEE TYP TREAD P. PLAN & SECTION A1

SEE HANDRAIL DETAIL-O

SEE HANDRAIL DETAIL-H & N.

SEE HANDRAIL DETAIL-D & N. (TYP)

SEE HANDRAIL DETAIL-A

3/8" ALUM. TREAD P. SEE TYPICAL PLAN & SECTION A1 & A2

SEE HANDRAIL DETAIL-F.

SEE HANDRAIL DETAIL-R & N.

REINFORCED CONCRETE STAIRWELL No. 2 SEE SHT. MM-22


STOP LOG FRAME TYPE IV SEE SHT. MM-32

SOUTHERN EXTENT OF HANDRAIL DETAIL-N.

**NOTES:**

1. FOR TYPICAL HANDRAIL (HR.) DETAILS SEE SHEETS MM-20 & MM-21.
2. FOR TYPICAL GRATING DETAILS SEE SHEETS MM-17 & MM-18.
3. FOR TYPICAL TREAD PLATE (TREAD P.) DETAILS SEE SHEETS MM-15 & MM-16.
4. FOR REINFORCED CONCRETE STAIRWELL HANDRAIL DETAILS SEE SHEETS MM-22 & MM-23.
5. FOR ALUMINUM (ALUM.) STAIRWAY DETAILS SEE SHEET MM-24.
6. FOR PRIMARY SEDIMENTATION TANK COVERS SEE SHEETS MM-6 to 14.
7. FOR STOP LOG DETAILS SEE SHEETS MM-32 & MM-33.
8. FOR SLIDE GATE DETAILS SEE SHEETS MM-27 to MM-31.
9. ALL STOP LOGS SHALL HAVE ALUM. TREAD PLATE COVERS.
10. WHERE ALUM. HANDRAILS ARE SUPPORTED ON STRUCTURAL STEEL MEMBERS, THE ALUM. SHALL BE PROPERLY INSULATED TO PREVENT CONTACT WITH THE STEEL.

**LEGEND:**

-  - TREAD PLATE.
-  - GRATING.

**PLAN**

04011



RECORD DRAWINGS  
 PREPARED BY: SIEMT PAPER CO.  
 KALEX CONSULTING ENGINEERS JUNE 1987

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'	DESIGNED: Y.K./C.C.	SUBMITTED: <i>Yoshitiro Katsura</i> 14038 6-7-87
	DRAWN: J.K.	KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE
	CHECKED: Y.K.	
		ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

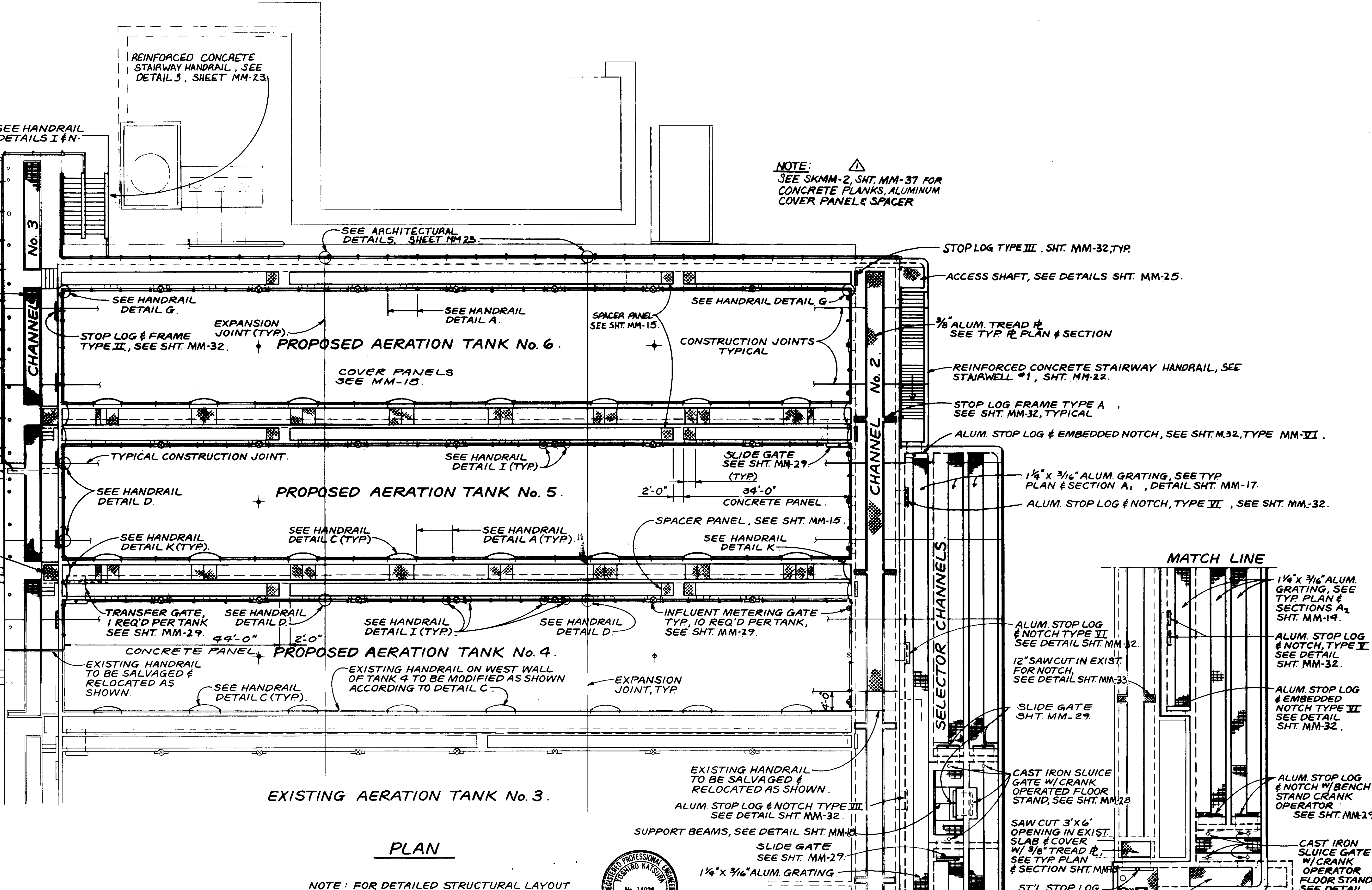
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PRIMARY SEDIMENTATION TANKS, GENERAL LAYOUT

SHEET  
**MM-1**

(HIDDEN FROM VIEW.)  
ALUM STAIRWAY #2  
TO GALLERY 3  
SEE DETAIL SHT. MM-24.

NOTE:  
SEE SKMM-2, SHT. MM-37 FOR  
CONCRETE PLANKS, ALUMINUM  
COVER PANEL & SPACER

FOR CONTINUATION SEE SHT. MM-3.



**PLAN**

NOTE: FOR DETAILED STRUCTURAL LAYOUT  
& DIMENSIONS OF AERATION TANKS  
SEE DRAWINGS S-3-2 & S-3-3.



RECORD DRAWING  
KALEX ENGINEERS  
KATSUMI CONSULTING ENGINEERS  
NOV 1999

04012

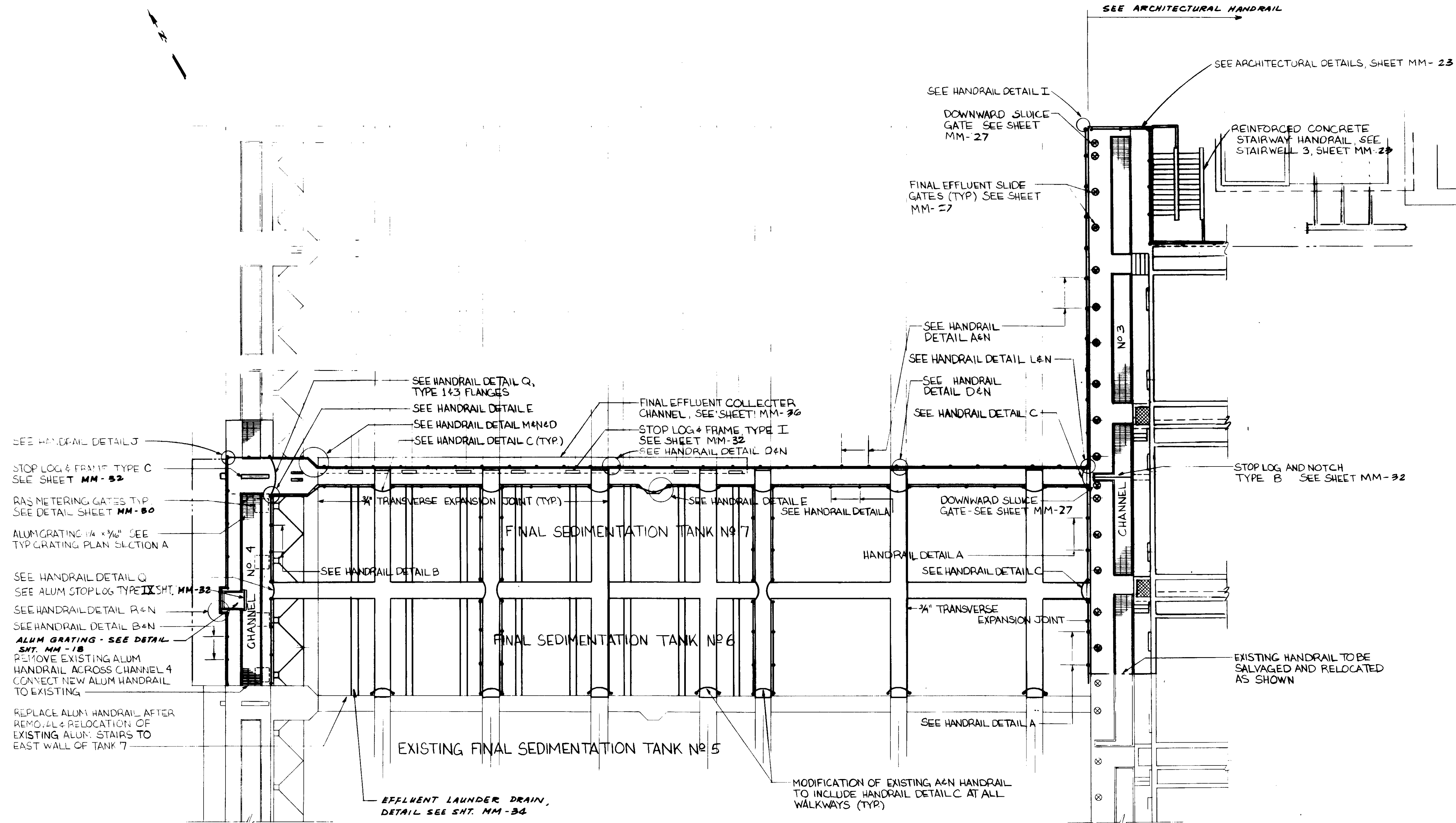
LAS VIRGENES MUNICIPAL WATER DISTRICT		SHEET <b>MM-2</b>
TAPIA WATER RECLAMATION FACILITY EXPANSION III		
AERATION TANKS, GENERAL LAYOUT		

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'-0"	DESIGNED JK	DATE 8-7-87
DRAWN JK	CHECKED JK	DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California      Glendora, California





FOR CONTINUATION SEE SHEET NO MM-2

FOR DETAILED STRUCTURAL LAYOUT AND DIMENSIONS OF THE FINAL SEDIMENTATION TANKS, SEE SHT. M4-7

# PLAN

04013



RECORD DRAWINGS  
 PREPARED BY KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS JUNE 1988

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'-0"  
 DESIGNED: YK/CC  
 T.R.  
 DRAWN: YK  
 CHECKED: YK

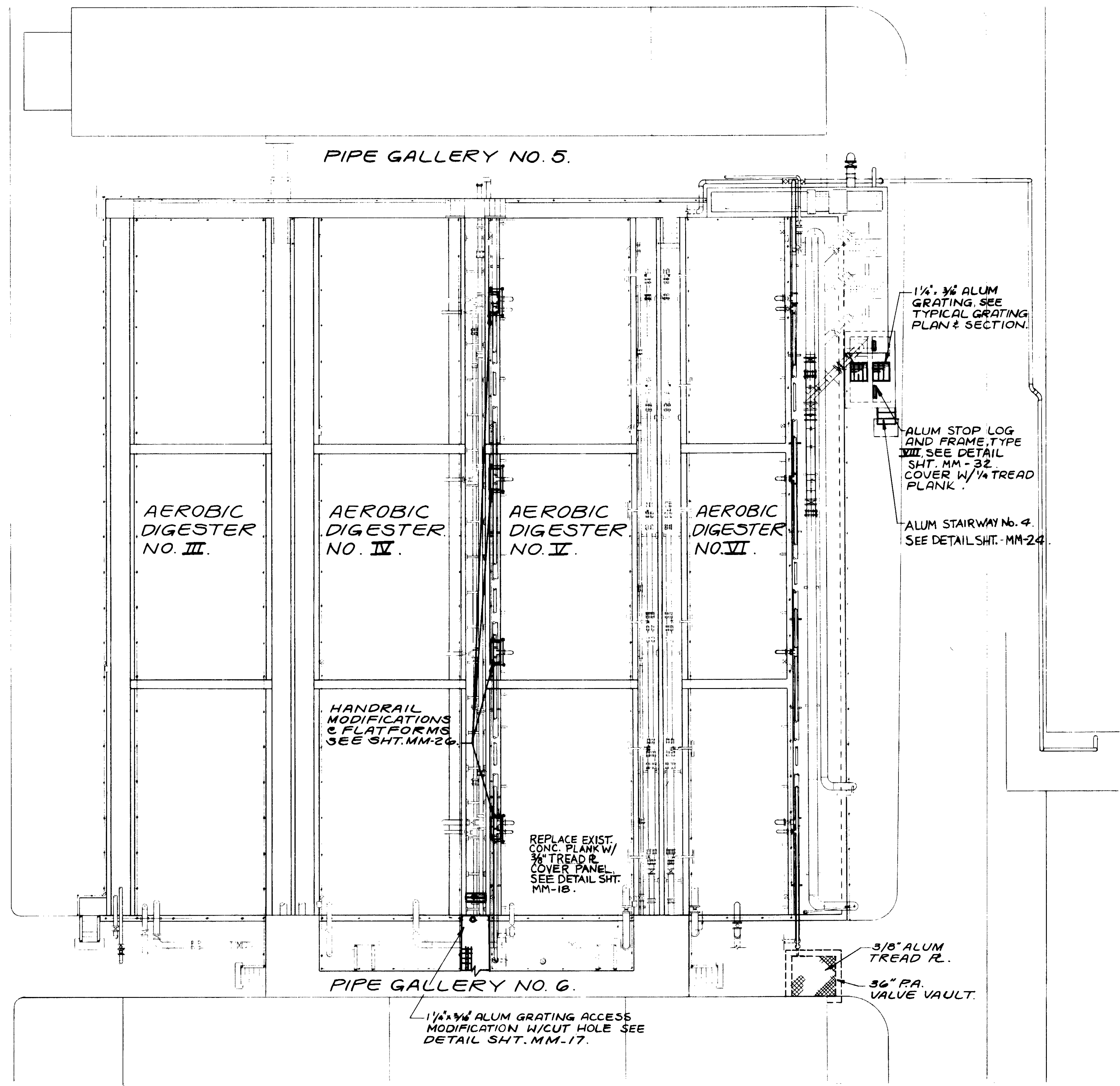
SUBMITTED: *Yoshio Katsura* 14038 8-7-87  
 KALEX CONSULTING ENGINEERS R.C.E. NO. DATE  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**FINAL SEDIMENTATION TANKS, GENERAL LAYOUT**

SHEET  
**MM-3**





04015



RECORD DRAWINGS  
 FOR FILE MAINTAINED BY FIRST PARTY COOP.  
 KATSURA CONSULTING ENGINEERS JUNE 1988

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'  
 DESIGNED YK/CC  
 DRAWN PN  
 CHECKED YK

SUBMITTED *Yoshitiro Katsura* 14038 8-7-87  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 ALEXANDER ENGINEERS 513 R.C.S.E. NO. DATE

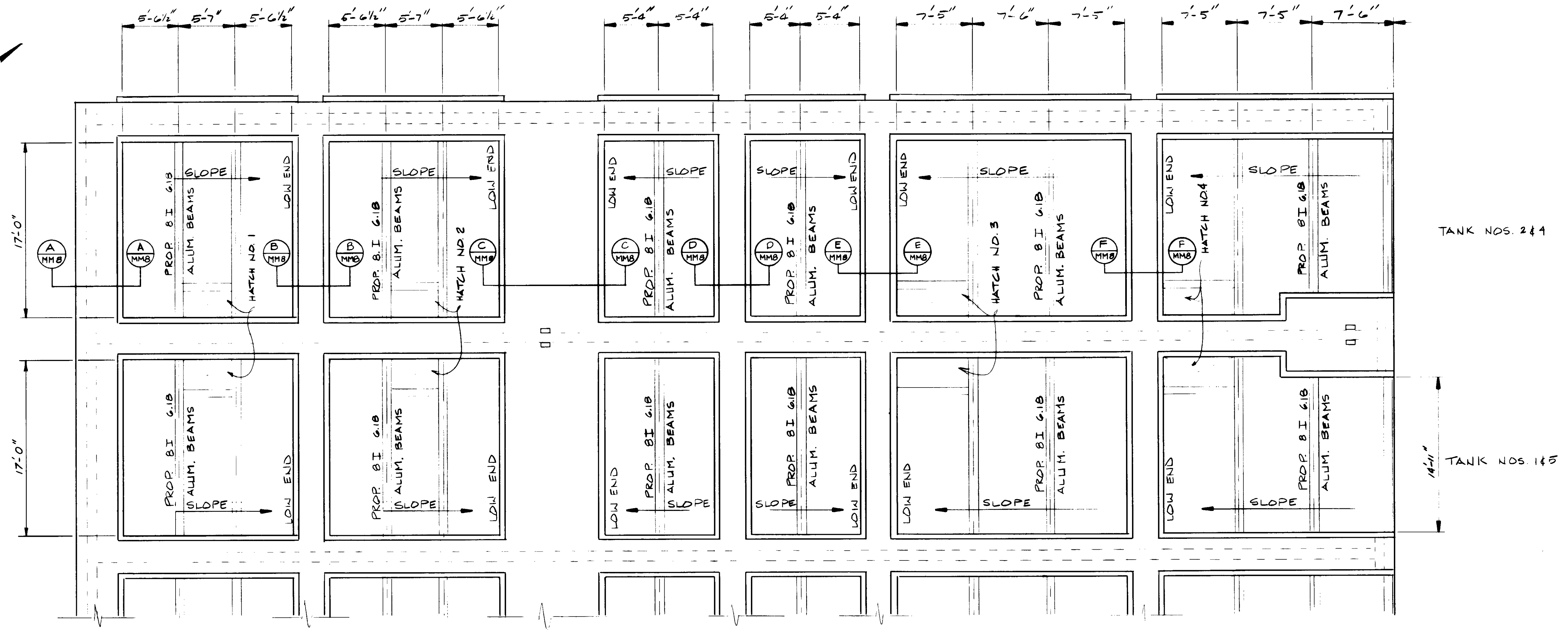
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**AEROBIC DIGESTERS, NO. III, IV, V & VI, GENERAL LAYOUT**

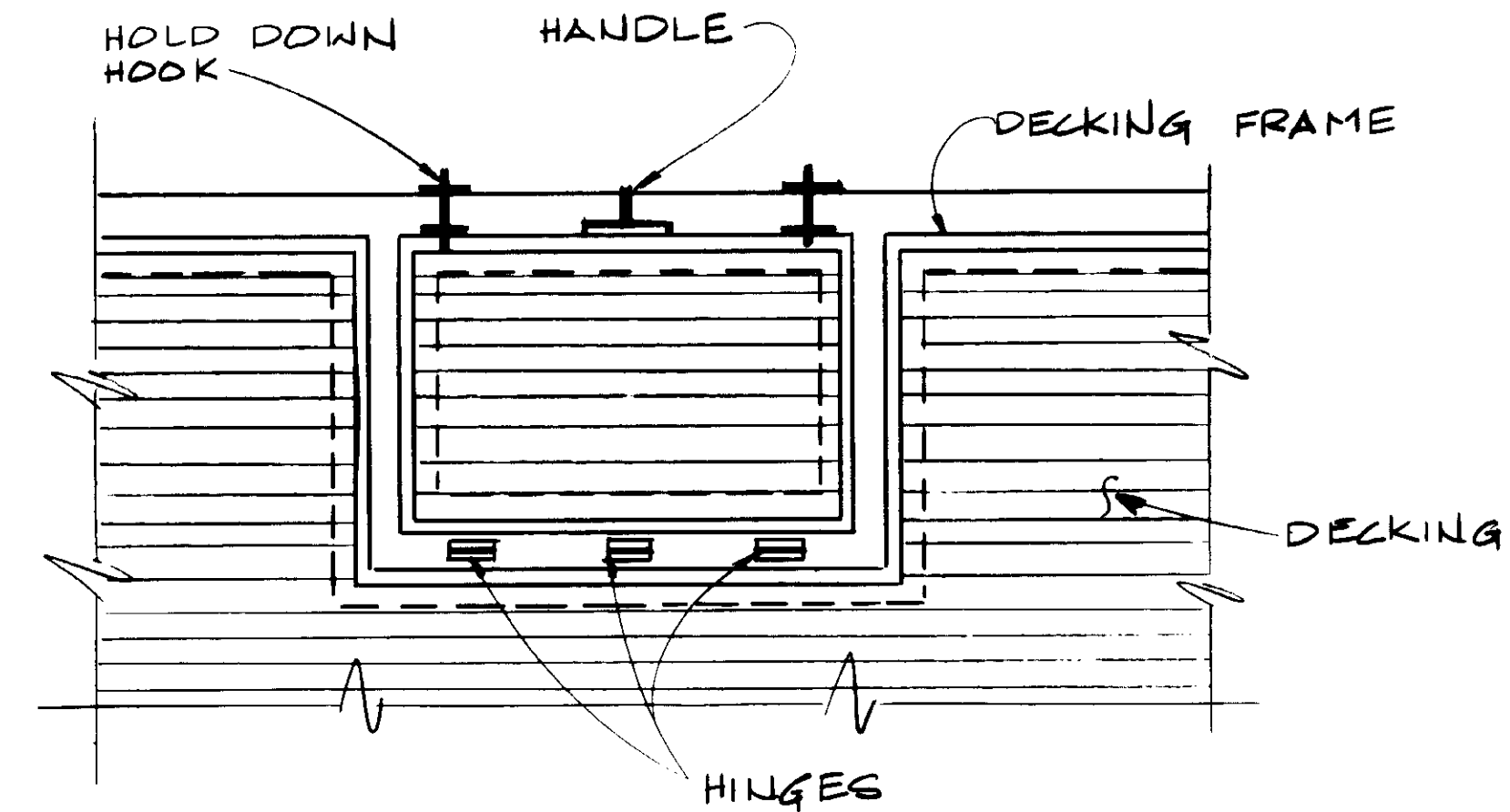
SHEET  
**MM-5**



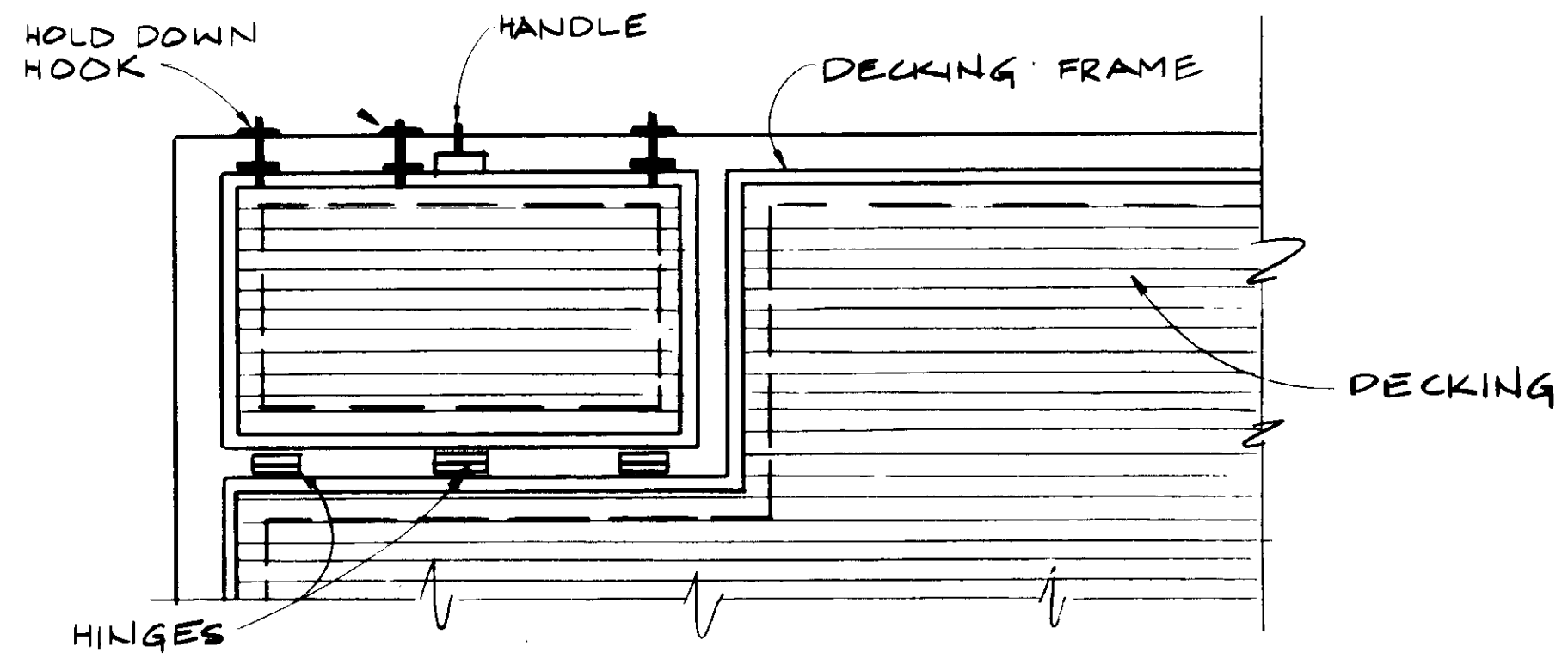




**PLAN**  
SCALE: 3/16" = 1'-0"

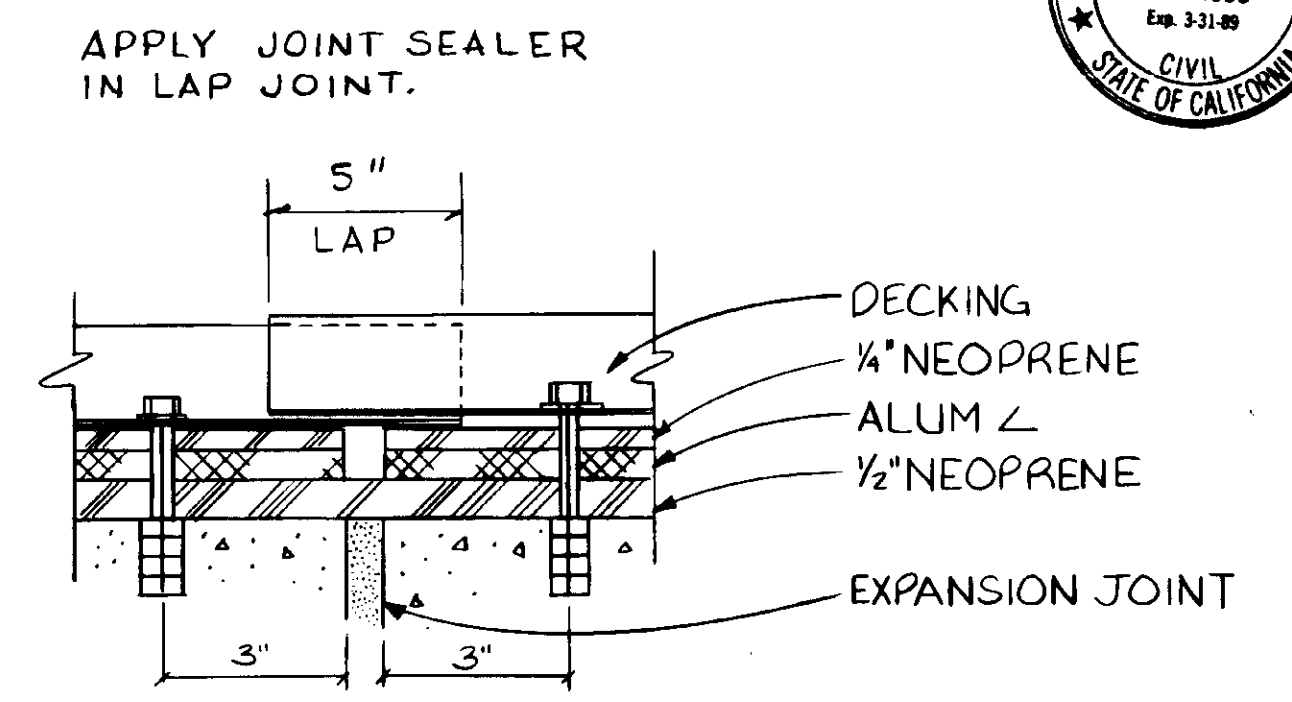


**HATCH NOS. 1 & 2**  
NOT TO SCALE



**HATCH NOS. 3 & 4**  
NOT TO SCALE

**NOTES:**



**COVER DETAIL @ EXPANSION JOINT**  
NO SCALE

RECORD DRAWINGS  
Pre-Filed Information by NORTH PACIFIC CORP.  
*[Signature]*  
KATSURA CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED.  
DESIGNED: Y.K./C.L.  
C.L./T.R.  
DRAWN: Y.K.  
CHECKED:  

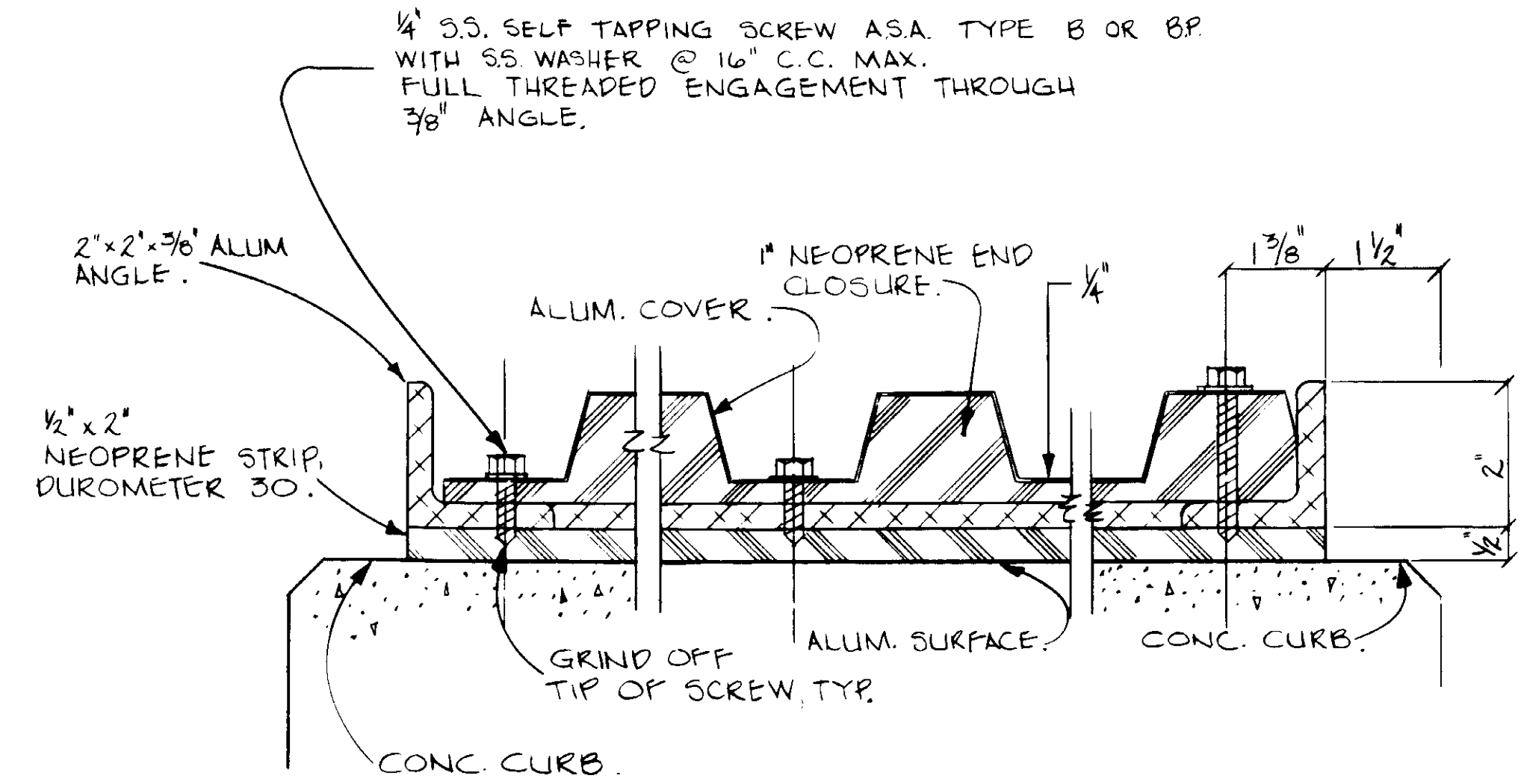
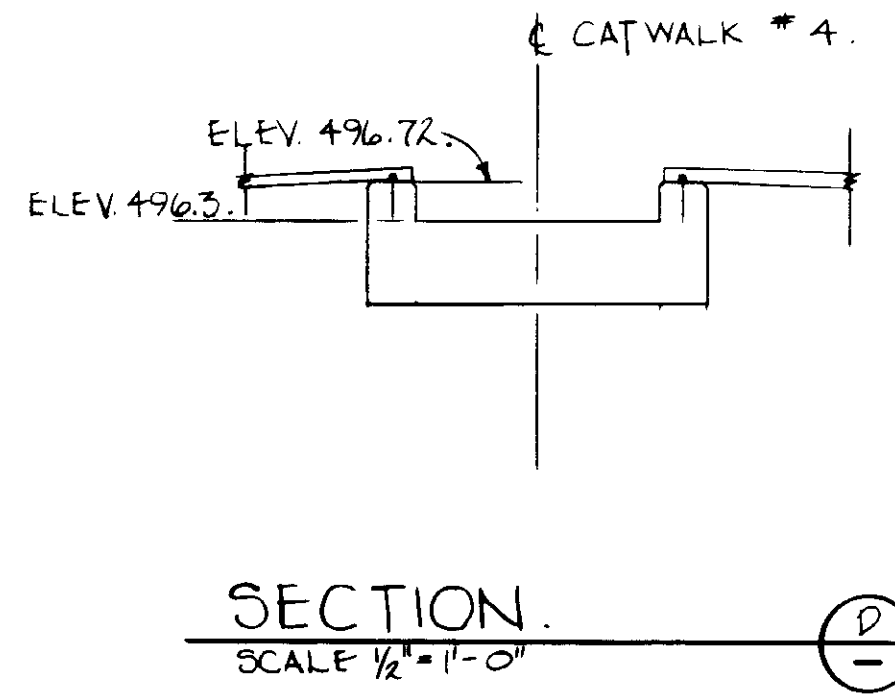
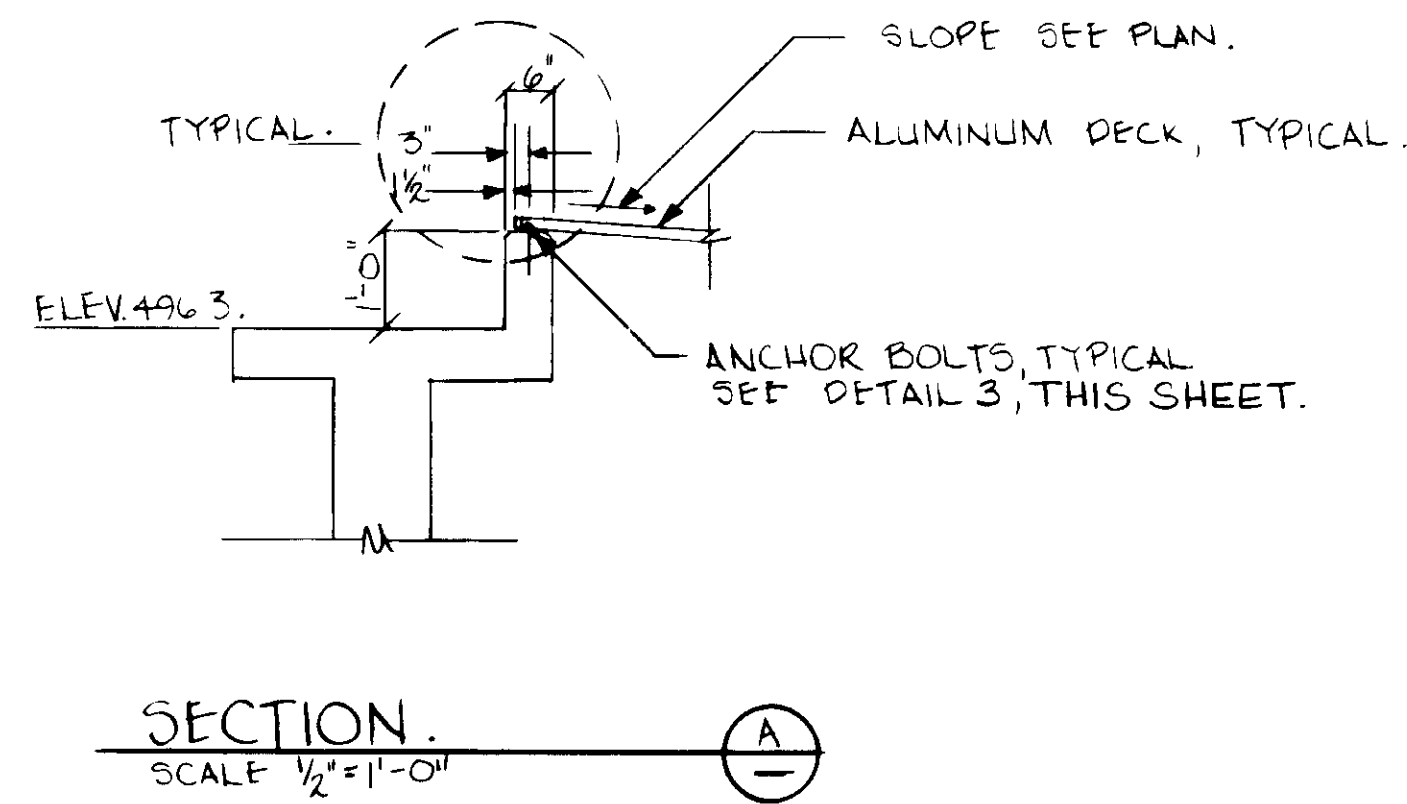
SUBMITTED: *[Signature]* 8-7-87  
KATSURA CONSULTING ENGINEERS R.C.E. NO. 14038 DATE  
ALEXANDER ENGINEERS R.C.E. NO. 513 DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

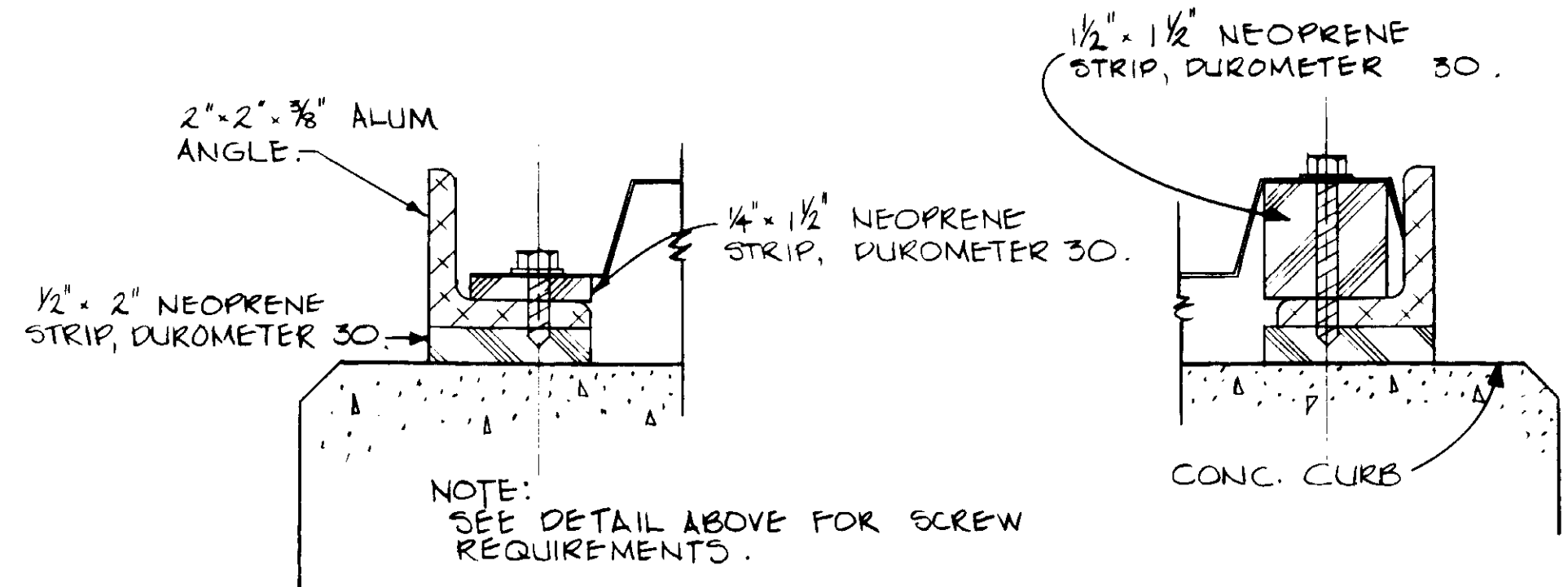
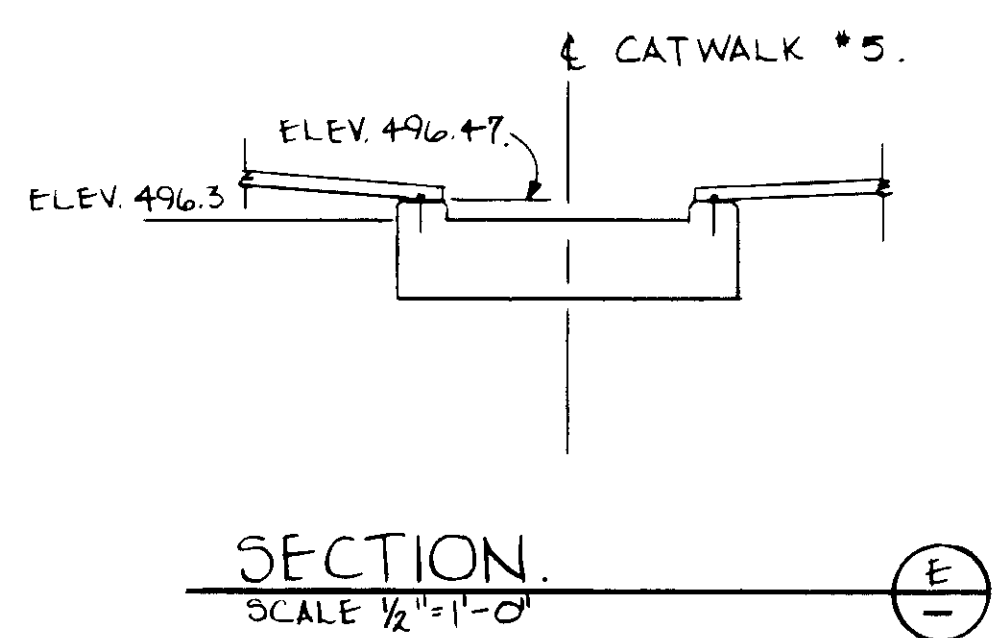
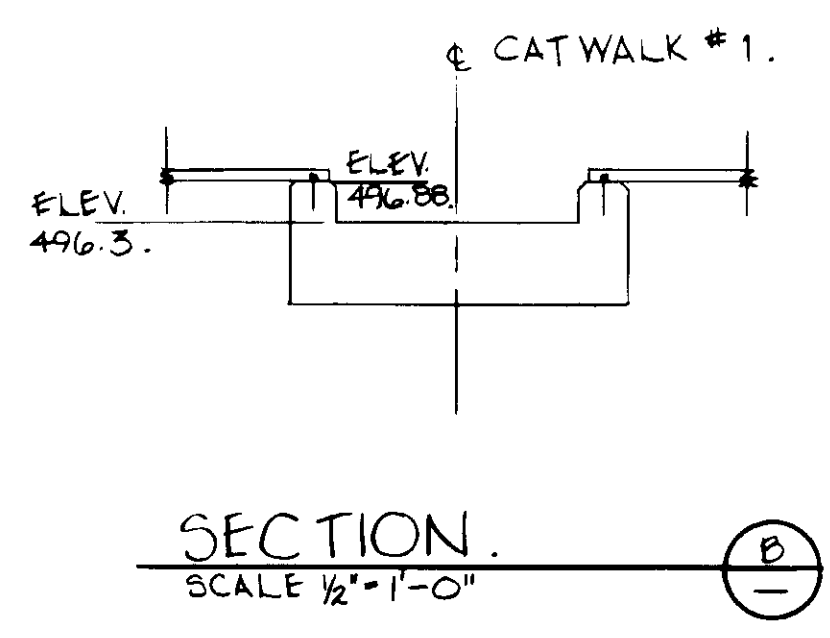
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**PRIMARY SEDIMENTATION TANK COVER, LAYOUT**

SHEET  
**MM-7**

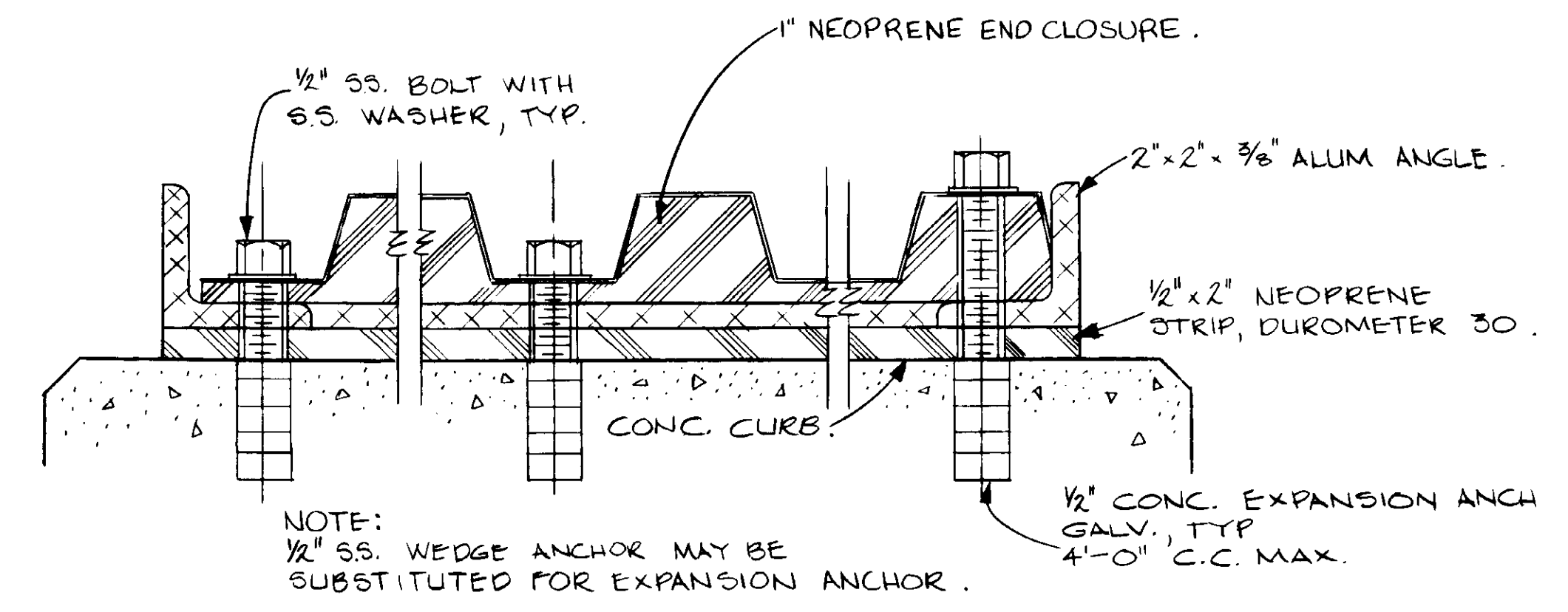
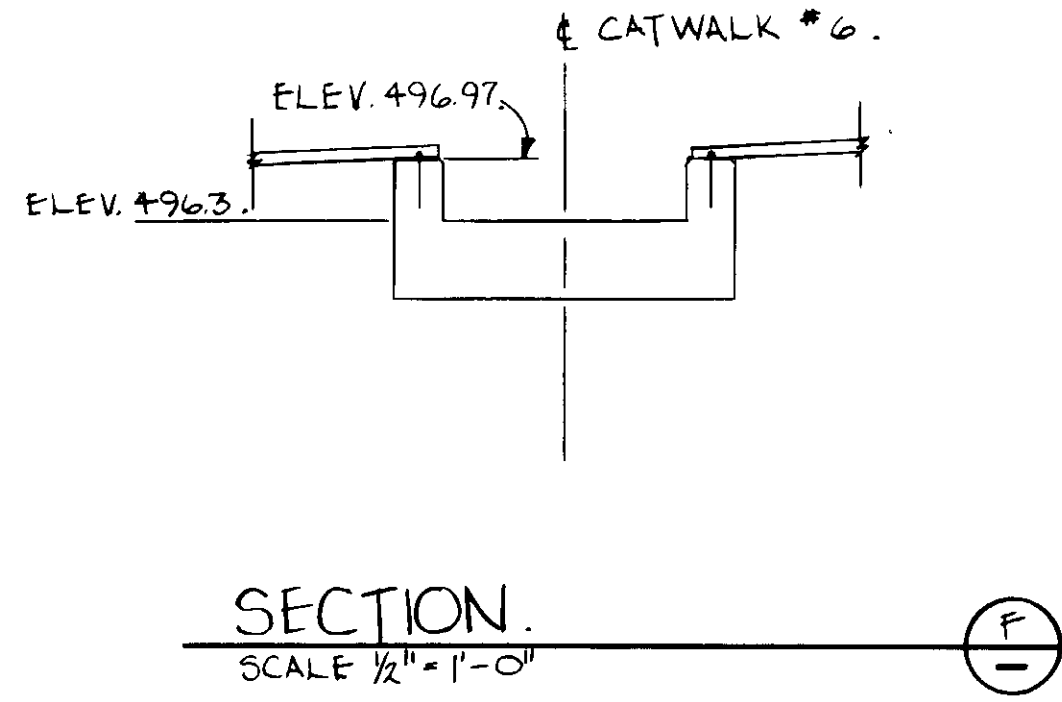
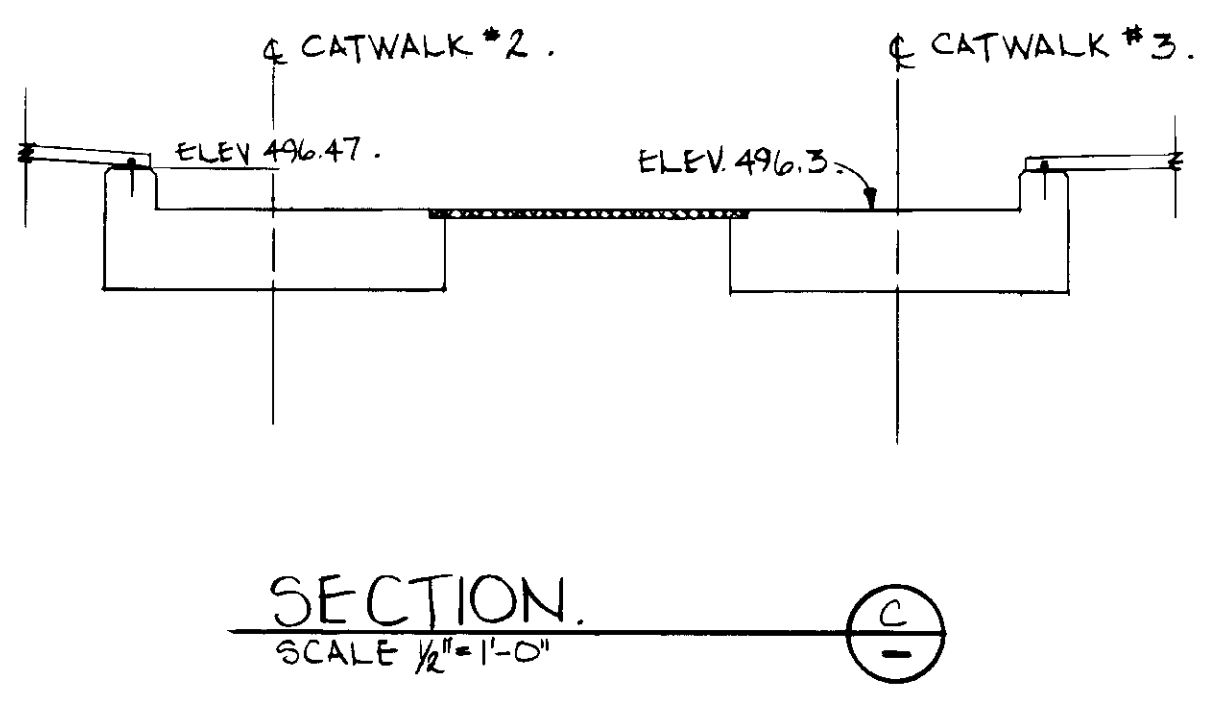
**04017**



DETAIL 1: COVER TO FRAME ATTACHMENT AT END CLOSURE SEAL. SCALE: 1/2" = 1'



DETAIL 2: COVER TO FRAME ATTACHMENT & SEAL (LONGITUDINAL DIRECTION) SCALE: 1/2" = 1'



DETAIL 3: FRAME TO CONCRETE CURB ATTACHMENT & SEAL. SCALE: 1/2" = 1'

RECORD DRAWINGS  
 PREPARED BY: KATSUMA CONSULTING ENGINEERS  
 JUN 1988



04018

REV	DATE	BY	DESCRIPTION

SCALE:	JB/YK.
AS SHOWN	T.R.
DRAWN	YK
CHECKED	

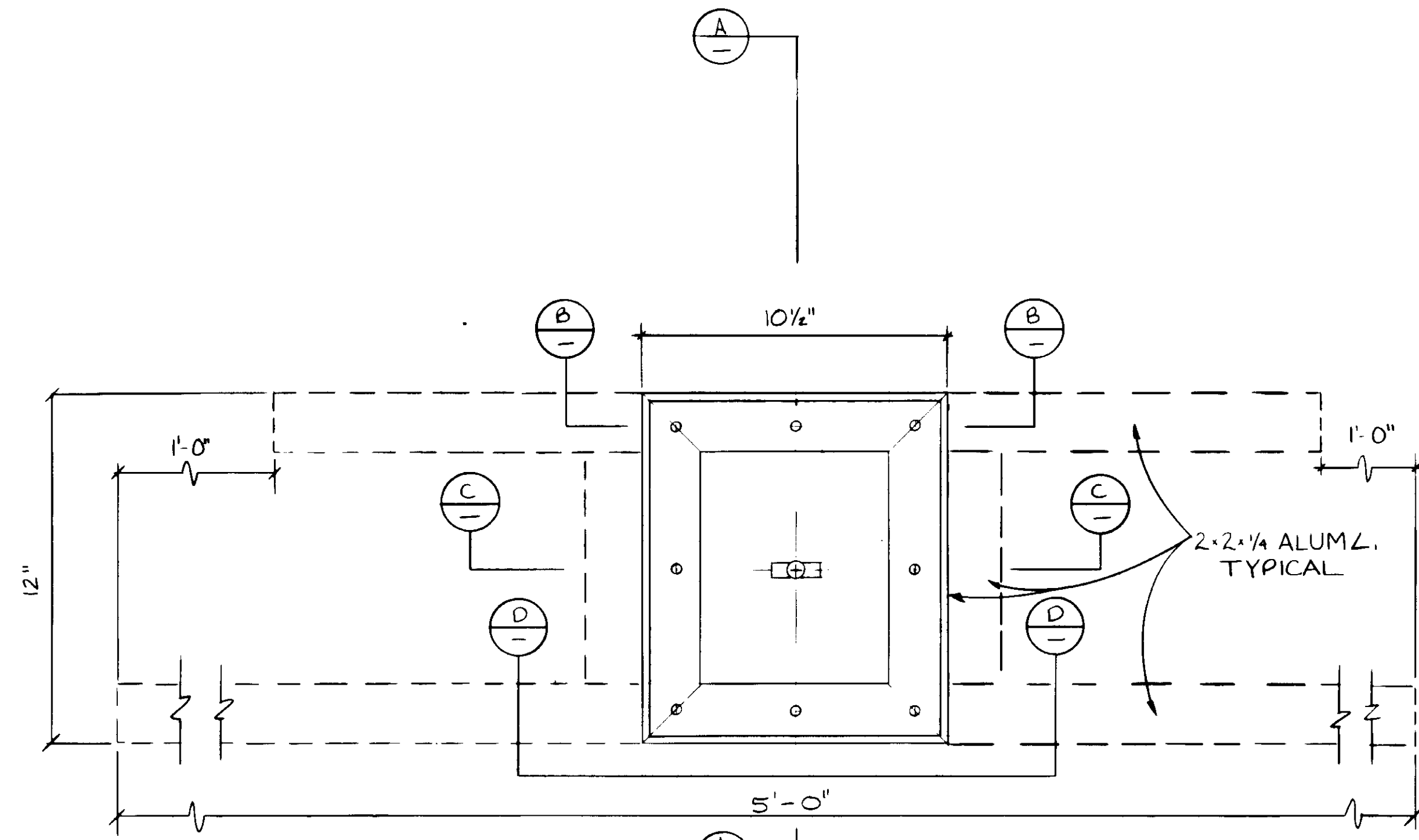
SUBMITTED	14038	8-7-87
DESIGNED	T.R.	DATE
DRAWN	YK	
CHECKED		

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III	
PRIMARY SEDIMENTATION TANK COVER, DETAILS - I	

SHEET  
MM-8

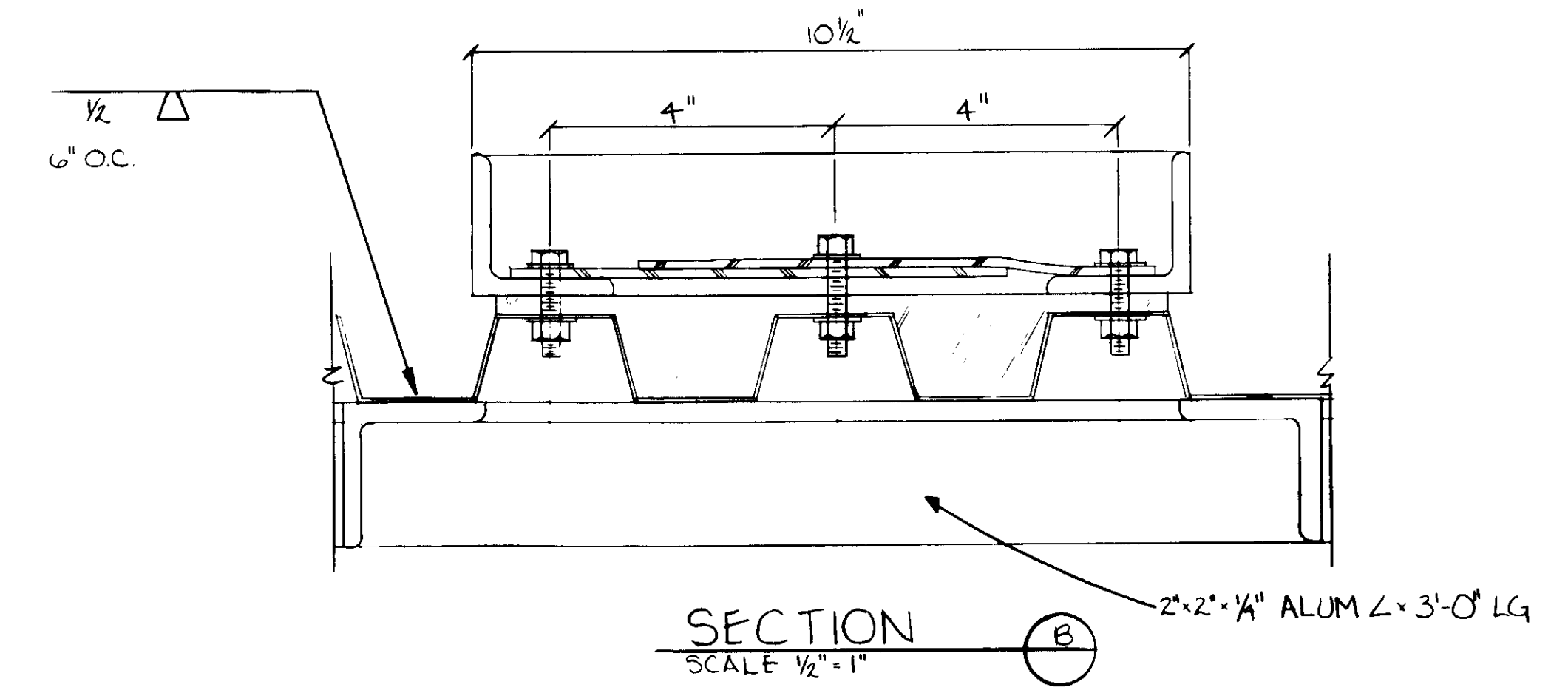




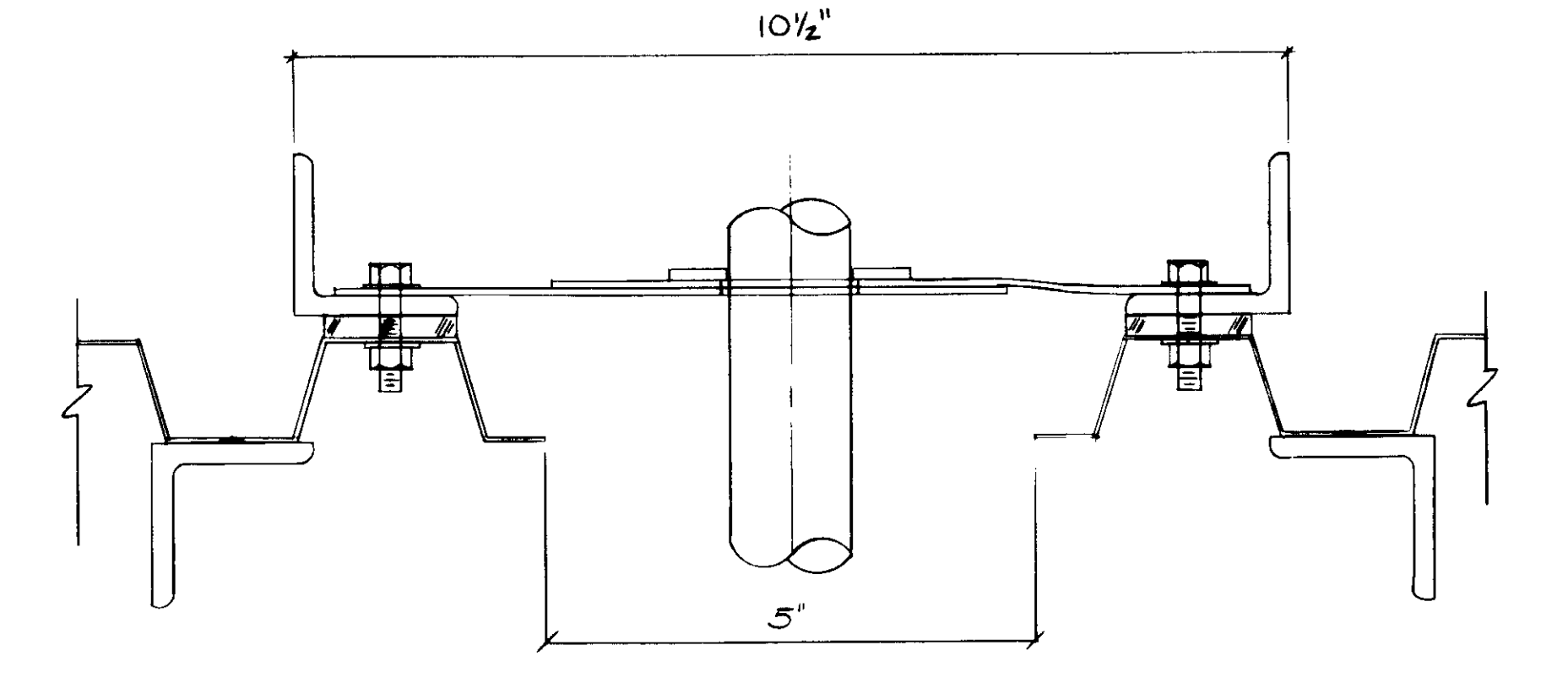
SLUDGE PROBE OPENING

PLAN  
SCALE 3" = 1'-0"

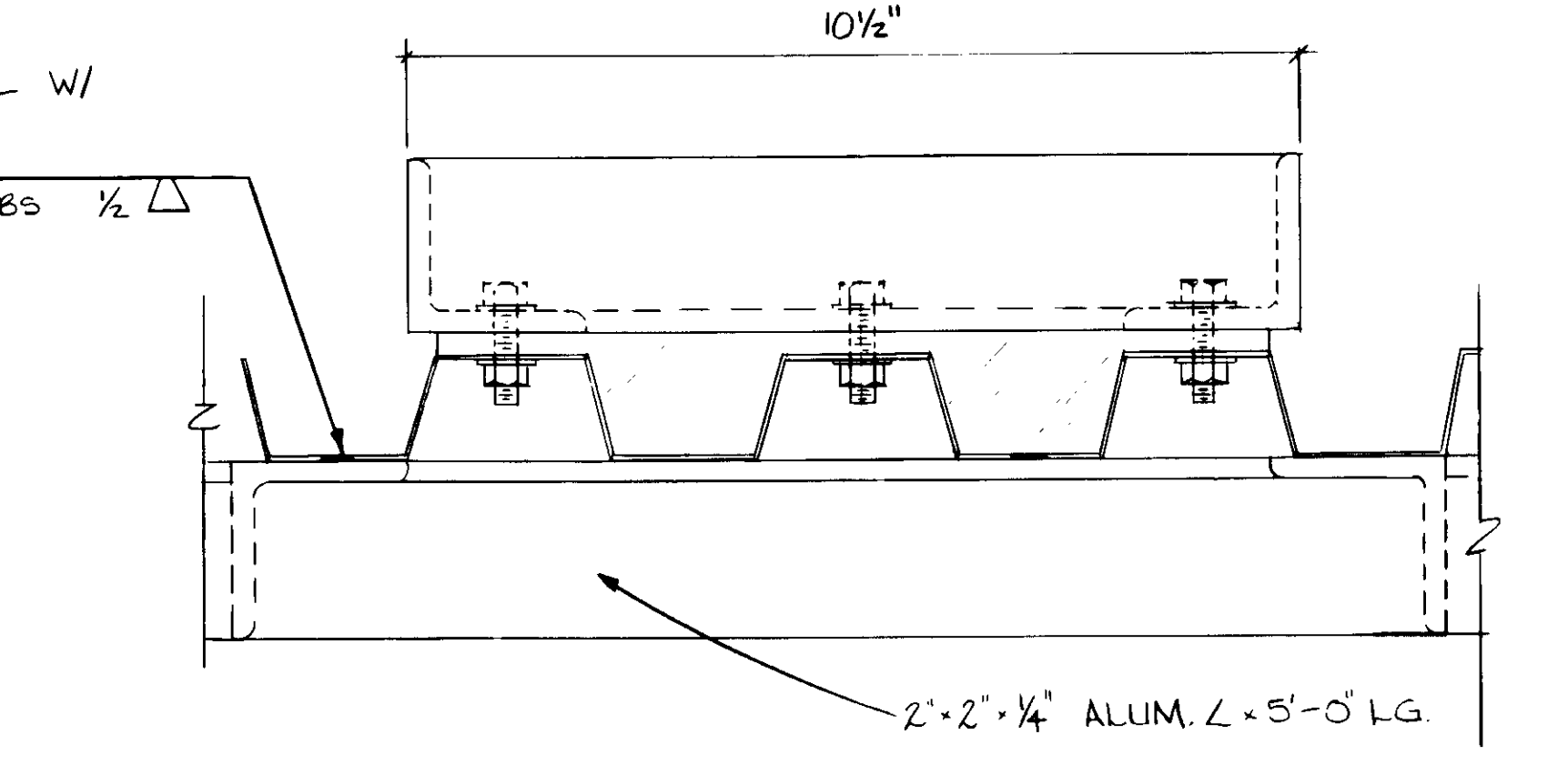
NOTE: NEOPRENE COVER NOT SHOWN



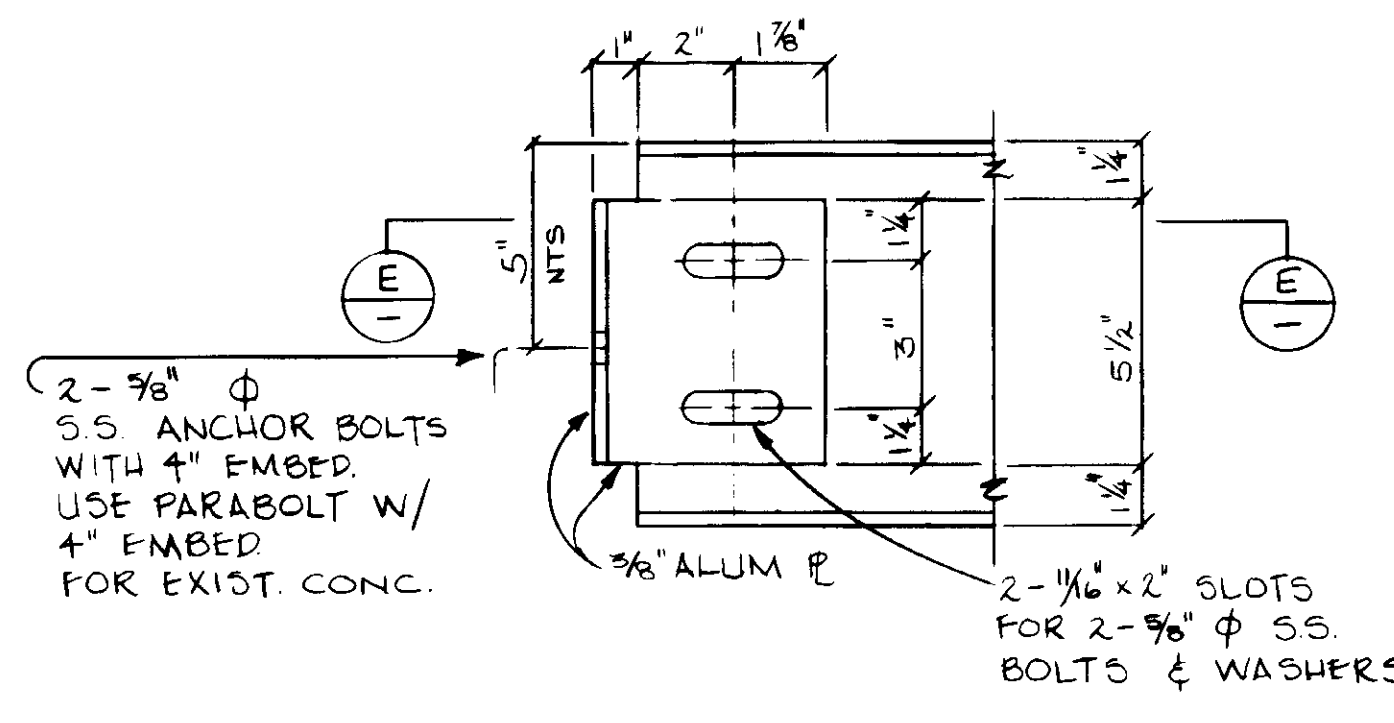
SECTION B  
SCALE 1/2" = 1"



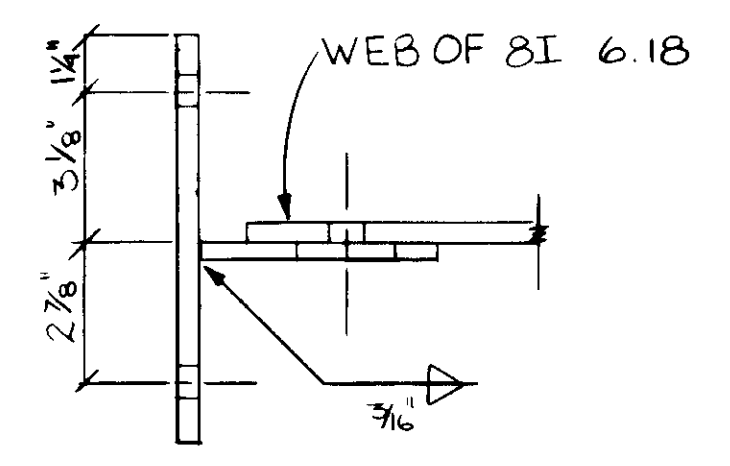
SECTION C  
NOT TO SCALE



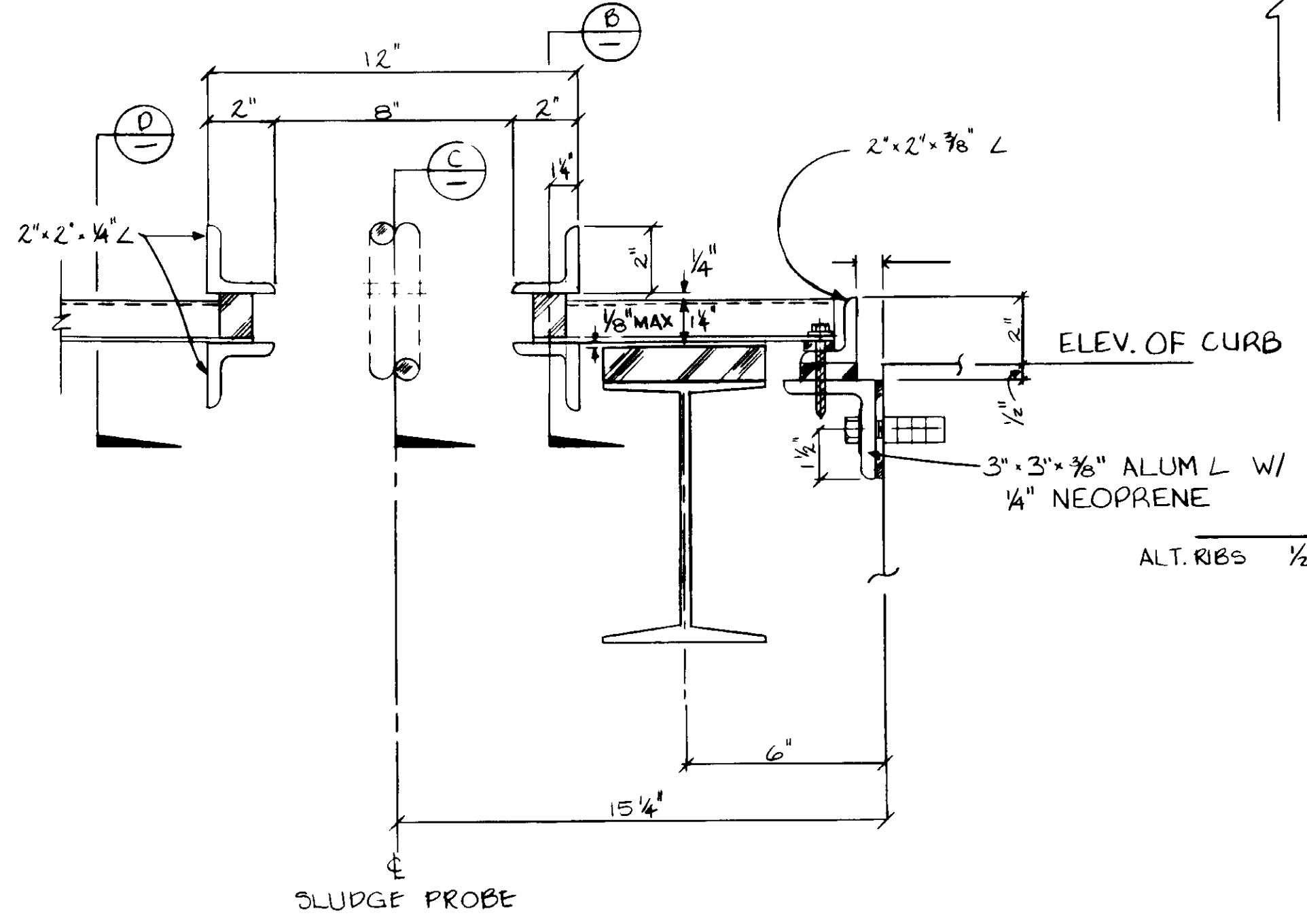
SECTION D  
SCALE 1/2" = 1"



ELEVATION  
SCALE 3" = 1'-0"



SECTION E  
SCALE 3" = 1'-0"



SECTION A  
NO SCALE

- NOTES:
1. USE 'T' FOR EXISTING 8I 6.18
  2. CHECK BOLT HOLE LOCATIONS ON EXIST. 8I 6.18 TO BE RELOCATED PRIOR TO FABRICATING 'T'S. REAM HOLES TO 1/4" Ø FOR 3/8" Ø SS. BOLTS.

8I 6.18 BEAM CONNECTIONS  
SCALE 3" = 1'-0"

04019



RECORD DRAWINGS  
FOR THIS PROJECT BY KIEWIT PARTNERS CORP.  
KATSURA CONSULTING ENGINEERS JUNE 1988

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

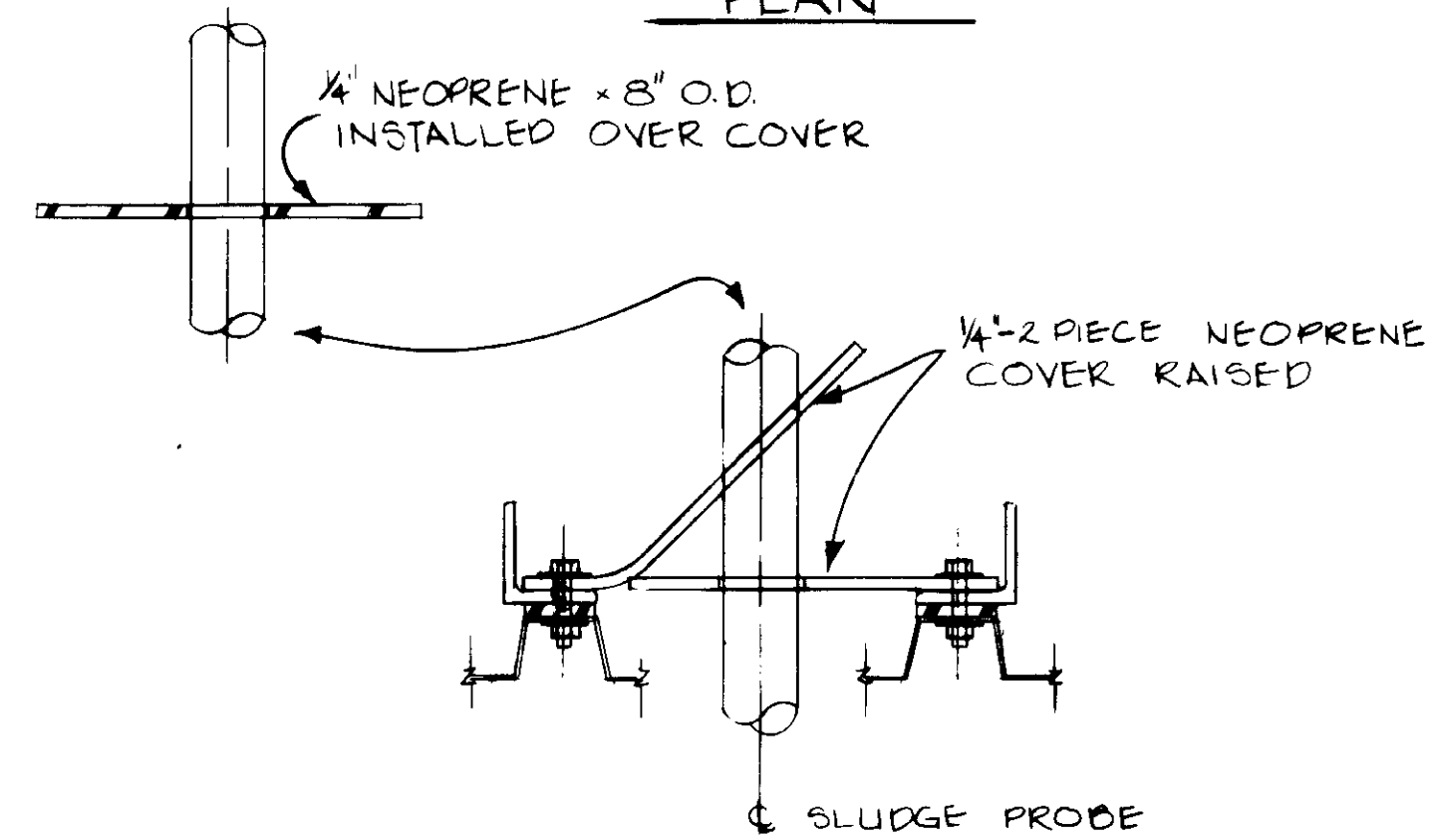
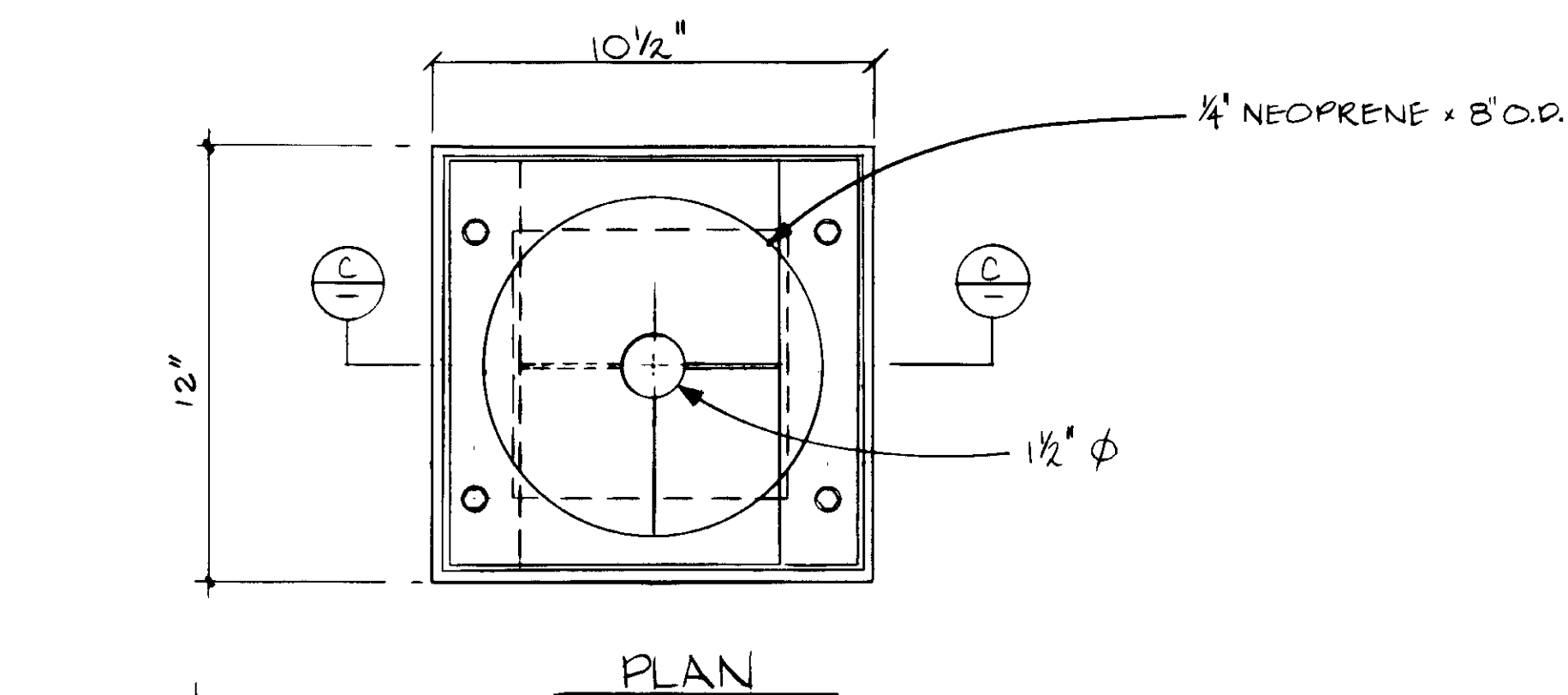
SCALE:	AS SHOWN
DESIGNED:	JB/YK
DRAWN:	J.B./TR
CHECKED:	YK

SUBMITTED:	14038	8-7-87
DATE:	8-7-87	DATE
ALEXANDER ENGINEERS	R.C.E. NO.	DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

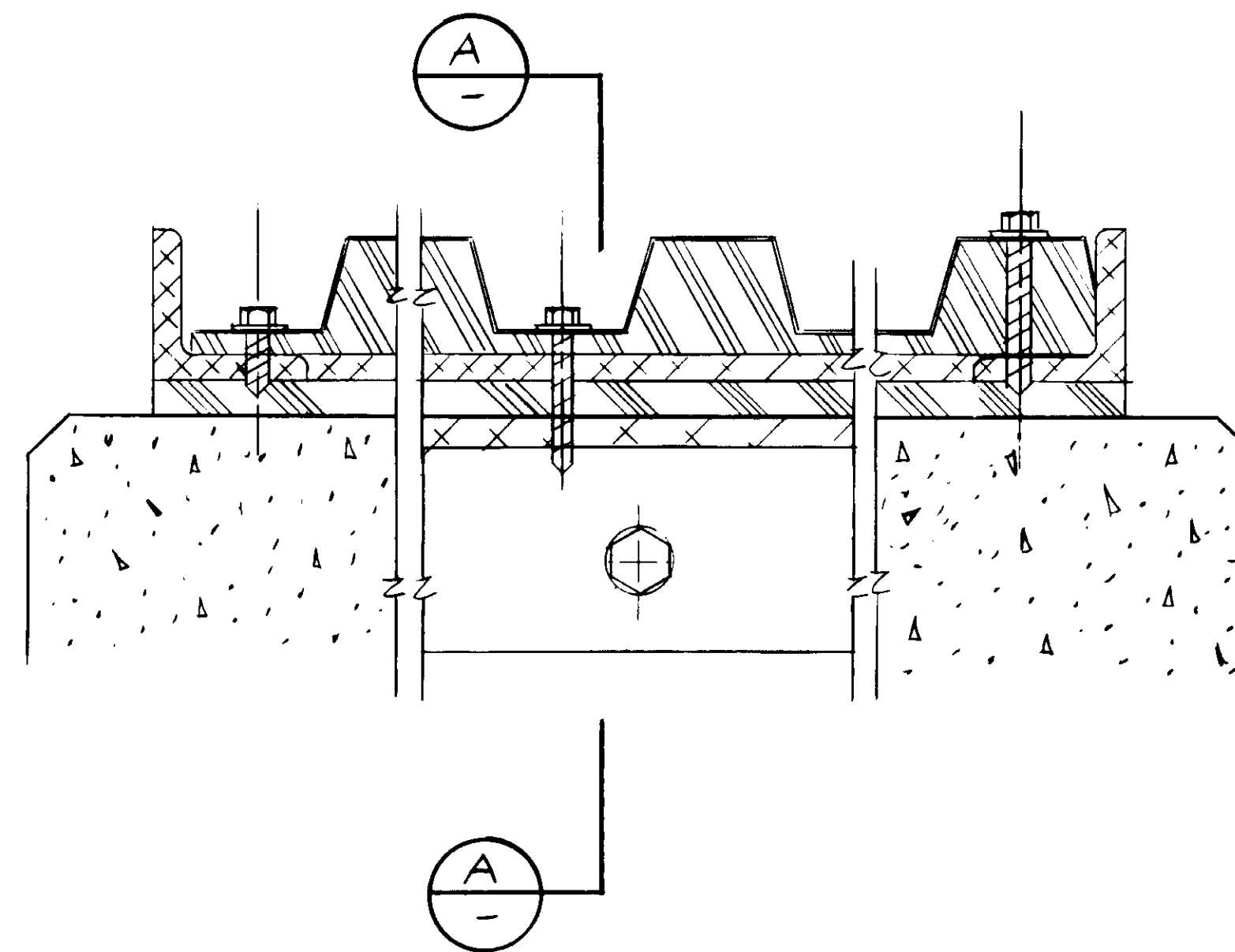
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
PRIMARY SEDIMENTATION TANK COVER, DETAILS - II

SHEET  
MM-9



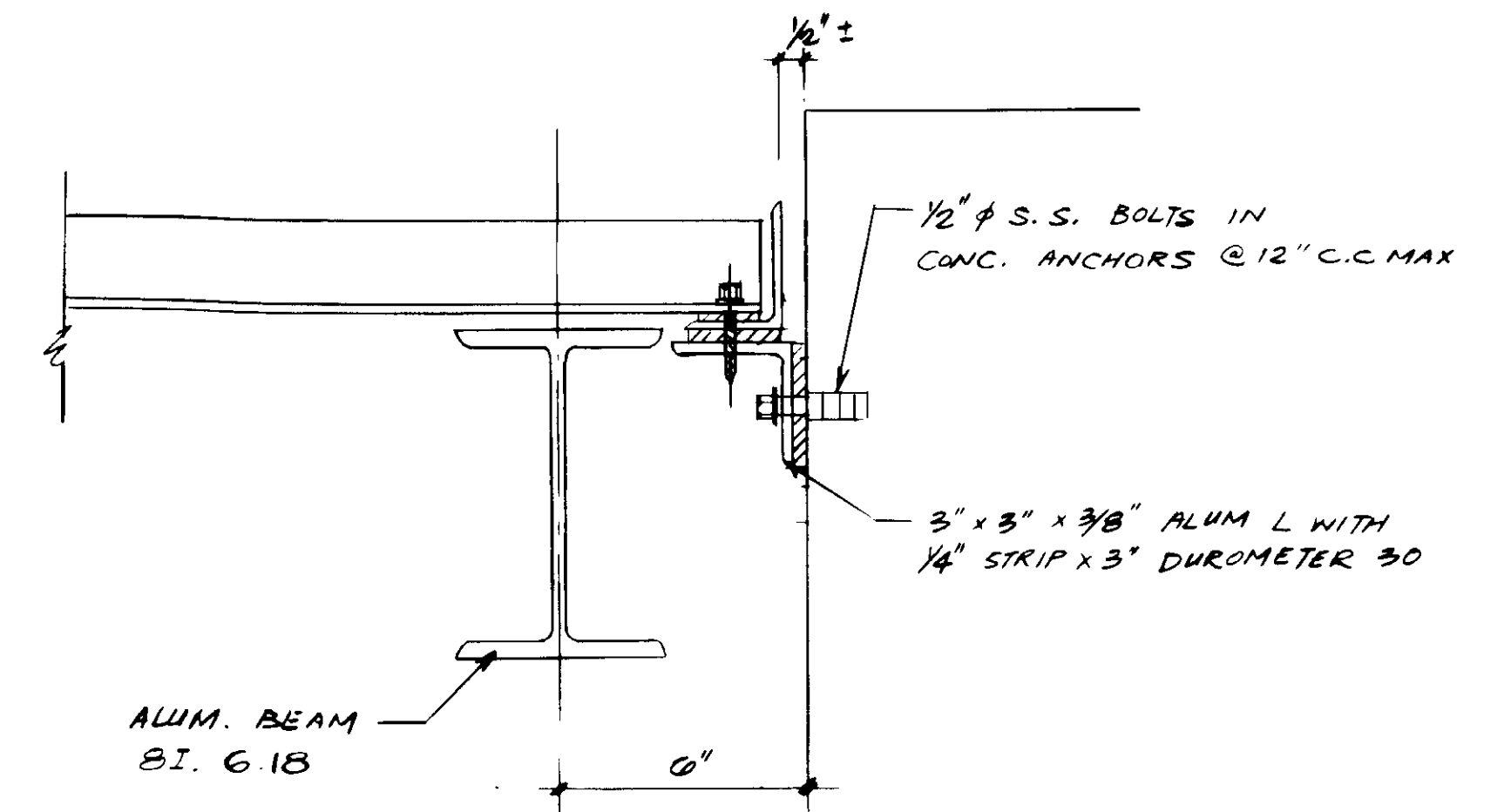
SECTION  
SCALE 3" = 1'-0"

SLUDGE PROBE SEAL



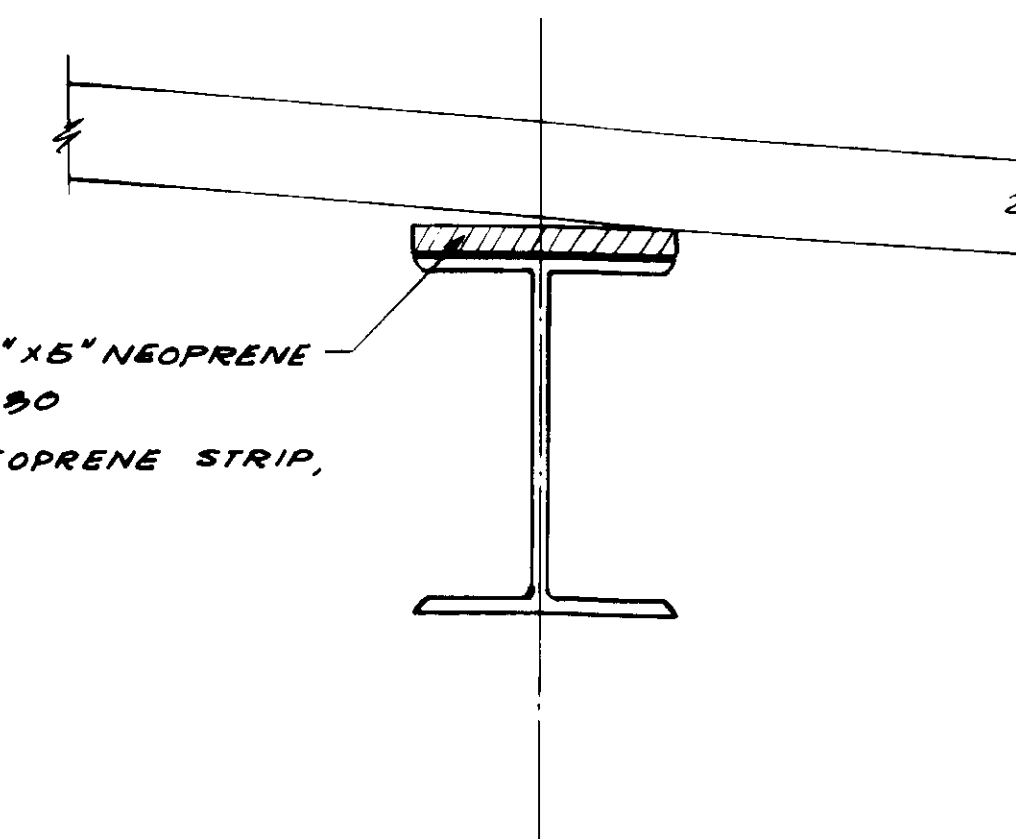
NORTH END OF TANK SEAL

NO SCALE



SECTION A

NOTE:  
1. REMOVE EXIST. LS



PST NO. 1, 2, 4 & 5: 1" x 5" NEOPRENE STRIP, DUROMETER 90  
PST NO. 3: 3/4" x 5" NEOPRENE STRIP, DUROMETER 90

N-S SECTION THROUGH 8I. 6.18 BEAM. TYP.

NO SCALE

04020

RECORD DRAWING  
FOR THIS DRAWING SEE AIRPORT RECORDS  
*[Signature]*  
KATSURA CONSULTING ENGINEERS 2008 1000



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

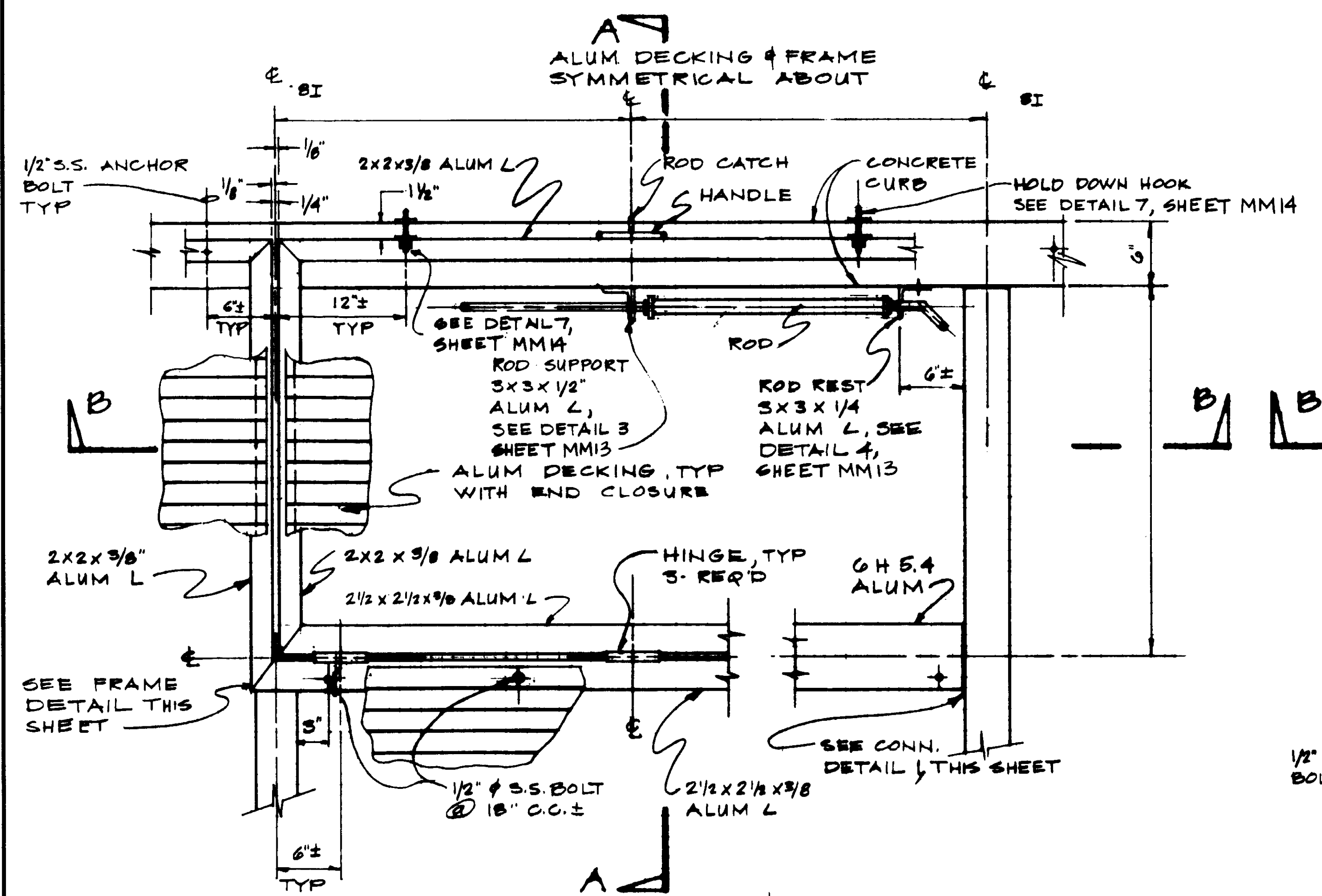
SCALE: AS NOTED  
DESIGNED: Y.K./JB  
DRAWN: JK/JB/KOH  
CHECKED: YK

SUBMITTED: *[Signature]* 14038 8-7-87  
KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
ALEXANDER ENGINEERS R.C.S.E. NO. DATE

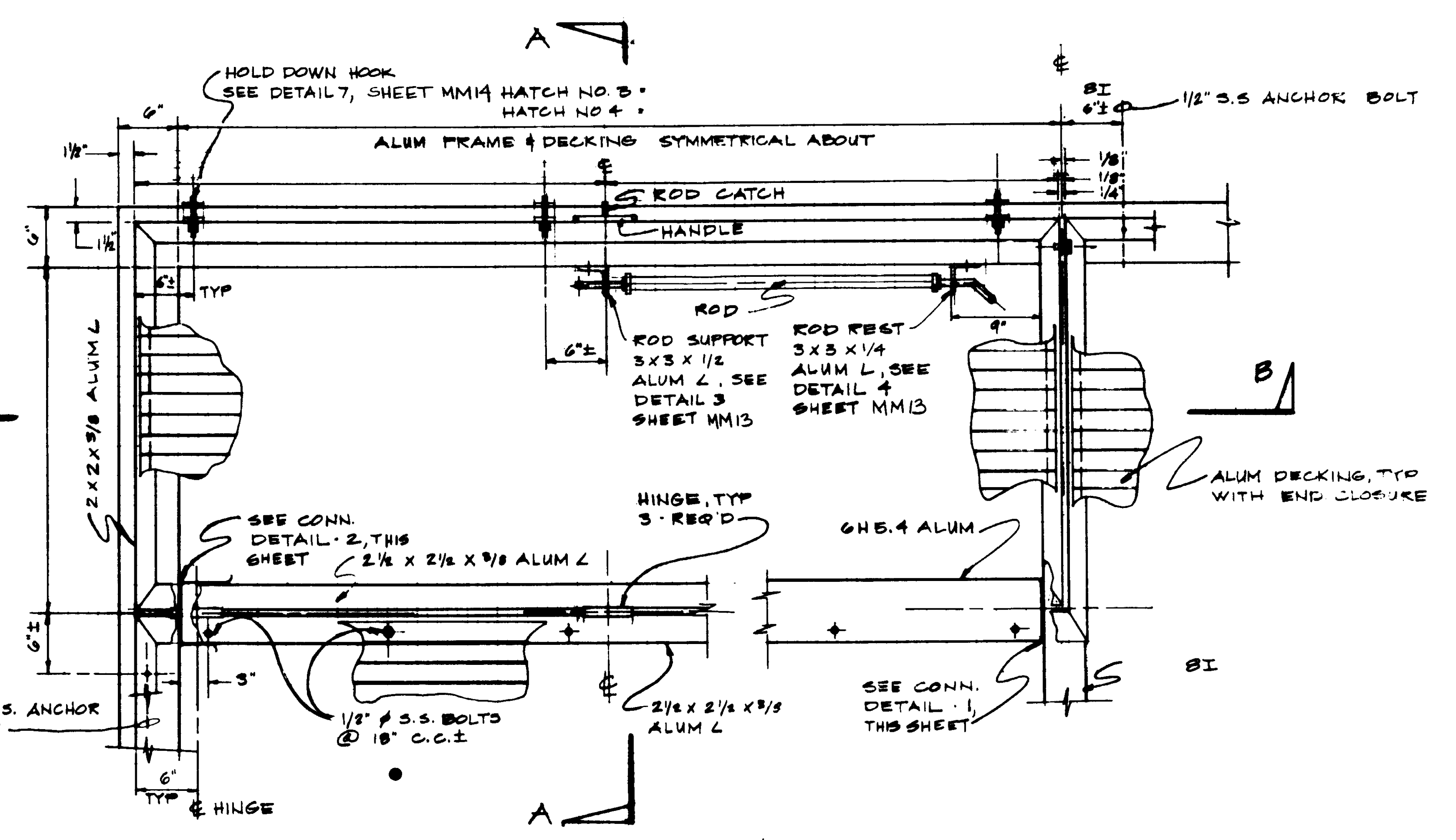
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
PRIMARY: SEDIMENTATION TANK COVER, DETAILS - III

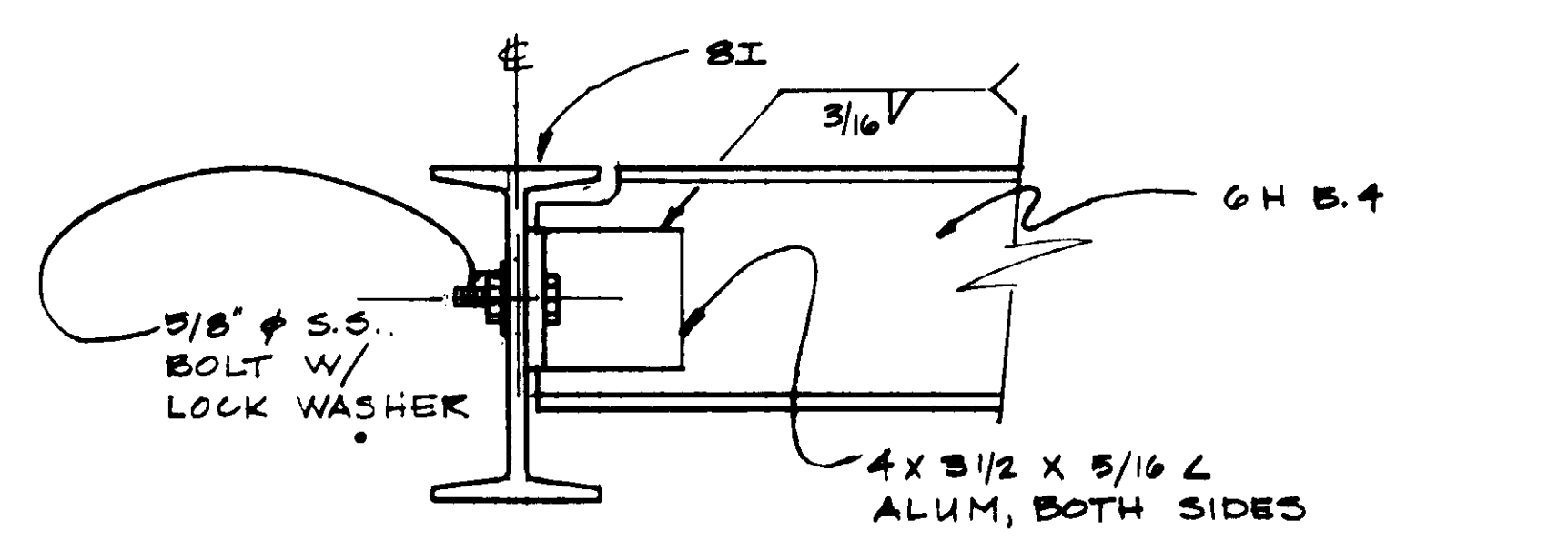
SHEET  
MM-10



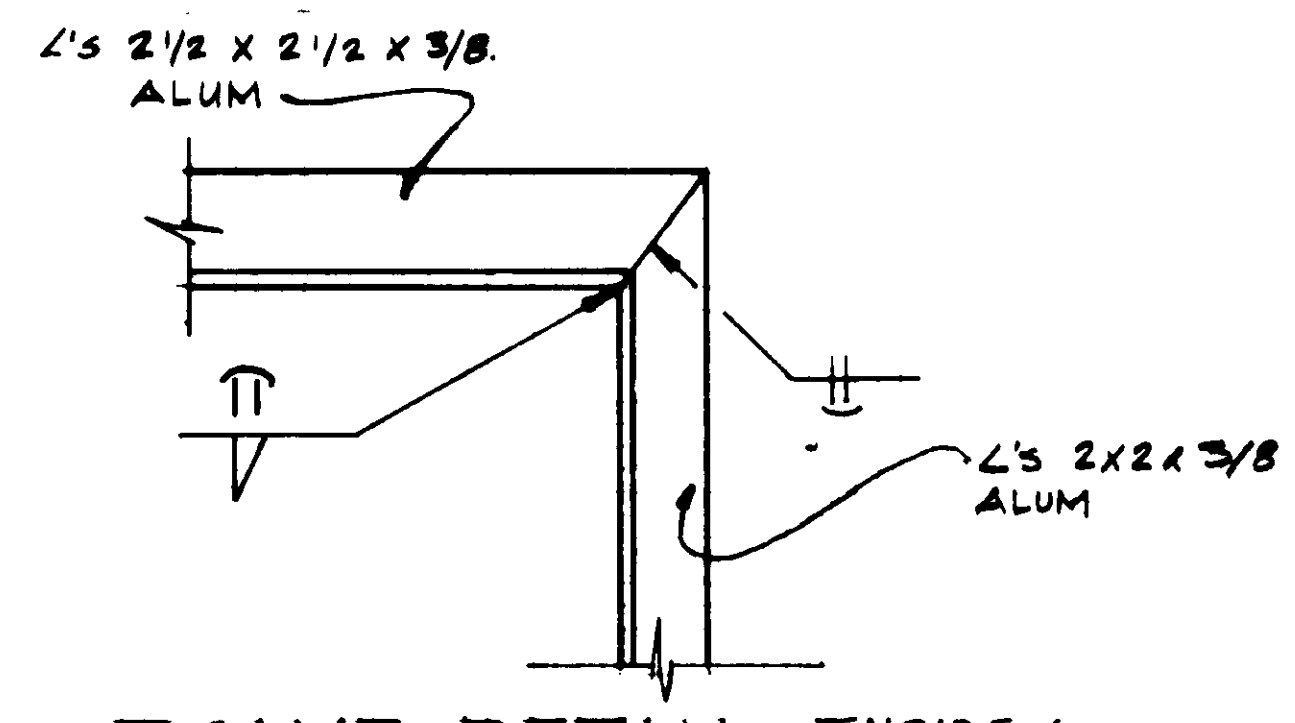
HATCH NOS. 1 & 2  
SCALE = 1/2" = 1'-0"



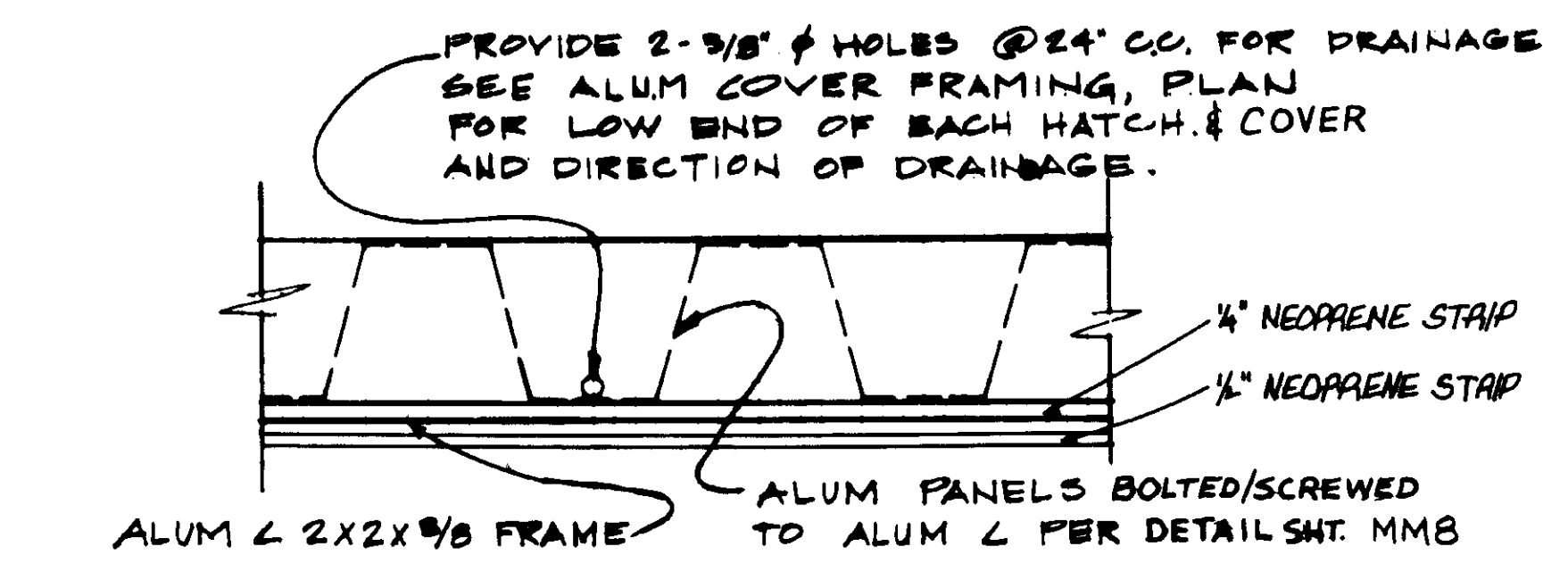
HATCH NOS. 3 & 4  
SCALE = 1/2" = 1'-0"



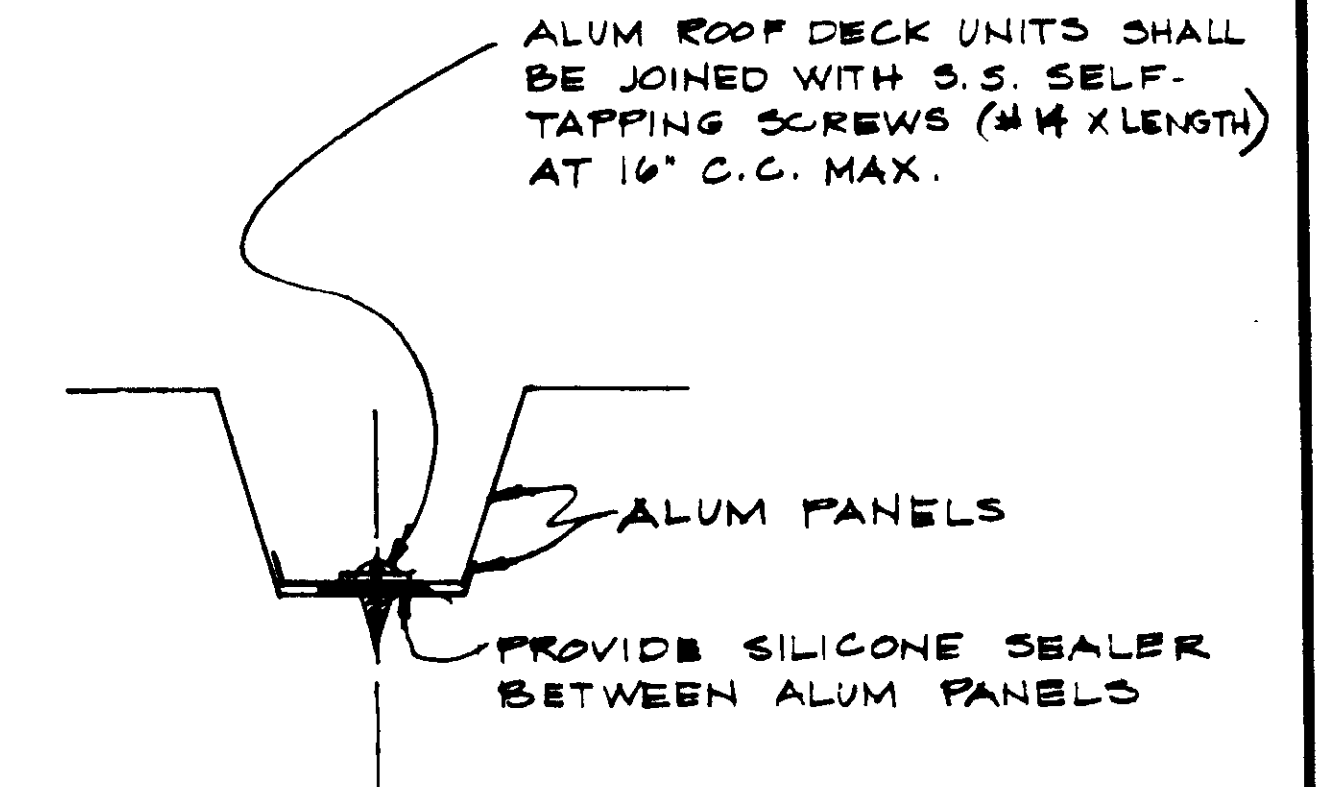
CONNECTION DETAIL - 1  
NOT TO SCALE



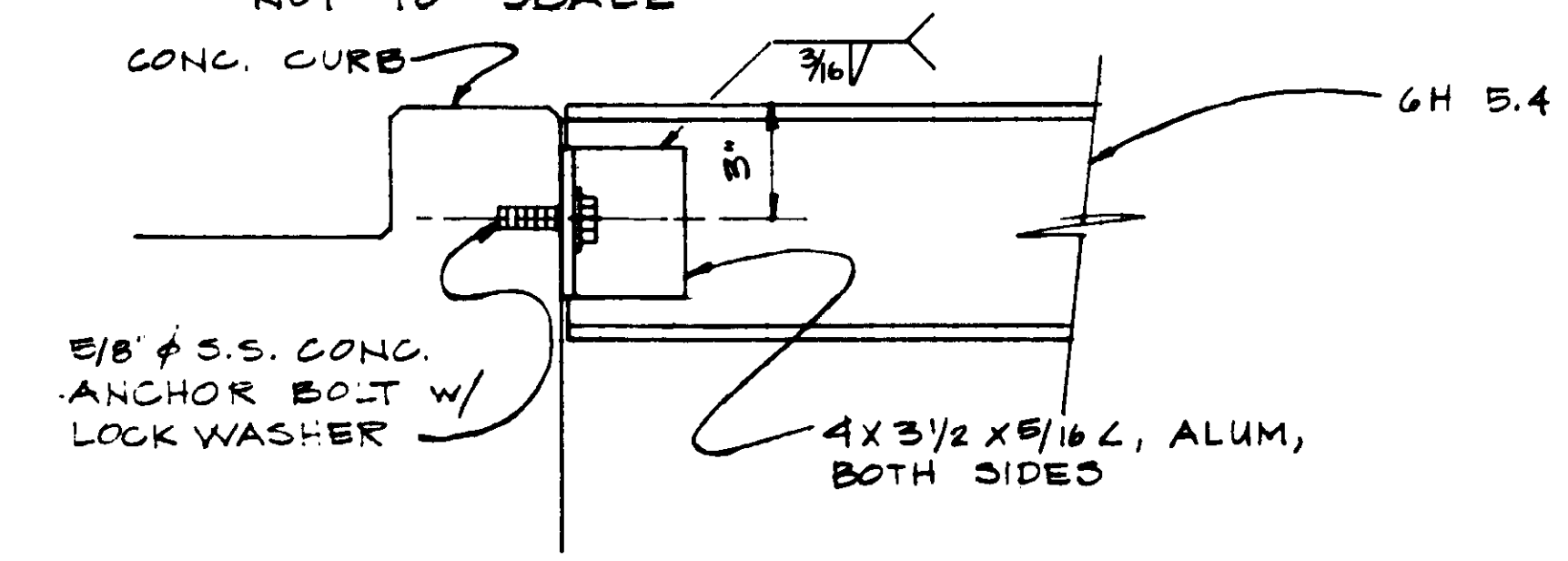
FRAME DETAIL - INSIDE  
NOT TO SCALE



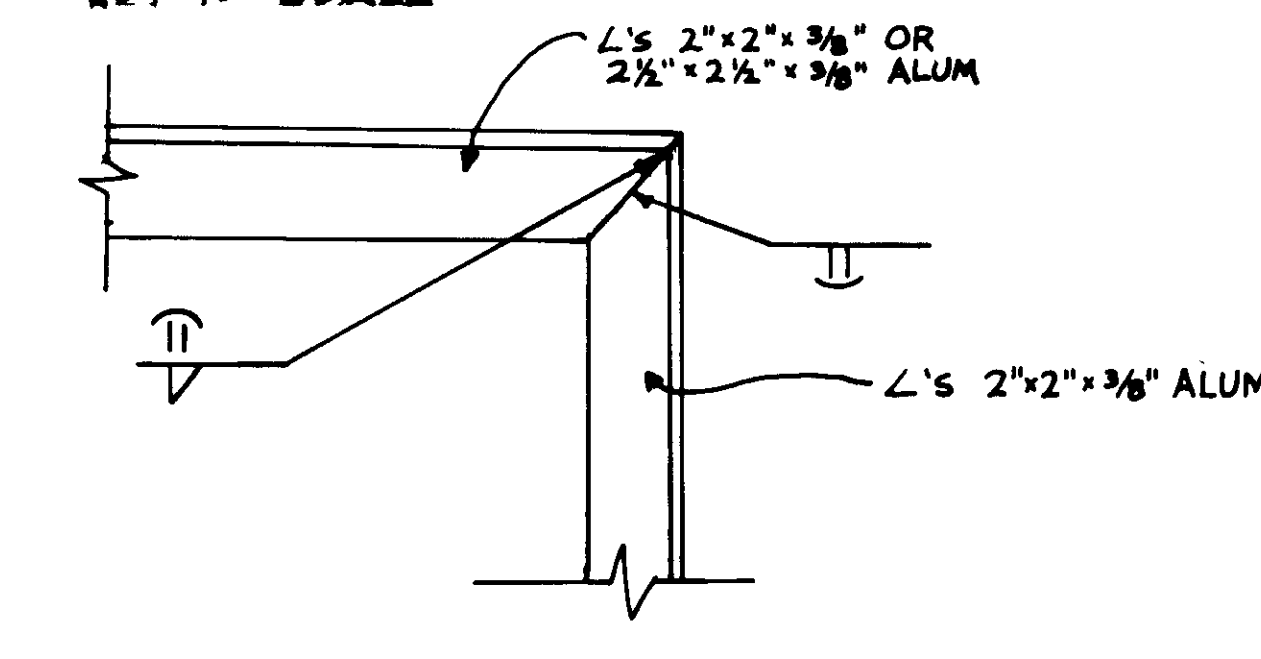
COVER & HATCH DRAINAGE  
NOT TO SCALE



TAPPING SCREW DETAIL FOR COVER AND HATCH  
NOT TO SCALE



CONNECTION DETAIL - 2  
NOT TO SCALE



FRAME DETAIL - OUTSIDE  
NOT TO SCALE

04021



RECORD DRAWING  
KALEX ENGINEERS  
KATSUMA CONSULTING ENGINEERS AND ARCHITECTS

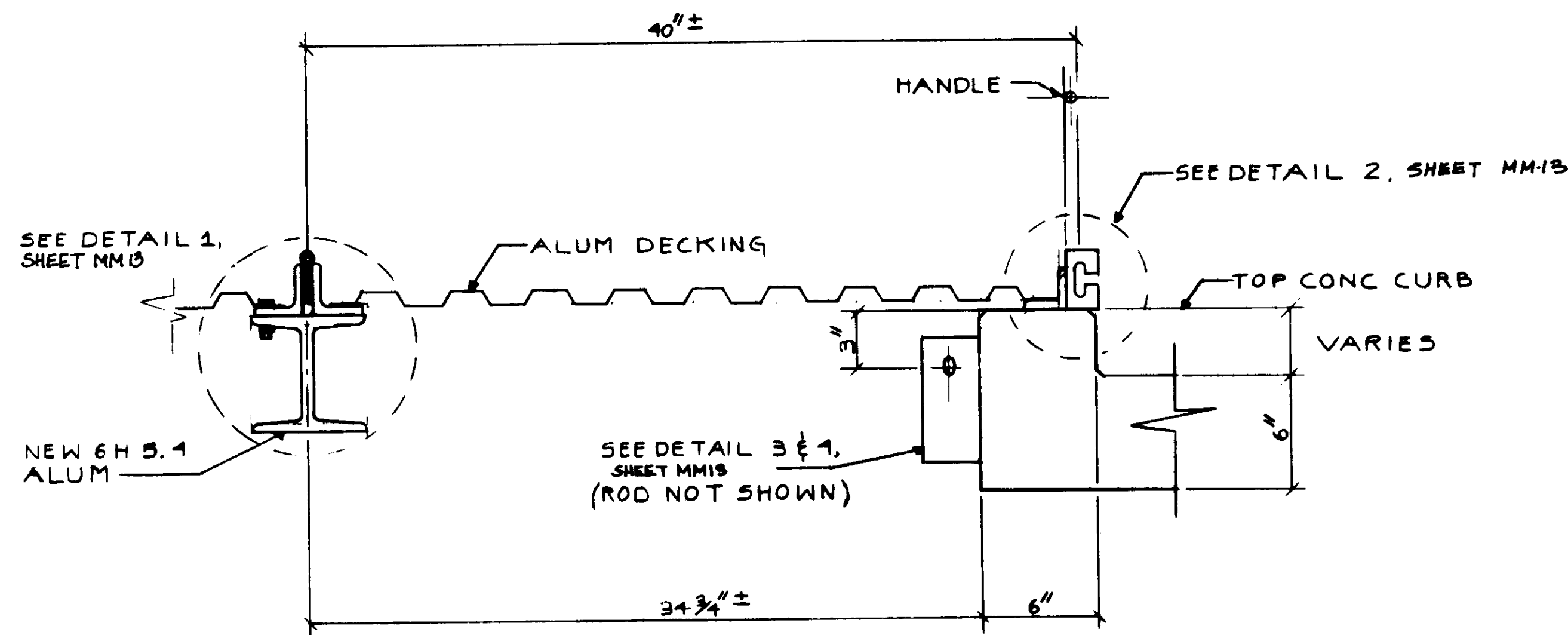
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: AS SHOWN	DESIGNED: CL/YK	SUBMITTED: <i>Katsura Katsura</i>	DATE: 8-7-87
	DRAWN: C.W./L.W.	KATSUMA CONSULTING ENGINEERS	R.C.E. NO. DATE
	CHECKED: Y.K.	ALEXANDER ENGINEERS	R.C.E. NO. DATE

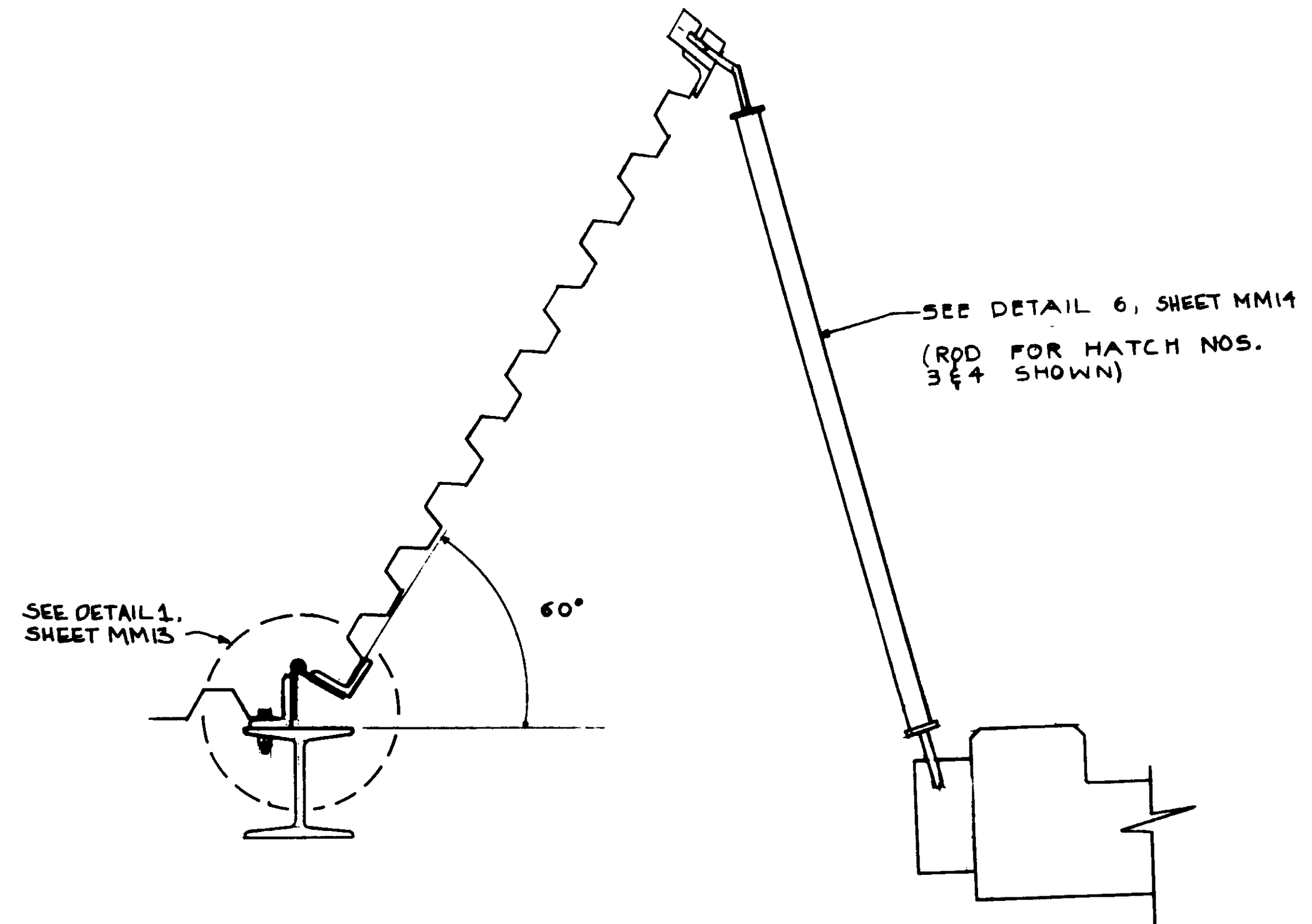
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SHEET 11

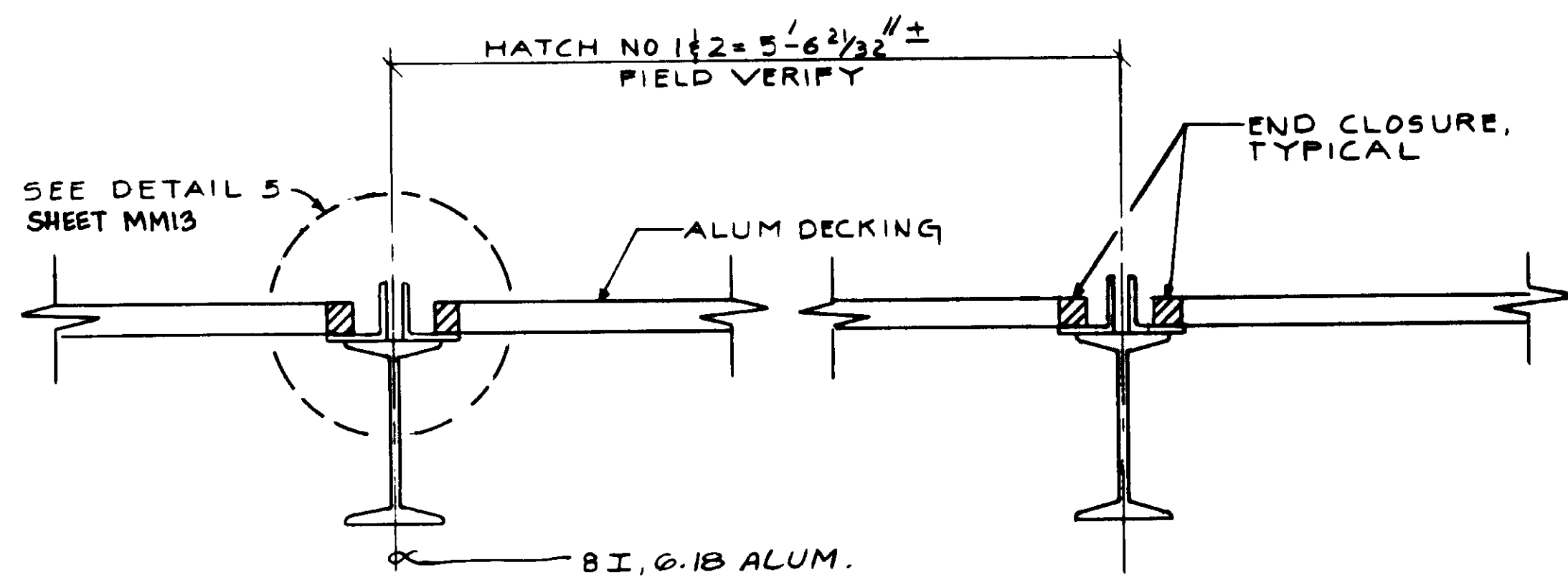




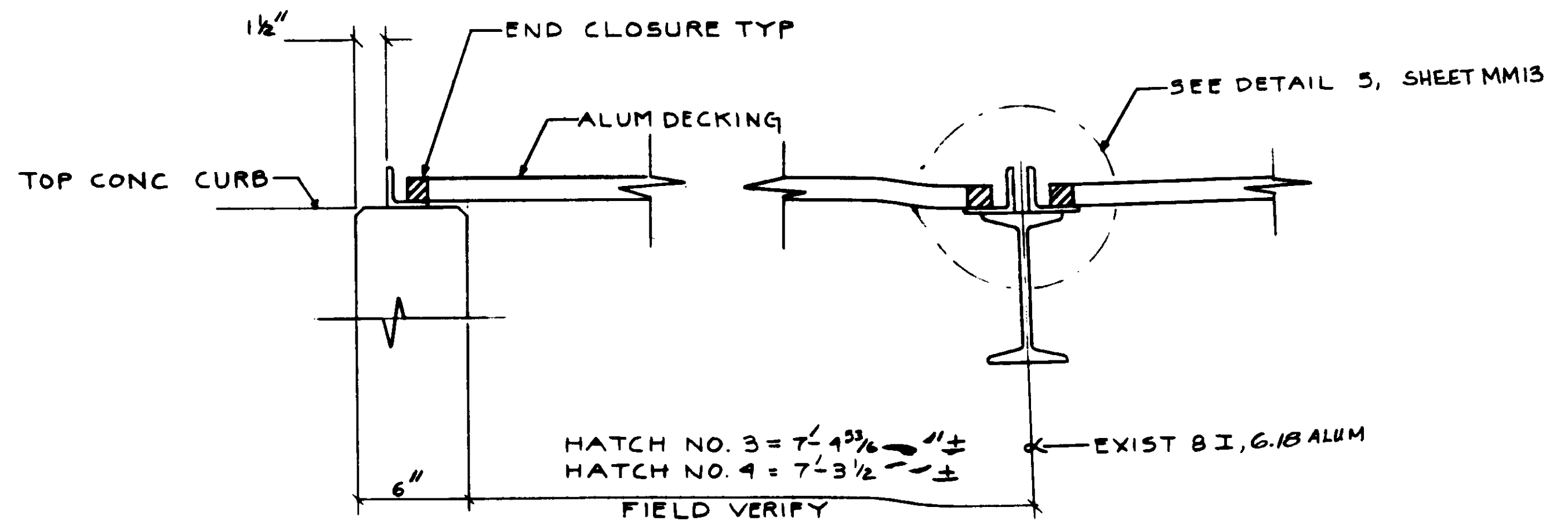
SECTION A-A  
NO SCALE



HATCH OPEN  
NO SCALE



SECTION B-B  
NO SCALE



SECTION B-B  
NO SCALE

04022

RECORD DRAWING  
No. 14038  
Exp. 3-31-89  
KATZMAN CONSULTING ENGINEERS 1988 1989



REV	DATE	BY	DESCRIPTION

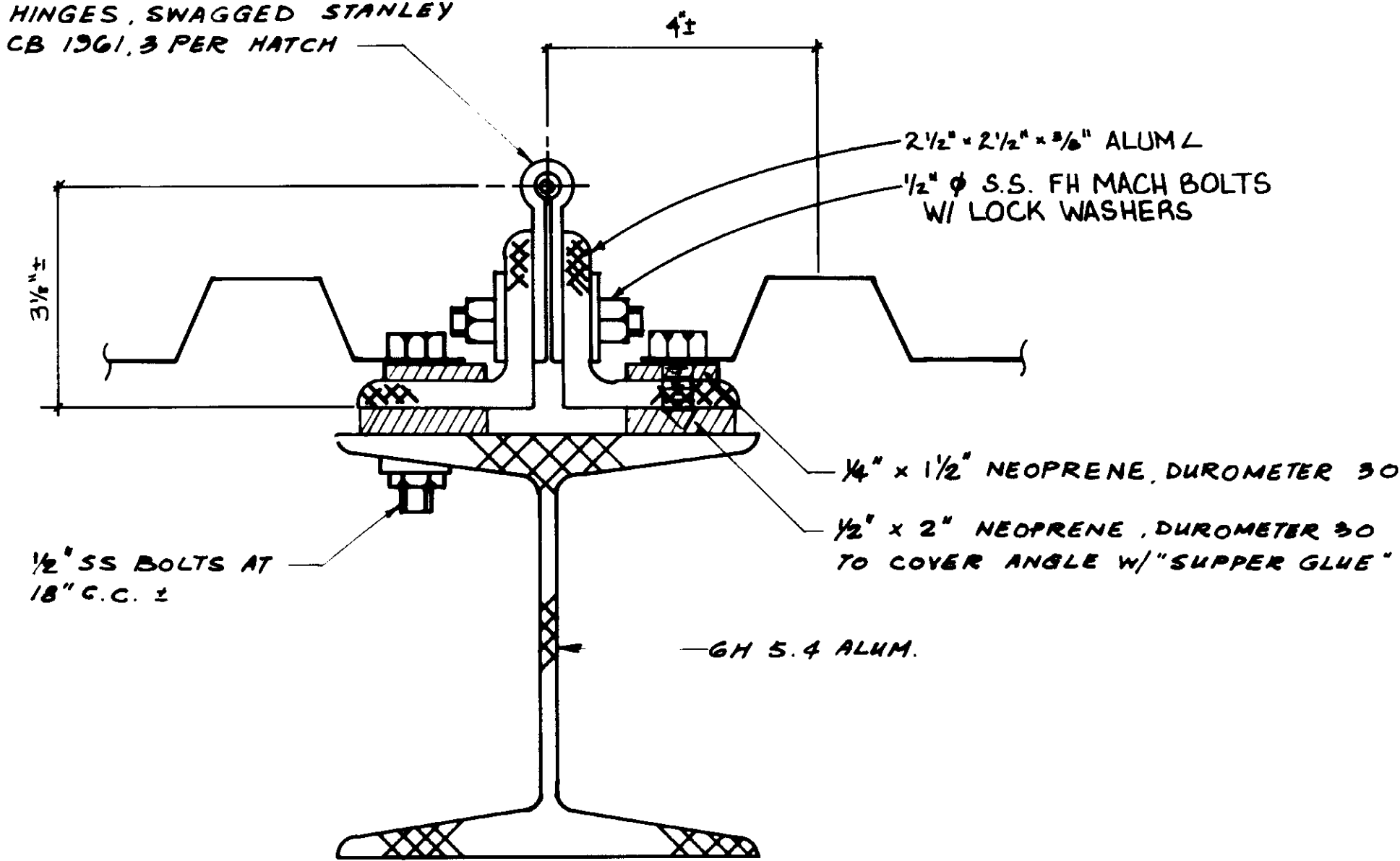
SCALE: AS SHOWN	DESIGNED: CLYK/IR	SUBMITTED: <i>[Signature]</i> 10000 8-7-87
DRAWN: Y.K.	CHECKED: <i>[Signature]</i>	KATZMAN CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katzman Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

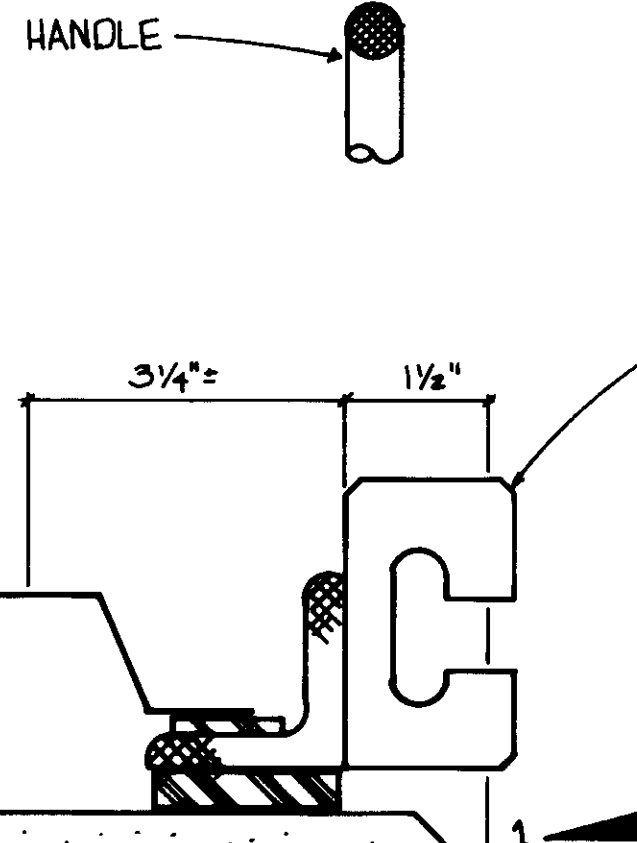
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
PRIMARY SEDIMENTATION TANK COVER, DETAILS - Y

SHEET  
MM-12

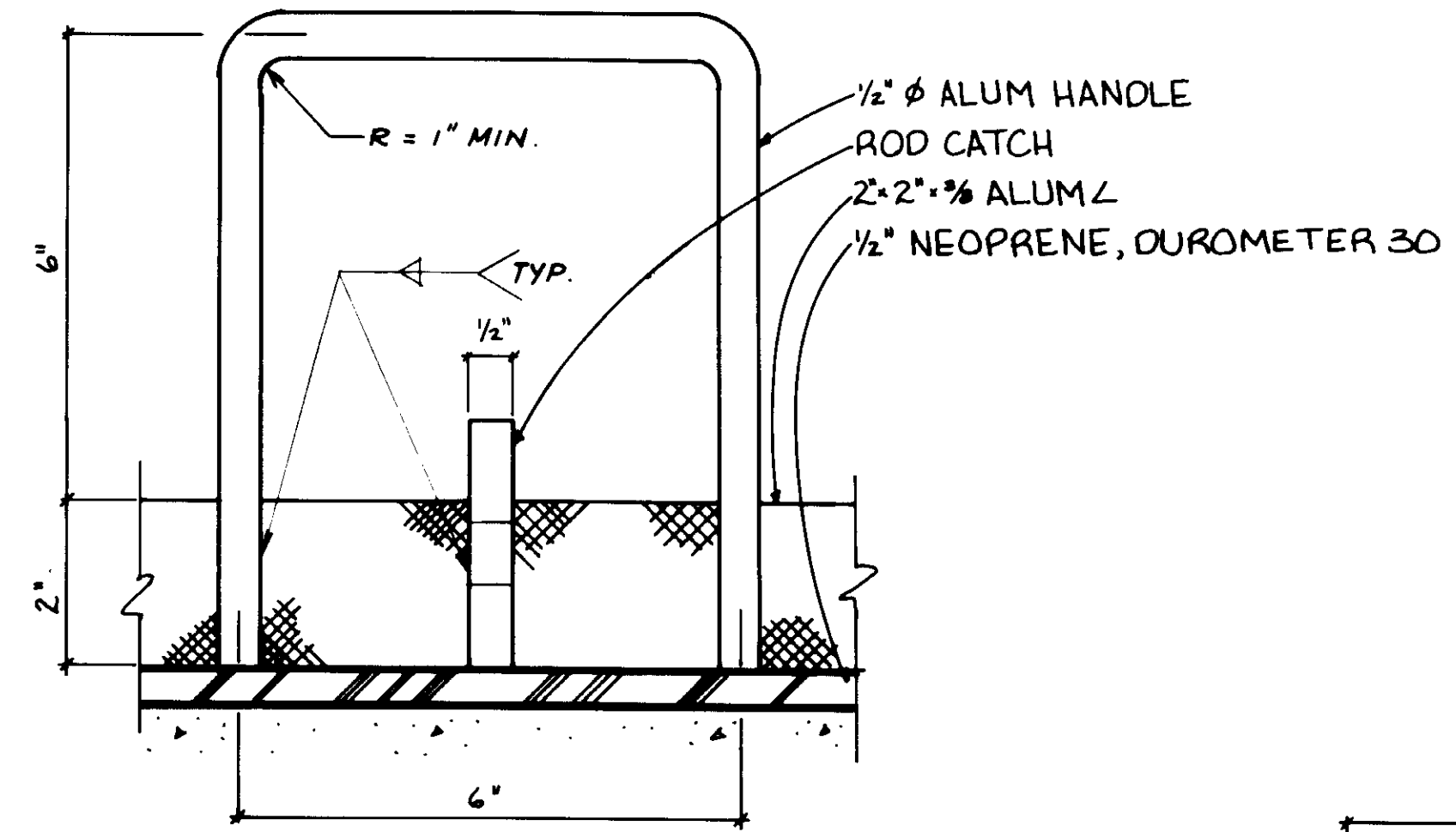
5" x 5" FULL MORTICE S.S. HINGES, SWAGGED STANLEY CB 1561, 3 PER HATCH



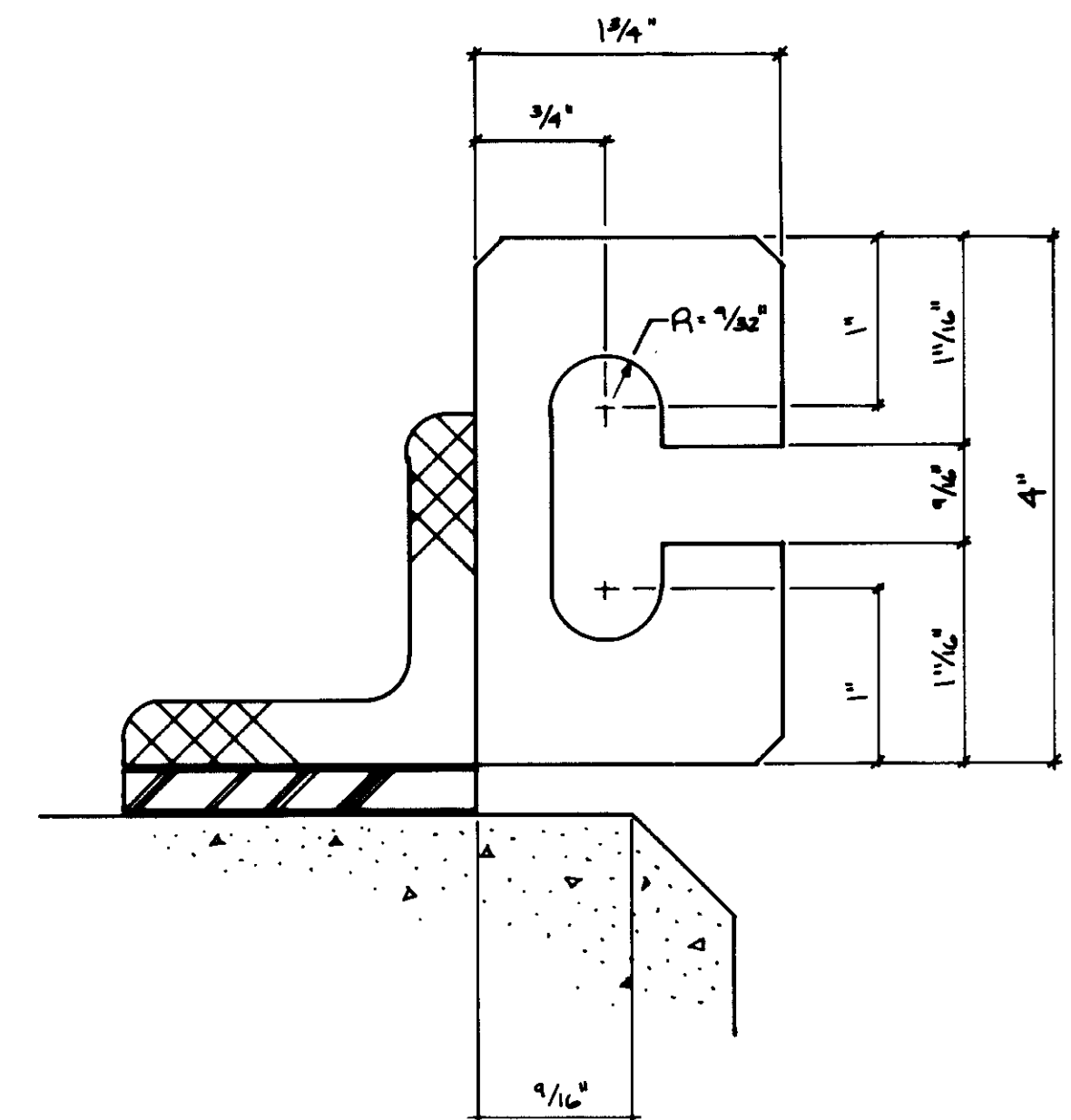
DETAIL 1  
NO SCALE



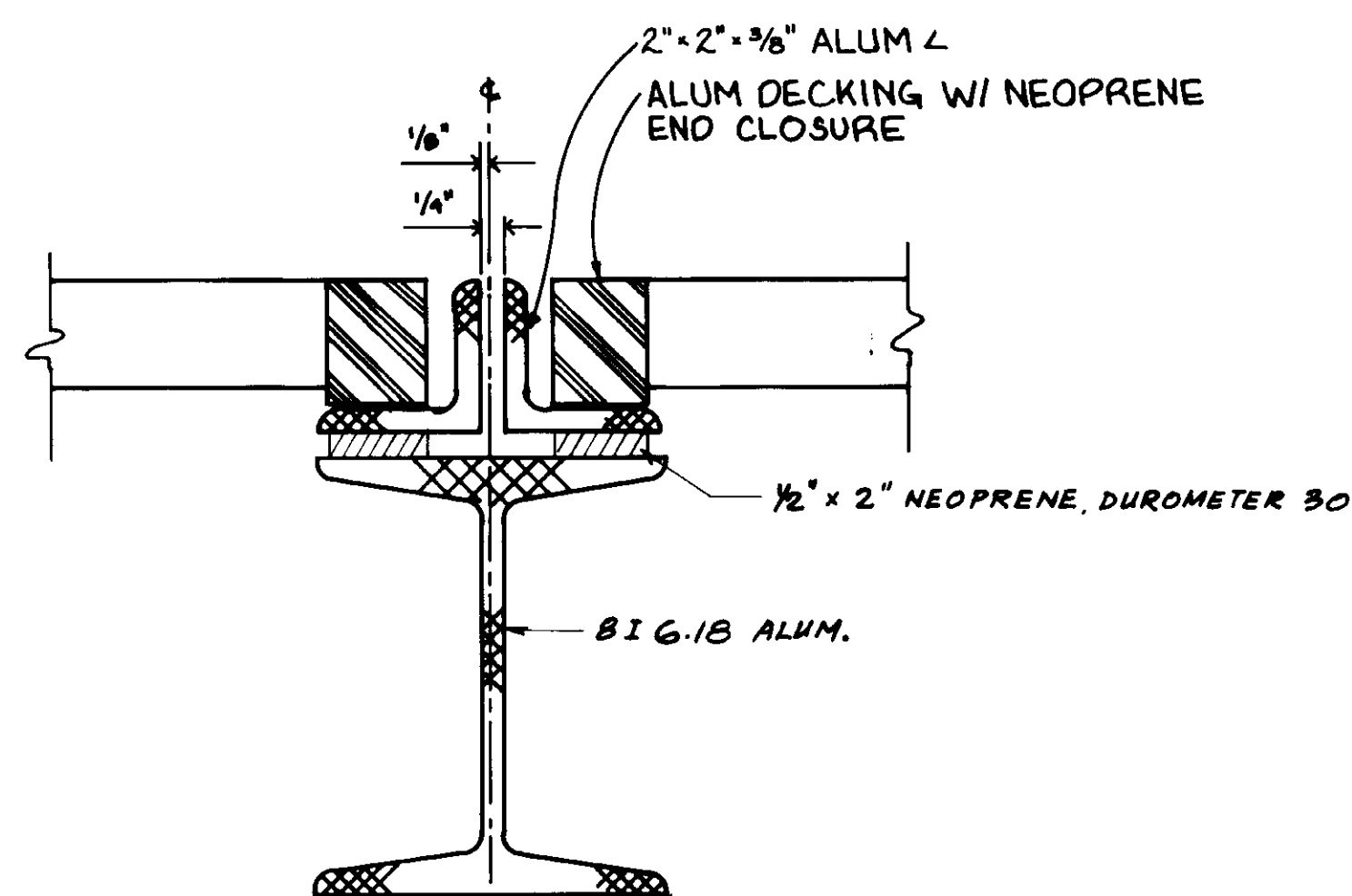
DETAIL 2  
NO SCALE



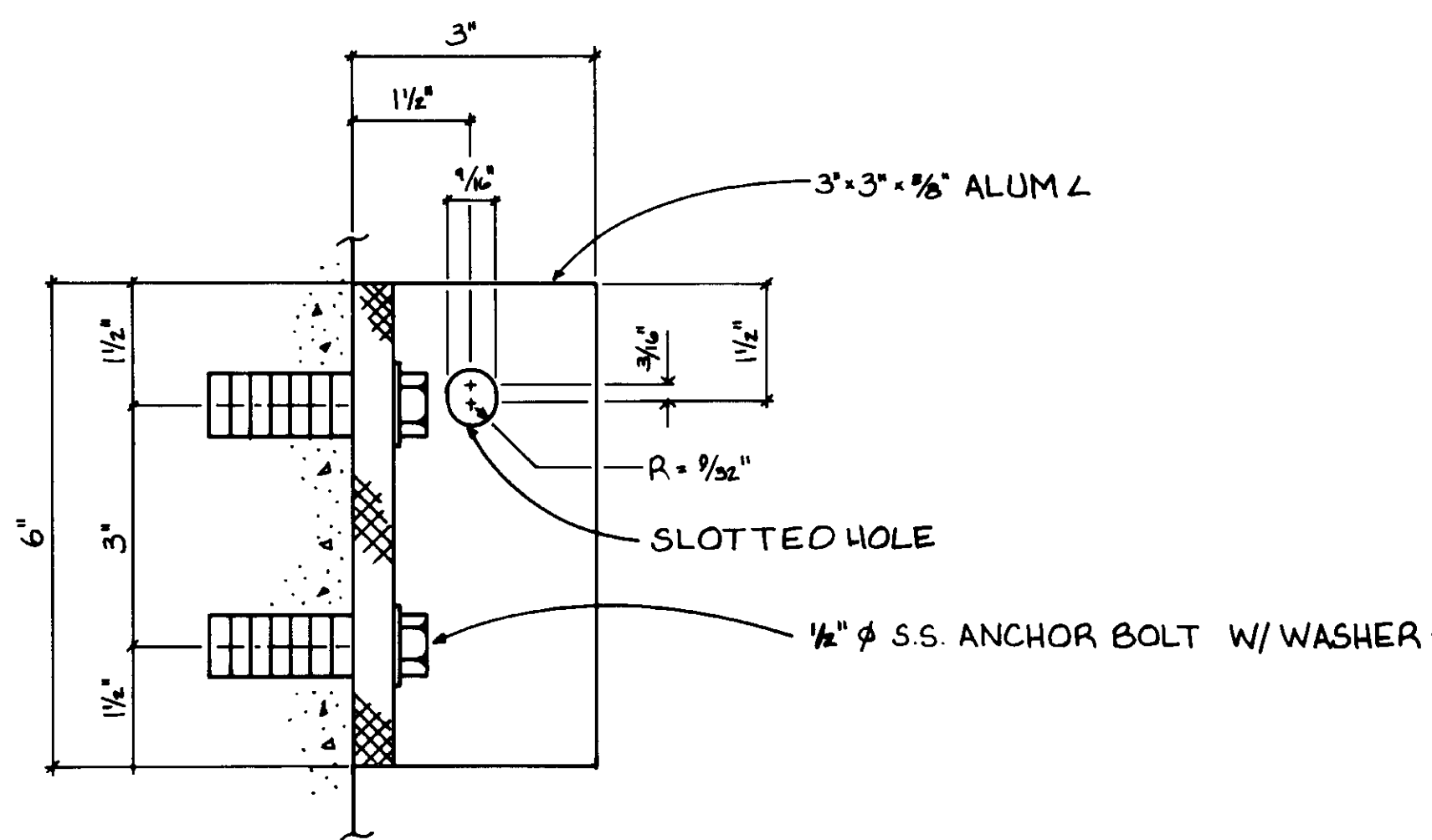
VIEW 1  
NO SCALE



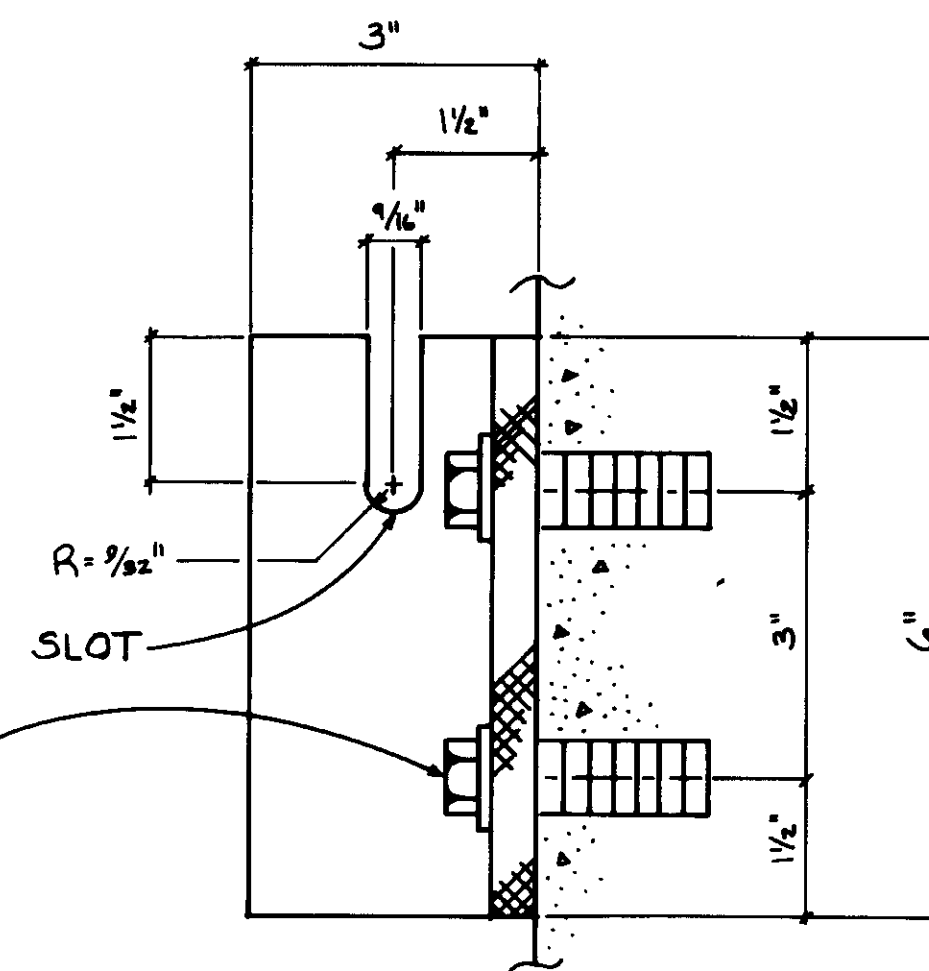
ROD CATCH  
NO SCALE



DETAIL 5  
NO SCALE



DETAIL 3  
NO SCALE



DETAIL 4  
NO SCALE

04023



RECORD DRAWINGS  
KATSUMA CONSULTING ENGINEERS

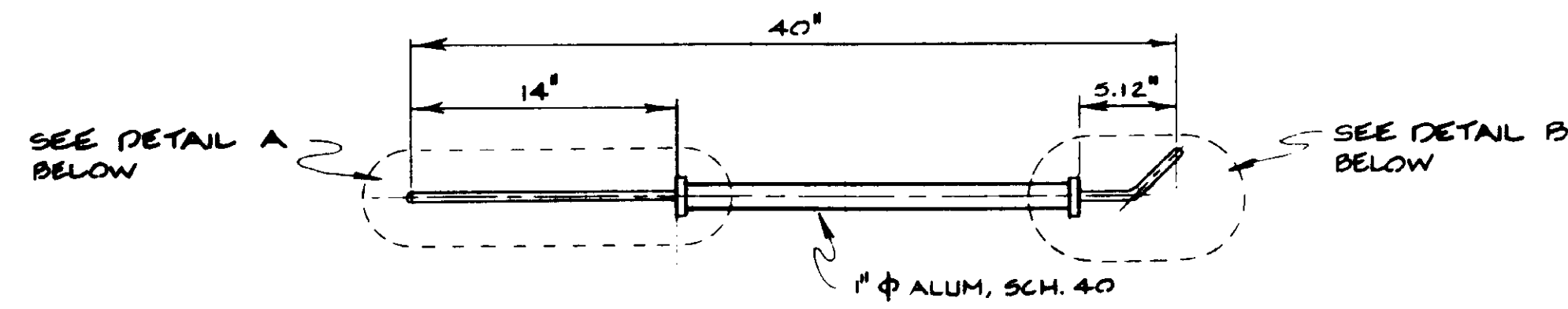
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	C.L.Y.K.	SUBMITTED	14038	8-7-87
AS NOTED	DESIGNED TR	DRAWN	Y.K.	CHECKED

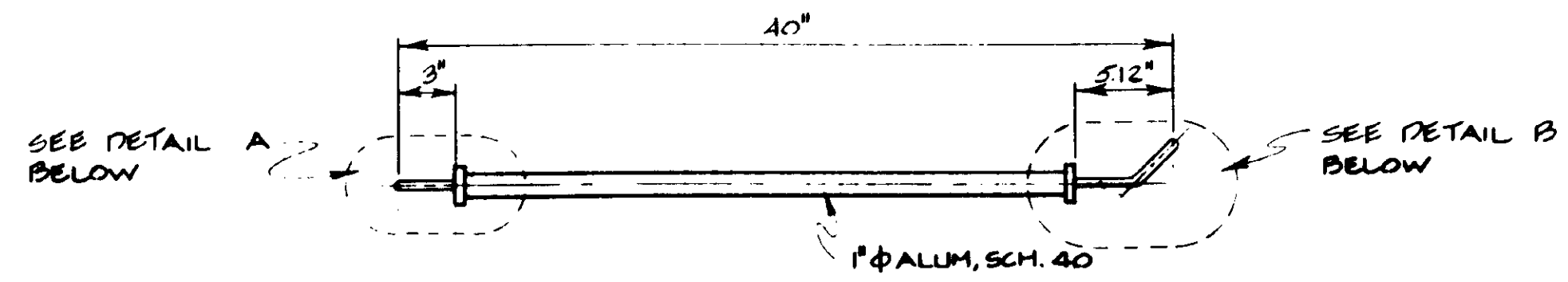
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
PRIMARY SEDIMENTATION TANK COVER, DETAILS - VI

SHEET  
MM-13

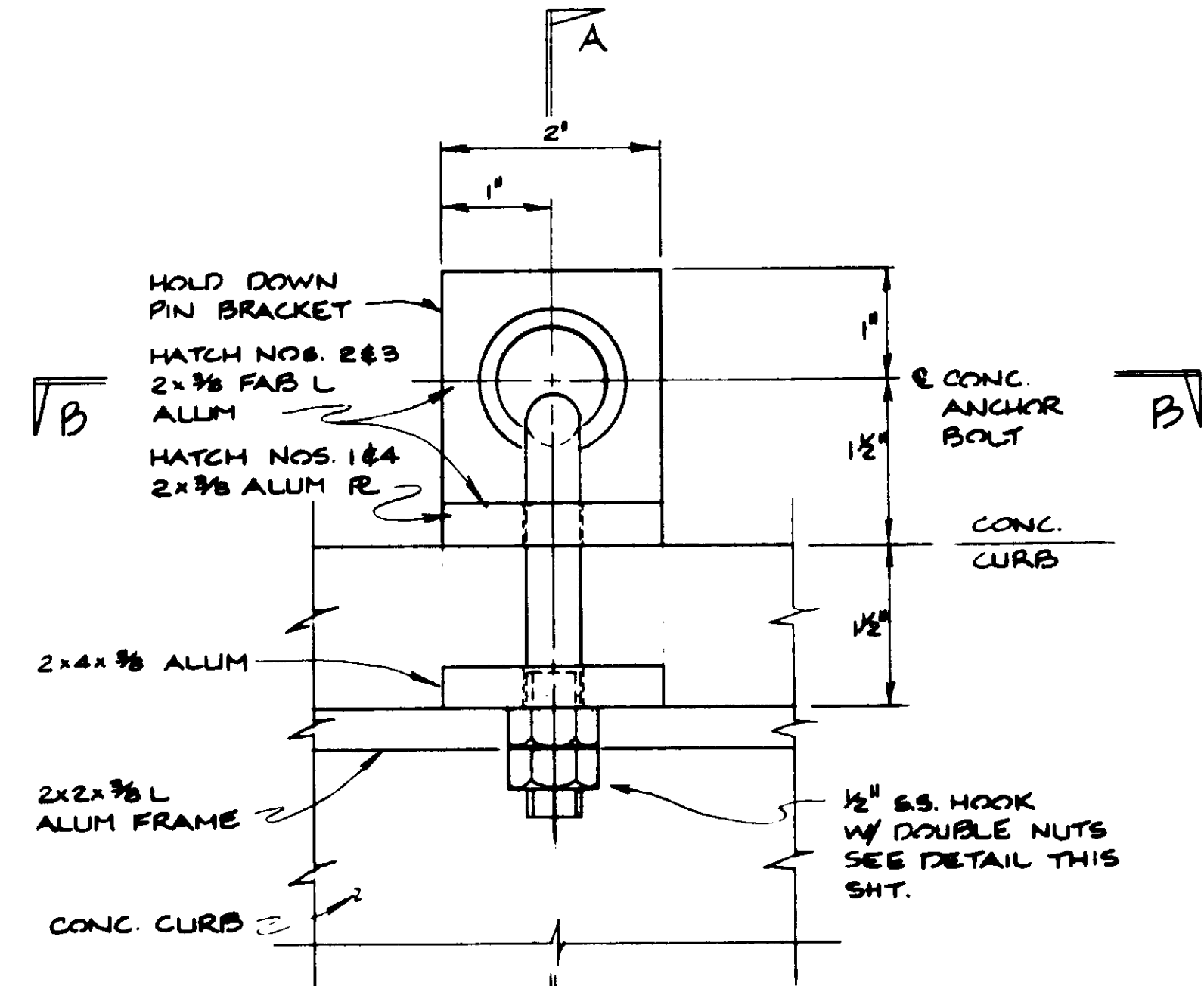


HATCH NOS. 1 & 2

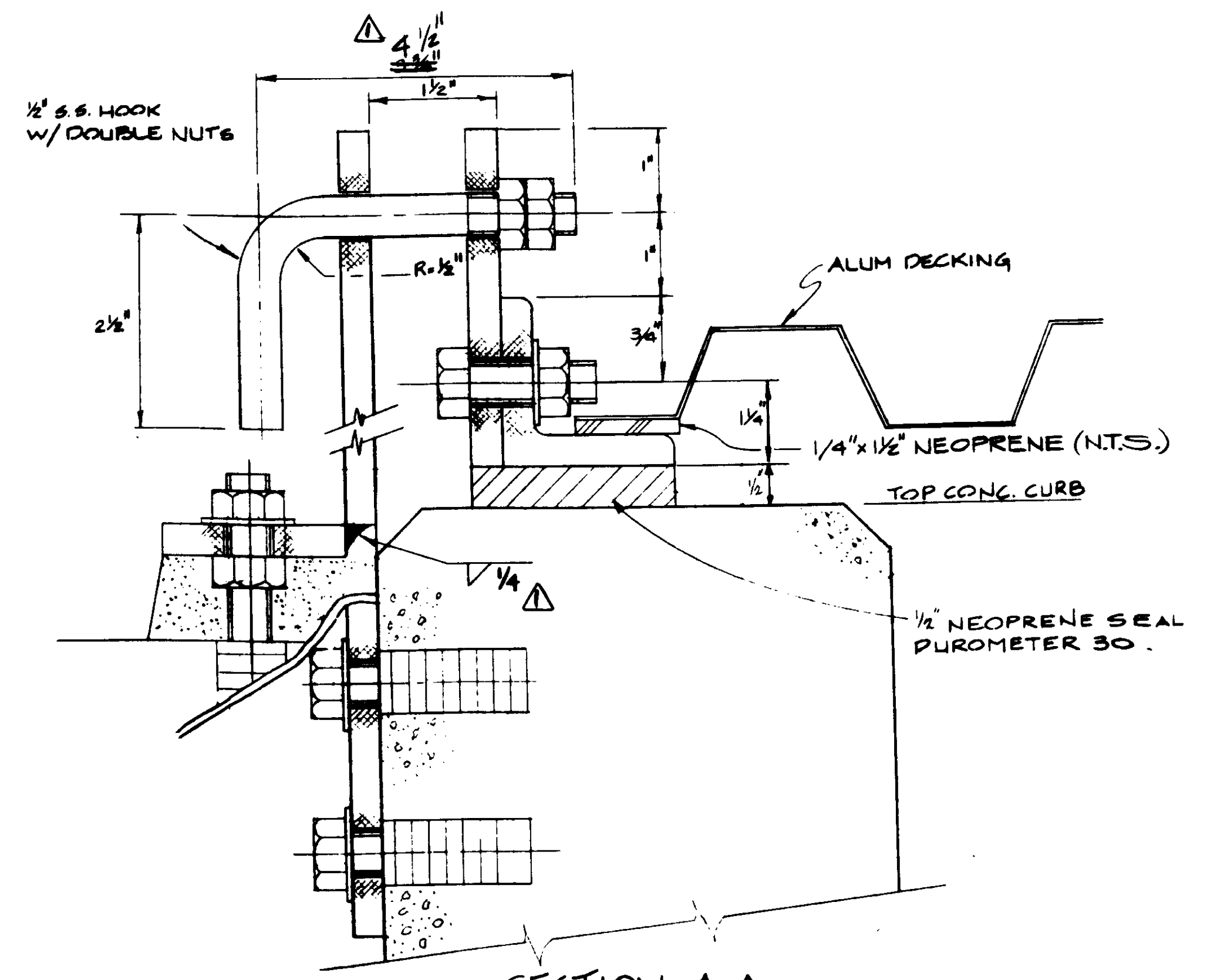


HATCH NOS. 3 & 4

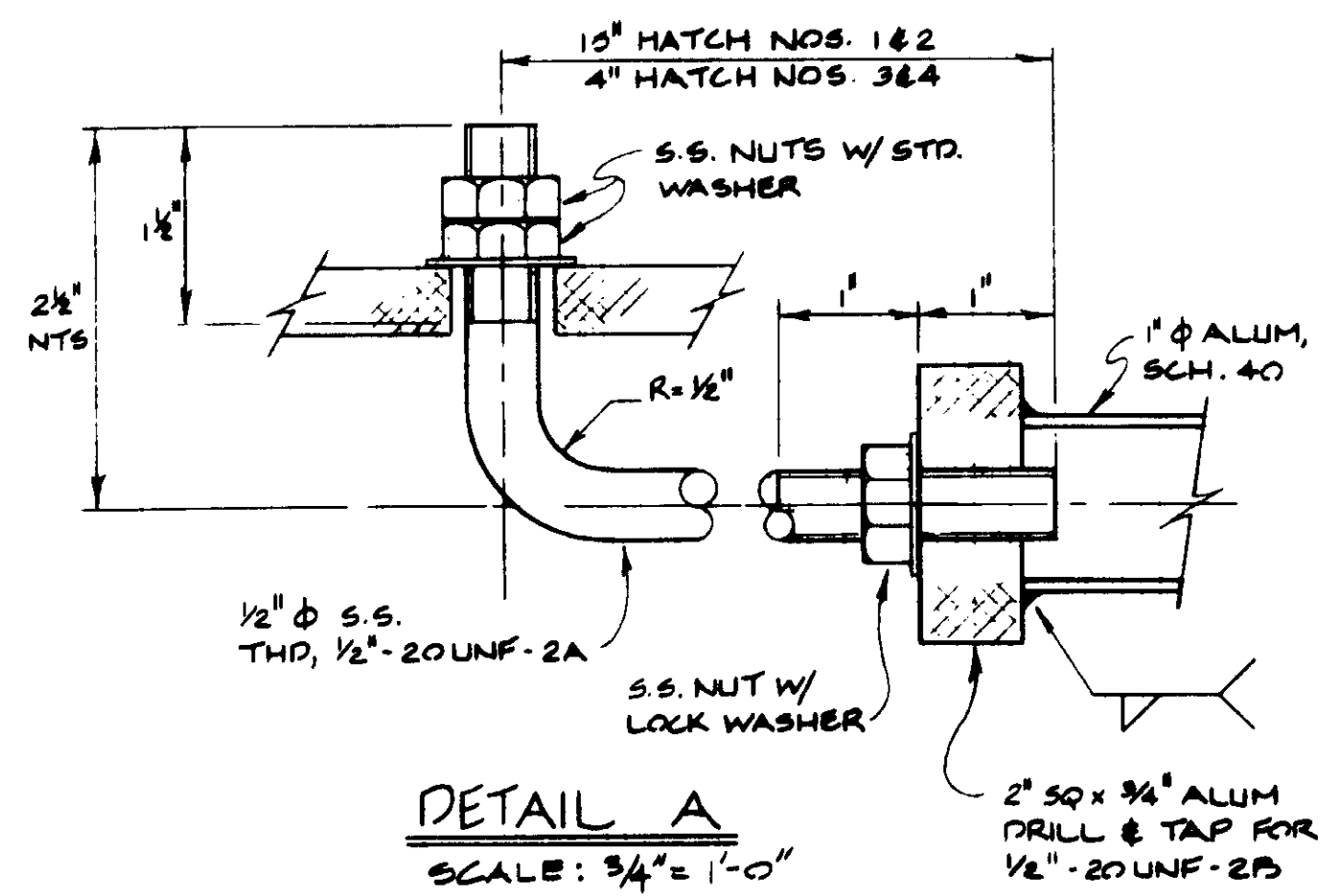
DETAIL 6  
SCALE: 1 1/2" = 1'-0"



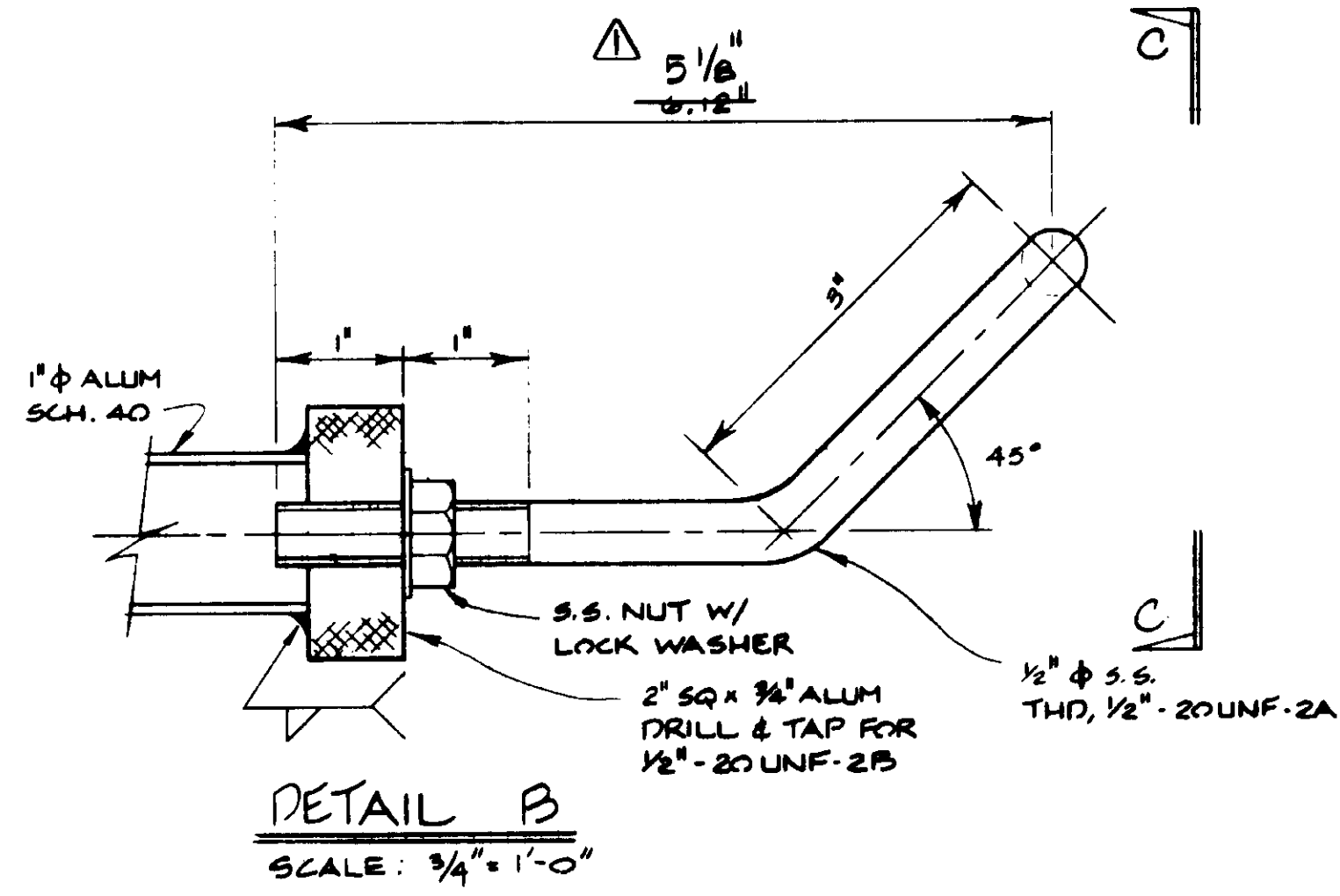
DETAIL 7  
PLAN - HATCH HOLD DOWN HOOK  
SCALE: 3/4" = 1'-0"



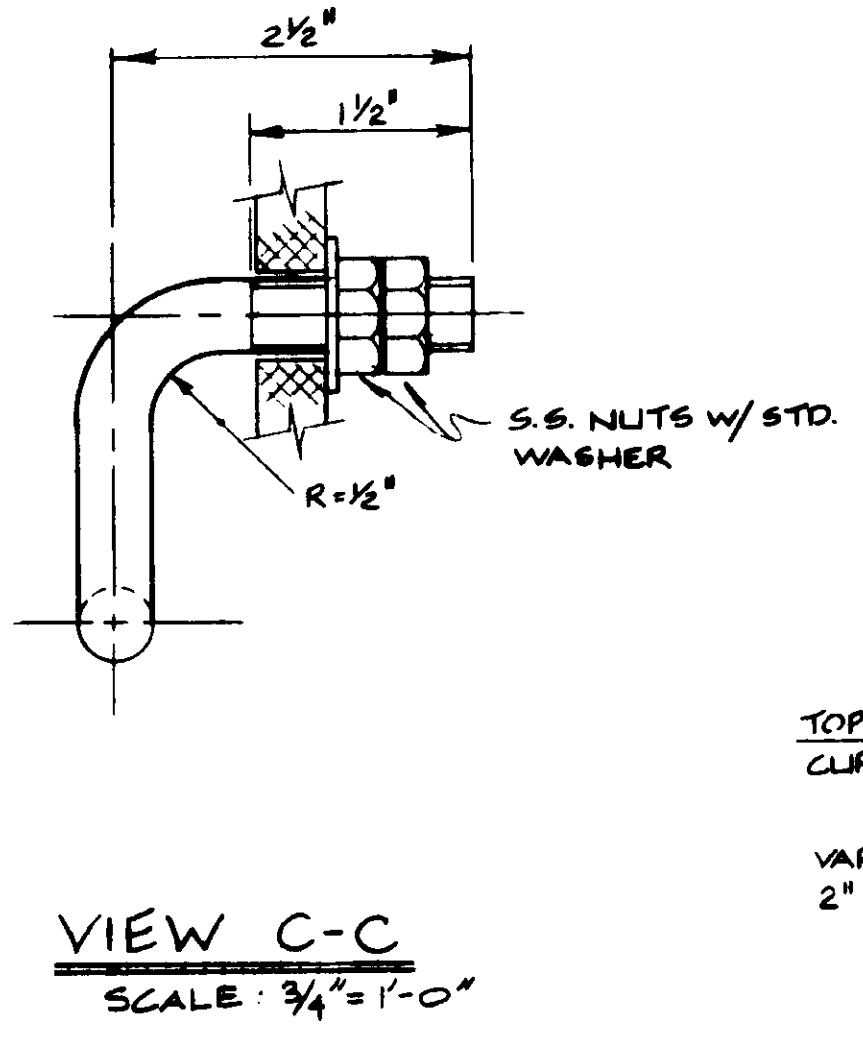
SECTION A-A  
SCALE: 3/4" = 1'-0"



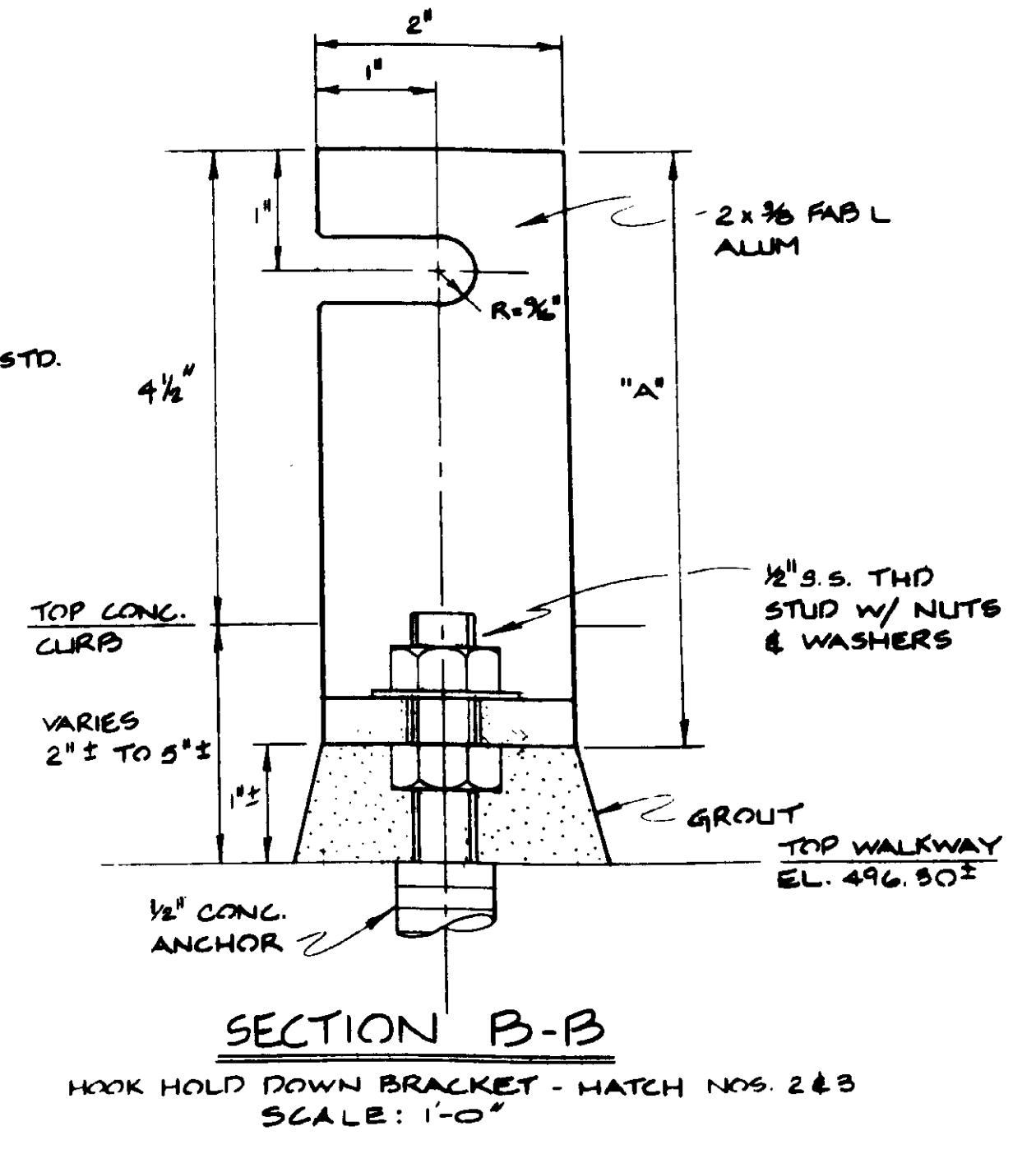
DETAIL A  
SCALE: 3/4" = 1'-0"



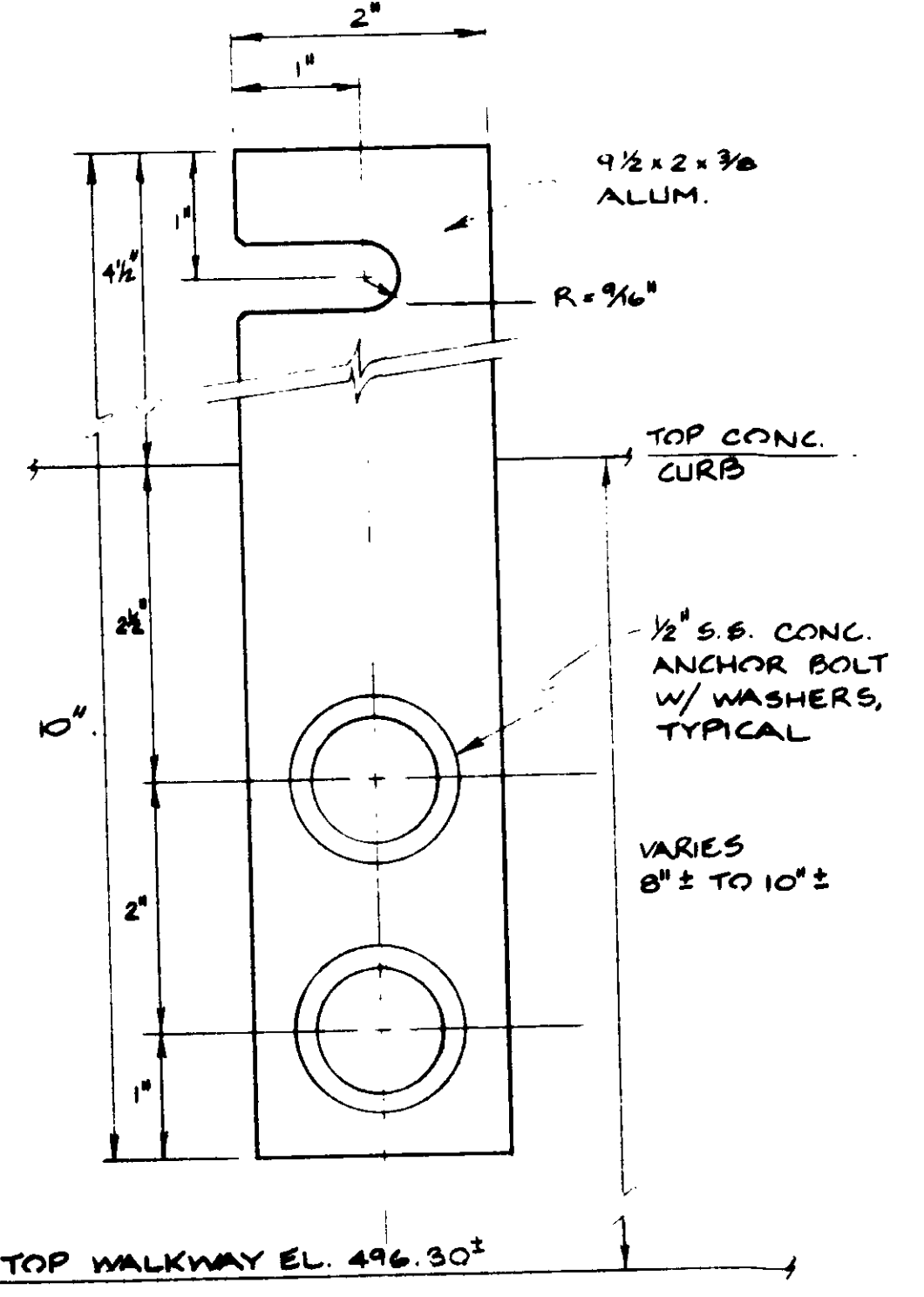
DETAIL B  
SCALE: 3/4" = 1'-0"



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



SECTION B-B  
HOOK HOLD DOWN BRACKET - HATCH NOS. 2 & 3  
SCALE: 1'-0"



SECTION B-B  
HOOK HOLD DOWN BRACKET - HATCH NOS. 1 & 4  
SCALE: 3/4" = 1'-0"

HATCH	"A" DIMENSION
HATCH NO. 2 NORTH BRACKET	7"
SOUTH BRACKET	8 3/4"
HATCH NO. 3 NORTH BRACKET	7 1/2"
SOUTH BRACKET	5 1/2"



RECORD DRAWINGS  
FOR THE INFORMATION OF THE CLIENT AND THE CONTRACTOR  
KATSUMI CONSULTING ENGINEERS  
ALEXANDER ENGINEERS

REV	DATE	BY	DESCRIPTION

SCALE:	C.L./Y.K.	SUBMITTED:	8-7-87
AS NOTED.	J.L.	DESIGNED:	8-7-87
	Y.K.	DRAWN:	8-7-87
		CHECKED:	8-7-87

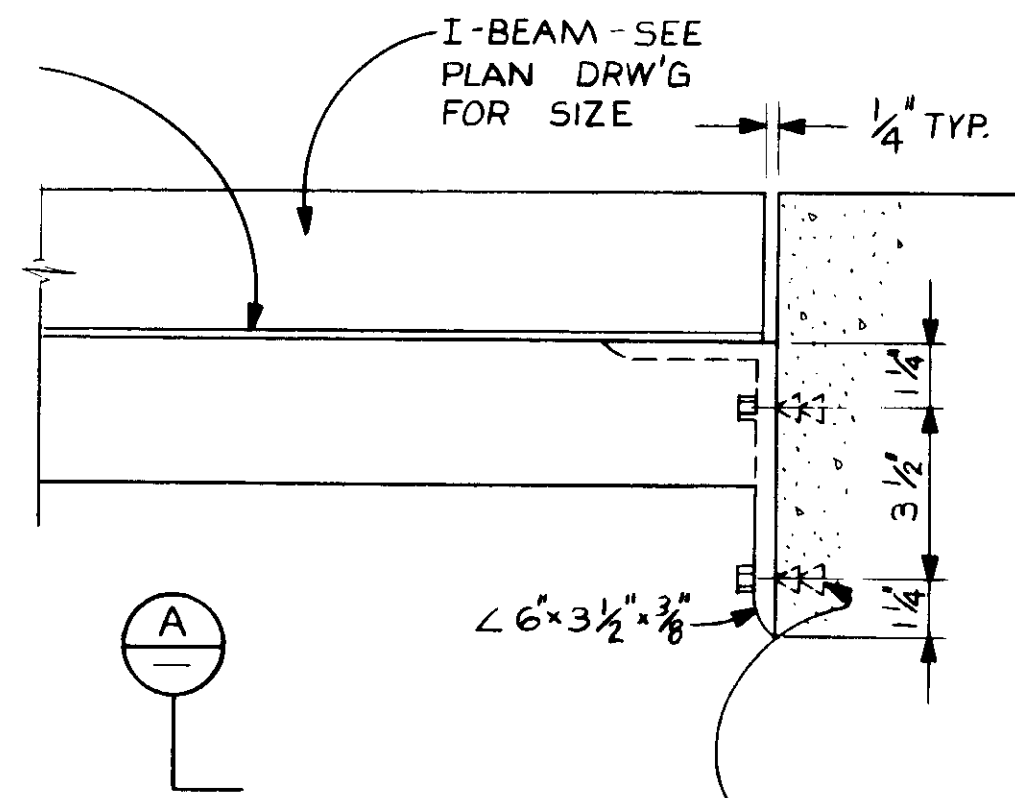
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
PRIMARY SEDIMENTATION TANK COVER, DETAILS - VII



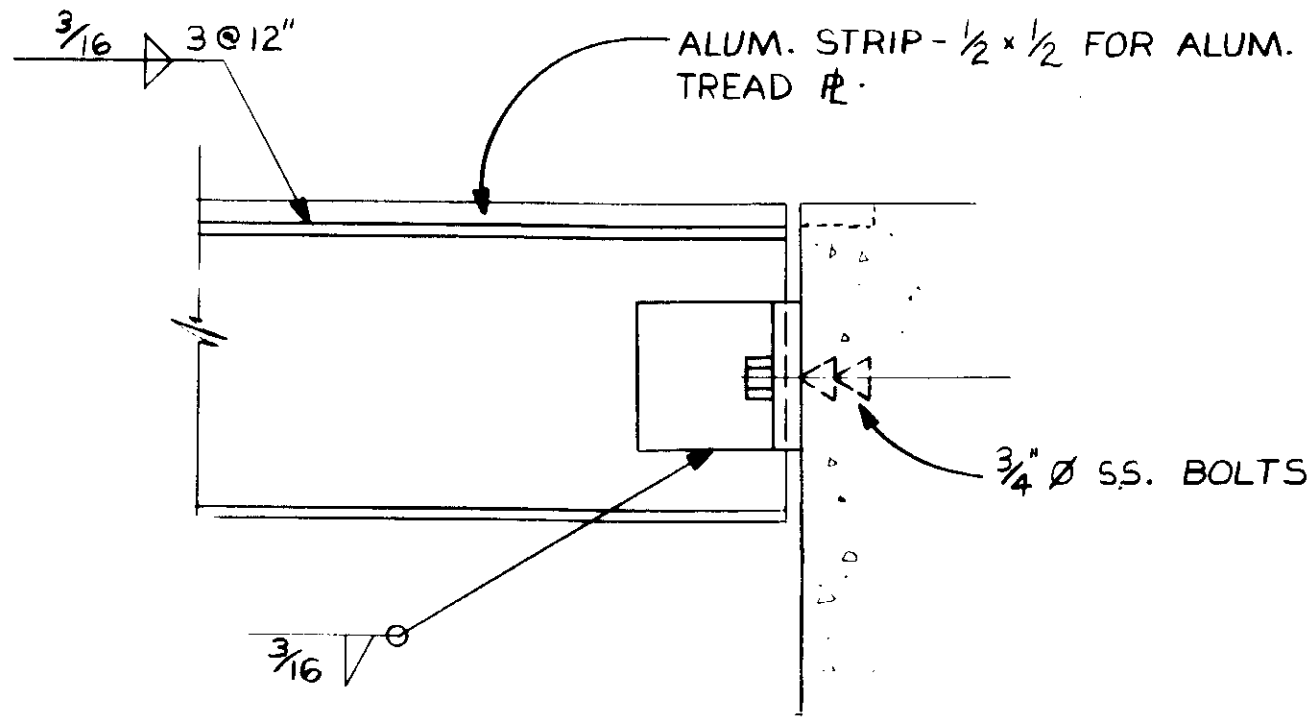


ALUM. STRIP - 1/2" x 1/4"  
FOR ALUM. TREAD P.

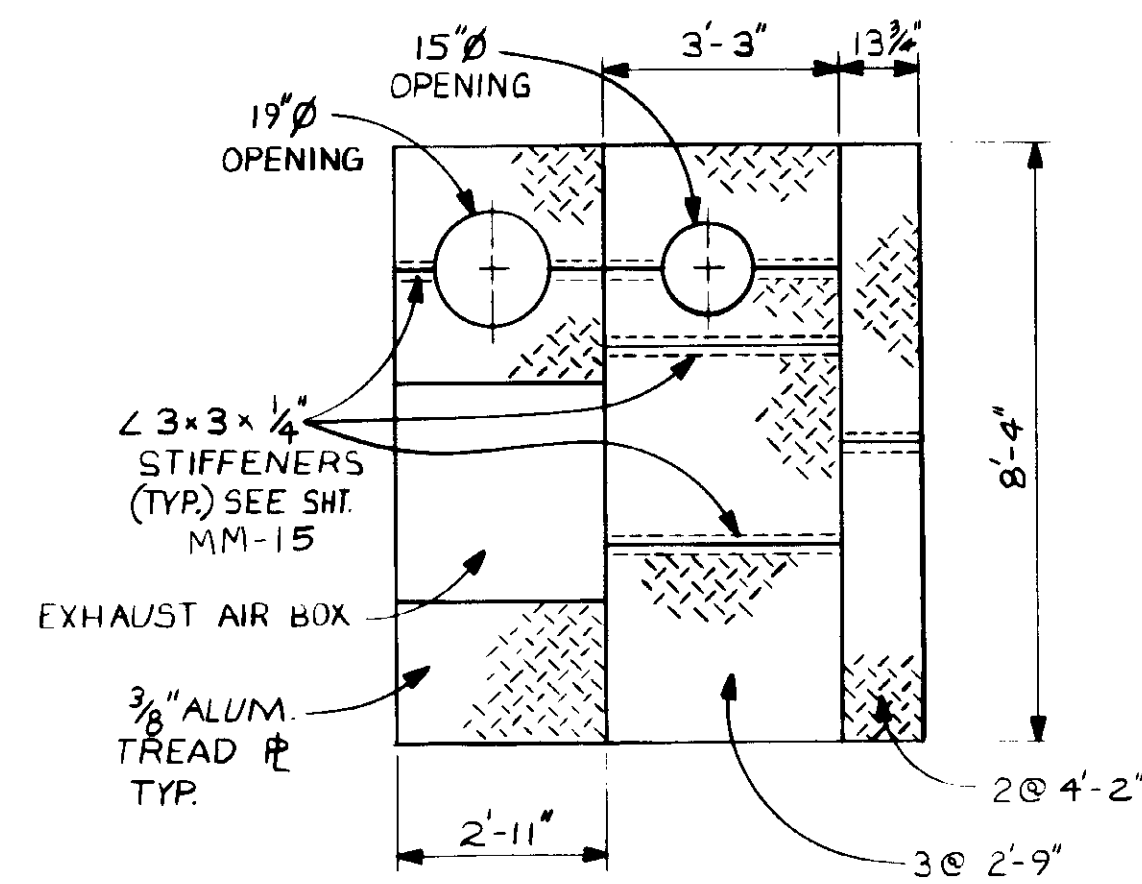


PLAN  
SCALE: 3/8" = 1'-0"

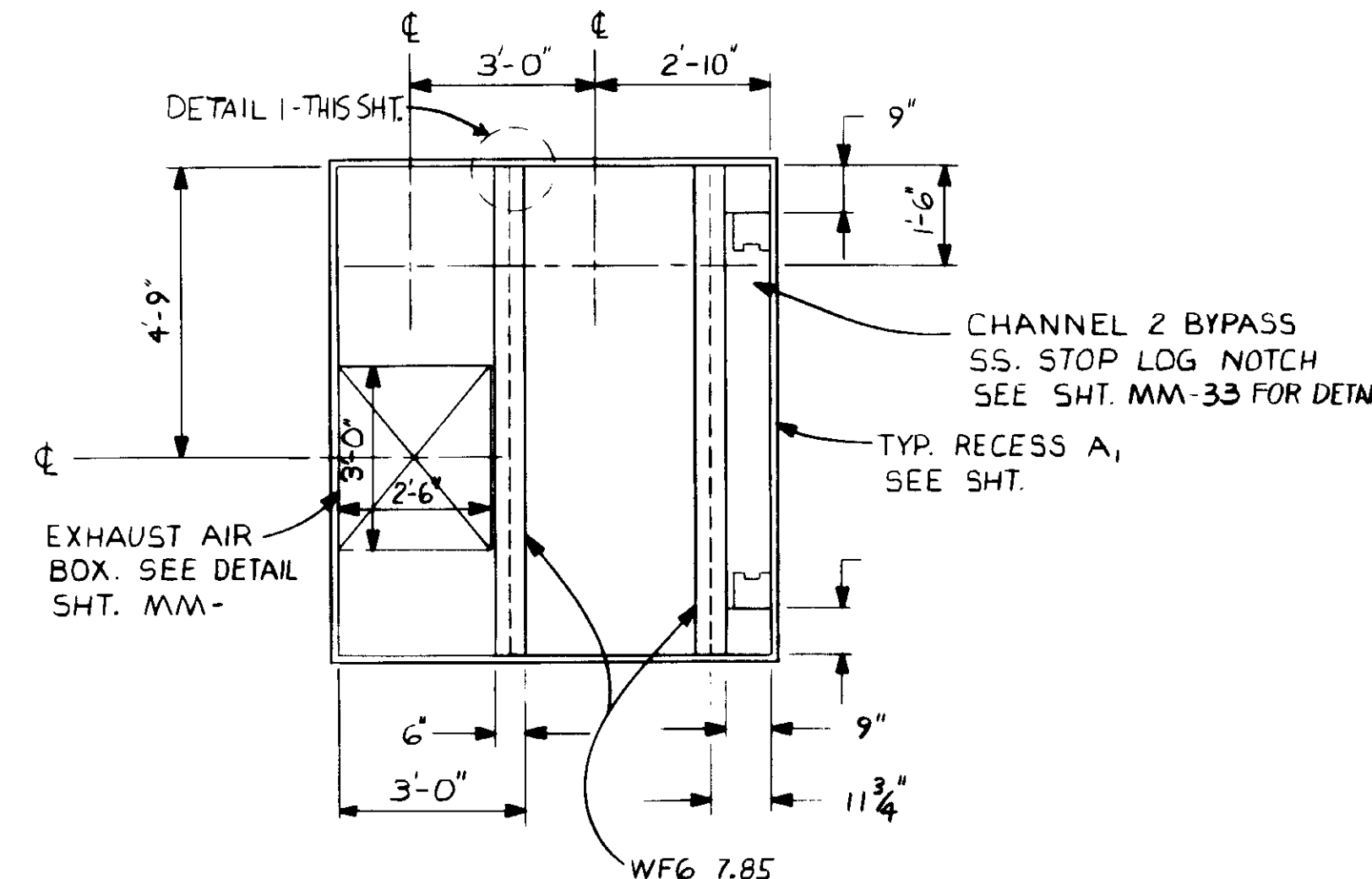
DETAIL NO 1



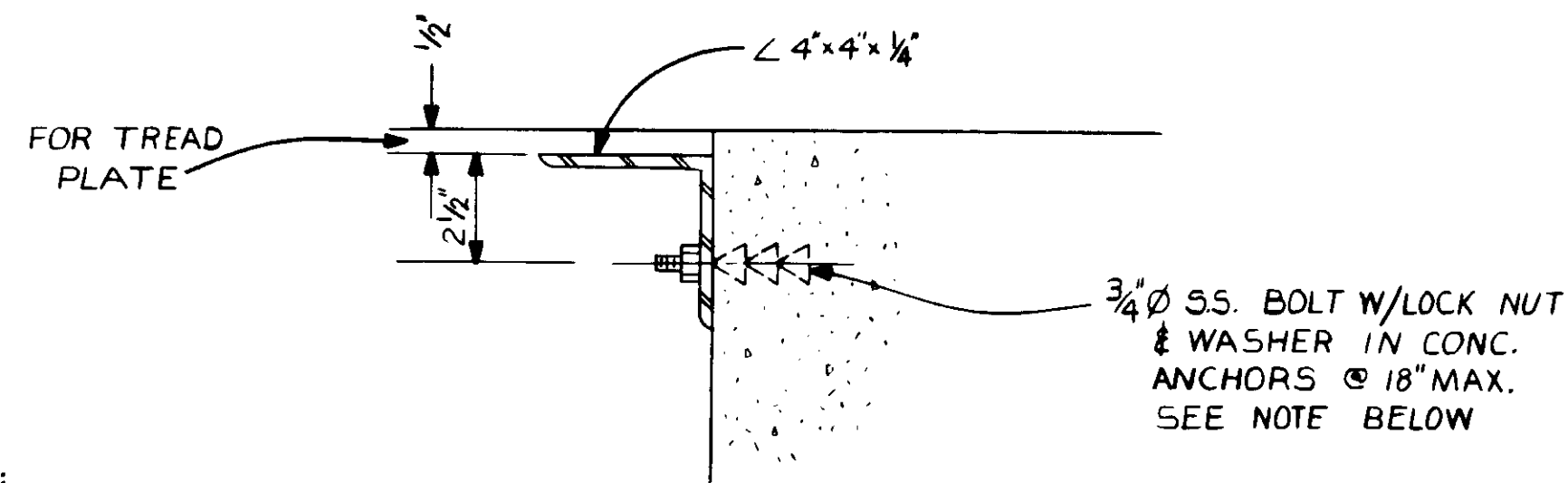
SECTION A  
SCALE: 3/8" = 1'-0"



PLAN  
ALUM. TREAD P  
SELECTOR CHANNEL  
SCALE: 3/8" = 1'-0"



FRAMING PLAN  
SELECTOR CHANNEL  
SCALE: 3/8" = 1'-0"



DETAIL NO 2  
SCALE: 3/8" = 1'-0"

**NOTE:**

CONTRACTOR AT HIS OPTION  
MAY USE EXPANSION BOLTS  
IN LIEU OF ANCHOR BOLTS.  
IF ANCHOR BOLTS ARE USED  
NO INTERFERENCE W/  
REINFORCING STEEL IS ALLOWED.

RECORD DRAWING  
No. 14038  
Exp. 3-31-89  
KATSURA CONSULTING ENGINEERS



04026

REV	DATE	BY	DESCRIPTION

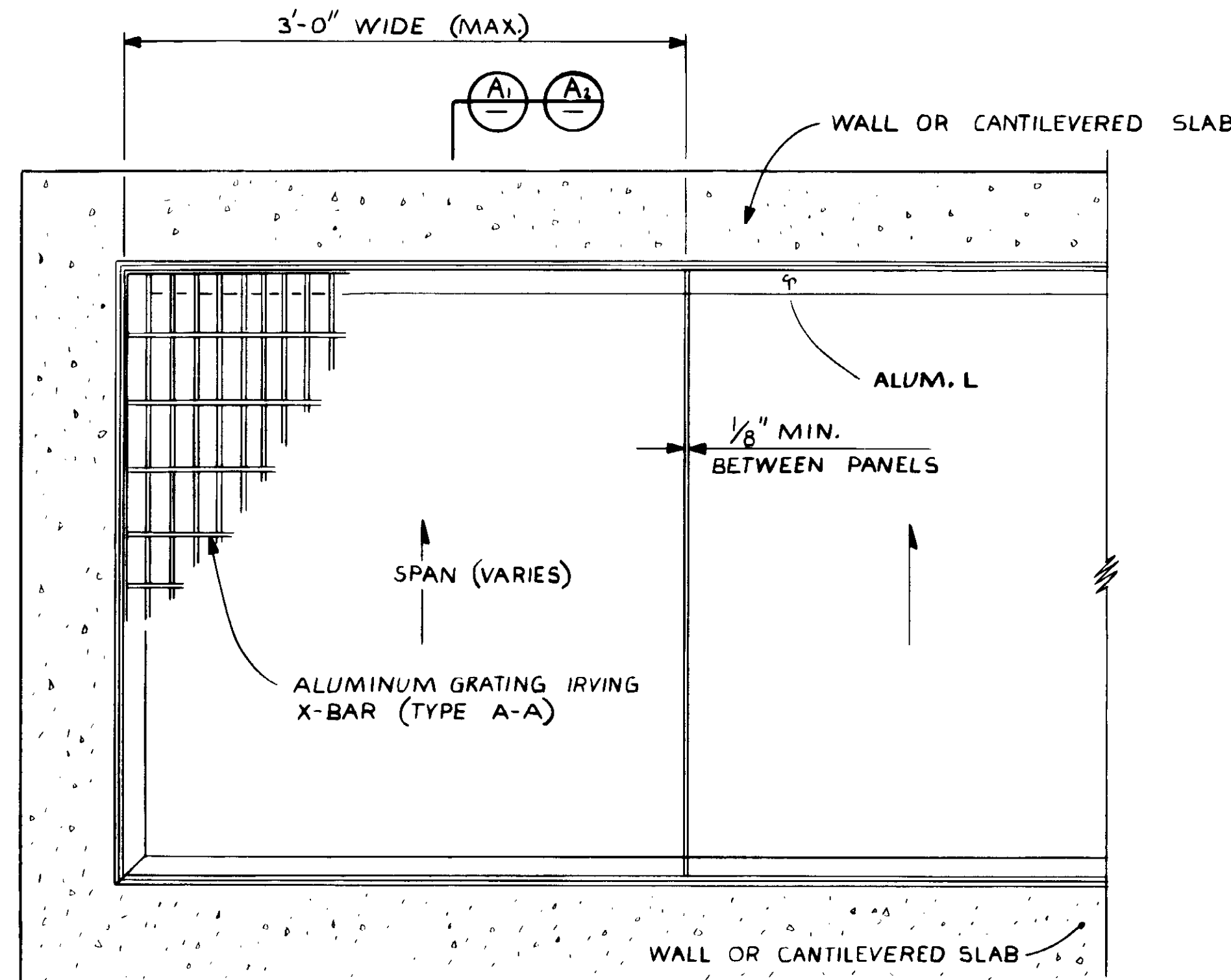
SCALE:	Y.K./C.C.
DESIGNED	R.K.
DRAWN	Y.K.
CHECKED	

SUBMITTED	14038	8-7-87
KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
ALEXANDER ENGINEERS	513	
	R.C.E. NO.	DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

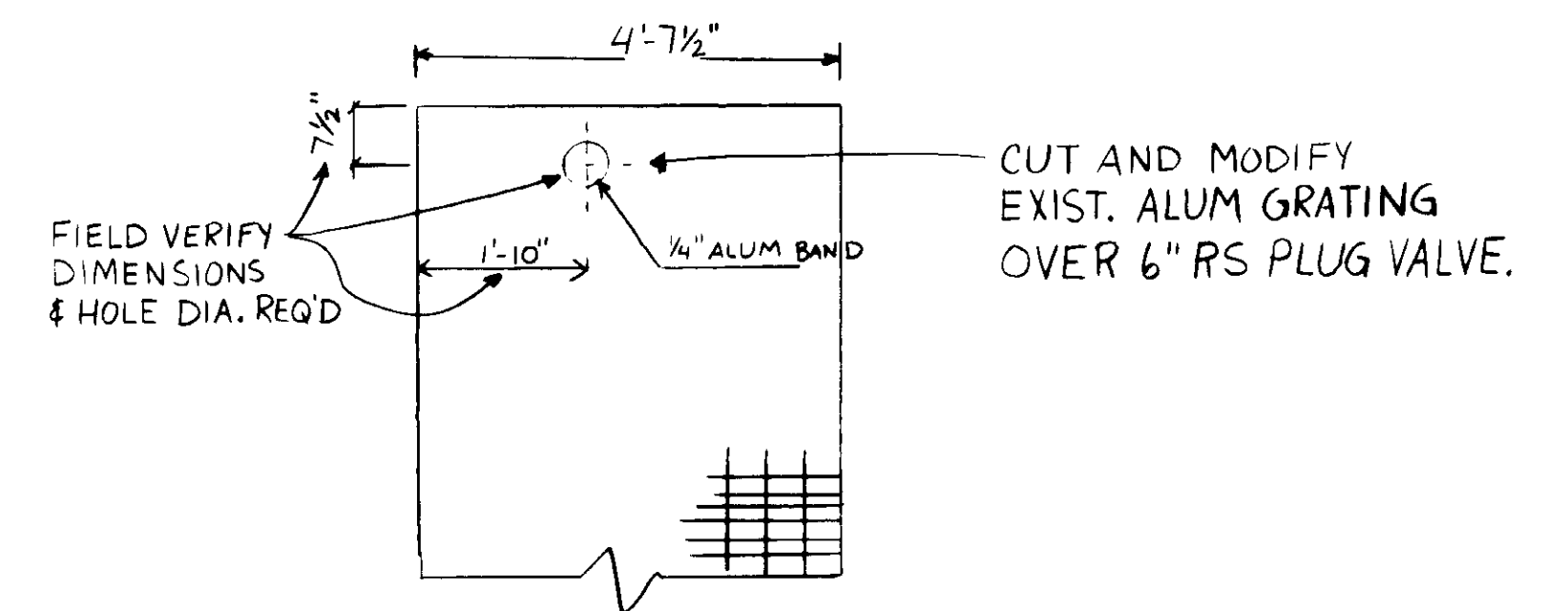
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III	
TREAD PLATES	

SHEET  
MM-16

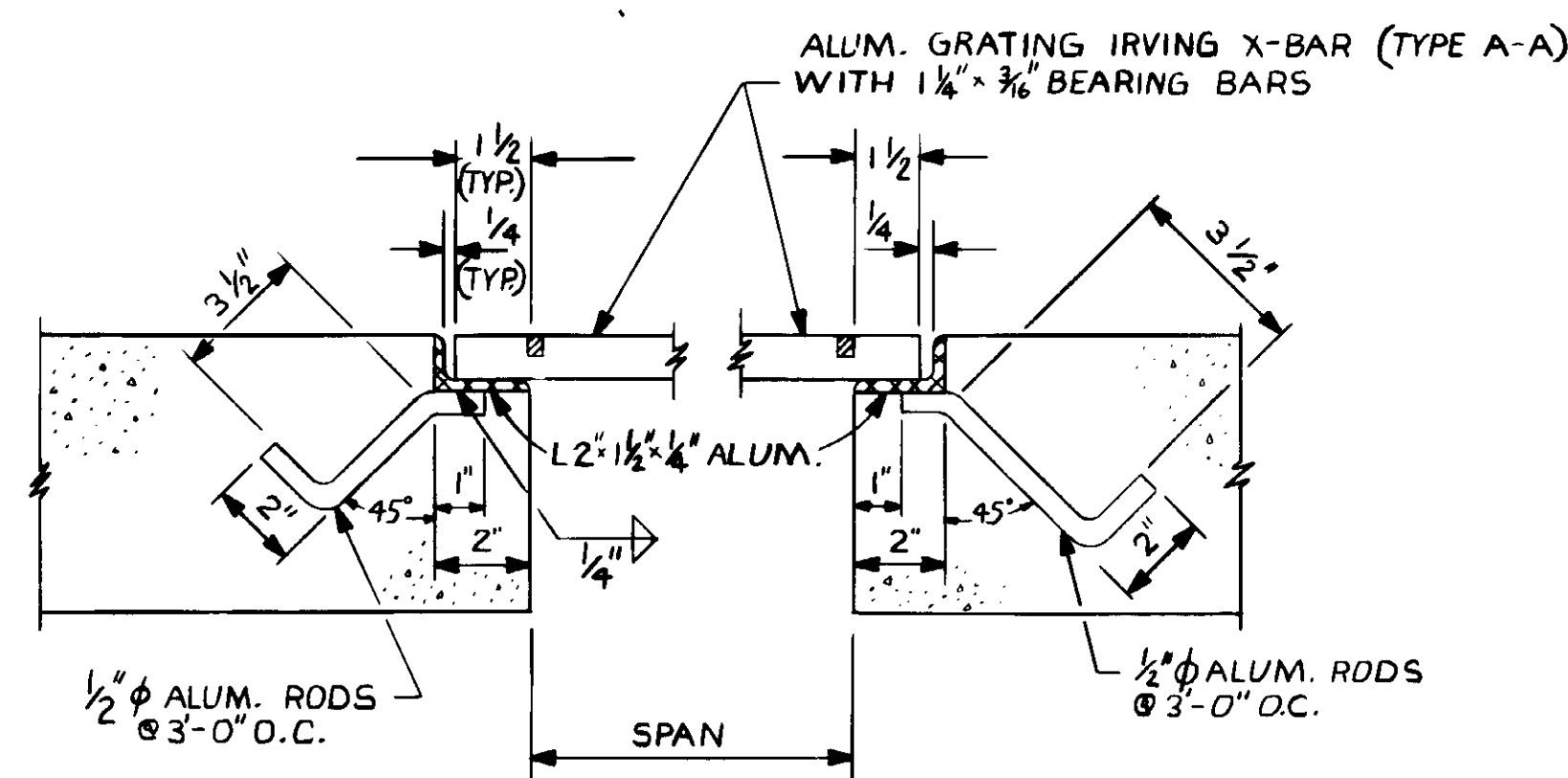


**TYPICAL GRATING PLAN**  
SCALE: 1/2" = 1'-0"

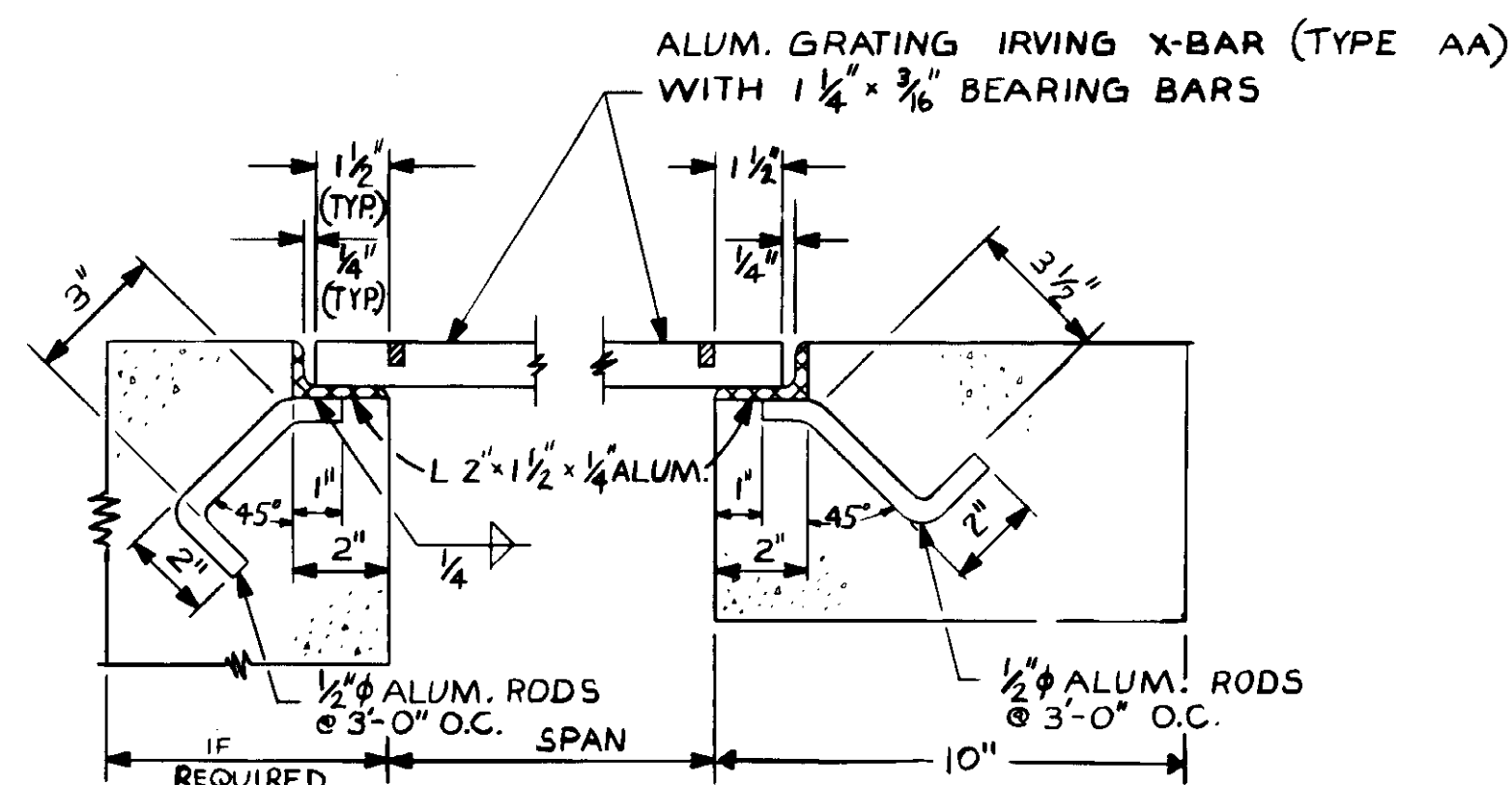
**NOTE:**  
ALUMINUM GRATING REQUIRED ON CHANNEL NO. 3 AND NO. 4  
ALUMINUM GRATING NOT REQUIRED ON CHANNEL NO. 2  
ALUMINUM GRATING REQUIRED ON GALLERY NO. 3 AND SELECTOR CHANNELS  
SEE SHTS MM-17 & MM-18.



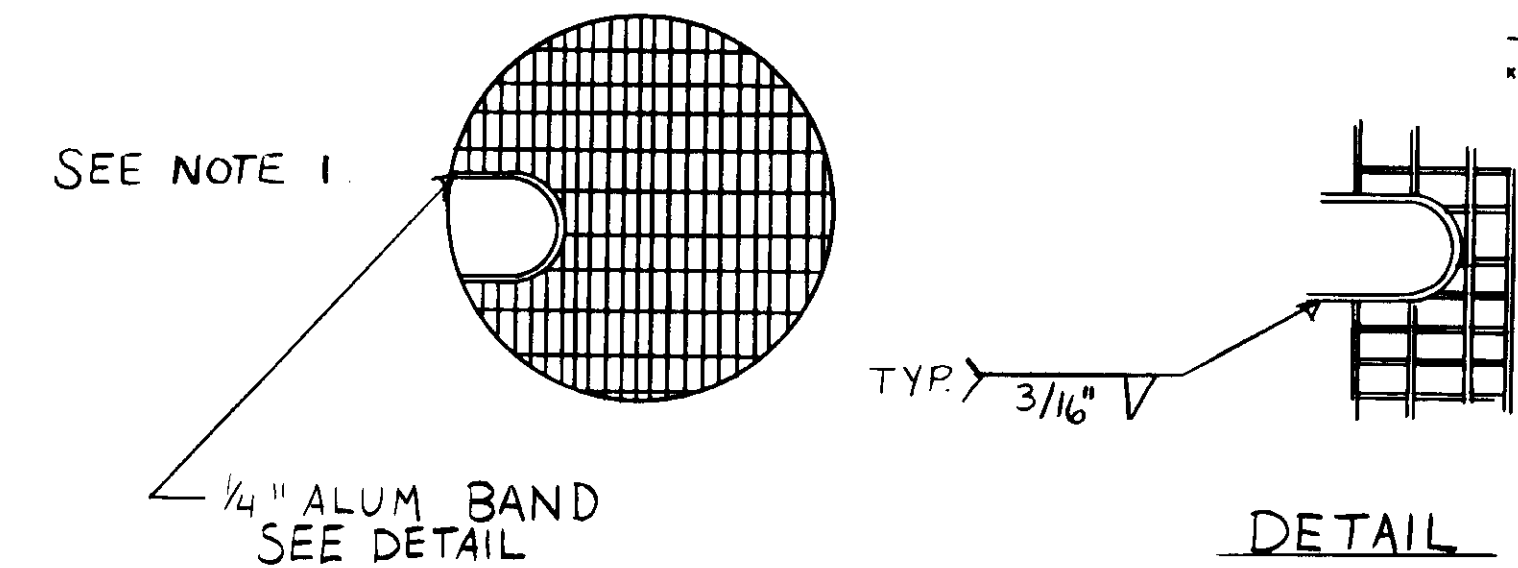
**GALLERY 5 - WALKWAY GRATING MODIFICATION**  
SCALE: 1/2" = 1'-0"



**SECTION A2**  
SCALE: 3/8" = 1'-0"



**SECTION A1**  
SCALE: 3/8" = 1'-0"



**NOTE:**  
1. CUT AND BAND ALUM. GRATING TO DIMENSION SHOWN ON DRAWINGS AND/OR TO DIMENSION REQUIRED BY EQUIPMENT MANUFACTURERS. BAND SHALL BE SAME DEPTH AS GRATING.

RECORD DRAWINGS  
Pre. Filed Information by SHERIFF PATRICK O. BOPP.  
*[Signature]*  
KATSURA CONSULTING ENGINEERS JUNE 1988

04027



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

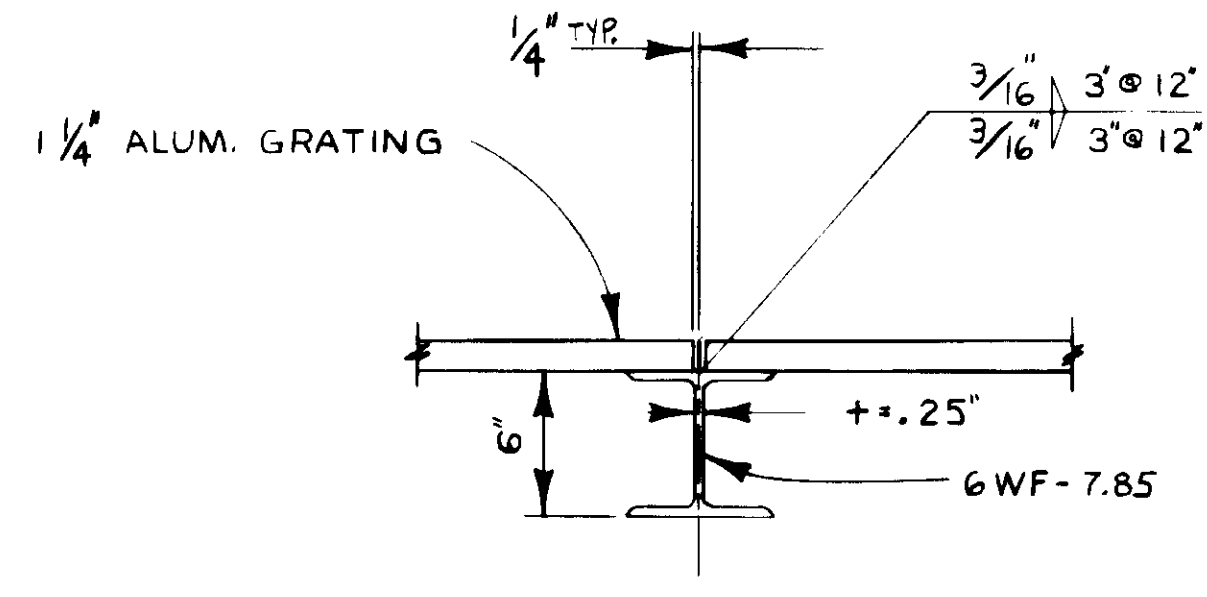
SCALE: AS NOTED.	DESIGNED: Y.K./C.C.	SUBMITTED: <i>[Signature]</i> 14038 8-7-87
DRAWN: Y.K.	CHECKED: Y.K.	KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

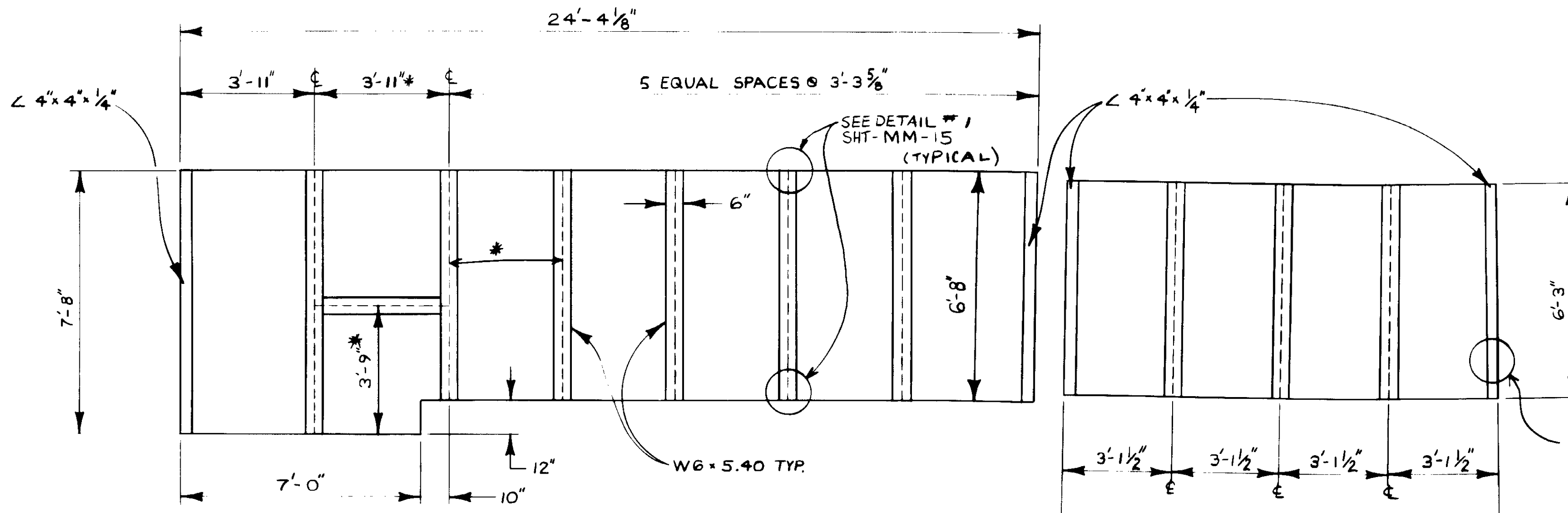
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
TYPICAL GRATING DETAILS

SHEET  
MM-17





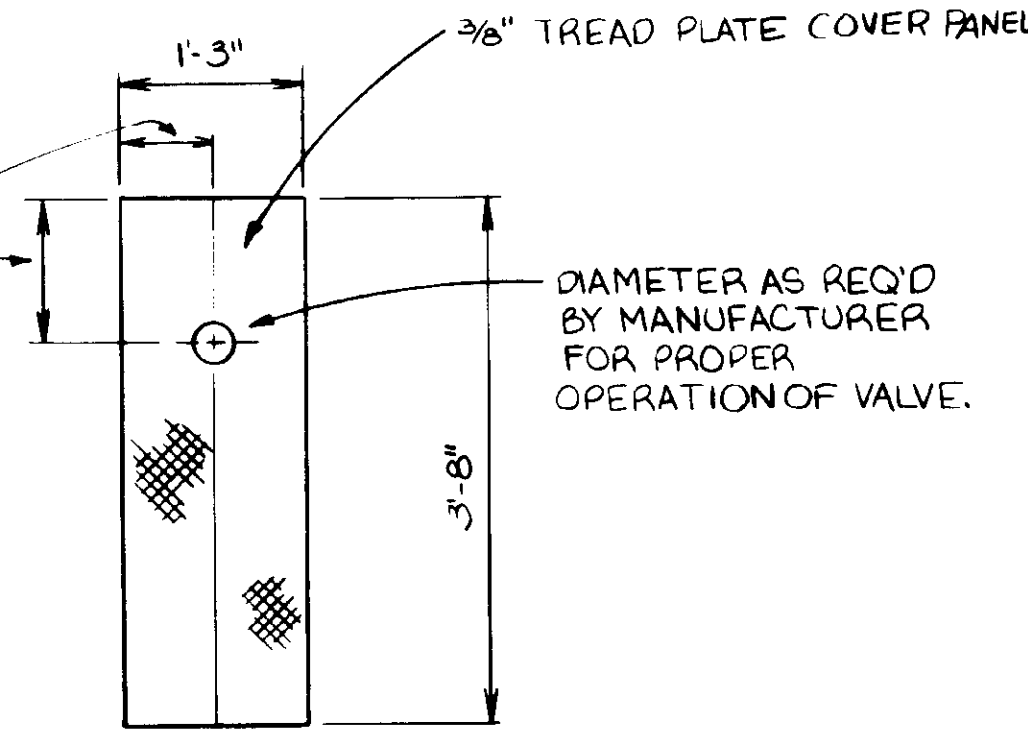
**SECTION A-A**  
SCALE: 1 1/2" = 1'-0"



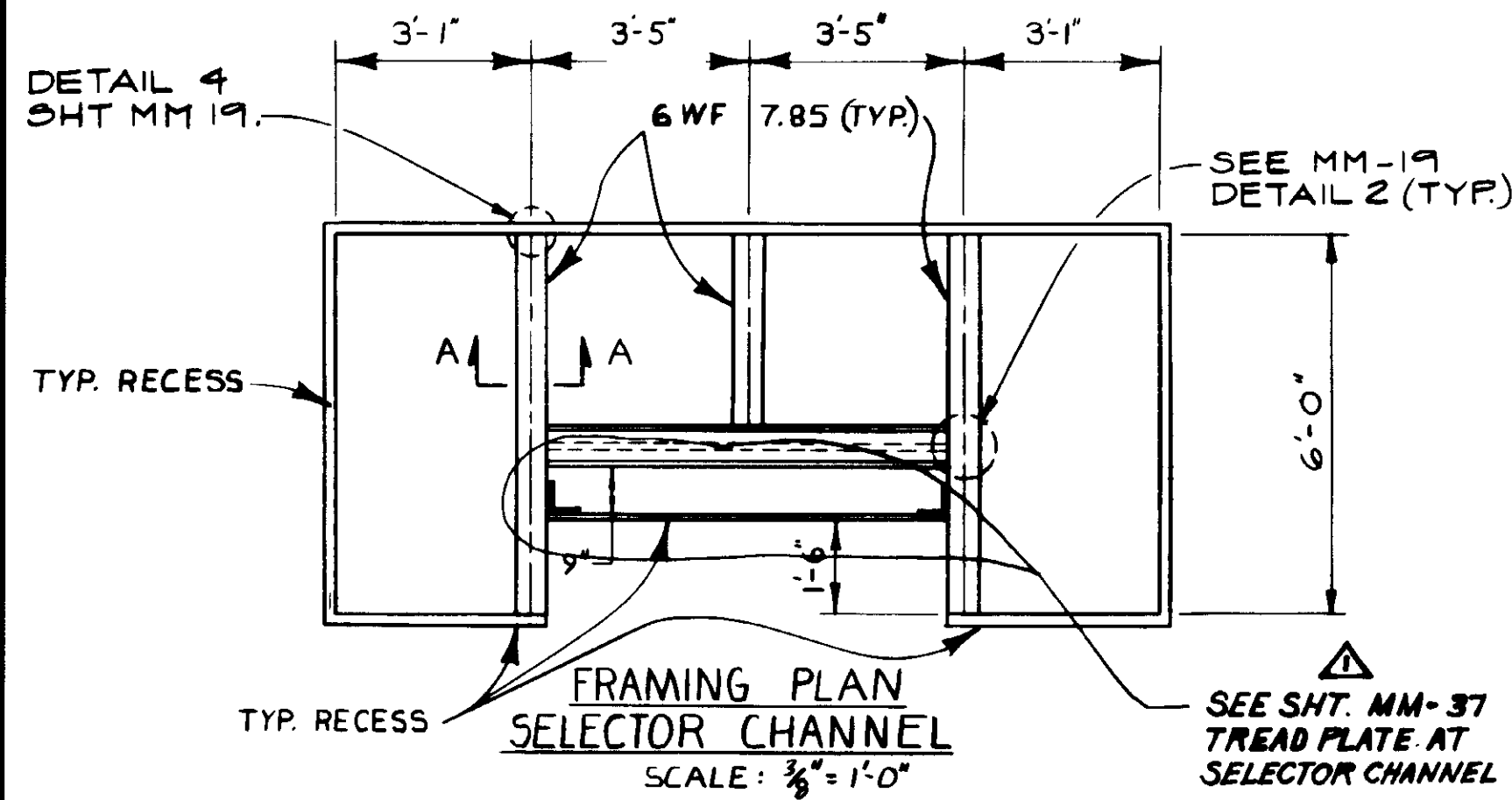
**FRAMING PLAN**  
**PROCESS AIR COMPRESSOR N<sup>o</sup> 3**  
SCALE: 3/8" = 1'-0"

\* CONTRACTOR: COORDINATE THESE DIMENSIONS AND CUT OUT WITH MECHANICAL REQUIREMENTS.

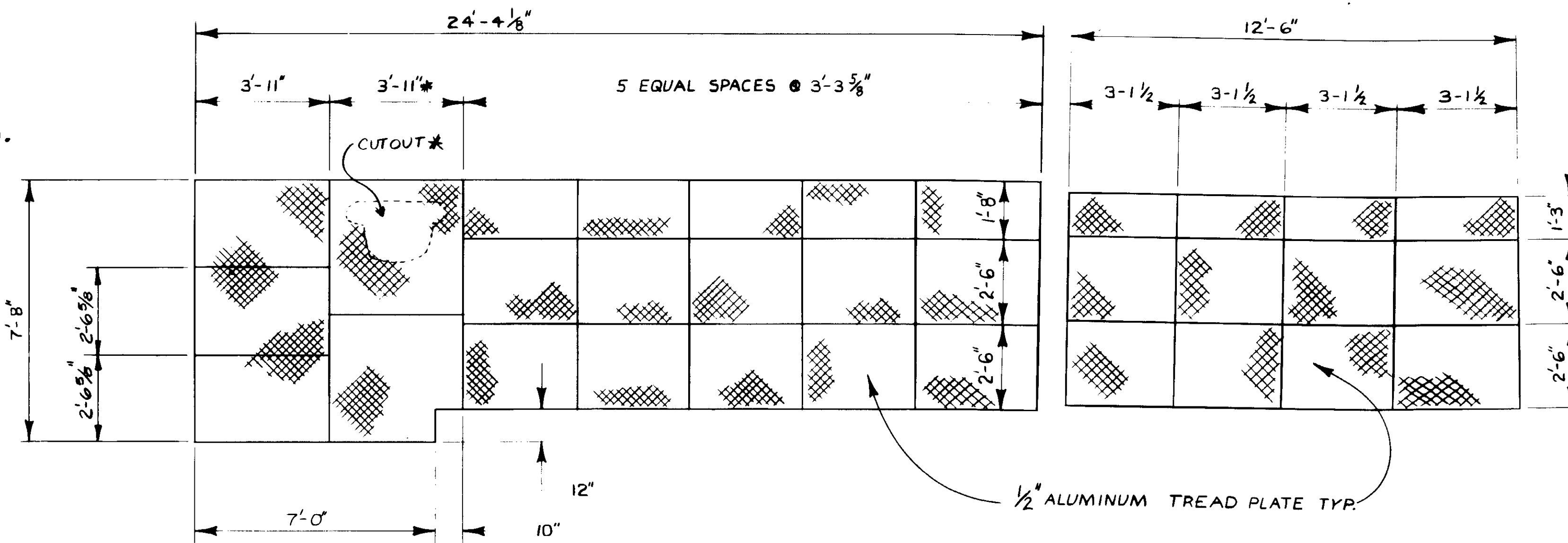
THESE DIMENSIONS TO BE ADJUSTED TO EXISTING VALVE LOCATION



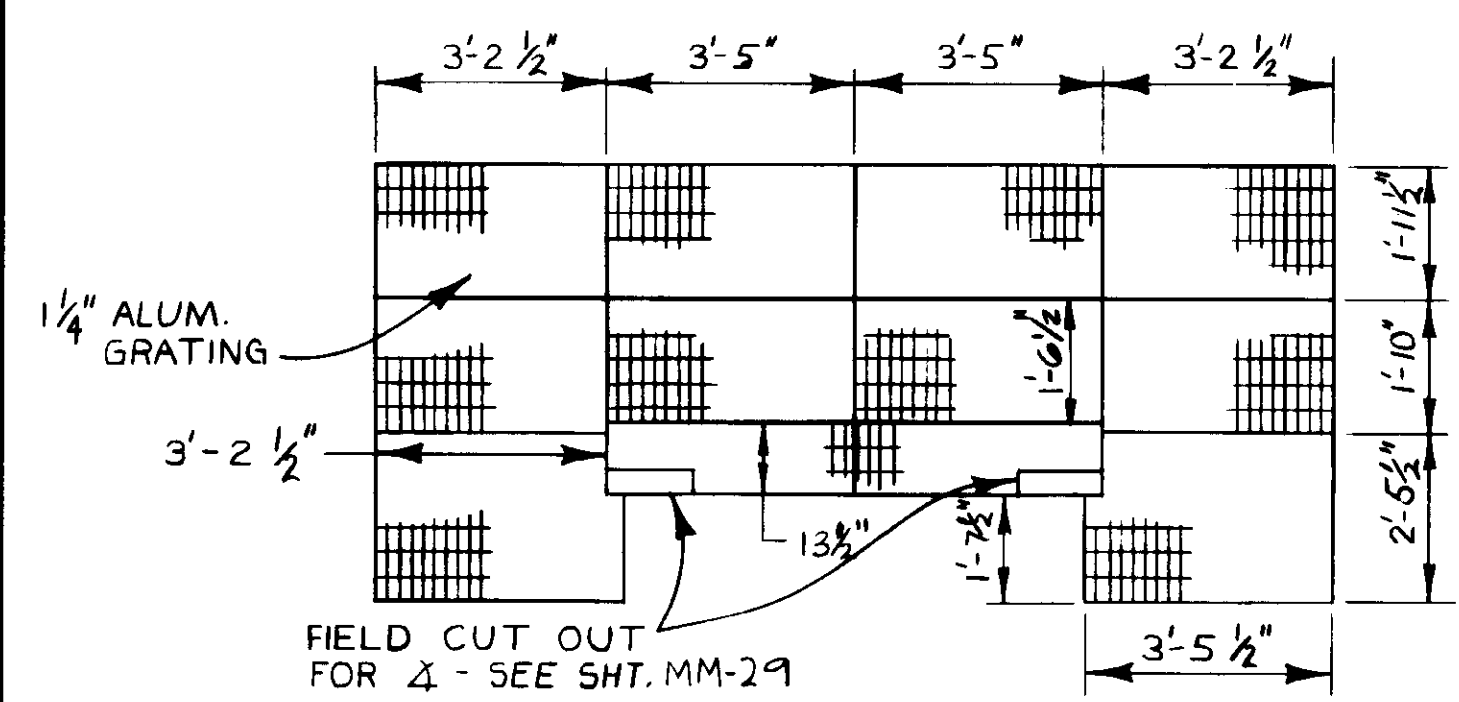
**AEROBIC DIGESTERS**  
**AUTOMATIC SLUDGE FEED VALVE**  
**COVERS**  
SCALE: 3/4" = 1'-0"



**FRAMING PLAN**  
**SELECTOR CHANNEL**  
SCALE: 3/8" = 1'-0"

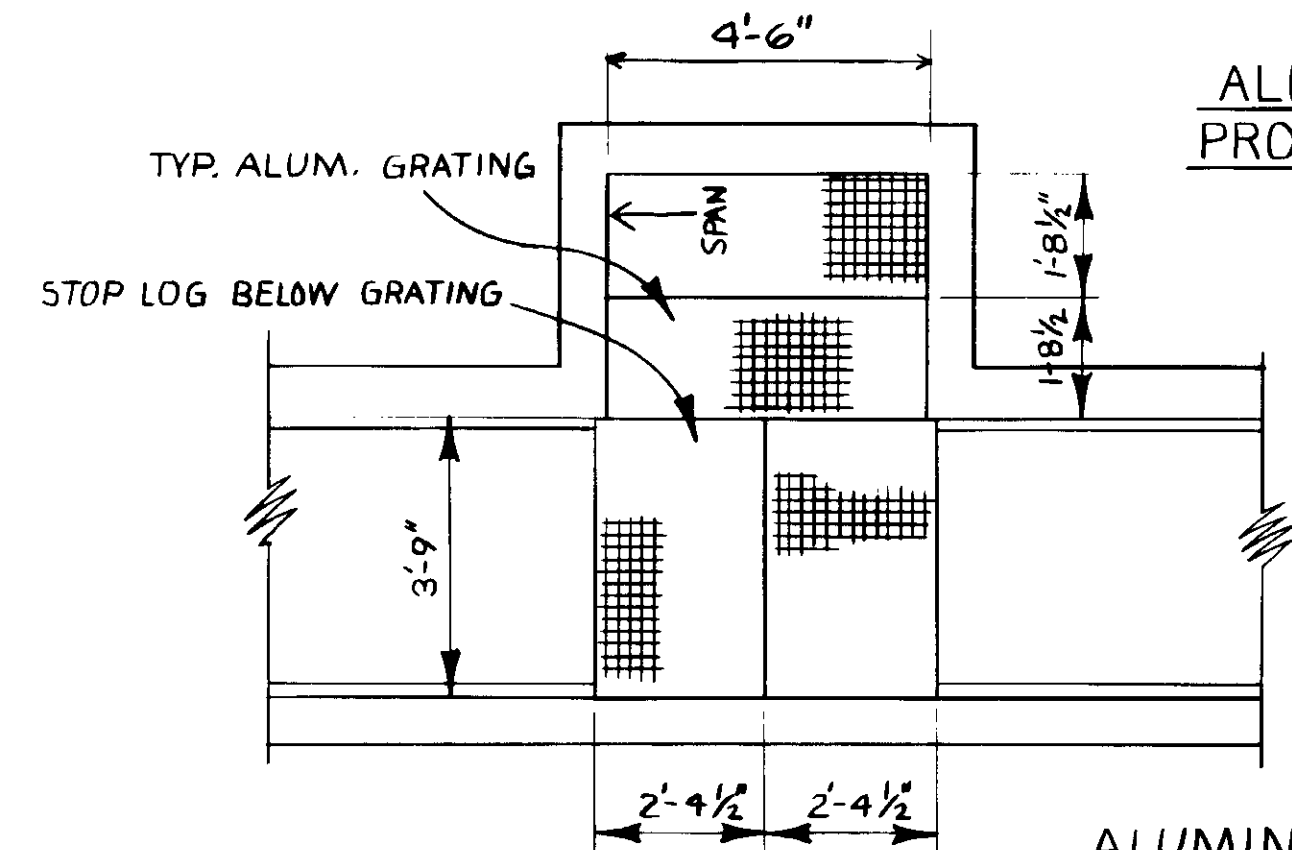


**ALUMINUM TREAD PLATE PLAN**  
**PROCESS AIR COMPRESSOR N<sup>o</sup> 3**  
SCALE: 3/8" = 1'-0"

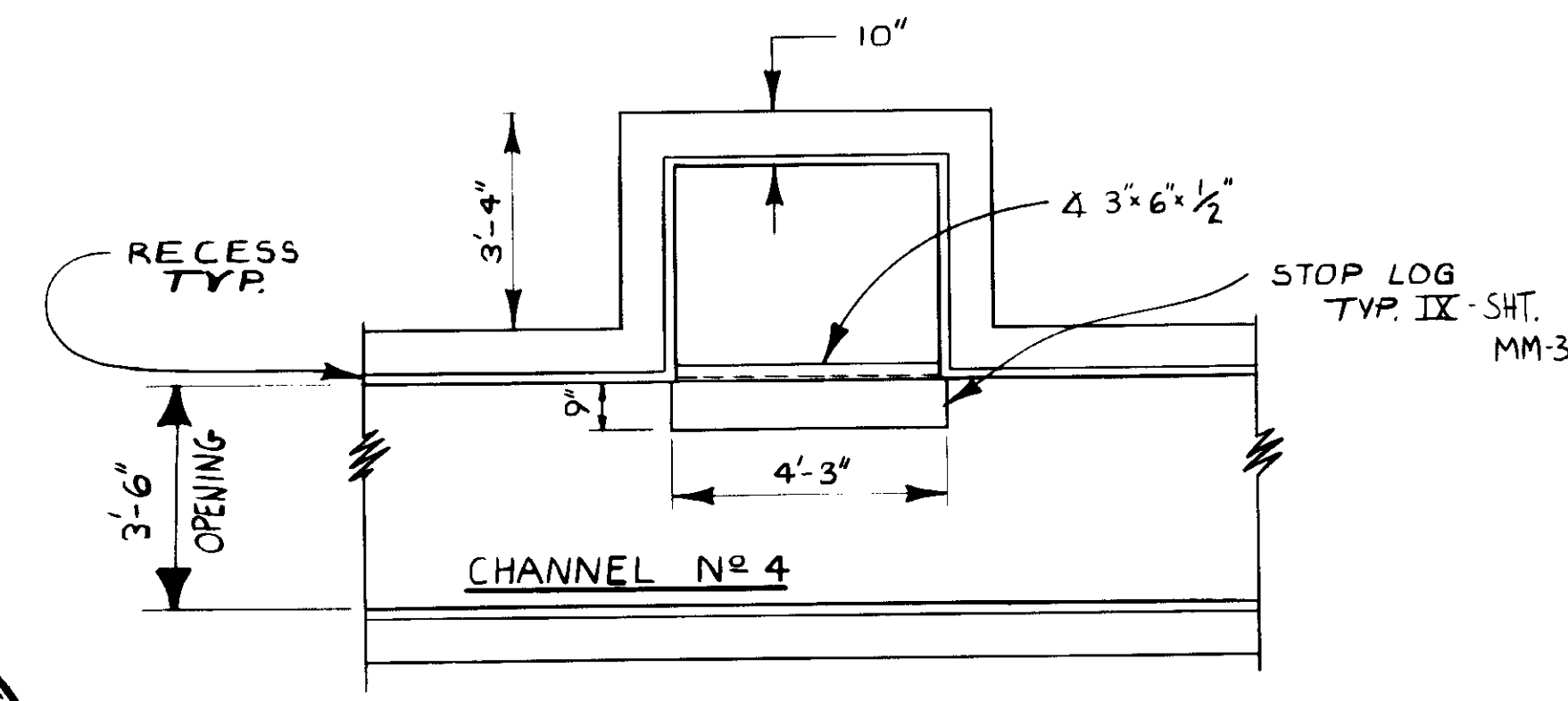


**ALUMINUM GRATING PLAN**  
**SELECTOR CHANNEL**  
SCALE: 3/8" = 1'-0"

NOTE: USE CONNECTION DETAIL FROM MM-19 W/6WF. 7.85 AS TYP. BEAM.



**ALUMINUM GRATING PLAN**  
**CHANNEL N<sup>o</sup> 4 - RAS INLET**  
SCALE: 3/8" = 1'-0"



**FRAMING PLAN**  
**CHANNEL N<sup>o</sup> 4**  
**RAS INLET**  
SCALE: 3/8" = 1'-0"



REGISTERED PROFESSIONAL ENGINEER  
No. 14038  
Exp. 3-31-89  
CIVIL  
STATE OF CALIFORNIA  
KATSUMI CONSULTING ENGINEERS JUNE 1982

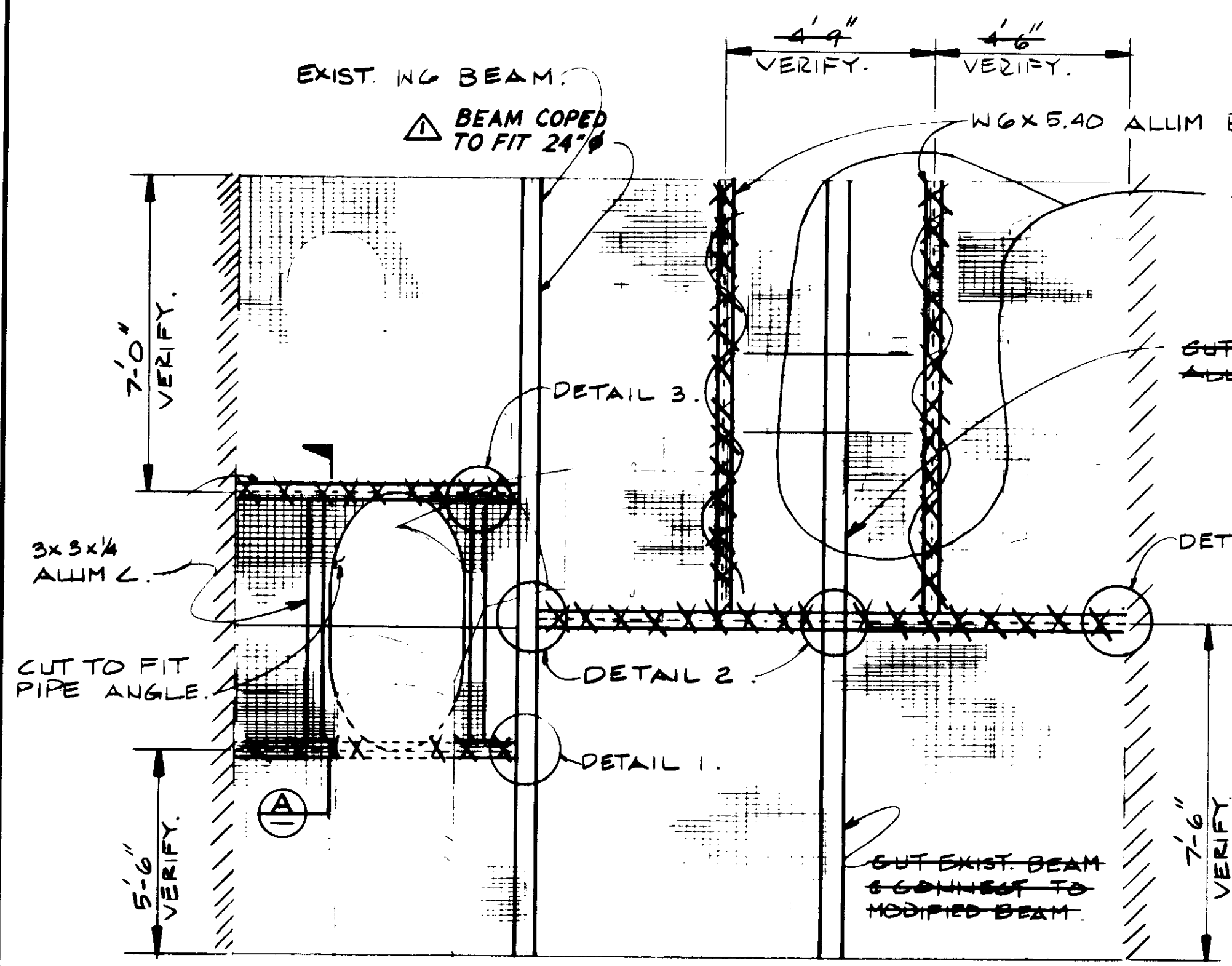
REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED	DESIGNED: Y.K./C.C.	SUBMITTED: 8-7-87
DRAWN: Y.K.	CHECKED: R.K.	DATE: 8-7-87

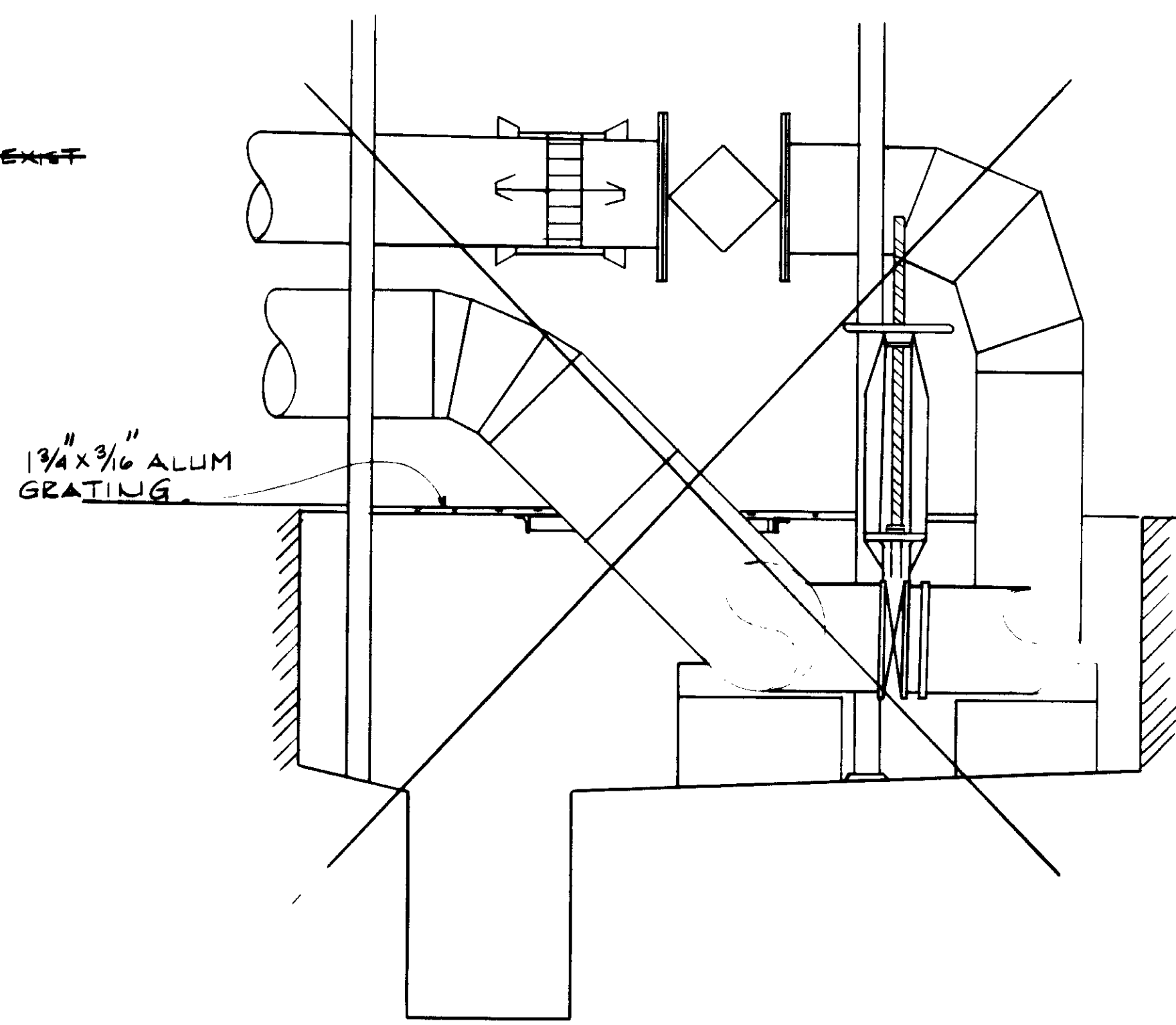
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**TREAD PLATE & GRATING DETAILS - I**

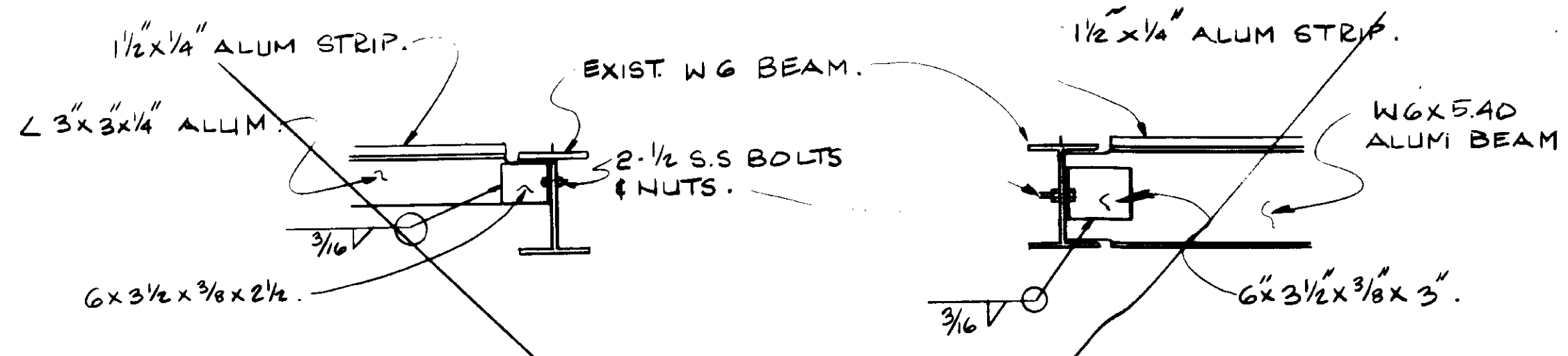
SHEET **MM-18**



E-W GALLERY GRATING MODIFICATION.  
3/8" = 1'-0"

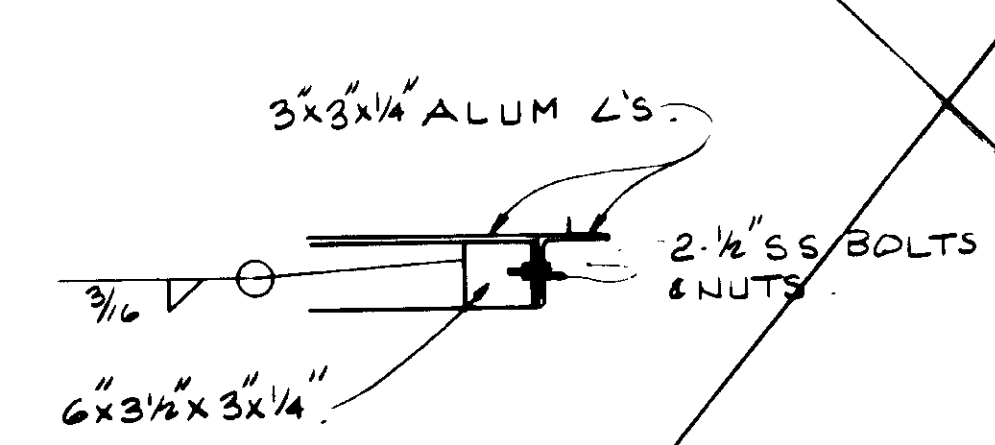


DETAIL  $\frac{3}{8}'' = 1'-0''$  (A)

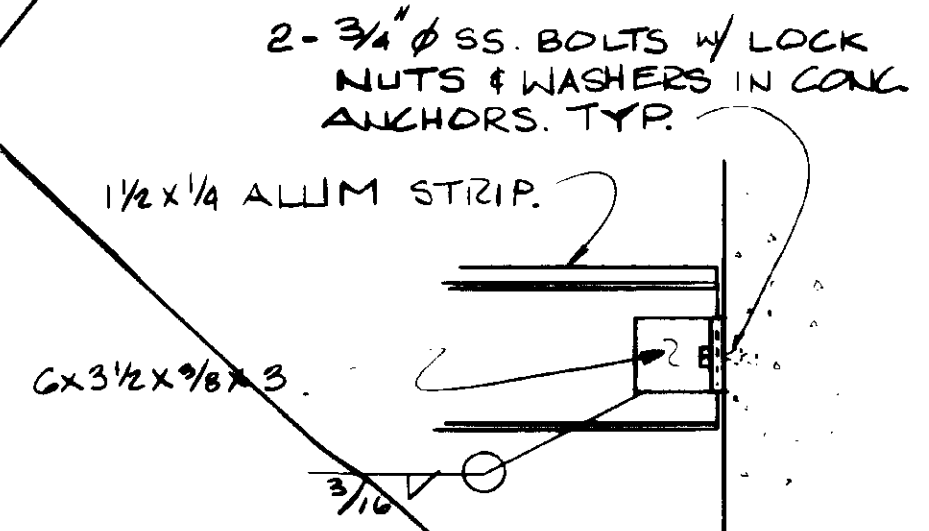


DETAIL 1.  
1 1/2" = 1'-0"

DETAIL 2  
1 1/2" = 1'-0"



DETAIL 3.  
1 1/2" = 1'-0"



DETAIL 4  
1 1/2" = 1'-0"

OPTION:  
NEW GRATING OR MODIFIED EXIST BAND ALL OPEN GAPS & EDGES.

04029



RECORD DRAWING  
KATSUMURA CONSULTING ENGINEERS JUNE 1988

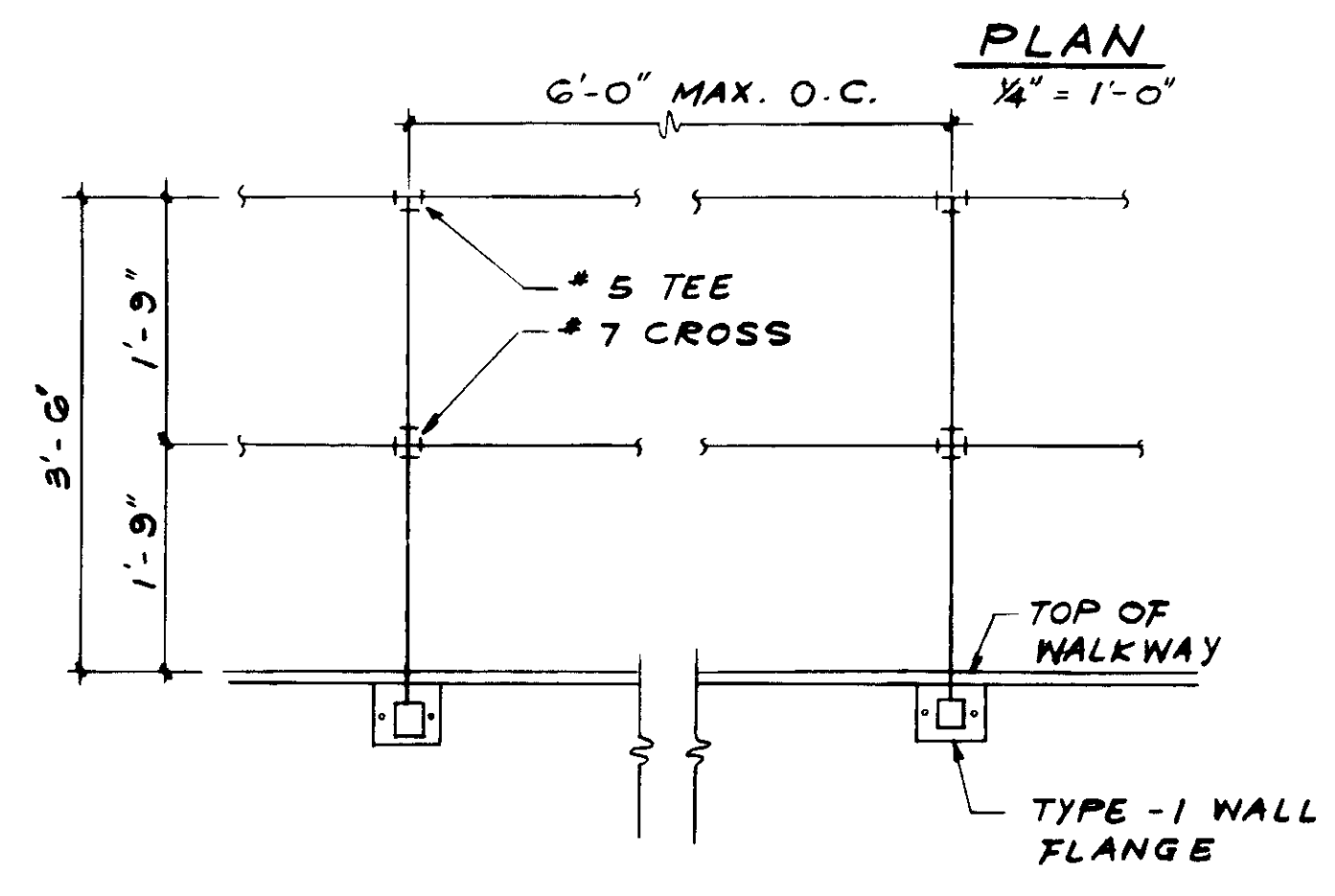
REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED	DESIGNED: Y.K./C.S.	SUBMITTED: <i>Toshiro Katsura</i> 14038 8-7-87
	DRAWN: C.L.	KATSUMURA CONSULTING ENGINEERS R.C.E. NO. DATE
	CHECKED: Y.K.	
		ALEXANDER ENGINEERS R.C.E. NO. DATE

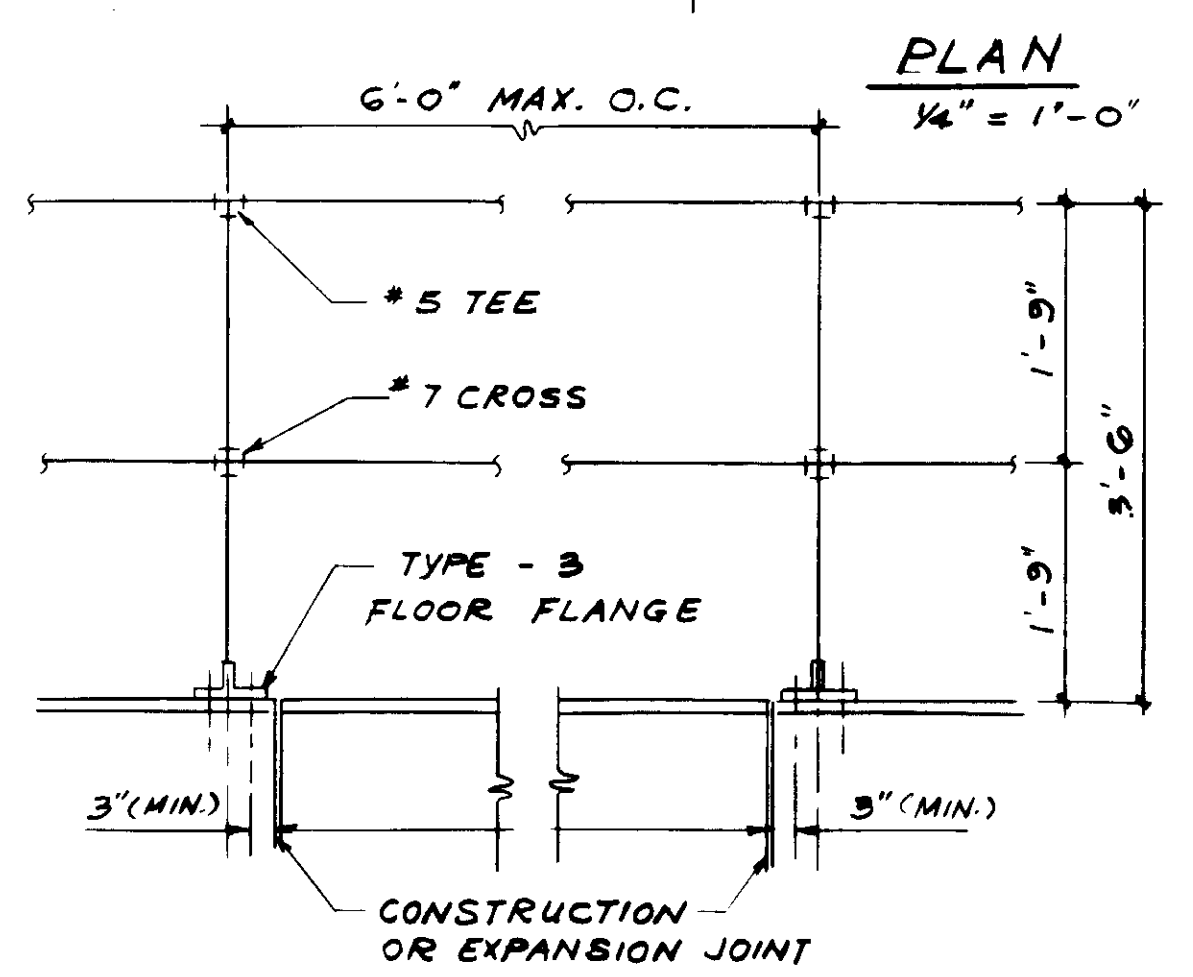
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
TREAD PLATE & GRATING DETAILS

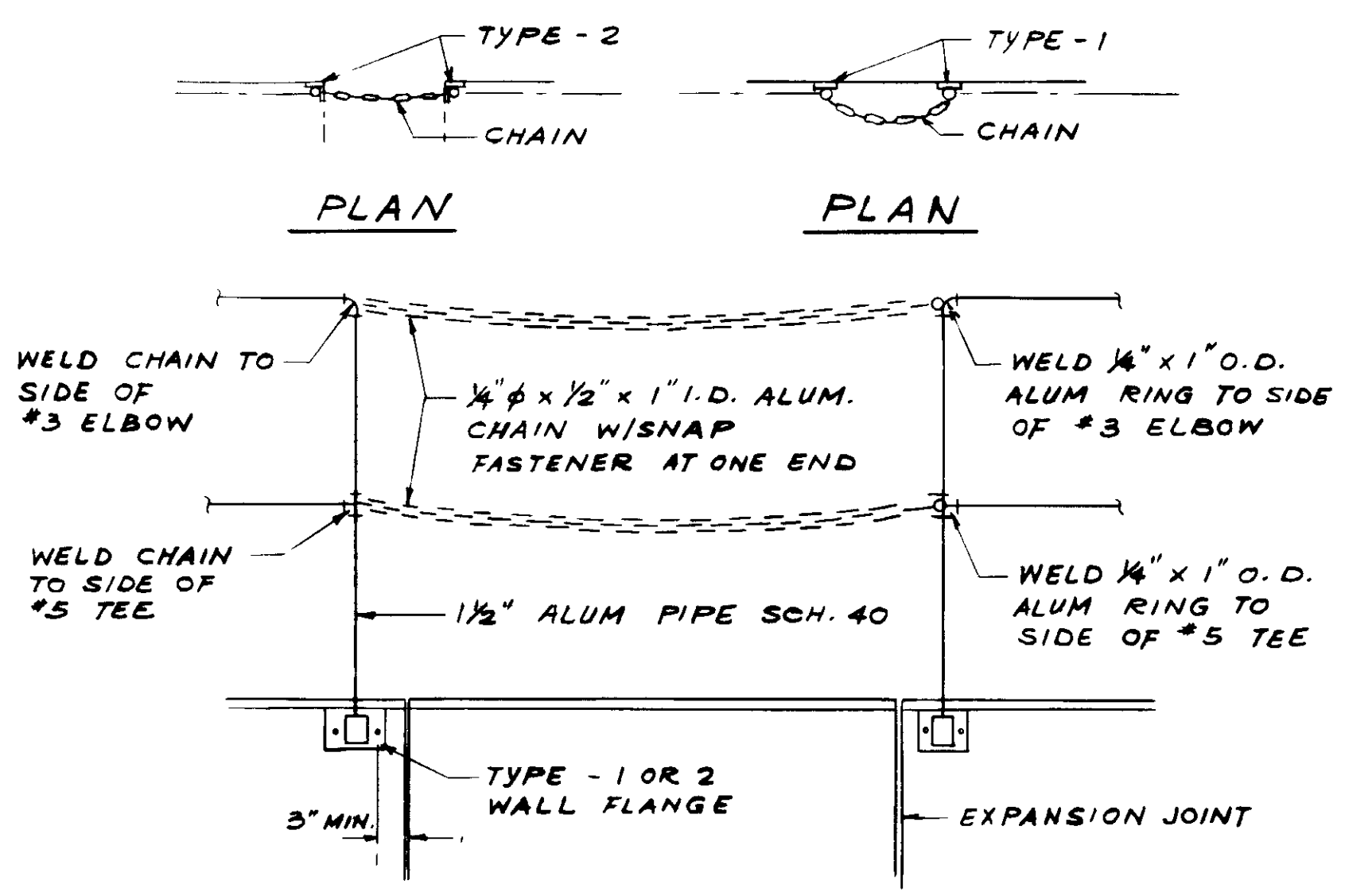
SHEET  
MM-19



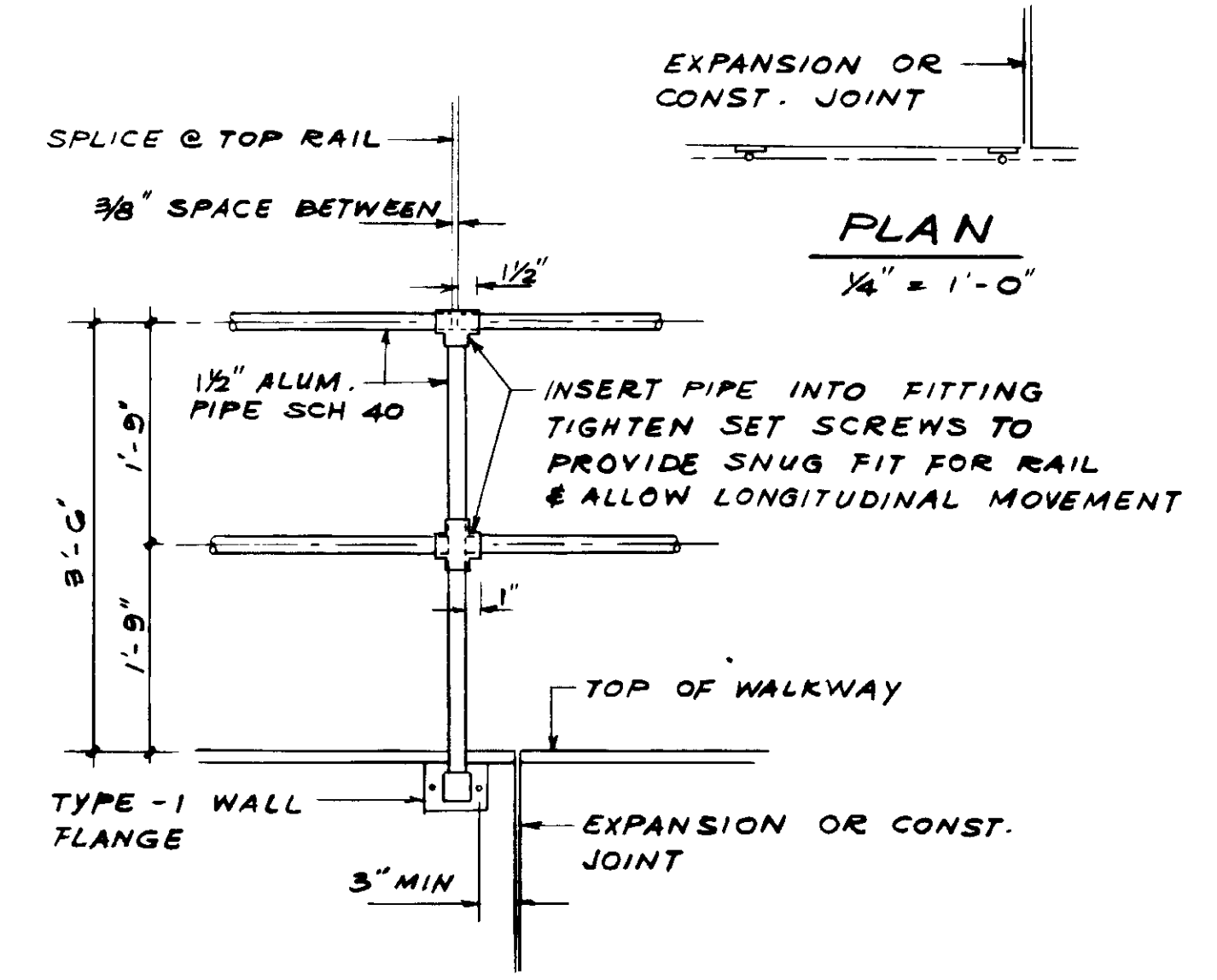
**DETAIL - A**



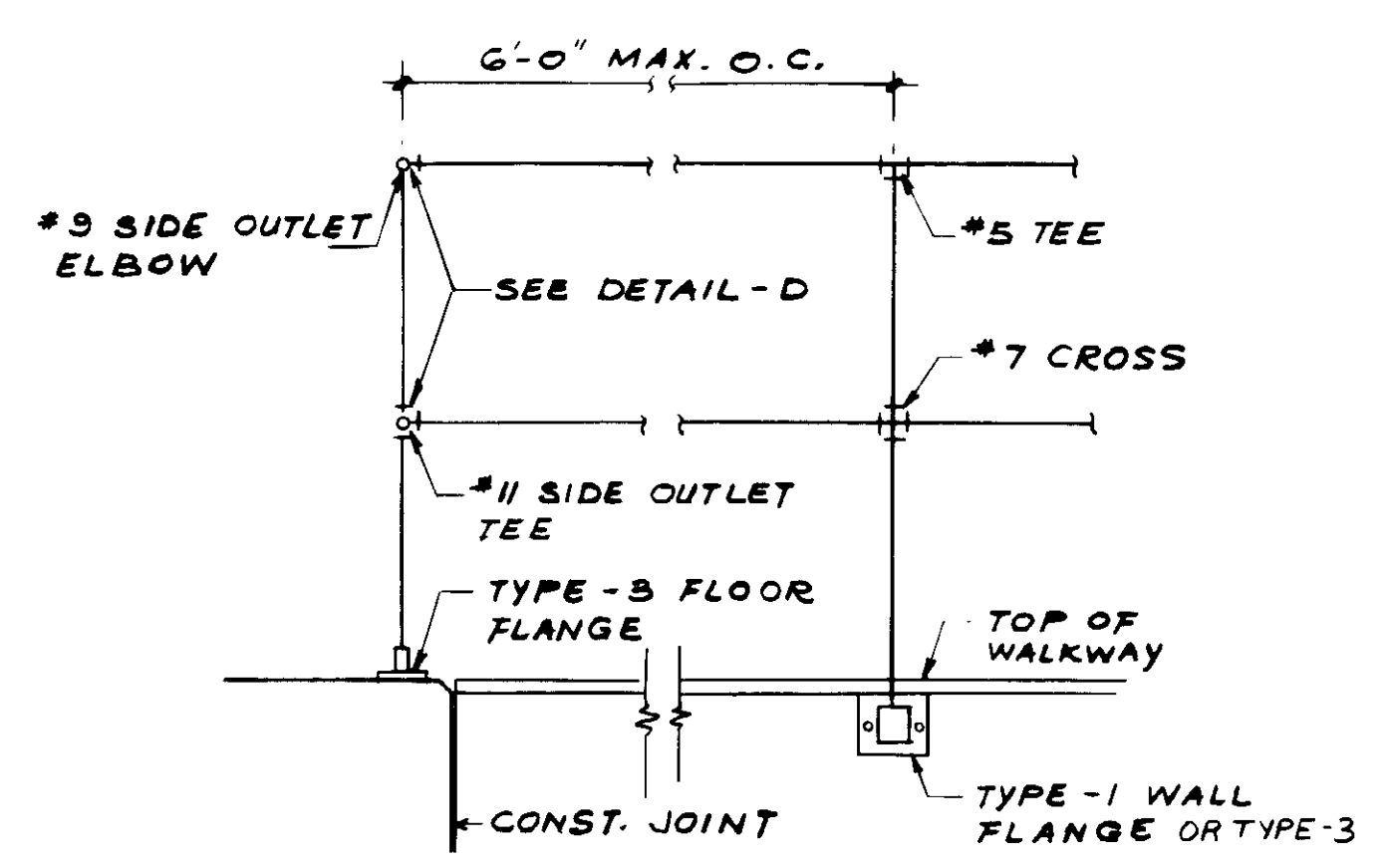
**DETAIL - B**



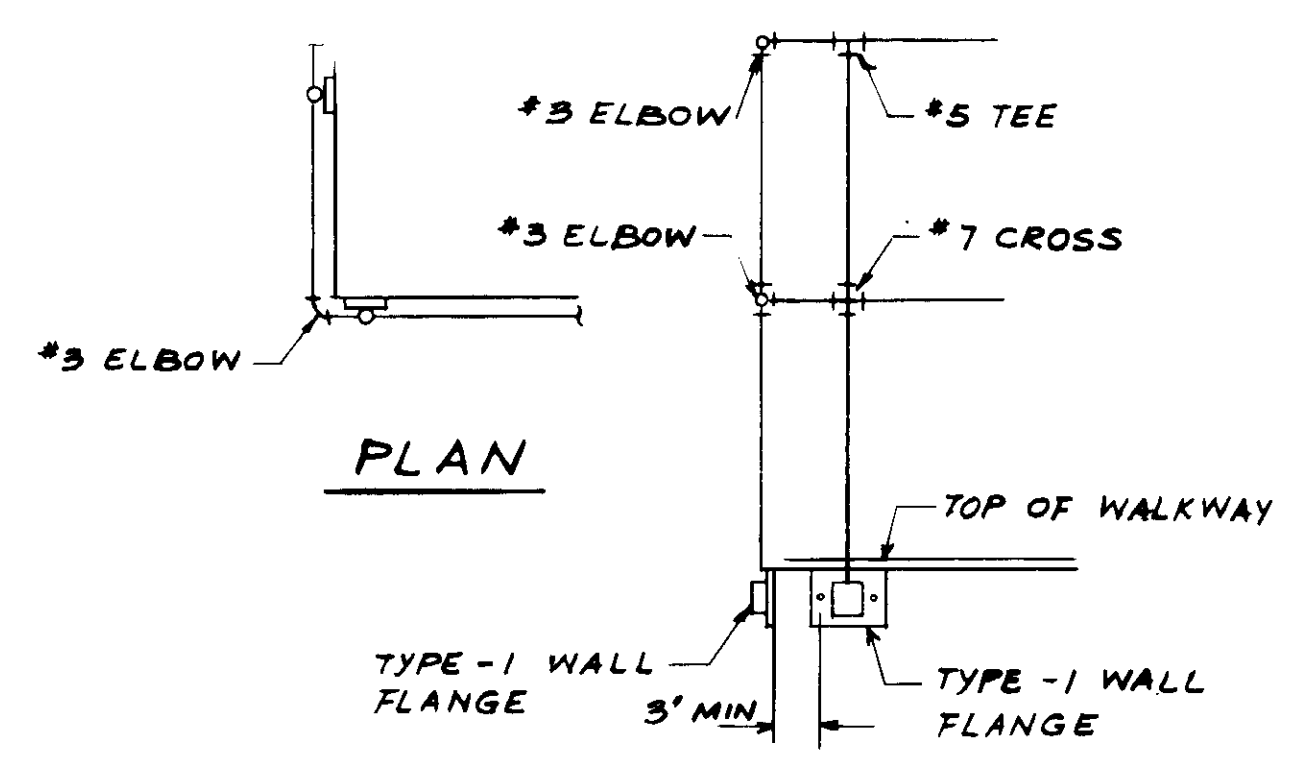
**DETAIL - C**



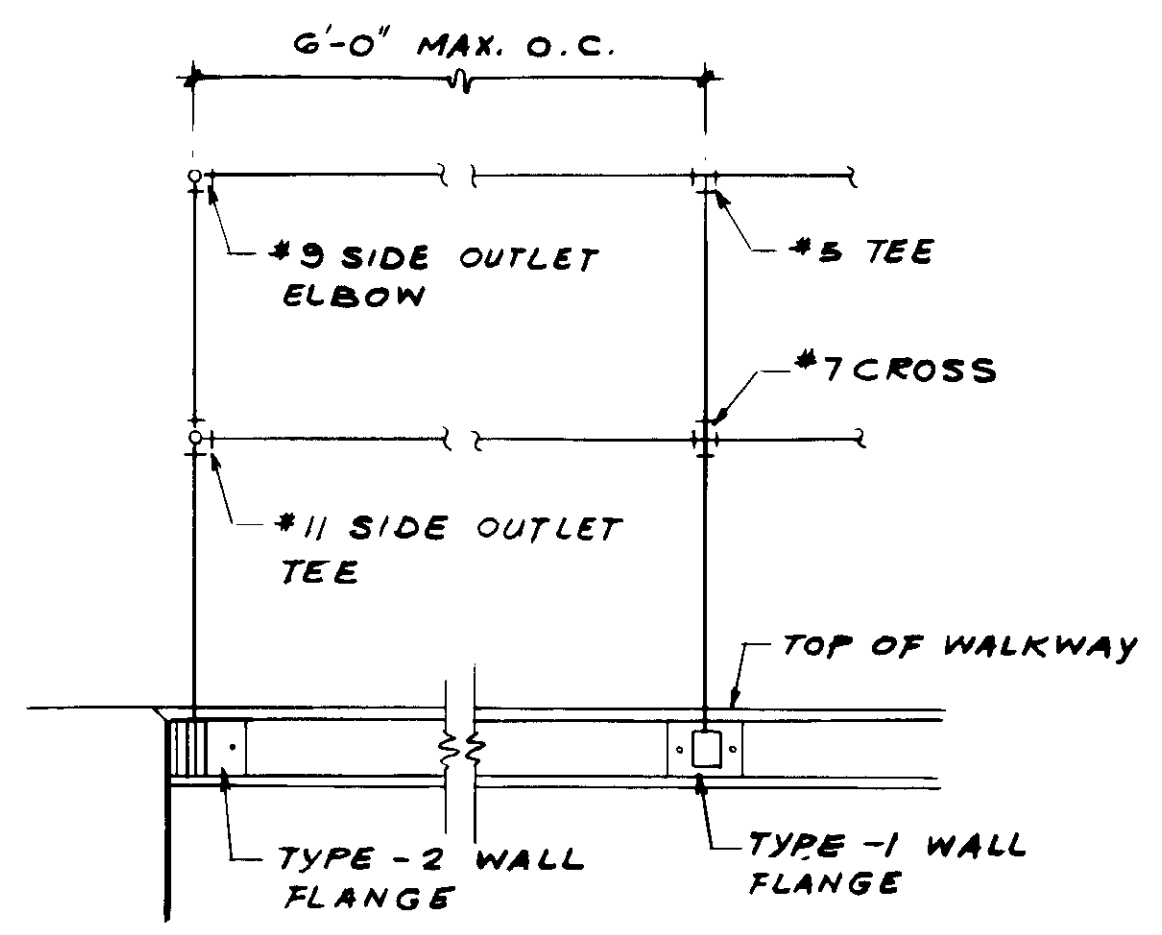
**DETAIL - D**



**DETAIL - E**



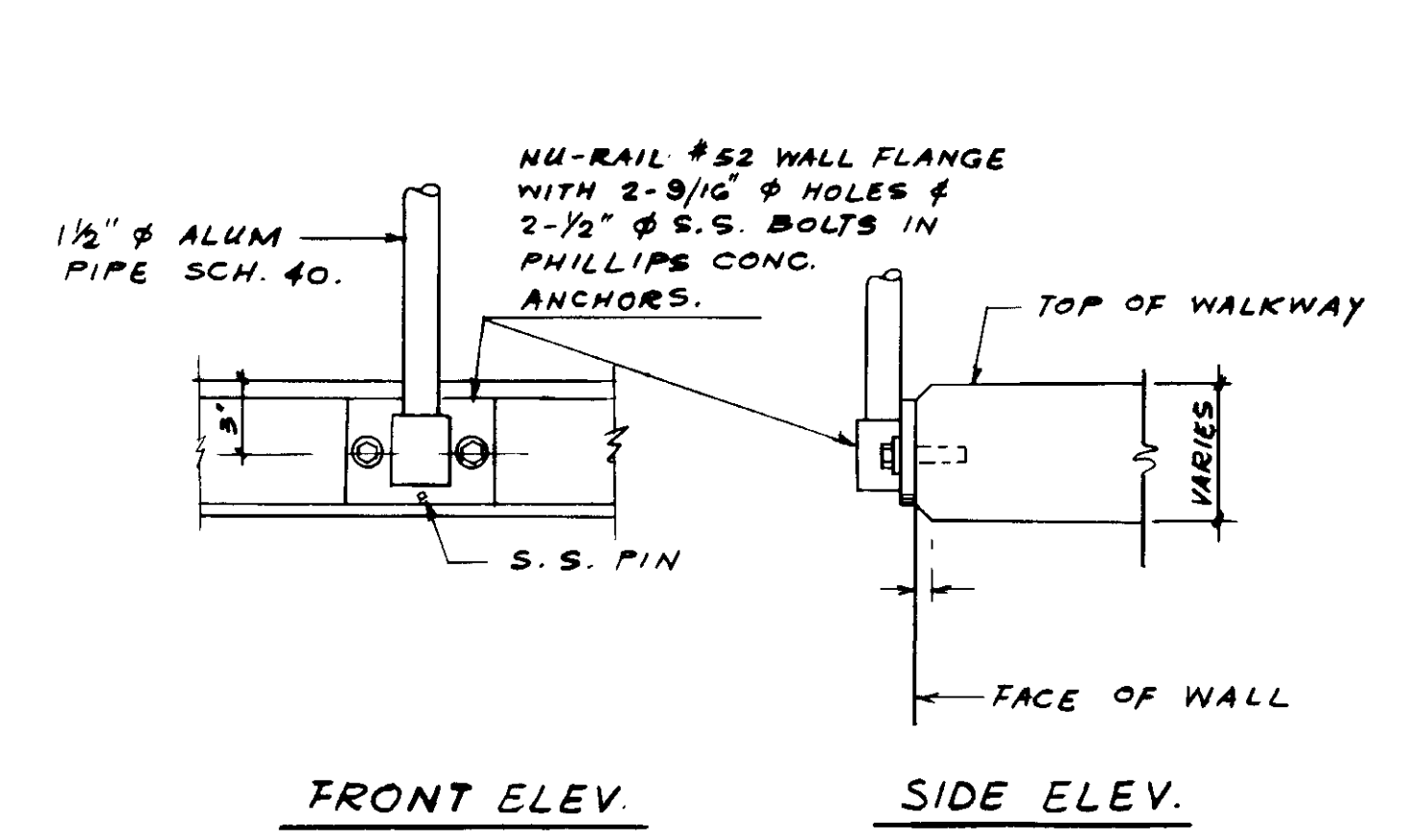
**DETAIL - F**



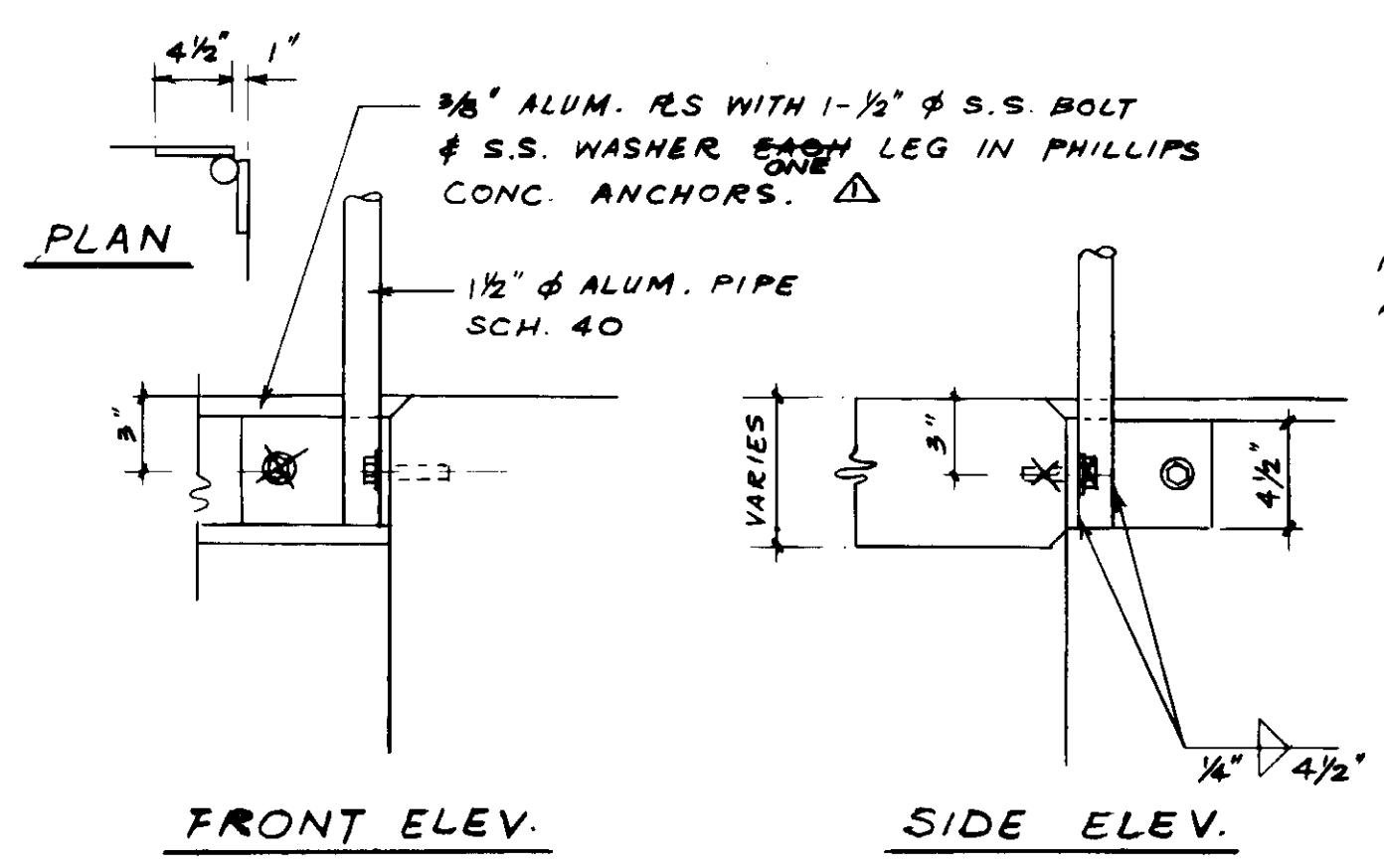
**DETAIL - G**

**NOTES:**

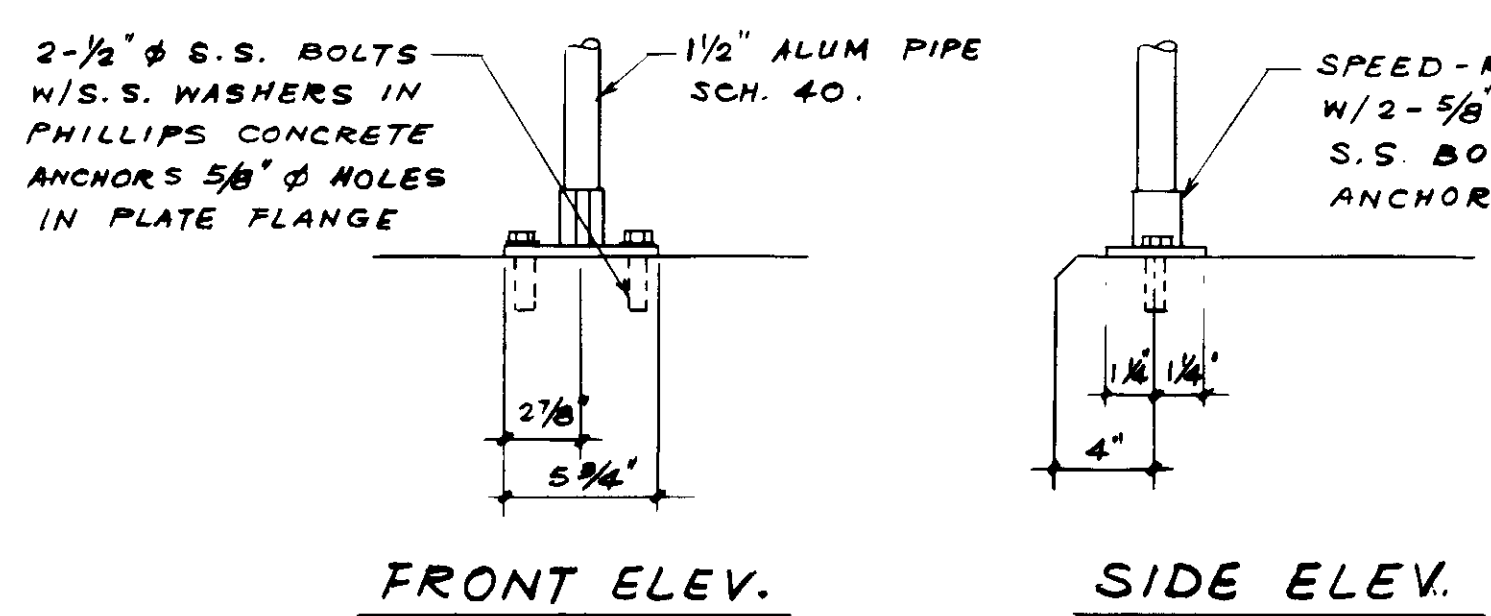
1. ALL HANDRAIL FITTINGS ARE SLIP-ON "SPEEDRAIL" TYPE, OR AS NOTED, "NO RAIL" TYPE AS MANUFACTURED BY HOLLAENDER MFG'R CO., OR APPROVED EQUAL.
2. ALL MATERIAL EXCEPT FASTENERS AND ANCHORS SHALL BE ALUMINUM ALLOY 6061-T6.
3. ALL WELD SHALL BE MADE WITH ALUMINUM ALLOY 4043.
4. STAINLESS STEEL BOLTS SHALL BE TYPE 304.
5. CONCRETE ANCHORS SHALL BE PHILLIPS RED HEAD SELF-DRILLING OR NONDRILLING ZINC CHROMATE COATED CONCRETE ANCHORS. TOP OF ANCHORS SHALL BE SET FLUSH WITH THE CONCRETE.
6. FOR PLANS OF HANDRAIL LOCATION SEE SHEETS SHT. MM-1 AND SHT. MM-2 & MM-3



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



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



**TYPE - 3**  
SCALE: 1/2" = 1'-0"

04030

REGISTERED PROFESSIONAL ENGINEER  
TOSHIO KATSURA  
No. 14038  
Exp. 3-31-89  
CIVIL  
STATE OF CALIFORNIA  
KATSURA CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION

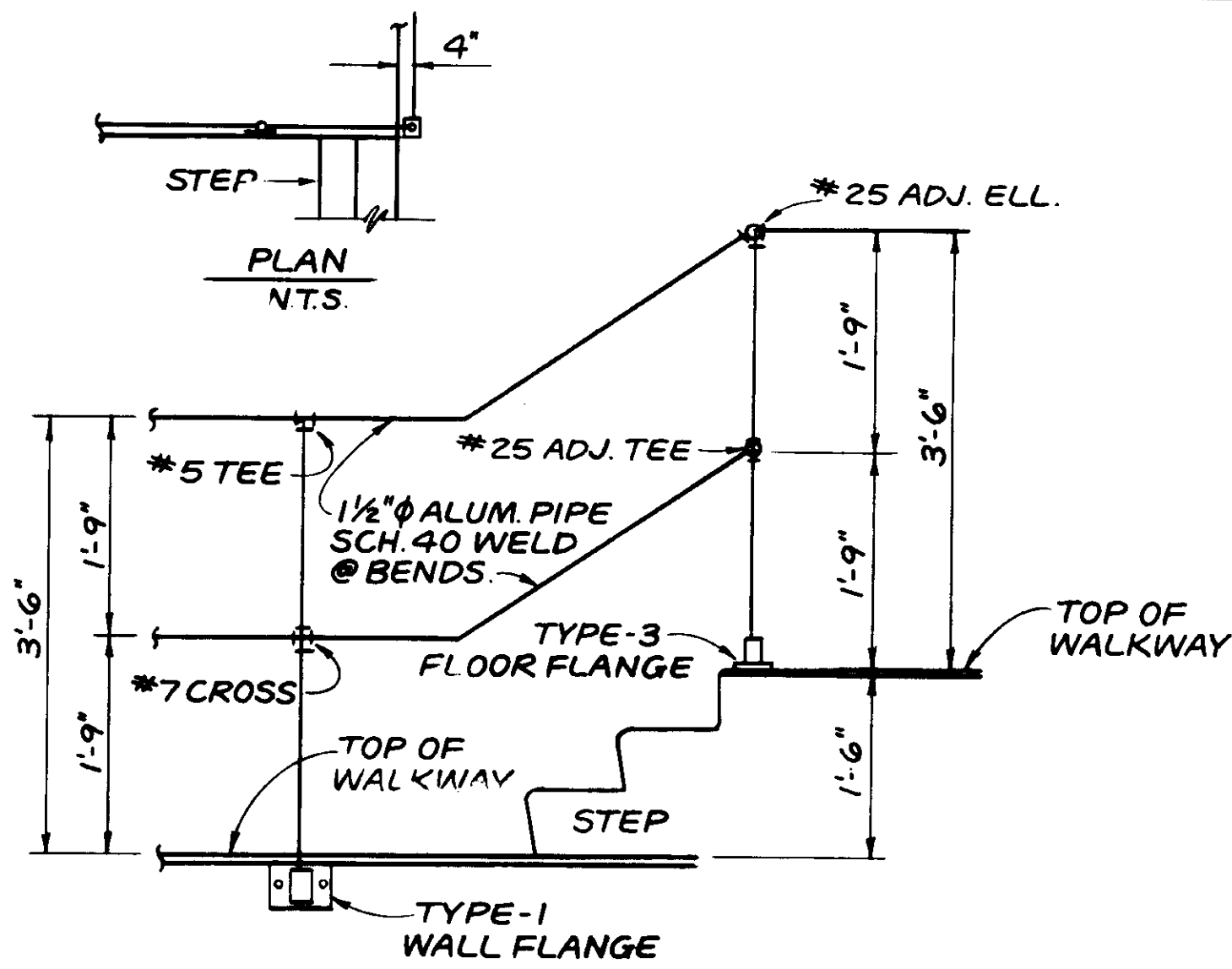
SCALE: AS SHOWN	DESIGNED: Y.K.I.C.C.	SUBMITTED: <i>Y. Katsura</i>	DATE: 8-7-87
	DRAWN: S.K.	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
	CHECKED: Y.K.	ALEXANDER ENGINEERS	513 R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

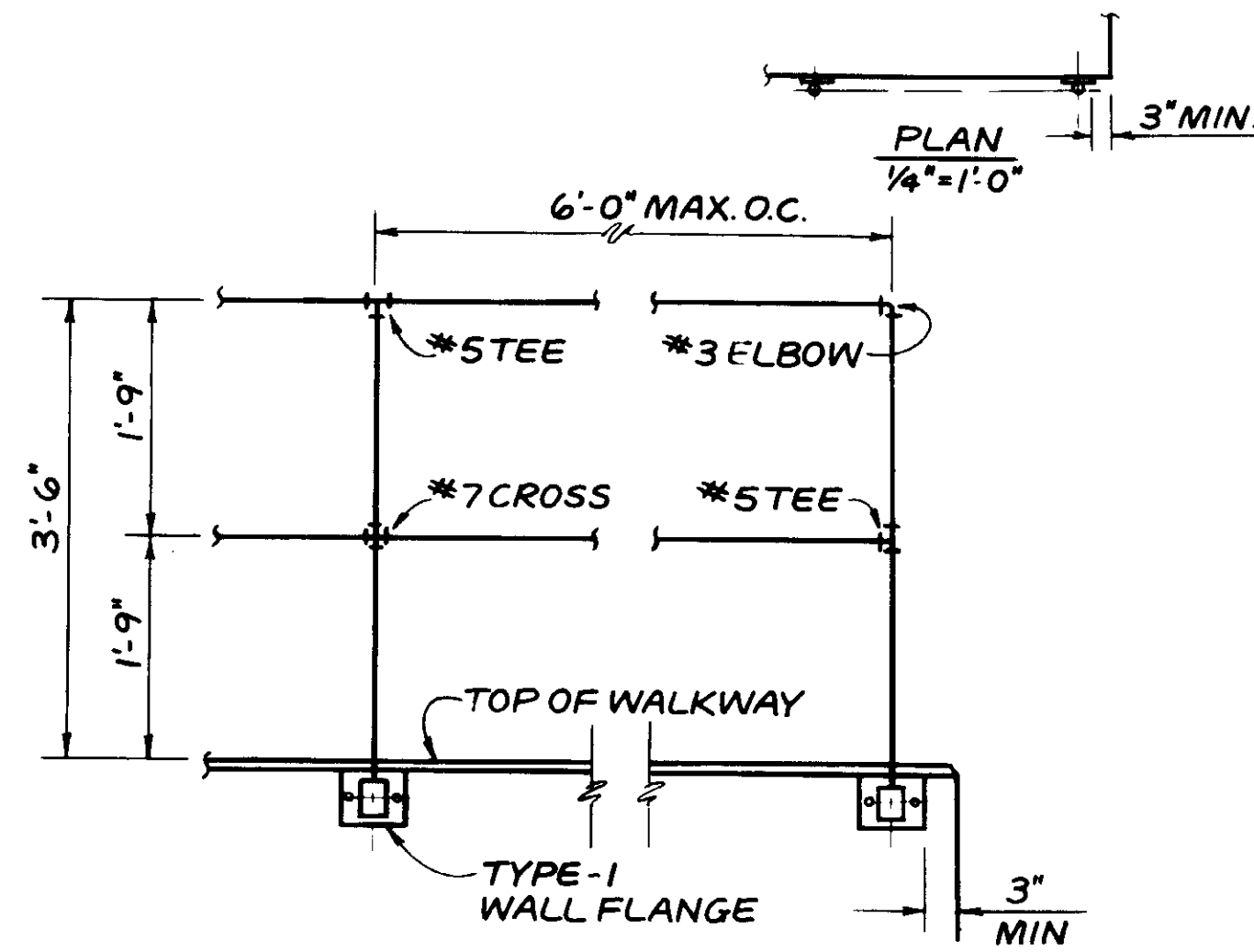
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**TYPICAL HANDRAIL DETAILS - I**

SHEET  
MM-20

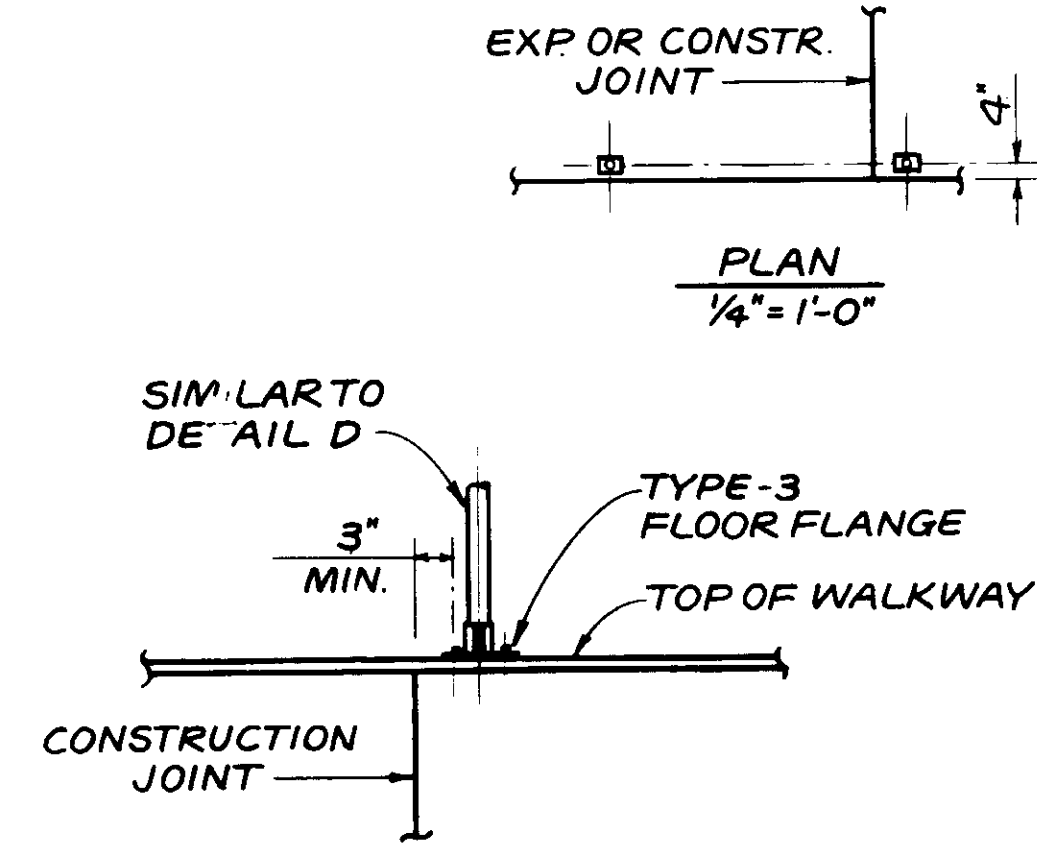




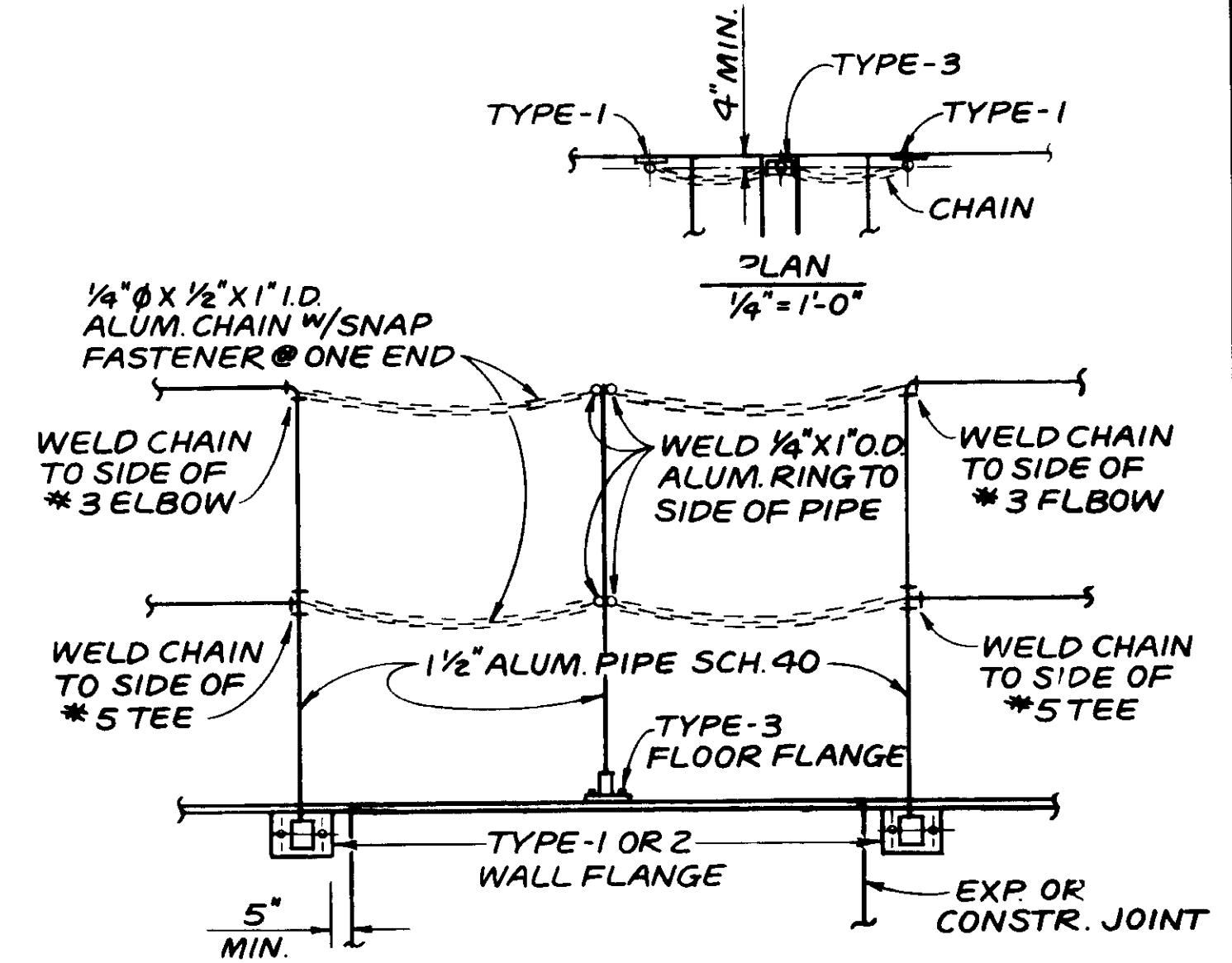
**DETAIL - H**  
SCALE: 3/4" = 1'-0"



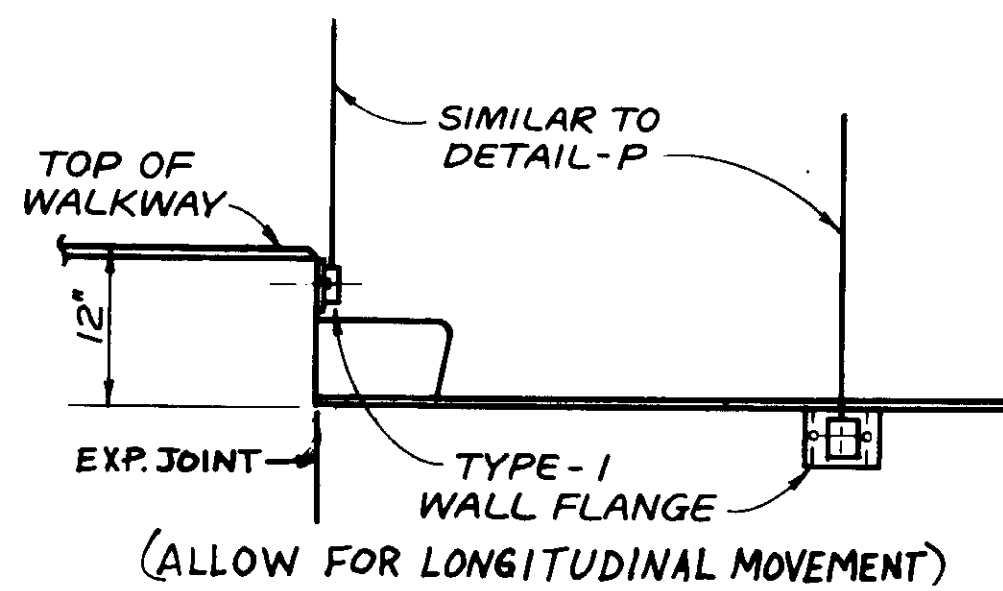
**DETAIL - I**  
SCALE: 3/4" = 1'-0"



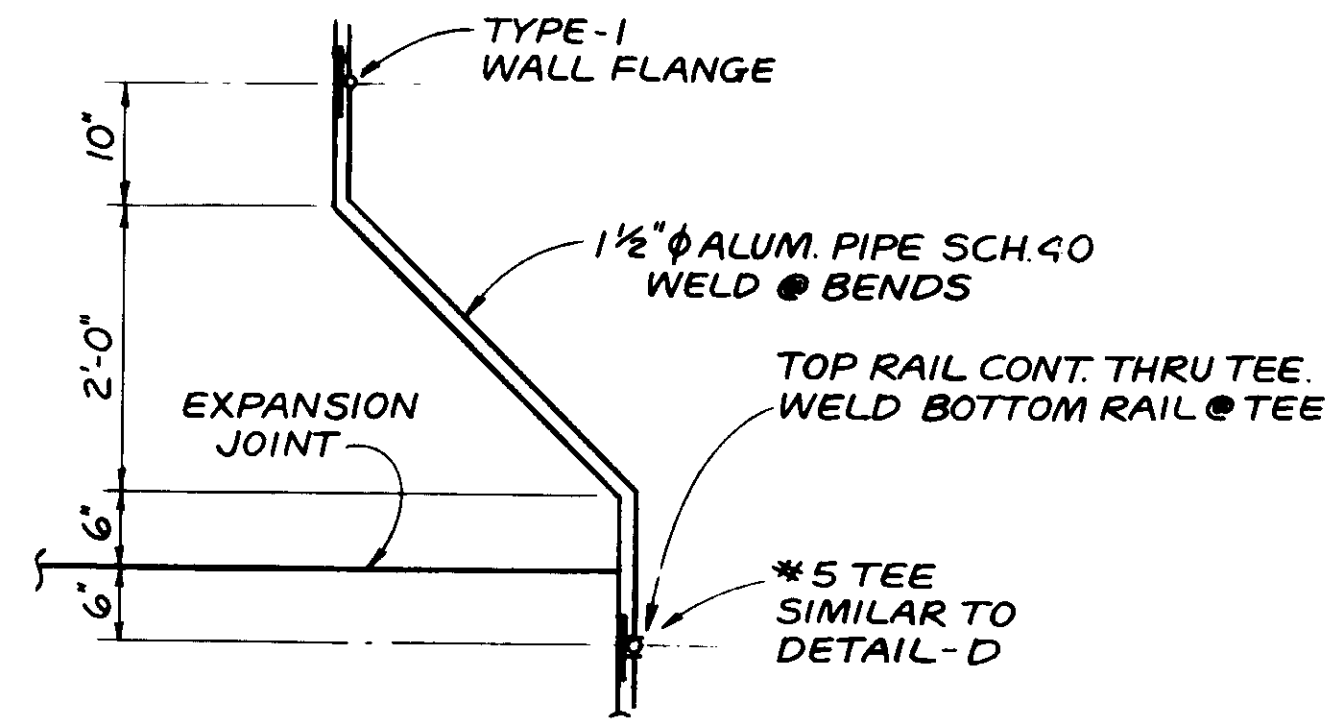
**DETAIL - J**  
SCALE: 3/4" = 1'-0"



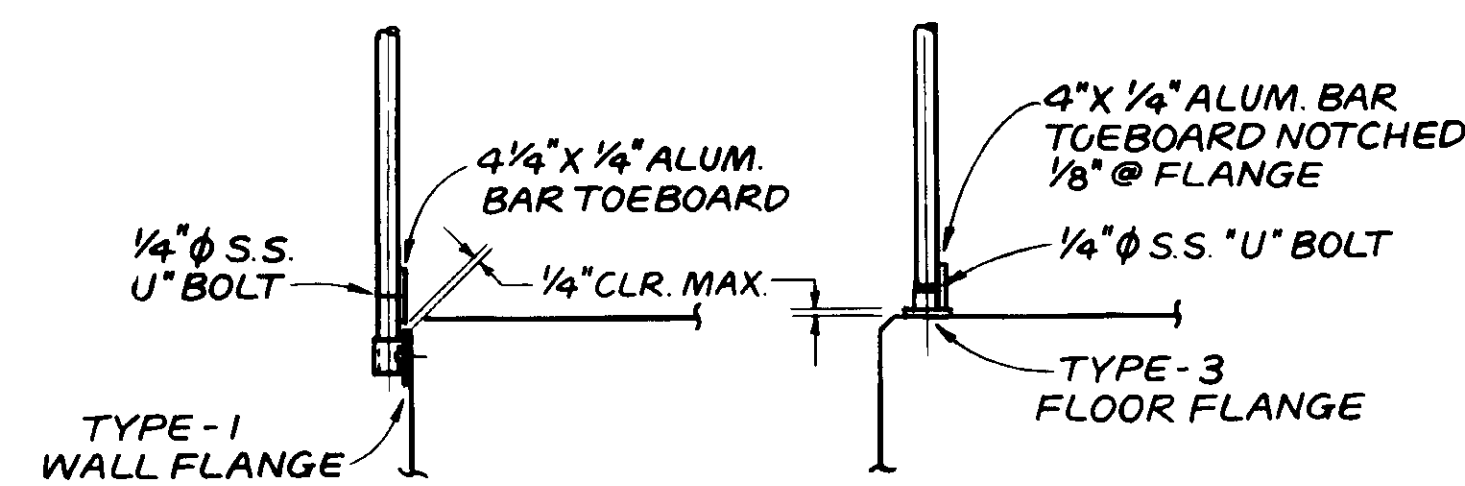
**DETAIL - K**  
SCALE: 3/4" = 1'-0"



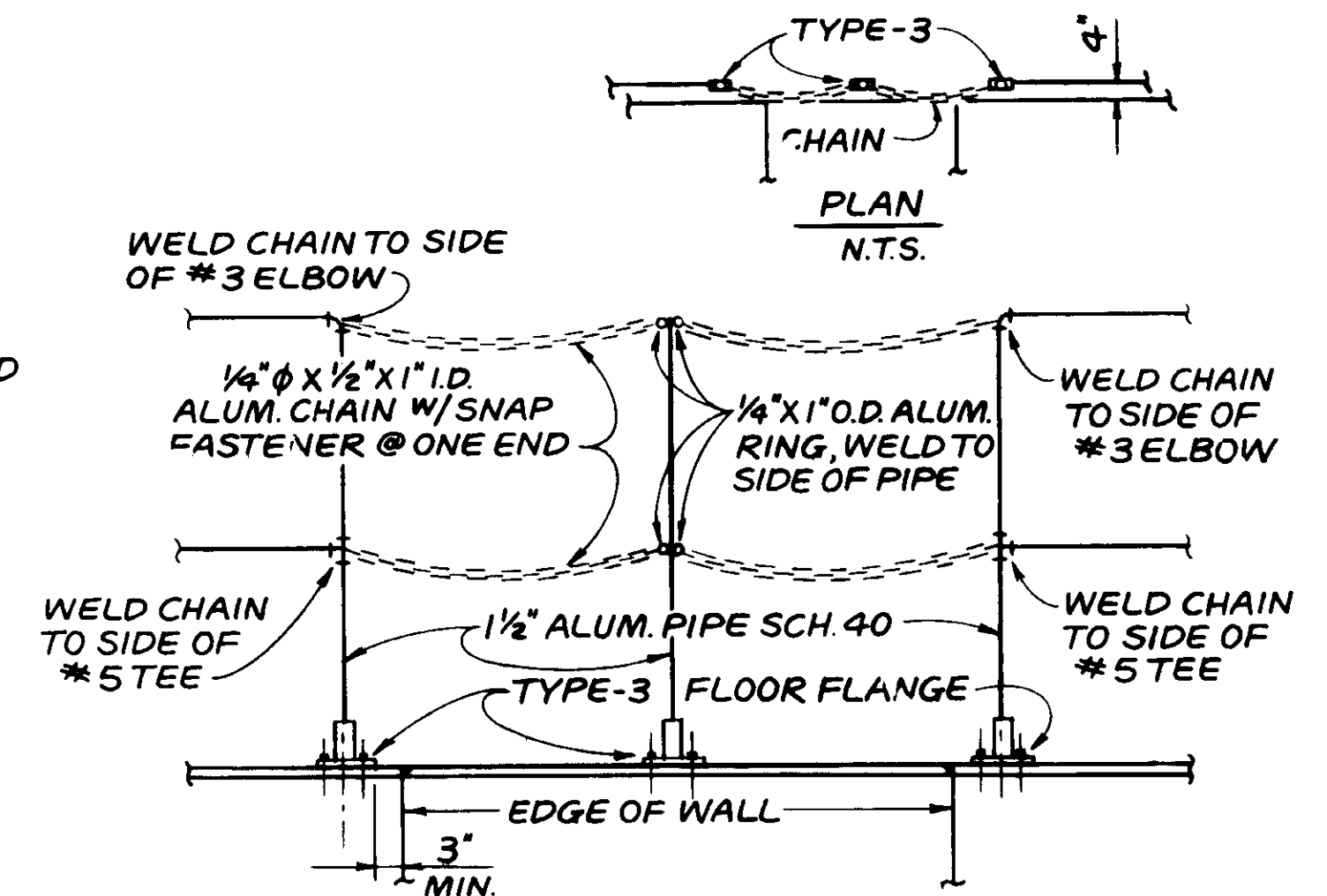
**DETAIL - L**  
SCALE: 3/4" = 1'-0"



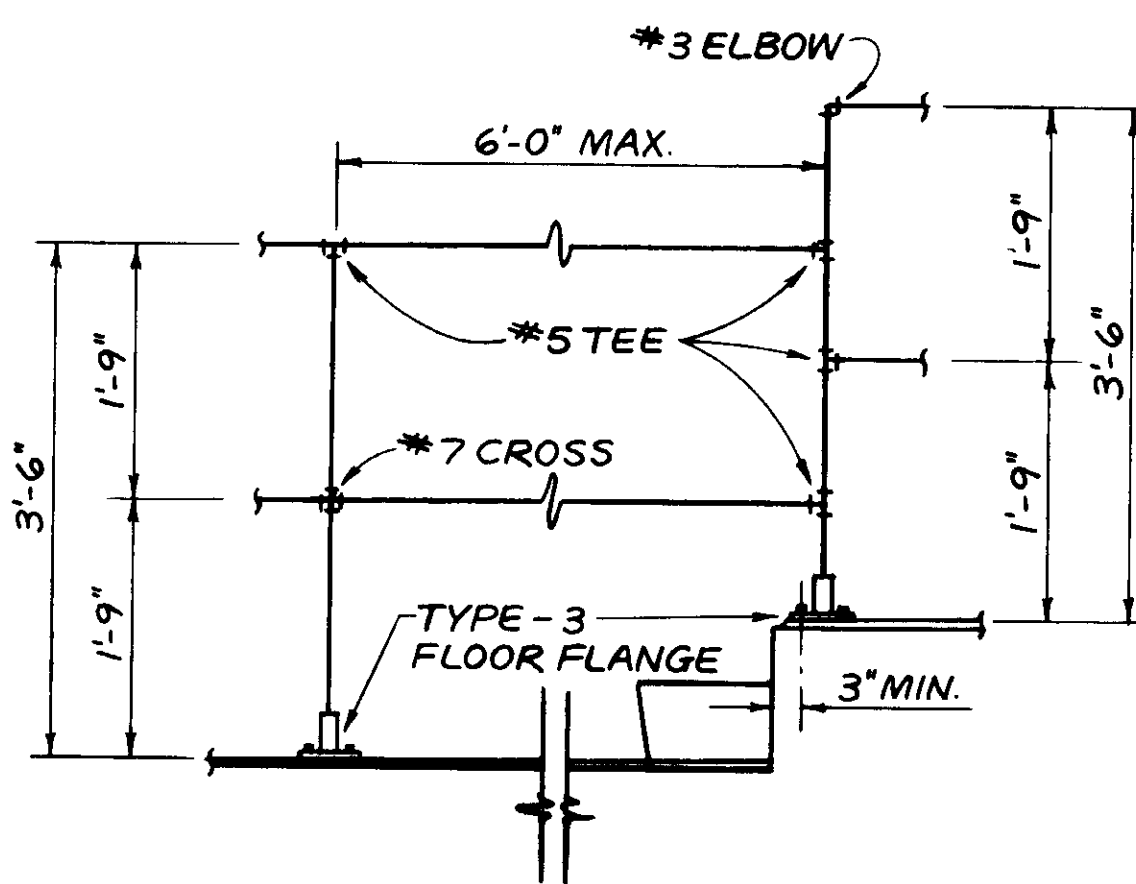
**DETAIL - M**  
SCALE: 3/4" = 1'-0"



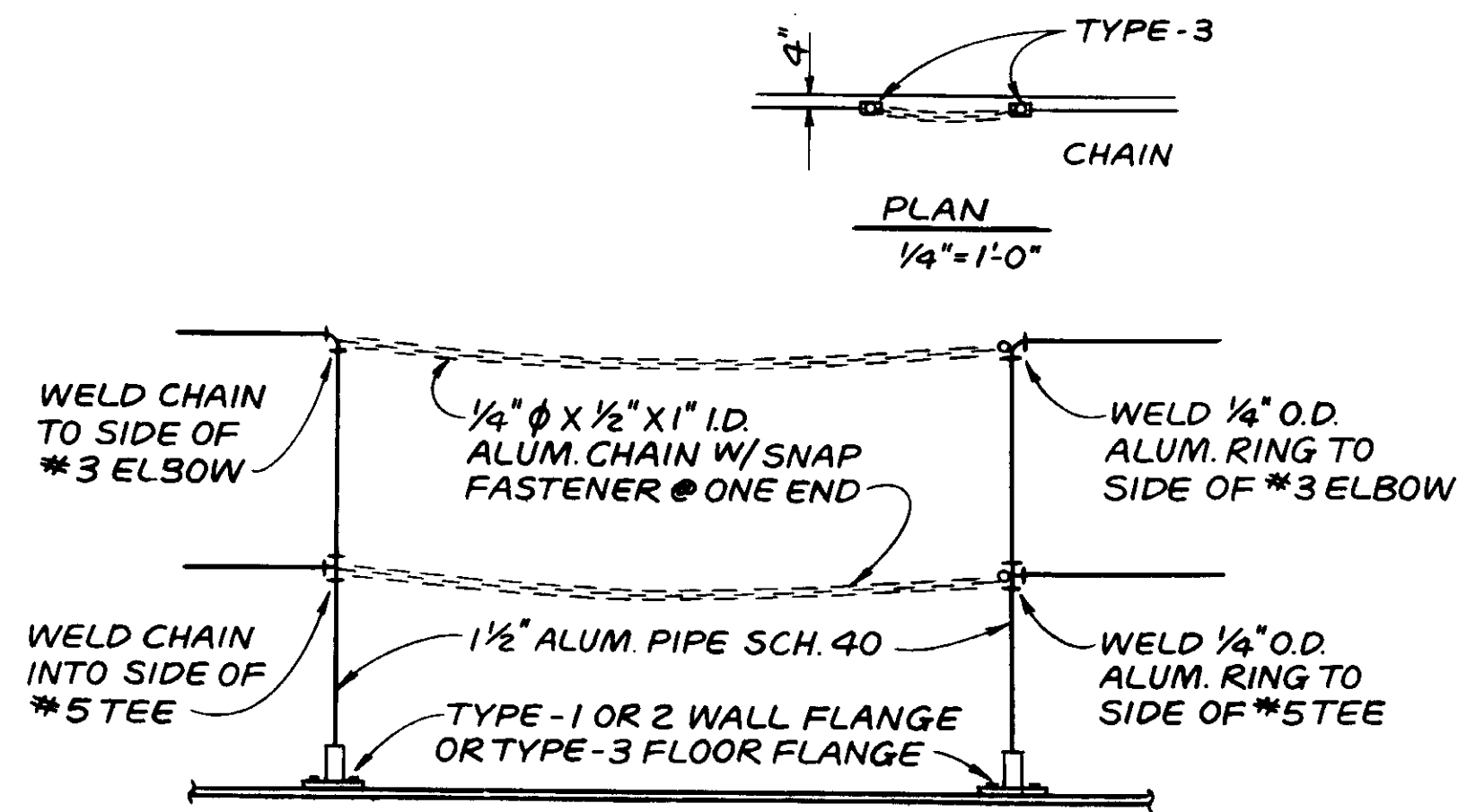
**DETAIL - N**  
SCALE: 3/4" = 1'-0"



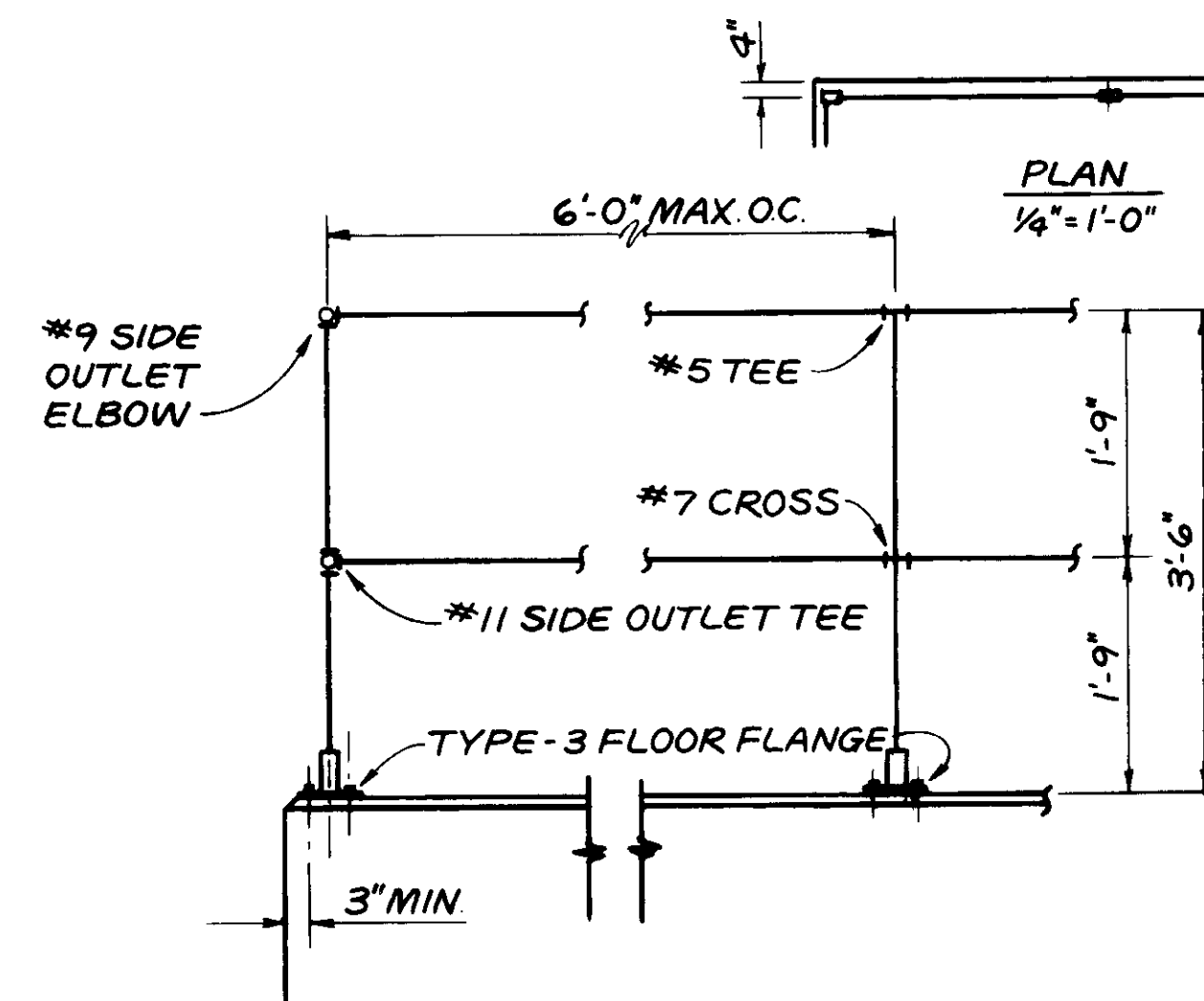
**DETAIL - O**  
SCALE: 3/4" = 1'-0"



**DETAIL - P**  
SCALE: 3/4" = 1'-0"



**DETAIL - Q**  
SCALE: 3/4" = 1'-0"



**DETAIL - R**  
SCALE: 3/4" = 1'-0"

**NOTE:**  
RAILING SHALL BE PROVIDED WITH A TOEBOARD WHERE A PLATFORM, RUNWAY, OR RAMP IS SIX (6) FEET OR MORE ABOVE PLACES WHERE EMPLOYEES MAY PASS.

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	AS NOTED	DESIGNED:	Y.K./C.C.	SUBMITTED:	14038	8-7-87
DRAWN:	Y.K.	CHECKED:	Y.K.	DATE:		

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

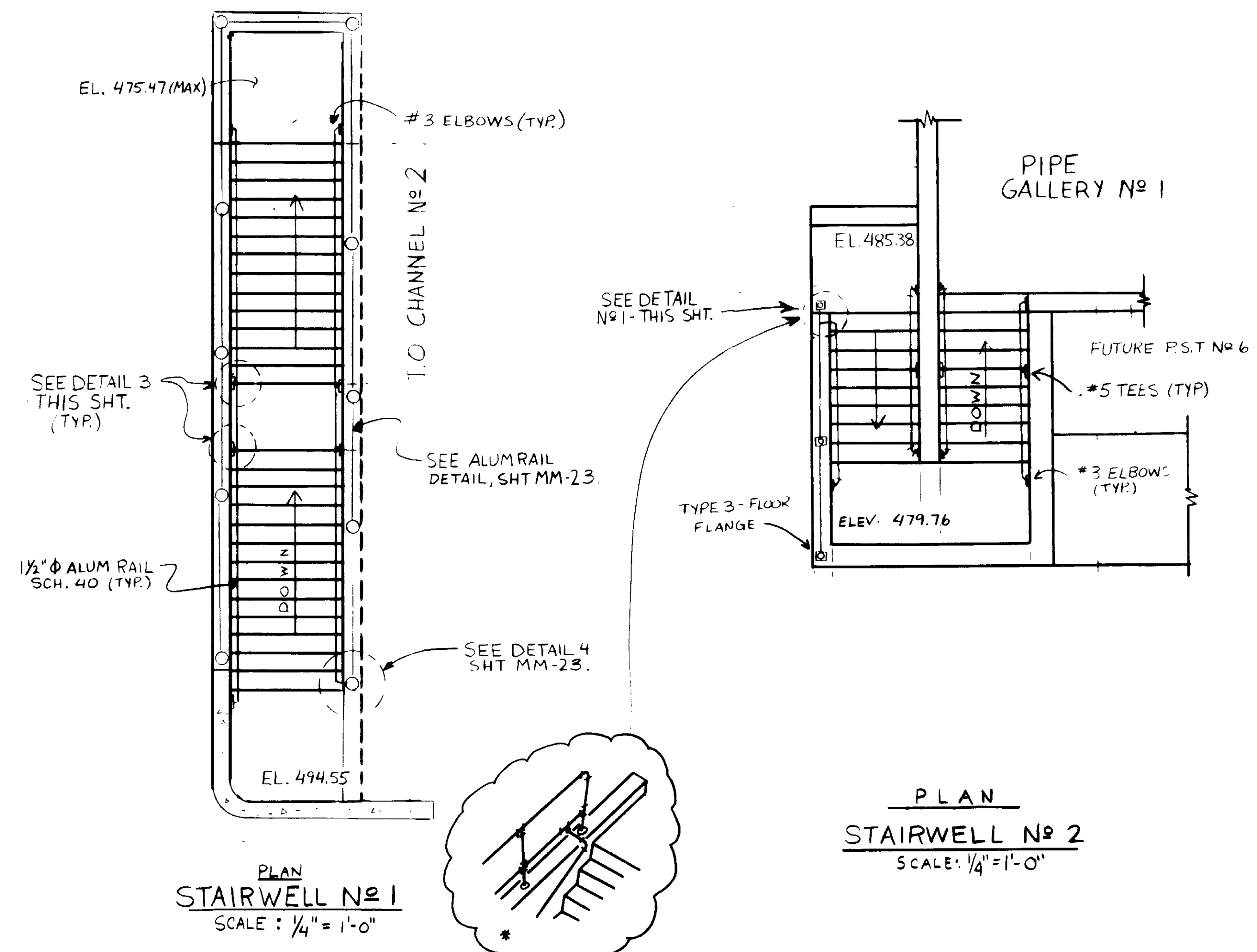
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
TYPICAL HANDRAIL DETAILS - II

SHEET  
MM-21

04031

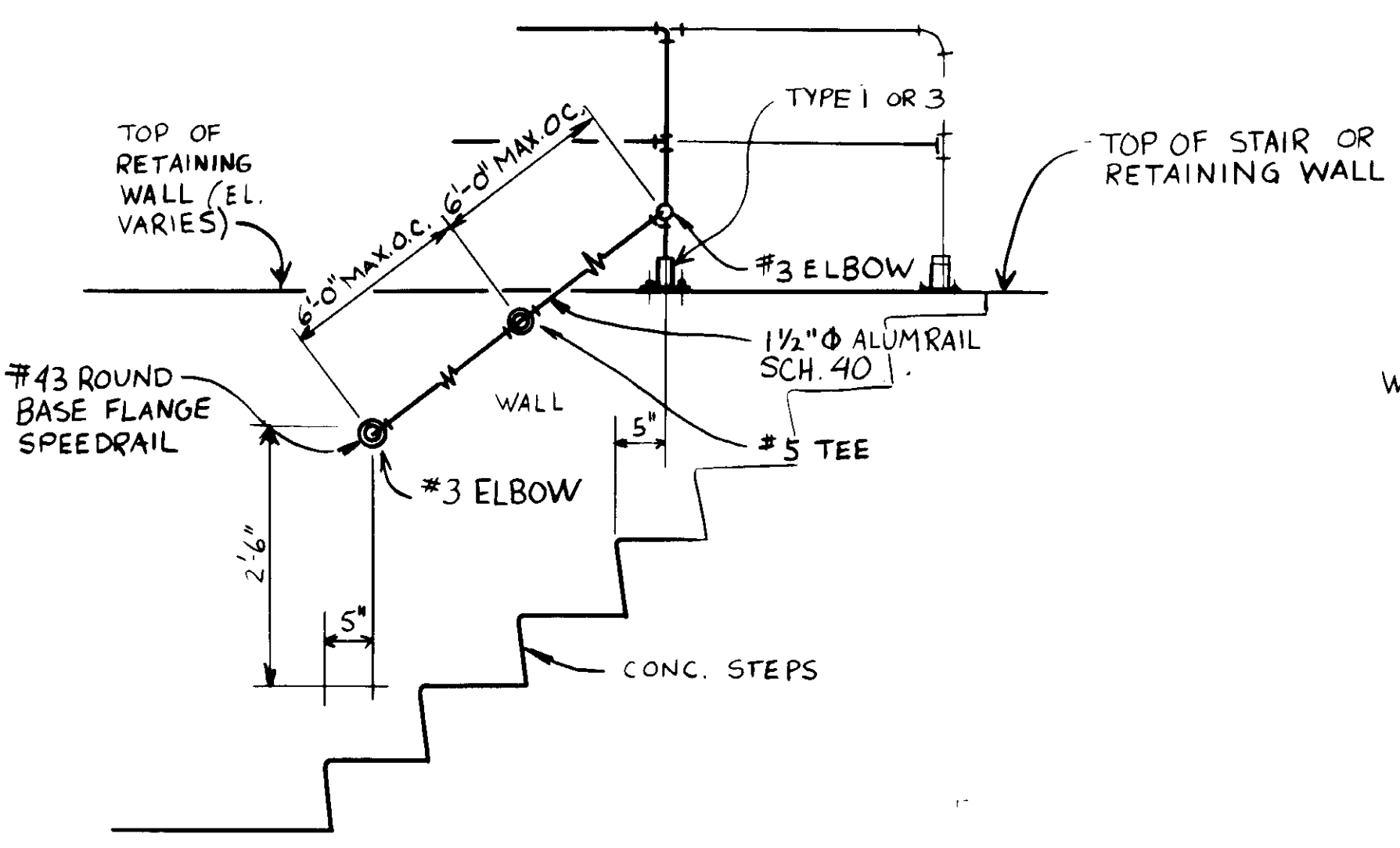


RECORD DRAWING  
KALEX ENGINEERS

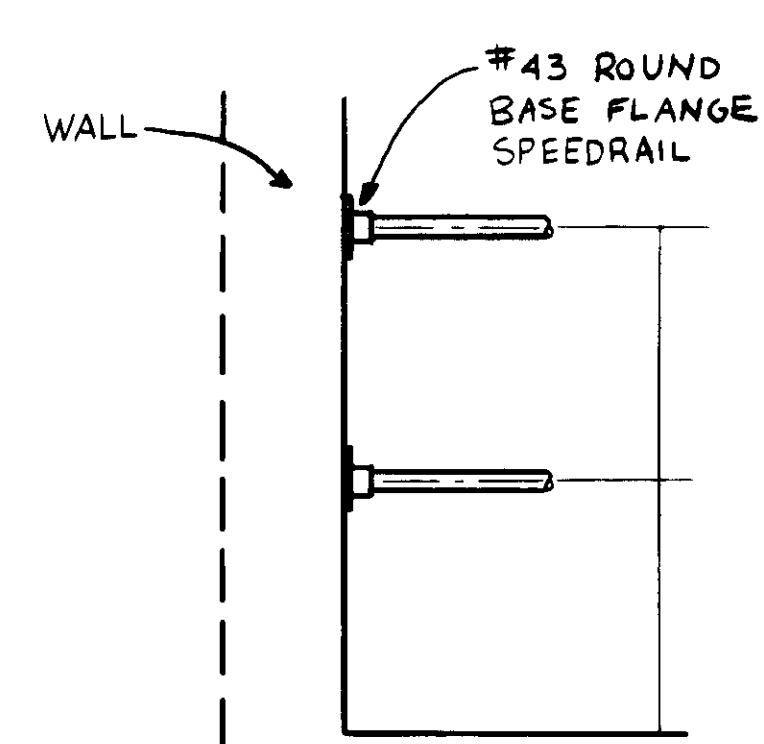


PLAN STAIRWELL No 1  
SCALE: 1/4" = 1'-0"

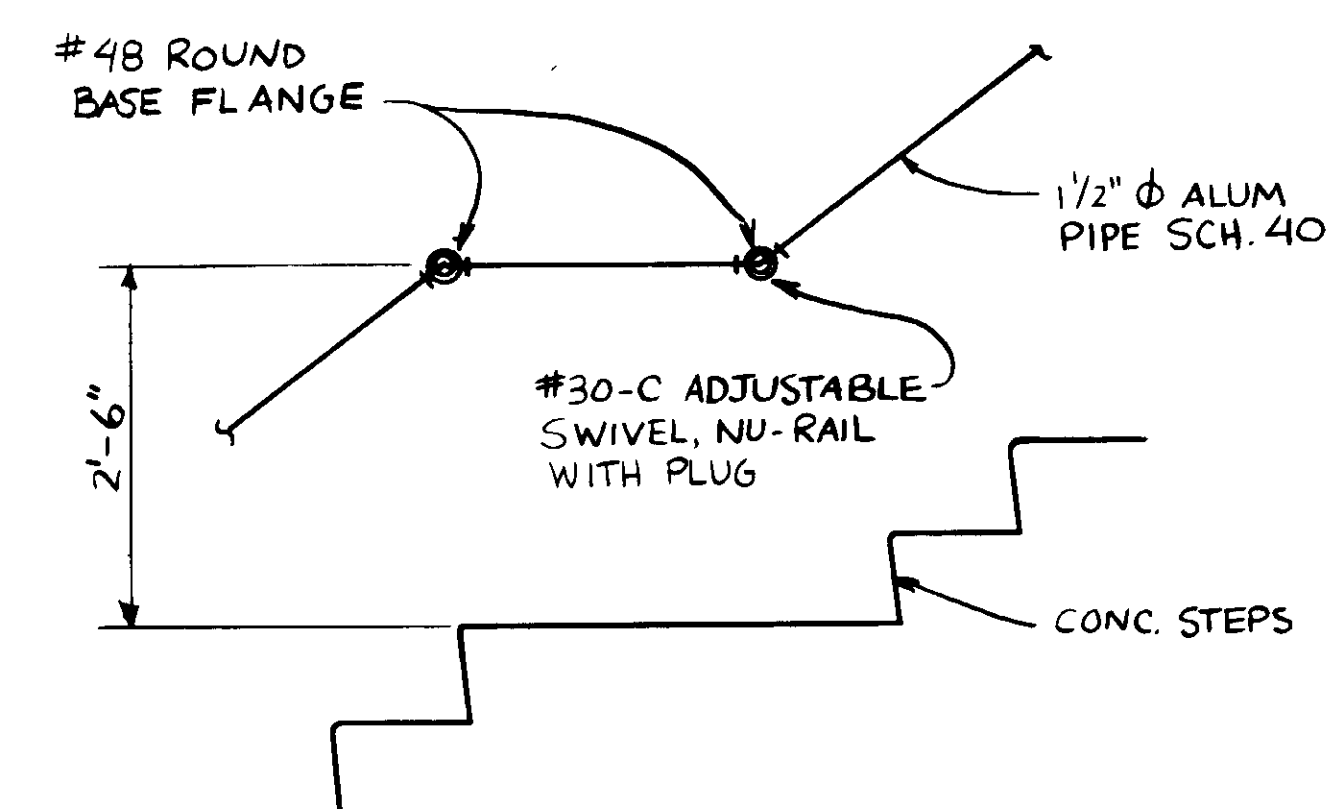
PLAN STAIRWELL No 2  
SCALE: 1/4" = 1'-0"



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



DETAIL - 2  
SCALE: 3/4" = 1'-0"



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

04032



RECORD DRAWING  
KATSURA CONSULTING ENGINEERS  
JUNE 1989

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

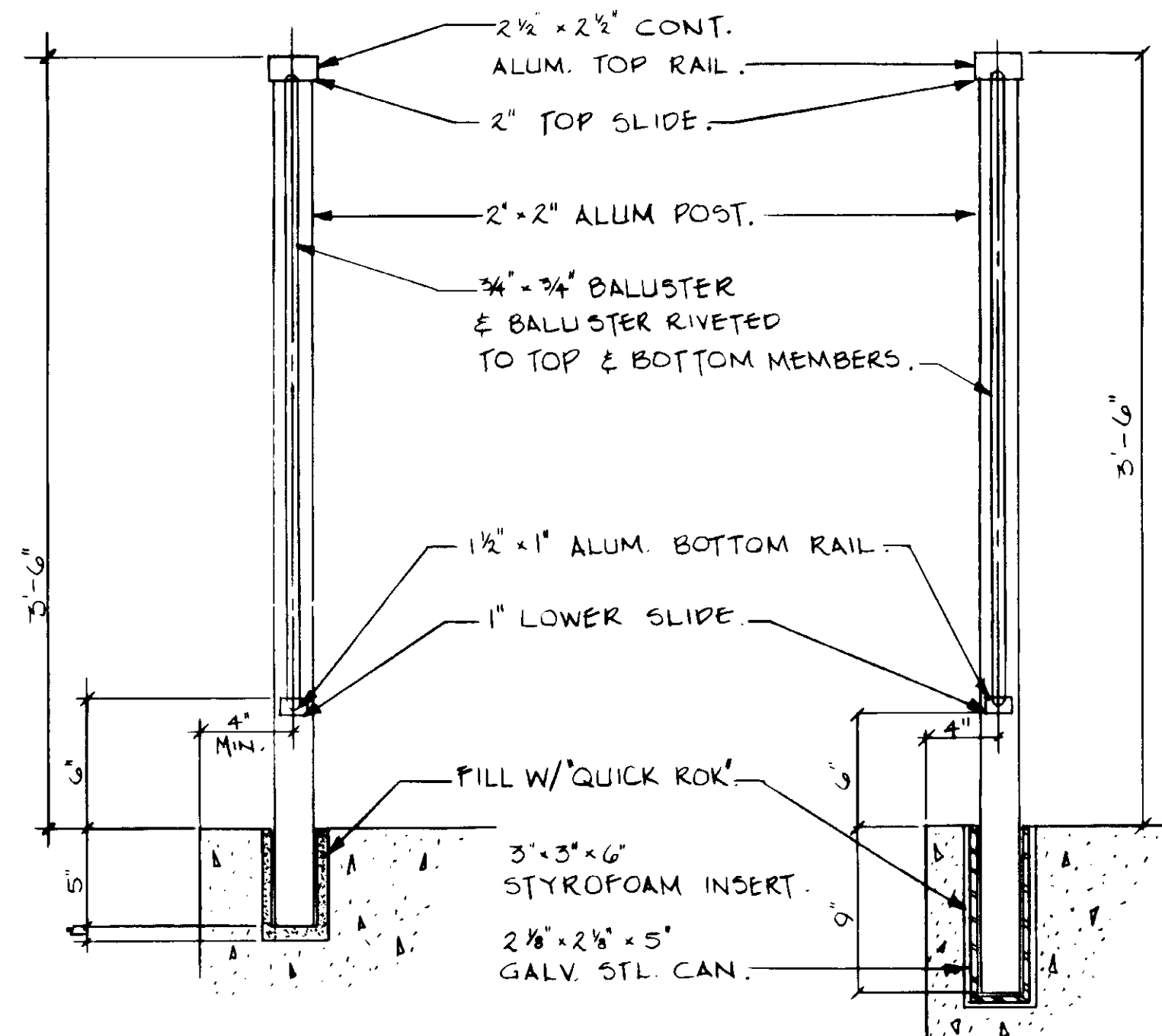
SCALE: AS NOTED  
DESIGNED: Y.K./C.C.  
DRAWN: J.K.  
CHECKED: Y.K.

SUBMITTED: *Yoshio Katsura* 14038 8-7-87  
KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

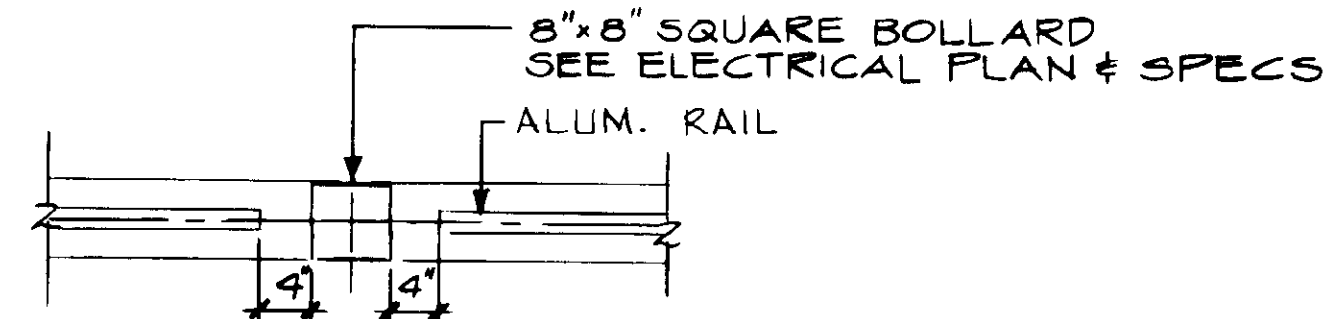
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
TYPICAL HANDRAIL DETAILS - III

SHEET  
MM-22

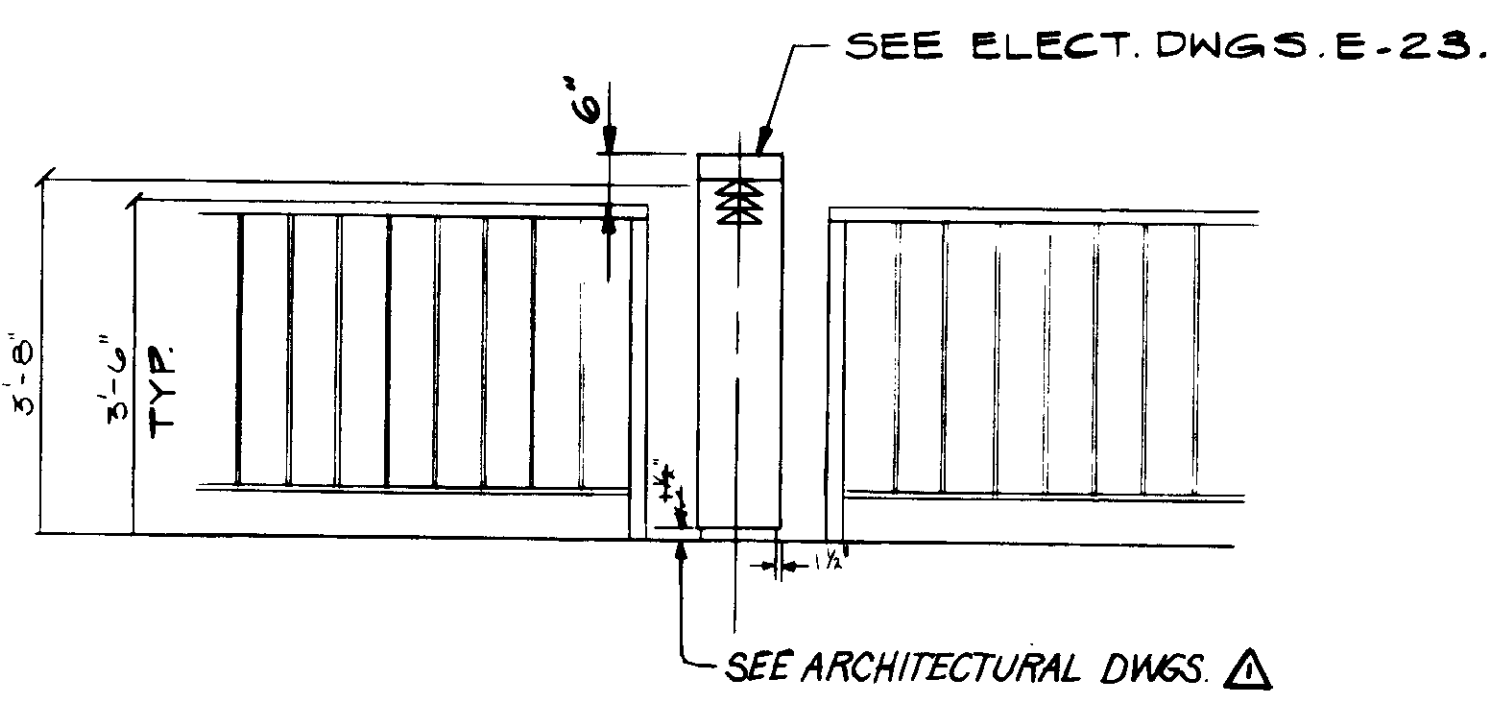


(A) (TYP) RAIL SECTION.  
SCALE 1/4" = 1'-0"

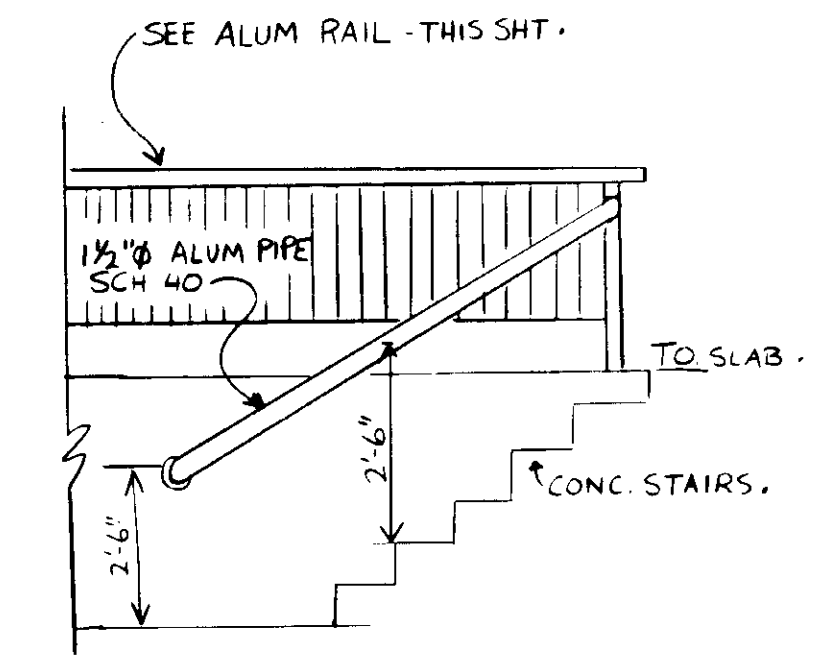
(A) (TYP) REMOVABLE RAIL SECT.  
SCALE 1/2" = 1'-0"  
DELETE



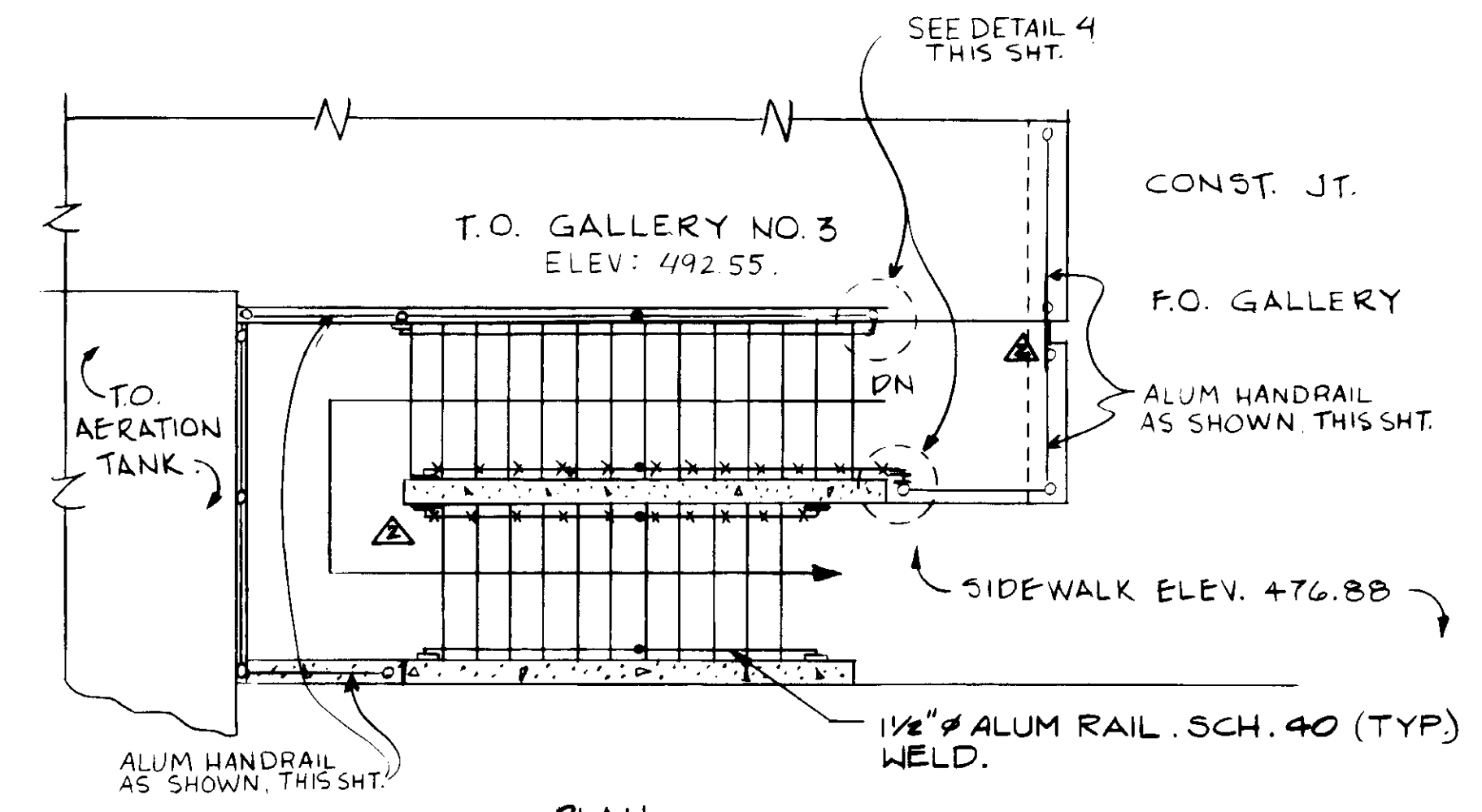
(B) TYP BOLLARD DET. PLAN.  
SCALE 1/2" = 1'-0"



(B) TYP BOLLARD DET. ELEVATION.  
SCALE 1/2" = 1'-0"



DETAIL 4.  
NO SCALE.



PLAN:  
STAIRWELL No. 3.  
SCALE 1/4" = 1'-0"

REV	DATE	BY	DESCRIPTION
1	5-10-87	A.B.	REV. PER K.P.C.
2	5-10-87	A.B.	REV. PER K.P.C.
3	5-10-87	A.B.	REV. PER K.P.C.

SCALE: Y.K./C.C.  
AS NOTES.

DESIGNED	J.K.
DRAWN	Y.K.
CHECKED	

SUBMITTED		14038	8-7-87
KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE	
ALEXANDER ENGINEERS	R.C.S.E. NO.	DATE	

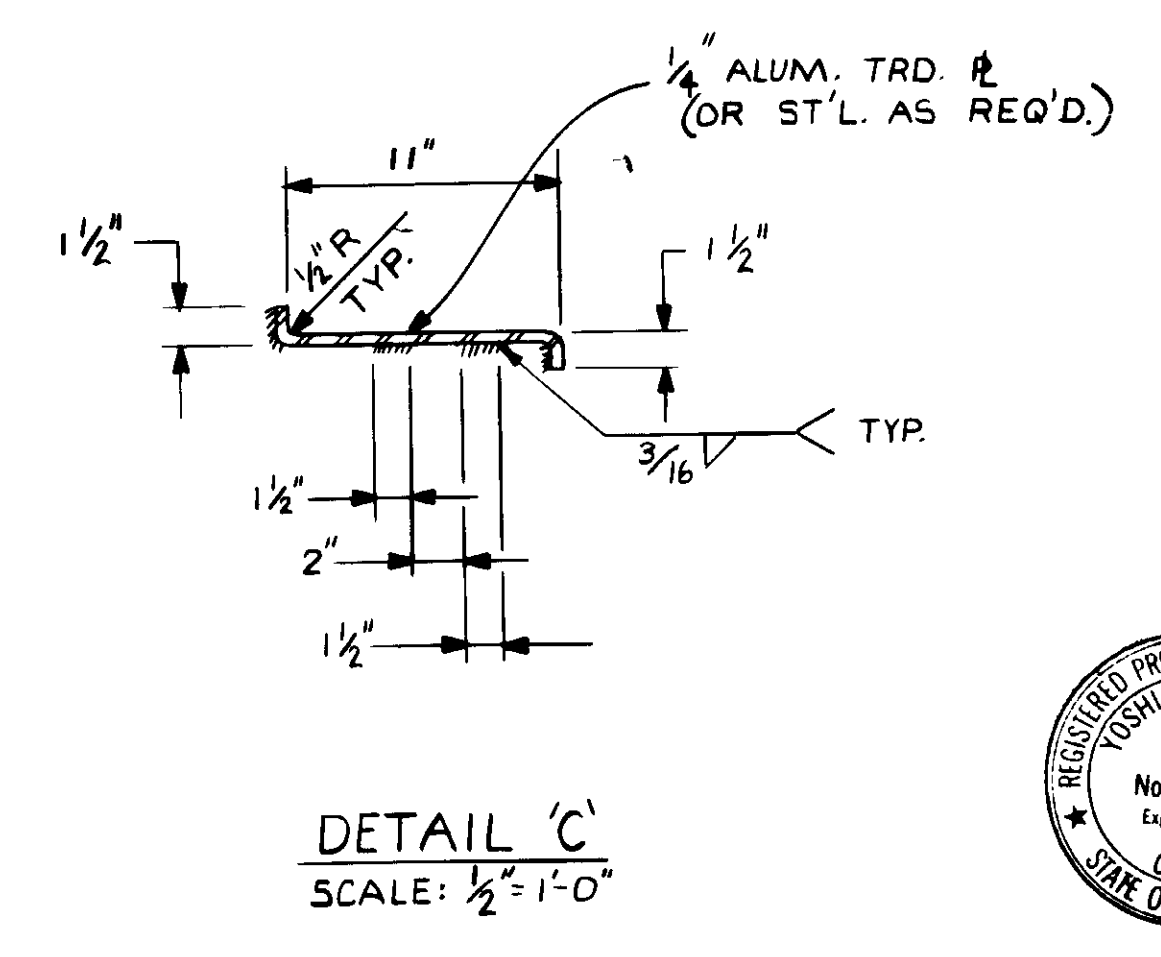
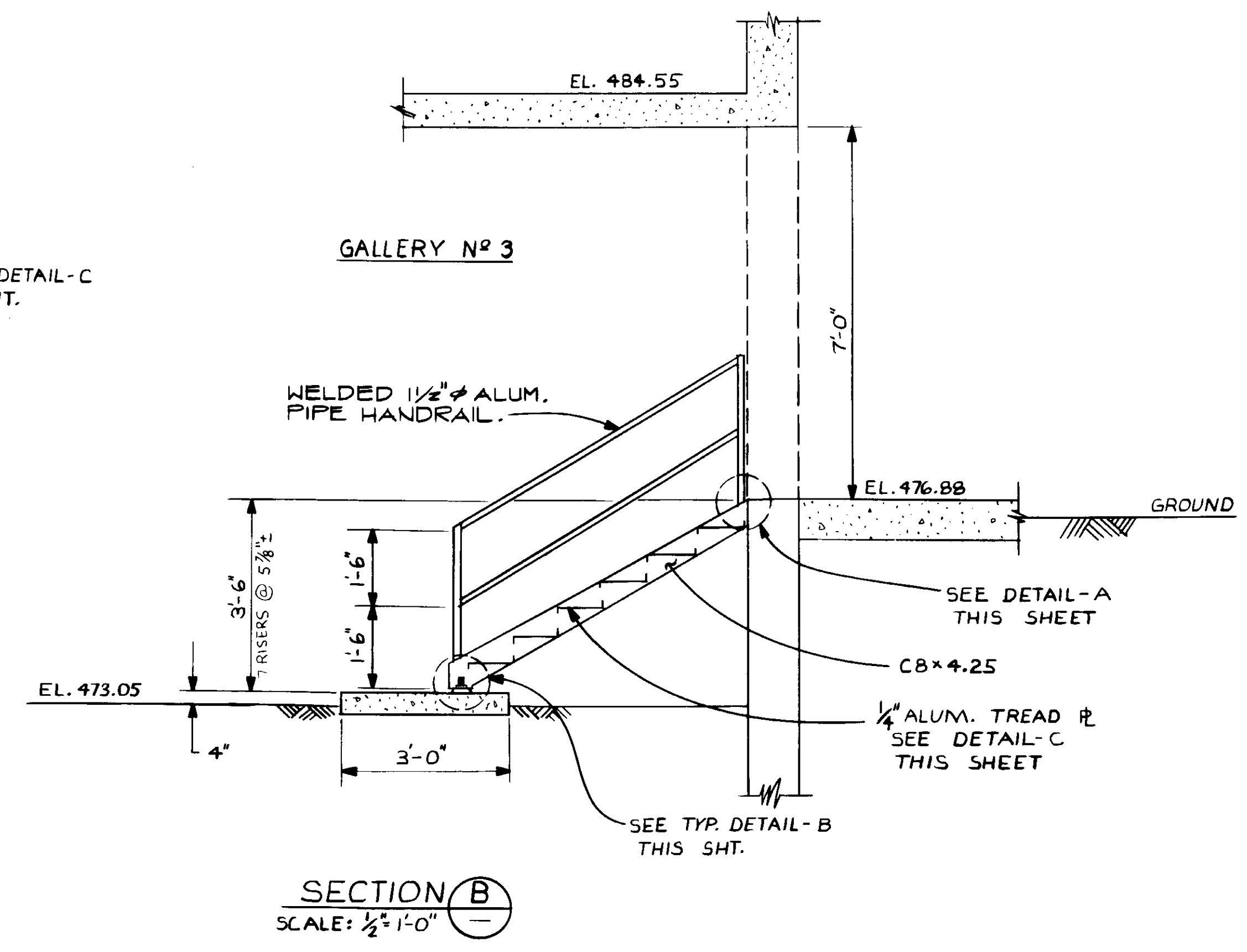
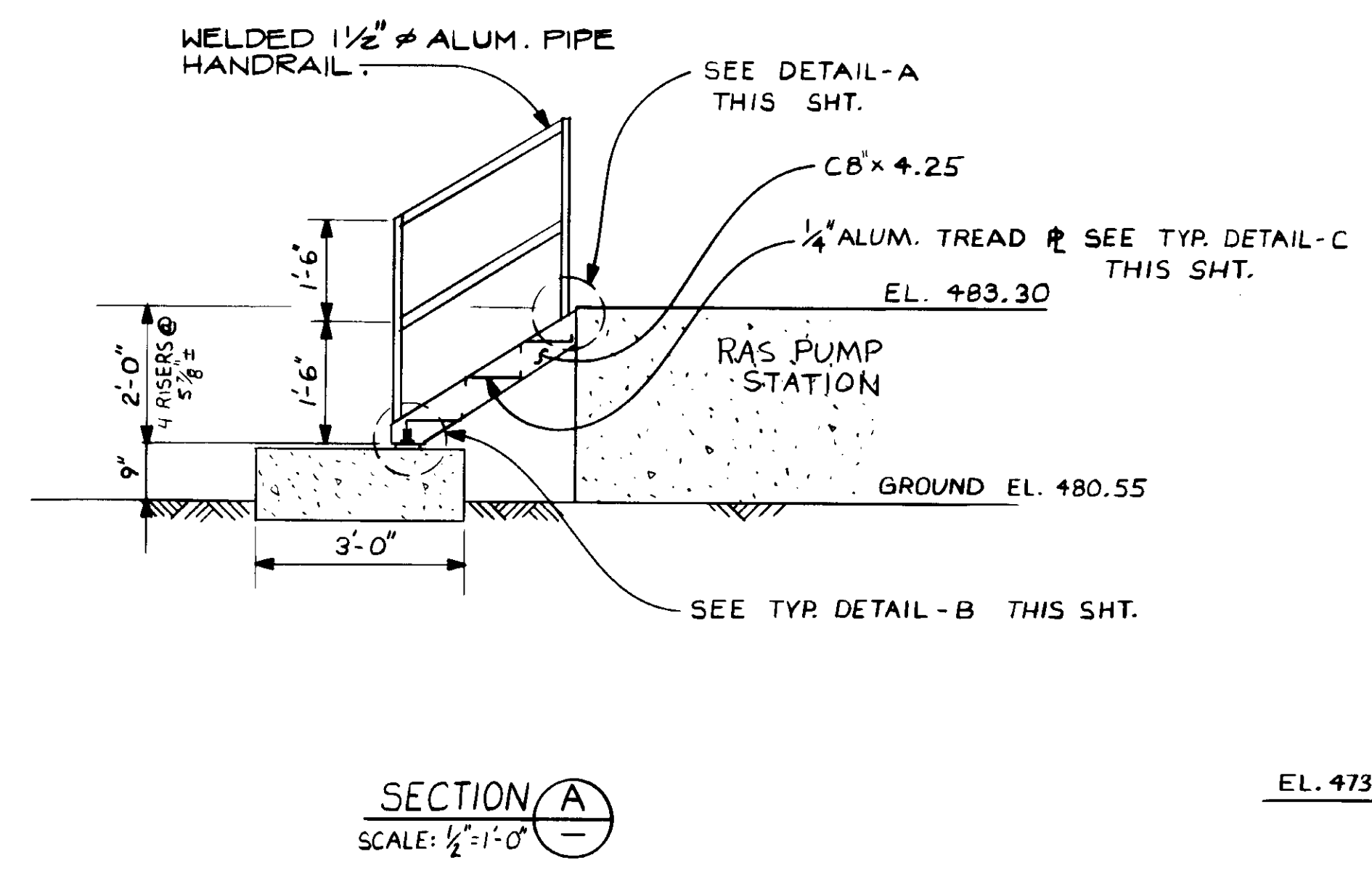
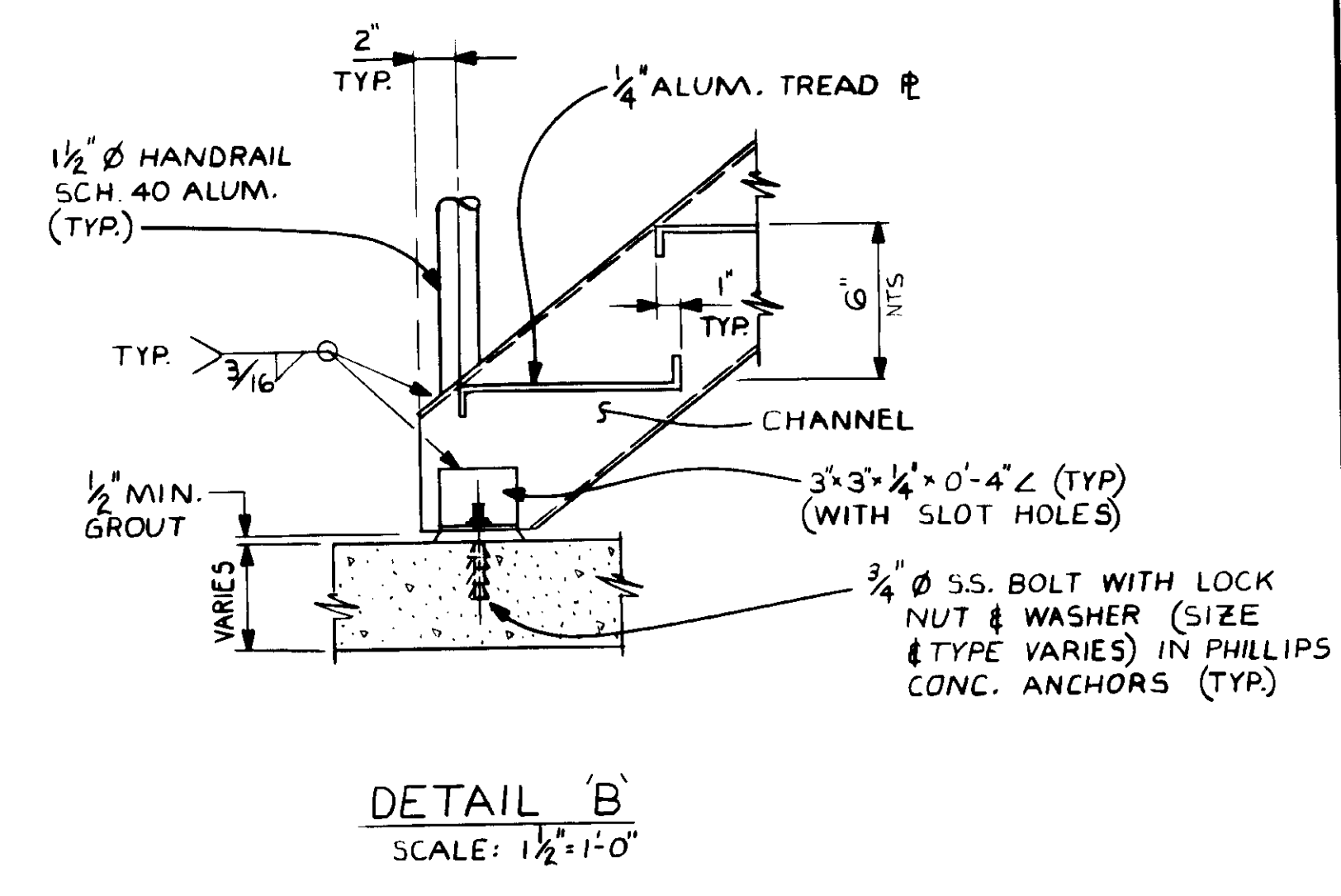
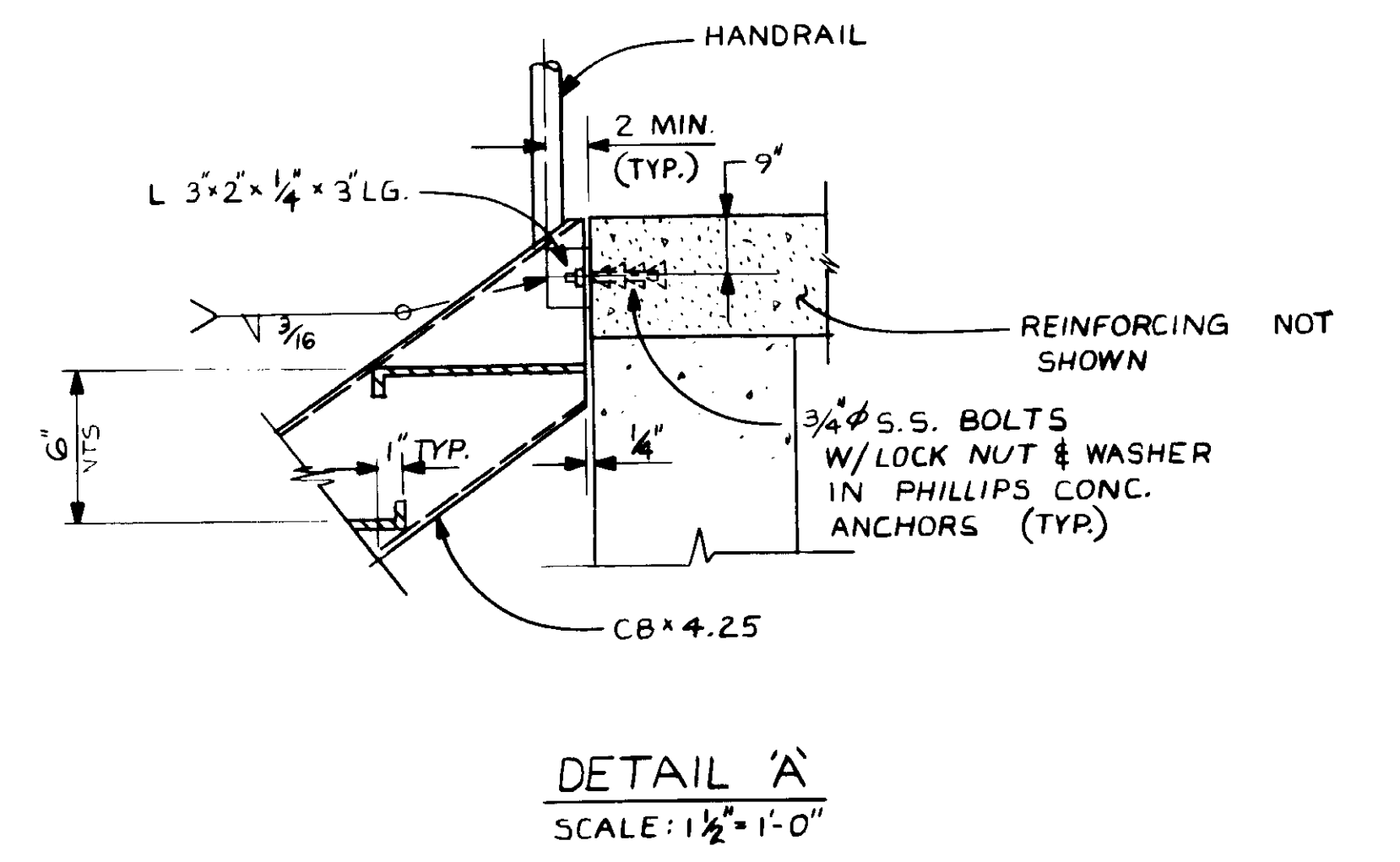
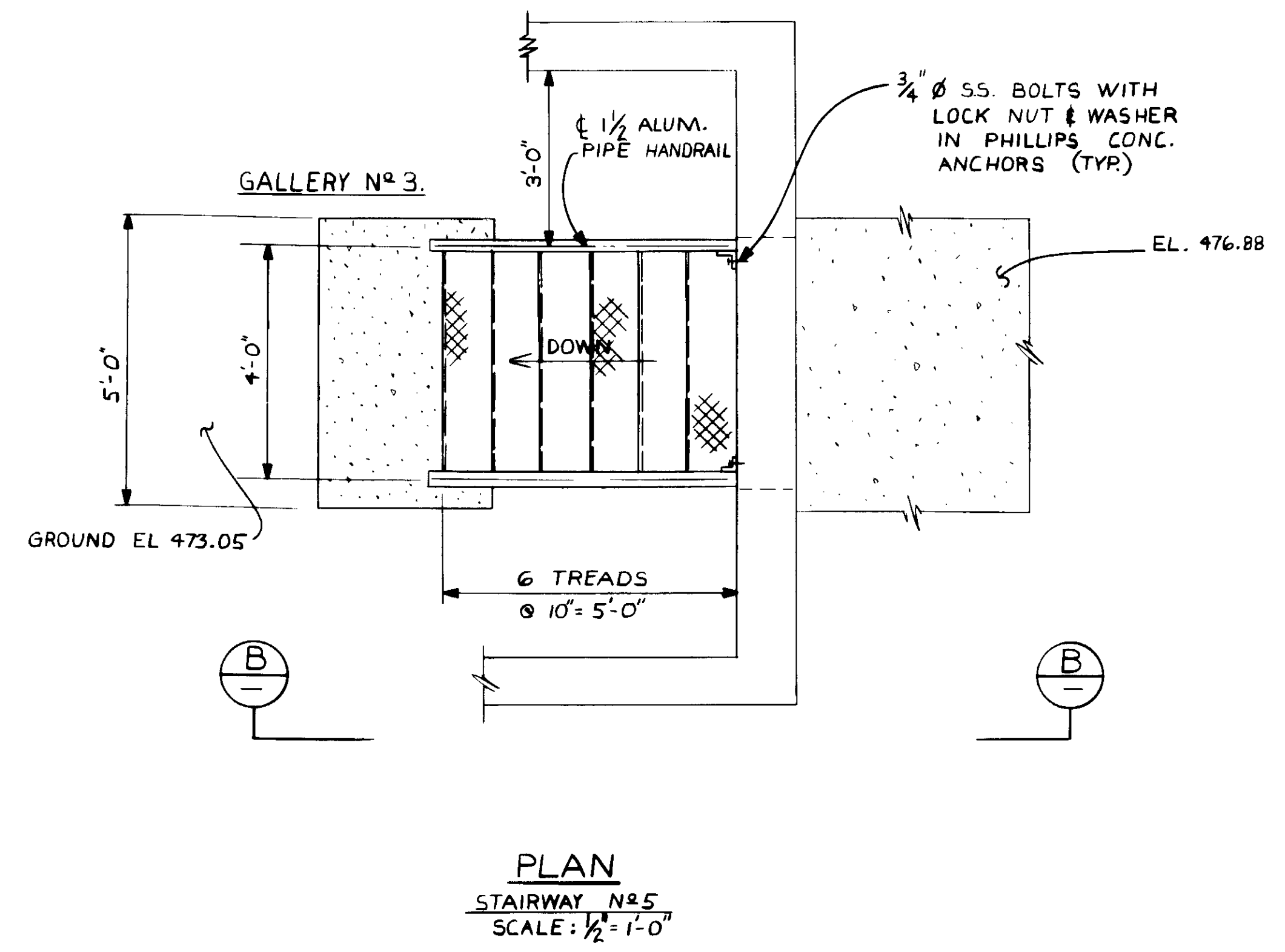
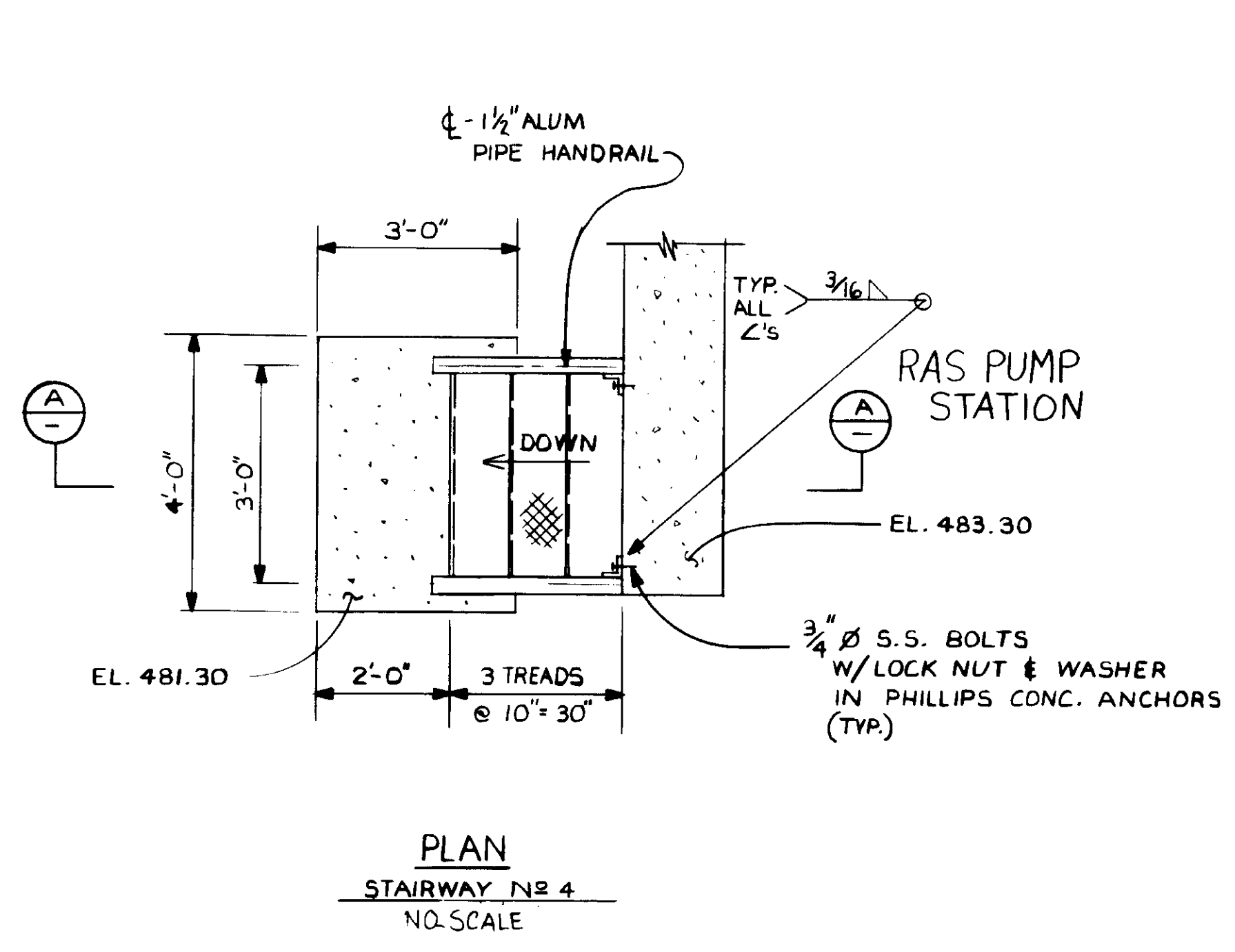
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
TYPICAL HANDRAIL DETAILS - IV

04033



RECORD DRAWINGS  
KATSURA CONSULTING ENGINEERS JUN 1988



RECORD DRAWINGS  
 PREPARED BY KATSUMI ENGINEERS  
 KATSUMI ENGINEERS  
 14008  
 8-7-87  
 R.C.E. NO. DATE



04034

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

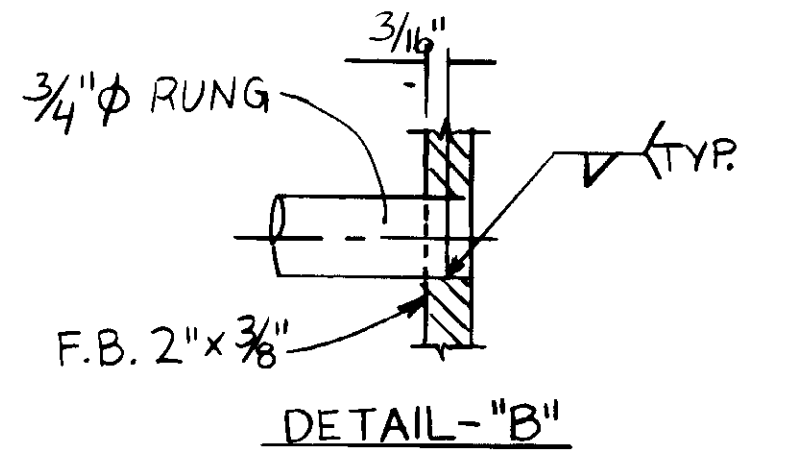
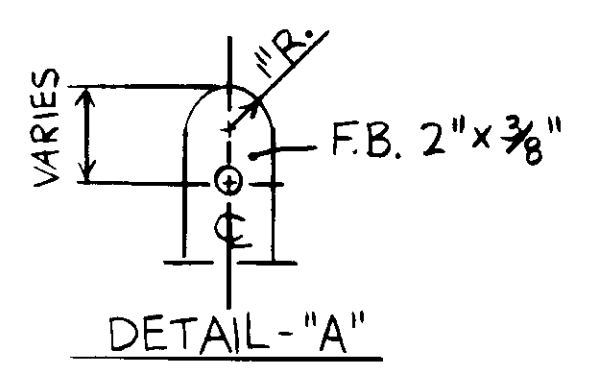
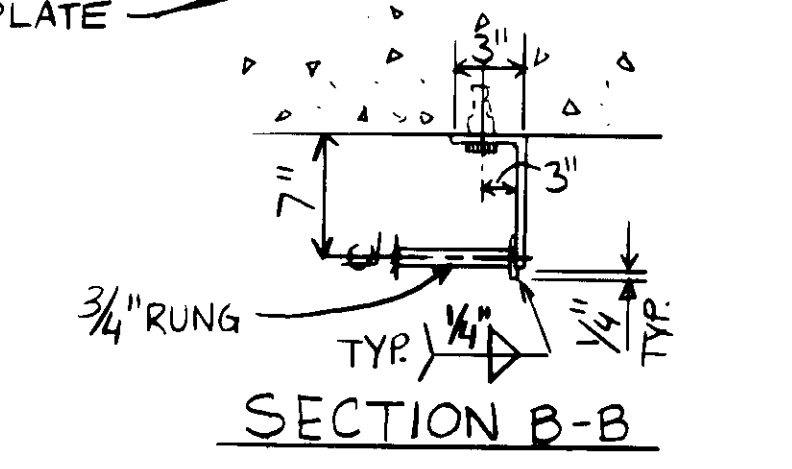
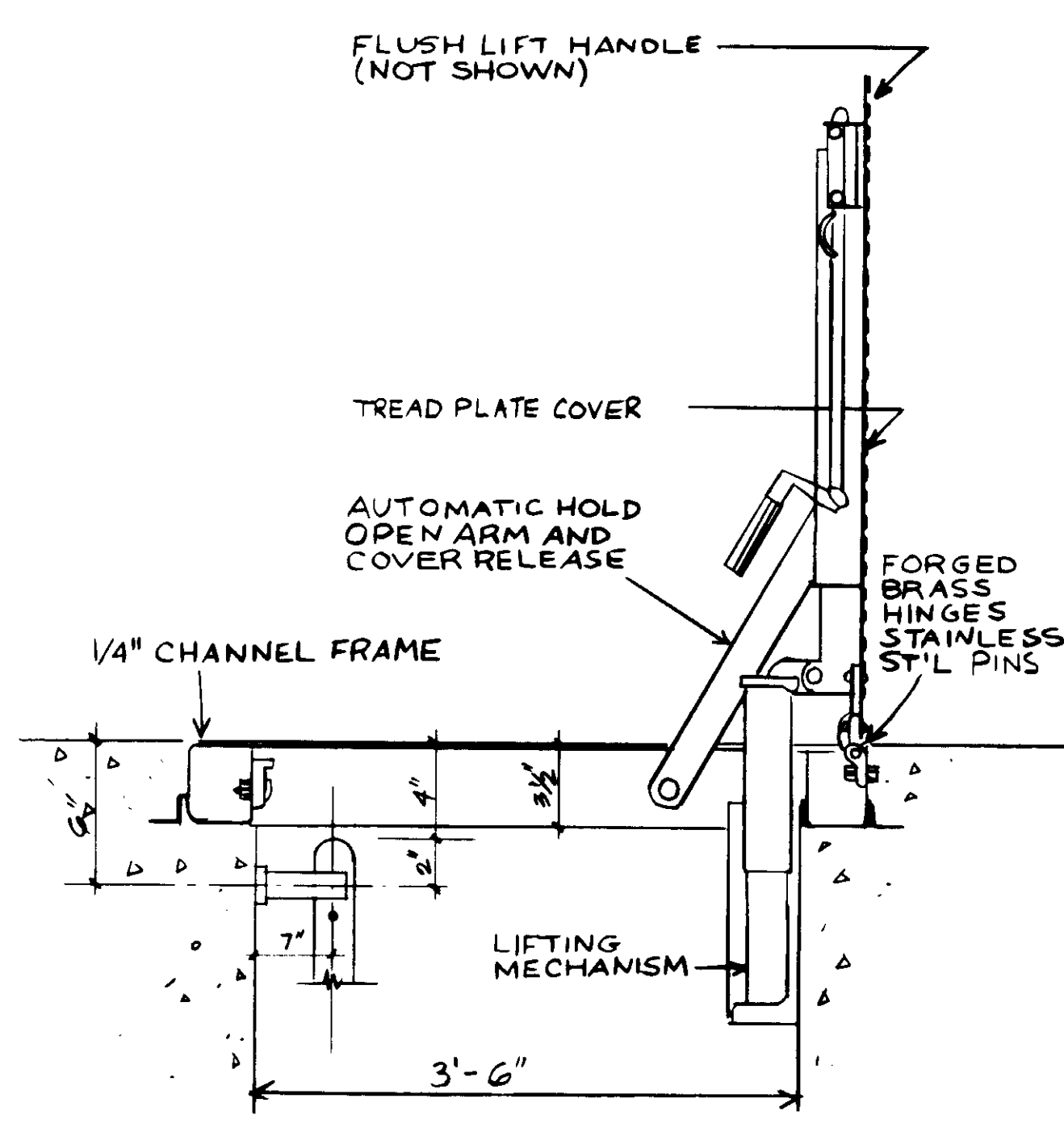
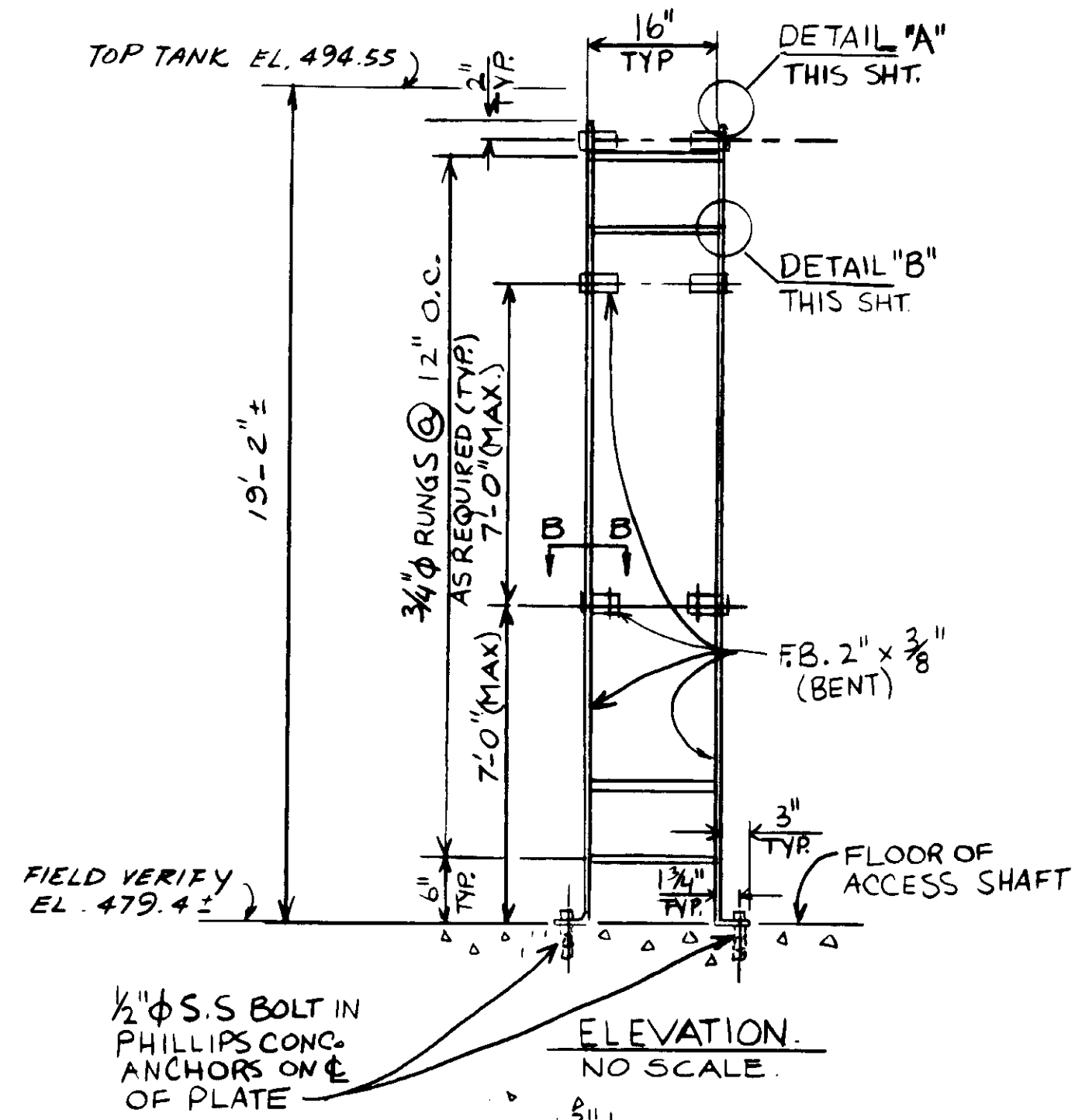
SCALE:	AS NOTED	DESIGNED:	Y.K./C.C.	SUBMITTED:	8-7-87
		DRAWN:	R.K.	DESIGNED BY:	Y.K.
		CHECKED:	Y.K.	DATE:	8-7-87
				R.C.E. NO.:	14008
				DATE:	8-7-87

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ALUMINUM STAIRWAYS**

SHEET  
 MM-24





NOTE: HOT-DIP GALVANIZE AFTER FABRICATION

STEEL LADDER NO SCALE

04035



RECORD DRAWING  
FOR FILE MAINTAINED BY CLIENT FACILITY DEPT.  
KATSUMA CONSULTING ENGINEERS 1996 1997

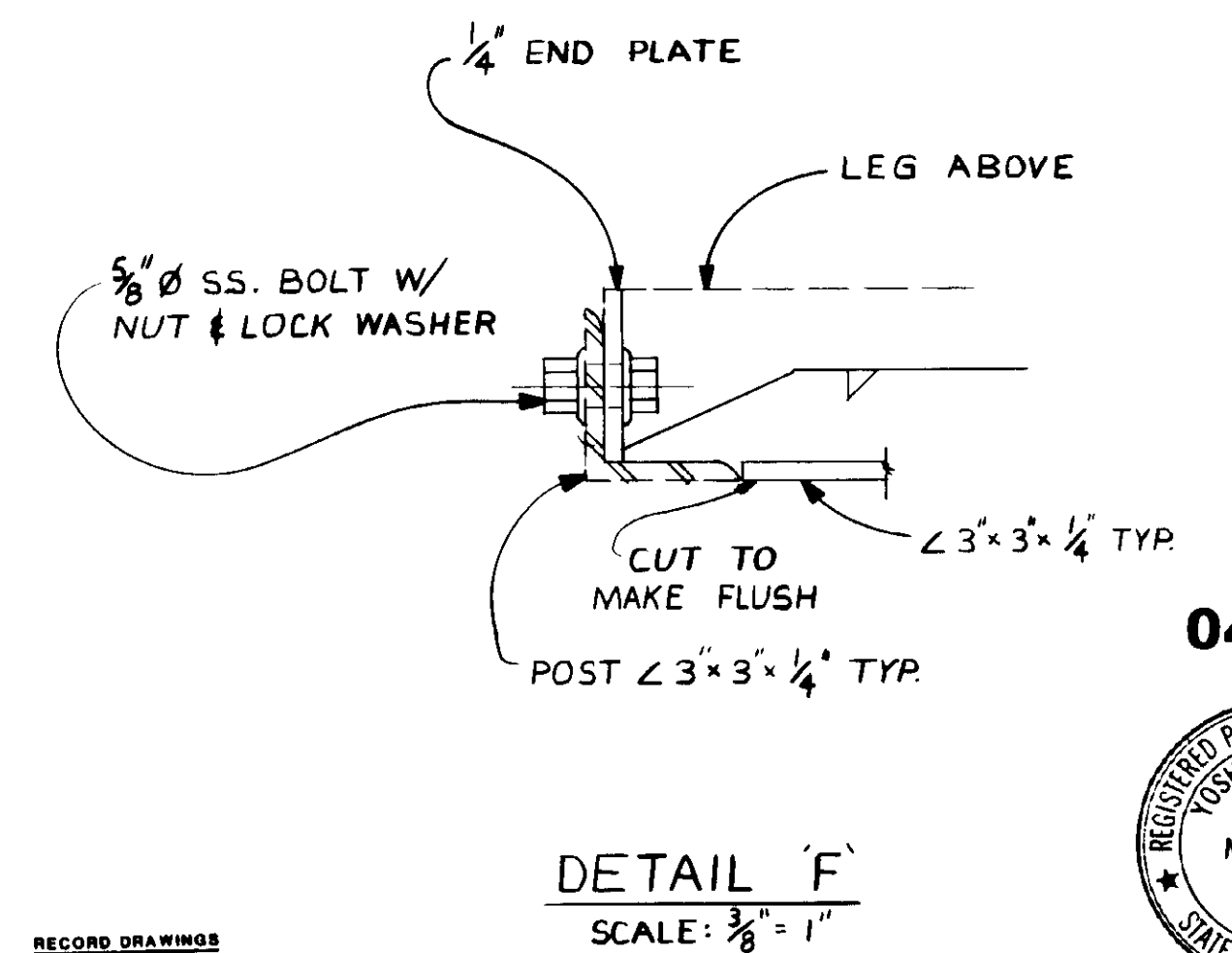
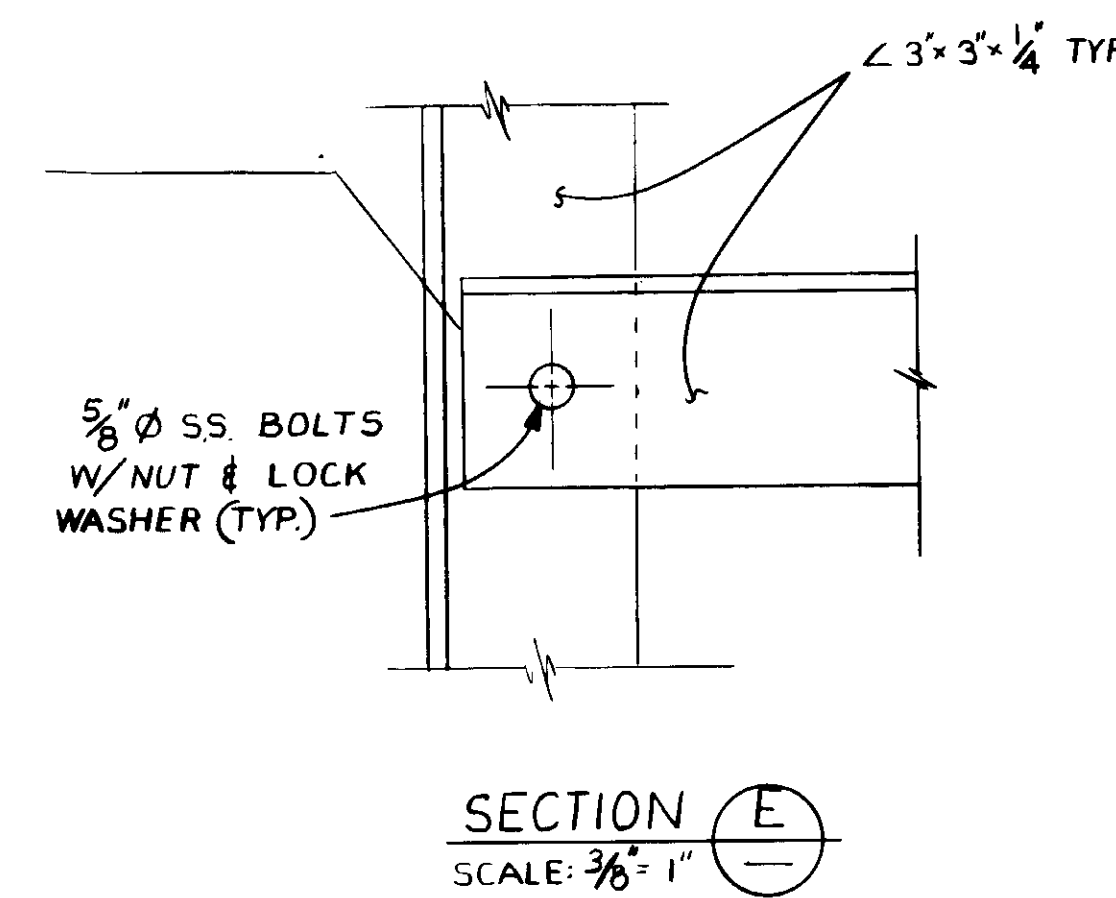
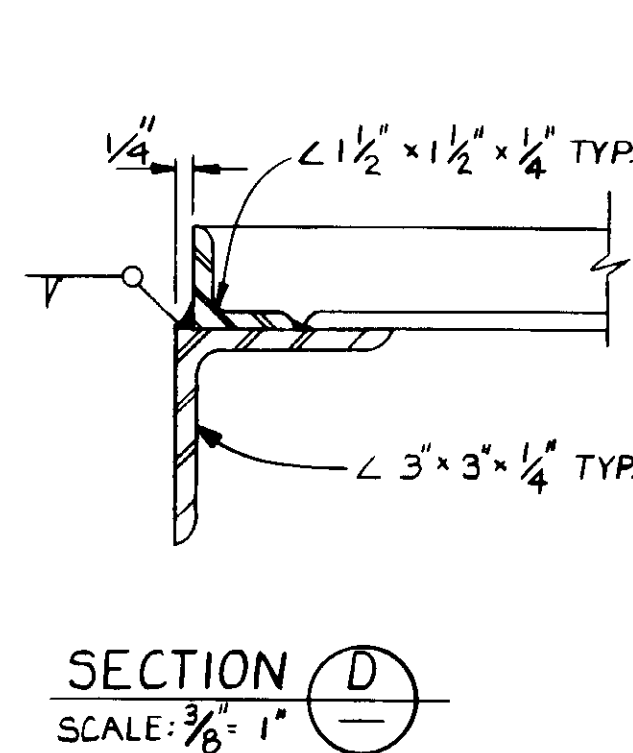
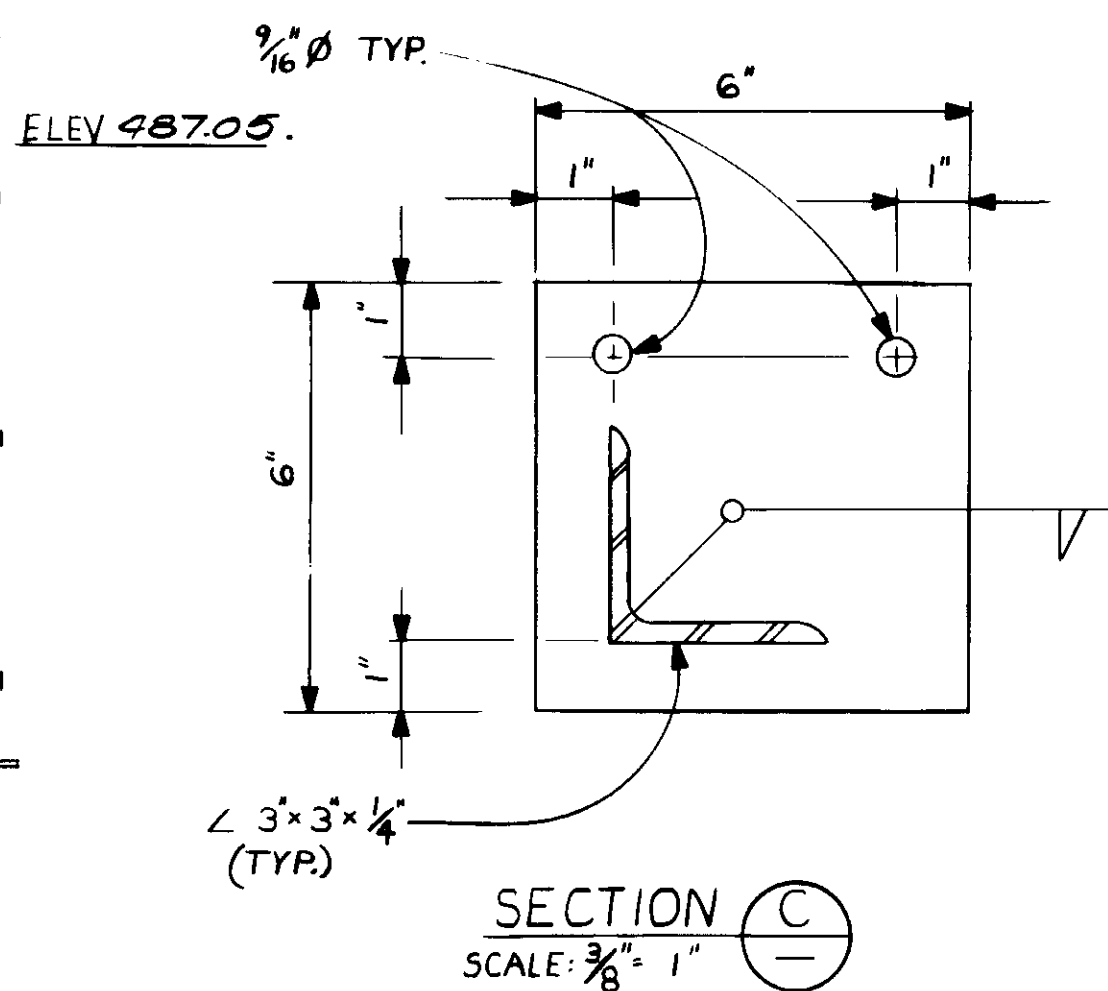
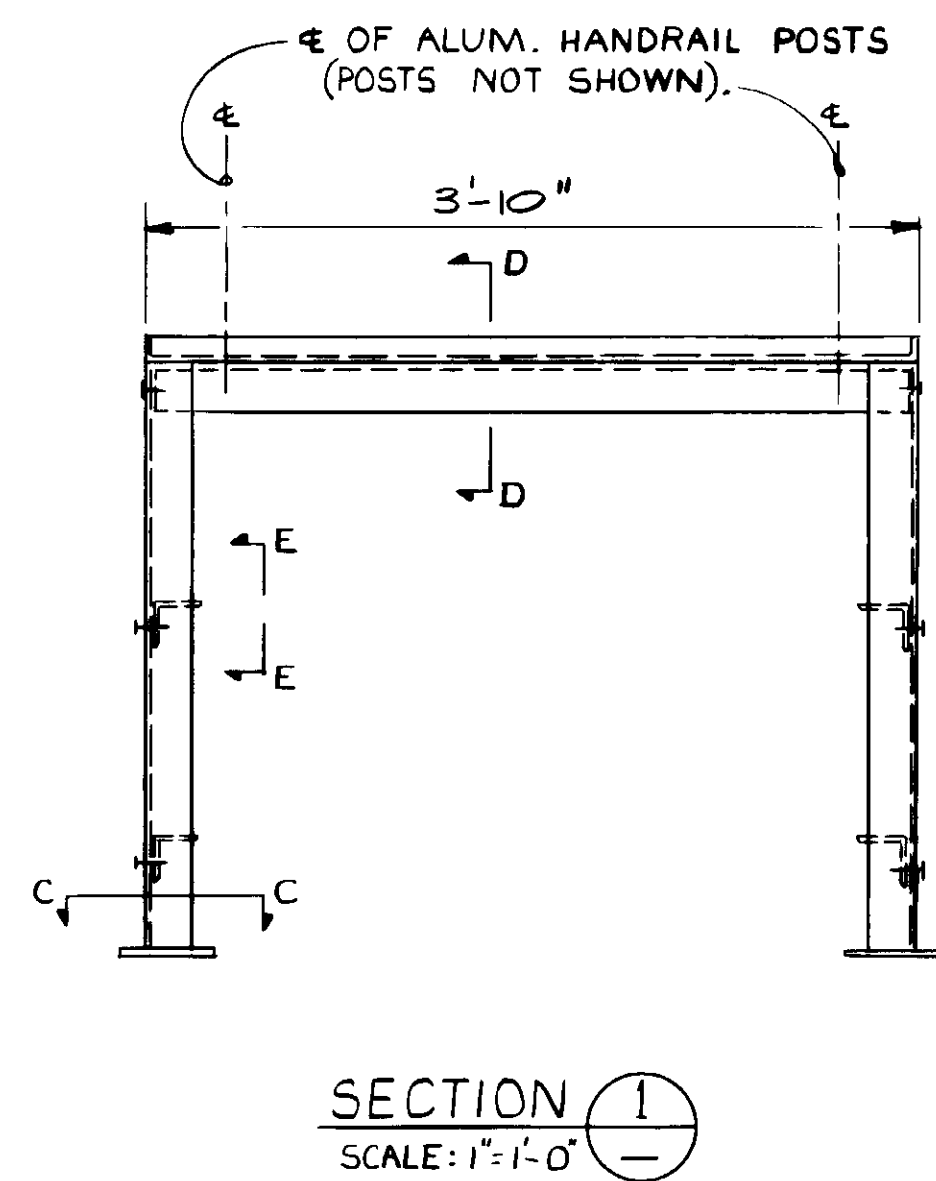
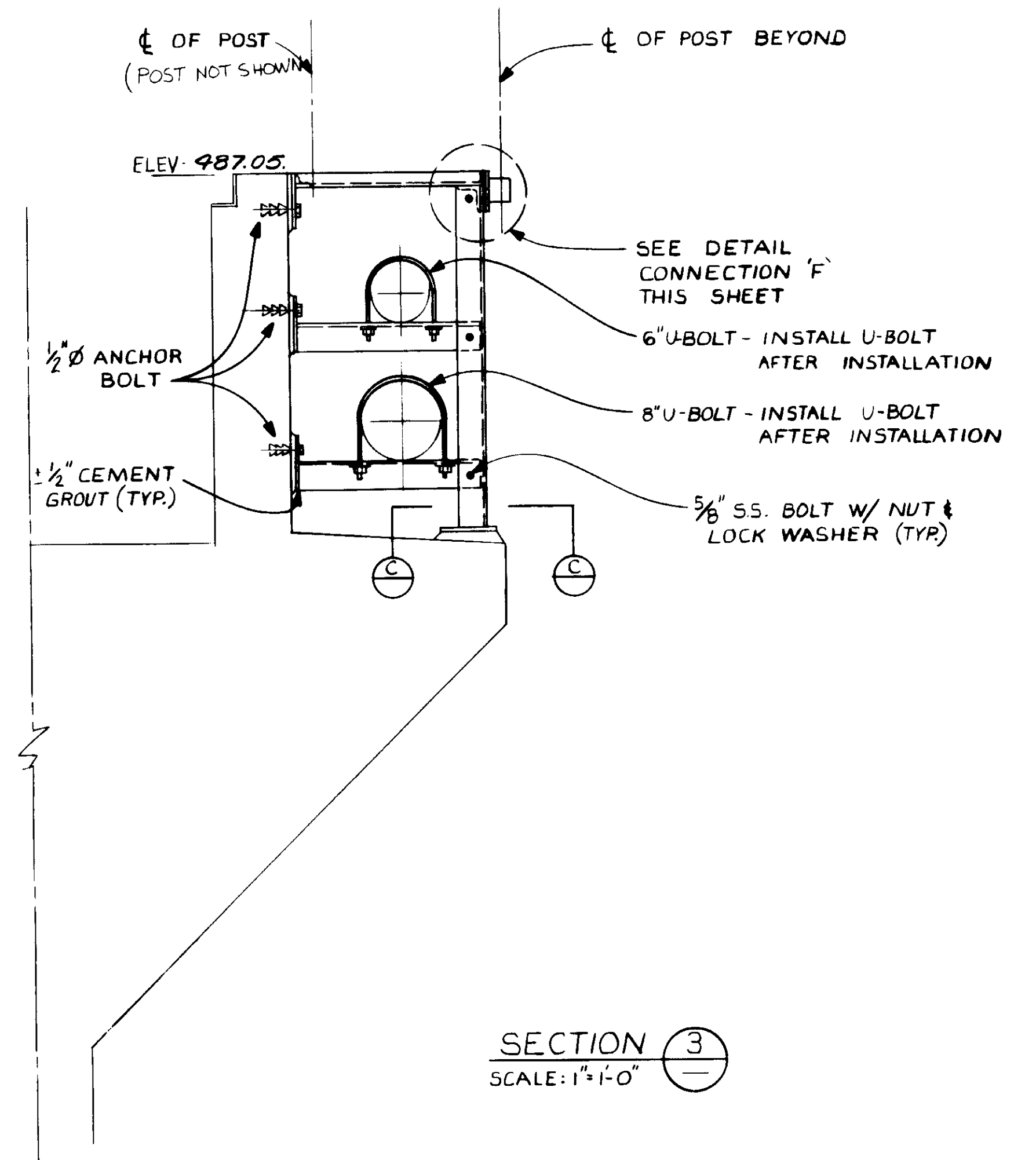
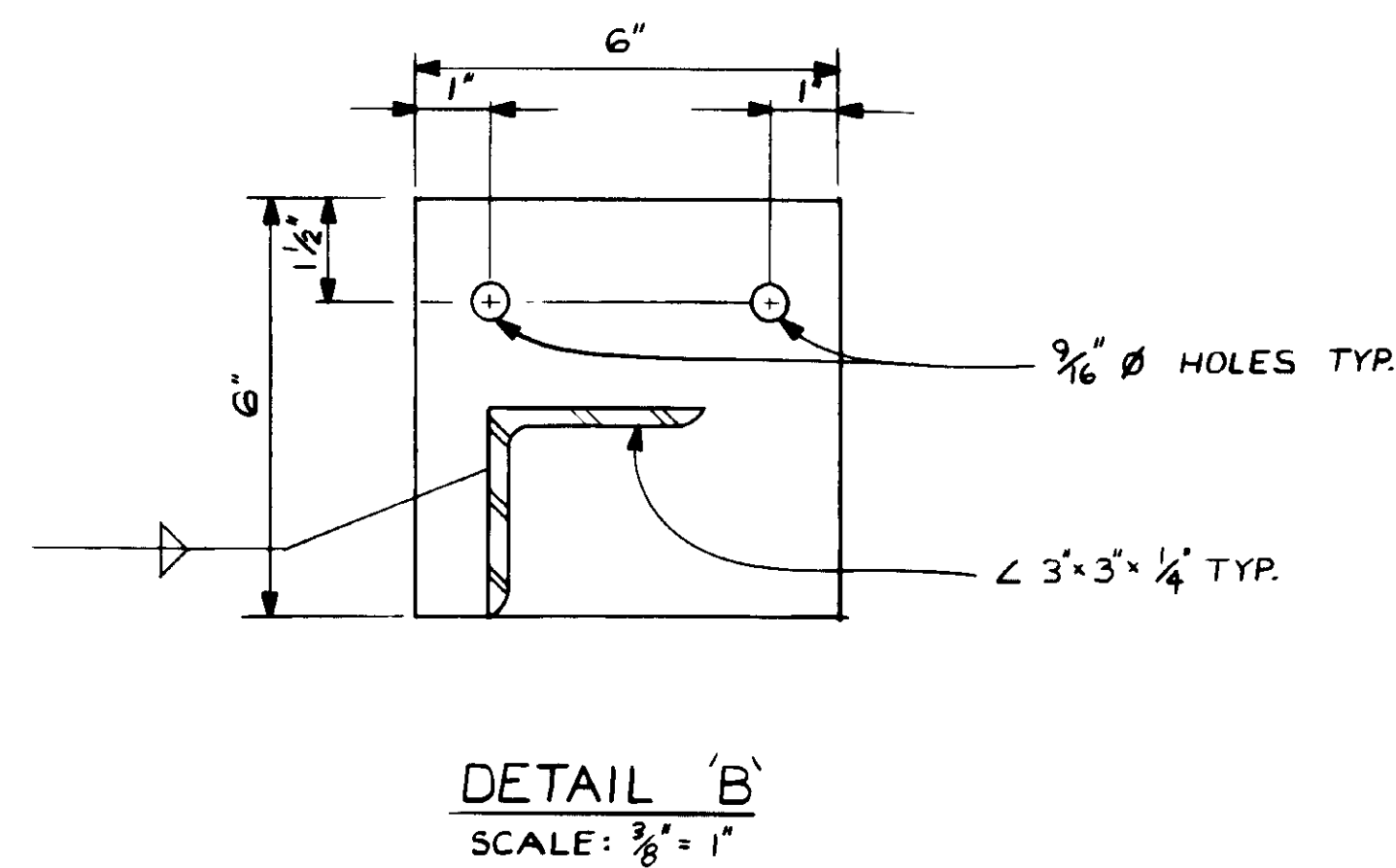
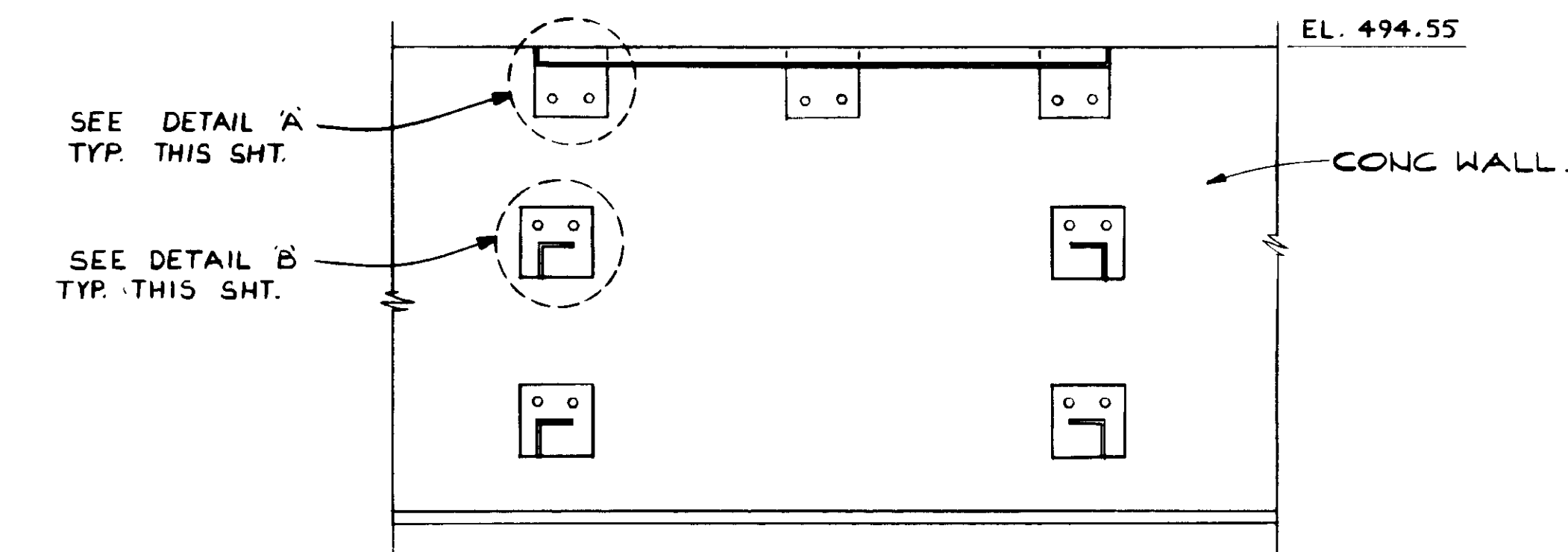
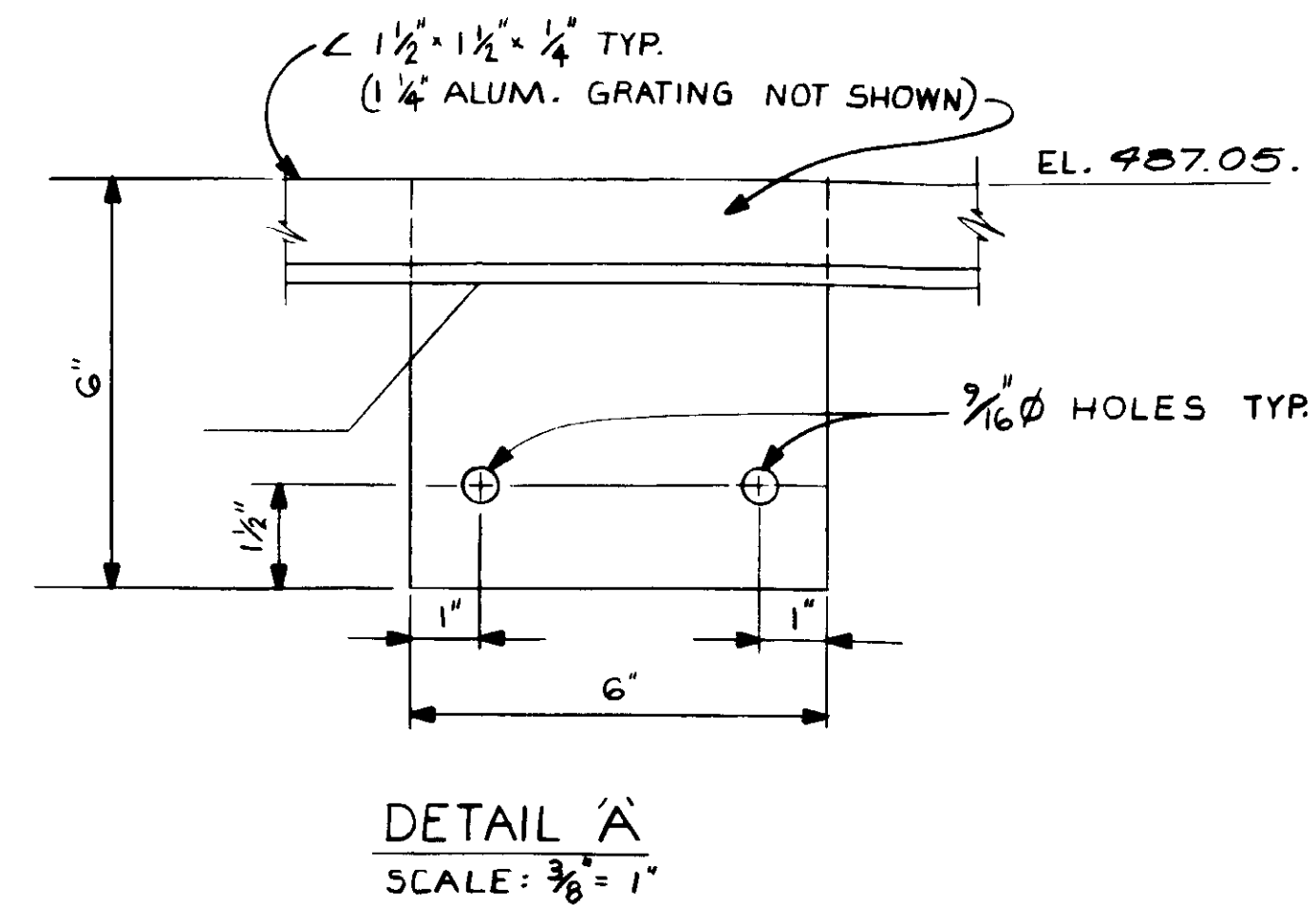
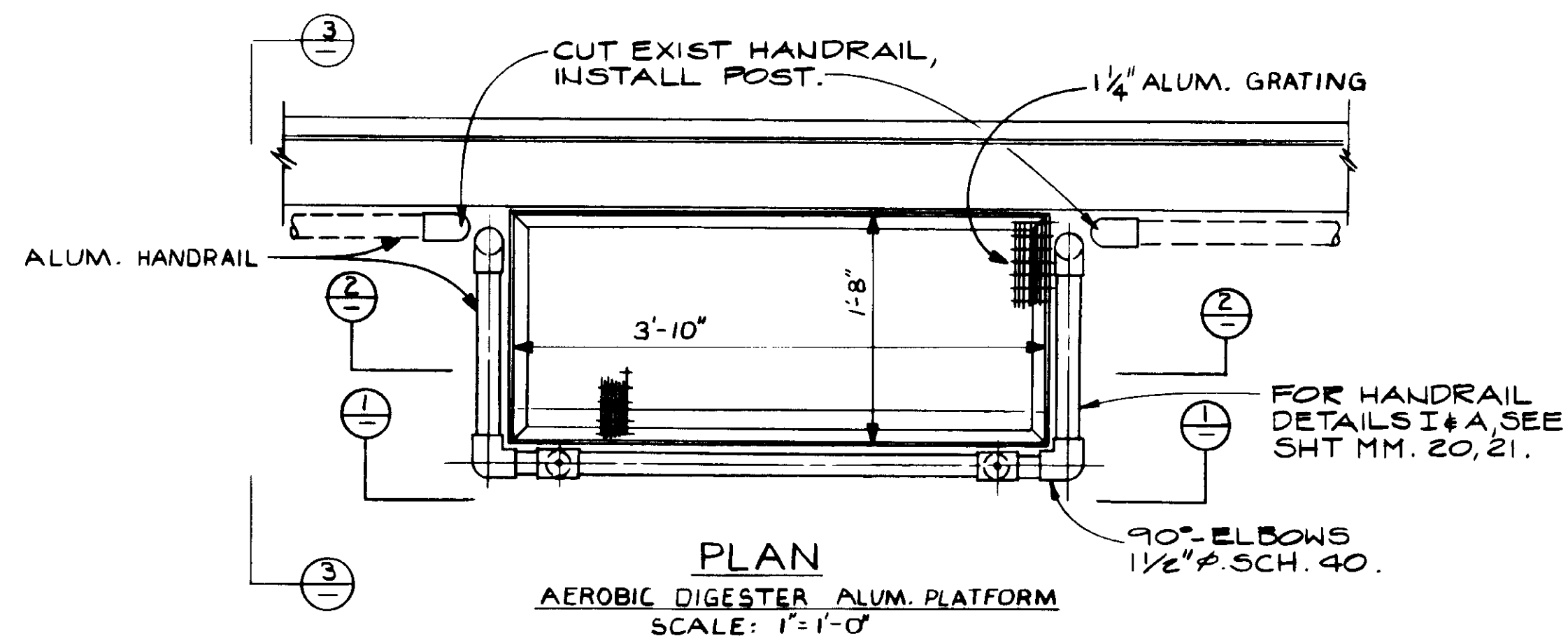
REV	DATE	BY	DESCRIPTION

SCALE:	Y.K./C.C.	SUBMITTED	8-7-87
AS NOTED	R.K.	KATSUMA CONSULTING ENGINEERS	R.C.E. NO. DATE
	Y.K.		
CHECKED		ALEXANDER ENGINEERS	513 R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**LADDER & HATCH DETAILS**

SHEET  
MM-25



04036



RECORD DRAWING  
FOR FILE INFORMATION BY CLIENT PACIFIC CORP.  
*[Signature]*  
KATSURA CONSULTING ENGINEERS JUNE 1984

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

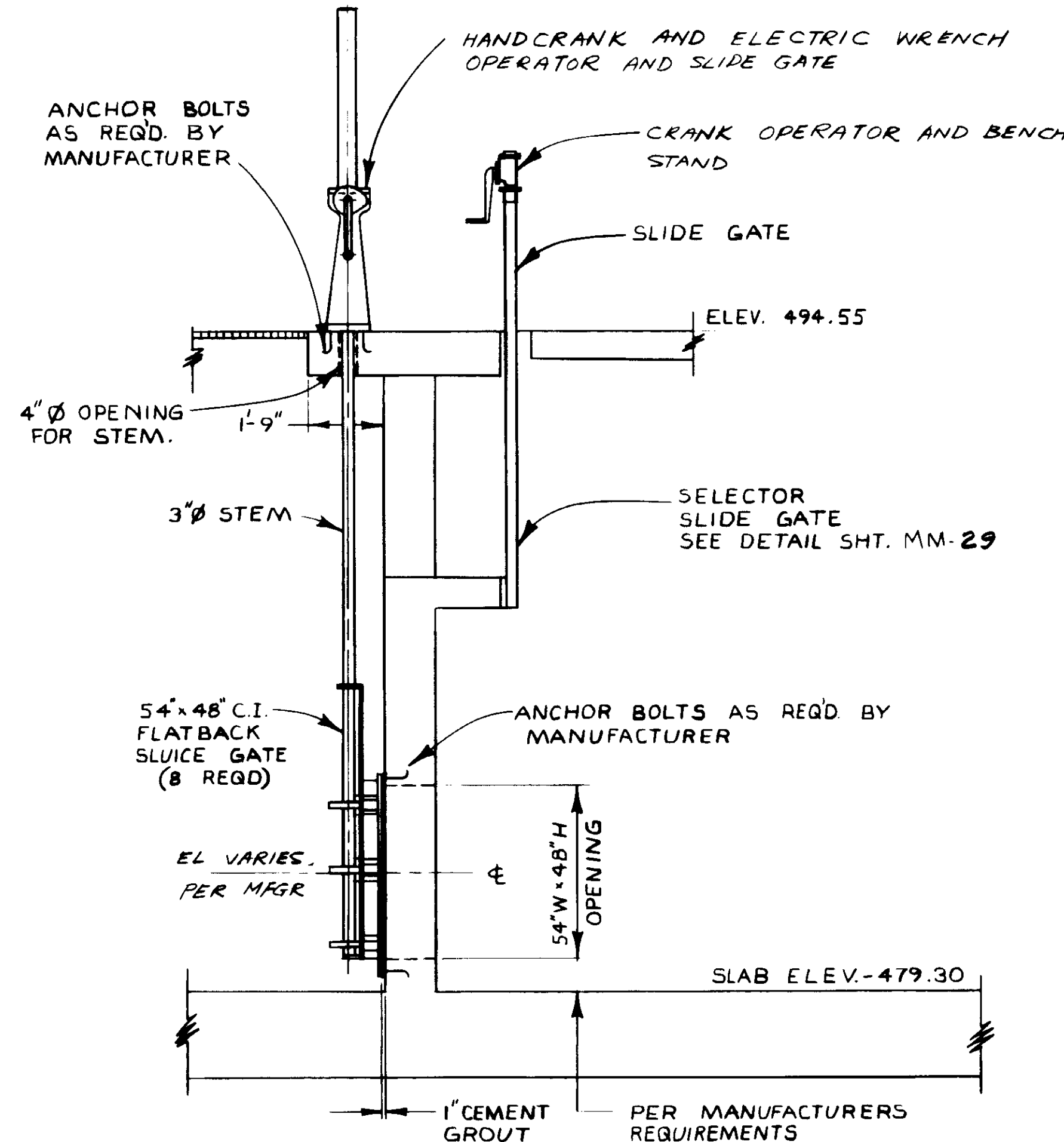
SCALE: AS NOTED.	DESIGNED: Y.K./J.L.	SUBMITTED: <i>[Signature]</i> 14038 8-7-87
DRAWN: R.K.	CHECKED: Y.K.	KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS 513 R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

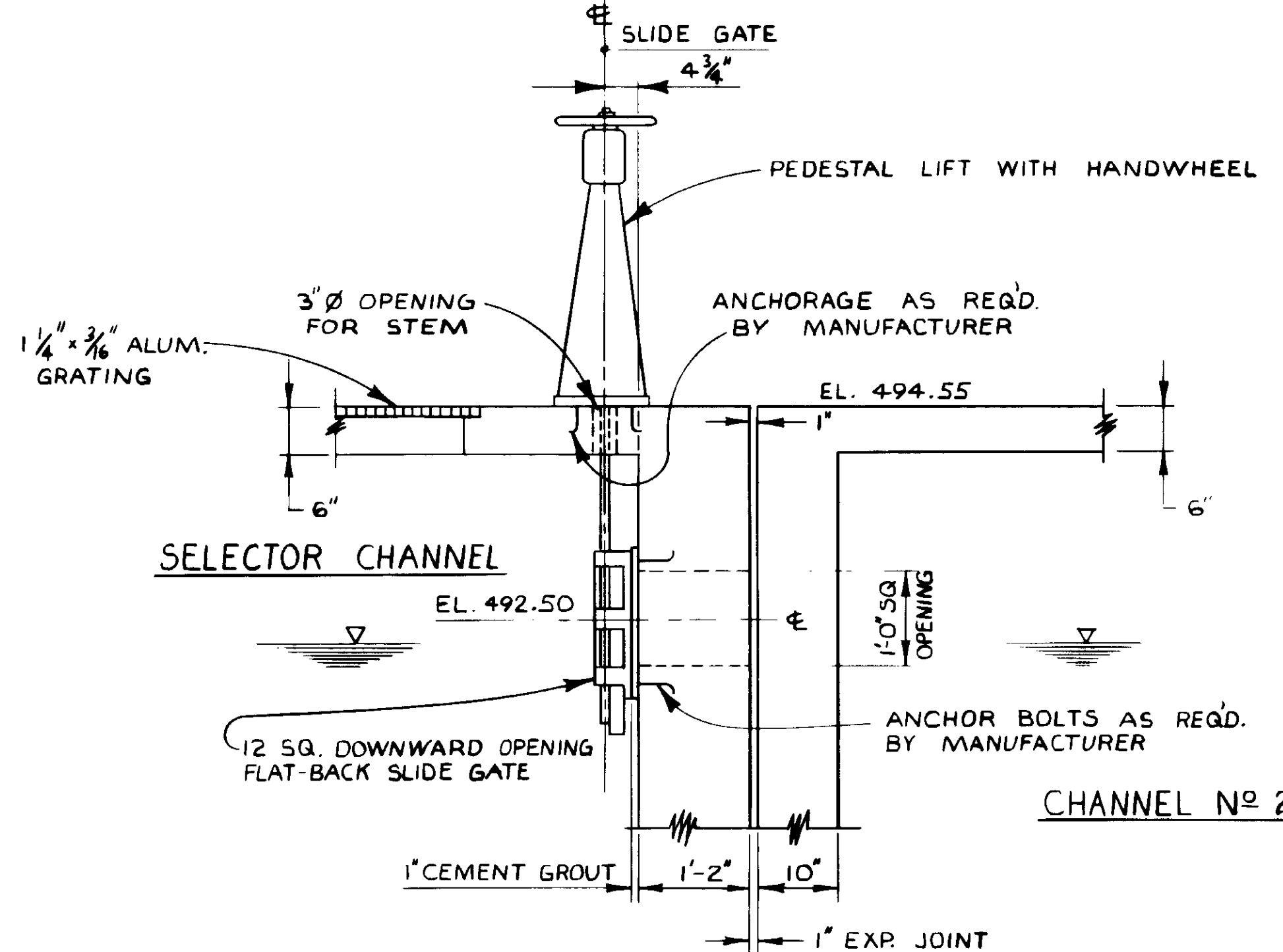
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ALUMINUM PLATFORM**

SHEET  
MM-26





SELECTOR CHANNEL CAST IRON  
SLUICE GATE  
SCALE: 3/8" = 1'-0"



SELECTOR CHANNEL  
DOWNWARD OPENING SLIDE GATE  
SCALE: 3/4" = 1'-0"

04038



RECORD DRAWINGS  
Per Field Inspection By KIEWIT PACIFIC CORP.  
*[Signature]*  
KATSURA CONSULTING ENGINEERS JUNE 1987

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

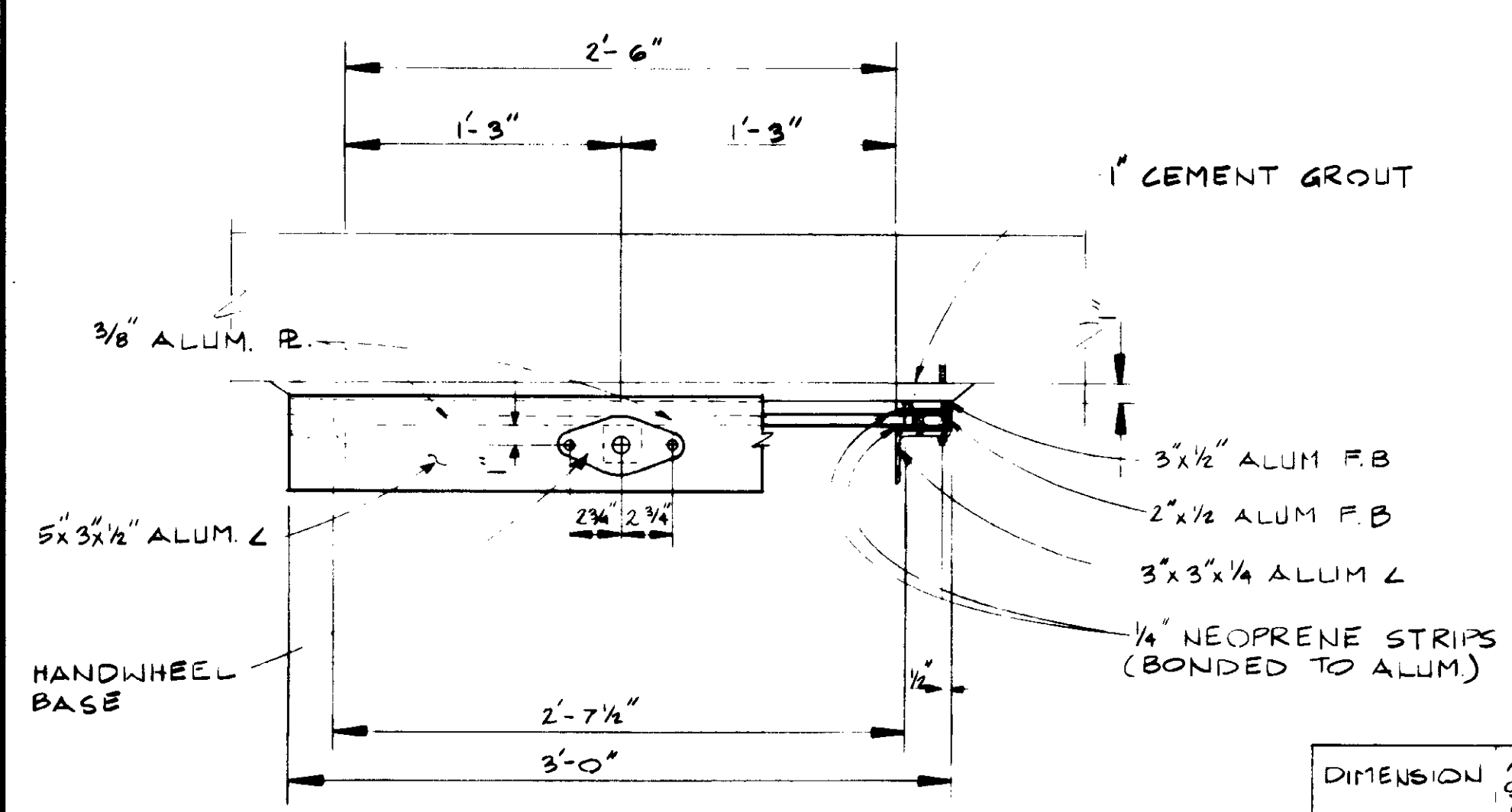
SCALE:	AS NOTED	DESIGNED:	Y.K./CC	SUBMITTED:	8-7-87
		DRAWN:	R.K.	KATSURA CONSULTING ENGINEERS	14038
		CHECKED:		ALEXANDER ENGINEERS	513

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SLIDE GATE DETAILS - II

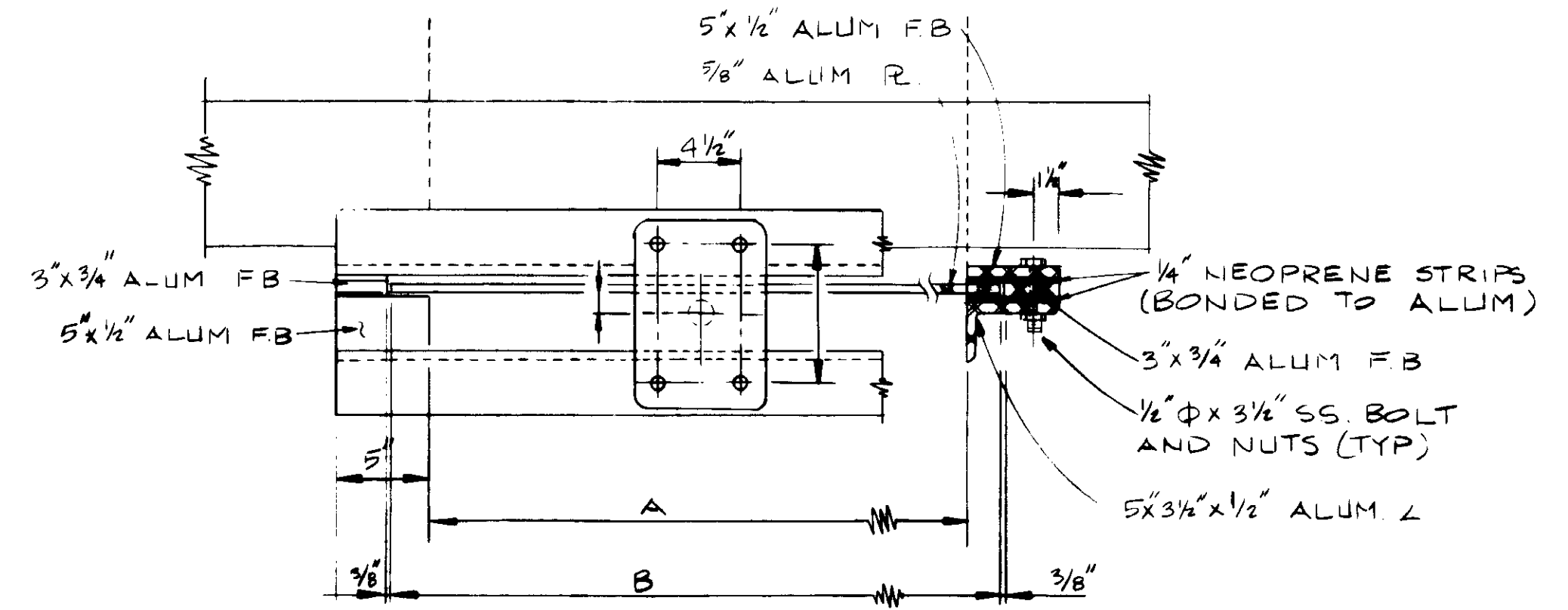
SHEET  
MM-28



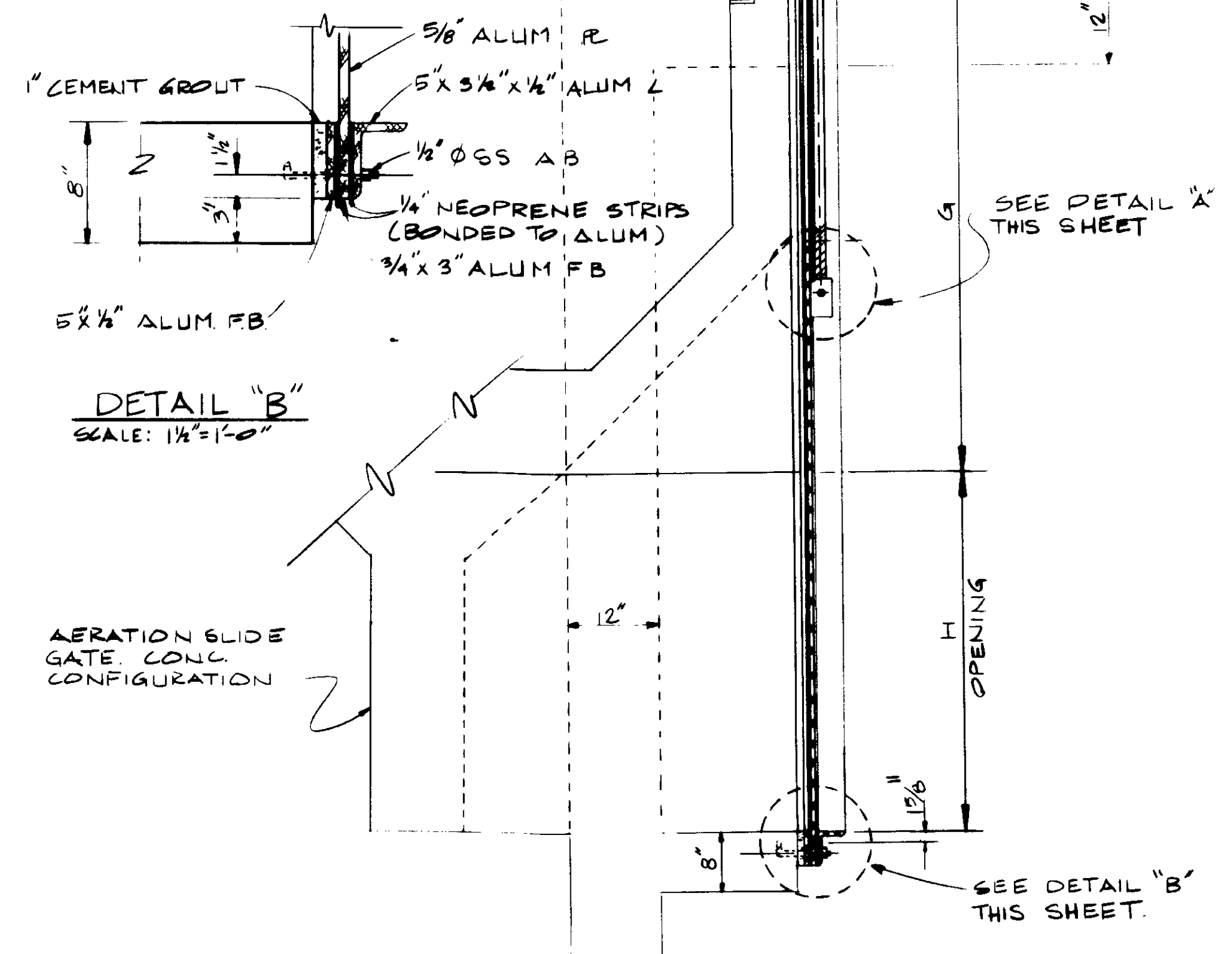


**PLAN  
AERATION TANK  
INFLUENT METERING GATE DETAILS**  
SCALE: 1/4" = 1'-0"

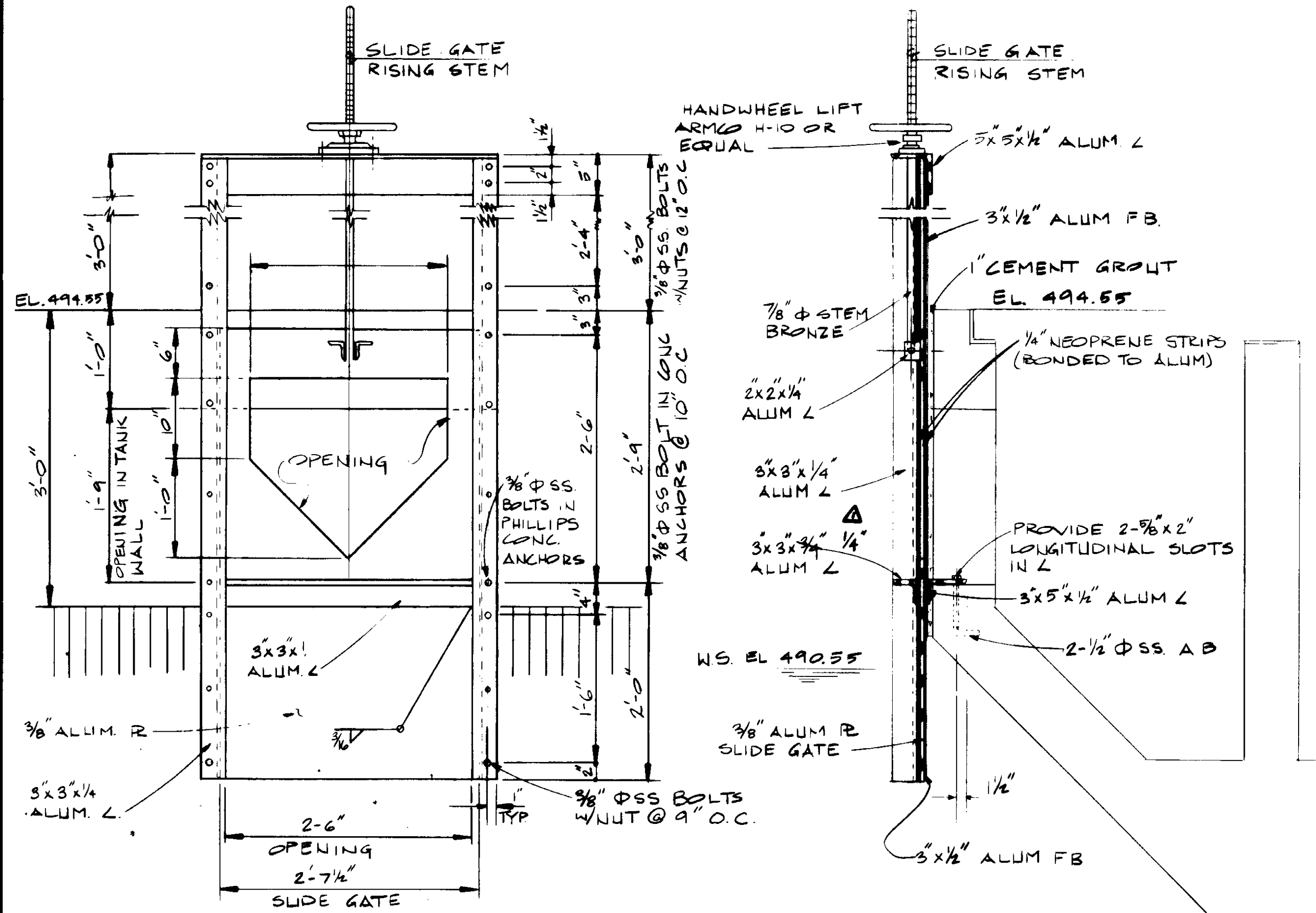
DIMENSION	AERATION SLIDE GATE	SELECTOR SLIDE GATE
A	4'-0"	4'-6"
B	4'-3 1/4"	4'-9 1/4"
C	4'-0"	4'-6"
D	4'-3 1/4"	4'-9 1/4"
E	4'-10"	5'-4"
F	485.05	488.80
G	5'-6"	1'-0"
H	4'-0"	4'-9"



**PLAN  
SELECTOR & AERATION TANK  
SLIDE GATE DETAILS**  
SCALE: 1/2" = 1'-0"

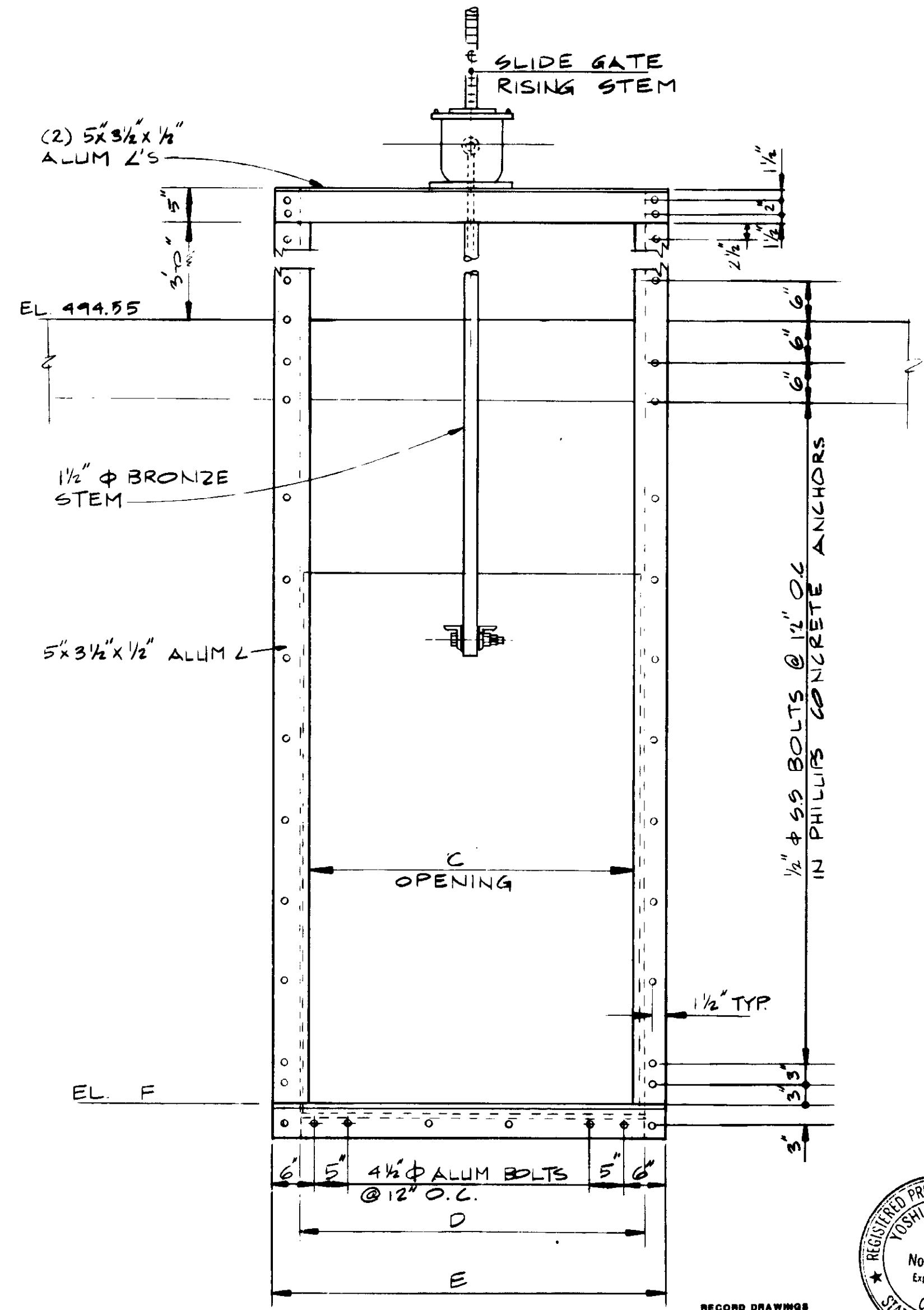


**ELEVATION-SECTION  
NO SCALE**

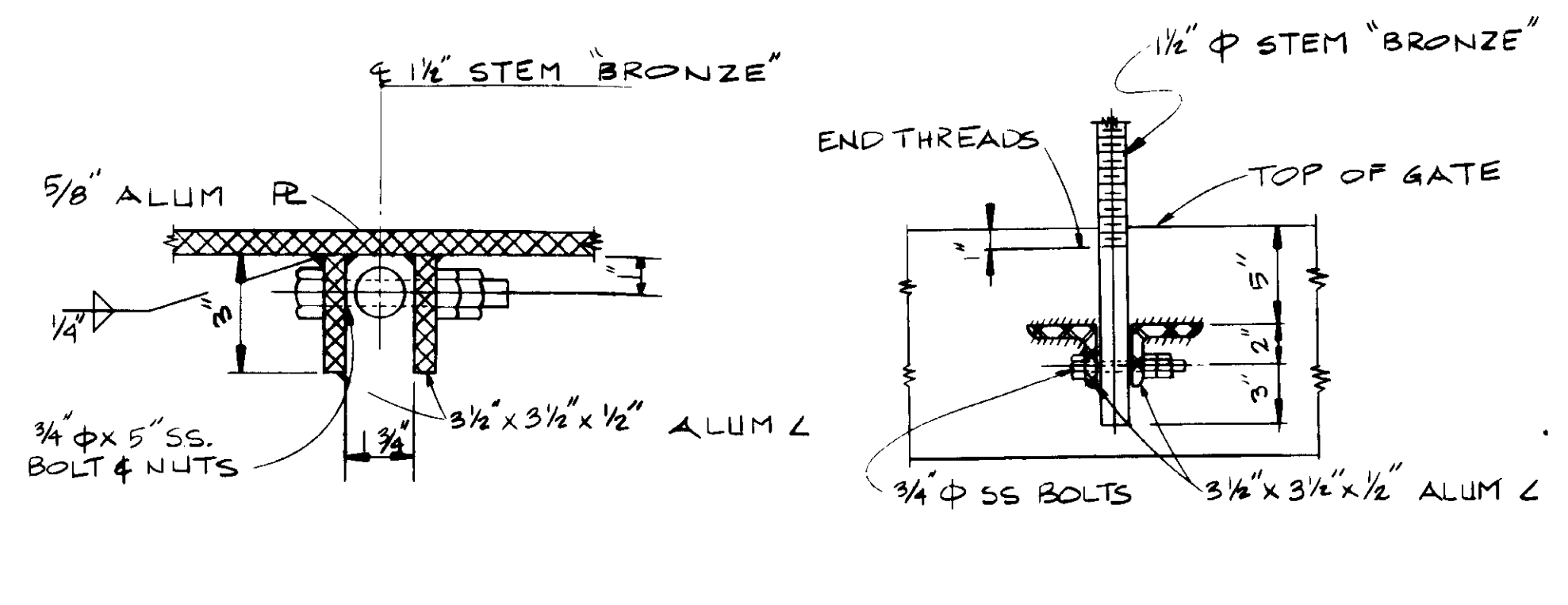


**ELEVATION  
SCALE: 1/4" = 1'-0"**

**ELEVATION-SECTION  
SCALE: 1/4" = 1'-0"**



**ELEVATION  
NO SCALE**



**PLAN SECTION  
SCALE: 3" = 1'-0"**

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

**STEM CONNECTION DETAIL 'A'**



04039

REV	DATE	BY	DESCRIPTION

SCALE:	AS SHOWN
DESIGNED:	YK/CC
DRAWN:	AR/CL
CHECKED:	YK

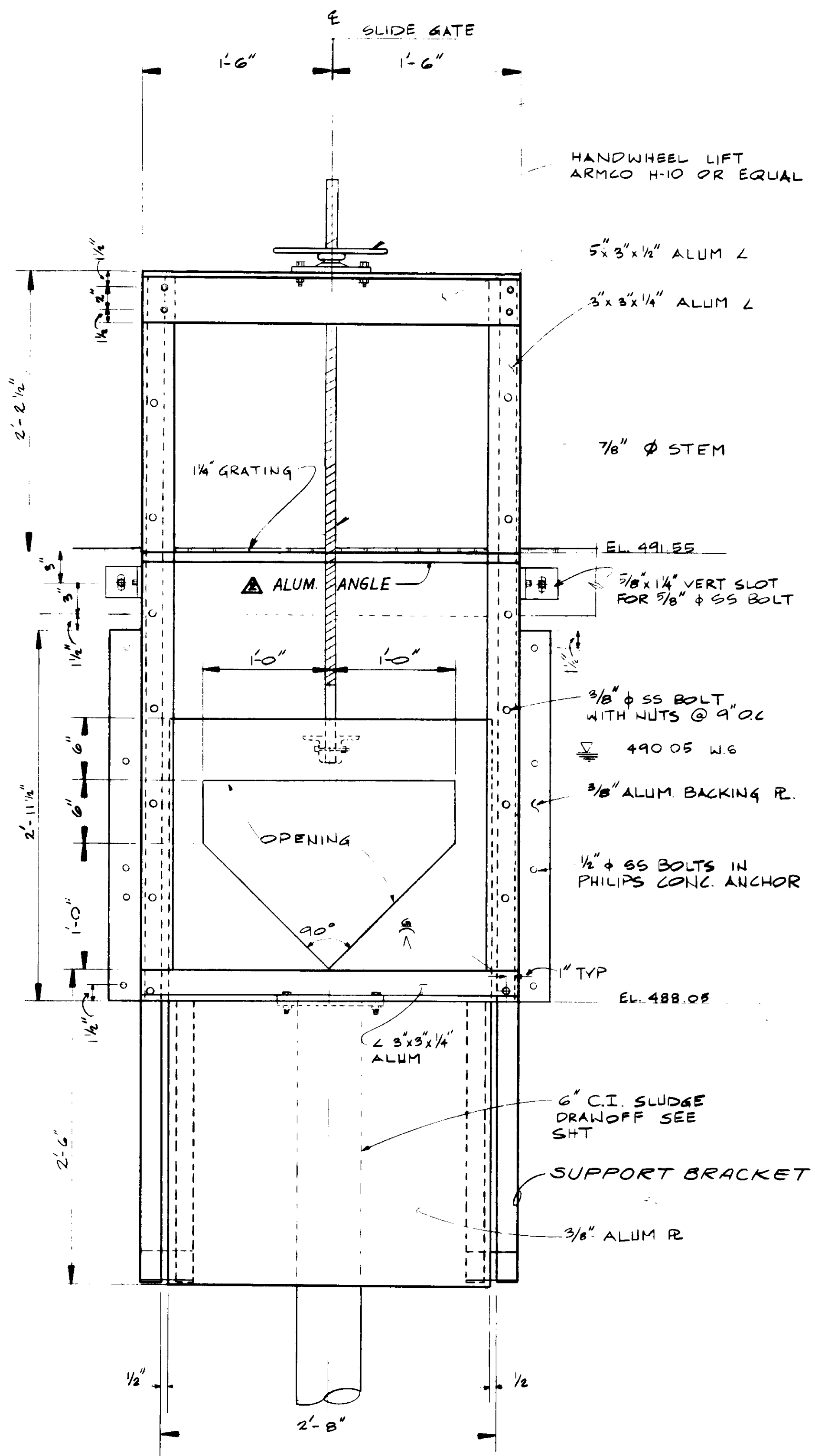
SUBMITTED:	Yoshio Katsura	DATE:	8-7-87
DESIGNED BY:	YK/CC	R.C.E. NO.:	14038
DRAWN BY:	AR/CL	DATE:	
CHECKED BY:	YK	R.C.E. NO.:	513
		DATE:	

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III**

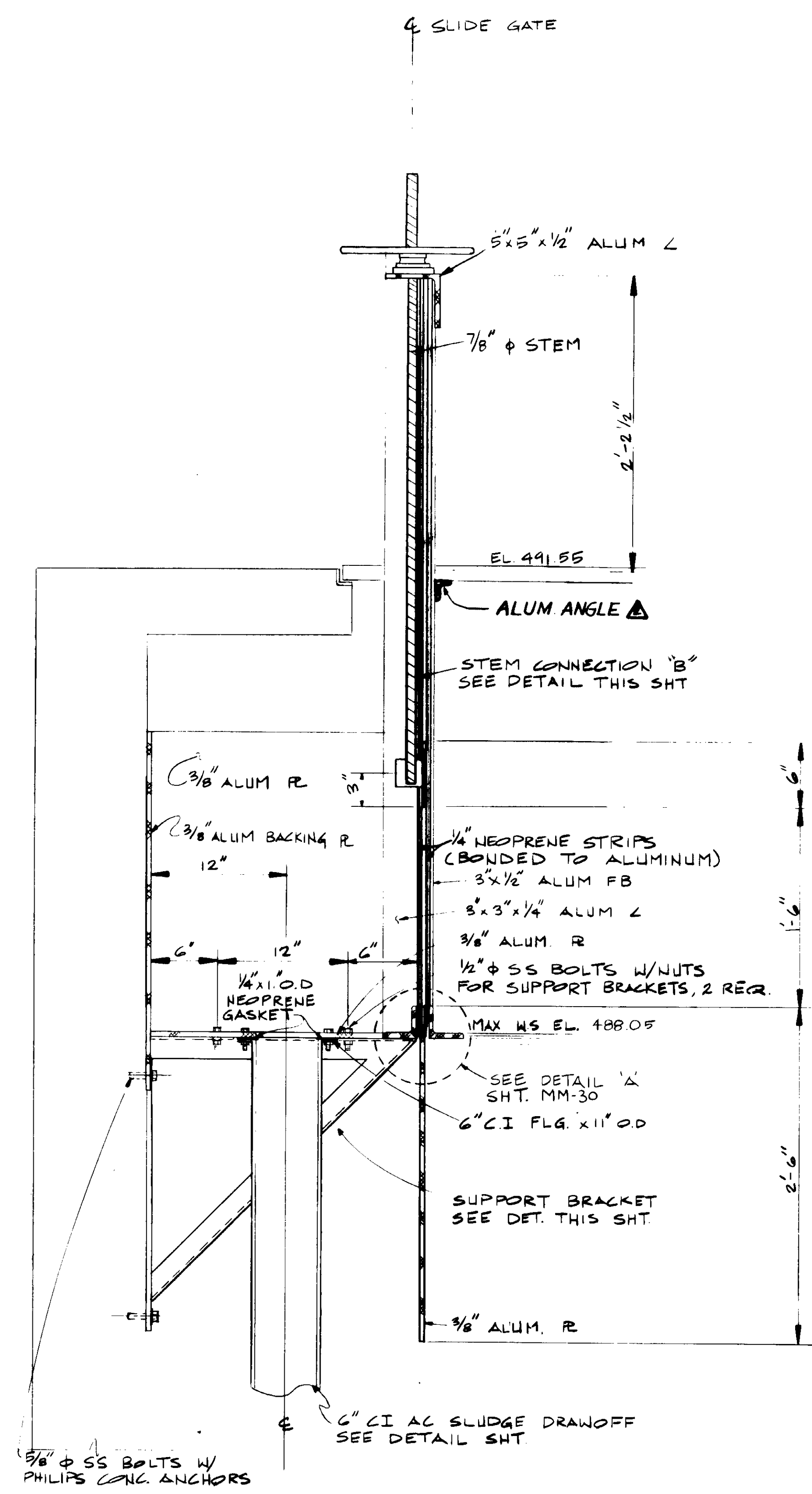
**SLIDE GATE DETAILS - III**

SHEET  
MM-29

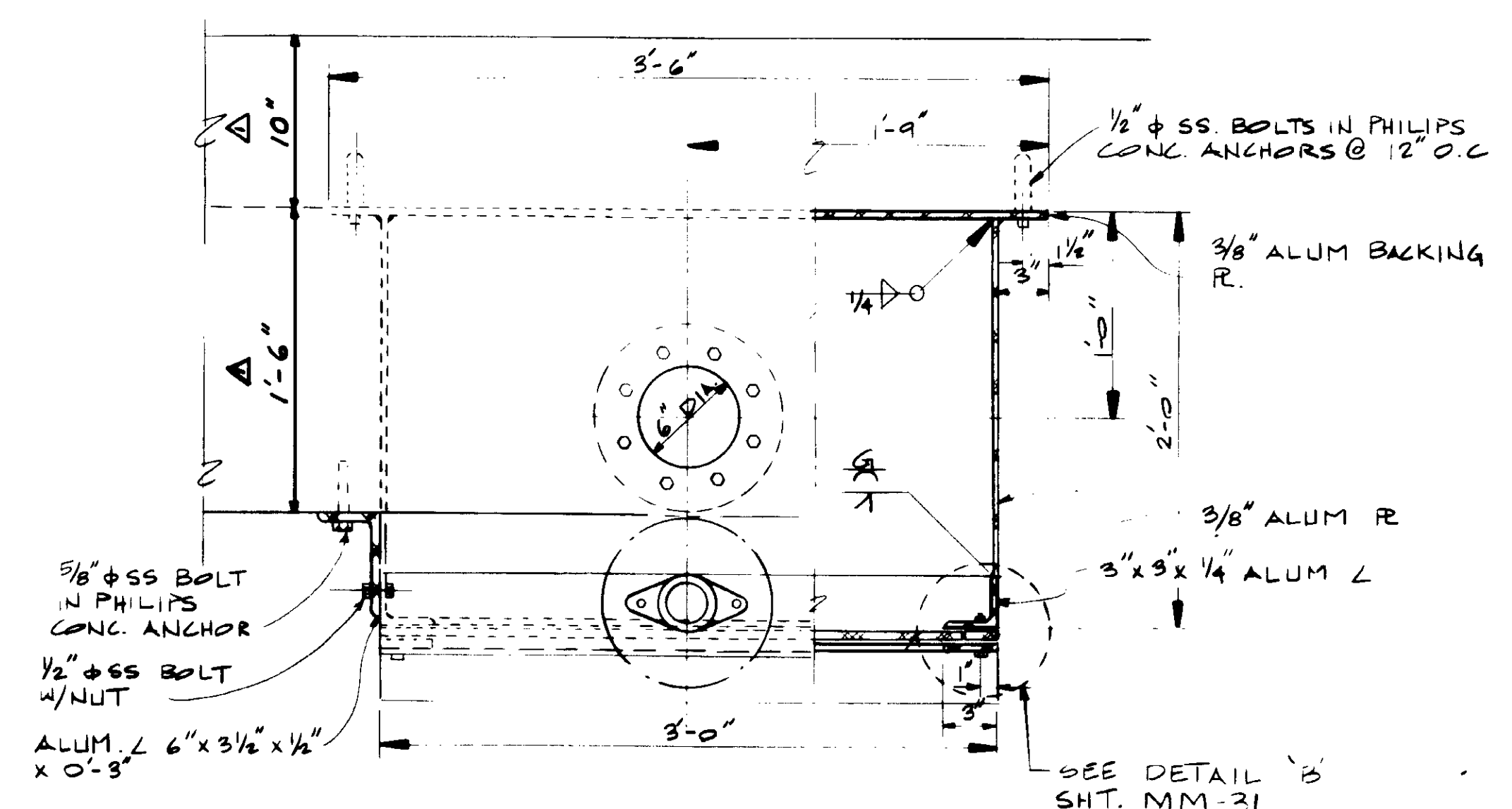


ELEVATION

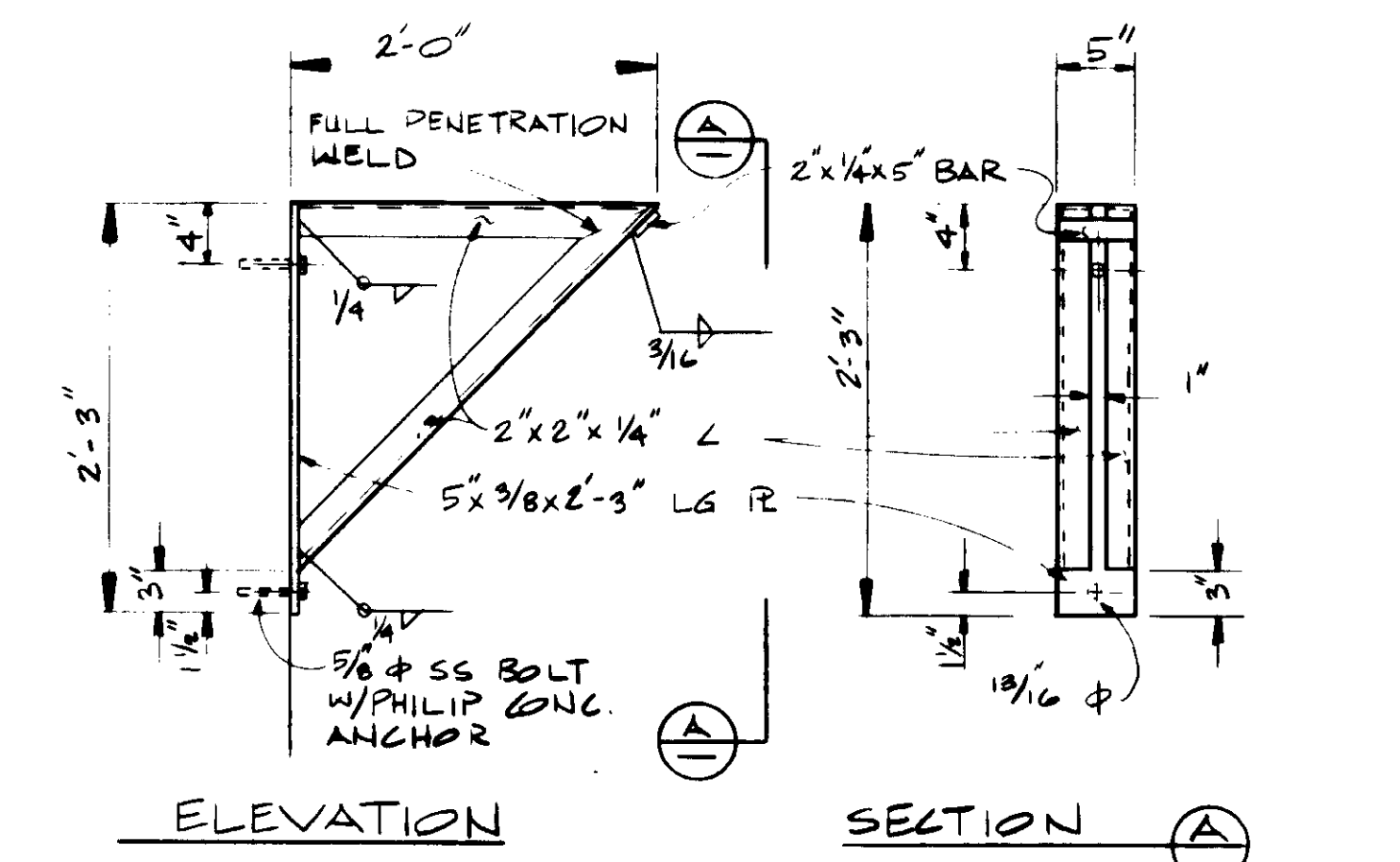
RETURN ACTIVATED SLUDGE METERING GATE DETAILS  
SCALE = 1/2" = 1'-0"



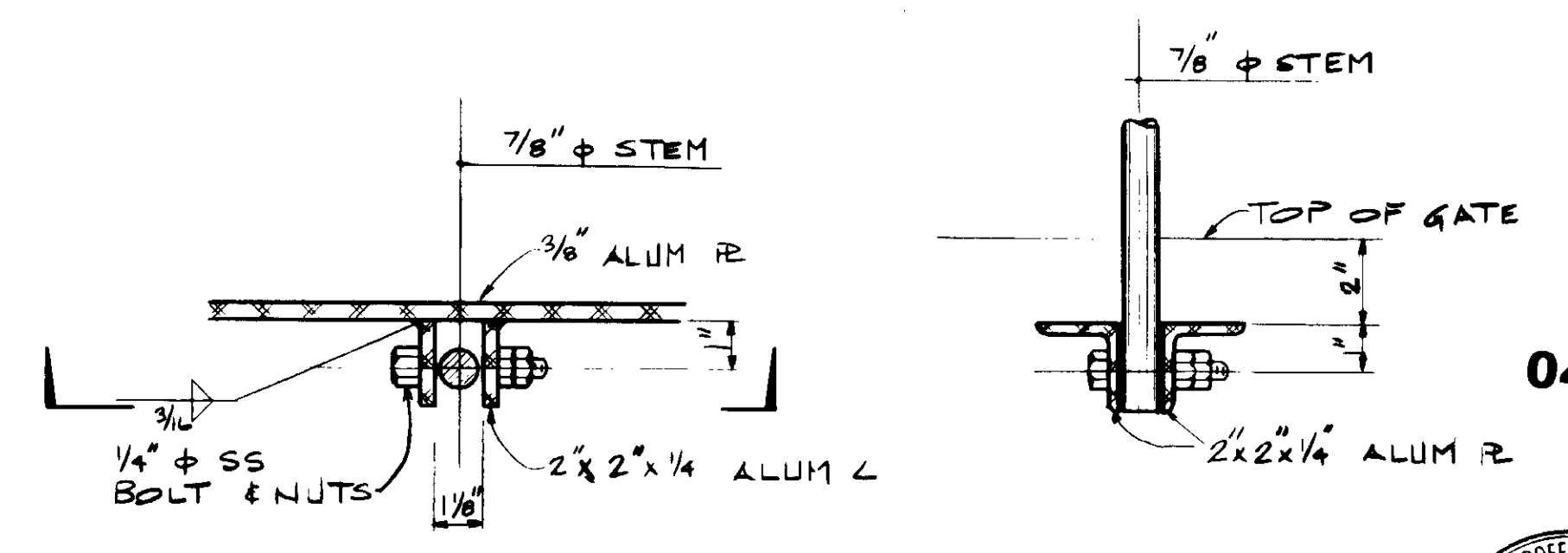
ELEVATION - SECTION



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



SUPPORT BRACKET DETAIL  
SCALE = 1" = 1'-0"



STEM CONNECTION DETAIL "B"  
SCALE = 3" = 1'-0"

04040



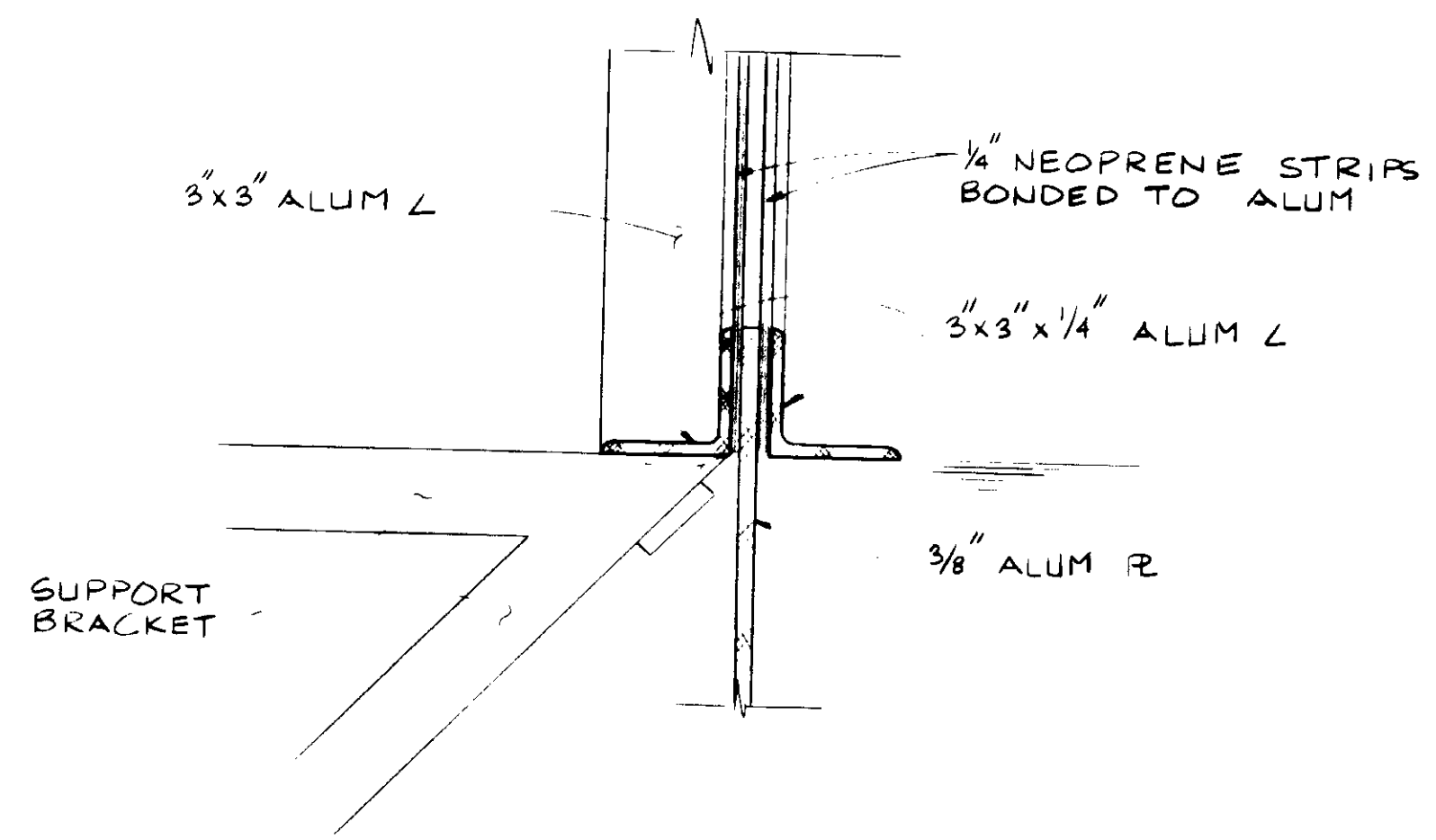
REV	DATE	BY	DESCRIPTION

SCALE:	AS SHOWN
DESIGNED:	Y.K/KC
DRAWN:	C.L/TR
CHECKED:	YK
SUBMITTED:	14038 8-7-87
DESIGNED BY:	KATSURA CONSULTING ENGINEERS
R.C.E. NO.:	
DATE:	
519	
ALEXANDER ENGINEERS	R.C.E. NO. DATE

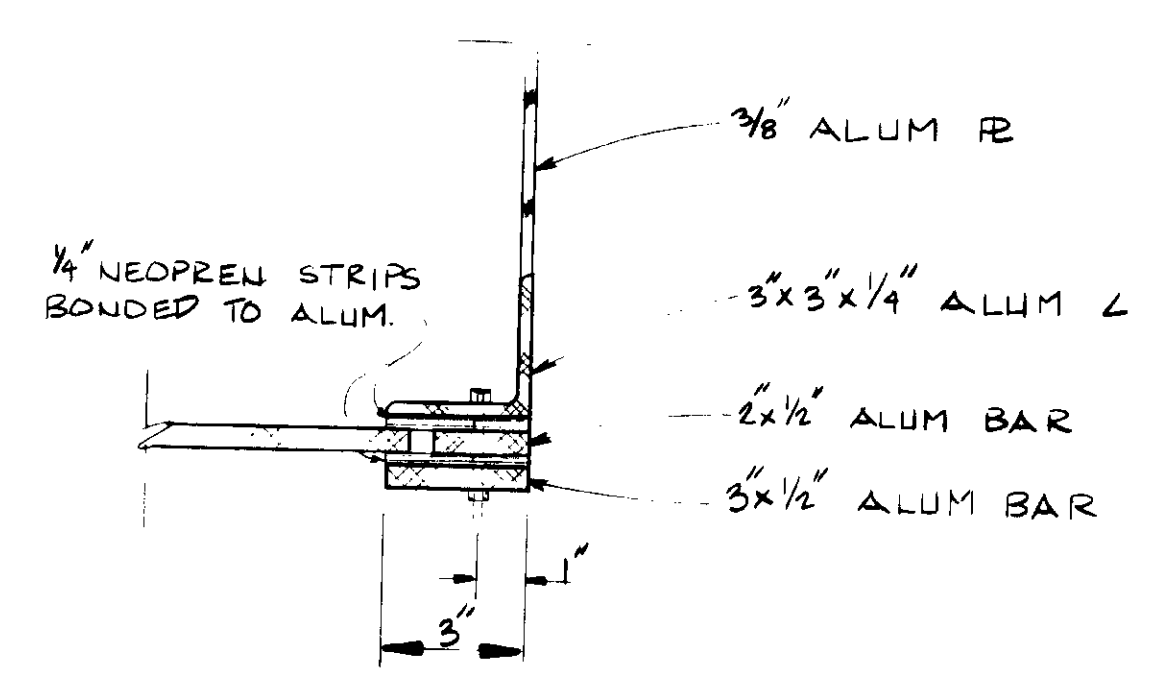
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SLIDE GATE DETAILS - IV

SHEET  
MM-30



DETAIL 'A'  
SCALE: 3"=1'-0"



DETAIL 'B'  
SCALE: 3"=1'-0"

RETURN ACTIVATED SLUDGE  
MEJERING GATE DETAILS A & B

04041



RECORD DRAWINGS  
FOR FILE MAINTAINED BY AIRSWAY PARTNERS CORP.  
*Y. Katsura*  
KATSUMURA CONSULTING ENGINEERS JUNE 1988

REV	DATE	BY	DESCRIPTION

SCALE: AS SHOWN

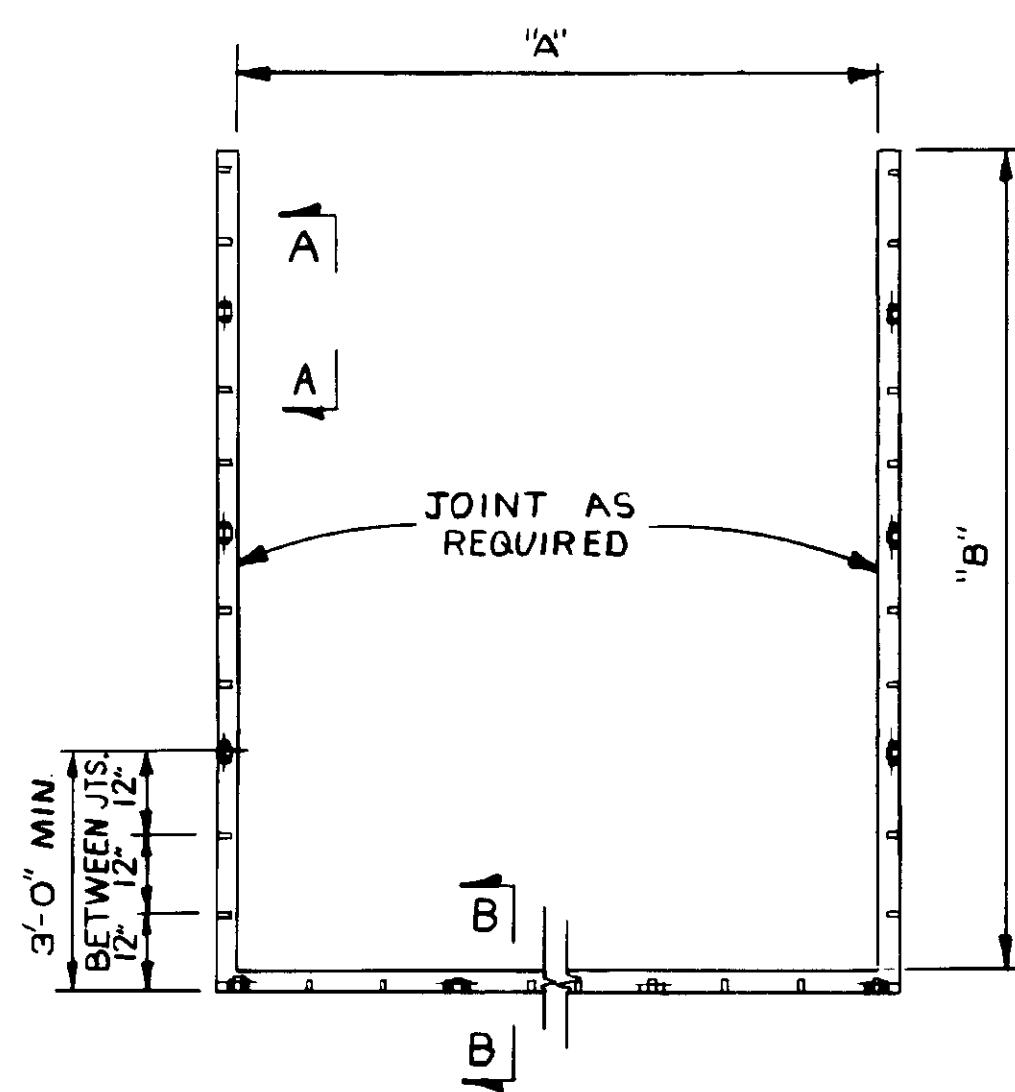
DESIGNED YK/CC  
DRAWN YK  
CHECKED CL

SUBMITTED *Yoshio Katsura* 14038 8-7-87  
KATSUMURA CONSULTING ENGINEERS R.C.E. NO. DATE  
ALEXANDER ENGINEERS R.C.S.E. NO. DATE

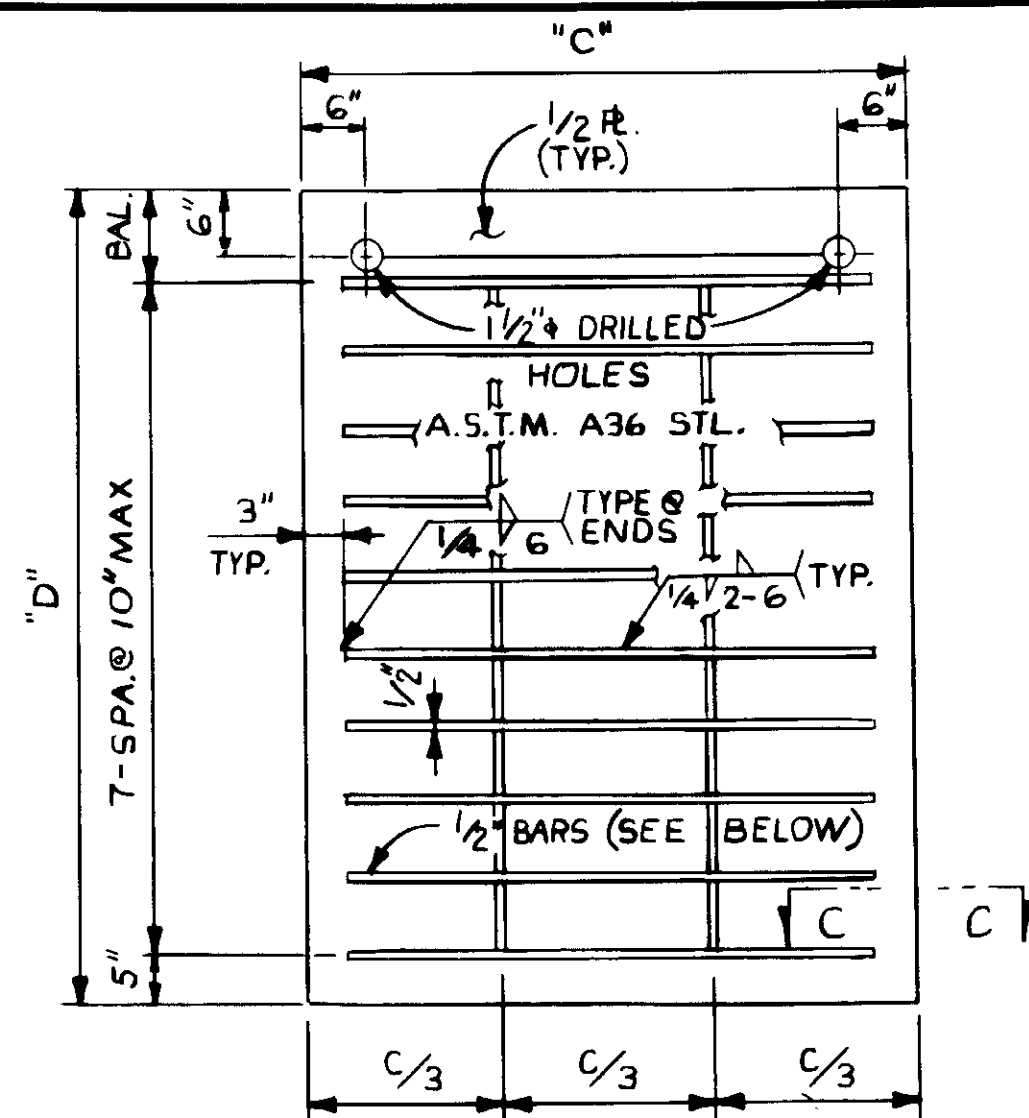
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SLIDE GATE DETAILS - 'A'

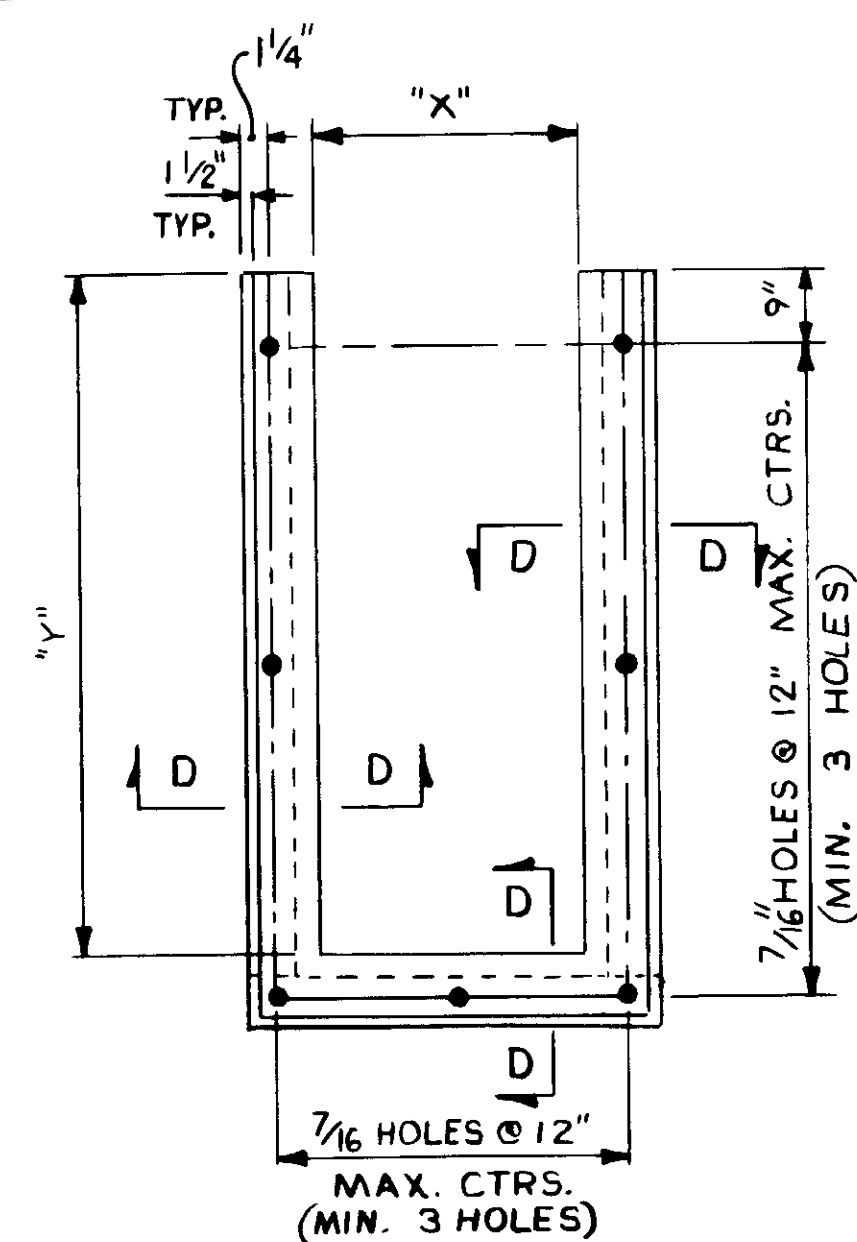
SHEET  
MM-31



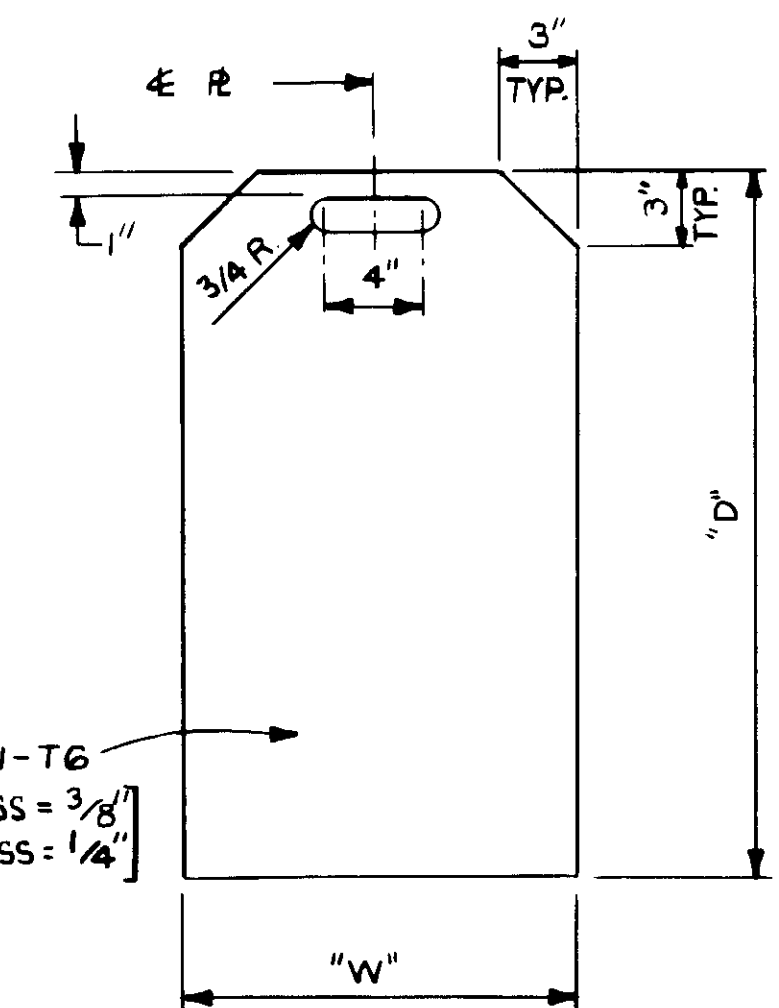
**CAST IRON STOP LOG NOTCH**  
NO SCALE  
(VARIATION FROM STRAIGHTNESS OF ASSEMBLED NOTCH SHALL NOT EXCEED 1/4 INCH.)



**STEEL STOP LOG**  
NO SCALE  
(VARIATION FROM FLATNESS SHALL NOT EXCEED 3/8 INCH)

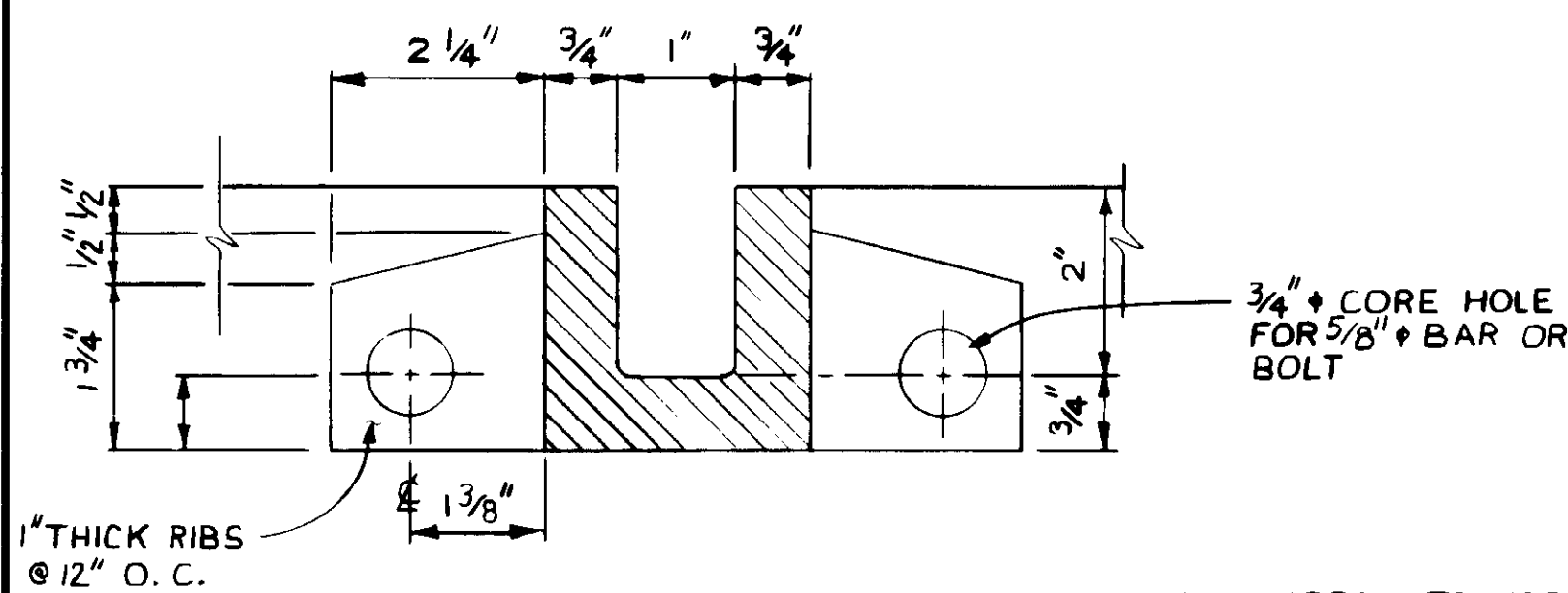


**FABRICATED ALUMINUM STOP LOG NOTCH**  
NO SCALE



**ALUMINUM STOP LOG**  
NO SCALE

**NOTE:** SEE ALUM. STOP LOG NOTCH ASSY. A-20 DET. SHT. MM-37

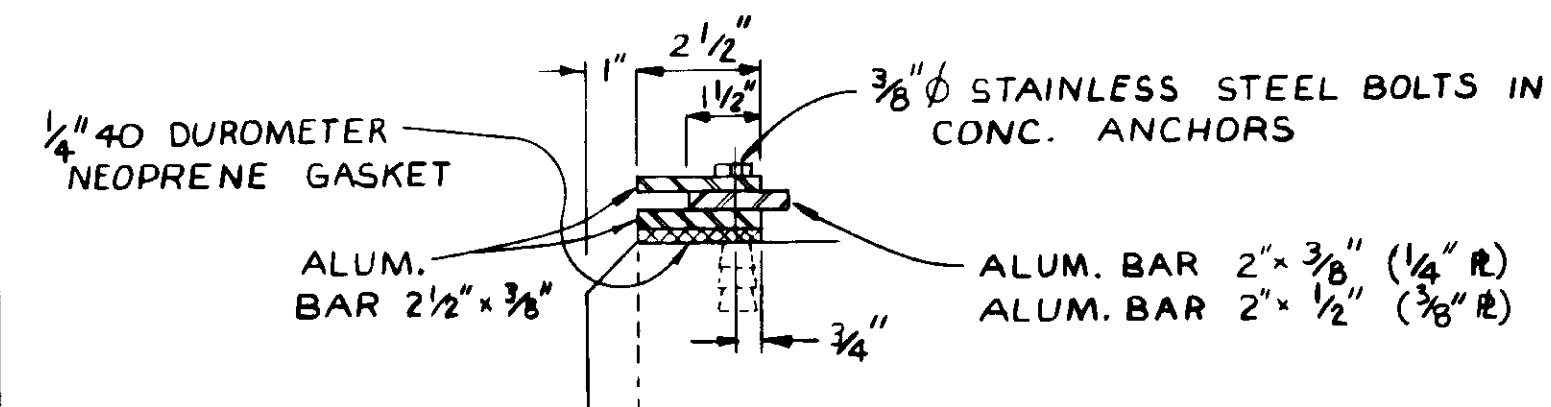


**SECTION B-B**  
HALF SCALE

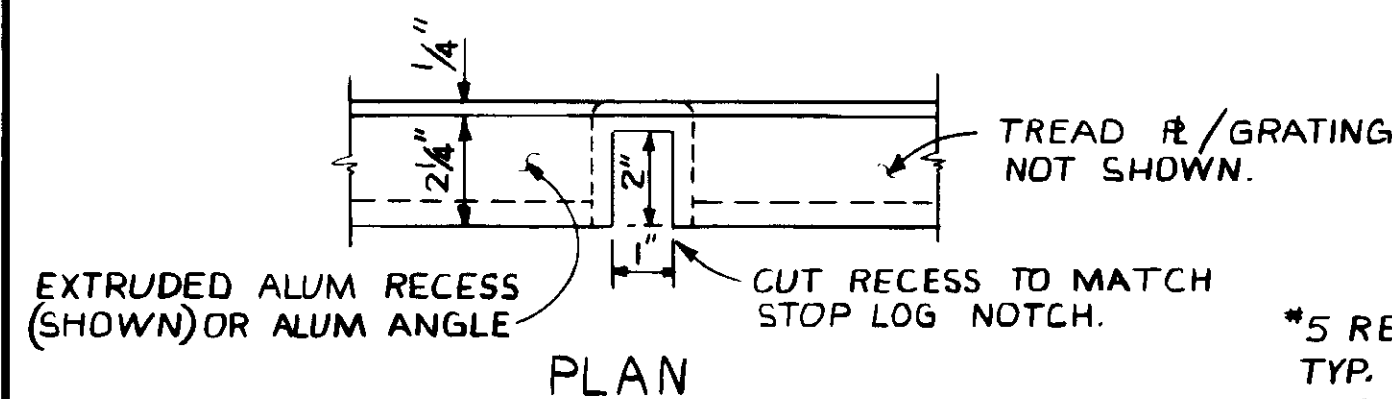
ALHAMBRA FOUNDRY TYPE 4 C.I. STOP LOG NOTCH WITH "X" DIMENSION EQUALS 1 1/2" AND "Y" DIMENSION EQUALS 2" WILL BE ACCEPTABLE AS EQUAL TO THE STOP LOG NOTCH SHOWN.

TYPE	CAST IRON NOTCH		STOP LOG		LOCATION
	NO. REQD	'A'	NO. REQD	'D'	
A	2	8'-0"	2	7'-0"	CHANNEL N° 2
B	1	6'-6"	1	8'-0"	CHANNEL N° 3 (SEE S-22)
C	2	5'-0"	2	9'-6"	CHANNEL N° 4
D	1	8'-5 1/2"	1	5'-4 3/4"	CHANNEL No. 2 BY PASS*

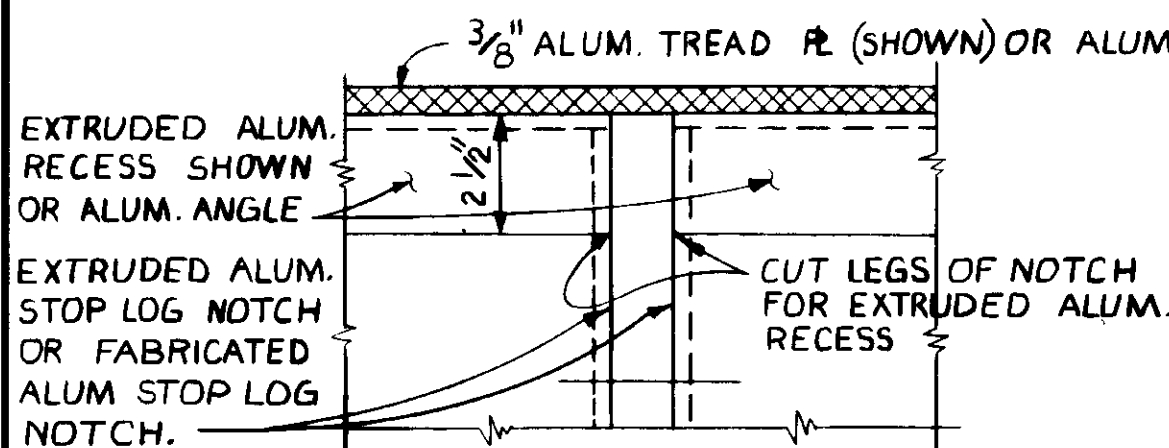
\* S.S. NOTCH - FOR DETAIL SEE SHT MM-



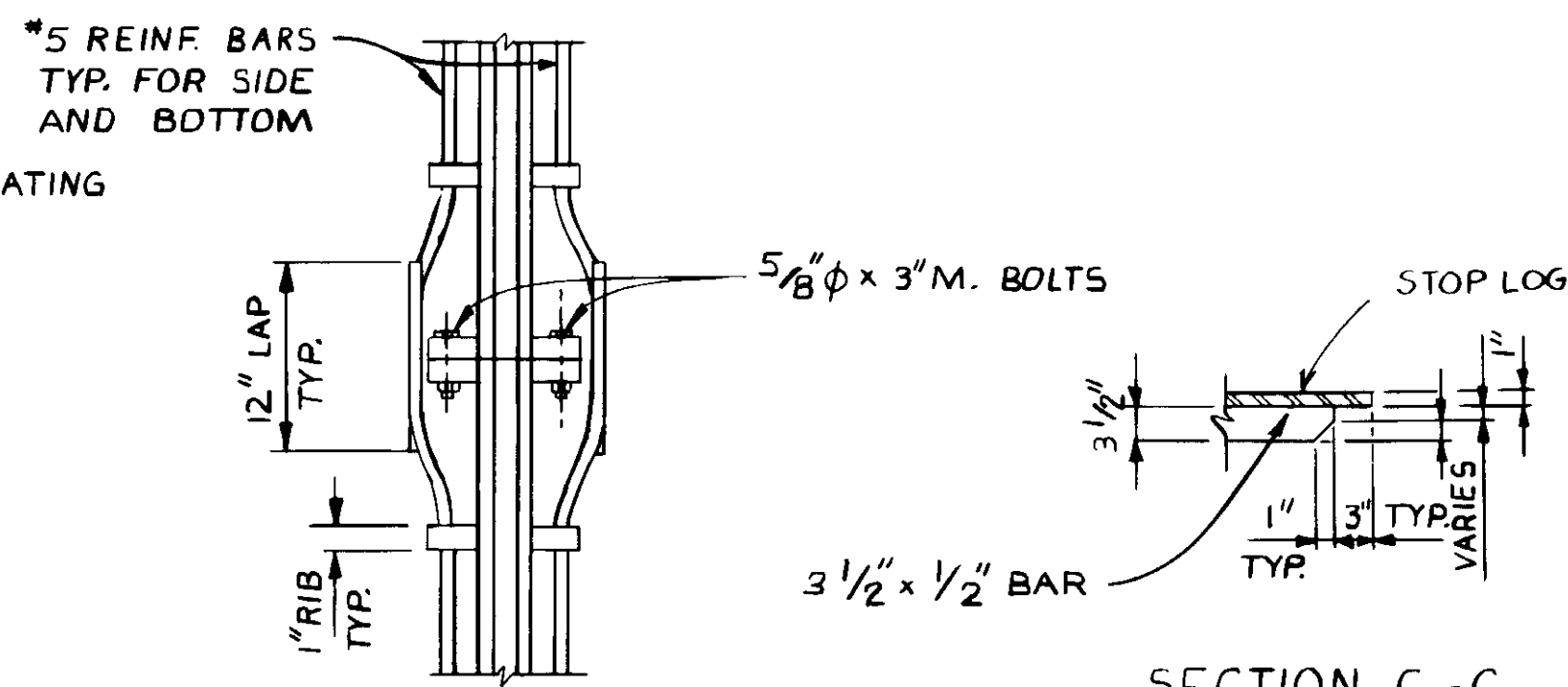
**SECTION D-D**  
SCALE: 3/4" = 1'-0"



**PLAN**



**ELEVATION RECESS CUT-OUT FOR STOP LOG NOTCH**  
SCALE: 3/4" = 1'-0"



**ELEVATION A-A**  
NO SCALE

**SECTION C-C**  
NO SCALE

TYPE	STOP LOG		NOTCH		LOCATION
	#REQD	'W'	#REQD	'X'	
I	8	1'-6 1/2"	8	1'-5"	FINAL LAUNDER
II	5	3'-3 1/2"	5	3'-2"	CHANNEL N° 3
III	3	2'-9 1/2"	3	2'-8"	CHANNEL N° 2
IV	0	2'-3 1/2"	4	2'-2"	PRIMARY LAUNDERS*
V	2	2'-3 1/2"	2	2'-8 1/2"	24" Φ - SELECTOR CHANNEL
VI	4	3'-3 1/2"	4	3'-2"	36" Φ - SELECTOR CHANNEL
VII	1	3'-9 1/2"	1	3'-8 1/2"	42" Φ - SELECTOR CHANNEL
VIII	2	1'-9 1/2"	2	1'-8"	RAS PUMP STATION
IX	1	3'-11 1/2"	1	3'-10"	RAS @ CHANNEL N° 4
X	2	1'-9 1/2"	2	1'-8"	BARMINUTION-ENTRY
XI	1	4'-5 1/2"	1	4'-4"	BARMINUTION-EXIT

\* NOTE: ST'L NOTCH

REV	DATE	BY	DESCRIPTION
5-11-87	A.B.	REV. PER K.P.C.	
5-11-87	A.B.	REV. PER K.P.C.	
5-11-87	A.B.	REV. PER K.P.C.	

SCALE: AS NOTED

DESIGNED: YK/ICC  
R. KEESING  
DRAWN: YK  
CHECKED:

SUBMITTED: 8-7-87  
KATSURA CONSULTING ENGINEERS  
ALEXANDER ENGINEERS

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

STOP LOG & NOTCH, TYPICAL DETAILS

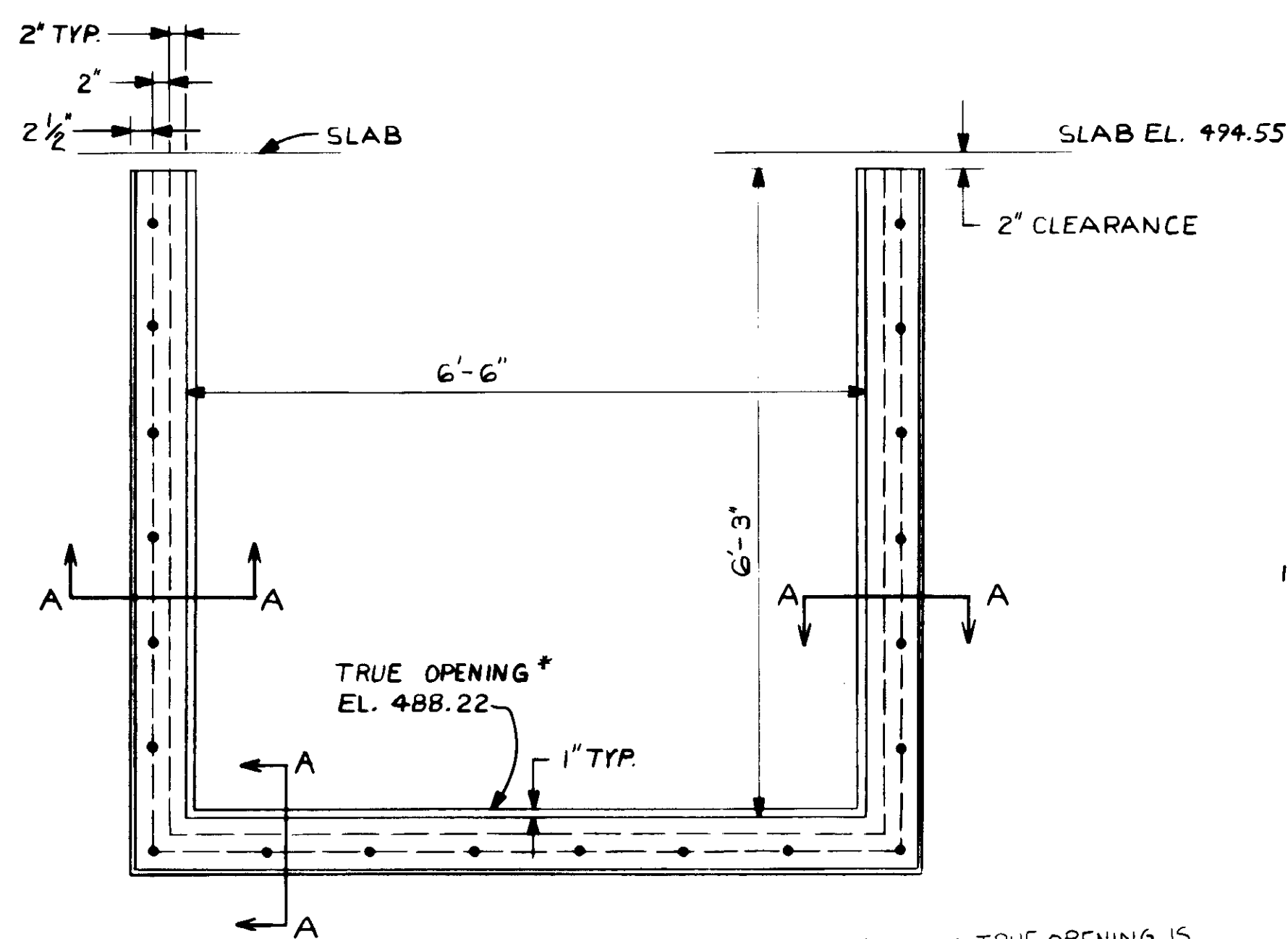
SHEET MM-32

04042



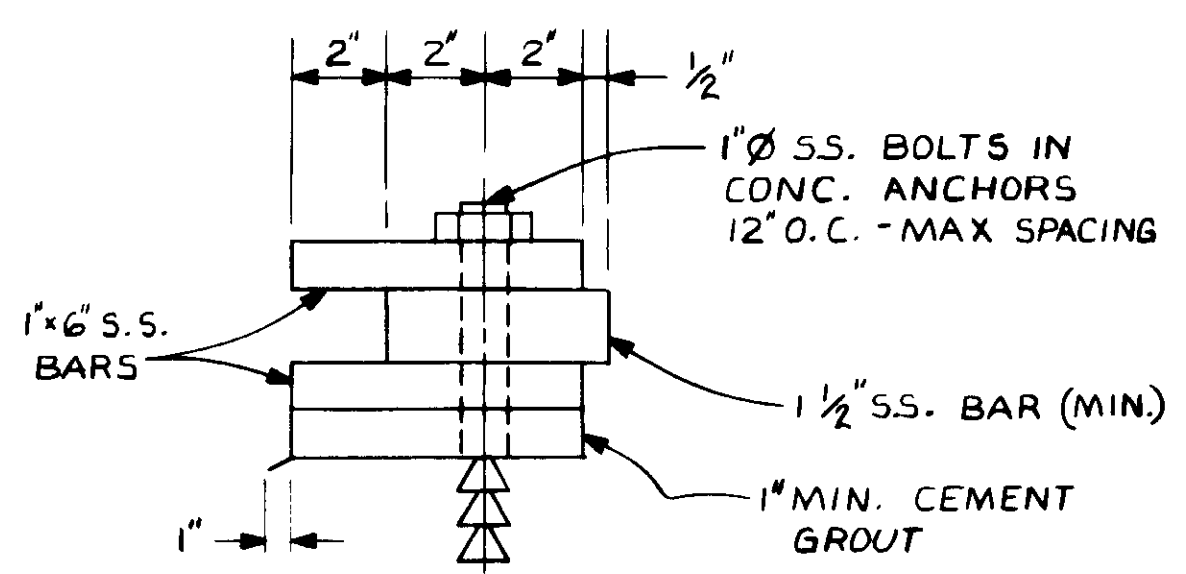
RECORD DRAWINGS  
KALEX ENGINEERS



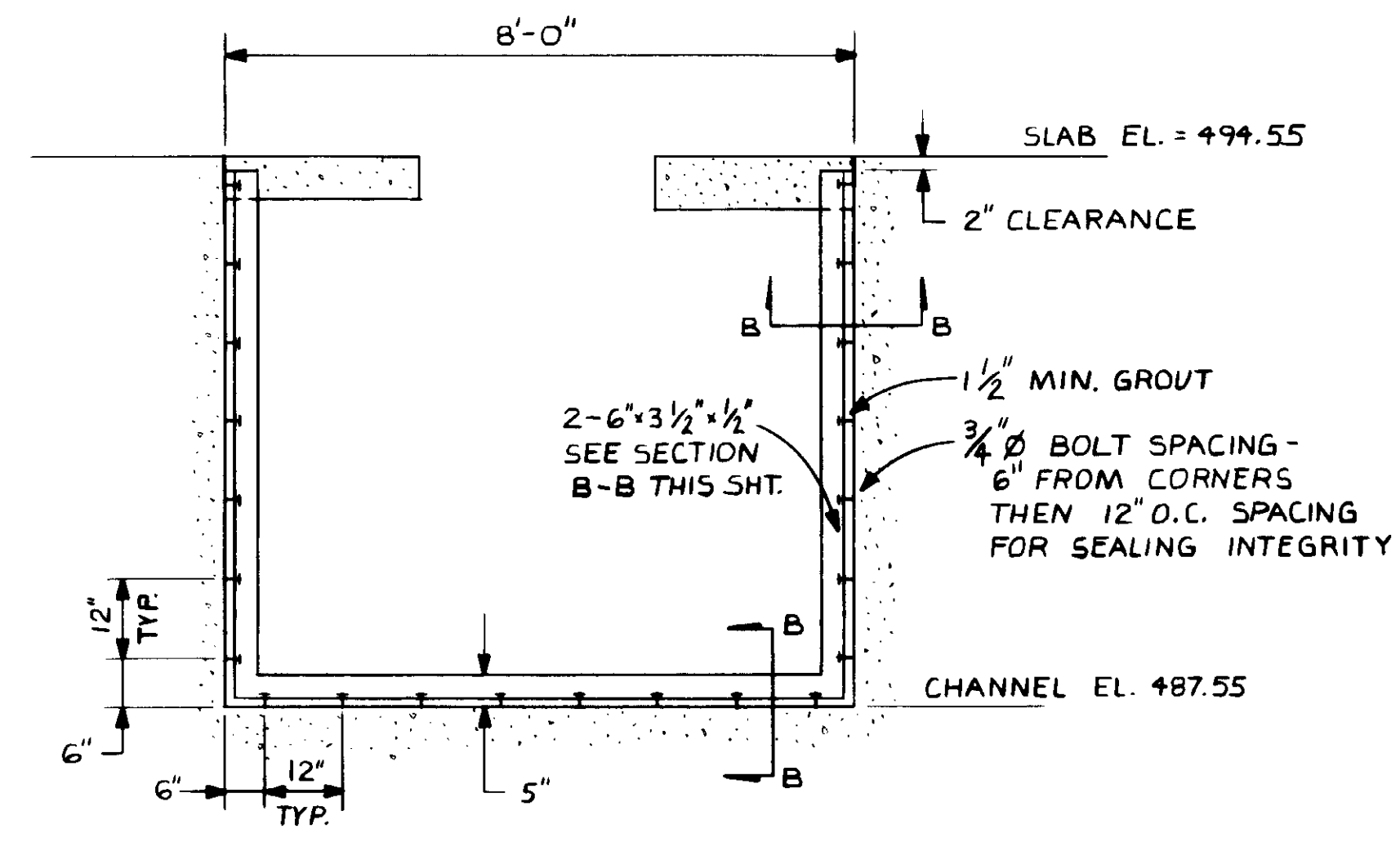


**CHANNEL #2 BY-PASS**  
**SS. STOP LOG NOTCH**  
 SCALE: 3/4" = 1'-0"

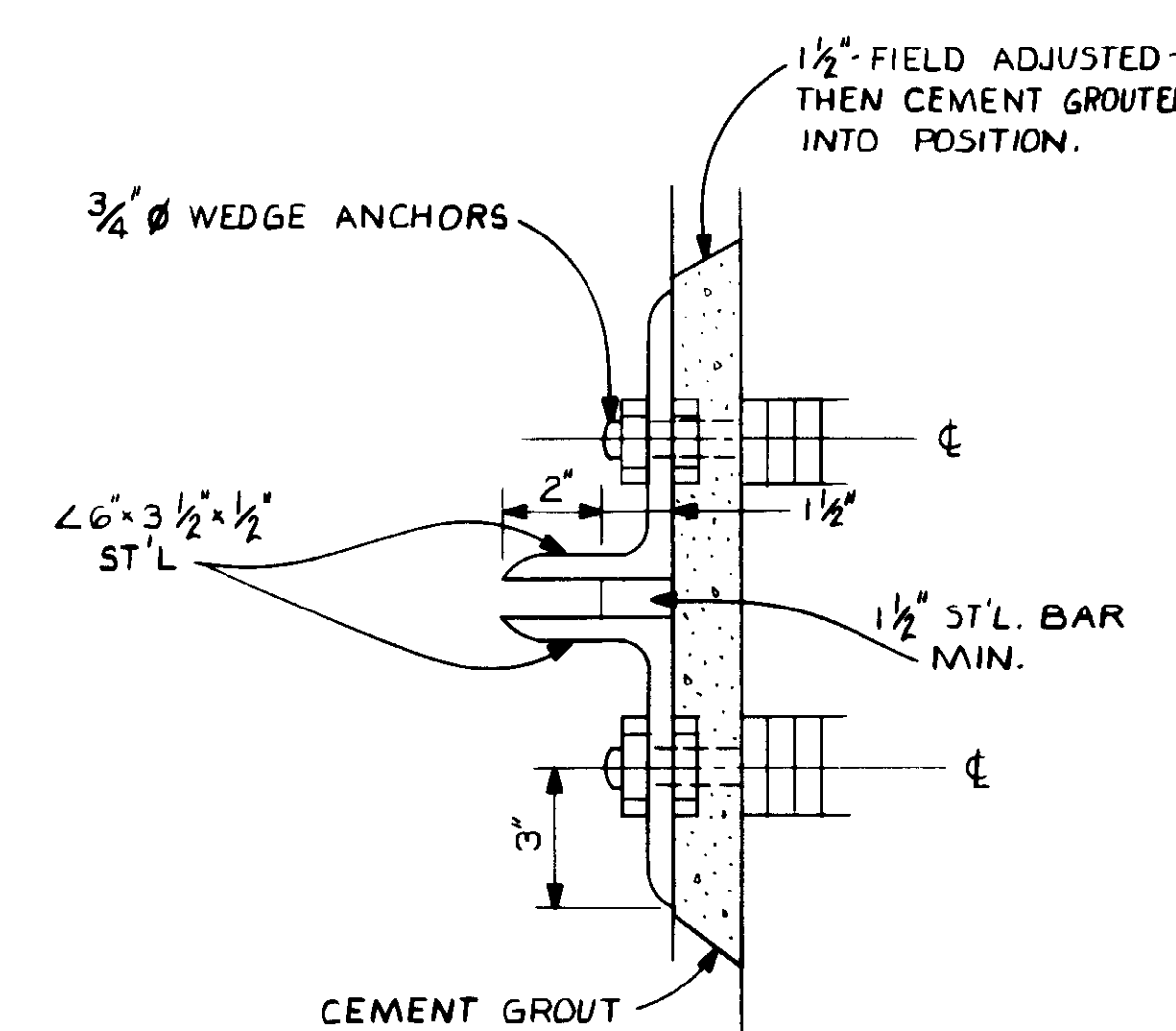
\* NOTE: TRUE OPENING IS  
 6'-4" W x 5'-4" H.  
 FINISH OPENING IS  
 6'-0" W x 5'-0" H.



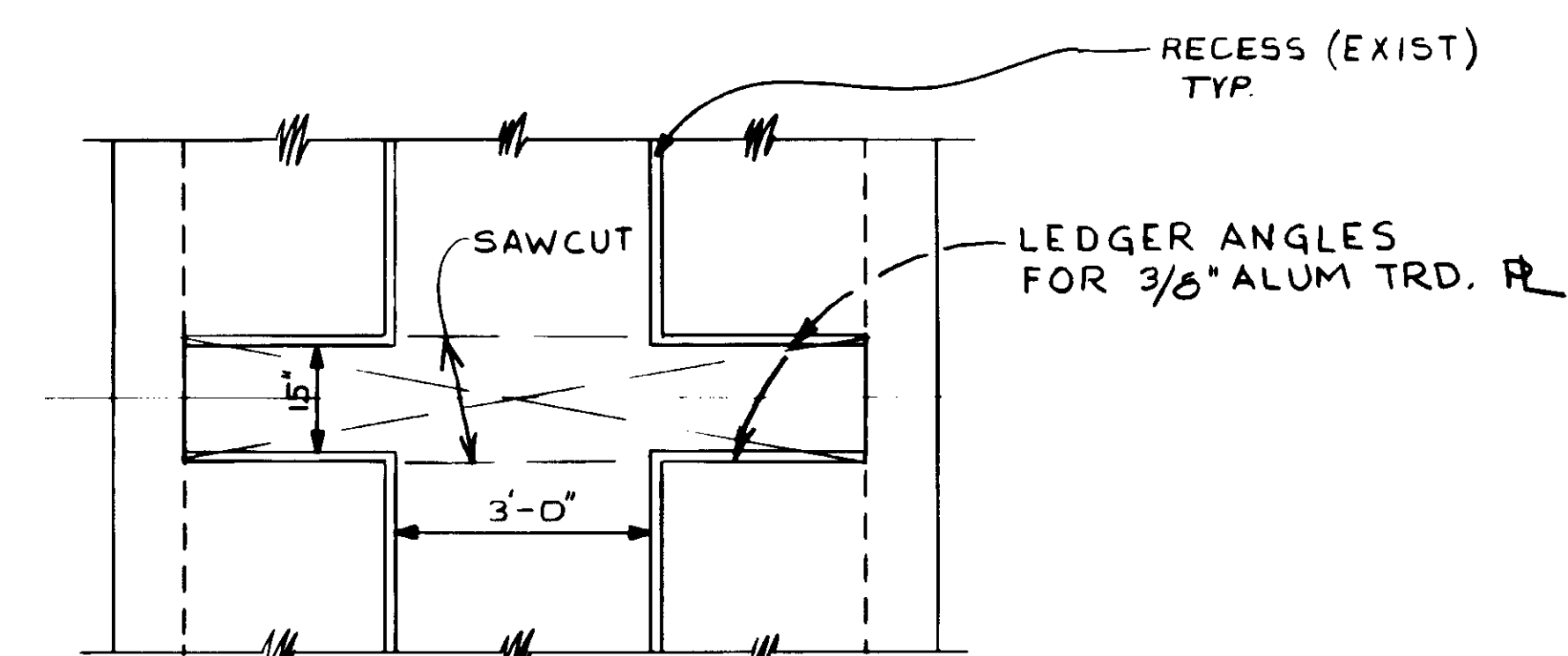
**SECTION A**  
 SCALE: 3" = 1'-0"



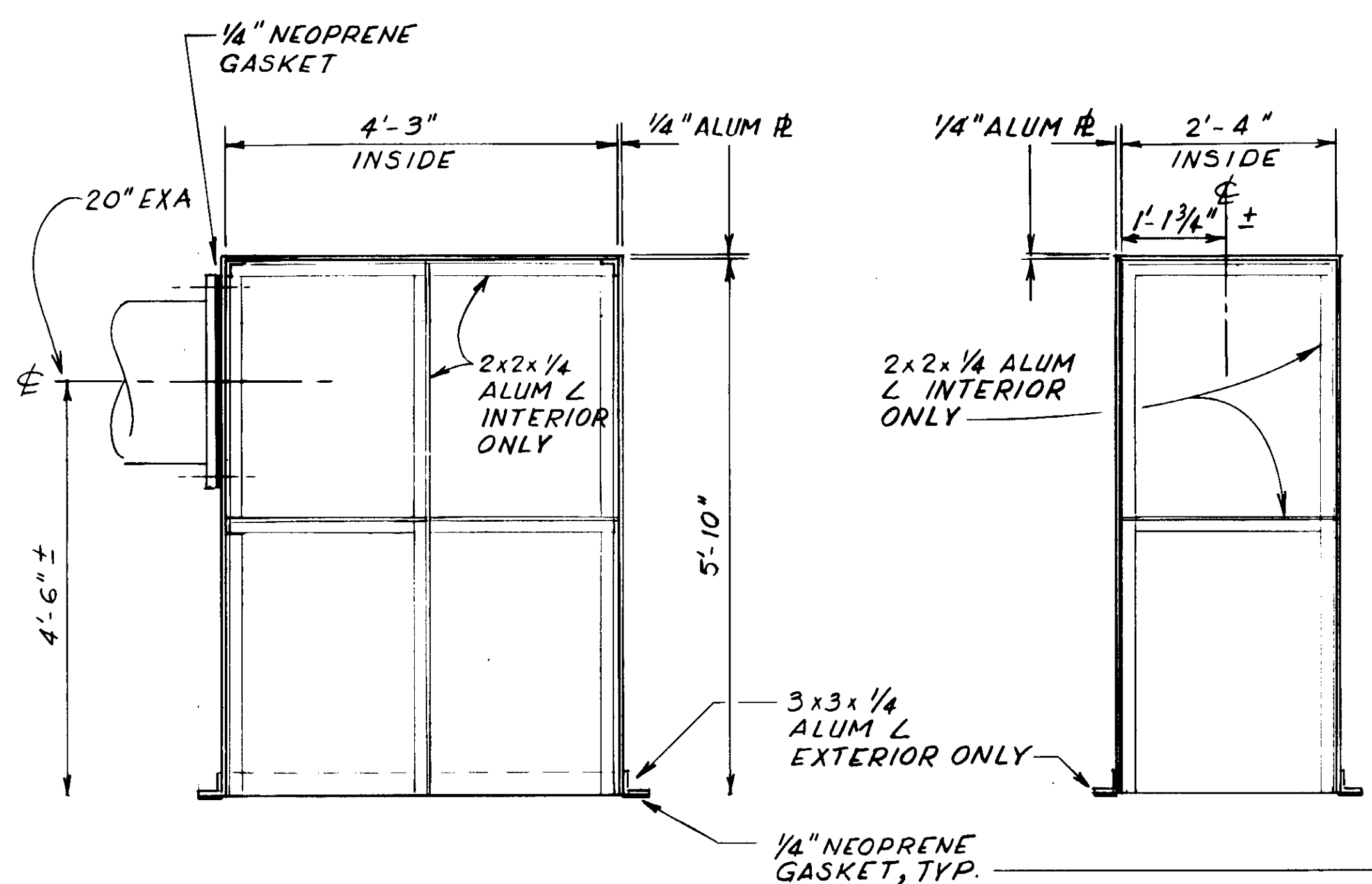
**CHANNEL 2 - DOUBLE ST'L. L's**  
 SCALE: 1/2" = 1'-0"



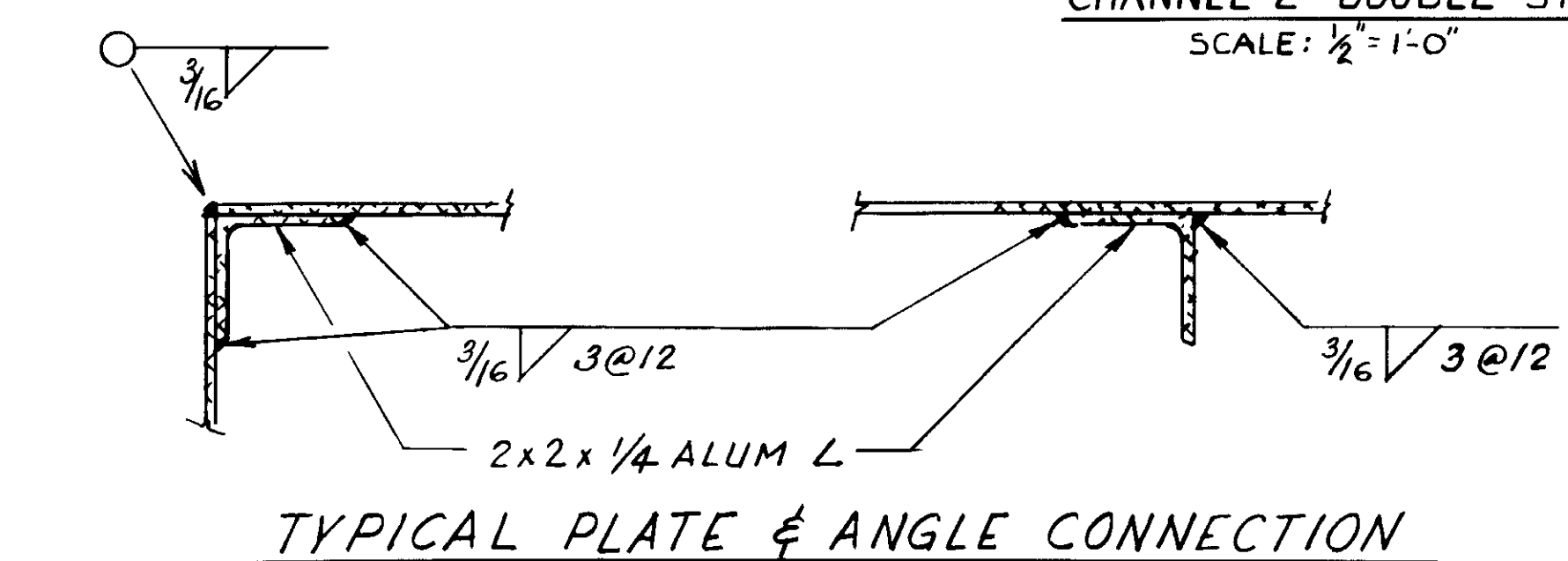
**SECTION B**  
 SCALE: 3" = 1'-0"



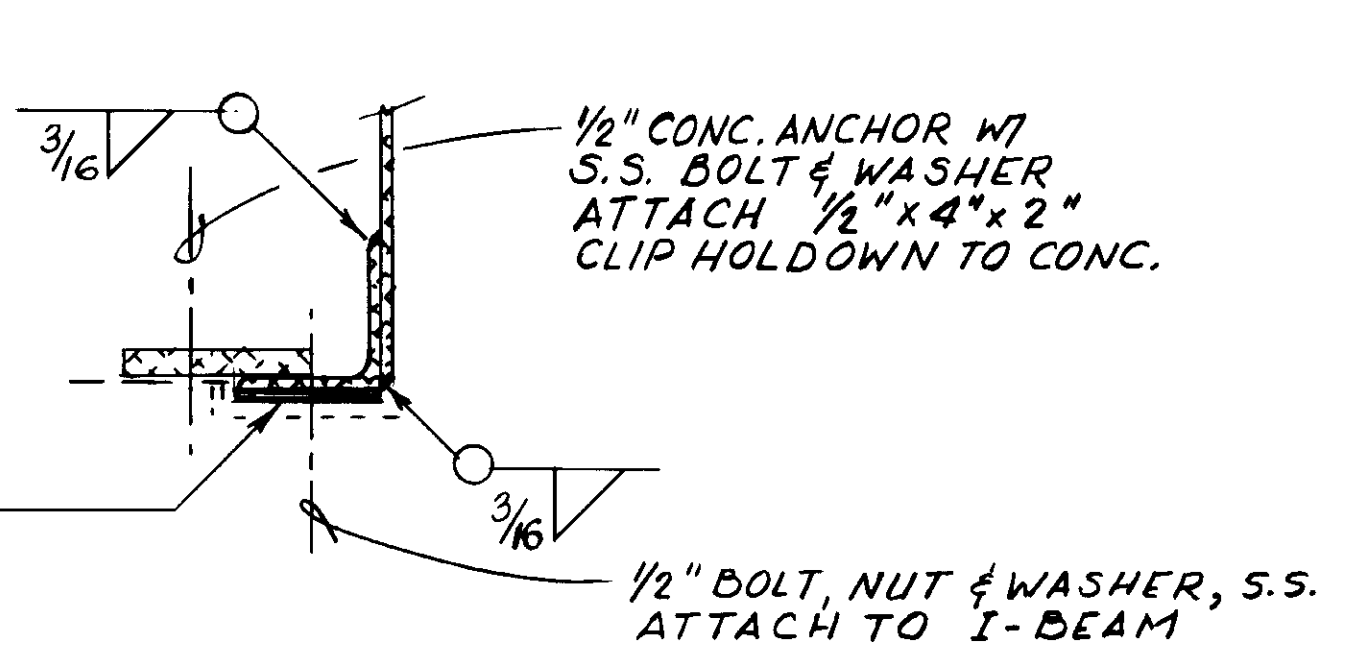
**PLAN**  
**CHANNEL 2 - DOUBLE ST'L. L's**  
 SCALE: 1/2" = 1'-0"



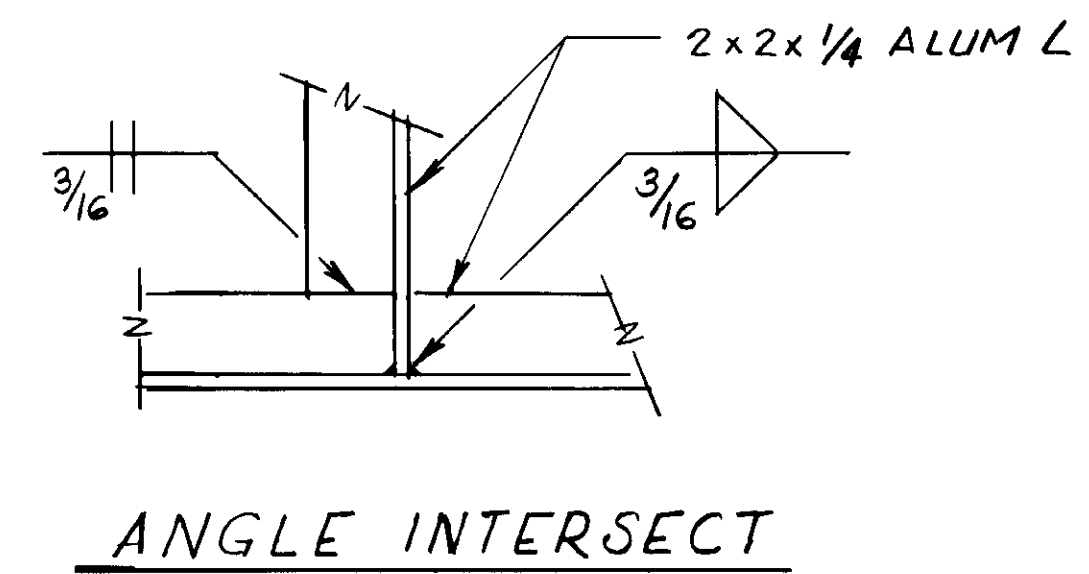
**EXHAUST AIR BOX-ELEVATION**  
 SCALE: 3/4" = 1'-0"



**TYPICAL PLATE & ANGLE CONNECTION**



**BOTTOM ANGLE**



**ANGLE INTERSECT**

04043



RECORD DRAWINGS  
 PREPARED BY KALEX ENGINEERS  
 KATSURA CONSULTING ENGINEERS JUNE 1987

REV	DATE	BY	DESCRIPTION

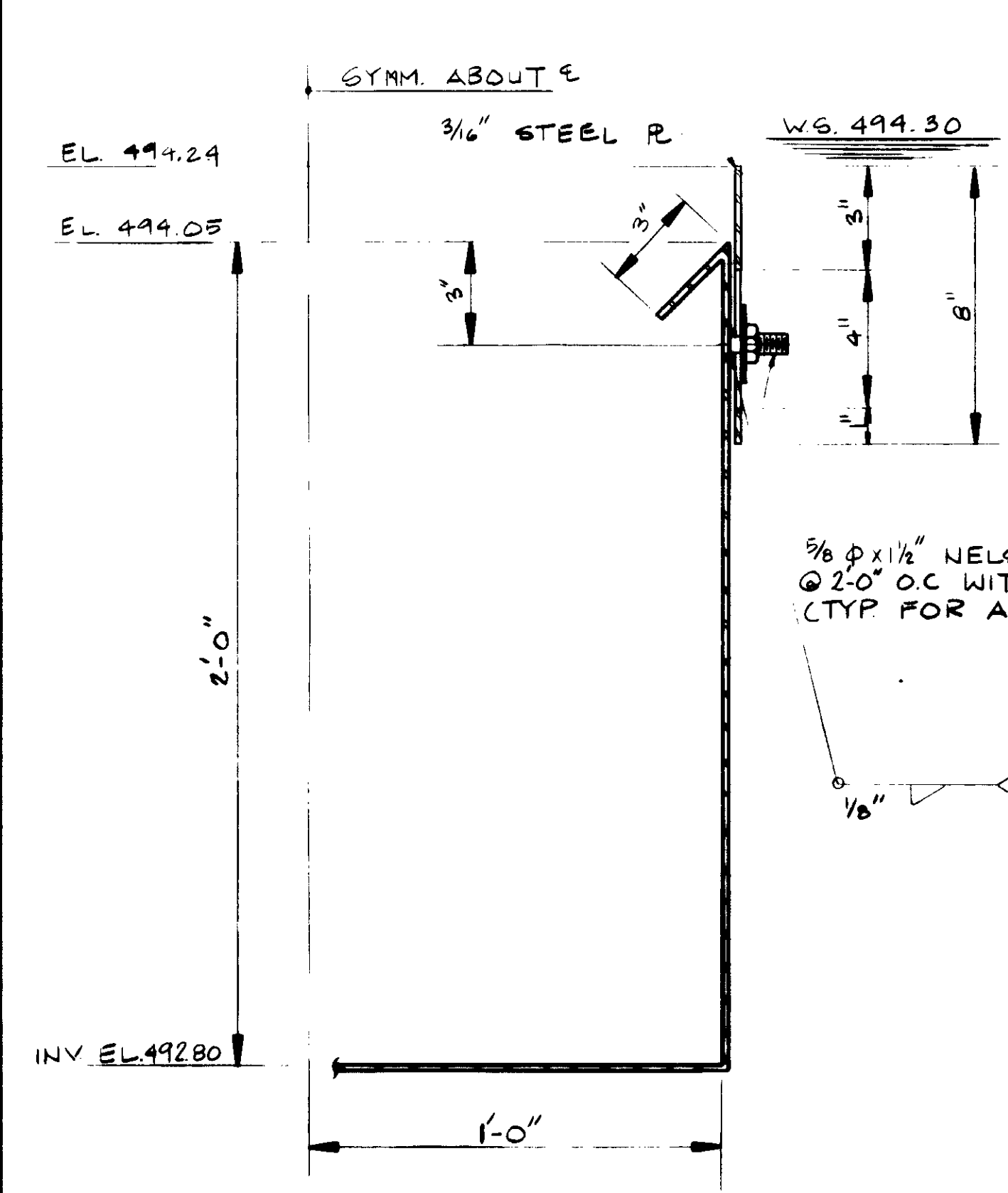
SCALE:	AS SHOWN
DESIGNED:	Y.K./CC
DRAWN:	RK
CHECKED:	YK

SUBMITTED:	8-7-87
DATE:	8-7-87
R.C.E. NO.:	14038
DATE:	8-7-87
R.C.S.E. NO.:	613
DATE:	

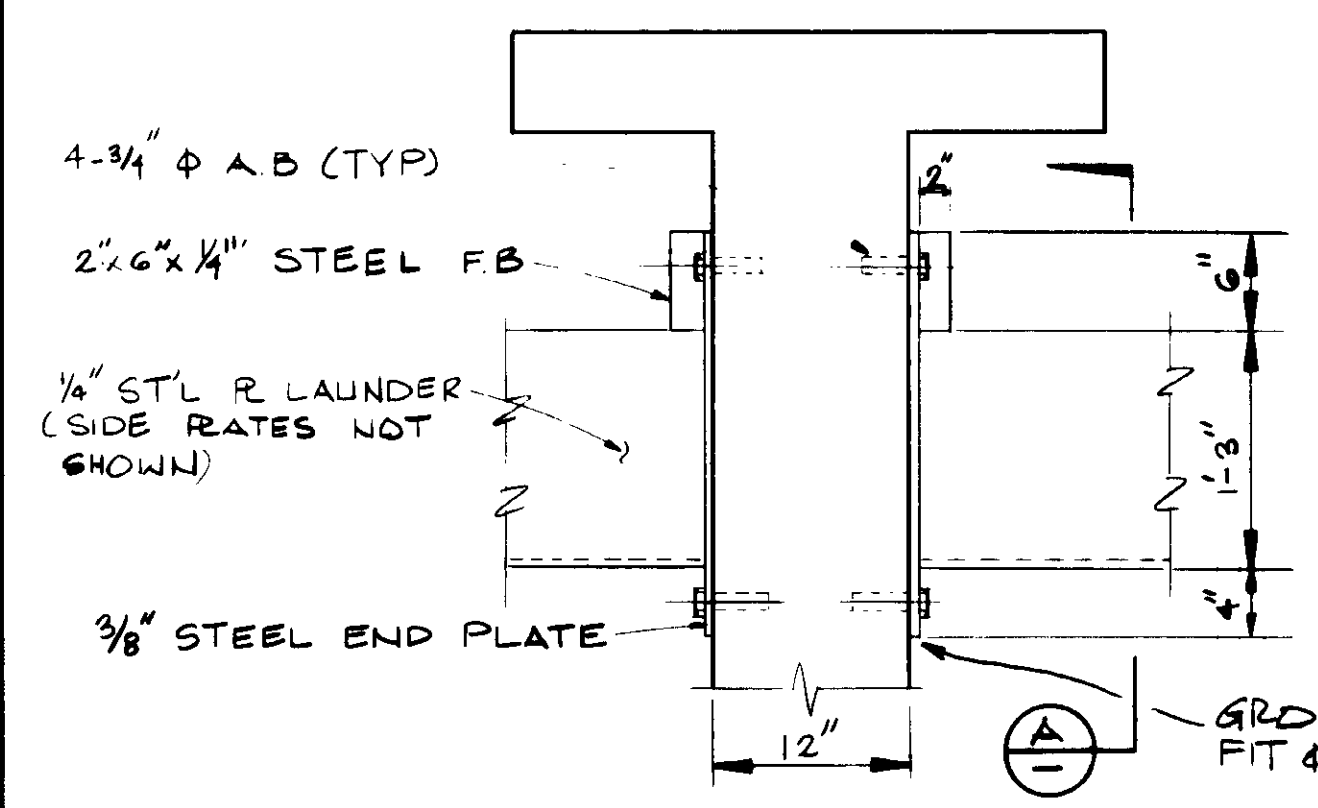
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 STOP LOG & NOTCH, DETAILS

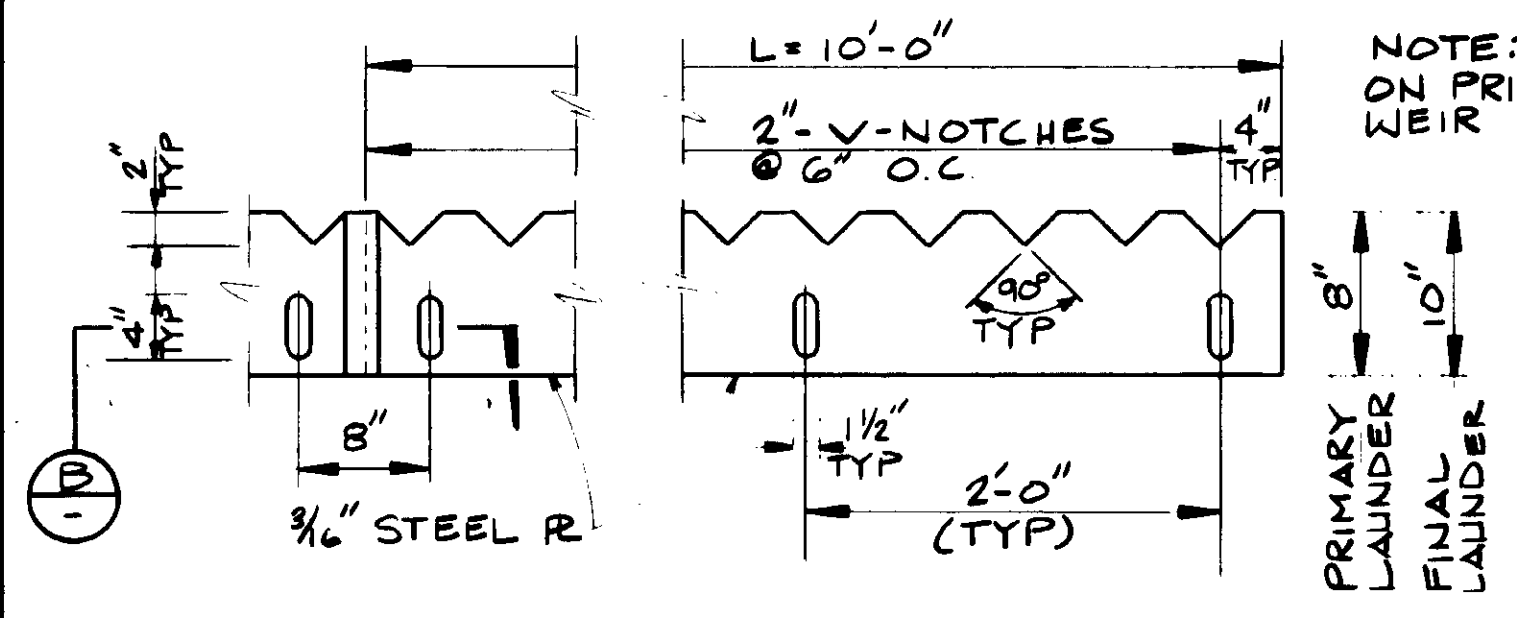
SHEET  
 MM-33



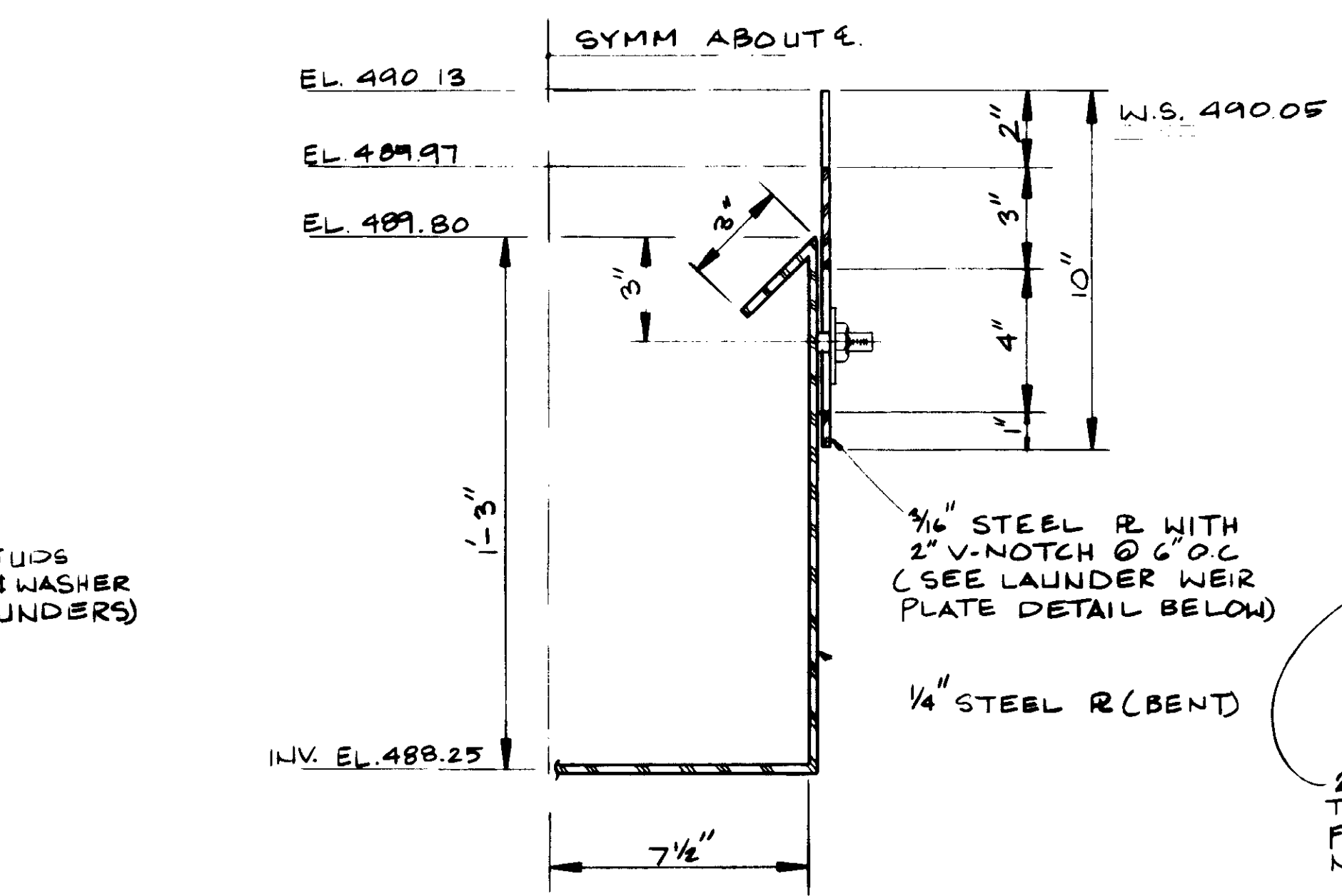
PRIMARY LAUNDRER  
SCALE: 3"=1'-0"



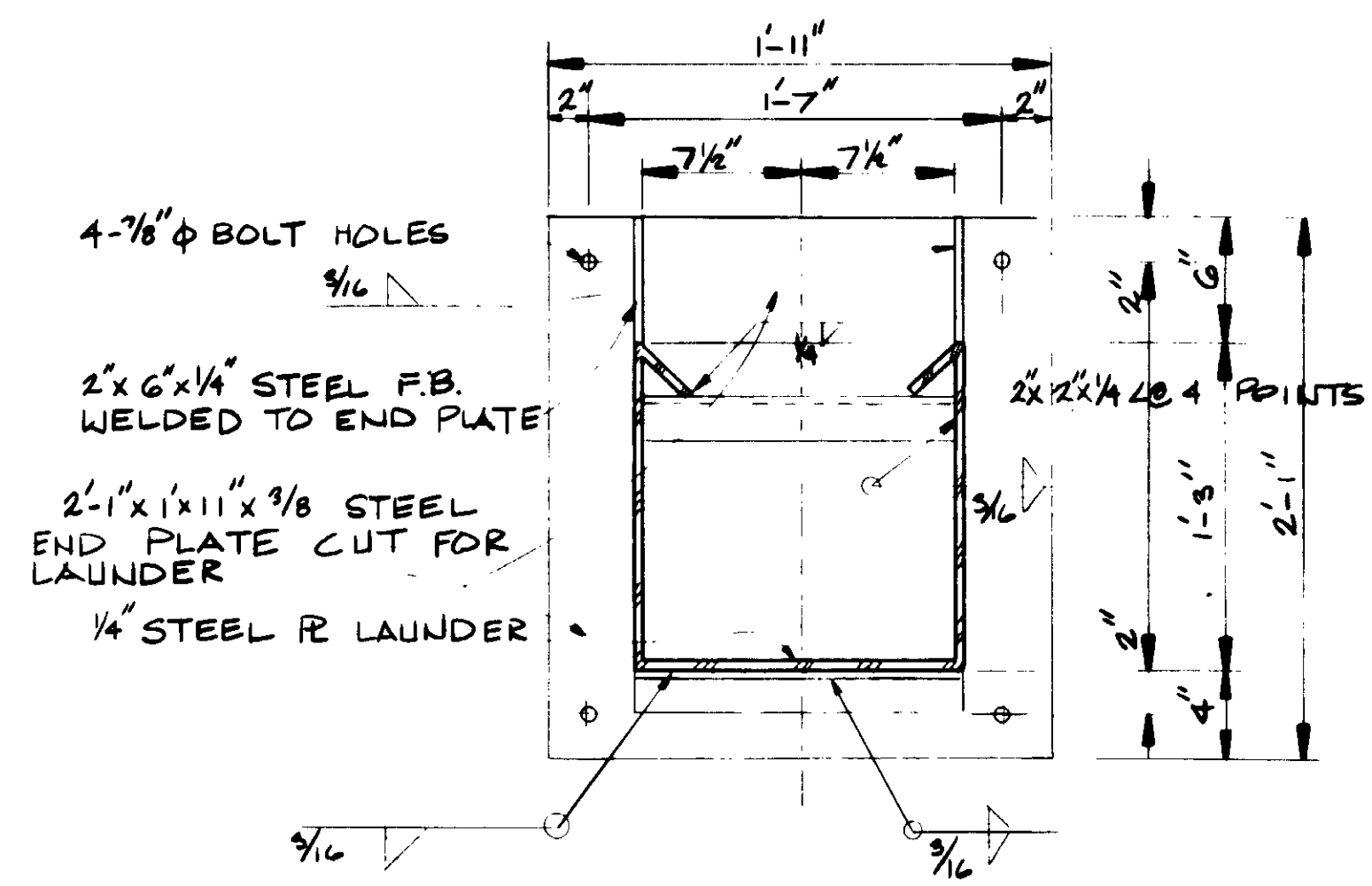
TYPICAL FINAL LAUNDRER WALL END PLATE DETAIL  
SCALE: 1"=1'-0"



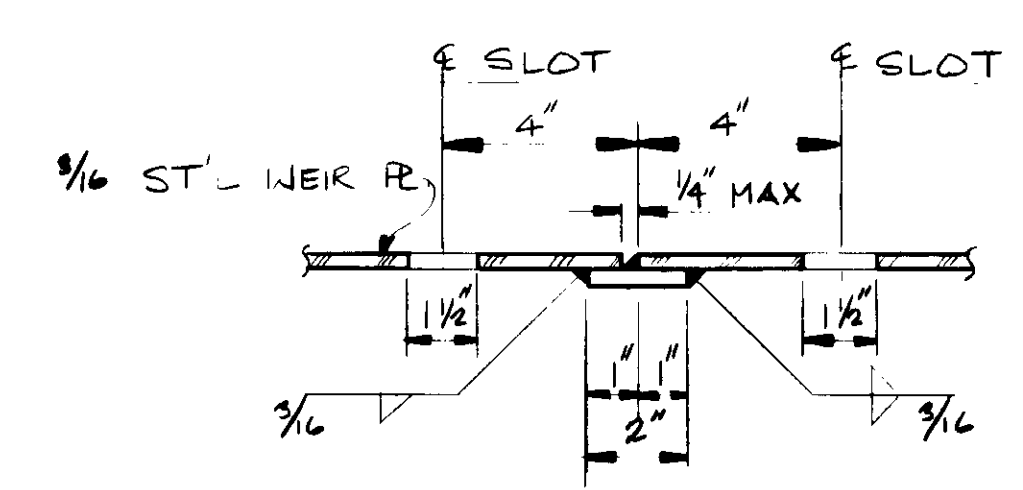
LAUNDRER WEIR PLATE  
SCALE: 1"=1'-0"



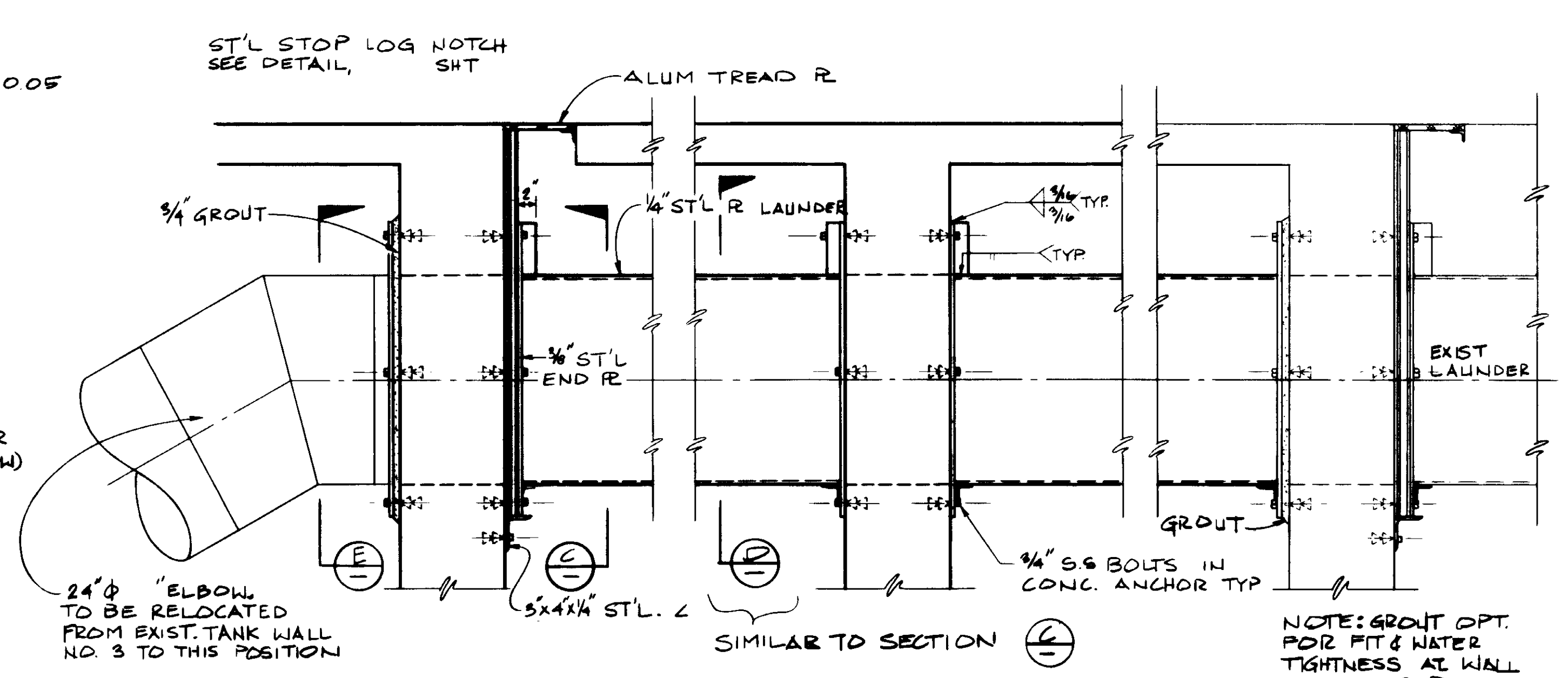
FINAL LAUNDRER  
SCALE: 3"=1'-0"



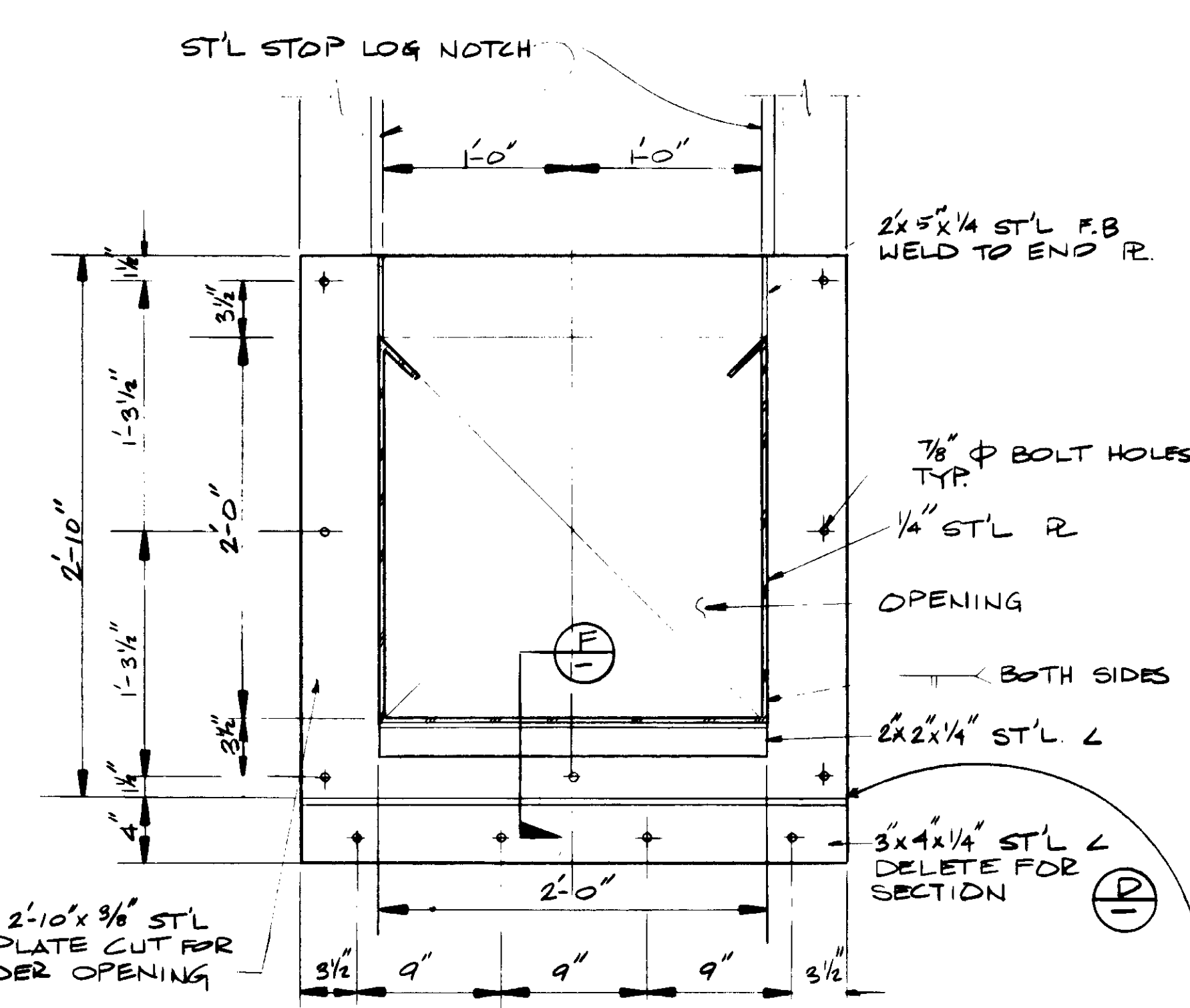
SECTION A  
SCALE: 1 1/2"=1'-0"



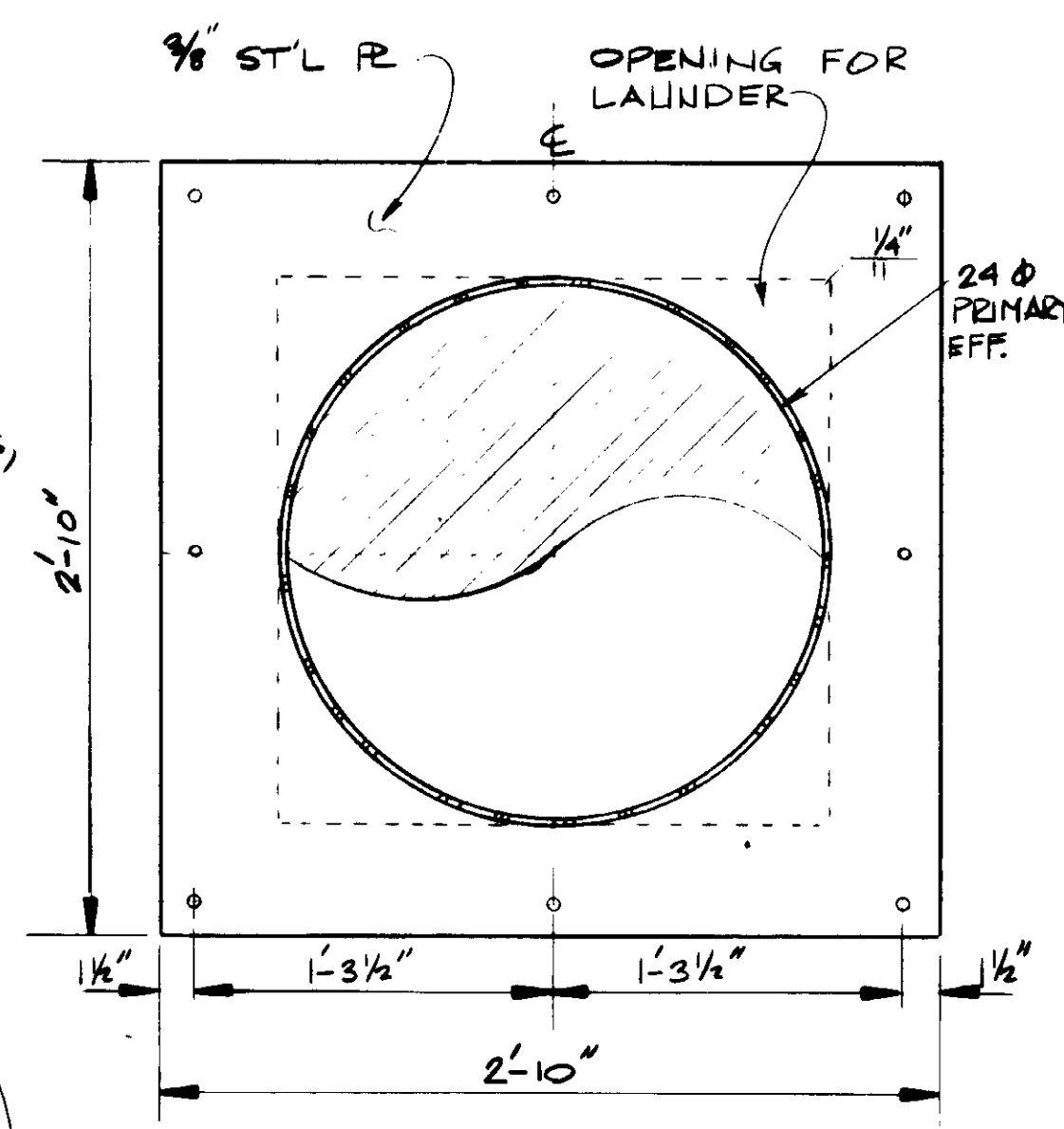
SECTION B  
SCALE: 3"=1'-0"



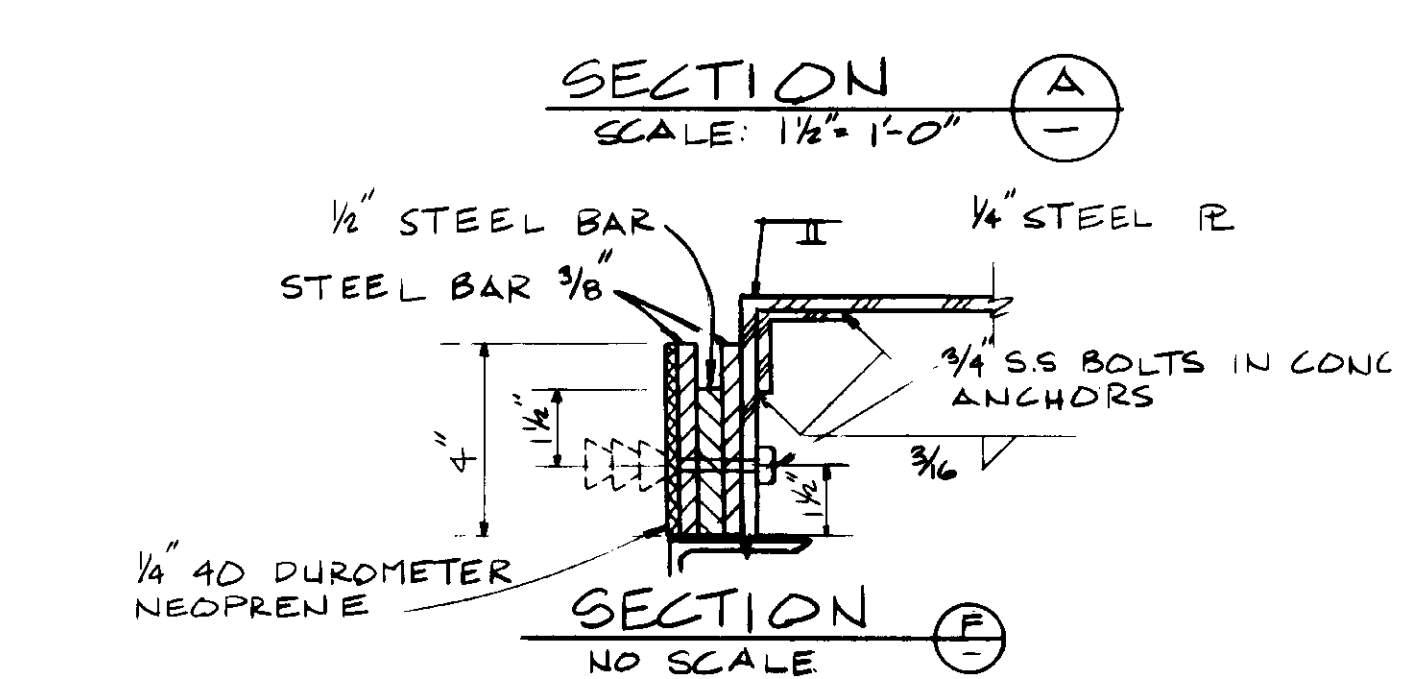
TYPICAL PRIMARY WALL END DETAIL  
SCALE: 1"=1'-0"



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



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



SECTION D  
NO SCALE

COAL TAR EPOXY AS SUBMITTED IN ALLIED STEEL DETAIL 49

RECORD DRAWING  
KATYUNA CONSULTING ENGINEERS  
JUNE 1999



04044

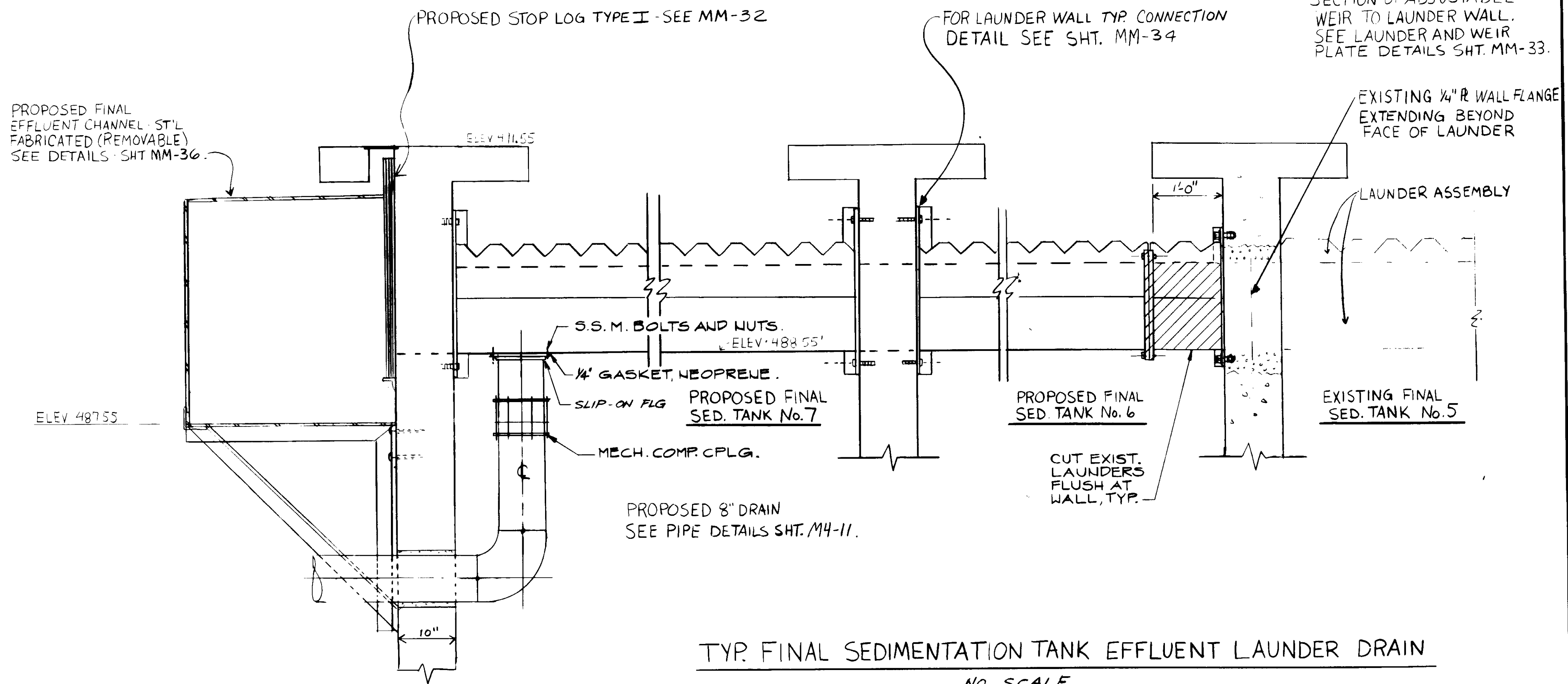
REV	DATE	BY	DESCRIPTION

SCALE: AS SHOWN	DESIGNED: Y.K./CC	SUBMITTED: 8-7-87
DRAWN: C.L.	CHECKED: Y.K.	DATE: 8-7-87

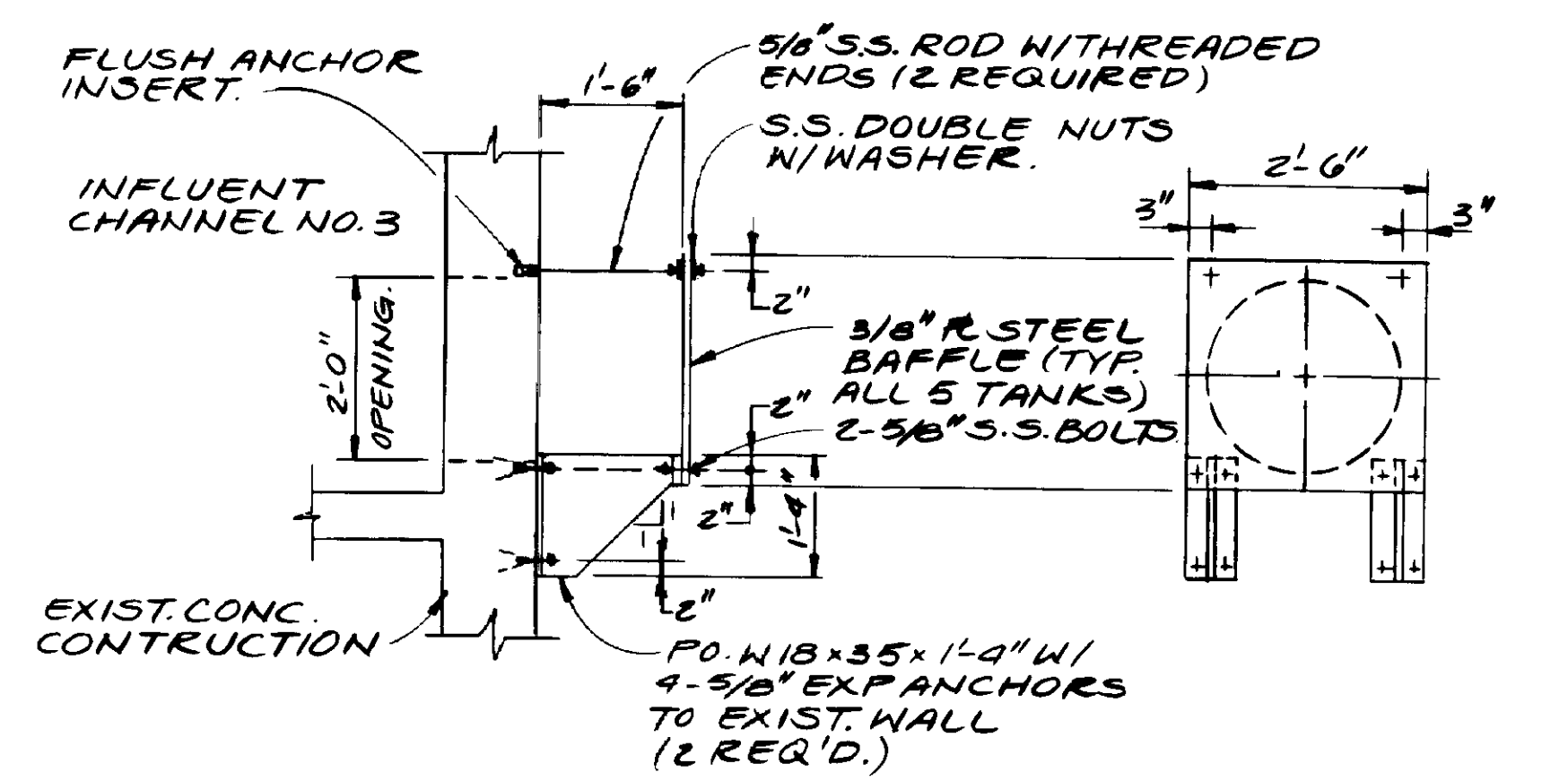
**KALEX ENGINEERS**  
Katsuna Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
LAUNDRER DETAILS - I

SHEET  
MM-34

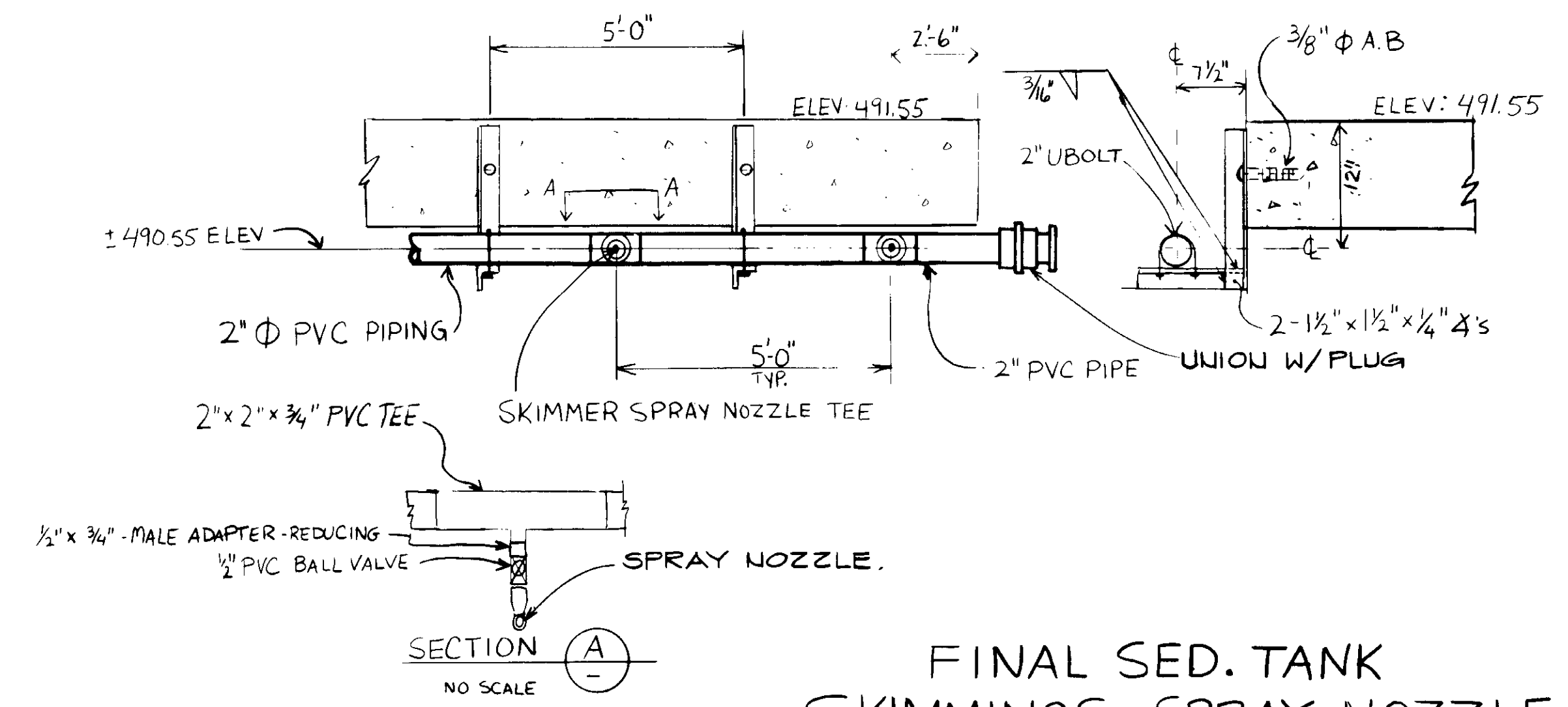


TYP. FINAL SEDIMENTATION TANK EFFLUENT LAUNDER DRAIN  
NO. SCALE



SIDE VIEW NO SCALES.  
FRONT VIEW NO SCALE.  
DETAIL OF INLET BAFFLE.

- NOTE:**
1. ALL STEEL PARTS SHALL BE GALVANIZED AFTER FABRICATION.
  2. ALL BOLTS, NUTS, WASHERS, ANCHORS & INSERTS FOR CONNECTIONS TO EXIST. CONC. WALL SHALL BE STAINLESS STEEL.
  3. PROVIDE 3 NEW INLET BAFFLES FOR EACH FINAL SEDIMENTATION TANK.



FINAL SED. TANK SKIMMINGS SPRAY NOZZLE  
NO SCALE



04045

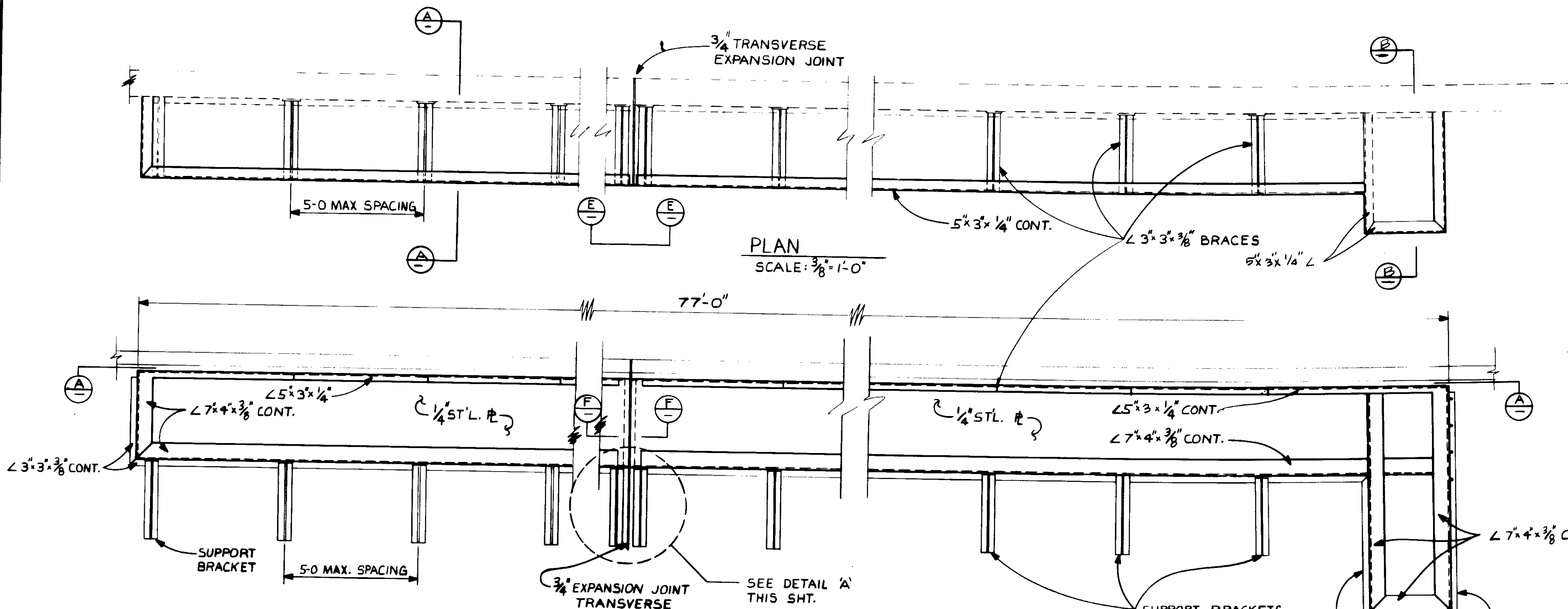
REV	DATE	BY	DESCRIPTION

SCALE:	CC/YK/KOH	SUBMITTED	8-7-87
DESIGNED	RK/CC/KOH	DESIGNED BY	KATSURA CONSULTING ENGINEERS
DRAWN	YK	DATE	
CHECKED		R.C.E. NO.	

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

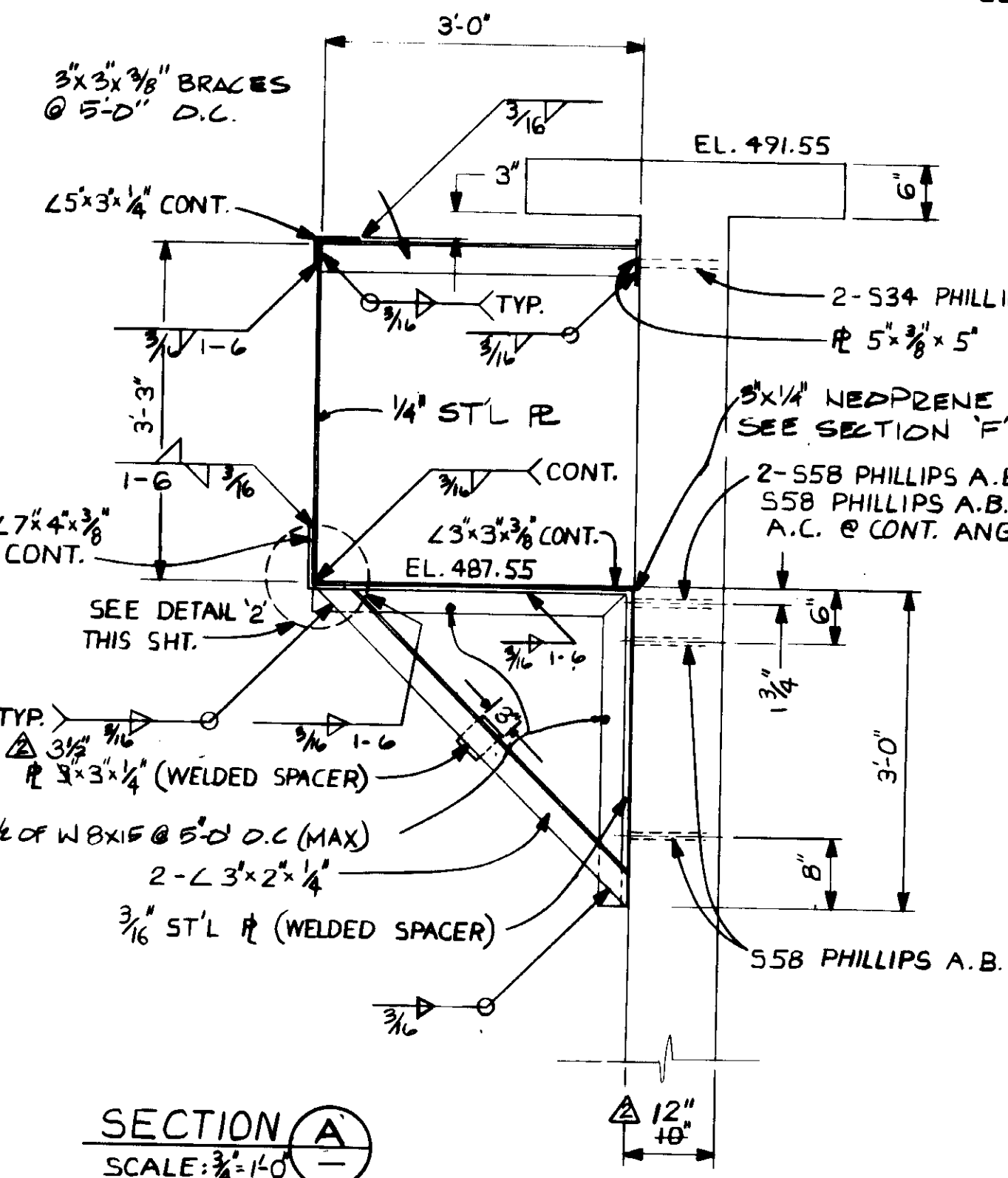
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
LAUNDER DETAILS - II  
SHEET MM-35

RECORD DRAWINGS  
FOR FILE MAINTAINED BY SIEMT PAPER CO. INC.  
KATSURA CONSULTING ENGINEERS JUNE 1989

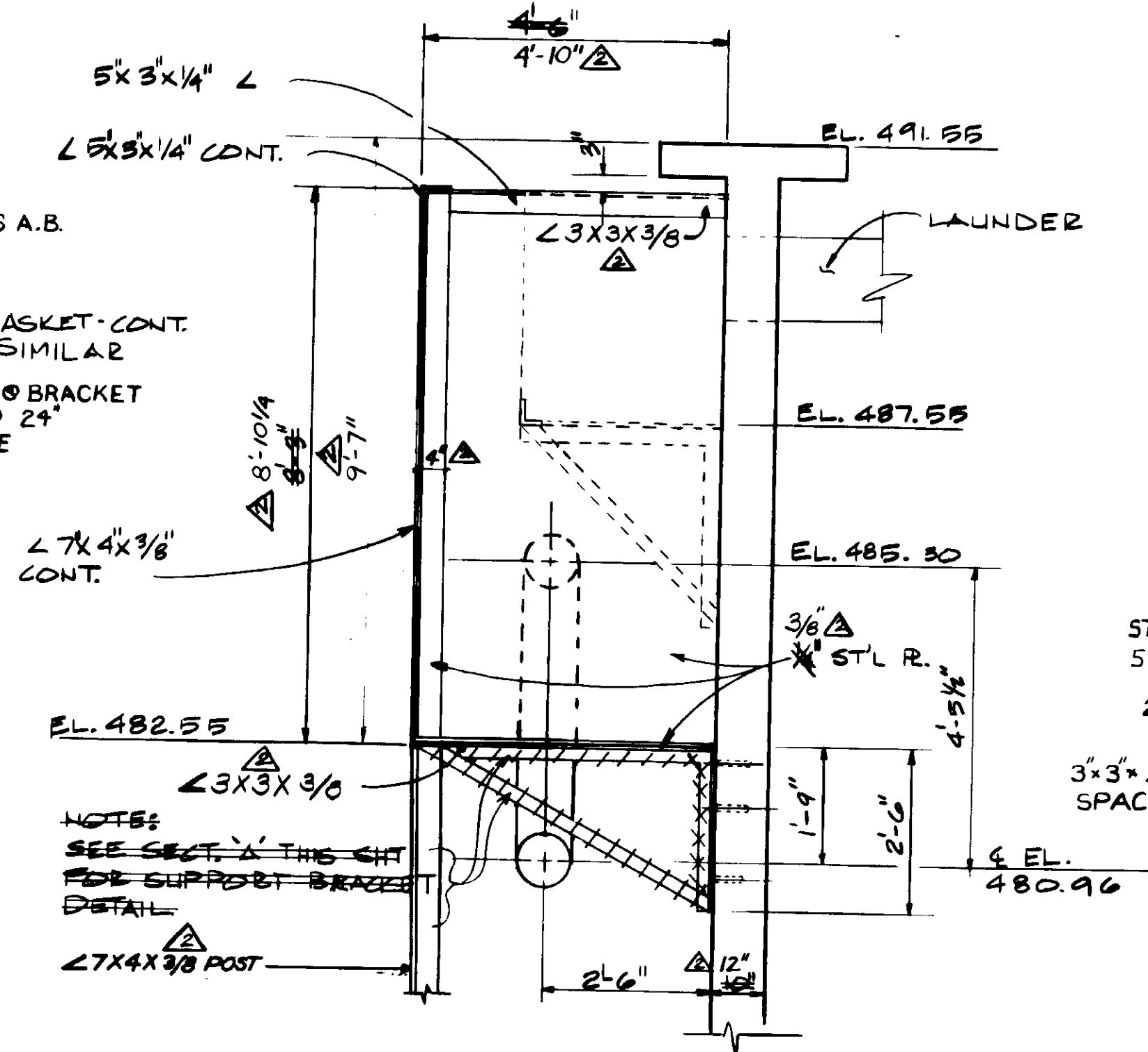


PLAN  
SCALE: 3/8" = 1'-0"

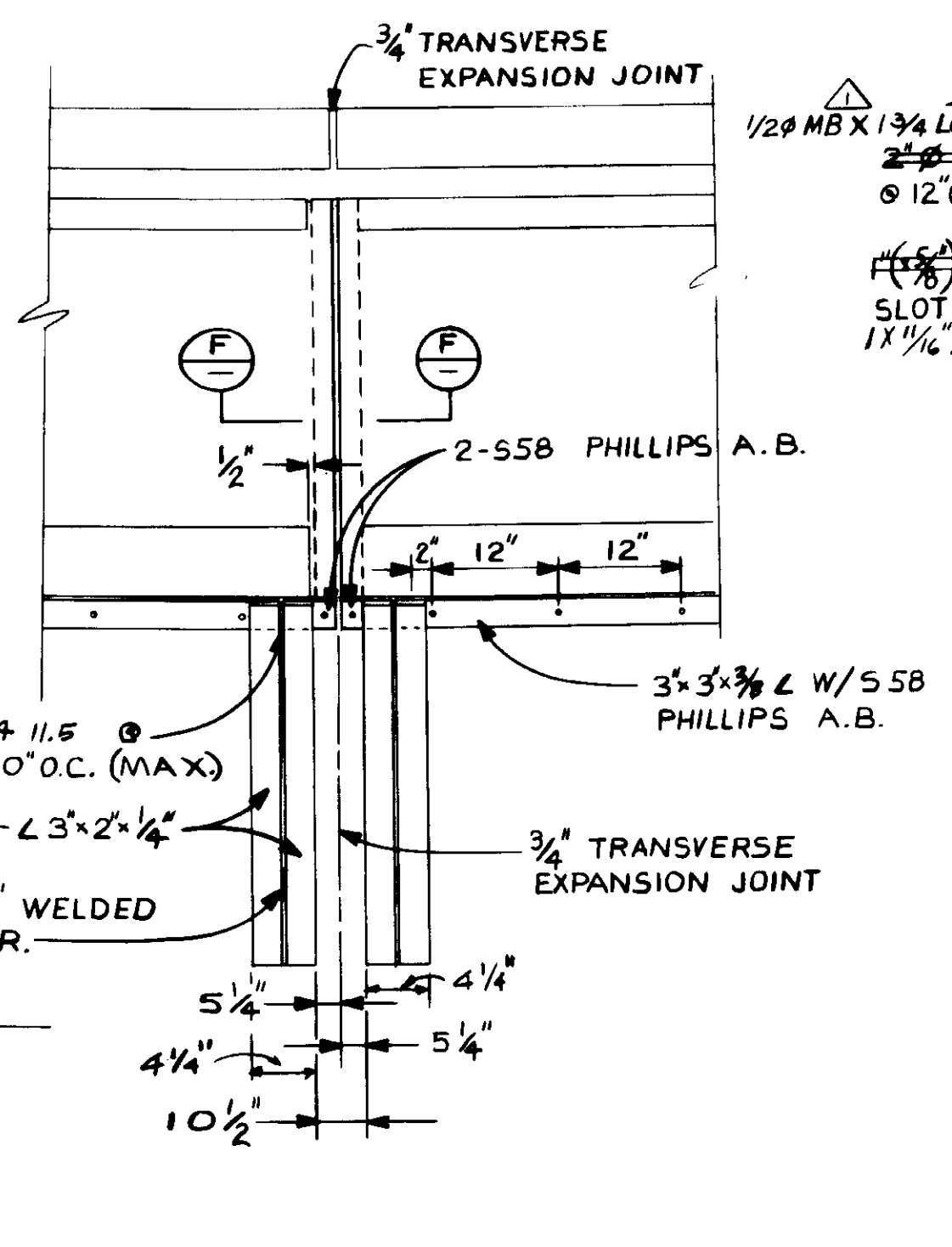
ELEVATION  
SCALE: 3/8" = 1'-0"



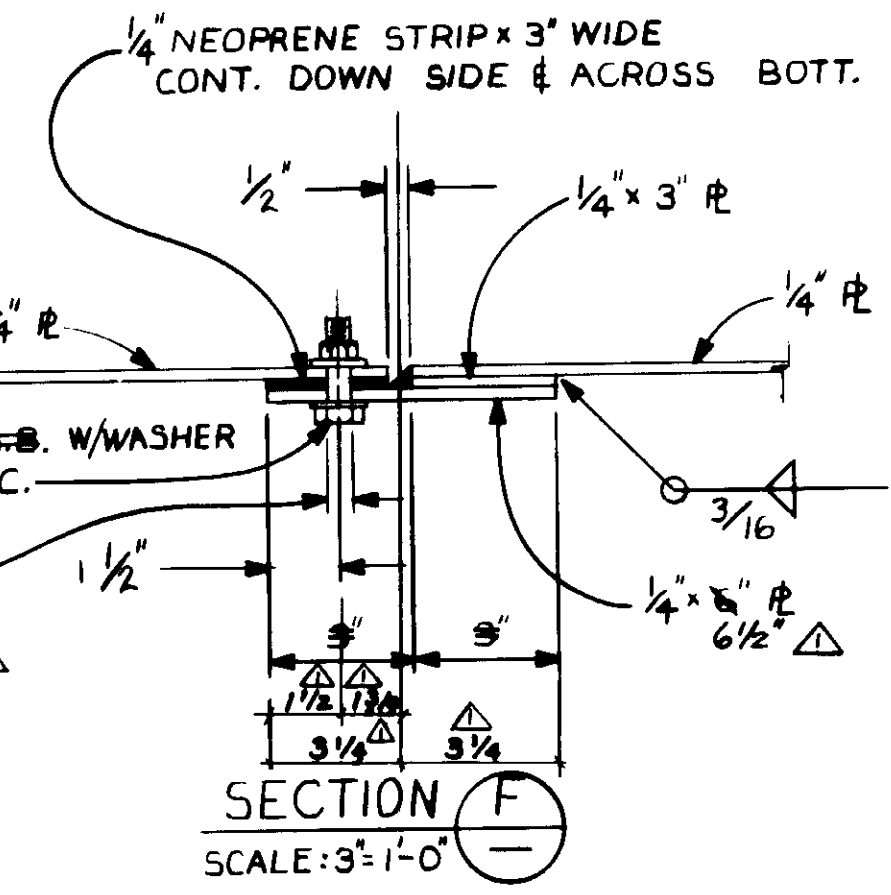
SECTION A-A  
SCALE: 3/4" = 1'-0"



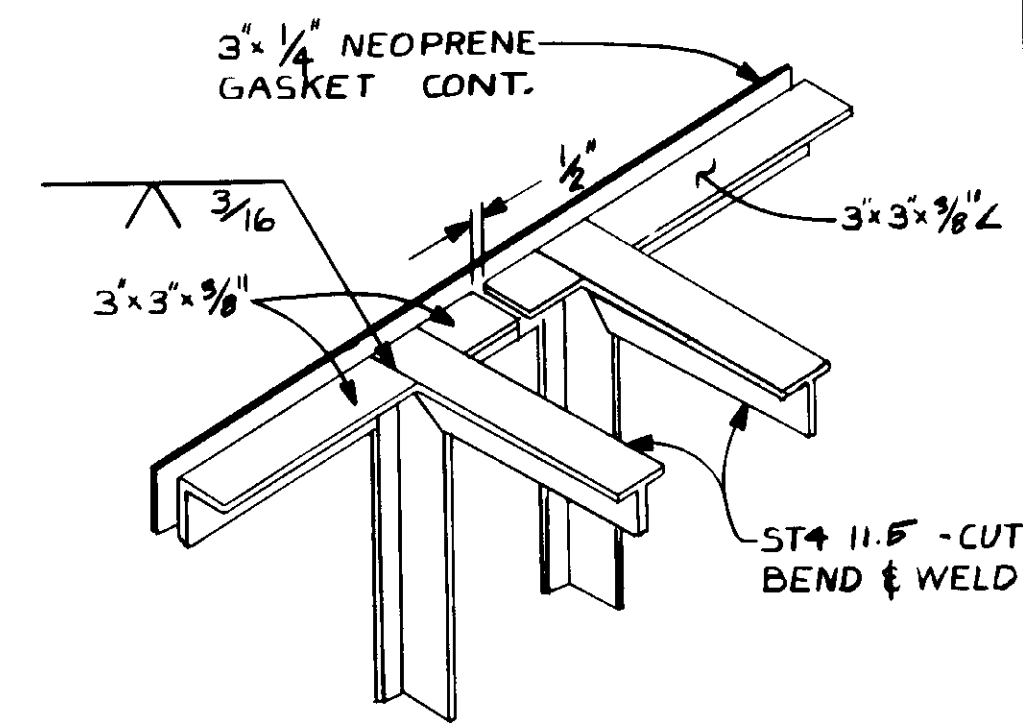
SECTION B-B  
1/2" = 1'-0"



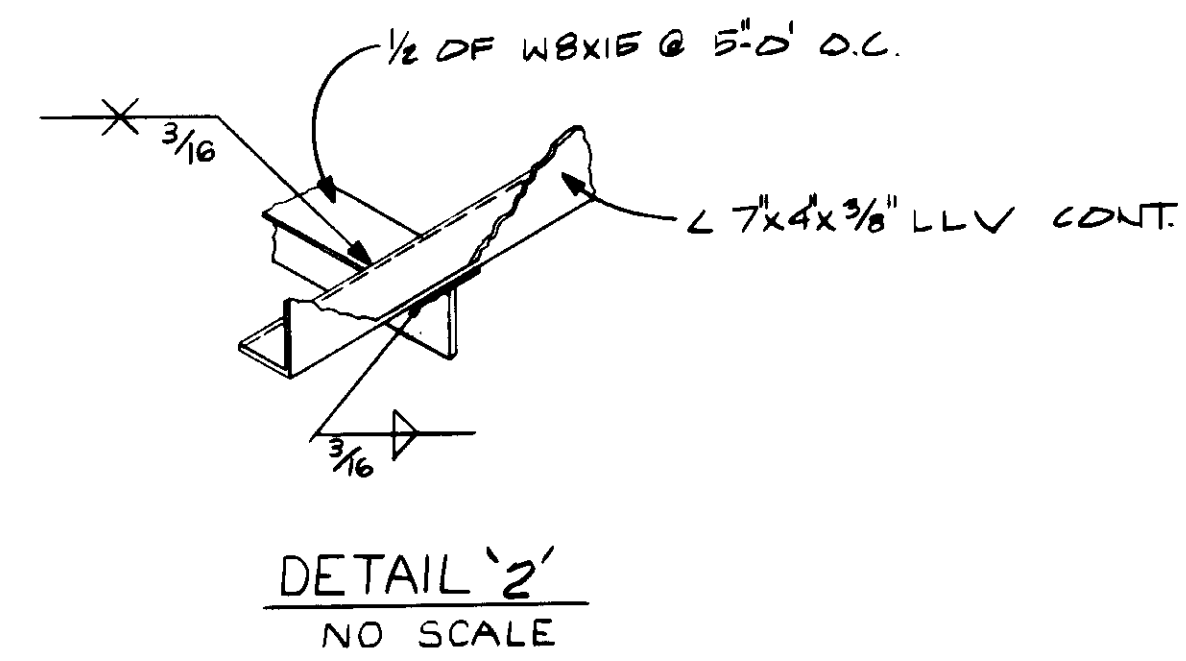
SECTION E-E  
SCALE: 3/4" = 1'-0"



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



DETAIL Y-Y  
NO SCALE



DETAIL Z-Z  
NO SCALE

REV	DATE	BY	DESCRIPTION
1	5-11-87	A.B.	REV. PER K.P.C.
2	5-11-87	A.B.	REV. PER K.P.C.

SCALE: AS NOTED	DESIGNED: Y.K./KOH	SUBMITTED: 8-7-87
	DRAWN: R.K.	DATE: 8-7-87
	CHECKED: Y.K.	

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

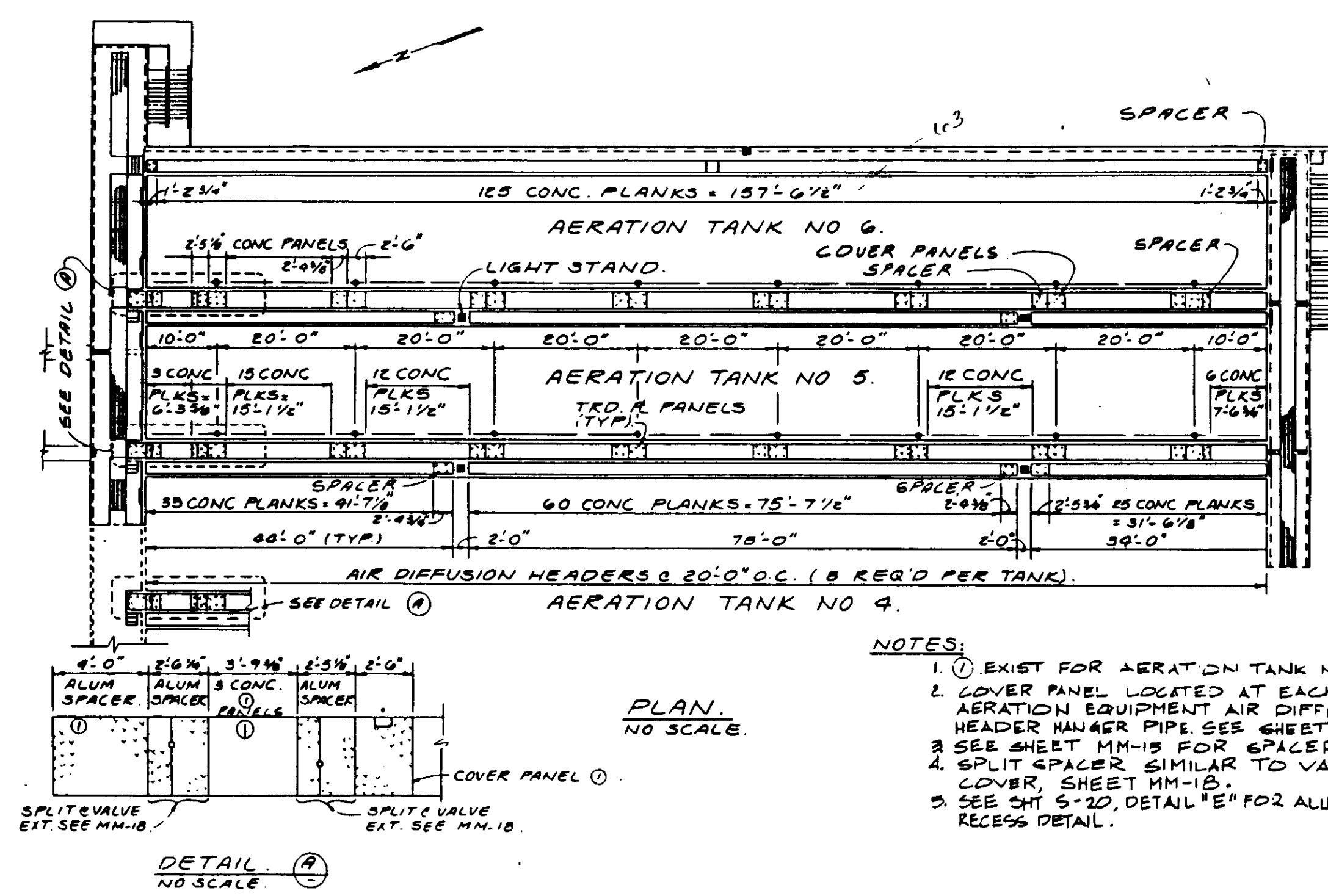
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
EFFLUENT CHANNEL

SHEET  
MM-36



RECORD DRAWING  
No. 14038  
Exp. 3-31-88  
KALEX CONSULTING ENGINEERS JUNE 1987

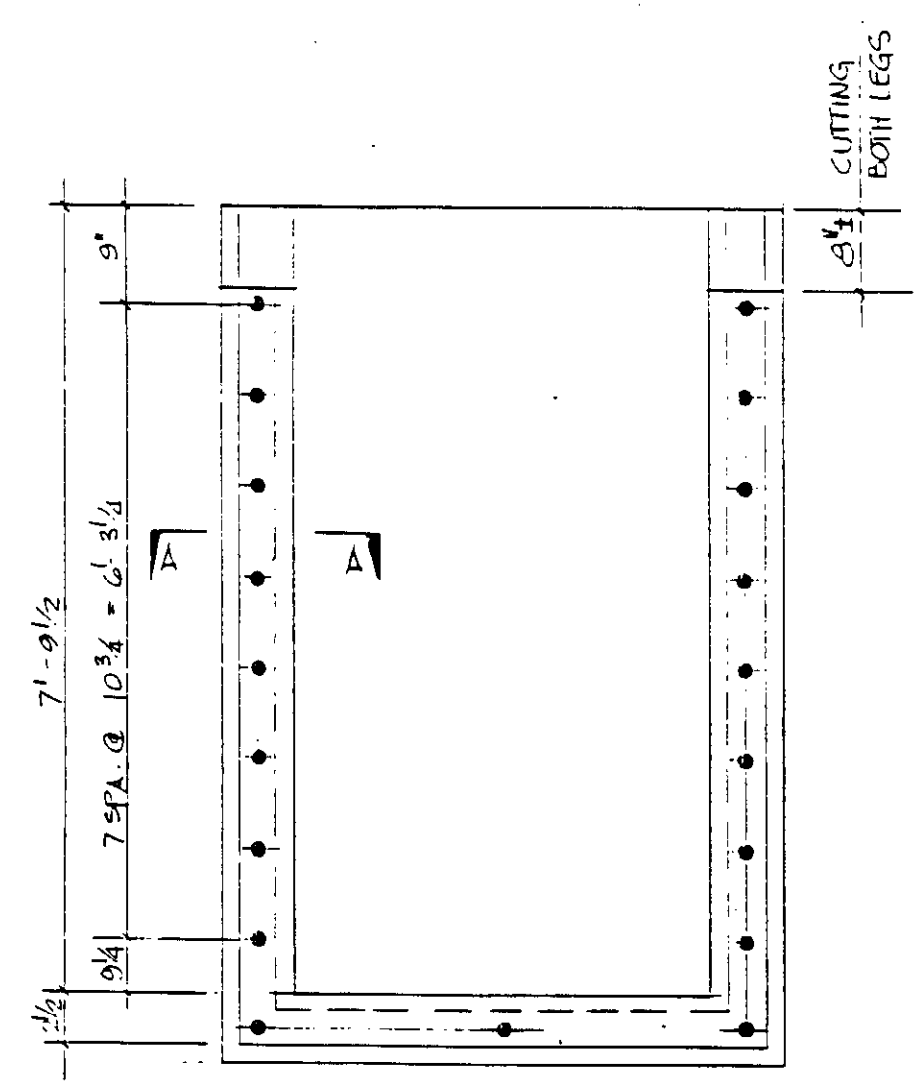
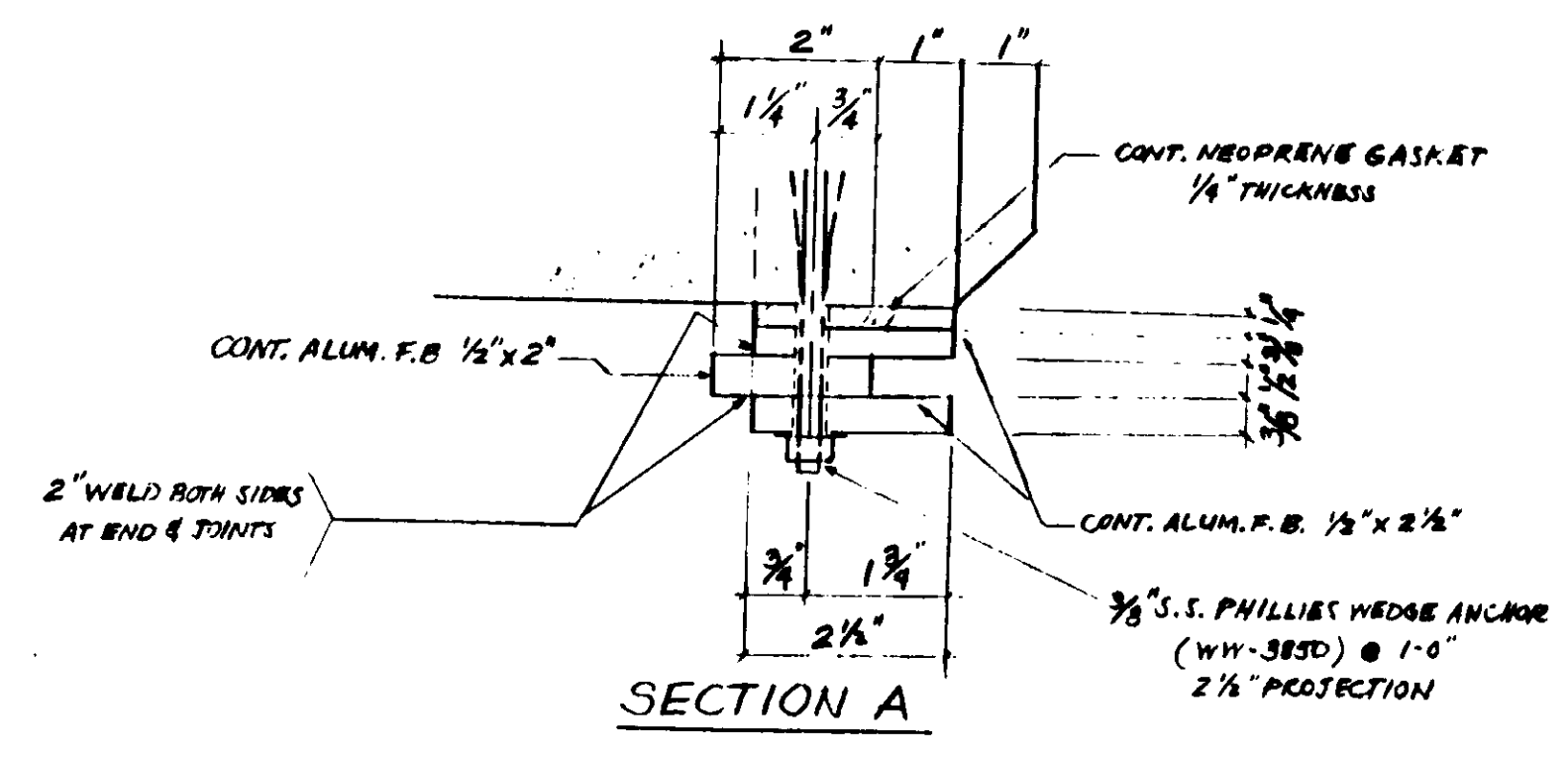




- NOTES:
- EXIST FOR AERATION TANK NO. 4.
  - COVER PANEL LOCATED AT EACH AERATION EQUIPMENT AIR DIFFUSION HEADER MANAGER PIPE SEE SHEET MM-15.
  - SEE SHEET MM-15 FOR SPACER.
  - SPLIT SPACER SIMILAR TO VALVE COVER SHEET MM-15.
  - SEE SHT S-20, DETAIL "E" FOR ALUMINUM RECESS DETAIL.

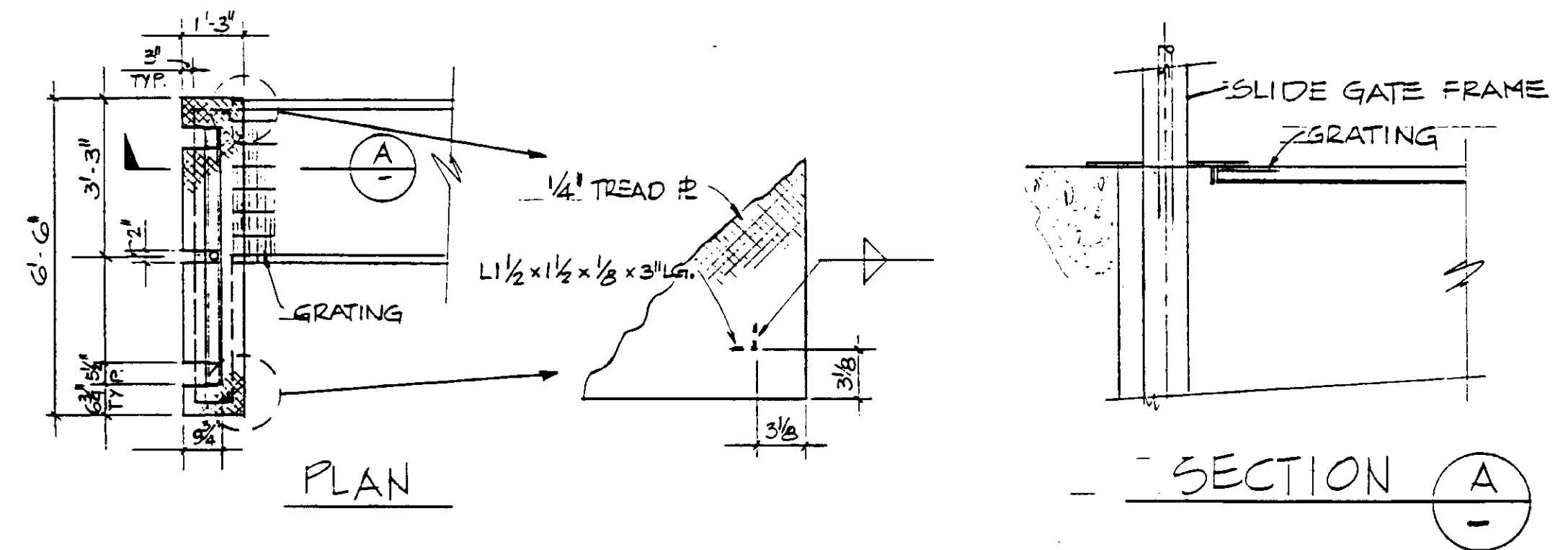
AERATION TANK  
CONCRETE PLANKS, ALUMINUM COVER PANEL & SPACER

SKETCH  
SKMM-2



2-ALUM STOP LOG NOTCH ASSY A-20  
NOT TO SCALE

RF1  
196



SHOP DWG. NO. 59, MISC METAL  
TREAD PLATE AT SELECTOR CHANNEL  
FABRICATED SLIDE GATE

REF  
E243



MATCH LINE - THIS SHT.

EXISTING INFLUENT PUMP ROOM  
FOR CONT. SEE SHT. M1-17-

EXISTING GENERATOR BLDG

GENERATOR #3 BLDG

EXISTING PROCESS AIR BLDG

PAC #3 BLDG

EXISTING E/W PIPE GALLERY

4" GRIT LINE, STD. STL

2'-9" NTS

24" INF. FORCE MAIN, STL 0.25" THK., MLECC

SEE SHT YP-9

2" CW  
2" CWD  
30" PROCESS AIR, STL, FOR CONT. SEE SHT. M7-1

EXIST. 42" PA, STL

EXISTING N/S PIPE GALLERY

EXISTING AEROBIC DIGESTER NO'S I & II

EXISTING AEROBIC DIGESTER NO. II

EXISTING HEADWORKS BLDG

EXISTING GRIT PUMP ROOM

FOR CONT. SEE SHT. M1-1

EXISTING E/W PIPE GALLERY

4" GRIT LINE, STD. STL  
SEE SHT YP-9.

MATCH LINE - SEE THIS SHT.

NOTE:  
EXISTING PIPING NOT SHOWN FOR CLARITY

PIPE GALLERY NO. 7 BELOW

SEE SHT YP-7.

EXIST. 42" PA, STL

EXIST. 36" EX. A, RPM

36" EXHAUST FAN, SEE DETAIL SHT. YP-7

EXISTING 6" WW

EXISTING 8" SRT

EXISTING 10" GST

EXISTING 6" RS

EXISTING 42" PA

24" INF. FM VALVE VAULT SEE SHT M2-7. FOR PIPING IN THIS AREA

EXISTING 20" INF. FM SEE SHT M2-6.

EXISTING 36" EX. AIR

SEE SHT M2-6.

36" EX. A, RPM

EXISTING PRIMARY SLUDGE PUMP STATION

EXISTING 8" DRAIN

24" INF. FORCE MAIN, STL 0.25" THK., MLECC

A-A MATCH LINE - FOR CONTINUATION SEE YP-3

RECORD DRAWING

FOR FILE INFORMATION BY ERNST PASTERIS GROUP  
KATSUBA CONSULTING ENGINEERS JUNE 1981

04049



REV	DATE	BY	DESCRIPTION

SCALE: 1"=10'

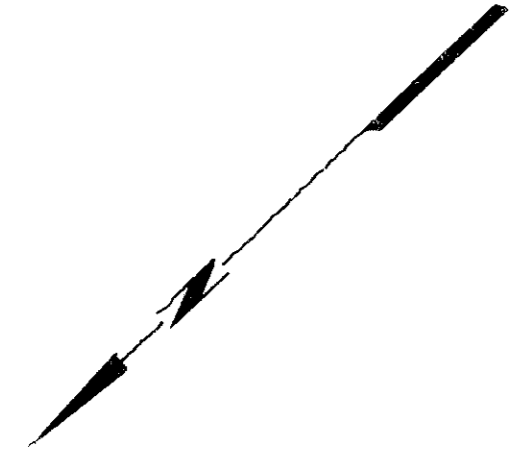
DESIGNED YK/CC  
DRAWN YK  
CHECKED

SUBMITTED 8-7-87  
KATSUBA CONSULTING ENGINEERS R.C.E. NO. 14038  
ALEXANDER ENGINEERS R.C.E. NO. 813

KALEX ENGINEERS  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

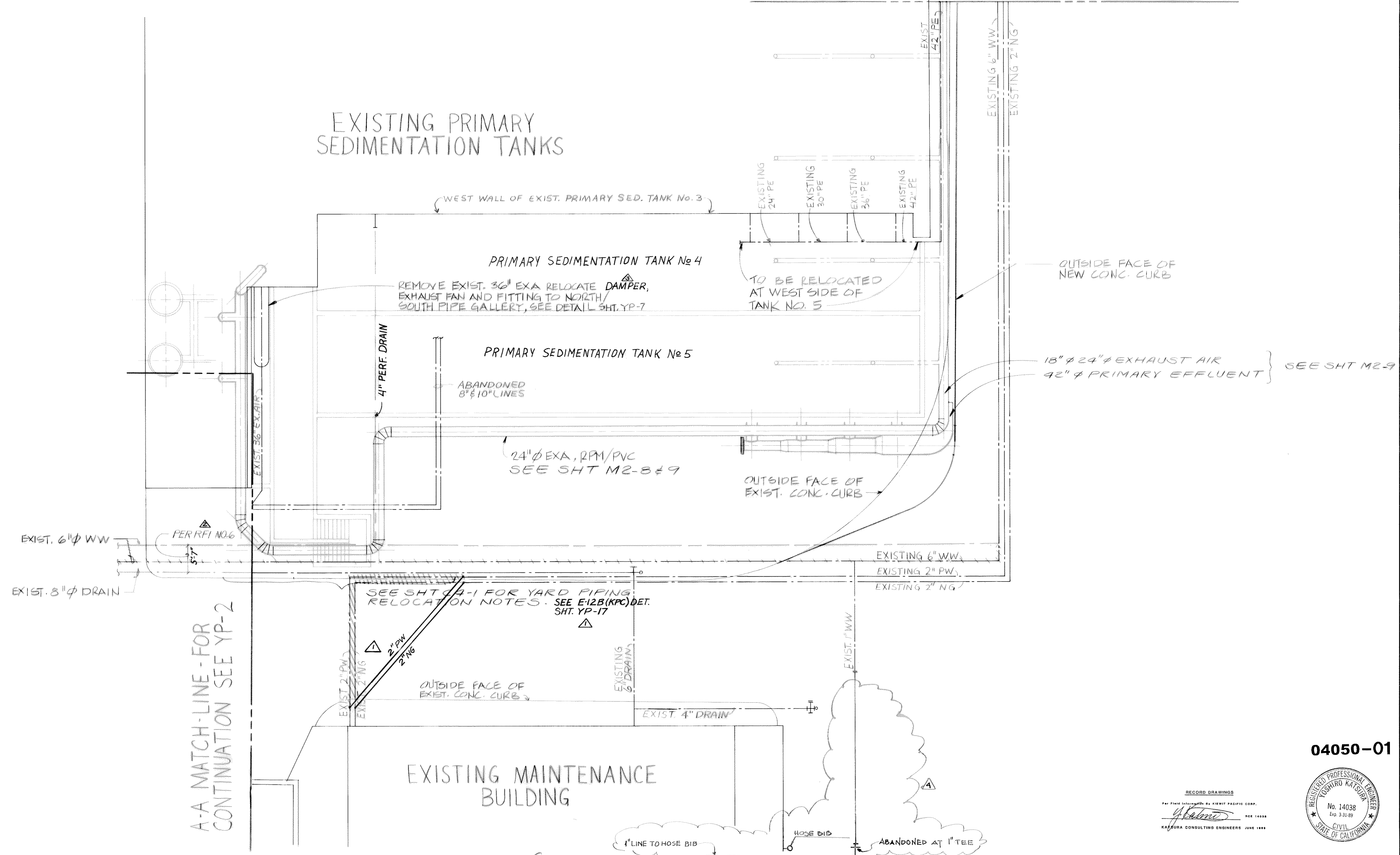
LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III  
EAST-WEST & NORTH-SOUTH GALLERY AREA, PLAN

SHEET YP-2



B-B MATCH LINE - FOR CONTINUATION SEE YP-4

### EXISTING PRIMARY SEDIMENTATION TANKS



A-A MATCH-LINE - FOR CONTINUATION SEE YP-2

04050-01

RECORD DRAWINGS  
 PREPARED BY: KIEWIT PACIFIC CORP.  
 KATSUMI  
 KATSURA CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
				5-2-89	A.B.		REV. PER K.P.C.
				5-2-89	A.B.		REV. PER K.P.C.
				5-2-89	A.B.		REV. PER K.P.C.

SCALE:	1" = 10'	DESIGNED:	YK/CC	SUBMITTED:	8-7-87
		DRAWN:	YK	KATSURA CONSULTING ENGINEERS	R.C.E. NO. 44038
		CHECKED:		ALEXANDER ENGINEERS	R.C.S.E. NO. 513

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PRIMARY TANK AREA, PLAN

SHEET  
 YP-3



EXISTING AERATION TANKS

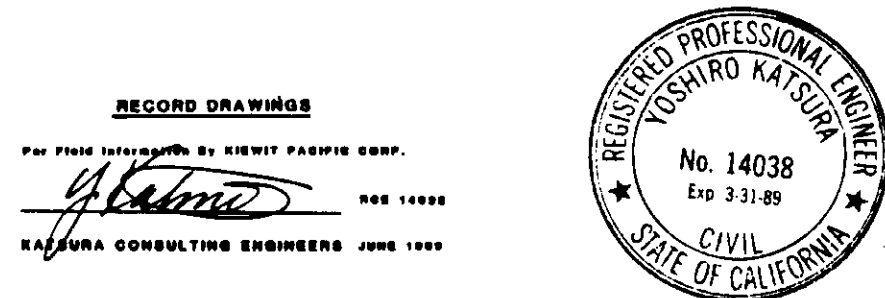
EXISTING PRIMARY SEDIMENTATION TANK No.1

D-D MATCH-LINE - FOR CONTINUATION SEE YP-5

C-C MATCH LINE - FOR CONTINUATION-SEE YP-6

B-B MATCH LINE - FOR CONTINUATION SEE YP-3

NOTE:  
1. REMOVE EXIST. 42" Ø PA, ST'L AFTER COMPLETING THE INSTALLATION OF PA LINE.



04051

REV	DATE	BY	DESCRIPTION
1	5-3-87	A.B.	REV. PER K.P.C.
2	5-3-87	A.B.	REV. PER K.P.C.
3	5-3-87	A.B.	REV. PER K.P.C.
4	5-3-87	A.B.	REV. PER K.P.C.

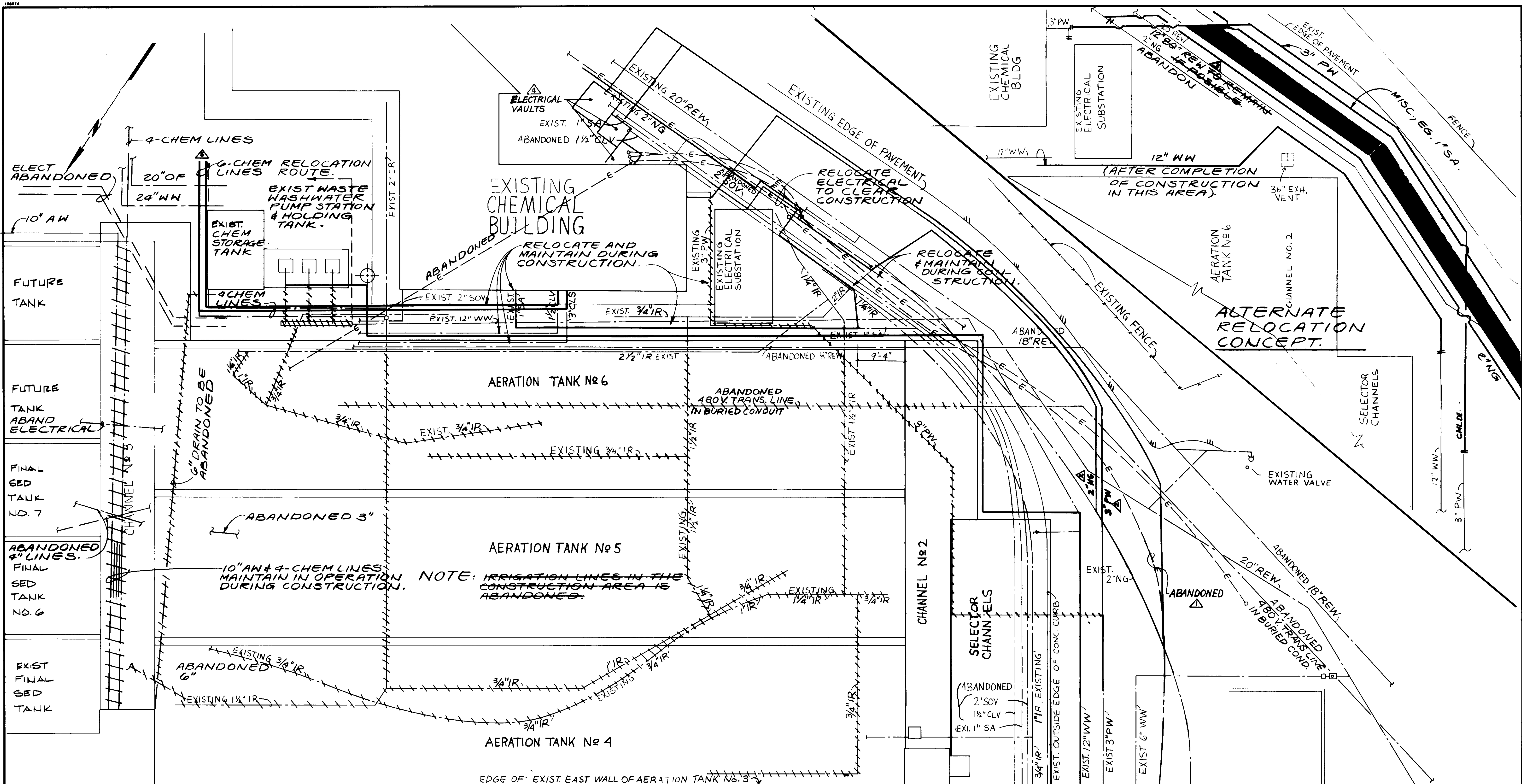
SCALE:	1" = 10'
DESIGNED:	YK/JCC
DRAWN:	SK/JCC
CHECKED:	YK

SUBMITTED:	14038	8-7-87
DATE:		
DESIGNED:	YK/JCC	
DRAWN:	SK/JCC	
CHECKED:	YK	

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
AERATION TANK AREA, PLAN - I

SHEET  
YP-4



EXISTING AERATION TANK No. 3

D.D MATCH LINE - FOR CONTINUATION  
SEE SH. YP-4

04052

RECORD DRAWING  
KATSUMA CONSULTING ENGINEERS



REV	DATE	BY	DESCRIPTION
5-3-87	A.B.	REV. PER K.P.C.	
5-3-87	A.B.	REV. PER K.P.C.	
5-3-87	A.B.	REV. PER K.P.C.	
5-3-87	A.B.	REV. PER K.P.C.	

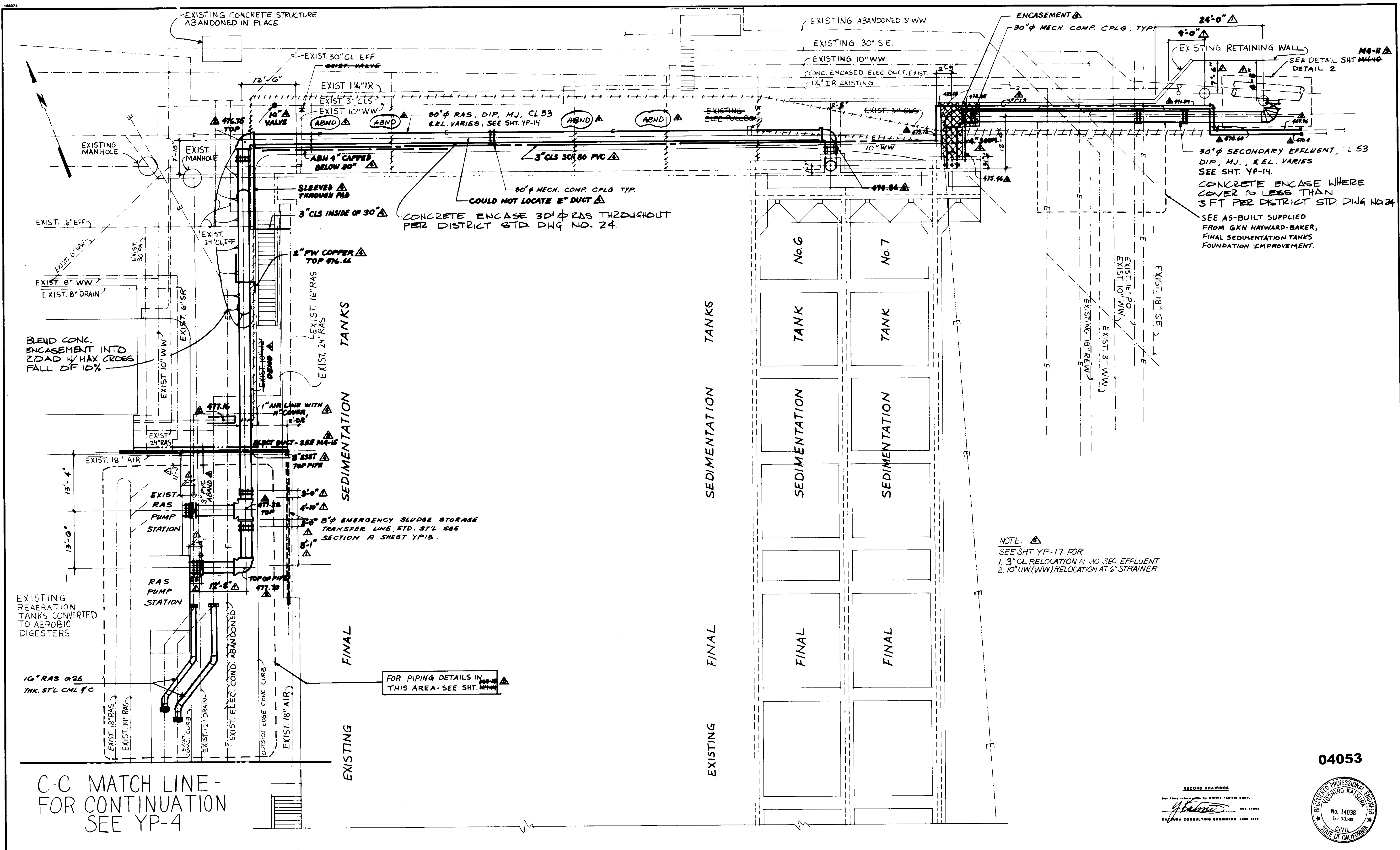
SCALE:	1" = 10'
DESIGNED	YK/CC
DRAWN	YK
CHECKED	
SUBMITTED	8-7-87
DATE	8-7-87
R.C.S.E. NO.	14038
R.C.S.E. NO.	513
DATE	

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

AERATION TANK AREA, PLAN - II

SHEET  
YP-5



30"  $\phi$  SECONDARY EFFLUENT, L 53  
 DIP, M.J., E.E.L. VARIES  
 SEE SHT. YP-14.  
 CONCRETE ENCASE WHERE  
 COVER IS LESS THAN  
 3 FT PER DISTRICT STD. DWG NO. 24  
 SEE AS-BUILT SUPPLIED  
 FROM GKN HAYWARD-BAKER,  
 FINAL SEDIMENTATION TANKS  
 FOUNDATION IMPROVEMENT.

NOTE:  $\triangle$   
 SEE SHT. YP-17 FOR  
 1. 3" CL RELOCATION AT 30" SEC. EFFLUENT  
 2. 10" UW (WW) RELOCATION AT 6" STRAINER

C-C MATCH LINE -  
 FOR CONTINUATION  
 SEE YP-4

04053

RECORD DRAWING  
 PREPARED BY: KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION
1-20-87		A.B.	REV. PER K.P.C.
1-20-87		A.B.	REV. PER K.P.C.
1-20-87		A.B.	REV. PER K.P.C.
1-20-87		A.B.	REV. PER K.P.C.

SCALE:	1" = 10'
DESIGNED	S. KOH
DRAWN	Y. K.
CHECKED	
SUBMITTED	14038 8-7-87
KALEX CONSULTING ENGINEERS	R.C.E. NO. DATE
ALEXANDER ENGINEERS	R.C.E. NO. DATE

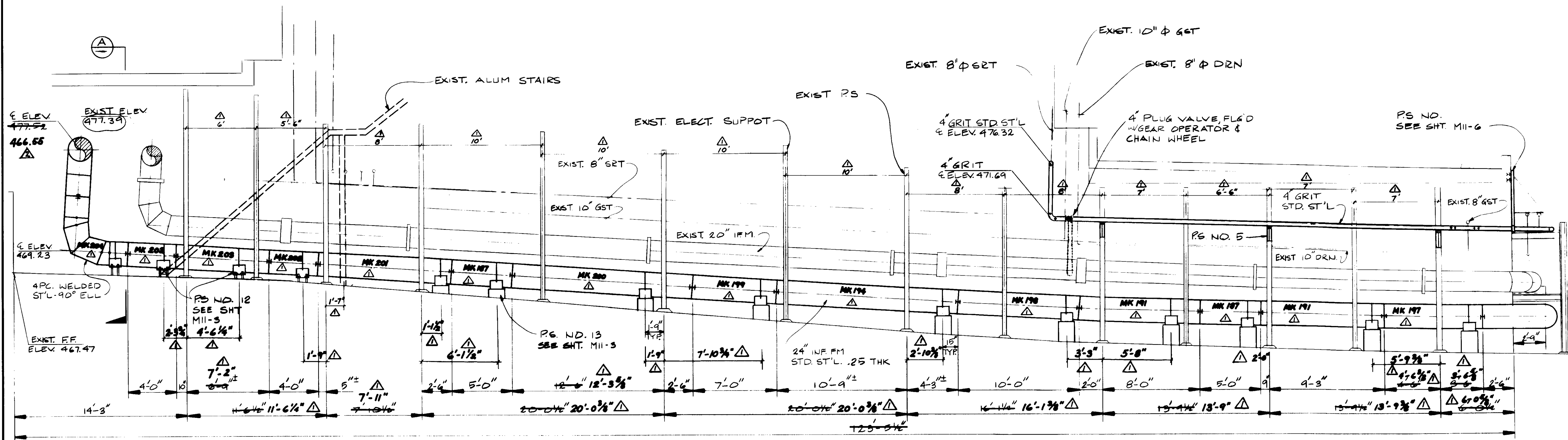
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

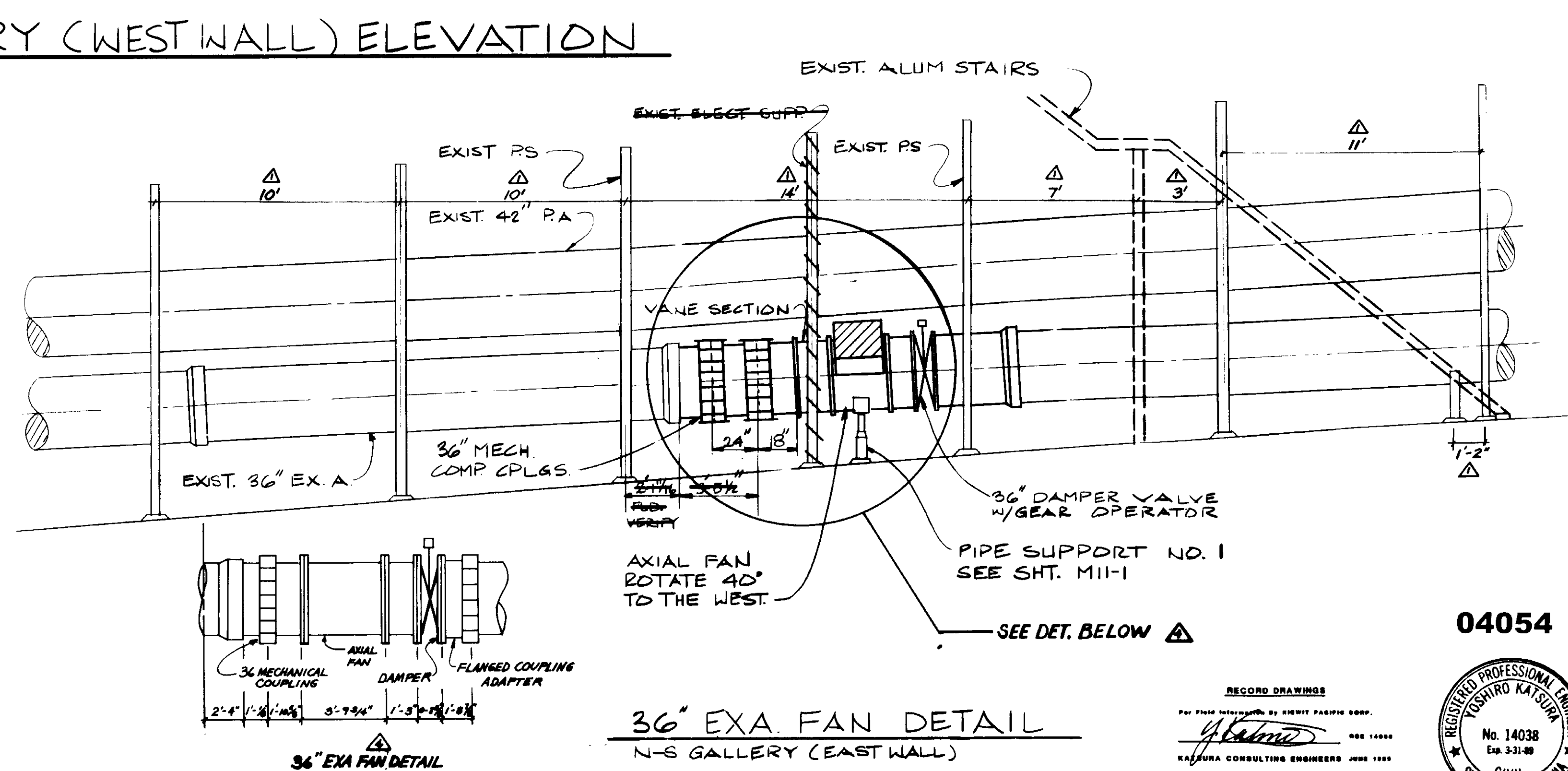
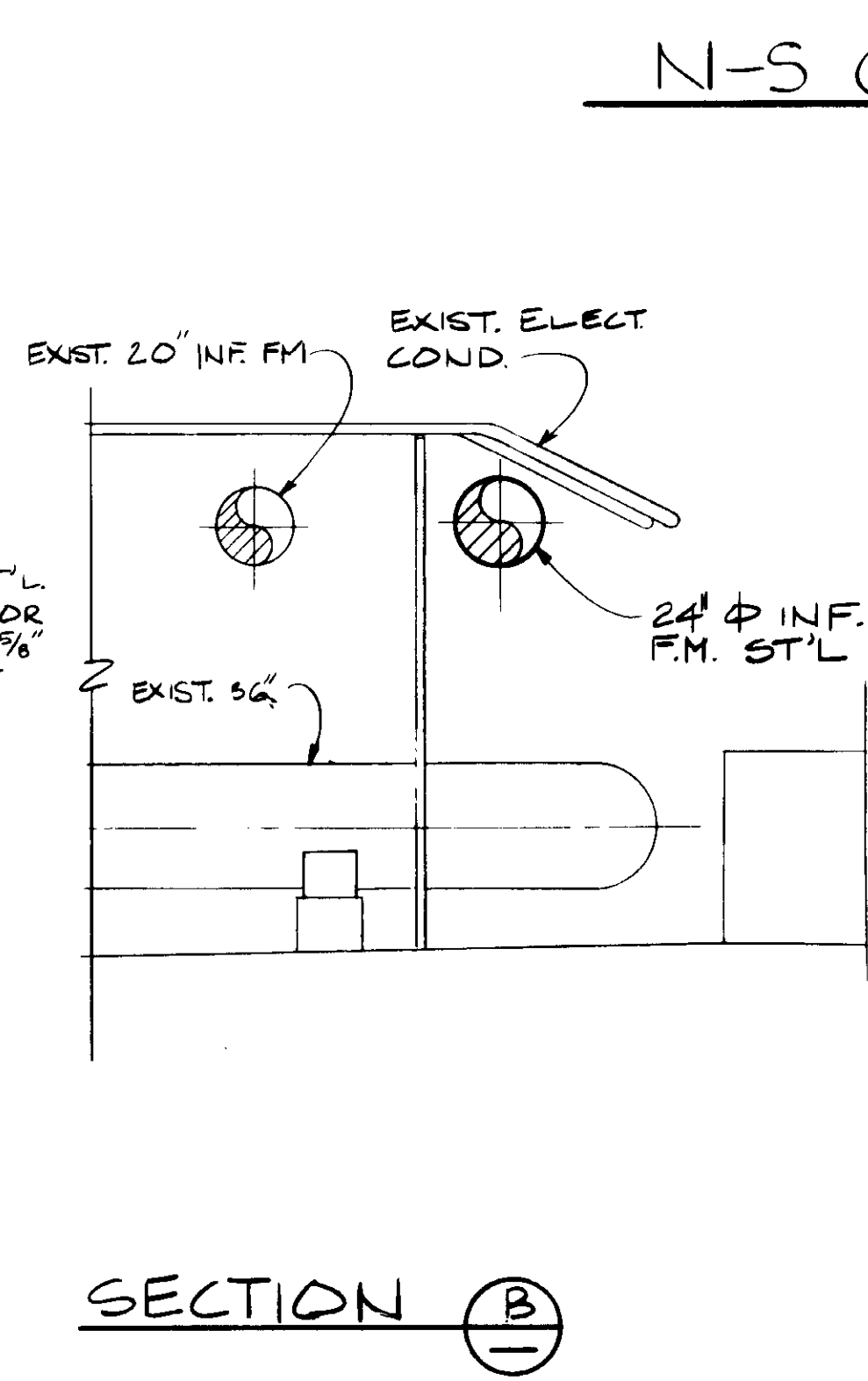
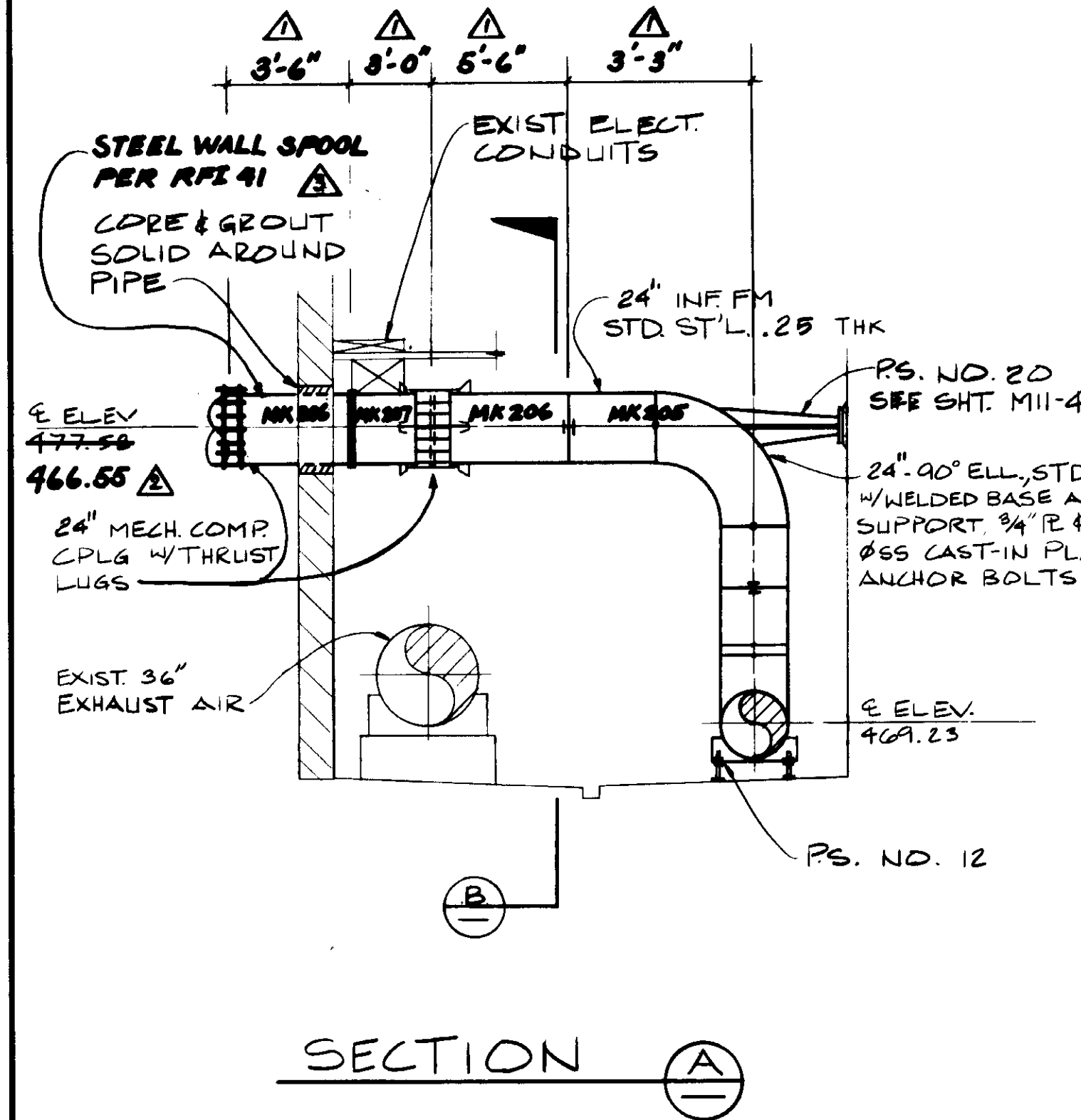
FINAL SEDIMENTATION TANK AREA, PLAN

SHEET  
 YP-6





N-S GALLERY (WEST WALL) ELEVATION



04054

RECORD DRAWING  
 PREPARED BY: KALEX ENGINEERS  
 DATE: 8-7-87  
 KALEX CONSULTING ENGINEERS



REV	DATE	BY	DESCRIPTION
1	4-27-87	A.B.	REV. PER K.P.C.
2	4-27-87	A.B.	REV. PER K.P.C.
3	4-27-87	A.B.	REV. PER K.P.C.
4	4-27-87	A.B.	REV. PER K.P.C.

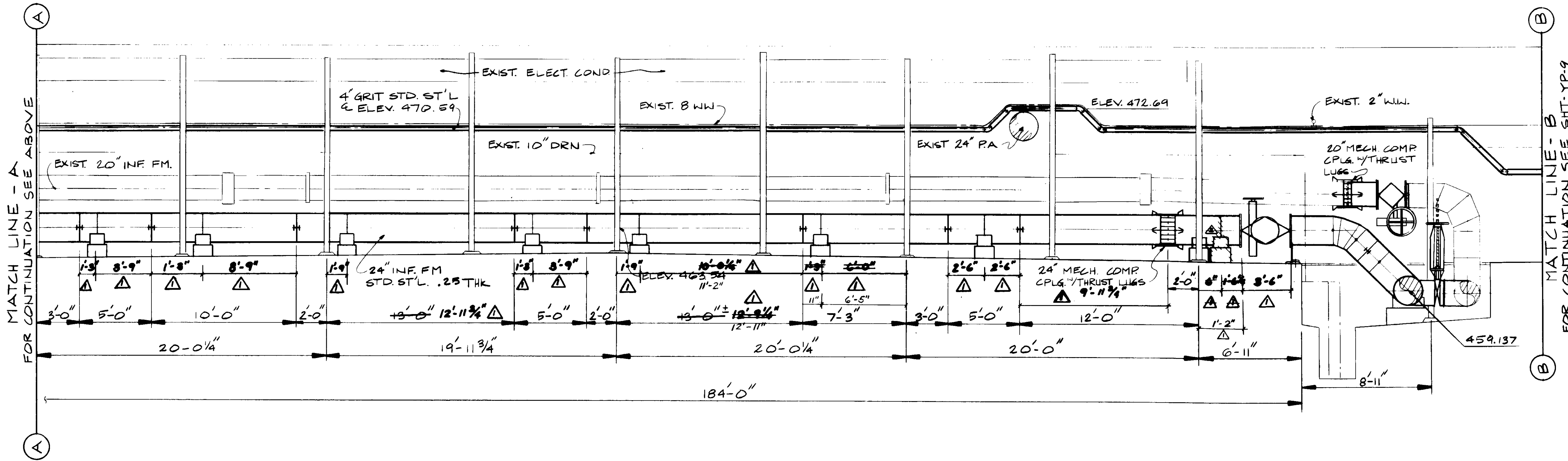
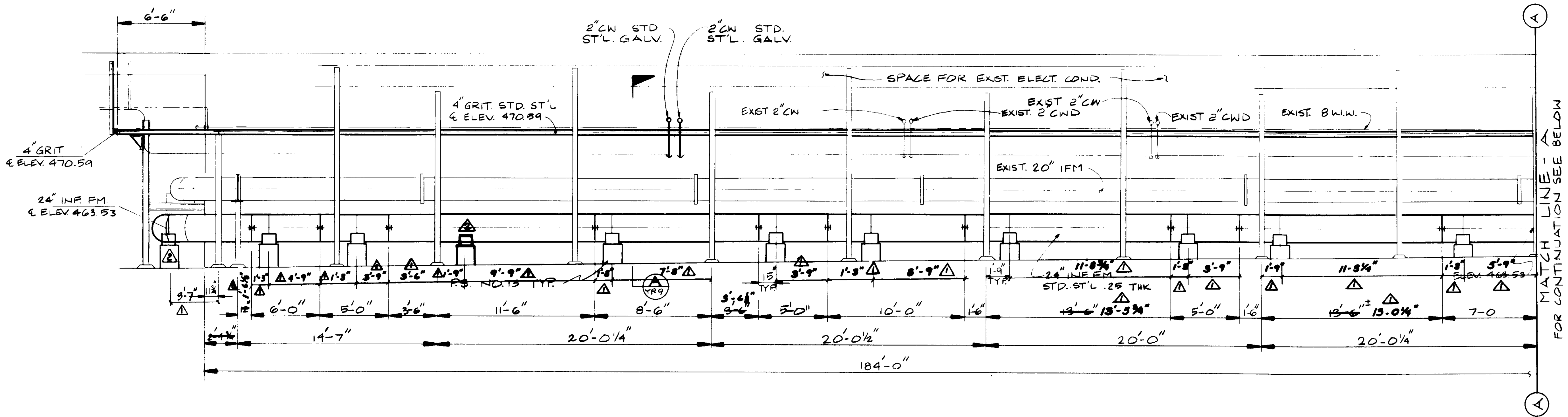
SCALE:	1/4" = 1'-0"
DESIGNED:	YK/CL
DRAWN:	CL
CHECKED:	YK
SUBMITTED:	8-7-87
DATE:	8-7-87
PROJECT NO.:	14038
R.C.E. NO.:	813
DATE:	

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 NORTH-SOUTH PIPE GALLERY ELEVATION

SHEET  
**YP-7**





E-W GALLERY (SOUTH WALL) ELEVATION

04055

RECORD DRAWINGS  
 PREPARED BY KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS 2000 1989



REV	DATE	BY	DESCRIPTION
1	4-27-87	A.B.	REV. PER K.P.C.
2	4-27-87	A.B.	REV. PER K.P.C.

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

DESIGNED	Y.K./C.L.
DRAWN	Y.K.
CHECKED	

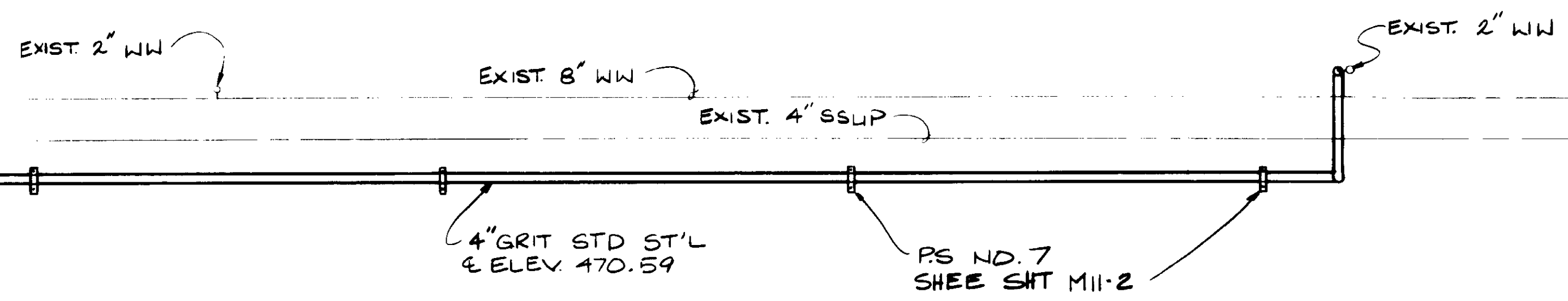
SUBMITTED	8-7-87
DESIGNED	14038
DRAWN	R.C.E. NO.
CHECKED	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

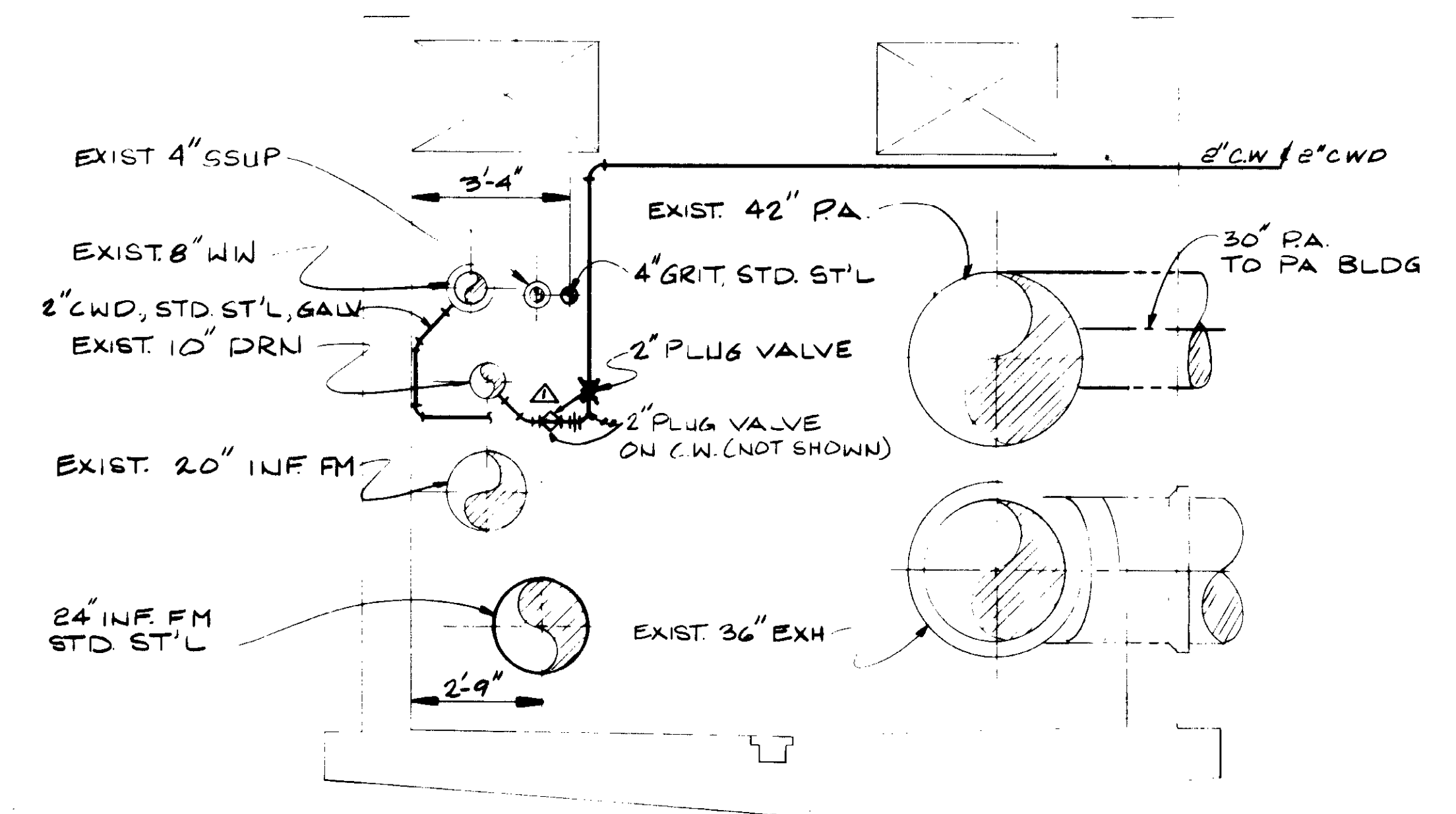
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 EAST-WEST GALLERY, ELEVATION - I

SHEET  
 YP-8

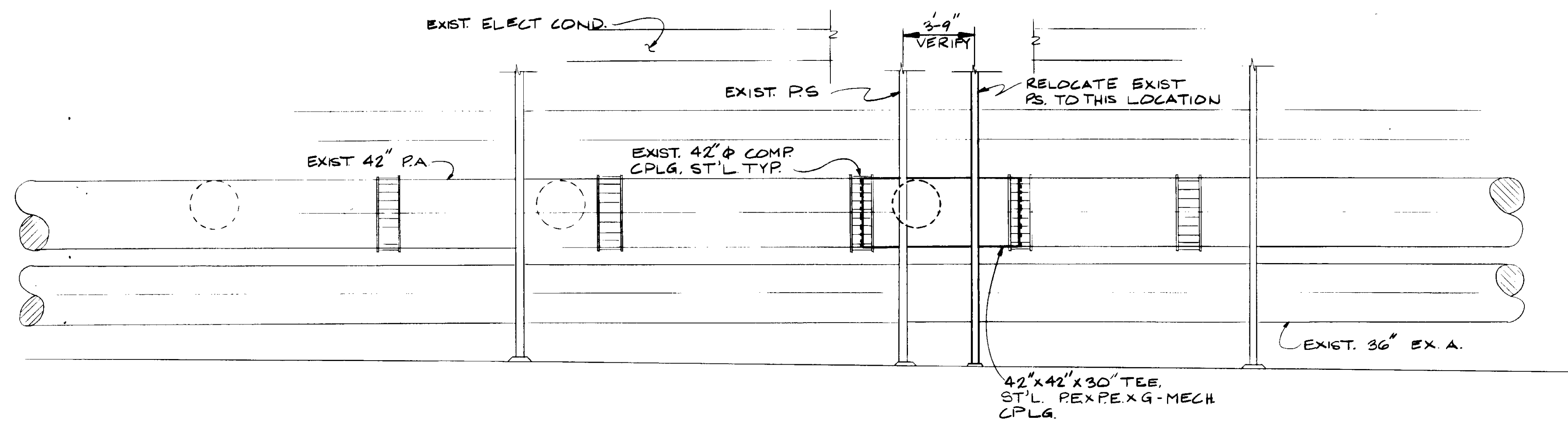
MATCH LINE-B FOR CONTINUATION SEE SHT YP-8



E-W GALLERY (SOUTH WALL) ELEVATION  
 1/4" = 1'-0"



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



E-W GALLERY (NORTH WALL) ELEVATION  
 1/4" = 1'-0"

04056

RECORD DRAWINGS  
 Katsura Consulting Engineers / Alexander Engineers  
 No. 14038  
 CIVIL  
 STATE OF CALIFORNIA



REV	DATE	BY	DESCRIPTION

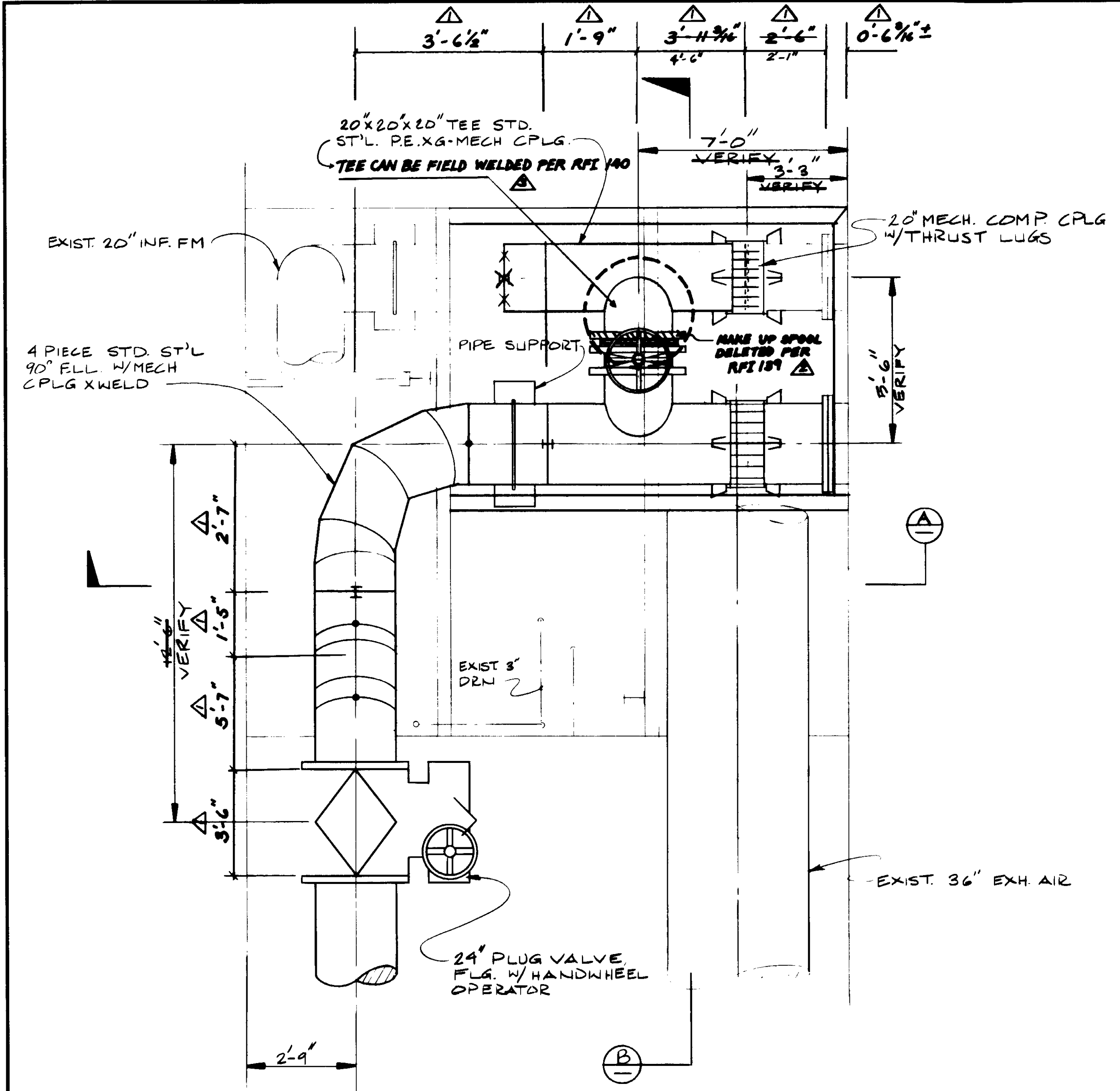
SCALE:	AS NOTED
DESIGNED	YK/CL
DRAWN	CL
CHECKED	YK

SUBMITTED	8-7-87
KATSUMA CONSULTING ENGINEERS	R.C.E. NO. 14038
ALEXANDER ENGINEERS	R.C.E. NO. 513

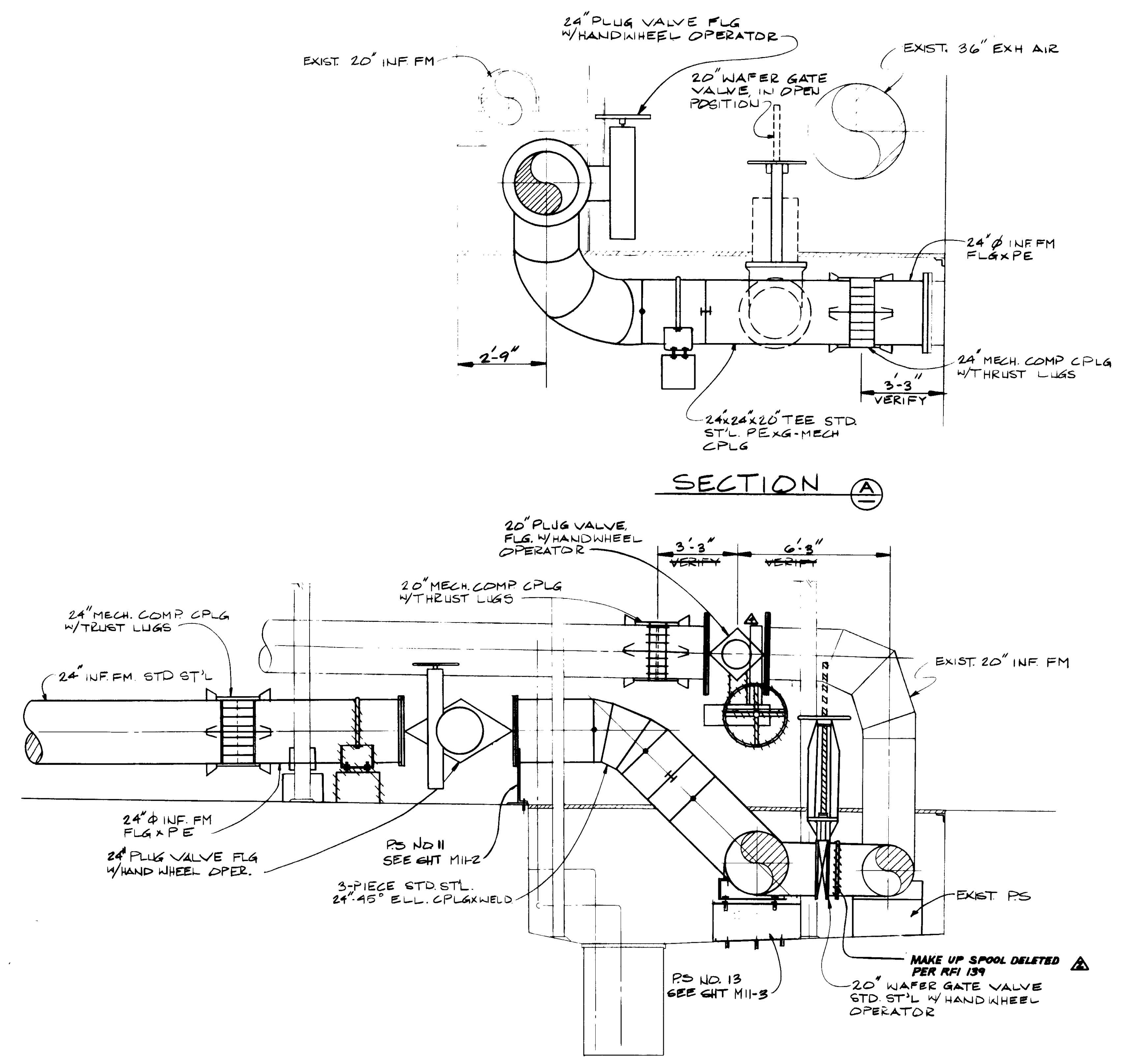
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 EAST-WEST GALLERY, ELEVATION -II

SHEET  
 YP-9



PLAN SUMP AREA



SECTION B

04057

RECORD DRAWINGS  
 PREPARED BY: KALEX ENGINEERS  
 KATSUMA CONSULTING ENGINEERS JUN 1988



REV	DATE	BY	DESCRIPTION
1	4-26-87	A.B.	REV. PER K.P.C.
2	4-26-87	A.B.	REV. PER K.P.C.
3	4-26-87	A.B.	REV. PER K.P.C.

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

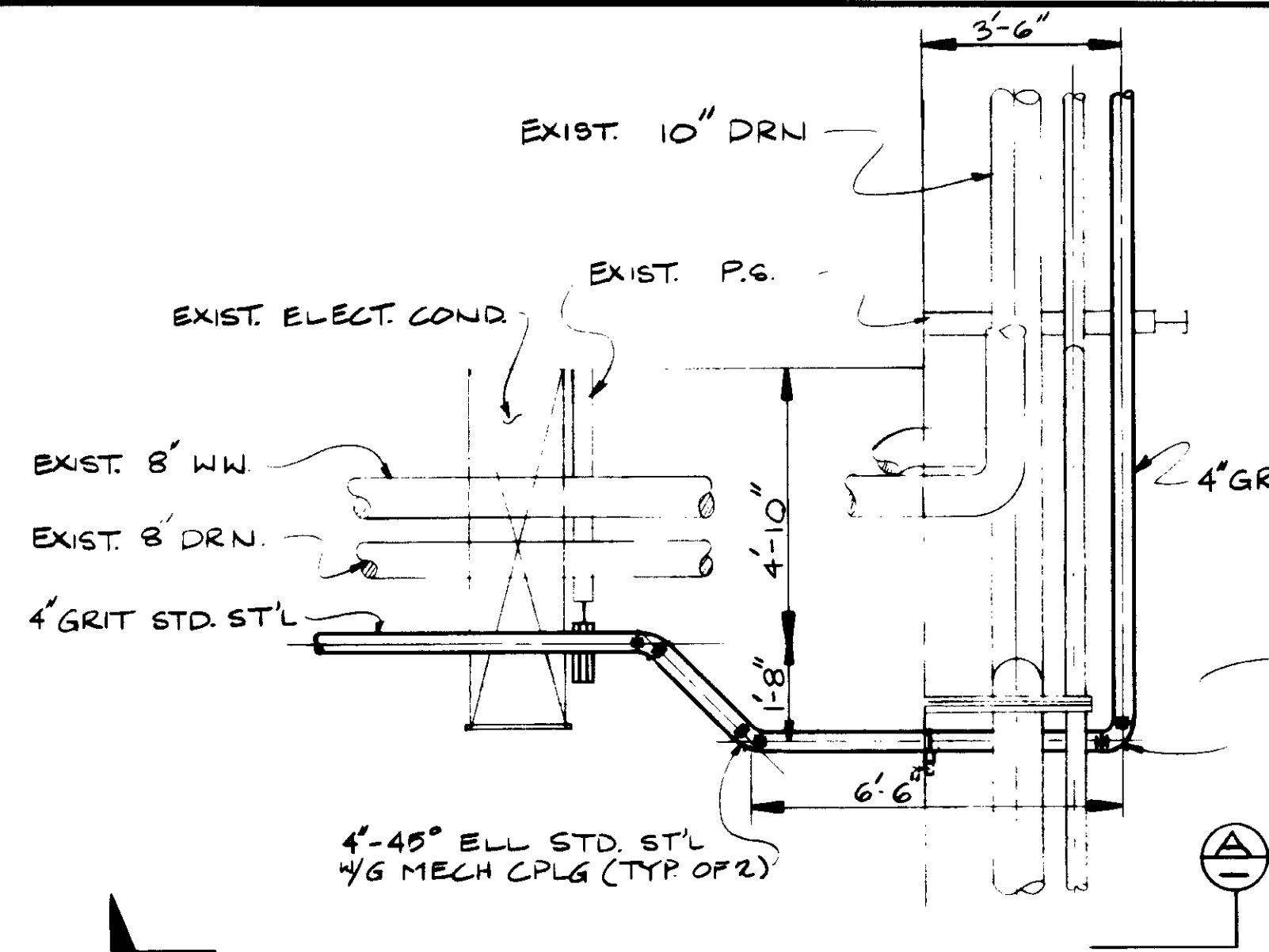
DESIGNED	YK/CL
DRAWN	CL/AR
CHECKED	YK

SUBMITTED	14038	8-7-87
DESIGNED	CL/AR	DATE
DRAWN	YK	
CHECKED		

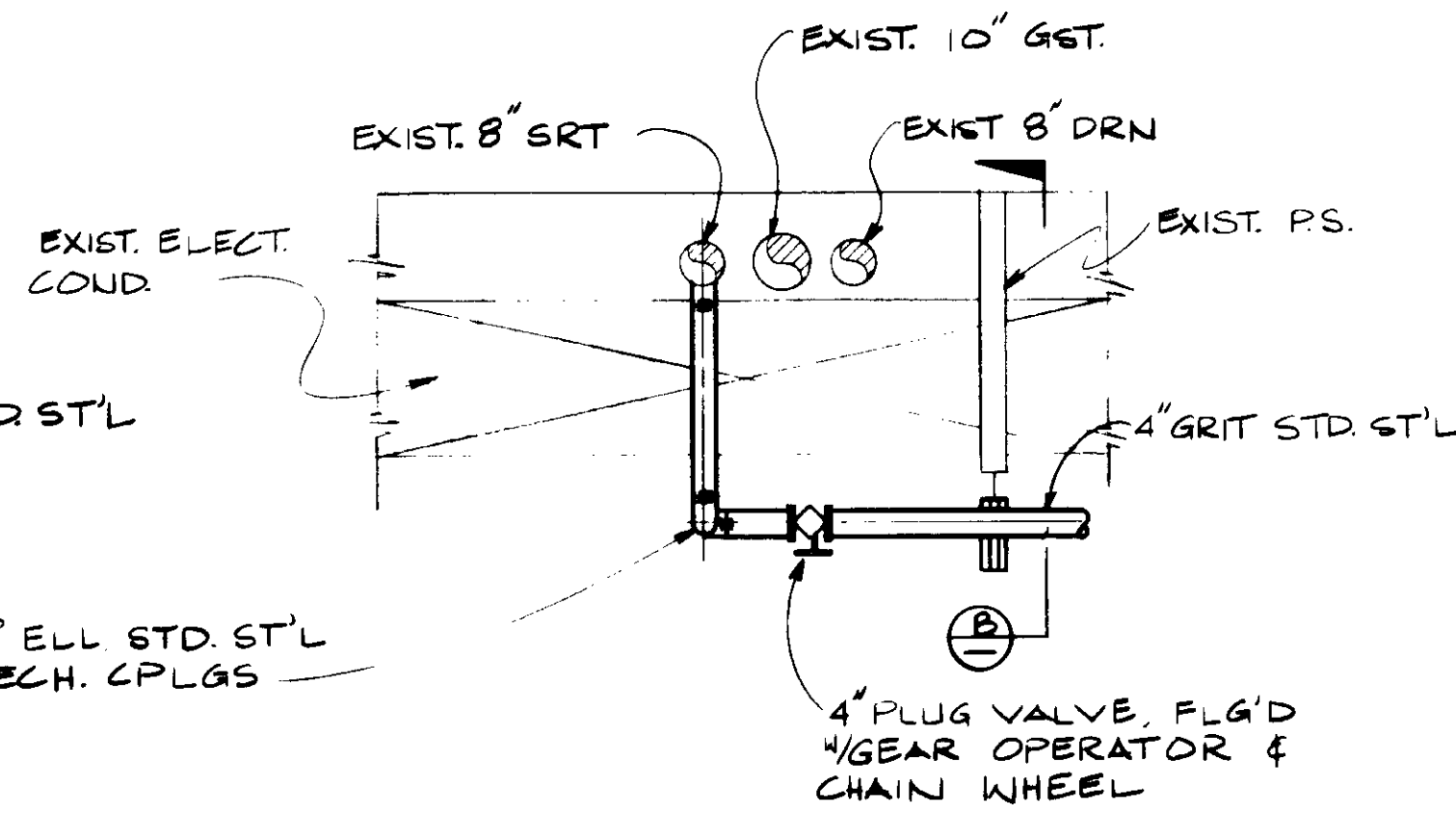
**KALEX ENGINEERS**  
 Katsuma Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 INFLUENT FORCE MAIN

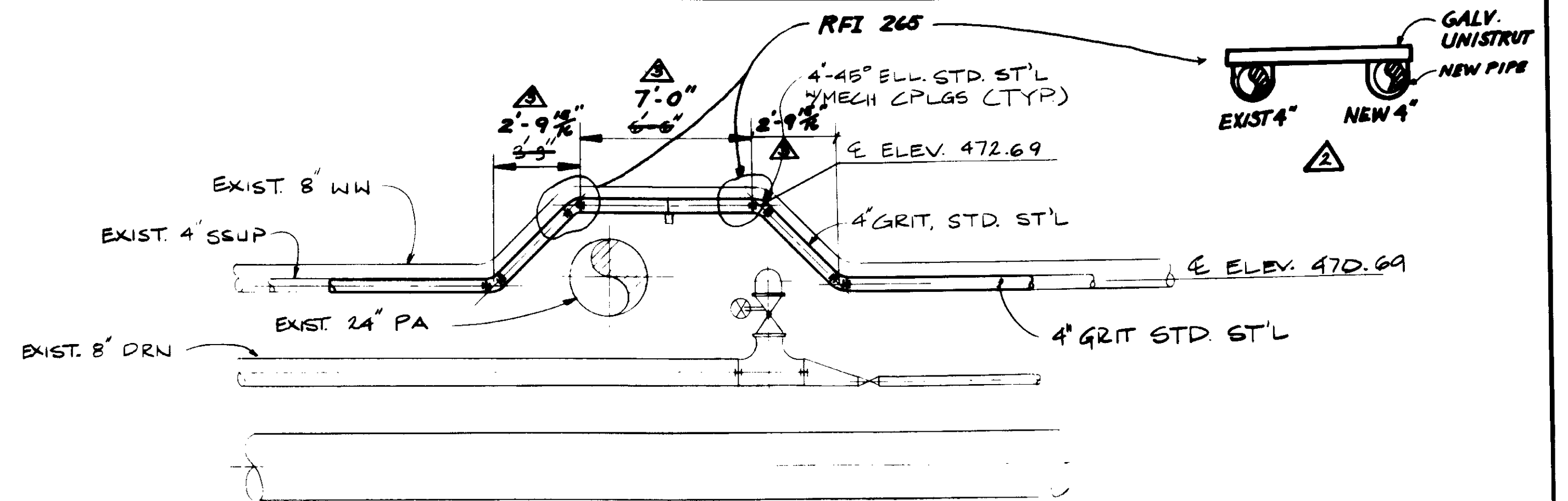
SHEET  
 YP-10



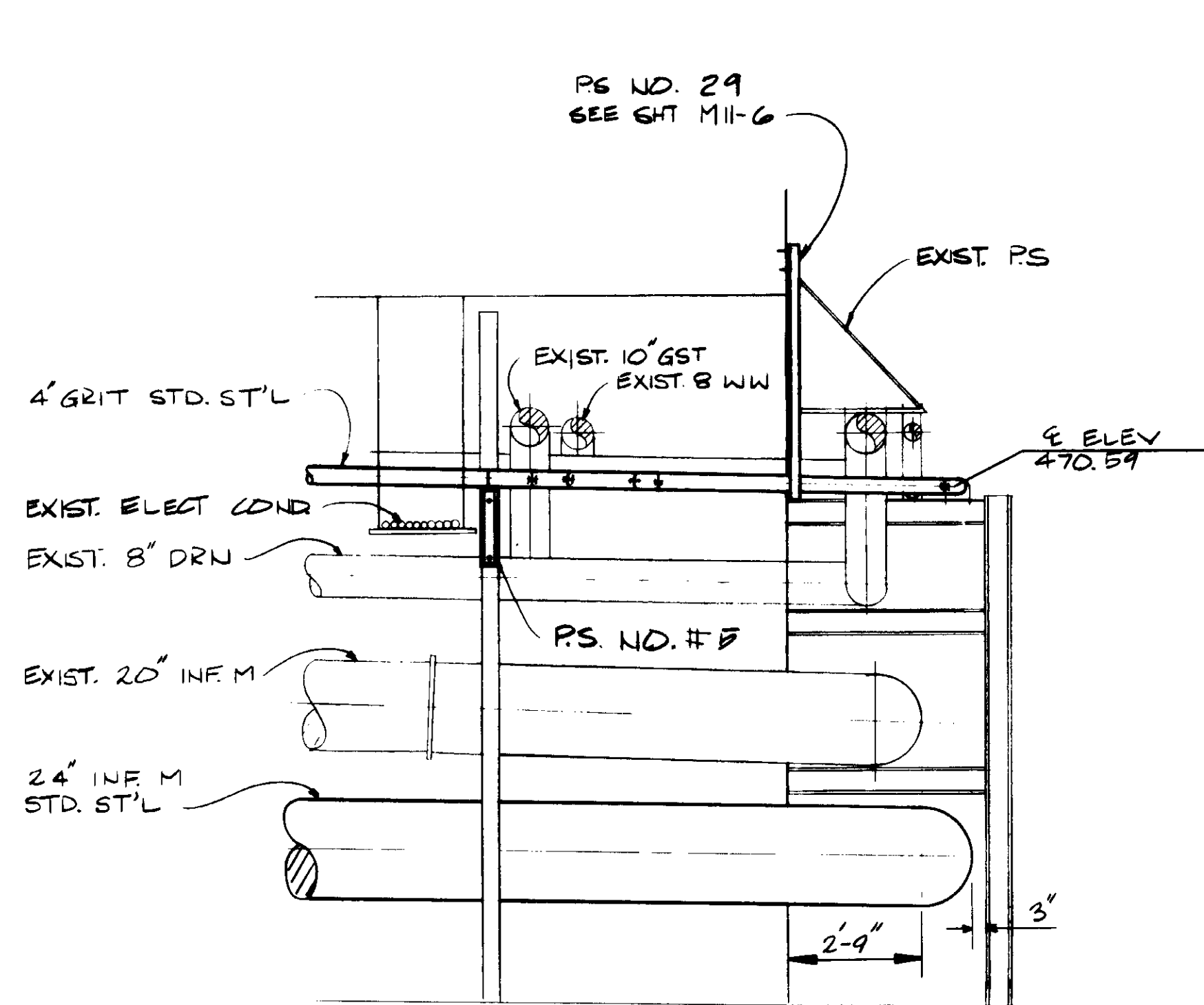
PLAN



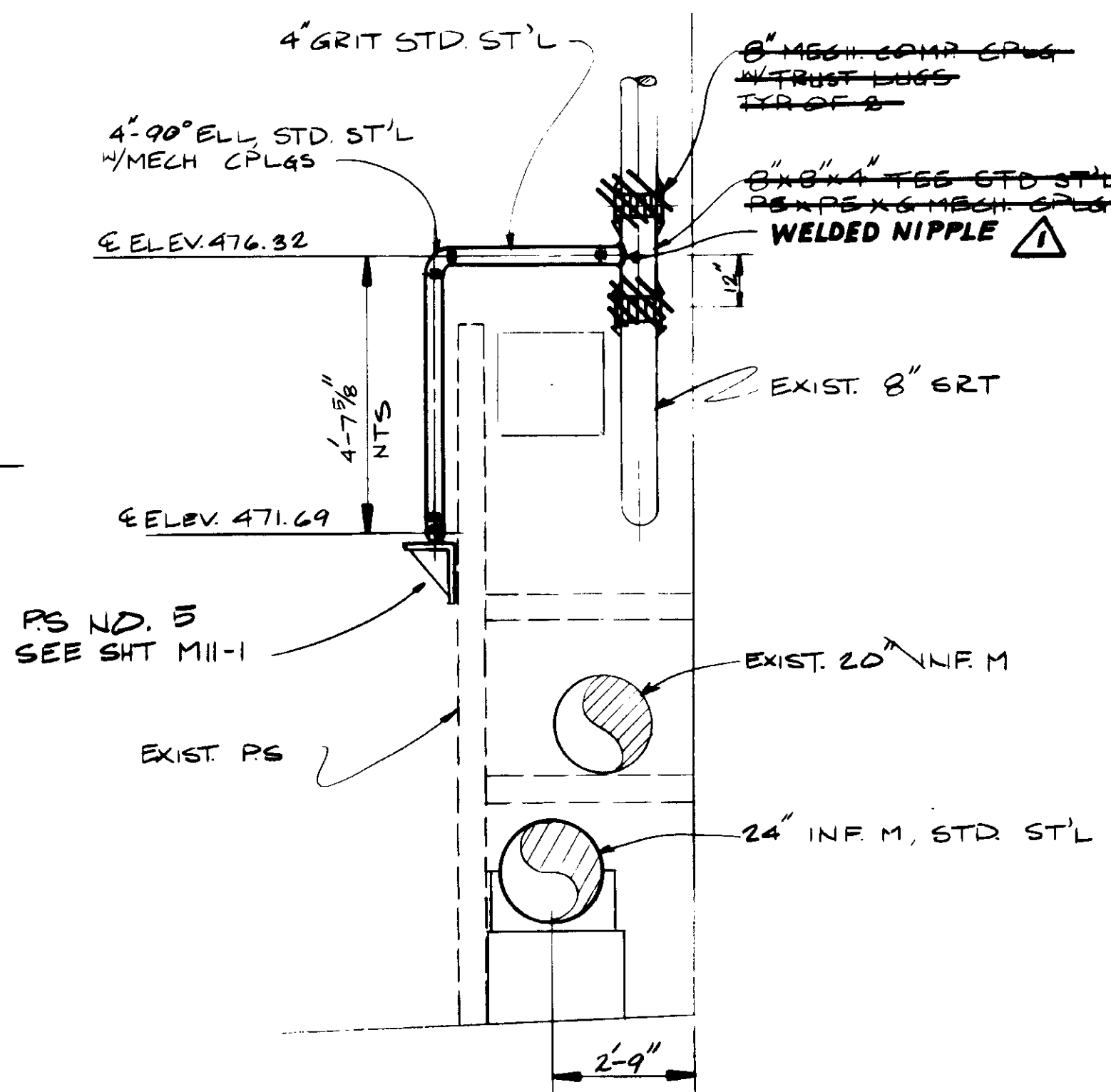
PLAN SECTION



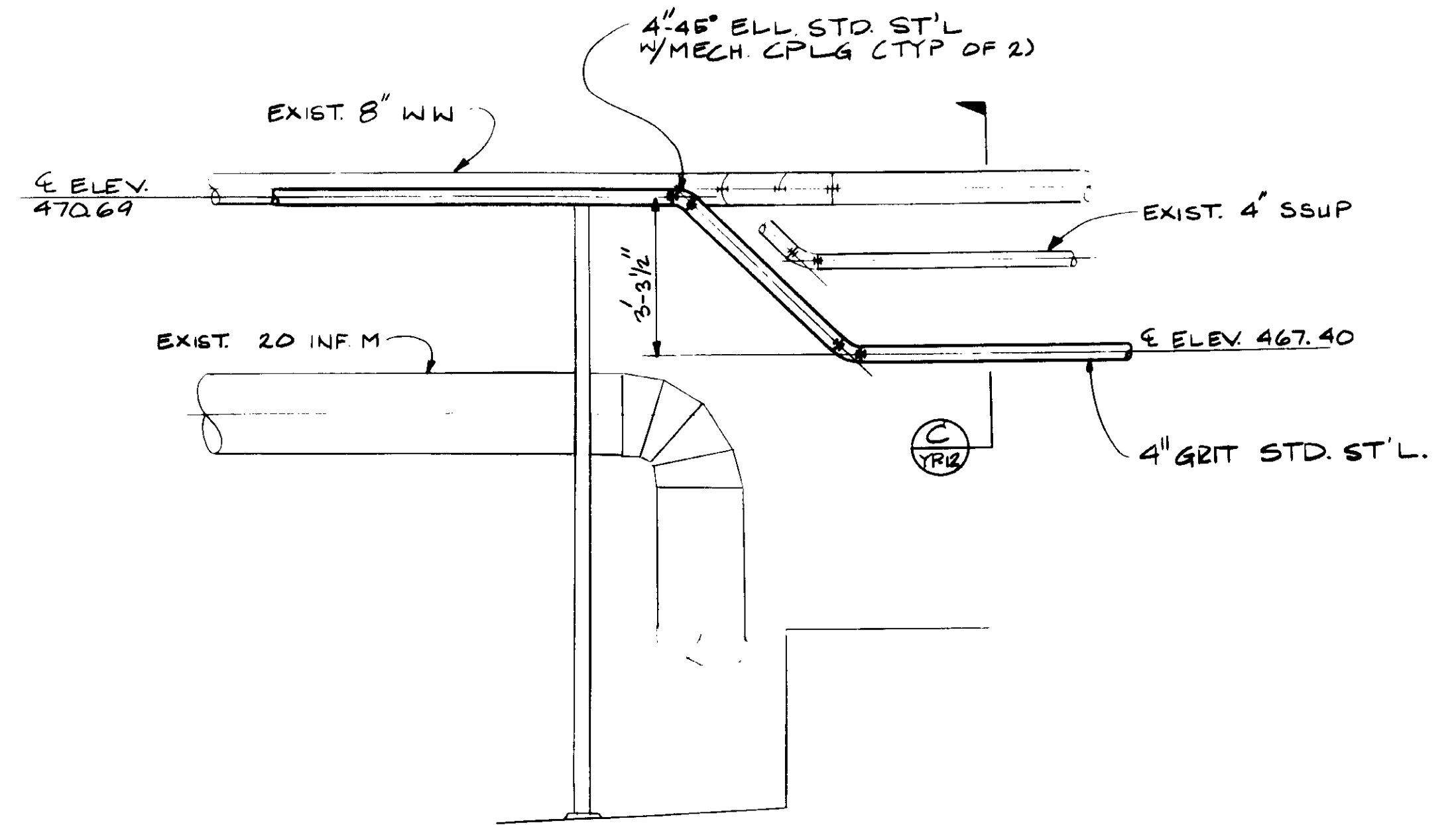
DETAIL



SECTION A



SECTION B



DETAIL I

04058



RECORD DRAWINGS  
 For Plans Issued by KALEX ENGINEERS  
 KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS 1996 1000

REV	DATE	BY	DESCRIPTION

SCALE:	3/8" = 1'-0"
DESIGNED	YK/CL
DRAWN	CL/AR
CHECKED	YK

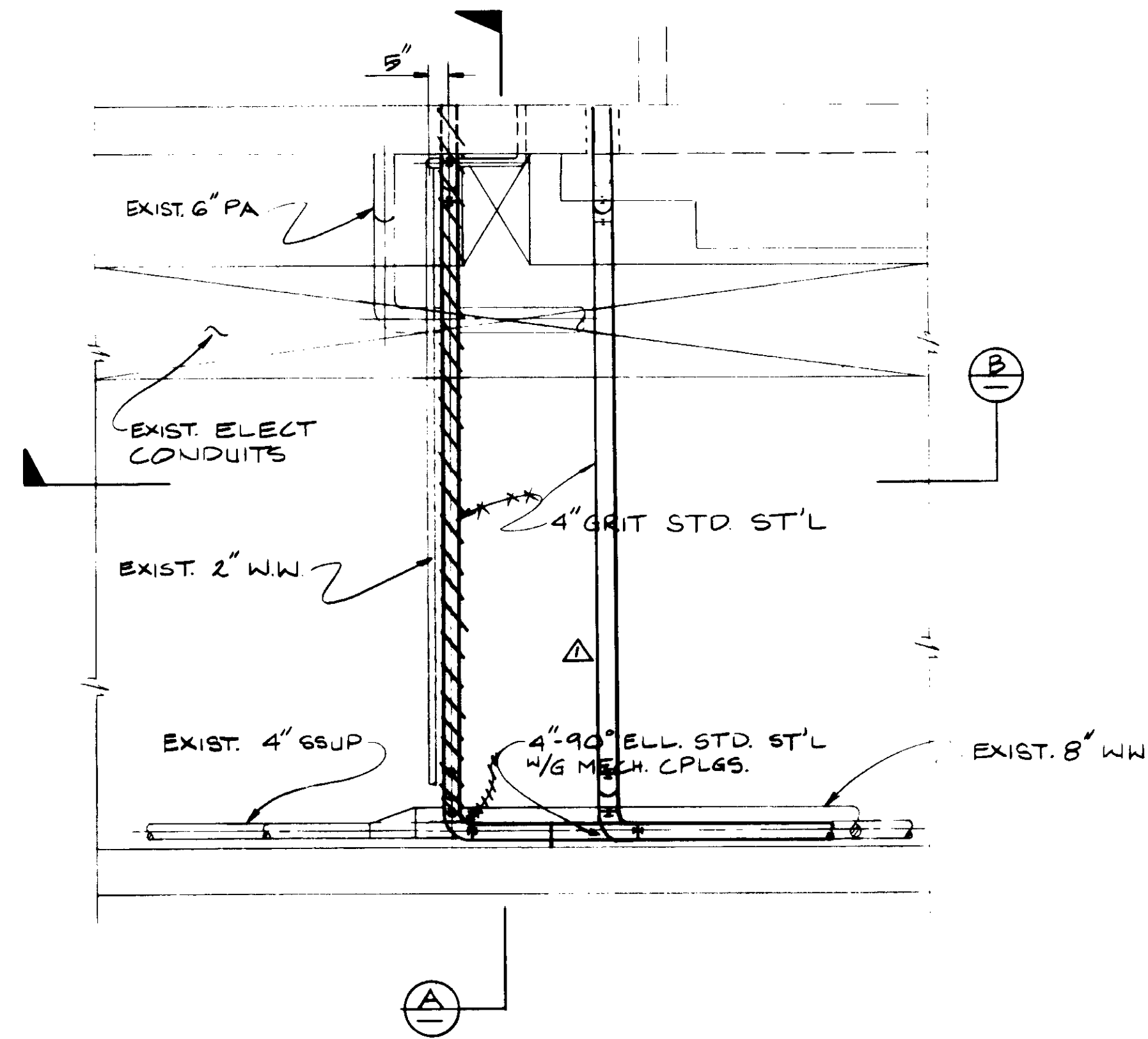
SUBMITTED	<i>[Signature]</i>	14038	8-7-87
	KALEX ENGINEERS	R.C.E. NO.	DATE
		513	
	ALEXANDER ENGINEERS	R.C.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

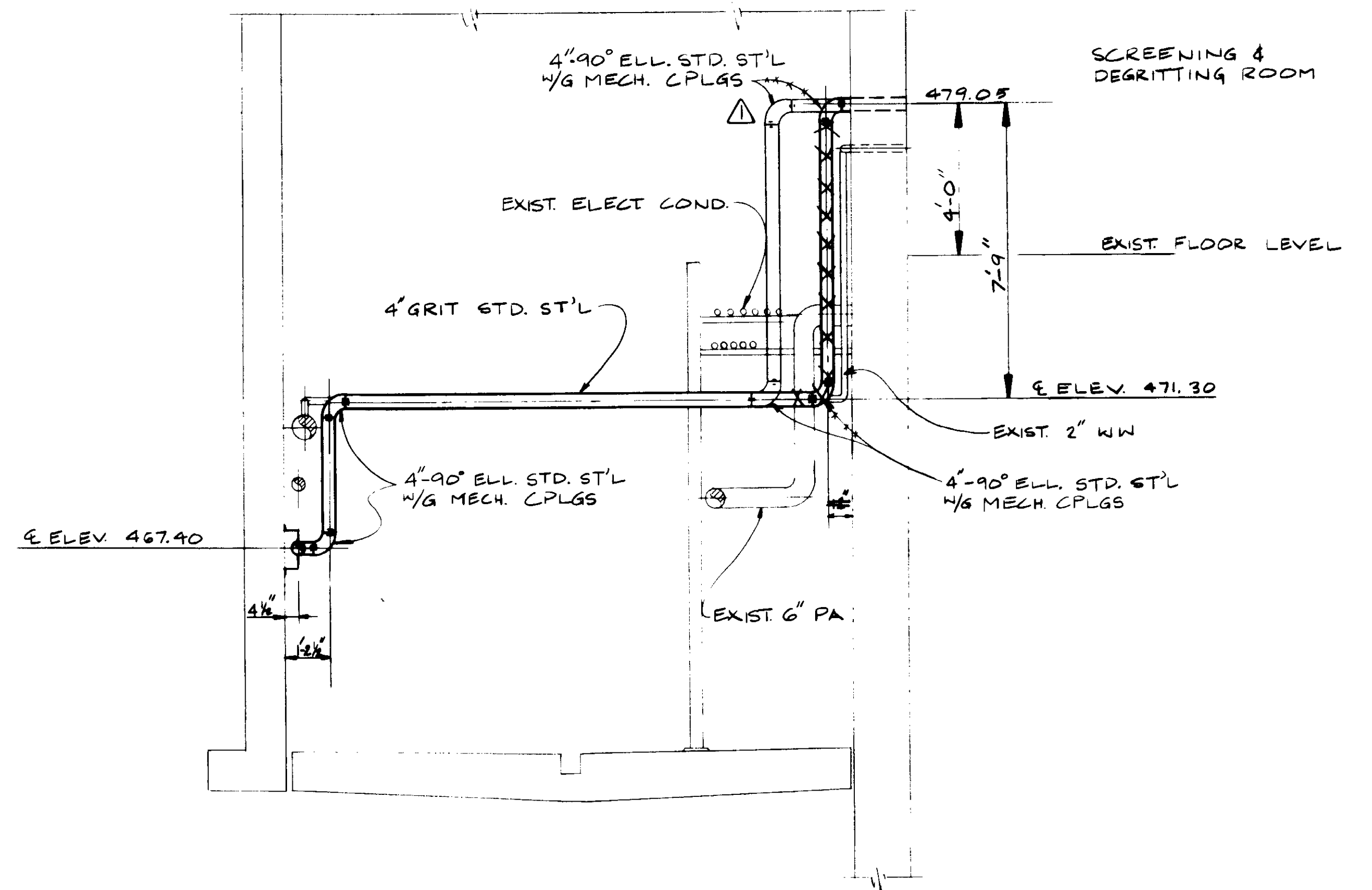
<b>LAS VIRGENES MUNICIPAL WATER DISTRICT</b>	
<b>TAPIA WATER RECLAMATION FACILITY EXPANSION III</b>	
GRIT LINE - I	

SHEET  
 YP-11

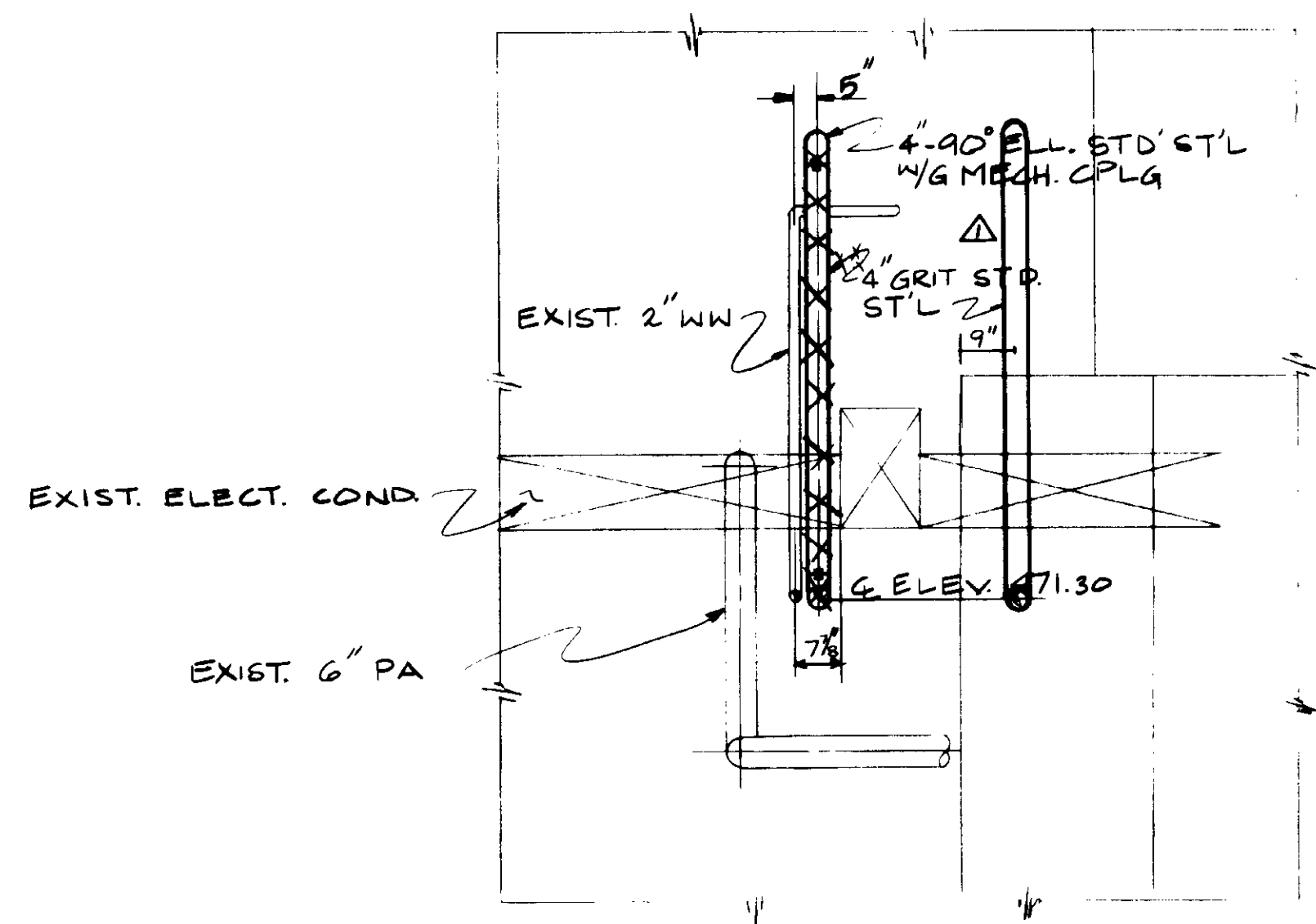




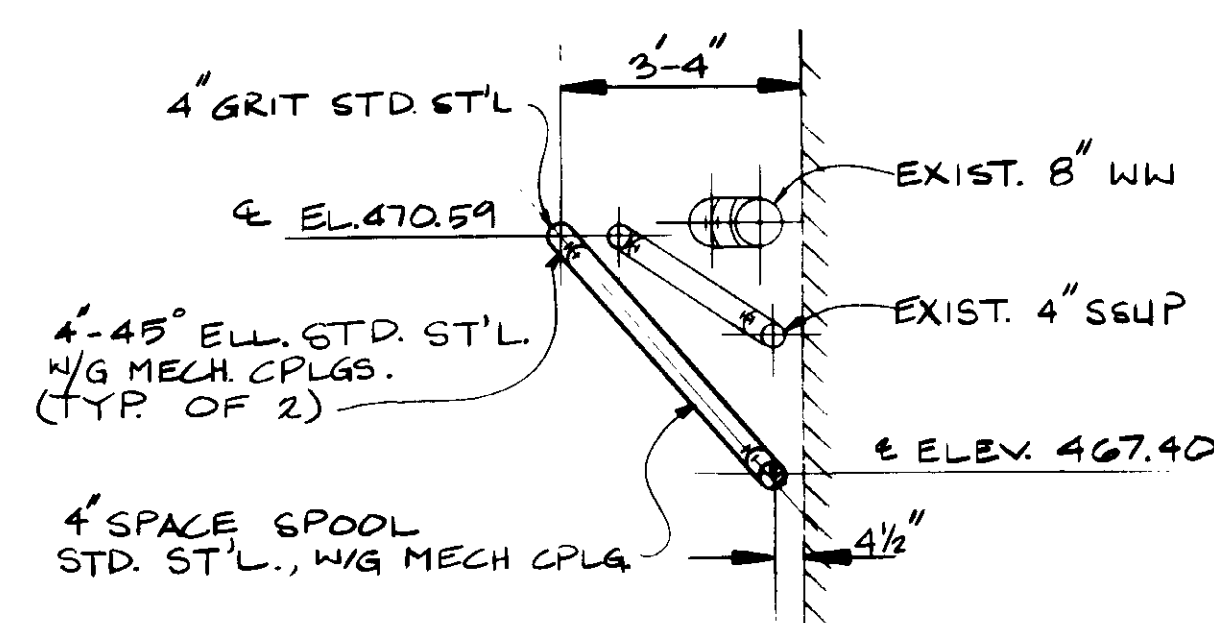
GALLERY PLAN DETAIL



SECTION A



SECTION B



SECTION C

04059

RECORD DRAWINGS  
 For State Information, By KHEWIT PACIFIC CORP.  
 KATSUMA CONSULTING ENGINEERS JUNE 1988



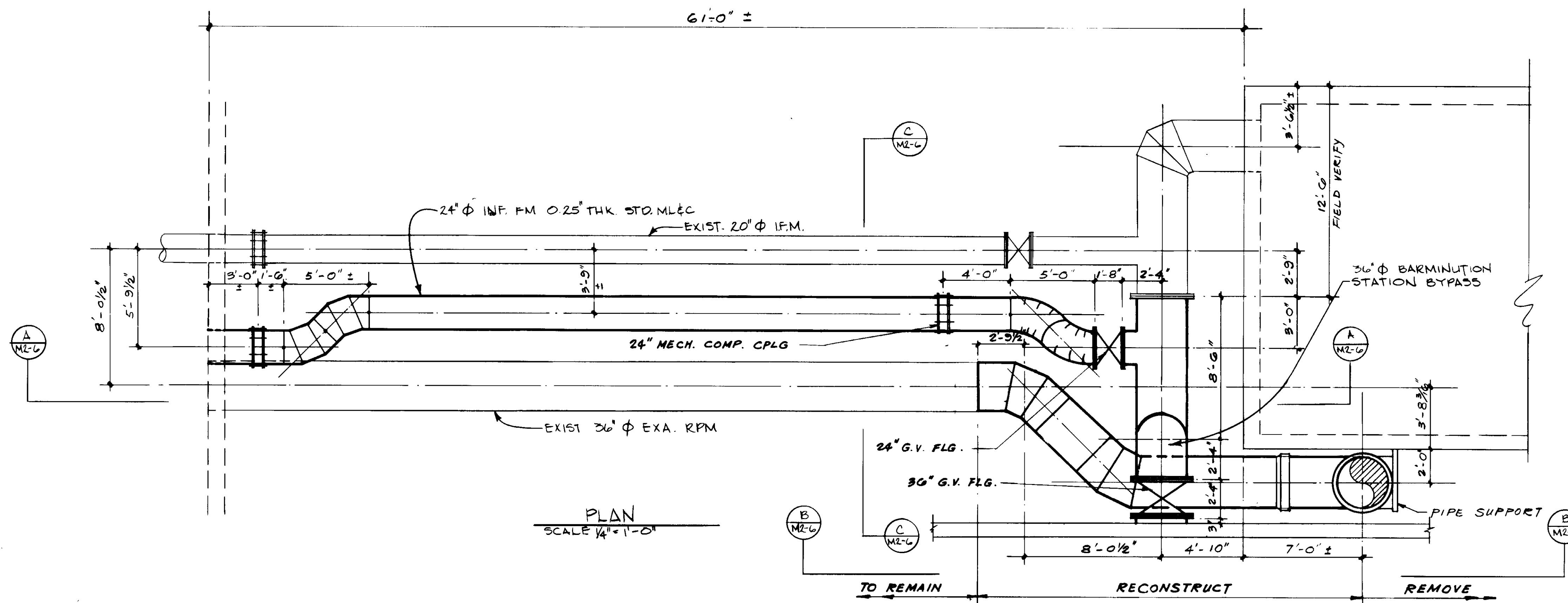
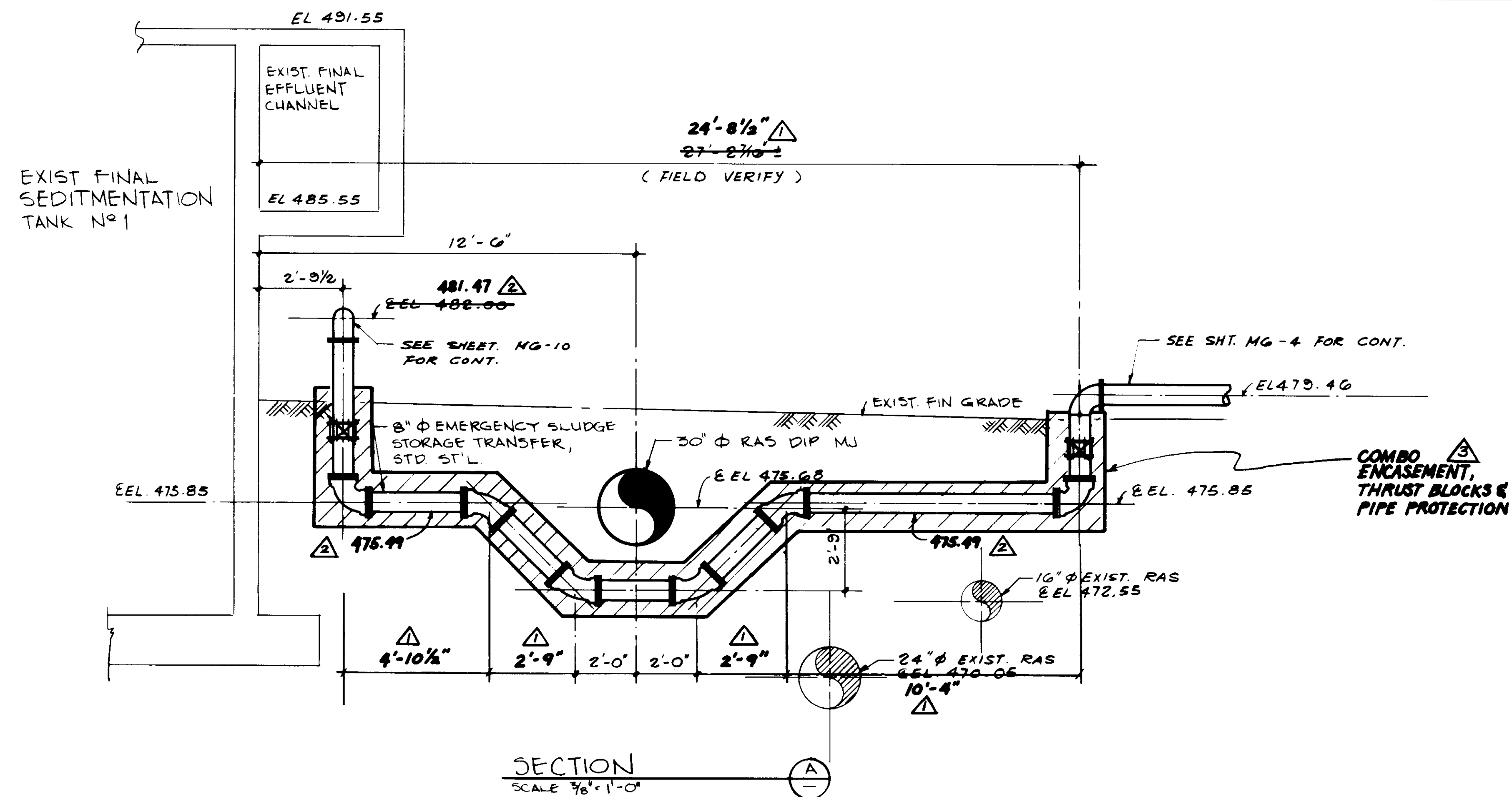
REV	DATE	BY	DESCRIPTION
1	4-26-87	A.B.	REV. PER K.P.C.

SCALE: 3/8" = 1'-0"	DESIGNED YK/ICL	SUBMITTED KATSUMA CONSULTING ENGINEERS	14038	8-7-87
DRAWN Y.K.	CHECKED	ALEXANDER ENGINEERS	R.C.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 GRIT LINE - II

SHEET  
 YP-12



04060

RECORD DRAWING  
KATSUMA CONSULTING ENGINEERS



REV	DATE	BY	DESCRIPTION
1	4-25-87	A.B.	REV. PER K.P.C.
2	4-25-87	A.B.	REV. PER K.P.C.
3	4-25-87	A.B.	REV. PER K.P.C.

SCALE: AS NOTED  
DESIGNED: YK/KOH  
DRAWN: S.K.  
CHECKED: YK

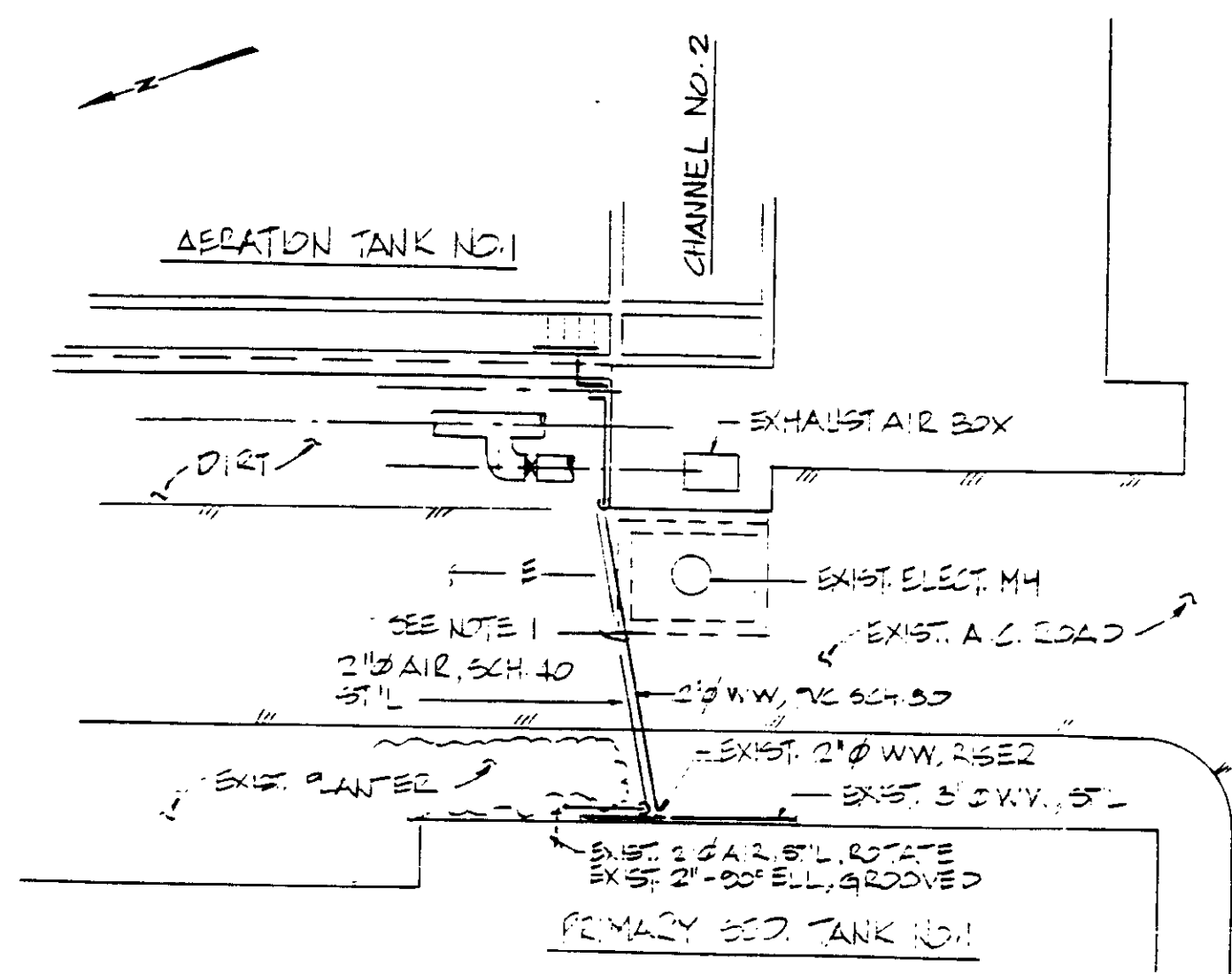
SUBMITTED: 8-7-87  
KATSUMA CONSULTING ENGINEERS  
ALEXANDER ENGINEERS

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
INFLUENT FORCE MAIN & EMERGENCY  
SLUDGE TRANSFER LINE, PROFILE

SHEET  
YP-13

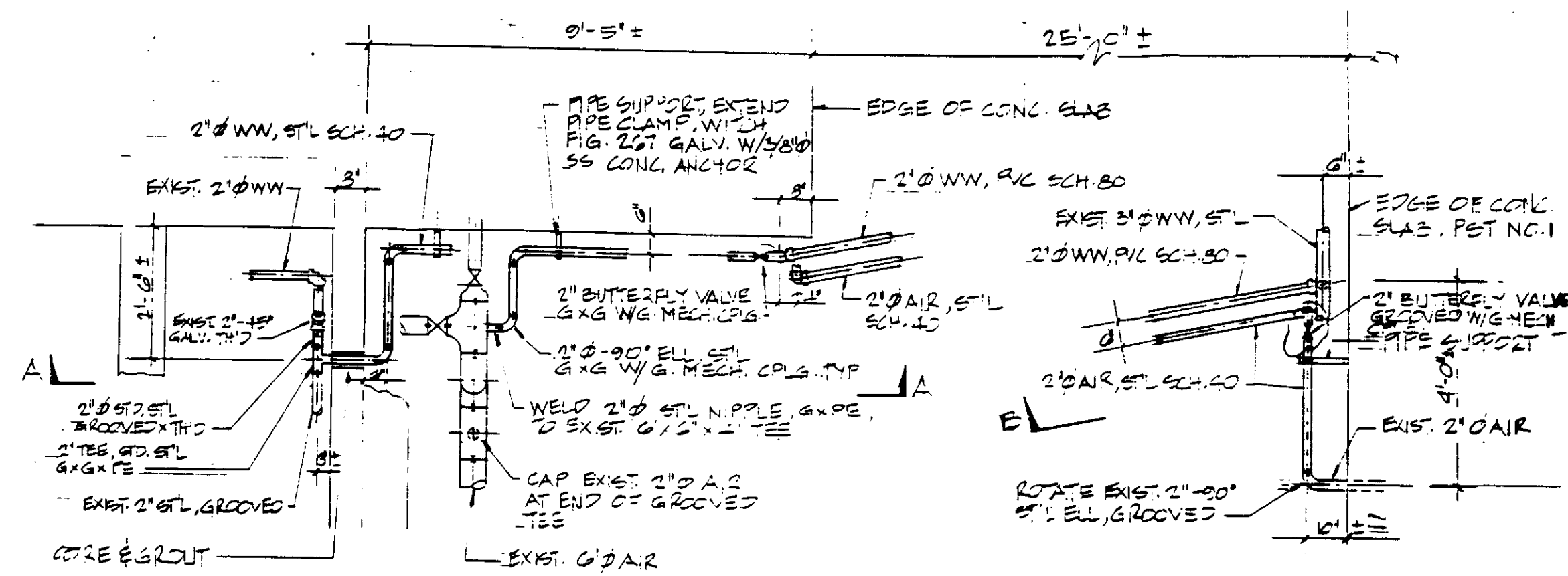




PLAN  
1" = 1'-0"

NOTES:

1. INSTALL 2" AIR & 2" WW IN COMMON TRENCH 18" BELOW EXIST. A.C. ROAD AND ENCASE IN CONC. 6" MIN. ALL AROUND.
2. DISTANCE BETWEEN PIPES SHALL BE 6" MIN.
3. POINT OF CONNECTION OF 2" WW TO EXIST. 2" BUTTERFLY VALVE GROOVED.
4. POINT OF CONNECTION OF 2" AIR TO EXIST. 2" 90° ELL GROOVED.

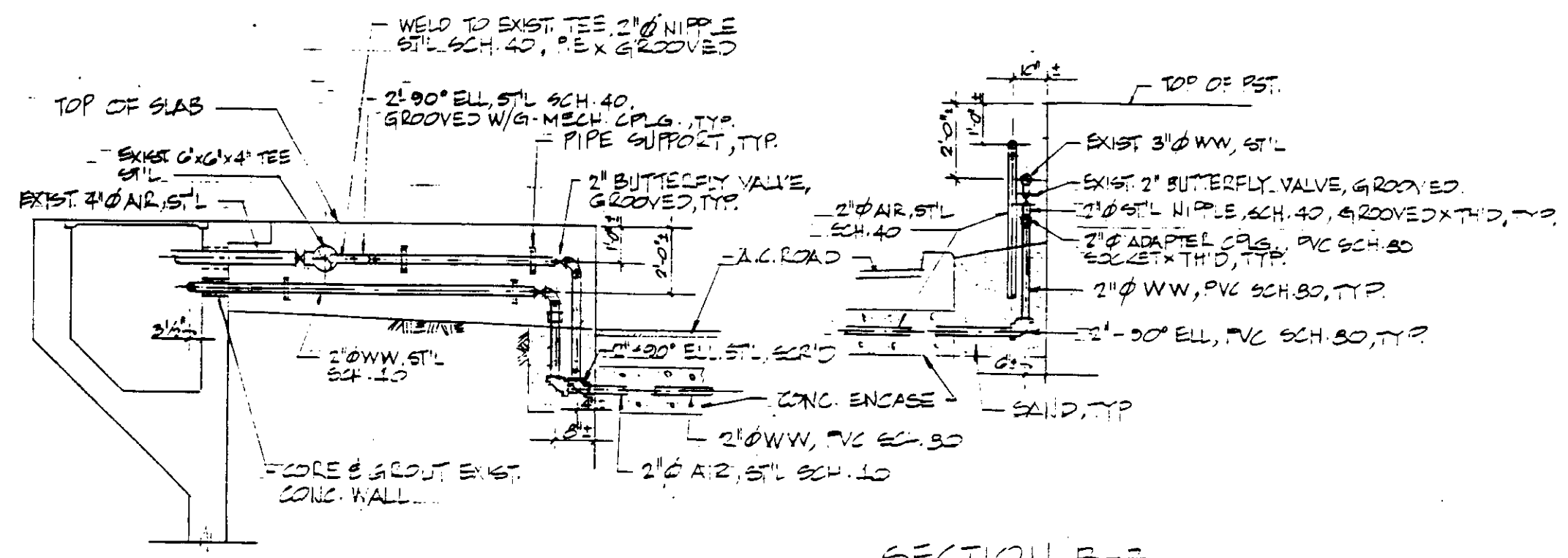


AERATION TANK NO. 1  
CONNECTION DETAIL  
NOT TO SCALE

AT PRIMARY SED. TANK NO. 1  
CONNECTION DETAIL  
NOT TO SCALE

PH-10	REPLACEMENT OF 2" WW & AIR (BETWEEN AT NO. 1 & PST NO. 1)	SKETCH A
-------	---	----------

PH-10	REPLACEMENT OF 2" WW & AIR (BETWEEN AT NO. 1 & PST NO. 1)	SKETCH B
-------	---	----------

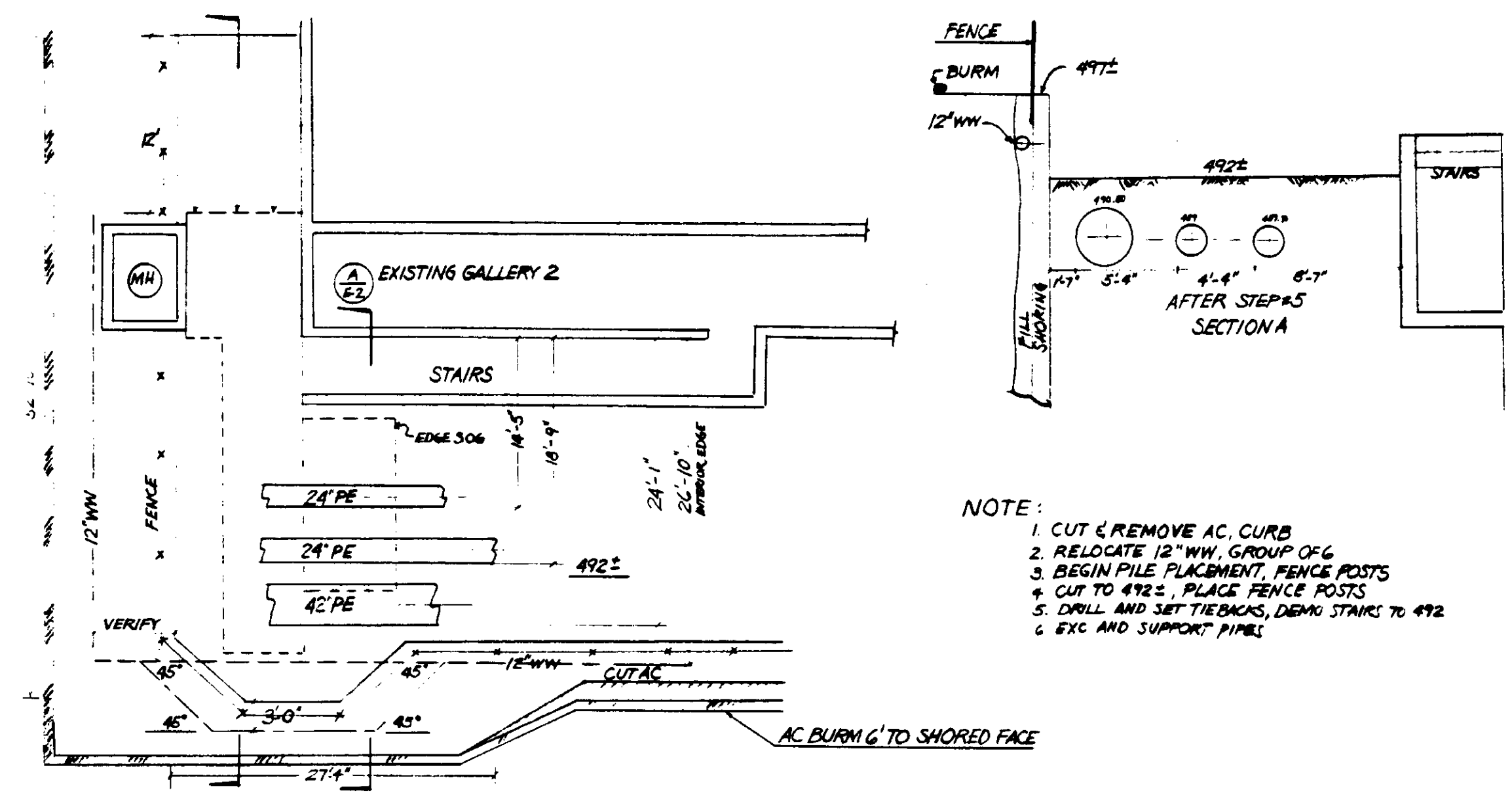


SECTION A-A  
NOT TO SCALE

SECTION B-B  
NOT TO SCALE

NOTE: 2" Ø STL SHALL BE TAPE WRAPPED PER SPECS AND WRAPPED IN POLYVINYL SHEET PRIOR TO BACKFILL

PH-10	REPLACEMENT OF 2" WW & AIR (BETWEEN AT NO. 1 & PST NO. 1)	SKETCH C
-------	---	----------



- NOTE:
1. CUT & REMOVE AC CURB
  2. RELOCATE 12" WW GROUP OF 6
  3. BEGIN PILE PLACEMENT, FENCE POSTS
  4. CUT TO 492±, PLACE FENCE POSTS
  5. DRILL AND SET TIEBACKS, DEMO STAIRS TO 492
  6. EXC AND SUPPORT PIPES

PERMANENT RELOCATION 12" WW DWG NO E-9

REV	DATE	BY	DESCRIPTION

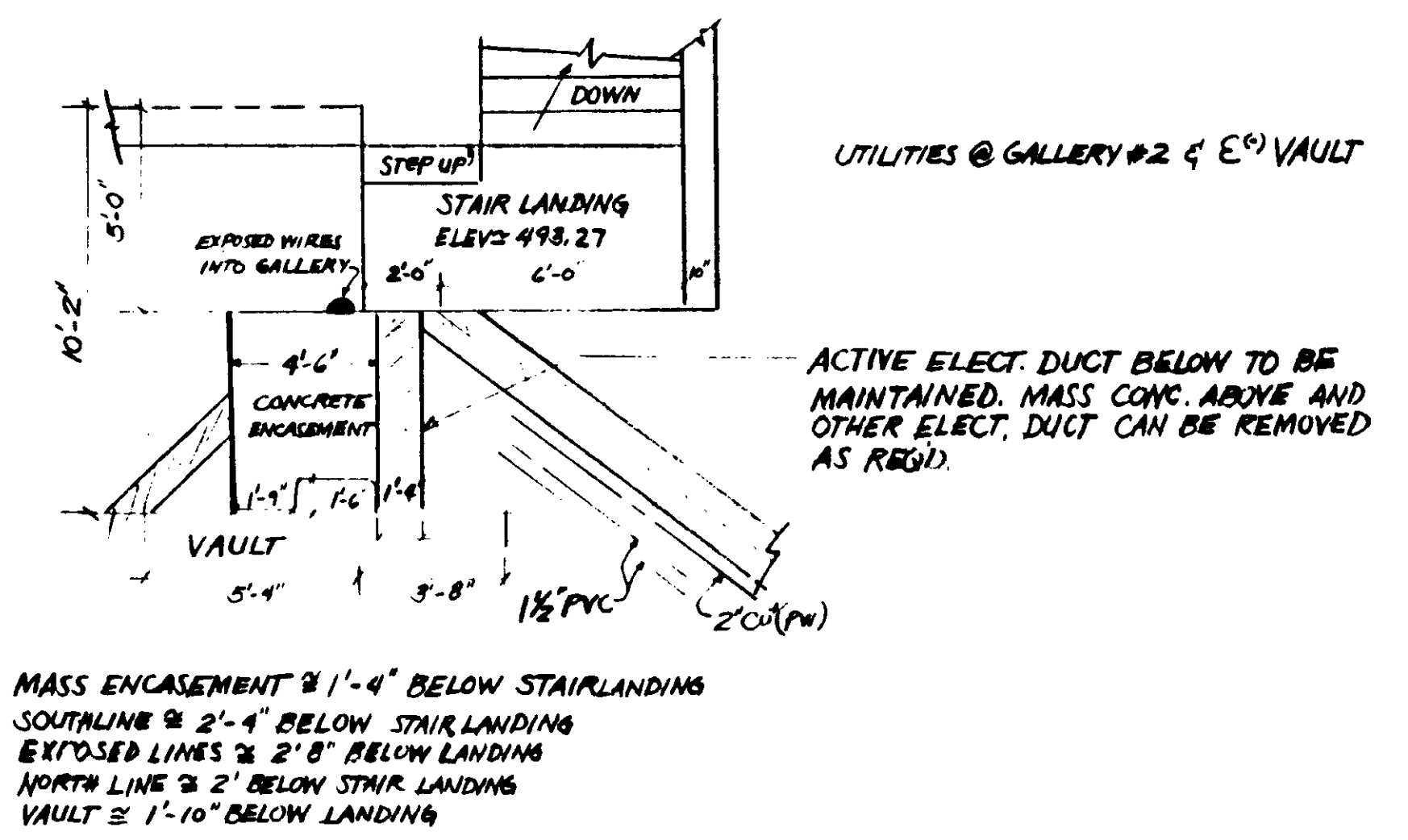
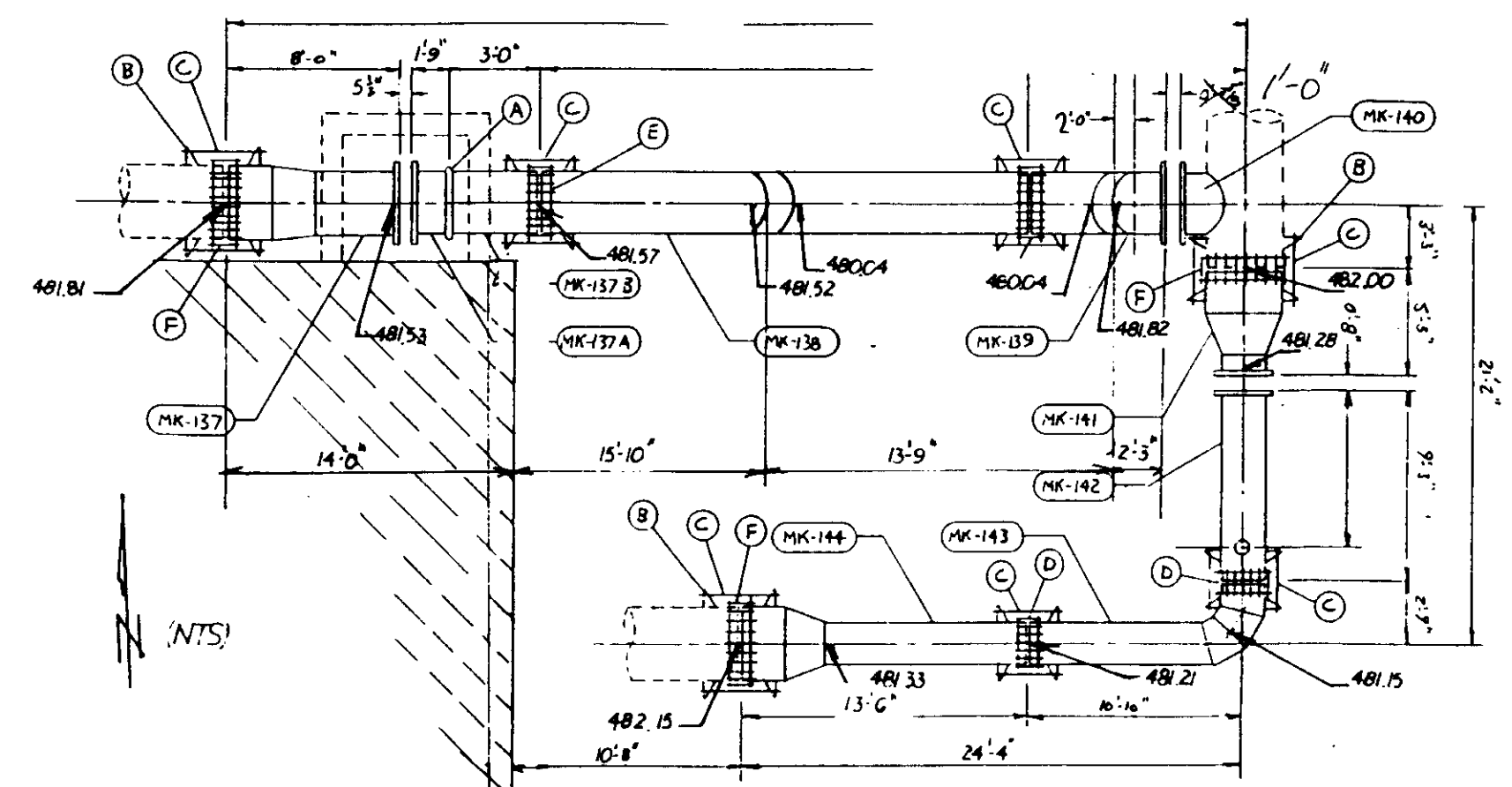
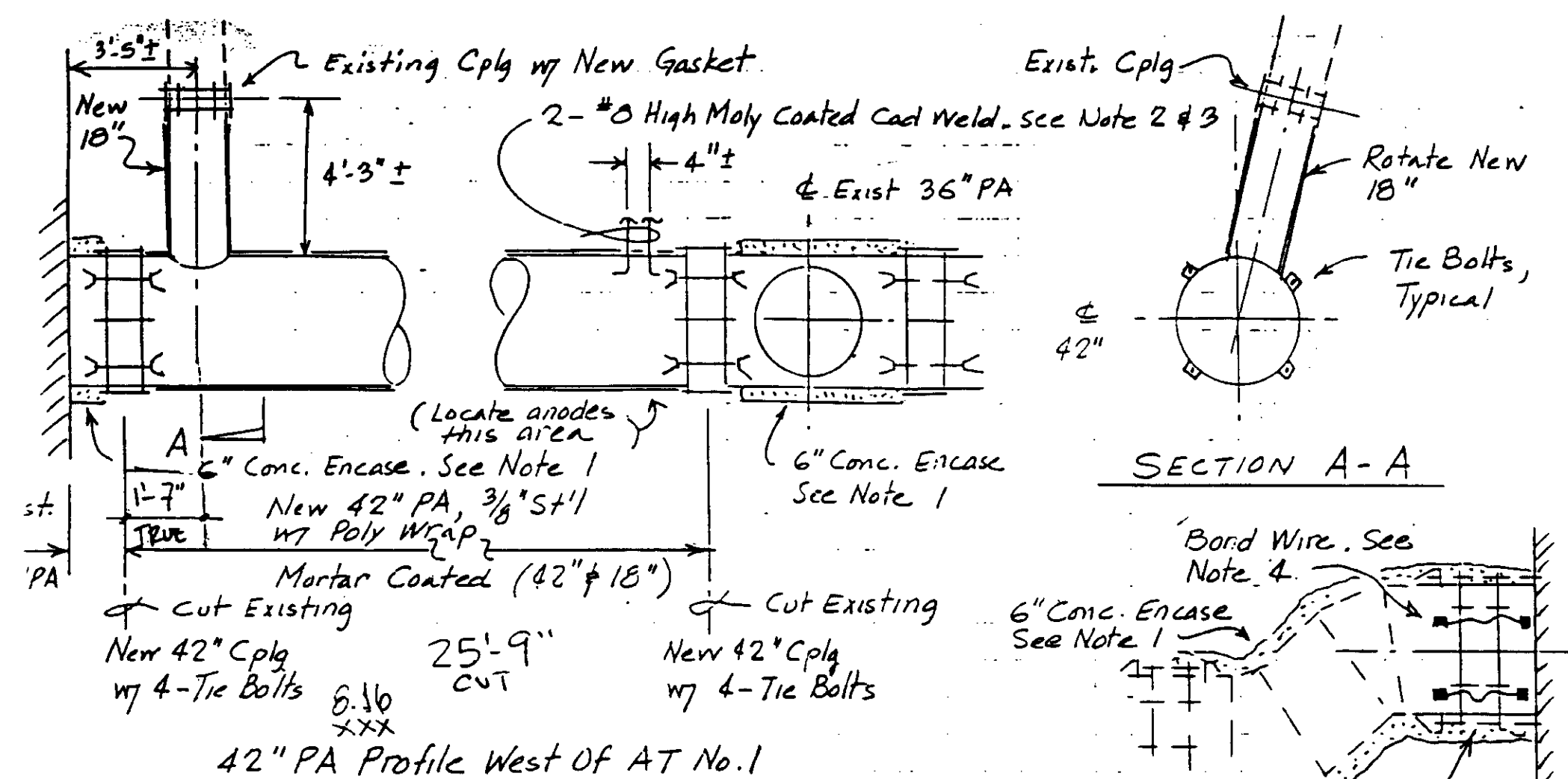
SCALE:	DESIGNED	CHECKED

SUBMITTED	14038
KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
ALEXANDER ENGINEERS	R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

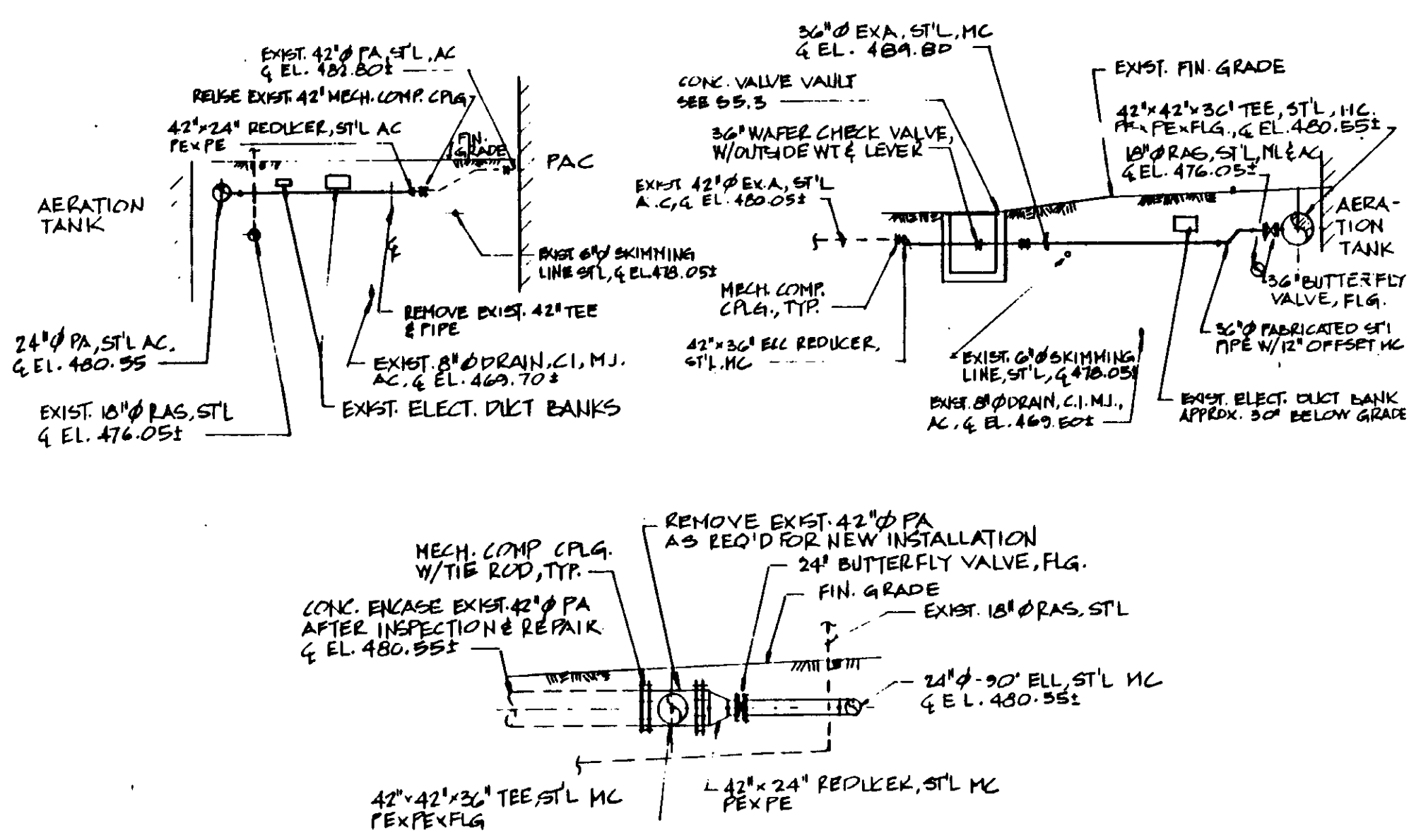
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**





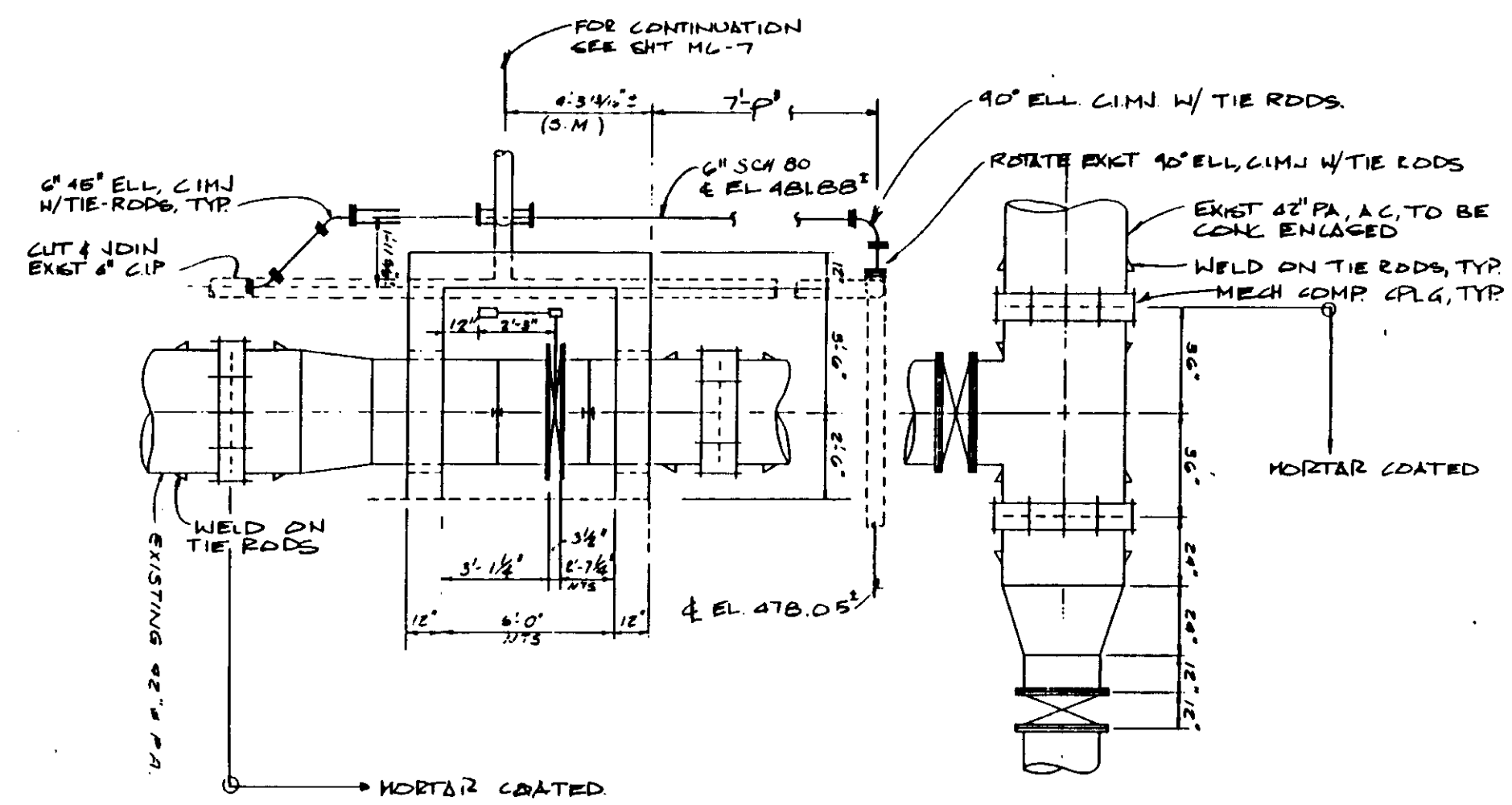
UTILITIES LOCATION

- Notes:
- Wire mesh reinforcing. Poly wrap
  - See LVMWD Std Dwg No. 39 for typical installation.
  - Terminate per LVMWD Std Dwg No. 38
  - Bond at 2 places. Wire: #8 High Moly Coated. Cad weld per LVMWD Std Dwg No. 39
  - Place 4-50# Galvo Mag anodes at 3' c.c. below invert of 42" PA. Connect each w/ #8 High Moly Coated wire and terminate at vard box
- 42" PA At PAC Sta "B"  
Pending Item No. 63



PROCESS AIR PROFILES & DETAILS

SKETCH SKYP-4B



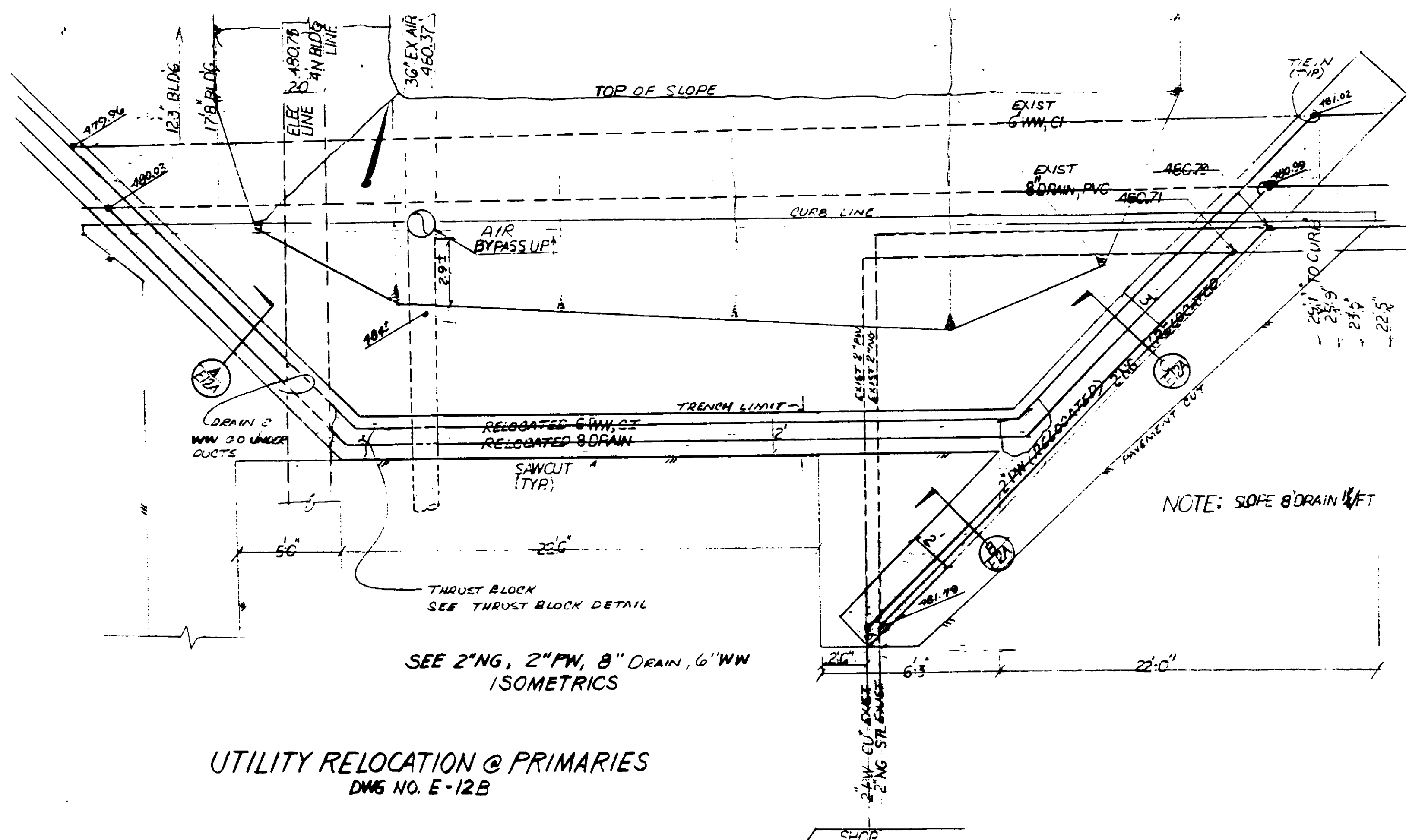
PROCESS AIR DETAIL

SKETCH SKYP-4C

DESIGNER  
KALEX ENGINEERS  
KATSURA CONSULTING ENGINEERS / ALEXANDER ENGINEERS  
Ventura, California / Glendora, California

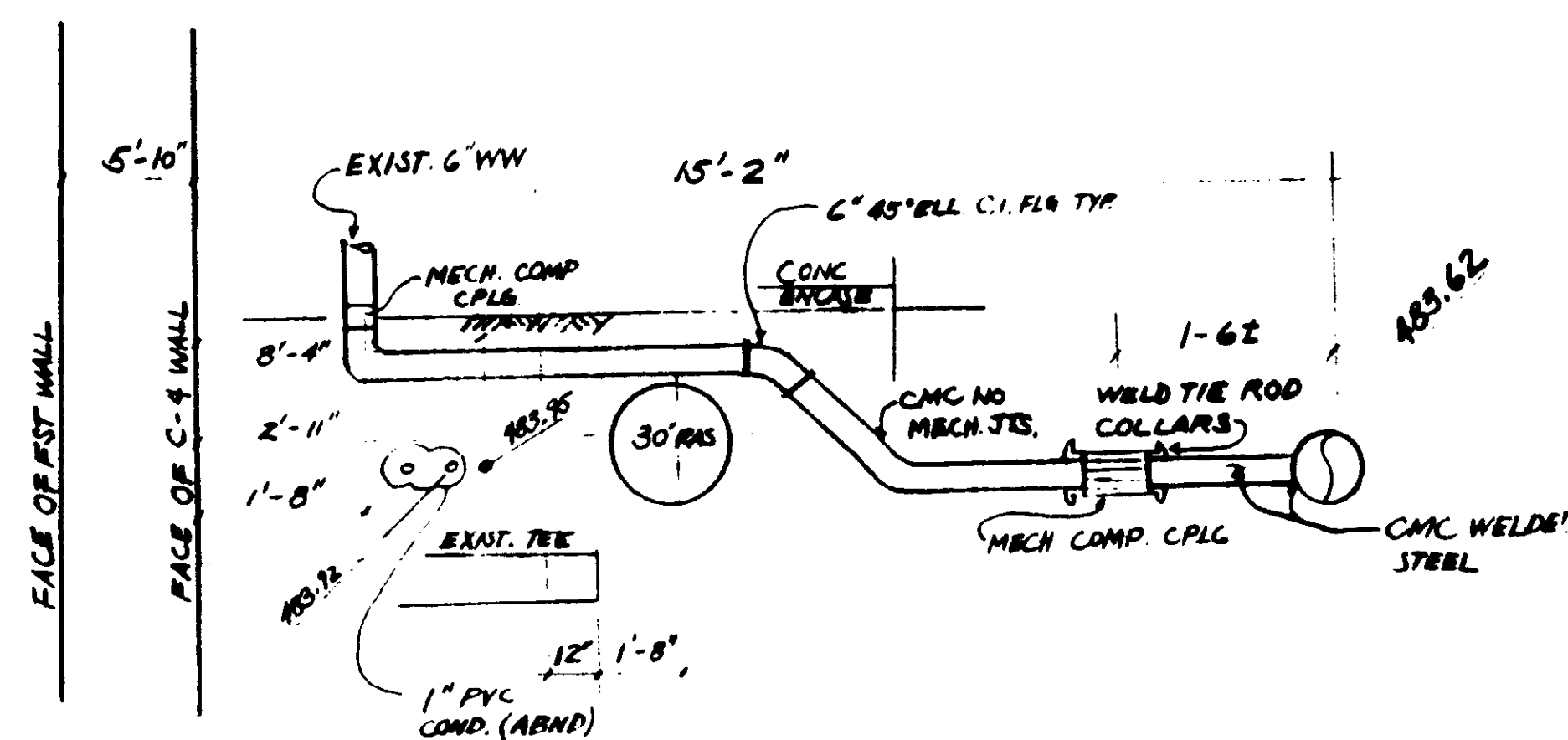
04063

SCALE:			SUBMITTED: 10038			KALEX ENGINEERS			LAS VIRGENES MUNICIPAL WATER DISTRICT			SHEET
DESIGNED:			KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE			KATSURA CONSULTING ENGINEERS / ALEXANDER ENGINEERS			TAPIA WATER RECLAMATION FACILITY EXPANSION III			VP-10
DRAWN:			813			Katsura Consulting Engineers / Alexander Engineers						
CHECKED:			ALEXANDER ENGINEERS R.C.S.E. NO. DATE			Ventura, California / Glendora, California						
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION					

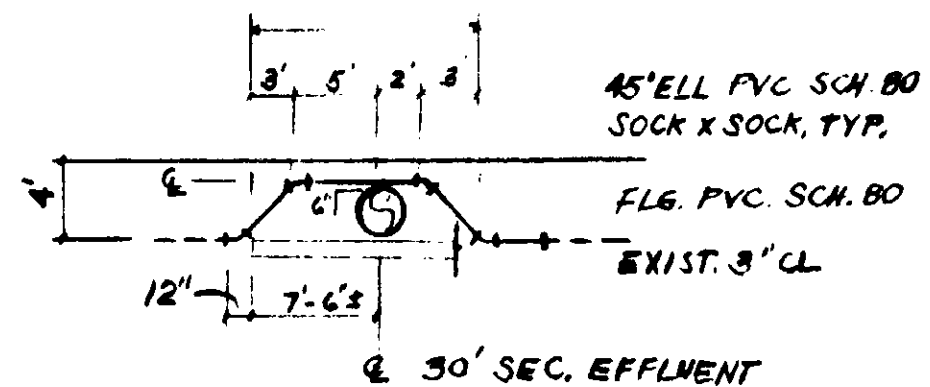


SEE 2"NG, 2"FW, 8" DRAIN, 6"WW ISOMETRICS

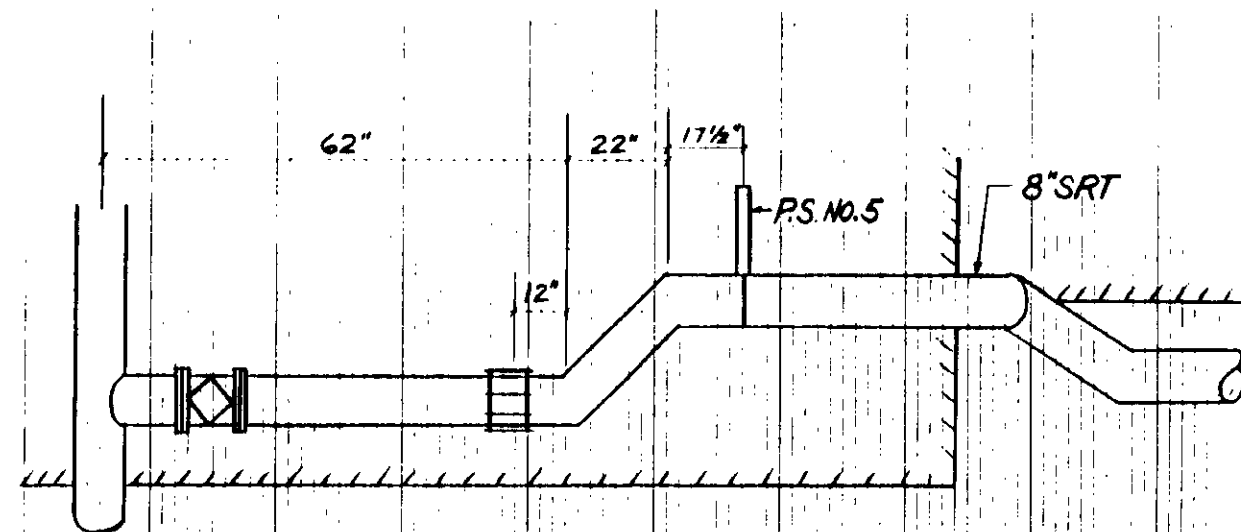
**UTILITY RELOCATION @ PRIMARIES**  
DWS NO. E-12B



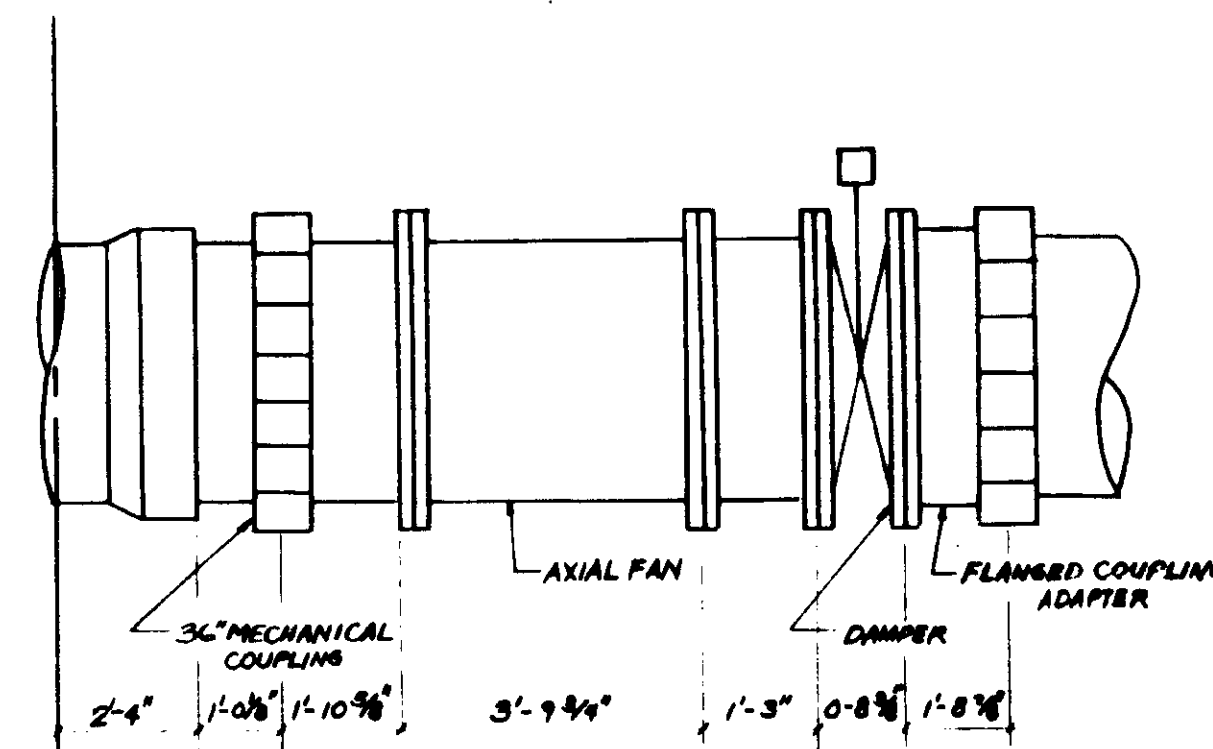
SECT A 10" U.W(WW) RELOCATION AT 6" STRAINER



3"CL RELOCATION AT 30" SEC. EFFLUENT



GALLERY NO. 5 SOUTH WALL SKETCH SKM6-4



36" EXA FAN DETAIL

RECORD DRAWING  
For Plans Prepared by GREAT PACIFIC CORP.  
*[Signature]*  
KATSUMA CONSULTING ENGINEERS JUN 1988

04064

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

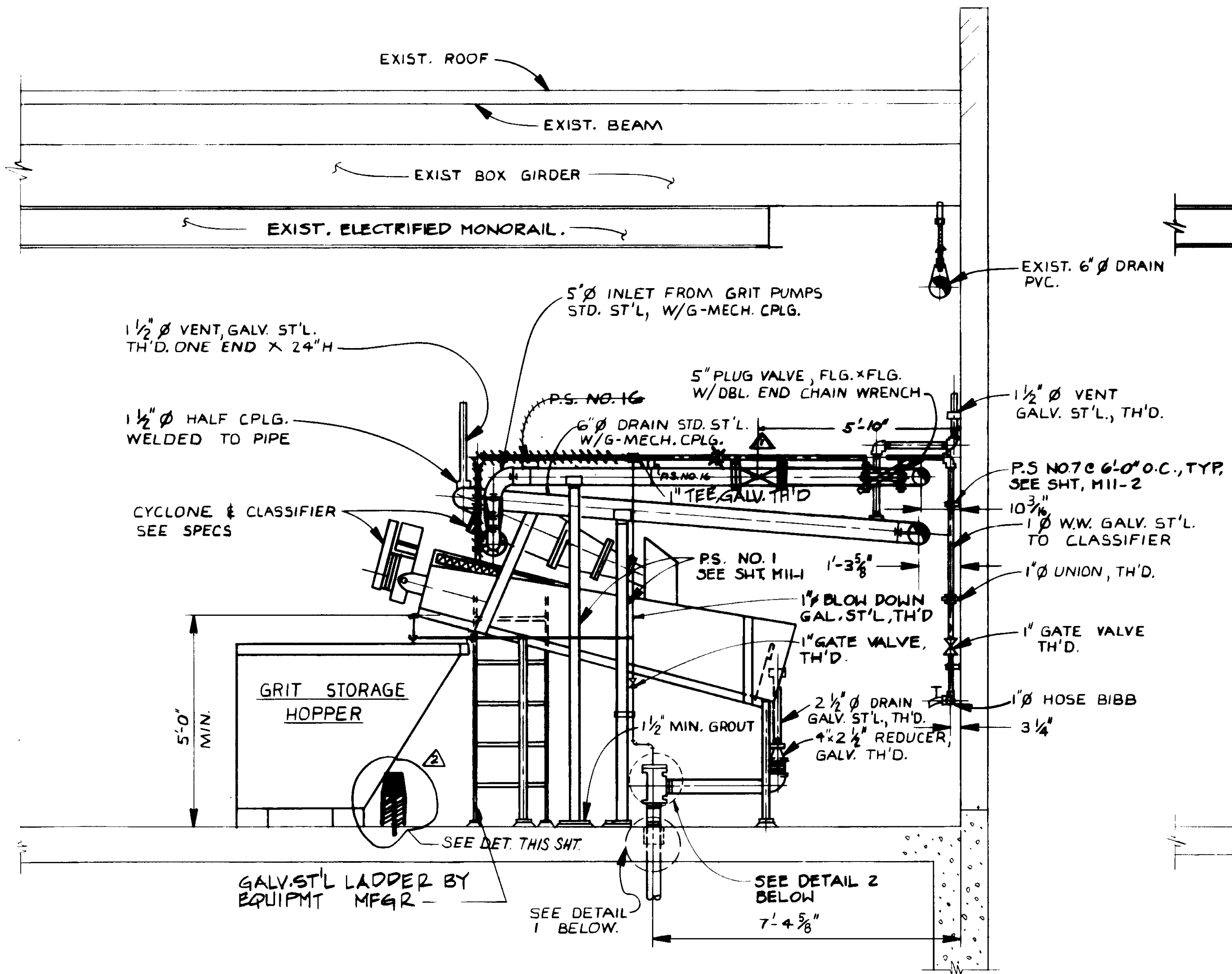
SCALE:	DESIGNED	SUBMITTED	14038
	DRAWN	KATSUMA CONSULTING ENGINEERS	R.C.E. NO. DATE
	CHECKED	ALEXANDER ENGINEERS	618
			R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

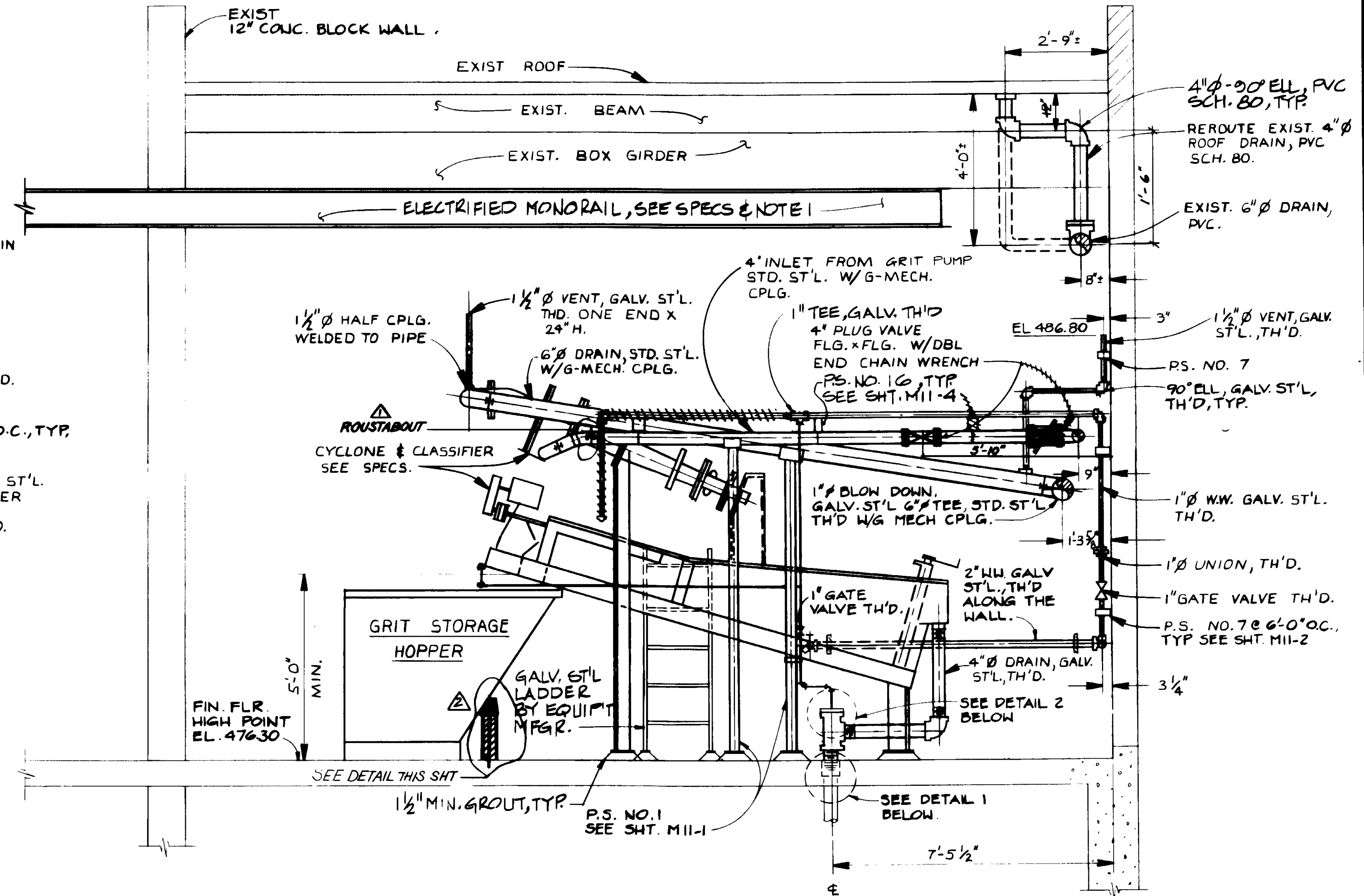
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

ONEST  
YP-17



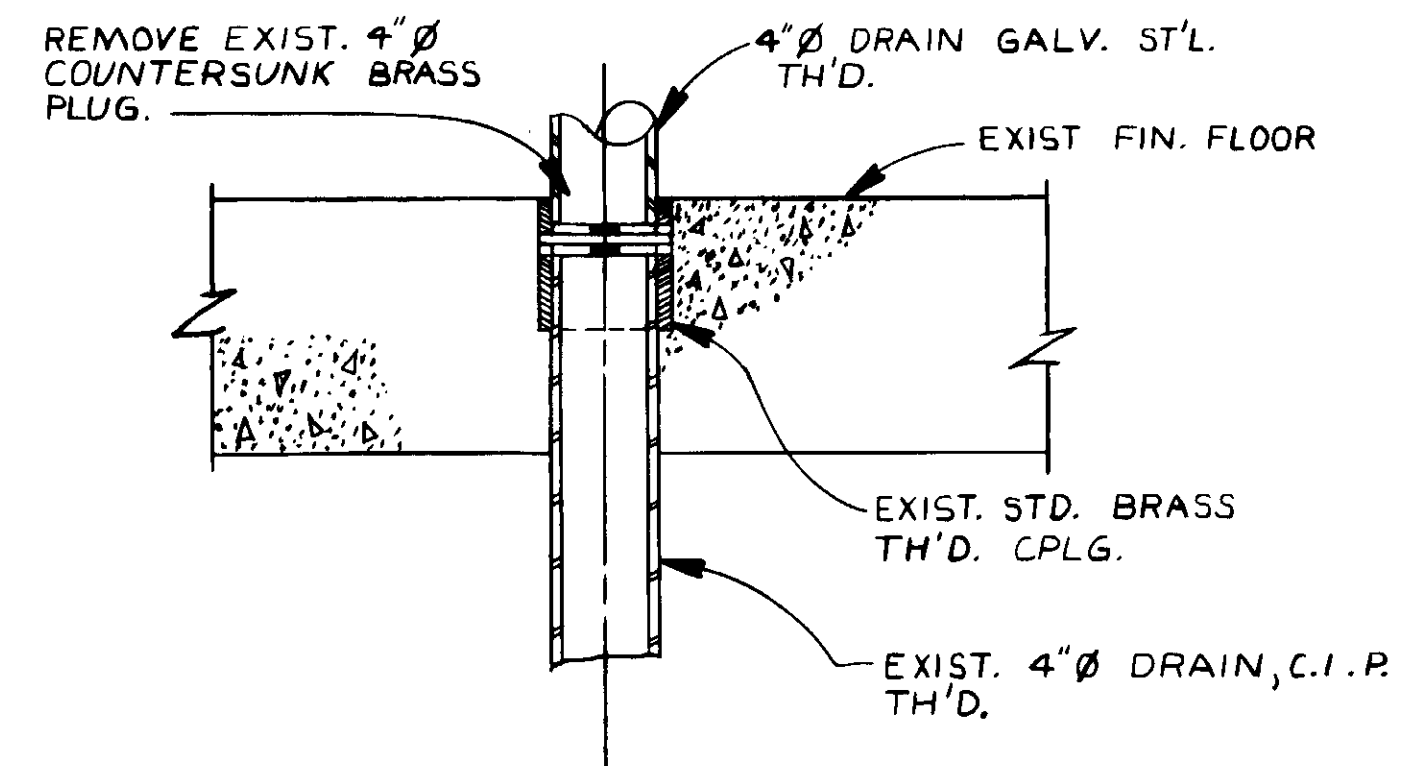


SECTION A  
SCALE: 1/2" = 1'-0"

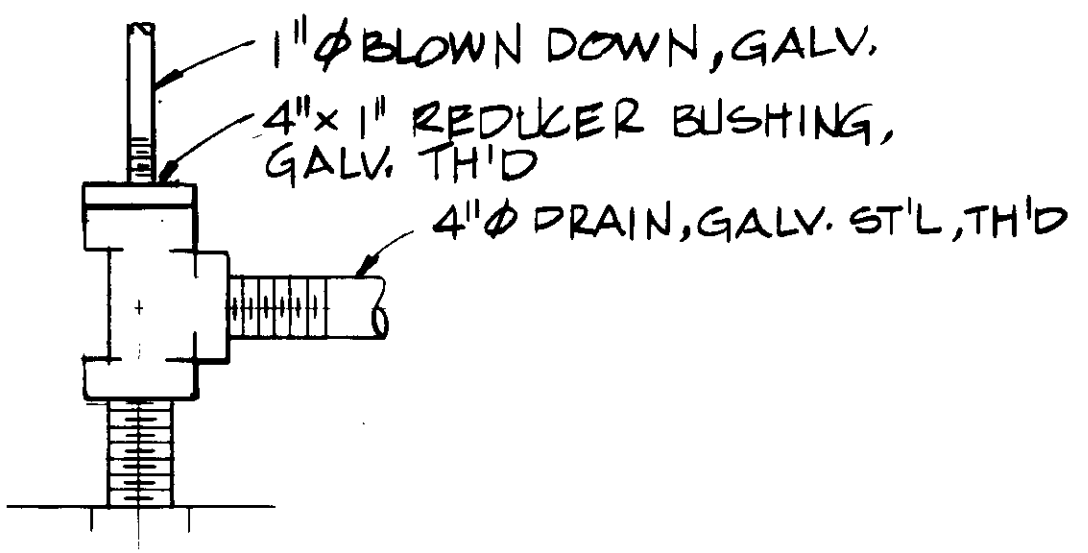


SECTION B  
SCALE: 1/2" = 1'-0"

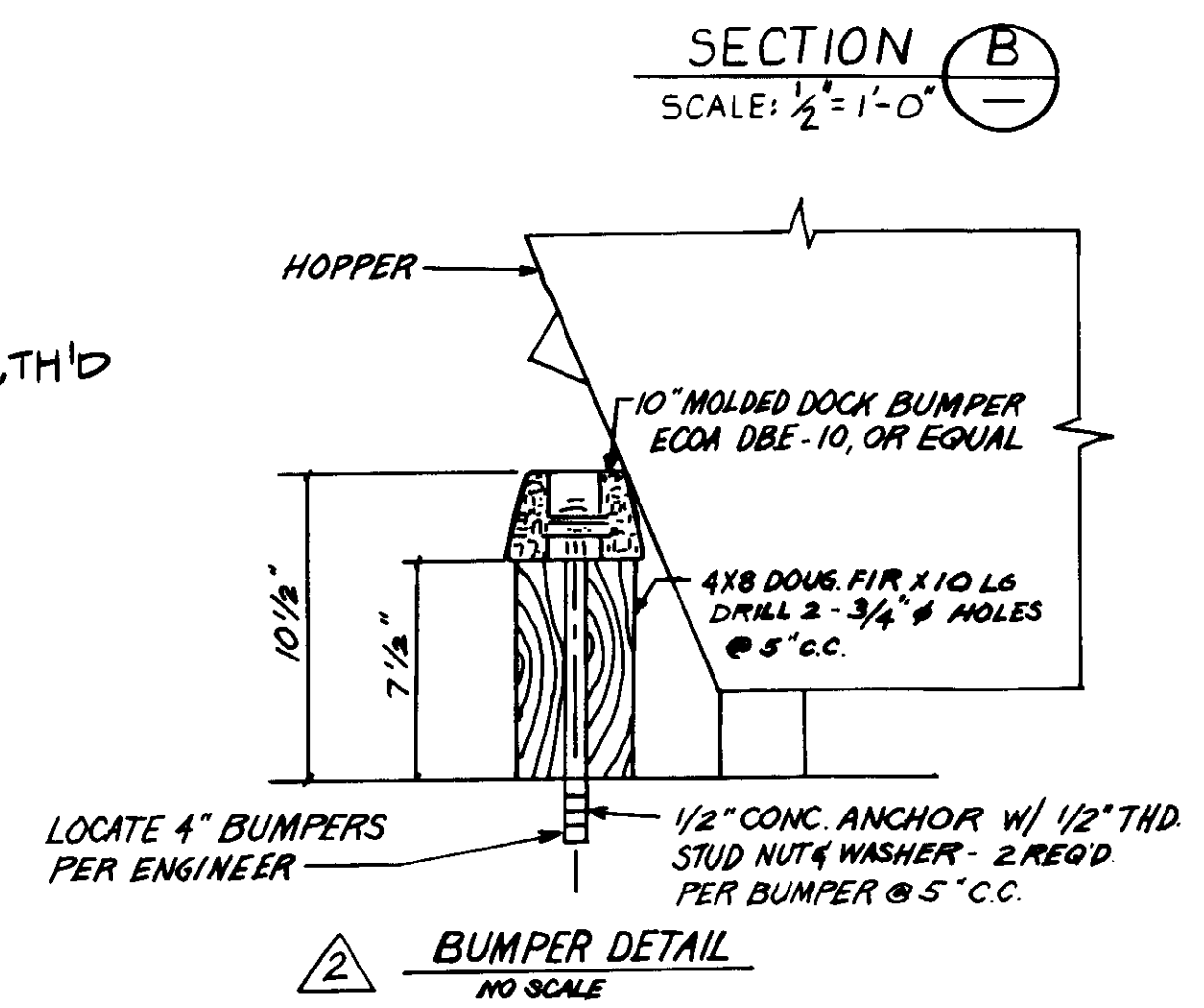
NOTE:  
1. USE EXISTING BOLT HOLES (FIELD VERIFY LOCATION) IN EXIST. BOX GIRDER TO SUPPORT NEW SECTION OF ELECTRIFIED MONORAIL AS REQ'D BY MONORAIL MANUFACTURER.



DETAIL 1  
N.T.S.



DETAIL 2  
N.T.S.



BUMPER DETAIL  
NO SCALE

REV	DATE	BY	DESCRIPTION

SCALE:	AS NOTED
DESIGNED:	A.R./U.B.
DRAWN:	Y.K.
CHECKED:	

SUBMITTED:	14038	8-7-87
DESIGNED:	A.R./U.B.	R.C.E. NO.
DRAWN:	Y.K.	DATE
CHECKED:		

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SCREENING & DEGRITTING ROOM, SECTION - I

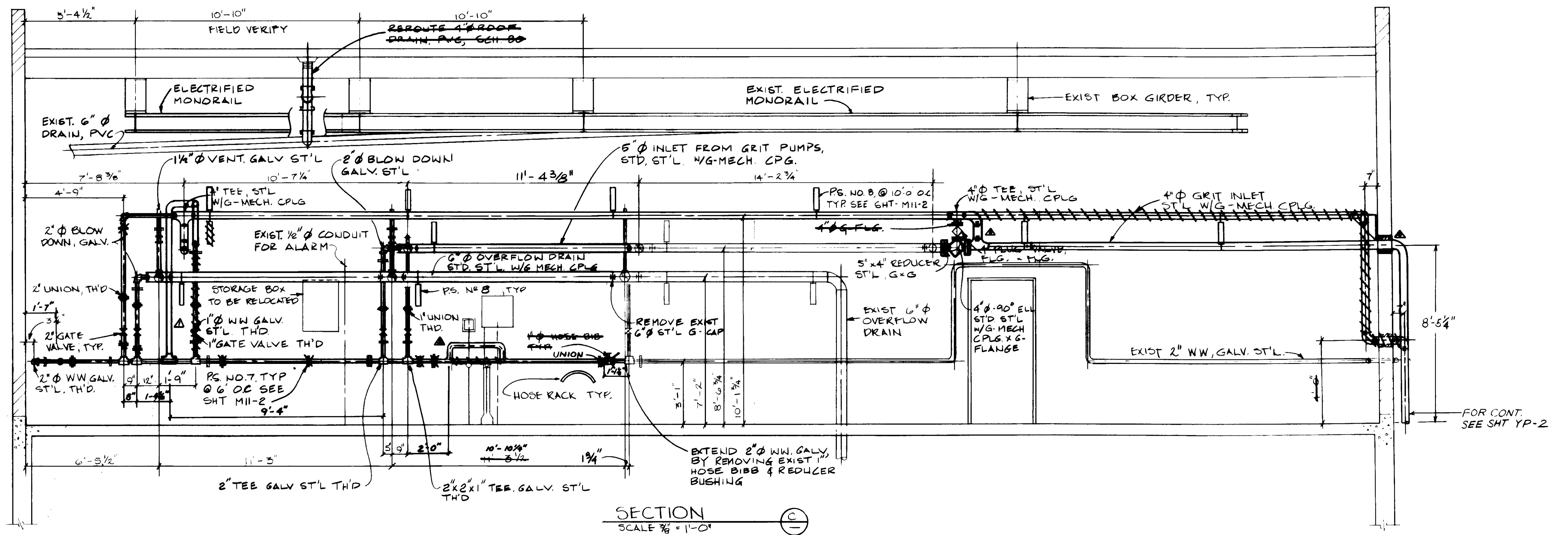
SHEET  
**M1-2**

04066



RECORD DRAWINGS  
KALEX ENGINEERS





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

04067

RECORD DRAWING  
KATSUMURA CONSULTING ENGINEERS



REV	DATE	BY	DESCRIPTION
1	8-7-87	A.B.	REV. PER K.P.C.
2	8-7-87	A.B.	REV. PER K.P.C.
3	8-7-87	A.B.	REV. PER K.P.C.
4	8-7-87	A.B.	REV. PER K.P.C.

SCALE: AS NOTED

DESIGNED	Y.K./C.S.
DRAWN	A.R./J.B.
CHECKED	Y.K.

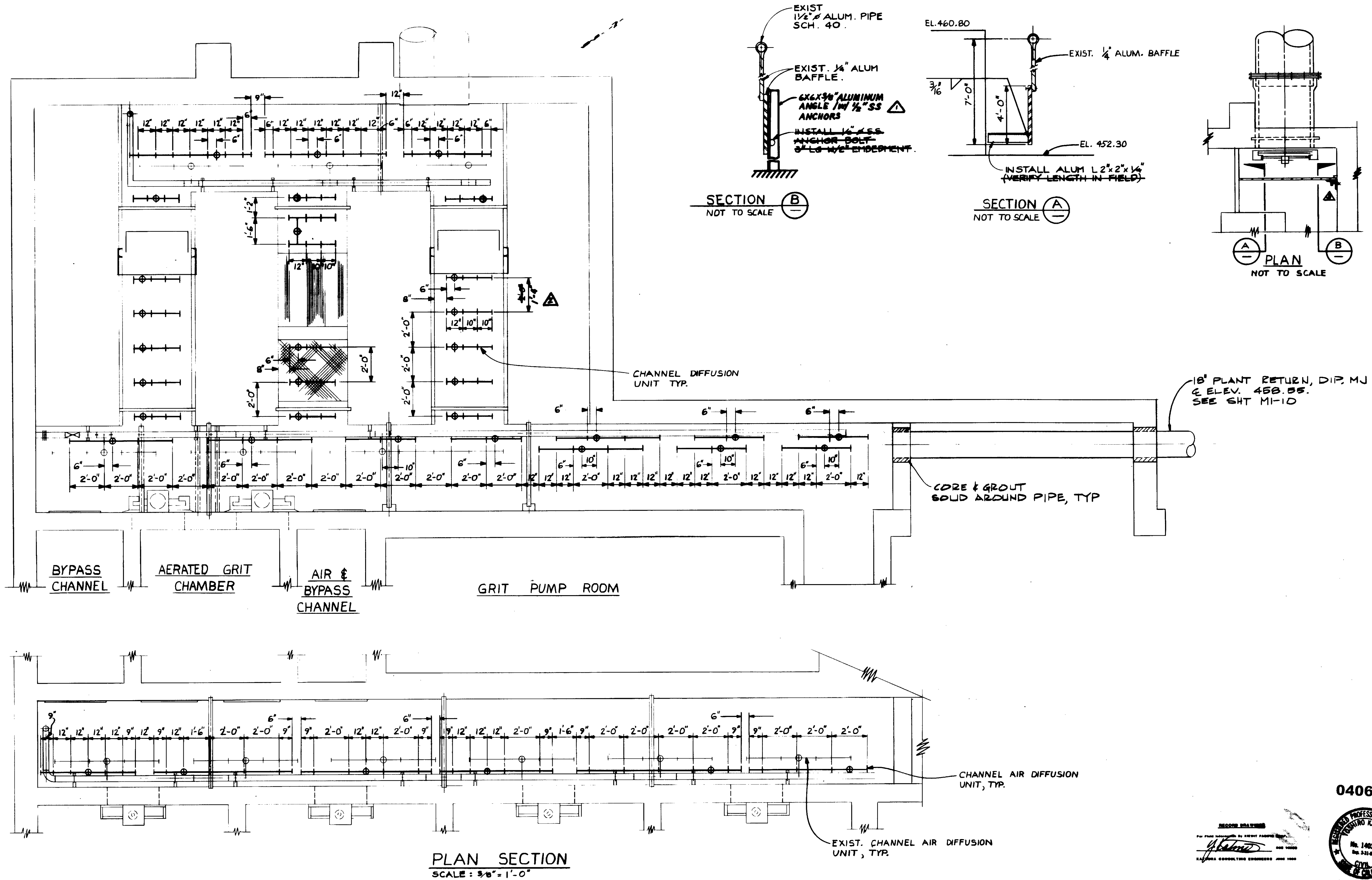
SUBMITTED	14038	8-7-87
DATE	R.C.E. NO.	DATE
513		
ALEXANDER ENGINEERS	R.C.E. NO.	DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SCREENING & DEGRITTING ROOM, SECTION - II

SHEET M1-3





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

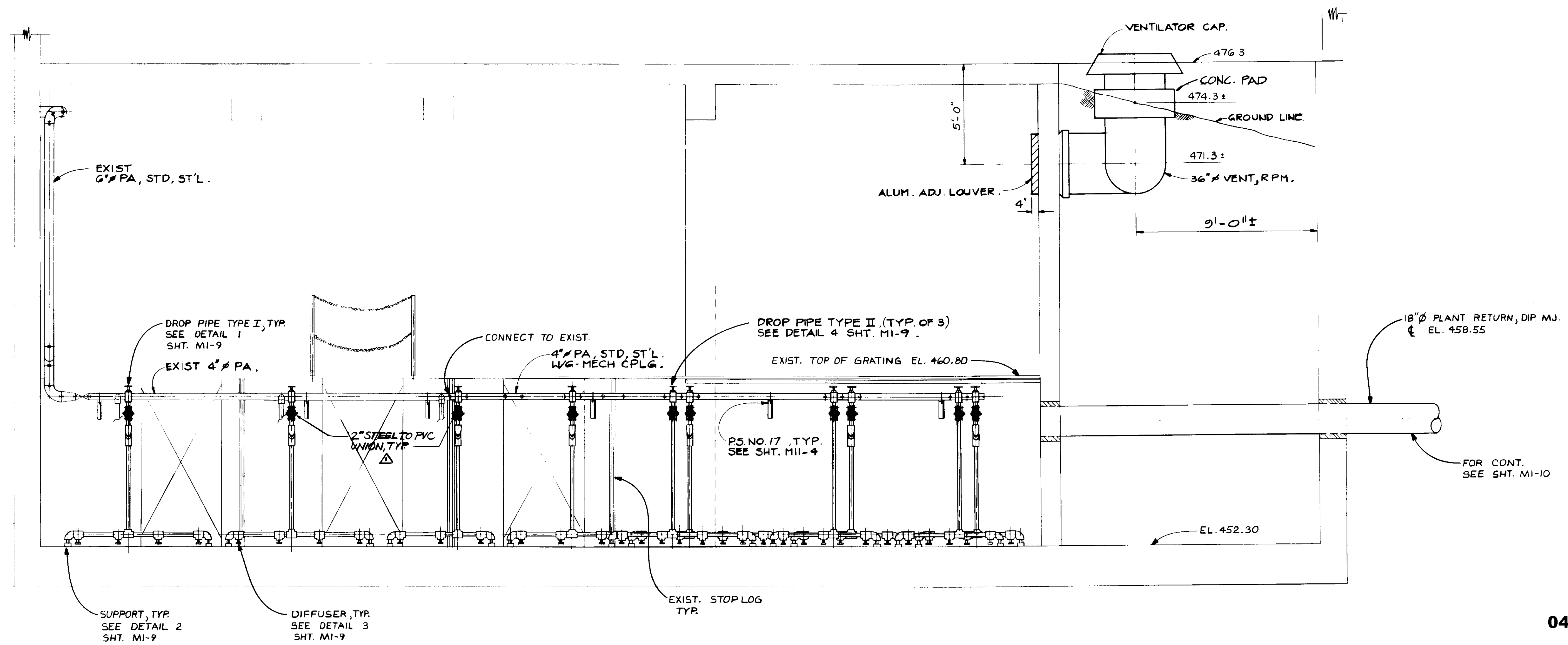
1-10-87 A.B. REV. PER K.P.C. 1-10-87 A.B. REV. PER K.P.C. 1-10-87 A.B. REV. PER K.P.C.		SCALE: AS NOTED DESIGNED: R.K. DRAWN: YK CHECKED:	SUBMITTED BY: <i>[Signature]</i> 14008 8-7-87 KATYRA CONSULTING ENGINEERS R.C.S. NO. DATE ALEXANDER ENGINEERS 613 R.C.S.E. NO. DATE	<b>KALEX ENGINEERS</b> Katsura Consulting Engineers / Alexander Engineers Ventura, California Glendora, California	<b>LAS VIRGENES MUNICIPAL WATER DISTRICT</b> <b>TAPIA WATER RECLAMATION FACILITY EXPANSION III</b> HEADWORKS CHANNEL AERATION, PLAN SECTION	SHEET <b>M1-6</b>
--	--	--	---	--	---	----------------------

04069



RECORD DRAWING  
 FOR FILE MAINTAINED BY CLIENT PROJECT NO. 14008  
 KATYRA CONSULTING ENGINEERS JUNE 1988

- NOTE:
1. VERTICAL DUCT & VENT HOOD NOT IN TRUE VIEW.
  2. REMOVE & REPLACE VENT DUCT & HOOD AS REQUIRED



SECTION (A)

04070

RECORD DRAWINGS  
 PREPARED BY: KATSUMI KATSURA  
 KATSURA CONSULTING ENGINEERS 14038  
 No. 14038  
 Exp. 3-31-08  
 CIVIL  
 STATE OF CALIFORNIA



REV	DATE	BY	DESCRIPTION

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

DESIGNED: Y.K./R.K.  
 R.K.  
 DRAWN: Y.K.  
 CHECKED: Y.K.

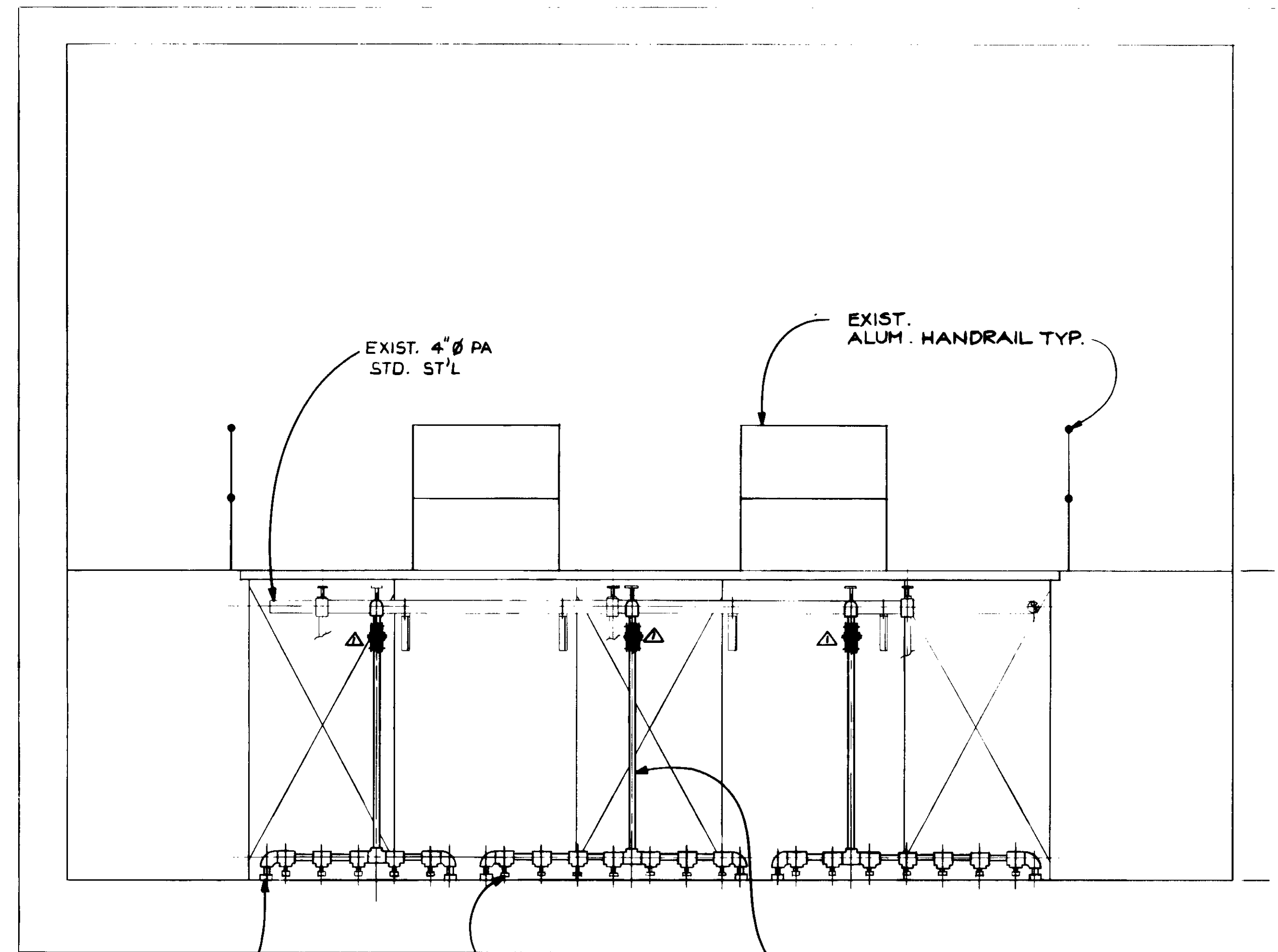
SUBMITTED: *[Signature]* 14038 8-7-87  
 KATSUMI KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 ALEXANDER ENGINEERS 513 R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

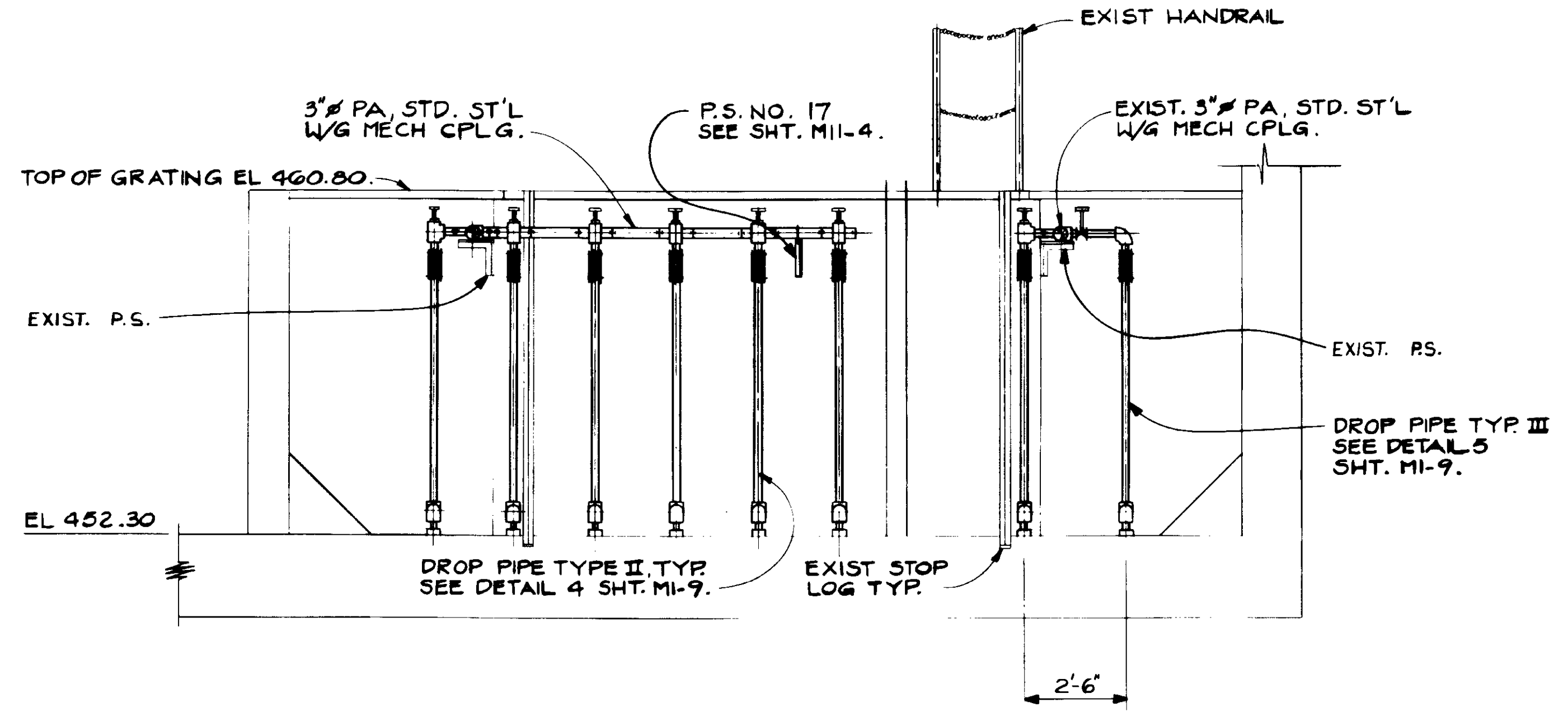
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 HEADWORKS CHANNEL AERATION, SECTION - I

SHEET  
**M1-6**

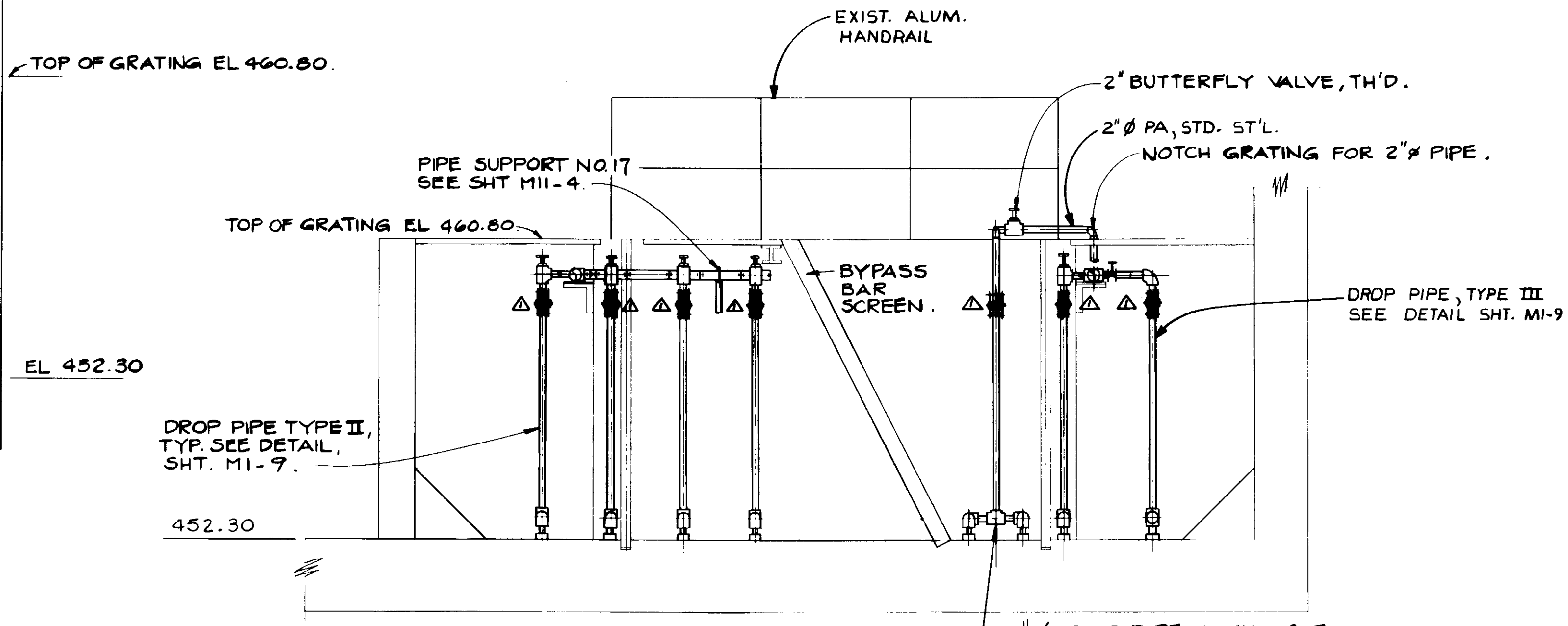




SECTION B



SECTION C



SECTION D

REV	DATE	BY	DESCRIPTION

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

DESIGNED	Y.K./R.K.
DRAWN	R.K.
CHECKED	Y.K.

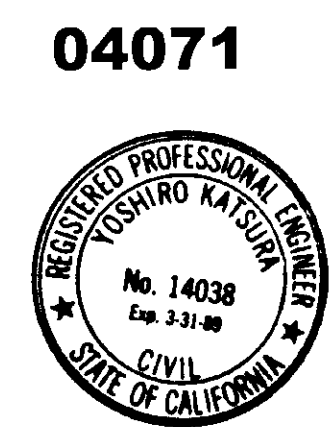
SUBMITTED	14038	8-7-87
KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
ALEXANDER ENGINEERS	R.C.E. NO.	DATE

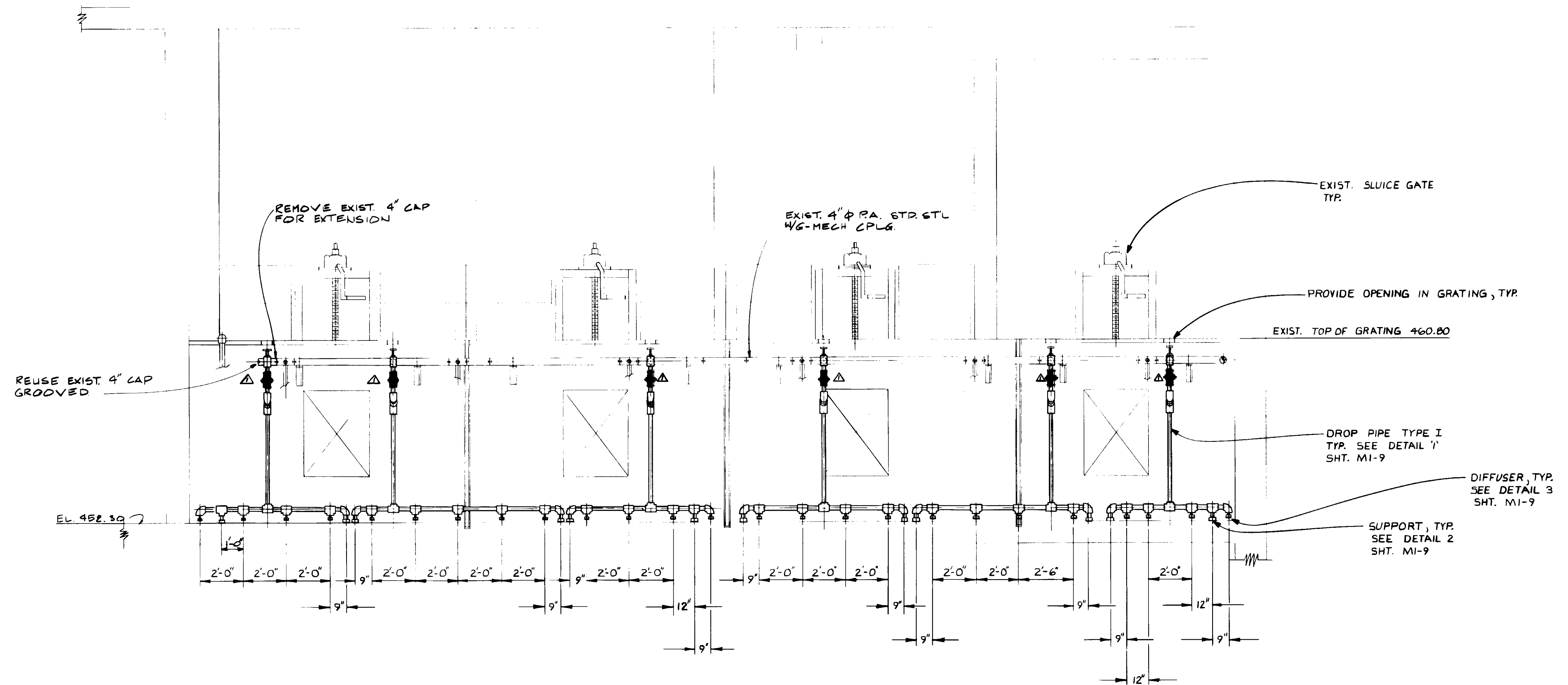
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 HEADWORKS CHANNEL AERATION, SECTION - II

SHEET  
**M1-7**

RECORD DRAWINGS  
 No. 14038  
 Exp. 3-31-88  
 KATSURA CONSULTING ENGINEERS JUNE 1984

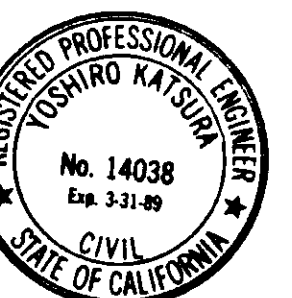




SECTION E

04072

RECORD DRAWINGS  
 PREPARED BY: KATELOR ENGINEERS  
 KATELOR CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION

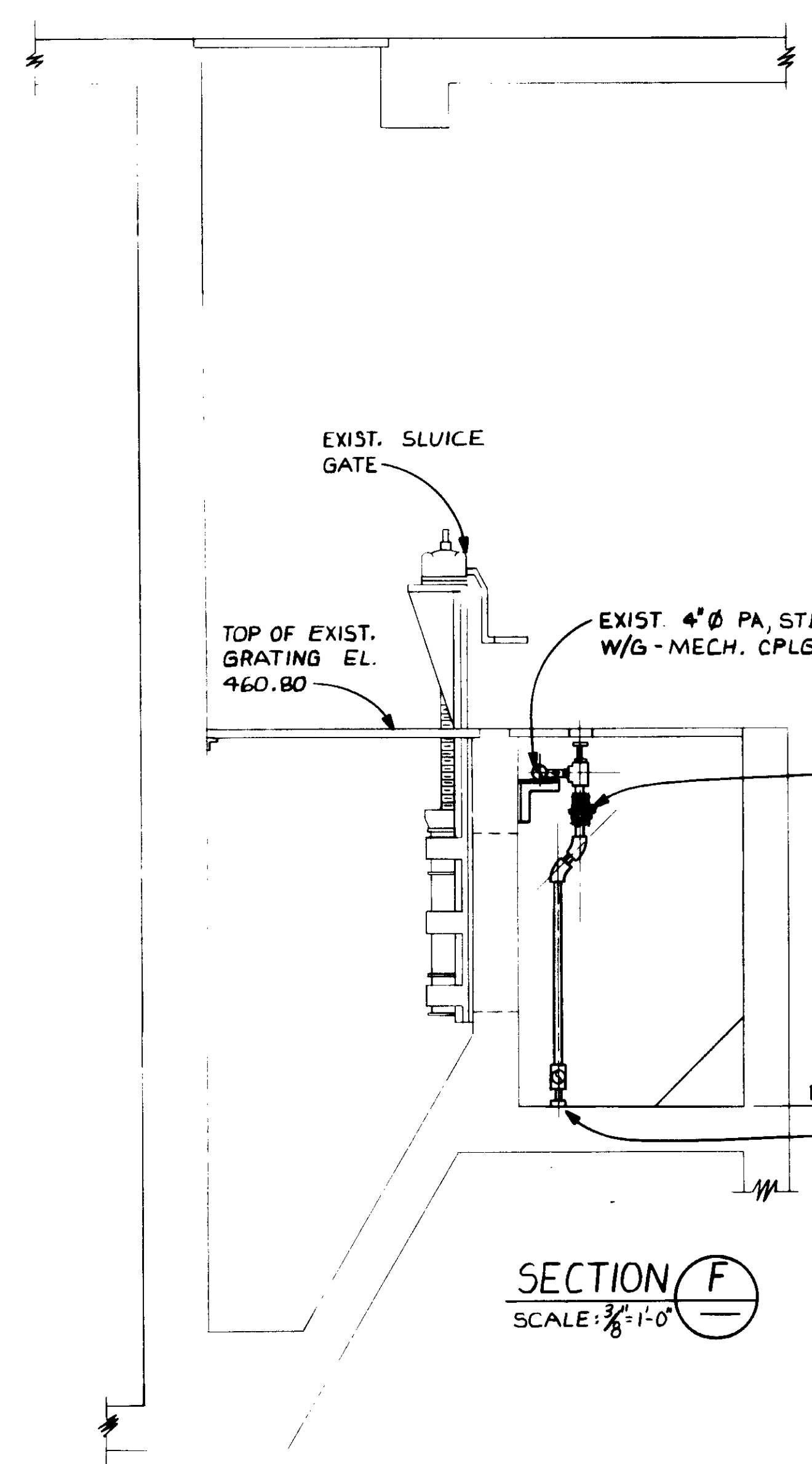
SCALE: 3/8" = 1'-0"	DESIGNED Y.K.I.R.K.
	DRAWN R.K.
	CHECKED Y.K.

SUBMITTED <i>[Signature]</i>	4038	8-7-87
KATELOR CONSULTING ENGINEERS	R.C.E. NO.	DATE
	513	
ALEXANDER ENGINEERS	R.C.S.E. NO.	DATE

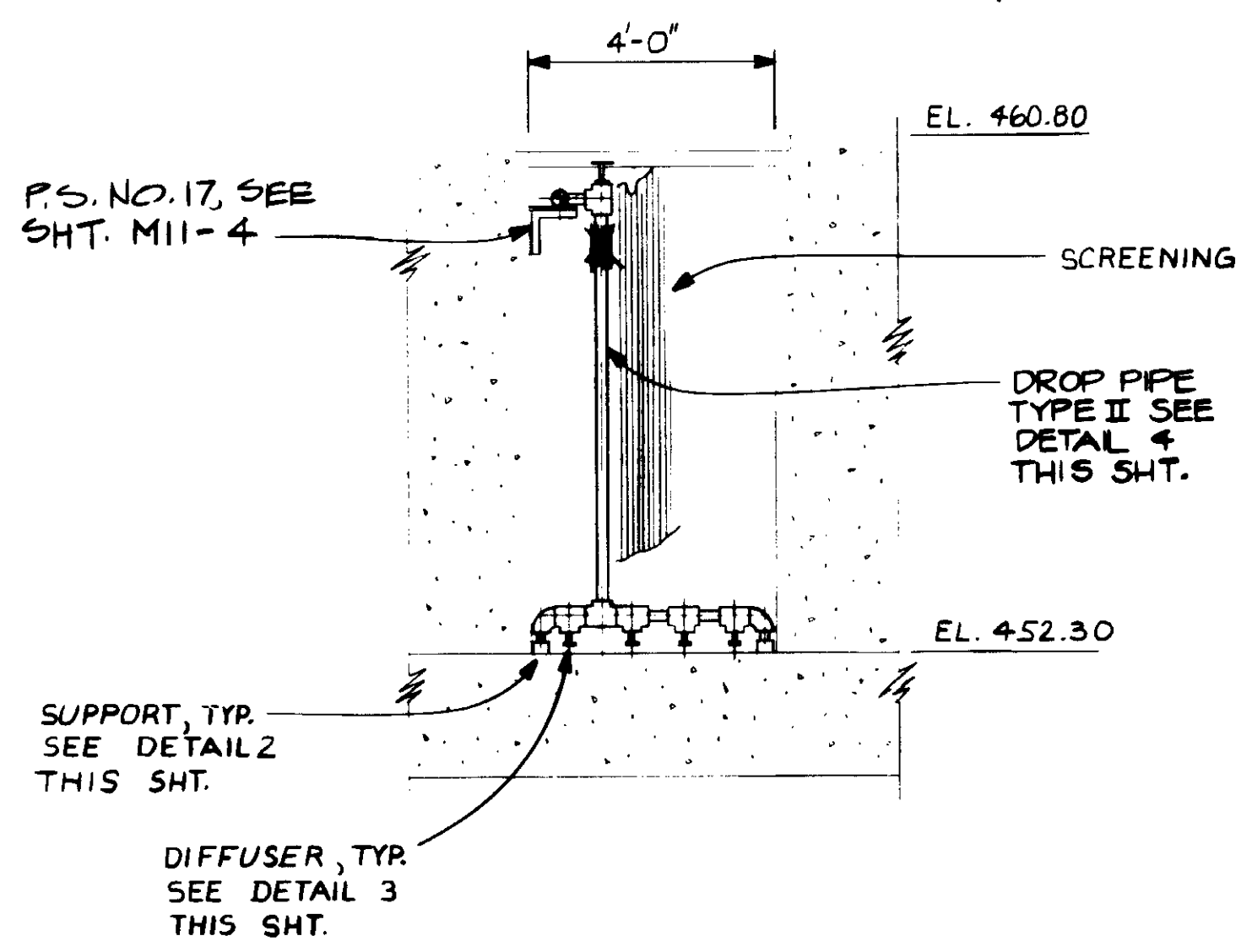
**KALEX ENGINEERS**  
 Katsuro Consulting Engineers / Alexander Engineers  
 Ventura, California      Glendora, California

LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III
HEADWORKS CHANNEL AERATION, SECTION - III

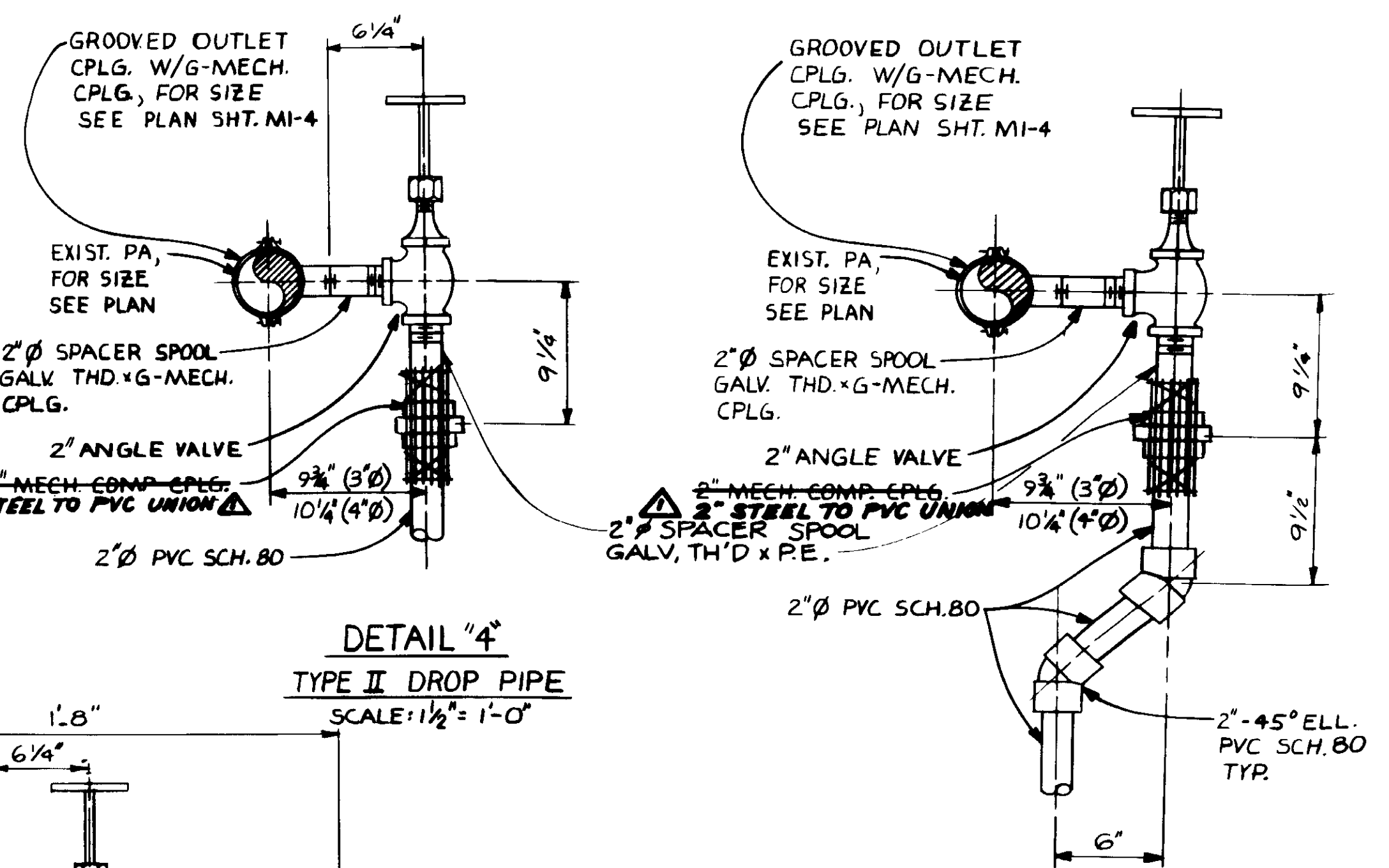
SHEET M1-8
---------------



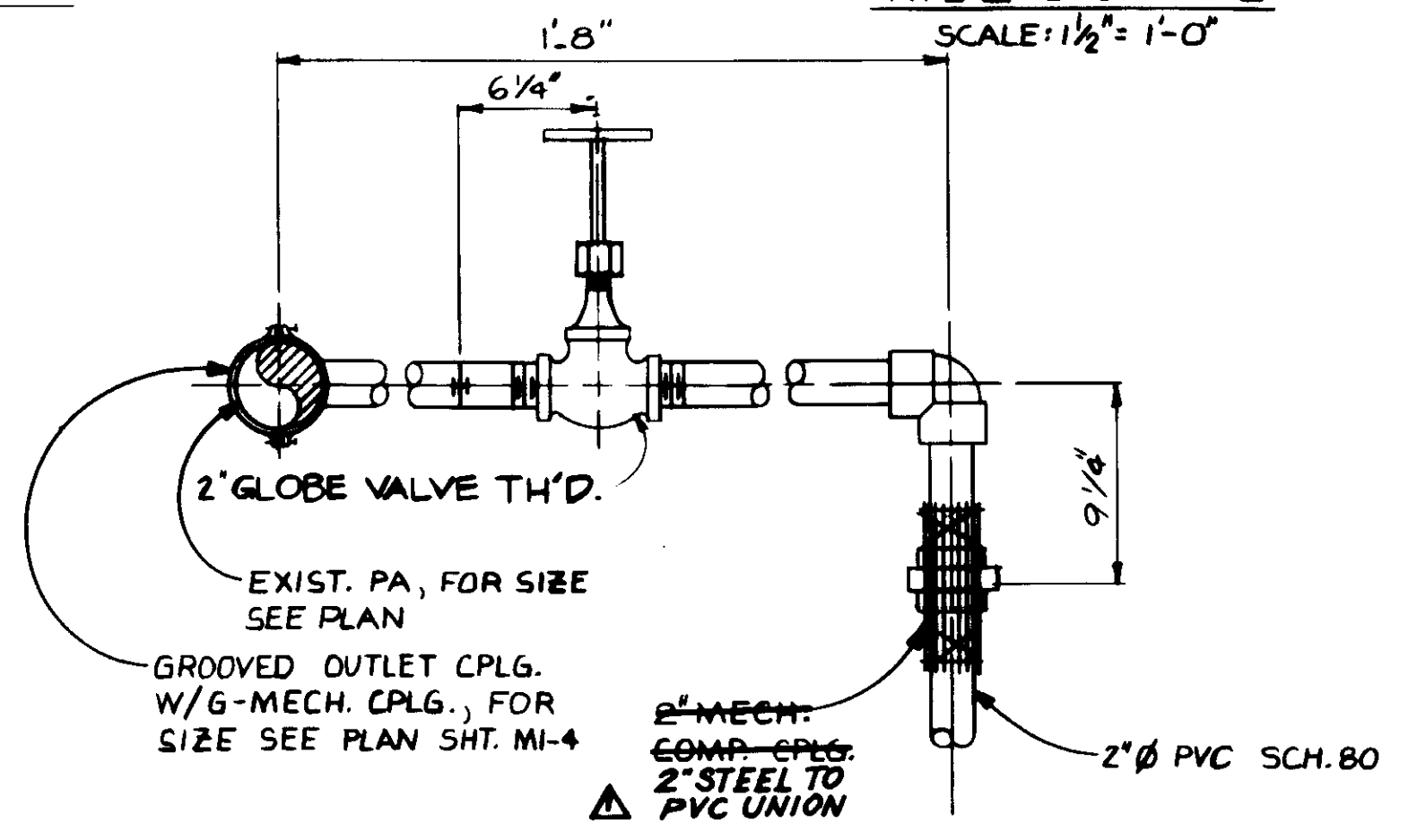
SECTION F  
SCALE: 3/8" = 1'-0"



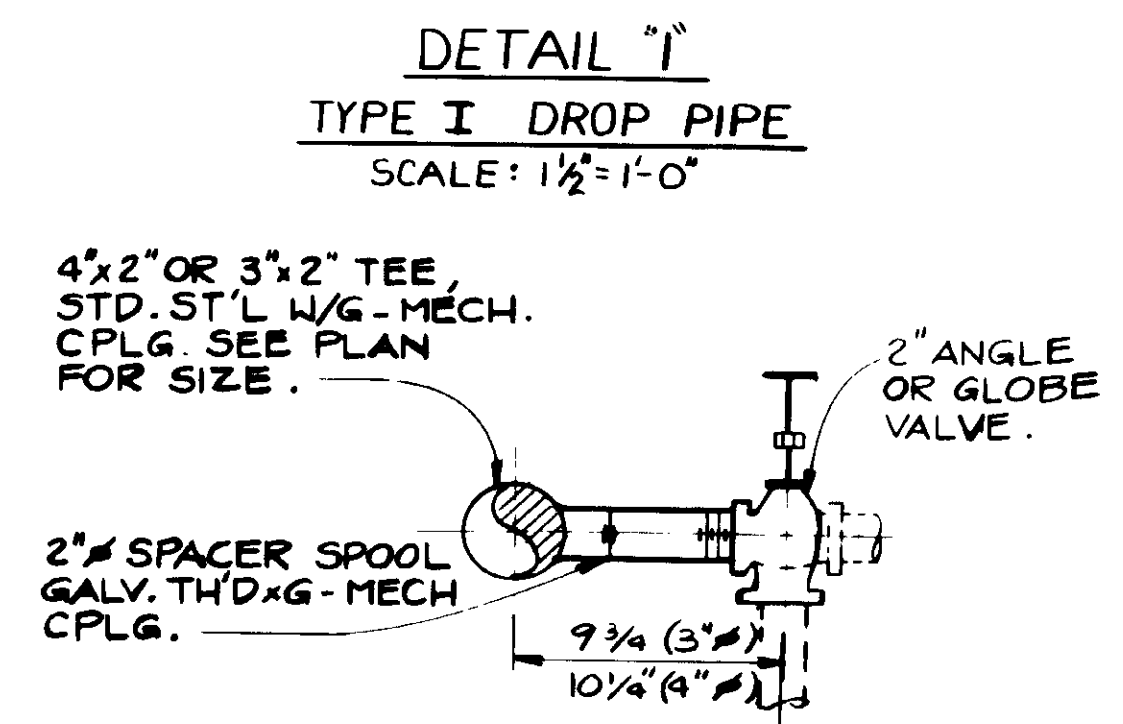
SECTION G  
SCALE: 3/8" = 1'-0"



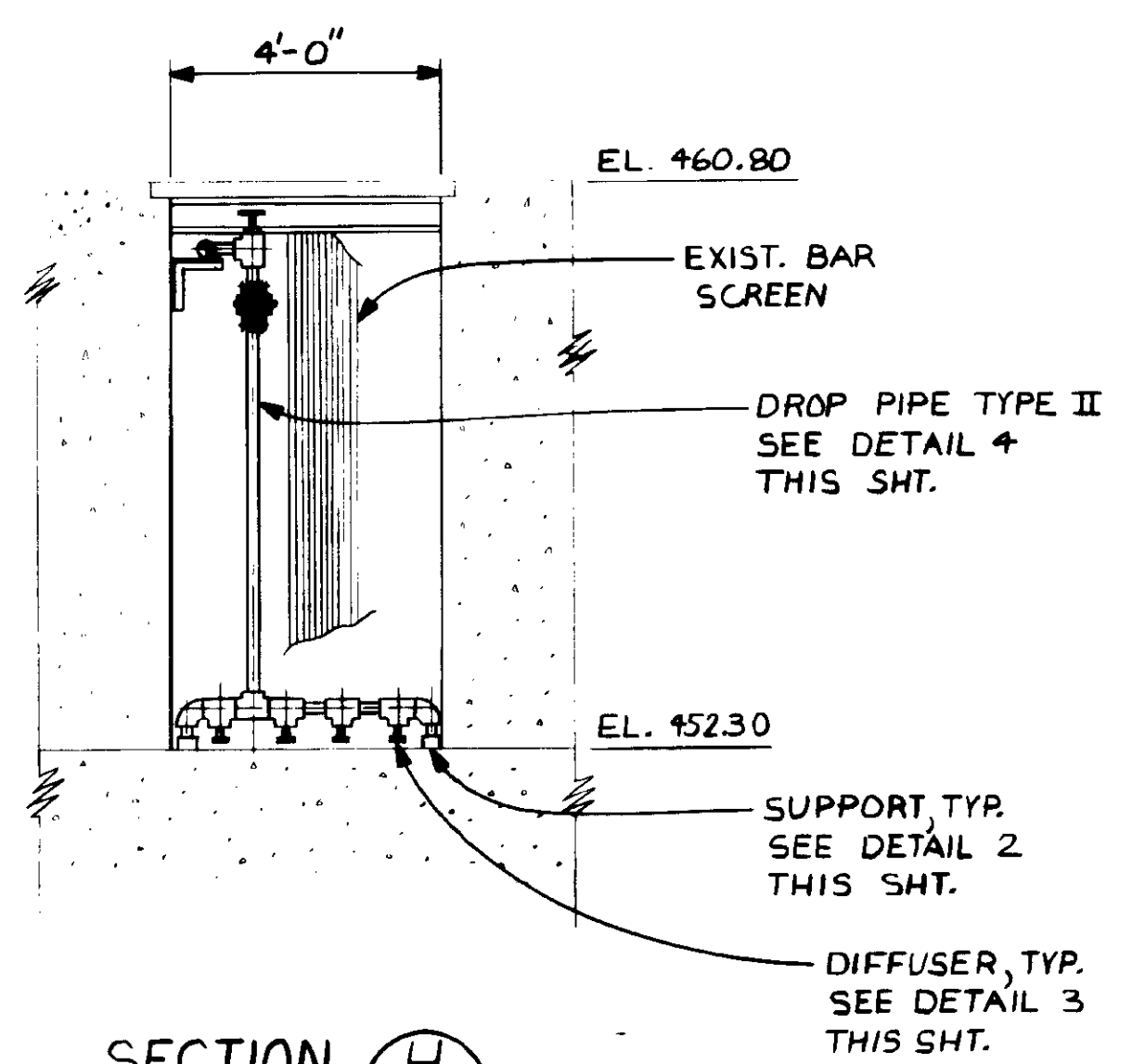
DETAIL 4  
TYPE II DROP PIPE  
SCALE: 1 1/2" = 1'-0"



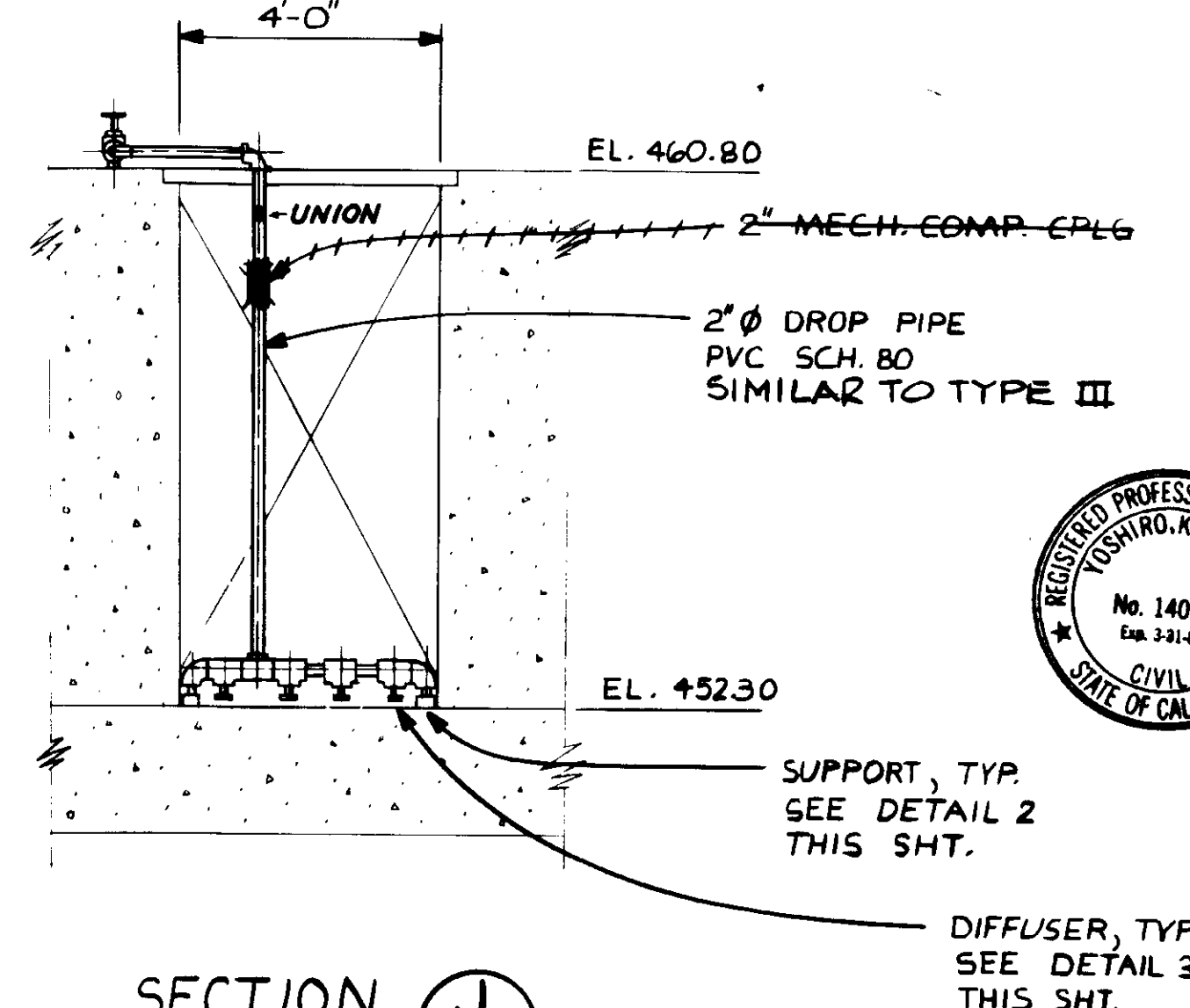
DETAIL 5  
TYPE III DROP PIPE  
SCALE: 1 1/2" = 1'-0"



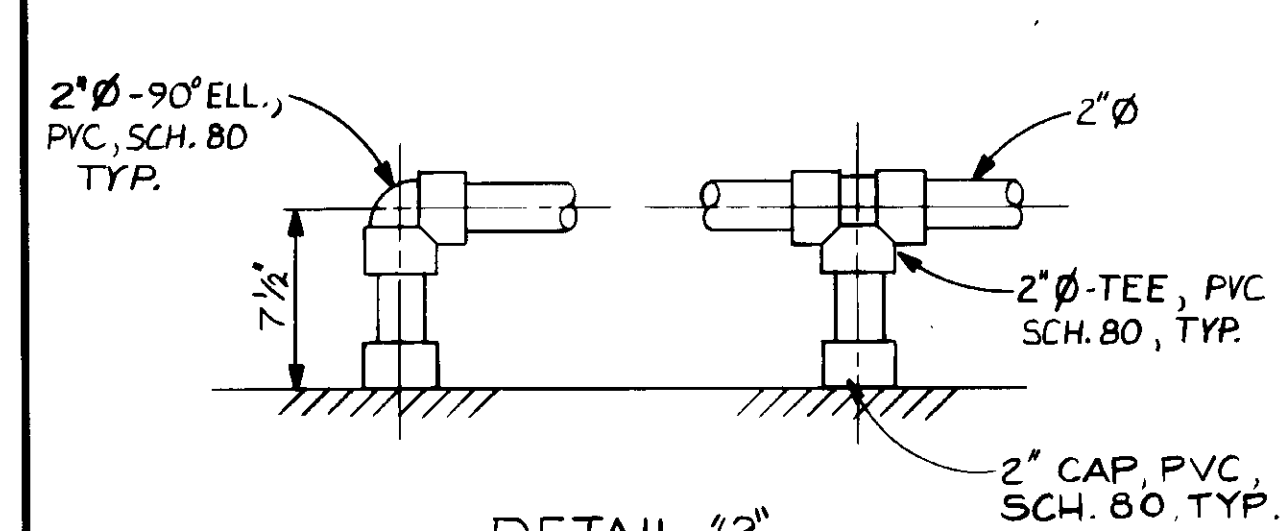
DETAIL 6  
NOT TO SCALE



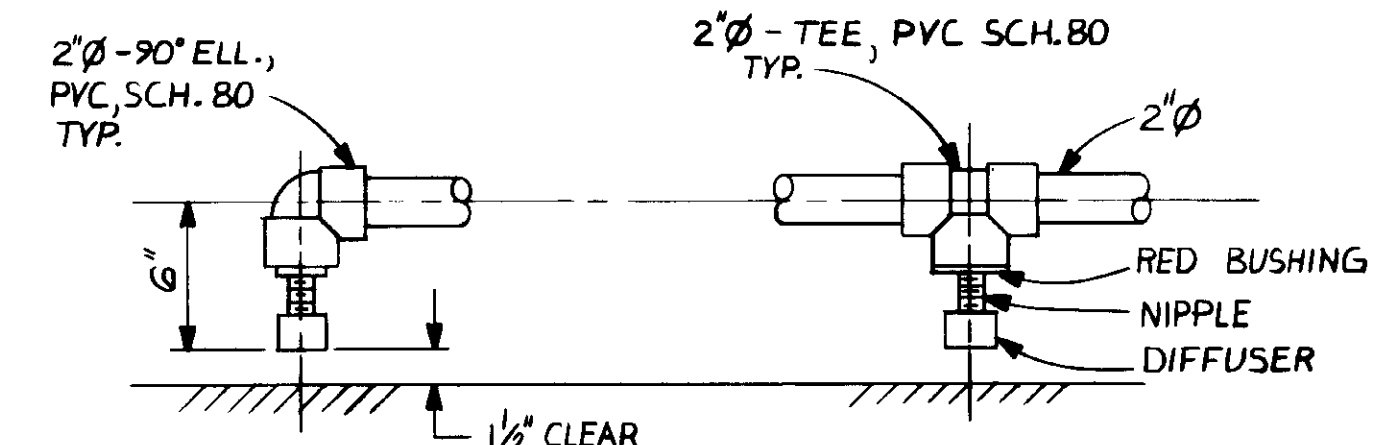
SECTION H  
SCALE: 3/8" = 1'-0"



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



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



DETAIL 3  
DIFFUSERS  
SCALE: 1 1/2" = 1'-0"



RECORD DRAWING  
KATSUMI  
KATSUMI CONSULTING ENGINEERS  
04073

REV	DATE	BY	DESCRIPTION

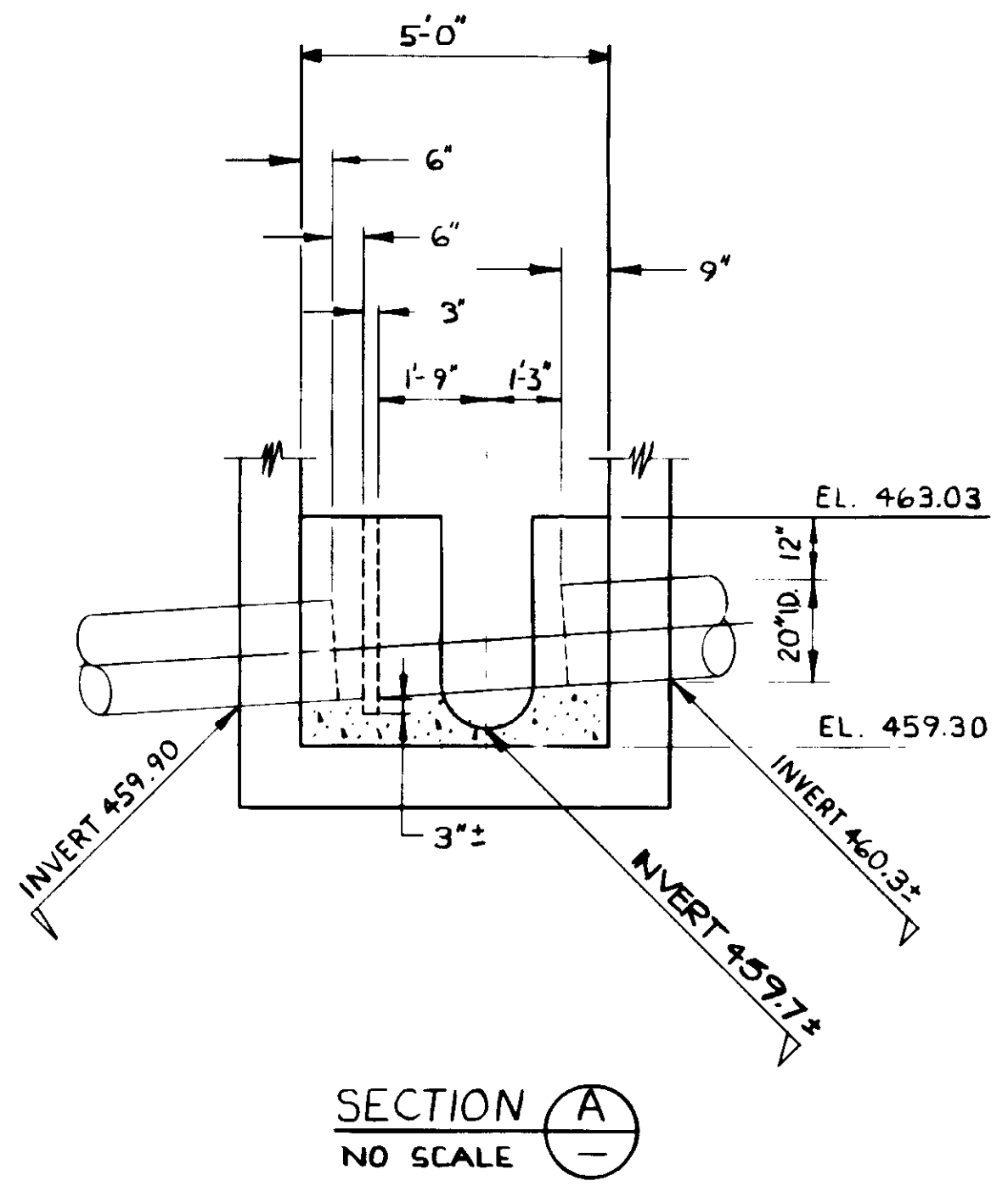
SCALE:	AS NOTED
DESIGNED:	Y.K./C.S./R.K.
DRAWN:	R.K.
CHECKED:	Y.K.

SUBMITTED:	8-7-87
DESIGNED:	R.K.
DRAWN:	Y.K.
CHECKED:	Y.K.

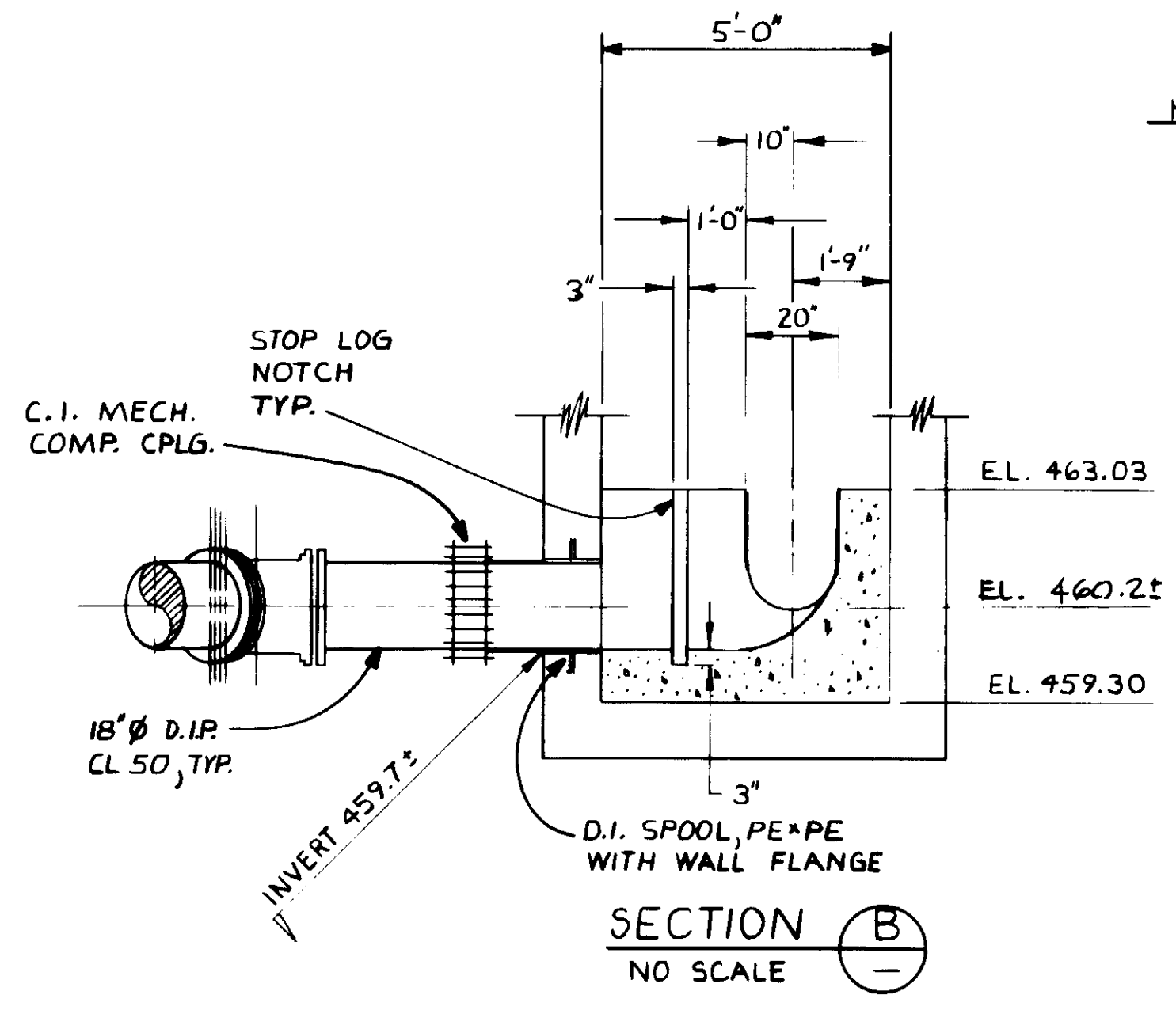
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
HEADWORKS CHANNEL AERATION, SECTION - IV

SHEET  
**M1**

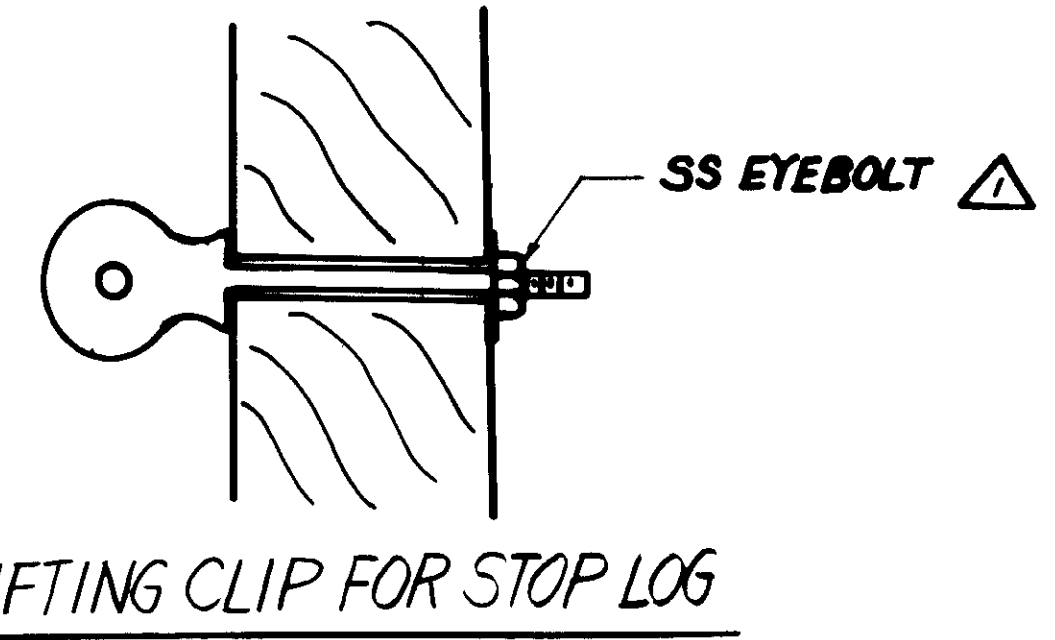


SECTION A  
NO SCALE

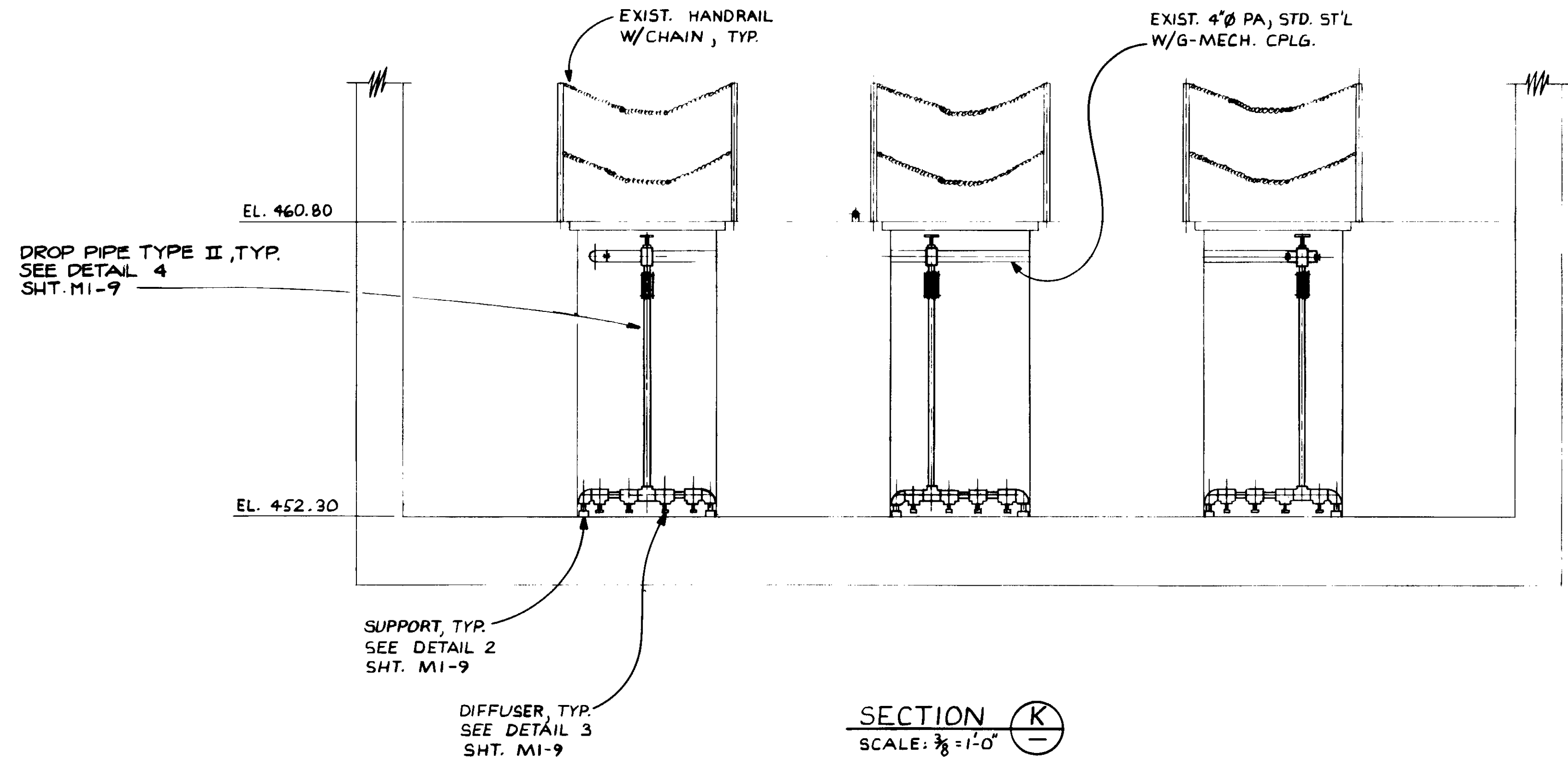


SECTION B  
NO SCALE

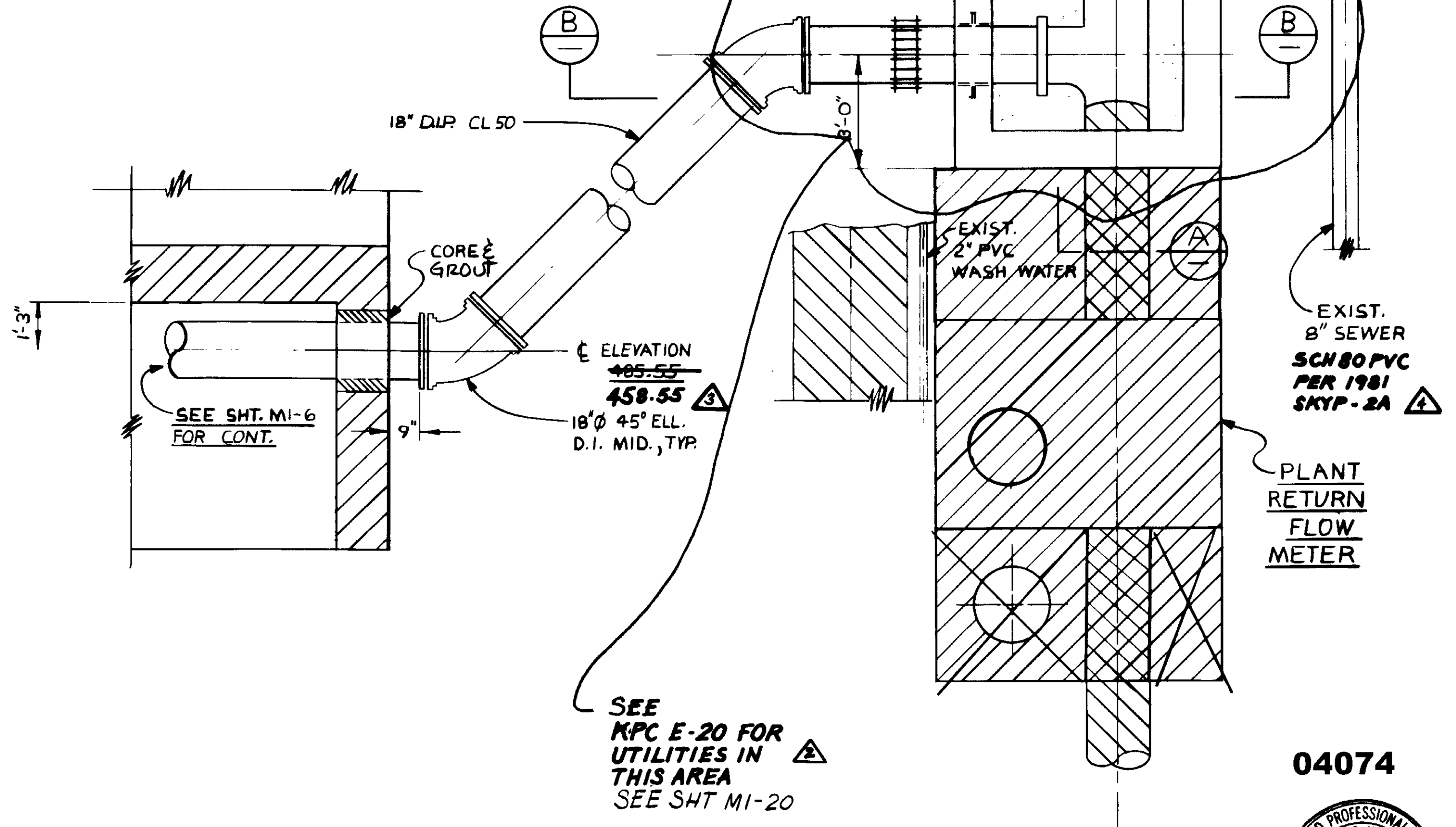
NOTE:  
1. FURNISH TONGUE & GROOVE DOUGLAS FIR STOP LOGS FOR 18" AND 20" PIPE. UNITS SHALL BE INSTALLED IN HORIZONTAL PIECES. EACH PIECE SHALL HAVE A GALVANIZED LIFTING CLIP OR LOG. MINIMUM THICKNESS SHALL BE 2X. MAXIMUM WIDTH SHALL BE 8X.



LIFTING CLIP FOR STOP LOG



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



SEE KPC E-20 FOR UTILITIES IN THIS AREA  
SEE SHT M1-20

PLAN  
PLANT RETURN  
FLOW DIVERSION  
NO SCALE

04074



REV	DATE	BY	DESCRIPTION
1	4-11-87	A.B.	REV. PER K.P.C.
2	4-11-87	A.B.	REV. PER K.P.C.
3	4-11-87	A.B.	REV. PER K.P.C.
4	4-11-87	A.B.	REV. PER K.P.C.

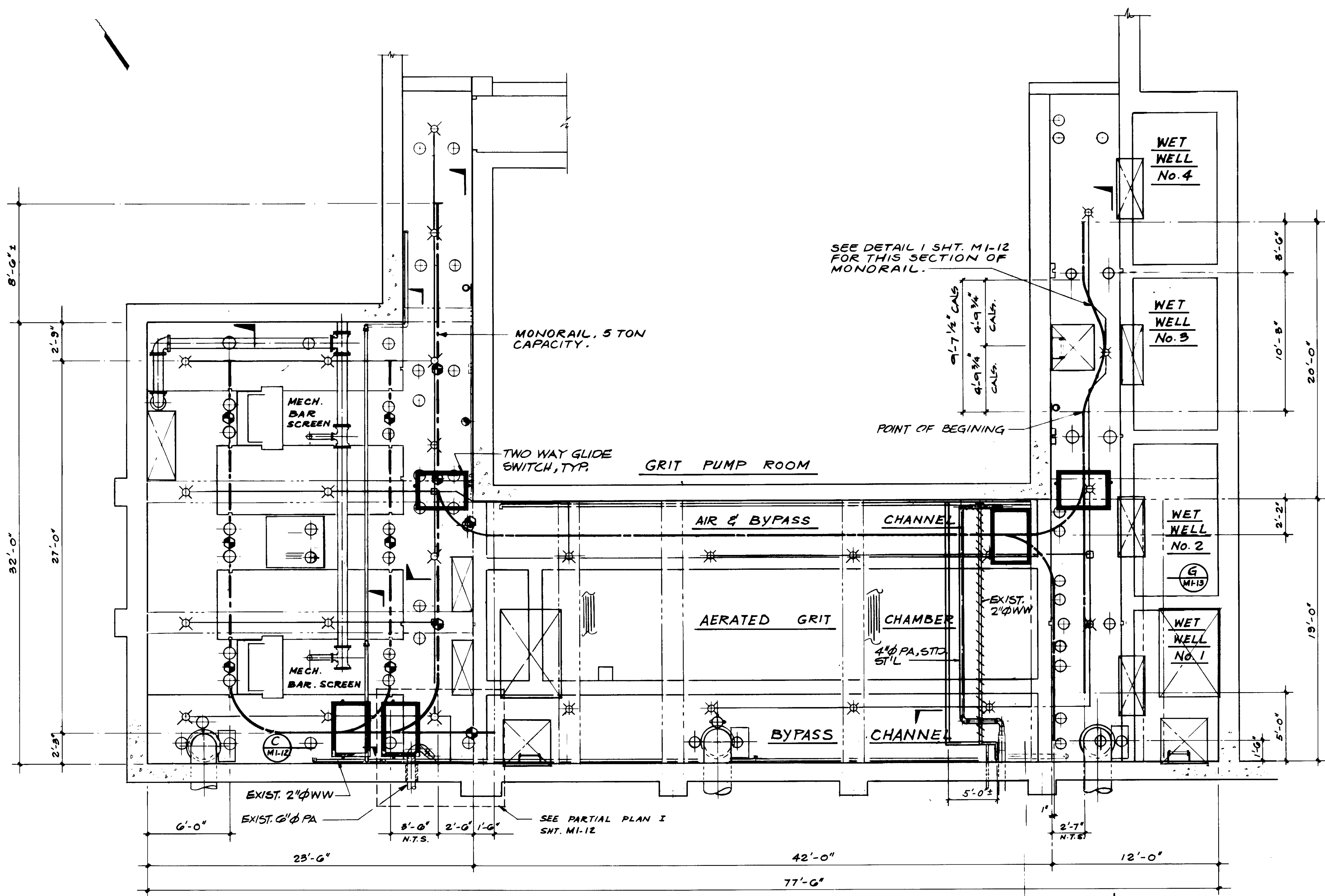
SCALE:	AS NOTED
DESIGNED:	Y.K./R.K.
DRAWN:	R.K.
CHECKED:	Y.K.

SUBMITTED:	8-7-87
DESIGNED:	Y.K./R.K.
DRAWN:	R.K.
CHECKED:	Y.K.

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
CHANNEL AERATION SECTIONS &  
PLANT RETURN FLOW DIVERSION





- LEGEND**
- ⊗ CEILING LIGHT
  - ⊙ LOCATION OF ALUMINUM STOP LOG
  - ⊕ HAND HOLE IN FLOOR ABOVE
  - ⊠ OPENING IN FLOOR ABOVE
  - ⊞ ELECTRICAL JUNCTION BOX
  - ⊗ WALL MOUNTED LIGHT
  - TWO WAY GLIDE SWITCH

**PLAN**

04075

RECORD DRAWING  
 FOR FILE MAINTAINED BY CLIENT PROJECT NO. 14038  
 KATSUMI CONSULTING ENGINEERS JUNE 1988

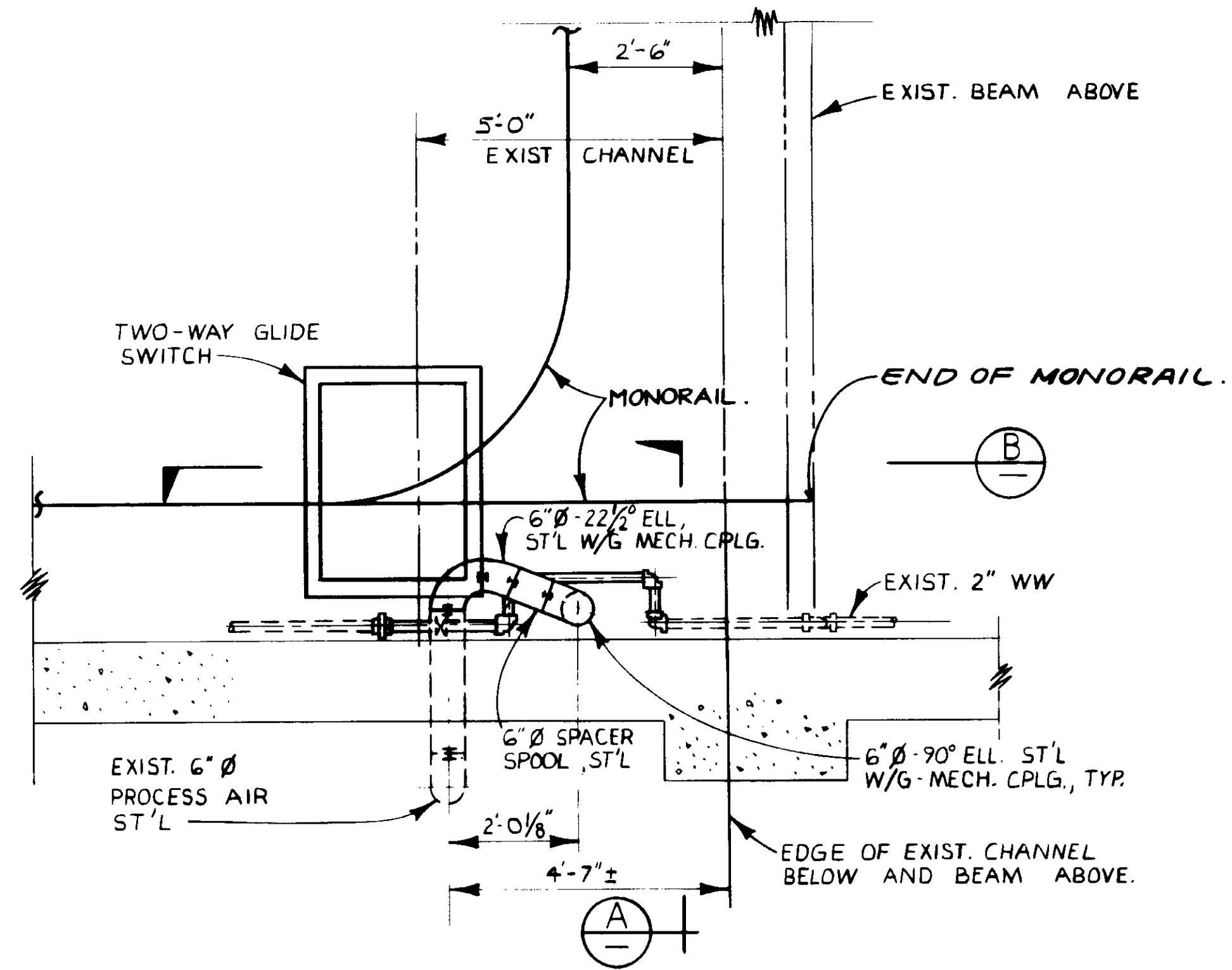


REV	DATE	BY	DESCRIPTION

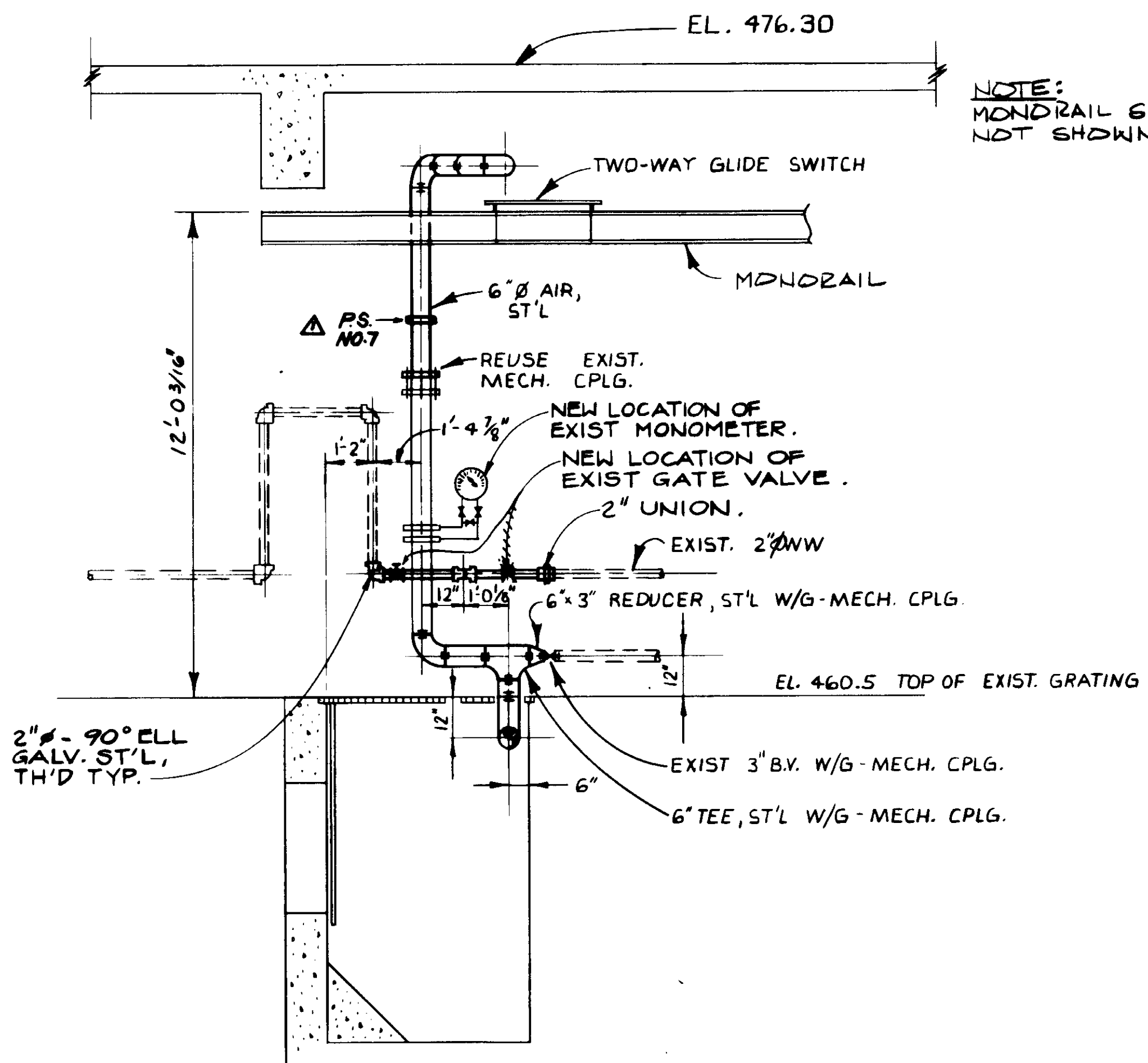
SCALE: 1/4" = 1'-0"	DESIGNER: Y. K. / C.S.	SUBMITTED: 8-7-87
DRAWN: Y. K.	CHECKED: Y. K.	DATE: 8-7-87

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

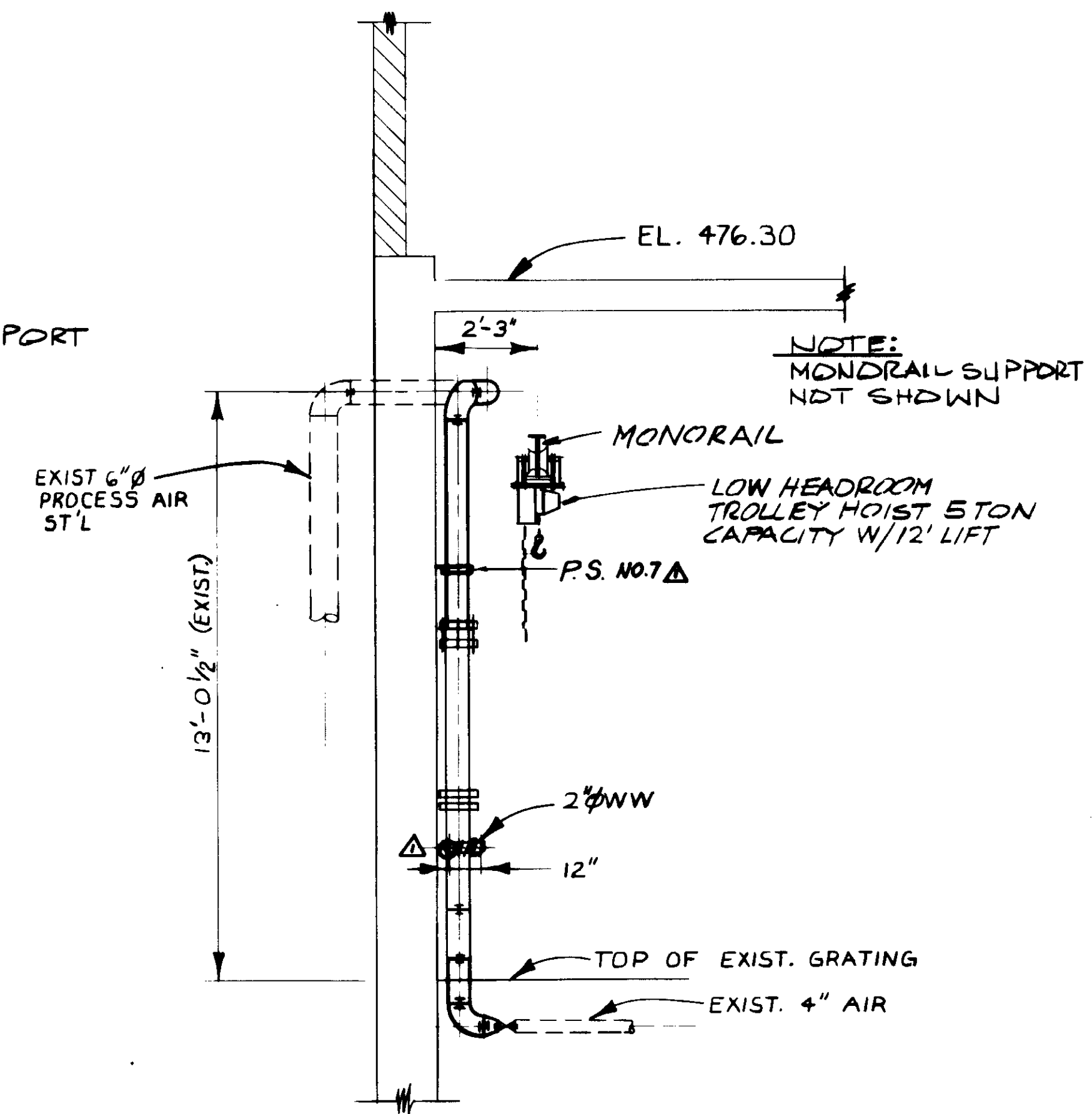
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 MONORAIL SHEET M1-11



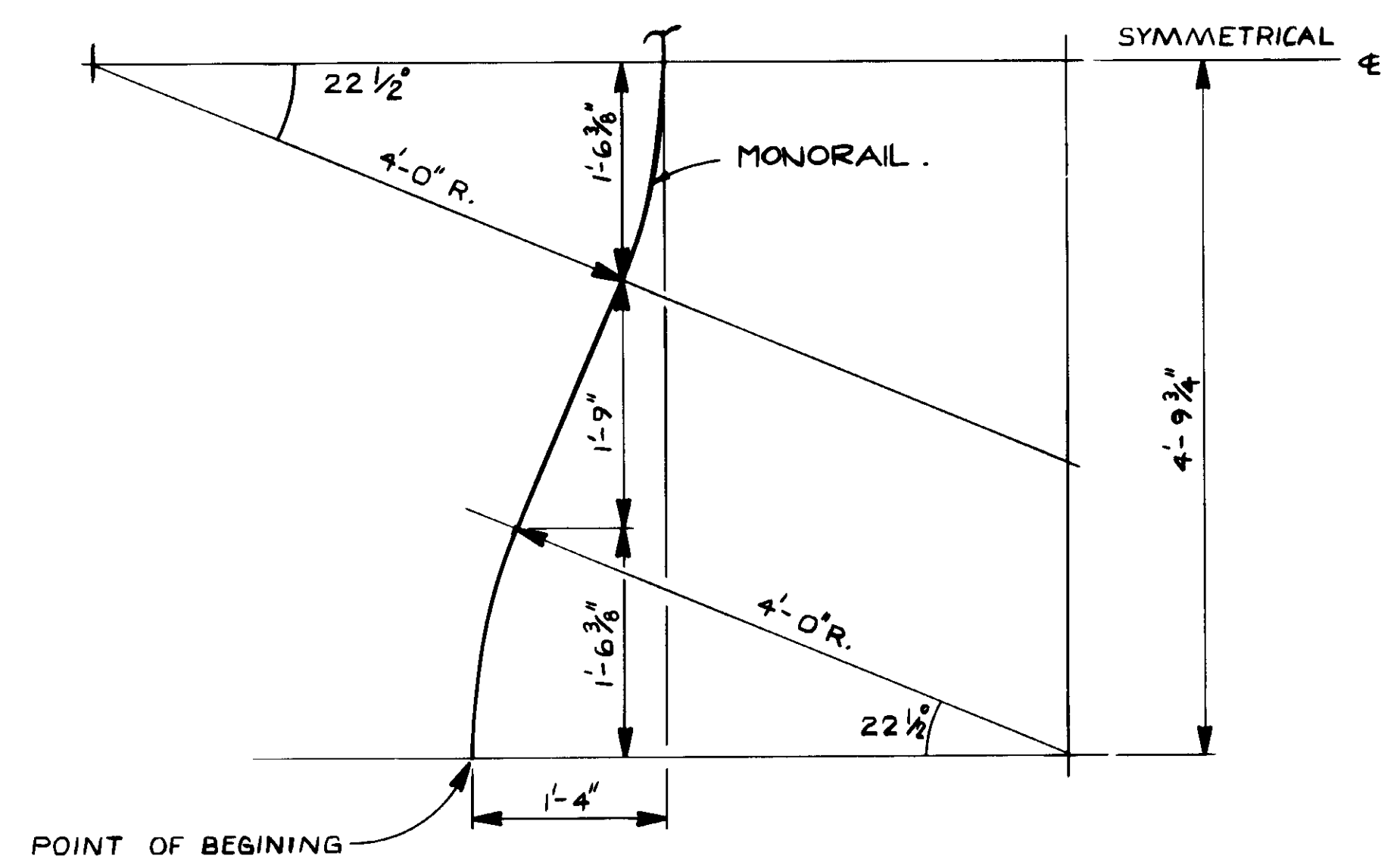
**PARTIAL PLAN**  
SCALE: 1/2" = 1'-0"



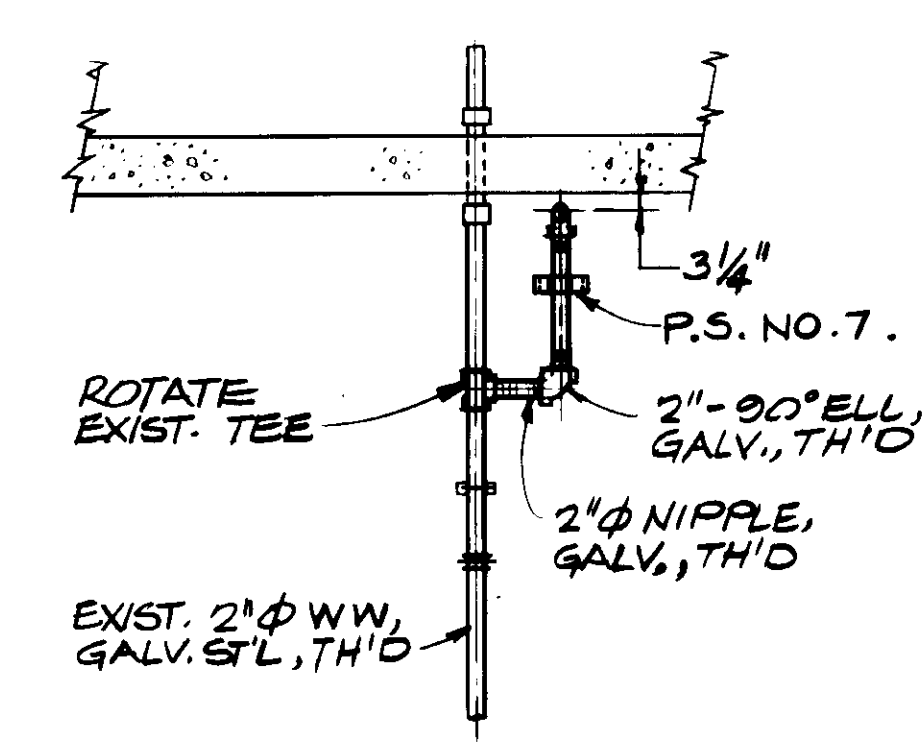
**SECTION B**  
SCALE: 3/8" = 1'-0"



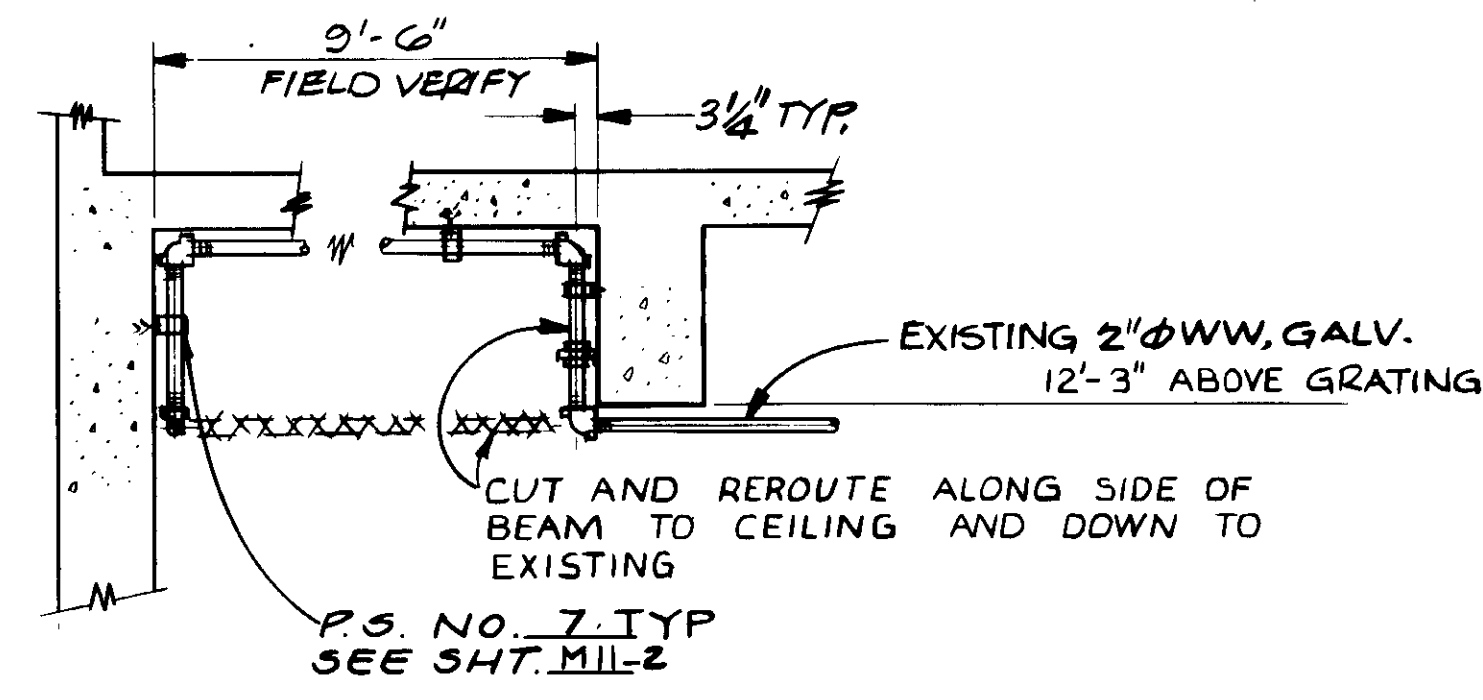
**SECTION A**  
SCALE: 3/8" = 1'-0"



**DETAIL 1**  
SCALE: 1" = 11'-0"



**SECTION C**  
SCALE: 1/2" = 1'-0"



**SECTION D**  
SCALE: 1/2" = 1'-0"

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED	DESIGNED D.N./S.K.	DRAWN Y.K.	CHECKED
--------------------	-----------------------	---------------	---------

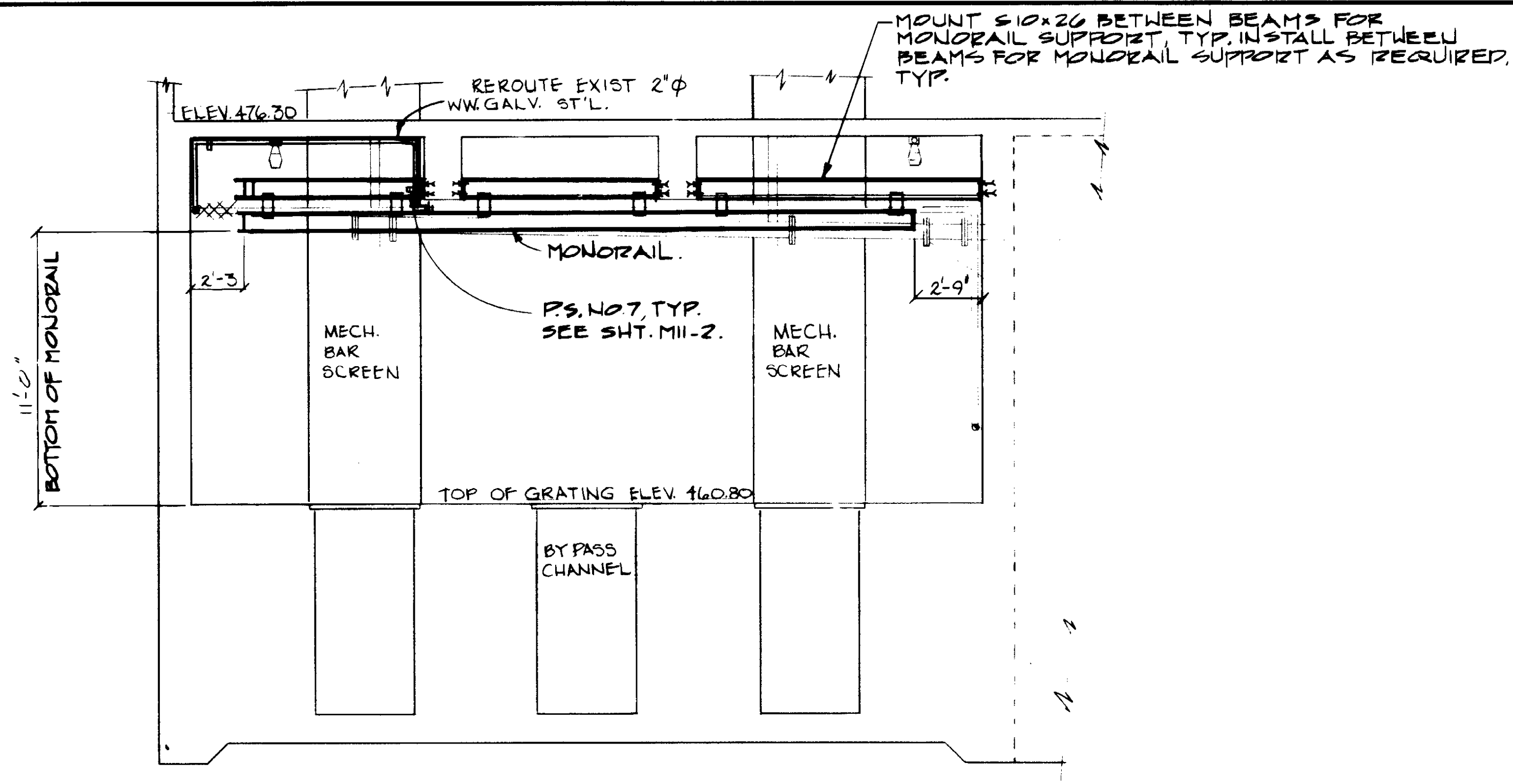
Y.K./C.S.	14038	8-7-87
KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
ALEXANDER ENGINEERS	R.C.S.E. NO.	DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

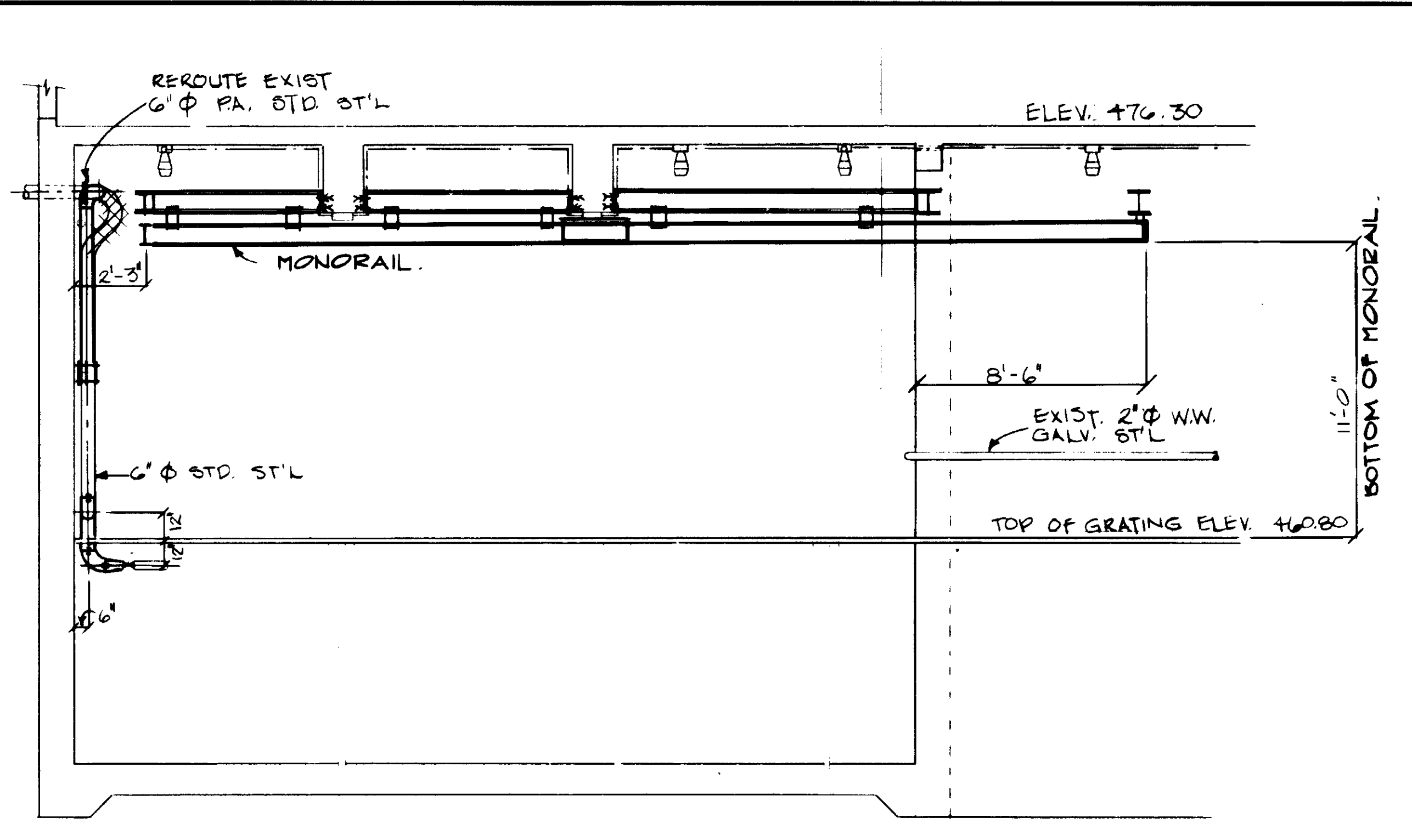
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
MONORAIL

SHEET  
**M1-12**

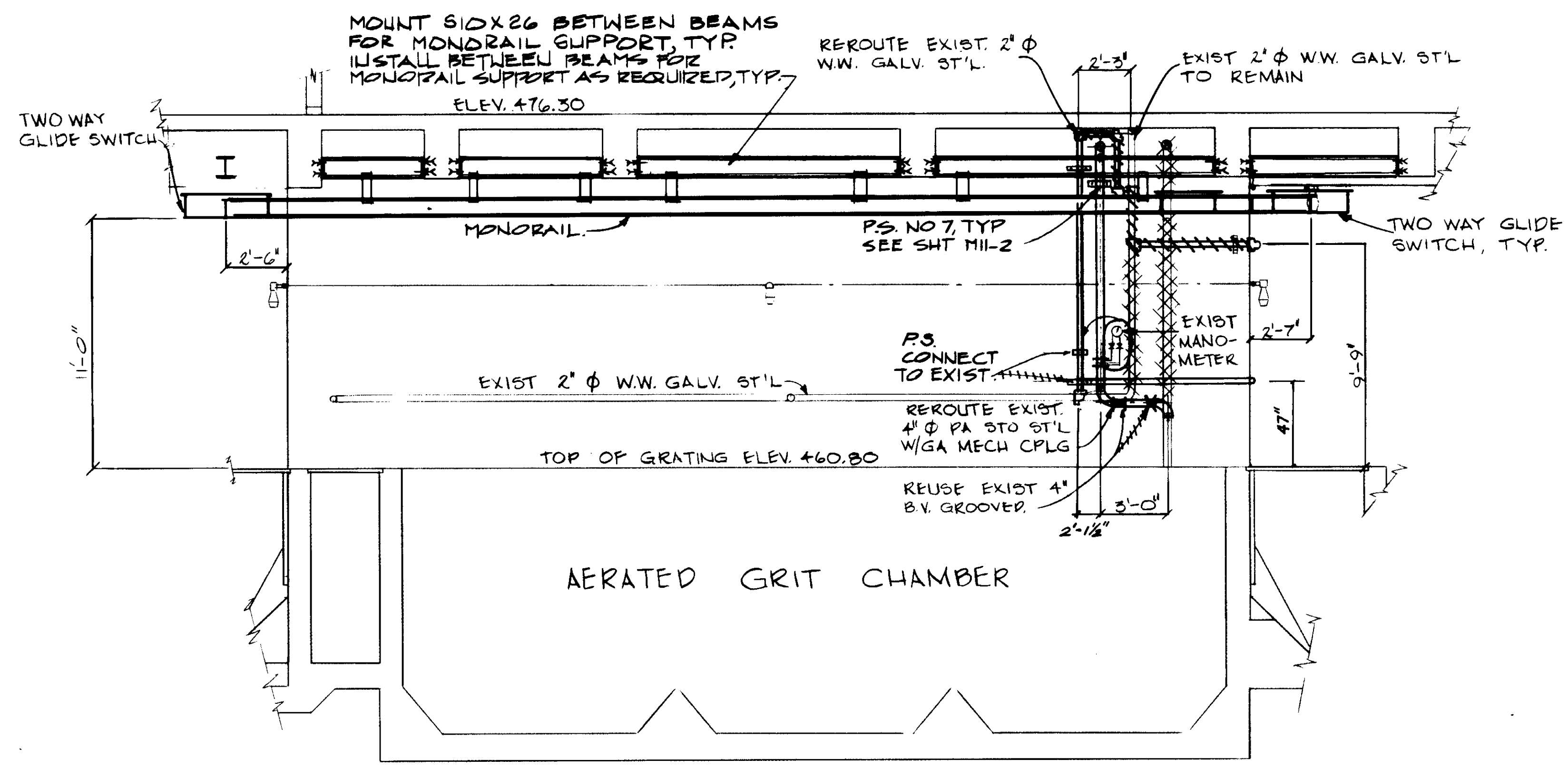
04076  
REGISTERED PROFESSIONAL ENGINEER  
No. 14038  
Exp. 3-31-90  
CIVIL  
STATE OF CALIFORNIA



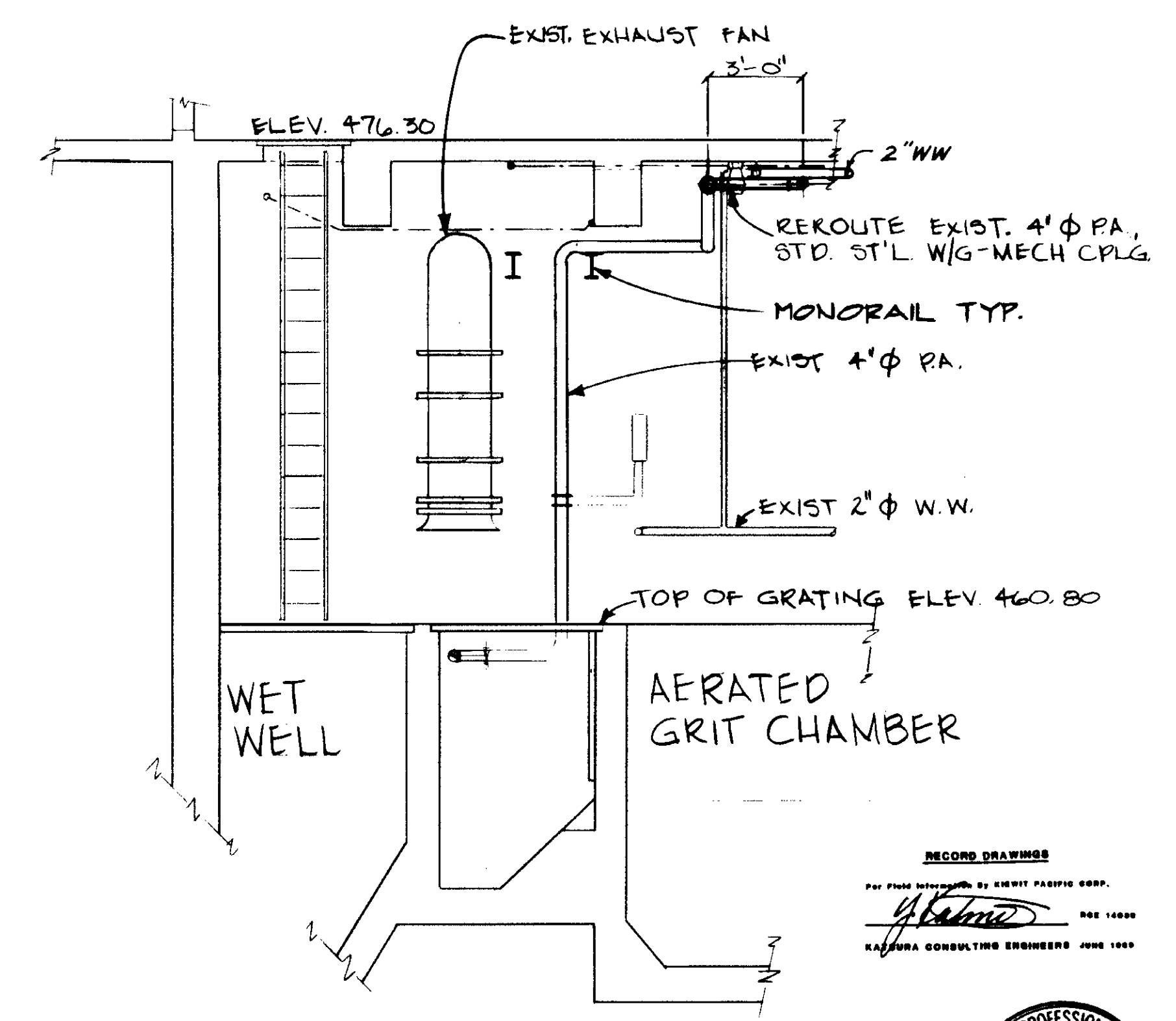
SECTION E



SECTION F



SECTION G



SECTION H

RECORD DRAWINGS  
 PREPARED BY HERBERT PARRISH CORP.  
 KATSUMI CONSULTING ENGINEERS JUNE 1987



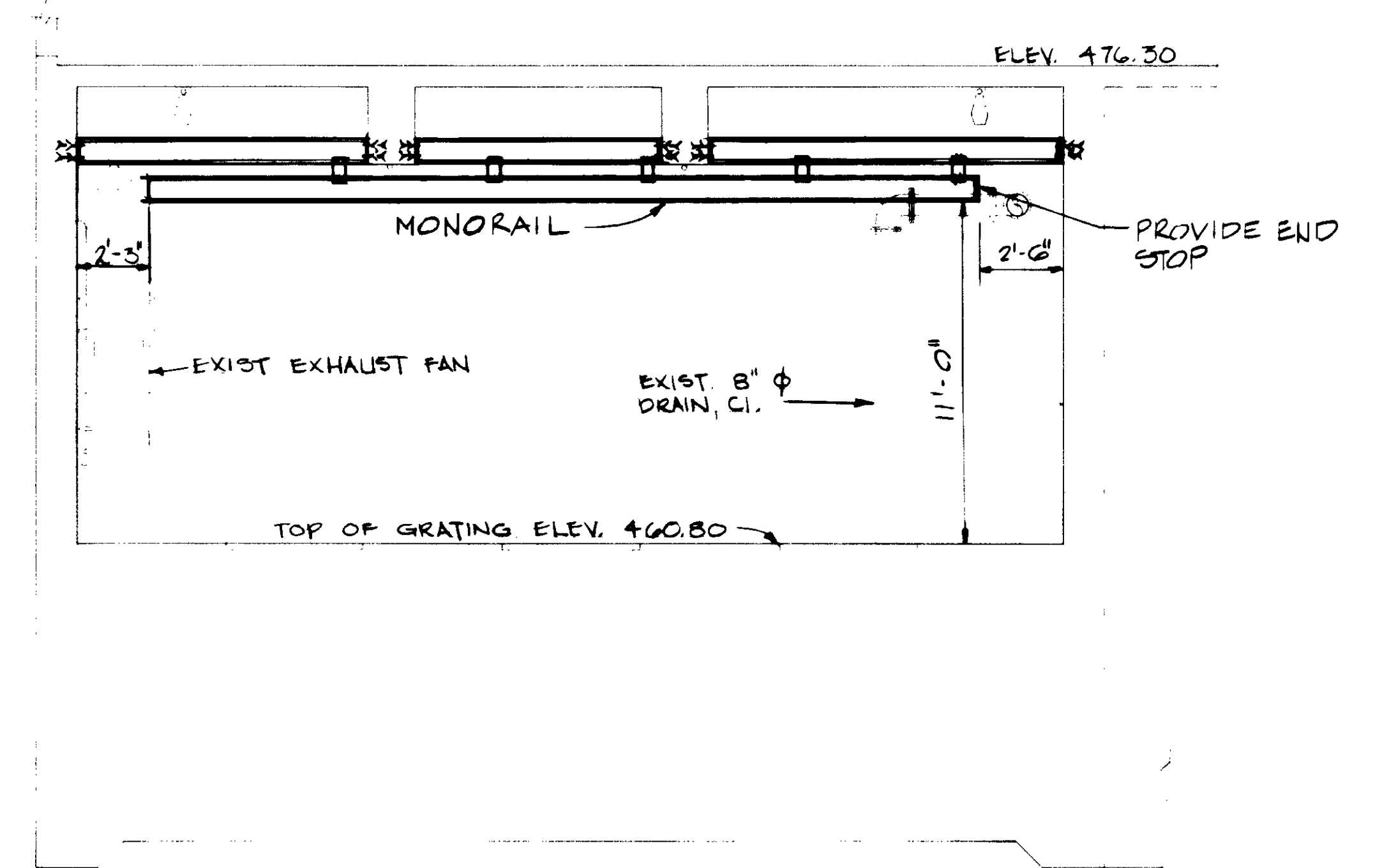
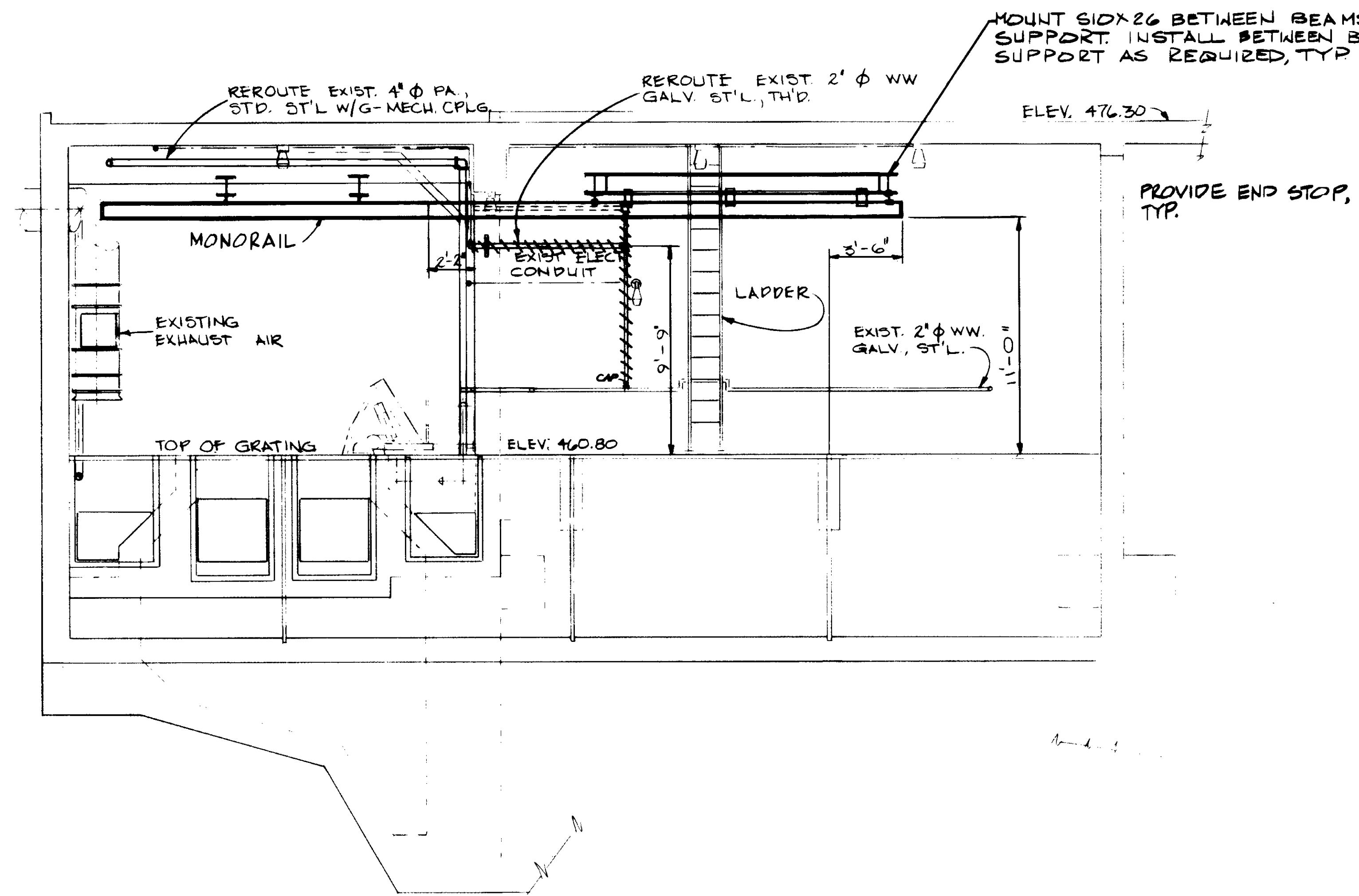
04077

REV	DATE	BY	DESCRIPTION

SCALE: 1/4" = 1'-0"	DESIGNED: C.S./Y.K.	SUBMITTED: <i>Yoshitiro Katsumi</i>	DATE: 8-7-87
	DRAWN: J.B.	KATSUMI CONSULTING ENGINEERS	R.C.E. NO. 14038
	CHECKED: Y.K.	ALEXANDER ENGINEERS	R.C.E. NO. 513

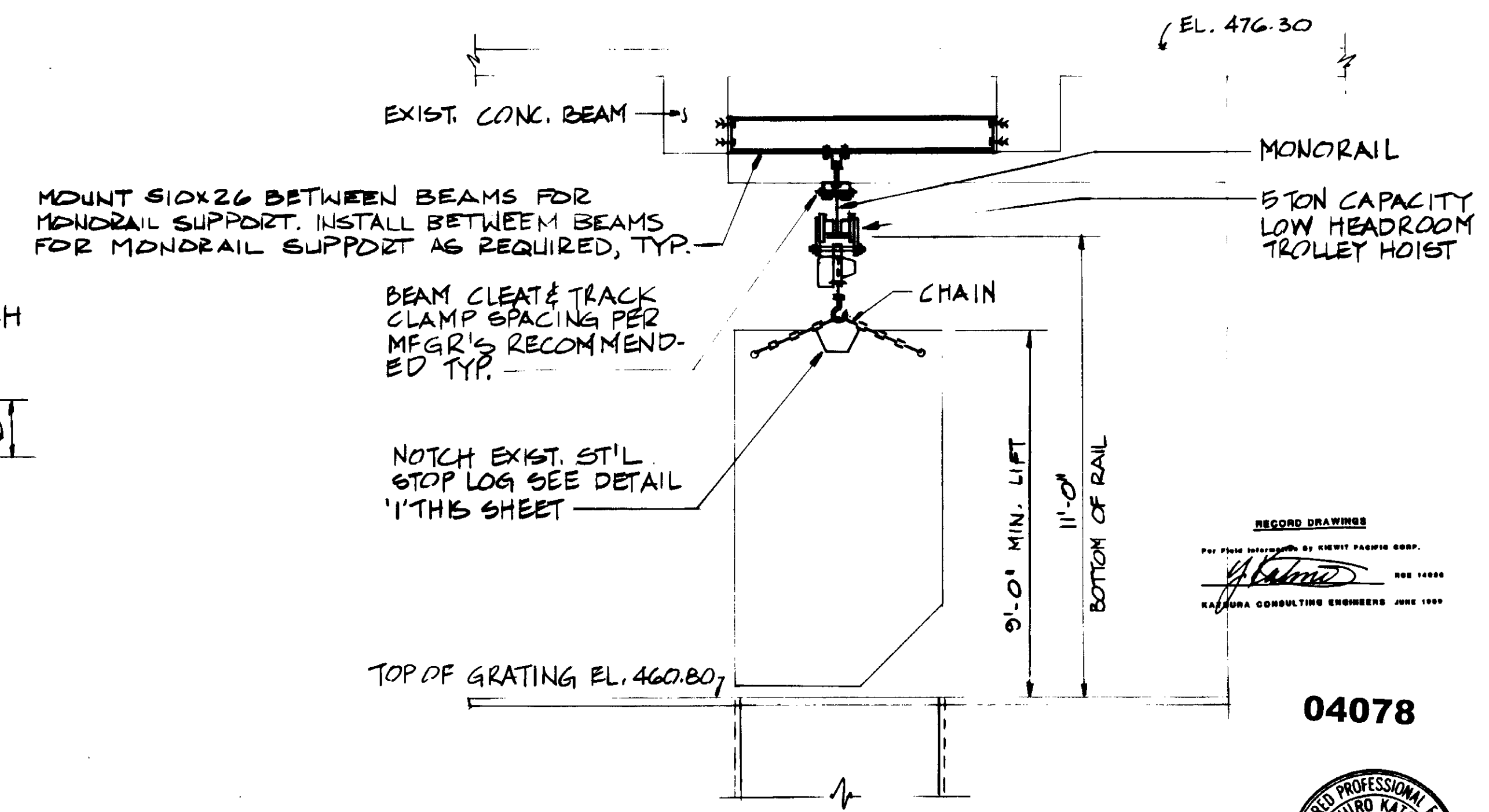
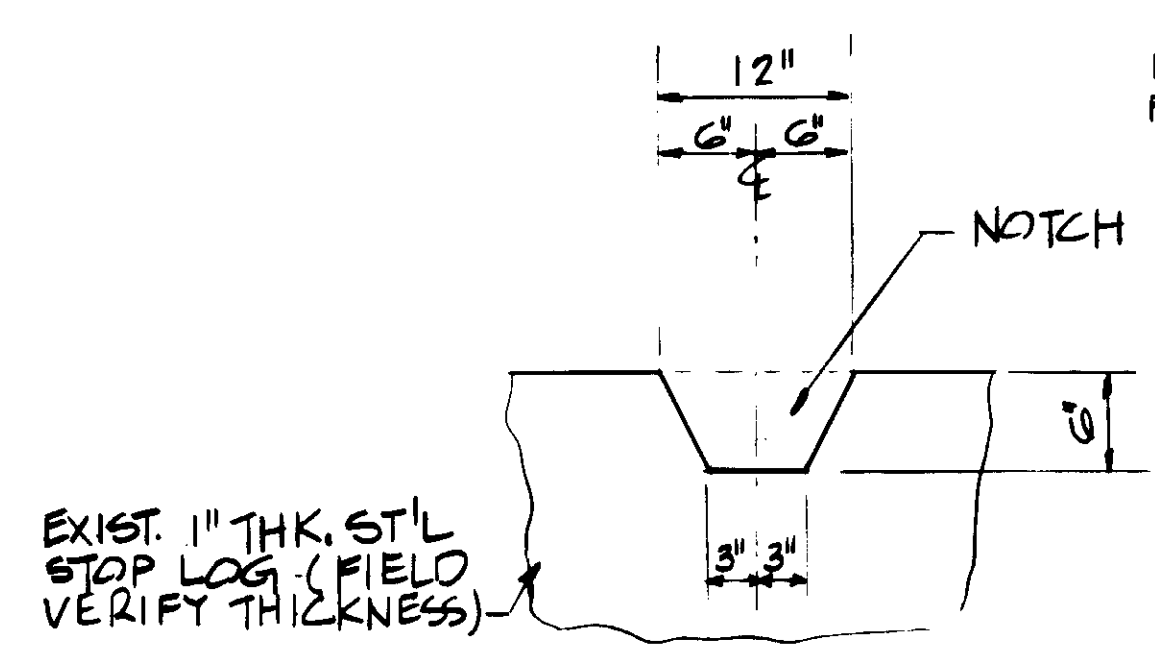
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 MONORAIL  
 SHEET M1-13



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

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



RECORD DRAWING  
PREPARED BY: ROBERT PASQUIN  
KATSURA CONSULTING ENGINEERS  
JUNE 1987

04078



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	AS NOTED	DESIGNED:	CS/Y.K.	DESIGNED:	R.M./U.B.	DRAWN:	Y.K.	CHECKED:	
SUBMITTED:		DATE:	8-7-87	R.C.E. NO.:	14038	DATE:		R.C.S.E. NO.:	
		KATSURA CONSULTING ENGINEERS		ALEXANDER ENGINEERS					

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California      Glendora, California

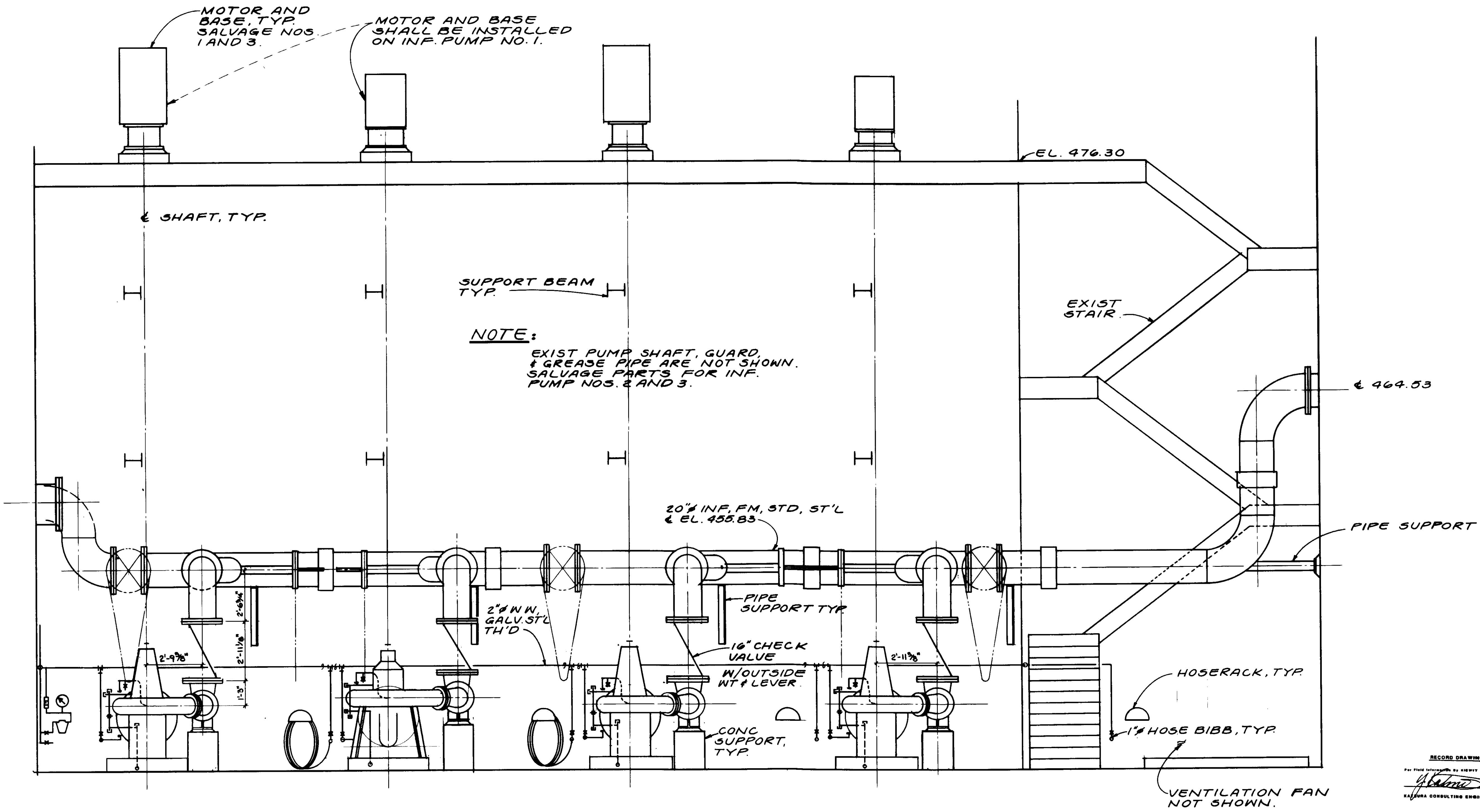
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

CRANE RAIL, SECTIONS - III

SHEET M1-14







EXISTING ELEVATION.

RECORD DRAWING  
 PREPARED BY KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS

04080



REV	DATE	BY	DESCRIPTION

SCALE: 3/8" = 1'-0"	DESIGNED Y.K. R.K./DN	SUBMITTED 14080 8-7-87 KALEX CONSULTING ENGINEERS
CHECKED	Y.K.	R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 INFLUENT PUMP ROOM, EXISTING ELEVATION

SHEET  
**M-16**

E-W PIPE GALLERY, SEE SHEET Y.P. 2

24" SPACER SPOOL 3'-2" LG. W/G-MECH CPLG.

24" GATE VALVE W/OS & Y, FLG & CHAIN WHEEL OPER, SEE SPECS.

TYPICAL BACK RATE

PS. NO. 9 SEE SHT. M11-2.

SPECIAL BACK RATE

20" GATE VALVE W/OS & Y, FLG. W/CHAIN WHEEL OPER. SEE SPECS.

EXIST. 20" INF. FM.

5'-0 1/2"  
3'-11 3/8"  
24"

G-FLG.

24" 90° ELL, STD. ST'L

24" 24" x 20" TEE STD. ST'L W/G-MECH CPLG.

24" x 20" REDUCER, STD. ST'L

REMOVE BLIND FLG. FROM EXIST. 24" WALL FLG.

24" GATE VALVE W/OS & Y, FLG. W/CHAIN WHEEL OPERATOR SEE SPECS

EXIST. PUMP AND PIPING TO REMAIN.

24" SPACER SPOOL, STD. ST'L GROOVER x PE.

20" CHECK VALVE W/OUTSIDE WT. & LEVER, FLG., TYP.

EXIST. PUMP AND PIPING TO REMAIN.

20" x 16" REDUCING ELBOW, C.I., FLG., TYP.

A MI-18

A MI-18

5'-0 5/8"

12'-0 1/8"

4'-4 3/4"  
TYP FOR No. 2 & 3  
VERIFY WITH PUMP MFR.

11'-11 3/4"

12'-0"

PUMP No. 1

PUMP No. 2

PUMP No. 3

PUMP No. 4

NOTES:

1. EXIST. PIPING NOT SHOWN FOR CLARITY.

PLAN

04081

RECORD DRAWINGS  
FOR FILE MAINTENANCE BY CLIENT FACILITY DEPT.  
KATSUMA CONSULTING ENGINEERS JUNE 1999



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

DESIGNED S. K.  
DRAWN Y. K.  
CHECKED

SUBMITTED 8-7-87  
KATSUMURA CONSULTING ENGINEERS R.C.E. NO. 14038  
ALEXANDER ENGINEERS R.C.E. NO. 813

**KALEX ENGINEERS**  
Katsumura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

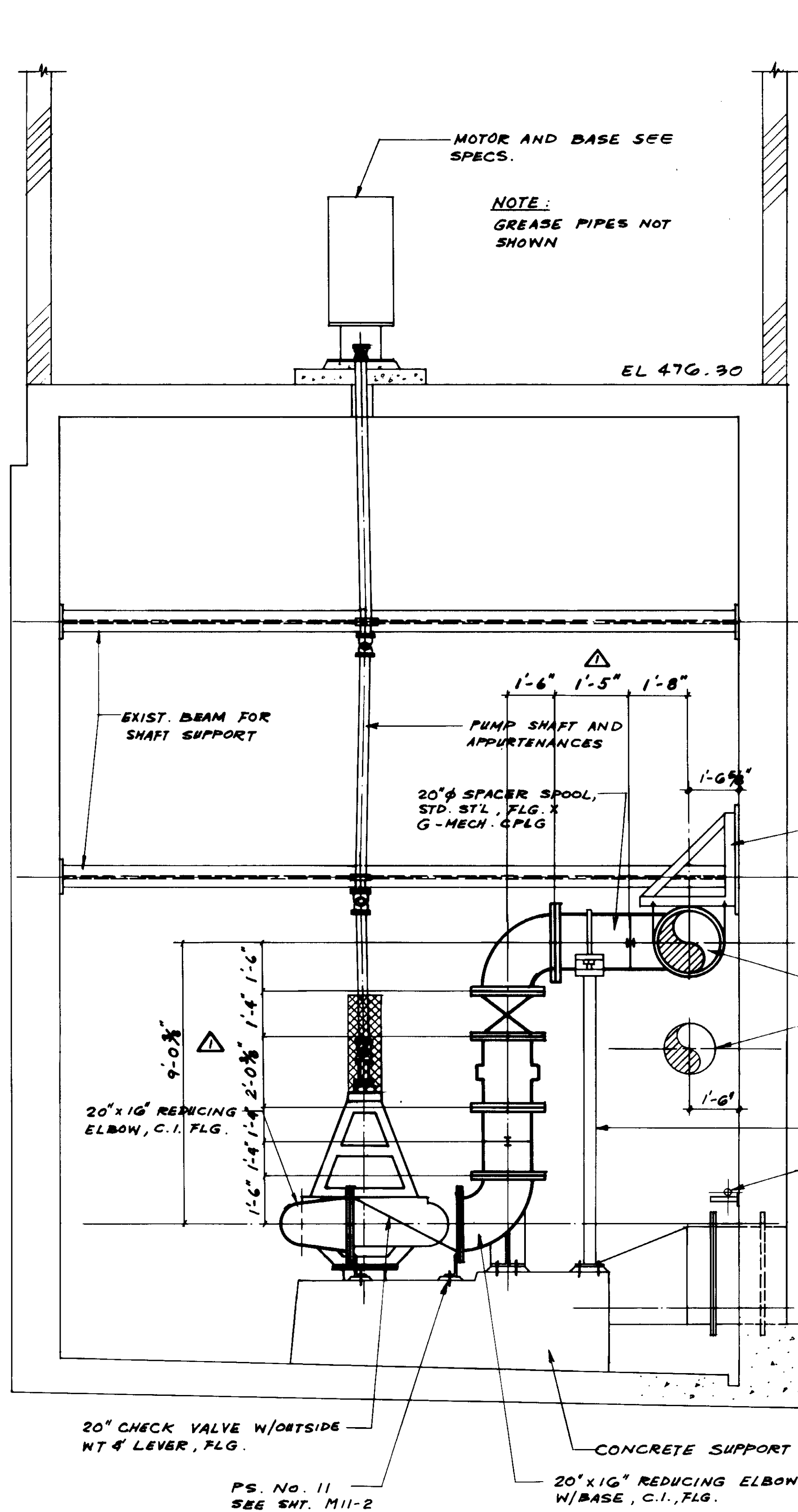
INFLUENT PUMP NOS. 2 & 3, PLAN

SHEET  
M1-17

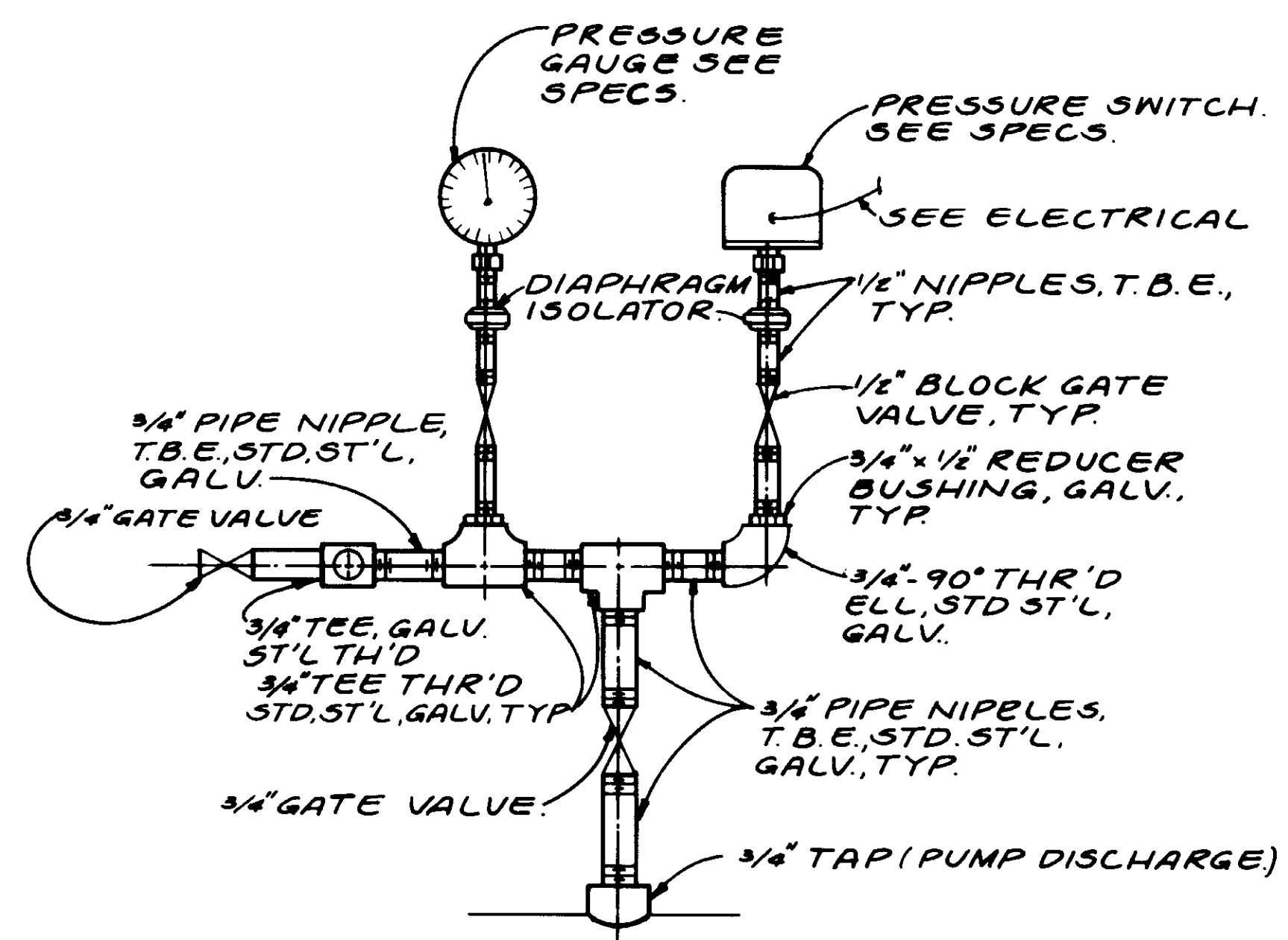
REV	DATE	BY	DESCRIPTION
1	4-12-91	A.B.	REV. PER K.P.C.
2	9-12-91	A.B.	REV. PER K.P.C.



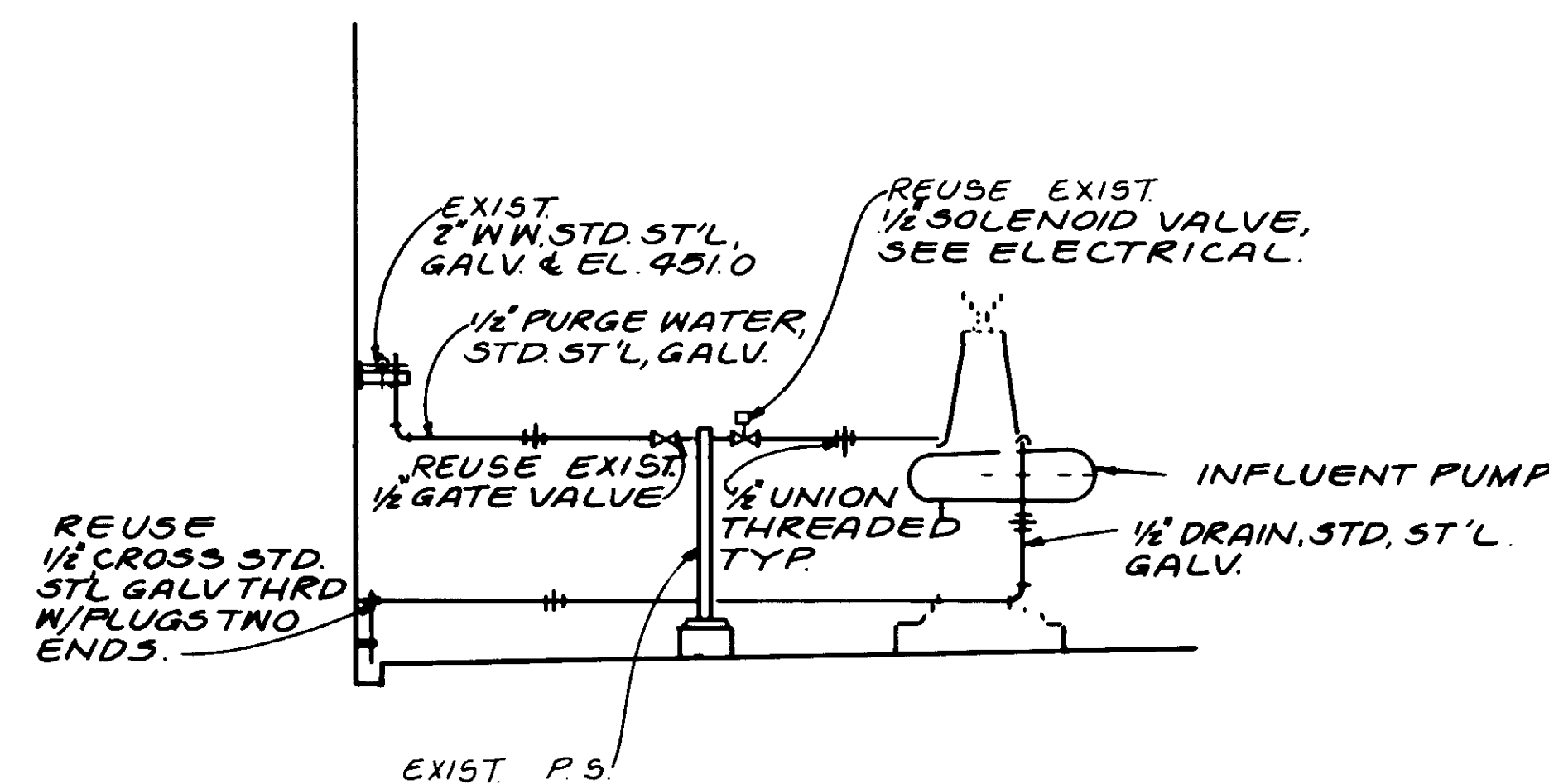




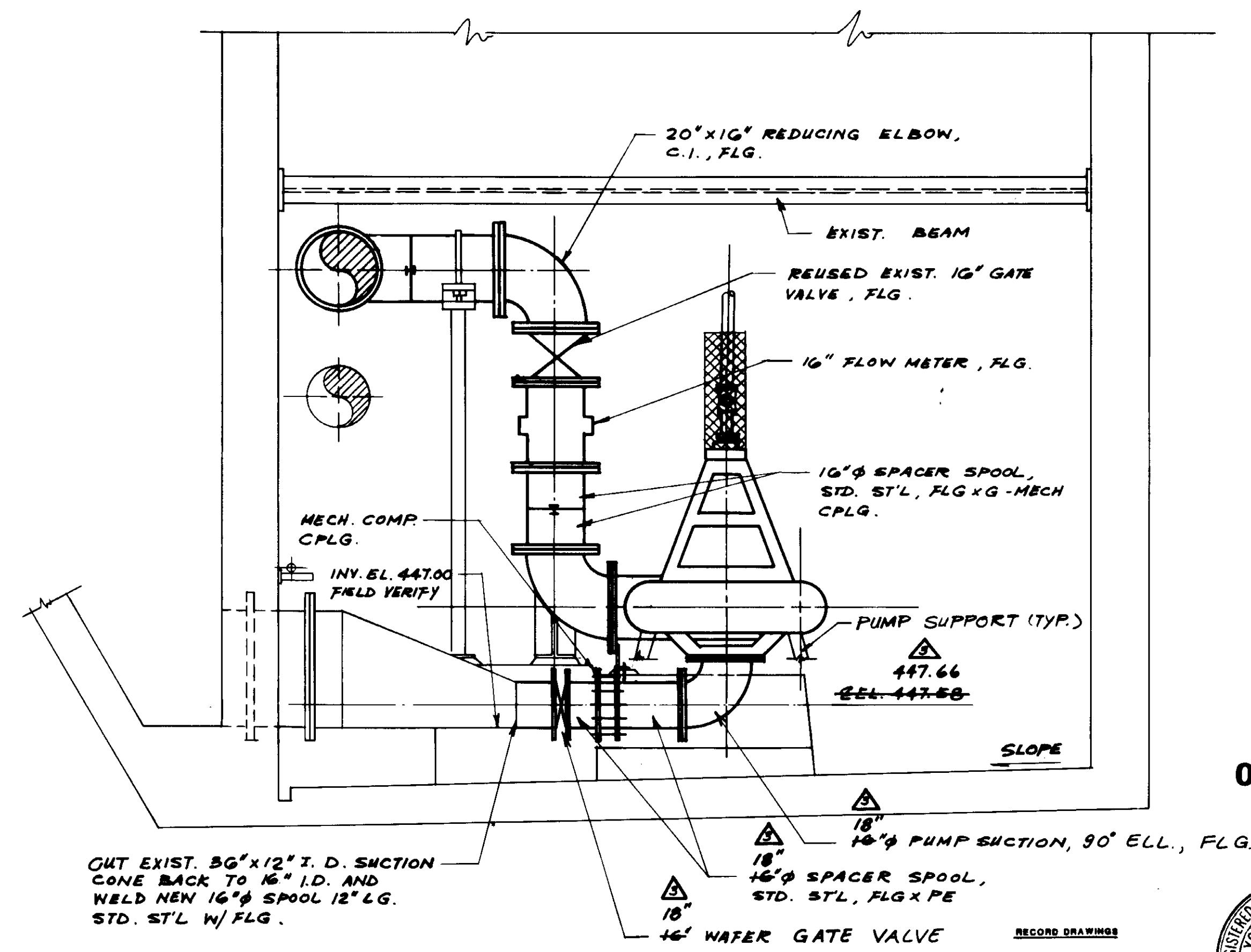
**SECTION B**



**REUSE EXISTING PRESSURE SWITCH & GAUGE.**  
NOT TO SCALE.



**PURGE WATER & DRAIN DETAIL**  
NOT TO SCALE.



**SECTION C**


REV	DATE	BY	DESCRIPTION
1	4-12-87	A.B.	REV. PER K.P.C.
2	4-12-87	A.B.	REV. PER K.P.C.
3	4-12-87	A.B.	REV. PER K.P.C.

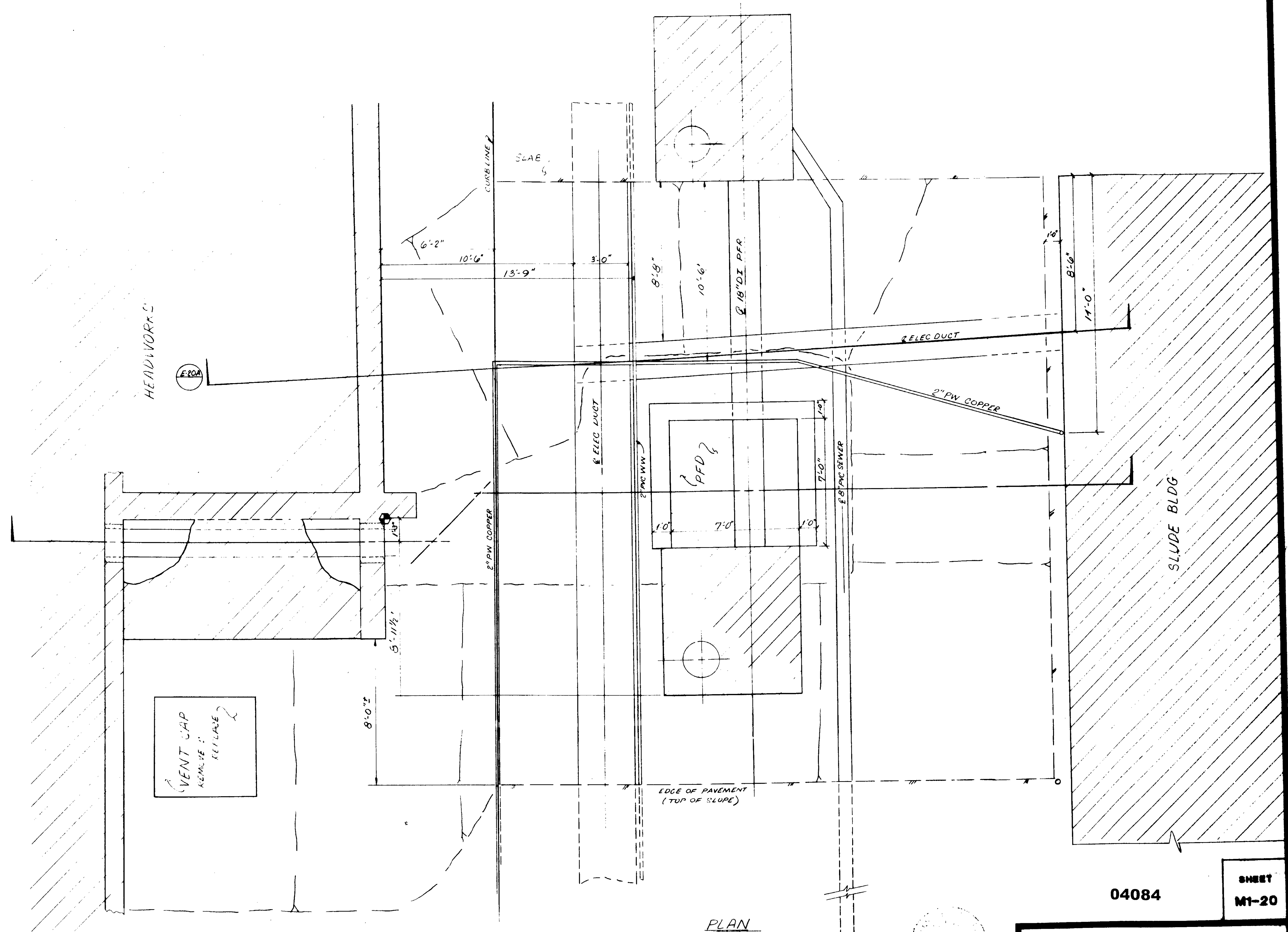
SCALE:	3/8" = 1'-0"
DESIGNED:	S. K.
DRAWN:	Y. K.
CHECKED:	Y. K. / C.S.
SUBMITTED:	8-7-87
DATE:	8-7-87
R.C.E. NO.:	513
DATE:	

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
INFLUENT PUMP NOS. 2 & 3, SECTION  
SHEET M1-19



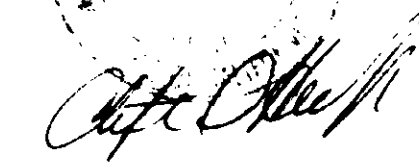
PLANT NORTH  
  
 Scale 3/8" = 1'



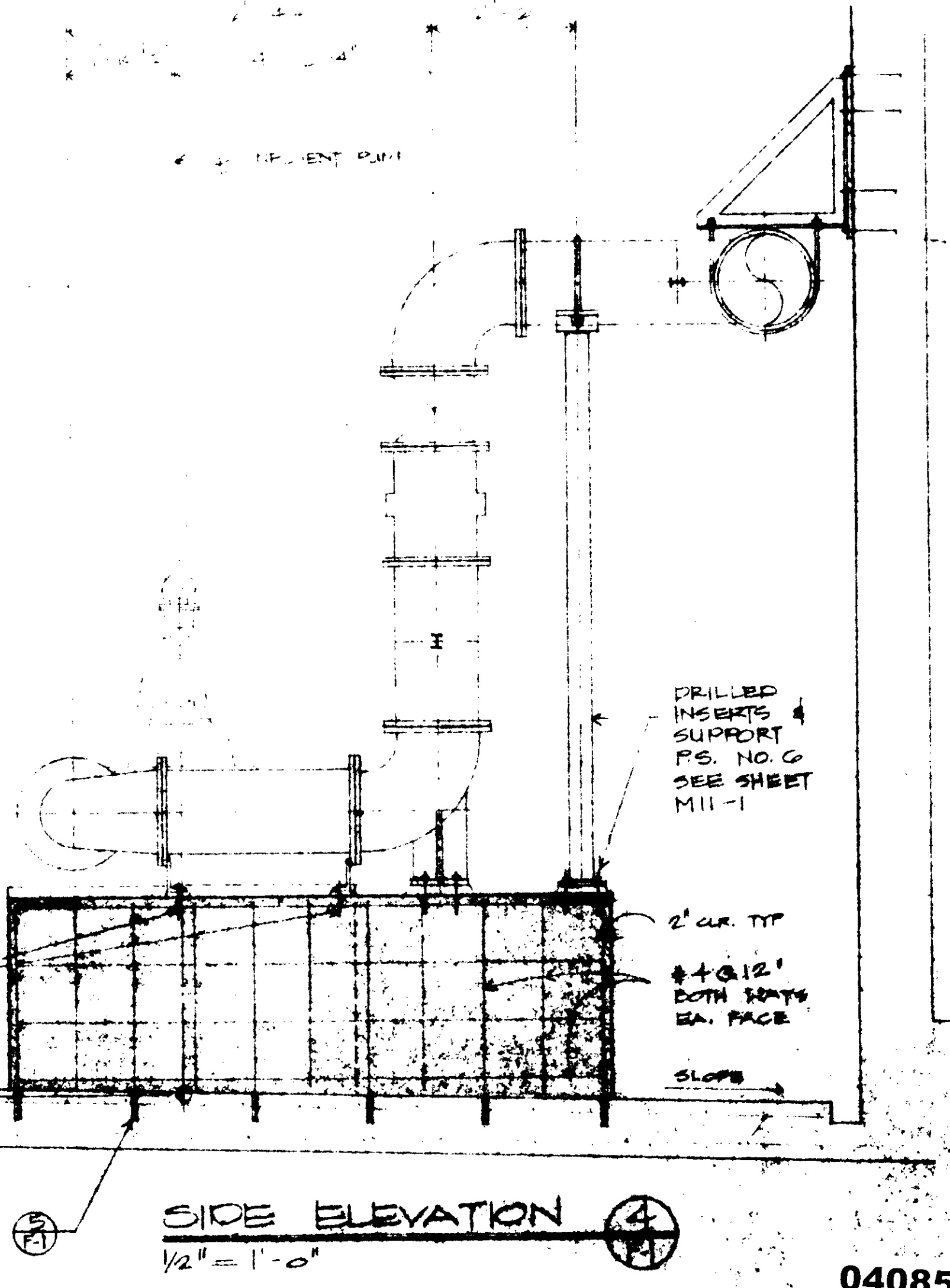
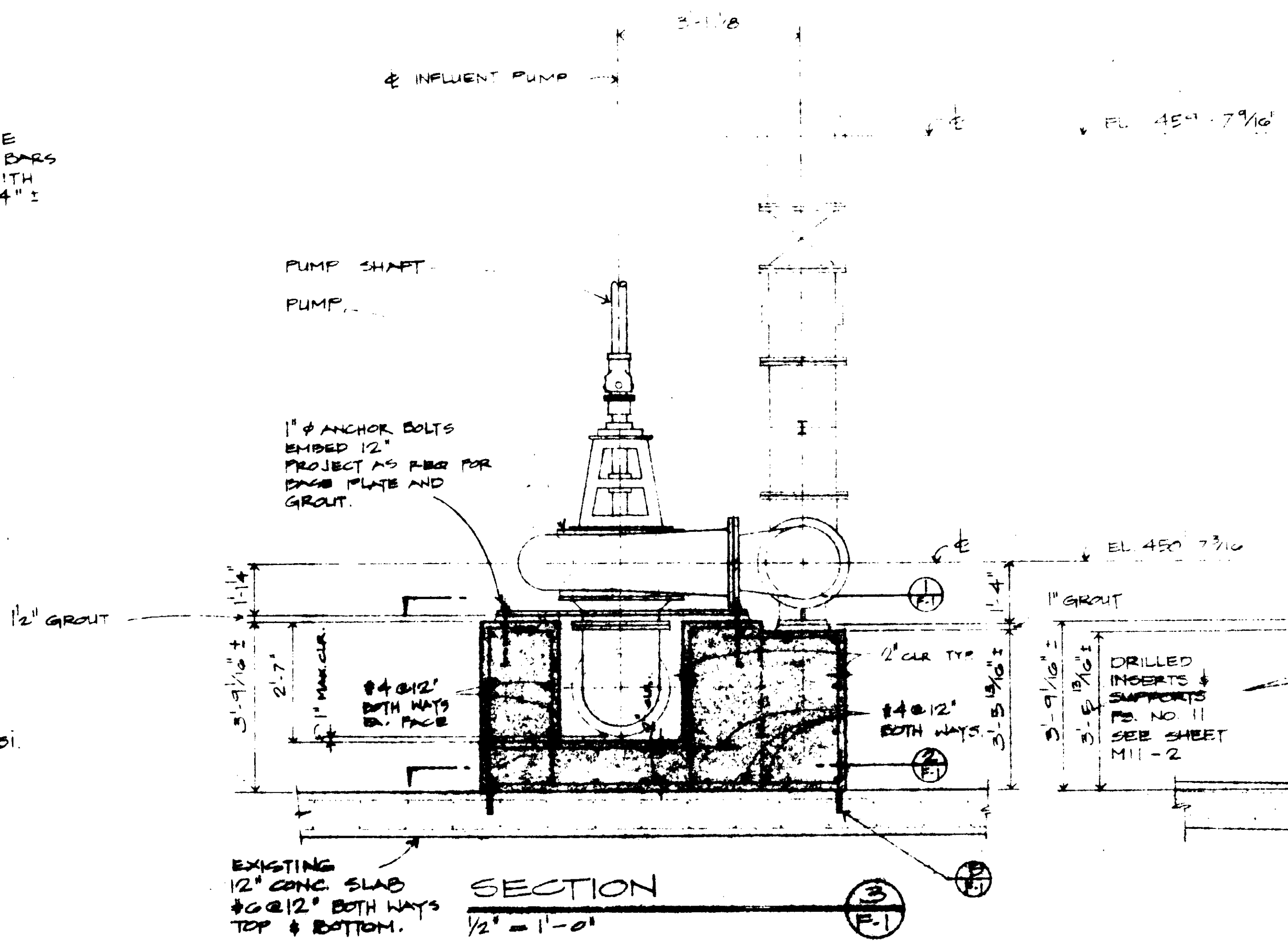
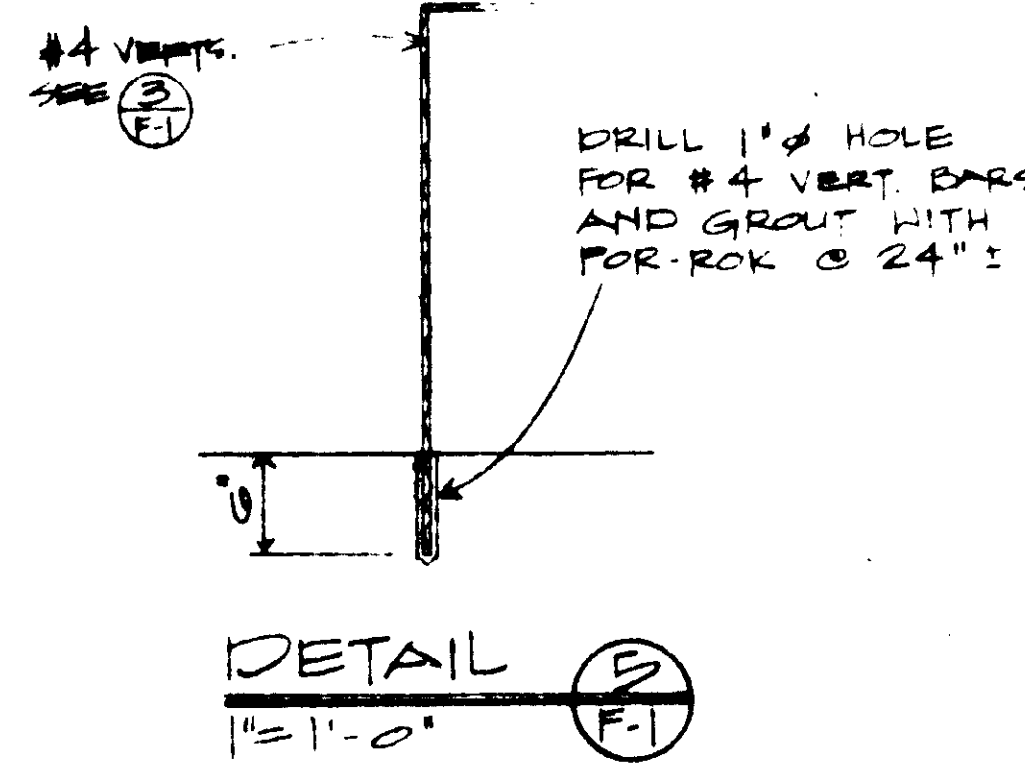
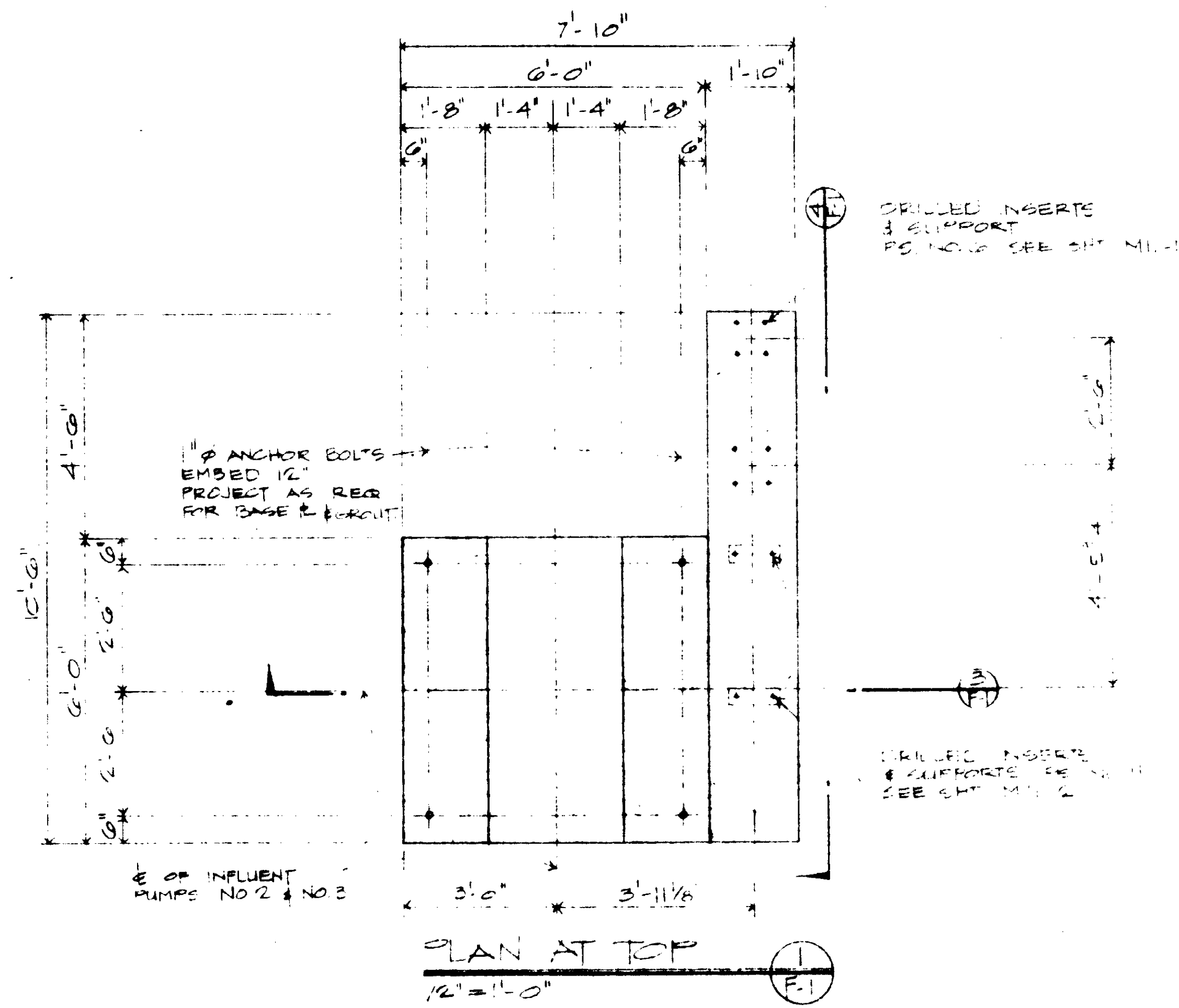
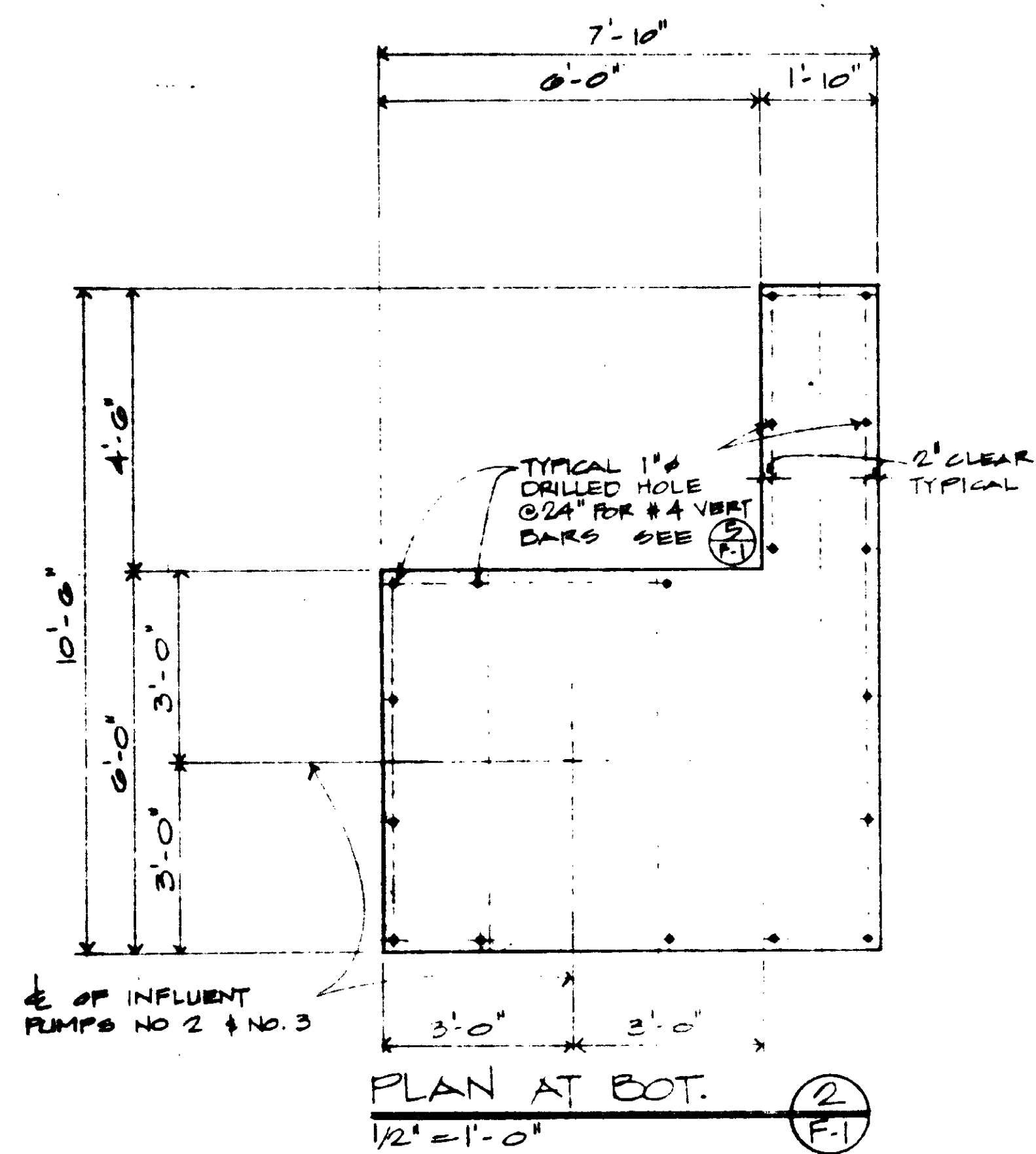
PLAN  
 3/8" = 1'

04084

SHEET  
 M1-20

<b>KIEWIT PACIFIC CO.</b>		
<b>PFD UTILITY &amp; EX PLAN</b>		
APPROVED BY	DATE	SCALE
	5-18-88	3/8" = 1'-0"
DRAWN BY	CHECKED BY	DATE
M. J. ...	M. J. ...	5-18-88
		<b>E-20</b>

△ REVISED TO SHOW ACTUAL LOCATIONS

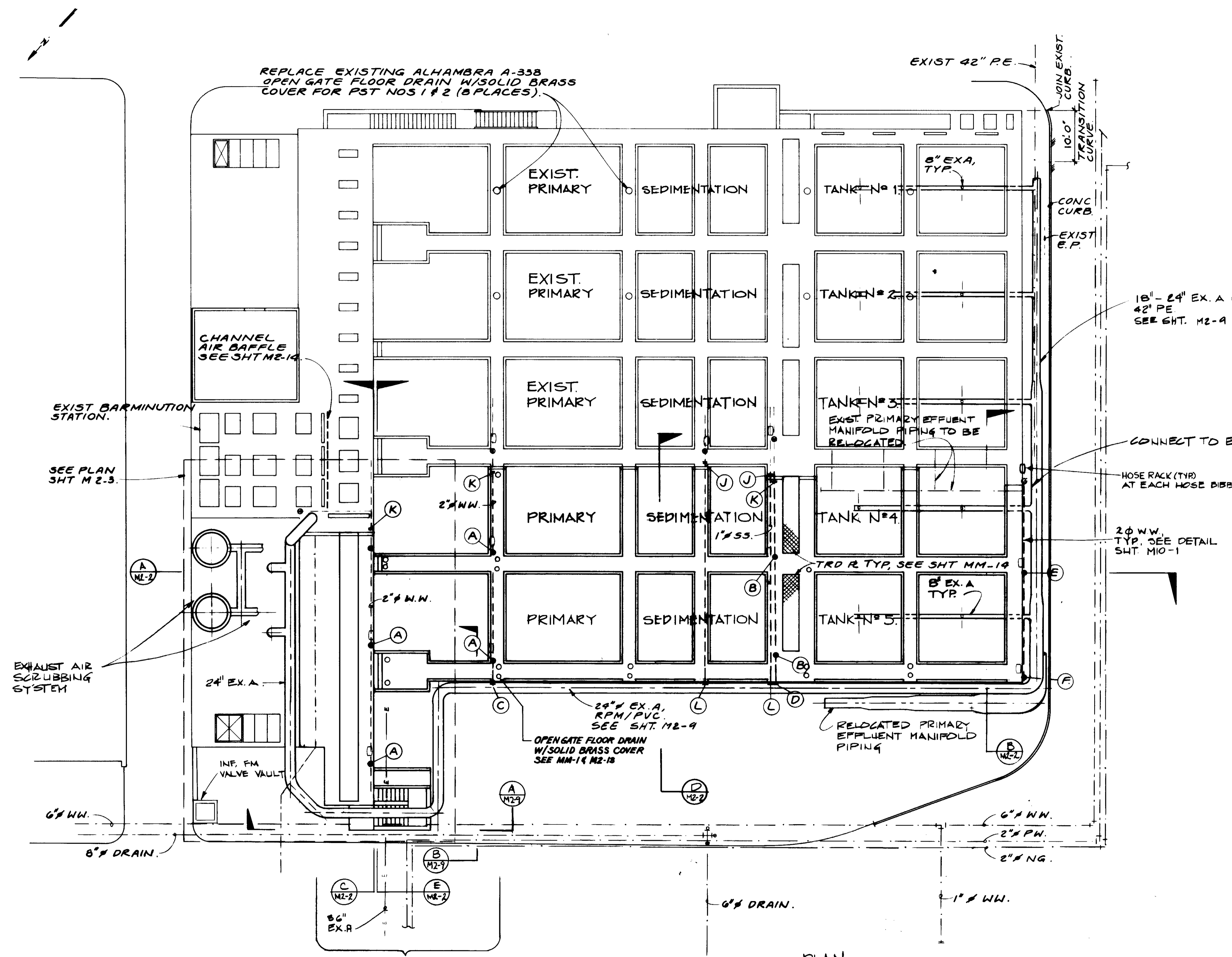


**MATERIALS:**  
 CONCRETE —  $F_c = 3000$  PSI.  
 REINF. — GRADE 60

04085

FOUNDATION PIECES  
 INFLUENT PUMPS NO. 2 & NO. 3  
 LAS VIRGENES, CALIF.  
 KIEWIT - PACIFIC CONTRACTORS





NOTE:  
 1. (A) DENOTE WASH WATER CONNECTION AND DETAILS SEE SHT. M10-1.  
 2. SEE MM-1 FOR SLAB DRAINS ON PRIMARY SEDIMENTATION TANK NO. 4 & 5

PLAN

SEE SHT YP-2 & 3 FOR PIPE RELOCATION IN THIS AREA

04086

RECORD DRAWING  
 PREPARED BY: KALEX ENGINEERS  
 DATE: 8-7-87



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

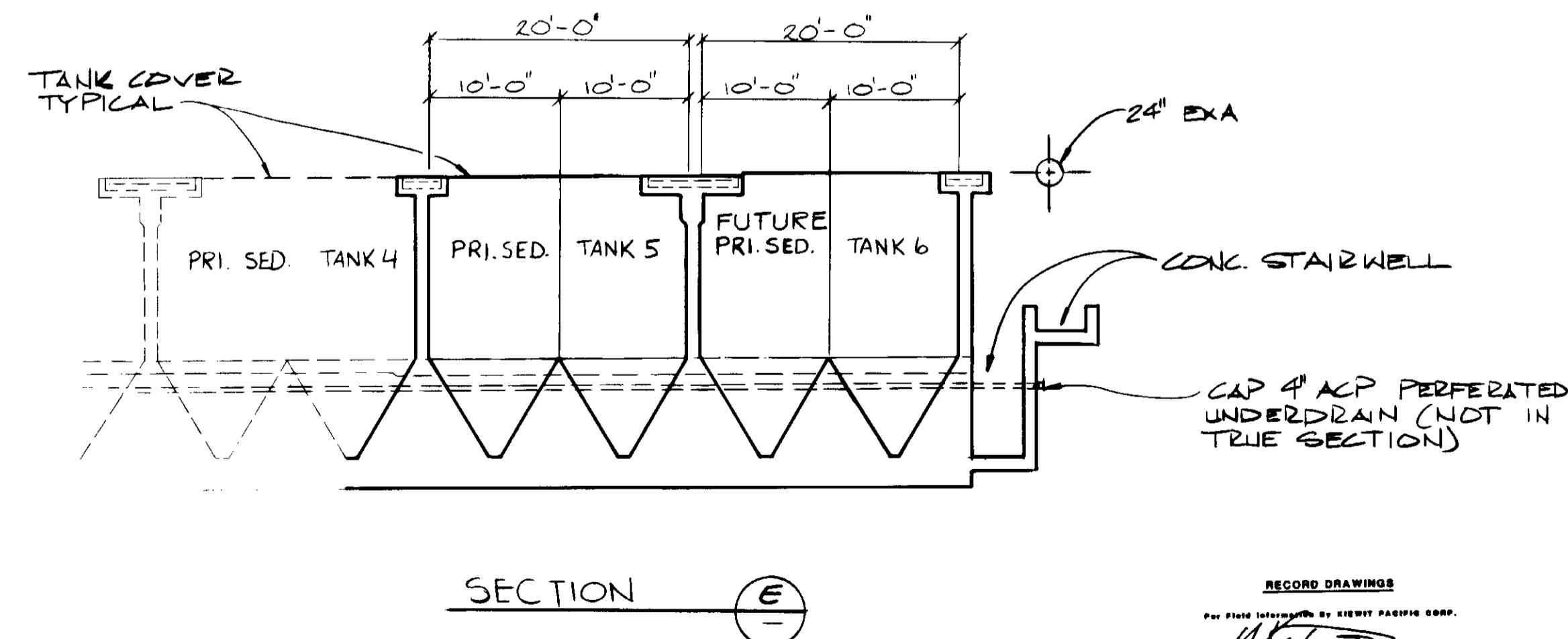
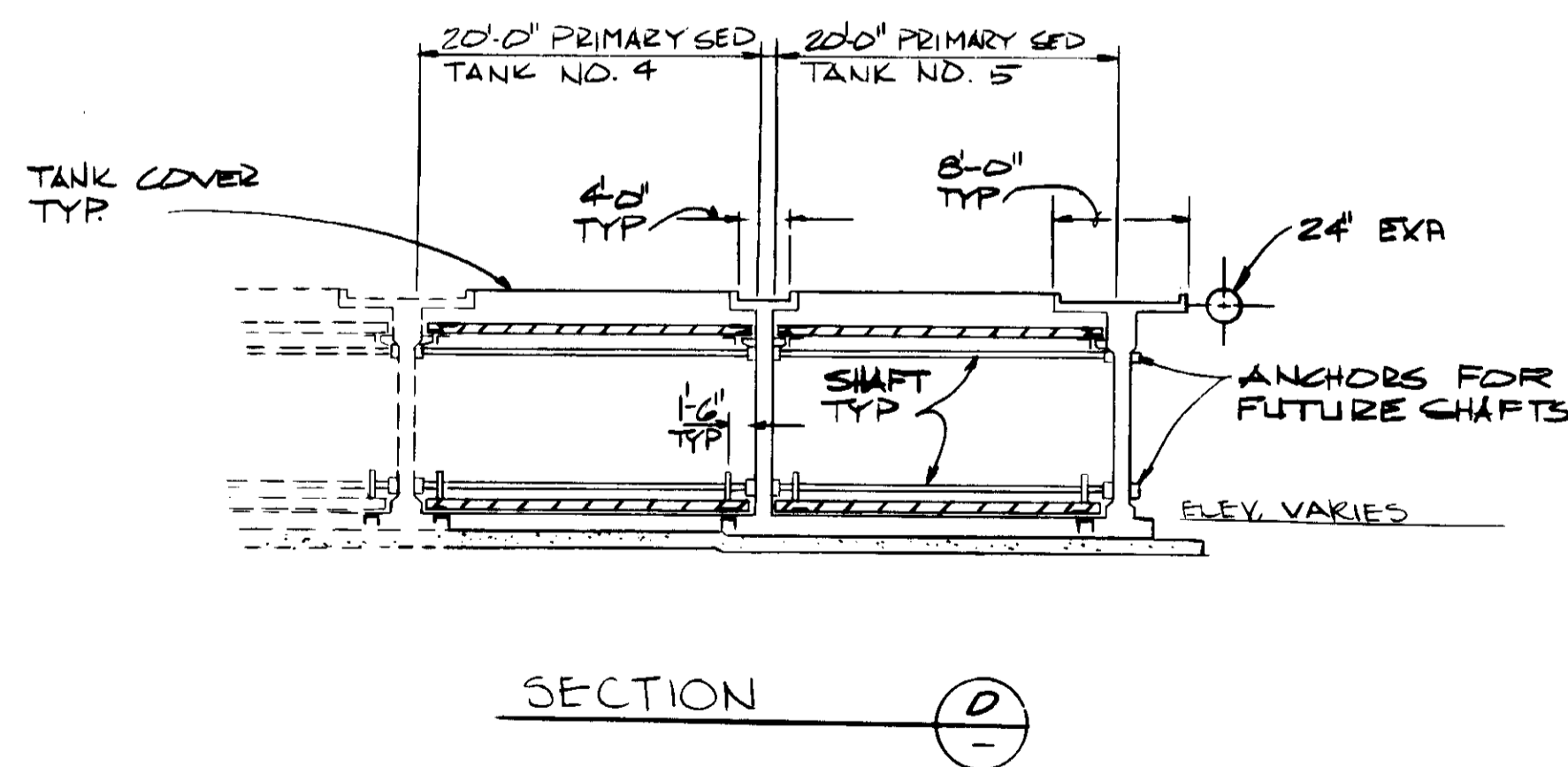
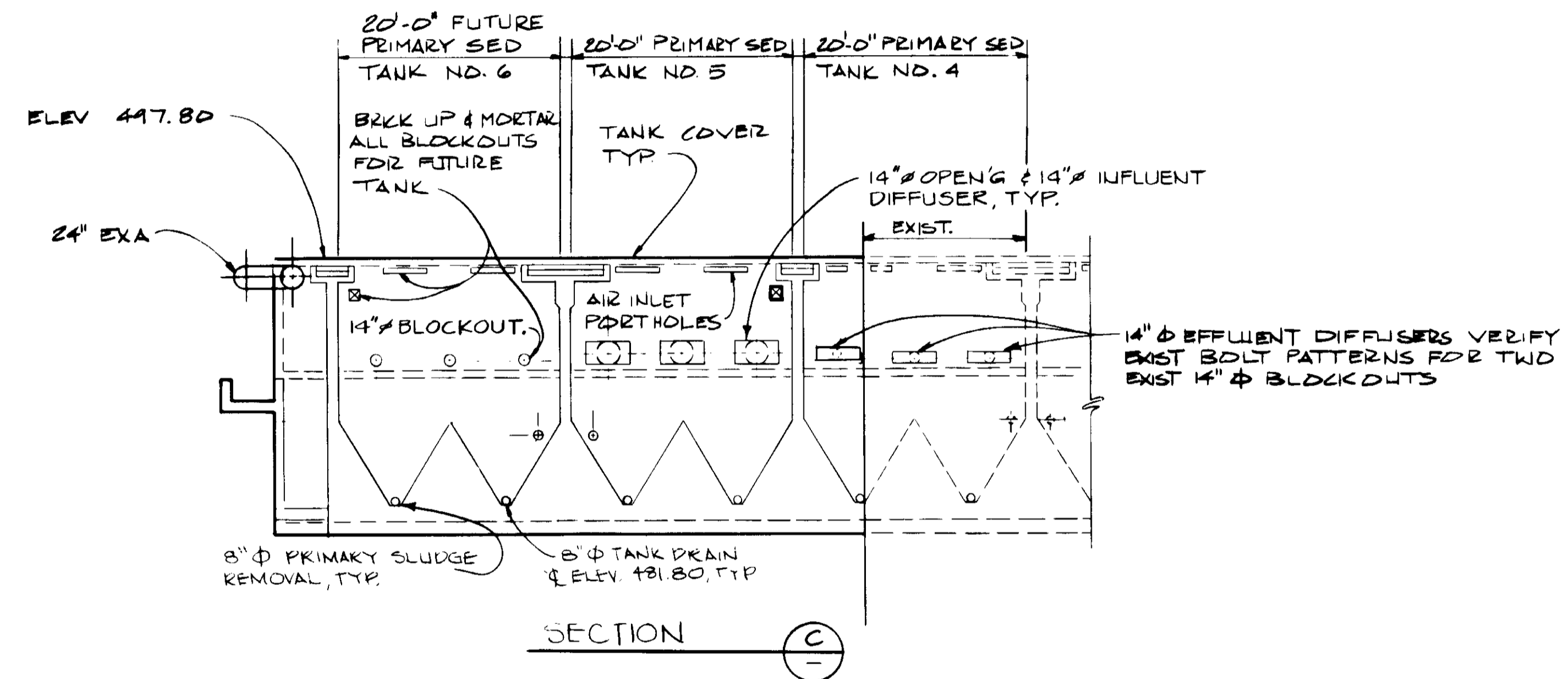
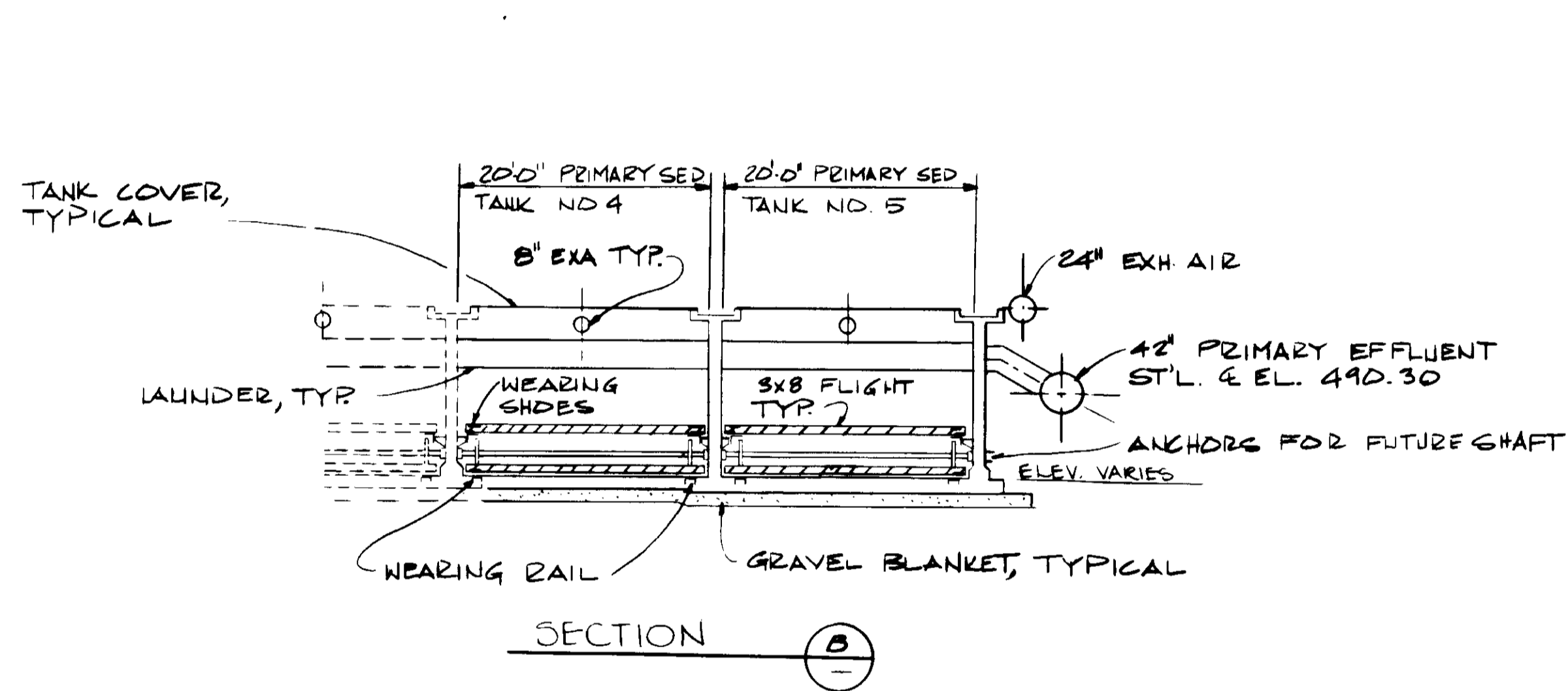
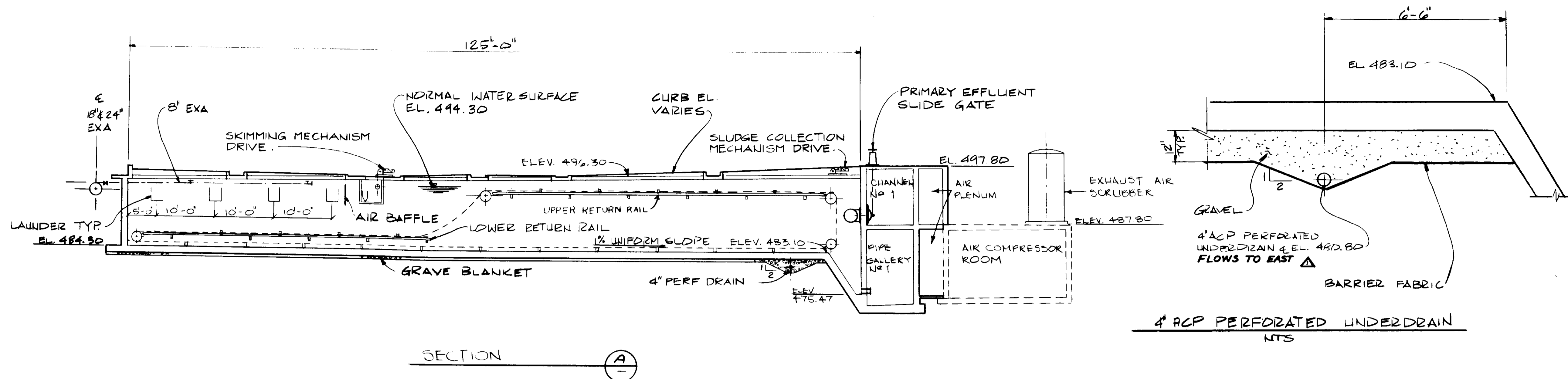
SCALE:	1" = 10'
DESIGNED:	YK/BC
DRAWN:	JB
CHECKED:	YK
SUBMITTED:	14038 8-7-87
DATE:	8-7-87
ENGINEER:	ALEXANDER ENGINEERS

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PRIMARY SEDIMENTATION TANK & VICINITY, LAYOUT

SHEET  
M2-1





04087

RECORD DRAWINGS  
 For Plans Issued by KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS 1988 1989



REV	DATE	BY	DESCRIPTION

SCALE:  
1"=10'

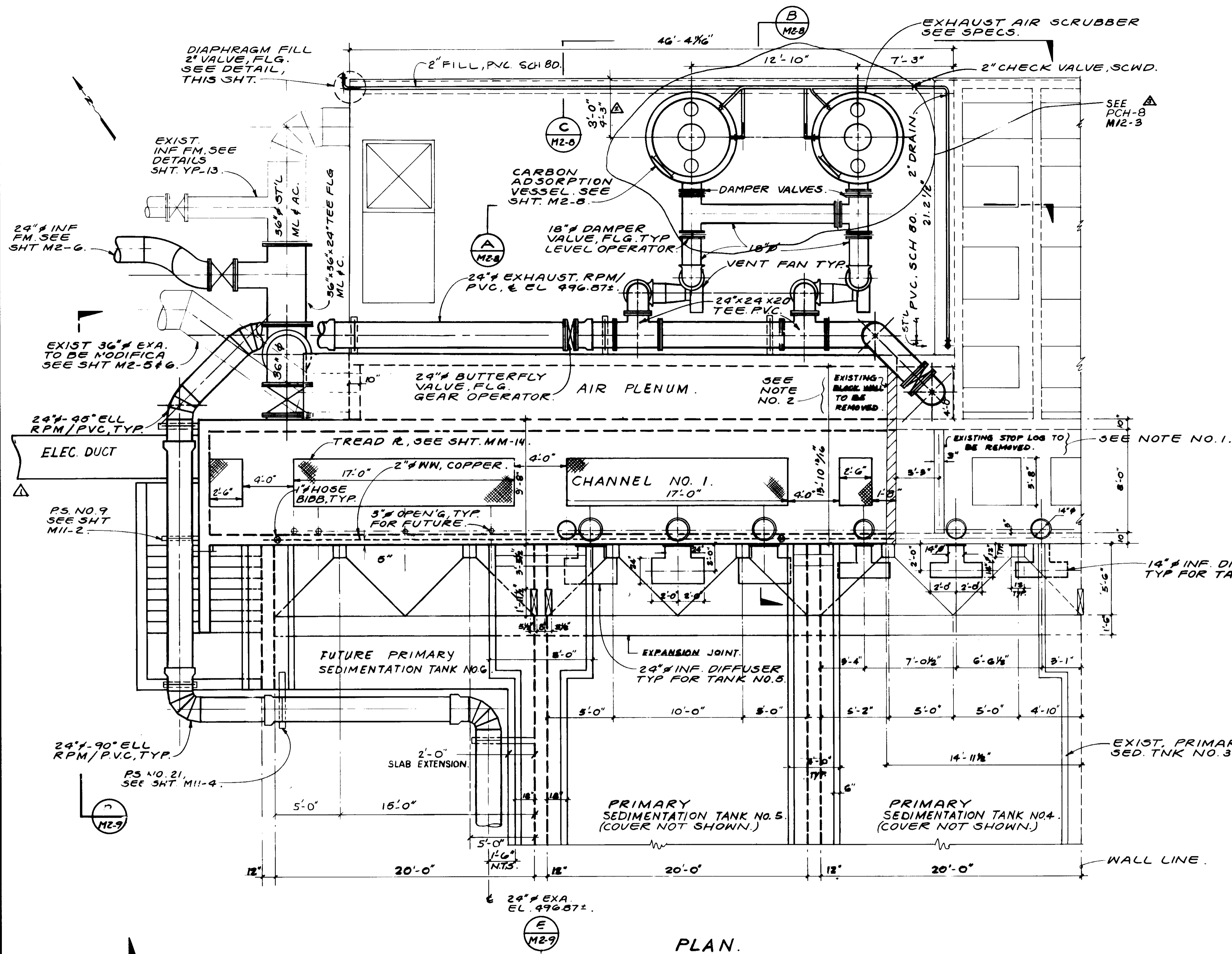
DESIGNED YK  
 DN/JB  
 DRAWN YK  
 CHECKED

SUBMITTED  
 KATSURA CONSULTING ENGINEERS  
 14038 8-7-87  
 R.C.E. NO. DATE  
 ALEXANDER ENGINEERS  
 813  
 R.C.S.E. NO. DATE

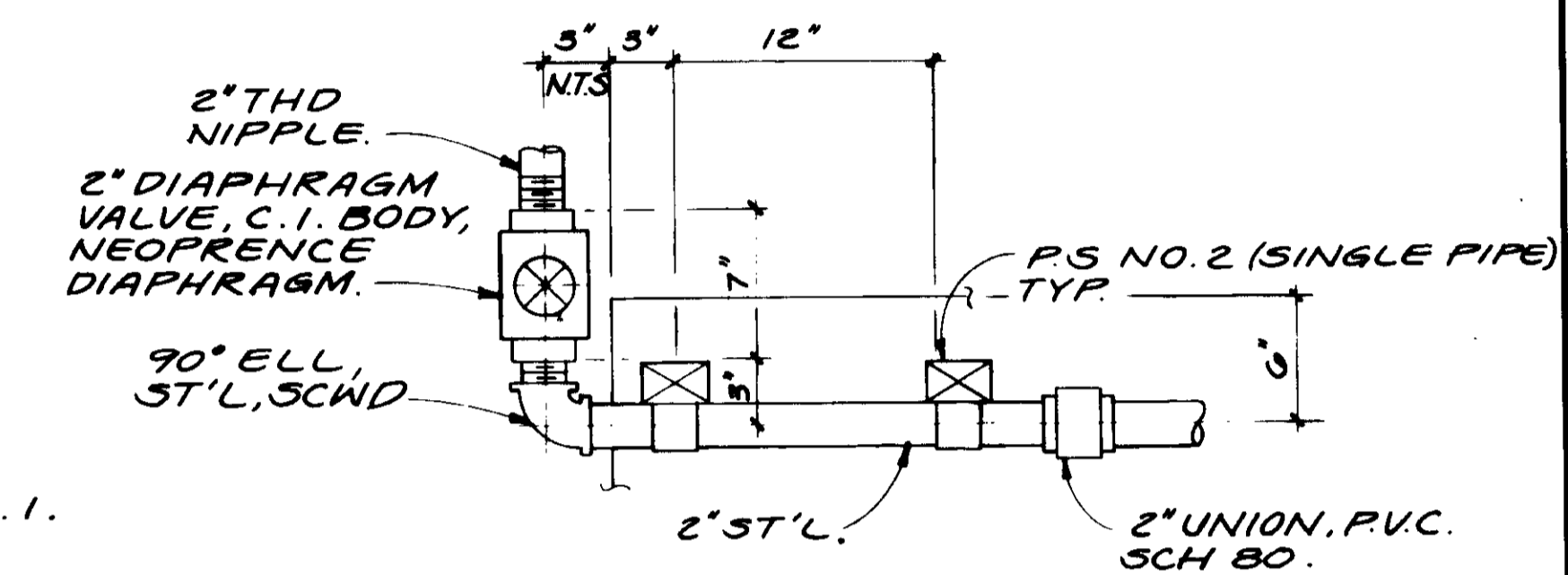
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 GENERAL SECTIONS

SHEET  
M2-2



- NOTES:**
1. REMOVE EXISTING STOP LOG AFTER COMPLETION OF MODIFICATION TO PRIMARY SEDIMENTATION TANK NO'S 1, 2 AND 3.
  2. REMOVE WALL AND INSTALL TEMP CLOSURE IN PLENUM & CHANNEL TO SEAL ODORS PRIOR TO EXTENSION OF PLENUM, CHANNEL AND GALLERY TO WEST.
  3. SEE CONSTRUCTION SEQUENCE REQUIREMENTS IN SPECIFICATIONS FOR ADDITIONAL NOTES.
  4. SEE MM-1 FOR HANDRAIL LOCATION AND DETAILS.



PLAN.

04088

RECORD DRAWING

PREPARED BY: ERIC TABATAKAWA

DESIGNED BY: Y. Katsura

DRAWN BY: Y. Katsura

CHECKED BY: Y. Katsura

KATSUMI CONSULTING ENGINEERS

NO. 14038

Exp. 3-31-88

CIVIL ENGINEER

STATE OF CALIFORNIA



REV	DATE	BY	DESCRIPTION
1	1-18-87	A.B.	REV. PER K.P.C.
2	1-18-87	A.B.	REV. PER K.P.C.
3	1-18-87	A.B.	REV. PER K.P.C.

SCALE:	1" = 1'-0"
DESIGNED:	AR
DRAWN:	Y.K.
CHECKED:	
SUBMITTED:	Yoshiro Katsura
DATE:	8-7-87
R.C.E. NO.:	14038
PROJECT:	KATSUMI CONSULTING ENGINEERS
PROJECT:	ALEXANDER ENGINEERS
R.C.E. NO.:	513
DATE:	

**KALEX ENGINEERS**

Katsura Consulting Engineers / Alexander Engineers

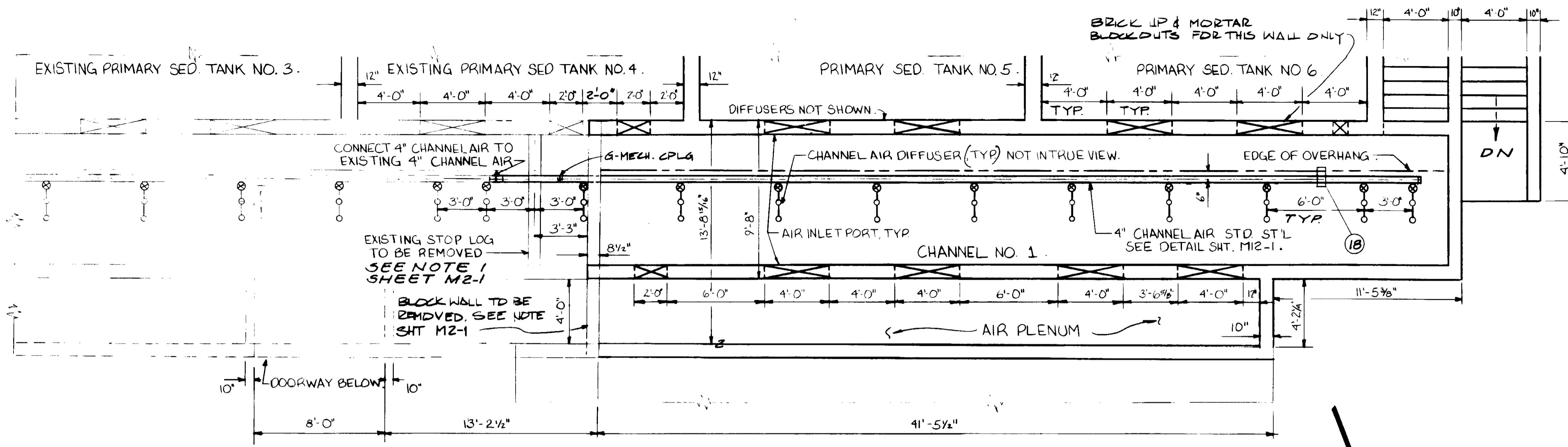
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**

**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

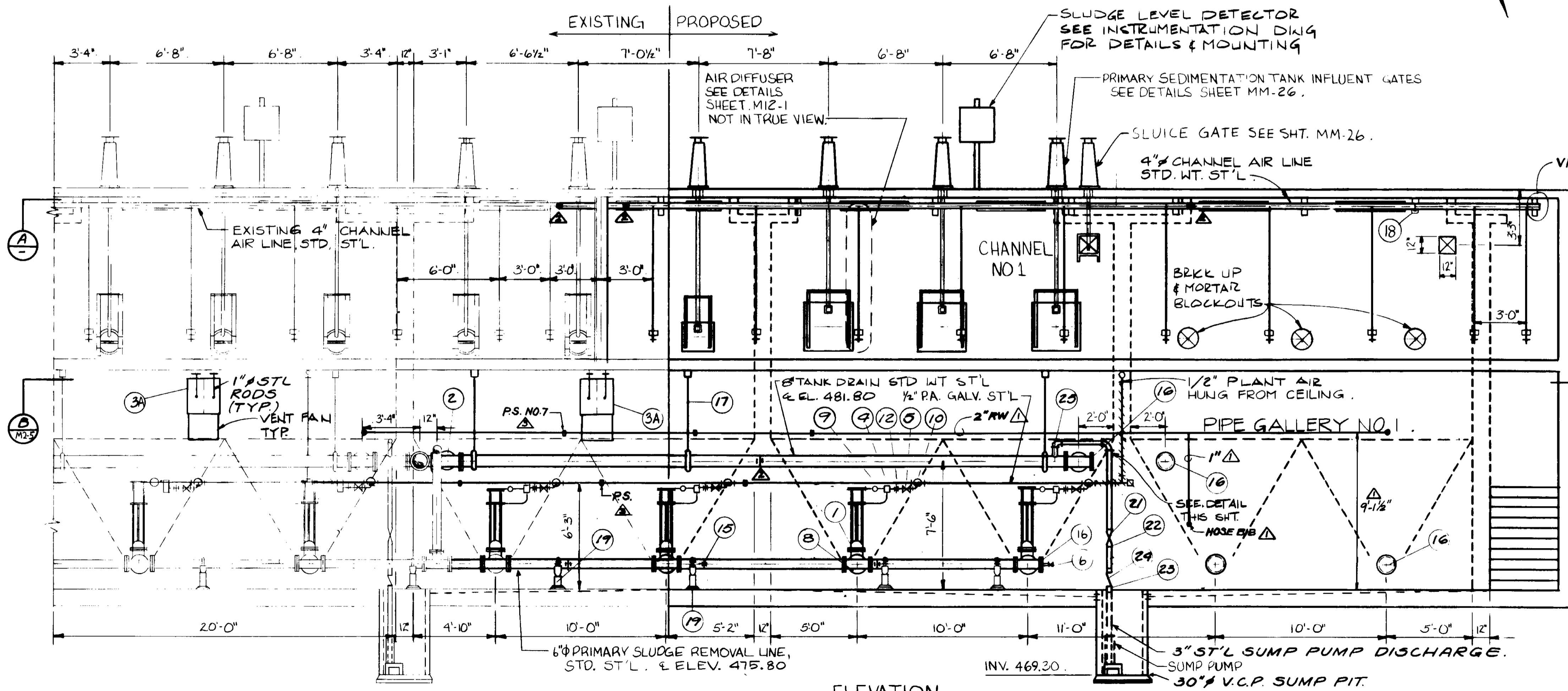
CHANNEL NO. 1 & VICINITY, PLAN

SHEET M2-3

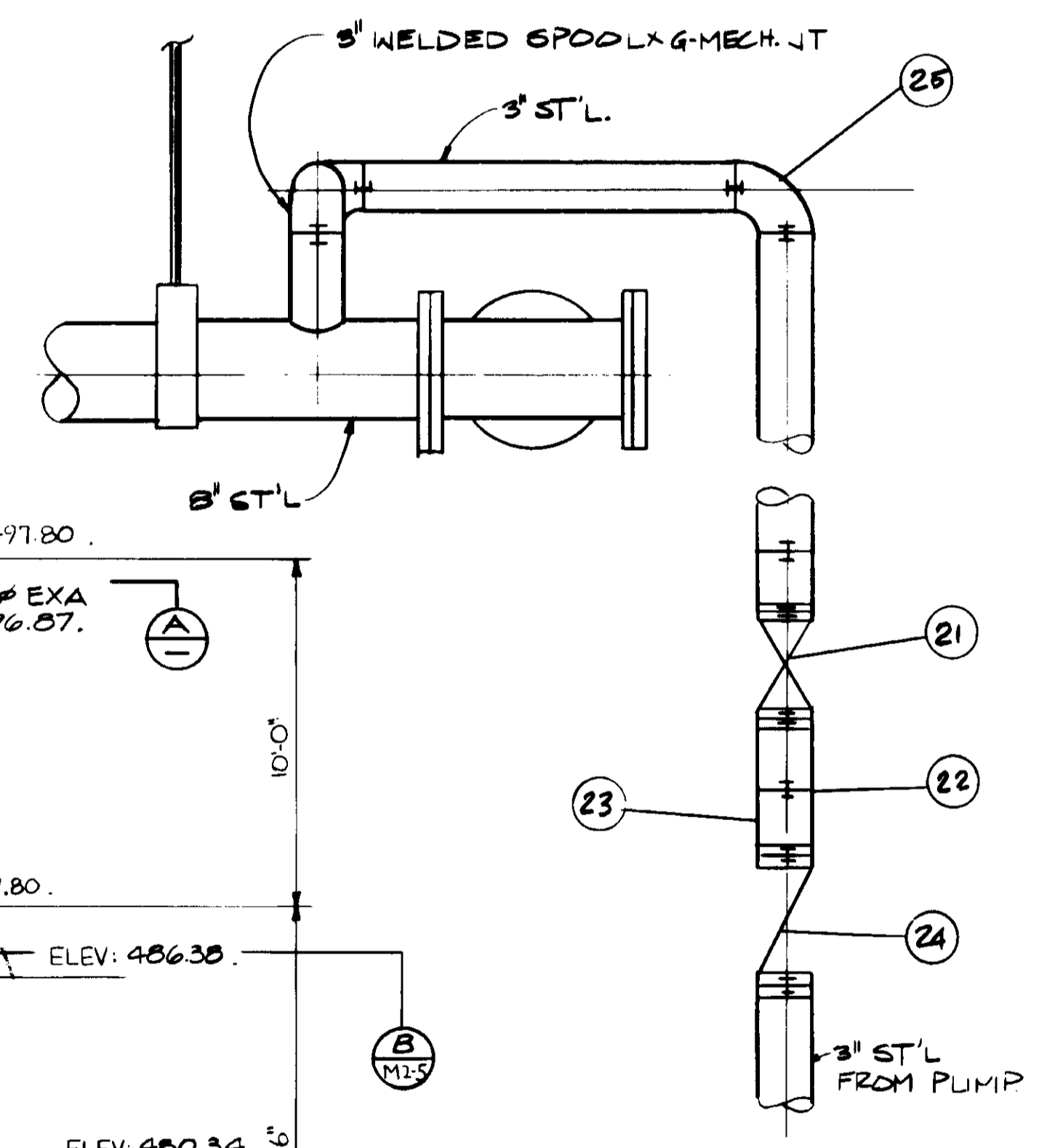


PLAN SECTION A

ITEM	DESCRIPTION
1	8" GATE VALVE W/CYLINDER OPERATOR.
2	8" GATE VALVE, FLG x FLG.
3A	VENT FAN VF-12, SEE SPECS.
3B	VENT FAN VF-3, SEE SPECS.
4	1/4" 4-WAY SOLENOID VALVE, TH'D.
5	1/4" GLOBE VALVE, TH'D.
6	1" GATE VALVE, TH'D. WITH 1" NIPPLE
7	8" TEE, C.I. FLG.
8	6x6x8 TEE, C.I. FLG.
9	PRESS REGULATOR - SEE SPECS.
10	1/2x1/2x1/4" TEE M.I. TH'D.
11	1/2" 90° ELL TH'D.
12	1/2" UNION, M.I., TH'D.
13	FLR DRAIN W/INTERGAL TRAP, TYLER NO. 734
14	8" SPOOL, C.I. WALL FLG, PE x FLG
15	6" GROOVE MECHANICAL COUPLING.
16	8" C.I. BLIND FLG. WITH 1" TAP.
17	PIPE SUPPORT, NO. 14
18	PIPE SUPPORT, NO. 30, SHT M11-6
19	PIPE SUPPORT, NO. 1, SHT M11-1
20	
21	3" GATE VALVE, TH'D
22	3" GROOVE MECHANICAL CPLG.
23	3" ST'L NIPPLE TH'DxG-MECH. CPLG
24	3" CHECK VALVE, TH'D
25	3" 90° ELL., G-MECH. CPLG.



ELEVATION.



SUMP PUMP PIPING DETAIL NO SCALE

04089

RECORD DRAWINGS  
 PREPARED BY SHREY PARIKH  
 KATKURA CONSULTING ENGINEERS JUN 1997



REV	DATE	BY	DESCRIPTION
1-3-87	A.B.	REV. PER K.P.C.	
1-18-87	A.B.	REV. PER K.P.C.	
1-2-87	A.B.	REV. PER K.P.C.	

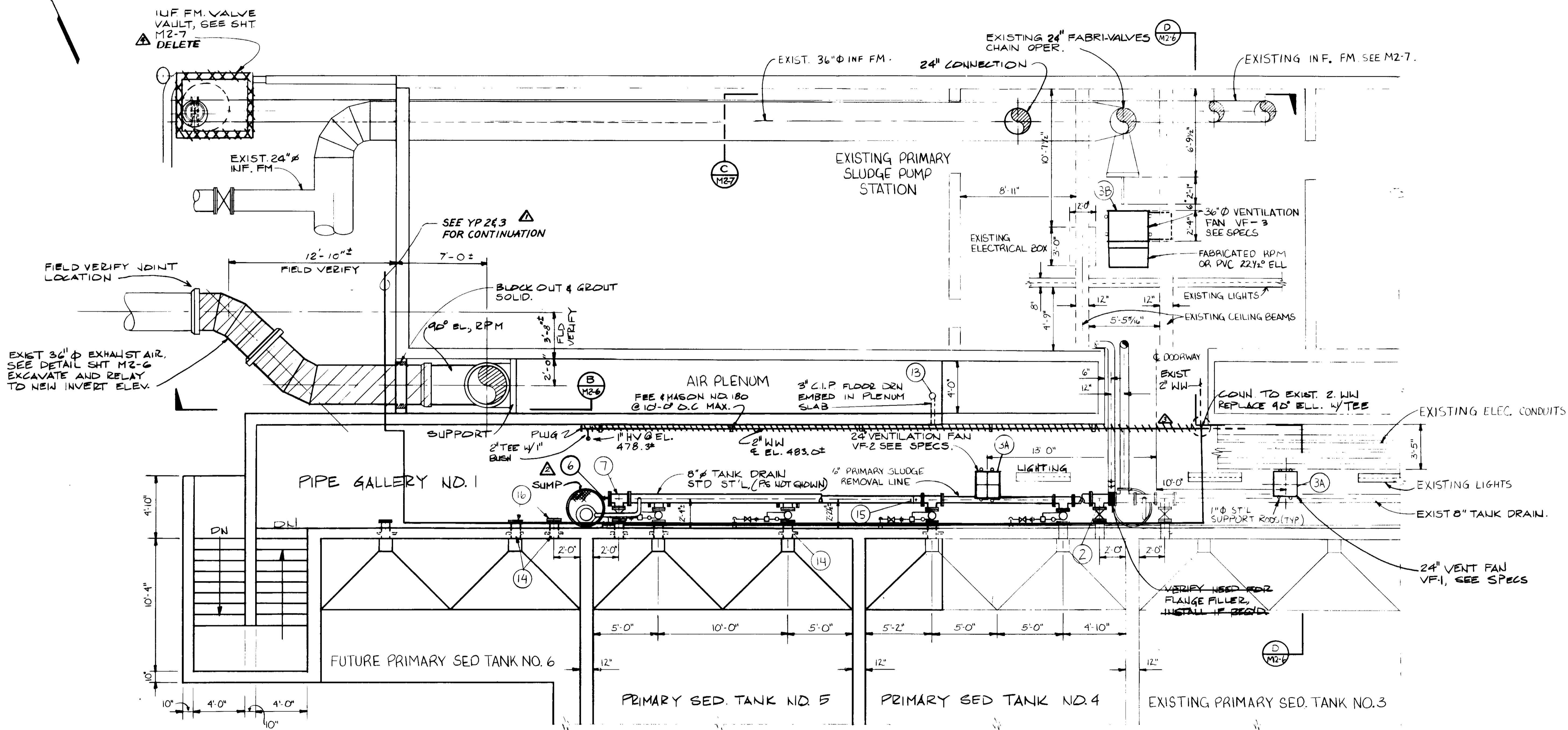
SCALE: 1/4" = 1'-0"	DESIGNED: Y.K. I.C.C. TRIAR	SUBMITTED: 14089 8-7-87
DRAWN: Y.K.	CHECKED:	KATKURA CONSULTING ENGINEERS R.C.S.E. NO. DATE
		ALEXANDER ENGINEERS 813 R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 CHANNEL & PIPE GALLERY NO. 1, PLAN & SECTION

SHEET M2-4





PLAN SECTION B

04090

RECORD DRAWINGS  
 PREPARED BY: KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS JAN 1999



REV	DATE	BY	DESCRIPTION
1	1-13-87	A.B.	REV. PER K.P.C.
2	1-13-87	A.B.	REV. PER K.P.C.
3	1-13-87	A.B.	REV. PER K.P.C.
4	1-13-87	A.B.	REV. PER K.P.C.

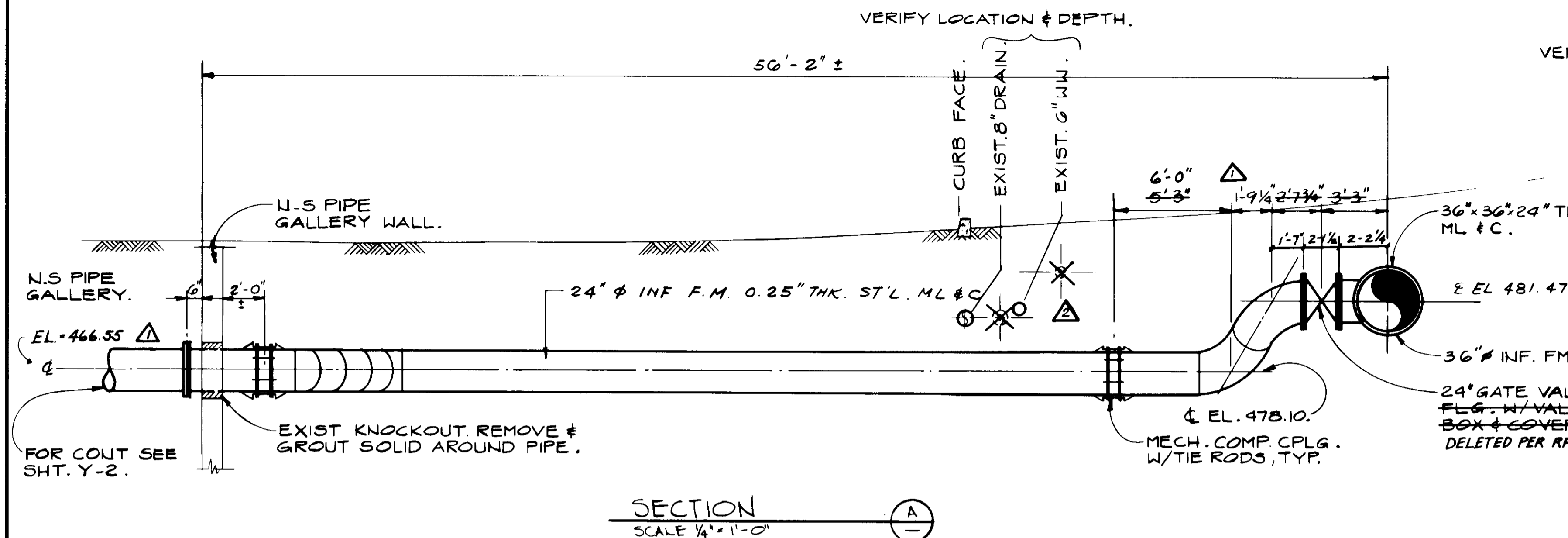
SCALE: 1/4" = 1'-0"	DESIGNED YK/CC	SUBMITTED 14038 8-7-87
DRAWN YK	CHECKED YK	DATE R.C.E. NO.
		DATE R.C.E. NO.

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

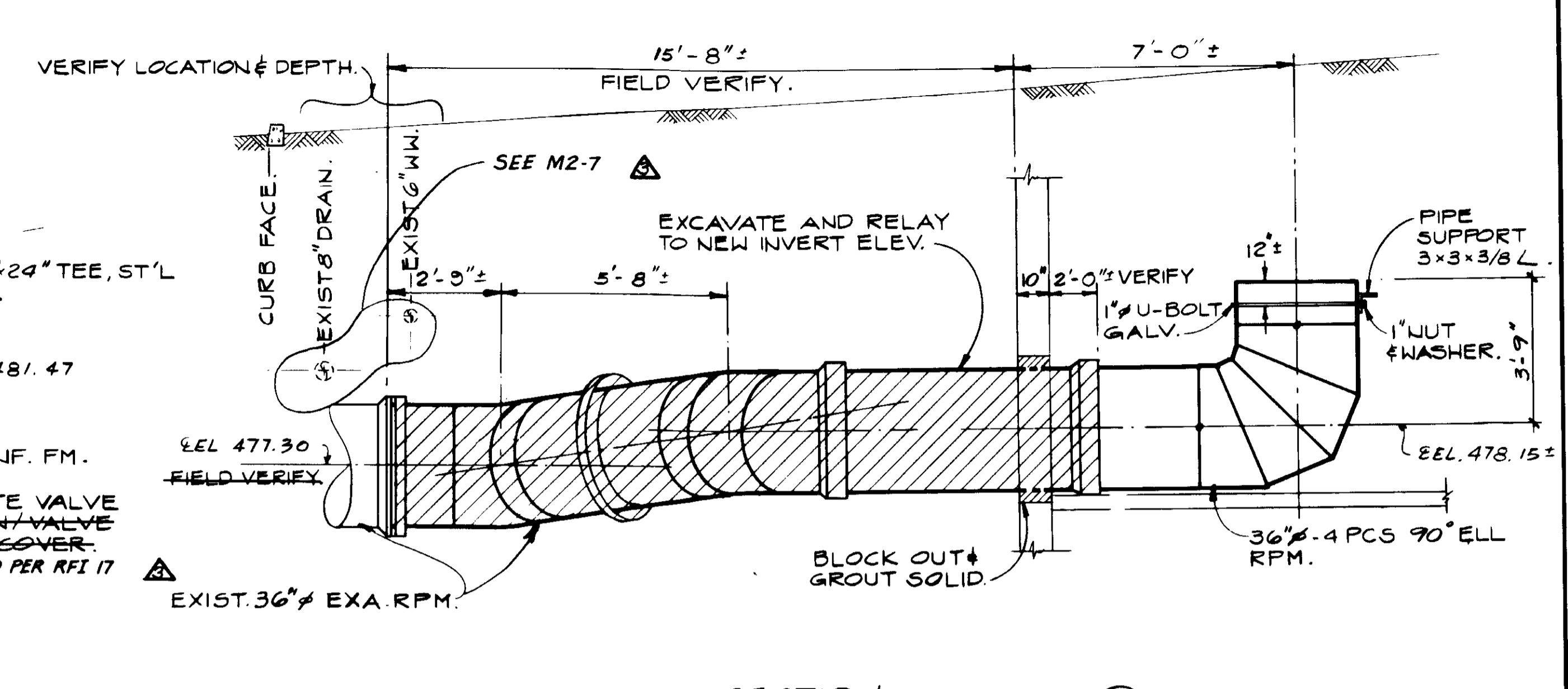
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 CHANNEL & PIPE GALLERY NO. 1

SHEET  
M2-5

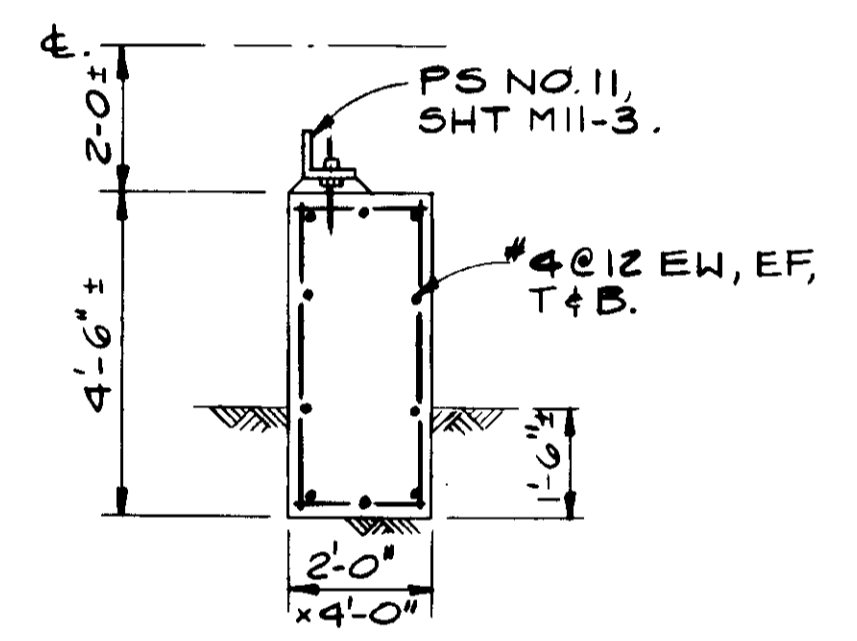




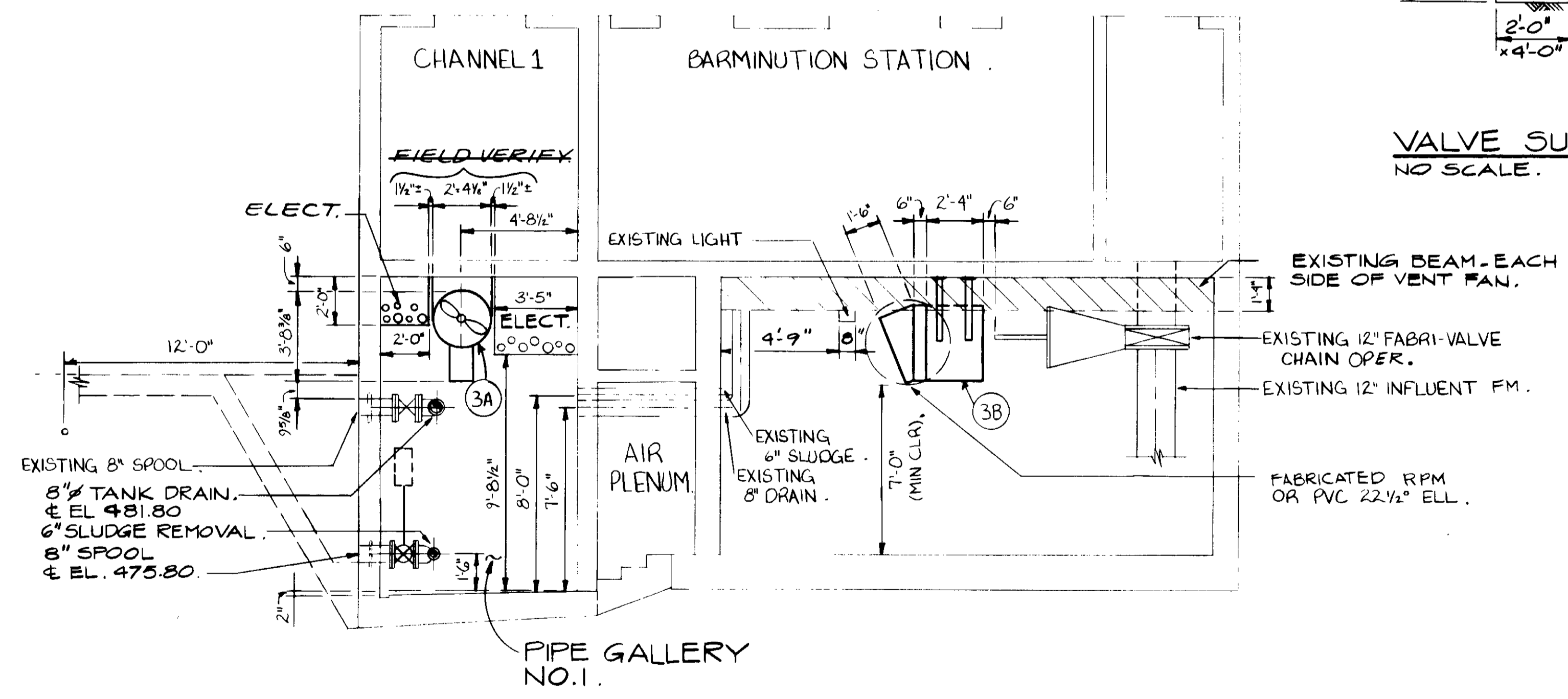
SECTION A  
SCALE: 1/4" = 1'-0"



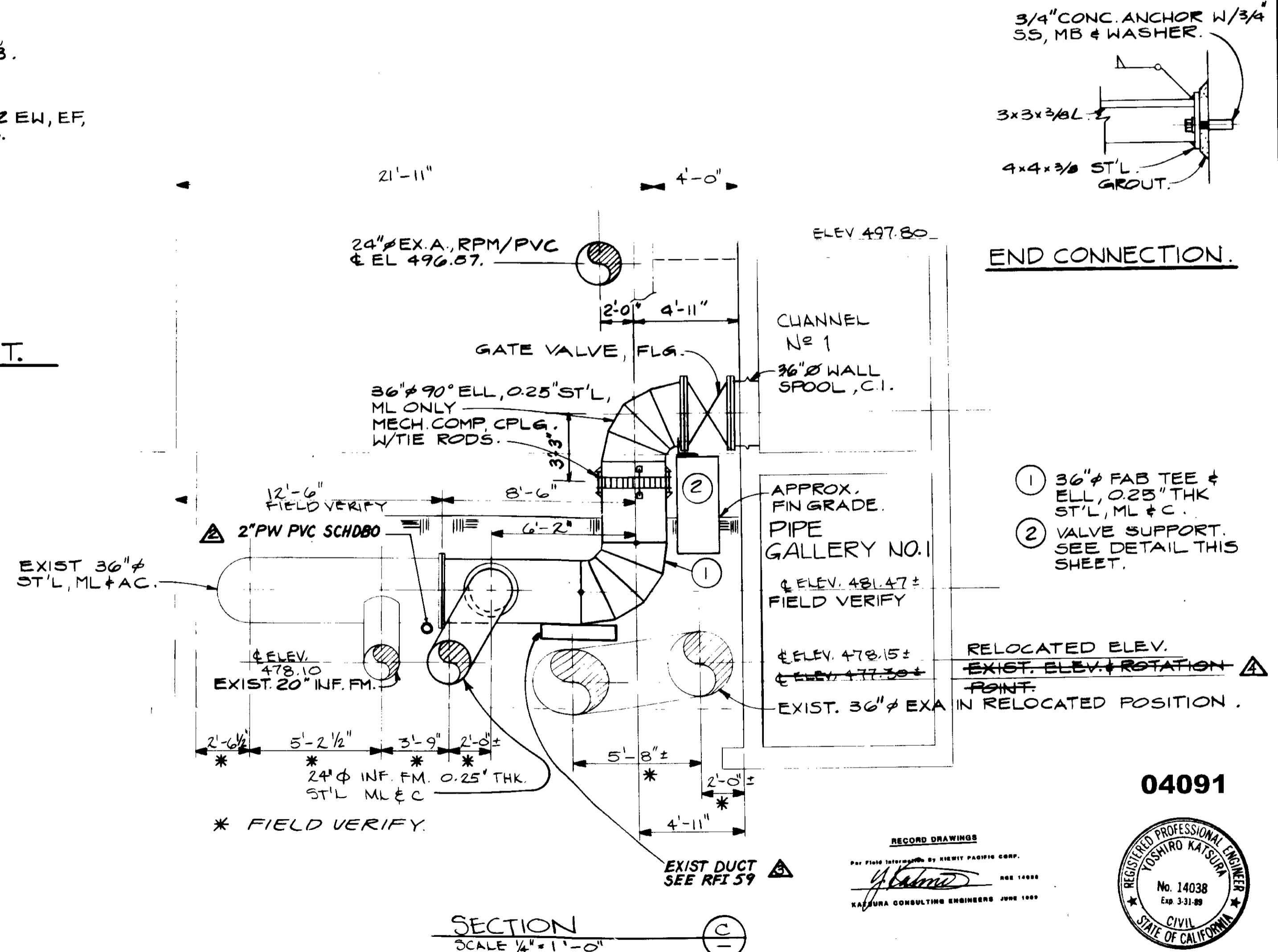
SECTION B  
SCALE: 3/8" = 1'-0"



VALVE SUPPORT.  
NO SCALE.



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



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

REV	DATE	BY	DESCRIPTION
1-3-91	A.B.	REV. PER K.P.C.	
1-13-91	A.B.	REV. PER K.P.C.	
1-13-91	A.B.	REV. PER K.P.C.	
1-13-91	A.B.	REV. PER K.P.C.	

SCALE:	AS NOTED
DESIGNED:	YK/CC/SK
DRAWN:	SK/RK/JB
CHECKED:	YK

SUBMITTED:	14038 8-7-87.
DATE:	8-7-87.
DESIGNED:	SK/RK/JB
DRAWN:	YK
CHECKED:	YK

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
INFLUENT FORCE MAIN, EXHAUST AIR & VENTILATION DETAILS

