



SPECIFICATION NO. 26-07



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REGISTERED PROFESSIONAL ENGINEER
SALENDAR SINGH
No. 79717
Saleendar Singh
6/22/2026
Exp. 9-30-26
CIVIL
STATE OF CALIFORNIA

SPEC. NO. 26-07	SHEET NO. 001	DRAWING NO. G-101
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PLOT DATE: 15-JUN-202

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ABBREVIATIONS

A
AB ----- ANCHOR BOLT OR AGGREGATE BASE
AC ----- ACRE OR ASPHALT CONCRETE
A/C ----- AIR CONDITIONING
ACI ----- AMERICAN CONCRETE INSTITUTE
ACP ----- ASBESTOS CONCRETE PIPE
ACST ----- ACOUSTIC
ADJ ----- ADJUSTABLE
AFF ----- ABOVE FINISH FLOOR
AGG ----- AGGREGATE
AGRM ----- AGREEMENT
AISC ----- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT ----- ALTERNATE
ALUM ----- ALUMINUM
APA ----- AMERICAN PLYWOOD ASSOCIATION
APPROX ----- APPROXIMATE
ARCH ----- ARCHITECTURAL
ASCE ----- AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM ----- AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS ----- AMERICAN WELDING SOCIETY
AWWA ----- AMERICAN WATER WORKS ASSOCIATION

B
B/T ----- BETWEEN
BAB ----- BOTTOM ALTERNATE BENT (REINFORCEMENT DRAWINGS)
BC ----- BEGIN CURVE
BD ----- BOARD
BLDG ----- BUILDING
B.O. ----- BOTTOM OF
BOT ----- BOTTOM
BO ----- BLOCKOUT
BOL ----- BEGINNING OF LINE
BP ----- BASE PLATE
BRG ----- BEARING
BTM ----- BOTTOM
BVC ----- BEGIN VERTICAL CURVE

C
CAJ ----- CONTRACTION JOINT
CBC ----- CALIFORNIA BUILDING CODE
CC ----- CENTER TO CENTER
CCJ ----- CRACK CONTROL JOINT
CCP ----- CONCRETE CYLINDER PIPE
CEM ----- CEMENT
CFS ----- CUBIC FEET PER SECOND
CHKR ----- CHECKER
CIDH ----- CAST IN DRILLED HOLE
CIP ----- CAST IRON PIPE
CIRC ----- CIRCUMFERENCE / CIRCULAR
CJ ----- CONTROL JOINT
CL ----- CENTER LINE
CLR ----- CLEAR OR CLEARANCE
CLSM ----- CONTROLLED LOW STRENGTH MATERIAL
CMP ----- CORRUGATED METAL PIPE
CMU ----- CONCRETE MASONRY UNIT
C.O. ----- CONDUIT ONLY OR CLEANOUT
COLS ----- COLUMNS
CONC ----- CONCRETE
CONN ----- CONNECTION
CONT ----- CONTINUOUS
CONT'D ----- CONTINUED
CSK ----- COUNTERSUNK

D
D ----- DEPTH OR DEAD LOAD
D/S ----- DOWNSTREAM
DEG. ----- DEGREES
DEMO ----- DEMOLISH
DET ----- DETAIL
DEV ----- DEVELOPMENT
DI ----- DROP INLET
DIA ----- DIAMETER
DIM ----- DIMENSION
DWG. ----- DRAWING
DWN ----- DOWN
DF ----- DOUGLAS FIR
DFG ----- CALIFORNIA DEPARTMENT OF FISH AND GAME
DF-L ----- DOUGLAS FIR-LARCH
DS ----- DOWNSPOUT
DWR ----- DEPARTMENT OF WATER RESOURCES

E
E ----- EASTING
(E) ----- EXISTING
EA ----- EACH
EC ----- END CURVE
EF ----- EACH FACE (REINFORCEMENT DRAWINGS)
EFEW ----- EACH FACE EACH WAY
EJ ----- EXPANSION JOINT
ELECT ----- ELECTRICAL
ELEV OR EL ----- ELEVATION
EMBED ----- EMBEDMENT
ENGR'D ----- ENGINEERED
EOL ----- END OF LINE
EP ----- EDGE OF PAVEMENT
EQ ----- EQUAL
EQUIP ----- EQUIPMENT
EQUIV ----- EQUIVALENT
ETC ----- ETCETERA
EVC ----- END VERTICAL CURVE
EXIST ----- EXISTING
EXP ----- EXPANSION
EXP JT ----- EXPANSION JOINT
EXTRU ----- EXTRUSIONS
EW ----- EACH WAY (REINFORCEMENT DRAWINGS)
EXT ----- EXTERIOR

F
FB ----- FLAT BAR
FD ----- FLOOR DRAIN
F.F. ----- FINISHED FLOOR
FG ----- FINISHED GRADE
FH ----- FLAT HEAD
FHMS ----- FLAT HEAD MACHINE SCREW
FIN ----- FINISHED
FL OR FLR ----- FLOOR
FNDN ----- FOUNDATION
FO ----- FACE OF
FOM ----- FACE OF MASONRY
FT ----- FEET
FTG ----- FOOTING

G
GA ----- GAUGE
GALV ----- GALVANIZED
GB ----- GRADE BREAK
GD ----- GUTTER DRAIN
GL ----- GRID LINE
GR ----- GUARDRAIL
GYP. BD ----- GYPSUM BOARD

H
H ----- HEIGHT
HC ----- HOLLOW CORE
HD ----- HEAD / HOT DIPPED
HDG ----- HOT DIPPED GALVANIZED
HDPE ----- HIGH-DENSITY POLYETHYLENE
HDR ----- HEADER
HEX ----- HEXAGON
HGL ----- HYDRAULIC GRADE LINE
HHT ----- HIGH HIGH TIDE
HMA ----- HOT MIX ASPHALT
HOR OR H ----- HORIZONTAL
HR ----- HOUR OR HANDRAIL
HP ----- HIGH POINT
H.S.B. ----- HIGH STRENGTH BOLTS
HSS ----- HOLLOW STRUCTURAL SECTION
HT ----- HEIGHT
HVAC ----- HEATING, VENTILATION & AIR CONDITIONING
HWY ----- HIGHWAY

I
I ----- MOMENT OF INERTIA
ID ----- IDENTIFICATION
I.D. ----- INSIDE DIAMETER
I.F. ----- INSIDE FACE
IN ----- INCHES
INCL ----- INCLUDING
INFO ----- INFORMATION
INV ----- INVERT
INT ----- INTERIOR

J
JB ----- JUNCTION BAR
JST ----- JOIST
JT ----- JOINT

K
Klp ----- 1,000 POUNDS
KSI ----- 1,000 POUNDS PER SQUARE INCH

L
L ----- LENGTH OR LIVE LOAD
LBS ----- POUNDS
LP ----- LOW POINT
LLT ----- LOW LOW TIDE
LT ----- LEFT OR LIGHT
L.W. ----- LIGHT WEIGHT

M
MANUF. ----- MANUFACTURER
MATL ----- MATERIAL
MAX ----- MAXIMUM
M.B. ----- MACHINE BOLT
MBGR ----- METAL BEAM GUARD RAILING
MCJ ----- MASONRY CONTROL JOINT
MECH ----- MECHANICAL
MET ----- METAL
MFR ----- MANUFACTURER
MH ----- MANHOLE
MHHW ----- MEAN HIGHER HIGH WATER
MIN ----- MINIMUM
MIR ----- MIRROR IMAGE
MLLW ----- MEAN LOWER LOW WATER
MPH ----- MILES PER HOUR
MT ----- METAL THRESHOLD
MWD ----- METROPOLITAN WATER DISTRICT

N
N ----- NORTHING
(N) ----- NEW
NA ----- NOT APPLICABLE TO THIS PROJECT
NAD ----- NORTH AMERICAN DATUM
NAVD ----- NORTH AMERICAN VERTICAL DATUM
NF ----- NEAR FACE
NGVD ----- NATIONAL GEODETIC VERTICAL DATUM
NIC ----- NOT IN CONTRACT
NMFS ----- NATIONAL MARINE FISHERIES SERVICE
NO ----- NUMBER
NTS ----- NOT TO SCALE
NWC ----- NORMAL WEIGHT CONCRETE

O
O.C. ----- ON CENTER
O.D. ----- OUTSIDE DIAMETER
O.F. ----- OUTSIDE FACE
OG ----- ORIGINAL GROUND
OH ----- OPPOSITE HAND
O-O ----- OUT - OUT
OPNG ----- OPENING
OPP ----- OPPOSITE

P
P.A.M. ----- PNEUMATICALLY APPLIED MORTAR
PCF ----- POUNDS PER CUBIC FOOT
PG&E ----- PACIFIC GAS AND ELECTRIC
PI ----- POINT OF INTERSECTION
PLYWD ----- PLYWOOD
PM ----- PRESSED METAL
POT ----- POINT OF TANGENT
PP ----- POWER POLE
PSF ----- POUNDS PER SQUARE FOOR
PSI ----- POUNDS PER SQUARE INCH
PT ----- POINT OR PRESSURE TREATED
PVMT ----- PAVEMENT
PVC ----- POLYVINYL CHLORIDE

R
R ----- RISER
RAD ----- RADIUS
RC ----- REINFORCED CONCRETE
RCP ----- REINFORCED CONCRETE PIPE
RD ----- ROAD OR ROOF DRAIN
REBAR ----- REINFORCING STEEL BAR
REF ----- REFERENCE
REINF ----- REINFORCEMENT
REQ'D ----- REQUIRED
RM ----- ROOM
RO ----- ROUGH OPENING
RT ----- RIGHT
RWD ----- REDWOOD
R/W ----- RIGHT OF WAY

S
S ----- SECTION MODULUS
S= ----- SLOPE
S.A.D. ----- SEE ARCHITECTURAL DRAWING
SCH/SCHED ----- SCHEDULE
SDST ----- DELF DRILLING, SELF TAPPING
SEP ----- SEPARATION
SHT ----- SHEET
SHT'G ----- SHEATHING
SIM ----- SIMILAR
SMH ----- SEWER MANHOLE
SMS ----- SHEET METAL SCREW
S.O.G. ----- SLAB ON GRADE
SP ----- SPACES
SPAC'G ----- SPACING
SPECS ----- SPECIFICATIONS
SQ ----- SQUARE
SS OR SST ----- STAINLESS STEEL
STA ----- STATION
STD ----- STANDARD
STIFF ----- STIFFENER
STL ----- STEEL
STRUCT ----- STRUCTURAL
SWC ----- STATE WATER CONTRACTOR
SYMM ----- SYMMETRICAL

T
T ----- TANGENT OR TOP (REINFORCEMENT DRAWINGS)
T & B ----- TOP AND BOTTOM (REINFORCEMENT DRAWINGS)
TDH ----- TOTAL DYNAMIC HEAD
THK ----- THICKNESS
THRU ----- THROUGH
T.O. ----- TOP OF
TOC ----- TOP OF CONCRETE
TOF ----- TOP OF FOOTING
TOS ----- TOP OF SLAB
TRD ----- TREAD
TYP ----- TYPICAL

U
U/S ----- UPSTREAM
UL ----- UNDERWRITERS LABORATORIES
UG ----- UNDERGROUND
UNO ----- UNLESS NOTED OTHERWISE
USACE ----- UNITED STATES ARMY CORPS OF ENGINEERS
USC & GS ----- UNITED STATES COAST AND GEODETIC SURVEY

V
VC ----- VERTICAL CURVE
VCP ----- VITREOUS CLAY PIPE
VERT OR V ----- VERTICAL
V.I.F. ----- VERIFY IN FIELD

W
W ----- WIDTH
W/ ----- WITH
WHS ----- WELDED HEADED STUD
WP ----- WORKING POINT
WSE ----- WATER SURFACE ELEVATION
WWF ----- WELDED WIRE FABRIC

SYMBOLS - GENERAL

@ ----- AT
C ----- CENTERLINE
° ----- DEGREES
Ø ----- DIAMETER, ROUND
' ----- MINUTES OR FEET
----- NUMBER OR POUND
D ----- PENNYWEIGHT
% ----- PERCENT
P ----- PLATE
" ----- SECONDS OR INCHES
☐ ----- SQUARE
△ ----- SURVEY CONTROL MONUMENT OR DEFLECTION
⚡ ----- OVERHEAD ELECTRICAL POWER POLE
⚡ ----- OVERHEAD ELECTRICAL TOWER

LEGEND

----- EXISTING FACILITIES
----- NEW CONSTRUCTION

THINK SAFETY
ACT SAFELY

APP. OSFM #

STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF
WATER RESOURCES
DIVISION OF ENGINEERING

REV. DESCRIPTION SUB. APP. DATE DATE

DESIGNED:
DWR
DRAWN:
DWR
CHECKED:
YU-CHEN HSUEH
REVIEWED:
SALENDAR SINGH
SUBMITTED:
SALENDAR SINGH

APPROVAL RECOMMENDED: DATE:

MANAGER, CIVIL II SECTION 6/15/2026

APPROVED: DATE:

MANAGER, CIVIL BRANCH 6/15/2026

CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN LUIS FIELD DIVISION
CALIFORNIA AQUEDUCT

CHECK STRUCTURE 17
STRUCTURAL MODIFICATIONS

GENERAL

ABBREVIATIONS, SYMBOLS,
AND LEGEND

SPEC. NO. SHEET NO. DRAWING NO.
26-07 002 G-102

PLOT DATE: 9-JUN-2026

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GENERAL NOTES

1. SEE REFERENCE DWG. 85-D-1385 FOR EXISTING GATES DETAILS. CONTRACTOR SHALL FIELD VERIFY EXISTING GATES DETAILS PRIOR TO CONSTRUCTION. REMOVAL OF THE RADIAL GATES SHALL BE FROM THE HINGE PINS TO THE HOIST ROPES, INCLUDING PIN BEARING GREASE PIPING. THE EXISTING HOIST DRUMS, MOTORS AND PIN BEARING HUB SHALL REMAIN AND BE PROTECTED IN PLACE.

2. THE LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE AND MAY NOT BE COMPLETE AS SHOWN IN THESE PLANS. THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO LOCATE UTILITIES TO BE PROTECTED OR REMOVED. THE ACTUAL LOCATIONS AND ELEVATIONS OF THE EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR. ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES SHALL BE PROTECTED FROM CONSTRUCTION EQUIPMENT AND OPERATIONS. THE CONTRACTOR, OR ANY SUBCONTRACTOR, IS REQUIRED TO NOTIFY THE UNDERGROUND SERVICE ALERT 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION BY CALLING (800) 227 - 2600.

3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, SIZES, AND LOCATIONS OF ALL EXISTING FACILITIES AND FEATURES BEFORE STARTING WORK AND SHALL IMMEDIATELY NOTIFY THE DEPARTMENT OF ANY DISCREPANCIES.

4. EXISTING FENCING AND GATES WITHIN THE RIGHT-OF-WAY SHALL BE REMOVED AS REQUIRED FOR CONSTRUCTION AND AS SHOWN ON THE PLANS. WHERE EXISTING FENCING OR BARRIERS ARE REMOVED, TEMPORARY BARRIERS SHALL BE PROVIDED. FENCING AND GATE SIGNS SHALL BE REPLACED FOLLOWING CONSTRUCTION.

5. THE CONTRACTOR SHALL MAINTAIN REASONABLE ACCESS FROM PUBLIC ROADS TO ADJACENT PROPERTIES DURING CONSTRUCTION. PRIOR TO RESTRICTING NORMAL ACCESS FROM PUBLIC ROADS TO ADJACENT PROPERTIES, COORDINATE WITH EACH PROPERTY OWNER OR RESPONSIBLE PERSON, INFORMING OWNER OF THE NATURE OF THE ACCESS RESTRICTION, THE APPROXIMATE DURATION OF THE RESTRICTION, AND THE BEST ALTERNATE ACCESS ROUTE FOR THAT PARTICULAR PROPERTY.

6. ALL CONSTRUCTION, INCLUDING CONTRACTOR PARKING AND STAGING AREAS, SHALL BE WITHIN DWR RIGHT-OF-WAY.

7. INFORMATION SHOWN ON THE DRAWINGS RELATED TO EXISTING CONDITIONS REPRESENTS THE PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE ENGINEER. NO DEVIATION FROM THE CONTRACT DOCUMENTS SHALL BE ALLOWED WITHOUT WRITTEN DIRECTION FROM THE ENGINEER.

8. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING STATIONS, BEARINGS, ELEVATIONS AND DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

MT. WHITNEY AVENUE BRIDGE LOAD AND TRAFFIC RESTRICTIONS

1. MAXIMUM AXLE WEIGHT: GROSS AXLE WEIGHT SHALL NOT EXCEED 27,000 POUNDS.

2. OCCUPANCY LIMITS: ONLY ONE VEHICLE (INCLUDING BUT NOT LIMITED TO CRANES, 5-AXLE TRUCKS, OR HEAVY EQUIPMENT) IS PERMITTED ON THE BRIDGE SPAN AT ANY TIME.

3. SPEED LIMIT: THE MAXIMUM CROSSING SPEED SHALL BE 20 MPH.

4. ENFORCEMENT: THE CONTRACTOR SHALL PROVIDE NECESSARY FLAGGERS OR PHYSICAL CONTROLS TO ENSURE COMPLIANCE WITH THESE OCCUPANCY AND SPEED RESTRICTIONS DURING ALL PHASES OF WORK.

STRUCTURAL NOTES

1. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, USE SIMILAR DETAILS OF CONSTRUCTION, SUBJECT TO REVIEW BY THE ENGINEER.

2. DETAILS ON SHEETS TITLED "TYPICAL DETAILS" APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. SUCH DETAILS ARE NOT NOTED AT EACH LOCATION THAT THEY OCCUR.

3. REFER TO CIVIL DRAWINGS FOR RADIAL GATE AND CRADLE STORAGE DETAILS.

4. REFER TO CIVIL DRAWINGS FOR SIZE AND LOCATION OF AGGREGATE BASE NOT SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE THE SIZE AND LOCATION OF AGGREGATE BASE WITH GATE CRADLE AND RADIAL GATE STRUTS. DO NOT CUT OR MODIFY THE STRUCTURAL MEMBERS UNLESS SPECIFICALLY INDICATED. SUBMIT FINAL SIZE AND LOCATION REQUIREMENTS OF AGGREGATE BASE AND SUBGRADE TO THE ENGINEER TO REVIEW.

5. VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF DISCREPANCIES.

6. DO NOT SCALE THE DRAWINGS.

STRUCTURAL STEEL

1. DETAIL, FABRICATE AND ERECT IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS," LATEST EDITION.

2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:

SECTIONS	TYPE
WIDE FLANGES	ASTM A992, GR 50
PLATES	ASTM A572, GR 50
STEEL PIPE	ASTM A53, GR B
HOLLOW STRUCT. SECTIONS (HSS)	ASTM A500, GR C

STRUCTURAL STEEL WELDING

1. USE THE MINIMUM SIZE OF WELDING IN ACCORDANCE WITH "AISC MANUAL OF STEEL CONSTRUCTION" AT STEEL TO STEEL JOINTS UNLESS A LARGER WELDING SIZE IS SPECIFIED ON THE PLANS.

2. WHERE LENGTH OF WELDING IS NOT SHOWN, IT SHALL BE FULL LENGTH OF JOINT. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS UNLESS OTHERWISE NOTED.

3. WHERE FIELD WELDING IS NOTED, THE DESIGNATION IS GIVEN AS A SUGGESTED CONSTRUCTION PROCEDURE ONLY.

4. ARC-WELDING ELECTRODES/FILLER METALS SHALL BE LOW HYDROGEN TYPES E70XX MINIMUM AS APPLICABLE.

5. ALL COMPLETE AND PARTIAL PENETRATION WELDS WHICH ARE EXPOSED TO VIEW SHALL BE GROUND SMOOTH AND FLUSH WITH FINISH SURFACE OF STEEL. HOLES SHALL BE FILLED WITH WELD METAL AND SMOOTHED BY GRINDING OR FILING.

STRUCTURAL DESIGN CRITERIA

1. DESIGN LOAD CRITERIA: CRADLE FRAME

GRAVITY LOADS	
APPROXIMATE DEAD LOADS	42,000 LBS (RADIAL GATE FACE WITH STRUTS) 28,000 LBS (RADIAL GATE FACE WITHOUT STRUTS) 4,500 LBS (CRADLE)
WIND LOADS (ASCE 7-22 CH 26)	
EXPOSURE CATEGORY	C
ULTIMATE WIND SPEED	93 MPH
IMPORTANCE FACTOR, I _w	1.00
ULTIMATE SEISMIC LOADS (STRUCTURE)	
IMPORTANCE FACTOR, I	1.00 (RISK CATEGORY II)
MAPPED SPECTRAL ACCELERATIONS	S _s =1.67g, S ₁ =0.47g
SITE CLASS (ASCE 7-22 § 11.4.2.1)	DEFAULT
DESIGN SPECTRAL RESPONSE COEFFICIENTS	S _{DS} =1.25g, S _{D1} =0.79g
SEISMIC DESIGN CATEGORY	D
ANALYSIS PROCEDURE	SEISMIC DESIGN REQUIREMENTS FOR NONBUILDING STRUCTURES (ASCE 7 §15.4.2)
NONBUILDING STRUCTURE TYPE TABLE 15.4-2	ALL OTHER SELF-SUPPORTING STRUCTURES
DESIGN BASE SHEAR, V	17,076 LBS
RESPONSE MODIFICATION FACTOR, R	1.25
OVERSTRENGTH FACTOR, Ω _o	2.0

THINK SAFETY
ACT SAFELY

APP. OSFM #

STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF
WATER RESOURCES
DIVISION OF ENGINEERING

REV. DESCRIPTION SUB. DATE APP. DATE

DESIGNED:
DWR

DRAWN:
DWR

CHECKED:
MICHAEL ANTWI

REVIEWED:
CAMERON BEST

SUBMITTED:
CAMERON BEST

APPROVAL RECOMMENDED: DATE:
Prof. Castillo 6/12/2026
MANAGER, STRUCTURAL SECTION

APPROVED: DATE:
Ashley Carlson 6/15/2026
MANAGER, STRUCTURAL BRANCH

CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN LUIS FIELD DIVISION
CALIFORNIA AQUEDUCT
CHECK STRUCTURE 17
STRUCTURAL MODIFICATIONS

GENERAL

GENERAL NOTES AND
STRUCTURAL NOTES

SPEC. NO. SHEET NO. DRAWING NO.

26-07 003 **G-103**

PLOT DATE: 10-JUN-2026

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M/ DesignScript24x36.PEN

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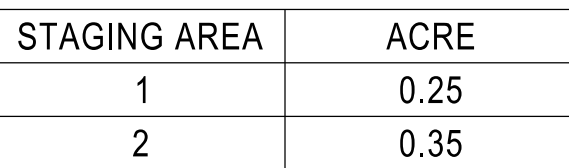
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8. CONSTRUCTION TRAFFIC ON CERINI AVENUE
BRIDGE MUST NOT EXCEED SINGLE-LANE
AASHTO HL-93 LOADING. ANY VEHICLE WITH
LOADS EXCEEDING HL-93 SINGLE LANE LOADING
OR AXLE SPACING LESS THAN 4 FEET MUST BE
SUBMITTED TO THE ENGINEER FOR REVIEW AND
ACCEPTANCE PRIOR TO CROSSING THE BRIDGE

PLOT DATE: 22-JUN-2026

E



(1) = POINTS NOT SHOWN ON MAP AS THEY ARE LOCATED WELL BEYOND LIMITS OF VIEW
(2) = CSRC CGPS POINTS HELD HORIZONTALLY AND VERTICALLY IN FULLY CONSTRAINED NETWORK ADJUSTMENT
(3) = CSRC CGPS POINTS HELD HORIZONTALLY IN FULLY CONSTRAINED NETWORK ADJUSTMENT
(BPC 8726(f), PRC 8813.3, 8815.1, 8815.5)

	DESIGNED: J. CAMPBELL
	DRAWN: J. CAMPBELL
	CHECKED: T. CASE
	REVIEWED: A. SQUELLATI
	SUBMITTED: A. SQUELLATI

SPEC. NO. 26-07	SHEET NO. 005	DRAWING NO. V-101
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APP.		OSFM #	
STATE OF CALIFORNIA CALIFORNIA NATURAL RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES DIVISION OF ENGINEERING			
REV.	DESCRIPTION	SUB. DATE	APP. DATE

	DESIGNED: YU-CHEN HSUEH
	DRAWN: YU-CHEN HSUEH
	CHECKED: WING CHIU
	REVIEWED: SALENDAR SINGH
	SUBMITTED: SALENDAR SINGH

APPROVAL RECOMMENDED:	DATE:
 MANAGER, CIVIL II SECTION	6/15/2026
APPROVED:	DATE:
 MANAGER, CIVIL BRANCH	6/15/2026

CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN LUIS FIELD DIVISION
CALIFORNIA AQUEDUCT

CHECK STRUCTURE 17
STRUCTURAL MODIFICATIONS

CIVIL

GENERAL PLAN
AND EXISTING UTILITIES

PLAN		
SPEC. NO. 26-07	SHEET NO. 006	DRAWING NO. C-101

PLOT DATE: 8-JUN-2026

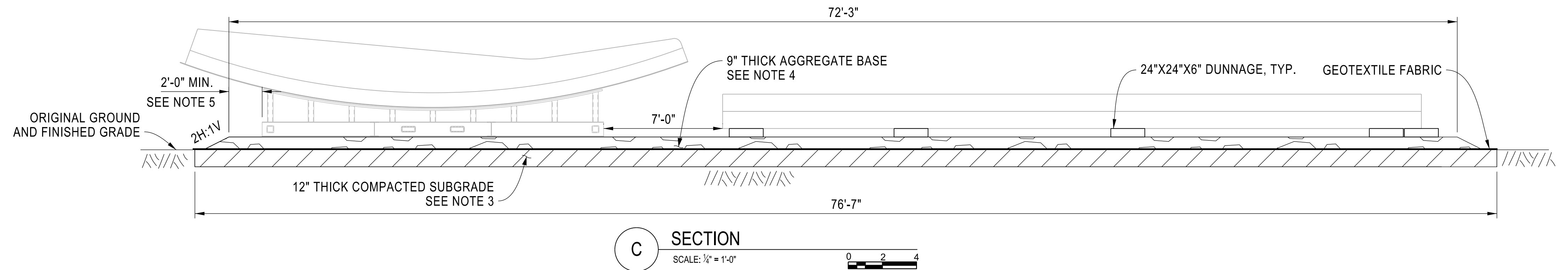
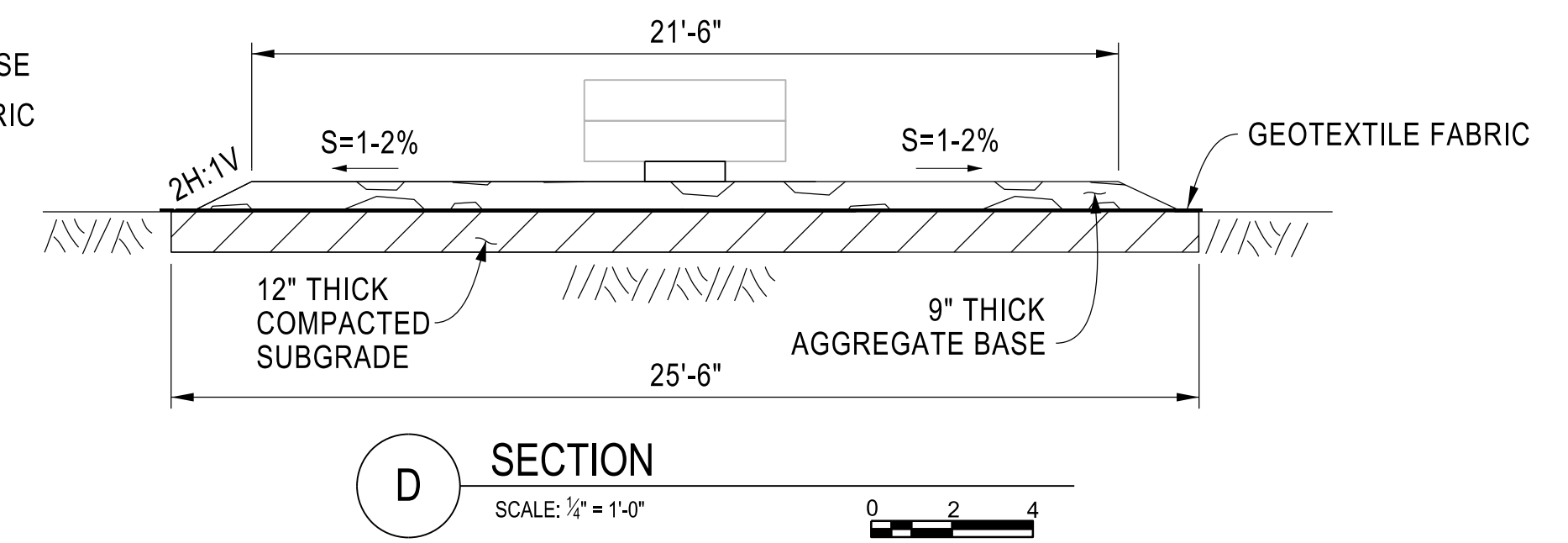
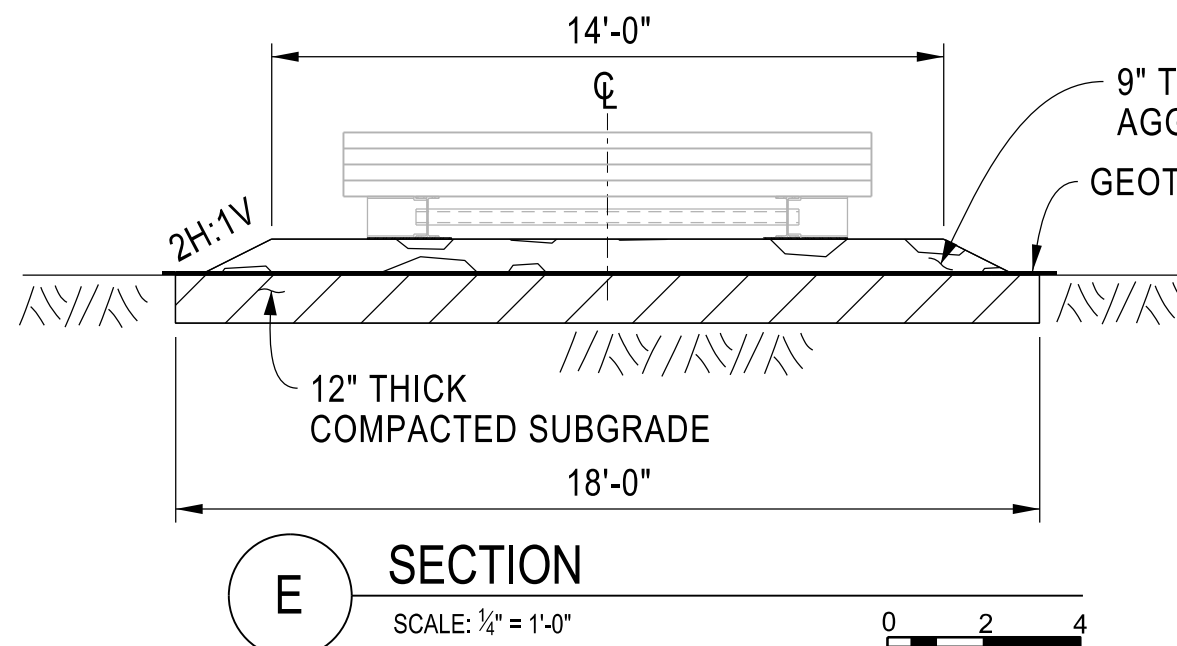
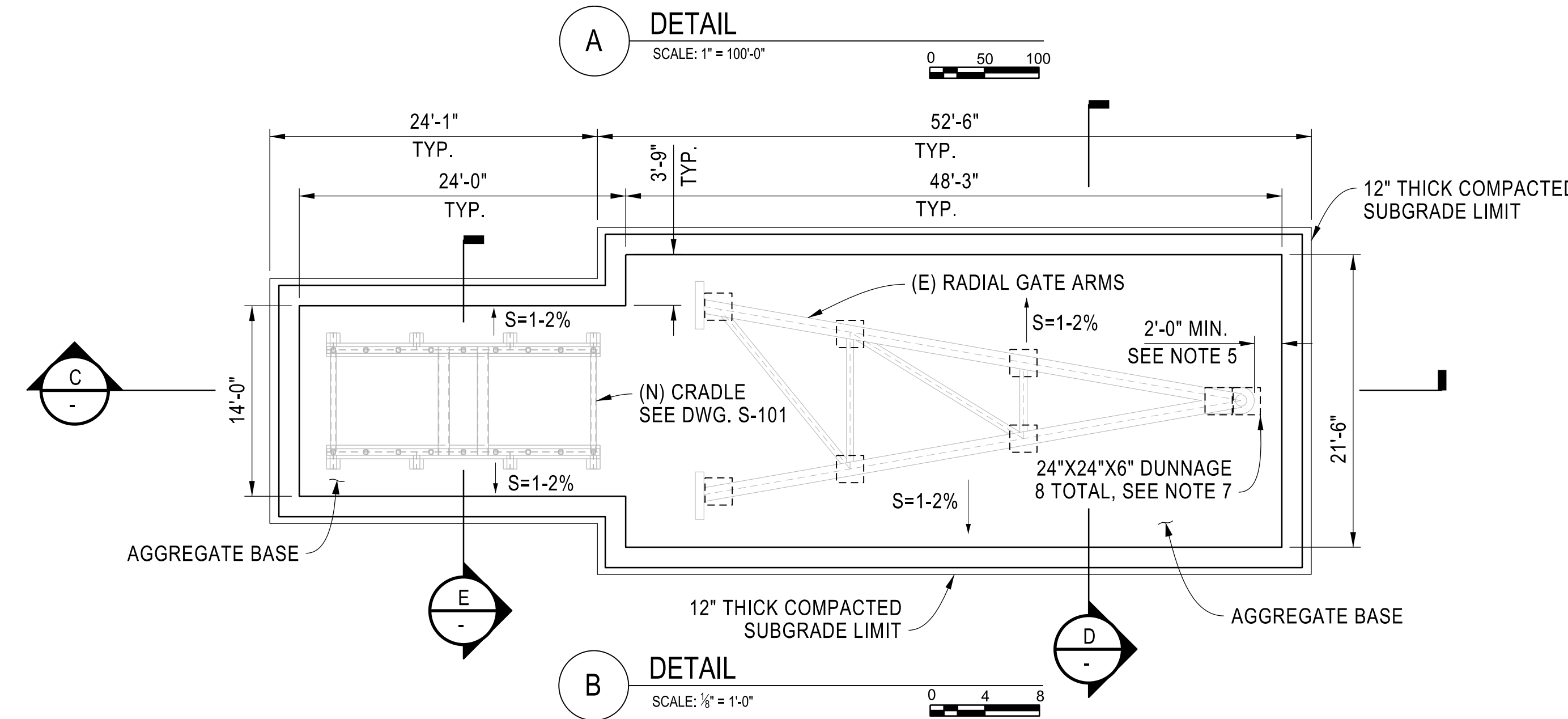
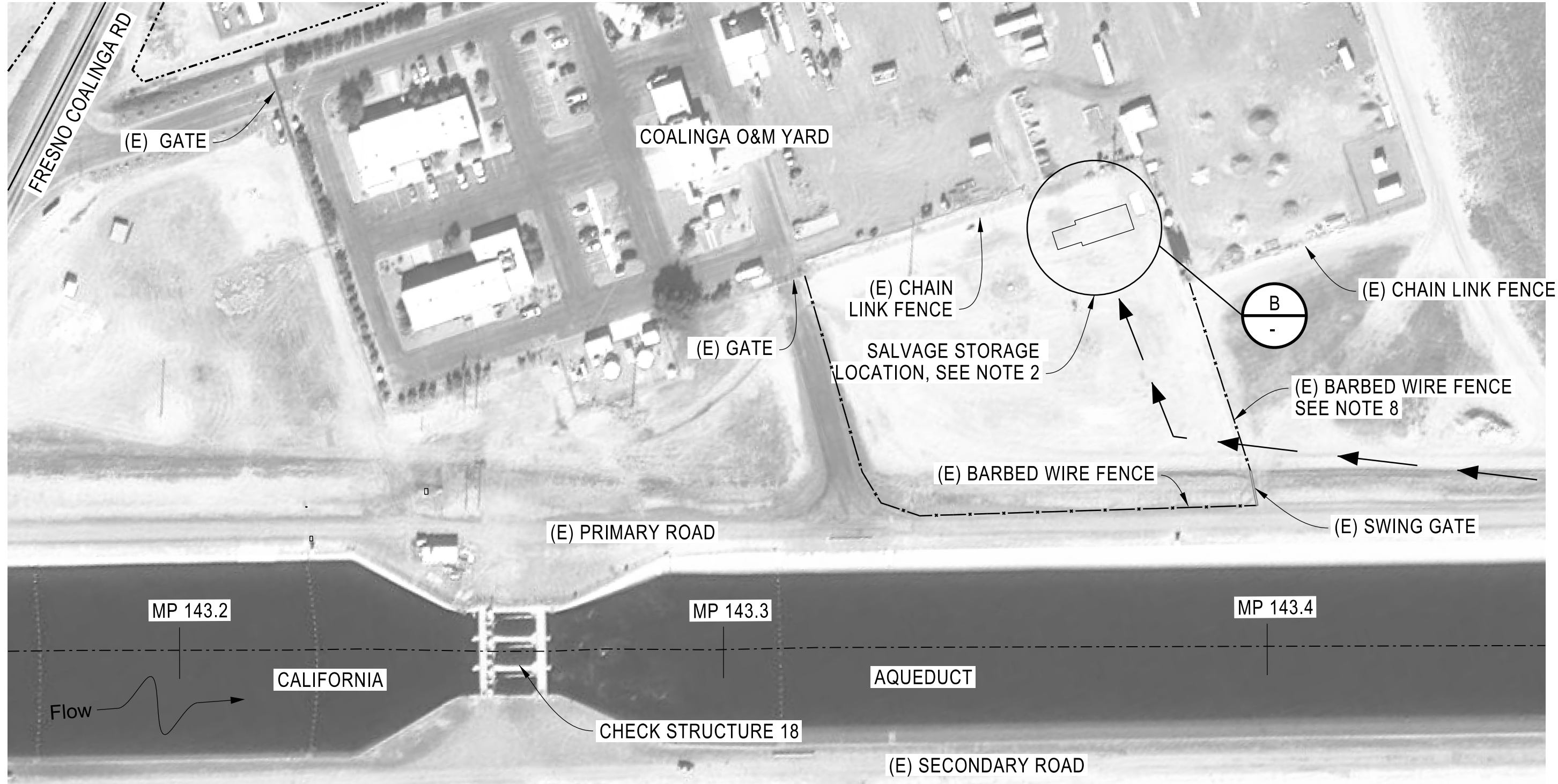
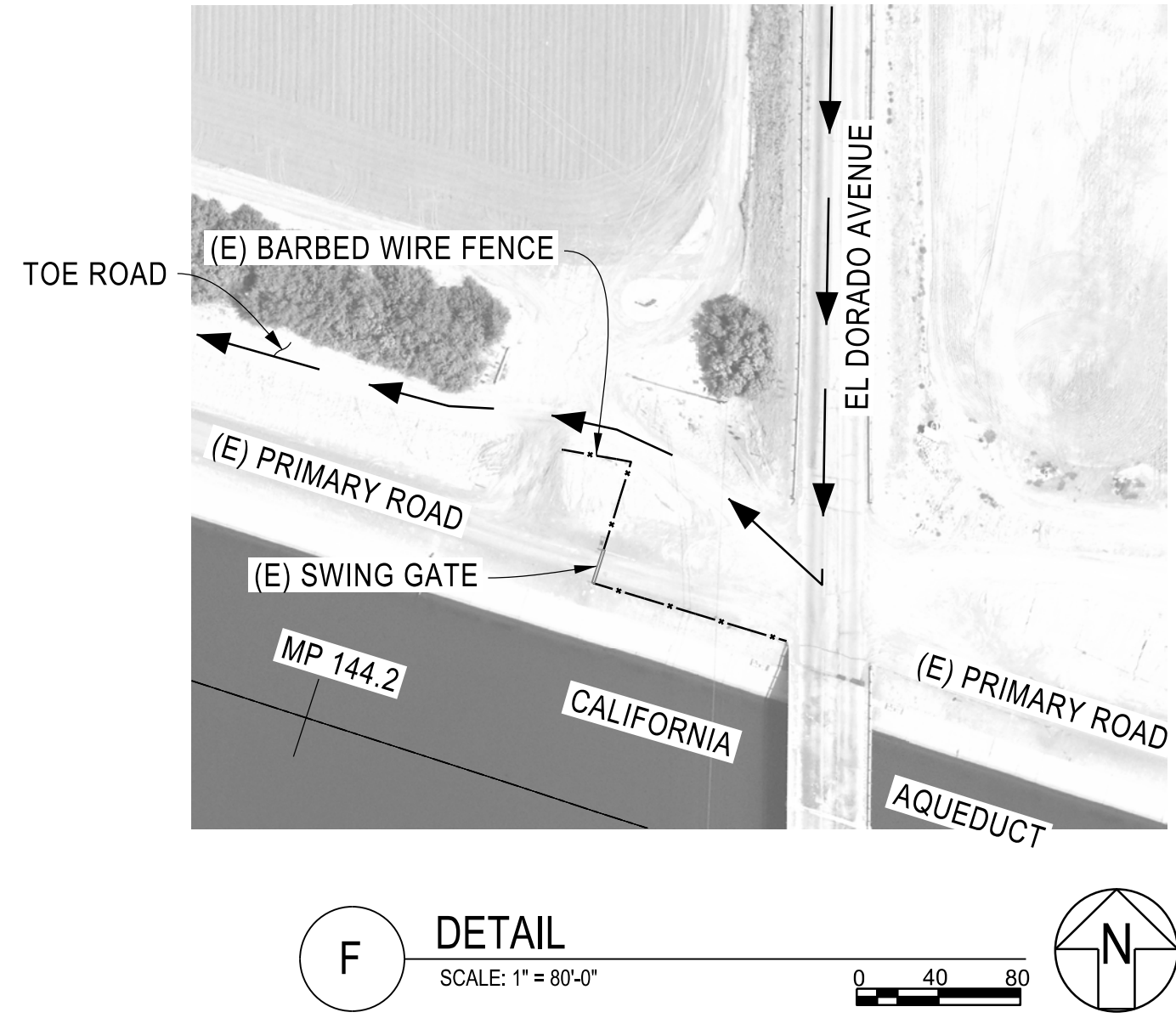
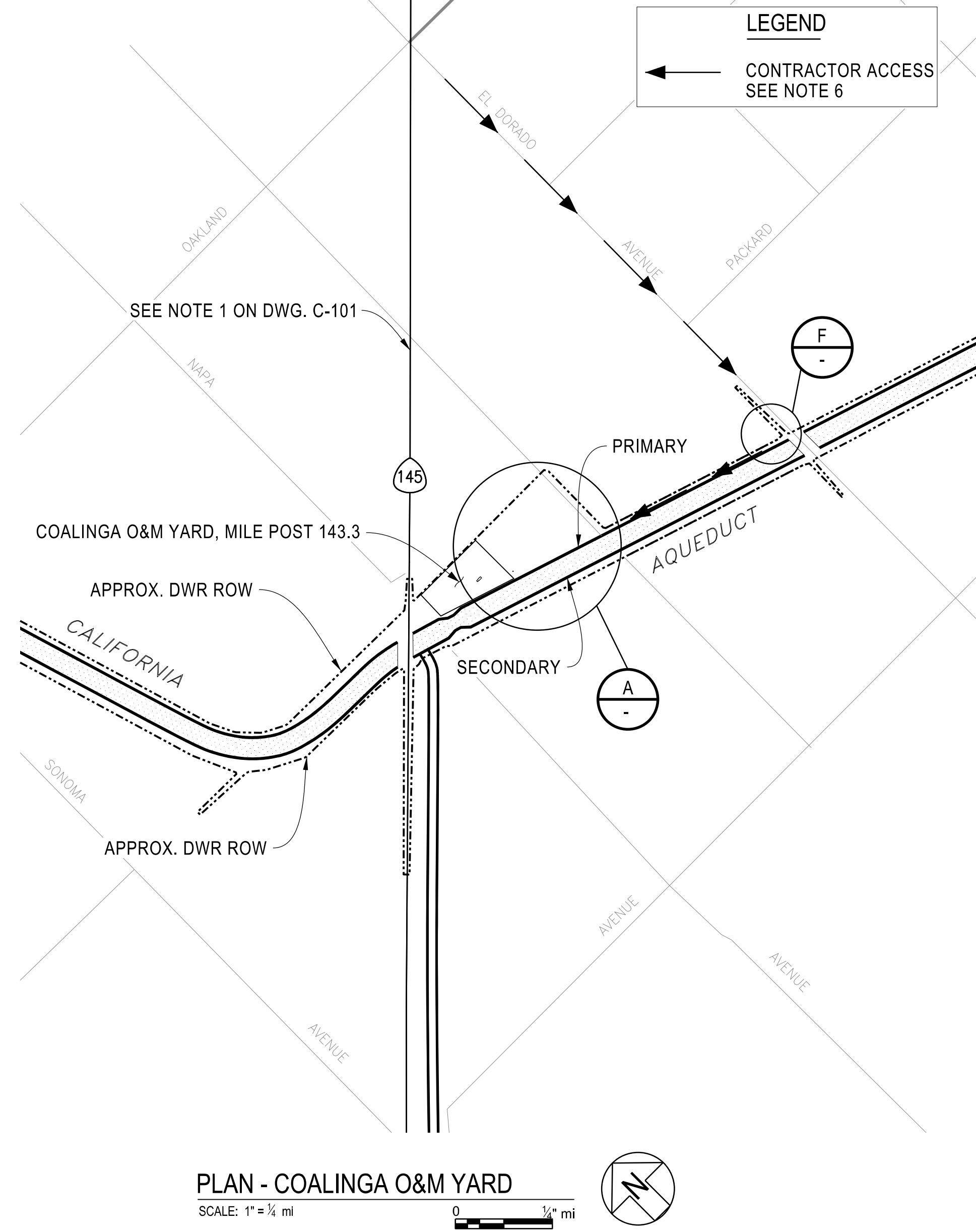
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NOTES

1. LOCATION MILE POSTS ARE BASED ON HORIZONTAL MEASUREMENT ALONG INDICATED ALIGNMENT.
2. THE FINAL ORIENTATION, AZIMUTH AND PRECISE LATERAL POSITIONING OF THE RADIAL GATE CRADLE FRAME SHALL BE DETERMINED BY THE DEPT. THE FIELD ENGINEER SHALL COORDINATE WITH THE FIELD DIVISION AT LEAST SEVEN DAYS PRIOR TO THE COMMENCEMENT OF SUBGRADE SCARIFICATION AND COMPACTION TO VERIFY THE FINAL LAYOUT.
3. CONTRACTOR SHALL CLEAR VEGETATION, SCARIFY NATIVE SOIL TO 12", MOISTURE CONDITION, AND COMPACT TO 95%.
4. FINISHED AGGREGATE BASE SURFACE SHALL MAINTAIN A CROSS SLOPE OF 1-2% FOR DRAINAGE.
5. MAINTAIN A MINIMUM 2 FT CLEARANCE BETWEEN THE EDGE OF THE AGGREGATE BASE AND ALL CRADLE COMPONENTS OR RADIAL GATE ARMS.
6. CONTRACTOR SHALL UTILIZE ACCESS ROUTES AS SHOWN ON THE PLANS. PORTIONS OF THE ACCESS ROUTES MAY REQUIRE THE USE OF COUNTY ROADS AND ENCROACHMENT UPON PRIVATE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE COUNTY AND SECURING NECESSARY PERMISSIONS OR TEMPORARY ENTRY PERMITS FROM PROPERTY OWNERS PRIOR TO USE.
7. CONTRACTOR SHALL STACK RADIAL ARMS MAX 2-HIGH ON EIGHT 24"X24"X6" PT DF-L TIMBER DUNNAGE BLOCKS AT LOCATIONS SHOWN. PLACE DUNNAGE LEVEL ON 9" COMPACTED AGGREGATE BASE. ENSURE STACKS ARE STABLE PRIOR TO DISCONNECTING LIFTING EQUIPMENT.
8. CONTRACTOR SHALL REMOVE EXISTING BARBED WIRE FENCE AND POSTS TO PROVIDE CLEAR OPENING FOR HAULING OF THE 25 FT WIDE SALVAGE RADIAL GATE. UPON COMPLETION OF WORK, CONTRACTOR SHALL RESTORE BARBED WIRE FENCE POST TO ITS ORIGINAL CONDITION AND FUNCTIONALITY.

THINK SAFETY
ACT SAFELY

APP.	OSFM #
STATE OF CALIFORNIA CALIFORNIA NATURAL RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES DIVISION OF ENGINEERING	

REV.	DESCRIPTION	SUB. DATE	APP. DATE
DESIGNED:	YU-CHEN HSUEH		
DRAWN:	YU-CHEN HSUEH		
CHECKED:	WING CHIU		
REVIEWED:	SALENDAR SINGH		
SUBMITTED:	SALENDAR SINGH		

APPROVAL RECOMMENDED:	DATE:
<i>SALENDAR SINGH</i>	6/15/2026
MANAGER, CIVIL II SECTION	
APPROVED:	DATE:
<i>SALENDAR SINGH</i>	6/15/2026
MANAGER, CIVIL BRANCH	

CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN LUIS FIELD DIVISION
CALIFORNIA AQUEDUCT
CHECK STRUCTURE 17
STRUCTURAL MODIFICATIONS

CIVIL
DWR COALINGA STORAGE YARD
SALVAGE GATE STORAGE AND
ACCESS SITE

SPEC. NO.	SHEET NO.	DRAWING NO.
26-07	007	C-102

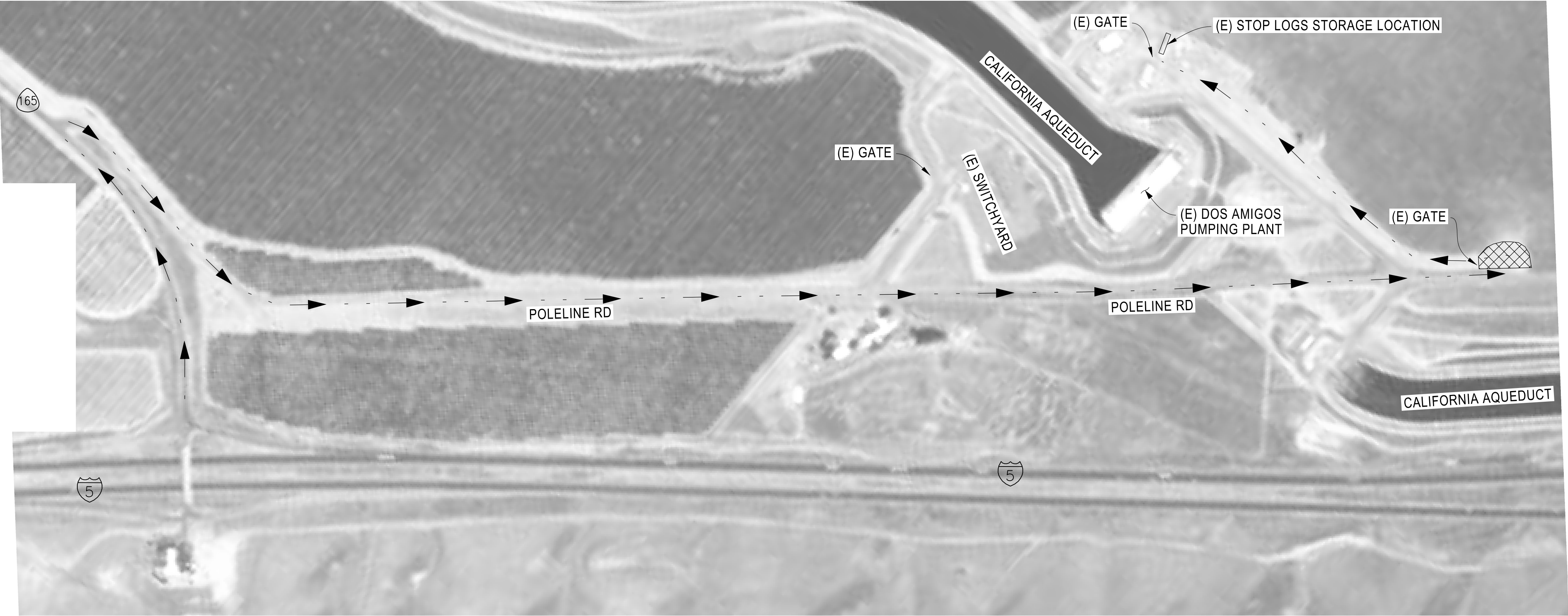
A

B

C

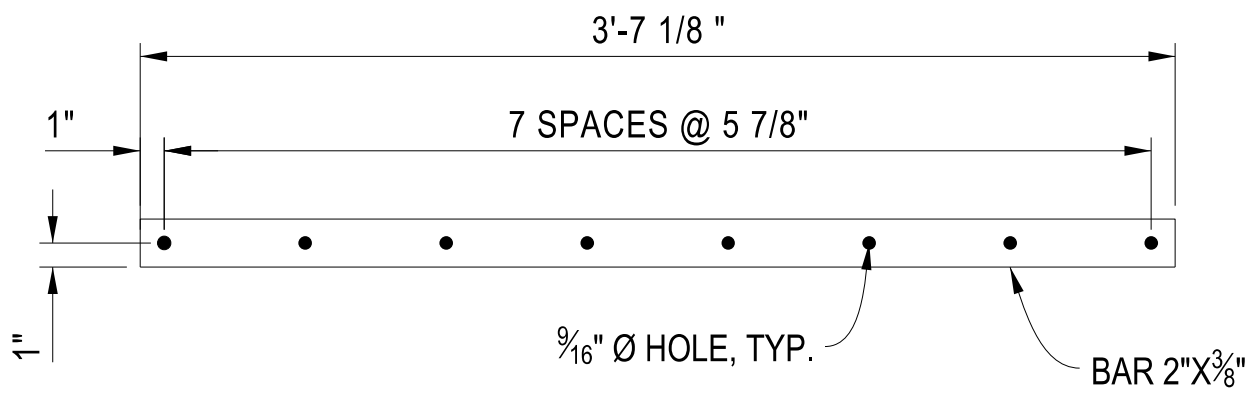
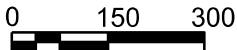
D

E



DAPP ACCESS PLAN

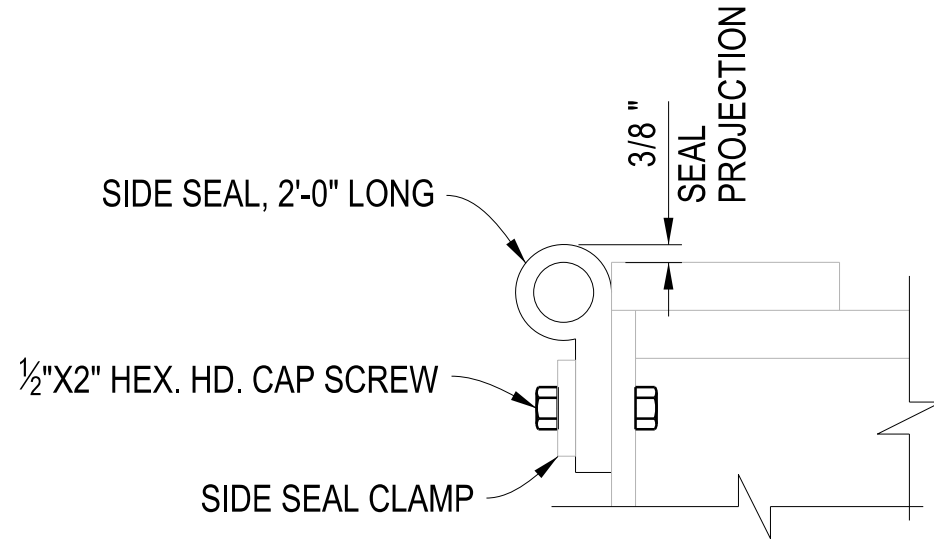
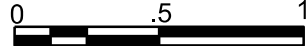
SCALE: 1" = 300'-0"



SEE REFERENCE DWG. 805-D-3562 FOR DETAIL.

SIDE SEAL CLAMP

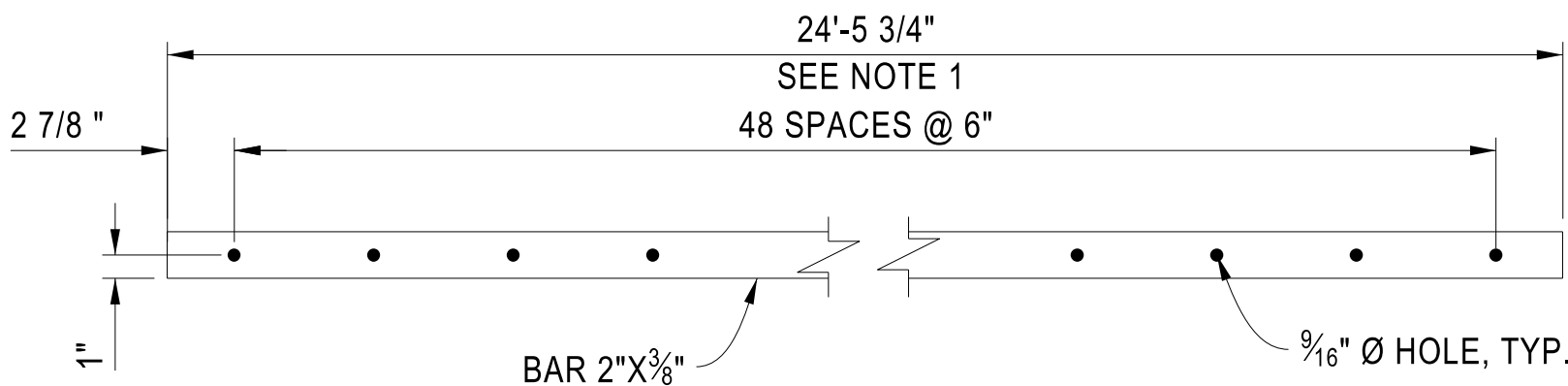
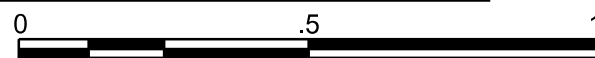
SCALE: 1 1/2" = 1'-0"



SEE REFERENCE DWG. 805-D-2952 FOR DETAIL.

SIDE SEAL

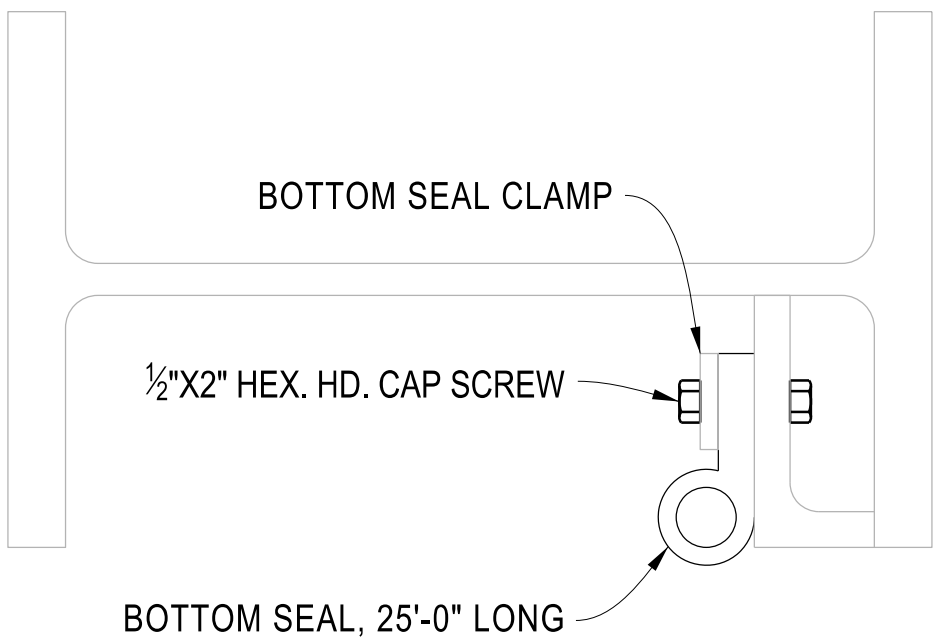
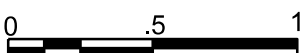
SCALE: 3" = 1'-0"



SEE REFERENCE DWG. 805-D-3562 FOR DETAIL.

BOTTOM SEAL CLAMP

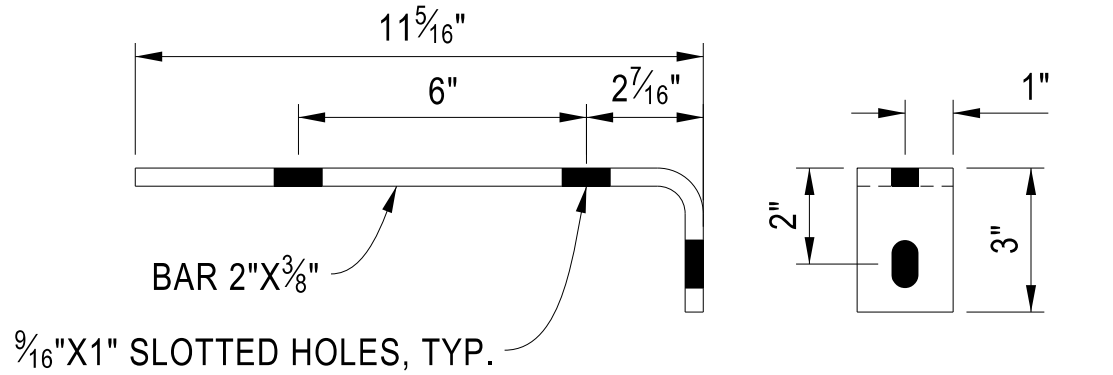
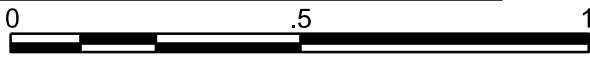
SCALE: 1 1/2" = 1'-0"



SEE REFERENCE DWG. 805-D-2952 FOR DETAIL.

BOTTOM SEAL

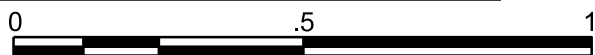
SCALE: 3" = 1'-0"



SEE REFERENCE DWG. 805-D-3562 FOR DETAIL.

CORNER SEAL CLAMP

SCALE: 3" = 1'-0"



NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL CRITICAL DIMENSIONS OF THE EXISTING STOPLOGS AND EMBEDDED SEALING SURFACES PRIOR TO THE FURNISHING OF REPLACEMENT PARTS. THE CONTRACTOR SHALL INSPECT AND REPAIR/REPLACE ALL RUBBER SEALS TO ENSURE A WATERTIGHT CONDITION. ALL REPAIRS SHALL BE COMPLETED AND TESTED FOR FUNCTIONALITY PRIOR TO THE STOPLOGS BEING UTILIZED FOR DEWATERING.
2. PRIOR TO REFURBISHMENT WORK OR MOBILIZATION, THE CONTRACTOR SHALL ENCLOSE THE DESIGNATED STAGING AREA PERIMETER WITH A TEMPORARY 6-FOOT-HIGH CHAIN LINK FENCE EQUIPPED WITH LOCKABLE ACCESS GATES. UPON PROJECT COMPLETION, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY FENCING AND RESTORE THE AREA TO ITS ORIGINAL CONDITION.

LEGEND

← - CONTRACTOR ACCESS



STAGING AREA FOR STOPLOG REFURBISHMENT SEE NOTE 2

THINK SAFETY
ACT SAFELY

APP. OSFM #

STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF
WATER RESOURCES
DIVISION OF ENGINEERING

REV. DESCRIPTION SUB. APP. DATE

DESIGNED:
YU-CHEN HSUEH
DRAWN:
YU-CHEN HSUEH
CHECKED:
WING CHIU
REVIEWED:
SALENDAR SINGH
SUBMITTED:
SALENDAR SINGH

APPROVAL RECOMMENDED: DATE:

MANAGER, CIVIL II SECTION 6/15/2026

APPROVED: DATE:

MANAGER, CIVIL BRANCH 6/15/2026

CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN LUIS FIELD DIVISION
CALIFORNIA AQUEDUCT

CHECK STRUCTURE 17
STRUCTURAL MODIFICATIONS

CIVIL

DOS AMIGOS PUMPING PLANT
STOPLOG STORAGE
AND REPAIRS

PLAN AND DETAILS

SPEC. NO. SHEET NO. DRAWING NO.
26-07 008 C-103

PLOT DATE: 9-JUN-2026

E

**THINK SAFETY
ACT SAFELY**

APP.	OSFM #	
STATE OF CALIFORNIA CALIFORNIA NATURAL RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES DIVISION OF ENGINEERING		
REV.	DESCRIPTION	SUB. DATE
		APP.

	DESIGNED: MICHAEL ANTWI
	DRAWN: DARICK BLAKE
	CHECKED: CAMERON BEST
	REVIEWED: CAMERON BEST
	SUBMITTED: CAMERON BEST

APPROVAL RECOMMENDED:	DATE:
<i>Mary Castillo</i>	6/12/2026
MANAGER, STRUCTURES SECTION I	
APPROVED:	DATE:
<i>Arthur Carlson</i>	6/15/2026
MANAGER, STRUCTURAL ENGINEERING BRANCH	

CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN LUIS FIELD DIVISION
CALIFORNIA AQUEDUCT

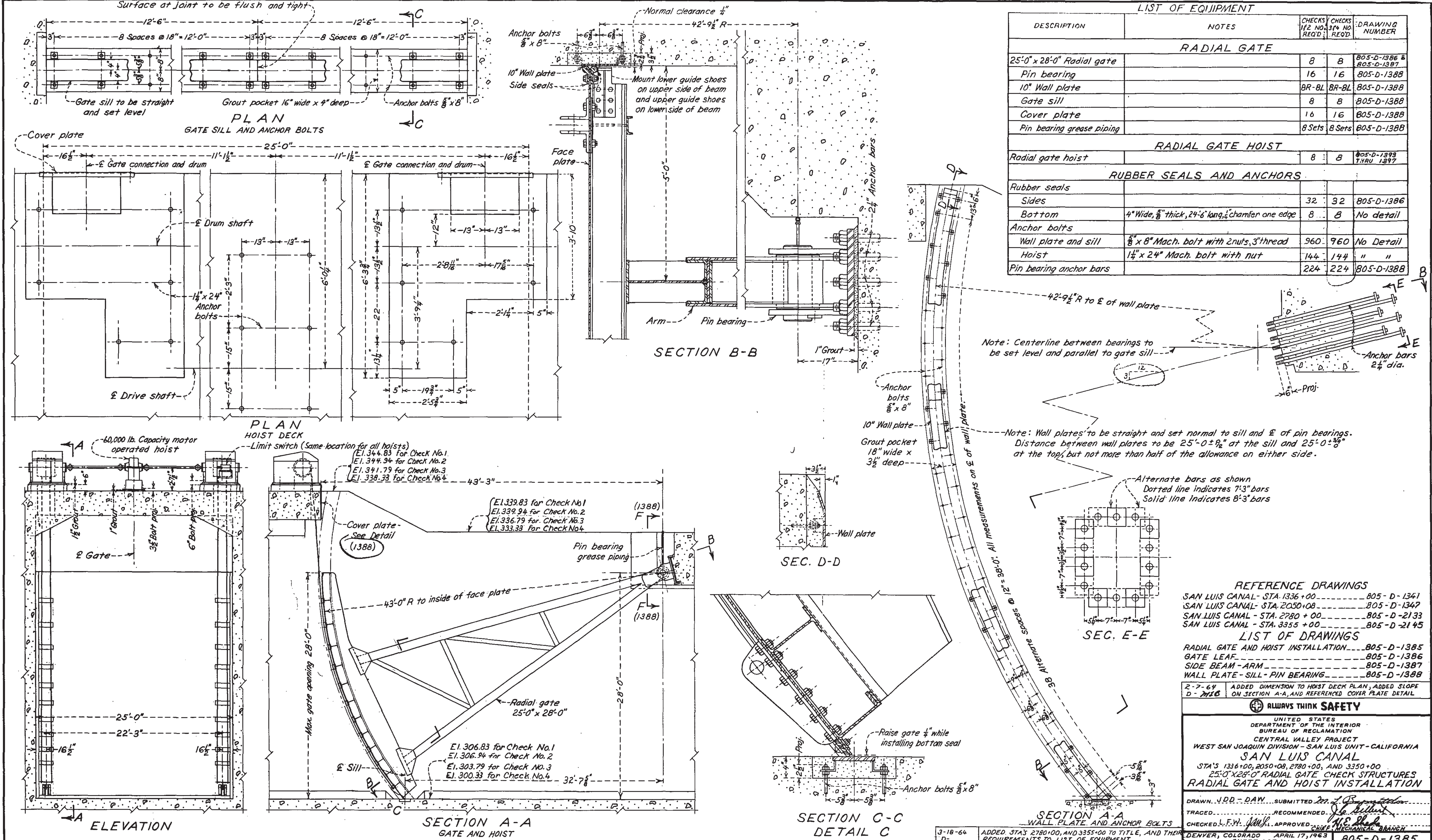
CHECK STRUCTURE 17
STRUCTURAL MODIFICATIONS

STRUCTURAL

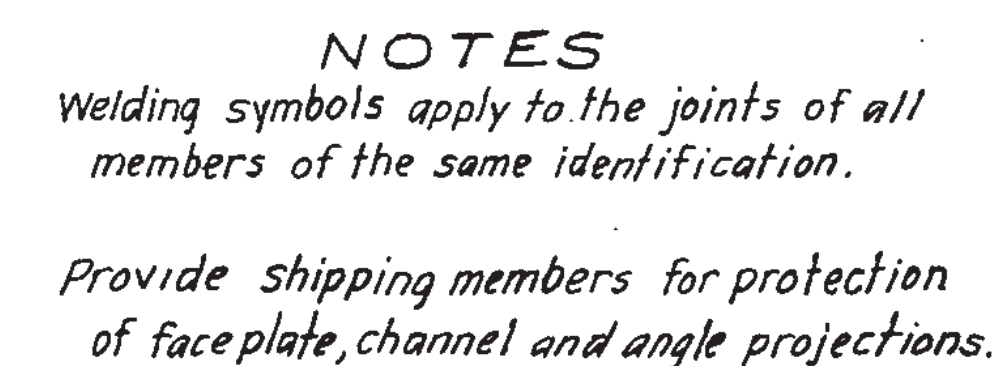
GATE CRADLE

PLAN, ELEVATION, SECTIONS AND DETAILS

SPEC. NO. 26-07	SHEET NO. 010	DRAWING NO. S-102
---------------------------	-------------------------	-----------------------------

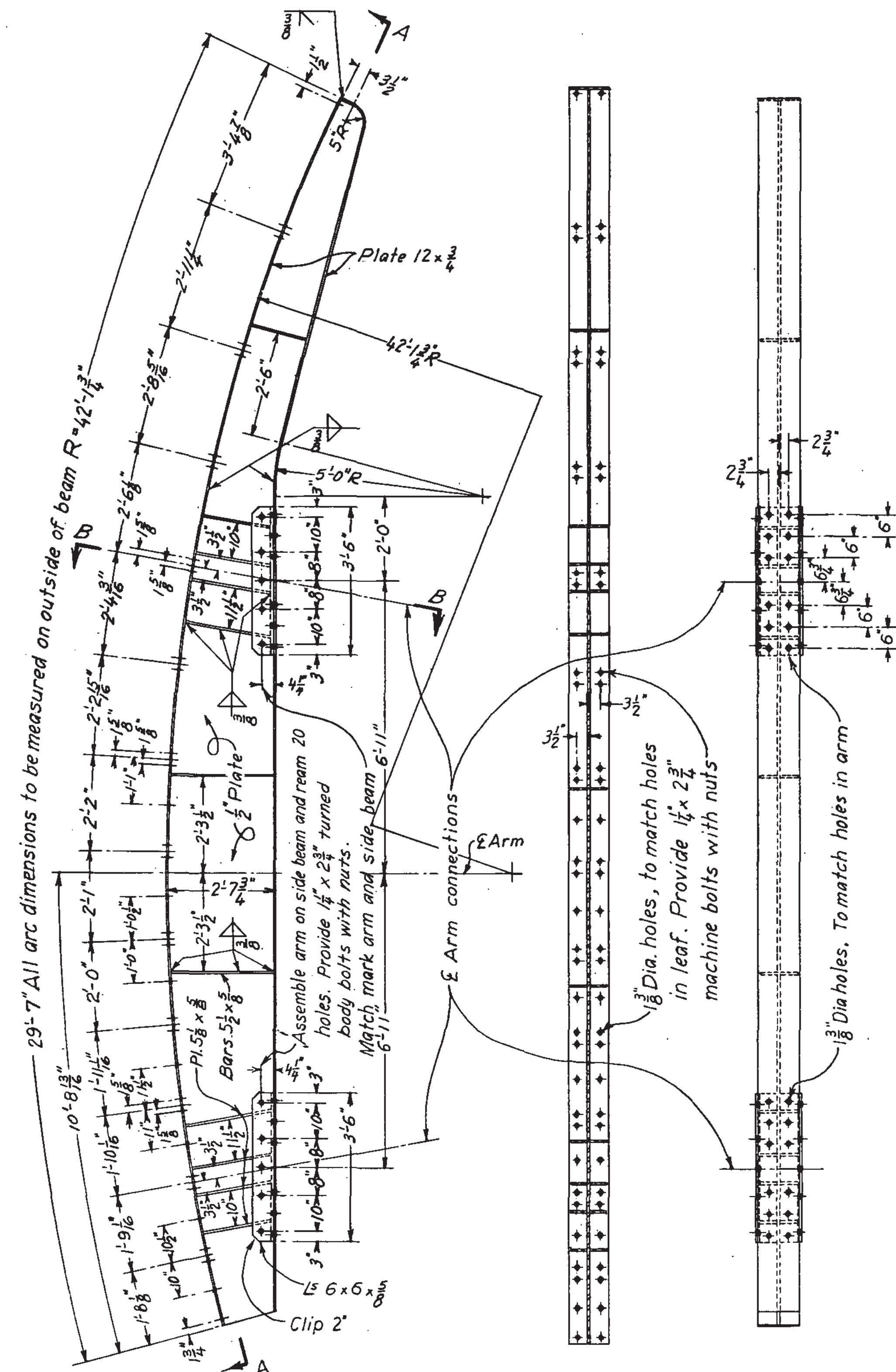


FOR REFERENCE ONLY
SPEC. 26-07, SHEET 011

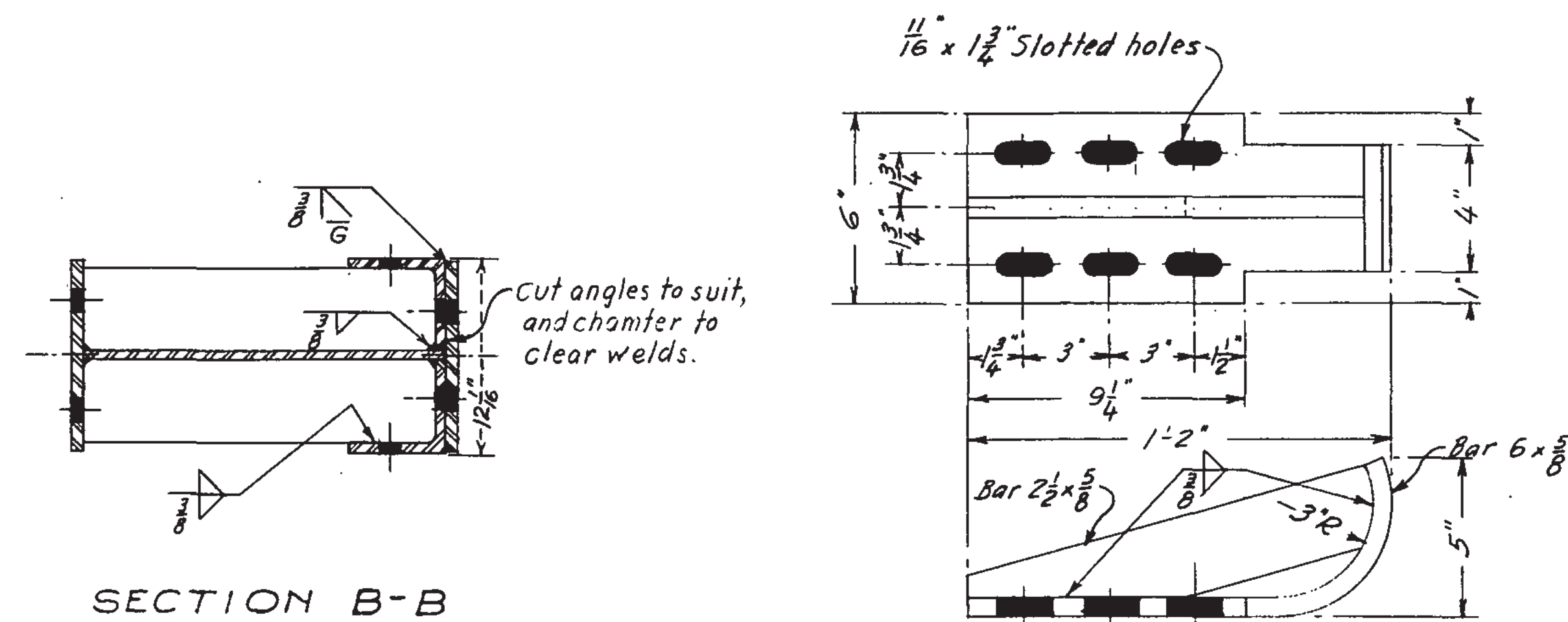


3-18-64 D	ADDED STA'S 2780+00 AND 3355+00 TO TITLE
7-8-63 D- 7145	ADDED 18 HARDWOOD BLOCKS (Section G-G)
 ALWAYS THINK SAFETY	
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION CENTRAL VALLEY PROJECT WEST SAN JOAQUIN DIVISION - SAN LUIS UNIT - CALIFORNIA	
SAN LUIS CANAL STA'S 1336+00, 2050+00, 2780+00 AND 3355+00 25'-0" x 28'-0" RADIAL GATE GATE LEAF	
DRAWN, J.D.D. SUBMITTED <i>M. J. B...</i> TRACED RECOMMENDED <i>Joe B...</i> CHECKED L.F.W. <i>JMS</i> APPROVED <i>H.P. Red</i> CHIEF MECHANICAL BRANCH DENVER, COLORADO APRIL 24, 1963 805-D-1386	

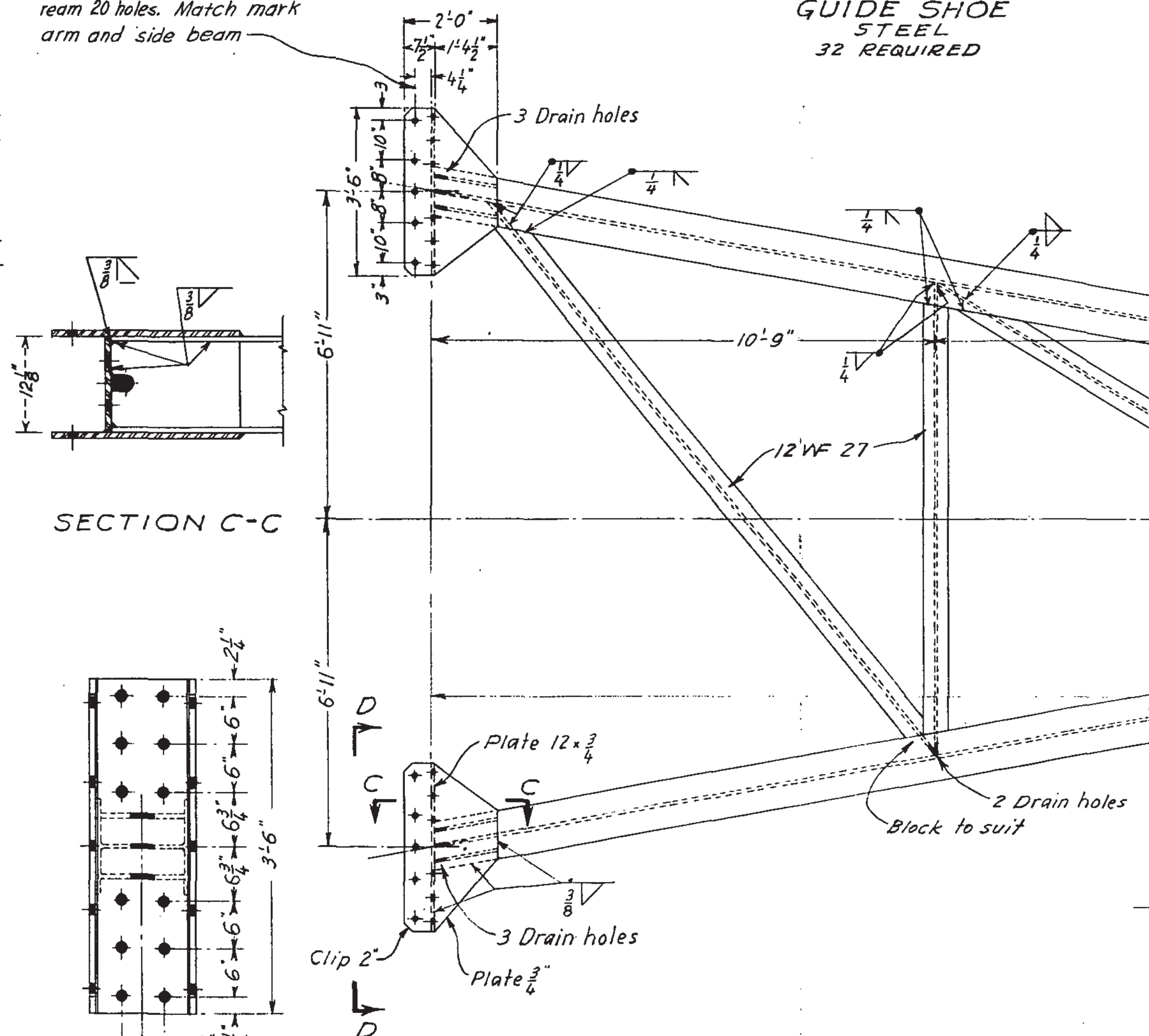
FOR REFERENCE ONLY
SPEC. 26-07, SHEET 012



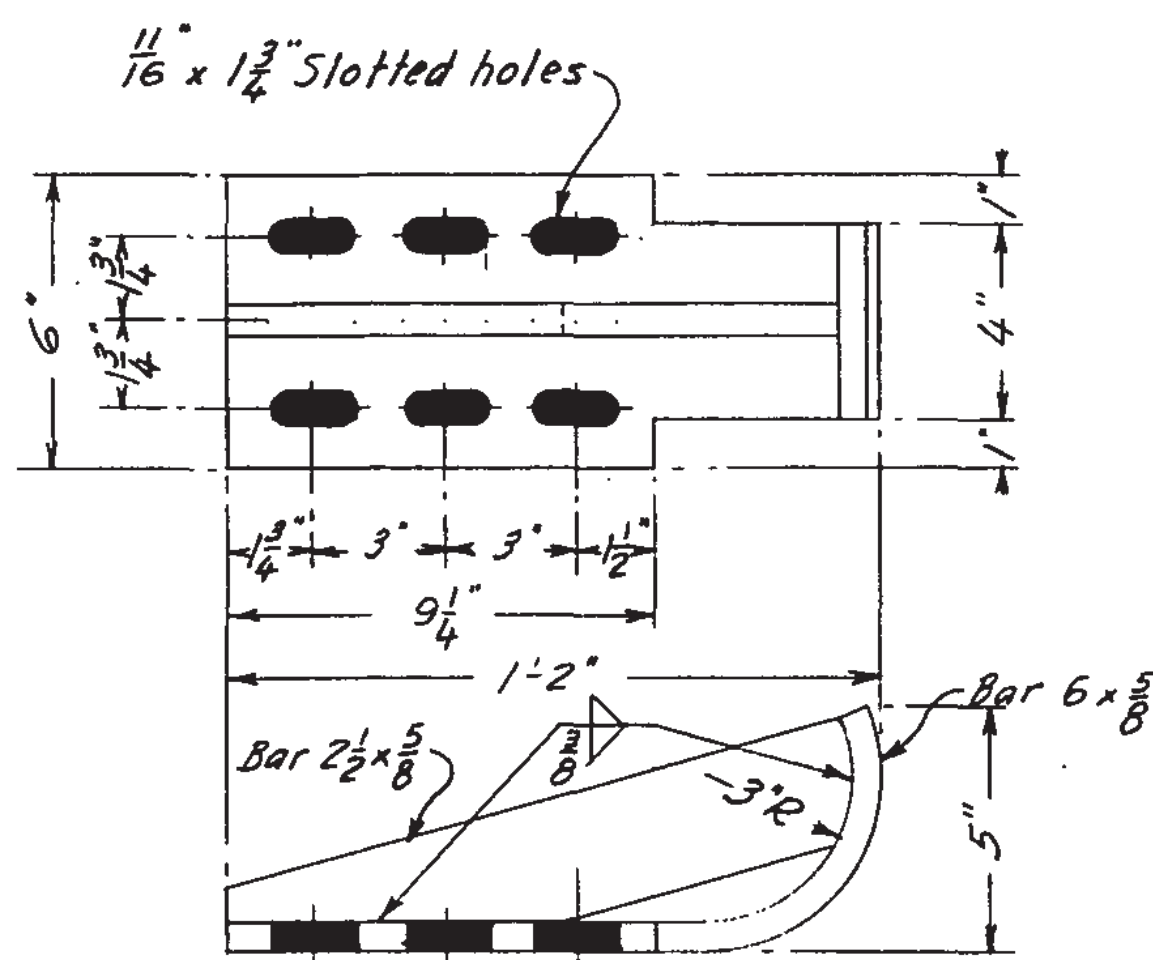
SECTION A-A
DEVELOPED
SIDE BEAM
STRUCTURAL STEEL
16 REQUIRED



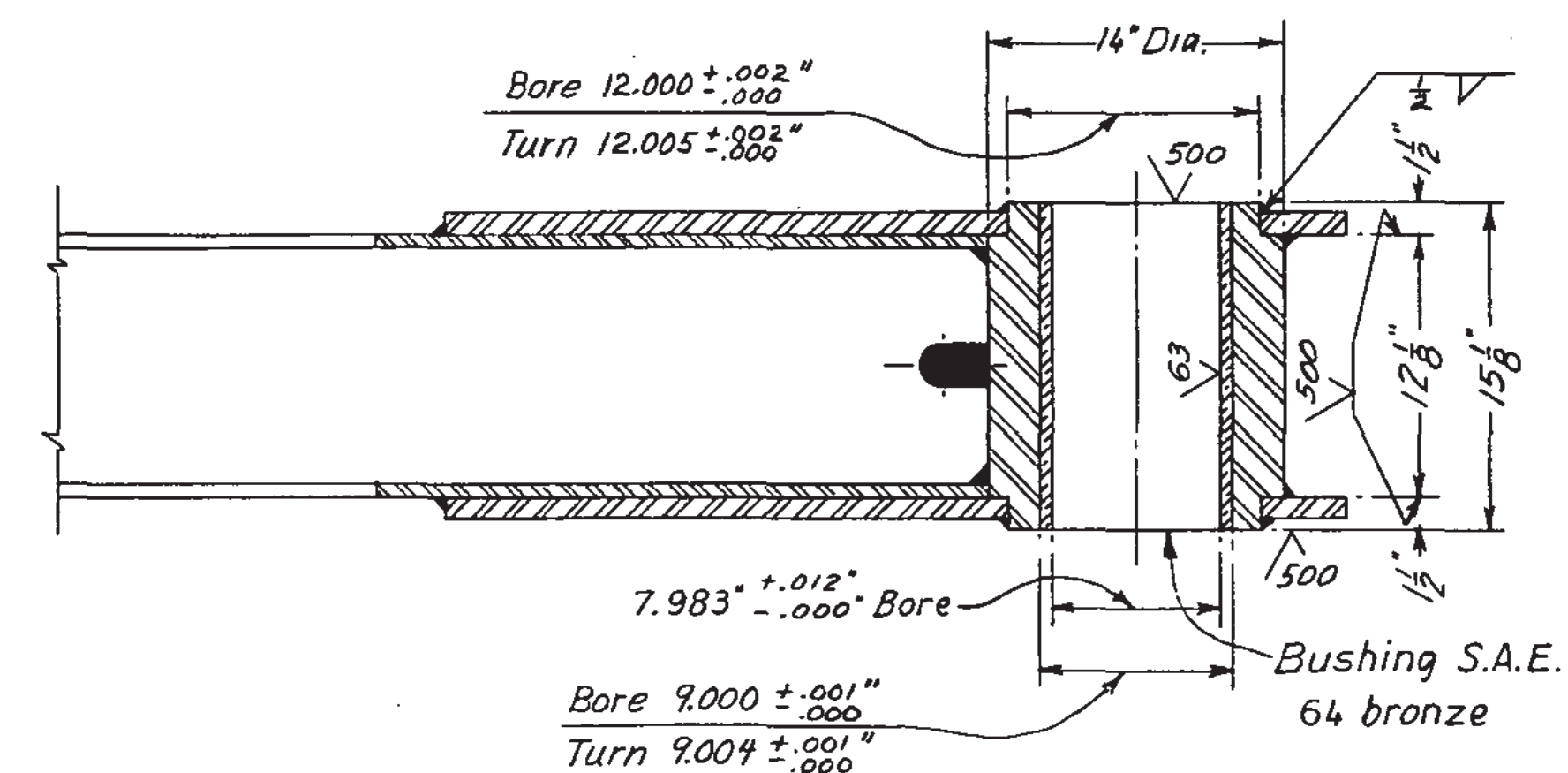
SECTION B-B
Assemble arm on side beam and ream 20 holes. Match mark arm and side beam



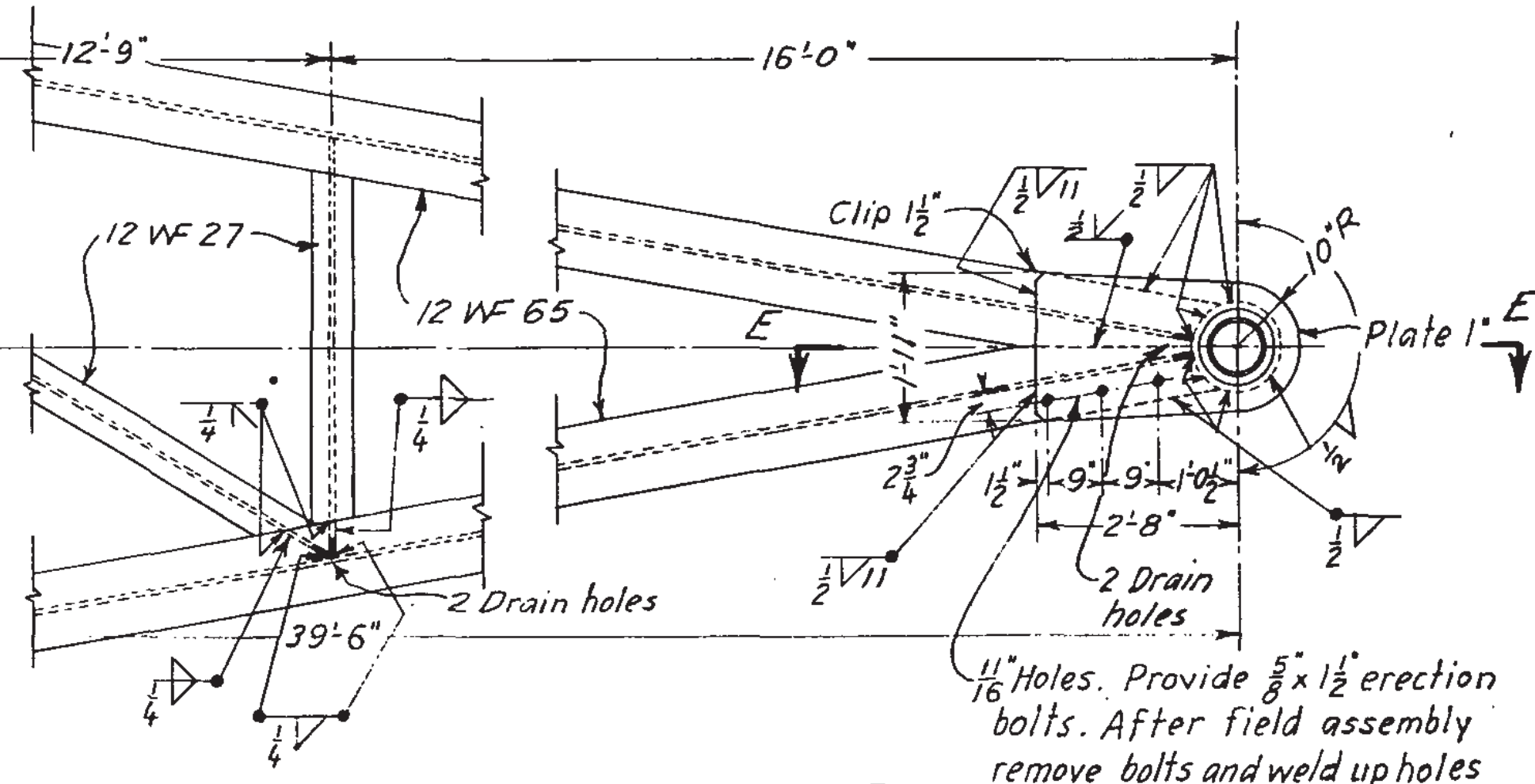
VIEW D-D
3" Dia. holes. To match holes in side beam. Provide 1 1/4 x 3 1/2" machine bolts with nuts



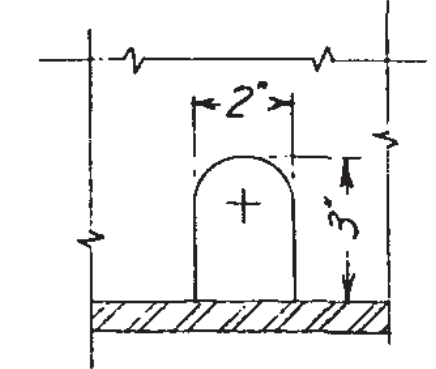
GUIDE SHOE
STEEL
32 REQUIRED



SECTION E-E



NOTE
Welding symbols apply to the joints of all members of the same identification.

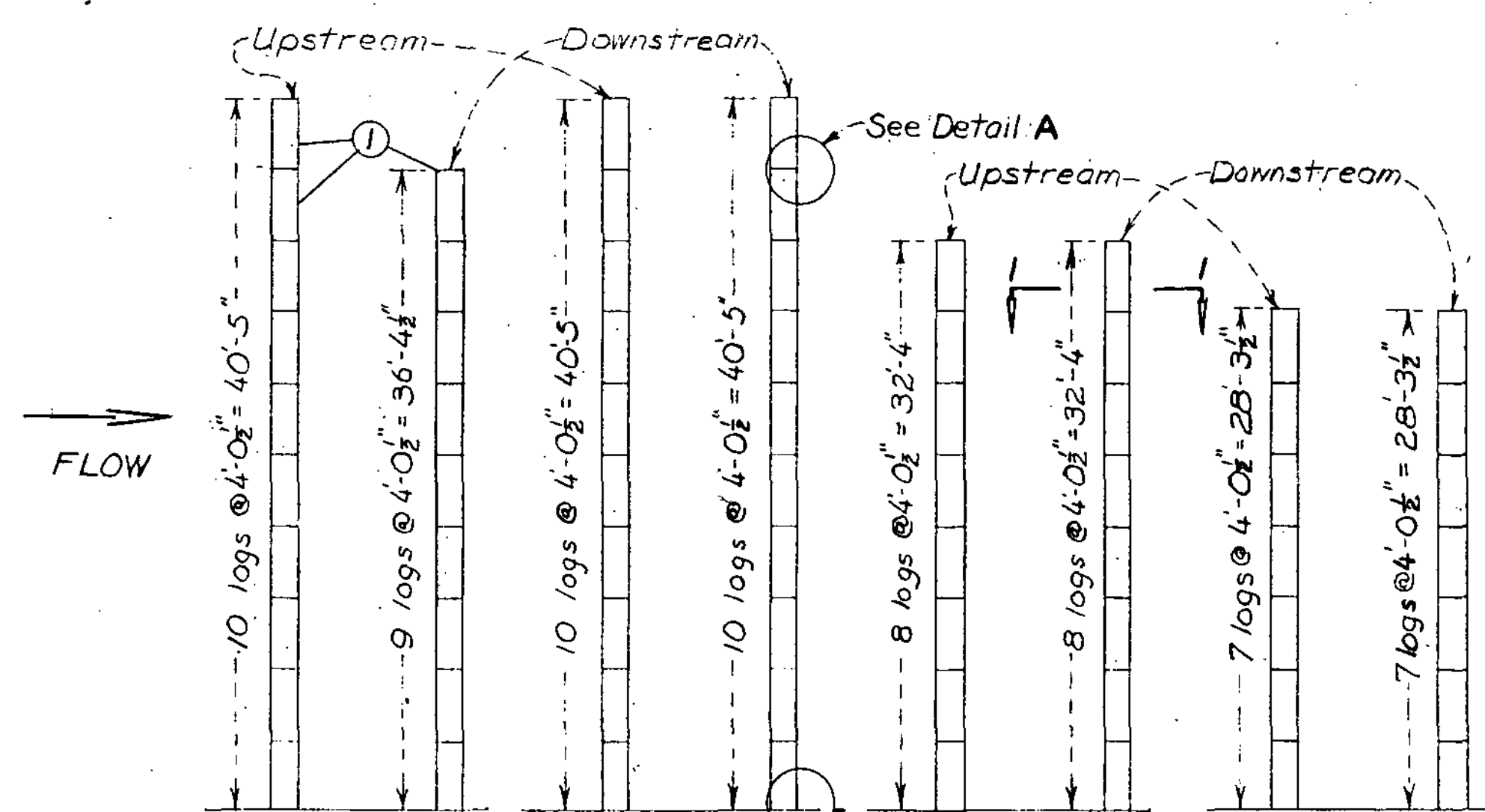


DRAIN HOLE
TYPICAL

3-18-64	ADDED STA'S 2780+00, AND 3355+00 TO TITLE
ALWAYS THINK SAFETY	
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION CENTRAL VALLEY PROJECT WEST SAN JOAQUIN DIVISION - SAN LUIS UNIT - CALIFORNIA	
SAN LUIS CANAL	
STA'S 1336+00, 2050+00, 2780+00, AND 3355+00	
25'-0" x 28'-0" RADIAL GATE	
SIDE BEAM - ARM	
DRAWN J.D.D.	SUBMITTED M. J. [Signature]
TRACED [Signature]	RECOMMENDED [Signature]
CHECKED L.V. [Signature]	APPROVED [Signature]
DENVER, COLORADO	APRIL 24, 1963
SHEET 3 OF 4	
805-D-1387	

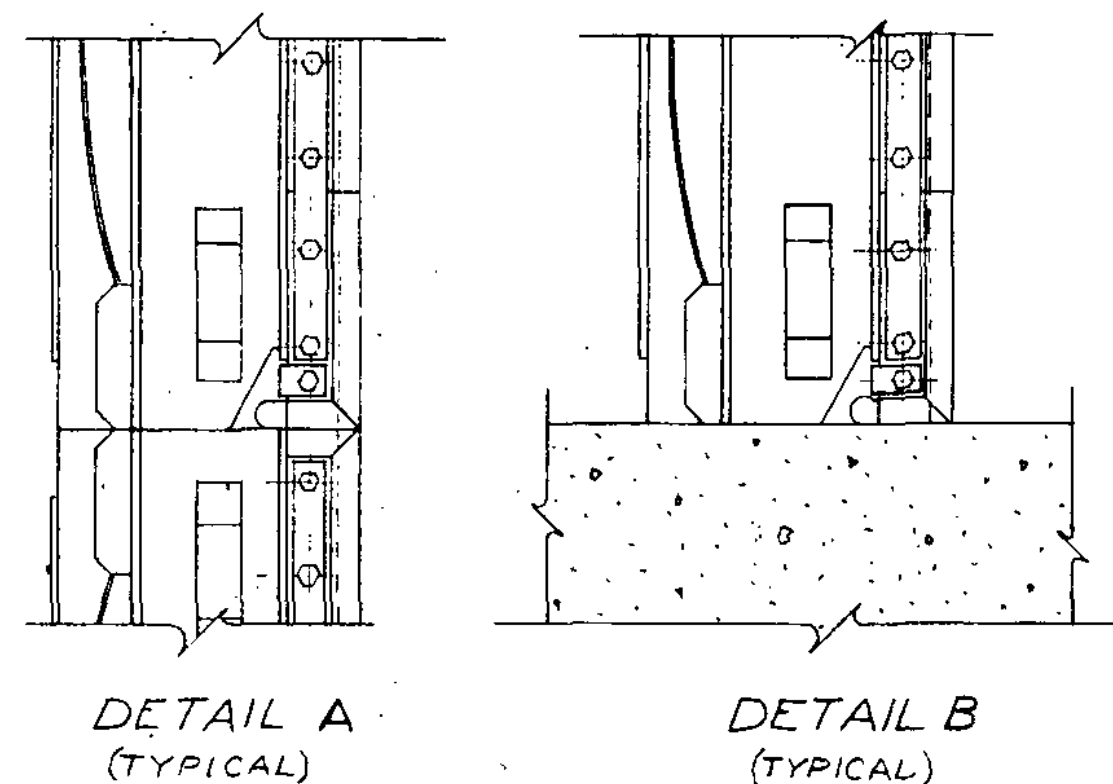
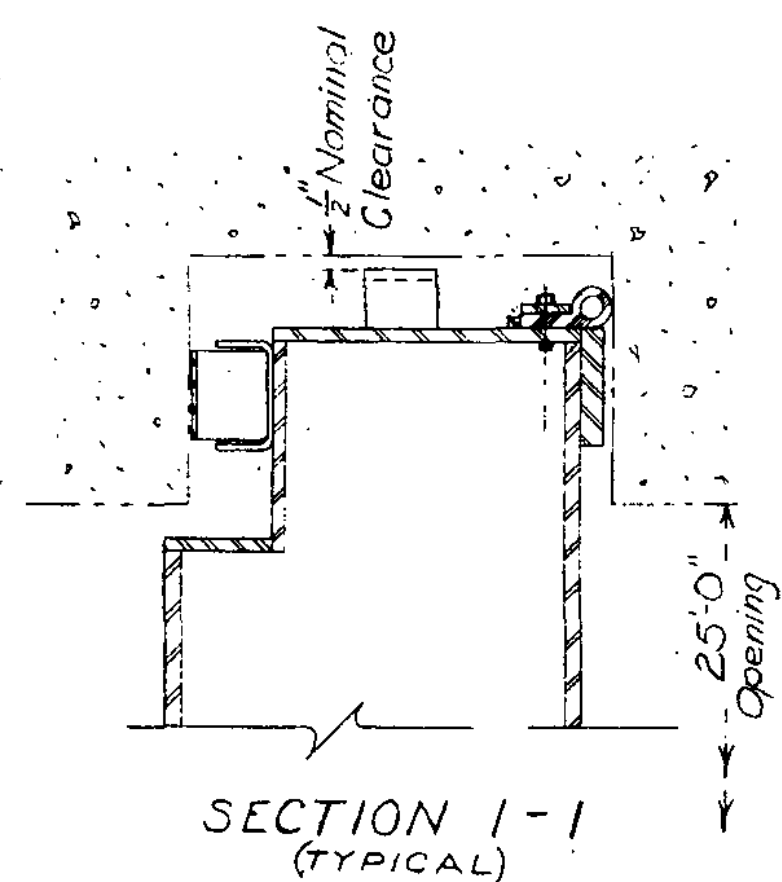
FOR REFERENCE ONLY
SPEC. 26-07, SHEET 013



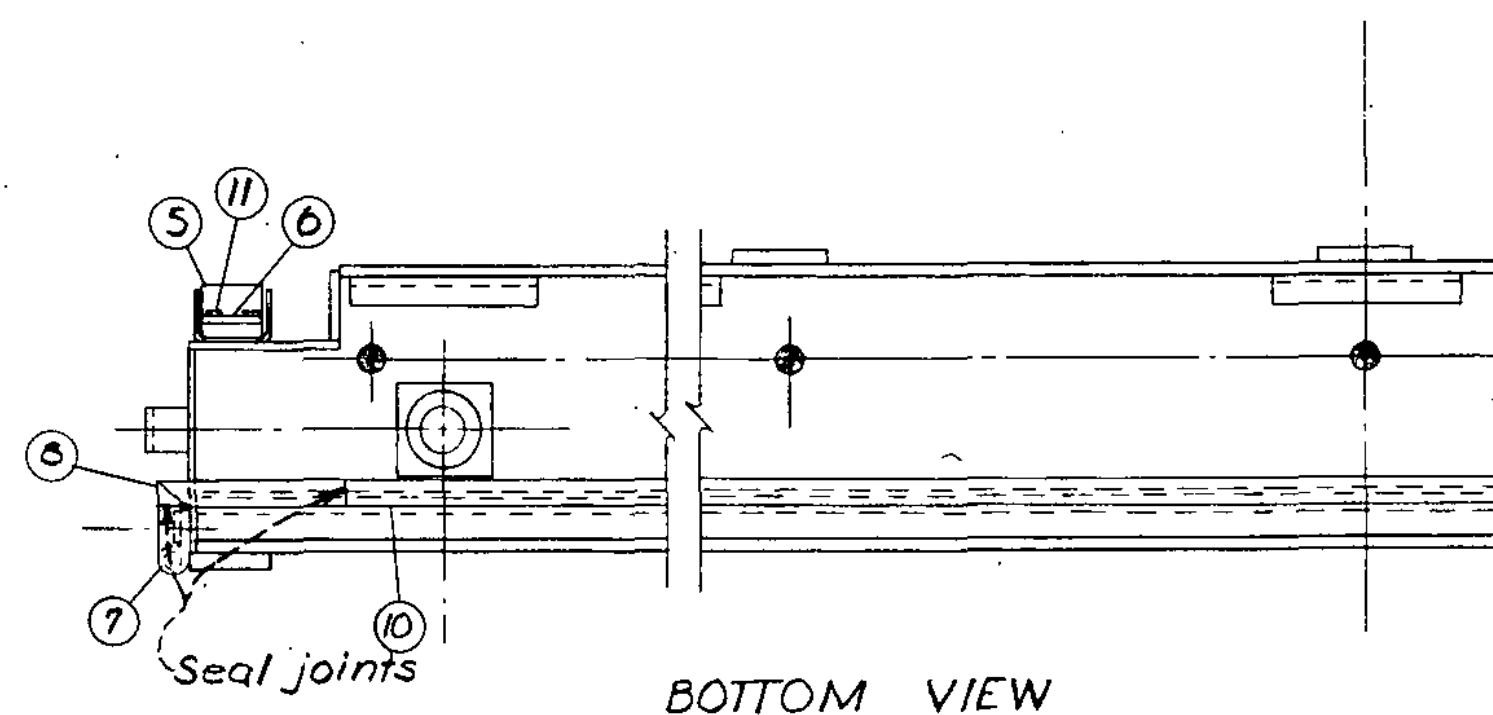
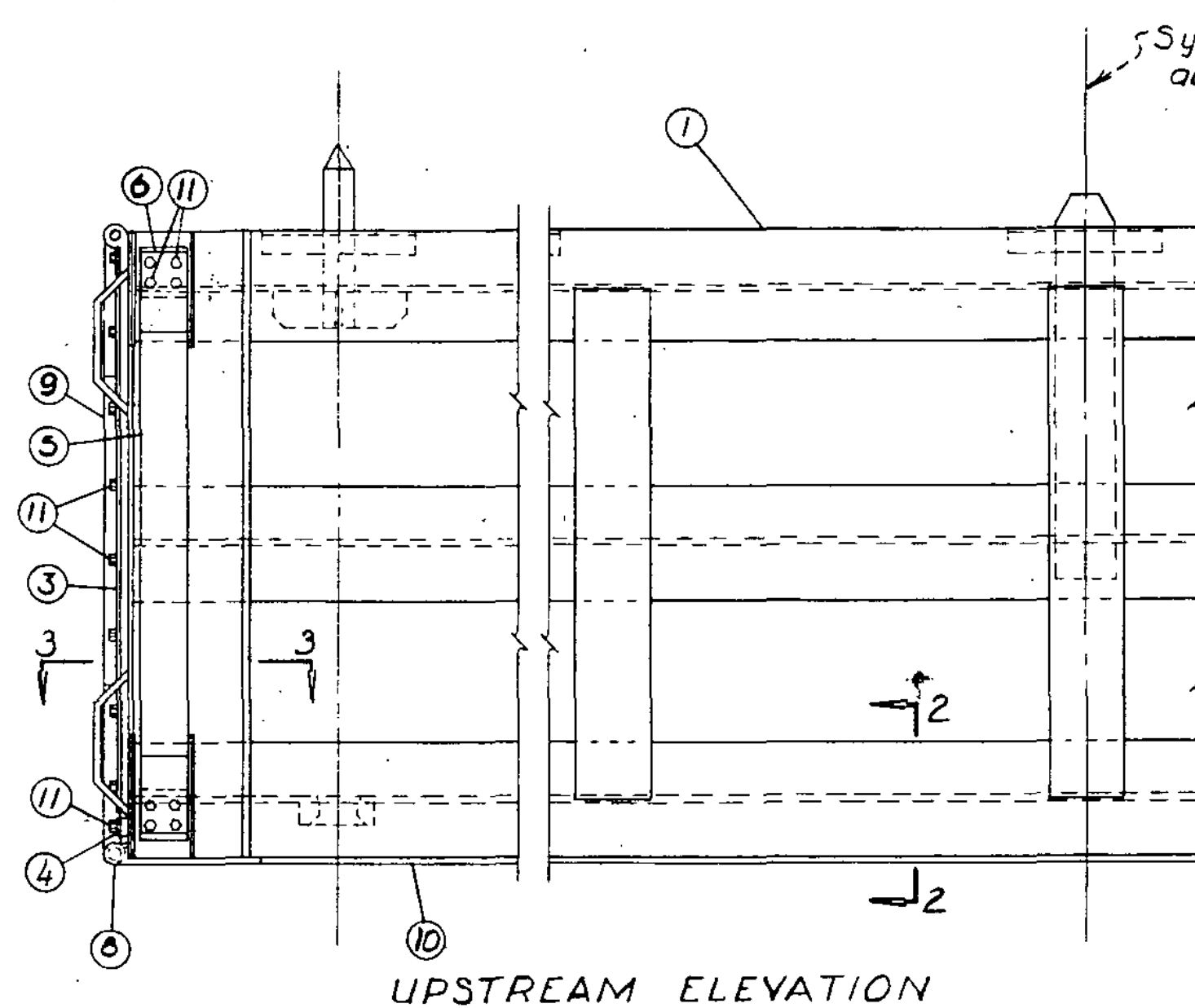
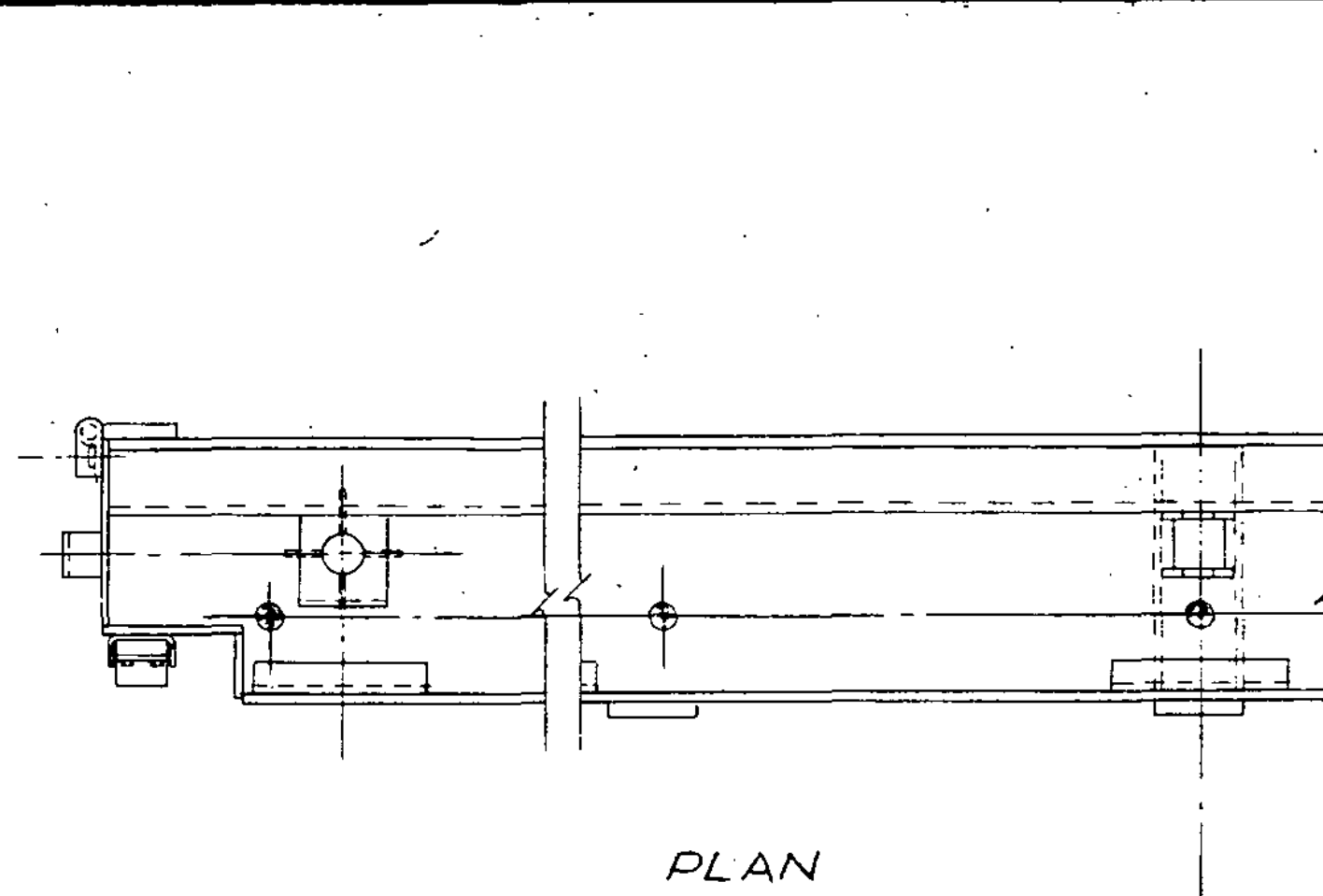


CANAL INLET STRUCTURE PANOCHÉ CREEK SIPHON CHECKS No. 1 thru 7 CHECK No. 8

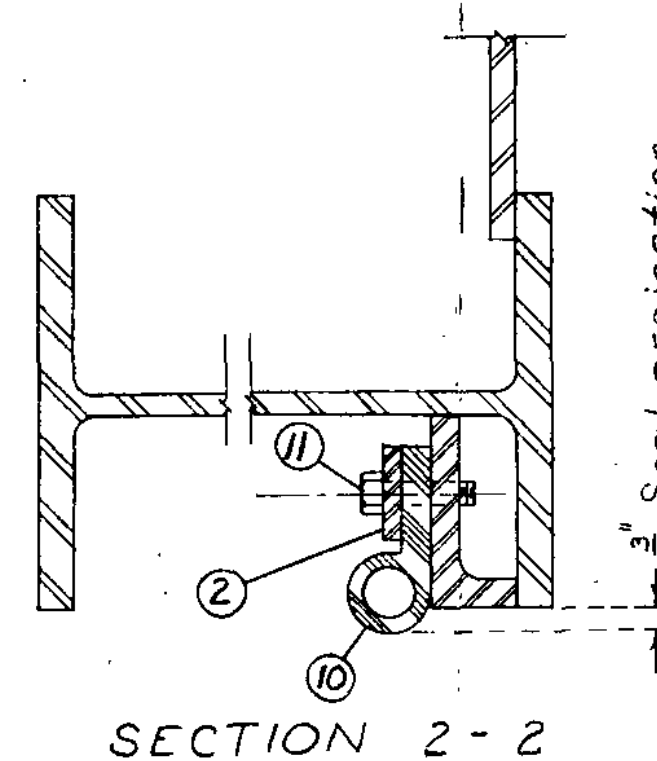
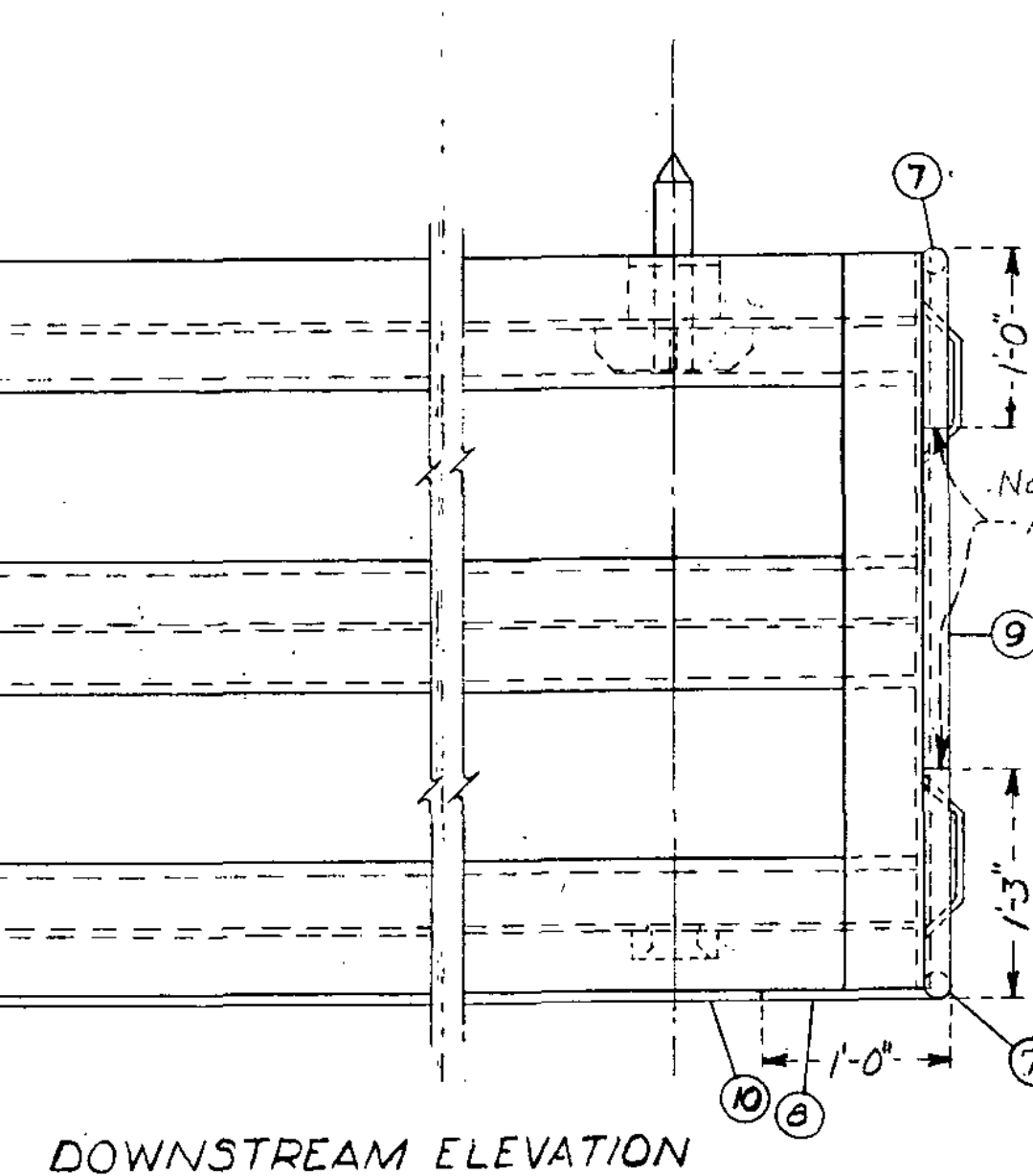
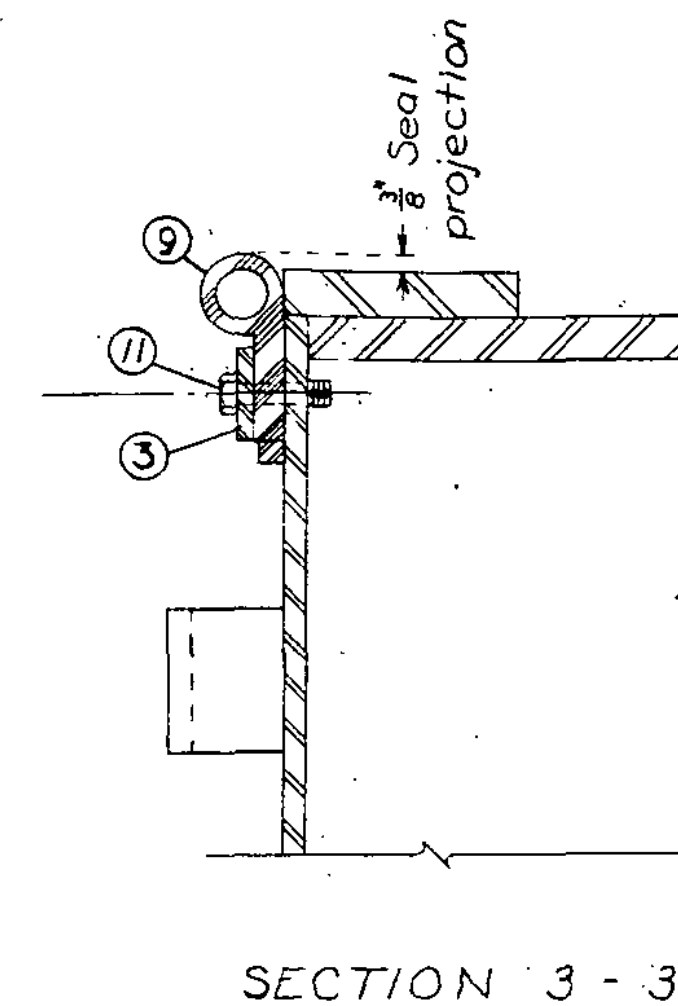
STACKING DIAGRAM



INSTALLATION



ASSEMBLY



FOR REFERENCE ONLY
SPEC. 26-07, SHEET 015

LIST OF PARTS

PART NO.	DESCRIPTION	MATERIAL	NO. REQD.	DRAWING NUMBER
1	Log section	Struct. Steel	20	805-D-3561
2	Bottom seal clamp	Steel	20	805-D-3562
3	Side seal clamp	Steel	40	"
4	Corner seal clamp	Steel	40	"
5	Spring	Spring steel	40	"
6	Spring keeper	Steel	80	"
7	Corner seal, type C15	Neoprene	80	40-D-2882
8	Corner seal	Neoprene	40	40-D-3887
9	Side seal, 2'-0" long	Neoprene	40	40-D-536
10	Bottom seal, 25'-0" long	Neoprene	20	"
11	1/2" x 2" Hex. hd. cap screw	Steel	1825	No detail

Includes approx. 5% in excess of requirements.
Estimated weight of parts 1 through 11 168,000 lbs.

DESIGN CRITERIA
Max. design head 37.5 ft.

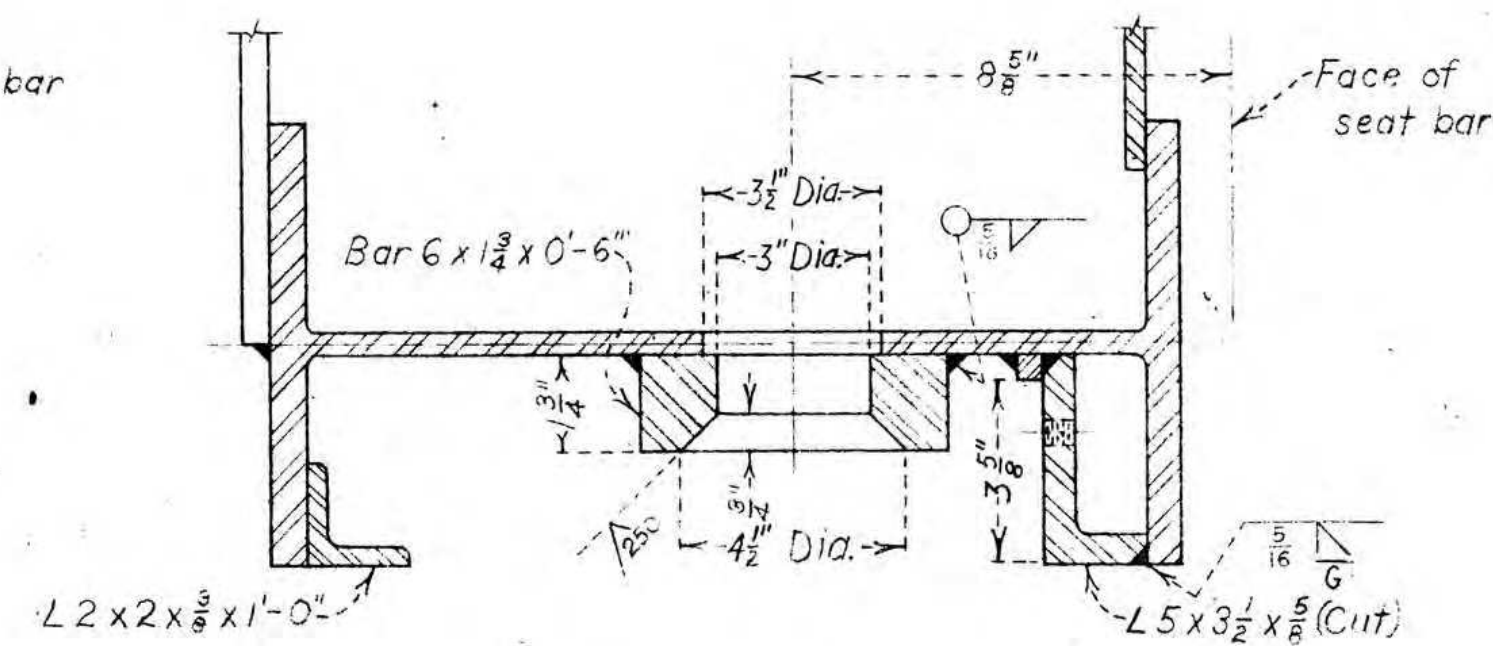
LIST OF DRAWINGS
INSTALLATION-ASSEMBLY-LIST OF PARTS 805-D-2952
LOG SECTION 805-D-3561
DETAILS 805-D-3562

REFERENCE DRAWINGS
CANAL INLET STRUCTURE-VICINITY PLAN 805-D-62
GENERAL PLANS AND SECTIONS
PANOCHÉ CREEK SIPHON 805-D-3228
CHECK NO. 1 805-D-1355
CHECK NO. 2 805-D-1356
CHECK NO. 3 805-D-2132
CHECK NO. 4 805-D-2144
CHECK NO. 5 805-D-2150
CHECK NO. 6 805-D-2862
CHECK NO. 7 805-D-3460
CHECK NO. 8 805-D-3471
RUBBER SEALING STRIP 40-D-536
RUBBER SEAL-CORNER STRIP 40-D-2982
RUBBER SEAL-CORNER STRIP 40-D-3887

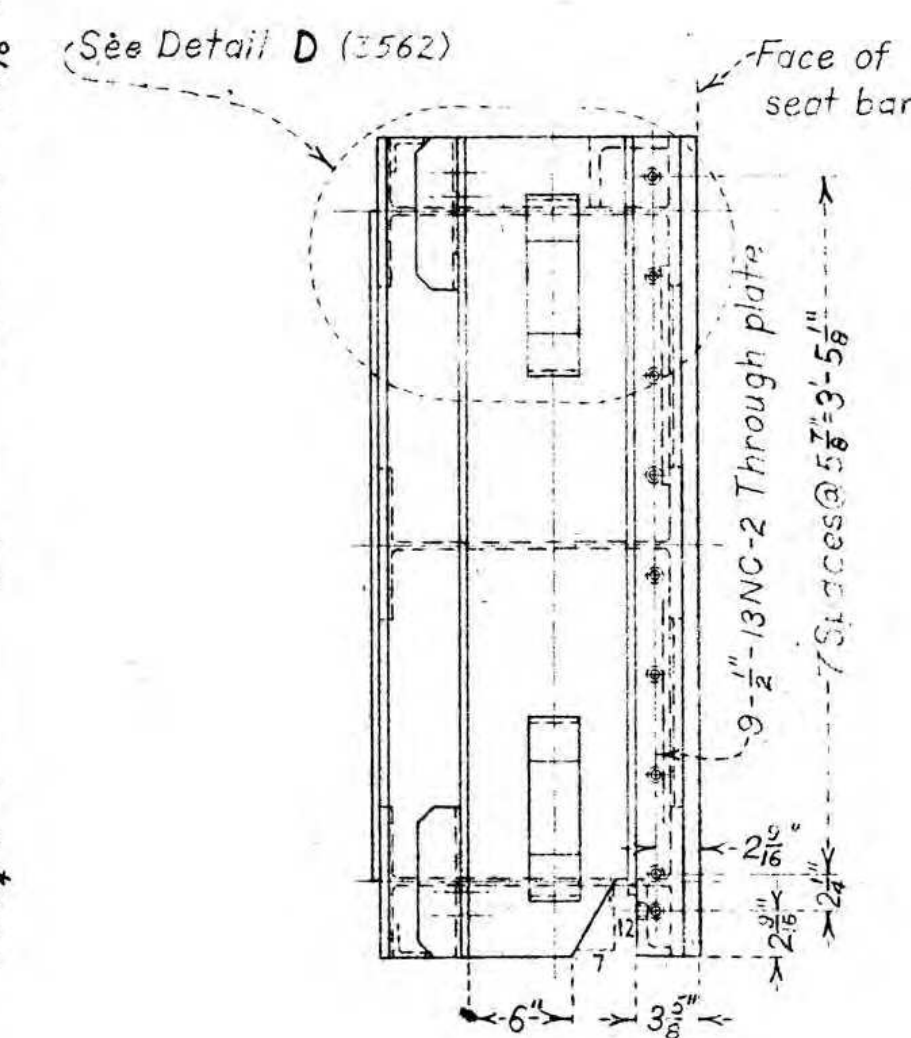
ALWAYS THINK SAFETY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
CENTRAL VALLEY PROJECT
WEST SAN JOAQUIN DIV. - SAN LUIS UNIT-CALIF.
SAN LUIS CANAL
CANAL INLET STRUCTURE-SIPHON AND CHECKS
STOPLOG
INSTALLATION-ASSEMBLY-LIST OF PARTS

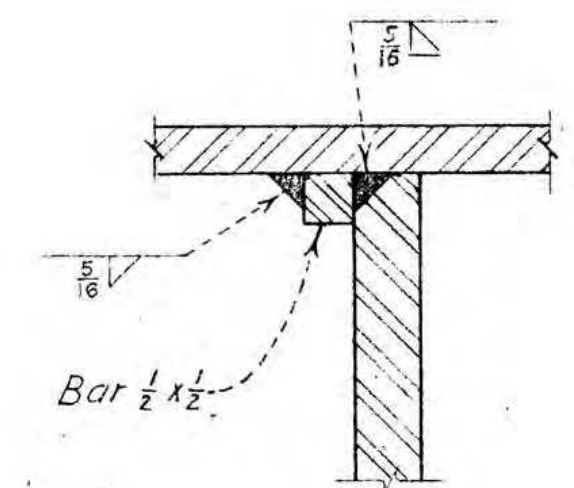
DRAWN: L.V.R. SUBMITTED: M.L. [Signature]
TRACED: RECOMMENDED: [Signature]
CHECKED: [Signature] APPROVED: [Signature]
DENVER, COLORADO AUGUST 18, 1963 805-D-2952
SHEET 1 OF 3



SECTION 5-5



SECTION 4-4



WELD DETAIL

NOTES

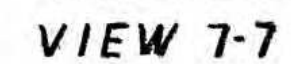
Welding symbols apply to the joints of all members of similar identification.

Each stoplap shall be suspended by its lifting stem and while suspended the faces of vertical seat bars at either side of the log shall not deviate from a straight line by more than $\frac{1}{16}$ inch, and both vertical seat bars shall lie in a plane formed by three corners of the seat face bars within $\frac{1}{16}$ inch.

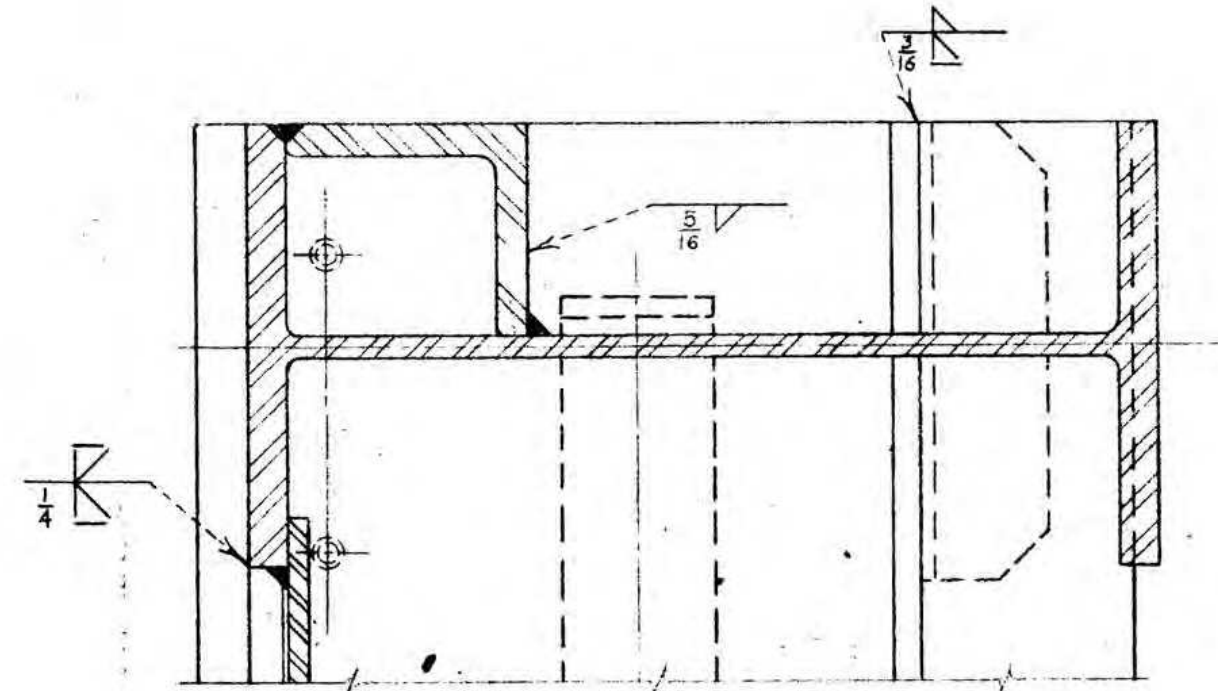
Machining of seat bars, if necessary, to obtain the required tolerances, shall be done after all welding on the stoplap has been completed.

Any variation in the depth of the 18WF70 beams, if within the established rolling tolerances, shall be taken on the upstream or unplated flange.

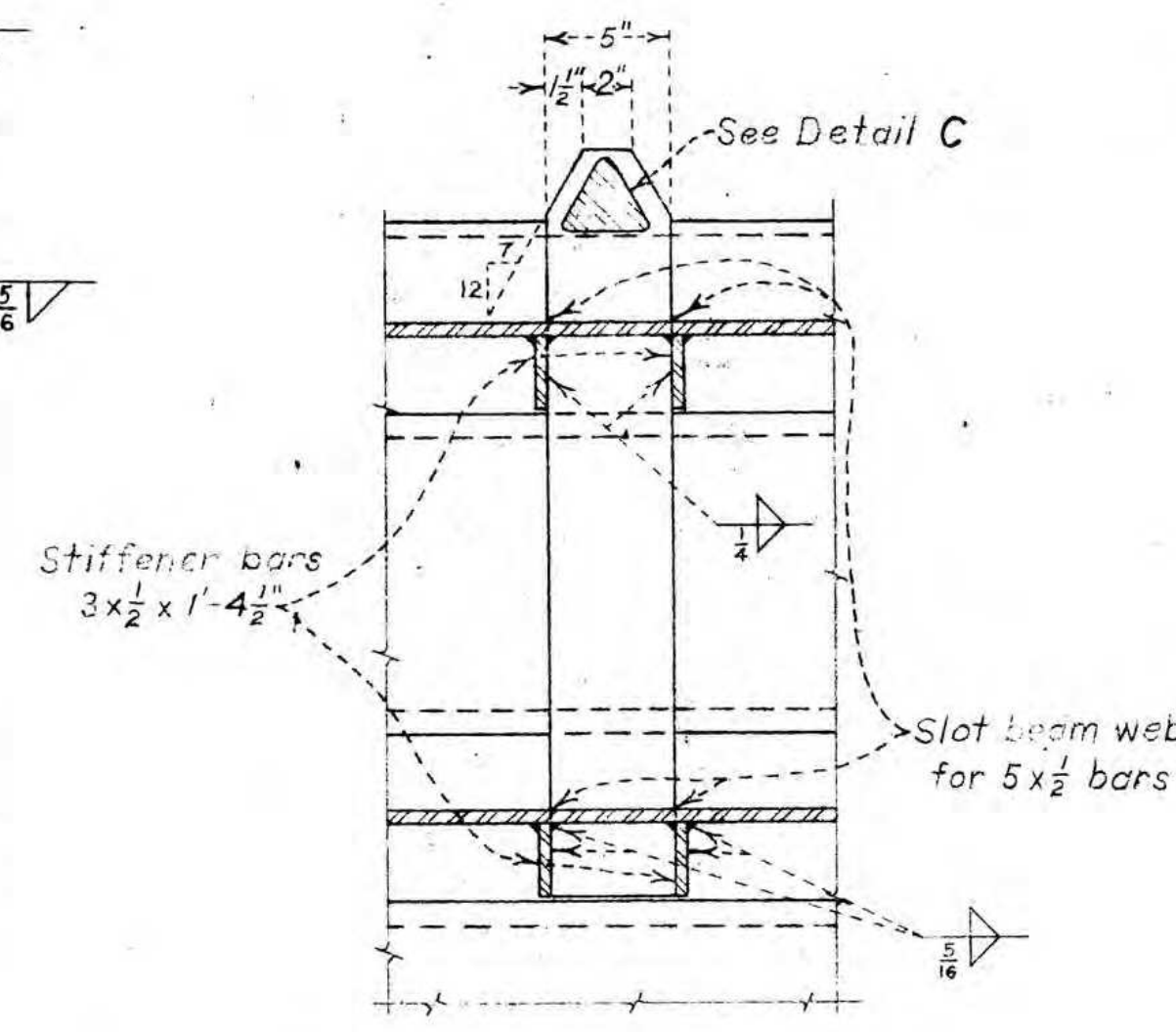
Beams shall have ends cut square before assembling. Top and bottom horizontal seat faces shall be straight within $\frac{1}{16}$ inch and shall be normal to the side seats.



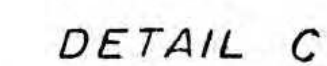
LOG SECTION
STRUCTURAL STEEL-ASTM:A441
2" REQUIRED



SECTION 9-9



SECTION 11-11



FOR REFERENCE ONLY
SPEC. 26-07, SHEET 016


ALWAYS THINK SAFETY

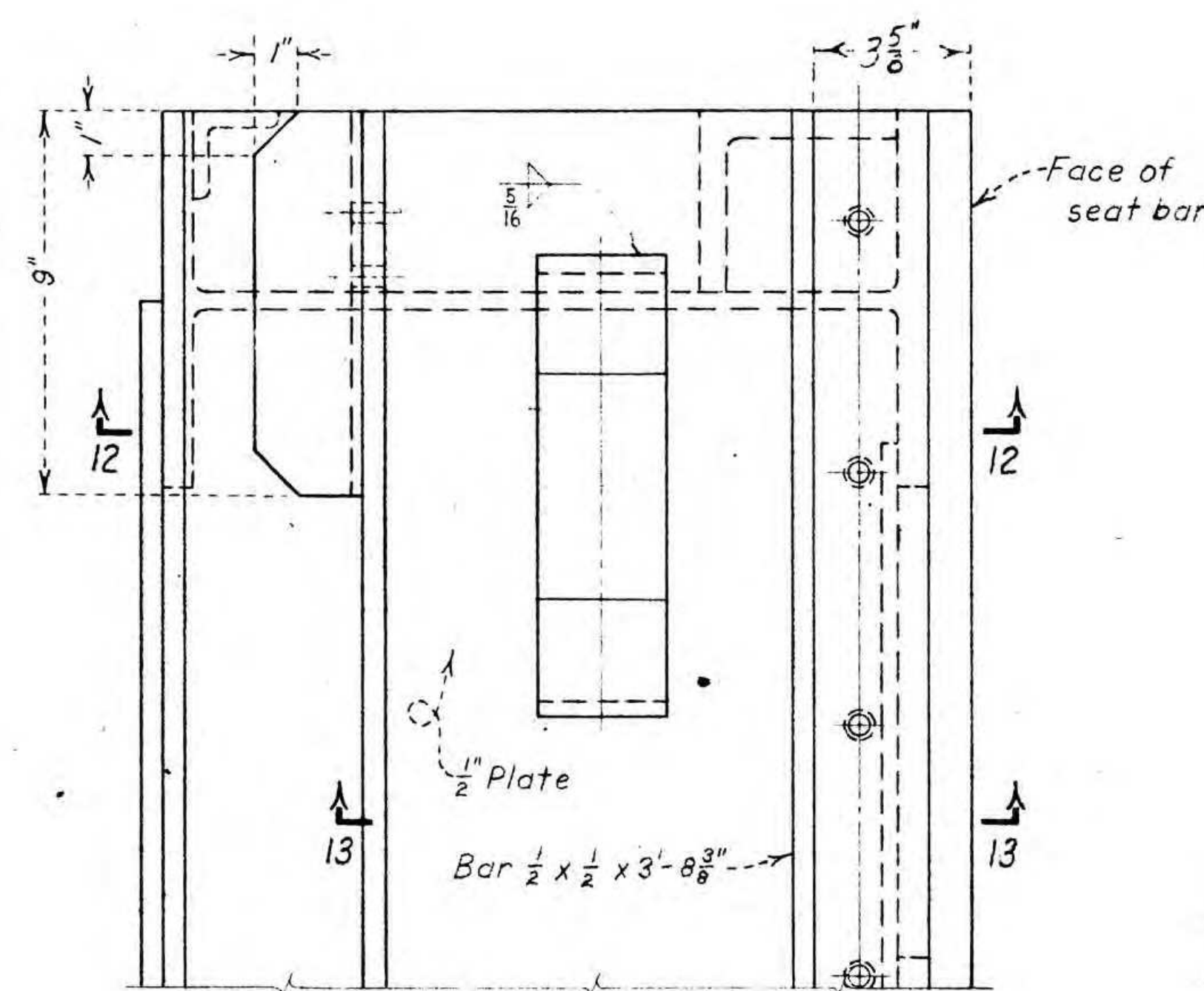
UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 CENTRAL VALLEY PROJECT
 WEST SAN JOAQUIN DIV. - SAN LUIS UNIT-- CALIFORNIA

SAN LUIS CANAL
 CANAL INLET STRUCTURE - SIPHON AND CHECKS
 STOPLOG
 LOG SECTION

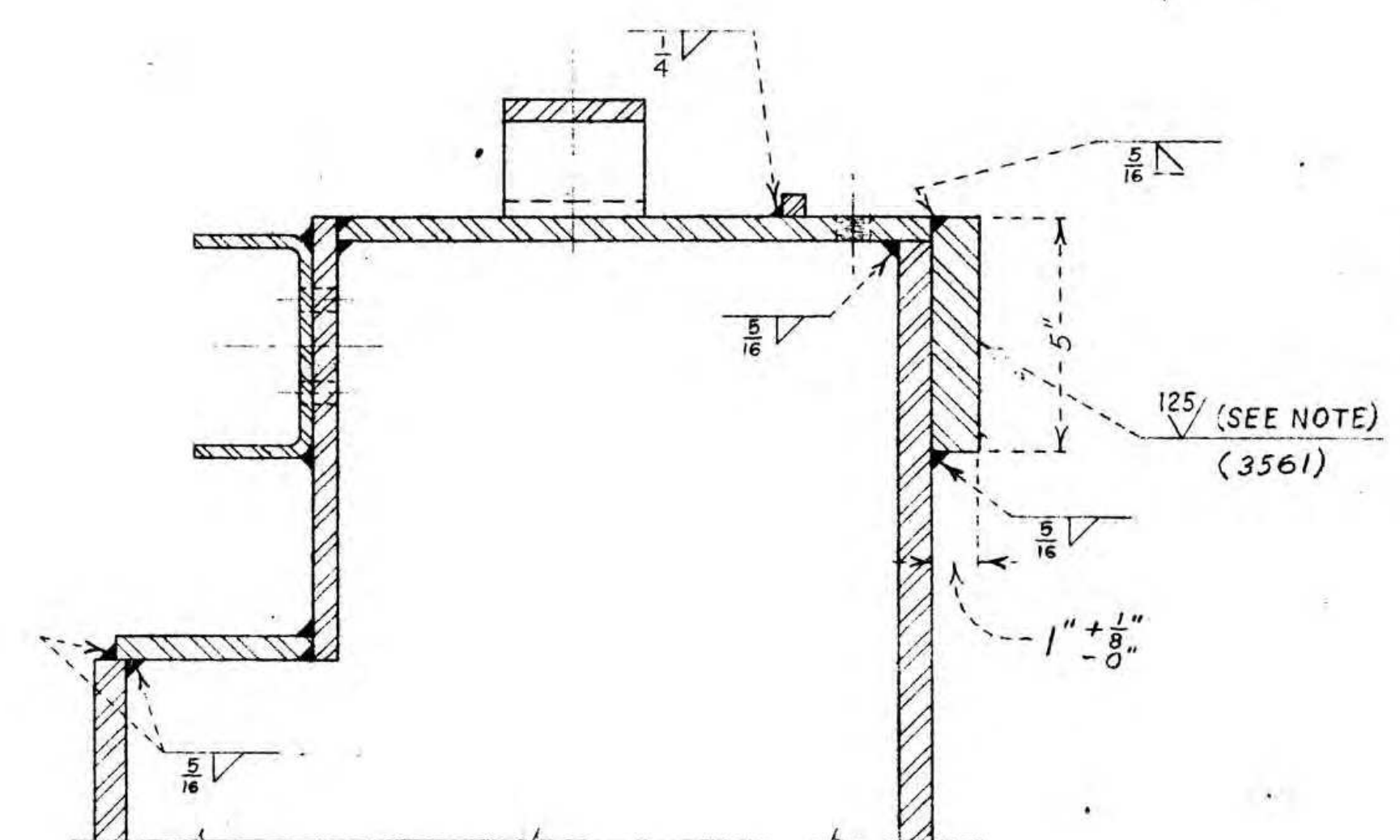
DRAWN N.L.B. SUBMITTED M. L. Rasmussen
 TRACED _____ RECOMMENDED J. E. Hillen
 CHECKED R. M. [initials] APPROVED J. E. [initials]
 CHIEF, MECHANICAL BRANCH

DENVER, COLORADO, AUG. 12, 1965

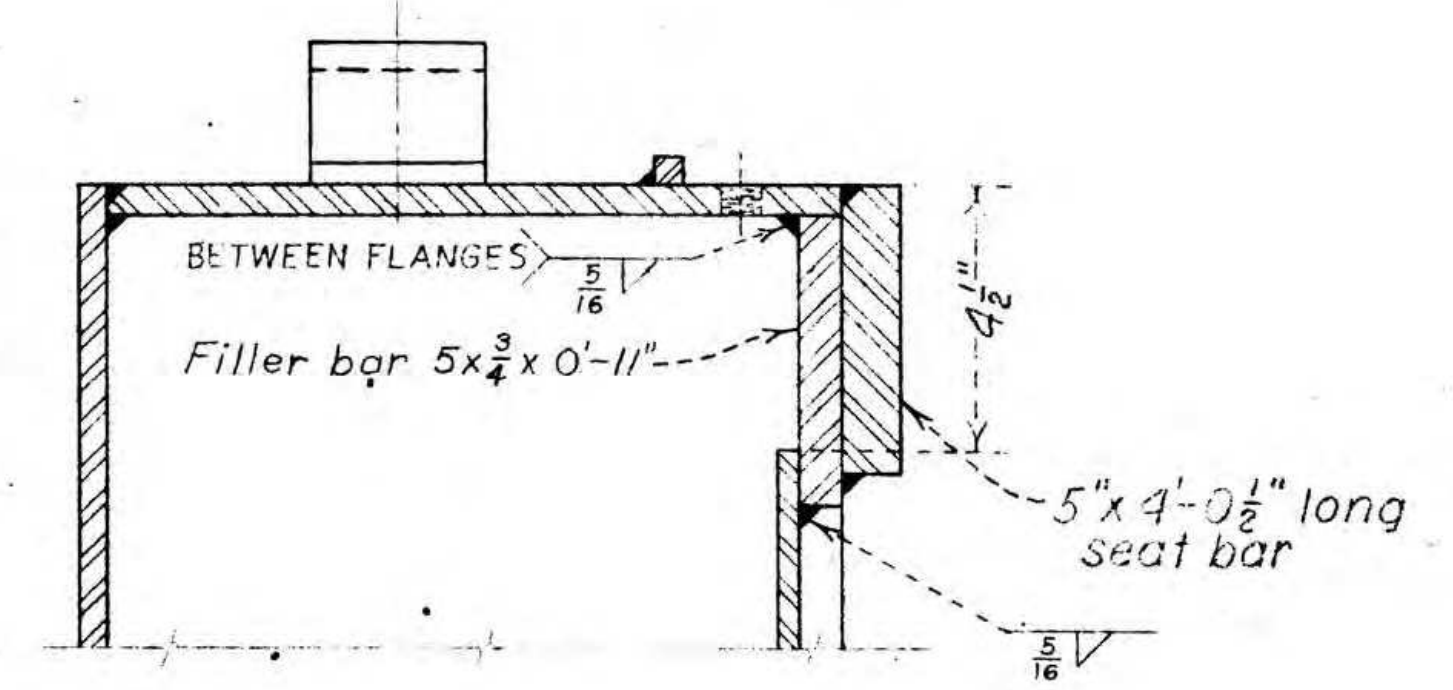
805-D-3561



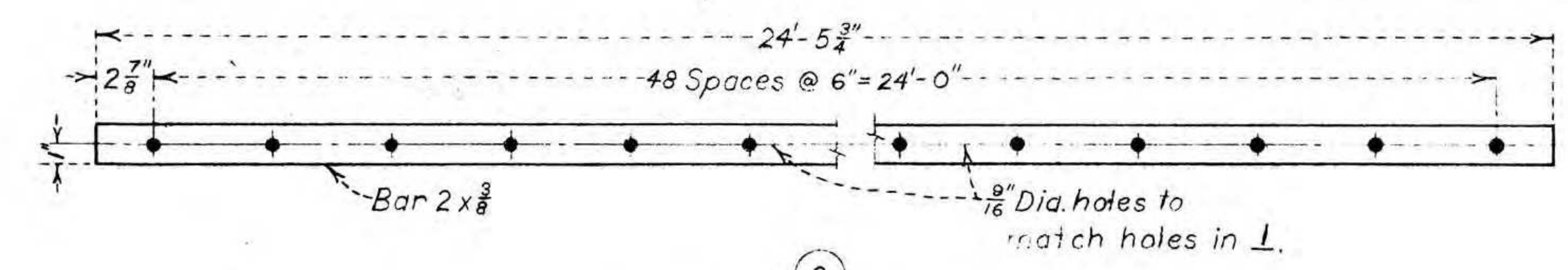
DETAIL D (3561)



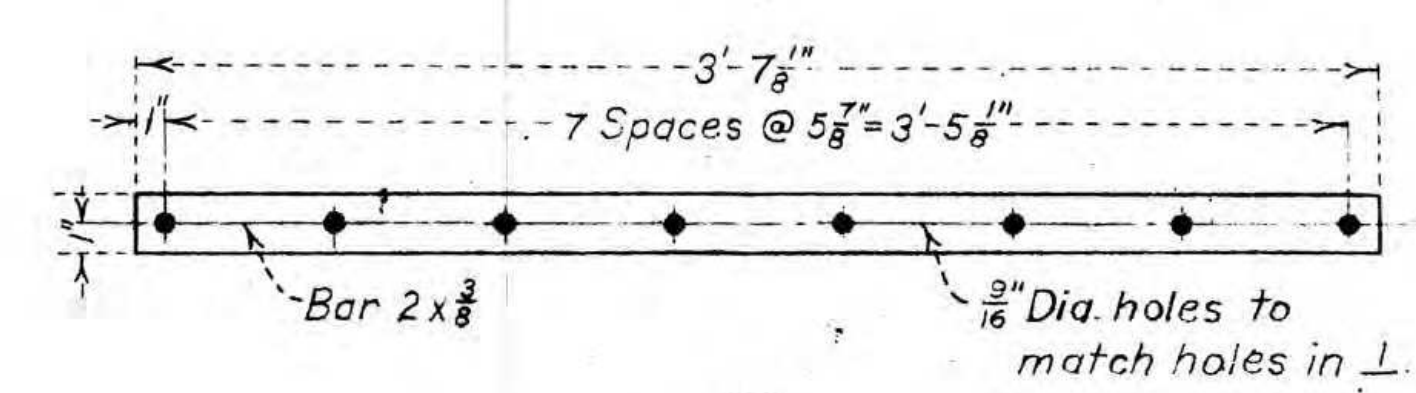
SECTION 12-12



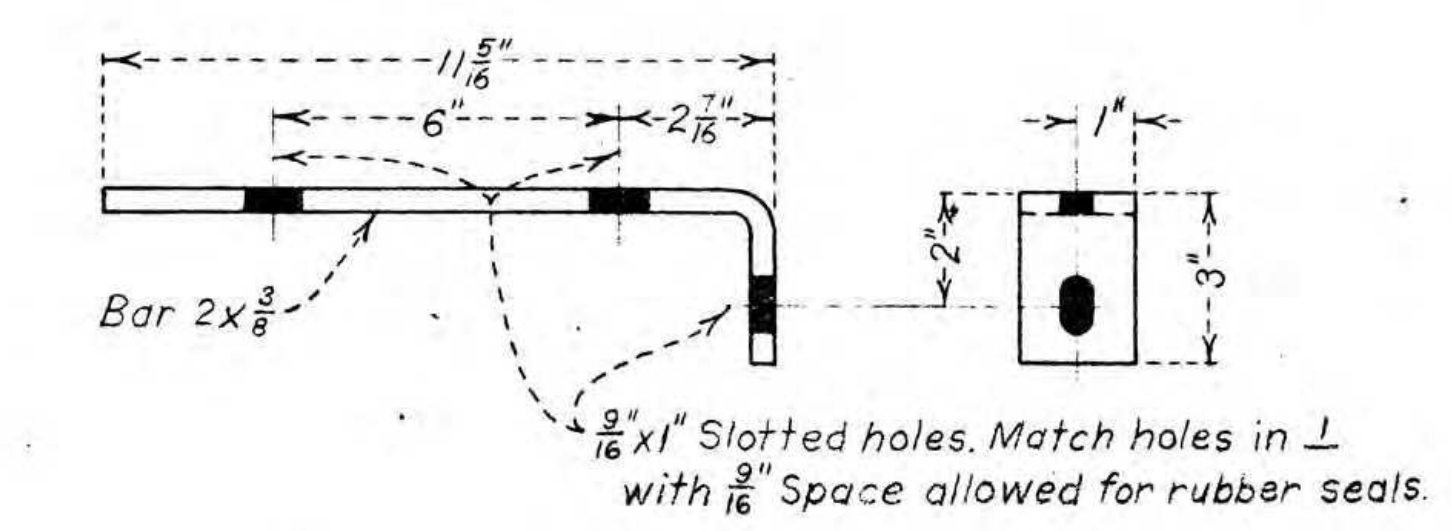
SECTION 13-13



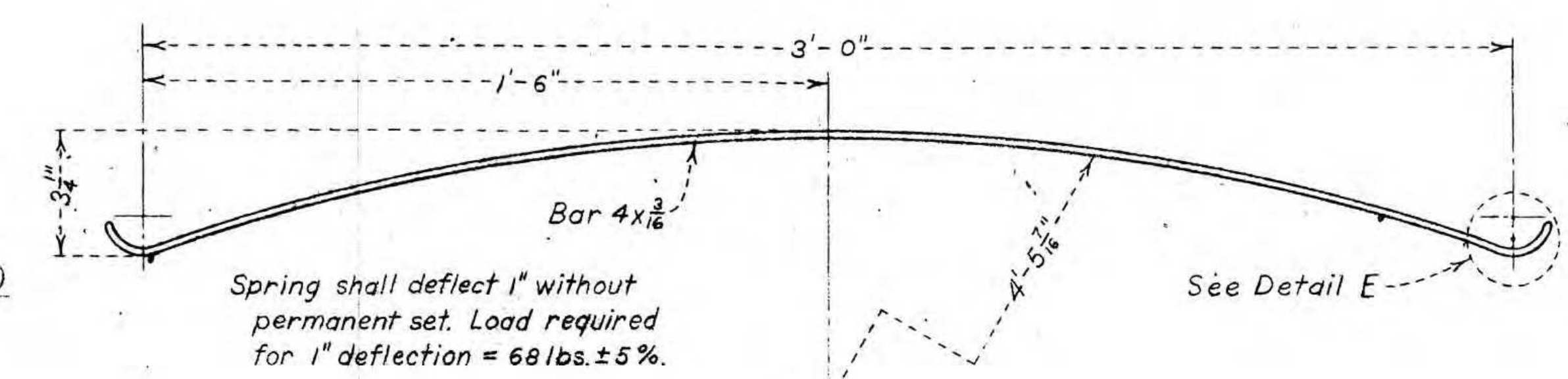
BOTTOM SEAL CLAMP
STEEL - ASTM A441
20 REQUIRED



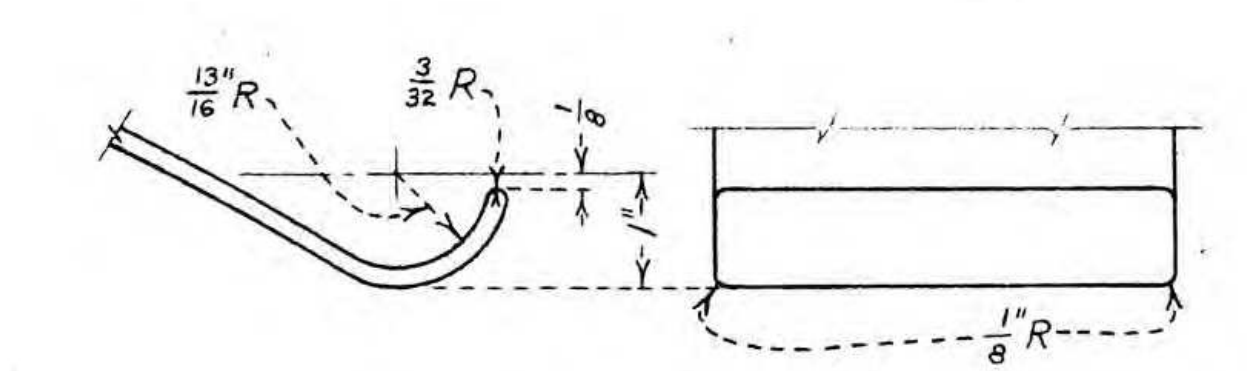
SIDE SEAL CLAMP
STEEL - ASTM A441
40 REQUIRED



CORNER SEAL CLAMP
STEEL - ASTM A441
40 REQUIRED

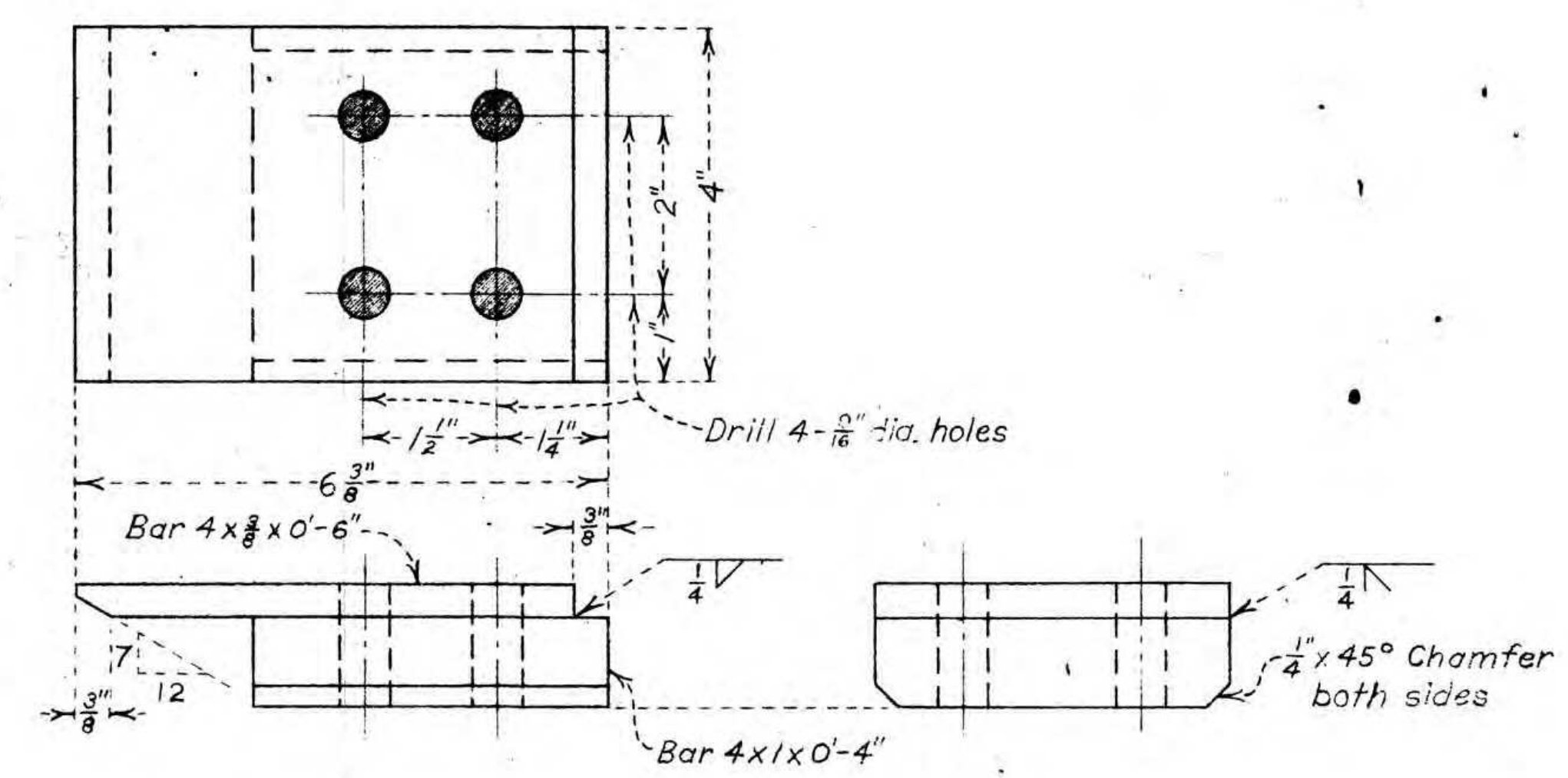


SPRING
SPRING STEEL
40 REQUIRED



DETAIL E

NOTE
Welding symbols apply to the joints of all members of similar identification.



SPRING KEEPER
STEEL - ASTM A441
80 REQUIRED

FOR REFERENCE ONLY
SPEC. 26-07, SHEET 017

ALWAYS THINK SAFETY	
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION CENTRAL VALLEY PROJECT WEST SAN JOAQUIN DIV. - SAN LUIS UNIT - CALIFORNIA	
SAN LUIS CANAL CANAL INLET STRUCTURE SIFON AND CHECKS STOPLOG DETAILS	
DRAWN <u>N.L.B.</u>	SUBMITTED <u>M.L. Bernitt</u>
TRACED <u>N.L.B.</u>	RECOMMENDED <u>N.L.B.</u>
CHECKED <u>N.L.B.</u>	APPROVED <u>N.L.B.</u>
CHIEF, MECHANICAL BRANCH	
DENVER, COLORADO, AUGUST 18, 1965	
SHEET 3 OF 3	
805-D-3562	