



LEON COUNTY, FLORIDA LAKE MUNSON DAM REHABILITATION



LOCATION MAP
NTS

AERIAL IMAGE OBTAINED FROM
GOOGLE EARTH PRO APRIL 2009

Board of County Commissioners			
William C. Proctor, Jr. District 1	Jane G. Sauls District 2	John Dailey District 3	
Bryan Desloge District 4	Kristin Dozier District 5	Nick Maddox At-Large	Akin Akinyemi At-Large

JANUARY 2011

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ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN CHANGED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.



Camp Dresser & McKee Inc.
3522 Thomasville Road, Suite 300
Tallahassee, FL 32309
Tel: (850) 386-9500
FL COA No. EB-0000020

consulting • engineering • construction • operations

CDM Project No. 6021 - 70628

Prepared For:
ENGINEERING SERVICES DIVISION

Director of Public Works
TONY PARK, P.E.

Project Manager
FELTON B. ARD, P.E.

County Administrator
PARWEZ ALAM

County Attorney
HERBERT W.A. THIELE

ISSUED FOR BID



Xrefs: [CDM_2436] Images: []
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GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF ALL GOVERNING AUTHORITIES.
2. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES AND THE MANDATORY PRE-CONSTRUCTION MEETING HAS BEEN CONDUCTED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND BUILDING PERMITS, UTILITY DISCONNECTION AND UTILITY RECONNECTION/NEW SERVICE APPLICATIONS AND FEES. CONTRACTOR SHALL OBTAIN NPDES PERMIT AT LEAST 48 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.
3. ALL ELEVATIONS ARE REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). HORIZONTAL COORDINATES ARE REFERENCED TO NORTH AMERICAN DATUM OF 1929, NATIONAL GEODETIC SURVEY ADJUSTMENT OF 1999 (NAD83 1999).
4. TOPOGRAPHIC SURVEY PERFORMED BY:

 DIVERSIFIED DESIGN AND DRAFTING SERVICES, INC. (3DS)
 2374 CAPITAL CIRCLE NE
 TALLAHASSEE, FLORIDA 32308
 PH: 850-385-1133
5. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON INFORMATION PROVIDED BY THE UTILITIES AND SHALL BE CONSIDERED APPROXIMATE. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.
6. THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENTS OF THE WATER, SANITARY SEWER, GAS, TELEPHONE, CABLE TELEVISION, AND POWER COMPANIES AT LEAST 10 DAYS IN ADVANCE THAT HE INTENDS TO START WORK AND SCHEDULE UTILITY SERVICE DISCONNECTIONS AND RECONNECTIONS. THE OWNER DISCLAIMS ANY RESPONSIBILITY FOR THE SUPPORT AND PROTECTION OF SEWERS, DRAINS, WATER PIPES, GAS PIPES, CONDUITS OF ANY KIND, UTILITIES OR OTHER STRUCTURES OWNED BY THE CITY, COUNTY, STATE OR BY PRIVATE OR PUBLIC UTILITIES LEGALLY OCCUPYING ANY STREET, ALLEY, PUBLIC PLACE OR RIGHT-OF-WAY.
7. PROPERTY OBSTRUCTIONS WHICH ARE TO REMAIN IN PLACE, SUCH AS SEWERS, DRAINS WATER OR GAS PIPES, CONDUITS, CABLES, POLES, WALLS, POSTS, ETC. ARE TO BE CAREFULLY PROTECTED. CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO REMOVING ANY OBSTRUCTIONS NOT SPECIFICALLY NOTED ON THE PLANS.
8. THE CONTRACTOR SHALL PLACE AND MAINTAIN ADEQUATE BARRICADES, CONSTRUCTION SIGNS, FLASHING LIGHTS, TORCHES, RED LANTERNS AND GUARDS DURING PROGRESS OF CONSTRUCTION WORK IN PUBLIC ROADWAYS, IN ACCORDANCE WITH APPLICABLE FDOT REGULATIONS.
9. ALL AREAS, NOT PAVED, DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED BY SODDING OR SEEDING AND MULCHING UNLESS OTHERWISE INDICATED. SOD, SEED AND MULCH SHALL BE PLACED AND WATERED IN ACCORDANCE WITH THESE CONSTRUCTION DOCUMENTS.
10. ALL SITE CLEARING AND CONSTRUCTION DEBRIS AND EXCESS MATERIAL SHALL BE HAULED AWAY AND DISPOSED OF APPROPRIATELY AT THE CONTRACTOR'S EXPENSE.
11. NO CONSTRUCTION, PARKING, OR STORAGE SHALL OCCUR WITHIN THE DRIP LINE OF TREES TO REMAIN. ALL TREE BARRICADES SHALL BE IN PLACE PRIOR TO ANY LAND DISTURBANCE.
12. CONTRACTOR SHALL VISIT SITE TO FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION, CLEARING & GRUBBING REQUIRED, PRIOR TO BID SUBMISSION.
13. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
14. CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE LAYOUT OF THE SITE IMPROVEMENTS AND WORK INCIDENTAL TO THE PROJECT. ANY DEVIATION FROM THE PRESCRIBED LAYOUT NECESSARY TO AVOID CONFLICTS SHALL REQUIRE WRITTEN PERMISSION FROM THE ENGINEER OR OWNER.
15. CONTRACTOR TO COORDINATE WITH RESPONSIBLE UTILITY FOR PROTECTION/HOLDING OF UTILITY POLES, GUY WIRES, AND GUY ANCHORS IN AREAS OF CONSTRUCTION.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR AND COMPLY WITH ANY TESTING REQUIRED BY THE LOCAL GOVERNING AGENCY IN ADDITION TO THE TESTING REQUIREMENTS OUTLINED IN THE SPECIFICATIONS.
17. TO MAINTAIN CONTRACT PLAN CLARITY ALL SYSTEM AND EQUIPMENT COMPONENTS MAY NOT BE SHOWN. CONTRACTOR IS RESPONSIBLE TO FURNISH AND INSTALL ALL EQUIPMENT, FITTINGS, ADAPTERS, CONNECTORS, PIPING, VALVES AND OTHER COMPONENTS TO PROVIDE FULLY FUNCTIONAL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
18. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR CONTROL OF ALL EROSION AND SEDIMENTATION.
19. CONTRACTOR SHALL INSTALL PRIOR TO THE START OF CONSTRUCTION AND MAINTAIN DURING CONSTRUCTION ALL EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED TO RETAIN ALL SEDIMENTS ON THE SITE.
20. NOTE OMITTED.
21. NOTE OMITTED.
22. CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS DURING CONSTRUCTION WHICH SHOW "AS-BUILT" CONDITIONS OF ALL WORK INCLUDING PIPING, DRAINAGE STRUCTURES, TOPOGRAPHIC OF POND(S), OUTLET STRUCTURES, DIMENSIONS, ELEVATIONS, GRADING, ETC. RECORD DRAWINGS SHALL BE PROVIDED TO THE ENGINEER OF RECORD PRIOR TO REQUESTING FINAL INSPECTION.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: D. NEAMTU
 DRAWN BY: D. MOHLE
 SHEET CHK'D BY: J. HOFFMAN
 CROSS CHK'D BY: P. CHENEVEY
 APPROVED BY: S. WHITESIDE
 DATE: JANUARY 2011

CDM
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 Tallahassee, FL 32309
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 consulting • engineering • construction • operations

LEON COUNTY, FLORIDA

 LAKE MUNSON DAM
 REHABILITATION

GENERAL NOTES

DATE:
 STEPHEN L. WHITESIDE
 P.E. NO. 55002

PROJECT NO. 6021-70628
 FILE NAME: G001NXSH

SHEET NO.
G-1

ABBREVIATIONS

GENERAL

ALUMINUM	AL., ALUM.
ANGLE	<
BENCH MARK	B.M.
BETWEEN	BTWN.
CENTER LINE	CL
CENTER TO CENTER	C.C.
DESIGN HIGH WATER ELEVATION	DHW
DIAMETER	DIA., DIAM.
DIAGONAL	DIAG.
DIMENSION	DIM.
DISCHARGE	DISC.
DRAWING	DWG.
EACH	EA.
EACH SIDE	E.S.
ELEVATION	EL., ELEV.
EFFLUENT	EFF.
EXISTING	EX., EXIST.
EXPANSION JOINT	E.J.
FINISH	FIN.
FLOOR	FL.
GALLON	GAL.
HIGH	H.
HIGH POINT	H.P.
INFLUENT	INFL.
LEFT/LENGTH	L
LONG	LG.
LIGHT POLE	L.P.
MATERIAL	MTL.
MANUFACTURE	MFG.
MAXIMUM	MAX.
MECHANICAL	MECH.
METAL	MET.
MILLION GALLON	MG.
MINIMUM	MIN.
MOUNTED	MTD.
NOMINAL	NOM.
NOT INCLUDED	NIC.
NOT TO SCALE	N.T.S.
NUMBER	NO.
ON CENTER	O.C.
OPTION	OPT.
OPPOSITE	OPP.
OPENING	OPNG.
OR EQUAL	O/E.
PIECE	PC.
POINT	PT.
POUND	LB.
PLATE	PL.
RADIUS	RAD., R.
REQUIRED	REQ'D
RIGHT/RADIUS	R
RIGHT OF WAY	R/W
ROOM	RM.
SQUARE	SQ.
STAINLESS STEEL	S.S.
SIDEWALK	SDWK.
SHEET	SH., SHT.

SYMBOLS

GENERAL

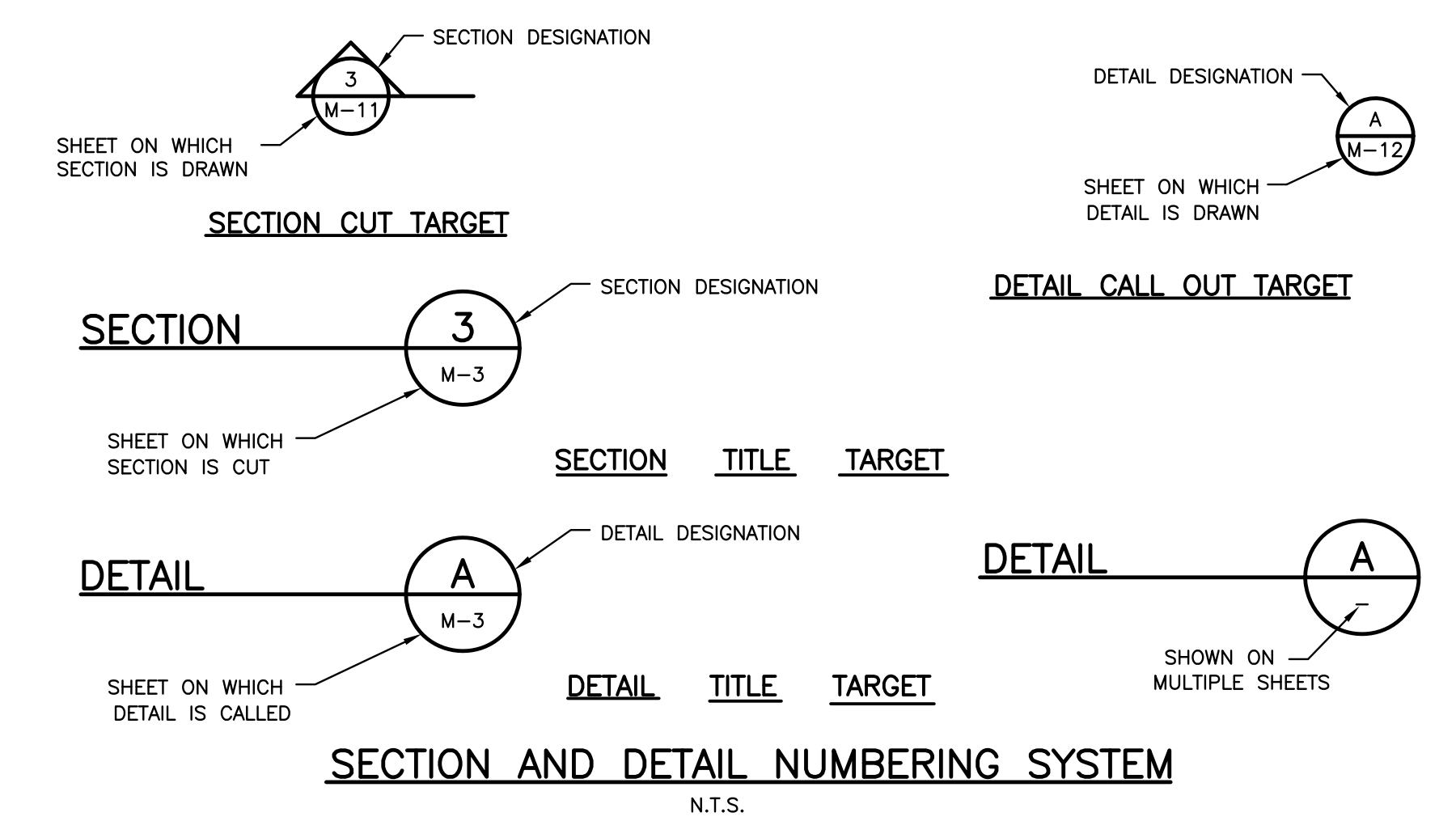
SYMMETRICAL	SYMM.
SECTION	SEC.
STANDARD	ST'D
STEEL	STL.
THICK	THK.
TYPICAL	TYP.
TEMPORARY	TEMP.
THREADED	THD.
UTILITY EASEMENT	U.E.
VERTICAL	VERT.
WEST	W.
WITH	W/
WATER LEVEL	W.L.
WEATHERPROOF	WPF.
WATER	WTR.

SURVEY

INVERT	INV
MAILBOX	MB
OVERHEAD UTILITIES	OH
RIGHT-OF-WAY	R/W
SIGN	SN
SANITARY SEWER MANHOLE	SSMH
TELEPHONE RISER	TR
UTILITY POLE	UP
TOP OF PIEZOMETER	TOP
GROUND	GND

LEGEND

	PREVIOUS EXPLORATION LOCATION (BY OTHERS)		EXISTING POWER POLE/LIGHT
	CDM EXPLORATION LOCATION (2006)		BENCH MARK
	EXISTING STORM SEWER W/CATCH BASIN		EXISTING CHAIN LINK FENCE
	EXISTING OVERHEAD UTILITIES		NEW CHAIN LINK FENCE
	EXISTING CONTOURS		NEW STRUCTURES
	PROPOSED CONTOURS		EXISTING STRUCTURES (TO REMAIN)
	PROPERTY LINE/CORNERS		EXISTING STRUCTURES (TO BE REMOVED)
	LEON COUNTY EASEMENT		NEW CONCRETE SLAB OR SIDEWALKS
			EXISTING ELEVATION
			EXISTING TEXT



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: <u>D. NEAMTU</u>	 Camp Dresser & McKee Inc. 3522 Thomasville Road, Suite 300 Tallahassee, FL 32309 Tel: (850) 386-9500 FL COA No. EB-0000020 consulting • engineering • construction • operations
DRAWN BY: <u>D. MOHLE</u>	
SHEET CHK'D BY: <u>J. HOFFMAN</u>	
CROSS CHK'D BY: <u>P. CHENEVEY</u>	
APPROVED BY: <u>S. WHITESIDE</u>	
DATE: <u>JANUARY 2011</u>	

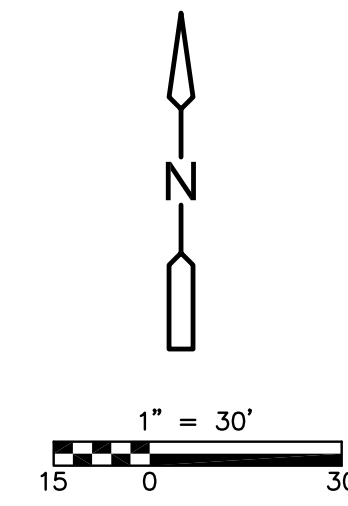
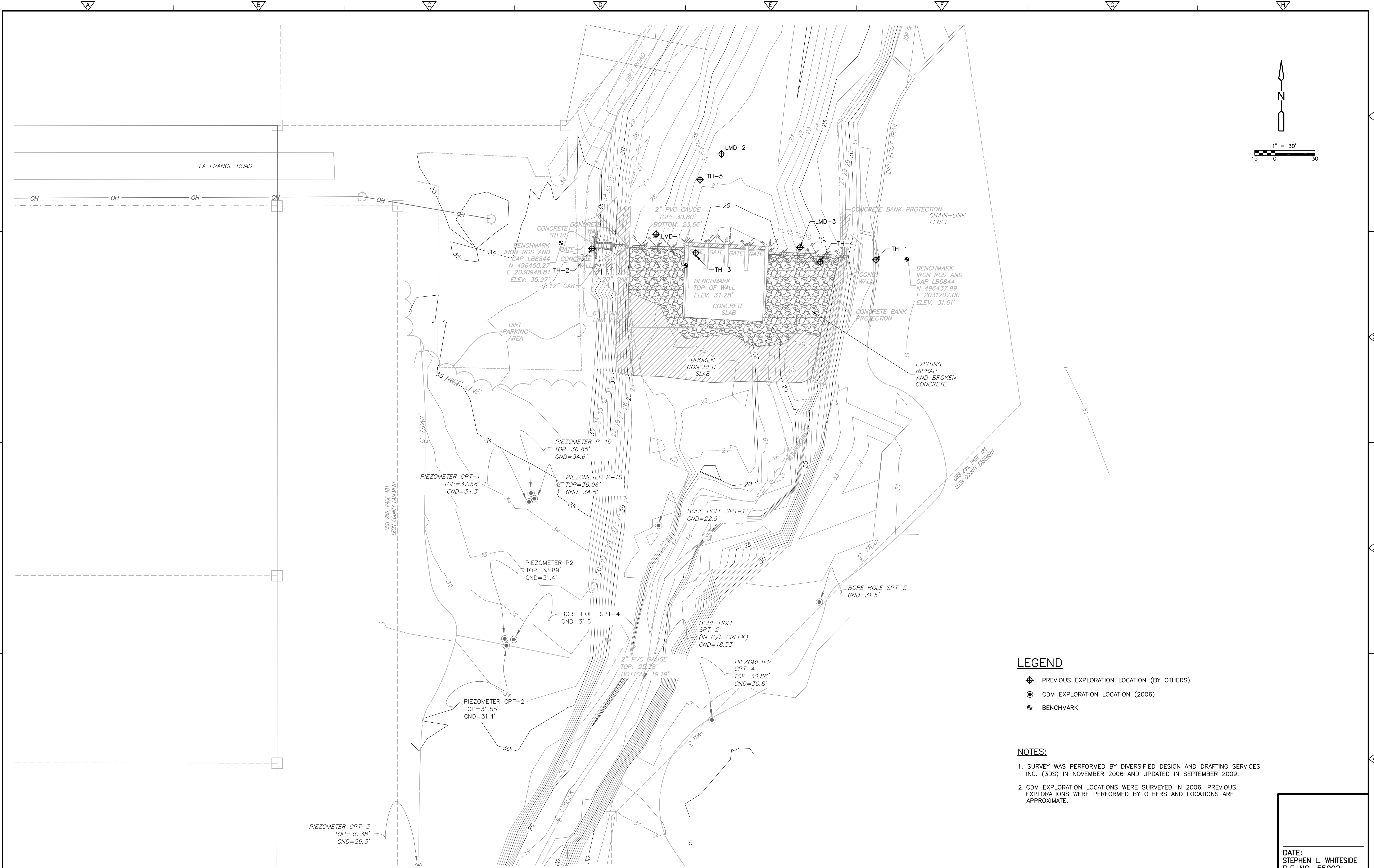
LEON COUNTY, FLORIDA
LAKE MUNSON DAM REHABILITATION

LEGEND, ABBREVIATIONS, AND SYMBOLS

DATE: STEPHEN L. WHITESIDE P.E. NO. 55002
PROJECT NO. 6021-70628 FILE NAME: G0025YMB
SHEET NO. G-2

ISSUED FOR BID

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LEGEND

- ⊕ PREVIOUS EXPLORATION LOCATION (BY OTHERS)
- CDM EXPLORATION LOCATION (2006)
- ⊙ BENCHMARK

NOTES:

1. SURVEY WAS PERFORMED BY DIVERSIFIED DESIGN AND DRAFTING SERVICES INC. (3DS) IN NOVEMBER 2006 AND UPDATED IN SEPTEMBER 2009.
2. CDM EXPLORATION LOCATIONS WERE SURVEYED IN 2006. PREVIOUS EXPLORATIONS WERE PERFORMED BY OTHERS AND LOCATIONS ARE APPROXIMATE.

REV. NO.	DATE	DRWN	CHKD	REMARKS

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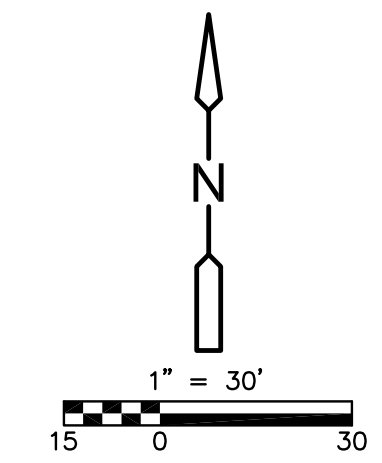
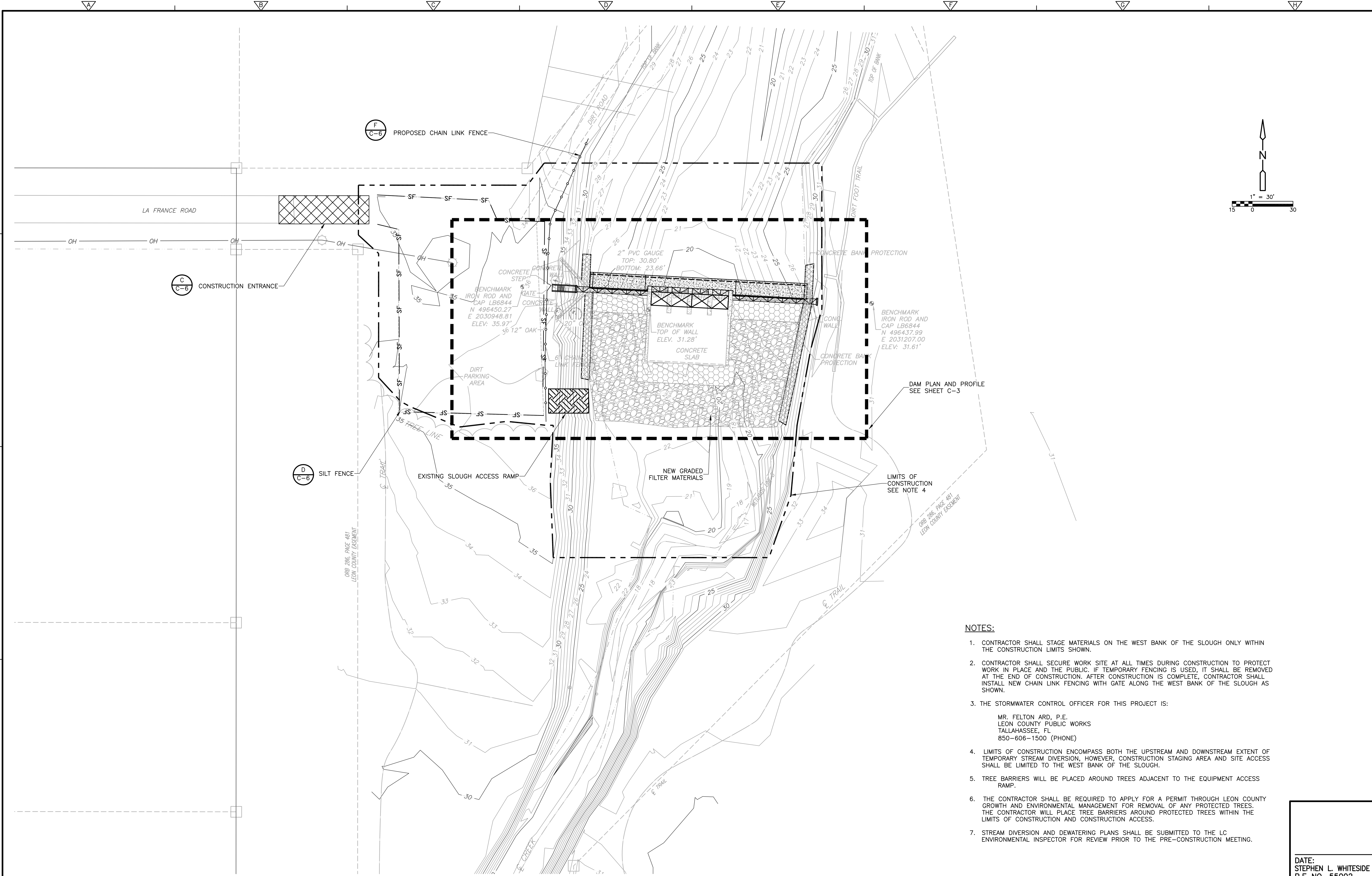
LEON COUNTY, FLORIDA
LAKE MUNSON DAM REHABILITATION

EXISTING CONDITIONS

DATE: STEPHEN L. WHITESIDE P.E. NO. 55002
PROJECT NO. 6021-70628 FILE NAME: C001STPL
SHEET NO. C-1

ISSUED FOR BID

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NOTES:

1. CONTRACTOR SHALL STAGE MATERIALS ON THE WEST BANK OF THE SLOUGH ONLY WITHIN THE CONSTRUCTION LIMITS SHOWN.
2. CONTRACTOR SHALL SECURE WORK SITE AT ALL TIMES DURING CONSTRUCTION TO PROTECT WORK IN PLACE AND THE PUBLIC. IF TEMPORARY FENCING IS USED, IT SHALL BE REMOVED AT THE END OF CONSTRUCTION. AFTER CONSTRUCTION IS COMPLETE, CONTRACTOR SHALL INSTALL NEW CHAIN LINK FENCING WITH GATE ALONG THE WEST BANK OF THE SLOUGH AS SHOWN.
3. THE STORMWATER CONTROL OFFICER FOR THIS PROJECT IS:
 MR. FELTON ARD, P.E.
 LEON COUNTY PUBLIC WORKS
 TALLAHASSEE, FL
 850-606-1500 (PHONE)
4. LIMITS OF CONSTRUCTION ENCOMPASS BOTH THE UPSTREAM AND DOWNSTREAM EXTENT OF TEMPORARY STREAM DIVERSION, HOWEVER, CONSTRUCTION STAGING AREA AND SITE ACCESS SHALL BE LIMITED TO THE WEST BANK OF THE SLOUGH.
5. TREE BARRIERS WILL BE PLACED AROUND TREES ADJACENT TO THE EQUIPMENT ACCESS RAMP.
6. THE CONTRACTOR SHALL BE REQUIRED TO APPLY FOR A PERMIT THROUGH LEON COUNTY GROWTH AND ENVIRONMENTAL MANAGEMENT FOR REMOVAL OF ANY PROTECTED TREES. THE CONTRACTOR WILL PLACE TREE BARRIERS AROUND PROTECTED TREES WITHIN THE LIMITS OF CONSTRUCTION AND CONSTRUCTION ACCESS.
7. STREAM DIVERSION AND DEWATERING PLANS SHALL BE SUBMITTED TO THE LC ENVIRONMENTAL INSPECTOR FOR REVIEW PRIOR TO THE PRE-CONSTRUCTION MEETING.

REV. NO.	DATE	DRWN	CHKD	REMARKS

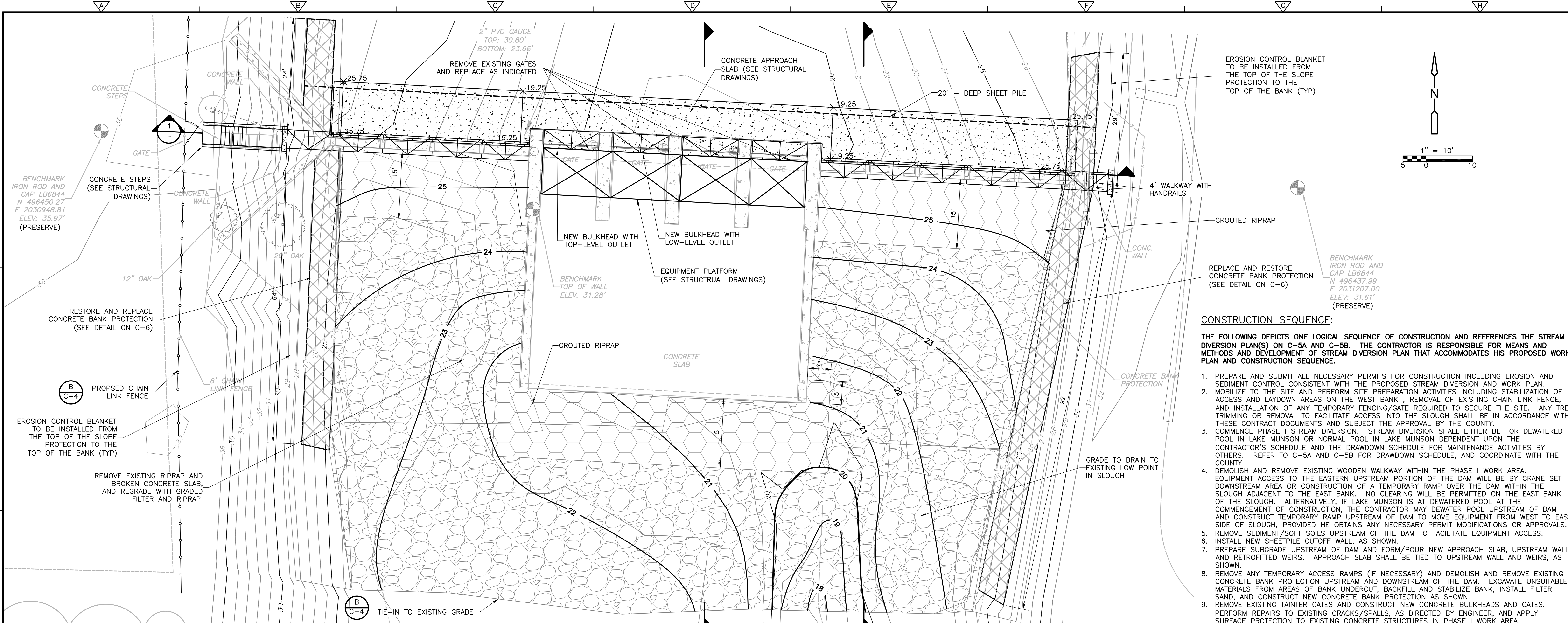
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LEON COUNTY, FLORIDA
LAKE MUNSON DAM REHABILITATION

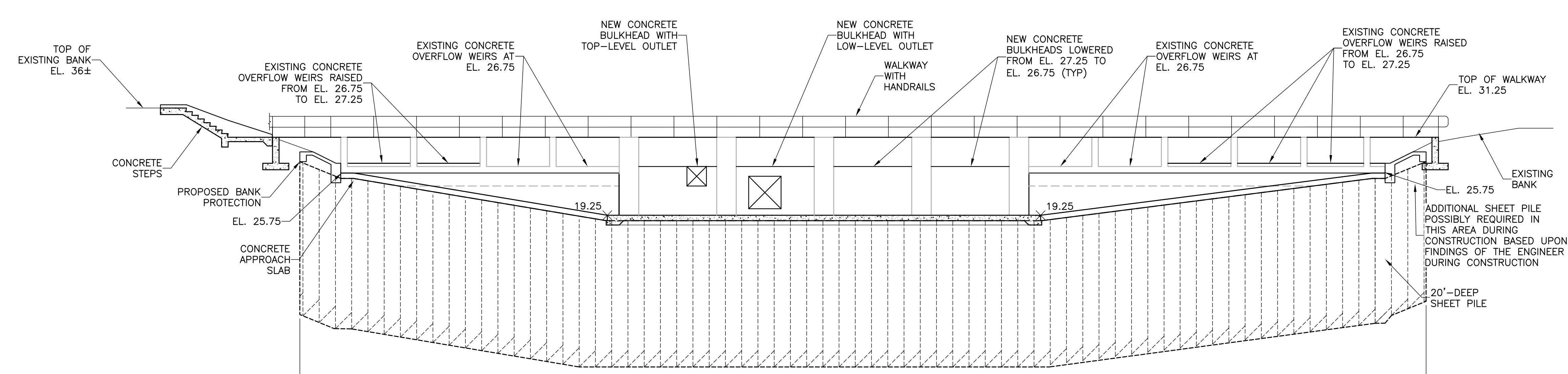
PROPOSED CONDITIONS

DATE: STEPHEN L. WHITESIDE P.E. NO. 55002
PROJECT NO. 6021-70628 FILE NAME: C002STPL
SHEET NO. C-2

ISSUED FOR BID



PLAN
1" = 10"



SECTION 1
1" = 10"

EROSION CONTROL BLANKET TO BE INSTALLED FROM THE TOP OF THE SLOPE PROTECTION TO THE TOP OF THE BANK (TYP)

1" = 10'
5 0 10

BENCHMARK IRON ROD AND CAP LB6844
N 496437.99
E 2031207.00
ELEV: 31.61'
(PRESERVE)

REPLACE AND RESTORE CONCRETE BANK PROTECTION (SEE DETAIL ON C-6)

BENCHMARK IRON ROD AND CAP LB6844
N 496450.27
E 2030948.81
ELEV: 35.97'
(PRESERVE)

CONCRETE STEPS (SEE STRUCTURAL DRAWINGS)

CONCRETE WALL

20' - DEEP SHEET PILE

CONCRETE APPROACH SLAB (SEE STRUCTURAL DRAWINGS)

REMOVE EXISTING GATES AND REPLACE AS INDICATED

NEW BULKHEAD WITH TOP-LEVEL OUTLET

NEW BULKHEAD WITH LOW-LEVEL OUTLET

EQUIPMENT PLATFORM (SEE STRUCTURAL DRAWINGS)

CONC. WALL

4' WALKWAY WITH HANDRAILS

GROUTED RIPRAP

CONCRETE BANK PROTECTION

GRADE TO DRAIN TO EXISTING LOW POINT IN SLOUGH

CONCRETE WALL

CONCRETE BANK PROTECTION

RESTORE AND REPLACE CONCRETE BANK PROTECTION (SEE DETAIL ON C-6)

12" OAK

6' CHAIN LINK FENCE

PROPOSED CHAIN LINK FENCE

EROSION CONTROL BLANKET TO BE INSTALLED FROM THE TOP OF THE SLOPE PROTECTION TO THE TOP OF THE BANK (TYP)

REMOVE EXISTING RIPRAP AND BROKEN CONCRETE SLAB, AND REGRADE WITH GRADED FILTER AND RIPRAP.

TIE-IN TO EXISTING GRADE

- CONSTRUCTION SEQUENCE:**
- THE FOLLOWING DEPICTS ONE LOGICAL SEQUENCE OF CONSTRUCTION AND REFERENCES THE STREAM DIVERSION PLAN(S) ON C-5A AND C-5B. THE CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS AND DEVELOPMENT OF STREAM DIVERSION PLAN THAT ACCOMMODATES HIS PROPOSED WORK PLAN AND CONSTRUCTION SEQUENCE.
1. PREPARE AND SUBMIT ALL NECESSARY PERMITS FOR CONSTRUCTION INCLUDING EROSION AND SEDIMENT CONTROL CONSISTENT WITH THE PROPOSED STREAM DIVERSION AND WORK PLAN.
 2. MOBILIZE TO THE SITE AND PERFORM SITE PREPARATION ACTIVITIES INCLUDING STABILIZATION OF ACCESS AND LAYDOWN AREAS ON THE WEST BANK, REMOVAL OF EXISTING CHAIN LINK FENCE, AND INSTALLATION OF ANY TEMPORARY FENCING/GATE REQUIRED TO SECURE THE SITE. ANY TREE TRIMMING OR REMOVAL TO FACILITATE ACCESS INTO THE SLOUGH SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS AND SUBJECT TO THE APPROVAL BY THE COUNTY.
 3. COMMENCE PHASE I STREAM DIVERSION. STREAM DIVERSION SHALL EITHER BE FOR DEWATERED POOL IN LAKE MUNSON OR NORMAL POOL IN LAKE MUNSON DEPENDENT UPON THE CONTRACTOR'S SCHEDULE AND THE DRAWDOWN SCHEDULE FOR MAINTENANCE ACTIVITIES BY OTHERS. REFER TO C-5A AND C-5B FOR DRAWDOWN SCHEDULE, AND COORDINATE WITH THE COUNTY.
 4. DEMOLISH AND REMOVE EXISTING WOODEN WALKWAY WITHIN THE PHASE I WORK AREA. EQUIPMENT ACCESS TO THE EASTERN UPSTREAM PORTION OF THE DAM WILL BE BY CRANE SET IN DOWNSTREAM AREA OR CONSTRUCTION OF A TEMPORARY RAMP OVER THE DAM WITHIN THE SLOUGH ADJACENT TO THE EAST BANK. NO CLEARING WILL BE PERMITTED ON THE EAST BANK OF THE SLOUGH. ALTERNATIVELY, IF LAKE MUNSON IS AT DEWATERED POOL AT THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MAY DEWATER POOL UPSTREAM OF DAM AND CONSTRUCT TEMPORARY RAMP UPSTREAM OF DAM TO MOVE EQUIPMENT FROM WEST TO EAST SIDE OF SLOUGH, PROVIDED HE OBTAINS ANY NECESSARY PERMIT MODIFICATIONS OR APPROVALS.
 5. REMOVE SEDIMENT/SOFT SOILS UPSTREAM OF THE DAM TO FACILITATE EQUIPMENT ACCESS.
 6. INSTALL NEW SHEETPILE CUTOFF WALL, AS SHOWN.
 7. PREPARE SUBGRADE UPSTREAM OF DAM AND FORM/POUR NEW APPROACH SLAB, UPSTREAM WALL, AND RETROFITTED WEIRS. APPROACH SLAB SHALL BE TIED TO UPSTREAM WALL AND WEIRS, AS SHOWN.
 8. REMOVE ANY TEMPORARY ACCESS RAMPS (IF NECESSARY) AND DEMOLISH AND REMOVE EXISTING CONCRETE BANK PROTECTION UPSTREAM AND DOWNSTREAM OF THE DAM. EXCAVATE UNSUITABLE MATERIALS FROM AREAS OF BANK UNDERCUT, BACKFILL AND STABILIZE BANK, INSTALL FILTER SAND, AND CONSTRUCT NEW CONCRETE BANK PROTECTION AS SHOWN.
 9. REMOVE EXISTING TANTIER GATES AND CONSTRUCT NEW CONCRETE BULKHEADS AND GATES. PERFORM REPAIRS TO EXISTING CRACKS/SPALLS, AS DIRECTED BY ENGINEER, AND APPLY SURFACE PROTECTION TO EXISTING CONCRETE STRUCTURES IN PHASE I WORK AREA.
 10. EXCAVATE AND REMOVE EXISTING RIPRAP AND SOILS IN DOWNSTREAM AREA. REMOVE AND DISPOSE OF MATERIALS.
 11. CONSTRUCT NEW GRADED FILTER MATERIALS AND RIPRAP IN THE DOWNSTREAM AREAS, AS SHOWN.
 12. CONSTRUCT NEW WALKWAY AND EQUIPMENT PLATFORM WITHIN PHASE I WORK AREA.
 13. PREPARE AND COMMENCE PHASE II STREAM DIVERSION. STREAM DIVERSION SHALL EITHER BE FOR DEWATERED POOL IN LAKE MUNSON OR NORMAL POOL IN LAKE MUNSON DEPENDENT UPON THE CONTRACTOR'S SCHEDULE AND THE DRAWDOWN SCHEDULE FOR MAINTENANCE ACTIVITIES BY OTHERS. REFER TO C-5A AND C-5B FOR DRAWDOWN SCHEDULE, AND COORDINATE WITH THE COUNTY.
 14. DEMOLISH AND REMOVE EXISTING WOODEN WALKWAY WITHIN THE PHASE II WORK AREA. EQUIPMENT ACCESS TO THE WESTERN UPSTREAM PORTION OF THE DAM WILL BE FORM WEST BANK OF THE SLOUGH.
 15. REMOVE SEDIMENT/SOFT SOILS UPSTREAM OF THE DAM TO FACILITATE EQUIPMENT ACCESS.
 16. INSTALL NEW SHEETPILE CUTOFF WALL, AS SHOWN.
 17. PREPARE SUBGRADE UPSTREAM OF DAM AND FORM/POUR NEW APPROACH SLAB, UPSTREAM WALL, AND RETROFITTED WEIRS. APPROACH SLAB SHALL BE TIED TO UPSTREAM WALL AND WEIRS, AS SHOWN.
 18. REMOVE EXISTING TANTIER GATES AND CONSTRUCT NEW CONCRETE BULKHEADS AND GATES. PERFORM REPAIRS TO EXISTING CRACKS/SPALLS, AS DIRECTED BY ENGINEER, AND APPLY SURFACE PROTECTION TO EXISTING CONCRETE STRUCTURES IN PHASE I WORK AREA.
 19. EXCAVATE AND REMOVE EXISTING RIPRAP AND SOILS IN DOWNSTREAM AREA. REMOVE AND DISPOSE OF MATERIALS.
 20. DEMOLISH AND REMOVE EXISTING CONCRETE BANK PROTECTION UPSTREAM AND DOWNSTREAM OF THE DAM. EXCAVATE UNSUITABLE MATERIALS FROM AREAS OF BANK UNDERCUT, BACKFILL AND STABILIZE BANK, INSTALL FILTER SAND, AND CONSTRUCT NEW CONCRETE BANK PROTECTION AS SHOWN.
 21. CONSTRUCT NEW GRADED FILTER MATERIALS AND RIPRAP IN THE DOWNSTREAM AREAS, AS SHOWN.
 22. CONSTRUCT NEW CONCRETE STEPS WITH HANDRAILS TO ACCESS NEW MAINTENANCE WALKWAY.
 23. PERMANENTLY STABILIZE ANY AREAS WITHIN THE SLOUGH DISTURBED BY CONSTRUCTION ACTIVITIES INCLUDING TEMPORARY STREAM DIVERSION.
 24. DECOMMISSION STREAM DIVERSION.
 25. INSTALL NEW CHAIN LINK FENCE AND GATE ALONG WEST BANK OF SLOUGH. REMOVE ANY TEMPORARY FACILITIES INCLUDING FENCING AND DE-MOBILIZE FROM THE SITE.

NOTES:

1. THE CONTRACTOR SHALL PERFORM TEST PITS AT BOTH BANKS PRIOR TO CONSTRUCTION OF SHEET PILES TO ALLOW THE ENGINEER TO VIEW ACTUAL CONDITIONS AND DETERMINE IF CHANGES ARE REQUIRED TO THE TIE IN OF THE SHEET PILES AND SLOPE PROTECTION IN THE ABUTMENTS.

Xref's: [CDM] 2436, CE-SURVEY, C-PROPOSED Images: Last saved by: MOHLEDP Time: 10/25/2010 5:36:20 PM
Filename: C:\cdm\m\mohep\0136344\C003STPL.dwg

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: D. NEAMTU	<p>Camp Dresser & McKee Inc. 3522 Thomasville Road, Suite 300 Tallahassee, FL 32309 Tel: (850) 386-9500 FL COA No. EB-0000020 consulting • engineering • construction • operations</p>
DRAWN BY: D. MOHLE	
SHEET CHK'D BY: J. HOFFMAN	
CROSS CHK'D BY: P. CHENEVEY	
APPROVED BY: S. WHITESIDE	
DATE: JANUARY 2011	

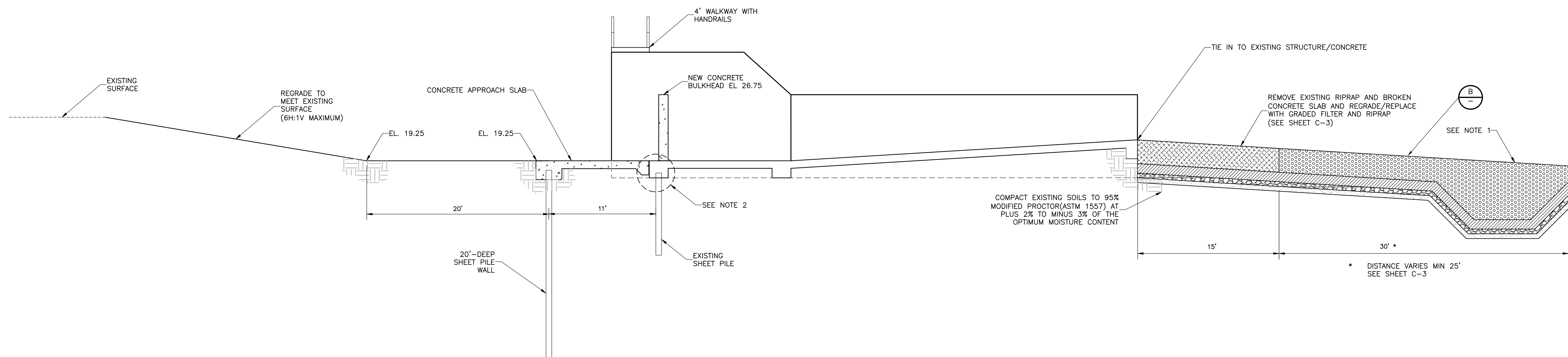
LEON COUNTY, FLORIDA

LAKE MUNSON DAM REHABILITATION

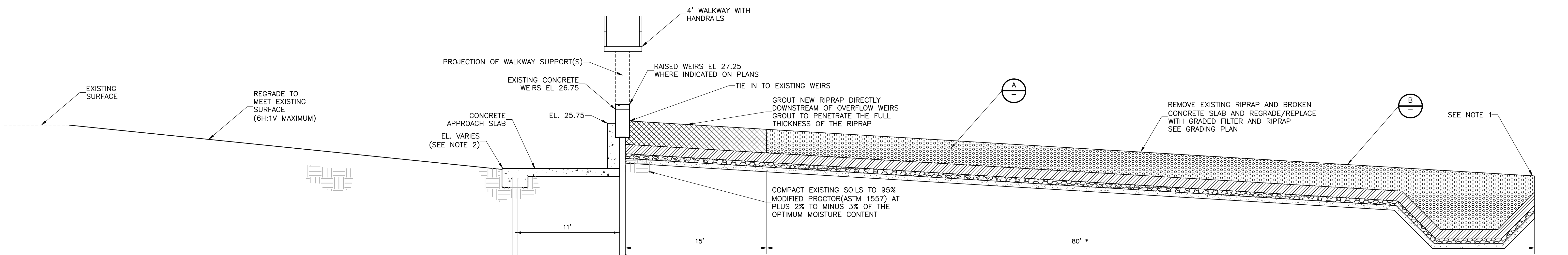
DATE: STEPHEN L. WHITESIDE P.E. NO. 55002	
PROJECT NO. 6021-70628	FILE NAME: C003STPL
SHEET NO. C-3	

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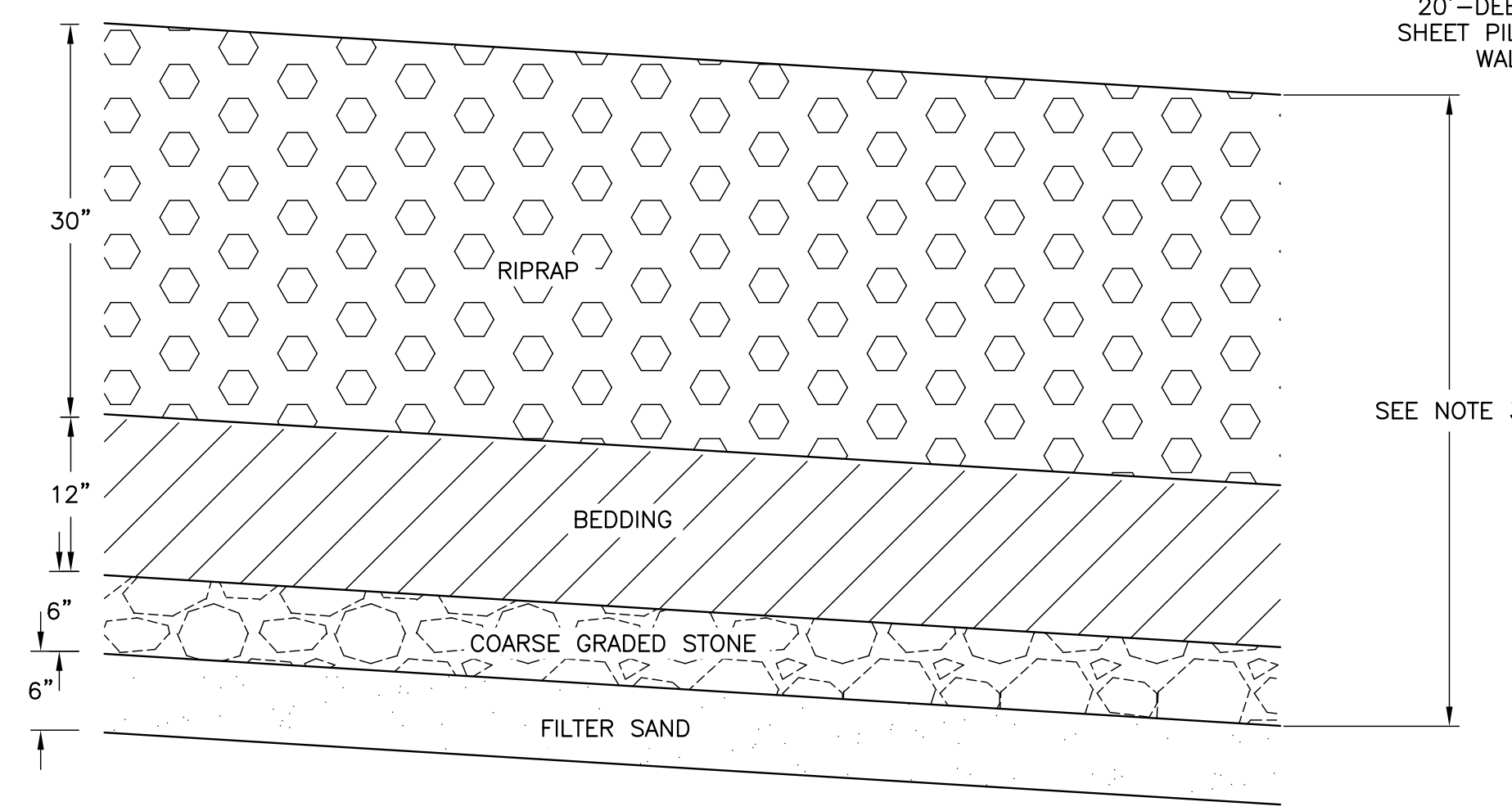
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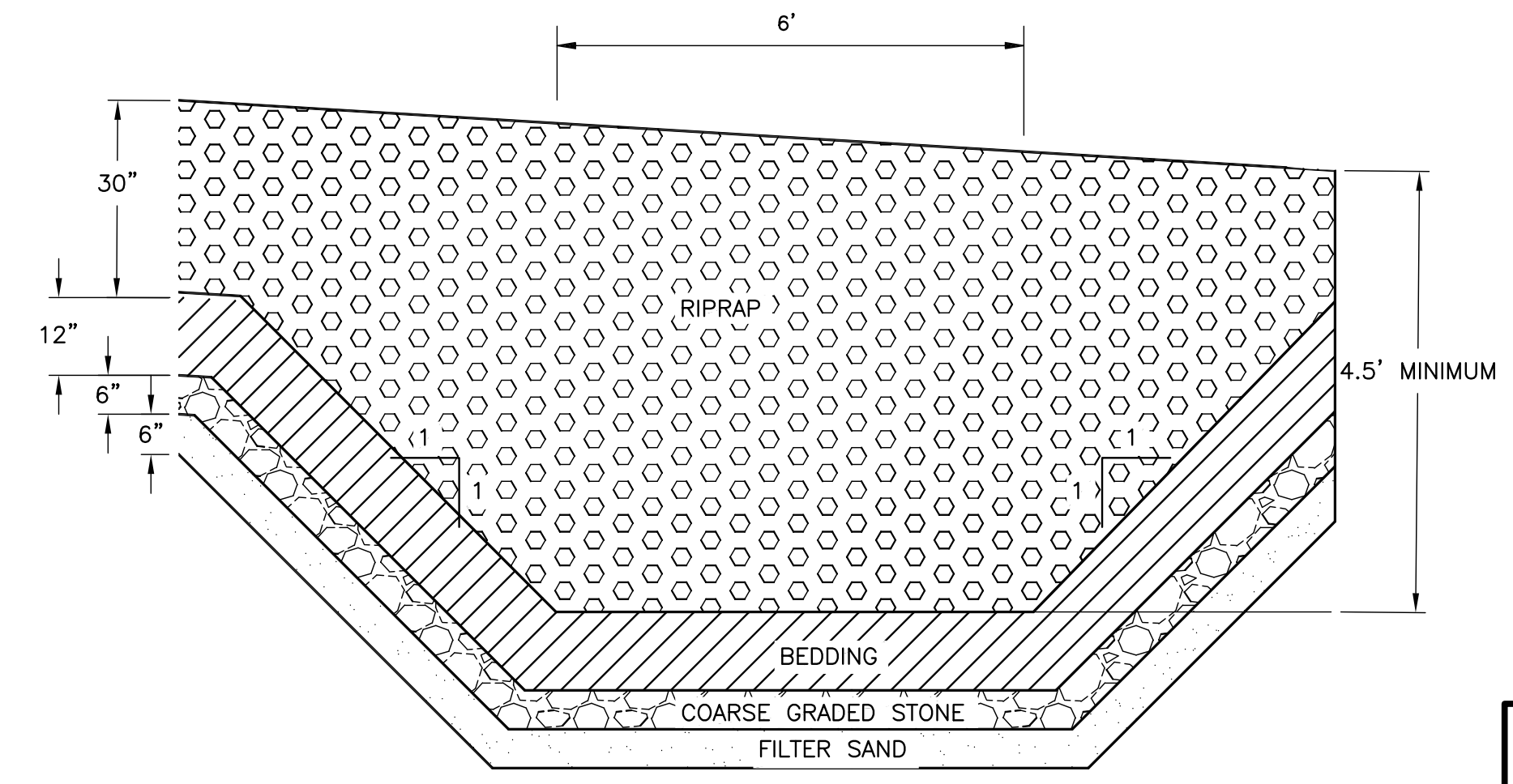
SECTION 2
1" = 5'



SECTION 3
1" = 5'



GRADED FILTER DETAIL
DETAIL A
1" = 1'-0"



RIPRAP TIE-IN WITH EXISTING GRADES
DETAIL B
1" = 2'-0"

- NOTES:
- RIPRAP AND GRADED FILTER SHALL BE GRADED TO DRAIN TO LOW POINT IN SLOUGH, AS SHOWN ON GRADING PLAN, AND TIE INTO EXISTING GRADES AT DAM, AND ALONG BANKS, AND AT DOWNSTREAM LIMITS. TIE-IN TO EXISTING GRADE AS SHOWN ON DETAIL B, THIS SHEET.
 - DEMOLISH AND REMOVE EXISTING CONCRETE FILL UPSTREAM OF EXISTING GATE STRUCTURE TO FACILITATE NEW CONSTRUCTION WITHOUT DAMAGING EXISTING STRUCTURE.
 - GRADED FILTER MATERIALS SHALL BE AS SPECIFIED IN SECTION 02200. RIPRAP AND BEDDING SHALL BE PER FDOT SECTION 530 BANK SHORE PROTECTION, COARSE GRADED AGGREGATE SHALL BE A BLEND OF FDOT NO. 6 AND NO. 9 STONE, AND FILTER SAND SHALL BE ASTM C-33 WITH LESS THAN 3% PASSING NO. 200 SIEVE.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	P. CHENEVEY
DRAWN BY:	D. MOHLE
SHEET CHK'D BY:	J. HOFFMAN
CROSS CHK'D BY:	P. CHENEVEY
APPROVED BY:	S. WHITESIDE
DATE:	JANUARY 2011

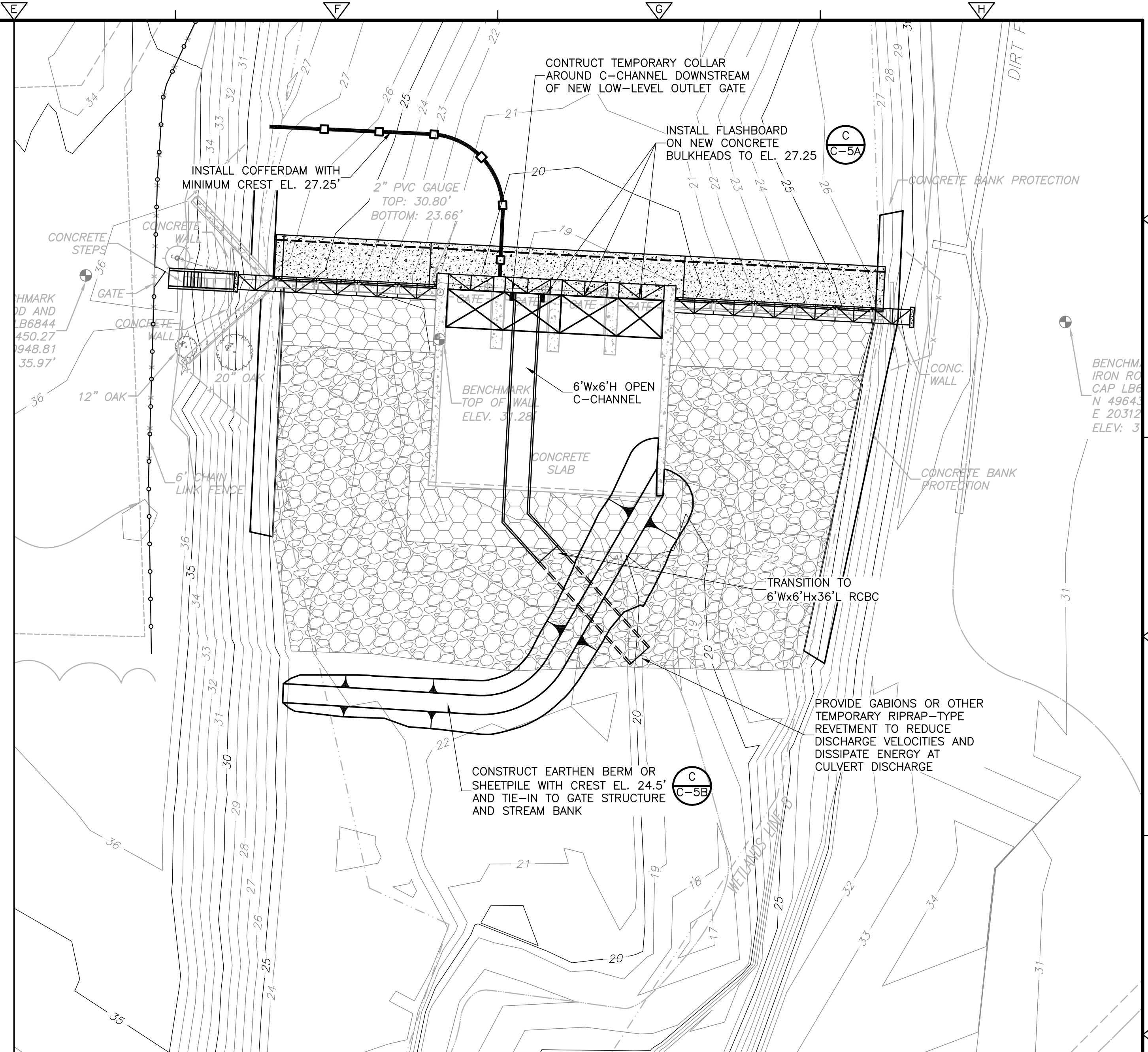
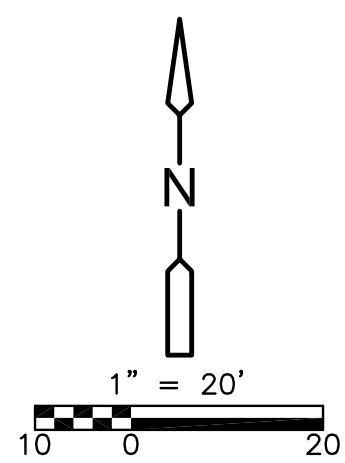
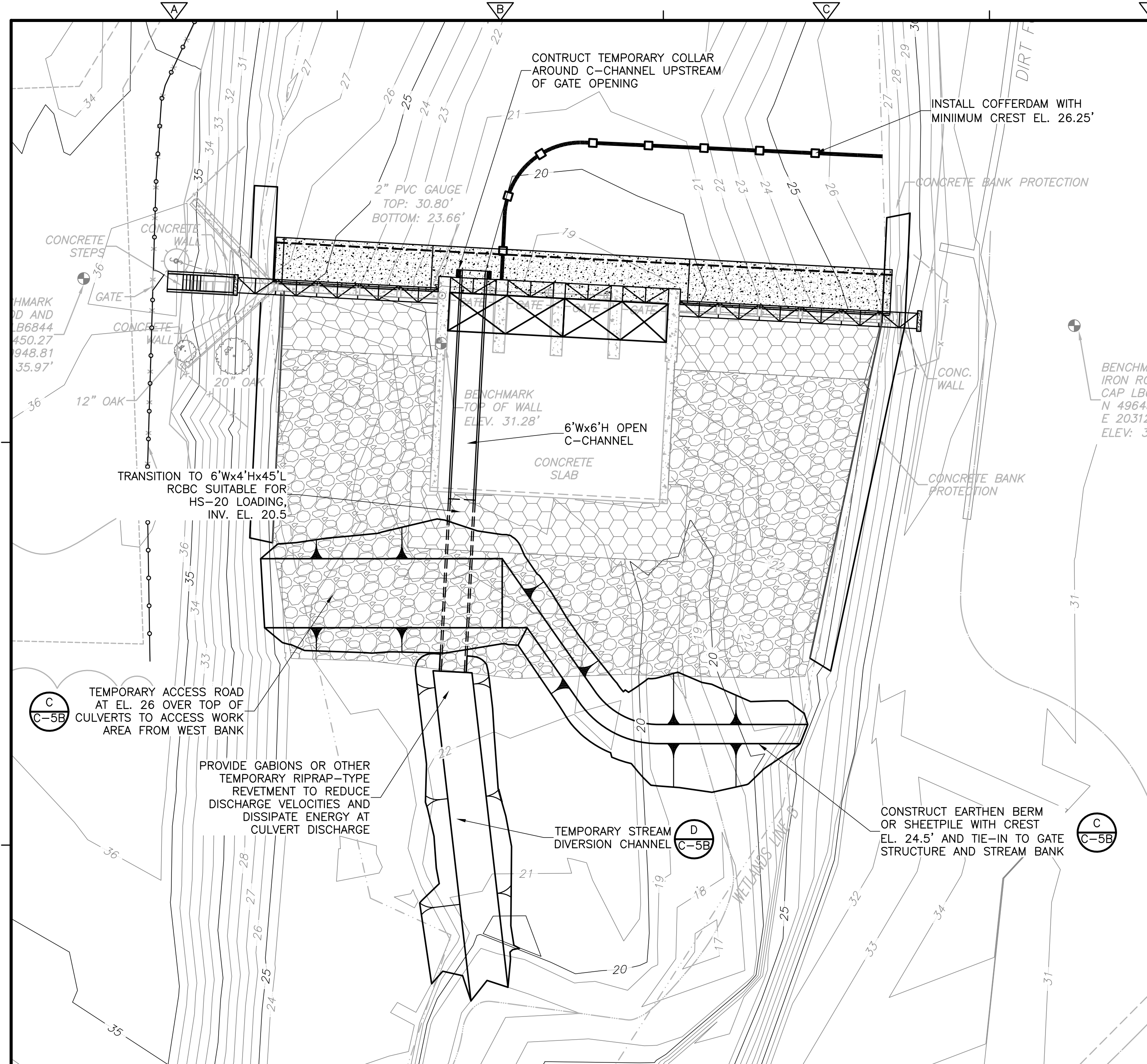
CDM
 Camp Dresser & McKee Inc.
 3522 Thomasville Road, Suite 300
 Tallahassee, FL 32309
 Tel: (850) 386-9500
 FL COA No. EB-0000020
 consulting • engineering • construction • operations

LEON COUNTY, FLORIDA
 LAKE MUNSON DAM
 REHABILITATION

DAM SECTIONS AND DETAILS
 SHEET NO.
C-4

DATE:
 STEPHEN L. WHITESIDE
 P.E. NO. 55002
 PROJECT NO. 6021-70628
 FILE NAME: C004STPL
 SHEET NO.
C-4

ISSUED FOR BID



PHASE IA STREAM DIVERSION
DETAIL A
1" = 20'
C-5A

PHASE IIA STREAM DIVERSION
DETAIL B
1" = 20'
C-5A

NOTES:

DRAWDOWN SCHEDULE

LAKE MUNSON WILL BE DEWATERED BY OPENING THE EXISTING WESTERMOST TAINTER GATE BEGINNING OCTOBER 2010 AND CONTINUING THROUGH MAY 31, 2011. THE GATE WILL BE CLOSED AND NORMAL POOL LEVELS PERMITTED TO RECOVER AFTER THE DRAWDOWN PERIOD. THE CONTRACTOR SHALL PLAN HIS FLOW AND STREAM DIVERSION APPROACH ACCORDINGLY.

CONSTRUCTION SEQUENCE

THE FOLLOWING STREAM DIVERSION PLAN DEPICTS ONE LOGICAL SEQUENCE OF CONSTRUCTION. THIS PLAN WAS DEVELOPED TO PROVIDE 6 INCHES OF FREEBOARD ABOVE PEAK STAGE DURING THE 2-YEAR STORM EVENT WHEN THE LAKE IS AT DEWATERED POOL (EL. 21.0) PRIOR TO THE STORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING A STREAM DIVERSION PLAN AND ASSOCIATED EROSION AND SEDIMENT CONTROL PLAN FOR THE CONTRACTOR'S PROPOSED WORK PLAN. SEE SPECIFICATIONS FOR DIVERSION REQUIREMENTS.

PHASE IA STREAM DIVERSION

- TEMPORARILY DIRECT FLOW FROM THE GATE STRUCTURE INTO EXISTING CHANNEL TOWARDS THE EAST BANK OF THE SLOUGH. PUMP AND DEWATER POOL IN FRONT OF GATE, IF DESIRED, TO LOWER THE POOL AND REDUCE THE FREQUENCY/QUANTITY OF FLOW THROUGH THE GATE DURING PREPARATION FOR DIVERSION. CONSTRUCT EARTHEN BERMS OR DRIVE SHEETPILE IN DOWNSTREAM AREA TO THE EXTENT POSSIBLE WITHOUT BLOCKING FLOW TO THE EXISTING CHANNEL. EXCAVATE DIVERSION CHANNEL IN DOWNSTREAM AREA AS SHOWN AND STABILIZE/PROTECT WITH RIPRAP.
- PUMP AND DEWATER POOL UPSTREAM OF DAM TO AT LEAST EL. 19.25. REMOVE WESTERMOST TAINTER GATE. CONSTRUCT TEMPORARY COLLAR/BULKHEAD, DESIGNED BY THE CONTRACTOR, ON THE UPSTREAM FACE OF THE DAM TO DIRECT ALL FLOW THROUGH THE OPEN C-CHANNEL FOUNDED ON THE GATE STRUCTURE SLAB.
- INSTALL C-CHANNELS AND CULVERT IN DOWNSTREAM AREAS AND DIRECT FLOW TO TEMPORARY DIVERSION CHANNEL. COMPLETE EARTHEN BERMS/SHEETPILE PROTECTION IN DOWNSTREAM AREA AND CONSTRUCT EARTHEN ACCESS RAMP OVER TOP OF CULVERT.
- CONSTRUCT COFFERDAM USING SHEETPILES, PORT-A-DAMS, OR EQUAL AS SHOWN ON THE DRAWINGS AND DEWATER THE EASTERN UPSTREAM PORTION OF THE DAM TO FACILITATE CONSTRUCTION IN-THE-DRY. USE WELLPOINTS AND SUMPS AS NECESSARY TO MAINTAIN DEWATERED EXCAVATION.
- COMPLETE IMPROVEMENTS TO EASTERN PORTION OF DAM, BANK PROTECTION, AND DOWNSTREAM AREAS.

PHASE IIA STREAM DIVERSION

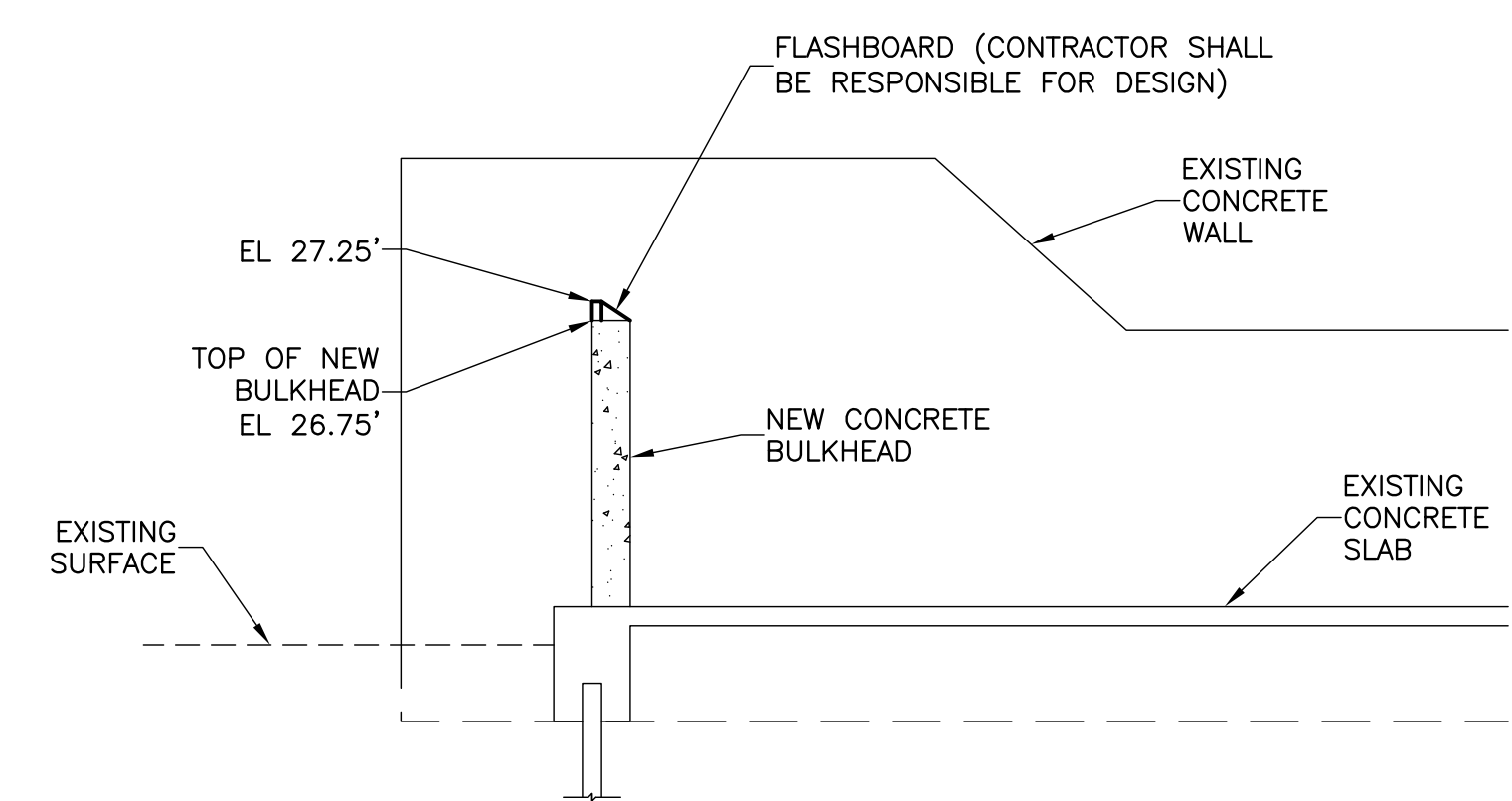
- INSTALL FLASHBOARDS ON THREE EASTERMOST CONCRETE BULKHEADS. CONSTRUCT TEMPORARY COLLAR/BULKHEAD, DESIGNED BY THE CONTRACTOR, ON THE DOWNSTREAM FACE OF THE CONCRETE BULKHEAD IN LINE WITH THE NEW GATE OPENING FOR THE NEW LOW-LEVEL OUTLET TO PREPARE TO DIRECT ALL FLOW THROUGH THE OPEN C-CHANNEL FOUNDED ON THE GATE STRUCTURE SLAB.
- PUMP AND DEWATER POOL IN FRONT OF GATE, IF DESIRED, TO LOWER THE POOL AND REDUCE THE FREQUENCY/QUANTITY OF FLOW THROUGH THE GATE DURING PREPARATION FOR NEXT PHASE OF DIVERSION. MOVE EARTHEN BERM/SHEETPILE IN DOWNSTREAM AREA TO PREPARE FOR NEXT PHASE OF DIVERSION. REMOVE UPSTREAM COFFERDAMS.
- PUMP AND DEWATER POOL UPSTREAM OF DAM TO AT LEAST EL. 19.25. MOVE ALL C-CHANNELS AND BOX CULVERT TO THE LOW-LEVEL OUTLET BULKHEAD AS SHOWN AND DIRECT FLOW TO RESTORED DOWNSTREAM AREA. COMPLETE EARTHEN BERMS/SHEETPILE PROTECTION IN DOWNSTREAM AREA AND CONSTRUCT EARTHEN BERM TO TIE IN TO CULVERT.
- CONSTRUCT COFFERDAM USING SHEETPILES, PORT-A-DAMS, OR EQUAL AS SHOWN ON THE DRAWINGS AND DEWATER THE WESTERN UPSTREAM PORTION OF THE DAM TO FACILITATE CONSTRUCTION IN-THE-DRY. USE WELLPOINTS AND SUMPS AS NECESSARY TO MAINTAIN DEWATERED EXCAVATION.
- RESTORE AND PERMANENTLY STABILIZE DIVERSION CHANNEL AREA WITH SPECIFIED VEGETATION.
- COMPLETE IMPROVEMENTS TO WESTERN PORTION OF DAM, BANK PROTECTION, AND DOWNSTREAM AREAS.

DECOMMISSION DIVERSION

- REMOVE EARTHEN BERM/SHEETPILE IN DOWNSTREAM AREA. REMOVE UPSTREAM COFFERDAMS AND FLASHBOARDS AND CLOSE LOW-LEVEL OUTLET GATE.

GENERAL NOTES:

- TUBIDITY CURTAINS SHALL BE INSTALLED AS NEEDED DURING CONSTRUCTION.
- THE CONTRACTOR IS REQUIRED TO SUBMIT BIDS FOR BOTH WET AND DRY DIVERSION SCENARIOS.



FLASHBOARD DIVERSION
DETAIL C
1" = 20'
C-5A

Xref's: [CDM] 2436, CE-SURVEY, C-PROPOSED, C-BASE-DIVERSION-A Images: [] Responses: [] Last saved by: CHENEVEYPM Time: 10/20/2010 8:31:27 AM

REV. NO.	DATE	DRWN	CHKD	REMARKS

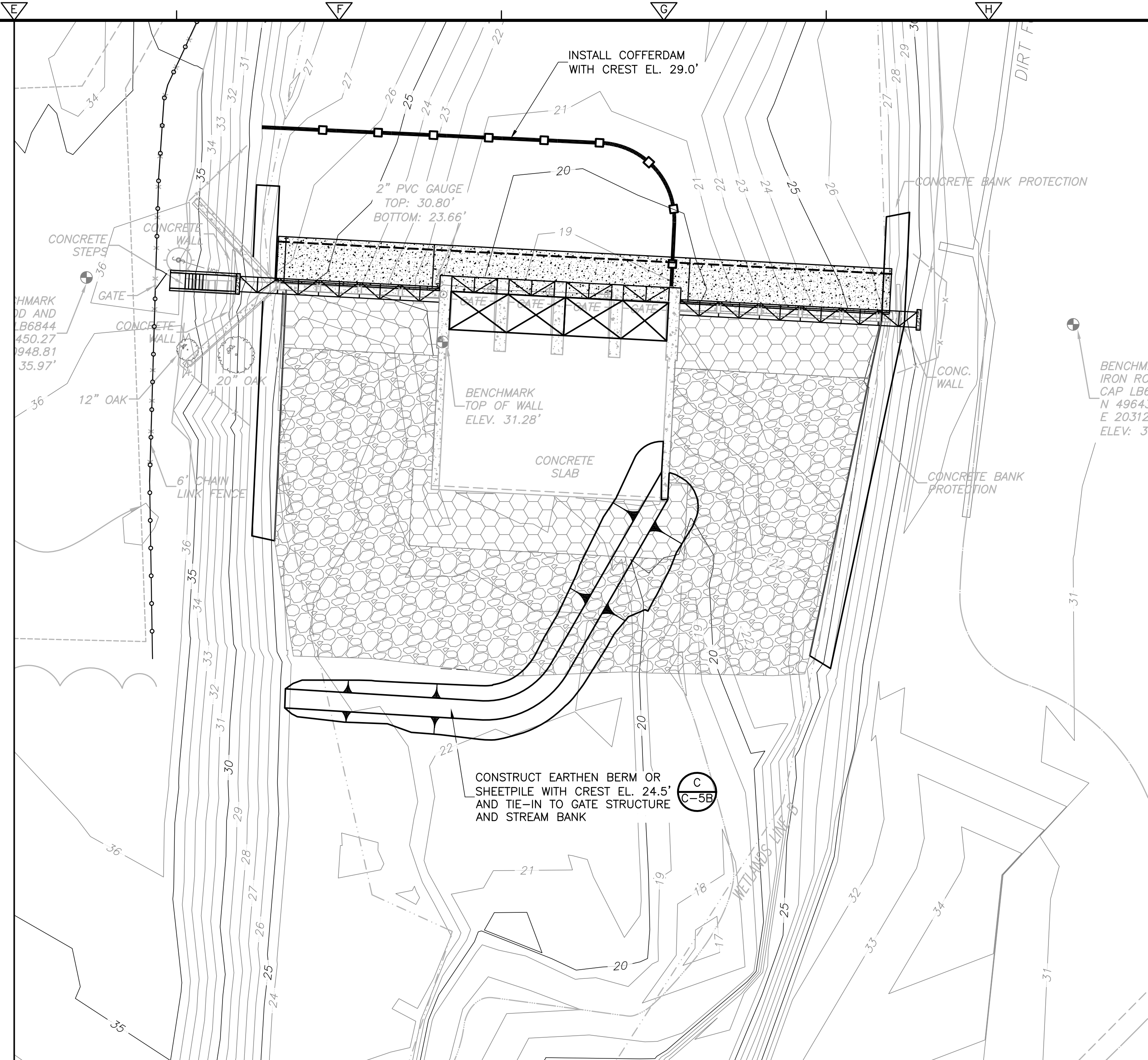
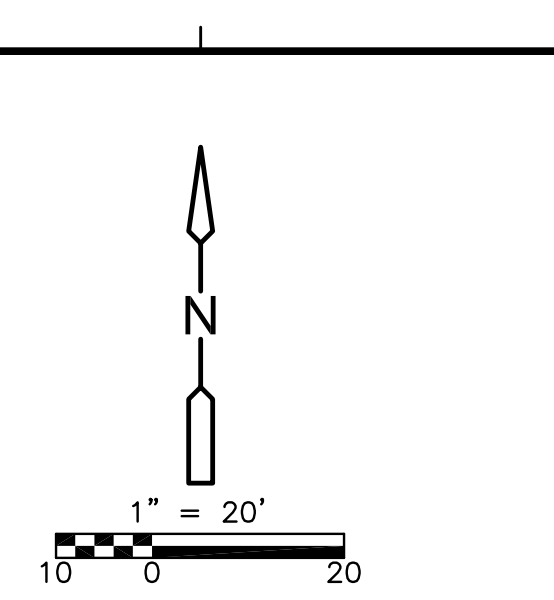
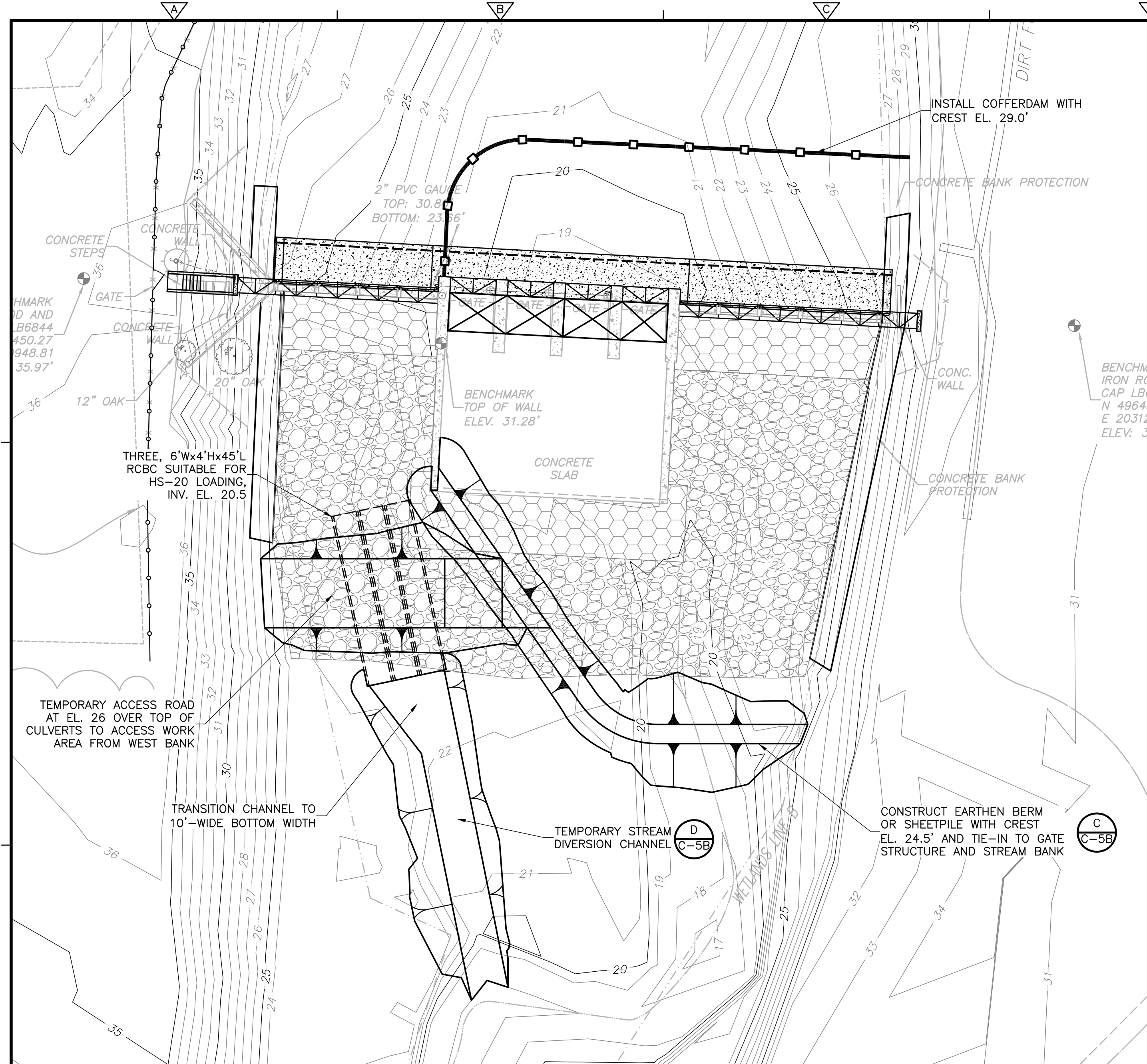
DESIGNED BY: D. NEAMTU	<p>Camp Dresser & McKee Inc. 3522 Thomasville Road, Suite 300 Tallahassee, FL 32309 Tel: (850) 386-9500 FL COA No. EB-0000020 consulting • engineering • construction • operations</p>
DRAWN BY: D. MOHLE	
SHEET CHK'D BY: J. HOFFMAN	
CROSS CHK'D BY: P. CHENEVEY	
APPROVED BY: S. WHITESIDE	
DATE: JANUARY 2011	

LEON COUNTY, FLORIDA
LAKE MUNSON DAM REHABILITATION

STREAM DIVERSION PHASE A - LAKE MUNSON AT DEWATERED POOL

DATE: STEPHEN L. WHITESIDE P.E. NO. 55002
PROJECT NO. 6021-70628 FILE NAME: C05ASTPL
SHEET NO. C-5A

ISSUED FOR BID



PHASE IB STREAM DIVERSION

DETAIL A
1" = 20'
C-5B

NOTES:

DRAWDOWN SCHEDULE

LAKE MUNSON WILL BE DEWATERED BY OPENING THE EXISTING WESTERMOST TAITER GATE BEGINNING OCTOBER 2010 AND CONTINUING THROUGH MAY 31, 2011. THE GATE WILL BE CLOSED AND NORMAL POOL LEVELS PERMITTED TO RECOVER AFTER THE DRAWDOWN PERIOD. THE CONTRACTOR SHALL PLAN HIS WORK AND STREAM DIVERSION APPROACH ACCORDINGLY.

CONSTRUCTION SEQUENCE

THE FOLLOWING STREAM DIVERSION PLAN DEPICTS ONE LOGICAL SEQUENCE OF CONSTRUCTION. THIS PLAN WAS DEVELOPED TO PROVIDE 6 INCHES OF FREEBOARD ABOVE PEAK STAGE DURING THE 2-YEAR STORM EVENT WHEN THE LAKE LEVEL IS AT NORMAL POOL (EL. 26.75) PRIOR TO THE STORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING A STREAM DIVERSION PLAN AND ASSOCIATED EROSION AND SEDIMENT CONTROL PLAN FOR THE CONTRACTOR'S PROPOSED WORK PLAN. SEE SPECIFICATIONS FOR DIVERSION REQUIREMENTS.

PHASE IB STREAM DIVERSION

1. CONSTRUCT EARTHEN BERMS OR DRIVE SHEETPILE TO DIRECT FLOW TOWARDS DIVERSION CHANNEL. EXCAVATE DIVERSION CHANNEL IN DOWNSTREAM AREA AS SHOWN AND STABILIZE/PROTECT WITH RIPRAP.
2. INSTALL CULVERTS AND CONSTRUCT ACCESS RAMP OVER CULVERTS FROM WEST BANK TO EASTERN DOWNSTREAM AREA.
3. CONSTRUCT COFFERDAM USING SHEETPILES, PORT-A-DAMS, OR EQUAL AS SHOWN ON THE DRAWINGS AND DEWATER THE EASTERN UPSTREAM PORTION OF THE DAM TO FACILITATE CONSTRUCTION IN-THE-DRY. USE WELLPOINTS AND SUMPS AS NECESSARY TO MAINTAIN DEWATERED EXCAVATION.
4. COMPLETE IMPROVEMENTS TO EASTERN PORTION OF DAM, BANK PROTECTION, AND DOWNSTREAM AREAS.

PHASE IIB STREAM DIVERSION

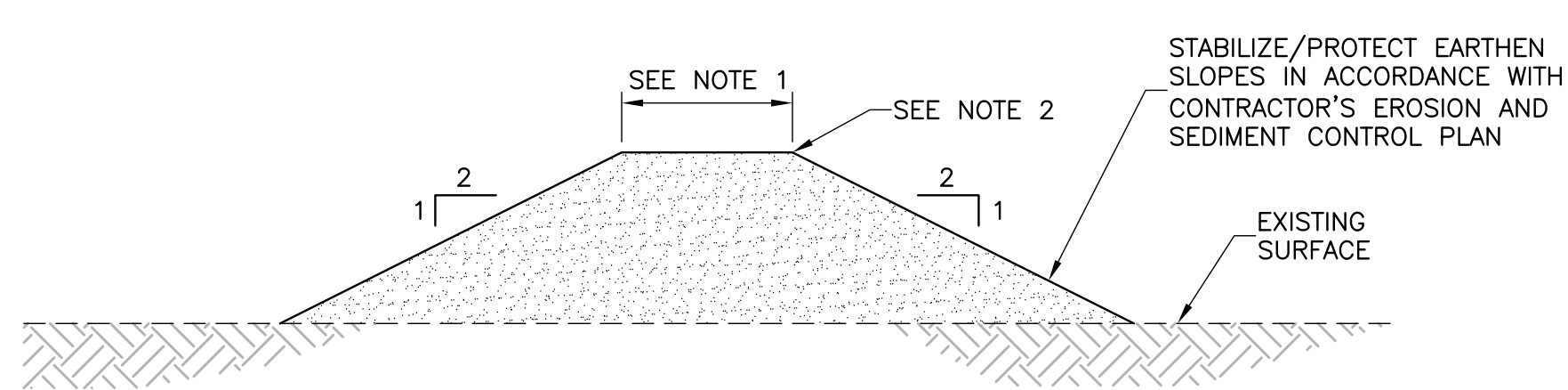
1. REMOVE EARTHEN BERM/SHEETPILE IN DOWNSTREAM AREA. REMOVE UPSTREAM COFFERDAMS AND ALLOW FLOW TO GO OVER ENTIRE DAM.
2. REMOVE FLASHBOARDS FROM WESTERMOST TAITER GATE. OPEN GATE AND LOWER LAKE LEVELS TO EL. 26.25. MONITOR DOWNSTREAM AT AMES SINK TO ASSURE THAT GATE OPERATION IS NOT CAUSING DOWNSTREAM FLOODING. CONSTRUCT EARTHEN BERMS OR DRIVE SHEETPILE AS SHOWN TO PROTECT DOWNSTREAM AREA.
3. CONSTRUCT COFFERDAM USING SHEETPILES, PORT-A-DAMS, OR EQUAL AS SHOWN ON THE DRAWINGS AND DEWATER THE WESTERN UPSTREAM PORTION OF THE DAM TO FACILITATE CONSTRUCTION IN-THE-DRY. USE WELLPOINTS AND SUMPS AS NECESSARY TO MAINTAIN DEWATERED EXCAVATION.
4. RESTORE AND PERMANENTLY STABILIZE DIVERSION CHANNEL AREA WITH SPECIFIED VEGETATION.
5. COMPLETE IMPROVEMENTS TO WESTERN PORTION OF DAM, BANK PROTECTION, AND DOWNSTREAM AREAS.

DECOMMISSION DIVERSION

1. REMOVE EARTHEN BERM/SHEETPILE IN DOWNSTREAM AREA. REMOVE UPSTREAM COFFERDAMS AND ALLOW FLOW TO GO OVER ENTIRE DAM.

GENERAL NOTES:

1. TUBIDITY CURTAINS SHALL BE INSTALLED AS NEEDED DURING CONSTRUCTION.
2. THE CONTRACTOR IS REQUIRED TO SUBMIT BIDS FOR BOTH WET AND DRY DIVERSION SCENARIOS.



ACCESS ROAD AND EARTHEN BERM

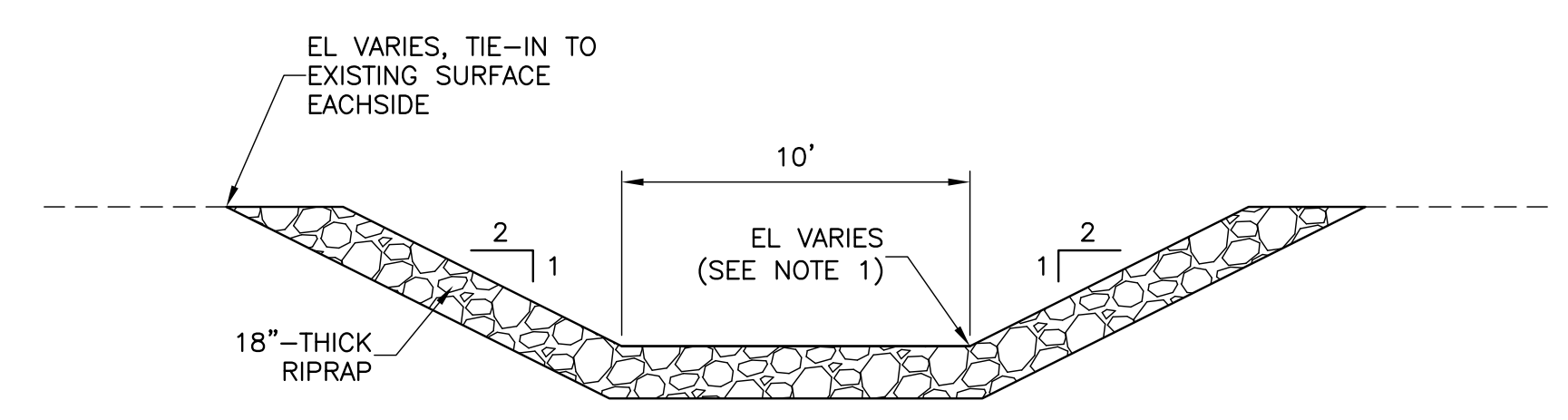
DETAIL C
NTS
C-5B

ACCESS ROAD AND EARTHEN BERM NOTES:

1. ROAD WIDTH SHALL BE 18-FOOT MINIMUM. BERM WIDTH SHALL BE 5-FOOT MINIMUM.
2. TOP OF ROAD SHALL BE EL. 26.0 OVER CULVERTS. TOP OF BERM SHALL BE EL. 24.5.

PHASE IIB STREAM DIVERSION

DETAIL B
1" = 20'
C-5B



TEMPORARY DIVERSION CHANNEL SECTION

DETAIL D
NTS
C-5B

TEMPORARY DIVERSION CHANNEL NOTES:

1. VARY SLOPE BOTTOM ELEVATION LINEARLY FROM EL. 20.5 AT UPSTREAM END TO EL. 18.0 AT THE DOWNSTREAM END.

Xref's: [CDM_2436_C-SURVEY_C-PROPOSED_C-BASE-DIVERSION-B] Images: [CDM_2436_C-SURVEY_C-PROPOSED_C-BASE-DIVERSION-B] Last saved by: CHENEVEY Time: 10/20/2010 8:19:09 AM

REV. NO.	DATE	DRWN	CHKD	REMARKS

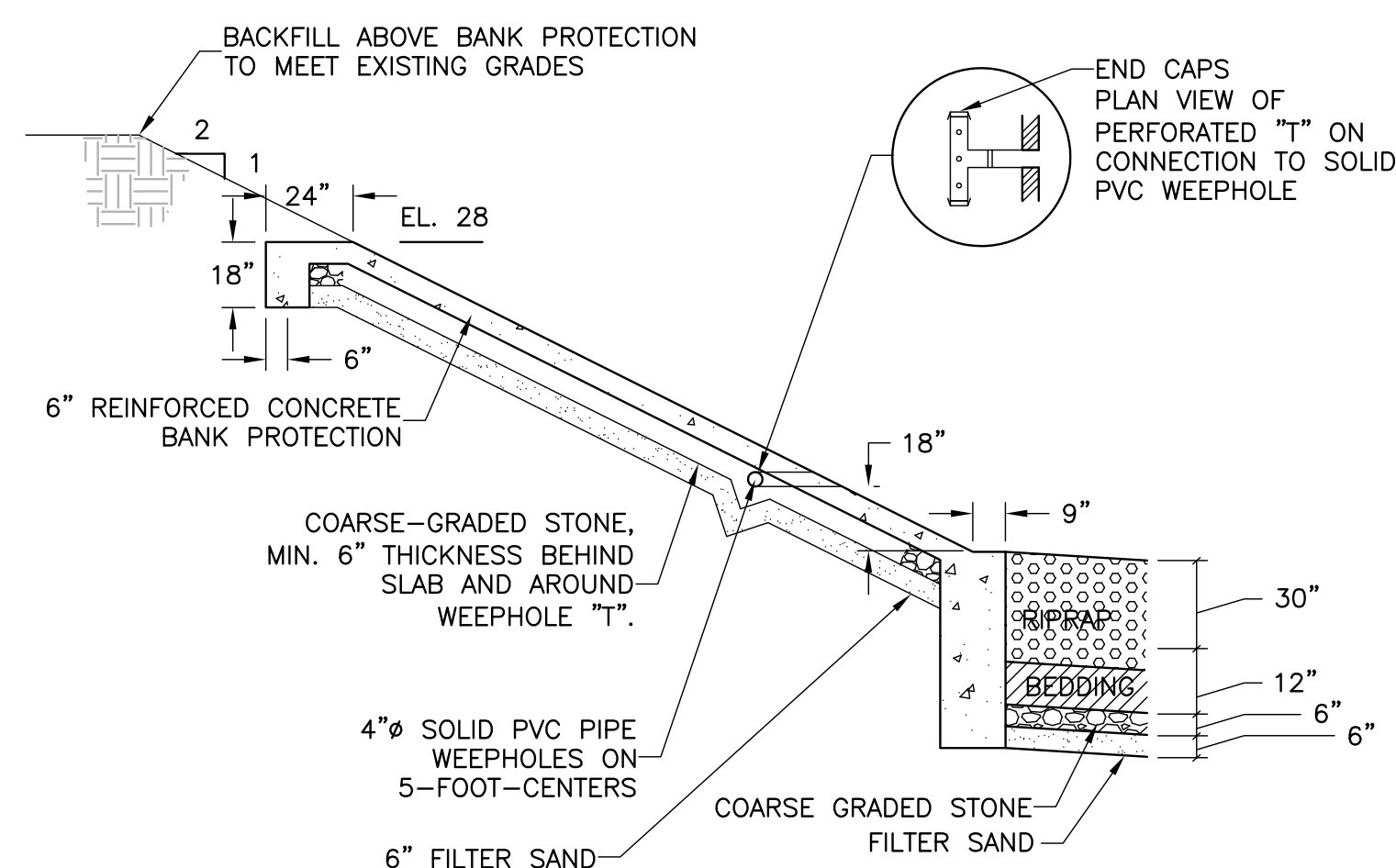
DESIGNED BY:	D. NEAMTU	<p>Camp Dresser & McKee Inc. 3522 Thomasville Road, Suite 300 Tallahassee, FL 32309 Tel: (850) 386-9500 FL COA No. EB-0000020 consulting • engineering • construction • operations</p>
DRAWN BY:	D. MOHLE	
SHEET CHK'D BY:	J. HOFFMAN	
CROSS CHK'D BY:	P. CHENEVEY	
APPROVED BY:	S. WHITESIDE	
DATE:	JANUARY 2011	

LEON COUNTY, FLORIDA
LAKE MUNSON DAM REHABILITATION

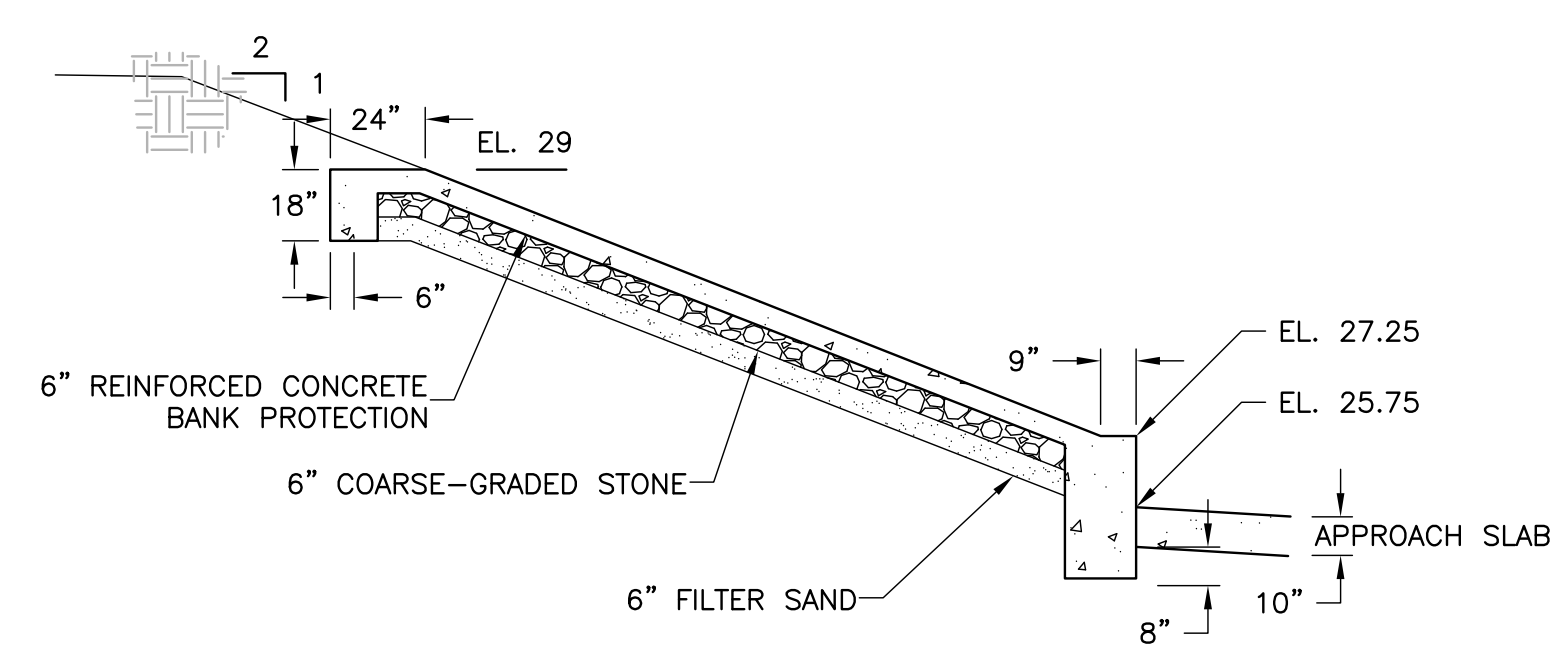
STREAM DIVERSION PHASE B - LAKE MUNSON AT NORMAL POOL

DATE:	STEPHEN L. WHITESIDE P.E. NO. 55002
PROJECT NO.	6021-70628
FILE NAME:	C05BSTPL
SHEET NO.	C-5B

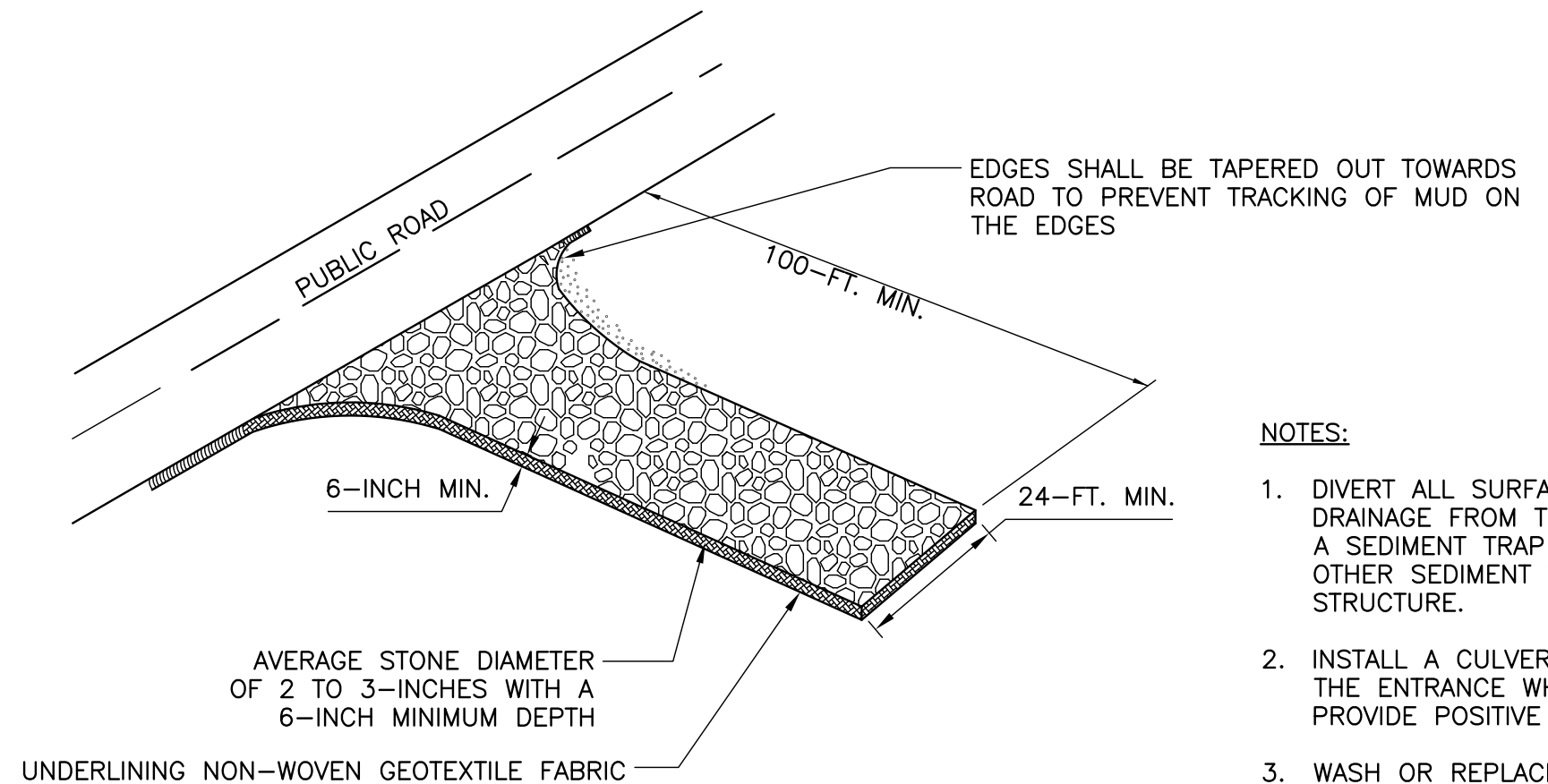
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DOWNSTREAM BANK PROTECTION DETAIL
DETAIL A
 NTS

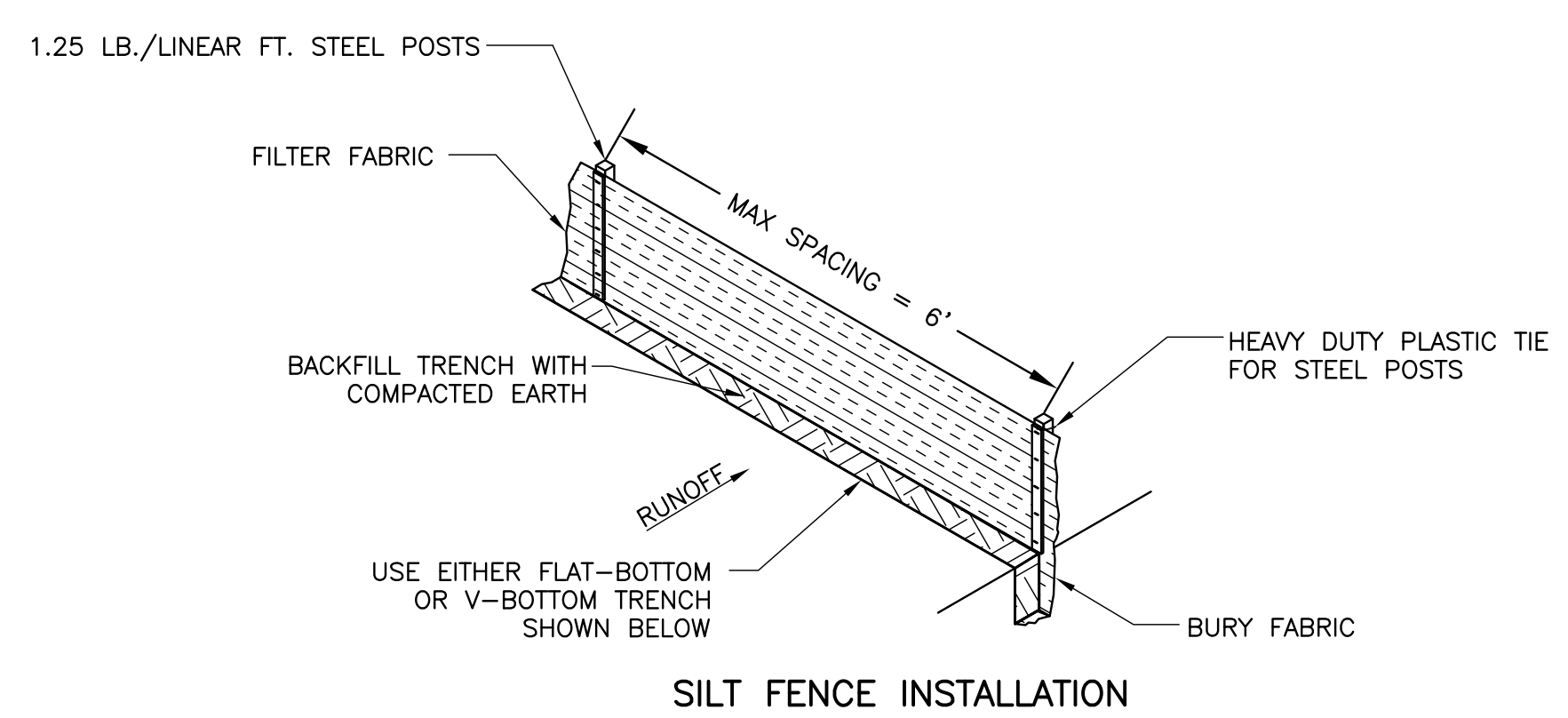


UPSTREAM BANK PROTECTION DETAIL
DETAIL B
 NTS

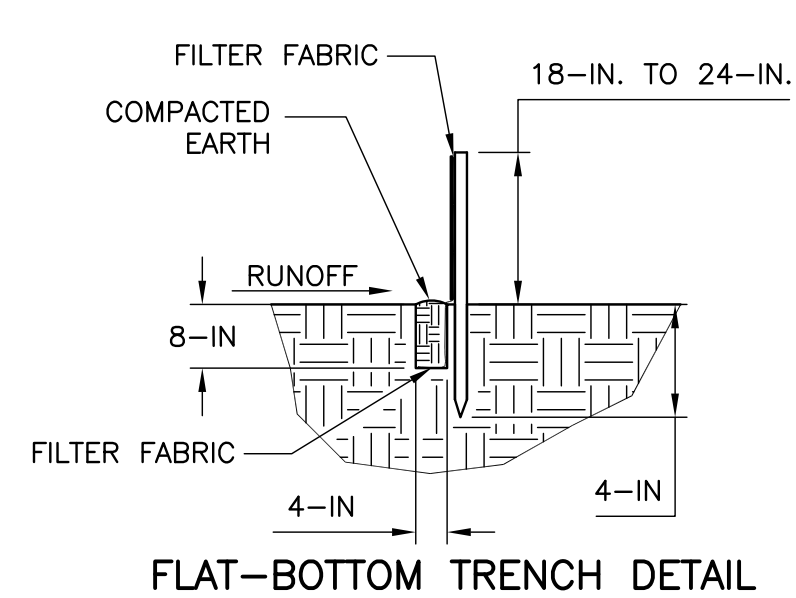


CONSTRUCTION ENTRANCE
DETAIL C
 NTS

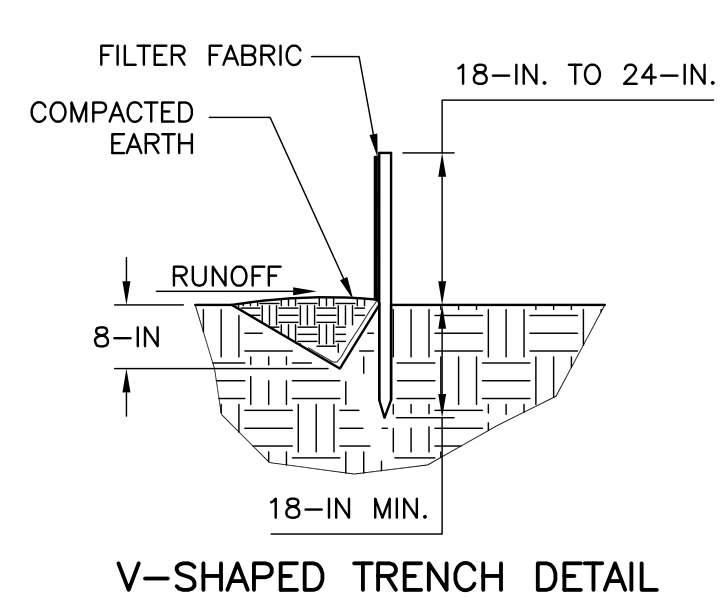
- NOTES:
1. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN OR OTHER SEDIMENT TRAPPING STRUCTURE.
 2. INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.
 3. WASH OR REPLACE STONE WHENEVER ENTRANCE FAILS TO PREVENT MUD FROM BEING CARRIED OFFSITE BY VEHICLES.



SILT FENCE INSTALLATION



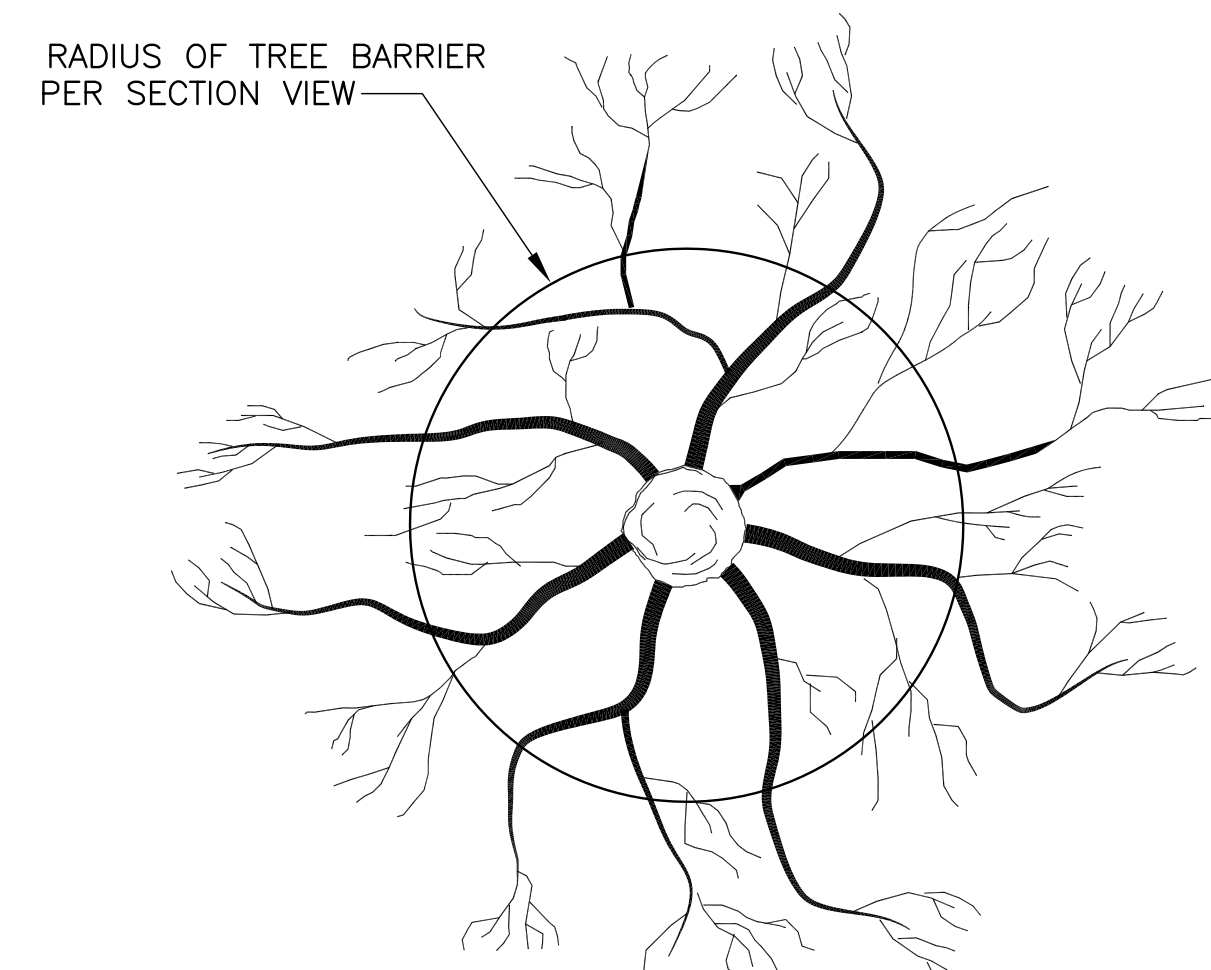
FLAT-BOTTOM TRENCH DETAIL



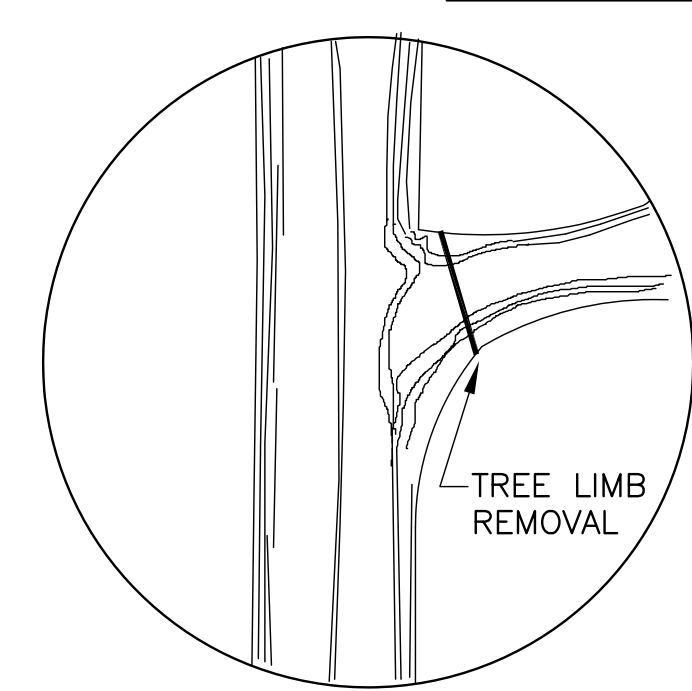
V-SHAPED TRENCH DETAIL

- NOTES:
1. PROVIDE SILT FENCE TIE BACKS IN LOCATIONS WHERE SILT FENCE CUTS ACROSS GRADE LINES.
 2. REMOVE SEDIMENT FROM BEHIND THE SILT FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE.

SILT FENCE
DETAIL D
 NTS



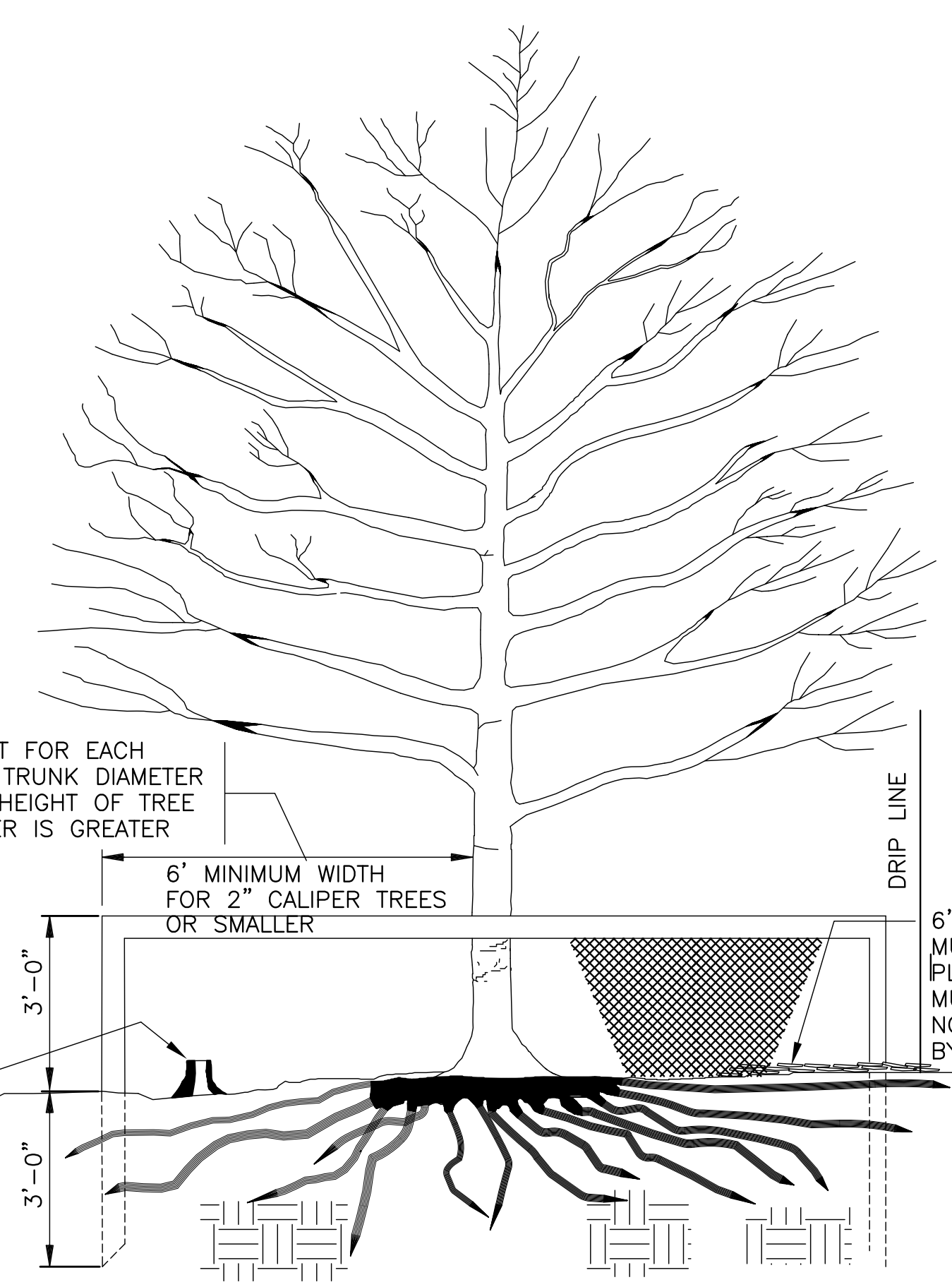
PLAN VIEW OF ROOT ZONE



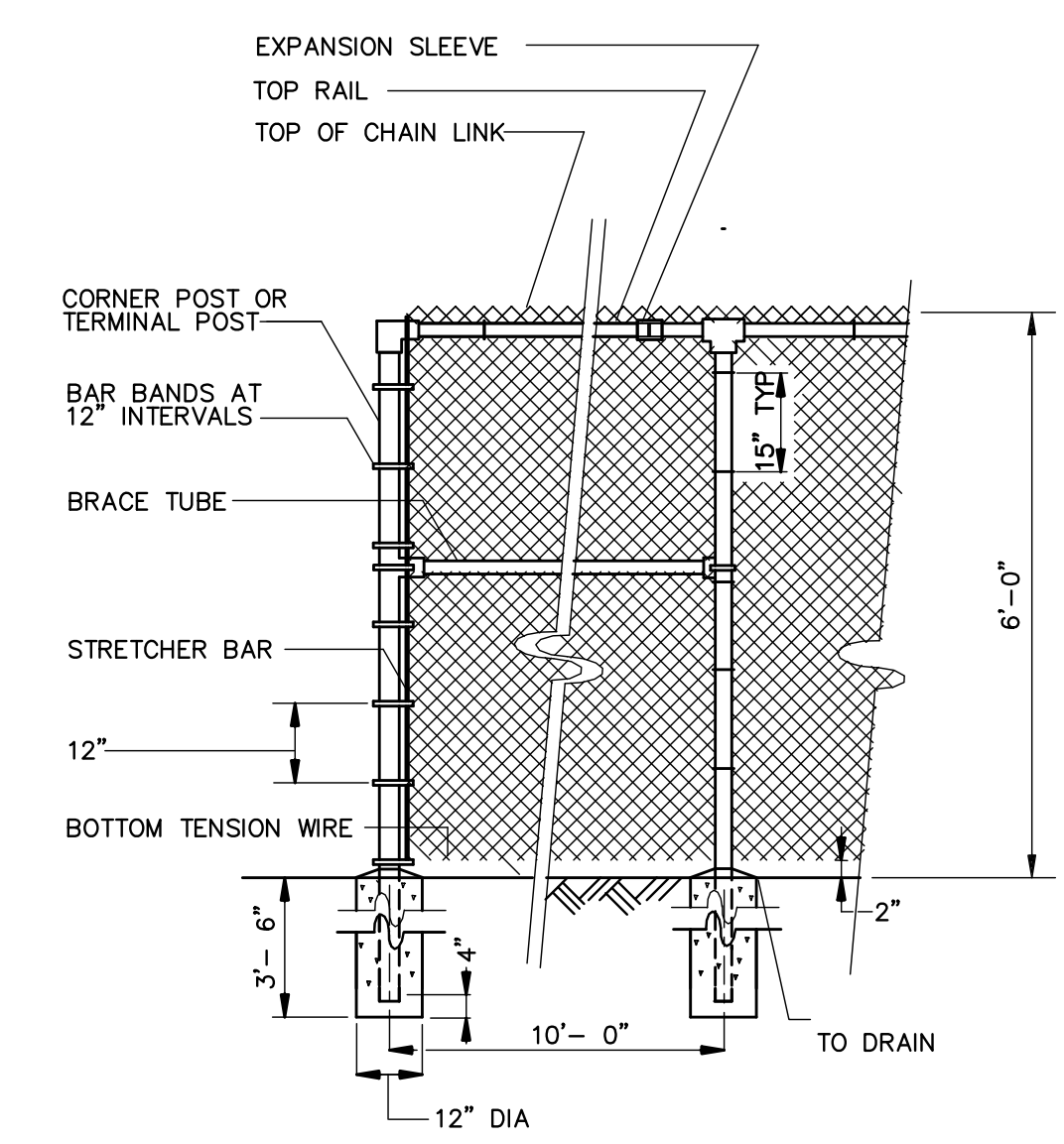
FOR PRUNING SEE NATIONAL ARBORIST ASSOCIATION SPECS.

DEAD TREES AND SCRUB OF UNDER GROWTH SHALL BE CUT FLUSH WITH ADJACENT GRADE. NO GRUBBING ALLOWED UNDER DRIP LINE.

2x4" STANDARDS + 1x4" RAILS OR ORANGE SAFETY FENCING MAY BE USED.



TREE BARRIERS
DETAIL E
 NTS



CHAIN LINK FENCE
DETAIL F
 NTS

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: D. NEAMTU	<p>Camp Dresser & McKee Inc. 3522 Thomasville Road, Suite 300 Tallahassee, FL 32309 Tel: (850) 386-9500 FL COA No. EB-0000020 consulting • engineering • construction • operations</p>
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CROSS CHK'D BY: P. CHENEVEY	
APPROVED BY: S. WHITESIDE	
DATE: JANUARY 2011	

LEON COUNTY, FLORIDA

LAKE MUNSON DAM REHABILITATION

DETAILS

DATE: STEPHEN L. WHITESIDE P.E. NO. 55002
PROJECT NO. 6021-70628 FILE NAME: CO065STPL
SHEET NO. C-6

ISSUED FOR BID

GENERAL NOTES

DESIGN CRITERIA:

CODES:

- FLORIDA BUILDING CODE, 2007 EDITION WITH 2009 AMENDMENTS
- ENVIRONMENTAL STRUCTURES: ACI 350 "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES"
- OTHER STRUCTURES: ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
- AISC MANUAL OF STEEL CONSTRUCTION, THIRTEENTH EDITION

DESIGN LOADS:

LIVE LOADS:

- WALKWAYS	200	PSF
- ELEVATED SLABS	200	PSF
- PROCESS SLABS ON GRADE	200	PSF

WIND LOADS:

- BASIC WIND SPEED	110	MPH
- EXPOSURE CATEGORY	C	
- IMPORTANCE FACTOR	1.15	

CONCRETE 28-DAY STRENGTH:

- SLABS, WALLS, FOOTINGS	4500	PSI
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REINFORCING STEEL:

- ALL BARS ASTM A615, GRADE 60
- WELDED WIRE FABRIC ASTM A185

FOUNDATIONS:

- ASSUMED ALLOWABLE BEARING PRESSURE FOR SPREAD FOOTINGS OVER SUBSURFACE PREPARED AS PER SPECIFICATIONS: 1500 PSF

GENERAL CONDITIONS:

ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE MECHANICAL, CIVIL, ELECTRICAL AND SHOP DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FACILITY. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.

THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATION AND OTHERS.

SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.

ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURES.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

STANDARD DETAILS (SHOWN ON SD1, SD2 AND SD3) APPLY TO ALL SIMILAR SITUATIONS ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

CONCRETE:

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS.

ALL CONCRETE SHALL BE AIR-ENTRAINED WITH 4500 PSI COMPRESSIVE STRENGTH AT 28 DAYS UNLESS OTHERWISE NOTED.

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494.

ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS CEMENT FINISHING IS COMPLETED OR FORMS ARE REMOVED.

ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE A MINIMUM CHAMFER OF 3/4" UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATION OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWING.

REINFORCING STEEL:

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS.

ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

- CONCRETE CAST AGAINST EARTH	3"
- FORMED SURFACES IN CONTACT WITH SOIL, WATER OR EXPOSED TO WEATHER	2"
- FORMED SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH SOIL:	
- SLABS AND WALLS	1"
- BEAMS	1-1/2"

LAP SPLICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPLICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL.

THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

FLOATATION CONSIDERATION:

STRUCTURES WERE DESIGNED TO BE NON-BUOYANT AFTER THE STRUCTURE IS PLACED INTO SERVICE. THEREFORE, THE STRUCTURE MAY BE BUOYANT DURING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL PROTECT ALL STRUCTURES (NEW AND EXISTING) FROM FLOATATION DURING CONSTRUCTION, REGARDLESS OF GROUNDWATER LEVELS, UNTIL STRUCTURES ARE PLACED IN OPERATION.

STRUCTURAL ALUMINUM:

DESIGN, FABRICATION, ERECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST "ALUMINUM DESIGN MANUAL" (ADM) SPECIFICATIONS AND DESIGN DRAWINGS.

ALL STRUCTURAL ALUMINUM:

ALUMINUM EXTRUDED PIPE -	ASTM B429, ALLOY 6063-T6
ALUMINUM EXTRUDED SHAPE -	ASTM B221, ALLOY 6061-T6
ALUMINUM SHEET AND PLATE -	ASTM B209, ALLOY 6061-T6
ALUMINUM ALLOY ROLLED THREAD PLATE -	ASTM B209, ALLOY 6061-T6
ALUMINUM CASTING -	ASTM B26/B36M, ALLOY 443.0-F

SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST ANS D1.2/D1.2M "STRUCTURAL WELDING CODE - ALUMINUM".

WHERE ALUMINUM CONTACTS A DISSIMILAR METAL, APPLY TO THE DISSIMILAR METAL A HEAVY BRUSH COAT OF ZINC-CHROMATE PRIMER FOLLOWED BY TWO COATS OF ALUMINUM METAL PAINT.

WHERE ALUMINUM CONTACTS CONCRETE, APPLY TO ALUMINUM A HEAVY COAT OF BITUMASTIC OR EPOXY PAINT.

STRUCTURAL STEEL:

DESIGN, FABRICATION, ERECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS AND DESIGN DRAWINGS.

ALL STRUCTURAL STEEL:

W SHAPES -	ASTM A992
M, S AND HP SHAPES -	ASTM A36
CHANNELS AND ANGLES -	ASTM A36
HSS (SQUARE AND RECTANGULAR) -	ASTM A500

ALL PIPE: ASTM A53, GRADE B.

THE FABRICATOR SHALL DESIGN AND DETAIL ALL PARTS OF CONNECTIONS NOT FULLY DETAILED ON THE DESIGN DRAWINGS. THE NUMBER OF BOLTS AND OTHER SIMILAR ELEMENTS SHOWN ON THE DRAWING ARE PICTORIAL ONLY.

SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS STRUCTURAL WELDING CODE REQUIREMENTS. ELECTRODES SHALL BE E-70XX.

CONCRETE CRACK REPAIR:

- CRACKS ON HORIZONTAL SURFACES SHALL BE REPAIRED BY GRAVITY FEEDING CRACK SEALANT INTO CRACKS PER MANUFACTURER'S RECOMMENDATIONS. IF CRACKS ARE LESS THAN 1/8" IN THICKNESS THEY SHALL BE PRESSURE INJECTED.
- CRACKS ON VERTICAL SURFACES SHALL BE REPAIRED BY PRESSURE INJECTING CRACK SEALANT THROUGH VALVES SEALED TO SURFACE WITH CRACK REPAIR EPOXY ADHESIVE PER MANUFACTURER'S RECOMMENDATIONS.

SURFACE REPAIR:

- FOR SURFACE AREA DEFECTS IN NEED OF REPAIR UP TO 1 1/2" THICK, REPAIRS SHALL BE ACCOMPLISHED USING A CEMENTITIOUS STRUCTURAL REPAIR MORTAR WITH AN INTEGRAL CORROSION INHIBITOR WHICH IS CAPABLE OF APPLICATION THICKNESS UP TO 1 1/2" IN A SINGLE APPLICATION. CEMENTITIOUS STRUCTURAL REPAIR MORTAR UP TO 1 1/2" THICK SHALL BE EMACO S88 CI BY DEGUSSA CONSTRUCTION CHEMICALS; SIKATOP 123 PLUS BY SIKA CORPORATION OR PROFESSIONAL APPROVED EQUAL.
- FOR SURFACE AREA DEFECTS IN NEED OF REPAIR GREATER THAN 1 1/2" BUT LESS THAN 3" THICK, REPAIRS SHALL BE ACCOMPLISHED USING A CEMENTITIOUS STRUCTURAL REPAIR MORTAR, WITH AN INTEGRAL CORROSION INHIBITOR AND CAPABLE OF AN APPLICATION THICKNESS UP TO 3" IN A SINGLE APPLICATION. CEMENTITIOUS STRUCTURAL REPAIR MORTAR BETWEEN 1 1/2" AND 3" THICK SHALL BE EMACO S66 CI BY DEGUSSA CONSTRUCTION CHEMICALS; SIKATOP 126 PLUS BY SIKA CORPORATION OR PROFESSIONAL APPROVED EQUAL.
- FOR SURFACE AREA DEFECTS IN NEED OF REPAIR GREATER THAN 3" THICK, REPAIRS SHALL BE ACCOMPLISHED USING A NON-SAG, CEMENTITIOUS STRUCTURAL REPAIR MORTAR WITH A CORROSION INHIBITOR CAPABLE OF VERTICAL SURFACE APPLICATION THICKNESS GREATER THAN 3" IN A SINGLE APPLICATION. CEMENTITIOUS STRUCTURAL REPAIR MORTAR MORE THAN 3" THICK SHALL BE EMACO S77 CI BY DEGUSSA CONSTRUCTION CHEMICALS; SIKATOP 111 PLUS BY SIKA CORPORATION OR PROFESSIONAL APPROVED EQUAL.
- THE CONTRACTOR SHALL FOLLOW ICRI TECHNICAL GUIDELINE NO. 03730 RECOMMENDATIONS FOR SURFACE PREPARATION OF DETERIORATED CONCRETE.
- THE CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S RECOMMENDATION FOR BONDING AGENT AND ADDITIONAL WIRE MESH REINFORCING TO BE INSTALLED WITHIN THE REPAIR.
- THE CONTRACTOR SHALL CONSULT THE MANUFACTURER FOR RECOMMENDATIONS TO INSURE COMPATIBILITY BETWEEN EACH STRUCTURAL REPAIR MORTAR AND THE LINING SYSTEM.
- ONE HUNDRED PERCENT EPOXY GROUT MAY BE USED FOR MINOR REPAIRS.

ABBREVIATIONS:

AL	ALUMINUM	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BOT	BOTTOM	NF	NEAR FACE
CC	CENTER TO CENTER	NTS	NOT TO SCALE
CJ	CONTROL JOINT	OC	ON CENTER
CMU	CONCRETE MASONRY UNIT	PL	PLATE
CONC	CONCRETE	PLF	POUNDS PER LINEAR FOOT
CONST JT	CONSTRUCTION JOINT	PROJ	PROJECTION
CONT	CONTINUOUS	PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DWG	DRAWING	REINF	REINFORCEMENT
EF	EACH FACE	SPECS	SPECIFICATIONS
EJ	EXPANSION JOINT	SS	STAINLESS STEEL
EL	ELEVATION	STD	STANDARD
EW	EACH WAY	T&B	TOP AND BOTTOM
FF	FAR FACE	T/STRUCTURE	TOP OF STRUCTURE
FTG	FOOTING	TYP	TYPICAL
HORIZ	HORIZONTAL	UNON	UNLESS OTHERWISE NOTED
HP	HIGH POINT	VERT	VERTICAL
ID	INSIDE DIAMETER	WSTP	WATERSTOP
LP	LOW POINT	WWF	WELDED WIRE FABRIC
MAT'L	MATERIAL		
MAX	MAXIMUM		

NOTE:
THESE ABBREVIATIONS ARE FOR USE ON STRUCTURAL DRAWINGS ONLY.

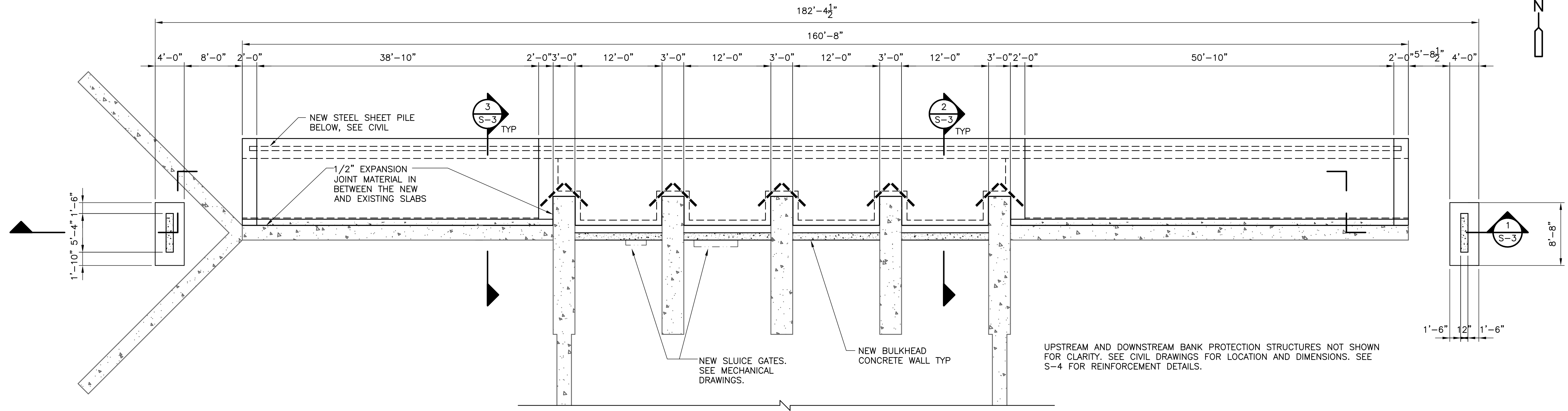
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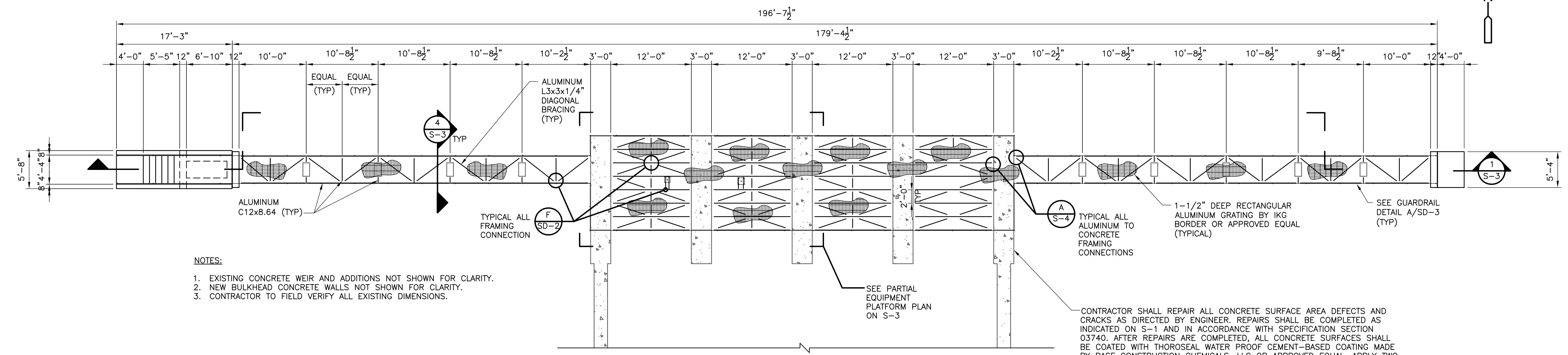
DESIGNED BY: J.C. MASTRAPA	 Camp Dresser & McKee Inc. 3522 Thomasville Road, Suite 300 Tallahassee, FL 32309 Tel: (850) 386-9500 FL COA No. EB-0000020 consulting • engineering • construction • operations
DRAWN BY: P. SCHIAVO	
SHEET CHK'D BY: T. VERWEY	
CROSS CHK'D BY: K. FRANCOFORTE	
APPROVED BY: J.C. MASTRAPA	
DATE: JANUARY 2011	

LEON COUNTY, FLORIDA
**LAKE MUNSON DAM
REHABILITATION**

GENERAL NOTES	
DATE: JUAN CARLOS MASTRAPA P.E NO. 68217	PROJECT NO. 6021-70628 FILE NAME: S001STINT
SHEET NO. S-1	



FOUNDATION
PLAN
3/16" = 1'-0"



WALKWAY/EQUIPMENT PLATFORM
PLAN
3/16" = 1'-0"

- NOTES:
1. EXISTING CONCRETE WEIR AND ADDITIONS NOT SHOWN FOR CLARITY.
 2. NEW BULKHEAD CONCRETE WALLS NOT SHOWN FOR CLARITY.
 3. CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS.

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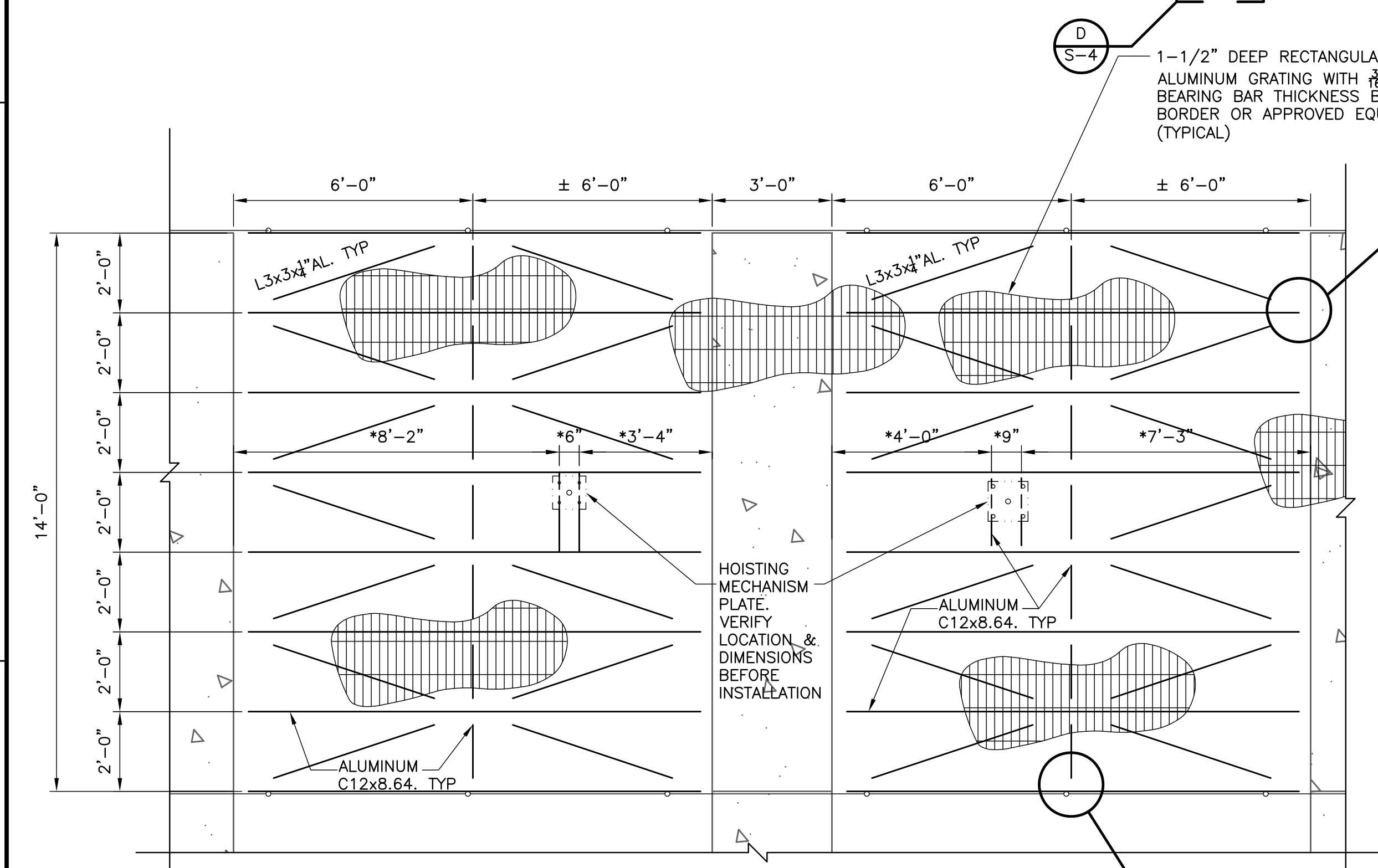
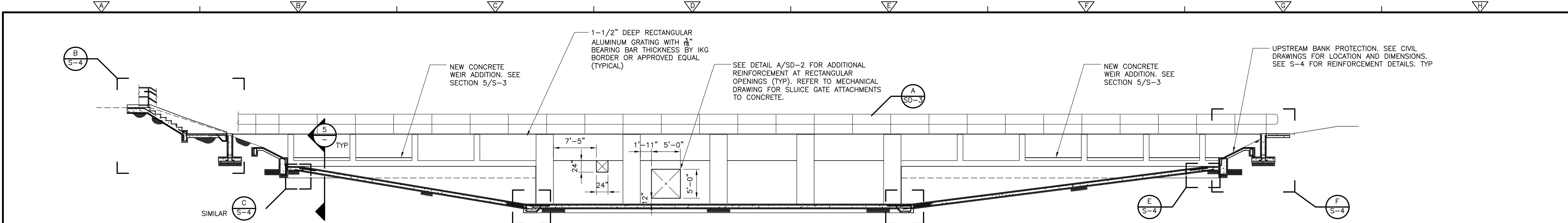
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DRAWN BY: J.C. MASTRAPA	
SHEET CHK'D BY: T. VERWEY	
CROSS CHK'D BY: K. FRANCOFORTE	
APPROVED BY: J.C. MASTRAPA	
DATE: JANUARY 2011	

LEON COUNTY, FLORIDA
LAKE MUNSON DAM
REHABILITATION

FOUNDATION AND TOP PLANS

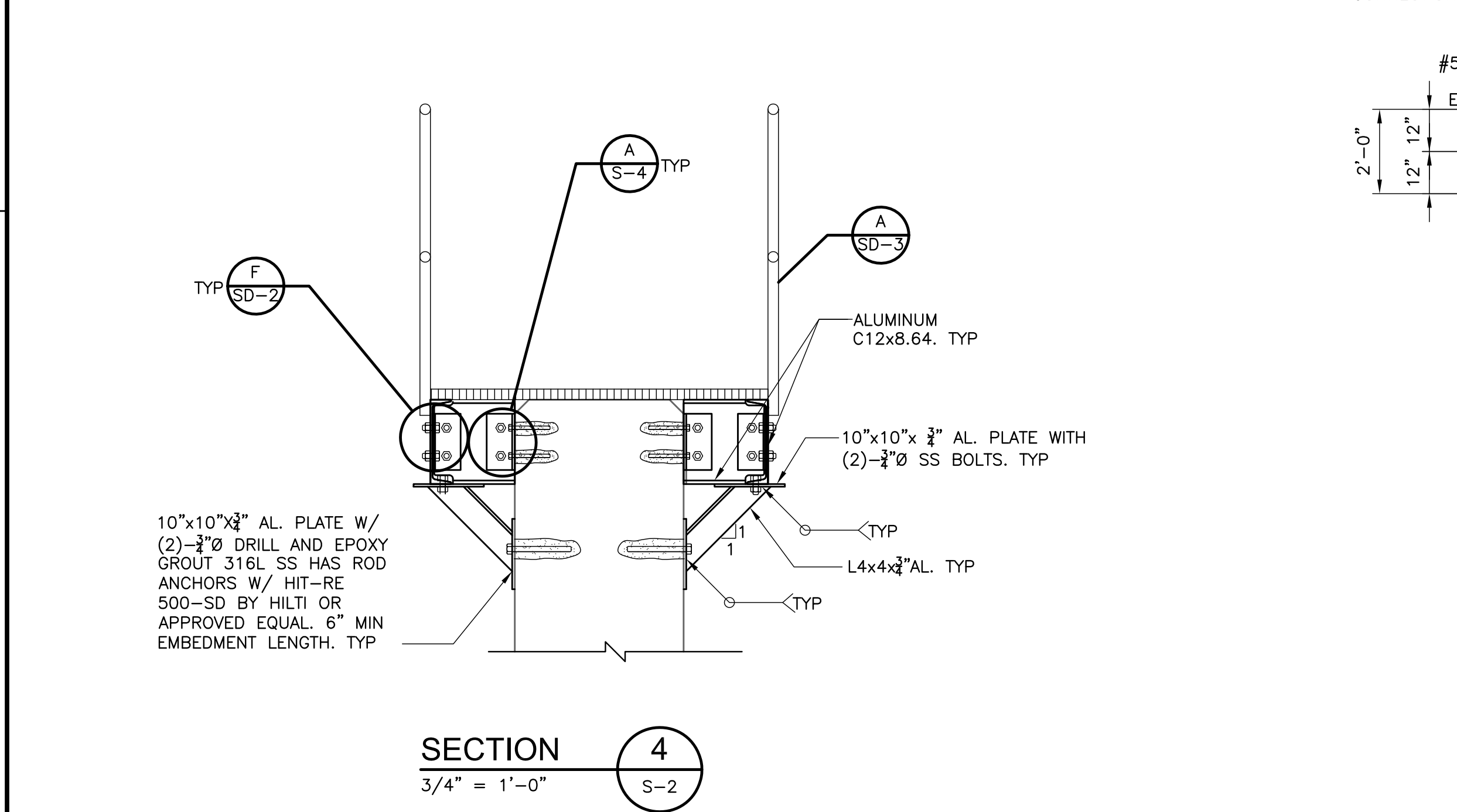
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PROJECT NO. 6021-70628 FILE NAME: S002MDPL
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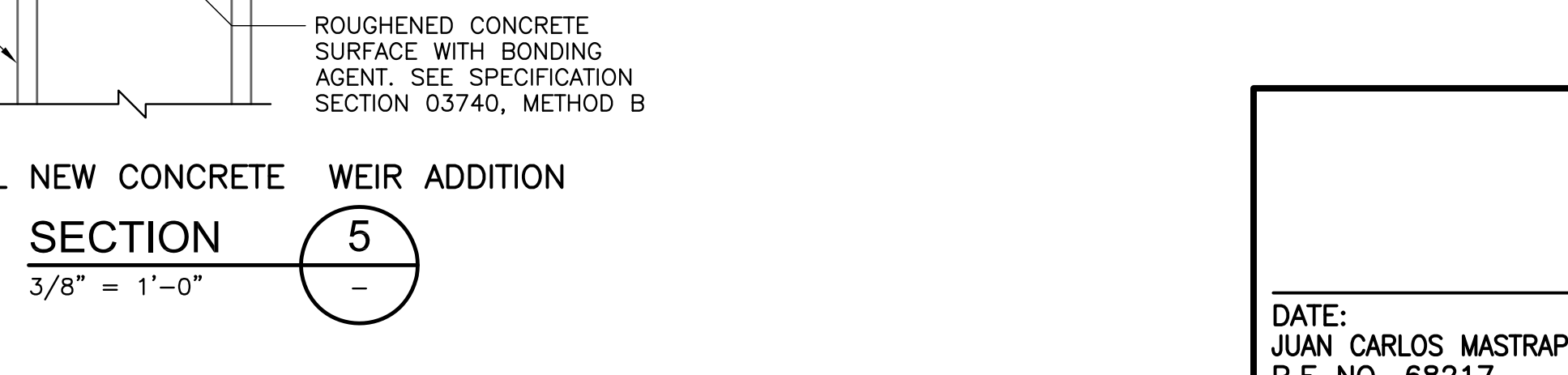
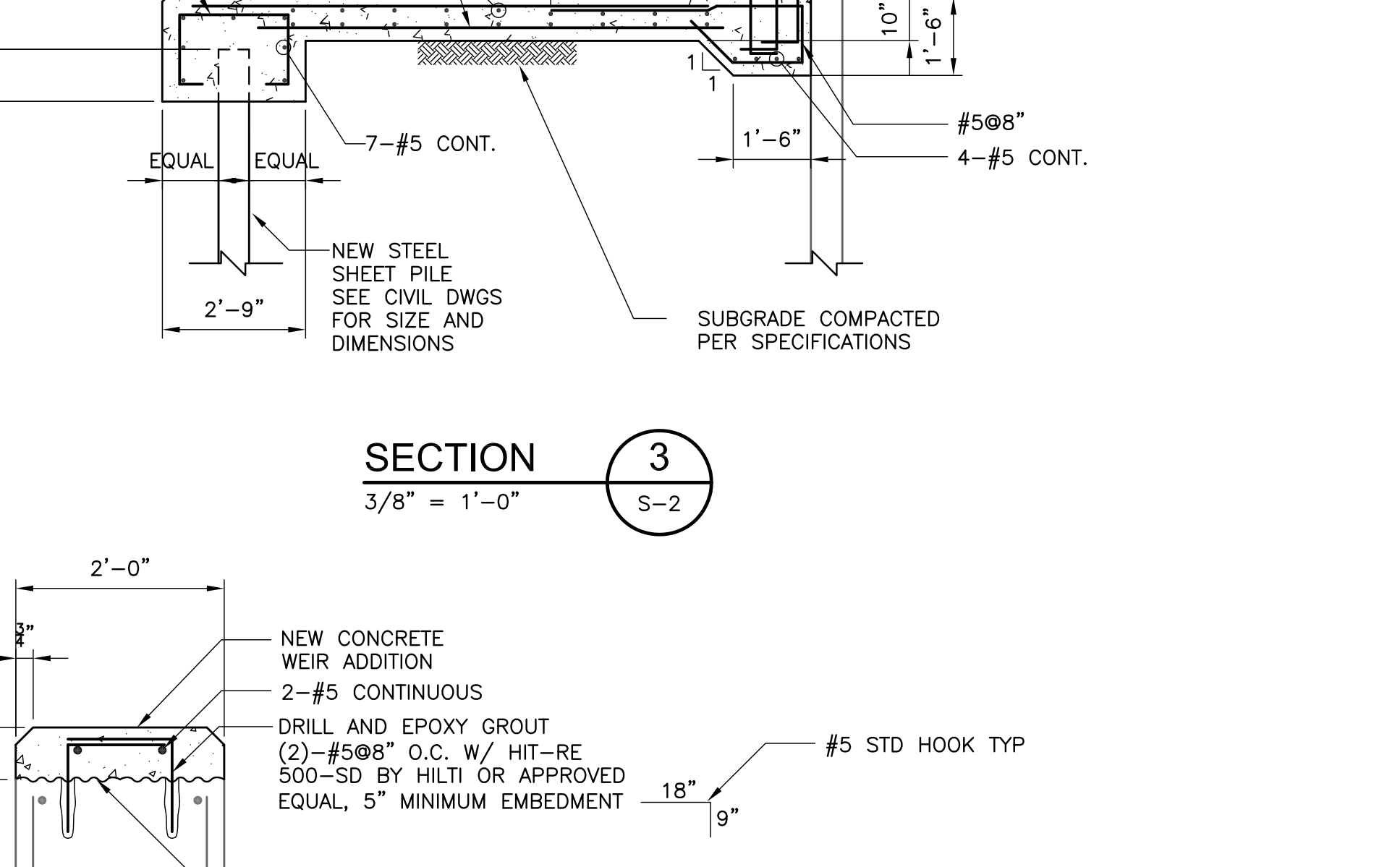
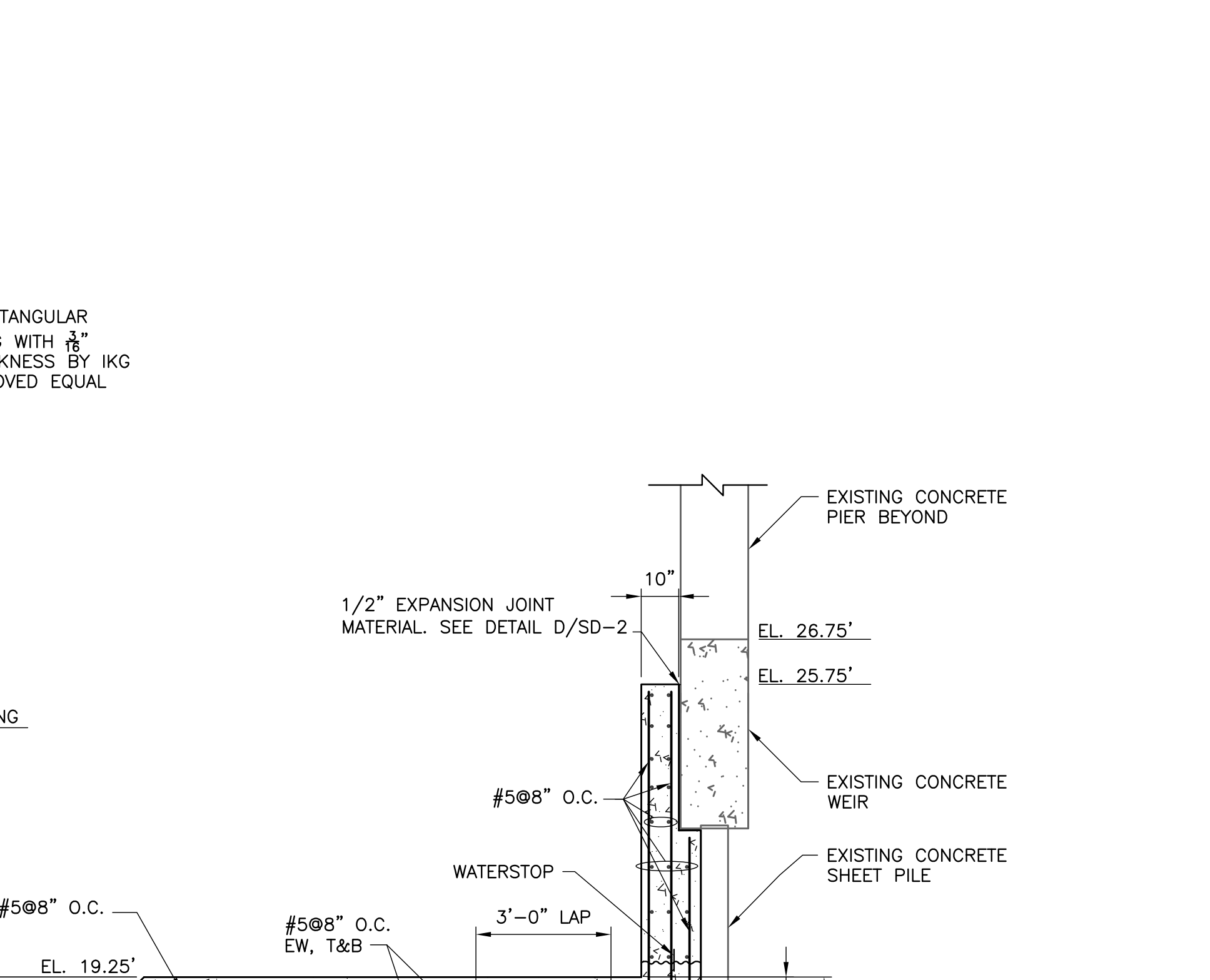
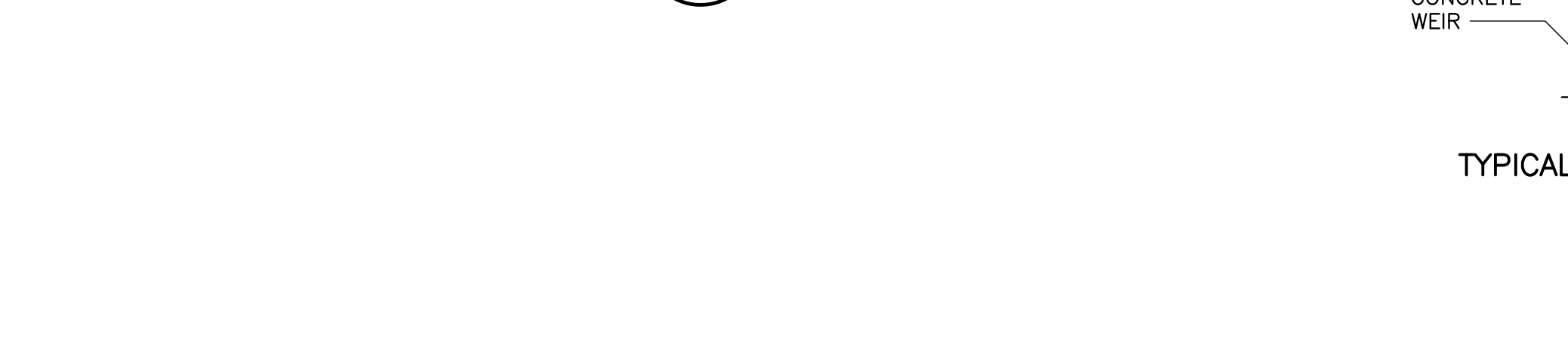
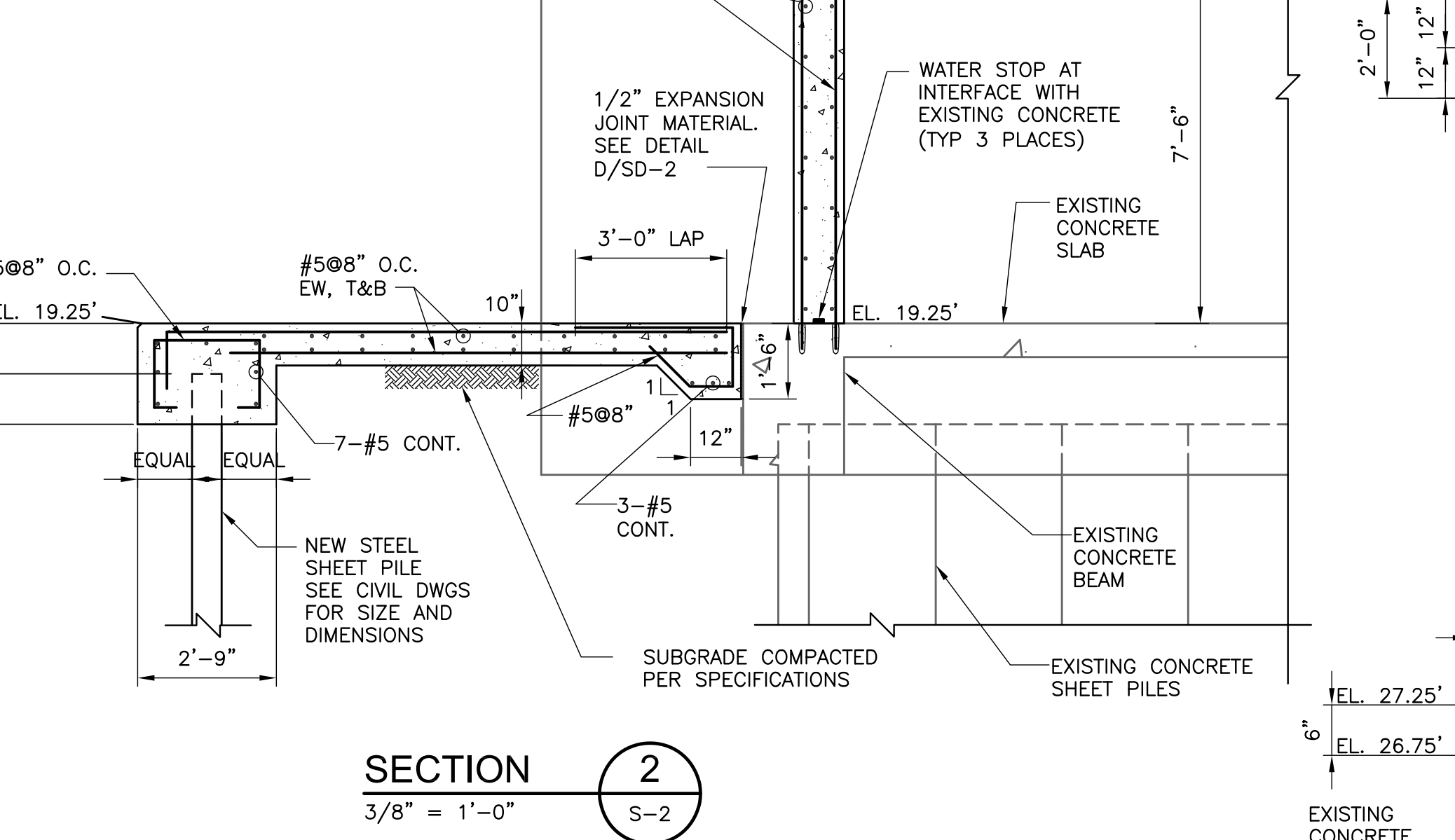
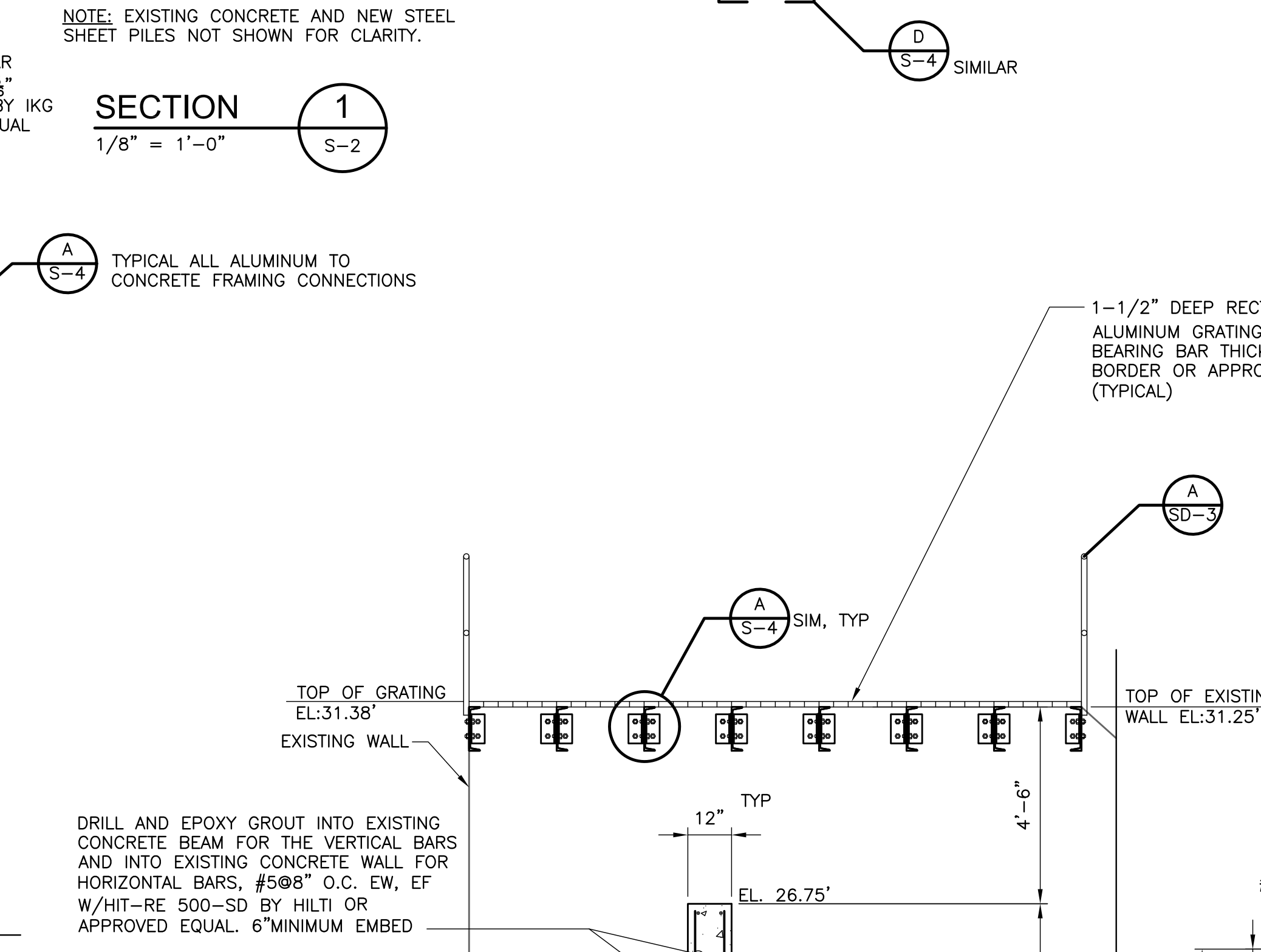


* VERIFY EXACT LOCATION FOR THE C12x8.64 ALUMINUM BEAMS WHICH SUPPORT THE HOISTING MECHANISM WITH MECHANICAL ENGINEER AND THE SLUICE GATE MANUFACTURER PRIOR TO ERECTION

PLAN
3/8" = 1'-0"



REV. NO.	DATE	DRWN	CHKD	REMARKS



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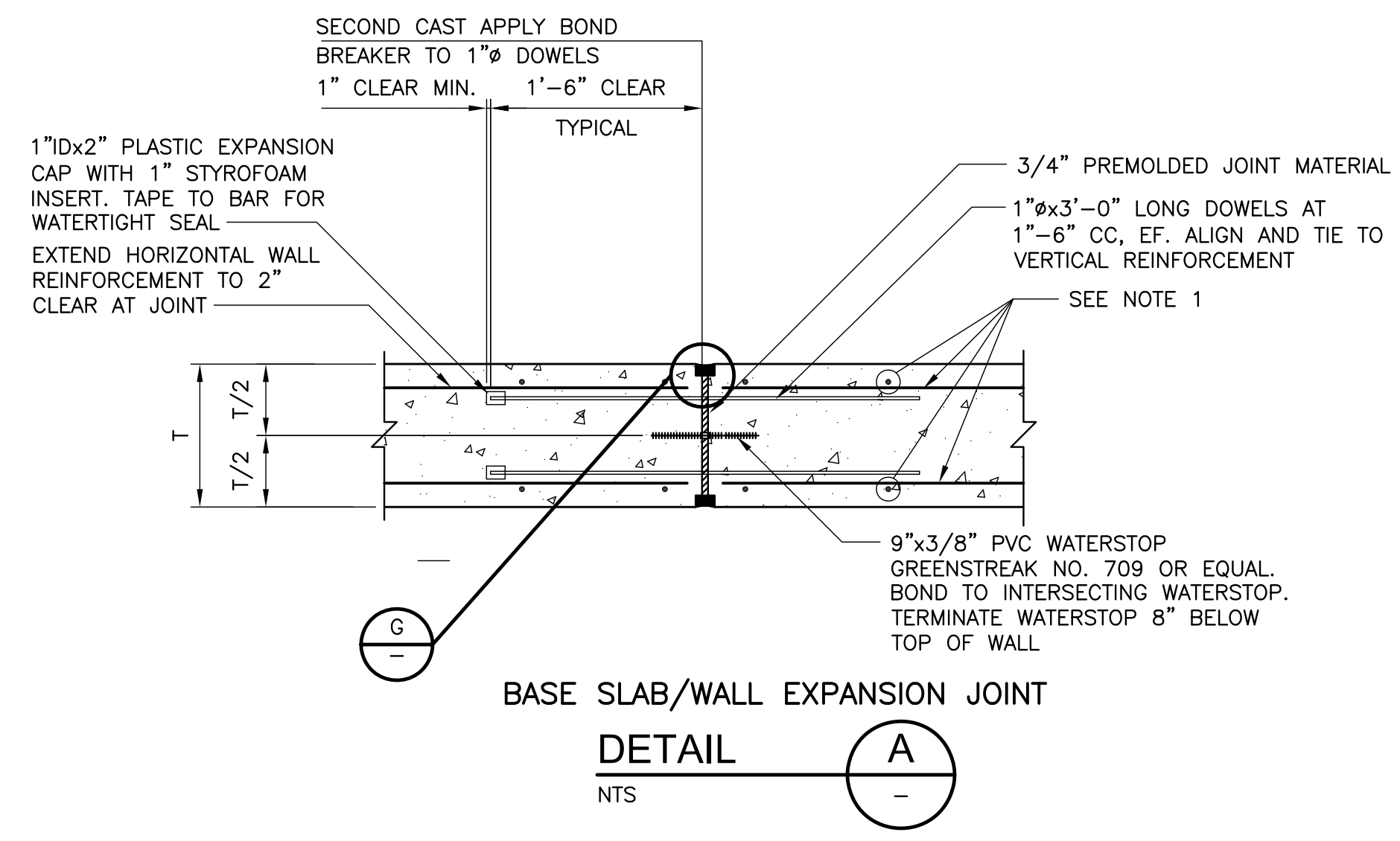
DESIGNED BY: J.C. MASTRAPA
 DRAWN BY: J.C. MASTRAPA
 SHEET CHK'D BY: T. VERWEY
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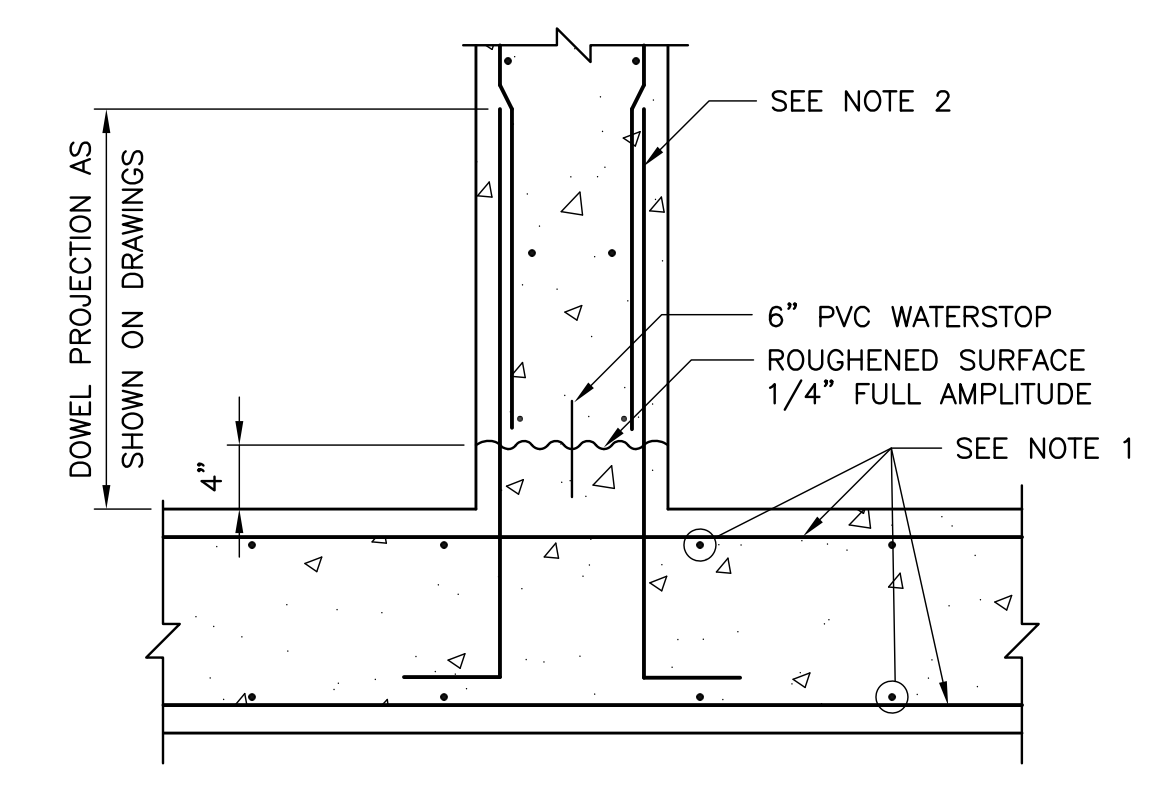
LEON COUNTY, FLORIDA
 LAKE MUNSON DAM
 REHABILITATION

PARTIAL PLAN, SECTIONS AND DETAILS

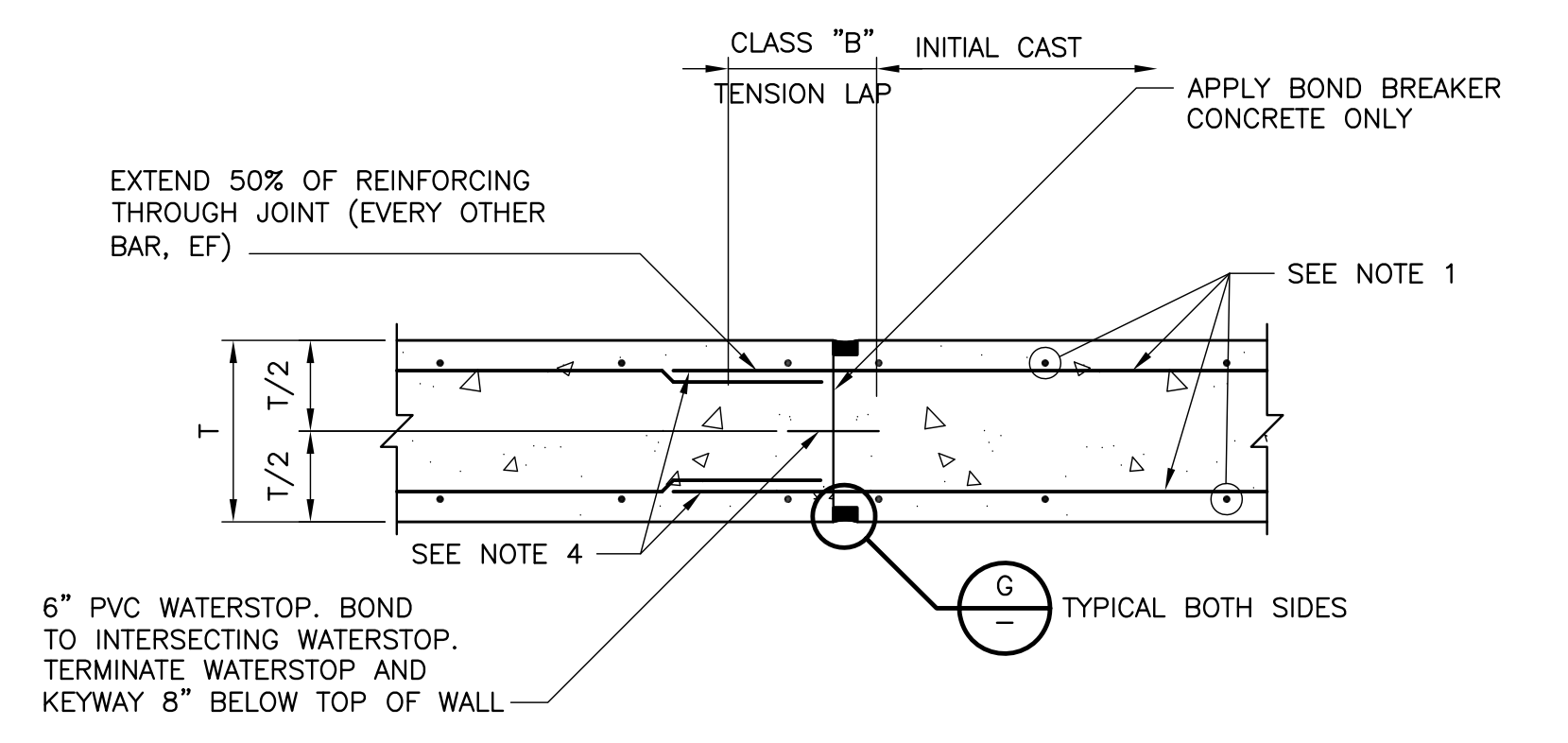
DATE: JUAN CARLOS MASTRAPA
 P.E. NO. 68217
 PROJECT NO. 6021-70628
 FILE NAME: S003MDS0
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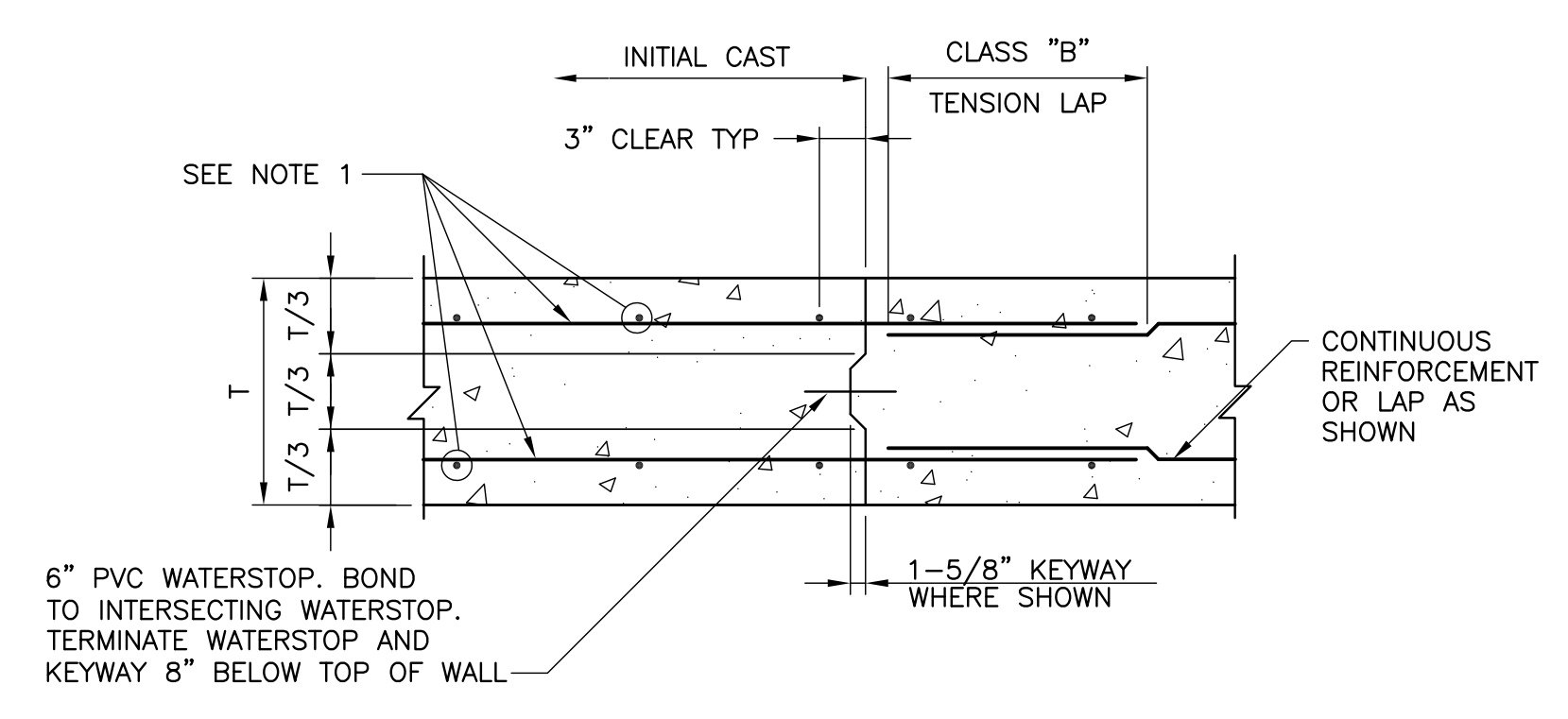
BASE SLAB/WALL EXPANSION JOINT
DETAIL A
NTS



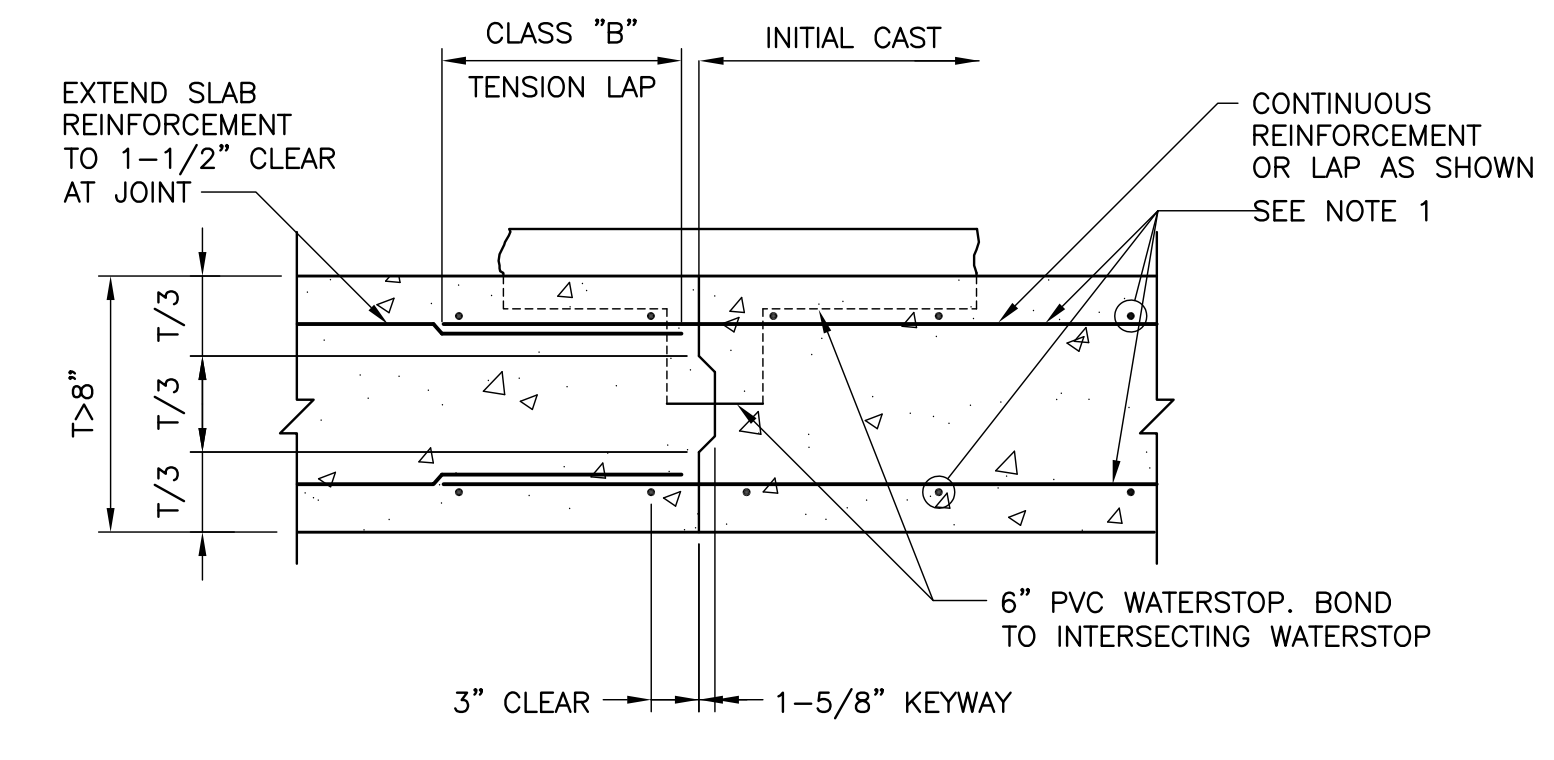
WALL BASE CONSTRUCTION JOINT
DETAIL B
NTS



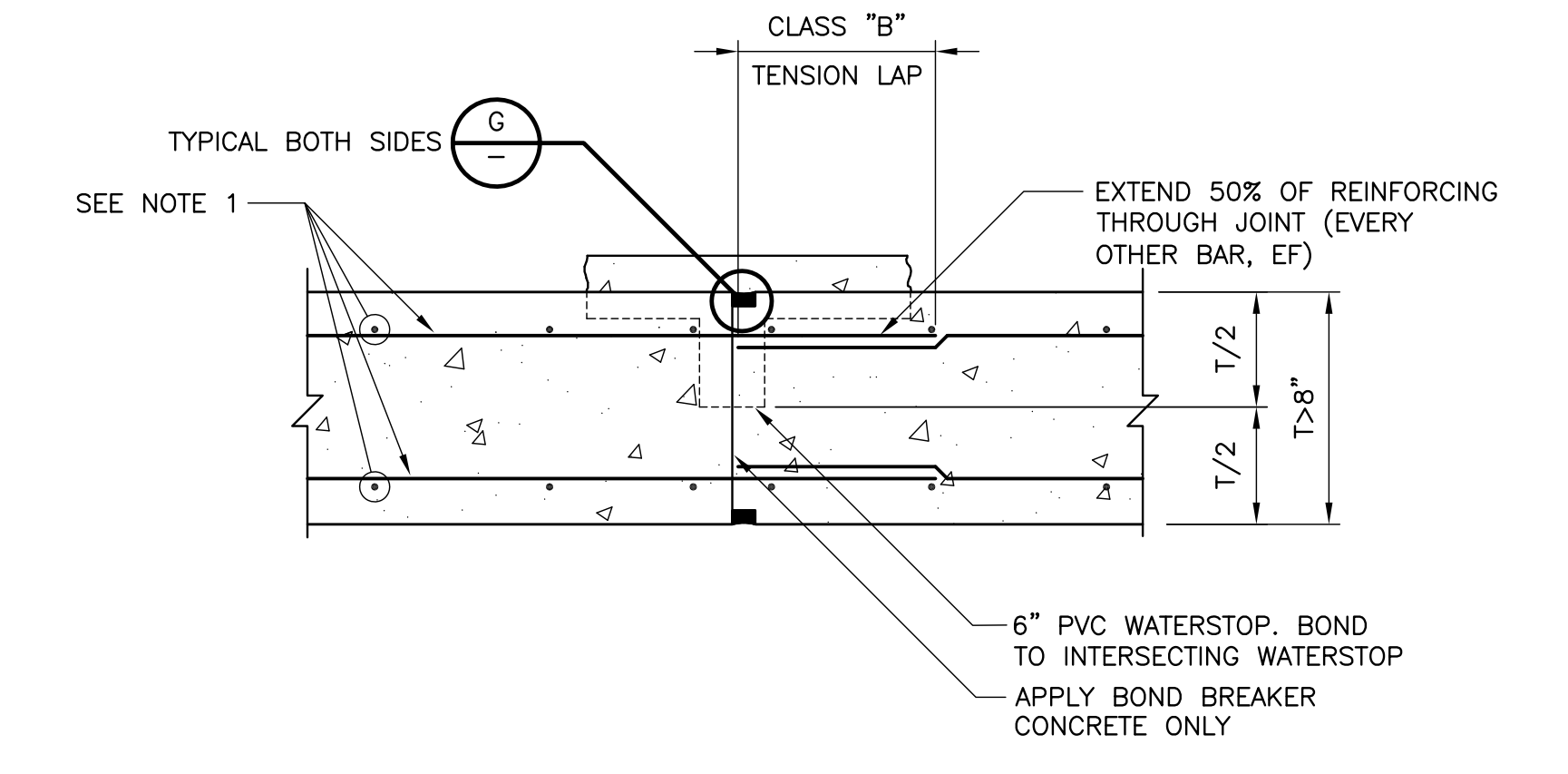
WALL CONTROL JOINT
DETAIL C
NTS



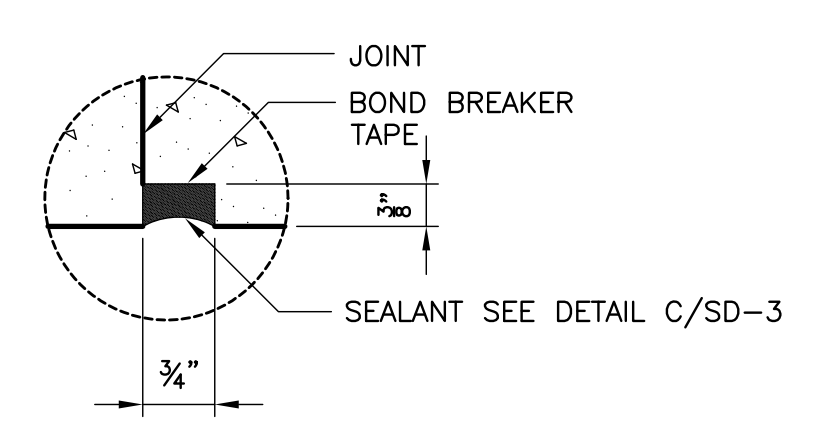
WALL CONSTRUCTION JOINT
DETAIL D
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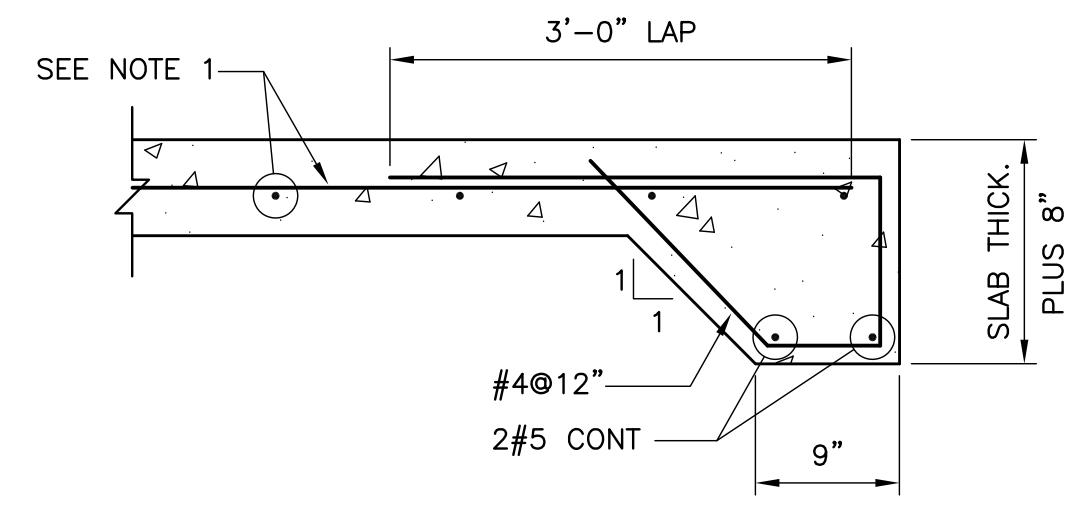
BASE/ELEVATED SLAB CONSTRUCTION JOINT
DETAIL E
NTS



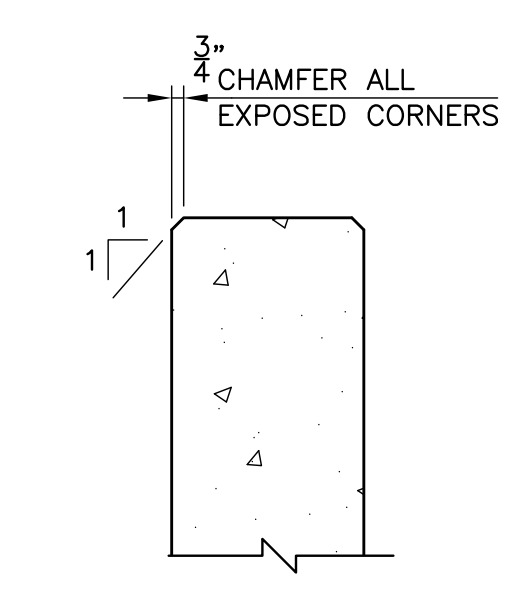
BASE/ELEVATED SLAB CONTROL JOINT
DETAIL F
NTS



CONTROL JOINT SEALANT
DETAIL G
NTS



THICKENED EDGE SLAB
DETAIL H
NTS



CHAMFER
DETAIL I
NTS

- NOTES:
- BASIC SLAB/WALL/BEAM REINFORCING AS SHOWN ON DESIGN DRAWINGS
 - FOR DOWEL SIZE & SPACING SEE DESIGN DRAWINGS
SEE DESIGN DRAWINGS

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	J.C. MASTRAPA
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CROSS CHK'D BY:	K. FRANCOFORTE
APPROVED BY:	J.C. MASTRAPA
DATE:	JANUARY 2011

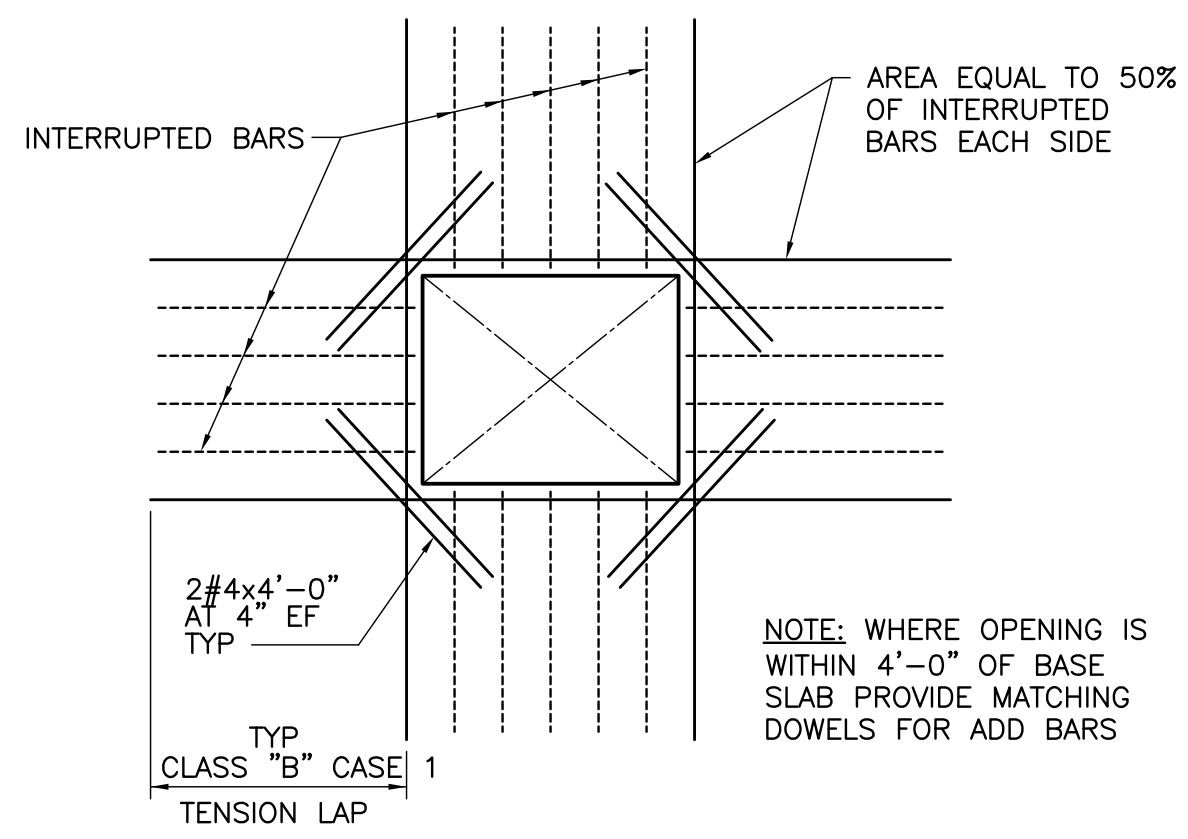
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LEON COUNTY, FLORIDA
LAKE MUNSON DAM
REHABILITATION

STANDARD DETAILS

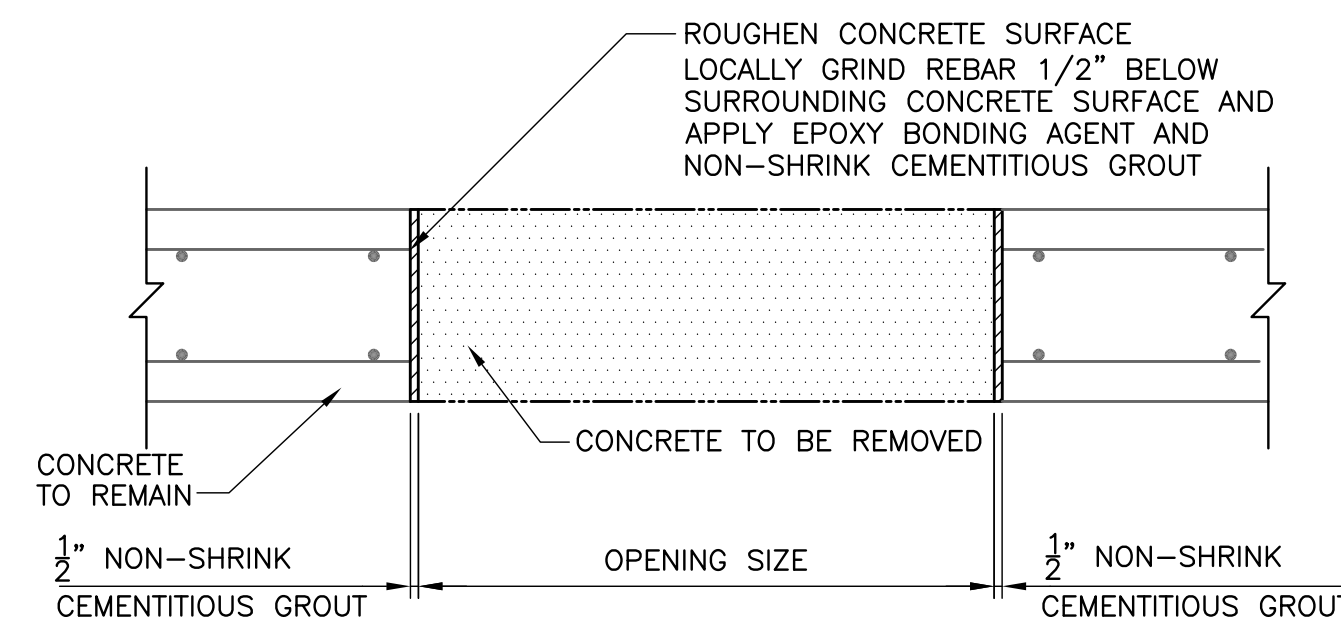
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PROJECT NO.	6021-70628
FILE NAME:	SD01STD1
SHEET NO.	SD-1

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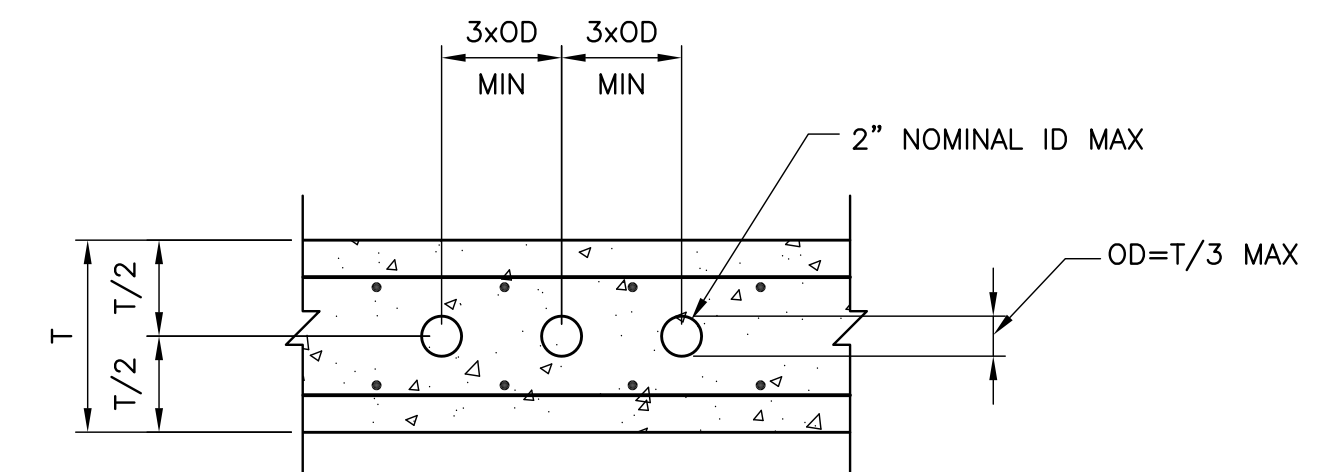
REINFORCEMENT AT RECTANGULAR OPENINGS GREATER THAN 12"

DETAIL A NOT TO SCALE



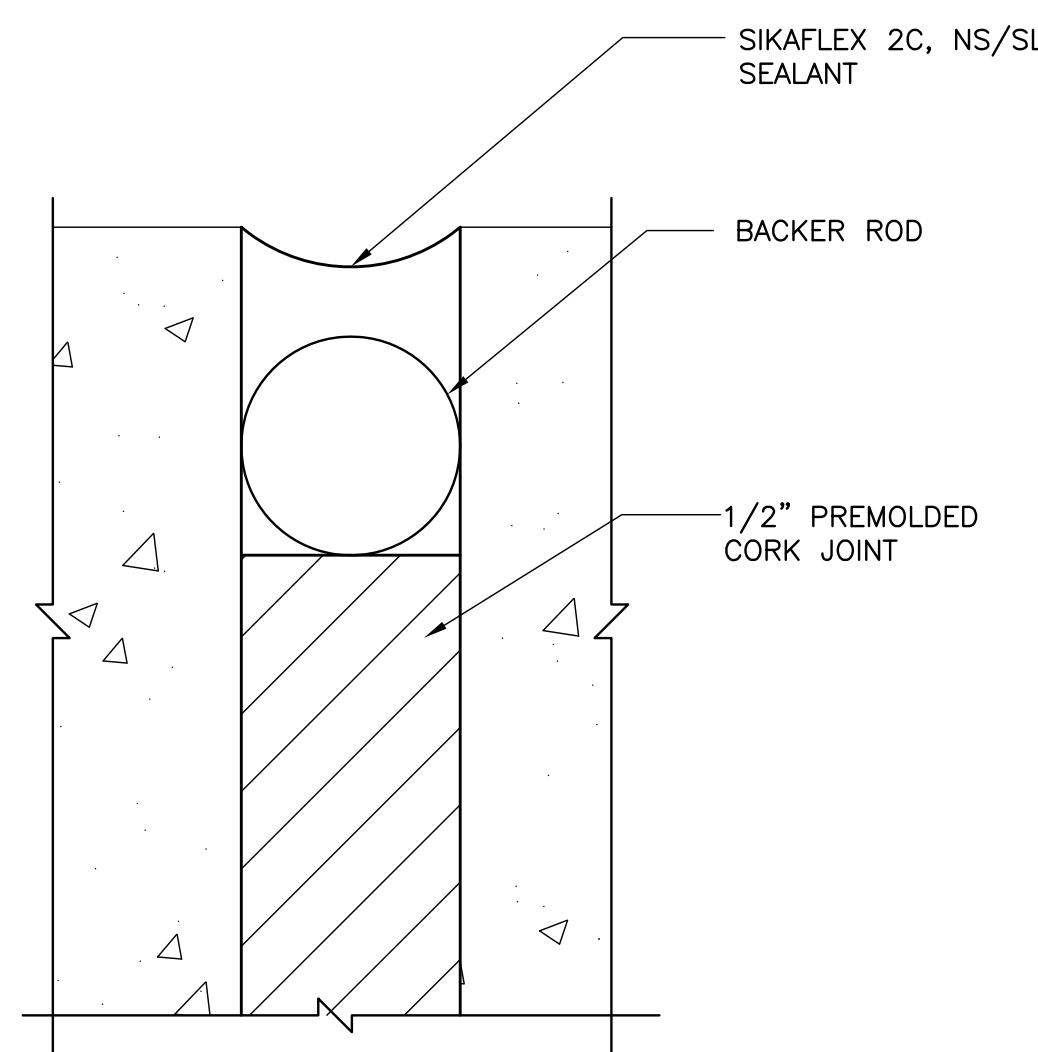
DEMOLITION OF EXISTING CONCRETE

DETAIL B 1"=1'-0"



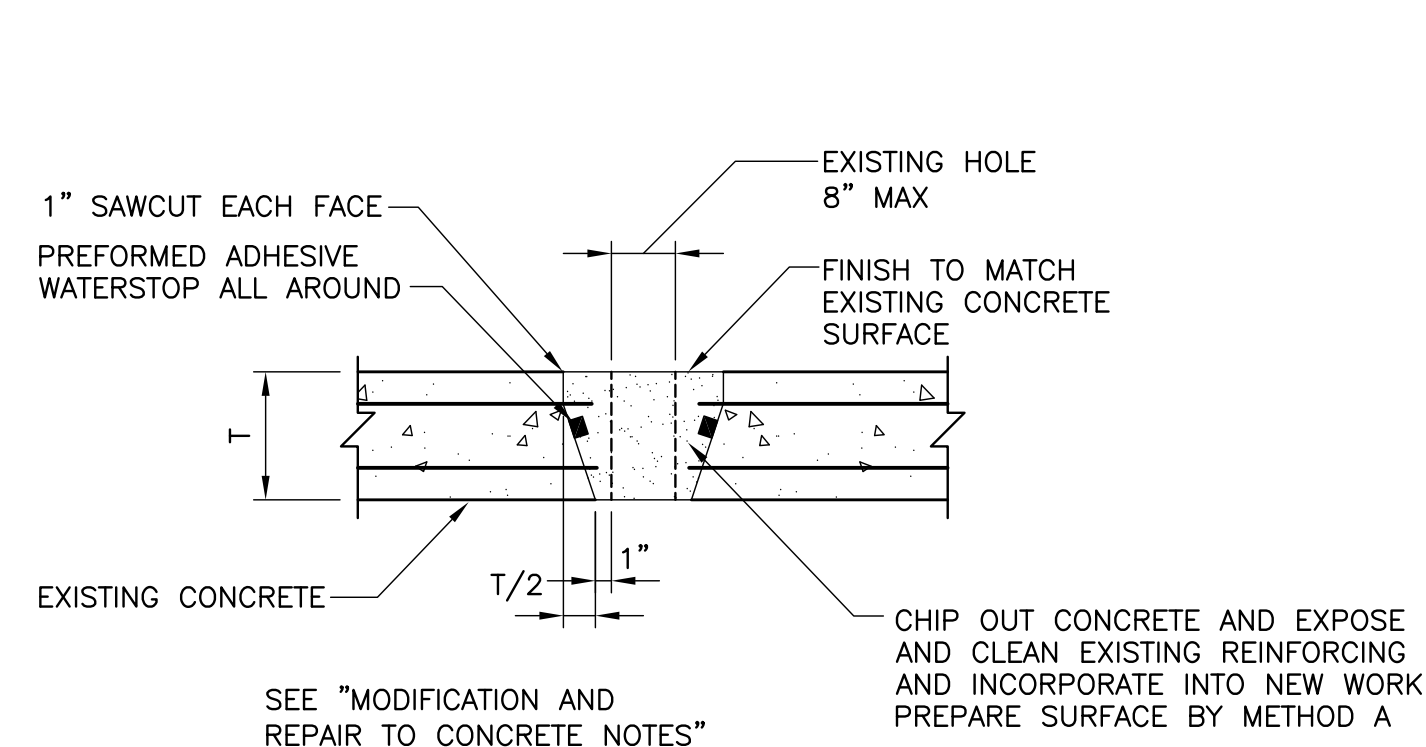
CONDUIT IN SLAB OR WALL

DETAIL C 1"=1'-0"



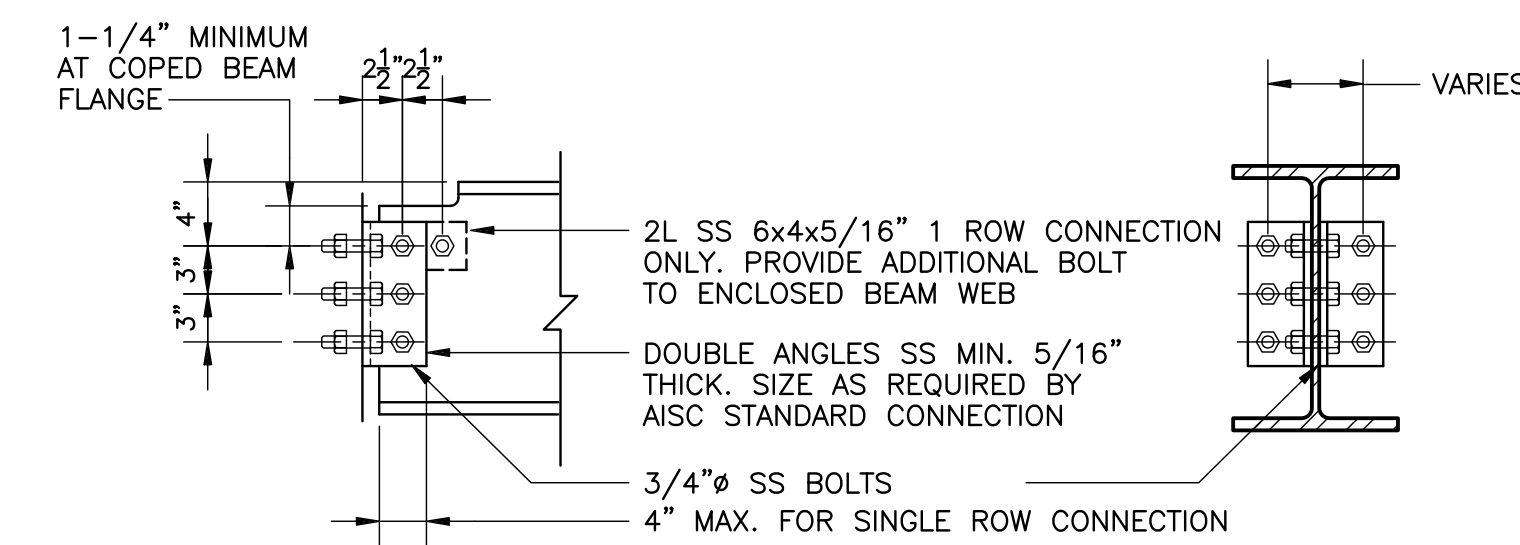
EXPANSION JOINT FILLER

DETAIL D NTS



SMALL HOLE PATCH

DETAIL E 1"=1'-0"



TYPICAL FRAMING CONNECTION

DETAIL F 1"=1'-0"

NOMINAL BEAM DEPTH, INCHES	ROWS OF BOLTS	LENGTH (3) OF ANGLE
36	7	1'-8 1/2"
30-33	6	1'-5 1/2"
24-27	5	1'-2 1/2"
16-21	4	11 1/2"
12-15	3	8 1/2"
8-10	2	5 1/2"
6	1	3"

- NOTES:
- NUMBER OF ROWS IS EQUAL TO NUMBER OF BOLTS TO ENCLOSED WEB
 - ALL FRAMING CONNECTIONS SHALL CONFORM TO SCHEDULE UNLESS DETAILED OTHERWISE ON FRAMING DRAWINGS
 - ADD 1-1/2" TO ANGLE LENGTH FOR STAGGERED BOLT CONNECTIONS
 - USE STAINLESS STEEL BOLTS FOR ALL ALUMINUM

CLASS B TENSION LAP SPLICE LENGTHS IN WALLS AND SLABS (INCHES)

BAR SIZE	BLACK STEEL	
	f'c=4000 psi	
	TOP BARS	OTHER BARS
3	15	12
4	20	15
5	29	23
6	40	31
7	65	50
8	81	62
8*	49	37
9*	60	46
10*	74	57

TENSION DEVELOPMENT LENGTHS IN WALLS AND SLABS (INCHES)

BAR SIZE	BLACK STEEL	
	f'c=4000 psi	
	TOP BARS	OTHER BARS
3	12	12
4	15	12
5	22	17
6	31	24
7	50	38
8	62	48
8*	37	29
9*	46	36
10*	57	44

- NOTES:
- MINIMUM BAR SPACING = 6" INCHES ON CENTER.
 - MINIMUM CONCRETE COVER = 1", EXCEPT AS NOTED BY * . * INDICATES MINIMUM CONCRETE COVER= 2".
 - A TOP BAR IS A HORIZONTAL BAR WHERE MORE THAN 12" OF FRESH CONCRETE IS CAST DIRECTLY BELOW THE BAR. WHERE HORIZONTAL WALL REINFORCEMENT IS UNIFORMLY SPACED IN A VERTICAL PLANE AT 12" MAXIMUM SPACING, LENGTHS MAY BE AS FOR "OTHER BARS".
 - LENGTHS FOR BEAMS AND COLUMNS SHALL BE AS SHOWN ON THE DRAWINGS.

LAP SPLICE AND DEVELOPMENT LENGTHS BLACK REINFORCING STEEL

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DESIGNED BY: J.C. MASTRAPA
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 APPROVED BY: J.C. MASTRAPA
 DATE: JANUARY 2011

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LEON COUNTY, FLORIDA
 LAKE MUNSON DAM
 REHABILITATION

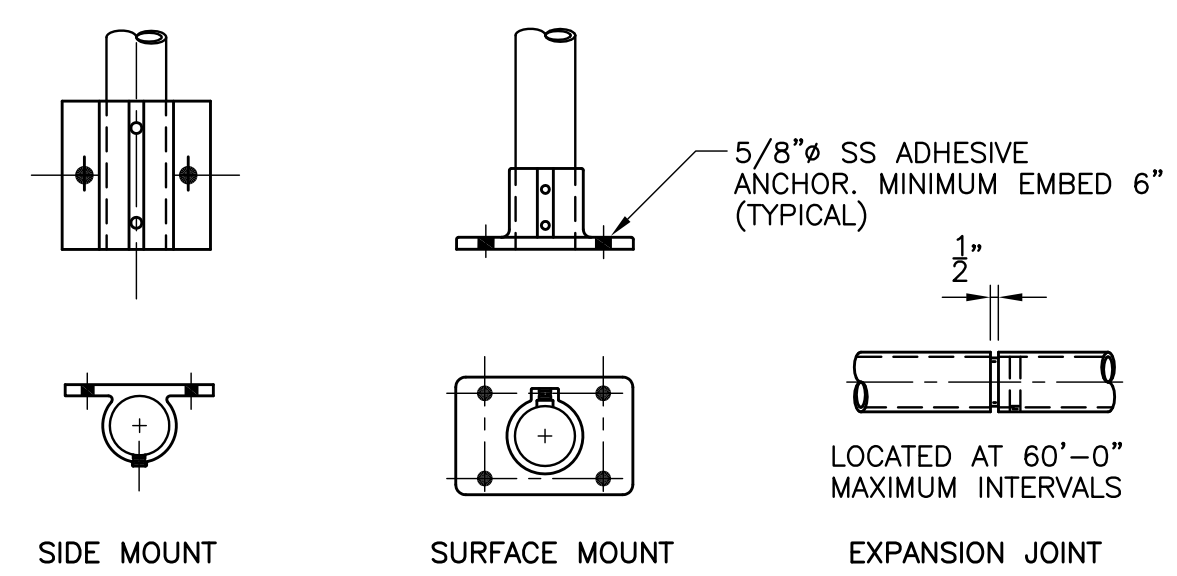
STANDARD DETAILS

DATE:
 JUAN CARLOS MASTRAPA
 P.E NO. 68217

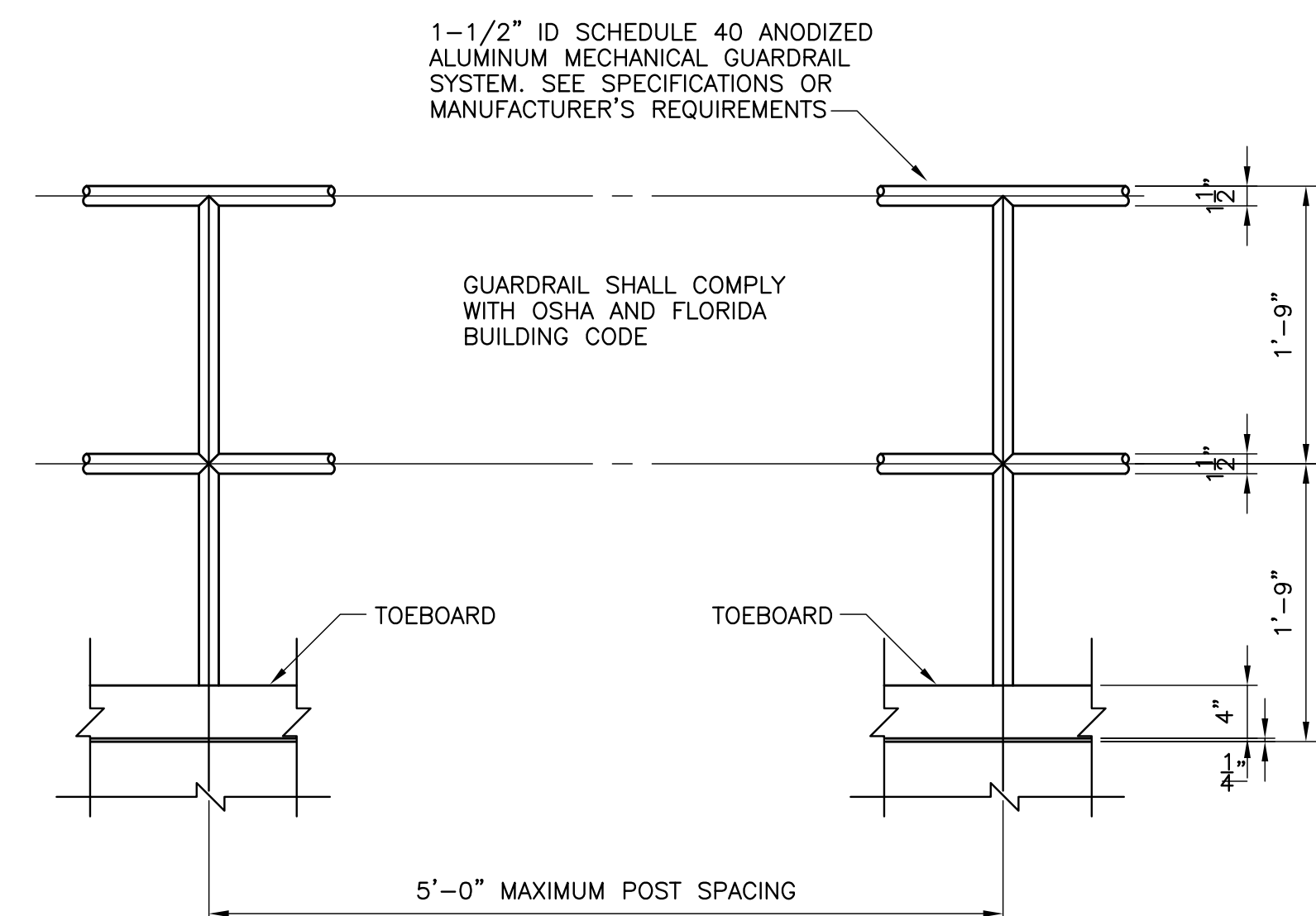
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SHEET NO.
 SD-2

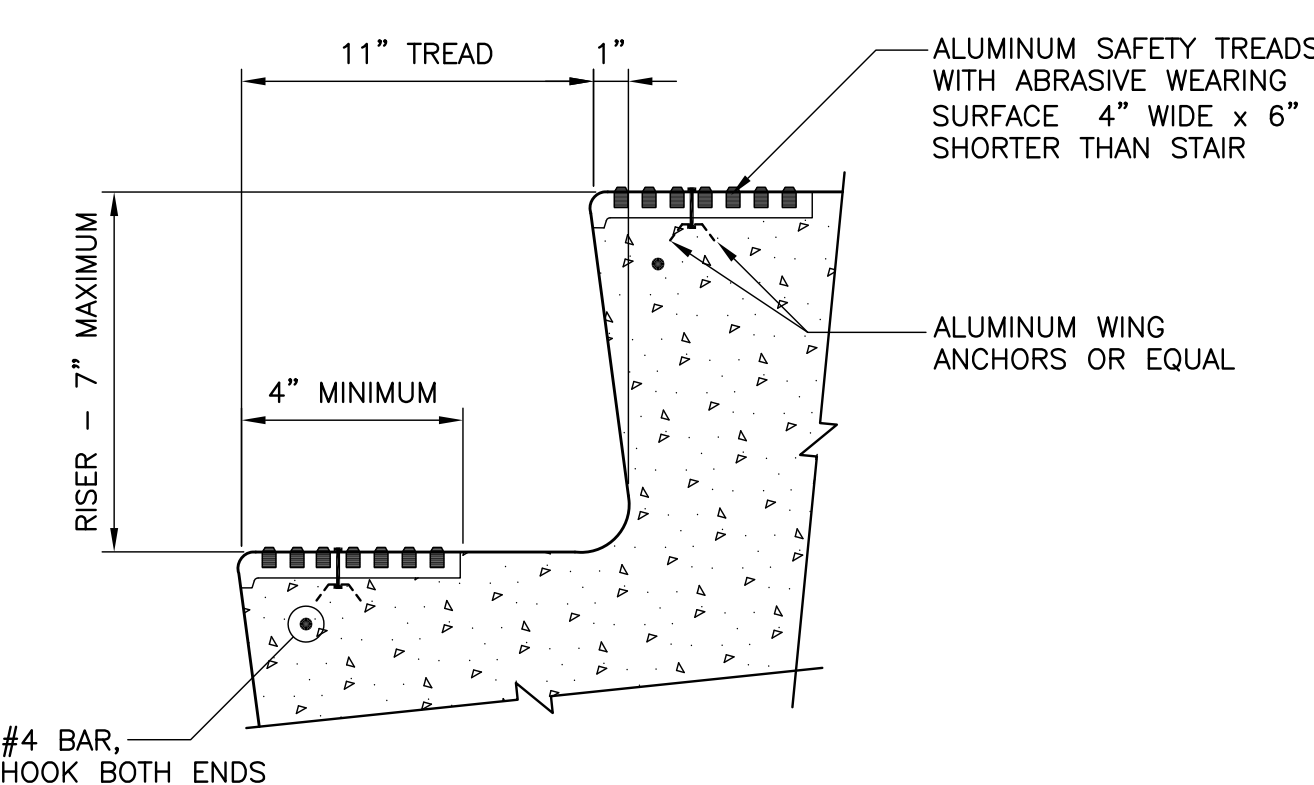
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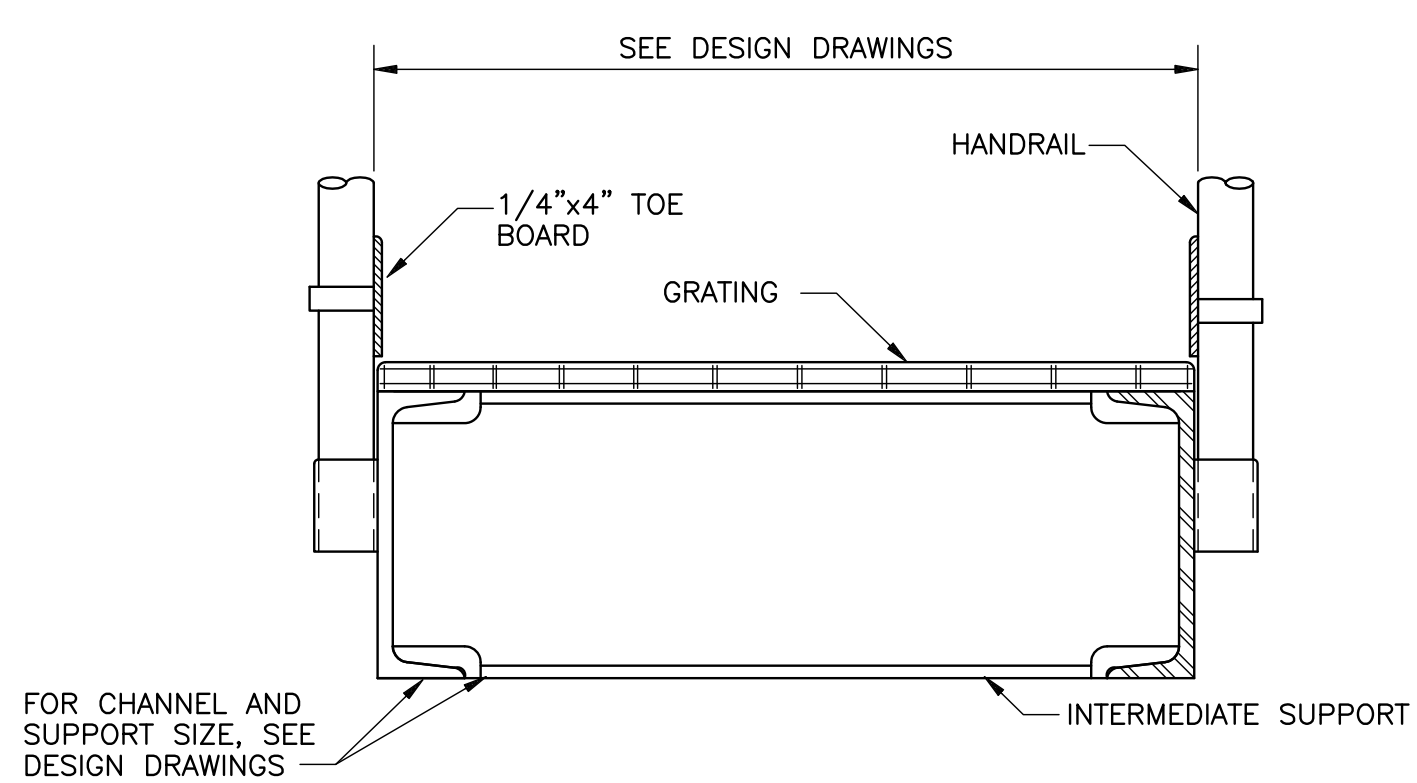
CONNECTIONS FOR NON-REMOVABLE GUARDRAIL



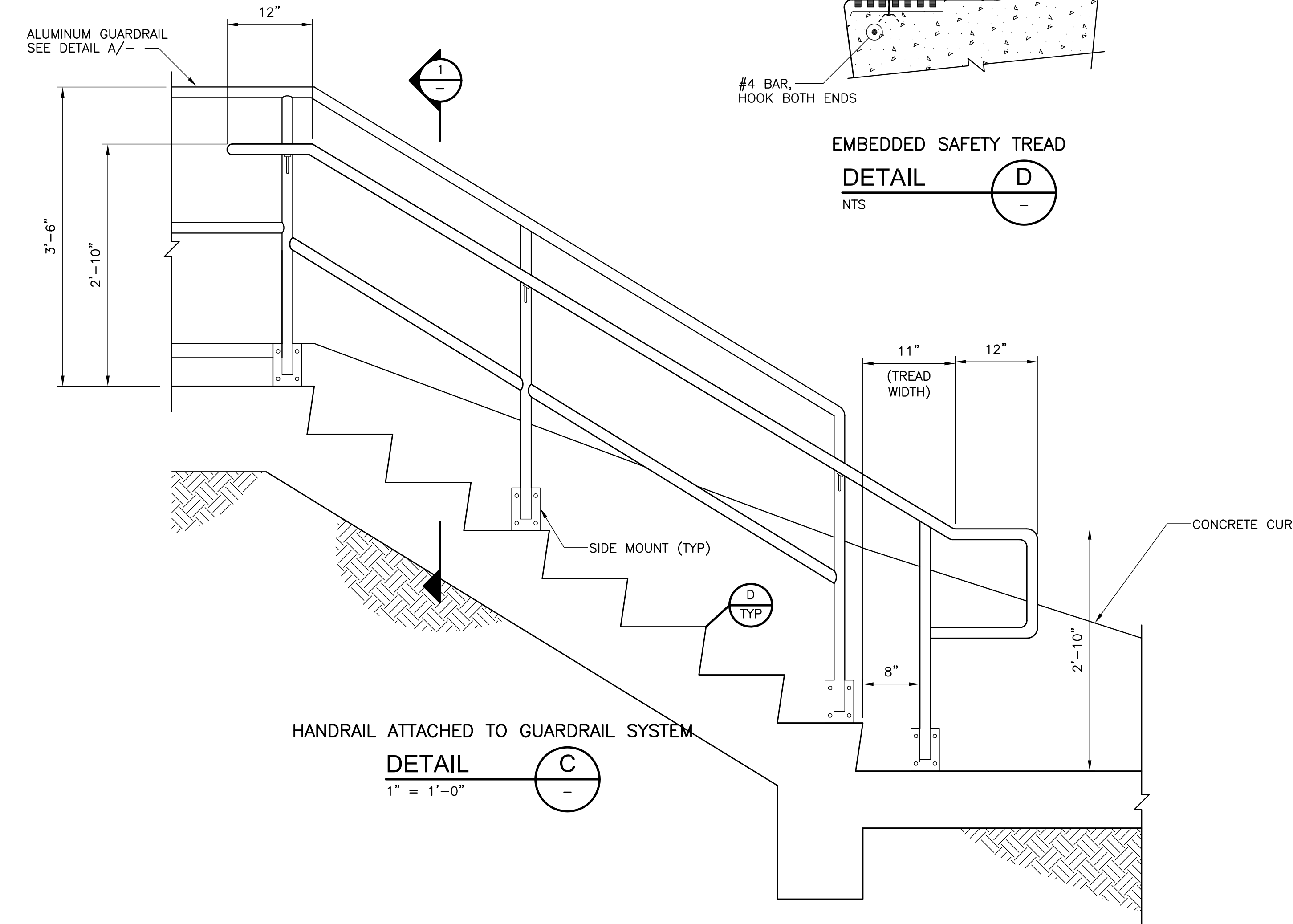
GUARDRAIL
DETAIL A
1" = 1'-0"



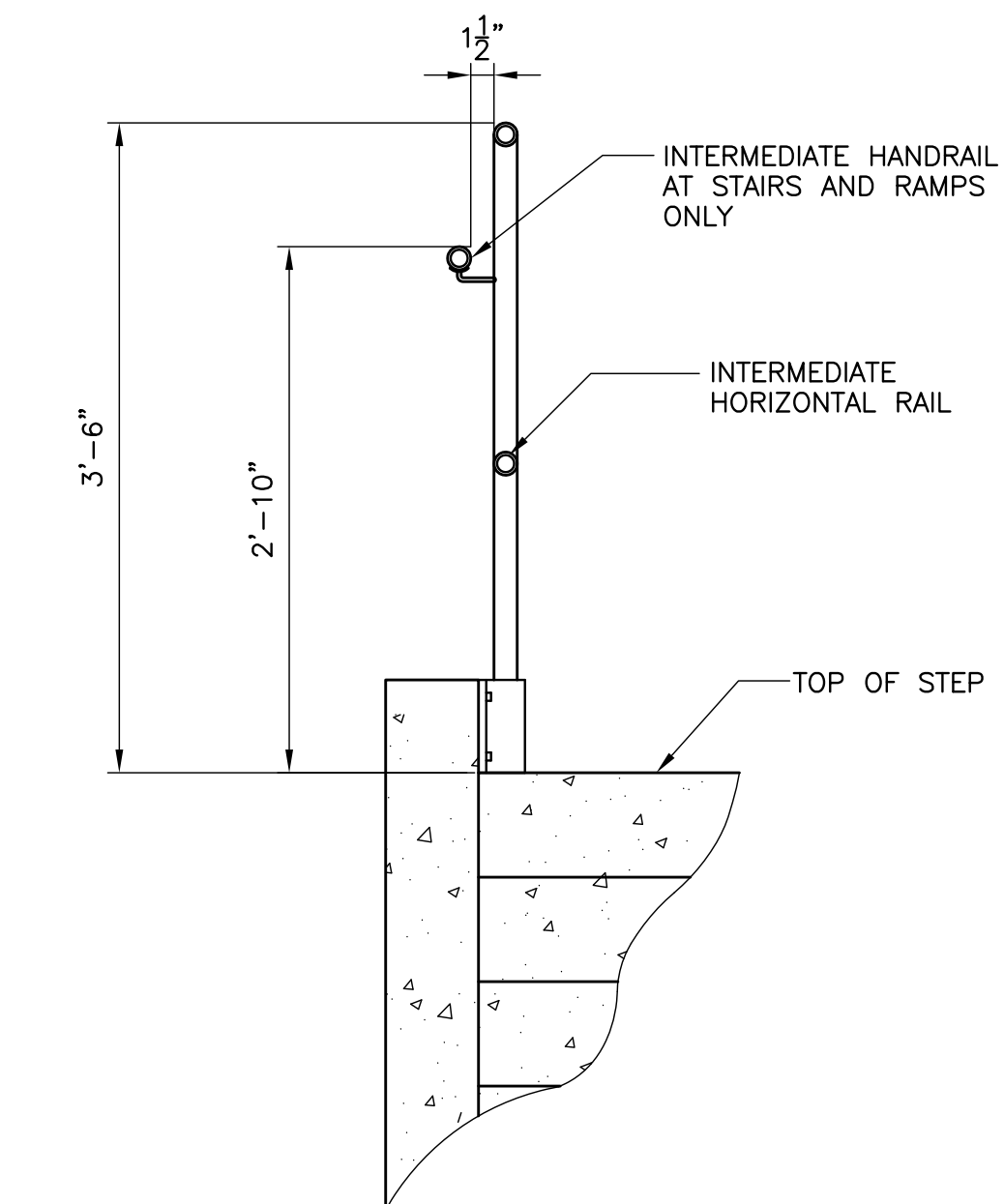
EMBEDDED SAFETY TREAD
DETAIL D
NTS



TYPICAL WALKING PLATFORM SECTION
DETAIL B
1" = 1'-0"



HANDRAIL ATTACHED TO GUARDRAIL SYSTEM
DETAIL C
1" = 1'-0"



SECTION 1
1" = 1'-0"

GUARDRAIL NOTES:

1. ALUMINUM EMBEDDED IN CONCRETE SHALL BE PAINTED WITH ONE SHOP COAT OF HEAVY BITUMASTIC.
2. ALUMINUM SHAPES IN CONTACT WITH CONCRETE SHALL BE SEPARATED BY A 1/32" NEOPRENE GASKET OR ANY CASE WHERE TWO DIFFERENT METALS ARE TO BE IN CONTACT. A NEOPRENE GASKET SHALL BE PROVIDED.
3. HANDRAILS, GUARDRAILS, POSTS, BRACKETS AND MOUNTINGS SHALL MEET THE FLORIDA BUILDING CODE AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) LOADING REQUIREMENTS.
4. TOP OF ALL GUARDRAILS SHALL BE 42" HIGH ABOVE THE FINISH FLOOR OR WALKWAY. THE CLEAR DISTANCE BETWEEN THE TOP AND INTERMEDIATE RAILS MEASURED AT RIGHT ANGLES TO THE RAILS SHALL NOT EXCEED 21".

ALUMINUM GUARDRAIL AND HANDRAIL NOTES:

GUARDRAILS

GUARDRAILS SHALL BE TWO RAIL, 1.5" DIAMETER SYSTEM. THE CENTERLINE OF THE INTERMEDIATE PARALLEL RAIL SHALL BE AT THE POST MID-POINT BETWEEN THE TOP RAIL AND KICKPLATE (AT HORIZONTAL SURFACES) AND BETWEEN TOP RAIL AND STRINGER (AT STAIRS/STEPS). HOWEVER, MAXIMUM CLEAR DISTANCE BETWEEN RAILS MEASURED AT RIGHT ANGLES TO RAILS SHALL BE 21".

GUARDRAILS AT HORIZONTAL SURFACES (LANDINGS), SHALL BE 42" HIGH AND SHALL BE PROVIDED WITH A 4" KICKPLATE.

- NOTES**
1. ALUMINUM EMBEDDED IN CONCRETE MUST BE PAINTED WITH ONE SHOP COAT OF HEAVY BITUMASTIC.
 2. ALUMINUM SHAPES IN CONTACT WITH CONCRETE MUST BE SEPARATED BY A 1/32" NEOPRENE GASKET OR ANY CASE WHERE TWO DIFFERENT METALS ARE TO BE IN CONTACT. A NEOPRENE GASKET MUST BE PROVIDED.
 3. HANDRAILS, GUARDRAILS, POSTS, BRACKETS AND MOUNTINGS SHALL MEET THE FLORIDA BUILDING CODE AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) LOADING REQUIREMENTS.
 4. TOP OF ALL GUARDRAILS SHOULD BE 42" HIGH ABOVE THE FINISH FLOOR OR WALKWAY. THE CLEAR DISTANCE BETWEEN THE TOP AND INTERMEDIATE RAILS MEASURED AT RIGHT ANGLES TO THE RAILS SHALL NOT EXCEED 21".
 5. ALL WALKWAYS SHALL USE GRATING UNLESS CHECKERED PLATE IS SHOWN ELSEWHERE ON THE DRAWINGS.

Xref's: [CDM_2436_] Images: [] Last saved by: SUTHARON Time: 1/24/2011 4:29:29 PM File name: C:\cdm\author\author\01363556\SD03STD1.dwg

REV. NO.	DATE	DRWN	CHKD	REMARKS

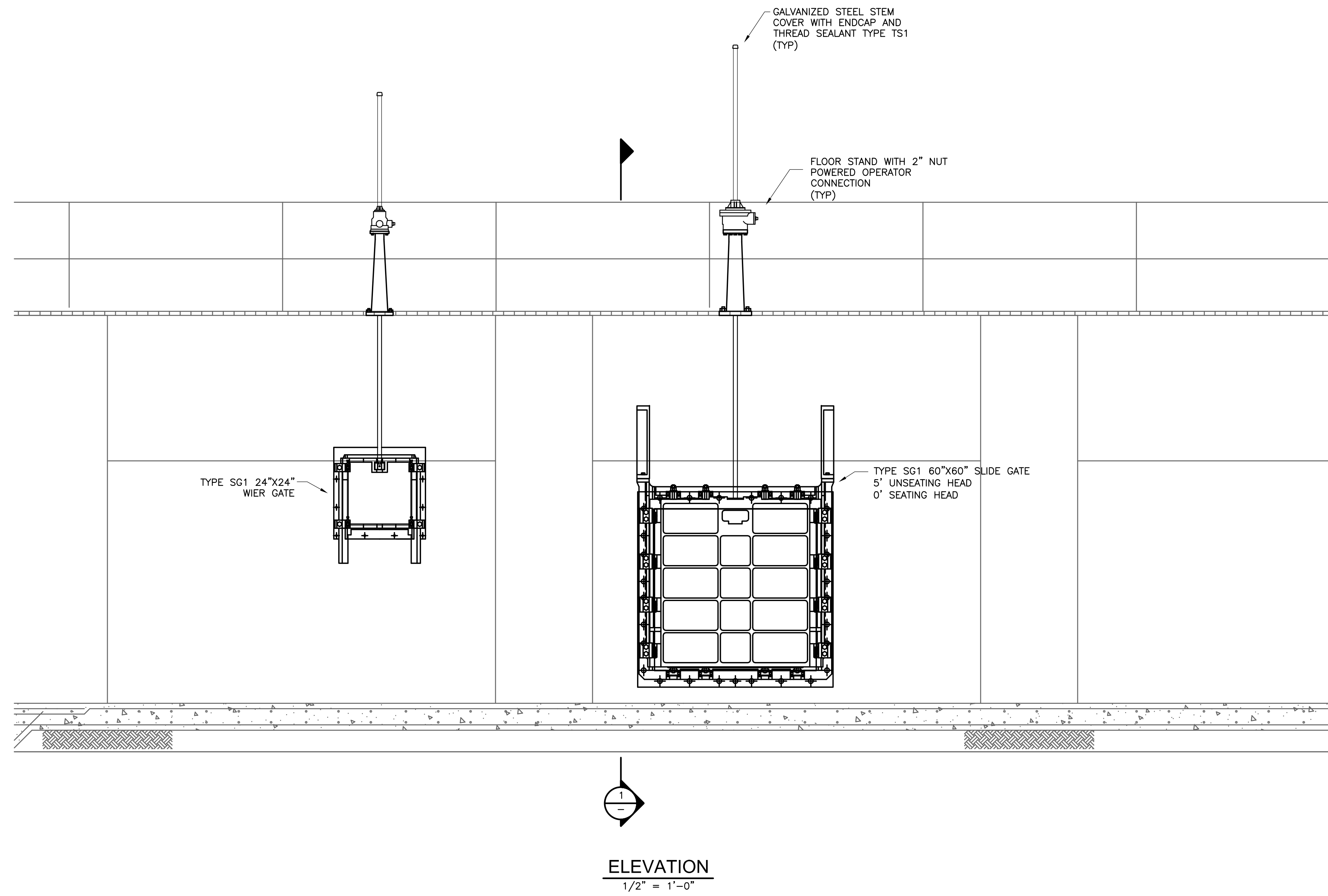
DESIGNED BY:	J.C. MASTRAPA
DRAWN BY:	P. SCHIAVO
SHEET CHK'D BY:	T. VERWEY
CROSS CHK'D BY:	K. FRANCOFORTE
APPROVED BY:	J.C. MASTRAPA
DATE:	JANUARY 2011

CDM
Camp Dresser & McKee Inc.
3522 Thomasville Road, Suite 300
Tallahassee, FL 32309
Tel: (850) 386-9500
FL COA No. EB-0000020
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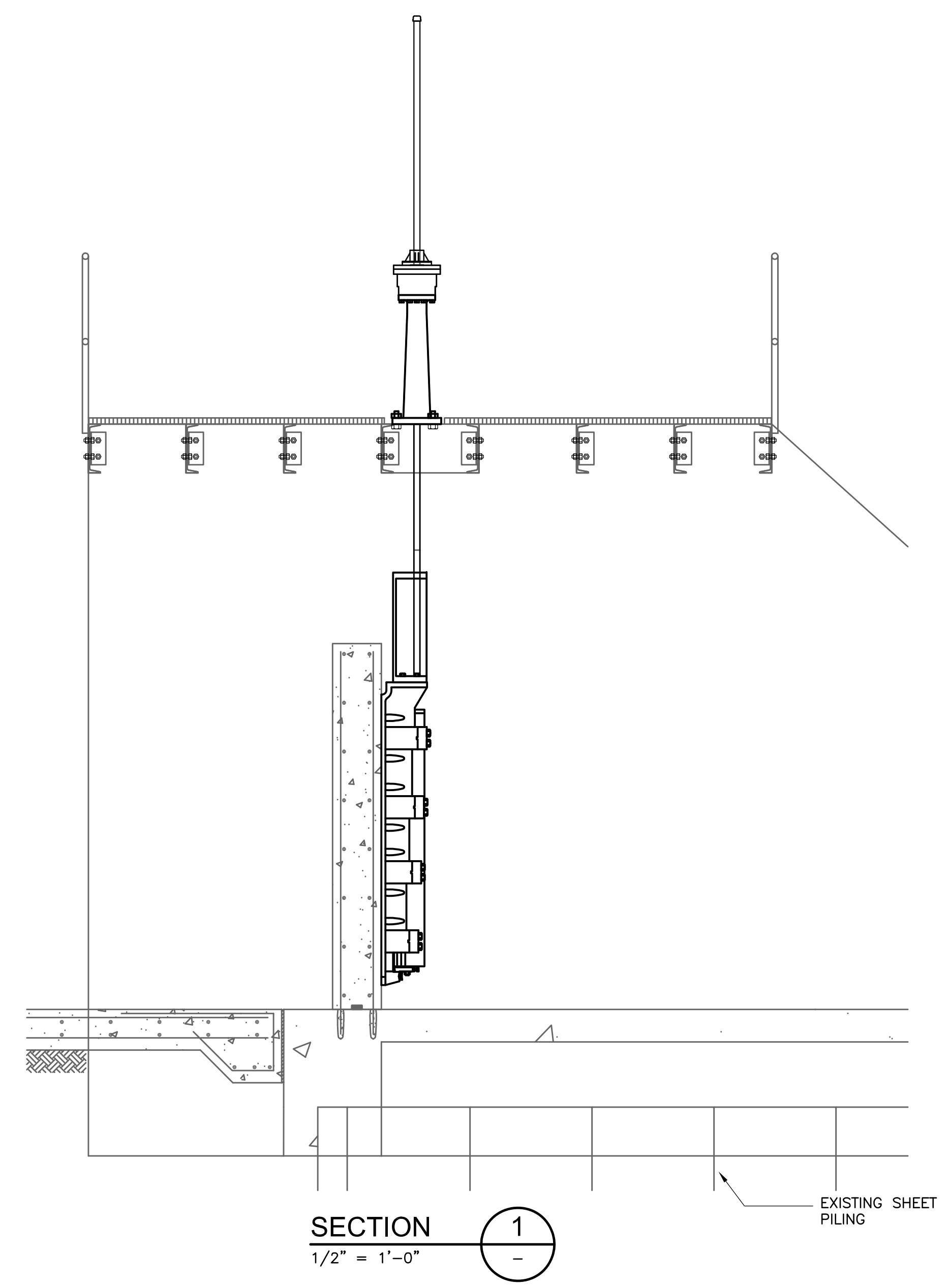
LEON COUNTY, FLORIDA
LAKE MUNSON DAM REHABILITATION

STANDARD DETAILS
SHEET NO. SD-3

DATE: JUAN CARLOS MASTRAPA P.E. NO. 68217
PROJECT NO. 6021-70628
FILE NAME: SD03STD1
ISSUED FOR BID



ELEVATION
1/2" = 1'-0"



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

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: N. HAMPTON
 DRAWN BY: S. HAAKENSTAD
 SHEET CHK'D BY: N. HAMPTON
 CROSS CHK'D BY: D. NEAMTU
 APPROVED BY: J. MILLS
 DATE: JANUARY 2011

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 Tallahassee, FL 32309
 Tel: (850) 386-9500
 FL COA No. EB-0000020
 consulting • engineering • construction • operations

LEON COUNTY, FLORIDA
LAKE MUNSON DAM REHABILITATION

LOW-LEVEL OUTLET GATE

DATE:
JEFFREY A. MILLS
 P.E. NO. 31511

PROJECT NO. 6021-70628
 FILE NAME: M001ELDT

SHEET NO.
M-1

ISSUED FOR BID