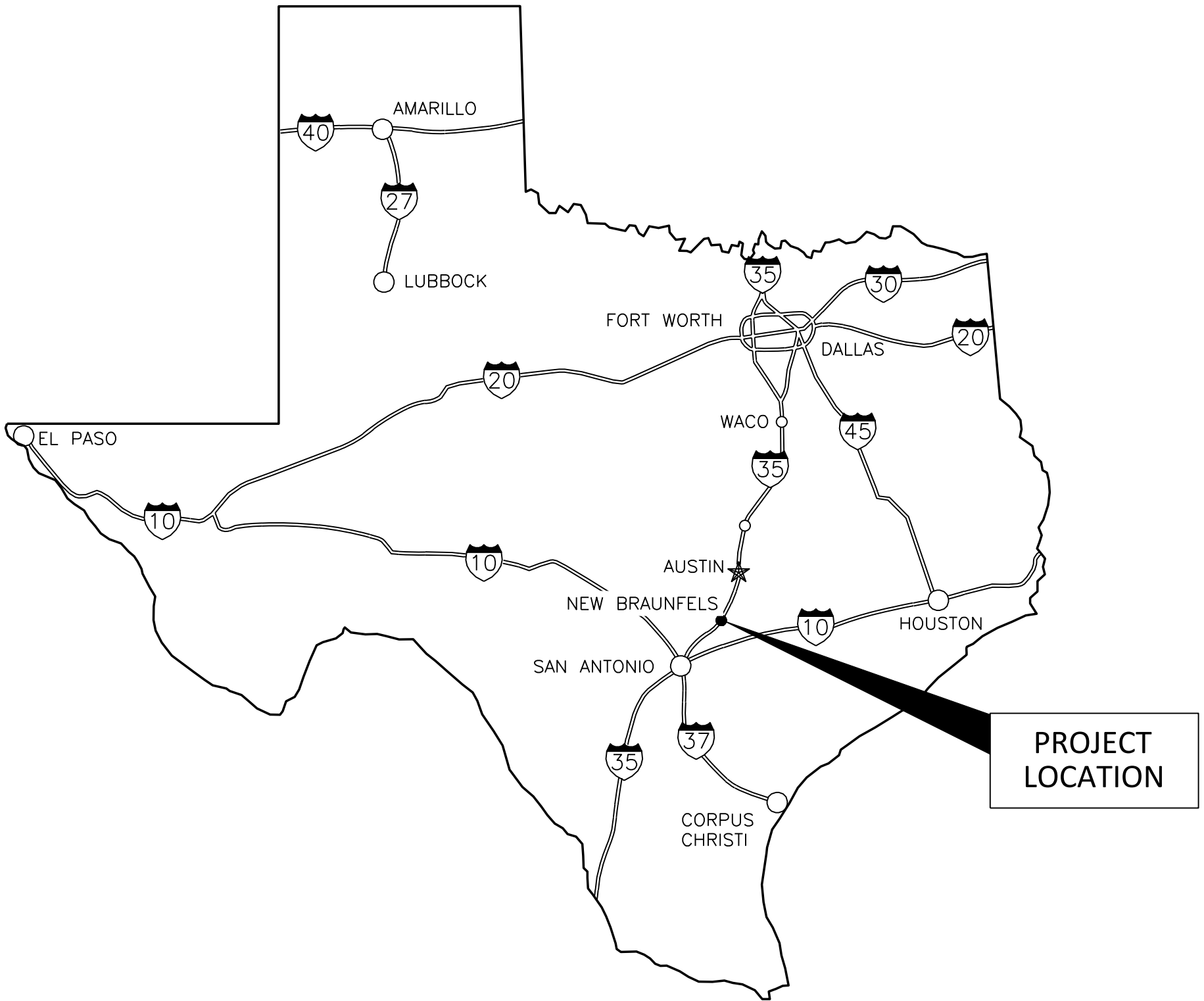


LANDA PARK LAKE DAM IMPROVEMENTS

(ECONOMIC DEVELOPMENT CORPORATION)

ISSUED FOR CONSTRUCTION



LOCATION MAP



VICINITY MAP
NOT TO SCALE

PROJECT
LOCATION
LAT 29.711494
LONG -98.134498



550 LANDA STREET
NEW BRAUNFELS, TEXAS 78130

**FREESE
& NICHOLS**
10431 Morado Circle, Suite 300
Austin, Texas 78759
Phone - (512) 617-3100
Web - www.freese.com

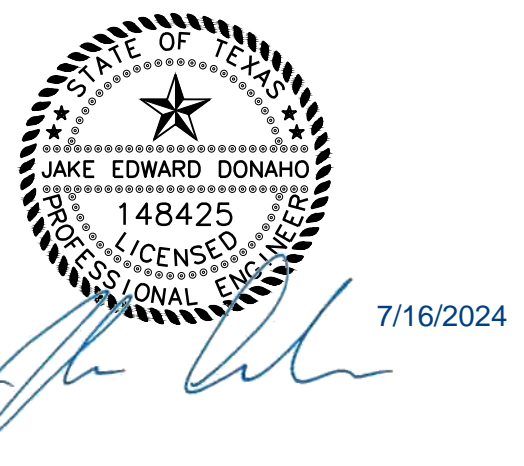
Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

NEB23518

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SHEET NO	SHEET DESCRIPTION
	COVER SHEET
G-1	SURVEY AND CONTROL PLAN
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C-5	EMBANKMENT PLAN
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C-11	OVERFLOW SPILLWAY PLAN AND PROFILE
C-12	OVERFLOW SPILLWAY SECTIONS
C-13	EMBANKMENT PIEZOMETER DETAILS

SUMMARY OF DESIGN CODES:
2012 ADA STANDARDS FOR ACCEPTABLE DESIGN AND TEXAS ACCESSIBILITY STANDARDS
2021 INTERNATIONAL BUILDING CODE (IBC)
2017 INTERNATIONAL CODE COUNCIL (ICC) A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
AMERICAN CONCRETE INSTITUTE, ACI 350-20
US ARMY CORPS OF ENGINEERS, ENGINEERING MANUAL 1110-2-2104
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, "DESIGN AND CONSTRUCTION OF DAMS IN TEXAS, 2009.
US DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION, ENGINEERING MONOGRAPH NO. 25

- NOTES:
- LANDA PARK LAKE TCEQ DAM ID: TX05963
 - PLANS AND SPECIFICATIONS SHALL NOT BE SUBSTANTIALLY OR MATERIALLY ALTERED WITHOUT PRIOR WRITTEN APPROVAL OF THE TCEQ'S EXECUTIVE DIRECTOR.
 - PROJECT IS A TYPE 3 DEVELOPMENT.
 - PROJECT IS WITHIN FEMA (FEDERAL EMERGENCY MANAGEMENT AGENCY) REGULATOR FLOODWAY AND ZONE AE, AS SHOWN ON THE FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 48091C0435G, EFFECTIVE MAY 8, 2024.
 - PROJECT IS LOCATED OVER THE EDWARDS AQUIFER TRANSITION ZONE.



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Filename: N:\WRD\Drawings\NEB CV-INDX-SRVY.dwg
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TREE POINT TABLE			
PNT	NORTHING	EASTING	DESCRIPTION
300	13807358.76	2243211.59	TR 45 CYPRS 25
301	13807119.31	2243345.29	TR 47 ANAQ 30
302	13807107.66	2243329.68	TR 8 ANAQ 16
303	13807467.88	2243259.34	TR 13 ELM 25
304	13807467.66	2243270.73	TR 23 ELM 25
305	13807454.66	2243292.11	TR 19 SYCAMR 15
306	13807460.18	2243295.48	TR 26 SYCAMOR 15
307	13807453.68	2243303.54	TR 11 ELM 15
308	13807449.98	2243308.44	TR 16 SYAMOR 20
309	13807444.89	2243309.66	TR 14 SYCAMOR 20
310	13807441.70	2243309.81	TR 15 SYCAMOR 20
311	13807436.32	2243326.26	TR 19 ELM 20
312	13807425.76	2243338.48	TR 10 SYCAMOR 15
313	13807434.95	2243281.94	TR 18 HACK 20
314	13807410.65	2243314.39	TR 12 SYCAMOR 15
315	13807389.65	2243334.74	TR 8 BOX 15
316	13807389.83	2243357.95	TR 8 ELM 15

CONTROL POINT TABLE			
PNT	NORTHING	EASTING	DESCRIPTION
CP-1	13807144.74	2243350.00	CONCRETE BLOCK CORNER
CP-2	13807124.18	2243342.78	EDGE OF CONCRETE
CP-3	13807249.10	2243259.78	CONCRETE BLOCK CORNER
CP-4	13807345.47	2243190.06	EDGE OF CONCRETE

AUXILIARY SPILLWAY BASELINE CONTROL			
PNT	STA	NORTHING	EASTING
BEGIN	14+00.00	13807609.81	2243101.22
CREST/PC	13+45.00	13807621.09	2243155.01
PT	13+12.35	13807614.45	2243186.57
PC	12+37.53	13807578.99	2243252.46
PT	11+86.50	13807541.77	2243286.10
PC	11+35.57	13807495.19	2243306.68
PT	11+19.40	13807481.16	2243314.66
END	10+74.80	13807444.81	2243340.51

DAM BASELINE CONTROL			
PNT	STA	NORTHING	EASTING
BEGIN	107+00.00	13807413.92	2243185.99
PC	107+16.14	13807398.92	2243180.04
PT	108+16.41	13807304.32	2243194.37
END	110+70.71	13807106.26	2243353.87



SURVEY CONTROL PLAN



NOTES:

- TOPOGRAPHIC DATA SHOWN ON PLANS IS BASED ON THE 2023 SURVEY BY D.A. MAWYER.
- POOL IS DRAINED IN THIS OVERHEAD VIEW

ISSUED FOR CONSTRUCTION

Freeze and Nichols, Inc.
Texas Registered Engineering Firm F-2144

PROFESSIONAL ENGINEER
JAKE EDWARD DONAHUE
148425
7/16/2024

FREEZE
NICHOLS

10431 Morado Circle, Suite 300
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CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS

SURVEY AND CONTROL PLAN

F&N JOB NO. NEB23518
DATE 7/16/2024
DESIGNED JD
DRAWN TTH
REVISED NO
CHECKED NO

FILE NAME
NEB CV-INDX-SRVY.dwg

NO. ISSUE
BY
DATE

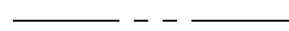


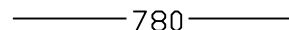

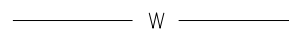
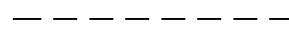

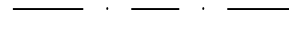



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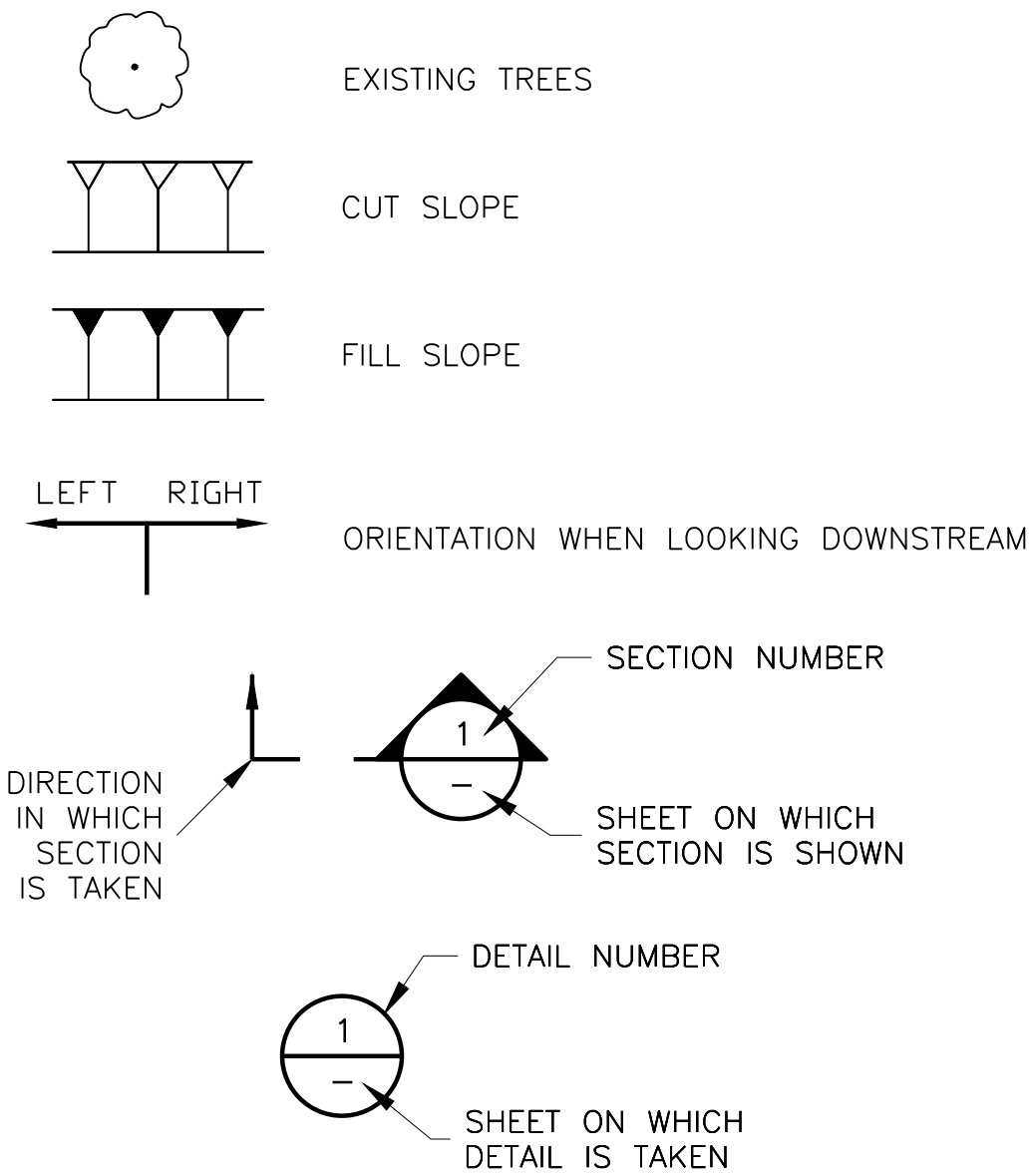
SHEET
G-1

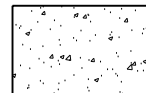
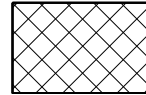




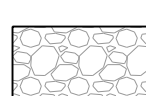


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SYMBOLS LEGEND

	EXISTING PROPERTY LINE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EXISTING WATER LINES
	TEMPORARY EASEMENT
	LIMITS OF CONSTRUCTION
	WATER SURFACE BOUNDARY
	PVC PIPE
	WATER LEVELS
	CONTROL POINT



	CONCRETE
	ITEMS TO BE REMOVED AND DISPOSED
	IN-SITU SOIL MATERIAL
	STEEL
	AREA TO BE CLEARED OF VEGETATION
	WOOD
	EXISTING DECOMPOSED GRANITE FILL
	ROCK RIPRAP
	EXISTING ARTICULATING CONCRETE BLOCK (ACB) CREST

ABBREVIATIONS

ADA	AMERICANS WITH DISABILITIES ACT	IF	INSIDE FACE
ADD'L	ADDITIONAL	LOC	LIMITS OF CONSTRUCTION
APPROX.	APPROXIMATELY	MAX.	MAXIMUM
BL, 	BASELINE	MIN.	MINIMUM
BMP	BEST MANAGEMENT PRACTICE	N	NORTH, NORTHING
BM	BENCH MARK	NBU	NEW BRAUNFELS UTILITIES
C/C	CENTER TO CENTER	N.T.S	NOT TO SCALE
CFS	CUBIC FEET PER SECOND	O.C.	ON CENTER
CL, 	CENTERLINE	OF	OUTSIDE FACE
C.J.	CONSTRUCTION JOINT	EXIST.	EXISTING
CT. J.	CONTRACTION JOINT	PRM	PERMANENT REFERENCE MONUMENT
CLR	CLEAR	PSI	POUNDS PER SQUARE INCH
CVC	CONVENTIONAL CONCRETE	R	RADIUS
DEG.	DEGREES	RCP	REINFORCED CONCRETE PIPE
\varnothing	DIAMETER	REINF.	REINFORCED, REINFORCING
D/S	DOWNSTREAM	SCH	SCHEDULE
DWLS	DOWELS	SF	SILT FENCE
EA	EACH	SHT.	SHEET
E/F	EACH FACE	SIM.	SIMILAR TO
E/W	EACH WAY	STD	STANDARD
E	EAST, EASTING	STA	STATION
ELEV., EL.	ELEVATION	S.S.	STAINLESS STEEL
EQ	EQUALS	SWPPP	STORM WATER POLLUTION PREVENTION PLAN
EQ SPA	EQUALLY SPACED	S.D.	STUB DIVERSION
EXP JT	EXPANSION JOINT	T&B	TOP AND BOTTOM
EXIST.	EXISTING	TYP.	TYPICAL
' FT	FEET	U.N.O	UNLESS NOTED OTHERWISE
FL	FLOWLINE	U/S	UPSTREAM
" IN.	INCHES	WPAP	WATER POLLUTION ABATEMENT PLAN
I.D.	INSIDE DIAMETER	YR	YEAR

Freeze and Nichols, Inc.
Texas Registered Engineering Firm F-2144



7/16/2024



CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS

DRAWING SYMBOLS AND ABBREVIATIONS

NO.	ISSUE	BY	DATE	F&N JOB NO.	NEB23518
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ISSUED FOR CONSTRUCTION

CITY OF NEW BRAUNFELS
GENERAL NOTES (REVISED MARCH 2023)

GENERAL:

1.

ALL WORK SHALL CONFORM TO THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES, NOVEMBER 2014, AND THE CITY OF NEW BRAUNFELS DETAILS AND STANDARDS.
2.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, AND ORDINANCES.
3.

THE CONTRACTOR SHALL ALWAYS MAINTAIN A COPY OF THE LATEST CONTRACT CONSTRUCTION PLANS AND SPECIFICATIONS ON-SITE.
4.

THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND INSPECTIONS REQUIRED TO COMPLETE THE WORK (NO SEPARATE PAY ITEM).
5.

THE CONTRACTOR SHALL PROVIDE AN EMERGENCY TELEPHONE NUMBER FOR EVENINGS, WEEKENDS, AND HOLIDAYS BEFORE CONSTRUCTION. THE CONTRACTOR SHALL RESPOND TO THE CITY WITHIN TWO HOURS OF THE INITIAL CONTACT.
6.

THE CONTRACTOR'S PERSONNEL, INCLUDING SUBCONTRACTORS, SHALL ALWAYS WEAR IDENTIFYING CLOTHING OR HATS ON-SITE.
7.

THE CONTRACTOR SHALL FIELD VERIFY AND PROTECT ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COMPLY WITH TEXAS EXCAVATION LAWS, CONTACT TEXAS-811 72 HOURS BEFORE ANY WORK IN THE AREA, AND MAINTAIN CURRENT LOCATES THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL COORDINATE ALL WORK INDIVIDUALLY WITH ADJACENT UTILITIES IN THE AREA, INCLUDING BUT NOT LIMITED TO: CENTERPOINT ENERGY (GAS), NBU ELECTRIC, NBU WATER, AT&T COMMUNICATIONS, SPECTRUM CABLE, CITY PUBLIC WORKS DEPARTMENT, CITY FIRE DEPARTMENT, AND TXDOT.
8.

THE CONTRACTOR SHALL PRESERVE ALL SURVEY MONUMENTS AND SITE MARKINGS PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING REQUIRED FOR THE SUCCESSFUL COMPLETION OF THE PROJECT.
9.

THE CONTRACTOR SHALL VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.
10.

THE CONTRACTOR SHALL PREPARE A CONSTRUCTION PHASING PLAN DETAILING LIMITS OF CONSTRUCTION FOR EACH PHASE. THE PHASING PLAN SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO CONSTRUCTION. THE CONTRACTOR WILL NOT BE ALLOWED TO WORK OUT OF PHASE UNLESS WRITTEN APPROVAL HAS BEEN OBTAINED FROM THE CITY FOR THE PHASE CHANGE. THE PHASING PLAN SHALL INCLUDE TRAFFIC CONTROL AND HAUL ROUTES.
11.

THE CONTRACTOR IS RESPONSIBLE FOR ALL SUBSIDIARY WORK AND THE MEANS AND METHODS NECESSARY TO COMPLETE THE PROJECT.
12.

THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE CITY AND DESIGN ENGINEER OF DISCREPANCIES BETWEEN THE CONSTRUCTION PLANS AND SPECIFICATIONS. THE MORE STRINGENT REQUIREMENTS SHALL GOVERN UNLESS OTHERWISE DIRECTED IN WRITING BY THE CITY.
13.

THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE CITY AND DESIGN ENGINEER OF DISCREPANCIES BETWEEN THE SITE CONDITIONS AND THE CONSTRUCTION PLANS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.

SITE:

1.

THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING THE SECURITY AND SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
2.

THE CONTRACTOR SHALL KEEP ALL AREAS WITHIN AND ADJACENT TO CONSTRUCTION AREAS FREE FROM OVERTGROWN VEGETATION AND ALL CONSTRUCTION DEBRIS AND BE SAFE FOR PEDESTRIAN AND VEHICLE TRAFFIC BEFORE, DURING, AND AFTER CONSTRUCTION.
3.

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES REGARDING DUST, DIRT, AND EROSION CONTROL. CONTRACTOR MAY BE RESPONSIBLE FOR ADDITIONAL MITIGATION UPON REQUEST OF OWNER. THE STREET PAVEMENT, DRIVEWAYS, SIDEWALKS, AND WALKWAYS WITHIN AND ADJACENT TO THE PROJECT SHALL BE SWEEPED FREE OF MUD AND ALL DEBRIS REMOVED FROM THE WORK AREA DAILY.
4.

THE CONTRACTOR SHALL INSTALL AND MAINTAIN THE PROJECT SIGN IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS.
5.

THE CONTRACTOR SHALL REMOVE, PROTECT, RELOCATE, OR REINSTALL ITEMS REQUESTED BY THE CITY AS DIRECTED BY THE OWNER.
6.

THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY THE CONTRACTOR OUTSIDE OF THE DESIGNATED WORK AREA. ANY EXISTING OFF-SITE IMPROVEMENTS THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE CITY THE EXISTING IMPROVEMENTS AT THE CONTRACTOR'S EXPENSE (NO SEPARATE PAY ITEM).
7.

THE CONTRACTOR SHALL REMOVE ALL WASTE MATERIALS. THE CITY SHALL APPROVE THE LOCATION FOR THE DISPOSAL OF CONSTRUCTION MATERIALS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN. NO WASTE MATERIALS SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING OR NATURAL DRAINAGE.
8.

DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE THE IMPACT OF CONSTRUCTION SHALL BE INSTALLED PRIOR TO ADDING IMPERVIOUS COVER. ALL DRAINAGE IMPROVEMENTS SHALL BEGIN AT THE OUTFALL TO ENSURE POSITIVE DRAINAGE THROUGHOUT CONSTRUCTION.
9.

THE CONTRACTOR SHALL MAINTAIN A SAFE, DRIVABLE SURFACE FREE FROM POTHOLES, RUTTING, AND HAZARDOUS CONDITIONS THROUGHOUT THE PROJECT.

EROSION CONTROL:

1.

THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A STORMWATER POLLUTION PREVENTION PLAN (SW3P) AND SUBMIT IT TO THE CITY PRIOR TO CONSTRUCTION. THE SW3P SHALL INCLUDE ALL DISTURBED AREAS BY THE CONSTRUCTION, INCLUDING BORROW, STAGING, AND STORAGE AREAS. THE SW3P WITH REQUIRED INSPECTION REPORTS MUST BE KEPT UP TO DATE AND KEPT ON THE CONSTRUCTION SITE AT ALL TIMES. THE CONTRACTOR SHALL PREPARE A NOTICE OF INTENT (NOI) AND SECURE A PERMIT FROM TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) FOR LARGE CONSTRUCTION SITES OF 5 OR MORE ACRES OF DISTURBED AREA WITH A COPY OF THE NOI AND THE REQUIRED CONSTRUCTION SITE NOTICE POSTED AT THE CONSTRUCTION ENTRANCE IN CLEAR VIEW OF THE PUBLIC DURING THE CONSTRUCTION. FOR LARGE CONSTRUCTION SITES, AFTER THE SITE IS 70% OR GREATER STABILIZED SO THAT THERE IS NO FURTHER DANGER OF EROSION AND SEDIMENTATION POLLUTION FROM THE SITE DISTURBED AREAS, THE CONTRACTOR MUST PREPARE AND SUBMIT A NOTICE OF TERMINATION (NOT) TO TCEQ. A COPY OF THE NOI AND NOT MUST BE SUBMITTED TO THE CITY FOR EACH PROJECT. SEE TCEQ REGULATIONS FOR SW3P REQUIREMENTS.
2.

ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES. THE EROSION CONTROL MEASURES SHALL REMAIN IN PLACE AND FUNCTIONAL UNTIL AFTER THE PROPOSED IMPROVEMENTS ARE IN PLACE AND VEGETATION IS ESTABLISHED. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR EFFECTIVELY CONTROLLING EROSION AND SEDIMENTATION.
3.

ADJUSTMENTS AND REPAIRS TO THE EROSION CONTROL DEVICES SHALL BE MADE AS NEEDED AT THE CONTRACTOR'S EXPENSE.
4.

STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3 IN X 5 IN ROCK TO BE PLACED AT A MINIMUM LENGTH OF 25 FT AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE CITY RIGHT-OF-WAY. THE RIGHT-OF-WAY MUST BE CLEARED OF MUD, ROCKS, DUST, ETC., AT ALL TIMES.
5.

SEED/SOD SHALL BE FURNISHED TO ESTABLISH GROUND COVER OVER ALL DISTURBED AREAS AS REQUIRED BY THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT WAIT UNTIL THE COMPLETION OF THE ENTIRE PROJECT BEFORE DOING THIS WORK. THE PROJECT SHALL NOT BE CONSIDERED FOR ACCEPTANCE BY THE CITY UNLESS THE ESTABLISHMENT OF 80% GROUND COVER IS ENSURED.

SEEDING TO ESTABLISH VEGETATION WITHIN CONSTRUCTED EARTHEN CHANNELS, BASINS AND DISTURBED AREAS SHALL BE CONDUCTED PER ITEM 164 (SEEDING FOR EROSION CONTROL OF TXDOT'S STANDARD SPECIFICATIONS). ONLY SEED TYPES AND MIXES SPECIFIED FOR THE SAN ANTONIO DISTRICT (DISTRICT 15) IN TABLES 1 AND 2 UNDER ITEM 164 SHALL BE UTILIZED. DURING THE COOL SEASON (SEPT 1-NOV 30), CEREAL RYE AND SEED SPECIES SPECIFIED FOR THE SAN ANTONIO DISTRICT IN TABLE 3 MAY BE USED.
6.

IT MAY BE DEEMED NECESSARY TO INCORPORATE TOPSOIL AND SOIL AMENDMENTS (I.E., COMPOST/ FERTILIZER) INTO EXISTING SOIL IN ORDER TO FACILITATE VEGETATION GROWTH. TOPSOIL, COMPOST, AND FERTILIZER ADDITIONS SHALL BE CONDUCTED ACCORDING TO ITEMS 160, 161 AND 166 OF TXDOT'S STANDARD SPECIFICATIONS.
7.

AREAS REQUIRING PERMANENT VEGETATION (EARTHEN CHANNELS, PONDS, ETC.) ARE REQUIRED TO MEET ITEM 160 OF TXDOT'S STANDARD SPECIFICATIONS. TESTING PER TEX-128-E MAY BE REQUIRED AT THE CITY'S REQUEST.
8.

WATERING MAY BE NECESSARY TO FACILITATE AND EXPEDITE THE SPROUTING AND GROWTH OF VEGETATION. ITEM 168 OF TXDOT'S STANDARD SPECIFICATIONS SHALL BE ADHERED TO FOR VEGETATIVE WATERING.
9.

IF EXTENDED DROUGHT CONDITIONS EXIST THAT HINDER OR PROHIBIT THE GROWTH AND ESTABLISHMENT OF VEGETATION, THE CONTRACTOR SHALL PROVIDE A PLAN TO THE CITY DESCRIBING THE MEASURES THAT WILL BE TAKEN TO STABILIZE EARTHEN DRAINAGE INFRASTRUCTURE UNTIL A TIME WHEN GROWING CONDITIONS BECOME MORE FAVORABLE.

TRAFFIC:

1.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL TRAFFIC CONTROL DEVICES AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS, AND TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TXMUTCD).
2.

THESE NOTES DO NOT, IN AND OF THEMSELVES, CONSTITUTE A TRAFFIC CONTROL PLAN. IN THE EVENT THAT THESE PLANS DO NOT INCLUDE TRAFFIC CONTROL, OR THAT THE CONTRACTOR WISHES TO VARY FROM TRAFFIC CONTROL INCLUDED WITH THE CONSTRUCTION PLANS, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. THE CITY INSPECTOR AND ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT THE TRAFFIC CONTROL DEVICES AND BARRICADES. IF, IN THE OPINION OF THE CITY INSPECTOR OR ENGINEERING REPRESENTATIVE, THE TRAFFIC CONTROL DEVICES DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CITY INSPECTOR SHALL HAVE THE OPTION TO STOP CONSTRUCTION OPERATIONS AT NO EXPENSE TO THE CITY UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED BY THE CONTRACTOR.
3.

THE CONTRACTOR SHALL NOTIFY THE CITY IMMEDIATELY IF THERE IS ANY CONFLICT BETWEEN THE TXMUTCD AND TRAFFIC CONTROL REQUIREMENTS WITHIN THE CONTRACT DOCUMENTS.
4.

IF THE NEED ARISES, THE CITY INSPECTOR OR ENGINEERING REPRESENTATIVE MAY REQUIRE THE RELOCATION AND ADDITIONAL TRAFFIC CONTROL DEVICES AND BARRICADES AT THE CONTRACTOR'S EXPENSE.
5.

THE CONTRACTOR SHALL NOTIFY TXDOT, COUNTY, ADJACENT CITY, AND PRIVATE OWNER PRIOR TO WORKING AT THEIR OWNED OR MAINTAINED ROADWAY AND INTERSECTION.
6.

FOR ALL ROAD CLOSURE REQUESTS, THE CONTRACTOR SHALL SUBMIT AND OBTAIN CITY APPROVAL OF A TRAFFIC CONTROL PLAN AND WORK SCHEDULE AT LEAST TWO (2) WEEKS PRIOR TO COMMENCING WORK ASSOCIATED WITH THE ROAD CLOSURE.
7.

WORK AROUND SCHOOLS SHALL BE SCHEDULED TO MINIMIZE IMPACTS TO THE SCHOOL. STREETS AND ACCESS SHALL NOT BE CLOSED DURING THE TIME STUDENTS ARE BEING DROPPED OFF AND PICKED UP FROM SCHOOL. WORK WITHIN A SCHOOL ZONE CAN ONLY OCCUR BETWEEN THE HOURS OF 9 AM AND 3 PM AS APPROVED BY THE CITY.
8.

THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE, AND COLLECTION OF SOLID WASTE AND RECYCLING, WHETHER PUBLIC OR PRIVATE.
9.

THE CONTRACTOR SHALL ALWAYS MAINTAIN ACCESS TO ALL COMMERCIAL AND RESIDENTIAL DRIVEWAYS. THE CONTRACTOR SHALL PROVIDE A 48-HOUR MINIMUM NOTICE TO PROPERTY OWNERS AND THE CITY BEFORE ANY DRIVEWAY ACCESS MODIFICATION.
10.

DURING ASPHALT OVERLAY, THE CONTRACTOR SHALL ALLOW RESIDENT TRAFFIC ACCESS TO THE

- STREET WITH PROPER GUIDANCE, DIRECTION, FLAGGER AND TRAFFIC CONTROL AND ONLY AT SUCH TIME THAT DAMAGE WILL NOT OCCUR TO THE NEW ASPHALT OVERLAY OR TO THE VEHICLES.

11. THE CONTRACTOR SHALL KEEP ALL TRAFFIC CONTROL DEVICES, BARRICADES, AND REFLECTIVE MARKINGS FREE FROM DUST AND DEBRIS. THE CONTRACTOR SHALL CLEAN THE DEVICES MONTHLY AND AT THE DIRECTION OF THE CITY.

UTILITIES:

1.

THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED. THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE ONLY AND SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES WHETHER SHOWN OR NOTED ON THE PLANS, INCLUDING BUT NOT LIMITED TO EXISTING WATER, SANITARY SEWER, GAS, STORM SEWERS, ELECTRIC AND TELECOMMUNICATION LINES, AND SERVICES.

2.

THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES THREE (3) WEEKS MINIMUM IN ADVANCE OF ALL WORK ACTIVITIES.

3.

IN THE EVENT OF DAMAGE TO UNDERGROUND FACILITIES, WHETHER SHOWN OR NOT IN THE PLANS, THE CONTRACTOR SHALL MAKE NECESSARY REPAIRS TO RESTORE THE FACILITY BACK IN SERVICE AND AT NO COST TO THE CITY. REPAIRS SHALL CONFORM TO THE REQUIREMENTS OF THE UTILITY OR AGENCY SERVICING THE FACILITY.

4.

THE CONTRACTOR SHALL COORDINATE WITH AND GAIN APPROVAL FROM THE UTILITY COMPANY OWNING THE FACILITY PRIOR TO RELOCATION OR ADJUSTMENT AS REQUIRED FOR CONFORMANCE TO PROJECT ALIGNMENT OR GRADES. ADJUSTMENT OF ALL EXISTING MANHOLES, THAT REMAIN IN SERVICE TO PROJECT GRADES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

5.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS PROHIBIT OPERATIONS THAT WILL BRING PERSONS OR EQUIPMENT WITHIN AN ENERGIZED LINE. WHERE WORKERS AND/OR EQUIPMENT HAVE TO WORK CLOSE TO AN ENERGIZED ELECTRICAL LINE, THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL POWER COMPANY INVOLVED AND MAKE WHATEVER ADJUSTMENTS NECESSARY TO ENSURE THE SAFETY OF THOSE WORKMEN.

6.

DUE TO FEDERAL REGULATIONS, GAS COMPANIES MUST ALWAYS MAINTAIN ACCESS TO GAS VALVES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

7.

THE CONTRACTOR WILL ABIDE BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS GOVERNING EXCAVATION. THE CONTRACTOR AND THE CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

8.

ALL UTILITY TRENCH FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED 12 IN. LOOSE OUTSIDE OF PAVEMENT AND 6 IN. LOOSE UNDER PAVEMENT. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING EQUIPMENT TO ADEQUATELY MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO 95% DENSITY, ± 2% OPTIMUM MOISTURE AS DETERMINED BY TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. DENSITY TESTS SHALL BE TAKEN AT A MINIMUM OF 100 LINEAR FEET INTERVALS FOR EACH LIFT AS DETERMINED BY THE CITY INSPECTOR.

9.

THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR 48 HOURS PRIOR TO THE BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE DENSITY TESTS AS REQUIRED.
- TREE PROTECTION:
1.

THE CONTRACTOR SHALL PROTECT ALL TREES WITHIN THE PROJECT LIMITS AND TREES OUTSIDE THE PROJECT LIMITS THAT THE PROJECT MAY IMPACT.

2.

NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.

3.

TREE PROTECTION FENCING SHALL BE REQUIRED, AND TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED, AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION.

4.

EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR A ROOT PROTECTION ZONE WILL BE ESTABLISHED AROUND EACH TREE OR ANY VEGETATION TO BE PRESERVED. A ROOT PROTECTION ZONE SHALL BE AN AREA DEFINED BY THE RADIUS EXTENDING OUTWARD FROM THE TRUNK OF TREE A DISTANCE OF 1 FT PER DIAMETER INCH OF THE TREE RADIUS AT BREAST HEIGHT OF 4.5 FT. AS AN EXAMPLE, A 10 IN DIAMETER TREE WOULD HAVE A 10 FT RADIUS ROOT PROTECTION ZONE AROUND THE TREE.

5.

NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHIN THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT. NO CLEAN-OUT AREAS SHALL BE CONSTRUCTED SO THAT THE MATERIAL WILL BE IN OR ADJACENT TO THE ROOT PROTECTION ZONE.

6.

ROOTS OR BRANCHES IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO TXDOT ROADSIDE VEGETATION MAINTENANCE MANUAL. ALL OAK WOUNDS SHALL BE PAINTED OVER WITHIN 30 MINUTES TO PREVENT OAK WILT.

7.

TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE WATERING THE ROOT PROTECTION ZONE AND OR WASHING FOLIAGE.

8.

NO WIRES, NAILS OR OTHER MATERIALS MAY BE ATTACHED TO THE PROTECTED TREES.

9.

TREES, WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION, SHALL BE MITIGATED TO THE CITY'S SATISFACTION.

10.

TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE CITY STREET OR ALLEY RIGHT-OF-WAY OR PERMANENT EASEMENTS WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION ACTIVITIES MAY BE NEATLY TRIMMED BY THE CONTRACTOR ONLY AFTER APPROVAL FROM THE CITY INSPECTOR. THERE SHALL BE NO SEPARATE PAY FOR ADDITIONAL COST OR EFFORT INCURRED BY THE CONTRACTOR WHERE REQUIRED TO WORK AROUND AND/OR UNDER EXISTING TREES OR FOR THE REMOVAL OF ADDITIONAL BRANCHES AND SHRUBS.

11.

SAPLINGS, SHRUBS, OR BUSHES TO BE CLEARED FROM THE PROTECTED ROOT ZONE AREA OF A LARGE TREE SHALL BE REMOVED BY HAND AS DESIGNATED BY THE CITY INSPECTOR.
- ROADWAY:
1.

ALL ROADWAY COMPACTION TESTS SHALL BE COORDINATED WITH THE CITY INSPECTOR. FLEXIBLE BASE OR FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED 6 IN COMPACTED. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100 LINEAR FEET FOR EACH LIFT. UPON COMPLETION OF TESTS, THE GEOTECHNICAL ENGINEER WILL PROVIDE THE CITY INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE BASE, FILL MATERIAL, AND SUBGRADE HAS BEEN COMPLETED PER THE CONTRACT DOCUMENTS.

2.

THE CONTRACTOR SHALL PROVIDE A 48-HOUR MINIMUM NOTICE TO THE CITY INSPECTOR PRIOR TO ANY WORK REQUIRING MATERIAL TESTING.

3.

THE CONTRACTOR SHALL SCHEDULE A PRE-PAVE INSPECTION AND COORDINATION MEETING 72 HOURS PRIOR TO PLACING ASPHALT.

4.

UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS, ASPHALTIC CONCRETE PAVEMENT SHALL BE TYPE "D" HOT MIX ASPHALT AS DEFINED IN TXDOT'S STANDARD SPECIFICATIONS.

5.

THE CITY WILL NOT ACCEPT THE USE OF RECYCLED ASPHALT PAVEMENT (RAP) OR RECYCLED ASPHALT SHINGLES (RAS) IN ASPHALT MIXTURES FOR NEW ROADWAYS. ANY DEBRIS INCLUSIONS WITHIN NEW ASPHALT PAVEMENTS WILL RESULT IN ASPHALT REMOVAL AND REPLACEMENT FROM CURB TO CURB FOR LIMITS TO BE DETERMINED BY THE CITY.

6.

THE ASPHALTIC CONCRETE SURFACE COURSE SHALL BE PLANT MIXED, HOT LAID TYPE "D" MEETING THE SPECIFICATION REQUIREMENTS OF TXDOT ITEM 340. THE MIX SHALL BE DESIGNED FOR STABILITY OF AT LEAST 35 AND SHALL BE COMPACTED TO BETWEEN 92 AND 97 PERCENT OF THE MAXIMUM THEORETICAL DENSITY AS DETERMINED BY TXDOT TEST METHOD TEX-227-F. THE ASPHALT CEMENT CONTENT BY PERCENT OF TOTAL MIXTURE WEIGHT SHALL FALL WITHIN A TOLERANCE OF +0.5 PERCENT FROM A SPECIFIC MIX DESIGN.

7.

A TXDOT TYPE II B-B BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE ROADWAY ADJACENT TO ALL FIRE HYDRANTS. IN LOCATIONS WHERE HYDRANTS ARE SITUATED ON CORNERS, BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH FRONT OF THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET TXDOT MATERIAL, EPOXY, AND ADHESIVE SPECIFICATIONS.

8.

ALL CONCRETE FOR FLATWORK, INCLUDING CURB AND GUTTER, SIDEWALKS, AND DRIVEWAYS, SHALL BE CLASS A WITH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI. MATERIAL TESTING METHODS AND FREQUENCY SHALL BE AS DESCRIBED IN ITEM 421 OF THE TXDOT STANDARD SPECIFICATIONS.
- GROUNDWATER:
1.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMMEDIATELY NOTIFY THE CITY IF THE PRESENCE OF GROUNDWATER WITHIN THE SITE IS EVIDENT. UPON NOTIFICATION, THE PROJECT ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. THE CITY SHALL RESPOND WITHIN TWO (2) BUSINESS DAYS UPON RECEIPT OF THE MITIGATION PLAN. ALL CONSTRUCTION ACTIVITY IMPACTED BY THE DISCOVERY OF GROUNDWATER SHALL BE SUSPENDED UNTIL THE CITY GRANTS WRITTEN APPROVAL FOR THE GROUNDWATER MITIGATION PLAN.
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- FREEZE & NICHOLS**
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- CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS
- CITY OF NEW BRAUNFELS GENERAL NOTES
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GENERAL NOTES

1. THE GENERAL NOTES AND TYPICAL DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY.
2. THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
3. VERIFY ALL DIMENSIONS, ELEVATIONS, OPENING SIZES, AND MECHANICAL EQUIPMENT WEIGHTS PRIOR TO STARTING WORK.
4. CONSTRUCTION ACTIVITIES SHALL NOT OCCUR OUTSIDE THE DESIGNATED LIMITS OF CONSTRUCTION, UNLESS OTHERWISE AUTHORIZED.
5. CONTRACTOR SHALL REMOVE FROM THE PROJECT AREA ALL SURPLUS MATERIAL. THIS SHALL BE INCIDENTAL AND NOT A SEPARATE PAY ITEM. SURPLUS MATERIALS FROM EXCAVATION/DEMOLITION, INCLUDING SOIL AND CONCRETE, SHALL BE PROPERLY DISPOSED OF IN ACCORDANCE WITH CITY OF NEW BRAUNFELS ORDINANCES.
6. EXISTING ROADS, ACCESS DRIVES, VEGETATION, UTILITIES AND PROPERTY WITHIN THE LIMITS OF CONSTRUCTION DAMAGED BY CONTRACTOR AND ALL DISTURBED AREAS SHALL BE REPAIRED BY CONTRACTOR TO SAME OR BETTER CONDITION PRIOR TO END OF CONSTRUCTION AT CONTRACTOR'S EXPENSE.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS, INCLUDING LOCATION AND DIMENSIONS OF ALL EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE OWNER IF THERE IS A CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS BEFORE PROCEEDING WITH WORK.
8. THE CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO IMPROVEMENTS AND UTILITIES ALONG THE ACCESS ROUTE AND AT OR NEAR THE WORKSITE. UTILITIES MAY EXIST AND NOT BE SHOWN ON THE CONSTRUCTION DRAWINGS. THE SITE SHALL BE CAREFULLY SCRUTINIZED FOR EVIDENCE OF UTILITIES. AT A MINIMUM, PRIOR TO ANY GROUND DISTURBANCE, THE TELEPHONE NUMBER 811 SHALL BE CALLED TO ASCERTAIN IF UNDERGROUND UTILITIES EXIST IN THE GENERAL WORK AREA. CALLING THIS TELEPHONE NUMBER WILL ONLY ASCERTAIN THE EXISTENCE OF UNDERGROUND UTILITIES OWNED BY COMPANIES THAT SUBSCRIBE TO THIS ORGANIZATION. THERE MAY BE OTHER UNDERGROUND UTILITIES IN THE WORK AREA.
9. THE CONTRACTOR SHALL NOTIFY THE OWNERS OF ALL UTILITIES A MINIMUM OF TEN (10) DAYS IN ADVANCE OF INTENT TO PERFORM WORK IN THE VICINITY OF THE AFFECTED UTILITY. THE NOTICE SHALL BE IN WRITING AND A COPY SHALL BE FURNISHED TO THE OWNER.
10. THE APPROXIMATE LOCATIONS OF THE ACCESS ROAD AND STAGING AREA ARE SHOWN. THE FINAL LOCATIONS OF THESE AREAS SHALL BE COORDINATED WITH THE OWNER.
11. NOTIFY OWNER OF ANY SIGNS TO BE TEMPORARILY REMOVED. ALL EXISTING SIGNS TEMPORARILY REMOVED, IF ANY, SHALL BE STORED ON SITE BY THE CONTRACTOR AND SHALL BE REINSTALLED BY THE CONTRACTOR AT THE END OF CONSTRUCTION IN THEIR ORIGINAL CONDITION.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ALL BARRICADES, WARNING SIGNS, TRAFFIC CONTROL DEVICES, ETC. NECESSARY TO CONTROL TRAFFIC AND PROVIDE FOR PUBLIC SAFETY AT THE ENTRANCE TO THE SITE.
13. COMPLY AND CONDUCT WORK IN ACCORDANCE WITH OWNER'S SECURITY REGULATIONS AND REQUIREMENTS. PROVIDE SITE SECURITY AS NECESSARY TO PROTECT AGAINST VANDALISM AND LOSS BY THEFT.
14. NO ON-SITE CONCRETE BATCH PLANT WILL BE PERMITTED.
15. PROVIDE PROTECTED STORAGE FOR PAINTS, CHEMICALS, SOLVENTS, AND OTHER POTENTIALLY HAZARDOUS MATERIALS.
16. PREVENT POLLUTION OF SURFACE WATER AND GROUNDWATER WITH PETROLEUM PRODUCTS OR OTHER HAZARDOUS OR REGULATED SUBSTANCES. TAKE SPECIAL MEASURES TO PREVENT CHEMICALS, FUELS, OILS, GREASES, HERBICIDES, AND INSECTICIDES FROM ENTERING DRAINAGE WAYS. DO NOT ALLOW WATER USED IN ON-SITE MATERIAL PROCESSING AND CLEANUP, AND OTHER WASTEWATERS TO ENTER A DRAINAGE WAY, STREAM, OR RIVER.
17. PROMPTLY REPAIR EQUIPMENT LEAKING OIL/HYDRAULIC FLUID/ETC. IMMEDIATELY REMOVE AND REPLACE, AS NECESSARY, ALL SOILS ON WHICH SUCH LEAKAGE OCCURRED. PREVENT THE SPREAD OF LEAKED FLUIDS OR FLUID CONTAMINATED MATERIALS FROM THE ORIGINAL LEAK AREA. BE RESPONSIBLE FOR THE PROPER HANDLING AND DISPOSAL OF ALL SUCH CONTAMINATED MATERIALS.
18. PROVIDE SECONDARY CONTAINMENT AROUND ANY FUEL AND CHEMICAL STORAGE AREAS TO ENSURE THAT SPILLS FROM ANY SUCH AREAS DO NOT DISCHARGE FROM THE SECONDARY CONTAINMENT AREA. THE SECONDARY CONTAINMENT CAPACITY SHALL BE ADEQUATE TO CONTAIN THE CAPACITY OF THE LARGEST TANK/CONTAINER PLUS SUFFICIENT FREEBOARD TO CONTAIN PRECIPITATION.
19. PRECAUTIONS SHALL BE TAKEN DURING EQUIPMENT FUELING AND CHEMICAL TRANSFER OPERATIONS IN ORDER TO PREVENT SPILLS FROM OCCURRING AND TO MINIMIZE THE IMPACT OF ANY SPILL THAT DOES OCCUR. ALL FUEL AND CHEMICAL TRANSFERS SHALL BE CONTINUOUSLY MONITORED. MAINTAIN APPROPRIATE EQUIPMENT ON-SITE FOR RESPONDING TO ANY OIL OR HAZARDOUS SUBSTANCE SPILL. ADDITIONALLY, THERE SHALL BE AN ON-SITE PROHIBITION AGAINST THE TOPPING OFF OF TANKS AND EQUIPMENT.
20. REMOVE ALL FORM WORK FOLLOWING CONSTRUCTION.
21. IF, DURING ANY CONSTRUCTION ACTIVITIES, ARTIFACTS OR ITEMS ARE DISCOVERED WHICH MAY BE ANTIQUITIES OR OTHERWISE HAVE HISTORICAL OR CULTURAL VALUE UNDER APPLICABLE FEDERAL AND/OR STATE LAWS REGULATING ANTIQUITIES, CEASE ALL WORK IMMEDIATELY AND NOTIFY THE OWNER.
22. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH CONSTRUCTION STORMWATER RUNOFF REGULATIONS, INCLUDING PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN (IF APPLICABLE) AND DESIGN/INSTALLATION OF TEMPORARY SITE ENVIRONMENTAL CONTROLS.
23. ALL FIELD QUALITY CONTROL TESTING SHALL BE PERFORMED BY A REPUTABLE, CERTIFIED, INDEPENDENT LABORATORY, ALL TESTING SHALL BE PAID FOR BY CONTRACTOR.

WATER CONTROL NOTES:


1. CONTRACTOR SHALL BUILD, MAINTAIN AND OPERATE ANY TEMPORARY DIKES, COFFERDAMS, CHANNELS, FLUMES, SUMPS AND OTHER TEMPORARY DIVERSION AND PROTECTIVE WORKS NEEDED TO DIVERT SURFACE WATER FROM THE CONSTRUCTION WORK WHILE CONSTRUCTION IS IN PROGRESS. CONTRACTOR SHALL MANAGE AND PROTECT THE WORK FROM FLOOD FLOWS, STREAM FLOWS, SURFACE WATER RUNOFF, GROUNDWATER OR ANY OTHER WATER ENCOUNTERED DURING THE PROGRESS OF THE WORK.
2. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL SUBMIT PLAN FOR CONTROL OF WATER TO OWNER FOR APPROVAL. WATER CONTROL PLANS SHALL INCLUDE, AT A MINIMUM, MEASURES TO DIVERT NORMAL (NON-STORM) RIVER FLOWS AWAY FROM CONSTRUCTION WORK AREA.

CONCRETE AND REINFORCEMENT

1. STRUCTURES ARE DESIGNED FOR OPERATIONAL LOADS ON COMPLETED STRUCTURES ONLY. DURING CONSTRUCTION, STRUCTURES SHALL BE PROTECTED BY TEMPORARY BRACING AND SHORING AS REQUIRED FOR STABILITY DURING CONSTRUCTION. THE DESIGN OF BRACING AND SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. CONCRETE CONSTRUCTION SHALL CONFORM TO THE LATEST EDITIONS OF ACI 301, ACI 318, AND ACI 350, AND US ARMY CORPS OF ENGINEERS EM 1110-2-2104.
3. ALL DETAILING, FABRICATION, AND ERECTION OF REINFORCING BARS, UNLESS NOTED OTHERWISE, SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."
4. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI, UNLESS NOTED OTHERWISE.
5. REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60, DEFORMED.
6. CONCRETE CLEAR COVER OVER REINFORCING IS SHOWN ON PLANS. CLEAR COVER DIMENSIONS ARE MARKED "CLR."
7. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" INSIDE FORMS OR TOOLED TO 3/4" RADIUS ON SLABS, UNLESS NOTED OTHERWISE.
8. ADDITIONAL CONSTRUCTION JOINTS SHALL HAVE PRIOR APPROVAL OF THE ENGINEER.
9. PENETRATIONS OTHER THAN SHOWN SHALL NOT BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
10. ALL EXPOSED CONCRETE SIDEWALK SURFACES SHALL HAVE A UNIFORM TRANSVERSE BROOM FINISH. ALL OTHER EXPOSED CONCRETE SLAB SURFACES SHALL HAVE A SMOOTH TROWEL FINISH.
11. ALL REINFORCING SHALL BE CONTINUOUS. CONTINUOUS BARS SHALL LAP IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. ALL REBAR EMBEDMENT LENGTHS SHALL BE 75% OF THE LAP SPICE LENGTH, UNLESS NOTED OTHERWISE. "TOP BARS" ARE HORIZONTAL REINFORCEMENT PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BARS (INCLUDING WALLS). "OTHER BARS" ARE ALL BARS OTHER THAN "TOP BARS".

REBAR LAP SPICE LENGTHS (INCHES)			
BAR SIZE	MIN CONCRETE CLEAR COVER	4,000 PSI	
		TOP BARS	OTHER BARS
#3	1.0"	16	16
#4	1.0"	20	16
#5	1.0"	30	23
	1.5"	25	20
#6	1.0"	41	32
	1.5"	30	24
#7	1.5"	49	38
	2.0"	43	33
#8	1.5"	62	47
	2.0"	49	38

REBAR LAP SPICE LENGTHS (INCHES)			
BAR SIZE	MIN CONCRETE CLEAR COVER	4,000 PSI	
		TOP BARS	OTHER BARS
#9	1.5"	76	58
	2.0"	60	47
	2.5"	55	43
#10	1.5"	91	71
	2.0"	75	58
	2.5"	65	51
#11	1.5"	110	85
	2.0"	89	69
	2.5"	81	63

12. THE SYMBOL  INDICATES A LAP SPICE, NOT A BEND IN THE BAR.
13. LAP SPLICES IN BEAMS AND WALLS SHALL BE STAGGERED, UNLESS NOTED OTHERWISE.
14. ALL SPLICES SHALL BE CLASS "B" SPLICES WITH THE APPROPRIATE ALLOWANCES FOR BAR SPACING AND DEPTH OF CONCRETE CAST BELOW THE REINFORCEMENT UNLESS OTHERWISE NOTED.
15. LAP SPLICES SHALL BE LOCATED WHERE INDICATED ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER.
16. SPLICES SHALL BE STAGGERED TO GIVE 12 INCHES CLEAR BETWEEN ENDS OF ADJACENT SPLICES, IF BARS ARE SPACED CLOSER THAN 6 INCHES OR 6 BAR DIAMETERS.
17. WHEN REINFORCING BARS OF DIFFERENT SIZES ARE TO BE SPLICED, THE LENGTH OF LAP SHALL BE GOVERNED BY THE SMALLER BAR.
18. REINFORCING BARS PARALLELING CONSTRUCTION JOINTS SHALL HAVE A MINIMUM OF 2" CLEAR CONCRETE COVER FROM JOINT.
19. IN CASES WHERE REINFORCING BARS CANNOT BE EXTENDED AS FAR AS REQUIRED DUE TO THE LIMITED EXTENT OF THE ADJACENT CONCRETE STRUCTURE, THE BARS SHALL EXTEND AS FAR AS POSSIBLE AND END IN STANDARD HOOKS.
20. UNLESS NOTED OTHERWISE, HOOKS SHOWN ON DRAWINGS SHALL BE ASSUMED TO BE STANDARD HOOKS PER ACI 318.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL FORMING, TEMPORARY BRACING, AND SHORING.
22. REINFORCEMENT MAY BE ADJUSTED Laterally TO MAINTAIN A CLEAR DISTANCE OF AT LEAST 1" BETWEEN THE REINFORCEMENT AND KEYS, WATER STOPS, ANCHOR BOLTS, FORM TIES, CONDUITS, AND OTHER EMBEDDED MATERIAL. IN HEAVILY REINFORCED AREAS, RELOCATION OF THE EMBEDDED MATERIAL MUST BE CONSIDERED.

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Texas Registered Engineering Firm F-2144



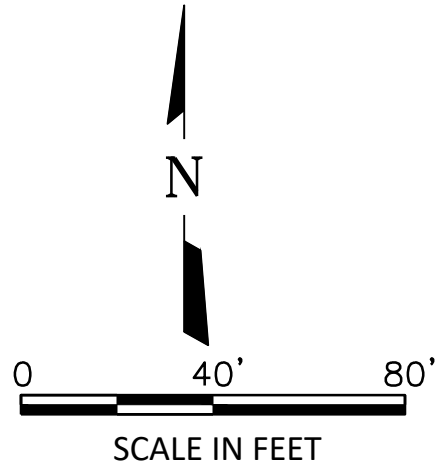
CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS

GENERAL NOTES

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NOTES:

1. TREES, TREE LIMBS, AND SHRUBS WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION ACTIVITIES MAY BE REMOVED OR NEATLY TRIMMED BY THE CONTRACTOR ONLY AFTER APPROVAL FROM THE CITY ARBORIST THROUGH THE INSPECTOR. TREES AND SHRUBS WILL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. ALL LIMBS AND BRANCHES SHALL BE REMOVED FROM THE PROJECT BY THE CONTRACTOR.
2. REMOVE EXISTING FENCES AND GATES AS NECESSARY FOR CONSTRUCTION ACCESS. REPLACE IN KIND AFTER CONSTRUCTION.
3. UTILIZE CERTIFIED FLAGGERS OUTSIDE FENCED AREAS AND ON PUBLIC ROADWAYS WHEN CONSTRUCTION ACTIVITIES MAY POSE A HAZARD TO PEDESTRIANS OR MOTORISTS.
4. NO STAGING OR STORAGE OF EQUIPMENT IS ALLOWED OUTSIDE THE FENCED AREAS SHOWN.
5. CONTRACTOR ACCESS THROUGH THE GOLF COURSE FROM ELIZABETH AVENUE TO THE SITE SHALL BE COORDINATED WITH PARKS AND RECREATION AND GOLF COURSE STAFF .
6. THE SPRING FED POOL IS SHOWN AS DRAINED IN ALL AREA VIEWS.

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7/16/2024

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CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS

SITE PLAN AND ACCESS

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- NOTES:
- DEMOLITION ITEMS ARE CLOUDED AS SHOWN.
 - NUMBERED TREES TO REMAIN AND BE PROTECTED (SEE SHEET G-1).

ISSUED FOR CONSTRUCTION

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20'

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SCALE IN FEET

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FREESE

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PROFESSIONAL ENGINEER

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JAKE EDWARD DONAHUE

STATE OF TEXAS

7/16/2024

CITY OF NEW BRAUNFELS

LANDA LAKE DAM IMPROVEMENTS

DEMOLITION PLAN

NO.	ISSUE	BY	DATE	FILE NAME
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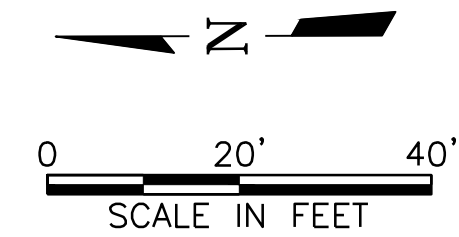
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

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C-3

ISSUED FOR CONSTRUCTION



CONTROL POINT TABLE			
PNT	NORTHING	EASTING	DESCRIPTION
CP-1	13807144.74	2243350.00	CONCRETE BLOCK CORNER
CP-2	13807124.18	2243342.78	EDGE OF CONCRETE
CP-3	13807249.10	2243259.78	CONCRETE BLOCK CORNER
CP-4	13807345.47	2243190.06	EDGE OF CONCRETE

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144



FREESE & NICHOLS
10431 Morado Circle, Suite 300
Austin, Texas 78759
Phone - (512) 617-3100
Web - www.freeze.com

CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS
EMBANKMENT PLAN

NO.	ISSUE	BY	DATE	18N JOB NO.
				NEB23518
				DATE 7/16/2024
				DESIGNED JD
				DRAWN TTH
				REVISED NO
				CHECKED JD

0 1

VERIFY SCALE

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

NEB-CV/PL-EMBARK.dwg

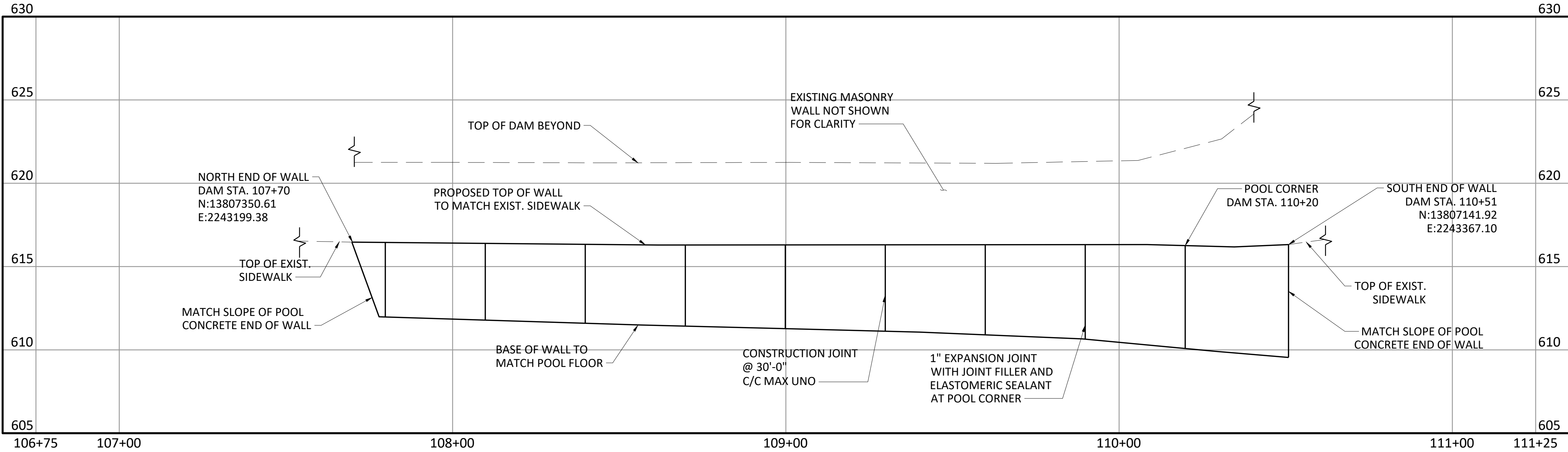
C-5

SEQ.	DESCRIPTION	DATE	AMOUNT	CHECK NO.	BANK	MEMO
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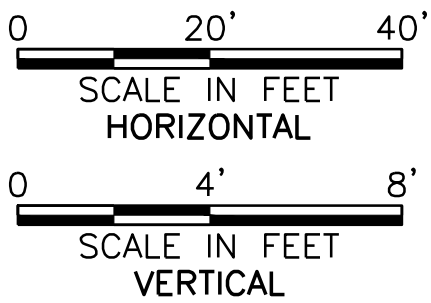
ISSUED FOR CONSTRUCTION

ACAD Rel: 24.2s (LMSTech)
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Last Saved: 7/16/2024 10:13 AM Saved By: 02462

Plot Date: 7/16/2024 10:57 AM Plot By: 02462 Filename: N:\WRD\Drawings\NEB-CV-XSEC-EMBAK.dwg



PROPOSED WALL PROFILE



ISSUED FOR CONSTRUCTION

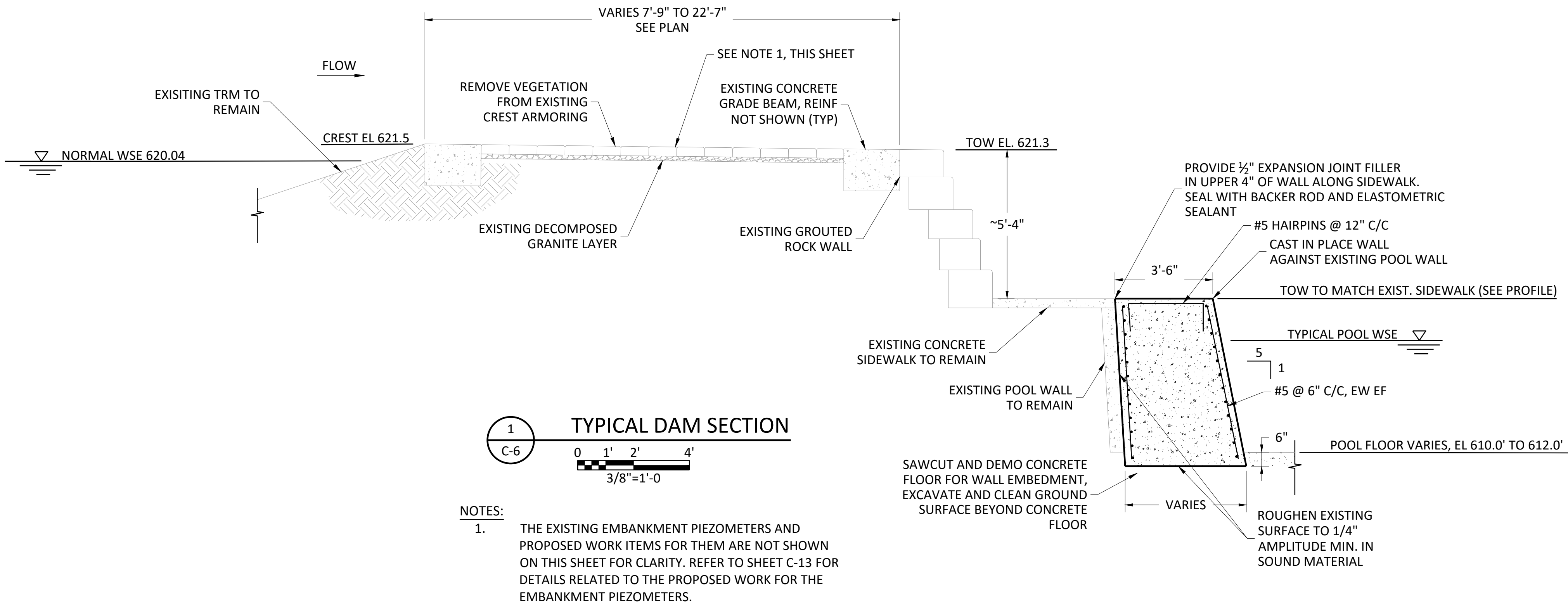
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CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS
PROPOSED WALL PROFILE



Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144





ISSUED FOR CONSTRUCTION

CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS
EMBANKMENT AND CONCRETE WALL SECTION

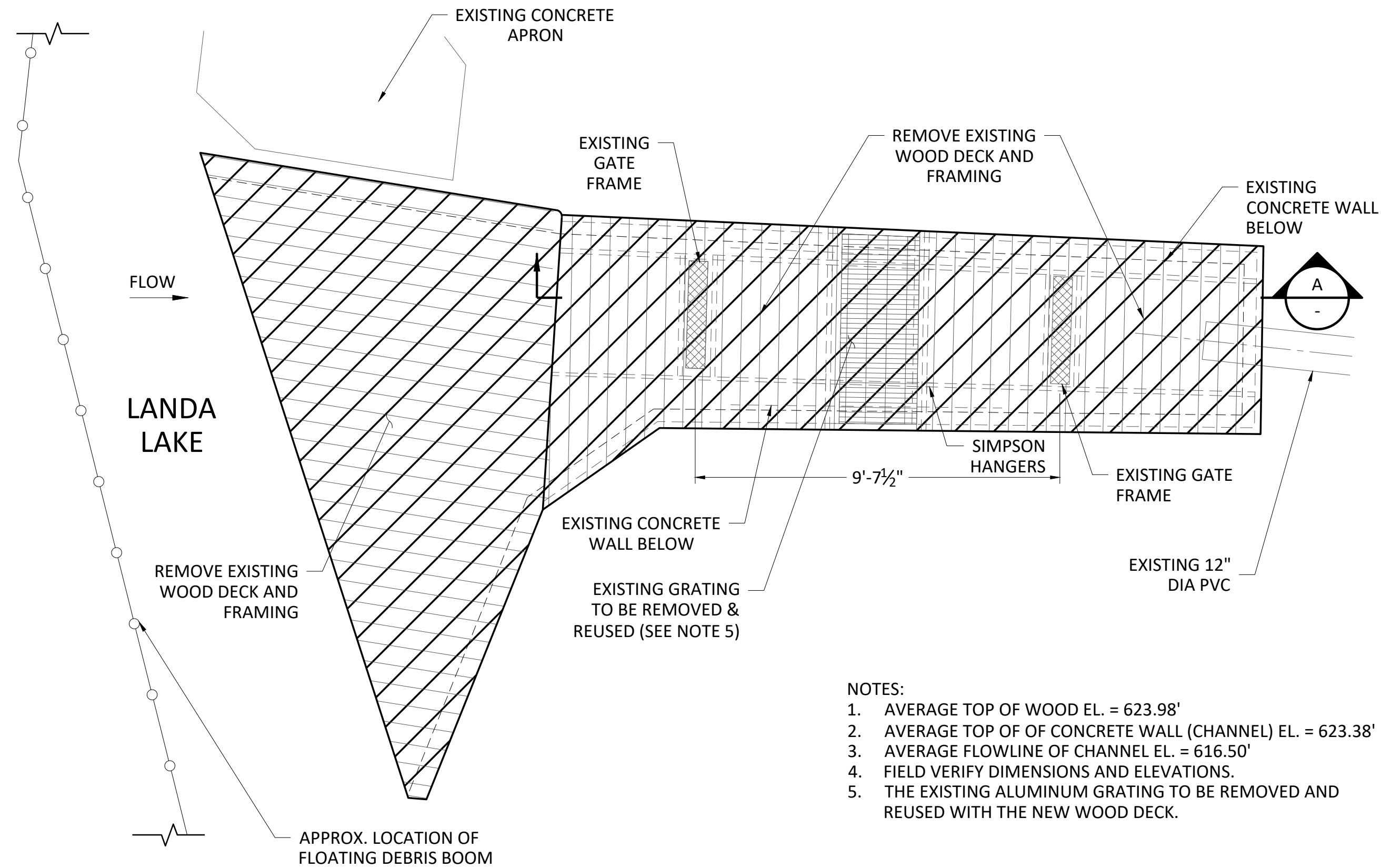
NO.	ISSUE	BY	DATE	F&N JOB NO.
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				DATE
				DESIGNED
				DRAWN
				REVISION
				CHECKED
				FILE NAME
				NEB-CV-SC-EMBAK.dwg

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

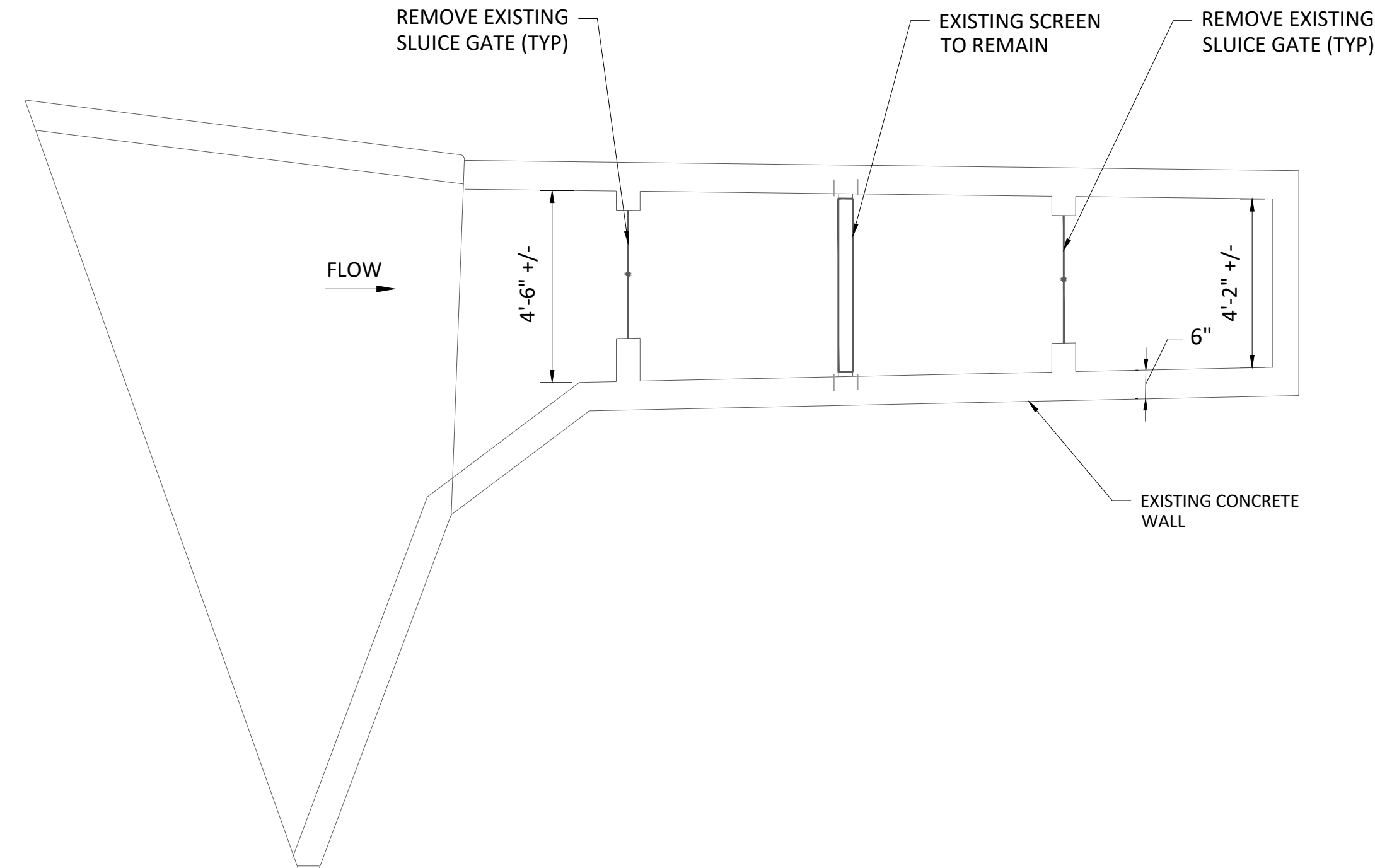
FREES & NICHOLS
10431 Morado Circle, Suite 300
Austin, Texas 78759
Phone - (512) 617-3100
Web - www.freese.com

Professional Engineer
JAKE EDWARD DONAHUE
148425
7/16/2024

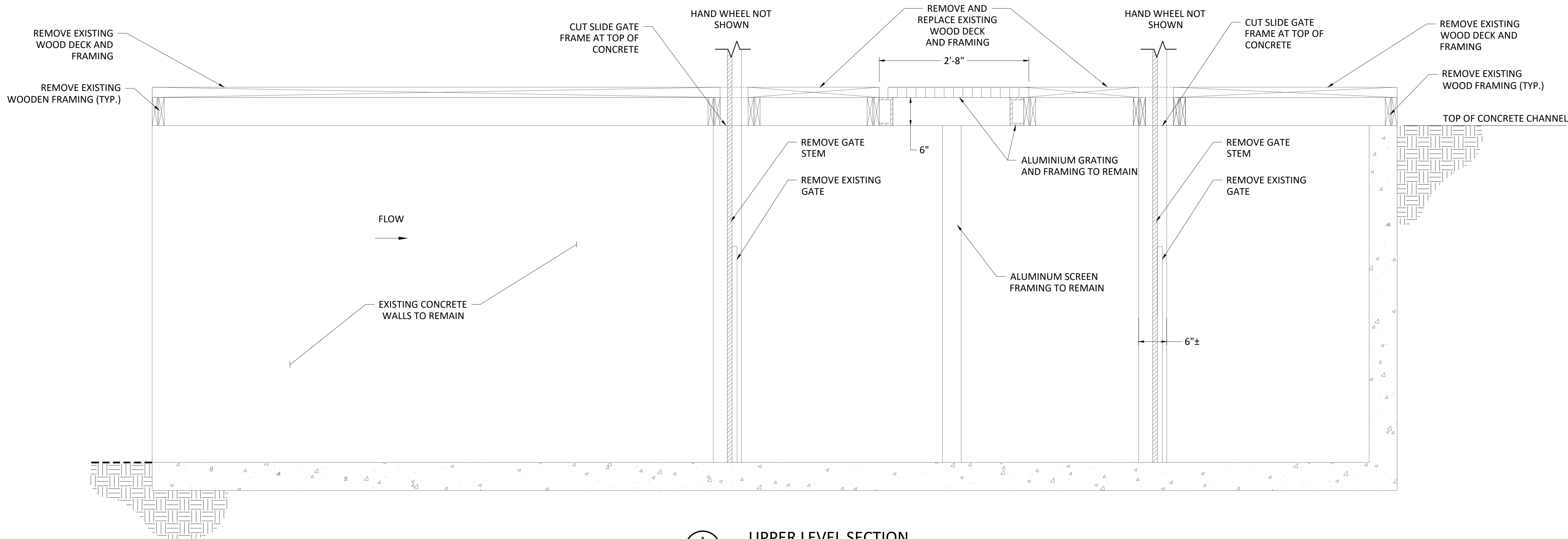
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POOL CULVERT INLET PLATFORM DEMOLITION PLAN
NOT TO SCALE



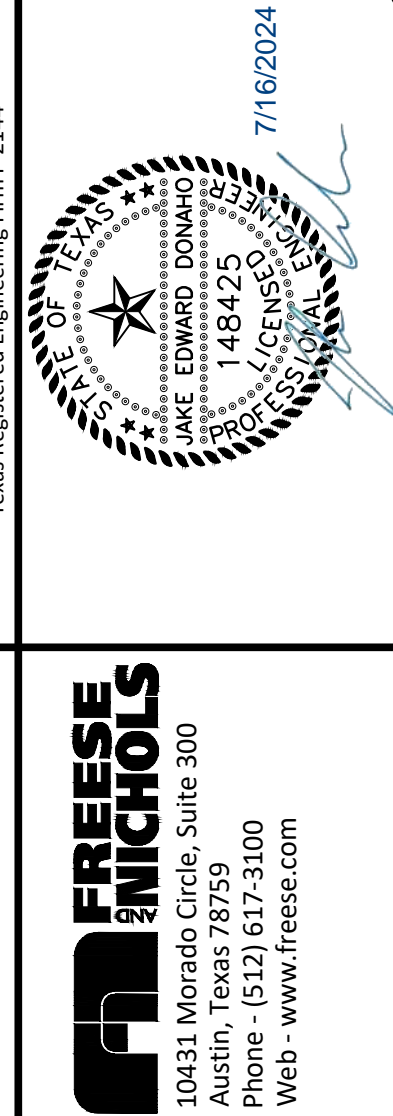
2
-
CONCRETE INLET CHANNEL PLAN
NOT TO SCALE



A
-
UPPER LEVEL SECTION
0 6" 1' 2'
1"=1'-0"

ISSUED FOR CONSTRUCTION

Freeze and Nichols, Inc.
Texas Registered Engineering Firm F-2144



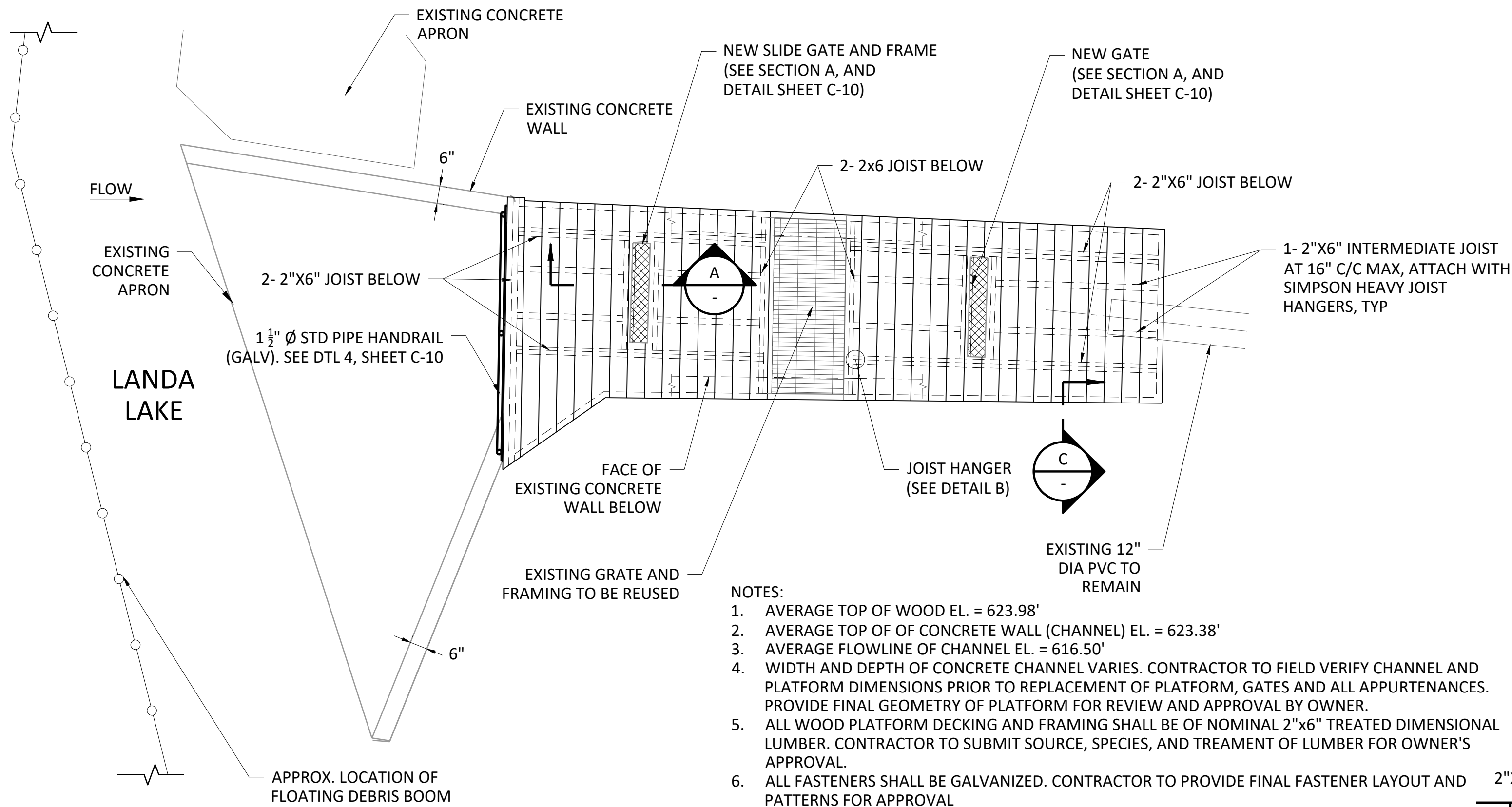
CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS
POOL CULVERT DEMOLITION PLAN

NO.	ISSUE	BY	DATE	F&N JOB NO.	NEB23518
0	VERIFY SCALE			DATE	7/16/2024
1	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.			DESIGNED	JD
				DRAWN	JD
				REVISED	TTH
				CHECKED	NO
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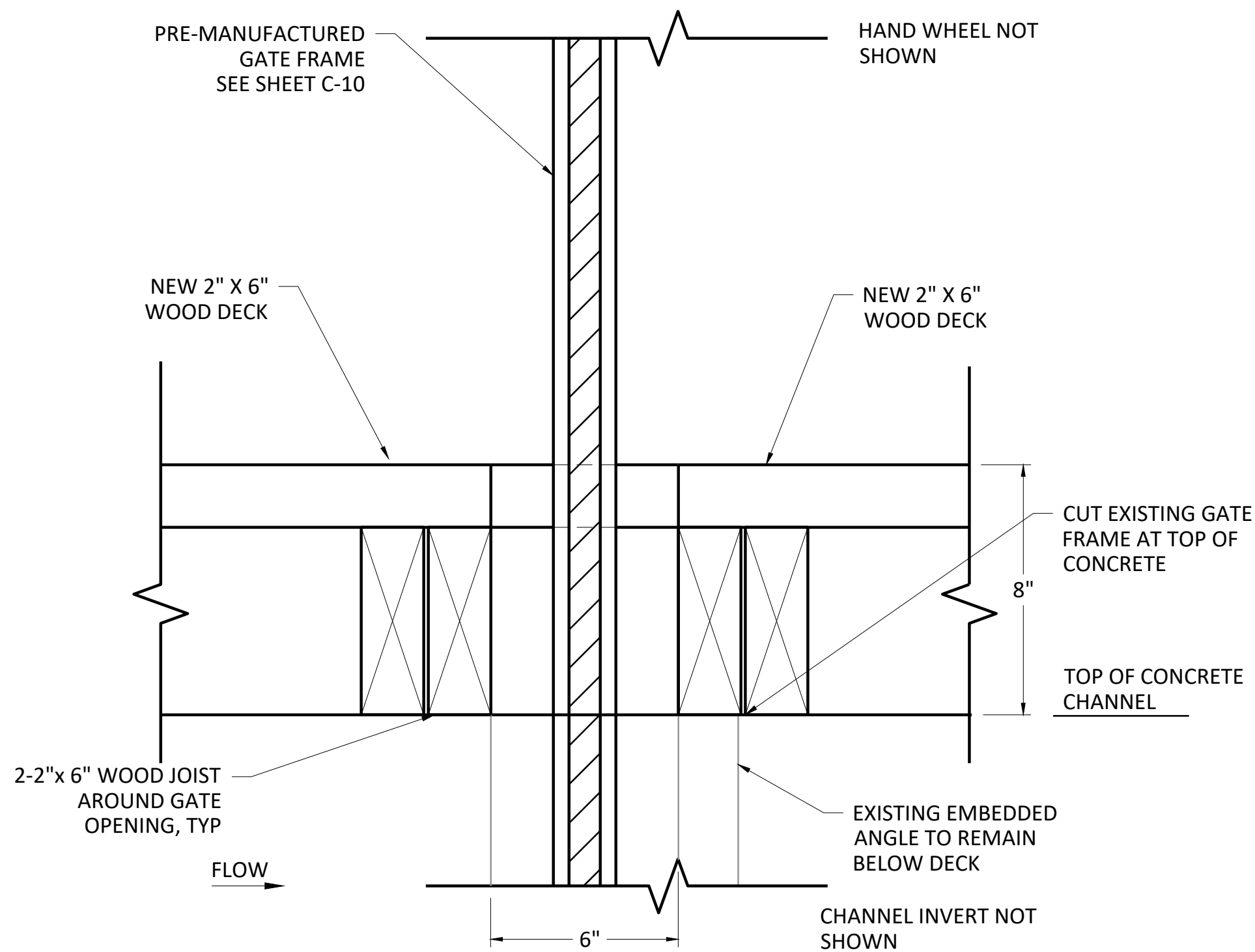
SHEET C-8

SEQ.

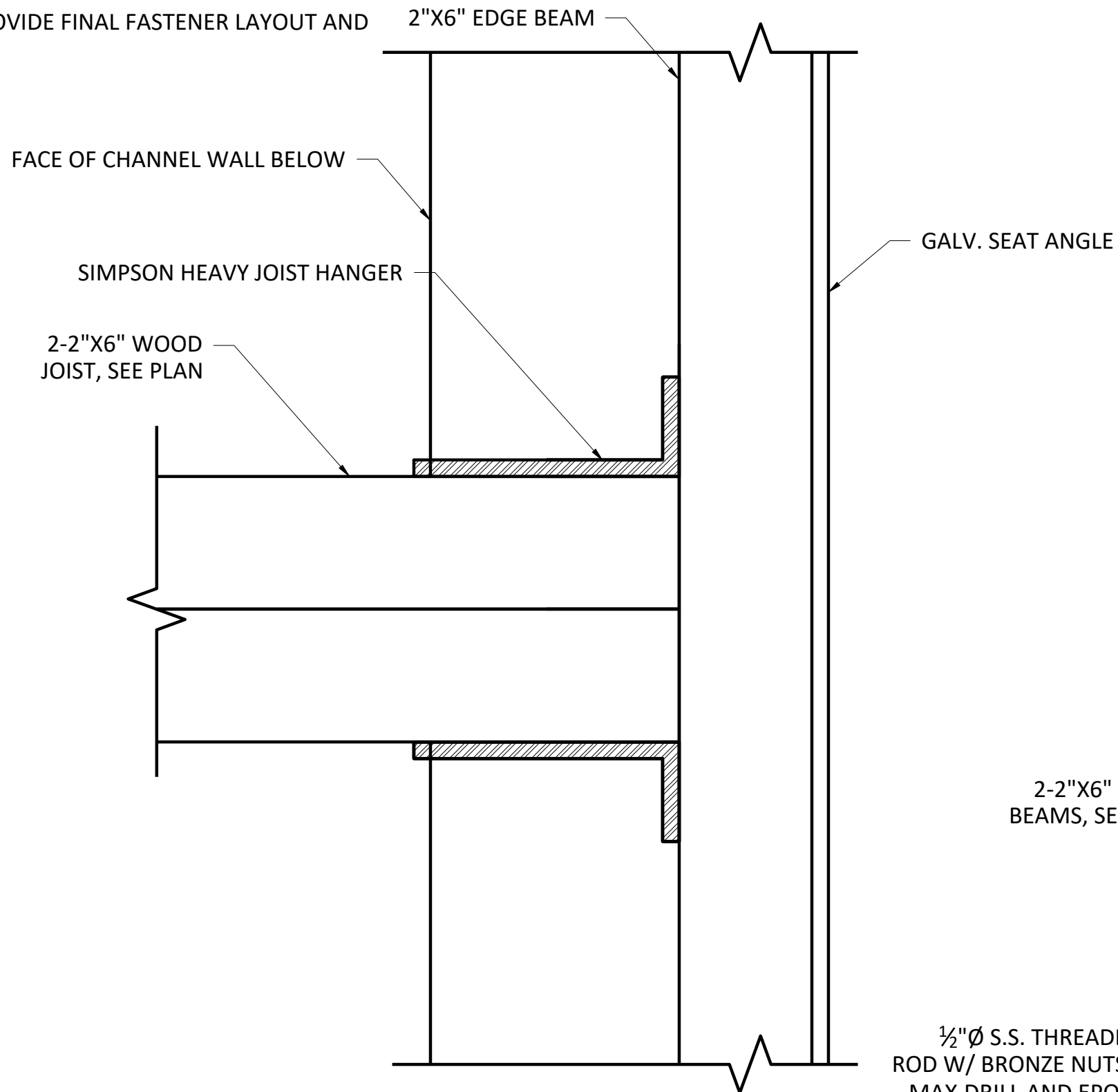
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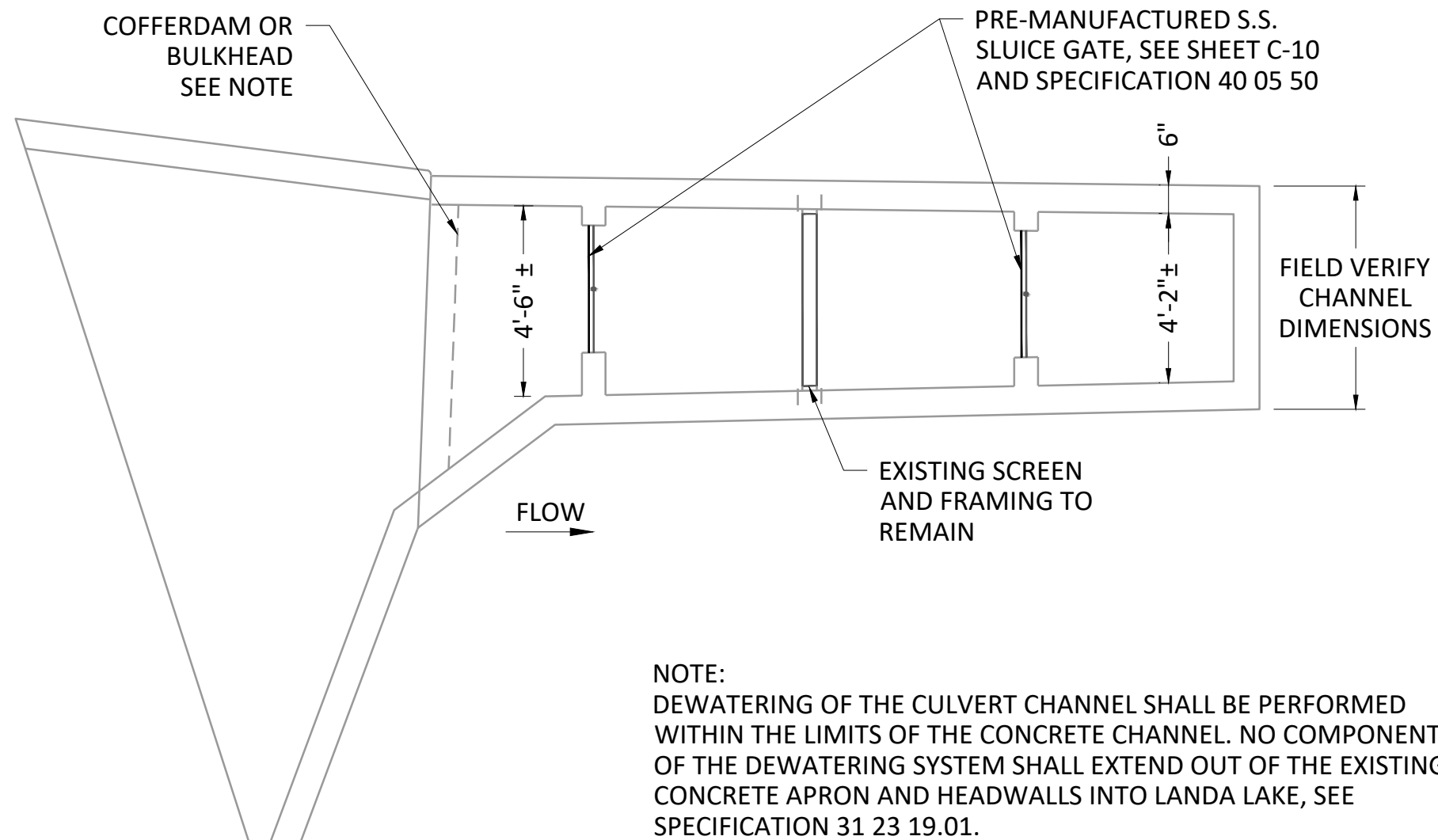
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POOL CULVERT INLET PLATFORM PLAN
NOT TO SCALE



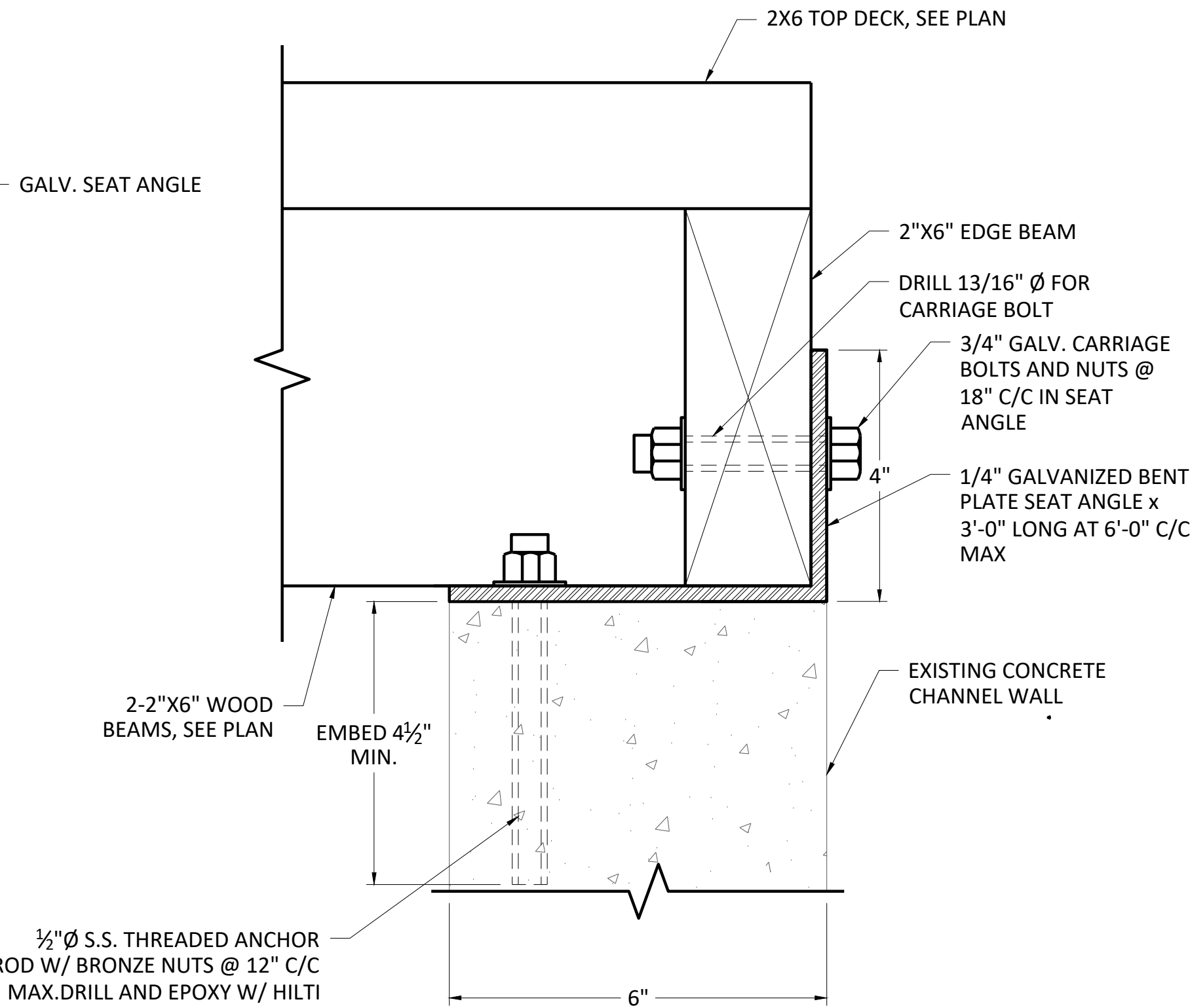
A
-
SLUICE GATE OPENING SECTION
0 1" 2" 4" 8"
3"=1'-0"



B
-
TYPICAL JOIST CONNECTION DETAILS PLAN
0 6" 1'
6"=1'-0"



2
-
CONCRETE INLET CHANNEL PLAN
NOT TO SCALE



C
-
TYPICAL SEAT ANGLE DETAIL SECTION
0 6" 1'
6"=1'-0"

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2444

JAKE EDWARD DONAHO
148425
EXPIRES 7/16/2024
PROFESSIONAL ENGINEER
CIVIL

FRESE & NICHOLS
10431 Morado Circle, Suite 300
Austin, Texas 78759
Phone - (512) 617-3100
Web - www.freese.com

CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS

SLUICE GATE PLATFORM DETAILS

FILE NO.	NEB23518
DATE	7/16/2024
DESIGNED	JD
DRAWN	TTH
REVISED	NO
CHECKED	JD
FILE NAME	NEB-CV-DT-GATE 02.dwg

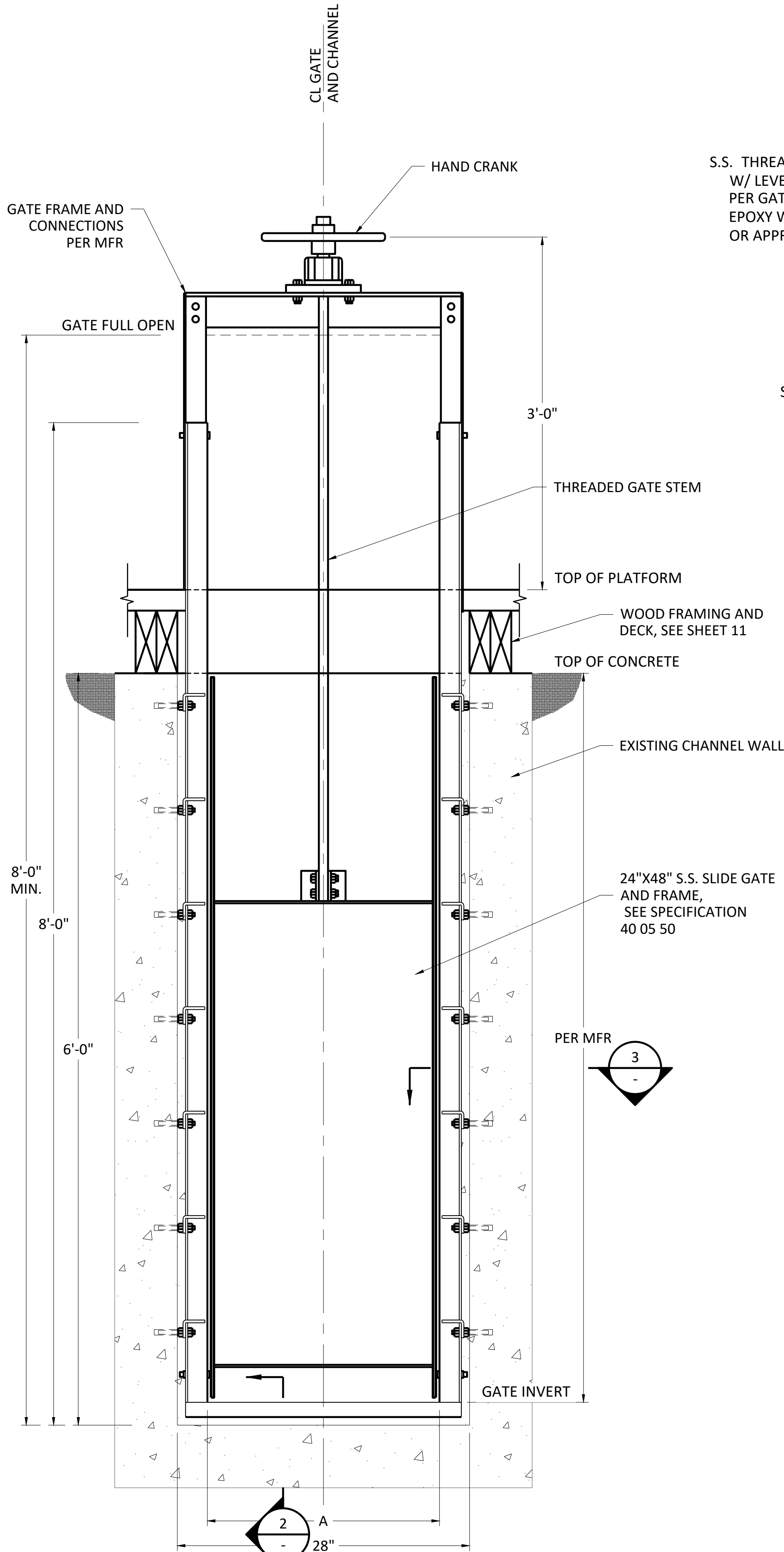
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SHEET
C-9

VERIFY SCALE
0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

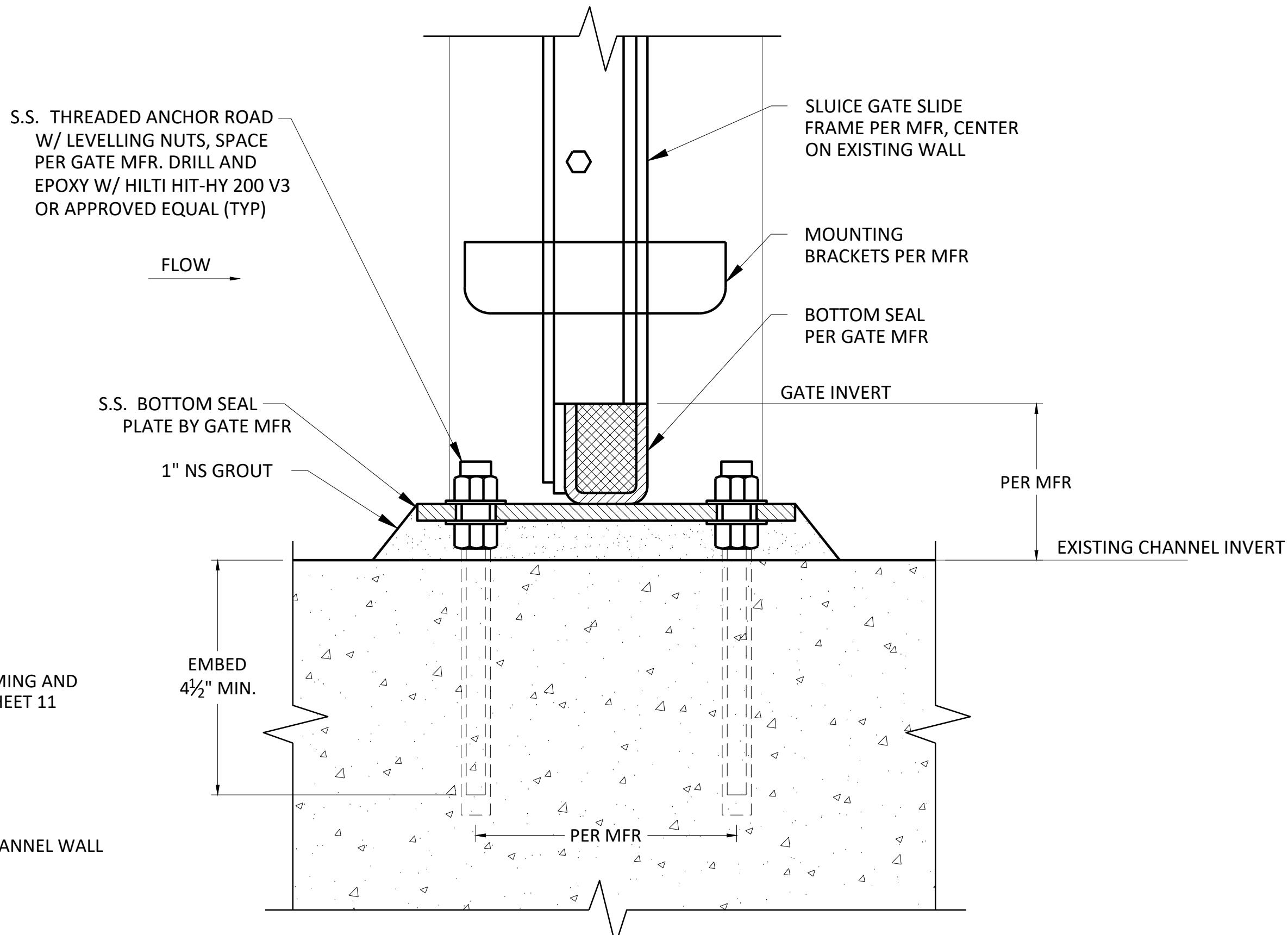
ISSUED FOR CONSTRUCTION

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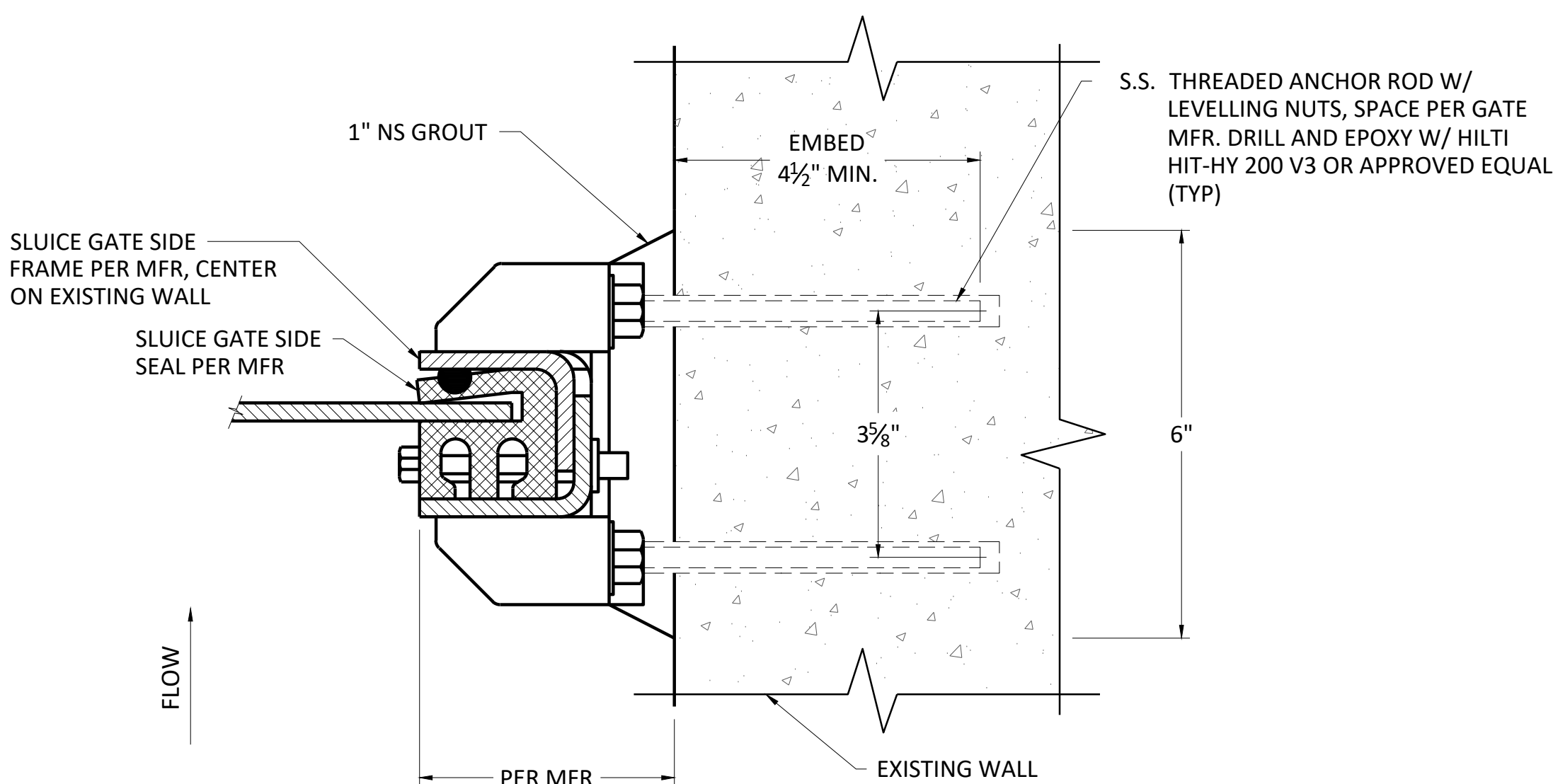
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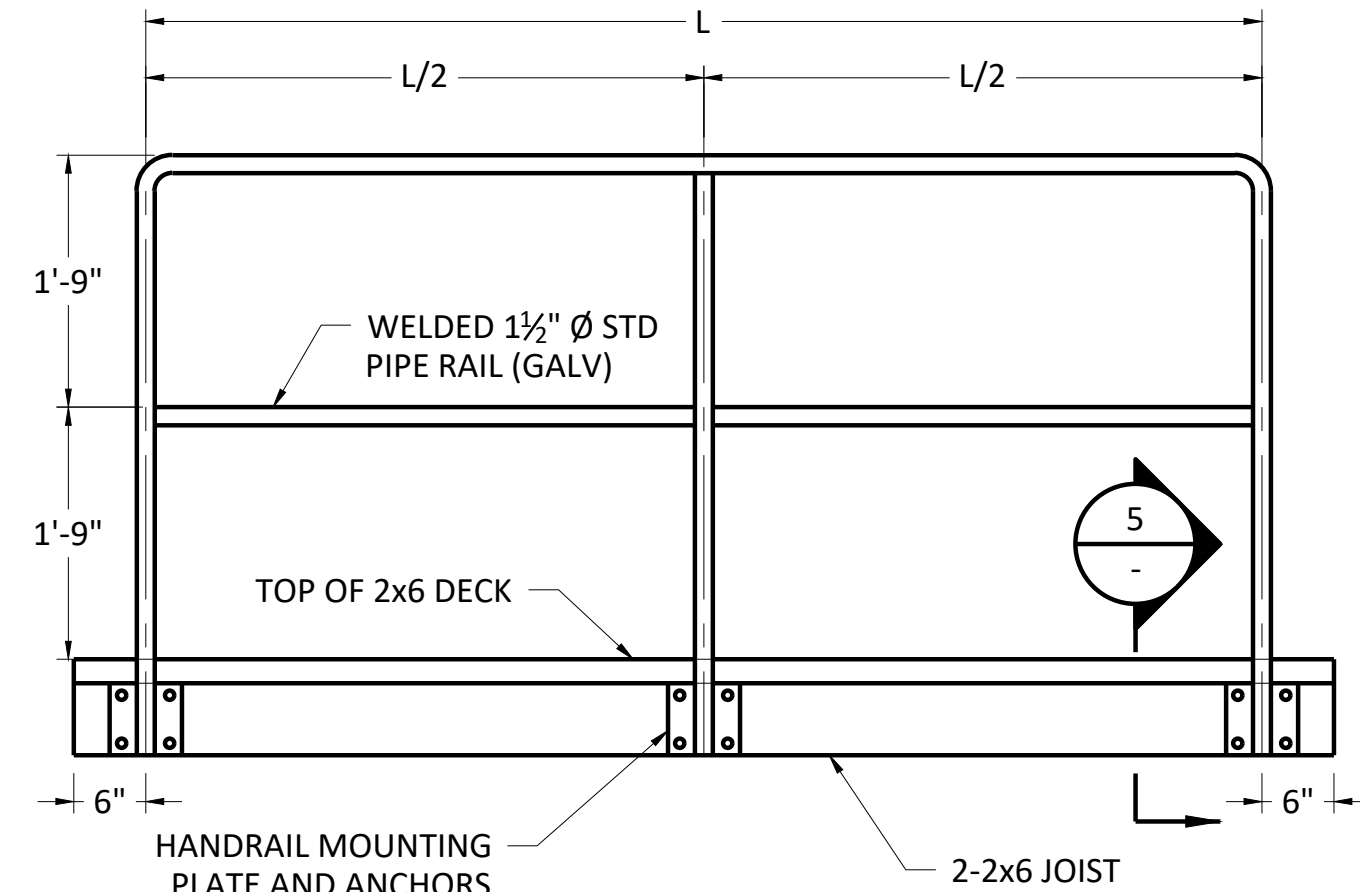
1 SLUICE GATE UPSTREAM ELEVATION
0 4" 8" 1"
1-1/2"=1'-0"



2 BOTTOM SEAL PLATE SECTION
0 1" 2" 4"
6"=1'-0"

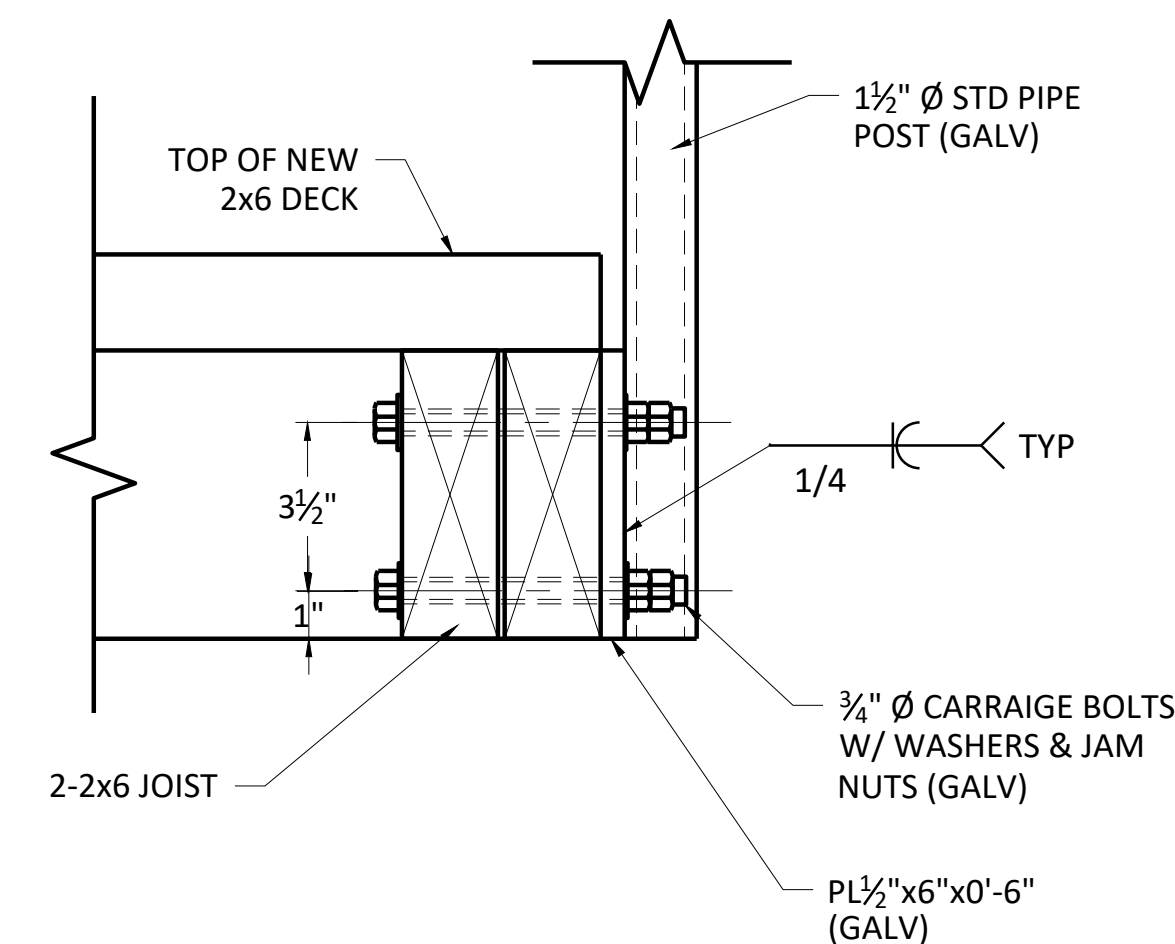


3 GATE SLIDE FRAME SECTION
0 1" 2" 4"
6"=1'-0"



NOTE:
GALVANIZED PIPE RAIL SHALL BE OF WELDED CONSTRUCTION.
OVERALL LENGTH OF PLATFORM SHALL BE FIELD VERIFIED PRIOR
TO FABRICATION OF THE RAIL.

4 HANDRAIL ELEVATION
0 6" 1' 2'
3/4"=1'-0"



5 HANDRAIL MOUNTING DETAIL
0 1" 2" 4" 8"
3"=1'-0"

Freeze and Nichols, Inc.
Texas Registered Engineering Firm F-2144



FREEZE & NICHOLS
10431 Morado Circle, Suite 300
Austin, Texas 78759
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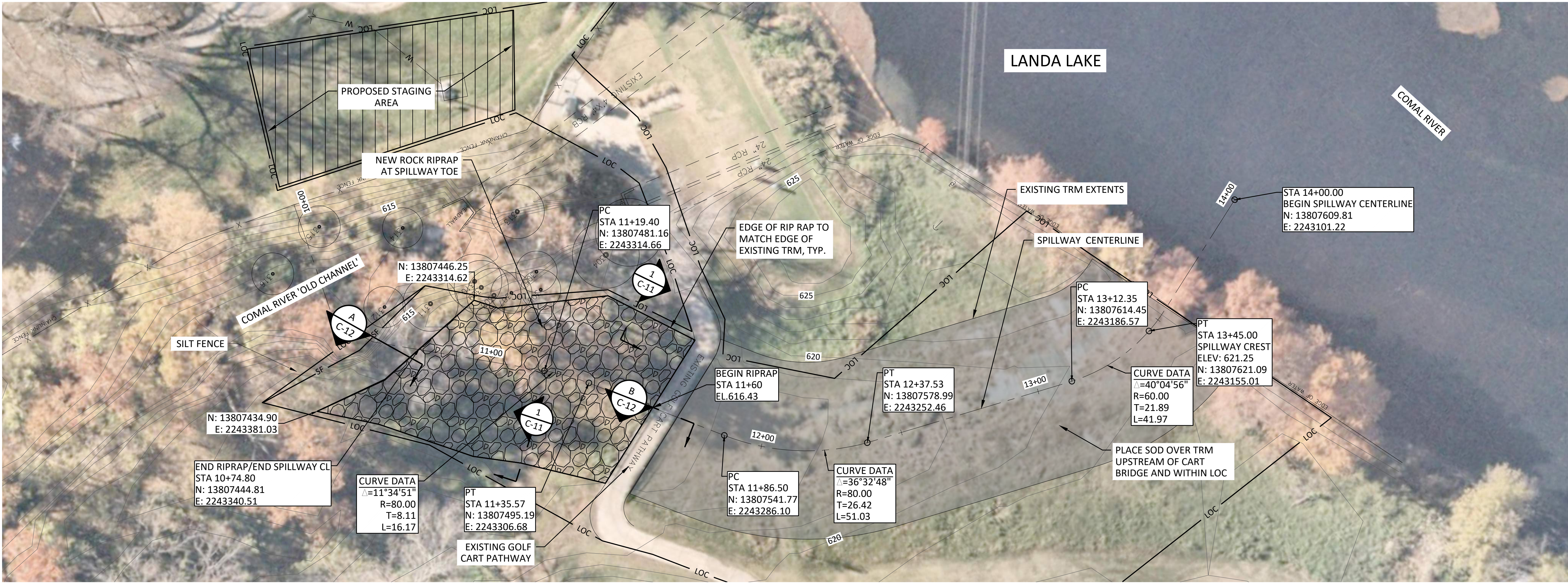
CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS
SLUICE GATE AND HANDRAIL DETAILS

NO.	ISSUE	DATE	BY	DATE	DESIGNED	DRAWN	REVIS	CHECKED	FILE NAME
0	VERIFY SCALE								NEB-CV-DT-GATE 03.dwg
1	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.								

SHEET C-10

SEQ.

ISSUED FOR CONSTRUCTION

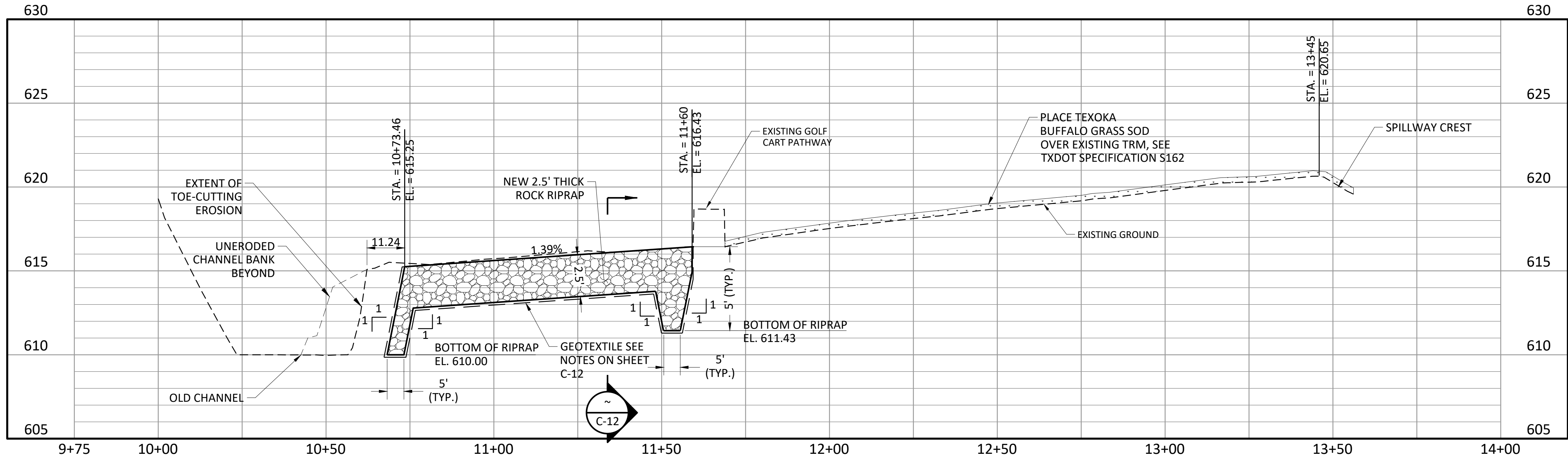


1
C-4

AUXILIARY SPILLWAY PLAN

0 20' 40'

SCALE IN FEET



AUXILIARY SPILLWAY CENTERLINE PROFILE

0 20' 40' 0 4' 8'

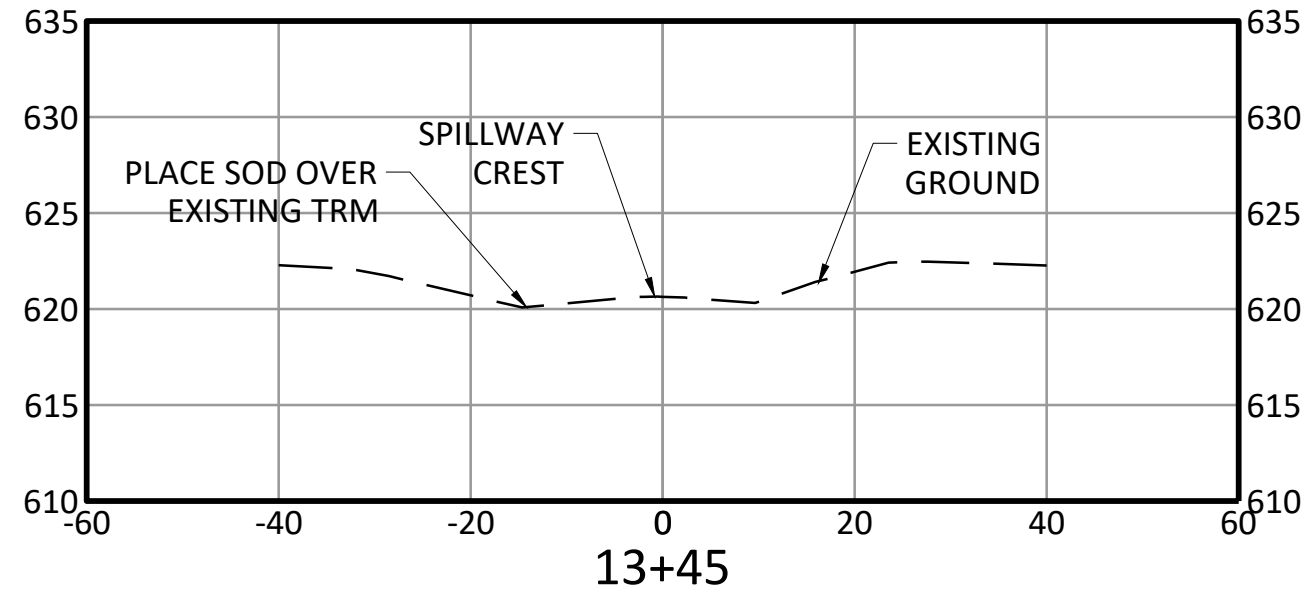
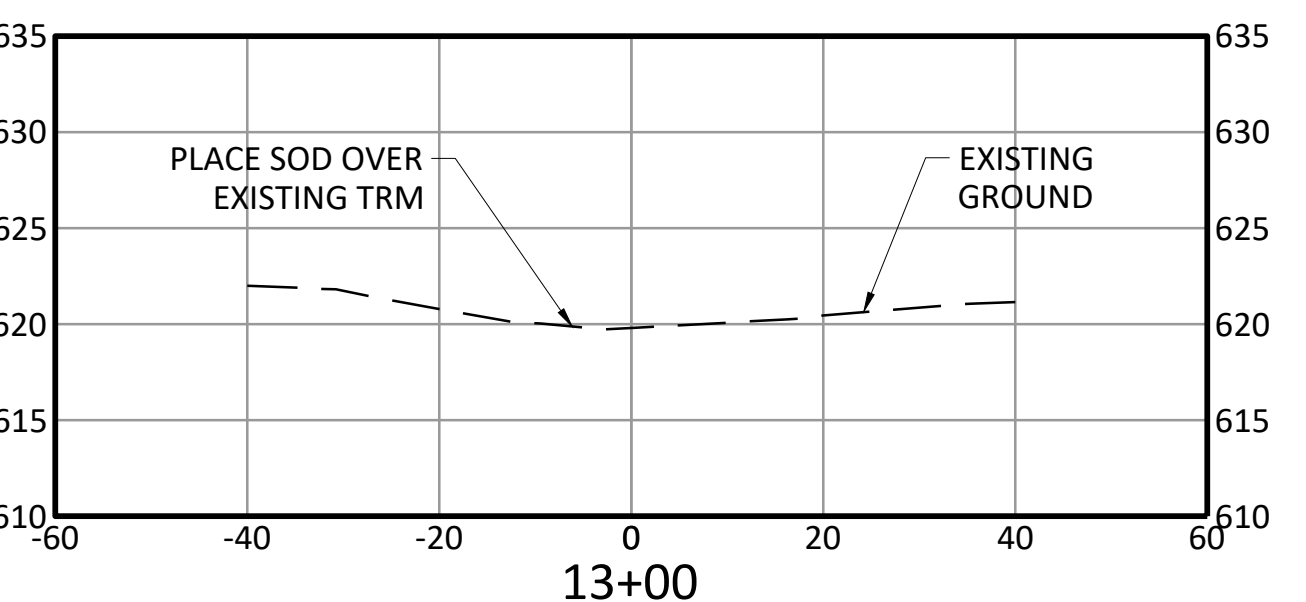
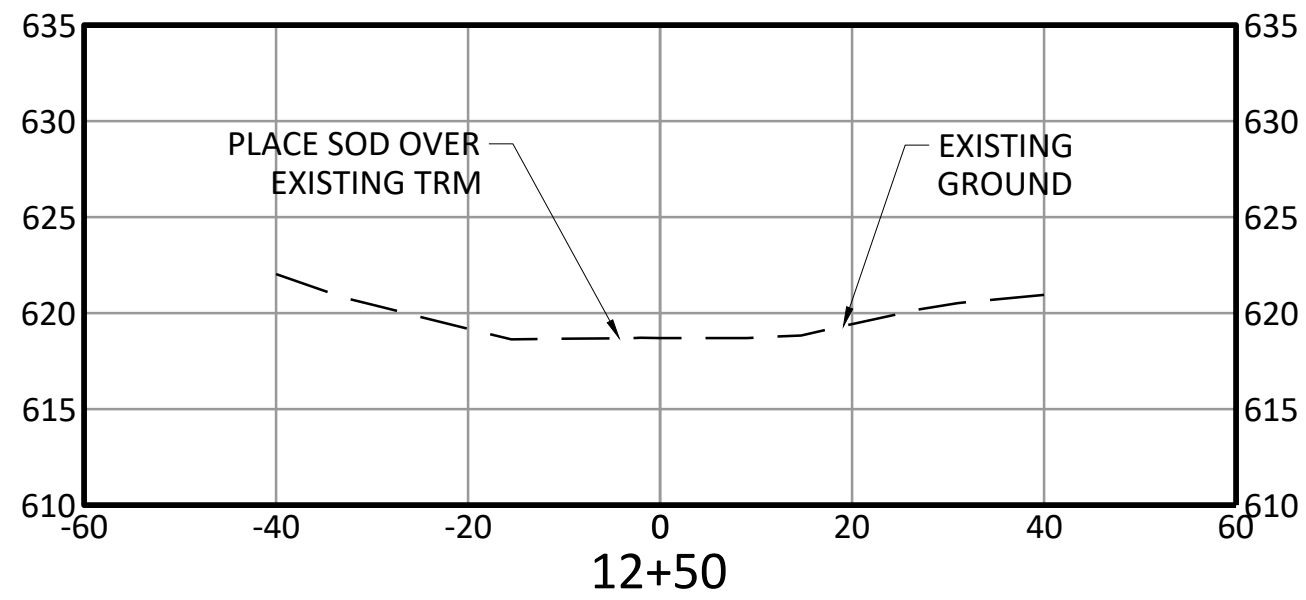
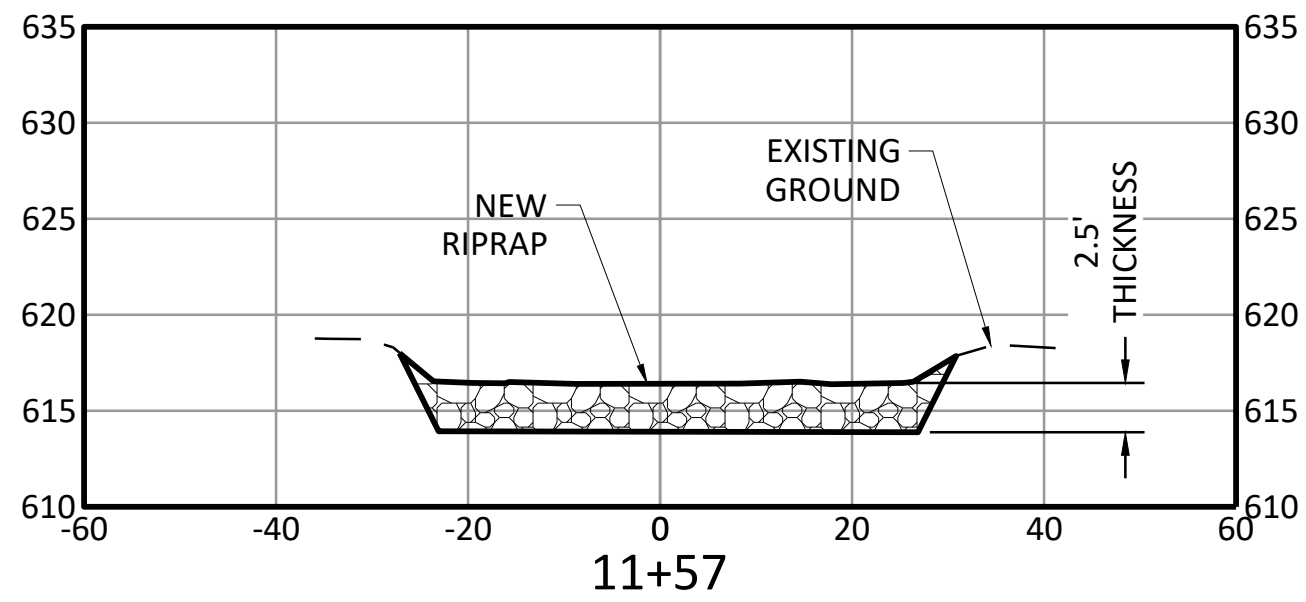
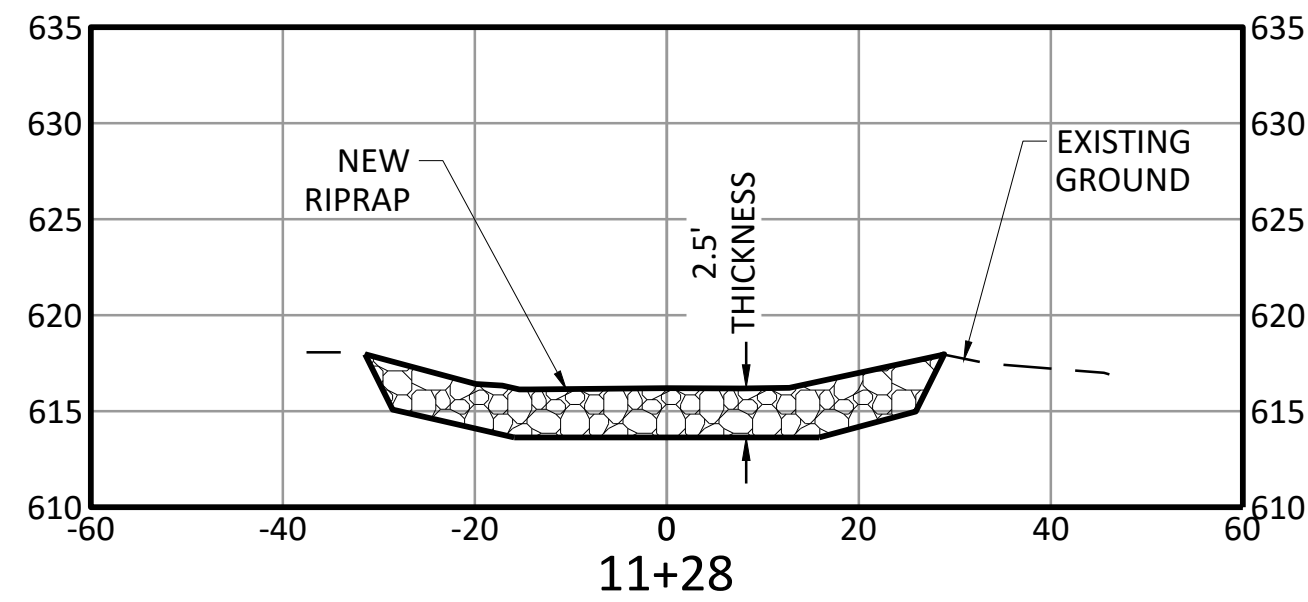
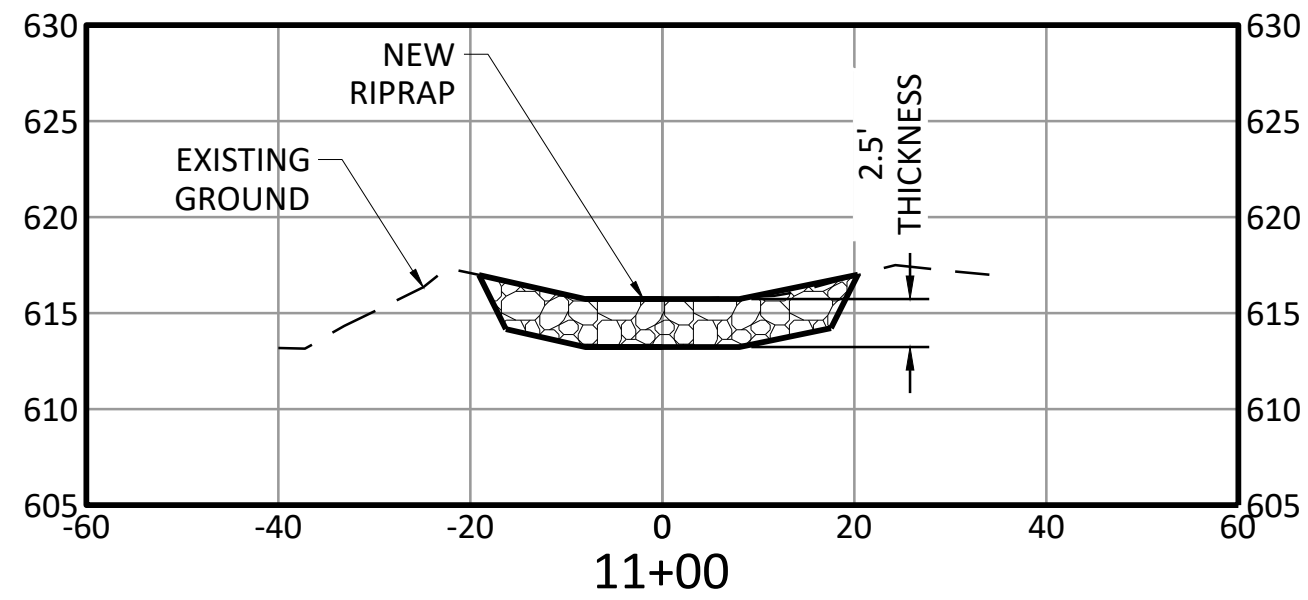
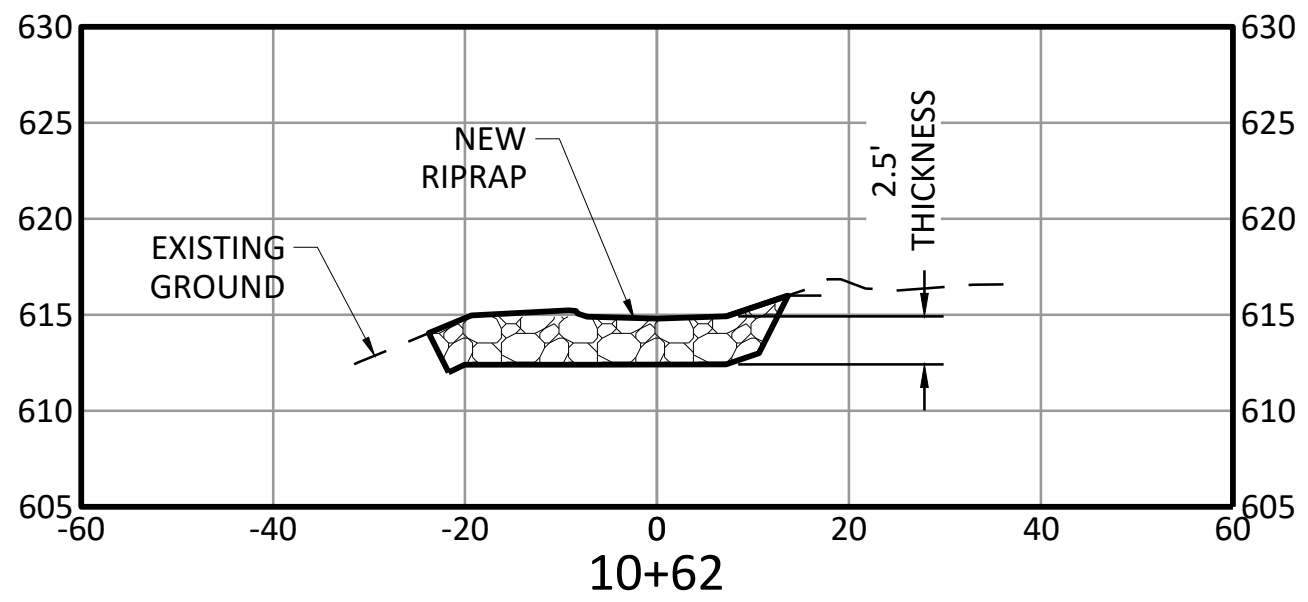
SCALE IN FEET HORIZONTAL

SCALE IN FEET VERTICAL

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ISSUED FOR CONSTRUCTION

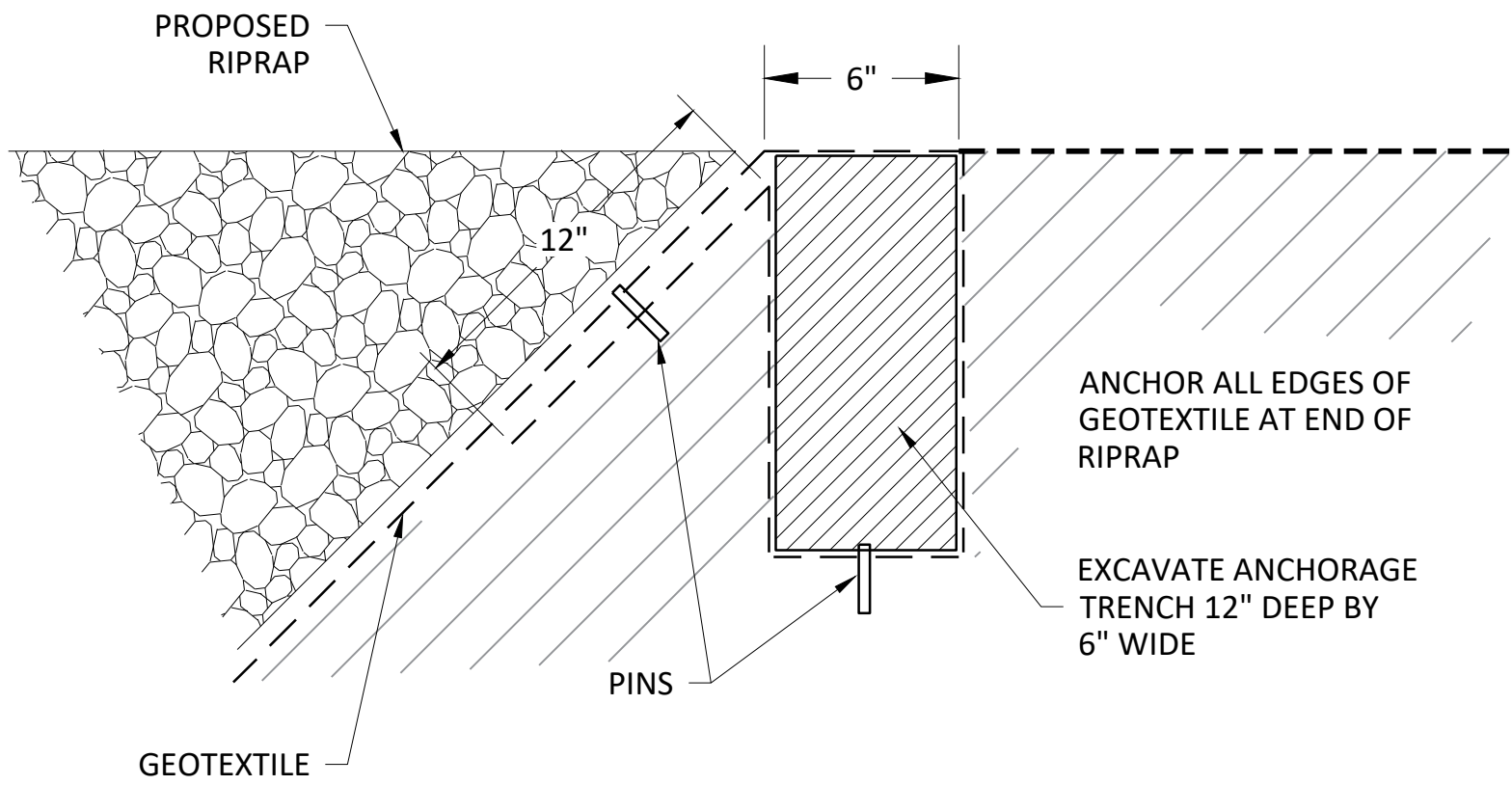
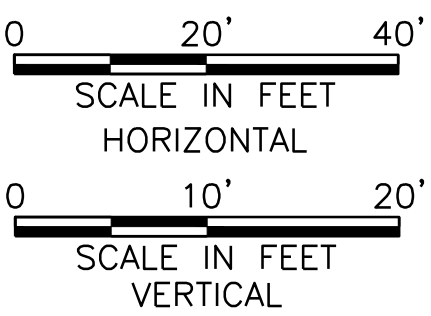
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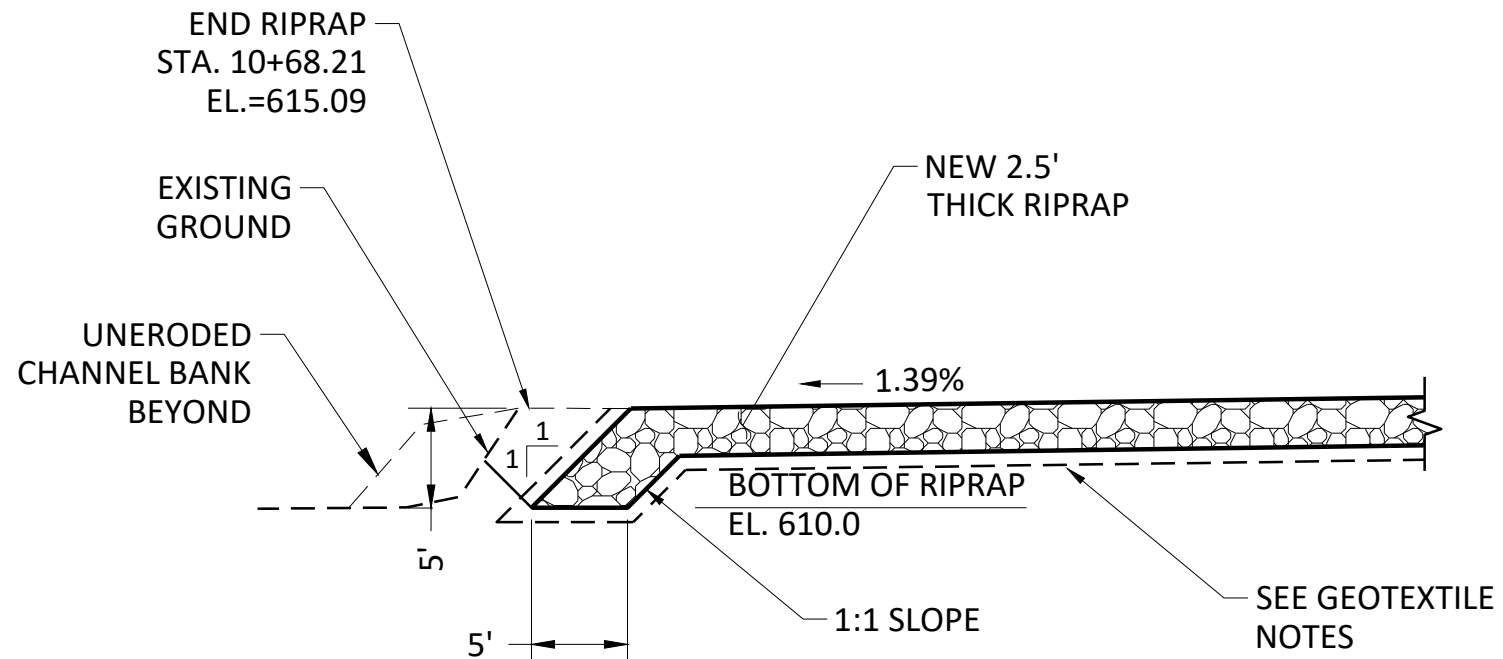
PERCENT PASSING (%)	PARTICAL SIZE (INCHES)	
	MAX.	MIN.
100	18	-
85	14	11
50	10.5	8.5
15	7.8	5.5

NOTES:

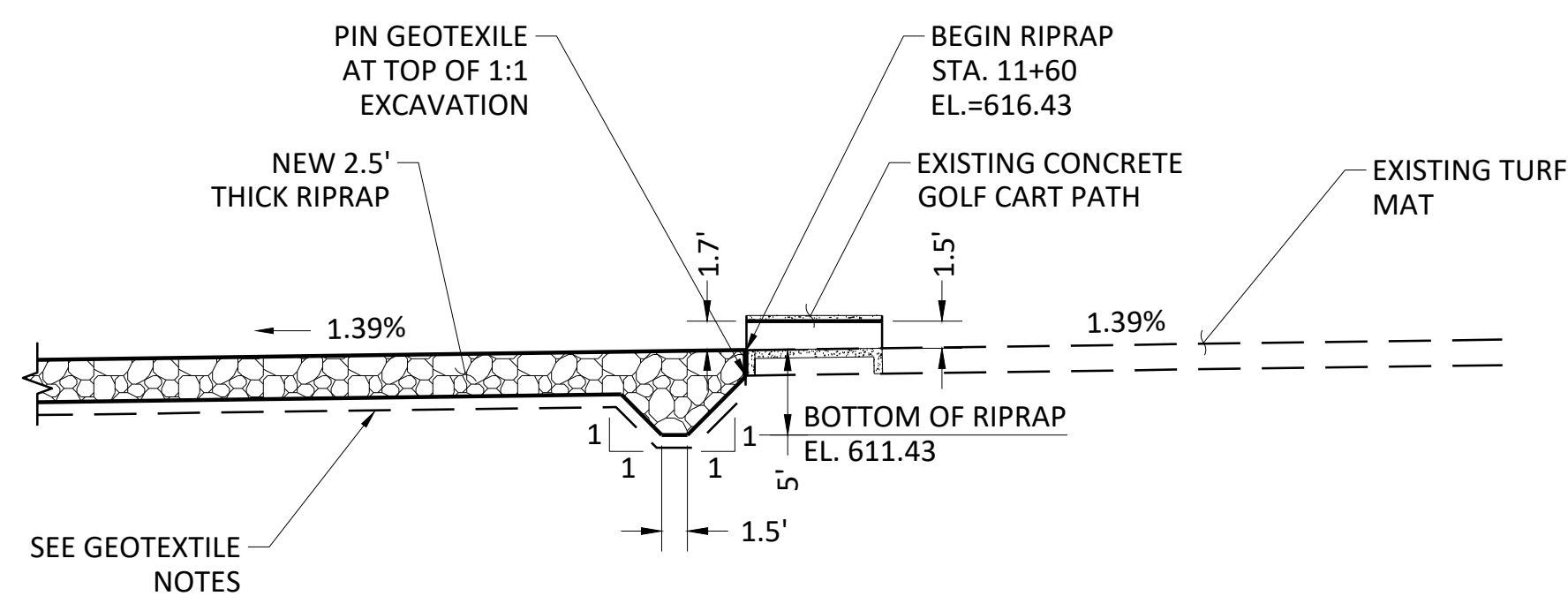
- SECTIONS ARE TAKEN LOOKING UPSTREAM.
- ROCK RIPRAP SHALL COMPLY WITH SPECIFICATION 31 37.00. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE ROCK RIPRAP AND THE APPROVED SUBGRADE.
- GEOTEXTILE FABRIC SHALL COMPLY WITH SPECIFICATION 31 37.00.
- ROCK PLACED AGAINST CONCRETE STRUCTURE SHALL BE PLACED CAREFULLY TO AVOID DAMAGE. SPALLS AND ROCK DUST THAT PASSES A 3" SIEVE SHALL CONSIST OF LESS THAN 5% BY WEIGHT.



1 ANCHORAGE DETAIL
C-11 NOT TO SCALE



A AUXILLARY SPILLWAY PROFILE
C-11 SCALE IN FEET



B AUXILLARY SPILLWAY PROFILE
C-11 SCALE IN FEET

ISSUED FOR CONSTRUCTION

Freeze and Nichols, Inc.
Texas Registered Engineering Firm F-2144

7/16/2024

10431 Morado Circle, Suite 300
Austin, Texas 78759
Phone - (512) 617-3100
Web - www.freeze.com

CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS
OVERFLOW SPILLWAY SECTIONS

FILE NAME	NEB-CV-XS-OVFLR.dwg
NO.	1
ISSUE	0
DATE	7/16/2024
BY	
DESIGNED	JD
DRAWN	JT
REVIS	
CHECKED	
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JT	

VERIFY SCALE

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET

C-12

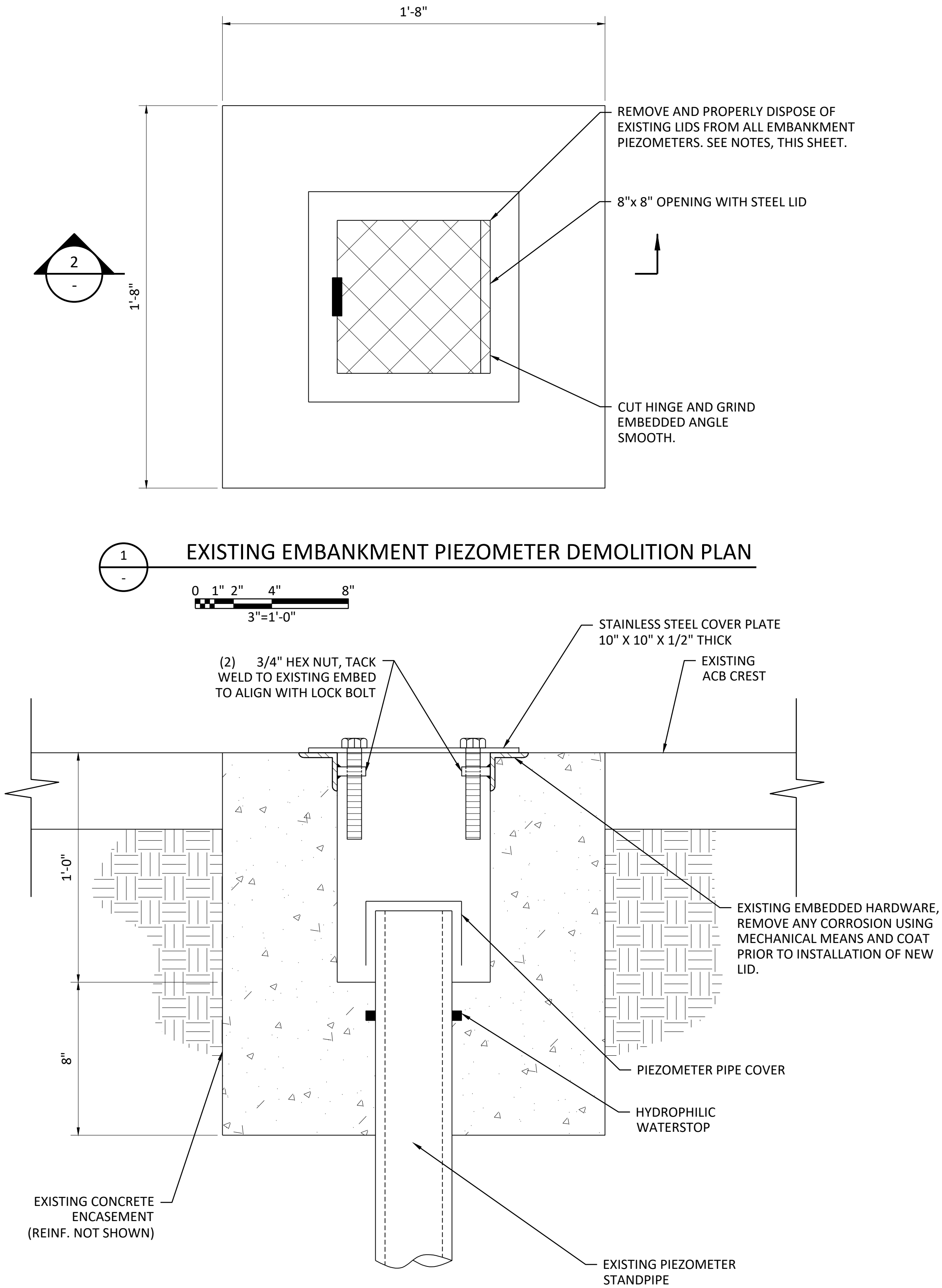
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TYPICAL EMBANKMENT PIEZOMETER COVER CONDITION
(PHOTO TAKEN ON APRIL 12, 2023)

NOTES:

- REMOVE LIDS (I.E. COVERS) FROM THE FIVE EXISTING EMBANKMENT PIEZOMETERS.
- CLEAN AND FLUSH OUT ALL SEDIMENT (I.E. SILT OR SOIL MATERIAL) FROM THE EMBANKMENT PIEZOMETER STANDPIPES. IF ORGANIC MATERIAL OR GROWTH (I.E. BIOFOULING) IS ENCOUNTERED IN THE STANDPIPES OTHER THAN SILT OR SOIL, NOTIFY THE ENGINEER IMMEDIATELY FOR THE BEST METHOD TO HANDLE BIOFOULING OR SIMILAR POSSIBLE ISSUES IN THE STANDPIPES. OTHERWISE, CLEAN AND FLUSH THE PIEZOMETER STANDPIPES USING ANY COMBINATION OF THE FOLLOWING METHODS: AIR LIFT, COMPRESSED AIR, WATER JET, PUMPS, AND VACUUM TRUCK.
- INSTALL NEW STAINLESS STEEL PIEZOMETER LIDS AS INDICATED ON THIS SHEET.
- CONTRACTOR TO PROVIDE DETAIL DRAWING OF PROPOSED NEW STAINLESS STEEL COVER FOR ENGINEER REVIEW AND APPROVAL.



Freeze and Nichols, Inc.
Texas Registered Engineering Firm F-2144

JAKE EDWARD DONAHO
148425
PROFESSIONAL ENGINEER
STATE OF TEXAS

7/16/2024

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Austin, Texas 78759
Phone - (512) 617-3100
Web - www.freeze.com

CITY OF NEW BRAUNFELS
LANDA LAKE DAM IMPROVEMENTS

EMBANKMENT PIEZOMETER DETAILS

NO.	ISSUE	BY	DATE	F&N JOB NO.	NEB23518
				DATE	7/16/2024
				DESIGNED	JD
				DRAWN	TTH
				REVISED	NO
				CHECKED	JD
				FILE NAME	NEB-CV-MISC.DTL.dwg

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