

**LEGEND**

<ul style="list-style-type: none"> <li>● SECTION CORNER</li> <li>△ SET 1/2" X 24" REBAR W/ OLSSON CONTROL CAP</li> <li>○ FOUND REBAR (ORIGIN UNKNOWN UNLESS OTHERWISE NOTED)</li> <li>△ SET MAGNETIC NAIL</li> <li>○ FOUND MAGNETIC NAIL</li> <li>○ FH FIRE HYDRANT</li> <li>○ WV WATER VALVE</li> <li>WM WATER METER</li> <li>△ WATER FAUCET</li> <li>○ SPH SPRINKLER HEAD</li> <li>IS SPRINKLER CONTROL BOX</li> <li>XL IRRIGATION VALVE</li> <li>GV GAS VALVE</li> <li>GM GAS METER</li> <li>○ SCV SPRINKLER CONTROL VALVE</li> <li>○ S SANITARY SEWER MANHOLE</li> <li>○ D STORM SEWER MANHOLE</li> <li>○ 6" DIA. STORM SEWER DRAIN</li> <li>○ SEWER CLEANOUT</li> <li>EM ELECTRIC METER</li> <li>ER ELECTRIC RISER</li> <li>E ELECTRIC BOX</li> <li>SL STREET LIGHT BOX</li> <li>ORD ROOF DRAIN</li> <li>P-OH OVERHEAD POWER LINE</li> <li>G GAS LINE</li> <li>W WATER LINE</li> <li>P-UG UNDERGROUND POWER LINE</li> <li>T OVERLAND PARK TRAFFIC POWER LINE</li> <li>SECTION LINE</li> <li>PROPERTY LINE</li> <li>CENTER LINE</li> <li>PROPOSED ROW LINE</li> <li>EXISTING ROW LINE</li> <li>UTILITY EASEMENT</li> <li>-1370- EXISTING MAJOR CONTOUR</li> <li>-1371- EXISTING MINOR CONTOUR</li> <li>1370 PROPOSED MAJOR CONTOUR</li> <li>1371 PROPOSED MINOR CONTOUR</li> </ul>	<ul style="list-style-type: none"> <li>-TEL-OH- OVERHEAD TELEPHONE LINE</li> <li>-CATV-OH- OVERHEAD CABLE TELEVISION LINE</li> <li>-FO- FIBER OPTIC CABLE LINE</li> <li>-SS- SANITARY SEWER LINE</li> <li>-SS- SANITARY SEWER SERVICE LINE</li> <li>-SD- STORM SEWER PIPE</li> <li>TP TELEPHONE PEDESTAL</li> <li>T TELEPHONE RISER</li> <li>TB TELEPHONE BOX</li> <li>C CABLE BOX</li> <li>FOV FIBER OPTIC VAULT</li> <li>F FIBER OPTIC BOX</li> <li>F FIBER OPTIC BOX</li> <li>G GRATE INLET</li> <li>S SIGN</li> <li>D DECIDUOUS TREE</li> <li>C CONIFEROUS TREE</li> <li>B BUSH</li> <li>TL TREE LINE/ BRUSH LINE</li> <li>PP POWER POLE</li> <li>LPPP LIGHT POLE/POWER POLE</li> <li>GA GUY ANCHOR WIRE</li> <li>LTP LIGHT POLE</li> <li>YL YARD LIGHT</li> <li>BH BASKETBALL GOAL W/ METAL POST</li> <li>COL SUPPORT COLUMN</li> <li>CLP CLOTHESLINE POLE</li> <li>AC AIR CONDITIONING UNIT</li> <li>BUILDING LINE</li> <li>EXISTING CHAIN LINK FENCE</li> <li>TREE PROTECTION FENCE</li> <li>GRADING LIMITS</li> <li>-TCE- TEMPORARY CONSTRUCTION EASEMENT</li> <li>-PDE- PERMANENT DRAINAGE EASEMENT</li> <li>PROPOSED CHAIN LINK FENCE</li> <li>PROPOSED WOOD PRIVACY FENCE</li> <li>CONSTRUCTION LIMITS</li> </ul>
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**ABBREVIATION TABLE**

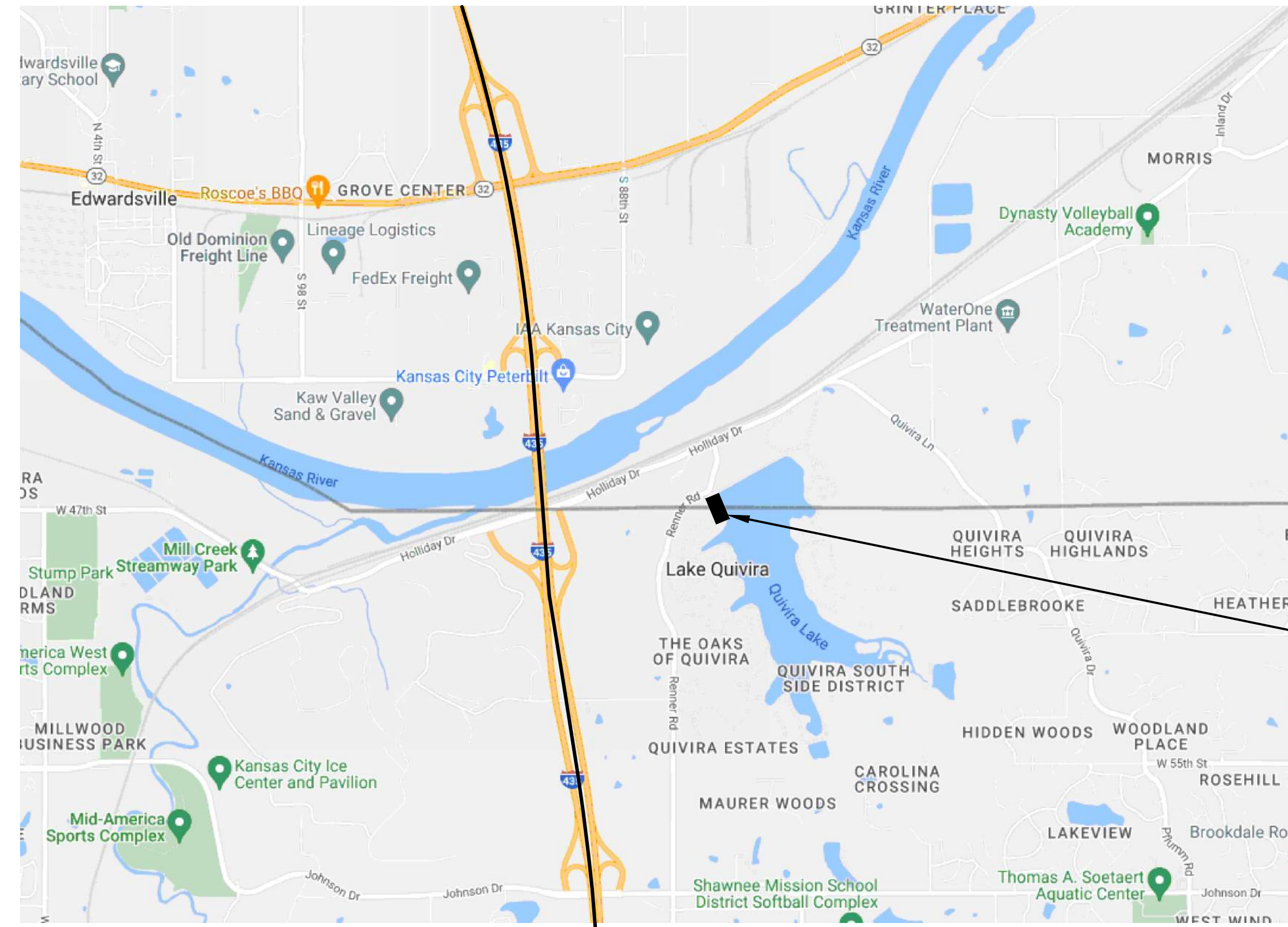
ASPH. ASPHALT	HOPE HIGH DENSITY POLYETHYLENE
AT&T AMERICAN TELEPHONE & TELEGRAPH	KCP&L KANSAS CITY POWER & LIGHT
BK. BOOK	(L) LENGTH
BF BASEMENT FLOOR ELEVATION	LAG LOW ADJACENT GRADE ELEVATION
BMK BENCHMARK	LIP LEAVE IN PLACE
BPL BRICK PLANTER	LOE LOW OPENING ELEVATION
CBX CABLE TELEVISION BOX	LSA LANDSCAPE AREA
CLF CHAIN LINK FENCE	LST LANDSCAPE TIMBER
CMP CORRUGATED METAL PIPE	MCI MICROWAVE COMMUNICATIONS INCORPORATED
CONC. CONCRETE	MH MANHOLE
OPP CORRUGATED PLASTIC PIPE	MOLS MISSOURI LICENSED SURVEYOR
CP CONTROL POINT	MPH MILES PER HOUR
CST CONCRETE STEPS	MHR METAL HANDRAIL
CSTMHR CONCRETE STEPS W/ METAL HANDRAIL	NO. NUMBER
CTL CONTROL	PG. PAGE
CWL CONCRETE WALL	PVC POLYVINYL CHLORIDE PIPE
D/E DRAINAGE EASEMENT	R/W RIGHT-OF-WAY
ECMP ELLIPTICAL CORRUGATED METAL PIPE	RBCP REBAR W/ CONTROL CAP
ELEV. ELEVATION	RCP REINFORCED CONCRETE PIPE
EOFCM END OF FIBER OPTIC CABLE MARKINGS	RRTW RAILROAD TIE WALL
EUGLM END OF GAS LINE MARKINGS	STW STONE/DECORATIVE STONE WALL
EOUPLM END OF UNDERGROUND POWER LINE MARKINGS	TBX TELEPHONE BOX
ESMT. EASEMENT	U/E UTILITY EASEMENT
(EXD) EXTERNAL DROP	UG UNDERGROUND
FL FLOW LINE	VCP VITRIFIED CLAY PIPE
FF FINISH FLOOR ELEVATION	(W) WIDTH
FND FOUND	W/ WITH
FOCMH FIBER OPTIC CABLE MANHOLE	WDF WOOD FENCE
GEN GENERATOR	WHR WOOD HANDRAIL
GF GARAGE FLOOR ELEVATION	WST WOOD STEPS

**UTILITY COMPANIES**

<p>Johnson Co. Wastewater Mr. Mike Piller 4800 Nall Ave. Mission, KS 66202 (913) 715-8537 Email: mike.piller@jcw.org</p>	<p>WaterOne of Johnson County Dan Sullivan 10747 Renner Blvd. Lenexa, KS 66219-9624 (913) 895-5617 Email: dsullivan@waterone.org</p>
<p>Wester Energy Mr. Travis Shockey 23505 W. 86th Street Shawnee, KS 66227 (913) 667-5122 Email: travis.shockey@westarenergy.com</p>	<p>Kansas Gas Service Mr. David Teefey 11401 W. 89th Street Overland Park, KS 66214 (913) 599-8933 Email: david.teefey@onegas.com</p>
<p>Spectrum Cable Mr. Ron Frank 8221 W. 119th Street Overland Park, KS 66213 (816) 215-8864 Email: ron.frank@charter.com</p>	<p>AT&amp;T Mr. Randy Gaskin 8444 Nall Ave. Overland Park, KS 66207 (913) 383-6948 Email: rg9513@att.com</p>

# LAKE QUIVIRA DAM SPILLWAY REHABILITATION

LOCATED IN THE SW QUARTER OF  
SECTION 32, TOWNSHIP 11 SOUTH, RANGE 24 EAST  
LAKE QUIVIRA, WYANDOTTE COUNTY, KANSAS



**LOCATION MAP**

NOT TO SCALE



KANSAS CALL BEFORE YOU DIG:  
1-800-DIG-SAFE (1-800-344-7233)

PREPARED & SUBMITTED BY:



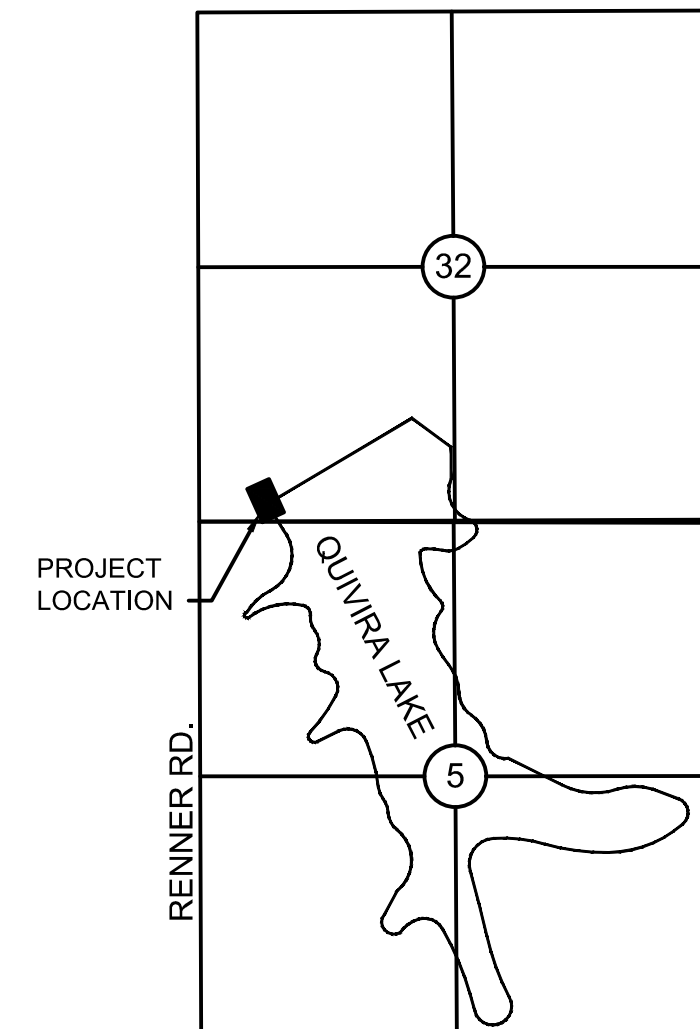
OLSSON  
7301 WEST 133RD STREET, SUITE 200  
OVERLAND PARK, KS 66213  
(913) 381-1170

GRANT C. LUCKENBILL, P.E. DATE \_\_\_\_\_  
I CERTIFY THESE PLANS WERE PREPARED BY ME OR UNDER MY IMMEDIATE PERSONAL SUPERVISION. THE FOLLOWING DRAWINGS ARE INTENDED TO BE AUTHENTICATED BY MY SEAL: 9-11

BRENT M. JOHNSON, P.E. DATE \_\_\_\_\_  
I CERTIFY THESE PLANS WERE PREPARED BY ME OR UNDER MY IMMEDIATE PERSONAL SUPERVISION. THE FOLLOWING DRAWINGS ARE INTENDED TO BE AUTHENTICATED BY MY SEAL: 1-8

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	GENERAL NOTES & SUMMARY OF QUANTITIES
3	ACCESS PLAN & PROJECT CONTROL
4	PLAN & PROFILE
5-6	CROSS SECTIONS
7	EROSION CONTROL PLAN
8	DETAIL SHEET
9-11	STRUCTURAL PLANS

PROJECT LOCATION



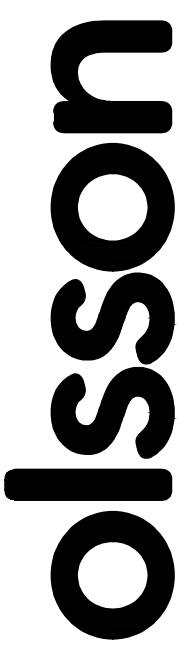
Section 32, T 11 S., R 24 E.

**VICINITY MAP**

N.T.S.

APPROVED BY:  
CITY OF LAKE QUIVIRA, KS

CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



7301 West 133rd Street, Suite 200  
Overland Park, KS 66213-4760  
TEL 913.381.1170 www.olsson.com



REV. NO.	DATE	REVISIONS DESCRIPTION

BY	DATE	REVISIONS DESCRIPTION

2023

COVER SHEET  
DAM SPILLWAY REHABILITATION  
LAKE QUIVIRA, KANSAS  
LAKE QUIVIRA, KS

drawn by: _____	KTF
checked by: _____	KTF
approved by: _____	BMJ
QA/QC by: _____	BMJ
project no.: _____	021-08019
drawing no.: _____	07-06-2023

DWG: F:\2021\08001-08500\021-08019\40-Design\AutoCAD\Final Plans\Sheets\WTRS\W\_TTL01\_02108019.dwg  
 DATE: Jul 06, 2023 2:50pm  
 USER: kfulton

**GENERAL NOTES:**

1. THE CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE KANSAS CITY METROPOLITAN CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION SHALL GOVERN THE CONSTRUCTION OF ALL PUBLIC IMPROVEMENTS FOR THIS PROJECT.
2. THE CITY OF LAKE QUIVIRA'S PLAN REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE CITY OF LAKE QUIVIRA MUNICIPAL CODE AND THE DESIGN CRITERIA AND CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE KANSAS CITY METROPOLITAN CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION. THE APPROVAL OF THESE IMPROVEMENT PLANS SHALL NOT BE CONSTRUED TO BE AN APPROVAL OF ANY VIOLATION OF THE CITY OF LAKE QUIVIRA'S MUNICIPAL CODE, INCLUDING BUILDING AND ZONING CODES, AND ANY OTHER CITY ORDINANCE. THE CITY OF LAKE QUIVIRA IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, OR DIMENSIONS AND ELEVATIONS, WHICH SHALL BE CONFIRMED AND CORRELATED AT THE PROJECT SITE. THE CITY OF LAKE QUIVIRA, THROUGH ITS APPROVAL OF THESE IMPROVEMENT PLANS, ASSUMES NO RESPONSIBILITY OTHER THAN AS STATED ABOVE FOR ACCURACY AND COMPLETENESS.
3. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE IMPROVEMENT PLANS, APPROVED BY THE CITY OF LAKE QUIVIRA, AT THE PROJECT SITE AT ALL TIMES.
4. THE CONSTRUCTION OF THE IMPROVEMENTS SHOWN OR IMPLIED BY THESE PLANS SHALL NOT BE INITIATED, OR ANY PART THEREOF UNDERTAKEN, UNTIL THE ENGINEER IS NOTIFIED OF SUCH INTENT, AND ALL REQUIRED PERMITS AND FEES, PROPERLY EXECUTED BONDS, AND CONTRACT AGREEMENTS ARE RECEIVED AND APPROVED BY THE ENGINEER.
5. THE CONTRACTOR SHALL NOT WORK ON SUNDAYS OR HOLIDAYS. WORK ON SATURDAYS IS ALLOWED WHEN REQUESTED AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE AND WHEN APPROVED BY THE ENGINEER. ALLOWABLE WORKING HOURS ARE 7AM TO 6 PM.
6. ALL EXISTING UTILITIES INDICATED ON THESE IMPROVEMENT PLANS ARE ACCORDING TO THE INFORMATION PROVIDED TO THE DESIGN ENGINEER; HOWEVER, ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN. UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR.
7. ALL BACKFILL SHALL BE TAMPED OR COMPACTED AS SPECIFIED IN THE PLANS OR SPECIFICATIONS. ALL BACKFILL UNDER PAVEMENT SHALL BE FLOWABLE FILL.
8. ALL SILTATION AND EROSION CONTROL MEASURES SPECIFIED ON THE PLANS, OR OTHERWISE REQUIRED, SHALL BE IN PLACE PRIOR TO COMMENCING ANY LAND DISTURBANCE ACTIVITIES ON THE SITE. CONTRACTOR SHALL BE REQUIRED TO SIGN AND ABIDE BY THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
9. CONTRACTOR SHALL CLEAR AND GRUB ALL TREES MARKED FOR REMOVAL. REMOVAL OF THE TREE INCLUDES REMOVAL OF ALL BRANCHES, ROOTS AND BRUSH WITHIN THE CANOPY LIMITS OF THE TREE. **ALL TREES NOT MARKED FOR REMOVAL SHALL BE PROTECTED AND SAVED.** THE CONTRACTOR IS REQUIRED TO EXERCISE PARTICULAR CARE DURING EXCAVATION TO PREVENT UNNECESSARY DAMAGE TO TREES, RETAINING WALLS, STRUCTURES, UTILITIES, ETC. IN THE VICINITY OF CONSTRUCTION. ONLY THOSE TREES IN DIRECT CONFLICT WITH CONSTRUCTION OPERATIONS SHALL BE REMOVED, AS AGREED UPON BETWEEN THE CONTRACTOR AND CITY REPRESENTATIVE. ALL TREES THAT ARE DEFINITELY TO BE SAVED SHALL BE MARKED "SAVE" AND SHALL BE FENCED AT THE DRIP LINE OR LIMITS OF PROPOSED GRADING WITH T-POSTS AND ORANGE CONSTRUCTION FENCING. TRIMMING OF TREES TO COMPLETE THE WORK SHALL BE APPROVED BY THE ENGINEER, AND SHALL BE SUBSIDIARY TO OTHER ITEMS.
10. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS, CODES AND ORDINANCES. OPEN BURNING OF DEBRIS SHALL NOT BE PERMITTED.
11. CONTRACTOR SHALL STRIP TOPSOIL AND VEGETATION A MINIMUM OF 6 INCHES AND STOCKPILE FOR USE AS TOPSOIL WHERE VEGETATION IS TO BE RE-ESTABLISHED.
12. EXCESS SOIL OR ROCK MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR UNLESS THE CONTRACTOR SECURES WRITTEN PERMISSION FROM THE RESIDENTS AND THE CITY TO PLACE ON INDIVIDUAL PROPERTY. EXCESS MATERIAL SHALL NOT BE DISPOSED OF IN A FLOODPLAIN WITHOUT OBTAINING REQUIRED PERMITS. ALL FILL SHALL BE TOP SOILED, GRADED TO DRAIN, THEN SEEDDED OR SODDED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
13. THE UNDERGROUND UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND ARE APPROXIMATE ONLY. SOME SERVICE LINES FROM BUILDING TO MAIN HAVE UNKNOWN LOCATIONS AND MAY CONFLICT WITH THE PLAN. THE CONTRACTOR, PRIOR TO CONSTRUCTION, SHALL VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES. UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR. ANY UTILITIES FOUND TO BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY THOSE COMPANIES WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED. ENCROACHMENTS SUCH AS TELEPHONE, POWER AND CABLE T.V. POLES SHALL BE MOVED BY THE UTILITY OWNER AND COORDINATED BY THE CONTRACTOR AFTER WRITTEN APPROVAL FROM THE OWNER, UNLESS OTHERWISE NOTED.
14. THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND ELEVATIONS SHALL BE CONFIRMED BY THE CONTRACTOR AT THE JOB SITE. IF THE CONTRACTOR FINDS ANY DIMENSIONS TO BE IN ERROR OR IN QUESTION, THE ENGINEER SHALL BE PROMPTLY CONTACTED FOR CLARIFICATION PRIOR TO THE CONTINUATION OF THE WORK.
15. ALL EXISTING DRAINAGE TILES, FOUNDATION DRAINS AND/OR ROOF DRAINS ENCOUNTERED OR DAMAGED DURING CONSTRUCTION ARE TO BE RESTORED TO THEIR ORIGINAL CONDITION, PROPERLY REROUTED AND/OR CONNECTED TO THE STORM SEWER SYSTEM. THE EXTENSION, RESTORATION OR REROUTING OF THESE TILES OR DRAINS SHALL BE CONSIDERED SUBSIDIARY TO THE CONSTRUCTION OF THE PROPOSED STORM SEWER.
16. ALL STORM SEWER PIPE LENGTHS SHOWN ON THE PLANS ARE MEASURED FROM CENTER OF DOWNSTREAM STRUCTURE TO CENTER OF UPSTREAM STRUCTURE. ALIGNMENT STATIONING, BEARINGS, PIPE SLOPES & STRUCTURE FLOW LINES SHOWN ON THE PLANS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE. (FOR DESIGN PURPOSES).
17. ALL SIGNS, MAILBOXES, AND FENCING IN CONFLICT WITH THE PROPOSED CONSTRUCTION SHALL BE REMOVED AND RESET, WHETHER SO NOTED ON THE PLANS OR NOT. TEMPORARY CHAIN LINK FENCING SHALL BE INSTALLED AROUND THE WORK PERIMETER. ADDITIONAL SAFETY RAILING OR FALL PROTECTION IS REQUIRED NEAR THE OUTFALL FOR THE SPILLWAY.
18. ALL EXISTING FENCING, PLANTER WALLS, WALKS, DRIVEWAYS, SIDEWALK, AND OTHER AREAS DAMAGED BY THE CONTRACTOR, BUT NOT SHOWN TO BE DISTURBED IN THE PLANS, SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING BEFORE DAMAGE OCCURRED, AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL SATISFY HIMSELF BY SITE VISIT AS TO THE EXTENT AND NATURE OF SUCH WORK IN PREPARING HIS BID.
19. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL PROPERTY CORNERS AND SECTION CORNERS. ANY PROPERTY CORNERS OR SECTION CORNERS DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A REGISTERED LAND SURVEYOR LICENSED IN THE STATE OF KANSAS, AT THE CONTRACTOR'S EXPENSE.
20. ALL DRAIN LINES ENCOUNTERED, WHICH ARE PRESENTLY CONNECTED TO THE EXISTING STORM SEWER, SHALL BE CONNECTED BY THE CONTRACTOR TO THE NEW STORM SEWER SYSTEM AS DIRECTED BY THE CITY OF LAKE QUIVIRA OR ITS REPRESENTATIVE. THIS WORK SHALL BE SUBSIDIARY TO OTHER BID ITEMS. THE LOCATION OF DRAIN LINES MAY OR MAY NOT BE NOTED IN THE PLANS.
21. THE CONTRACTOR SHALL REMOVE ONLY THE SOD NECESSARY TO CONSTRUCT THE IMPROVEMENTS. FOLLOWING CONSTRUCTION, FOLLOWING CONSTRUCTION, THE CONTRACTOR SHALL COMPLETE THE GRADING TO LINES AND ELEVATIONS NOTED IN THE PLANS AND PREPARE THE SURFACE SUITABLE FOR SEEDING OR SODDING. THE CITY WILL HAVE A SEPARATE CONTRACTOR COMPLETE THE SEEDING AND SODDING FOR THE PROJECT.
22. ACCESS TO PROPERTIES SHALL BE MAINTAINED AT ALL TIMES. IF CONSTRUCTION ACROSS A DRIVEWAY IS TO TAKE MORE THAN 24 HRS, ONE HALF THE DRIVE SHALL REMAIN IN SERVICE UNTIL THE OTHER HALF IS RECONSTRUCTED AND IN SERVICE.
23. ALL FENCING WITHIN THE WORK LIMITS SHALL BE PROTECTED OR RESTORED TO PRIOR CONDITIONS UPON COMPLETION OF THE WORK, WHETHER SO NOTED ON THE PLANS OR NOT. CONTRACTOR SHALL PROVIDE TEMPORARY FENCING FOR ANY RESIDENTS WHO OWN PETS THAT NEED TO BE FENCED IN OR WHO OTHERWISE REQUEST TEMPORARY FENCING. CONTRACTOR SHALL COORDINATE THE TEMPORARY FENCING LOCATION WITH THE RESIDENT, CITY, AND ENGINEER.
24. THE CONTRACTOR SHALL MAINTAIN DRAINAGE DURING CONSTRUCTION AND IS RESPONSIBLE FOR ANY DEWATERING NECESSARY FOR CONSTRUCTION. DEWATERING SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
25. ALL EQUIPMENT USED BY THE CONTRACTOR HAVING METAL TRACKS SHALL NOT BE DRIVEN OVER PAVED STREETS OTHER THAN THOSE SHOWN ON THE PLANS AS BEING DISRUPTED BY STORM SEWER TRENCHING. SUCH EQUIPMENT MUST BE TRANSPORTED.
26. CONTRACTOR SHALL NOTIFY EACH IMPACTED PROPERTY OWNER OF THE ANTICIPATED CONSTRUCTION ACTIVITY 48 HOURS PRIOR TO BEGINNING WORK. THE NOTIFICATION METHOD SHALL BE OF SUITABLE MEANS, AND APPROVED BY THE ENGINEER.
27. CONCRETE DRIVEWAYS SHALL BE REPLACED TO THE NEAREST JOINT UP TO 6 FEET BEYOND THE AREA THAT NEEDS TO BE REPLACED. IF NO JOINT IS WITHIN 6 FEET THEN A SAW-CUT WILL BE MADE AT THE PLANNED REPLACEMENT. ALL GRAVEL DRIVEWAYS DISTURBED AS PART OF PROJECT SHALL BE REPAIRED WITH AN ASPHALT DRIVEWAY WHERE DISTURBED.
28. ALL ITEMS MARKED TO SALVAGE SHALL BE PROVIDED TO OWNER OR CITY FOR THEIR ACCEPTANCE AND USE. ANY ITEMS MARKED FOR SALVAGE, BUT WHICH ARE REFUSED BY THE RESIDENT AND CITY, SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR REMOVAL AND/OR DISPOSAL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
29. THE EXISTING ITEMS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION AVAILABLE TO THE ENGINEER. ALL ITEMS NOT SHOWN ON THE PLANS, BUT WHICH MAY INTERFERE WITH COMPLETION OF THE WORK INDICATED, SHALL BE SALVAGED OR REMOVED AND DISPOSED OF AS DIRECTED BY CITY OR ENGINEER.
30. THE CONTRACTOR SHALL GIVE NOTICE TO THE CITY 48 HOURS IN ADVANCE OF BEGINNING CONSTRUCTION WORK ON ANY EXISTING STREET.
31. ACCESS TO THE PROJECT SHALL BE THROUGH THE HOA COMMON AREAS AND TEMPORARY CONSTRUCTION EASEMENTS AS SHOWN ON THE PLANS. SHOULD THE CONTRACTOR REQUIRE ADDITIONAL ACCESS, THEN THE CONTRACTOR MAY NEGOTIATE THE ADDITIONAL ACCESS WITH INDIVIDUAL PROPERTY OWNERS. WRITTEN PERMISSION SHALL BE OBTAINED PRIOR TO MOBILIZATION AND COPIES OF AGREEMENTS FURNISHED TO THE CITY.
32. THE CONTRACTOR IS REQUIRED TO PHASE CONSTRUCTION AND TRAFFIC CONTROL ON ALL AFFECTED STREETS TO PROVIDE ACCESS TO ALL RESIDENTS AFFECTED BY CONSTRUCTION.
33. CONTRACTOR SHALL MAKE ALL PROVISIONS NECESSARY TO ADEQUATELY SUPPORT AND MAINTAIN EXPOSED UTILITIES. CONTRACTOR IS RESPONSIBLE FOR DAMAGES AND RELOCATION NEEDS, AND FOR ADEQUATE COMPACTION AROUND DISTURBED UTILITIES. CONTRACTOR SHALL ALSO MAKE ALL PROVISIONS NECESSARY TO PROTECT EXPOSED LINES FROM FREEZING TEMPERATURES.
34. DEWATERING FOR COMPLETING THE EPOXY RESIN CRACK REPAIR AS DEPICTED IN THESE DRAWINGS AND SPECIFICATIONS SHALL BE DESIGNED BY THE CONTRACTOR. THIS MAY CONSIST OF INSTALLING A TEMPORARY COFFERDAM, TEMPORARY CAUSEWAY, BYPASS PUMPING, A COMBINATION THEREOF, OR OTHER METHODS. ALL TEMPORARY CONSTRUCTION MATERIALS PLACED INTO THE LAKE SHALL BE REVIEWED AND APPROVED BY THE ENGINEER AND SHALL BE REMOVED AT THE CONCLUSION OF WORK. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS FOR THEIR TEMPORARY WORKS AND DEWATERING METHODS FOR APPROVAL BY THE ENGINEER PRIOR TO CONSTRUCTION. A MINIMUM OF 5 DAYS SHALL BE PROVIDED FOR CONDUCTING THE REVIEW. CONTRACTOR SHALL MAKE A REASONABLE EFFORT TO SCHEDULE WORK OUTSIDE OF ANTICIPATED TIMES WHERE HEAVY RAINFALL MAY BE PRESENT. THIS SCHEDULING SHOULD INCLUDE STAGING OF THE WORK IN LOGISTICAL SEQUENCES TO PROTECT THE CONTRACTOR'S EQUIPMENT AND MATERIAL. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PLANNING, STAGING, AND EXECUTION TO ENSURE SUCCESSFUL COMPLETION OF THE WORK UNDER CONTRACT.

SUMMARY OF QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
1	Clearing and Grubbing	LS	1
2	Removal of Existing Structures	LS	1
3	Earthwork	LS	1
4	Dewatering	LS	1
5	Epoxy Resin Crack Repair	LS	1
6	KCMMB 5K Concrete	CY	642
7	Concrete Slope Protection	SY	117
8	Flowable Fill	CY	448
9	Contractor Construction Staking	LS	1
10	Traffic Control	LS	1
11	Fence (Temporary)	LF	800
12	Fence (Decorative)	LF	682
13	Erosion Control Blanket (Type 2)	SY	1,536
14	Biodegradable Log (8")	LF	785
15	Benchmark Monument	LS	1
16	Bridge Painting (Organic Zinc w/Acrylic System)	LS	1

USER: kfulton

DWG: F:\2021\08001-08500\021-06019\40-Design\AutoCAD\Final Plans\Sheets\WTRS\W\_GEN01\_02108019.dwg  
DATE: Jul 06, 2023 2:50pm

**olsson**

7301 West 133rd Street, Suite 200  
Overland Park, KS 66213-4760  
TEL 913.381.1170 www.olsson.com



REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL NOTES & SUMMARY OF QUANTITIES

DAM SPILLAY REHABILITATION  
LAKE QUIVIRA, KANSAS

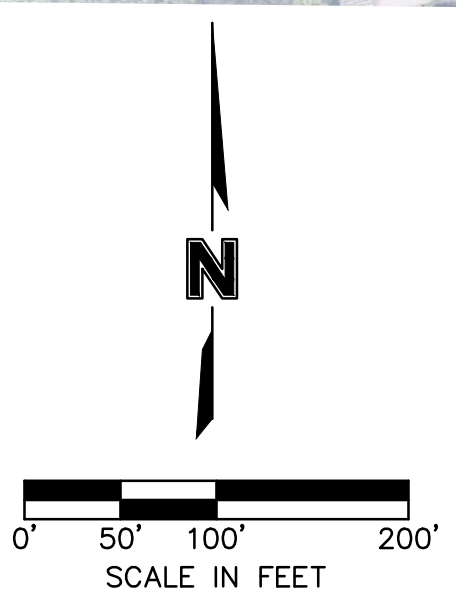
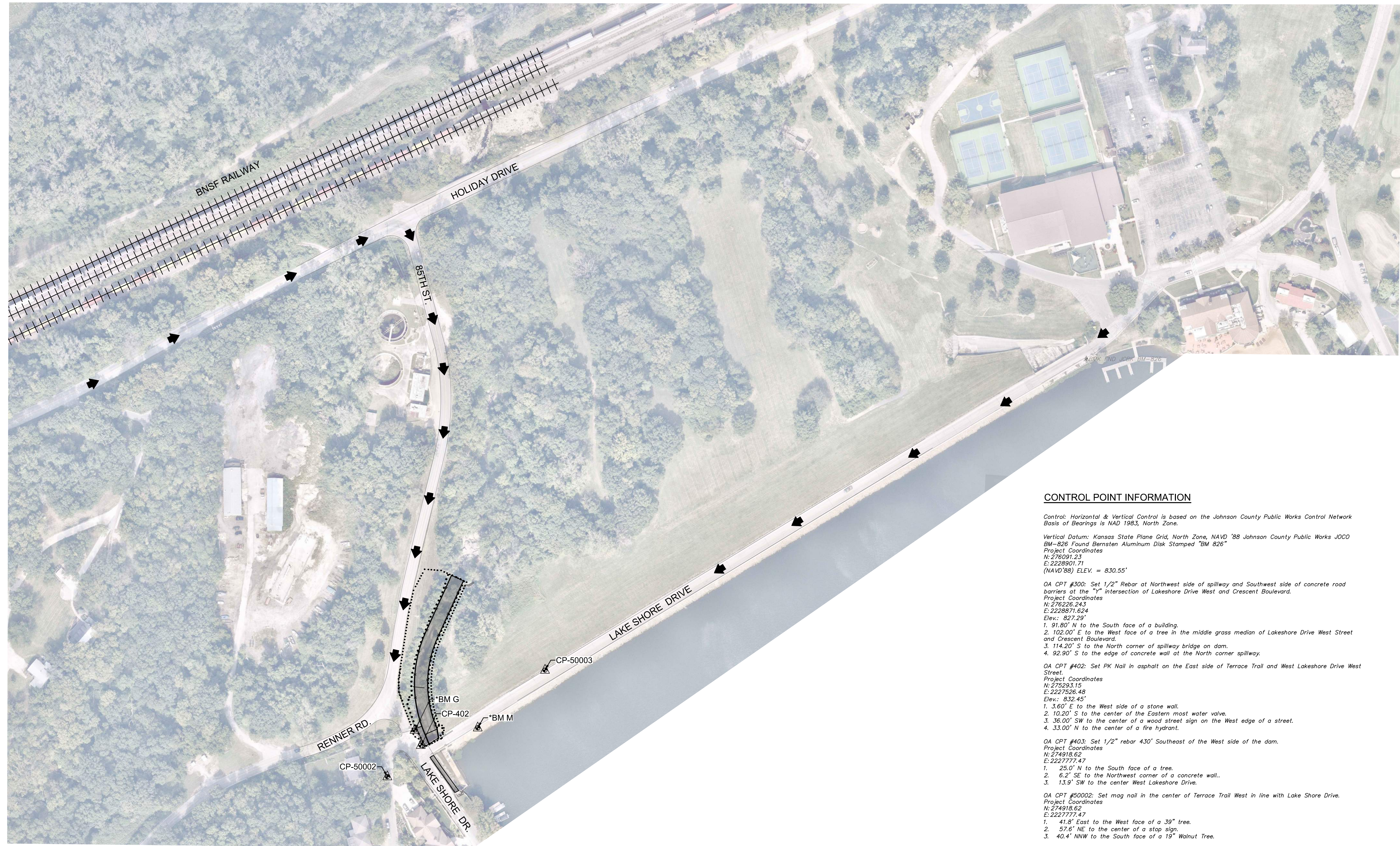
LAKE QUIVIRA, KS

2023

drawn by: \_\_\_\_\_ KTF  
checked by: \_\_\_\_\_ KTF  
approved by: \_\_\_\_\_ BMJ  
QA/QC by: \_\_\_\_\_ BMJ  
project no.: 021-08019  
drawing no.: \_\_\_\_\_  
date: 07-06-2023

USER: kfulton

DWG: F:\2021\08001-08500\021-08019\40-Design\AutoCAD\Final Plans\Sheets\WFRS\W\_ACCESS\_02108019.dwg  
 DATE: Jul 06, 2023 2:53pm XREFS: V\_XTOPO\_02108019 W\_PTBK\_02108019 W\_PBASE\_02108019



**UTILITY NOTES**

Utilities shown have been located from field survey information and/or records obtained. The surveyor makes no guarantee that the utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the utilities shown are in the exact location indicated. No private utilities were located. Utilities shown hereon are in compliance with subsurface utility engineering quality level "C". Kansas One Call was not contacted nor requested to locate underground utilities.

**CONTROL POINT INFORMATION**

Control: Horizontal & Vertical Control is based on the Johnson County Public Works Control Network Basis of Bearings is NAD 1983, North Zone.

Vertical Datum: Kansas State Plane Grid, North Zone, NAVD '88 Johnson County Public Works JOCO  
 BM-826 Found Bernsten Aluminum Disk Stamped "BM 826"  
 Project Coordinates  
 N: 276091.23  
 E: 2228901.71  
 (NAVD'88) ELEV. = 830.55'

OA CPT #300: Set 1/2" Rebar at Northwest side of spillway and Southwest side of concrete road barriers at the "Y" intersection of Lakeshore Drive West and Crescent Boulevard.  
 Project Coordinates  
 N: 276226.243  
 E: 2228871.624  
 Elev.: 827.29'  
 1. 91.80' N to the South face of a building.  
 2. 102.00' E to the West face of a tree in the middle grass median of Lakeshore Drive West Street and Crescent Boulevard.  
 3. 114.20' S to the North corner of spillway bridge on dam.  
 4. 92.90' S to the edge of concrete wall at the North corner spillway.

OA CPT #402: Set PK Nail in asphalt on the East side of Terrace Trail and West Lakeshore Drive West Street.  
 Project Coordinates  
 N: 275293.15  
 E: 2227526.48  
 Elev.: 832.45'  
 1. 3.60' E to the West side of a stone wall.  
 2. 10.20' S to the center of the Eastern most water valve.  
 3. 36.00' SW to the center of a wood street sign on the West edge of a street.  
 4. 33.00' N to the center of a fire hydrant.

OA CPT #403: Set 1/2" rebar 430' Southeast of the West side of the dam.  
 Project Coordinates  
 N: 274918.62  
 E: 2227777.47  
 1. 25.0' N to the South face of a tree.  
 2. 6.2' SE to the Northwest corner of a concrete wall.  
 3. 13.9' SW to the center West Lakeshore Drive.

OA CPT #50002: Set mag nail in the center of Terrace Trail West in line with Lake Shore Drive.  
 Project Coordinates  
 N: 274918.62  
 E: 2227777.47  
 1. 41.8' East to the West face of a 39" tree.  
 2. 57.6' NE to the center of a stop sign.  
 3. 40.4' NNW to the South face of a 19" Walnut Tree.

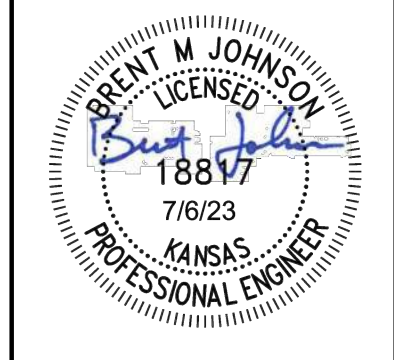
OA CPT #50003: Set 1/2" Rebar w/ Cap  
 Project Coordinates  
 N: 275448.45  
 E: 2227783.16  
 1. 244.93' SW to the Southeast corner of a stone wall at the Northeast corner of the dam.  
 2. 3.00' SE to the edge of asphalt.  
 3. 1290.08' NE to the centerline of BMK-826.  
 4. 300.01' SW to mag nail CP-402.

BMK G:  
 Rail spike at the South face of power pole located at the East end of Access gate at the intersection of W 85th Street and Lakeshore Drive West.  
 Elev.: 833.89'

BMK M:  
 Out Square Cut on the South Back of Curb on Spillway, 78± Northeast of the East corner of bridge at the West end of dam.  
 Elev.: 831.15'

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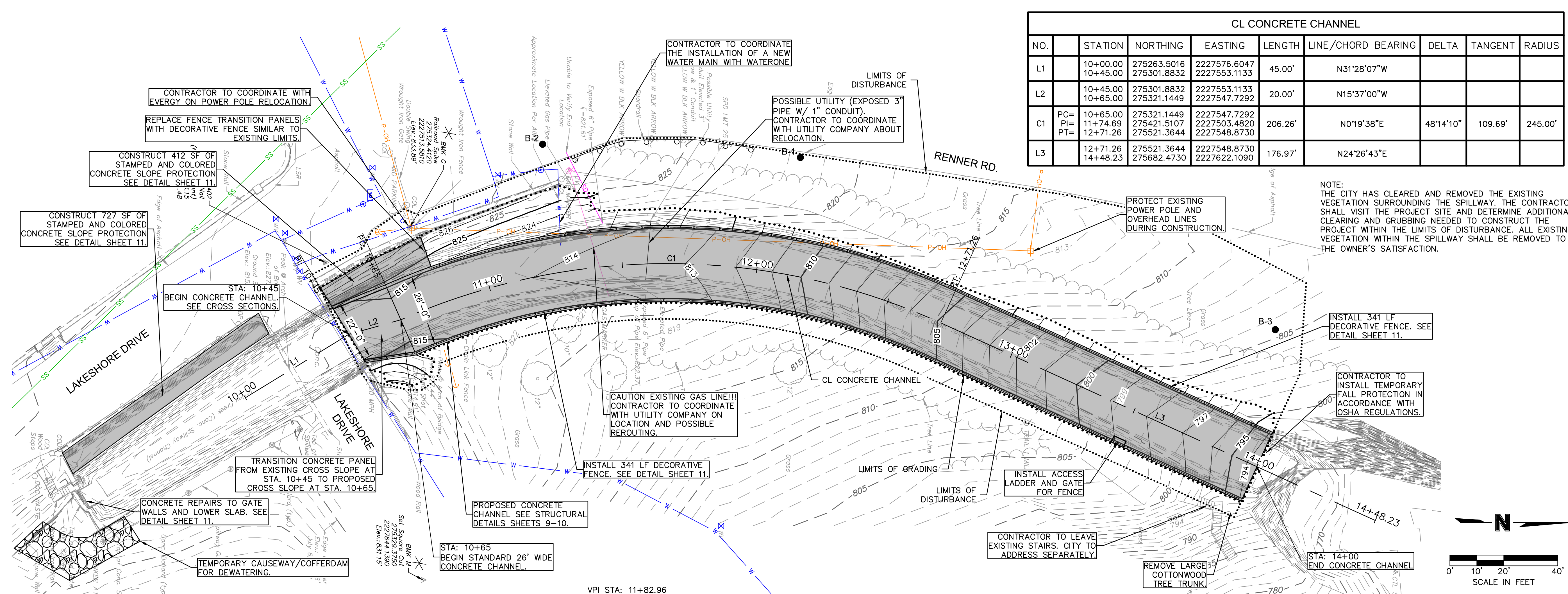


REV. NO.	DATE	REVISIONS DESCRIPTION	BY

ACCESS PLAN & PROJECT CONTROL	DAM SPILLWAY REHABILITATION LAKE QUIVIRA, KANSAS	2023
		LAKE QUIVIRA, KS
drawn by: _____	checked by: _____	KTF
approved by: _____	approved by: _____	BMJ
QA/QC by: _____	QA/QC by: _____	BMJ
project no.: _____	project no.: _____	021-08019
drawing no.: _____	drawing no.: _____	07-06-2023

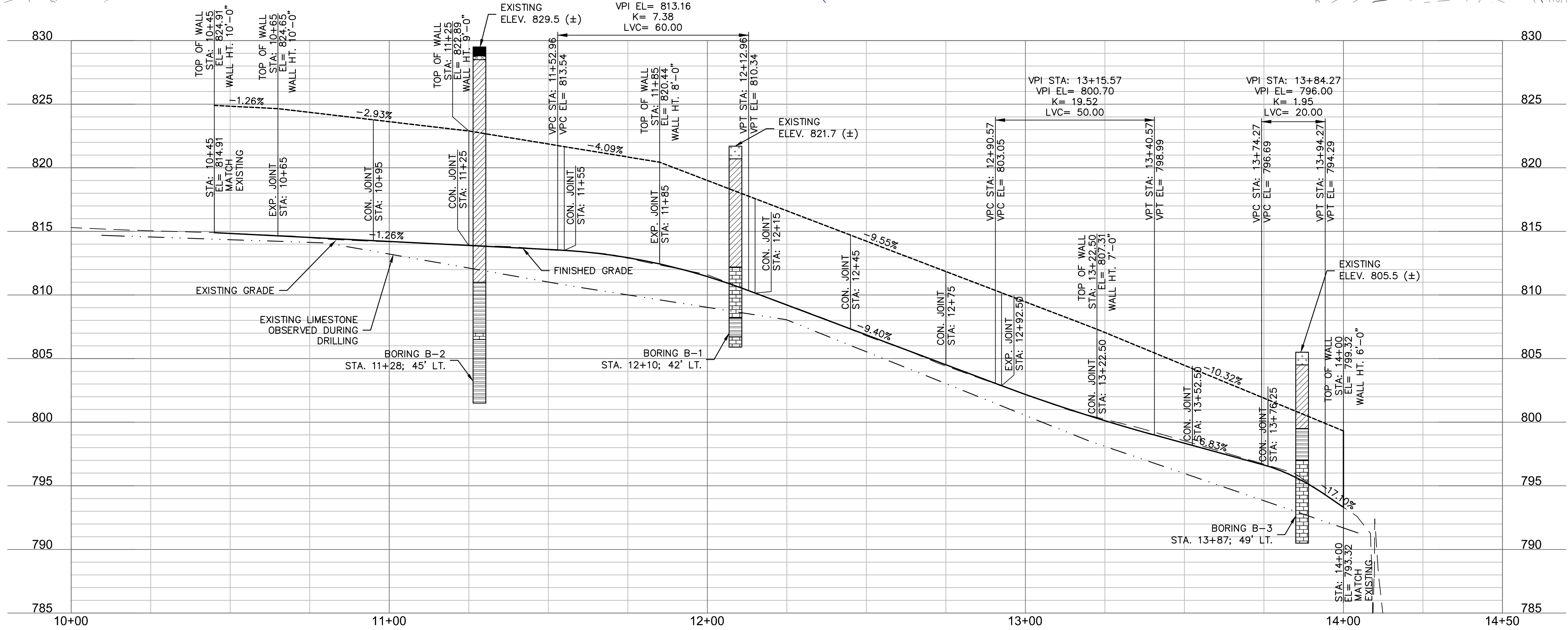
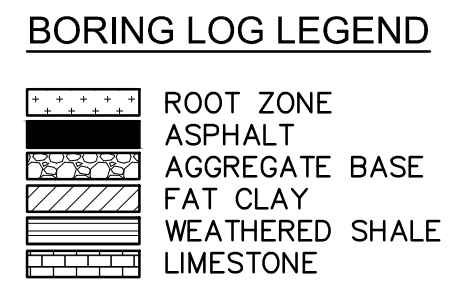
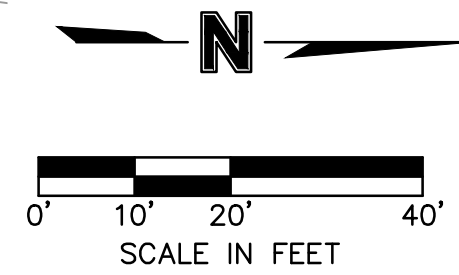
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USER: kfulton



CL CONCRETE CHANNEL									
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS	
L1	10+00.00 10+45.00	275263.5016 275301.8832	2227576.6047 2227553.1133	45.00'	N31°28'07"W				
L2	10+45.00 10+65.00	275301.8832 275321.1449	2227553.1133 2227547.7292	20.00'	N15°37'00"W				
C1	PC= 10+65.00 PI= 11+74.69 PT= 12+71.26	275321.1449 275421.5107 275521.3644	2227547.7292 2227503.4820 2227548.8730	206.26'	N0°19'38"E	48°14'10"	109.69'	245.00'	
L3	12+71.26 14+48.23	275521.3644 275682.4730	2227548.8730 2227622.1090	176.97'	N24°26'43"E				

NOTE:  
 THE CITY HAS CLEARED AND REMOVED THE EXISTING VEGETATION SURROUNDING THE SPILLWAY. THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND DETERMINE ADDITIONAL CLEARING AND GRUBBING NEEDED TO CONSTRUCT THE PROJECT WITHIN THE LIMITS OF DISTURBANCE. ALL EXISTING VEGETATION WITHIN THE SPILLWAY SHALL BE REMOVED TO THE OWNER'S SATISFACTION.



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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

PLAN & PROFILE

DAM SPILLWAY REHABILITATION  
LAKE QUIVIRA, KANSAS

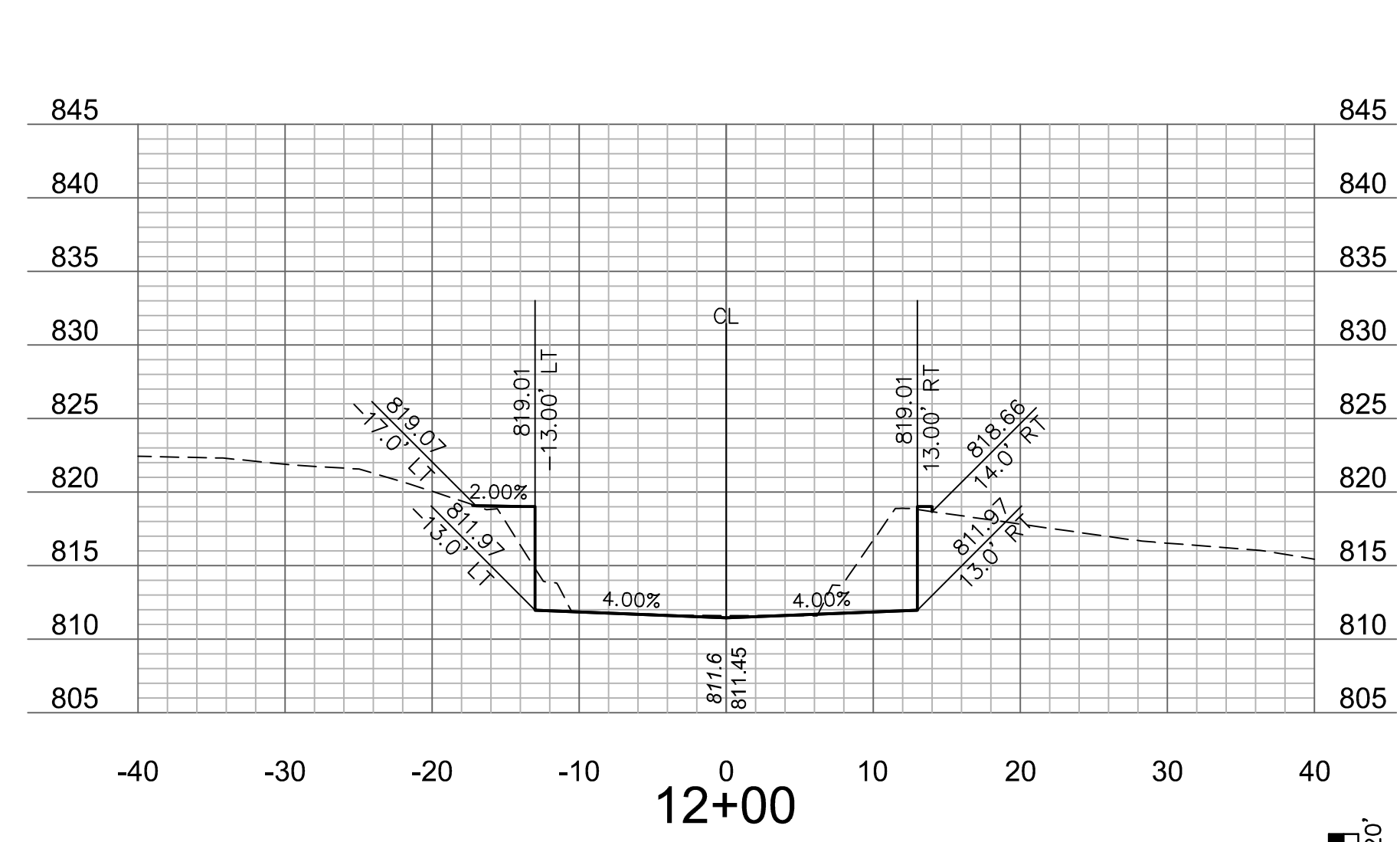
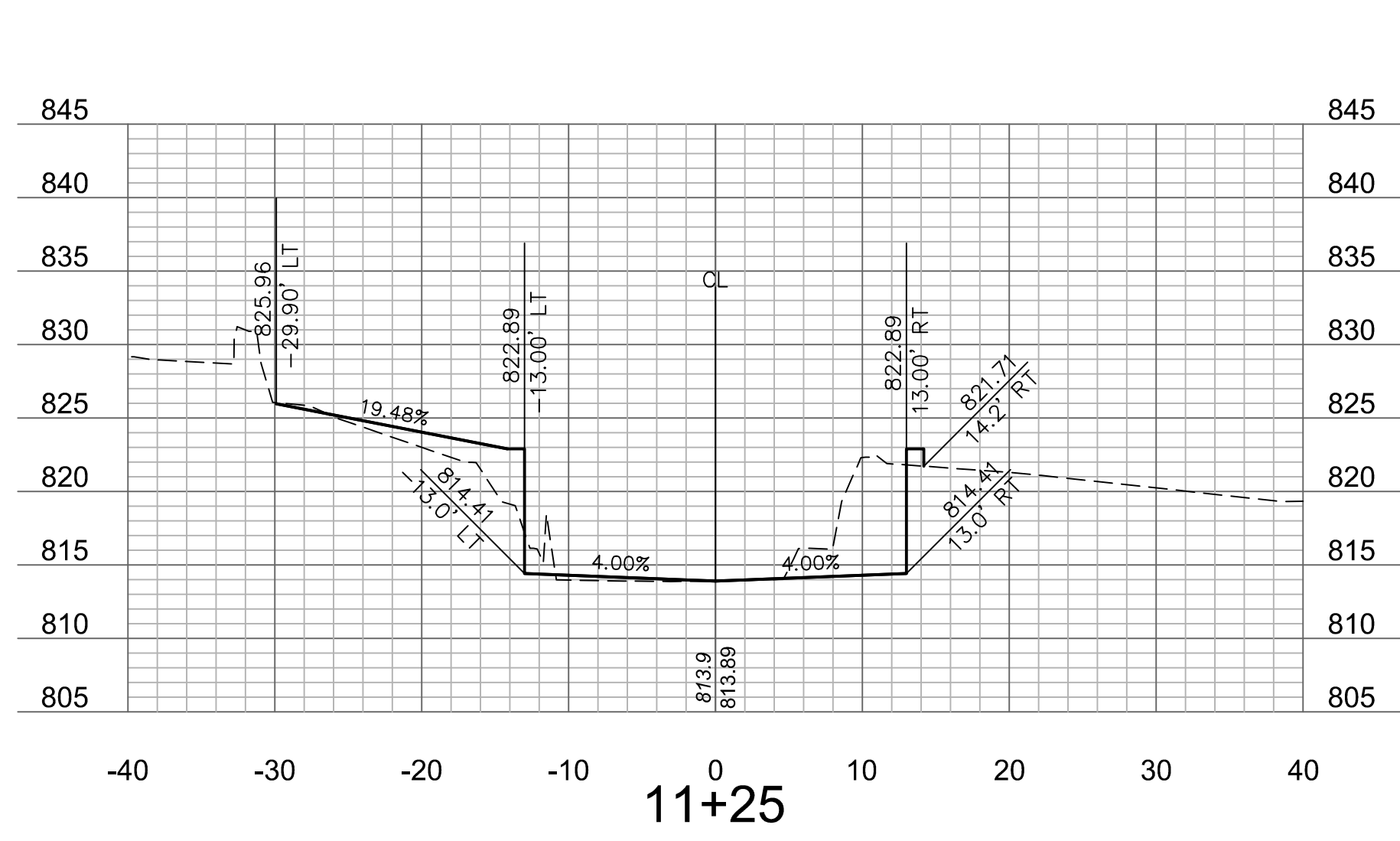
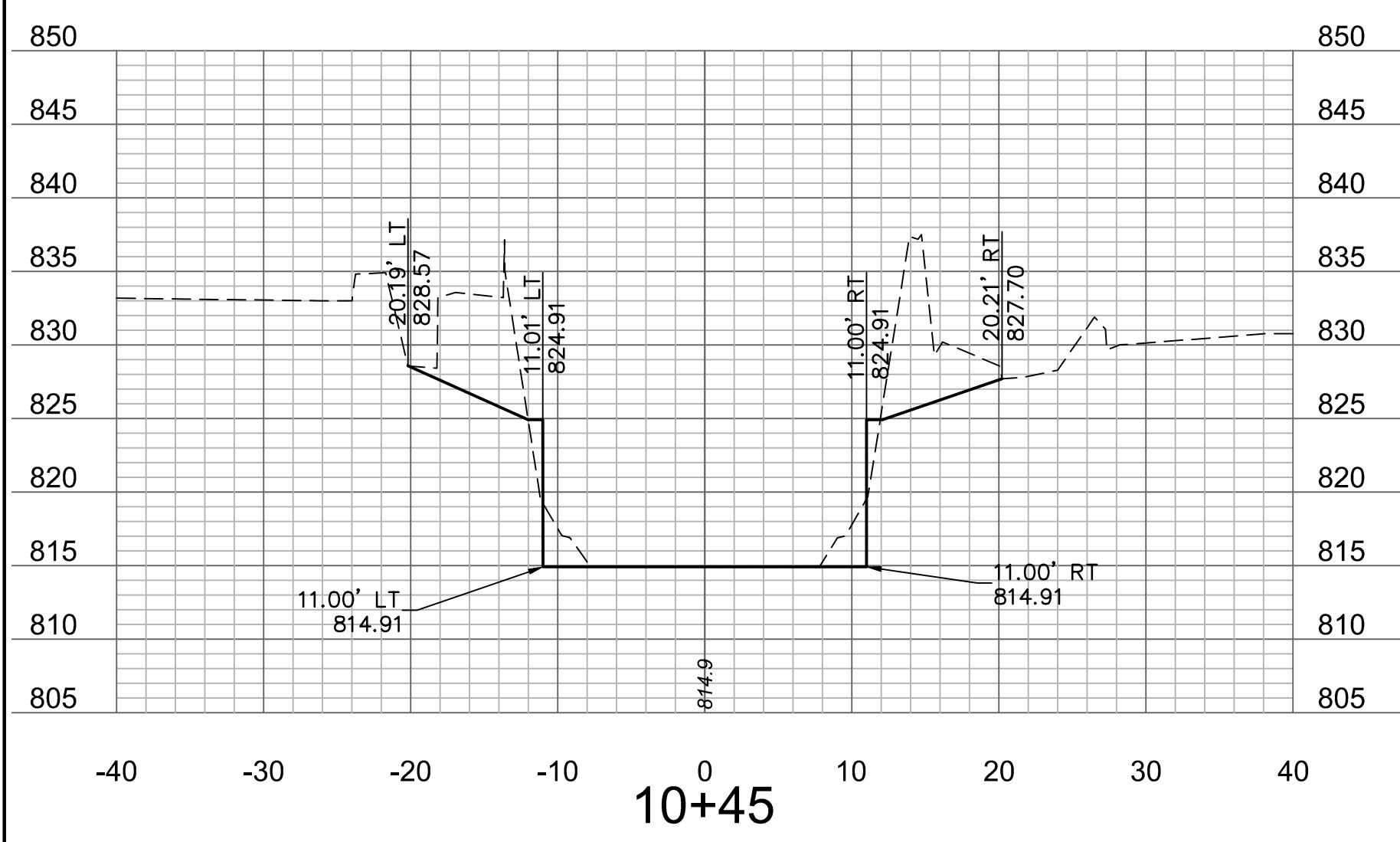
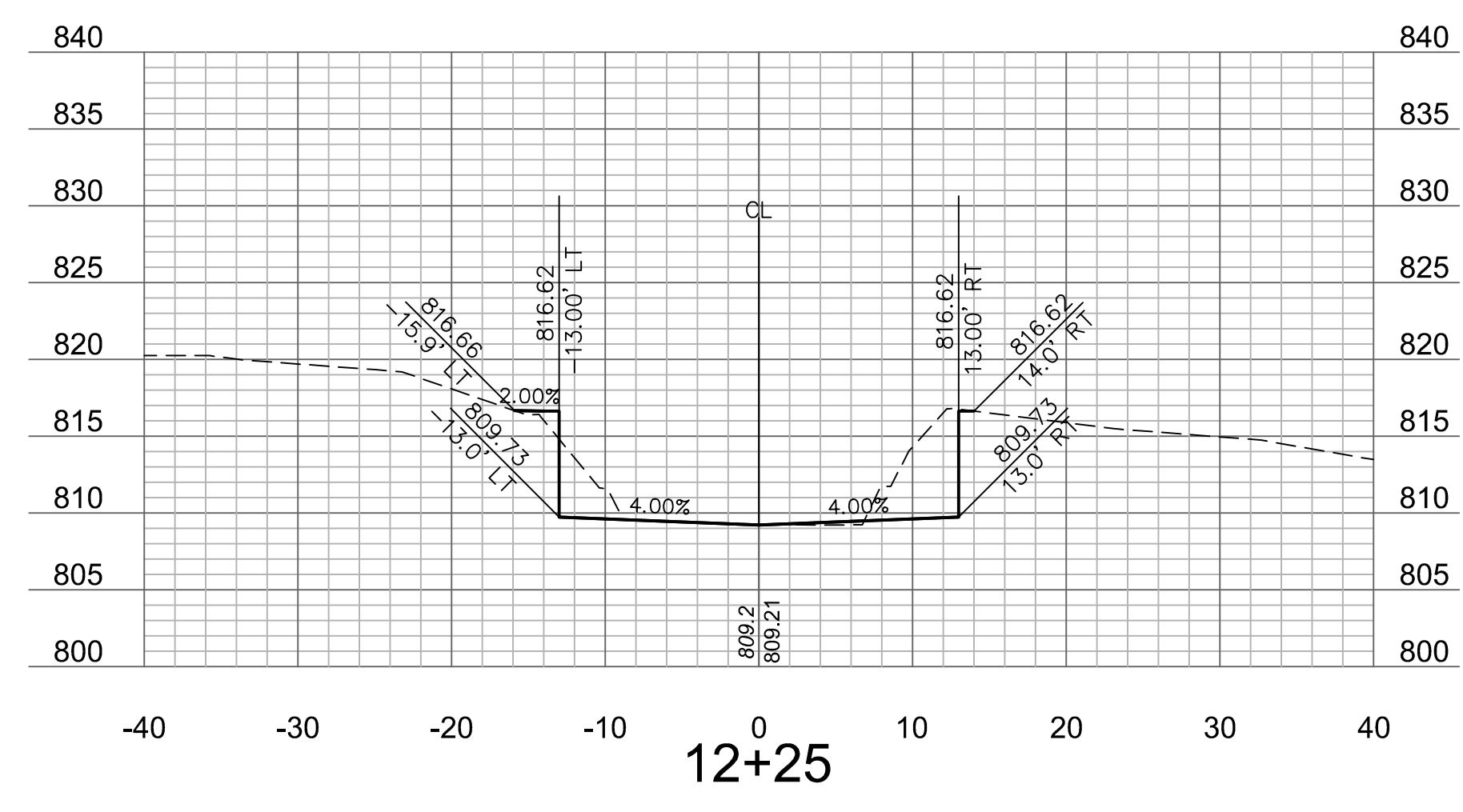
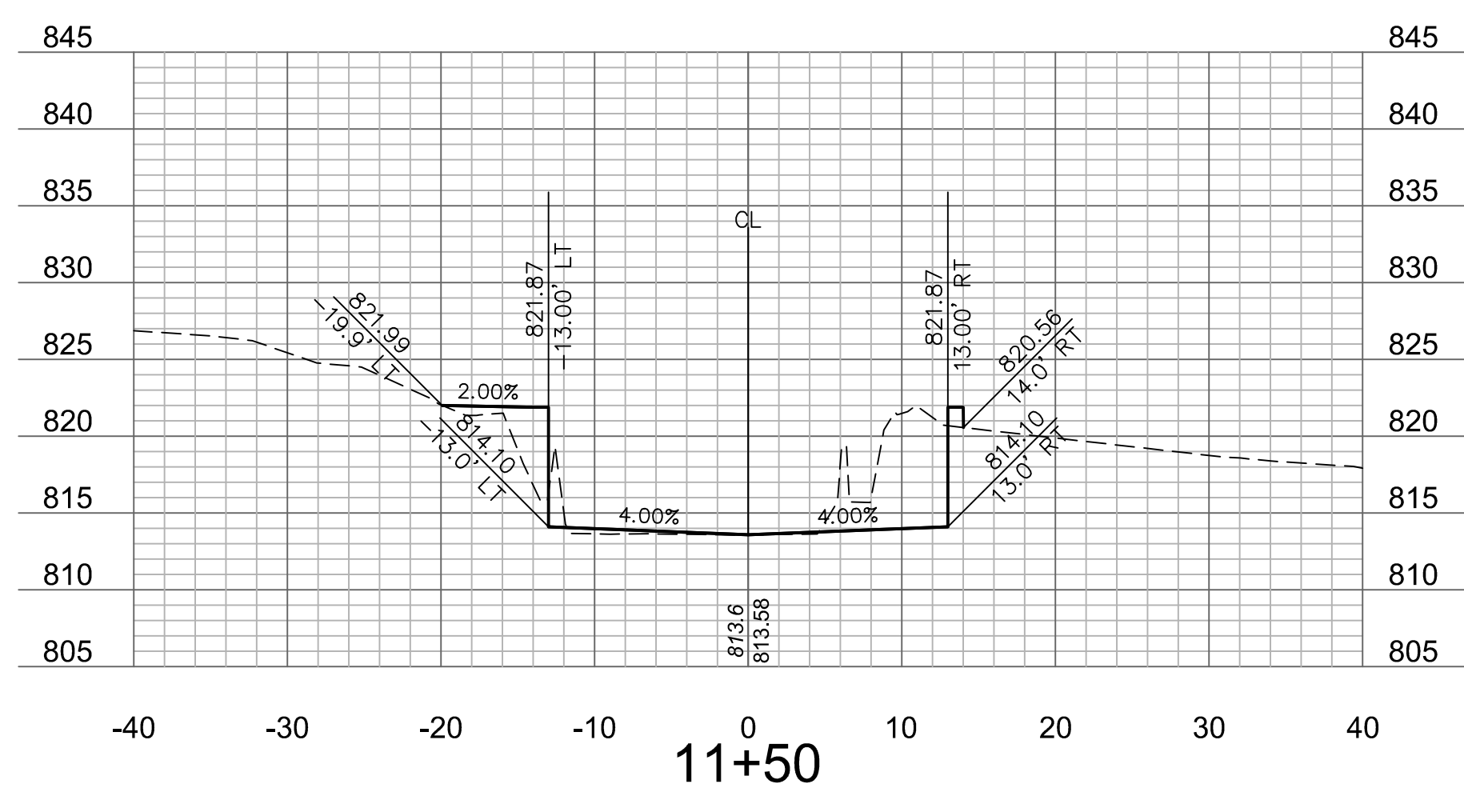
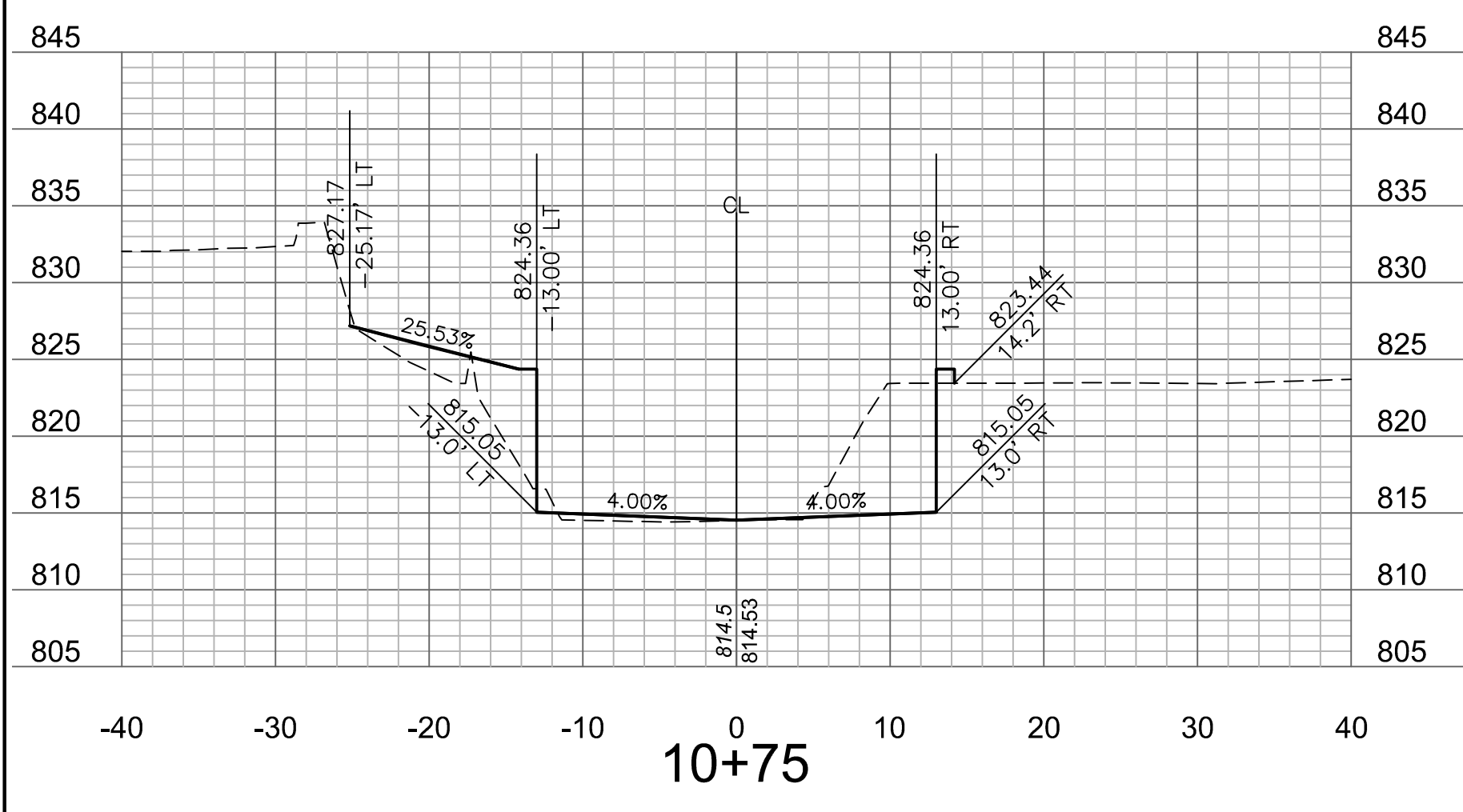
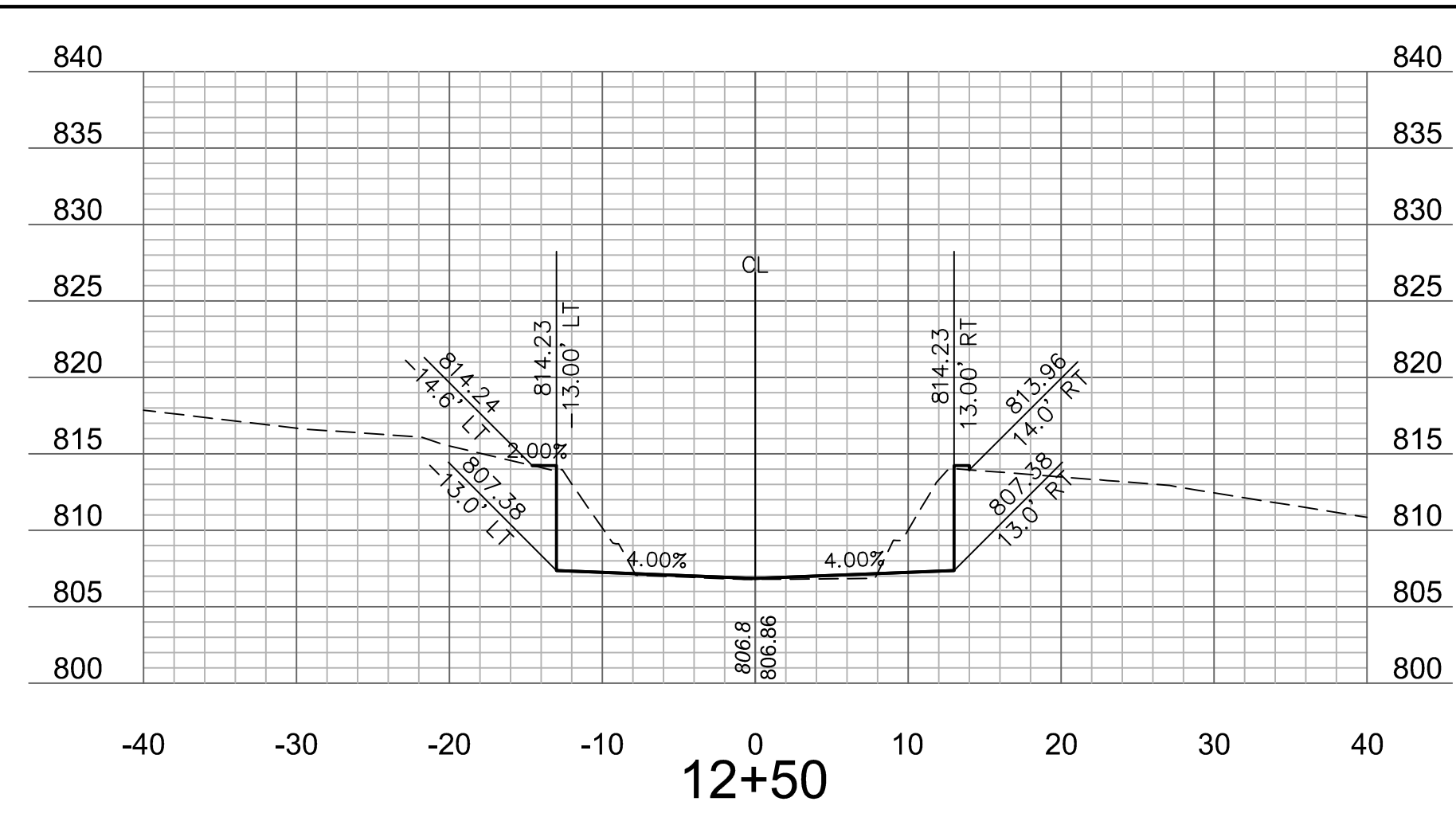
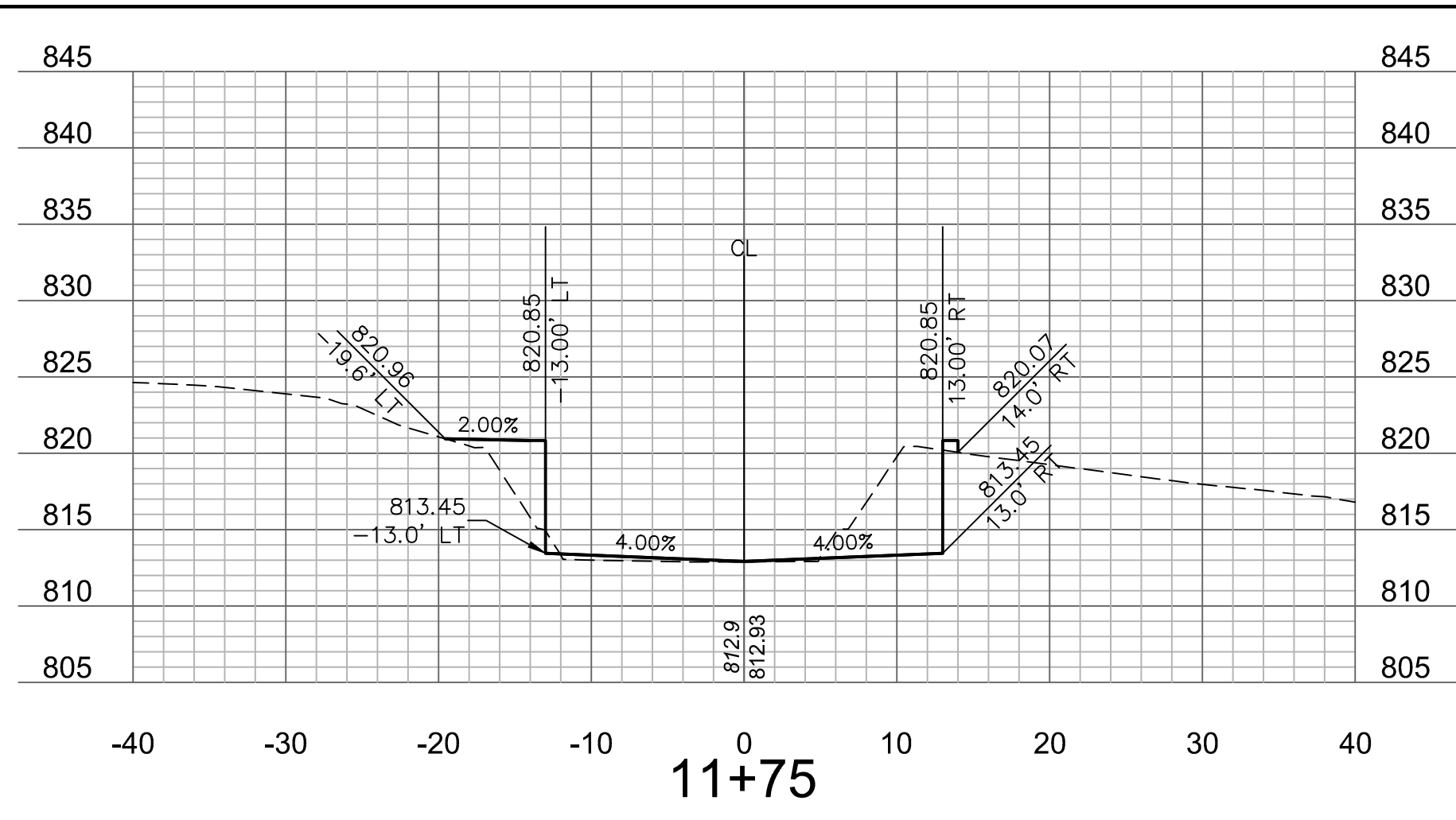
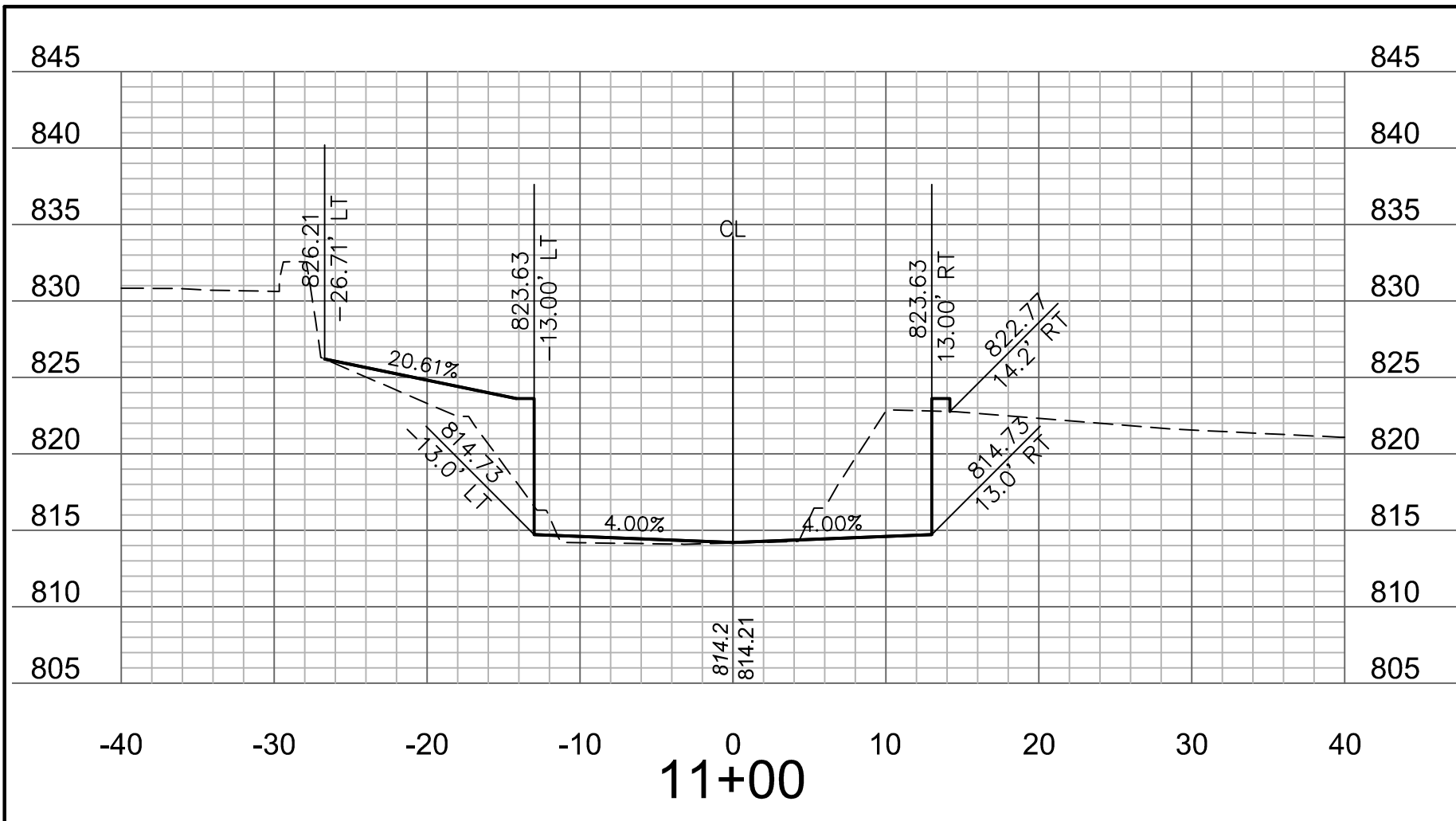
LAKE QUIVIRA, KS

2023

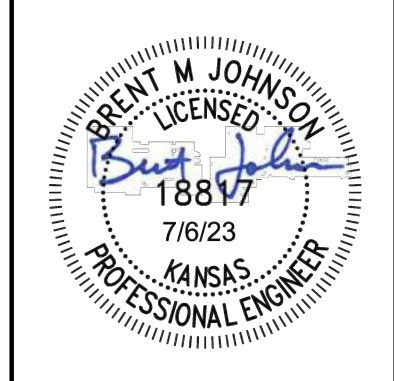
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4 of 11

drawn by: KTF  
 checked by: KTF  
 approved by: BMJ  
 QA/QC by: BMJ  
 project no.: 021-08019  
 drawing no.:  
 date: 07-06-2023

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 USER: kfulton



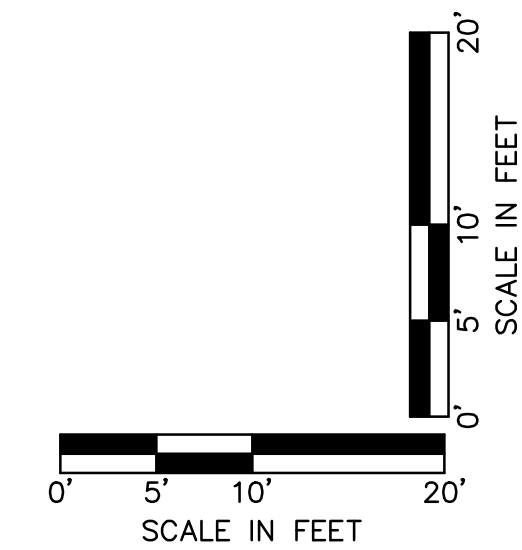
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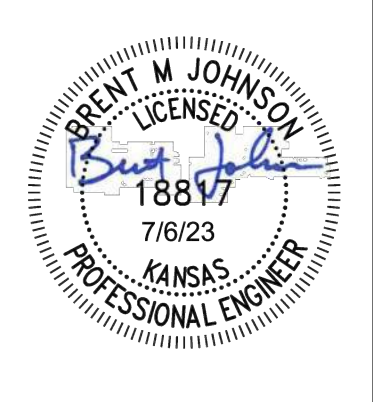
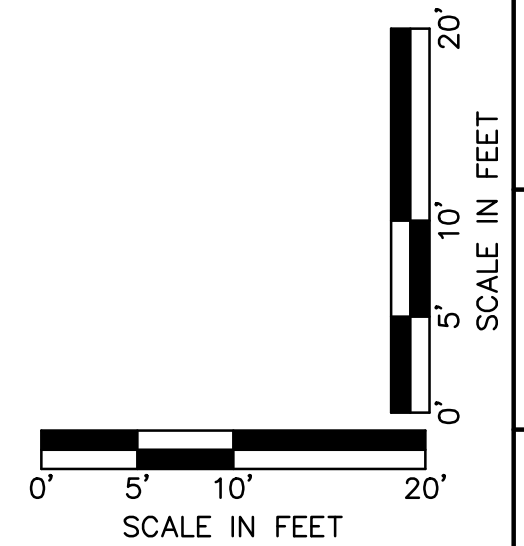
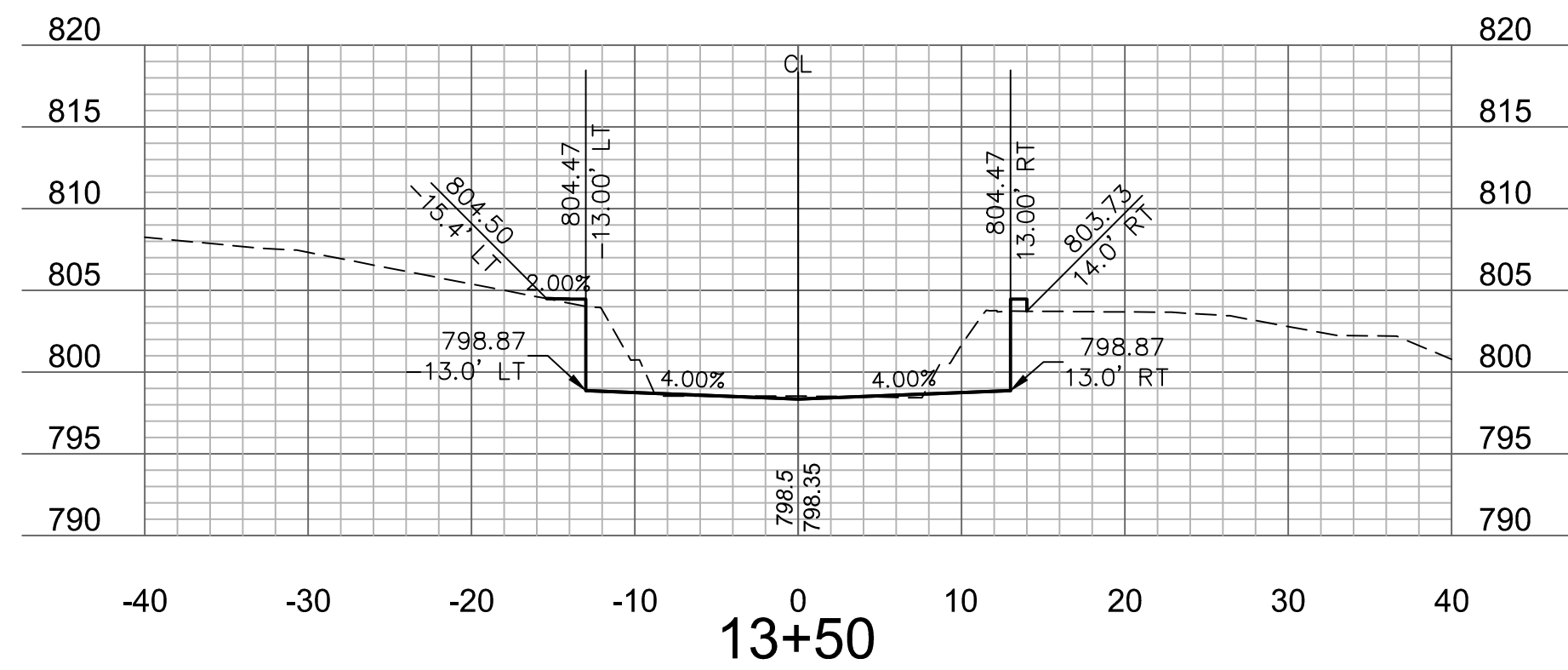
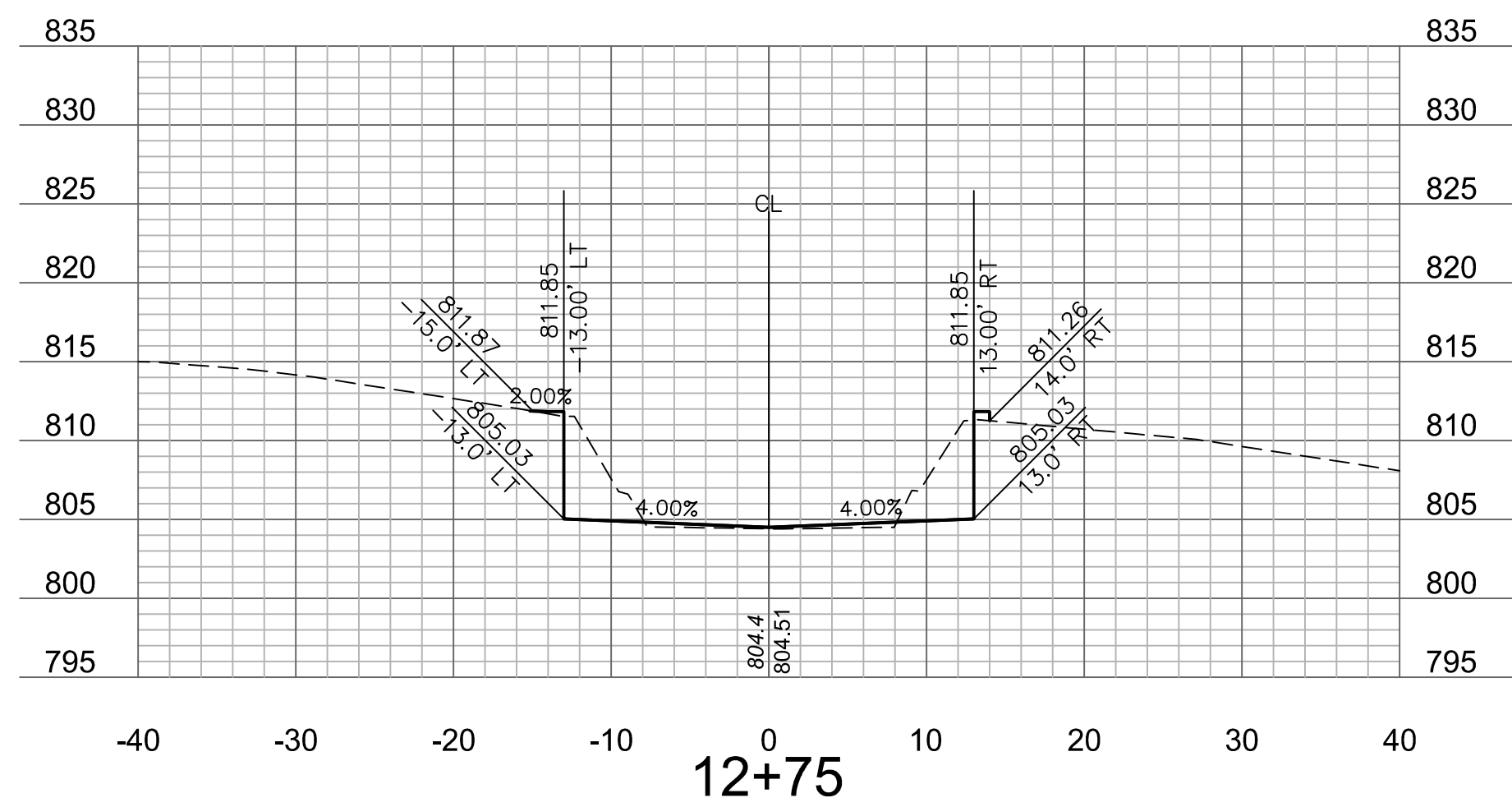
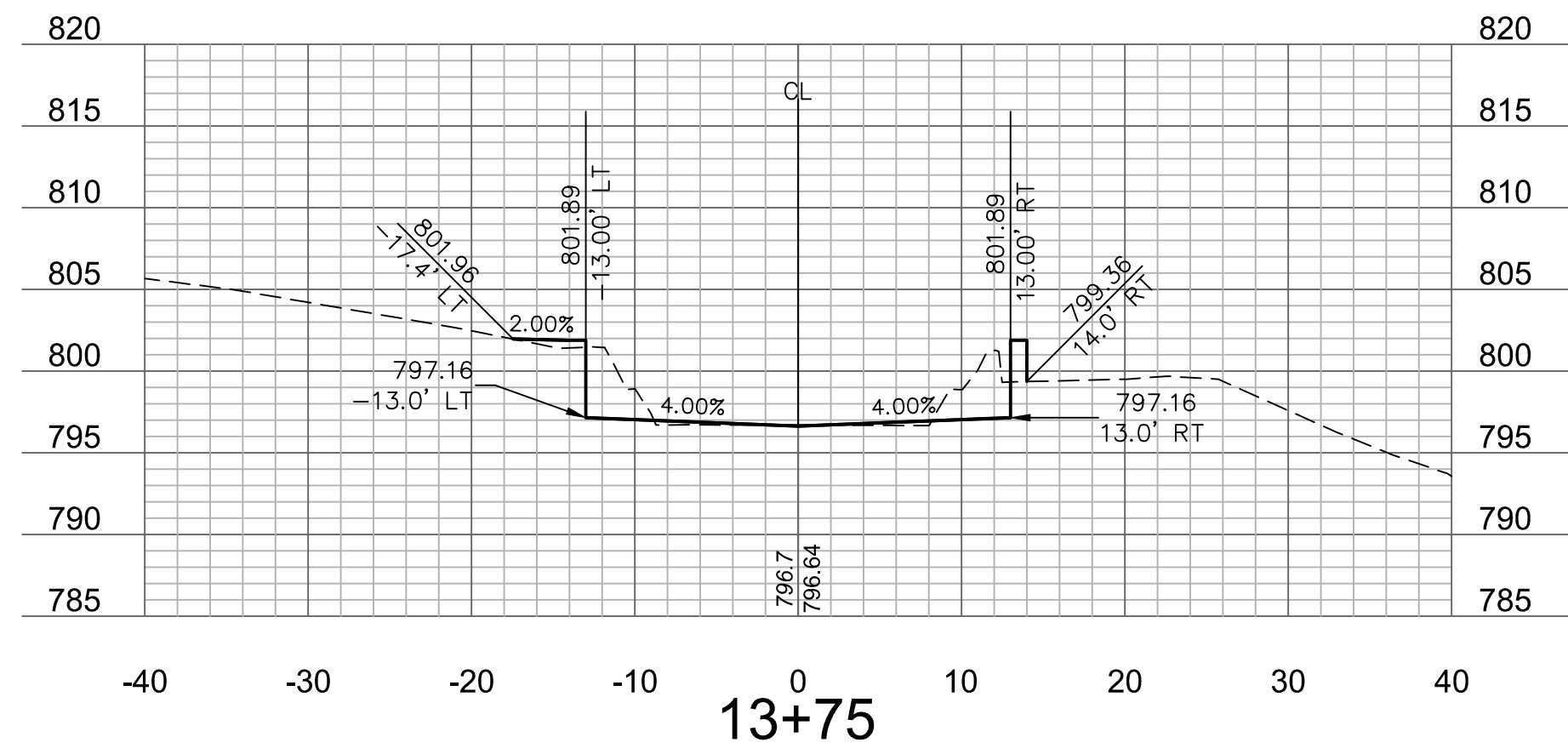
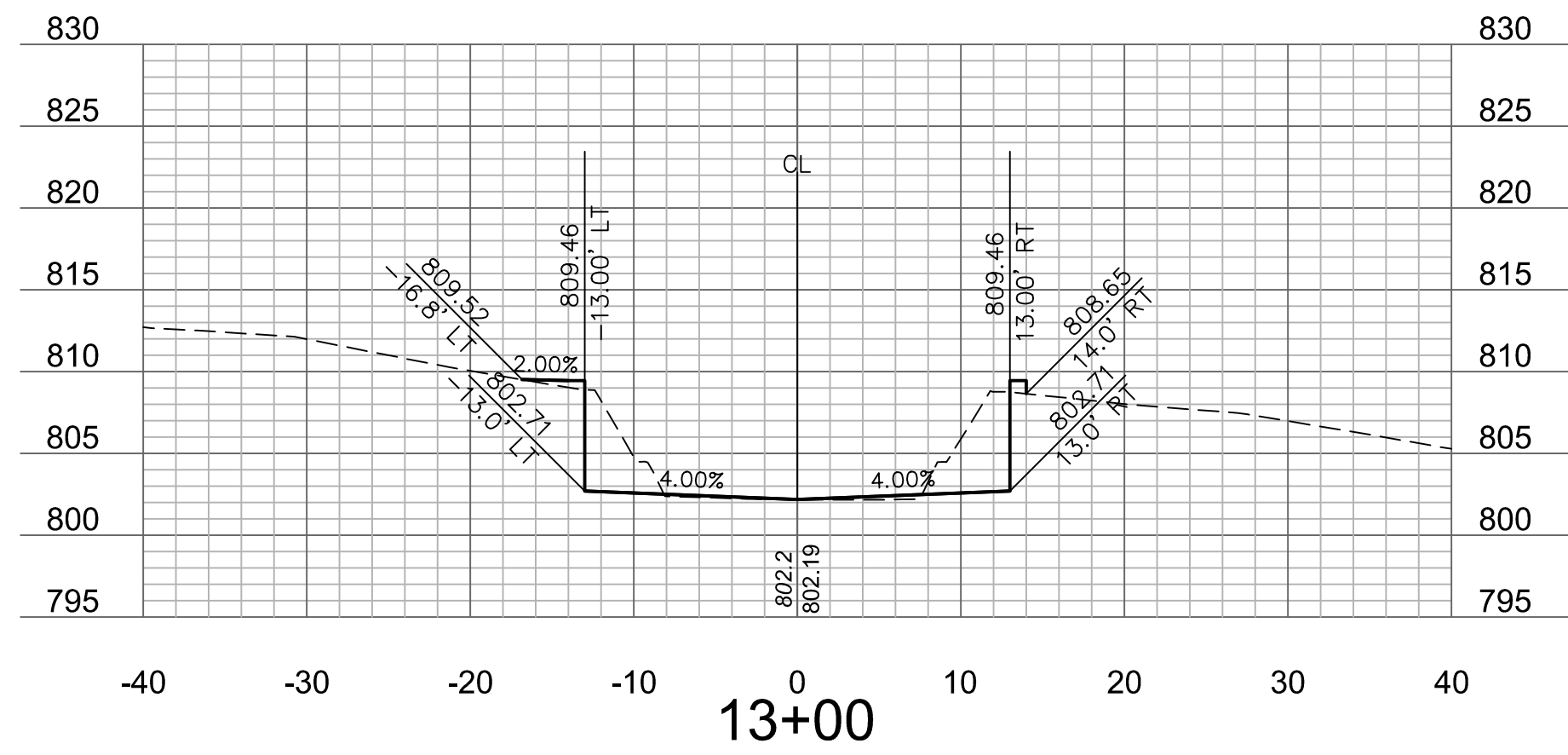
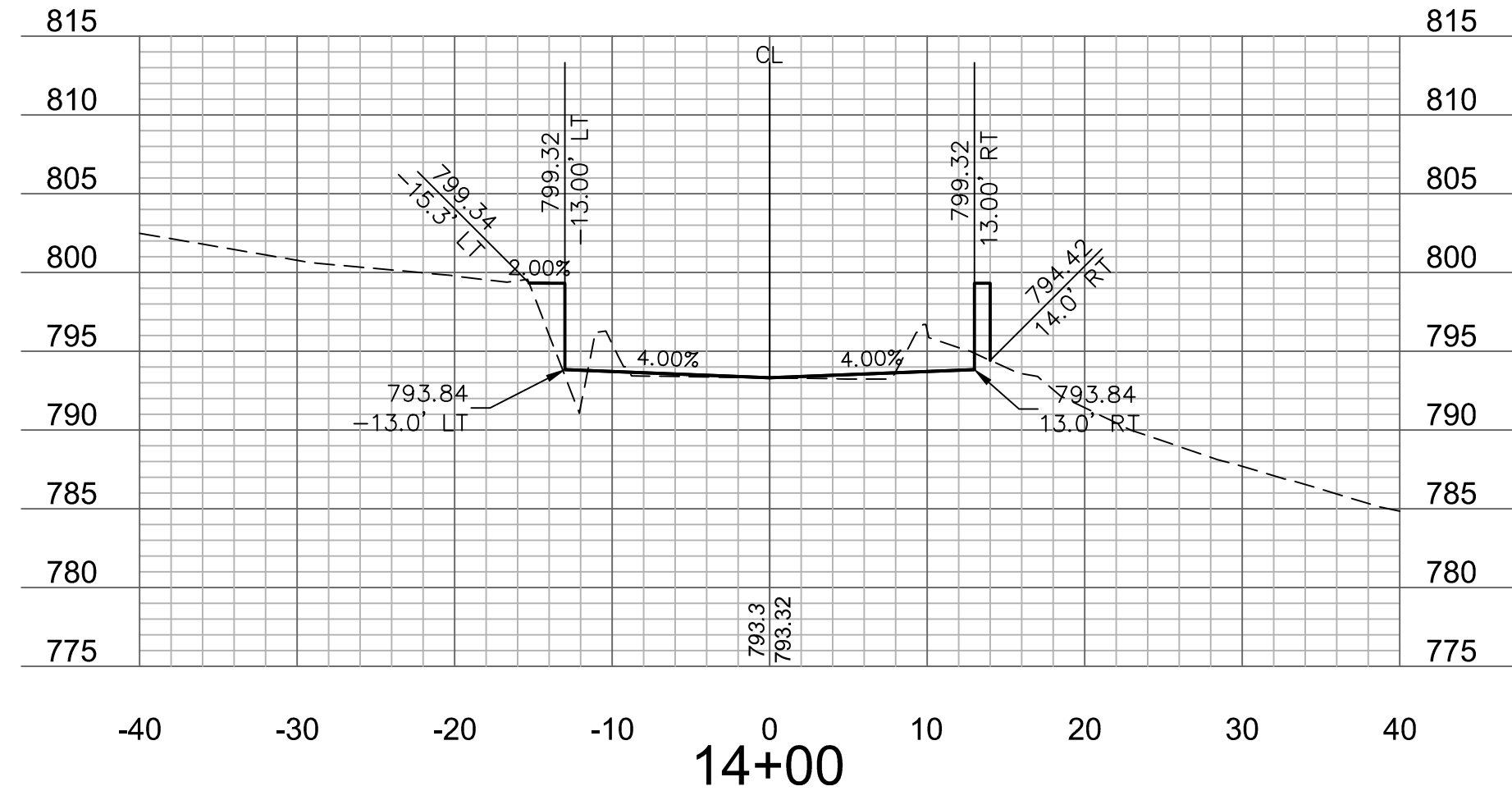
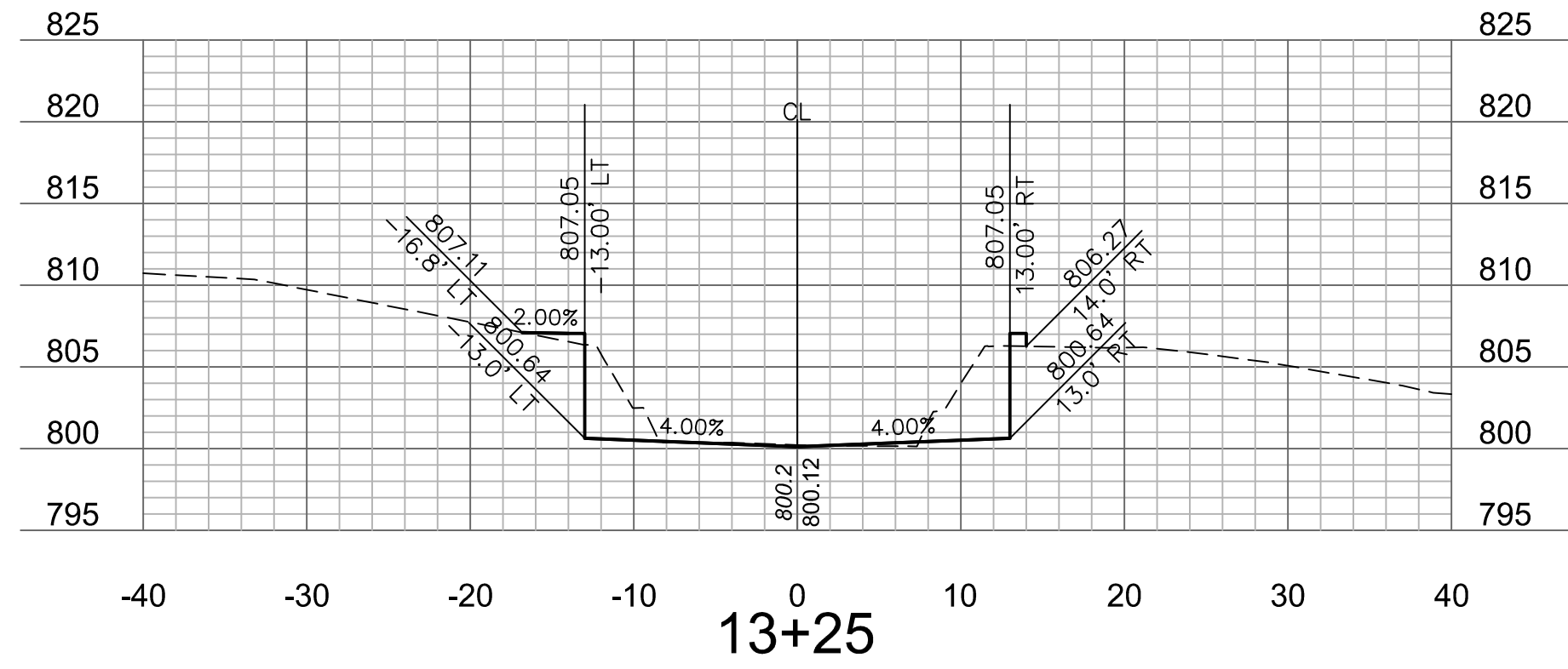
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

CROSS SECTIONS  
 DAM SPILLAY REHABILITATION  
 LAKE QUIVIRA, KANSAS  
 LAKE QUIVIRA, KS  
 2023

drawn by: KTF  
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 approved by: BML  
 QA/QC by: BML  
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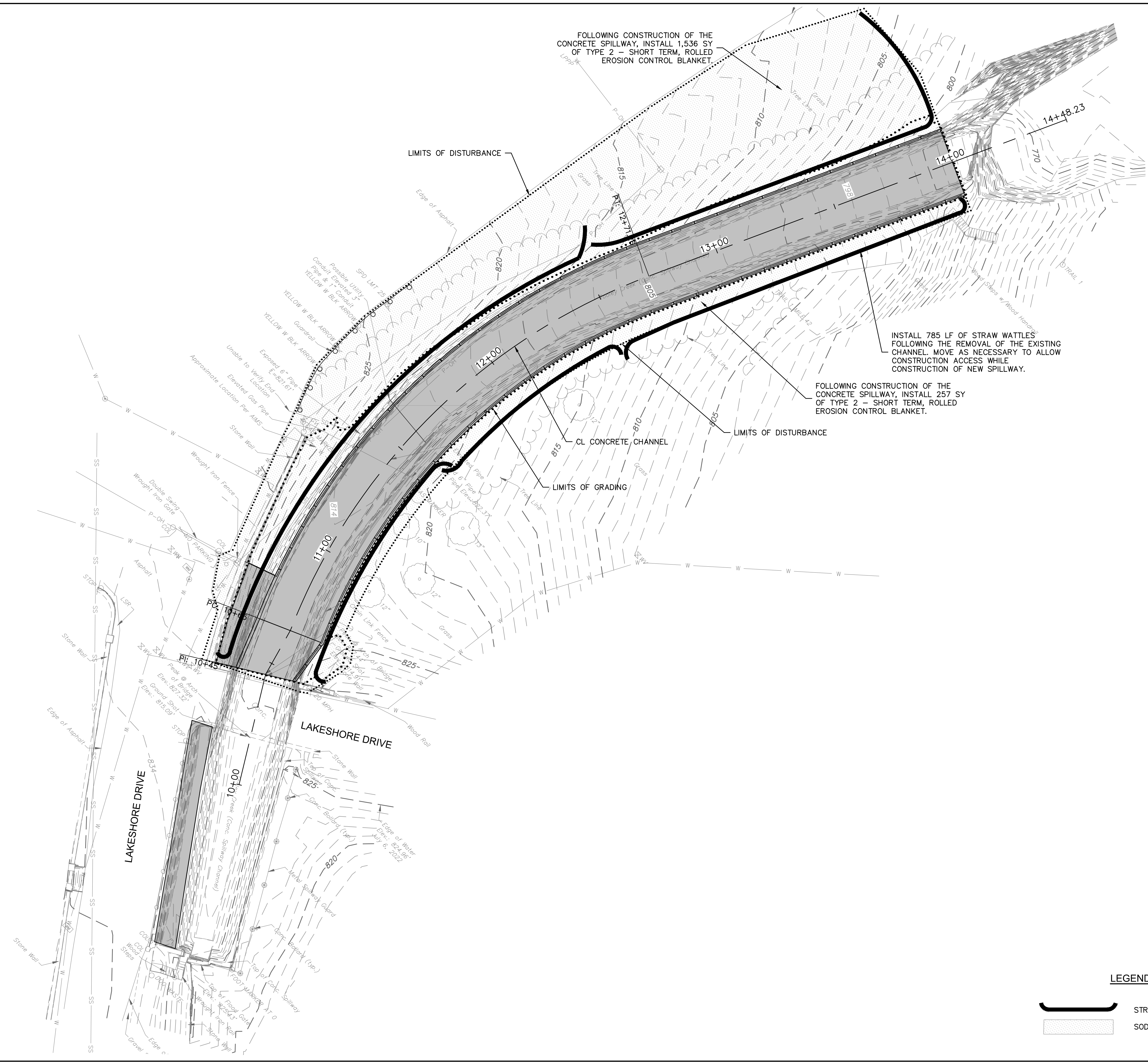
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CROSS SECTIONS  
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 2023

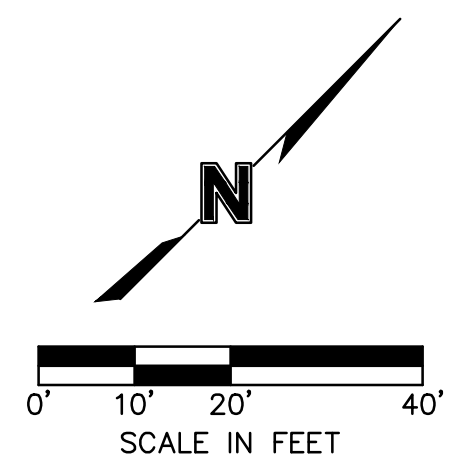
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**LEGEND**

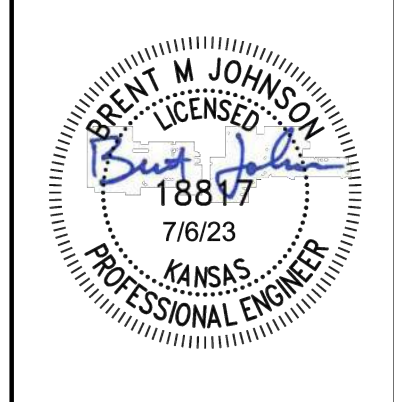
STRAW WATTLES

SOD



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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

**EROSION CONTROL PLAN**

**DAM SPILLWAY REHABILITATION  
 LAKE QUIVIRA, KANSAS**

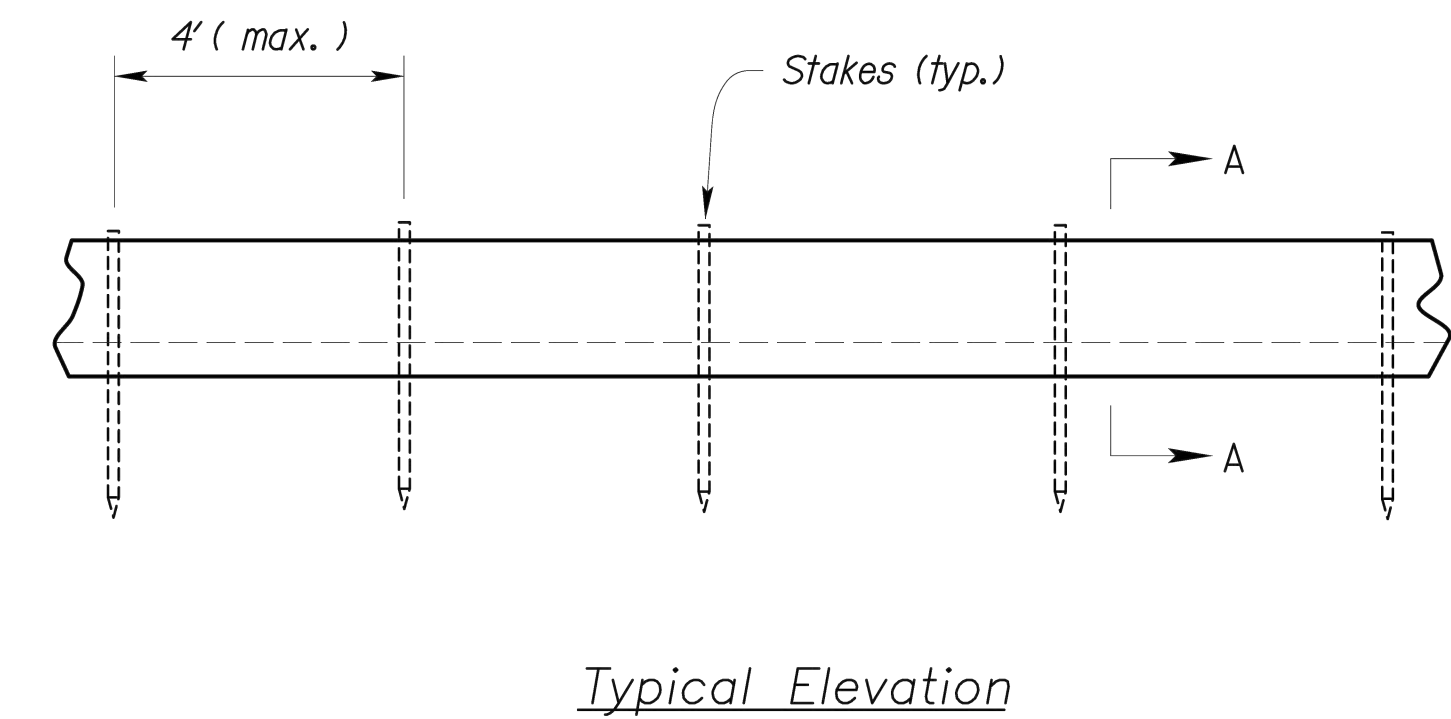
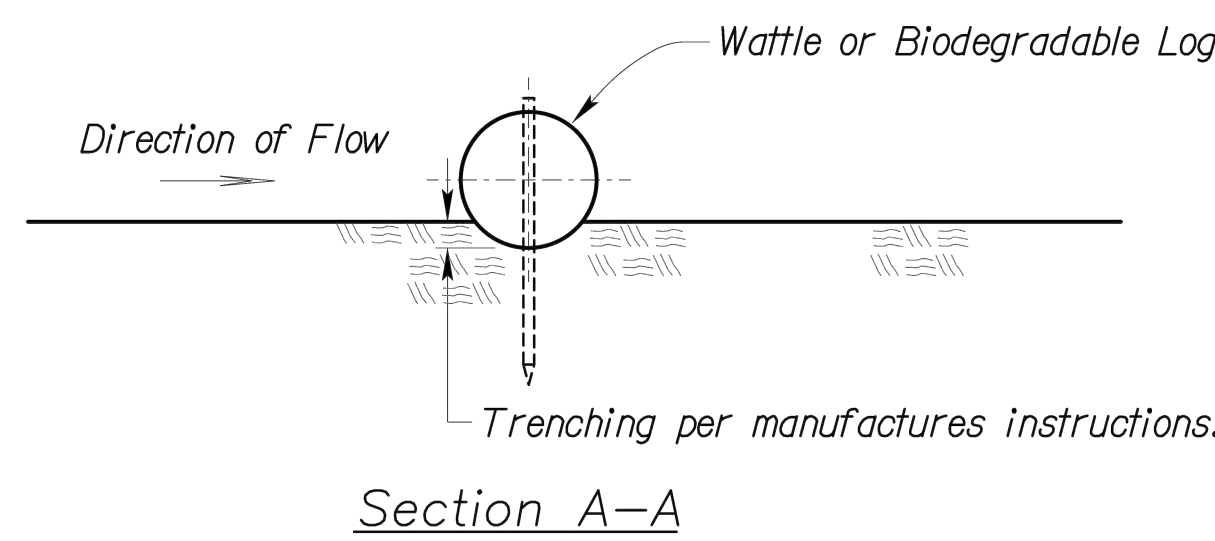
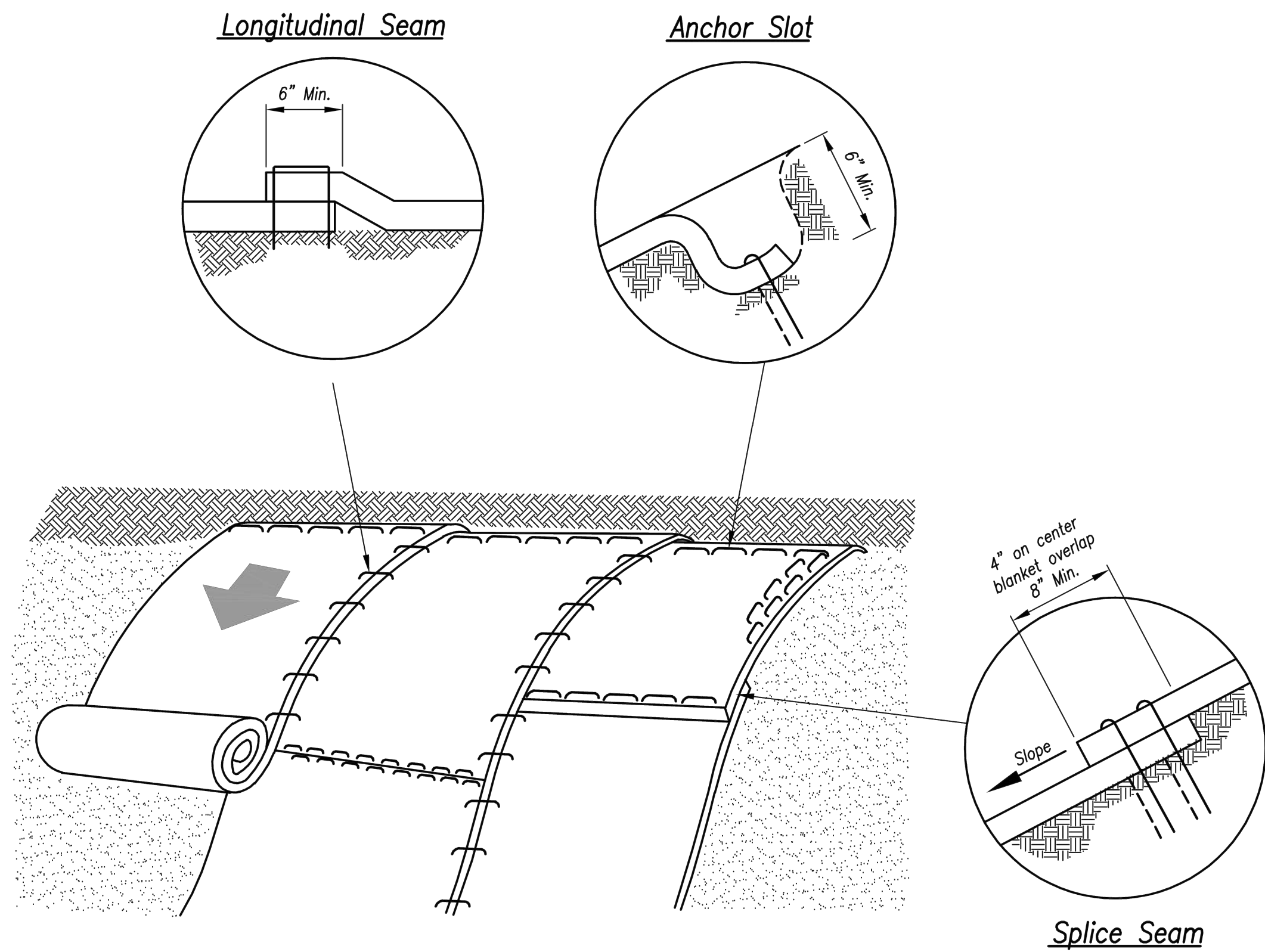
LAKE QUIVIRA, KS

2023

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 checked by: KTF  
 approved by: BML  
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 project no.: 021-08019  
 drawing no.:  
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**SHEET**  
 7 of 11

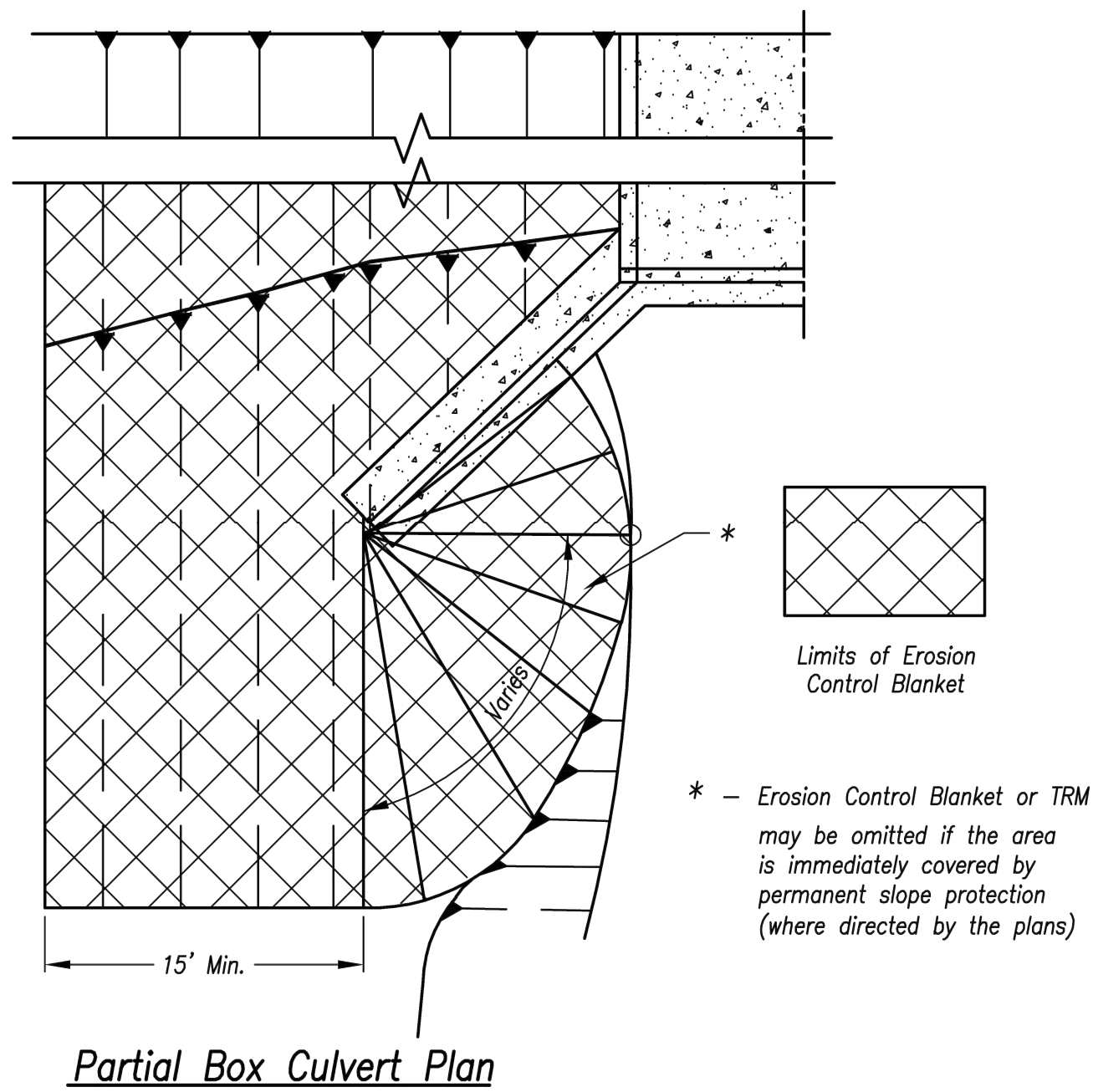
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 DATE: Jul 06, 2023 2:56pm  
 USER: kfulton



**WATTLES AND BIODEGRADABLE LOG**

**Notes for Wattles and Biodegradable Log Slope Protection:**

1. The Slope barriers shall be placed along contour lines, with a short section turned upgrade at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
2. Install wattles and biodegradable logs per manufacturer's instructions.
3. Spacing of stakes per manufacturer's instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with minimum of 24".



Not to Scale

**SLOPE INSTALLATION**

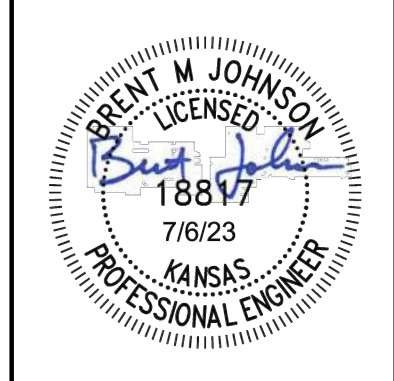
**EROSION CONTROL BLANKET**

**Notes:**

1. Overland Park Municipal Code (OPMC) and Overland Park Design and Construction Standards Manual (OPDCSM) are incorporated, except as otherwise noted.
2. Erosion Control Blankets and TRMs shall be laid in the direction of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.
3. ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.
4. LONGITUDINAL SEAM: The edges of the blanket should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.
5. SPLICE SEAM: When splices are necessary, overlap end a minimum of 8 inches in direction of water flow. Stagger splice seams.
6. TERMINAL FOLD: The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.
7. TYPICAL ANCHORS: Anchor design shall be as recommended by the manufacturer.
8. STAPLE PATTERN: Staple pattern and spacing shall be as required by the manufacturer.

**Maintenance:**

Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer. Edges or seams which are loose or frayed shall be secured.



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DETAIL SHEET	2023
DAM SPILLAY REHABILITATION LAKE QUIVIRA, KANSAS	
LAKE QUIVIRA, KS	

drawn by:	KTF
checked by:	KTF
approved by:	BMJ
QA/QC by:	BMJ
project no.:	021-08019
drawing no.:	07-06-2023



**GENERAL NOTES:**

**DESIGN SPECIFICATIONS:**

ASCE/SEI 7-10, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES  
 ACI 350-06, CODE REQUIREMENTS FOR ENVIRONMENT ENGINEERING CONCRETE STRUCTURES  
 2020 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND LATEST INTERIM REVISIONS

**DESIGN UNIT STRESSES:**

KCMMB 5K CONCRETE  $f'c = 5,000$  PSI  
 REINFORCING STEEL (GRADE 60)  $fy = 60,000$  PSI

**DESIGN LOADING:**

EARTH = 120 PCF  
 HYDROSTATIC PRESSURE = 62.4 PCF  
 LIVE LOAD SURCHARGE = 2 FEET  
 EQUIVALENT FLUID PRESSURE = 51 LB/CF (DRAINED),  
 = 87 LB/CF (UNDRAINED)

**MISCELLANEOUS:**

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 2", UNLESS OTHERWISE SHOWN.

ALL REINFORCEMENT SHALL BE EPOXY COATED. BAR BENDS AND LAP SPLICES SHALL BE IN ACCORDANCE WITH CRSI DETAILING STANDARDS.

CONTRACTOR TO PROVIDE SHOP DRAWINGS THAT INCLUDE A BILL OF REINFORCING FOR APPROVAL BY THE ENGINEER PRIOR TO ORDERING MATERIALS. ALLOW THREE (3) WEEKS FOR REVIEW PERIOD.

ALL DIMENSIONS ARE HORIZONTAL.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

SPILLWAY CHANNEL FOOTING SHALL BE FOUNDED ON COMPETENT LIMESTONE BEDROCK. ROCK SURFACE SHALL BE CLEANED AND FREE OF LARGE ROCKY PROJECTIONS, SOIL, GRAVEL, STANDING WATER, AND OTHER LOOSE MATERIAL PRIOR TO PLACING FLOWABLE FILL OR CONCRETE. CONTRACTOR MAY INSTALL A 3" MIN. CONCRETE SEAL COURSE (COMMERCIAL GRADE MIX) TO ASSIST WITH ENTRAPPING PROJECTIONS OF BEDROCK, PREVENT WATER INFILTRATION (IF REQUIRED), AND PREPARE THE SURFACE PRIOR TO PLACING THE FLOWABLE FILL AND LOWER SLAB. WHERE CLAY SOIL IS ENCOUNTERED BELOW THE BOTTOM OF EXISTING FOOTING ELEVATION, THE SOIL SHALL BE EXCAVATED TO BEDROCK AND BACKFILLED WITH AN APPROVED FLOWABLE FILL WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,000 PSI. IT IS ASSUMED THAT AN AVERAGE LIFT OF 12" WILL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CHANNEL. THIS QUANTITY SHALL BE OVER/UNDERRUN BASED ON THE CONDITIONS OBSERVED AFTER CONDUCTING REMOVALS AT THE DIRECTION OF THE ENGINEER.

CONTRACTOR SHALL DESIGN AND PROVIDE DEWATERING AROUND THE GATE REPAIRS AND WITHIN THE CHANNEL EXCAVATION TO ENSURE THE WORK AREAS ARE DRY AND FREE OF FLOWING WATER. THIS WORK MAY CONSIST OF DIVERSION DAMS, COFFERDAMS, WELL-POINT DEWATERING, BYPASS PUMPING, SEAL COURSE CONSTRUCTION, ETC. ALL LABOR AND MATERIALS NECESSARY TO DEWATER THE WORK AREAS SHALL BE CONSIDERED COMPLETELY COVERED BY THE LUMP SUM BID ITEM "DEWATERING".

GRANULAR BACKFILL SHALL BE DEPOSITED BEHIND THE CHANNEL WALLS AS SHOWN IN THE TYPICAL SECTIONS. GRANULAR BACKFILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF KDOT SPECIFICATIONS FOR SB-1 OR SB-2. GRANULAR BACKFILL SHALL BE WRAPPED WITH CLASS 1 FILTER FABRIC.

PERFORATED DRAIN PIPE SHALL BE 6" DIAMETER PVC AND WRAPPED IN GEOTEXTILE FILTER FABRIC. FIELD LOCATE END OF DRAIN PIPE TO DAYLIGHT INTO CHANNEL NEAR END OF STRUCTURE. PROVIDE A TEE AND DAYLIGHT DRAINS AT 100' MAX. INTERVALS THROUGH WALLS AND INTO CHANNEL. THE EXPOSED ENDS OF THE DRAIN PIPE OUTLETS SHALL BE FITTED WITH AN INTERNAL GALVANIZED RODENT SCREEN AND 6" ALUMINUM BACKWATER FLOOD VALVE AND LID (VICE BROTHERS VB-FLOODVALVE06 OR APPROVED EQUIVALENT). RING OF BACKWATER FLOOD VALVE SHALL BE CAST INTO CONCRETE WALL AND MECHANICALLY SECURED THROUGH RING WITH FOUR FASTENERS (1/4" DIA. S.S. BOLTS X 3" LONG, NUTS AND WASHERS). OTHER WALL MOUNT PRODUCTS MAY BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ILLUSTRATE DRAIN PIPE MATERIAL, TEE CONNECTION, LEG OF PIPE THROUGH WALL, RODENT SCREEN, AND FLOOD VALVE ASSEMBLY FOR REVIEW AND APPROVAL BY THE ENGINEER. NO SPECIAL MEASUREMENT OR PAYMENT WILL BE MADE FOR DRAINAGE SYSTEM. ALL LABOR AND MATERIALS SHALL BE CONSIDERED SUBSIDIARY TO "KCMMB 5K CONCRETE" PER CUBIC YARD.

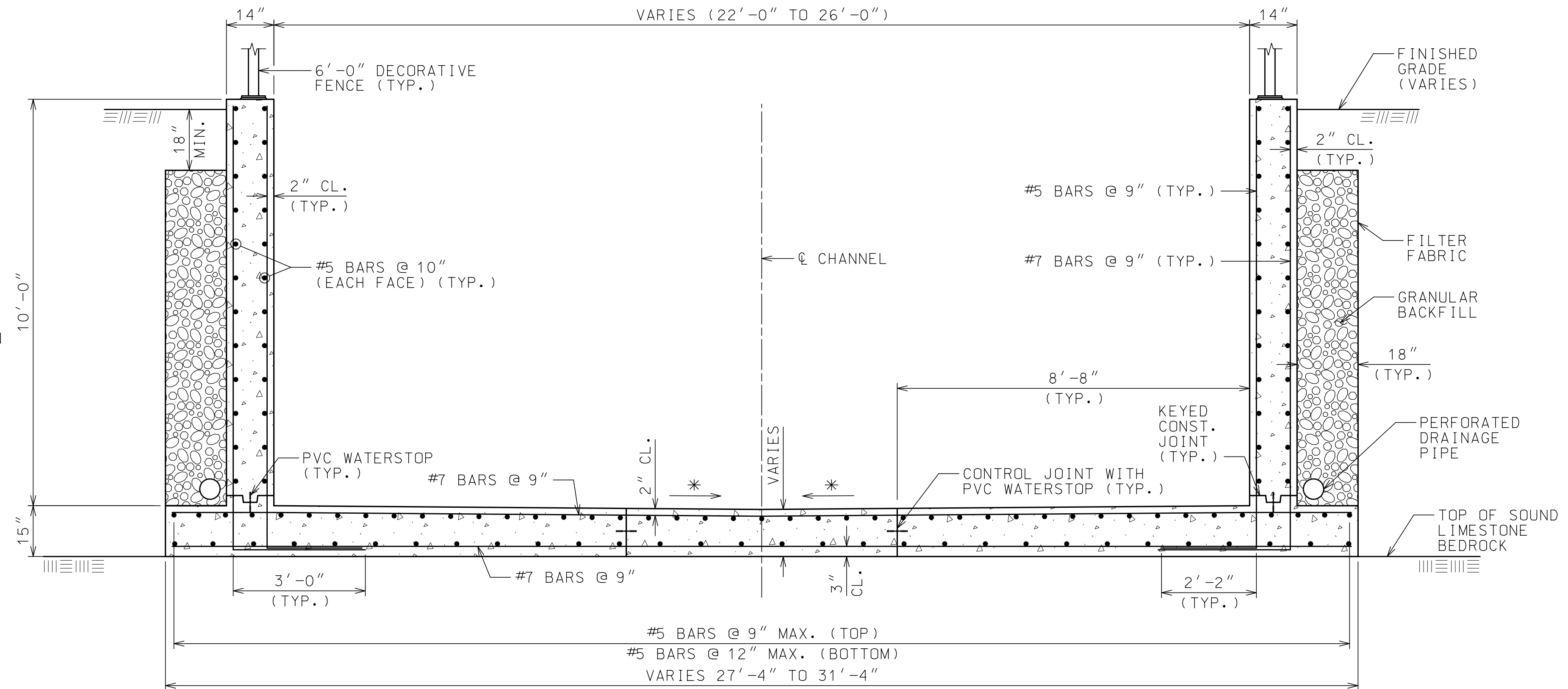
DECORATIVE FENCE SHALL BE AMERISTAR MONTAGE PLUS GENESIS WITH QUAD FLARE FINIALS OR AN APPROVED EQUAL.

ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT THE PEDESTRIAN FENCE, INCLUDING POSTS, ANCHOR BOLTS, HARDWARE, BASE PLATES, GROUT PADS, PAINT/FINISHES, SPECIAL TRANSITION PANELS, TEMPORARY BRACING, ETC., SHALL BE CONSIDERED COMPLETELY COVERED BY THE BID ITEM "PEDESTRIAN FENCE" PER LINEAL FOOT. NO SPECIAL MEASUREMENT OR PAYMENT WILL BE MADE FOR ANCILLARY ITEMS ASSOCIATED WITH THE FENCING.

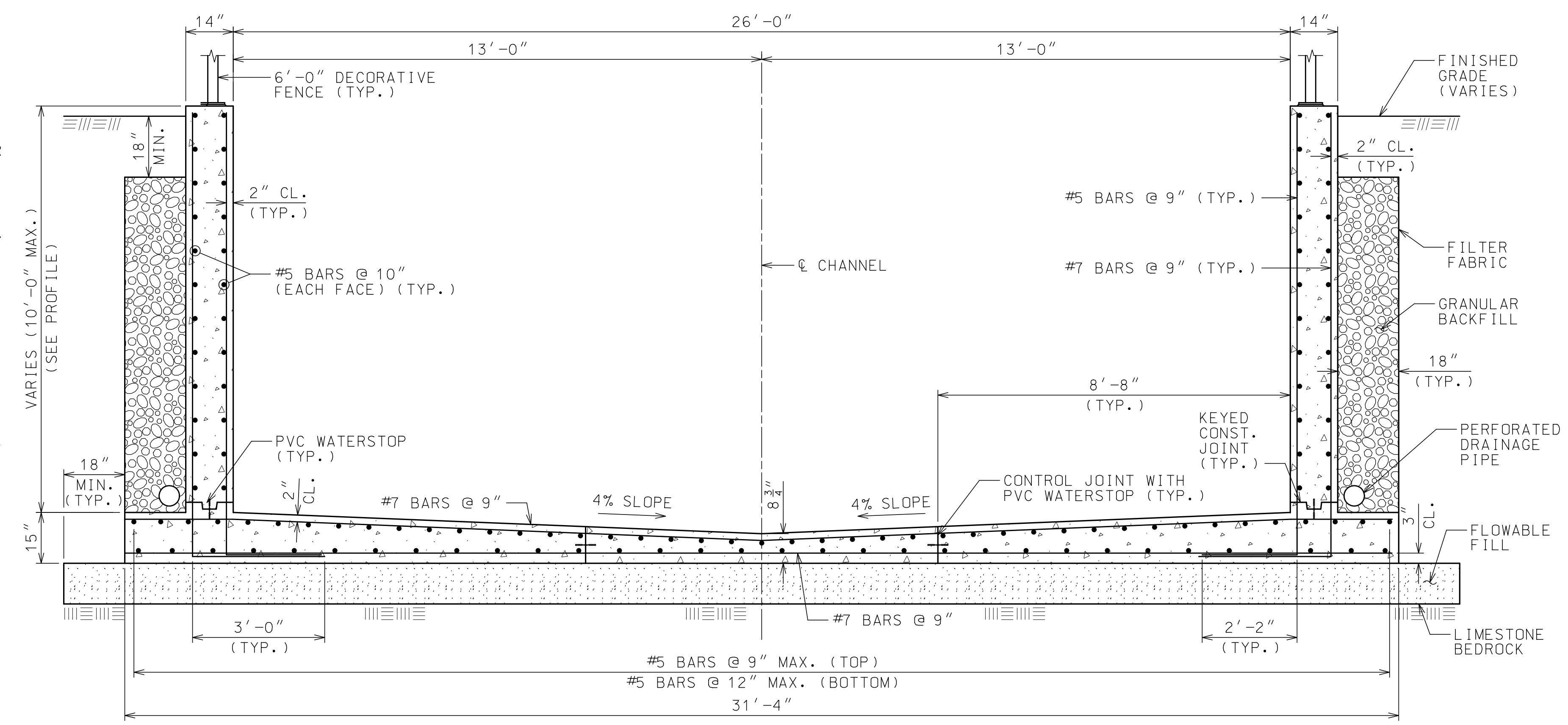
FORM LINER SHALL BE AN APPROVED ASHLAR STONE PATTERN. PROVIDE FORM LINER WHERE THE EXTERIOR FACE OF THE SOUTH CHANNEL WALL IS EXPOSED.

CRACK REPAIR SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 730 OF THE KDOT STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION. CONTRACTOR SHALL SUBMIT EPOXY RESIN PRODUCT FOR APPROVAL BY THE ENGINEER PRIOR TO ORDERING MATERIALS.

ESTIMATED QUANTITIES FOR CHANNEL		TOTAL
KCMMB 5K CONCRETE	CU. YARD	641.7
EPOXY RESIN CRACK REPAIR	LUMP SUM	1
REMOVAL OF EXISTING STRUCTURE	LUMP SUM	1
EARTHWORK	LUMP SUM	1
DEWATERING	LUMP SUM	1
CONCRETE SLOPE PROTECTION	SQ. YARD	117
PEDESTRIAN FENCE	LN. FT.	682
FLOWABLE FILL	CU. YARD	447.3



TYPICAL SECTION STA. 10+45.00 TO STA. 10+65.00  
 \* TRANSITION CROSS SLOPE FROM EXISTING CROSS SLOPE AT STA. 10+45.00 TO 4% CROSS SLOPE AT STA. 10+65.00



TYPICAL SECTION STATION 10+65.00 TO 11+85.00

ALL LABOR AND MATERIALS NECESSARY INCLUDING, BUT NOT LIMITED TO, REINFORCING, SOIL BACKFILL, GRANULAR BACKFILL, CONCRETE FORMWORK, COMPACTION, FILTER FABRIC, EXPANSION JOINT MATERIAL, DOWEL BARS, JOINT SEALANT, PVC WATERSTOP, AND DRAINS SHALL BE CONSIDERED SUBSIDIARY TO THE BID ITEM "KCMMB 5K CONCRETE" PER CUBIC YARD.

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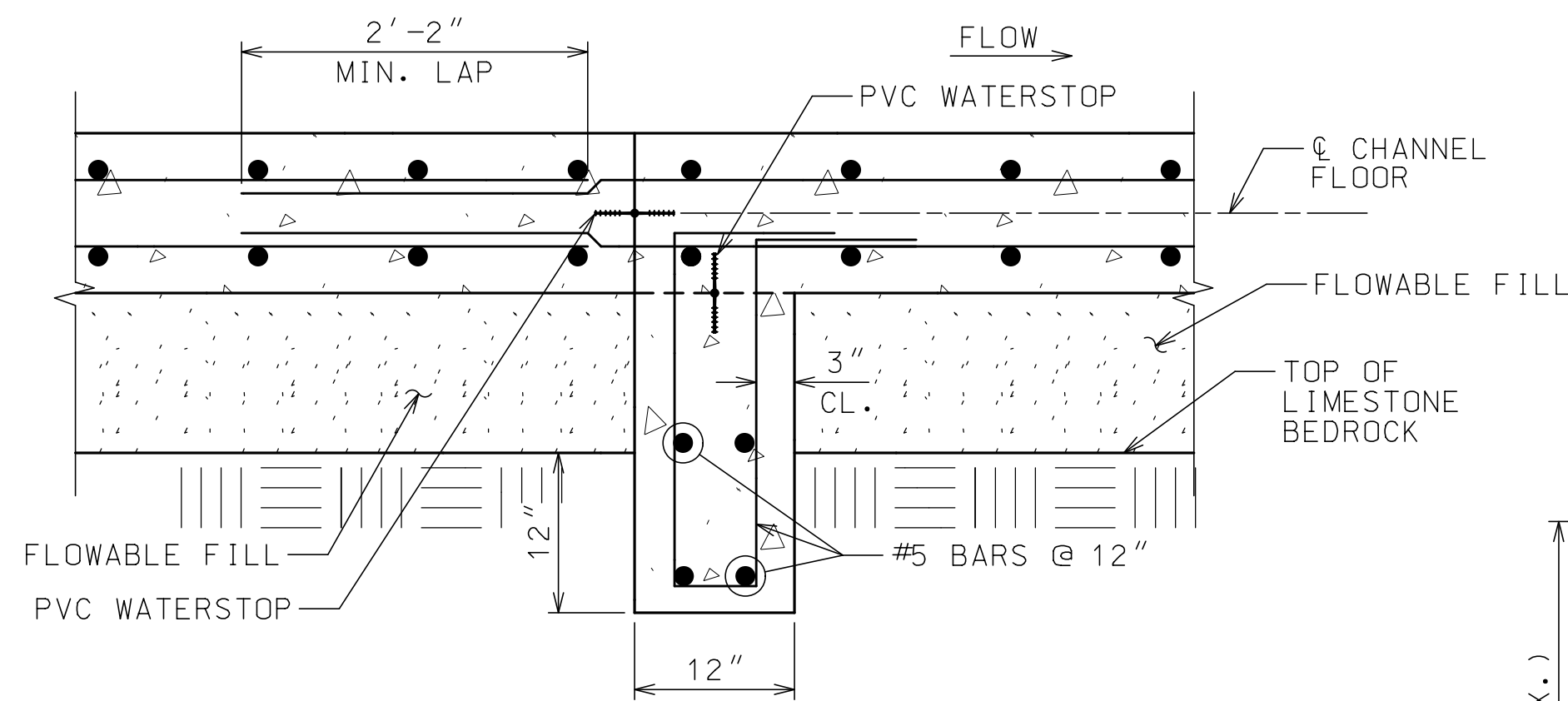
7301 West 133rd Street, Suite 200  
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 TEL 913.381.1170  
 www.olsson.com

**PRELIMINARY**  
 NOT FOR CONSTRUCTION

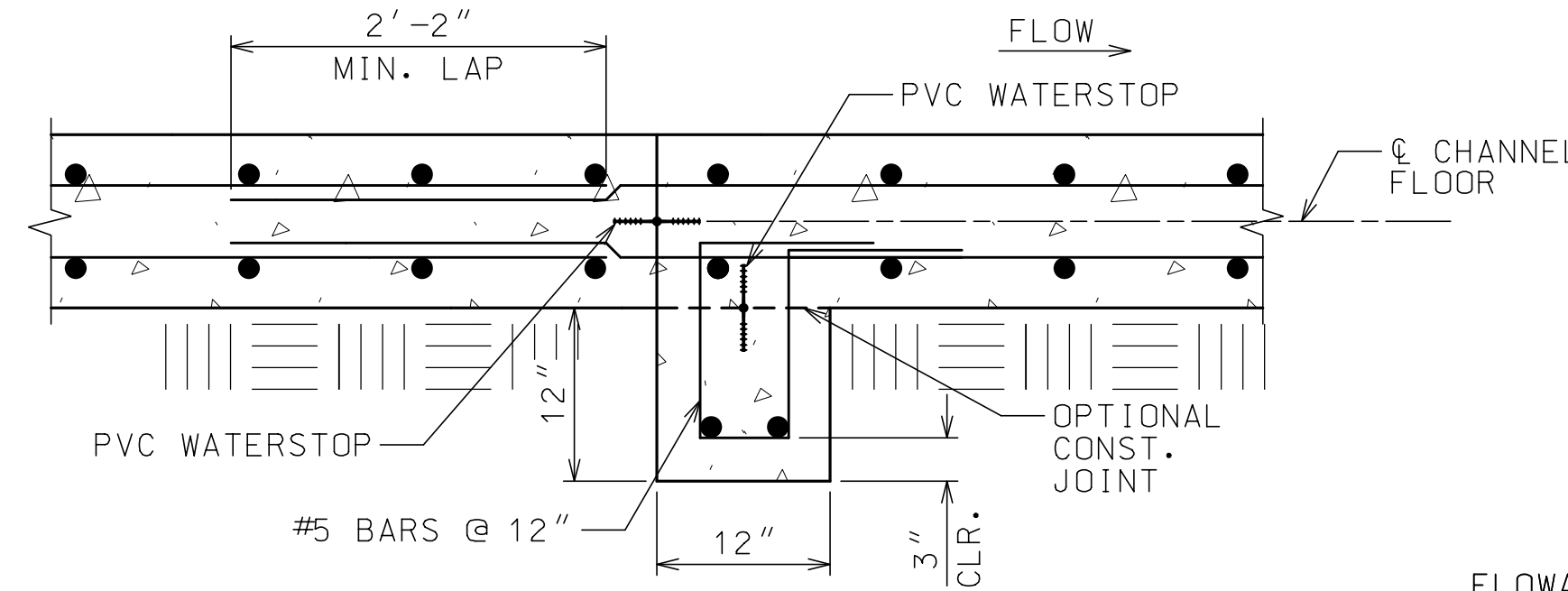
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

SPILLWAY CHANNEL TYPICAL SECTIONS AND NOTES  
 DAM SPILLWAY REHABILITATION  
 LAKE QUIVIRA, KANSAS  
 LAKE QUIVIRA, KS  
 2023

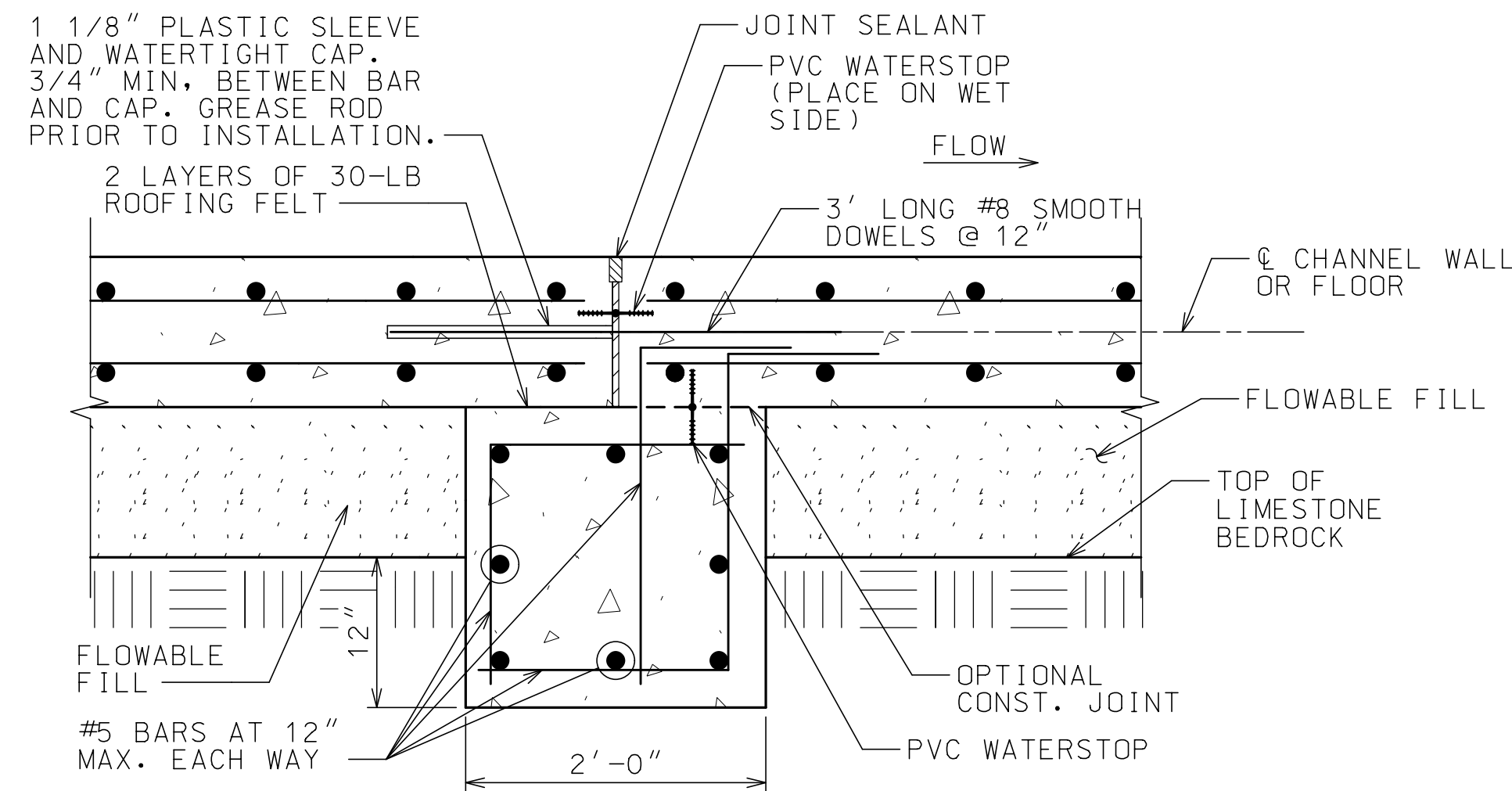
drawn by: ENO  
 checked by: LAH  
 approved by: \_\_\_\_\_  
 QA/QC by: \_\_\_\_\_  
 project no.: 021-08019  
 drawing no.: \_\_\_\_\_  
 date: 07-06-2023



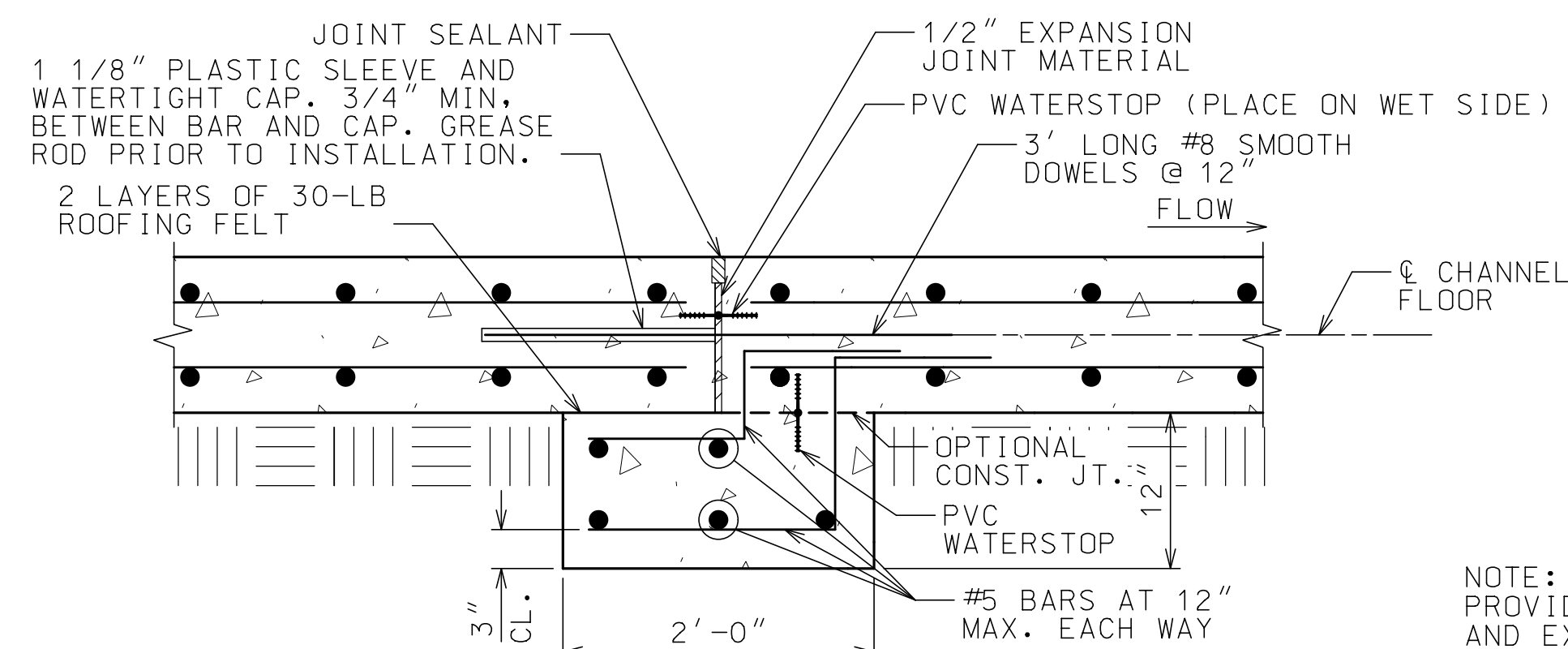
TRANSVERSE CONTROL JOINT AND SHEAR KEY  
(WHERE CHANNEL IS FOUNDED ON FLOWABLE FILL)



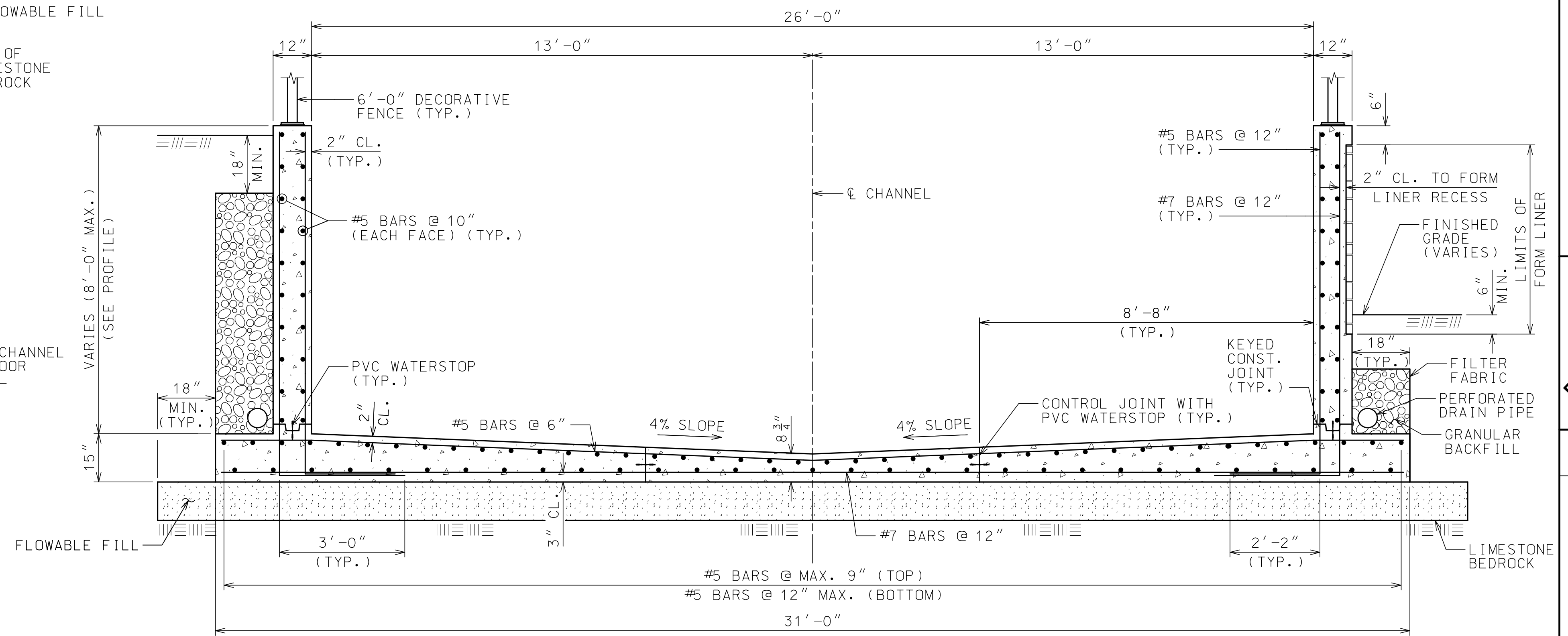
TRANSVERSE CONTROL JOINT AND SHEAR KEY  
(WHERE CHANNEL IS FOUNDED ON LIMESTONE BEDROCK)



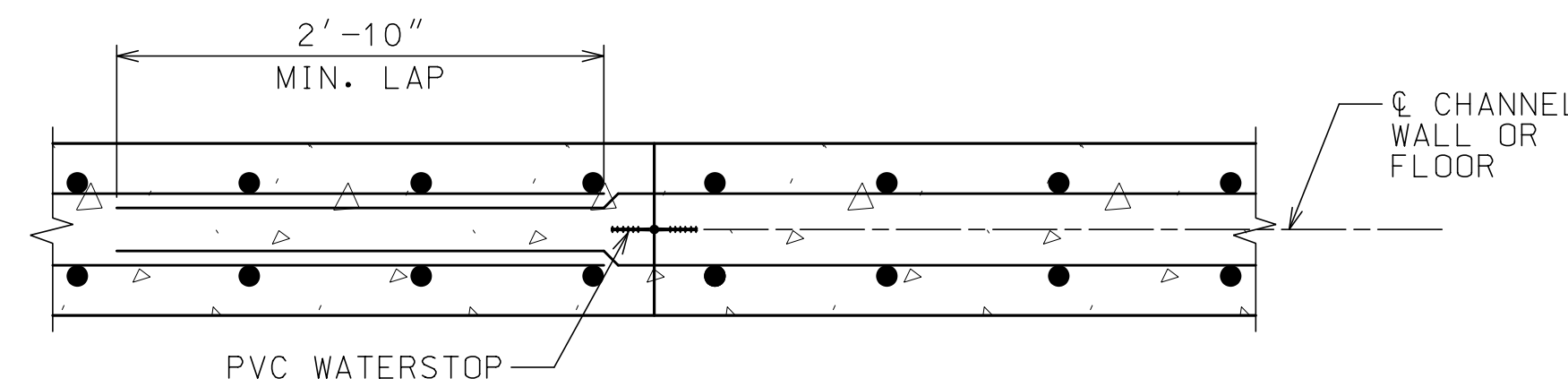
EXPANSION JOINT AND SHEAR KEY  
(WHERE CHANNEL IS FOUNDED ON FLOWABLE FILL)



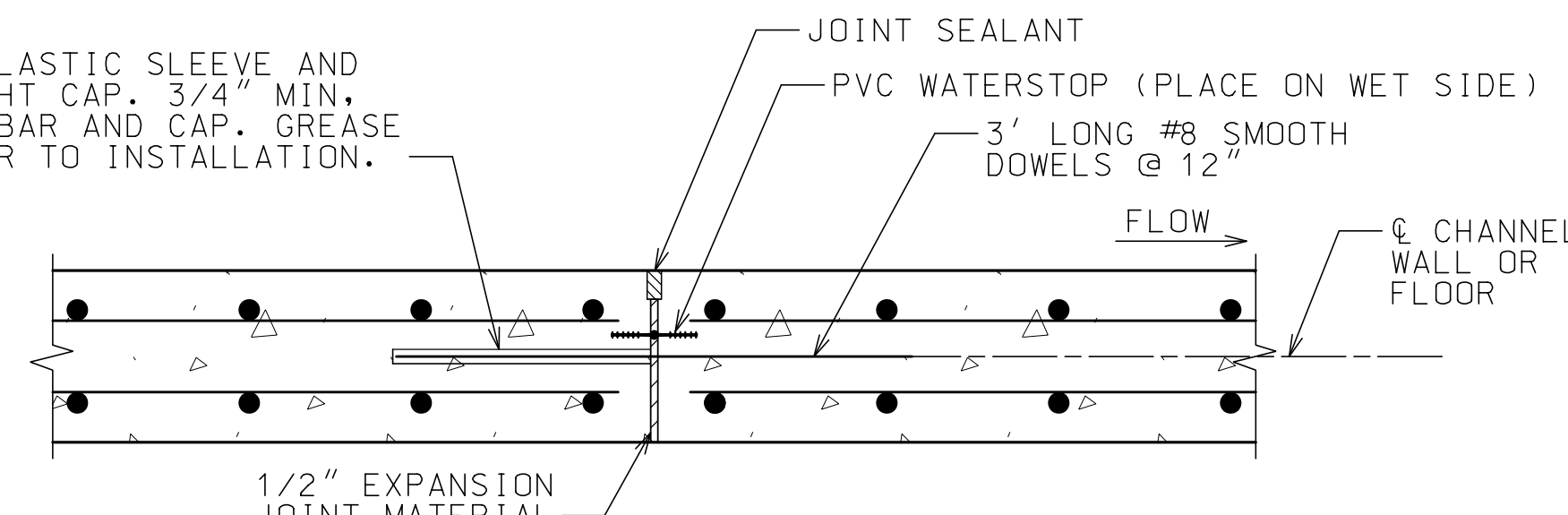
EXPANSION JOINT AND SHEAR KEY  
(WHERE CHANNEL IS FOUNDED ON LIMESTONE BEDROCK FILL)



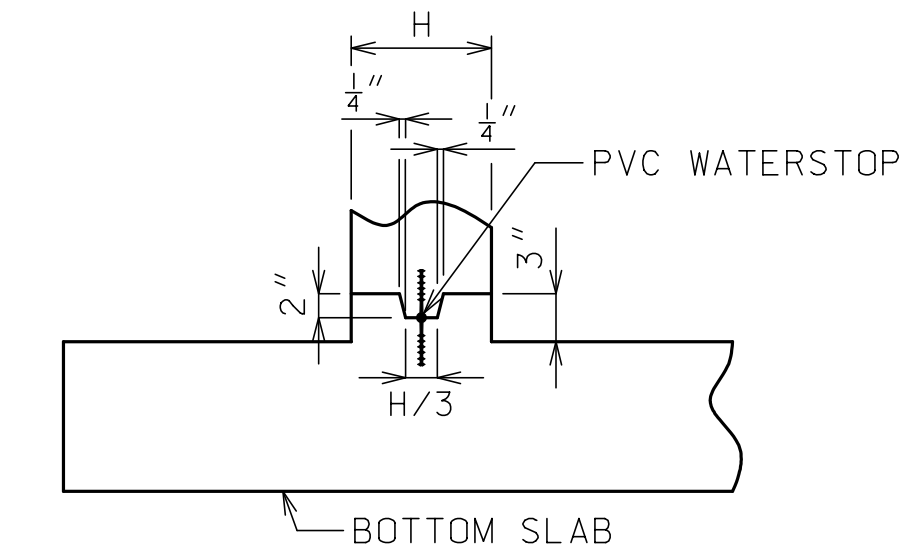
TYPICAL SECTION STATION 11+85.00 TO 14+00.00



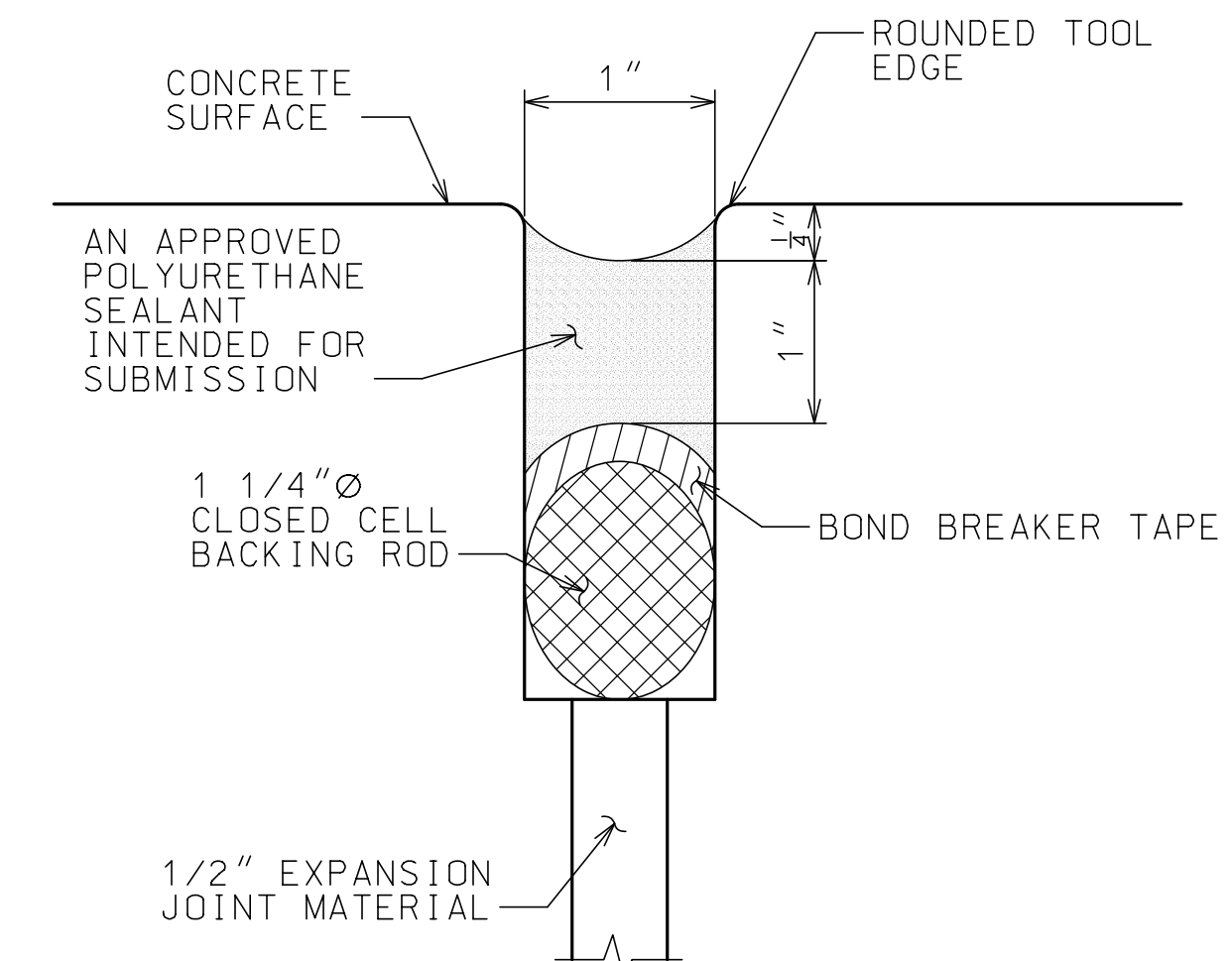
WALL CONTROL JOINT



WALL EXPANSION JOINT



KEYED CONSTRUCTION JOINT



JOINT SEALANT

NOTE:  
PROVIDE CONTROL JOINTS WITH SHEAR KEYS  
AND EXPANSION JOINTS WITH SHEAR KEYS AS  
SHOWN ON THE PLAN AND PROFILE (30' MAX.  
CONTROL JOINT SPACING, 120' MAX. EXPANSION  
JOINT SPACING).

**PRELIMINARY**  
NOT FOR CONSTRUCTION

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

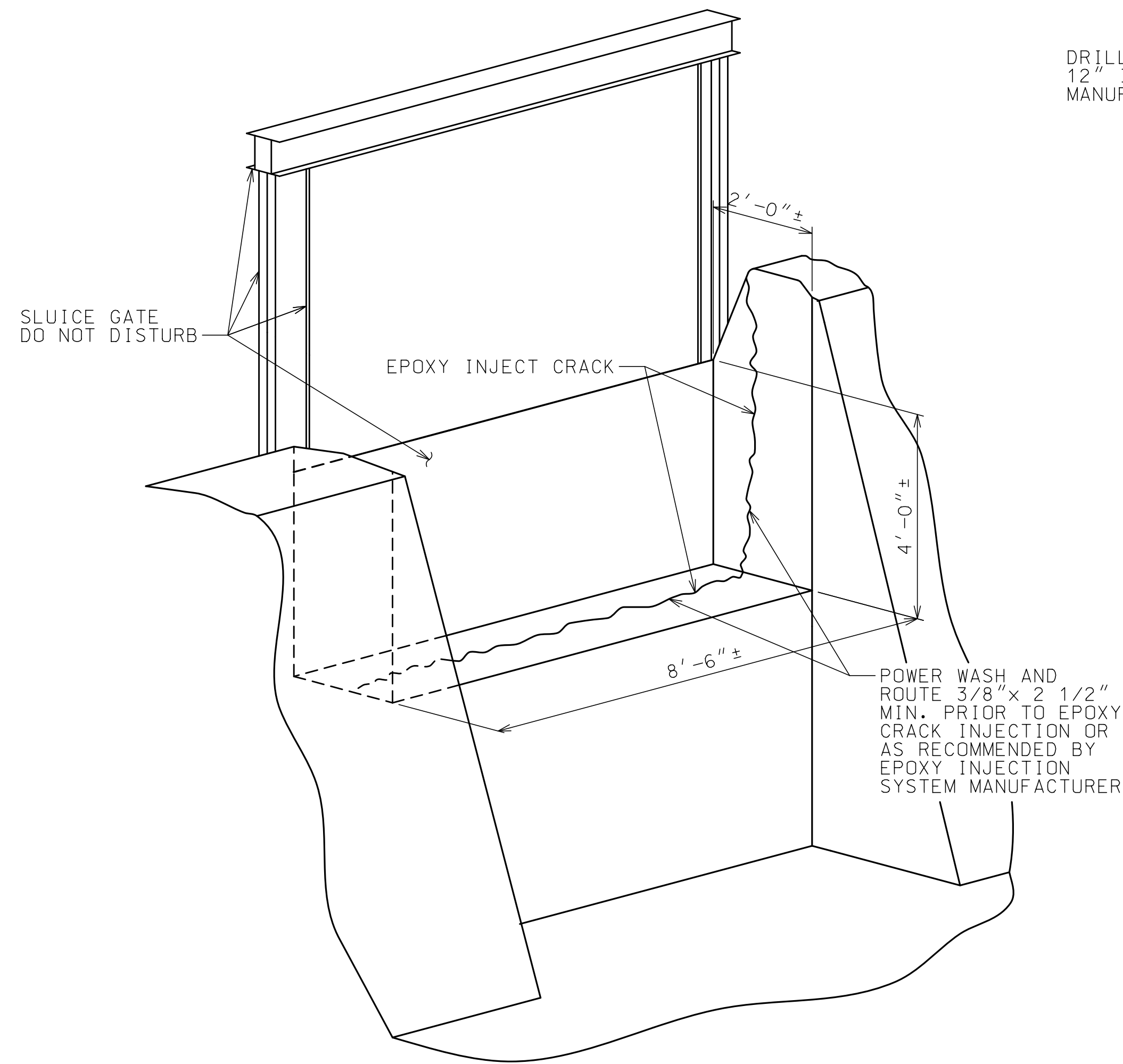
SPILLWAY CHANNEL TYPICAL SECTION AND JOINT DETAILS

DAM SPILLWAY REHABILITATION  
LAKE QUIVIRA, KANSAS

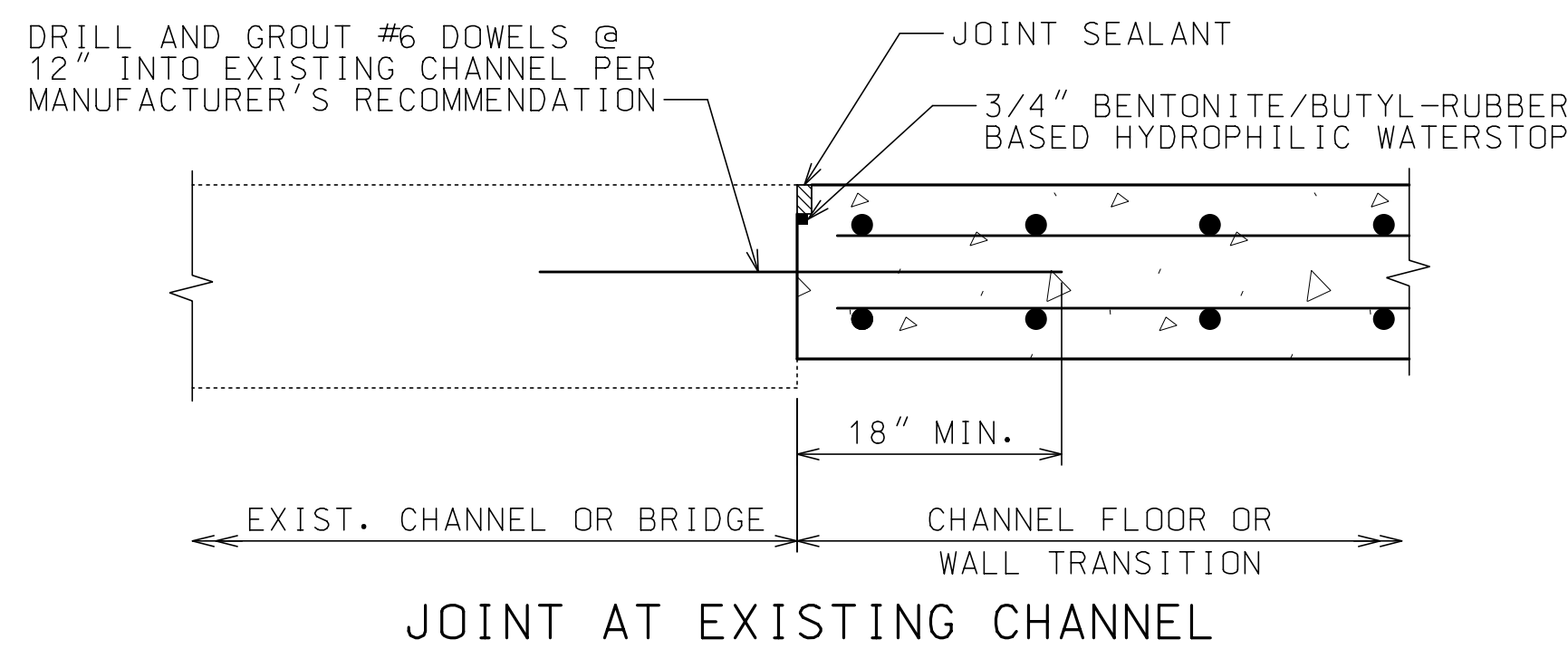
2023

LAKE QUIVIRA, KS

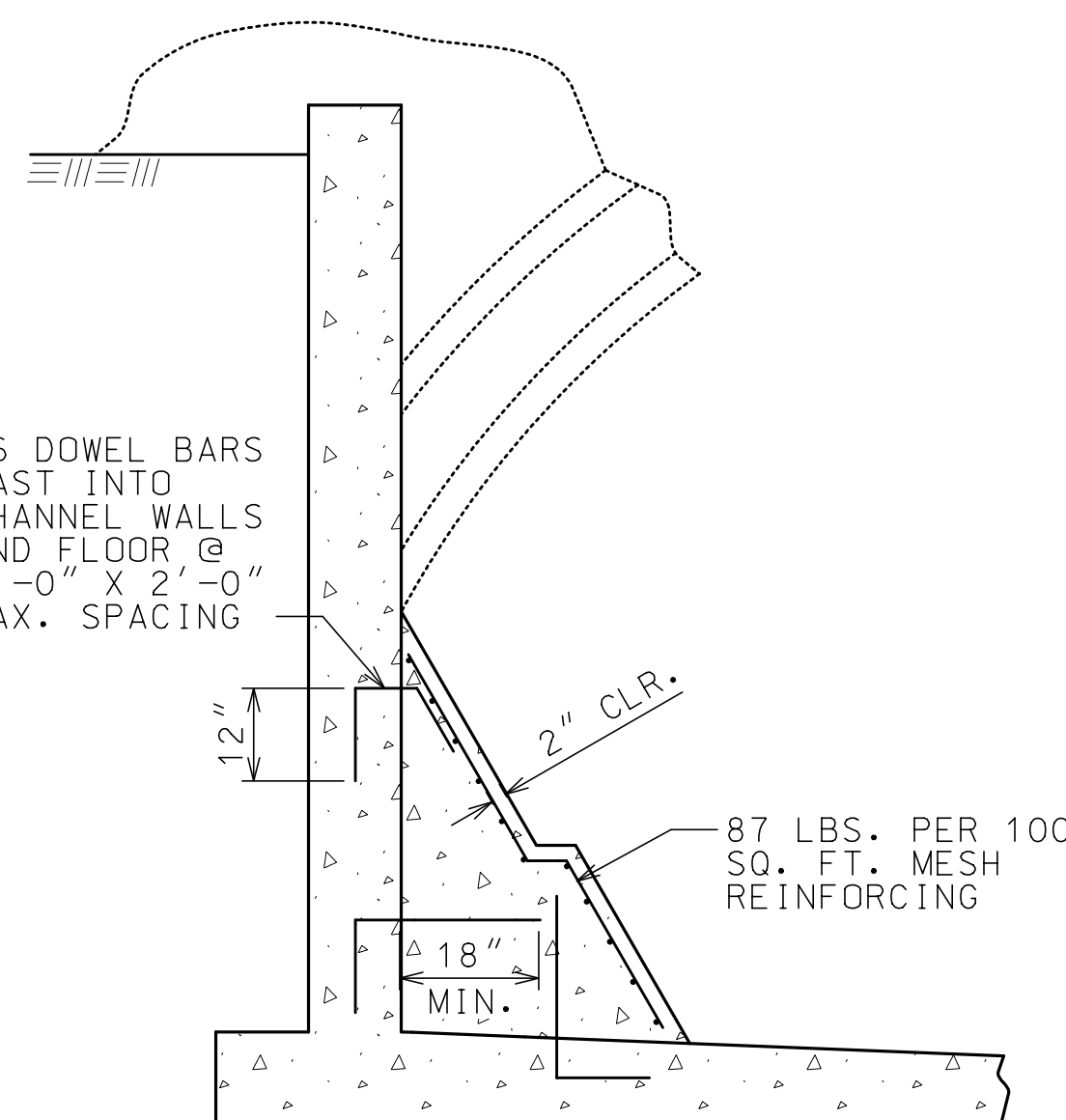
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checked by:	LAH
approved by:	
QA/QC by:	
project no.:	021-08019
drawing no.:	07-06-2023



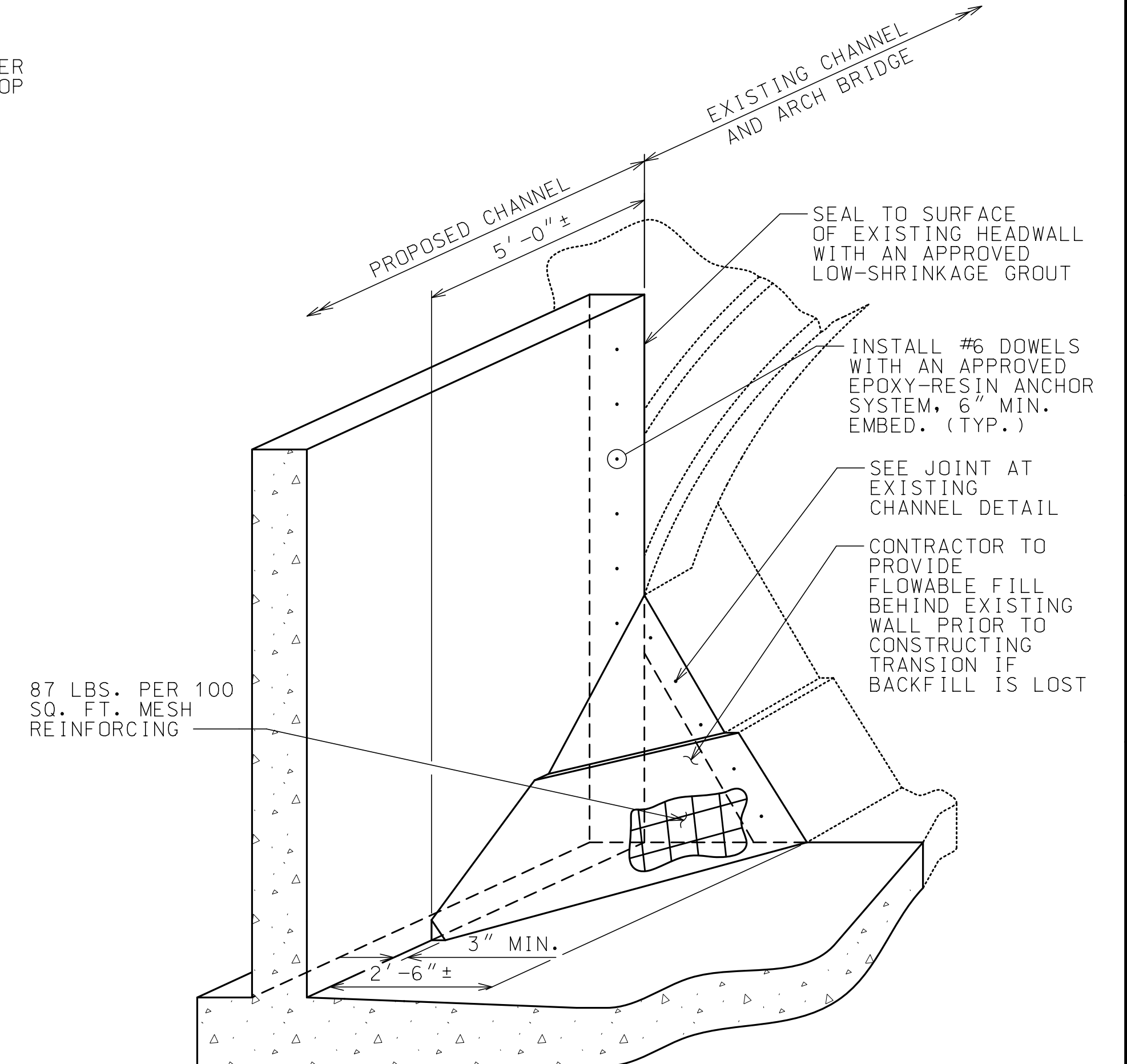
VIEW OF CRACK REPAIR AT SLUICE GATE  
(FENCE NOT SHOWN FOR CLARITY)



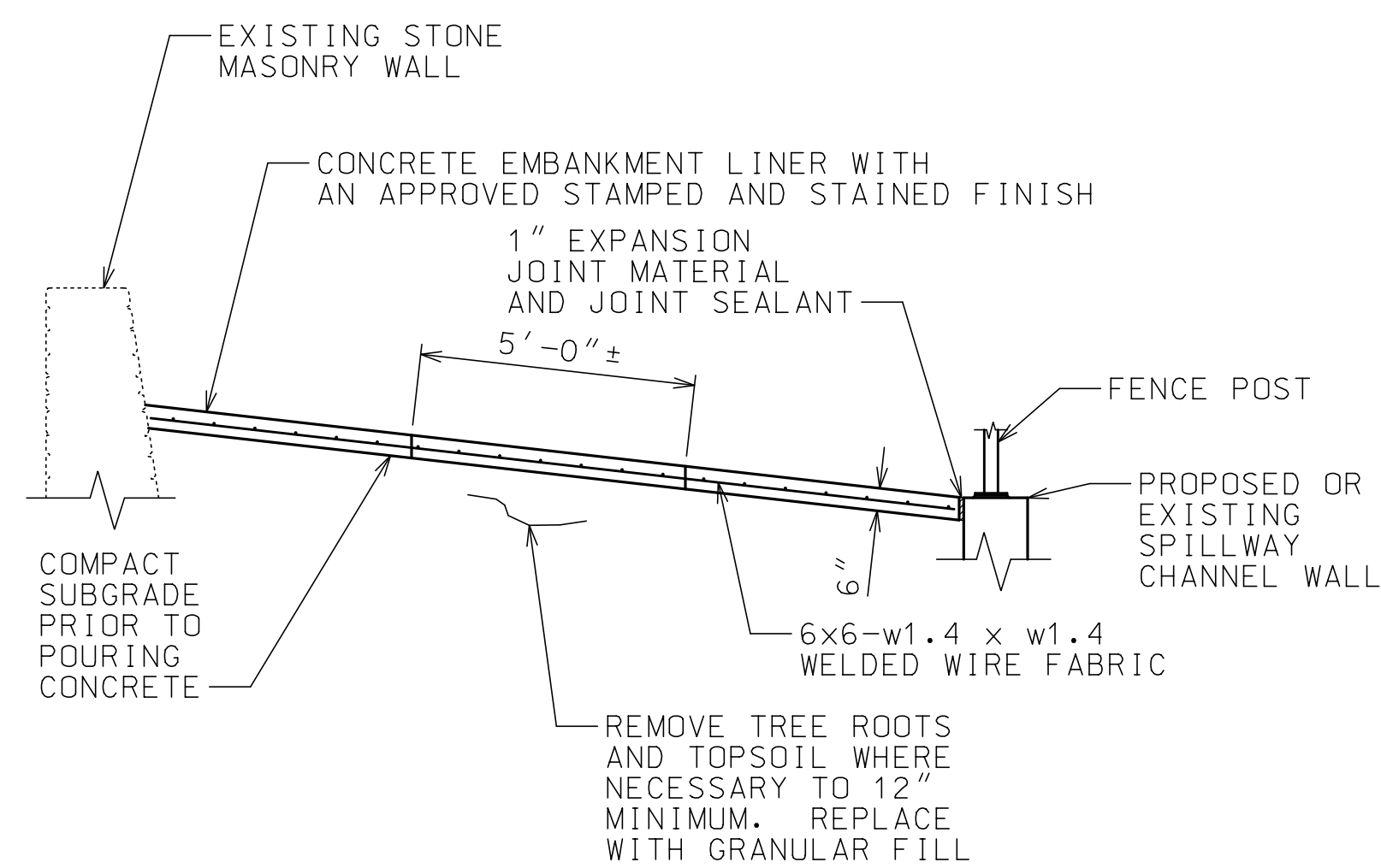
JOINT AT EXISTING CHANNEL



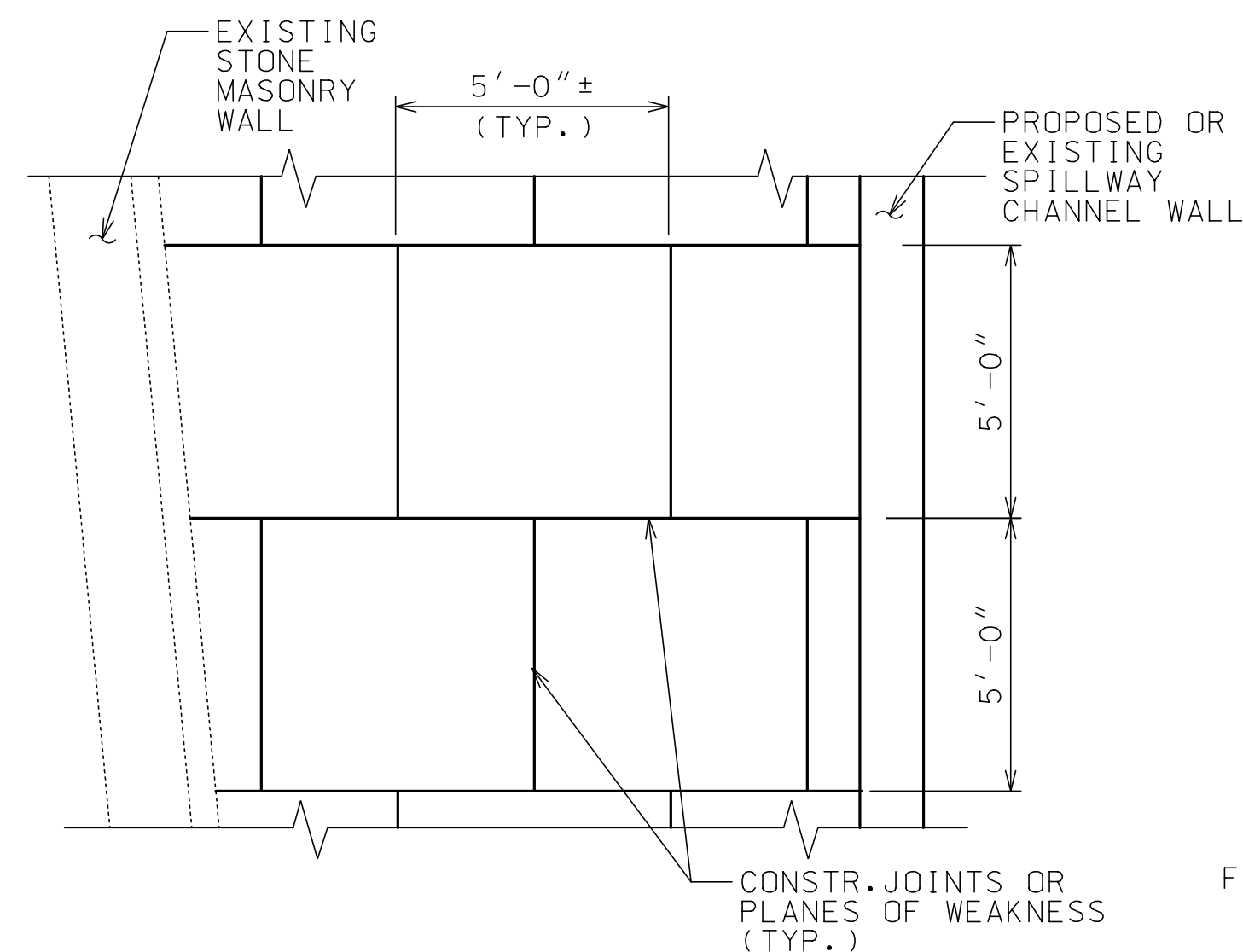
SECTION AT WALL TRANSITION  
(FENCE NOT SHOWN FOR CLARITY)



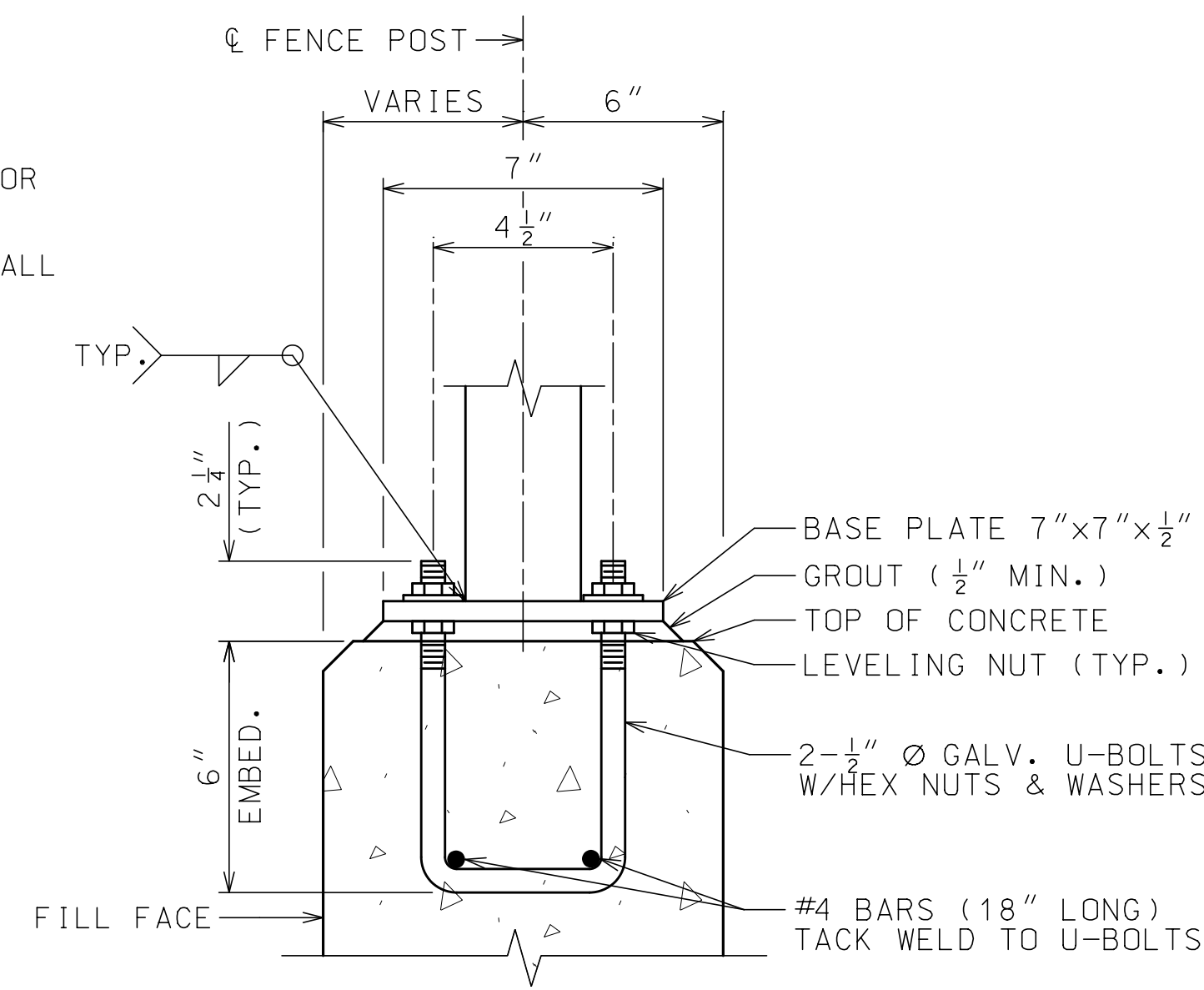
VIEW OF WALL TRANSITION  
(FENCE NOT SHOWN FOR CLARITY)  
(SOUTH WALL TRANSITION SHOWN,  
NORTH WALL TRANSITION SIMILAR)



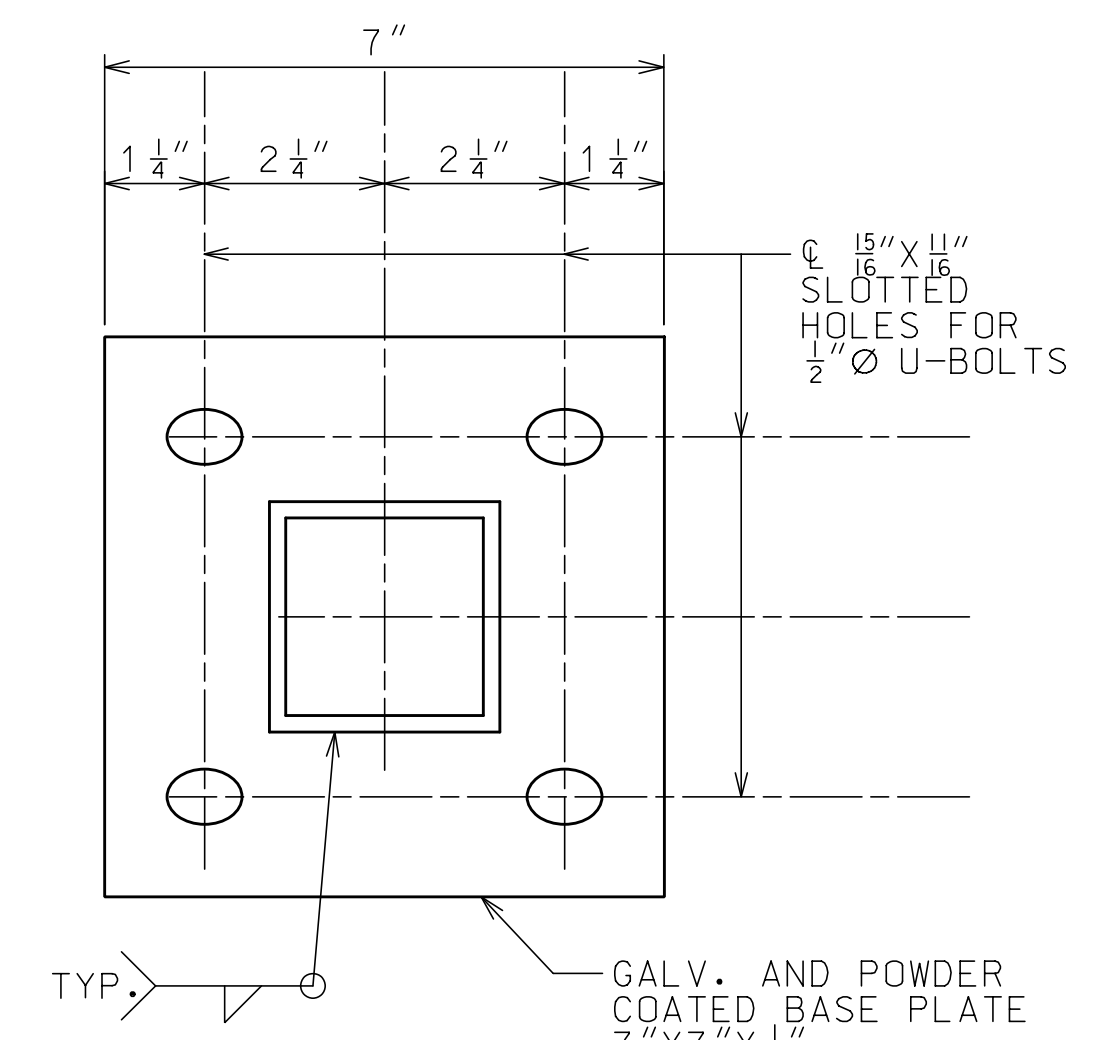
TYPICAL SECTION THROUGH CONCRETE SLOPE PROTECTION



PART PLAN OF CONCRETE SLOPE PROTECTION



FENCE POST CONNECTION



PLAN OF FENCE BASE PLATE

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