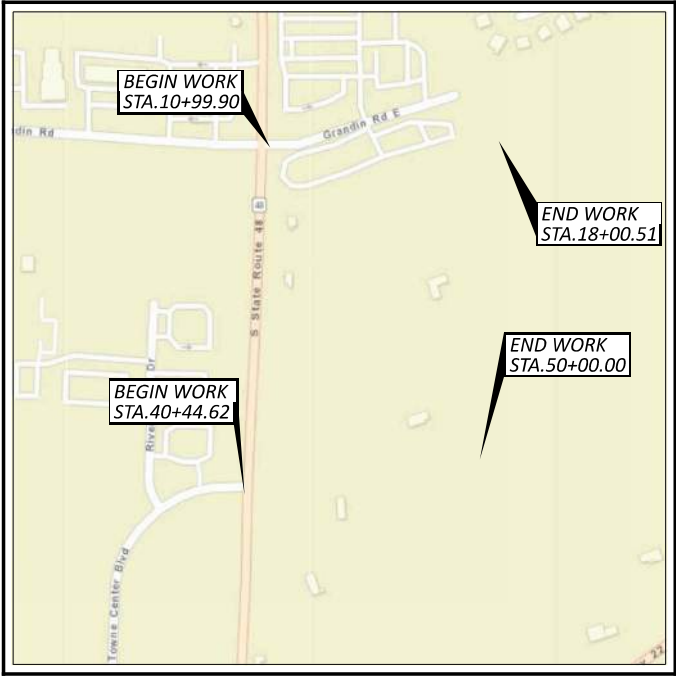


GRANDIN & TOWNE CENTER

MODEL: Sheet PAPER: 17x11 (in.) DATE: 3/14/2023 TIME: 12:43:31 PM USER: jbarbour L:\WarrenCo\OH\22004451-00_TowneCtr&GrandinRd\Ex445100\400-Engineering\Roadway\Sheets\445100_G1101.dgn



LOCATION MAP

LATITUDE: 39°20'43" LONGITUDE: -84°12'54"



PORTION TO BE IMPROVED	-----	=====
INTERSTATE HIGHWAY	-----	=====
FEDERAL ROUTES	-----	=====
STATE ROUTES	-----	=====
COUNTY & TOWNSHIP ROADS	-----	=====
OTHER ROADS	-----	=====

STATE OF OHIO

TOWNE CENTER BLVD (T-2314) & GRANDIN ROAD (T-150) EXTENTIONS EAST OF SR 48 - PART A

WARREN COUNTY HAMILTON TOWNSHIP

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3 - 4
GENERAL NOTES	5
MAINTENANCE OF TRAFFIC	6 - 8
SITE PLAN	9
PLAN AND PROFILES(GRADIN RD)	10 - 11
CROSS SECTIONS(GRADIN RD)	12 - 23
PLAN AND PROFILES(TOWNE CENTER BLVD)	24 - 26
CROSS SECTIONS(TOWNE CENTER BLVD)	27 - 56
INTERSECTION DETAILS	57 - 59
DRIVEWAY DETAILS	60 - 63
DRAINAGE DETAILS	64 - 65
TRAFFIC CONTROL	66 - 69
UTILITY PLANS	70 - 78

PROJECT DESCRIPTION

PART A WORK: PREP THE CONSTRUCTION SITE AND COMPLETE EARTHWORK FOR FUTURE IMPROVEMENTS (TO BE COMPLETED IN PART B).

PART B WORK INCLUDES:
WIDEN AND EXTEND GRANDIN ROAD FROM SR 48 EAST TO NEW DEVELOPMENT. EXTEND TOWNE CENTER BOULEVARD FROM SR 48 APPROXIMATELY 1,000 FEET. INSTALL NEW STORM SEWERS AND 16" WATER MAIN ON TOWNE CENTER BOULEVARD.

THE PROJECT WILL BE COMPLETED IN TWO PHASES. PART A WORK HAS BEEN SPECIFICALLY IDENTIFIED IN THESE PLANS USING THE FOLLOWING SYMBOL: A

PART B INCLUDES ALL OTHER WORK NOT IDENTIFIED AS PART A

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	3.68	ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25	ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.90	ACRES

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO 811. 8-1-1. or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:



ENGINEER'S SEAL:

SIGNED: _____
DATE: _____

STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-3.1	1/21/22	MT-95.31	7/19/19		800-2019	10/21/22		
BP-4.1	7/19/13	MT-97.11	1/20/17		832	7/15/22		
BP-5.1	7/15/22	MT-101.60	1/17/20					
BP-7.1	1/21/22	MT-101.90	7/17/20					
CB-3	7/16/21	TC-41.20	10/18/13					
CB-3A	7/16/21	TC-42.20	10/18/13					
		TC-52.20	1/15/21					
DM-1.1	7/17/20	TC-71.10	7/15/22					
DM-4.3	1/15/16							
DM-4.4	1/15/16							
MH-3	7/16/21							
HL-30.22	1/15/21							

APPROVED _____
DATE _____ WARREN COUNTY ENGINEER

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
84 REARICK BOULEVARD
BIRMGHAM, OHIO 45006
PH: (513) 702-2100
WWW.CMTENG.COM

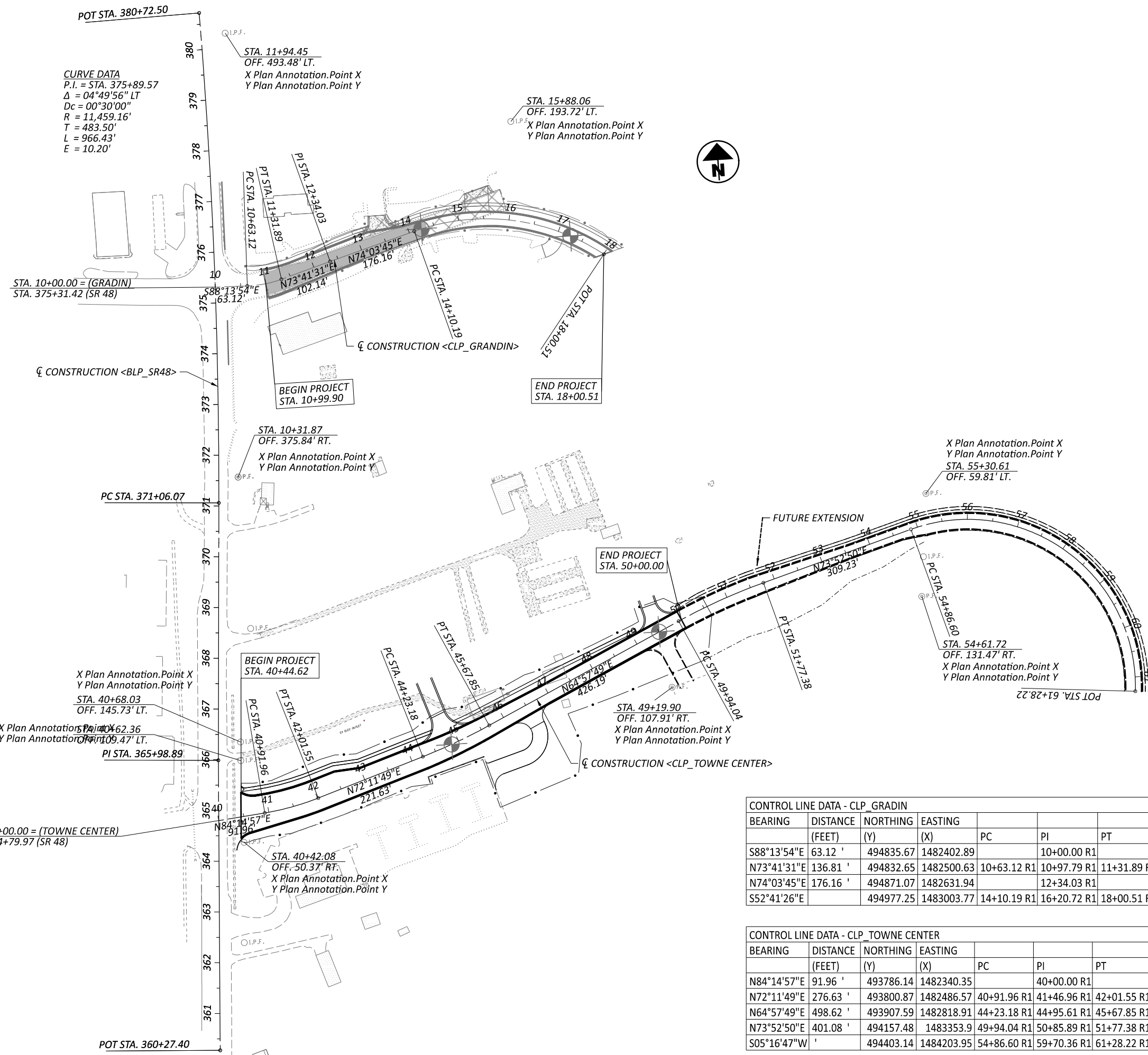
DESIGNER
AEE

REVIEWER
JWB 12/23/22

PROJECT ID
22004451.00

SHEET	TOTAL
1	78

TITLE SHEET



CURVE DATA
 P.I. = STA. 375+89.57
 $\Delta = 04^{\circ}49'56''$ LT
 $D_c = 00^{\circ}30'00''$
 $R = 11,459.16'$
 $T = 483.50'$
 $L = 966.43'$
 $E = 10.20'$

CONTROL LINE DATA - CLP_GRADIN

BEARING	DISTANCE (FEET)	NORTHING (Y)	EASTING (X)	PC	PI	PT	DELTA	R	L	T
S88°13'54"E	63.12	494835.67	1482402.89		10+00.00 R1					
N73°41'31"E	136.81	494832.65	1482500.63	10+63.12 R1	10+97.79 R1	11+31.89 R1	18°04'35.09"	-218.00	68.78	34.68
N74°03'45"E	176.16	494871.07	1482631.94		12+34.03 R1					
S52°41'26"E		494977.25	1483003.77	14+10.19 R1	16+20.72 R1	18+00.51 R1	53°14'48.40"	420.00	390.32	210.53

CONTROL LINE DATA - CLP_TOWNE CENTER

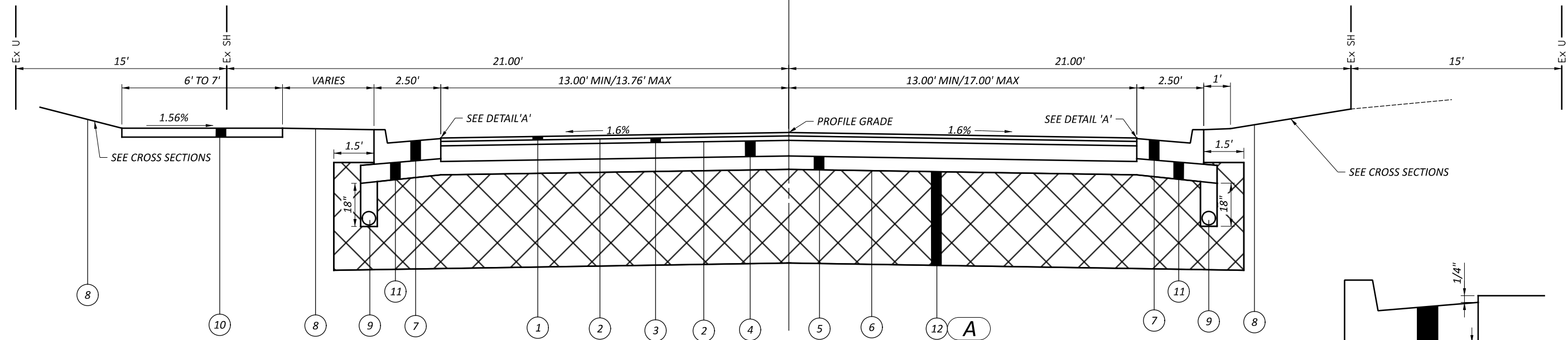
BEARING	DISTANCE (FEET)	NORTHING (Y)	EASTING (X)	PC	PI	PT	DELTA	R	L	T
N84°14'57"E	91.96	493786.14	1482340.35		40+00.00 R1					
N72°11'49"E	276.63	493800.87	1482486.57	40+91.96 R1	41+46.96 R1	42+01.55 R1	12°03'08.34"	-521.00	109.59	55.00
N64°57'49"E	498.62	493907.59	1482818.91	44+23.18 R1	44+95.61 R1	45+67.85 R1	07°13'59.47"	-1146.00	144.67	72.43
N73°52'50"E	401.08	494157.48	1483353.9	49+94.04 R1	50+85.89 R1	51+77.38 R1	08°55'01.23"	1178.00	183.33	91.85
S05°16'47"W		494403.14	1484203.95	54+86.60 R1	59+70.36 R1	61+28.22 R1	111°23'56.69"	330.00	641.61	483.75



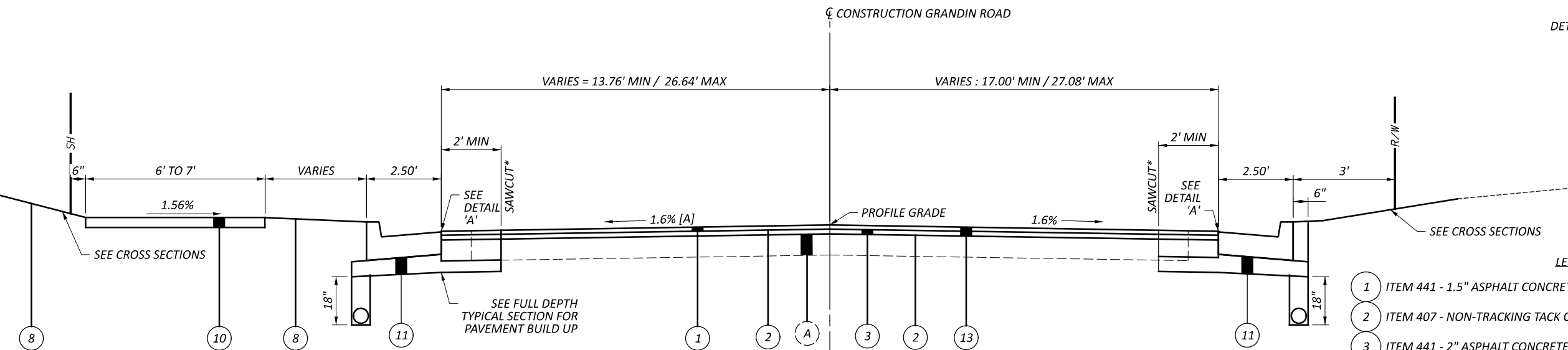
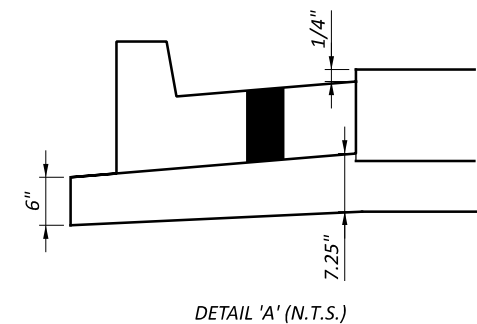
SCHMATIC PLAN
 GRANDIN ROAD AND TOWNE CENTER BLVD

DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING, INC.
 84 REARICKS BOULEVARD
 BIRMINGHAM, AL 35202-2530
 www.cmteng.com

DESIGNER
 LDW
 REVIEWER
 JWB 12/23/22
 PROJECT ID
 22004451.00
 SHEET TOTAL
 2 78



GRANDIN ROAD TYPICAL SECTION - FULL DEPTH
 STA 14+35.00 TO STA 18+00.00
 (PART A WORK BEGINS AT STA 16+00.00)



GRANDIN ROAD TYPICAL SECTION - WIDENING
 STA 11+00.00 TO STA 14+35.00

LEGEND

- 1 ITEM 441 - 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, (448)
- 2 ITEM 407 - NON-TRACKING TACK COAT
- 3 ITEM 441 - 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
- 4 ITEM 302 - 7" ASPHALT CONCRETE BASE, PG64-22 [PLACED IN TWO EQUAL LIFTS]
- 5 ITEM 304 - 6" AGGREGATE BASE
- 6 ITEM 204 - SUBGRADE COMPACTION
- 7 ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
- 8 ITEM 659 - 4" TOPSOIL, SEEDING AND MULCHING
- 9 ITEM 605 - 4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
- 10 ITEM 608 - 4" CONCRETE WALK
- 11 ITEM 304 - VARIABLE DEPTH AGGREGATE BASE (6" TO 7.25")
- A 12 ITEM 204 - EXCAVATION OF SUBGRADE (3.5**), ITEM 204 - EMBANKMENT
- 13 ITEM 254 - PAVEMENT PLANNING (VARIABLE DEPTH)
- A Existing Asphalt Pavement (8.5"±)

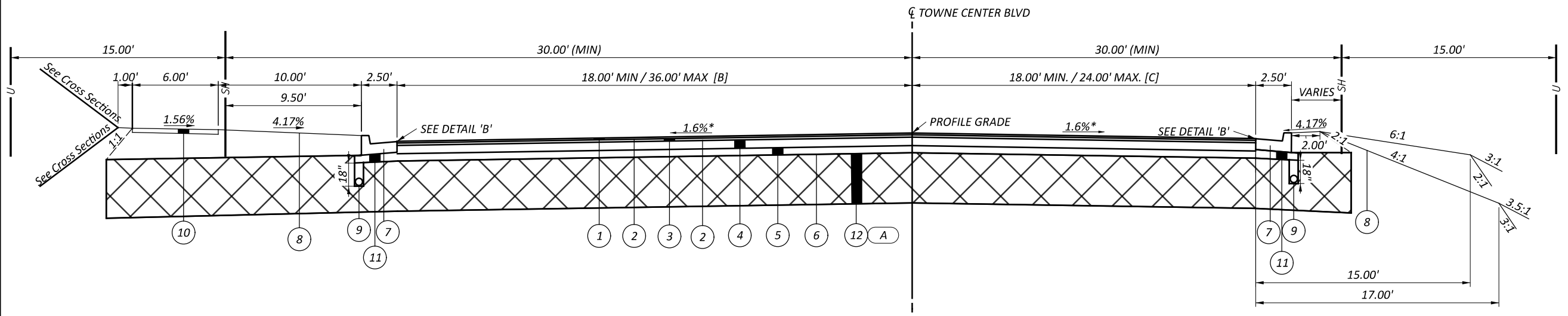
NOTE: DO NOT INSTALL UNDERDRAINS FROM STA 11+00 TO STA 12+55 RT TO AVOID CONFLICT WITH EXISTING GAS MAIN

TABLE [A]			
BEGIN STA	CROSS SLOPE	END STA	CROSS SLOPE
13+52.00	1.6%	13+92.00	2.0%
13+92.00	2.0%	14+25.00	1.6%

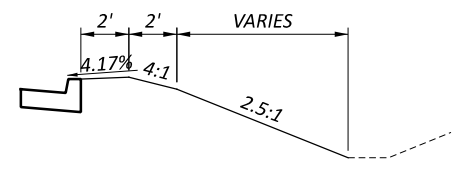
*LOCATE SAWCUT THE GREATER OF 1' INSIDE EXISTING EDGE OF PAVEMENT OR 2' INSIDE OF THE PROPOSED EDGE OF PAVEMENT

**EXCAVATION OF SUBGRADE ESTIMATED TO BE REQUIRED 3.5' MEASURED FROM TOP OF EXISTING GRADE. SEE GENERAL NOTES AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION

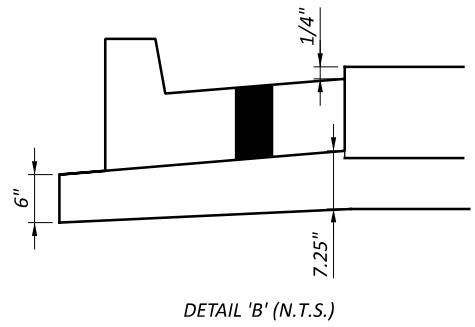
A



TOWNE CENTER BOULEVARD TYPICAL SECTION - FULL DEPTH
 STA 40+44.57 TO STA 50+00.00



ALTERNATE GRADING AT EXISTING CATCH BASINS, APPLIES:
 STA 41+35 TO STA 41+50 LT
 STA 42+45 TO STA 42+65 LT



SUPERELEVATION TABLE												
TOWNE CENTER BOULEVARD												
EDGE ELEVATION	LEFT SIDE				CENTERLINE CONTROL		RIGHT SIDE				REMARKS	
	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE		EDGE ELEVATION
795.220		2.452	5.22%	46.97	40+52.14	792.768	34.03	5.22%	1.776		790.992	MATCH EX
794.382		1.729	4.77%	36.28	40+75.00	792.653	30.93	4.77%	1.474		791.179	
794.142		1.595	4.43%	36.00	40+91.96	792.547	28.56	4.43%	1.265		791.282	PC
794.015		1.537	4.27%	36.00	41+00.00	792.478	27.54	4.27%	1.176		791.302	
793.561		1.358	3.77%	36.00	41+25.00	792.203	25.18	3.77%	0.950		791.253	
793.086		1.180	3.28%	36.00	41+50.00	791.906	24.09	3.28%	0.789		791.117	
792.667		1.001	2.78%	36.00	41+75.00	791.666	24.00	2.78%	0.667		790.999	
792.303	208:1	0.822	2.28%	36.00	42+00.00	791.481	24.00	2.28%	0.548		790.933	
792.281		0.811	2.25%	36.00	42+01.55	791.47	24.00	2.25%	0.541		790.929	PT
791.996		0.643	1.79%	36.00	42+25.00	791.353	24.00	1.79%	0.429		790.924	
791.895		0.576	1.60%	36.00	42+34.43	791.319	24.00	1.60%	0.384		790.935	RC
791.746		0.465	1.29%	36.00	42+50.00	791.281	24.00					
791.594		0.329	0.99%	33.15	42+65.00	791.265	24.00					
791.504		0.238	0.79%	30.00	42+75.00	791.266	24.00					
791.377		0.071	0.30%	24.00	43+00.00	791.306	24.00					
791.358		0.000	0.00%	24.00	43+15.00	791.358	24.00					1/2 LEVEL
791.344		-0.059	-0.25%	24.00	43+25.00	791.403	24.00					
791.321	226:1	-0.207	-0.86%	24.00	43+50.00	791.528	24.00					
791.299		-0.354	-1.48%	24.00	43+75.00	791.653	24.00					
791.294		-0.384	-1.60%	24.00	43+80.00	791.678	24.00					NC

BEGIN STA	WIDTH	END STA	WIDTH
40+44.57	SEE INT. DETAIL	40+79.79	36'
40+79.79	36'	42+50.00	36'
42+50.00	36'	43+00.00	24'
43+00.00	24'	44+23.00	24'
44+23.00	24'	46+93.00	18'
46+93.00	18'	50+00.00	18'

BEGIN STA	WIDTH	END STA	WIDTH
40+44.57	SEE INT. DETAIL	40+57.12	32.99'
40+57.12	32.99'	41+58.74	24'
41+58.74	24'	44+23.00	24'
44+23.00	24'	46+93.00	18'
46+93.00	18'	50+00.00	18'

- LEGEND
- 1 ITEM 441 - 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, (448)
 - 2 ITEM 407 - NON-TRACKING TACK COAT
 - 3 ITEM 441 - 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
 - 4 ITEM 302 - 7" ASPHALT CONCRETE BASE, PG64-22 [PLACED IN TWO EQUAL LIFTS]
 - 5 ITEM 304 - 6" AGGREGATE BASE
 - 6 ITEM 204 - SUBGRADE COMPACTION
 - 7 ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
 - 8 ITEM 659 - 4" TOPSOIL, SEEDING AND MULCHING
 - 9 ITEM 605 - 4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
 - 10 ITEM 608 - 4" CONCRETE WALK
 - 11 ITEM 304 - VARIABLE DEPTH AGGREGATE BASE (6" TO 7.25")
 - A 12 ITEM 204 - EXCAVATION OF SUBGRADE (3.5'**), ITEM 204 - EMBANKMENT

* SEE SUPERELEVATION TABLE FOR CROSS SLOPE TRANSITIONS

**EXCAVATION OF SUBGRADE ESTIMATED TO BE REQUIRED 3.5' MEASURED FROM TOP OF EXISTING GRADE. SEE GENERAL NOTES AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION

A

ALL NOTES THIS SHEET PERTAIN TO PART A

SEE SPECIAL PROVISIONS / TECHNICAL SPECIFICATIONS IN THE CONTRACT DOCUMENT FOR ADDITIONAL NOTES AND REQUIREMENTS.

TESTING OF CONSTRUCTION MATERIALS

THE ENGINEER MAY SELECT A TESTING FIRM FOR THIS PROJECT. THE ENGINEER WILL NOTIFY THE CONTRACTOR OF THE SELECTED FIRM DURING THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SCHEDULING OF ALL TESTING AS PER THE GENERAL TESTING REQUIREMENTS LISTED BELOW OR AS MODIFIED BY THE ENGINEER. THE ENGINEER SHALL BE RESPONSIBLE FOR THE COSTS INCURRED IN THE TESTING OF THE CONSTRUCTION MATERIALS BOTH ON SITE AND AT THE PLANT UNLESS NOTED OTHERWISE IN THE CONSTRUCTION PLANS. HOWEVER, THE CONTRACTOR SHALL NOTE THAT THEY WILL BE RESPONSIBLE FOR ANY AND ALL COSTS INCURRED BY THE SCHEDULING AND/OR RESCHEDULING OF THE TESTING FIRM'S ACTIVITIES BY THE CONTRACTOR AND THE SUBSEQUENT DELAY AND/OR CANCELLATION OF SAID ACTIVITIES DUE TO THE DELAY AND/OR CANCELLATION OF THE SCHEDULED CONSTRUCTION BY THE CONTRACTOR.

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE BID FOR ITEM 201, CLEARING AND GRUBBING.

THIS WORK SHALL CONSIST OF CLEARING, GRUBBING, SCALPING, REMOVAL OF TREES AND STUMPS, AND REMOVING AND DISPOSING OF ALL VEGETATION AND DEBRIS WITHIN THE LIMITS OF CONSTRUCTION, EXCEPT SUCH OBJECTS AS ARE TO REMAIN OR ARE TO BE REMOVED IN ACCORDANCE WITH OTHER SECTIONS OF THESE SPECIFICATIONS. THE CONTRACTOR SHALL KEEP CLEARING TO A MINIMUM REMOVING ONLY WHAT IS NECESSARY TO COMPLETE CONSTRUCTION.

NOTE THAT THIS ITEM SHALL INCLUDE CLEARING AND GRUBBING REQUIRED FOR ALL OF THE ROADWAY AND THE WATER MAIN WORK.

PROPERTY OWNERS SHALL BE ALLOWED TO SALVAGE THE WOOD FROM TREES BEING REMOVED FROM THEIR PROPERTY. TREES DESIGNATED AS BEING SALVAGED FOR WOOD, AS IDENTIFIED BY THE ENGINEER, SHALL BE CUT ABOVE THE BASE AND PLACED OUTSIDE OF THE RIGHT-OF-WAY.

PAYMENT FOR THE WORK LISTED ABOVE AND ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM BID PRICE LINE ITEM FOR ITEM 201 CLEARING AND GRUBBING, AS PER PLAN.

ITEM 203 - EMBANKMENT, SACRIFICIAL LAYER

CONSTRUCT AN ADDITIONAL 12" (+/-) OF EMBANKMENT ON TOP OF THE PROPOSED SUBGRADE ELEVATION TO PROTECT THE ROADWAY SUBGRADE OVER THE WINTER. GRADE THE TOP OF THE SACRIFICIAL LAYER TO PROVIDE POSITIVE DRAINAGE. THE SACRIFICIAL LAYER WILL BE REMOVED WITH THE PART B PROJECT.

THE FOLLOWING QUANTITY IS INCLUDED IN THE BID:
ITEM 203 EMBANKMENT, SACRIFICIAL LAYER, 2450 CU YD.

THIS QUANTITY ASSUMES 12" OF MATERIAL PLACED ABOVE THE PROPOSED SUBGRADE ELEVATION FOR THE ENTIRE PAVEMENT WIDTH, INCLUDING CURB AND GUTTER.

BORROW SOILS

IT IS ANTICIPATED THAT SOILS FROM THE ADJACENT DEVELOPMENT SITE CAN BE IMPORTED FOR FILLS NEEDED ON THE ROADWAY SITE. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO DETERMINE THE SUITABILITY OF SOILS IMPORTED FROM THE ADJACENT SITE FOR USE IN ROADWAY CONSTRUCTION. THE REQUIREMENTS OF ITEM 204 SHALL APPLY TO ALL MATERIALS USED FOR ROADWAY EMBANKMENTS.

ITEM 204 - EXCAVATION OF SUBGRADE, AS DIRECTED BY ENGINEER

WHERE AREAS OF UNSUITABLE AND/OR UNSTABLE SUBGRADE MATERIAL ARE FOUND, THE UNSUITABLE / UNSTABLE MATERIAL SHALL BE REMOVED AND REPLACED AS PER ODOT CMS SPECIFICATIONS FOR ITEMS 203 AND 204. THE REMOVAL OF THE MATERIAL WILL BE TO THE LIMITS DETERMINED IN THE FIELD BY THE ENGINEER, AND THE LIMITS OF THE REMOVAL WILL BE MEASURED BY THE ENGINEER IN ORDER TO DETERMINE QUANTITIES FOR PAYMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING HIS OPERATIONS WITH THE ENGINEER SO THAT THE PROPER MEASUREMENTS MAY BE OBTAINED FOR THESE CALCULATIONS. BASED UPON THE GEOTECHNICAL INVESTIGATION IT IS ANTICIPATED THAT APPROXIMATELY THREE AND ONE-HALF (3.5) FEET OF SUBGRADE MATERIAL MAY NEED REMOVED AND REPLACED WITH ENGINEERED FILL IN ACCORDANCE WITH ITEM 204 EMBANKMENT. FOR ITEM 204 EXCAVATION OF SUBGRADE, AS DIRECTED BY ENGINEER, AN ESTIMATED QUANTITY OF 10,689 C.Y. IS PROVIDED FOR USE IN UNDERCUTTING UNSUITABLE SOIL AREAS AS DETERMINED BY THE COUNTY ENGINEER. THIS QUANTITY IS ESTIMATED BY ASSUMING 3.5 FEET OF SUBGRADE EXCAVATION ALONG THE ENTIRE LENGTH OF THE PROJECT AT THE WIDTH SHOWN ON THE TYPICAL SECTIONS AND CROSS SECTIONS. THE 10,689 C.Y. OF FILL REQUIRED TO REPLACE THE EXCAVATED MATERIAL IS INCLUDED IN THE QUANTITIES FOR ITEM 204 EMBANKMENT, AS DIRECTED BY ENGINEER.

THE CONTRACTOR MAY REWORK THE EXCAVATED MATERIAL IN ACCORDANCE WITH ITEM 204 FOR REUSE AS FILL. REMOVAL AND PROPER DISPOSAL OF UNSUITABLE MATERIALS NOT REUSED ON SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE BORROW MATERIALS USED FOR REPLACING THE UNSUITABLE SUBGRADE MATERIALS AND FOR BUILDING EMBANKMENTS SHALL CONSIST OF SOILS AS DESCRIBED IN ITEM 204 SPECIFICATIONS AND SHALL BE OF SUCH UNIT WEIGHT AS TO BE SATISFACTORY FOR SUBGRADE CONSTRUCTION AS REQUIRED BY THE SPECIFICATIONS. IT IS ANTICIPATED THAT THE CONTRACTOR WILL USE THE MATERIAL EXCAVATED FROM THE ADJACENT KROGER SITE DEVELOPMENT PROJECT AREA FOR THE BORROW MATERIAL.

GRANULAR MATERIALS SHALL NOT BE USED UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER. THE UNDERCUT AREAS BENEATH NEW PAVEMENT MUST BE SHAPED AND COMPACTED USING A HEAVY DUTY, TAMPING-TYPE COMPACTOR. COMPACTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS FOR SOIL EMBANKMENT IN SECTION 204.

THE CONTRACTOR SHALL SCHEDULE AND CONDUCT ALL OF HIS OPERATIONS FROM REMOVAL OF THE EXISTING PAVEMENT THROUGH THE COMPACTION OF SUBGRADE SO AS TO PROTECT AND MAINTAIN AT ALL TIMES THE CONDITION OF THE EXPOSED SUBGRADE MATERIAL. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS SO AS TO PROVIDE PROPER DRAINAGE AND PREVENT STANDING WATER ON THE SUBGRADE. ANY UNSUITABLE SUBGRADE CONDITIONS THAT ARE CAUSED BY EITHER THE ACTION AND/OR INACTION OF THE CONTRACTOR SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. PAYMENT WILL BE MADE AT THE UNIT PRICE BID PER C.Y. OF ITEM 204 EXCAVATION OF SUBGRADE, AS DIRECTED BY ENGINEER.

ITEM 204, GRANULAR MATERIAL, TYPE E, NO. 2 STONE, AS DIRECTED BY ENGINEER

FOR USE WHEN DIRECTED BY THE ENGINEER TO BACKFILL UNDERCUT AREAS IN LIEU OF THE BORROW SOIL EMBANKMENT MATERIAL SPECIFIED IN ITEM 204 EXCAVATION OF SUBGRADE, AS DIRECTED BY ENGINEER. THIS ITEM MAY ALSO BE MIXED WITH EMBANKMENT MATERIAL, AS DIRECTED BY ENGINEER, TO CREATE AN ENGINEERED FILL.

THE LIMITS OF THE GRANULAR MATERIAL FILL WILL BE MEASURED BY THE ENGINEER IN ORDER TO DETERMINE QUANTITIES FOR PAYMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING HIS OPERATIONS WITH THE ENGINEER SO THAT THE PROPER MEASUREMENTS MAY BE OBTAINED FOR THE CALCULATIONS. THE CONTRACTOR SHALL PROVIDE MATERIAL TICKETS FOR ADDITIONAL DOCUMENTATION.

THIS ITEM CONSIDERS THE ADDED COST OF UTILIZING 204 GRANULAR MATERIAL TO BE FURNISHED AND PLACED IN ACCORDANCE WITH ODOT CMS ITEM 204 IN LIEU OF BORROW SOIL MATERIAL AS DESCRIBED IN ITEM 204 EXCAVATION OF SUBGRADE, AS DIRECTED BY ENGINEER. WHEN THE CONTRACTOR IS DIRECTED BY THE ENGINEER TO USE GRANULAR MATERIAL IN LIEU OF THE BORROW SOIL MATERIAL, THE FULL UNIT PRICE FOR ITEM 204 EXCAVATION OF SUBGRADE, AS DIRECTED BY ENGINEER WILL BE PAID, AND THE FULL UNIT PRICE FOR THIS ITEM WILL ALSO BE PAID. EACH CUBIC YARD OF GRANULAR MATERIAL PLACED WILL RESULT IN AN EQUAL NON-PERFORMED QUANTITY OF ITEM 204 EMBANKMENT, AS DIRECTED BY ENGINEER.

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE ESTIMATED EXCAVATION LIMITS ARE SHOWN ON THE CROSS SECTIONS. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO SECTION 204.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).

IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.

3. COMPACT THE SUBGRADE ACCORDING TO C&MS 204.03.

4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN ON THE CROSS SECTIONS. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO C&MS 204.06.

5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO C&MS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS UNLESS OTHERWISE DIRECTED.

6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 204.06 TO VERIFY STABILITY.

7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204, EXCAVATION OF SUBGRADE.

ITEM 206 - CHEMICALLY STABILIZED SUBGRADE, AS DIRECTED BY ENGINEER
QUANTITIES HAVE BEEN PROVIDED IN THE BID FOR COMPLETING CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. IF THE ENGINEER DETERMINES CHEMICAL STABILIZATION IS NECESSARY IN ADDITION TO OR IN LIEU OF SUBGRADE EXCAVATION AND REPLACEMENT, THE CONTRACTOR SHALL PERFORM THE WORK TO THE LIMITS DETERMINED IN THE FIELD BY THE ENGINEER. QUANTITIES PROVIDED IN THE BID ASSUME GLOBAL STABILIZATION OF ALL FULL-WIDTH FULL-DEPTH ROADWAY PAVEMENT. CONTRACTOR IS ADVISED THAT CHEMICAL STABILIZATION MAY BE USED IN FULL, PARTIALLY, OR COMPLETELY NON PERFORMED. NO ADJUSTMENT TO THE UNIT PRICES WILL BE MADE FOR INCREASES OR DECREASES IN QUANTITIES PERFORMED WITHOUT PRIOR APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL STRUCTURE HIS BID CONSIDERING THAT THE CHEMICAL STABILIZATION MAY BE NON-PERFORMED. NO COMPENSATION WILL BE PROVIDED FOR OVERHEAD, PROFIT, INCIDENTALS, ETC. FOR NON-PERFORMED ITEMS.

THE FOLLOWING QUANTITIES ARE PROVIDED TO COMPLETE THE CHEMICAL STABILIZATION:

- ITEM 206 - LIME STABILIZED SUBGRADE, 16 INCHES DEEP, AS DIRECTED BY ENGINEER, 6860 SQ YD
- ITEM 206 - LIME, AS DIRECTED BY ENGINEER, 477 TON
- ITEM 206 - CURING COAT, AS DIRECTED BY ENGINEER, 6860 SQ YD
- ITEM 206 - TEST ROLLING, AS DIRECTED BY ENGINEER, 3 HOUR
- ITEM 206 - MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS, AS DIRECTED BY ENGINEER, LUMP SUM

QUANTITY OF ITEM 206 LIME IS ESTIMATED AS FOLLOWS:
LIME PROVIDED FOR CHEMICAL STABILIZATION ASSUMES AN APPLICATION RATE OF 5% APPLIED TO THE LIME STABILIZED SUBGRADE AREA TOTALING 237 TON.
ADDITIONAL QUANTITY OF LIME IS PROVIDED FOR USE AS DIRECTED BY ENGINEER TO ASSIST IN DRYING EXCAVATED MATERIAL FOR REUSE AS ITEM 204 EMBANKMENT, TOTALING 240 TON.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE BID TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 PROOF ROLLING, 4 HOUR.

ITEM 651 - TOPSOIL STOCKPILED

IN ADDITION TO THE REQUIREMENTS OF ITEM 651, THE FOLLOWING PROVISIONS SHALL APPLY. STRIP TOPSOIL FROM THE SITE AND STOCKPILE MATERIAL OUTSIDE OF THE PROPOSED PAVEMENT AND CURB LIMITS FOR REUSE IN PART B OF THE PROJECT. STOCKPILED TOPSOIL SHALL BE TEMPORARILY STABILIZED THROUGH THE WINTER. STOCKPILE ONLY THE AMOUNT OF TOPSOIL NEEDED FOR FINAL SEEDING AND MULCHING AREAS (TO BE CONSTRUCTED IN PART B). TOPSOIL REMOVED IN EXCESS OF THAT NEEDED FOR FINAL SEEDING AND MULCHING AREAS SHALL BE REMOVED, DISPOSED AND PAID FOR UNDER ITEM 203 EXCAVATION.

ITEM 832 - EROSION CONTROL

CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES IN ACCORDANCE WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN. ITEMS UTILIZED FOR TEMPORARY STABILIZATION SHALL BE PAID FOR UNDER THE PAY SCHEDULE IN SUPPLEMENTAL SPECIFICATION 832. PAYMENT SHALL ONLY BE MADE FOR ITEMS NEEDED TO STABILIZE THE ROADWAY IMPROVEMENTS. STABILIZATION REQUIRED FOR THE ADJACENT SITE DEVELOPMENT PROJECT SHALL BE PAID FOR BY THE DEVELOPER.

ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING

THIS ITEM SHALL INCLUDE CONSTRUCTION LAYOUT STAKES AND SURVEYING NECESSARY FOR CONSTRUCTION OF THE ROADWAY EMBANKMENT. CONSTRUCTION LAYOUT STAKES AND SURVEYING ASSOCIATED WITH THE ADJACENT SITE DEVELOPMENT PROJECT SHALL BE PAID FOR BY THE DEVELOPER.

ALL CENTERLINE OF SURVEY AND PROPERTY CORNER MONUMENTATION THAT IS DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A PROFESSIONAL SURVEYOR. PAYMENT FOR THE CONSTRUCTION LAYOUT AND WORK LISTED ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 623 CONSTRUCTION LAYOUT STAKES.

ITEM 624 - MOBILIZATION

THIS ITEM SHALL INCLUDE MOBILIZATION NECESSARY FOR CONSTRUCTION OF THE ROADWAY EMBANKMENT. MOBILIZATION ASSOCIATED WITH THE ADJACENT SITE DEVELOPMENT PROJECT SHALL BE PAID FOR BY THE DEVELOPER.

REPORT OF GEOTECHNICAL EXPLORATION

CBC ENGINEER'S & ASSOCIATES, LTD. NOVEMBER 10, 2022 GEOTECHNICAL REPORT FOR THIS PROJECT IS ATTACHED TO THESE SPECIAL PROVISIONS.

STRUCTURES TO BE REMOVED

REMOVE STRUCTURES IDENTIFIED ON THE PLANS AND DISPOSE OF WASTE MATERIALS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS APPLICABLE.

ITEM SPECIAL - CONTINGENCY

THIS ITEM WILL BE USED IN THE EVENT THAT THERE ARE CHANGE ORDERS IN THE CONTRACT. NO WORK WILL BE PAID OR RECOGNIZED UNDER THIS ITEM UNLESS AGREED UPON IN WRITING BY AN AUTHORIZED REPRESENTATIVE OF THE WARREN COUNTY ENGINEER'S OFFICE. ANY ITEM OVER THE PLAN QUANTITY WILL NOT BE PAID OR RECOGNIZED UNLESS AGREED UPON IN WRITING BY AN AUTHORIZED REPRESENTATIVE OF THE WARREN COUNTY ENGINEER. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE BID PRICE OF \$1.00 PER EACH FOR ITEM SPECIAL CONTINGENCY.

DESIGN AGENCY



DESIGNER

TG

REVIEWER

JWB 12/23/22

PROJECT ID

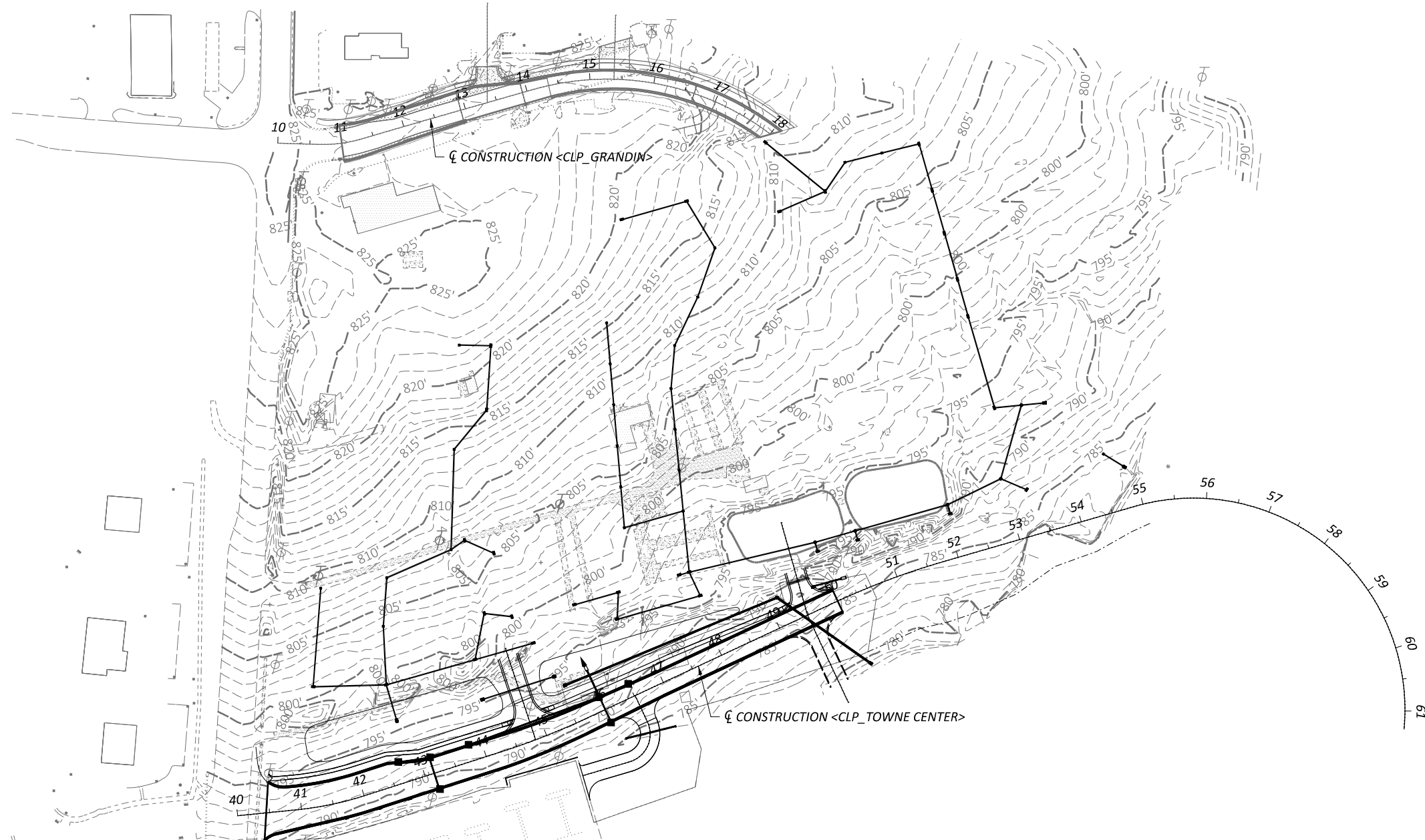
22004451.00

SHEET TOTAL

5 78

A PART A WORK CONSISTS OF IMPLEMENTING TEMPORARY SEDIMENT AND EROSION CONROLS NECESSARY FOR COMPLETING THE EARTHWORK AND TEMPORARY STABILIZATION FOR OVERWINTERING. PART B WORK IS ANTICIPATED TO BEGIN IN SPRING 2024.

PROJECT DESCRIPTION
 WIDEN AND EXTEND GRANDIN ROAD FROM SR 48 EAST TO NEW DEVELOPMENT. EXTEND TOWNE CENTER BOULEVARD FROM SR 48 APPROXIMATELY 1,000 FEET. INSTALL NEW STORM SEWERS AND 16" WATER MAIN ON TOWNE CENTER BOULEVARD.



PROJECT SITE PLAN
 GRANDIN ROAD AND TOWNE CENTER BLVD

GRANDIN & TOWNE CENTER

MODEL: site [Sheet] PAPER: 17x11 (in.) DATE: 3/14/2023 TIME: 12:44:09 PM USER: jbarbour
 L:\Warren\COH\22004451-00_TowneCtrBldg\GrandinRdExt\445100_400-Engineering\Drainage\Sheets\445100_DE101.dgn

PROJECT DATA	
PROJECT EARTH DISTURBED AREA -	3.68 Ac.
ESTIMATED CONTRACTOR EARTH DISTURBED AREA -	0.25 Ac.
NOTICE OF INTENT EARTH DISTURBED AREA -	4.90 Ac.
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE -	0.62 Ac.
IMPERVIOUS (PAVED) AREA FOR POST CONSTRUCTION SITE -	2.33 Ac.
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE -	0.39
RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE -	0.64
POST CONSTRUCTION BMP: EXTENDED DETENTION (CONSTRUCTED BY OTHERS)	
IMMEDIATE RECEIVING WATERS -	LITTLE MIAMI RIVER
SUBSEQUENT RECEIVING WATERS -	OHIO RIVER

USGS Map: LEBANON QUADRANGLE
 NSN. 7643016387978
 NGA REF NO. USGSX24K42209

Longitude: -84°12'54"
 Latitude: 39°20'43"

*Longitude and Latitude to Approx. Center of Project

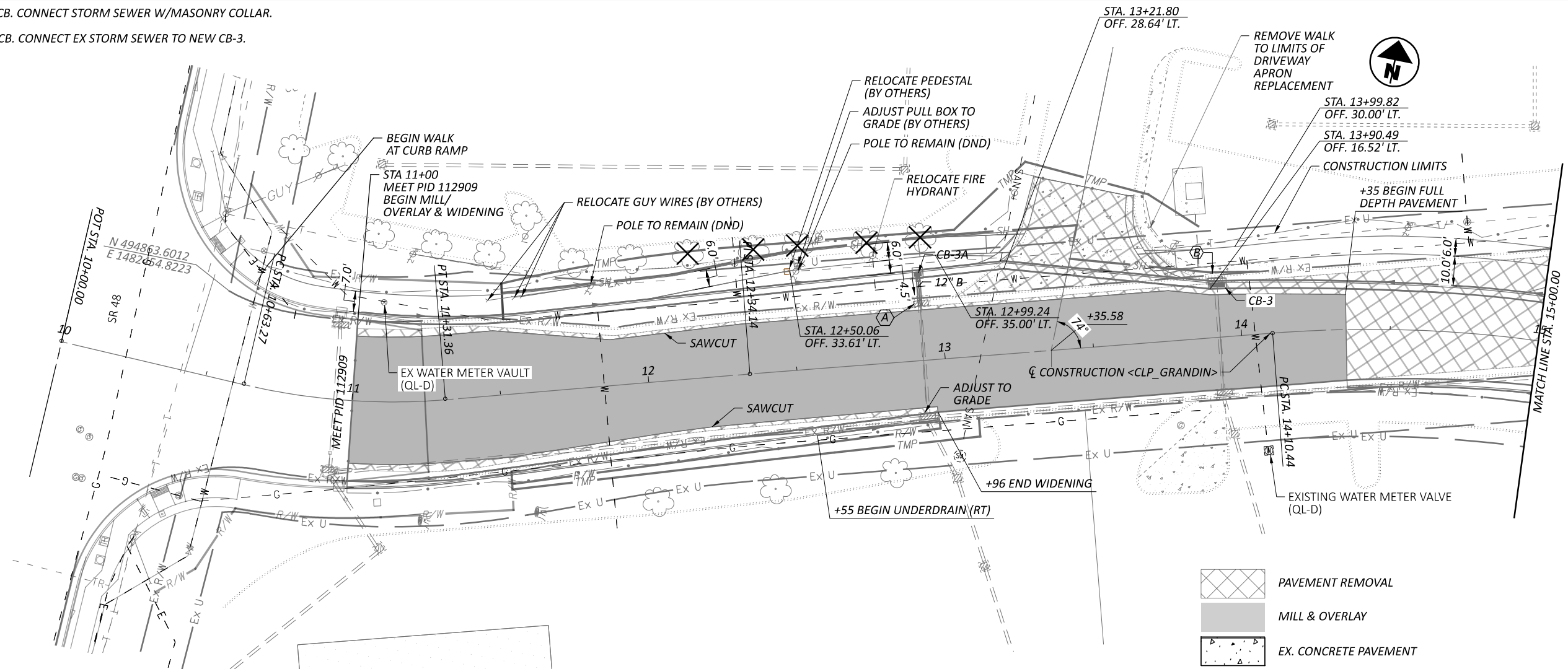
- LEGEND
- ◀ INLET/OUTLET
 - CATCH BASIN
 - MANHOLE




ITEM	QUANTITIES
ITEM 832 STORM WATER POLLUTION PREVENTION PLAN	LS
ITEM 832 STORM WATER POLLUTION PREVENTION INSPECTIONS	LS
ITEM 832 STORM WATER POLLUTION PREVENTION SOFTWARE	LS
ITEM 832 EROSION CONTROL	26,500 EACH

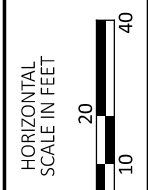
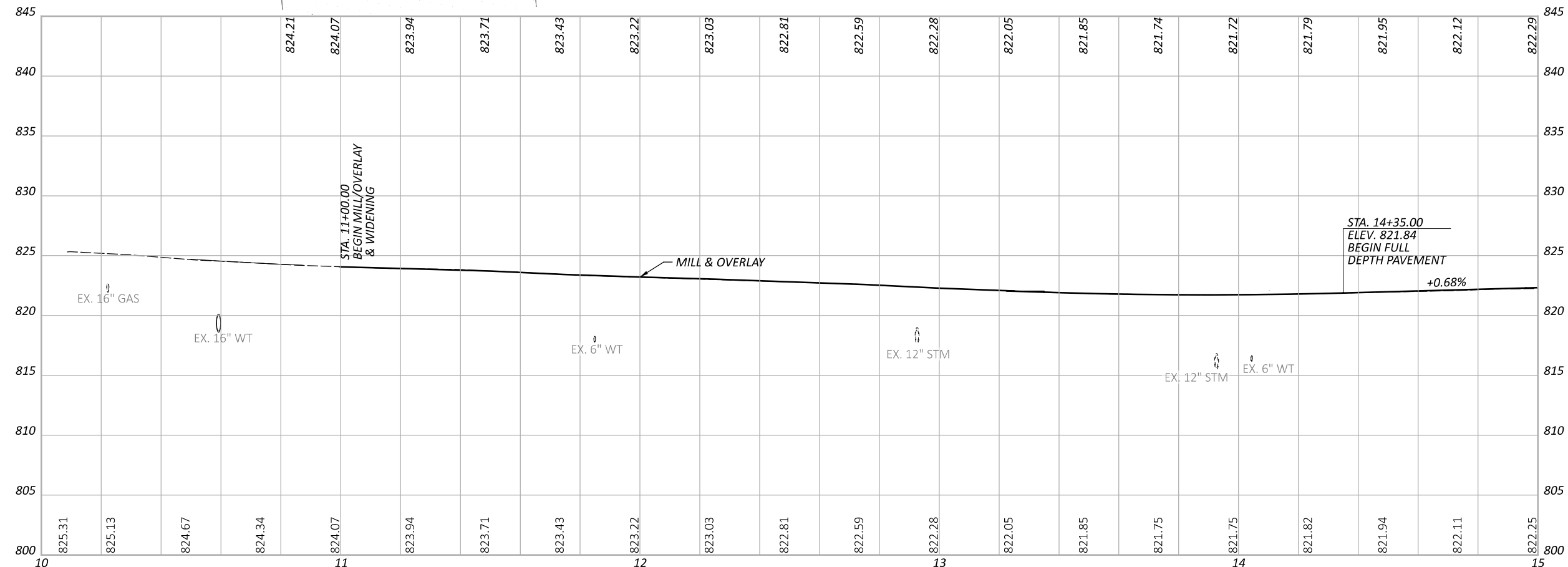
DESIGN AGENCY
CMT
 CIVIL & ENVIRONMENTAL
 84 REMICKS BOULEVARD
 BIRMINGHAM, AL 35202
 WWW.CMTENR.COM

DESIGNER	
LDW	
REVIEWER	
JWB	12/23/22
PROJECT ID	
22004451.00	
SHEET	
9	TOTAL 78

- (A) REMOVE CB. CONNECT STORM SEWER W/MASONRY COLLAR.
- (B) REMOVE CB. CONNECT EX STORM SEWER TO NEW CB-3.



 PAVEMENT REMOVAL
 MILL & OVERLAY
 EX. CONCRETE PAVEMENT



PLAN AND PROFILE - GRANDIN RD
 STA 10+00 TO STA 15+00

DESIGN AGENCY

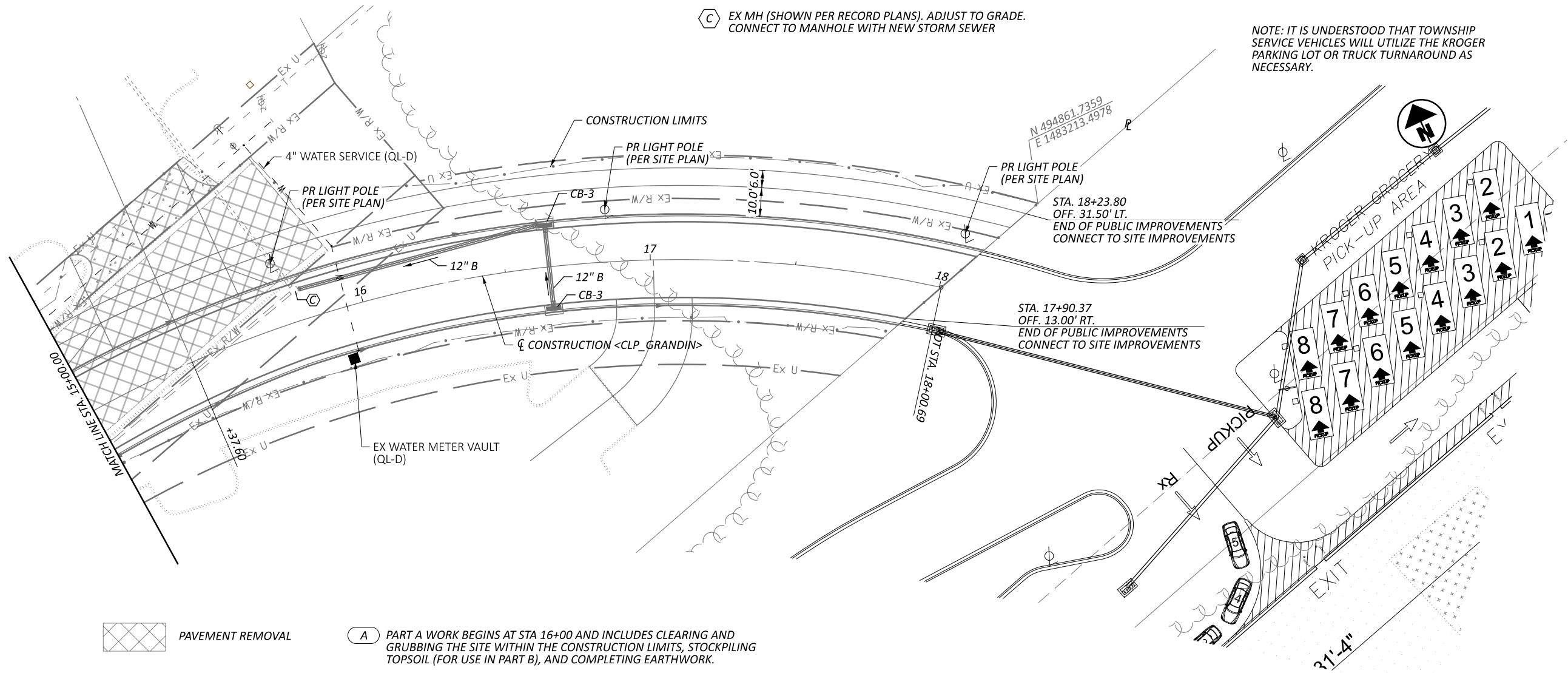
 CMT
 CONSULTING
 84 REMICK'S BOULEVARD
 BIRMINGHAM, AL 35202-2530
 WWW.CMTENR.COM

DESIGNER
 LDW

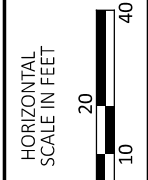
REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

SHEET TOTAL
 10 78

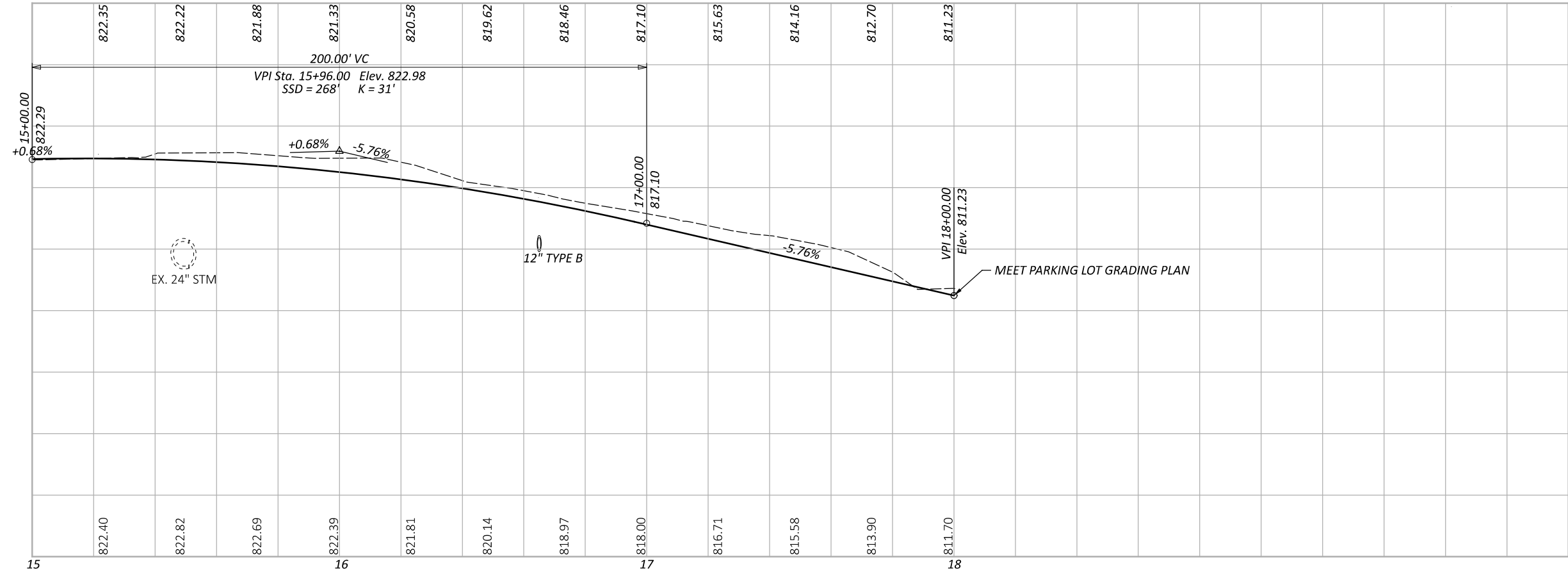


NOTE: IT IS UNDERSTOOD THAT TOWNSHIP SERVICE VEHICLES WILL UTILIZE THE KROGER PARKING LOT OR TRUCK TURNAROUND AS NECESSARY.



PAVEMENT REMOVAL

A PART A WORK BEGINS AT STA 16+00 AND INCLUDES CLEARING AND GRUBBING THE SITE WITHIN THE CONSTRUCTION LIMITS, STOCKPILING TOPSOIL (FOR USE IN PART B), AND COMPLETING EARTHWORK.



PLAN AND PROFILE - GRANDIN RD
 STA 15+00 TO STA 18+00

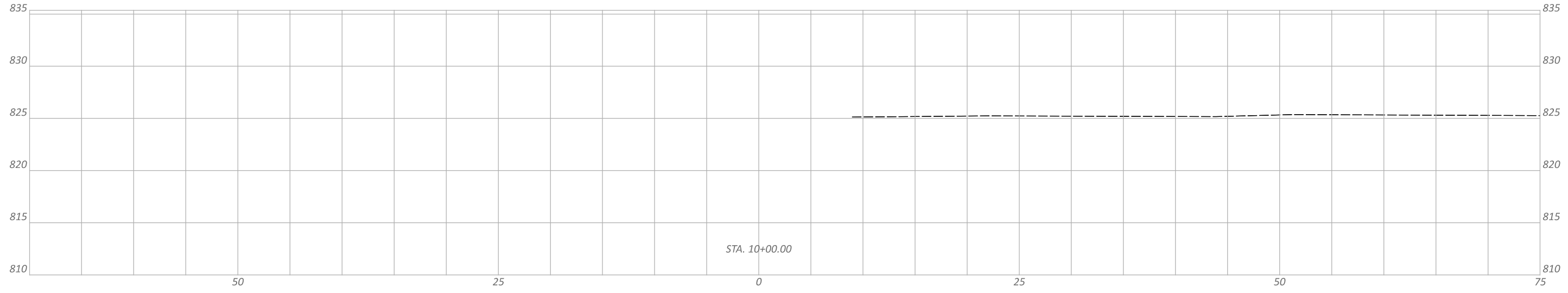
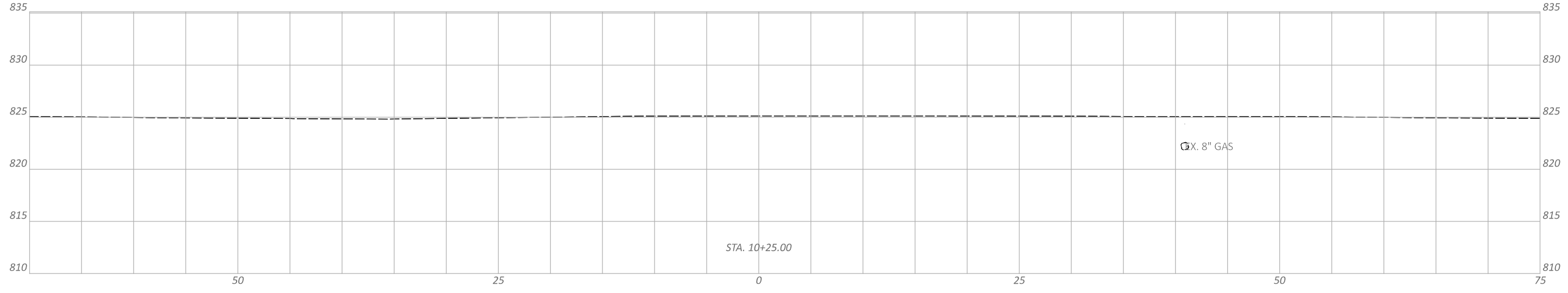
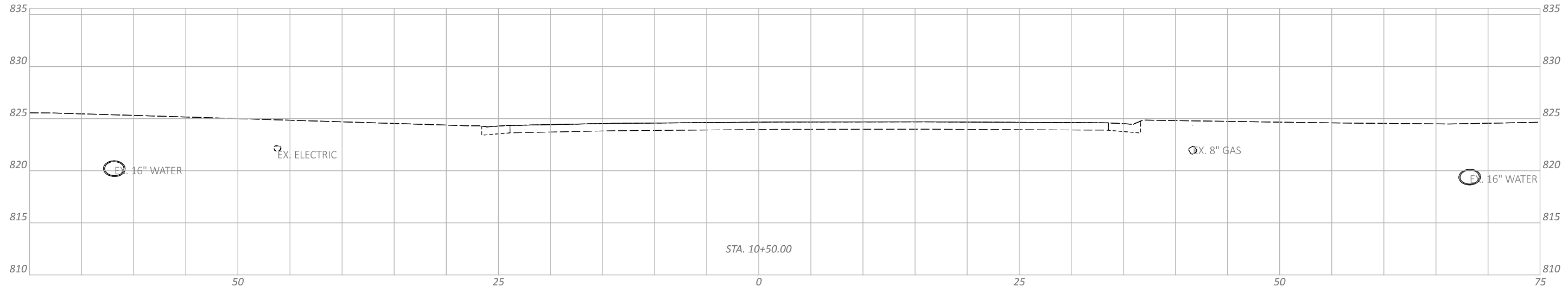
DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING, INC.
 84 REMICK'S BOULEVARD
 BIRMINGHAM, AL 35202-2530
 www.cmteng.com

DESIGNER
LDW

REVIEWER
JWB 12/23/22

PROJECT ID
22004451.00

SHEET TOTAL
11 78



CROSS SECTIONS - GRANDIN RD
 STA 10+00 TO STA 10+50

DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING
 84 BEAUCHAMPE BOULEVARD
 BRIDGEVILLE, OHIO 45066
 PH: 513.333.2233
 WWW.CMTENR.COM

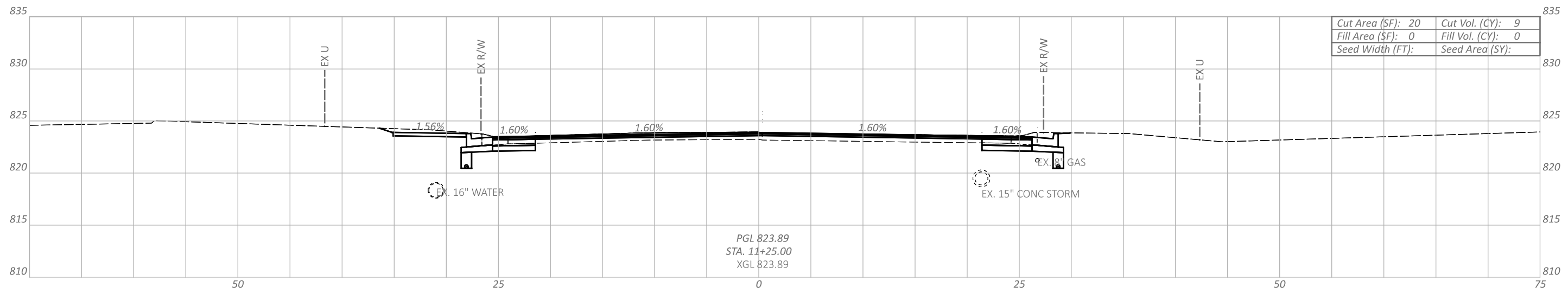
DESIGNER
LDW

REVIEWER
JWB 12/23/22

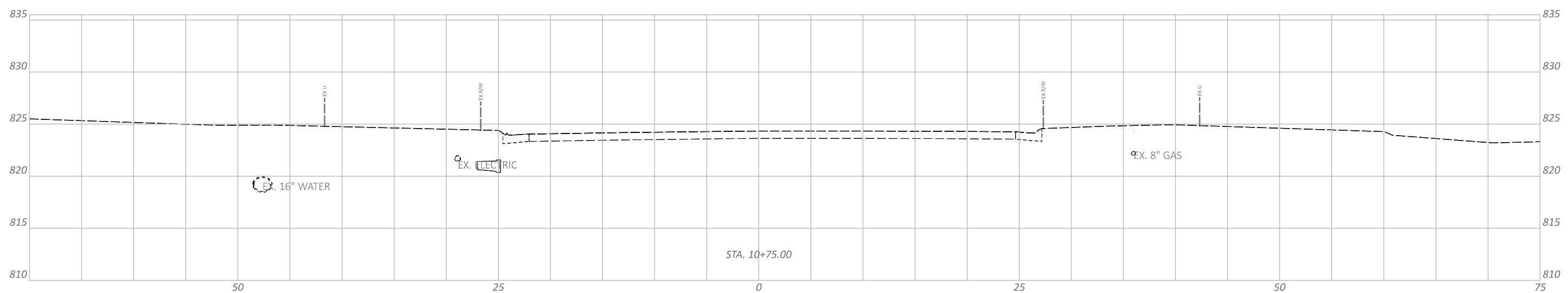
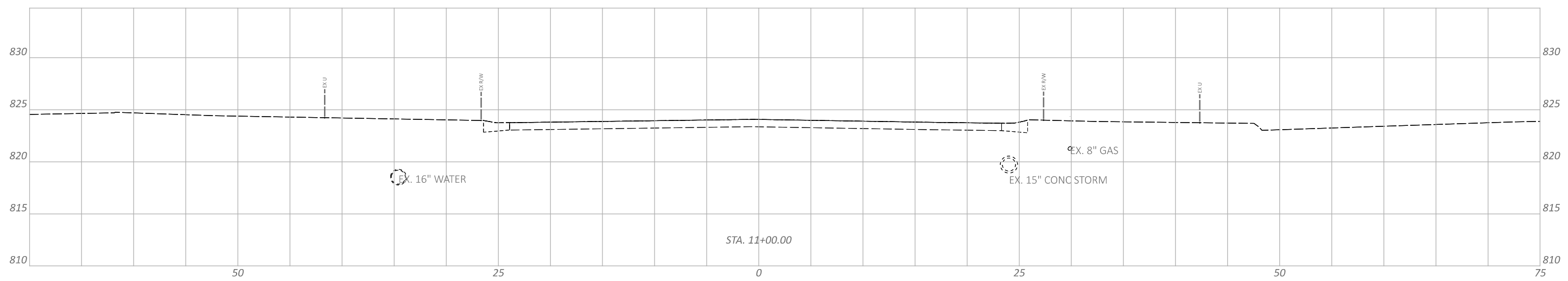
PROJECT ID
22004451.00

Sheet Totals		
Seeding	Cut	Fill
.	.	.

SHEET	TOTAL
12	78



Cut Area (SF):	20	Cut Vol. (CY):	9
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



CROSS SECTIONS - GRANDIN RD
 STA 10+75 TO STA 11+25

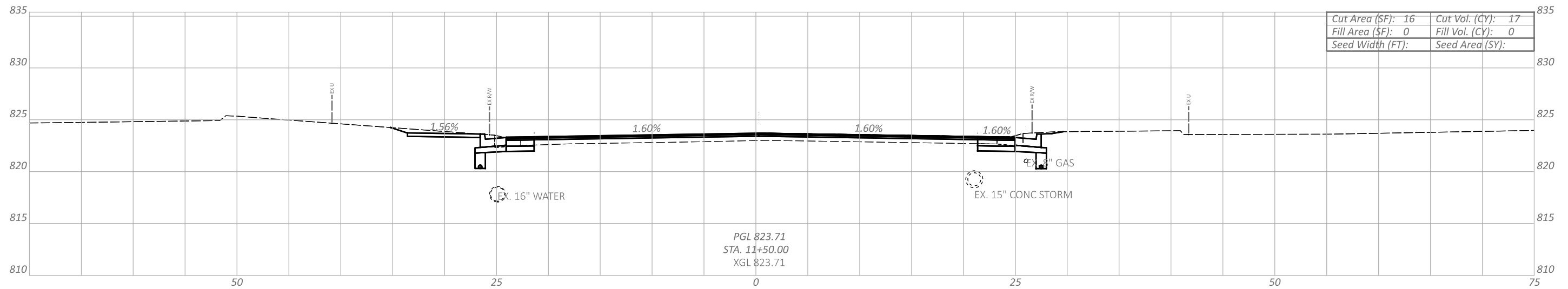
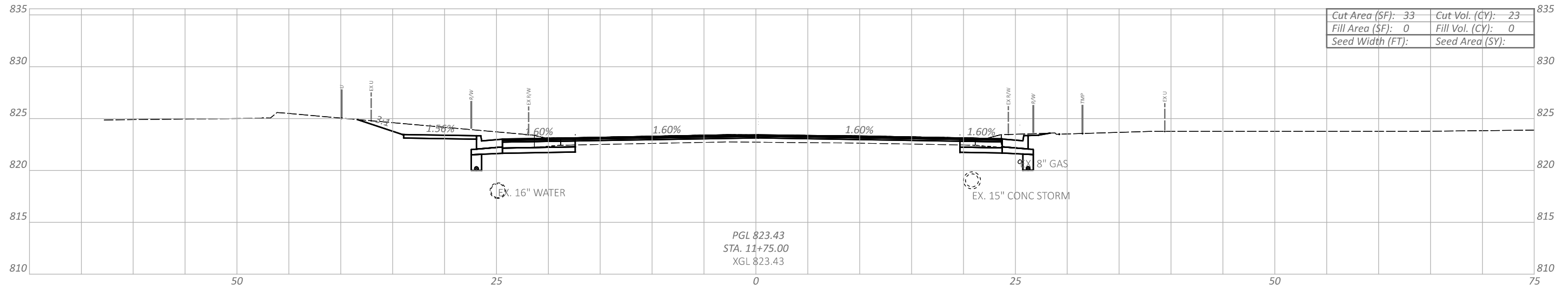
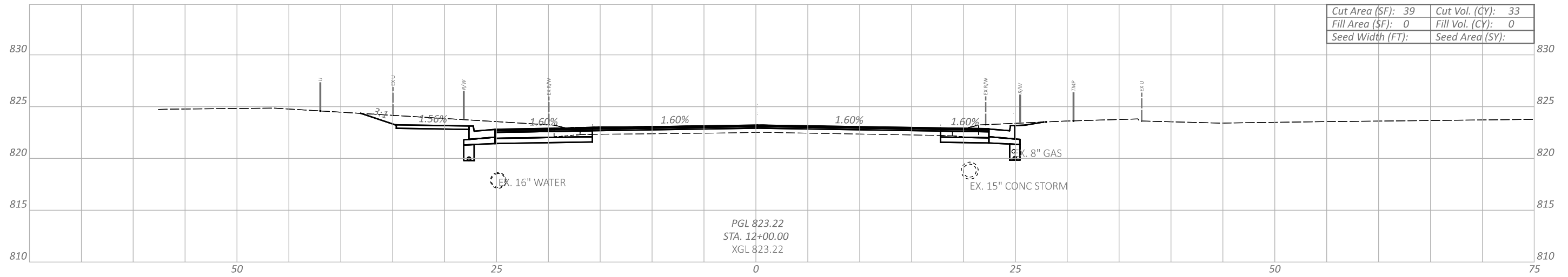
DESIGN AGENCY
CMT
 CIVIL INC.
 84 REMICK BOULEVARD
 BIRMGHAM, AL 35202-2930
 www.cmteng.com

DESIGNER
LDW

REVIEWER
JWB 12/23/22

PROJECT ID
22004451.00

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
.	.	.	13	78



CROSS SECTIONS - GRANDIN RD
STA 11+50 TO STA 12+00

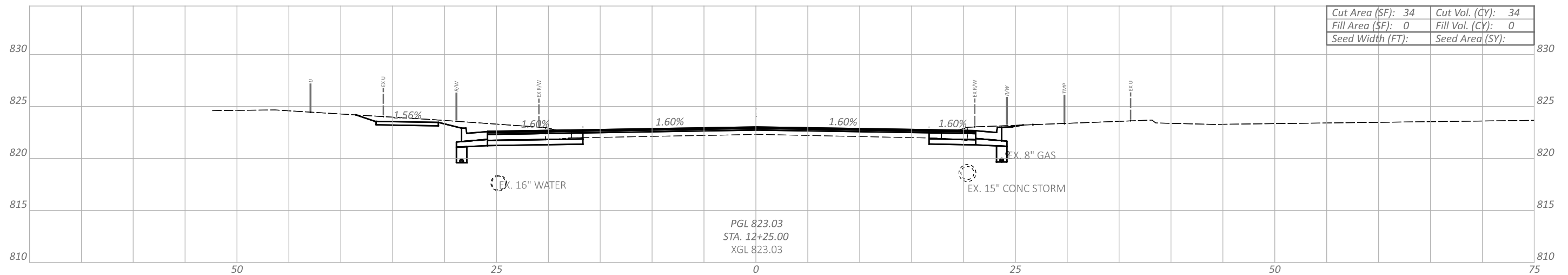
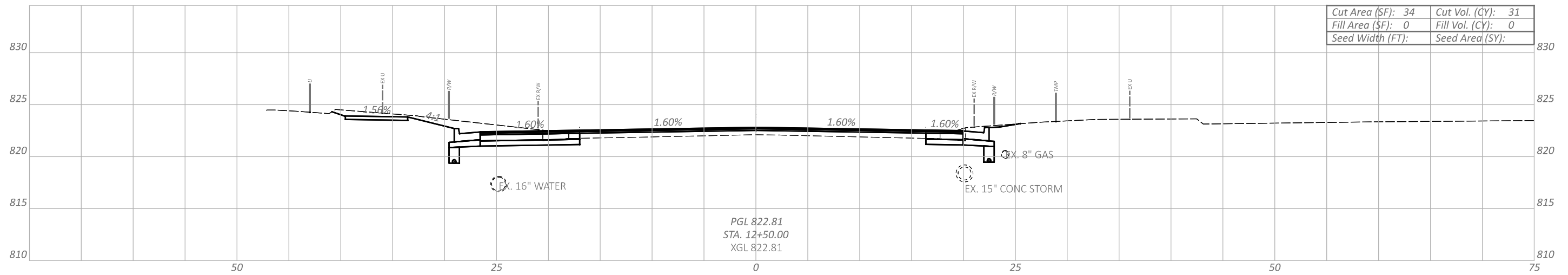
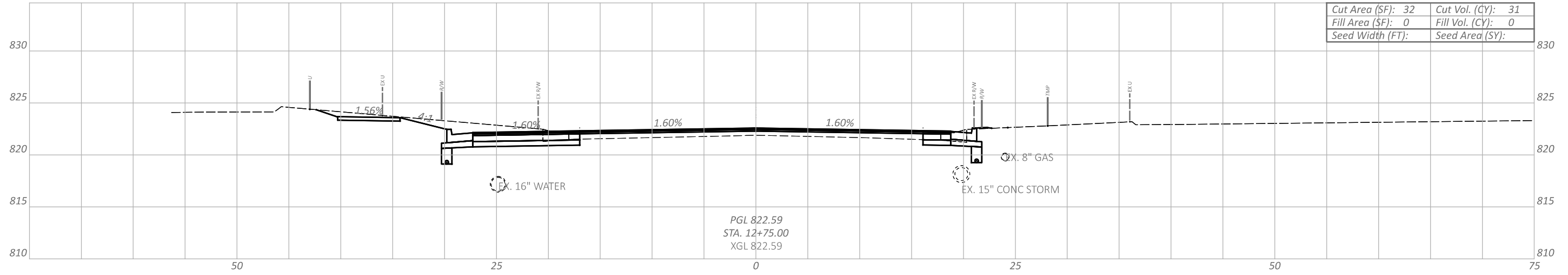
DESIGN AGENCY
CMT
 CIVIL INC.
 84 REMICK BOULEVARD
 BIRMINGHAM, AL 35202-2930
 www.cmteng.com

DESIGNER
LDW

REVIEWER
JWB 12/23/22

PROJECT ID
22004451.00

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
.	.	.	14	78



CROSS SECTIONS - GRANDIN RD
 STA 12+25 TO STA 12+75

DESIGN AGENCY
CMT
 CIVIL INC.
 84 REMICK BOULEVARD
 BIRMIINGHAM, AL 35202-2100
 PH: (205) 987-2100
 WWW.CMTENR.COM

DESIGNER

LDW

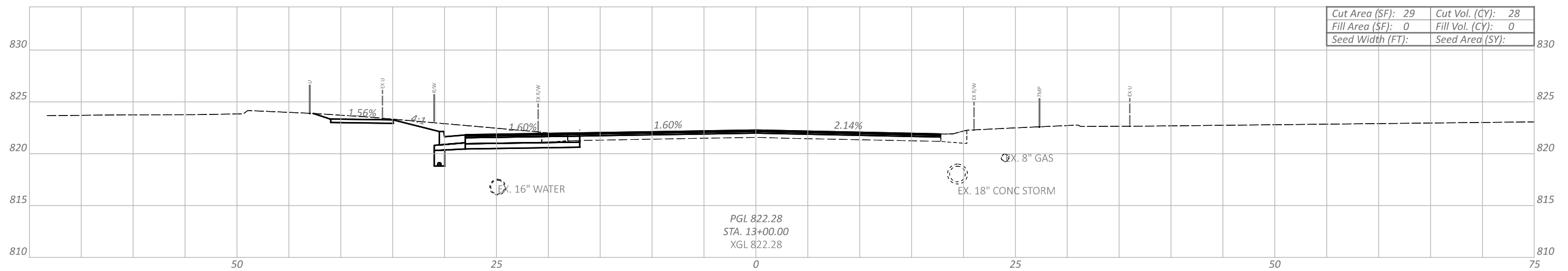
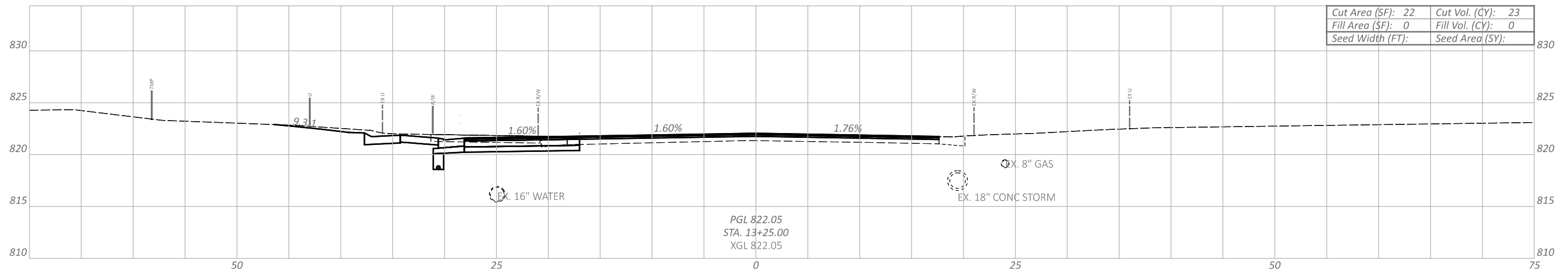
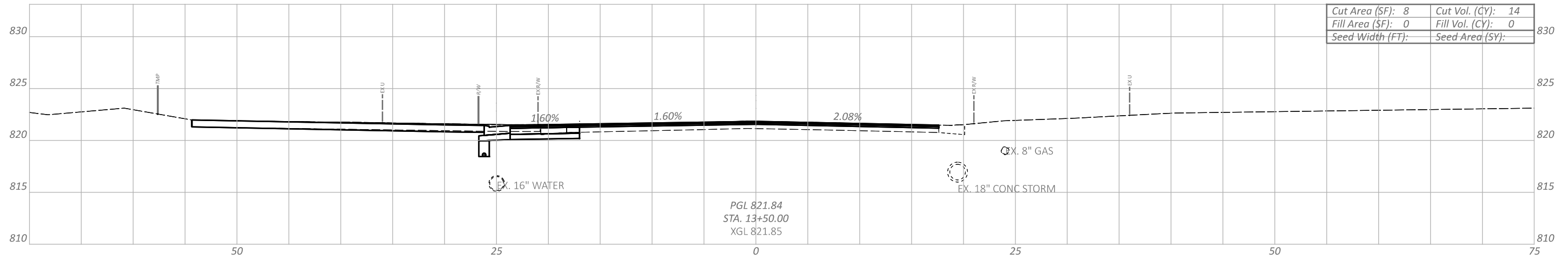
REVIEWER

JWB 12/23/22

PROJECT ID

22004451.00

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
.	.	.	15	78



Sheet Totals		
Seeding	Cut	Fill
.	.	.

CROSS SECTIONS - GRANDIN RD
 STA 13+00 TO STA 13+50

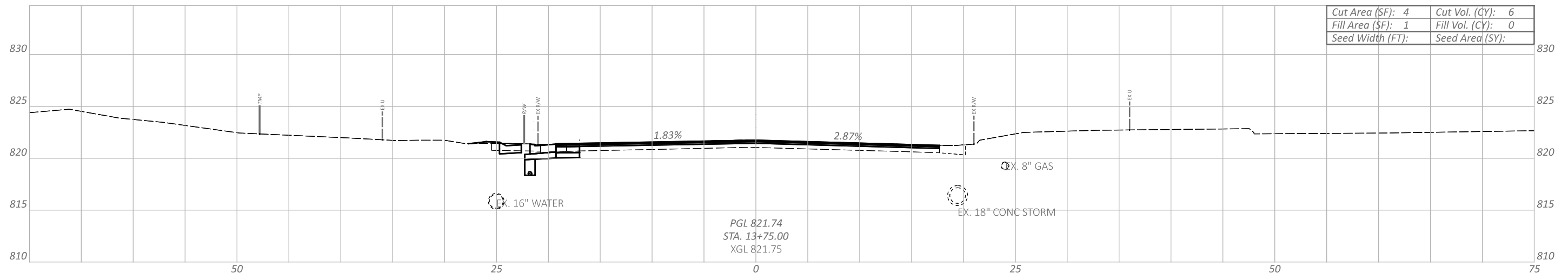
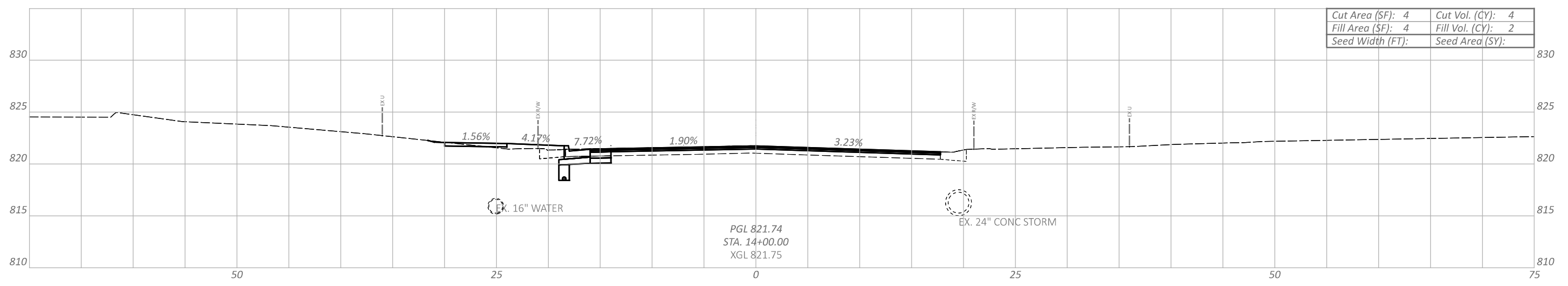
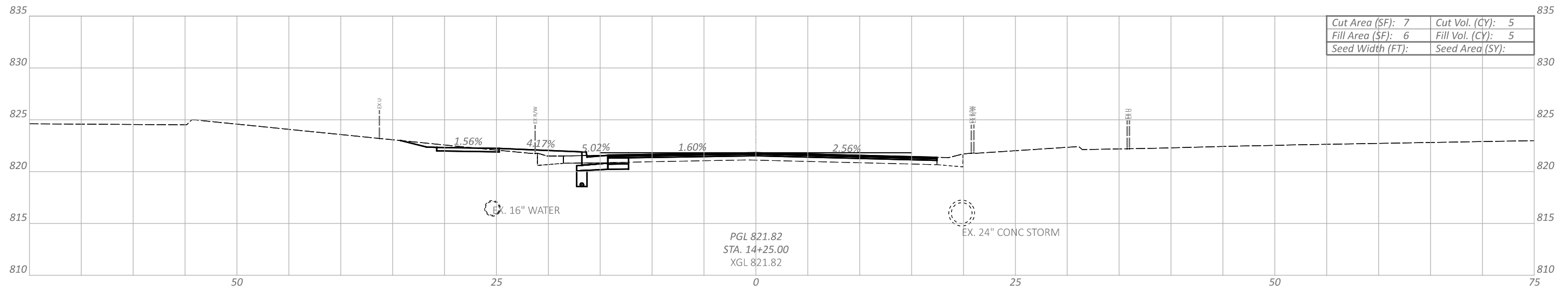
DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING, INC.
 84 BEAUCHAMPEL BOULEVARD
 BIRMINGHAM, AL 35202-3200
 WWW.CMTENR.COM

DESIGNER
LDW

REVIEWER
JWB 12/23/22

PROJECT ID
22004451.00

SHEET TOTAL
16 78



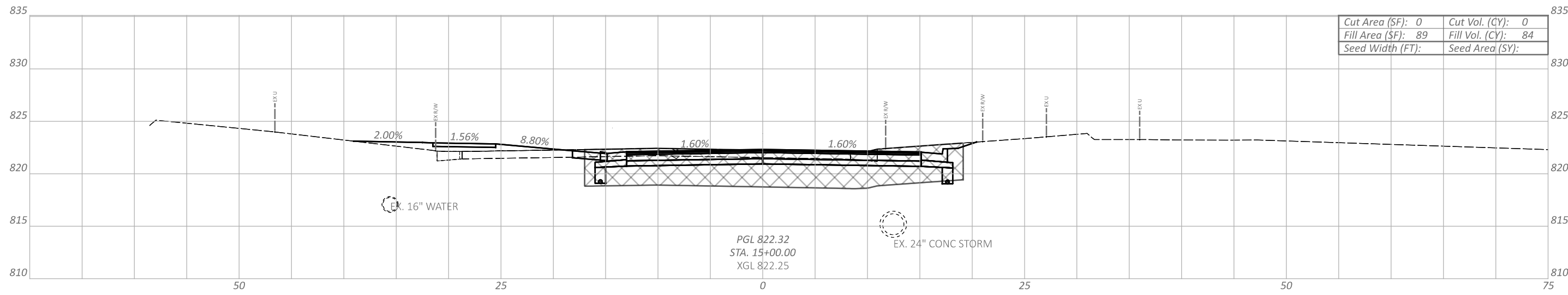
CROSS SECTIONS - GRANDIN RD
 STA 13+75 TO STA 14+25

DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING, INC.
 84 BEAUCHAMPEL BOULEVARD
 BIRMINGHAM, AL 35202-2930
 WWW.CMTENR.COM

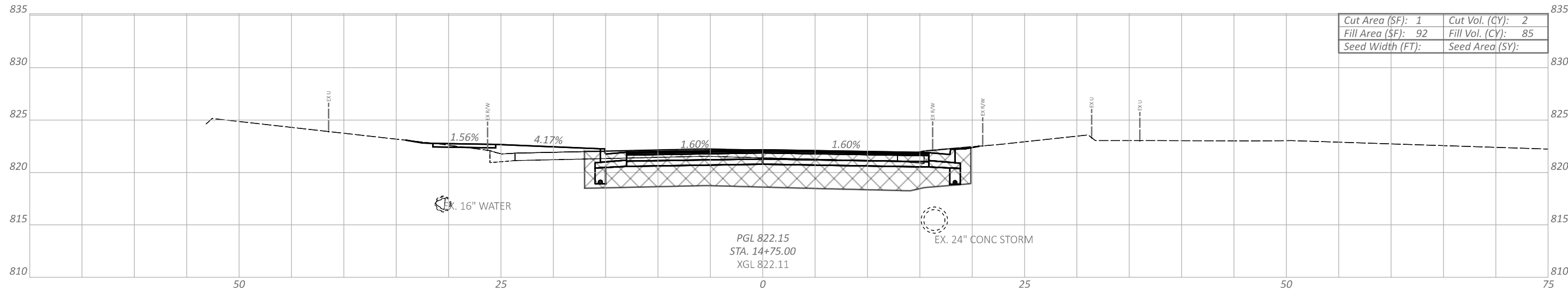
DESIGNER
LDW
 REVIEWER
JWB 12/23/22

PROJECT ID
22004451.00

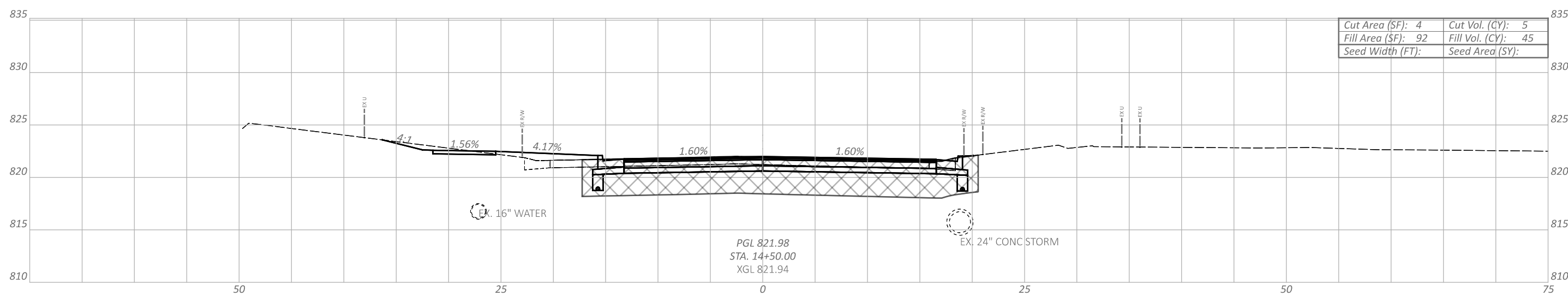
Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	17	78
.	.	.		



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	89	Fill Vol. (CY):	84
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	1	Cut Vol. (CY):	2
Fill Area (SF):	92	Fill Vol. (CY):	85
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	4	Cut Vol. (CY):	5
Fill Area (SF):	92	Fill Vol. (CY):	45
Seed Width (FT):		Seed Area (SY):	

CROSS SECTIONS - GRANDIN RD
 STA 14+50 TO STA 15+00

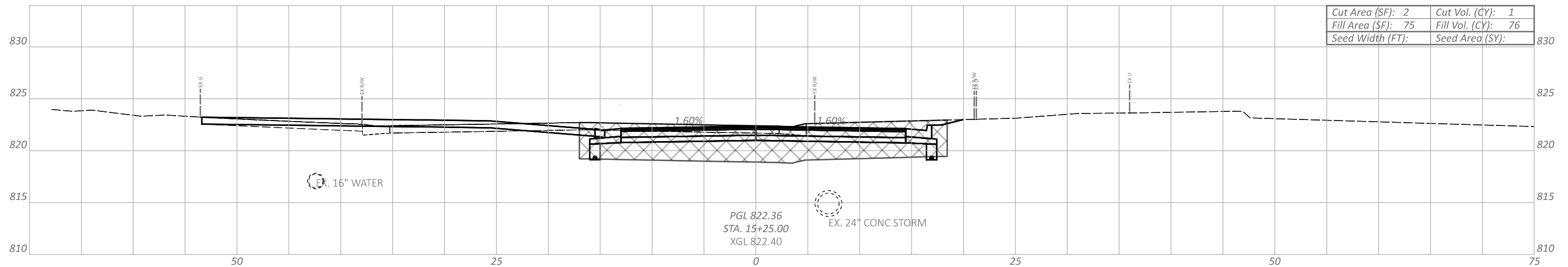
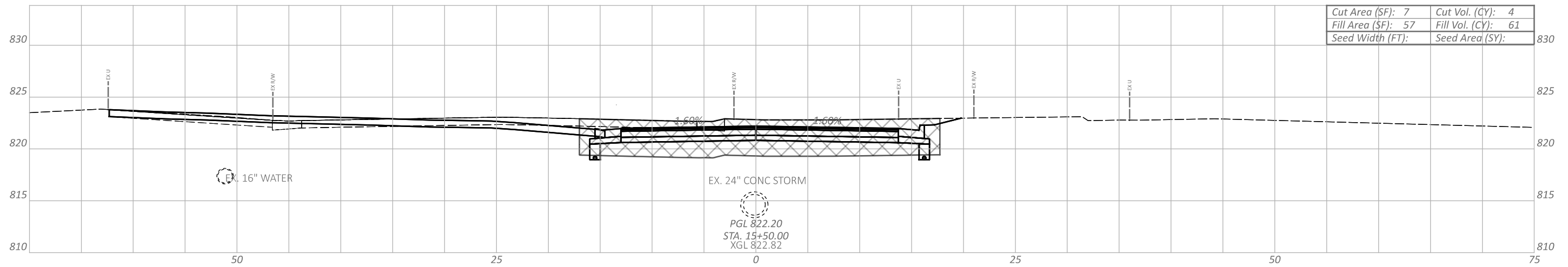
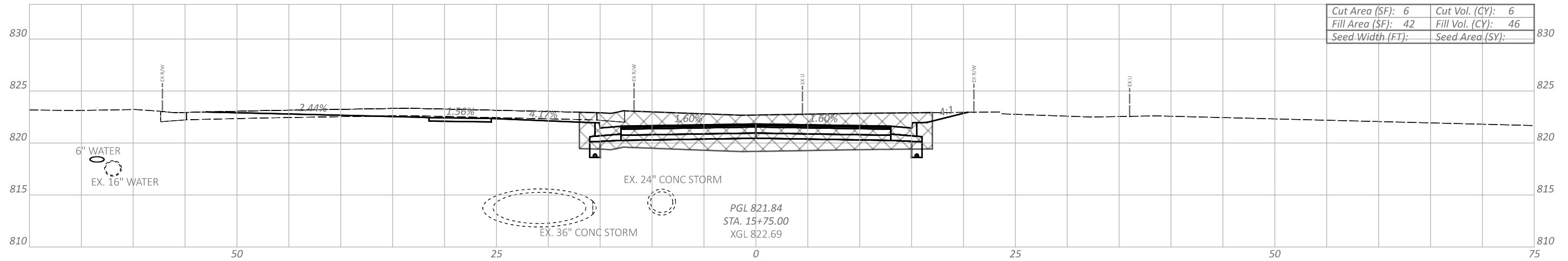
DESIGN AGENCY
CMT
 CIVIL INC.
 84 BEAUCHAMPEL BOULEVARD
 BIRMINGHAM, AL 35202
 WWW.CMTENR.COM

DESIGNER
LDW

REVIEWER
JWB 12/23/22

PROJECT ID
22004451.00

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	18	78
.	.	.		



CROSS SECTIONS - GRANDIN RD
 STA 15+25 TO STA 15+75

DESIGN AGENCY
CMT
 CONSULTING
 ENGINEERS
 84 REMOND BOULEVARD
 BIRMINGHAM, AL 35202
 PH: (205) 987-2300
 WWW.CMTENR.COM

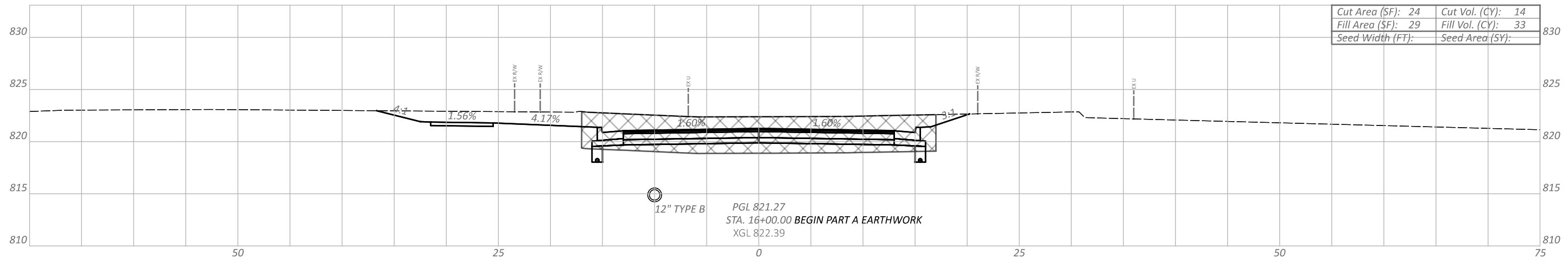
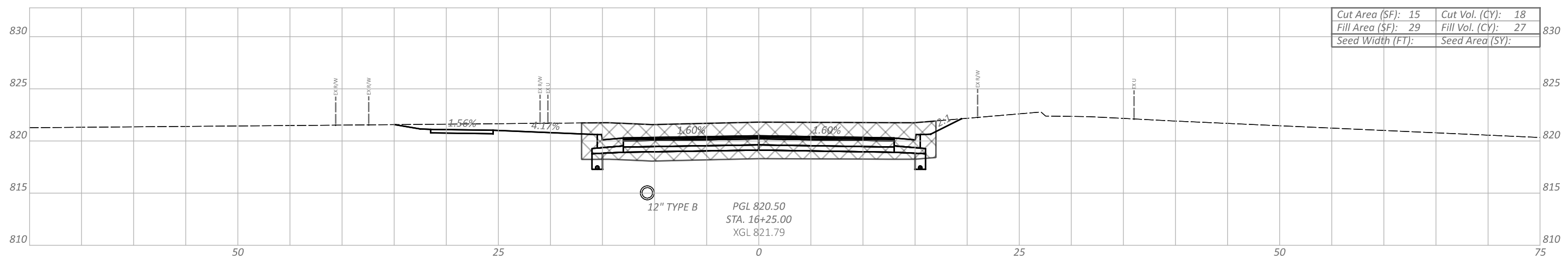
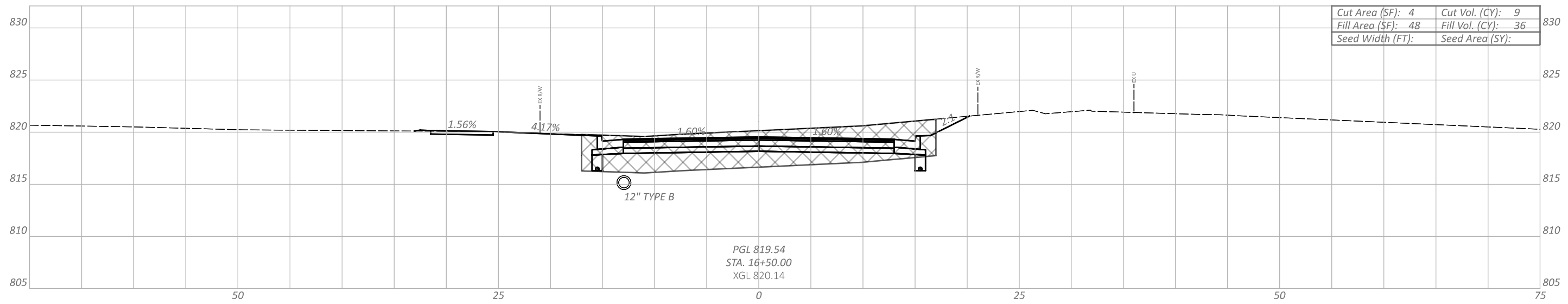
DESIGNER
LDW

REVIEWER
JWB 12/23/22

PROJECT ID
22004451.00

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	19	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - GRANDIN RD
 STA 16+00 TO STA 16+50

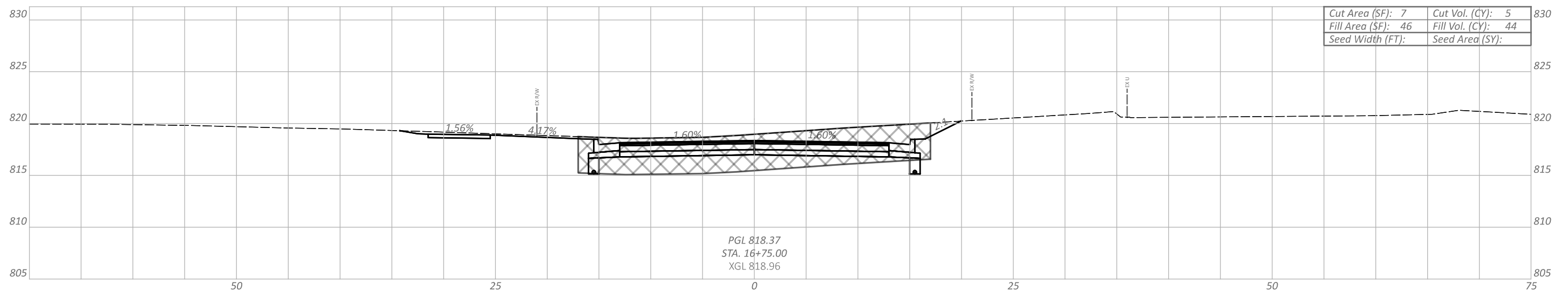
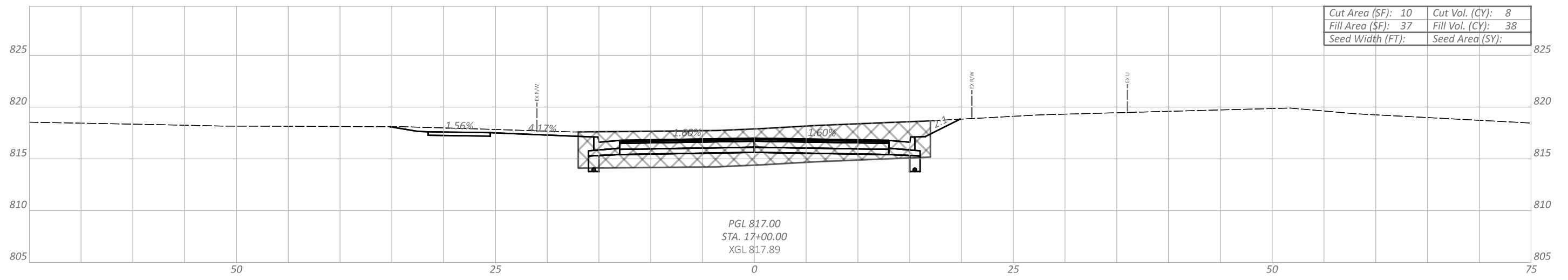
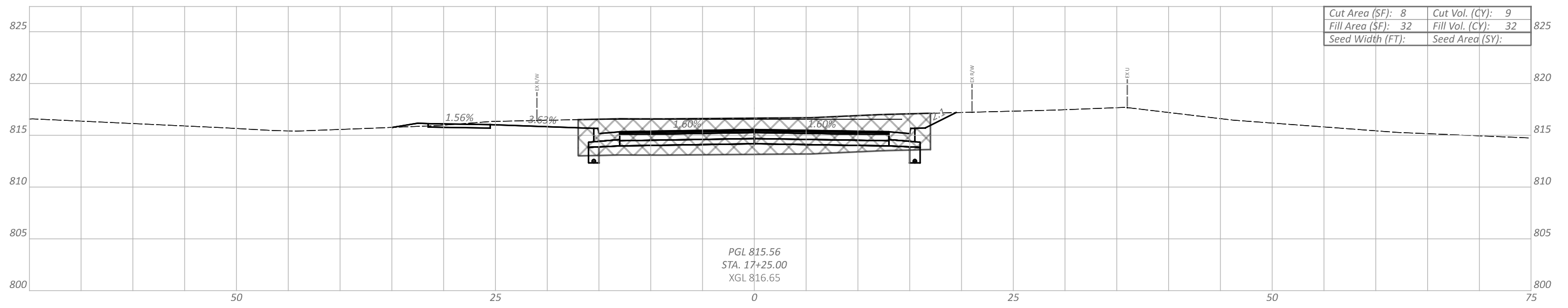
DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING, INC.
 84 REMICK BOULEVARD
 BIRMGHAM, AL 35202-2100
 WWW.CMTENR.COM

DESIGNER
LDW
 REVIEWER
JWB 12/23/22

PROJECT ID
22004451.00

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	20	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - GRANDIN RD
STA 16+75 TO STA 17+25

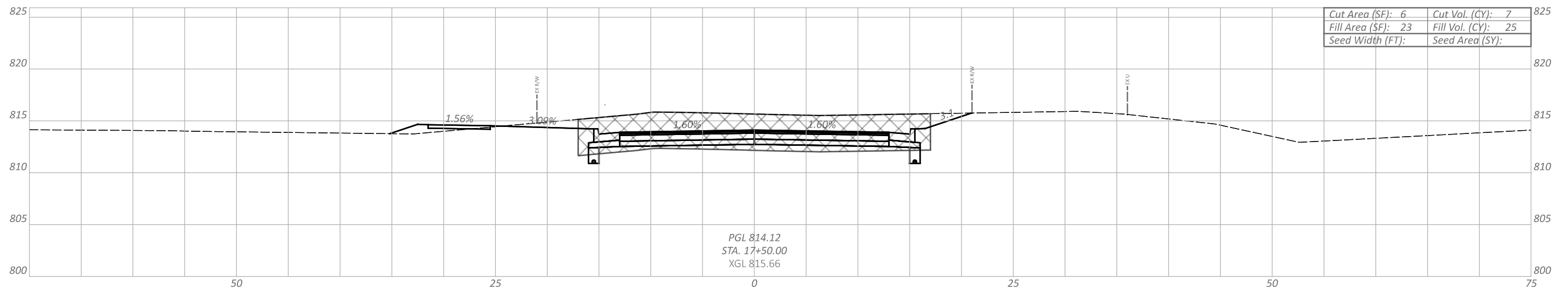
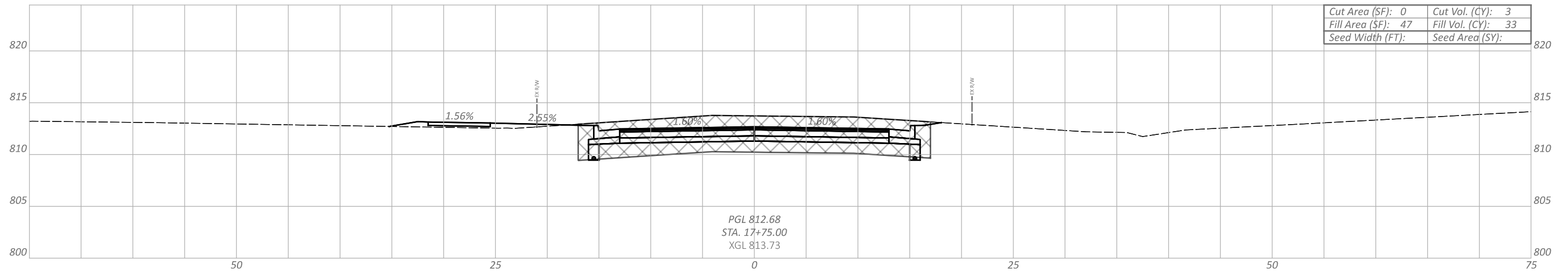
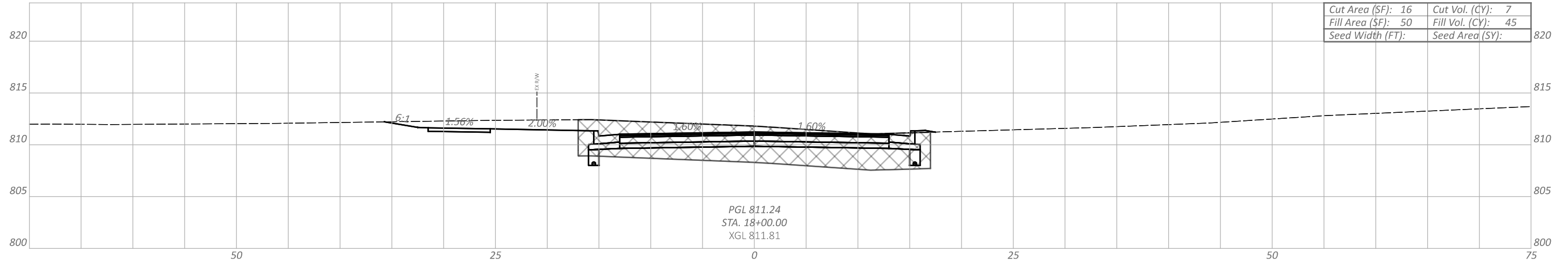
DESIGN AGENCY
CMT
 CIVIL INC.
 84 REMICK BOULEVARD
 BIRMGHAM, AL 35202
 PH: (205) 987-2200
 WWW.CMTENR.COM

DESIGNER
LDW
 REVIEWER
JWB 12/23/22

PROJECT ID
22004451.00

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	SHEET	TOTAL
.	.	.	21	78

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - GRANDIN RD
 STA 17+50 TO STA 18+00

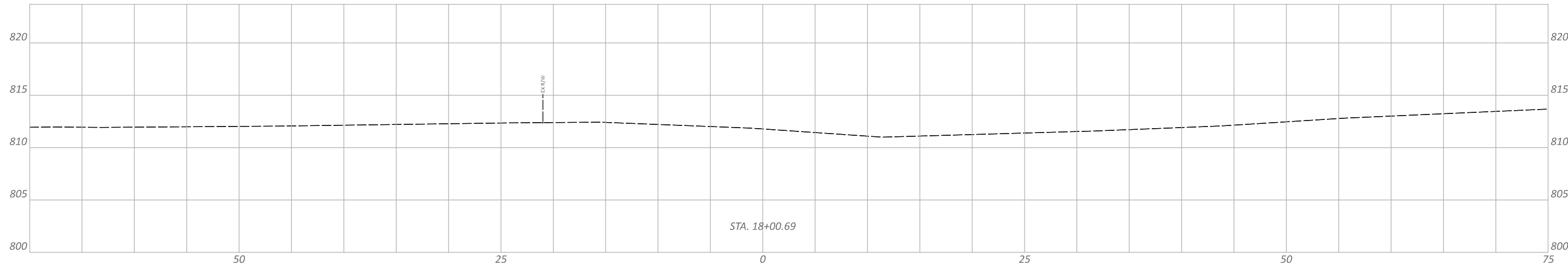
DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING, INC.
 84 BEAUCHAMPE BOULEVARD
 BIRMINGHAM, AL 35202-2930
 www.cmtengr.com

DESIGNER
LDW

REVIEWER
JWB 12/23/22

PROJECT ID
22004451.00

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	22	78
.	.	.		



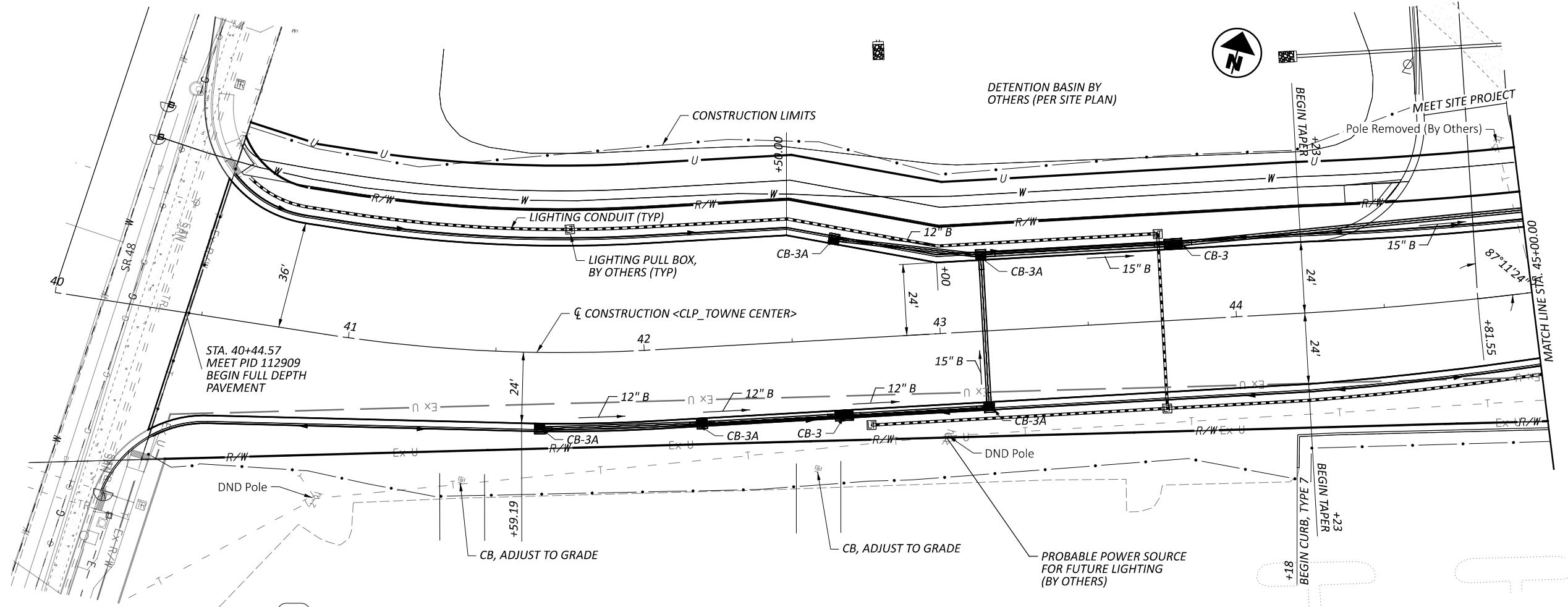
EARTHWORK SUMMARY GRANDIN ROAD			
ITEM 203 - EXCAVATION	PART A	65	CU. YD.
	PART B	290	CU. YD.
	TOTAL	355	CU. YD.
ITEM 204 - EMBANKMENT	PART A	8142	CU. YD.
	PART B	437	CU. YD.
	TOTAL	717	CU. YD.
ITEM 204 - EXCAVATION OF SUBGRADE	PART A	913	CU. YD.
	PART B	751	CU. YD.
	TOTAL	1664	CU. YD.

A PART A CONTRACTOR SHALL INSTALL A 12" SACRIFICIAL EARTHWORK CAP ABOVE THE PLAN SUBGRADE ELEVATION WITHIN THE LIMITS OF THE ROADWAY (BACK OF CURB TO BACK OF CURB) TO PROTECT THE SUBGRADE OVER WINTER. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE BID SUMMARY:
 ITEM 203, EMBANKMENT, SACRIFICIAL LAYER, 230 CU YD

PART B CONTRACTOR SHALL REMOVE EXCESS EARTHWORK TO THE PLAN SUBGRADE ELEVATION. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE BID SUMMARY:
 ITEM 203, EXCAVATION, REMOVE 12" SACRIFICIAL LAYER FROM PART A, 230 CU YD

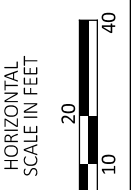
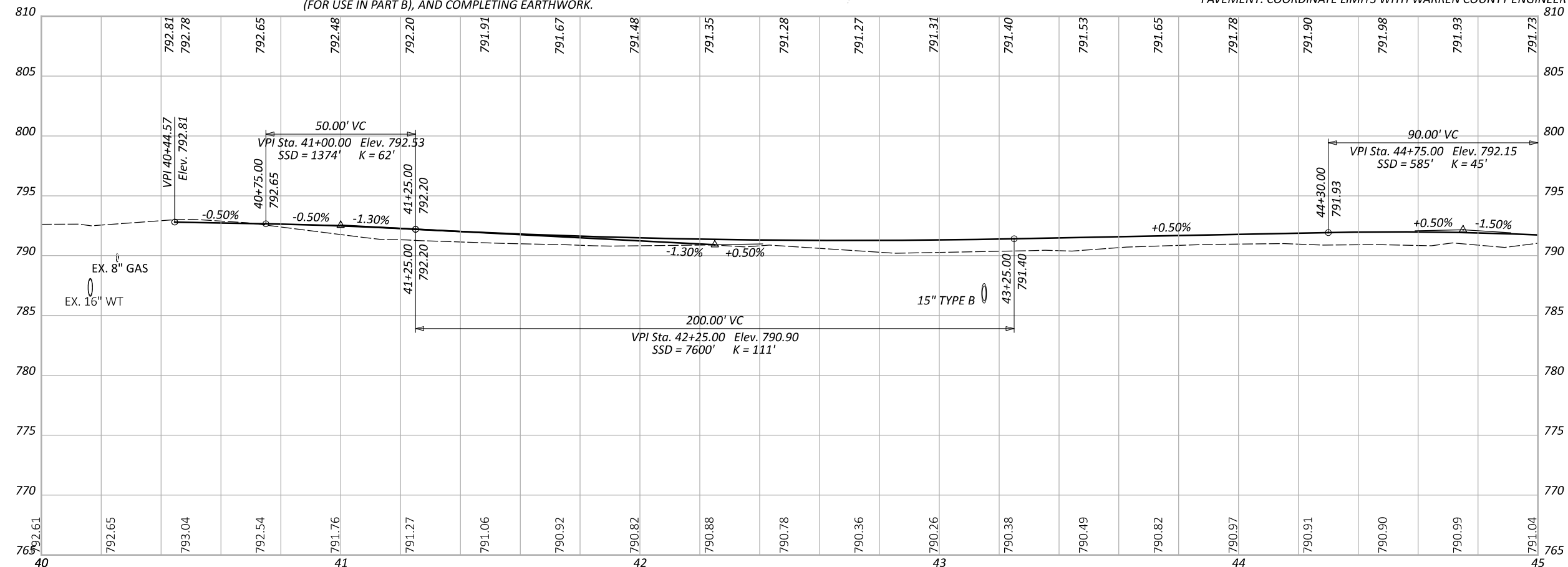
Sheet Totals		
Seeding	Cut	Fill
.	.	.

SHEET	TOTAL
23	78



A PART A INCLUDES CLEARING AND GRUBBING THE SITE WITHIN THE CONSTRUCTION LIMITS, STOCKPILING TOPSOIL (FOR USE IN PART B), AND COMPLETING EARTHWORK.

NOTE: LIGHTING CONDUIT IS 2" UNDER TREE LAWN, 3" UNDER PAVEMENT. COORDINATE LIMITS WITH WARREN COUNTY ENGINEER

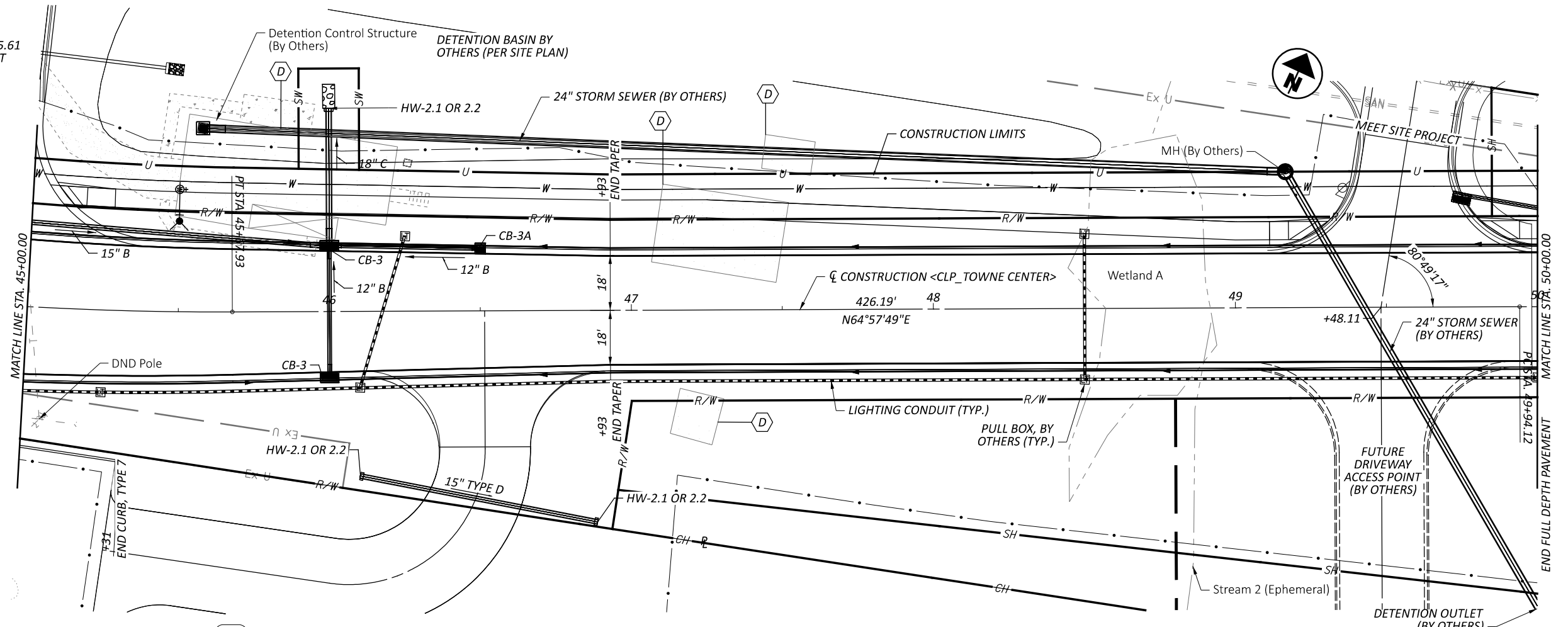


PLAN AND PROFILE - TOWNE CENTER BLVD
 STA 40+00 TO STA 45+00

DESIGN AGENCY	
DESIGNER	
LDW	
REVIEWER	
JWB 12/23/22	
PROJECT ID	
22004451.00	
SHEET	TOTAL
24	78

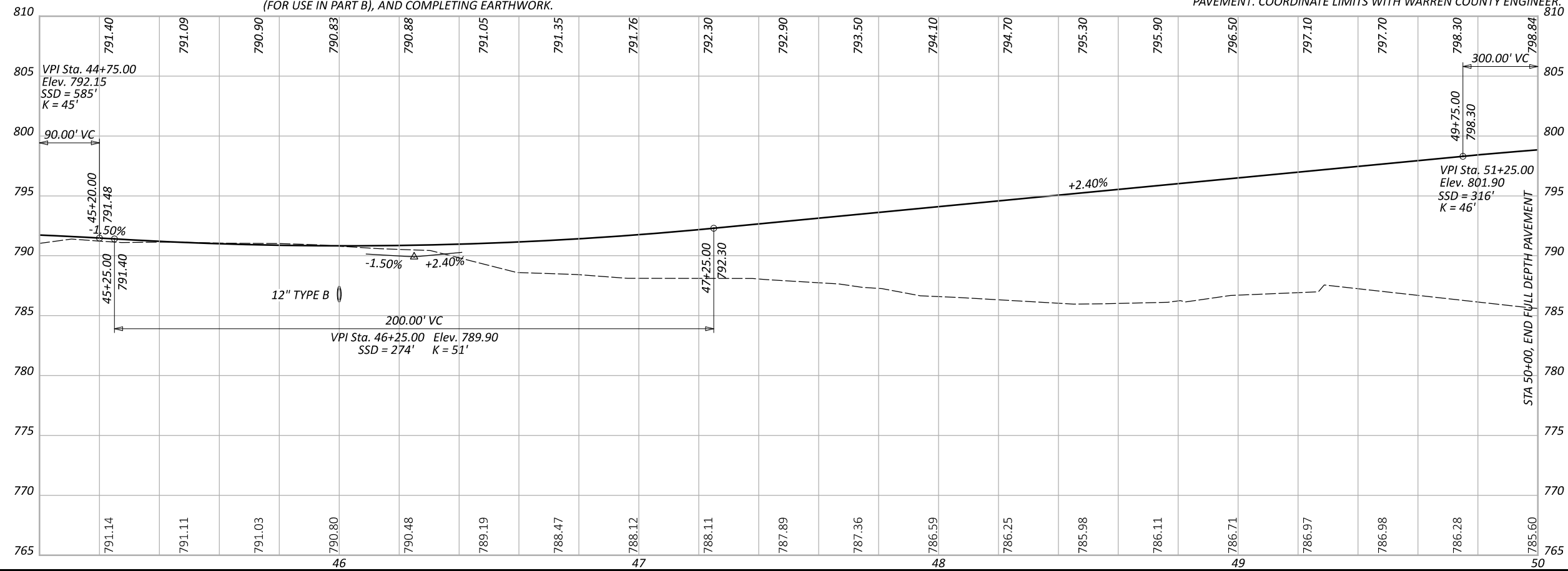
(D) DEMOLISH EXISTING STRUCTURE (A)

CURVE DATA
 P.I. = STA. 44+95.61
 $\Delta = 07^{\circ}13'59''$ LT
 $D_c = 04^{\circ}59'59''$
 $R = 1,146.00'$
 $T = 72.43'$
 $L = 144.67'$
 $E = 2.29'$



(A) PART A WORK INCLUDES CLEARING AND GRUBBING THE SITE WITHIN THE CONSTRUCTION LIMITS, STOCKPILING TOPSOIL (FOR USE IN PART B), AND COMPLETING EARTHWORK.

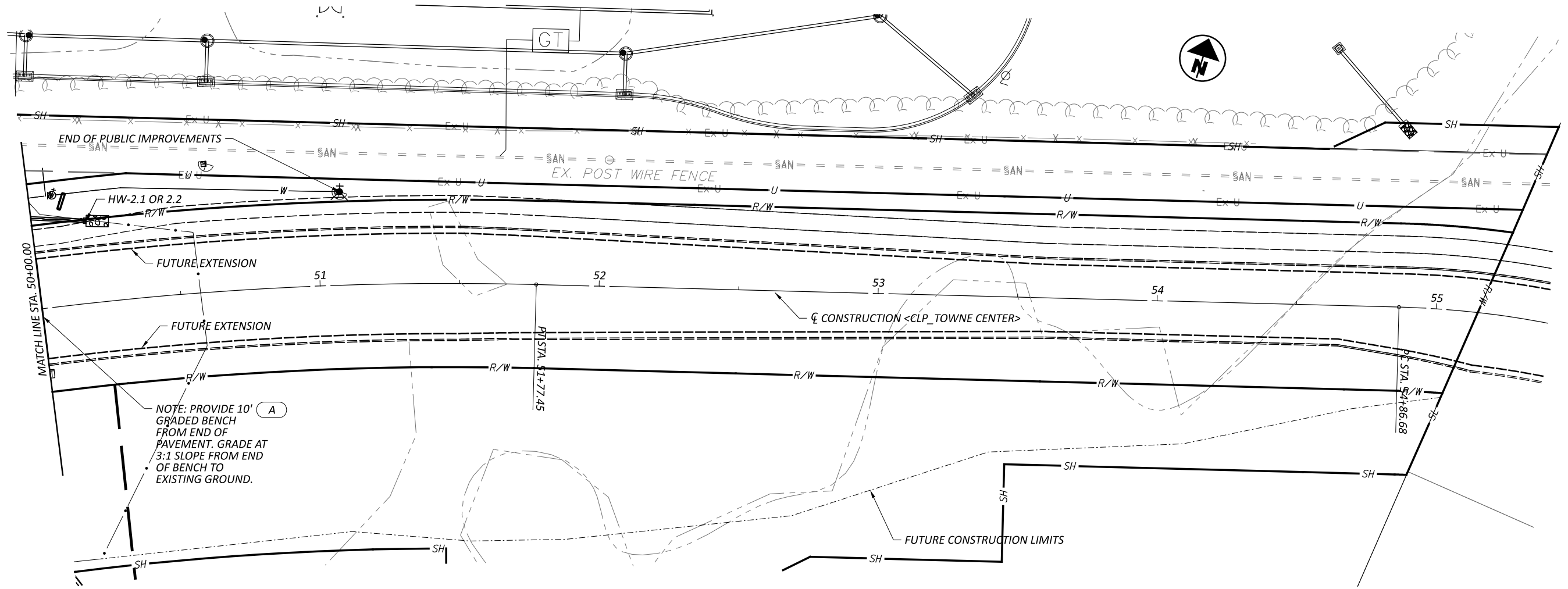
NOTE: LIGHTING CONDUIT IS 2" UNDER TREE LAWN, 3" UNDER PAVEMENT. COORDINATE LIMITS WITH WARREN COUNTY ENGINEER.



PLAN AND PROFILE - TOWNE CENTER BLVD
 STA 45+00 TO STA 50+00

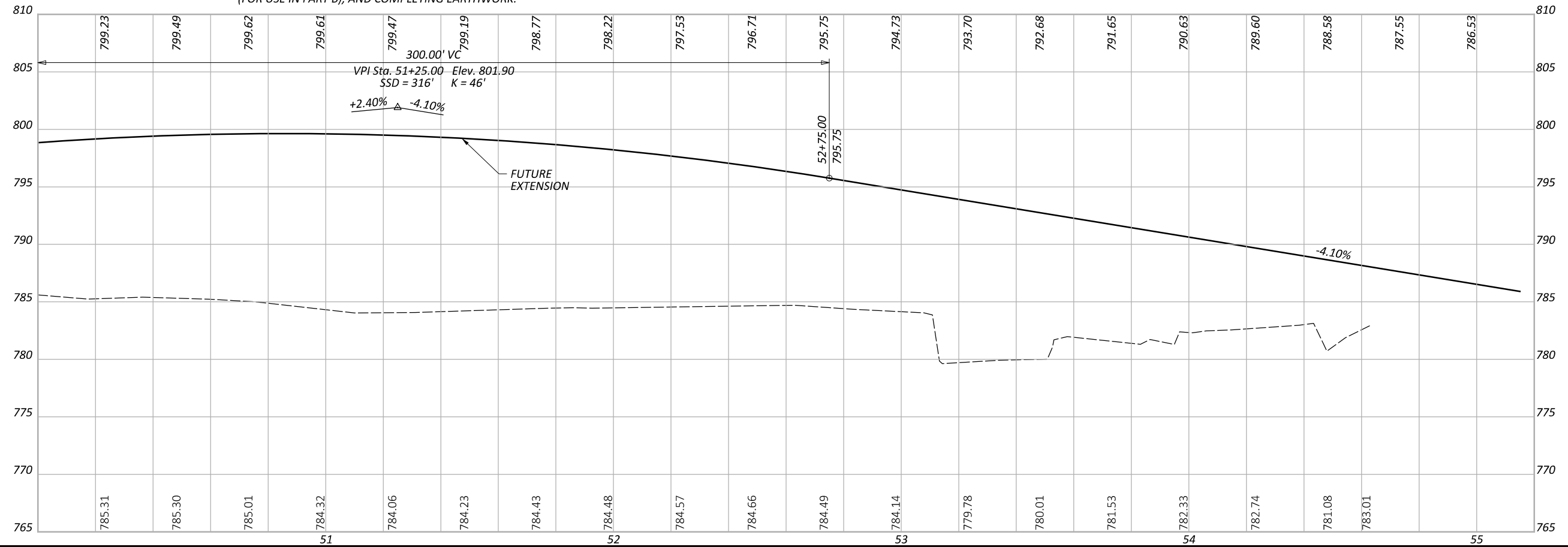
DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING, INC.
 84 REMICKS BOULEVARD
 BIRMINGHAM, AL 35202-2130
 www.cmteng.com

DESIGNER
LDW
 REVIEWER
JWB 12/23/22
 PROJECT ID
22004451.00
 SHEET TOTAL
 25 78



NOTE: PROVIDE 10' GRADED BENCH FROM END OF PAVEMENT. GRADE AT 3:1 SLOPE FROM END OF BENCH TO EXISTING GROUND.

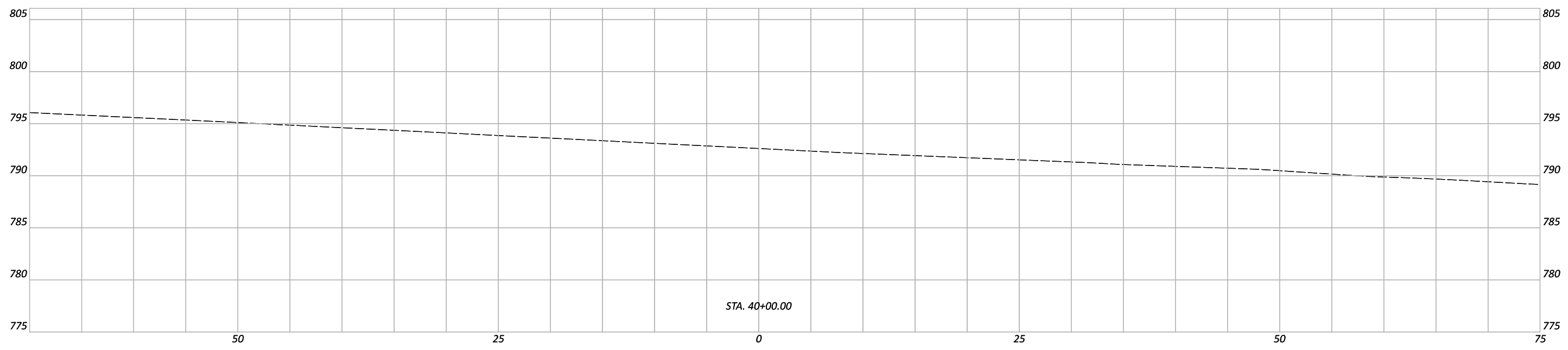
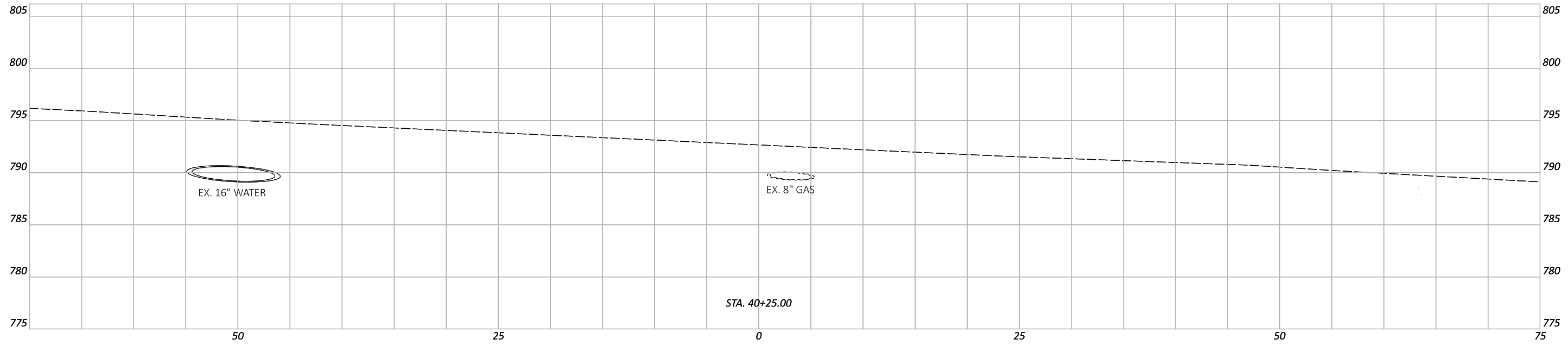
A PART A WORK INCLUDES CLEARING AND GRUBBING THE SITE WITHIN THE CONSTRUCTION LIMITS, STOCKPILING TOPSOIL (FOR USE IN PART B), AND COMPLETING EARTHWORK.



PLAN AND PROFILE - TOWNE CENTER BLVD
 STA 50+00 TO STA 55+25

DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING
 84 REMICKS BOULEVARD
 BIRMINGHAM, AL 35202-2500
 www.cmtengr.com

DESIGNER
LDW
 REVIEWER
JWB 12/23/22
 PROJECT ID
22004451.00
 SHEET TOTAL
 26 78



CROSS SECTIONS - TOWNE CENTER BLVD
 STA 40+00 TO STA 40+25

DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING
 84 REMICK BOULEVARD
 BIRMINGHAM, AL 35202-2100
 www.cmteng.com

DESIGNER
 LDW

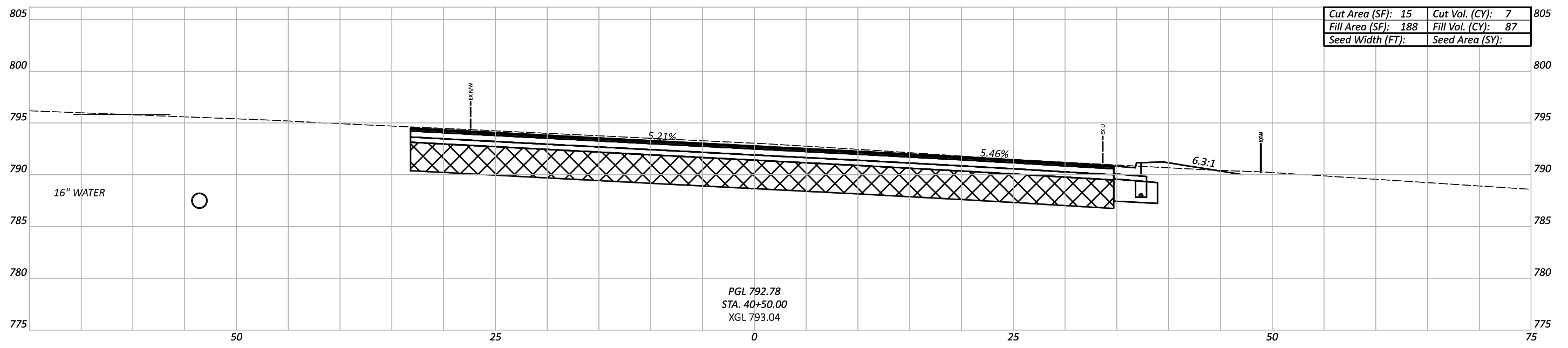
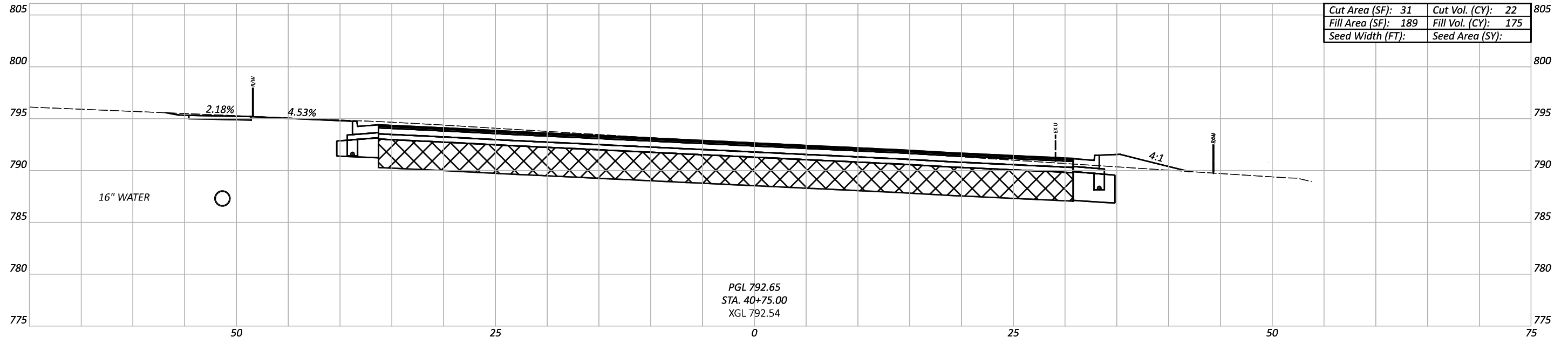
REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

Sheet Totals		
Seeding	Cut	Fill
.	.	.

SHEET	TOTAL
27	78

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - TOWNE CENTER BLVD
 STA 40+50 TO STA 40+75

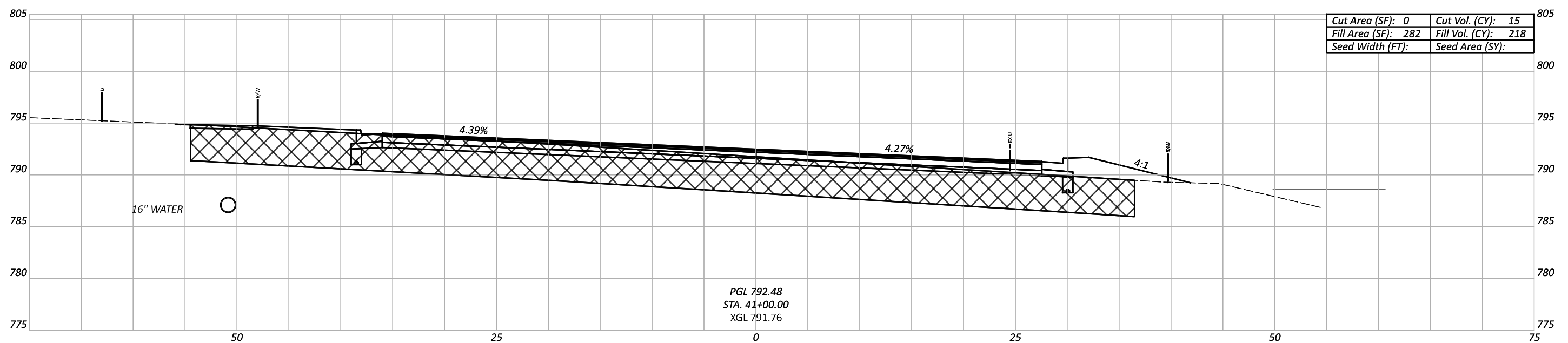
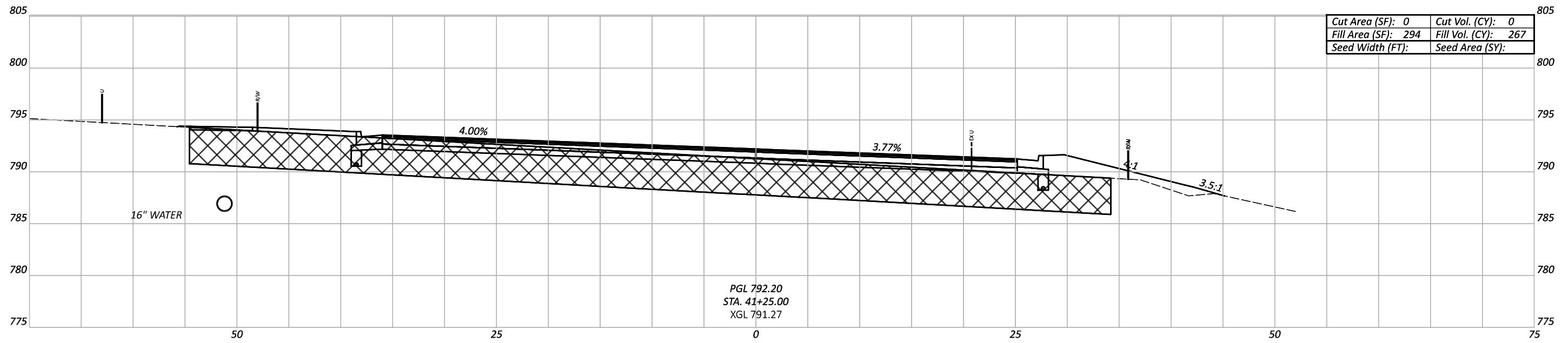
DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING, INC.
 84 BEAUMONT BOULEVARD
 BIRMINGHAM, AL 35202-2930
 www.cmteng.com

DESIGNER
 LDW
 REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	28	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - TOWNE CENTER BLVD
 STA 41+00 TO STA 41+25

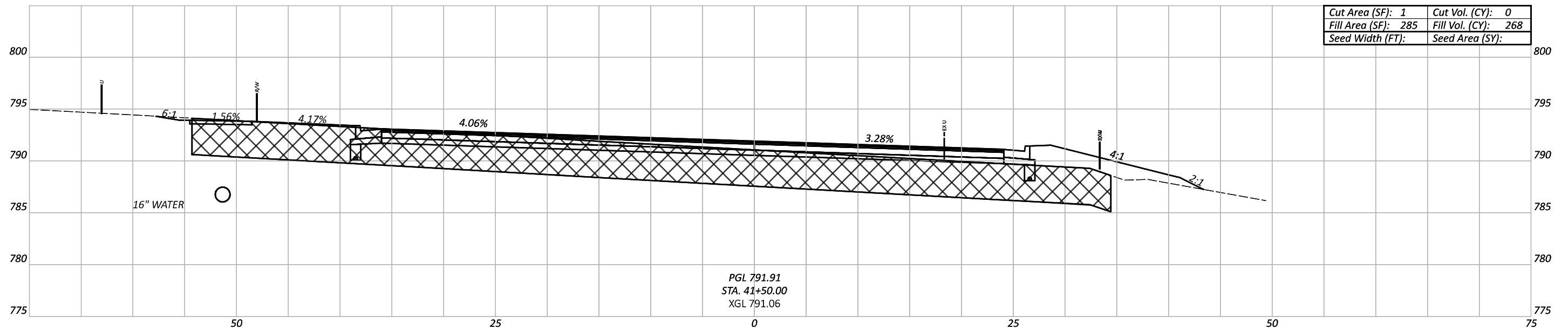
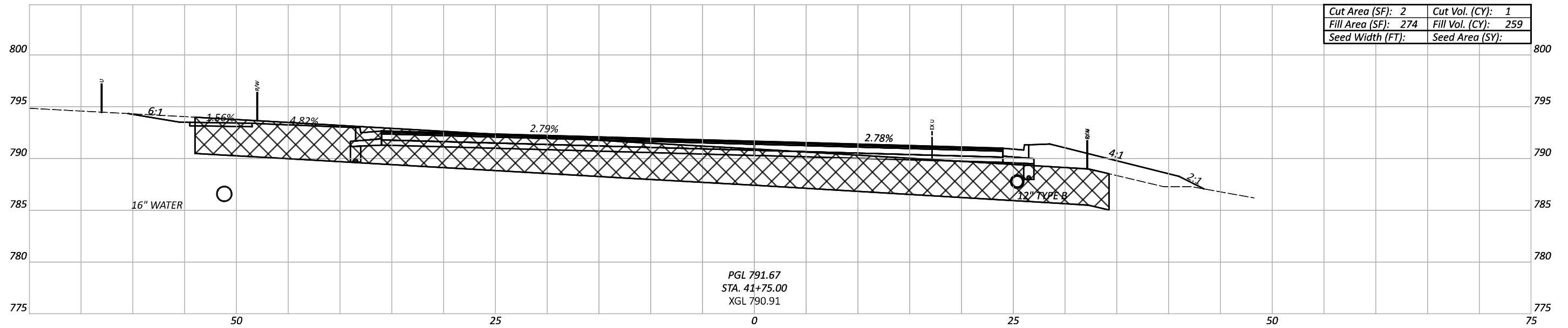
DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING
 84 BEAUMONT BOULEVARD
 BIRMINGHAM, AL 35202-2130
 www.cmtengr.com

DESIGNER
 LDW
 REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

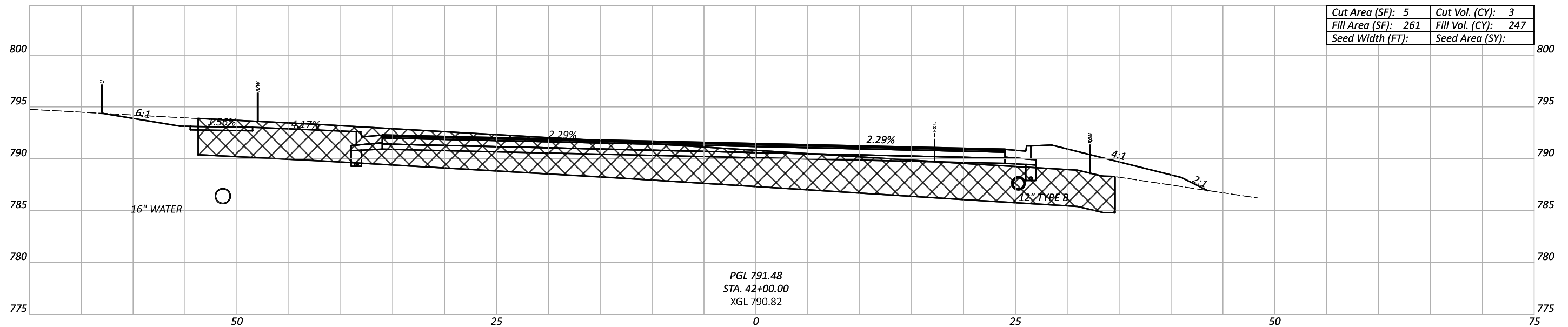
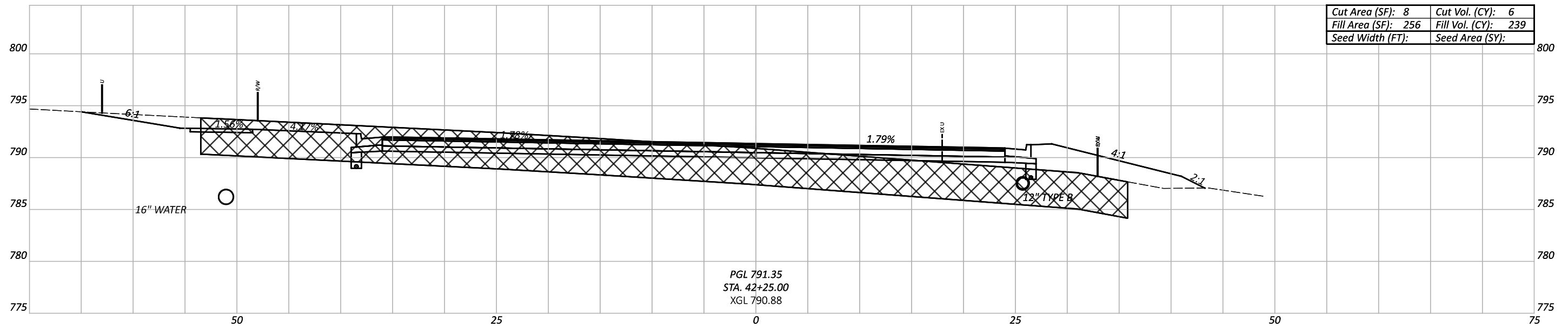
Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	29	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	SHEET	TOTAL
.	.	.	30	78

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - TOWNE CENTER BLVD
 STA 42+00 TO STA 42+25

DESIGN AGENCY
CMT
 CONSULTANTS
 84 BEAUMONT BOULEVARD
 BIRMINGHAM, AL 35202-2130
 www.cmteng.com

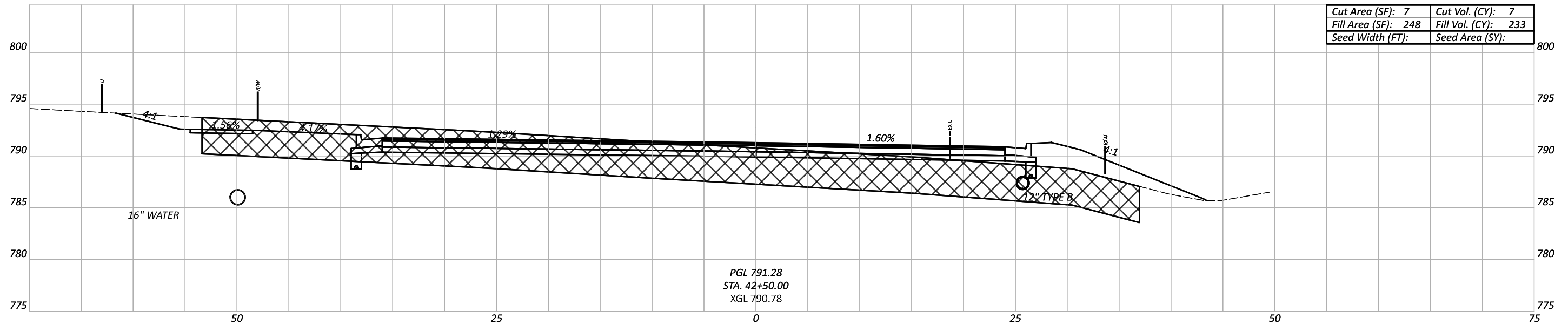
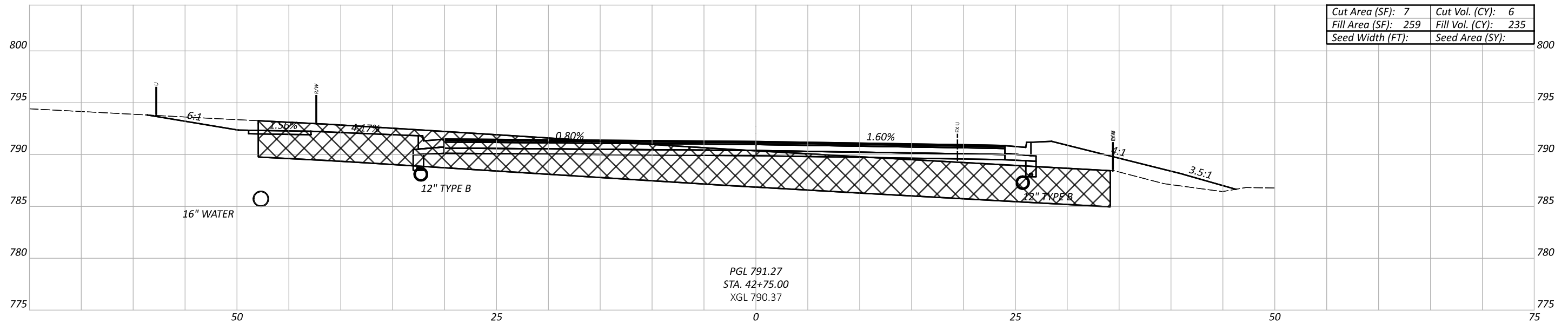
DESIGNER
 LDW

REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

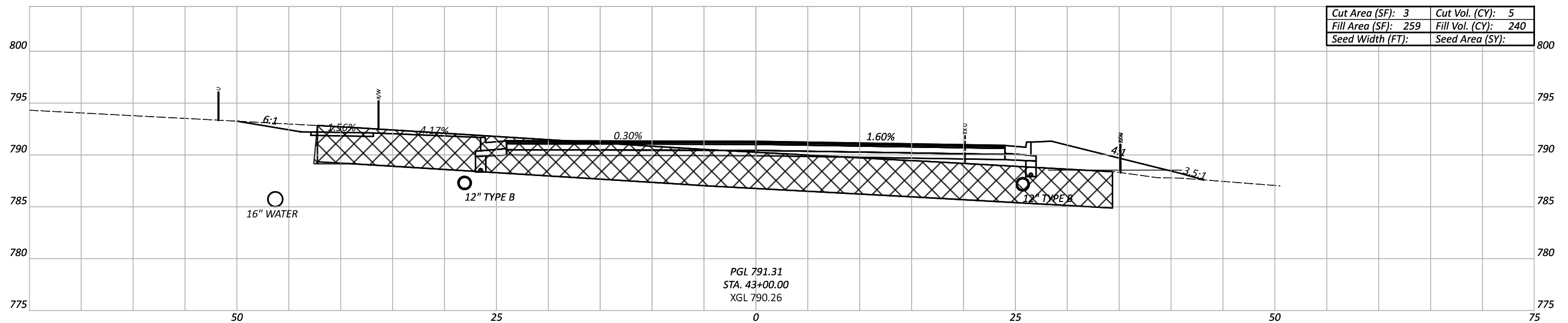
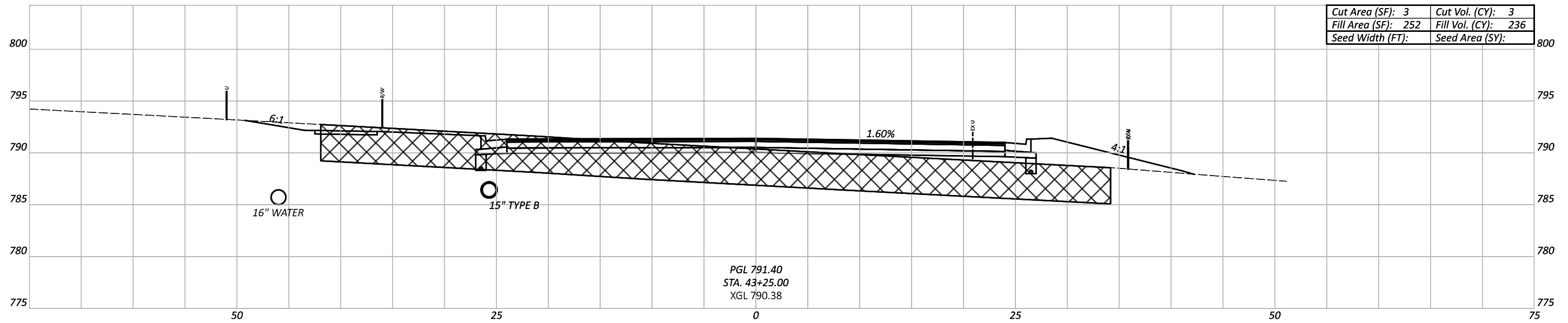
Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
.	.	.	31	78

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	32	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - TOWNE CENTER BLVD
 STA 43+00 TO STA 43+25

DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING
 84 BEAUMONT BOULEVARD
 BIRMINGHAM, AL 35202-2130
 www.cmteng.com

DESIGNER
 LDW

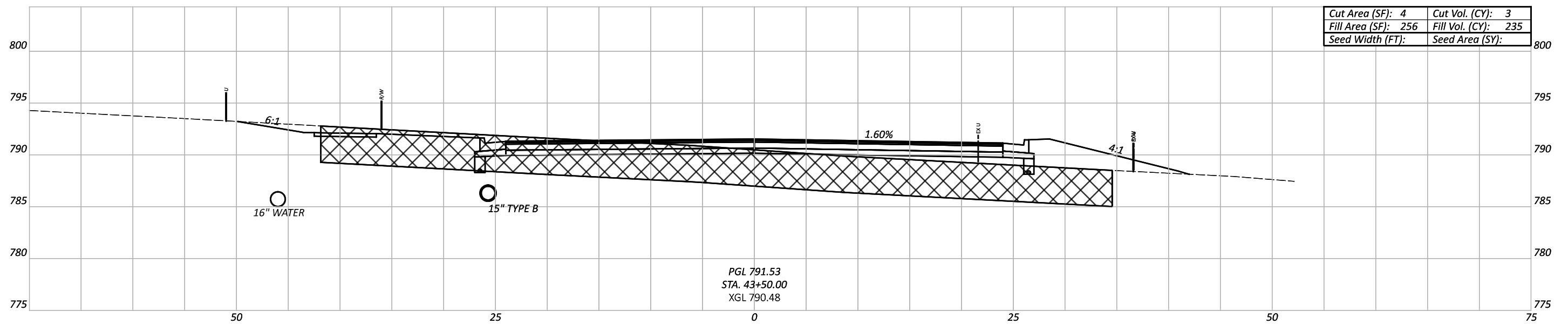
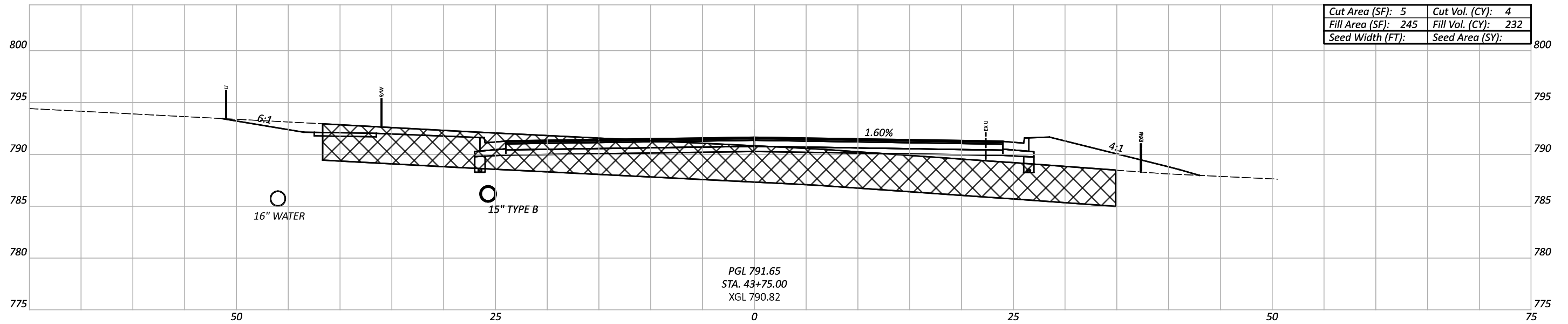
REVIEWER
 JWB

DATE
 12/23/22

PROJECT ID
 22004451.00

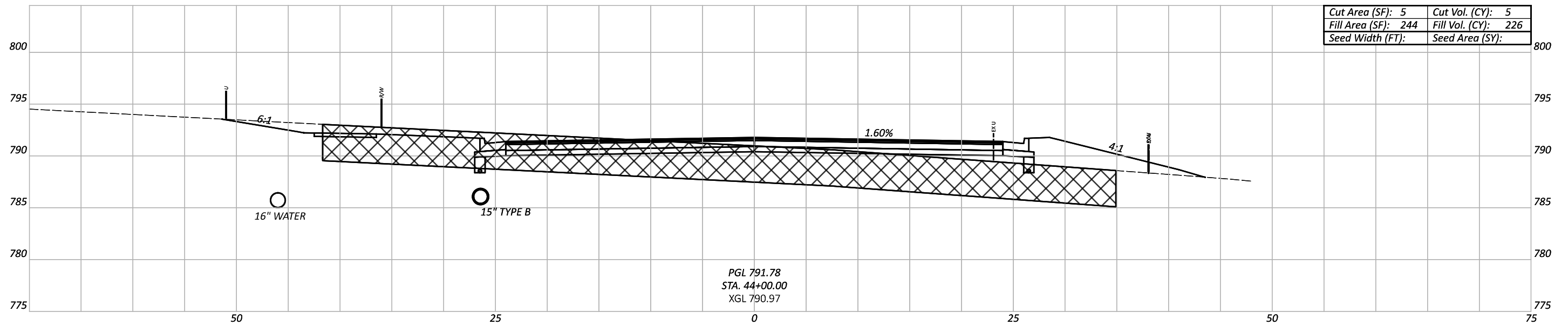
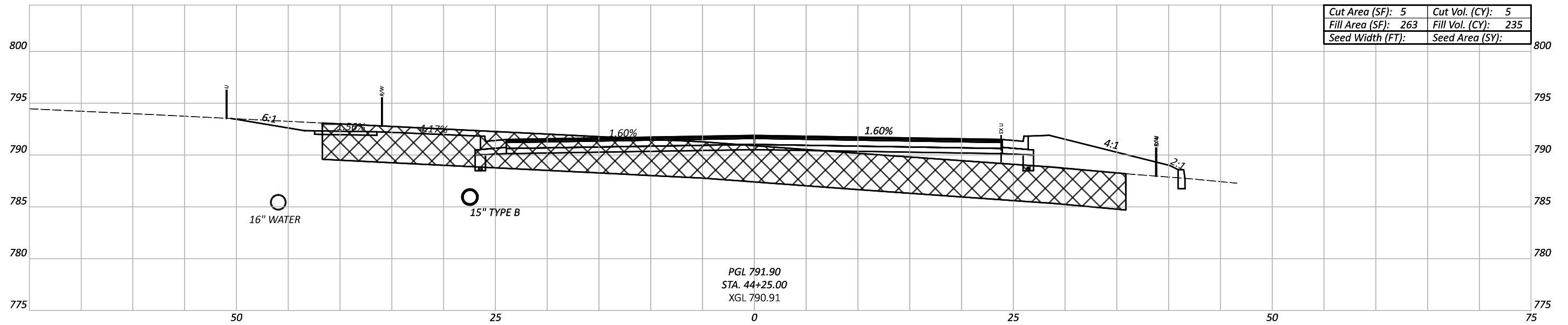
Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	33	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



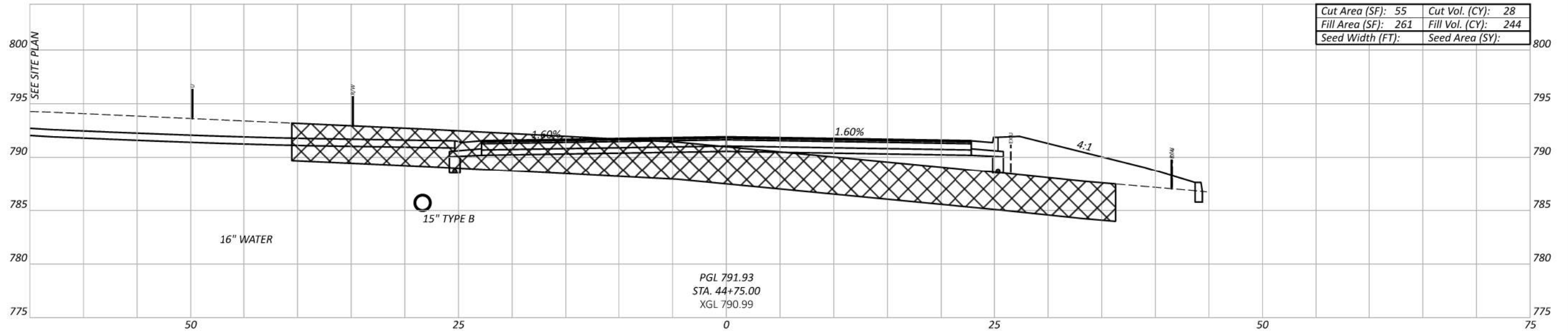
Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	34	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.

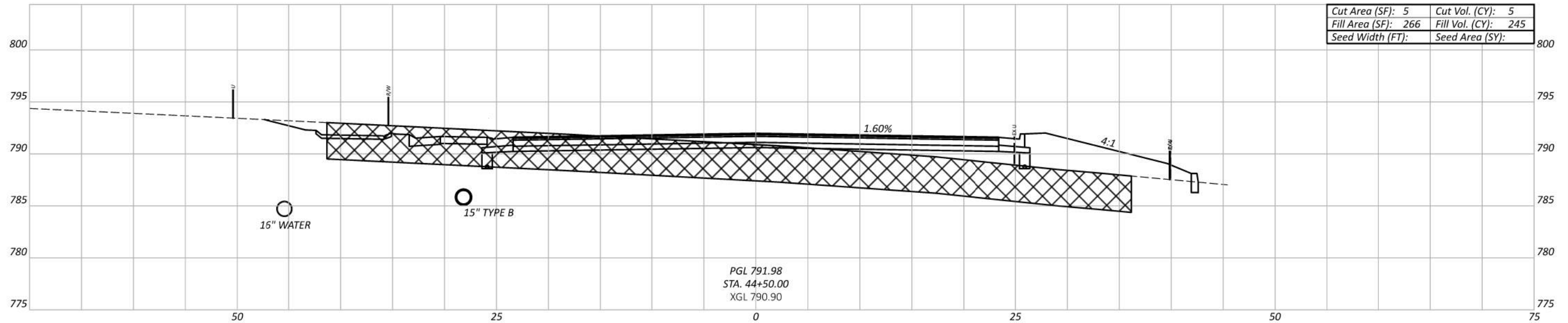


Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	35	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



PGL 791.93
 STA. 44+75.00
 XGL 790.99



PGL 791.98
 STA. 44+50.00
 XGL 790.90

CROSS SECTIONS - TOWNE CENTER BLVD
 STA 44+50 TO STA 44+75

DESIGN AGENCY
CMT
 CONSTRUCTION MANAGEMENT
 CONSULTANTS & ENGINEERS
 24 FRENCH BOULEVARD
 SUITE 100
 WARREN, OHIO 44122-2101
 www.cmteng.com

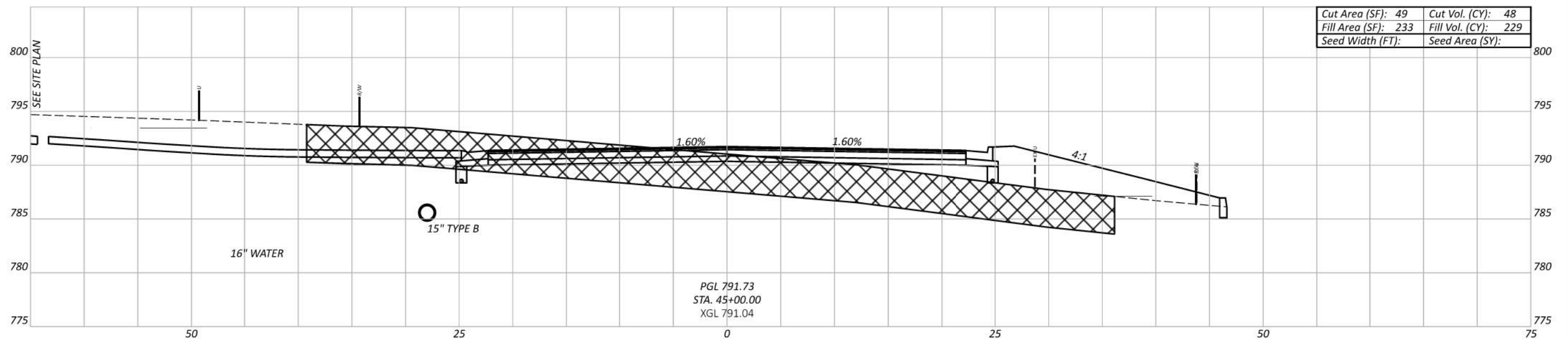
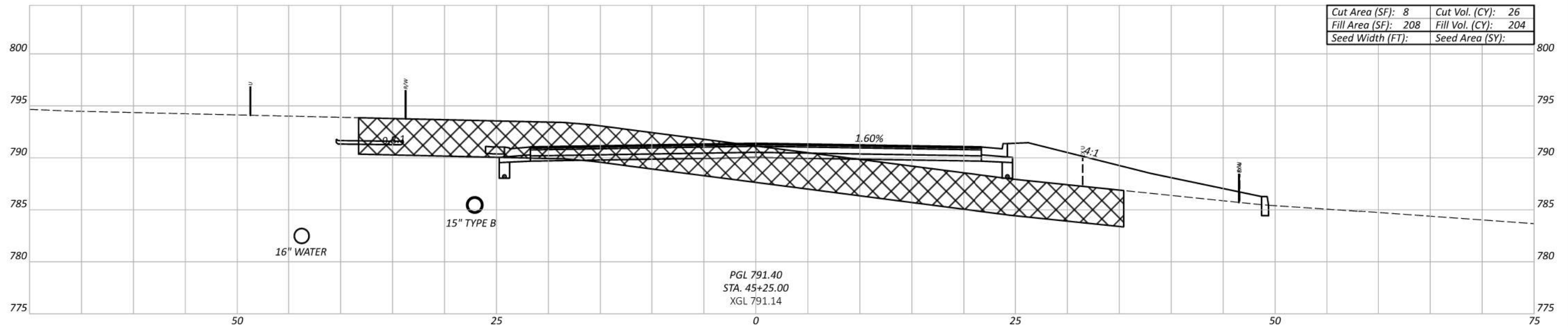
DESIGNER
 LDW

REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

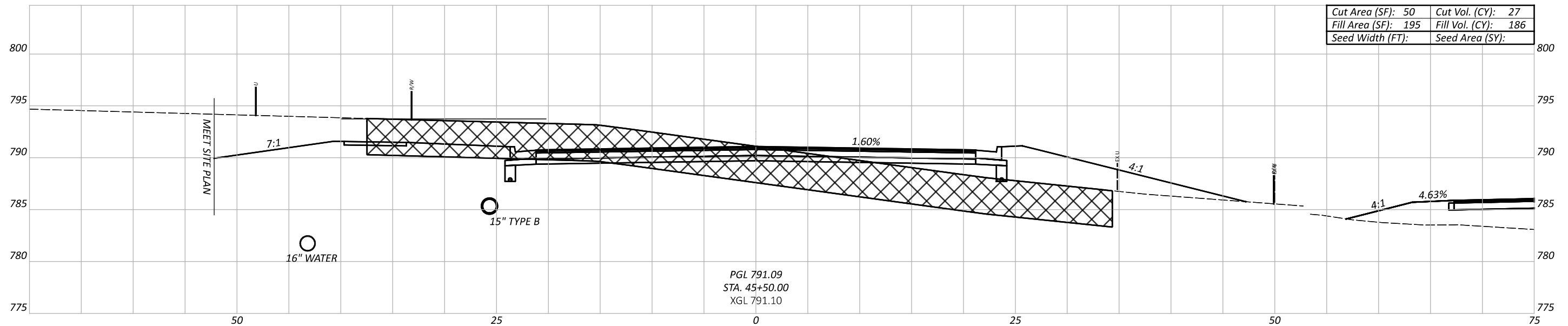
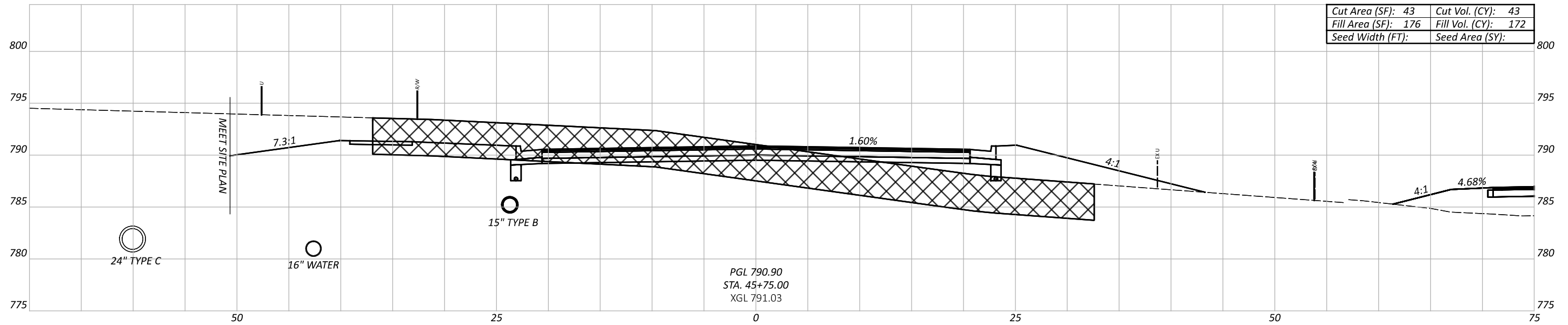
Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	SHEET	TOTAL
.	.	.	36	78

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



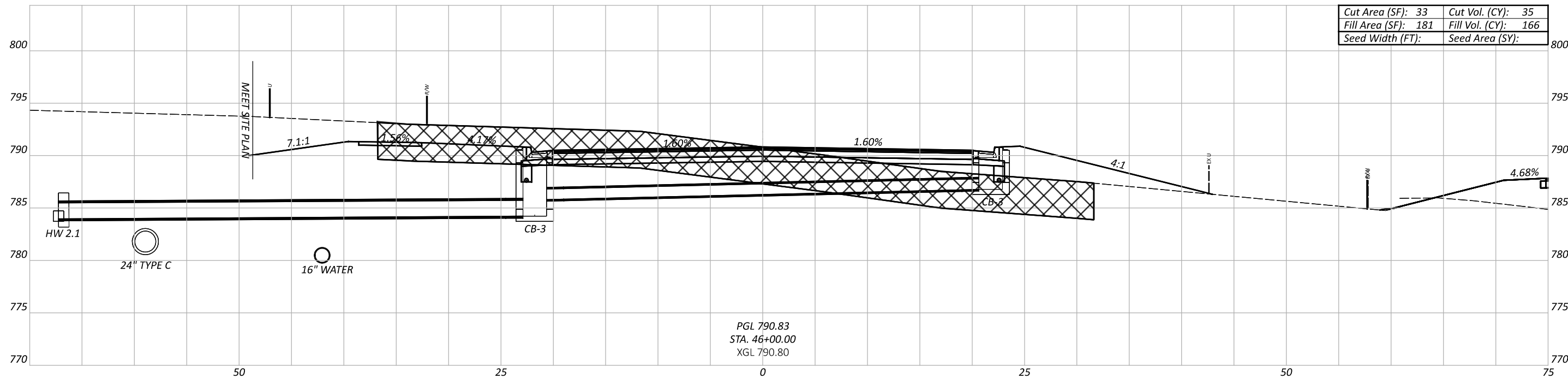
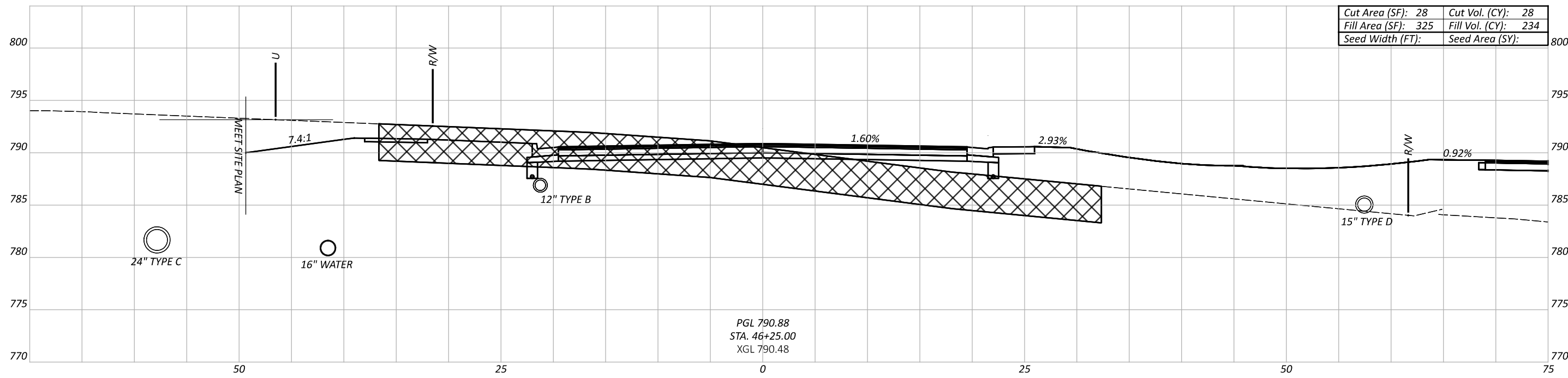
Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	37	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill	38	78

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



Sheet Totals			22004451.00	
Seeding	Cut	Fill	SHEET	TOTAL
.	.	.	39	78

DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING
 84 REMICK BOULEVARD
 BIRMINGHAM, AL 35202-2130
 WWW.CMTENR.COM

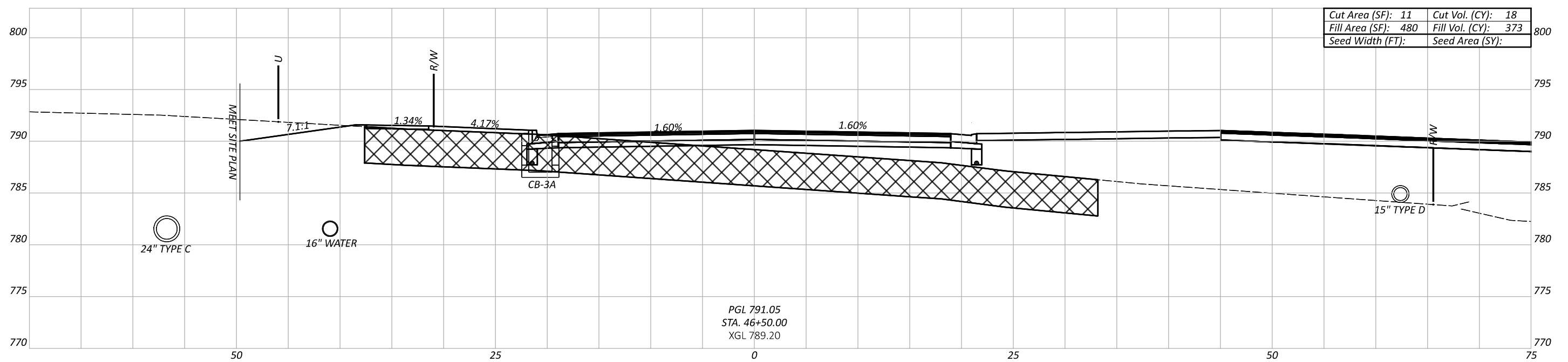
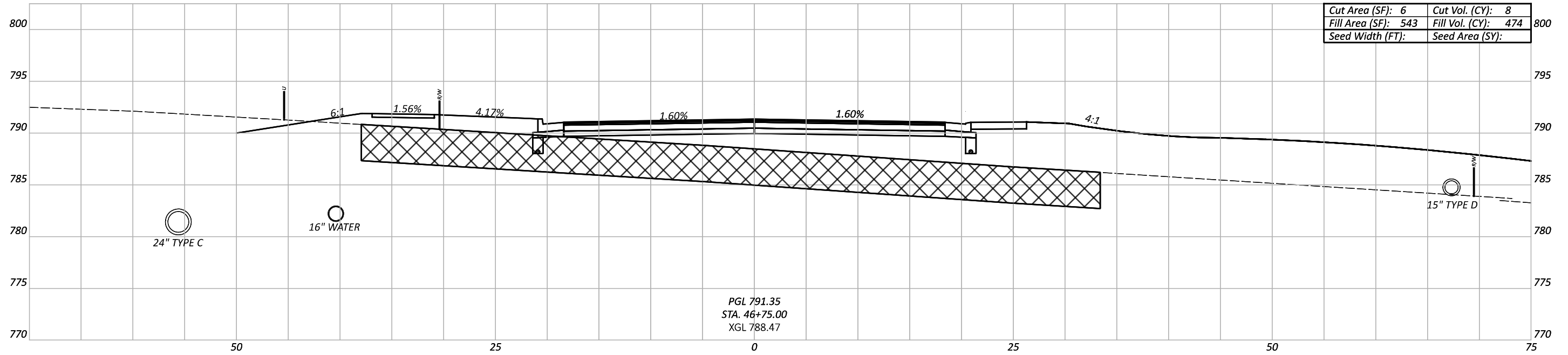
DESIGNER
 LDW

REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

CROSS SECTIONS - TOWNE CENTER BLVD
 STA 46+00 TO STA 46+25

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - TOWNE CENTER BLVD
 STA 46+50 TO STA 46+75

DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING
 84 REARICK BOULEVARD
 BIRMINGHAM, AL 35202-2930
 WWW.CMTENR.COM

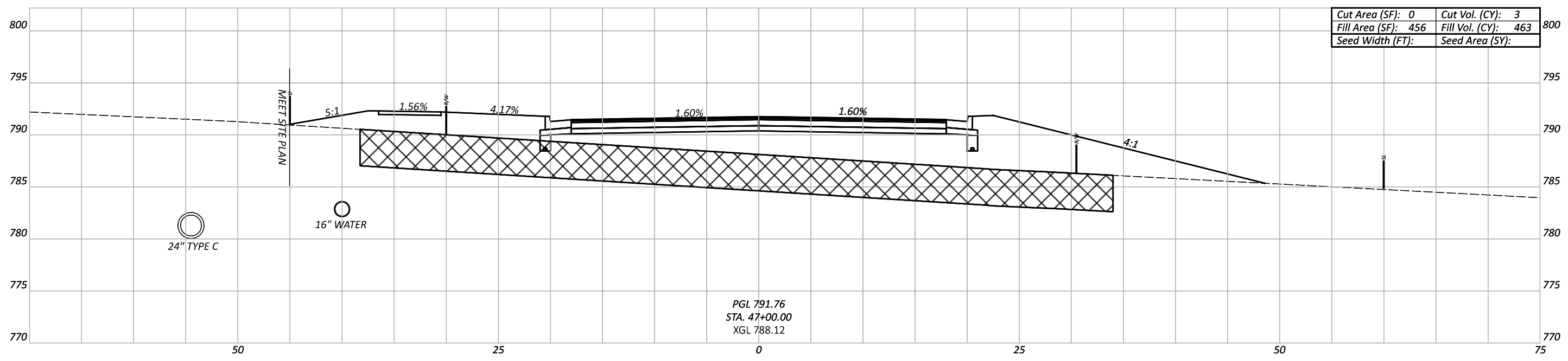
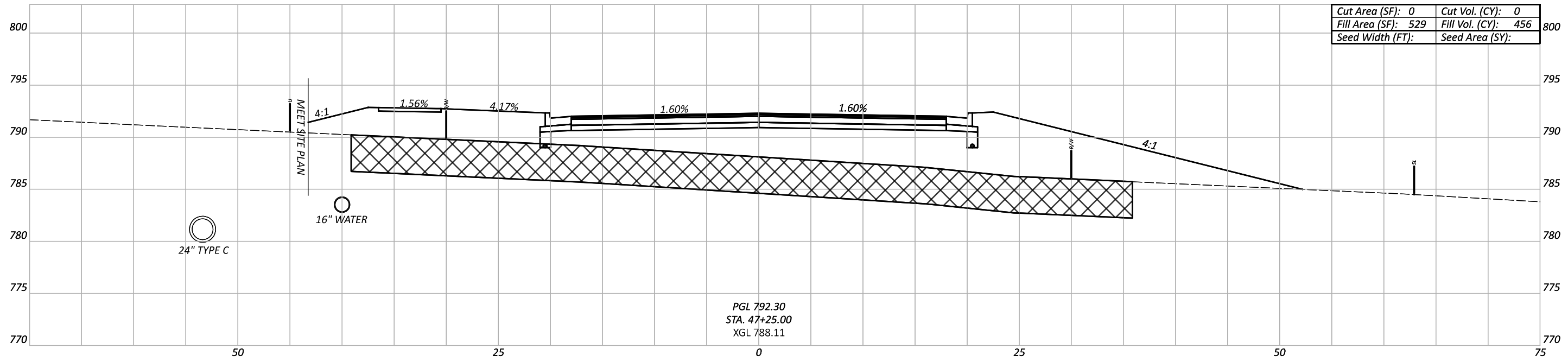
DESIGNER
 LDW

REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	40	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - TOWNE CENTER BLVD
 STA 47+00 TO STA 47+25

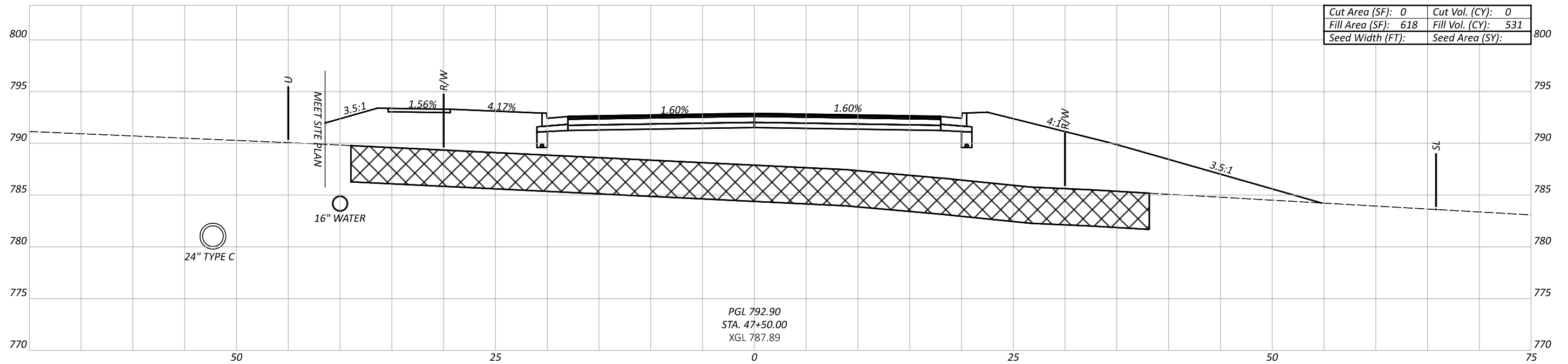
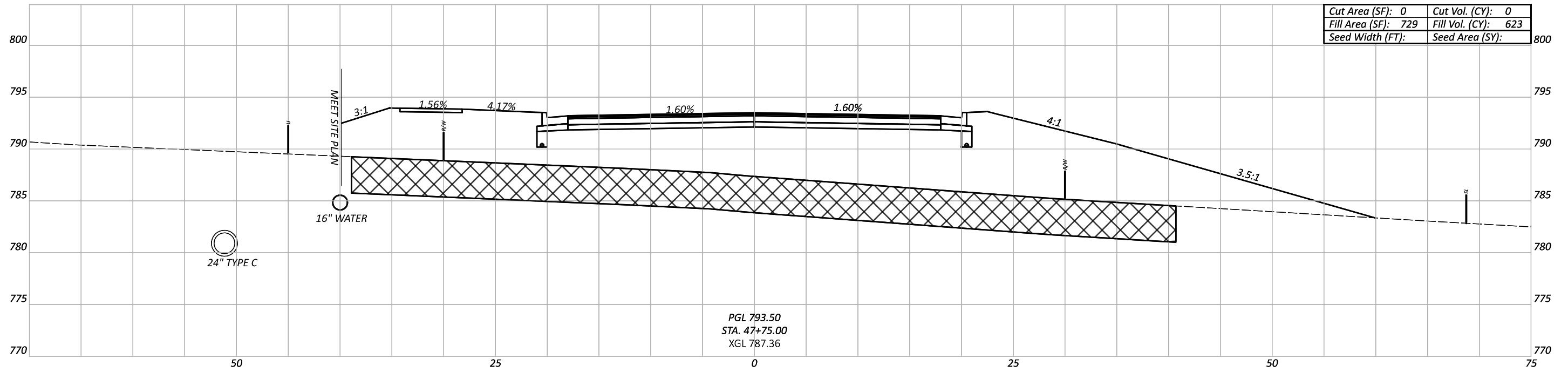
DESIGN AGENCY
CMT
 CONSULTING
 ENGINEERS
 84 REARICK BOULEVARD
 BIRMINGHAM, AL 35202-2130
 WWW.CMTENR.COM

DESIGNER
 LDW
 REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	41	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - TOWNE CENTER BLVD
 STA 47+50 TO STA 47+75

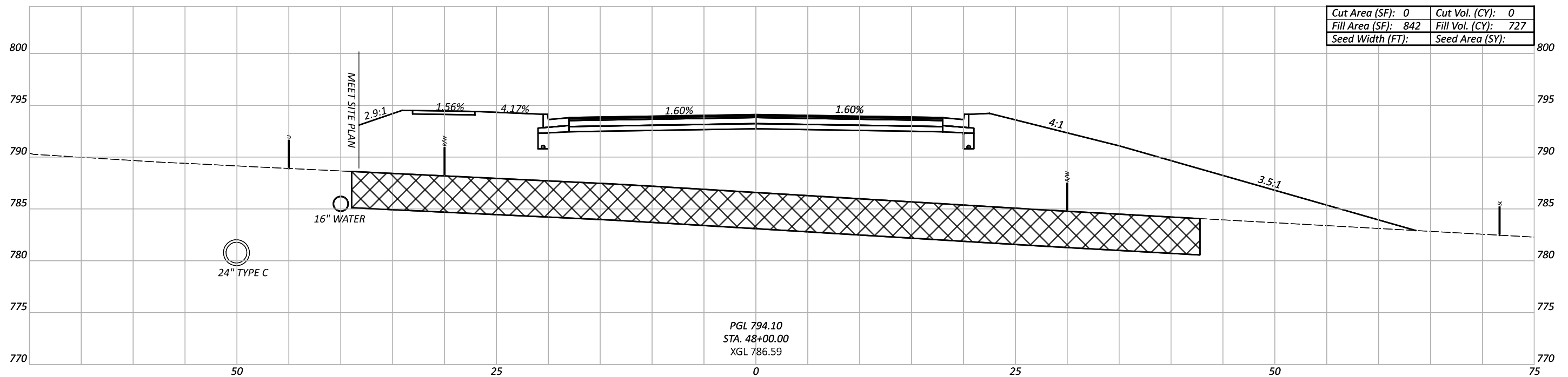
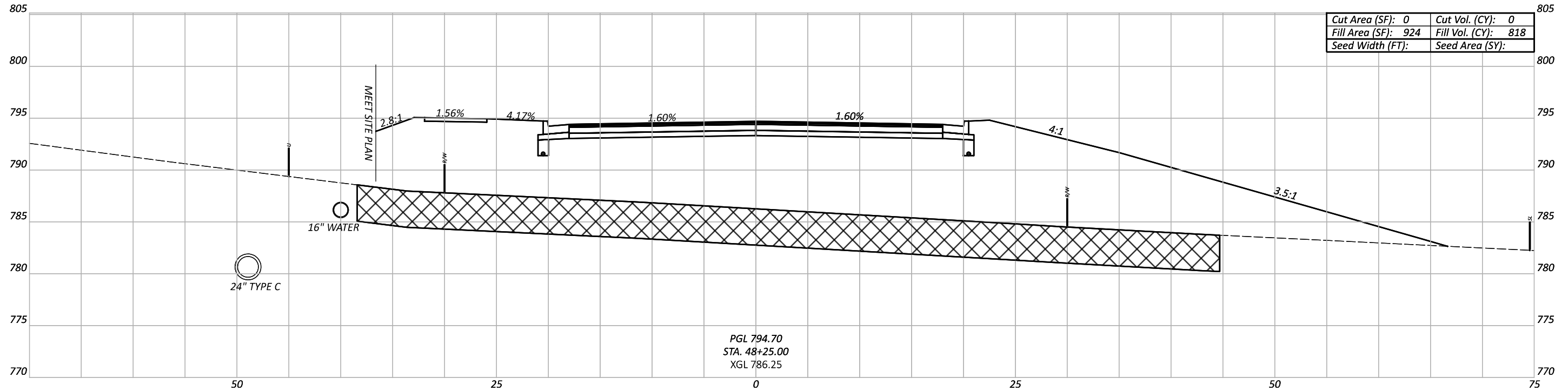
DESIGN AGENCY
CMT
 CIVIL INC.
 84 REARICK BOULEVARD
 BIRMINGHAM, AL 35202
 PH: (205) 987-2100
 WWW.CMTENR.COM

DESIGNER
 LDW
 REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

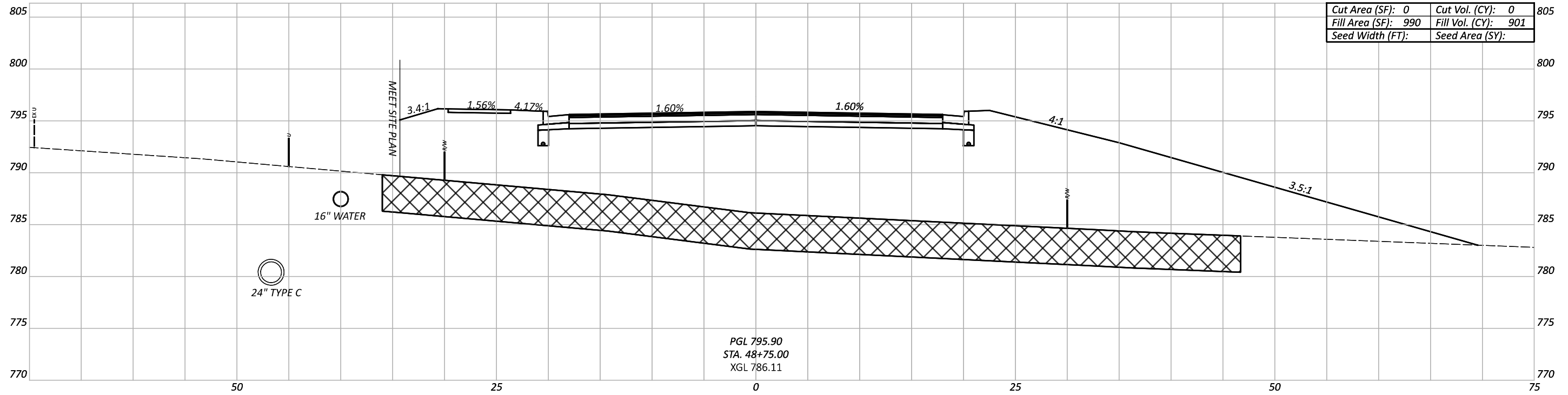
Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	42	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



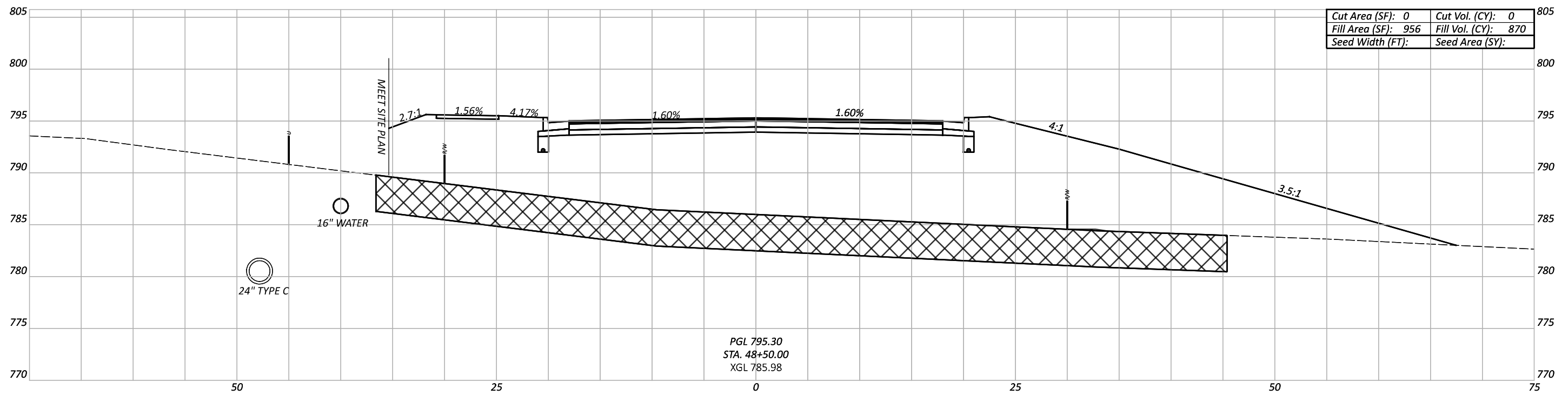
Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	43	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	990	Fill Vol. (CY):	901
Seed Width (FT):		Seed Area (SY):	

PGL 795.90
 STA. 48+75.00
 XGL 786.11



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	956	Fill Vol. (CY):	870
Seed Width (FT):		Seed Area (SY):	

PGL 795.30
 STA. 48+50.00
 XGL 785.98

CROSS SECTIONS - TOWNE CENTER BLVD
 STA 48+50 TO STA 48+75

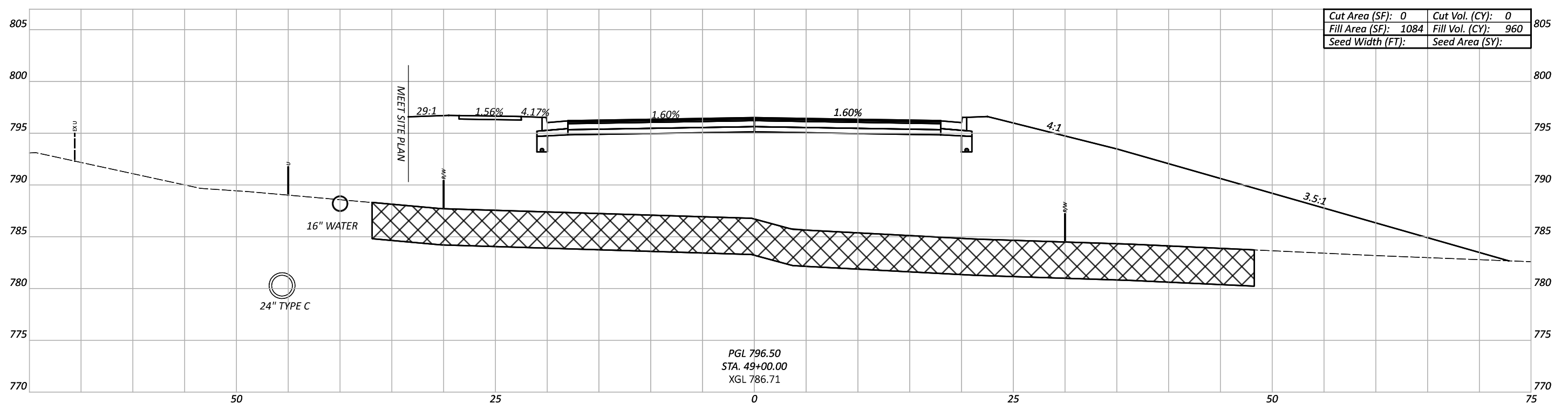
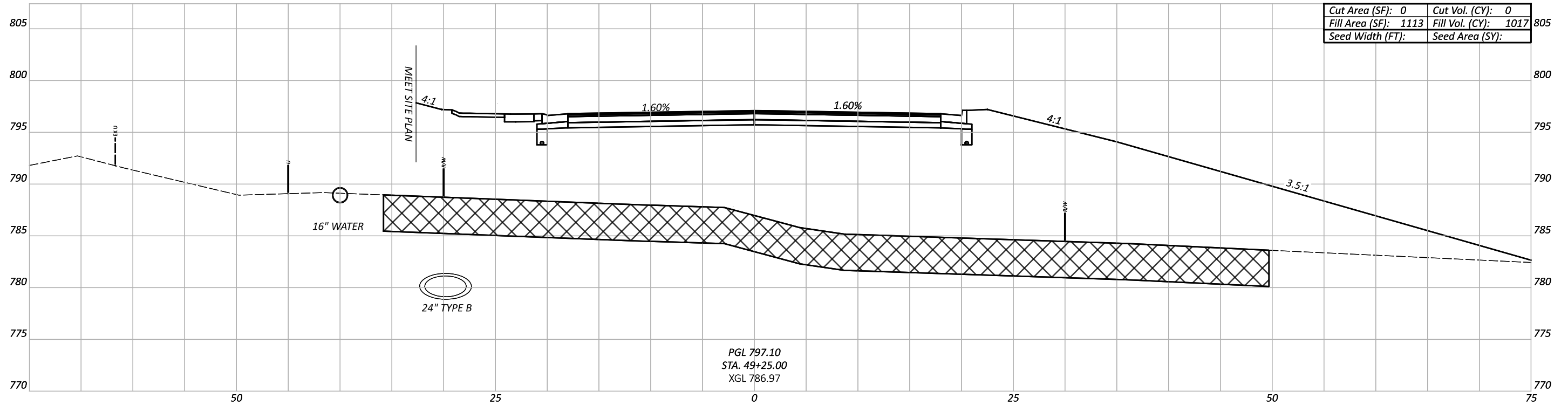
DESIGN AGENCY
CMT
 CONSULTING
 ENGINEERS
 84 REMOND BOULEVARD
 BIRMINGHAM, AL 35202
 PH: (205) 987-2100
 WWW.CMTENG.COM

DESIGNER
 LDW
 REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

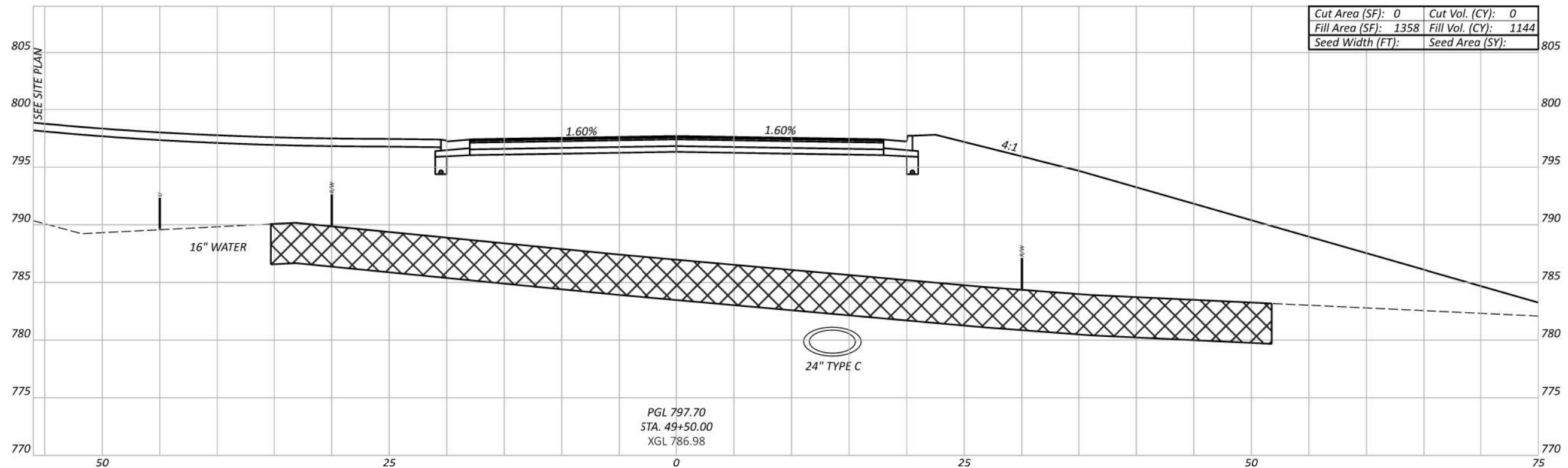
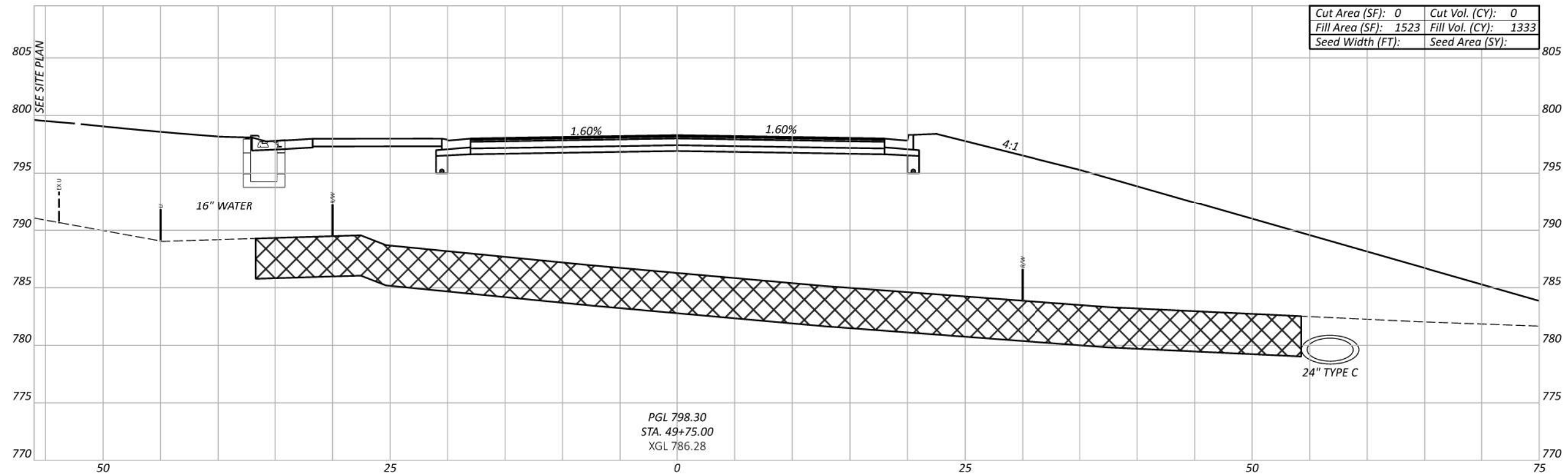
Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	44	78
.	.	.		

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



Sheet Totals			22004451.00
Seeding	Cut	Fill	SHEET TOTAL
.	.	.	45 78

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - TOWNE CENTER BLVD
 STA 49+50 TO STA 49+75

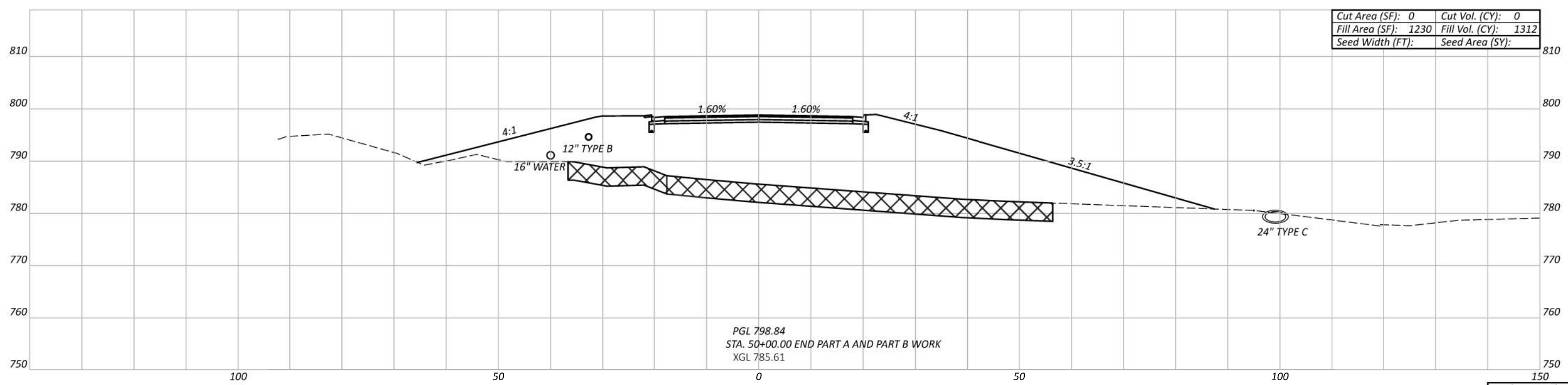
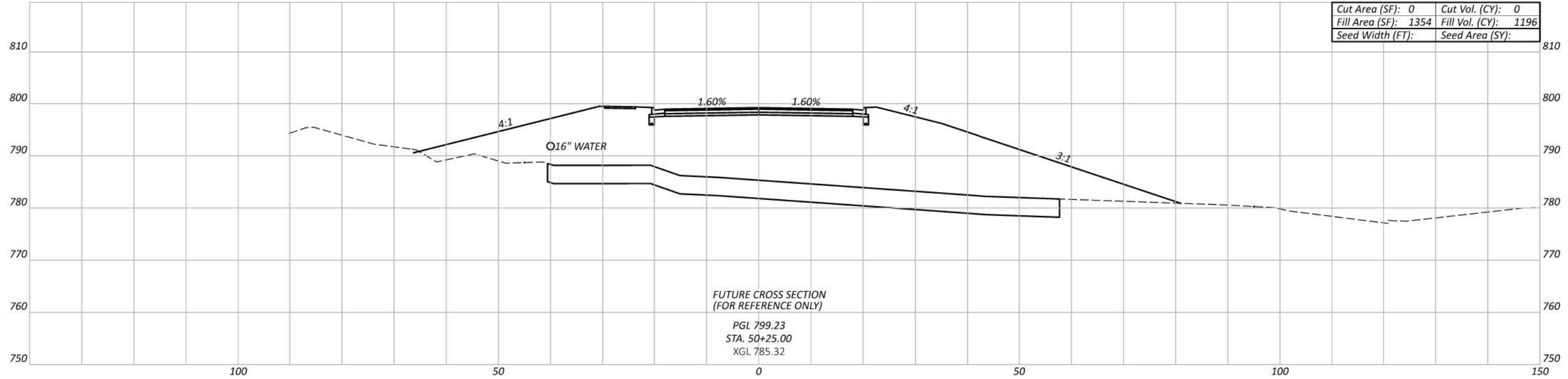
DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING
 24 FRENCH BOULEVARD
 SUITE 200
 WARREN, OHIO 44508
 www.cmteng.com

DESIGNER
 LDW
 REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	46	78

A PART A WORK INCLUDES UNDERCUT AND REPLACEMENT, AND/OR CHEMICAL STABILIZATION AS DIRECTED BY THE ENGINEER. PART A WORK ALSO INCLUDES COMPLETING EARTHWORK TO THE PLAN SUBGRADE ELEVATION AND THE INSTALLATION OF A 12" SACRIFICIAL EARTHWORK CAP WITHIN THE LIMITS OF THE CURBS. GRADE THE SACRIFICIAL CAP TO PROVIDE POSITIVE DRAINAGE.



CROSS SECTIONS - TOWNE CENTER BLVD
 STA. 50+00 TO STA. 50+25

DESIGN AGENCY
CMT
 CONSULTING & ENGINEERING
 24 FRENCH BOULEVARD
 SUITE 200
 WARREN, OHIO 44568
 www.cmteng.com

DESIGNER
 LDW
 REVIEWER
 JWB 12/23/22

PROJECT ID
 22004451.00

Sheet Totals			22004451.00	
Seeding	Cut	Fill	SHEET	TOTAL
			47	78