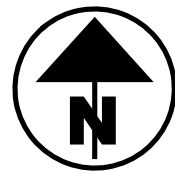


LOCATION MAP

LATITUDE: 40 °15'21" LONGITUDE: 82 °55'41"



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

FOR DESIGN DESIGNATIONS, SEE SHEET 2

ADA DESIGN WAIVERS: NONE REQUIRED

UNDERGROUND UTILITIES

Contact Two Working Days
Before You Dig

Before You Dig

OHIO811. 8-1-1, or 1-800-362-2764

(Non members must be called directly)

PLAN PREPARED BY:
ms consultants, inc.
ENGINEERS, ARCHITECTS & PLANNERS
2321 SCHROCK ROAD
COLUMBUS, OHIO 43229
PHONE (614) 898-7100

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

DEL-71-8.91 (PHASE A)

PART 1

BERKSHIRE TOWNSHIP

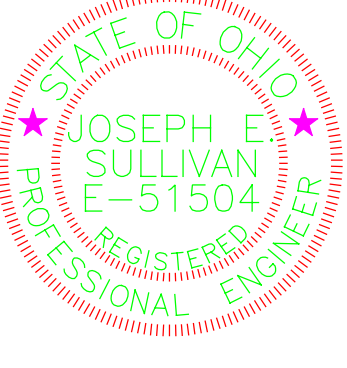

DELAWARE COUNTY

FOR PART 2, SEE DEL-71-8.91 (PHASE A)

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PARTS 1 AND 2

	STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
ENGINEER'S SEAL: ROADWAY	BP-2.1	1/21/22	CB-2-2A, 2B, 2C	7/19/24	ITS-12.10	7/15/22	MT-95.30	7/19/19	TC-41.10	7/19/13	800-2023	7/19/24	404 PERMIT	
	BP-2.2	1/15/21	CB-3	7/19/24	ITS-14.10	7/19/24	MT-95.45	7/21/23	TC-41.20	10/18/13	804	7/19/24	01/24/2025	
	BP-3.1	1/19/24	CB-3A	7/19/24	ITS-14.11	7/19/24	MT-98.21	7/21/23	TC-41.30	4/21/23	807	1/21/22		
	BP-5.1	7/15/22	CB-8	7/19/24	ITS-14.50	7/19/24	MT-98.28	1/17/20	TC-41.50	10/18/13	808	7/19/24		
	BP-7.1	1/19/24	I-2-6	7/19/24	ITS-14.60	1/19/24	MT-98.29	1/17/20	TC-42.10	10/18/13	809	7/19/24		
			I-3B, 3B1	7/19/24	ITS-15.11	7/19/24	MT-98.30	7/16/21	TC-42.20	10/18/13	813	7/21/23		
	F-2.1	7/20/18	I-3C, 3C1	7/19/24	ITS-18.00	7/16/21	MT-99.20	4/19/19	TC-51.11	1/15/16	821	4/20/12		
	F-3.1	7/19/13			ITS-50.10	1/20/23	MT-99.30	1/17/20	TC-52.10	10/18/13	825	7/19/24		
	F-3.3	7/19/13	MH-3	7/19/24	ITS-50.11	7/19/24	MT-99.50	7/21/23	TC-52.20	1/15/21	832	7/19/24		
	F-3.4	7/19/13			HL-10.11	7/21/23	MT-101.70	7/19/24	TC-61.10	4/21/23	836	1/19/24		
	MGS-1.1	7/16/21	DM-1.1	7/17/20	HL-10.12	7/21/23	MT-101.75	7/21/23	TC-61.30	7/19/24	840	7/19/24		
MGS-2.1	1/19/18	DM-1.2	7/16/21	HL-10.13	1/20/23	MT-101.90	7/17/20	TC-65.10	1/17/14	850	7/21/23			
ENGINEER'S SEAL: STRUCTURES	MGS-3.1	1/19/18	DM-4.2	7/20/12	HL-10.31	7/15/22	MT-102.10	7/21/23	TC-65.11	1/19/24	872	1/21/22		
	MGS-4.2	7/19/13			HL-20.11	7/21/23	MT-102.20	4/19/19	TC-71.10	4/21/23	902	7/19/19		
	MGS-5.3	7/15/16	AS-1-15	1/20/23	HL-20.21	1/15/21	MT-102.30	10/16/15	TC-72.20	7/21/23	904	7/15/22		
			AS-2-15	7/21/23	HL-30.11	7/21/23	MT-103.10	1/21/22	TC-73.20	7/19/24	905	4/17/20		
	RM-1.1	1/20/23	BR-2-15	7/19/24	HL-30.21	4/17/20	MT-104.10	1/19/24	TC-74.10	7/21/23	908	10/20/17		
	RM-4.3	1/21/22	PSID-1-13	7/19/24	HL-30.22	1/15/21	MT-105.10	1/17/20			909	7/19/24		
	RM-4.4	7/21/23	SBR-1-20	7/19/24	HL-30.31	7/19/24					913	4/16/21		
	RM-4.5	7/21/17	SICD-1-21	1/21/22	HL-30.41	1/21/22	TC-12.31	4/15/22			921	7/19/24		
	RM-4.6	7/19/13	SICD-2-14	1/19/24	HL-40.10	7/19/24	TC-15.116	1/19/24			992	4/18/14		
	RM-5.2	7/21/23	VPF-1-90	7/21/23	HL-50.21	7/15/22	TC-21.11	7/16/21						
					HL-60.11	7/21/17	TC-21.21	1/20/23						
HW-2.1	7/15/22	ITS-10.10	7/19/24	HL-60.21	7/20/18	TC-21.50	4/17/20							
HW-2.2	7/20/18	ITS-10.11	7/19/24	HL-60.31	7/19/24	TC-22.20	1/17/14							

FEDERAL PROJECT NUMBER

E190 (125)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

CONSTRUCT A NEW PARTIAL DIAMOND INTERCHANGE ON I-71 AT SUNBURY PARKWAY. THIS WILL INCLUDE AN ENTRANCE RAMP FROM SUNBURY PARKWAY TO I-71 SB AND AN EXIT RAMP FROM I-71 NB TO SUNBURY PARKWAY. BUILD A I-71 NB CD ROAD BETWEEN SUNBURY PARKWAY AND SR 36/37 COMBINING THE EXITING TRAFFIC TO SUNBURY WITH THE EXITING TRAFFIC TO SR 36/37. CONNECT SUNBURY PARKWAY TO WILSON RD. THE PROJECT WILL ALSO INCLUDE THE SUNBURY PARKWAY TWO SPAN BRIDGE OVER I-71, THE RECONSTRUCTION OF STORM SEWERS AND CULVERTS, AND THE RELOCATION OF SIGNAGE AND LIGHTING. THE FULL PARCLO INTERCHANGE AND THE EXTENSION OF SUNBURY PARKWAY WILL BE BUILT IN FUTURE PHASES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	53.26 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	42.15 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	95.41 ACRES

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2023 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.

TRAFFIC REROUTED FOR BRIEF TIME PERIODS

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS P.35 & P.47, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

Anthony C. Turowski, P.E.
District 06 Deputy Director

Pamela Boratyn
Director, Department of Transportation

ITEM 606 - CABLE GUARDRAIL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE HIGH TENSION FOUR CABLE GUARDRAIL SYSTEMS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION, AND ITEM 606 CABLE BARRIER, ANCHOR ASSEMBLY AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL HIGH TENSION CABLE GUARDRAIL SYSTEM NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. THE LENGTH OF THE TENSIONED CABLE NECESSARY TO INSTALL A FUNCTIONAL ANCHOR SYSTEM SHALL BE INCLUDED IN ITEM 606, CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

SYSTEMS SHALL HAVE A MAXIMUM DEFLECTION OF 8 FEET AND THE MAXIMUM LONGITUDINAL DISTANCE BETWEEN POSTS SHALL BE 15 FEET.

INSTALLATION WILL BE A FOUR CABLE HIGH TENSION SYSTEM INSTALLED IN SOCKETED POSTS FOUNDATION WITH A FOUR FOOT WIDE "NO MOW STRIP".

DELINEATE THE CABLE BARRIER USING TYPE 6 BARRIER REFLECTORS PER ITEM 626 OR USING FLEXIBLE POSTS PER ITEM 620 AS CALLED FOR IN THE PLANS OR DIRECTED BY THE ENGINEER.

ANCHOR TERMINAL STRUTS SHALL BE COVERED COMPLETELY ON BOTH SIDES WITH YELLOW TYPE J, ASTM D 4956 TYPE XI REFLECTIVE SHEETING, PER CMS 730.193.

TRANSITIONS TO W-BEAM GUARDRAIL ARE NOT ALLOWED.

REFER TO MANUFACTURER FOR MAXIMUM OFFSET FROM BREAK POINT.

TORPEDO OR BULLET SPLICES ARE NOT ALLOWED. ALL CABLE SPLICES SHALL BE A SWAGED OR OPEN BODY DESIGN THAT ALLOWS FOR ANNUAL INSPECTION BETWEEN THE WEDGE AND STRANDS OF CABLE.

POSTS ARE SET IN SOCKETED CONCRETE FOUNDATIONS AND SHALL NOT BE PERMANENTLY INSTALLED UNTIL THEIR RESPECTIVE RUNS OF TENSIONED CABLE GUARDRAIL ARE READY FOR FINAL CONNECTION TO THE END TERMINAL ASSEMBLY. THE CONTRACTOR SHALL REPLACE ANY POSTS DAMAGED DURING INSTALLATION AS DETERMINED BY THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

FIELD DRAINS

IF FIELD DRAINS ARE ENCOUNTERED DURING CONSTRUCTION, THE FOLLOWING "FARM DRAINS" NOTE SHALL APPLY. IF THE FIELD DRAIN WILL NO LONGER BE UTILIZED DUE TO THE FILLING AND PLUGGING OF THE EXISTING 15" FIELD DRAIN UNDER I-71 AND HAS NO ADJOIN CONNECTIONS, REMOVE THE EXISTING FIELD DRAIN FROM THE LIMITS OF THE PROPOSED ROADWAY EMBANKMENT TO A POINT JUST OUTSIDE OF THE GRADING LIMITS. AT THIS POINT, INSTALL A CATCH BASIN 2-2B, WHICH WILL SERVE AS A CLEAN OUT, TYING INTO THE EXISTING FIELD DRAIN. THE CASTING SHALL BE INSTALLED TO MATCH EXISTING GRADE ELEVATION.

THE FOLLOW ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 202, PIPE REMOVED 24" AND UNDER, 300 FT
ITEM 611, 15" CONDUIT TYPE E, 300 FT
ITEM 611, CATCH BASIN NO 2-2B, 1 EA

FARM DRAINS

PROVIDE UNOBSTRUCTED OUTLETS TO ALL FARM DRAINS ENCOUNTERED DURING CONSTRUCTION. REPLACE EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY WITHIN THE (RIGHT OF WAY)(CONSTRUCTION) LIMITS WITH ITEM 611, CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

OUTLET EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES INTO THE ROADWAY.

DITCH USING ITEM 611, TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION IS ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. INTERCEPT LATERAL FIELD TILES WHICH CROSS THE ROADWAY WITH ITEM 611, TYPE E CONDUIT, AND CARRY IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS IS DETERMINED BY THE ENGINEER AND PAYMENT MADE ON FINAL MEASUREMENTS.

PROVIDE EROSION CONTROL PADS AT THE OUTLET END OF ALL FARM DRAINS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE.

PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES IS INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

611 - 6" CONDUIT, TYPE F - 200 FT.
611 - 4" CONDUIT, TYPE E - 100 FT.
611 - 4" CONDUIT, TYPE F - 200 FT.
601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER - 4 CU. YD.

ITEM 611 - CONDUIT BORED OR JACKED

WHERE IT IS SPECIFIED THAT A CONDUIT BE INSTALLED BY THE METHOD OF BORING OR JACKING, NO TRENCH EXCAVATION SHALL BE CLOSER THAN 5 FEET TO THE (EDGE OF PAVEMENT) (NEAREST RAIL). PROVIDE A STEEL CASING PIPE CONFORMING TO 748.06. JOINTS WITH A CIRCUMFERENCIAL FULLY PENETRATING B-U4B WELD THAT IS PERFORMED BY A CERTIFIED WELDER FOR WELDING CODE AMERICAN WELDING SOCIETY (AWS) D1.1 OR MACHINED INTERLOCKING JOINTS ARE PERMITTED.THE INSTALLED CASING PIPE IS THE STORM WATER CONVEYANCE CARRIER UNLESS OTHERWISE SPECIFIED IN THE PLANS. HYDROSTATIC TESTING IS NOT REQUIRED FOR THE CASING PIPE.

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK CONSISTS OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. DISPOSE OF ALL MATERIAL PER 105.16 AND 105.17. CLEAN OUT TO THE APPROVAL OF THE ENGINEER.

CLEANOUT OF THE PIPE IS PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL, PIPE CLEANOUT. THIS PRICE INCLUDES THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM SPECIAL, PIPE CLEANOUT, 24" AND UNDER 200 FT.
ITEM SPECIAL, PIPE CLEANOUT, 27" TO 48" 100 FT.

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	11697 CU. YD.
659, SEEDING AND MULCHING , CLASS 1	15401 SQ. YD.
659, SEEDING AND MULCHING, CLASS 3B	89976 SQ. YD.
659, REPAIR SEEDING AND MULCHING	5269 SQ. YD.
659, INTER-SEEDING	5269 SQ. YD.
659, COMMERCIAL FERTILIZER	16 TON
659, LIME	22 ACRES
659, WATER	600 M. GAL.
659, MOWING	0.24 M. SQ.FT.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

CLEARING AND GRUBBING

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	214	4	218
30"	9	0	9
48"	1	0	1

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

ITEM 203 – BORROW, AS PER PLAN

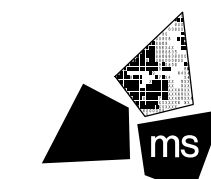
ODOT HAS STOCKPILED 127,000 C.Y. OF BORROW FROM THE INTEL SITE AT THE ABANDONED WEIGH STATION SITE TO SUPPLEMENT THE EMBANKMENT NEEDS FOR THE PROJECT. THIS BORROW SHALL BE USED FOR THE EMBANKMENT ON THIS PROJECT. THE ABANDONED WEIGH STATION IS WITHIN ODOT'S RIGHT-OF-WAY, BUT OUTSIDE OF THE PROJECT'S CONSTRUCTION LIMITS AS SHOWN ON THE PROJECT SITE PLAN SHEET P.119, AND PLAN & PROFILE SHEETS P.192, P.194 & P133. THE USE OF ITEM 203 - BORROW, AS PER PLAN IS REFLECTED IN THE EARTHWORK REPORT. ITEM 203 EMBANKMENT TOTAL C.Y. IS REDUCED BY THE BORROW'S TOTAL C.Y.

THE AREA OF THE ABANDONED WEIGH STATION WHERE THE BORROW IS LOCATED WILL BE CONSIDERED PART OF THE CONTRACTORS EARTH DISTURBED AREA. CLEANUP OF THE BORROW AREA SHALL BE ACCORDING TO C&MS 104.04.

THE WASTE AND BORROW AREAS SHOWN IN THE PLANS HAVE BEEN PREVIOUSLY INVESTIGATED FOR ECOLOGICAL RESOURCES. IT IS NOT NECESSARY TO HIRE AN ECOLOGICAL ENVIRONMENTAL CONSULTANT AS PER CONSTRUCTION AND MATERIAL SPECIFICATION 105.16 TO INVESTIGATE THESE AREAS. ALL OTHER REQUIREMENTS OF C&MS 105.16 APPLY.

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

DESIGN AGENCY



DESIGNER

ACW

REVIEWER

TAZ 08/01/23

PROJECT ID

106959

SHEET

P.22

TOTAL

663

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 20 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

WORK ZONE SPEED ZONES (WZSZS)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER	COUNTY-ROUTE-SECTION	DIRECTION
WZ-35806	DEL-71-7.219 - DEL-71-9.807	NB
WZ-35806	DEL-71-8.252 - DEL-71-10.829	SB

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

WORK ZONE SPEED ZONES (WZSZS), CONTINUED

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMUTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH)
FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
ORIGINAL POSTED SPEED LIMIT	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
72 SIGN MNTHS
ASSUMING 5 DSL SIGN ASSEMBLIES FOR 6 MONTHS AND
3 DSL SIGN ASSEMBLIES FOR 14 MONTHS

DESIGNATED LOCAL DETOUR ROUTES

THE OFFICIAL SIGNED DETOUR ROUTES HAVE BEEN DETERMINED TO BE "DESIGNATED LOCAL DETOUR ROUTES." THESE ROUTES ARE SHOWN ON SHEETS P.35 AND P.47. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THESE ROUTES IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTES SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHAN AND AS DETERMINED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DETERMINED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE DESIGNATED LOCAL DETOUR ROUTES.

ITEM 301, ASPHALT CONCRETE BASE, PG 64-22	460 CU. YD.
ITEM 304, AGGREGATE BASE	276 CU. YD.
ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22	69 CU. YD.
ITEM 407, TACK COAT	149 GAL.
ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	667 CU. YD.
ITEM 616, WATER	32 M. GAL.
ITEM 617, COMPACTED AGGREGATE	250 CU. YD.
ITEM 617, WATER	10 M. GAL.
ITEM 642, CENTER LINE	1 MILE

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)

R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETRORREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF C&MS 730.19.

NO.	RFI	DESCRIPTION	REV.	BY	DATE
PIR4	.	REVISE NOTE	KJF		04/15/25
PIR4	.	REVISE NOTE	KJF		04/25/25

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A), CONTINUED

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN 12 EACH

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY.

EXCAVATION FOR MAINTAINING TRAFFIC 692 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC 64 CU. YD.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.



THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR UNDERCUTS UNDER TEMPORARY PAVEMENT AS DIRECTED BY THE ENGINEER.

ITEM 204, EXCAVATION OF SUBGRADE 10 CU. YD.

EARTHWORK FOR MAINTAINING TRAFFIC IS INCIDENTAL TO THE LUMP SUM PRICE FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

REMOVAL OF CABLE BARRIER

DURING PHASE 2A OF CONSTRUCTION THE CONTRACTOR SHALL REMOVE THE EXISTING CABLE BARRIER ALONG THE I-71 NORTHBOUND INSIDE SHOULDER WHERE IT CONFLICTS WITH THE PORTABLE BARRIER FROM APPROXIMATELY STA. 689+00 TO STA. 701+22 AS SHOWN ON SHEETS P.82 - P.83. THE CONTRACTOR SHALL PLACE A CABLE BARRIER ANCHOR ASSEMBLY AT THE NORTHERN END OF THE EXISTING CABLE BARRIER TO REMAIN. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE THE TEMPORARY CABLE BARRIER ANCHOR ASSEMBLY. THE PERMANENT CABLE BARRIER SHALL BE INSTALLED PER THE ROADWAY PLANS, PAYMENT FOR THE PERMANENT CABLE BARRIER IS INCLUDED IN THE ROADWAY PLANS.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR INFORMATIONAL PURPOSES:

	1,222 FT
CABLE BARRIER REMOVED	1 EACH
CABLE BARRIER ANCHOR ASSEMBLY	1 EACH
REMOVAL OF CABLE BARRIER ANCHOR ASSEMBLY	

PAYMENT FOR THE CABLE BARRIER REMOVAL AND INSTALLATION AND REMOVAL OF THE CABLE BARRIER ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

DESIGN AGENCY



DESIGNER

JML

REVIEWER

DRB 06/28/23

PROJECT ID

106959

SHEET

P.25

TOTAL

663

SHEET NUM. <div>4</div>												PART. <div>4</div>		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.21	P.22	P.108	P.109	P.110	P.113		P.466	OFFICE	P.25			01/NHS/01	02/NHS/08						
LS												LS		201	11000	LS		ROADWAY	P.21/P.22
		10										10		202	20010	10	EACH	CLEARING AND GRUBBING	
		400										400		202	23000	400	SY	HEADWALL REMOVED	
		259										259		202	30000	259	SF	PAVEMENT REMOVED	
		59										59		202	32000	59	FT	WALK REMOVED	
																		CURB REMOVED	
	300	166										466		202	35100	466	FT	PIPE REMOVED, 24" AND UNDER	
		30										30		202	35200	30	FT	PIPE REMOVED, OVER 24"	
		1,965										1,965		202	38000	1,965	FT	GUARDRAIL REMOVED	
							1					1		202	42010	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
		839										839		202	48000	839	FT	CABLE BARRIER REMOVED	
		5										5		202	58100	5	EACH	CATCH BASIN REMOVED	
		1										1		202	58200	1	EACH	INLET REMOVED	
		625										625		SPECIAL	20270000	625	FT	FILL AND PLUG EXISTING CONDUIT, 15"	P.23
	200											200		SPECIAL	20270110	200	FT	PIPE CLEANOUT, 24" AND UNDER	P.22
	100											100		SPECIAL	20270120	100	FT	PIPE CLEANOUT, 27" TO 48"	P.22
		4,909										4,909		202	75000	4,909	FT	FENCE REMOVED	
		1										1		202	98100	1	EACH	REMOVAL MISC.: WOOD POLE	P.23
		1										1		202	98100	1	EACH	REMOVAL MISC.: POLE AND FOUNDATION	P.23
		14										14		202	98100	14	EACH	REMOVAL MISC.: REFLECTOR POST	P.23
		140										140		202	98400	140	SF	REMOVAL MISC.: BUILDING PAD	P.23
							<div>4</div>	58,456				58,456		203	10000	58,456	CY	EXCAVATION	
								166,843				166,843		203	20000	166,843	CY	EMBANKMENT	
								23,718				23,718		203	20001	23,718	CY	EMBANKMENT, AS PER PLAN	P.23
							<div>4</div>	127,000				127,000		203	40001	127,000	CY	BORROW, AS PER PLAN	P.22
								21,122				21,122		204	10000	21,122	SY	SUBGRADE COMPACTION	P.21
									10			10		204	13000	10	CY	EXCAVATION OF SUBGRADE	
							<div>4</div>	34				34		204	45000	34	HOURL	PROOF ROLLING	P.21
								1,628				1,628		206	10500	1,628	TON	CEMENT	
								77,405				77,405		206	11000	77,405	SY	CURING COAT	
								72,971				72,971		206	15010	72,971	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
							<div>4</div>	4,434				4,434		206	15020	4,434	SY	CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP	
							<div>4</div>	LS				LS		206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
			4,953				100					5,053		606	15050	5,053	FT	GUARDRAIL, TYPE MGS	
			14				1					15		606	26150	15	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	P.21
			10									10		606	26550	10	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
			4									4		606	35002	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
			1,731									1,731		SPECIAL	60655010	1,731	FT	CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION	P.22
			3									3		SPECIAL	60655150	3	EACH	CABLE BARRIER, ANCHOR ASSEMBLY	P.22
			1									1		606	60022	1	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) 75 mph, 24" WIDTH, (MASH 2016)	P.21
			2									2		606	60050	2	EACH	IMPACT ATTENUATOR, TYPE 3 (BIDIRECTIONAL) 75 MPH, 24" WIDTH (MASH 2016)	P.21
			7,868									7,868		607	15000	7,868	FT	FENCE, TYPE 47	
			8,311									8,311		608	10000	8,311	SF	4" CONCRETE WALK	
			1,252									1,252		608	52000	1,252	SF	CURB RAMP	
			160									160		608	53020	160	SF	DETECTABLE WARNING	
				225								225		622	10100	225	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
				4,892								4,892		622	10120	4,892	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	
				352								352		622	10160	352	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
				1								1		622	24840	1	EACH	CONCRETE BARRIER END SECTION, TYPE B	
				2								2		622	24850	2	EACH	CONCRETE BARRIER END SECTION, TYPE B1	
				4								4		622	25000	4	EACH	CONCRETE BARRIER END SECTION, TYPE D	
				1								1		622	25004	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B	
				30								30		622	25008	30	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C	
				2								2		622	25050	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
				2								2		622	25051	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	P.5
				8								8		623	38500	8	EACH	MONUMENT ASSEMBLY, TYPE C	P.21
				2								2		625	32000	2	EACH	GROUND ROD	
LS					118							118		654	10001	118	MSF	RENOVATING EXISTING SOIL, AS PER PLAN	P.439
												LS		SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION	P.21
												LS		878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	

NO.	REV.	BY	DATE
PIR4	REVISE SUBGRADE QTY	TAZ	04/07/25
PIR4	REVISE E.W. QUANTITIES	TAZ	04/10/25
PIR4	ADD ITEM 206 QUANTITIES	TAZ	04/15/25
PIR4	REVISE E.W. QUANTITIES	TAZ	04/23/25
PIR4	ADD EXC. & SUBGRADE QTY	TAZ	04/25/25

DESIGN AGENCY



DESIGNER

ACW

REVIEWER

TAZ 11/22/23

PROJECT ID

106959

SHEET

P.101

TOTAL

663

GENERAL SUMMARY

SHEET NUM.												PART.		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
P.22	P.24	P.25	P.112	P.113	P.115	P.116	P.117	P.111				01/NHS/01	02/NHS/08		EXT	TOTAL			
																		EROSION CONTROL	
			11									11		601	11000	11	SY	RIPRAP, TYPE D	
			11									11		601	11001	11	SY	RIPRAP, TYPE D, AS PER PLAN	P.23
4			84									88		601	32200	88	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
			6									6		601	32204	6	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	
	1,400	32										1,432		616	10000	1,432	MGAL	WATER	
2												2		659	00100	2	EACH	SOIL ANALYSIS TEST	
11,697	4			1,774							4	13,471		659	00300	13,471	CY	TOPSOIL	
				181								181		659	00301	181	CY	TOPSOIL, AS PER PLAN	P.439
15,401				13,015								28,416		659	00500	28,416	SY	SEEDING AND MULCHING, CLASS 1	
89,976												89,976		659	00530	89,976	SY	SEEDING AND MULCHING, CLASS 3B	
5,269	4										4	5,269		659	14000	5,269	SY	REPAIR SEEDING AND MULCHING	
5,269												5,269		659	15000	5,269	SY	INTER-SEEDING	
16	4											16		659	20000	16	TON	COMMERCIAL FERTILIZER	
22												22		659	31000	22	ACRE	LIME	
600												600		659	35000	600	MGAL	WATER	
0.24	4										4	0.24		659	40000	0.24	MSF	MOWING	
				15,962								15,962		670	00500	15,962	SY	SLOPE EROSION PROTECTION	
			4,285									4,285		670	00720	4,285	SY	DITCH EROSION PROTECTION MAT, TYPE B	
				13,015								13,015		671	15000	13,015	SY	EROSION CONTROL MAT, TYPE A	
								1,480				1,480		671	15010	1,480	SY	EROSION CONTROL MAT, TYPE B	
												LS		832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
												LS		832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
												LS		832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
												100,000		832	30000	100,000	EACH	EROSION CONTROL	
			70									70		836	10000	70	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	
																		DRAINAGE	
			4	14	28	8						36		601	21050	36	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
												14		602	20000	14	CY	CONCRETE MASONRY	
					26,488	14,306	1,550					42,344		605	05110	42,344	FT	4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
						48	49					97		605	05210	97	FT	4" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
					7,380	5,518	2,735					15,633		605	06020	15,633	FT	4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
100												100		611	00400	100	FT	4" CONDUIT, TYPE E	
200												200		611	00406	200	FT	4" CONDUIT, TYPE F	
					828	758	306					1,892		611	00410	1,892	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
200												200		611	01500	200	FT	6" CONDUIT, TYPE F	
								524				524		611	04400	524	FT	12" CONDUIT, TYPE B	
								1,808				1,808		611	04600	1,808	FT	12" CONDUIT, TYPE C	
								1,326				1,326		611	05900	1,326	FT	15" CONDUIT, TYPE B	
								426				426		611	06100	426	FT	15" CONDUIT, TYPE C	
300												300		611	06600	300	FT	15" CONDUIT, TYPE E	
												175		611	07400	175	FT	18" CONDUIT, TYPE B	
								291				291		611	07600	291	FT	18" CONDUIT, TYPE C	
								48				48		611	08200	48	FT	18" CONDUIT, TYPE F	
								795				795		611	09100	795	FT	21" CONDUIT, TYPE C	
								49				49		611	10600	49	FT	24" CONDUIT, TYPE C	
								238				238		611	12100	238	FT	27" CONDUIT, TYPE C	
			46									46		611	16200	46	FT	36" CONDUIT, TYPE A, 706.02	
			22									22		611	19200	22	FT	42" CONDUIT, TYPE A, 706.02	
			118									118		611	19200	118	FT	42" CONDUIT, TYPE A, 707.02, ALUMINIZED; OR 42" CONDUIT, 706.02; OR 42" CONDUIT, 707.65; OR 42" CONDUIT, 707.04	
			61									61		611	20700	61	FT	48" CONDUIT, TYPE A, 706.02	
			141									141		611	20700	141	FT	48" CONDUIT, TYPE A, 707.02, ALUMINIZED; OR 48" CONDUIT, 706.02; OR 48" CONDUIT, 707.65; OR 48" CONDUIT, 707.04	
								233				233		611	97400	233	FT	CONDUIT, MISC.: CONDUIT INSTALLED BY THE TRENCHLESS METHOD, 15"	P.23

NO.	REF.	DESCRIPTION	REV.	BY	DATE
PIR4	.	REVISE EC & DRAINAGE QTY'S	TAZ		04/10/25
PIR4	.	REVISE EC QTY'S	TAZ		04/23/25

DESIGN AGENCY



ms consultants, inc.

DESIGNER

ACW

REVIEWER

TAZ 11/22/23

PROJECT ID

106959

SHEET


P.102

TOTAL

663

GENERAL SUMMARY

GENERAL SUMMARY				
NO.	REF	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE DRAINAGE QTY'S	TAZ	04/11/25
PIR4	.	REVISE PUMP QTY'S	TAZ	04/14/25
PIR4	.	REVISE LSW QTY'S	TAZ	04/22/25



ms consultants, inc.

DESIGNER	ACW
REVIEWER	TAZ
PROJECT ID	106959
SHEET	P.103
TOTAL	663

SHEET NUM.												PART.		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
P.25	P.34	P.466	P.469	P.473	P.475	P.521						01/NHS/01	02/NHS/08		EXT	TOTAL			
																		TRAFFIC CONTROL (CONT.)	
		7										7		630	87400	7	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
		1										1		630	89706	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	
		2										2		630	89804	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-15.115	
	4											4		630	89894	4	EACH	REMOVAL OF TEMPORARY OVERLAY SIGN AND DISPOSAL	
			7									7		630	97700	7	EACH	SIGNING, MISC.:TEMPORARY SIGN SUPPORT	P.465
1												1		642	00300	1	MILE	CENTER LINE, TYPE 1	
					0.11							0.11		644	00104	0.11	MILE	EDGE LINE, 6"	
					0.06							0.06		644	00204	0.06	MILE	LANE LINE, 6"	
					0.11							0.11		644	00300	0.11	MILE	CENTER LINE	
					240							240		644	00700	240	FT	TRANSVERSE/DIAGONAL LINE	
				0.01	1.64							1.65		646	10010	1.65	MILE	EDGE LINE, 6"	
					0.49							0.49		646	10110	0.49	MILE	LANE LINE, 6"	
					0.34							0.34		646	10200	0.34	MILE	CENTER LINE, DOUBLE YELLOW	
					153							153		646	10310	153	FT	CHANNELIZING LINE, 12"	
				48	36							84		646	10400	84	FT	STOP LINE	
					478							478		646	10510	478	FT	CROSSWALK LINE, 12"	
				120	216							336		646	10520	336	FT	CROSSWALK LINE, 24"	
					363							363		646	10600	363	FT	TRANSVERSE/DIAGONAL LINE	
				211								211		646	10620	211	FT	CHEVRON MARKING	
				50	16							66		646	20300	66	EACH	LANE ARROW	
				2								2		646	20320	2	EACH	WRONG WAY ARROW	
					773							773		646	20504	773	FT	DOTTED LINE, 6"	
				0.61								0.61		807	12010	0.61	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"	
				1,162								1,162		807	12310	1,162	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	
				7.68								7.68		807	14010	7.68	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6"	
				7.33								7.33		807	14110	7.33	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6"	
				6,039								6,039		807	14310	6,039	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12"	
				2,638								2,638		807	14410	2,638	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 6"	
				15.02								15.02		850	10010	15.02	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
				2,638								2,638		850	10110	2,638	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
				5,539								5,539		850	10130	5,539	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	
				0.62								0.62		850	20010	0.62	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	
				1,662								1,662		850	20130	1,662	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE)	
																		TRAFFIC SIGNALS	
						1,938						1,938		625	25600	1,938	FT	CONDUIT, 4", 725.04	
						969						969		625	29000	969	FT	TRENCH	
						7						7		625	30700	7	EACH	PULL BOX, 725.08, 18"	
						2						2		625	30706	2	EACH	PULL BOX, 725.08, 24"	
						969						969		625	36010	969	FT	UNDERGROUND WARNING/MARKING TAPE	

NO.	REV.	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE TRF. CTRL. QTY	TAZ	04/23/25
.

DESIGN AGENCY



DESIGNER

ACW

REVIEWER

TAZ 11/22/23

PROJECT ID

106959

SHEET

P.106

TOTAL

663

GENERAL SUMMARY

SHEET NUM.						PART.		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	
P.567	P.595					01/NHS/01	02/NHS/08		EXT	TOTAL			
												RETAINING WALLS (MSE-1)	
4	689					689		203	20001	689	CY	EMBANKMENT, AS PER PLAN	
	893					893		203	35110	893	CY	GRANULAR MATERIAL, TYPE B	
	773					773		512	10100	773	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
	154					154		516	13600	154	SF	1" PREFORMED EXPANSION JOINT FILLER	
	6,544					6,544		840	20000	6,544	SF	MECHANICALLY STABILIZED EARTH WALL	
4	270					270		840	21000	270	CY	WALL EXCAVATION	
	695					695		840	22001	695	SY	FOUNDATION PREPARATION, AS PER PLAN	
	4,657					4,657		840	23000	4,657	CY	SELECT GRANULAR BACKFILL	
	552					552		840	25010	552	FT	6" DRAINAGE PIPE, PERFORATED	
	72					72		840	25020	72	FT	6" DRAINAGE PIPE, NON-PERFORATED	
4	330					330		840	26000	330	FT	CONCRETE COPING	
	5					5		840	27000	5	DAY	ON-SITE ASSISTANCE	
	LS					LS		840	28000	LS		SGB INSPECTION AND COMPACTION TESTING	
												RETAINING WALLS (MSE-2)	
4	692					692		203	20001	692	CY	EMBANKMENT, AS PER PLAN	
	829					829		203	35110	829	CY	GRANULAR MATERIAL, TYPE B	
4	694					694		512	10100	694	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
	154					154		516	13600	154	SF	1" PREFORMED EXPANSION JOINT FILLER	
	5,831					5,831		840	20000	5,831	SF	MECHANICALLY STABILIZED EARTH WALL	
	256					256		840	21000	256	CY	WALL EXCAVATION	
	706					706		840	22001	706	SY	FOUNDATION PREPARATION, AS PER PLAN	
4	4,109					4,109		840	23000	4,109	CY	SELECT GRANULAR BACKFILL	
	554					554		840	25010	554	FT	6" DRAINAGE PIPE, PERFORATED	
	155					155		840	25020	155	FT	6" DRAINAGE PIPE, NON-PERFORATED	
4	330					330		840	26000	330	FT	CONCRETE COPING	
	5					5		840	27000	5	DAY	ON-SITE ASSISTANCE	
	LS					LS		840	28000	LS		SGB INSPECTION AND COMPACTION TESTING	
												STRUCTURE OVER 20 FOOT SPAN (DEL-00071-08.910)	
3,125						3,125		507	00101	3,125	FT	STEEL PILES HP10X42, FURNISHED, AS PER PLAN	
1,366						1,366		507	92201	1,366	FT	PREBORED HOLES, AS PER PLAN	
404,371						404,371		509	10000	404,371	4	LB	EPOXY COATED STEEL REINFORCEMENT
8,822						8,822		509	30020	8,822	FT	NO. 4 DEFORMED GFRP REINFORCEMENT	
293						293		511	33418	293	4	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE
4						4		511	33500	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	
1,063						1,063		511	34446	1,063	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK	
90						90		511	34450	90	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)	
183						183		511	41012	183	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS	
235						235		511	46512	235	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	
141						141		511	50212	141	CY	CLASS QC1 CONCRETE WITH QC/QA, SUBSTRUCTURE	
355						355		511	51512	355	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK	
8						8		511	53010	8	4	CY	CLASS QC1 CONCRETE, MISC..6" CONCRETE SLAB
2,846						2,846		512	10100	2,846	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
9						9		512	33000	9	4	SY	TYPE 2 WATERPROOFING
16						16		515	15120	16	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE WF66-49(108'-0" LONG)	
16						16		515	15120	16	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE WF66-49(125'-7" LONG)	
90						90		515	20000	90	EACH	INTERMEDIATE DIAPHRAGMS	
303						303		516	10010	303	FT	ARMORLESS PREFORMED JOINT SEAL	
27						27		516	13600	27	SF	1" PREFORMED EXPANSION JOINT FILLER	
145						145		516	13900	145	SF	2" PREFORMED EXPANSION JOINT FILLER	
1,025						1,025		516	25000	1,025	4	SF	NYLON REINFORCED NEOPRENE SHEETING
32						32		516	44200	32	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), (1'-7"x4"x3 1/8" PAD, 3'-3 1/2"x1'-5"x1 1/2" STEEL LOAD PLATE)	

GENERAL SUMMARY

NO.	REF	DESCRIPTION	REV.	BY	DATE
PIR4	.	REVISE EPOXY STEEL QTY	TAZ		04/16/25
PIR4	.	UPDATE MSE/STR. QTY	TAZ		04/22/25

DESIGN AGENCY



DESIGNER

ACW

REVIEWER

TAZ 11/22/23

PROJECT ID

106959

SHEET

P.107

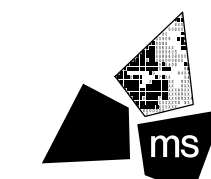
TOTAL

663

SHEET NUM.									PART.		ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
P.24	P.25	P.26	P.28	P.34	P.109	P.113	P.567		01/NHS/01	02/NHS/08	(X)		EXT	TOTAL			
																STRUCTURE OVER 20 FOOT SPAN (DEL-00071-08.910) (CONT.)	
							32			32		516	46900	32	EACH	BEARING DEVICE, MISC.:ELASTOMERIC BEARING ASSEMBLY	P.578
							255			255		518	21200	255	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
							303			303		518	40000	303	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
							43			43		518	40010	43	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
						4	144			144		524	94904	144	FT	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK	
							152			152		524	94906	152	FT	DRILLED SHAFTS, 54" DIAMETER, ABOVE BEDROCK	
							1,009			1,009		526	30010	1,009	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")	
							303			303		526	90030	303	FT	TYPE C INSTALLATION	
																STRUCTURE OVER 20 FOOT SPAN (DEL-00071-08.910) ALTERNATES	
						4	565			565	X	607	39930	565	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC (ALTERNATE 1)	P.20
										565	X	607	98000	565	FT	FENCE, MISC.: DECORATIVE FENCE (ALTERNATE 2)	P.20
						4	589			589	X	517	75122	589	FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING AND VANDAL PROTECTION FENCE) (ALTERNATE 1)	P.20
										589	X	517	76300	589	FT	RAILING, MISC.: CONC. PARAPET W/ TWIN STEEL TUBE RAIL & DECORATIVE PROTECTION FENCE (ALTERNATE 2)	P.20
																MISCELLANEOUS STRUCTURE	
				3													
								LS		LS		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	P.23
							7,167			7,167		512	10000	7,167	SY	SEALING OF CONCRETE SURFACES	
																MAINTENANCE OF TRAFFIC	
							472			472		614	11110	472	HOURL	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
							3,199			3,199		614	11630	3,199	FT	INCREASED BARRIER DELINEATION	
						4	12			12		614	12380	12	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
							1			1		614	12400	1	EACH	WORK ZONE IMPACT ATTENUATOR, MISC.:48" WIDE HAZARDS, UNIDIRECTIONAL	P.28
LS										LS		614	12420	LS		DETOUR SIGNING	
	12									12		614	12484	12	EACH	WORK ZONE INCREASED PENALTIES SIGN	
10										10		614	12500	10	EACH	REPLACEMENT SIGN	
	20									20		614	12600	20	EACH	REPLACEMENT DRUM	
							1,850			1,850		614	12801	1,850	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	P.28
	667									667		614	13000	667	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
							283			283		614	13310	283	EACH	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	
						4	346			346		614	13350	346	EACH	OBJECT MARKER, ONE WAY	
		80					80			80		614	18601	80	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	P.26
8.15										8.15		614	20010	8.15	MILE	WORK ZONE LANE LINE, CLASS I, 6"	
							4.37			4.37		614	20056	4.37	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
										9.24		614	22010	9.24	MILE	WORK ZONE EDGE LINE, CLASS I, 6"	
							9.79			9.79		614	22056	9.79	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
3,646										3,646		614	23010	3,646	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12"	
							20,020			20,020		614	23110	20,020	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
508										508		614	24000	508	FT	WORK ZONE DOTTED LINE, CLASS I, 6"	
							4,200			4,200		614	24102	4,200	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	
							537			537		614	28000	537	FT	WORK ZONE GORE MARKING, CLASS II	
20							20			40		614	30000	40	EACH	WORK ZONE ARROW, CLASS I	
							2			2		614	30001	2	EACH	WORK ZONE ARROW, CLASS I, AS PER PLAN	P.28
4	LS									LS		615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
							864			864		615	20000	864	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
						3	17,340			17,340		622	41100	17,340	FT	PORTABLE BARRIER, UNANCHORED	
	72									72		808	18700	72	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																INCIDENTALS	
										LS		108	10000	LS		CPM PROGRESS SCHEDULE	
										LS		614	11000	LS		MAINTAINING TRAFFIC	
										24		619	16020	24	MNTH	FIELD OFFICE, TYPE C	
										LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
										LS		624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY



ms consultants, inc.

DESIGNER

ACW

REVIEWER

TAZ 11/22/23

PROJECT ID

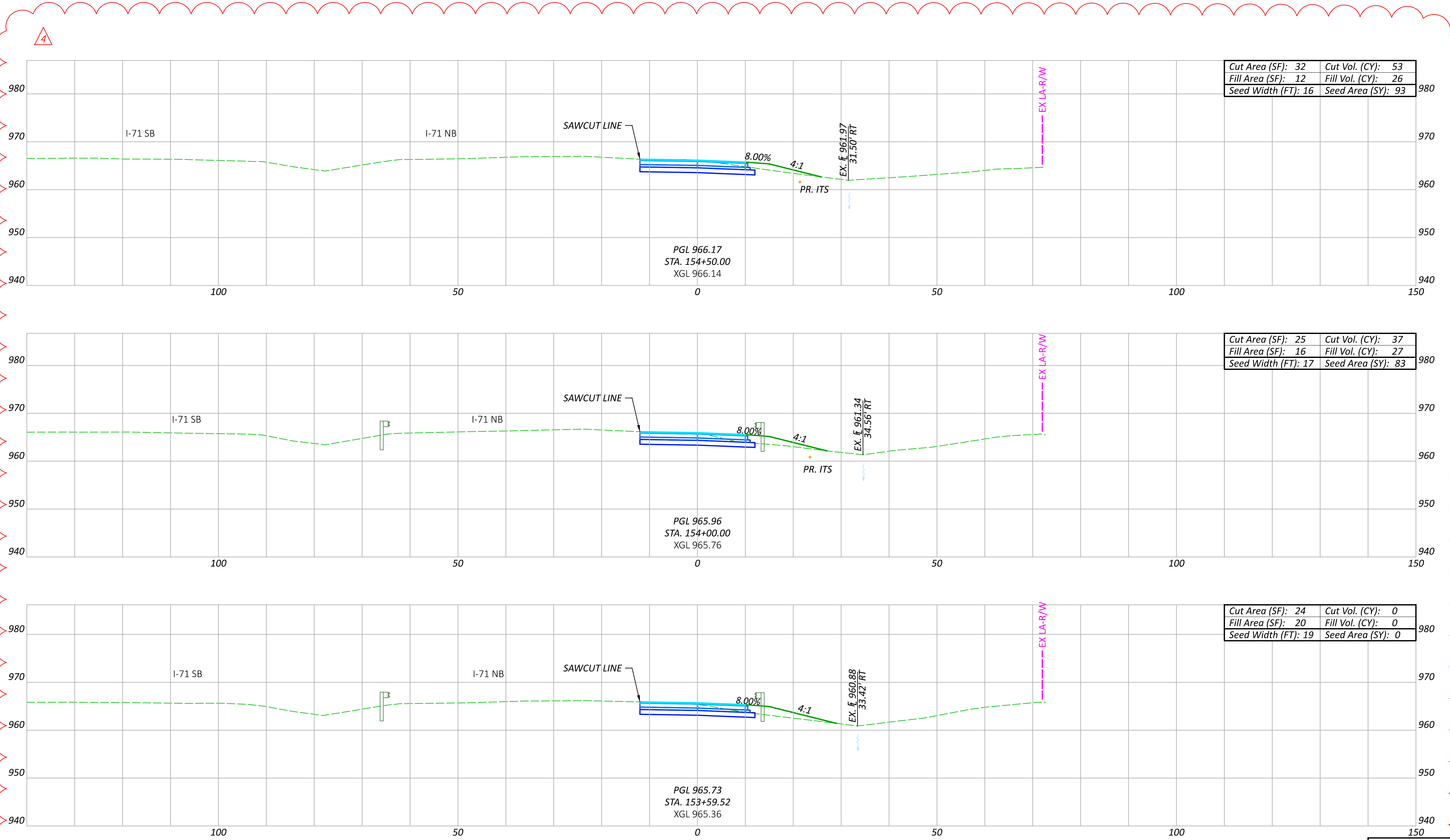
106959

SHEET

P.107A

TOTAL

663



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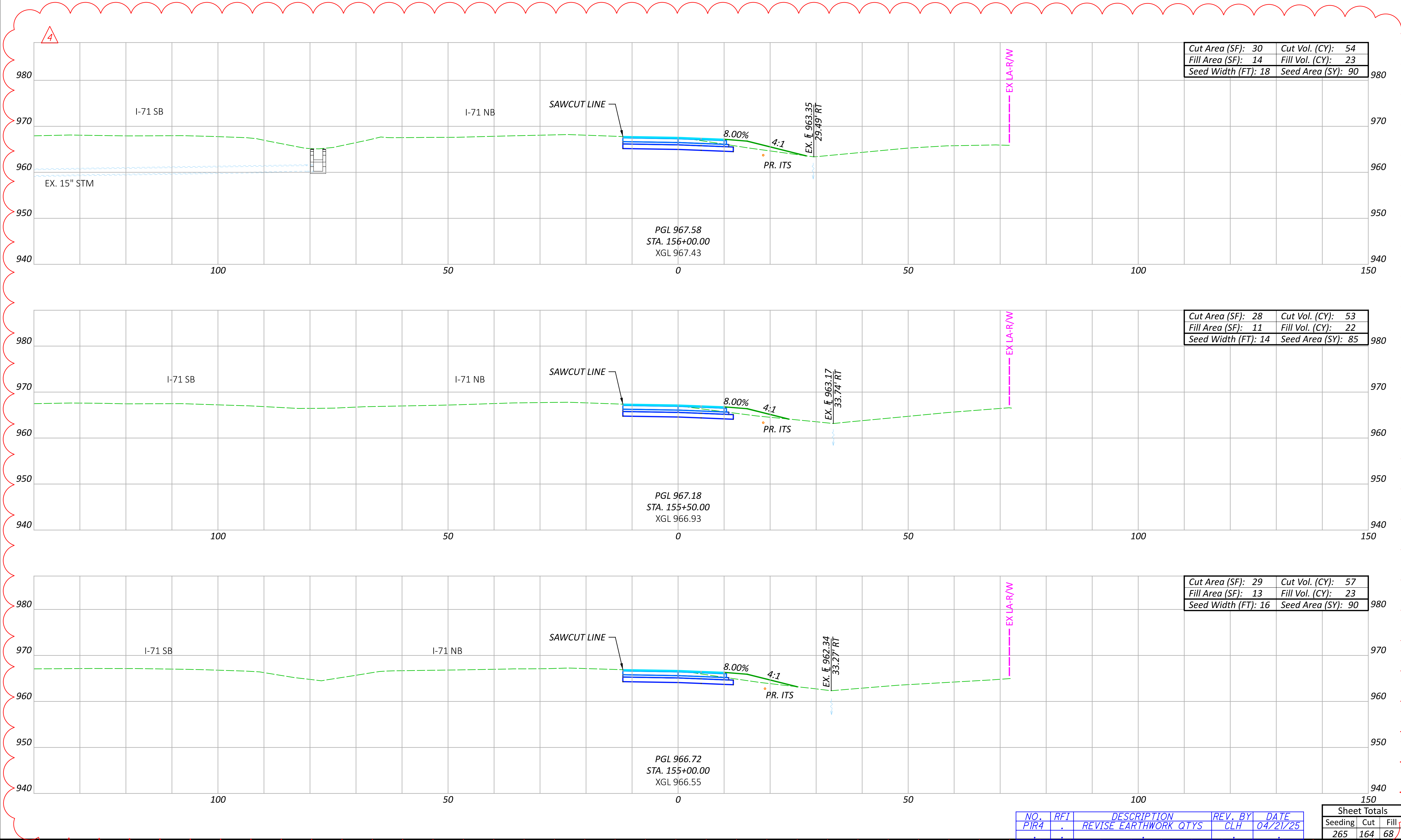
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Fill Area (SF):	20	Fill Vol. (CY):	0
Seed Width (FT):	19	Seed Area (SY):	0

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

Sheet Totals		
Seeding	Cut	Fill
176	90	53

PROJECT ID	
106959	
SHEET TOTAL	
P.207	663



CROSS SECTIONS CD ROAD
STA. 155+00.00 TO STA. 156+00.00

DESIGN AGENCY
 ms consultants, inc.

DESIGNER
CLH

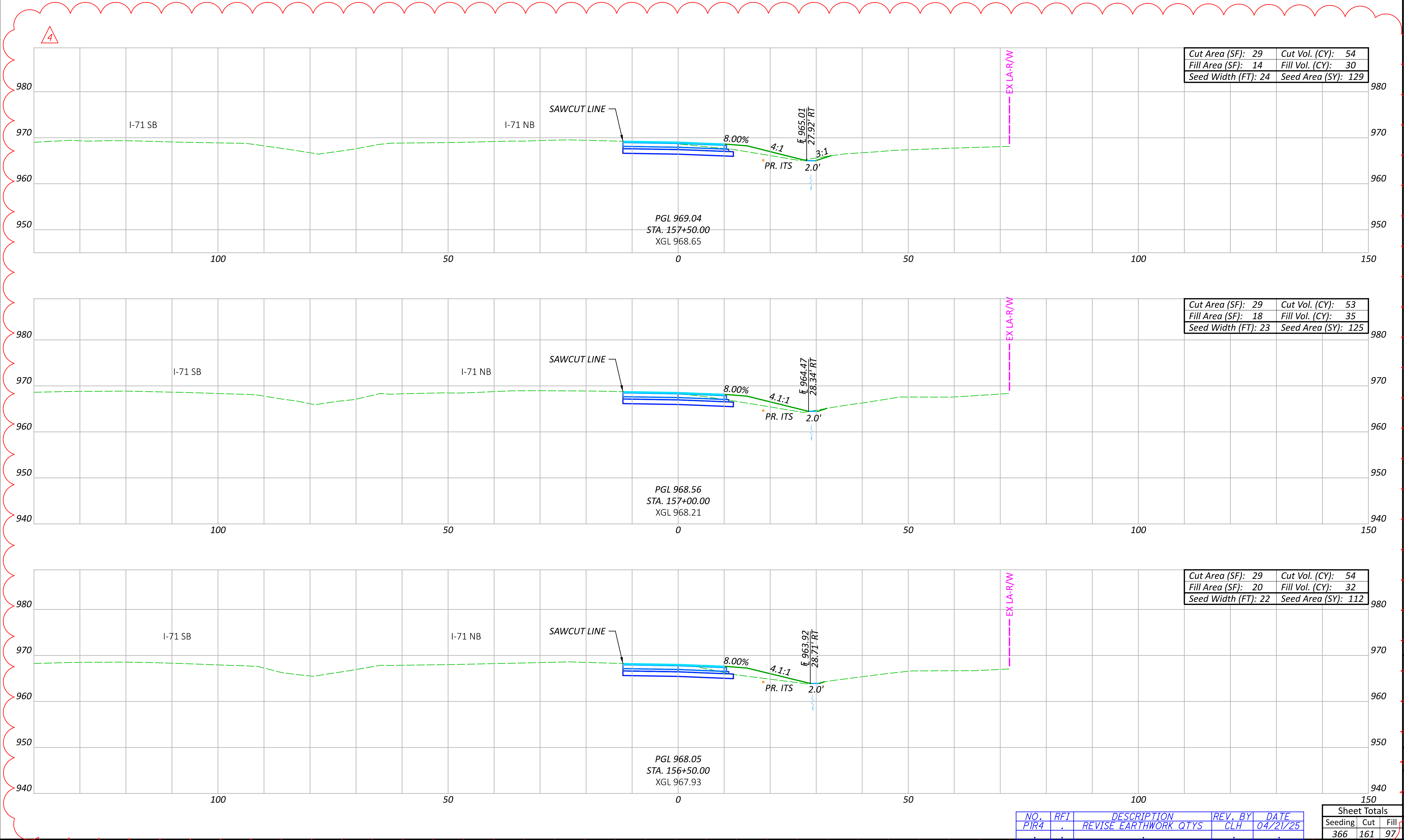
REVIEWER
TAZ 05/15/23

PROJECT ID
106959

SHEET TOTAL
P.208 663

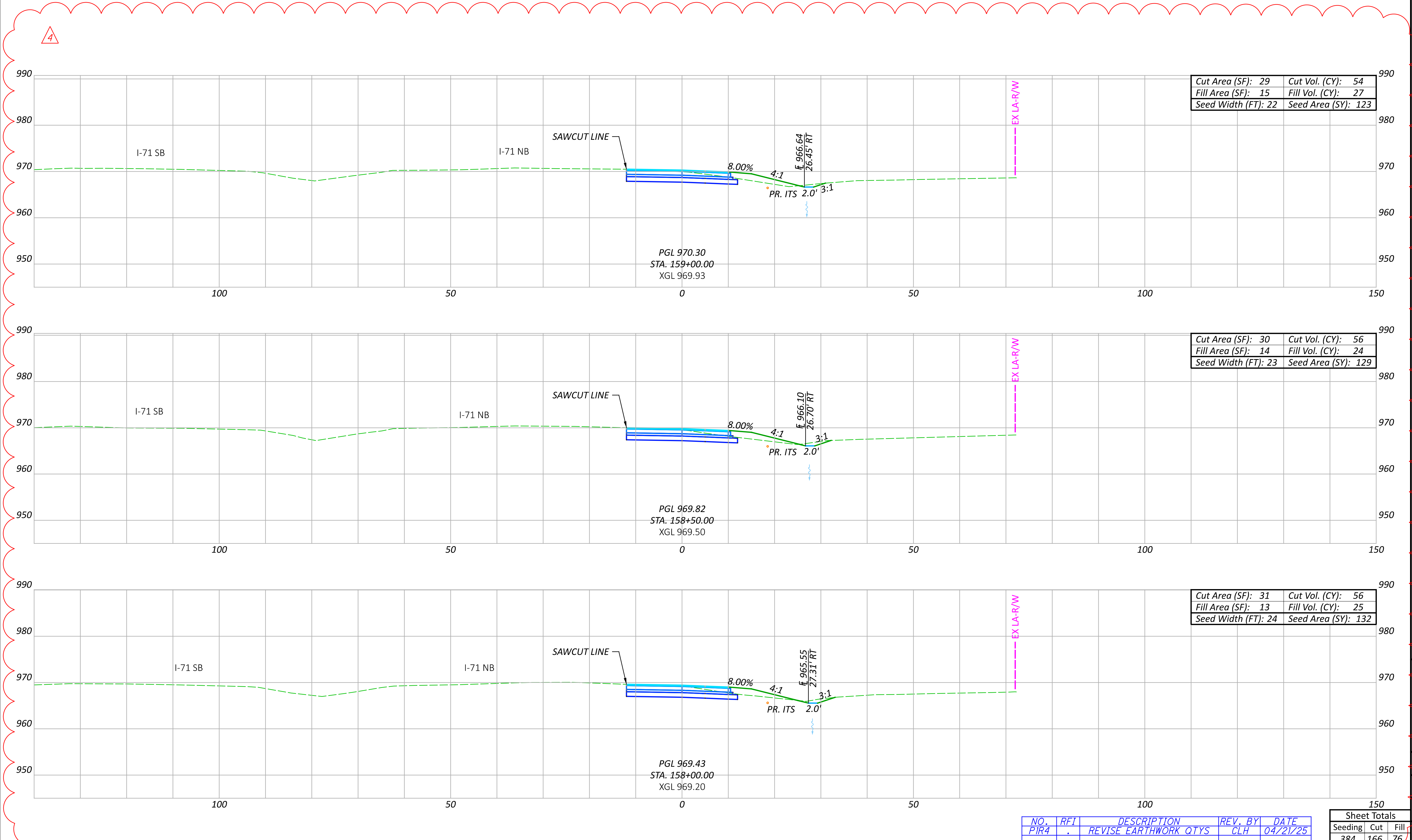
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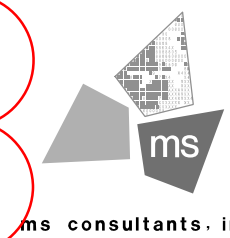
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CROSS SECTIONS CD ROAD
STA. 158+00.00 TO STA. 159+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

106959

SHEET

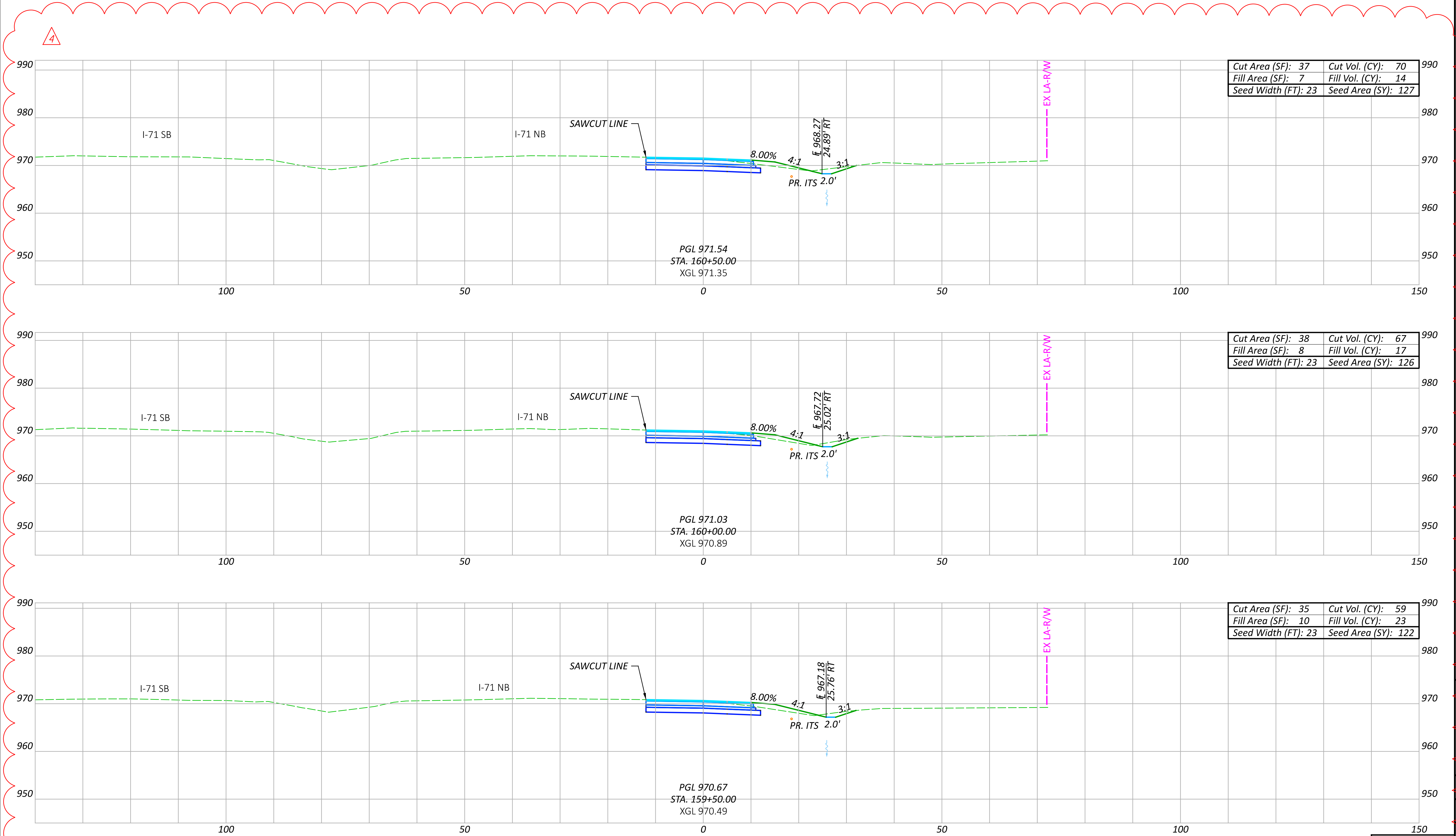
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P.210 663

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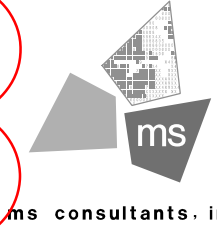
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LAST REVISED: PIR4 04/21/2025



CROSS SECTIONS CD ROAD
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DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

106959

SHEET

P.211

TOTAL

663

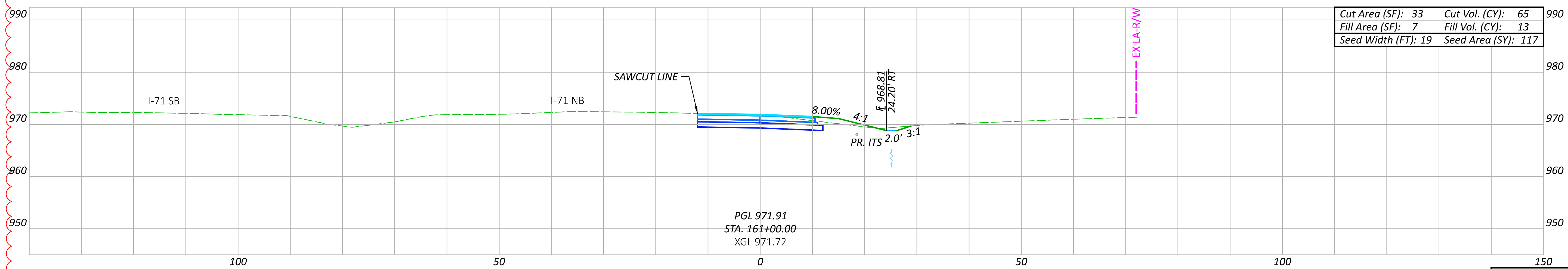
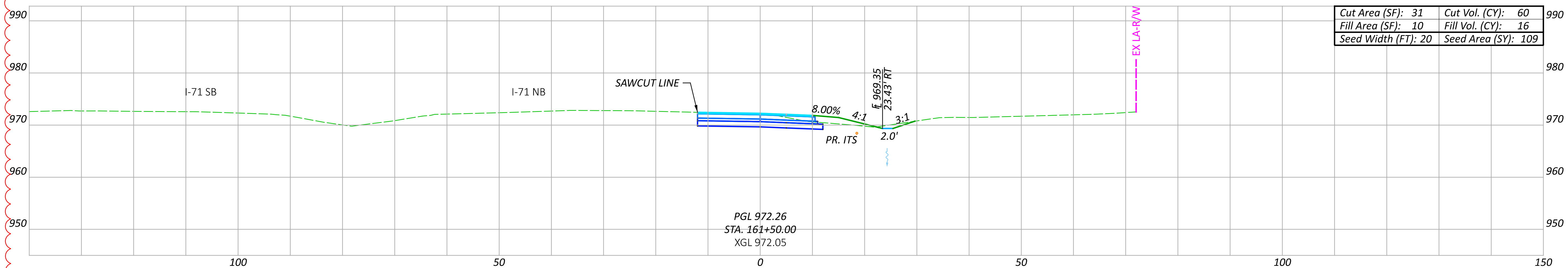
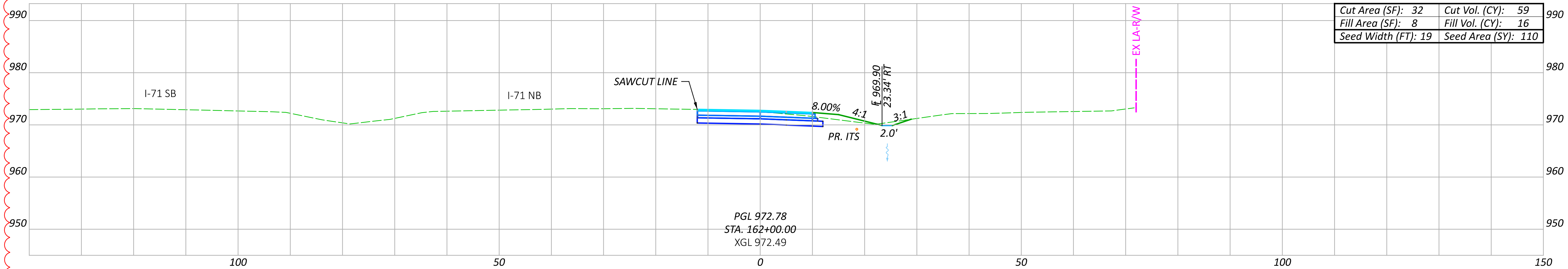
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LAST REVISED: PIR4 04/21/2025

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Fill Area (SF): 8	Fill Vol. (CY): 16
Seed Width (FT): 19	Seed Area (SY): 110

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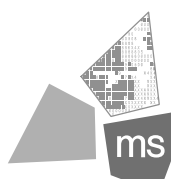
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NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
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Sheet Totals			106959	
Seeding	Cut	Fill	SHEET	TOTAL
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CROSS SECTIONS CD ROAD
STA. 161+00.00 TO STA. 162+00.00

DESIGN AGENCY



ms consultants, inc

DESIGNER

CLH

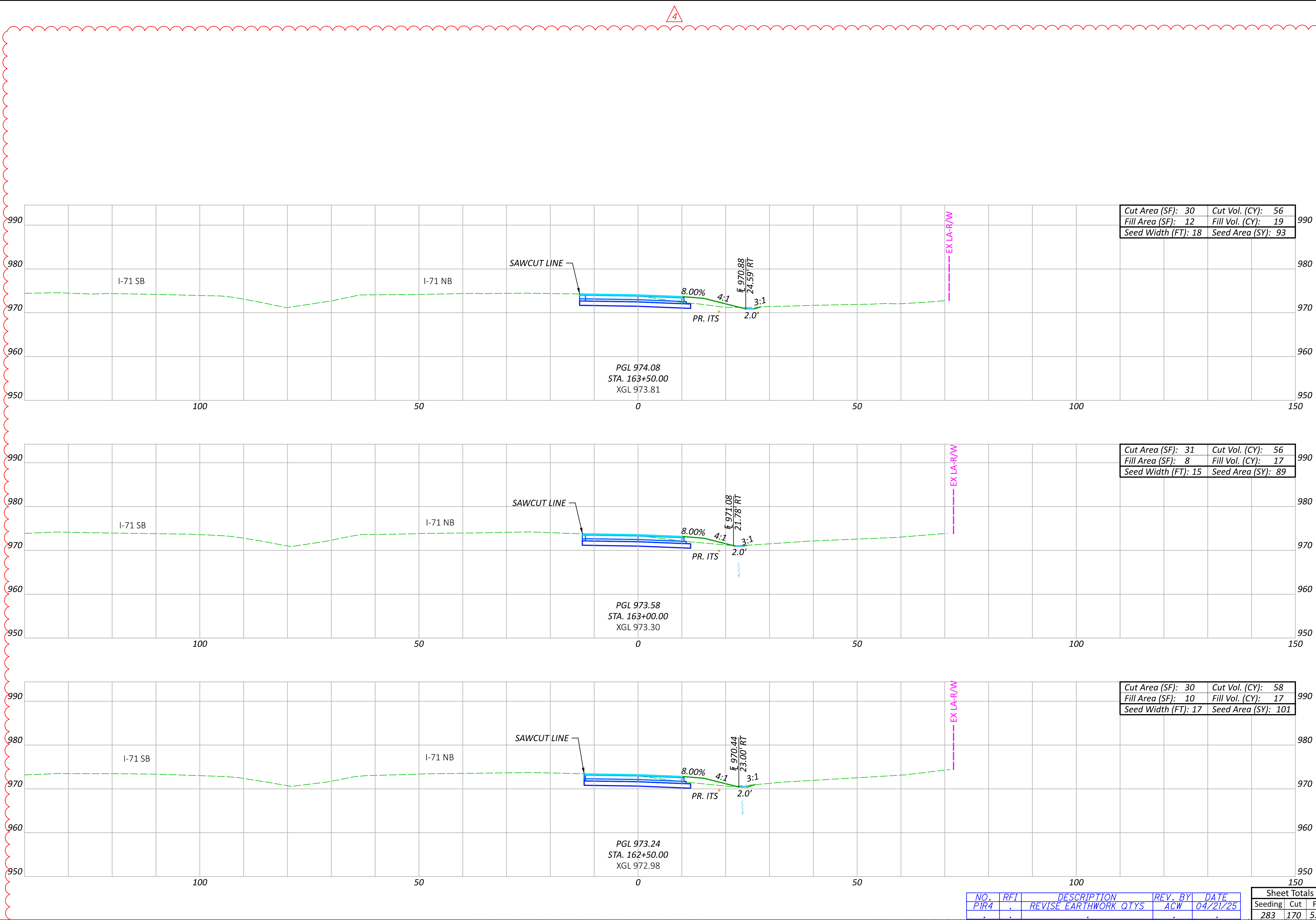
REVIEWER

PROJECT ID

06959

SHEET	TOTAL
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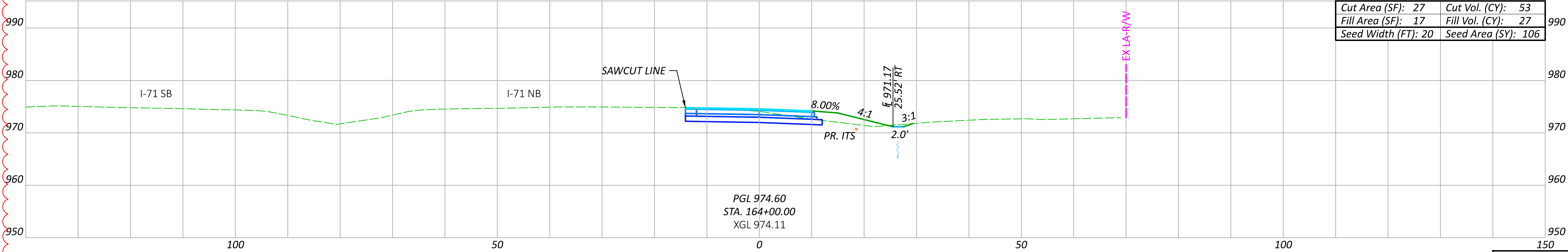
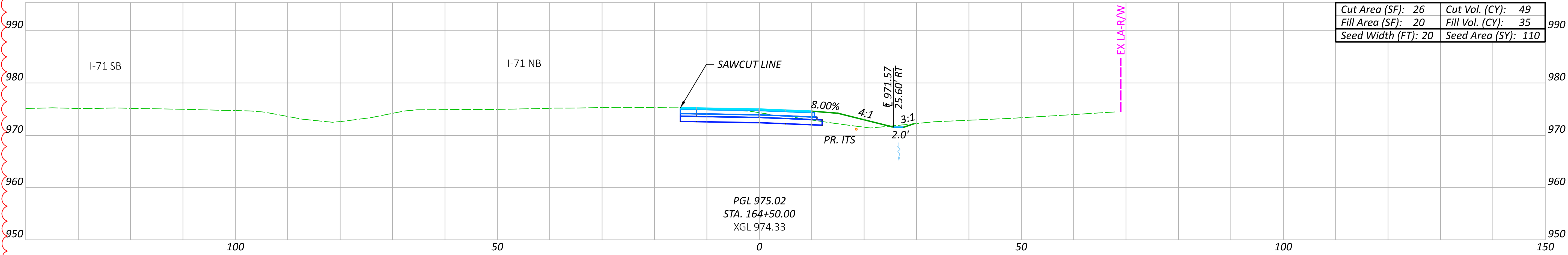
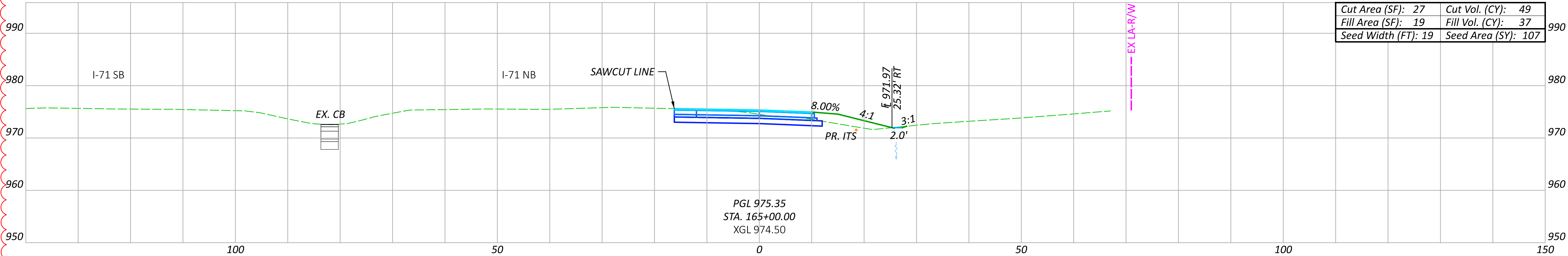
LAST REVISED: PIR4 04/21/2025



NO.	RFI	DESCRIPTION	REV. BY	DATE
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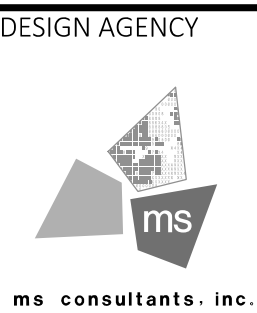
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SHEET	TOTAL
P.213	663



NO.	RFI	DESCRIPTION	REV. BY	DATE
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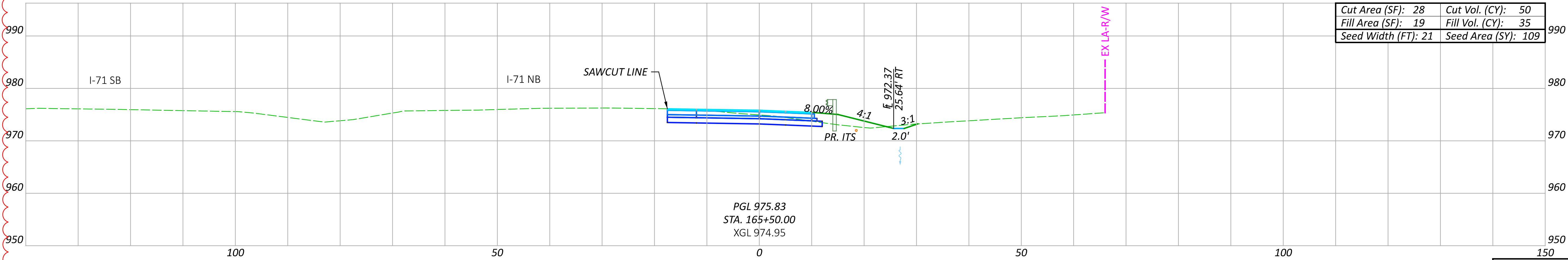
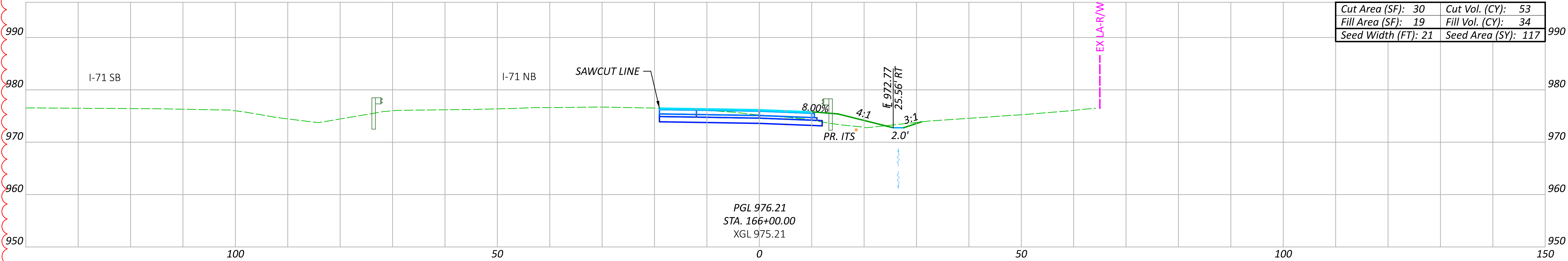
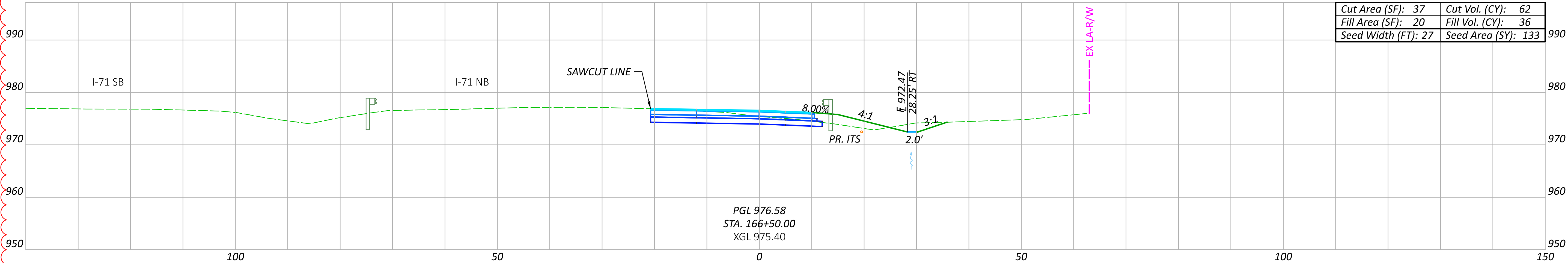
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Seeding	Cut	Fill	P.214	663
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DESIGNER
CLH

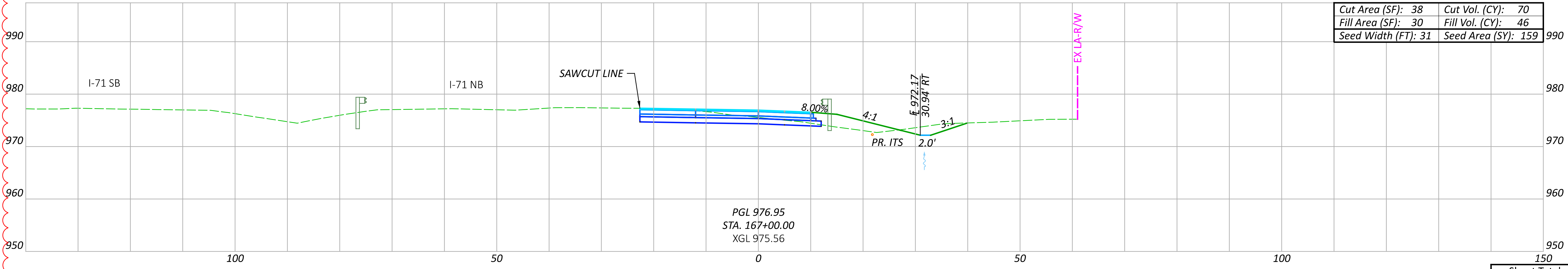
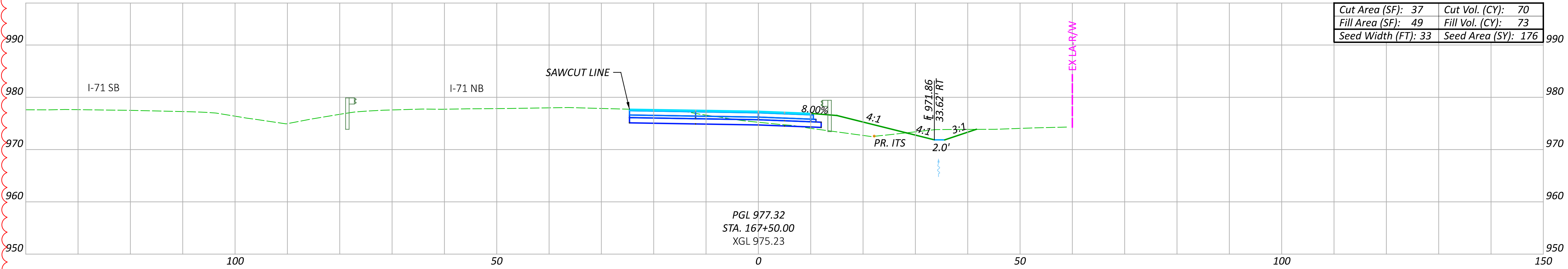
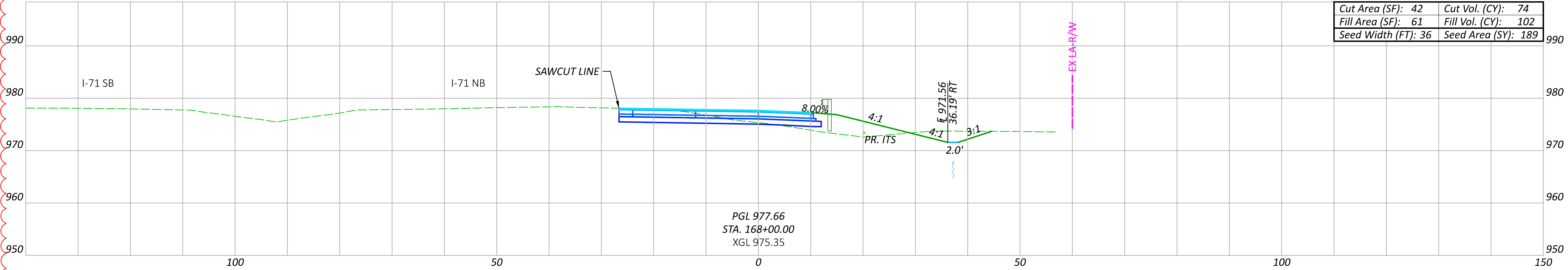
REVIEWER
TAZ 05/15/23

PROJECT ID
106959



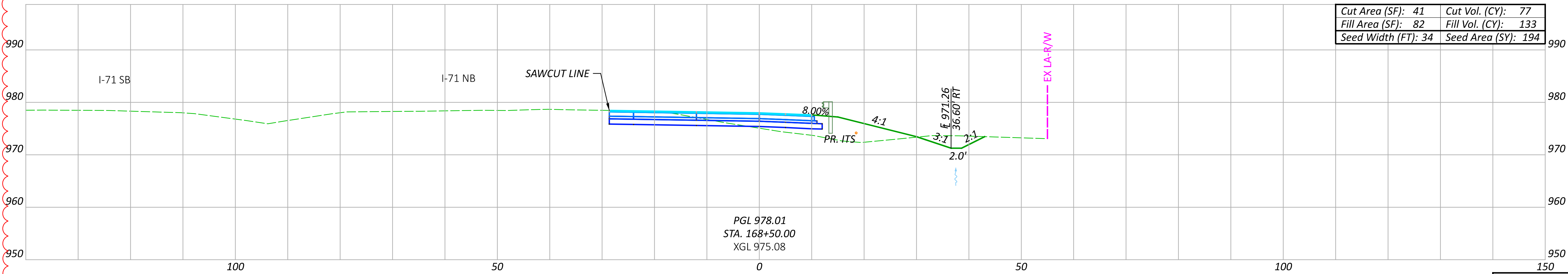
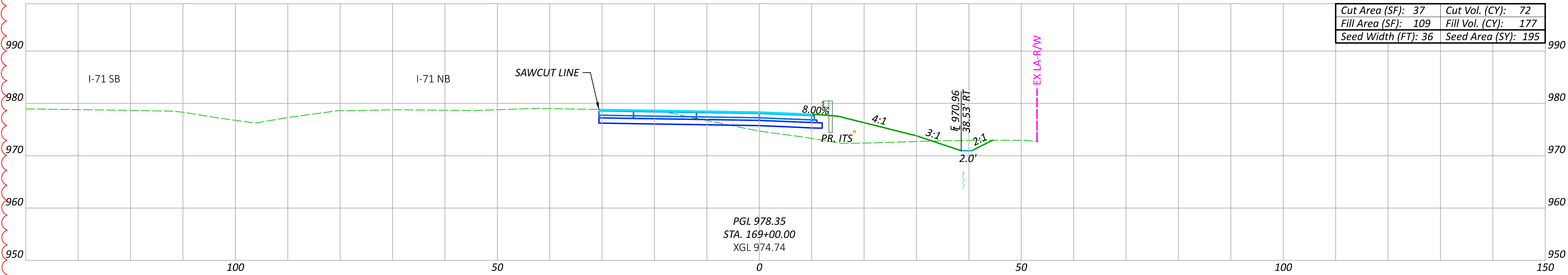
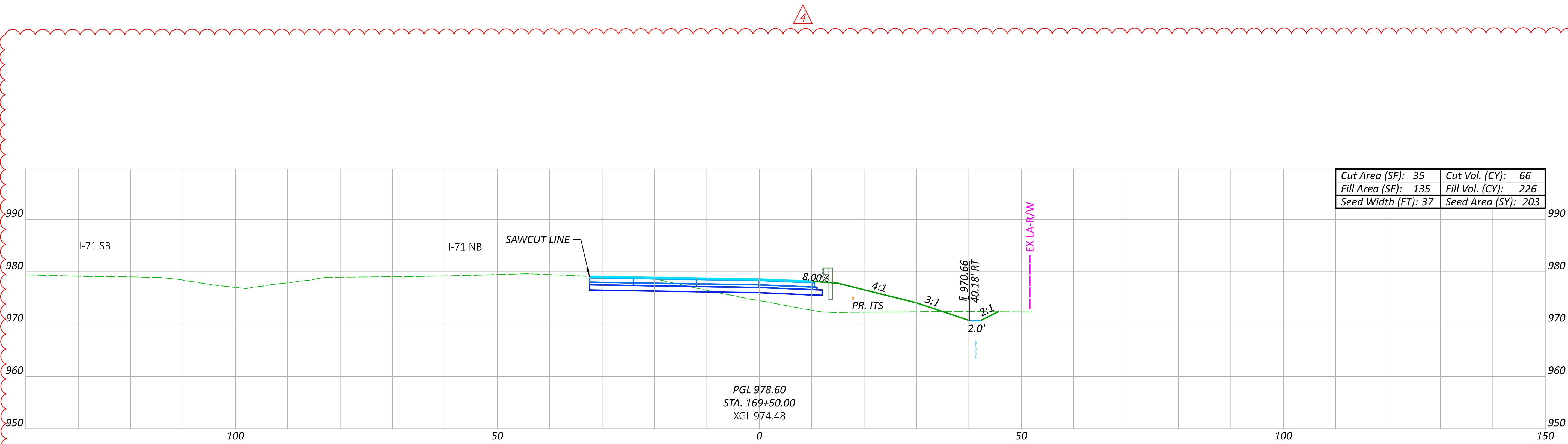
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
359	165	105	P.215	663



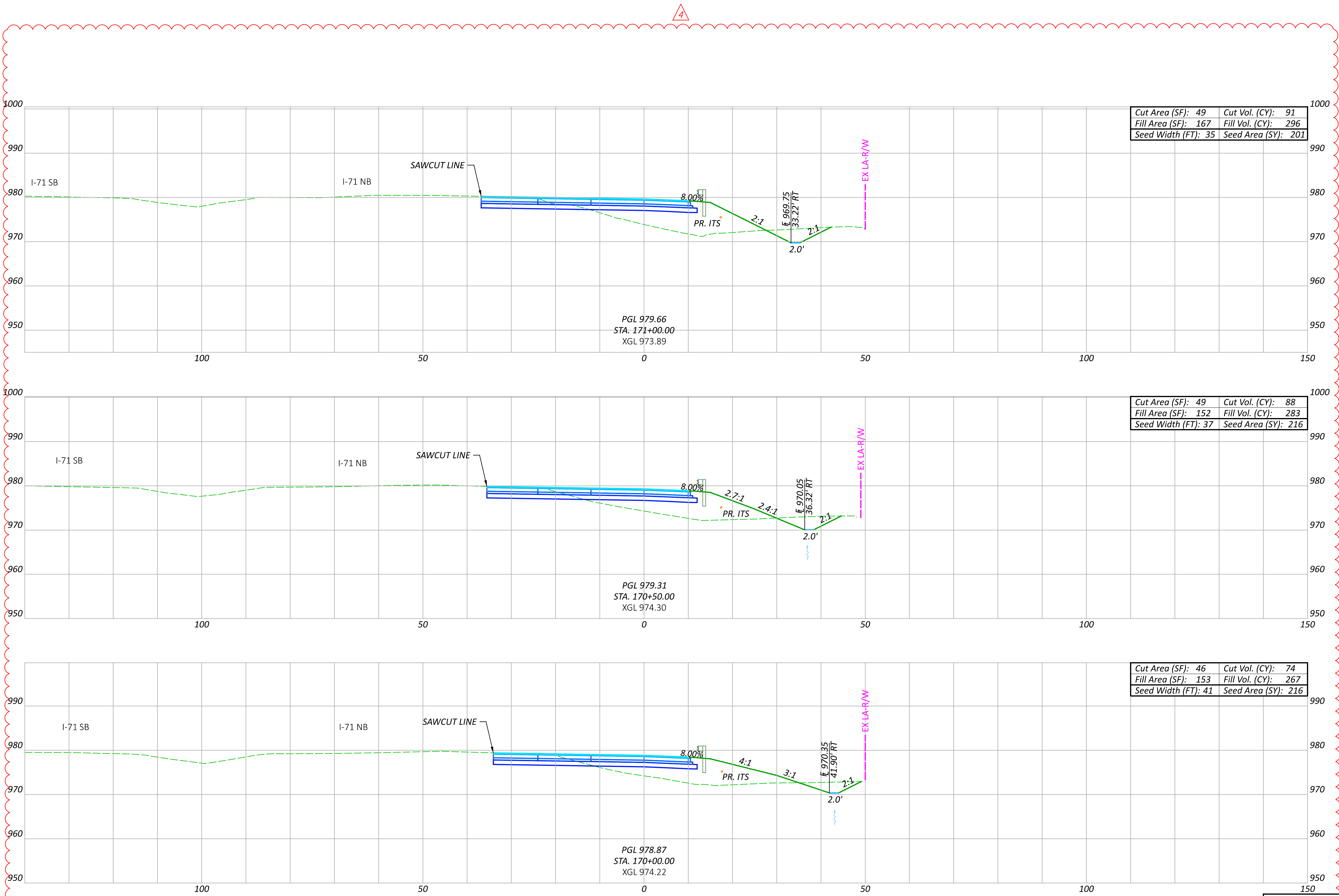
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.216	663
524	214	221		



NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.217	663
592	215	536		



Cut Area (SF):	49	Cut Vol. (CY):	91
Fill Area (SF):	167	Fill Vol. (CY):	296
Seed Width (FT):	35	Seed Area (SY):	201

Cut Area (SF):	49	Cut Vol. (CY):	88
Fill Area (SF):	152	Fill Vol. (CY):	283
Seed Width (FT):	37	Seed Area (SY):	216

Cut Area (SF):	46	Cut Vol. (CY):	74
Fill Area (SF):	153	Fill Vol. (CY):	267
Seed Width (FT):	41	Seed Area (SY):	216

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
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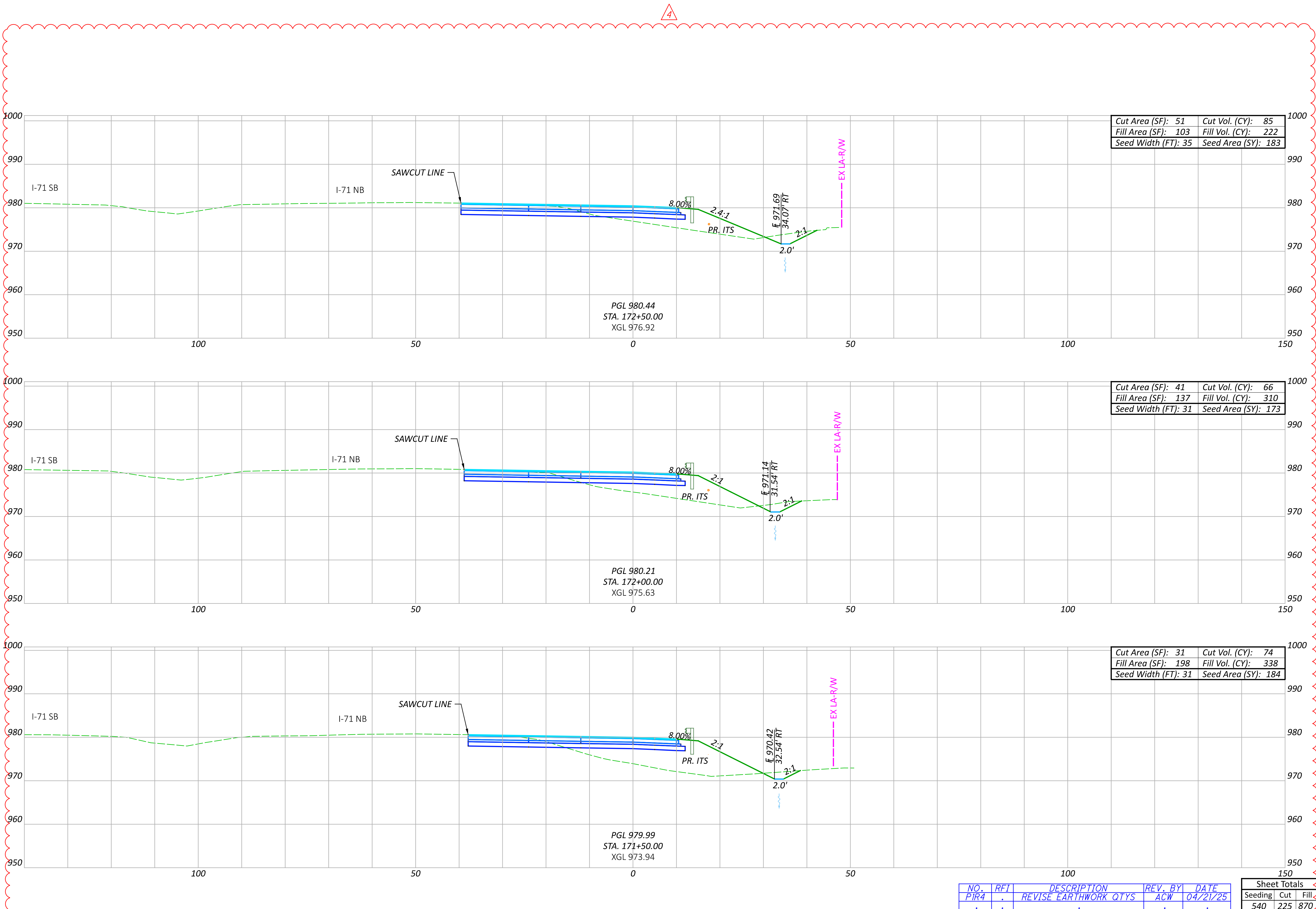
Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.218	663
633	253	846		



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TAZ 05/15/23

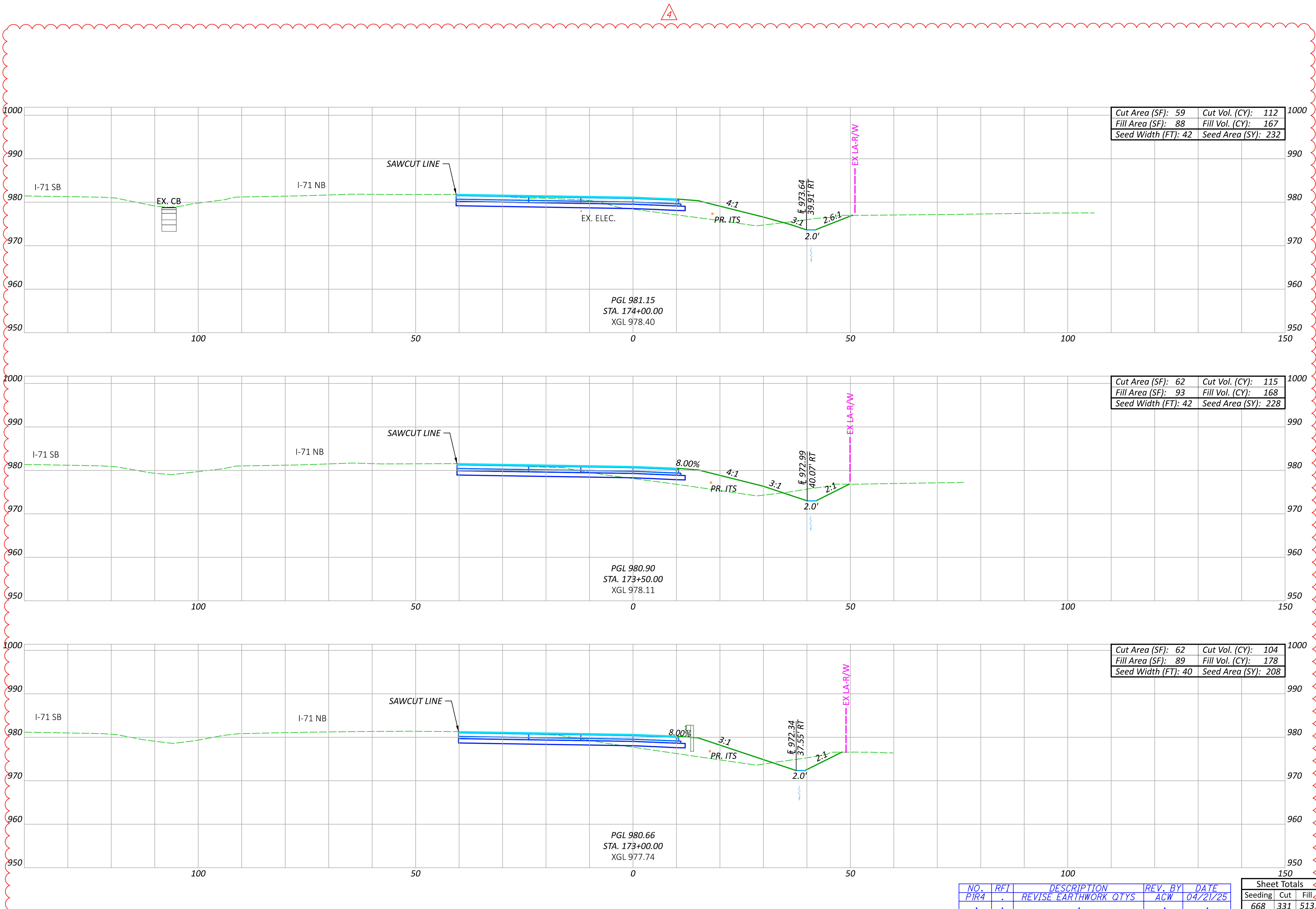
PROJECT ID
106959



NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTY'S	ACW	04/21/25
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Sheet Totals		
Seeding	Cut	Fill
540	225	870

SHEET	TOTAL
P.219	663



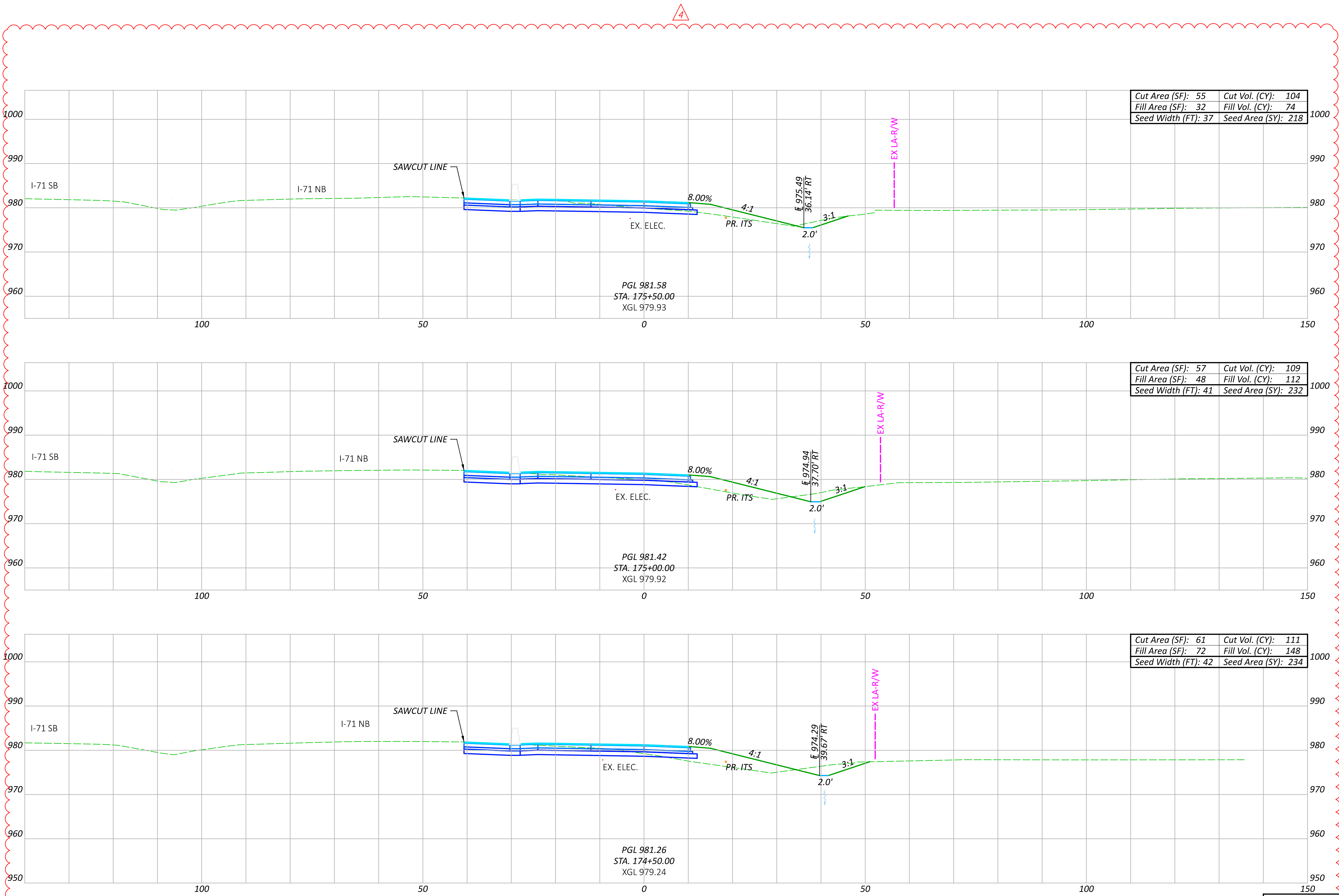
CROSS SECTIONS CD ROAD
STA. 173+00.00 TO STA. 174+00.00

DESIGN AGENCY

ms consultants, inc.
DESIGNER
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REVIEWER
TAZ 05/15/23
PROJECT ID
106959

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYs	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
668	331	513	P.220	663



CROSS SECTIONS CD ROAD
STA. 173+50.00 TO STA. 175+50.00

DESIGN AGENCY



ms consultants, inc.

DESIGNER

CLH

REVIEWER

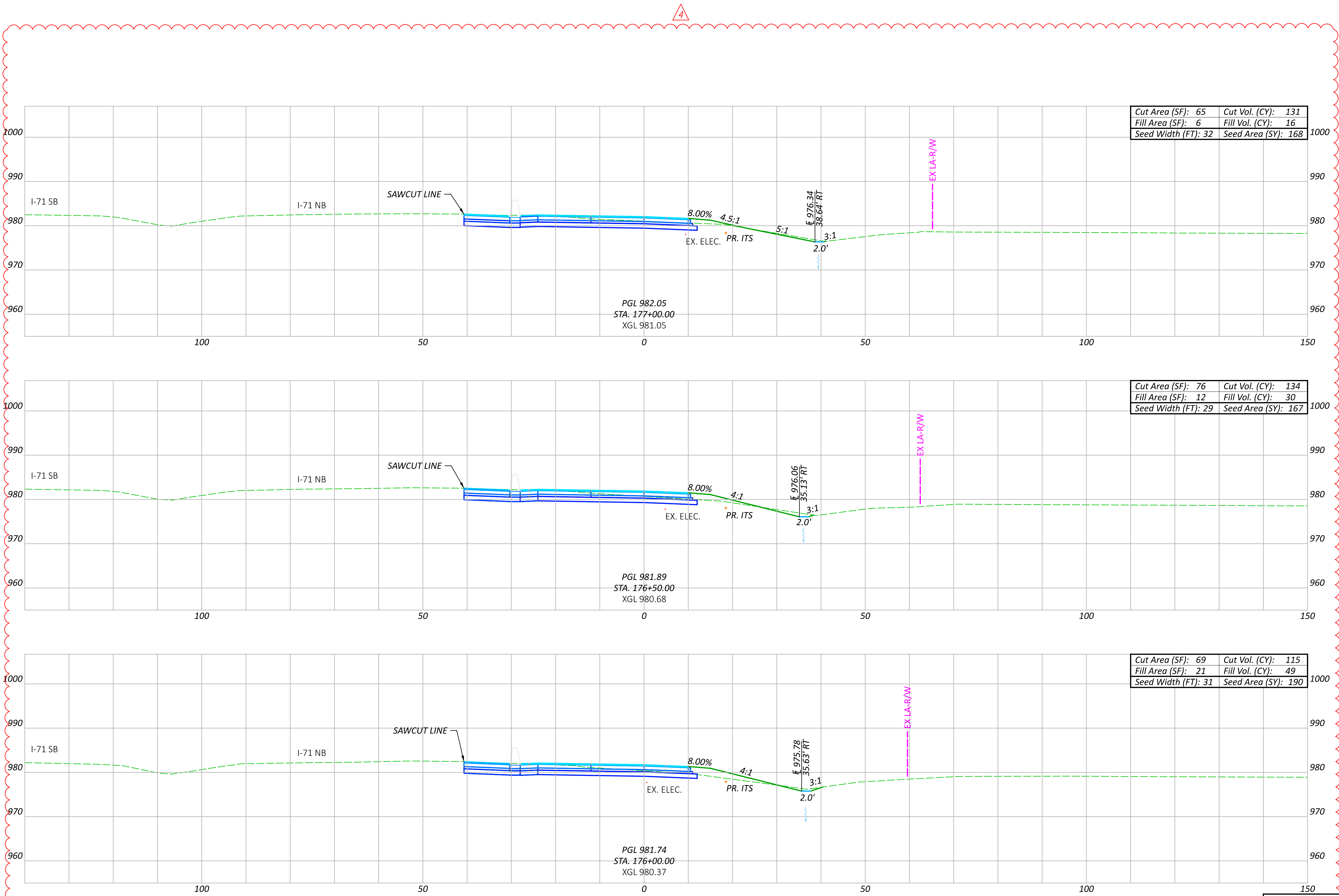
TAZ 05/15/23

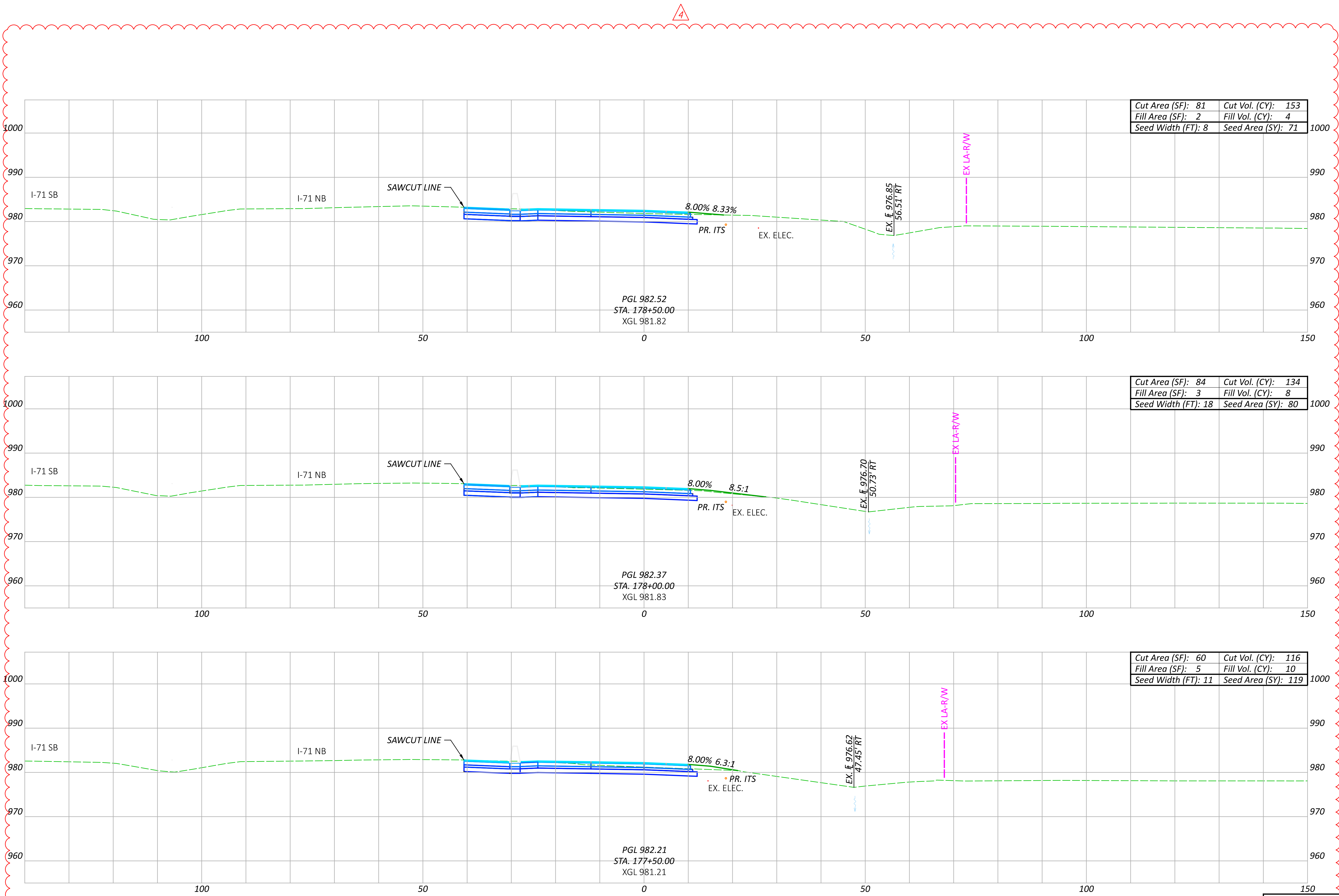
PROJECT ID

106959

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYs	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
684	324	334	P.221	663





CROSS SECTIONS CD ROAD
STA. 177+50.00 TO STA. 178+50.00

DESIGN AGENCY

ms consultants, inc.

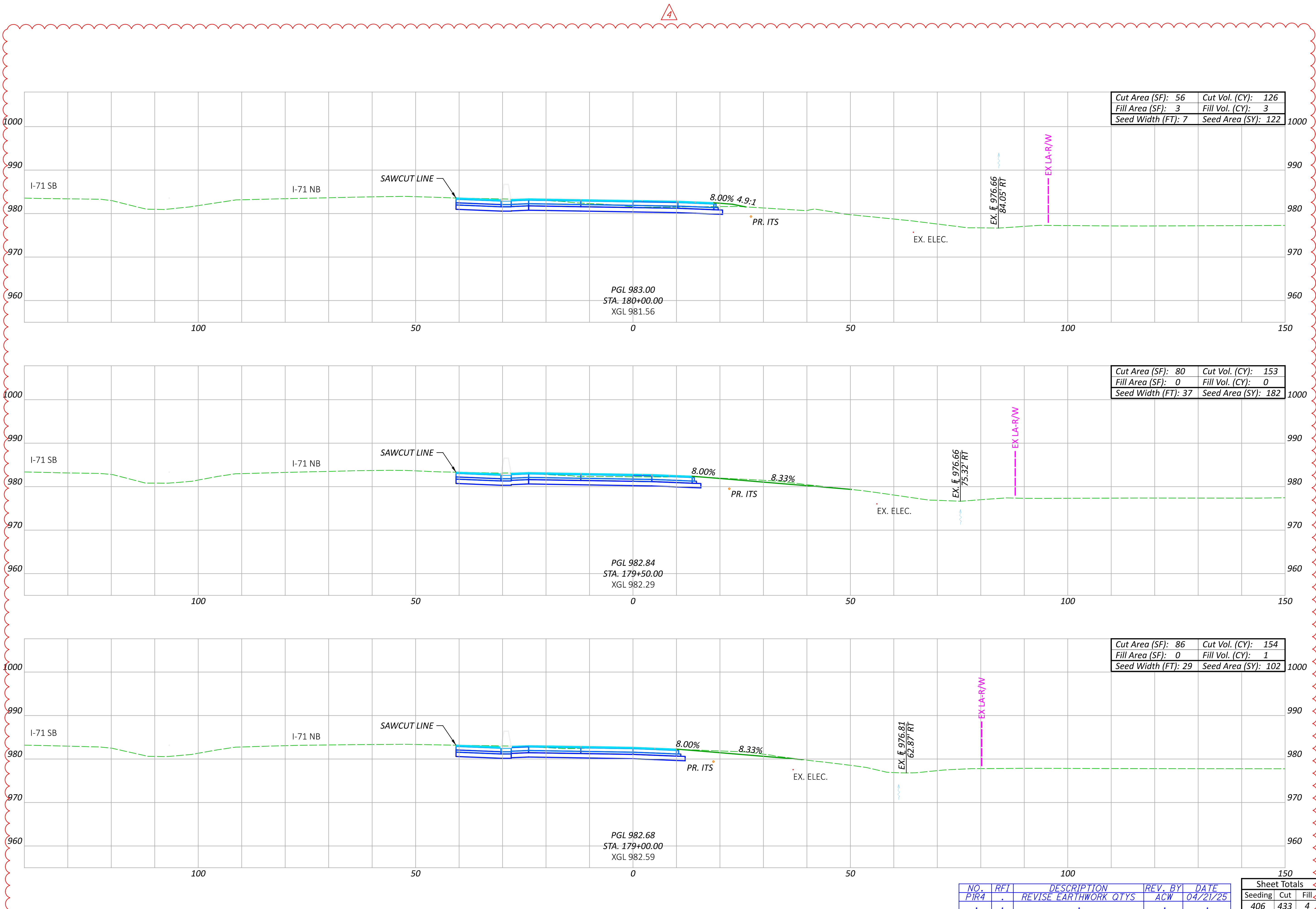
DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
270	403	22	P.223	663

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTY'S	ACW	04/21/25
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CROSS SECTIONS CD ROAD
STA. 179+00.00 TO STA. 180+00.00

DESIGN AGENCY

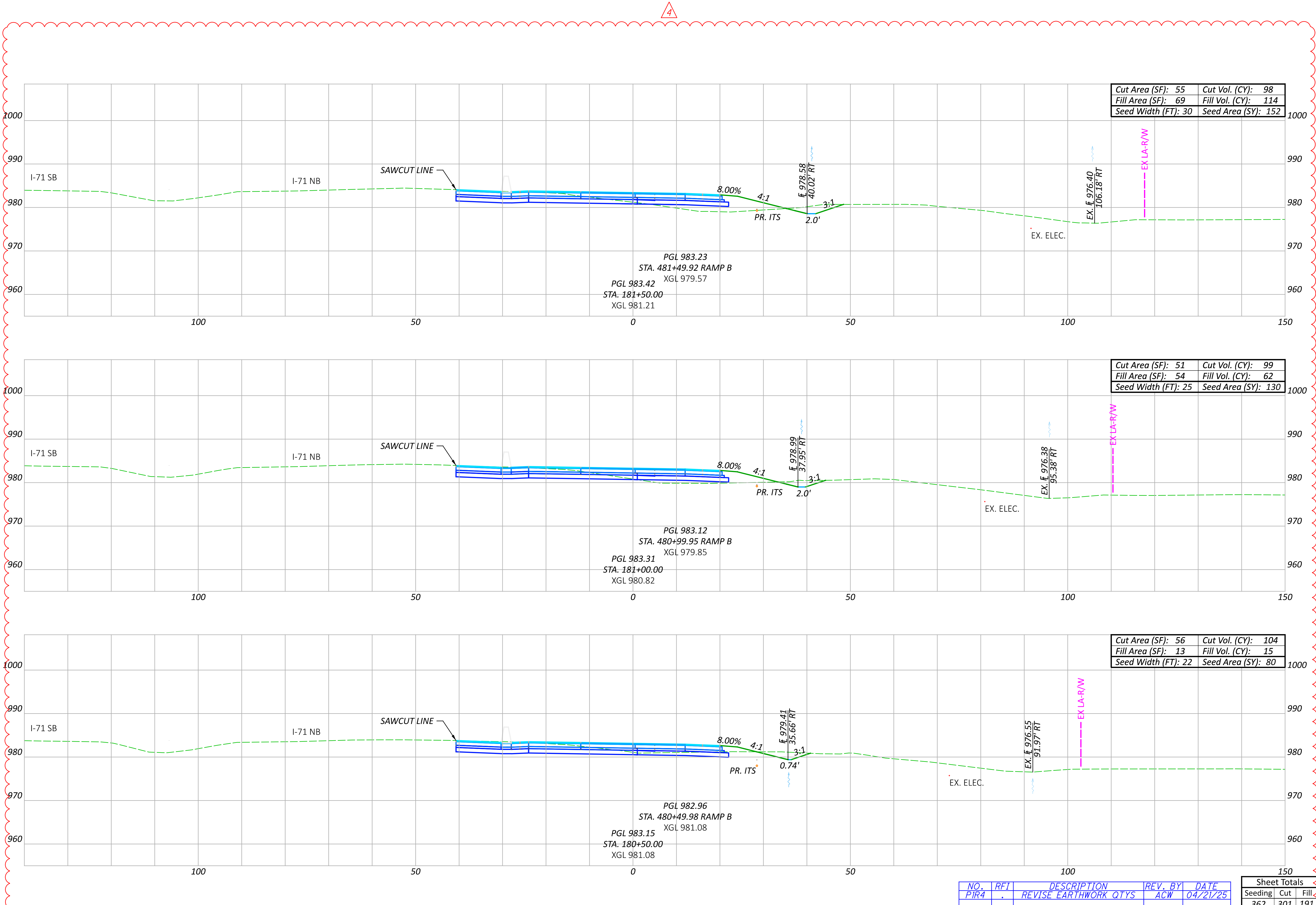
ms consultants, inc.

DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

Sheet Totals			SHEET P.224	TOTAL 663
Seeding	Cut	Fill		
406	433	4		



CROSS SECTIONS CD ROAD
STA. 180+50.00 TO STA. 181+50.00

DESIGN AGENCY

ms consultants, inc.

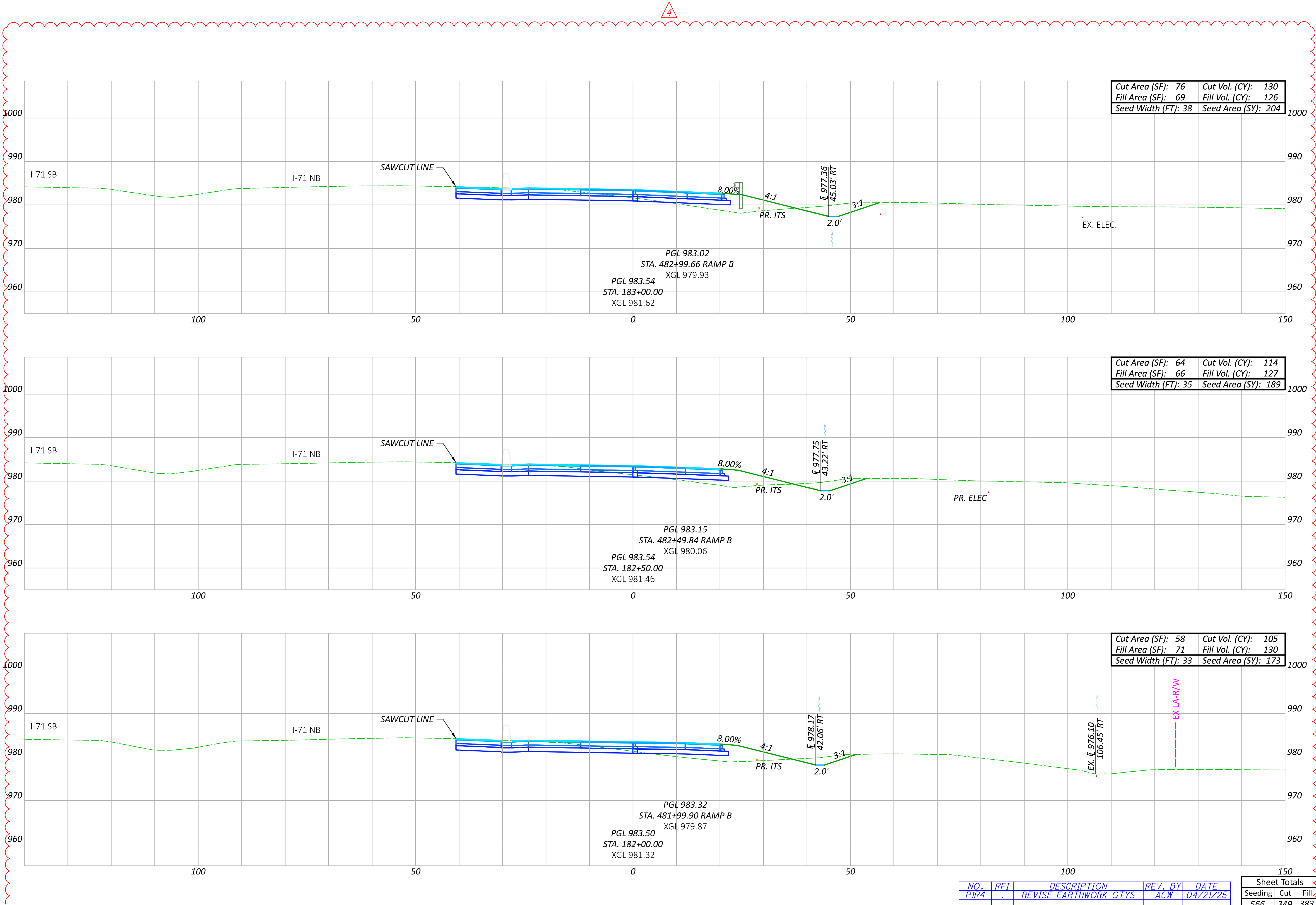
DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

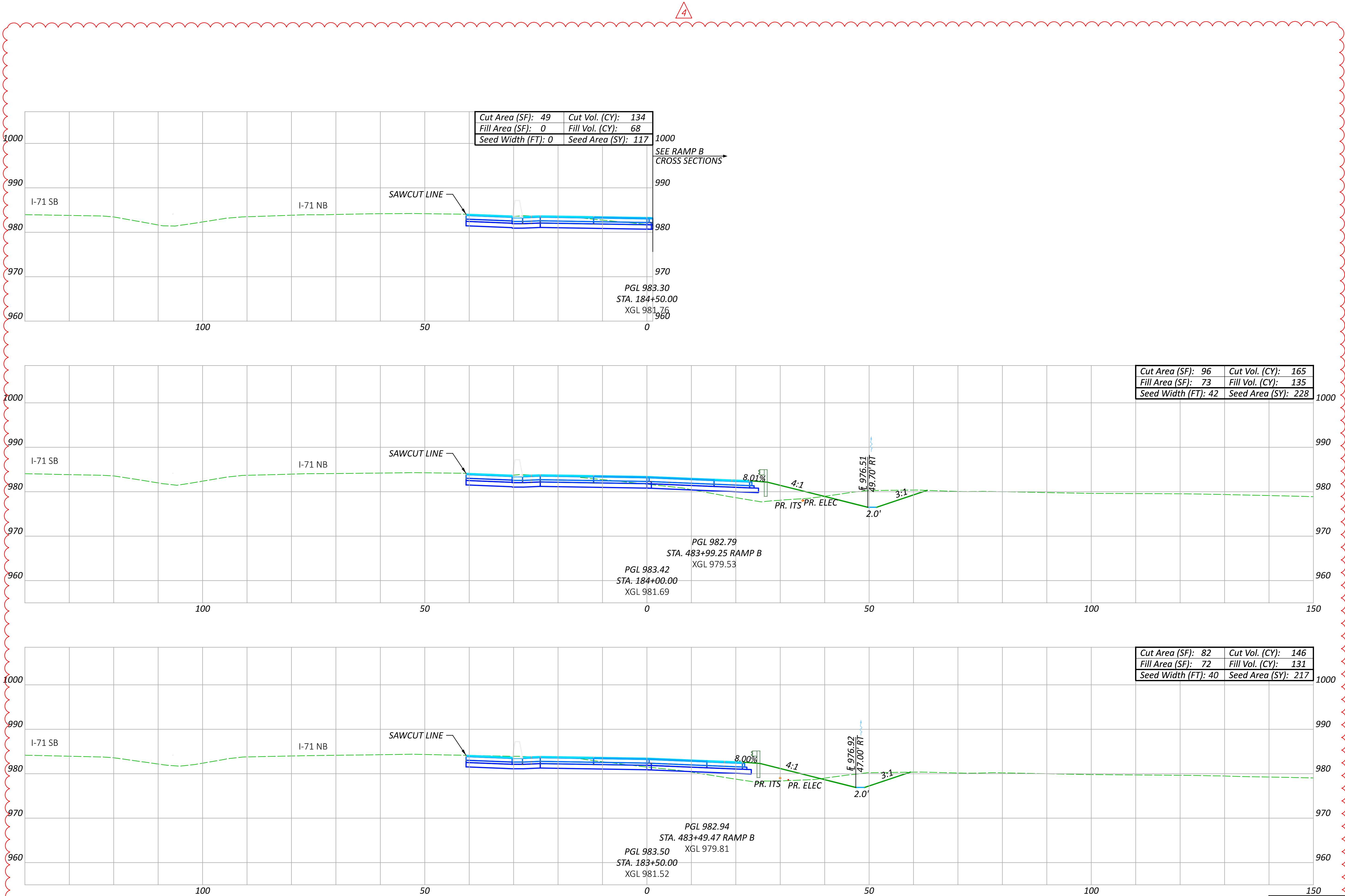
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYs	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
362	301	191	P.225	663



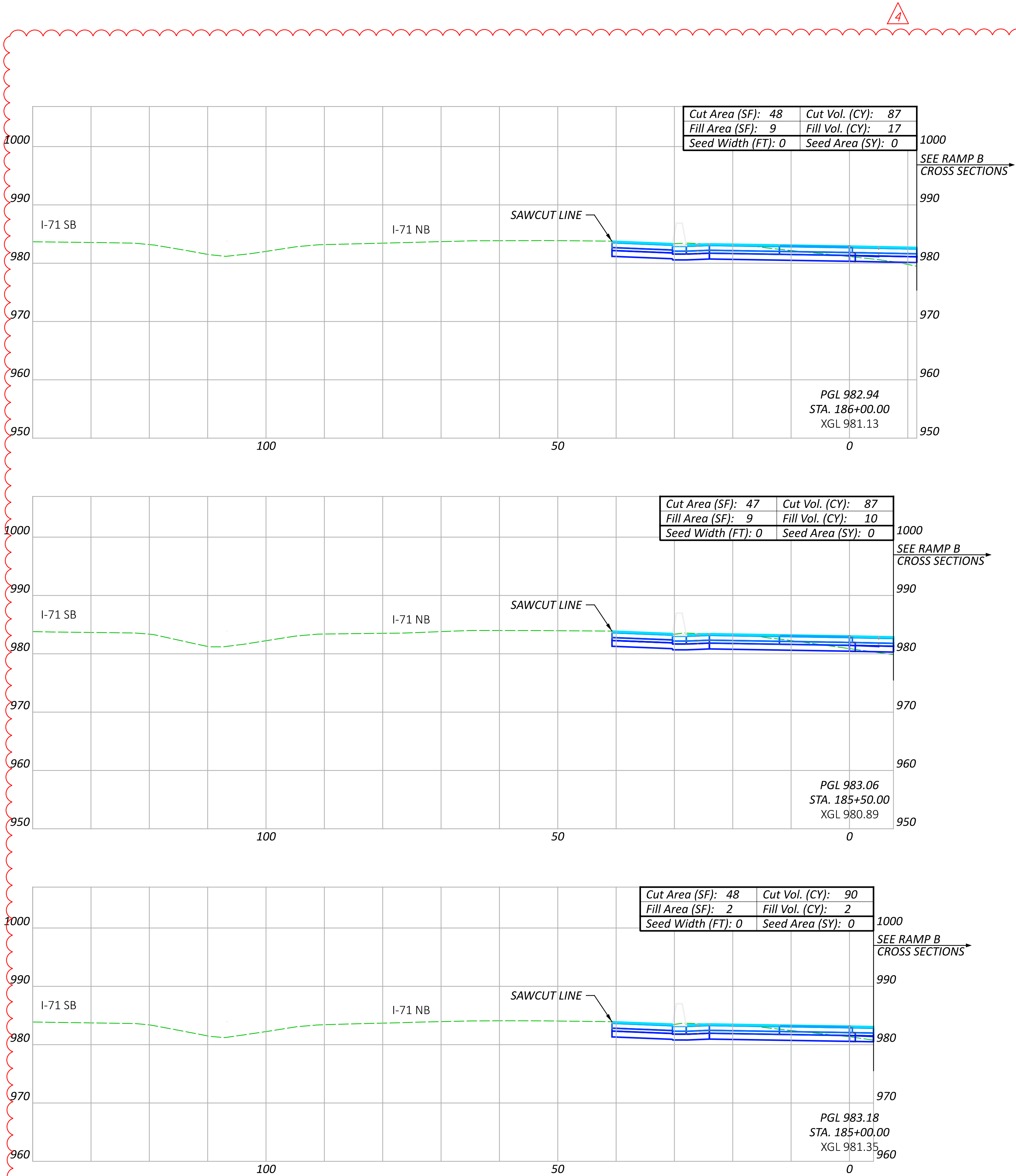
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYs	ACW	04/21/25

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
566	349	383	P.226	663



NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
562	445	334	P.227	663



CROSS SECTIONS CD ROAD
STA. 185+00.00 TO STA. 186+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

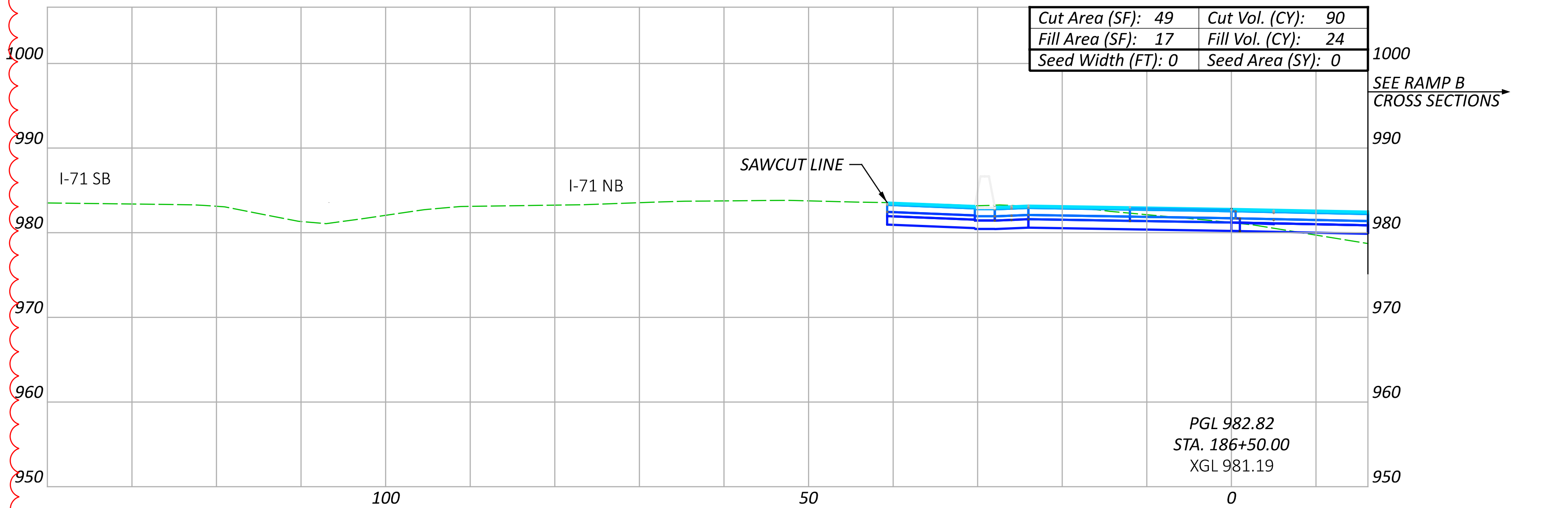
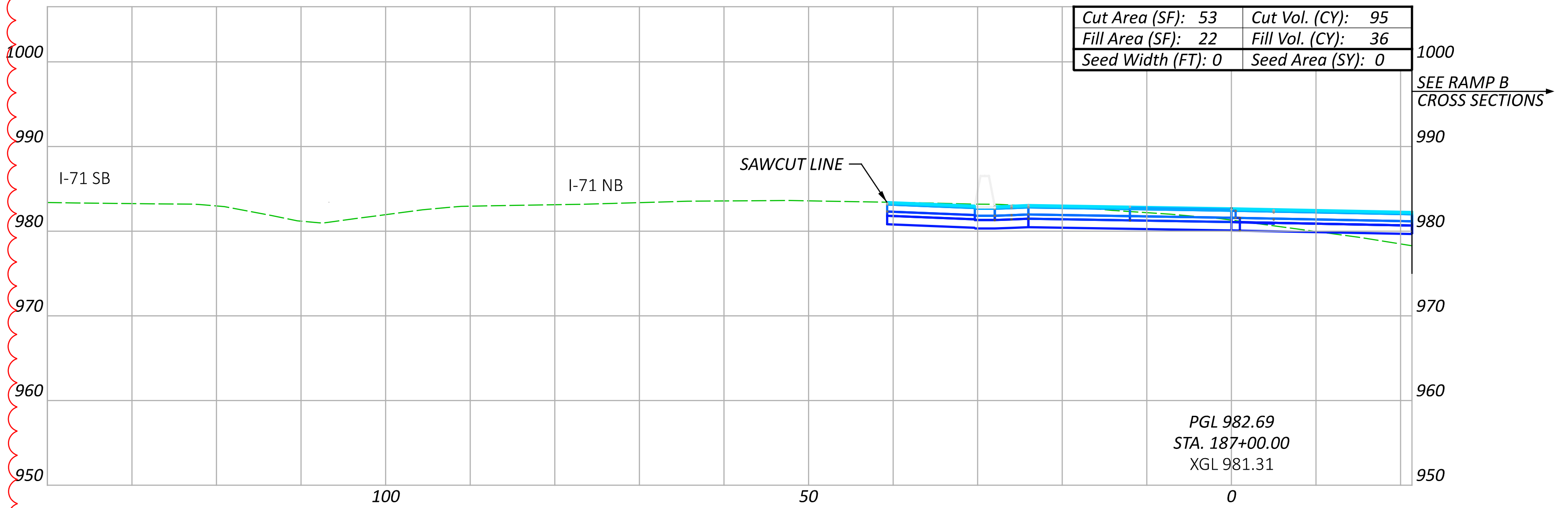
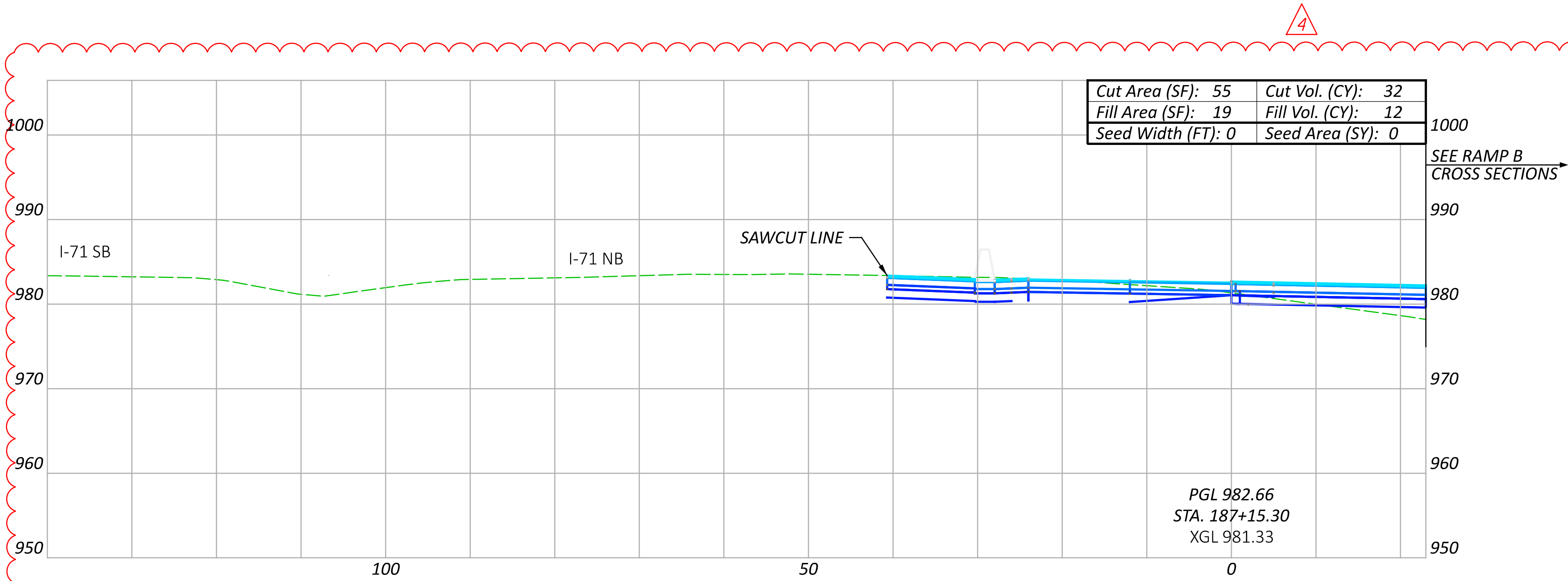
TAZ 05/15/23

PROJECT ID

106959

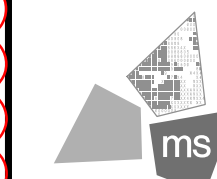
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
0	264	29	P.228	663



CROSS SECTIONS CD ROAD
STA. 186+50.00 TO STA. 187+00.00

DESIGN AGENCY



ms consultants, inc.

DESIGNER

CLH

REVIEWER

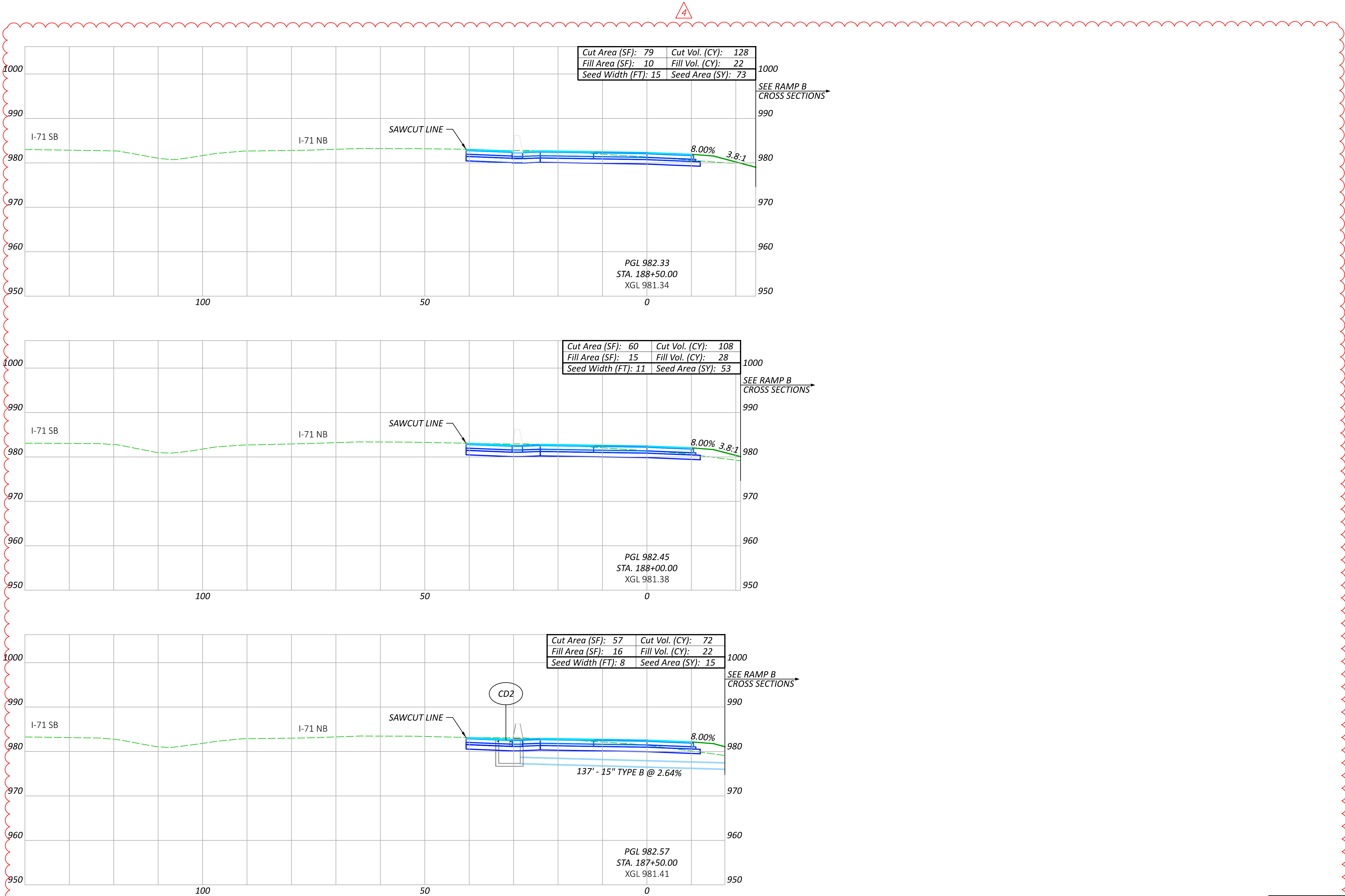
TAZ 05/15/23

PROJECT ID

106959

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
0	217	72	P.229	663



CROSS SECTIONS CD ROAD
STA. 187+50.00 TO STA. 188+50.00

DESIGN AGENCY



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DESIGNER

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REVIEWER

TAZ 05/15/23

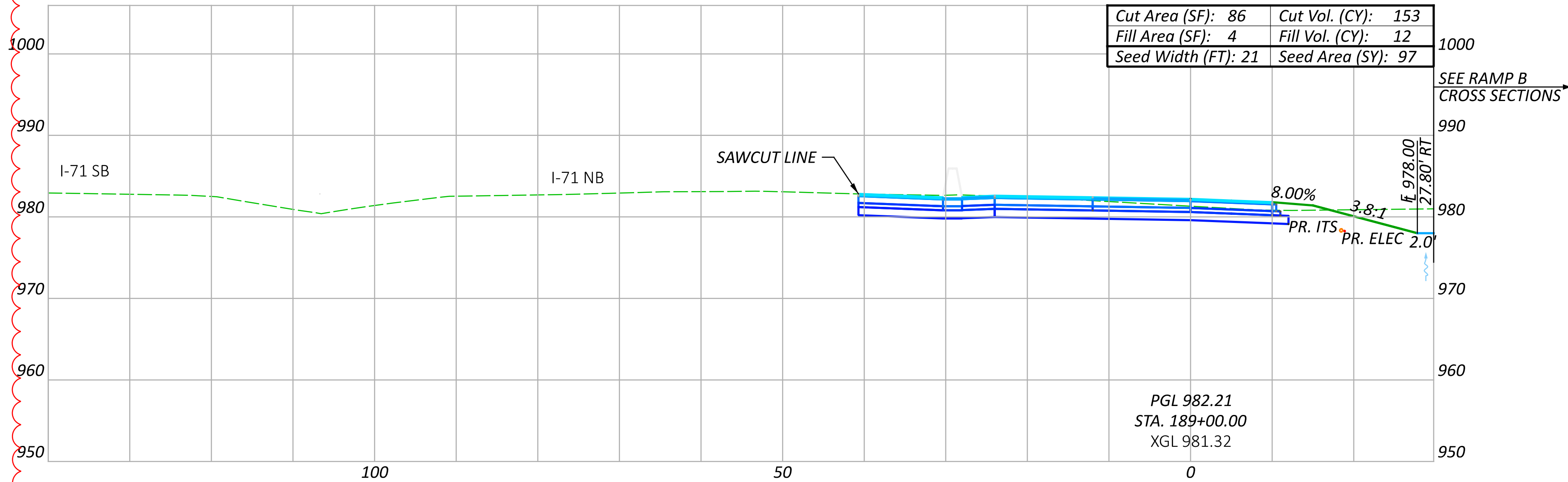
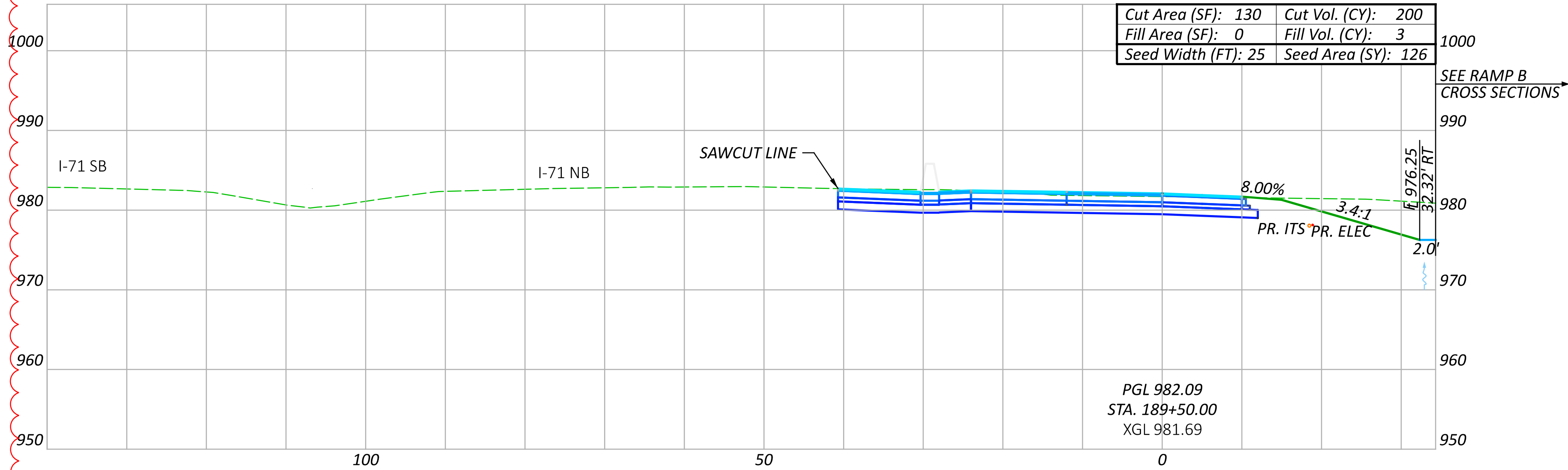
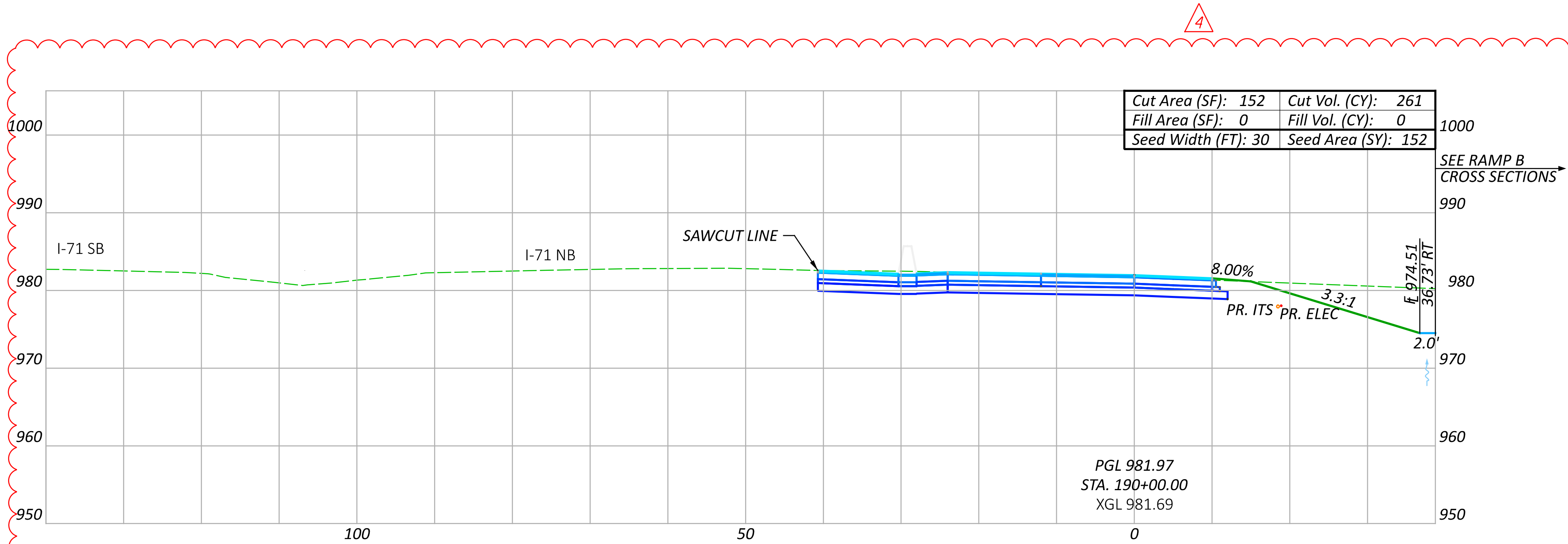
PROJECT ID

106959

Sheet Totals

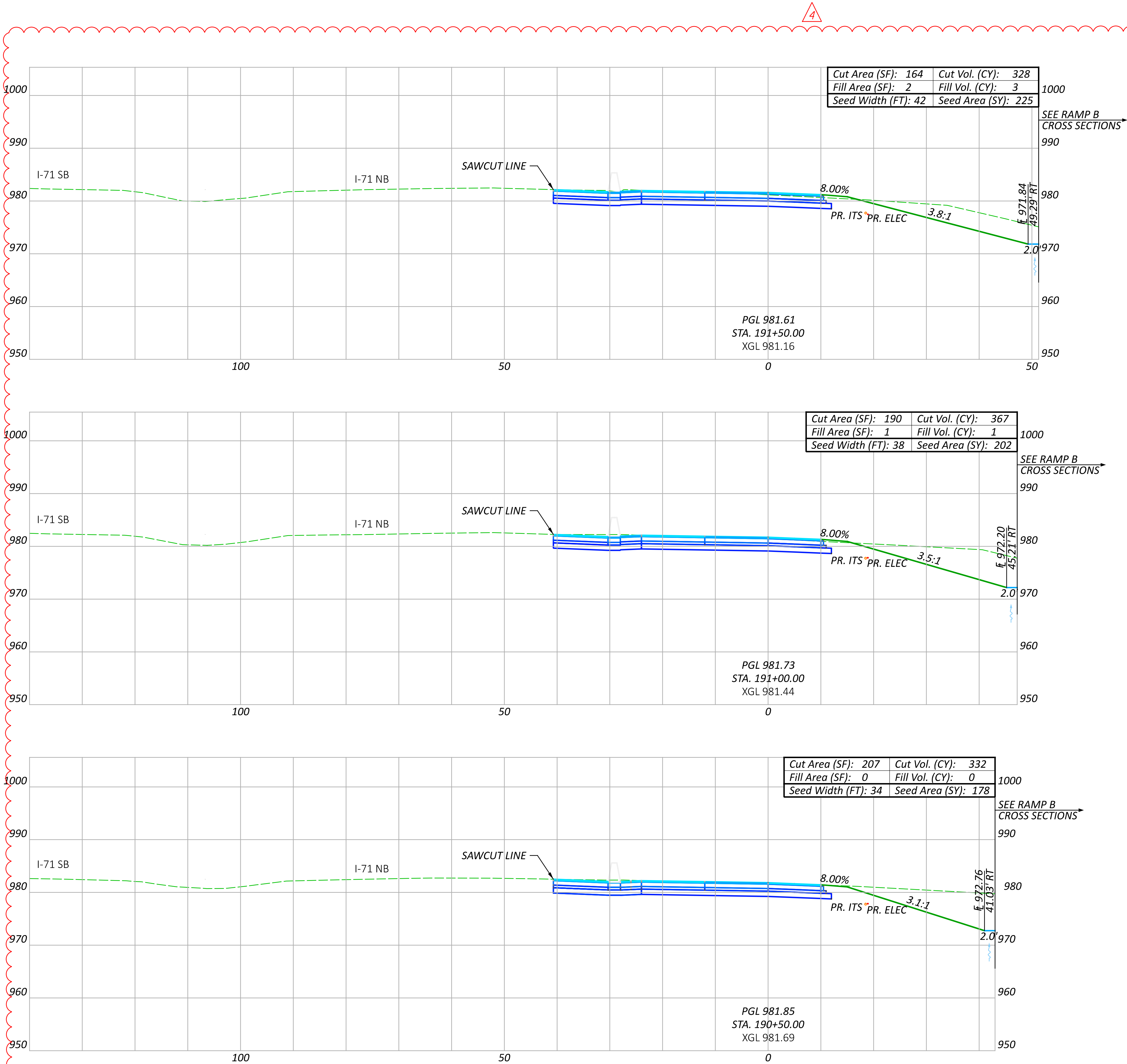
Seeding	Cut	Fill
141	308	72

SHEET	TOTAL
P.230	663



NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			PROJECT ID	
Seeding	Cut	Fill	SHEET	TOTAL
375	614	15	P.231	663



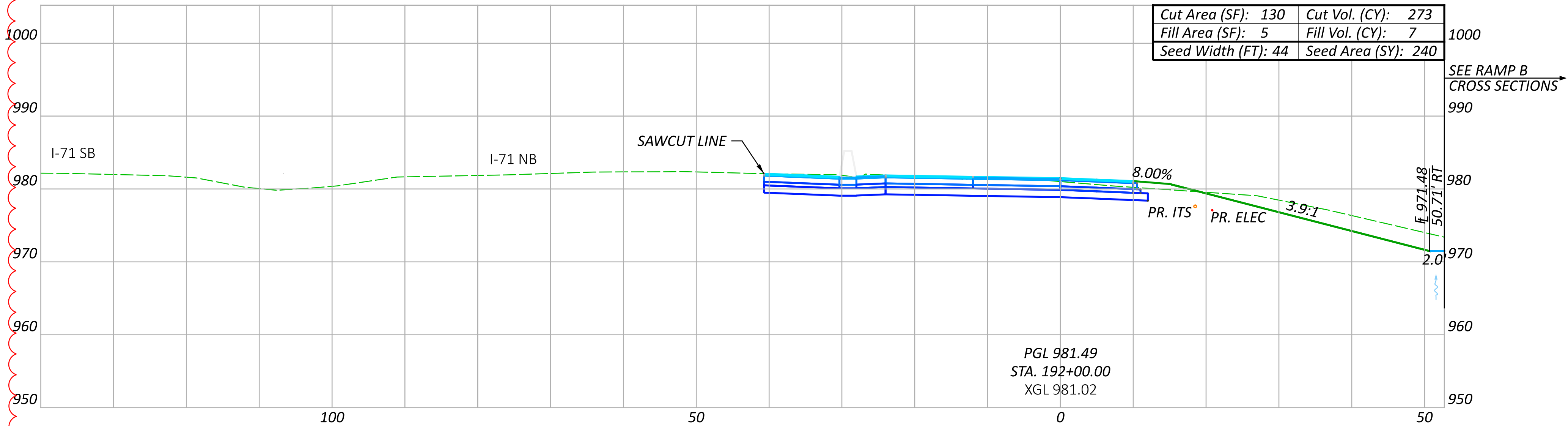
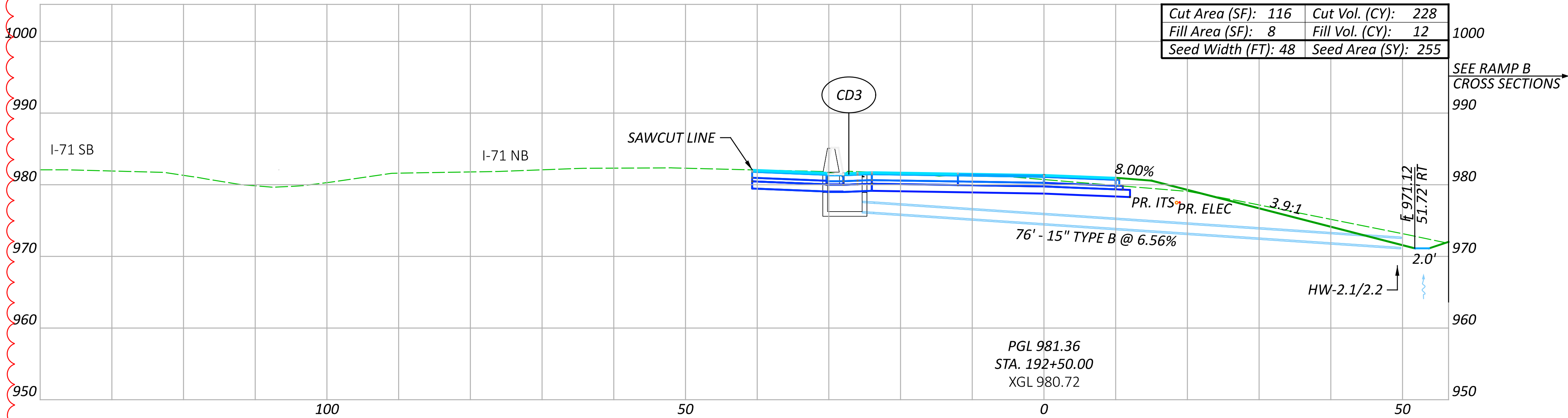
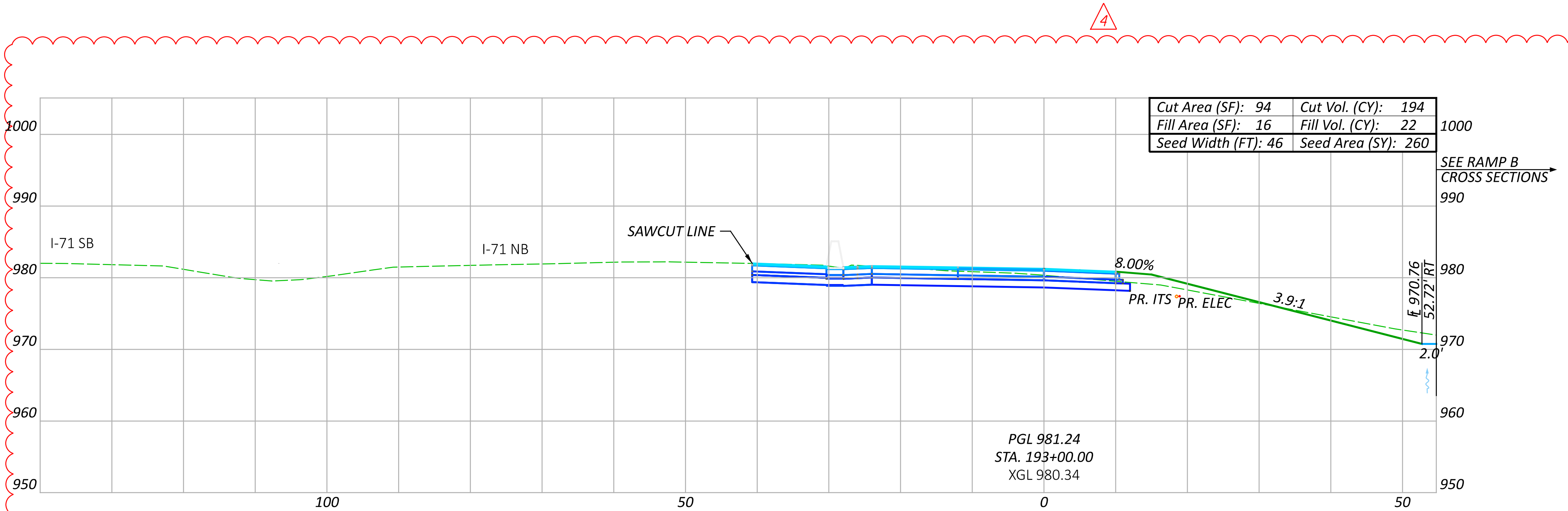
CROSS SECTIONS CD ROAD
STA. 190+50.00 TO STA. 191+50.00



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REVIEWER	TAZ
PROJECT ID	106959

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill	P.232	663
605	1027	4		



NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
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Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.233	663
755	695	41		

LAST REVISED: PIR4 04/21/2025

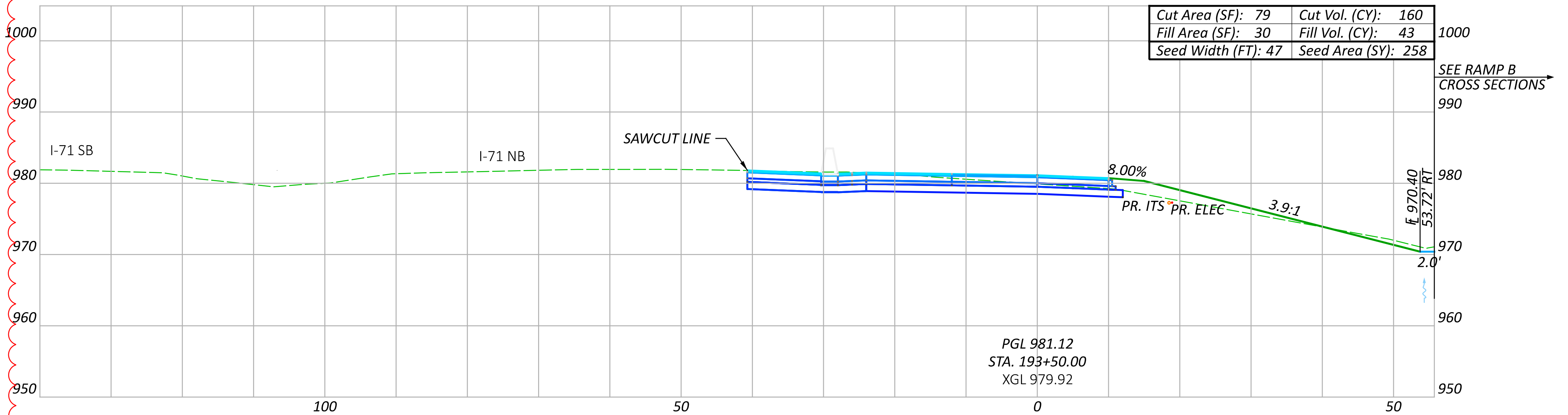
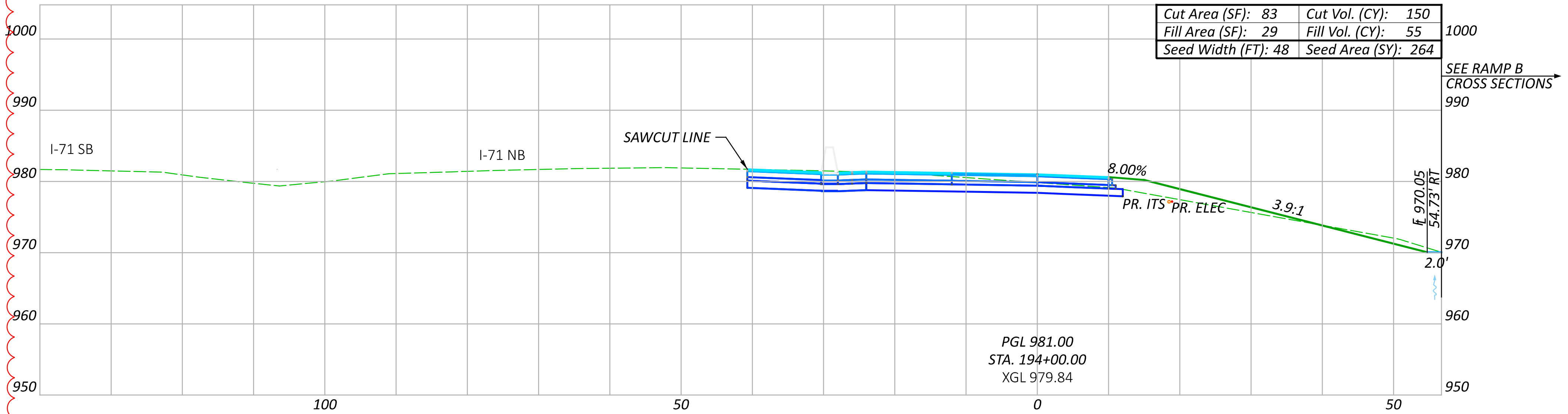
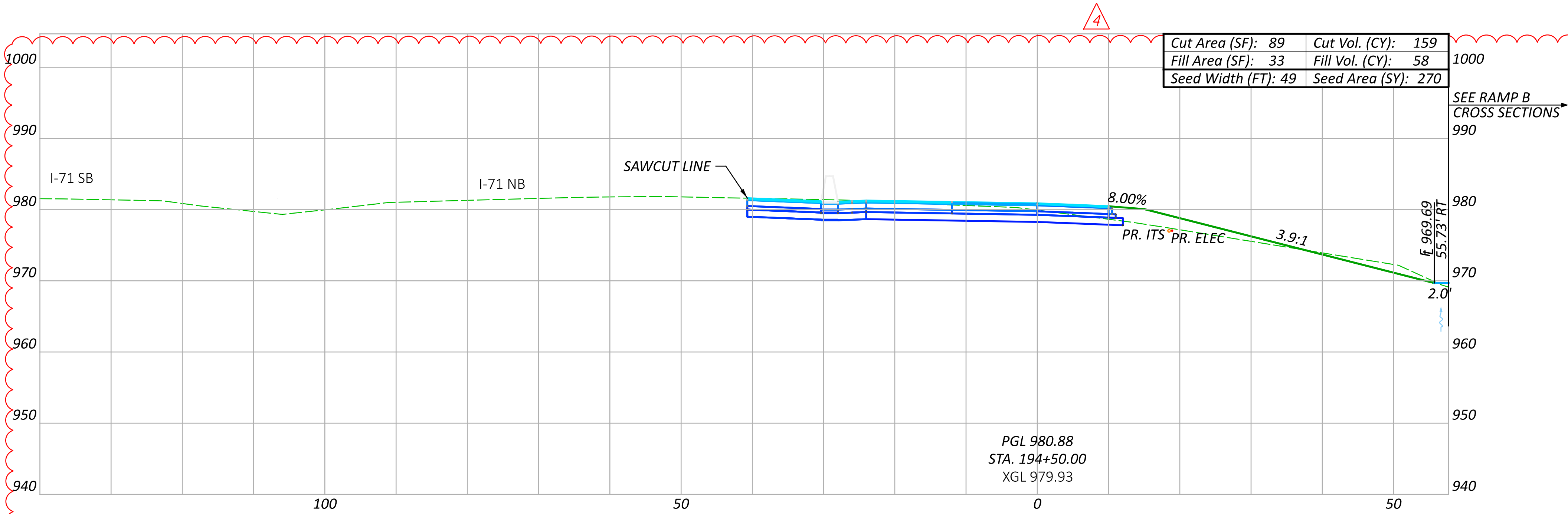
CROSS SECTIONS CD ROAD
STA. 192+00.00 TO STA. 193+00.00



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REVIEWER
TAZ 05/15/23

PROJECT ID
106959



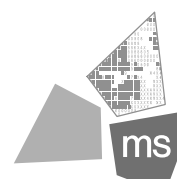
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.234	663
792	469	156		

LAST REVISED: PIR4 04/21/2025

CROSS SECTIONS CD ROAD
STA. 193+50.00 TO STA. 194+50.00

DESIGN AGENCY



ms consultants, inc.

DESIGNER

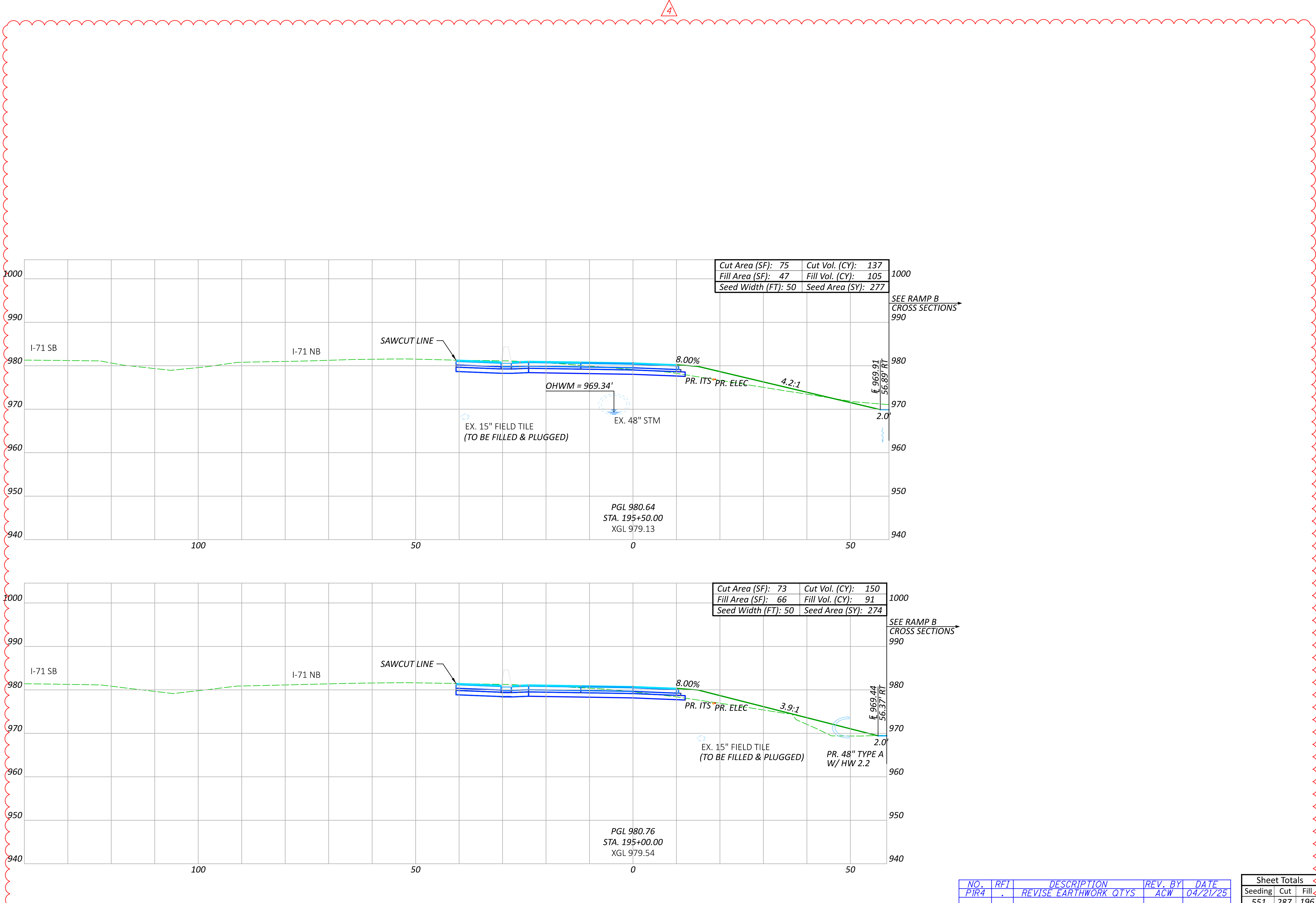
CLH

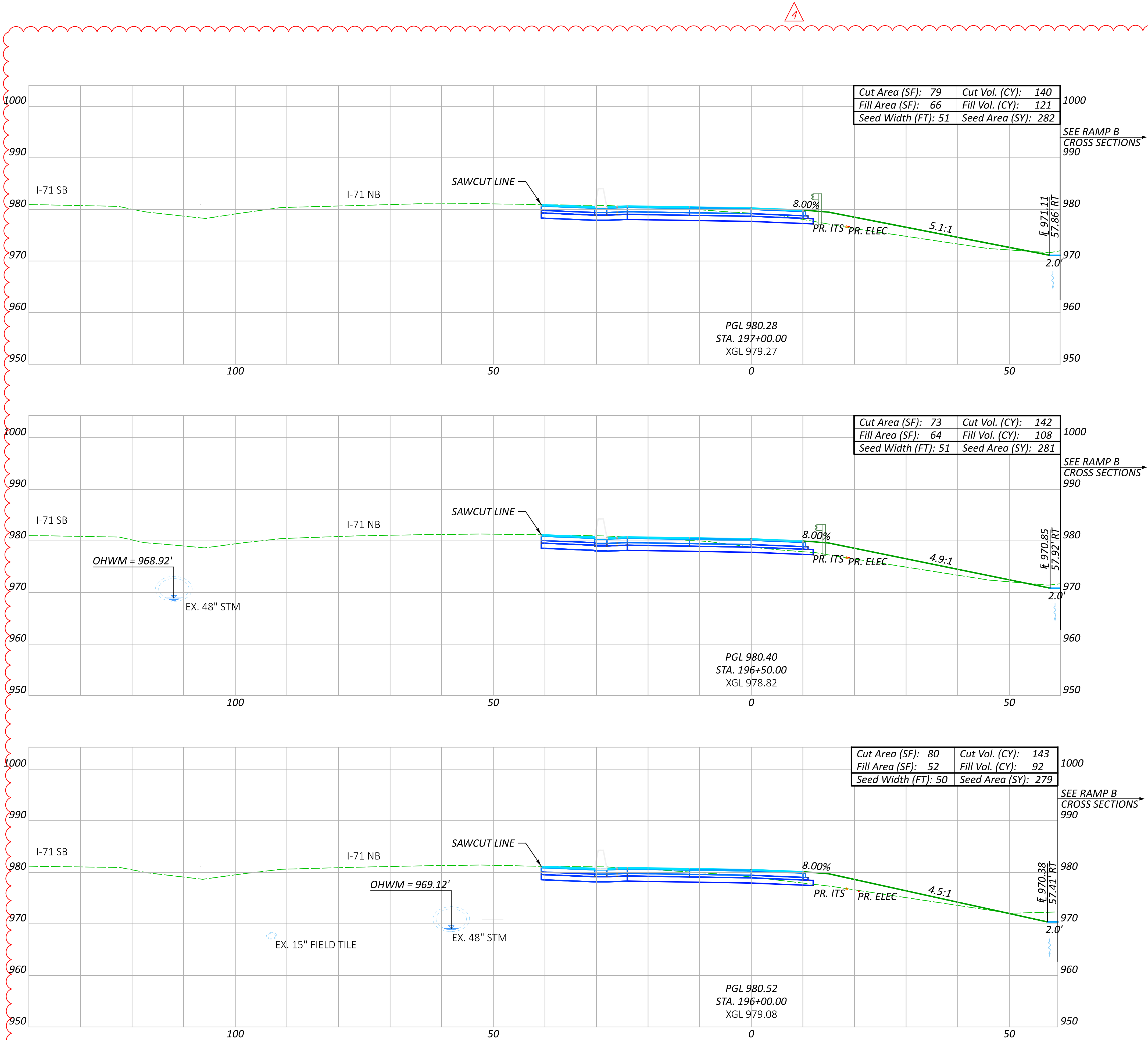
REVIEWER

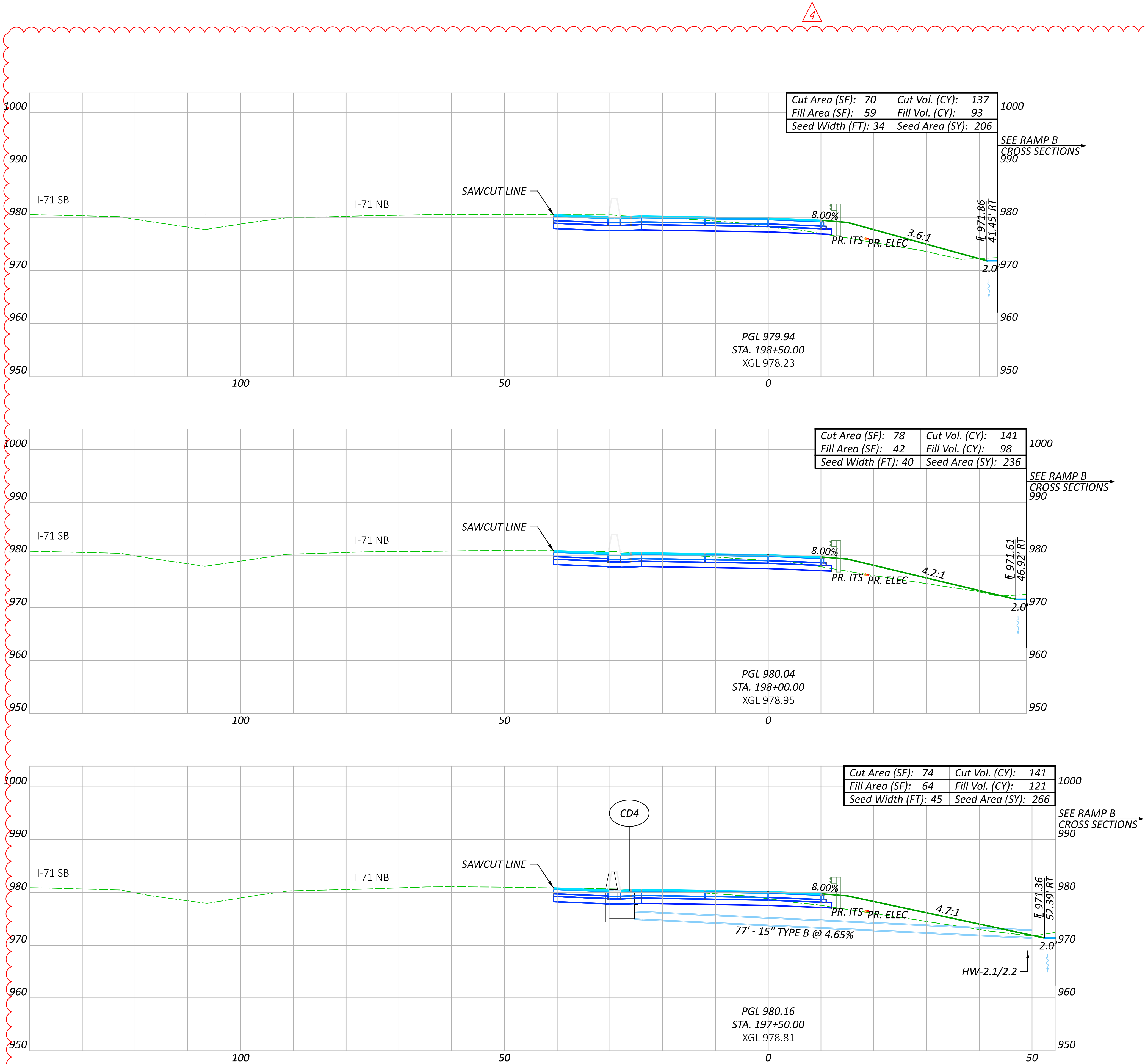
TAZ 05/15/23

PROJECT ID

106959







NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
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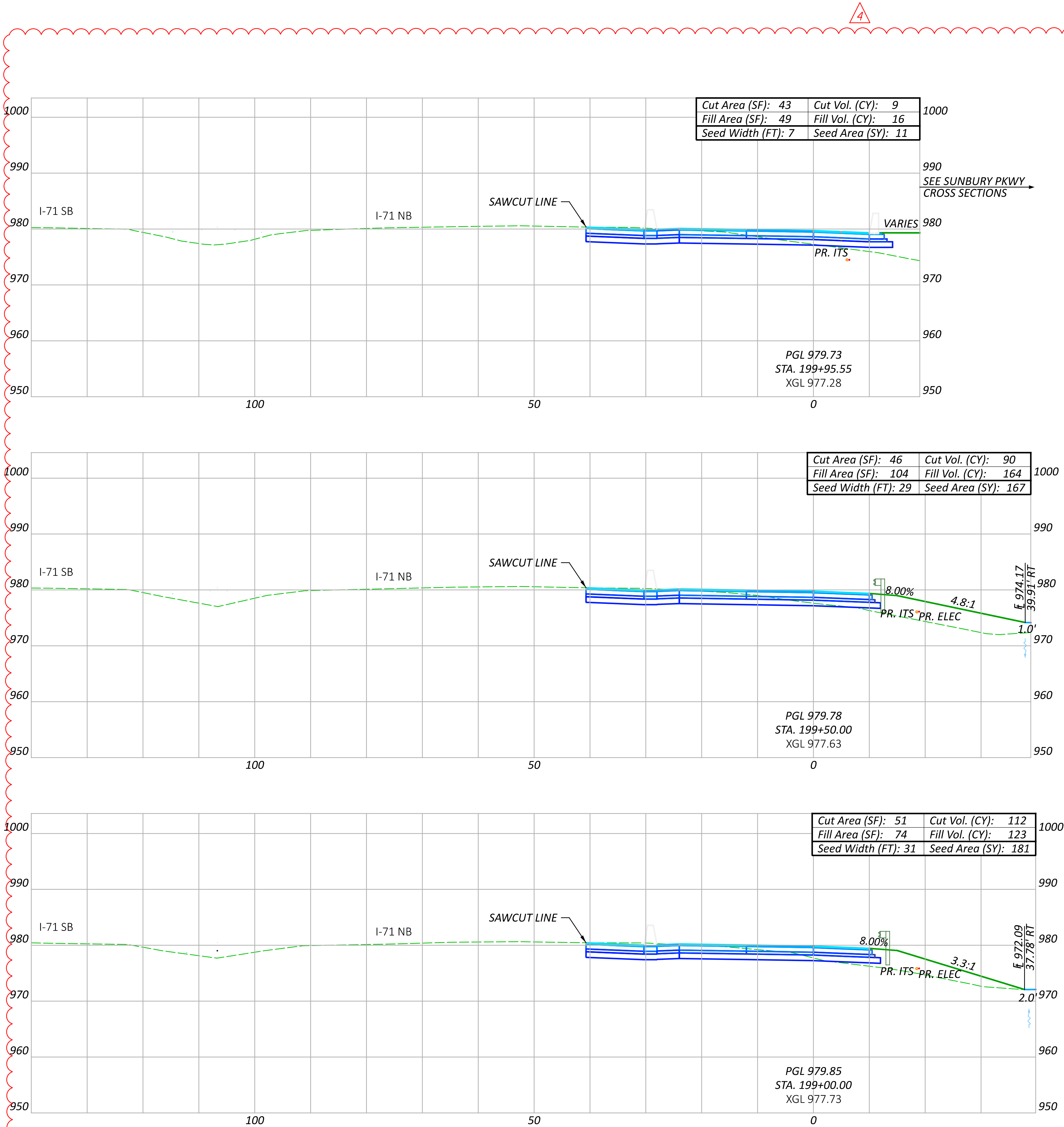
Sheet Totals			PROJECT ID	
Seeding	Cut	Fill	SHEET	TOTAL
708	419	312	P.237	663

LAST REVISED: PIR4 04/21/2025

CROSS SECTIONS CD ROAD
STA. 197+50.00 TO STA. 198+50.00



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CLH
REVIEWER
TAZ 05/15/23



NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

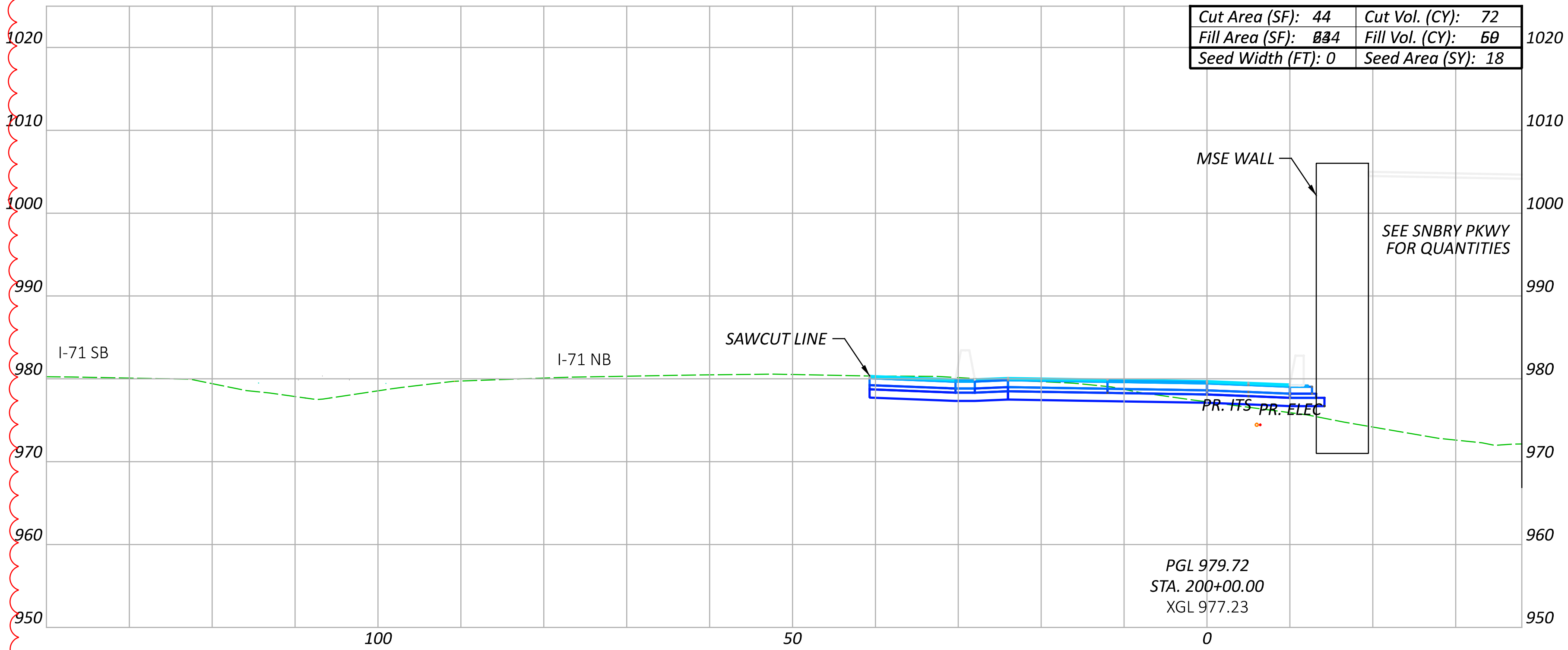
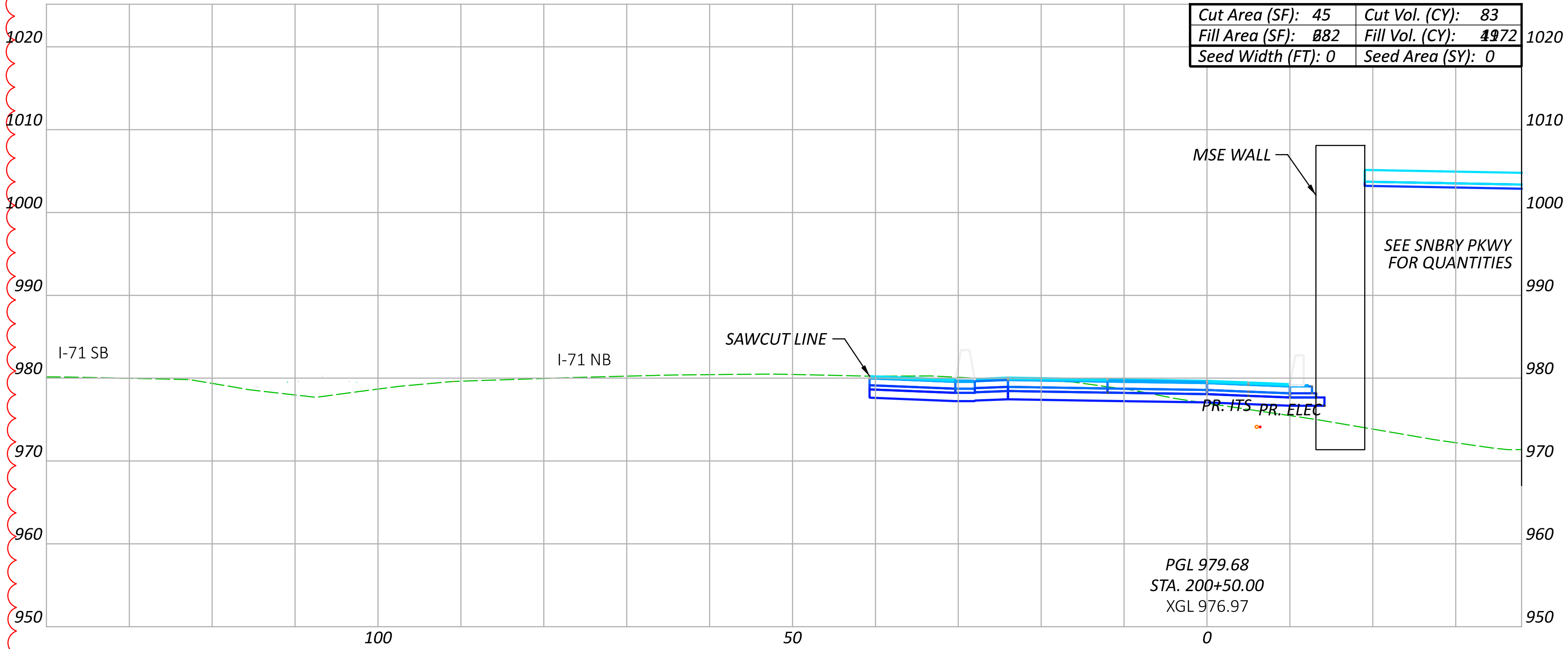
Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.238	663
359	211	303		



DESIGNER
ACW

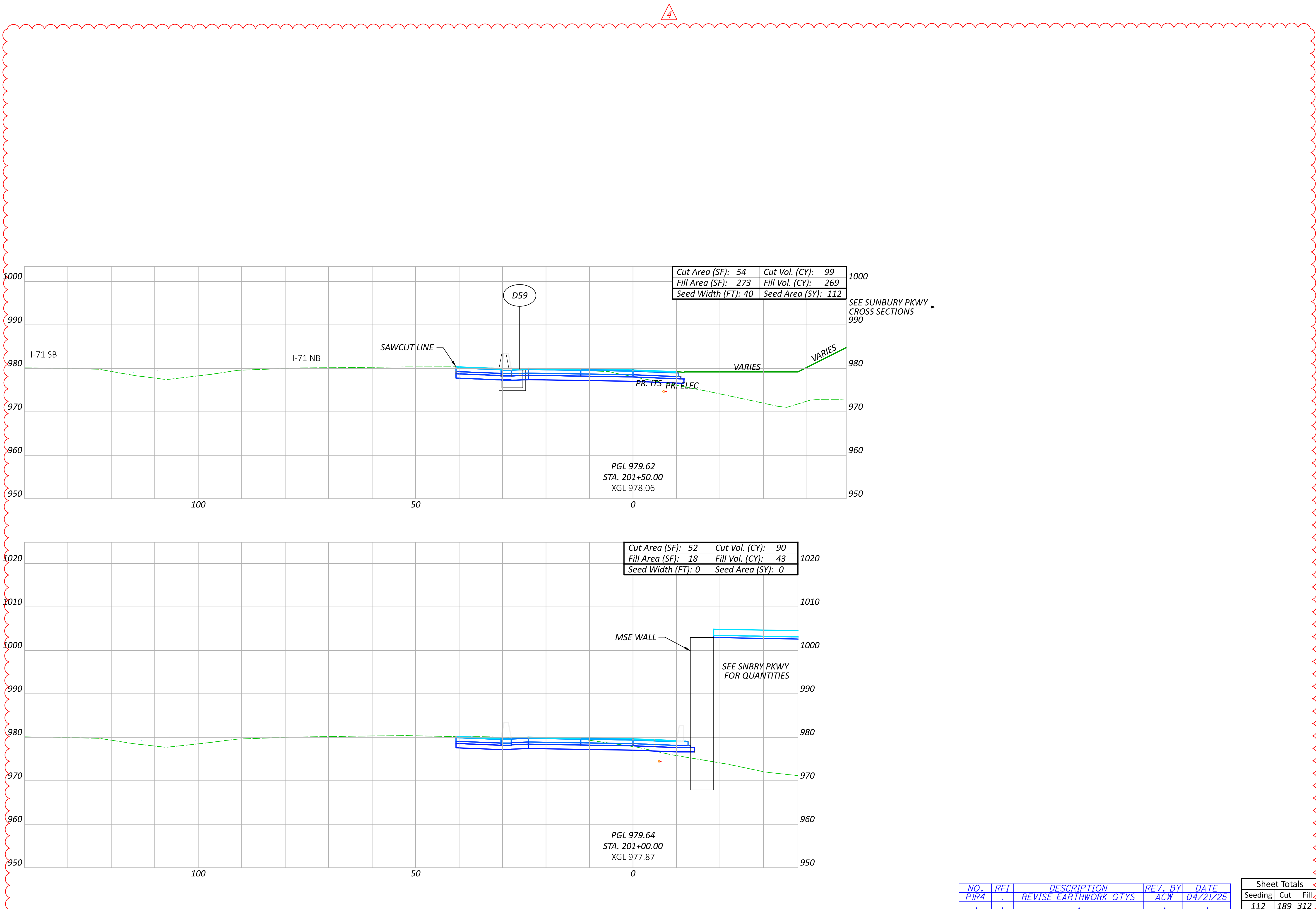
REVIEWER
TAZ 05/15/23

PROJECT ID
106959



NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.239	663
18	155	109		



CROSS SECTIONS CD ROAD
STA. 201+00.00 TO STA. 201+50.00

DESIGN AGENCY



ms consultants, inc.

DESIGNER

ACW

REVIEWER

TAZ 05/15/23

PROJECT ID

106959

Sheet Totals

Seeding Cut Fill

112 189 312

SHEET

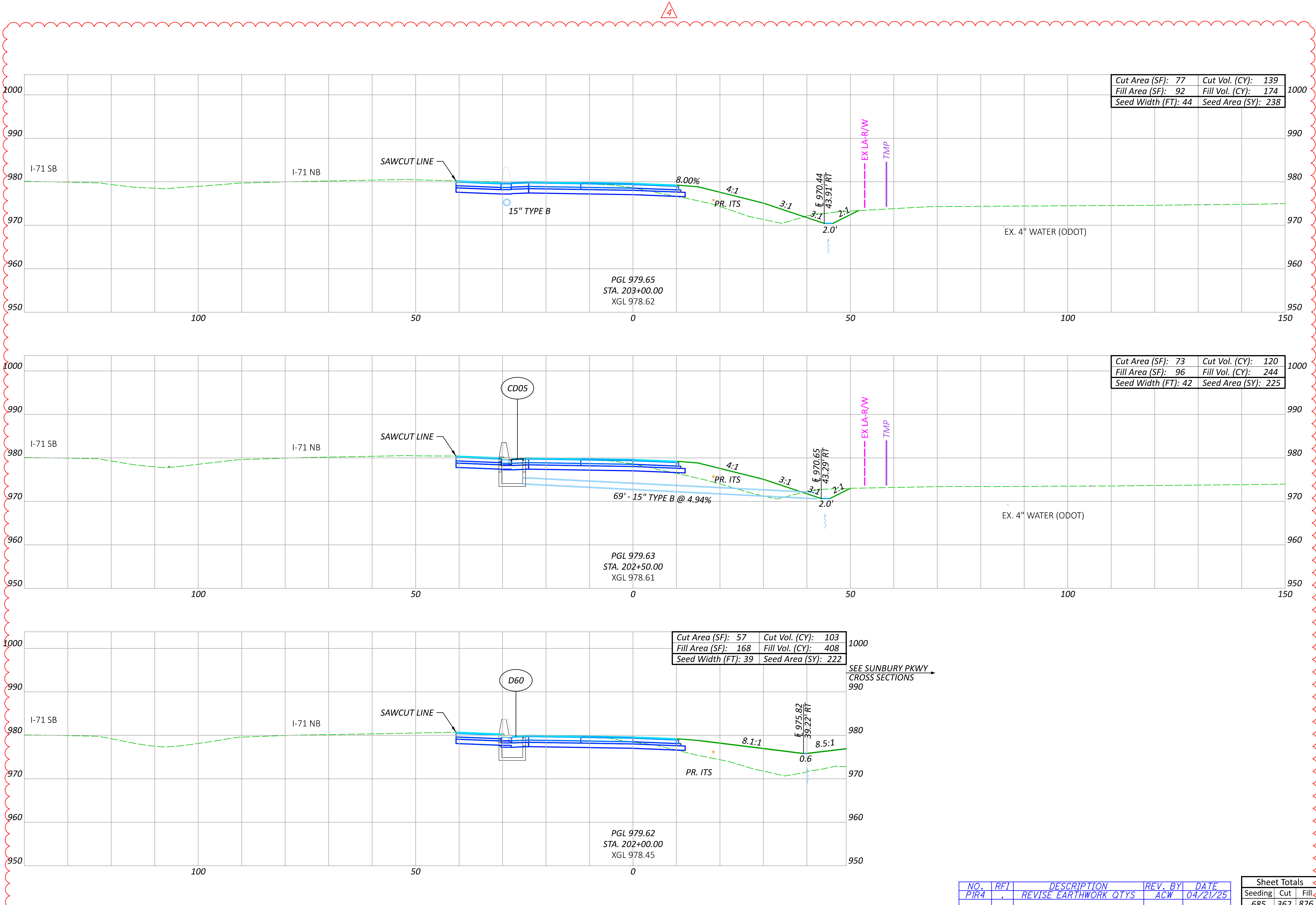
P.240

TOTAL

663

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
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LAST REVISED: PIR4 04/21/2025



CROSS SECTIONS CD ROAD
STA. 202+00.00 TO STA. 203+00.00

DESIGN AGENCY



ms consultants, inc.

DESIGNER

ACW

REVIEWER

TAZ 05/15/23

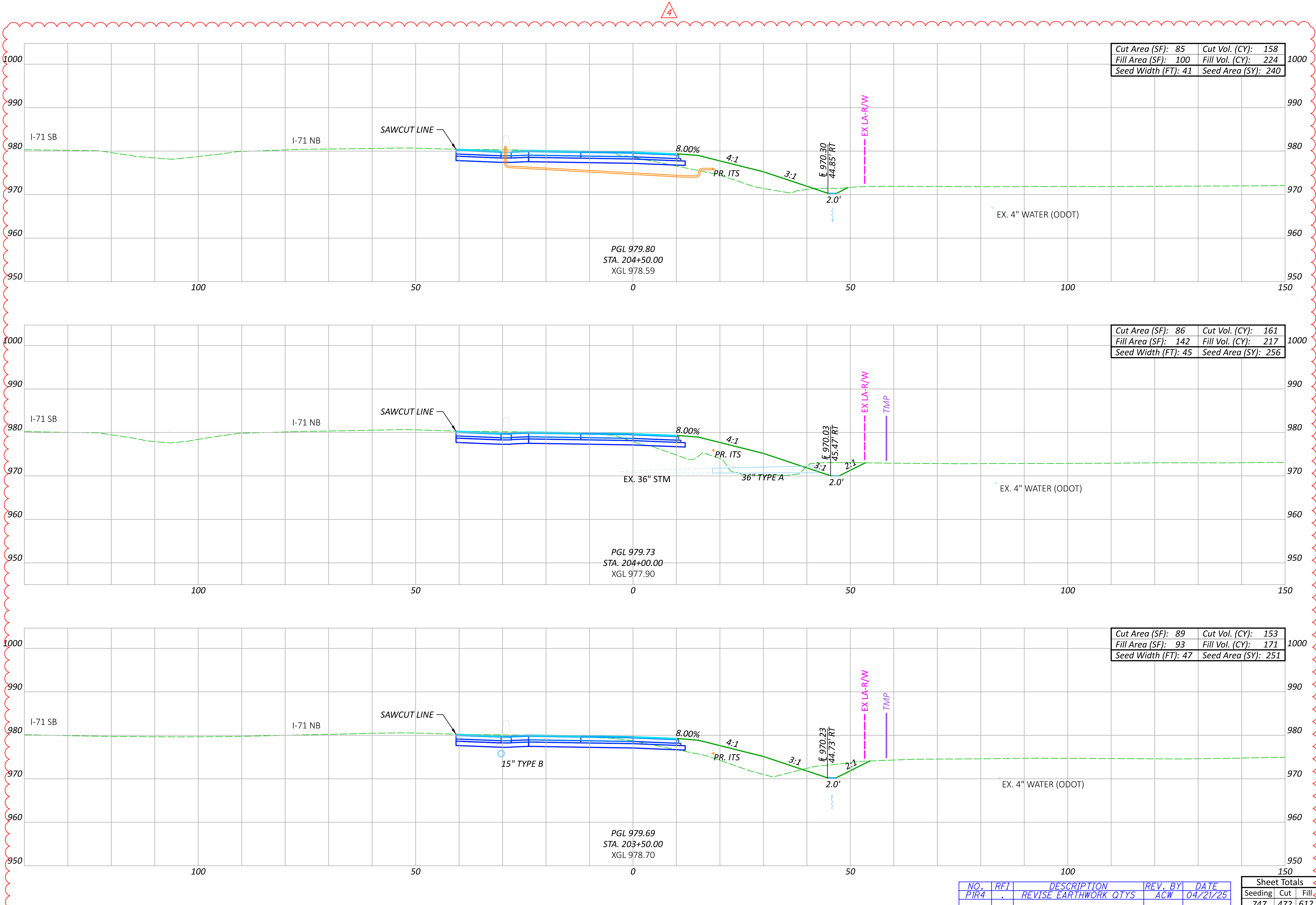
PROJECT ID

106959

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYs	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
685	362	826	P.241	663

LAST REVISED: PIR4 04/21/2025



CROSS SECTIONS CD ROAD
STA. 203+50.00 TO STA. 204+50.00

DESIGN AGENCY


ms consultants, inc.

DESIGNER

CLH

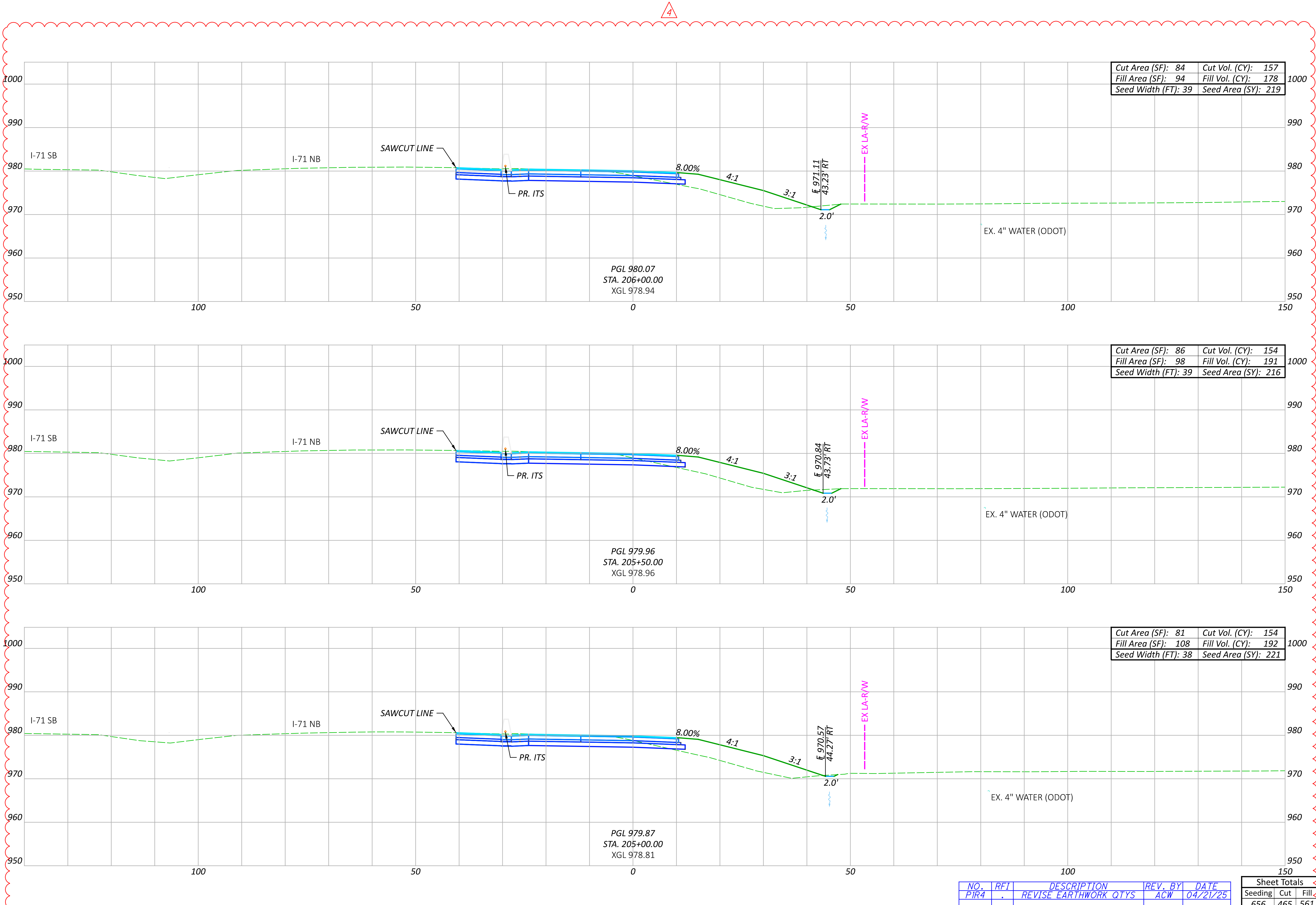
REVIEWER

TAZ 05/15/23

PROJECT ID

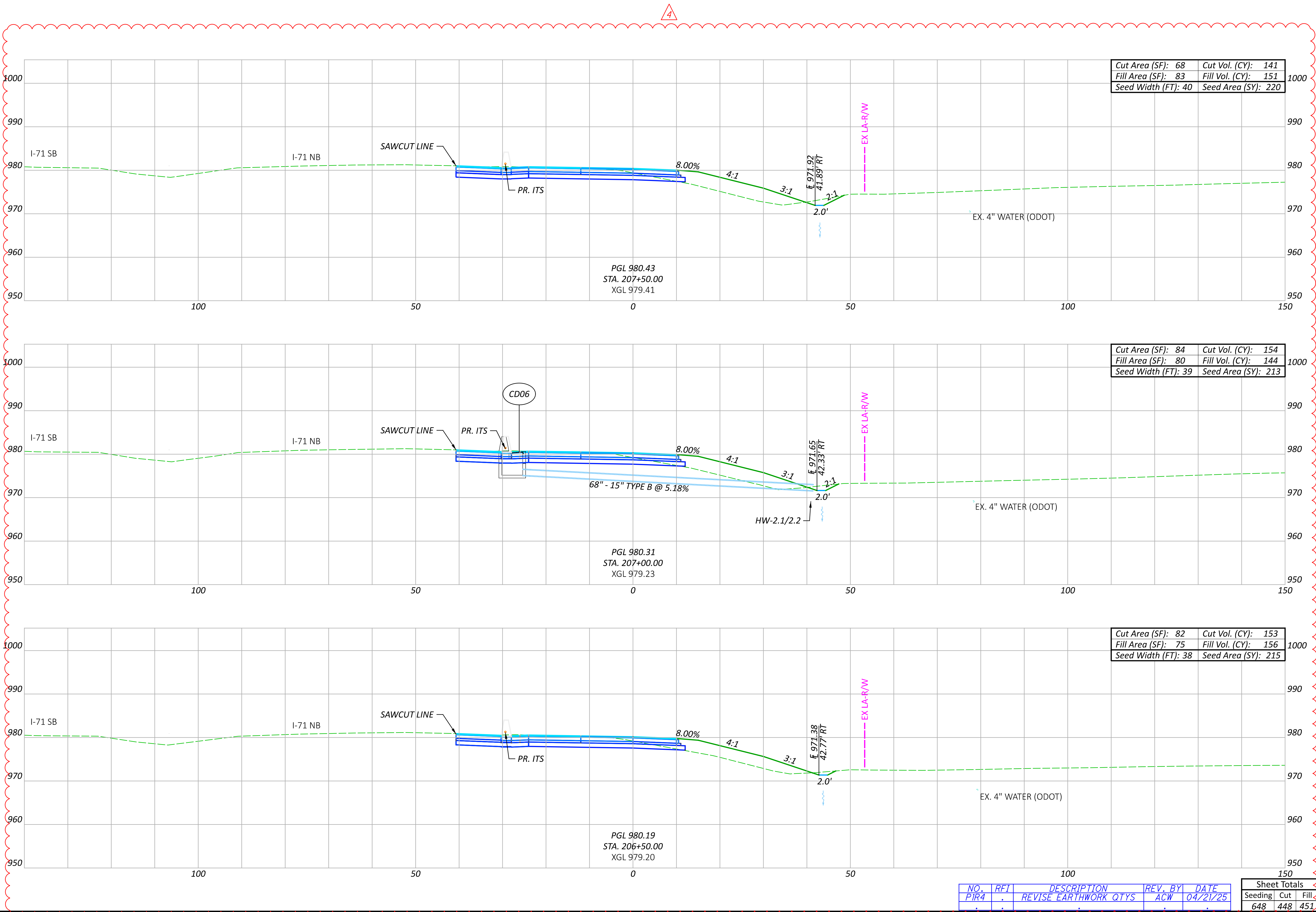
106959

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
747	472	612	P.242	663



NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYs	ACW	04/21/25

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
656	465	561	P.243	663



CROSS SECTIONS CD ROAD
STA. 206+50.00 TO STA. 207+50.00



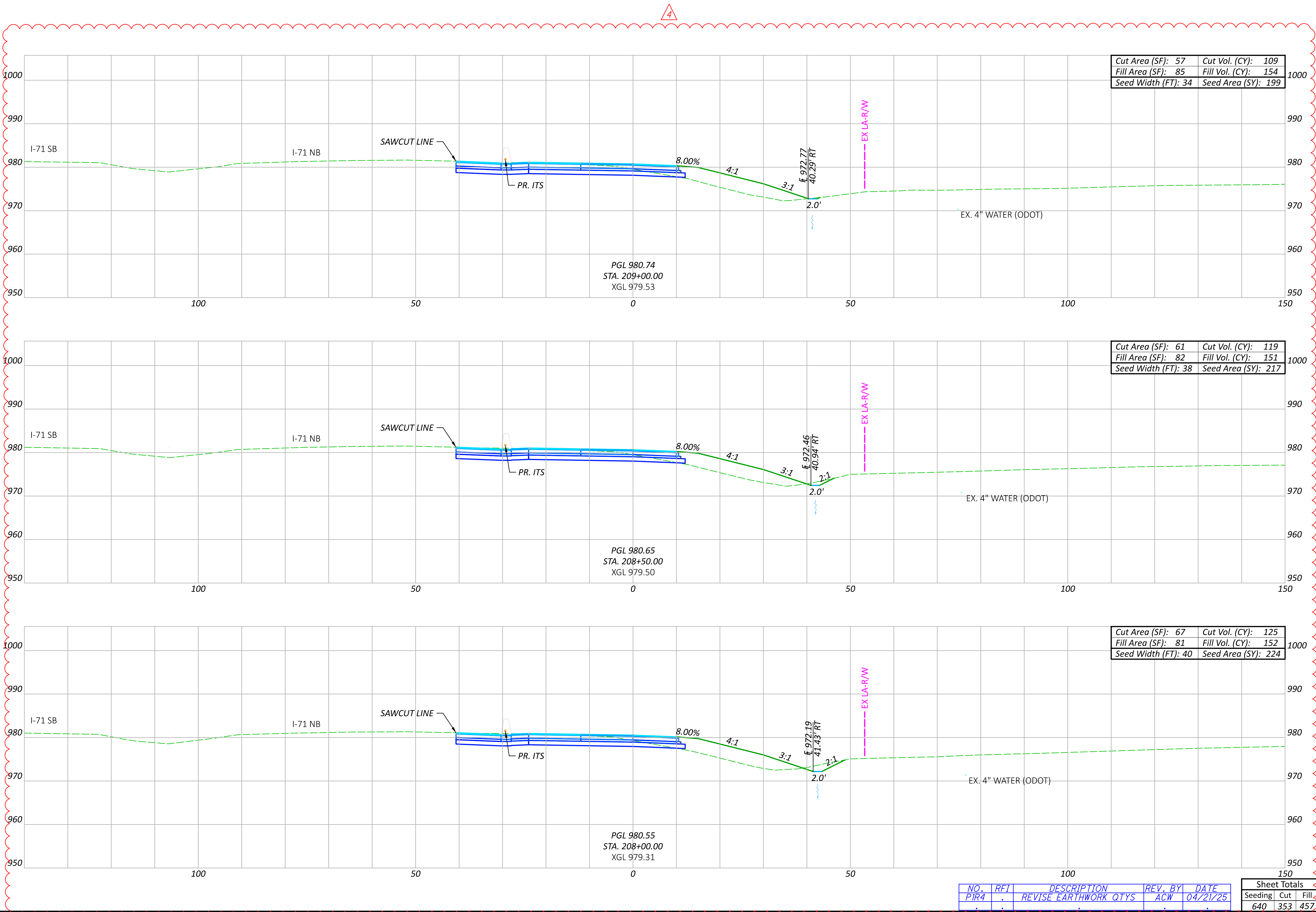
DESIGNER
CLH

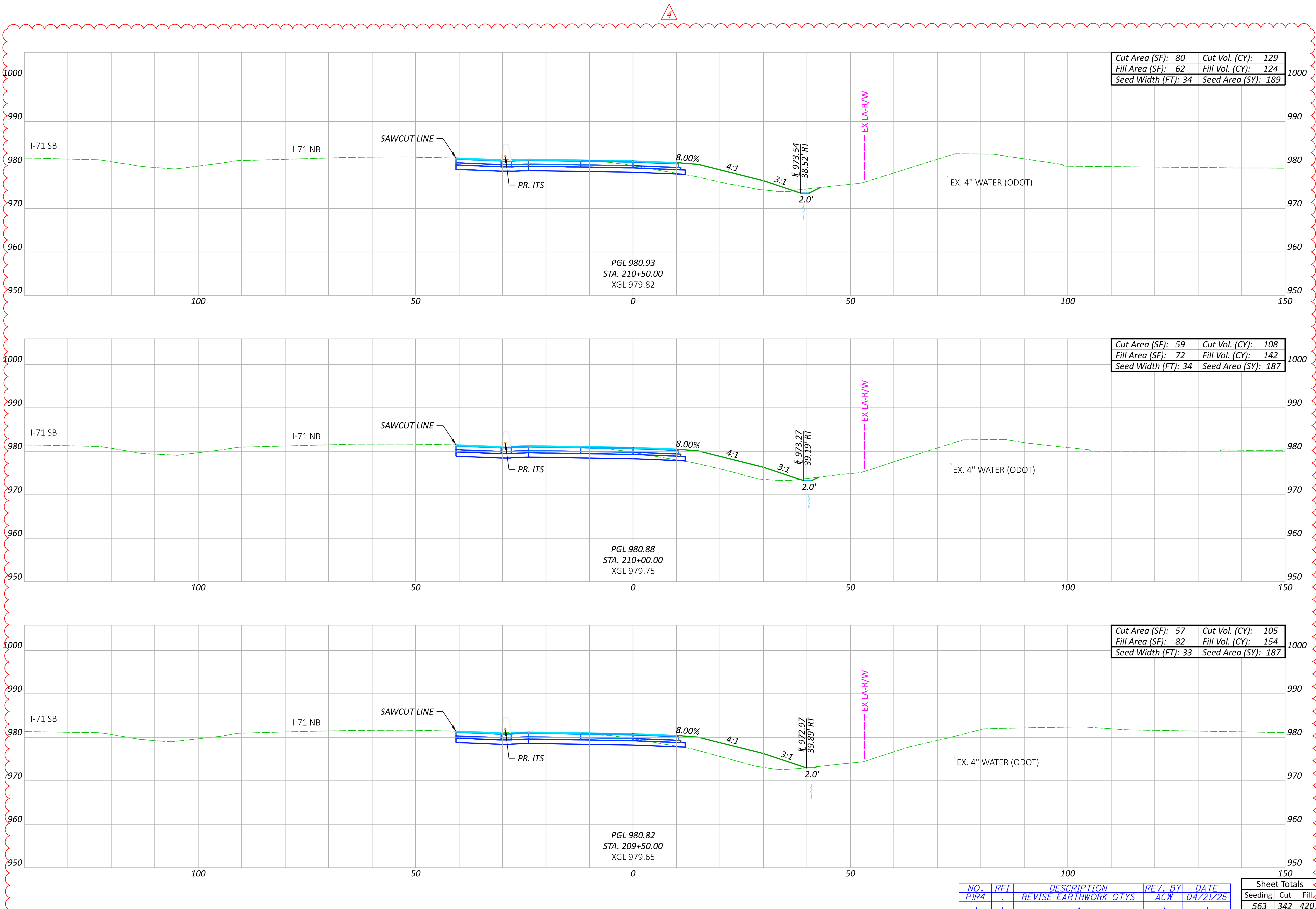
REVIEWER
TAZ 05/15/23

PROJECT ID
106959

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
648	448	451	P.244	663





CROSS SECTIONS CD ROAD
STA. 209+50.00 TO STA. 210+50.00

DESIGN AGENCY

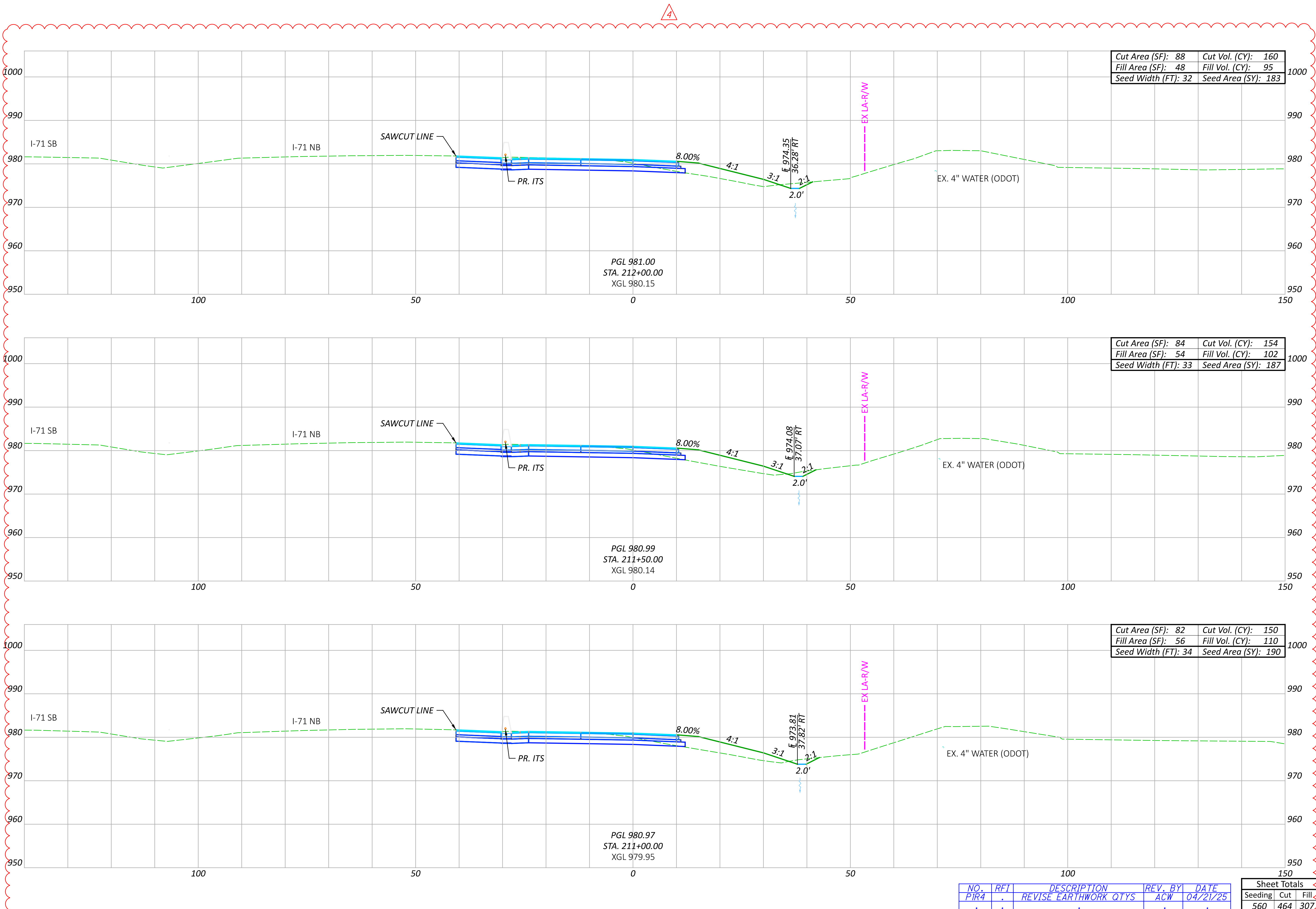
ms consultants, inc.

DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
563	342	420	P.246	663



CROSS SECTIONS CD ROAD
STA. 211+00.00 TO STA. 212+00.00



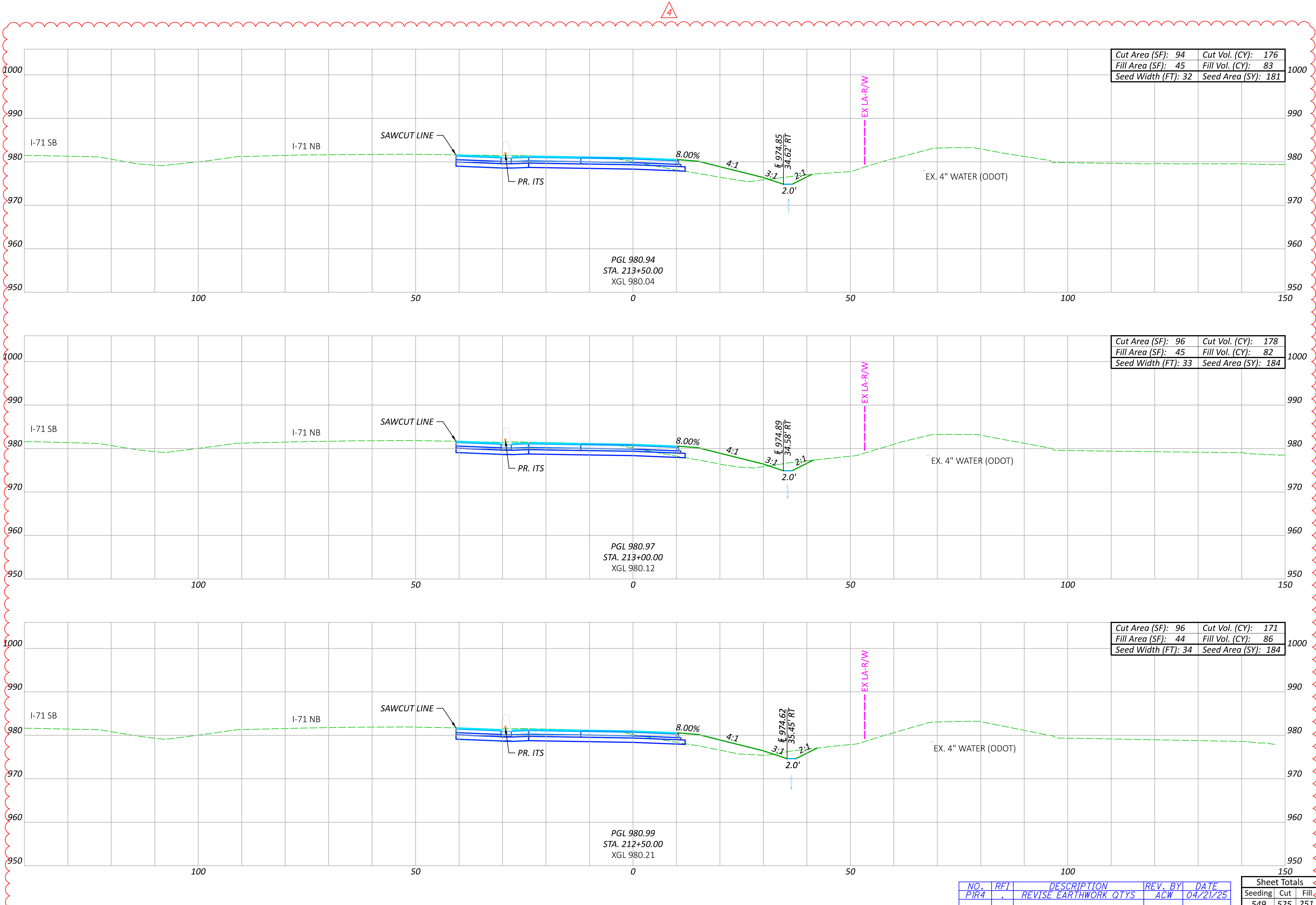
DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

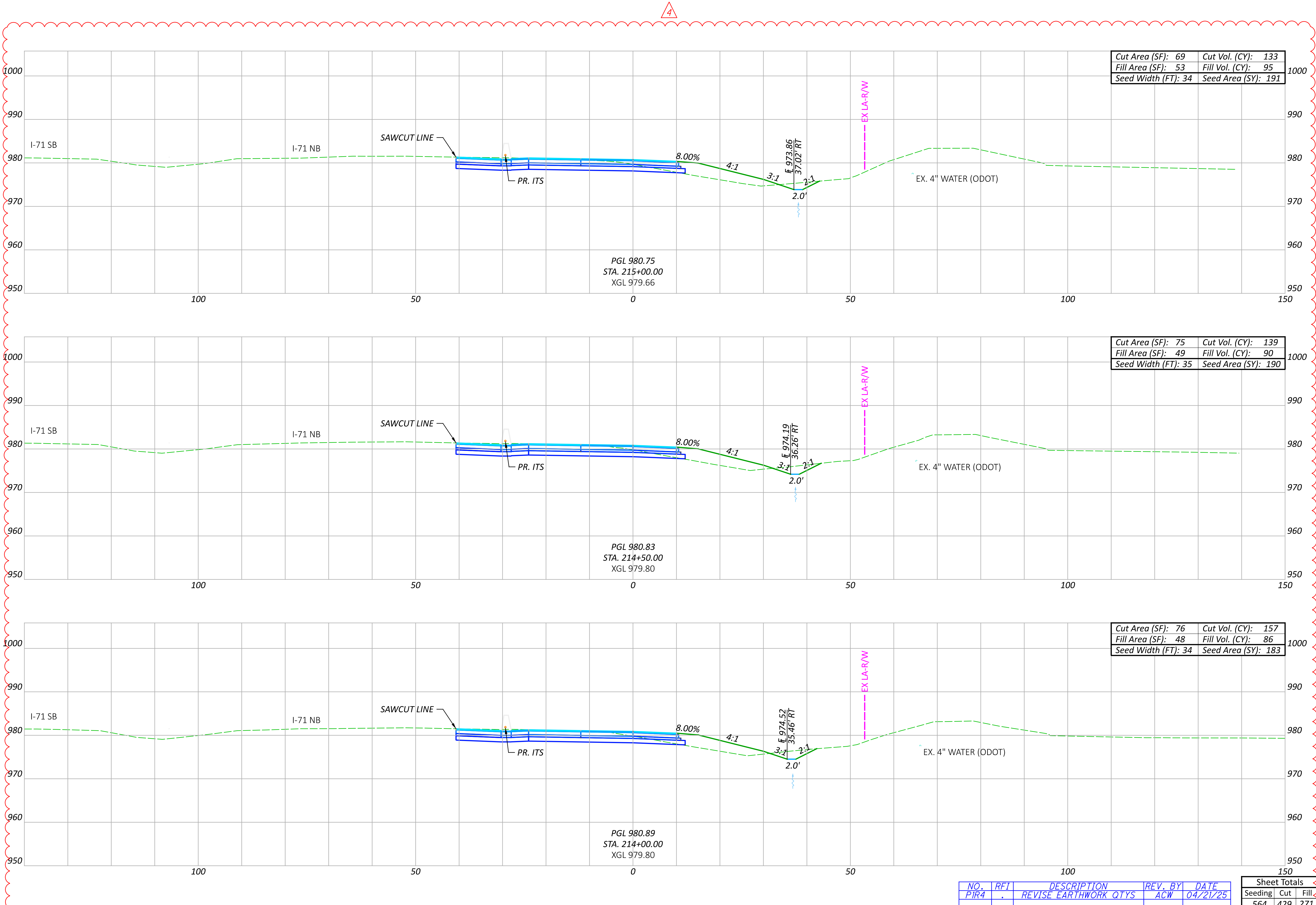
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
560	464	307	P.247	663

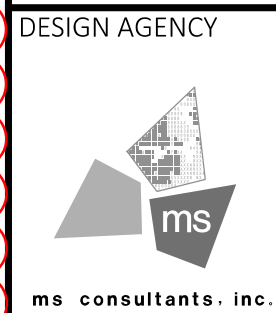


NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYs	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
549	525	251	P.248	663



CROSS SECTIONS CD ROAD
STA. 214+00.00 TO STA. 215+50.00



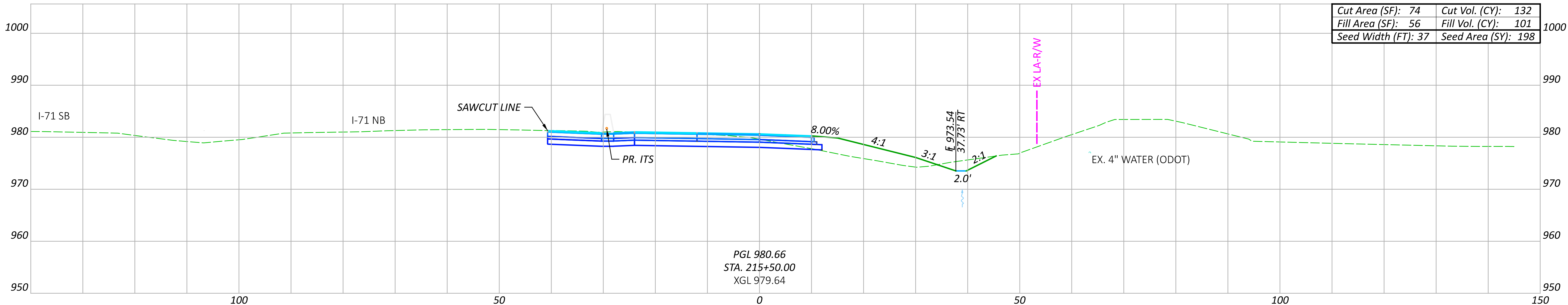
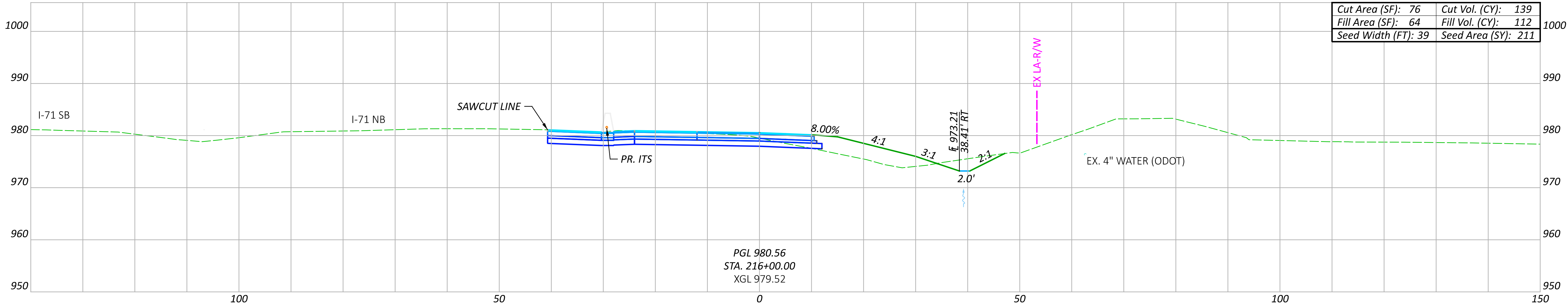
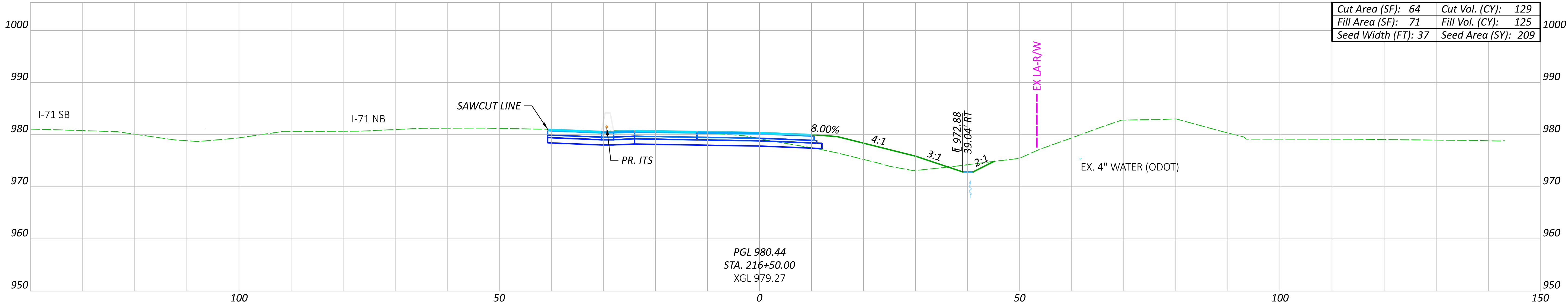
DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

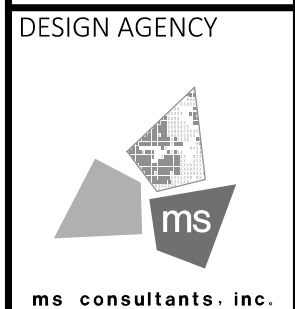
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTY'S	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
564	429	271	P.249	663



Sheet Totals			106959	
Seeding	Cut	Fill	SHEET	TOTAL
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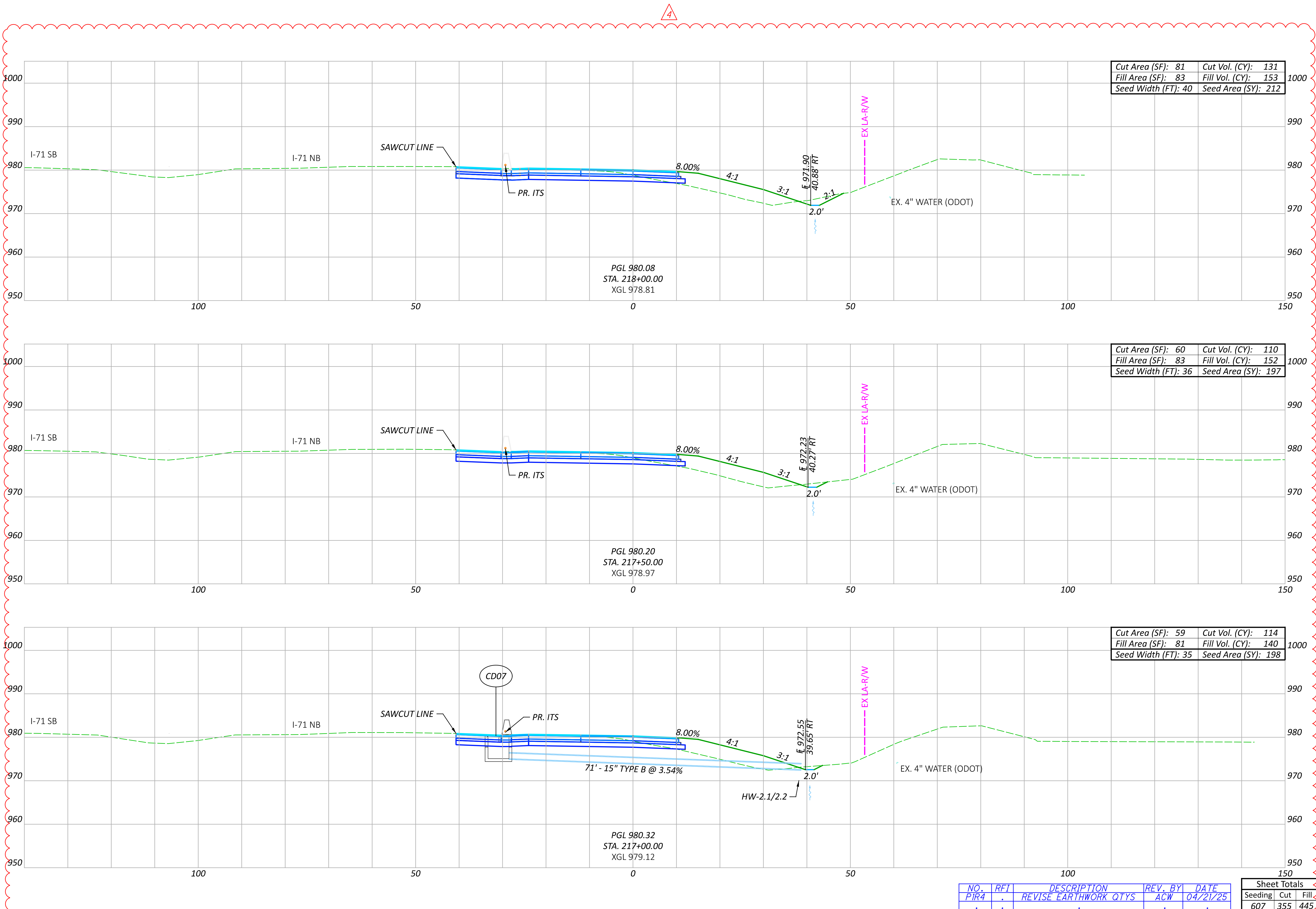
CROSS SECTIONS CD ROAD
STA. 215+50.00 TO STA. 216+50.00



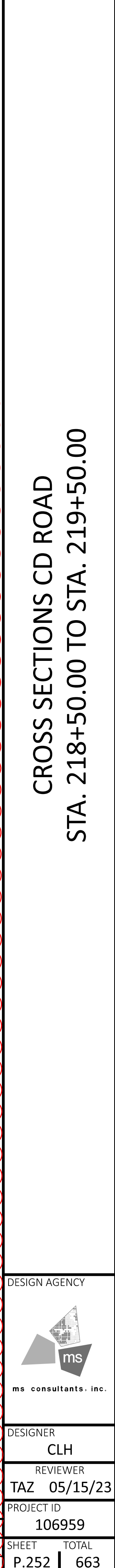
DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959




DEL-71-8.91 (PHASE A) PART 1



CROSS SECTIONS CD ROAD

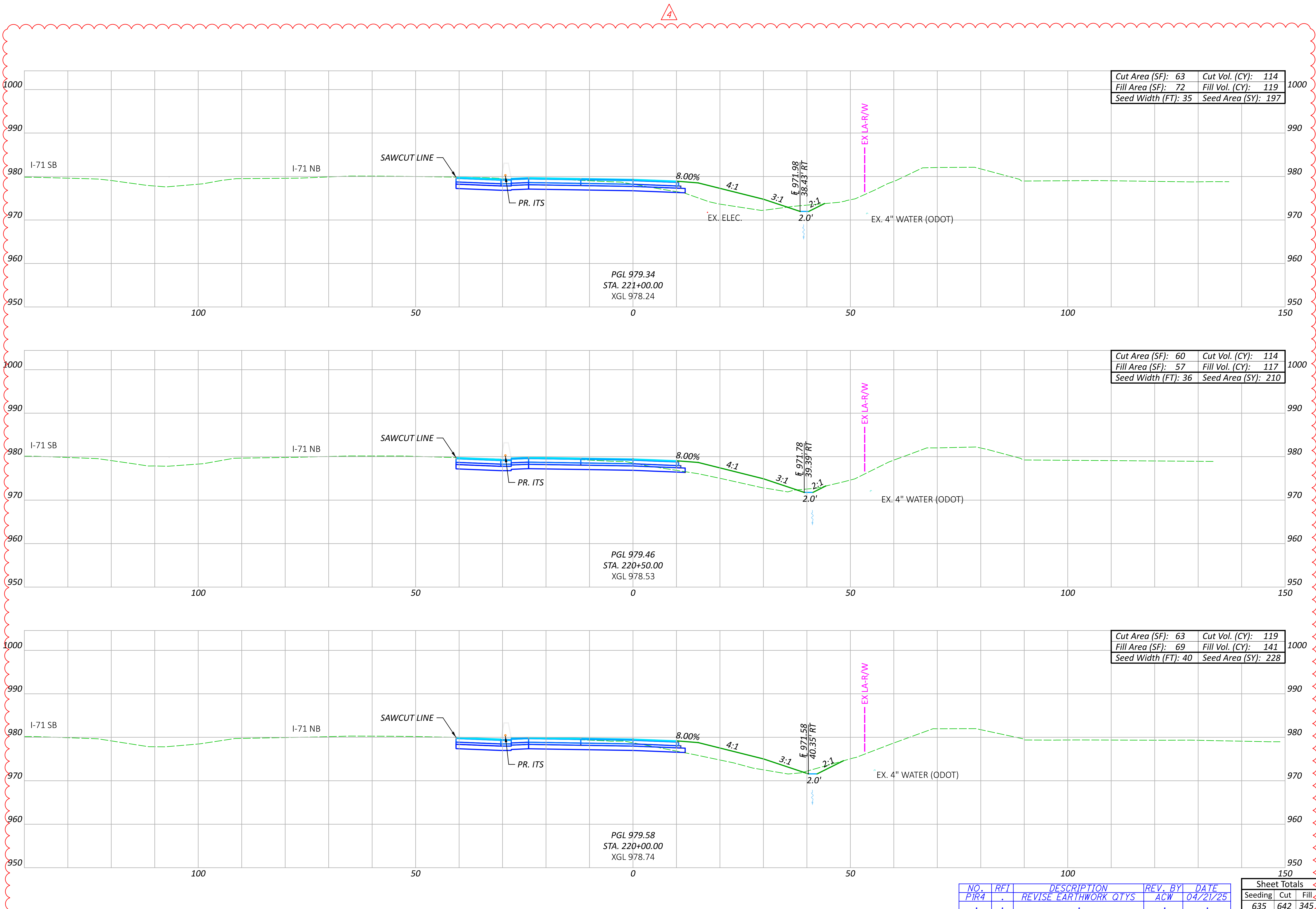
STA. 218+50.00 TO STA. 219+50.00

DESIGN AGENCY



ms consultants, inc.

DESIGNER CLH	
REVIEWER TAZ 05/15/23	
PROJECT ID 106959	
SHEET P.252	TOTAL 663



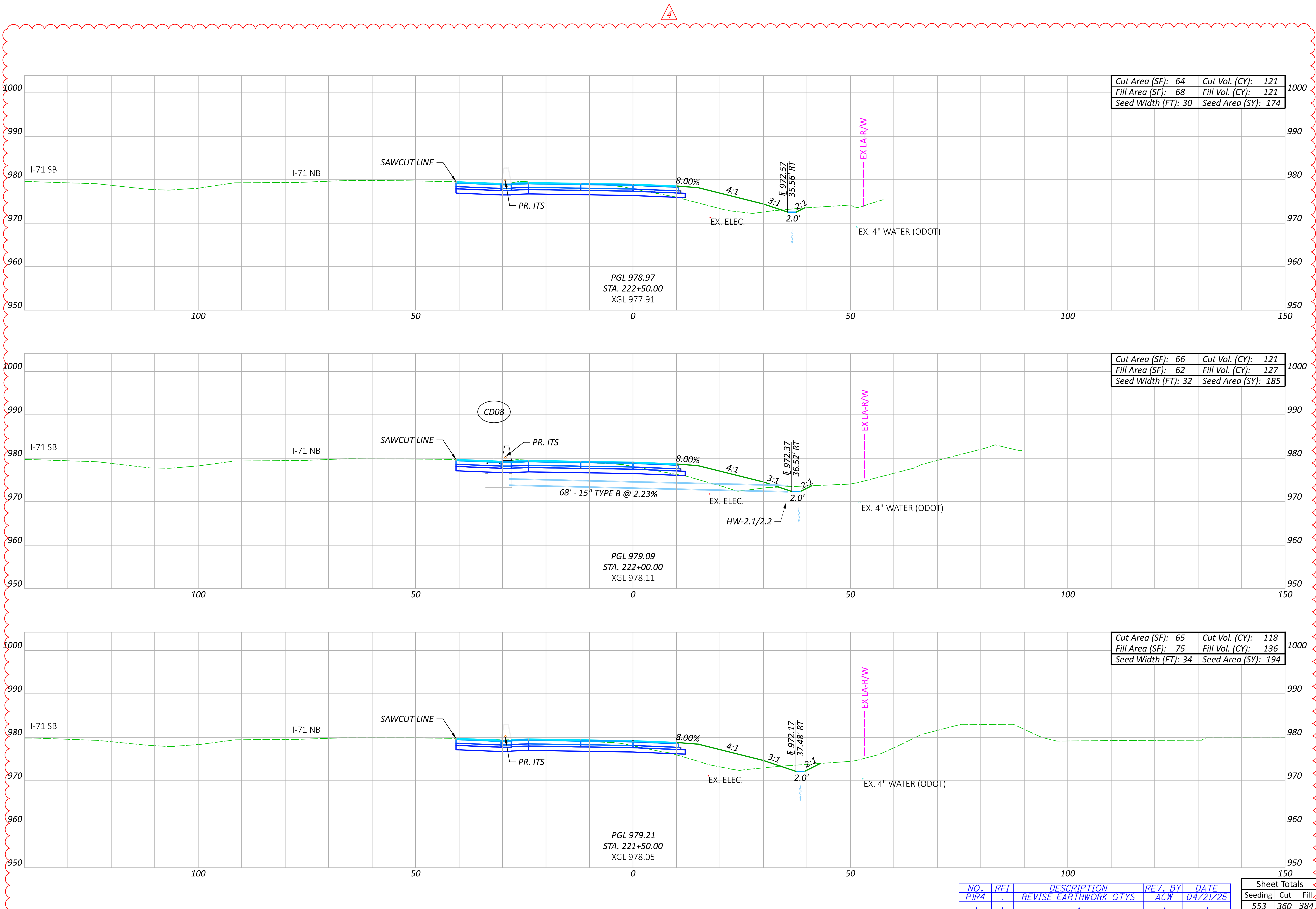
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Seed Width (FT):	35	Seed Area (SY):	197

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Fill Area (SF):	57	Fill Vol. (CY):	117
Seed Width (FT):	36	Seed Area (SY):	210

Cut Area (SF):	63	Cut Vol. (CY):	119
Fill Area (SF):	69	Fill Vol. (CY):	141
Seed Width (FT):	40	Seed Area (SY):	228

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYs	ACW	04/21/25
.

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.253	663
635	642	345		



CROSS SECTIONS CD ROAD
STA. 221+50.00 TO STA. 222+50.00

DESIGN AGENCY

ms consultants, inc.

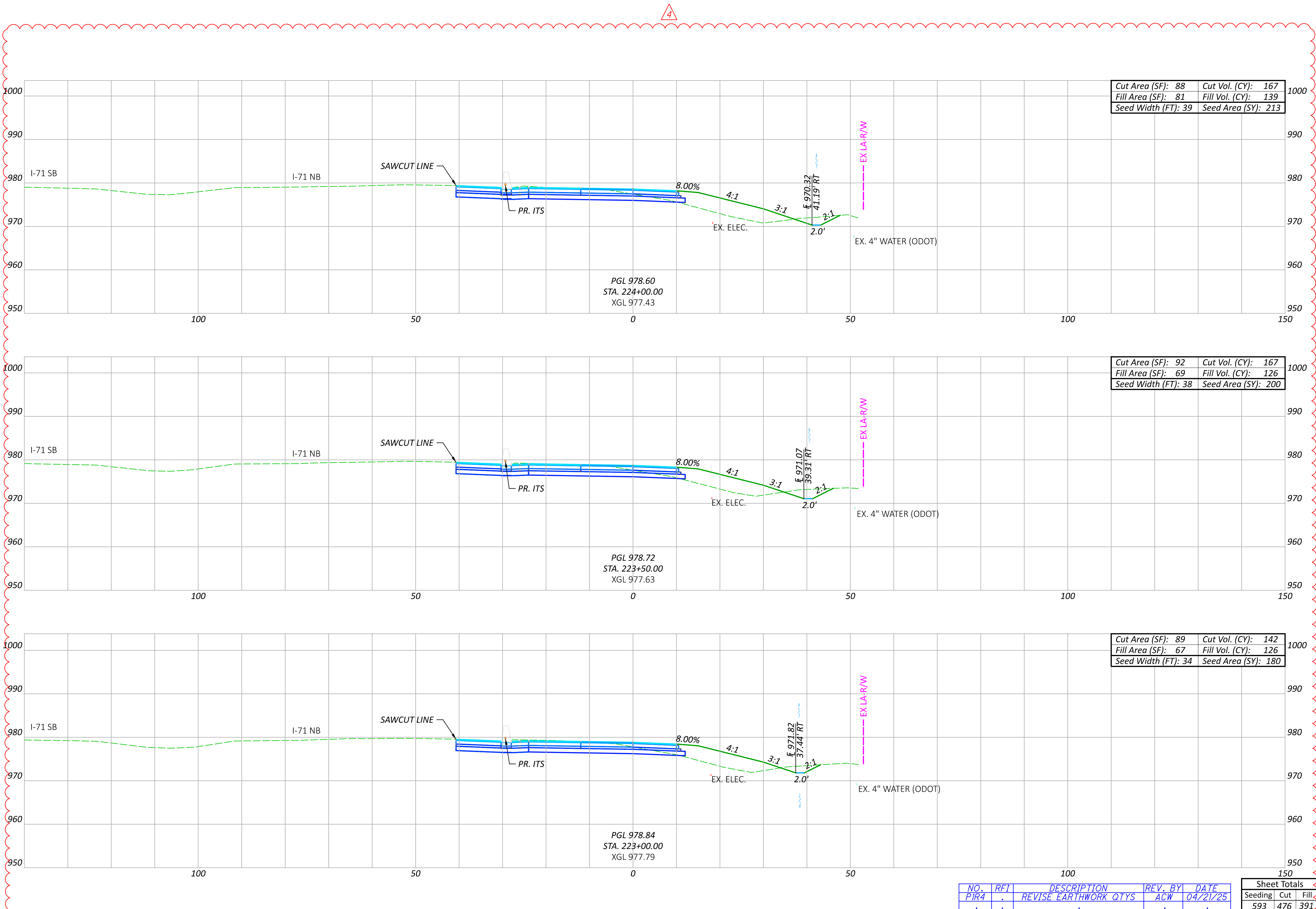
DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYs	ACW	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
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CROSS SECTIONS CD ROAD
STA. 223+00.00 TO STA. 224+00.00

DESIGN AGENCY

ms consultants, inc.

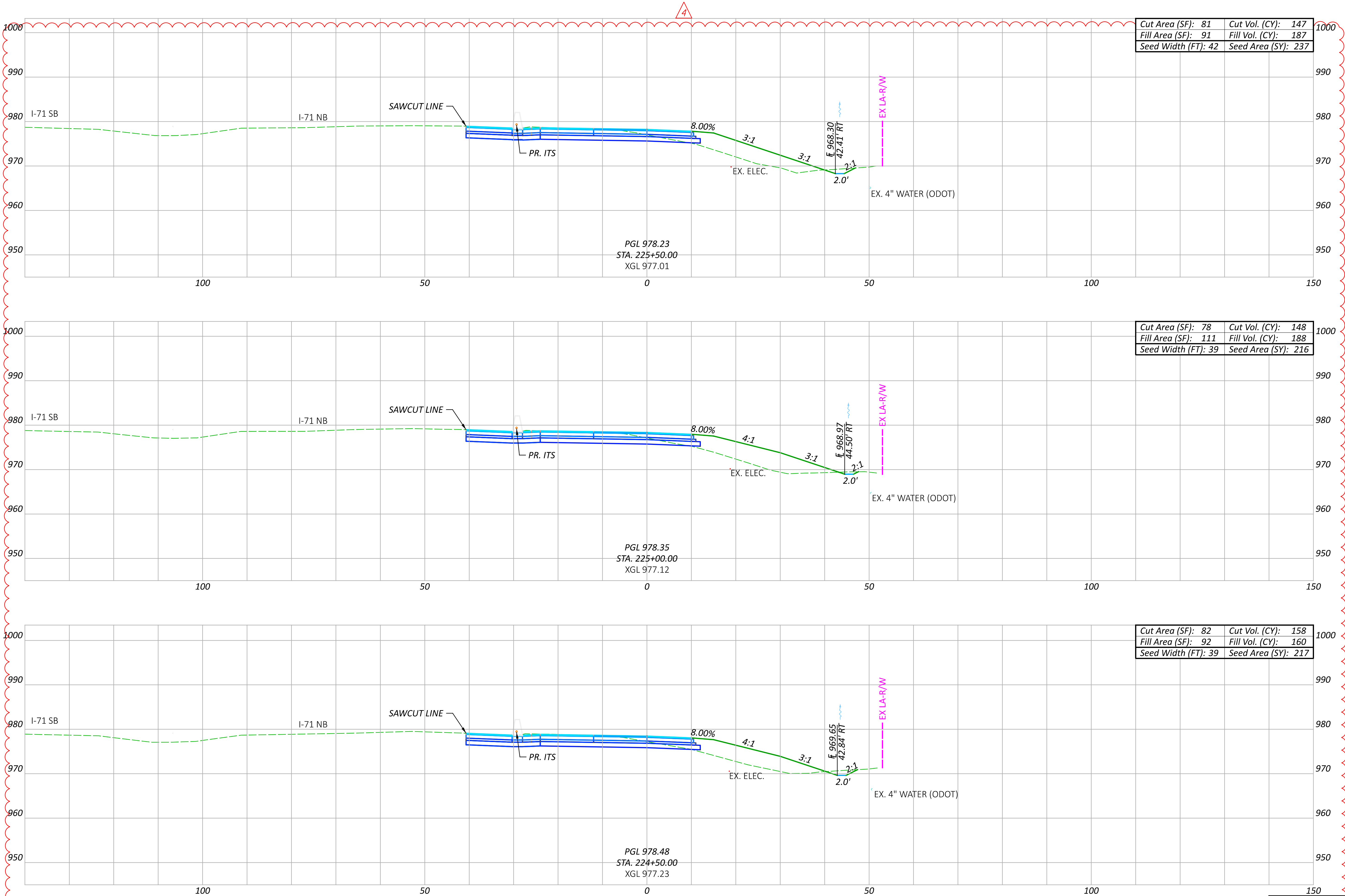
DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

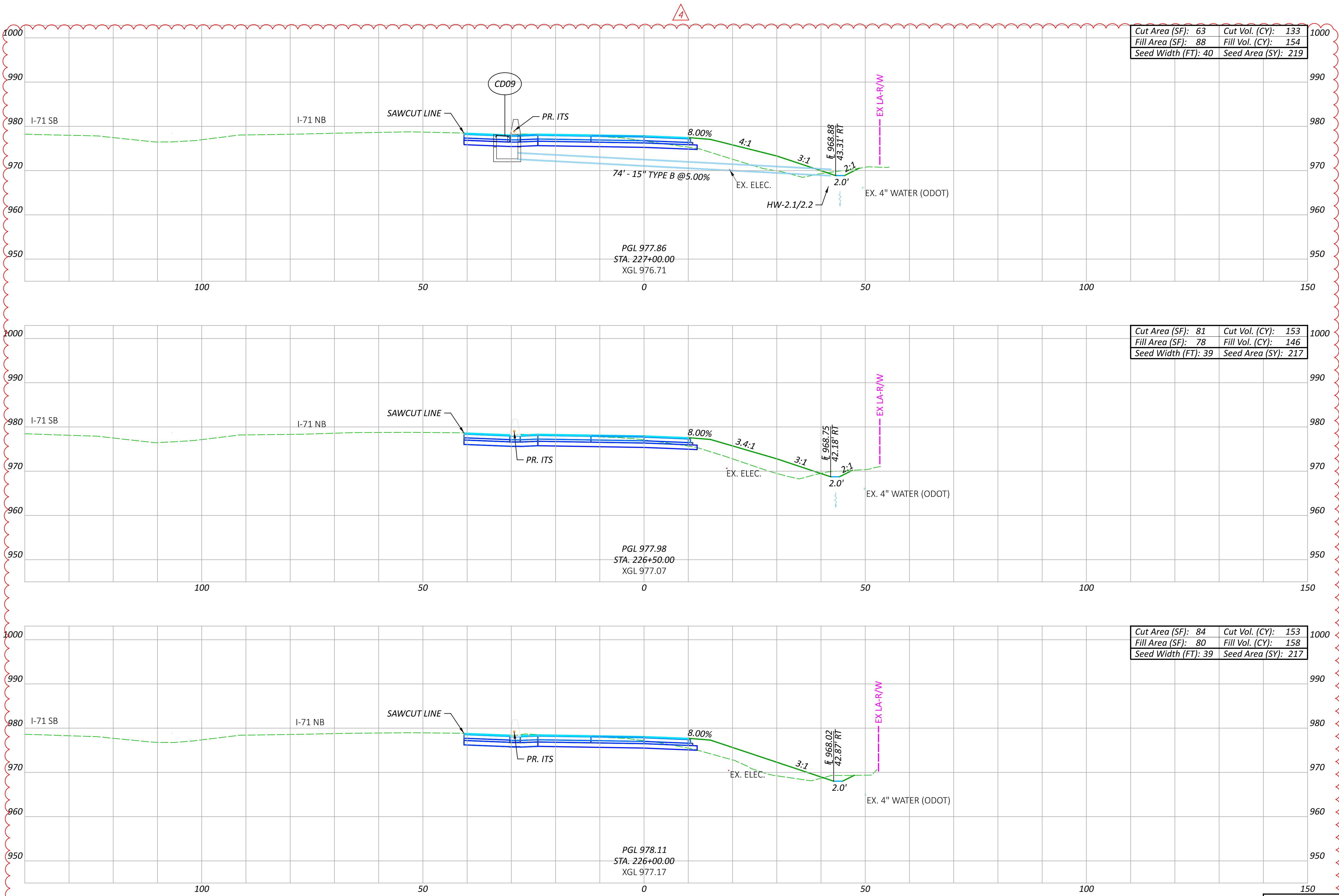
NO.	RFI	DESCRIPTION	REV. BY	DATE
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.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
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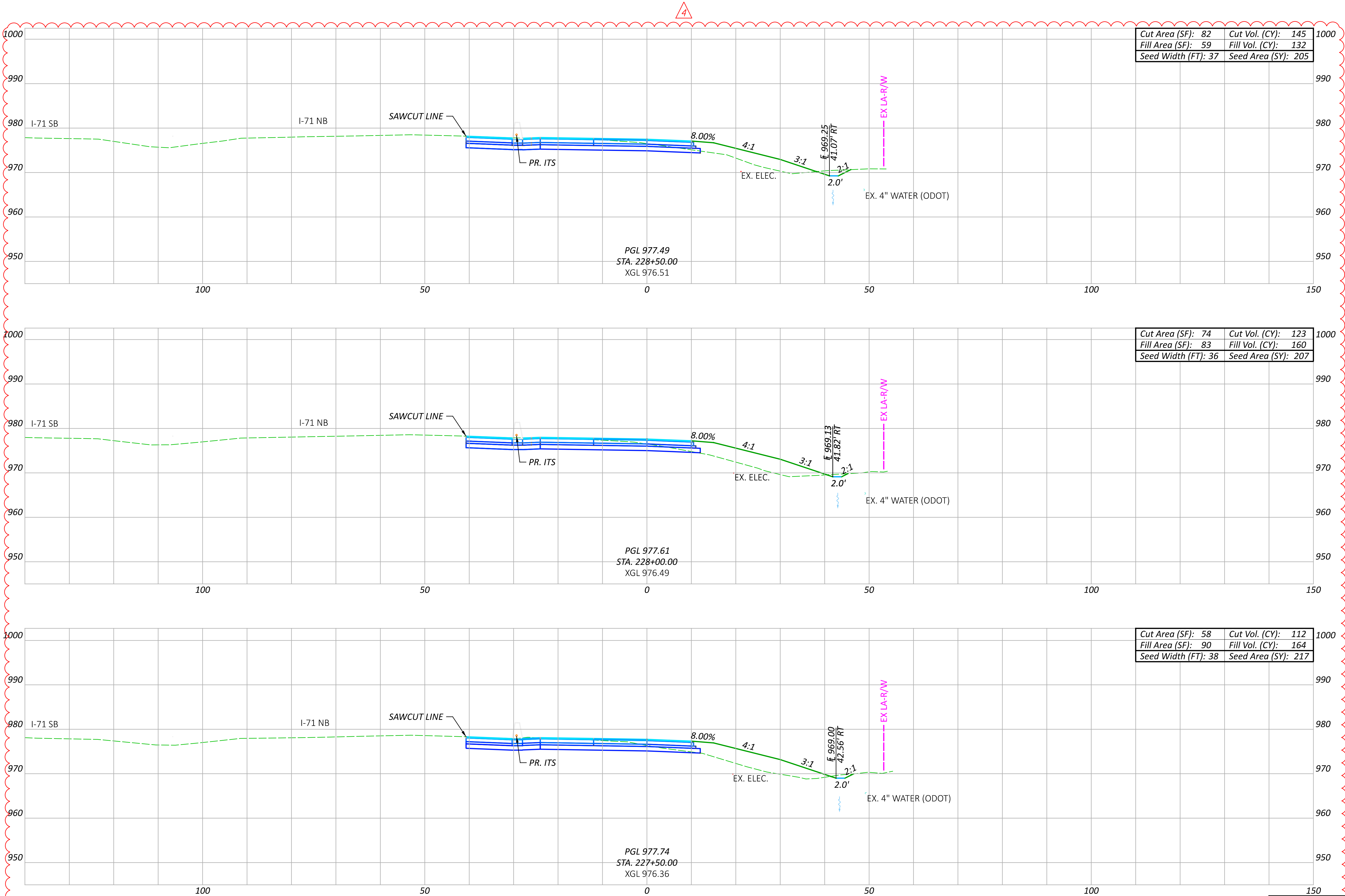
NO.	RFI	DESCRIPTION	REV. BY	DATE
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Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
670	453	535	P.256	663



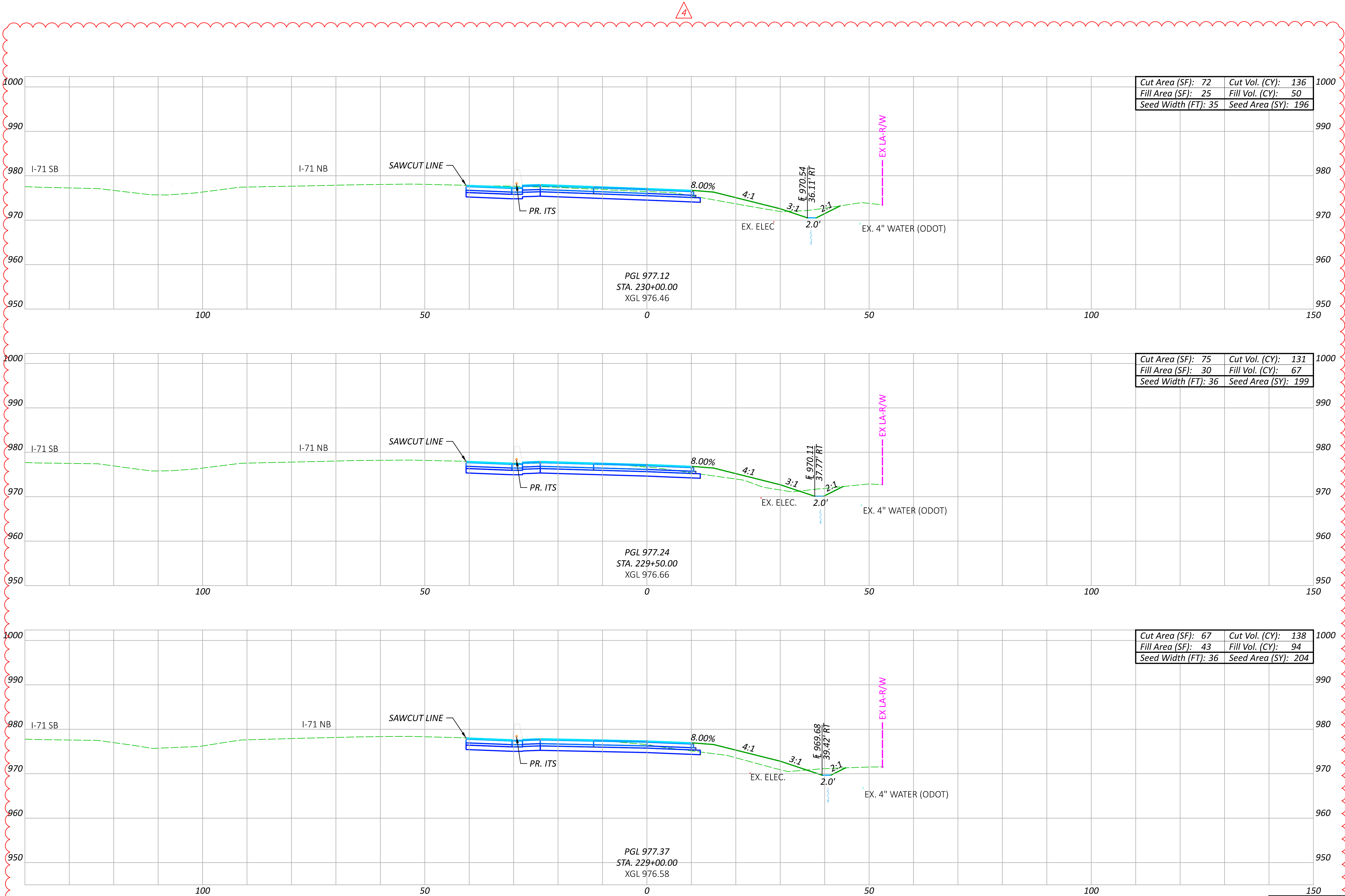
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Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
653	439	458	P.257	663



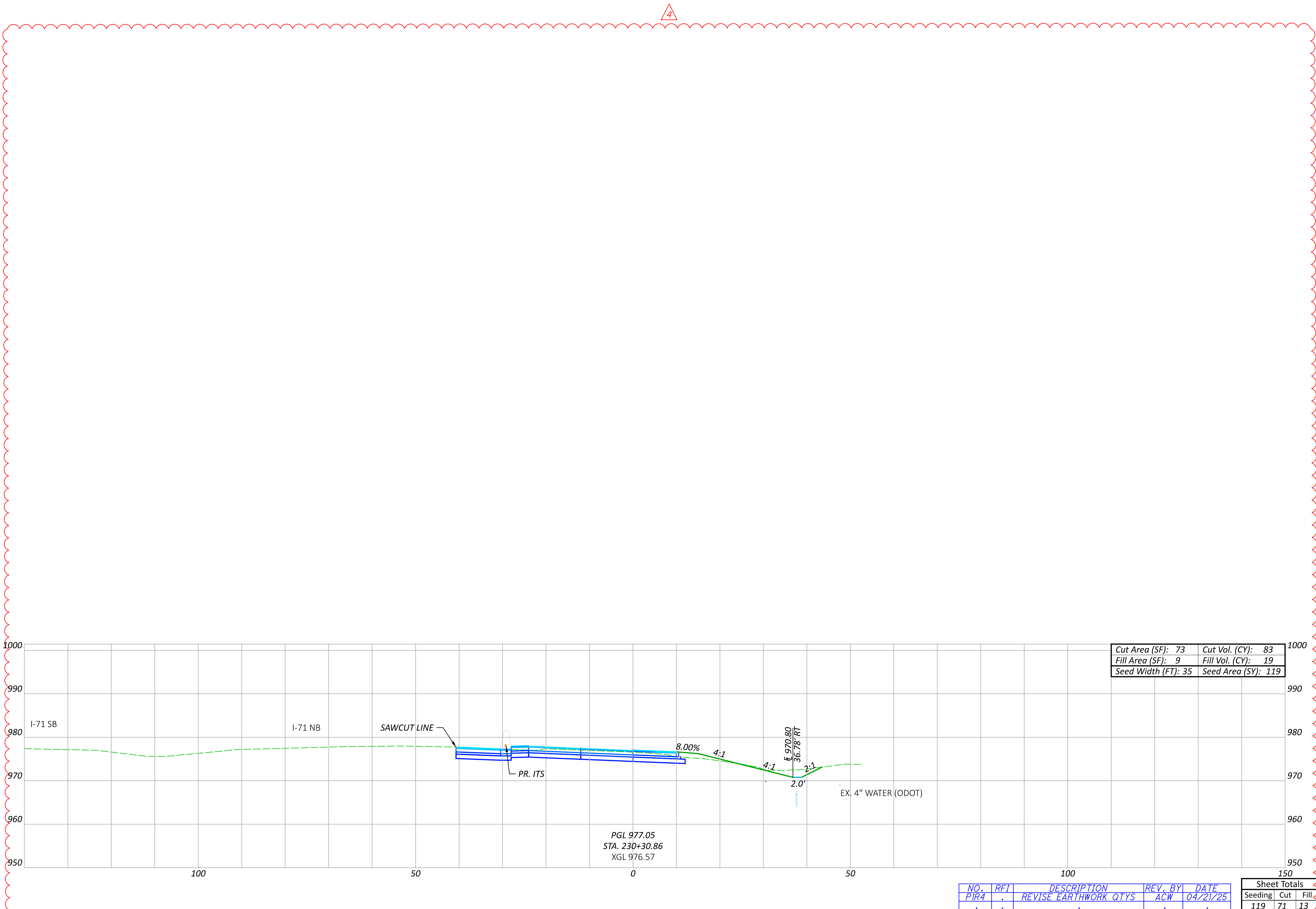
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Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
629	380	456	P.258	663



NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTY'S	ACW	04/21/25
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Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
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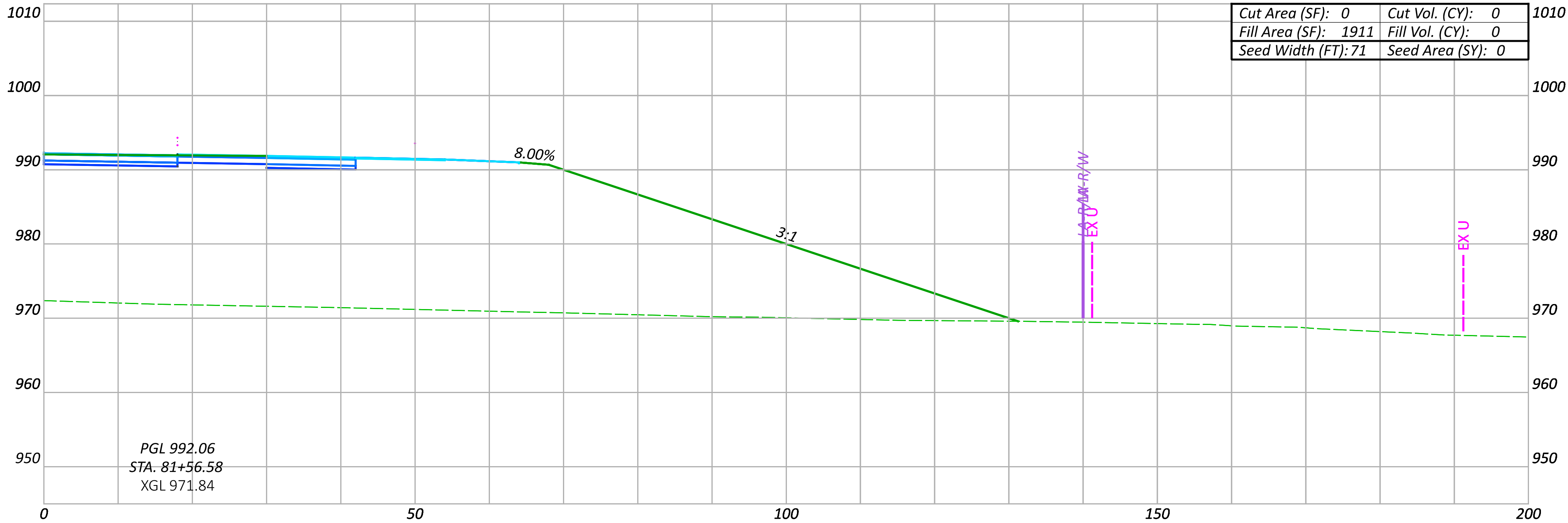
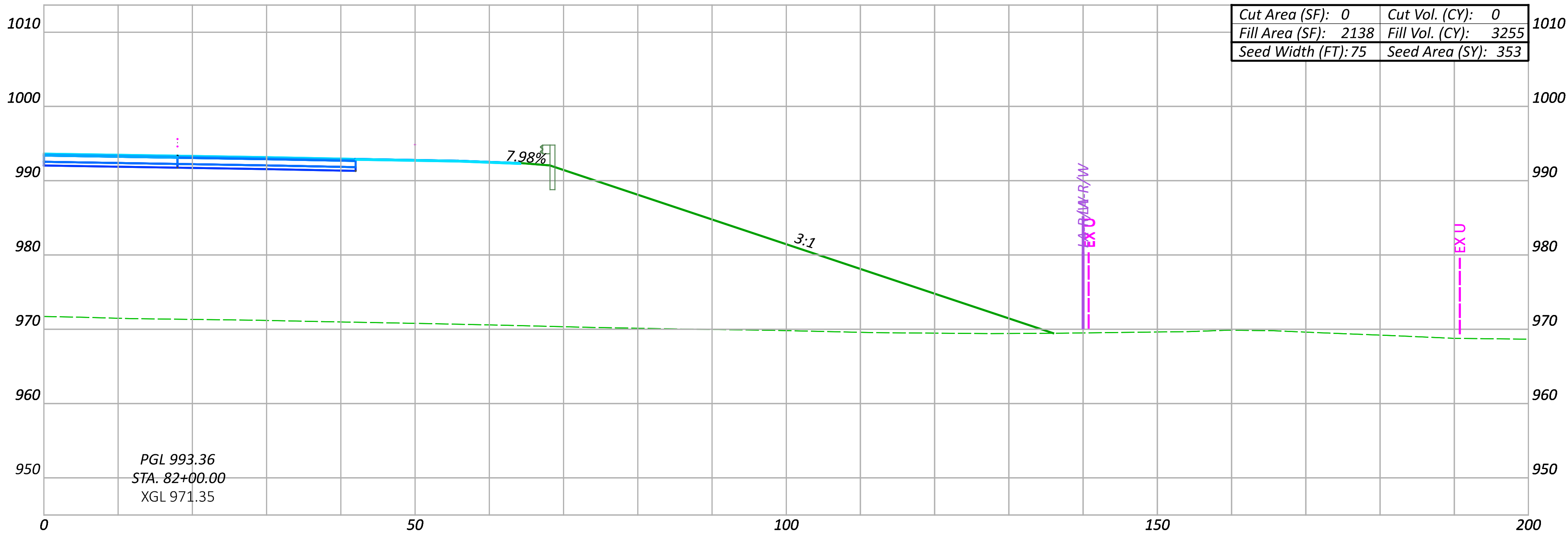
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NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	ACW	04/21/25
.

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.260	663
119	71	13		

NOTE: FOR EMBANKMENT AND SEEDING QUANTITIES BETWEEN STA 80+32.20 TO STA 81+56.58, SEE THE OFFICE CALCULATIONS

4



CROSS SECTIONS SUNBURY PARKWAY EB
STA. 81+56.58 TO STA. 82+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

106959

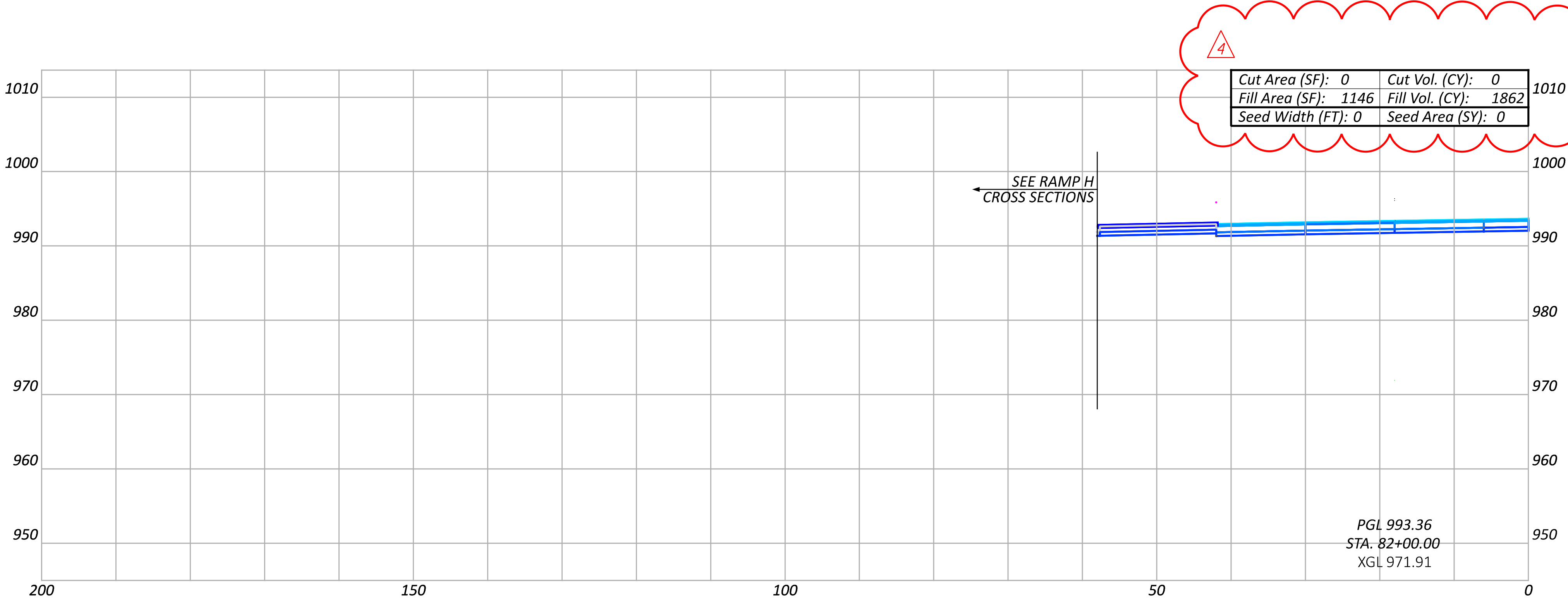
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SHEET	TOTAL
P.261	663

NO.	RFI	DESCRIPTION	REV. BY	DATE
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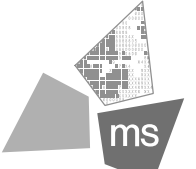
NOTE: FOR EMBANKMENT AND SEEDING QUANTITIES BETWEEN STA 80+32.20 TO STA 81+56.58, SEE THE OFFICE CALCULATIONS



NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.262	663
0	0	1862		

DESIGN AGENCY



ms consultants, inc.

DESIGNER

CLH

REVIEWER

TAZ 05/15/23

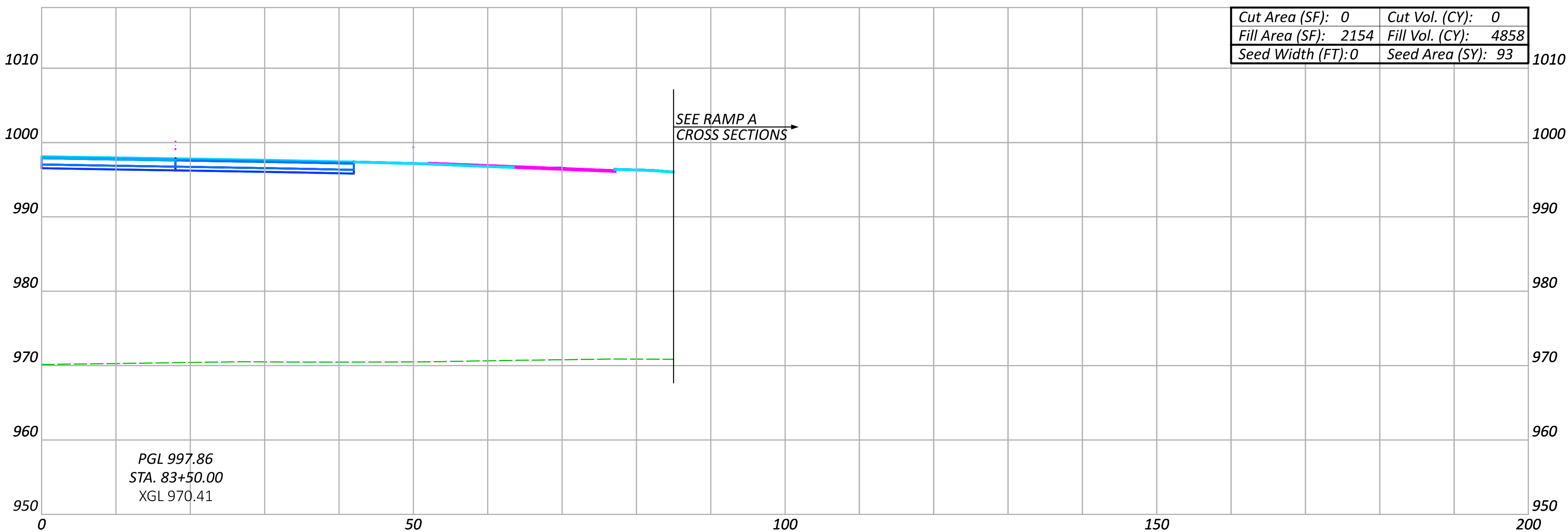
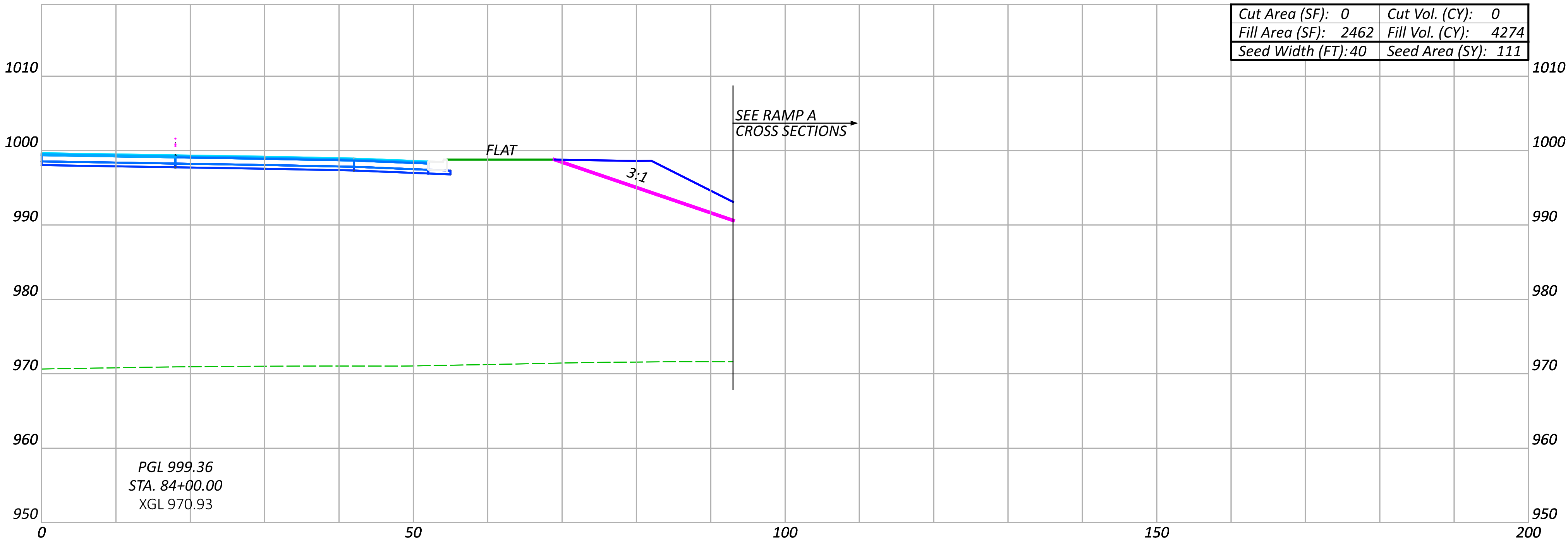
PROJECT ID

106959

CROSS SECTIONS SUNBURY PARKWAY WB
STA. 81+56.58 TO STA. 82+00.00

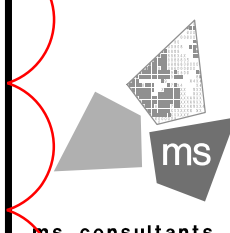
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4



CROSS SECTIONS SUNBURY PARKWAY EB
STA. 83+50.00 TO STA. 84+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

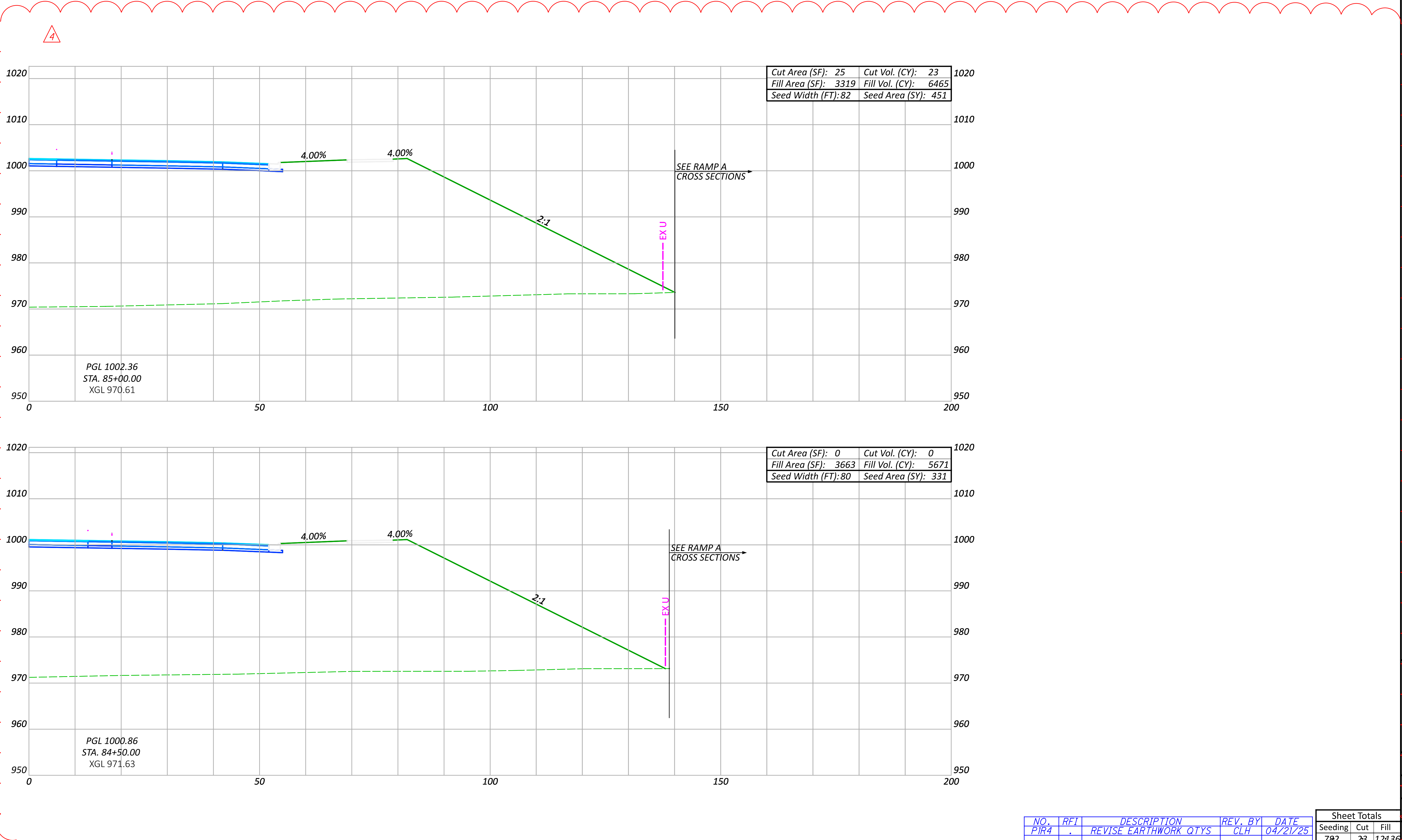
PROJECT ID

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Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
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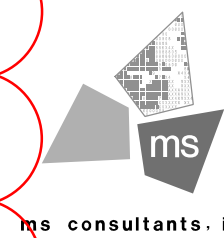
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
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CROSS SECTIONS SUNBURY PARKWAY EB
STA. 84+50.00 TO STA. 85+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

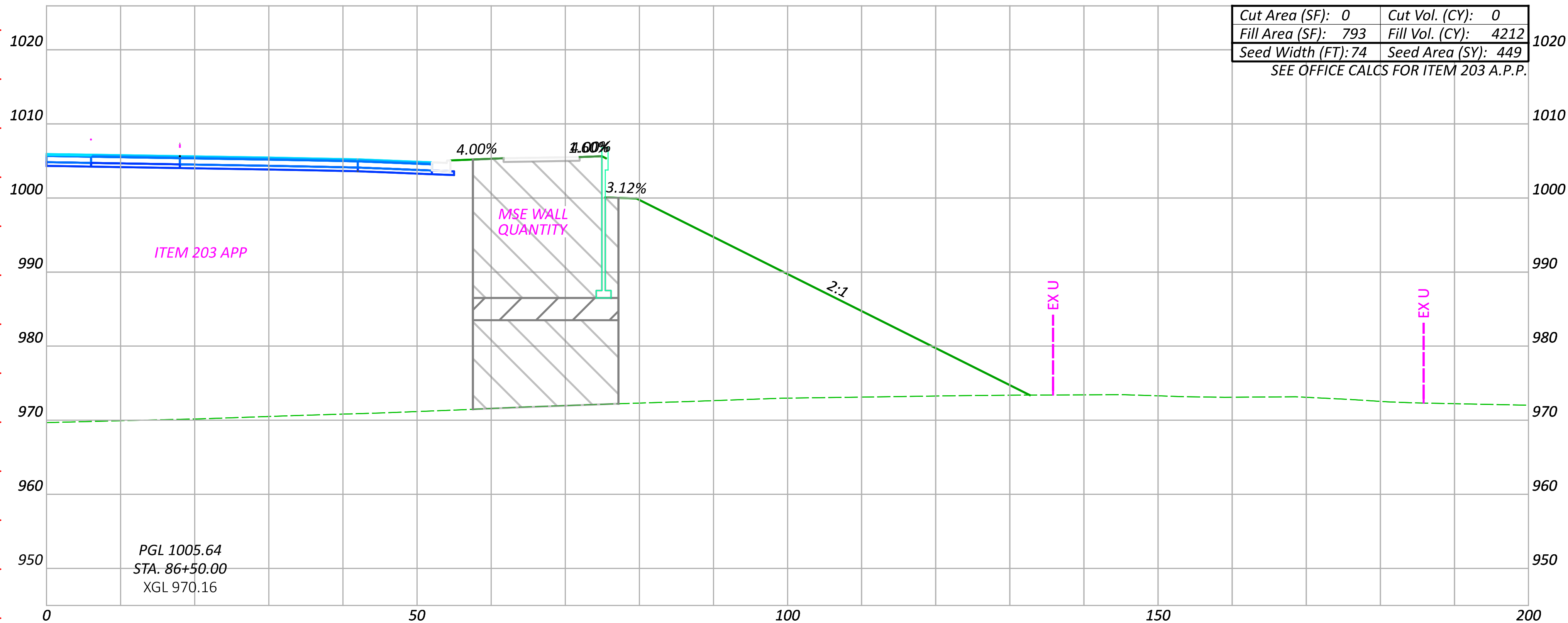
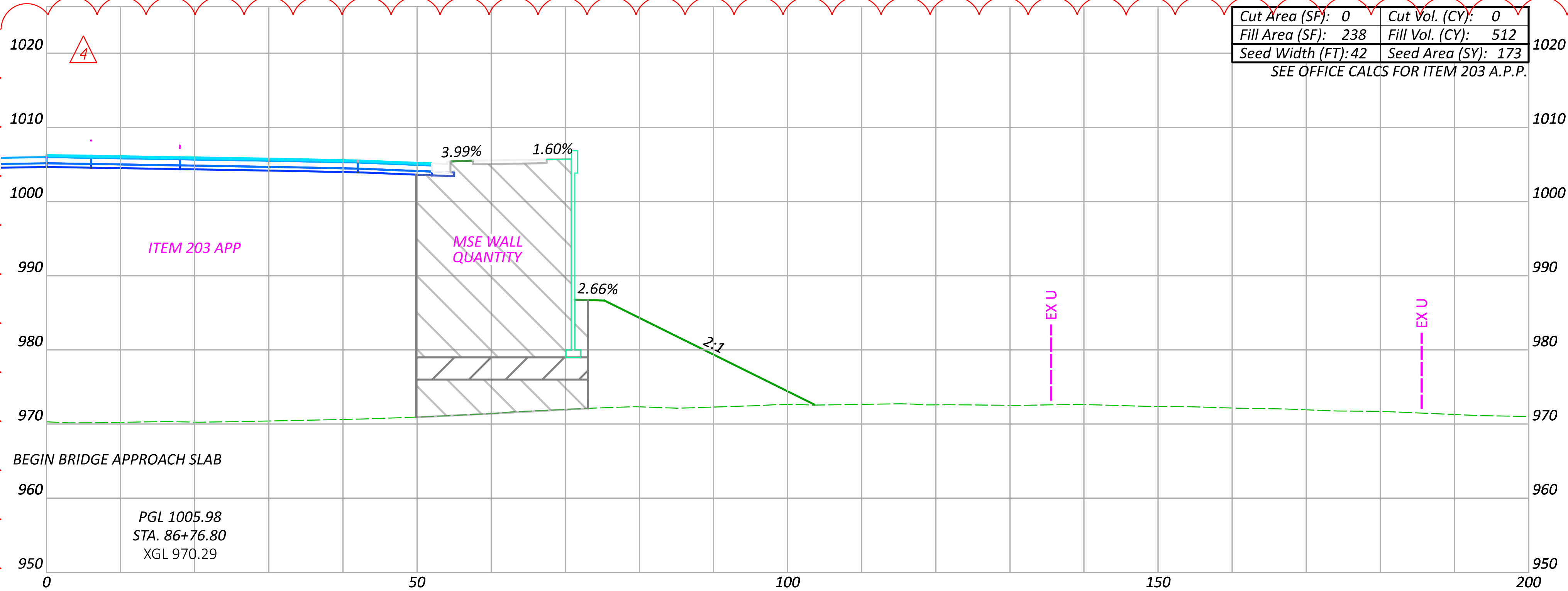
106959

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Seeding	Cut	Fill
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SHEET	TOTAL
P.267	663

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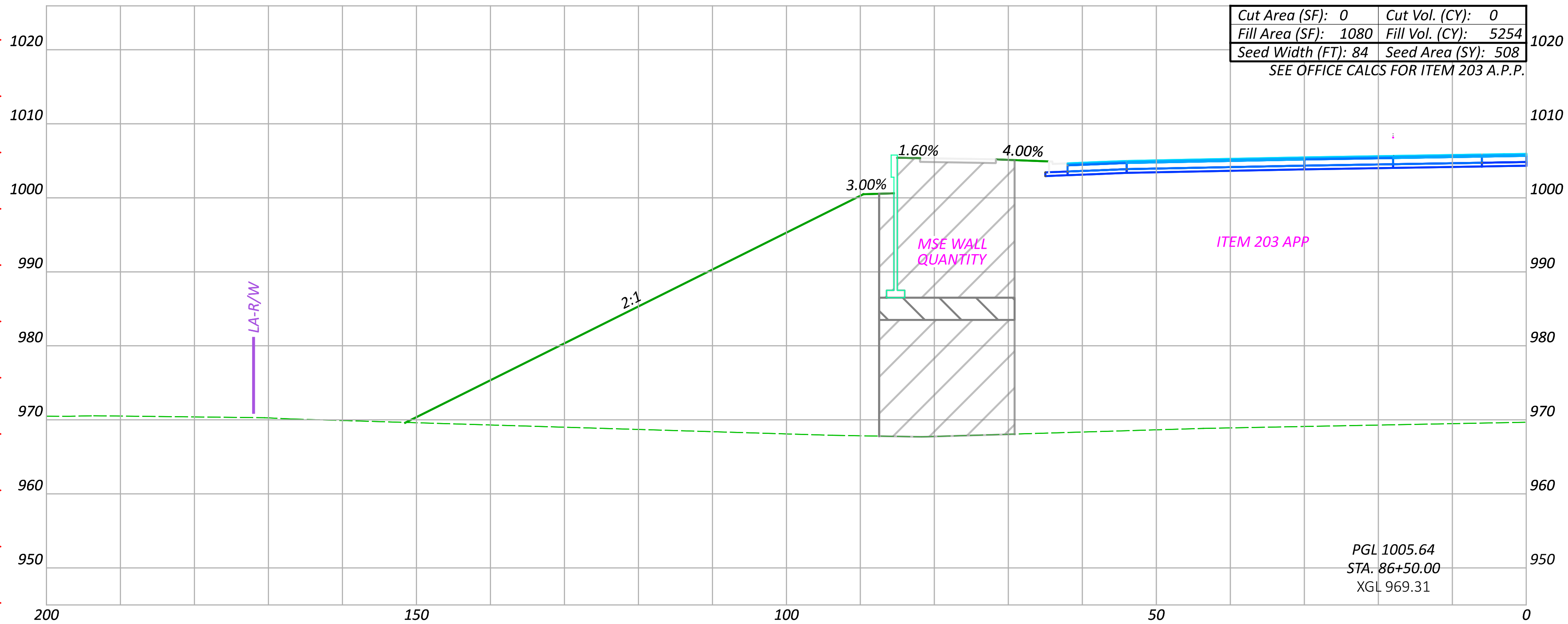
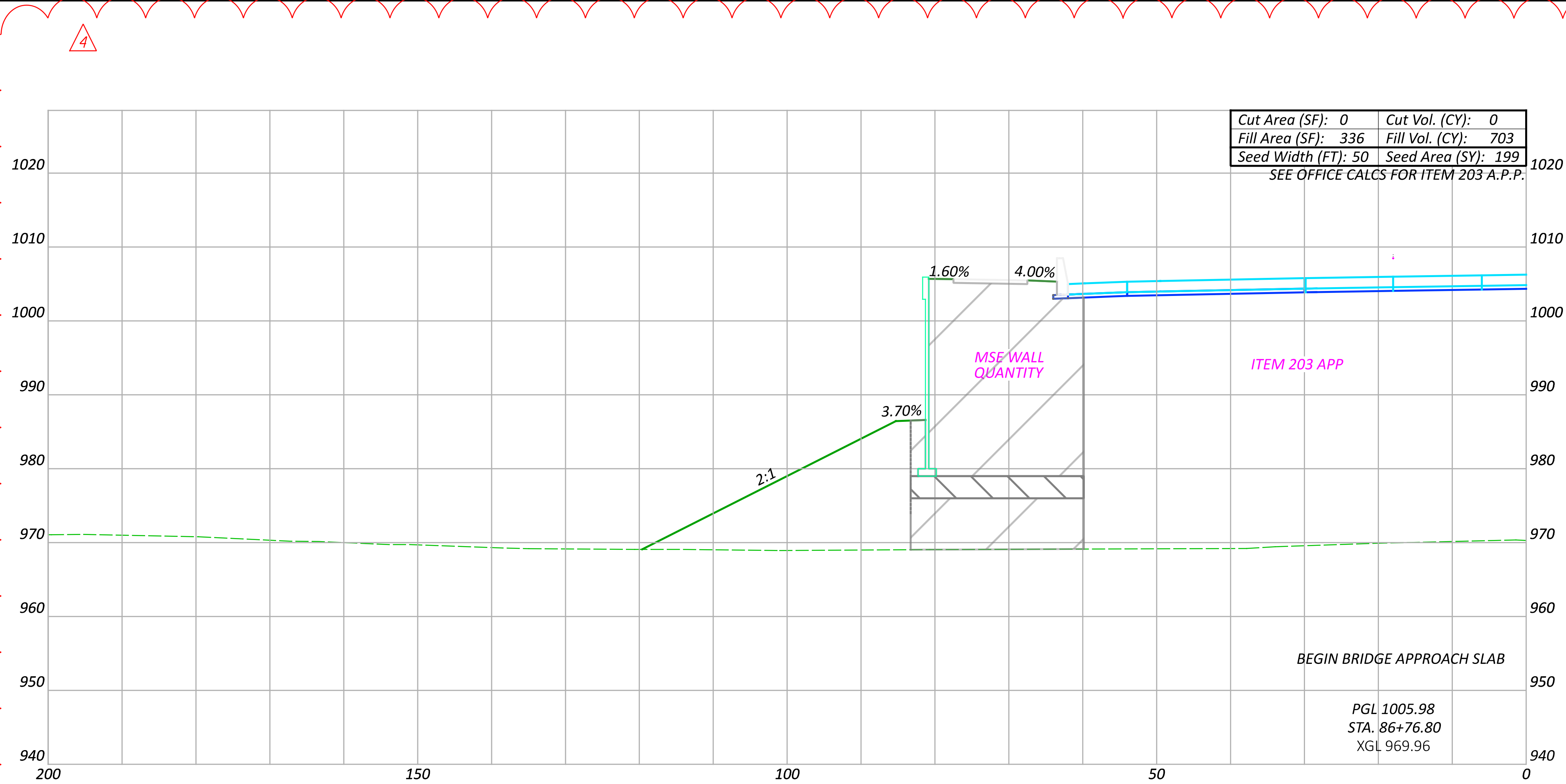


CROSS SECTIONS SUNBURY PARKWAY EB
STA. 86+50.00 TO STA. 86+76.80

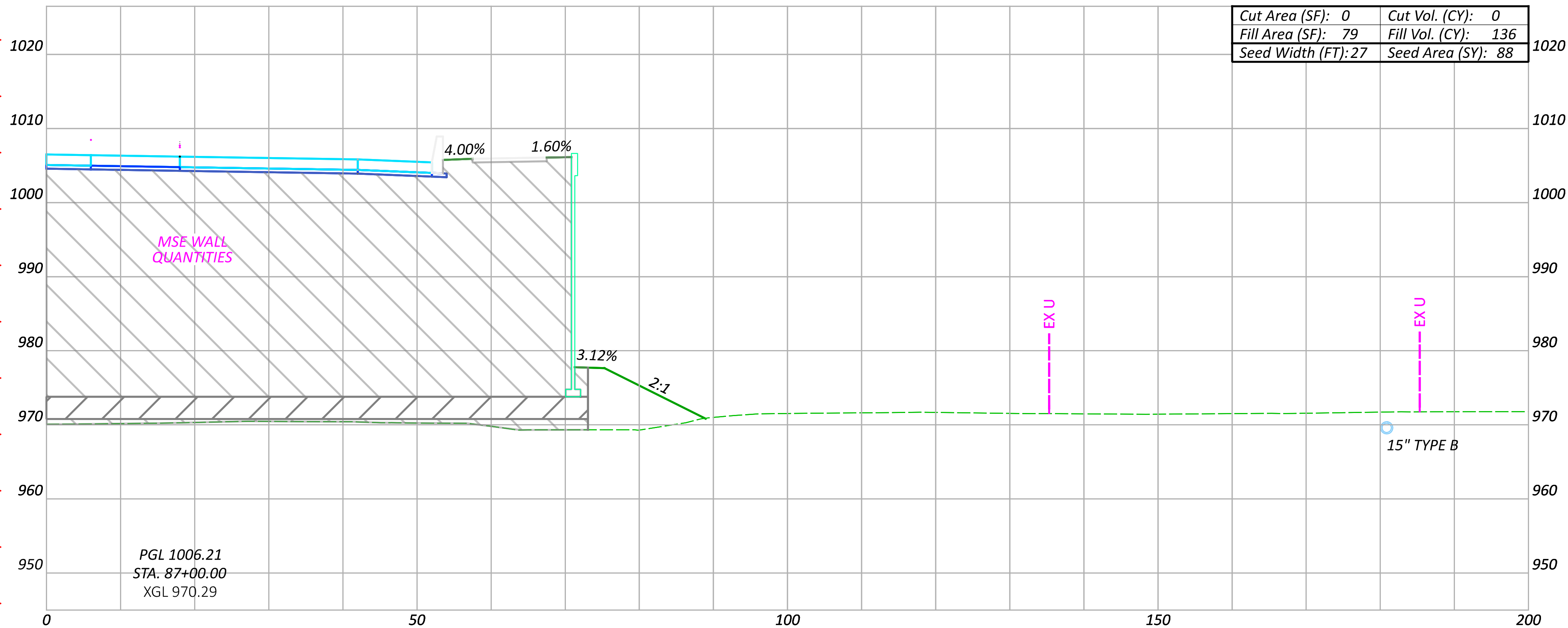
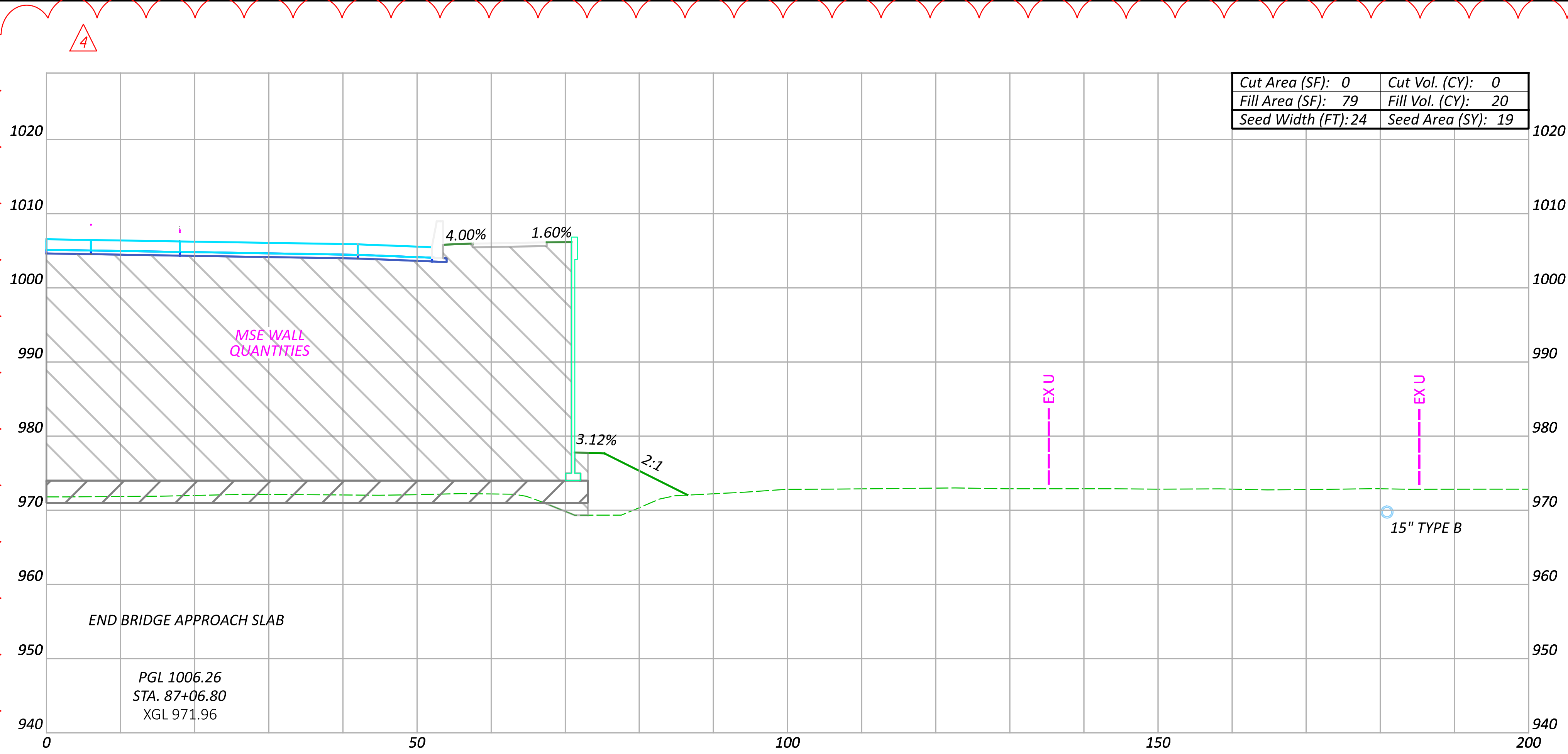
DESIGN AGENCY

ms consultants, inc.
DESIGNER
CLH
REVIEWER
TJZ 05/15/23
PROJECT ID
106959

Sheet Totals				SHEET TOTAL	
Seeding	Cut	Fill		P.271	663
622	0	4724			

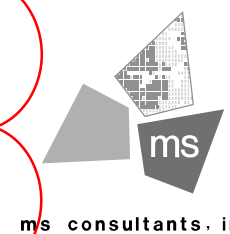


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CROSS SECTIONS SUNBURY PARKWAY EB
STA. 87+00.00 TO STA. 87+06.80

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

106959

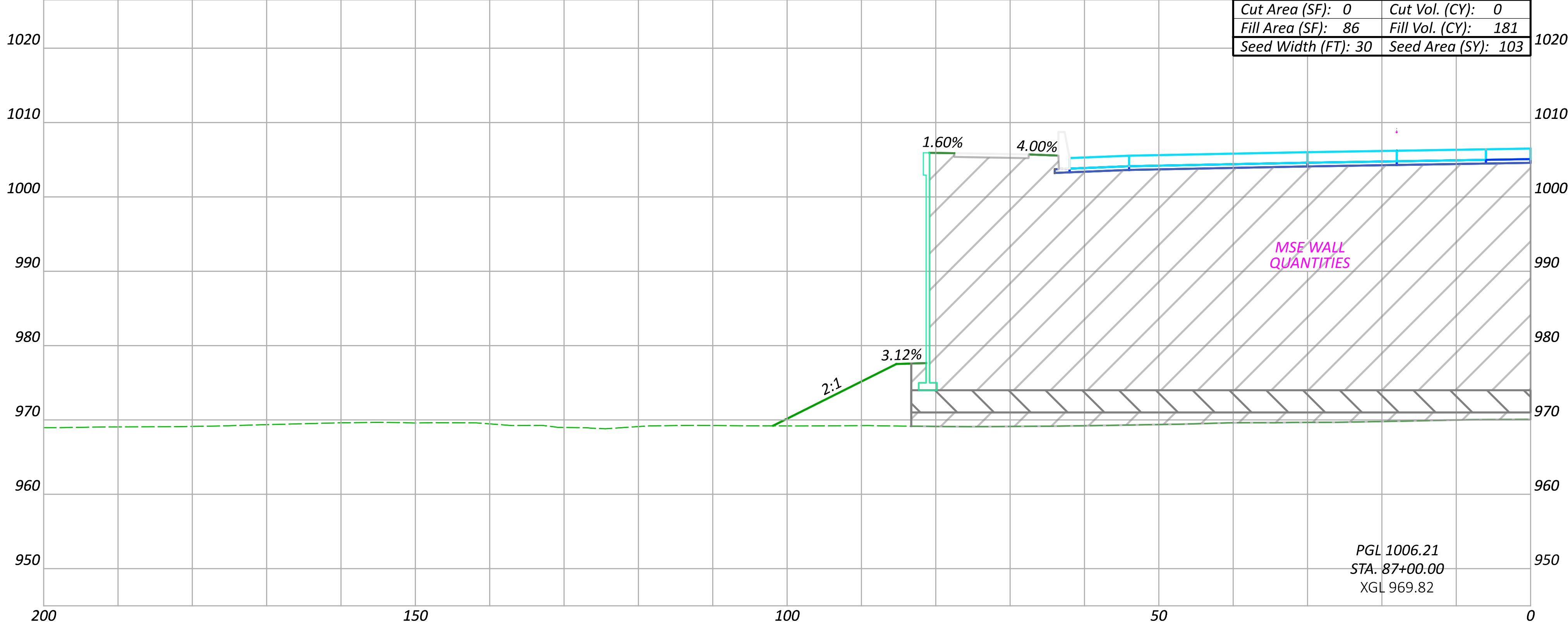
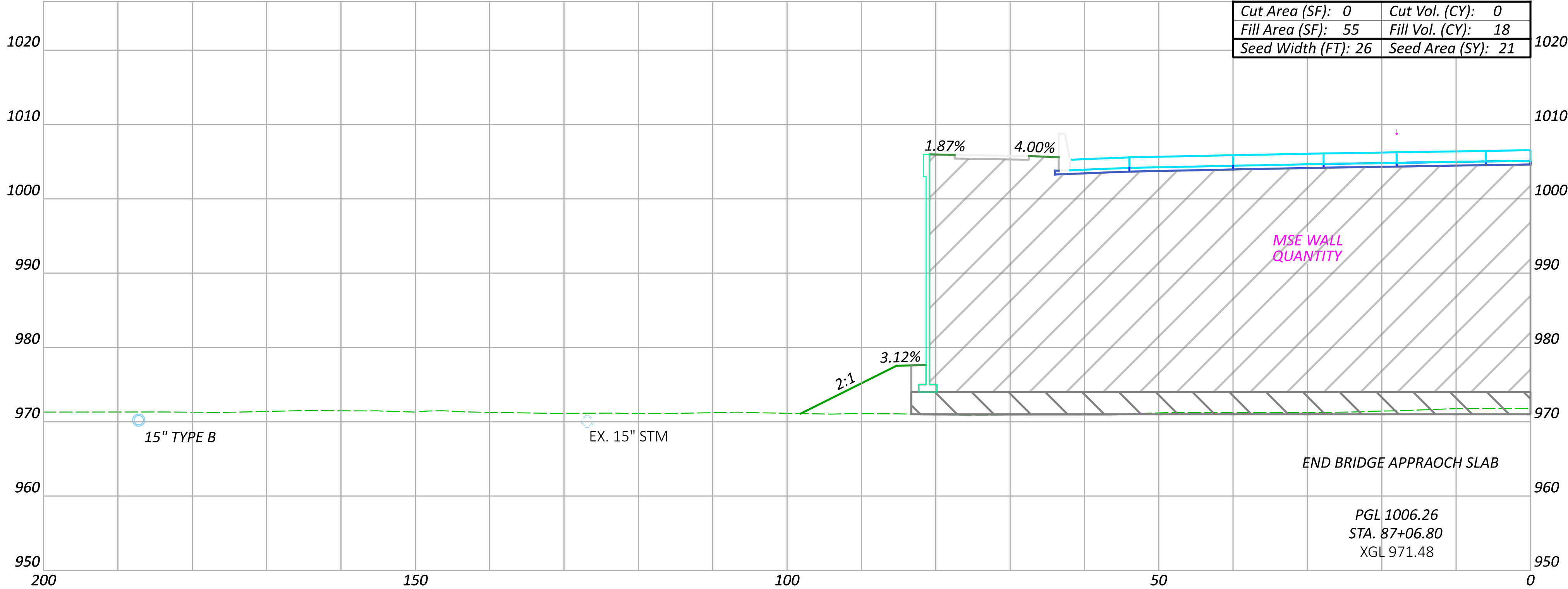
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SHEET	TOTAL
P.273	663

NO.	RFI	DESCRIPTION	REV. BY	DATE
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MODEL: BLP_SUNB - 87+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 4/21/2025 TIME: 11:16:43 PM USER: chonaker
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CROSS SECTIONS SUNBURY PARKWAY WB
STA. 87+00.00 TO STA. 87+06.80

DESIGN AGENCY

ms consultants, inc.

DESIGNER
CLH

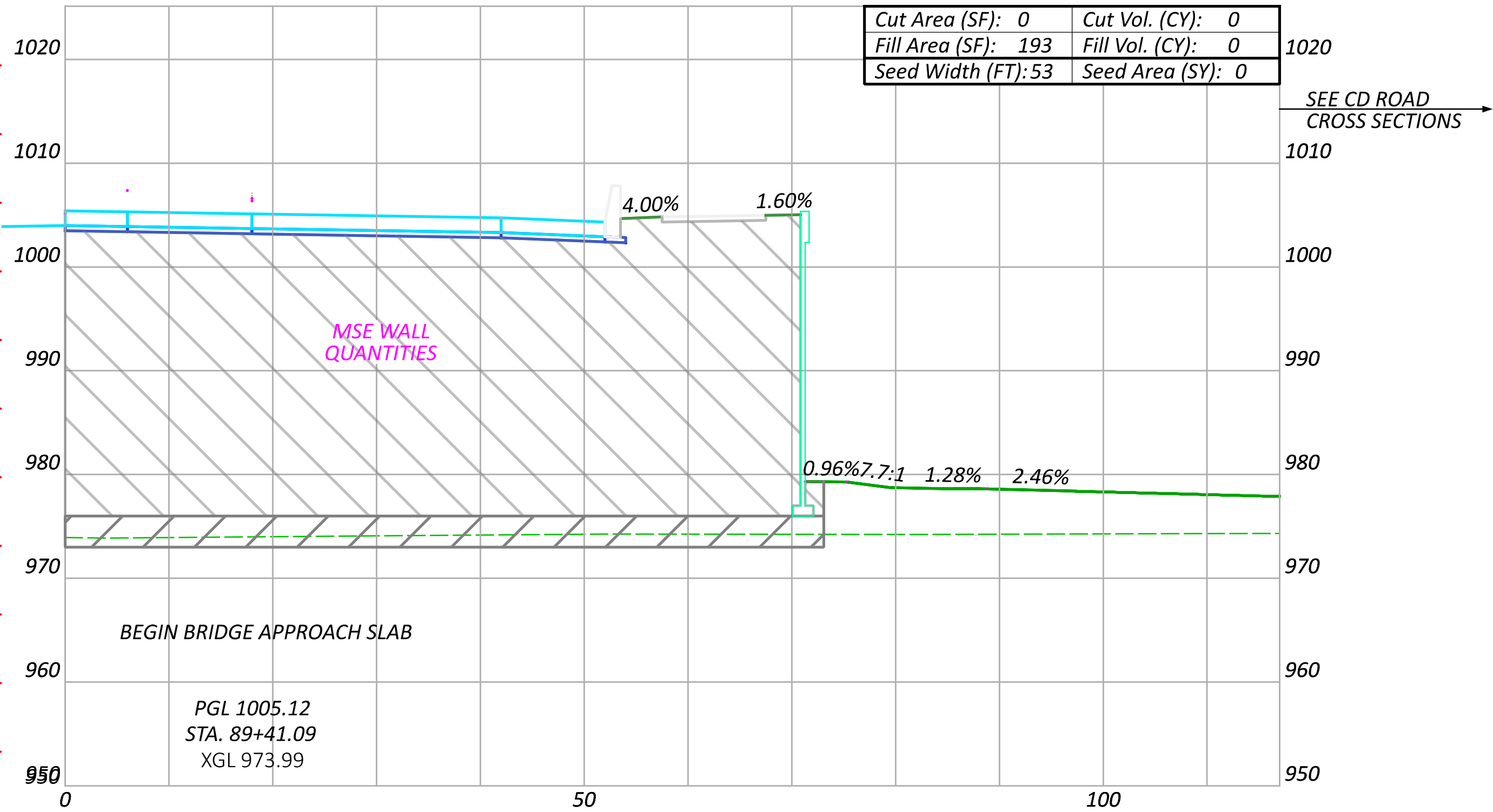
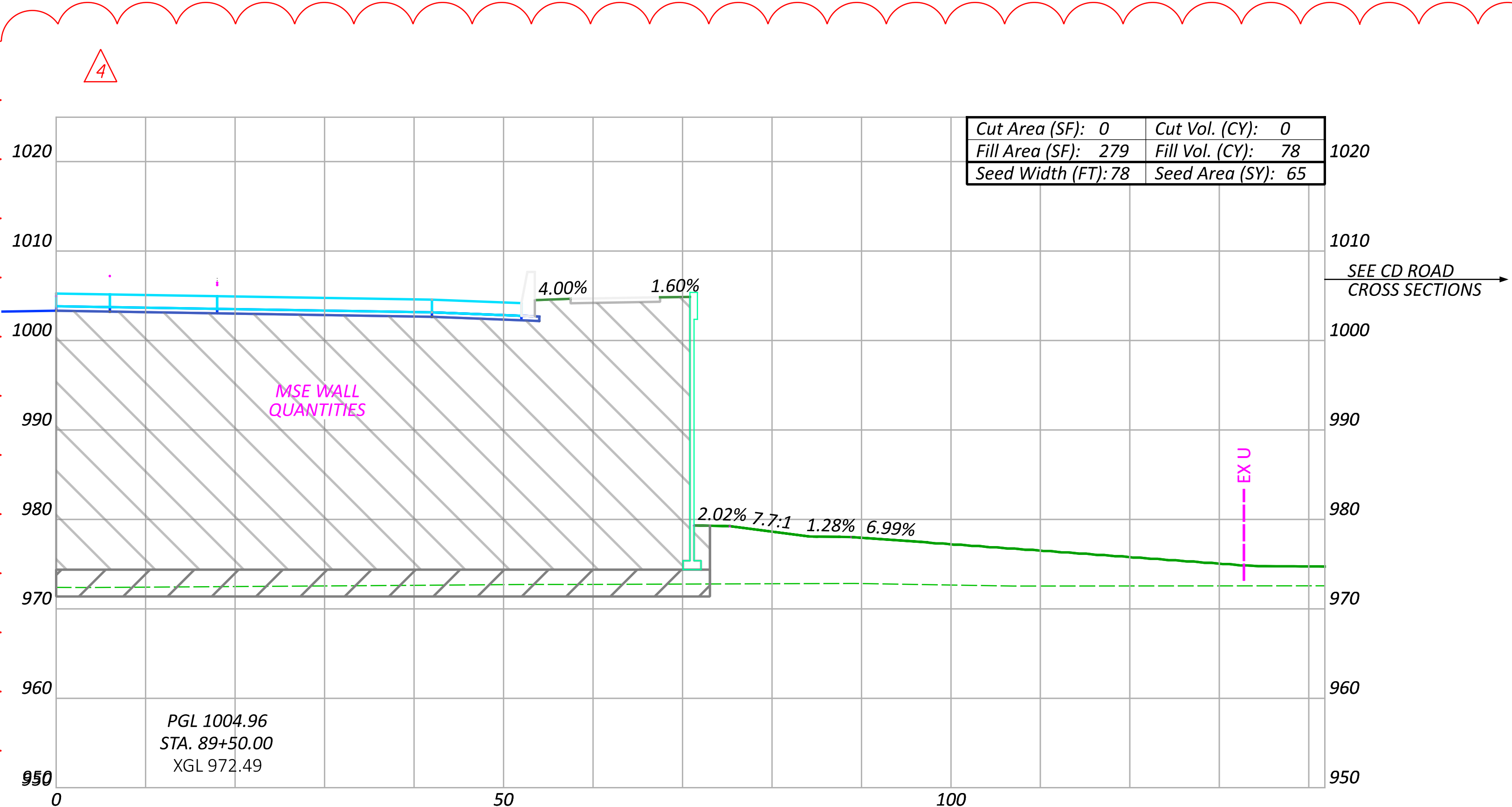
REVIEWER
TAZ 05/15/23

PROJECT ID
106959

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.274	663
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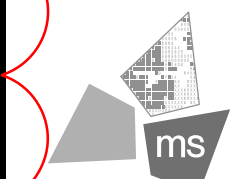
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CROSS SECTIONS SUNBURY PARKWAY EB
STA. 89+41.09 TO STA. 89+50.00

DESIGN AGENCY



ms consultants, inc.

DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

106959

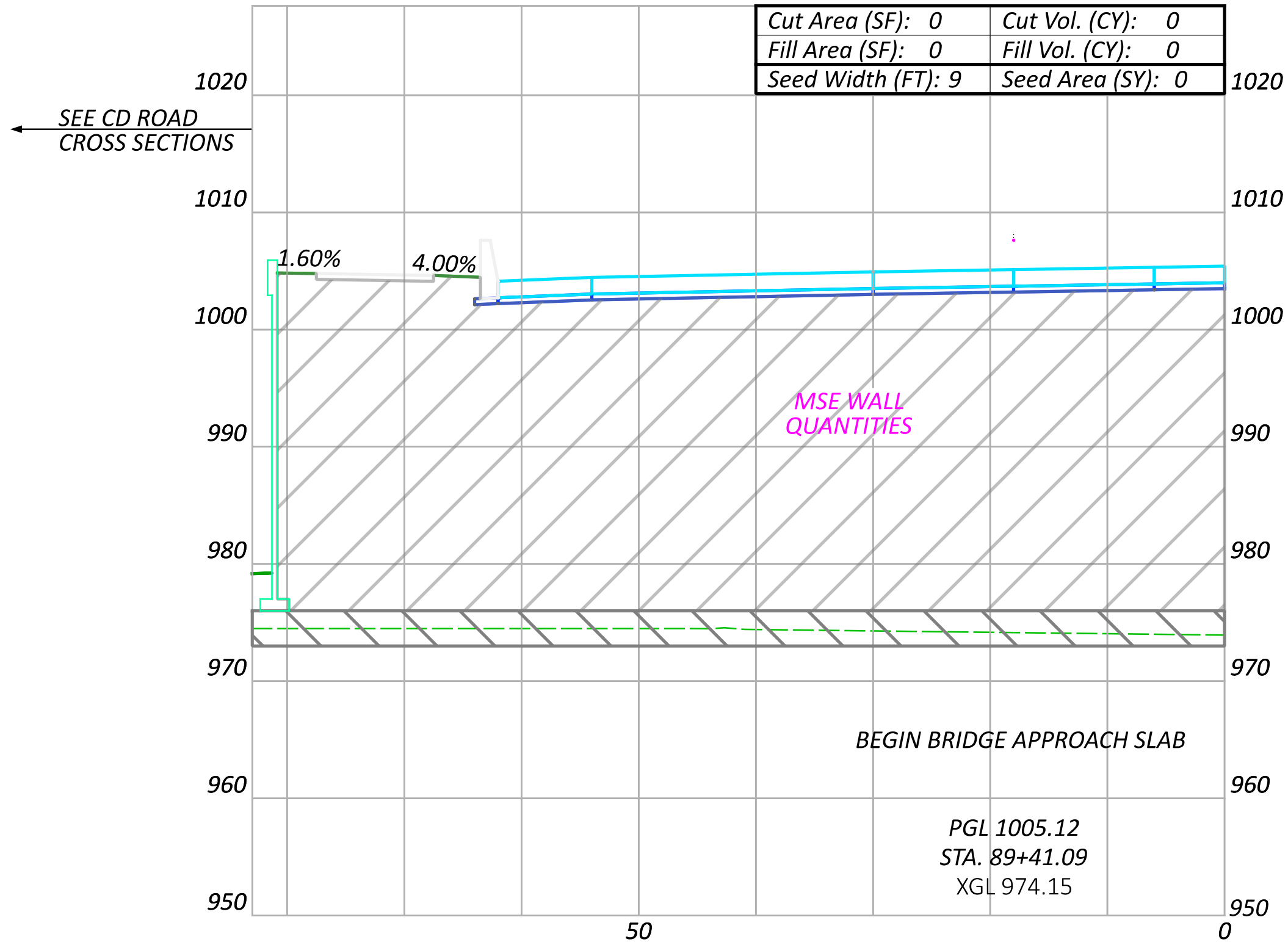
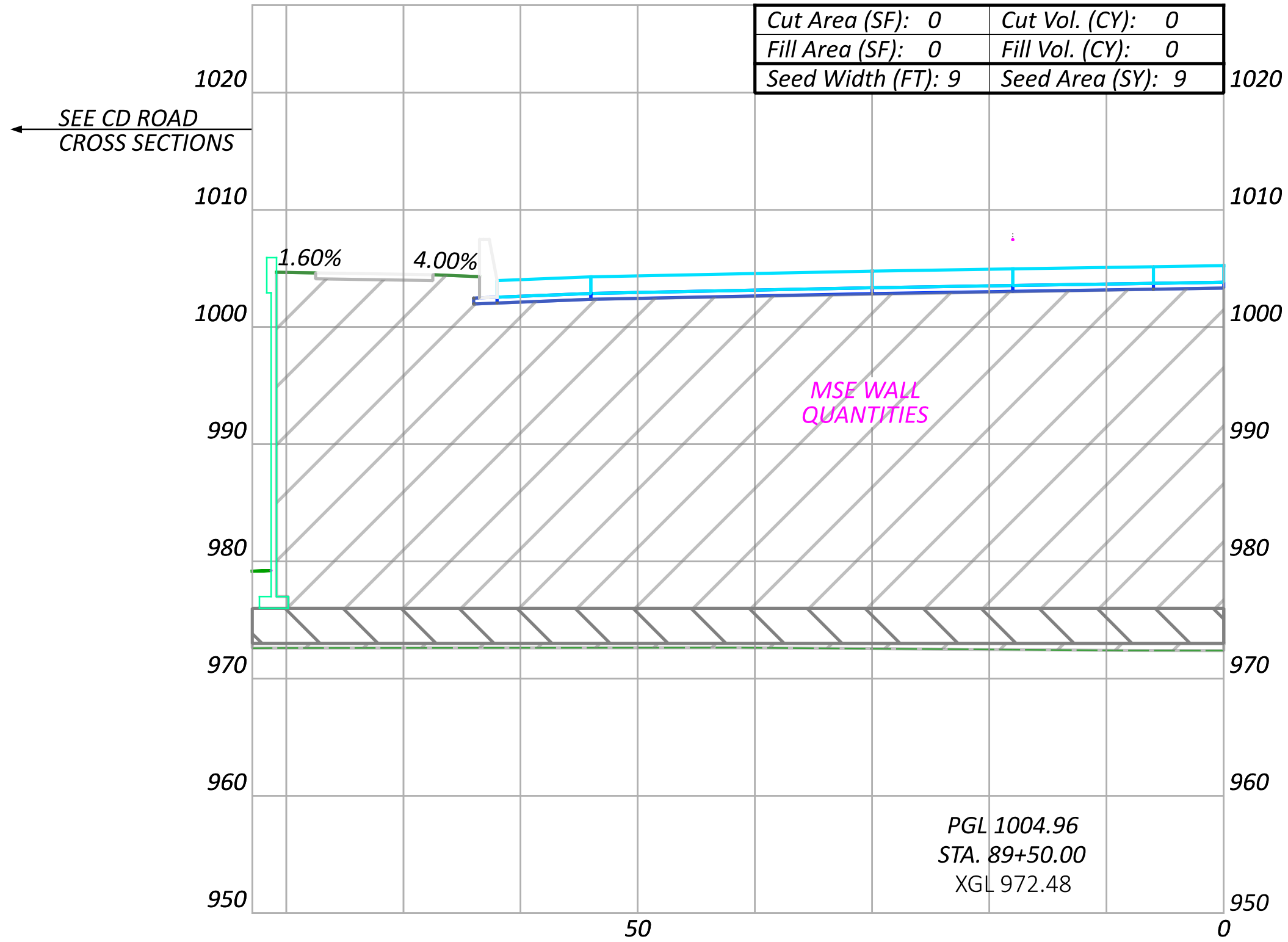
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Sheet Totals

Seeding	Cut	Fill
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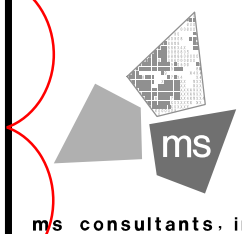
SHEET	TOTAL
P.275	663

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CROSS SECTIONS SUNBURY PARKWAY WB
STA. 89+41.09 TO STA. 89+50.00

DESIGN AGENCY



DESIGNER
CLH

REVIEWER
TAZ 05/15/23

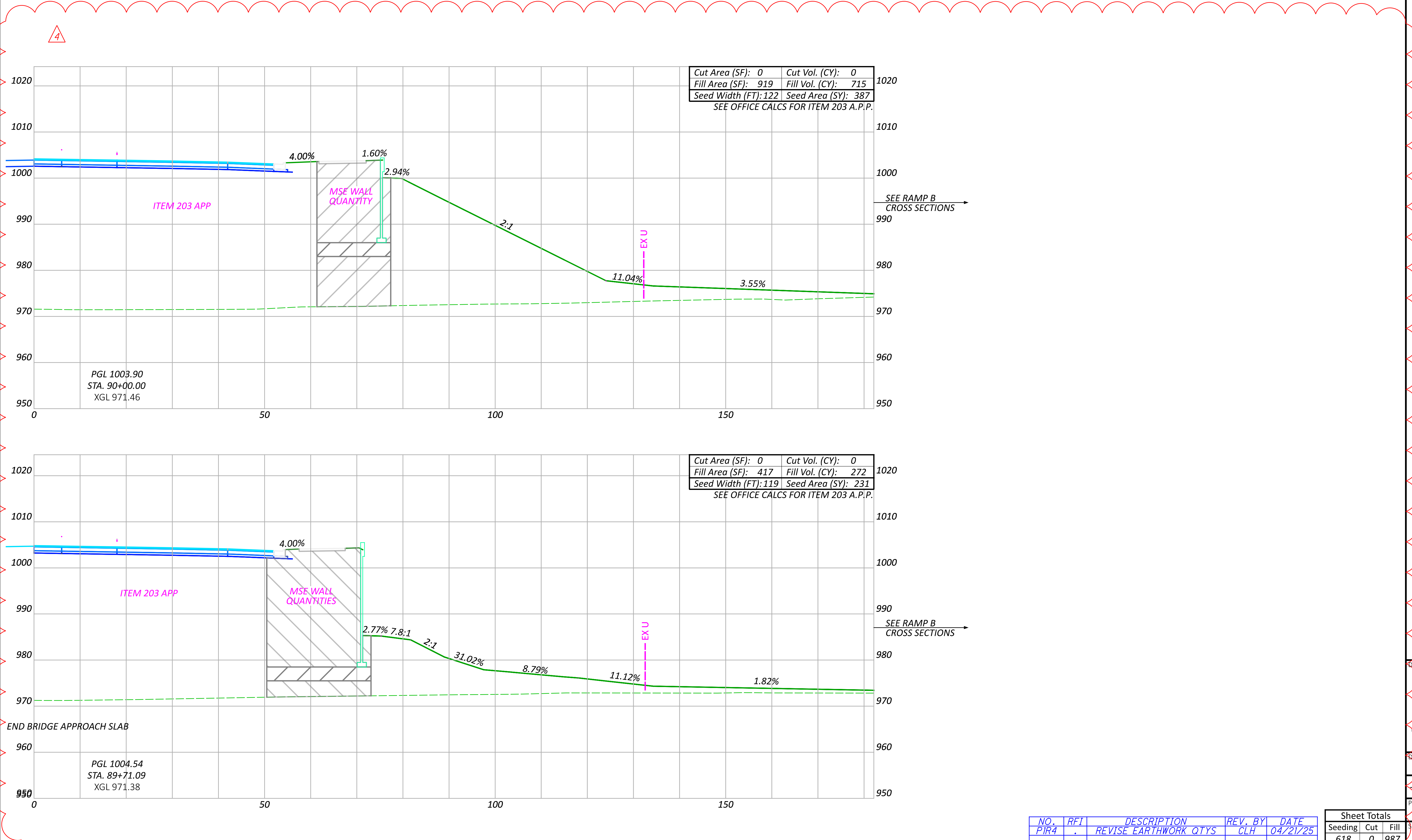
PROJECT ID
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NO.	RFI	DESCRIPTION	REV. BY	DATE
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Sheet Totals		
Seeding	Cut	Fill
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SHEET	TOTAL
P.276	663

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CROSS SECTIONS SUNBURY PARKWAY EB
STA. 89+71.09 TO STA. 90+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

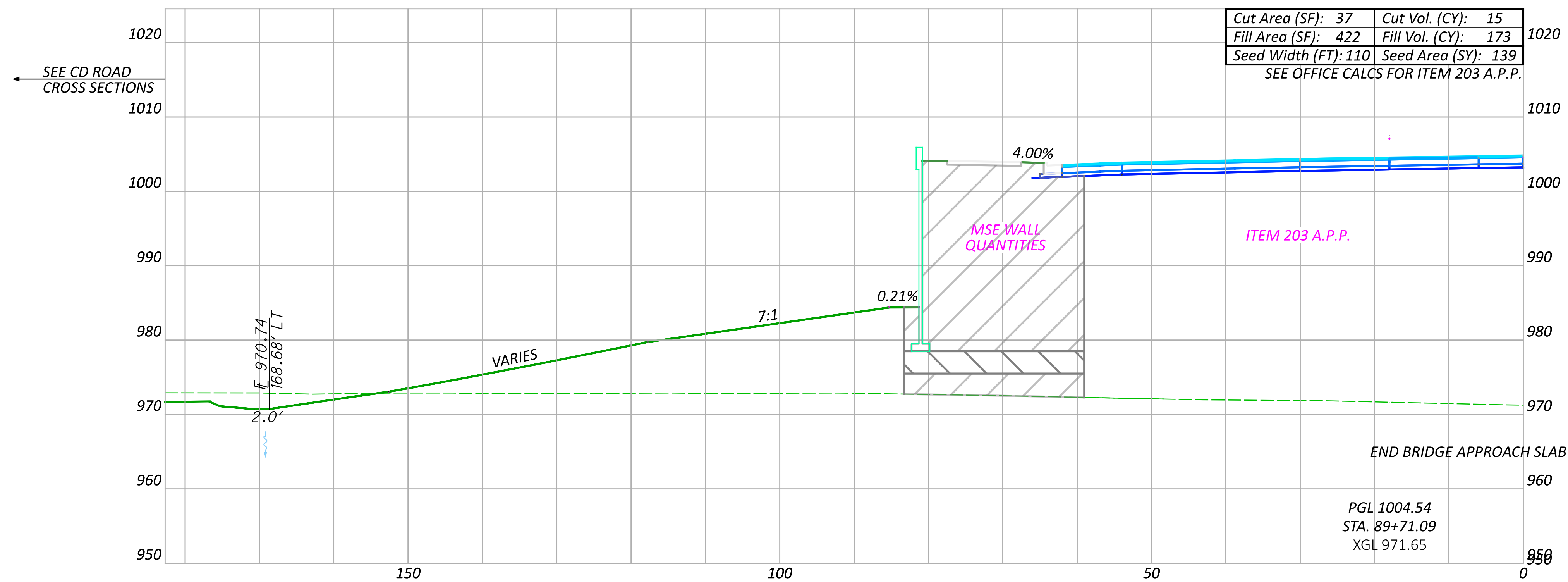
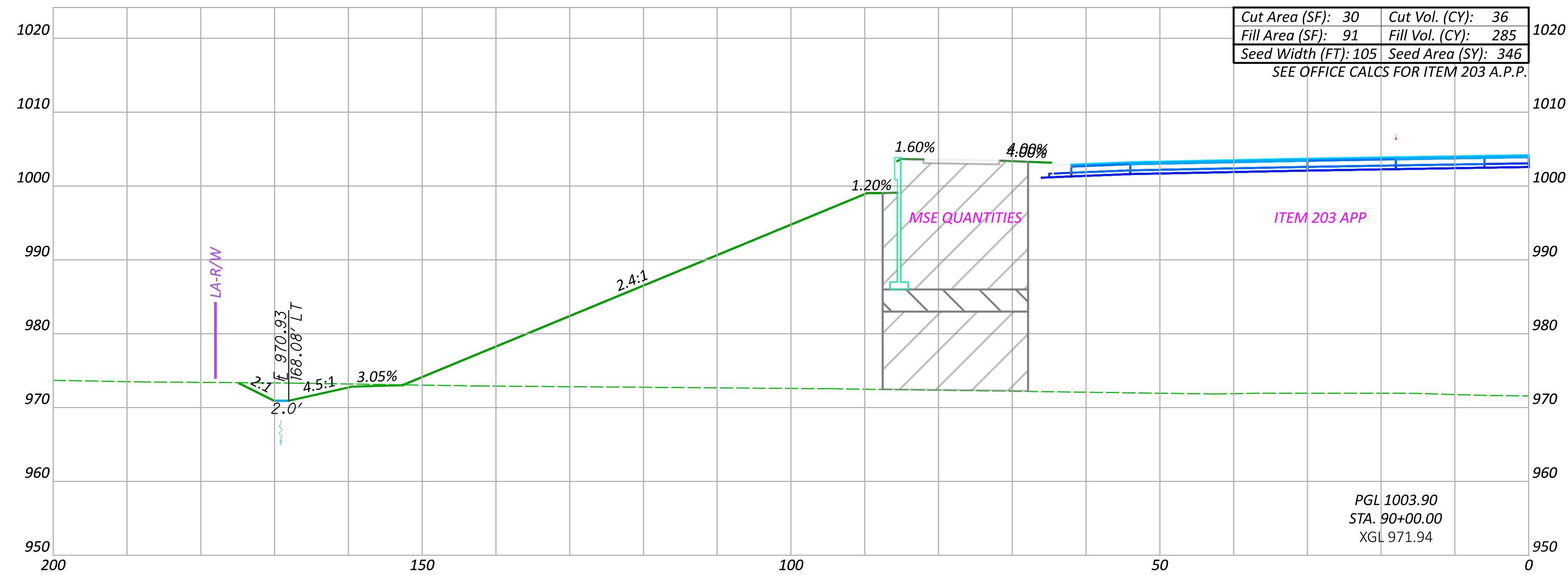
TAZ 05/15/23

PROJECT ID

106959

NO.	RFI	DESCRIPTION	REV. BY	DATE
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Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
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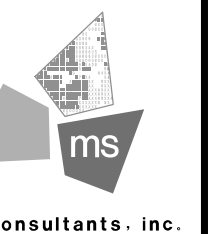
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.

Sheet Totals			106959	
Seeding	Cut	Fill	SHEET	TOTAL
485	51	458	P.278	663

LAST REVISED: PIR4 04/21/2025

CROSS SECTIONS SUNBURY PARKWAY WB
STA. 89+71.09 TO STA. 90+00.00

DESIGN AGENCY



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REVIEWER

05/15/23

AZ 05/13/23

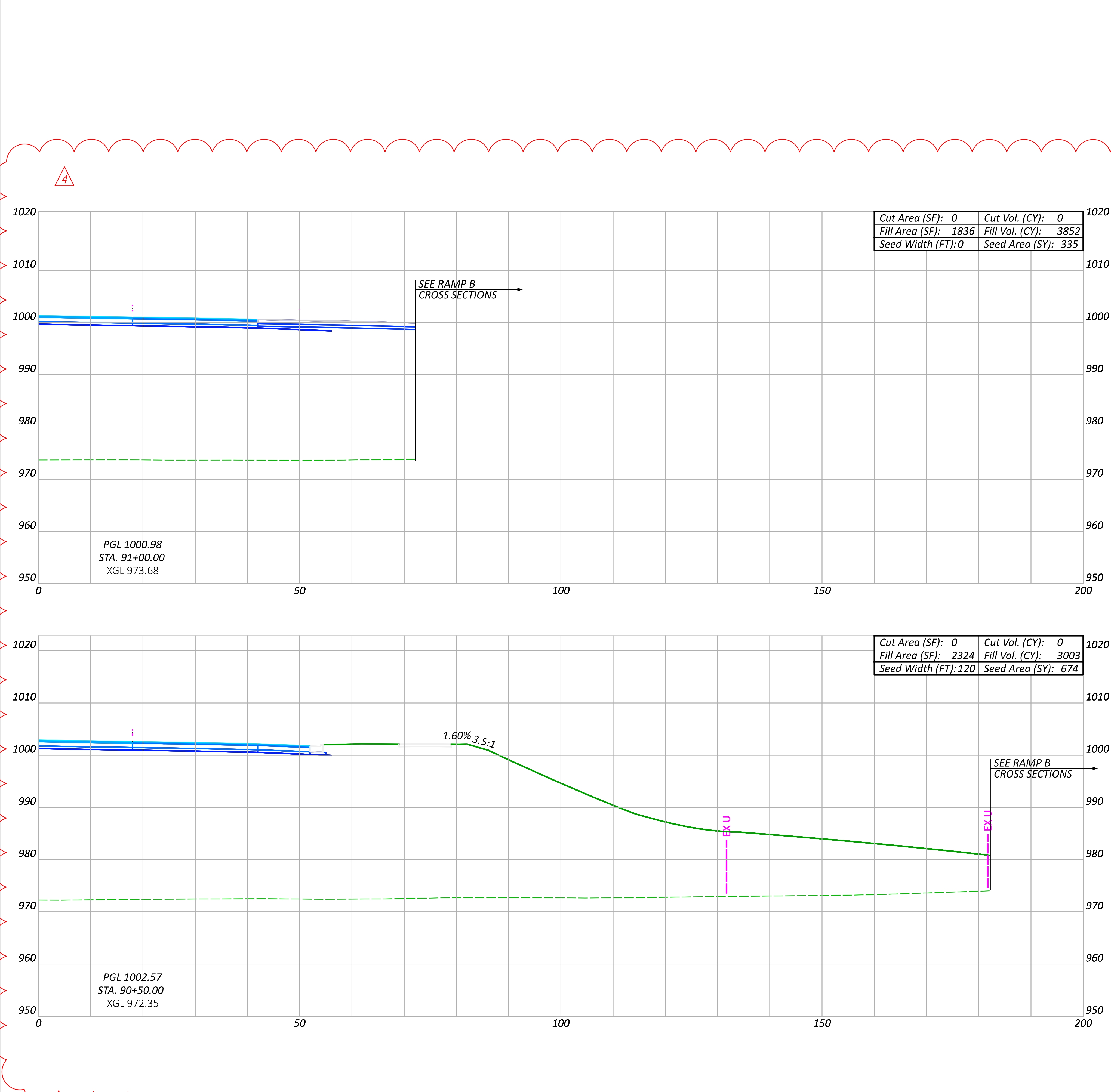
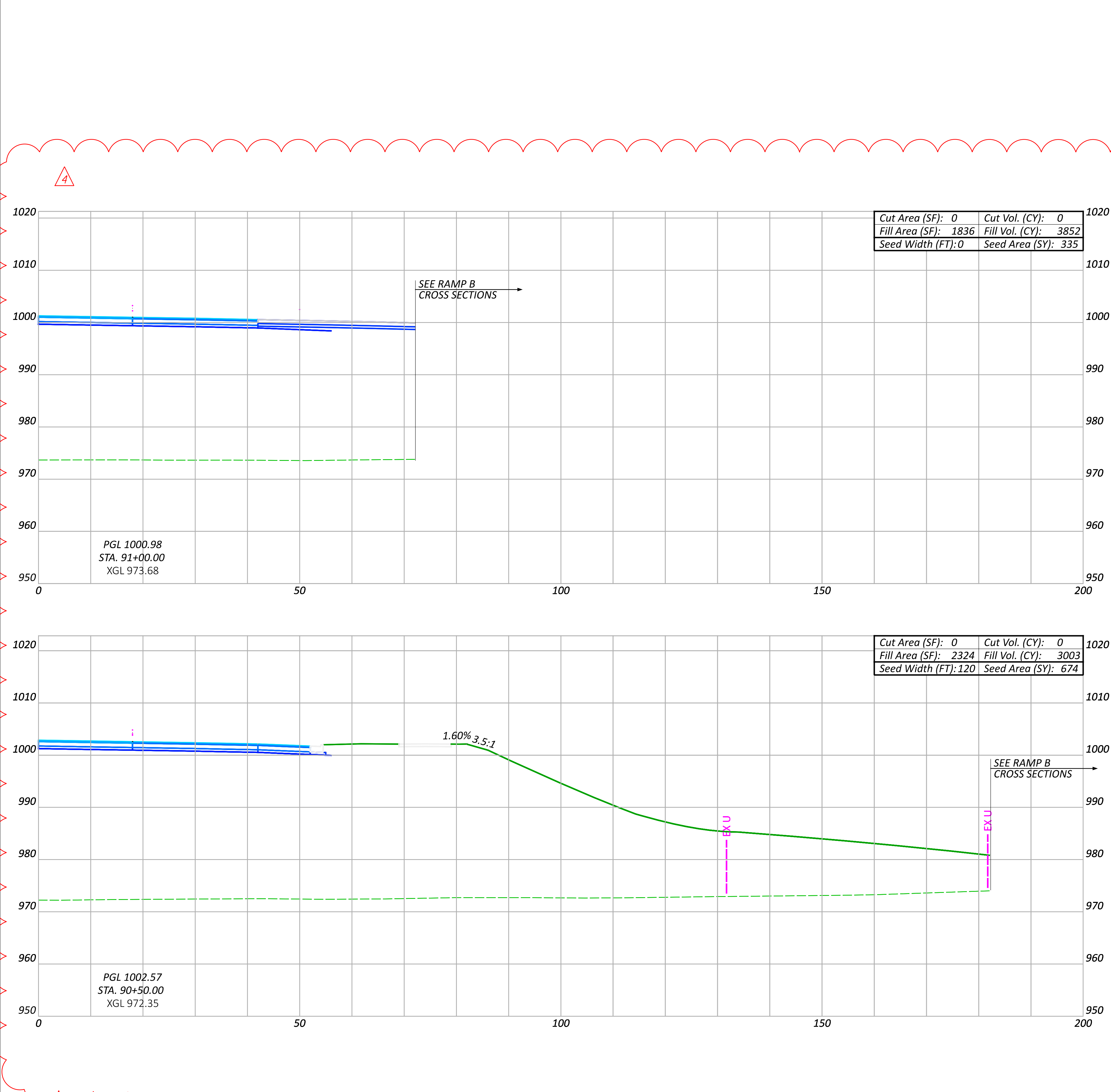
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TOTAL

DEL-71-8.91 (PHASE A) PART 1

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Fill Area (SF): 2324	Fill Vol. (CY): 3003
Seed Width (FT): 120	Seed Area (SY): 674

Sheet Totals			106959	
Seeding	Cut	Fill	SHEET	TOTAL
1009	0	6855	P.279	663

CROSS SECTIONS SUNBURY PARKWAY EB

STA. 90+50.00 TO STA. 91+00.00

DESIGN AGENCY



ms consultants, inc.

DESIGNER **CLH**

REVIEWER

TAZ **05/15/2017**


PROJECT ID **106959**

SHEET	TOTAL
P. 279	663

CROSS SECTIONS SUNBURY PARKWAY EB

STA. 90+50.00 TO STA. 91+00.00

DESIGN AGENCY



ms consultants, inc.

DESIGNER **CLH**

REVIEWER

TAZ 05/15/23

PROJECT ID **106959**

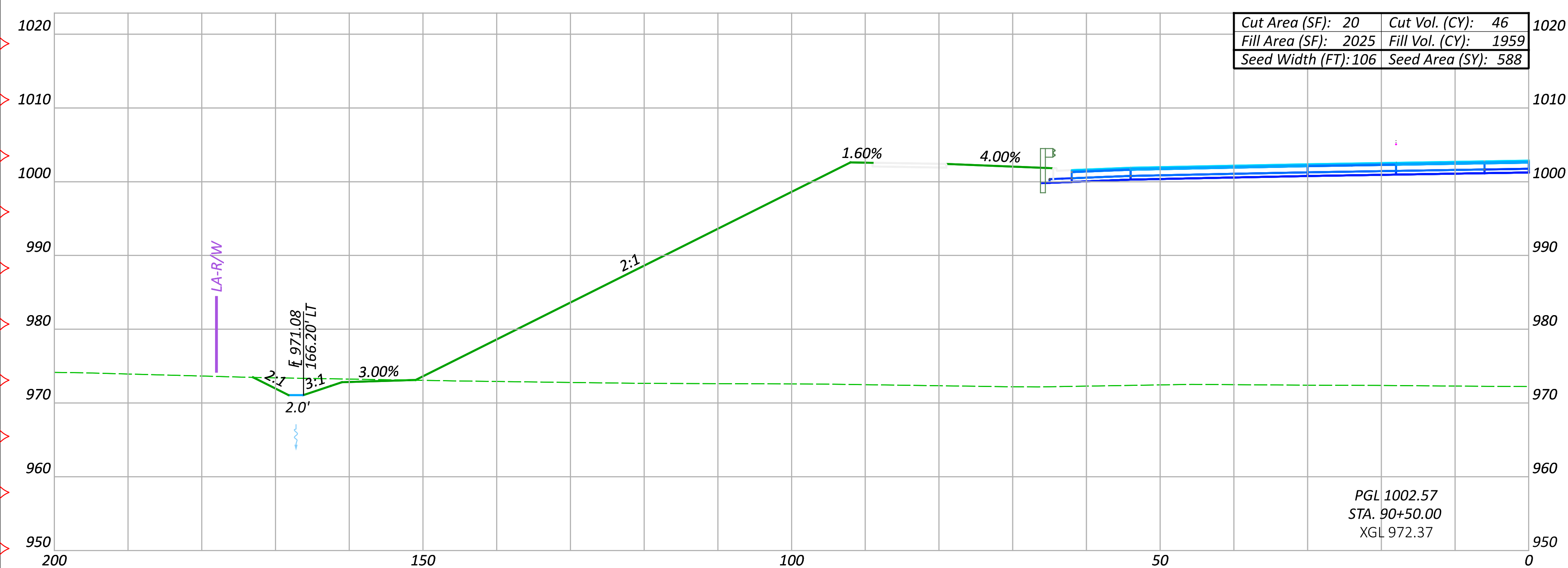
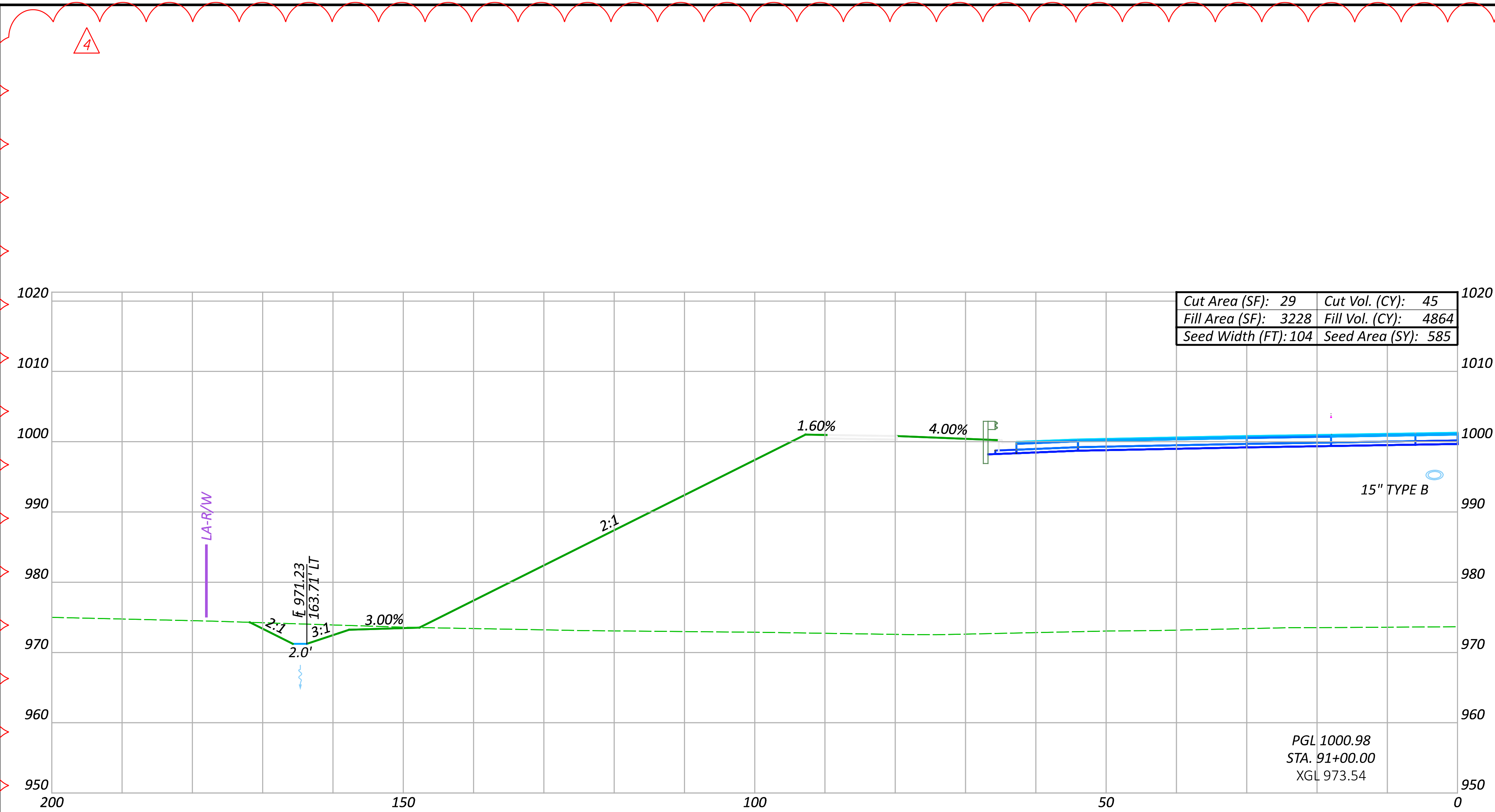
SHEET	TOTAL
P. 279	663

Sheet Totals		
Seeding	Cut	Fill
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BY	DATE
CH	04/21/25

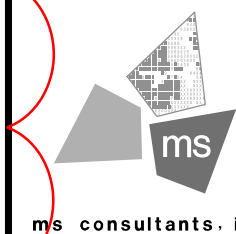
DEL-71-8.91 (PHASE A) PART 1

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CROSS SECTIONS SUNBURY PARKWAY WB
STA. 90+50.00 TO STA. 91+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

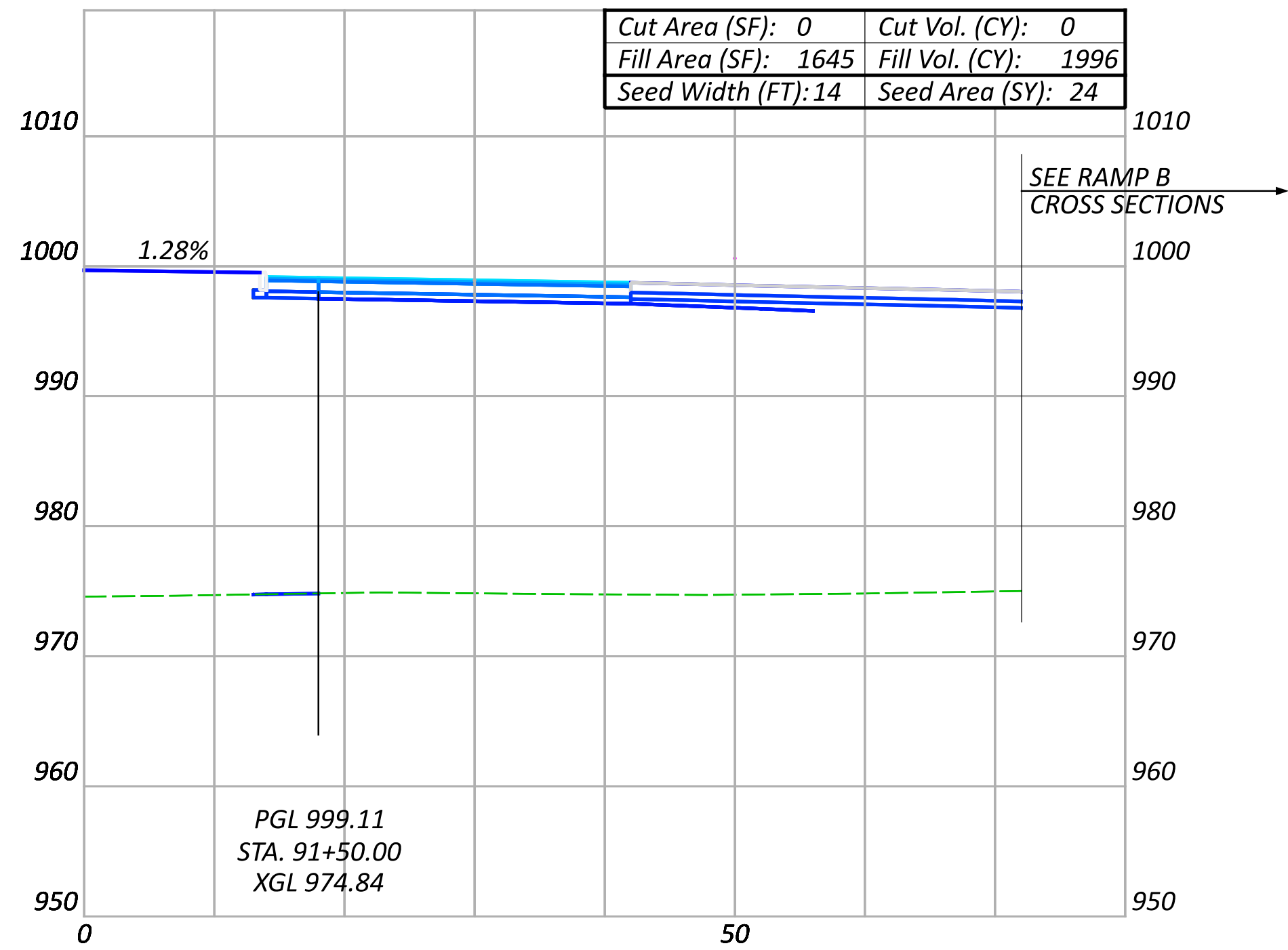
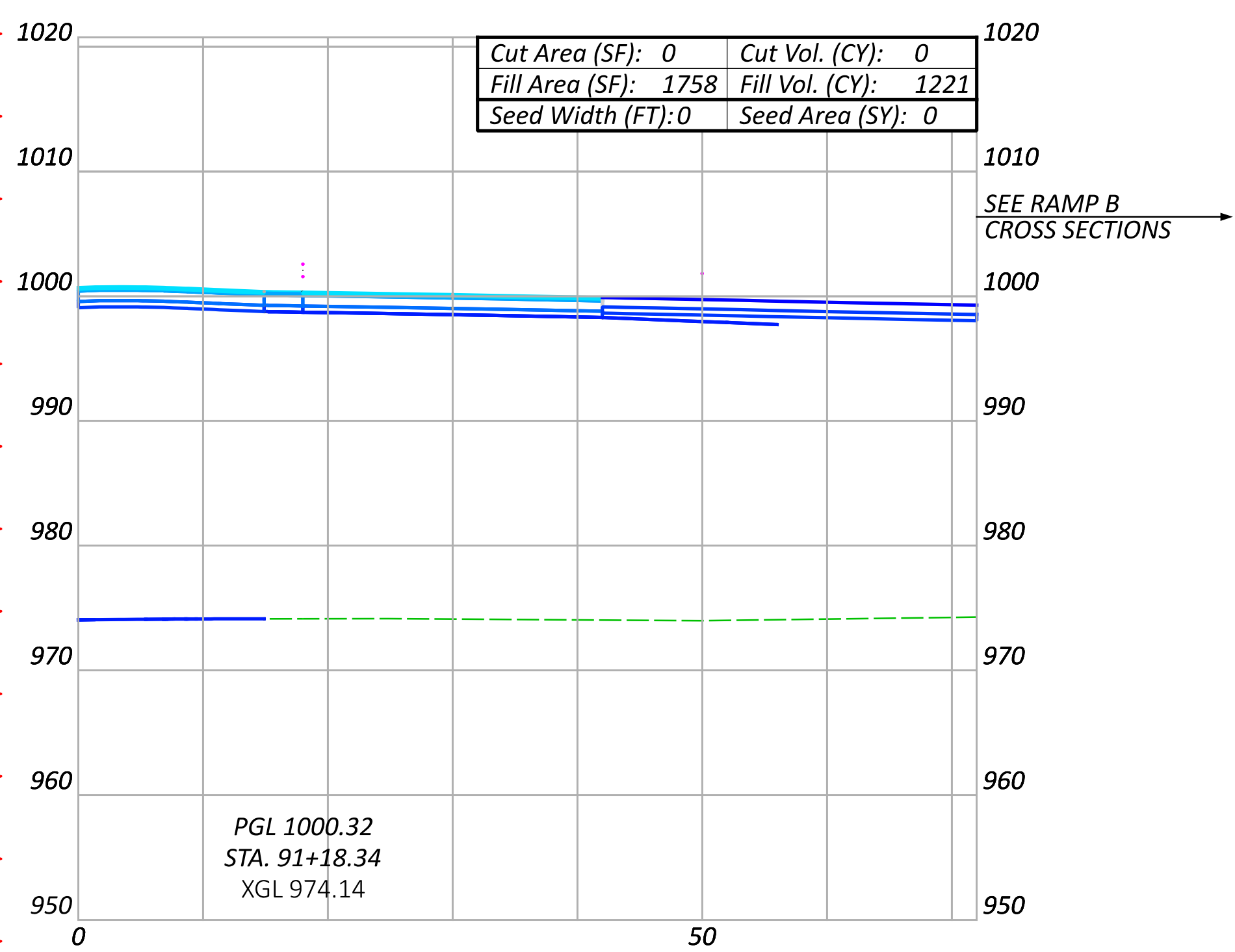
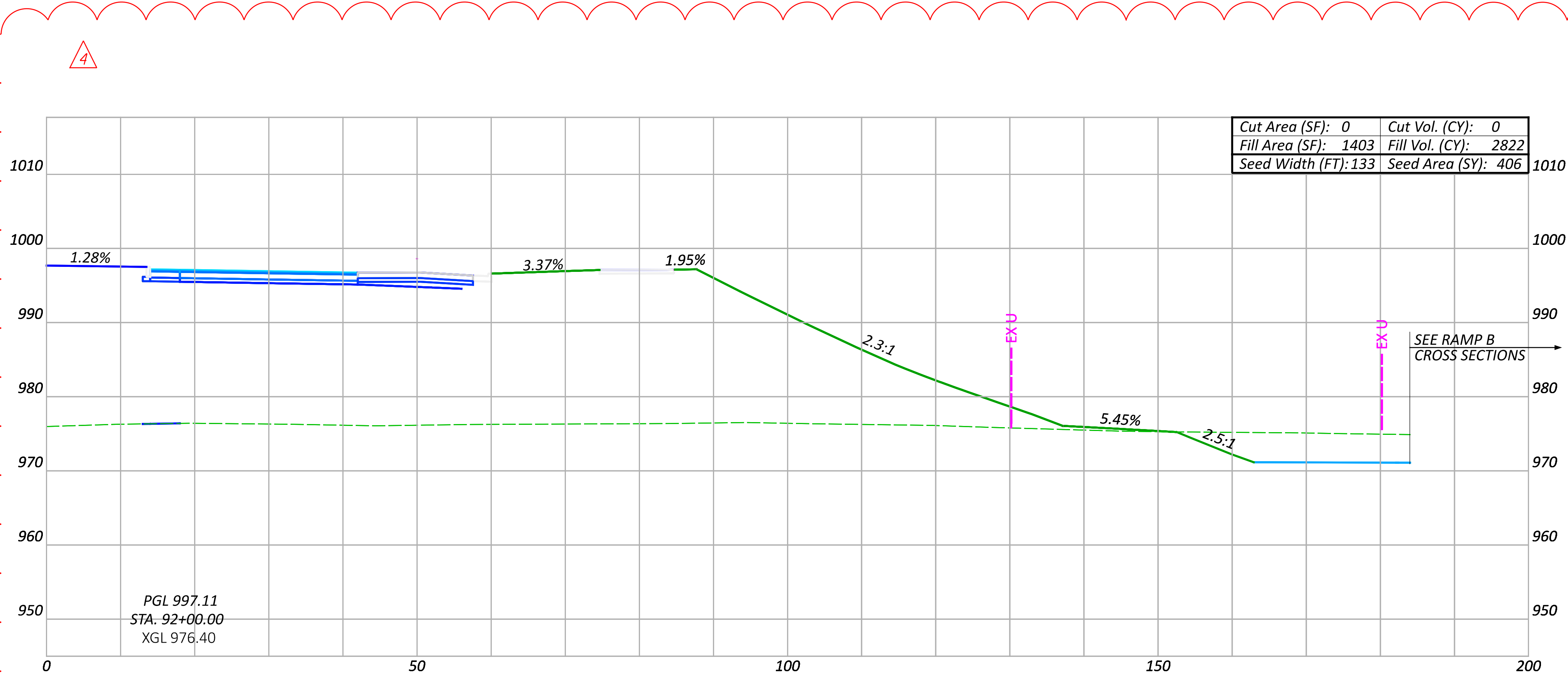
106959

Sheet Totals

Seeding	Cut	Fill
1173	91	6823

SHEET	TOTAL
P.280	663

LAST REVISED: PIR4 04/21/2025

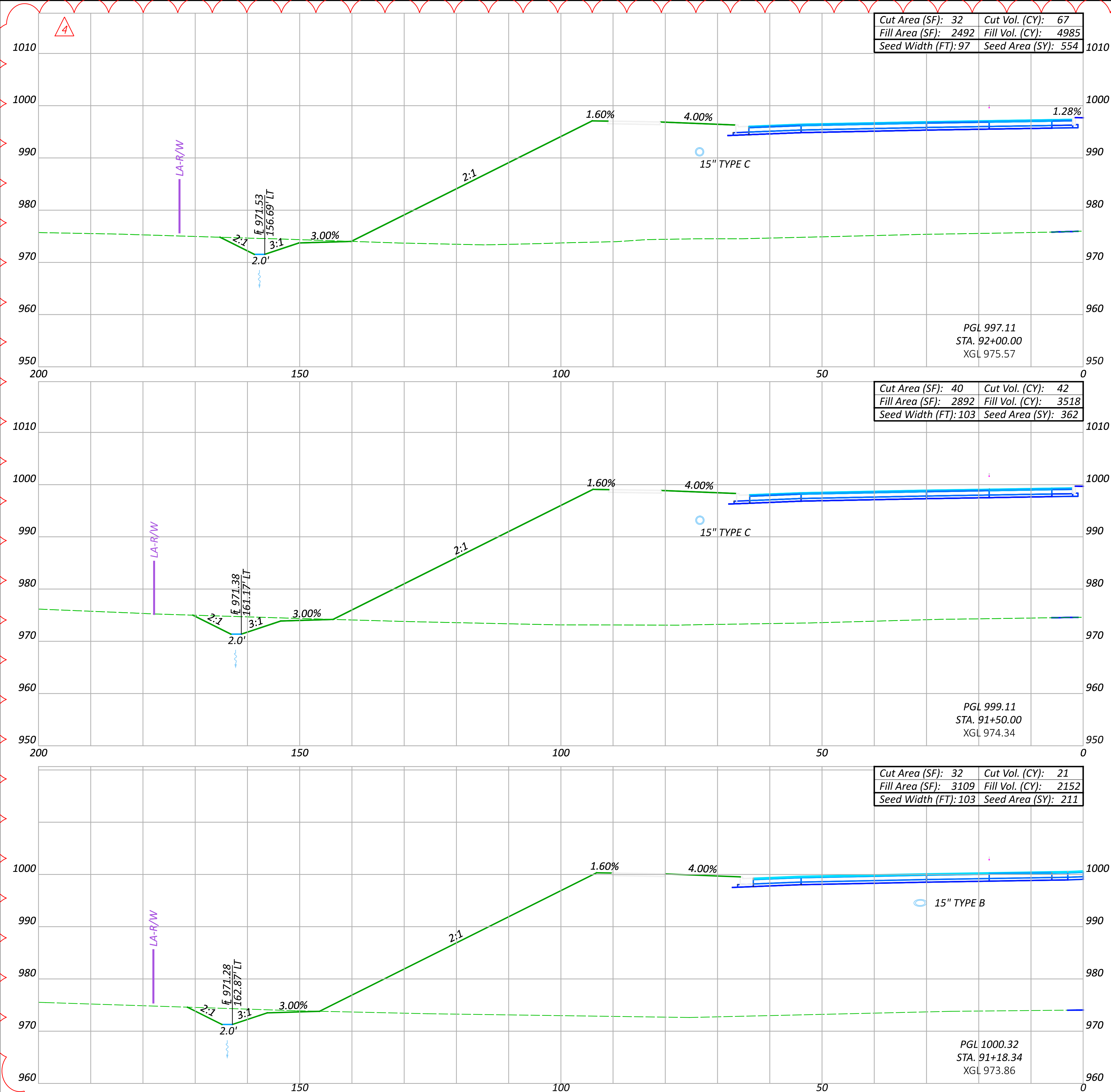


NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.281	663
430	0	6039		

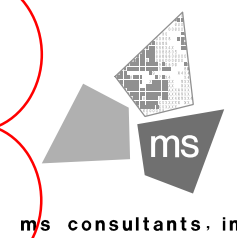
DEL-71-8.91 (PHASE A) PART 1

MODEL: BLP_SUNB - 91+18.34; [Sheet] PAPER SIZE: 34x22 (in.); DATE: 4/22/2025 TIME: 10:36:45 AM USER: chonaker
\\msconsultants.com\files\Production\03\60\06873-00\71-7.91 Phase A\106959\400-Engineering\Roadway\Sheets\106959_XS002a.dgn



CROSS SECTIONS SUNBURY PARKWAY WB
STA. 91+18.34 TO STA. 92+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

106959

SHEET

P.282

TOTAL

663



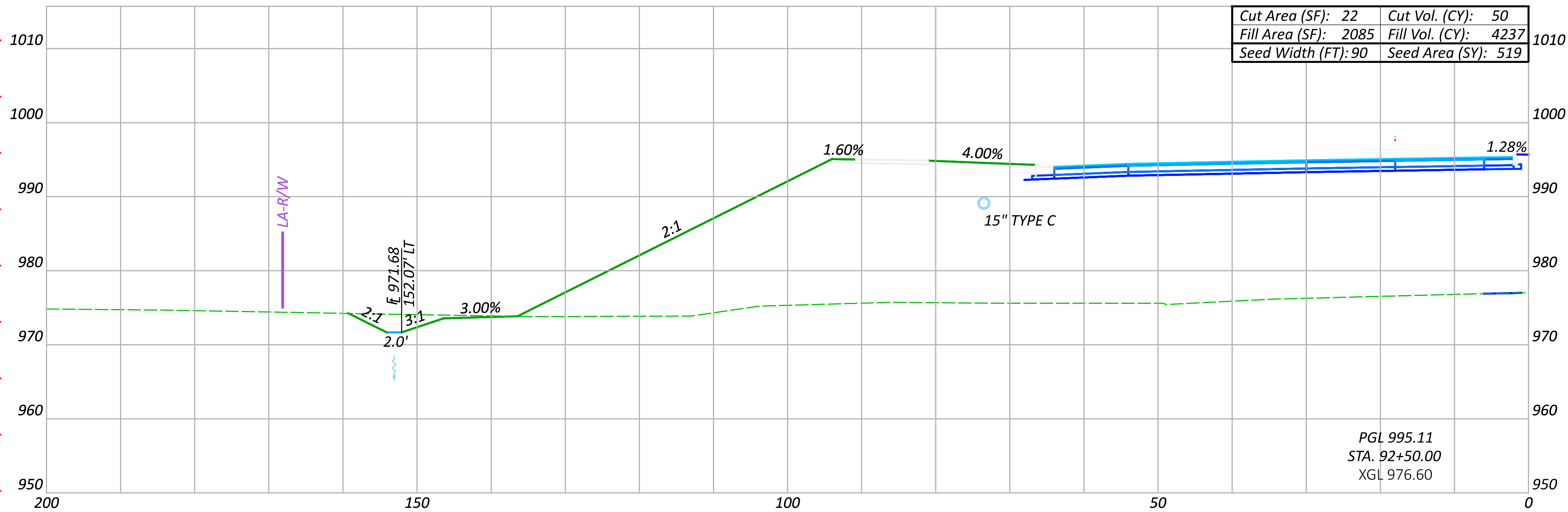
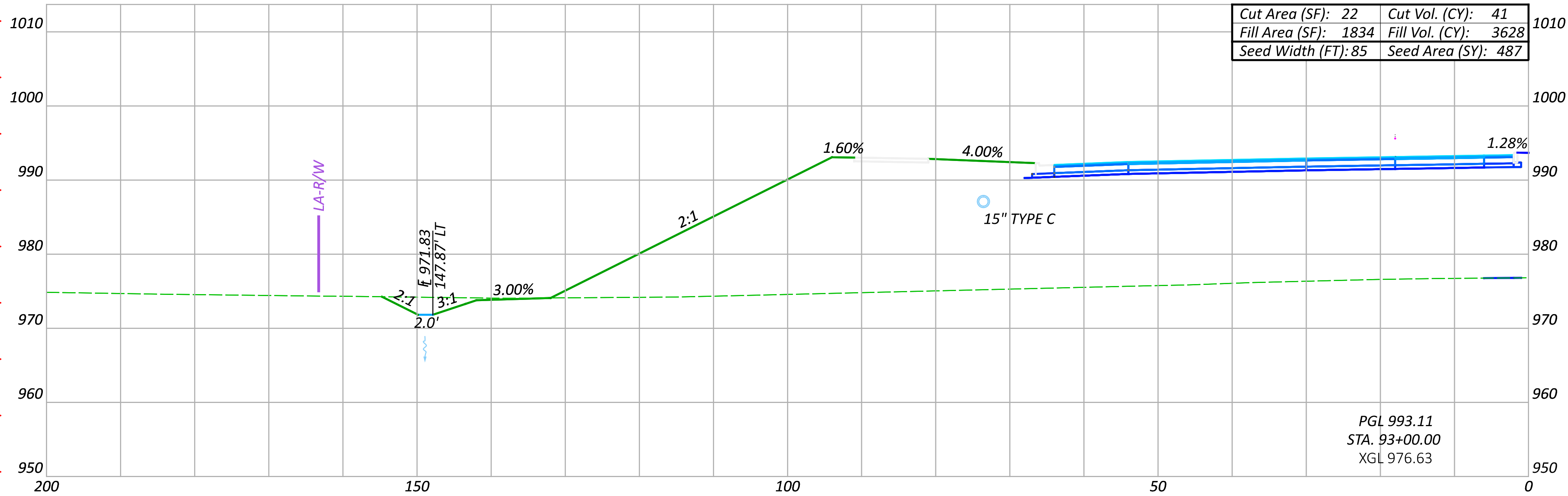
Sheet Totals			106959	
Seeding	Cut	Fill	SHEET	TOTAL
1304	339	5767	P.283	663

LAST REVISED: PIR4 04/21/2025

CROSS SECTIONS SUNBURY PARKWAY EB
STA. 92+50.00 TO STA. 93+00.00

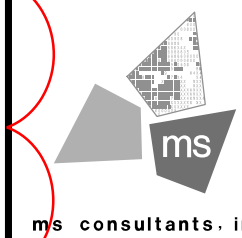
MODEL: BLP_SUNB -92+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 4/22/2025 TIME: 10:51:40 AM USER: chonaker
\\msconsultants.com\\files\\Production\\03\\60\\06873-00\\71-7.91 Phase A\\106959\\400-Engineering\\Roadway\\Sheets\\106959_XS002a.dgn

4



CROSS SECTIONS SUNBURY PARKWAY WB
STA. 92+50.00 TO STA. 93+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

106959

Sheet Totals

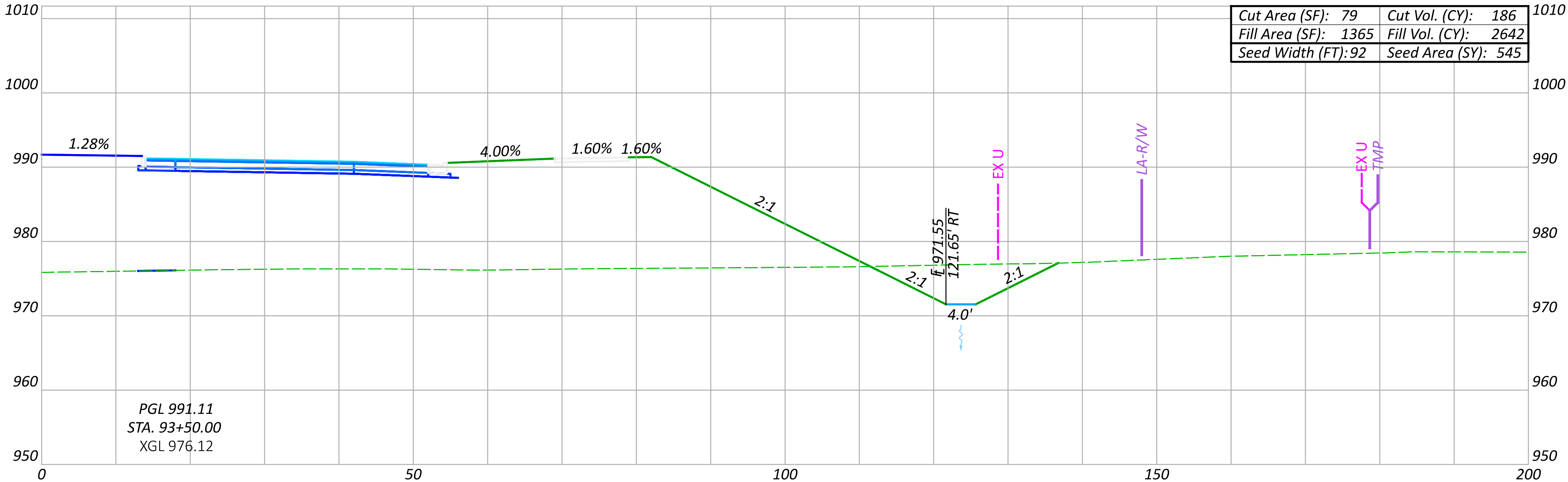
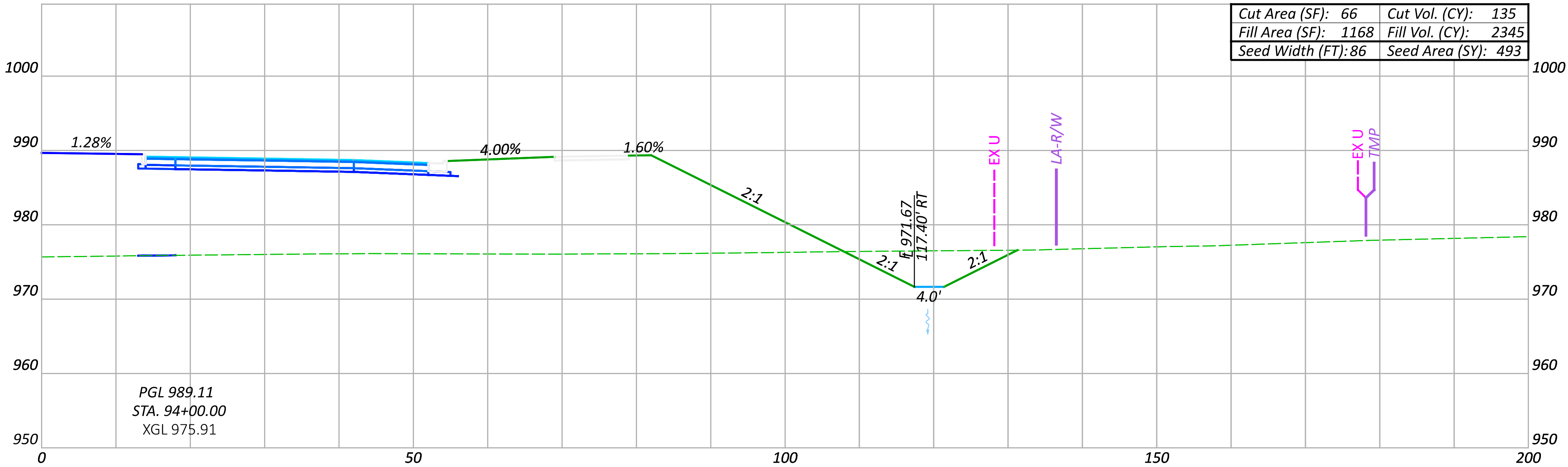
Seeding	Cut	Fill
1006	91	7865

SHEET	TOTAL
P.284	663

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

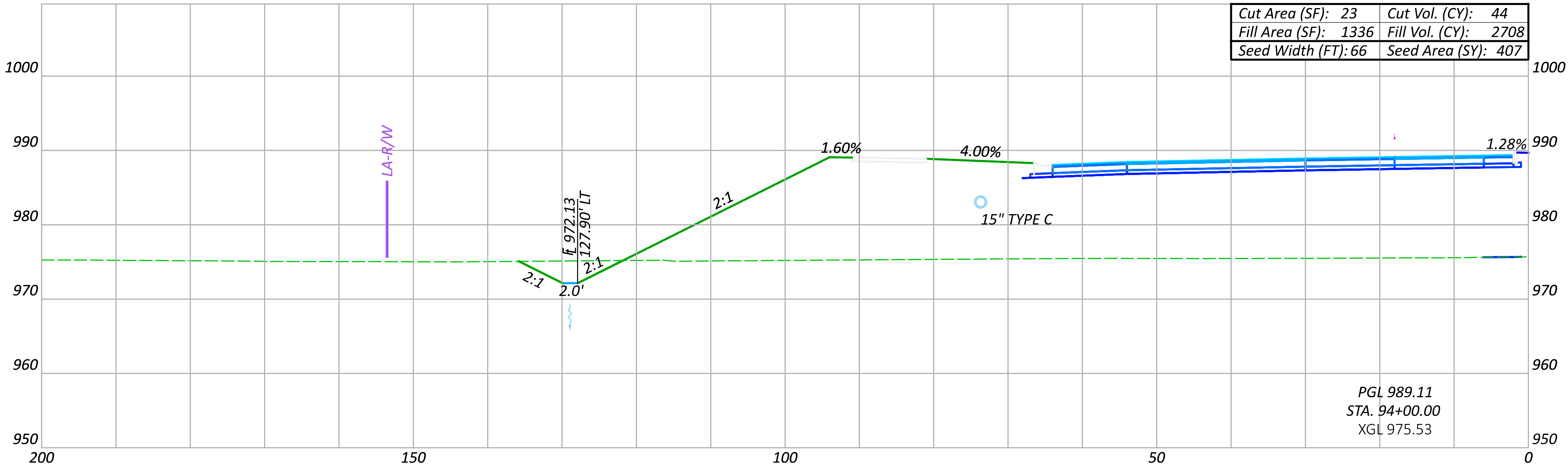
MODEL: BLP_SUNB - 93+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 4/21/2025 TIME: 2:49:58 PM USER: chonaker
\\msnconsultants.com\files\Production\03\60\06873-00\71-7.91 Phase A\106959\400-Engineering\Roadway\Sheet\106959_XS002.dgn

4



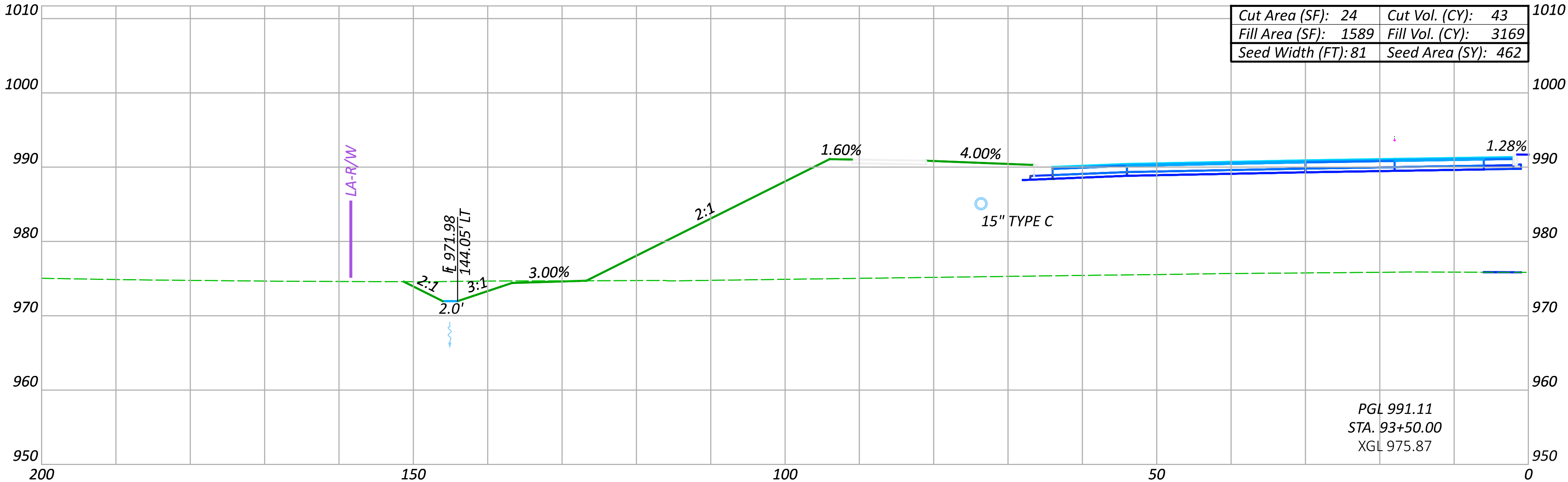
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.285	663
1038	321	4987		



Cut Area (SF): 23	Cut Vol. (CY): 44
Fill Area (SF): 1336	Fill Vol. (CY): 2708
Seed Width (FT): 66	Seed Area (SY): 407

PGL 989.11
STA. 94+00.00
XGL 975.53

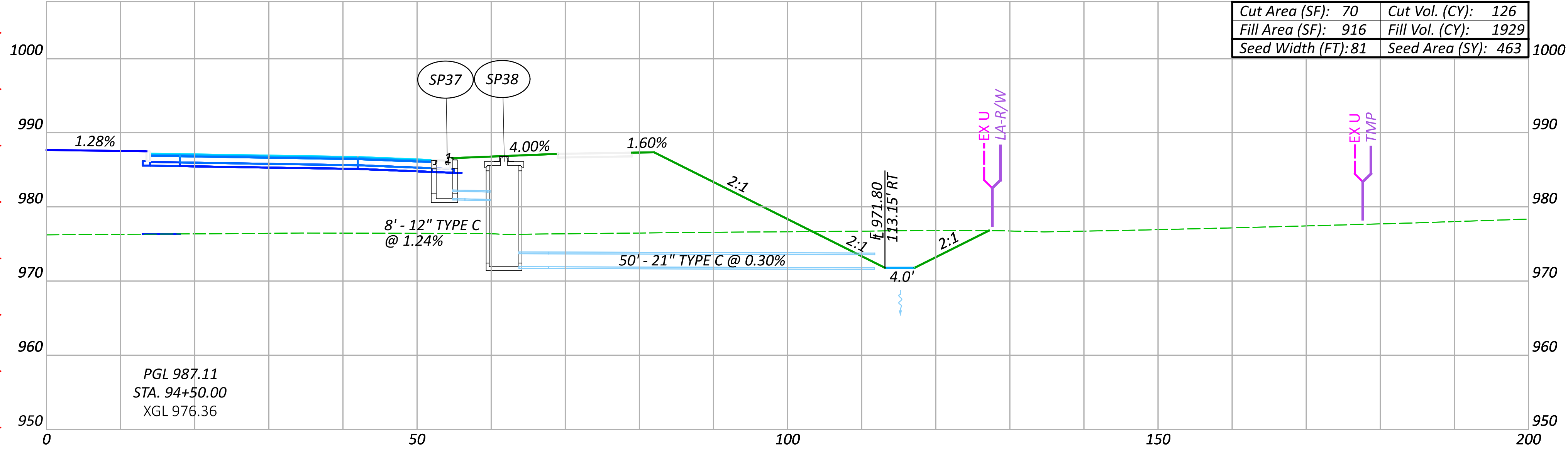
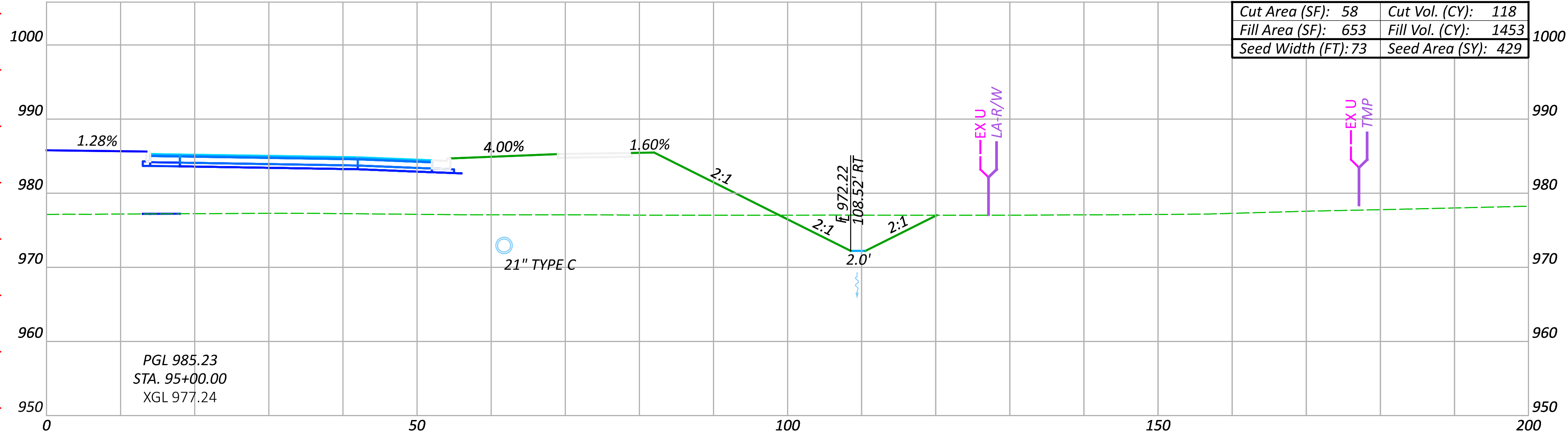
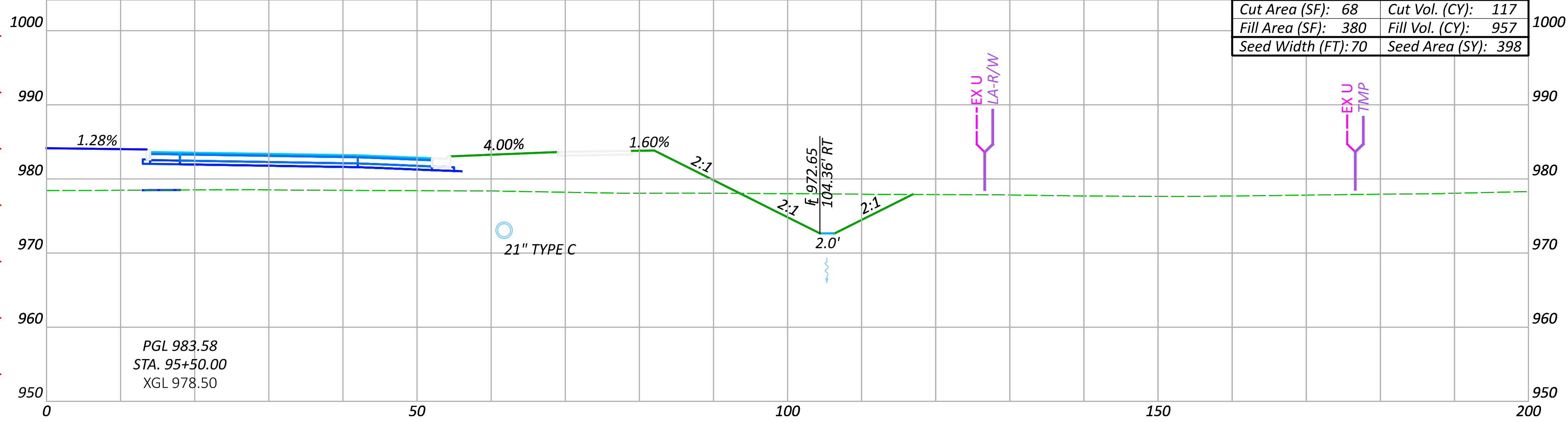


Cut Area (SF): 24	Cut Vol. (CY): 43
Fill Area (SF): 1589	Fill Vol. (CY): 3169
Seed Width (FT): 81	Seed Area (SY): 462

PGL 991.11
STA. 93+50.00
XGL 975.87

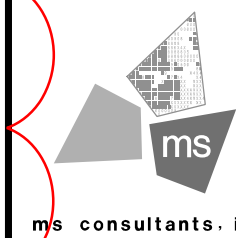
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.286	663
869	87	5877		



CROSS SECTIONS SUNBURY PARKWAY EB
STA. 94+50.00 TO STA. 95+50.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

106959

Sheet Totals

Seeding Cut Fill

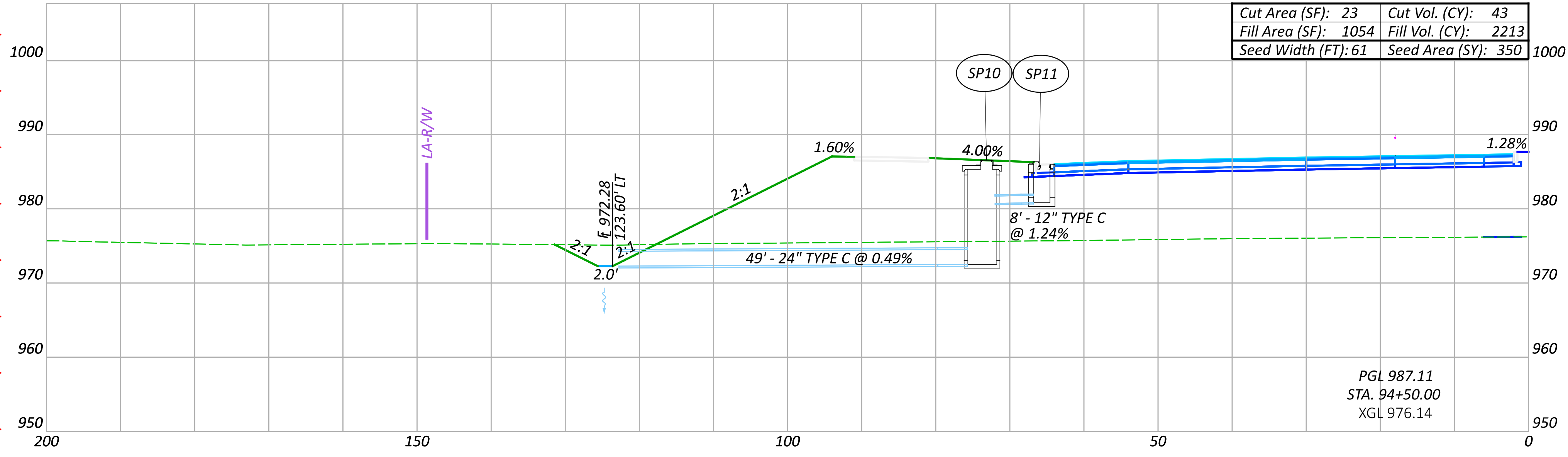
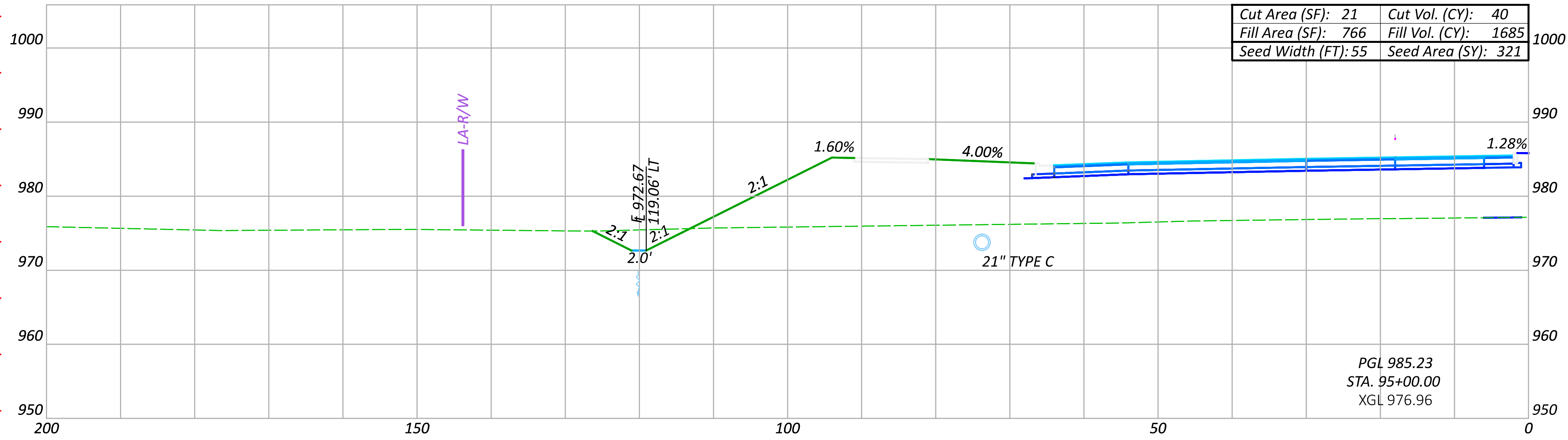
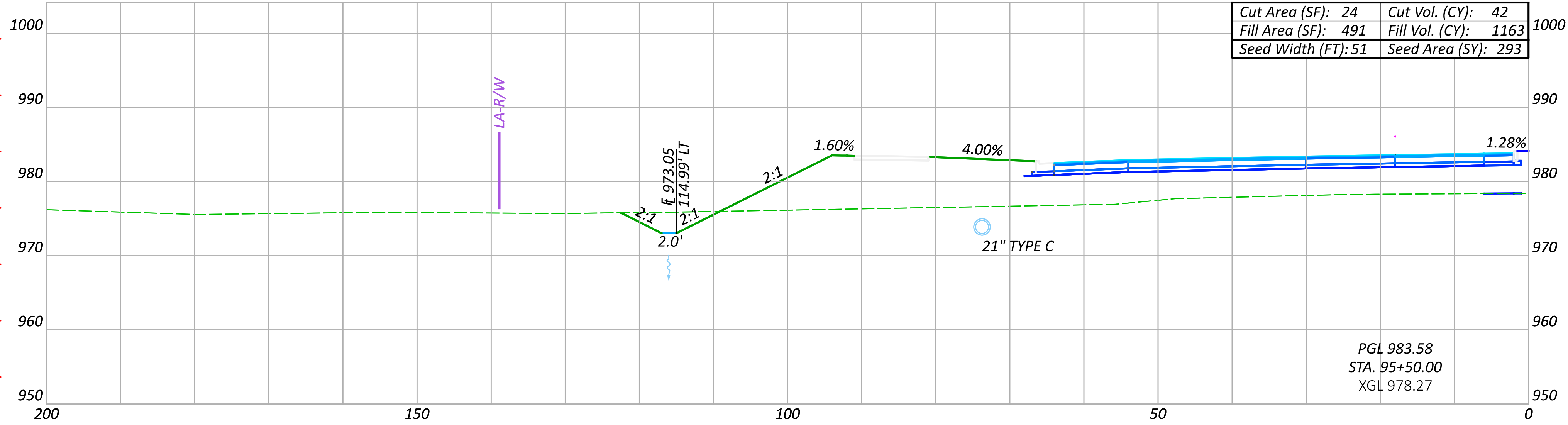
1290 361 4339

SHEET

P.287

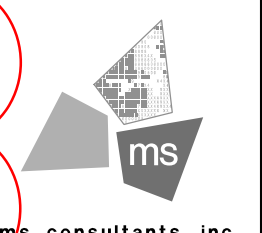
TOTAL

663



CROSS SECTIONS SUNBURY PARKWAY WB
STA. 94+50.00 TO STA. 95+50.00

DESIGN AGENCY



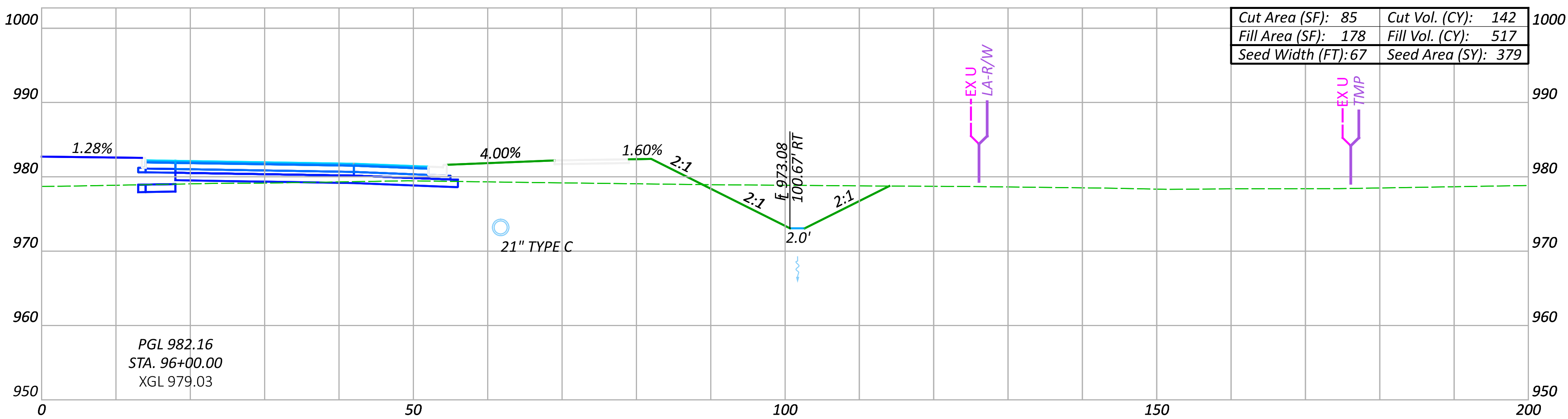
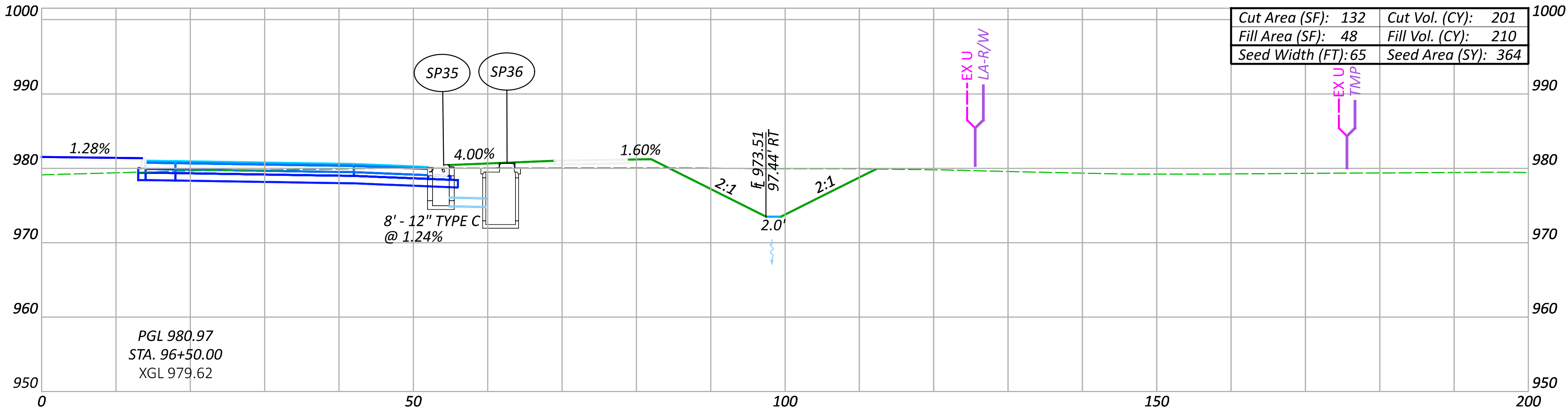
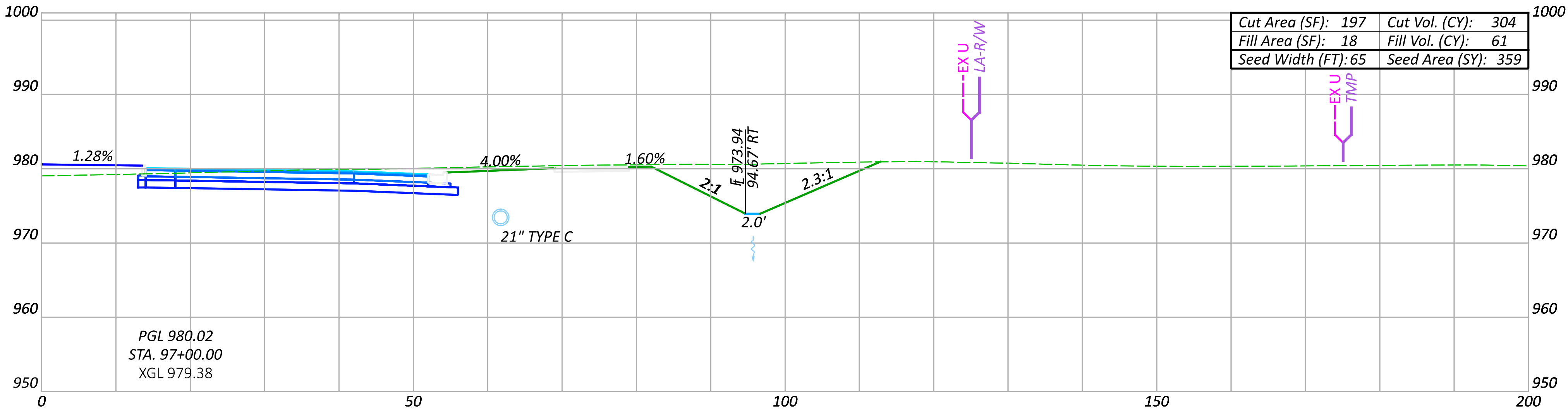
DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

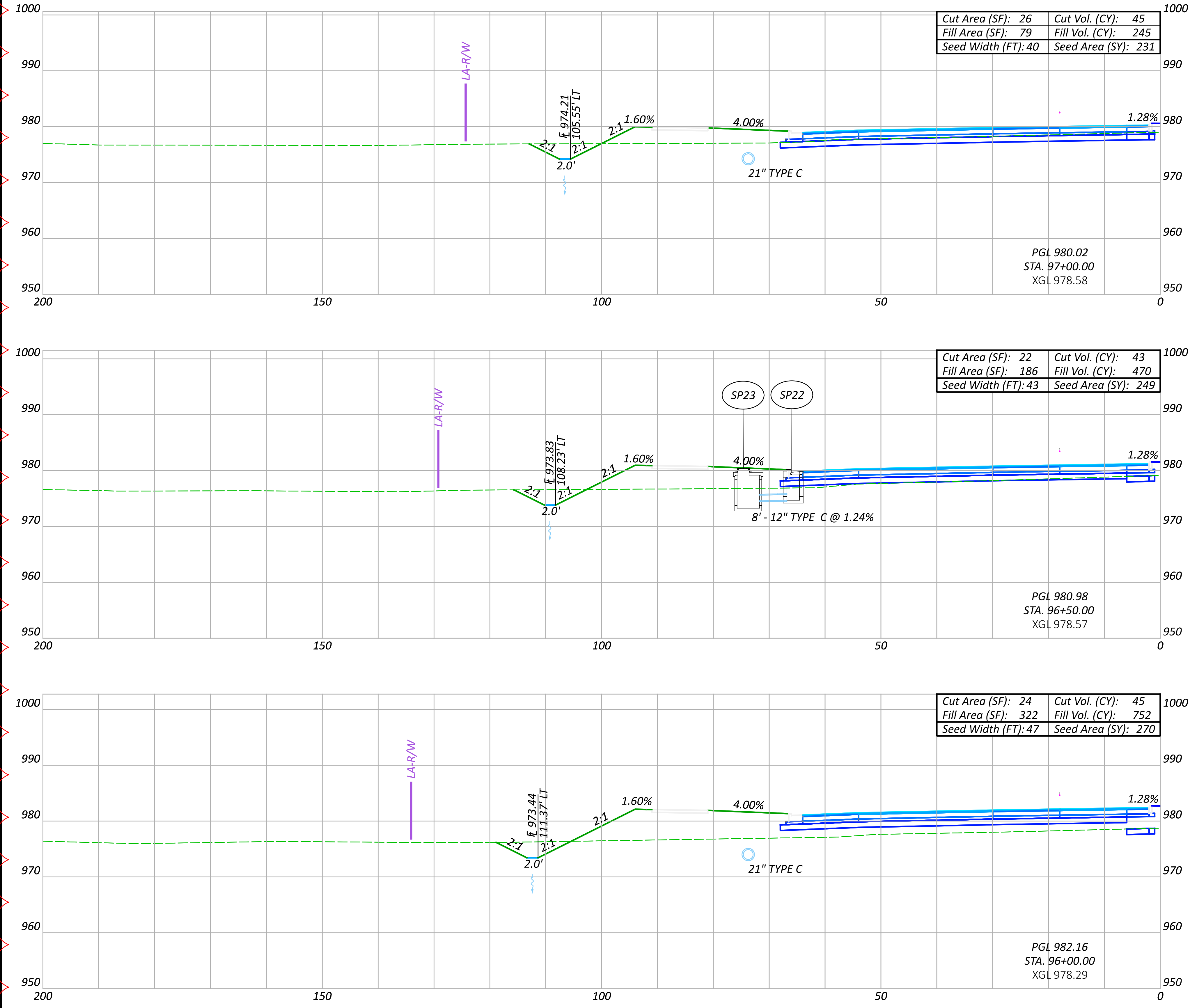
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
964	125	5061	P.288	663



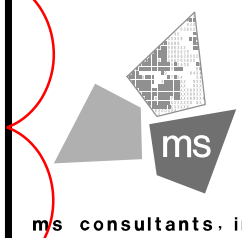
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
1102	647	788	P.289	663



CROSS SECTIONS SUNBURY PARKWAY WB
STA. 96+00.00 TO STA. 97+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

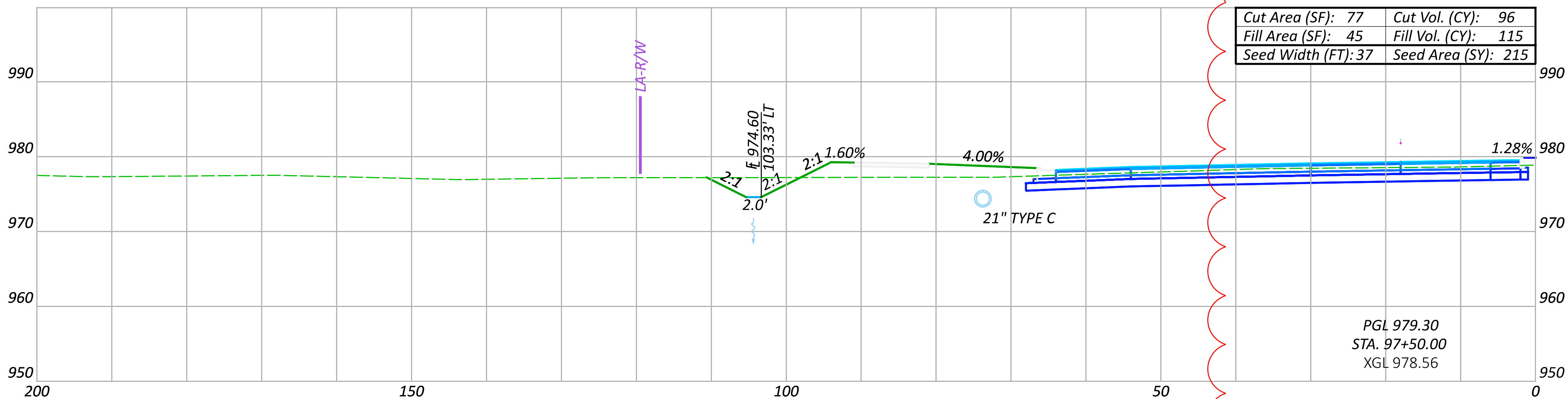
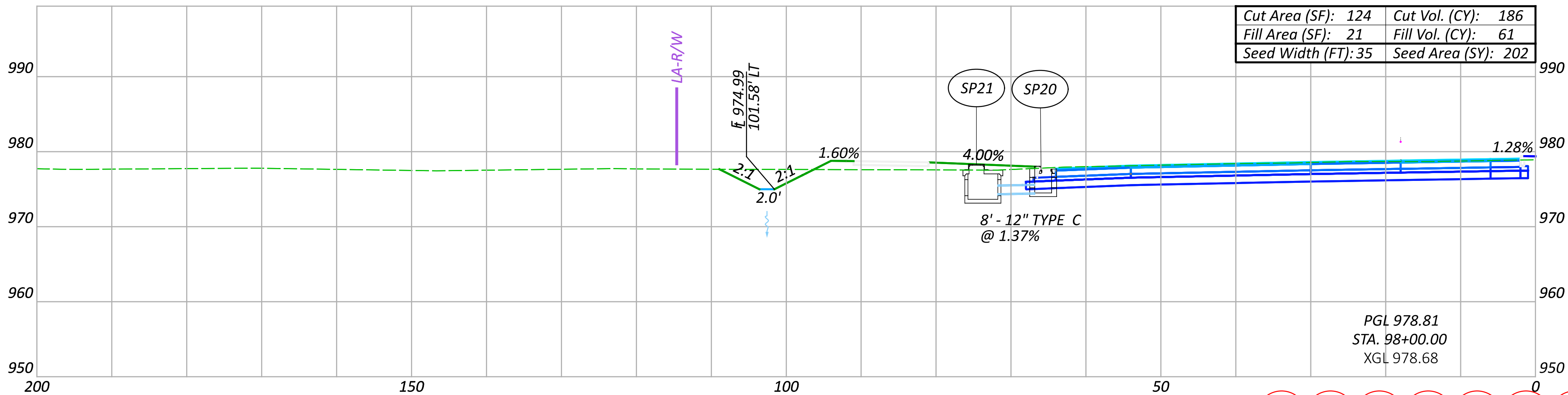
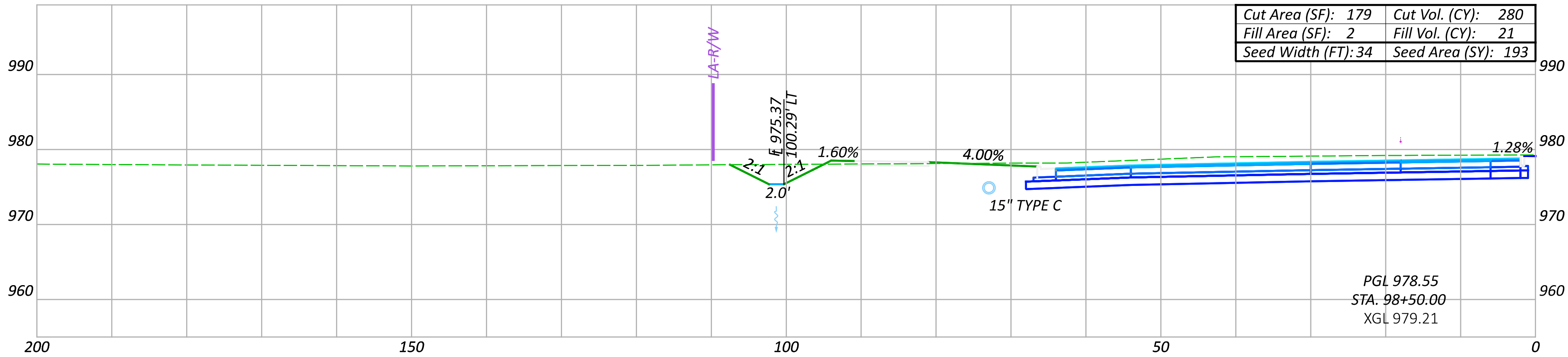
PROJECT ID

106959

Sheet Totals

Seeding	Cut	Fill
750	133	1467

SHEET	TOTAL
P.290	663



CROSS SECTIONS SUNBURY PARKWAY WB
STA. 97+50.00 TO STA. 98+50.00

DESIGN AGENCY



ms consultants, inc.

DESIGNER

CLH

REVIEWER

TAZ 05/15/23

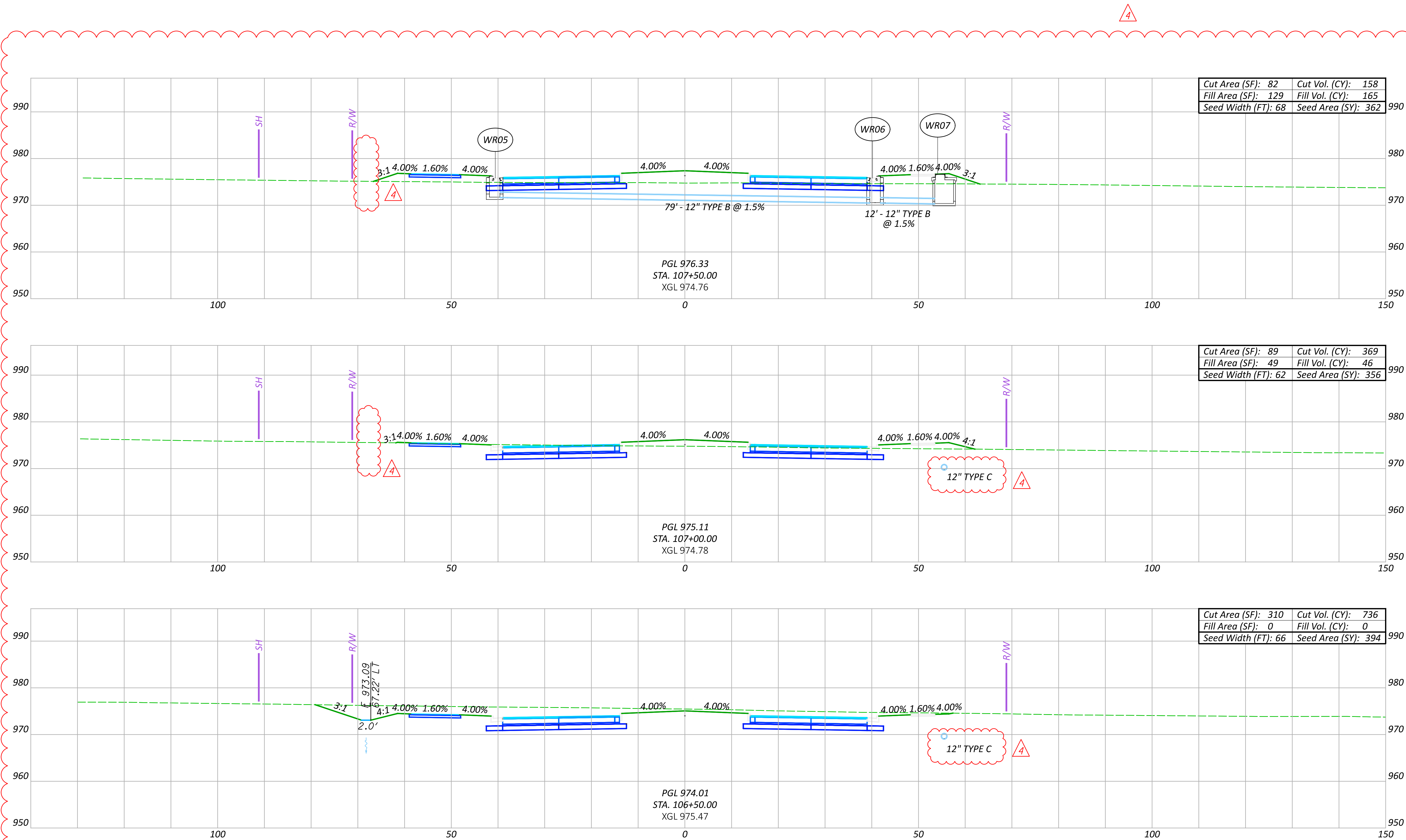
PROJECT ID

106959

Sheet Totals

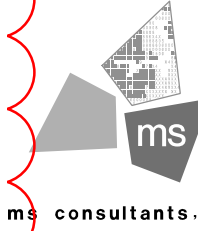
Seeding	Cut	Fill
610	562	197

SHEET	TOTAL
P.292	663



CROSS SECTIONS WILSON ROAD
STA. 106+50.00 TO STA. 107+50.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 06/05/23

PROJECT ID

106959

SHEET

P 312

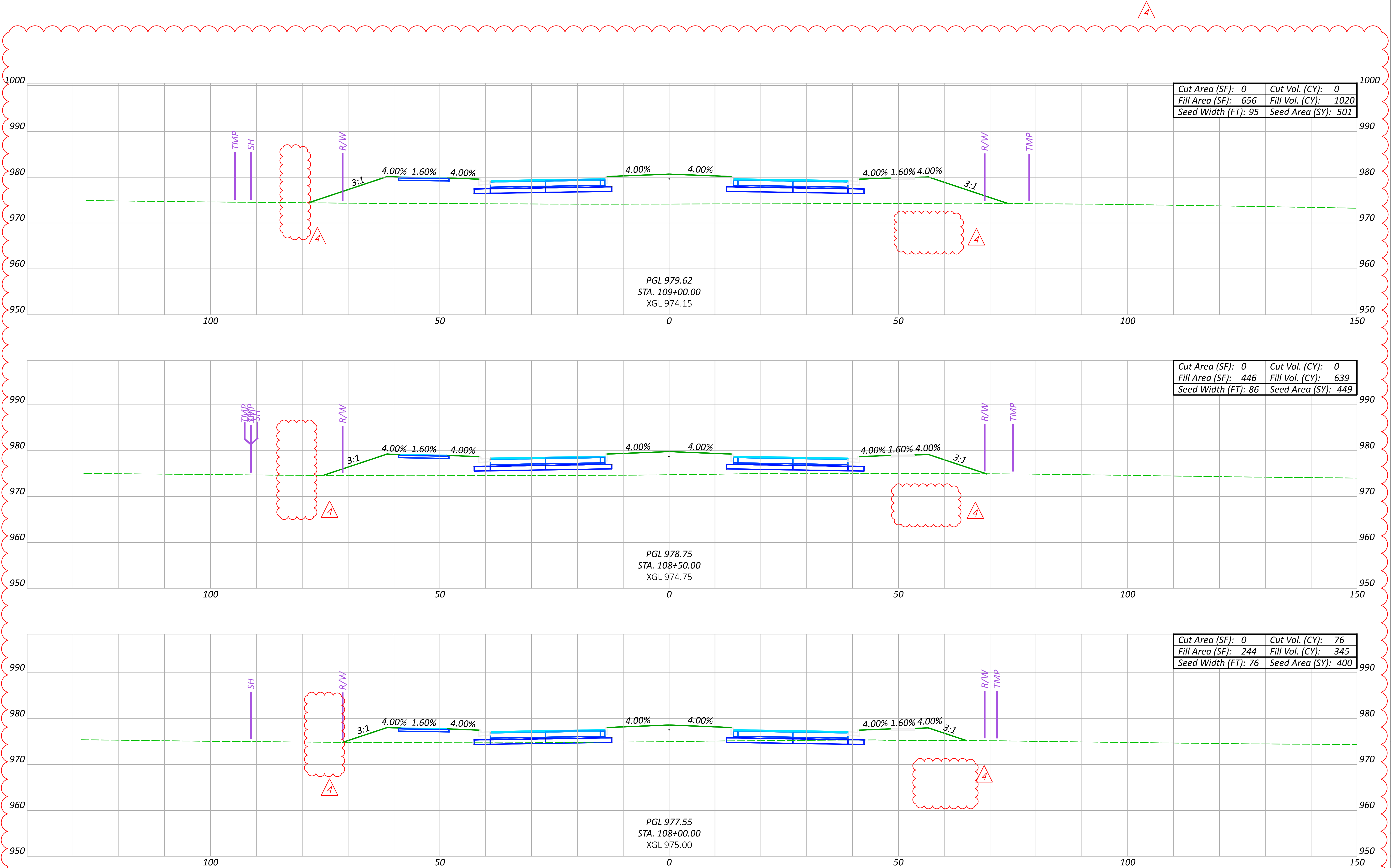
TOTAL

663

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	DRAINAGE CHANGES	ACW	04/14/25
PIR4	.	EARTHWORK QUANTITY CHANGES	ACW	04/21/25

Sheet Totals		
Seeding	Cut	Fill
11:12	1263	211

LAST REVISED: PIR4 04/21/2025



CROSS SECTIONS WILSON ROAD
STA. 108+00.00 TO STA. 109+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 06/05/23

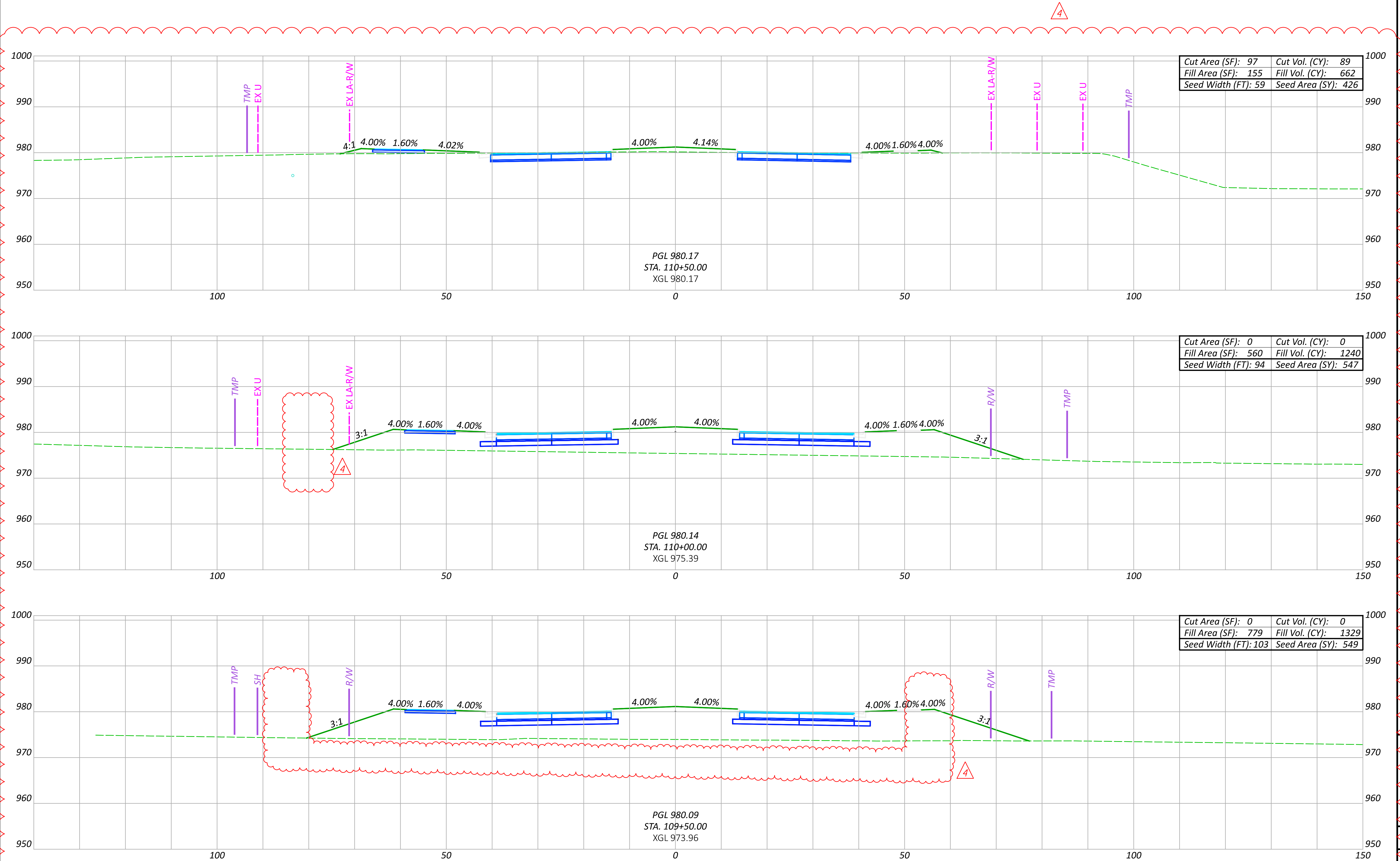
PROJECT ID

106959

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	:	DRAINAGE CHANGES	ACW	04/14/25
PIR4	:	EARTHWORK QUANTITY CHANGES	ACW	04/21/25

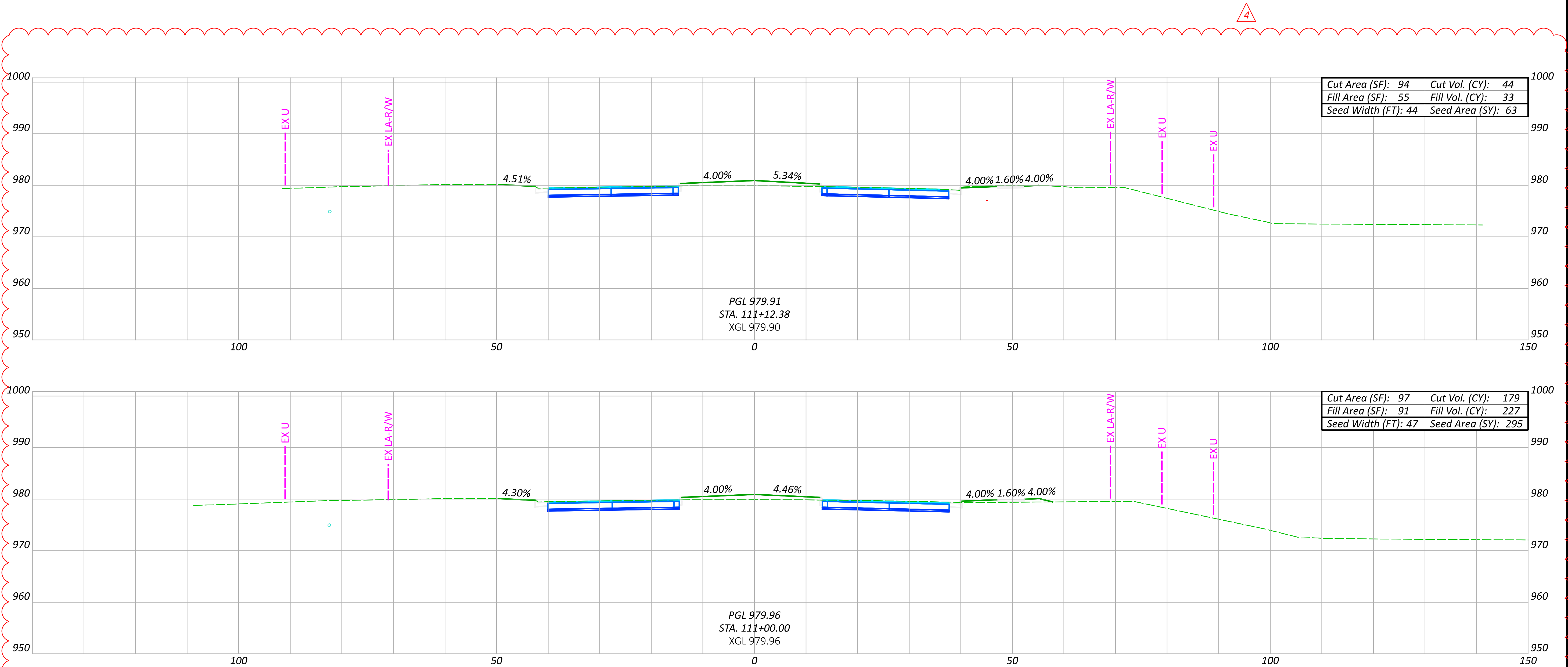
Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill	P.313	663
1350	76	2004		

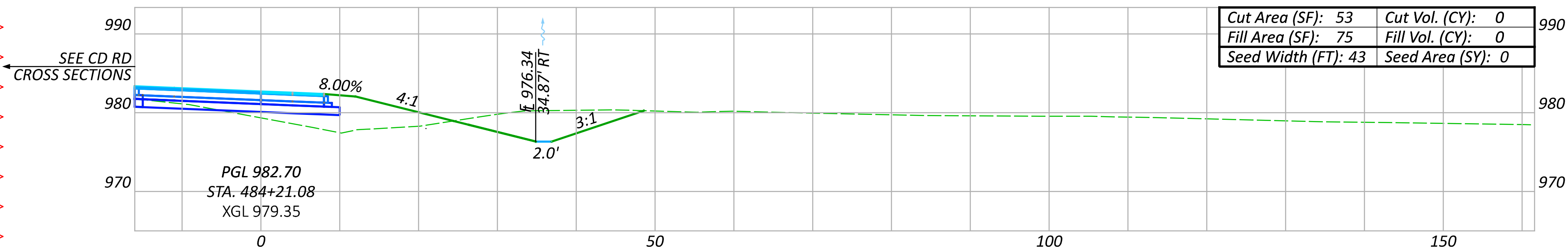
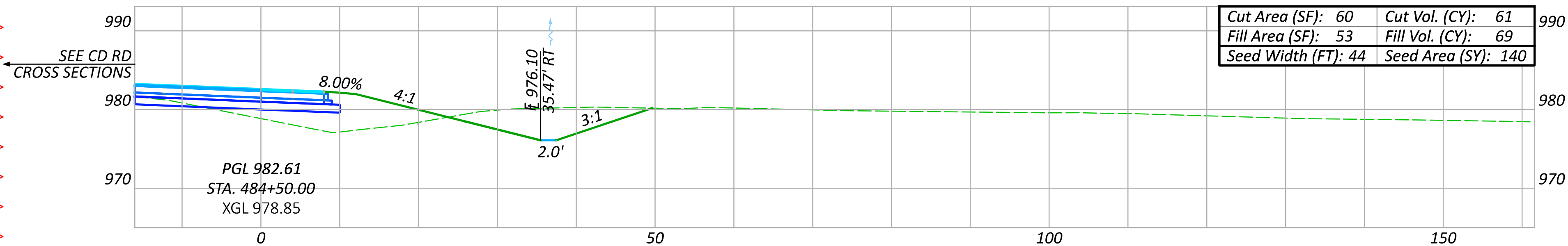
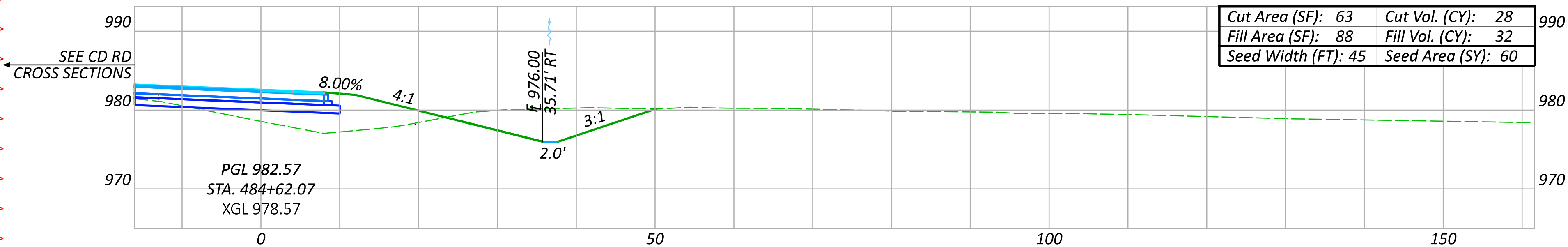
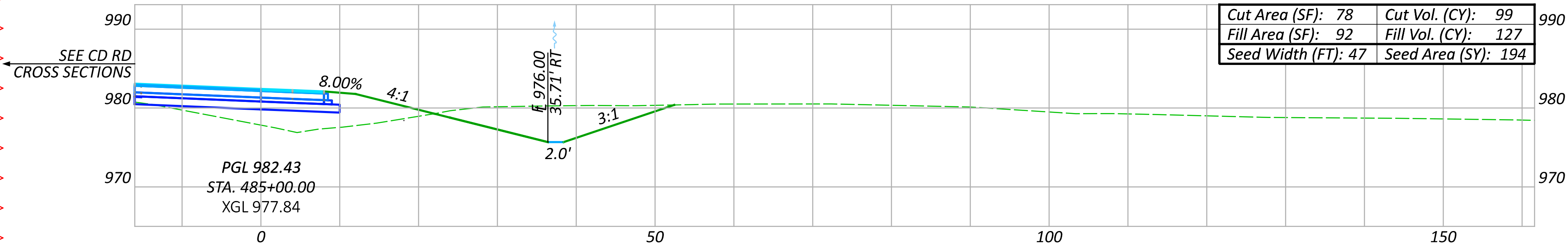
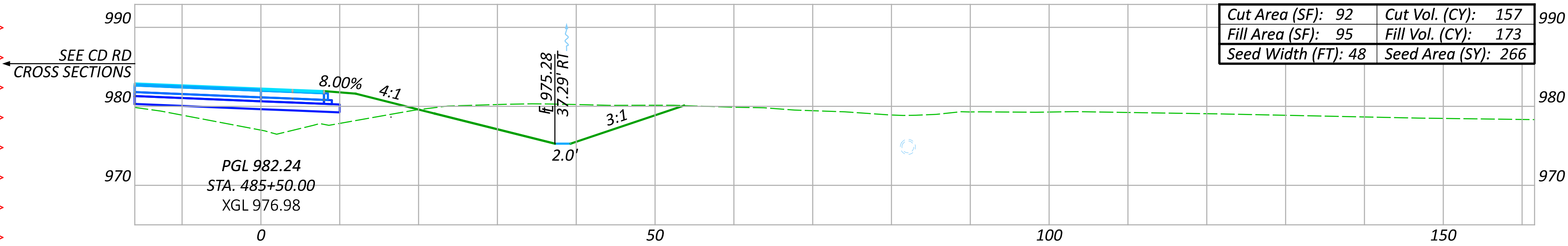
LAST REVISED: PIR4 04/21/2025



NO.	RFI	DESCRIPTION	REV.	BY	DATE
PIR4	.	DRAINAGE CHANGES	ACW		04/14/25
PIR4	.	EARTHWORK QUANTITY CHANGES	ACW		04/21/25

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
1522	89	3231	P.314	663





NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	EARTHWORK QUANTITY CHANGES	ACW	04/21/25

Sheet Totals		
Seeding	Cut	Fill
660	345	401

SHEET	TOTAL
P.338	663

DESIGN AGENCY


ms consultants, inc.

DESIGNER

CLH

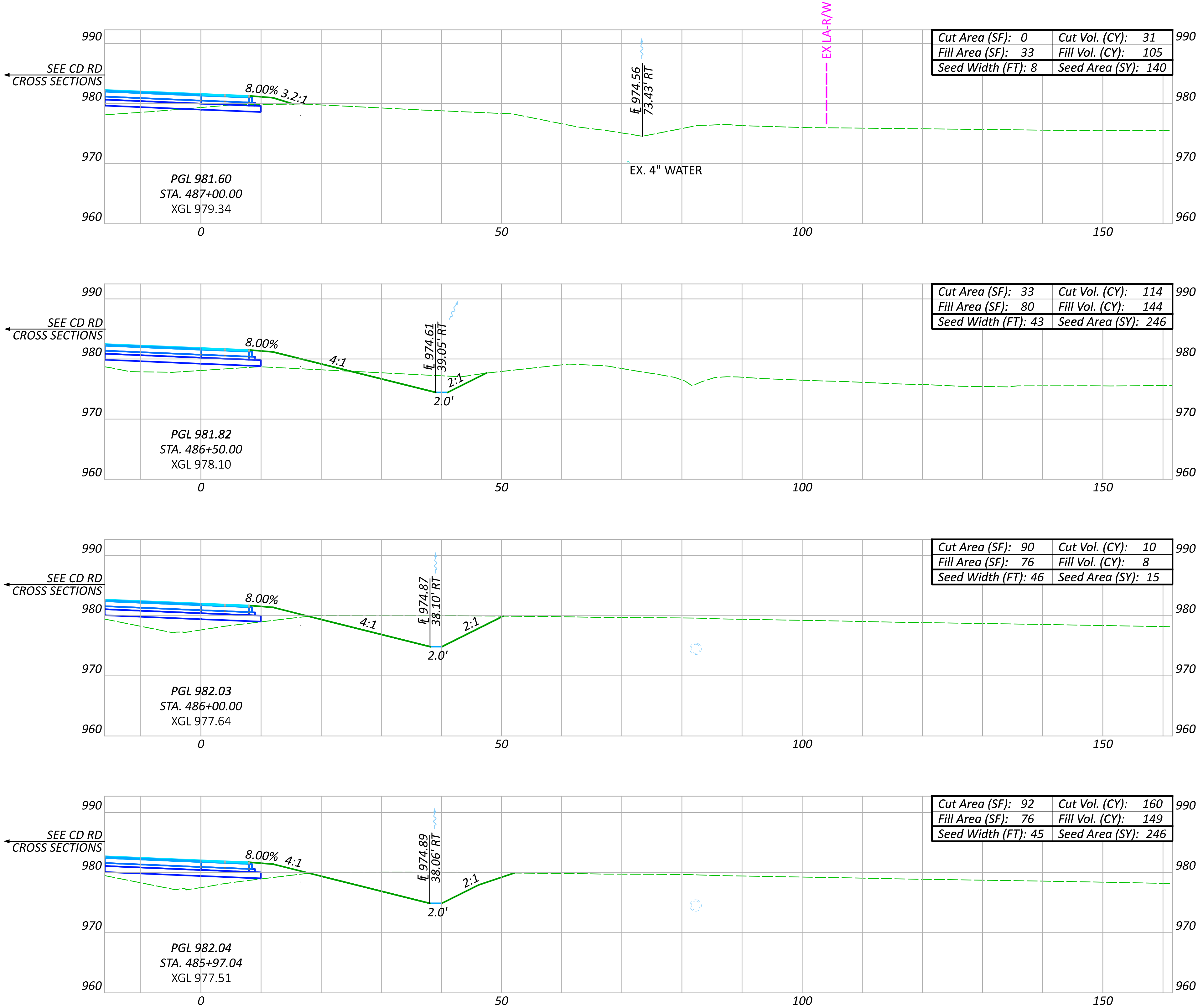
REVIEWER

JAZ 06/05/23

PROJECT ID

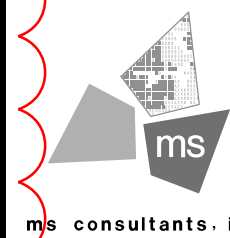
106959

CROSS SECTIONS RAMP B
STA. 484+21.08 TO STA. 485+50.00



CROSS SECTIONS RAMP B
STA. 485+97.04 TO STA. 487+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

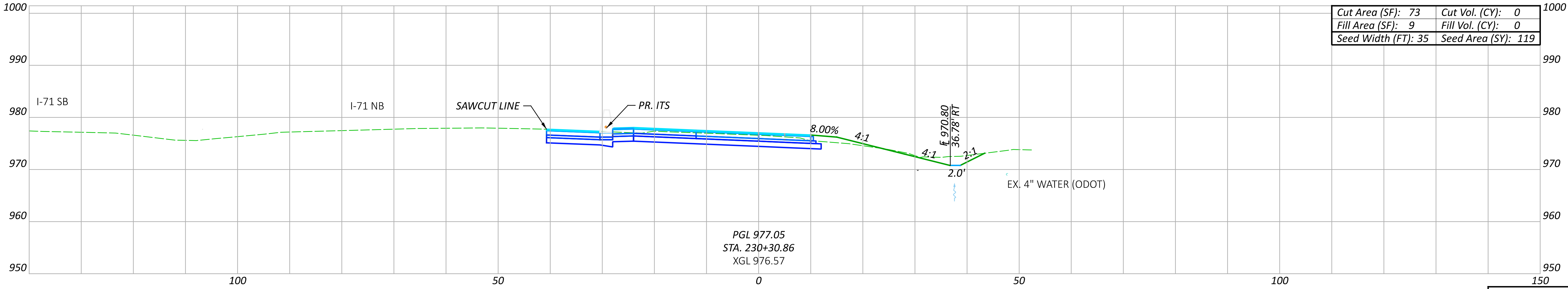
14Z 06/05/23

PROJECT ID

106959

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	EARTHWORK QUANTITY CHANGES	ACW	04/21/25

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
647	315	406	P.339	663



Cut Area (SF):	73	Cut Vol. (CY):	0
Fill Area (SF):	9	Fill Vol. (CY):	0
Seed Width (FT):	35	Seed Area (SY):	119

DESIGN AGENCY

ms consultants, inc.

DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

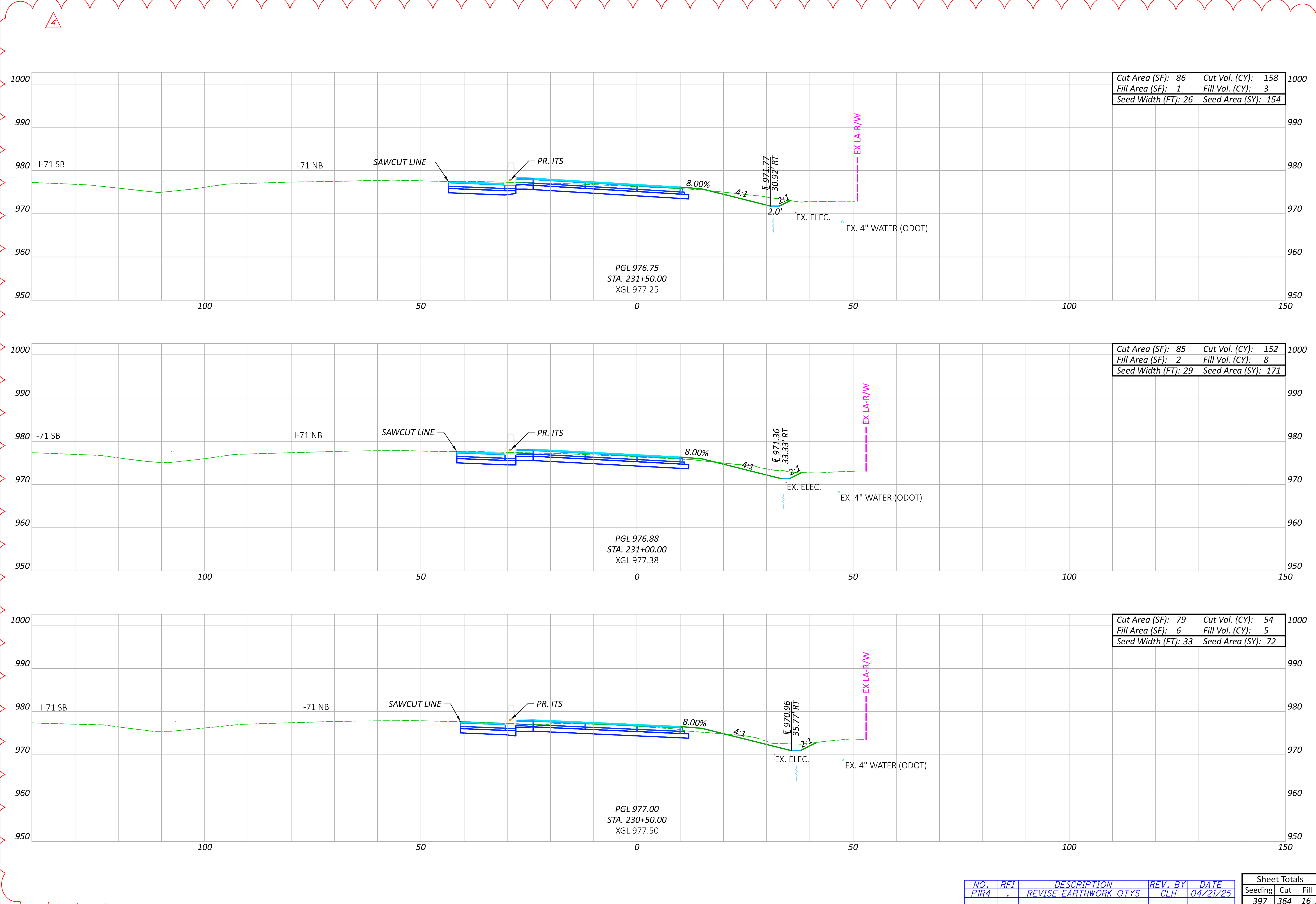
SHEET TOTAL
P.347 663

CROSS SECTIONS RAMP D (CD ROAD)
STA. 230+30.86

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

Sheet Totals		
Seeding	Cut	Fill
0	0	0

MODEL: CLP_CD - 230+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 4/23/2025 TIME: 12:23:03 PM USER: chonaker
\\msconsultants.com\files\Production\03\60\06873-00\I-71-7.91 Phase A\106959\400-Engineering\Roadway\Sheets\106959_XS001.dgn



CROSS SECTIONS RAMP D (CD ROAD)
STA. 230+50.00 TO STA. 231+50.00

Cut Area (SF):	86	Cut Vol. (CY):	158
Fill Area (SF):	1	Fill Vol. (CY):	3
Seed Width (FT):	26	Seed Area (SY):	154

Cut Area (SF):	85	Cut Vol. (CY):	152
Fill Area (SF):	2	Fill Vol. (CY):	8
Seed Width (FT):	29	Seed Area (SY):	171

Cut Area (SF):	79	Cut Vol. (CY):	54
Fill Area (SF):	6	Fill Vol. (CY):	5
Seed Width (FT):	33	Seed Area (SY):	72

DESIGN AGENCY

ms consultants, inc.

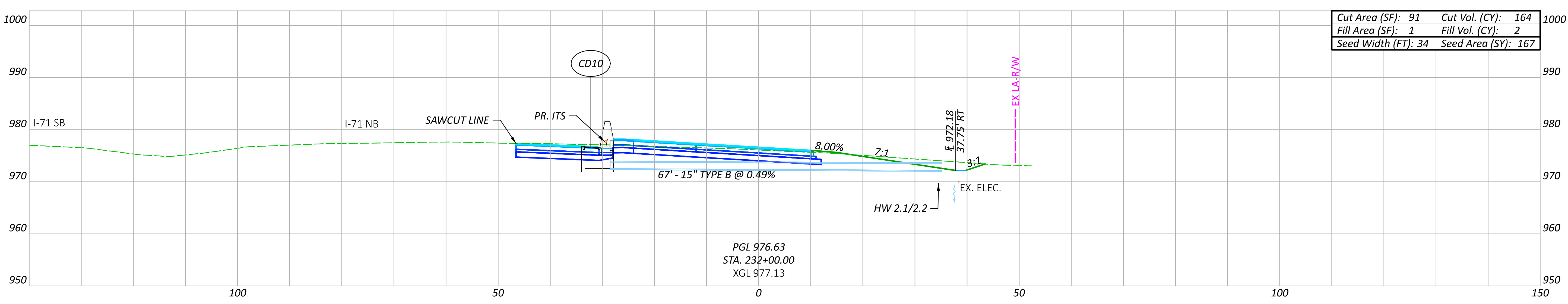
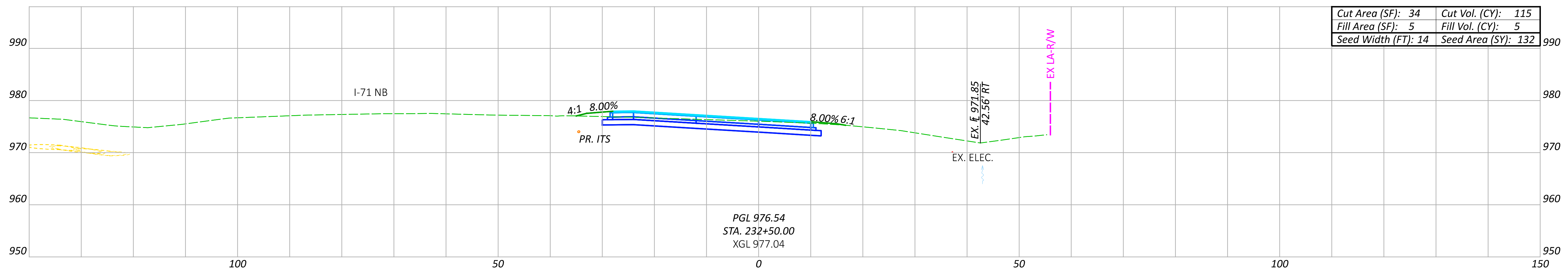
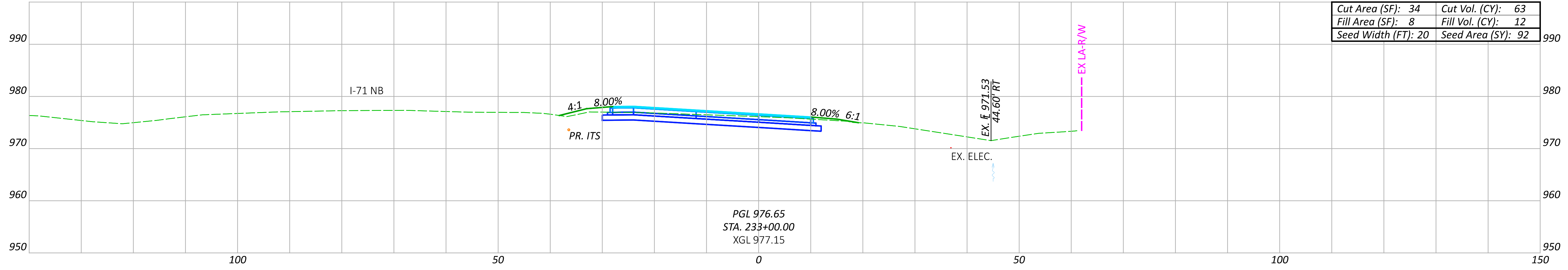
DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

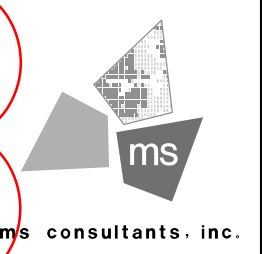
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYs	CLH	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
397	364	16	P.348	663



CROSS SECTIONS RAMP D (CD ROAD)
STA. 232+00.00 CROSS SECTIONS RAMP D 233+00.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

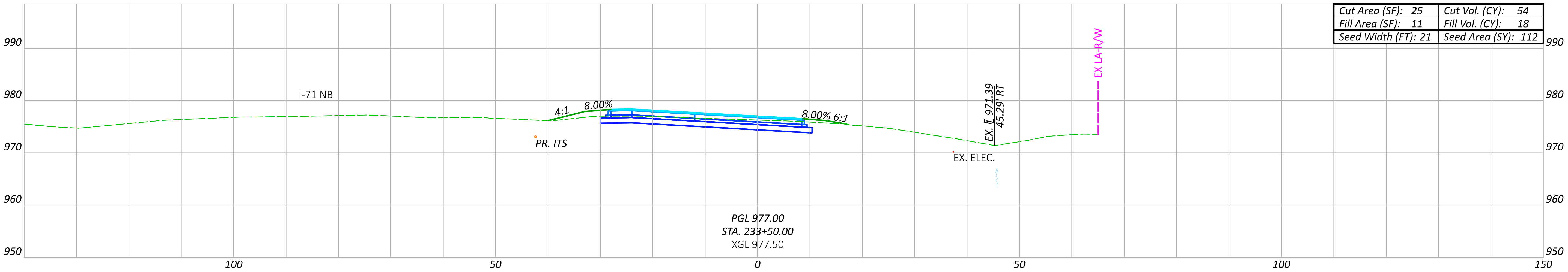
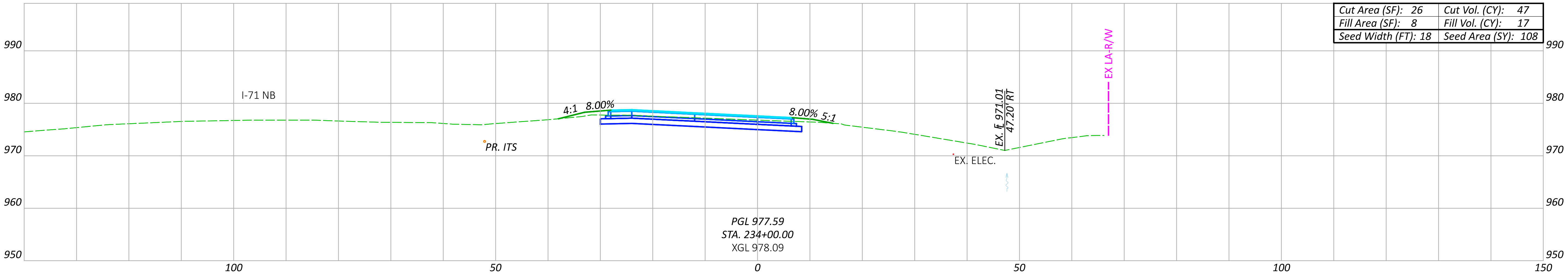
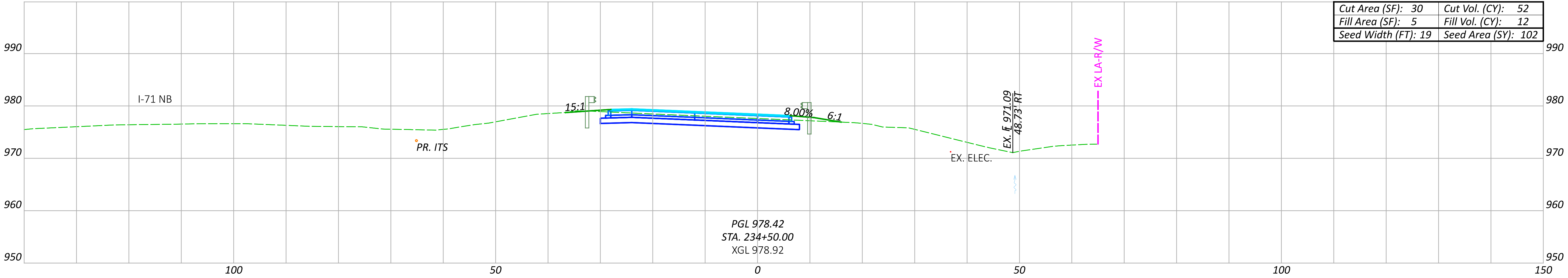
TAZ 05/15/23

PROJECT ID

106959

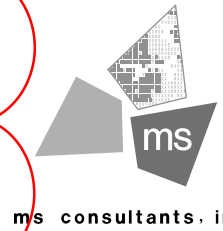
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYs	CLH	04/21/25
.

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
391	342	19	P.349	663



CROSS SECTIONS RAMP D (CD ROAD)
STA. 233+50.00 TO STA. 234+50.00

DESIGN AGENCY



DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

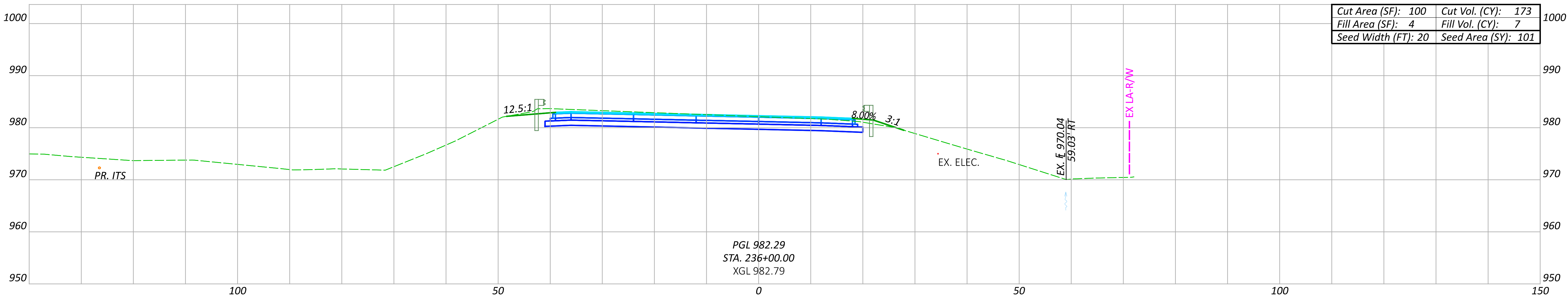
106959

Sheet Totals

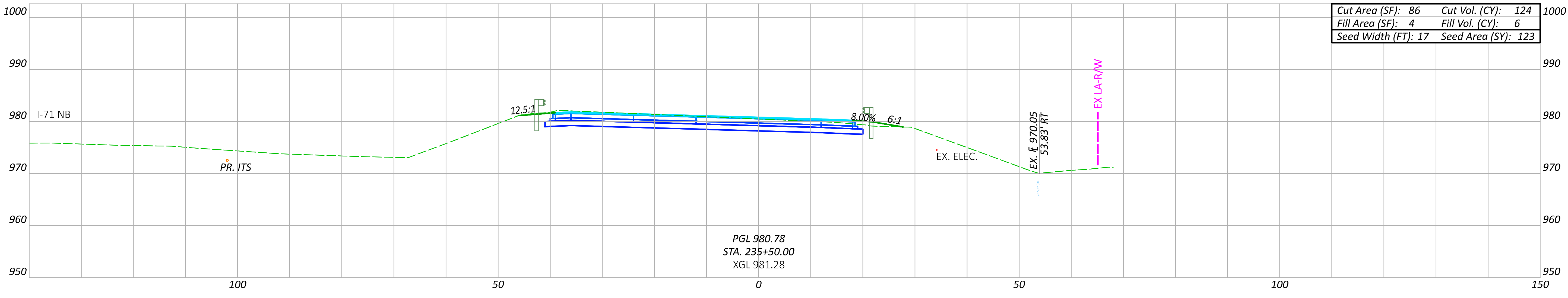
Seeding	Cut	Fill
322	153	47

SHEET	TOTAL
P.350	663

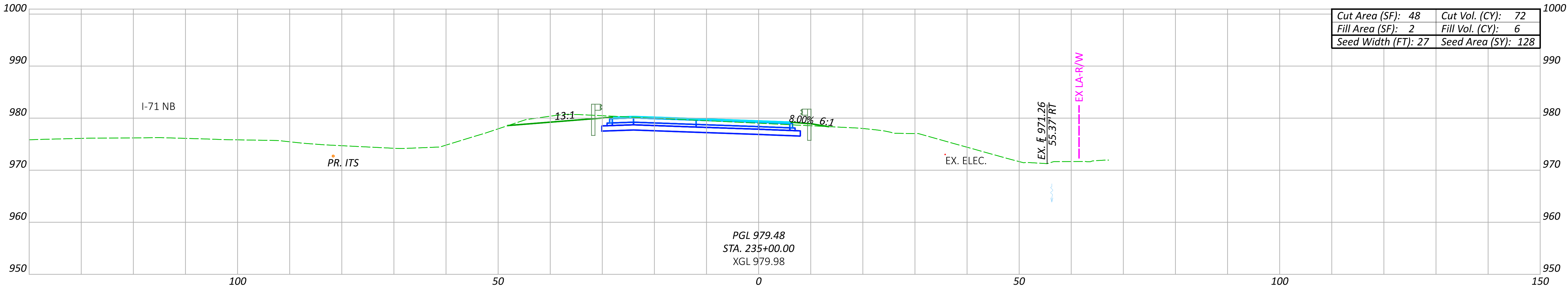
NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.



Cut Area (SF):	100	Cut Vol. (CY):	173
Fill Area (SF):	4	Fill Vol. (CY):	7
Seed Width (FT):	20	Seed Area (SY):	101

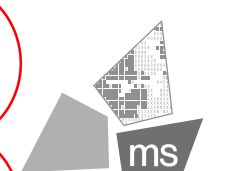


Cut Area (SF):	86	Cut Vol. (CY):	124
Fill Area (SF):	4	Fill Vol. (CY):	6
Seed Width (FT):	17	Seed Area (SY):	123



Cut Area (SF):	48	Cut Vol. (CY):	72
Fill Area (SF):	2	Fill Vol. (CY):	6
Seed Width (FT):	27	Seed Area (SY):	128

CROSS SECTIONS RAMP D (CD ROAD)
STA. 235+00.00 TO STA. 236+00.00

DESIGN AGENCY

ms consultants, inc.

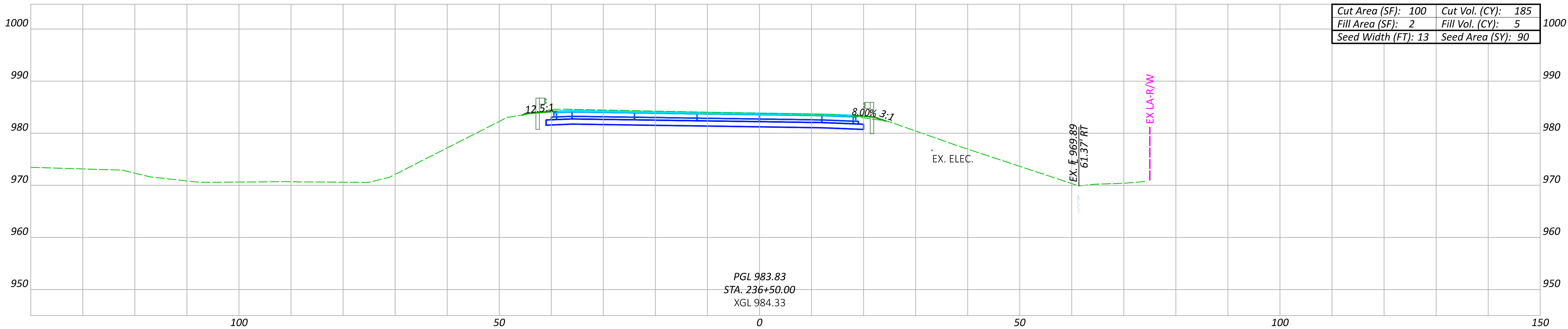
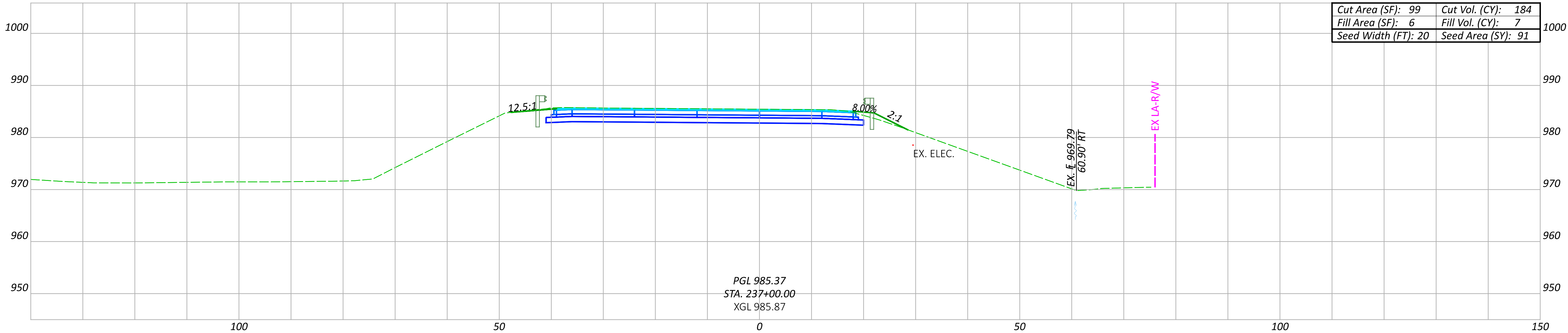
DESIGNER
CLH

REVIEWER
TAZ 05/15/23

PROJECT ID
106959

Sheet Totals
Seeding 352 Cut 369 Fill 19
SHEET TOTAL
P.351 663

4



CROSS SECTIONS RAMP D (CD ROAD)
STA. 236+50.00 TO STA. 237+00.00

DESIGN AGENCY



ms consultants, inc.

DESIGNER

CLH

REVIEWER

TAZ 05/15/23

PROJECT ID

106959

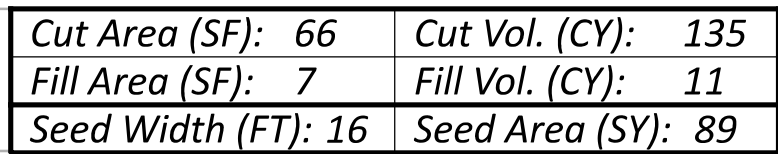
Sheet Totals

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SHEET TOTAL

P.352 663

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

$\sqrt{4}$ 

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE EARTHWORK QTYS	CLH	04/21/25
.

Sheet Totals			106959	
Seeding	Cut	Fill	SHEET	TOTAL
89	135	11	P.353	663

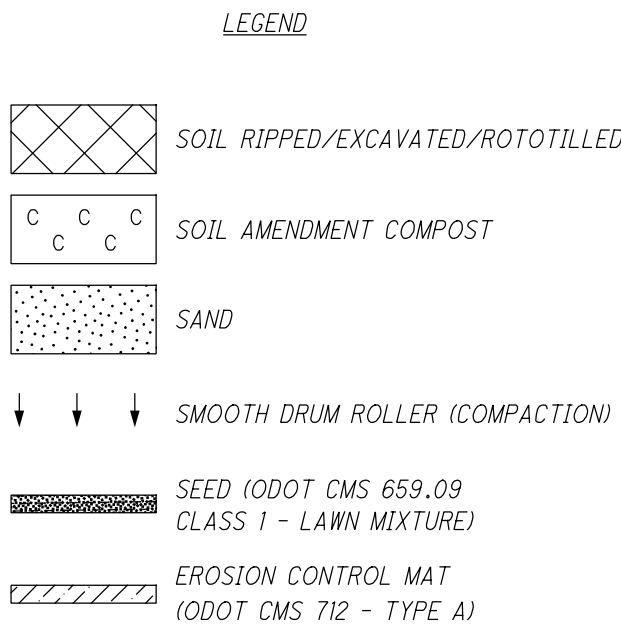
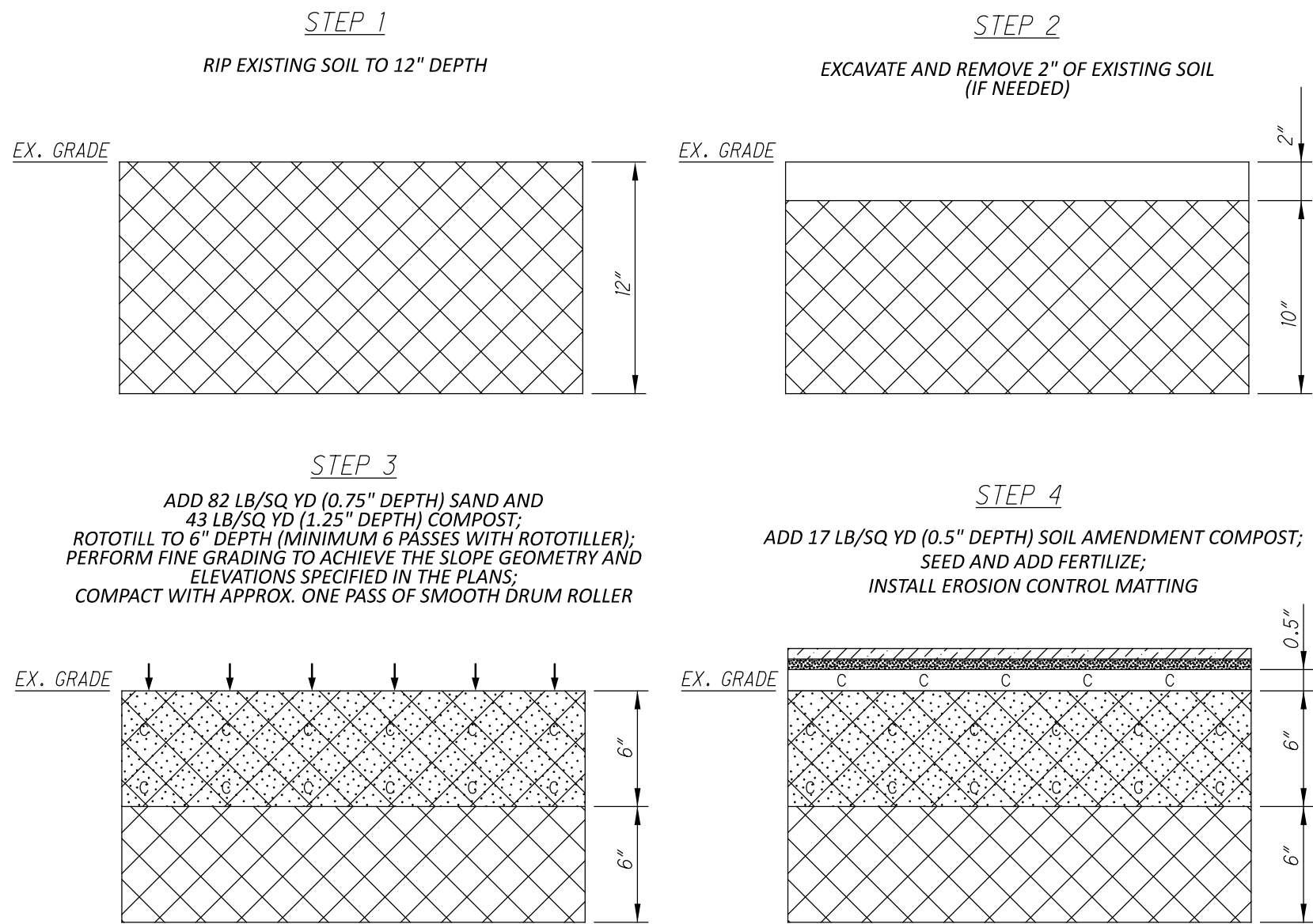
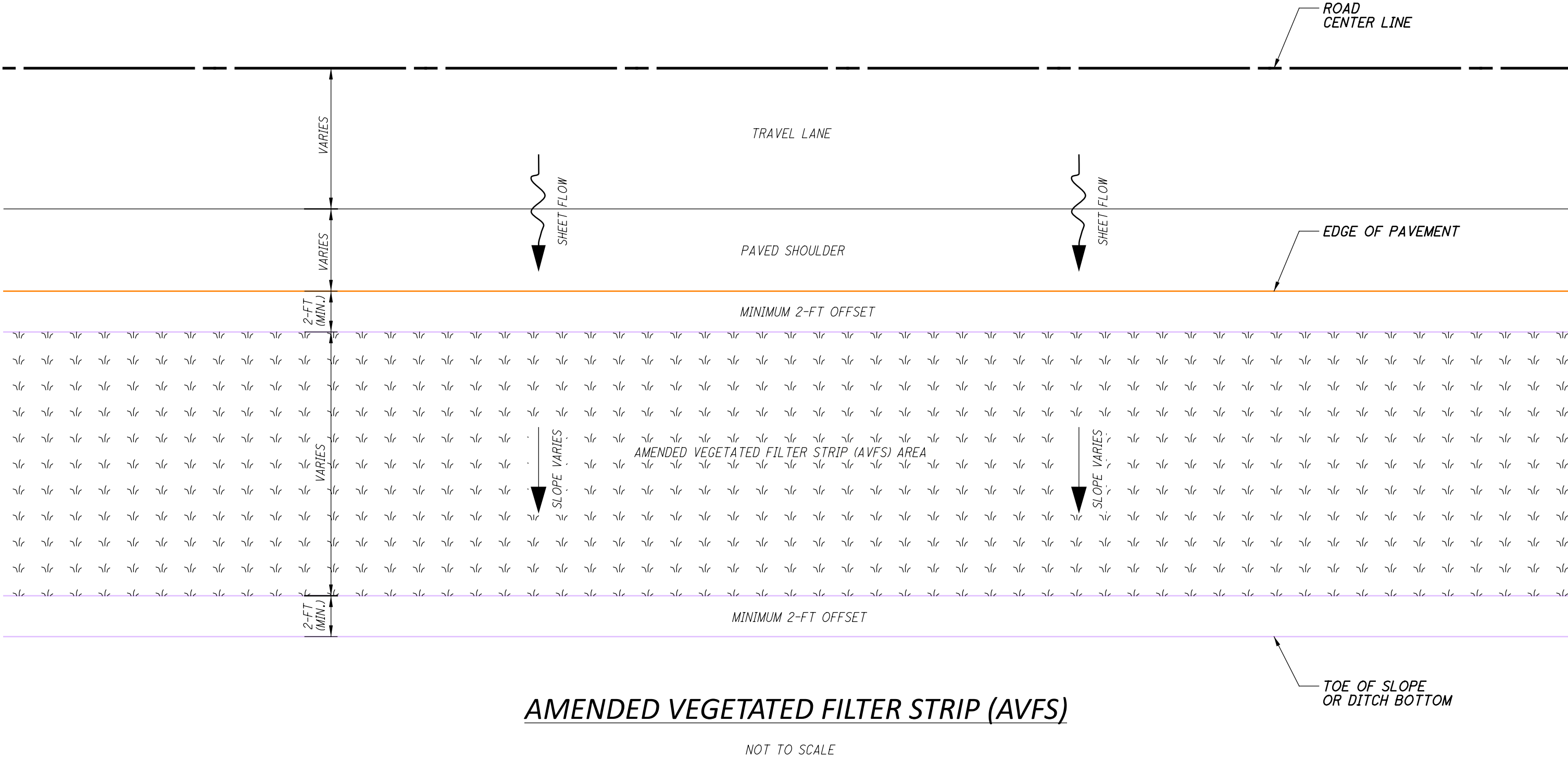
DESIGNER
CLH

REVIEWER
TAZ 05/15/23

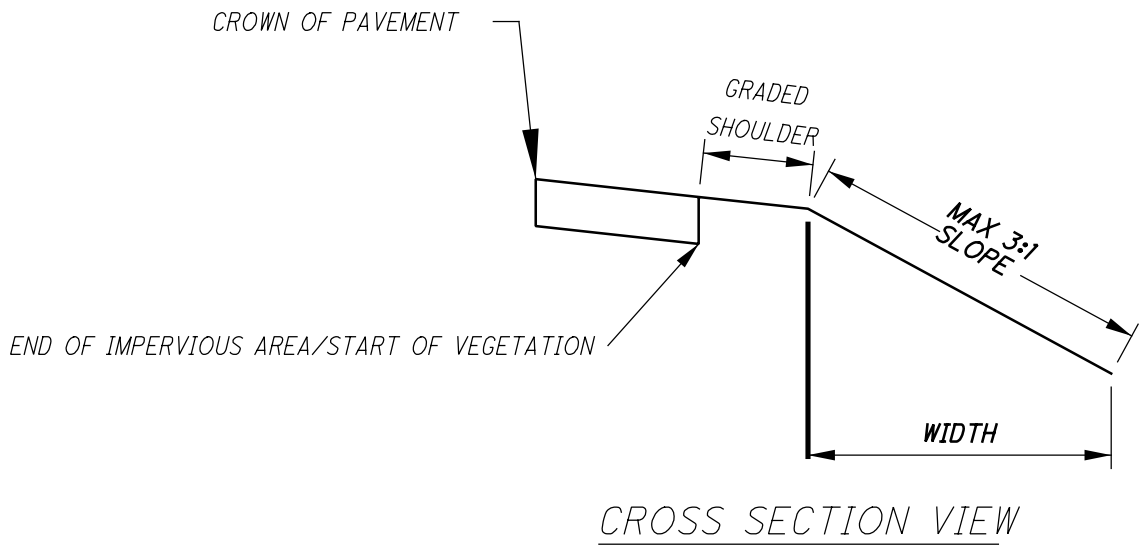
PROJECT ID
106959

LAST REVISED: PIR4 04/21/2025

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE BMP PAY ITEMS	MRB	04/24/25
.



FINAL AMENDED SOIL COMPOSITION
(% BY VOLUME)
SAND = 13%
AMENDED SOIL COMPOST = 21%
NATIVE SOIL = 67%



VEGETATED FILTERSTRIP DETAIL

AMENDED VEGETATED FILTER STRIP (AVFS)

THE AMENDED VEGETATED FILTER STRIP (AVFS) CONSISTS OF THE GRASSED PORTION OF THE GRADED SHOULDER AND GRASSED FORESLOPE, WHERE THE UNDERLYING SOILS HAVE BEEN AMENDED WITH COMPOST AND SAND. THE AVFS SHOULD BE IMPLEMENTED IN A STRIP, PARALLEL WITH THE ROADWAY, SO THAT IT CAN RECEIVE SHEET FLOW DIRECTLY FROM THE ROADWAY.

MATERIAL SPECIFICATIONS

SAND

1. MEET ODOT CMS 703.02 - FINE AGGREGATE

SOIL AMENDMENT COMPOST

1. SOIL AMENDMENT COMPOST SHALL ORIGINATE FROM AN OHIO EPA CLASS IV COMPOSTING FACILITY.

2. 100% OF MATERIAL MUST PASS THE 1/2-INCH SCREEN, WITH 75% PASSING THE 1/4-INCH SCREEN.

3. $5.5 < \text{PH} < 8.5$

4. INERT MATERIAL $< 1\%$

5. $35\% < \text{ORGANIC CONTENT} < 65\%$ (DRY WEIGHT BASIS DETERMINED BY LOSS OF IGNITION)

6. $20\% < \text{C:N RATION} < 25\%$

7. MATURITY $> 80\%$ (SOLVITA INDEX VALUE BETWEEN 7 AND 8). PARENT MATERIAL IS NO LONGER VISIBLE. COMPOST SHOULD BE STABLE WITH REGARD TO OXYGEN CONSUMPTION AND CARBON DIOXIDE GENERATION.

8. $< 1,000 \text{ MPN/GTS FECAL COLIFORM AND } < 3 \text{ MPN/GTS SALMONELLA SPP.}$

9. $30\% < \text{MOISTURE CONTENT} < 60\% \text{ WET BASIS}$

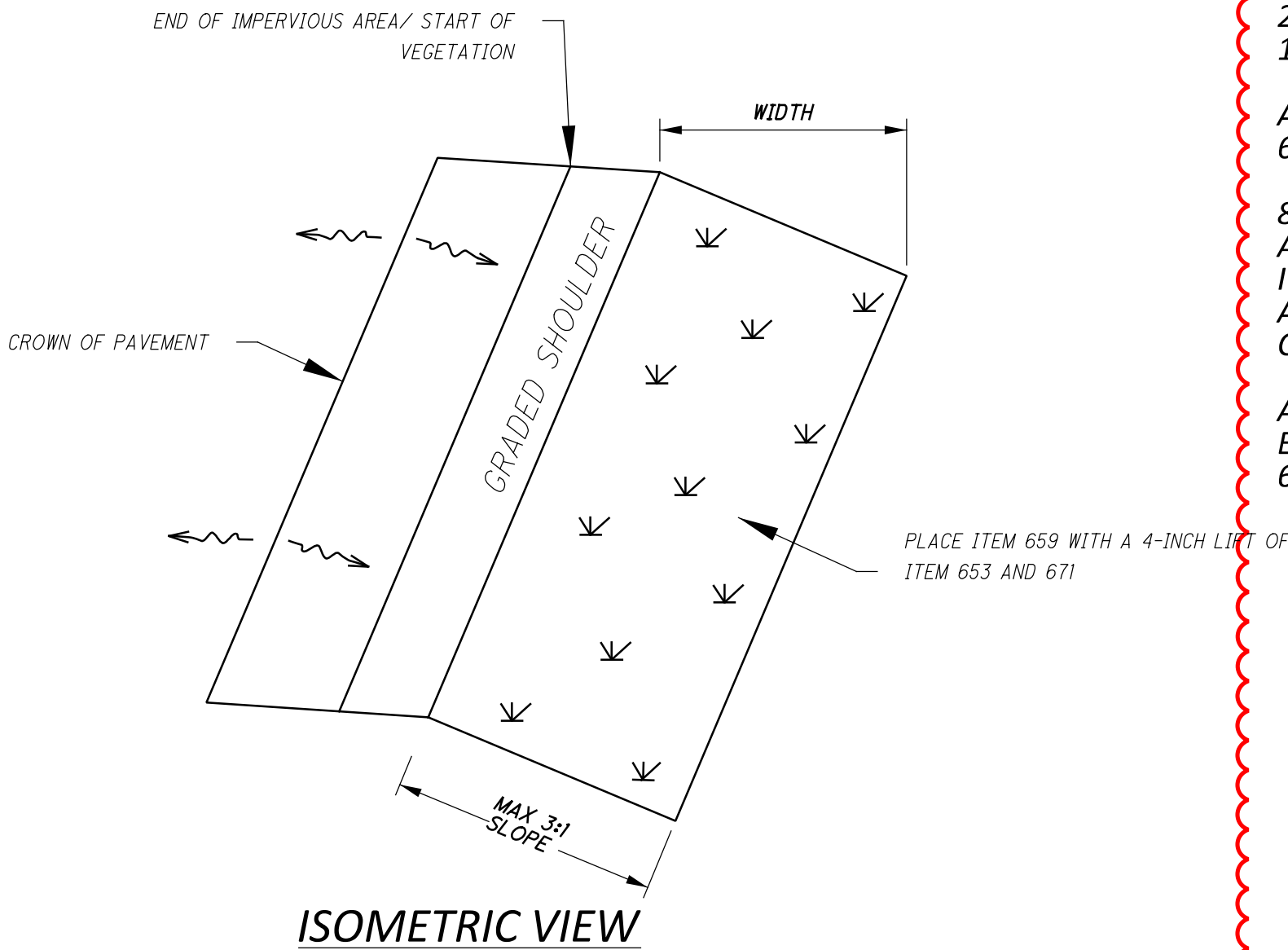
10. SOIL AMENDMENT COMPOST SAMPLES SHOULD BE TAKEN FROM THE MATERIAL STOCKPILED BY THE SUPPLIER WITHIN 15 CALENDAR DAYS PRIOR TO INITIAL APPLICATION. SUBMIT LABORATORY RESULTS TO THE ENGINEER FOR APPROVAL. SOIL AMENDMENT COMPOST THAT DOES NOT MEET THE SPECIFICATION SHALL NOT BE USED.

SEED

1. MEET ODOT CMS 659.09 - CLASS 1 - LAWN MIXTURE

EROSION CONTROL MAT

1. MEET ODOT CMS 712 - TYPE A - TEMPORARY EROSION CONTROL MAT



AMENDED VEGETATED FILTER STRIP (AVFS)

1. SOIL RIPPING: USE A SOLID-SHANK RIPPER WITH TEETH, TRAVERSING THE AREA WITH 2 PASSES IN EACH DIRECTION TO A DEPTH OF 12 INCHES. EACH PASS IS CONSIDERED THE WIDTH OF THE RIPPER, WITH TEETH SPACED NO MORE THAN 12 INCHES APART. THIS MAY BE ACCOMPLISHED WITH IMPLEMENTS MOUNTED TO A TRACTOR OR DOZER OR USE OF A GRADER WITH APPROPRIATE IMPLEMENTS (SCARIFIER TEETH), BUT MUST MEET THE 12-INCH DEPTH. IF TEETH ARE SPACED GREATER THAN 12 INCHES, ADDITIONAL PASSES ARE REQUIRED TO MEET A FURROW SPACING OF 6 INCHES. ONLY PERFORM RIPPING DURING DRY CONDITIONS WHEN SOILS ARE FRIABLE.

2. EXCAVATION: REMOVE EXCESS SOIL, SO THAT AFTER THE AMENDMENTS HAVE BEEN INCORPORATED INTO THE EXISTING SOIL, THE EXISTING GROUND SURFACE PROFILE WILL NOT APPRECIABLY CHANGE.

3. AMENDMENT PLACEMENT AND INCORPORATION: SPREAD AMENDMENTS OVER THE GROUND SURFACE IN A UNIFORM THICKNESS TO THE SPECIFIED AMENDMENT DEPTH. INCORPORATE AMENDMENTS WITH A ROTOTILLER OR SIMILAR EQUIPMENT INTO THE SOIL TO A DEPTH OF 6 INCHES. CONTINUE TILLING UNTIL ALL SOIL CLODS ARE REDUCED TO A MAXIMUM SIZE OF 1-INCH (25 MM) AND THE MIXTURE IS UNIFORM. INCORPORATION SHOULD ONLY BE PERFORMED DURING DRY CONDITIONS WHEN SOILS ARE FRIABLE. SIX PASSES (PASS IS THE WIDTH OF THE MACHINE) WITH A ROTOTILLER OR SIMILAR IS ANTICIPATED TO MEET THE UNIFORMITY REQUIREMENT.

SOIL AMENDMENT COMPOST SHALL BE PAID FOR UNDER ITEM 659, TOPSOIL, AS PER PLAN - SOIL AMENDMENT COMPOST.

4. FINE GRADING AND LIMITED COMPACTION: PERFORM FINE GRADING TO ACHIEVE THE SLOPE GEOMETRY AND ELEVATIONS SPECIFIED IN THE PLANS. TO ACHIEVE AN APPROXIMATE COMPACTION OF 85 TO 90% MAXIMUM DENSITY, ONE PASS WITH A RUBBER-TIRED OR SMOOTH DRUM ROLLER IS ANTICIPATED.

5. COMPOST BLANKET: EVENLY SPREAD A 0.5-INCH THICK LAYER OF SOIL AMENDMENT COMPOST OVER THE GROUND SURFACE.

ALL WORK ASSOCIATED WITH ITEMS 1, 2, 3, AND 4 SHALL BE PAID FOR UNDER ITEM 654, RENOVATING EXISTING SOIL AS PER PLAN.

ALL WORK ASSOCIATED WITH ITEM 5 SHALL BE PAID FOR UNDER ITEM 659, TOPSOIL AS PER PLAN.

6. SEEDING AND WATERING: ODOT CLASS I LAWN MIXTURE (ODOT ITEM 659.09) INSTALLED PER ITEM 659. RAKE SEED INTO SOIL AMENDMENT COMPOST. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING A MINIMUM OF 70% PERMANENT VEGETATION COVERAGE WITHIN THE PROJECT SCHEDULE. WATERING MAY BE NECESSARY.

7. FERTILIZER: APPLY THE FOLLOWING FERTILIZER AND RATES. FOLLOW ODOT ITEM 659.04 SPECIFICATION FOR APPLICATION OF FERTILIZER.
1.0 LB./1,000 SQFT POTASSIUM
2.5 LB./1,000 SQFT POTASH
1.0 LB./1,000 SQFT MAGNESIUM

ALL WORK FOR ITEMS 6-7 SHALL BE PAID FOR UNDER ITEM 659, SEEDING AND MULCHING, CLASS 1.

8. EROSION CONTROL MATTING: ODOT CMS ITEM 712 TYPE A TEMPORARY EROSION CONTROL MAT. INSTALL PER ODOT ITEM 671. DO NOT RUN MACHINERY/EQUIPMENT OVER THE AMENDED SOILS DURING INSTALLATION OF THE EROSION CONTROL MAT.

ALL WORK ASSOCIATED WITH SUPPLYING AND INSTALLING EROSION CONTROL MAT SHALL BE PAID FOR UNDER ITEM 671, EROSION CONTROL MAT, TYPE A.

POST CONSTRUCTION STORMWATER TREATMENT

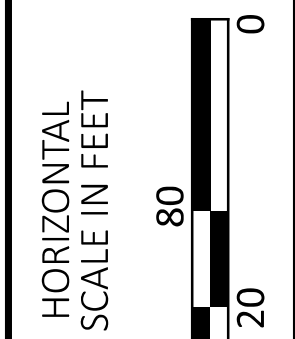
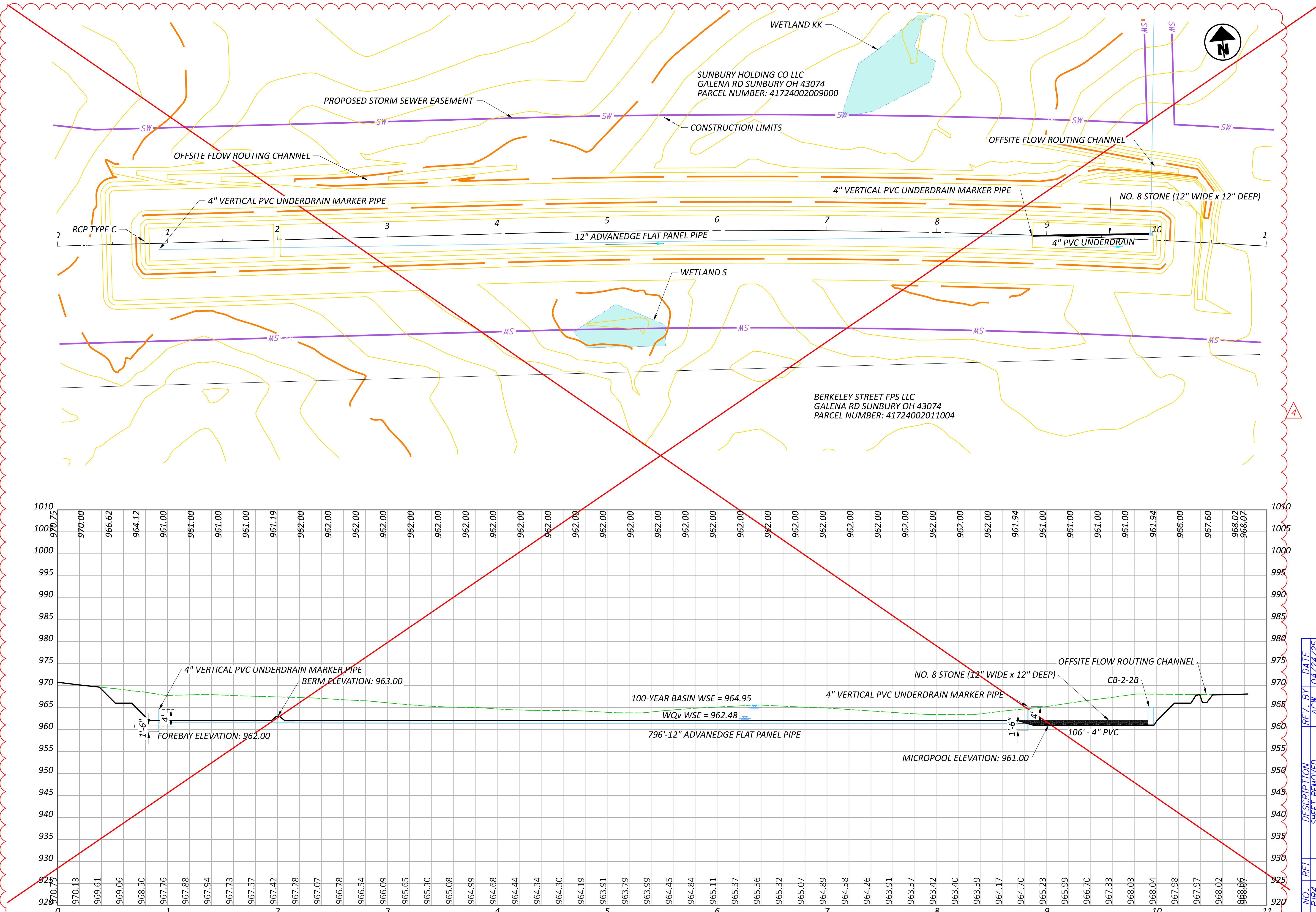
THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED FILTER STRIP (VFS)

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

DEL-71-8.91 (PHASE A) PART 1

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N:\03\60\06873-00-171-7.91 Phase A\106959\400-Engineering\Drawings\Sheets\106959_DPO23.dgn



DETENTION BASIN
NE CORNER OF SUNBURY PKWY & WILSON RD

NO.	REF	DESCRIPTION	REV. BY	DATE
PIR4	.	SHEET REMOVED	ACW	04/24/25

DESIGN AGENCY

ms consultants, inc.

DESIGNER

MRB

REVIEWER

CAB 10/02/23

PROJECT ID

106959

SHEET

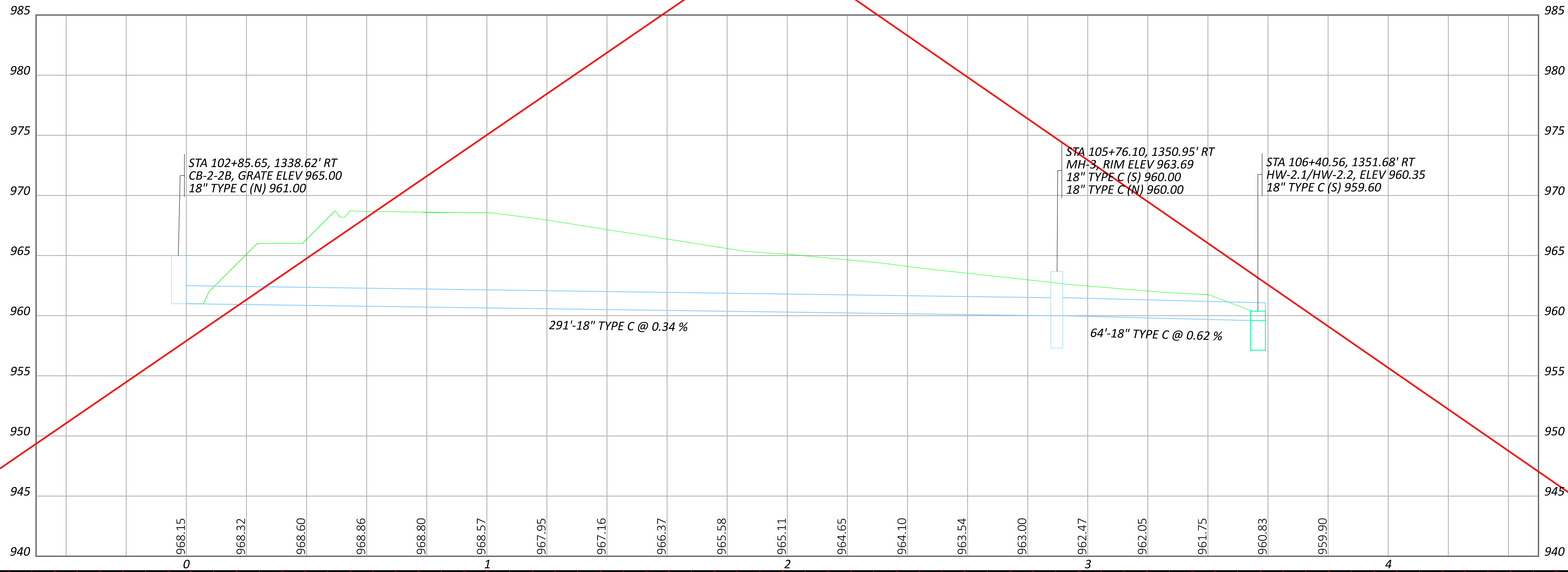
P.462

TOTAL

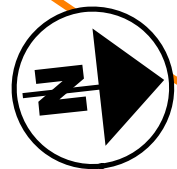
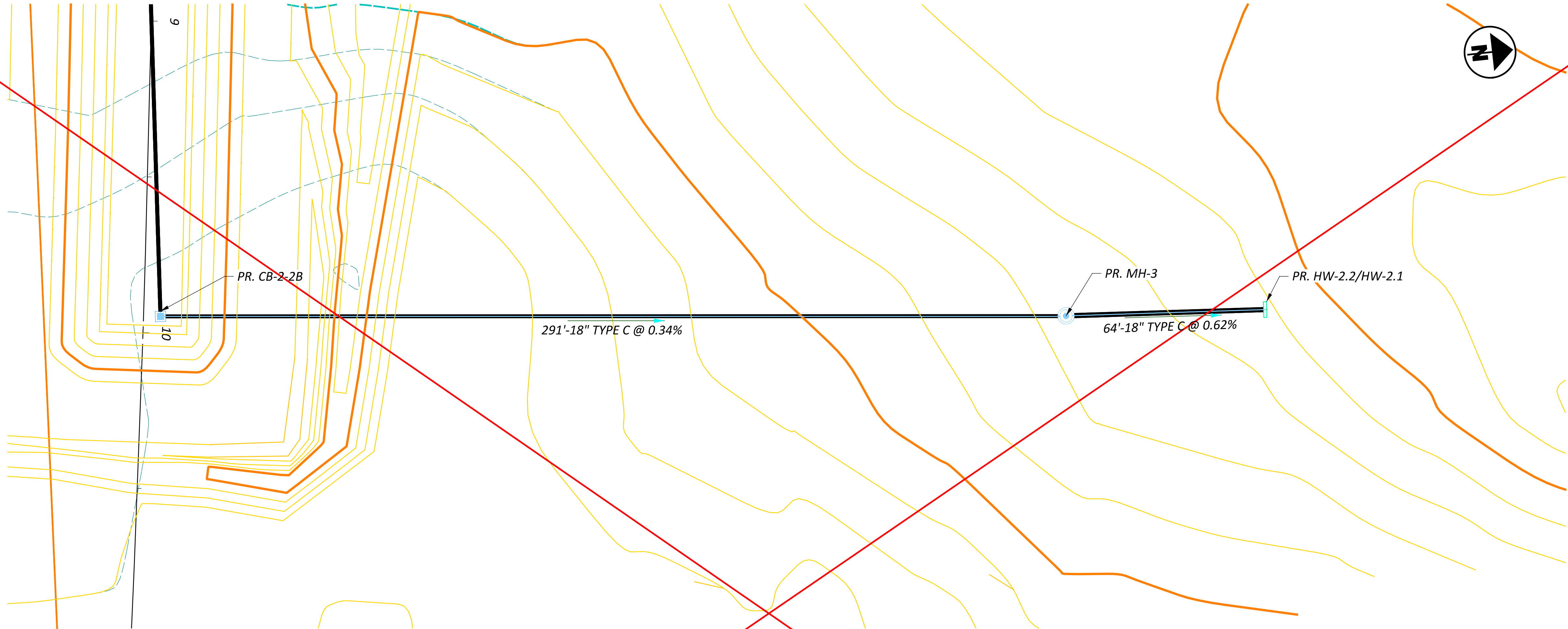
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DEL-71-8.91 (PHASE A) PART 1

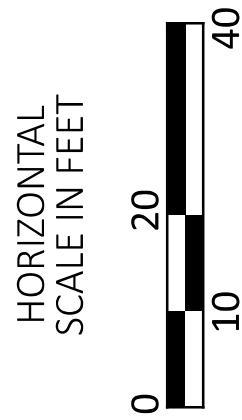
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STATION AND OFFSETS ARE TAKEN FROM WILSON ROAD



BASIN OUTLET PIPE
NE CORNER OF SUNBURY & WILSON



NO.	REF	DESCRIPTION	REV.	BY	DATE
PIR4	.	SHEET REMOVED	ACW		04/24/25



DESIGNER
MRB

REVIEWER
CAB 10/31/23

PROJECT ID
106959

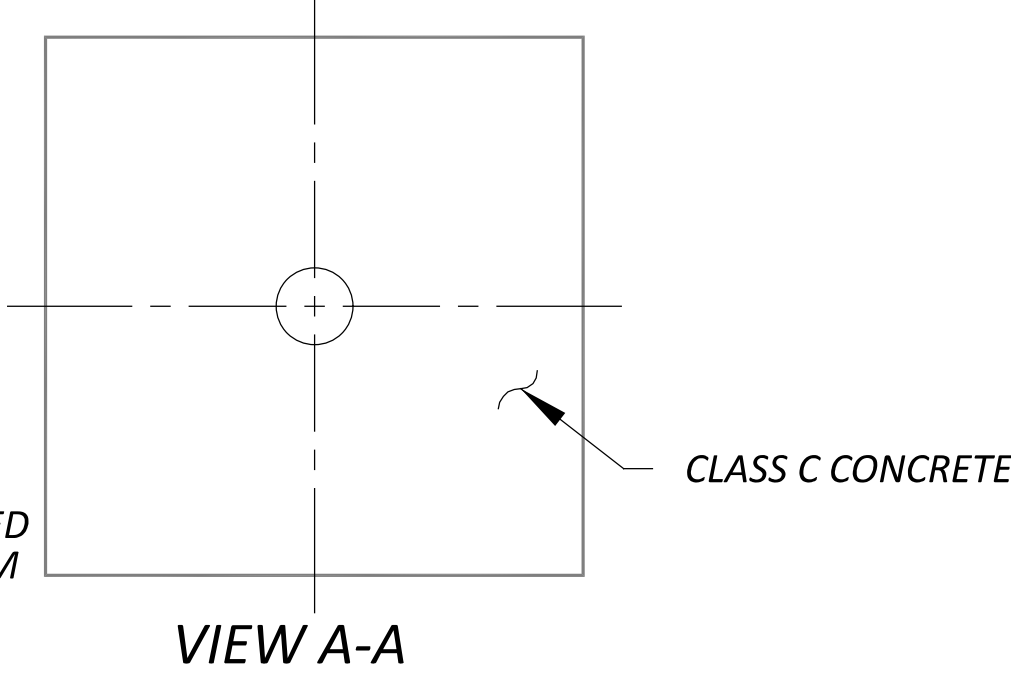
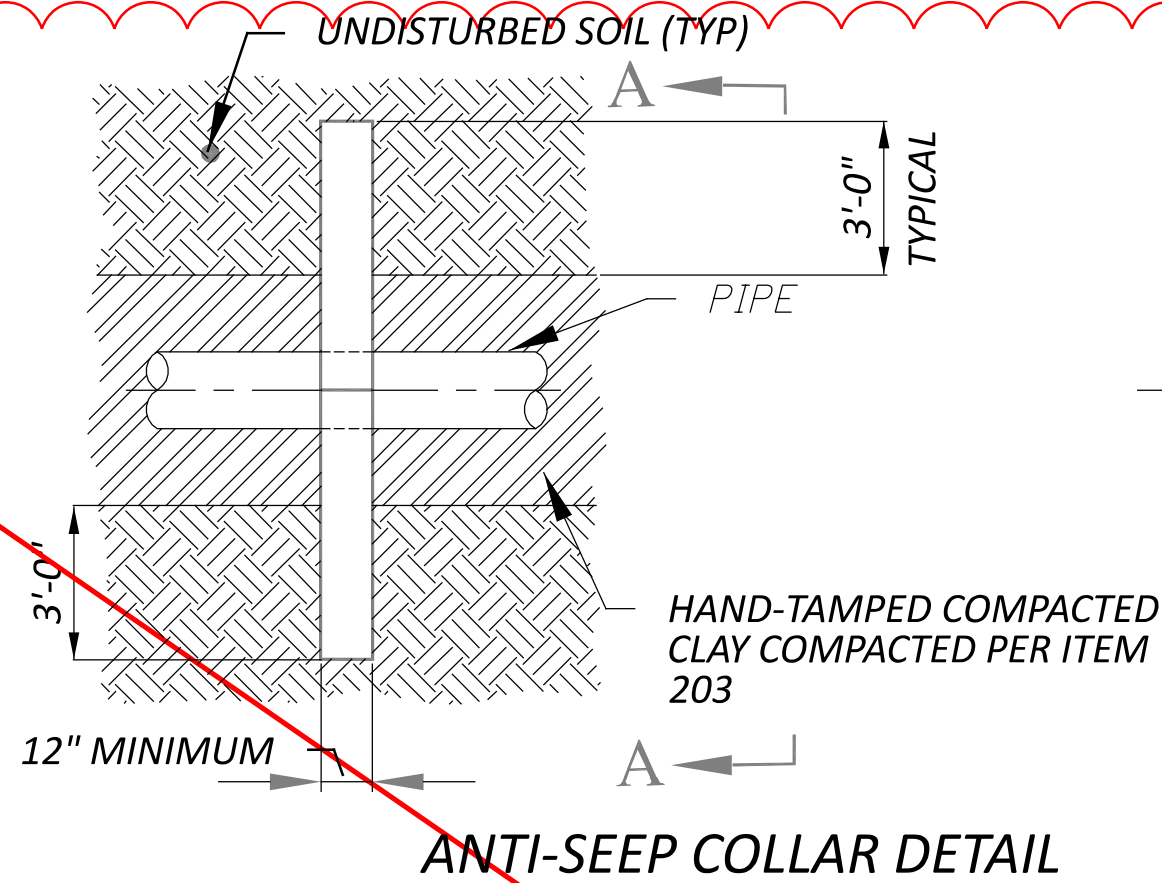
SHEET P.463	TOTAL 663
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LAST REVISED: PIR4 04/24/2025

ANTI-SEEP COLLAR NOTES:

SPACING BETWEEN ADJACENT COLLARS SHALL BE A MINIMUM OF 5 FEET WITH THE FIRST COLLAR BEING A MINIMUM OF 5 FEET FROM THE INLET.

FURNISH A MINIMUM OF 2 COLLARS PER OUTLET CONDUIT ALL ANTI-SEEP COLLARS AND THEIR CONNECTIONS SHALL BE WATERTIGHT.



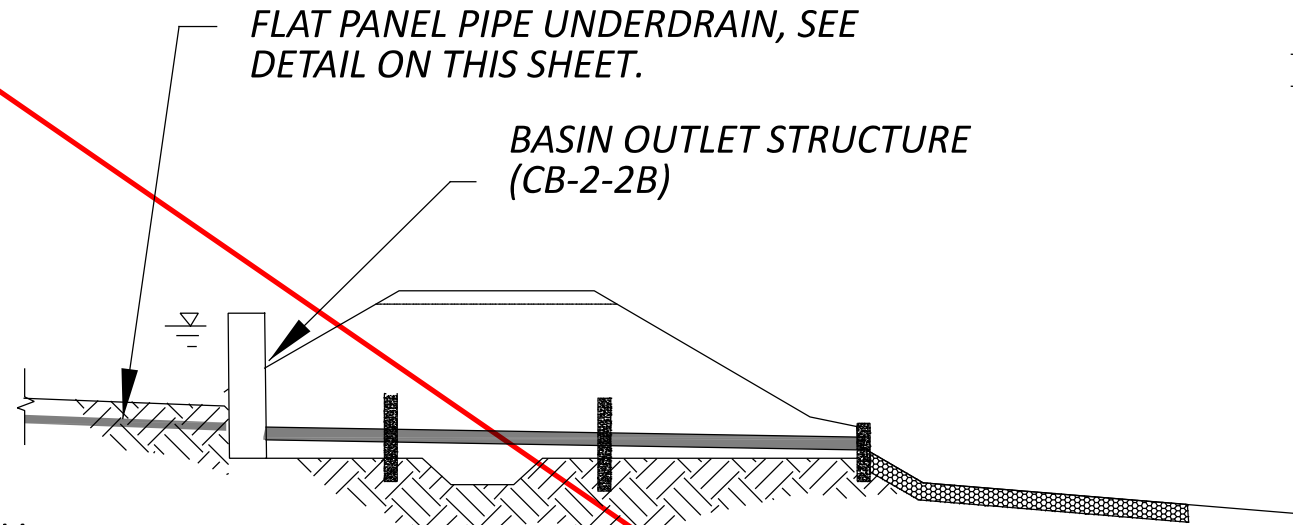
UNDERDRAIN NOTES:

THE UNDERDRAIN SHALL BE 12" ADVANEDGE FLAT PANEL PIPE OR APPROVED EQUAL WITH FILTER FABRIC WRAP. THE FABRIC WRAP SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. THE PANEL PIPE SHALL SLOPE POSITIVELY TOWARDS THE BASIN OUTLET STRUCTURE AND SHALL ENTER THE BASIN OUTLET STRUCTURE AT OR ABOVE THE THE STRUCTURE'S OUTLET PIPE'S INVERT ELEVATION.

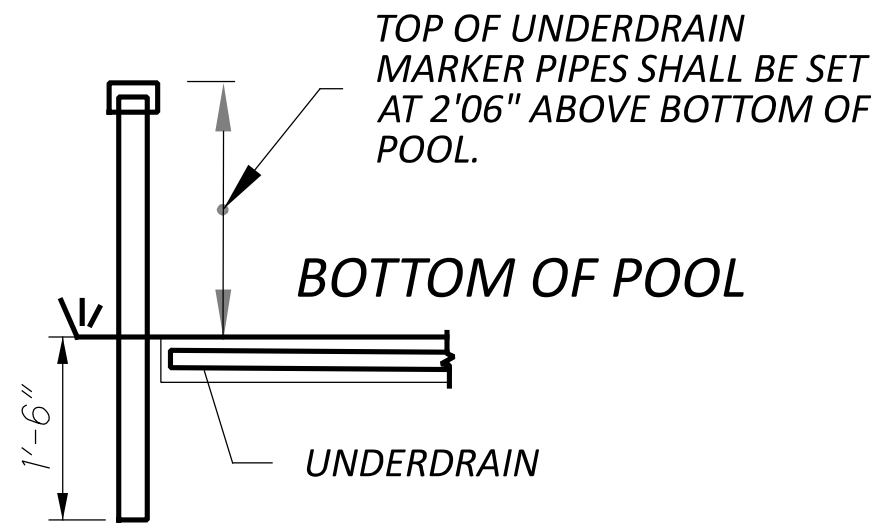
THE CONTRACTOR SHALL INSTALL THE FLAT PANEL UNDERDRAINS AFTER COVER HAS BEEN ESTABLISHED.

UNDERDRAIN SHALL BE MARKED WITH A CAPPED 4" VERTICAL PVC PIPE STUBBED 2'-6" ABOVE THE BOTTOM OF THE FORBAY AND THE MICROPOOL AS SHOWN ON THIS SHEET.

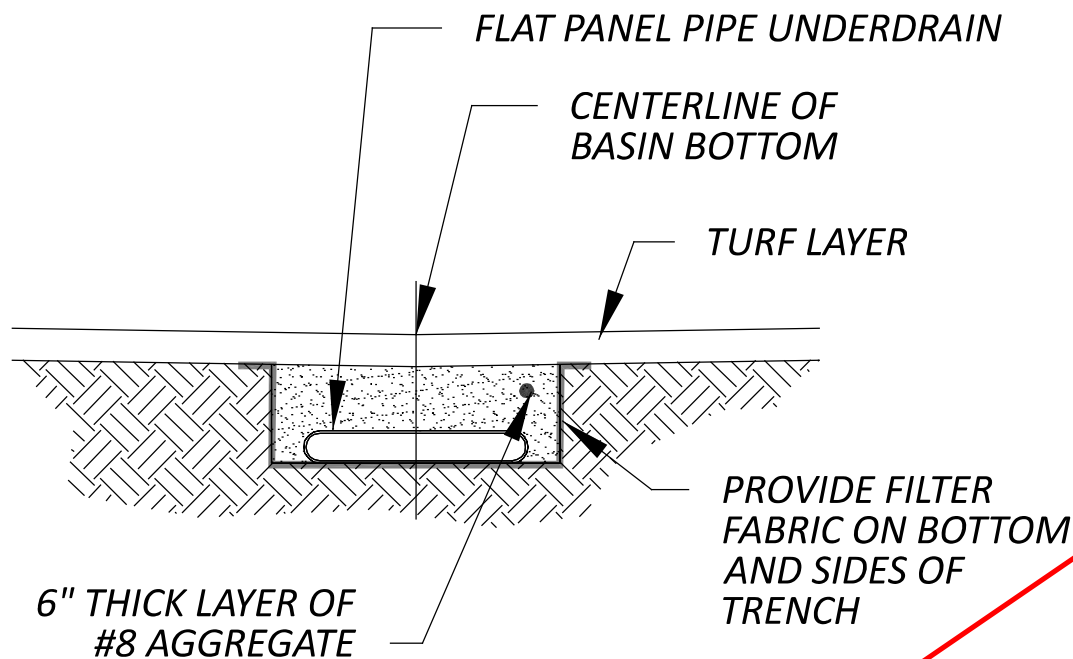
THE REQUIRED UNDERDRAIN TRENCH IS 6" DEEP BY 24" WIDE. UNDERDRAIN BACKFILL SHALL BE NO. 8 STONE PER ODOT CMS 605.02. THE NO. 8 STONE SHALL BE PAID FOR UNDER ITEM 690 - SPECIAL - UNDERDRAIN TRENCH BACKFILL.



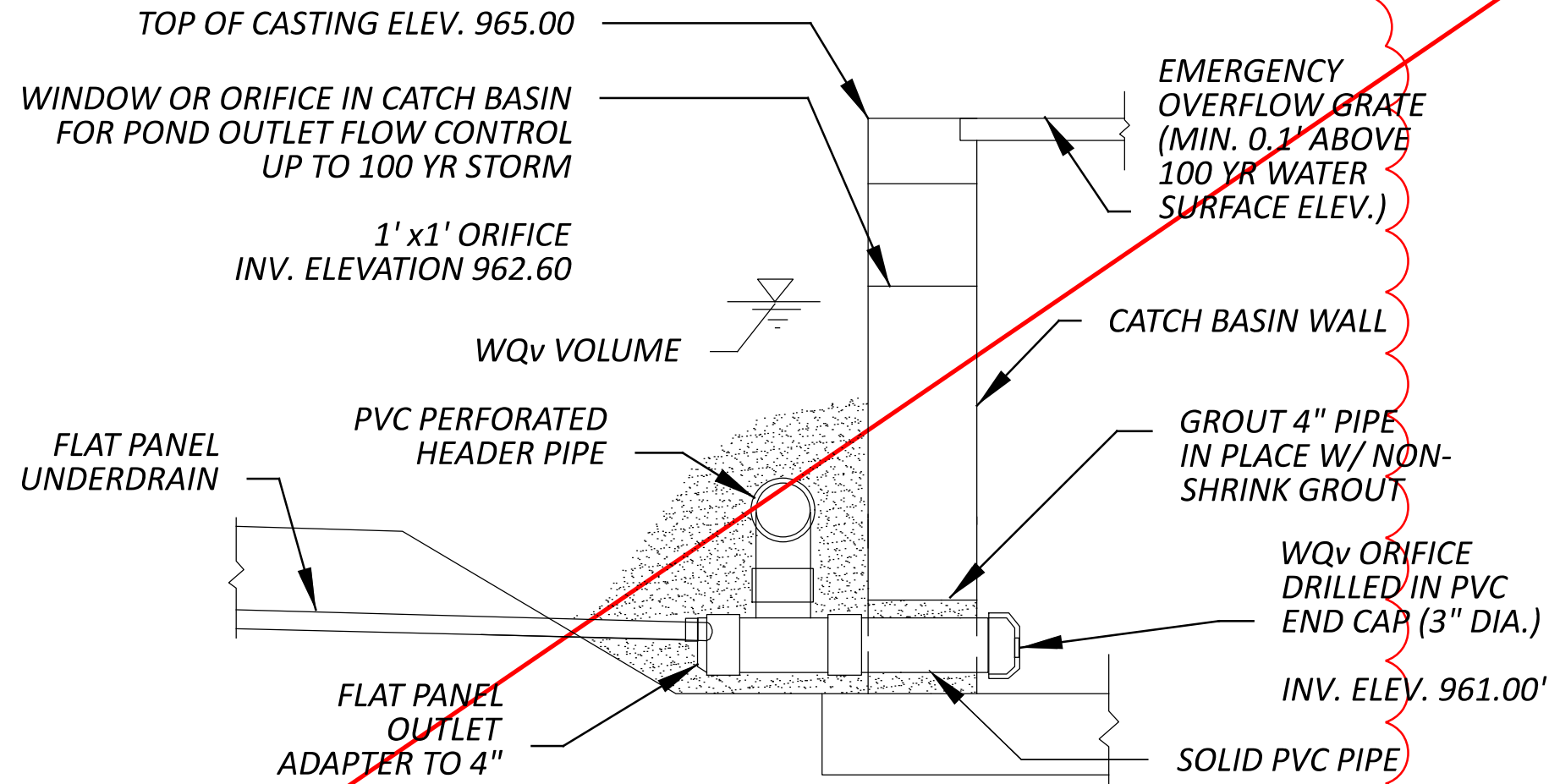
UNDERDRAIN DETAIL



BOTTOM OF POOL



FLAT PANEL PIPE UNDERDRAIN DETAIL



MODIFIED CATCH BASIN (2-2B) FOR UNDERDRAIN

NOTES:

* FOREBAY AND MICROPOOL SHALL BE SIZED PER CURRENT OEPA GUIDELINES. DIRECT SITE FLOW TO THE FOREBAY TREES, ROOTS, AND BRUSH SHALL BE REMOVED FROM THE DRAINAGE EASEMENT, DETENTION BASIN AND BASIN EMBANKMENT.
* POND BOTTOM CROSS SLOPE SHALL BE A MINIMUM OF 2%.
* PROVIDE ROCK CHANNEL PROTECTION OR CONCRETE PAVED CHANNEL AT THE POND OUTLET PIPE.
* EMERGENCY SPILLWAY SHALL ONLY BE UTILIZED FOR DISCHARGE ABOVE THE 100 YR STORM.
* SEE ARTICLE IX OF THE DELAWARE COUNTY DESIGN, CONSTRUCTION, AND SURVEYING STANDARDS FOR OTHER BASIN DESIGN REQUIREMENTS.
* SEE ARTICLE IX, SECTION 902 FOR REQUIRED DRAINAGE EASEMENTS. EASEMENTS SHALL BE PROVIDED TO ALL MAINTENANCE AND ACCESS BERMS AND DRIVES AS WELL AS ALONG ALL FLOOD ROUTES. ACCESS DRIVES SHALL HAVE A MAXIMUM DRIVE PROFILE SLOPE OF 6:1.

QUANTITY SHEET NO.	203	203	602	602	605	605	611	611	611	611	611	611	659	670	SPECIAL
	EMBANKMENT	EXCAVATION	CONCRETE MASONRY	CONCRETE MASONRY, ANTI-SEEP COLLAR	UNDERDRAINS, MISC.: 12" ADVANEDGE W/ FILTER FABRIC, TYPE A PER 712.09	4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	MANHOLE, NO. 3	CATCH BASIN, NO. 2-2B	18" CONDUIT, TYPE C	WATER QUALITY BASIN, DETENTION, AS PER PLAN 4" PVC ELBOW	WATER QUALITY BASIN, DETENTION, AS PER PLAN 4" PVC ELBOW	WATER QUALITY BASIN, DETENTION, AS PER PLAN 4" PVC ELBOW	SEEDING AND MULCHING, CLASS 1	SLOPE EROSION PROTECTION	STONE - UNDERDRAIN TRENCH BACKFILL (NO. 8 STONE)
P.462	1736	8130			796	106				2			18920	7100	38
P.463			0.31	1			1	1	356		1	1			
TOTALS CARRIED TO GENERAL SUMMARY	1736	8130	0.31	1	796	106	1	1	356	2	1	1	18920	7100	38

NO.	REV.	DESCRIPTION	BY	DATE
PIR4	1	DESCRIPTION SHEET REMOVED	ACW	04/24/25

DESIGN AGENCY


ms consultants, inc.

DESIGNER

MRB

REVIEWER

CAB 11/01/23

PROJECT ID

106959

SHEET

P.464

TOTAL

663

DEL-71-8.91 (PHASE A) PART 1

MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 4/23/2025 TIME: 2:09:43 PM USER: kromich
\\msconsultants.com\\files\\Production\\036006873-00 1-71-7.91 Phase A\\106959400-Engineering\\Traffic\\Sheets\\106959_TS006.dgn

SHEET NO.	LOCATION	REFERENCE NO.	STATION TO STATION				646	646	646	646	646	646	646	807	807	807	807	807	807	807	850	850	850	850	850	
							EDGE LINE, 6" , YELLOW FT/MILE	EDGE LINE, 6" , WHITE FT/MILE	STOP LINE FT	CROSSWALK LINE, 24" FT	CHEVRON MARKING FT	LANE ARROW EACH	WRONG WAY ARROW EACH	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" , YELLOW FT/MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" , WHITE FT/MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6" , YELLOW FT/MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6" , WHITE FT/MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6" FT/MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12" FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 6" FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT/MILE	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE) FT/MILE	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE) FT
P.484	I-71	YE-10, LL-22, LL-23, WE-10	690+00	RT	TO	700+00	RT										1000	1000	2000			4000				
		WE-12, CH-7	690+00	LT	TO	692+00	LT											200		200		200	200			
		CH-8	690+00	LT	TO	694+50	LT													450		450				
		LL-25, LL-26, YE-12	690+00	LT	TO	700+00	LT									1000		2000			3000					
		WE-13	694+50	LT	TO	700+00	LT										550			550						
	CD ROAD	YE-11, LL-24	189+91	LT	TO	199+90	LT									999		999			1998					
		WE-11	189+91		TO	199+90																				
P.485	I-71	YE-13, LL-27, LL-28, WE-15	700+00	RT	TO	710+00	RT										1000	1000	2000			4000				
		YE-15, LL-30, LL-31, WE-17	700+00	LT	TO	710+00	LT										1000	1000	2000			4000				
	CD ROAD	YE-14, LL-29	199+90	LT	TO	209+90	LT									1000		1000			2000					
		WE-16	199+90		TO	209+90											1000			1000						
P.486	I-71	YE-16, LL-32, LL-33, WE-18	710+00	RT	TO	720+00	RT										1000	2000	1000			4000				
		YE-18, WE-20	710+00	LT	TO	714+95	LT										495	495			990					
		LL-35, LL-36	710+00	LT	TO	718+95	LT												1790		1790					
	CD ROAD	YE-17, LL-34	209+90	LT	TO	219+90	LT									1000		1000			2000					
		WE-19	209+90			219+90												1000			1000					
P.487	I-71	YE-19, LL-37, LL-38, WE-21	720+00	RT	TO	730+00	RT										1000	1000	2000			4000				
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	WE-22		219+90		TO	229+90												1000			1000					
TOTALS THIS SHEET																	10494	10245	16789			37528				
TOTALS CARRIED TO SHEET P.473																	1.99	1.94	3.18	650		7.11	650			

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE ITEM TYPE & QTYS	KJF	04/23/25

DESIGN AGENCY



DESIGNER

C

REVIEWER
KWR 10/04/23

PROJECT ID
106959

SHEET	TOTAL
P.471	66

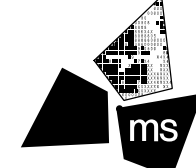
PAVEMENT MARKING SUBSUMMARY - MAINLINE & RAMPS

LAST REVISED: P1R4 04/23/2025

REF NO.	LOCATION	REFERENCE NO.	STATION TO STATION					646	646	646	646	646	646	646	807	807	807	807	807	807	850	850	850	850	850		
								EDGE LINE, 6", YELLOW	EDGE LINE, 6", WHITE	STOP LINE	CROSSWALK LINE, 24"	CHEVRON MARKING	LANE ARROW	WRONG WAY ARROW	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6", YELLOW	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6", WHITE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6"	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12"	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 6"	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE)
							FT/MILE	FT/MILE	FT	FT	FT	EACH	EACH	FT/MILE	FT/MILE	FT	FT/MILE	FT/MILE	FT/MILE	FT	FT	FT/MILE	FT	FT	FT/MILE	FT	
P.488	I-71	YE-21, LL-40, LL-41, WE-23	730+00	RT	TO	740+00	RT										1000	1000	2000			4000					
	CD ROAD	YE-22	229+90	LT	TO	239+29	LT										939					939					
		WE-24	229+90		TO	239+29	RT										939					939					
		LL-42	229+90	LT	TO	235+00	LT												510			510					
		WW-1	234+70	LT	TO	234+70	LT						1														
		CH-9, CH-10	235+50	LT	TO	239+29	LT															758		758			
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		A-1	235+58										4														
		A-2	236+44										4														
		A-3	237+32										4														
	A-4	238+20										4															
	A-5	239+08										4															
P.489	I-71	YE-23, WE-25	740+00	RT	TO	740+90	RT									90	90				180						
		LL-43, LL-44	740+00	RT	TO	743+90	RT											780			780						
P.490	RAMP A	WE-26	892+00		TO	896+00	RT						4		153			247			247			153			
		CH-12	892+00	RT	TO	894+46	RT								153		1			246		1	246	153			
		YE-24	894+46	RT	TO	896+00	RT																	153			
P.491	RAMP A	WE-27, YE-25	896+00	RT	TO	899+99	RT							406	402								808				
			899+99	RT	TO	901+00	RT										104	101				205					
P.492	RAMP A	YE-26	901+00	RT	TO	901+26	RT								26									26			
		WE-28	901+00	RT	TO	901+49	RT									49							49				
P.493	RAMP B	WE-29	479+14		TO	484+00												486			486						
P.494	RAMP B	WE-30	484+00		TO	489+00																					
		CH-13	484+21	LT	TO	487+14	LT																186				
		YE-27	487+14	LT	TO	489+00	LT									186				293		314	293	186			
P.495	RAMP B	Y-28	489+00	LT	TO	494+00	LT									500								500			
		WE-31	489+00		TO	494+00	RT									500							500				
		WW-2	490+79	LT	TO								1														
		CH-14	491+50		TO	494+00																		250			
		CH-15	491+50	LT	TO	494+00	LT																	250			
		A-6, A-7	491+67	LT																							
		A-8	491+67	RT																							
		A-9, A-10	492+55	LT																							
		A-11	492+55	RT																							
		A-12,A-13	493+43	LT																							
A-14	493+43	RT																									
TOTALS THIS SHEET													29	2	1271	1290	500	2134	3177	3290			8601			2561	
TOTALS CARRIED TO SHEET P.473															0.24	0.24	500	0.40	0.60	0.62	1676		1.63	1676		0.49	500

NO.	REF.	DESCRIPTION	REV.	BY	DATE
PIR4	.	REVISE ITEM TYPE & QTY'S	KJF		04/23/25

DESIGN AGENCY



ms consultants, inc.

DESIGNER

CLB

REVIEWER

KWR 10/04/23

PROJECT ID

106959

SHEET

P.472

TOTAL

663

PAVEMENT MARKING SUBSUMMARY - MAINLINE & RAMPS

[illegible]

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC. AT LEAST 48 HOURS BEFORE DIGGING, THE CONTRACTOR SHALL CALL THE OHIO UTILITIES PROTECTION SERVICE, TOLL-FREE, 800-362-2764. NON-MEMBER UTILITY COMPANIES MUST BE CALLED DIRECTLY. SEE SHEET P.20 FOR ADDITIONAL UTILITY INFORMATION.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIAL OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

EXISTING LIGHTING ITEMS, DUCT CABLE AND CONDUIT

THE LOCATION OF EXISTING LIGHTING ITEMS, CONDUIT AND DUCT CABLE SHOWN ON THE PLANS HAVE BEEN OBTAINED BY SEARCHES OF AVAILABLE RECORDS AND FIELD CHECKS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, HOWEVER, THE STATE OF OHIO DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. FIELD VERIFY ALL CIRCUITS.

EXISTING ODOT CONTROL CENTERS

THE CONTRACTOR SHALL CONTACT ODOT DISTRICT 6 TO OBTAIN KEYS TO THE EXTERNAL DISCONNECT HANDLES OF EXISTING CONTROL CENTER ENCLOSURES. THE AFFECTED EXISTING CONTROL CENTERS AND THEIR LOCATIONS ARE AS FOLLOWS:

- CONTROL CENTER '5' (CKTS 'A' & 'B') STA. 740+70± I-71, LT.

CIRCUITS SHALL BE TURNED "OFF" AS NECESSARY TO SAFELY WORK ON THE AFFECTED CIRCUITS. THE ENCLOSURES SHALL REMAIN LOCKED. ALL REMAINING CIRCUITS SHALL REMAIN "ON" UNLESS OTHERWISE APPROVED BY THE ENGINEER. UPON COMPLETION OF A PARTICULAR CIRCUIT'S WORK, THE CONTRACTOR SHALL RESTORE POWER TO THAT CIRCUIT, UNLESS THE CIRCUIT HAS BEEN DEACTIVATED.

EXISTING CABLE AND CONDUIT

EXISTING CIRCUIT CABLES IN TRENCH WHICH HAVE BEEN REPLACED AS INDICATED IN THE PLANS (INCLUDING CONDUIT, DISTRIBUTION CABLE, AND DUCT CABLE) MAY BE ABANDONED IN PLACE OR REMOVED. THE REMOVAL OR ABANDONMENT OF THESE ITEMS WHICH ARE NOT ITEMIZED SEPARATELY SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS LIGHTING ITEMS IN THE PROJECT.

ITEM 625 TRENCH

TRENCH SHALL BE AS PER 625.13. IN ADDITION, ALL TRENCHING IN PAVED AREAS AND AREAS TO BE PAVED SHALL BE PERFORMED PRIOR TO THE PLACEMENT OF PAVEMENT.

ITEM 625, POWER SERVICE, AS PER PLAN B

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING SHALL APPLY.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

POWER COMPANY: AMERICAN ELECTRIC POWER
ADDRESS: 700 MORRISON ROAD, GAHANNA, OH 43230
PHONE #: (614) 883-7963
CONTACT NAME: ERIK SCHAAS

POWER SERVICE: 480 VOLT, 3-WIRE, SINGLE PHASE, GROUNDED NEUTRAL. THIS PROJECT HAS BEEN DESIGNED ON THE BASIS OF 5% VOLTAGE DROP WITH A MAXIMUM UNIFORMITY RATIO OF 4.0 TO 1.0 FOR CONVENTIONAL UNITS AND 3.0 TO 1.0 FOR HIGH MAST UNITS.

ALL POWER SERVICES SHALL BE METERED. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN FIVE (5) FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND. A NON-FUSED DISCONNECT SHALL BE INSTALLED ON THE POWER SIDE OF THE METER BASE. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES AND DISCONNECTS.

4 THE CONTRACTOR SHALL PAY ALL ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. UPON ACCEPTANCE OF THE LIGHTING WORK, USUALLY AT THE COMPLETION OF THE PROJECT, AND AFTER WRITTEN AUTHORIZATION FROM THE DISTRICT CONSTRUCTION ENGINEER, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCY. THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT. IF POWER SERVICE IS TRANSFERRED PRIOR TO RECEIVING THE WRITTEN AUTHORIZATION, A DISINCENTIVE OF \$100 PER DAY SHALL BE ASSESSED FOR EACH CALENDAR DAY OF NON-COMPLIANCE.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625, "POWER SERVICE, AS PER PLAN B" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

HIGH VOLTAGE TEST WAIVED

THE HIGH VOLTAGE TEST SHALL NOT BE PERFORMED ON ANY EXISTING CIRCUITS MODIFIED BY THIS PROJECT, SINCE THE TEST COULD DAMAGE THE PORTION OF THE COMPLETED CIRCUIT WHICH HAS BEEN IN SERVICE PRIOR TO THIS PROJECT.

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH C&MS 631.06. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

ITEM 625 - SERVICE TO UNDERPASS LIGHTING

THIS ITEM SHALL CONSIST OF PROVIDING COMPLETE ELECTRICAL SERVICE, EXCEPT FOR LUMINAIRES AND STRUCTURE GROUNDING FOR AN UNDERPASS LIGHTING SYSTEM ON THE VARIOUS UNDERPASSES SHOWN IN THE PLANS.

THE INSTALLATION WORK SHALL INCLUDE DISCONNECT SWITCH WITH ENCLOSURE, CONDUITS, CONDUIT GROUNDING, MOUNTINGS, FITTINGS, JUNCTION BOXES, CABLES, AND ALL INCIDENTALS NECESSARY TO COMPLETE READY FOR USE, THE SERVICE AS SHOWN IN THE LIGHTING PLANS. ALL CONDUITS AND FITTINGS SHALL BE SCH-80 PVC. CABLE FOR UNDERPASS LIGHTING SHALL BE #10 AWG (MINIMUM).

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR ITEM 625, "SERVICE TO UNDERPASS LIGHTING" AND SHALL INCLUDE PAYMENT FOR ALL EQUIPMENT, LABOR, AND MATERIALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED. COMPONENT PARTS NOT SPECIFICALLY MENTIONED BUT REQUIRED FOR SATISFACTORY OPERATION OF THIS ITEM SHALL BE FURNISHED AND CONSIDERED PAID FOR AS PART OF THE ITEM.

ITEM - 625 ARC FLASH CALCULATIONS AND LABEL, (BY LOCATION)

THE CONTRACTOR SHALL SATISFY THE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATION 825 FOR EACH OF THE NEW LIGHTING CONTROL CENTERS INDICATED IN THE PLANS.

THE CONTRACTOR MAY BE ABLE TO OBTAIN LABELS FOR ODOT MAINTAINED INSTALLATIONS FROM THE ODOT SIGN SHOP, 1606 WEST BROAD STREET, COLUMBUS, OH 43223. FOR NON-ODOT MAINTAINED INSTALLATIONS, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE LABEL, MADE FROM "ENGINEER GRADE" SIGN SHEETING OR AN EQUIVALENT COMMERCIAL LABEL MATERIAL.

THE ODOT OFFICE OF ROADWAY ENGINEERING HAS AN EXCEL SPREADSHEET, AVAILABLE UPON REQUEST, TO ASSIST WITH MAKING AND DOCUMENTING THE REQUIRED CALCULATIONS.

METHOD OF MEASUREMENT SHALL BE PER 825.06.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ARC FLASH CALCULATIONS AND LABEL (CC-'S') 1 EACH

ITEM 625 - RE-ERECT EXISTING LIGHT TOWER, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING AN EXISTING LIGHT TOWER REMOVED FROM A PREVIOUS LOCATION ON THE PROJECT SITE OR SUPPLIED TO THE PROJECT BY OTHERS.

WHEN REQUIRED, ADDITIONAL LUMINAIRE BRACKET ARMS SHALL BE ADDED TO THE EXISTING LUMINAIRE BRACKETS RELOCATED ALONG WITH THE NECESSARY ADJUSTMENTS AND ADDITIONS TO THE LUMINAIRE WIRING TO ENABLE THE LUMINAIRES TO BE MOUNTED SYMMETRICALLY AROUND THE LUMINAIRE MOUNTING RING.

WHERE THE TOWER WILL BE INSTALLED ON A NEW FOUNDATION, NEW ANCHOR BOLTS SHALL BE FURNISHED.

THE TOWER AND LOWERING MECHANISM SHALL BE CLEANED AND LUBRICATED.

ANY REPAIRS AND ADJUSTMENTS NECESSARY TO RETURN THE TOWER AND MECHANISM TO GOOD OPERATING CONDITION SHALL BE MADE.

THE EXISTING LIGHT TOWER IDENTIFICATION DECAL SHALL BE REMOVED, AND A NEW DECAL FOR THE NEW IDENTIFICATION NUMBER FURNISHED AND INSTALLED.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, "RE-ERECT EXISTING LIGHT TOWER, AS PER PLAN" FOR EACH TOWER RE-ERECTED WHICH SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CONDUIT EXPANSION AND DEFLECTION

EXPANSION FITTINGS SHALL BE OZ TYPE AX, CROUSE HINDS TYPE XIG, OR EQUAL APPROVED BY THE ENGINEER. EACH EXPANSION FITTING SHALL PROVIDE EITHER 4 OR 8 INCHES TOTAL MOVEMENT AS SPECIFIED BY THE PLAN DETAILS AND SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS.

DEFLECTION COUPLINGS SHALL BE OZ TYPE DX, CROUSE HINDS TYPE XD, OR EQUAL APPROVED BY THE ENGINEER. EACH DEFLECTION COUPLING SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS. MINIMUM DEFLECTION CAPABILITY: 25°.

EXPANSION AND DEFLECTION FITTINGS FULLY OR PARTIALLY EMBEDDED IN CONCRETE, SOIL, OR SIMILAR MATERIAL SHALL BE COMPLETELY WRAPPED IN A NEOPRENE SLEEVE OR SHEET OF 1/2-INCH MINIMUM THICKNESS.

SECURE NEOPRENE WRAP WITH TIE-WRAPS PRIOR TO EMBEDMENT OF THE FITTING.

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISED NOTE	KWR	4/24/25
.

DESIGN AGENCY



ms consultants, inc.

DESIGNER

KWR

REVIEWER

DRB 11/10/23

PROJECT ID

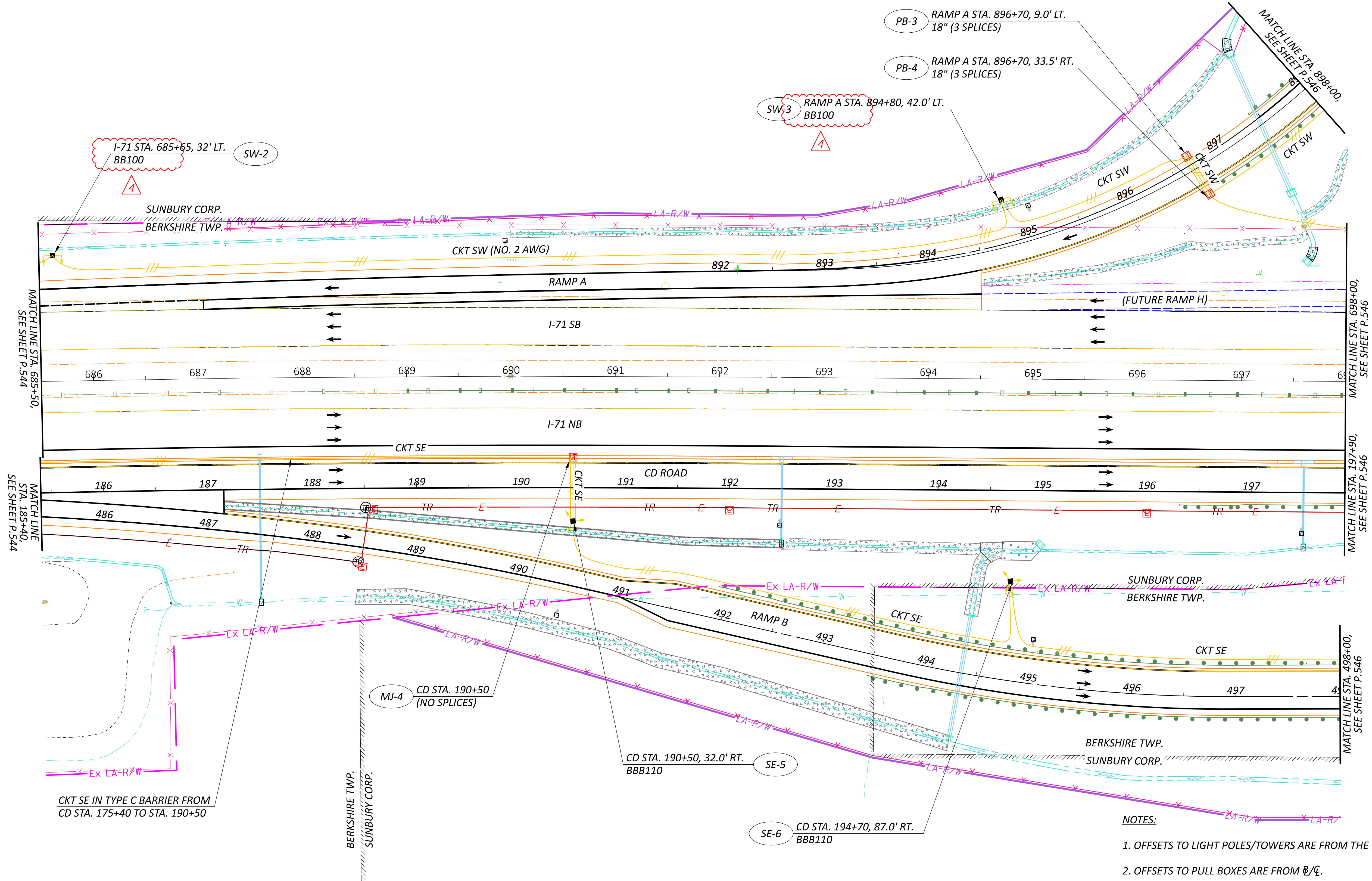
106959

SHEET

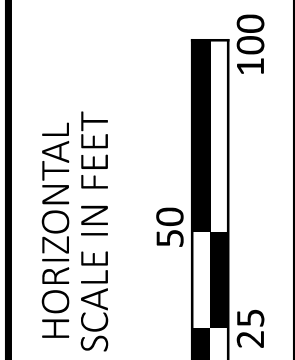
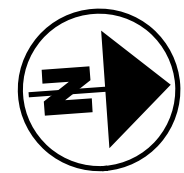
P.536

TOTAL

663



NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE TOWER DESCRIPTION	KWR	04/11/25
.



LIGHTING PLAN (ODOT)
I-71 STA. 685+50 TO STA. 698+00
CD ROAD STA. 185+40 TO STA. 197+90

DESIGN AGENCY



DESIGNER	KWR
REVIEWER	DRB
PROJECT ID	106959
SHEET	P.545
TOTAL	663

ITEM 625. POWER SERVICE, AS PER PLAN C

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING SHALL APPLY.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

POWER COMPANY: AMERICAN ELECTRIC POWER
ADDRESS: 700 MORRISON ROAD, GAHANNA, OH 43230
PHONE #: (614) 883-7963
CONTACT NAME: ERIK SCHAAS

POWER SERVICE: 240 VOLT, 3-WIRE, SINGLE PHASE, GROUNDED NEUTRAL. THIS PROJECT HAS BEEN DESIGNED ON THE BASIS OF 5% VOLTAGE DROP WITH A MAXIMUM UNIFORMITY RATIO OF 4.0 TO 1.0 FOR CONVENTIONAL UNITS AND 3.0 TO 1.0 FOR HIGH MAST UNITS.

ALL POWER SERVICES SHALL BE METERED. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN FIVE (5) FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND. A NON-FUSED DISCONNECT SHALL BE INSTALLED ON THE POWER SIDE OF THE METER BASE. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES AND DISCONNECTS.

THE CONTRACTOR SHALL PAY ALL ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. UPON ACCEPTANCE OF THE LIGHTING WORK, USUALLY AT THE COMPLETION OF THE PROJECT, AND AFTER WRITTEN AUTHORIZATION FROM THE DISTRICT CONSTRUCTION ENGINEER, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCY. THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT. IF POWER SERVICE IS TRANSFERRED PRIOR TO RECEIVING THE WRITTEN AUTHORIZATION, A DISINCENTIVE OF \$100 PER DAY SHALL BE ASSESSED FOR EACH CALENDAR DAY OF NON-COMPLIANCE.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625, "POWER SERVICE, AS PER PLAN C" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM - 625 ARC FLASH CALCULATIONS AND LABEL, (BY LOCATION)

THE CONTRACTOR SHALL SATISFY THE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATION 825 FOR EACH OF THE NEW LIGHTING CONTROL CENTERS INDICATED IN THE PLANS.

THE CONTRACTOR MAY BE ABLE TO OBTAIN LABELS FOR ODOT MAINTAINED INSTALLATIONS FROM THE ODOT SIGN SHOP, 1606 WEST BROAD STREET, COLUMBUS, OH 43223. FOR NON-ODOT MAINTAINED INSTALLATIONS, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE LABEL, MADE FROM "ENGINEER GRADE" SIGN SHEETING OR AN EQUIVALENT COMMERCIAL LABEL MATERIAL.

THE ODOT OFFICE OF ROADWAY ENGINEERING HAS AN EXCEL SPREADSHEET, AVAILABLE UPON REQUEST, TO ASSIST WITH MAKING AND DOCUMENTING THE REQUIRED CALCULATIONS.

METHOD OF MEASUREMENT SHALL BE PER 825.06.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ARC FLASH CALCULATIONS AND LABEL (CC-'W') 1 EACH

ITEM 625 - LIGHT POLE, CONVENTIONAL, AS PER PLAN, AT6B31

THIS ITEM OF WORK SHALL COMPLY WITH CITY OF COLUMBUS, DIVISION OF POWER (DOP) MATERIAL AND INSTALLATION SPECIFICATION MIS-305 AND SHALL BE HAPCO B74135P1 OR APPROVED EQUAL AND BE PAINTED BLACK.

ITEM 625 - LUMINAIRE, TEARDROP, SOLID STATE (LED), REFRACTIVE GLASS, 3000K, BLACK FINISH

THIS ITEM CONSISTS OF SUPPLYING AND INSTALLING A DECORATIVE TEARDROP-STYLE LED LUMINAIRE FOR ROADWAY ILLUMINATION.

HL-10.11 SHOWS A TEARDROP-STYLE LED LUMINAIRE SCHEMATICALLY.

THIS ITEM CONSISTS OF A BASE FITTER, GLASS (NOT ACRYLIC) SAG TYPE GLOBE AND A BASIC HOUSING WITH NO DECORATIVE FEATURES SUCH AS FINIAL, CROWN, BAND OR RIBS. PROVIDE A LUMINAIRE WITH A B-U-G UP-LIGHTING RATING OF U4 OR LESS.

PROVIDE A LUMINAIRE COMPATIBLE WITH THE LIGHTING BRANCH CIRCUIT SHOWN IN THE PLANS.

ASSURE THE LUMINAIRE CAN MOUNT A PHOTOCELL OR WIRELESS CONTROL THAT USES A NEMA STANDARD PHOTOCELL RECEPTACLE.

PROVIDE A LUMINAIRE WITH 3G VIBRATION RATING.

PROTECT EACH LUMINAIRE USING A SURGE PROTECTIVE DEVICE (SPD) CONFORMING TO ODOT SUPPLEMENTAL SPEC 913.

ASSURE THE LUMINAIRE HAS A NOMINAL COLOR TEMPERATURE (CCT) OF 3000K.

ASSURE THE LUMINAIRE IS COMPATIBLE WITH A 240V LIGHTING SYSTEM.

PROVIDE A LUMINAIRE WITH FACTORY-APPLIED BLACK FINISH MEETING SUPPLEMENTAL SPECIFICATION 916.

THE LUMINAIRE SHALL BE HOLOPHANE ESPLANADE, 112W, ESL3-P35S-30K-MVOLT-TG3-BK, KING K804 CORONET, 130W, K804-P4SA-3X-120-30, OR APPROVED EQUAL.

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISED NOTE	KWR	4/24/25
.

DESIGN AGENCY



ms consultants, inc.

DESIGNER

KWR

REVIEWER

DRB 11/10/23

PROJECT ID

106959

SHEET

P.555

TOTAL

663

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	01-20-23
AS-2-15	REVISED	07-21-23
BR-2-15	REVISED	01-21-22
HL-50.21	REVISED	07-15-22
PSID-1-13	REVISED	01-20-23
SBR-1-20	REVISED	01-20-23
SICD-1-21	REVISED	01-21-22
SICD-2-14	REVISED	01-15-21
VPF-1-90	REVISED	07-21-23

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	07-21-23
832	DATED	07-21-23
840	DATED	07-21-23

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN DATA:

CONCRETE, CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE, CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
CONCRETE, CLASS QCS, WITH 3/8-IN. MAX. AGGREGATE SIZE - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT)

CONCRETE REINFORCEMENT:
EPOXY COATED STEEL REINFORCEMENT
MINIMUM YIELD STRENGTH 60 KSI
USED IN: DECK, ABUTMENTS, PRESTRESSED I-BEAMS, PIERS, DRILLED SHAFTS

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

PRESTRESSED CONCRETE BRIDGE MEMBERS:

CONCRETE FOR PRESTRESSED I-BEAM:
COMPRESSIVE STRENGTH (FINAL) = 7.0 KSI
COMPRESSIVE STRENGTH (RELEASE) = 6.0 KSI

WELDED WIRE FABRIC:
YIELD STRENGTH = 70 KSI

PRESTRESSING STRAND:
ASTM A416, UNCOATED, SEVEN WIRE STRAND
AREA OF STRANDS = 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 IN. THICK.

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER

PROPRIETARY RETAINING WALL DATA:

THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF A MECHANICALLY STABILIZED EARTH (MSE) WALL IN ACCORDANCE WITH SS840 TO SUPPORT THE ABUTMENT. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE A NOMINAL (I.E. UNFACTORED) HORIZONTAL STRIP LOAD DUE TO FRICTION (FR) FROM THE SUPERSTRUCTURE OF 1.10 K/FT APPLIED PERPENDICULAR TO THE FACE OF WALL AT THE BASE OF THE CONCRETE FOOTING. THIS STRIP LOAD DOES NOT INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL. HOWEVER, THE PROPRIETARY WALL SUPPLIER SHALL INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL IN THE DESIGN CALCULATIONS.

FOUNDATION BEARING RESISTANCE

THE MSE WALL 1 REINFORCED SOIL MASS, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 5.45 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 7.75 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 8.44 KIPS PER SQUARE FOOT.

THE MSE WALL 2 REINFORCED SOIL MASS, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 5.06 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 7.2 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 7.2 KIPS PER SQUARE FOOT.

ROCK SOCKETED DRILLED SHAFTS:

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1576 KIPS AT THE PIER. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET. AT THE PIER, THE FACTORED SIDE RESISTANCE IS 1659 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 16 FEET OF THE BEDROCK SOCKET.

LATERALLY LOADED DRILLED SHAFTS:

THE MAXIMUM FACTORED LATERAL LOAD AND BENDING MOMENT TO BE SUPPORTED BY EACH DRILLED SHAFT ARE 15.2 KIPS AND 559 KIP-FT, RESPECTIVELY. THESE LOADS PRODUCE A MAXIMUM FACTORED BENDING MOMENT OF 596 KIP-FT, AND A MAXIMUM FACTORED SHEAR OF 55 KIPS, WITHIN THE DRILLED SHAFT.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.2 KIPS (FOR PART WIDTH PHASED CONSTRUCTION).

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 IN.

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 IN.

TEMPORARY LATERAL SUPPORTS TO PREVENT BEAM ROTATION DURING DECK PLACEMENT ARE REQUIRED FOR THE TWO BEAMS IN EACH CONSTRUCTION PHASE. THE TEMPORARY LATERAL SUPPORTS SHALL BE PROVIDED AT EACH INTERMEDIATE DIAPHRAGM LOCATION AND AT BOTH BEAM ENDS.

TEMPORARY LATERAL SUPPORT SYSTEMS SHOULD BE CAPABLE OF FORMING FORCE COUPLES TO RESIST THE TORSION PRODUCED BY OVERHANG WET CONCRETE, FALSEWORK, SCREEDING MACHINE AND CONSTRUCTION LIVE LOADS.

IF SUPPORT SYSTEMS ARE PROVIDED BETWEEN BEAMS, TYPICAL TEMPORARY LATERAL SUPPORT SYSTEMS CONSIST OF TIE-RODS FOR THE TOP FLANGE AND TIMBER BLOCKS FOR THE BOTTOM FLANGE. EACH TEMPORARY LATERAL SUPPORT ASSEMBLY SHALL PROVIDE HORIZONTAL RESISTANCE OF 25 KIPS AT TOP AND BOTTOM FLANGES.

BRIDGE SEAT ELEVATIONS:

BRIDGE SEAT ELEVATIONS HAVE BEEN ADJUSTED UPWARD ⅛ INCHES AT BOTH ABUTMENTS AND ⅓ INCHES AT THE PIER TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.

DECK PLACEMENT SEQUENCE

ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASEING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE A HORIZONTAL CONSTRUCTION JOINT IN THE DIAPHRAGM AS SHOW ON PSID-1-13. SHEET 7 OF 10. PLACE CLOSURE PORT CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.

ITEM 203 - EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6-IN LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 85+50.00 AND 87+06.80 AND BETWEEN STATIONS 89+41.09 AMD 91+00.00.

ITEM 507 - STEEL PILES HP10x42, FURNISHED, AS PER PLAN

THIS WORK CONSISTS OF FURNISHING AND PLACING STEEL PILES INTO PREBORED HOLES. PLACE EACH PILE VERTICALLY WITHIN THE HOLE SO IT IS NOT INCLINED MORE THAN ONE INCH BETWEEN THE TOP AND BOTTOM. SUPPORT THE PILE SO THAT IT DOES NOT MOVE DURING PLACEMENT OF BACKFILL MATERIAL. DO NOT REMOVE SUPPORTS FROM THE PIER PULES UNTIL THEY CAN FULLY SUPPORT THE PIER CAPS.

THE TOTAL FACTORED LOAD IS 403 KIPS PER PILE FOR REAR ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 438 KIPS PER PILE FOR FORWARD ABUTMENT PILES.

REAR ABUTMENT PILES:
HP10x42 PILES 50 FEET LONG, ORDER LENGTH (PILE NO. 1-11 & 22-27)
HP10x42 PILES 55 FEET LONG, ORDER LENGTH (PILE NO. 12-21 & 28-32)

FORWARD ABUTMENT PILES:
HP10x42 PILES 45 FEET LONG, ORDER LENGTH (PILE NO. 33-64)

ITEM 507 - PREBORED HOLES, AS PER PLAN:

PREBORED HOLES SHALL EXTEND AT LEAST 5-FT INTO BEDROCK AT EACH PILE. THE DIAMETER OF THE PREBORED HOLE SHALL BE A MINIMUM 2-IN LARGER THAN THE DIAGONAL DIMENSION OF THE PILE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AN OPEN HOLE.

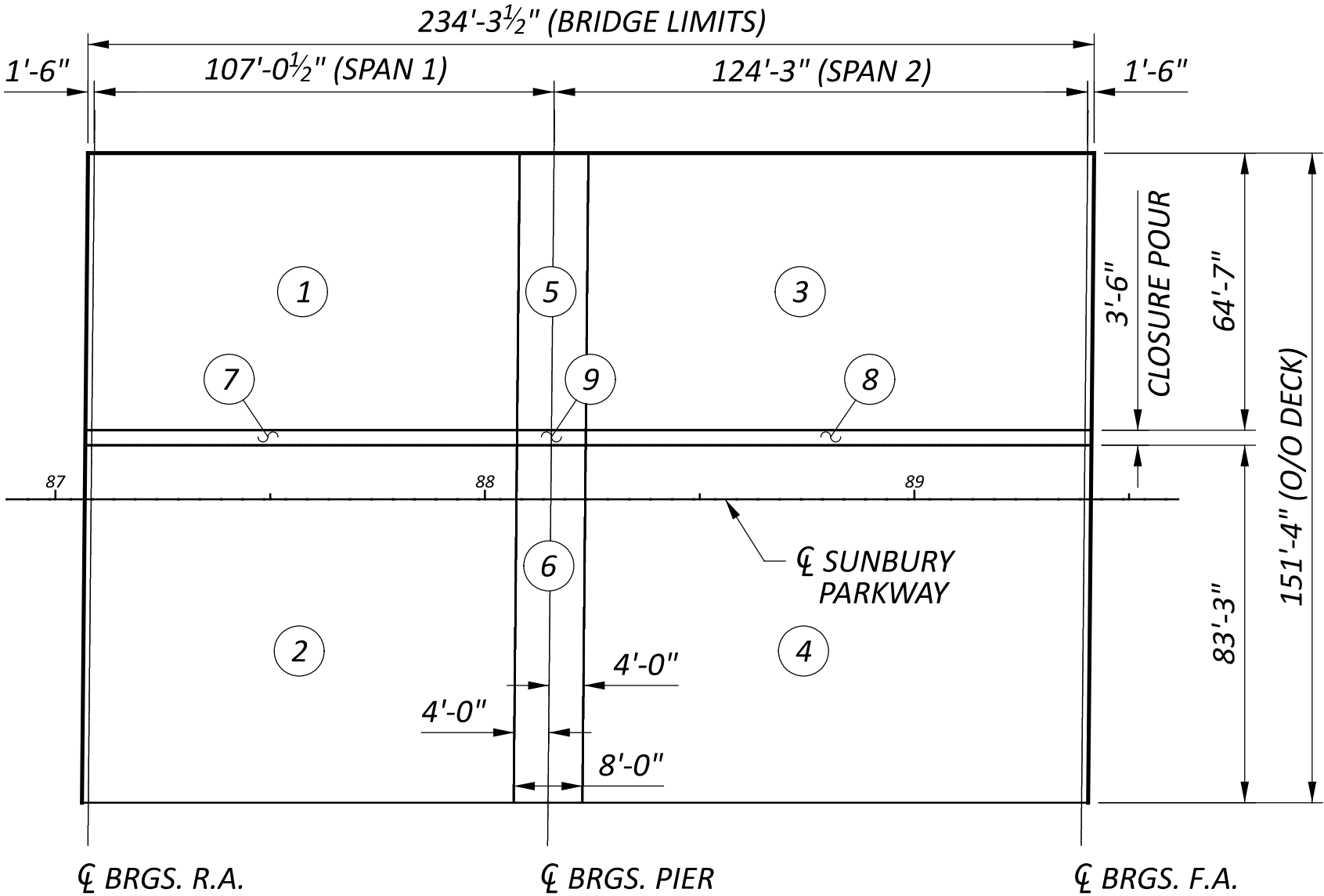
THE PREBORED HOLES SHALL BE CLEAN AND FREE OF ALL DELETERIOUS MATERIALS PRIOR TO BACKFILLING OPERATIONS. BACKFILL THE VOID BETWEEN THE PILE AND THE PREBORED HOLES WITH CLASS QC MISC. CONCRETE UP TO THE BOTTOM OF THE PILE SLEEVE. ABOVE THE BOTTOM OF PILE SLEEVE, BACKFILL THE VOID TO THE BOTTOM OF FOOTING ELEVATION WITH GRANULAR MATERIAL CONFORMING TO 703.11, STRUCTURAL BACKFILL TYPE 2, EXCEPT 100 PERCENT OF THE MATERIAL SHALL PASS THROUGH A ¾" SIEVE. PAYMENT FOR THE PREBORED HOLES INCLUDES THE BACKFILL MATERIAL.

ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN:

AFTER THE FOUNDATION HAS BEEN ACCEPTED, SPREAD, PLACE, AND COMPACT 3'-0" OF GRANULAR MATERIAL TYPE C ACCORDING TO THE REQUIREMENTS OF CMS 204.07.

ABBREVIATIONS:


ABUT.	-	ABUTMENT
APPR.	-	APPROACH
B	-	BASELINE
B.F.	-	BACK FACE
B/FTG.	-	BOTTOM OF FOOTING
BOT.	-	BOTTOM
BTWN	-	BETWEEN
BRG.	-	BEARING
C.I.P.	-	CAST-IN-PLACE
C.J.	-	CONSTRUCTION JOINT
C/C	-	CENTER-TO-CENTER
CLR.	-	CLEAR
CONSTR.	-	CONSTRUCTION
DIA.	-	DIAMETER
DWG.	-	DRAWING
E.F.	-	EACH FACE
EA.	-	EACH
EL./ELEV.	-	ELEVATION
EOP	-	EDGE OF PAVEMENT
EQ.	-	EQUAL
EX.	-	EXISTING
F.A.	-	FORWARD ABUTMENT
F.F.	-	FAR FACE
FWD.	-	FORWARD
JT.	-	JOINT
LT.	-	LEFT
MAX.	-	MAXIMUM
MEAS.	-	MEASURED
MIN.	-	MINIMUM
M.U.P	-	MULTI-USE PATH
N.P.C.P.P.	-	NON-PERFORATED CORRUGATED PLASTIC PIPE
N.F.	-	NEAR FACE
N.T.S.	-	NOT TO SCALE
NO.	-	NUMBER
P.C.P.P.	-	PERFORATED CORRUGATED PLASTIC PIPE
O/O	-	OUT-TO-OUT
P.E.J.F.	-	PREFORMED EXPANSION JOINT FILLER
P.G.	-	PROFILE GRADE
PROP.	-	PROPOSED
PT.	-	POINT
R	-	RADIUS
R.A.	-	REAR ABUTMENT
RT.	-	RIGHT
SHLDR.	-	SHOULDER
SPA.	-	SPACING
S.R.	-	STATE ROUTE
STA.	-	STATION
STD.	-	STANDARD
T/FTG.	-	TOP OF FOOTING
T/SLOPE	-	TOP OF SLOPE
T/ROCK	-	TOP OF ROCK
TEMP.	-	TEMPORARY
TYP.	-	TYPICAL
VAR.	-	VARIES
W/	-	WITH
WW	-	WINGWALL



DECK PLACEMENT SEQUENCE

- DENOTES ORDER OF DECK PLACEMENT SEQUENCE

NO.	DESCRIPTION	REV. BY	DATE
PIR4	ADDED NOTE	ATM	04/23/25

SFN	2102440
DESIGN AGENCY	
DESIGNER	CHECKER
ATM	DBL
REVIEWER	
YSJ	11/30/23
PROJECT ID	106959
SUBSET	TOTAL
2	34
SHEET	TOTAL
P.566	663

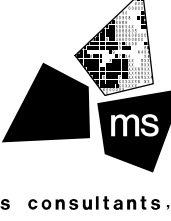
						CALC	DBL	DATE	6/28/23
						CHECK	ATM	DATE	6/28/23
ESTIMATED QUANTITIES									
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GENERAL	SHEET REF.
507	00101	3,125	FT	STEEL PILES HP10X42, FURNISHED, AS PER PLAN	3,125				2 / 34
507	92201	1,366	FT	PREBORED HOLES, AS PER PLAN	1,366				2 / 34
4	509	10000	404,371	LB	EPOXY COATED STEEL REINFORCEMENT	33,415	41,075	329,881	
	509	30020	8,822	FT	NO. 4 GFRP DEFORMED BARS			8,822	
	511	33418	293	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE			293	
	511	33500	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	4			
	511	34446	1,063	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			1,063	
	511	34450	90	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			90	
	511	41012	183	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		183		
	511	46512	235	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	235			
	511	50212	141	CY	CLASS QC1 CONCRETE WITH QC/QA, SUBSTRUCTURE	141			
	511	51512	355	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK			355	
	511	53010	8	CY	CLASS QC1 CONCRETE, MISC.: 6" CONCRETE SLAB			8	11 / 34
	512	10100	2,846	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	142	395	2,309	
	512	33000	9	SY	TYPE 2 WATERPROOFING			9	
	515	15120	16	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE WF66-49 (108'-0" LONG)			16	
	515	15120	16	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE WF66-49 (125'-7" LONG)			16	
	515	20000	90	EACH	INTERMEDIATE DIAPHRAGMS			90	
	516	10010	303	FT	ARMORLESS PREFORMED JOINT SEAL			303	
	516	13600	27	SF	1" PREFORMED EXPANSION JOINT FILLER			27	
	516	13900	145	SF	2" PREFORMED EXPANSION JOINT FILLER	145			
	516	25000	1,025	SF	NYLON REINFORCED NEOPRENE SHEETING	1,025			
	516	44200	32	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-7" x 1'-4" x 3 1⁄8" PAD, 3'-3 1⁄2" x 1'-5" x 1 1⁄2" STEEL LOAD PLATE)		32		
	516	46900	32	EACH	BEARING DEVICE MISC.: ELASTOMERIC BEARING ASSEMBLY	32			14 / 34
4	517	75122	589	FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING AND VANDAL PROTECTION FENCE) (ALTERNATE 1) *			589	
	518	21200	255	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	255			
	518	40000	303	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	303			
	518	40010	43	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	43			
	524	94904	144	FT	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK		144		
	524	94906	152	FT	DRILLED SHAFTS, 54" DIAMETER, ABOVE BEDROCK		152		
	526	30010	1,009	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")			1,009	
	526	90030	303	FT	TYPE C INSTALLATION			303	
4	607	39930	565	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC (ALTERNATE 1) **			565	
	613	41250	70	CY	LOW STRENGTH MORTAR BACKFILL (TYPE 1)				70

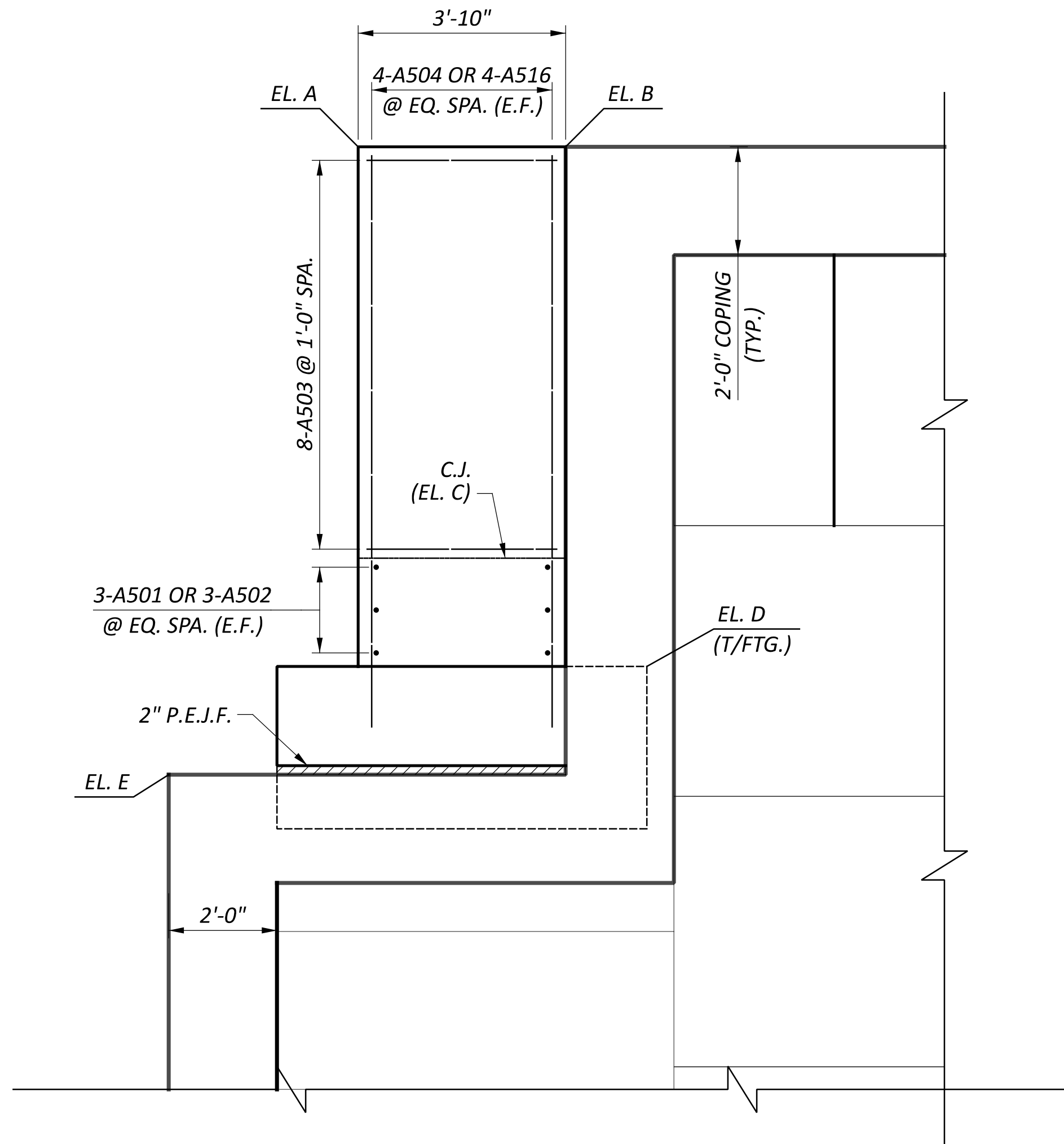
* CARRIED TO GENERAL SUMMARY UNDER STRUCTURE ALTERNATES (SEE NOTE 2)
** CARRIED TO GENERAL SUMMARY UNDER ROADWAY ALTERNATES (SEE NOTE 2)

NOTES:

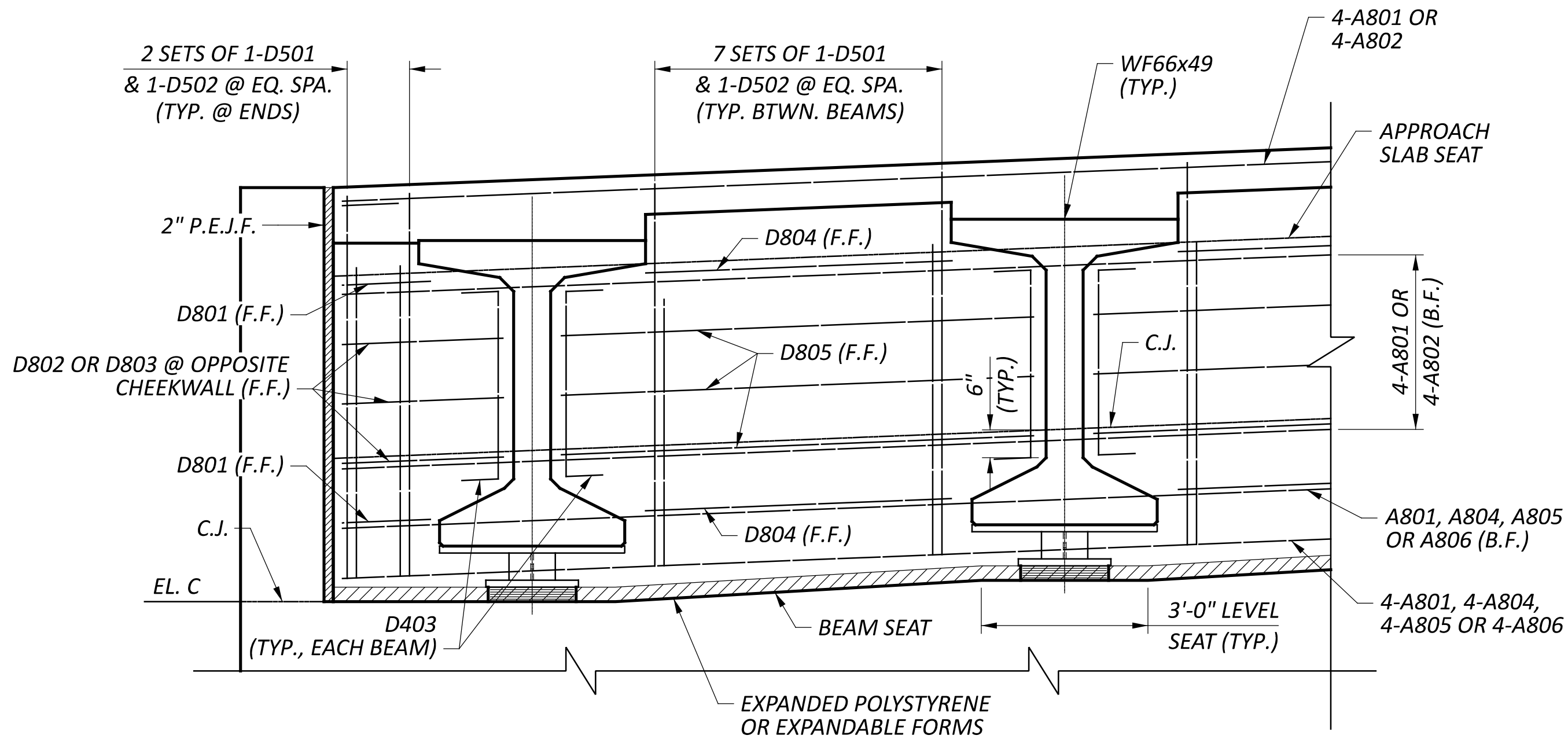
1. FOR MSE WALL 1 AND MSE WALL 2 QUANTITIES, SEE SHEET 31/34 .
2. FOR ALTERNATE AESTHETIC FENCE NOTES AND DETAILS, SEE PART 2.

NO.	DESCRIPTION	REV. BY	DATE
PIR4	UPDATED VARIOUS QTYS	ATM	04/23/25

SFN 2102440	
DESIGN AGENCY	
	
DESIGNER DBL	CHECKER ATM
REVIEWER YSJ 11/30/23	
PROJECT ID 106959	
SUBSET 3	TOTAL 34
SHEET P.567	TOTAL 663

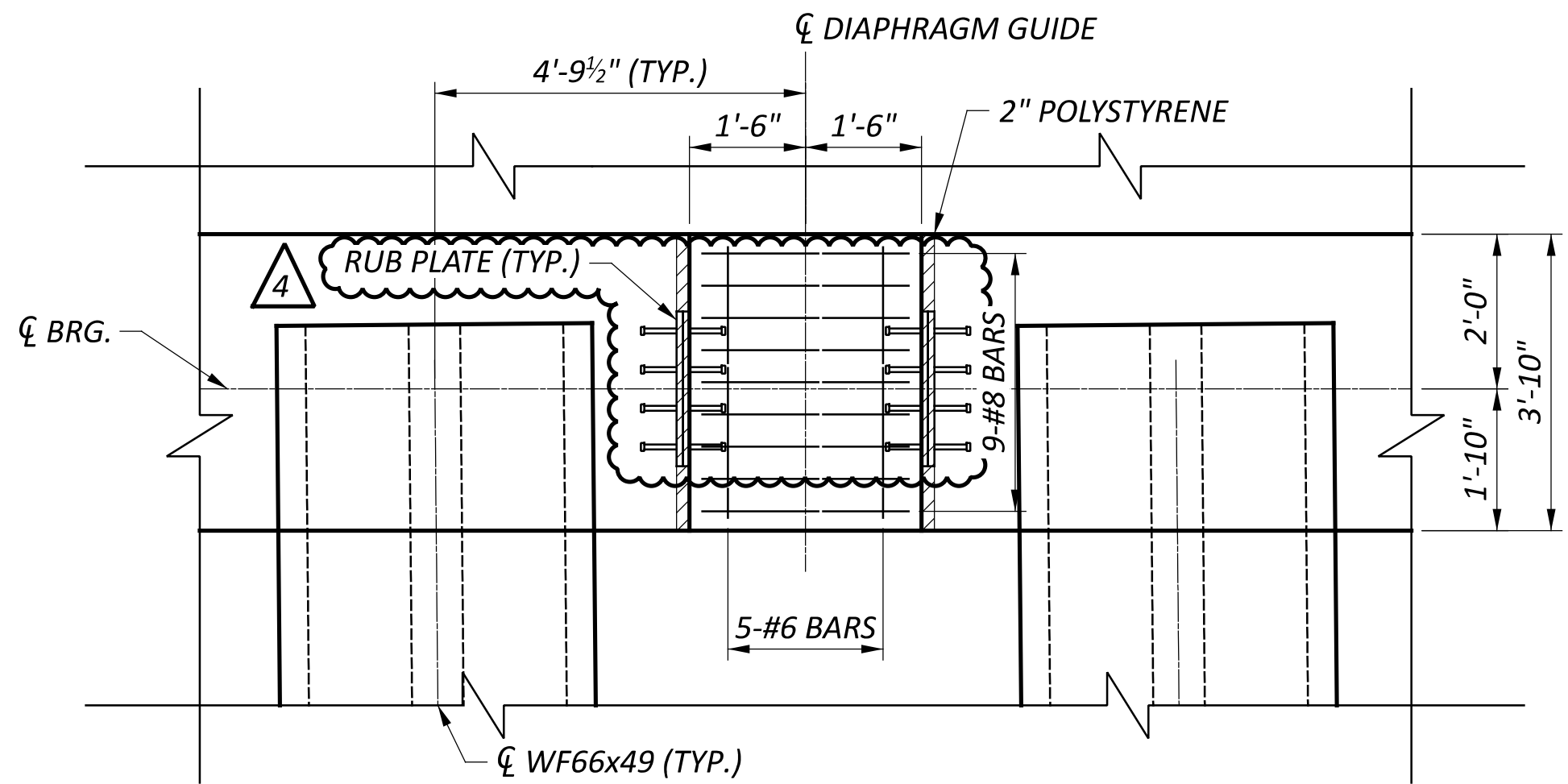


CHEEKWALL ELEVATION VIEW

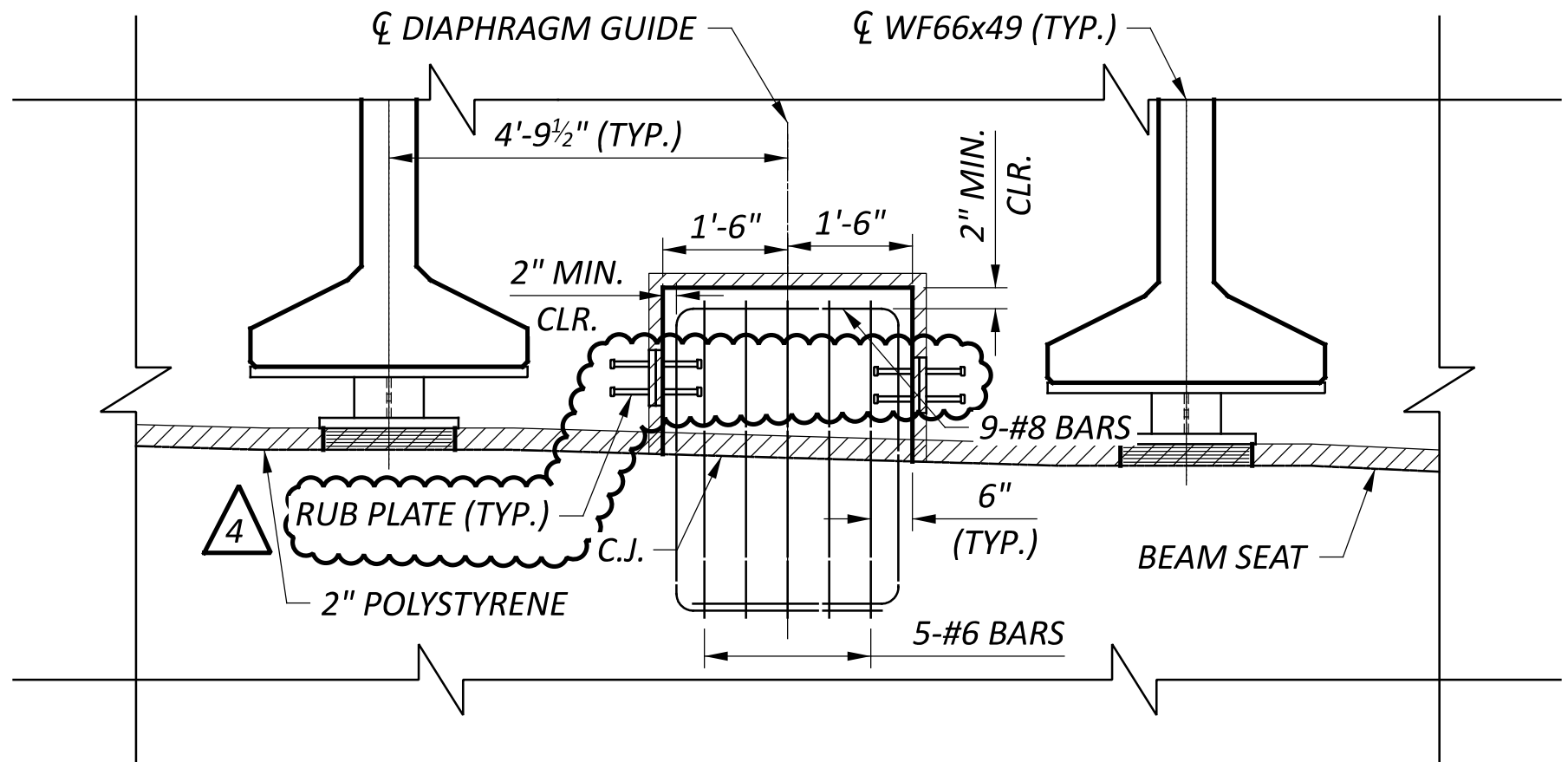


TYPICAL DIAPHRAGM REINFORCING PARTIAL ELEVATION
(CHEEKWALL REINFORCING NOT SHOWN)

NO.	DESCRIPTION	REV. BY	DATE
PIR4	ADDED RUB PLATE	ATM	04/23/25



DIAPHRAGM GUIDE PLAN



DIAPHRAGM GUIDE ELEVATION
(ABUTMENT AND DIAPHRAGM REINFORCING NOT SHOWN)

ELEVATION TABLE				
ELEV.	CHEEKWALL 1	CHEEKWALL 2	CHEEKWALL 3	CHEEKWALL 4
A	1004.52	1004.68	1003.44	1003.60
B	1004.55	1004.71	1003.37	1003.53
C	997.23	997.38	996.07	996.22
D	995.00	995.00	994.00	994.00
E	993.00	993.00	992.00	992.00

MINIMUM BAR LAP LENGTHS:

NO. 4 BAR = 1'-11"
NO. 5 BAR = 2'-5"
NO. 6 BAR = 3'-7"
NO. 8 BAR = 4'-9"

NOTES:

- FOR ADDITIONAL ABUTMENT DETAILS AND CHEEKWALL LOCATIONS, SEE SHEETS 5/34 THRU 9/34.
- CONCRETE, REINFORCING STEEL, P.E.J.F., RUB PLATES, CAULK AND ALL OTHER ITEMS REQUIRED FOR THE INSTALLATION OF THE DIAPHRAGM GUIDE SHALL BE CONSIDERED INCIDENTAL AND INCLUDED FOR PAYMENT WITH ITEM 511 - SEMI-INTEGRAL DIAPHRAGM GUIDE.
- FOR ADDITIONAL DIAPHRAGM GUIDE DETAILS, SEE STD. DWG. SICD-2-14.

ESTIMATED QUANTITIES					CALC	DATE
					DBL	7/14/23
					CHECK	DATE
					ATM	10/3/23
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SHEET REFERENCE	
MSE WALL 1						
203	20001	689	CY	EMBANKMENT, AS PER PLAN *		
203	35110	893	CY	GRANULAR MATERIAL, TYPE B		
512	10100	773	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
516	13600	154	SF	1" PREFORMED EXPANSION JOINT FILLER		
611	99710	2	EACH	PRECAST REINFORCED CONCRETE OUTLET		
840	20000	6,544	SF	MECHANICALLY STABILIZED EARTH WALL		
840	21000	270	CY	WALL EXCAVATION		
840	22001	695	SY	FOUNDATION PREPARATION, AS PER PLAN	P.566	
840	23000	4,657	CY	SELECT GRANULAR BACKFILL		
840	25010	552	FT	6" DRAINAGE PIPE, PERFORATED		
840	25020	72	FT	6" DRAINAGE PIPE, NON-PERFORATED		
840	26000	330	FT	CONCRETE COPING		
840	27000	5	DAY	ON-SITE ASSISTANCE		
840	28000	LS		SGB INSPECTION AND COMPACTION TESTING		

* ITEM 203 - EMBANKMENT, AS PER PLAN TO BE CARRIED TO GENERAL SUMMARY

ESTIMATED QUANTITIES					CALC	DATE
					ATM	11/1/23
					CHECK	DATE
					YSJ	2/28/24
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SHEET REFERENCE	
MSE WALL 2						
203	20001	692	CY	EMBANKMENT, AS PER PLAN *		
203	35110	829	CY	GRANULAR MATERIAL, TYPE B		
512	10100	694	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
516	13600	154	SF	1" PREFORMED EXPANSION JOINT FILLER		
611	99710	2	EACH	PRECAST REINFORCED CONCRETE OUTLET		
840	20000	5,831	SF	MECHANICALLY STABILIZED EARTH WALL		
840	21000	256	CY	WALL EXCAVATION		
840	22001	706	SY	FOUNDATION PREPARATION, AS PER PLAN	P.566	
840	23000	4,109	CY	SELECT GRANULAR BACKFILL		
840	25010	554	FT	6" DRAINAGE PIPE, PERFORATED		
840	25020	155	FT	6" DRAINAGE PIPE, NON-PERFORATED		
840	26000	330	FT	CONCRETE COPING		
840	27000	5	DAY	ON-SITE ASSISTANCE		
840	28000	LS		SGB INSPECTION AND COMPACTION TESTING		


* ITEM 203 - EMBANKMENT, AS PER PLAN TO BE CARRIED TO GENERAL SUMMARY


NO.	DESCRIPTION	REV. BY	DATE
P1R4	UPDATED VARIOUS ITEMS	ATM	04/22/25

DEL-71-8.91 (PHASE A) PART 2

MODEL: Sheet_SurvFt_PAPERSize: 34x22 (in.) DATE: 4/23/2025 TIME: 10:50:16 AM USER: Klein
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[illegible]

ESTIMATED QUANTITIES DEL-71-08.91 (PHASE A) PART 2	
SFN	2102440
DESIGN AGENCY	
	
DESIGNER	CHECKER
MPS	TMK
REVIEWER	
TAB	02-29-24
PROJECT ID	
106959	
SUBSET	TOTAL
4	10
SHEET	TOTAL
P.4	10

SFN	
2102440	
DESIGN AGENCY	
	
DESIGNER	CHECKER
MPS	TMK
REVIEWER	
TAB 02-29-24	
PROJECT ID	
106959	
SUBSET	TOTAL
4	10
SHEET	TOTAL
P.4	10

NO.	RFI	DESCRIPTION	REV. BY	DATE
PIR4	.	REVISE FENCE QTYS	MPS	04/23/25
.

LAST REVISED: PIR4 04/23/2025