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GENERAL NOTES

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2024 INCLUDING THE INTERIM SPECIFICATIONS .

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS (2023).

AREMA MANUAL FOR RAILWAY ENGINEERING (2019) - DESIGN LOAD E80

DESIGN DATA

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 P.S.I. (CURB, DRILLED SHAFTS, AND WALLS)

REINFORCING STEEL - ASTM A615 OR A996
GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.

STEEL BEAM PILES - AASHTO M 270/M 270M - GRADE 50 (ASTM A709/A709M), GALVANIZED

NORFOLK SOUTHERN RAILROAD

NORFOLK SOUTHERN RAILWAY - ROW 1115333-N-633.59-N-633.64 - CR 52
THIS PROJECT INCLUDES WORK ON OR ADJACENT TO NORFOLK SOUTHERN PROPERTY. SPECIAL ATTENTION IS DIRECTED TO THE SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTERESTS DATED 11-4-22. CONTRACTOR SHOULD FAMILIARIZE THEMSELVES WITH THE DIRECTIVES AND REQUIREMENTS WITHIN THIS DOCUMENT FOR WORKING ON OR ADJACENT TO NSRR RIGHT OF WAY. ANY WORK ACTIVITIES WITHIN NSRR RIGHT OF WAY OR ADJACENT TO NSRR RIGHT OF WAY WITH THE POTENTIAL OF FOULING THE TRACKS MUST BE REVIEWED AND APPROVED BY NSRR PRIOR TO STARTING WORK. CONTRACTOR MUST OBTAIN APPROVALS, RIGHT OF ENTRY, LIABILITY INSURANCE, ETC AS DIRECTED IN THE SPECIAL PROVISION PRIOR TO STARTING WORK. PROJECT COORDINATION, CONSTRUCTION LIMITATIONS, STORAGE OF MATERIALS, DESIGN REQUIREMENTS AND PROTECTIVE SERVICES ARE COVERED IN THIS DOCUMENT. THE CONTRACTOR WILL BE REQUIRED TO OBTAIN PROTECTIVE SERVICES WITH A COMPANY APPROVED BY NSRR WHEN WORKING ON OR ADJACENT TO NSRR RIGHT OF WAY WITH THE POTENTIAL OF FOULING TRACKS. ANY ACTIVITIES ASSOCIATED WITH THE DIRECTIVES IN THIS DOCUMENT WILL BE INCIDENTAL TO THE PROJECT.

NSRR CONTACT: E.W. CHAMBERS
SENIOR ENGINEER PUBLIC IMPROVEMENTS
NORFOLK SOUTHERN RAILWAY COMPANY
ENGINEERING DESIGN AND CONSTRUCTION
650 WEST PEACHTREE STREET, NW - BOX 45
ATLANTA, GA 30308
PHONE: (470) 463-6307
EMAIL: eldridge.chambers@nscorp.com

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER, OR ADJACENT TO, THE WORK AREA.

ELECTRIC AERIAL LINE - AMERICAN ELECTRIC POWER - OHIO (1-800-672-2231). THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING RELOCATION OF THE LINE IF IN THE WAY OF CONSTRUCTION ACTIVITIES. COORDINATION AND RELOCATION COSTS IF REQUIRED ARE INCIDENTAL TO THE PROJECT.

THE CONTRACTOR IS REQUIRED TO CONTACT THE OHIO811.ORG 2 DAYS PRIOR TO ANY WORK FOR UNDERGROUND UTILITIES.

UTILITIES WITHIN NORFOLK SOUTHERN RIGHT OF WAY DO NOT SHOW UP IN THE 811 SYSTEM FOR OHIO. CONTRACTOR SHALL REFER TO THE SPECIAL PROVISION "NORFOLK SOUTHERN - SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTERESTS" FOR ANY UTILITY INFORMATION IN NSRR RIGHT OF WAY.

NORFOLK SOUTHERN RAILWAY COMPANY – ALL UTILITY INSTALLATIONS OR RELOCATIONS THAT ARE REQUIRED IN CONJUNCTION WITH THIS PROJECT CAN BE INSTALLED OR RELOCATED AS PART OF THE PROJECT, PROVIDED THE CONSTRUCTION IS PERFORMED BY THE PROJECT CONTRACTOR’S SUB-CONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR THE INSTALLATION OR RELOCATIONS TO NS PIPE AND WIRE FOR APPROPRIATE HANDLING FOR LICENSE AGREEMENT AND APPLICABLE FEES. FOR UTILITY APPLICATIONS GO TO [HTTPS://WWW.NORFOLKSOUTHERN.COM/EN/RAIL-DEVELOPMENT-PROPERTY/NS-PROPERTY/PROJECT-ON-NS-PROPERTY](https://www.norfolksouthern.com/en/rail-development-property/ns-property/project-on-ns-property)
NOTE: LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.

CONSTRUCTION SEQUENCE

1. ROAD CLOSURE - THE PROJECT AREA SHALL BE CLOSED TO PUBLIC TRAFFIC DURING CONSTRUCTION. SEE DETOUR PLANS FOR DETAILS OF CONTRACTOR'S RESPONSIBILITIES REGARDING ROAD CLOSURE. COORDINATE WITH PIKE COUNTY OFFICIALS ON CLOSURE.
2. THE CONTRACTOR SHALL INSTALL COMPOST FILTER SOCK AS INDICATED ON THE PLANS. CLEAR AND GRUB AS REQUIRED. EXCAVATE AS REQUIRED FOR CONSTRUCTION.
3. CONSTRUCT RETAINING WALL PER DETAILS AND NOTES CONTAINED IN THE CONSTRUCTION DRAWINGS. SEQUENCE OF INSTALLATION FOR CAISSONS IS DETAILED IN THE NOTES. ADDITIONAL FILL OR EXCAVATION REQUIRED NECESSARY INSTALL THE CAISSON WALL IS INDICENTAL TO THE PROJECT. COORDINATE THE INSTALLATION OF 24" DRAINAGE PIPE WITH THE WALL CONSTRUCTION. DISPOSE OF ALL EXCAVATED MATERIALS AT A REMOTE LOCATION APPROVED BY THE PIKE COUNTY ENGINEER. ALL EXCAVATED MATERIAL SHALL BE REMOVED FROM THE PROJECT SITE. STORAGE OF EXCAVATED MATERIAL AT THE PROJECT SITE WILL NOT BE ALLOWED. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY PERMITS NECESSARY FOR WASTE MATERIALS OFFSITE.

4. UPON COMPLETION OF CAISSON WALL, CONTRACTOR IS TO CONSTRUCT THE CURB WALL ALONG THE TOP OF THE CAISSON WALL AND THE CONNECTING WALL AT THE EAST END AS DETAILED IN THE PLANS. ALLOW ADEQUATE TIME FOR CONCRETE CURE PRIOR TO INSTALLING BASE DRAINS AND BACKFILLING AGAINST THE WALL.

5. BACKFILL - THE FRONT (ROAD) SIDE OF THE WALL SHALL BE BACKFILLED WITH ITEM 518 POROUS BACKFILL AND ITEM 203 GRANULAR EMBANKMENT, AS SHOWN ON THE PLANS.

6. DUMPED ROCK FILL - THE BACK (RIVER) SIDE OF THE WALL SHALL BE BACKFILLED WITH ITEM 601 DUMPED ROCK FILL, TYPE C, WITH FABRIC FILTER AS SHOWN ON THE PLANS.

7. REMOVE EXISTING ROADWAY PAVEMENT AND SUBGRADE. INSTALL NEW SUBGRADE AND PAVEMENT AD DETAILED IN THE PLANS. INSTALL GUIDERAIL AND END TREATMENTS AS DETAILED IN THE PLANS. CONSTRUCT THE NEW ROAD AS DETAILED ON THE TYPICAL SECTION.

8. INSTALLATION OF GUIDERAILS - ALL GUARDRAIL POSTS SHALL BE INSTALLED PLUMB AND AT THE LOCATIONS AS SHOWN ON THE PLANS. GALVANIZED SHIMS APPROVED BY THE PIKE COUNTY ENGINEER SHALL BE USED TO ACCOMPLISH THIS PURPOSE.

9. THE CONTRACTOR SHALL PLACE SEED AND MULCH ITEMS. UPON ACCEPTANCE OF THE PROJECT FROM THE COUNTY ENGINEER, OPEN THE ROAD TO TRAFFIC.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 250,000 GAL.

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SURVEYING PARAMETERS

HORIZONTAL DATUM IS BASED UPON NAD83(2011) OHIO STATE PLANE COORDINATE SYSTEM (SOUTH).

VERTICAL DATUM IS BASED UPON NAVD88 (GEOID18).

BOTH HORIZONTAL AND VERTICAL DATUM WAS ESTABLISHED USING GPS STATIC SESSION AND COMPUTED USING NGS-OPUS.

TRAVERSE POINTS *	TRAVERSE NUMBER	NORTHING	EASTING	ELEVATION
	3	397977.6653	1833124.9300	569.1557
	5	397840.4036	1832973.0079	563.803
	6	397565.8607	1832575.7414	560.6949

FOUR PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY.
* ALL TRAVERSE POINTS ARE 5/8" REBAR CAP

FIELD VERIFICATION QUANTITIES

DUE TO THE NATURE OF THE PROJECT BEING A SLIDE REPAIR, THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF QUANTITIES PRIOR TO BIDDING AND THEN PRIOR TO CONSTRUCTION. THE ACTUAL WORK LOCATIONS AND QUANTITIES PERFORMED SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ITEM 524 DRILLED SHAFTS, MISC.: PLUG PILE, 42" DIAMETER, UNREINFORCED

THESE SHAFTS ARE NON-STRUCTURAL "PLUG PILES" SERVING THE PURPOSE OF LAGGING. CONSTRUCTION PER ITEM 524. DRILL TO THE DEPTH SHOWN IN THE WALL TABLE ON SHEETS 11 AND 12 AND FILL WITH CLASS QC1 CONCRETE.

PAYMENT FOR LABOR EQUIPMENT AND MATERIALS FOR THE ABOVE SHALL BE INCLUDED IN THE PER FOOT CONTRACT PRICE FOR ITEM 524 DRILLED SHAFTS, MISC.: PLUG PILE, 42" DIAMETER, UNREINFORCED.

CONTRACTOR MUST DRILL 42" CAISSON FOR PLUG PILE TO TOP OF COMPETENT ROCK. IF TOP OF COMPETENT ROCK IS REACHED ABOVE THE ELEVATION FOR BOTTOM OF PLUG PILE AS LISTED ON SHEETS 11 AND 12, CONTRACTOR CAN STOP DRILLING WITH APPROVAL OF ENGINEER. CLAYSTONE, SAPROLITIC ROCK IS NOT CONSIDERED COMPETENT ROCK. THE TOP OF THE SHALE LAYER AS SHOWN IN THE BORINGS CONTAINED IN THE GEOTECHINCIAL INVESTIGATION REPORT IS CONSIDERED TO TOP OF COMPETENT ROCK.

ITEM 441, ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, (448), PG64-22, AS PER PLAN

DURING PAVING OPERATIONS THE ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG64-22 SHALL BE PLACED IN 1" LIFTS AND AT NO TIME SHALL IT EXCEED A 2" (MAXIMUM) LIFT.

ITEM 524 DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK, AS PER PLAN AND ITEM 524 DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN

THIS WORK CONSISTS OF INSTALLING DRILLED SHAFTS FOR SLOPE STABILIZATION. THE INSTALLATION SHALL BE PER ITEM 524 EXCEPT THE DRILLED SHAFTS ARE TO BE REINFORCED WITH STRUCTURAL STEEL MEMBERS (W-SECTIONS) INSTEAD OF TRADITIONAL (RE-BAR) REINFORCING CAGES.

PLACE THE STRUCTURAL MEMBERS IN THE PRE-BORED SHAFTS. ORIENT THE STRUCTURAL MEMBER SO THAT THE FLANGES ARE PARALLEL TO THE CHORD LINE. DO NOT ALLOW THE ORIENTATION OF THE FLANGES TO VARY BY MORE THAN 10 DEGREES. PLUMB THE STRUCTURAL MEMBERS SO THEY ARE VERTICAL AND NOT INCLINED MORE THAN 1/8 INCH PER FOOT FROM VERTICAL. EACH STRUCTURAL MEMBER SHALL BE CENTERED WITHIN THE SHAFT. SUPPORT THE STRUCTURAL MEMBER SO THAT IT DOES NOT MOVE DURING CONCRETE PLACEMENT.

CHECK THE POSITION, THE VERTICAL ALIGNMENT AND ORIENTATION OF THE STRUCTURAL MEMBER IMMEDIATELY AFTER CONCRETE PLACEMENT. MAKE CORRECTIONS AS NECESSARY TO MEET ABOVE TOLERANCES.

THE COUNTY WILL MEASURE DRILLED SHAFTS ABOVE ROCK ALONG THE AXIS OF THE DRILLED SHAFT FROM TOP OF SHAFT TO THE TOP OF BEDROCK, AS DETERMINED BY THE ENGINEER. DRILLED SHAFTS INTO ROCK WILL BE MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM TOP OF BEDROCK TO BOTTOM OF SHAFT, AS DETERMINED BY THE ENGINEER.

PAYMENT FOR LABOR, EQUIPMENT AND MATERIALS FOR THE ABOVE SHALL BE INCLUDED IN THE PER FOOT CONTRACT PRICE FOR ITEM 524, DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK, OR ITEM 524, DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK.

CONTRACTOR MUST DRILL A MINIMUM OF 10 FEET INTO ROCK FOR SOCKET LENGTH. IF 10 FEET OF COMPETENT ROCK IS DRILLED AND THE BOTTOM OF SOCKET ELEVATION IS ABOVE THE BOTTOM OF DRILLED SHAFT WITH BEAM ELEVATONS AS LISTED ON SHEETS 11 AND 12, CONTRACTOR CAN STOP DRILLING WITH APPROVAL OF ENGINEER. CLAYSTONE, SEPROLITIC ROCK IS NOT CONSIDERED COMPETENT ROCK. THE TOP OF THE SHALE LAYER AS SHOWN IN THE BORING CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT IS CONSIDERED TO TOP OF COMPETENT ROCK.

ITEM 507 STEEL PILES, MISC.: W27X129 STEEL BEAM, FURNISHED

THIS WORK SHALL CONSIST OF FURNISHING STRUCTURAL STEEL MEMBERS THAT CONFORM TO ASTM A572, GRADE 50 AND CMS 711.01. THE W27X129 PILES WILL BE NEW, UNUSED, GALVANIZED, HOT ROLLED AND CONFORM TO ASTM A572 - GRADE 50 STEEL.

THE W27X129 PILES WILL BE EMBEDDED A MINIMUM OF 10 FT INTO COMPETENT BEDROCK (SHALE).

THE DIAMETER OF THE DRILLED HOLE SHALL BE A MINIMUM OF 3 INCHES LARGER (ENCIRCLING THE PILE) OR, A MINIMUM OF 6 INCHES GREATER THAN THE DIAGONAL MEASUREMENT OF THE PILE.

THE ESTIMATED AND FURNISHED PILE LENGTHS CAN BE FOUND IN THE TABLE ON SHEETS 11 AND 12 WITH THE FURNISHED LENGTH GREATER THAN THE ESTIMATED LENGTH, BEAM TRIMMING IS EXPECTED AND SHALL BE INCLUDED IN THE UNIT PRICE FOR THIS ITEM.

THE COUNTY WILL PAY FOR STEEL BEAMS AT THE CONTRACT UNIT PRICE PER FOOT FURNISHED OF ITEM 507, STEEL PILES MISC.: W27X129 SPECIAL.

PLACE CLASS QC1 CONCRETE IN EACH HOLE AS BACKFILL MATERIAL.

ITEM 507 STEEL PILES, MISC.: W27X129 STEEL BEAM SPLICE - 5 EACH

IF THE FURNISHED BEAM LENGTHS ARE NOT ADEQUATE TO OBTAIN THE REQUIRED ROCK SOCKET LENGTH, SPLICE ADDITIONAL LENGTH WITH A FULL PENETRATION BUTT WELD IN ACCORDANCE WITH CMS 513.12. ANY SPLICES SHALL BE MADE NEAR THE TOP OF THE PILE, NOT NEAR THE BOTTOM WHERE THE BEAM WILL BE SITUATED IN THE ROCK SOCKET.

THE COUNTY WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE FOR EACH SPLICE OF ITEM 507, STEEL PILES MISC.: W27X129 STEEL BEAM SPLICE.

ITEM 518 - 6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN

THIS QUANTITY OF THIS ITEM SHALL INCLUDE THE EXCAVATION, BACKFILL (57 COARSE AGGREGATE), AND GEOTEXTILE FABRIC AS SHOWN ON THE SECTIONS AND TYPICAL.

ITEM 601 - DUMPED ROCK FILL, TYPE C, AS PER PLAN

THIS QUANTITY OF THIS ITEM SHALL INCLUDE THE EXCAVATION, BACKFILL, AND GEOTEXTILE FABRIC AS SHOWN ON THE SECTIONS AND TYPICAL.

ITEM 606 - GUARDRAIL, TYPE MGS

THIS QUANTITY OF THIS ITEM SHALL INCLUDE ALL CONNECTIONS TO EXISTING RUNS OF GUARDRAIL.

ITEM 511 - CLASS QC1 CONCRETE WITH QA-QC - RETAINING WALL - NO FOOTING

THIS QUANTITY OF THIS ITEM SHALL INCLUDE ELASTOMERIC BEARING MATERIAL BETWEEN TIE-IN WALL AND EXISTING STEM WALL.

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ITEM 524 DRILLED SHAFTS, AS PER PLAN

SEQUENCE OF INSTALLATION:

1. INSTALL KING PILES (PRIMARY CAISSONS) (REINFORCED WITH THE STEEL SECTIONS). THE INSTALLATION SEQUENCE SHALL BE SUCH THAT NO MORE THAN ONE DRILLED SHAFT IS INSTALLED ADJACENT TO EITHER AN OPEN DRILLED SHAFT EXCAVATION OR A DRILLED SHAFT WITH CONCRETE THAT IS LESS THAN A 24 HOUR CURE. INSTALLING THE SHAFTS IN A MANNER THAT MEETS THIS CRITERIA IS PERMITTED. (EXAMPLE: PILES 1, 5, 9, & 13 DRILLED AND POURED, THEN PILES 3, 7, 11, & 15 DRILLED AND POURED THE FOLLOWING DAY.) REPEAT THIS SEQUENCE FOR REMAINING PILES.
2. INSTALL PLUG PILES (SECONDARY CAISSONS) AFTER THE KING PILES HAVE BEEN INSTALLED AND HAVE CURED THREE DAYS, THE INSTALLATION SEQUENCE SHALL BE SUCH THAT NO MORE THAN ONE DRILLED SHAFT IS INSTALLED ADJACENT TO EITHER AN OPEN DRILLED SHAFT EXCAVATION OR A DRILLED SHAFT IN WHICH THE CONCRETE HAS A LESS THAN 24 HOUR CURE. INSTALLING THE SHAFTS IN AN ALTERNATING MANNER THAT MEETS THIS CRITERIA IS PERMITTED. (EXAMPLE: PILES 2, 6, 10, & 14 DRILLED AND POURED, THEN PILES 4, 8, 12, & 16 DRILLED AND POURED THE FOLLOWING DAY.)

PROTECTION OF UNATTENDED OPEN SHAFTS:

CARE SHALL BE EXERCISED TO COVER UNATTENDED OPEN SHAFTS. TEMPORARY COVER SHALL BE ADEQUATE STRENGTH TO PROTECT A PERSON OR ANIMAL FROM FALLING IN.

ACCESS:

ANY TEMPORARY GRADING, AGGREGATE, DRAINAGE, ETC., NEEDED FOR ACCESS TO THE WORK AREA SHALL BE INCLUDED IN THE BID FOR DRILLED SHAFTS. ANY FORM WORK REQUIRED TO CONSTRUCT THE TOPS OF THE SHAFTS SHALL BE INCLUDED IN THE BID FOR DRILLED SHAFTS.

TEMPORARY SHEETING MAY BE INSTALLED IN ORDER TO PREVENT SPOILS OR MATERIALS FROM FALLING OR BEING PLACED OUTSIDE OF THE PROVIDED WORK LIMITS. UNDER NO CIRCUMSTANCES SHOULD SPOILS, MATERIALS, OR ANY OTHER ITEM BE POSITIONED OUTSIDE OF THE WORK LIMITS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES THAT MAY OCCUR FROM SUCH A BREACH OF THE WORK LIMITS. ANY TEMPORARY SHEETING SHALL BE INCLUDED IN THE BID PRICE FOR THE DRILLED SHAFTS. IF TEMPORARY SHEETING IS USED, CONTRACTOR MUST SUBMIT DESIGN TO THE COUNTY AND TO NORFOLK SOUTHERN FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

STOCKPILING:

THE CONTRACTOR SHALL NOT STOCKPILE SOIL OR OTHER LARGE QUANTITIES OF MATERIAL AT THE TOP OF THE SLOPE. DOING SO COULD USE ADDITIONAL INSTABILITY OF THE SLOPE AND ROADWAY SURFACE. SPOILS SHOULD BE REMOVED FROM THE VICINITY OF THE SLOPE AS THE DRILLED SHAFT EXCAVATION PROGRESSES.

OBSTRUCTIONS:

THE CONTRACTOR SHOULD REVIEW THE RESULTS OF THE GEOTECHNICAL INVESTIGATION REPORT FOR ADDITIONAL INFORMATION ON GROUND AND GROUNDWATER CONDITIONS. THE CONTRACTOR SHOULD USE THIS INFORMATION TO DETERMINE IF CASING IS REQUIRED FOR SHAFT CONSTRUCTION AND IF TREMIE METHODS ARE REQUIRED FOR INSTALLATION OF CONCRETE. CASING AND/OR TREMIE METHOD OF INSTALLATION IF REQUIRED SHALL BE INCIDENTAL TO ITEMS FOR CAISSON CONSTRUCTION.

IT IS ANTICIPATED THAT FLUCTUATIONS WILL OCCUR IN THE MATERIAL COMPOSITION AND DEPTH. IF UNSUITABLE MATERIALS OR UNSUITABLE CONDITIONS ARE ENCOUNTERED DURING THE WALL CONSTRUCTION, NOTIFY THE COUNTY ENGINEER FOR FURTHER INVESTIGATION.

SEEDING AND MULCHING

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

ITEM 659, TOPSOIL	46 CY
ITEM 659, SEEDING AND MULCHING	414 SY
ITEM 659, REPAIR SEEDING AND MULCHING	21 SY
ITEM 659, INTER-SEEDING	21 SY
ITEM 659, COMMERCIAL FERTILIZER	.06 TON
ITEM 659, LIME	.09 ACRES
ITEM 659, WATER	3.35 M. GAL

APPLY SEEDING AND MULCHING 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 IN ADDITION TO DITCHES BEING CLEANED.

ESTIMATED QUANTITIES					
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
000	99902	1335	LF	STEEL PILES, W27X129 - SPECIAL	3, 11-12
201	11000	1	LS	CLEARING AND GRUBBING	2
202	23000	431	SY	PAVEMENT REMOVED	
202	38000	25	FT	GUARDRAIL REMOVED	
203	10000	134	CY	EXCAVATION	
203	35000	80	CY	GRANULAR EMBANKMENT	7
209	10000	193	FT	DITCH CLEANOUT	
301	56000	53	CY	ASPHALT CONCRETE BASE, PG64-22, (449), 4" DEPTH	7
304	20000	95	CY	AGGREGATE BASE, 6" DEPTH	7
407	10000	57	GAL	TACK COAT	
441	70000	40	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22, 3" DEPTH	7
507	00400	5	EACH	STEEL PILES, W27X129 - SPLICE	3
509	10000	3876	LB	EPOXY COATED REINFORCING STEEL	13
510	9951	399	EACH	DOWEL HOLES WITH CEMENT GROUT, AS PER PLAN	8,9
511	46012	21	CY	CLASS QC1 CONCRETE WITH QA-QC - RETAINING WALL - NO FOOTING	
518	40001	220	FT	6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN	
524	94703	628	FT	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN	3, 4, 6, 7, 11 & 12
524	94705	638	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK, AS PER PLAN	3, 4, 6, 7, 11 & 12
524	95000	609	FT	DRILLED SHAFTS, 42" DIAMETER, UNREINFORCED	3, 4, 6, 7, 11 & 12
601	27001	173	CY	DUMPED ROCK FILL, TYPE C, AS PER PLAN	3, 6, & 7
606	15050	238	FT	GUARDRAIL, TYPE MGS	3, 6, & 7
611	10201	40	FT	24" CONDUIT, TYPE A, AS PER PLAN	6, 7, 9, & 18
614	11000	1	LS	MAINTAINING TRAFFIC	5
616	10000	0.25	M. GAL.	WATER	2
623	10000	1	LS	CONSTRUCTION LAYOUT STAKES, PER PLAN	6 & 10
624	10000	1	LS	MOBILIZATION	
659	10000	414	SY	SEEDING AND MULCHING	
659	00300	46	CY	TOPSOIL	
659	14000	21	SY	REPAIR SEEDING AND MULCHING	
659	15000	21	SY	INTERSEEDING	
659	20000	0.06	TON	COMMERCIAL FERTILIZER	
659	31000	0.09	ACRES	LIME	
659	35000	3.35	M.GAL.	WATER	
690	76002	286	FT	SPECIAL - 12" COMPOST FILTER SOCK FOR PERIMETER CONTROL	6
690	76012	18	FT	SPECIAL - 12" COMPOST FILTER SOCK FOR DITCH CHECKS	6

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BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF THE PERSON OR PERSONS WHO CAN BE CONTACTED (24) HOURS PER DAY BY ODOT, THE PIKE COUNTY ENGINEER, AND ALL INTERESTED LAW ENFORCEMENT AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.







W20-H13-60

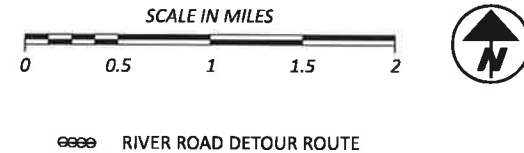
THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48" X 30" SIGNS, SIGN SUPPORTS, BARRICADES, GATES, AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATIONS AS FOLLOWS:

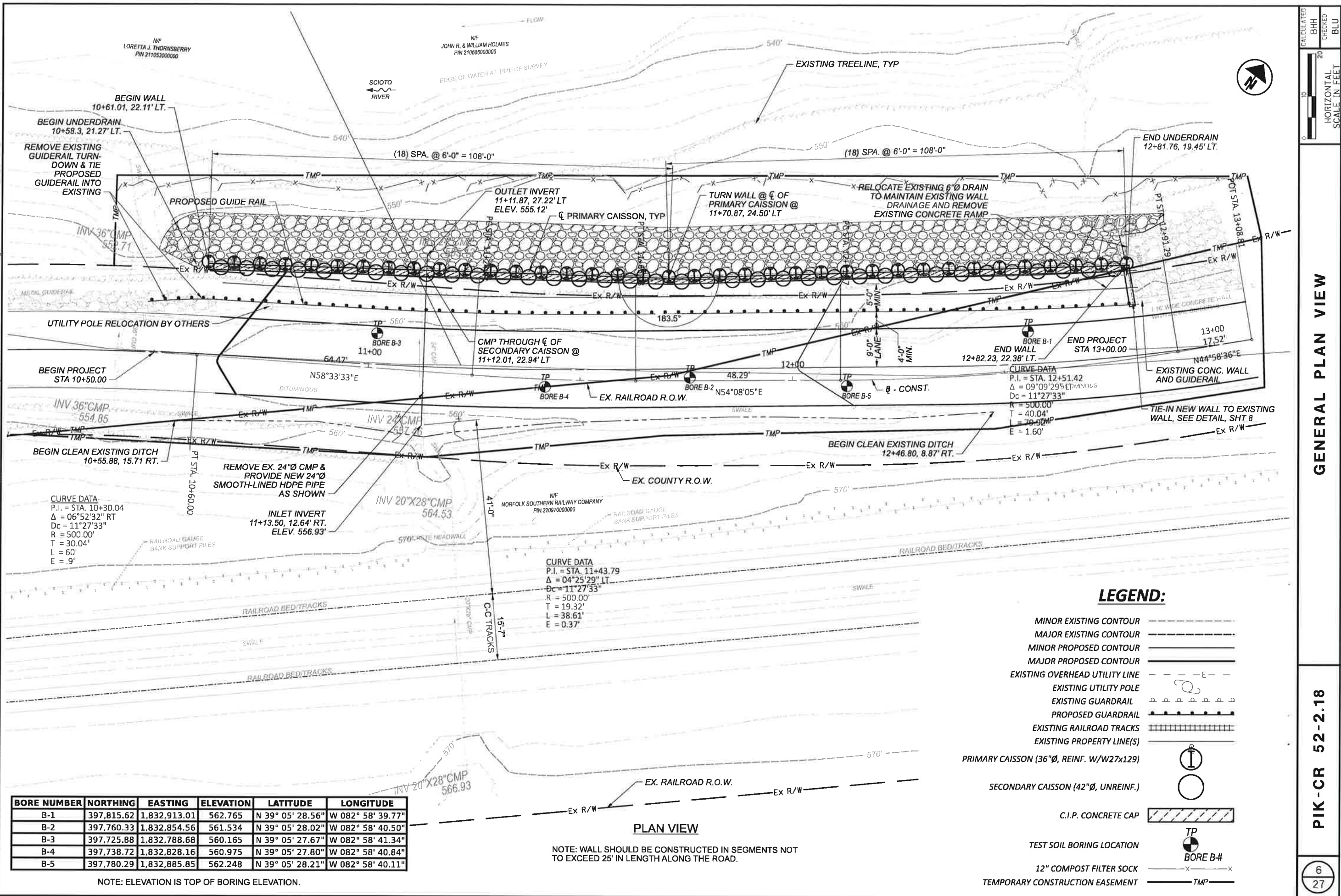
R11-3A-60 ROAD CLOSED 0.2 MILES AHEAD LOCAL TRAFFIC ONLY SIGN AND M4-10L-48 DETOUR ARROW LEFT SIGN ON TYPE III BARRICADE ON BOTH SHOULDERS OF C.R. 52 (RIVER ROAD) JUST WEST OF INTERSECTION WITH OH- 220.

THE CONTRACTOR SHALL MAINTAIN THE INGRESS AND EGRESS FOR LOCAL PROPERTY OWNERS WITHIN THE PROJECT WORK LIMITS AT ALL TIMES BY THE USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT.

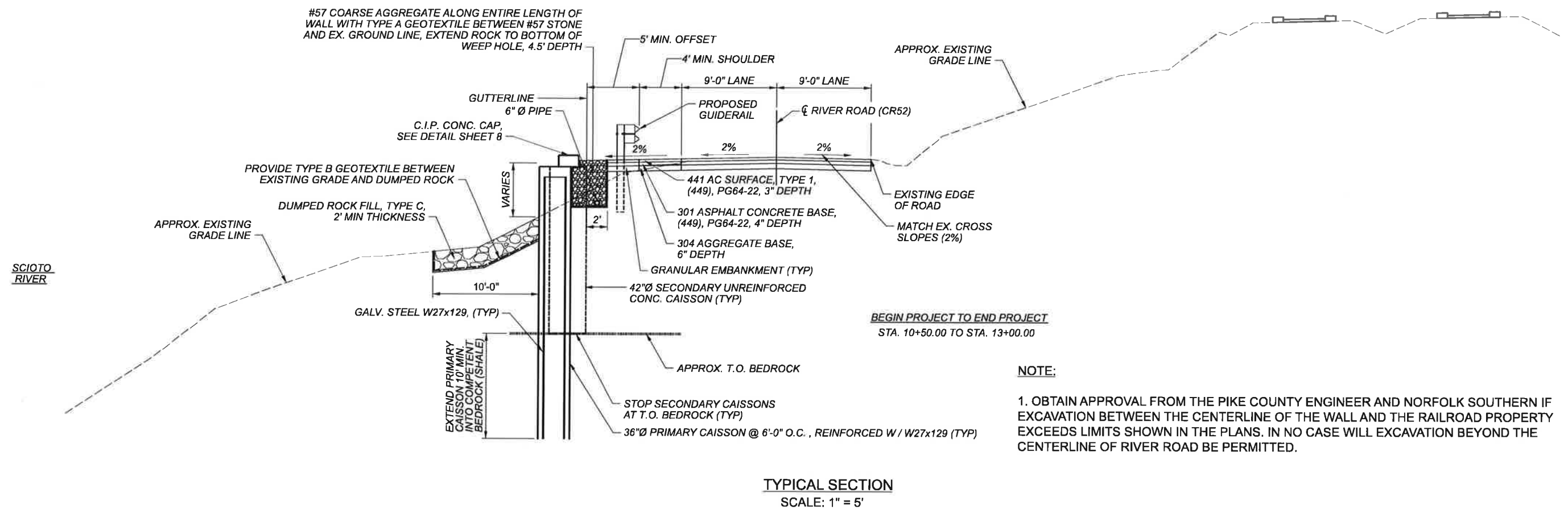
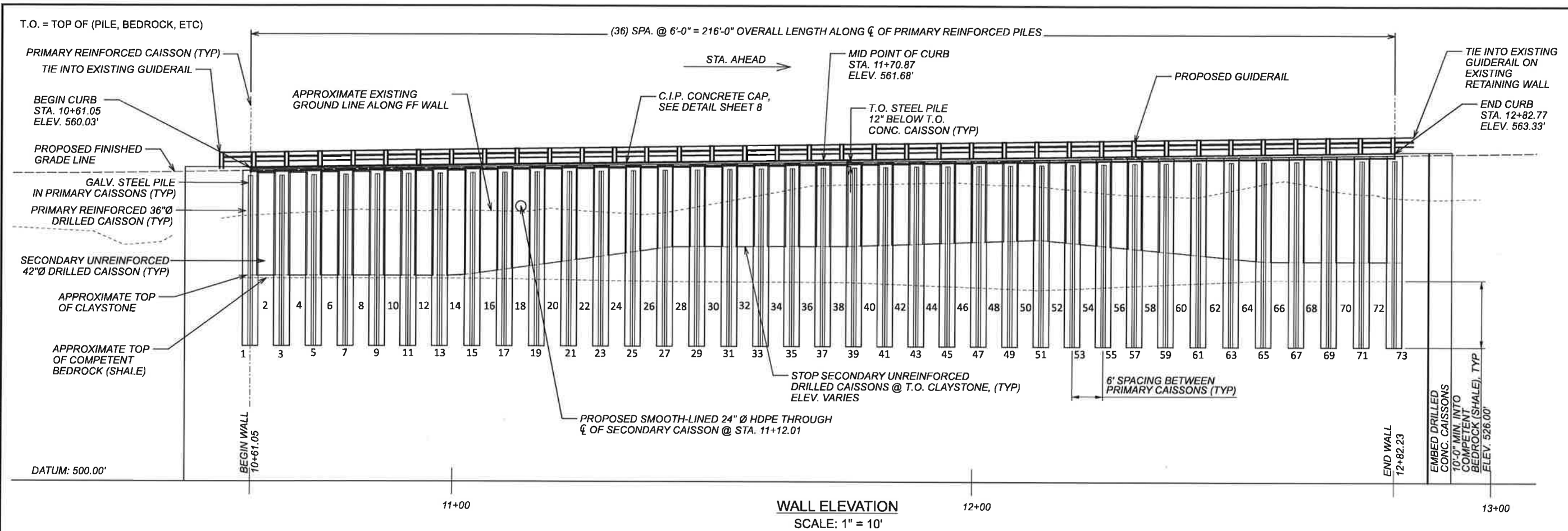
 <p>TYPE III BARRICADE (A)</p>	<p>R11-2-48</p>
 <p>(B)</p>	<p>D3-H3-48 M4-9L-30</p>
 <p>(C)</p>	<p>D3-H3-48 M4-9R-30</p>
 <p>(D)</p>	<p>D3-H3-48 M4-8-24</p>
 <p>TYPE III BARRICADE (E)</p>	<p>R11-3A-60</p>
 <p>TYPE III BARRICADE (F)</p>	<p>R11-3A-60 M4-10L-48</p>

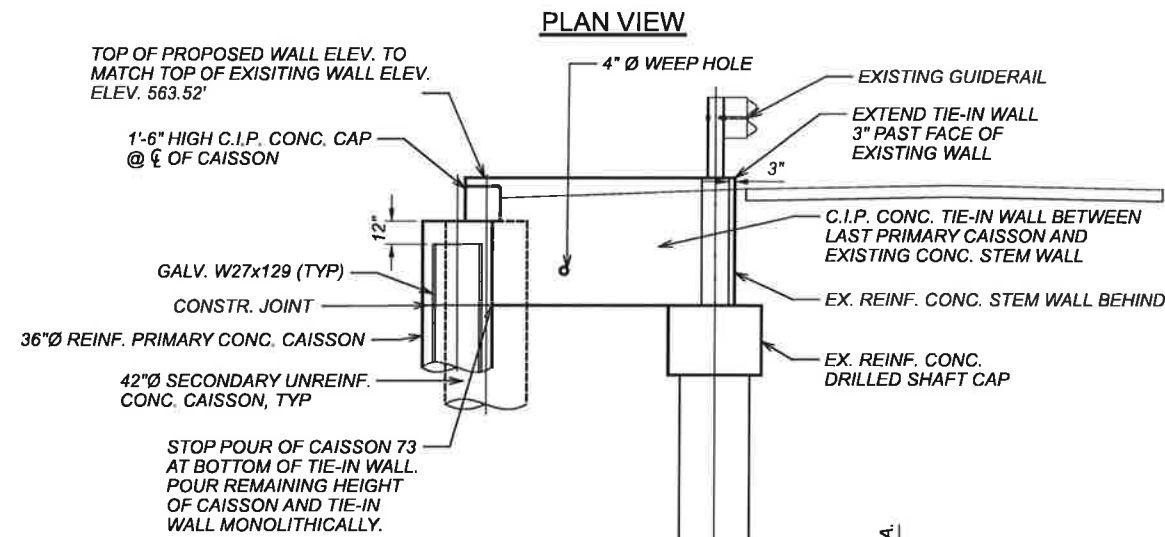
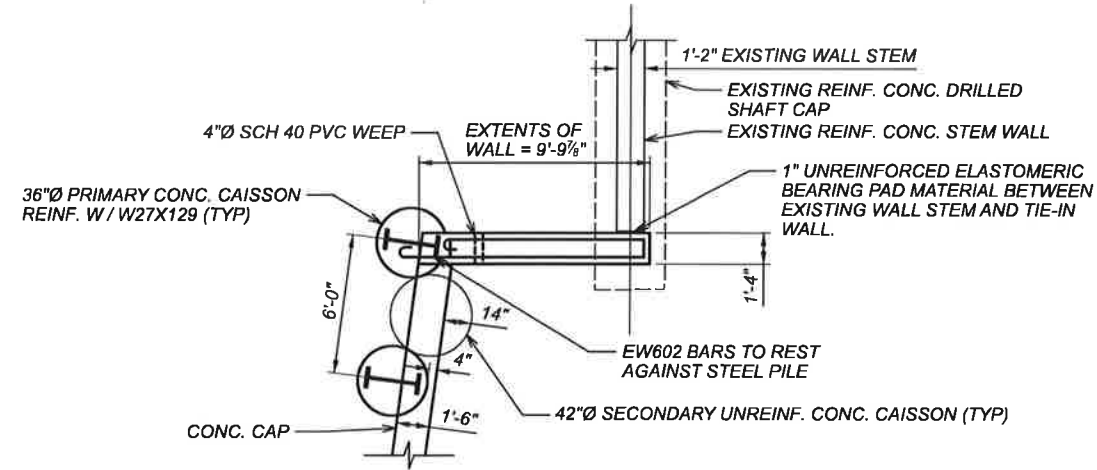


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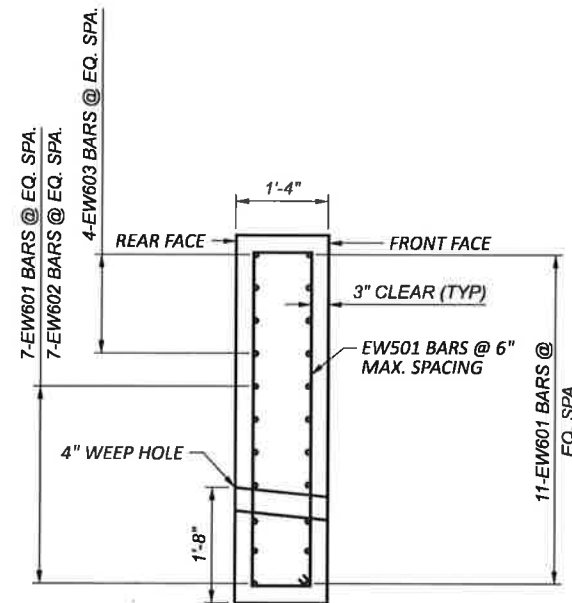
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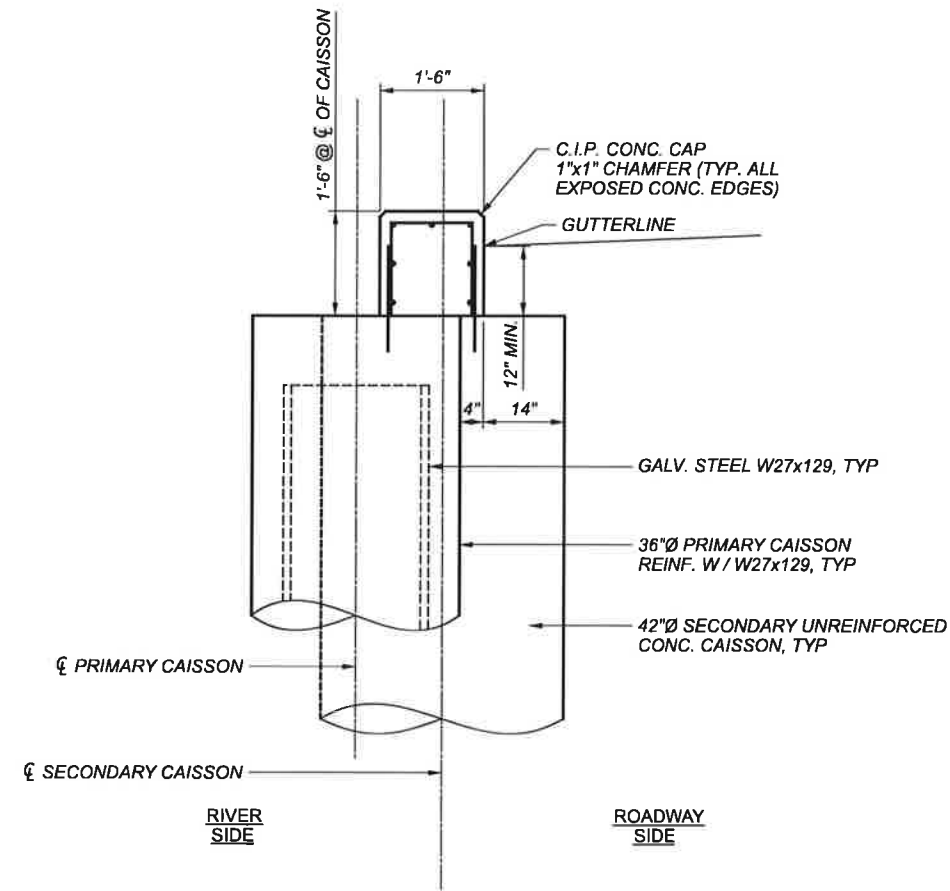


ELEVATION VIEW

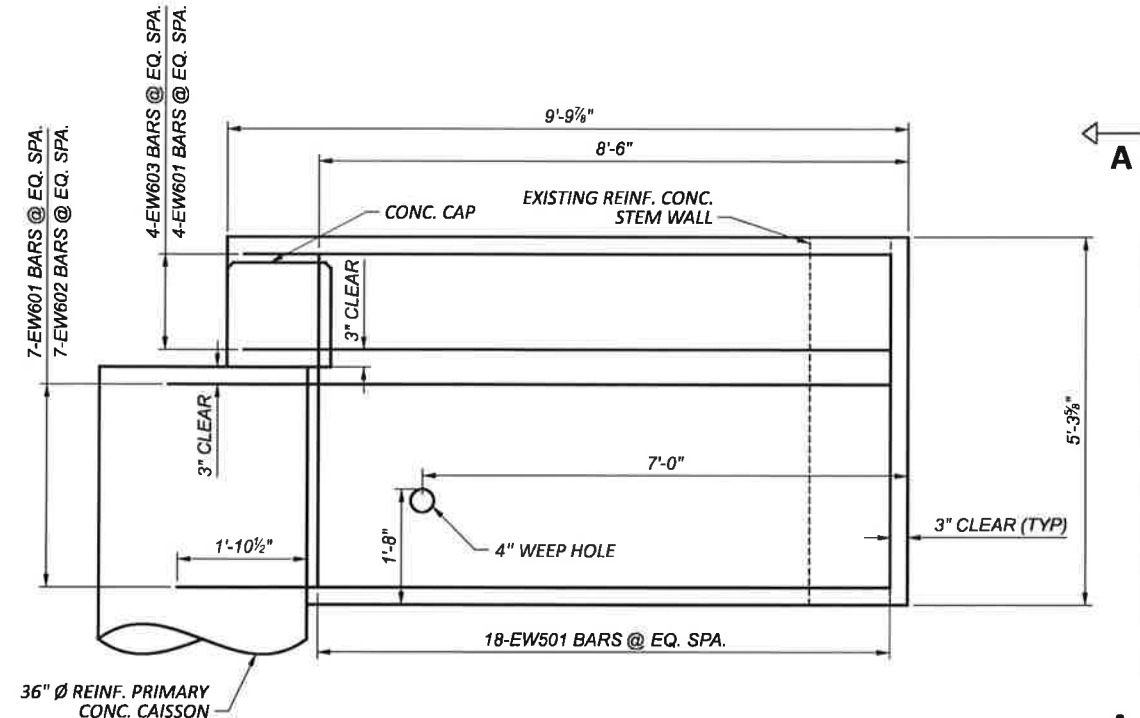
WALL TIE-IN DETAIL
SCALE: 1/4" = 1'-0"



SECTION A-A DETAIL
SCALE: 3/4" = 1'-0"



C.I.P. CAP DETAIL
SCALE: 3/4" = 1'-0"

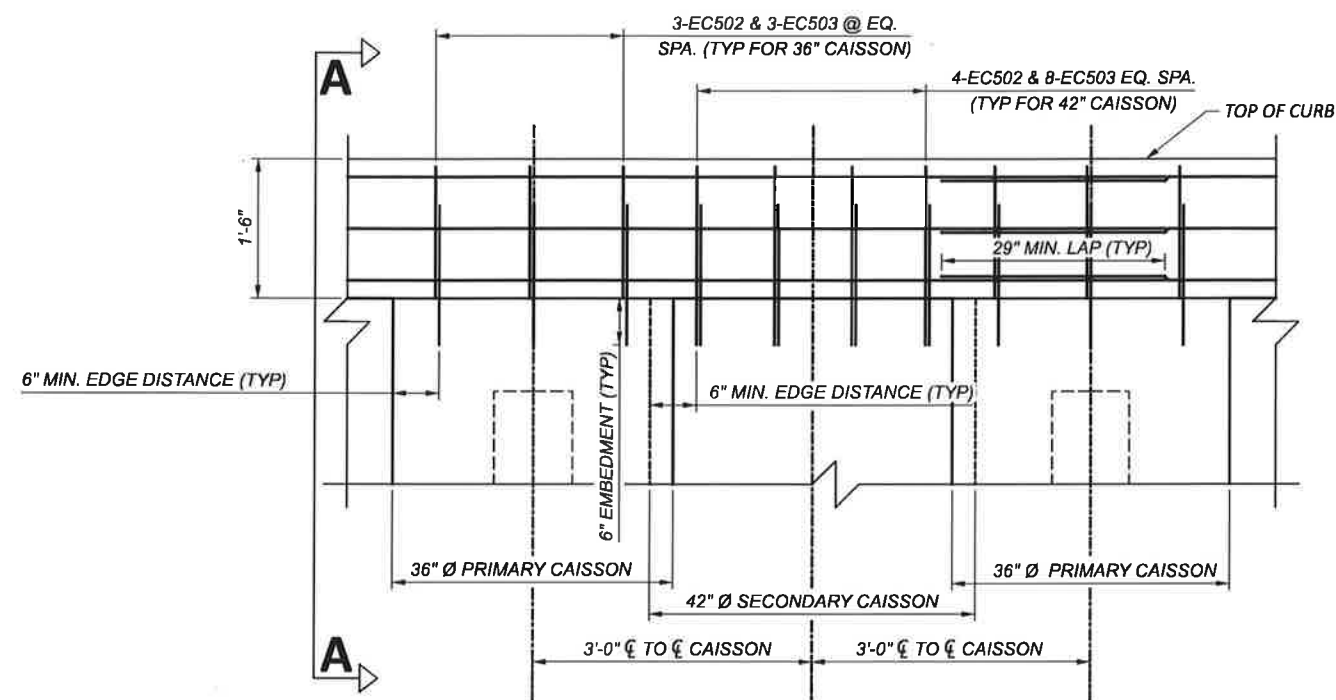


WALL TIE-IN DETAIL
SCALE: 3/4" = 1'-0"

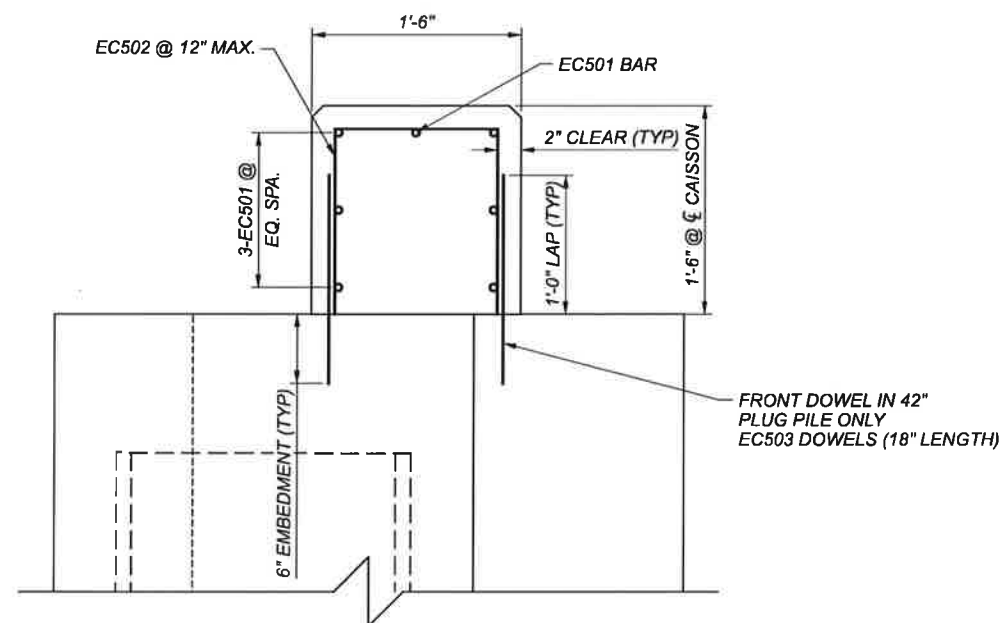
NOTES:

1. CAST 4" DIAMETER WEEPHOLE THROUGH WALL; ADJUST REINFORCEMENT AS NECESSARY.
2. CONTRACTOR TO POUR PRIMARY CAISSON 73 TO BOTTOM ELEVATION OF TIE IN WALL. POUR REMAINING HEIGHT OF CAISSON AND TIE IN WALL MONOLITHICALLY.
3. WALL HEIGHT IS BASED ON EXISTING PLANS FOR ADJACENT WALL.

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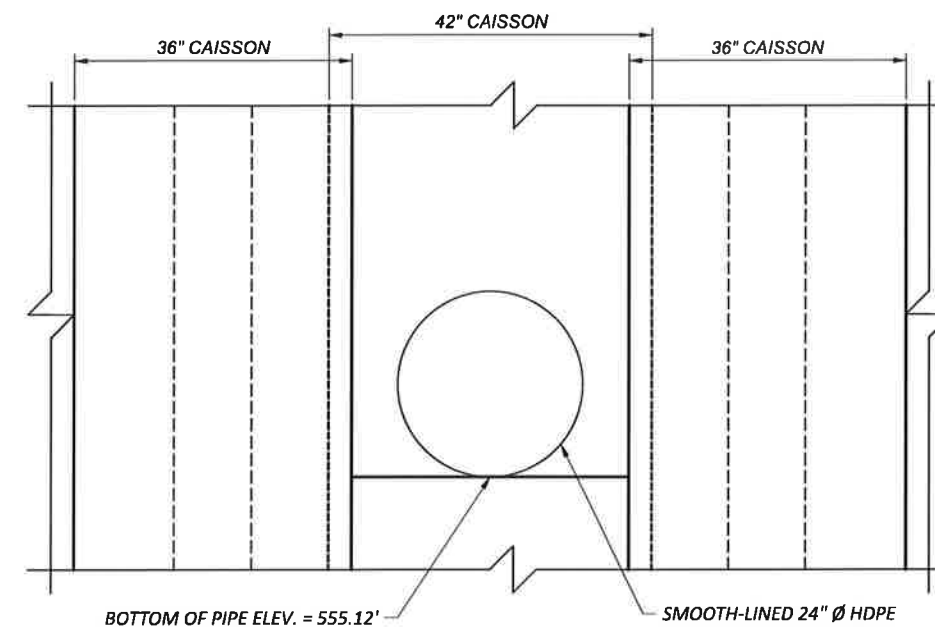
CURB ELEVATION DETAIL
SCALE: 1" = 1'-0"



SECTION A-A DETAIL
SCALE: 1/2" = 1'-0"

NOTES:

1. PROVIDE CONSTRUCTION JOINTS IN CURB AT A MAXIMUM SPACING OF 30 FEET.
2. USE CLASS QC1 CONCRETE FOR CURB.
3. CONCRETE CURB TO BE CAST IN PLACE AT A CONSTANT SLOPE BETWEEN BEGIN AND END OF CURB.



PIPE ELEVATION DETAIL
SCALE: 1" = 1'-0"

NOTES:

1. CONTRACTOR TO CAST PLUG PILE #18 TO ELEVATION 555.12'; INSTALL 24" HDPE CENTERED BETWEEN PRIMARY CAISSONS #16 AND #17 AND SECURE IN PLACE. POUR REMAINING CONCRETE FOR PLUG PILE #18 ABOVE THE 24" DIAMETER PIPE TO THE ELEVATION AS SHOWN IN TABLE ON SHEET 11.

CALCULATED
BHH
CHECKED
BLU

TYPICAL WALL DETAILS

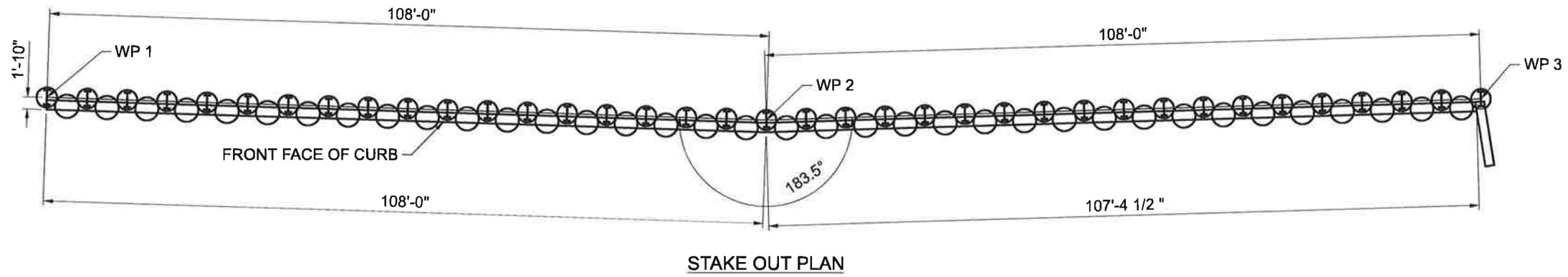
PIK-CR 52-2.18

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WORK POINTS				
WORK POINT	STATION	OFFSET	NORTHING	EASTING
1	10+61.01	22.11 LT	397716.6799	1832746.8845
2	11+70.87	24.50 LT	397776.7303	1832836.6506
3	12+82.23	22.38 LT	397842.1488	1832922.5833

NOTES:

1. CENTER TO CENTER CAISSON SPACING @ 3'-0" ALONG CHORDS.



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RETAINING WALL DATA TABLE												
DRILLED SHAFT NUMBER	DRILLED SHAFT CL STATION	DRILLED SHAFT OFFSET FROM BASELINE (FT)	GUTTERLINE ELEVATION (FT)	TOP OF DRILLED SHAFT ELEVATION (FT)	BOTTOM OF DRILLED SHAFT W/ BEAM ELEVATION (FT)	BOTTOM OF PLUG PILE ELEVATION (FT)	*ESTIMATED TOP OF BEDROCK ELEVATION, CLAYSTONE (FT)	STEEL PILES, W27X129 STEEL BEAM	STEEL PILES, W27X129 STEEL BEAM, FURNISHED	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK	DRILLED SHAFTS, 42" DIAMETER PLUG PILE, UNREINFORCED
1	10+61.01	22.11 LT	559.53	558.53	526.00		539.50	31.53	35	13.50	19.03	
2	10+64.05	20.98 LT	559.57	558.57		539.50	539.50					19.07
3	10+67.00	22.35 LT	559.62	558.62	526.00		539.50	31.62	35	13.50	19.12	
4	10+70.05	21.23 LT	559.67	558.67		539.50	539.50					19.17
5	10+73.00	22.60 LT	559.71	558.71	526.00		539.50	31.71	35	13.50	19.21	
6	10+76.04	21.47 LT	559.76	558.76		539.50	539.50					19.26
7	10+78.99	22.84 LT	559.80	558.8	526.00		539.50	31.8	35	13.50	19.30	
8	10+82.04	21.72 LT	559.85	558.85		539.50	539.50					19.35
9	10+84.99	23.09 LT	559.89	558.89	526.00		539.50	31.89	35	13.50	19.39	
10	10+88.03	21.96 LT	559.94	558.94		539.50	539.50					19.44
11	10+90.98	23.34 LT	559.99	558.99	526.00		539.50	31.99	35	13.50	19.49	
12	10+94.03	22.21 LT	560.03	559.03		539.50	539.50					19.53
13	10+96.98	23.58 LT	560.08	559.08	526.00		539.50	32.08	35	13.50	19.58	
14	11+00.02	22.45 LT	560.12	559.12		539.59	539.59					19.53
15	11+02.97	23.83 LT	560.17	559.17	526.00		539.87	32.17	35	13.87	19.30	
16	11+06.02	22.70 LT	560.22	559.22		540.29	540.29					18.93
17	11+08.97	24.07 LT	560.26	559.26	526.00		540.71	32.26	35	14.71	18.55	
18	11+12.01	22.94 LT	560.31	559.31		541.13	541.13					18.18
19	11+14.96	24.32 LT	560.35	559.35	526.00		541.56	32.35	35	15.56	17.79	
20	11+18.01	23.19 LT	560.40	559.4		541.98	541.98					17.42
21	11+20.96	24.56 LT	560.44	559.44	526.00		542.41	32.44	35	16.41	17.03	
22	11+24.00	23.43 LT	560.49	559.49		542.83	542.83					16.66
23	11+27.08	24.80 LT	560.54	559.54	526.00		543.25	32.54	35	17.25	16.29	
24	11+30.27	23.65 LT	560.58	559.58		543.67	543.67					15.91
25	11+33.39	24.97 LT	560.63	559.63	526.00		544.10	32.63	35	18.10	15.53	
26	11+36.57	23.78 LT	560.67	559.67		544.52	544.52					15.15
27	11+39.71	25.07 LT	560.72	559.72	526.00		544.95	32.72	35	18.95	14.77	
28	11+42.87	23.85 LT	560.77	559.77		545.11	545.11					14.66
29	11+46.02	25.10 LT	560.81	559.81	526.00		545.11	32.81	35	19.11	14.70	
30	11+49.17	23.83 LT	560.86	559.86		545.12	545.12					14.74
31	11+52.34	25.05 LT	560.90	559.9	526.00		545.13	32.9	35	19.13	14.77	
32	11+55.47	23.74 LT	560.95	559.95		545.14	545.14					14.81
33	11+58.65	24.92 LT	560.99	559.99	526.00		545.15	32.99	35	19.15	14.84	
34	11+61.77	23.58 LT	561.04	560.04		545.16	545.16					14.88
35	11+64.87	24.72 LT	561.09	560.09	526.00		545.17	33.09	37	19.17	14.92	
36	11+67.82	23.36 LT	561.13	560.13		545.18	545.18					14.95
37	11+70.87	24.50 LT	561.18	560.18	526.00		545.19	33.18	37	19.19	14.99	
38	11+73.90	23.33 LT	561.22	560.22		545.19	545.19					15.03
39	11+76.87	24.65 LT	561.27	560.27	526.00		545.24	33.27	37	19.24	15.03	
40	11+79.90	23.48 LT	561.32	560.32		545.35	545.35					14.97

*ESTIMATED TOP OF BEDROCK IS THE CLAYSTONE LAYER FOR ESTIMATING PURPOSES. CONTRACTOR TO DRILL TO ELEVATION 526.00 OR A MINIMUM OF 10 FEET INTO COMPETENT ROCK LAYER (SHALE). STOPPING ABOVE ELEVATION 526.00 MUST BE APPROVED BY THE ENGINEER.

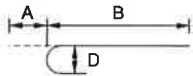
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RETAINING WALL DATA TABLE												
DRILLED SHAFT NUMBER	DRILLED SHAFT CL STATION	DRILLED SHAFT OFFSET FROM BASELINE (FT)	GUTTERLINE ELEVATION (FT)	TOP OF DRILLED SHAFT ELEVATION (FT)	BOTTOM OF DRILLED SHAFT W/ BEAM ELEVATION (FT)	BOTTOM OF PLUG PILE ELEVATION (FT)	*ESTIMATED TOP OF BEDROCK ELEVATION, CLAYSTONE (FT)	STEEL PILES, W27X129 STEEL BEAM	STEEL PILES, W27X129 STEEL BEAM, FURNISHED	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK	DRILLED SHAFTS, 42" DIAMETER PLUG PILE, UNREINFORCED
41	11+82.86	24.80 LT	561.36	560.36	526.00		545.45	33.36	37	19.45	14.91	
42	11+85.89	23.62 LT	561.41	560.41		545.56	545.56					14.85
43	11+88.86	24.95 LT	561.45	560.45	526.00		545.67	33.45	37	19.67	14.78	
44	11+91.89	23.77 LT	561.50	560.5		545.77	545.77					14.73
45	11+94.86	25.10 LT	561.54	560.54	526.00		545.88	33.54	37	19.88	14.66	
46	11+97.89	23.92 LT	561.59	560.59		545.98	545.98					14.61
47	12+00.86	25.24 LT	561.64	560.64	526.00		546.09	33.64	37	20.09	14.55	
48	12+03.89	24.07 LT	561.68	560.68		546.19	546.19					14.49
49	12+06.86	25.39 LT	561.73	560.73	526.00		546.30	33.73	37	20.30	14.43	
50	12+09.89	24.22 LT	561.77	560.77		546.40	546.40					14.37
51	12+12.93	25.54 LT	561.82	560.82	526.00		546.48	33.82	37	20.48	14.34	
52	12+16.12	24.34 LT	561.87	560.87		546.20	546.20					14.67
53	12+19.26	25.63 LT	561.91	560.91	526.00		545.92	33.91	37	19.92	14.99	
54	12+22.42	24.40 LT	561.96	560.96		545.63	545.63					15.33
55	12+25.58	25.65 LT	562.00	561	526.00		545.35	34	37	19.35	15.65	
56	12+28.73	24.37 LT	562.05	561.05		545.07	545.07					15.98
57	12+31.91	25.59 LT	562.10	561.1	526.00		544.78	34.1	37	18.78	16.32	
58	12+35.04	24.28 LT	562.14	561.14		544.50	544.50					16.64
59	12+38.23	25.45 LT	562.19	561.19	526.00		544.22	34.19	37	18.22	16.97	
60	12+41.34	24.10 LT	562.23	561.23		543.92	543.92					17.31
61	12+44.54	25.24 LT	562.28	561.28	526.00		543.63	34.28	37	17.63	17.65	
62	12+47.64	23.85 LT	562.32	561.32		543.33	543.33					17.99
63	12+50.85	24.95 LT	562.37	561.37	526.00		543.03	34.37	37	17.03	18.34	
64	12+53.93	23.53 LT	562.42	561.42		542.74	542.74					18.68
65	12+57.15	24.59 LT	562.46	561.46	526.00		542.44	34.46	37	16.44	19.02	
66	12+60.20	23.13 LT	562.51	561.51		542.40	542.40					19.11
67	12+63.44	24.15 LT	562.56	561.56	526.00		542.40	34.56	37	16.40	19.16	
68	12+66.47	22.66 LT	562.60	561.6		542.40	542.40					19.20
69	12+69.72	23.63 LT	562.65	561.65	526.00		542.40	34.65	37	16.40	19.25	
70	12+72.73	22.11 LT	562.69	561.69		542.40	542.40					19.29
71	12+75.99	23.05 LT	562.74	561.74	526.00		542.40	34.74	37	16.40	19.34	
72	12+78.97	21.48 LT	562.78	561.78		542.40	542.40					19.38
73	12+82.23	22.38 LT	562.83	561.83	526.00		542.40	34.83	37	16.40	19.43	
TOTALS =								1228	1335	638	628	609

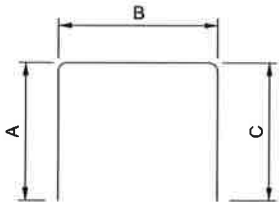
*ESTIMATED TOP OF BEDROCK IS THE CLAYSTONE LAYER FOR ESTIMATING PURPOSES. CONTRACTOR TO DRILL TO ELEVATION 526.00 OR A MINIMUM OF 10 FEET INTO COMPETENT ROCK LAYER (SHALE). STOPPING ABOVE ELEVATION 526.00 MUST BE APPROVED BY THE ENGINEER.

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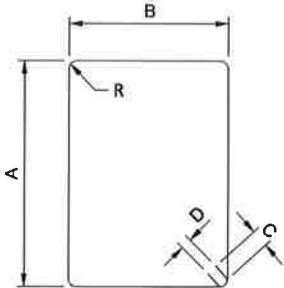
REINFORCEMENT BAR SCHEDULE											
(FOR INFORMATION ONLY)											
MARK	SIZE	QUANTITY	LENGTH/DIAMETER	TYPE	A	B	C	D	E	R	REMARKS
EW501	5	18	11'-10 1/2"	3	4'-9 5/8"	0'-10"	0'-3 3/4"	0'-2 1/2"		0'-1 1/4"	
EW601	6	11	9'-1"	1	0'-8"	8'-5"		0'-4 1/2"			
EW602	6	7	11'-1"	1	0'-8"	10'-5"		0'-4 1/2"			
EW603	6	4	9'-4"	STR							
EC501	5	49	33'-0"	1							BEND IN FIELD
EC502	5	255	3'-10"	2	1'-4"	1'-2"	1'-4"				
EC503	5	399	1'-6"	STR							



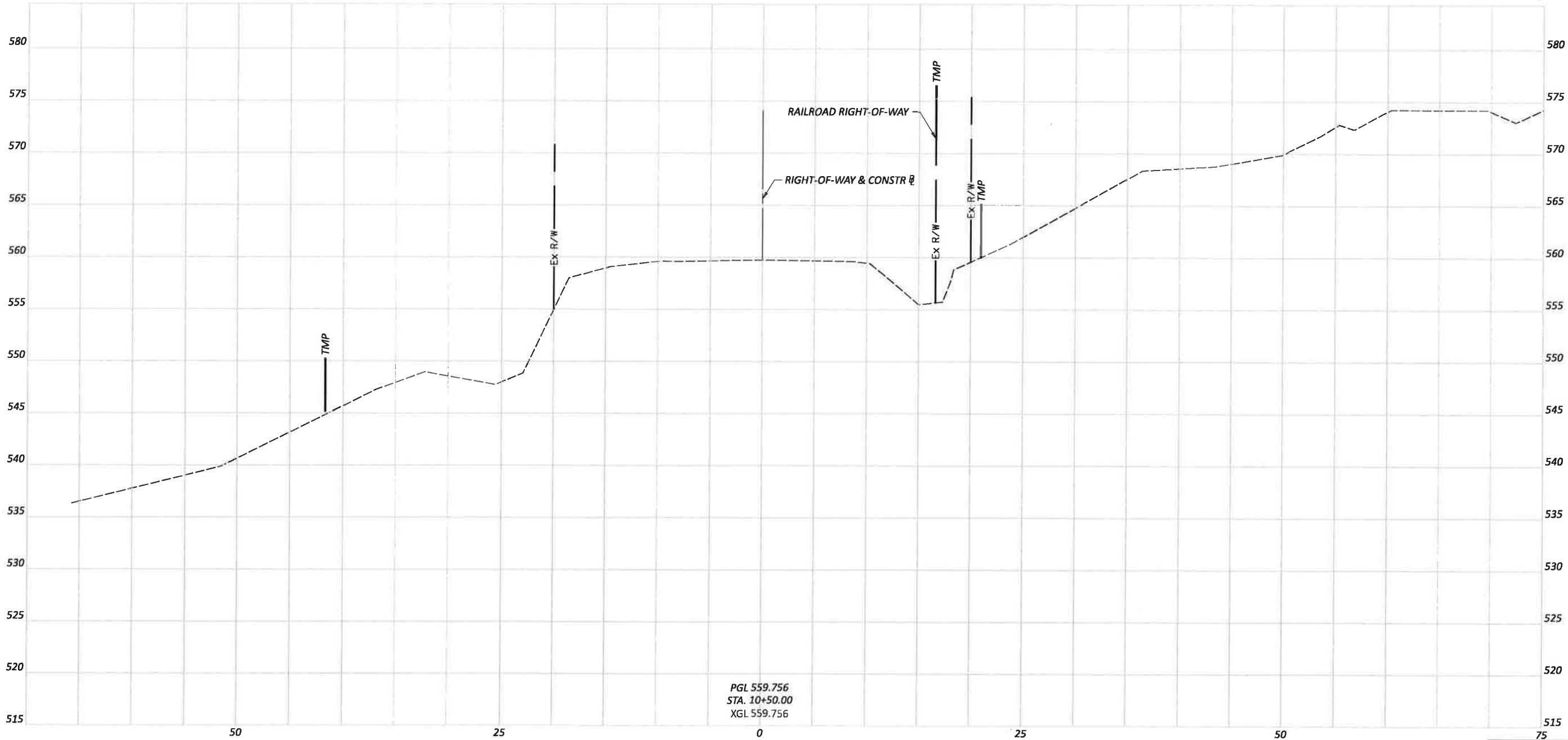
TYPE 1



TYPE 2



TYPE 3



CROSS SECTION
STA 10+50.00

DESIGN AGENCY

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SHEAFFER
ENG.

DESIGNER

KMM

REVIEWER

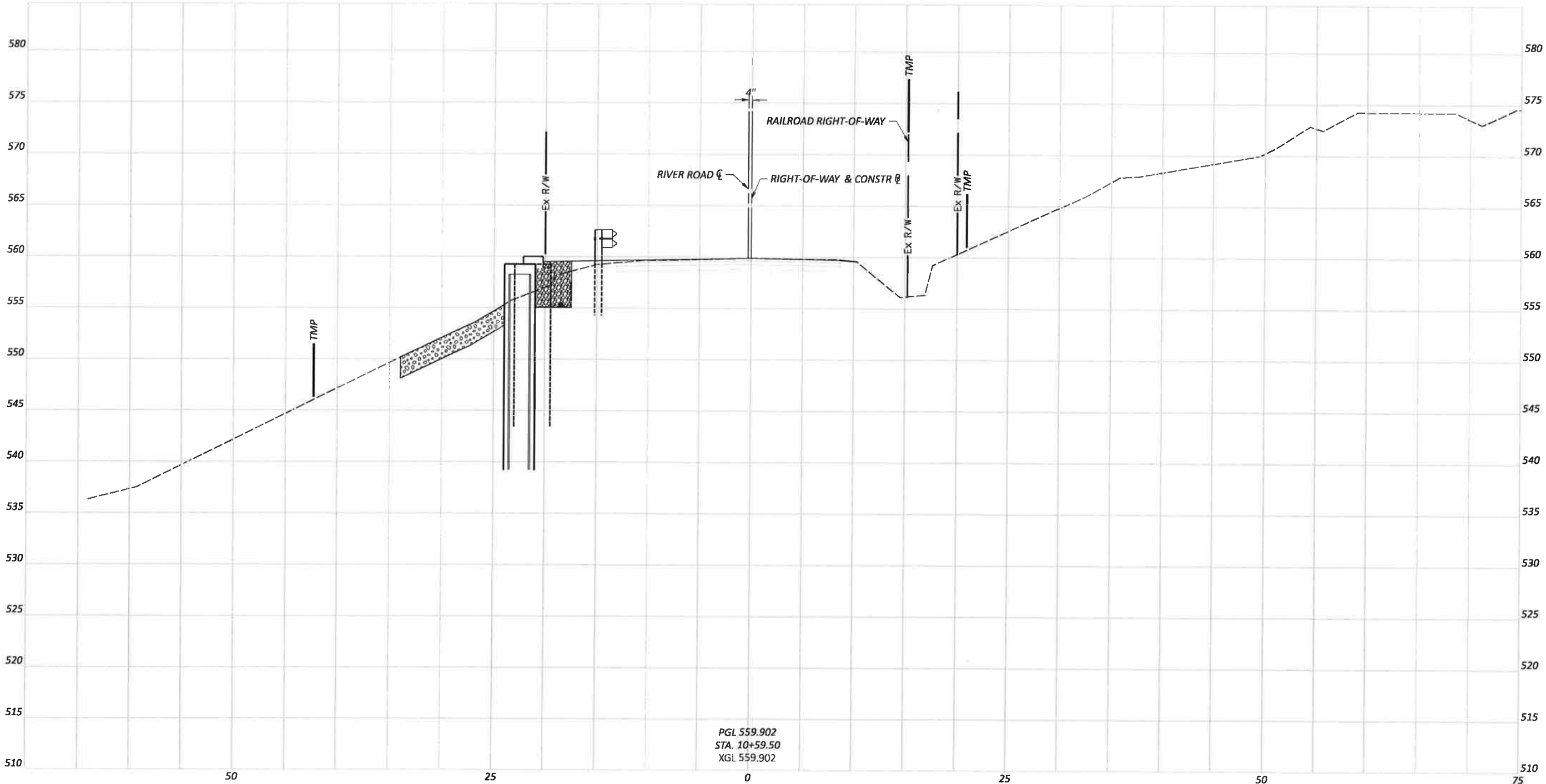
MDC 6-18-2025

PROJECT ID

22-330

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SHEET	TOTAL
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CROSS SECTION
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DESIGN AGENCY

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SHEAFFER
ENG.

DESIGNER

KMM

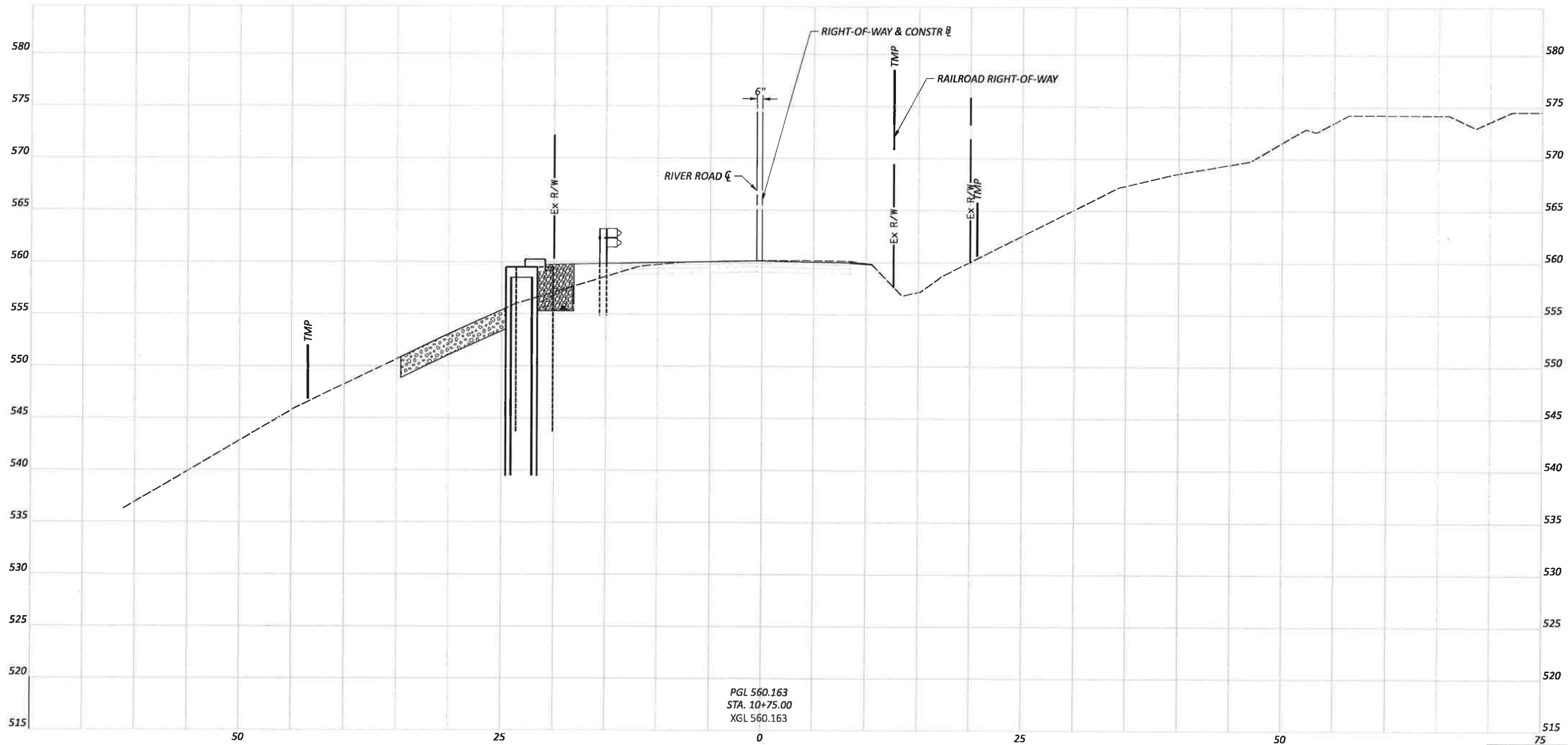
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MDC 6-18-2025

PROJECT ID

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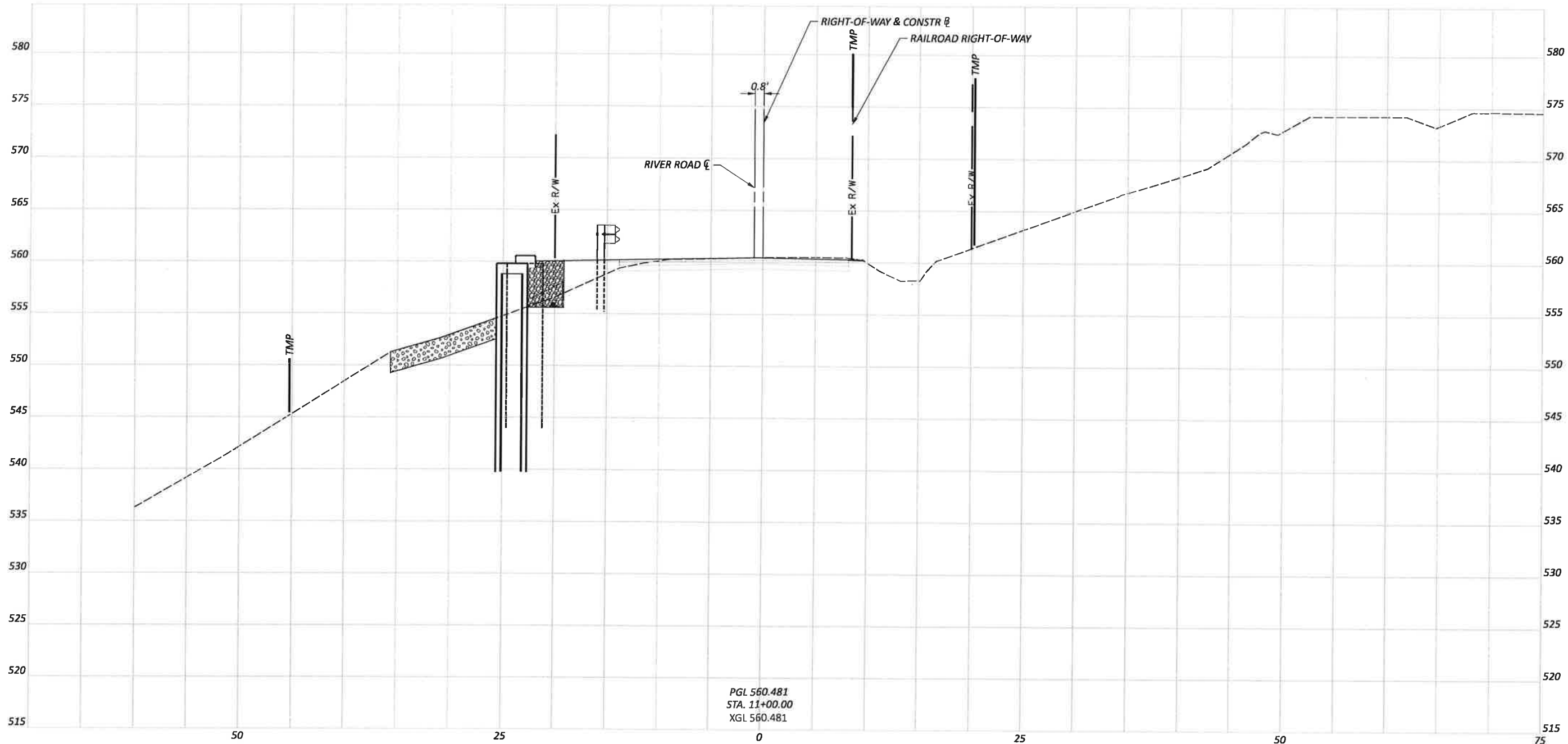
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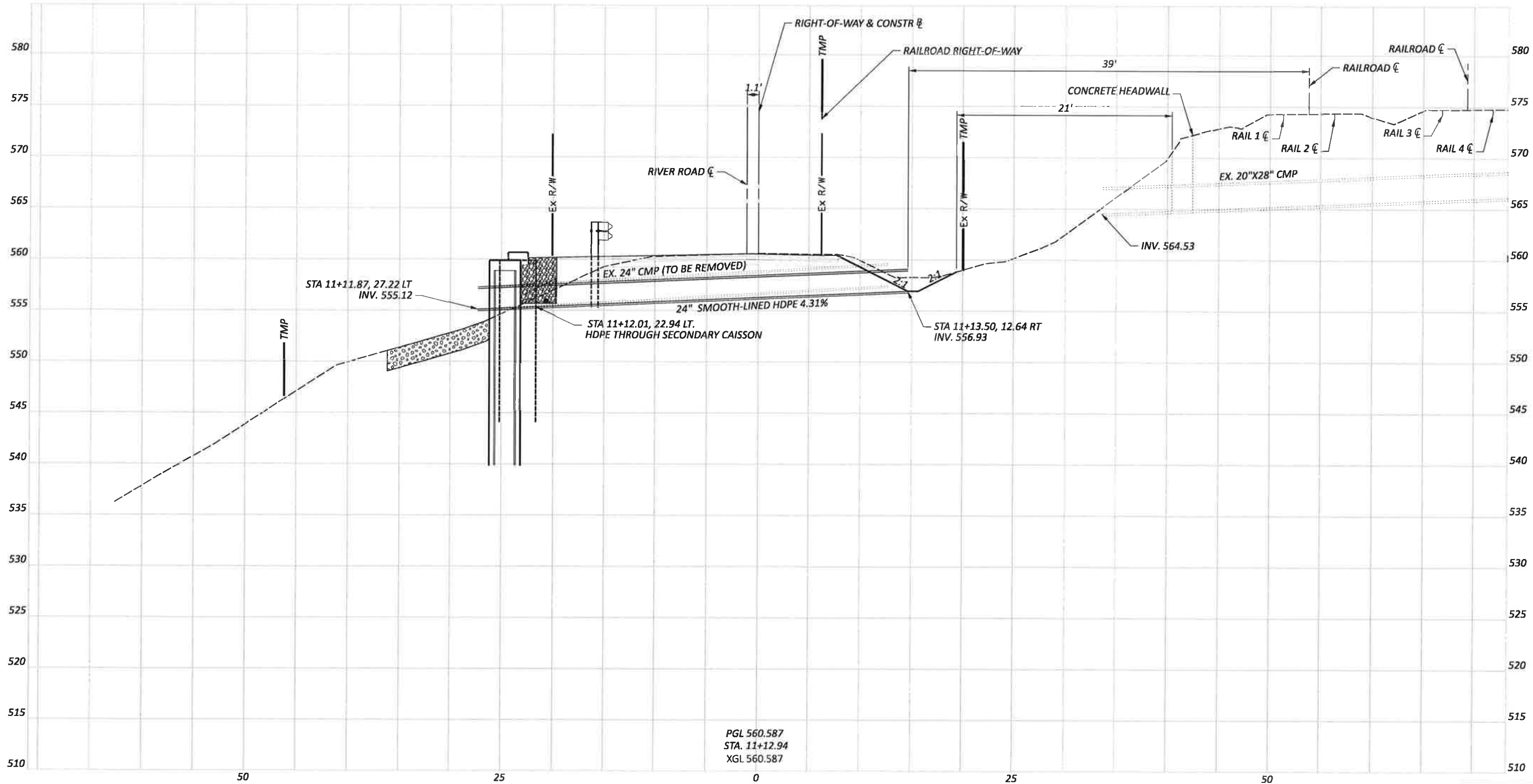
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STAHL SHEAFFER ENG.
DESIGNER
KMM
REVIEWER
MDC 6-18-2025
PROJECT ID
22-330

Sheet Totals			22-330	
Seeding	Cut	Fill	SHEET	TOTAL
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CROSS SECTION
STA 11+00.00

DESIGN AGENCY
STAHL SHEAFFER ENG.
DESIGNER
KMM
REVIEWER
MDC 6-18-2025
PROJECT ID
22-330
Sheet Totals
Seeding Cut Fill SHEET TOTAL
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CROSS SECTION
STA 11+12.94

DESIGN AGENCY

STAHL
SHEAFFER
ENG.

DESIGNER

KMM

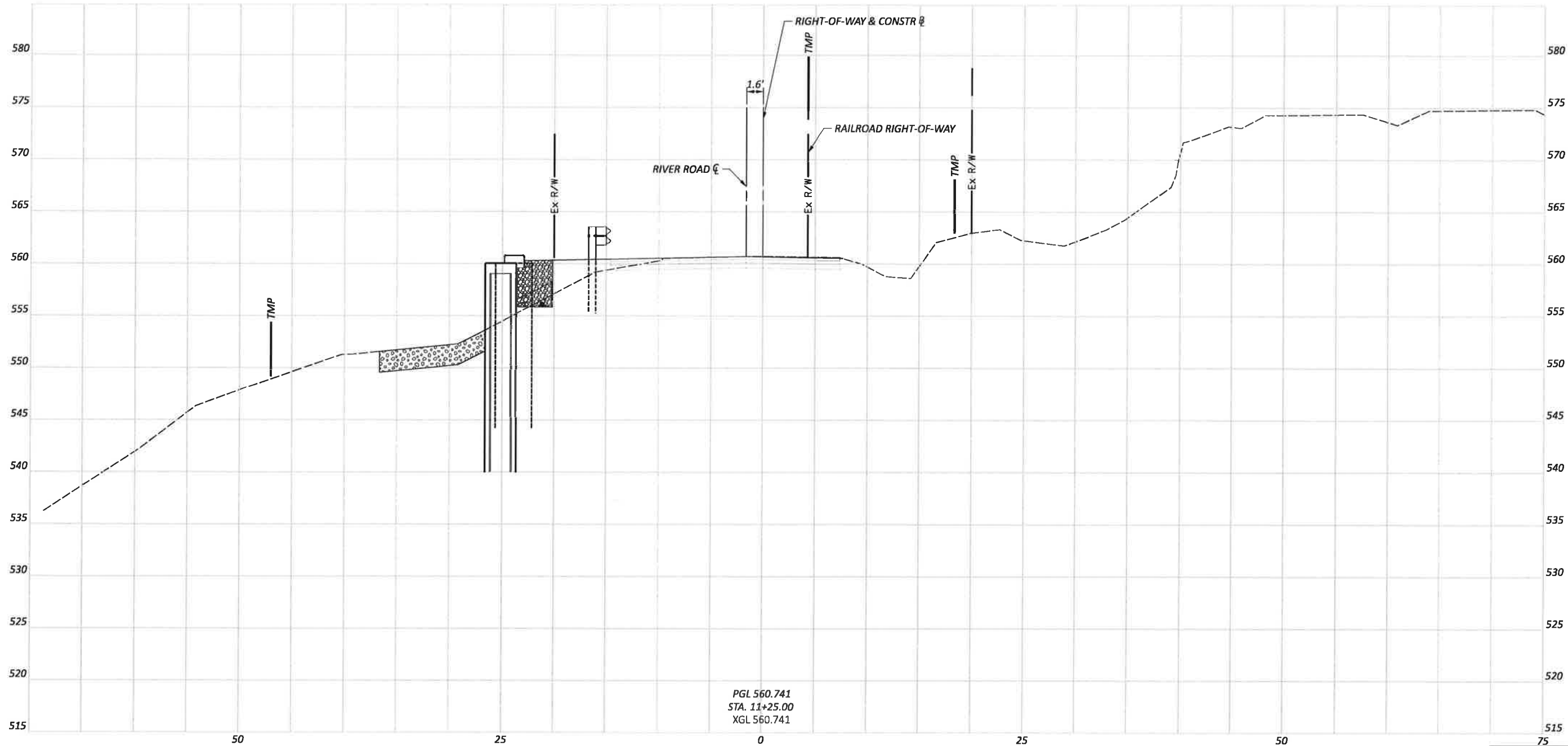
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MDC 6-18-2025

PROJECT ID

22-330

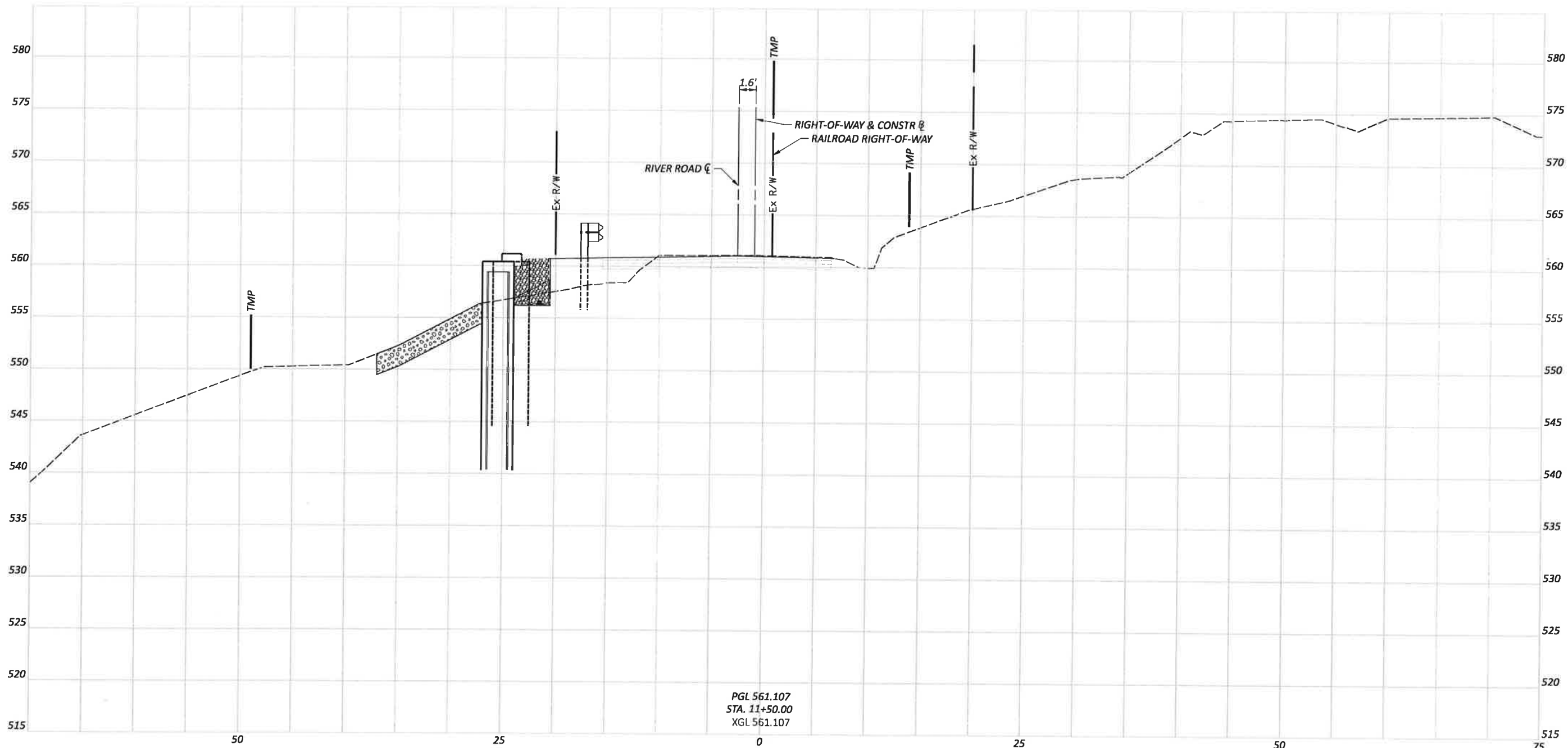
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Seeding	Cut	Fill		
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CROSS SECTION
STA 11+25.00

DESIGN AGENCY
STAHL SHEAFFER ENG.
DESIGNER
KMM
REVIEWER
MDC 6-18-2025
PROJECT ID
22-330

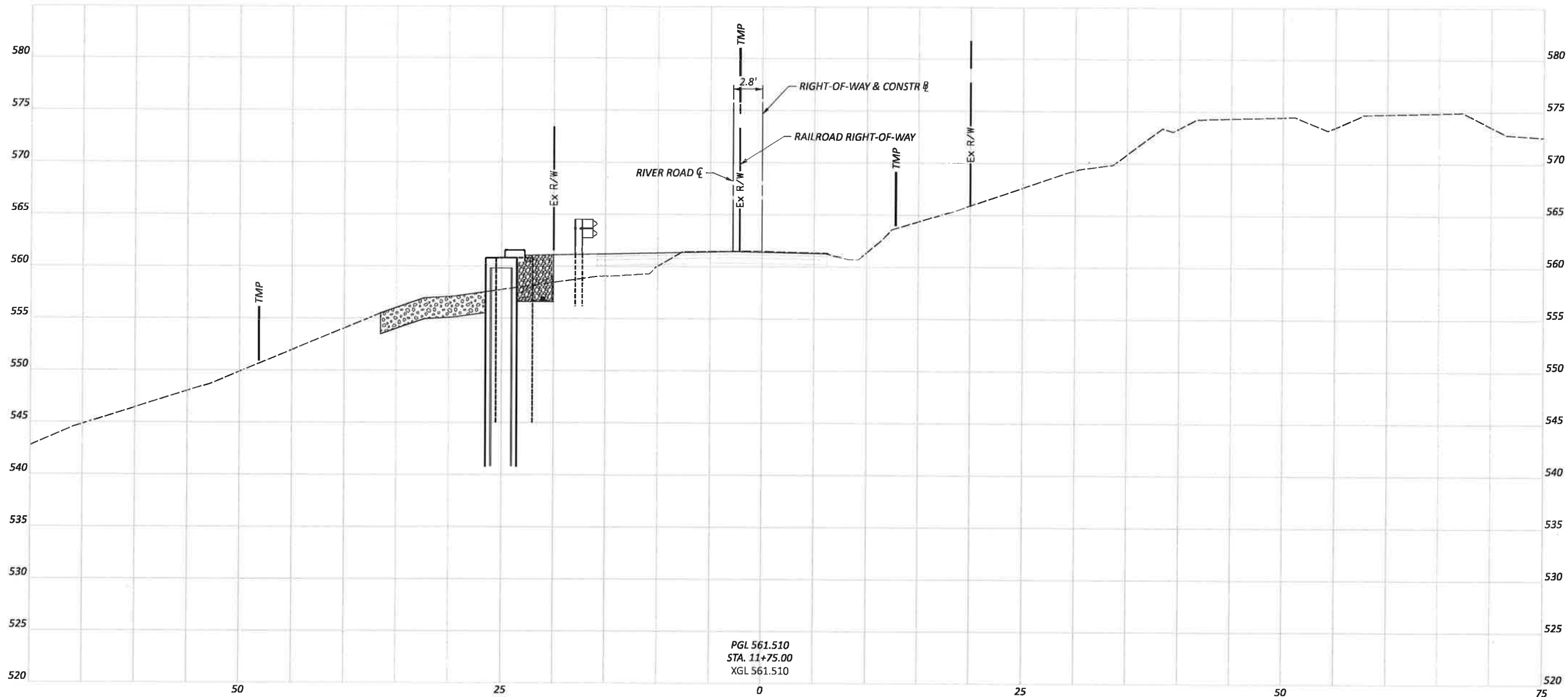
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CROSS SECTION
STA 11+50.00

DESIGN AGENCY
STAHL SHEAFFER ENG.
DESIGNER
KMM
REVIEWER
MDC 6-18-2025
PROJECT ID
22-330

Sheet Totals			22-330	
Seeding	Cut	Fill	SHEET	TOTAL
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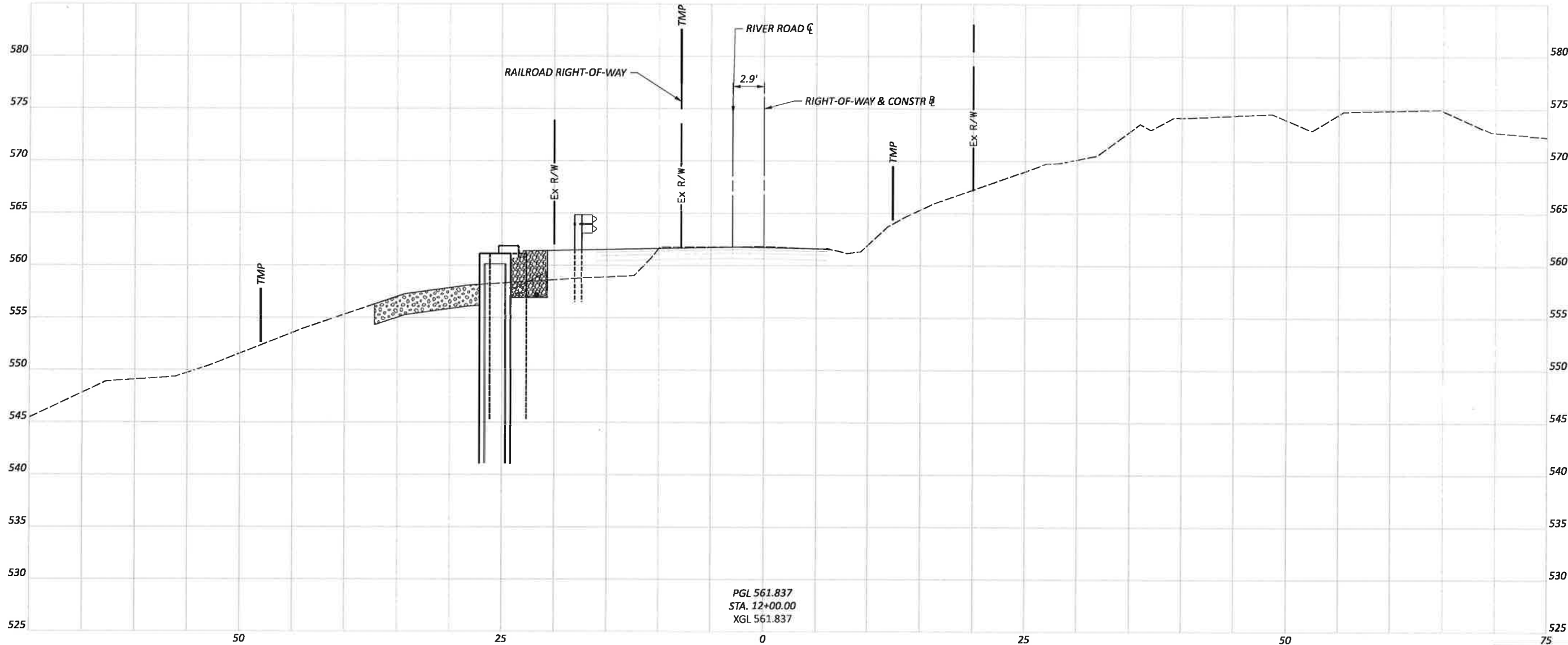


CROSS SECTION
STA 11+75.00

DESIGN AGENCY
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SHEAFFER
ENG.

DESIGNER
KMM
REVIEWER
MDC 6-18-2025
PROJECT ID

Sheet Totals			22-330	
Seeding	Cut	Fill	SHEET	TOTAL
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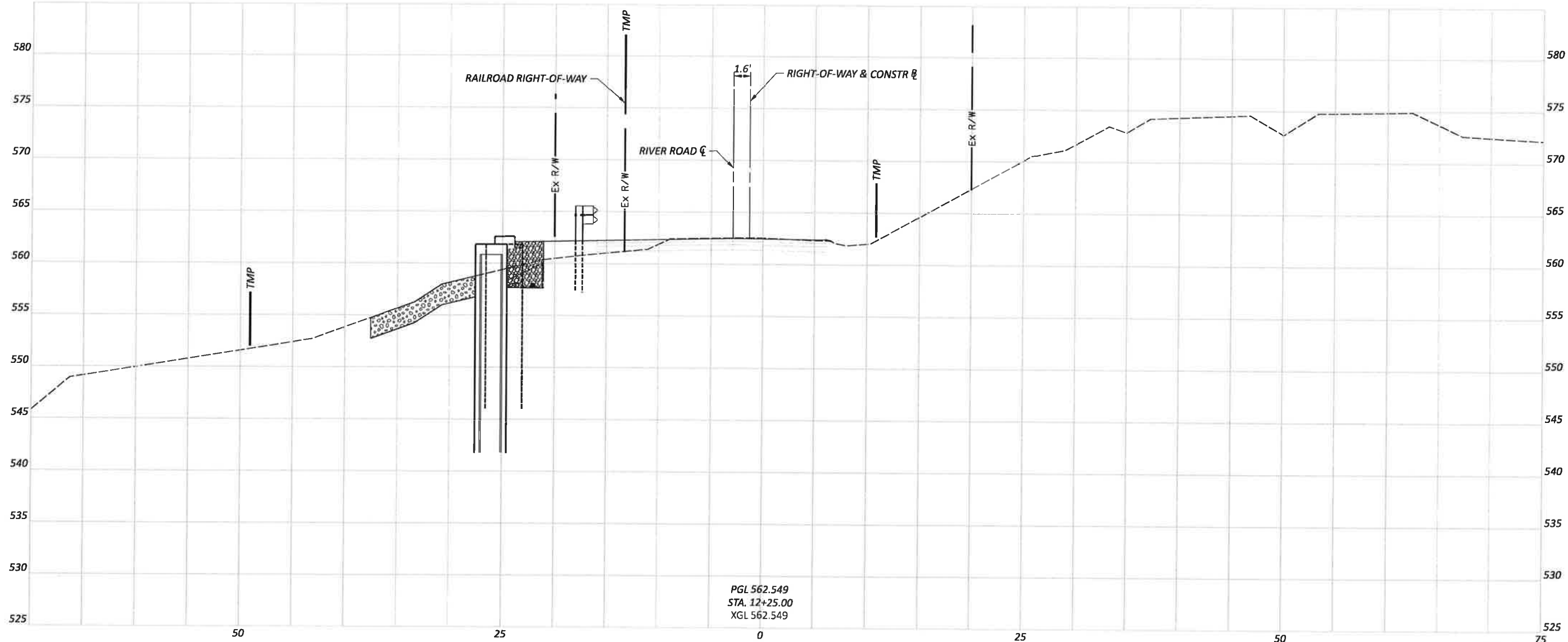


PGL 561.837
STA. 12+00.00
XGL 561.837

Sheet Totals			
Seeding	Cut	Fill	
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DESIGN AGENCY	STAHL SHEAFFER ENG.
DESIGNER	KMM
REVIEWER	MDC 6-18-2025
PROJECT ID	22-330
SHEET	22
TOTAL	27

CROSS SECTION
STA 12+00.00



CROSS SECTION
STA 12+25.00

DESIGN AGENCY

STAHL
SHEAFFER
ENG.

DESIGNER

KMM

REVIEWER

MDC 6-18-2025

PROJECT ID

22-330

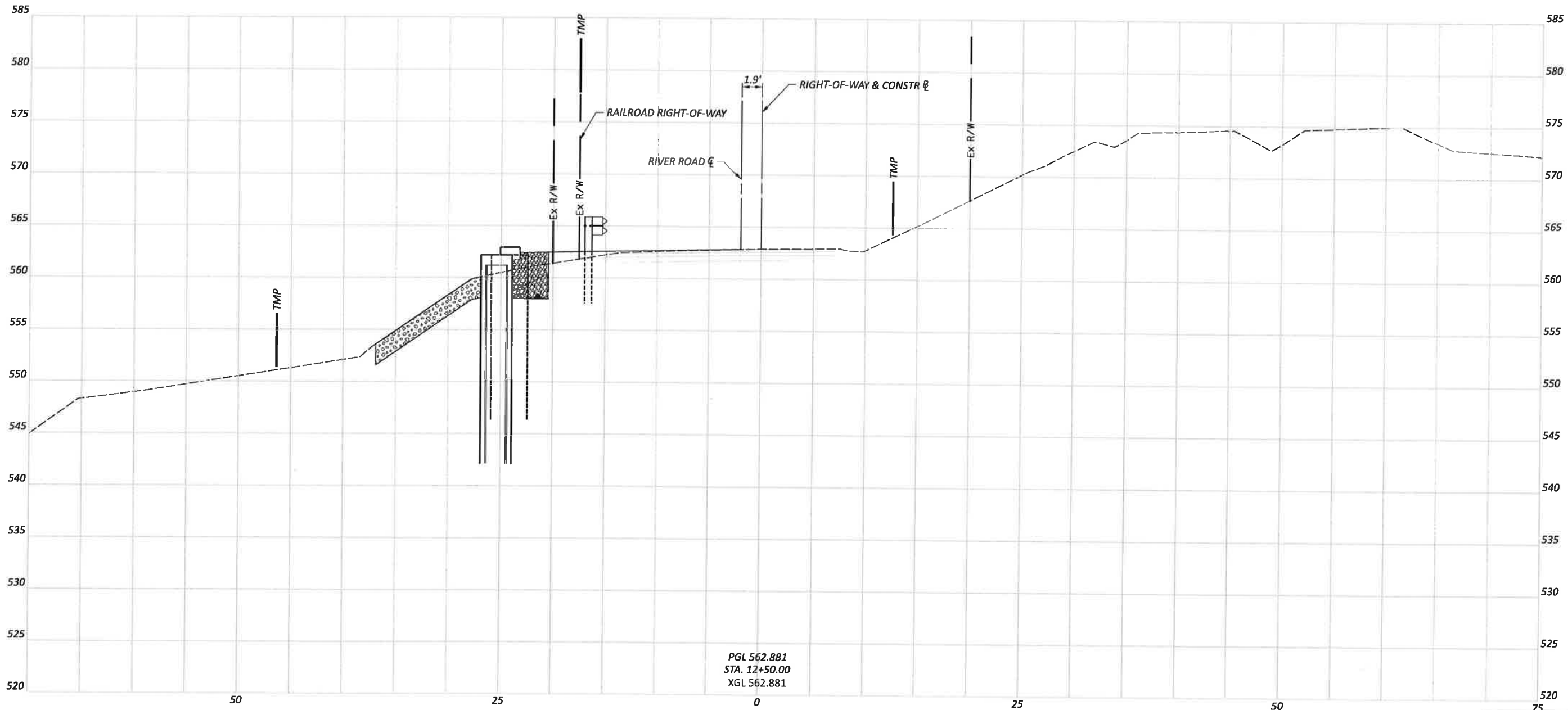
Sheet Totals

Seeding Cut Fill

13.56 8.05

SHEET TOTAL

23 27



CROSS SECTION
STA 12+50.00

DESIGN AGENCY

STAHL
SHEAFFER
ENG.

DESIGNER

KMM

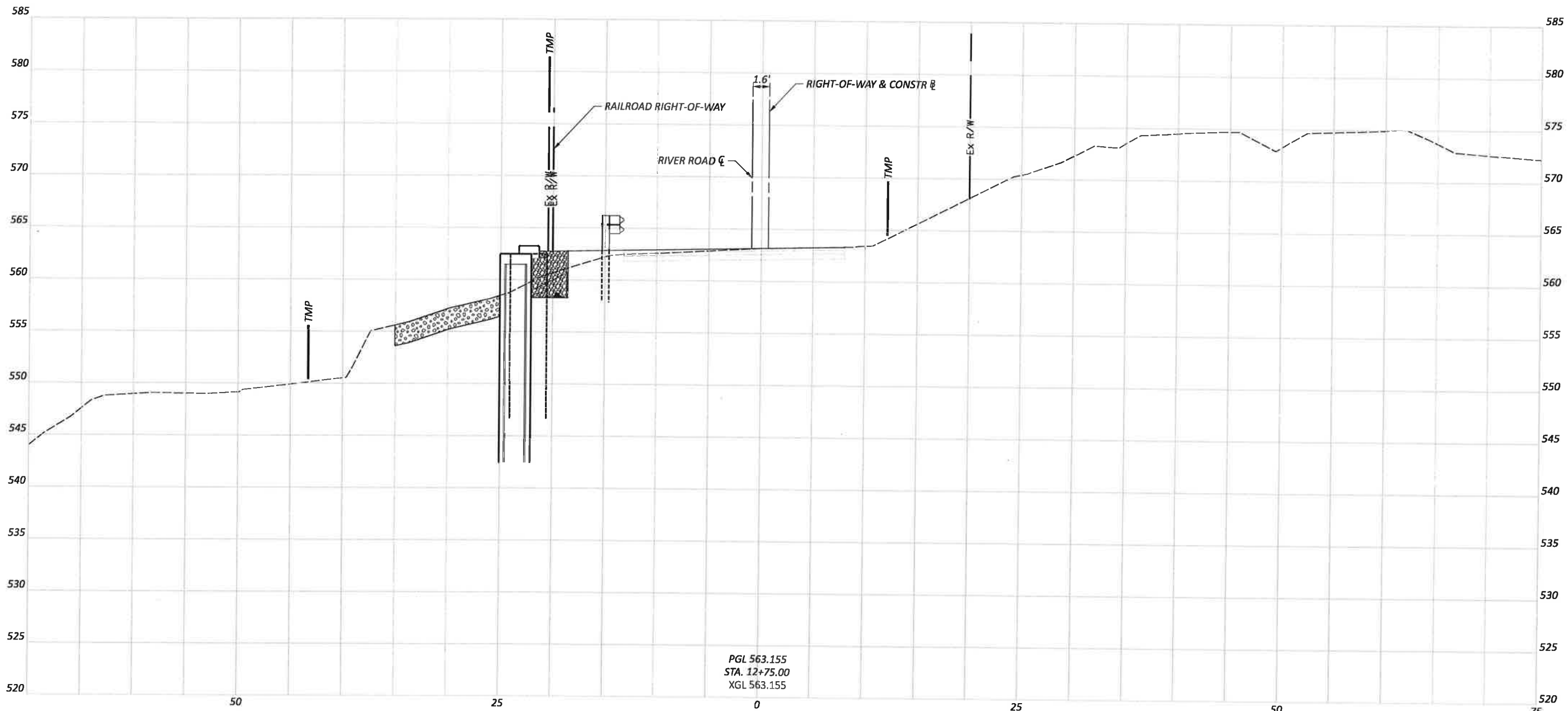
REVIEWER

MDC 6-18-2025

PROJECT ID

22-330

Sheet Totals			22-330	
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CROSS SECTION
STA 12+75.00

DESIGN AGENCY

STAHL
SHEAFFER
ENG.

DESIGNER

KMM

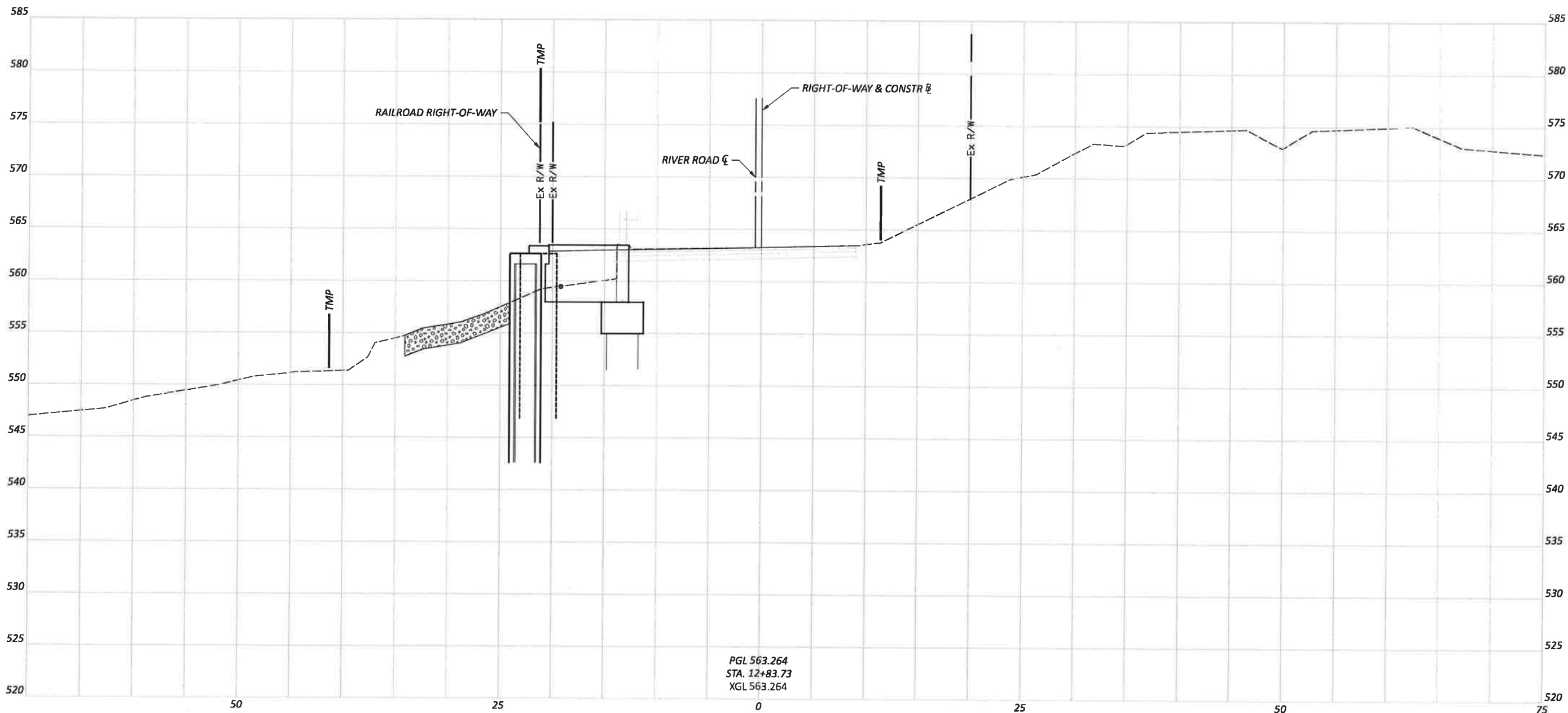
REVIEWER

MDC 6-18-2025

PROJECT ID

22-330

Sheet Totals			SHEET TOTAL	
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PGL 563.264
STA. 12+83.73
XGL 563.264

CROSS SECTION
STA 12+83.73

DESIGN AGENCY

STAHL
SHEAFFER
ENG.

DESIGNER

KMM

REVIEWER

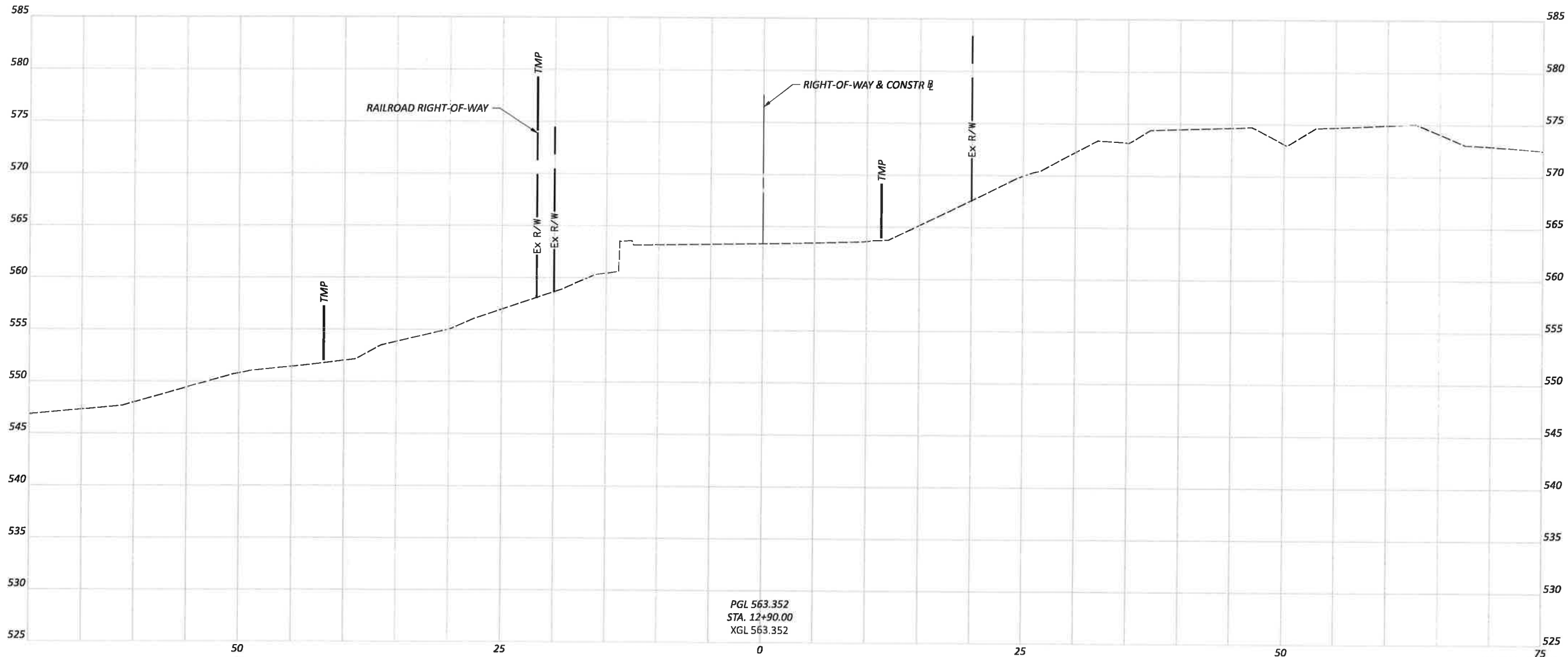
MDC 6-18-2025

PROJECT ID

22-330

Sheet Totals		
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SHEET	TOTAL
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PGL 563.352
STA. 12+90.00
XGL 563.352

CROSS SECTION
STA 12+90.00

DESIGN AGENCY
STAHL SHEAFFER ENG.
DESIGNER
KMM
REVIEWER
MDC 6-18-2025
PROJECT ID
22-330

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	27	27
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