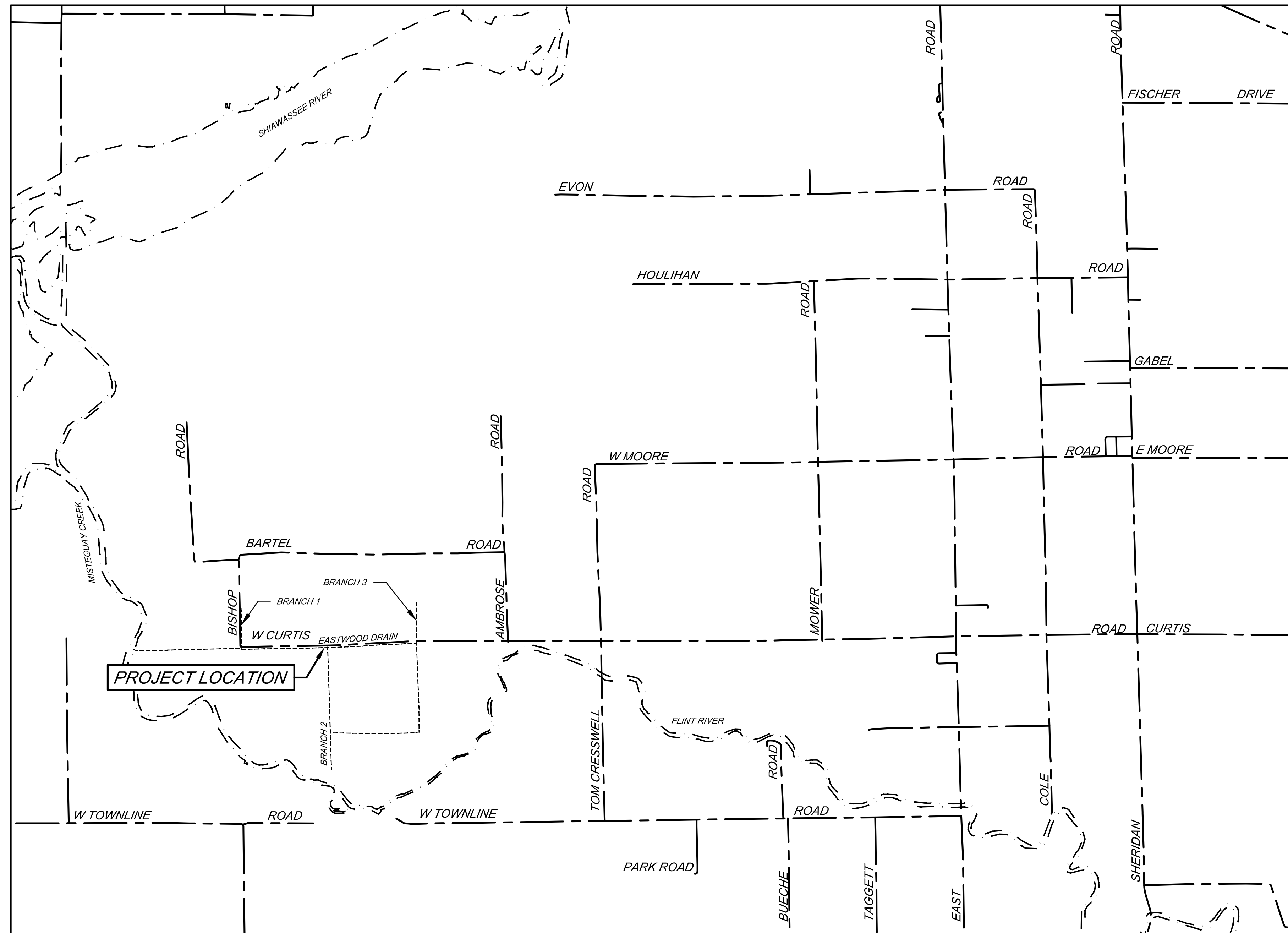


EASTWOOD DRAIN OPEN CHANNEL - DIVISION II

SAGINAW COUNTY PUBLIC WORKS COMMISSIONER - BRIAN J. WENDLING

PLAN INDEX

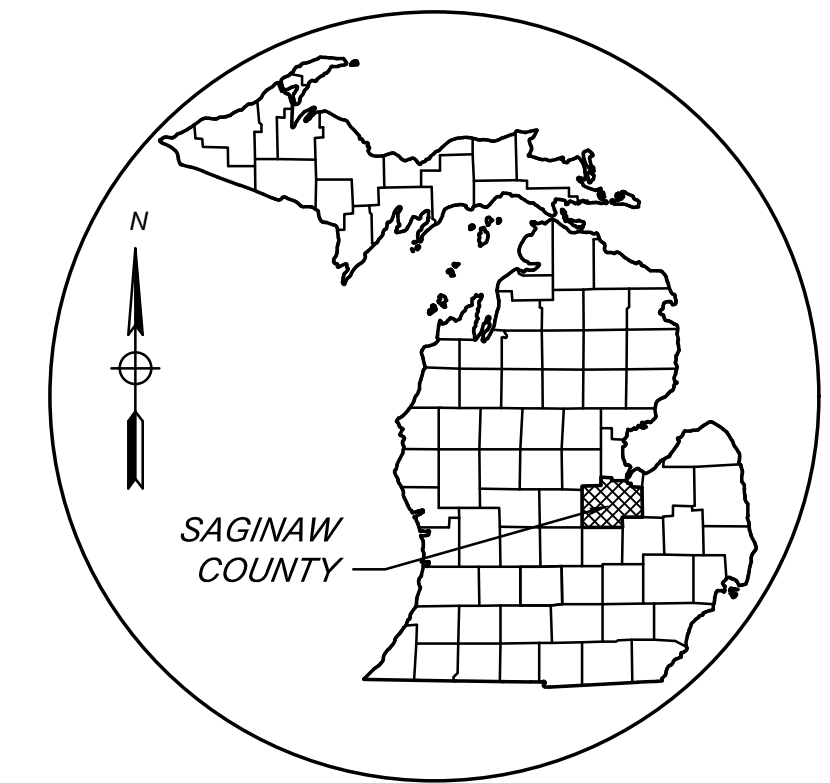
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LOCATION MAP
NOT TO SCALE



SECTIONS 19-20, 28-33, T11N-R04E,
SPAULDING TOWNSHIP,
SAGINAW COUNTY, MICHIGAN



AREA MAP
NOT TO SCALE

BY	MARK	REVISIONS	DATE
<small>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</small>			
EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN			
COVER SHEET			
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4777 Fax: 989-754-4440 www.SpicerGroup.com</small>	
DE BY:	POC/TMC	CH BY:	LDO
DR BY:	POC	APP BY:	NDC
		PROJECT NO. 126405SG2018	
STDS.	SHEET 01 OF 15		DR
DATE	APRIL 2023	FILE NO.	01
SCALE	NOT TO SCALE	DR-4189-01	

GENERAL NOTES

NO WORK SHALL BE PERFORMED BEFORE 7:00 AM OR AFTER 7:00 PM MONDAY THROUGH SATURDAY. NO WORK SHALL HAPPEN ON SUNDAYS OR HOLIDAYS, UNLESS AUTHORIZED BY THE OWNER.

CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS PRIOR TO START OF CONSTRUCTION, CONSTRUCTION STAKING AND INSPECTION.

CONTRACTOR SHALL MAINTAIN ACCESS FOR MAIL DELIVERY AND GARBAGE PICKUP AT ALL PARCELS. IF THESE SERVICES CANNOT BE PERFORMED, CONTRACTOR IS RESPONSIBLE FOR TAKING THE NECESSARY MEASURES TO CARRY THEM OUT.

COORDINATE DRIVE CLOSURES AND MAIL BOX RELOCATION WITH LANDOWNERS A MINIMUM OF ONE DAY IN ADVANCE.

CONTRACTOR TO PROVIDE DUST CONTROL AND SWEEP ROADS DAILY.

ALL EXCAVATED MATERIAL NOT TO BE REUSED OR DISPOSED OF ON SITE SHALL BE REMOVED FROM SITE. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF MATERIALS ACCORDING TO LOCAL AND STATE REQUIREMENTS.

UNDERGROUND UTILITIES/MISS DIG FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 1-800-482-7171 OR 811 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE EXISTING UTILITIES ON THESE DRAWINGS HAVE BEEN SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND SHALL NOTIFY THE ENGINEER AS TO WHERE POSSIBLE CONFLICT EXISTS.

ALL CONSTRUCTION UNDER EXISTING UTILITIES, INCLUDING HOUSE SERVICES, SHALL BE COMPLETELY BACKFILLED WITH SAND, IN 12" LAYERS, AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM UNIT WEIGHT.

ANY UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE SUPPORTED, PER THE SPECIFICATIONS OF THE INDIVIDUAL UTILITY COMPANY CLAIMING OWNERSHIP OF THE UTILITY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTH-DISTURBING ACTIVITIES. PLACE TURF ESTABLISHMENT ITEMS AS SOON AS POSSIBLE ON POTENTIAL ERODABLE SLOPES AS DIRECTED BY OWNER. CRITICAL DITCH GRADES SHALL BE PROTECTED WITH EITHER SOD, SEED/MULCH, OR SEED/MULCH BLANKET AS DIRECTED BY OWNER.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE AND MAINTAINED UNTIL THE CONTRACT HAS BEEN COMPLETED AND ACCEPTED. MEASURES SHALL ONLY BE PAID FOR ONCE.

ALL CATCHBASINS AND SEDIMENTATION TRAPS/BASINS SHALL BE CLEANED OUT UPON COMPLETION OF THE PROJECT.

CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL ACT, PART 91 OF ACT 451 OF 1994.

PROPERTY OWNERS PROPERTY OWNERS' NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY, AND THEIR ACCURACY IS NOT GUARANTEED.

ADJUSTING MONUMENT BOXES ALL GOVERNMENT CORNERS ON THIS PROJECT SHALL BE PRESERVED, WHETHER SHOWN OR NOT, IT MAY BE NECESSARY TO PLACE OR ADJUST MONUMENT BOXES, AS REQUIRED.

TRAFFIC THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES. SIGNAGE MUST BE IN ACCORDANCE WITH THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL BE COORDINATED WITH THE ENGINEER AND GOVERNING ROAD AGENCY. PERMITS MAY BE REQUIRED.

PERMITS PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED BY THE APPROPRIATE AGENCIES.

CONSTRUCTION PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE AGENCIES.

GENERAL NOTES CONT.

ALL WORK SHALL BE CONFINED TO THE RIGHT-OF-WAY OR CONSTRUCTION LIMITS SHOWN ON THE PLANS. ANY WORK OUTSIDE OF THESE LIMITS SHALL BE AGREED TO BY THE CONTRACTOR AND THE LANDOWNER IN WRITING.

RESTORE ALL LAWN AREAS PER SPECIFICATIONS AND PLANS.

CONTRACTOR TO RESTORE INCIDENTAL DAMAGES ON THE PROJECT AS DIRECTED BY OWNER AND ENGINEER AT THE CONTRACTOR'S EXPENSE.

ALL DRAIN SIDE SLOPES SHALL BE 2H:1V OR FLATTER, UNLESS SPECIFIED OTHERWISE.

THE WORDS "RIGHT SIDE" OR "LEFT SIDE" IMPLY A REFERENCE TO THE DRAIN FACING UPSTREAM.

REMOVE EXISTING FENCES, LANDSCAPING, AND OTHER STRUCTURES IN RIGHT-OF-WAY OR CONSTRUCTION LIMITS AS-NEEDED FOR CONSTRUCTION. COST TO BE INCLUDED IN SITE CLEARING.

REINSTALLATION OF FENCES MUST BE COORDINATED WITH THE LAND OWNER AT THE LAND OWNER'S EXPENSE, UNLESS STATED OTHERWISE IN THE PLANS.

CONTRACTOR TO CLEAR TREES WITHIN THE RIGHT-OF-WAY OR CONSTRUCTION LIMITS AS NECESSARY TO CONSTRUCT PROJECT AND LEVEL SPOILS AS SHOWN IN DETAILS. COORDINATE REMOVALS WITH THE ENGINEER/LANDOWNER.

ROADS, DRIVEWAYS AND SIDEWALKS ALL JOINTS AT INTERSECTION APPROACHES AND DRIVEWAYS SHALL BE SAW-CUT WITH BUTT-JOINTS.

FOR OPEN CUT PAVEMENT REMOVAL, CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT FULL DEPTH PRIOR TO REMOVAL.

ALL DRIVING SURFACES ARE TO BE RESTORED TO IN-KIND DEPTH AND MATERIAL, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROTECT ALL ROADS NOT SPECIFIED TO BE REMOVED DURING CONSTRUCTION. REPAIR ANY UNAUTHORIZED DAMAGE AT CONTRACTOR'S EXPENSE.

BROKEN CONCRETE AND DEBRIS SHALL BE CONSIDERED WASTE AND SHALL BE DISPOSED OF BY THE CONTRACTOR OFF-SITE. COST SHALL BE INCLUDED IN THE OTHER PAY ITEMS OF THE PROJECT.

MATCH EXISTING TYPE FOR CONCRETE CURB AND GUTTER RESTORATION.

CONTRACTOR SHALL REMOVE AND REPLACE ALL STREET AND TRAFFIC SIGNAGE AS NECESSARY FOR CONSTRUCTION. ALL COST SHALL BE INCLUDED IN THE BID PRICE FOR SITE CLEARING.

CONTRACTOR SHALL COORDINATE LOCATION OF ANY ACCESS ROADS WITH THE LANDOWNER AND THE ENGINEER. ANY ACCESS ROAD SHALL BE REPAIRED TO THE OWNER'S SATISFACTION.

ALL WORK WITHIN THE ROAD RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND GENERAL SPECIFICATIONS OF THE AGENCY WITH JURISDICTION OVER THE ROAD.

MAIL BOXES CONTRACTOR SHALL REMOVE AND TEMPORARILY RELOCATE ALL EXISTING MAIL BOXES AS NEEDED FOR CONSTRUCTION. COSTS TO BE INCLUDED IN THE UNIT PRICE BID FOR SITE CLEARING.

ALL TEMPORARILY RELOCATED MAIL BOXES, STREET AND TRAFFIC SIGNS TO BE REINSTALLED TO ORIGINAL LOCATIONS AS CONSTRUCTION ALLOWS. COSTS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLEANUP AND RESTORATION.

UTILITIES UTILITIES LOCATED IN THE ROAD AND DRAIN RIGHTS-OF-WAY WILL BE RELOCATED BY OTHERS, UNLESS OTHERWISE NOTED ON THE PLANS.

THE DRAIN COMMISSIONER'S MINIMUM CLEARANCE STANDARDS SHALL BE MET WHENEVER RELOCATING EXISTING UTILITIES WITHIN THE DRAIN RIGHT-OF-WAY.

ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

ALL MANHOLE RIMS IN ROADWAYS AND DRIVES SHALL BE ADJUSTED PRIOR TO FINAL PAVING TO BE FLUSH WITH FINISHED GRADE.

GRADING AROUND MANHOLES/CATCHBASINS, FLARED END SECTIONS, AND OTHER INLETS SHALL BE SMOOTH AND SHAPED TO PROVIDE POSITIVE DRAINAGE INTO THE INLETS.

DEMOLISH EXISTING STRUCTURE(S) AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. COST TO BE INCLUDED WITH THE ITEM BEING INSTALLED AS DIRECTED BY OWNER/ENGINEER.

CONTRACTOR SHALL CONNECT ANY AND ALL FIELD TILE OUTLETS AND OTHER STORM LEADS TO PROPOSED STORM SEWER WITH PREMANUFACTURED TEES, WYES, GASKETS, SEALS, COUPLERS, BOOTS, ETC. PER SPECIFICATIONS.

SOIL EROSION SEDIMENT CONTROL ALL RIPRAP MATERIAL SHALL BE APPROVED BY THE ENGINEER. OWNER AND ENGINEER RESERVES THE RIGHT TO REJECT ANY AND ALL RIPRAP.

CONTRACTOR SHALL FINISH GRADE, SEED, FERTILIZE, AND MULCH DAILY ON ALL DISTURBED AREAS AS DESCRIBED IN THE SPECIFICATIONS.

PROJECT NOTES

THE PROJECT IS BEING BID IN TWO DIVISIONS. CONTRACTOR'S ARE REQUIRED TO COORDINATE WORK AMONGST DIVISIONS AS NECESSARY.

ABBREVIATIONS

- BC = BACK OF CURB
- BM = BENCH MARK
- CB = CATCH BASIN
- CC = CENTER TO CENTER
- CJ = CONSTRUCTION JOINT
- CL = CENTERLINE
- CMP = CORRUGATED METAL PIPE
- CONC = CONCRETE
- CORR = CORRUGATED
- CSP = CORRUGATED STEEL PIPE
- DI = DUCTILE IRON PIPE
- EF = EACH FACE
- ELEC = ELECTRIC
- EL OR ELEV = ELEVATION
- EOM = EDGE OF METAL
- EOP = EDGE OF PAVEMENT
- EQ/SP = EQUALLY SPACED
- ESMT = EASEMENT
- EW = EACH WAY
- EX OR EXIST = EXISTING
- FES = FLARED END SECTION
- FF = FINISH FLOOR
- FG = FINISH GROUND
- FL = FLOW LINE
- FS = FINISH SURFACE
- FT = FEET
- GALV = GALVANIZED
- G = GUTTER
- GA = GAUGE
- HDC = HOT DIP GALVANIZED
- HDPE = HIGH DENSITY POLYETHYLENE
- HMA = HOT MIX ASPHALT
- HOR = HORIZONTAL
- HP = HIGH POINT
- HYD = HYDRANT
- INV = INVERT
- LP = LOW POINT
- OC = ON CENTER
- OH = OVERHEAD
- MH = MANHOLE
- MIN = MINIMUM
- MON = MONUMENT
- NFL = NOT FIELD LOCATED
- NTS = NOT TO SCALE
- PROP = PROPOSED
- PVC = POLYVINYL CHLORIDE
- RCP = REINFORCED CONCRETE PIPE
- ROW = RIGHT OF WAY
- SAN = SANITARY
- SB = SOIL BORING
- SS = STAINLESS STEEL
- STA = STATION
- STM = STORM
- SWR = SEWER
- T/B = TOP AND BOTTOM
- TC = TOP OF CURB
- TOB = TOP OF BANK
- TOS = TOE OF SLOPE
- TELE = TELEPHONE
- TRW = TOP OF RETAINING WALL
- TW = TOP OF WALK
- UG = UNDERGROUND
- UNO = UNLESS NOTED OTHERWISE
- VERT = VERTICAL
- WM = WATER MAIN
- WSEL = WATER SURFACE ELEVATION

LINE TYPE LEGEND

- EXISTING ROAD CENTERLINE
- EXISTING WATER MAIN
- EXISTING SANITARY SEWER OR FORCEMAIN
- EXISTING STORM SEWER
- EXISTING TELEPHONE CABLE
- EXISTING GAS MAIN
- EXISTING ELECTRIC
- EXISTING DRAINS (OTHER)
- PROPOSED UTILITY
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- FENCE LINE
- OVERHEAD UTILITY
- RAILROAD TRACKS
- STATION LINE
- LIMITS OF RIGHT OF WAY
- EASEMENT
- SILT FENCE
- REVERSE PAN CURB & GUTTER
- TREE LINE
- EXISTING CONTOURS
- PROPOSED CONTOURS

SYMBOL LEGEND

EXISTING SYMBOLS

- MANHOLE
- CATCH BASIN
- CURB CATCH BASIN
- FIRE HYDRANT
- GAS VALVE
- WATER VALVE
- TELEPHONE PEDESTAL
- POWER POLE
- TELEPHONE POLE
- POWER AND TELEPHONE POLE
- LIGHT POLE
- GUY ANCHOR AND POLE
- MAIL BOX
- WATER METER
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- MONITORING WELL
- HAND HOLE
- TRANSFORMER
- ELECTRICAL PEDESTAL
- BARRIER FREE PARKING
- SPRINKLER
- RAILROAD SIGNAL
- ANTENNA
- SATELLITE DISH
- AIR CONDITIONING UNIT
- SOIL BORING
- BENCH MARK
- FOUND SURVEY CORNER
- SET 1/2" IRON ROD
- 1/4 SECTION CORNER
- BREAK IN LINE
- EXISTING SIGN-1 POST
- EXISTING SIGN-2 POST
- STUMP
- WETLANDS
- PINE
- BUSH
- TREE

PROPOSED SYMBOLS

- MANHOLE
 - CATCHBASIN
 - FIRE HYDRANT
 - WATER VALVE
 - BARRIER FREE PARKING
 - LIGHT POLES
 - DRAINAGE FLOW
 - SPOT ELEVATION LABELS
- G = GUTTER
TW = WALK
TC = TOP OF CURB
FS = FINISH SURFACE

CONTACTS

- SAGINAW COUNTY PUBLIC WORKS COMMISSIONER** OWNER
ATT: BRIAN J. WENDLING
111 S MICHIGAN AVENUE
SAGINAW, MI 48602
(989) 790-5258
- SPICER GROUP, INC.** ENGINEER
ATT: LUKE O'BRIEN, P.E.
230 S WASHINGTON AVENUE
SAGINAW, MI 48605
(989) 754-4717
- SAGINAW COUNTY ROAD COMMISSION** ROAD COMMISSION
ATT: HALEY SHEPHERD
3020 SHERIDAN AVENUE
SAGINAW, MI 48601
(989) 752-6140
- SPAULDING TOWNSHIP** DPW
ATT: DANIEL KROSS
5025 EAST ROAD
SAGINAW, MI 48601
(989) 777-2733
- AT&T** CABLE
ATT: KATHY HENDERSON
309 S WASHINGTON AVENUE
SAGINAW, MI 48607
(248) 425-1659
- CONSUMERS ENERGY** ELECTRIC
ATT: MIKE TODD
530 S WILLOW STREET
LANSING, MI 48906
(989) 293-7057

PROJECT DATUM			
HORIZONTAL:	STATE PLANE SOUTH MI 83 2143		
VERTICAL:	NORTH AMERICAN VERTICAL DATUM 88		
BY:	MARK	REVISIONS	DATE
THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PRESENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.			
EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN			
CONTACTS, GENERAL NOTES, LINE TYPE LEGEND, AND SESC MEASURE LEGEND			
		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com	
DE. BY: POC/TMC	CH. BY: LDO	PROJECT NO.	
DR. BY: POC	APP. BY: NDC	126405SG2018	
STDS.	SHEET 02 OF 15	DR 02	
DATE: APRIL 2023	FILE NO. DR-4189-02		
SCALE: NOT TO SCALE			

EROSION CONTROL MEASURES

KEY	SESC MEASURE	SYMBOL	WHERE USED
1	Seeding		When bare soil exposed, temporarily or permanently, to erosive forces from wind and or water on flat areas, mild slopes, grassed waterways, diversion ditches and dikes, borrow and stockpile areas and spoil piles.
2	Mulch		On flat areas, slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles when areas are subject to raindrop impact, and erosive forces from wind or water.
15	Riprap		Along drain banks, shorelines, or where concentrated flows occur. Slows velocity, reduces erosion and sediment load.
16	Riprap Toe of Slope		Riprap toe of slope protection is used in areas where velocities are causing drain bank erosion and are too high to stabilize using other methods.
18	Reinforced Vegetated Spillway		When slope failure at eroded outfalls are observed or from concentrated runoff on very shallow slopes (where flow velocities will be low enough not to undermine the reinforced grass root structure).
19	Armored Spillway		When concentrated flow must be conveyed down a drain bank or slope or discharge into another drain. Where slope failure or channel scour is observed or is likely to occur, or when runoff must be redirected around work in the drain.
23	Outfall Stabilization		In the stream or drain bank usually above the ordinary high water mark where an enclosed drain or tile discharges to an open drain.

ROUTINE MAINTENANCE ACTIVITIES

KEY	BEST MANAGEMENT PRACTICE	SESC PLAN
A	Debris Removal	NO
B	Sediment Removal	> 100 FEET
C	Stormwater Basin Maintenance	NO
D	Drain Crossing Maintenance	NO
E	Enclosed Drain Maintenance	NO

DETAILED DRAWINGS AND SPECIFICATIONS ARE LOCATED IN THE MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS SOIL EROSION AND SEDIMENTATION CONTROL AUTHORIZED PUBLIC AGENCY PROCEDURES MANUAL.

SYMBOLGY FOR INSERTION INTO CONSTRUCTION DRAWINGS:



GENERAL TIMING & SEQUENCE

ALL PROPOSED CHANNEL EXCAVATION ACTIVITIES FOR THIS PROJECT MUST ADHERE TO THE FOLLOWING SEQUENCE.

- CONTRACTOR MUST CLEAR THE DRAIN CHANNEL AND RIGHT-OF-WAY AS NOTED PLANS. THIS INCLUDES ALL DEBRIS AND STUMP REMOVAL AS NOTED ON PLANS. CONTRACTOR MUST VERIFY WITH ENGINEER THAT CLEARING REQUIREMENTS HAVE BEEN MET PRIOR TO MOVING FORWARD WITH EXCAVATION.
- DRAIN EXCAVATION STAKES WILL BE PLACED FOLLOWING APPROVAL OF SITE CLEARING.
- CONTRACTOR IS TO PERFORM PROPOSED EXCAVATION ACTIVITIES REQUIRED TO OBTAIN PROPOSED GRADES AND SIDE SLOPES AS DESIGNATED ON PLANS.
- CONTRACTOR MUST PERFORM DAILY RAKING, SEEDING, AND MULCHING OF DRAIN BANKS AND SPOILS.
- ENGINEER WILL STAKE ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES ALONG PORTIONS OF DRAIN THAT HAVE BEEN EXCAVATED DURING ROUTINE INSPECTIONS.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING SOIL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE ENTIRE PROJECT.
- FINAL PAYMENT WILL BE MADE ONCE ALL DRAIN BANKS, SPOILS, AND DISTURBED AREAS HAVE ESTABLISHED VEGETATION GROWING. ALL LAWN AREAS MUST BE RESTORED TO IN KIND CONDITIONS PRIOR TO FINAL PAYMENT.

GENERAL TIMING & SEQUENCE

INSTALL TEMPORARY CONTROL MEASURES

SITE CLEARING

UPDATE PER CONSTRUCTION TYPE
example: (OPEN CHANNEL CONSTRUCTION)

RESTORATION

INSTALL AND ESTABLISH PERMANENT CONTROL MEASURES

REMOVE TEMPORARY CONTROL MEASURES

MAINTENANCE PROGRAM FOR SESC MEASURES

GENERAL MAINTENANCE

- CONTRACTOR SHALL MAINTAIN ALL PERMANENT SESC MEASURES FOR A PERIOD OF 1 YEAR FOLLOWING THEIR INSTALLATION.
- TEMPORARY SESC MEASURES MUST BE INSTALLED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.
- TEMPORARY MEASURES MUST BE MAINTAINED AND IN PLACE UNTIL AREAS ARE PERMANENTLY STABILIZED.
- PERMANENT MEASURES MUST BE INSTALLED AND MAINTAINED BY THE CONTRACTOR UNTIL FINAL COMPLETION.
- DAILY MAINTENANCE IS THE CONTRACTOR'S RESPONSIBILITY.
- TEMPORARY SESC MEASURES MUST BE REMOVED AT THE END OF THE PROJECT ONCE PERMANENT MEASURES ARE ESTABLISHED.
- TEMPORARY SESC MEASURES MUST BE INSTALLED PRIOR TO OR AT THE TIME OF EARTH DISTURBANCE.
- INSPECT WEEKLY AND AFTER EACH RAIN EVENT UNTIL VEGETATION HAS BEEN ESTABLISHED.
- IF NECESSARY, REPAIR AND RE-SEED OR REPLANT ERODED AREAS IMMEDIATELY.

SEEDING AND MULCHING

- SEEDING PRACTICES INCLUDE TOPSOIL (AS DIRECTED BY ENGINEER), SEED, POLYMER, AND MULCH OR MULCH MATTING (AS DIRECTED BY ENGINEER OR WHERE SHOWN ON PLANS).
- WHERE NECESSARY, APPROPRIATE MULCH MUST BE APPLIED BASED ON SLOPE AND GROWING CONDITIONS AS APPROVED BY THE PROJECT ENGINEER.
- ALL SLOPES AND HIGHLY ERODIBLE AREAS MUST BE SEEDED, POLYMER APPLIED AND MULCHED AS NEEDED WHEN CONSTRUCTION ACTIVITY IS NOT TAKING PLACE.
- SEED AND MULCH IS TO BE INSPECTED DAILY FOLLOWING EACH RAIN EVENT TO DETERMINE IF CONCENTRATED FLOWS ARE PRESENT.
- IN THE EVENT THAT SEED AND MULCH ARE REMOVED BY ERODIBLE RUNOFF, REPAIRS ARE TO BE MADE IMMEDIATELY.
- ALL AREAS DURING CONSTRUCTION MUST BE PERMANENTLY STABILIZED WITHIN 72 HOURS OF FINAL GRADE (GRADE LISTED ON PLAN).

STABILIZED CONSTRUCTION ACCESS

- INSPECT WEEKLY AND AFTER EACH RAINFALL.
- WHEN CONSTRUCTION ACCESS IS NO LONG EFFECTIVE, SCRAPE THE TOP LAYER AND ADD 2" OF AGGREGATE.

COMPLIANCE WITH PART 91 OF PA 451

- RESPOND IMMEDIATELY TO STORMWATER OPERATOR AND/OR SOIL EROSION AND SEDIMENTATION CONTROL INSPECTOR CONCERNS. MAKE CORRECTIVE MEASURES AS REQUIRED IMMEDIATELY AS DETAILED BY THE APPROVED APA MANUAL(S).

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

- INSTALL AND MAINTAIN ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE APPROVED PLAN PRIOR TO COMMENCEMENT OF CONSTRUCTION OR MASS GRADING. ALL SESC MEASURES MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE BELL CREEK DRAIN SESC PLAN AND PROJECT SPECIFICATIONS.
- SOIL EROSION CONTROL MEASURES MUST BE INSPECTED BY A STATE CERTIFIED INSPECTOR AFFILIATED WITH THE COUNTY DRAIN COMMISSIONER'S OFFICE PRIOR TO COMMENCEMENT OF CONSTRUCTION OR MASS GRADING.
- DAILY INSPECTION AND MAINTENANCE MUST BE MADE TO ENSURE ALL EROSION CONTROL MEASURES ARE FUNCTIONING PROPERLY AND INTACT. NECESSARY REPAIRS MUST BE PERFORMED WITHIN 24 HOURS.
- ADDITIONAL SOIL EROSION CONTROL MEASURES MUST BE PROVIDED THROUGHOUT CONSTRUCTION ACTIVITY AS NEEDED AND DETERMINED BY THE APA/ENGINEER. THE SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS TO BE AMENDED TO INCLUDE ADDITIONAL EROSION CONTROL MEASURES IMPLEMENTED ON-SITE.
- SEDIMENT FROM WORK ON THIS SITE IS TO BE CONTAINED ON THE SITE AND IS NOT TO BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, PONDS, AND WETLANDS.
- ALL VISUAL TRACKING INCLUDING MUD, DIRT, AND DEBRIS TRACKED ONTO EXISTING ROADWAYS MUST BE IMMEDIATELY REMOVED NO LESS THAN ON A DAILY BASIS BY SCRAPING AND SWEEPING AND/OR AS DIRECTED BY THE ENGINEER.
- DUST CONTROL MUST BE EXERCISED AT ALL TIMES DURING THE PROJECT AND AS DIRECTED BY THE ENGINEER OR APA. APPLY DUST SUPPRESSANT TO SURFACES USING A PRESSURE TYPE WATER DISTRIBUTOR TRUCK EQUIPPED WITH A SPRAY SYSTEM.
- ALL PERMANENT SOIL EROSION CONTROL MEASURES MUST BE IN PLACE WITHIN 24 HOURS OF FINAL GRADING (GRADE LISTED ON PLANS). THIS INCLUDES ALL VEGETATIVE STABILIZATION, VEGETATIVE, STABILIZATION WILL BE ONGOING. TOPSOIL, FERTILIZER, SEED, POLYMER, SILT STOP (OR EQUAL), MULCH AND OR RIPRAP MUST BE IN PLACE BEFORE PROCEEDING TO THE NEXT WORK AREA. ALL TEMPORARY MEASURES SUCH AS SILT FENCE AND INLET PROTECTION BAGS ARE TO BE REMOVED ONCE PERMANENT SESC MEASURES ARE IN PLACE AND VEGETATION IS ESTABLISHED. REMOVAL OF TEMPORARY MEASURES, FOLLOWING ACCEPTANCE OF THE PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- PRIOR TO WINTER CONSTRUCTION, ALL EXPOSED SOILS MUST BE STABILIZED WITH A COMBINATION OF SILT STOP 705 POLYMER BLEND, NORTH AMERICAN GREEN EROSION CONTROL BLANKETS, MULCH, OR OTHER APPROVED METHOD IF VEGETATION COULD NOT BE ESTABLISHED DURING THE GROWING SEASON AS DETERMINED BY THE APA OR ENGINEER.
- WORK AREAS MUST BE STABILIZED WITH TOPSOIL, SEED, FERTILIZER, AND MULCH WITHIN 24 HOURS FOLLOWING CONSTRUCTION. VEGETATIVE STABILIZATION IS ONGOING THROUGHOUT THE PROJECT.
- ALL SOIL EROSION CONTROL MEASURES MUST BE INSPECTED DAILY. THE STORM WATER OPERATOR IS TO MAKE A WEEKLY INSPECTION OR INSPECT AFTER EACH RAIN EVENT THAT RESULTED IN A DISCHARGE TO ENSURE PROPER MAINTENANCE OF THE SOIL EROSION CONTROL MEASURES. ANY DEFICIENCIES OR REPAIRS TO SOIL EROSION CONTROL MEASURES MUST BE CORRECTED IMMEDIATELY. INLET PROTECTION MEASURES, DANDY BAG II (OR EQUAL), FLEX STORM (OR EQUAL), MUST BE INSTALLED IN CATCHBASINS BEFORE ANY STORMWATER RUNOFF IS ALLOWED TO ENTER THE TOP OF THE STRUCTURES. THE SILT AND SEDIMENT MUST BE REMOVED FROM INLET PROTECTION MEASURES AS NEEDED TO ENSURE PROPER FUNCTION OF THE BAGS.
- THE NEED FOR TEMPORARY MEASURES SUCH AS SILT FENCE AND DANDY BAG II (OR EQUAL), FLEX STORM (OR EQUAL) FOR EXISTING OR NEW CATCHBASINS MUST BE ASSESSED ON A DAILY BASIS. PIPES ARE TO BE CAPPED AT THE END OF EACH WORKDAY. AT NO TIME SHOULD SEDIMENT COLLECT IN A CATCHBASIN OR AN OFF-SITE AREA. TEMPORARY MEASURES MUST BE REMOVED ONCE PERMANENT MEASURES ARE IN PLACE AND VEGETATION IS ESTABLISHED.
- IF DEWATERING IS NECESSARY, CONTRACTOR SHALL SUBMIT A DEWATERING PLAN TO THE APA FOR APPROVAL.
- THE NOTICE OF COVERAGE (IF REQUIRED), SOIL EROSION AND SEDIMENTATION CONTROL PLAN, AND STORMWATER OPERATOR LOGS MUST BE LOCATED ON SITE AT ALL TIMES.
- ALL RESTORATION TO OCCUR WITHIN 24 HOURS OF FINAL GRADING.

SOIL EROSION & SEDIMENTATION CONTROL PLAN

IN COMPLIANCE WITH SECTION 323.1703 OF PART 91, SOIL EROSION AND SEDIMENTATION CONTROL OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451, AS AMENDED.

BY	MARK	REVISIONS	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PRESENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>			
<p>EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN</p>			
<p>SOIL EROSION AND SEDIMENTATION CONTROL PLAN</p>			
		<p>DUNDEE OFFICE 125 Helle Blvd, Suite 2 Dundee, MI 48131 Tel: 734-623-3389 www.SpicerGroup.com</p>	
DE BY: POC/TMC	CH BY: LDO	PROJECT NO. 126405SG2018	
DR BY: POC	APP BY: NDC		
STDS.	SHEET 03 OF 15	<p>DR 03</p>	
DATE: APRIL 2023	FILE NO. DR-4189-03		
SCALE: NOT TO SCALE			

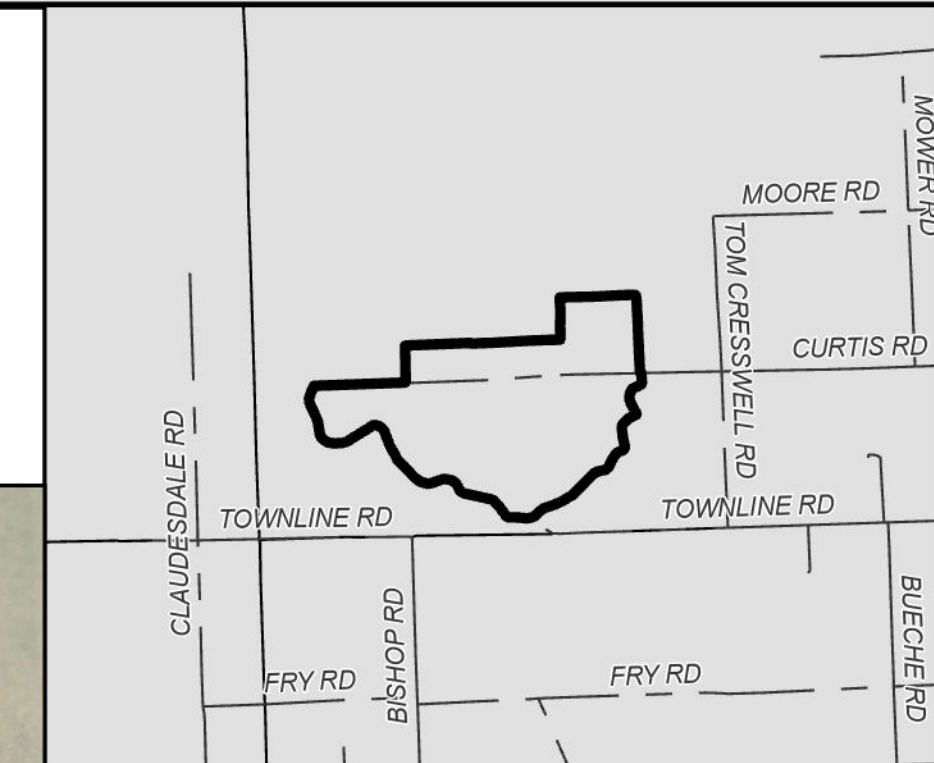
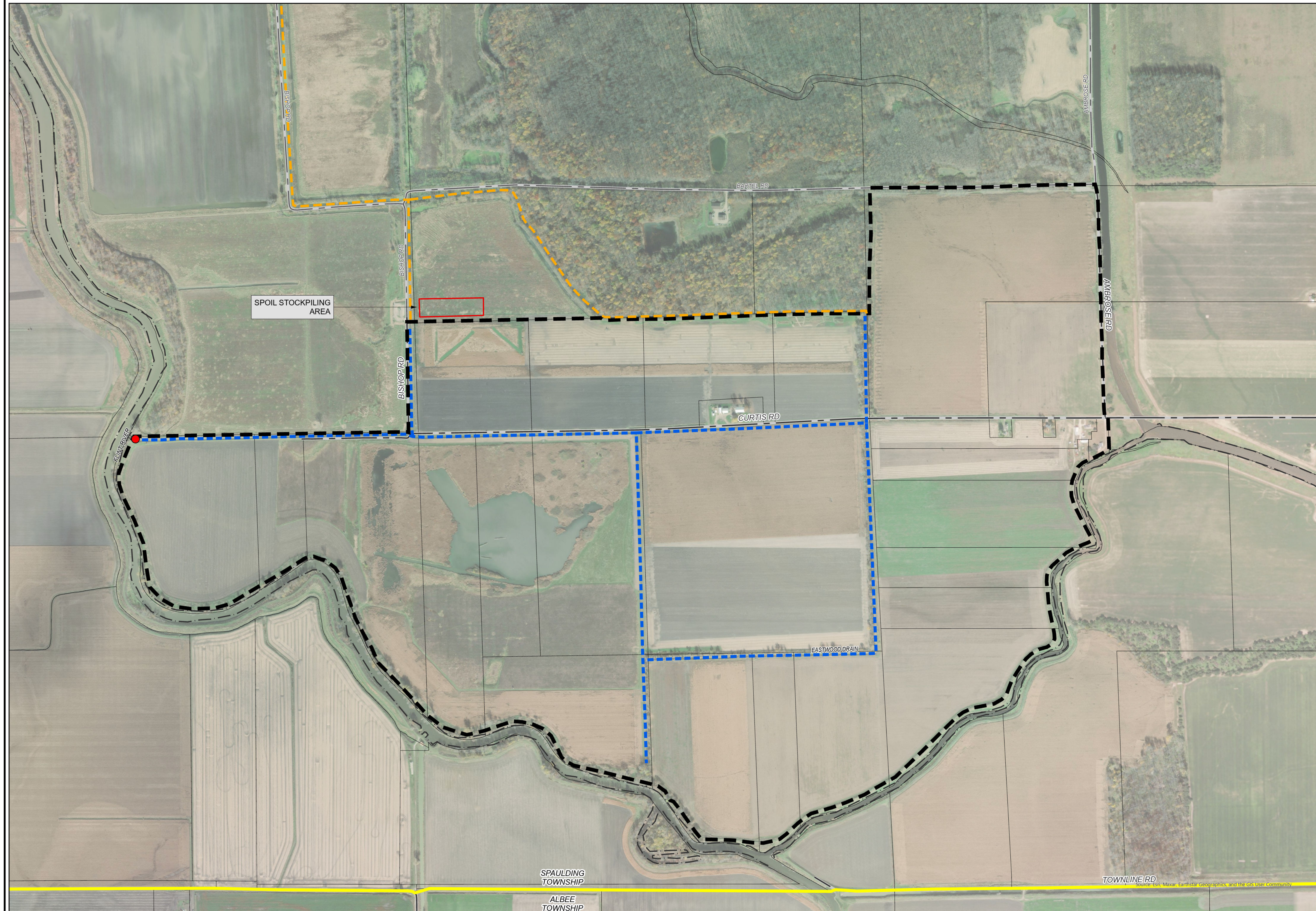
SAGINAW COUNTY	
SOIL CLASS	SOIL COMPOSITION
69	Sloan silt loam, rarely flooded
89	roundhead muck
95	Sloan-Ceresco complex, rarely flooded
W	Water
Zwkaaa	Zilwaukee and Misteguay silty clays, 0 to 1 percent slopes, rarely flooded

CONTINUED MAINTENANCE PROGRAM FOR PERMANENT SESC MEASURES	
RESPONSIBLE PARTY:	SAGINAW COUNTY PUBLIC WORKS COMMISSIONER
PERMANENT SESC MEASURE	MAINTENANCE PROCEDURE
SEEDING:	REPAIR BARE AREAS, APPLYING SUPPLEMENTAL SEED, MULCH, AND WATER AS NEEDED. MOWING CAN BE USED PERIODICALLY TO DISCOURAGE WEEDS.
RIPRAP:	REPAIR AREAS WHERE ROCK HAS BEEN DISPLACED. EXPAND RIPRAP AREA IF NEEDED.

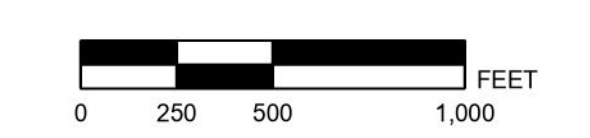
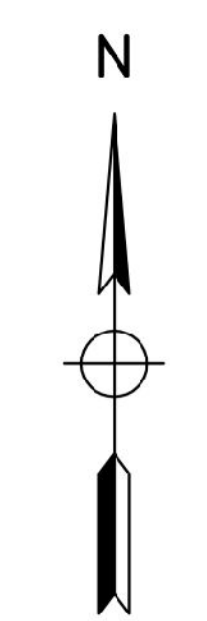


EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN

BRIAN J. WENDLING. - SAGINAW COUNTY PUBLIC WORKS COMMISSIONER



AREA MAP
NOT TO SCALE



LEGEND

- EASTWOOD DRAIN PUMP STATION
- DRAIN TO BE ABANDONED
- - - APPROXIMATE DRAIN LOCATION
- - - APPROXIMATE LOCATION OF OUTLET WATERCOURSE
- SPOIL STOCKPILING AREA
- DRAINAGE DISTRICT BOUNDARY
- STATE ROADS
- COUNTY ROADS
- LOCAL ROADS
- PARCELS
- MUNICIPALITY BOUNDARY

DRAINAGE DISTRICT BREAKDOWN

SPAULDING TOWNSHIP	1,088.64 AC.
TOTAL ACREAGE IN DISTRICT	
1,088.64 AC.	
LENGTH OF DRAIN	
EASTWOOD DRAIN	19,669.7 FT.

BY	MARK	REVISIONS	DATE

THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREIN IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.

**EASTWOOD DRAIN
SAGINAW COUNTY, MICHIGAN**

DRAINAGE DISTRICT MAP

SAGINAW'S OFFICE
230 S Washington Ave
Saginaw, MI 48607
Tel. 989-754-4747
www.SpicerGroup.com

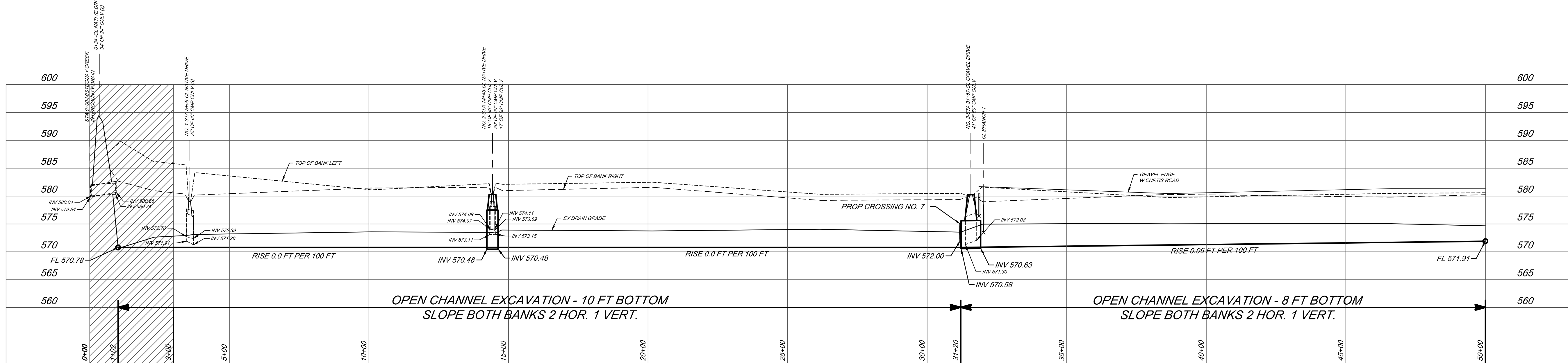
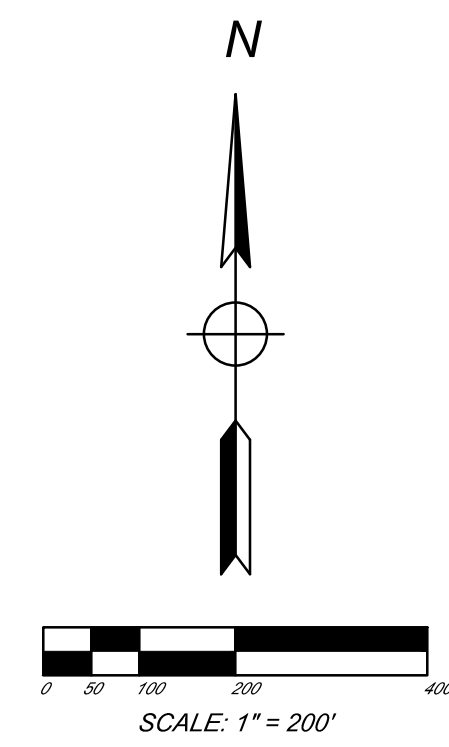
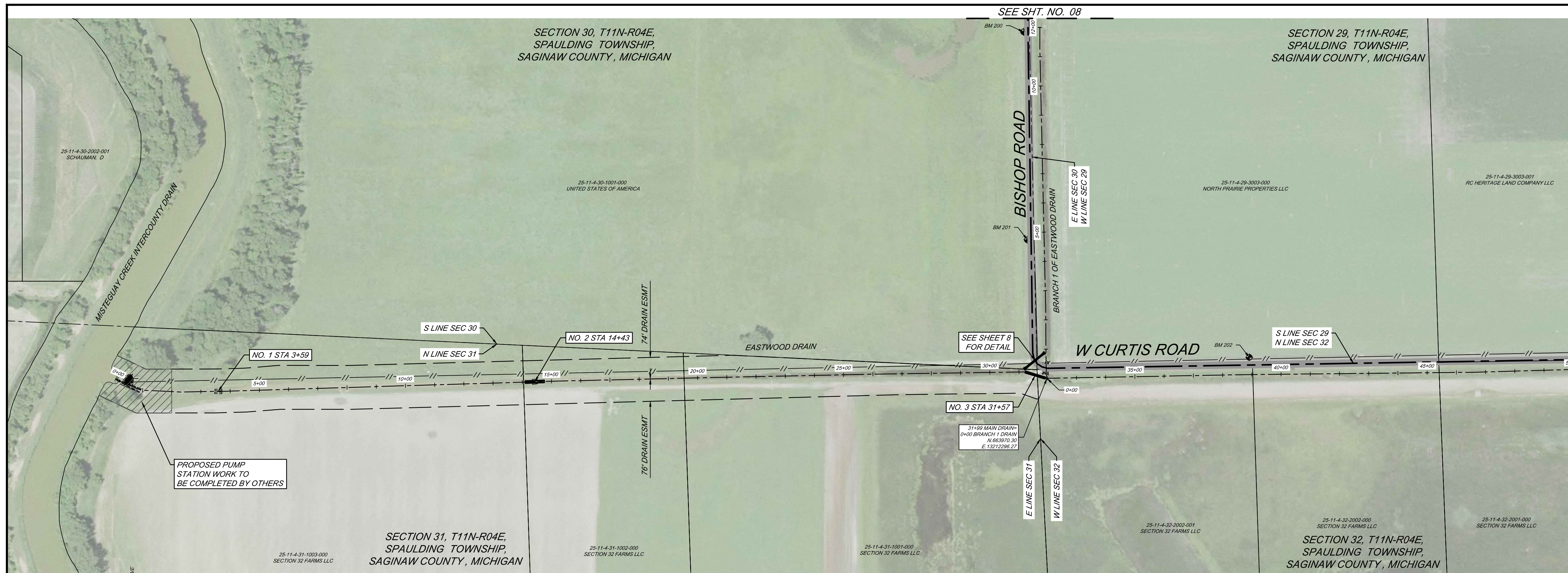
DE BY: TMC	CH BY: LDO	PROJECT NO.
DR BY: MKB	APP BY: NDC	126405SG2018

STDS.	SHEET 4 OF 15	DR
DATE: APRIL 2023	FILE NO.	4
SCALE: 1:6,000	DR-4189-04	

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SPAULDING TOWNSHIP
ALBEE TOWNSHIP

TOWNLINERD
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



LEGEND
 DIVISION I WORK TO BE COMPLETED BY OTHERS

- NO. 1 - STA 3+59 - SECTION 32 FARMS LLC
REMOVE EXISTING CROSSING.
- NO. 2 - STA 14+43 - SECTION 32 FARMS LLC
REMOVE EXISTING CROSSING, INSTALL 40 LIN FT OF 34" RCP.
OWNER TO SUPPLY PIPE.
RESTORE NATIVE DRIVE.
- NO. 3 - STA 31+57 - SECTION 32 FARMS LLC
REMOVE EXISTING CROSSING AND SALVAGE EXISTING GATE. INSTALL 140 LIN FT OF 60" HP STORM CULVERT TO BE INSTALLED AS TWO PARALLEL CULVERTS. EACH 70 LIN FT IN LENGTH.
RESTORE NATIVE DRIVE AND REINSTALL GATE.

EROSION CONTROL TABLE					
KEY*	FROM STATION	TO STATION	SIDE	DESCRIPTION	QTY
1 P	0+00	50+00	BOTH	SEEDING OF ALL DISTURBED	LUMP SUM
2 T	0+00	50+00	BOTH	MULCH OF ALL DISTURBED AREAS	LUMP SUM
16 P	AS STAKED BY ENGINEER	-	-	RIPRAP TOE OF SLOPE PROTECTION	75 LIN FT
19 P	AS STAKED BY ENGINEER	-	-	RIPRAP SPILLWAY	100 LIN FT
22 P	AS STAKED BY ENGINEER	-	-	SURFACE OUTLET TUBE (35 LIN FT)	3 EA
15 P	CROSSINGS 2 & 3	BOTH	-	INSTALL RIPRAP PROTECTION AT INLET & OUTLET OF CROSSING	100 SQ YDS TOTAL

NOTE: COORDINATE INSTALLATION OF EROSION CONTROL STRUCTURES WITH ENGINEER PRIOR TO CONSTRUCTION. LOCATIONS, QUANTITIES, OR TYPES MAY VARY BASED ON FIELD DECISIONS.

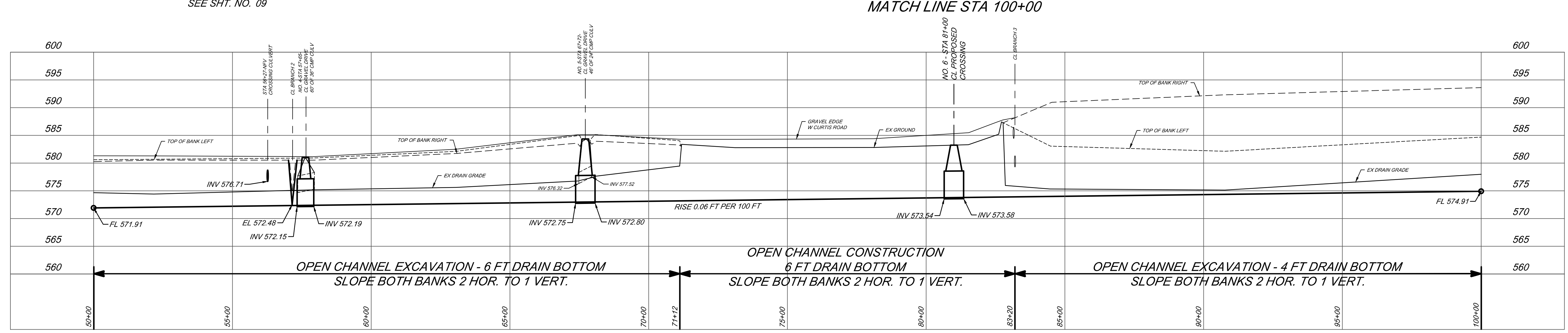
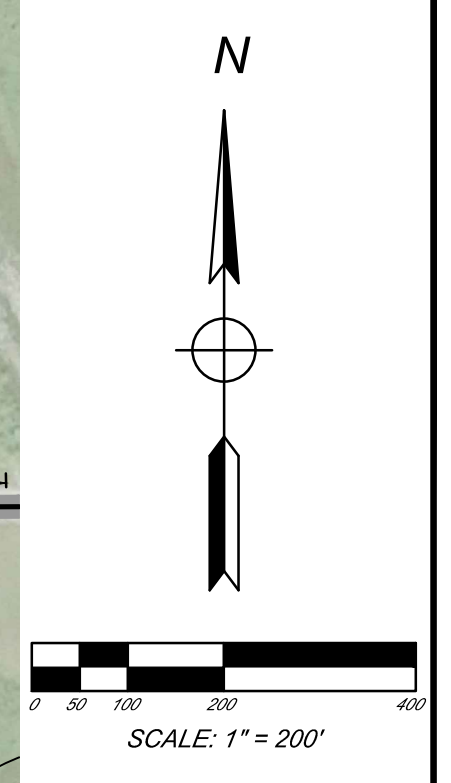
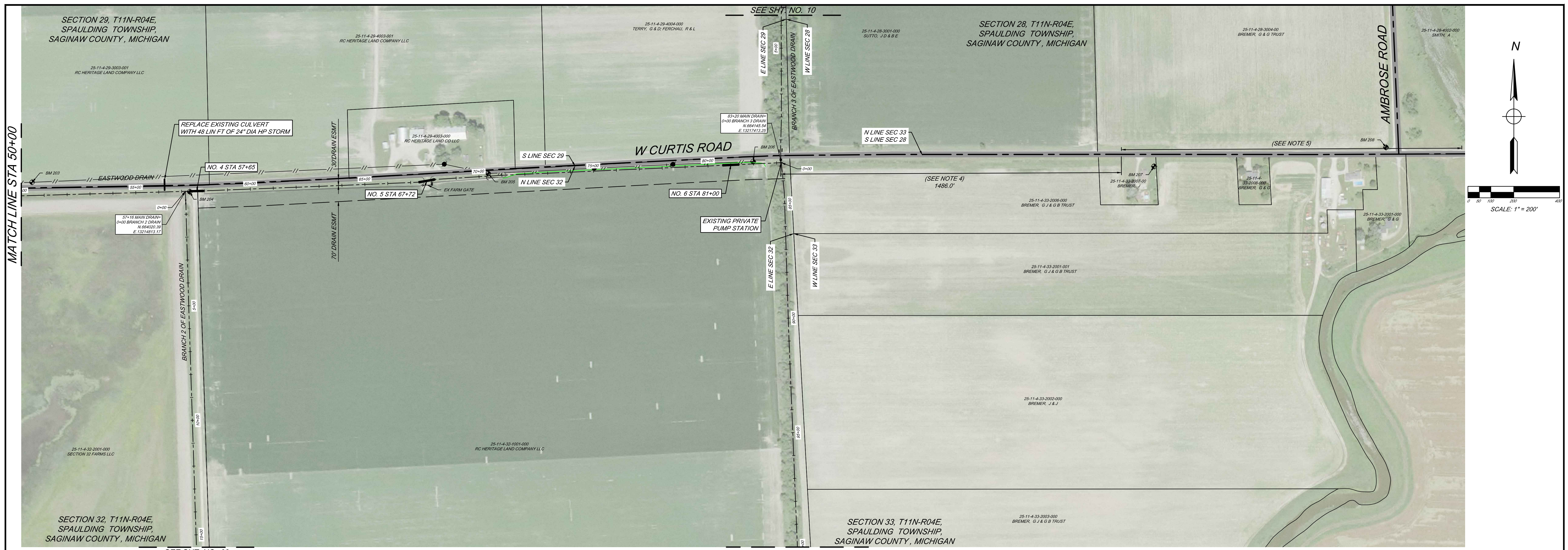
SPOIL LEVELING TABLE			
STATION FROM	STATION TO	DETAIL	SIDE TO EXCAVATE FROM
2+00	31+20	"A"	BOTH
31+20	50+00	"A" / SPOILS MANAGEMENT	EITHER / BOTH

- CONSTRUCTION NOTES**
- STA 14+43 - OWNER TO SUPPLY PIPE. CONTRACTOR TO SUPPLY ANY ADDITIONAL MATERIALS REQUIRED FOR COMPLETE INSTALLATION OF CROSSING.
 - STA 31+10 TO STA. 50+00 - CONTRACTOR TO USE SPOILS FROM OPEN CHANNEL CONSTRUCTION TO IMPROVE ROAD SHOULDER ON BOTH SIDES OF CURTIS ROAD. COST TO BE INCLUDED IN PRICE PER LINEAR FOOT FOR ROAD SHOULD IMPROVEMENTS (BOTH SIDES). SEE DETAILS ON SHEET 15.
 - COST FOR SALVAGING OF GATES AND REINSTALLATION TO BE INCLUDED IN THE PER LINEAR FOOT COST BID FOR THE CULVERT WHERE THE GATE IS LOCATED.

- BENCHMARKS**
- BM 200 - GEAR SPIKE IN EAST FACE OF 1ST POWER POLE SOUTH OF FERGUSON BAYOU PARKING, EAST SIDE OF BISHOP ROAD. EL 581.61
 - BM 201 - GEAR SPIKE IN EAST FACE OF 3RD POWER POLE SOUTH OF FERGUSON BAYOU PARKING, EAST SIDE OF BISHOP ROAD. EL 581.63
 - BM 202 - GEAR SPIKE IN SOUTH FACE OF 2ND POLE EAST OF INTERSECTION OF CURTIS AND BISHOP ROADS. EL 580.43

RIGHT OF WAY
 EASTWOOD DRAIN - DRAIN RIGHT-OF-WAY IS 4 RODS (66') WIDE ON EACH SIDE OF CENTERLINE OF DRAIN, UNLESS SHOWN OTHERWISE IN PLAN VIEW.

BY	MARK	REVISIONS	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>			
<p>EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN</p> <p>EASTWOOD DRAIN PLAN AND PROFILE STA 0+00 TO STA 50+00</p>			
<p>DE. BY: POC/TMC DR. BY: POC</p>		<p>CH. BY: LJO APP. BY: NDC</p>	
<p>PROJECT NO. 126405SG2018</p>		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>	
<p>STDS.</p>		<p>SHEET 05 OF 15</p>	
<p>DATE APRIL 2023 SCALE 1" = 10'</p>		<p>FILE NO. DR-4189-05</p>	
		<p>DR 05</p>	



EROSION CONTROL TABLE					
KEY*	FROM STATION	TO STATION	SIDE	DESCRIPTION	QTY
1/P	50+00	100+00	BOTH	SEEDING OF ALL DISTURBED	LUMP SUM
2/T	50+00	100+00	BOTH	MULCH OF ALL DISTURBED AREAS	LUMP SUM
16/P	AS STAKED BY ENGINEER	-	-	RIPRAP TOE OF SLOPE PROTECTION	140 LIN FT
19/P	AS STAKED BY ENGINEER	-	-	RIPRAP SPILLWAY	60 LIN FT
22/P	AS STAKED BY ENGINEER	-	-	SURFACE OUTLET TUBE (35 LIN FT)	3 EA
15/P	CROSSINGS 4-6	BOTH	-	INSTALL RIPRAP PROTECTION AT INLET & OUTLET OF CROSSING	80 SQ YDS TOTAL

NOTE: COORDINATE INSTALLATION OF EROSION CONTROL STRUCTURES WITH ENGINEER PRIOR TO CONSTRUCTION. LOCATIONS, QUANTITIES, OR TYPES MAY VARY BASED ON FIELD DECISIONS.

CONSTRUCTION NOTES

- STA 50+00 TO STA 56+29 - CONTRACTOR TO USE SPOILS FROM OPEN CHANNEL CONSTRUCTION TO IMPROVE ROAD SHOULDER ON BOTH SIDES OF CURTIS ROAD. COST TO BE INCLUDED IN THE LUMP SUM PRICE BID PER LIN. FT. FOR ROAD SHOULDER IMPROVEMENTS (BOTH SIDES).
- STA 56+29 TO STA 65+03 - CONTRACTOR TO USE SPOILS FROM OPEN CHANNEL CONSTRUCTION TO IMPROVE ROAD SHOULDER ON SOUTH SIDE OF CURTIS ROAD. COST TO BE INCLUDED IN PER LIN. FT. PRICE BID FOR ROAD SHOULDER IMPROVEMENTS (ONE SIDE).
- STA 56+29 TO STA 82+85 - EXCESS SPOILS NOT USED FOR ROAD SHOULDER IMPROVEMENTS TO BE HAULED TO NATIONAL REFUGE SITE. APPROXIMATE 10,000 CU YD (SEE SHEET 4 FOR LOCATION).
- CONTRACTOR TO USE SPOILS FROM OPEN CHANNEL CONSTRUCTION TO IMPROVE ROAD SHOULDER ON BOTH SIDES OF CURTIS ROAD FROM BRANCH 3 TO 1486 FEET EAST OF BRANCH 3. COST TO BE INCLUDED IN PER LIN. FT. PRICE BID FOR ROAD SHOULDER IMPROVEMENTS (BOTH SIDES).
- CONTRACTOR TO USE SPOILS FROM OPEN CHANNEL CONSTRUCTION TO IMPROVE ROAD SHOULDER ON NORTH SIDE OF CURTIS ROAD FROM 1486 FEET EAST OF BRANCH 3 TO 275 FEET EAST OF AMBROSE ROAD. COST TO BE INCLUDED IN PER LINEAR FOOT. PRICE BID FOR ROAD SHOULDER IMPROVEMENTS (ONE SIDE).
- SEE ROAD SHOULDER IMPROVEMENT DETAILS ON SHEET 15.
- COST FOR SALVAGING OF GATES AND REINSTALLATION TO BE INCLUDED IN THE PER LINEAR FOOT BID FOR THE CULVERT WHERE THE GATE IS LOCATED.

BENCHMARKS

- BM 203 - GEAR SPIKE IN SOUTH FACE OF POWER POLE 1900± EAST OF INTERSECTION OF CURTIS AND BISHOP ROADS. EL 581.70
- BM 204 - TOP CENTER OF WEST END OF 36" CMP, 2,570± EAST OF THE INTERSECTION OF CURTIS AND BISHOP ROAD INTERSECTION. EL 577.73
- BM 205 - GEAR SPIKE IN NORTH FACE OF POWER POLE, SOUTH SIDE OF CURTIS ROAD. EL 584.56
- BM 206 - GEAR SPIKE IN NORTH FACE OF POWER POLE, SOUTH SIDE OF CURTIS ROAD. EL 585.02
- BM 207 - GEAR SPIKE IN NORTH FACE OF POWER POLE, SOUTH SIDE OF CURTIS ROAD AT HOUSE NUMBER 4715. EL 586.81
- BM 207 - GEAR SPIKE IN NORTH FACE OF WOOD POST IN THE NORTHWEST QUADRANT OF CURTIS & AMBROSE ROAD. EL 589.74

SPOIL LEVELING TABLE

STATION FROM	STATION TO	DETAIL	SIDE TO EXCAVATE FROM
50+00	83+20	SPOIL MANAGEMENT	EITHER / BOTH
83+20	100+00	"B"	EITHER

RIGHT OF WAY

EASTWOOD DRAIN - DRAIN RIGHT-OF-WAY IS 4 RODS (66') WIDE ON EACH SIDE OF CENTERLINE OF DRAIN, UNLESS SHOWN OTHERWISE IN PLAN VIEW.

NO. 4 - STA 57+65 - SECTION 32 FARMS LLC REMOVE EXISTING CROSSING AND SALVAGE EXISTING GATE. INSTALL 80 LIN FT OF 60" HP STORM. RESTORE GRAVEL DRIVE AND REINSTALL GATE.

NO. 6 - STA 81+00 - RC HERITAGE LAND COMPANY LLC INSTALL 70 LIN FT OF 60" HP STORM. CONSTRUCT GRAVEL DRIVE

NO. 5 - STA 67+72 - RC HERITAGE LAND COMPANY LLC REMOVE EXISTING CROSSING AND SALVAGE EXISTING. INSTALL 70 LIN FT OF 60" HP STORM. RESTORE GRAVEL DRIVE AND REINSTALL GATE.

BY	MARK	REVISIONS	DATE

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**EASTWOOD DRAIN
SAGINAW COUNTY, MICHIGAN**

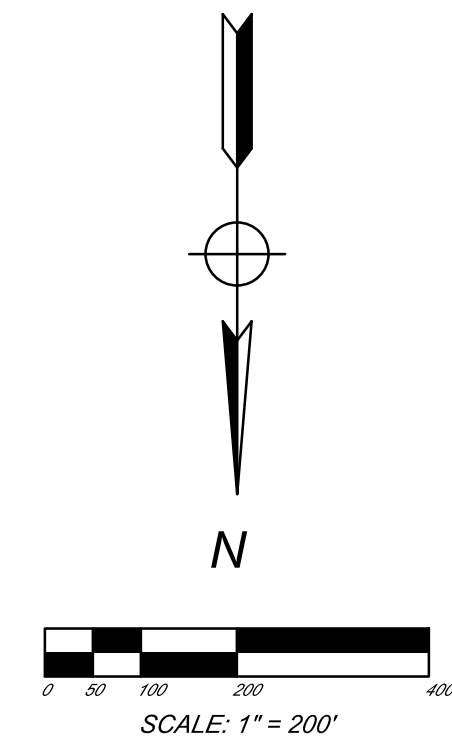
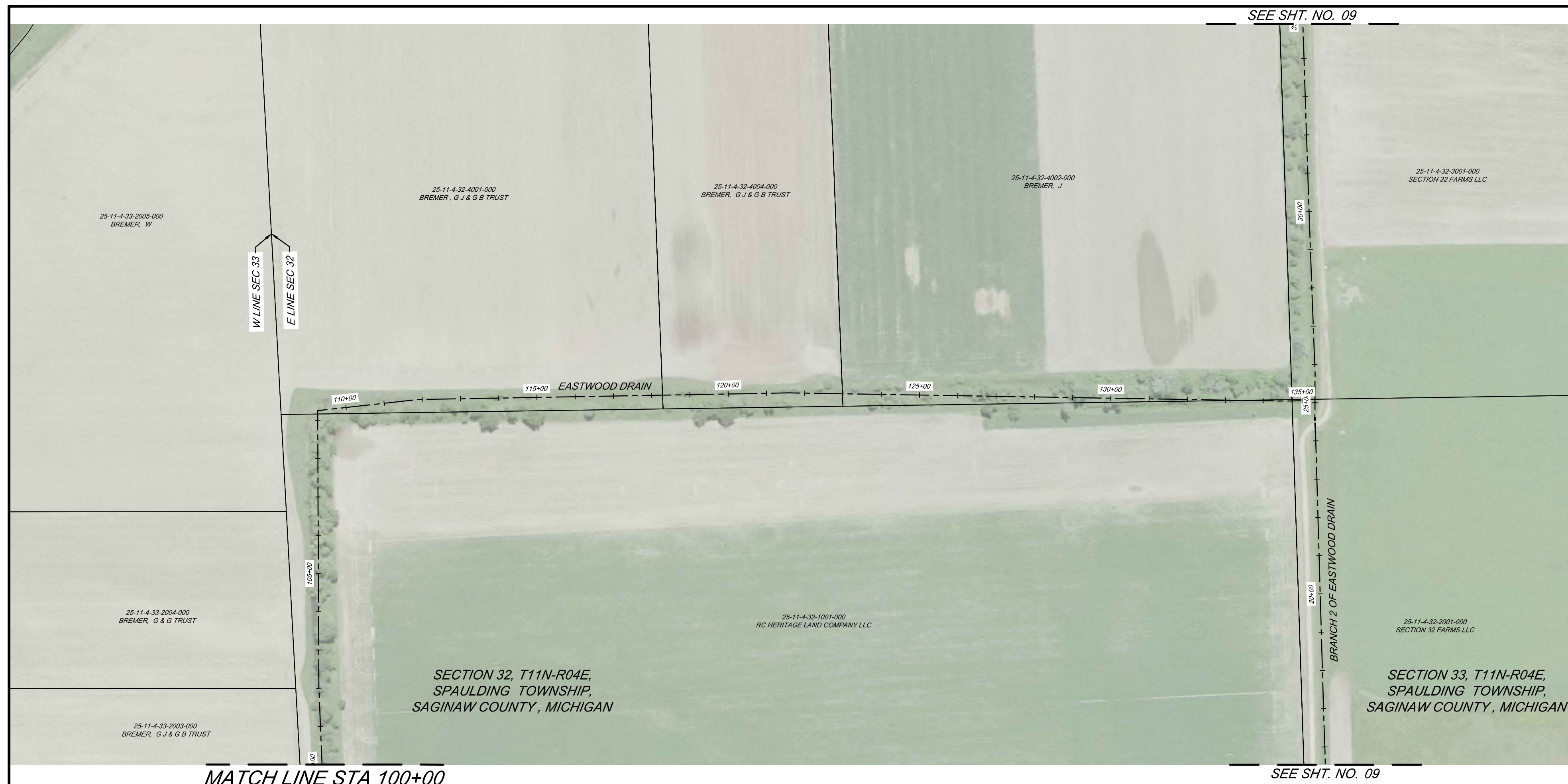
**EASTWOOD DRAIN
PLAN AND PROFILE
STA 50+00 TO STA 100+00**

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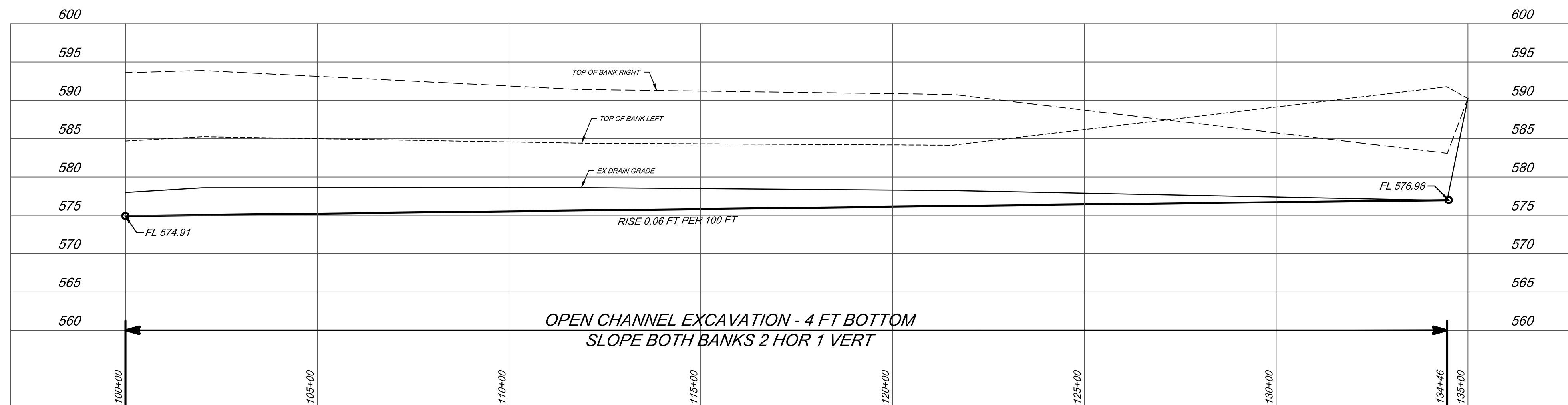
DE. BY: POC/TMC	CH. BY: LJO	PROJECT NO:
DR. BY: POC	APP. BY: NDC	126405SG2018

STDS.	SHEET 06 OF 15	DR
DATE SCALE: APRIL 2023 1" = 10'	FILE NO. DR-4189-06	06



MATCH LINE STA 100+00

SEE SHT. NO. 09



EROSION CONTROL TABLE					
KEY*	FROM STATION	TO STATION	SIDE	DESCRIPTION	QTY
1 P	100+00	134+50	BOTH	SEEDING OF ALL DISTURBED	LUMP SUM
2 T	100+00	134+50	BOTH	MULCH OF ALL DISTURBED AREAS	LUMP SUM
18 P	AS STAKED BY ENGINEER	-	-	RIPRAP TOE OF SLOPE PROTECTION	40 LIN FT
19 P	AS STAKED BY ENGINEER	-	-	RIPRAP SPILLWAY	135 LIN FT

NOTE: COORDINATE INSTALLATION OF EROSION CONTROL STRUCTURES WITH ENGINEER PRIOR TO CONSTRUCTION. LOCATIONS, QUANTITIES, OR TYPES MAY VARY BASED ON FIELD DECISIONS.

SPOIL LEVELING TABLE			
STATION FROM	STATION TO	DETAIL	SIDE TO EXCAVATE FROM
100+00	134+46	"B"	EITHER

BY	MARK	REVISIONS	DATE

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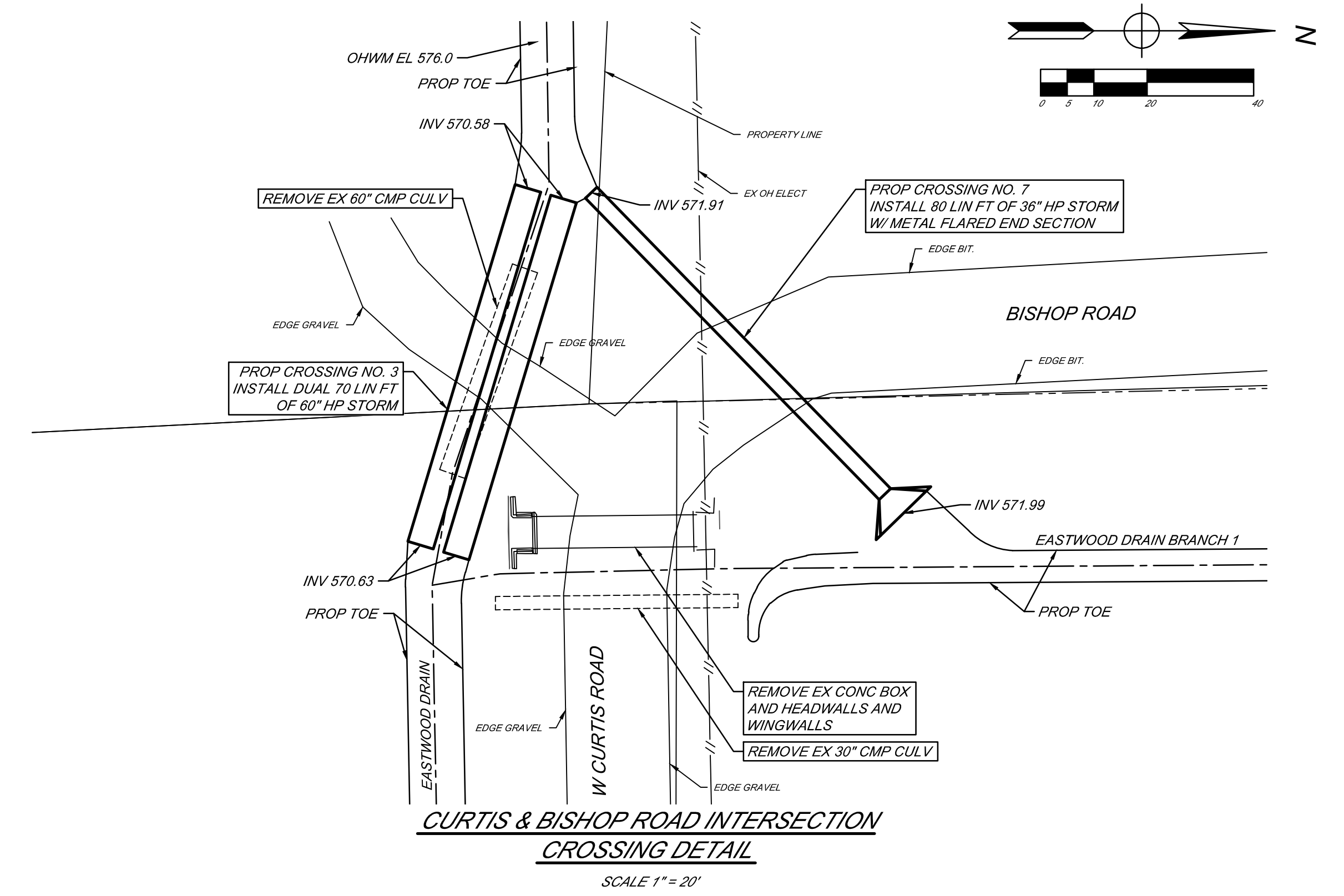
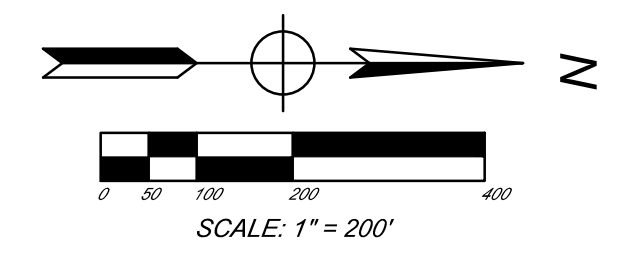
EASTWOOD DRAIN
SAGINAW COUNTY, MICHIGAN

EASTWOOD DRAIN
PLAN AND PROFILE
STA 100+00 TO STA 134+50

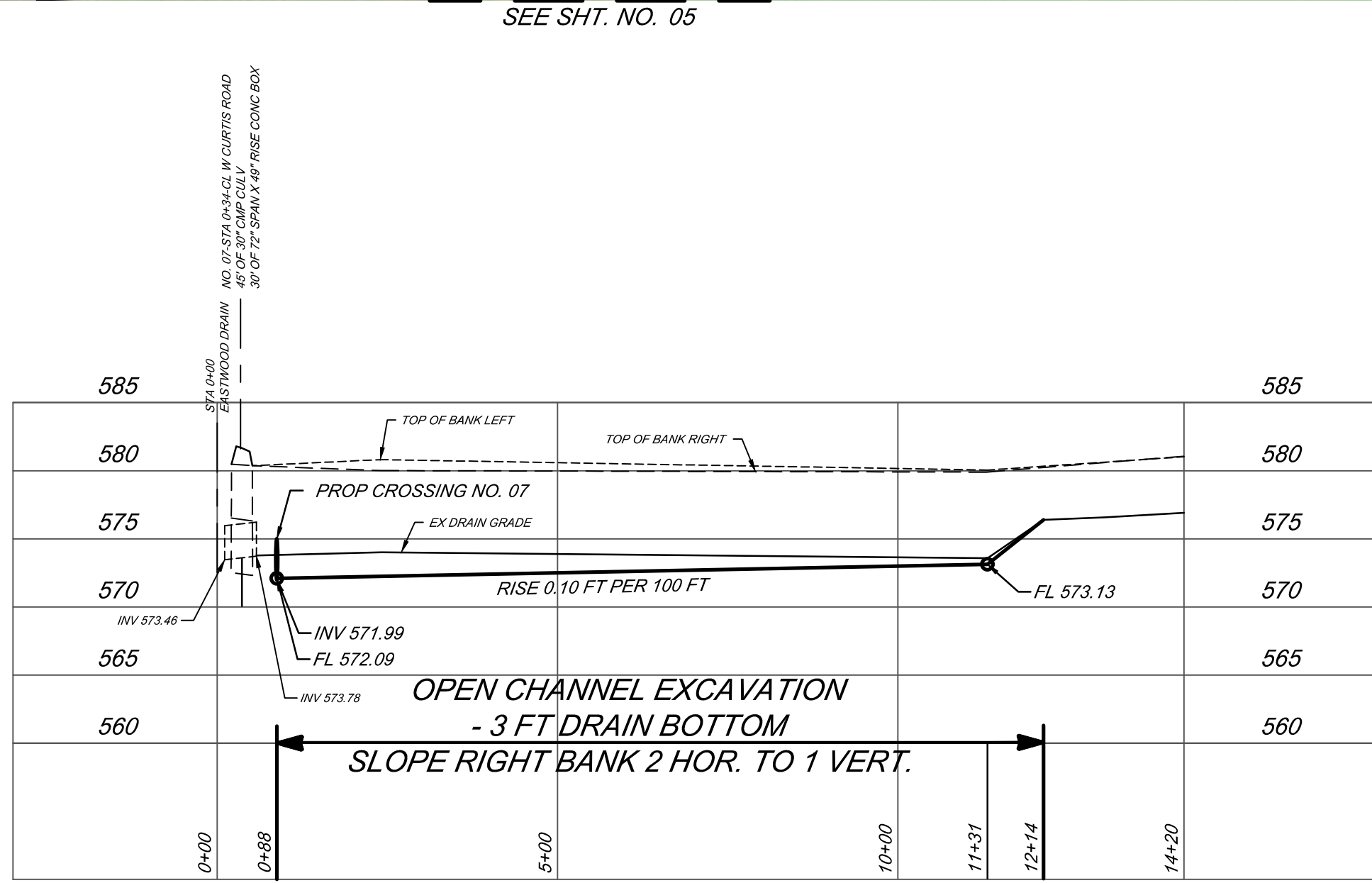
Spicer Group
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DE. BY: POC/TMC	CH. BY: LJO	PROJECT NO:
DR. BY: POC	APP. BY: NDC	126405SG2018
STDS.	SHEET 07 OF 15	DR
DATE: APRIL 2023	FILE NO. DR-4189-07	07
SCALE: 1" = 10'		

RIGHT OF WAY
EASTWOOD DRAIN - DRAIN RIGHT-OF-WAY IS 4 RODS (66') WIDE ON EACH SIDE OF CENTERLINE OF DRAIN, UNLESS SHOWN OTHERWISE IN PLAN VIEW.



NOTE
 INSTALLATION OF PROPOSED CROSSING MAY IMPACT EXISTING PAVEMENT ON BISHOP ROAD. CONTRACTOR TO SAW CUT PAVEMENT PERPENDICULAR TO ROAD AT THE NORTHERN LIMITS OF IMPACT AND REMOVE PAVEMENT. ROAD TO BE RESTORED WITH GRAVEL FOLLOWING INSTALLATION OF PIPE.
 COST TO BE INCLUDED WITH PER LINEAR FOOT BID PRICE BID FOR NEW CULVERT. PAVEMENT TO BE RESTORED BY OTHERS.



NO. 07 - STA 0+34 - W CURTIS ROAD
 REMOVE EXISTING CROSSINGS. INSTALL 80 LIN FT OF 36" HP STORM W/ METAL FLARED END SECTION ON UPSTREAM END ONLY.
 (SEE CURTIS AND BISHOP ROAD CROSSING DETAIL THIS SHEET)
 RESTORE GRAVEL ROAD.

EROSION CONTROL TABLE					
KEY*	FROM STATION	TO STATION	SIDE	DESCRIPTION	QTY
1 P	0+00	12+00	BOTH	SEEDING OF ALL DISTURBED	LUMP SUM
2 T	0+00	12+00	BOTH	MULCH OF ALL DISTURBED AREAS	LUMP SUM
16 P	AS STAKED BY ENGINEER	-	-	RIPRAP TOE OF SLOPE PROTECTION	60 LIN FT
19 P	AS STAKED BY ENGINEER	-	-	RIPRAP SPILLWAY	30 LIN FT
15 P	CROSSING 07	BOTH	-	INSTALL RIPRAP PROTECTION AT INLET & OUTLET OF CROSSING	30 SQ YDS TOTAL

NOTE: COORDINATE INSTALLATION OF EROSION CONTROL STRUCTURES WITH ENGINEER PRIOR TO CONSTRUCTION. LOCATIONS, QUANTITIES, OR TYPES MAY VARY BASED ON FIELD DECISIONS.

SPOIL LEVELING TABLE			
STATION FROM	STATION TO	DETAIL	SIDE TO EXCAVATE FROM
0+00	12+14	"A"	EITHER / BOTH

CONSTRUCTION NOTES

- CONTRACTOR TO DEMOLISH AND REMOVE EXISTING CURTIS ROAD CROSSINGS NEAR STATION 0+34. COST FOR REMOVAL AND GRAVEL ROAD RESTORATION TO BE INCLUDED IN THE PER LINEAR FOOT BID ITEM FOR THE NEW CULVERT.

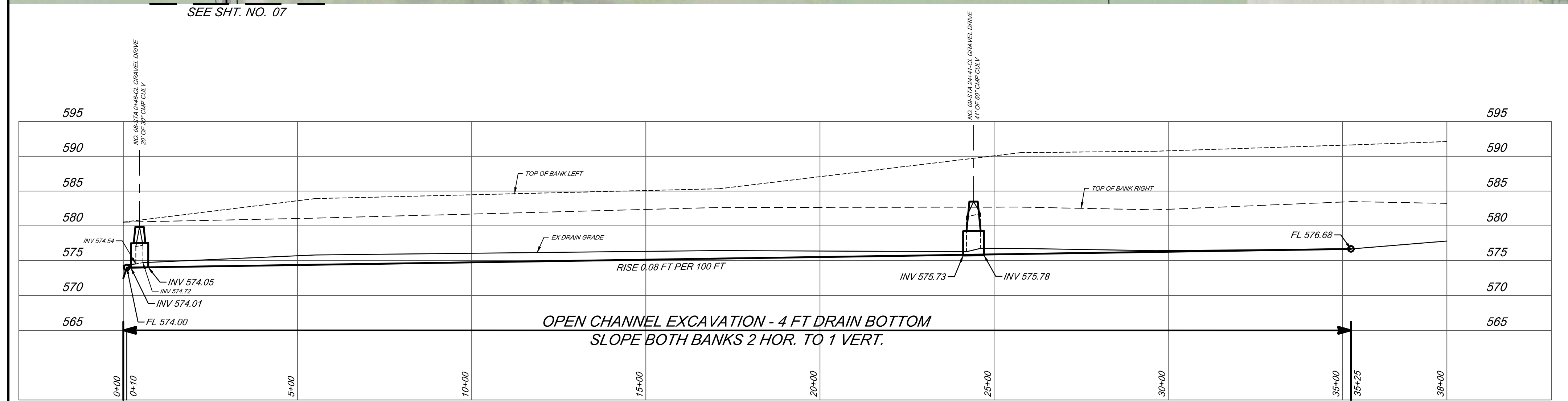
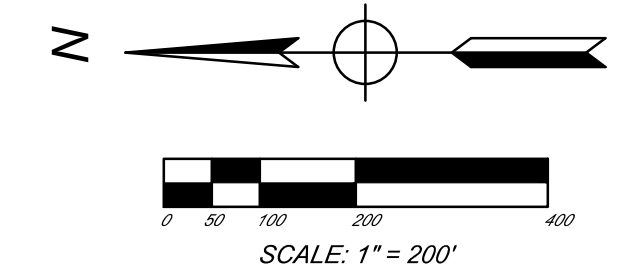
BENCHMARKS

- BM 200 - GEAR SPIKE IN EAST FACE OF 1ST POWER POLE SOUTH OF FERGUSON BAYOU PARKING, EAST SIDE OF BISHOP ROAD. EL 581.61
- BM 201 - GEAR SPIKE IN EAST FACE OF 3RD POWER POLE SOUTH OF FERGUSON BAYOU PARKING, EAST SIDE OF BISHOP ROAD. EL 581.63
- BM 202 - GEAR SPIKE IN SOUTH FACE OF 2ND POLE EAST OF INTERSECTION OF CURTIS AND BISHOP ROADS. EL 580.43

RIGHT OF WAY

EASTWOOD DRAIN - DRAIN RIGHT-OF-WAY IS 4 RODS (66') WIDE ON EACH SIDE OF CENTERLINE OF DRAIN, UNLESS SHOWN OTHERWISE IN PLAN VIEW.

BY	MARK	REVISIONS	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>			
<p>EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN</p>			
<p>BRANCH 1 PLAN AND PROFILE STA 0+00 TO STA 12+00</p>			
<p>DE. BY: POC/TMC DR. BY: POC</p>		<p>CH. BY: LDC APP. BY: NDC</p>	
<p>PROJECT NO. 126405SG2018</p>		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>	
STDS.	SHEET 08 OF 15	<p>DR 08</p>	
DATE SCALE	APRIL 2023 1" = 10'		



NO. 08 - STA 0+46 - SECTION 32 FARMS LLC
 REMOVE EXISTING CROSSING, INSTALL 50 LIN FT OF
 42" HP STORM.
 RESTORE GRAVEL DRIVE

NO. 09 - STA 24+41 - SECTION 32 FARMS LLC
 REMOVE EXISTING CROSSING, INSTALL 60 LIN FT OF
 42" HP STORM.
 RESTORE GRAVEL DRIVE

EROSION CONTROL TABLE					
KEY*	FROM STATION	TO STATION	SIDE	DESCRIPTION	QTY
1 P	0+00	35+75	BOTH	SEEDING OF ALL DISTURBED	LUMP SUM
2 T	0+00	35+75	BOTH	MULCH OF ALL DISTURBED AREAS	LUMP SUM
19 P	AS STAKED BY ENGINEER	-	-	RIPRAP SPILLWAY	40 LIN FT
15 P	CROSSINGS 8 & 9	BOTH	BOTH	INSTALL RIPRAP PROTECTION AT INLET & OUTLET OF CROSSING	40 SQ YDS TOTAL

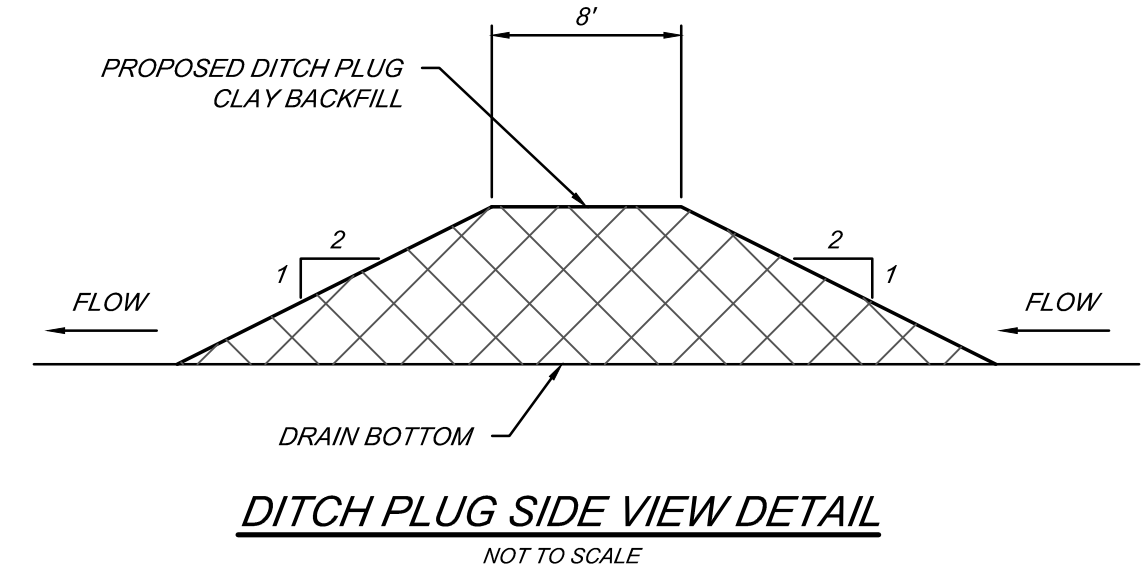
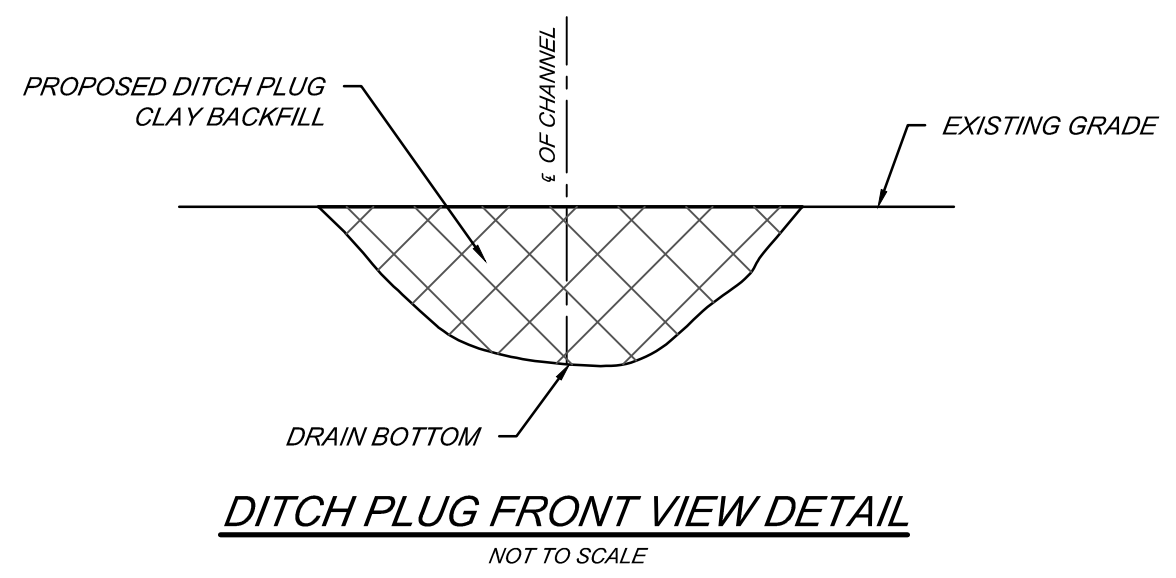
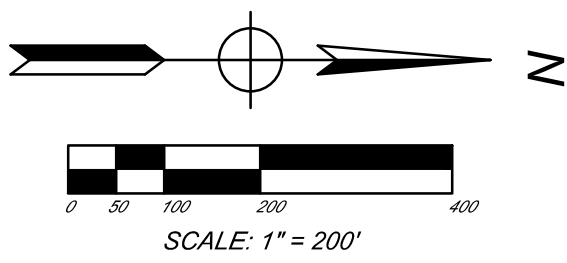
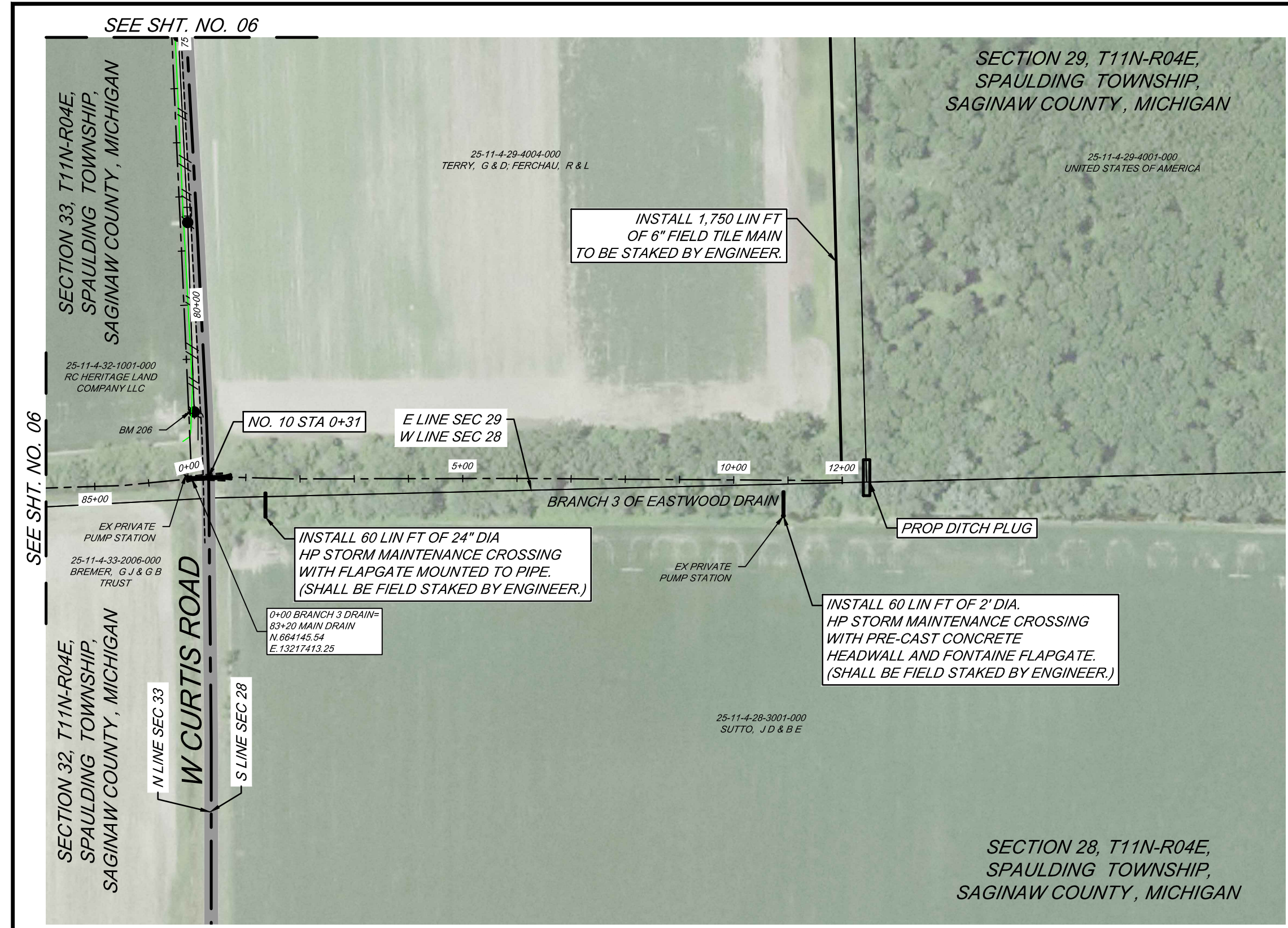
NOTE: COORDINATE INSTALLATION OF EROSION CONTROL STRUCTURES WITH ENGINEER PRIOR TO CONSTRUCTION. LOCATIONS, QUANTITIES, OR TYPES MAY VARY BASED ON FIELD DECISIONS.

SPOIL LEVELING TABLE			
STATION FROM	STATION TO	DETAIL	SIDE TO EXCAVATE FROM
0+00	35+25	"A"	EITHER

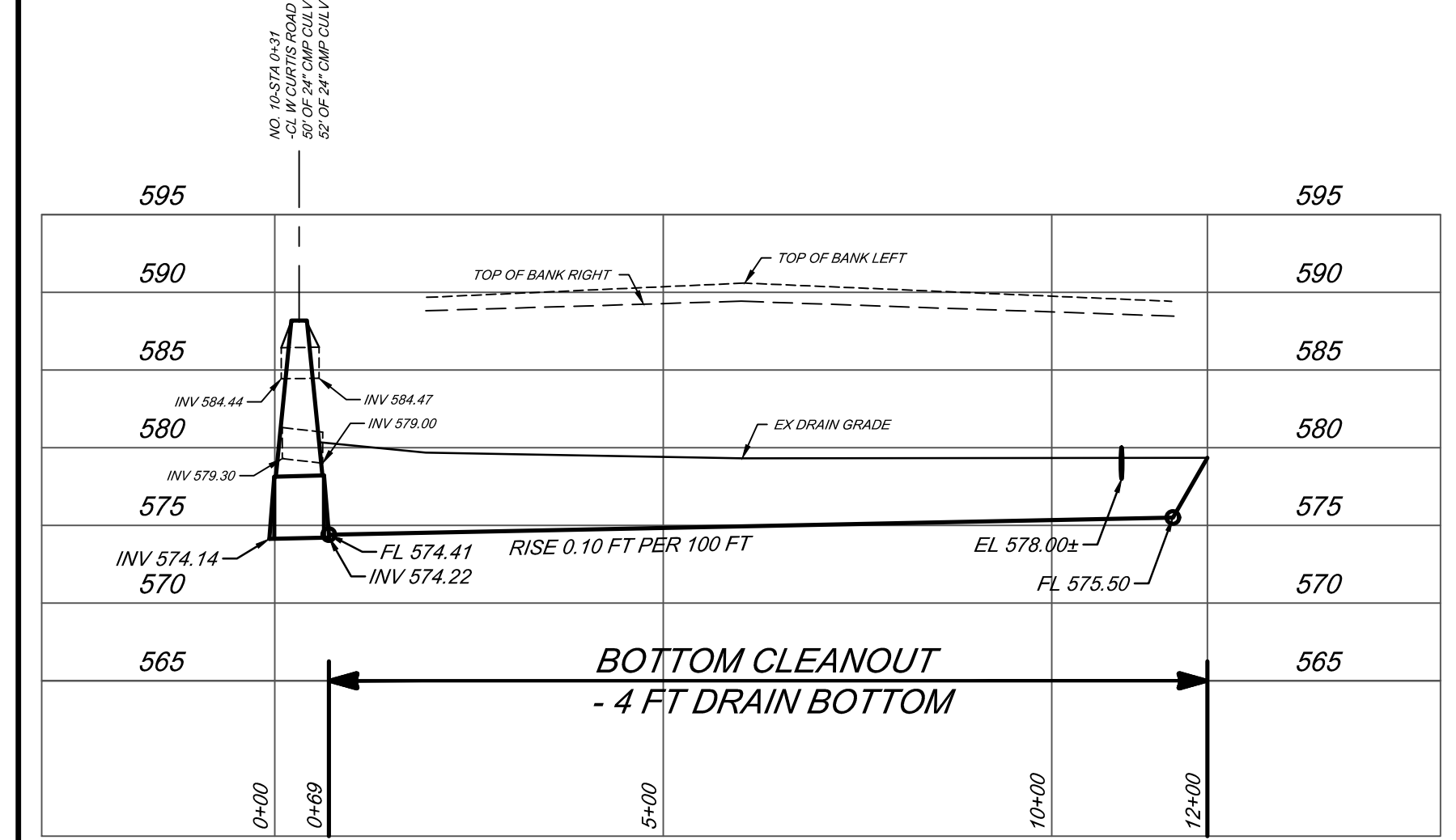
BENCHMARKS
 BM 204 - TOP CENTER OF WEST END OF 36" CMP, 2.570% EAST OF THE INTERSECTION OF CURTIS AND BISHOP ROAD INTERSECTION.
 EL 577.73

RIGHT OF WAY
 EASTWOOD DRAIN - DRAIN RIGHT-OF-WAY IS 4 RODS (66') WIDE ON EACH SIDE OF CENTERLINE OF DRAIN, UNLESS SHOWN OTHERWISE IN PLAN VIEW.

BY	MARK	REVISIONS	DATE
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EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN			
BRANCH 2 PLAN AND PROFILE STA 0+00 TO STA 35+25			
		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com	
DE. BY: POC/TMC	CH. BY: LJO	PROJECT NO. 126405SG2018	
DR. BY: POC	APP. BY: NDC		
STDS.	SHEET 09 OF 15	DR	
DATE SCALE: APRIL 2023 1" = 10'	FILE NO. DR-4189-09	09	



PERMANENT WETLAND IMPACT #4			
TYPE	LENGTH	WIDTH	DEPTH
CUT	20 FT	58 FT	9 FT
FILL	-	-	-



NO. 10 - STA 0+31 - W CURTIS ROAD
 REMOVE EXISTING CROSSING, INSTALL 64 LIN FT OF
 48\"/>

EROSION CONTROL TABLE					
KEY*	FROM STATION	TO STATION	SIDE	DESCRIPTION	QTY
1 P	0+00	12+00	BOTH	SEEDING OF ALL DISTURBED	LUMP SUM
2 T	0+00	12+00	BOTH	MULCH OF ALL DISTURBED AREAS	LUMP SUM
22 P	AS STAKED BY ENGINEER			SURFACE OUTLET TUBE (35 LIN FT)	4 EA
15 P	CROSSING 10		BOTH	INSTALL RIPRAP PROTECTION AT INLET & OUTLET OF CROSSING	30 SQ YDS TOTAL

NOTE: COORDINATE INSTALLATION OF EROSION CONTROL STRUCTURES WITH ENGINEER PRIOR TO CONSTRUCTION. LOCATIONS, QUANTITIES, OR TYPES MAY VARY BASED ON FIELD DECISIONS.

SPOIL LEVELING TABLE			
STATION FROM	STATION TO	DETAIL	SIDE TO EXCAVATE FROM
0+00	12+00	"C"	BOTH

- CONSTRUCTION NOTES**
- STA 0+31 - CONTRACTOR TO COORDINATE WITH LANDOWNER AND SALVAGE ADJACENT MANHOLE AND WEIR GATES IF LANDOWNER WISHES TO KEEP THEM. CONTRACTOR TO REMOVE ANY ADJACENT ITEMS NOT SALVAGED. COST INCLUDED IN PER LIN FT PRICE BID FOR PROPOSED CROSSING.
 - STA 12+00 - CONTRACTOR TO COORDINATE WITH LANDOWNER BEFORE INSTALLATION OF 1,750 LIN FT 6\"/>

BENCHMARKS
 BM 205 - GEAR SPIKE IN NORTH FACE OF POWER POLE, SOUTH SIDE OF CURTIS ROAD. EL 584.56

RIGHT OF WAY
 EASTWOOD DRAIN - DRAIN RIGHT-OF-WAY IS 4 RODS (68') WIDE ON EACH SIDE OF CENTERLINE OF DRAIN, UNLESS SHOWN OTHERWISE IN PLAN VIEW.

BY	MARK	REVISIONS	DATE

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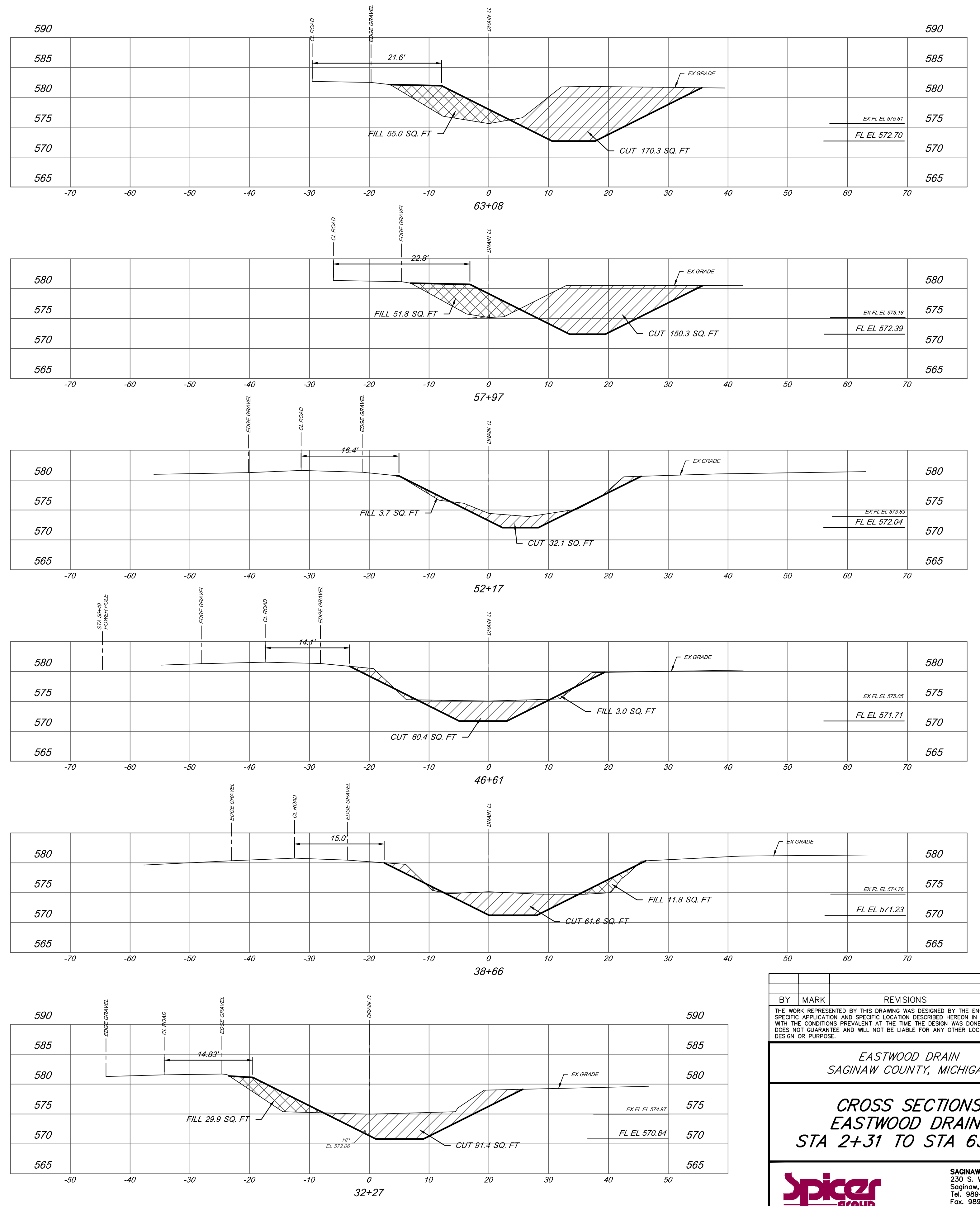
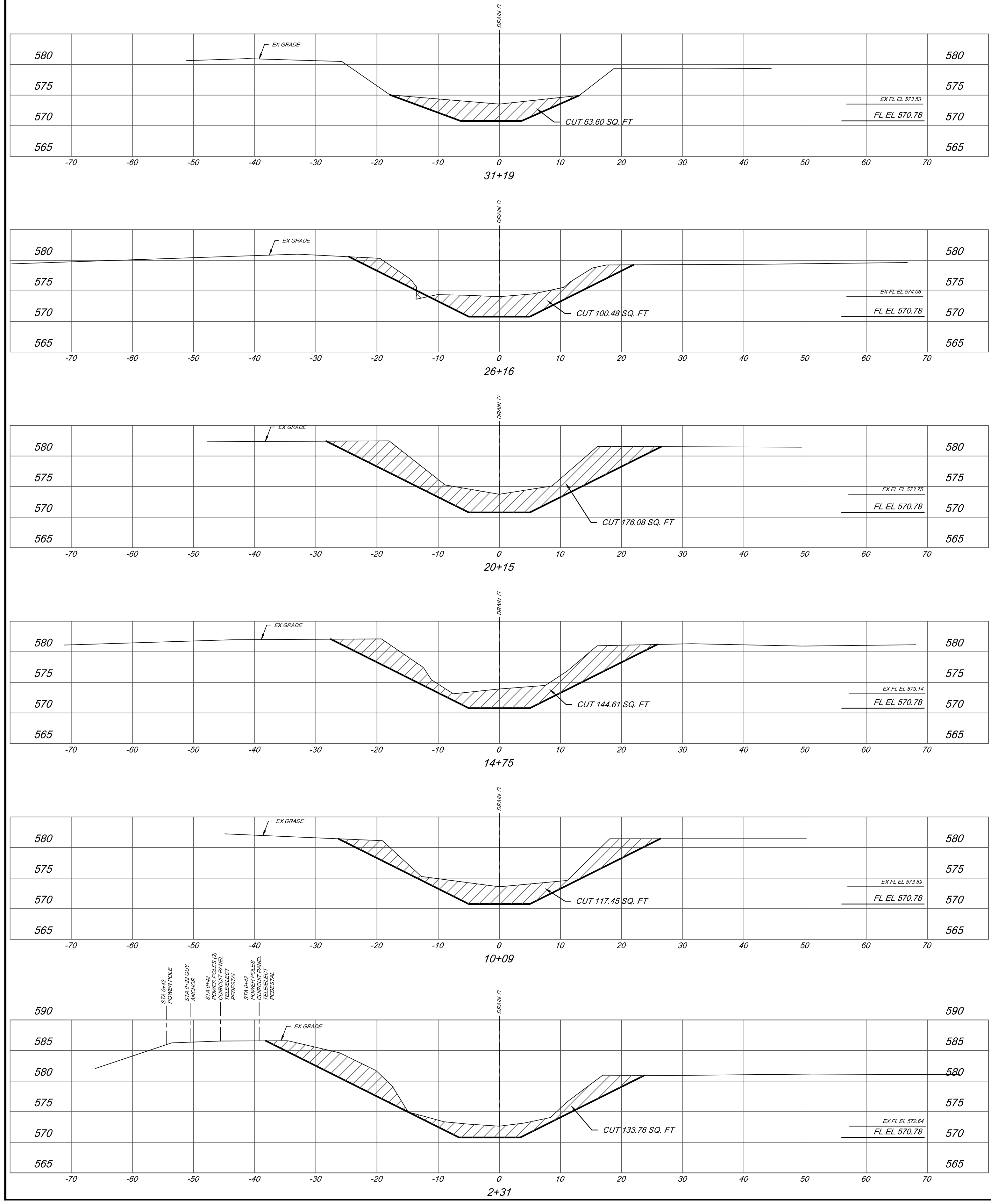
**EASTWOOD DRAIN
 SAGINAW COUNTY, MICHIGAN**

**BRANCH 3
 PLAN AND PROFILE
 STA 0+00 TO STA 12+00**

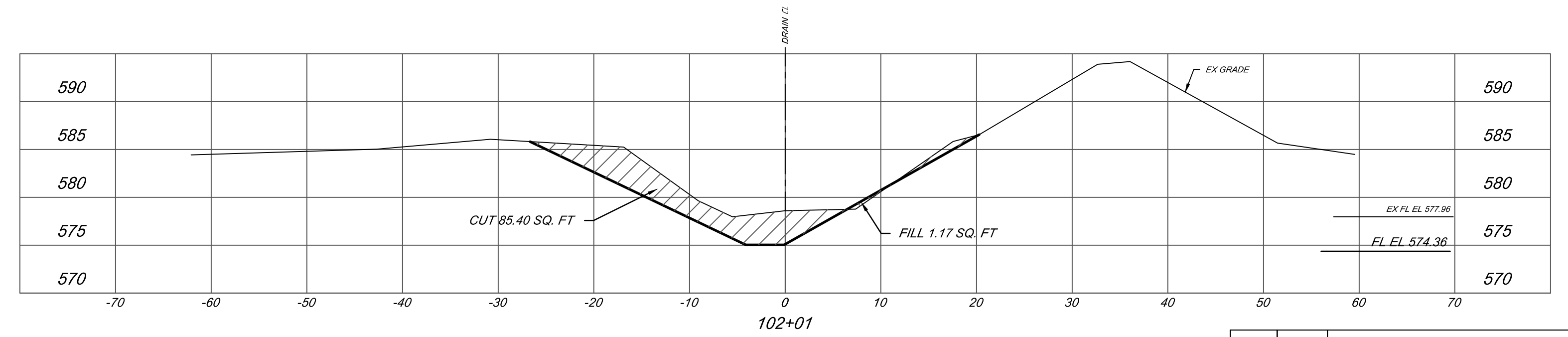
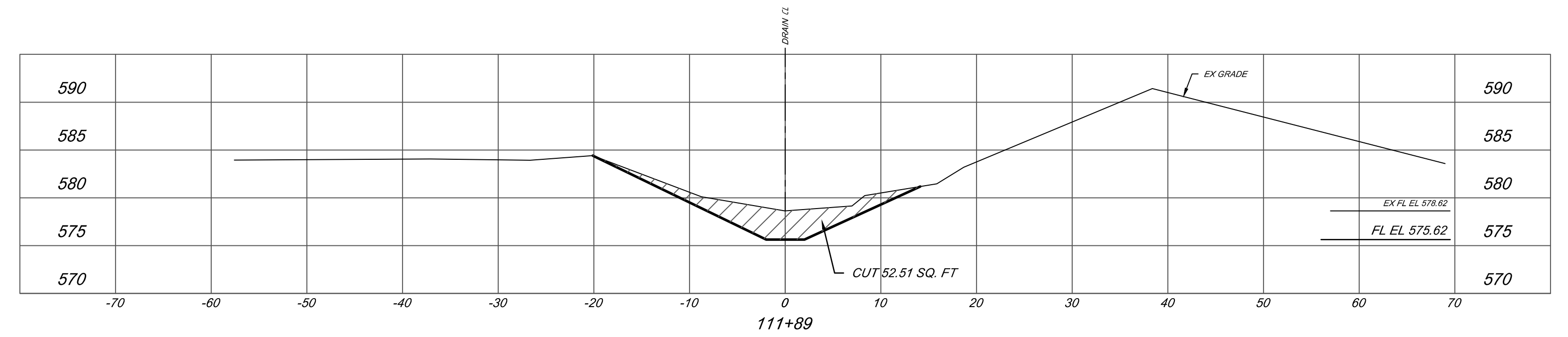
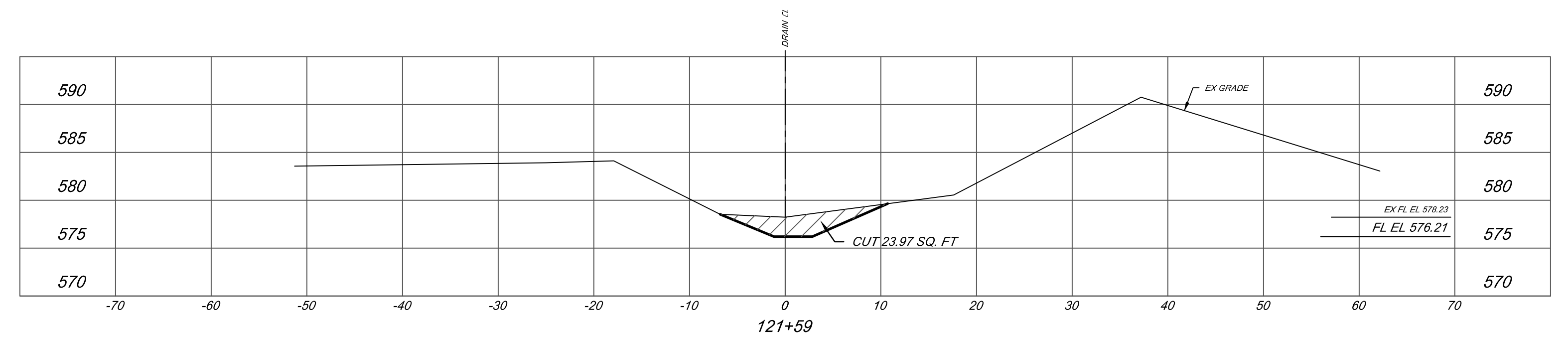
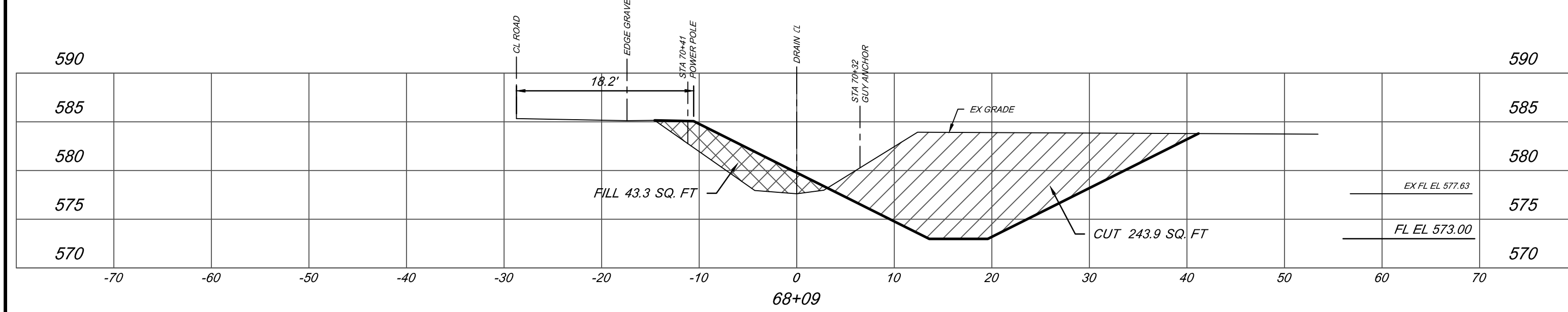
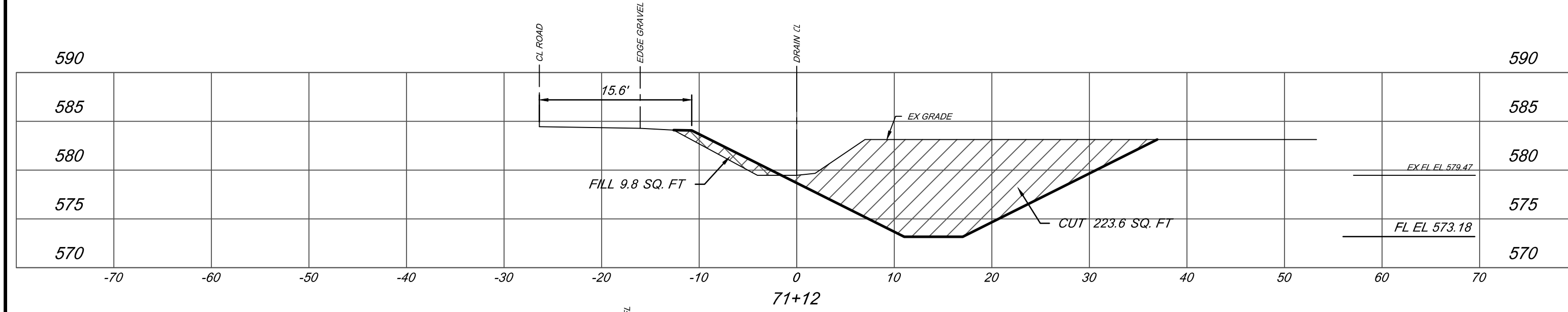
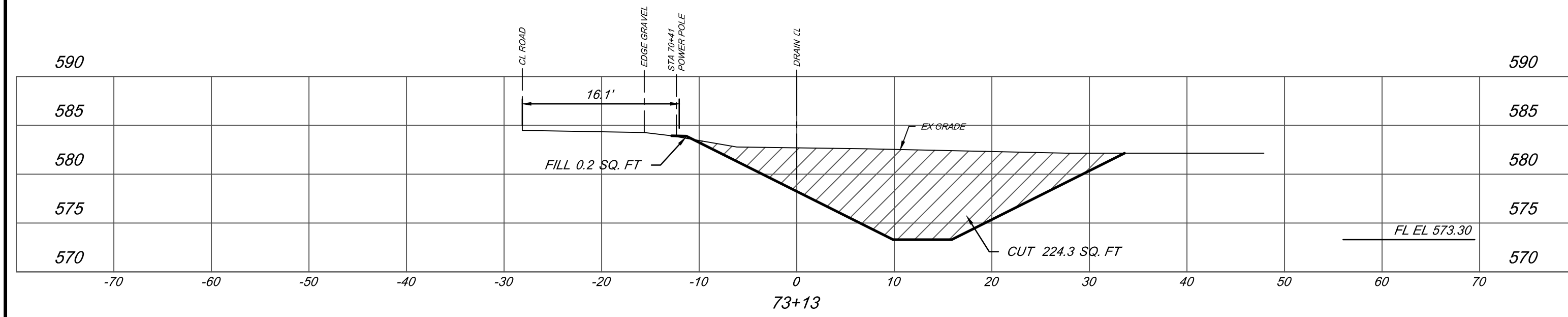
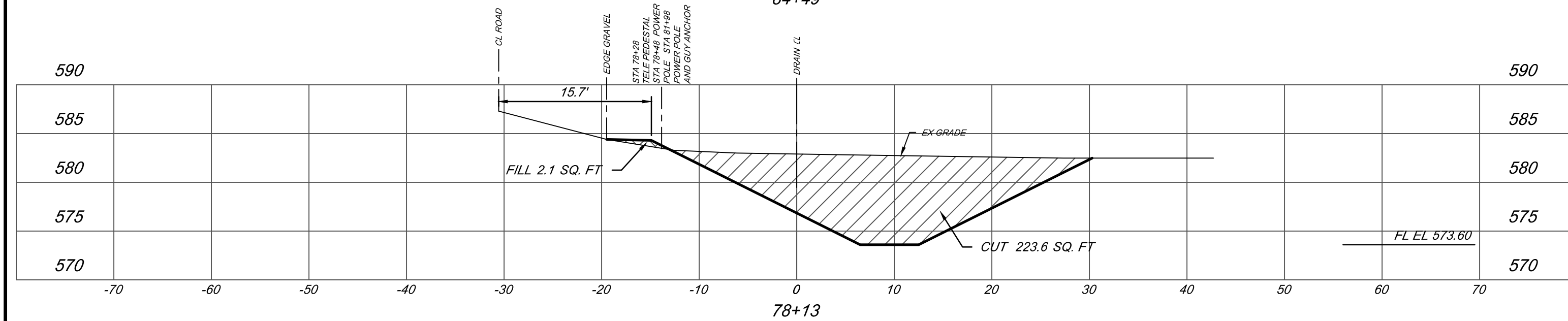
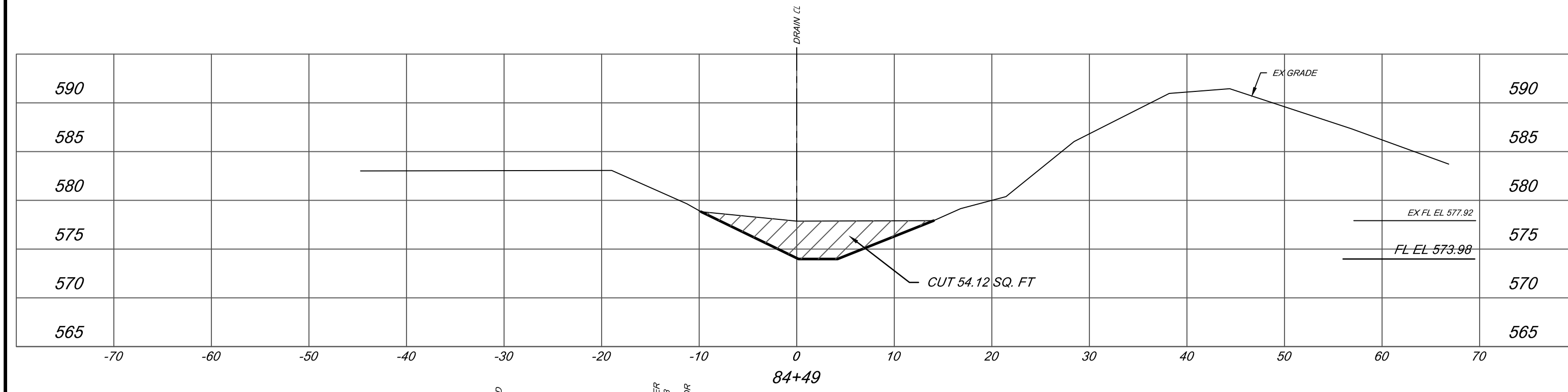
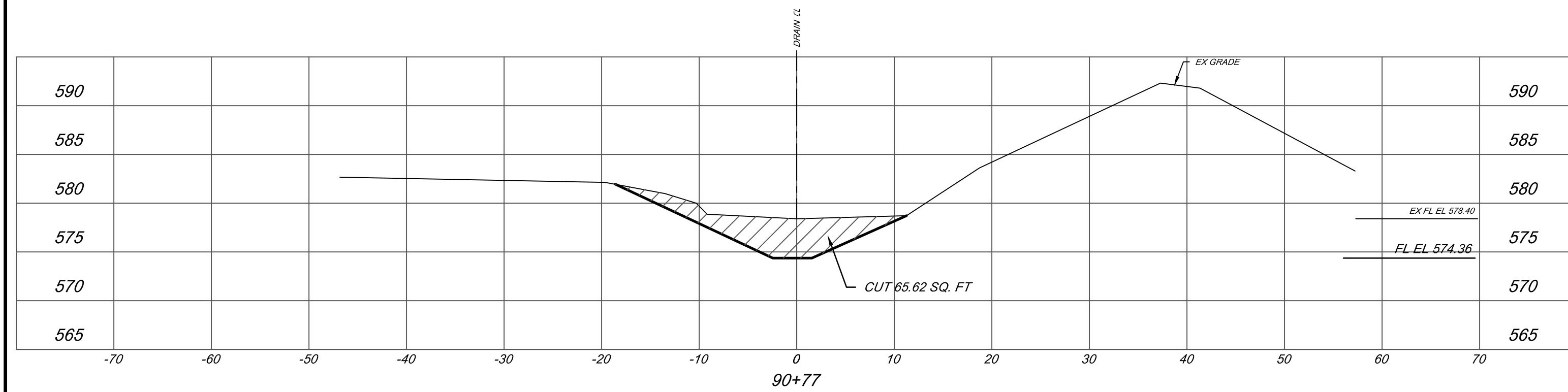
Spicer Group
 SAGINAW OFFICE
 230 S. Washington Ave.
 Saginaw, MI 48607 Tel.
 989-754-4717 Fax.
 989-754-4440
 www.SpicerGroup.com

DE. BY: POC/TMC	CH. BY: LJO	PROJECT NO:
DR. BY: POC	APP. BY: NDC	126405SG2018
STDS.	SHEET 10 OF 15	DR
DATE: APRIL 2023	FILE NO. DR-4189-10	10
SCALE: 1" = 10'		

IMPACT 2 (STA 0+00 TO STA 31+99)					
TYPE	LENGTH	WIDTH	DEPTH	CU FT	CU YD
CUT	3199 FT	30.80 FT	2.10 FT	206,911.30	7,663.40
FILL	-	-	-	-	-



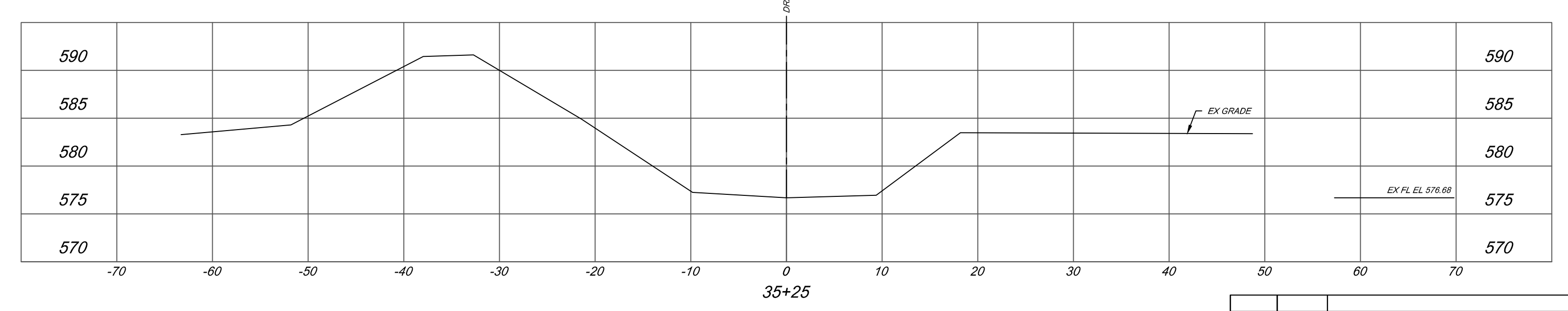
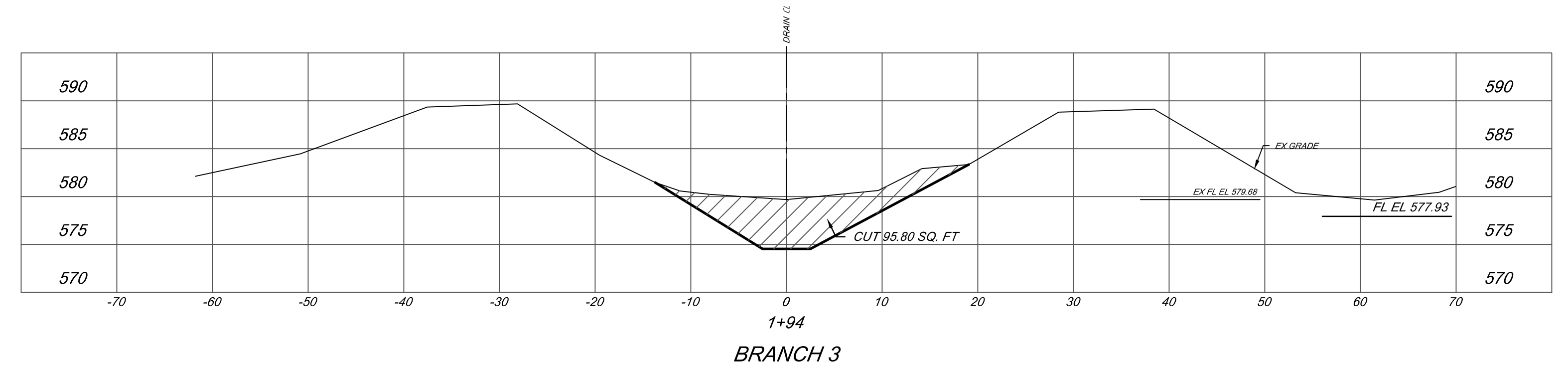
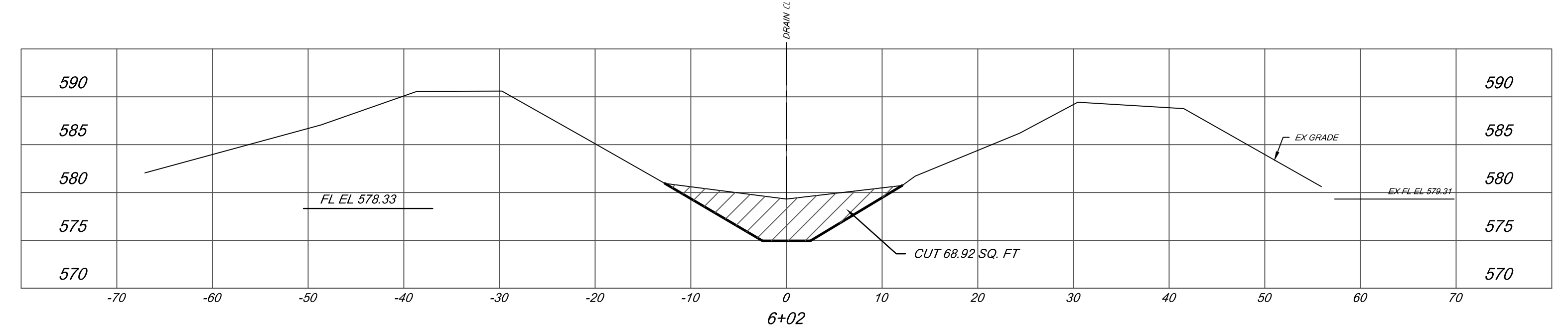
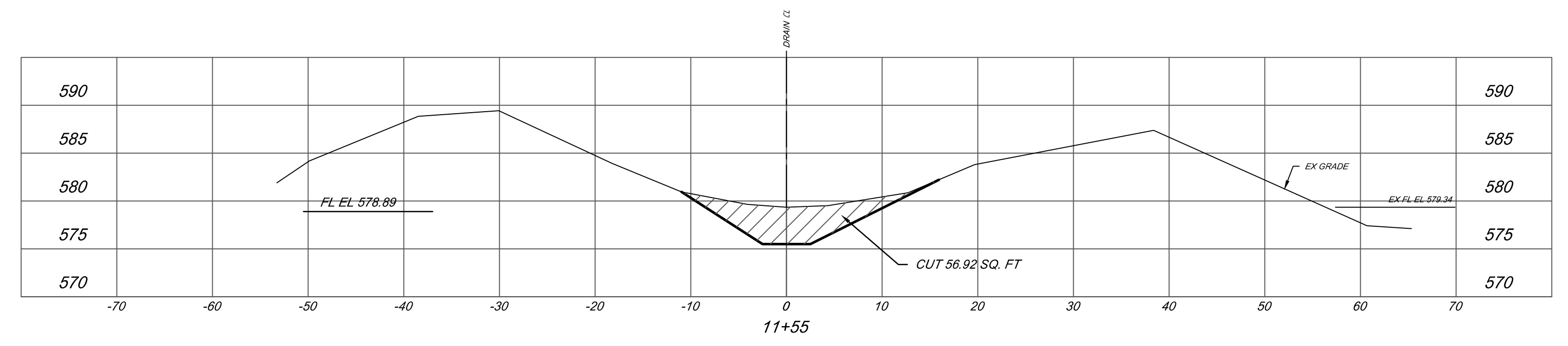
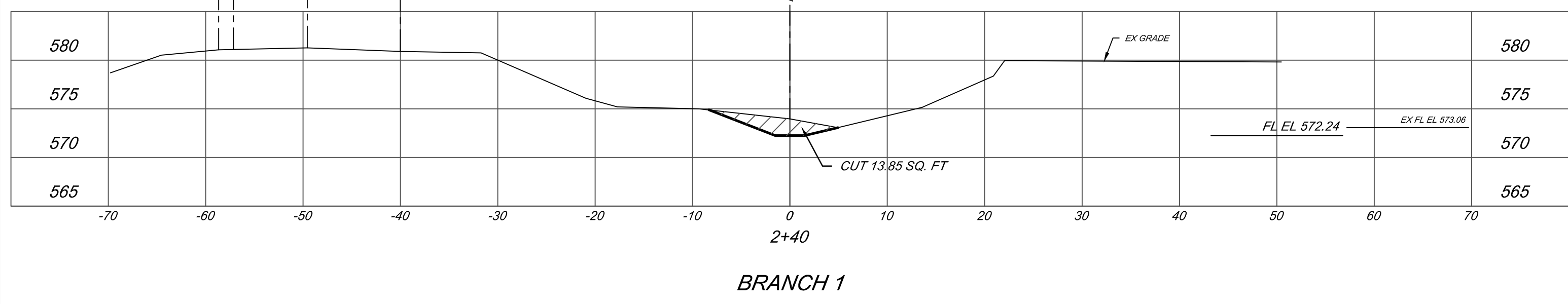
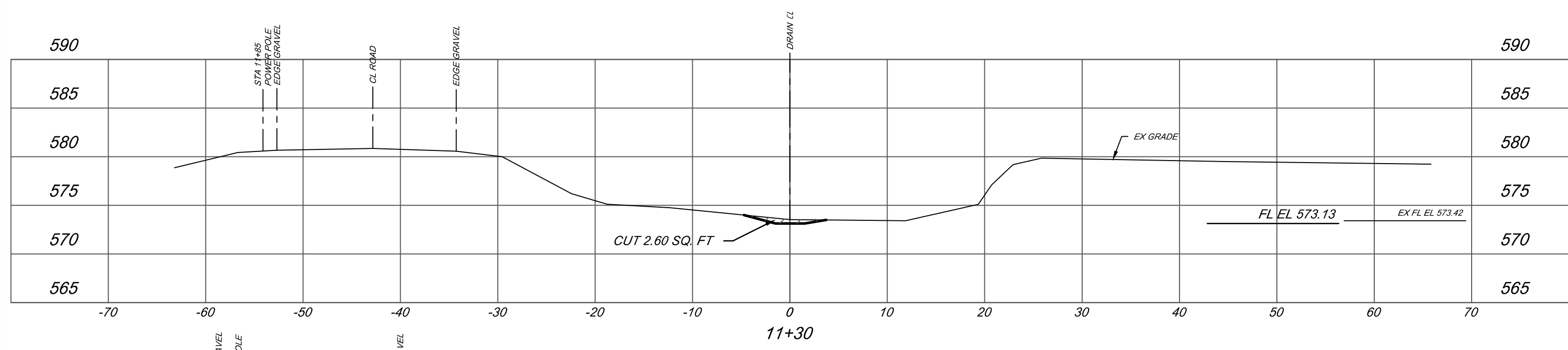
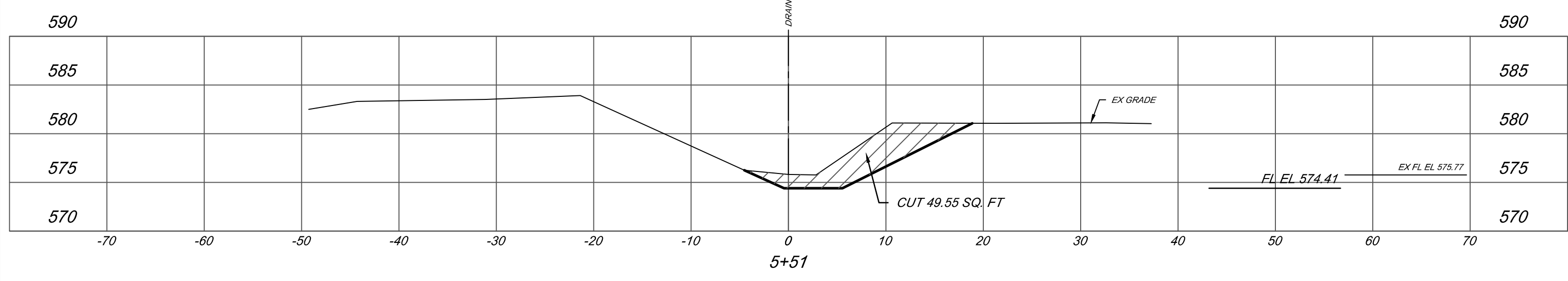
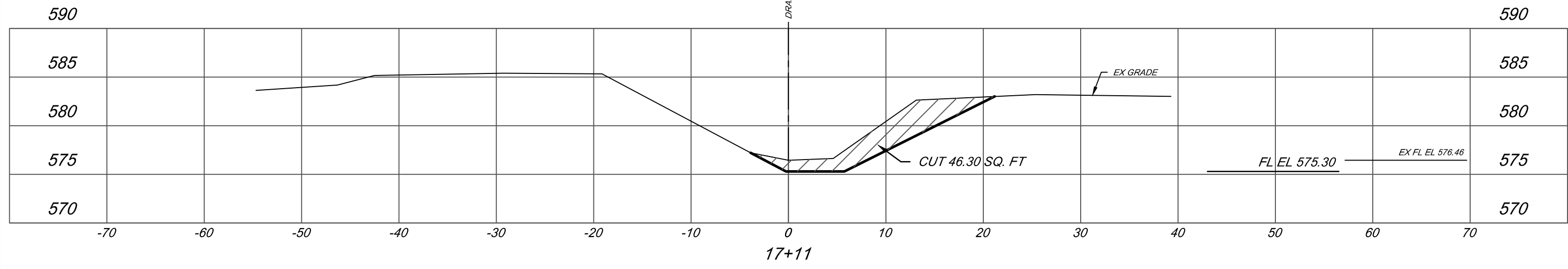
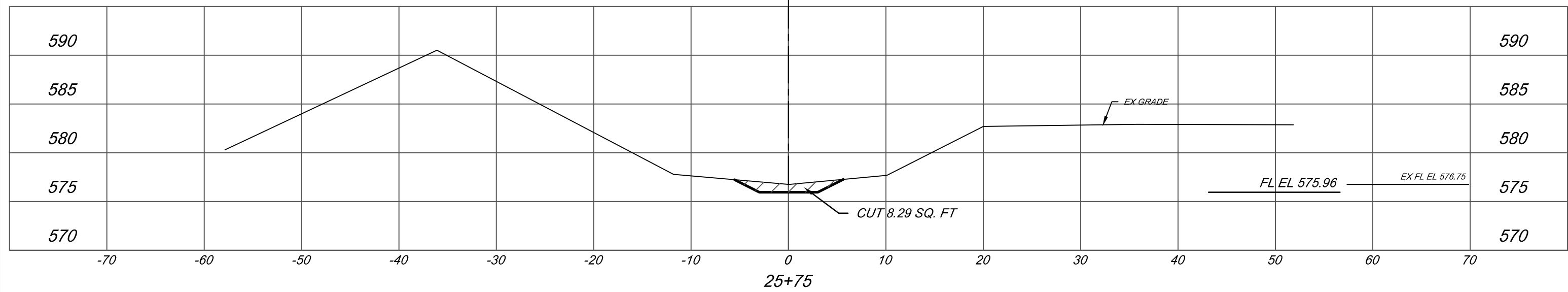
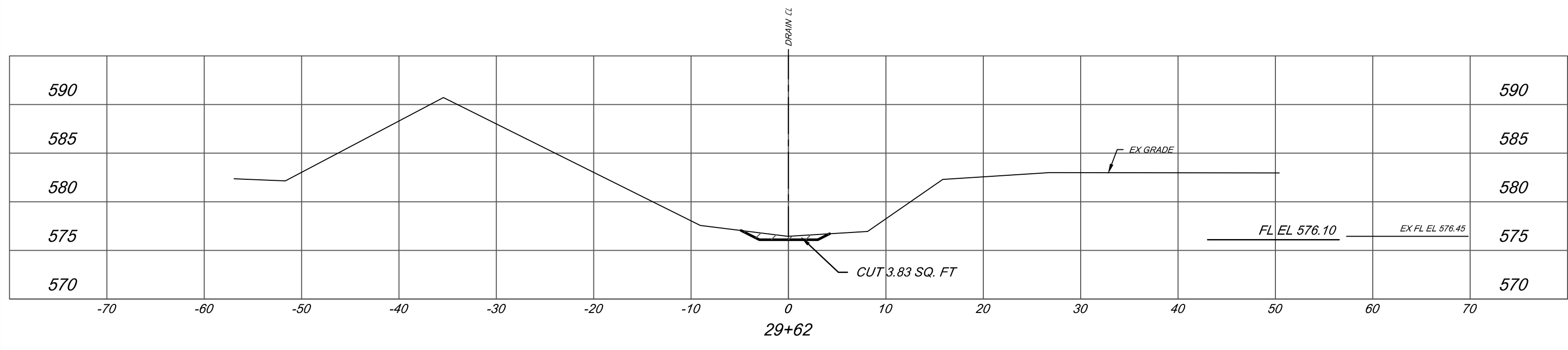
BY	MARK	REVISIONS	DATE
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DE. BY:	POC/TMC	CH. BY:	LDO
DR. BY:	POC	APP. BY:	NDC
PROJECT NO.		126405SG2018	
STDS.	SHEET 11 OF 15	DR	
DATE	APRIL, 2023	FILE NO.	DR-4189-11
SCALE	1" = 10'	11	



BY	MARK	REVISIONS	DATE
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<p>EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN</p>			
<p>CROSS SECTIONS EASTWOOD DRAIN STA 68+09 TO STA 134+46</p>			
<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com</p>		<p>PROJECT NO. 126405SG2018</p>	
DE. BY: POC/TMC	CH. BY: LDO	PROJECT NO.	
DR. BY: POC	APP. BY: NDC	126405SG2018	
STDS.	SHEET 12 OF 15	DR	
DATE: APRIL, 2023	FILE NO.	12	
SCALE: 1" = 10'	DR-4189-12		

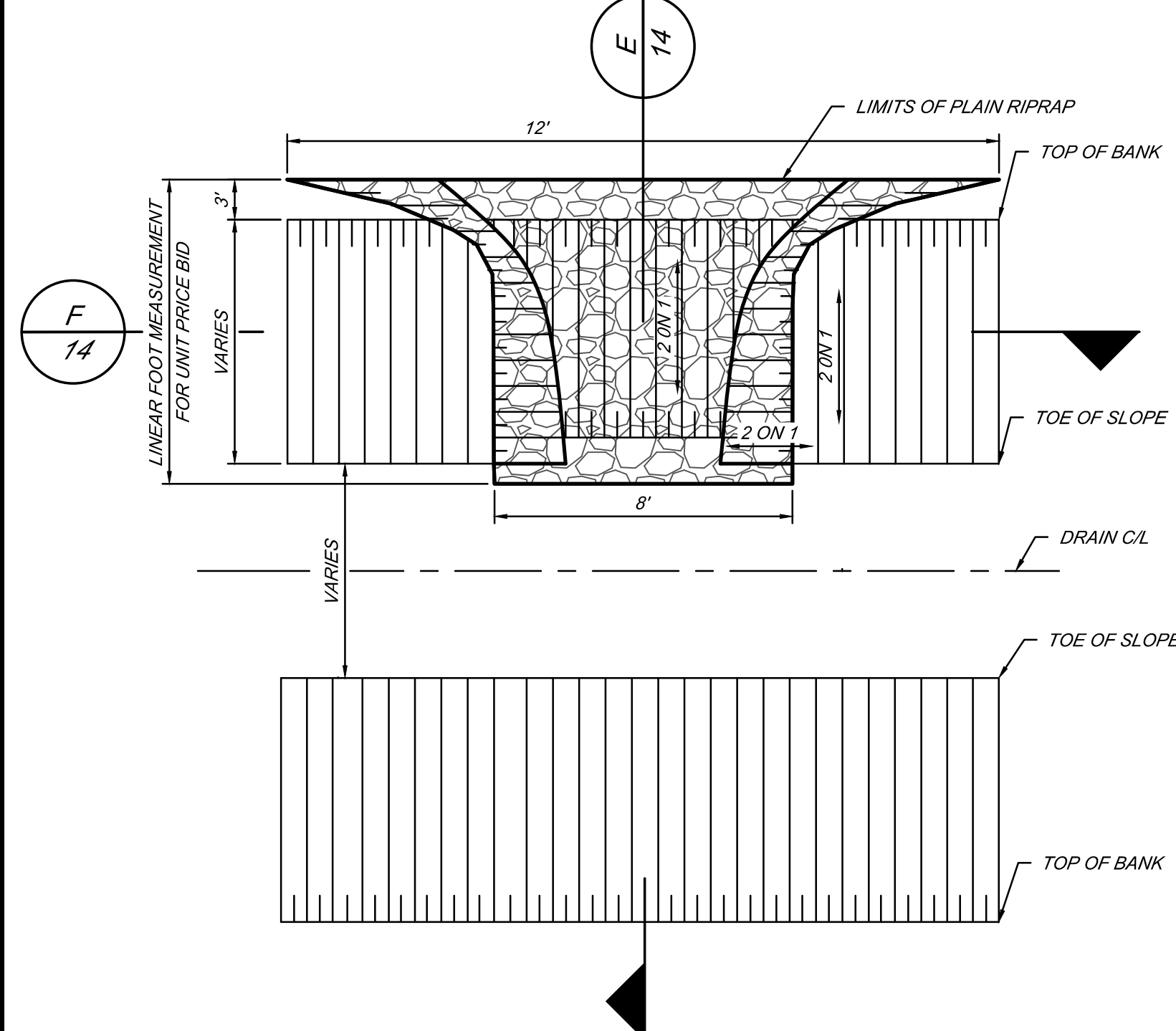
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IMPACT 2 BRANCH 3 (STA 0+00 TO STA 12+00)					
TYPE	LENGTH	WIDTH	DEPTH	CU FT	CU YD
CUT	1,200 FT	26 FT	2.8 FT	87,360.0	3,235.60
FILL	-	-	-	-	-

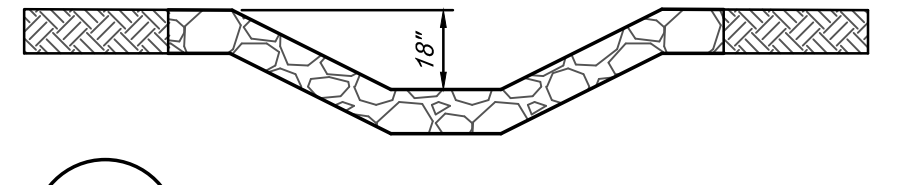


BRANCH 3

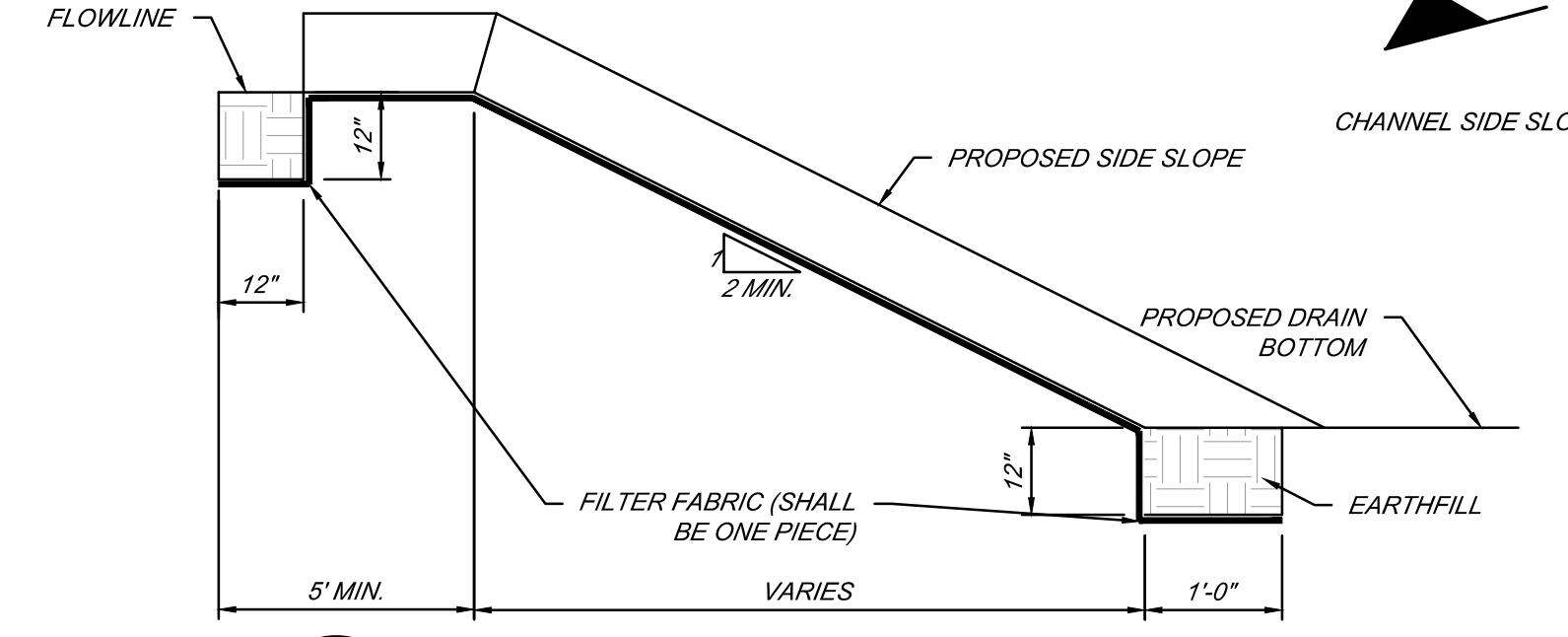
BY	MARK	REVISIONS	DATE
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<p>EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN</p>			
<p>CROSS SECTIONS BR 1 STA 2+40 TO STA 11+30 BR 2 STA 5+51 TO STA 35+25 BR 3 STA 1+94 TO STA 11+55</p>			
		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com</p>	
DE. BY:	POC/TMC	CH. BY:	LDO
DR. BY:	POC	APP. BY:	NDC
PROJECT NO.		126405SG2018	
STDS.	SHEET 13 OF 15		<p>DR 13</p>
DATE	APRIL, 2023		
SCALE	1" = 10'		FILE NO. DR-4189-13



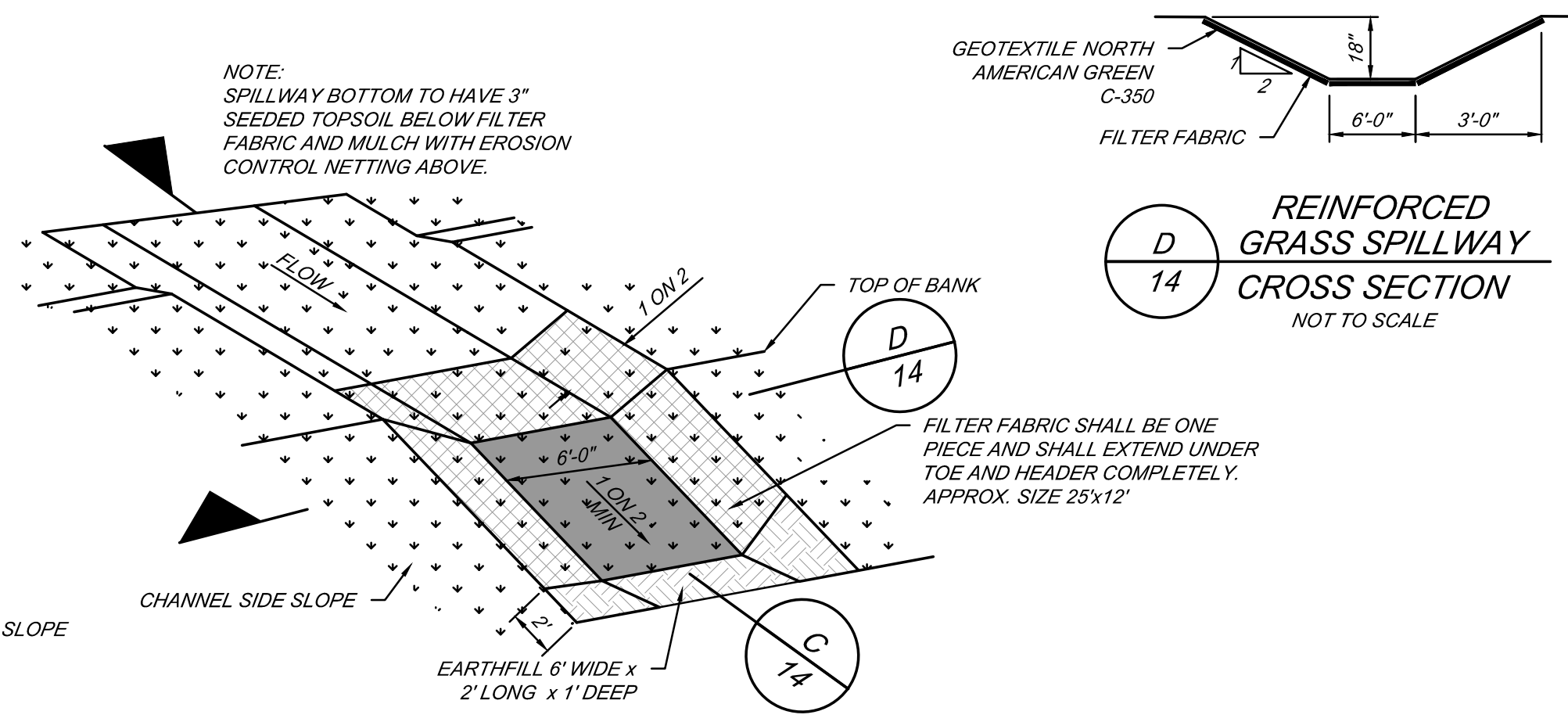
E 14
PLAIN RIPRAP SPILLWAY
CROSS SECTION
NOT TO SCALE



F 14
PLAIN RIPRAP SPILLWAY
CROSS SECTION
NOT TO SCALE



C 14
REINFORCED GRASS SPILLWAY
CROSS SECTION
NOT TO SCALE

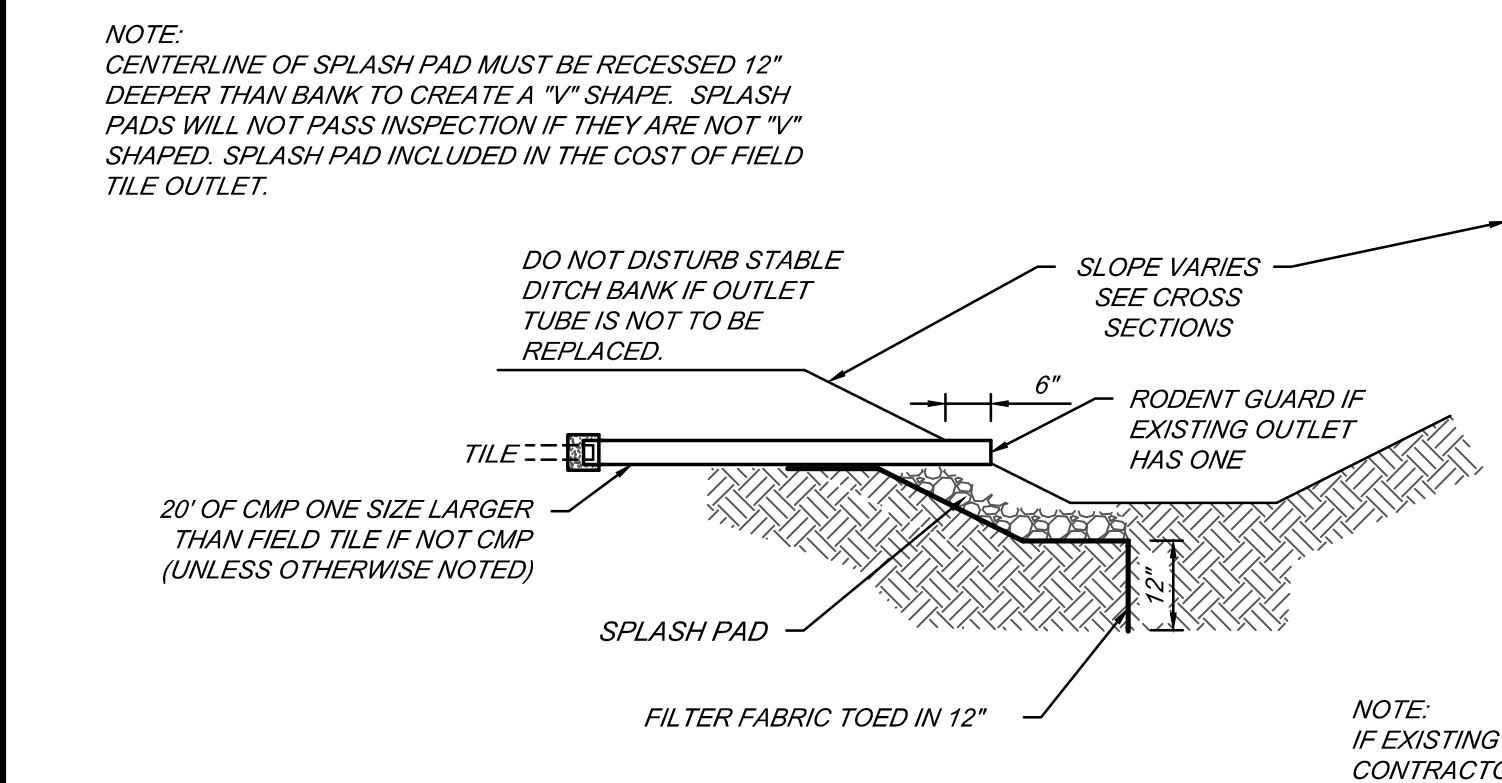


D 14
REINFORCED GRASS SPILLWAY
CROSS SECTION
NOT TO SCALE

REINFORCED GRASS SPILLWAY DETAIL
NOT TO SCALE

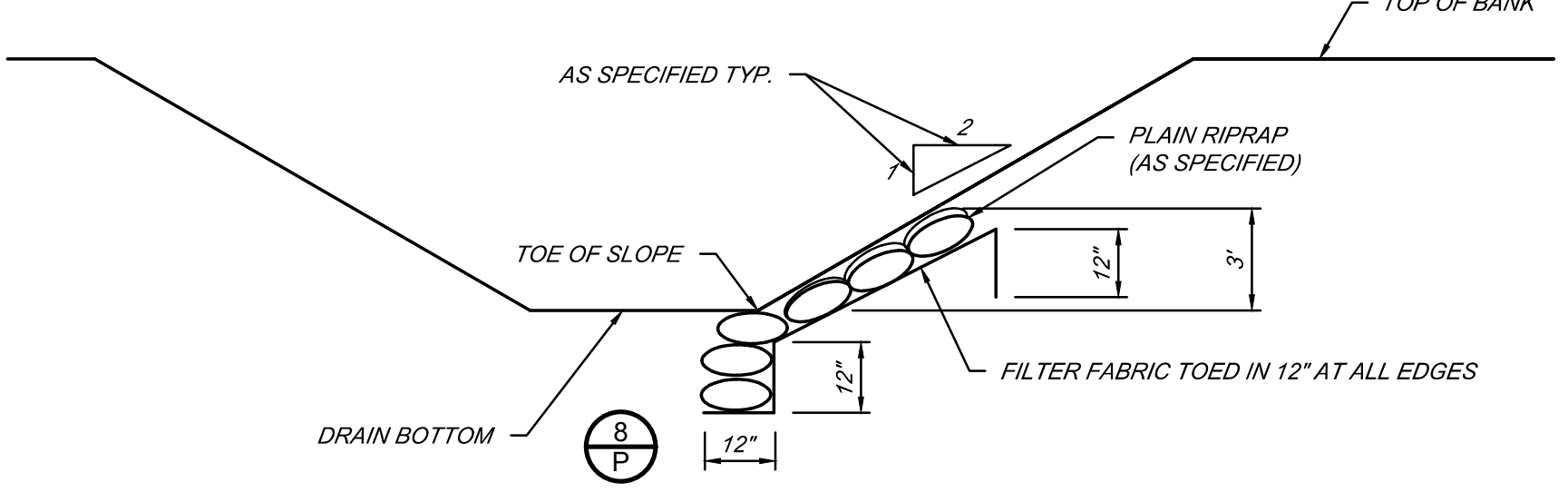


15 P
PLAIN RIPRAP SPILLWAY
PLAN VIEW
NOT TO SCALE

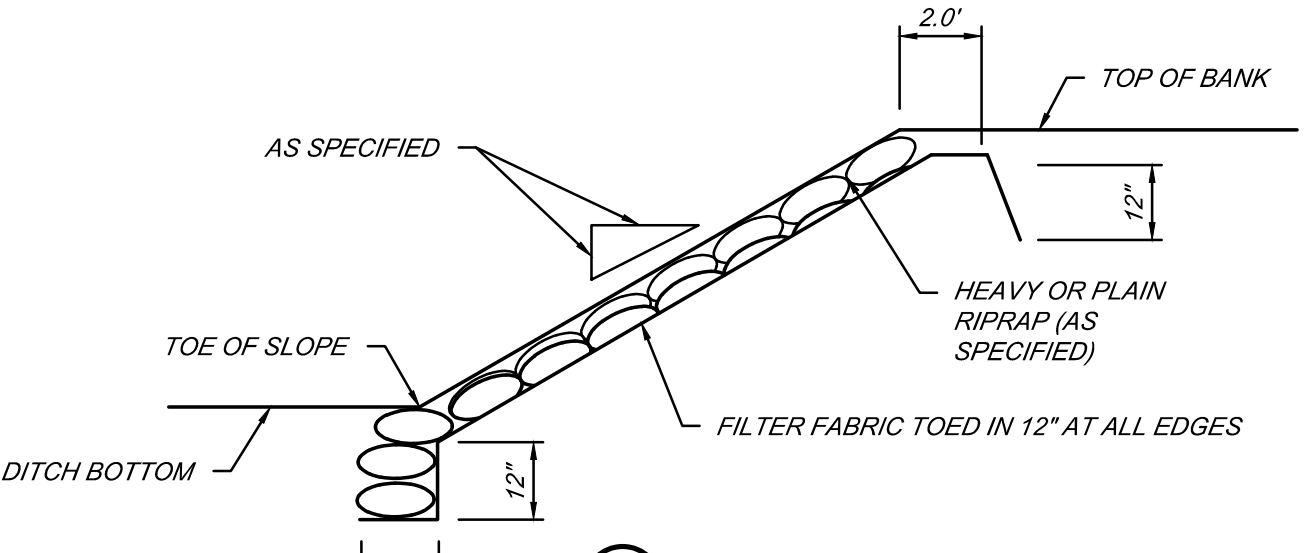


FIELD TILE OUTLET DETAIL
NOT TO SCALE

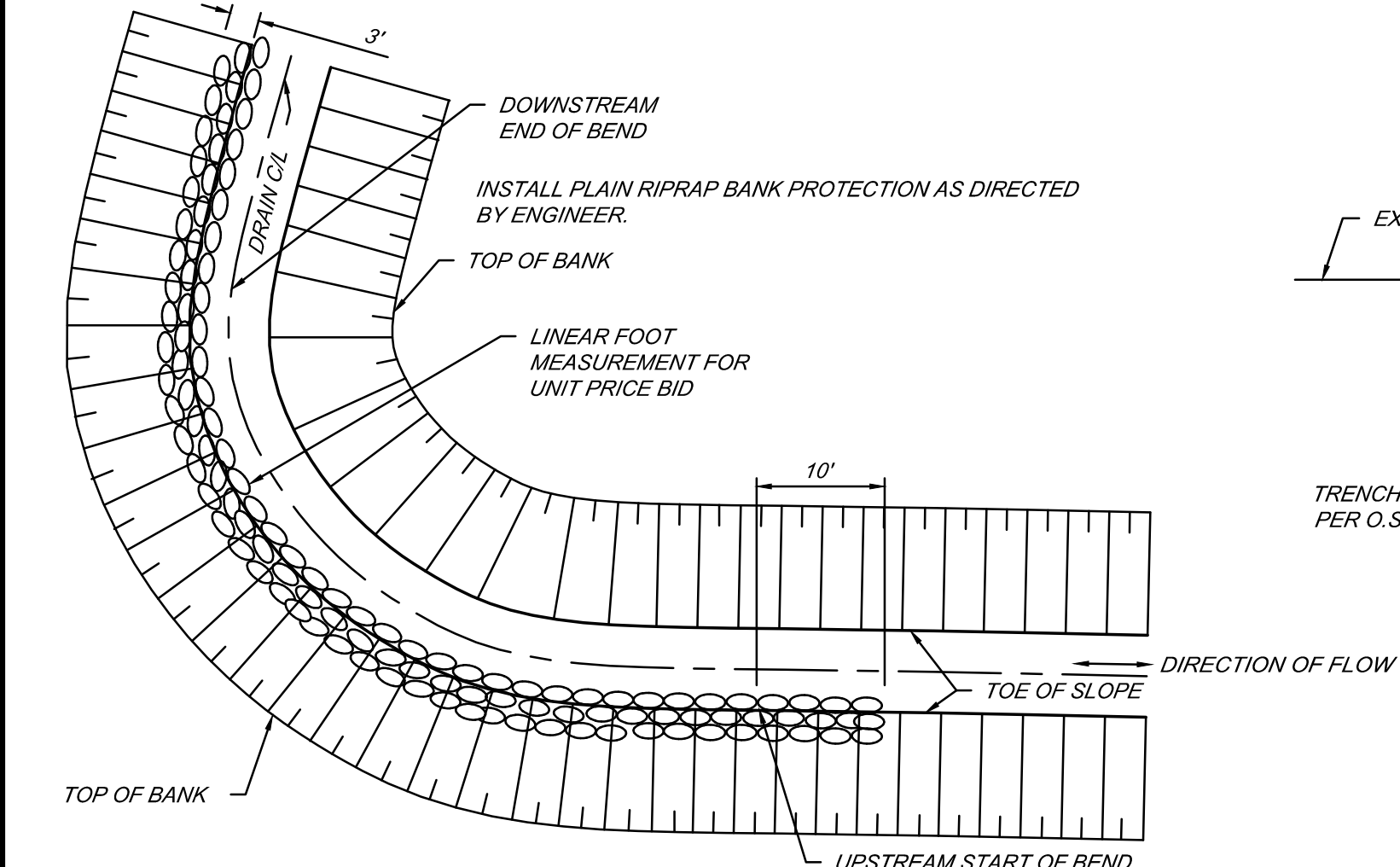
NOTE:
IF EXISTING TILE IS PLASTIC:
CONTRACTOR SHALL SLIDE CMP TILE OUTLET APPROX 18" OVER EXISTING TILE AND WRAP JOINT WITH 2" WIDE BAND OF FILTER FABRIC.
IF EXISTING TILE IS CLAY OR CONCRETE:
CONTRACTOR SHALL PROVIDE 12" WIDE x 3" THICK CONCRETE COLLAR AT JOINT.
IF EXISTING TILE IS CMP:
CONTRACTOR SHALL ATTACH NEW FIELD TILE OUTLET WITH MANUFACTURER SUPPLIED COLLAR.



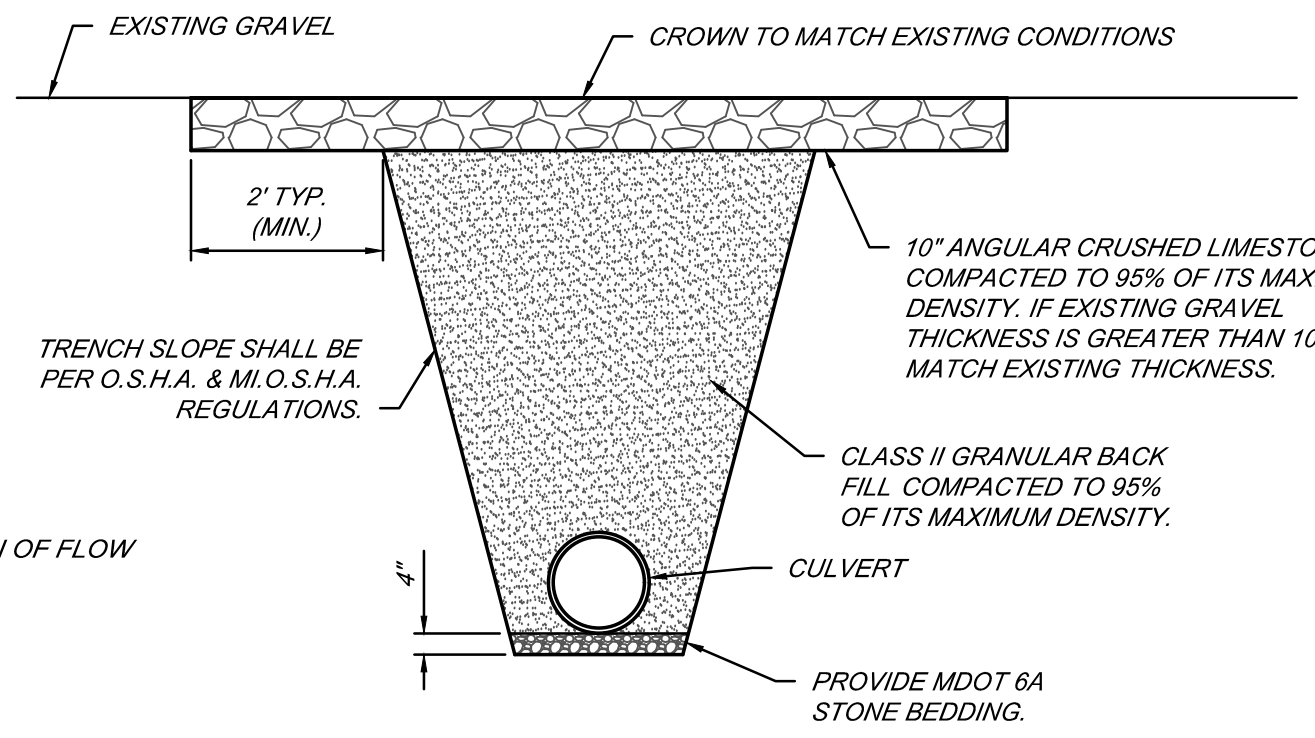
RIPRAP TOE OF SLOPE PROTECTION TYPICAL CROSS-SECTION
NOT TO SCALE



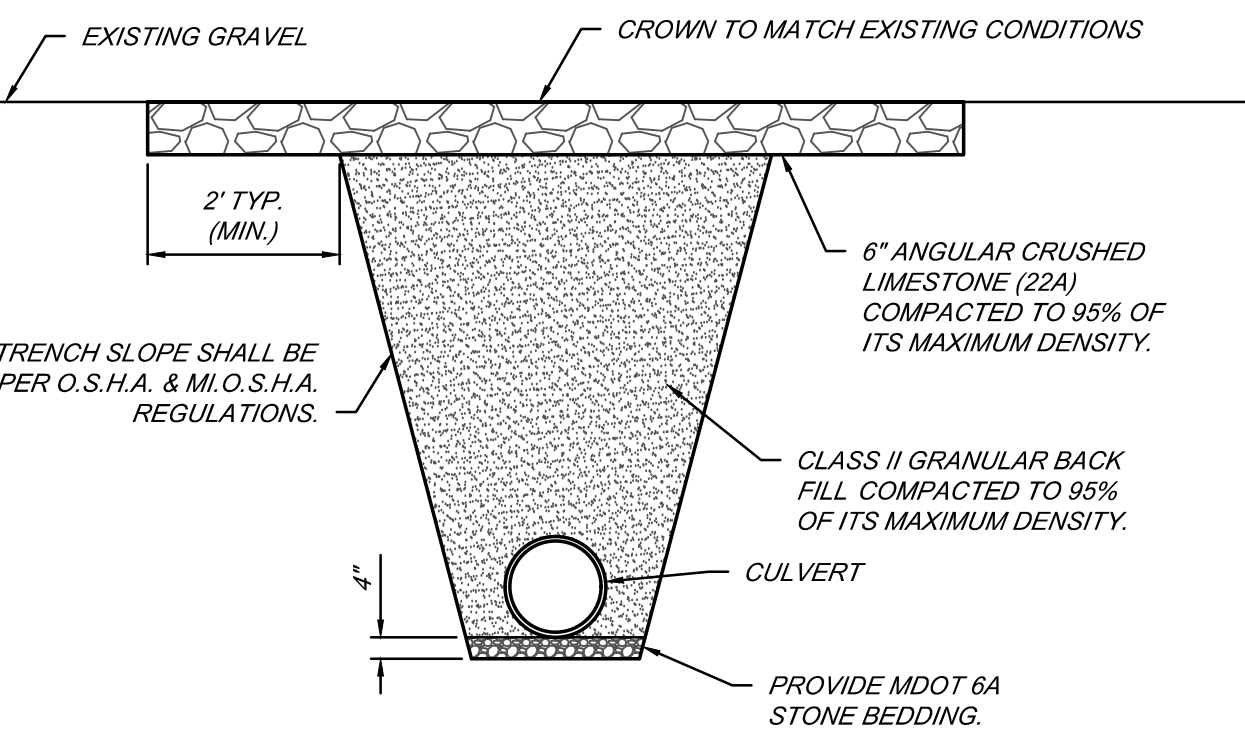
RIPRAP BANK PROTECTION
NOT TO SCALE



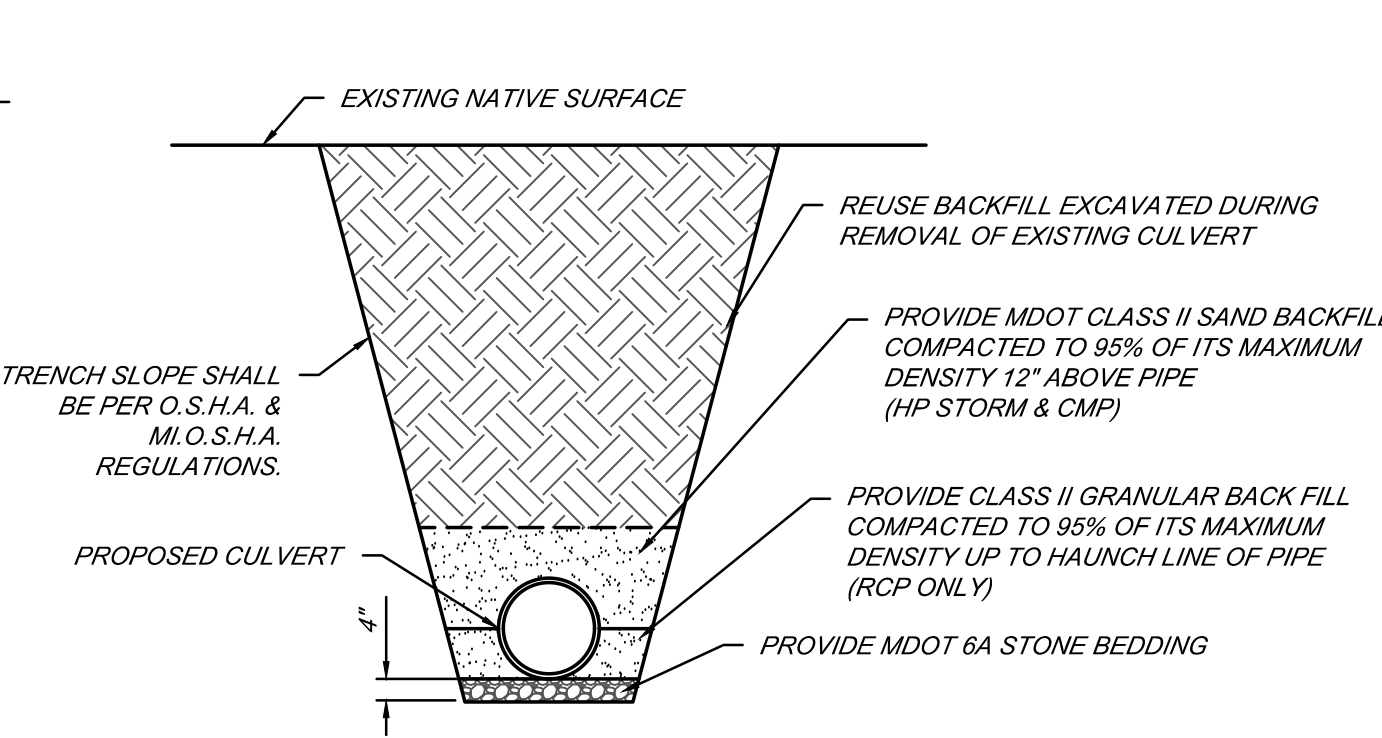
RIPRAP TOE OF SLOPE PROTECTION PLAN VIEW
NOT TO SCALE



SCRC GRAVEL ROAD CROSSING DETAIL
NOT TO SCALE



TYPICAL GRAVEL DRIVE CROSSING DETAIL
NOT TO SCALE



TYPICAL NATIVE DRIVE CROSSING DETAIL
NOT TO SCALE

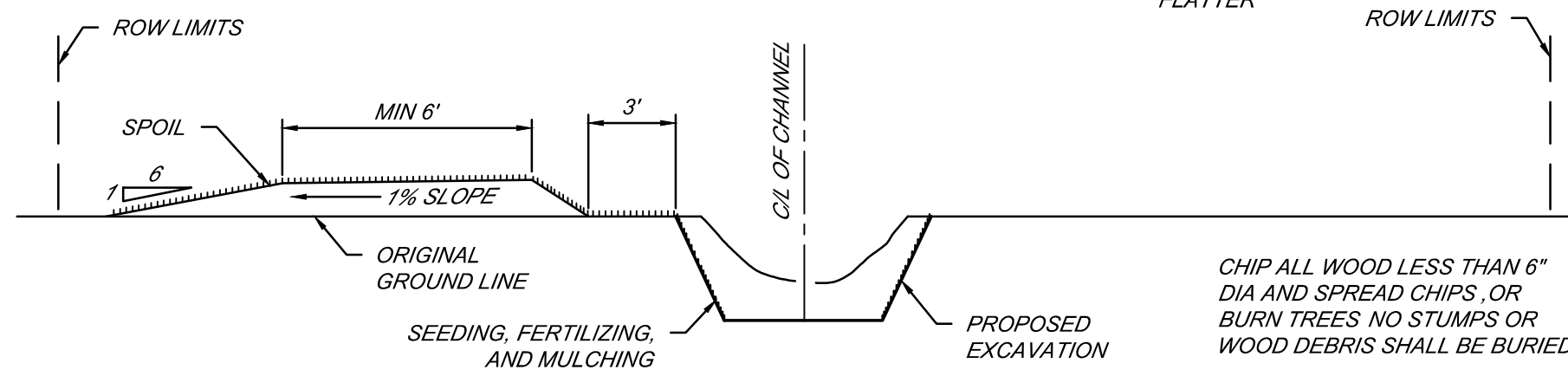
BY	MARK	REVISIONS	DATE
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<p>EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN</p>			
<p>STANDARD DETAILS</p>			
<p>DE. BY: POC/TMC DR. BY: CBS</p>		<p>CH. BY: LJO APP. BY: NDC</p>	
<p>STDS.</p>		<p>PROJECT NO. 126405SG2018</p>	
<p>DATE: APRIL 2023 SCALE: NOT TO SCALE</p>		<p>SHEET 14 OF 15 FILE NO. DR-4189-14</p>	
		<p>DR 14</p>	

Spicer Group
SAGINAW OFFICE
230 S. Washington Ave.
Saginaw, MI 48607 Tel.
989-754-4717 Fax.
989-754-4440
www.SpicerGroup.com

EXCAVATE FROM ONLY ONE SIDE OF DRAIN AS DESIGNATED ON PLANS OR DETERMINED BY ENGINEER

FOR EXCAVATION FROM ONE SIDE OF DRAIN, OPPOSITE SIDE OF DRAIN MUST BE CLEARED TO TOP OF BANK

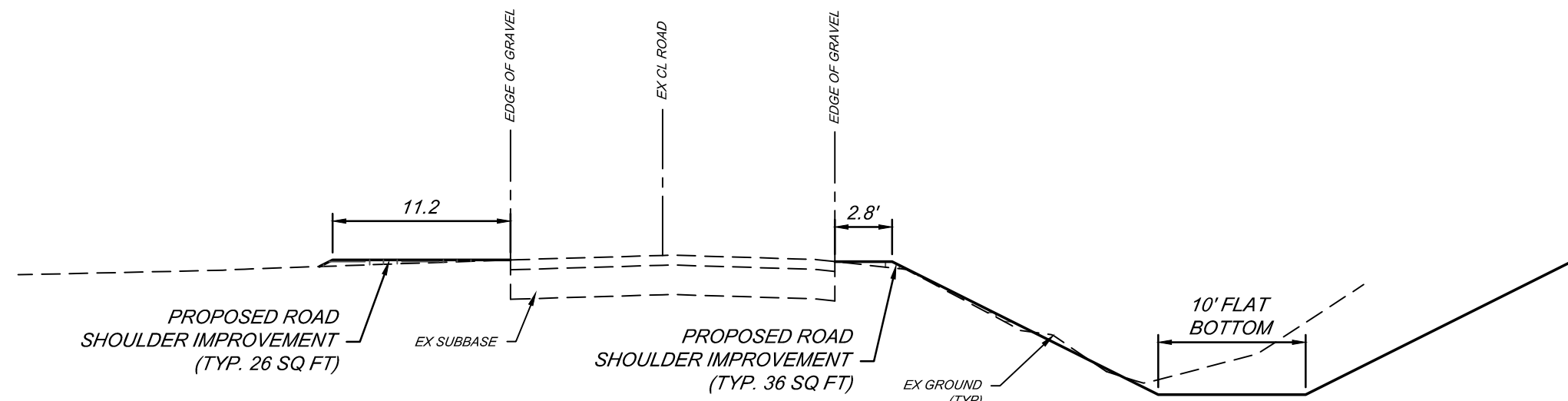
LEAVE OPENINGS IN DEBRIS PILE AND SPOIL BANK WHERE NECESSARY SO THAT NO PONDING OF SURFACE WATER OCCURS SIDE SLOPES ON OPENINGS SHALL BE 1 VERT ON 10 HOR OR FLATTER



PROVIDE 4" TOPSOIL IN LAWN AREAS NO SPOILS WILL BE LEVELLED IN LAWN AREAS UNLESS INDICATED ON PLAN OR WITH WRITTEN PERMISSION FROM LAND OWNER

SPOIL LEVELING DETAIL "A"
NOT TO SCALE

RAKE, SEED, FERTILIZE AND MULCH ALL DISTURBED AREAS DAILY SEE SPECIFICATION FOR APPLICATION RATES

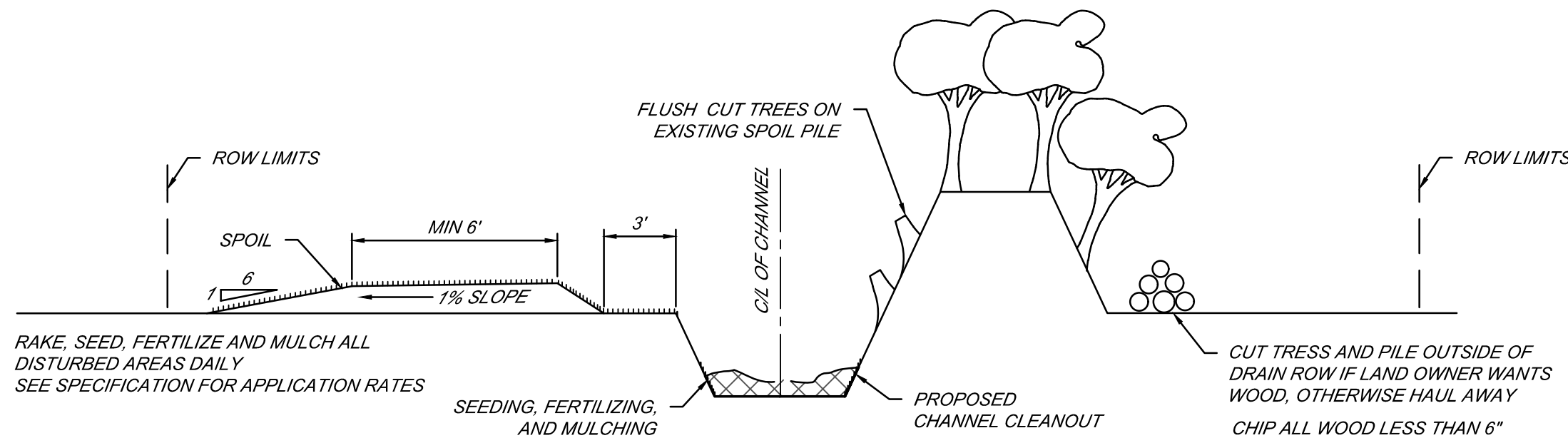


CURTIS ROAD DETAIL
APPLY: STA 31+10 TO STA 56+29

EXCAVATE FROM ONLY ONE SIDE OF DRAIN AS DESIGNATED ON PLANS OR DETERMINED BY ENGINEER

FOR EXCAVATION FROM ONE SIDE OF DRAIN, OPPOSITE SIDE OF DRAIN MUST BE CLEARED TO TOP OF BANK

LEAVE OPENINGS IN DEBRIS PILE AND SPOIL BANK WHERE NECESSARY SO THAT NO PONDING OF SURFACE WATER OCCURS SIDE SLOPES ON OPENINGS SHALL BE 1 VERT ON 10 HOR OR FLATTER

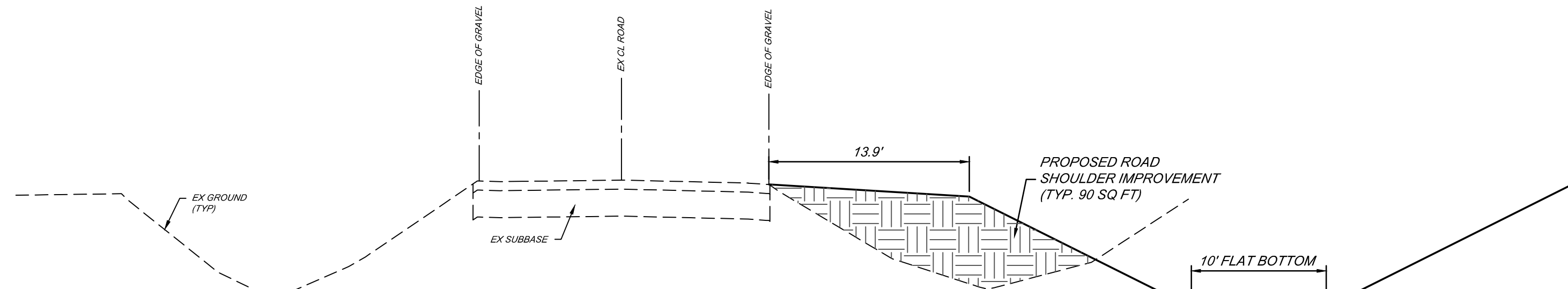


NOTES: CONTRACTOR MAY CLEAR TREES AND LEVEL EXISTING SPOIL PILE ON RIGHT SIDE AS NEED TO PERFORM WORK AS SHOWN ON DETAIL.

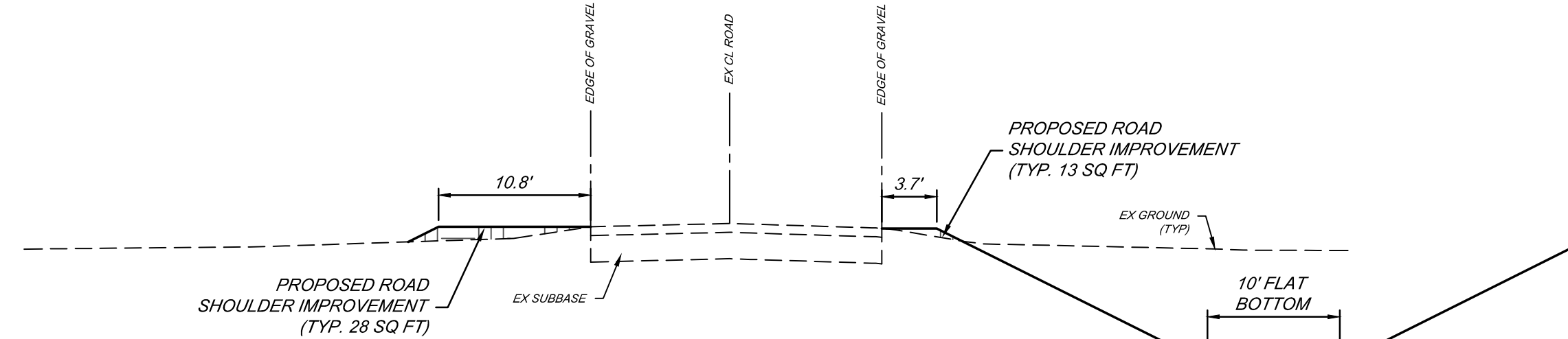
SPOIL LEVELING DETAIL "B"
NOT TO SCALE

ALL TREES WITHIN DRAIN BANKS ARE TO BE FLUSH CUT AND STUMPS ARE TO BE LEFT IN PLACE AND SPRAYED PER SPECIFICATIONS.

CHIP ALL WOOD LESS THAN 6" DIA AND SPREAD CHIPS, OR BURN TREES NO STUMPS OR WOOD DEBRIS SHALL BE BURIED



CURTIS ROAD DETAIL
APPLY: STA 56+29 TO STA 65+03

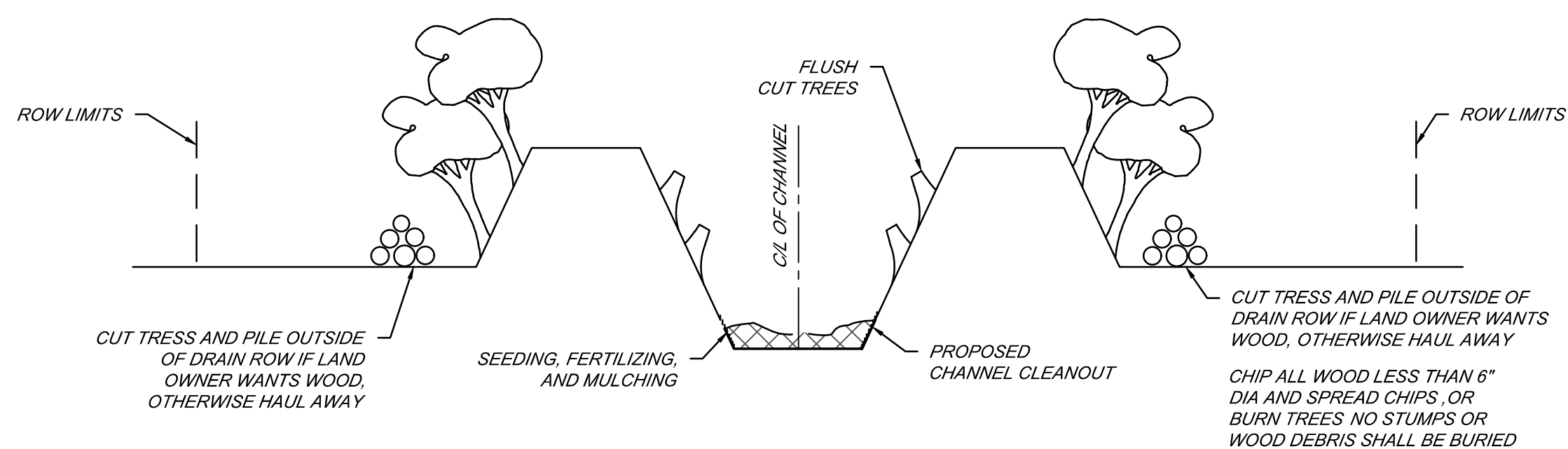


CURTIS ROAD DETAIL
APPLY: STA 65+03 TO STA 83+20

EXCAVATE FROM ONLY ONE SIDE OF DRAIN AS DESIGNATED ON PLANS OR DETERMINED BY ENGINEER

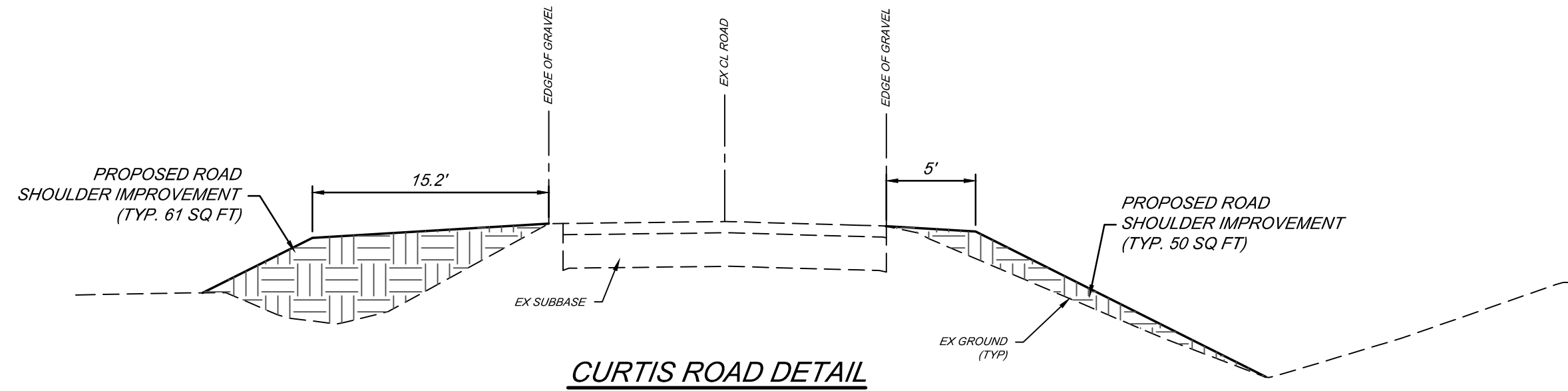
FOR EXCAVATION FROM ONE SIDE OF DRAIN, OPPOSITE SIDE OF DRAIN MUST BE CLEARED TO TOP OF BANK

LEAVE OPENINGS IN DEBRIS PILE AND SPOIL BANK WHERE NECESSARY SO THAT NO PONDING OF SURFACE WATER OCCURS SIDE SLOPES ON OPENINGS SHALL BE 1 VERT ON 10 HOR OR FLATTER

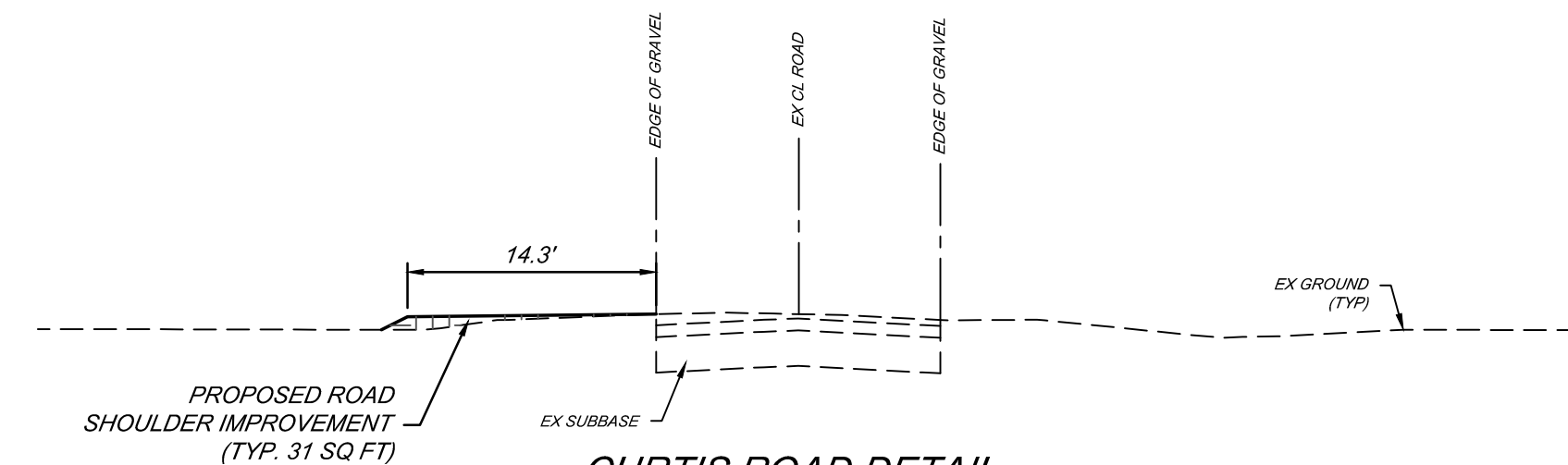


NOTES: ALL TREES WITHIN DRAIN BANKS ARE TO BE FLUSH CUT AND STUMPS ARE TO BE LEFT IN PLACE AND SPRAYED PER SPECIFICATIONS.

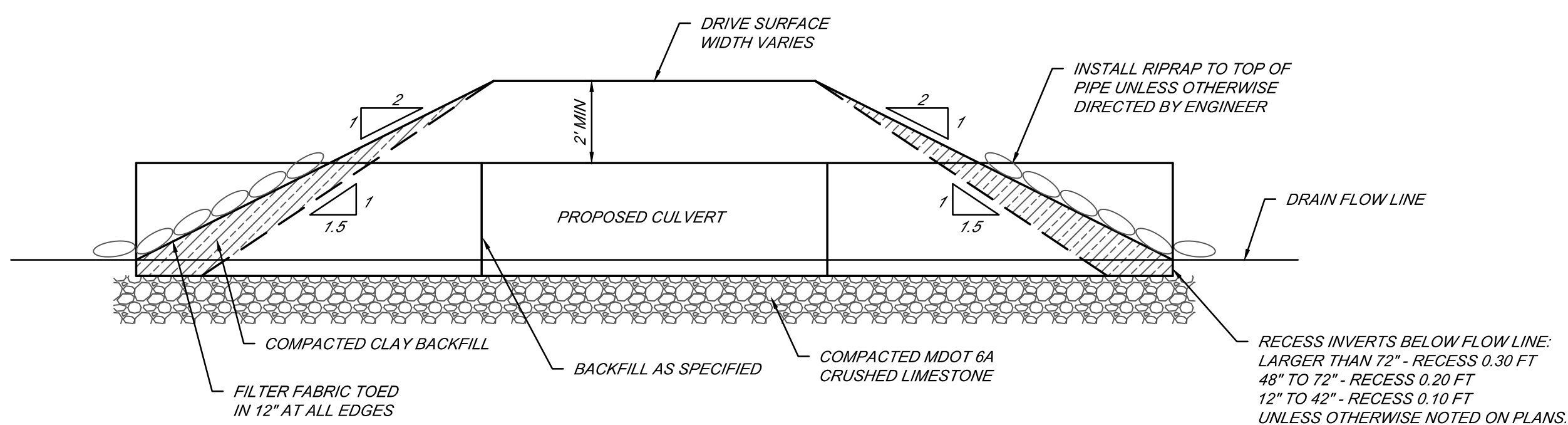
SPOIL LEVELING DETAIL "C"
NOT TO SCALE



CURTIS ROAD DETAIL
APPLY: BRANCH 3 TO 1486 FEET EAST OF BRANCH 3.



CURTIS ROAD DETAIL
APPLY: 1486 FEET EAST OF BRANCH 3 TO 275' EAST OF AMBROSE ROAD



HP STORM CROSSING DETAIL
NOT TO SCALE

BY	MARK	REVISIONS	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>			
<p>EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN</p>			
<p>STANDARD DETAILS</p>			
<p>DE. BY: POC/TMC DR. BY: CBS</p>		<p>CH. BY: LDO APP. BY: NDC</p>	
<p>PROJECT NO. 126405SG2018</p>		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>	
STDS.	SHEET 15 OF 15	DR	15
DATE: APRIL 2023	FILE NO. DR-4189-15		
SCALE: H:1=200V:1=10'			