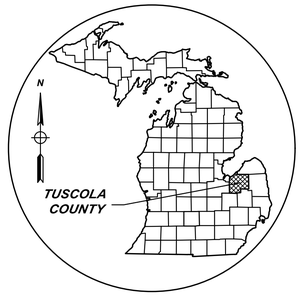
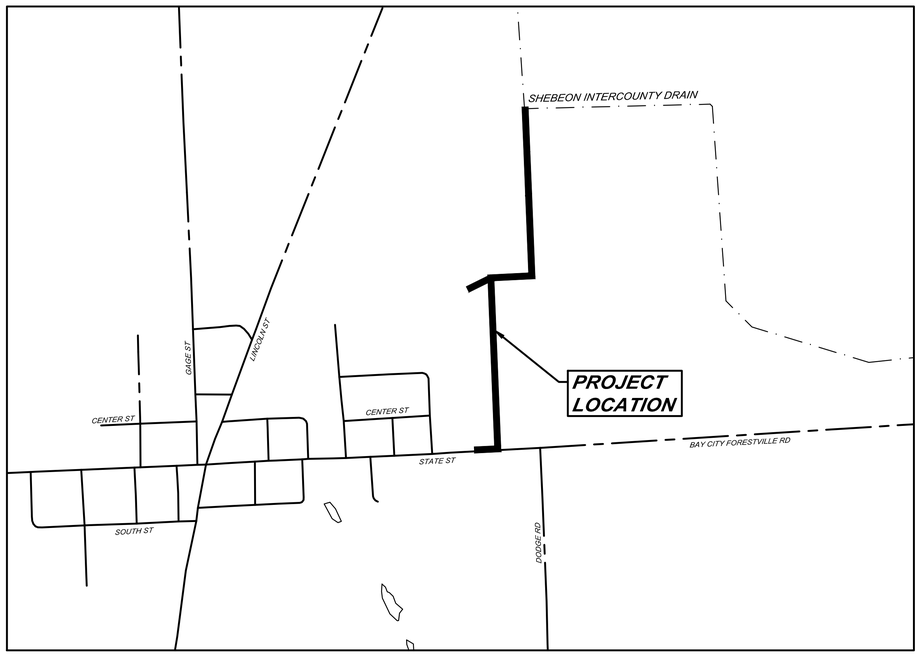
GAGETOWN DRAIN

TUSCOLA COUNTY DRAIN COMMISSIONER - DARA HOOD



AREA MAP
NOT TO SCALE

PLAN INDEX		
FILE NO.	**DESCRIPTION**	**NO.**
DR-4869-01	COVER SHEET	01
DR-4869-02	CONTACTS, GENERAL NOTES, AND LINE TYPE LEGEND	02
DR-4869-03	SOIL EROSION AND SEDIMENTATION CONTROL PLAN	03
DR-4869-04	PLAN AND PROFILE STORM SEWER STA 0+00 TO 11+00	04
DR-4869-05	PLAN AND PROFILE STORM SEWER STA 11+00 TO 21+00	05
DR-4869-06	PLAN AND PROFILE STORM SEWER STA 21+00 TO 31+00 AND STA 0+00 TO STA 2+00	06
DR-4869-07	STANDARD DETAILS	07



LOCATION MAP
NOT TO SCALE

SECTION 01, T14N-R10E
VILLAGE OF GAGETOWN,
TUSCOLA COUNTY, MICHIGAN

SECTION 06, T14N-R11E
ELKLAND TOWNSHIP,
TUSCOLA COUNTY, MICHIGAN

BY	MARK	REVISIONS	DATE

GAGETOWN DRAIN
TUSCOLA COUNTY, MICHIGAN

COVER SHEET

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

DE. BY:
DR. BY: SCT
CH. BY: MDN
APP. BY: MJJ
PROJECT NO. 135125SG2023

STDS. N/A
SHEET 01 OF 07
DR 01

DATE AUGUST, 2026
SCALE NOT TO SCALE
FILE NO. DR-4869-01

P:\Proj\2023\135125\2023 - Gagetown Storm Sewer Outlet\2_AutoCAD_GIS\Gagetown Storm Sewer Outlet\DR-4869_Gagetown Drain.dwg, 8/12/2026 9:29:03 AM, parickc

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 THUS 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 LANDOWNER AT THE LANDOWNER'S EXPENSE, UNLESS STATED OTHERWISE IN THE PLANS.

ALL SPRINKLER SYSTEMS DAMAGED SHALL BE REPAIRED BY CONTRACTOR. COST TO BE INCLUDED IN AMOUNT BID FOR THE PAY ITEM BEING INSTALLED, UNLESS OTHERWISE NOTED.

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 COUNTY PUBLIC WORKS / DRAIN COMMISSIONER'S / WATER RESOURCES COMMISSIONER'S MINIMUM CLEARANCE STANDARDS SHALL BE MET WHENEVER RELOCATING EXISTING UTILITIES WITHIN THE DRAIN RIGHT-OF-WAY.

ALL WATER VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADE. COST SHALL BE INCLUDED IN THE PAY ITEM BEING INSTALLED.

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

1. ALL STORM SEWER TO BE ADS N-12 PIPE UNLESS OTHERWISE NOTED ON PLANS.

CONTACTS

TUSCOLA COUNTY DRAIN COMMISSION ATT: DARA HOOD 125 W. LINCOLN STREET CARO, MI 48723 PHONE: (989)-672-3820	OWNER
VILLAGE DPW ATT: CHRIS ABBE 6737 SOUTH STREET GAGETOWN, MI 48735 PHONE: (989) 977-0034	VILLAGE
SPICER GROUP ATT: CHRISTIAN VALESANO, PE 230 S. WASHINGTON SAGINAW, MI 48607 PHONE: (989) 754-4440	ENGINEER
CONSUMERS ENERGY ATT: KYLE SKRABUT 2400 WEISS STREET SAGINAW, MI 48602 PHONE: (989) 791-5918	GAS
CONSUMERS ENERGY ATT: SARA KIPP 4100 DOERR ROAD CASS CITY, MI 48726 PHONE: (989) 872-6107	ELECTRIC
AT&T ATT: MICHAEL MCLANE 309 S. WASHINGTON STREET SAGINAW, MI 48607 PHONE: (586)-382-9901	TELEPHONE
TUSCOLA COUNTY ROAD COMMISSION ATT: BRENT DANKERT, P.E. 1733 MERTZ ROAD CARO, MI 48723 PHONE: (989)-673-2128	ROAD COMMISSION

ABBREVIATIONS

BC = BACK OF CURB
BM = BENCH MARK
CB = CATCH BASIN
C/C = 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
HDG = 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 = WATERMAIN
WSEL = WATER SURFACE ELEVATION

PROPOSED SYMBOLS

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

LINE TYPE LEGEND

- EXISTING ROAD CENTERLINE
- EXISTING BRINE LINE
- EXISTING WATERMAIN
- 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
- 100 YEAR FLOODPLAIN
- ORDINARY HIGH WATER MARK
- 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
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- WATERMAIN MANHOLE
- M.W. - MONITORING WELL
- HAND HOLE
- TRANSFORMER
- ELECTRICAL PEDESTAL
- BARRIER FREE PARKING
- SPRINKLER
- RAILROAD SIGNAL
- ANTENNA
- SATELLITE DISH
- AC - AIR CONDITIONING UNIT
- SB# - SOIL BORING
- CONTROL POINT
- 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

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 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.

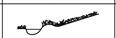
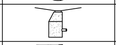
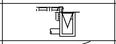
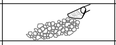
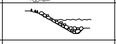
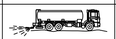
GAGETOWN DRAIN
TUSCOLA COUNTY, MICHIGAN

CONTACTS, GENERAL NOTES, AND LINE TYPE LEGEND

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

DE. BY: SCT DR. BY: SCT	CH. BY: MDN APP. BY: MJJ	PROJECT NO. 135125SG2023	
STDS. N/A	SHEET 02 OF 07		DR 02
DATE AUGUST, 2026 SCALE N/A	FILE NO. DR-4869-02		

EROSION CONTROL MEASURES

KEY	SESC MEASURE	SYMBOL	WHERE USED
1	Seeding		When bare soil is exposed, temporarily or permanently, to erosive forces from wind and or water on flat areas, mild slopes, grassed waterways and spillways, 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.
6	Catchbasin		Where surface water accumulates and needs an outlet or an open drain discharges to a stream or drain at erosive velocities. Within an enclosed drain system to provide an inlet and a sump.
7	Storm Drain Inlet Protection		Around the entrance to a catchbasin or an inlet that will capture runoff from an earth change activity.
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.
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.
26	Dust Control		As a temporary measure on exposed and unstabilized areas that must be protected from wind or water erosion.
28	Stone Construction Access		At locations where construction equipment will enter and exit the drain easement and tracking of soil is anticipated.

ROUTINE MAINTENANCE ACTIVITIES

KEY	BEST MANAGEMENT PRACTICE	SESC PLAN
A	Debris Removal	NO
B	Sediment Removal	NO
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.

SYMBOLOGY FOR INSERTION INTO CONSTRUCTION DRAWINGS:

P = PERMANENT MEASURE

T = TEMPORARY MEASURE

CONTINUED MAINTENANCE PROGRAM FOR PERMANENT SESC MEASURES	
RESPONSIBLE PARTY:	TUSCOLA COUNTY
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.

TUSCOLA COUNTY	
SOIL CLASS	SOIL COMPOSITION
18	ESSEXVILLE LOAMY FINE SAND
20B	GUELPH-LONDO LOAMS, 0 TO 6 PERCENT SLOPES
27B	BOYER SANDY LOAM, 0 TO 6 PERCENT SLOPES
27C	BOYER SANDY LOAM, 6 TO 12 PERCENT SLOPES
36	TAPPAN LOAM, 0 TO 1 PERCENT SLOPES

GENERAL TIMING & SEQUENCE
INSTALL TEMPORARY CONTROL MEASURES
SITE CLEARING
INSTALL CULVERT AND STORM SEWER
RESTORATION
INSTALL AND ESTABLISH PERMANENT CONTROL MEASURES
REMOVE TEMPORARY CONTROL 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 MANAGER.
- ALL SLOPES AND HIGHLY EROSIVE ARES 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 EROSIVE 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).

STORM DRAIN INLET PROTECTION

- INSPECT ROUTINELY AND FOLLOWING A PRECIPITATION EVENT THAT RESULTS IN RUNOFF UNTIL SEDIMENT FILTER IS REMOVED.
- ROUTINELY REMOVE SEDIMENT ACCUMULATION.
- REPAIR AND REPLACE CONTROL MEASURES AS NEEDED.

SILT FENCE

- SILT FENCE IS TO BE TRENCHED IN NO LESS THAN 6 INCHES BELOW THE GROUND SURFACE.
- INSPECT SILT FENCE DAILY AND IMMEDIATELY FOLLOWING EACH RAINFALL.
- REPAIR WHEN SILT FENCE IS SAGGING OR HAS BEEN REMOVED/TORN DOWN.
- WHEN SILT COLLECTS TO HALF THE HEIGHT OF THE FENCE, ALL SILT IS TO BE REMOVED AND FENCE REPAIRED.
- REMOVE SILT FENCE WHEN PERMANENT SESC MEASURES ARE IN PLACE AND VEGETATION IS ESTABLISHED.

STABILIZED CONSTRUCTION ACCESS

- INSPECT WEEKLY AND AFTER EACH RAINFALL.
- WHEN CONSTRUCTION ACCESS IS NO LONGER 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'S CONCERNS. MAKE CORRECTIVE MEASURES AS REQUIRED IMMEDIATELY AS DETAILED BY THE APPROVED APA MANUAL(S).

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

1. 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 CEDARIDGE DRAIN SESC PLAN AND PROJECT SPECIFICATIONS.
2. SOIL EROSION CONTROL MEASURES MUST BE INSPECTED BY A STATE CERTIFIED INSPECTOR AFFILIATED WITH THE COUNTY PUBLIC WORKS / COUNTY DRAIN COMMISSIONER'S OFFICE PRIOR TO COMMENCEMENT OF CONSTRUCTION OR MASS GRADING.
3. 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.
4. 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.
5. 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.
6. 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 OR APA.
7. 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.
8. 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.
9. 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.
10. WORK AREAS MUST BE STABILIZED WITH TOPSOIL, SEED, FERTILIZER, AND MULCH WITHIN 24 HOURS FOLLOWING CONSTRUCTION. VEGETATIVE STABILIZATION IS ONGOING THROUGHOUT THE PROJECT.
11. 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.
12. 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.
13. IF DEWATERING IS NECESSARY, CONTRACTOR SHALL SUBMIT A DEWATERING PLAN TO THE ENGINEER OR APA FOR APPROVAL.
14. THE NOTICE OF COVERAGE (IF REQUIRED), SOIL EROSION AND SEDIMENTATION CONTROL PLAN, AND STORMWATER OPERATOR LOGS MUST BE LOCATED ON SITE AT ALL TIMES.
15. ALL RESTORATION TO OCCUR WITHIN 24 HOURS OF FINAL GRADING.

BY	MARK	REVISIONS	DATE

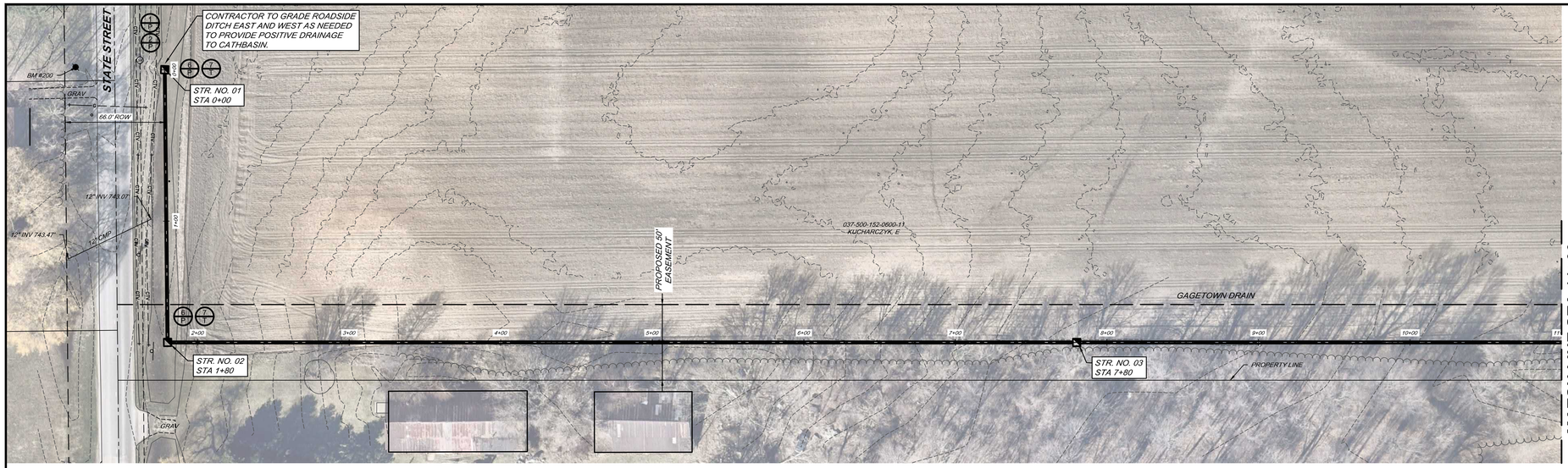
THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION,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

GAGETOWN DRAIN
TUSCOLA COUNTY, MICHIGAN

SOIL EROSION AND SEDIMENTATION CONTROL PLAN

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

DE. BY: SCT	CH. BY: MDN	PROJECT NO.	
DR. BY: SCT	APP. BY: MJJ	135125SG2023	
STDS. N/A	SHEET 03 OF 07	DR 03	
DATE AUGUST, 2026	FILE NO.		
SCALE N/A	DR-4869-03		



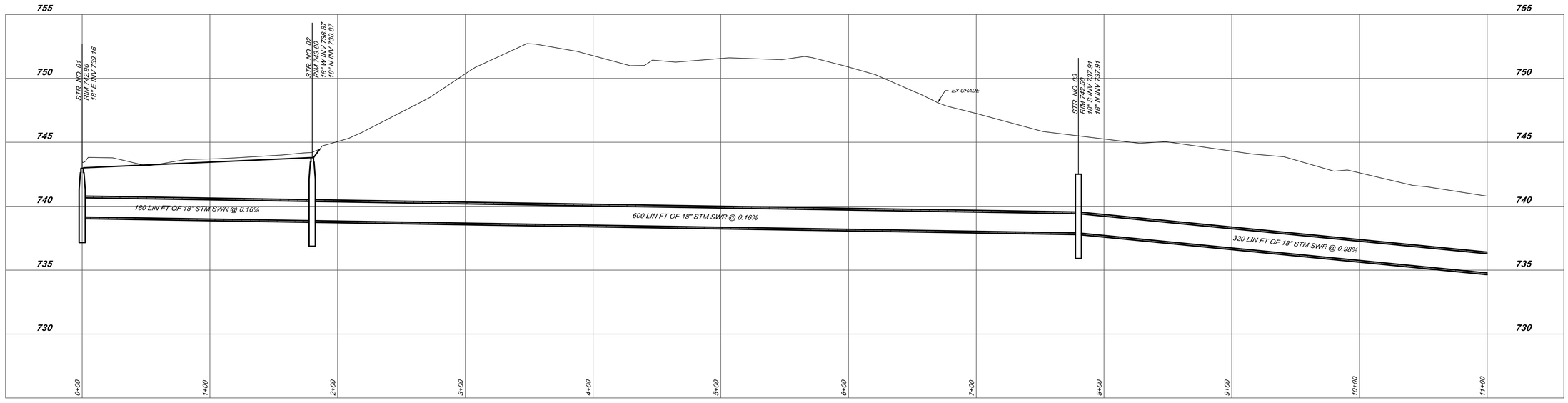
N

0 10 20 40 80

SCALE: 1" = 40'

SECTION 01, T14N-R10E
VILLAGE OF GAGETOWN,
TUSCOLA COUNTY, MICHIGAN

QUANTITIES		
ITEM	UNIT	QTY.
4' DIA MH/CB	EACH	3
18" STM SWR	LIN FT	1100



PROPOSED STORM SEWER STRUCTURE TABLE				
STRUCTURE NO.	LOCATION	OFFSET	SIZE/TYPE	EJIW FRAME W/ TYPE COVER GRATE
01	0+00	0.0' T	4' DIA MH/CB	1045 N W/OVAL GRATE
02	1+80	0.0' T	4' DIA MH/CB	1045 W/N OVAL GRATE
03	7+80	0.0' T	4' DIA MH/CB	1/4" X 30" X 30" STEEL PLATE

NOTE:

STRUCTURE RIM ELEVATIONS ARE TO BE ADJUSTED IN THE FIELD TO ENSURE POSITIVE DRAINAGE TO ALL STRUCTURES.

SHEET 07 EROSION CONTROL TABLE					
KEY*	FROM STATION	TO STATION	SIDE	DESCRIPTION	QTY
1/P	0+00	11+00	BOTH	SEEDING OF ALL DISTURBED AREAS	LUMP SUM
2/T	0+00	11+00	BOTH	MULCH OF ALL DISTURBED AREAS	LUMP SUM
6/P	AS SHOWN		-	CATCHBASIN	3 EA
7/T	ALL CATCHBASINS AND DRAIN BASINS		-	STORM DRAIN INLET PROTECTION	3 EA

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

CONSTRUCTION NOTES

1. STRUCTURE NO. 03 RIM ELEVATIONS TO BE SET A MINIMUM OF 2.5 FEET BELOW EXISTING GROUND ELEVATION. FILTER FABRIC IS TO BE PLACED OVER COVER PRIOR TO BURYING.
2. STA 1+80 TO STA 7+90 - CONTRACTOR SHALL INSTALL 18" DIA HP STORM.

BENCHMARKS

BM 200 - SET GEAR SPIKE IN NORTH FACE OF LIGHT POLE ON SOUTH SIDE OF BAY CITY/FORESTVILLE ROAD, 470± WEST OF DODGE ROAD.

NAVD88 EL 749.51

RIGHT OF WAY

GAGETOWN DRAIN - DRAIN RIGHT-OF-WAY IS 50 WIDE 25 FEET ON EACH SIDE OF CENTERLINE OF DRAIN.

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 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.

GAGETOWN DRAIN
TUSCOLA COUNTY, MICHIGAN

PLAN AND PROFILE STORM SEWER STA 0+00 TO STA 11+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: SCT CH. BY: MDN
DR. BY: SCT APP. BY: MJJ

PROJECT NO. 135125SG2023

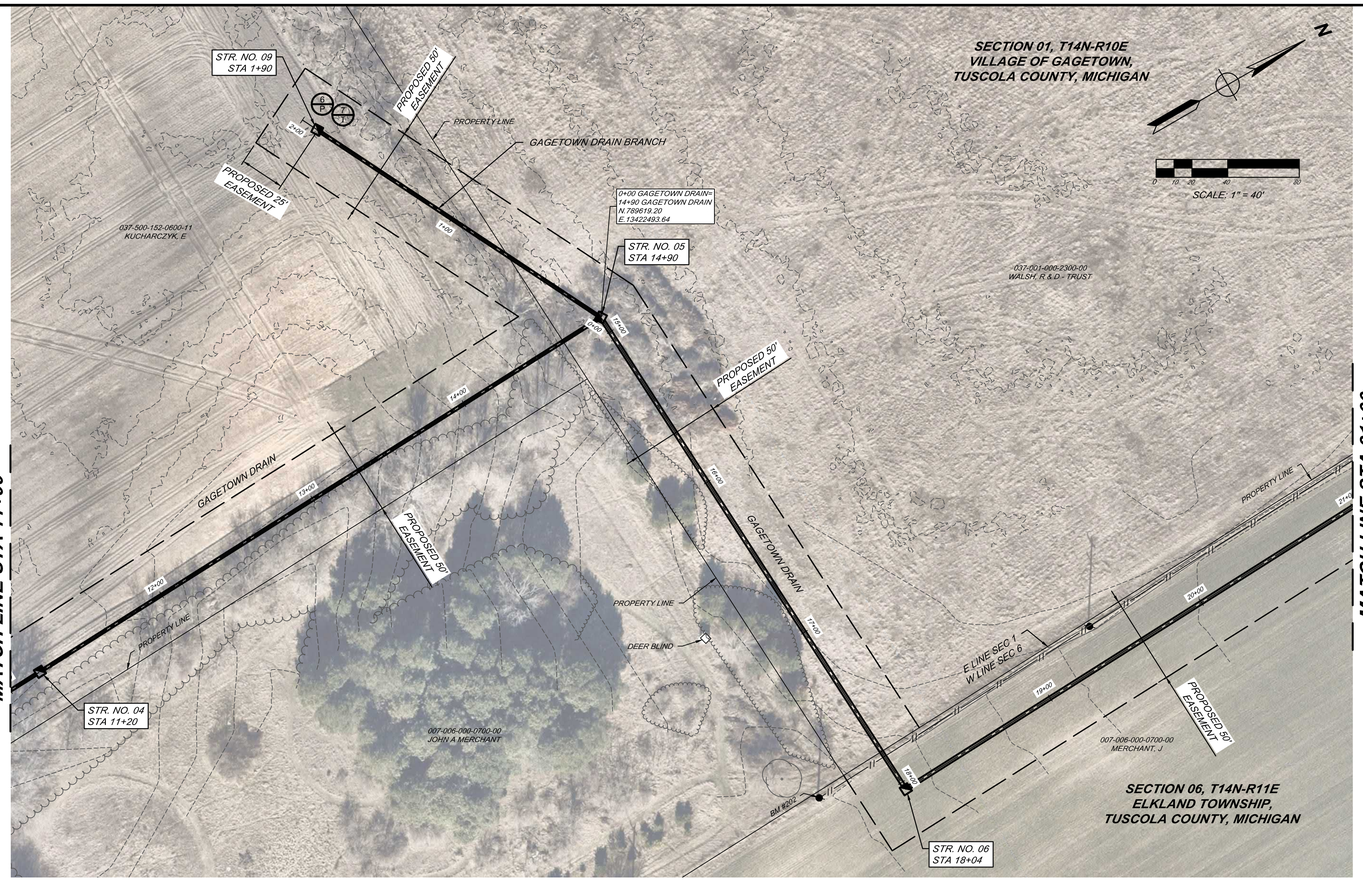
STDS. N/A

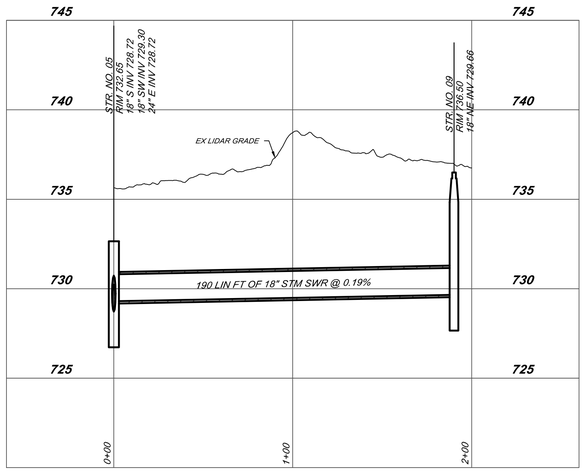
SHEET 04 OF 07

DR 04

DATE AUGUST, 2026
SCALE H: 1" = 40' V: 1" = 4'

FILE NO. DR-4869-04





GAGETOWN DRAIN BRACH PROFILE VIEW

QUANTITIES

ITEM	UNIT	QTY.
4' DIA MH/CB	EACH	3
5' DIA MH/CB	EACH	1
18" STM SWR	LIN FT	581
24" STM SWR	LIN FT	610

PROPOSED STORM SEWER STRUCTURE TABLE

STRUCTURE NO.	LOCATION	OFFSET	SIZE/TYPE	EJIW FRAME W/ TYPE COVER GRATE
09	1+90	0.0' T	4' DIA MH/CB	1045 W/N OVAL GRATE

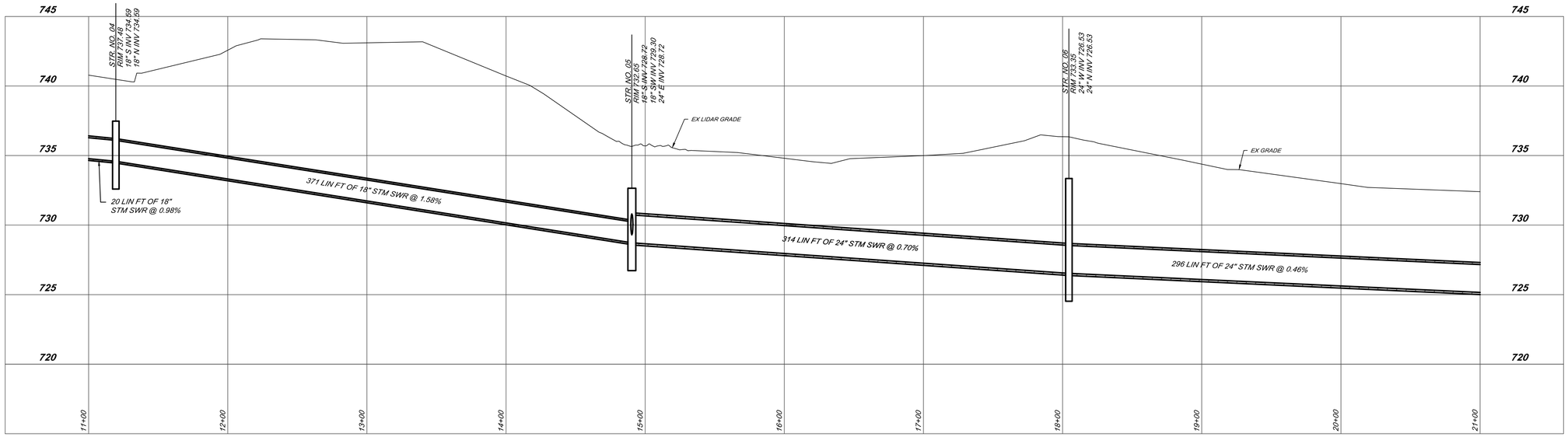
CONSTRUCTION NOTES

1. STRUCTURE RIM ELEVATION TO BE ADJUSTED IN THE FIELD TO ENSURE POSITIVE DRAINAGE TO STRUCTURE NO. 09.
2. STRUCTURE NO. 04 AND 06 RIM ELEVATIONS TO BE SET A MINIMUM OF 2.5 FEET BELOW EXISTING GROUND ELEVATION. FILTER FABRIC IS TO BE PLACED OVER COVER PRIOR TO BURYING.
3. STRUCTURE NO. 05 RIM ELEVATION TO BE SET A MINIMUM OF 2 FEET BELOW EXISTING GROUND ELEVATION. FILTER FABRIC IS TO BE PLACED OVER COVER PRIOR TO BURYING.
4. WALSH PROPERTY TO BE RESTORED AND PLANTED WITH CONSERVATION RESOURCE PROGRAM APPROVED MIX.

SHEET 07 EROSION CONTROL TABLE

KEY*	FROM STATION	TO STATION	SIDE	DESCRIPTION	QTY
1/P	0+00	11+00	BOTH	SEEDING OF ALL DISTURBED AREAS	LUMP SUM
2/T	0+00	11+00	BOTH	MULCH OF ALL DISTURBED AREAS	LUMP SUM
6/P	AS SHOWN		-	CATCHBASIN	4 EA
7/T	ALL CATCHBASINS AND DRAIN BASINS		-	STORM DRAIN INLET PROTECTION	4 EA

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



PROPOSED STORM SEWER STRUCTURE TABLE

STRUCTURE NO.	LOCATION	OFFSET	SIZE/TYPE	EJIW FRAME W/ TYPE COVER GRATE
04	11+20	0.0' T	4' DIA MH/CB	1/4" X 30" X 30" STEEL PLATE
05	14+90	0.0' T	5' DIA MH/CB	1/4" X 30" X 30" STEEL PLATE
06	18+04	0.0' T	4' DIA MH/CB	1/4" X 30" X 30" STEEL PLATE

BENCHMARKS

BM 202 - SET GEAR SPIKE IN WEST FACE OF 7TH POWER POLE SOUTH OF DRAIN INTERSECTION ON NORTH END OF PROJECT.

NAVD88 ELEV 738.98

RIGHT OF WAY

GAGETOWN DRAIN - DRAIN RIGHT-OF-WAY IS 50 WIDE 25 FEET ON EACH SIDE OF CENTERLINE OF DRAIN.

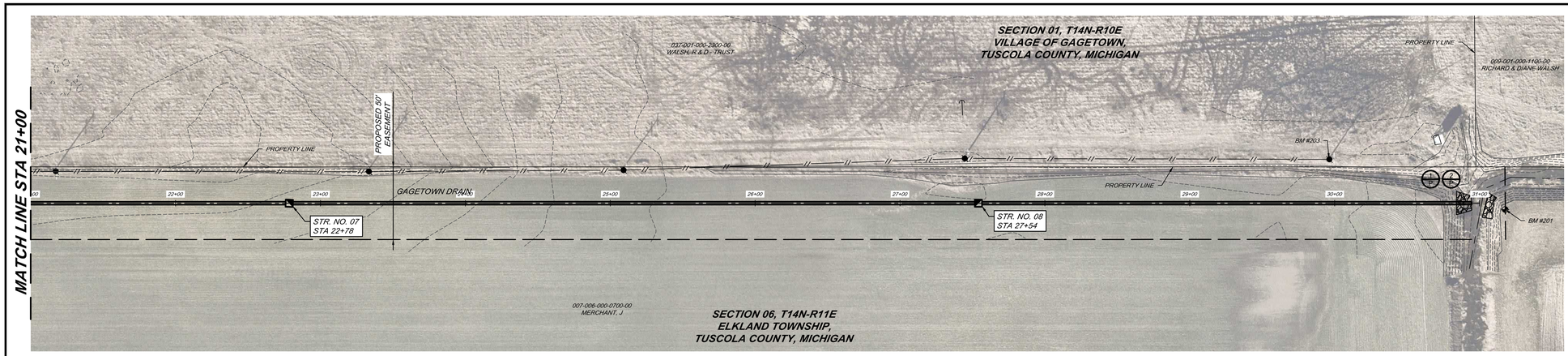
BY	MARK	REVISIONS	DATE

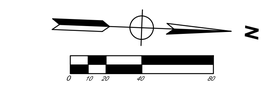
GAGETOWN DRAIN
TUSCOLA COUNTY, MICHIGAN

PLAN AND PROFILE STORM SEWER STA 11+00 TO STA 21+00 AND STA 0+00 TO STA 2+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: SCT	CH. BY: MDN	PROJECT NO.	
DR. BY: SCT	APP. BY: MJJ	135125SG2023	
STDS. N/A	SHEET 05 OF 07	DR 05	
DATE AUGUST, 2026	FILE NO. DR-4869-05		
SCALE H: 1" = 40' V: 1" = 4'			





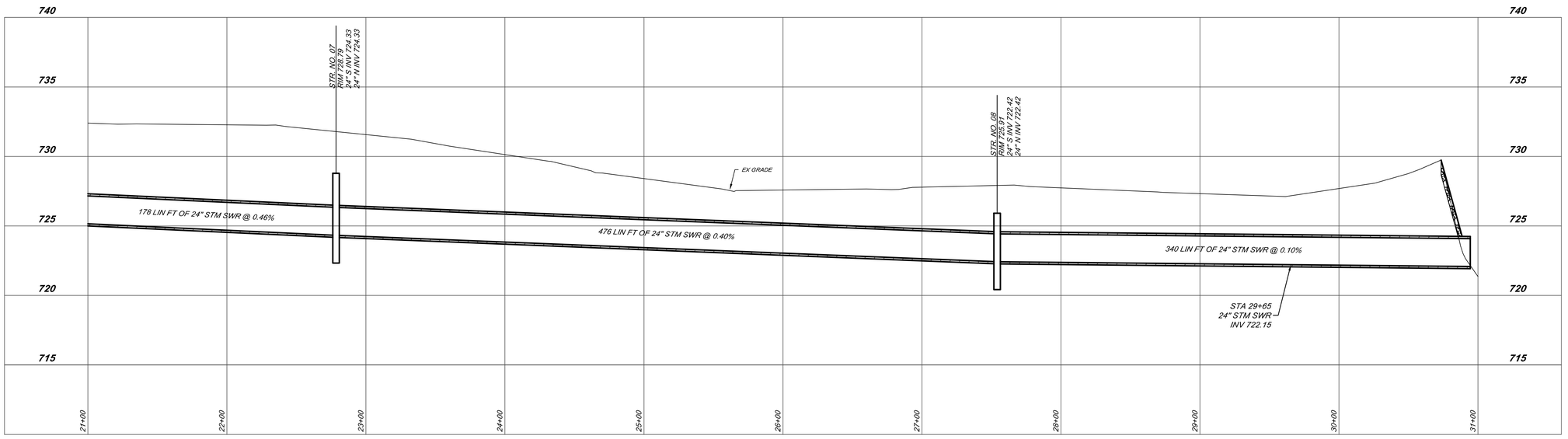
SCALE: 1" = 40'

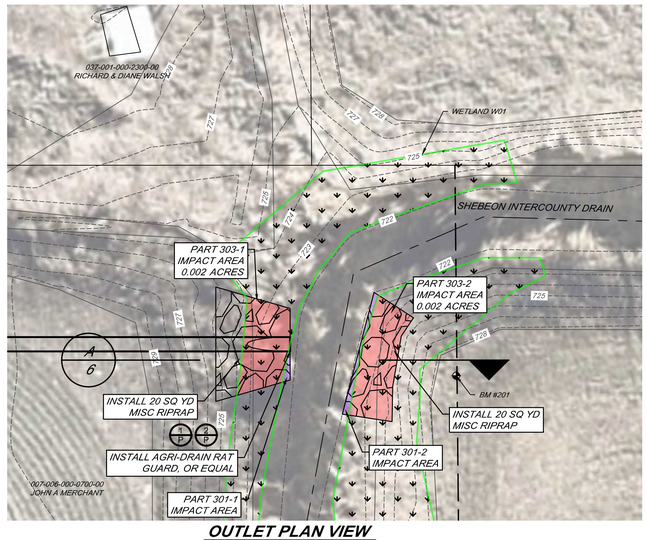
QUANTITIES

ITEM	UNIT	QTY.
4' DIA MH/CB	EACH	2
24" STM SWR	LIN FT	994

LEGEND

- WETLAND AREA
- PART 303 PERMANENT IMPACT AREA
- PART 301 IMPACT AREA





OUTLET PLAN VIEW

SCALE: 1" = 10'

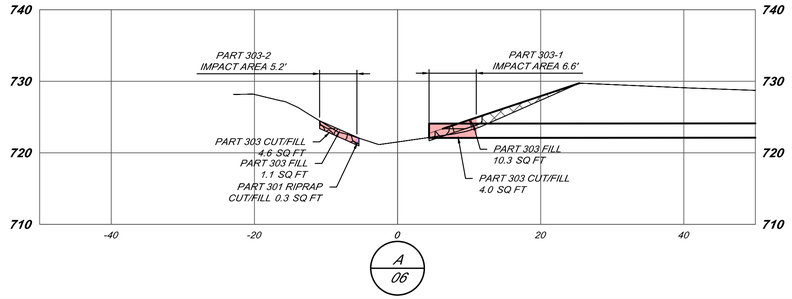
PROPOSED STORM SEWER STRUCTURE TABLE

STRUCTURE NO.	LOCATION	OFFSET	SIZE/TYPE	EJIW FRAME W/ TYPE COVER GRATE
07	22+78	0.0' T	4' DIA MH/CB	1/4" X 30" X 30" STEEL PLATE
08	27+54	0.0' T	4' DIA MH/CB	1/4" X 30" X 30" STEEL PLATE

SHEET 07 EROSION CONTROL TABLE

KEY*	FROM STATION	TO STATION	SIDE	DESCRIPTION	QTY
1/P	0+00	11+00	BOTH	SEEDING OF ALL DISTURBED AREAS	LUMP SUM
2/P	0+00	11+00	BOTH	MULCH OF ALL DISTURBED AREAS	LUMP SUM
6/P	AS SHOWN		-	CATCHBASIN	2 EA
7/P	ALL CATCHBASINS AND DRAIN BASINS		-	STORM DRAIN INLET PROTECTION	2 EA

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



CONSTRUCTION NOTES

1. STRUCTURE NO. 07 RIM ELEVATION TO BE SET A MINIMUM OF 2.5 FEET BELOW EXISTING GROUND ELEVATION. FILTER FABRIC IS TO BE PLACED OVER COVER PRIOR TO BURYING.
2. STRUCTURE NO. 08 RIM ELEVATIONS TO BE SET A MINIMUM OF 2 FEET BELOW EXISTING GROUND ELEVATION. FILTER FABRIC IS TO BE PLACED OVER COVER PRIOR TO BURYING.

BENCHMARKS

BM 201 - SET HUB ON NORTH END OF PROJECT SITE IN NORTHEAST QUADRANT OF DRAIN INTERSECTION AT TOP OF BANK.

NAVD88 ELEV 728.46

BM 203 - SET GEAR SPIKE IN WEST FACE OF FIRST POWER POLE SOUTH OF DRAIN INTERSECTION ON NORTH END OF PROJECT.

NAVD88 ELEV 728.87

RIGHT OF WAY

GAGETOWN DRAIN - DRAIN RIGHT-OF-WAY IS 50 WIDE 25 FEET ON EACH SIDE OF CENTERLINE OF DRAIN.

BY	MARK	REVISIONS	DATE

GAGETOWN DRAIN
TUSCOLA COUNTY, MICHIGAN

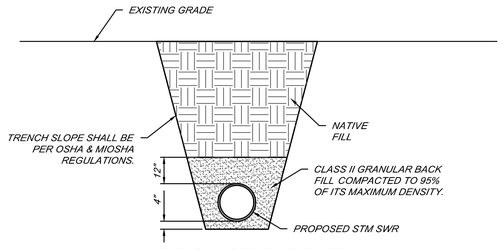
PLAN AND PROFILE STORM SEWER STA 21+00 TO STA 31+00

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

DE. BY: SCT CH. BY: MDN
DR. BY: SCT APP. BY: MJJ
PROJECT NO. 135125SG2023

STDS. N/A
SHEET 06 OF 07
DR 06

DATE AUGUST, 2026
SCALE H: 1" = 40' V: 1" = 4'
FILE NO. DR-4869-06



TYPICAL STORM SEWER TRENCH DETAIL

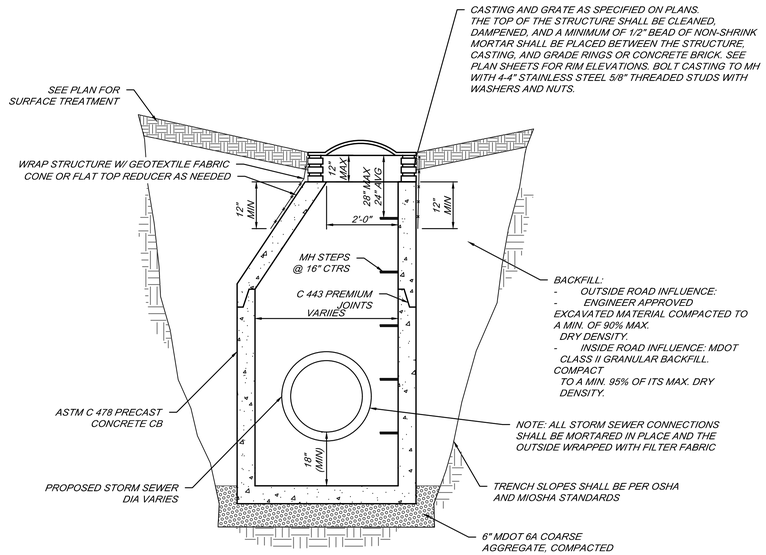
NOT TO SCALE

TRENCH WIDTH CHART

PIPE SIZE	MINIMUM	MAXIMUM
8" & 10"	24"	30"
12" & 15"	30"	36"
18"	34"	40"
21"	38"	42"
24"	42"	46"
27"	45"	49"
30"	49"	53"
36"	56"	60"
LARGER THAN 36"	I.D. +20"	I.D. +24"

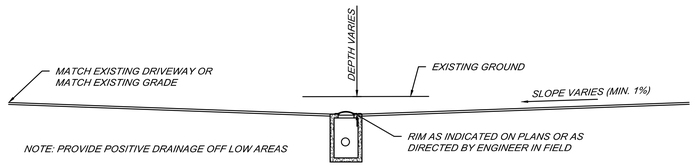
NOTE:

CONTRACTOR SHALL USE APPROPRIATE MEASURES, APPROVED BY THE ENGINEER, TO PROVIDE A SEALED CONNECTION.



48"-60" DIA. MANHOLE/CATCHBASIN DETAIL

NOT TO SCALE



CATCH BASIN GRADING DETAIL

NOT TO SCALE

PART 301 PROPOSED IMPACTS BELOW OHWM

				CUT AREA			FILL AREA			NET FILL
IMPACT AREA	SHEET	IMPACT WATER BODY	MATERIAL TYPE	(QUANTITY) LENGTH (FT) X WIDTH (FT) X DEPTH (FT)	CUBIC FEET (FT^3)	CUBIC YARDS (YD^3)	(QUANTITY) LENGTH (FT) X WIDTH (FT) X DEPTH (FT)	CUBIC FEET (FT^3)	CUBIC YARDS (YD^3)	CUBIC YARDS (YD^3)
1	6	SHEBEON INTERCOUNTY DRAIN	RIPRAP	4.25 X 0.5 X 1	2.13	0.08	4.25 X 0.5 X 1	2.13	0.08	0.00
2	6	SHEBEON INTERCOUNTY DRAIN	RIPRAP	17.5 X 0.5 X 1	8.75	0.32	17.5 X 0.5 X 1	8.75	0.32	0.00
TOTAL PERMANENT IMPACT				TOTAL CUT	10.88	0.40	TOTAL FILL	10.88	0.40	0.00

NOTES:
1. THE LENGTH, WIDTH AND DEPTH ARE TAKEN AS AVERAGES

TOTAL PERMANENT STREAM FILL IMPACT: 10.88 CU FT / 0.40 CU YD

PART 303 PROPOSED IMPACTS TO WETLANDS

				CUT			FILL			NET FILL	IMPACT AREA
IMPACT AREA	SHEET	WETLAND ID	WETLAND TYPE	(QUANTITY) LENGTH (FT) X WIDTH (FT) X DEPTH (FT)	CUBIC FEET (FT^3)	CUBIC YARDS (YD^3)	(QUANTITY) LENGTH (FT) X WIDTH (FT) X DEPTH (FT)	CUBIC FEET (FT^3)	CUBIC YARDS (YD^3)	CUBIC YARDS (YD^3)	ACRES (AC)
1	6	1	EMERGENT	12 X 6.6 X 0.61	48	1.76	12 X 6.6 X 2.16	171	6.34	4.58	0.002
2	6	2	EMERGENT	17 X 5.2 X 0.88	78	2.88	17 X 5.2 X 1.1	97	3.60	0.72	0.002
TOTAL PERMANENT IMPACT				TOTAL CUT	126	4.64	TOTAL FILL	268	9.94	5.30	0.004

NOTES:
1. WETLAND ID IS FROM THE WETLAND DELINEATION REPORT
2. THE LENGTH, WIDTH AND DEPTH ARE TAKEN AS AVERAGES

TOTAL PERMANENT PEM IMPACT: 0.004 AC (167.6 SQ FT)
NOTE: IMPACT ACREAGE AREA IS MEASURED FROM PLAN AREA

BY	MARK	REVISIONS	DATE

GAGETOWN DRAIN
TUSCOLA COUNTY, MICHIGAN

STANDARD DETAILS

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

DE. BY: SCT	CH. BY: MDN	PROJECT NO.	
DR. BY: SCT	APP. BY: MJJ	135125SG2023	
STDS. N/A	SHEET 07 OF 07		DR 07
DATE AUGUST, 2026	FILE NO.		
SCALE AS SHOWN	DR-4869-07		