# CITY OF TAYLOR WAYNE COUNTY, MI

# FRANK & POET STREAM MITIGATION IMPROVEMENTS



COUNTY KEY

Tim Woolley
MAYOR

Cynthia Bower
CLERK

Michelle Tocco
TREASURER

### COUNCIL

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Jill Brandana
Angela Winton
Charley Johnson
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Donna Colley-Andrews
Rich Todd
Douglas Reimel
Ronald Moran
Rhonda Danaj
Timothy Schramm
Amy Jurecki
Gerald Thomas

#### **PROJECT DESCRIPTION:**

THIS WORK SHALL CONSIST OF FURNISHING,
TRANSPORTING, INSTALLING AND MAINTAINING ROCK
AND LOG RIFFLE STRUCTURES AND LARGE WOODY
DEBRIS HABITAT STRUCTURES WITHIN THE MITIGATION
STREAM CHANNEL



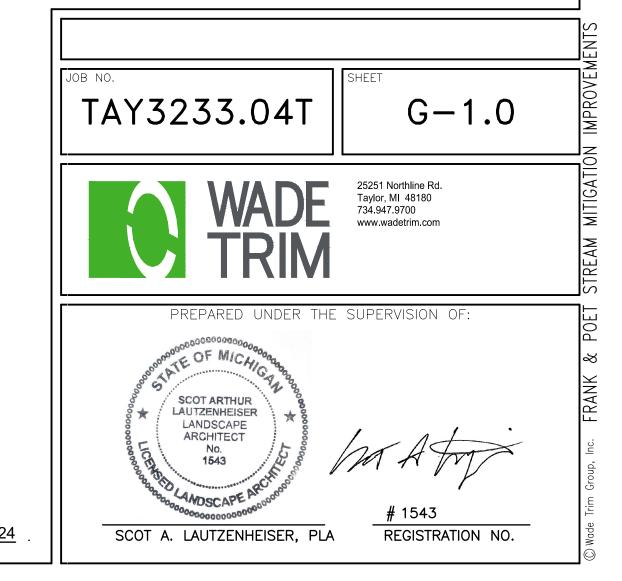
	Land Use Summary		
	CHARACTERISTIC	EXISTING CONDITIONS (AC)	PROPOSED CONDITIONS (AC)
	TOTAL DEVELOPMENT AREA (AC)	0.53	0.53
	IMPERVIOUS AREA (AC)	0.02	0.02
	TOTAL PERVIOUS AREA (AC)	0.51	0.51
	PERVIOUS AREA BREAKDOWN BY	COVER TYPE	
∢ ≮	MEADOW/FALLOW/NATURAL AREAS (NON-CULTIVATED)	0.13	0.12
AREA DATA	PREDOMINANT NRCS SOIL TYPES (A,B,C, OR D)	C/D	C/D
OUS USE	IMPROVED AREAS (TURF GRASS, LANDSCAPE, CROPS)	0.20	0.20
PERVIOUS LAND USE	PREDOMINANT NRCS SOIL TYPES (A,B,C, OR D)	C/D	C/D
щ _	WOODED AREAS	0.18	0.19
	PREDOMINANT NRCS SOIL TYPES (A,B,C, OR D)	C/D	C/D

- NOTE:

  1. THE PROFESSIONAL ENGINEER WHO SIGNS AND SEALS THIS SITE PLAN CERTIFIES THAT THE VALUES IN THIS TABLE REFLECT THE WAYNE COUNTY STORMWATER CALCULATIONS REQUIRED FOR THIS DEVELOPMENT AND THAT GEOTECHNICAL INVESTIGATIONS WERE PERFORMED THAT PROVIDE CONCLUSIVE DOCUMENTATION THAT DEMONSTRATES WHETHER INFILTRATION (LE CPVC VOLUME CONTROL) IS PRACTICABLE
- 2. PROJECT CONSTRUCTION TO BE COMPLETED AND INSPECTED AS DESCRIBED IN THE WAYNE COUNTY STORMWATER MANAGEMENT PLAN. AFTER THE COUNTY'S APPROVAL OF THE FINAL INSPECTION OF THE STORMWATER SYSTEM, THE ENGINEER SHALL COMPLETE THE "ENGINEER'S CERTIFICATE OF COMPLETION" FOR THE COMPLETED SYSTEM AND PRIOR TO THE EXPIRATION DATE OF THE CONSTRUCTION PERMIT, THE PROPERTY OWNER SHALL OBTAIN A RESOLUTION ISSUED BY THE LOCAL UNIT(S) OF GOVERNMENT TO EXECUTE THE LONG—TERM MAINTENANCE PERMIT ON BEHALF OF THE LOCAL UNIT(S) OF GOVERNMENT.

PROJECT LOCATION
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NOT TO SCALE

SHEET INDEX	
GENERAL SHEETS	SHEET NO.
COVER SHEET	G-1.0
LEGEND & NOTES	G-1.1
LONG TERM MAINTENANCE EXHIBITS	G-1.2
FRANK & POET STREAM MITIGATION SHEETS	
TOPOGRAPHIC SURVEY AND DEMOLITION PLAN	C-1.0
SITE, GRADING & SESC PLAN	C-2.0
STREAM CHANNEL PLAN & PROFILE	C-2.1 TO C-2.3
CROSS-SECTIONS	C-2.4
DETAILS	C-3.0 TO C-3.1
SESC DETAILS	C-3.2
LANDSCAPE PLAN & DETAILS	L-1.0 TO L-1.1



ISSUED FOR BID 12/19/24

REMOVE

#### GENERAL CONSTRUCTION NOTES

- 1. STANDARD SPECIFICATIONS & DETAILS
  CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CONTRACT DOCUMENTS
  ISSUED IN CONJUNCTION WITH THE PROJECT PLANS. ANY DEVIATIONS FROM THE
  APPROVED PLANS WILL NOT BE PERMITTED, UNLESS APPROVED BY ENGINEER.
- 2. MISS DIG UTILITY ALERT
  THREE (3) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, IT SHALL BE
  CONTRACTOR'S RESPONSIBILITY TO CONTACT MISS DIG UTILITY PROTECTION
  SERVICE (1-800-482-7171) TO VERIFY THE LOCATION OF EXISTING UTILITIES.
  CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF EXISTING
  UTILITIES DURING CONSTRUCTION. UTILITIES DAMAGED DURING CONSTRUCTION
  SHALL BE REPAIRED IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS.
- 3. SUBSURFACE SOIL CONDITIONS
  PRIOR TO BIDDING CONTRACTOR SHALL MAKE A PERSONAL INVESTIGATION OF THE
  SITE. CONTRACTOR IS RESPONSIBLE TO ACQUAINT THEM—SELF WITH CONDITIONS
  OF THE WORK AREA. CONTRACTOR IS ADVISED TO DETERMINE THE SUBSURFACE
  SOIL AND GROUND WATER CONDITIONS. DEWATERING AND MAINTAINING MINIMUM
  CONTINUOUS FLOWS TO TOWNLINE CREEK WILL BE REQUIRED. TEMPORARY
  COFFERDAMS MAY BE REQUIRED FOR THE REMOVAL OF STEEL SHEET PILING AND
  CONCRETE BASE INCLUDING CCUTTING ALL EXPOSED REBAR BEING LEFT IN THE
  GROUND IN THE DRY, UNLESS AN ALTERNATIVE WRITTEN PLAN IS PROVIDED BY
  THE CONTRACTOR.
- 4. SOIL EROSION CONTROL, PART 91 OF P.A. 451 OF 1994
  CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF PART 91, ACT 451 OF
  P.A. 1994, FOR SOIL EROSION AND SEDIMENTATION CONTROL, AND WILL BE
  RESPONSIBLE FOR ALL MAINTENANCE UNTIL THE FINAL ACCEPTANCE OF THE
  PERMANENT CONTROL MEASURES BY OWNER.
- 5. CONSTRUCTION OBSERVATION

  CONSTRUCTION SHALL BE PERFORMED UNDER THE OBSERVATION OF OWNER'S CONSTRUCTION OBSERVER OR AUTHORIZED AGENT. IT IS CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OBSERVER THREE (3) WORKING DAYS PRIOR TO STARTING CONSTRUCTION TO ARRANGE FOR ON—SITE OBSERVATION AND TESTING.
- 6. MIOSHA SAFETY REQUIREMENTS
  WORK PRACTICES AND MATERIALS SHALL COMPLY WITH APPLICABLE STATE AND
  FEDERAL SAFETY GUIDELINES, OCCUPATION, HEALTH AND ENVIRONMENTAL
  REGULATIONS, AND ALSO NFPA AND ANSI CODES AS APPLICABLE. WORK INSIDE A
  CONFINED SPACE, SUCH AS MANHOLES OR OTHER UNDERGROUND STRUCTURES,
  SHALL BE COORDINATED WITH THE UTILITY OWNER, AND WORKER SAFETY
  REQUIREMENTS STRICTLY ENFORCED. CONTRACTOR SHALL HAVE ITS SAFETY PLAN
  ON FILE WITH OWNER AND ONE (1) COPY ON SITE AT ALL TIMES.
- 7. SURFACE RESTORATION
  DISTURBED AREAS SHALL BE RESTORED IN COMPLIANCE WITH THE SOIL EROSION AND SEDIMENTATION SPECIFICATIONS AND TO THE SATISFACTION OF OWNER. AREAS DISTURBED DURING CONSTRUCTION SHALL RECEIVE A 3—INCH APPLICATION OF TOPSOIL, SEED AND MULCH. EXCESS MATERIALS, DEBRIS, AND SIMILAR ITEMS SHALL BE REMOVED FROM THE PROJECT AREA BY CONTRACTOR AND DISPOSED OF PROPERLY. GROUND SURFACES SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER PRIOR TO FINAL APPROVAL.
- 8. PROTECTION OF HAZARDOUS AREAS EXCAVATION AND HAZARDOUS AREAS SHALL BE PROTECTED BY BARRICADES, SAFETY FENCE, OR OTHER APPROPRIATE MEANS. BARRICADES LEFT IN PLACE AFTER DARK SHALL BE LIGHTED.
- 9. NON-STOPPAGE CLAUSE
  CONTRACTOR SHALL BE REQUIRED TO COMPLETE ALL WORK IN AN EXPEDITIOUS
  MANNER AND SHALL NOT STOP CONSTRUCTION FOR EXTENDED PERIODS (GREATER
  THAN 1 WEEK) ONCE CONSTRUCTION HAS BEGUN WITHOUT APPROVAL OF OWNER.
- 10. DISPOSAL OF EXCESS EXCAVATED MATERIAL EXCESS EXCAVATED MATERIALS SHALL BE DISPOSED OF BY CONTRACTOR, WITH ALL PERMITS, PERMISSIONS, AND LOCATIONS PROVIDED BY CONTRACTOR. ADJACENT PROPERTY OWNERS SHALL BE GIVEN PREFERENCE FOR DISPOSAL SITES, BUT WRITTEN PERMISSION FOR DISPOSAL ON ADJACENT PROPERTY OWNERS SHALL BE PROVIDED TO OWNER PRIOR TO FINAL DISPOSAL.

#### SOIL EROSION AND SEDIMENTATION CONTROL PLAN NOTES

- 1. CONTRACTOR SHALL SUBMIT A DETAILED EROSION CONTROL PLAN AND OBTAIN A SOIL EROSION & SEDIMENTATION CONTROL PERMIT FROM AGENCY HAVING JURISDICTION PRIOR TO ANY EARTH CHANGES.
- 2. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
- 3. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING 9. BACKFILLING AND/OR GRADING OPERATIONS. TIMING AND SEQUENCING OF EROSION CONTROL DEVICES FOR THE MAJOR ITEMS OF WORK SHALL BE IDENTIFIED AND SUBMITTED BY CONTRACTOR TO ENGINEER.
- 4. CLEANUP SHALL BE DONE IN A MANNER WHICH INSURES THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.
- 5. THE PROJECT WILL CONTINUALLY BE INSPECTED FOR SOIL EROSION AND SEDIMENTATION CONTROL COMPLIANCE. DEFICIENCIES SHALL BE CORRECTED BY THE CONTRACTOR WITHIN 24 HOURS.
- 6. TEMPORARY EROSION CONTROL MEASURES SHALL BE COMPLETELY REMOVED BY CONTRACTOR UPON ESTABLISHMENT OF PERMANENT SOIL EROSION CONTROL MEASURES.
- 7. RESTORATION SHALL INCLUDE ALL FINAL TRIM & CLEANUP WORK PLUS IT SHALL INCLUDE FINAL GRADING, TOPSOIL SPREADING, LIVE STAKING, AND NATIVE SEEDING NECESSARY TO PROPERLY COVER DISTURBED AREAS. APPLICATION RATES SHALL BE AS APPROVED BY ENGINEER AND SHALL REASONABLY CONFORM TO THE PROJECT SPECIFICATIONS FOR THIS WORK. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO ASSURE PROPER GROWTH AND COVERAGE.
- 8. RESTORATION THAT WASHES OUT SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
- 9. RESTORATION WILL NOT BE PAID FOR UNTIL STABILIZATION IS EVIDENT AS DETERMINED BY ENGINEER, THE END PRODUCT IS WELL ESTABLISHED AND IN A GROWING AND VIGOROUS CONDITION AND CONTAINS THE SPECIES CALLED FOR IN THE NATIVE SEEDING MIXTURE. AREAS WHERE UNSATISFACTORY RESULTS ARE OBTAINED SHALL BE REWORKED, AND RESEEDED TO THE SATISFACTION OF THE PROJECT ENGINEER, AT CONTRACTOR'S EXPENSE.

#### REQUIREMENTS FOR CONSTRUCTION IN WETLANDS

- 1. SOIL DISTURBANCE SHALL BE MINIMIZED PRIOR TO INSTALLING EROSION AND SEDIMENTATION CONTROLS IN THE VICINITY OF THE WETLANDS AND STREAM. TEMPORARY IMPACTS AS A RESULT OF CONSTRUCTION ACCESS AND IMPACTS FROM CONSTRUCTION EQUIPMENT MOVEMENT (I.E. RUTTING) WILL BE ROUGH GRADED TO ORIGINAL ELEVATIONS. IN AREAS WHERE SIGNIFICANT SOIL COMPACTION MAY OCCUR, CONSTRUCTION MATS WILL BE USED AND REMOVED AT THE CONCLUSION OF CONSTRUCTION.
- 2. LOSS OF VEGETATION WITHIN EMERGENT, WET MEADOW AND OPEN WATER AREAS IS EXPECTED TO BE MINIMAL AND NO PLANTING IS PROPOSED. THOSE AREAS IMPACTED ARE EXPECTED TO QUICKLY REGENERATE FROM ADJACENT SEED SOURCES AND SEED WITHIN THE SOILS.
- 3. TREE AND SHRUB REMOVALS FOR CONSTRUCTION WILL BE LIMITED TO THE EXTENT POSSIBLE. TREE AND SHRUB CUTTING WILL BE THE ONLY ACCEPTABLE CLEARING. NO STUMPING OR REMOVAL OF ROOT WILL BE PERMITTED. STABILIZED CONSTRUCTION ACCESS SHALL BE DONE AS NEEDED, HOWEVER A GEOTEXTILE FABRIC SHALL BE PLACED AT THE BASE OF THE AGGREGATE AS A SEPARATOR FROM THE EXISTING SOILS. ONCE CONSTRUCTION IS COMPLETE, THE AGGREGATE AND GEOTEXTILE FABRIC SHALL BE REMOVED FROM THE SITE.
- 4. SILT FENCE OR SILT SOCKS SHALL BE INSTALLED TO SUPPLIER SPECIFICATIONS ALONG THE DOWN SLOPE OF ALL CONSTRUCTION ACCESS ROADS AND STAGING AND STOKE PILE AREAS PRIOR TO ANY EARTHMOVING OPERATIONS.
- 5. STAGING AREAS, ASSEMBLY AREAS, TEMPORARY EQUIPMENT AND NON—HAZARDOUS STORAGE AREAS SHALL BE LOCATED A MINIMUM OF 50 FEET FROM THE TOP OF THE BANK OF STREAMS AND WETLANDS AND OUTSIDE THE 100 YEAR FLOODWAY. ALL EQUIPMENT ENTERING THE STREAM OR WETLANDS SHALL USE BIODEGRADABLE HYDRAULIC FLUID AND POWER WASHED PRIOR TO ENTERING THE SITE.

#### SITE RESTORATION

- 1. PROTECTION AND RESTORATION OF GOLF COURSE: EXISTING ITEMS DISTURBED BY CONSTRUCTION OF THE PROJECT SHALL BE TEMPORARILY RESET BEYOND THE LIMITS OF CONSTRUCTION OR DIRECTED BY THE ENGINEER. ITEMS TO BE RESET OR REPLACED IN KIND BY THE CONTRACTOR IF ANY DAMAGE OCCURES WITHIN SEVEN (7) DAYS OF COMPLETION OF WORK WITHIN THE AFFECTED AREA. THE TEMPORARY RESETTING AND FINAL PLACEMENT OF THE ITEMS WILL BE CONSIDERED INCLUDED IN THE COST OF THE PROJECT.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE GOLF COURSE PROPERTY BEYOND THE LIMITS OF CONSTRUCTION. INCLUDING EXISTING FENCING, FAIRWAYS, IRRIGATION LINES OR APPURTENANCES, CART PATHS, TREES AND SHRUBBERY.
- 3. ALL TREES AND SHRUBS REQUIRED TO BE TRIMMED/PRUNED SHALL BE DONE IN A MANNER TO MAINTAIN NATURAL APPEARANCE. ALL TREES INDICATED TO BE PROTECTED ON THE PLANS OR AS DIRECTED BY THE PROJECT ENGINEER SHALL HAVE TEMPORARY PROTECTIVE MEASURES INSTALLED PURSUANT TO THE PLANS AND SPECIFICATIONS.
- 4. ACCESS TO AREAS OUTSIDE OF THE PROJECT LIMITS SHALL BE APPROVED BY THE CITY OF TAYLOR OR PROJECT ENGINEER PRIOR TO START OF CONSTRUCTION.
- 5. ANY DEWATERING NECESSARY TO CONSTRUCT THIS PROJECT SHALL BE CONSIDERED INCIDENTAL AND ALL COSTS ASSOCIATED SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE AFFECTED INSTALLATION.
- 6. THE CONTRACTOR SHALL LOCATE AND PROTECT ANY GOLF COURSE IRRIGATION PIPES, VALVES. ROTORS OR APPURTENANCES THAT MAY BE LOCATED WITHIN THE LIMITS OF CONSTRUCTION.
- 7. REMOVE ALL CONSTRUCTION EQUIPMENT, EXCESS MATERIALS, DEBRIS, ETC. ESTABLISH FINE GRADE AND RESTORE PER PLANS AND SPECIFICARTIONS. ALL COSTS FOR THE LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR GRADING.
- 3. ALL WATER REQUIRED FOR SOD AND SEEDING SHALL BE INCLUDED IN THE CONTRACT COST FOR THESE ITEMS. WATER REQUIRED FOR COMPACTION SHALL BE INCLUDED IN THE COST OF CONSTRUCTION FOR THIS PROJECT. CONTRACTOR SHALL WATER THE PLANTINGS AND SEEDED AREAS DAILY FOR A MINIMUM OF 14 DAYS WITH AN ADDITIONAL FOUR WATERING EVENTS IN THE FOLLOWING TWO WEEKS AFTER THE DAILY WATERING. WATERING SHALL NOT OCCUR ON SATURDAYS, SUNDAYS OR IMMEDIATELY AFTER RAIN EVENTS. ALL EXCEPTIONS SHALL BE APPROVED BY THE ENGINEER. WATER CAN BE TAKEN FROM THE DRAIN FOR THE PLANTINGS.
- 9. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OF COMPLETION OF THE MITIGATION CHANNEL.
- 10. CONTRACTOR SHALL MONITOR AND ACTIVELY MANAGE THE SEED AND SOD GROWTH & SUPPLEMENT AS NEEDED. COSTS FOR THE SEEDING AND RESODDING TO BE INCLUDED IN THE UNIT PRICE FOR SITE RESTORATION. THE CONTRACTOR SHALL MATCH THE SOD PLACED IN THE FAIRWAYS TO THE EXISTING TURF GRASS MIX AS DIRECTED BY THE CITY OF TAYLOR.

#### WAYNE COUNTY CONSTRUCTION NOTES

- 1. PRIOR TO PAVEMENT REMOVAL, THE CONTRACTOR SHALL CONTACT WAYNE COUNTY ENGINEER/INSPECTOR TO VERIFY IF THE EXISTING GRADE OF THE GUTTER LINES AND THE TOPS OF CURBS ARE NEEDED TO BE PROVIDED AS REQUESTED.
- SAW—CUT FULL DEPTH THE EXISTING PAVEMENT TO THE NEAREST JOINT WITHIN WAYNE COUNTY ROAD RIGHT—OF—WAY AND REMOVE THE EXISTING PAVEMENT AND CURB, OR AS DIRECTED BY WAYNE COUNTY ENGINEER.
- CONSTRUCT THE PRIMARY ROADS AS FOLLOWS:

   CONSTRUCT WAYNE COUNTY PRIMARY ROAD PAVEMENT PER WAYNE COUNTY
   PERMIT STANDARDS, "PR-1" OR "PR-2" AS APPLICABLE, OR AS DIRECTED BY 15.
   THE WAYNE COUNTY ENGINEER.
   PLACE 9" OF 21AA AGGREGATE COMPACTED TO MINIMUM 95% DENSITY OF
  - MAXIMUM UNIT WEIGHT, OR AS DIRECTED BY WAYNE COUNTY ENGINEER.

     CONSTRUCT WAYNE COUNTY ROAD PAVEMENT REPAIR WITHIN MINIMUM 2" HMA

    (F) ON MINIMUM OF 10" NON-REINFORCED CONCRETE WC 35P MIX (3500

    PSI AT 28 DAYS) AND INTEGRAL STRAIGHT CURB TYPE "4" AS PER WAYNE

    COUNTY PERMIT STANDARDS, "RS-2," OR AS DIRECTED BY WAYNE COUNTY

    ENGINEER.
- TIE THE NEW PAVEMENT TO THE EXISTING PAVEMENT WITH #5 EPOXY COATED TIE BARS AT MAXIMUM 43—INCH ON CENTER LONGITUDINALLY AND AT 18—INCH ON CENTER TRANSVERSELY AS PER WAYNE COUNTY PERMIT STANDARDS, "RS—2," OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
   PLACE THE CONSTRUCTION JOINTS OF THE NEW PAVEMENT TO MATCH THE

EXISTING PAVEMENT JOINTS, OR AS DIRECTED BY WAYNE COUNTY ENGINEER.

#### WAYNE COUNTY CONSTRUCTION NOTES (CONTINUED)

- 4. ANY DAMAGED UNDERDRAIN AS A RESULT OF THIS PROJECT ACTIVITY SHALL BE RECONSTRUCTED PER WAYNE COUNTY PERMIT STANDARDS, "S-14," OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
- 5. ANY DAMAGED SIDEWALK AS A RESULT OF THIS PROJECT ACTIVITY SHALL BE RECONSTRUCTED AS PER WAYNE COUNTY PERMIT STANDARDS, "RS-5," OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER. MAINTAIN 2% MAXIMUM TRANSVERSE SLOPE ON THE SIDEWALK.
- 6. ANY DAMAGED SIDEWALK RAMPS AS A RESULT OF THIS PROJECT ACTIVITY SHALL BE RECONSTRUCTED PER MDOT STANDARDS, "R-28-J," OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
- 7. STRUCTURE ADJUSTMENT SHALL BE DETERMINED ONSITE BY THE WAYNE COUNTY ENGINEER.
- 8. THE CONTRACTOR IS RESPONSIBLE TO RESOLVE ANY WATER PONDING ISSUES AND MAINTAIN A POSITIVE FLOW ALONG THE GUTTER LINE WITHIN THE LIMIT OF THE PROJECT.
- 9. RELOCATE, RESTORE, OR REPLACE ANY TRAFFIC SIGNS THAT AREA AFFECTED BY THIS CONSTRUCTION AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
- 10. ANY EXISTING GAS MAINS TO BE ABANDONED IN PLACE WITHIN WAYNE COUNTY RIGHT-OF-WAY SHALL BE FILLED WITH FLOWABLE FILL. CUT AND CAP ALL EXISTING GAS MAINS WHEN ABANDONING, TYP.

#### WAYNE COUNTY DPS REQUIREMENTS

- 1. ALL WORK WITHIN THE WAYNE COUNTY ROAD RIGHT—OF—WAY (ROW) AND DRAIN EASEMENT SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND GENERAL SPECIFICATIONS, INCLUDING SOIL EROSION AND SEDIMENTATION CONTROL OF THE WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES, AND MDOT 2012 SPECIFICATIONS FOR CONSTRUCTION.
- 2. THESE PLANS ARE NOT VALID WITHOUT ATTACHMENT OF THE WAYNE COUNTY PERMIT SPECIFICATIONS FOR CONSTRUCTION WITHIN THE ROAD ROW, PARKS, DRAIN EASEMENT OR SANITARY SEWER UNDER JURISDICTION OF THE WAYNE COUNTY (07/01/93) REVISED 12/15/2004
- 3. CONTRACTOR SHALL CONTACT MISS DIG AT 811 TO IDENTIFY AND FLAG / MARK THE LOCATIONS OF ALL UNDERGROUND UTILITIES AT THE PROPOSED CONSTRUCTION AREAS PRIOR TO START OF CONSTRUCTION, AND SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND UTILITIES, AND RESOLVE ANY CONFLICT BETWEEN THE PROPOSED WORK AND THE EXISTING UNDERGROUND OR ABOVEGROUND UTILITIES.
- 4. CONTRACTOR SHALL MAINTAIN 18" MINIMUM VERTICAL CLEARANCE AND 3 FEET MINIMUM HORIZONTAL CLEARANCE BETWEEN THE PROPOSED AND EXISTING UTILITIES. ANY PROPOSED UTILITY PERMITTED TO CROSS UNDER THE ROAD OR DRAIN, MUST BE PLACED A MINIMUM OF 7 FEET BELOW THE LOWEST POINT OF THE ROAD, OR 6 FEET BELOW THE DRAIN BOTTOM. OVERHEAD WIRES/CABLES MUST BE INSTALLED 18 FEET MINIMUM ABOVE THE ROAD CENTERLINE. TO RELOCATE ANY UTILITY WITHIN THE ROAD ROW, THE CONTRACTOR SHALL COORDINATE THE RELOCATION WITH THE UTILITY COMPANY AND AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
- 5. ALL SURVEY MONUMENTS / CORNERS AND BENCH MARKS LOCATED WITHIN THE CONSTRUCTION AREA MUST BE PRESERVED IN ACCORDANCE WITH PUBLIC ACT 74 AS AMENDED (INCLUDING ACT 34, P.A. 2000) AND AS PER WAYNE COUNTY PERMIT RULE 1.5. THE PERMIT HOLDER AND CONTRACTOR SHALL COORDINATE THE WORK WITH A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF MICHIGAN DURING CONSTRUCTION ACTIVITIES FOR THE PURPOSE OF WITNESSING, PRESERVING OR REPLACING SURVEY MONUMENTS AND MONUMENT BOXES.
- 6. EXPOSURE OF ANY UTILITIES UNDER THE PAVEMENT WILL NOT BE PERMITTED, UNLESS APPROVED BY THE WAYNE COUNTY ENGINEER. PAVEMENT REMOVAL AND REPLACEMENT SHALL BE PERFORMED PER APPLICABLE WAYNE COUNTY STANDARD DETAILS AN AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
- 7. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS WITHIN THE WAYNE COUNTY ROAD ROW AND DRAIN EASEMENT WITH 3" TOPSOIL, THM SEED MIX AND MULCH. SLOPES STEEPER THAN 1 ON 3 SHALL BE RESTORED BY PLACING SOD ON 2" TOPSOIL.
- 8. ALL BACKFILLS UNDER OR WITHIN 3 FEET OF THE PROPOSED OR EXISTING PAVEMENT, CURB OR SIDEWALK SHALL CONFORM TO THE WAYNE COUNTY TRENCH "B" BACKFILL REQUIREMENTS. TRENCH "A" BACKFILL MAY BE USED WITHIN THE ROAD ROW AREAS UNDER CONDITIONS OTHER THAN THOSE SPECIFIED FOR TRENCH "B".
- 9. CONTRACTOR IS RESPONSIBLE FOR RESTORING OR REPLACING ALL DISTURBED LANDSCAPED AREAS, SPRINKLER SYSTEMS, FENCES, SIGNS, MAIL BOXES, ETC. WITHIN THE WAYNE COUNTY ROAD ROW AND / OR AS DIRECTED BY THE COUNTY ENGINEER.
- 10. CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES. OTHERWISE, DETOURING TRAFFIC MUST BE PER APPROVED PLANS. ALL SIGNING AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF M.M.U.T.C.D.
- 11. MAINTAIN A SAFE AND ADEQUATE TRAVEL ROUTE FOR PEDESTRIANS AT ALL TIMES THROUGHOUT THE PROJECT DURATION.
- 12. TUNNELING, BORING AND JACKING OPERATIONS SHALL BE IN ACCORDANCE WITH THE WAYNE COUNTY SPECIFICATIONS AND DETAILS. BORE PITS SHALL BE PLACED AT MINIMUM 10 FEET FROM THE BACK OF CURB OR EDGE OF PAVEMENT.
- 13. REMOVE ALL ABANDONED CONDUITS FROM THE COUNTY ROADS ROW OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
- 14. CONTRACTOR SHALL PROVIDE COLD WEATHER PROTECTION FOR ALL PROPOSED CONCRETE WORK (PAVEMENTS, SIDEWALKS, DRIVE APPROACHES, ETC.) AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
- 5. OVERNIGHT VEHICLE PARKING AND STORAGE OF CONSTRUCTION MATERIALS AND EQUIPMENT'S ARE NOT PERMITTED WITHIN THE WAYNE COUNTY ROADS RIGHTS-OF-WAY.
- 16. CONTRACTOR SHOULD OBTAIN SOIL EROSION AND SEDIMENTATION CONTROL PERMIT FROM THE WAYNE COUNTY DPS. CONTACT THE WAYNE COUNTY SOIL EROSION OFFICE AT (734) 326-3936, OR THE COMMUNITY HAVING JURISDICTION OVER THE SOIL EROSION PERMIT.
- 17. CONTRACTOR SHALL NOTIFY THE WAYNE COUNTY TRAFFIC SIGNAL SHOP AT (734) 955-2161 AT LEAST 72 HOURS PRIOR TO START OF WORK AT OR NEAR ANY SIGNALIZED INTERSECTIONS.
- 18. CONTRACTOR SHALL NOTIFY WAYNE COUNTY 72 HOURS PRIOR TO START OF CONSTRUCTION. CONTACT THE PERMIT OFFICE AT (734) 858-2761.

FY OF TAYLOR

GODDARD ROAD

TOR, MI 48180

POET STREAM MITIGATION
EGEND & NOTES

23555 GC TAYLOR FRANK & POET

SSUED FOR: DATE: BY:
PERMIT 12/03/21 DLA
RESUB PMT 11/22/22 SAL
RESUB PMT 1/6/23 SAL
RESUB PMT 7/12/23 SAL
RESUB PMT 08/15/23 SAL
FB 12/19/24 SAL

B NO. TAY3233.04T

G-1.1

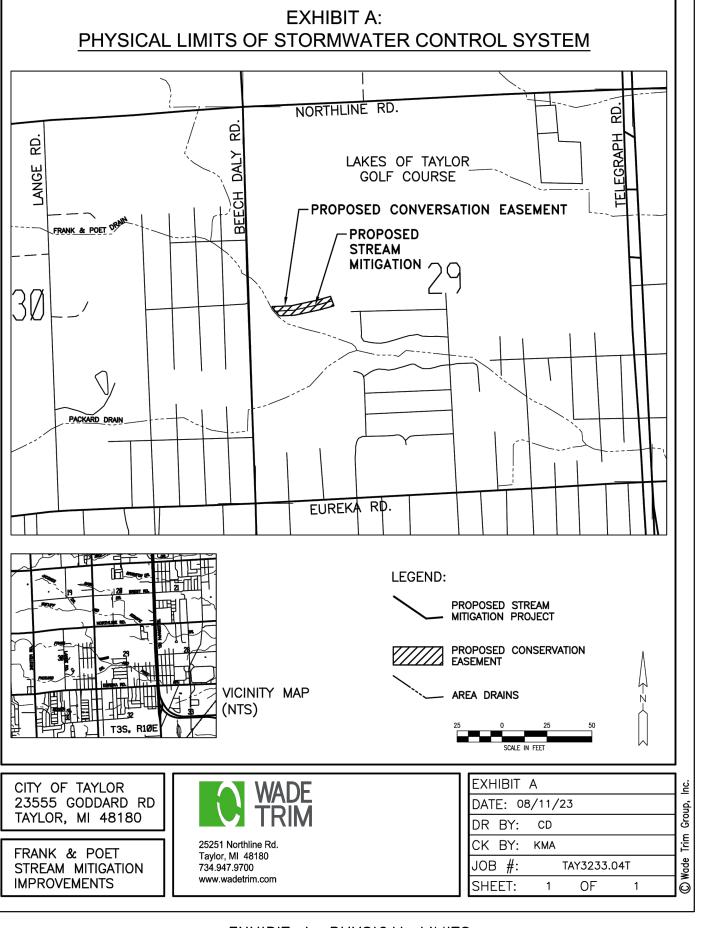


EXHIBIT A: PHYSICAL LIMITS

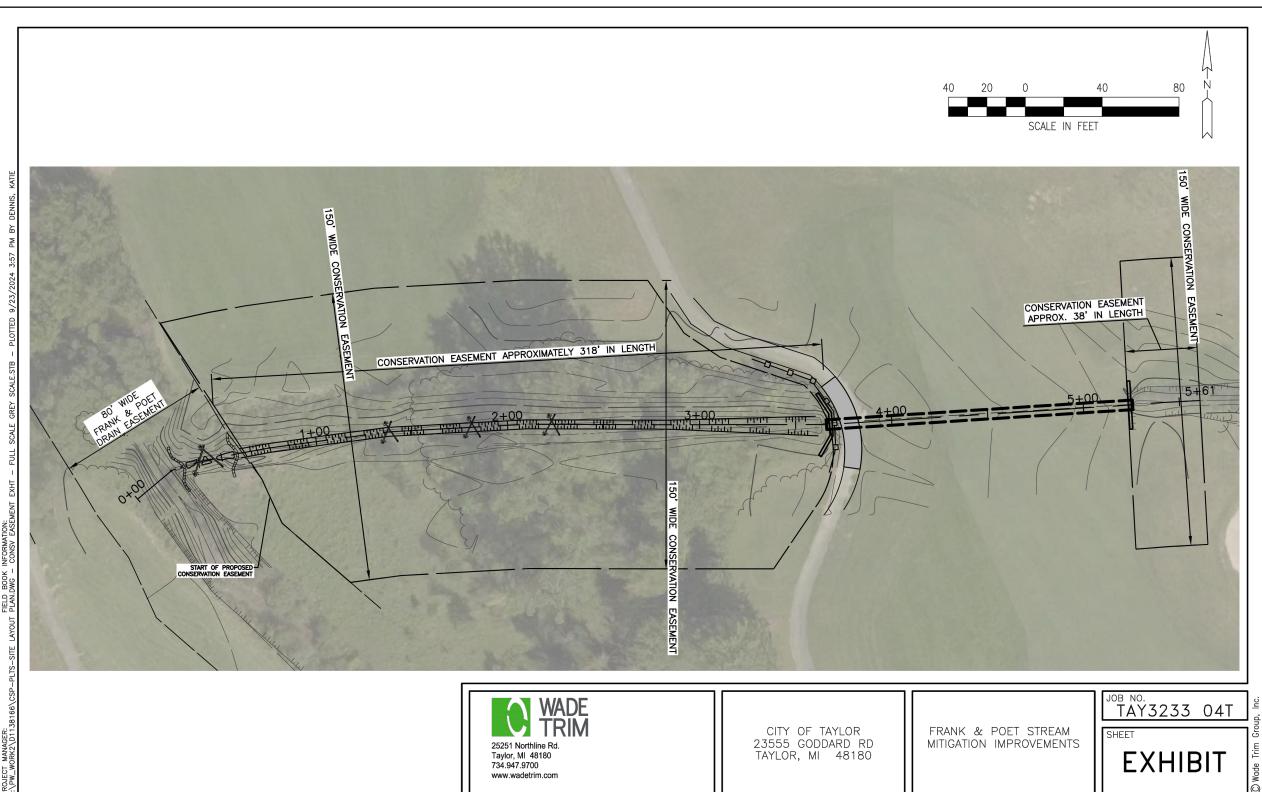


EXHIBIT A: PROPOSED CONSERVATION EASEMENT

#### **EXHIBIT B LONG-TERM MAINTENANCE PLAN**

Property Information: Lakes of Taylor Golf Course 25505 Northline Rd

Taylor, Michigan 48180

City of Taylor

23555 Goddard Rd Taylor, Michigan 48180

Lakes of Taylor Golf Course **Property Owner:** 25505 Northline Rd

Taylor, Michigan 48180

Permit Number: R 22-0407

A. Physical Limits of the Stormwater Control System

The stormwater control system (SWCS) subject to the Long-Term Maintenance Plan (Plan) is depicted on Exhibit A to the Permit and includes without limitation the mitigation stream channels, riparian buffers, and rock/riffle structures that convey flow through the project area to the Frank & Poet Drain.

For purposes of this Plan, this stormwater control system and all of its components as shown on Exhibit A is referred to as "Frank & Poet Stream Mitigation Improvements".

B. Time Frame for Long-Term Maintenance Responsibility

Lakes of Taylor Golf Course is responsible for maintaining the Frank & Poet Stream Mitigation Improvements, including complying with applicable requirements o the local or Wayne County soil erosion sedimentation control program, until Wayne County releases the construction Cpermit. Long-term maintenance responsibility for the Frank & Poet Stream Mitigation Improvements commences when defined by the maintenance permit issued by the County. Long-Term maintenance continues in perpetuity.

C. Manner of Ensuring Maintenance Responsibility

The City of Taylor has agreed to assume responsibility for long-term maintenance of Frank & Poet Stream Mitigation Improvements if Lakes of Taylor Golf Course fails to perform. The resolution by which City of Taylor has assured maintenance responsibility will be attached to the M-Permit as Exhibit C. Lakes of Taylor Golf Course, through this maintenance agreement with the City of Taylor, has committed to perform the maintenance activities required by this Plan. City of Taylor retains the right to enter the property and perform the

Appendix B: Frank & Poet Stream Mitigation Improvements Long-Term Maintenance Permit

EXHIBIT B: LONG-TERM MAINTENANCE PLAN

necessary maintenance of the Frank & Poet Stream Mitigation Improvements if Lakes of Taylor Golf Course fails to perform the required maintenance activities. Minimum Required Method of Notifying Subsequent Property Owners To ensure that the Frank & Poet Stream Mitigation Improvements is maintained in perpetuity, the map of the physical limits of the stormwater control system (Exhibit A), this Plan (Exhibit B), the resolution attached as Exhibit C, including the maintenance agreement between the public entity and the Property Owner will be recorded with the Wayne County Register of Deeds. Upon recording, a copy of the recorded document will be provided to the County. D. Long-Term Maintenance Plan and Schedule Table 1 identifies the maintenance activities to be performed, organized by category (monitoring/inspections, preventative maintenance, and remedial actions). Table 1 also identifies site-specific work needed to ensure that the stormwater control system functions properly as designed. The following list supplements Table 1 and provides more information about site specific activities: - While performing maintenance, chemicals should not be applied anywhere within the project area unless performed by a State of Michigan licensed pesticide applicator and conducted under a valid aquatic nuisance control permit. Appendix B: Frank & Poet Stream Mitigation Improvements Long-Term Maintenance Permit

EXHIBIT B: LONG-TERM MAINTENANCE PLAN

Long-Term Ma FRANK & POET STREAM 23555 Goddard Rd,	MITIGAT	ION IMP	ROVEM	
	Syste	m Comp	onent	
Maintenance Activity	Mitigation Channel	Vegetative Riparian Buffer	Rock / Log Riffle Structure	Frequency
onitoring/Inspection				
Inspect for sediment accumulation	х		Х	Annually
Inspect for floatables, dead vegetation, debris	Х			Annually & after major events
Inspect for erosion and integrity of system	Х	х	Х	Annually & after major event
Monitor plantings/vegetation	х	х		Twice annually - once in sprin once in fall
eventative Maintenace  Remove accumulated sediment	х		х	As-needed
Remove floatables, dead vegetation, debris	Х	х	Х	As-needed
Re-apply / replace mulch layer	х	х		Re-apply every 6 months, replace every 2 years
Remove invasive plant species	Х	Х		Annually
emedial Actions				
Repair / stabilize erosion	Х	х	Х	As-needed
Replace dead shrubs and trees		х		As-needed
Reseed bare areas and stabilize with erosion control matting	х	х	Х	As-needed

EXHIBIT B: LONG-TERM MAINTENANCE PLAN

EXHIBIT C	
MODEL COMMUNITY RESOLUTION ACCEPT	ING
LONG-TERM MAINTENANCE OF STORMWATER	<b>SYSTEM</b>
Resolution No:	

At a Regular Meeting of the City of Taylor City Council (Name of Community Governing Board) \_(date), the following resolution was offered:

WHEREAS, Chapter 7 of the Wayne County Stormwater Control Ordinance ("Wayne County Ordinance"), requires stormwater control systems to be maintained in perpetuity to ensure that the systems function properly as designed;

WHEREAS, Rule 1001 of the Wayne County Stormwater Control Administrative Rules ("Administrative Rules") requires applicants for stormwater construction approval to submit long-term maintenance plans as part of an application for stormwater construction approval;

WHEREAS, Lakes of Taylor Golf Course ("Property Owner") has applied to the Wayne County Department of Public Services for a stormwater construction approval with respect to a project named Frank & Poet Stream Mitigation Improvements (Project Name) ("Project") located at (Project Location) in Lakes of Taylor Golf Course (City/Village/Township); Taylor, Michigan

WHEREAS, Property Owner's application for stormwater construction approval has been assigned permit review number R 22-0407 (insert permit review number);

WHEREAS, Property Owner submitted a plan to the County and (Community) entitled "Long-Term Maintenance Plan" (Title, author, and date of Plan) ("Plan") for long-term maintenance of the stormwater control system(s) at the Project pursuant to Rule 1001, which Plan has been tentatively approved by the County pending issuance of this resolution and acceptance by (Community); and

WHEREAS, pursuant to the Wayne County Ordinance (Community) guarantees it will assume jurisdiction and accept responsibility for long-term maintenance of stormwater control system(s) at the Project in perpetuity if the Property Owner fails to do so;

WHEREAS, [Community] has designated \_ [Name of Authorized Community Official], the \_\_\_\_[Title of Individual] of [Community], as the person responsible for executing long-term maintenance permits on behalf of [Community];

NOW THEREFORE BE IT RESOLVED, that pursuant to Chapter 7 of the Wayne County Ordinance (Community) guarantees it will assume jurisdiction over and accept responsibility for long-term maintenance of stormwater control system(s) at the Project pursuant to the Wayne County Ordinance, the Administrative Rules, the Plan, and the stormwater construction approval issued by Wayne County if the Property Owner fails to do so;

BE IT FURTHER RESOLVED, that approval be and is hereby granted, authorizing (Authorized Community Official) to execute, on behalf of (Community), Permit (No. R 22-0407 ) for long-term maintenance of stormwater control system issued by Wayne County for the Project.

[Insert Certification Language of Local Community here]

Appendix B: Frank & Poet Stream Mitigation Improvements Long-Term Maintenance Permit

EXHIBIT C: COMMUNITY RESOLUTION

CITY OF TAYLOR 23555 GODDARD ROAD TAYLOR, MI 48180

12/03/21 DLA

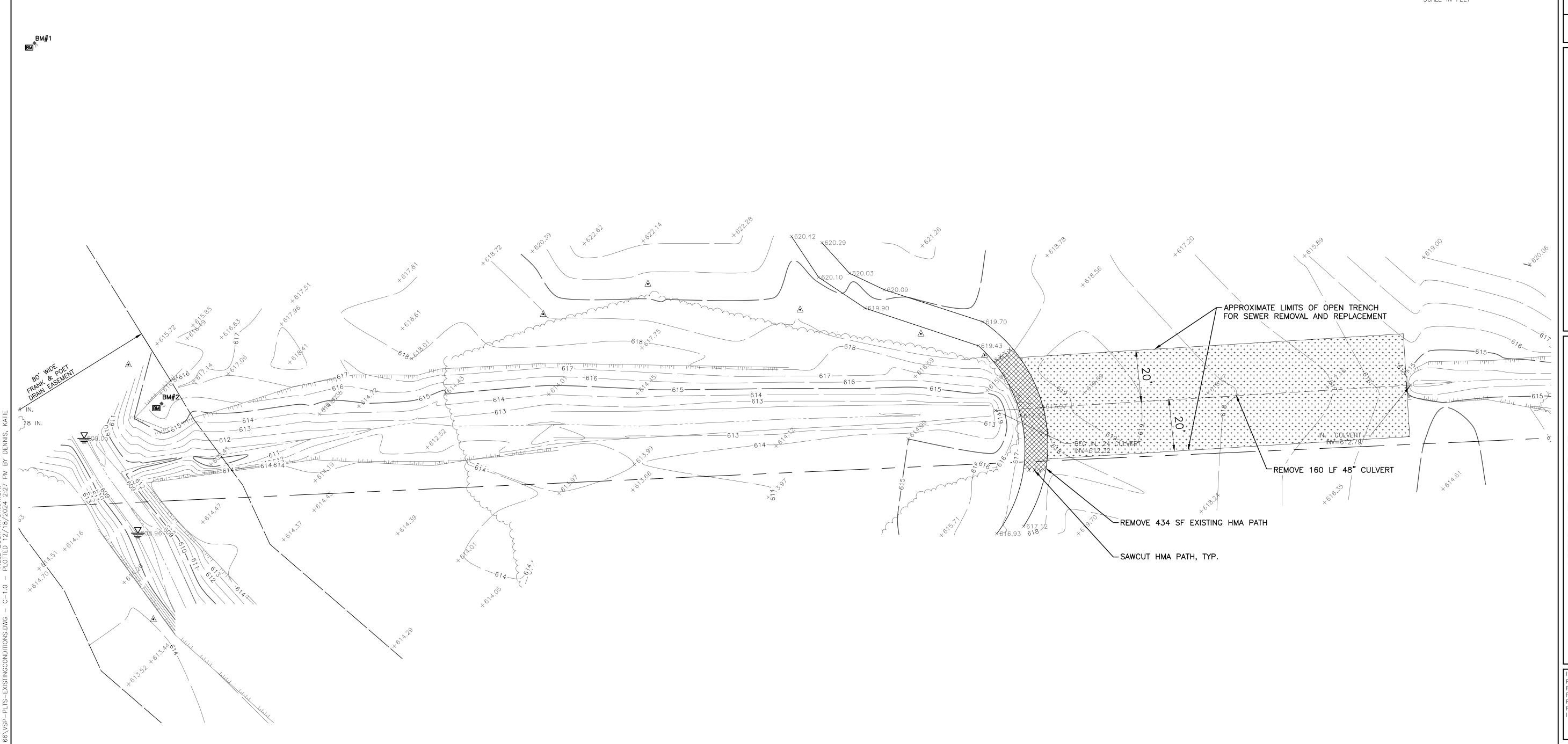
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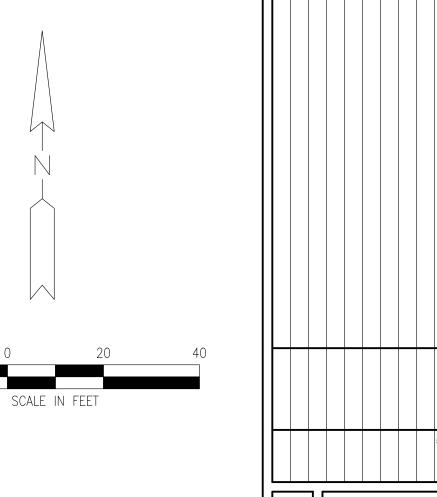
# **BENCHMARKS** BM#1 EAST OF CART BRIDGE TOP OF RED POST MARKED "100" NORTHING: 258716.33 EASTING: 13415945.97 ELEVATION: 621.03 NAVD88

BM#2 EAST OF CART BRIDGE TOP OF WOOD POST MARKED "150" NORTHING: 258576.41 EASTING: 13415995.27 ELEVATION: 620.34 NAVD88

#### **SURVEY INFORMATION**

- 1. TOPOGRAPHIC DATA SHOWN ON THESE PLANS IS FOR THE INFORMATION OF THE CONTRACTOR. THE CONTRACTOR SHALL MAKE ADDITIONAL INVESTIGATIONS AS REQUIRED TO ACQUAINT HIMSELF ADEQUATELY WITH THE SITE TOPOGRAPHY AN SUBSURFACE CONDITIONS FOR THE PREPARATION OF HIS BID AND FOR THE SUCCESSFUL EXECUTION OF HIS WORK.
- 2. THE CONTRACT SHALL BE RESPONSIBLE FOR ALL SURVEY REQUIREMENTS OF THIS PROJECT AND SHALL USE A MICHIGAN LICENSED LAND SURVEYOR.
- 3. THE BASE SURVEY INFORMATION WAS PERFORMED BY WADE TRIM ASSOCIATES, INC IN 2020.
- 4. SURVEY HORIZONTAL AND VERTICAL CONTROL BASED ON NAD83 AND NAVD88.



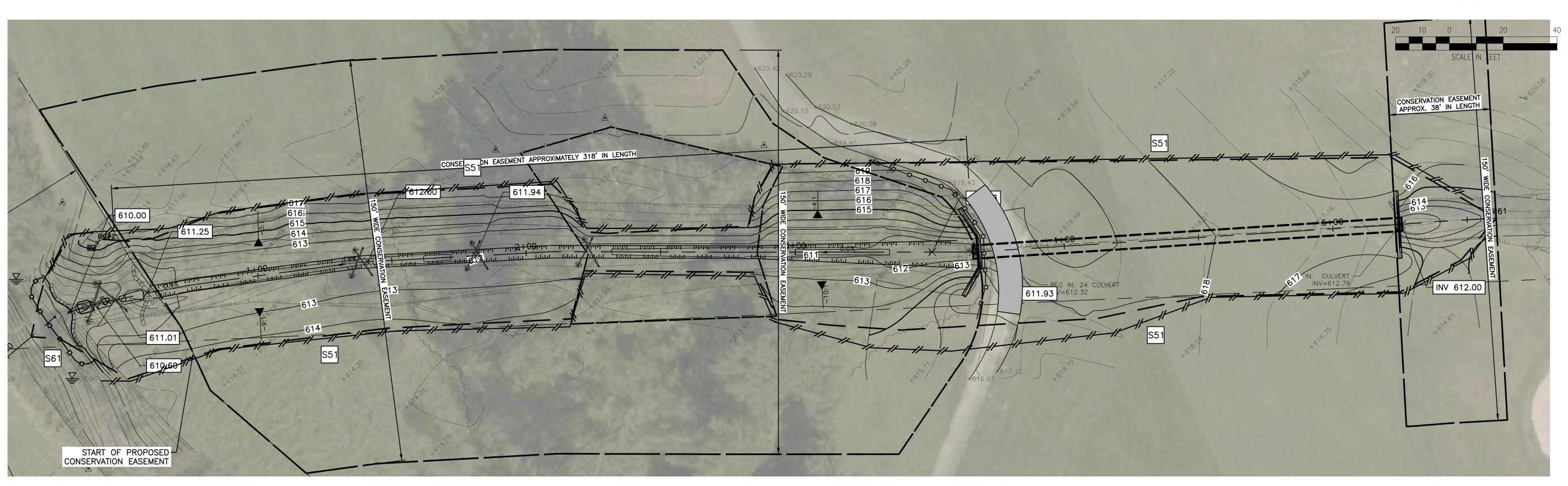




CITY OF TAYLOR
23555 GODDARD ROAD
TAYLOR, MI 48180
FRANK & POET STREAM MITIGATION
TOPOGRAPHIC SURVEY AND DEMOLITION PLAN

TAY3233.04T

C-1.0



KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
ER	OSION CONTROLS		
E1	SELECTIVE GRADING AND SHAPING	——————————————————————————————————————	To reduce steep slopes and erosive velocities.
E2	GRUBBING OMITTED		For use on steep slopes to prevent rilling, gullying, and reduce sheet flow velocity or where clear vision corridors are necessary.
E3	SLOPE ROUGHENING AND SCARIFICATION		Where created grades cause increased erosive velocites. Promotes infiltration and reduces runoff velocity.
E4	TERRACES		On relatively long slopes up to 8% grades with fairly stable soils.
E5	DUST CONTROL		For use on construction sites, unpaved roads, etc. to reduce dust and sedimentation from wind and construction activities.
E6	MULCH		For use in areas subject to erosive surface flows or severe wind or on newly seeded areas.
E7	TEMPORARY SEEDING	ALL WAR AND WAR AND	Stabilization method utilized on construction sites where earth change has been initiated but not completed within a 2 week period.
E8	PERMANENT SEEDING	ali sa	Stabilization method utilized on sites where earth change has been completed (final grading attained).
E9	MULCH BLANKETS		On exposed slopes, newly seeded areas, new ditch bottoms, or areas subject to erosion.
E10	SODDING		On areas and slopes where immediate stabilization is required.
E11	VEGETATED CHANNELS	- the second of	For use in created stormwater channels. Vegetation is used to slow water velocity and reduce erosion within the channel.
E12	RIPRAP	-140	Use along shorelines, waterways, or where concentrated flows occur. Slows velocity, reduces sediment load, and reduces erosion.
E13	GABION WALLS		On newly created or denuded stream banks to reduce velocity until permanent stabilization is achieved or on existing banks to retard erosive velocities.
E14	ENERGY DISSIPATOR		Where the energy transmitted from a concentrated flow of surface runoff is sufficient to erode receiving area or watercourse.
E15	TEMPORARY SLOPE DRAIN		Where surface runoff temporarily accumulates or sheet flows over the top of a slope and must be conveyed down a slope in order to prevent erosion.
E16	SLOPE DRAIN		Where concentrated flow of surface runoff must be permanently conveyed down a slope in order to prevent erosion.

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
E17	CELLULAR CONFINEMENT SYSTEMS		Used on steep slopes and high velocity channels.
E18	PLASTIC SHEETS		Used on exposed slopes, seeded areas, new ditch bottoms, and areas subject to surface runoff and erosion. Used as a liner in temporary channels and to stabilize stockpiles.
E19	TEMPORARY DRAINAGEWAY/ STREAM CROSSING		Use on construction sites where stream/drainageway crossings are required.
E20	TEMPORARY BYPASS CHANNEL		Use within existing stream corridors when existing flow cannot be interrupted, and at culvert and bridge repair sites
E21	LIVE STAKING	B	In areas requiring protection of slopes against surface erosion and shallow mass wasting.
E	EROSION / SEDIMENT CO	NTROLS	
ES31	CHECK DAM		Used to reduce surface flow velocities within constructed and existing flow corridors.
ES32	STONE FILTER BERM		Use primarily in areas where sheet or rill flow occurs and to accommodate dewatering flow.
ES33	FILTER ROLLS	B	In areas requiring immediate protection of slopes against surface erosion and gully formation and for perimeter sediment control.
ES34	SAND FENCE		For use in areas susceptible to wind erosion, especially where the ground has not yet been stabilized by other means.
ES35	DEWATERING		Use where construction activities are limited by the presence of water and dry work is required.
ES36	DIVERSION DIKE/BERM		Within existing flow corridors to address or prevent erosion and sedimentation, or on disturbed or unstable slopes subject to erosive surface water velocities.
ES37	DIVERSION DITCH	ANTONIO CONTRACTOR ANTONIO CONTR	In conjunction with a diversion dike, or where diversion of upslope runoff is necessary to prevent damage to unstabilized or disturbed construction areas.
ES38	COFFERDAM/SHEET PILINGS		Constructed along or within water corridor or waterbody to provide dry construction area.
ES39	STREAMBANK BIOSTABILIZATION	В	For use along banks where stream and riparian zones may have difficulty recovering from the long—term effects of erosion.
ES40	POLYMERS		To minimize soil erosion and reduce sedimentation in water bodies by increasing soil particle size.
ES41	WATTLES		In areas requiring protection of slopes against surface erosion and gully formation.

B = BIOENGINEERING

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
	SEDIMENT CONTROLS		
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.
S52	CATCH BASIN SEDIMENT GUARD		Use in or at stormwater inlets, especially at construction sites.
S53	STABILIZED CONSTRUCTION ACCESS		Used at every point where construction traffic enters or leaves a construction site.
S54	TIRE WASH		For use on construction sites where vehicular traffic requires sediment removed from its tires in highly erosive areas.
S55	SEDIMENT BASIN		At the outlet of disturbed areas and at the location of a permanent detention basin.
S56	SEDIMENT TRAP		In small drainage areas, along construction site perimeters, and above check dams or drain inlets.
S57	VEGETATED BUFFER/FILTER STRIP		Use along shorelines, waterways, or other sensitive areas. Slows velocity, reduces sediment load, and reduces erosion in areas of sheet flow.
S58	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially at construction sites.
S59	INLET PROTECTION FABRIC FENCE		Use at stormwater inlets, especially at construction sites.
S60	INLET PROTECTION STONE		Use around urban stormwater inlets.
S61	TURBIDITY CURTAIN		Use during construction adjacent to a water esource, to contain sediment within the work area when other BMP's cannot be used.

#### SEQUENCE OF CONSTRUCTION NOTES

- INSTALL SILT FENCE AND SEDIMENT TRAPS/TURBIDITY CURTAIN AT CONFLUENCE WITH FRANK & POET DRAIN.
- 2. INSTALL LOG/ROCK RIFFLE.
- 3. EXCAVATE CHANNEL PER CROSS SECTIONS AND DETAILS.STABILZE BANKS WITH FABRIC WRAPED SOIL LIFTS.
- 4. INSTALL LWD STRUCTURE, PROGRESS WEST TO EAST (DOWNSTREAM TO UPSTREAM).
- 5. STABILZE THE DISTURBED STREAMBANKS, FLOODPLAIN AND SLOPED AREAS AFTER SEEDING WITH STRAW/COIR BLANKET (NAG SC125BN) PER DETAILS.
- 6. REMOVE EXISTING 24-INCH CMP AND REPLACE AT PROPOSED
- 7. INSTALL HEADWALLS AND FINAL STABILIZATION MEASURES, SEED, PLUGS AND LIVE STAKES.
- 8. REMOVE SILT FENCE AND SEDIMENT TRAPS/TURBIDITY CURTAIN AT CONFLUENCE WITH FRANK & POET DRAIN ONCE CONSTRUCTION IS COMPLETED.

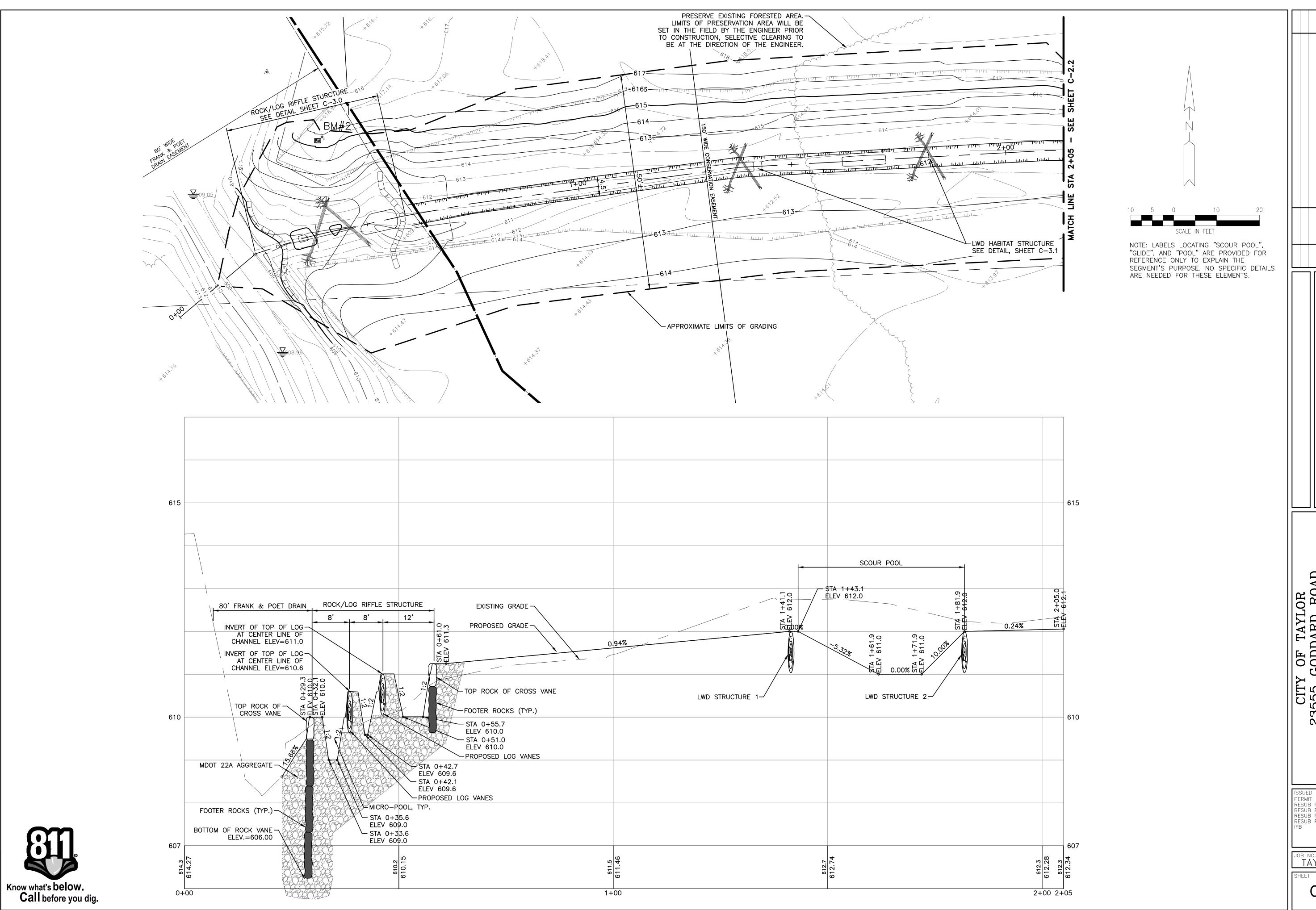
25251 Northline Rd.
Taylor, MI 48180
734.947.9700
www.wadetrim.com

CITY OF TAYLOR
23555 GODDARD ROAD
TAYLOR, MI 48180
FRANK & POET STREAM MITIGATION
SITE, GRADING & SESC PLAN

| SSUED FOR: DATE: BY: | PERMIT | 12/03/21 DLA | RESUB PMT | 11/22/22 SAL | RESUB PMT | 1/6/23 SAL | RESUB PMT | 7/12/23 SAL | RESUB PMT | 08/15/23 SAL | IFB | 12/19/24 SAL | YNTER |

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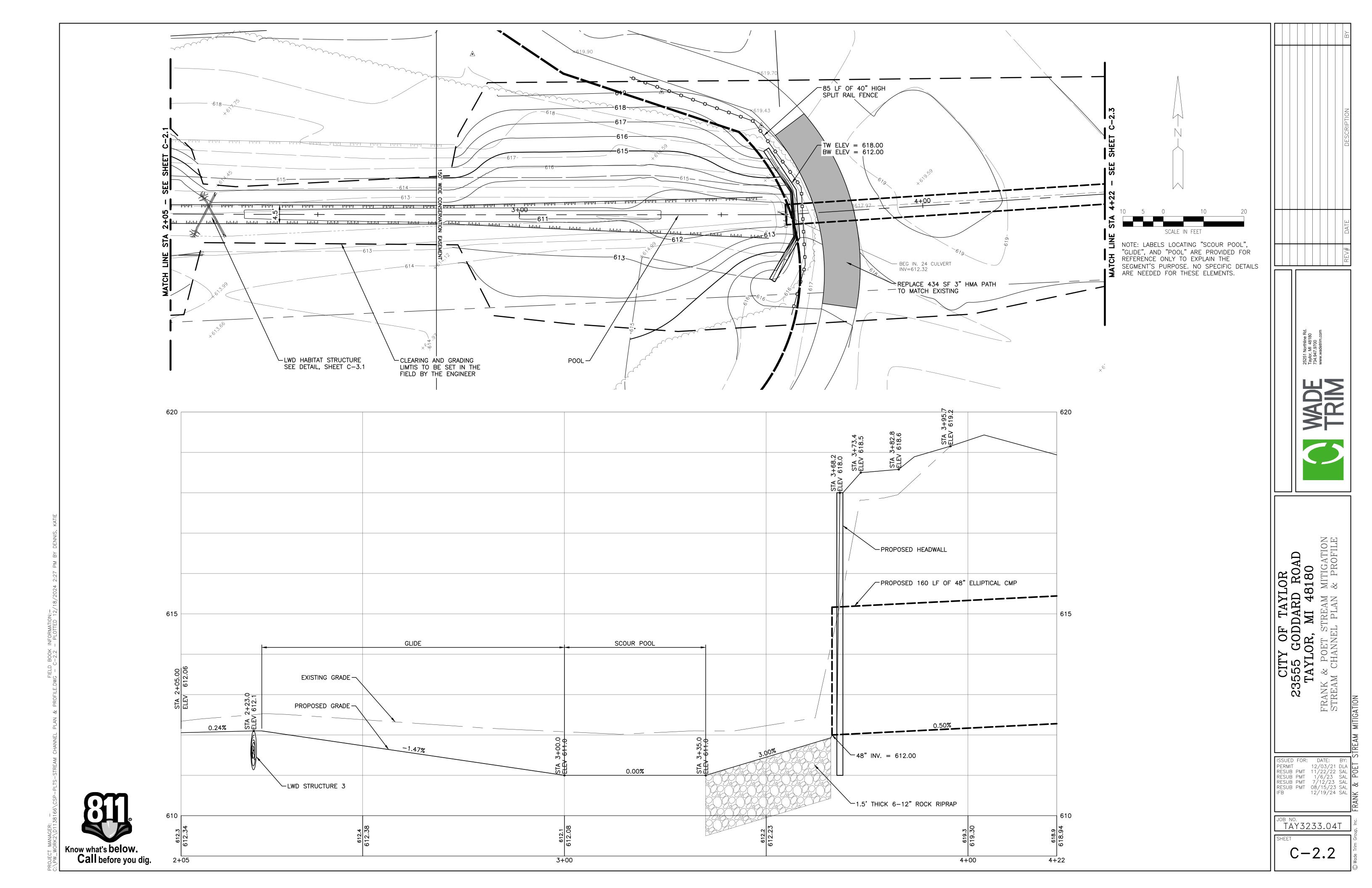
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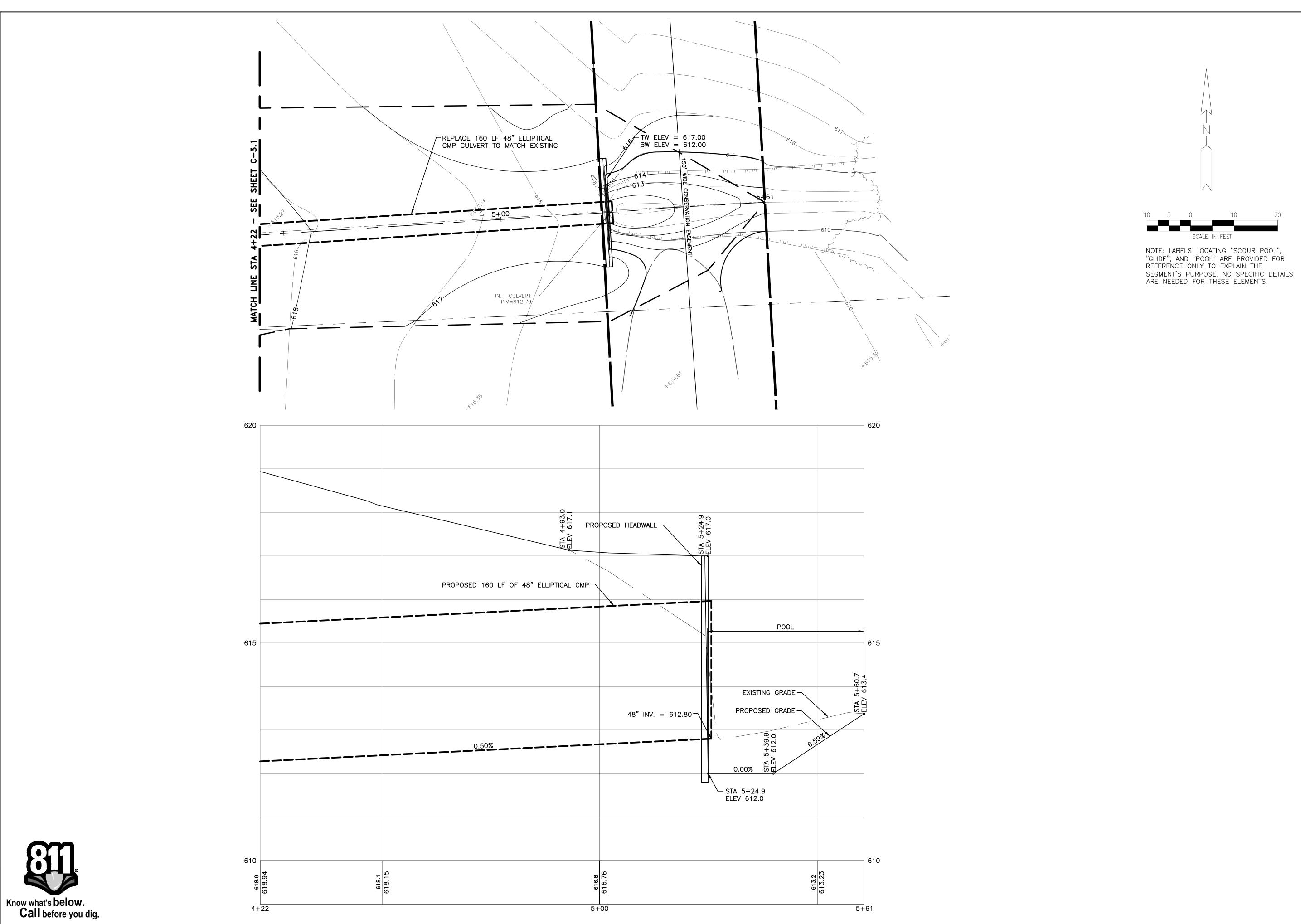


CITY OF TAYLOR
23555 GODDARD ROAD
TAYLOR, MI 48180
FRANK & POET STREAM MITIGATION
STREAM CHANNEL PLAN & PROFILE

TAY3233.04T

C-2.1

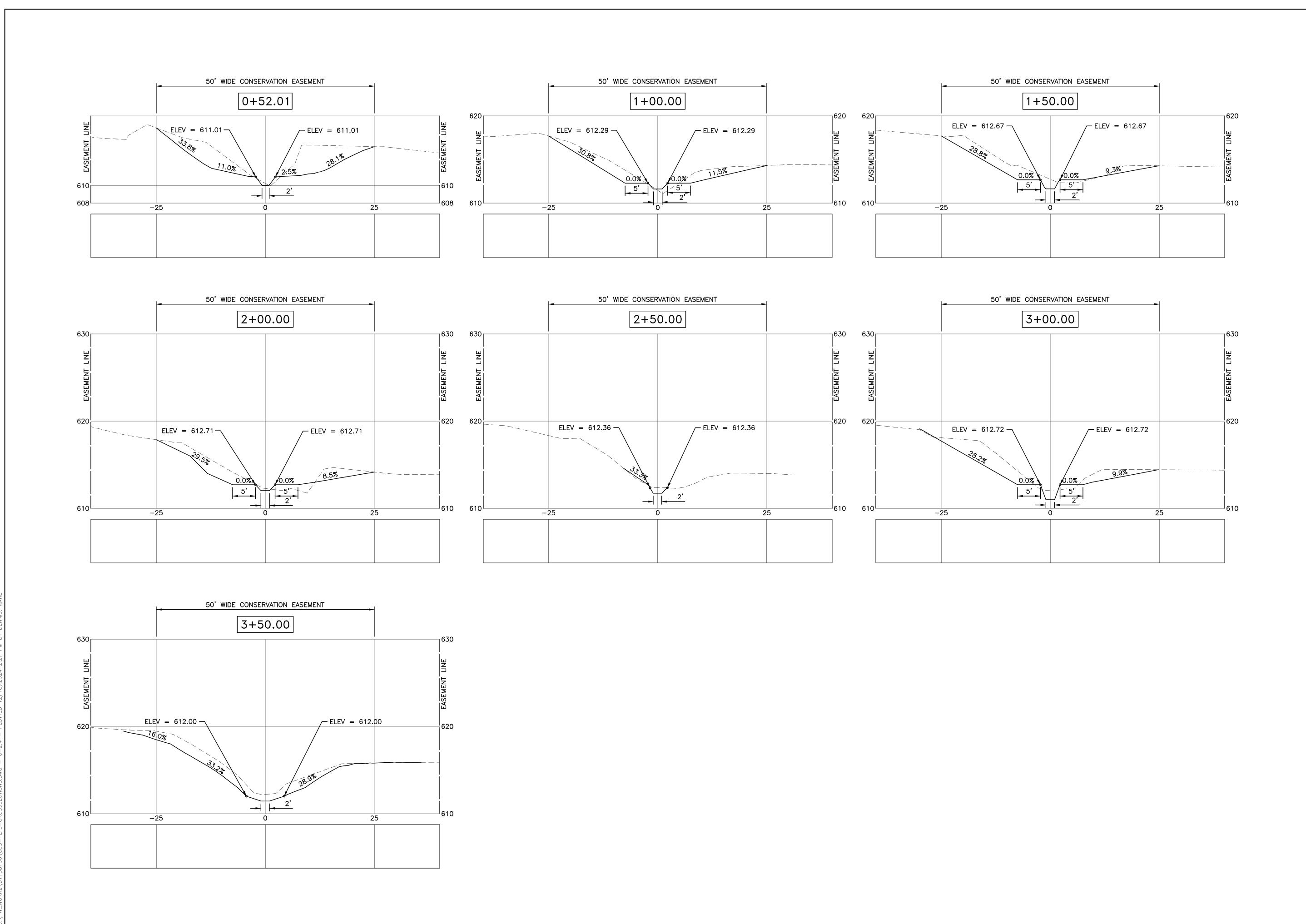




CITY OF TAYLOR
23555 GODDARD ROAD
TAYLOR, MI 48180
FRANK & POET STREAM MITIGATION
STREAM CHANNEL PLAN & PROFILE

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C - 2.3



### 25251 Northline Rd.
Taylor, MI 48180
734.947.9700
www.wadetim.com

| REV# DATE | DESCRIPTION

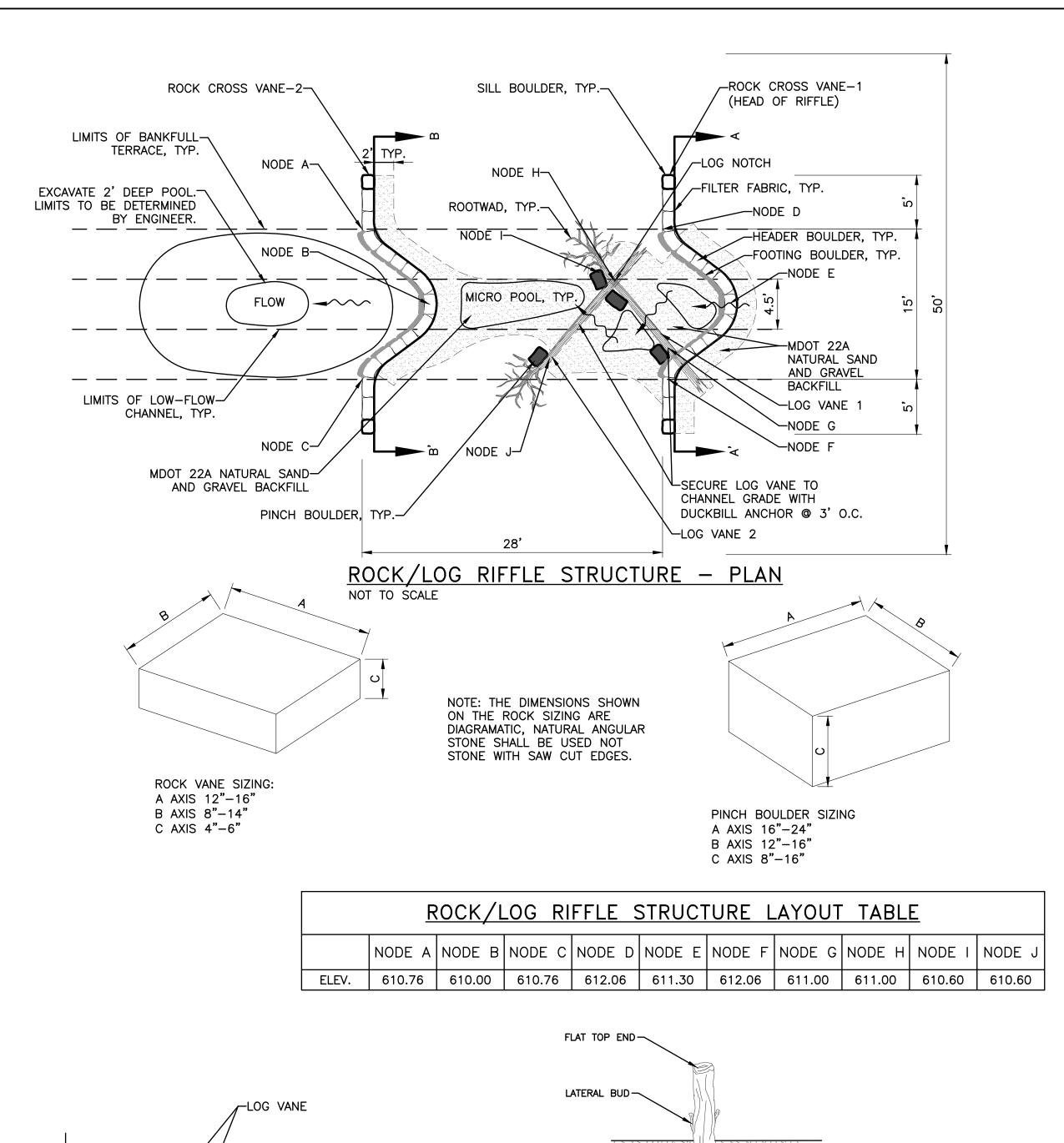
CITY OF TAYLOR
23555 GODDARD ROAD
TAYLOR, MI 48180

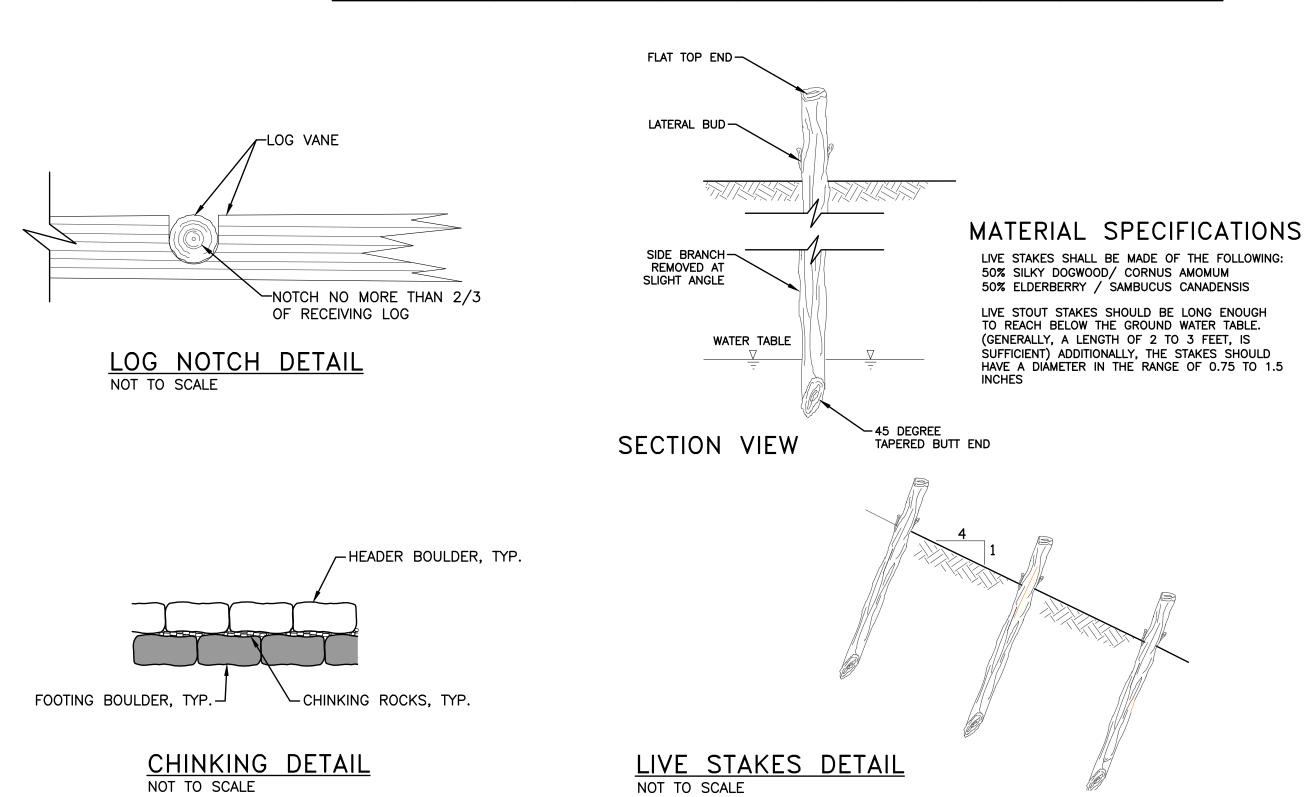
TAYLOR, STREAM MITIGATION
CROSS—SECTIONS

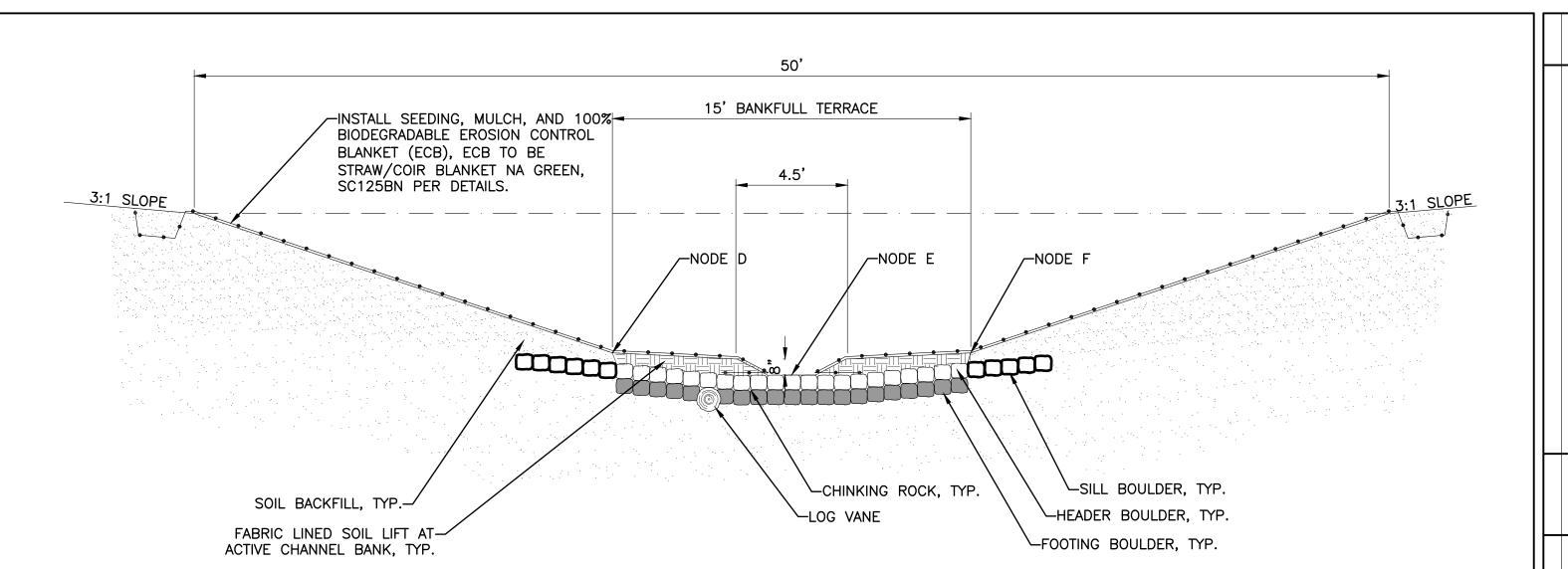
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IRMIT 12/03/21 DLA
ISUB PMT 11/22/22 SAL
ISUB PMT 1/6/23 SAL
ISUB PMT 7/12/23 SAL
ISUB PMT 08/15/23 SAL
ISUB PMT 08/15/23 SAL
ISUB PMT 08/15/23 SAL

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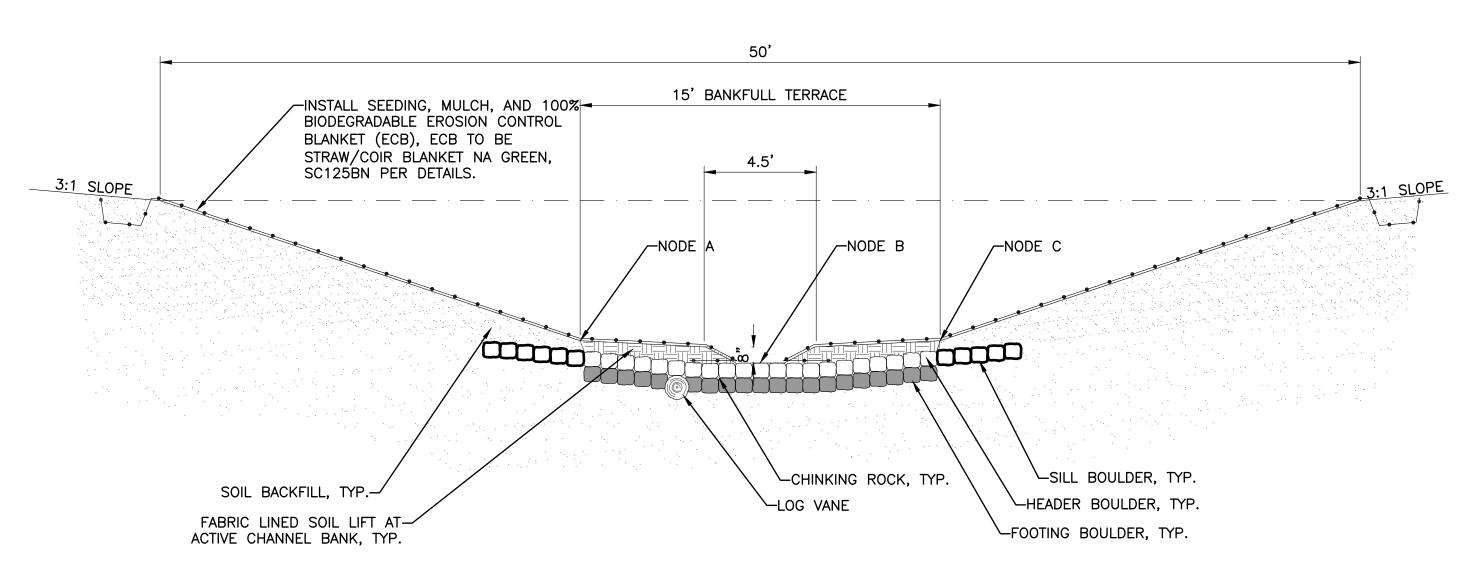
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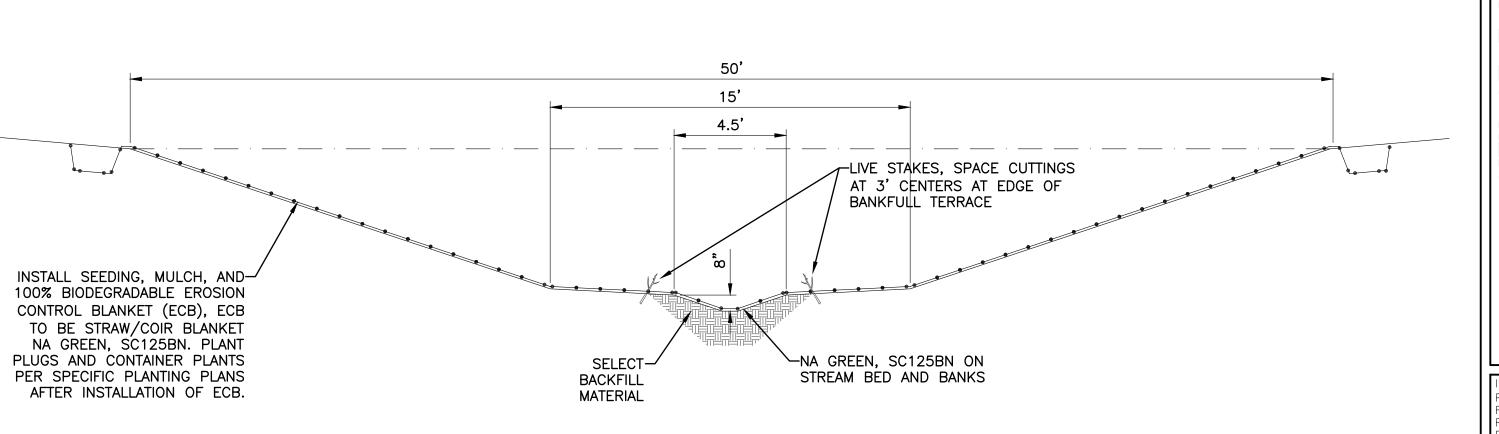




CROSS SECTION A-A'
SCALE: 1/4"



CROSS SECTION B-B'
SCALE: 1/4"



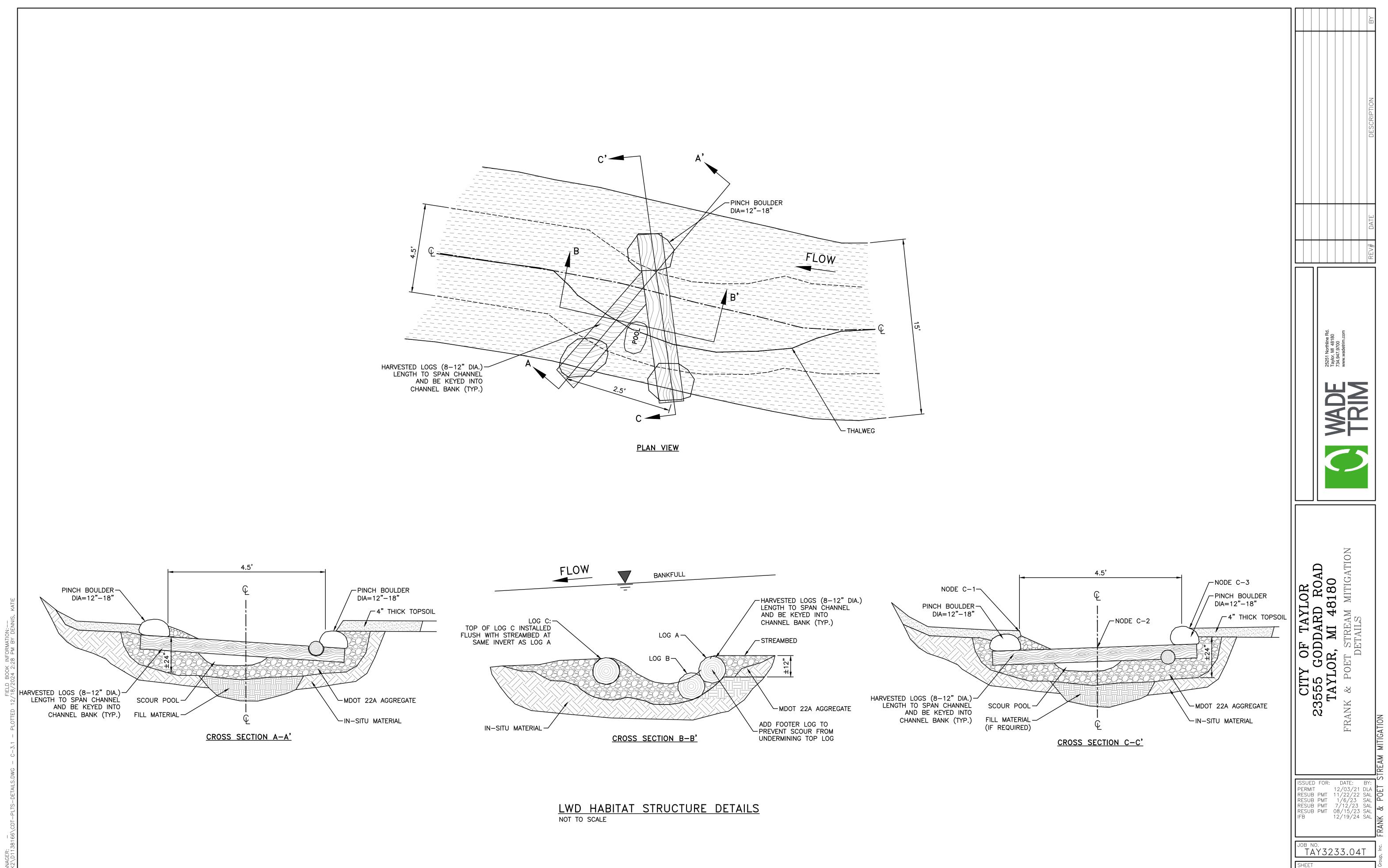
MITIGATION CHANNEL - TYPICAL SECTION SCALE: 1/4"

CITY OF TAYLOR
23555 GODDARD ROAD
TAYLOR, MI 48180
FRANK & POET STREAM MITIGATION
DETAILS

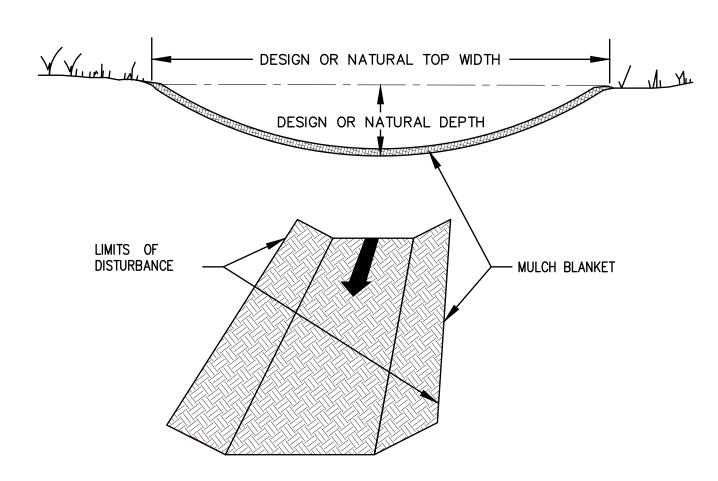
| SSUED FOR: DATE: BY: | PERMIT | 12/03/21 DLA | RESUB PMT | 11/22/22 SAL | RESUB PMT | 1/6/23 SAL | RESUB PMT | 08/15/23 SAL | RESUB PMT | 08/15/23 SAL | IFB | 12/19/24 SAL | WWY | WWY

C-3.0

PROJECT MANAGER: -



C - 3.1



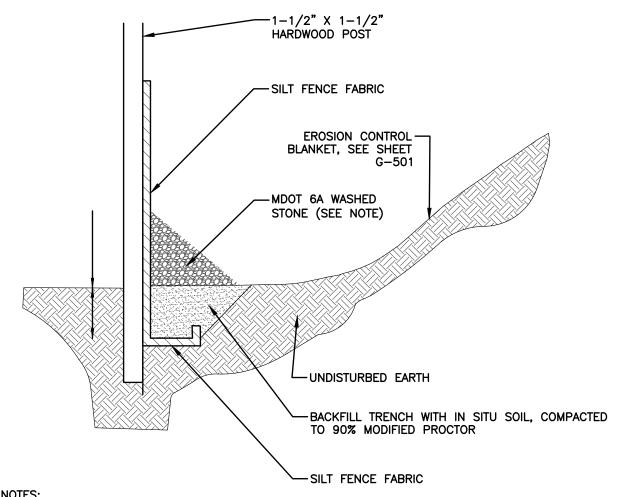
#### **APPLICATIONS**

- 1. STEEP SLOPES.
- 2. CHANNEL AND ROADSIDE DITCH BOTTOMS.
- USE SEED AND MULCH BLANKETS TO STABILIZE THE GRASSED LINED CHANNEL, IMMEDIATELY AFTER GRADING (ONE DAY MAX).
- 4. MUST NOT BE PLACED ON FROZEN SOIL: MUST REMAIN IN IN CONTACT WITH SEED AND SOIL.
- MUST BE USED DURING THE NON-GROWING SEASON TO MINIMIZE EROSION UNTIL VEGETATION IS ESTABLISHED.

#### **DESIGN**

- FOR DITCHES AND CHANNELS ROLL MULCH BLANKETS IN THE DIRECTION OF FLOW. DO NOT STRETCH.
- 2. FASTEN OR PEG MULCH BLANKET PER MANUFACTURERS INSTRUCTIONS.
- 3. ON BACKSLOPES, BLANKETS SHALL BE PLACED AT RIGHT ANGLES TO ROADBED OR PIPE LINE.
- 4. OVERLAY ENDS BY 18" AND EDGES BY 4".
- 5. AT ALL BLANKET EDGES, BURY 6'-10" OF BLANKET IN 3-4' DEEP TRENCH AND COMPACT TRENCH WITH NATIVE SOIL BACKFILL OR MDOT 6AA STONE.

#### SEEDING WITH MULCH BLANKET AND/OR MATTING NOT TO SCALE



NOTES:

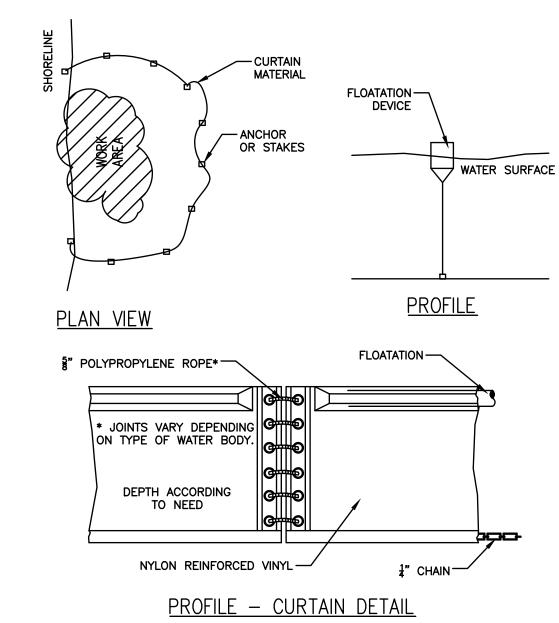
POST SPACING: 6-FOOT MAX

FABRIC: 36 INCHES IN WIDTH, MUST MEET ASTM D6461, 4 FT MINIMUM OVERLAP AT JOINTS (ENDS).

STONE: IF SILT FENCE IS DESIGNED AND UTILIZED AS A DIVERSION, PLACE MOOT 6A WASHED STONE 12 INCHES DEEP AT SILT FENCE AS SHOWN.

CURL EACH END OF THE SILT FENCE UPHILL IN A "J" PATTERN TO PREVENT RELEASE OF UNTREATED STORM FLOWS.

#### SILT FENCE DETAIL NOT TO SCALE



TURBIDITY CURTAIN DETAIL NOT TO SCALE

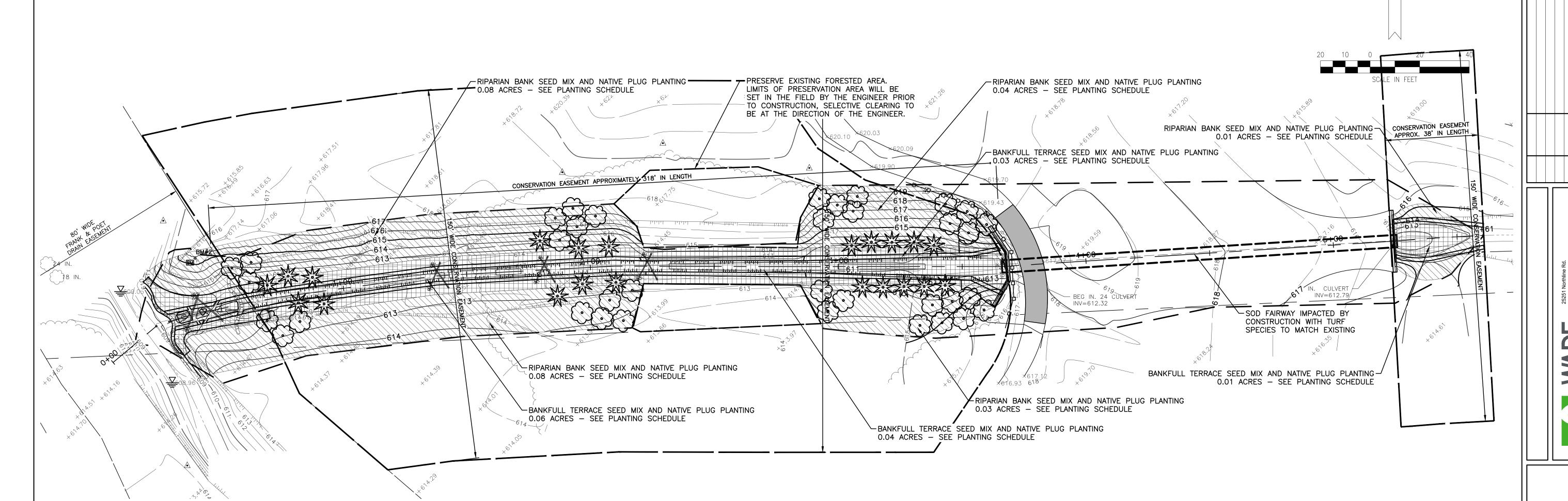
CITY OF TAYLOR
23555 GODDARD ROAD
TAYLOR, MI 48180

RANK & POET STREAM MITIGATION
SESC DETAILS

RANK

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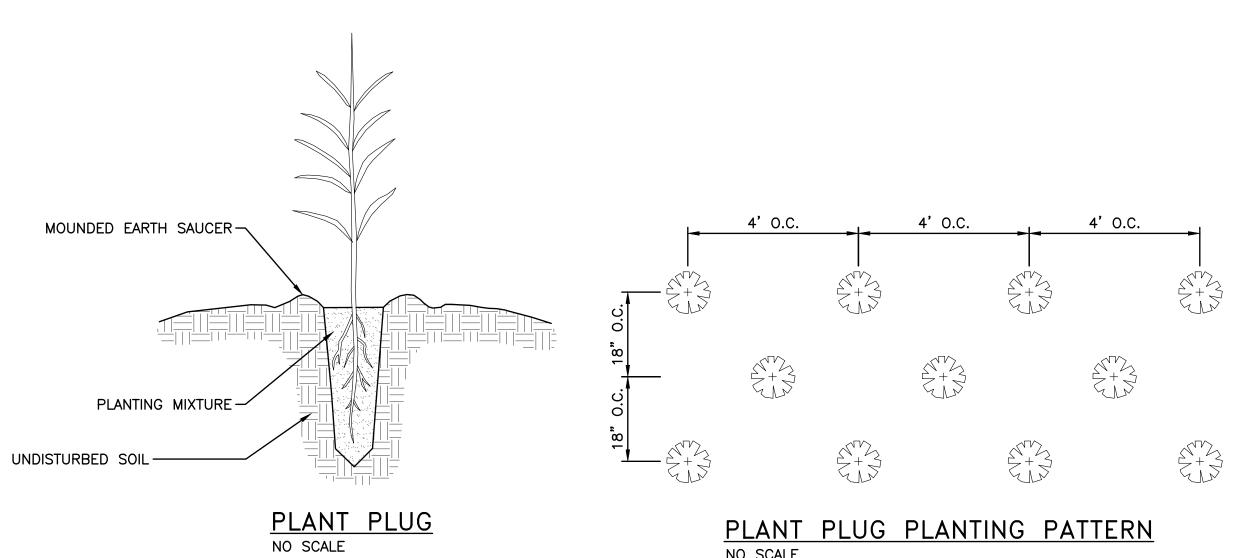


BANKFULL	BANKFULL TERRACE SEED MIX (ZONES B-C)				
Scientific Name	Common Name	% of Mix By Weight	Quantity (Lbs./acre)		
Grasses					
Carex stricta	Tussock Sedge	4%	2		
Carex vulpinoidea	Fox Sedge	5%	3		
Juncus effusus	Soft Rush	9%	5		
Scirpus validus	Great Bulrush	7%	4		
SUBTOTAL		25%	14		
Forbs					
Aster umbellatus	White Aster	0.45%	0.25		
Helenium autumnale	Sneezeweed	0.89%	0.5		
Lobelia siphilitica	Blue Lobelia	0.89%	0.5		
Aster laevis	Smooth Aster	0.89%	0.5		
Rudbeckia lacinata	Cone Flower	0.45%	0.25		
SUBTOTAL		4%	2		
Cover Crop					
Avena sativa	Oats	36%	20		
Argrostis alba	Redtop	36%	20		
SUBTOTAL		71%	40		
	Tot	al Pounds per Acre	56		

BANKFULL NATIVE PLUG MIX (ZONES B-C)				
	Plant at 72 plugs per 1000 SF = 4' o	Plant at 72 plugs per 1000 SF = 4' on center spacing		
		Plugs per 1000 SF		
Caltha palustris	Marsh Marigold	12		
Eupatorium purpureum	Joe Pye Weed	12		
Juncus effusus	Soft Rush	12		
Scirpus validus	Soft-stemmed Bulrush	12		
Veronicastrum virginicum	Culvers Root	12		
Zizia aurea	Golden Alexanders	12		

Scientific Name	Common Name	% of Mix By Weight	Quantity (Lbs./acre)
	Grasses		
Schizachyrium scoparium	Little Bluestem	2%	1
Bouteloua curtipendula	Side Oats Gramma	4%	2
Spartina pectinata	Prairie Cordgrass	4%	2
Sporobolus heterolepis	Prairie Dropseed	4%	2
Carex vulpinoidea	Fox Sedge	5%	3
Panicum virgatum	Switch Grass	2%	1
Sorgastrum nutans	Indian Grass	5%	3
SUBTOTAL		25%	14
	Forbs	•	•
Achillea millefolium	Yarrow	0.44%	0.25
Aquilegia canadensis	Wild Columbine	0.18%	0.1
Asclepias tuberosa	Butterflyweed	0.35%	0.2
Aster laevis	Smooth Aster	0.35%	0.2
Aster pilosus	Hairy Aster	0.35%	0.2
Rudbeckia palmata	Prairie coreopsis	0.53%	0.3
Coreopsis lanceolata	Sand Tickseed	0.53%	0.3
Monarda fistulosa	Bergamot	0.53%	0.3
Penstemon hirsutus	Hairy Beardtongue	0.53%	0.3
Rudbeckia hirta	Blackeyed Susan	0.53%	0.3
SUBTOTAL		4%	2.45
	Cover Crop	•	
Avena sativa	Oats	35%	20
Lolium multiflorum	Annual Ryegrass	35%	20
SUBTOTAL		71%	40

	Plant at 72 plugs per 1000 SF = 4	Plant at 72 plugs per 1000 SF = 4' on center spacing		
		Plugs per 1000 SF		
Agastache foeniculum	Anise Hyssop	12		
Asclepis tuberosa	Butterfly Weed	12		
Aster novae-angliae	New England Aster	12		
Panicum virgatum'Shenandoah	Switchgrass	12		
Phlox carolina spp. Carolina	Thickleaf Phlox	12		
Schizachyrium scoparium	Little Bluestem	12		



PLANT PLUG PLANTING PATTERN
NO SCALE

MITIGATION DETAILS CITY OF TAYLOR
23555 GODDARD ROAD
TAYLOR, MI 48180
RANK & POET STREAM MITIGATIO
LANDSCAPE PLAN & DETAILS

L-1.0

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