



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3655

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

April 14, 2015

Mr. Jim McAdoo, Permit Section
TN Department of Environment and Conservation
Division of Water Pollution Control
11th Floor William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue
Nashville, Tennessee 37243

RE: NOI and SWPPP Submittals for TDOT Construction Activities

Dear Mr. McAdoo:

We request coverage under the General NPDES Permit for Discharges of Storm Water Associated with Construction Activities for the subject project. Enclosed is the Notice of Intent (NOI) for Construction Activity – Storm Water Discharges and one hard copy and one electronic copy on CD of the site-specific Storm Water Pollution Prevention Plan (SWPPP).

Project # 36010-1215-14 , PIN 100322.04
SR-128 from South of Opel Road to SR-15 in Savannah
Hardin County

By copy of this letter, we are sending three hard copies of the permits and documentation binder and one CD of this SWPPP to the Region Construction Office (one copy for the contractor).

Please forward our office the Notice of Coverage (NOC) for this project as soon as it becomes available. Please contact me at (615)253-2466 if I can be of any assistance.

Sincerely,

Melanie Bumpus
Environmental Permits Section

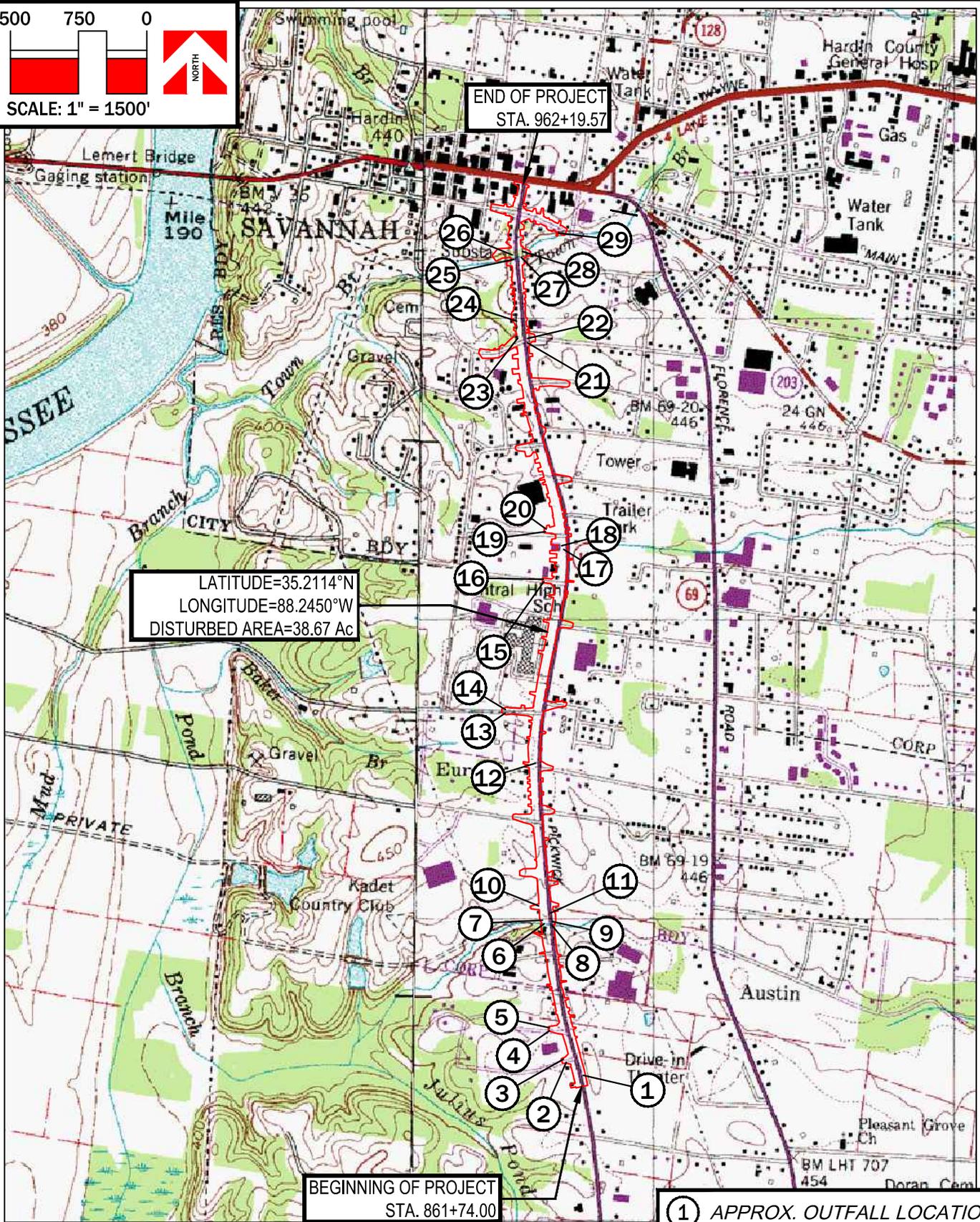
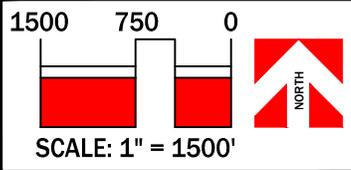
Enclosures

JLH: MBB:JLP,PC

Enclosures for:

cc:

Ms. Lou Timms, Region 4 Construction (CD)
Reading File, NPDES File



LATITUDE=35.2114°N
 LONGITUDE=88.2450°W
 DISTURBED AREA=38.67 Ac

END OF PROJECT
 STA. 962+19.57

BEGINNING OF PROJECT
 STA. 861+74.00

① APPROX. OUTFALL LOCATION



Tennessee Department of Transportation
 Nashville, Tennessee

Storm Water Pollution Prevention Plan
 SR-128 (PICKWICK RD)
 FROM SOUTH OF OPEL ROAD
 TO
 SR-15 (US-64) IN SAVANNAH
 Hardin County, Tennessee

Drawn By: DMM	Checked By: JLH
Project No. 36010-1215-14	
Figure: 1	PIN 100322.04

SWPPP INDEX OF SHEETS

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NOTE: CITATIONS IN PARENTHESIS INDICATE SECTIONS OF THE CURRENT CGP.

1. SWPPP REQUIREMENTS (3.0)

- 1.1. HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING CERTIFICATIONS (3.1.1)?
YES NO (CHECK ALL THAT APPLY BELOW)
1.1.1. CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC); OR
1.1.2. TDEC LEVEL II
- 1.2. DO THE EPSC PLANS INVOLVE STRUCTURAL DESIGN, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS FOR EPSC STRUCTURAL MEASURES (SEDIMENT BASINS, ETC.)?(3.1.1)? YES NO
IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT?
 YES NO
- 1.3. DO THE PROJECT STORMWATER OUTFALLS DIRECTLY DISCHARGE INTO THE FOLLOWING (5.4.1)? YES NO (CHECK ALL THAT APPLY BELOW)
1.3.1. IMPAIRED WATERS (303d FOR SILTATION OR HABITAT ALTERATION)
1.3.2. KNOWN EXCEPTIONAL TENNESSEE WATERS
IF YES TO SECTION 1.3, HAVE THE EPSC PLANS BEEN PREPARED BY AN INDIVIDUAL WHO HAS COMPLETED TDEC LEVEL II? (5.4.1.b)
 YES NO N/A (MAY 23, 2013 CGP EXEMPTION); AND
IF YES TO SECTION 1.3, HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL WHO HAS COMPLETED TDEC LEVEL II? (5.4.1.b)
 YES NO N/A (MAY 23, 2013 CGP EXEMPTION)

2. SITE DESCRIPTION (3.5.1)

- 2.1. PROJECT LIMITS (3.5.1.g): REFER TO TITLE SHEET
- 2.2. PROJECT DESCRIPTION (3.5.1.a):
TITLE: SR-128 (PICKWICK ROAD) FROM SOUTH OF OPEL ROAD TO SR-15 (US-64) IN SAVANNAH
COUNTY: HARDIN
PIN: 100322.04
- 2.3. SITE MAP(S) (3.5.1.g): REFER TO TITLE SHEET
- 2.4. DESCRIPTION OF EXISTING SITE TOPOGRAPHY (3.5.1.d): REFER TO EXISTING CONTOURS SHEET(S) 18-18H, DRAINAGE MAP SHEET(S) 15-15A, USGS QUAD MAP, AND THE OUTFALL TABLE IN SECTION 4.2.3 BELOW.
- 2.5. MAJOR SOIL DISTURBING ACTIVITIES (3.5.1.b) (CHECK ALL THAT APPLY):
2.5.1. CLEARING AND GRUBBING
2.5.2. EXCAVATION
2.5.3. CUTTING AND FILLING
2.5.4. FINAL GRADING AND SHAPING
2.5.5. UTILITIES
2.5.6. OTHER (DESCRIBE): _____
- 2.6. TOTAL PROJECT AREA (3.5.1.c): 38.67 ACRES

- 2.7. TOTAL AREA TO BE DISTURBED (3.5.1.c): 38.67 ACRES
IF GREATER THAN 50 ACRES, HAS CONSTRUCTION PROJECT PHASING BEEN SPECIFIED IN SECTION 3 BELOW AND IN THE PLANS (3.5.3.1.k)?
YES NO N/A
- 2.8. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? YES NO
IF YES, DESCRIBE AND LIST THE CORRESPONDING PLAN SHEET: _____
- 2.9. WAS ROW FINALIZED PRIOR TO FEBRUARY 1, 2010 (4.1.2.2)?
YES 10-21-2014 (DATE) NO

IF ROW WAS FINALIZED PRIOR TO FEBRUARY 1, 2010, THIS PROJECT IS CONSIDERED A PRE-APPROVED SITE (4.1.2.2)

- 2.10. ARE UTILITIES INCLUDED IN THE CONTRACT? YES NO
- 2.11. SOIL PROPERTIES (3.5.1.e)(4.1.1).
SOIL PROPERTIES FOR THE PRIMARY SOILS ARE LISTED IN THE TABLE BELOW.

SOIL PROPERTIES			
PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
Cg — Collins loam, local alluvium	C	4%	.28
Fm — Falaya silt loam	D	3%	.49
PaB — Paden silt loam	D	48%	.43
PkB2 — Pickwick silt loam	B	10%	.43
PwD3 — Pickwick silty clay loam	B	8%	.43
Rb — Robertsville silt loam	D	6%	.49
WgD3 — Waynesboro gravelly clay loam	B	20%	.24
WnF — Waynesboro very gravelly sandy loam	B	1%	.28

- 2.12. IS ACID PRODUCING ROCK (APR) (i.e. PYRITE) LOCATED WITHIN THE PROJECT LIMITS? YES NO
2.12.1. IF YES TO SECTION 2.12, HAVE APR LOCATIONS BEEN IDENTIFIED WITHIN THE CONSTRUCTION PLANS AND/OR THE GEOTECHNICAL REPORT? YES NO; AND
2.12.2. IF YES TO SECTION 2.12.1, HAS A SPECIAL HANDLING PLAN AND/OR ADAPTIVE MANAGEMENT PLAN (AMP) BEEN PREPARED FOR THE PROJECT? YES NO N/A (TDOT SP107L WILL BE APPLIED.)
- 2.13. PROJECT RUNOFF COEFFICIENTS AND AREA PERCENTAGES (3.5.1.f).

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	18.47	48%	98	
SEMI-IMPERVIOUS	2.16	5%	88	
PERVIOUS	18.04	47%	72	
WEIGHTED CURVE NUMBER OR C-FACTOR =			85	

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	25.60	66%	98	

SEMI-IMPERVIOUS	.30	1%	89	
PERVIOUS	12.77	33%	72	
WEIGHTED CURVE NUMBER OR C-FACTOR =			89	

3. ORDER OF CONSTRUCTION ACTIVITIES (3.5.1.b, 3.5.2.a):

- 3.1. SPECIAL SEQUENCING REQUIREMENTS (SEE SHEETS 18-20H)
- 3.2. INSTALL STABILIZED CONSTRUCTION EXITS.
- 3.3. INSTALL PERIMETER PROTECTION WHERE RUNOFF SHEETS FROM THE SITE.
- 3.4. INSTALL INITIAL EPSC (EROSION PREVENTION AND SEDIMENT CONTROL) MEASURES.
- 3.5. PERFORM CLEARING AND GRUBBING (NOT MORE THAN 15 DAYS PRIOR TO GRADING OR EARTH-MOVING. REFER TO THE STABILIZATION PRACTICES BELOW.)
- 3.6. REMOVE AND STORE TOPSOIL.
- 3.7. STABILIZE DISTURBED AREAS WITHIN 14 DAYS OF COMPLETING ANY STAGE AND/OR PHASE OF ACTIVITY.
- 3.8. INSTALL UTILITIES, STORM SEWERS, CULVERTS AND BRIDGE STRUCTURES.
- 3.9. INSTALL INLET AND CULVERT PROTECTION ONCE STRUCTURES ARE IN PLACE AND CAPABLE OF INTERCEPTING FLOW.
- 3.10. PERFORM FINAL GRADING AND INSTALL BASE STONE.
- 3.11. COMPLETE FINAL PAVING AND SEALING OF CONCRETE.
- 3.12. INSTALL TRAFFIC CONTROL AND PROTECTION DEVICES.
- 3.13. COMPLETE FINAL STABILIZATION (TOPSOIL, SEEDING, MULCH, EROSION CONTROL BLANKET, SOD, ETC.)
- 3.14. REMOVE TEMPORARY EROSION CONTROLS AND ACCUMULATED SEDIMENT FROM AREAS THAT HAVE ESTABLISHED AT LEAST 70 PERCENT PERMANENT VEGETATIVE COVER.
- 3.15. RE-STABILIZE AREAS DISTURBED BY REMOVAL ACTIVITIES.

4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION

- 4.1. STREAM INFORMATION
 - 4.1.1. WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS WITHIN THE PROJECT LIMITS?
YES NO
 - 4.1.2. IF NO TO SECTION 4.1.1, WILL THIS PROJECT DISCHARGE INTO STATE WATERS THAT ARE LESS THAN OR EQUAL TO 1 FLOW MILE DOWN GRADIENT OF THE PROJECT LIMITS? YES NO
 - 4.1.3. IF YES TO SECTION 4.1.2, HAVE ANY OF THE RECEIVING WATERS DOWN GRADIENT BEEN CLASSIFIED BY TDEC AS FOLLOWS (CHECK ALL THAT APPLY):
4.1.3.1. 303d IMPAIRED FOR SILTATION
4.1.3.2. 303d IMPAIRED FOR HABITAT ALTERATION
4.1.3.3. HIGH QUALITY WATERS OR KNOWN EXCEPTIONAL TENNESSEE WATERS (KETW)
 - 4.1.4. RECEIVING STREAMS (3.5.1.j).

RECEIVING STREAM INFORMATION					
NATURAL RESOURCE LABEL	NAME OF RECEIVING NATURAL RESOURCE	303d IMPAIRED FOR SILTATION OR HABITAT ALTERATION (YES OR NO)	HIGH QUALITY OR KETW (YES OR NO)	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)
STR-1	UNNAMED TRIBUTARY TO JULIUS POND BRANCH	NO	NO	YES	N/A
WWC-1/ EPH-1	WET WEATHER CONVEYANCE/ EPHEMERAL STREAM	NO	NO	YES	N/A
WWC-2/ EPH-2	WET WEATHER CONVEYANCE/ EPHEMERAL STREAM	NO	NO	YES	N/A

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	1A
P.E.	2015	36010-1215-14	S-1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORM WATER POLLUTION PREVENTION PLAN

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	1A
P.E.	2015	36010-1215-14	S-2

RECEIVING STREAM INFORMATION					
NATURAL RESOURCE LABEL	NAME OF RECEIVING NATURAL RESOURCE	303d IMPAIRED FOR SILTATION OR HABITAT ALTERATION (YES OR NO)	HIGH QUALITY OR KETW (YES OR NO)	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)
WWC-3/ EPH-3	WET WEATHER CONVEYANCE/ EPHEMERAL STREAM	NO	NO	YES	N/A
WWC-4/ EPH-4	WET WEATHER CONVEYANCE/ EPHEMERAL STREAM	NO	NO	YES	N/A
STR-2	UNNAMED TRIBUTARY TO TOWN BRANCH	NO	NO	YES	N/A
STR-3	TOWN BRANCH	NO	NO	YES	N/A
WWC-5/ EPH-5	WET WEATHER CONVEYANCE/ EPHEMERAL STREAM	NO	NO	YES	N/A

IF YES, THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT WETLAND IMPACTS AND HAVE BEEN INCLUDED IN THE ARAP PERMIT, 401 OR 404 PERMITS.

WETLAND INFORMATION				
WETLAND LABEL	FROM STATION LT OR RT	TO STATION LT OR RT	TEMPORARY IMPACTS (AC)	PERMANENT IMPACTS (AC)
WTL-1	874+10 RT	875+10 RT	0	0.03

- 4.1.5. ARE BUFFER ZONES REQUIRED (4.1.2, 5.4.2)? YES NO
 IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____
 IF YES, CHECK THE APPROPRIATE BOX BELOW FOR SIZE OF BUFFER.
 60-FEET FOR IMPAIRED AND KNOWN EXCEPTIONAL TENNESSEE WATERS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET)
 30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET)
 IF NO, CHECK THE APPROPRIATE BOX BELOW.
 BUFFERS NOT REQUIRED (I.E. NO STREAM, WETLAND, ETC. IMPACTS)
 TDEC ARAP APPLIED FOR
- BUFFER ZONE REQUIREMENTS ARE NOT REQUIRED FOR PRE-APPROVED SITES (4.1.2.2.)**
- 4.1.6. ARE THERE BUFFER ZONE EXEMPTIONS (4.1.2.1)? YES NO
 IF YES, EXISTING CONDITIONS DESCRIPTION: _____
- 4.2. OUTFALL INFORMATION:
 A SEDIMENT BASIN OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:
- 4.2.1. OF TEN ACRES OR MORE FOR AN OUTFALL(S) THAT DOES NOT DISCHARGE TO AN IMPAIRED STREAM OR KNOWN EXCEPTIONAL TENNESSEE WATERS (3.5.3.3) OR
- 4.2.2. OF FIVE ACRES OR MORE FOR AN OUTFALL(S) THAT DISCHARGES TO AN IMPAIRED STREAM OR KNOWN EXCEPTIONAL TENNESSEE WATERS (5.4.1.f).
- 4.2.3. OUTFALL TABLE (3.5.1.d, 5.4.1.f).
SEE SWPPP SHEET S-6 FOR OUTFALL INFORMATION.
- 4.2.4. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED THROUGH THE PROJECT SO THAT THE OFF-SITE RUN-ON WILL NOT FLOW OVER DISTURBED AREAS WITHIN THE ROW, THUS SEPARATING NON-PROJECT RUN-OFF FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA TO ANY ONE OUTFALL?
 YES NO N/A
- 4.2.5. ARE EQUIVALENT MEASURES BEING SUBSTITUTED FOR A SEDIMENT BASIN(S)? YES NO N/A
- 4.2.6. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (3.5.1.g, 5.4.1.f)? YES NO
- 4.2.7. HAVE ALL OUTFALLS BEEN LABELED ON A USGS TOPOGRAPHIC MAP INCLUDED IN THE "DOCUMENTATION AND PERMITS" BINDER (2.6.2)?
 YES NO
- 4.3. WETLAND INFORMATION
 WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WETLANDS? YES NO

- 4.4. TOTAL MAXIMUM DAILY LOADS (TMDL) INFORMATION (3.5.10)
- 4.4.1. IS THIS PROJECT LOCATED IN A WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION? YES NO
- 4.4.2. IF YES, IS THIS PROJECT LOCATED WITHIN A SUBWATERSHED WITH A WASTE LOAD ALLOCATION (WLA)? YES NO
- 4.4.3. IF YES, DOES THE PROJECT HAVE A DIRECT DISCHARGE TO A 303(d) LISTED STREAM FOR SILTATION OR HABITAT ALTERATION?
 YES NO
- 4.4.4. IF YES, HAS A SUMMARY OF THE CONSULTATION (LETTER) BEEN INCLUDED WITH THE SWPPP DOCUMENTATION? YES NO
- 4.5. ECOLOGY INFORMATION (3.5.5.e)
 IF SPECIAL NOTES ARE PRESENT IN THE TDOT ECOLOGY REPORT, HAVE THEY BEEN ADDED TO THE APPROPRIATE PLAN SHEETS?
 YES NO NO NOTES REQUIRED
 IF YES, LIST ALL PLAN SHEETS WHERE SPECIAL NOTES HAVE BEEN ADDED.

5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (3.5.3)

- 5.1. EPSC MEASURES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE EROSION (4.1.1).
- 5.2. EPSC MEASURES MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS, STREAM CHANNELS AND STREAM BANKS. (4.1.1)
- 5.3. HAVE THE CONTROL MEASURES BEEN DESIGNED ACCORDING TO THE SIZE AND SLOPE OF THE DISTURBED DRAINAGE AREA (3.5.3.3)? YES NO
- 5.4. THE CONTROL MEASURES HAVE, AT A MINIMUM, BEEN DESIGNED FOR THE 2-YEAR, 24 HOUR STORM EVENT (3.5.3.3, 5.4.1.a).
- 5.5. ARE THE LIMITS OF DISTURBANCE CLEARLY MARKED ON THE EPSC PLANS (3.5.1.n)? YES NO
- 5.6. HAVE STAGED EPSC PLANS BEEN PREPARED FOR THE PROJECT (3.5.2)?
 YES NO (IF YES, CHECK ONE BELOW)
- 5.6.1.1. PROJECT DISTURBED AREA IS THAN LESS THAN 5 ACRES (MINIMUM OF TWO STAGES OF EPSC PLANS)
- 5.6.1.2. PROJECT DISTURBED AREA IS GREATER THAN 5 ACRES (MINIMUM OF THREE STAGES OF EPSC PLANS)
- 5.7. IS ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF NECESSARY (5.4.1.a)? YES NO
- 5.8. HAVE STEEP SLOPES (GREATER THAN 35%) BEEN MINIMALLY DISTURBED AND/OR PROTECTED BY CONVEYING RUNOFF NON-EROSIVELY AROUND OR OVER THE SLOPE (3.5.3.2) (10. "STEEP SLOPE")?
 YES NO N/A
- 5.9. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE RESEARCHED, APPLIED IN ACCORDANCE WITH MANUFACTURE'S GUIDELINES AND FULLY DESCRIBED ON THE EPSC PLANS (3.5.3.1.b).
- 5.10. ALL EPSC CONTROL MEASURES WILL BE INSTALLED ACCORDING TO TDOT STANDARDS (E.G. STANDARD DRAWINGS).
- 5.11. EPSC MEASURES WILL NOT BE INSTALLED IN A STREAM WITHOUT FIRST OBTAINING US COE SECTION 404, TDEC ARAP, AND TVA PERMITS.
- 5.12. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY CONTROLS PROVIDING EQUIVALENT LEVEL OF TREATMENT (FILTRATION) (4.14).
- 5.13. DISCHARGES FROM SEDIMENT BASINS AND IMPOUNDMENTS MUST USE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT, UNLESS INFEASIBLE (4.1.7).

- 5.14. THE CONTROL MEASURES LISTED IN THE QUANTITIES TABLE ON SHEET 2A-2A1, 17A HAVE BEEN SELECTED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES (3.5.3.1.b).
- 5.15. THE QUANTITIES REQUIRED FOR STABILIZED CONSTRUCTION EXITS PER TDOT STANDARDS HAVE BEEN SPECIFIED ON SHEET 17A (3.5.3.1.n).
- 5.16. STABILIZATION PRACTICES: PRE-CONSTRUCTION VEGETATIVE COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 15 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA WILL BE SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED (3.5.3.1.h).
- 5.17. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT STABILIZATION WILL BE COMPLETED WITHIN 14 DAYS AFTER ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IN THAT AREA. PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE (3.5.3.2).
- 5.18. STEEP SLOPES (3.5.3.2): STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR STEEPER REGARDLESS OF HEIGHT. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.
- 5.19. THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE AQUATIC RESOURCE ALTERATION (ARAP) PERMIT OR SECTION 401 CERTIFICATION (3.5.1.i). REFER TO THE LIST OF APPLICABLE ENVIRONMENTAL PERMITS LOCATED ON SWPPP SHEET 5. ALL PERMITS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER.

6. CONSTRUCTION SUPPORT ACTIVITIES – BORROW AND WASTE AREAS (1.2.2)(3.5.3.1.g)

IF OFFSITE BORROW AND WASTE AREAS BECOME NECESSARY DURING THE LIFE OF THE PROJECT, THIS SUPPORT ACTIVITY SHALL BE ADDRESSED PER THE TDOT WASTE AND BORROW MANUAL AS INDICATED IN THE STATEWIDE STORMWATER MANAGEMENT PLAN (SSWMP).

7. MAINTENANCE AND INSPECTION

- 7.1. INSPECTION PRACTICES (3.5.8)
- 7.1.1. INSPECTORS MUST HAVE SUCCESSFULLY COMPLETED THE TDEC FUNDAMENTALS OF EROSION AND SEDIMENT CONTROL COURSE (TDEC LEVEL I) AND MAINTAIN THE CERTIFICATION. A COPY OF THE INSPECTOR'S CERTIFICATION SHOULD BE KEPT ON SITE (3.5.8.1).
- 7.1.2. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS A PART (3.5.8.2.a).
- 7.1.3. THE FREQUENCY OF EPSC INSPECTIONS MAY BE REDUCED TO ONCE A MONTH (I.E. EXTREME DROUGHT CONDITIONS, FROZEN GROUND, ETC.) WITH WRITTEN NOTIFICATION TO TDEC NASHVILLE CENTRAL OFFICE AND SUBSEQUENT TDEC APPROVAL. WRITTEN NOTIFICATION MUST INCLUDE THE INTENT TO CHANGE FREQUENCY AND JUSTIFICATION (3.5.8.2.a).
- 7.1.4. ALL DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR MATERIAL STORAGE THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL WILL BE INSPECTED (3.5.8.2.b).
- 7.1.5. THE INSPECTOR WILL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, US COE AND TVA SECTION 26a PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE (10 "INSPECTOR").
- 7.1.6. THE SWPPP WILL BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. REVISION(S) WILL BE RECORDED WITHIN 7 DAYS OF THE INSPECTION. REVISION(S) WILL BE IMPLEMENTED WITHIN 14 DAYS OF THE INSPECTION (3.8.5.2.e AND 3.8.5.2.f).
- 7.1.7. THE INSPECTOR SHALL CONDUCT PRE-CONSTRUCTION INSPECTIONS TO VERIFY AREAS THAT ARE NOT TO BE DISTURBED HAVE BEEN MARKED IN THE SWPPP AND IN THE FIELD BEFORE LAND DISTURBANCE ACTIVITIES BEGIN AND INITIAL MEASURES HAVE BEEN INSTALLED (10 "INSPECTOR") (3.5.1.n).
- 7.1.8. INSPECTIONS WILL BE DOCUMENTED ON THE TDOT EPSC INSPECTION REPORT (TDEC PRE-APPROVED) AND INCLUDE THE SCOPE OF THE INSPECTION, NAME(S), TITLE AND TN EPSC CERTIFICATION NUMBER OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, CURRENT APPROXIMATE DISTURBED ACREAGE AT TIME

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	1A
P.E.	2015	36010-1215-14	S-3

- OF INSPECTION, CHECKLIST (NOC, SWPPP, RAIN GAUGE, SITE CONTACT INFORMATION, ETC.) AND MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE SWPPP (3.5.8.2.g).
- 7.1.9. DOCUMENTATION OF INSPECTIONS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER. REPORTS WILL BE SUBMITTED TO THE TDOT PROJECT SUPERVISOR PER THE CONTRACT.
- 7.1.10. THESE INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS OF THE SITE THAT HAVE MET FINAL STABILIZATION REQUIREMENTS AND HAVE BEEN NOTED IN THE SWPPP.
- 7.1.11. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION DOCUMENTATION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES (3.8.5.2.h).
- 7.2. DULY AUTHORIZED REPRESENTATIVE (7.7.3)
THE PROJECT SUPERVISOR MAY DELEGATE AN INDIVIDUAL AND/OR CONSULTANT TO SIGN EPSC INSPECTIONS REPORTS. FOR SATISFYING SIGNATORY REQUIREMENTS FOR EPSC INSPECTION REPORTS, THE PROJECT SUPERVISOR AND NEWLY AUTHORIZED INDIVIDUAL ACCEPTING RESPONSIBILITY MUST PERFORM THE FOLLOWING:
- 7.2.1. COMPLETE AND SIGN THE TDOT CONSTRUCTION DIVISION EPSC DELEGATION OF AUTHORITY.
- 7.2.2. SUBMIT THE EPSC DELEGATION OF AUTHORITY TO THE LOCAL TDEC EFO.
- 7.3. MAINTENANCE PRACTICES (3.5.3.1 AND 3.5.7)
- 7.3.1. ALL CONTROLS WILL BE MAINTAINED IN GOOD AND EFFECTIVE OPERATING ORDER. NECESSARY REPAIRS OR MAINTENANCE WILL BE ACCOMPLISHED BEFORE THE NEXT STORM EVENT AND IN NO CASE MORE THAN 24 HOURS AFTER THE NEED IS IDENTIFIED. IN A CASE WHERE THE ACTIVITY IS DEEMED IMPRACTICABLE, ANY SUCH CONDITIONS WILL BE DOCUMENTED (3.5.8.2.e).
- 7.3.2. ALL CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES. (3.5.3.1.b)
- 7.3.3. SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, AND OTHER CONTROLS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50% (3.5.3.1.e).
- 7.3.4. CHECK DAMS WILL BE INSPECTED FOR STABILITY. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES ONE-HALF (1/2) THE HEIGHT OF THE DAM.
- 7.3.5. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF OF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EROSION CONTROL WILL BE REMOVED (3.5.3.1.f).
- 7.3.6. ALL SEEDED AREAS WILL BE CHECKED FOR BARE SPOTS, EROSION WASHOUTS, AND VIGOROUS GROWTH FREE OF SIGNIFICANT WEED INFESTATIONS.
- 7.3.7. THE TDOT PROJECT SUPERVISOR OR THEIR DESIGNEE AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT PROJECT SUPERVISOR OR THEIR DESIGNEE WILL COMPLETE THE INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

- 8. SITE ASSESSMENTS (3.1.2)**
QUALITY ASSURANCE SITE ASSESSMENTS OF EROSION PREVENTION AND SEDIMENT CONTROLS SHALL BE PERFORMED ACCORDING TO THE TDOT ENVIRONMENTAL DIVISION COMPREHENSIVE INSPECTIONS OFFICE GUIDELINES.
- 9. STORMWATER MANAGEMENT (3.5.4)**
- 9.1. STORMWATER MANAGEMENT WILL BE HANDLED BY TEMPORARY CONTROLS OUTLINED IN THIS SWPPP AND ANY PERMANENT CONTROLS NEEDED TO MEET PERMANENT STORMWATER MANAGEMENT NEEDS IN THE POST CONSTRUCTION PERIOD. PERMANENT CONTROLS WILL BE SHOWN ON THE PLANS AND NOTED AS PERMANENT.
- 9.2. DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (3.5.1.F, 3.5.4): MILD

- GRASSED SLOPES WILL INTERCEPT POLLUTANTS AND IMPROVE WATER QUALITY OF STORMWATER RUNOFF, AND RIPRAP WILL BE USED AS VELOCITY DISSIPATORS AT THE OUTLETS OF DRAINAGE STRUCTURES TO SLOW STORMWATER RUNOFF. THE DEPARTMENT WILL PROVIDE FOR ROUTINE MAINTENANCE OF HIGHWAY FACILITIES; SUCH PROCEDURES WILL INCLUDE DEBRIS REMOVAL FROM DRAINAGE STRUCTURES AND TRASH REMOVAL AND DISPOSAL FROM THE RIGHT-OF-WAY.
- 9.3. OTHER ITEMS NEEDING CONTROL (3.5.5)
- 9.3.1. CONSTRUCTION MATERIALS: THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).
- 9.3.1.1. LUMBER, GUARDRAIL, TRAFFIC CONTROL DEVICES
- 9.3.1.2. CONCRETE WASHOUT
- 9.3.1.3. CONCRETE AND CORRUGATED METAL PIPES
- 9.3.1.4. MINERAL AGGREGATES, ASPHALT
- 9.3.1.5. EARTH
- 9.3.1.6. LIQUID TRAFFIC STRIPING MATERIALS, PAINT
- 9.3.1.7. ROCK
- 9.3.1.8. CURING COMPOUND
- 9.3.1.9. EXPLOSIVES
- 9.3.1.10. OTHER
- THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.
- 9.3.2. WASTE MATERIALS (3.5.5.b)
WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S) CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.
- 9.3.3. HAZARDOUS WASTE (3.5.5.c) (7.9)
ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S ON-SITE REPRESENTATIVE WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.
- 9.3.4. SANITARY WASTE (3.5.5.b)
PORTABLE SANITARY FACILITIES WILL BE PROVIDED ON ALL CONSTRUCTION SITES. SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY LOCAL REGULATIONS. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.
- 9.3.5. OTHER MATERIALS
THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).
- 9.3.5.1. FERTILIZERS AND LIME
- 9.3.5.2. PESTICIDES AND/OR HERBICIDES
- 9.3.5.3. DIESEL AND GASOLINE
- 9.3.5.4. MACHINERY LUBRICANTS (OIL AND GREASE)
- THESE MATERIALS WILL BE HANDLED AS NOTED THIS SWPPP.

- 10. NON-STORMWATER DISCHARGES (3.5.9)**
- 10.1. THE FOLLOWING NON-STORMWATER DISCHARGES ARE ANTICIPATED DURING THE COURSE OF THIS PROJECT (CHECK ALL THAT APPLY):
- 10.1.1. DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER
- 10.1.2. WATERS USED TO WASH VEHICLES (OF DUST AND SOIL) WHERE DETERGENTS ARE NOT USED AND DETENTION AND/OR FILTERING IS PROVIDED BEFORE THE WATER LEAVES SITE
- 10.1.3. WATER USED TO CONTROL DUST (3.5.3.1.n)
- 10.1.4. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE
- 10.1.5. UNCONTAMINATED GROUNDWATER OR SPRING WATER

- 10.1.6. FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS
- 10.1.7. OTHER:
- 10.2. ALL ALLOWABLE NON-STORMWATER DISCHARGES WILL BE DIRECTED TO STABLE DISCHARGE STRUCTURES PRIOR TO LEAVING THE SITE. FILTERING OR CHEMICAL TREATMENT MAY BE NECESSARY PRIOR TO DISCHARGE.
- 10.3. THE DESIGN OF ALL IMPACTED EPSC MEASURES RECEIVING FLOW FROM ALLOWABLE NON-STORMWATER DISCHARGES MUST BE DESIGNED TO HANDLE THE VOLUME OF THE NON-STORMWATER COMPONENT.
- 10.4. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON-SITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.
- 10.5. ARE ANY DISCHARGES ASSOCIATED WITH INDUSTRIAL (NON-CONSTRUCTION STORMWATER) ACTIVITY EXPECTED (3.5.1.h)?
YES NO IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER.

- 11. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (3.5.5.c, 5.1)**
- 11.1. SPILL PREVENTION (3.5.5.c)
- 11.1.1. MATERIAL MANAGEMENT
- 11.1.1.1. HOUSEKEEPING
ONLY NEEDED PRODUCTS WILL BE STORED ON-SITE BY THE CONTRACTOR. EXCEPT FOR BULK MATERIALS THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL. DUST GENERATED WILL BE CONTROLLED IN AN ENVIRONMENTALLY SAFE MANNER. VEGETATION AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.
- 11.1.1.2. HAZARDOUS MATERIALS
PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RESEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S LABEL DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM. POTENTIAL PH-MODIFYING MATERIALS SUCH AS: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS AND CURING WATERS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON SITE AND MANAGED TO PREVENT CONTAMINATION OF STORMWATER RUNOFF.
- 11.1.1.3. PRODUCT SPECIFIC PRACTICES
- 11.1.1.3.1. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM

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- 11.1.1.3.2. PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. FERTILIZERS: FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY TDOT. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA UNDER COVER. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.
- 11.1.1.3.3. PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. THE EXCESS WILL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.
- 11.1.1.3.4. CONCRETE TRUCKS: CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED.

- 11.3.1. THE TDOT PROJECT SUPERVISOR IS RESPONSIBLE FOR NOTIFYING THE REGIONAL ENVIRONMENTAL COORDINATOR OR ASSISTANT REGIONAL ENVIRONMENTAL COORDINATOR AS SOON AS HE OR SHE HAS KNOWLEDGE OF THE DISCHARGE.
- 11.3.2. THE TDOT REGIONAL ENVIRONMENTAL COORDINATOR WILL NOTIFY THE LOCAL TDEC ENVIRONMENTAL FIELD OFFICE AND ANY OTHER APPLICABLE REGULATORY AGENCIES WITHIN 24 HOURS OF THE SPILL.
- 11.3.3. A WRITTEN DESCRIPTION OF THE RELEASE, DATE OF RELEASE AND CIRCUMSTANCES LEADING TO THE RELEASE, WHAT ACTIONS WERE TAKEN TO MITIGATE EFFECTS OF THE RELEASE, AND STEPS TAKEN TO MINIMIZE THE CHANCE OF FUTURE OCCURRENCES WILL BE SUBMITTED TO THE APPROPRIATE TDEC ENVIRONMENTAL FIELD OFFICE WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE.
- 11.3.4. THE SWPPP MUST BE MODIFIED WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE PROVIDING A DESCRIPTION OF THE RELEASE, CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF RELEASE. THE SWPPP WILL BE REVIEWED AND MODIFIED AS NECESSARY TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES.

12. RECORD-KEEPING

12.1. REQUIRED RECORDS

- TDOT OR THEIR DESIGNEE WILL MAINTAIN AT THE SITE THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES (3.5.3.1.m) (6.2.1):
- 12.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR
- 12.1.2. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE
- 12.1.3. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED
- 12.1.4. RECORDS OF TWICE WEEKLY EPSC INSPECTION REPORTS AND CORRECTIVE MEASURES
- 12.1.5. RECORDS OF QUALITY ASSURANCE SITE ASSESSMENTS
- 12.1.6. COPY OF SITE EPSC INSPECTOR'S TDEC LEVEL 1 CERTIFICATION
- 12.1.7. RAINFALL MONITORING PLAN (3.5.3.1.o):
 - 12.1.7.1. EQUIPMENT
 - AT A MINIMUM, THE CONTRACTOR WILL INSTALL A FENCE POST TYPE RAIN GAUGE TO MEASURE RAINFALL. THE STANDARD FENCE POST RAIN GAUGE WILL BE A WEDGE-SHAPED GAUGE THAT MEASURES UP TO 6 INCHES OF RAINFALL. AN ENGLISH SCALE WILL BE PROVIDED ON ONE FACE, WITH A METRIC SCALE ON THE OTHER FACE. GRADUATION WILL BE PERMANENTLY MOLDED IN DURABLE WEATHER-RESISTANT PLASTIC. THE MINIMUM GRADUATION WILL BE 0.01 INCH (OR 0.1MM). AN ALUMINUM BRACKET WITH SCREWS MAY BE USED TO MOUNT THE GAUGE ON A WOODEN SUPPORT.
 - 12.1.7.2. LOCATION
 - THE RAIN GAUGE WILL BE LOCATED AT OR ALONG THE PROJECT SITE, AS DEFINED IN THE NOI OF THE NPDES PERMIT, IN AN OPEN AREA SUCH THAT THE MEASUREMENT WILL NOT BE INFLUENCED BY OUTSIDE FACTORS (I.E. OVERHANGS, GUTTER, TREES, ETC). AT LEAST ONE RAIN GAUGE PER LINEAR MILE IS REQUIRED ALONG (AS MEASURED ALONG THE CENTERLINE OF THE PRIMARY ALIGNMENT) THE PROJECT WHERE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING IS ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED.
 - 12.1.7.3. METHODS
 - 12.1.7.3.1. RAINFALL MONITORING WILL BE INITIATED PRIOR TO CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING, OR FILLING, EXCEPT AS SUCH MINIMAL CLEARING MAY BE NECESSARY TO INSTALL A RAIN GAUGE IN AN OPEN AREA. THE RAIN GAUGE WILL BE CHECKED FOR OPERATIONAL SOUNDNESS DAILY (DURING NORMAL BUSINESS HOURS) IN WET TIMES AND WEEKLY IN DRY TIMES. GAUGES WILL BE REPAIRED OR REPLACED ON THE SAME DAY IF FOUND TO BE NON-OPERATIONAL OR MISSING.

- 12.1.7.3.2. EACH RAIN GAUGE WILL BE READ (FOR DETAILED RECORDS OF RAINFALL) AND EMPTIED AFTER EVERY RAINFALL EVENT OCCURRING ON THE PROJECT SITE AT APPROXIMATELY THE SAME TIME OF THE DAY (DURING NORMAL BUSINESS HOURS). DURING PERIODS OF DRY CONDITIONS, IT WILL NOT BE NECESSARY TO READ THE RAIN GAUGE EVERY DAY. IN LIEU OF THIS REQUIREMENT ON WEEKENDS AND ON STATE HOLIDAYS, THE RAIN GAUGES CAN BE EMPTIED THE NEXT BUSINESS DAY AND A REFERENCE SITE USED FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION FOR THOSE DAYS. A REFERENCE SITE IS THE DOCUMENTATION FROM THE CLOSEST GAUGE WITHIN PROXIMITY OF THE PROJECT FROM A RECOGNIZED SOURCE SUCH AS THE NOAA NATIONAL WEATHER SERVICE.
- 12.1.7.3.3. DETAILED RECORDS WILL BE RECORDED OF RAINFALL EVENTS INCLUDE DATES, AMOUNTS OF RAINFALL, AND THE APPROXIMATE DURATION (OR THE STARTING AND ENDING TIMES). THE RAINFALL RECORDS SHALL BE RECORDED ON THE TDOT RAINFALL RECORD SHEET AND SHALL BE MAINTAINED IN THE "DOCUMENTATION AND PERMITS" BINDER.
- 12.1.7.3.4. IF, IN THE EVENT THAT THE RAINFALL EVENT IS STILL IN PROGRESS AT THE DAILY RECORDING TIME, THE GAUGE WILL BE EMPTIED AND THE RECORD WILL INDICATE THAT THE STORM EVENT WAS STILL IN PROGRESS.
- 12.1.7.3.5. RAIN GAUGE INFORMATION (DETAILED RECORDS), INCLUDING THE LOCATION OF THE NEAREST OUTFALL, WILL BE RECORDED ON THE EPSC INSPECTION REPORT FORMS AT THE TIME OF MEASUREMENT.

11.2. SPILL MANAGEMENT

- 11.2.1. IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP IF NECESSARY.
- 11.2.2. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.
- 11.2.3. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. AS APPROPRIATE, EQUIPMENT AND MATERIALS MAY INCLUDE ITEMS SUCH AS BOOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR CLEAN UP PURPOSES.
- 11.2.4. ALL SPILLS WILL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- 11.2.5. THE CONTRACTOR'S SITE SUPERINTENDENT WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.
- 11.2.6. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING THE SITE AND ENTERING RECEIVING WATERS, PERSONNEL WILL RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE SUPERINTENDENT AFTER THE SITUATION HAS BEEN STABILIZED.
- 11.2.7. IF OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.
- 11.2.8. IF A SPILL OCCURS THE SUPERINTENDENT OR THE SUPERINTENDENT'S DESIGNEE WILL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE TDOT PROJECT SUPERVISOR.
- 11.2.9. SPILL RESPONSE EQUIPMENT WILL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.

11.3. SPILL NOTIFICATION (5.1)

WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD:

12.2. KEEPING PLANS CURRENT (3.4)

- TDOT OR THEIR DESIGNEE WILL MODIFY AND UPDATE THE SWPPP WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:
- 12.2.1. WHENEVER THERE IS A CHANGE IN THE SCOPE OF THE PROJECT THAT WOULD BE EXPECTED TO HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE SWPPP;
- 12.2.2. WHENEVER INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE, OR FEDERAL OFFICIALS INDICATE THE SWPPP IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM CONSTRUCTION ACTIVITY SOURCES, OR IS OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY; WHERE LOCAL, STATE, OR FEDERAL OFFICIALS DETERMINE THAT THE SWPPP IS INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP;
- 12.2.3. WHEN ANY NEW OPERATOR AND/OR SUB-OPERATOR IS ASSIGNED OR RELIEVED OF THEIR RESPONSIBILITY TO IMPLEMENT A PORTION OF THE SWPPP;
- 12.2.4. TO PREVENT A NEGATIVE IMPACT TO LEGALLY PROTECTED STATE OR FEDERALLY LISTED OR PROPOSED THREATENED OR ENDANGERED AQUATIC FAUNA;
- 12.2.5. WHEN THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS INCLUDING: USE OF DIFFERENT TREATMENT CHEMICALS, DIFFERENT DOSAGE OR APPLICATION RATES OR A DIFFERENT AREA OF APPLICATION NOT SPECIFIED ON THE EPSC PLANS; OR
- 12.2.6. WHEN A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION)

12.3. MAKING PLANS ACCESSIBLE

- 12.3.1. TDOT WILL RETAIN A COPY OF THIS SWPPP (INCLUDING A COPY OF THE "DOCUMENTATION AND PERMITS" BINDER AT THE CONSTRUCTION SITE (OR OTHER LOCATION ACCESSIBLE TO TDEC AND THE PUBLIC) FROM THE DATE CONSTRUCTION COMMENCES TO THE DATE OF FINAL STABILIZATION. TDOT WILL HAVE A COPY OF THE SWPPP AVAILABLE AT THE LOCATION WHERE WORK IS OCCURRING ON-SITE FOR THE USE OF

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**STORM WATER
POLLUTION
PREVENTION
PLAN**

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- OPERATORS AND THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE SWPPP WHENEVER THEY ARE ON THE CONSTRUCTION SITE (6.2).
- 12.3.2. PRIOR TO THE INITIATION OF LAND DISTURBING ACTIVITIES AND UNTIL THE SITE HAS MET THE FINAL STABILIZATION CRITERIA, TDOT OR THEIR DESIGNEE WILL POST A NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION (3.3.3) (6.2.1):
- 12.3.2.1. A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT NUMBER FOR THE PROJECT;
 - 12.3.2.2. THE INDIVIDUAL NAME, COMPANY NAME, E-MAIL ADDRESS (IF APPLICABLE) AND TELEPHONE NUMBER OF THE LOCAL PROJECT SITE OWNER AND OPERATOR CONTACT;
 - 12.3.2.3. A BRIEF DESCRIPTION OF THE PROJECT; AND
 - 12.3.2.4. THE LOCATION OF THE SWPPP.
- 12.3.3. ALL INFORMATION DESCRIBED IN SECTION 10.3.2 MUST BE MAINTAINED IN LEGIBLE CONDITION. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE DUE TO SAFETY CONCERNS, THE NOTICE SHALL BE POSTED IN A LOCAL BUILDING. THE NOTICE MUST BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION WHERE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY.
- 12.4. NOTICE OF TERMINATION (8.0)
- 12.4.1. WHEN ALL STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED BY FINAL STABILIZATION, TDOT WILL SUBMIT A NOTICE OF TERMINATION (NOT) THAT IS SIGNED IN ACCORDANCE WITH THE PERMIT TO THE TDEC CENTRAL OFFICE IN NASHVILLE, TN.
- 12.4.2. FOR THE PURPOSES OF THE CERTIFICATION REQUIRED BY THE NOT, THE ELIMINATION OF STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY MEANS THE FOLLOWING:
- 12.4.2.1. ALL EARTH-DISTURBING ACTIVITIES ON THE SITE ARE COMPLETED AND ALL DISTURBED SOILS AT THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL HAVE BEEN FINALLY STABILIZED; AND
 - 12.4.2.2. ALL CONSTRUCTION MATERIALS, WASTE AND WASTE HANDLING DEVICES, AND ALL EQUIPMENT, AND VEHICLES THAT WERE USED DURING CONSTRUCTION HAVE BEEN REMOVED AND PROPERLY DISPOSED; AND
 - 12.4.2.3. ALL STORMWATER CONTROLS THAT WERE INSTALLED AND MAINTAINED DURING CONSTRUCTION, EXCEPT THOSE THAT ARE INTENDED FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE, HAVE BEEN REMOVED; AND
 - 12.4.2.4. ALL POTENTIAL POLLUTANTS AND POLLUTANT GENERATING ACTIVITIES ASSOCIATED WITH CONSTRUCTION HAVE BEEN REMOVED; AND
 - 12.4.2.5. THE PERMITTEE HAS IDENTIFIED WHO IS RESPONSIBLE FOR ONGOING MAINTENANCE OF ANY STORMWATER CONTROLS LEFT ON THE SITE FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE; AND
 - 12.4.2.6. TEMPORARY EPSC MEASURES HAVE BEEN OR WILL BE REMOVED AT AN APPROPRIATE TIME TO ENSURE FINAL STABILIZATION IS MAINTAINED; AND
 - 12.4.2.7. ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDENTIFIED SITE THAT ARE AUTHORIZED BY A NPDES GENERAL PERMIT HAVE OTHERWISE BEEN ELIMINATED FROM THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL.
- 12.5. RETENTION OF RECORDS (6.2)
TDOT WILL RETAIN COPIES OF THE SWPPP, ALL REPORTS REQUIRED BY THE PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT FOR THE PROJECT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THE NOT WAS FILED.

13. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (7.7.5)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.


AUTHORIZED TDOT PERSONNEL SIGNATURE (3.3.1)

JIM OZMENT
PRINTED NAME

ENVIRONMENTAL DIVISION DIRECTOR
TITLE

04-15-2015
DATE

14. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (7.7.6)

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE REVIEWED THIS DOCUMENT, ANY ATTACHMENTS, AND THE SWPPP REFERENCED ABOVE. BASED ON MY INQUIRY OF THE CONSTRUCTION SITE OWNER/DEVELOPER IDENTIFIED ABOVE AND/OR MY INQUIRY OF THE PERSON DIRECTLY RESPONSIBLE FOR ASSEMBLING THIS NOI AND SWPPP, I BELIEVE THE INFORMATION SUBMITTED IS ACCURATE. I AM AWARE THAT THIS NOI, IF APPROVED, MAKES THE ABOVE-DESCRIBED CONSTRUCTION ACTIVITY SUBJECT TO NPDES PERMIT NUMBER TNR100000, AND THAT CERTAIN OF MY ACTIVITIES ON-SITE ARE THEREBY REGULATED. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS, AND FOR FAILURE TO COMPLY WITH THESE PERMIT REQUIREMENTS.

AUTHORIZED OPERATOR (CONTRACTOR) SIGNATURE (3.3.1)

PRINTED NAME

TITLE

DATE

15. ENVIRONMENTAL PERMITS (9.0)

LIST ALL ENVIRONMENTAL PERMITS AND EXPIRATION DATES FOR PROJECT (TO BE COMPLETED AT THE ENVIRONMENTAL PRECONSTRUCTION MEETING BY TDOT CONSTRUCTION OR THEIR DESIGNEE):

ENVIRONMENTAL PERMITS			
PERMIT	YES OR NO	PERMIT OR TRACKING NO.	EXPIRATION DATE*
TDEC ARAP			
CORPS OF ENGINEERS (COE)			
TVA 26A			
TDEC CGP			
OTHER:			

*THE TDOT ENVIRONMENTAL DIVISION MUST BE NOTIFIED SIX MONTHS PRIOR TO PERMIT EXPIRATION DATE.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	1A
P.E.	2015	36010-1215-14	S-6

4.2.3 OUTFALL TABLE (3.5.1.d, 5.4.1.f)

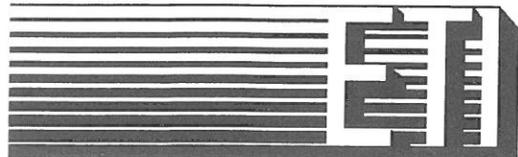
EPSC STAGE	OUTFALL LABEL	SUB OUTFALL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	STAGE 1 (P1) DRAINAGE AREA (AC)	STAGE 2 (P2) DRAINAGE AREA (AC)	STAGE 3 (P3) DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING NATURAL RESOURCE NAME OR LABEL	COMMENTS*
1-3	1		±862+18.75 RT	5	0.51	0.51	0.51	N/A	WWC	
1-3	2		±18+93.75 RT, OPEL LOOP SOUTH	3	0.16	0.16	0.16	N/A	WWC	
1-3	3		±19+18.75 LT, OPEL LOOP SOUTH	2	0.16	0.06	0.06	N/A	WWC	
1-3	4		±28+12.50 RT, OPEL LOOP NORTH	4	0.33	0.11	0.11	N/A	WWC	
1-3	5		±28+12.50 LT, OPEL LOOP NORTH	3	0.18	0.11	0.11	N/A	WWC	
1-3	6		879+93.75 LT	16	0.72	0.35	0.35	N/A	STR-1	STR-9
1-3	7		881+6.25 LT	4	0.50	0.27	0.27	N/A	WWC-2/EPH-2 & STR-1	WWC-24 & STR-9
1-3	8		880+6.25 RT	4	2.25	2.25	0.83	N/A	WWC-1/EPH-1 & STR-1	WWC-21 & STR-9
1-3	9		880+82.50 RT	9	1.24	1.24	0.83	N/A	WWC-3/EPH-3 & STR-1	WWC-23 & STR-9
1-3	10		39+18.75 RT, SCHOOL DRIVE	7	1.35	0.38	0.38	N/A	WWC-2/EPH-2	WWC-24
1-3	11		885+00 RT	6	1.49	1.49	0.49	N/A	WWC-3/EPH-3	WWC-23
1-3	12		899+43.75 LT	14	0.92	0.28		N/A	WWC	WWC-27
1-3	13		26+37.50 RT, STADIUM DRIVE	6	0.45	0.25	0.25	N/A	WWC	
1-3	14		26+37.50 LT, STADIUM DRIVE	9	1.18	0.58	0.58	N/A	WWC	
1-3	15		8+12.50 RT, SEVIER STREET	3	1.14	0.12	0.12	N/A	WWC	WWC-30
1-3	16		8+12.50 LT, SEVIER STREET	2	0.29	0.12	0.12	N/A	WWC	
1-3	17		921+68.75 RT	9	3.66	3.66	0.40	N/A	WWC-4/EPH-4	WWC-31
1	18		921+81.25 RT	10	0.99			N/A	WWC-4/EPH-4	WWC-31
1	19		18+68.75 RT, BRAZELTON STREET	1	0.15			N/A	WWC	
1	20		18+93.75 LT, BRAZELTON STREET	4	0.17			N/A	WWC	
1-3	21		944+56.25 RT	27	3.21	3.21	0.59	N/A	STR-2	WWC-H
1-3	22		945+25 RT	4	0.16	0.16	0.16	N/A	STR-2	WWC-H
1-3	23		945+80.30 LT	2	0.67	0.56	0.56	N/A	STR-2	WWC-H
1-3	24		947+12.50 LT	6	0.49	0.17	0.17	N/A	STR-2	WWC-H
1-3	25		954+18.75 LT	41	0.09	0.03	0.03	N/A	STR-3	STR-11
1-3	26		954+50 LT	47	0.09	0.11	0.11	N/A	STR-3	STR-11
1-3	27		954+25 RT	39	0.79	0.79	0.45	N/A	STR-3	STR-11
1-3	28		954+62.50 RT	32	0.66	0.66	0.31	N/A	STR-3	STR-11
1-3	29		45+00 RT, WATER STREET	31	0.55	4.55	4.55	N/A	STR-3	STR-11

* SEE COMMENTS SECTION FOR ADDITIONAL INFORMATION REGARDING RECEIVING NATURAL RESOURCES. THE TDOT ECOLOGY REPORT DATED DECEMBER 16, 2014 IDENTIFIES 3 STREAMS, 5 WET WEATHER CONVEYANCES/EPIHEMERAL STREAMS, AND 1 WETLAND. THE PLANS WERE DESIGNED USING AN OLD ECOLOGY REPORT, WHICH INCLUDED ADDITIONAL RECEIVING NATURAL RESOURCES. THEREFORE, THE LABELS SHOWN ON THE FINAL EPSC PLANS DO NOT MATCH THE LABELS IN THE ECOLOGY REPORT. FOR CLARIFICATION PURPOSES, THE RECEIVING NATURAL RESOURCES COLUMN IN THE OUTFALL TABLE ABOVE MATCHES THE TDOT ECOLOGY REPORT, AND THE COMMENTS COLUMN INCLUDE THE LABELS SHOWN IN THE EPSC PLANS AS A CROSS REFERENCE.

ALL UNUSED FIELDS WITHIN THE OUTFALL TABLE ARE TO BE SHADED OR HATCHED TO INDICATE THEIR NON-USAGE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**STORM WATER
POLLUTION
PREVENTION
PLAN**



ETI CORPORATION

ENGINEERING • SURVEYING • LAND PLANNING • LANDSCAPE ARCHITECTURE

PRINCIPALS

Matthew D. Wolfe
Ralph B. Smith
Mark E. Lindstrom
Frank L. Shepherd
Stacey O. Morris
Vincent J. Thillen
Christopher E. Perry
Douglas M. Baker
Steve R. Hooper

ASSOCIATES

David M. Docauer
Jameelah Hudson

March 31, 2015

Mr. Jim Ozment
Environmental Division Director
Environmental Division
Tennessee Department of Transportation
505 Deaderick Street
Suite 900, James K. Polk Building
Nashville, TN 37243

RE: SWPPP Plan Development
TDOT Project # 36010-1215-14
TDOT PIN 100322.04
SR-128 (Pickwick Road) From South of Opel Loop To SR-15 (US-64) in Savannah
Hardin County, Tennessee
ETI Project No. 12300-760

Dear Mr. Ozment:

We are enclosing:

1. Three (3) copies of Documentation and Permits in binders.
2. One (1) bound set of supporting construction plan sheets.
3. One (1) compact disk containing a copy of the complete Documentation and Permits Binder, supporting construction plan sheets and EPSC plans (11x17), SWPPP Sheets (22x34), NOI, and Topo Map with outfalls in portable document format (*.pdf) are included with this submittal.

This project does not discharge into a municipal separate storm sewer system. (MS4)

We have enjoyed working with you and your staff in development of this SWPPP. Please let me know if you need any additional information or desire any changes to the SWPPP prior to your submitting it to TDEC for issuance of a permit. Thank you.

Sincerely,

ETI Corporation

Jameelah L. Hudson, EI, CPESC

JLH:gp

Enclosure

cc: Mr. Jim Ladieu (letter only); Ms. Tabitha T. Cavaness (letter only)

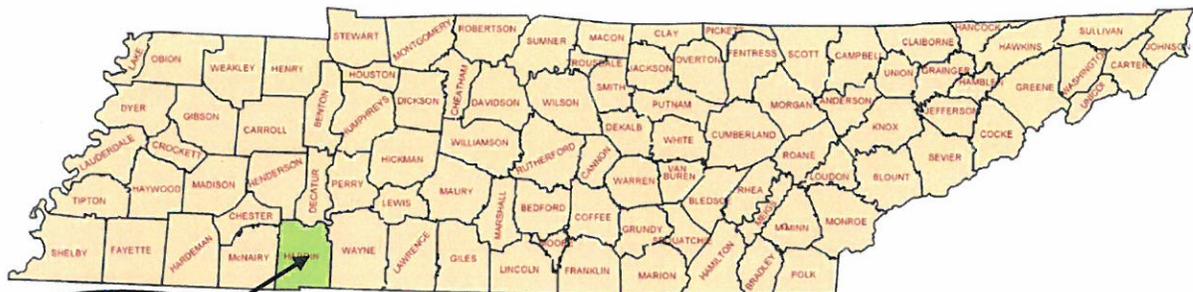
M:_TDOT PROJECTS\12300-SWPPP\760\SWPPP\12300760L01.DOC



Documentation and Permits Binder

SR-128 (Pickwick Road)
From South of Opel Loop
To SR-15 (US-64) in Savannah

Project No.: 36010-1215-14
PIN: 100322.04
Hardin County, Tennessee



**PROJECT
SITE**

Hardin County, Tennessee

Prepared for:
Tennessee Department of Transportation – TDOT

Prepared by:



Consultant Reference No.: 12300-760

March 23, 2015

**DOCUMENTS AND PERMITS BINDER
CHECKLIST**

PROJECT NAME: **SR-128 (Pickwick Road) From South of Opel Loop to SR-15 (US-64) in Savannah**
PIN: **100322.04**
PROJECT NO.: **36010-1215-14**
COUNTY: **Hardin**

1. INDEX OF REVISIONS
2. RAINFALL RECORD SHEETS
3. EPSC INSPECTION REPORTS
4. NOI AND NOC
5. BLANK NOT
6. CONSTRUCTION GENERAL PERMIT (CGP)
7. ENVIRONMENTAL PERMITS
 - PERMIT APPLICATION LETTER
 - PERMITS
 - TDEC ARAP
 - CORPS OF ENGINEERS (COE)
 - TVA 26A
 - OTHER
8. ECOLOGY REPORT
9. TDEC LEVEL I TRAINING CERTIFICATIONS
 - EPSC INSPECTOR
 - TDOT PROJECT SUPERVISOR
 - TDOT PROJECT SUPERVISOR MANAGER
 - CONTRACTOR PROJECT SUPERVISOR
10. TMDL INFORMATION REQUIRED
 - Yes
 - No



1 – INDEX OF REVISIONS

2 – RAINFALL RECORD SHEETS



TDOT EPSC Inspection Monthly Rainfall Data Log

Month _____ Year _____

Date	Day of Week ¹	Predicted Precipitation (%) ²	Rainfall Gage 1 (in)	Rainfall Gage 2 (in)	Rainfall Gage 3 (in)	Rainfall Gage 4 (in)	Rainfall Gage 5 (in)	Duration (hr)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
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24								
25								
26								
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28								
29								
30								
31								

¹ Day of Week= Su,M,Tu,W,Th,F,Sa

² Predicted Precipitation Source: _____



NOAA Atlas 14, Volume 2, Version 3
 Location name: Savannah, Tennessee, US*
 Latitude: 35.2114°, Longitude: -88.2450°
 Elevation: 446 ft*
 * source: Google Maps



POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aerials](#)

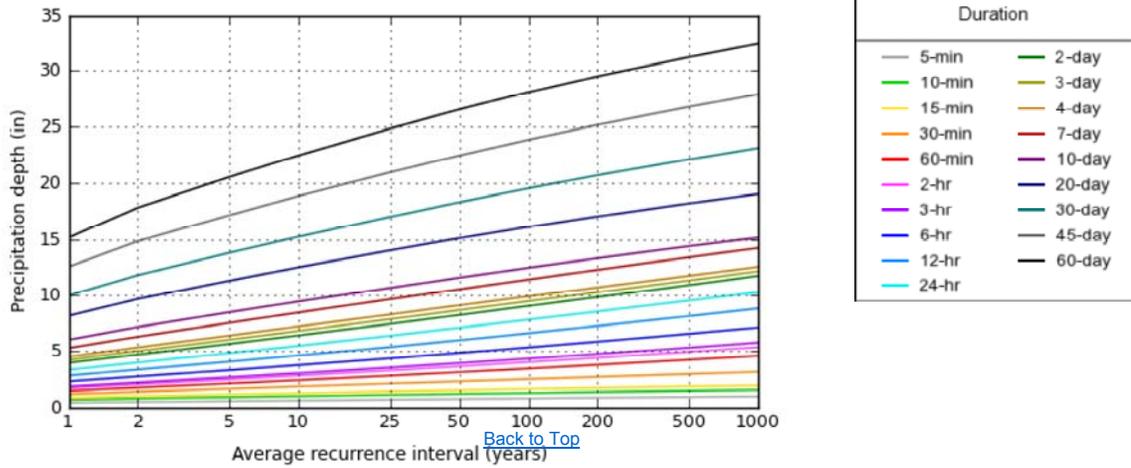
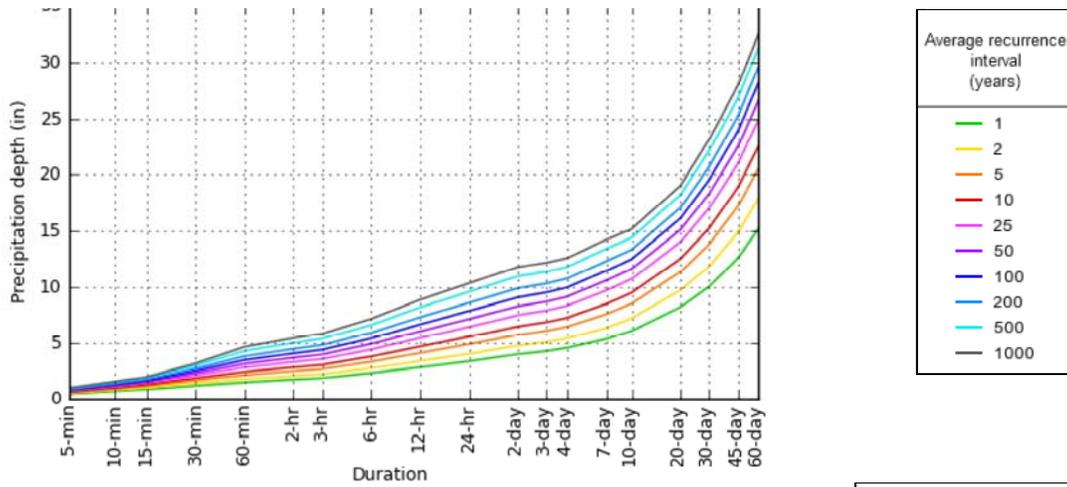
PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.430 (0.391-0.474)	0.502 (0.456-0.554)	0.572 (0.519-0.630)	0.629 (0.570-0.693)	0.702 (0.632-0.773)	0.756 (0.677-0.834)	0.810 (0.720-0.894)	0.863 (0.761-0.956)	0.930 (0.808-1.04)	0.981 (0.843-1.10)
10-min	0.687 (0.624-0.758)	0.803 (0.730-0.886)	0.915 (0.832-1.01)	1.01 (0.911-1.11)	1.12 (1.01-1.23)	1.20 (1.08-1.33)	1.29 (1.14-1.42)	1.37 (1.21-1.52)	1.47 (1.28-1.64)	1.55 (1.33-1.73)
15-min	0.858 (0.780-0.947)	1.01 (0.917-1.11)	1.16 (1.05-1.28)	1.27 (1.15-1.40)	1.42 (1.28-1.56)	1.52 (1.37-1.68)	1.63 (1.45-1.80)	1.73 (1.52-1.91)	1.85 (1.61-2.06)	1.94 (1.67-2.17)
30-min	1.18 (1.07-1.30)	1.40 (1.27-1.54)	1.65 (1.49-1.81)	1.84 (1.67-2.03)	2.10 (1.89-2.31)	2.30 (2.06-2.53)	2.49 (2.21-2.75)	2.69 (2.37-2.98)	2.95 (2.56-3.28)	3.14 (2.70-3.52)
60-min	1.47 (1.33-1.62)	1.75 (1.59-1.93)	2.11 (1.92-2.33)	2.40 (2.18-2.64)	2.80 (2.52-3.08)	3.11 (2.79-3.43)	3.43 (3.05-3.79)	3.77 (3.32-4.18)	4.23 (3.67-4.71)	4.59 (3.94-5.14)
2-hr	1.71 (1.58-1.87)	2.04 (1.88-2.23)	2.46 (2.26-2.69)	2.80 (2.57-3.06)	3.27 (2.98-3.56)	3.64 (3.29-3.97)	4.02 (3.61-4.39)	4.41 (3.93-4.84)	4.95 (4.35-5.45)	5.38 (4.69-5.95)
3-hr	1.84 (1.70-2.00)	2.20 (2.03-2.39)	2.66 (2.45-2.88)	3.02 (2.78-3.27)	3.52 (3.22-3.81)	3.92 (3.56-4.25)	4.33 (3.91-4.70)	4.75 (4.26-5.16)	5.33 (4.72-5.82)	5.78 (5.07-6.33)
6-hr	2.29 (2.11-2.49)	2.73 (2.51-2.97)	3.29 (3.03-3.58)	3.74 (3.44-4.06)	4.35 (3.97-4.72)	4.85 (4.40-5.26)	5.35 (4.83-5.81)	5.87 (5.26-6.39)	6.58 (5.83-7.18)	7.13 (6.25-7.82)
12-hr	2.81 (2.56-3.08)	3.35 (3.06-3.67)	4.05 (3.70-4.44)	4.62 (4.21-5.06)	5.39 (4.87-5.90)	6.00 (5.40-6.57)	6.63 (5.92-7.26)	7.27 (6.45-7.99)	8.15 (7.15-9.00)	8.84 (7.67-9.80)
24-hr	3.32 (3.08-3.61)	3.97 (3.68-4.31)	4.83 (4.46-5.24)	5.50 (5.07-5.96)	6.40 (5.89-6.94)	7.11 (6.52-7.71)	7.84 (7.15-8.50)	8.57 (7.78-9.31)	9.55 (8.62-10.4)	10.3 (9.25-11.2)
2-day	3.95 (3.67-4.25)	4.70 (4.36-5.06)	5.67 (5.27-6.11)	6.44 (5.96-6.92)	7.45 (6.88-8.02)	8.25 (7.59-8.89)	9.06 (8.29-9.77)	9.87 (8.99-10.7)	11.0 (9.90-11.9)	11.8 (10.6-12.8)
3-day	4.22 (3.93-4.52)	5.03 (4.68-5.39)	6.05 (5.62-6.48)	6.83 (6.35-7.32)	7.88 (7.30-8.43)	8.69 (8.02-9.31)	9.50 (8.74-10.2)	10.3 (9.44-11.1)	11.4 (10.3-12.3)	12.2 (11.0-13.2)
4-day	4.50 (4.20-4.80)	5.35 (5.00-5.72)	6.42 (5.98-6.85)	7.23 (6.73-7.71)	8.30 (7.72-8.85)	9.12 (8.45-9.74)	9.93 (9.18-10.6)	10.7 (9.89-11.5)	11.8 (10.8-12.6)	12.6 (11.5-13.5)
7-day	5.30 (4.95-5.65)	6.32 (5.91-6.73)	7.55 (7.05-8.04)	8.48 (7.90-9.03)	9.67 (9.00-10.3)	10.6 (9.82-11.3)	11.5 (10.6-12.2)	12.3 (11.4-13.2)	13.4 (12.3-14.4)	14.2 (13.0-15.3)
10-day	6.04 (5.66-6.43)	7.18 (6.73-7.64)	8.50 (7.96-9.04)	9.47 (8.85-10.1)	10.7 (9.99-11.4)	11.6 (10.8-12.4)	12.5 (11.6-13.3)	13.3 (12.4-14.2)	14.4 (13.3-15.4)	15.1 (13.9-16.2)
20-day	8.18 (7.68-8.68)	9.70 (9.10-10.3)	11.3 (10.6-12.0)	12.5 (11.8-13.3)	14.0 (13.1-14.9)	15.1 (14.1-16.0)	16.1 (15.0-17.1)	17.0 (15.9-18.1)	18.2 (16.9-19.4)	19.0 (17.6-20.3)
30-day	10.0 (9.43-10.6)	11.8 (11.1-12.6)	13.8 (13.0-14.6)	15.2 (14.3-16.1)	17.0 (16.0-18.0)	18.3 (17.2-19.4)	19.5 (18.3-20.7)	20.7 (19.3-22.0)	22.1 (20.6-23.5)	23.1 (21.4-24.7)
45-day	12.6 (11.9-13.3)	14.8 (14.0-15.7)	17.2 (16.2-18.1)	18.9 (17.8-19.9)	20.9 (19.7-22.1)	22.5 (21.1-23.7)	23.9 (22.4-25.2)	25.2 (23.6-26.6)	26.8 (25.0-28.4)	27.9 (26.0-29.6)
60-day	15.2 (14.3-16.0)	17.8 (16.8-18.9)	20.5 (19.4-21.8)	22.5 (21.2-23.8)	24.8 (23.4-26.3)	26.5 (25.0-28.1)	28.1 (26.4-29.8)	29.5 (27.7-31.3)	31.2 (29.2-33.2)	32.4 (30.3-34.5)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical



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Maps & aerials

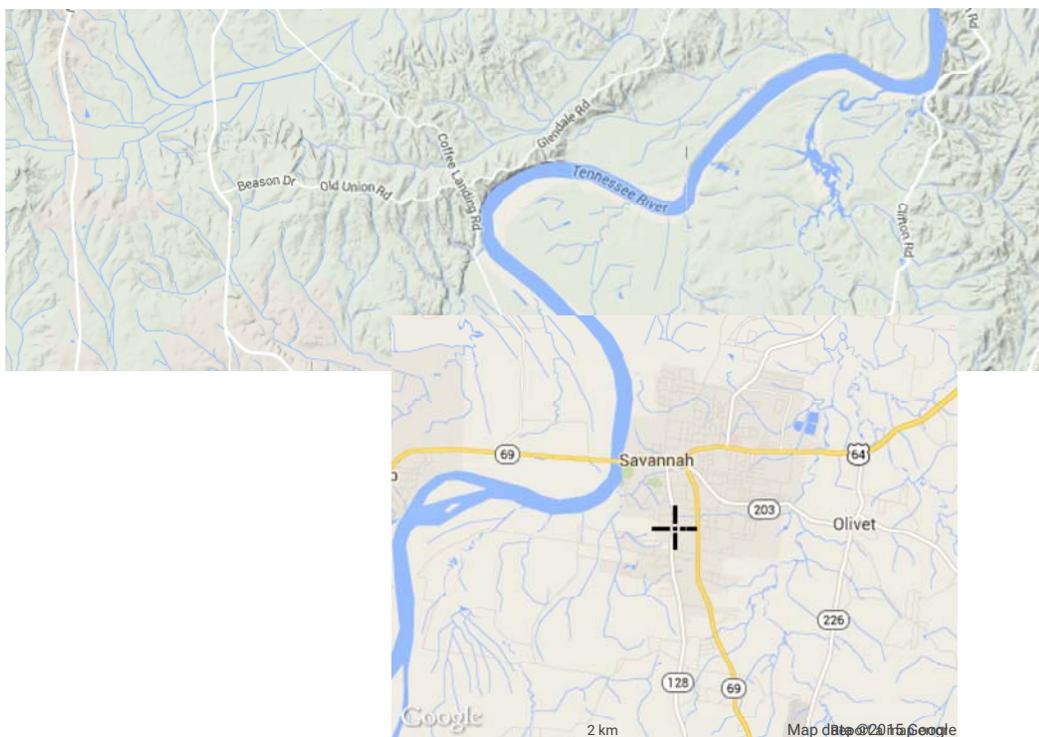
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NOAA Atlas 14, Volume 2, Version 3

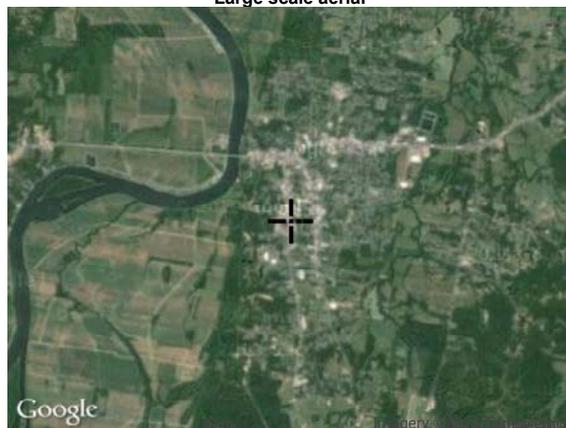
Small scale terrain



Large scale terrain



Large scale aerial



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[US Department of Commerce](#)
[National Oceanic and Atmospheric Administration](#)
[National Weather Service](#)
[Office of Hydrologic Development](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

[Disclaimer](#)

3 – EPSC INSPECTION REPORTS



TENNESSEE DEPARTMENT OF TRANSPORTATION
EROSION PREVENTION & SEDIMENT CONTROL (EPSC) INSPECTION REPORT

EPSC Inspection Schedule (circle one): 1st Weekly or 2nd Weekly

Date of Inspection: _____

Site or Project Name (State Route (SR) / US Route or Road Name and Description):		Are corrective actions required by this inspection report (Yes /No):	
County(ies):	TDOT PIN:	Number of New Corrective Actions/Deficiencies:	Number of New Sediment Releases:
TDOT Project No.:	NPDES Tracking Number: TNR	Number of Recurring Corrective Actions/Deficiencies:	Number of Un-Corrected Sediment Releases:
	Contractor:		

Please check the box if the following items are on-site:

- Notice of Coverage (NOC) Stormwater Pollution Prevention Plan (SWPPP) Twice Weekly Inspection Documentation Site Contact Information Rain Gauge(s)
- Off-site Reference Rain Gauge Location: _____ Has daily rainfall been checked/documentated on the TDOT Monthly Rainfall Log? Yes No

Best Management Practices (BMPs)

Are the Erosion Prevention and Sediment Controls (EPSCs) functioning correctly. If "No," see attached page(s) for description.	TDOT/Contractor Agrees with EPSC Inspection Report: NO or YES. If No, Explain and initial comment.
1. Are all applicable (EPSCs) installed and maintained per the SWPPP?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. Are EPSC's functioning correctly at all disturbed areas/material storage areas per section 4.1.5 of the CGP?	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. Are EPSC's functioning correctly at outfall/discharge points such that there is no objectionable color contrast in the receiving stream, and no other water quality impacts per section 5.3.2 of the CGP?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. Are EPSC's functioning correctly at ingress/egress points such that there is no evidence of track out?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5. If construction activity at any location on-site has temporarily/permanently ceased, was the area stabilized within 14 days per section 3.5.3.2 of the CGP? If "No," refer to the attached page(s) for each location and measures taken to stabilize the area(s).	<input type="checkbox"/> Yes <input type="checkbox"/> No
6. Have pollution prevention measures been installed, implemented, and maintained to minimize the discharge of pollutants from equipment and vehicle washing, wheel and wash water and other wash waters per section 4.1.5 of the CGP? If "No," refer to the attached page(s) for measures to be implemented to address deficiencies.	<input type="checkbox"/> Yes <input type="checkbox"/> No
7. If applicable, have discharges from dewatering activities been managed by appropriate controls per Section 4.1.4 of the CGP? If "No," refer to the attached page(s) for measures to be implemented to address deficiencies.	<input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No
8. If a concrete washout facility is located on site, is it clearly identified on the project and maintained? If "No," refer to the attached page(s) for measures to be implemented to address deficiencies.	<input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No

Certification and Signature (must be signed by the certified inspector and the permittees per Sections 3.5.8.2 (g) and 7.7.2 of the CGP)
This document was prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated information presented. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, I certify that inspections of storm water discharge points (outfalls) and of erosion and sediment controls have been performed and recorded. I certify that erosion and sediment controls in the drainage area of the identified outfall were installed as planned and designed in working order as recorded in the table above. I certify, under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code annotated section 39-16-702(a) (4), this declaration is made under penalty of perjury.

EPSC Inspector Name, Title and Company (print or type):	Signature:	Date:
TN EPSC Certification No.: Contractor (Secondary Permittee) Name and Title (print or type):	Signature:	Date:
TDOT Project Supervisor or Designee (Primary Permittee) Name and Title (print or type):	Signature:	Date:



**CONSTRUCTION DIVISION
EPSC DELEGATION OF AUTHORITY**

In accordance with Section 7.7.3 (Duly Authorized Representative) of the *Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities*, I _____
 (print name of TDOT project supervisor), delegate the reporting responsibility of coordination with the erosion prevention and sediment control (EPSC) inspection services consultant for TDOT contract # _____
 to:

Name: _____ (print name of TDOT delegate)

Title: _____

Address: _____

Phone No.: _____

Email Address: _____

I am providing delegation of authority as stated above and confirm that the TDOT delegate stated above has direct knowledge of the subject project and the ability to discuss the reports and recommendations from the EPSC inspection services consultant on the subject project directly to the contractor.

_____ (signature of TDOT Project Supervisor)

_____ (signature of TDOT delegate)

_____ (date)

The EPSC Delegation of Authority shall be submitted to the local TDEC WPC Environmental Field Office (EFO) address (see table below) for record keeping. A copy shall be placed within the on-site SWPPP Documentation and Permits Binder.

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305	Chattanooga	540 McCallie Avenue STE 550	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

4 – NOI AND NOC



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Water Resources

William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Ave., 11th Floor, Nashville, TN 37243

1-888-891-8332 (TDEC)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Site or Project Name: TDOT #36010-1215-14 PIN 100322.04 SR-128 (Pickwick Road) Construct From South of Opel Loop to SR-15 (US-64) in Savannah. Existing NPDES Tracking Number: TNR. Street Address or Location: SR-128. Start date: 5/2015. Estimated end date: 5/2020. Site Activity Description: Widening 1.903 miles of existing two lane highway... Latitude: 35.2114° N. Longitude: 88.2450° W. County(ies): Hardin. MS4 Jurisdiction: TDOT. Acres Disturbed: 38.67 Acres. Total Acres: 38.67 Acres. Does a topographic map show dotted or solid blue lines and/or wetlands on or adjacent to the construction site? [X] and/or wetlands [] on or adjacent to the construction site? If wetlands are located on-site and may be impacted, attach wetlands delineation report. If an Aquatic Resource Alteration Permit has been obtained for this site, what is the permit number? ARAP permit No.: NRS 14.340. Receiving waters: Unnamed tributaries to Town Branch, Town Branch, and unnamed tributaries to Julius Pond Branch. Attach the SWPPP with the NOI [X] SWPPP Attached. Attach a site location map [X] Map Attached.

Site Owner/Developer Entity (Primary Permittee): (person, company, or legal entity that has operational or design control over construction plans and specifications): Tennessee Department of Transportation. Site Owner/Developer Signatory (V.P. level/higher - signs certification below): (individual responsible for site): Jim Ozment. Signatory's Title or Position (V.P. level/higher - signs certification below): Director Environmental Division. Mailing Address: 900 James K. Polk Bldg., 505 Deaderick Street. City: Nashville. State: TN. Zip: 37243-0334. Phone: (615) 741-5373. Fax: (615) 741-1098. E-mail: Environmental.NPDES.TDOT@tn.gov. Optional Contact: Melanie Bumpus. Title or Position: SR.TPS. Mailing Address: 900 James K. Polk Bldg., 505 Deaderick Street. City: Nashville. State: TN. Zip: 37243-0334. Phone: (615) 253-2466. Fax: (615) 741-1098. E-mail: Melanie.Bumpus@tn.gov.

Owner or Developer Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee). I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. Owner or Developer Name; (print or type) Jim Ozment. Signature: [Signature]. Date: 04-15-2015.

Contractor(s) Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee). I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Contractor company name (print or type): Contractor signatory (print/type): (V.P. level or higher) Signature: Date: Mailing Address: City: State: Zip: Phone: () Fax: () E-mail:

Other Contractor company name (print or type): Other Contractor signatory (print/type): (V.P. level or higher) Signature: Date: Mailing Address: City: State: Zip: Phone: () Fax: () E-mail:

OFFICIAL STATE USE ONLY. Received Date: Reviewer: Field Office: Permit Number TNR Exceptional TN Water: Fee(s): T & E Aquatic Flora and Fauna: Impaired Receiving Stream: Notice of Coverage Date:

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Purpose of this form A completed notice of intent (NOI) must be submitted to obtain coverage under the Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activity (permit). **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant’s claim of ability to be in compliance with permit terms and conditions.** This permit is required for stormwater discharge(s) from construction activities including clearing, grading, filling and excavating (including borrow pits) of one or more acres of land. This form should be submitted at least 30 days prior to the commencement of land disturbing activities, or no later than 48 hours prior to when a new operator assumes operational control over site specifications or commences work at the site.

Permit fee (see table below) must accompany the NOI and is based on total acreage to be disturbed by an entire project, including any associated construction support activities (e.g. equipment staging yards, material storage areas, excavated material disposal areas, borrow or waste sites). There is no fee for sites less than 1 acre.

Acres Disturbed	= or > 150 acres	= or > 50 < 150 acres	= or > 5 < 50 acres	= or > 1 < 5 acres
Fee	\$7,500	\$4,000	\$1,000	\$250

Who must submit the NOI form? Per Section 2 of the permit, all site operators must submit an NOI form. “Operator” for the purpose of this permit and in the context of stormwater associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria: (1) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g. subsequent builder), or the person that is the current land owner of the construction site. This person is considered the primary permittee; or (2) The person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

Owners, developers and all contractors that meet the definition of the operator in subsection 2.2 of the permit shall apply for permit coverage on the same NOI, insofar as possible. After permit coverage has been granted to the primary permittee, any subsequent NOI submittals must include the site’s previously assigned permit tracking number and the project name. The comprehensive site-specific SWPPP shall be prepared in accordance with the requirements of part 3 of the permit and must be submitted with the NOI unless the NOI being submitted is to only add a contractor (secondary permittee) to an existing coverage.

Notice of Coverage The division will review the NOI for completeness and accuracy and prepare a notice of coverage (NOC). Stormwater discharge from the construction site is authorized as of the effective date of the NOC.

Complete the form Type or print clearly, using ink and not markers or pencil. Answer each item or enter “NA,” for not applicable, if a particular item does not fit the circumstances or characteristics of your construction site or activity. If you need additional space, attach a separate piece of paper to the NOI form. **The NOI will be considered incomplete without a permit fee, a map, and the SWPPP.**

Describe and locate the project Use the legal or official name of the construction site. If a construction site lacks street name or route number, give the most accurate geographic information available to describe the location (reference to adjacent highways, roads and structures; e.g. intersection of state highways 70 and 100). Latitude and longitude (expressed in decimal degrees) of the center of the site can be located on USGS quadrangle maps. The quadrangle maps can be obtained at the USGS World Wide Web site: <http://www.usgs.gov/>; latitude and longitude information can be found at numerous other web sites. Attach a copy of a portion of a 7.5 minute quad map, showing location of site, with boundaries at least one mile outside the site boundaries. Provide estimated starting date of clearing activities and completion date of the project, and an estimate of the number of acres of the site on which soil will be disturbed, including borrow areas, fill areas, stockpiles and the total acres. For linear projects, give location at each end of the construction area.

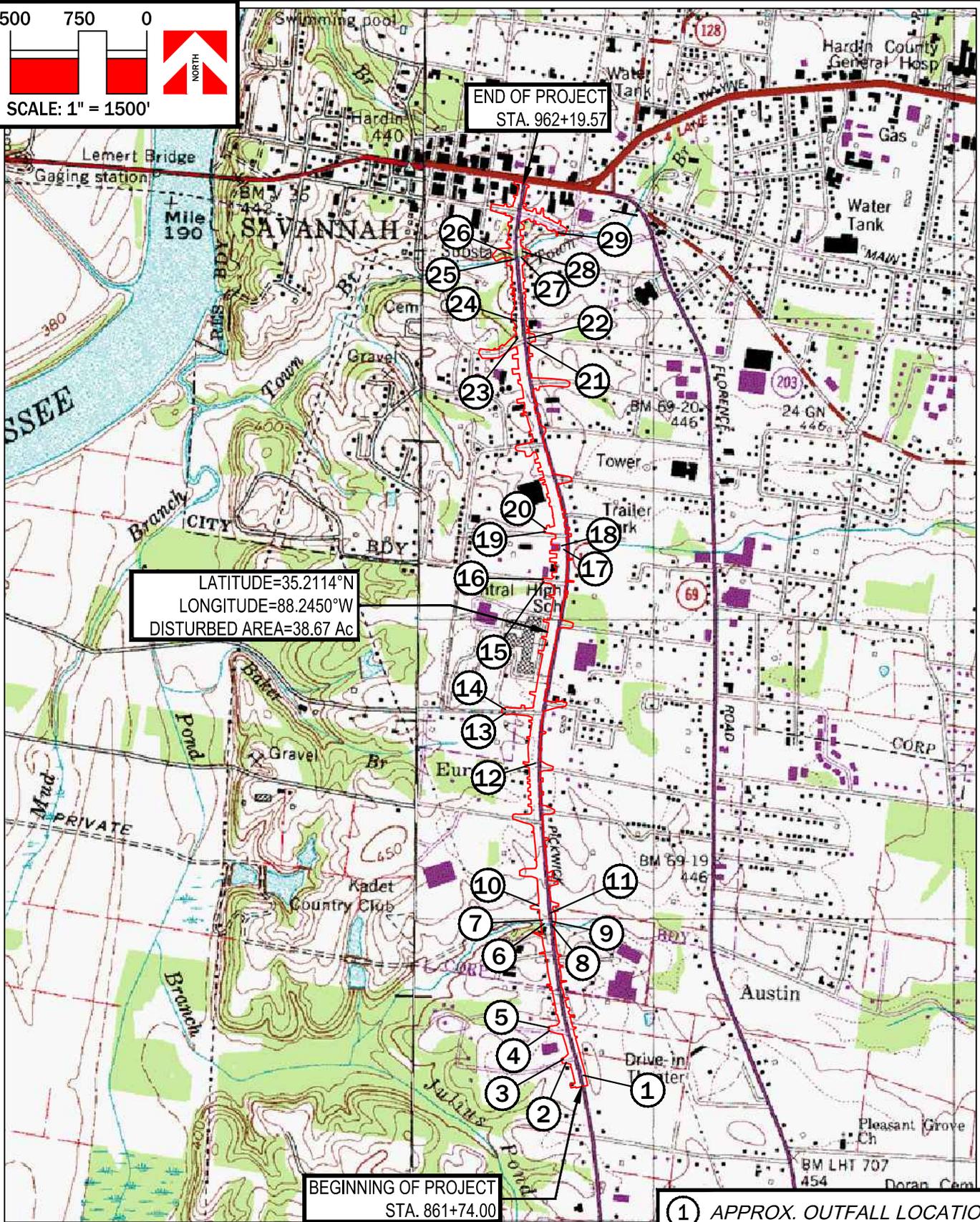
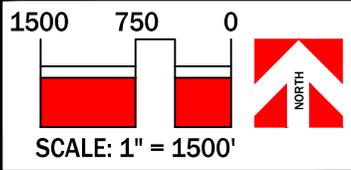
MS4 Jurisdiction: If this construction site is located within a Municipal Separate Storm Sewer System (MS4), please list name of MS4. A current list of MS4s in Tennessee may be found at http://www.tn.gov/environment/wpc/stormh2o/docs/MS4s_Jan2012.pdf

Give name of the receiving waters Trace the route of stormwater runoff from the construction site and determine the name of the river(s), stream(s), creek(s), wetland(s), lake(s) or any other water course(s) into which the stormwater runoff drains. Note that the receiving water course may or may not be located on the construction site. If the first water body receiving construction site runoff is unnamed (“unnamed tributary”), determine the name of the water body that the unnamed tributary enters.

ARAP permit may be required **If your work will disturb or cause alterations of a stream or wetland, you must obtain an appropriate Aquatic Resource Alteration Permit (ARAP).** If you have a question about the ARAP program or permits, contact your local Environmental Field Office (EFO).

Submitting the form and obtaining more information Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 2.5. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed NOI form (keep a copy for your records) to the TDEC Nashville, TN address below, addressed to **Attention: Stormwater NOI Processing.**

Tennessee Department of Environment and Conservation
 Division of Water Resources
 Attn: Storm Water NOI Processing
 William R. Snodgrass Tennessee Tower
 312 Rosa L. Parks Avenue, 11th Floor
 Nashville, TN 37243



Tennessee Department of Transportation
Nashville, Tennessee

Storm Water Pollution Prevention Plan
SR-128 (PICKWICK RD)
FROM SOUTH OF OPEL ROAD
TO
SR-15 (US-64) IN SAVANNAH
Hardin County, Tennessee

Drawn By: DMM	Checked By: JLH
Project No. 36010-1215-14	
Figure: 1	PIN 100322.04

5 – BLANK NOT



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)

Division of Water Resources

William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Ave., 11th Floor, Nashville, TN 37243

1-888-891-TDEC (8332)

Notice of Termination (NOT) for General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

This form is required to be submitted when requesting termination of coverage from the CGP. The purpose of this form is to notify the TDEC that either all stormwater discharges associated with construction activity from the portion of the identified facility where you, as an operator, have ceased or have been eliminated; or you are no longer an operator at the construction site. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the TDEC Nashville, TN address depicted below. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC).

Type or print clearly, using ink.

Site or Project Name: NPDES Tracking Number: TNR
Street Address or Location: County(ies):

Name of Permittee Requesting Termination of Coverage: Tennessee Department of Transportation
Permittee Contact Name: Title or Position:
Mailing Address: City: State: Zip:
Phone: E-mail:

Check the reason(s) for termination of permit coverage:

Stormwater discharge associated with construction activity is no longer occurring and the permitted area has a uniform 70% permanent vegetative cover OR has equivalent measures such as rip rap or geotextiles, in areas not covered with impervious surfaces.
You are no longer the operator at the construction site (i.e., termination of site-wide, primary or secondary permittee coverage).

Certification and Signature: (must be signed by president, vice-president or equivalent ranking elected official)

I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

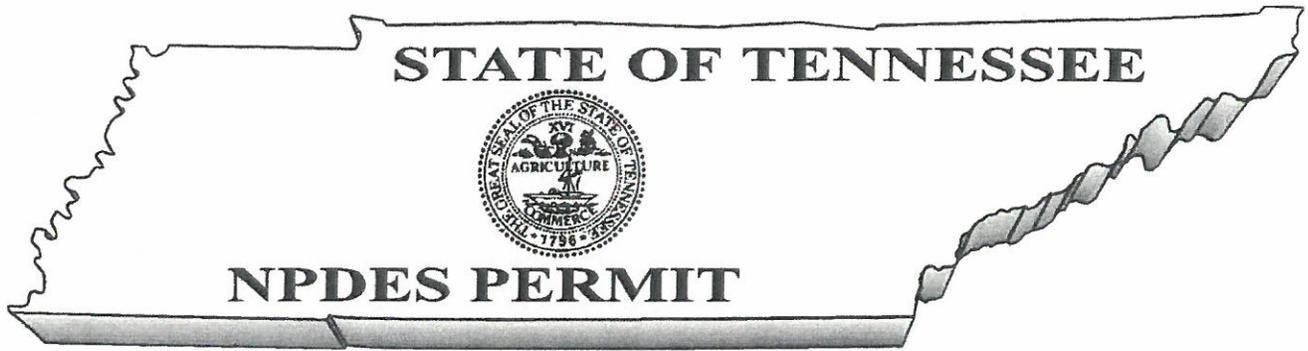
For the purposes of this certification, elimination of stormwater discharges associated with construction activity means that all stormwater discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have been eliminated from the portion of the construction site where the operator had control. Specifically, this means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized, the temporary erosion and sediment control measures have been removed, and/or subsequent operators have obtained permit coverage for the site or portions of the site where the operator had control.

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Permittee name (print or type): Signature: Date:

Tennessee Department of Environment and Conservation
Division of Water Resources
Attn: Storm Water NOI Processing
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243

6 – CONSTRUCTION GENERAL PERMIT (CGP)



GENERAL NPDES PERMIT
FOR DISCHARGES OF STORMWATER
ASSOCIATED WITH CONSTRUCTION ACTIVITIES

PERMIT NO. TNR100000

Under authority of the Tennessee Water Quality Control Act of 1977 ([T.C.A. 69-3-101](#) et seq.) and the authorization by the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 ([33 U.S.C. 1251](#), et seq.) and the [Water Quality Act of 1987, P.L. 100-4](#), including special requirements as provided in part 5.4 (Discharges into Impaired or Exceptional Tennessee Waters) of this general permit, operators of point source discharges of stormwater associated with construction activities into waters of the State of Tennessee, are authorized to discharge stormwater associated with construction activities in accordance with the following permit monitoring and reporting requirements, effluent limitations, and other provisions as set forth in parts 1 through 10 herein, from the subject outfalls to waters of the State of Tennessee.

This permit is issued on: **May 23, 2011**

This permit is effective on: **May 24, 2011**

This permit expires on: **May 23, 2016**

A handwritten signature in blue ink, appearing to read "P. Davis", is written over a horizontal line.

for Paul E. Davis, P.E., Director
Division of Water Pollution Control

Tennessee General Permit No. TNR100000
Stormwater Discharges Associated with Construction Activities

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1. COVERAGE UNDER THIS GENERAL PERMIT

1.1. Permit Area

This construction general permit (CGP) covers all areas of the State of Tennessee.

1.2. Discharges Covered by this Permit

1.2.1. Stormwater discharges associated with construction activities

This permit authorizes point source discharges of stormwater from construction activities including clearing, grading, filling and excavating (including borrow pits and stockpile/material storage areas containing erodible material), or other similar construction activities that result in the disturbance of one acre or more of total land area. Projects or developments of less than one acre of land disturbance are required to obtain authorization under this permit if the construction activities at the site are part of a larger common plan of development or sale that comprise at least one acre of land disturbance. One or more site operators must maintain coverage under this permit for all portions of a site that have not been finally stabilized.

Projects or developments of less than one acre of total land disturbance may also be required to obtain authorization under this permit if:

- a) the director has determined that the stormwater discharge from a site is causing, contributing to, or is likely to contribute to a violation of a state water quality standard;
- b) the director has determined that the stormwater discharge is, or is likely to be a significant contributor of pollutants to waters of the state, or
- c) changes in state or federal rules require sites of less than one acre that are not part of a larger common plan of development or sale to obtain a stormwater permit.

Note: Any discharge of stormwater or other fluid to an improved sinkhole or other injection well, as defined, must be authorized by permit or rule as a Class V underground injection well under the provisions of TDEC Rules, Chapter [1200-4-6](#).

1.2.2. Stormwater discharges associated with construction support activities

This permit also authorizes stormwater discharges from support activities associated with a permitted construction site (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided all of the following are met:

- a) the support activity is primarily related to a construction site that is covered under this general permit;
- b) the operator of the support activity is the same as the operator of the construction site;
- c) the support activity is not a commercial operation serving multiple unrelated construction projects by different operators;
- d) the support activity does not operate beyond the completion of the construction activity of the last construction project it supports; and

- e) support activities are identified in the Notice of Intent (NOI) and the Stormwater Pollution Prevention Plan (SWPPP). The appropriate erosion prevention and sediment controls and measures applicable to the support activity shall be described in a comprehensive SWPPP covering the discharges from the support activity areas.

TDOT projects shall be addressed in the [Waste and Borrow Manual](#) per the [Statewide Stormwater Management Plan \(SSWMP\)](#). Stormwater discharges associated with support activities that have been issued a separate individual permit or an alternative general permit are not authorized by this general permit. This permit does not authorize any process wastewater discharges from support activities. Process wastewater discharges from support activities must be authorized by an individual permit or other appropriate general permit.

1.2.3. Non-stormwater discharges authorized by this permit

The following non-stormwater discharges from active construction sites are authorized by this permit provided the non-stormwater component of the discharge is in compliance with section 3.5.9 below (*Pollution prevention measures for non-stormwater discharges*):

- a) dewatering of work areas of collected stormwater and ground water (filtering or chemical treatment may be necessary prior to discharge);
- b) waters used to wash vehicles (of dust and soil, not process materials such as oils, asphalt or concrete) where detergents are not used and detention and/or filtering is provided before the water leaves site;
- c) water used to control dust in accordance with section 3.5.5 below;
- d) potable water sources including waterline flushings from which chlorine has been removed to the maximum extent practicable;
- e) routine external building washdown that does not use detergents or other chemicals;
- f) uncontaminated groundwater or spring water; and
- g) foundation or footing drains where flows are not contaminated with pollutants (process materials such as solvents, heavy metals, etc.).

All non-stormwater discharges authorized by this permit must be free of sediment or other solids and must not cause erosion of soil or the stream bank, or result in sediment impacts to the receiving stream.

1.2.4. Other NPDES-permitted discharges

Discharges of stormwater or wastewater authorized by and in compliance with a different NPDES permit (other than this permit) may be mixed with discharges authorized by this permit.

1.3. **Limitations on Coverage**

Except for discharges from support activities, as described in section 1.2.2 above and certain non-stormwater discharges listed in section 1.2.3 above, all discharges covered by this permit shall be composed entirely of stormwater. This permit does not authorize the following discharges:

- a) Post-Construction Discharges (Permanent Stormwater Management) - Stormwater discharges associated with construction activity that originate from the construction site

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- after construction activities have been completed, the site has undergone final stabilization, and the coverage under this permit has been terminated.
- b) Discharges Mixed with Non-Stormwater - Discharges that are mixed with sources of non-stormwater, other than discharges which are identified in section 1.2.4 above (*Other NPDES-permitted discharges*) and in compliance with section 3.5.9 below (*Pollution prevention measures for non-stormwater discharges*) of this permit.
 - c) Discharges Covered by Another Permit - Stormwater discharges associated with construction activity that have been issued an individual permit in accordance with subpart 7.12 below (*Requiring an Individual Permit*).
 - d) Discharges Threatening Water Quality - Stormwater discharges from construction sites, that the director determines will cause, have the reasonable potential to cause, or contribute to violations of water quality standards. Where such determination has been made, the discharger will be notified by the director in writing that an individual permit application is necessary as described in subpart 7.12 below (*Requiring an Individual Permit*). However, the division may authorize coverage under this permit after appropriate controls and implementation procedures have been included in the SWPPP that are designed to bring the discharge into compliance with water quality standards.
 - e) Discharges into Impaired Streams - This permit does not authorize discharges that would add loadings of a pollutant that is identified as causing or contributing to the impairment of a water body on the list of **impaired waters**. **Impaired waters** means any segment of surface waters that has been identified by the division as failing to support its designated classified uses. Compliance with the additional requirements set forth in sub-part 5.4 is not considered as contributing to loadings to **impaired waters** or degradation unless the division determines upon review of the SWPPP that there is a reason to limit coverage as set forth in paragraph d) above and the SWPPP cannot be modified to bring the site into compliance.
 - f) Discharges into Outstanding National Resource Waters - The director shall not grant coverage under this permit for discharges into waters that are designated by the Water Quality Control Board as Outstanding National Resource Waters (ONRWs). Designation of ONRWs are made according to TDEC Rules, [Chapter 1200-4-3-.06](#).
 - g) Discharges into Exceptional Quality Waters - The director shall not grant coverage under this permit for potential discharges of pollutants which would cause degradation to waters designated by TDEC as exceptional quality waters (see sub-part 5.4 (Discharges into Impaired or Exceptional Tennessee Waters for additional permit requirements). Compliance with the additional requirements set forth in sub-part 5.4 is not considered as contributing to loadings to exceptional quality waters or degradation unless the division determines upon review of the SWPPP that there is a reason to limit coverage as set forth in paragraph d) above and the SWPPP cannot be modified to bring the site into compliance. Identification of exceptional quality waters is made according to TDEC Rules, [Chapter 1200-4-3-.06](#).
 - h) Discharges Not Protective of Federal or State listed Threatened and Endangered Species, Species Deemed in Need of Management or Special Concern Species - Stormwater discharges and stormwater discharge-related activities that are not protective of legally protected listed or proposed threatened or endangered aquatic fauna or flora (or species proposed for such protection) in the receiving stream(s); or discharges or activities that would result in a “take” of a state or federal listed endangered or threatened aquatic or wildlife species deemed in need of management or special concern species, or such species’ habitat. If the division finds that stormwater discharges or stormwater related activities are likely to result in any of the above effects, the director will deny the

coverage under this general permit unless and until project plans are changed to adequately protect the species.

- i) Discharges from a New or Proposed Mining Operation - This permit does not cover discharges from a new or proposed mining operation.
- j) Discharges Negatively Affecting a Property on the National Historic Register - Stormwater discharges that would negatively affect a property that is listed or is eligible for listing in the [National Historic Register](#) maintained by the Secretary of Interior.
- k) Discharging into Receiving Waters With an Approved Total Maximum Daily Load Analysis - Discharges of pollutants of concern to waters for which there is an EPA-approved total maximum daily load (TMDL) for the same pollutant are not covered by this permit unless measures or controls that are consistent with the assumptions and requirements of such TMDL are incorporated into the SWPPP. If a specific wasteload allocation has been established that would apply to the discharge, that allocation must be incorporated into the SWPPP and steps necessary to meet that allocation must be implemented. In a situation where an EPA-approved or established TMDL has specified a general wasteload allocation applicable to construction stormwater discharges, but no specific requirements for construction sites have been identified, the permittee should consult with the division to confirm that adherence to a SWPPP that meets the requirements of this permit will be consistent with the approved TMDL. Where an EPA-approved or established TMDL has not specified a wasteload allocation applicable to construction stormwater discharges, but has not specifically excluded these discharges, adherence to a SWPPP that meets the requirements of the CGP will generally be assumed to be consistent with the approved TMDL. If the EPA-approved or established TMDL specifically precludes construction stormwater discharges, the operator is not eligible for coverage under the CGP.

1.4. Obtaining Permit Coverage

Submitting a complete NOI, a SWPPP and an appropriate permitting application fee are required to obtain coverage under this general permit. Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant's claim of ability to comply with permit terms and conditions. Upon completing NOI review, the division will:

- a) issue a notice of coverage (NOC) to the operator identified as a primary permittee on the NOI form (see subpart 1.5 below - *Effective Date of Coverage*); or
- b) notify the applicant of needed changes to their NOI submittal (see section 2.6.3 below - *Application completeness*); or
- c) deny coverage under this general permit (see subpart 7.12 below - *Requiring an Individual Permit*).

1.4.1. Notice of Intent (NOI)

Operators wishing to obtain coverage under this permit must submit a completed NOI in accordance with requirements of part 2 below, using the NOI form provided in Appendix A of this permit (or a copy thereof). The division will review NOIs for completeness and accuracy and, when deemed necessary, investigate the proposed project for potential impacts to the waters of the state.

1.4.2. Stormwater Pollution Prevention Plan (SWPPP)

Operators wishing to obtain coverage under this permit must develop and submit a site-specific SWPPP with the NOI. The initial, comprehensive SWPPP, developed and submitted by the site-wide permittee (typically owner/developer who applied for coverage at project commencement¹), should address all construction-related activities from the date construction commences to the date of termination of permit coverage, to the maximum extent practicable. The SWPPP must be developed, implemented and updated according to the requirements in part 3 below (*SWPPP Requirements*) and subpart 2.3 below (*Responsibilities of Operators*). The SWPPP must be implemented prior to commencement of construction activities.

If the initial, comprehensive SWPPP does not address all activities until final stabilization of the site, an updated SWPPP or addendums to the plan addressing all aspects of current site disturbance must be prepared. An active, updated SWPPP must be in place for all disturbed portions of a site until each portion has been completed and finally stabilized.

Preparation and implementation of the comprehensive SWPPP may be a cooperative effort with all operators at a site. New operators with design and operational control of their portion of the construction site are expected to adopt, modify, update and implement a comprehensive SWPPP. Primary permittees at the site may develop a SWPPP addressing only their portion of the project, as long as the proposed Best Management Practices (BMPs) are compatible with the comprehensive SWPPP and complying with conditions of this general permit.

1.4.3. Permit application fees

The permit application fee should accompany the site-wide permittee's NOI form. The fee is based on the total acreage planned to be disturbed by an entire construction project for which the site-wide permittee is requesting coverage, including any associated construction support activities (see section 1.2.2 above). *The disturbed area* means the total area presented as part of the development (and/or of a larger common plan of development) subject to being cleared, graded, or excavated during the life of the development. The area cannot be limited to only the portion of the total area that the site-wide owner/developer initially disturbs through the process of various land clearing activities and/or in the construction of roadways, sewers and water utilities, stormwater drainage structures, etc., to make the property marketable. The site-wide owner/developer may present documentation of common areas in the project that will not be subject to disturbance at anytime during the life of the project and have these areas excluded from the fee calculation.

The application fees shall be as specified in the TDEC Rules, [Chapter 1200-4-11](#). The application will be deemed incomplete until the appropriate application fee is paid in full. Checks for the appropriate fee should be made payable to "Treasurer, State of Tennessee." There is no additional fee for subsequent owner/operator to obtain permit coverage (see section 2.4.3 below - *New operator*), as long as the site-wide primary permittee has active permit coverage at the time of receipt of the subsequent operator's application, because the site-wide primary permittee paid the appropriate fee for the entire area of site disturbance. If a project was previously permitted, but permit coverage was terminated (see section 8.1.1 below - *Termination process for primary permittees*), and subsequent site disturbance or re-development occurs, the new operator must obtain coverage and pay the appropriate fee for the disturbed acreage.

¹ See sub-part 2.1 on page 7 for a definition of an site-wide permittee.

1.4.4. Submittal of a copy of the NOC and NOT to the local MS4

Permittees who discharge stormwater through an NPDES-permitted municipal separate storm sewer system ([MS4](#)) who are not exempted in section 1.4.5 below (*Permit Coverage through Qualifying Local Program*) must submit a courtesy copy of the notice of coverage (NOC), and at project completion, a copy of the signed notice of termination (NOT) to the [MS4](#) upon their request. Permitting status of all permittees covered (or previously covered) under this general permit as well as the most current list of all [MS4](#) permits is available at the division's DataViewer web site².

1.4.5. Permit Coverage through Qualifying Local Program

Coverage equivalent to coverage under this general permit may be obtained from a qualifying local erosion prevention and sediment control Municipal Separate Storm Sewer System ([MS4](#)) program. A qualifying local program (QLP) is a municipal stormwater program for stormwater discharges associated with construction activity that has been formally approved by the division. More information about Tennessee's QLP program and MS4 participants can be found at: <http://tn.gov/environment/wpc/stormh2o/qlp.shtml>.

If a construction site is within the jurisdiction of and has obtained a notice of coverage from a QLP, the [operator](#) of the construction activity is authorized to discharge stormwater associated with construction activity under this general permit without the submittal of an NOI to the division. The permittee is also not required to submit a [SWPPP](#), a notice of termination or a permit fee to the division. At the time of issuance of this permit, there were no qualifying local erosion prevention and sediment control [MS4](#) programs in Tennessee. Permitting of stormwater runoff from construction sites from federal or state agencies (including, but not limited to the Tennessee Department of Transportation (TDOT) and Tennessee Valley Authority (TVA)) and the local [MS4](#) program itself will remain solely under the authority of TDEC.

The division may require any owner/developer or [operator](#) located within the jurisdiction of a QLP to obtain permit coverage directly from the division. The [operator](#) shall be notified in writing by the division that coverage by the QLP is no longer applicable, and how to obtain coverage under this permit.

1.5. Effective Date of Coverage

1.5.1. Notice of Coverage (NOC)

The NOC is a notice from the division to the primary permittee, which informs the primary permittee that the NOI, the [SWPPP](#) and the appropriate fee were received and accepted, and stormwater discharges from a specified area of a construction activity have been approved under this general permit. The permittee is authorized to discharge stormwater associated with construction activity as of the effective date listed on the NOC.

Assigning a permit tracking number by the division to a proposed discharge from a construction site does not confirm or imply an authorization to discharge under this permit. Correspondence

² <http://www.tn.gov/environment/wpc/dataviewer/>

with the permittee is maintained through the Site Owner or Developer listed in the NOI, not the optional contact or the secondary permittee.

If any [Aquatic Resource Alteration Permits](#) (ARAP) are required for a site in areas proposed for active construction, the NOC will not be issued until ARAP application(s) are submitted and deemed by TDEC to be complete. The treatment and disposal of wastewater (including, but not limited to sanitary wastewater) generated during and after the construction must be also addressed. The issuance of the NOC may be delayed until adequate wastewater treatment and accompanying permits are issued.

1.5.2. Permit tracking numbers

Construction sites covered under this permit will be assigned permit tracking numbers in the sequence TNR100001, TNR100002, etc. An [operator](#) presently permitted under a previous construction general permit shall be granted coverage under this new general permit. Permit tracking numbers assigned under a previous construction general permit will be retained (see section 2.4.1 below). An [operator](#) receiving new permit coverage will be assigned a new permit tracking number (see section 2.4.2 below).

2. NOTICE OF INTENT (NOI) REQUIREMENTS

2.1. Who Must Submit an NOI?

All site [operators](#) must submit an NOI form. “[Operator](#)” for the purpose of this permit and in the context of stormwater associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria:

- a) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g. subsequent builder), or the person that is the current land owner of the construction site. This person is considered the primary permittee; or
- b) The person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a [SWPPP](#) for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

The site-wide permittee is the first primary permittee to apply for coverage at the site. There may be other primary permittees for a project, but there is only one site-wide permittee. Where there are multiple operators associated with the same project, all operators are required to obtain permit coverage. Once covered by a permit, all such operators are to be considered as co-permittees if their involvement in the construction activities affects the same project site, and are held jointly and severally responsible for complying with the permit.

2.2. Typical Construction Site Operators

2.2.1. Owner/Developer

An owner or developer(s) of a project is a primary permittee. This person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person may include, but is not limited to a developer, landowner, realtor, commercial builder, homebuilder, etc. An owner or developer's responsibility to comply with requirements of this permit extends until permit coverage is terminated in accordance with requirements of part 8 below.

2.2.2. Commercial builders

A commercial builder can be a primary or secondary permittee at a construction site.

A commercial builder who purchases one or more lots from an owner/developer (site-wide permittee) for the purpose of constructing and selling a structure (e.g., residential house, non-residential structure, commercial building, industrial facility, etc.) and has design or operational control over construction plans and specifications is a primary permittee for that portion of the site. A commercial builder may also be hired by the end user (e.g., a lot owner who may not be a permittee). In either case the commercial builder is considered a new **operator** and must submit a new NOI following requirements in section 2.4.3 below.

The commercial builder may also be hired by the primary permittee or a lot owner to build a structure. In this case, the commercial builder signs the primary permittee's NOI and **SWPPP** as a contractor (see section 2.2.3 below) and is considered a secondary permittee.

2.2.3. Contractors

A contractor is considered a secondary permittee. This person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a **SWPPP** for the site or other permit conditions (e.g., contractor is authorized to direct workers at a site to carry out activities required by the **SWPPP** or comply with other permit conditions).

A contractor may be, but is not limited to a general contractor, grading contractor, erosion control contractor, sub-contractor responsible for any land disturbing activities and/or erosion prevention and sediment control (EPSC) implementation/maintenance, commercial builder hired by the owner/developer, etc. The contractor may need to include in their contract with the party that hired them specific details for the contractor's responsibilities concerning EPSC measures. This includes the ability of the contractor to make EPSC modifications. The contractor should sign the NOI and **SWPPP** associated with the construction project at which they will be an operator.

2.3. Responsibilities of Operators

A permittee may meet one or more of the operational control components in the definition of "operator" found in subpart 2.1 above. Either section 2.3.1 or 2.3.2 below, or both, will apply depending on the type of operational control exerted by an individual permittee.

2.3.1. Permittee(s) with design control (owner/developer)

Permittee(s) with design control (i.e., operational control over construction plans and specifications) at the construction site, including the ability to make modifications to those plans and specifications (e.g., owner/developer) must:

- a) Ensure the project specifications they develop meet the minimum requirements of part 3 below (stormwater pollution prevention plan - **SWPPP**) and all other applicable conditions;
- b) Ensure that the **SWPPP** indicates the areas of the project where they have design control (including the ability to make modifications in specifications), and ensure all other permittees implementing and maintaining portions of the **SWPPP** impacted by any changes they make to the plan are notified of such modifications in a timely manner;
- c) Ensure that all common facilities (i.e., sediment treatment basin and drainage structures) that are necessary for the prevention of erosion or control of sediment are maintained and effective until all construction is complete and all disturbed areas in the entire project are stabilized, unless permit coverage has been obtained and responsibility has been taken over by a new (replacement) owner/operator.
- d) If parties with day-to-day operational control of the construction site have not been identified at the time the comprehensive **SWPPP** is initially developed, the permittee with design control shall be considered to be the responsible person until such time the supplemental NOI is submitted, identifying the new **operator(s)** (see section 2.4.3 below). These new **operators** (e.g., general contractor, utilities contractors, sub-contractors, erosion control contractors, hired commercial builders) are considered secondary permittees. The **SWPPP** must be updated to reflect the addition of new **operators** as needed to reflect operational or design control.
- e) Ensure that all **operators** on the site have permit coverage, if required, and are complying with the **SWPPP**.

2.3.2. Permittee(s) with day-to-day operational control (contractor – secondary permittee)

Permittee(s) with day-to-day operational control of those activities at a project which are necessary to ensure compliance with the **SWPPP** for the site or other permit conditions (e.g., general contractor, utilities contractors, sub-contractors, erosion control contractors, hired commercial builders) must:

- a) Ensure that the **SWPPP** for portions of the project where they are operators meets the minimum requirements of part 3 below (*SWPPP Requirements*) and identifies the parties responsible for implementation of control measures identified in the plan;
- b) Ensure that the **SWPPP** indicates areas of the project where they have operational control over day-to-day activities;
- c) Ensure that measures in the **SWPPP** are adequate to prevent erosion and control any sediment that may result from their earth disturbing activity;
- d) Permittees with operational control over only a portion of a larger construction project are responsible for compliance with all applicable terms and conditions of this permit as it relates to their activities on their portion of the construction site. This includes, but is not limited to, implementation of **Best Management Practices (BMPs)** and other controls required by the **SWPPP**. Permittees shall ensure either directly or through coordination with other permittees, that their activities do not render another person's pollution control ineffective. All permittees must implement their portions of a comprehensive **SWPPP**.

2.4. NOI Submittal

2.4.1. Existing site

An **operator** presently permitted under the 2005 construction general permit shall be granted coverage under this new general permit. There will be no additional fees associated with an extension of coverage for existing sites under the new permit. The division may, at its discretion, require permittees to confirm their intent to be covered under this new general permit following its effective date through submission of an updated NOI. Should the confirmation be required and is not received, coverage under the new general permit will be terminated. Should a site with terminated coverage be unstable or construction continues, a new NOI, **SWPPP** and an appropriate fee must be submitted.

2.4.2. Application for new permit coverage

Except as provided in section 2.4.3 below, **operators** must submit a complete NOI, **SWPPP** and an appropriate fee in accordance with the requirements described in subpart 1.4 above. The complete application should be submitted at least 30 days prior to commencement of construction activities. The permittee is authorized to discharge stormwater associated with construction activity as of the effective date listed on the NOC. The land disturbing activities shall not start until a NOC is prepared and written approval by the division staff is obtained according to subpart 1.5 above.

2.4.3. New operator

For stormwater discharges from construction sites or portions of the sites where the **operator** changes (new owner), or projects where an **operator** is added (new contractor) after the initial NOI and comprehensive **SWPPP** have been submitted, the supplemental (submitted by a new contractor) or additional (submitted by a new owner) NOI should be submitted as soon as practicable, and always before the new **operator** commences work at the site. The supplemental NOI must reference the project name and tracking number assigned to the primary permittee's NOI.

If the site under the control of the new owner is inactive and all areas disturbed are completely stabilized, the NOI may not need to be submitted immediately upon assuming operational control. However, the division should be notified if a new **operator** obtains operational control at a site, but commencement of construction under the direction of the **operator** at the site is going to be delayed.

If upon the sale or transfer of the site's ownership does not change the signatory requirements for the NOI (see section 7.7.1 below), but the site's owner or developer's company name has changed, a new, updated NOI should be submitted to the division within 30 days of the name change. If the new **operator** agrees to comply with an existing comprehensive **SWPPP** already implemented at the site, a copy of the supplemental or modified **SWPPP** does not have to be submitted with the NOI. There will be no additional fees associated with the sale or transfer of ownership for existing permitted sites.

If the transfer of ownership is due to foreclosure or a permittee filing for bankruptcy proceedings, the new owner (including but not limited to a lending institution) must obtain permit coverage if the property is inactive, but is not stabilized sufficiently. If the property is sufficiently stabilized permit coverage may not be necessary, unless and until construction activity at the site resumes.

2.4.4. Late NOIs

Dischargers are not prohibited from submitting late NOIs. When a late NOI is submitted, and if the division authorizes coverage under this permit, such authorization is only for future discharges; any prior, unpermitted, discharges or permit noncompliances are subject to penalties as described in section 7.1.2 below.

2.5. **Who Must Sign the NOI?**

All construction site [operators](#) as defined in subsection 2.2 above (*Typical Construction Site Operators*) must sign the NOI form. Signatory requirements for a NOI are described in section 7.7.1 below. All signatures must be original. An NOI that does not bear an original signature will be deemed incomplete. The division recommends that signatures be in blue ink.

2.6. **NOI Form**

2.6.1. Contents of the NOI form

NOI for construction projects shall be submitted on the form provided in Appendix A of this permit, or on a copy thereof. This form and its instructions set forth the required content of the NOI. The NOI form must be filled in completely. If sections of the NOI are left blank, a narrative explaining the omission must be provided as an attachment.

Owners, developers and all contractors that meet the definition of the [operator](#) in subsection 2.2 above (*Typical Construction Site Operators*) shall apply for permit coverage on the same NOI, insofar as possible. The NOI is designed for more than one contractor (secondary permittee). The division may accept separate NOI forms from different [operators](#) for the same construction site when warranted.

After permit coverage has been granted to the primary permittee, any subsequent NOI submittals must include the site's previously assigned permit tracking number and the project name. The comprehensive site-specific [SWPPP](#) shall be prepared in accordance with the requirements of part 3 below, and must be submitted with the NOI unless the NOI being submitted is to only add a contractor (secondary permittee) to an existing coverage.

2.6.2. Construction site map

An excerpt (8 ½" by 11" or 11" by 17") from the appropriate 7.5 minute [United States Geological Survey](#) (USGS) topographic map, with the proposed construction site centered, must be included with the NOI. The entire proposed construction area must be clearly identified (outlined) on this map. The total area to be disturbed (in acres) should be included on the map. The map should outline the boundaries of projects, developments and the construction site in relation to major roads, streams or other landmarks. All outfalls where runoff will leave the property should be identified. Stream(s) receiving the discharge, and storm sewer system(s)

conveying the discharge from all site outfalls should be clearly identified and marked on the map. The map should also list and indicate the location of EPSCs that will be used at the construction site. NOIs for [linear projects](#) must specify the location of each end of the construction area and all areas to be disturbed. Commercial builders that develop separate [SWPPPs](#) that cover only their portion of the project shall also submit a site or plat map that clearly indicates the lots which they purchased and for which they are applying for permit coverage and the location of EPSCs that will be used at each lot.

2.6.3. Application completeness

Based on a review of the NOI or other available information, the division shall:

1. prepare a notice of coverage (NOC) for the construction site (see subpart 1.5 above); or
2. prepare a deficiency letter stating additional information must be provided before the NOC can be issued; or
3. deny coverage under this general permit and require the discharger to obtain coverage under an individual NPDES permit (see subpart 7.12 below).

2.7. Where to Submit the NOI, SWPPP and Permitting Fee?

The applicant shall submit the NOI, [SWPPP](#) and permitting fee to the appropriate TDEC Environmental Field Office (EFO) for the county(ies) where the construction activity is located and where stormwater discharges enters [waters of the state](#). If a site straddles a county line of counties that are in areas of different EFOs, the [operators](#) shall send NOIs to each EFO. The permitting fee should be submitted to the EFO that provides coverage for the majority of the proposed construction activity.

A list of counties and the corresponding EFOs is provided in subpart 2.8 below. The division’s Nashville Central Office will serve as a processing office for NOIs submitted by federal or state agencies (including, but not limited to the Tennessee Department of Transportation (TDOT), Tennessee Valley Authority (TVA) and the local [MS4](#) programs).

2.8. List of the TDEC Environmental Field Offices (EFOs) and Corresponding Counties

EFO Name	List of Counties
Chattanooga	Bledsoe, Bradley, Grundy, Hamilton, Marion, McMinn, Meigs, Polk, Rhea, Sequatchie
Columbia	Bedford, Coffee, Franklin, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry, Wayne
Cookeville	Cannon, Clay, Cumberland, De Kalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Van Buren, Warren, White
Jackson	Benton, Carroll, Chester, Crockett, Decatur, Dyer, Gibson, Hardeman, Hardin, Haywood, Henderson, Henry, Lake, Lauderdale, Madison, McNairy, Obion, Weakley
Johnson City	Carter, Greene, Hancock, Hawkins, Johnson, Sullivan, Unicoi, Washington
Knoxville	Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier, Union
Memphis	Fayette, Shelby, Tipton
Nashville	Cheatham, Davidson, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson, Wilson

TDEC may be reached by telephone at the toll-free number 1-888-891-8332 (TDEC). Local EFOs may be reached directly when calling this number from the construction site, using a land line.

3. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

3.1. The General Purpose of the SWPPP

A comprehensive [SWPPP](#) must be prepared and submitted along with the NOI as required in section 1.4.2 above. The primary permittee must implement the [SWPPP](#) as written from commencement of construction activity until final stabilization is complete, or until the permittee does not have design or operational control of any portion of the construction site. Requirements for termination of site coverage are provided in part 8 below.

A site-specific [SWPPP](#) must be developed for each construction project or site covered by this permit. The design, inspection and maintenance of [Best Management Practices \(BMPs\)](#) described in [SWPPP](#) must be prepared in accordance with good engineering practices. At a minimum, [BMPs](#) shall be consistent with the requirements and recommendations contained in the current edition of the [Tennessee Erosion and Sediment Control Handbook](#) (the handbook). The handbook is designed to provide information to planners, developers, engineers, and contractors on the proper selection, installation, and maintenance of [BMPs](#). This permit allows the use of innovative or alternative [BMPs](#), whose performance has been documented to be equivalent or superior to conventional [BMPs](#) as certified by the [SWPPP](#) designer.

Once a definable area has been finally stabilized, the permittee may identify this area on the site-specific [SWPPP](#). No further [SWPPP](#) or inspection requirements apply to that portion of the site (e.g., earth-disturbing activities around one of three buildings in a complex are done and the area is finally stabilized, one mile of a roadway or pipeline project is done and finally stabilized, etc).

For more effective coordination of [BMPs](#) a cooperative effort by the different [operators](#) at a site to prepare and participate in a comprehensive [SWPPP](#) is expected. Primary permittees at a site may develop separate [SWPPPs](#) that cover only their portion of the project. In instances where there is more than one [SWPPP](#) for a site, the permittees must ensure the stormwater discharge controls and other measures are compatible with one another and do not prevent another [operator](#) from complying with permit conditions. The comprehensive [SWPPP](#) developed and submitted by the primary permittee must assign responsibilities to subsequent (secondary) permittees and coordinate all [BMPs](#) at the construction site. Assignment and coordination can be done by name or by job title.

3.1.1. Registered engineer or landscape architect requirement

The narrative portion of the [SWPPP](#) may be prepared by an individual that has a working knowledge of erosion prevention and sediment controls, such as a Certified Professional in Erosion and Sediment Control ([CPESC](#)) or a person that successfully completed the “[Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites](#)” course. Plans and specifications for any building or structure, including the design of sediment basins or other sediment controls involving structural, hydraulic, hydrologic or other engineering calculations shall be prepared by a licensed professional engineer or landscape architect and

stamped and certified in accordance with the [Tennessee Code Annotated](#), Title 62, Chapter 2 (see part 10 below) and the rules of the [Tennessee Board of Architectural and Engineering Examiners](#). Engineering design of sediment basins and other sediment controls must be included in SWPPPs for construction sites involving drainage to an outfall totaling 10 or more acres (see subsection 3.5.3.3 below) or 5 or more acres if draining to an impaired or exceptional quality waters (see subsection 5.4.1 below).

3.1.2. Site Assessment

Quality assurance of erosion prevention and sediment controls shall be done by performing site assessment at a construction site. The site assessment shall be conducted at each outfall involving drainage totaling 10 or more acres (see subsection 3.5.3.3 below) or 5 or more acres if draining to an impaired or exceptional quality waters (see subsection 5.4.1 below), within a month of construction commencing at each portion of the site that drains the qualifying acreage of such portion of the site. The site assessment shall be performed by individuals with following qualifications:

- a licensed professional engineer or landscape architect;
- a Certified Professional in Erosion and Sediment Control ([CPESC](#)) or
- a person that successfully completed the “[Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites](#)” course.

As a minimum, site assessment should be performed to verify the installation, functionality and performance of the EPSC measures described in the SWPPP. The site assessment should be performed with the inspector (as defined in part 10 below – Definitions), and should include a review and update (if applicable) of the SWPPP. Modifications of plans and specifications for any building or structure, including the design of sediment basins or other sediment controls involving structural, hydraulic, hydrologic or other engineering calculations shall be prepared by a licensed professional engineer or landscape architect and stamped and certified in accordance with the [Tennessee Code Annotated](#), Title 62, Chapter 2 (see part 10 below) and the rules of the [Tennessee Board of Architectural and Engineering Examiners](#).

The site assessment findings shall be documented and the documentation kept with the SWPPP at the site. At a minimum, the documentation shall include information included in the inspection form provided in Appendix C of this permit. The documentation must contain the printed name and signature of the individual performing the site assessment and the following certification:

“I certify under penalty of law that this report and all attachments are, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

The site assessment can take the place of one of the twice weekly inspections requirement from subsection 3.5.8.2 below.

The division may require additional site assessment(s) to be performed if site inspection by division’s personnel reveals site conditions that have potential of causing pollution to the [waters of the state](#).

3.2. SWPPP Preparation and Compliance

3.2.1. Existing site

Operator(s) of an existing site presently permitted under the division's previous construction general permit shall maintain full compliance with the current SWPPP. The current SWPPP should be modified, if necessary, to meet requirements of this new general permit, and the SWPPP changes implemented no later than 12 months following the new permit effective date (**Error! Reference source not found.**), excluding the buffer zone requirements as stated in section 4.1.2 below. The permittee shall make the updated SWPPP available for the division's review upon request.

3.2.2. New site

For construction stormwater discharges not authorized under an NPDES permit as of the effective date of this permit, a SWPPP that meets the requirements of subpart 3.5 below of this permit shall be prepared and submitted along with the NOI and an appropriate fee for coverage under this permit.

3.3. Signature Requirements, Plan Review and Making Plans Available

3.3.1. Signature Requirements for a SWPPP

The SWPPP shall be signed by the operator(s) in accordance with subpart 7.7 below, and if applicable, certified according to requirements in section 3.1.1 above. All signatures must be original. A SWPPP that does not bear an original signature will be deemed incomplete. The division recommends that signatures be in blue ink.

3.3.2. SWPPP Review

The permittee shall make updated plans and inspection reports available upon request to the director, local agency approving erosion prevention and sediment control plan, grading plans, land disturbance plans, or stormwater management plans, or the operator of an MS4.

3.3.3. Making plans available

A copy of the SWPPP shall be retained on-site at the location which generates the stormwater discharge in accordance with part 6 below of this permit. If the site is inactive or does not have an onsite location adequate to store the SWPPP, the location of the SWPPP, along with a contact phone number, shall be posted on-site. If the SWPPP is located offsite, reasonable local access to the plan, during normal working hours, must be provided.

3.4. Keeping Plans Current

3.4.1. SWPPP modifications

The permittee must modify and update the [SWPPP](#) if any of the following are met:

- a) whenever there is a change in the scope of the project, which would be expected to have a significant effect on the discharge of pollutants to the [waters of the state](#) and which has not otherwise been addressed in the [SWPPP](#). If applicable, the SWPPP must be modified or updated whenever there is a change in chemical treatment methods, including the use of different treatment chemical, different dosage or application rate, or different area of application;
- b) whenever inspections or investigations by site [operators](#), local, state or federal officials indicate the [SWPPP](#) is proving ineffective in eliminating or significantly minimizing pollutants from sources identified under section 3.5.2 below of this permit, or is otherwise not achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity. Where local, state or federal officials determine that the SWPPP is ineffective in eliminating or significantly minimizing pollutant sources, a copy of any correspondence to that effect must be retained in the SWPPP;
- c) to identify any new [operator](#) (typically contractor and/or subcontractor) as needed to reflect operational or design control that will implement a measure of the [SWPPP](#) (see subparts 2.1 and 2.2 above for further description of which [operators](#) must be identified); and
- d) to include measures necessary to prevent a negative impact to legally protected state or federally listed fauna or flora (or species proposed for such protection – see subpart 1.3 above). Amendments to the [SWPPP](#) may be reviewed by the division, a local [MS4](#), the EPA or an authorized regulatory agency; and
- e) a TMDL is developed for the receiving waters for a pollutant of concern (siltation and/or habitat alteration).

3.5. Components of the SWPPP

The [SWPPP](#) shall include the following items, as described in sections 3.5.1 to 3.5.10 below: site description, description of stormwater runoff controls, erosion prevention and sediment controls, stormwater management, description of other items needing control, approved local government sediment and erosion control requirements, maintenance, inspections, pollution prevention measures for non-stormwater discharges, and documentation of permit eligibility related to Total Maximum Daily Loads ([TMDL](#)). The [SWPPP](#) must:

- a) identify all potential sources of pollution which are likely to affect the quality of stormwater discharges from the construction site;
- b) describe practices to be used to reduce pollutants in stormwater discharges from the construction site; and
- c) assure compliance with the terms and conditions of this permit.

3.5.1. Site description

Each plan shall provide a description of pollutant sources and other information as indicated below:

- a) a description of all construction activities at the site (not just grading and street construction);
- b) the intended sequence of major activities which disturb soils for major portions of the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation, etc.);
- c) estimates of the total area of the site and the total area that is expected to be disturbed by excavation, grading, filling, or other construction activities;
- d) a description of the topography of the site including an estimation of the percent slope and the variation in percent slope found on the site; such estimation should be on a basis of a drainage area serving each outfall, rather than an entire project;
- e) any data describing the soil (data may be referenced or summarized) and how the soil type will dictate the needed control measures and how the soil may affect the expected quality of runoff from the site;
- f) an estimate of the runoff coefficient of the site after construction activities are completed and how the runoff will be handled to prevent erosion at the permanent outfall and receiving stream, as well as the estimate of the percentage of impervious area before and after construction;
- g) an erosion prevention and sediment control plan of the site with the proposed construction area clearly outlined. The plan should indicate the boundaries of the permitted area, drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which are not to be disturbed, the location of major structural and nonstructural controls identified in the [SWPPP](#), the location of areas where stabilization practices are expected to occur, surface waters including wetlands, sinkholes, and careful identification on the site plan of outfall points intended for coverage under the general permit for stormwater discharges from the site. The erosion control plan must meet requirements stated in section 3.5.2 below;
- h) a description of any discharge associated with industrial activity other than construction stormwater that originates on site and the location of that activity and its permit number;
- i) identification of any stream or wetland on or adjacent to the project, a description of any anticipated alteration of these waters and the permit number or the tracking number of the [Aquatic Resources Alteration Permit](#) (ARAP) or Section 401 Certification issued for the alteration;
- j) the name of the receiving water(s), and approximate size and location of affected wetland acreage at the site;
- k) if applicable, clearly identify and outline the [buffer zones](#) established to protect [waters of the state](#) located within the boundaries of the project;
- l) some construction projects, such as residential or commercial subdivisions and/or developments or industrial parks are subdivided. Subdivided lots are sometimes sold to new owners prior to completion of construction. The site-wide developer/owner must describe EPSC measures implemented at those lots. Once the property is sold, the new operator must obtain coverage under this permit;
- m) for projects of more than 50 acres, the construction phases must be described (see subsection 3.5.3.1 below); and
- n) if only a portion of the total acreage of the construction site is to be disturbed, then the protections employed to limit the disturbance must be discussed, i.e., caution fence, stream side [buffer zones](#), etc. Limits of disturbance shall be clearly marked in the

SWPPP and areas to be undisturbed clearly marked in the field before construction activities begin.

3.5.2. Description of stormwater runoff controls

The **SWPPP** shall include a description of appropriate erosion prevention and sediment controls and other **Best Management Practices (BMPs)** that will be implemented at the construction site. The **SWPPP** must clearly describe each major activity which disturbs soils for major portions of the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation, etc.):

- a) appropriate control measures and the general timing for the measures to be implemented during construction activities; and
- b) which permittee is responsible for implementation of which controls.

The **SWPPP** must include erosion prevention and sediment control (EPSC) plans showing the approximate location of each control measure along with a description of the timing during the construction process for implementing each measure (e.g., prior to the start of earth disturbance, as the slopes are altered and after major grading is finished). The different stages of construction (initial/major grading, installation of infrastructure, final contours, etc.) and the erosion preventions and sediment control measures that will be utilized during each stage should be depicted on multiple plan sheets (see paragraphs below). Half sheets are acceptable. One sheet showing all EPSCs that will be used during the life of the multi-phase project implementing different EPSC controls at each stage will not be considered complete.

For site disturbances less than 5 acres, at least two separate EPSC plan sheets shall be developed. At least two stages shall be identified, with associated EPSC measures addressed. The plan stages shall be addressed separately in plan sheets, with each stage reflecting the conditions and EPSC measures necessary to manage stormwater runoff, erosion and sediment during the initial land disturbance (initial grading) and the conditions and EPSC measures necessary to manage stormwater, erosion and sediment at final grading.

For site disturbances more than 5 acres, at least 3 separate EPSC plan sheets shall be developed. Three stages shall be identified. The first plan sheet should reflect the conditions and EPSC measures necessary to manage stormwater runoff, during the initial land disturbance (initial grading). The second plan sheet shall reflect the conditions and the EPSC measures necessary to manage stormwater runoff from interim land disturbance activities. The third plan sheet shall reflect the conditions and EPSC measures necessary to manage stormwater runoff, erosion and sediment at final grading.

The description and implementation of controls shall address the following minimum components, as described in sections 3.5.3, 3.5.4 and 3.5.5 below. Additional controls may be necessary to comply with section 5.3.2 below.

3.5.3. Erosion prevention and sediment controls

3.5.3.1. General criteria and requirements

- a) The construction-phase erosion prevention controls shall be designed to eliminate (or minimize if complete elimination is not possible) the dislodging and suspension of soil in

- water. Sediment controls shall be designed to retain mobilized sediment on site to the maximum extent practicable.
- b) The design, inspection and maintenance of [Best Management Practices \(BMPs\)](#) described in [SWPPP](#) must be prepared in accordance with good engineering practices and, at a minimum, shall be consistent with the requirements and recommendations contained in the current edition of the [Tennessee Erosion and Sediment Control Handbook](#). In addition, all control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications (where applicable). All control measures selected must be able to slow runoff so that rill and gully formation is prevented. When [steep slopes](#) and/or fine particle soils are present at the site, additional physical or chemical treatment of stormwater runoff may be required. Proposed physical and/or chemical treatment must be researched and applied according to the manufacturer's guidelines and fully described in the SWPPP. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the permittee must replace or modify the control for relevant site situations.
 - c) If permanent or temporary vegetation is to be used as a control measure, then the timing of the planting of the vegetation cover must be discussed in the [SWPPP](#). Planning for planting cover vegetation during winter months or dry months should be avoided.
 - d) If sediment escapes the permitted area, off-site accumulations of sediment that have not reached a stream must be removed at a frequency sufficient to minimize offsite impacts (e.g., fugitive sediment that has escaped the construction site and has collected in a street must be removed so that it is not subsequently washed into storm sewers and streams by the next rain and/or so that it does not pose a safety hazard to users of public streets). Permittees shall not initiate remediation/restoration of a stream without consulting the division first. This permit does not authorize access to private property. Arrangements concerning removal of sediment on adjoining property must be settled by the permittee with the adjoining landowner.
 - e) Sediment should be removed from sediment traps, silt fences, sedimentation ponds, and other sediment controls as recommended in the [Tennessee Erosion and Sediment Control Handbook](#), and must be removed when design capacity has been reduced by 50%.
 - f) Litter, construction debris, and construction chemicals exposed to stormwater shall be picked up prior to anticipated storm events or before being carried off of the site by wind (e.g., forecasted by local weather reports), or otherwise prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, daily pick-up, etc.). After use, materials used for erosion prevention and sediment control (such as silt fence) should be removed or otherwise prevented from becoming a pollutant source for stormwater discharges.
 - g) Erodible material storage areas (including but not limited to overburden and stockpiles of soil etc.) and borrow pits used primarily for the permitted project and which are contiguous to the site are considered a part of the site and shall be identified on the NOI, addressed in the [SWPPP](#) and included in the fee calculation. TDOT projects shall be addressed in the [Waste and Borrow Manual](#) per the [Statewide Stormwater Management Plan \(SSWMP\)](#).
 - h) Pre-construction vegetative ground cover shall not be destroyed, removed or disturbed more than 15 days prior to grading or earth moving unless the area is seeded and/or mulched or other temporary cover is installed.
 - i) Clearing and grubbing must be held to the minimum necessary for grading and equipment operation. Existing vegetation at the site should be preserved to the maximum extent practicable.

- j) Construction must be sequenced to minimize the exposure time of graded or denuded areas.
- k) Construction phasing is required on all projects regardless of size as a major practice for minimizing erosion and limiting sedimentation. Construction must be phased to keep the total disturbed area less than 50 acres at any one time. Areas of the completed phase must be stabilized within 15 days (see subsection 3.5.3.2 below). No more than 50 acres of active soil disturbance is allowed at any time during the construction project. This includes off-site borrow or disposal areas that meet the conditions of section 1.2.2 above of this general permit.

The 50 acre limitation does not apply to [linear construction projects](#) (such as roadway, pipeline, and other infrastructure construction activities) if the following conditions are met:

- Where no one area of active soil disturbance is greater than 50 acres and the various areas of disturbance have distinct receiving waters; or
- Where contiguous disturbances amount to greater than 50 acres, but no one distinct water is receiving run off from more than 50 disturbed acres; or
- With the department's written concurrence, where more than 50 acres of disturbance is to occur and where one receiving water will receive run-off from more than 50 acres; or
- Where no one area of active soil disturbance is greater than 50 acres and the various areas of disturbance are more than 5 miles apart.

In order for a [linear project](#) to take advantage of the 50 acre rule exemption outlined in this paragraph, the contractor shall conduct monthly site assessments as described in section 3.1.2 above until the site is permanently stabilized.

- l) Erosion prevention and sediment control measures must be in place and functional before earth moving operations begin, and must be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the workday, but must be replaced at the end of the workday.
- m) The following records shall be maintained on or near site: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; the dates when stabilization measures are initiated; inspection records and rainfall records.
- n) Off-site vehicle tracking of sediments and the generation of dust shall be minimized. A stabilized construction access (a point of entrance/exit to a construction site) shall be described and implemented, as needed, to reduce the tracking of mud and dirt onto public roads by construction vehicles.
- o) Permittees shall maintain a rain gauge and daily rainfall records at the site, or use a reference site for a record of daily amount of precipitation.

3.5.3.2. Stabilization practices

The [SWPPP](#) shall include a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized. Site plans should comply with [buffer zone](#) requirements (see sections 4.1.2

and 5.4.2 below), if applicable, in which construction activities, borrow and/or fill are prohibited. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Use of impervious surfaces for final stabilization in lieu of a permanent vegetative cover should be avoided where practicable. No stabilization, erosion prevention and sediment control measures are to be installed in a stream without obtaining a Section 404 permit and an [Aquatic Resources Alteration Permit](#) (ARAP), if such permits are required and appropriate.

Stabilization measures shall be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased. Temporary or permanent soil stabilization at the construction site (or a phase of the project) must be completed no later than 15 days after the construction activity in that portion of the site has temporarily or permanently ceased. In the following situations, [temporary stabilization](#) measures are not required:

- a) where the initiation of stabilization measures is precluded by snow cover or frozen ground conditions or adverse soggy ground conditions, stabilization measures shall be initiated as soon as practicable; or
- b) where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 15 days.

[Steep slopes](#) shall be temporarily stabilized not later than 7 days after construction activity on the slope has temporarily or permanently ceased.

Permanent stabilization with perennial vegetation (using native herbaceous and woody plants where practicable) or other permanently stable, non-eroding surface shall replace any temporary measures as soon as practicable. Unpacked gravel containing fines (silt and clay sized particles) or crusher runs will not be considered a non-eroding surface.

3.5.3.3. Structural practices

The [SWPPP](#) shall include a description of structural practices to divert flows from exposed soils, store flows or otherwise limit runoff and discharge of pollutants from exposed areas of the site. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural controls shall not be placed in streams or wetlands except as authorized by a section 404 permit and/or [Aquatic Resources Alteration Permit](#) (ARAP).

Erosion prevention and sediment control measures must be prepared in accordance with good engineering practices and the latest edition of the [Tennessee Erosion and Sediment Control Handbook](#). In addition, erosion prevention and sediment controls shall be designed to minimize erosion and maximize sediment removal resulting from a [2-year, 24-hour storm](#) (the design storm – see part 10 below: “2-year and 5-year design storm depths and intensities”), as a minimum, either from total rainfall in the designated period or the equivalent intensity as specified on the following website http://hdsc.nws.noaa.gov/hdsc/pfds/orb/tn_pfds.html. When clay and other fine particle soils are present at the construction site, chemical treatment may be used to minimize amount of sediment being discharged.

For an on-site outfall which receives drainage from 10 or more acres, a minimum sediment basin volume that will provide treatment for a calculated volume of runoff from a [2 year, 24 hour storm](#) and runoff from each acre drained, or equivalent control measures as specified in the [Tennessee Erosion and Sediment Control Handbook](#), shall be provided until final stabilization of the site. A drainage area of 10 or more acres includes both disturbed and undisturbed portions of the site or areas adjacent to the site, all draining through the common outfall. Where an equivalent control measure is substituted for a sediment retention basin, the equivalency must be justified to the division. Runoff from any undisturbed acreage should be diverted around the disturbed area and the sediment basin. Diverted runoff can be omitted from the volume calculation. Sediment storage expected from the disturbed areas must be included.

All calculations of drainage areas, runoff coefficients and basin volumes must be provided in the [SWPPP](#). The discharge structure from a sediment basin must be designed to retain sediment during the lower flows. Muddy water to be pumped from excavation and work areas must be held in settling basins or filtered or chemically treated prior to its discharge into surface waters. Water must be discharged through a pipe, well-grassed or lined channel or other equivalent means so that the discharge does not cause erosion and sedimentation. Discharged water must not cause an objectionable color contrast with the receiving stream.

3.5.4. Stormwater management

The [SWPPP](#) shall include a description of any measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed.

For projects discharging to waters considered impaired by sediment or habitat alteration due to in-channel erosion, the [SWPPP](#) shall include a description of measures that will be installed during the construction process to control pollutants and any increase in the volume of stormwater discharges that will occur after construction operations have been completed. For [steep slope](#) sites, the [SWPPP](#) shall also include a description of measures that will be installed to dissipate the volume and energy of the stormwater runoff to pre-development levels.

This permit only addresses the installation of stormwater management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed, the site has undergone final stabilization, and the permit coverage has been terminated. Permittees are only responsible for the installation and maintenance of stormwater management measures prior to final stabilization of the site, and are not responsible for maintenance after stormwater discharges associated with construction activity have been eliminated from the site. All permittees are encouraged to limit the amount of post construction runoff, if not required by local building regulations or local [MS4](#) program requirements, in order to minimize in-stream channel erosion in the receiving stream.

Construction stormwater runoff management practices may include: stormwater detention structures (including ponds with a permanent pool); stormwater retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices).

Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide a non-erosive velocity flow from the structure to the receiving stream so that the natural physical and biological characteristics and functions of the stream are

maintained and protected (e.g., there should be no significant changes in the hydrological regime of the receiving water). The [SWPPP](#) shall include an explanation of the technical basis used to select the velocity dissipation devices to control pollution where flows exceed pre-development levels. The [Tennessee Erosion and Sediment Control Handbook](#) provides measures that can be incorporated into the design or implemented on site to decrease erosive velocities. An [Aquatic Resources Alteration Permit](#) (ARAP) may be required if such velocity dissipation devices installed would alter the receiving stream and/or its banks.

3.5.5. Other items needing control

- a) No solid materials, including building materials, shall be placed in [waters of the state](#), except as authorized by a section 404 permit and/or [Aquatic Resources Alteration Permit](#) (ARAP)(see part 9 below).
- b) For installation of any waste disposal systems on site, or sanitary sewer or septic system, the [SWPPP](#) shall identify these systems and provide for the necessary EPSC controls. Permittees must also comply with applicable state and/or local waste disposal, sanitary sewer or septic system regulations for such systems to the extent these are located within the permitted area.
- c) The [SWPPP](#) shall include a description of construction and waste materials expected to be stored on-site. The [SWPPP](#) shall also include a description of controls used to reduce pollutants from materials stored on site, including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response.
- d) A description of stormwater sources from areas other than construction and a description of controls and measures that will be implemented at those sites.
- e) A description of measures necessary to prevent “taking” of legally protected state or federal listed threatened or endangered aquatic fauna and/or critical habitat (if applicable). The permittee must describe and implement such measures to maintain eligibility for coverage under this permit.

3.5.6. Approved local government sediment and erosion control requirements

Permittees must comply with any additional erosion prevention, sediment controls and stormwater management measures required by a local municipality or permitted [MS4](#) program.

3.5.7. Maintenance

The [SWPPP](#) shall describe procedures to ensure that vegetation, erosion and sediment control measures, [buffer zones](#), and other protective measures identified in the site plan are kept in good and effective operating condition. Maintenance needs identified in inspections or by other means shall be accomplished before the next storm event, but in no case more than 7 days after the need is identified.

3.5.8. Inspections

3.5.8.1. Inspector training and certification

Inspectors performing the required twice weekly inspections must have an active certification by completing the “[Fundamentals of Erosion Prevention and Sediment Control Level I](#)” course. A copy of the certification or training record for inspector certification should be kept on site.

3.5.8.2. Schedule of inspections

- a) Inspections described in paragraphs b, c and d below, shall be performed at least twice every calendar week. Inspections shall be performed at least 72 hours apart. Where sites or portion(s) of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g., site covered with snow or ice) or due to extreme drought, such inspection only has to be conducted once per month until thawing or precipitation results in runoff or construction activity resumes. Inspection requirements do not apply to definable areas that have been finally stabilized, as described in subpart 3.1 above. Written notification of the intent to change the inspection frequency and the justification for such request must be submitted to the local Environmental Field Office, or the division's Nashville Central Office for projects of the Tennessee Department of Transportation (TDOT) and the Tennessee Valley Authority (TVA). Should the division discover that monthly inspections of the site are not appropriate due to insufficient stabilization measures or otherwise, twice weekly inspections shall resume. The division may inspect the site to confirm or deny the notification to conduct monthly inspections.
- b) Qualified personnel, as defined in section 3.5.8.1 above (provided by the permittee or cooperatively by multiple permittees) shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site, and each outfall.
- c) Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site's drainage system. Erosion prevention and sediment control measures shall be observed to ensure that they are operating correctly.
- d) Outfall points (where discharges leave the site and/or enter [waters of the state](#)) shall be inspected to determine whether erosion prevention and sediment control measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.
- e) Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event, but in no case more than 7 days after the need is identified.
- f) Based on the results of the inspection, the site description identified in the [SWPPP](#) in accordance with section 3.5.1 above and pollution prevention measures identified in the [SWPPP](#) in accordance with section 3.5.2 above shall be revised as appropriate, but in no case later than 7 days following the inspection. Such modifications shall provide for timely implementation of any changes to the [SWPPP](#), but in no case later than 14 days following the inspection.
- g) All inspections shall be documented on the Construction Stormwater Inspection Certification form provided in Appendix C of this permit for all construction sites. An alternative inspection form may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the division's form (Appendix C) and the permittee has obtained a written approval from the division to use the alternative form. Inspection documentation will be maintained on site and made available to the division upon request. Inspection reports must be submitted to the division within 10 days of the request. If the division requests the Construction Stormwater Inspection Certification form to be submitted, the submitted form must contain the printed name and

signature of the trained certified inspector and the person who meets the signatory requirements of section 7.7.2 below of this permit.

- h) Trained certified inspectors shall complete inspection documentation to the best of their ability. Falsifying inspection records or other documentation or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.
- i) Subsequent operator(s) (primary permittees) who have obtained coverage under this permit should conduct twice weekly inspections, unless their portion(s) of the site has been temporarily stabilized, or runoff is unlikely due to winter conditions or due to extreme drought as stated in paragraph a) above. The primary permittee (such as a developer) is no longer required to conduct inspections of portions of the site that are covered by a subsequent primary permittee (such as a home builder).

3.5.9. Pollution prevention measures for non-stormwater discharges

Sources of non-stormwater listed in section 1.2.3 above of this permit that are combined with stormwater discharges associated with construction activity must be identified in the SWPPP. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Any non-stormwater must be discharged through stable discharge structures. Estimated volume of the non-stormwater component(s) of the discharge must be included in the design of all impacted control measures.

3.5.10. Documentation of permit eligibility related to Total Maximum Daily Loads (TMDL)

The SWPPP must include documentation supporting a determination of permit eligibility with regard to waters that have an approved TMDL for a pollutant of concern, including:

- a) identification of whether the discharge is identified, either specifically or generally, in an approved TMDL and any associated wasteload allocations, site-specific requirements, and assumptions identified for the construction stormwater discharge;
- b) summaries of consultation with the division on consistency of SWPPP conditions with the approved TMDL, and
- c) measures taken to ensure that the discharge of TMDL identified pollutants from the site is consistent with the assumptions and requirements of the approved TMDL, including any specific wasteload allocation that has been established that would apply to the construction stormwater discharge.

4. CONSTRUCTION AND DEVELOPMENT EFFLUENT GUIDELINES

4.1. Non-Numeric Effluent Limitations

Any point source authorized by this general permit must achieve, at a minimum, the effluent limitations representing the degree of effluent reduction attainable by application of best practicable control technology (BPT) currently available and is described in sections 4.1.1 through 4.1.7 below.

4.1.1. Erosion Prevention and Sediment Controls

Design, install and maintain effective erosion prevention and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:

- (1) Control stormwater volume and velocity within the site to minimize soil erosion;
- (2) Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;
- (3) Minimize the amount of soil exposed during construction activity;
- (4) Minimize the disturbance of [steep slopes](#);
- (5) Eliminate (or minimize if complete elimination is not possible) sediment discharges from the site. The design, installation and maintenance of erosion prevention and sediment controls must address factors such as the design storm (see sub-section 3.5.3.3 above) and soil characteristics, including the range of soil particle sizes expected to be present on the site;
- (6) Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible (see section 4.1.2 below); and
- (7) Minimize soil compaction and, unless infeasible, preserve topsoil.

4.1.2. Buffer zone requirements

[Buffer zone](#) requirements in this section apply to all streams adjacent to construction sites, with an exception for streams designated as impaired or Exceptional Tennessee waters (see section 5.4.2 below). A 30-foot natural riparian [buffer zone](#) adjacent to all streams at the construction site shall be preserved, to the maximum extent practicable, during construction activities at the site. The water quality [buffer zone](#) is required to protect [waters of the state](#) (e.g., perennial and intermittent streams, rivers, lakes, wetlands) located within or immediately adjacent to the boundaries of the project, as identified using methodology from Standard Operating Procedures for Hydrologic Determinations (see rules to implement a certification program for Qualified Hydrologic Professionals, [TN Rules Chapter 0400-40-17](#)). [Buffer zones](#) are not primary sediment control measures and should not be relied on as such. Rehabilitation and enhancement of a natural [buffer zone](#) is allowed, if necessary, for improvement of its effectiveness of protection of the [waters of the state](#). The [buffer zone](#) requirement only applies to new construction sites, as described in section 2.4.2 above.

The riparian [buffer zone](#) should be preserved between the top of stream bank and the disturbed construction area. The 30-foot criterion for the width of the [buffer zone](#) can be established on an average width basis at a project, as long as the minimum width of the [buffer zone](#) is more than 15 feet at any measured location.

Every attempt should be made for construction activities not to take place within the [buffer zone](#). [BMPs](#) providing equivalent protection to a receiving stream as a natural riparian zone may be used at a construction site. Such equivalent [BMPs](#) shall be designed to be as effective in protecting the receiving stream from effects of stormwater runoff as a natural riparian zone. A justification for use and a design of equivalent [BMPs](#) shall be included in the [SWPPP](#). Such equivalent [BMPs](#) are expected to be routinely used at construction projects typically located adjacent to surface waters. These projects include, but are not limited to: sewer line construction,

roadway construction, utility line or equipment installation, greenway construction, construction of a permanent outfall or a velocity dissipating structure, etc.

This requirement does not apply to any valid [Aquatic Resources Alteration Permit](#) (ARAP), or equivalent permits issued by federal authorities. Additional [buffer zone](#) requirements may be established by the local [MS4](#) program.

4.1.2.1. Buffer zone exemption based on existing uses

[Buffer zones](#) as described in section 4.1.2 above shall not be required to portions of the buffer where certain land uses exist and are to remain in place according to the following:

1. A use shall be considered existing if it was present within the [buffer zone](#) as of the date of the Notice of Intent for coverage under the CGP. Existing uses shall include, but not be limited to, buildings, parking lots, roadways, utility lines and on-site sanitary sewage systems. Only the portion of the [buffer zone](#) that contains the footprint of the existing land use is exempt from [buffer zones](#). Activities necessary to maintain uses are allowed provided that no additional vegetation is removed from the [buffer zone](#).
2. If an area with an existing land use is proposed to be converted to another use or the impervious surfaces located within the buffer area are being removed [buffer zone](#) requirements shall apply.

4.1.2.2. Pre-Approved Sites

Construction activity at sites that have been pre-approved before February 1, 2010, are exempt from the buffer requirements of section 4.1.2 above. Evidence of pre-approval for highway projects shall be a final right-of-way plan and for other construction projects, the final design drawings with attached dated, written approval by the local, state or federal agency with authority to approve such design drawings for construction.

4.1.3. Soil stabilization

Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have temporarily or permanently ceased on any portion of the site, and will not resume for a period exceeding 14 calendar days. Soil stabilization (temporary or permanent) of those of disturbed areas must be completed as soon as possible, but not later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures (such as, but not limited to: properly anchored mulch, soil binders, matting) must be employed.

4.1.4. Dewatering

Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. Appropriate controls include, but are not limited to: weir tank, dewatering tank, gravity bag filter, sand media particulate filter, pressurized bag filter, cartridge filter or other control units providing the level of treatment necessary to comply with permit requirements.

4.1.5. Pollution prevention measures

The permittee must design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:

- (1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
- (2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and
- (3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

4.1.6. Prohibited discharges

The following discharges are prohibited:

- (1) Wastewater from washout of concrete, unless managed by an appropriate control;
- (2) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
- (3) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
- (4) Soaps or solvents used in vehicle and equipment washing.

4.1.7. Surface outlets

When discharging from basins and impoundments, utilize outlet structures that only withdraw water from near the surface of the basin or impoundment, unless infeasible.

5. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, AND OTHER NON-NUMERIC LIMITATIONS

5.1. Releases in Excess of Reportable Quantities

The discharge of hazardous substances or oil in the stormwater discharge(s) from a facility shall be prevented or minimized in accordance with the applicable stormwater pollution prevention plan for the facility. This permit does not relieve the permittee of the reporting requirements of [40 CFR 117](#) and [40 CFR 302](#). Where a release containing a hazardous substance in an amount

equal to or in excess of a reportable quantity established under either [40 CFR 117](#) or [40 CFR 302](#) occurs during a 24 hour period:

- a) the permittee is required to notify the National Response Center (NRC) (800-424-8802) and the Tennessee Emergency Management Agency (emergencies: 800-262-3300; non-emergencies: 800-262-3400) in accordance with the requirements of [40 CFR 117](#) or [40 CFR 302](#) as soon as he or she has knowledge of the discharge;
- b) the permittee shall submit, within 14 days of knowledge of the release, a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, what actions were taken to mitigate effects of the release, and steps to be taken to minimize the chance of future occurrences, to the appropriate Environmental Field Office (see subpart 2.8 above); and
- c) the [SWPPP](#) required under part 3 above of this permit must be updated within 14 days of knowledge of the release: to provide a description of the release, the circumstances leading to the release, and the date of the release. This can be accomplished by including a copy of a written description of the release as described in the paragraph b) above. In addition, the [SWPPP](#) must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

5.2. Spills

This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

5.3. Discharge Compliance with State Water Quality Standards

5.3.1. Violation of Water Quality Standards

This permit does not authorize stormwater or other discharges that would result in a violation of a state water quality standard (the TDEC Rules, Chapters [1200-4-3](#), [1200-4-4](#)). Such discharges constitute a violation of this permit.

Where a discharge is already authorized under this permit and the division determines the discharge to cause or contribute to the violation of applicable state water quality standards, the division will notify the [operator](#) of such violation(s). The permittee shall take all necessary actions to ensure future discharges do not cause or contribute to the violation of a water quality standard and shall document these actions in the [SWPPP](#).

5.3.2. Discharge quality

- a) The construction activity shall be carried out in such a manner that will prevent violations of water quality criteria as stated in the TDEC Rules, [Chapter 1200-4-3-.03](#). This includes but is not limited to the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of waters of the state for any of the uses designated for that water body by TDEC Rules, [Chapter 1200-4-4](#). Construction activity carried out in the manner required by this permit shall be considered compliance with the TDEC Rules, [Chapter 1200-4-3-.03](#).
- b) There shall be no distinctly visible floating scum, oil or other matter contained in the stormwater discharge.
- c) The stormwater discharge must not cause an objectionable color contrast in the receiving stream.
- d) The stormwater discharge must result in no materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream. This provision includes species covered under subpart 1.3 above.

5.4. Discharges into Impaired or Exceptional Tennessee Waters

5.4.1. Additional SWPPP/BMP Requirements for discharges into impaired or exceptional TN Waters

Discharges that would add loadings of a pollutant that is identified as causing or contributing to an impairment of a water body on the list of [impaired waters](#), or which would cause degradation to waters designated by TDEC as Exceptional Tennessee waters are not authorized by this permit (see subpart 1.3 above). To be eligible to obtain and maintain coverage under this permit, the [operator](#) must satisfy, at a minimum, the following additional requirements for discharges into waters impaired by siltation (or discharges upstream of such waters and because of the proximity to the impaired segment and the nature of the discharge is likely to contribute pollutants of concern in amounts measurable in the impaired segment that may affect the [impaired waters](#)) and for discharges to waters identified by TDEC as Exceptional Tennessee waters (or discharges upstream of such waters and because of the proximity to the exceptional segment and the nature of the discharge is likely to contribute pollutants of concern in amounts measurable in the exceptional segment that may affect the Exceptional Tennessee waters):

- a) The [SWPPP](#) must certify that erosion prevention and sediment controls used at the site are designed to control storm runoff generated by a [5-year, 24-hour storm](#) event (the design storm - see part 10 below: “2-year and 5-year design storm depths and intensities”), as a minimum, either from total rainfall in the designated period or the equivalent intensity as specified on the following website http://hdsc.nws.noaa.gov/hdsc/pfds/orb/tn_pfds.html. When clay and other fine particle soils are found on sites, additional physical or chemical treatment of stormwater runoff may be used.
- b) The [SWPPP](#) must be prepared by a person who, at a minimum, has completed the department’s [Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites](#) course. This requirement goes in effect 24 months following the new permit effective date. A copy of the certification or training record for inspector certification should be included with the [SWPPP](#).

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- c) The permittee shall perform inspections described in section 3.5.8 above at least twice every calendar week. Inspections shall be performed at least 72 hours apart.
- d) The permittee must certify on the form provided in Appendix C of this permit whether or not all planned and designed erosion prevention and sediment controls are installed and in working order. The form must contain the printed name and signature of the inspector and the certification must be executed by a person who meets the signatory requirements of section 7.7.2 below of this permit. The record of inspections must be kept at the construction site with a copy of the [SWPPP](#). For record retention requirements, see part 6 below.
- e) In the event the division finds that a discharger is complying with the [SWPPP](#), but contributing to the impairment of receiving stream, then the discharger will be notified by the director in writing that the discharge is no longer eligible for coverage under the general permit. The permittee may update the [SWPPP](#) and implement the necessary changes designed to eliminate further impairment of the receiving stream. If the permittee does not implement the [SWPPP](#) changes within 7 days of receipt of notification, the permittee will be notified in writing that continued discharges must be covered by an individual permit (see subpart 7.12 below). To obtain the individual permit, the [operator](#) must file an individual permit application (EPA Forms 1 and 2F). The project must be stabilized immediately until the [SWPPP](#) is updated and the individual permit is issued. Only discharges from earth disturbing activities necessary for stabilization are authorized to continue until the individual permit is issued.
- f) For an on-site outfall in a drainage area of a total of 5 or more acres, a minimum temporary (or permanent) sediment basin volume that will provide treatment for a calculated volume of runoff from a [5 year, 24 hour storm](#) and runoff from each acre drained, or equivalent control measures as specified in the [Tennessee Erosion and Sediment Control Handbook](#), shall be provided until final stabilization of the site. A drainage area of 5 or more acres includes both disturbed and undisturbed portions of the site or areas adjacent to the site, all draining through the common outfall. Where an equivalent control measure is substituted for a sediment retention basin, the equivalency must be justified. Runoff from any undisturbed acreage should be diverted around the disturbed area and the sediment basin and, if so, can be omitted from the volume calculation. Sediment storage expected from the disturbed areas must be included and a marker installed signifying a cleanout need.
- g) The director may require revisions to the [SWPPP](#) necessary to prevent a negative impact to legally protected state or federally listed aquatic fauna, their habitat, or the receiving waters.

5.4.2. Buffer zone requirements for discharges into impaired or exceptional TN waters

For sites that contain and/or are adjacent to a receiving stream designated as impaired or Exceptional Tennessee waters a 60-foot natural riparian [buffer zone](#) adjacent to the receiving stream shall be preserved, to the maximum extent practicable, during construction activities at the site. The water quality [buffer zone](#) is required to protect [waters of the state](#) (e.g., perennial and intermittent streams, rivers, lakes, wetlands) located within or immediately adjacent to the boundaries of the project, as identified using methodology from Standard Operating Procedures for Hydrologic Determinations (see rules to implement a certification program for Qualified Hydrologic Professionals, [TN Rules Chapter 0400-40-17](#)). [Buffer zones](#) are not primary sediment control measures and should not be relied on as such. Rehabilitation and enhancement of a natural [buffer zone](#) is allowed, if necessary, for improvement of its effectiveness of

protection of the [waters of the state](#). The [buffer zone](#) requirement only applies to new construction sites, as described in section 2.4.2 above.

The natural [buffer zone](#) should be established between the top of stream bank and the disturbed construction area. The 60-foot criterion for the width of the [buffer zone](#) can be established on an average width basis at a project, as long as the minimum width of the [buffer zone](#) is more than 30 feet at any measured location.

Every attempt should be made for construction activities not to take place within the [buffer zone](#). [BMPs](#) providing equivalent protection to a receiving stream as a natural riparian zone may be used at a construction site. Such equivalent [BMPs](#) shall be designed to be as effective in protecting the receiving stream from effects of stormwater runoff as a natural [buffer zone](#). A justification for use and a design of equivalent [BMPs](#) shall be included in the [SWPPP](#). Such equivalent [BMPs](#) are expected to be routinely used at construction projects typically located adjacent to surface waters. These projects include, but are not limited to: sewer line construction, roadway construction, utility line or equipment installation, greenway construction, construction of a permanent outfall or a velocity dissipating structure, etc.

This requirement does not apply to an area that is being altered under the authorization of a valid [Aquatic Resources Alteration Permit](#) (ARAP), or equivalent permits issued by federal authorities. Additional natural [buffer zone](#) requirements may be established by the local [MS4](#) program.

5.4.2.1. Buffer zone exemption based on existing uses

[Buffer zones](#) as described in section 5.4.2 above shall not be required to portions of the buffer where certain land uses exist and are to remain in place according to the following:

1. A use shall be considered existing if it was present within the [buffer zone](#) as of the date of the Notice of Intent for coverage under the CGP. Existing uses shall include, but not be limited to, buildings, parking lots, roadways, utility lines and on-site sanitary sewage systems. Only the portion of the [buffer zone](#) that contains the footprint of the existing land use is exempt from [buffer zones](#). Activities necessary to maintain uses are allowed provided that no additional vegetation is removed from the [buffer zone](#).
2. If an area with an existing land use is proposed to be converted to another use or the impervious surfaces located within the buffer area are being removed [buffer zone](#) requirements shall apply.

5.4.3. Pre-Approved sites

Construction activity at sites that have been pre-approved before June 16, 2005, are exempt from the design storm requirements of section 5.4.1 a) and e) above and the buffer requirements of section 5.4.2 above. Evidence of pre-approval for highway projects shall be a final right-of-way plan and for other construction projects, the final design drawings with attached dated, written approval by the local, state or federal agency with authority to approve such design drawings for construction.

6. RETENTION, ACCESSIBILITY AND SUBMISSION OF RECORDS

6.1. Documents

The permittee shall retain copies of stormwater pollution prevention plans and all reports required by this permit, and records of all data used to complete the NOI and the NOT to be covered by this permit, for a period of at least three years from the date the notice of termination is submitted. This period may be extended by written request of the director.

6.2. Accessibility and Retention of Records

The permittee shall retain a copy of the [SWPPP](#) required by this permit (including a copy of the permit) at the construction site (or other local location accessible to the director and the public) from the date construction commences to the date of termination of permit coverage. Permittees with day-to-day operational control over pollution prevention plan implementation shall have a copy of the [SWPPP](#) available at a central location onsite for the use of all [operators](#) and those identified as having responsibilities under the plan whenever they are on the construction site. Once coverage is terminated, the permittee shall maintain a copy of all records for a period of three years.

6.2.1. Posting information at the construction site

The permittee shall post a notice near the main entrance of the construction site accessible to the public with the following information:

- a) a copy of the NOC with the NPDES permit tracking number for the construction project;
- b) name, company name, E-mail address (if available), telephone number and address of the project site owner/operator or a local contact person;
- c) a brief description of the project; and
- d) the location of the [SWPPP](#) (see section 3.3.3 above).

The notice must be maintained in a legible condition. If posting this information near a main entrance is infeasible due to safety concerns, or not accessible to the public, the notice shall be posted in a local public building. If the construction project is a [linear construction project](#) (e.g., pipeline, highway, etc.), the notice must be placed in a publicly accessible location near where construction is actively underway and moved as necessary. This permit does not provide the public with any right to trespass on a construction site for any reason, including inspection of a site. This permit does not require that permittees allow members of the public access to a construction site.

The permittee shall also retain following items/information in an appropriate location on-site:

- a) a rain gauge;
- b) a copy of twice weekly inspection reports;
- c) a documentation of quality assurance site assessments, if applicable (see section 3.1.2 above); and
- d) a copy of the site inspector's [Fundamentals of Erosion Prevention and Sediment Control Level 1](#) certification.

6.3. Electronic Submission of NOIs, NOTs and Reports

If the division notifies dischargers (directly by mail or E-mail, by public notice, or by making information available on the world wide web) of electronic forms or other report options that become available at a later date (e.g., electronic submission of forms), the operators may take advantage of those options to satisfy the NOI, NOT and other report notification requirements.

7. STANDARD PERMIT CONDITIONS

7.1. Duty to Comply

7.1.1. Permittee's duty to comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Tennessee Water Quality Control Act (TWQCA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

7.1.2. Penalties for violations of permit conditions

Pursuant to [T.C.A. § 69-3-115](#) of The Tennessee Water Quality Control Act of 1977, as amended:

- a) any person who violates an effluent standard or limitation or a water quality standard established under this part ([T.C.A. § 69-3-101](#), et. seq.); violates the terms or conditions of this permit; fails to complete a filing requirement; fails to allow or perform an entry, inspection, monitoring or reporting requirement; violates a final determination or order of the board, panel or commissioner; or violates any other provision of this part or any rule or regulation promulgated by the board, is subject to a civil penalty of up to ten thousand dollars (\$10,000) per day for each day during which the act or omission continues or occurs;
- b) any person unlawfully polluting the waters of the state or violating or failing, neglecting, or refusing to comply with any of the provisions of this part ([T.C.A. § 69-3-101](#), et. seq.) commits a Class C misdemeanor. Each day upon which such violation occurs constitutes a separate offense;
- c) any person who willfully and knowingly falsifies any records, information, plans, specifications, or other data required by the board or the commissioner, or who willfully and knowingly pollutes the waters of the state, or willfully fails, neglects or refuses to comply with any of the provisions of this part ([T.C.A. § 69-3-101](#), et. seq.) commits a Class E felony and shall be punished by a fine of not more than twenty-five thousand dollars (\$25,000) or incarceration, or both.

7.1.3. Civil and criminal liability

Nothing in this permit shall be construed to relieve the discharger from civil or criminal penalties for noncompliance. Notwithstanding this permit, the discharger shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge to any surface or subsurface waters. Additionally, notwithstanding this permit, it shall be the responsibility of the discharger to

conduct stormwater discharge activities in a manner such that public or private nuisances or health hazards will not be created. Furthermore, nothing in this permit shall be construed to preclude the State of Tennessee from any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or the Federal Water Pollution Control Act.

7.1.4. Liability under state law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable local, state or federal law.

7.2. Continuation of the Expired General Permit

Permittees shall maintain coverage under this general permit until a new general permit is issued. Permittees who choose not to maintain coverage under the expired general permit, or are required to obtain an individual permit, must submit an application (U.S. EPA NPDES Forms [1](#) and [2F](#) and any other [applicable forms](#)) at least 180 days prior to expiration of this general permit. Permittees who are eligible and choose to be covered by the new general permit must submit an NOI by the date specified in that permit. Facilities that have not obtained coverage under this permit by the permit expiration date cannot become authorized to discharge under the continued permit.

[Operator\(s\)](#) of an existing site permitted under the division's 2005 construction general permit shall maintain full compliance with the existing [SWPPP](#). The existing [SWPPP](#) should be modified, if necessary, to meet requirements of this new general permit, and the [SWPPP](#) changes implemented no later than 12 months following the new permit effective date. The permittee shall make the updated [SWPPP](#) available for the division's review upon request.

7.3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

7.4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

7.5. Duty to Provide Information

The permittee shall furnish to the division or an authorized representative of the division, within a time specified by the division, any information that the division may request to determine compliance with this permit or other information relevant to the protection of the [waters of the state](#). The permittee shall also furnish to the division, upon request, copies of records required to be kept by this permit.

7.6. Other Information

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the director, he or she shall promptly submit such facts or information.

7.7. Signatory Requirements

All Notices of Intent (NOIs), stormwater pollution prevention plans (SWPPPs), requests for termination of permit coverage (NOTs), Construction Stormwater Inspection Certifications, Construction Stormwater Monitoring Report forms, reports, certifications or information either submitted to the director or the operator of a large or medium municipal separate storm sewer system and/or any other information either submitted to the division, or that this permit requires be maintained by the permittee, shall be signed as described in sections 7.7.1 and 7.7.2 below and dated.

7.7.1. Signatory requirements for a Notice of Intent (NOI)³

NOI shall be signed as follows:

- a) For a corporation, by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

- (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or
- (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated site including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

NOTE: The division does not require specific assignments or delegations of authority to responsible corporate officers. The division will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

- b) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively.

³ As specified in 40 CFR 122.22(a)(1)-(3) [48 FR 14153, Apr. 1, 1983, as amended at 48 FR 39619, Sept. 1, 1983; 49 FR 38047, Sept. 29, 1984; 50 FR 6941, Feb. 19, 1985; 55 FR 48063, Nov. 16, 1990; 65 FR 30907, May 15, 2000]

- c) For a municipality, state, federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (i) the chief executive officer of the agency, or
 - (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

7.7.2. Signatory requirements for reports and other items

SWPPPs, Construction Stormwater Inspection Certification forms, reports, certifications or other information submittals required by the permit and other information requested by the division, including but not limited to Notice of Violation responses, shall be signed by a person described in section 7.7.1 above, or by a duly authorized representative of that person.

7.7.3. Duly authorized representative

For a purpose of satisfying signatory requirements for reports (see section 7.7.2 above), a person is a duly authorized representative only if:

- a) the authorization is made in writing by a person described in section 7.7.1 above;
- b) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated site or activity such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; a duly authorized representative may thus be either a named individual or any individual occupying a named position and,
- c) the written authorization is submitted to the director or an appropriate EFO (see section 2.8 above). The written authorization shall be a written document including the name of the newly authorized person and the contact information (title, mailing address, phone number, fax number and E-mail address) for the authorized person. The written authorization shall be signed by the newly authorized person accepting responsibility and by the person described in section 7.7.1 above delegating the authority.

7.7.4. Changes to authorization

If an authorization under sections 7.7.1 above or 7.7.3 above is no longer accurate because a different individual or position has responsibility as the primary or secondary permittee, but the company name (permittee name) remains the same, a new NOI and SWPPP certification shall be submitted to an appropriate EFO (see section 2.8 above) and signed by the new party who meets signatory authority satisfying the requirements of sections 7.7.1 above or 7.7.3 above. The NOI shall include the new individual's information (title, mailing address, phone number, fax number and E-mail address), the existing tracking number and the project name.

7.7.5. Signatory requirements for primary permittees

Primary permittees required to sign an NOI and [SWPPP](#) because they meet the definition of an [operator](#) (see subpart 2.2 above) shall sign the following certification statement on the NOI and [SWPPP](#):

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

7.7.6. Signatory requirements for secondary permittees

Secondary permittees (typically construction contractors) required to sign an NOI and [SWPPP](#) because they meet the definition of an [operator](#) but who are not primarily responsible for preparing an NOI and [SWPPP](#), shall sign the following certification statement on the NOI and [SWPPP](#):

“I certify under penalty of law that I have reviewed this document, any attachments, and the [SWPPP](#) referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and [SWPPP](#), I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements.”

7.8. Penalties for Falsification of Reports

Knowingly making any false statement on any report or form required by this permit may result in the imposition of criminal penalties as provided for in [Section 309 of the Clean Water Act](#) and in [T.C.A. §69-3-115](#) of the Tennessee Water Quality Control Act.

7.9. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to [Section 311 of the Clean Water Act](#) or [Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act](#) of 1980 (CERCLA).

7.10. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. The issuance of this permit does not authorize trespassing or discharges of stormwater or non-stormwater across private property.

7.11. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

7.12. Requiring an Individual Permit

7.12.1. Director can require a site to obtain an individual permit

The director may require any person authorized by this permit to apply for and/or obtain an individual NPDES permit in order to obtain adequate protection of designated uses of a receiving stream. Any interested person may petition the director in writing to take action under this paragraph, but must include in their petition the justification for such an action. Where the director requires a discharger authorized to discharge under this permit to apply for an individual NPDES permit, the director shall notify the discharger in writing that an individual permit application is required. This notification will include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application, and a statement that coverage under this general permit shall terminate upon the effective date of an individual NPDES permit or denial of coverage under an individual permit. The notification may require stabilization of the site and suspend coverage under this general permit until the individual permit is issued. Individual permit applications shall be submitted to the appropriate Environmental Field Office of the division as indicated in subpart 2.8 above of this permit. The director may grant additional time to submit the application upon request of the applicant. If a discharger fails to submit in a timely manner an individual NPDES permit application as required by the director under this paragraph, then the applicability of this permit to the discharger will be terminated at the end of the day specified by the director for application submittal.

If the decision to require an individual NPDES permit precedes the issuance of coverage under this general permit, earth disturbing activities cannot begin until the individual permit is issued.

7.12.2. Permittee may request individual permit instead of coverage under this general permit

Any discharger authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. Any discharger that knowingly cannot abide by the terms and conditions of this permit must apply for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of [40 CFR 122.26\(c\)\(1\)\(ii\)](#), with reasons supporting the request, to the appropriate division's Environmental Field Office. The request may be granted by issuance of an individual permit, or alternative general permit, if the reasons cited by the permittee are adequate to support the request.

7.12.3. Individual permit terminates general permit

When an individual NPDES permit is issued to a discharger otherwise subject to this permit, or the discharger is authorized to discharge under an alternative NPDES general permit, the applicability of this permit to the discharger is terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual NPDES permit is denied to an owner or operator otherwise subject to this permit, or the owner or operator is denied for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is terminated on the date of such denial, unless otherwise specified by the director. Coverage under the [Tennessee Multi-Sector General Permit for the Discharge of Stormwater from an Industrial Activity](#) (TMSP) will not be considered as an alternative general permit under this section without being specified by the director.

7.13. Other, Non-Stormwater, Program Requirements

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

7.14. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related equipment) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of stormwater pollution prevention plans.

Proper operation and maintenance also includes adequate laboratory quality assurance and quality control procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee, when determined by the permittee or the division to be necessary to achieve compliance with the conditions of the permit.

7.15. Inspection and Entry

The permittee shall allow authorized representatives of the Environmental Protection Agency, the director or an authorized representative of the commissioner of TDEC, or, in the case of a construction site which discharges through a municipal separate storm sewer, an authorized representative of the [MS4](#) receiving the discharge, upon the presentation of credentials and other documents as may be required by law:

- a) to enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- b) to have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
- c) to inspect any facilities or equipment (including monitoring and control equipment).

7.16. Permit Actions

This permit may be issued, modified, revoked, reissued or terminated for cause in accordance with this permit and the applicable requirements of [T.C.A. § 69-3-108](#). The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

8.1.1. Termination of builder and contractor coverage

8. REQUIREMENTS FOR TERMINATION OF COVERAGE

8.1. Termination of Developer and Builder Coverage

8.1.1. Termination process for primary permittees

Primary permittees wishing to terminate coverage under this permit must submit a completed notice of termination (NOT) form, provided in Appendix B of this permit (or copy thereof). Primary permittees who abandon the site and fail to submit the NOT will be in violation of this permit. Signs notifying the public of the construction activity shall be in place until the NOT form has been submitted. Primary permittees may terminate permit coverage only if the conditions described in items 1, 2 or 3 below occur at the site:

1. All earth-disturbing activities at the site are completed and, if applicable, construction support activities permitted under section 1.2.2 above, and the following requirements are met:
 - (a) For any areas that
 - were disturbed during construction,
 - are not covered over by permanent structures, and
 - over which the permittee had control during the construction activitiesthe requirements for final vegetative or non-vegetative stabilization described in subsection 3.5.3.2 above are met;
 - (b) The permittee has removed and properly disposed of all construction materials, waste and waste handling devices, and have removed all equipment and vehicles that were used during construction, unless intended for long-term use following termination of permit coverage;
 - (c) The permittee has removed all stormwater controls that were installed and maintained during construction, except those that are intended for long-term use following termination of permit coverage;

(d) The permittee has removed all potential pollutants and pollutant-generating activities associated with construction, unless needed for long-term use following termination of permit coverage; and

(e) The permittee must identify who is responsible for ongoing maintenance of any stormwater controls left on the site for long-term use following termination of permit coverage; or

2. The permittee has transferred control of all areas of the site for which he is responsible (including, but not limited to, infrastructure, common areas, stormwater drainage structures, sediment control basin, etc.) under this permit to another operator, and that operator has submitted an NOI and obtained coverage under this permit; or
3. The permittee obtains coverage under an individual or alternative general NPDES permit.

8.1.2. NOT review

The division will review NOTs for completeness and accuracy and, when necessary, investigate the proposed site for which the NOT was submitted. Upon completing the NOT review, the division will:

- 1) prepare and transmit a notification that a NOT form was received;
- 2) notify the applicant of needed changes to their NOT submittal; or
- 3) deny a request for termination of coverage under this general permit.

The division retains the right to deny termination of coverage under this general permit upon receipt of the NOT. If the local Environmental Field Office has information indicating that the permit coverage is not eligible for termination, written notification will be provided that permit coverage has not been terminated. The notification will include a summary of existing deficiencies. When the site meets the termination criteria, the NOT should be re-submitted.

If any permittee files for bankruptcy or the site is foreclosed on by the lender, the permittee should notify the division of the situation so that the division may assess the site to determine if permit coverage should be obtained by any other person or whether other action is needed.

8.2. Termination of Builder and Contractor Coverage

8.2.1. Termination process for secondary permittees

Secondary permittees (builders/contractors) must request termination of coverage under this permit by submitting an NOT when they are no longer an operator at the construction site. Secondary permittees receive coverage under this permit, but are not normally mailed a Notice of Coverage. Consequently, the division may, but is not required to, notify secondary permittees that their notice of termination has been received. If the division has reason to believe that the secondary permittee's NOT should not have been submitted, the division will deny the secondary permittee's NOT in writing, with specific reasons as to why the NOT should not have been submitted.

8.3. NOT certification

The NOT and the following certification must be signed in accordance with subpart 7.7 above (Signatory Requirements) of this permit:

"I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act."

8.4. Where to Submit a Notice of Termination (NOT)?

The NOT shall be submitted to the Environmental Field Office (EFO) which issued the NOC to the primary permittee. A list of counties and the corresponding EFOs is provided in subpart 2.8 above. The appropriate permit tracking number must be clearly printed on the form.

9. Aquatic Resource Alteration Permits (ARAP)

Alterations to channels or waterbodies (stream, wetland and/or other [waters of the state](#)) that are contained on, traverse through or are adjacent to the construction site, may require an [Aquatic Resources Alteration Permit](#) (ARAP) (<http://www.tn.gov/environment/permits/arap.shtml>). It is the responsibility of the developer to provide a determination of the water's status⁴. This determination must be conducted using methodology from Standard Operating Procedures for Hydrologic Determinations (see rules to implement a certification program for Qualified Hydrologic Professionals, [TN Rules Chapter 0400-40-17](#)). The permittee can make an assumption that streams/wetlands are present at the site in order to expedite the permit process. In some cases, issuance of coverage under the CGP may be delayed or withheld if the appropriate ARAP has not been obtained. At a minimum, any delay in obtaining an ARAP for water body alteration associated with the proposed project must be adequately addressed in the [SWPPP](#) prior to issuance of an NOC. Failure to obtain an ARAP prior to any actual alteration may result in enforcement action for the unauthorized alteration.

10. DEFINITIONS

"2-year and 5-year design storm depths and intensities" The estimated design rainfall amounts, for any return period interval (i.e., 2-yr, 5-yr, 25-yr, etc.) in terms of either 24-hour depths or intensities for any duration, can be found by accessing the following NOAA National Weather Service Atlas 14 data for Tennessee:

⁴ The EPA considers inventorying a site's natural features is a technique called fingerprinting. More info can be found in EPA's document - EPA's Developing Your SWPPP – A Guide for Construction Sites (EPA-833-R-06-004 May 2007)

http://hdsc.nws.noaa.gov/hdsc/pfds/orb/tn_pfds.html. Other data sources may be acceptable with prior written approval by TDEC Water Pollution Control.

“Best Management Practices” (“BMPs”) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to [waters of the state](#). BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

“Borrow Pit” is an excavation from which erodible material (typically soil) is removed to be fill for another site. There is no processing or separation of erodible material conducted at the site. Given the nature of activity and pollutants present at such excavation, a borrow pit is considered a construction activity for the purpose of this permit.

“Buffer Zone” is a strip of dense undisturbed perennial native vegetation, either original or re-established, that borders streams and rivers, ponds and lakes, wetlands, and seeps. Buffer zones are established for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the upland area and reaching surface waters. Buffer zones are most effective when stormwater runoff is flowing into and through the buffer zone as shallow sheet flow, rather than in concentrated form such as in channels, gullies, or [wet weather conveyances](#). Therefore, it is critical that the design of any development include management practices, to the maximum extent practical, that will result in stormwater runoff flowing into and through the buffer zone as shallow sheet flow. Buffer zones are established for the primary purpose of protecting water quality and maintaining a healthy aquatic ecosystem in receiving waters.

“Clearing” in the definition of discharges associated with construction activity, typically refers to removal of vegetation and disturbance of soil prior to grading or excavation in anticipation of construction activities. Clearing may also refer to wide area land disturbance in anticipation of non-construction activities; for instance, clearing forested land in order to convert forestland to pasture for wildlife management purposes. Clearing, grading and excavation do not refer to clearing of vegetation along existing or new roadways, highways, dams or power lines for sight distance or other maintenance and/or safety concerns, or cold planing, milling, and/or removal of concrete and/or bituminous asphalt roadway pavement surfaces. The clearing of land for agricultural purposes is exempt from federal stormwater NPDES permitting in accordance with Section 401(1)(1) of the 1987 Water Quality Act and state stormwater NPDES permitting in accordance with the Tennessee Water Quality Control Act of 1977 ([T.C.A. 69-3-101](#) et seq.).

“Commencement of construction” The initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.

“Common plan of development or sale” is broadly defined as any announcement or documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot. A common plan of development or sale identifies a situation in which multiple areas of disturbance are occurring on contiguous areas. This applies because the activities may take place at different times, on different schedules, by different [operators](#).

“Control measure” As used in this permit, refers to any Best Management Practice (BMP) or other method used to prevent or reduce the discharge of pollutants to [waters of the state](#).

“CWA” means the Clean Water Act of 1977 or the Federal Water Pollution Control Act ([33 U.S.C. 1251](#), et seq.)

“Department” means the Department of Environment and Conservation.

“Director” means the director, or authorized representative, of the Division of Water Pollution Control of the State of Tennessee, Department of Environment and Conservation.

“Discharge of stormwater associated with construction activity” As used in this permit, refers to stormwater point source discharges from areas where soil disturbing activities (e.g., clearing, grading, excavation, etc.), or construction materials or equipment storage or maintenance (e.g., earth fill piles, fueling, waste material etc.) are located.

“Division” means the Division of Water Pollution Control of the State of Tennessee, Department of Environment and Conservation.

“Final Stabilization” means that all soil disturbing activities at the site have been completed and one of the three following criteria is met:

- a. A uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a uniform density of at least 70 percent of the (preferably) native vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, and all slopes and channels have been permanently stabilized against erosion, or
- b. Equivalent permanent stabilization measures (such as the use of riprap; permanent geotextiles, hardened surface materials including concrete, asphalt, gabion baskets, or Reno mattresses) have been employed, or
- c. For construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural or silvicultural use.

“[Exceptional Tennessee waters](#)” are surface waters of the State of Tennessee that satisfy characteristics of exceptional Tennessee waters as listed [Chapter 1200-4-3-.06](#) of the official compilation - Rules and Regulations of the State of Tennessee. Characteristics include waters designated by the Water Quality Control Board as Outstanding National Resource Waters (ONRW); waters that provide habitat for ecologically significant populations of certain aquatic or semi-aquatic plants or animals; waters that provide specialized recreational opportunities; waters that possess outstanding scenic or geologic values; or waters where existing conditions are better than water quality standards.

“Impaired waters” (unavailable conditions waters) means any segment of surface waters that has been identified by the division as failing to support one or more classified uses. For the purpose of this permit, pollutants of concern include, but are not limited to: siltation (silt/sediment) and habitat alterations. Based on the most recent assessment information available

to staff, the division will notify applicants and permittees if their discharge is into, or is affecting, impaired waters. Resources to be used in making this determination include biennial compilations of impaired waters, databases of assessment information, updated [GIS](#) coverages (<http://tnmap.tn.gov/wpc/>), and the results of recent field surveys. [GIS](#) coverages of the streams and lakes not meeting water quality standards, plus the biennial list of impaired waters, can be found at <http://tn.gov/environment/wpc>.

“Improved sinkhole” is a natural surface depression that has been altered in order to direct fluids into the hole opening. Improved sinkhole is a type of injection well regulated under the [Underground Injection Control](#) (UIC) program. Underground injection constitutes an intentional disposal of waste waters in natural depressions, open fractures, and crevices (such as those commonly associated with weathering of limestone).

“Inspector” An inspector is a person that has successfully completed (has a valid certification from) the [“Fundamentals of Erosion Prevention and Sediment Control Level I”](#) course or equivalent course. An inspector performs and documents the required inspections, paying particular attention to time-sensitive permit requirements such as stabilization and maintenance activities. An inspector may also have the following responsibilities:

- a) oversee the requirements of other construction-related permits, such as [Aquatic Resources Alteration Permit](#) (ARAP) or Corps of Engineers permit for construction activities in or around [waters of the state](#);
- b) update field [SWPPPs](#);
- c) conduct pre-construction inspection to verify that undisturbed areas have been properly marked and initial measures have been installed; and
- d) inform the permit holder of activities that may be necessary to gain or remain in compliance with the CGP and other environmental permits.

“Linear Project” – is a land disturbing activity as conducted by an underground/overhead utility or highway department, including but not limited to any cable line or wire for the transmission of electrical energy; any conveyance pipeline for transportation of gaseous or liquid substance; any cable line or wire for communications; or any other energy resource transmission ROW or utility infrastructure, e.g., roads and highways. Activities include the construction and installation of these utilities within a corridor. Linear project activities also include the construction of access roads, staging areas, and borrow/spoil sites associated with the linear project. Land disturbance specific to the development of a residential and/or commercial subdivision or high-rise structures is not considered a linear project.

“Monthly” refers to calendar months.

“Municipal Separate Storm Sewer System” or **“MS4”** is defined at [40 CFR §122.26\(b\)\(8\)](#) to mean a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

1. Owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section [208 of the CWA](#) that discharges to waters of the United States;

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2. Designed or used for collecting or conveying stormwater;
3. Which is not a combined sewer; and
4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at [40 CFR §122.2](#).

“**NOI**” means notice of intent to be covered by this permit (see part 2 above of this permit.)

“**NOT**” means notice of termination (see part 8 above of this permit).

“**Operator**” for the purpose of this permit and in the context of stormwater associated with construction activity, means any person associated with a construction project that meets either of the following two criteria:

- a) This person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project, and is considered the primary permittee; or
- b) This person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a [SWPPP](#) for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

It is anticipated that at different phases of a construction project, different types of parties may satisfy the definition of “operator.”

“**Point source**” means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include introduction of pollutants from non point-source agricultural and silvicultural activities, including stormwater runoff from orchards, cultivated crops, pastures, range lands, and forest lands or return flows from irrigated agriculture or agricultural stormwater runoff.

“**Qualifying State, Tribal, or local erosion and sediment control program**” is one that includes, as defined in [40 CFR 122.44\(s\)](#):

- (i) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;
- (ii) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
- (iii) Requirements for construction site operators to develop and implement a stormwater pollution prevention plan. (A stormwater pollution prevention plan includes site descriptions, descriptions of appropriate control measures, copies of approved State, Tribal or local requirements, maintenance procedures, inspection procedures, and identification of non-stormwater discharges); and
- (iv) Requirements to submit a site plan for review that incorporates consideration of potential water quality impacts.

“Quality Assurance Site Assessment” means documented site inspection to verify the functionality and performance of the [SWPPP](#) and for determining if construction, operation and maintenance accurately comply with permit requirements, as presented in the narrative, engineering specifications; maps, plans and drawings; and details for erosion prevention, sediment control and stormwater management.

“Registered Engineer” and **“Registered Landscape Architect”** An engineer or landscape architect certified and registered by the [State Board of Architectural and Engineer Examiners](#) pursuant to [Section 62-202, Tennessee Code Annotated](#), to practice in Tennessee.

“Runoff coefficient” means the fraction of total rainfall that will appear at the conveyance as runoff. Runoff coefficient is also defined as the ratio of the amount of water that is NOT absorbed by the surface to the total amount of water that falls during a rainstorm.

“Sediment” means solid material, both inorganic (mineral) and organic, that is in suspension, is being transported, or has been moved from the site of origin by wind, water, gravity, or ice as a product of erosion.

“Sediment basin” A temporary basin consisting of an embankment constructed across a wet weather conveyance, or an excavation that creates a basin or by a combination of both. A sediment basin typically consists of a forebay cell, dam, impoundment, permanent pool, primary spillway, secondary or emergency spillway, and surface dewatering device. The size and shape of the basin depends on the location, size of drainage area, incoming runoff volume and peak flow, soil type and particle size, land cover, and receiving stream classification (i.e., impaired, HQ, or unimpaired).

“Sedimentation” means the action or process of forming or depositing sediment.

“Significant contributor of pollutants to waters of the state” means any discharge containing pollutants that are reasonably expected to cause or contribute to an impairment of receiving stream water quality or designated uses.

“Soil” means the unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of plants.

“Steep Slope” A natural or created slope of 35% grade or greater. Designers of sites with steep slopes must pay attention to stormwater management in the [SWPPP](#) to engineer runoff non-erosively around or over a steep slope. In addition, site managers should focus on erosion prevention on the slope(s) and stabilize the slope(s) as soon as practicable to prevent slope failure and/or sediment discharges from the project.

“Stormwater” means rainfall runoff, snow melt runoff, and surface runoff and drainage.

“Stormwater associated with industrial activity” is defined at [40 CFR 122.26\(b\)\(14\)](#) and incorporated here by reference. Most relevant to this permit is [40 CFR 122.26\(b\)\(14\)\(x\)](#), which relates to construction activity including clearing, grading, filling and excavation activities (including borrow pits containing erodible material). Disturbance of soil for the purpose of crop production is exempted from permit requirements, but stormwater discharges from agriculture-

related activities which involve construction of structures (e.g., barn construction, road construction, pond construction, etc.) are considered associated with industrial activity. Maintenance performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility, e.g. re-clearing, minor excavation performed around an existing structure necessary for maintenance or repair, and repaving of an existing road, is not considered a construction activity for the purpose of this permit.

“Stormwater discharge-related activities” include: activities which cause, contribute to, or result in point source stormwater pollutant discharges, including but not limited to: excavation, site development, grading and other surface disturbance activities; and measures to control stormwater including the siting, construction and operation of best management practices (BMPs) to control, reduce or prevent stormwater pollution.

“Stormwater Pollution Prevention Plan”(SWPPP): A written plan required by this permit that includes site map(s), an identification of construction/contractor activities that could cause pollutants in the stormwater, and a description of measures or practices to control these pollutants. It must be prepared and approved before construction begins. In order to effectively reduce erosion and sedimentation impacts, Best Management Practices (BMPs) must be designed, installed, and maintained during land disturbing activities. The SWPPP should be prepared in accordance with the [Tennessee Erosion and Sediment Control Handbook](#). The handbook is designed to provide information to planners, developers, engineers, and contractors on the proper selection, installation, and maintenance of BMPs. The handbook is intended for use during the design and construction of projects that require erosion and sediment controls to protect [waters of the state](#). It also aids in the development of SWPPPs and other reports, plans, or specifications required when participating in Tennessee's water quality regulations.

“Take” of an endangered species means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct.

“Temporary stabilization” is achieved when vegetation and/or a non-erodible surface have been established on the area of disturbance and construction activity has temporarily ceased. Under certain conditions, temporary stabilization is required when construction activities temporarily cease. However, if future construction activity is planned, permit coverage continues.

“Total maximum daily load” (TMDL) The sum of the individual wasteload allocations for point sources and load allocations for nonpoint sources and natural background ([40 CFR 130.2\(I\)](#)). TMDL is a study that: quantifies the amount of a pollutant in a stream, identifies the sources of the pollutant, and recommends regulatory or other actions that may need to be taken in order for the stream to cease being polluted. Some of the actions that might be taken are:

- 1.) Re-allocation of limits on the sources of pollutants documented as impacting streams. It might be necessary to lower the amount of pollutants being discharged under NPDES permits or to require the installation of other control measures, if necessary, to ensure that water quality standards will be met.
- 2.) For sources over which the division does not have regulatory authority, such as ordinary agricultural or forestry activities, provide information and technical assistance to other state and federal agencies that work directly with these groups to install appropriate Best Management Practices (BMPs).

Even for impacted streams, TMDL development is not considered appropriate for all bodies of water: if enforcement has already been taken and a compliance schedule has been developed; or if best management practices have already been installed for non-regulated activities, the TMDL is considered not applicable. In cases involving pollution sources in other states, the recommendation may be that another state or EPA perform the TMDL. TMDLs can also be described by the following equation:

$TMDL = \text{sum of non point sources (LA)} + \text{sum of point sources (WLA)} + \text{margin of safety}$

A list of completed TMDLs that have been approved by EPA can be found at our web site:
<http://tn.gov/environment/wpc/tmdl/approved.shtml>

“Turbidity” is the cloudiness or haziness of a fluid caused by individual particles (suspended solids) that are generally invisible to the naked eye, similar to smoke in air.

“Waters” or **“waters of the state”** means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

“Waste site” is an area where material from a construction site is disposed of. When the material is erodible, such as soil, the site must be treated as a construction site.

“Wet weather conveyances” are man-made or natural watercourses, including natural watercourses that have been modified by channelization that flow only in direct response to precipitation runoff in their immediate locality; whose channels are at all times above the ground water table; that are not suitable for drinking water supplies; and in which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months. (Rules and Regulations of the State of Tennessee, Chapter [1200-4-3-.04\(3\)](#)).

11. LIST OF ACRONYMS

ARAP	Aquatic Resource Alteration Permit
BMP	Best Management Practice
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CGP	Construction General Permit
CWA	Clean Water Act
EFO	Environmental Field Office
EPA	(U.S.) Environmental Protection Agency
EPSC	Erosion Prevention and Sediment Control
MS4	Municipal Separate Storm Sewer System
NOC	Notice of Coverage
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
ONRW	Outstanding National Resource Waters

Tennessee General Permit No. TNR100000
Stormwater Discharges from Construction Activities

POTW	Publicly Owned Treatment Works
SWPPP	Stormwater Pollution Prevention Plan
TDEC	Tennessee Department of Environment and Conservation
TDOT	Tennessee Department of Transportation
TMDL	Total Maximum Daily Load
TMSP	Tennessee Multi-Sector General Permit for the Discharge of Stormwater from an Industrial Activity
TVA	Tennessee Valley Authority
TWQCA	Tennessee Water Quality Control Act
UIC	Underground Injection Control
USGS	United States Geological Survey

(End of body of permit; appendices follow.)

Tennessee General Permit No. TNR100000
Stormwater Discharges from Construction Activities

APPENDIX A – Notice of Intent (NOI) Form
(next page)



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Water Pollution Control

6th Floor Annex, L&C Tower, 401 Church Street, Nashville, Tennessee 37243

1-888-891-8332 (TDEC)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Site or Project Name:		NPDES Tracking Number: TNR	
Street Address or Location:		Construction Start Date:	
		Estimated End Date:	
Site Description:		Latitude (dd.dddd):	
		Longitude (-dd.dddd):	
County(ies):	MS4 Jurisdiction:	Acres Disturbed:	
		Total Acres:	
Does a topographic map show dotted or solid blue lines <input type="checkbox"/> and/or wetlands <input type="checkbox"/> on or adjacent to the construction site? If wetlands are located on-site and may be impacted, attach wetlands delineation report. If an Aquatic Resource Alteration Permit has been obtained for this site, what is the permit number? ARAP Number:			
Receiving waters:			
Attach the SWPPP with the NOI <input type="checkbox"/> SWPPP Attached		Attach a site location map <input type="checkbox"/> Map Attached	
Name of Site Owner or Developer (Site-Wide Permittee): (person, company, or legal entity that has operational or design control over construction plans and specifications)			
Site Owner or Developer Contact Name: (individual responsible for site)		Title or Position: (the party who signs the certification below):	
Mailing Address:		City:	State: Zip:
Phone: ()	Fax: ()	E-mail:	
Optional Contact:		Title or Position:	
Mailing Address:		City:	State: Zip:
Phone: ()	Fax: ()	E-mail:	
Owner or Developer Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)			
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.			
Owner or Developer Name: (print or type)		Signature:	Date:
Contractor(s) Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)			
I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements.			
Primary contractor name and address: (print or type)		Signature:	Date:
Other contractor name and address: (print or type)		Signature:	Date:
Other contractor name and address: (print or type)		Signature:	Date:
OFFICIAL STATE USE ONLY			
Received Date:	Reviewer:	Field Office:	Permit Number TNR
Fee(s):	T & E Aquatic Flora and Fauna:	Impaired Receiving Stream:	Exceptional TN Water: Notice of Coverage Date:

**CONSTRUCTION ACTIVITY – STORMWATER DISCHARGES
NOTICE OF INTENT (NOI) - INSTRUCTIONS**

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Purpose of this form A completed notice of intent (NOI) must be submitted to obtain coverage under the Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activity (permit). **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant’s claim of ability to be in compliance with permit terms and conditions.** This permit is required for stormwater discharge(s) from construction activities including clearing, grading, filling and excavating (including borrow pits) of one or more acres of land. This form should be submitted at least 30 days prior to the commencement of land disturbing activities, or no later than 48 hours prior to when a new operator assumes operational control over site specifications or commences work at the site.

Permit fee (see table below) must accompany the NOI and is based on total acreage to be disturbed by an entire project, including any associated construction support activities (e.g. equipment staging yards, material storage areas, excavated material disposal areas, borrow or waste sites). There is no fee for sites less than 1 acre.

Acres Disturbed	= or > 150 acres	= or > 50 < 150 acres	= or > 5 < 50 acres	= or > 1 < 5 acres
Fee	\$7,500	\$4,000	\$1,000	\$250

Who must submit the NOI form? Per Section 2 of the permit, all site operators must submit an NOI form. “Operator” for the purpose of this permit and in the context of stormwater associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria: (1) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g. subsequent builder), or the person that is the current land owner of the construction site. This person is considered the primary permittee; or (2) The person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

Owners, developers and all contractors that meet the definition of the operator in subsection 2.2 of the permit shall apply for permit coverage on the same NOI, insofar as possible. After permit coverage has been granted to the primary permittee, any subsequent NOI submittals must include the site’s previously assigned permit tracking number and the project name. The comprehensive site-specific SWPPP shall be prepared in accordance with the requirements of part 3 of the permit and must be submitted with the NOI unless the NOI being submitted is to only add a contractor (secondary permittee) to an existing coverage.

Notice of Coverage The division will review the NOI for completeness and accuracy and prepare a notice of coverage (NOC). Stormwater discharge from the construction site is authorized as of the effective date of the NOC.

Complete the form Type or print clearly, using ink and not markers or pencil. Answer each item or enter “NA,” for not applicable, if a particular item does not fit the circumstances or characteristics of your construction site or activity. If you need additional space, attach a separate piece of paper to the NOI form. **The NOI will be considered incomplete without a permit fee, a map, and the SWPPP.**

Describe and locate the project Use the legal or official name of the construction site. If a construction site lacks street name or route number, give the most accurate geographic information available to describe the location (reference to adjacent highways, roads and structures; e.g. intersection of state highways 70 and 100). Latitude and longitude (expressed in decimal degrees) of the center of the site can be located on USGS quadrangle maps. The quadrangle maps can be obtained at the USGS World Wide Web site: <http://www.usgs.gov/>; latitude and longitude information can be found at numerous other web sites. Attach a copy of a portion of a 7.5 minute quad map, showing location of site, with boundaries at least one mile outside the site boundaries. Provide estimated starting date of clearing activities and completion date of the project, and an estimate of the number of acres of the site on which soil will be disturbed, including borrow areas, fill areas, stockpiles and the total acres. For linear projects, give location at each end of the construction area.

Give name of the receiving waters Trace the route of stormwater runoff from the construction site and determine the name of the river(s), stream(s), creek(s), wetland(s), lake(s) or any other water course(s) into which the stormwater runoff drains. Note that the receiving water course may or may not be located on the construction site. If the first water body receiving construction site runoff is unnamed (“unnamed tributary”), determine the name of the water body that the unnamed tributary enters.

ARAP permit may be required **If your work will disturb or cause alterations of a stream or wetland, you must obtain an appropriate Aquatic Resource Alteration Permit (ARAP).** If you have a question about the ARAP program or permits, contact your local Environmental Field Office (EFO).

Submitting the form and obtaining more information Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 2.5. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed NOI form (keep a copy for your records) to the appropriate EFO for the county(ies) where the construction activity is located, addressed to **Attention: Stormwater NOI Processing.**

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	540 McCallie Avenue STE 550	37402-2013
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

APPENDIX B – Notice of Termination (NOT) Form
(next page)



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)

Division of Water Pollution Control (WPC)

6th Floor Annex, L&C Tower, 401 Church Street, Nashville, Tennessee 37243

1-888-891-TDEC (8332)

Notice of Termination (NOT) for General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

This form is required to be submitted when requesting termination of coverage from the CGP. The purpose of this form is to notify the TDEC that either all stormwater discharges associated with construction activity from the portion of the identified facility where you, as an operator, have ceased or have been eliminated; or you are no longer an operator at the construction site. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the local WPC Environmental Field Office (EFO) address (see table below). For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC).

Type or print clearly, using ink and not markers or pencil.

Site or Project Name:	NPDES Tracking Number: TNR
Street Address or Location:	County(ies):

Name of Permittee Requesting Termination of Coverage:			
Permittee Contact Name :		Title or Position:	
Mailing Address:		City:	State: Zip:
Phone: ()		E-mail:	

Check the reason(s) for termination of permit coverage:

<input type="checkbox"/>	Stormwater discharge associated with construction activity is no longer occurring and the permitted area has a uniform 70% permanent vegetative cover OR has equivalent measures such as rip rap or geotextiles, in areas not covered with impervious surfaces.
<input type="checkbox"/>	You are no longer the operator at the construction site (i.e., termination of site-wide, primary or secondary permittee coverage).

Certification and Signature: (must be signed by president, vice-president or equivalent ranking elected official)

I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

For the purposes of this certification, elimination of stormwater discharges associated with construction activity means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized, the temporary erosion and sediment control measures have been removed, and/or the site or portions of the site have obtained permit coverage by subsequent operators or that all stormwater discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have otherwise been eliminated from the portion of the construction site where the operator had control.

Permittee name (print or type):	Signature:	Date:
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EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett, TN	38133	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305	Chattanooga	540 McCallie Avenue STE 550	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

APPENDIX C – Twice-Weekly Inspection Report Form
(next page)



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)
 Division of Water Pollution Control (WPC)
 6th Floor Annex, L&C Tower, 401 Church Street, Nashville, Tennessee 37243
 1-888-891-8332 (TDEC)

**General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)
 CGP Inspection Worksheet for Twice-Weekly Inspections of Erosion Prevention and Sediment Controls**

Site or Project Name:		NPDES Tracking Number: TNR
Primary Permittee Name:		Date of Inspection:
Current approximate disturbed acreage:	Has daily rainfall been documented? <input type="checkbox"/> Yes <input type="checkbox"/> No	Name of Inspector:
Current weather/site conditions:		Inspector's TNEPSC Certification Number:

Please check the box if the following items are on-site:

- Notice of Coverage (NOC)
 Stormwater Pollution Prevention Plan (SWPPP)
 Twice weekly inspection documentation
 Site contact information
 Rain Gage
 Off-site Reference Rain Gage Location: _____

Best Management Practices (BMPs):

Are the Erosion Prevention and Sediment Controls (EPSCs) functioning correctly in the following locations:

1.	Disturbed areas/material storage areas	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2.	Outfall points (or nearest accessible downstream point if an outfall is inaccessible)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3.	Construction ingress/egress points	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If the answer is "No" for any of the above, please describe the problem and corrective actions to be taken. Otherwise, describe any pertinent observations:

4.	Are (EPSCs) installed and maintained in the field per SWPPP? If "No", describe below.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.	Have site discharges caused an objectionable color contrast in the receiving stream (Permit section 5.3.2)? If "Yes", describe below the measures implemented to eliminate contrast.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6.	Have discharges from dewatering activities been managed by appropriate controls per Section 4.1.4 of the Permit? If "No", describe below the measures to be implemented to achieve compliance.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7.	If construction activity at any location on-site has temporarily/permanently ceased, was the area stabilized within 15 days per Section 3.5.3.2? If "No", describe below each location and measures taken to stabilize the area(s).	<input type="checkbox"/> Yes	<input type="checkbox"/> No
8.	Are non-stormwater discharges (per Section 1.2.3) and housekeeping measures such as storing chemicals, construction related debris litter, oils, fuels, building products, truck wash (per Section 3.5.3.1 (f) and (g)) being properly managed? If "No", describe below the measures to be implemented to achieve compliance.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
9.	If a concrete washout facility is located on site, is it clearly identified on the project and maintained? If "No", describe below the measures to be implemented to achieve compliance.	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No
10.	Have all previous deficiencies been addressed? If not, describe the remaining deficiencies. <input type="checkbox"/> Check if deficiencies/corrective measures have been reported on a previous form.	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Certification and Signature (must be signed by the certified inspector and the permittee per Sections 3.5.8.2 (g) and 7.7.2 of the CGP)

I certify under penalty of law that this report and all attachments are, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Inspector Name and Title (print or type):	Signature:	Date:
Permittee Name and Title (print or type):	Signature:	Date:

CGP Inspection Worksheet for Twice-Weekly Inspections of Erosion Prevention and Sediment Controls

Purpose of this form/ Instructions

An inspection, as described in section 3.5.8.2. of the General Permit for Stormwater Discharges from Construction Activities (“Permit”), shall be performed at least twice every calendar week and documented on this form. Inspections shall be performed at least 72 hours apart. Where sites or portion(s) of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g., site covered with snow or ice), such inspection only has to be conducted once per month until thawing results in runoff or construction activity resumes.

Inspectors performing the required twice weekly inspections must have an active certification by completing the “Fundamentals of Erosion Prevention and Sediment Control Level I” course. (<http://www.tnepsc.org/>). A copy of the certification or training record for inspector certification should be kept on site.

Qualified personnel, as defined in section 3.5.8.1 of the Permit (provided by the permittee or cooperatively by multiple permittees) shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site, and each outfall.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site’s drainage system. Erosion prevention and sediment control measures shall be observed to ensure that they are operating correctly.

Outfall points (where discharges leave the site and/or enter waters of the state) shall be inspected to determine whether erosion prevention and sediment control measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event if possible, but in no case more than 7 days after the need is identified.

Based on the results of the inspection, the site description identified in the SWPPP in accordance with section 3.5.1 of the Permit and pollution prevention measures identified in the SWPPP in accordance with section 3.5.2 of the Permit, shall be revised as appropriate, but in no case later than 7 days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than 14 days following the inspection.

All inspections shall be documented on this Construction Stormwater Inspection Certification form. Alternative inspection forms may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the division’s form and the permittee has obtained a written approval from the division to use the alternative form. Inspection documentation will be maintained on site and made available to the division upon request. Inspection reports must be submitted to the division within 10 days of the request. If the division requests the Construction Stormwater Inspection Certification form to be submitted, the submitted form must contain the printed name and signature of the trained certified inspector and the person who meets the signatory requirements of section 7.7.2 of the Permit.

Trained certified inspectors shall complete inspection documentation to the best of their ability. Falsifying inspection records or other documentation or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.

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7 – ENVIRONMENTAL PERMITS



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3655

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

December 26, 2014

Mr. Brian Canada
Natural Resource Section
Tennessee Department of Environment and Conservation
11th Floor William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue
Nashville, Tennessee 37243

Subject: Project #36010-1215-14(A)
PIN 100322.04
State Route 128
Construct from south of Opel Loop
to US-64 in Savannah
Hardin County

All permits are required by March 4, 2015.

Dear Mr. Canada:

The Tennessee Department of Transportation is proposing to widen SR-128 from South of Opel Road to SR-15 (US 64) in Savannah, Hardin County. The project involves the widening of the subject roadway from an existing two lane highway to a highway with a proposed typical section consisting of one (1) 12 ft. wide travel lane, one (1) 14 ft. wide travel lane, curb and gutter, and one (1) 5 ft. wide sidewalk in each direction, in addition to one (1) 12 ft. wide center turn lane. The project scope also includes all associated drainage improvements. The total proposed length of roadway construction and improvements equals 1.903 miles. In accordance with T.C.A. 69-3-108(b), this office is submitting form CN-1091 identifying where permits may be needed.

The primary purpose of the proposed project is to provide a balanced solution for safety and capacity issues of SR-128 between SR-226 and SR-15 (US 64). Construction of the proposed widening of SR-128 will relieve future traffic congestion and provide a safer and more efficient transportation facility for the motoring public.

In addition, and in accordance with the notification requirements of the U.S. Army Corps of Engineers, we are submitting this pre-construction notification and requesting concurrence that location number 4, as described within the enclosed feature impact tables, meets the criteria of the nationwide permit identified.

By copy of this letter, we are also applying for a Section 26a permit or a letter of no objection from the Tennessee Valley Authority. Appropriate information is enclosed. This project will not cause any loss of flood storage or power storage volumes.

Please refer to the enclosed feature impact and summary tables for detailed information regarding environmental feature locations, proposed environmental feature impacts, required environmental permits, FEMA floodplain designations, etc.

We are requesting permit coverage for the associated impacts from the gas, water, and electric utilities at each location. The utility plans were not finalized at time of application but are included with the construction contract. Utility plans will be made available to the permit agencies once finalized.

This project includes a total permanent wetland impact of 0.03 acres and a total temporary wetland impact of 0.00 acres.

As mitigation for 313 ft. (313 ft. x 1.0) of stream encapsulation, we propose a payment of \$75,120. A total payment of \$75,120 is proposed to the In-Lieu Fee Stream Mitigation Program. Please cite this payment to the TWRF in your permits. As mitigation for the stream relocation, we propose 100 ft of on-site replacement in-kind and to plant trees as shown in the enclosed permit sketch and plan sheet.

Efforts were made during the planning and design phases of this project to avoid impacts to waters of the U.S. and waters of the State to the extent practicable, and to minimize impacts that were not avoidable. Mitigation for these impacts has been proposed on the project site, where practicable.

A letter was sent from TDOT to the USFWS on November 18, 2014, transmitting mist netting survey results. In a response letter dated December 11, 2014, the USFWS concurred with TDOT's determination of "not likely to adversely affect" for these species.

A search of the TDEC Division of Natural Areas, endangered species database, was conducted on December 16, 2014. This database search identified several listed species within four miles of the proposed site. A table of the listed species can be found in the attached Environmental Boundary report. No protected species were found within the proposed project area.

A Biological Assessment was completed for this project and the conclusions are: The widening of SR-128 **May Affect, but is not likely to adversely affect** any of the species listed below. The BA addresses the following freshwater mussels and the Indiana bat (*Myotis sodalists*):

- Ring pink, *Obavaria retusa*
- Eastern fanshell pearlymussel, *Cyprogenia stegaria*
- White wartyback, *Plethobasus cicatricosus*
- Pink mucket, *Lampsilis abrupta*
- Orangefoot pimpleback, *Plethobasus cooperianus*
- Rough pigtoe, *Pleurobema plenum*
- Cracking pearlymussel, *Hemistena lata*

The project corridor was studied as part of Section 106 surveys in January 2002 and again in December 2009. The Tennessee State Historic Preservation Office (TN-SHPO) concurred with the findings of the January 2002 report on February 13, 2003 and with the findings of the

Mr. Brian Canada
December 26, 2014
Page 3

December 2009 report on February 01, 2010. TDOT historians re-drove the area of potential effects in 2013 and the SHPO agreed with the resurvey in a December 03, 2013 letter. All information regarding the findings are included the supporting documentation.

In addition to the impacts referenced above, we are requesting that the Tennessee Department of Environment and Conservation include approval for all proposed outfall structures (ditches, pipes, etc.) associated with the proposed project in your permits.

It is the opinion of this office that all other aspects of the project not specifically mentioned in this letter meet the criteria for the General Permit for Wet Weather Conveyances. Please refer to the enclosed Environmental Boundaries for more information.

By copy of this letter, we are also requesting that the TDEC and the TVA please include approval of a potential temporary stream crossing at each location in your permits. Temporary crossings will be located within right-of-way or easements. Copies of TDOT Standard Drawings EC-STR-25 (Temporary Road Stabilization and Temporary Culvert Crossing), EC-STR-31 (Temporary Diversion Channels), EC-STR-31A (Temporary Diversion Channel Design), and EC-STR-32 (Temporary Diversion Culverts) are enclosed for your information and use.

This project is currently scheduled for the March 4, 2015 turn-in. We would greatly appreciate your initial review and request for additional information needed, or issuance of the public notice, within 15 days of receipt of our application; and issuance of the permits as soon as possible.

If you have any questions or we can be of further assistance please contact me at (615) 253-2466 or Shaleen McCormick at (615) 741-5364.

Sincerely,



Melanie Bumpus
Senior Transportation Project Specialist, Environmental Permits Section

Enclosures

JLH: MBB: STM

cc: Mr. Jimmy Smith, TDEC
Ms. Tammy Turley, USACE, Nashville District
Ms. Kelly Baxter, TVA

ec: Ms. Jeanene Woodruff, TDEC
Ms. Kelly Baxter, TVA
Ms. Tabitha Cavaness, Project Management Office
Mr. Jason Blankenship, HQ (Region 4) Construction Office
Ms. Jane Jones, Region 4 Project Development
Ms. Lou Timms, Region 4 Environmental Coordinator
Mr. Tim Nehus, Region 4 Ecology Section
Mr. Ronnie Porter, Program Operations Office
Mr. Jim Vuncannon, TDOT Compliance
Mr. John Hewitt, Natural Resources Office

Mr. Brian Canada
December 26, 2014
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Permit File

FEATURE IMPACT TABLE:		Location #1 / WTL-1
Location Information		
Location #	Location #1	
Feature Name:	WTL-1	
Latitude:	35.2007°	
Longitude:	-88.2446°	
Stationing:	Sta. 874+10 RT - 875+10 RT ± (SR-128)	
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone X	
Permits Required - TDEC:	ARAP: Meets the General ARAP criteria for the Minor Alteration to Wetlands . Will only cause de minimis degradation to water quality.	
Permits Required - Corps:	Pre-Construction Notification- Nationwide #14: Impacts at this site exceed one tenth of an acre, impacts wetlands or special aquatic site; therefore, Pre-Construction Notification is required.	
Permits Required - TVA:	Section 26A	
CN-1091 Section 6: Project Description		
6.1: Narrative description of project scope	Wetland Impact	
6.2: USGS Topographic Map	Please see enclosed	
6.3: Resource photographs	Please refer to photographs in the enclosed Environmental Boundaries Report	
6.4: Existing feature characteristics	Existing area: 0.08 ac. Please refer to the enclosed Environmental Boundaries Report for more information	
6.5: Proposed feature characteristics	Permanent Impact: 0.03 ac. Temporary Impact: 0.00 ac.	
* Impact acreage to waters of the US (acres):		0.03
6.6: Wetland delineation documentation	Please refer to the enclosed Environmental Boundaries Report	
6.7: Water resource hydrologic and jurisdictional determination documentation	Please refer to the enclosed Environmental Boundaries Report	
CN-1091 Section 7: Project Rationale		
Description of the need for the proposed activity, alternatives, and impact minimization	Please refer to the enclosed cover letter for project rationale	
CN-1091 Section 8: Technical Information		
8.1: Detailed plans, specifications, etc. included for present conditions and proposed activity	Please see enclosed	
8.2: Sequencing of events and construction methods for proposed activity and compensatory mitigation	1. EPSC measures will be installed. Please refer to the enclosed EPSC sheets. 2. For the construction method at this location, please refer to the enclosed note sheet, present layout, proposed layout, profile, and culvert cross-section.	
* Proposed impact mitigation:		MITIGATION NOT REQUIRED N/A
8.3: Depiction and narrative of EPSC measures	Please refer to the enclosed plan set for the EPSC plan sheets	
CN-1091 Section 9: Water Resources Degradation (select one)		
My activity, as proposed, will not cause measurable degradation to water quality		
My activity, as proposed, will only cause de minimis degradation to water quality	X	
My activity, as proposed, will cause more than de minimis degradation to water quality (if selected, must complete Sections 10 and 11 below)		
Unsure / need more information		

FEATURE IMPACT TABLE:		Location #2 / STR-1 (UT to Julius Pond Branch)	
Location Information			
Location #	Location #2		
Feature Name:	STR-1 (UT to Julius Pond Branch)		
Latitude:	35.2023°		
Longitude:	-88.2452°		
Stationing:	Sta. 880+58.32 ± (SR-128)		
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone X		
Permits Required - TDEC:	ARAP: Meets the General ARAP criteria for the Construction and Removal of Minor Road Crossings . Will only cause de minimis degradation to water quality.		
Permits Required - Corps: No verification required	Non-Notification - Nationwide #14: This roadway crossing meets all of the following criteria required for non-notification under Nationwide #14: <ul style="list-style-type: none"> • Discharge results in the loss of less than a tenth of an acre • Does not affect a special aquatic site • Does not affect federally listed species • Does not affect historic properties All conditions of the Nationwide #14 General Permit will be followed during construction.		
Permits Required - TVA:	Section 26A		
CN-1091 Section 6: Project Description			
6.1: Narrative description of project scope	Encapsulation		
6.2: USGS Topographic Map	Please see enclosed		
6.3: Resource photographs	Please refer to photographs in the enclosed Environmental Boundaries Report		
6.4: Existing feature characteristics	Existing structure: 53 ft of 8' x 5' box culvert (to be removed) Existing open stream: 116 ft Total Existing Length: 169 ft Please refer to the enclosed Environmental Boundaries Report for more information		
6.5: Proposed feature characteristics	Proposed structure: 122 ft of 8' x 6' box culvert Proposed open stream: 47 ft Total proposed length: 169 ft (includes 47 ft of riprap at inlet and outlet ends)		
	* Impact acreage to waters of the US (acres): 0.05		
6.6: Wetland delineation documentation	N/A		
6.7: Water resource hydrologic and jurisdictional determination documentation	N/A		
CN-1091 Section 7: Project Rationale			
Description of the need for the proposed activity, alternatives, and impact minimization	Please refer to the enclosed cover letter for project rationale		
CN-1091 Section 8: Technical Information			
8.1: Detailed plans, specifications, etc. included for present conditions and proposed activity	Please see enclosed		
8.2: Sequencing of events and construction methods for proposed activity and compensatory mitigation	1. EPSC measures will be installed. Please refer to the enclosed EPSC sheets. 2. For the construction method at this location, please refer to the enclosed note sheet, present layout, proposed layout, profile, and culvert cross-section.		
	* Proposed impact mitigation: MITIGATION NOT REQUIRED		
8.3: Depiction and narrative of EPSC measures	N/A		
	Please refer to the enclosed plan set for the EPSC plan sheets		
CN-1091 Section 9: Water Resources Degradation (select one)			
My activity, as proposed, will not cause measurable degradation to water quality			
My activity, as proposed, will only cause de minimis degradation to water quality	X		
My activity, as proposed, will cause more than de minimis degradation to water quality (if selected, must complete Sections 10 and 11 below)			
Unsure / need more information			

FEATURE IMPACT TABLE:		Location #3 / STR-2 (UT to Town Branch)	
Location Information			
Location #	Location #3		
Feature Name:	STR-2 (UT to Town Branch)		
Latitude:	35.2100°		
Longitude:	-88.2463°		
Stationing:	Sta. 945+66.71 ± (SR-128)		
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone AE		
Permits Required - TDEC:	JARAP		
Permits Required - Corps: No verification required	Non-Notification - Nationwide #14: This roadway crossing meets all of the following criteria required for non-notification under Nationwide #14: <ul style="list-style-type: none"> • Discharge results in the loss of less than a tenth of an acre • Does not affect a special aquatic site • Does not affect federally listed species • Does not affect historic properties All conditions of the Nationwide #14 General Permit will be followed during construction.		
Permits Required - TVA:	Section 26A		
CN-1091 Section 6: Project Description			
6.1: Narrative description of project scope	Encapsulation		
6.2: USGS Topographic Map	Please see enclosed		
6.3: Resource photographs	Please refer to photographs in the enclosed Environmental Boundaries Report		
6.4: Existing feature characteristics	Existing structure: 300 ft to remain including 160 ft of 72" CMP, 94 ft of 6' x 5' box culvert, and 46 ft of 6' x 5' box culvert Existing open stream: 83 ft Total Existing Length: 383 ft Please refer to the enclosed Environmental Boundaries Report for more information		
6.5: Proposed feature characteristics	Proposed structure: 14 ft of 6' x 5' box culvert extension, 53 ft of 6' x 5' box culvert extension, 16 ft of 6' x 5' box culvert extension Proposed open stream: 0 ft Total proposed length: 383 ft (includes 300 ft of existing culvert)		
	* Impact acreage to waters of the US (acres): 0.05		
6.6: Wetland delineation documentation	N/A		
6.7: Water resource hydrologic and jurisdictional determination documentation	N/A		
CN-1091 Section 7: Project Rationale			
Description of the need for the proposed activity, alternatives, and impact minimization	Please refer to the enclosed cover letter for project rationale		
CN-1091 Section 8: Technical Information			
8.1: Detailed plans, specifications, etc. included for present conditions and proposed activity	Please see enclosed		
8.2: Sequencing of events and construction methods for proposed activity and compensatory mitigation	1. EPSC measures will be installed. Please refer to the enclosed EPSC sheets. 2. For the construction method at this location, please refer to the enclosed note sheet, present layout, proposed layout, profile, and culvert cross-section.		
	* Proposed impact mitigation: MITIGATION NOT REQUIRED		
8.3: Depiction and narrative of EPSC measures	N/A		
	Please refer to the enclosed plan set for the EPSC plan sheets		
CN-1091 Section 9: Water Resources Degradation (select one)			
My activity, as proposed, will not cause measurable degradation to water quality			
My activity, as proposed, will only cause de minimis degradation to water quality			
My activity, as proposed, will cause more than de minimis degradation to water quality (if selected, must complete Sections 10 and 11 below)	X		
Unsure / need more information			
CN-1091 Section 10: Detailed Alternative Analysis			
10.1: Analysis of reasonable alternatives	The proposed culvert extension is the most feasible alternative for the widening of the roadway. A span bridge for this location is not economical and would not work as an extension to the existing culvert.		
10.2: Discussion of social and economic consequences	Refer to attached NEPA document.		
10.3: Demonstration that degradation from alternative will not violate WQ criteria	Proposed mitigation. See Section 11.1.		
CN-1091 Section 11: Compensatory Mitigation			
11.1: Detailed discussion of proposed compensatory mitigation	As mitigation for 83 ft. (83 ft. x 1.00) of stream encapsulation, we propose a payment of \$ 19,920. A total payment of \$19,920 is proposed to the In-Lieu Fee Stream Mitigation Program. Please cite this payment to the TSMP in your permits.		
11.2: Description of how compensatory mitig. will result in no net loss of resource value	This stream is not habitat impaired, and therefore in-system mitigation is not required. Thus, payment into the in lieu fee system, will result in no net loss of resource value.		
11.3: Detailed monitoring plan	N/A		
11.4: Long-term protection measures for compensatory mitigation site	N/A		

FEATURE IMPACT TABLE:		Location #4 / STR-3 (Town Branch)
Location Information		
Location #	Location #4	
Feature Name:	STR-3 (Town Branch)	
Latitude:	35.2224°	
Longitude:	-88.2466°	
Stationing:	Sta. 954+43 ± (SR-128)	
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone AE	
Permits Required - TDEC:	JARAP	
Permits Required - Corps: No verification required	Non-Notification - Nationwide #14: This roadway crossing meets all of the following criteria required for non-notification under Nationwide #14: <ul style="list-style-type: none"> • Discharge results in the loss of less than a tenth of an acre • Does not affect a special aquatic site • Does not affect federally listed species • Does not affect historic properties All conditions of the Nationwide #14 General Permit will be followed during construction.	
Permits Required - TVA:	Section 26A	
CN-1091 Section 6: Project Description		
6.1: Narrative description of project scope	Encapsulation	
6.2: USGS Topographic Map	Please see enclosed	
6.3: Resource photographs	Please refer to photographs in the enclosed Environmental Boundaries Report	
6.4: Existing feature characteristics	Existing structure: 142 ft of 8' x 5' box culvert (to be removed) Existing open stream: 239 ft Total Existing Length: 381 ft Please refer to the enclosed Environmental Boundaries Report for more information	
6.5: Proposed feature characteristics	Proposed structure: 230 ft of 12' x 10' box culvert Proposed open stream: 151 ft Proposed relocation in-kind: 100 ft Total proposed length: 381 ft (includes 51 ft of riprap at inlet and outlet ends and 100 ft of stream relocation)	
* Impact acreage to waters of the US (acres):		
		0.08
6.6: Wetland delineation documentation	N/A	
6.7: Water resource hydrologic and jurisdictional determination documentation	N/A	
CN-1091 Section 7: Project Rationale		
Description of the need for the proposed activity, alternatives, and impact minimization	Please refer to the enclosed cover letter for project rationale	
CN-1091 Section 8: Technical Information		
8.1: Detailed plans, specifications, etc. included for present conditions and proposed activity	Please see enclosed	
8.2: Sequencing of events and construction methods for proposed activity and compensatory mitigation	1. EPSC measures will be installed. Please refer to the enclosed EPSC sheets. 2. For the construction method at this location, please refer to the enclosed note sheet, present layout, proposed layout, profile, and culvert cross-section.	
* Proposed impact mitigation:		
		MITIGATION NOT REQUIRED
		N/A
8.3: Depiction and narrative of EPSC measures	Please refer to the enclosed plan set for the EPSC plan sheets	
CN-1091 Section 9: Water Resources Degradation (select one)		
My activity, as proposed, will not cause measurable degradation to water quality		
My activity, as proposed, will only cause de minimis degradation to water quality		
My activity, as proposed, will cause more than de minimis degradation to water quality (if selected, must complete Sections 10 and 11 below)	X	
Unsure / need more information		
CN-1091 Section 10: Detailed Alternative Analysis		
10.1: Analysis of reasonable alternatives	The proposed culvert is the most feasible alternative for the widening of the roadway. A span bridge for this location is not economical.	
10.2: Discussion of social and economic consequences	Refer to attached NEPA document.	
10.3: Demonstration that degradation from alternative will not violate WQ criteria	Proposed mitigation. See Section 11.1.	
CN-1091 Section 11: Compensatory Mitigation		
11.1: Detailed discussion of proposed compensatory mitigation	As mitigation for 230 ft. (230 ft. x 1.00) of stream encapsulation, we propose a payment of \$ 55,200. A total payment of \$ 55,200 is proposed to the In-Lieu Fee Stream Mitigation Program. Please cite this payment to the TSMP in your permits. As part of on-site in-kind replacement, we propose to plant two rows of trees on both sides of the new channel. The proposed stream channel has been designed to mimic existing channel characteristics (size, shape, etc.) as closely as possible. For more details, see the proposed roadway plans.	
11.2: Description of how compensatory mitig. will result in no net loss of resource value	This stream is not habitat impaired, and therefore in-system mitigation is not required. Thus, payment into the in lieu fee system, will result in no net loss of resource value.	
11.3: Detailed monitoring plan	N/A	
11.4: Long-term protection measures for compensatory mitigation site	N/A	



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Water Resources

William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit

OFFICIAL STATE USE ONLY | Site #: | Permit #: |

Section 1. Applicant Information (individual responsible for site, signs certification below)

Applicant Name: Melanie Bumpus
Company: Tennessee Department of Transportation | Signatory's Title or Position: Sr. Transportation Project Specialist
Mailing Address: 505 Deaderick Street Suite 900 J.K. Polk Bldg. | City: Nashville | State: TN | Zip: 37243
Phone: (615) 253-2466 | Fax: N/A | E-mail: Melanie.Bumpus@tn.gov

Section 2. Alternate Contact/Consultant Information (a consultant is not required)

Alternate Contact Name: Shaleen McCormick
Company: Tennessee Department of Transportation | Title or Position: TDOT Consultant
Mailing Address: 505 Deaderick Street Suite 900 J.K. Polk Bldg. | City: Nashville | State: TN | Zip: 37243
Phone: (615) 741-5364 | Fax: N/A | E-mail: Shaleen.McCormick@tn.gov

Section 3. Fee (check appropriate box and submit requisite fee with application)

[X] No Fee Submitted | [] Fee Submitted with Application | Amount Submitted: \$ _____
Current fee schedules for Aquatic Resource Alteration Permit processing may be found at the Division of Water Resources webpage at
http://www.tn.gov/environment/permits/arap.shtml or by calling (615) 532-0625. Make checks payable to "Treasurer, State of Tennessee".

Section 4. Project Details (fill in information and check appropriate boxes)

Site or Project Name: Construct from South of Opel Loop to US-64 in Savannah | Nearest City, Town or Major Landmark: Savannah
Street Address or Location: SR-128, Project #36010-1215-14(A)
County(ies): Hardin | MS4 Jurisdiction: TDOT | Latitude (dd.dddd): See Feature Summary Tables | Longitude (dd.dddd): See Feature Summary Tables
Resource Proposed for Alteration: [X] Stream [X] Wetland [] Reservoir
Name of Water Resource: UT to Julius Pond Branch, UT to Town Branch, Town Branch
Brief Project Description (a more detailed description is required under Section 8):
The Tennessee Department of Transportation is proposing to widen SR-128 from South of Opel Road to SR-15 (US 64) in Savannah, Hardin County.
Does the proposed activity require approval from the U.S. Army Corps of Engineers, the Tennessee Valley Authority, or any other federal, state, or local government agency? [X] Yes [] No
If Yes, provide the permit reference numbers: USACOE and TVA 26a pending
Is the proposed activity associated with a larger common plan of development? [] Yes [X] No
If Yes, submit site plans and identify the location and overall scope of the common plan of development. Plans attached? [] Yes [X] No
If applicable, indicate any other federal, state, or local permit authorizations that the overall project site (common plan of development) has obtained in the past (i.e. construction general permit coverage and/or other ARAPs):
N/A

Section 5. Project Schedule (fill in information and check appropriate boxes)

Start date: 6/15/2015 | Estimated end date: 6/15/2020
Is any portion of the activity complete now? [] Yes [X] No | If yes, describe the extent of the completed portion:
N/A

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit

The required information in Sections 6-11 must be submitted on a separate sheet(s) and submitted in the same numbered format as presented below. If any question is not applicable, state the reason why it is not applicable. Please refer to the enclosed feature impact and summary tables.

Section 6. Project Description		Attached	
		Yes	No
6.1	A narrative description of the scope of the project	<input type="checkbox"/>	<input type="checkbox"/>
6.2	USGS topographic map indicating the exact location of the project (<i>can be a photographic copy</i>)	<input type="checkbox"/>	<input type="checkbox"/>
6.3	Photographs of the resource(s) proposed for alteration with location description (<i>photo locations should be noted on map</i>)	<input type="checkbox"/>	<input type="checkbox"/>
6.4	A narrative description of the existing stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input type="checkbox"/>	<input type="checkbox"/>
6.5	A narrative description of the proposed stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input type="checkbox"/>	<input type="checkbox"/>
6.6	In the case of wetlands, include a wetland delineation with delineation forms and site map denoting location of data points	<input type="checkbox"/>	<input type="checkbox"/>
6.7	A copy of all hydrologic or jurisdictional determination documents issued for water resources on the project site	<input type="checkbox"/>	<input type="checkbox"/>

Section 7. Project Rationale	Attached	
	Yes	No
Describe the need for the proposed activity, including, but not limited to, the purpose, alternatives considered, and what will be done to avoid or minimize impacts to streams or wetlands.	<input type="checkbox"/>	<input type="checkbox"/>

Section 8. Technical Information		Attached	
		Yes	No
8.1	Detailed plans, specifications, blueprints, or legible sketches of present site conditions and the proposed activity. Plans must be 8.5.x 11 inches. Additional larger plans may also be submitted to aid in application review. The detailed plans should be superimposed on existing and new conditions (<i>e.g., stream cross sections where road crossings are proposed</i>)	<input type="checkbox"/>	<input type="checkbox"/>
8.2	For both the proposed activity and compensatory mitigation, provide a discussion regarding the sequencing of events and construction methods	<input type="checkbox"/>	<input type="checkbox"/>
8.3	Depiction and narrative on the location and type of erosion prevention and sediment control (EPSC) measures for the proposed alterations	<input type="checkbox"/>	<input type="checkbox"/>

Section 9. Water Resources Degradation (degree of proposed impact) <i>Note that in most cases, activities that exceed the scope of the General Permit limitations are considered greater than de minimis degradation to water quality.</i>	
My activity, as proposed: <ul style="list-style-type: none"> a. <input type="checkbox"/> Will not cause measurable degradation to water quality b. <input checked="" type="checkbox"/> Will only cause de minimis degradation to water quality c. <input checked="" type="checkbox"/> Will cause more than de minimis degradation to water quality (<i>Complete additional sections 9-11</i>) d. <input type="checkbox"/> Unsure/need more information 	<div style="border: 1px solid black; padding: 5px;">Please refer to the enclosed feature impact and summary tables.</div>
<i>For information and guidance on the definition of de minimis and degradation, refer to the Antidegradation Statement in Chapter 0400-40-03-.06 of the Tennessee Water Quality Criteria Rule: https://www.tn.gov/sos/rules/0400/0400-40/0400-40-03.20131216.pdf. For more information on specifics on what General Permits can cover, refer to the Natural Resources Unit webpage at http://www.tn.gov/environment/permits/arap.shtml</i>	

If you checked "c." above in Section 9, complete the following 2 sections, 10-11.

Section 10. Detailed Alternative Analysis		Attached	
		Yes	No
10.1	Analyze all reasonable alternatives and describe the level of degradation caused by each of the feasible alternatives	<input type="checkbox"/>	<input type="checkbox"/>
10.2	Discuss the social and economic consequences of each alternative	<input type="checkbox"/>	<input type="checkbox"/>
10.3	Demonstrate that the degradation associated with the preferred alternative will not violate water quality criteria for uses designated in the receiving waters, and is necessary to accommodate important economic and social development in the area	<input type="checkbox"/>	<input type="checkbox"/>

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit

Section 11. Compensatory Mitigation		Attached	
		Yes	No
11.1	A detailed discussion of the proposed compensatory mitigation	<input type="checkbox"/>	<input type="checkbox"/>
11.2	Describe how the compensatory mitigation would result in no net loss of resource value	<input type="checkbox"/>	<input type="checkbox"/>
11.3	Provide a detailed monitoring plan for the compensatory mitigation site	<input type="checkbox"/>	<input type="checkbox"/>
11.4	Describe the long-term protection measures for the compensatory mitigation site (e.g., deed restrictions, conservation easement)	<input type="checkbox"/>	<input type="checkbox"/>

Certification and Signature

An application submitted by a corporation must be signed by a principal executive officer; from a partnership or proprietorship, by the partner or proprietor respectively; from a municipal, state, federal or other public agency or facility, the application must be signed by either a principal executive officer, ranking elected official, or other duly authorized employee.

“I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury”.

Melanie Bumpus	Senior Trans. Proj. Spec.	<i>Melanie Bumpus</i>	12/22/14
Printed Name	Official Title	Signature	Date

Submitting the form and obtaining more information Note that this form must be signed by the principal executive officer, partner or proprietor, or a ranking elected official in the case of a municipality; for details see **Certification and Signature** statement above. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed ARAP Application form (keep a copy for your records) to the appropriate EFO for the county(ies) where the ARAP activity is located, addressed to **Attention: ARAP Processing**. You may also electronically submit the complete application and all associated attachments (e.g., maps, wetland delineations and narrative portions) to water.permits@tn.gov.

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	540 McCallie Avenue STE 550	37402-2013
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601



OFFICIAL STATE USE ONLY

Received Date:	Permit Number:	Reviewer:	Field Office:
Fee amount paid:	T & E Aquatic Flora and Fauna:		Application Review: <input type="checkbox"/> Deficient Date: _____ <input type="checkbox"/> Complete Date: _____
Date:	Impaired Receiving Stream:		
Check #:	Exceptional TN Water:		

TVA RESTRICTED INFORMATION

List of previous DA/TVA permits/approvals DA _____ TVA _____
Permit Number Date

Previous Property Owner (if known) _____

Is any portion of the activity for which authorization is sought now complete? Yes No (If "Yes" attach explanation)
 Month and year the activity was completed: _____ . Indicate the existing work on the drawings.

List all approvals or certifications required by other federal, interstate, state, or local agencies for any structures, construction, discharges, deposits, or other activities described in this application.

Issuing Agency	Type Approval	Identification No.	Date of Application	Date of Approval
TDEC	ARAP		Pending	
TDEC	CGP		Pending	

Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein?
 Yes No (If "Yes" attach explanation)

Project plans or drawings, on paper suitable for reproduction no larger than 11 x 17 inches or in electronic format (dxf, docx, or pdf), must accompany the application. Submit the application to the appropriate TVA and U.S. Army Corps of Engineers offices. An application that is not complete will be returned for additional information.

U.S.A.C.E. Offices		TVA Offices	
U.S. Army Corps of Engineers Eastern Regulatory Field Office 501 Adesa Parkway., Suite 250 Lenoir City, Tennessee 37771 (865) 986-7296	U.S. Army Corps of Engineers Savannah District The Plaza, Suite 130 1590 Adamson Parkway Morrow, Georgia 30260-1763 (678) 422-2729	Tennessee Valley Authority Chattanooga Regional Office 1101 Market Street, PSC 1E-C Chattanooga, Tennessee 37402-2801 1-800-882-5263	Tennessee Valley Authority Morristown Regional Office 3726 E. Morris Boulevard Morristown, Tennessee 37813-1270 1-800-882-5263
U.S. Army Corps of Engineers Regulatory Branch 3701 Bell Road Nashville, Tennessee 37214 (615) 369-7500	U.S. Army Corps of Engineers Western Regulatory Field Office 2042 Beltline Road, SW, Bldg C, Suite 415 Decatur, Alabama 35602 (256) 350-5620	Tennessee Valley Authority Gray Regional Office 106 Tri-Cities Business Park Drive Gray, Tennessee 37615 1-800-882-5263	Tennessee Valley Authority Murphy Regional Office 4800 US Highway 64 West, Suite 102 Murphy, North Carolina 28906 1-800-882-5263
U.S. Army Corps of Engineers Norfolk District P.O. Box 338 Abingdon, Virginia 24212 (276) 623-5259	U.S. Army Corps of Engineers Asheville Regulatory Field Office 151 Patton Avenue, Room 208 Asheville, North Carolina 28801-5006 (828) 271-4856	Tennessee Valley Authority Guntersville Regional Office 3696 Alabama Highway 69, CAB 1A-GVA Guntersville, Alabama 35976-7196 1-800-882-5263	Tennessee Valley Authority Muscle Shoals Regional Office Post Office Box 1010, MPB 1H Muscle Shoals, Alabama 35662-1010 1-800-882-5263
		Tennessee Valley Authority Lenoir City Regional Office 260 Interchange Park Drive, LCB 1A-LCT Lenoir City, Tennessee 37772-5664 1-800-882-5263	Tennessee Valley Authority Paris Regional Office 2835-A East Wood Street Paris, Tennessee 38242-5948 1-800-882-5263

Privacy Act Statement

This information is being requested in accordance with Section 26a of the TVA Act as cited on the front page of this form. Disclosure of the information requested is voluntary; however, failure to provide any required information or documents may result in a delay in processing your application or in your being denied a Section 26a permit. An application that is not complete will be returned for additional information. TVA uses this information to assess the impact of the proposed project on TVA programs and the environment and to determine if the project can be approved. Information in the application is made a matter of public record through issuance of a public notice if warranted. Routine uses of this information include providing to federal, state, or local agencies, and to consultants, contractors, etc., for use in program evaluations, studies, or other matters involving support services to the program; to respond to a congressional inquiry concerning the application or Section 26a program; and for oversight or similar purposes, corrective action, litigation or law enforcement.

Burden Estimate Statement

Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Agency Clearance Officer, Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402; and to the Office of Management and Budget, Paperwork Reduction Project (3316-0060), Washington, D.C. 20503.



**Section 26a Permit and Land Use Application
Applicant Disclosure Form**

By signing the Joint Application Form (Department of Army/TVA) or TVA's Land Use Application and again below, you agree to disclose any business, political, or financial interest that may present an actual or potential conflict of interest with TVA. If a new significant business, political, or financial interest is obtained during the period of the time that the application is under review, you agree to file an additional disclosure.

Disclose if any of the following apply to you (check all that apply). I am:

- An elected government official
- A policy making level employee of an entity that regulates TVA or its activities
- A management level employee of a power customer of TVA
- A TVA Director
- A TVA employee
- An immediate family member of one of the above
- A representative of a corporation or entity submitting an application and one of the above applies to me. Print entity or corporation name, and identify which of the above applies to you.

Project #36010-1215-14
PIN 100322.04
SR 128: Construct from south of Opel Loop
to US-64 in Savannah
Hardin County

- A representative of a corporation or entity submitting an application and the corporation or entity has partners, investors, or senior management that are one of the above. Print entity or corporation name, and identify the partner(s), investor(s), or senior manager(s) and which of the above applies.

None of the above

Do you have any other business or personal relationships not covered in your answers above that could appear to be a conflict of interest? (check one) **Yes** **No** If yes, provide more detail here.

By signing this form, you consent to this Applicant Disclosure Form being made available to the public in response to an appropriate request, including, without limitation, a request made under the Freedom of Information Act.

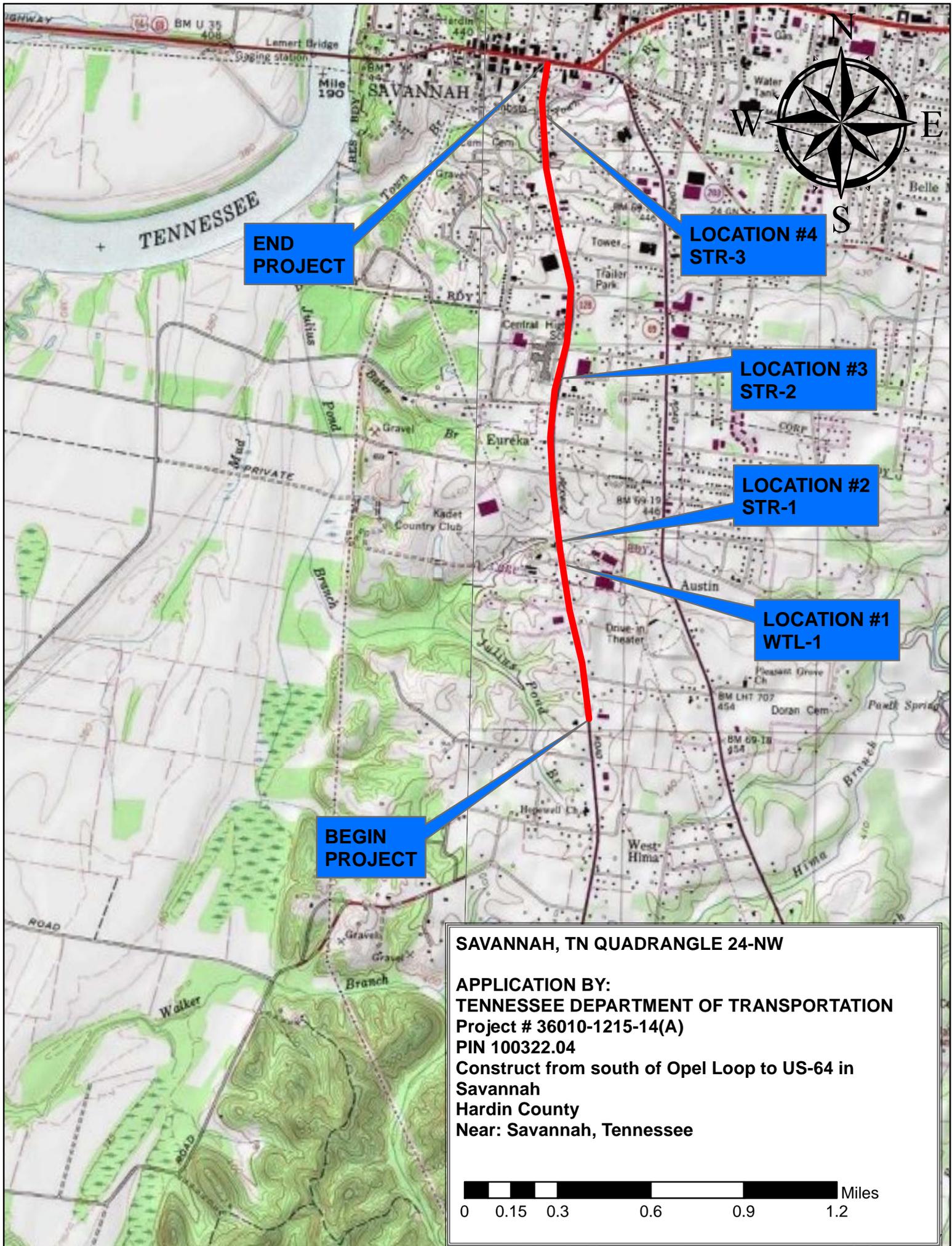
Please sign and return this form with your application package. Your application cannot be processed without receipt of this signed form.

Melanie Bumpus		12/22/2014
Name of applicant (Printed)	Signature of Applicant	Date

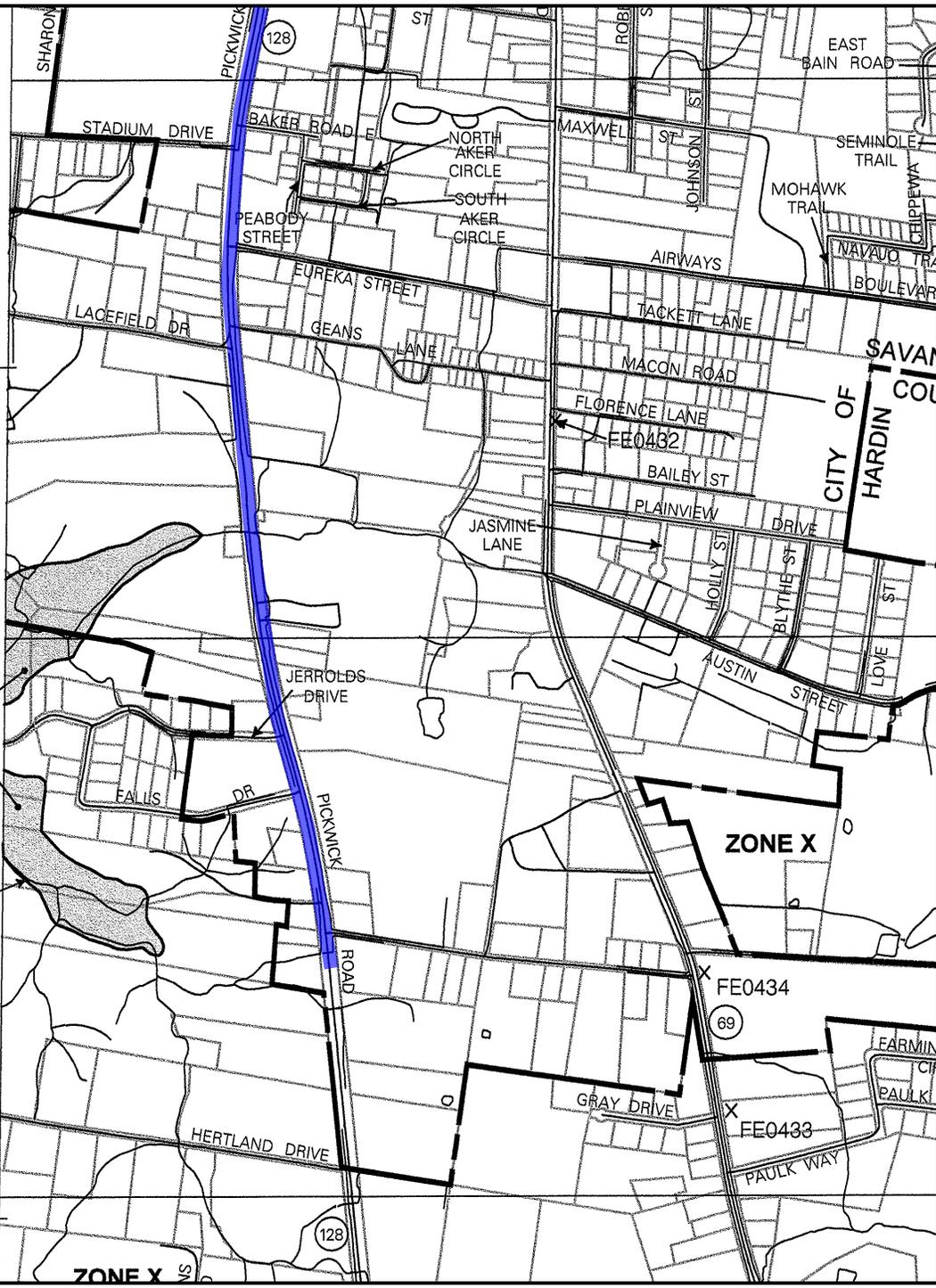
All applications and communications that occur as part of the application process may be made public to the extent permitted by applicable law, including the Freedom of Information Act and the Privacy Act, and could be reviewed formally by the Office of Inspector General (OIG). All written correspondence regarding your request may be forwarded to the TVA Chief Ethics and Compliance Officer (CECO) and the OIG, and all oral communication between TVA and the applicant regarding this request may be documented and maintained by TVA. Inquiries concerning your application from any person who falls into one of the categories described above will be disclosed to the CECO and OIG.

Privacy Act Statement

This information is being requested in accordance with Sections 4(k), 15d, 26a, and/or 31 of the TVA Act; 40 U.S.C. § 1314; 30 U.S.C. § 185; 16 U.S.C. § 667b; and/or 40 U.S.C. § 483. Disclosure of the information requested is voluntary; however, failure to provide any required information or documents may result in a delay in processing your application or in your application being denied. An application that is not complete will be returned for additional information. TVA uses this information to assess the impact of the proposed project on TVA programs and the environment and to determine if the project can be approved. Information in the application is made a matter of public record through issuance of a public notice if warranted. Routine uses of this information include providing to federal, state, or local agencies, and to consultants, contractors, etc., for use in program evaluations, studies, or other matters involving support services to the program; to respond to a congressional inquiry concerning the application or the applicable program; and for oversight or similar purposes, corrective action, litigation, or law enforcement.



32



SCALE 1" = 1000'

1000 2000 FEET

METERS

PANEL 0205E

FIRM
FLOOD INSURANCE RATE MAP
HARDIN COUNTY,
TENNESSEE
AND INCORPORATED AREAS

PANEL 205 OF 455

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HARDIN COUNTY	470082	0205	E
SAVANNAH, CITY OF	470084	0205	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



MAP NUMBER
47071C0205E

EFFECTIVE DATE
JUNE 16, 2006

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

ZONE AE
 (EL 398)

Julius Pond Branch

ZONE X

X FE0434

X FE0433

325000 FT

320000 FT

ZONE X

470084



SCALE 1" = 1000'

1000 2000 FEET

METERS

PANEL 0205E

FIRM FLOOD INSURANCE RATE MAP HARDIN COUNTY, TENNESSEE AND INCORPORATED AREAS

PANEL 205 OF 455

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HARDIN COUNTY	470082	0205	E
SAVANNAH, CITY OF	470084	0205	E

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**MAP NUMBER
47071C0205E**

**EFFECTIVE DATE
JUNE 16, 2006**

Federal Emergency Management Agency

**Hardin County
Unincorporated
Areas
470082**

**ZONE AE
(EL 398)**

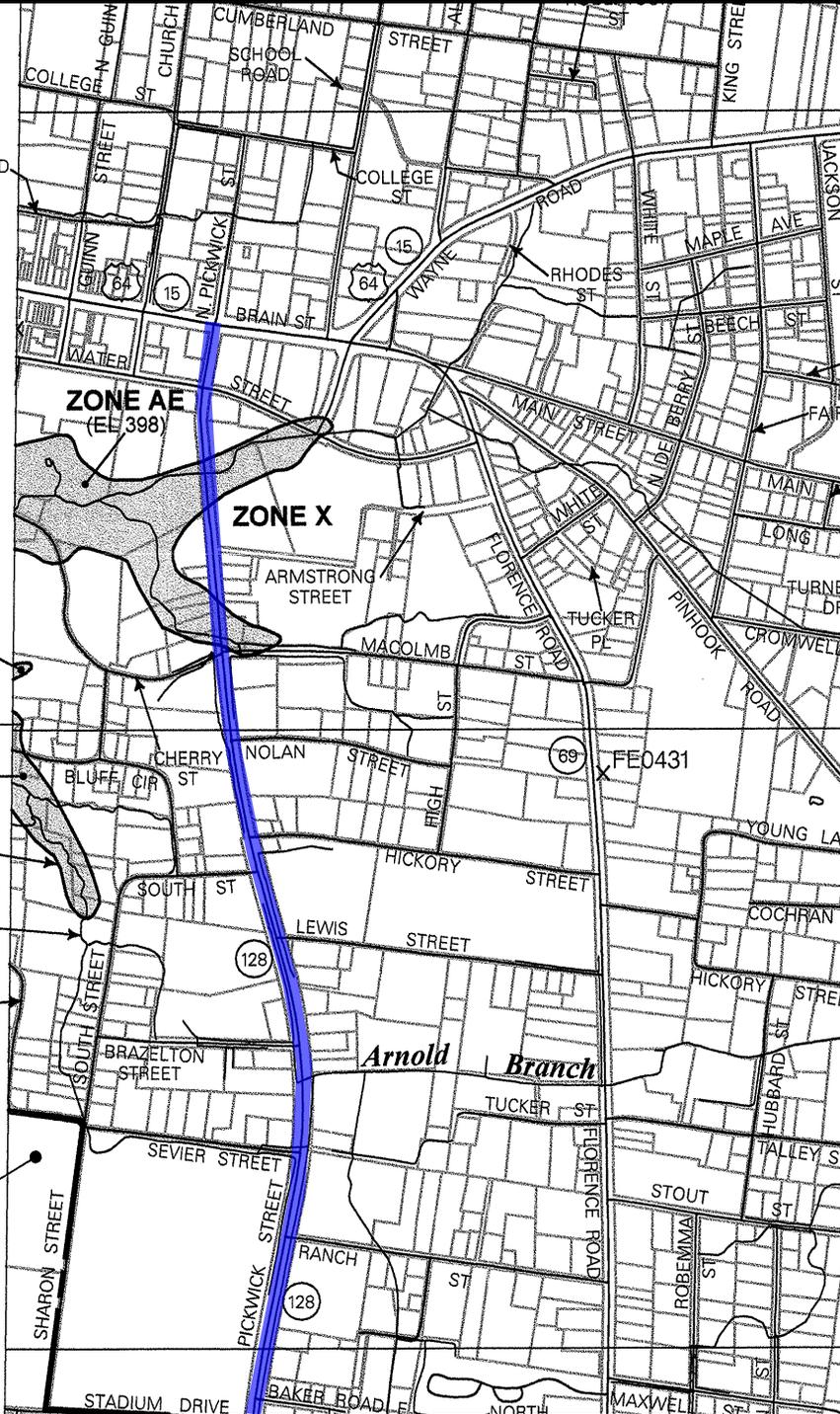
**ZONE AE
(EL 398)**

**Town
Branch**

**Arnold
Branch**

JOINS PANEL 0185

330000 FT

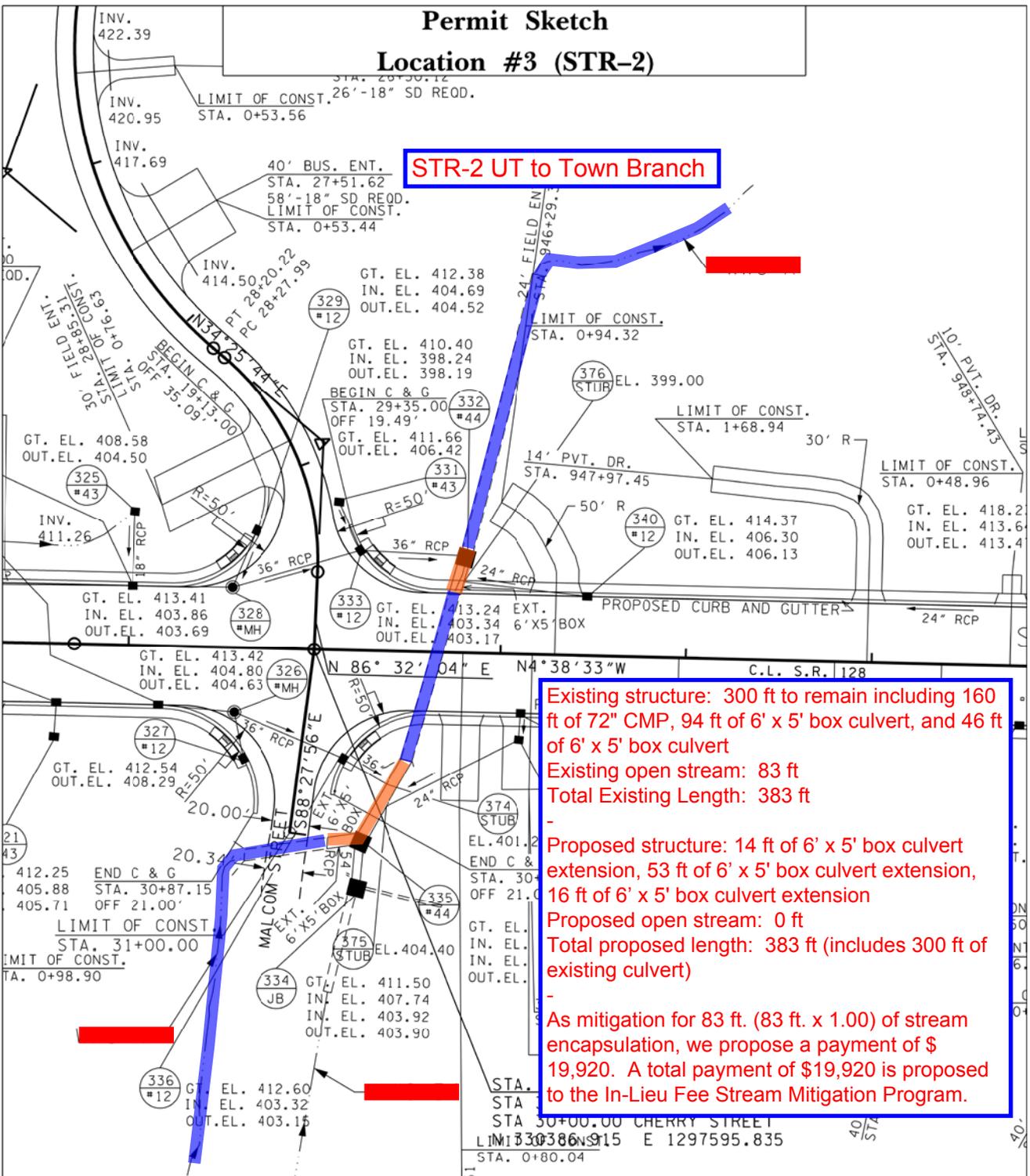


This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Permit Sketch

Location #3 (STR-2)

STR-2 UT to Town Branch



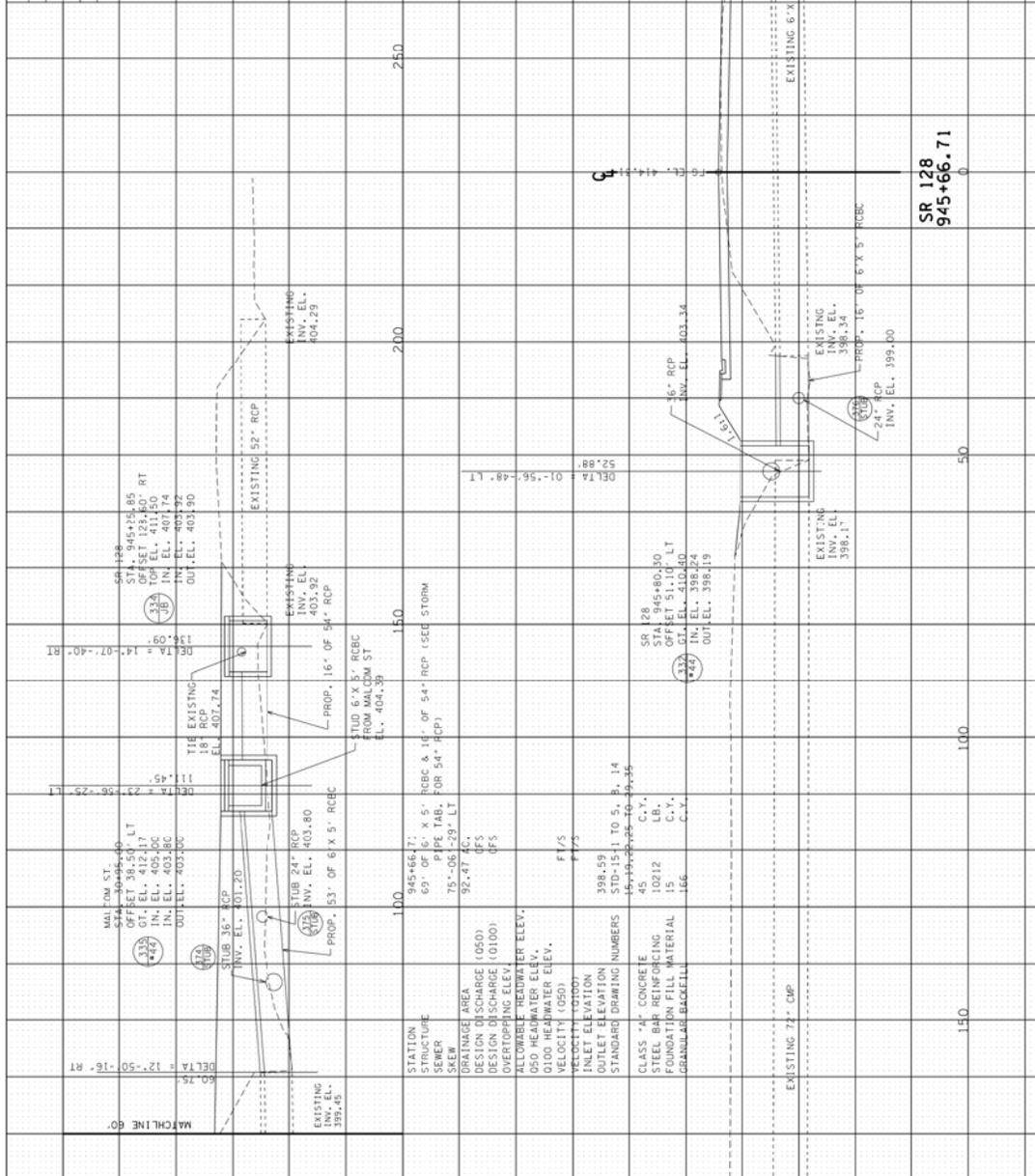
Existing structure: 300 ft to remain including 160 ft of 72" CMP, 94 ft of 6' x 5' box culvert, and 46 ft of 6' x 5' box culvert
Existing open stream: 83 ft
Total Existing Length: 383 ft
 -
Proposed structure: 14 ft of 6' x 5' box culvert extension, 53 ft of 6' x 5' box culvert extension, 16 ft of 6' x 5' box culvert extension
Proposed open stream: 0 ft
Total proposed length: 383 ft (includes 300 ft of existing culvert)
 -
As mitigation for 83 ft. (83 ft. x 1.00) of stream encapsulation, we propose a payment of \$19,920. A total payment of \$19,920 is proposed to the In-Lieu Fee Stream Mitigation Program.

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 36010-1215-14
 PIN # 100322.04
 SR-128 FROM SOUTH OF OPEL ROAD TO
 SR-15 IN SAVANNAH



Permit Sketch Location #3 (STR-2)

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH128271	16A



**CONS
FIELD
REVISE**

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SCALED BY: _____

**CULVERT
CROSS-
SECTIONS**
SCALE: 1"=10'

**SR 128
945+66.71**

APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 36010-1215-14
PIN # 100322.04
SR-128 FROM SOUTH OF OPEL ROAD TO
SR-15 IN SAVANNAH

Permit Sketch

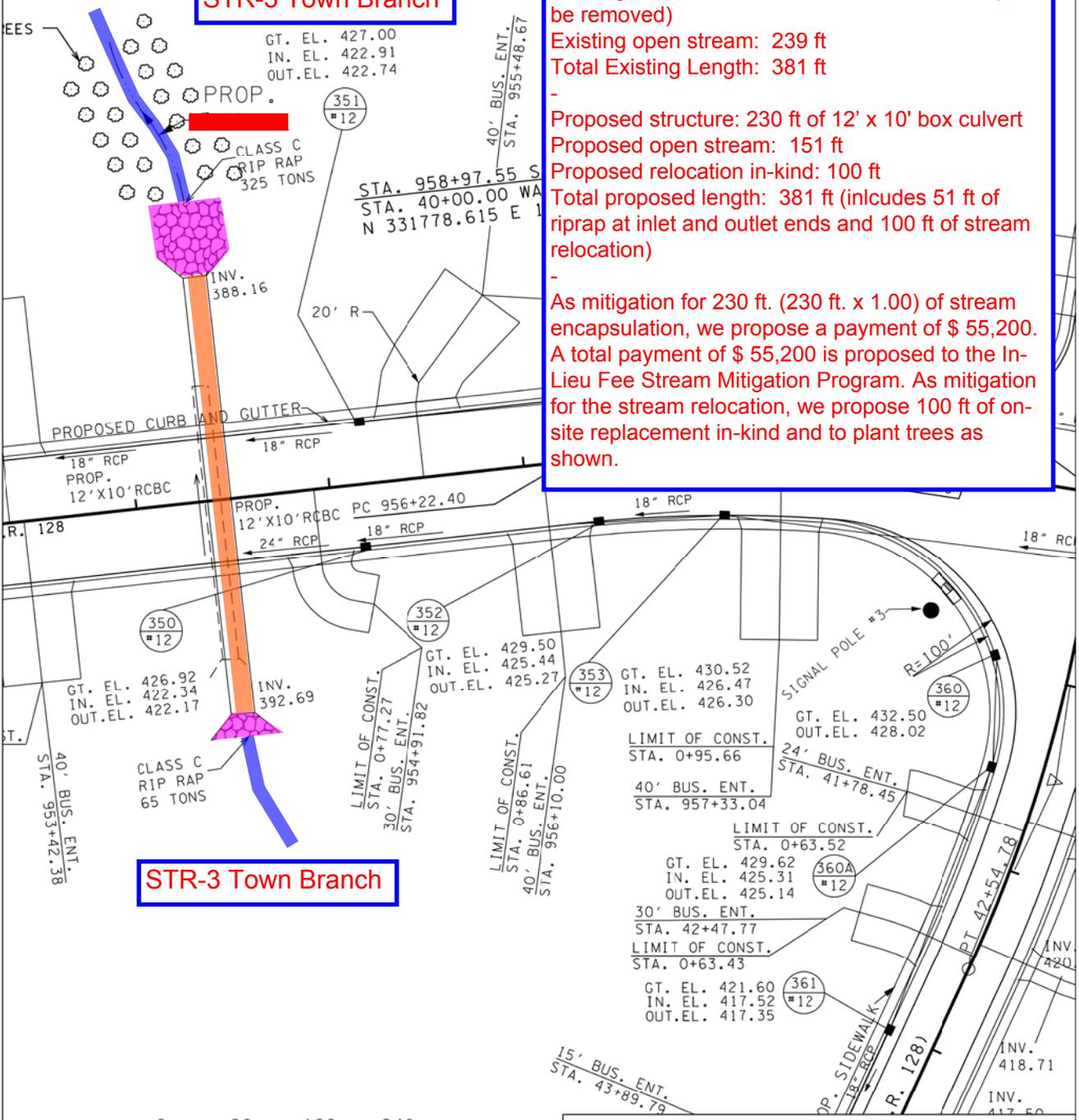
Location #4 (STR-3)

STR-3 Town Branch

Existing structure: 142 ft of 8' x 5' box culvert (to be removed)
 Existing open stream: 239 ft
 Total Existing Length: 381 ft

Proposed structure: 230 ft of 12' x 10' box culvert
 Proposed open stream: 151 ft
 Proposed relocation in-kind: 100 ft
 Total proposed length: 381 ft (includes 51 ft of riprap at inlet and outlet ends and 100 ft of stream relocation)

As mitigation for 230 ft. (230 ft. x 1.00) of stream encapsulation, we propose a payment of \$ 55,200. A total payment of \$ 55,200 is proposed to the In-Lieu Fee Stream Mitigation Program. As mitigation for the stream relocation, we propose 100 ft of on-site replacement in-kind and to plant trees as shown.



STR-3 Town Branch

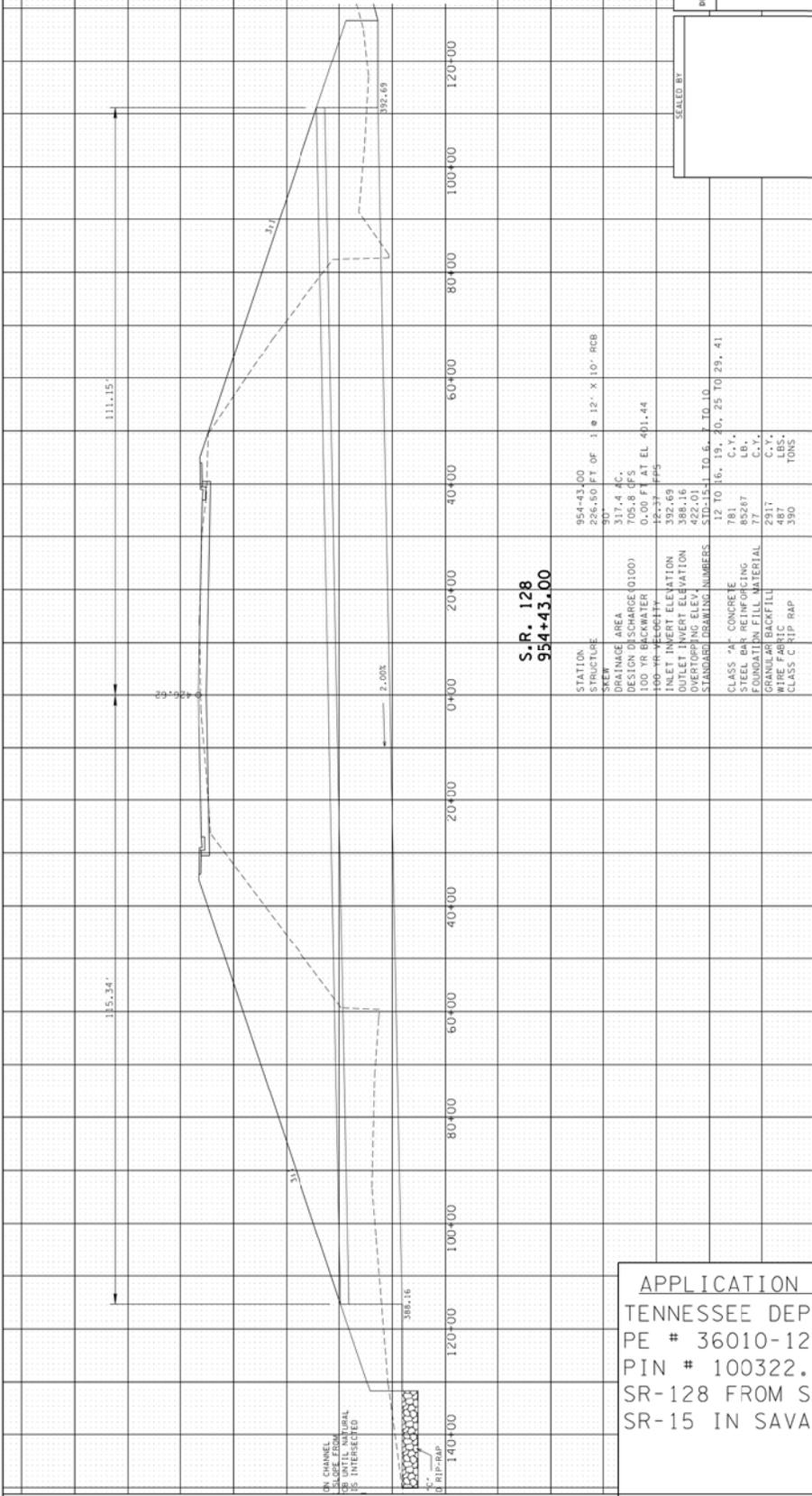


2206
 WATER STREET
 P.I. 41+49.95
 N 331752.0017
 E 1297676.6587
 Δ 16°07'30" RT.

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 36010-1215-14
 PIN # 100322.04
 SR-128 FROM SOUTH OF OPEL ROAD TO
 SR-15 IN SAVANNAH

Permit Sketch

Location #4 (STR-3)



**S.R. 128
954+43.00**

STATION	954+43.00
STRUCTURE	226.50 FT OF 1 @ 12" x 10" RCB
DRAINAGE AREA	317.4 AC
DESIGN DISCHARGE (0100)	705.8 CFS
100 YR BACKWATER	0.00 FT AT EL 401.44
100-YR VELOCITY	12.37 FPS
INLET INVERT ELEVATION	392.69
OUTLET INVERT ELEVATION	388.16
OVERFLOWING ELEVATION	522.01
STANDARD DRAINING NUMBERS	12 TO 16, 19, 20, 25 TO 29, 41
CLASS "A" CONCRETE	781 C.Y.
STEEL BAR REINFORCING	85287 LB.
FOUNDATION FILL MATERIAL	77 C.Y.
GRANULAR BACKFILL	2917 C.Y.
CLAY PAVING	360 C.Y.
CLASS C RIP RAP	390 TONS

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 36010-1215-14
 PIN # 100322.04
 SR-128 FROM SOUTH OF OPEL ROAD TO
 SR-15 IN SAVANNAH

Permit Sketch
Stream Relocation (STR-3)

**CHANNEL RELOCATION SEQUENCE AND IMPLEMENTATION NOTES FOR RELOCATED
STREAM CHANNELS (IGNORE REFERENCES TO ITEMS NOT SPECIFIED)**

1. The new channel shall be excavated and stabilized during a low-water period. Rip-rap (only as shown on plans), seeding, and sod shall be installed immediately following channel completion. Trees shall be installed in the first planting season following channel excavation. Water shall be diverted into the new channel only after it is completely stabilized, and only during a low-water period. Stabilized means that all specified rock and erosion control blanket or flexible channel liner is in place, and seeding and sod are in place and established.
2. CHANNEL RELOCATION SEQUENCE
 - a. Flag edge of the new channel top bank prior to clearing. Do not clear large trees in position to shade the new channel. Leave as many trees and shrubs as possible between toe of the new highway slope and the stream.
 - b. Excavate the new channel "in the dry" by leaving areas of undisturbed earth (diversion berms) in place at both ends.
 - c. Shape channel to specifications shown. Remove loose soils and debris.
 - d. Place topsoil, erosion control blanket or flexible channel liner, seed, and sod as specified.
 - e. Remove diversion berms, beginning with the most downstream, banks and bottom elevation of the old channel should transition smoothly into the new channel. The elevations of the new channel bottom at each end of the relocation sequence should match the elevations of the existing channel, and a steady percent slope should be maintained throughout the relocated channel centerline as specified.
 - f. Install trees according to standard specifications section 802.
3. Only rip-rap shown on plans should be used in the relocated channel reach. Any other proposed rip-rap should be coordinated with the Environmental Division through the TDOT Headquarters Construction Office.
4. Requests by any agency that would require the modification of channels, ditches, elevations, rip-rap or any other stream mitigation items associated with the channel relocations shall be referred to the TDOT Environmental Division via the Headquarters Construction Office for coordination with all involved agencies and TDOT divisions.

RIP-RAP PROPOSED IN BOTTOM OF STREAM CHANNEL

1. Rip-rap shall be placed as to mimic the existing contours of the stream channel. The top of the proposed rip-rap shall be at grade with the bottom of the existing stream channel. Voids within the rip-rap shall be filled with creek gravel to prevent loss of stream within rip-rap areas. Creek gravel can be removed from culvert excavation area.

EXCAVATION IN THE DRY NOTES

1. Any work within the wetland/stream channel area (e.g., for Pier Footing, Rip-rap Placement, Multi-Barrel Culvert/Bridge Construction etc.) shall be separated from flowing water or expected flow path and performed during low flow conditions. All items used within the wetland/stream channel area for diversion of flow (or expected flow), unless specified in the plans, shall not be paid for directly but shall be included in the cost of the other items. The note excludes any items specified in the plans for use with EC-STR-31 and EC-STR-32.

APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 36010-1215-14
PIN # 100322.04
SR-128 FROM SOUTH OF OPEL ROAD TO
SR-15 IN SAVANNAH

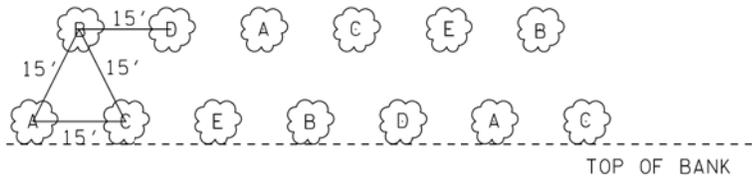
Permit Sketch
Stream Relocation (STR-3)

TREES NOTES

1. No substitutions of tree species or sizes shall be allowed without the written approval of TDOT Environmental Division. Concerning stream mitigation, trees shall be of the variety requested and first quality. Concerning temporary wetland mitigation, trees shall be of the variety requested, well branched, bare root (roots must be kept moist at all times), and first quality. No clones or cultivars will be accepted. Any found to be incorrect species, or improperly planted, at any time prior to termination of the contract shall be removed and replaced at the contractor's expense. Stakes and wires shall be removed immediately prior to contract termination, unless otherwise directed by the engineer.
2. The contractor should arrange several months ahead of time to obtain the correct tree species, as some may require some time to locate.
3. All trees planted shall be wrapped as per section 802.07 of TDOT standard specification for the road and bridge construction.
4. Trees shall be watered as required through the period of establishment to insure survival.

RECOMMENDED TREE REPLACEMENT FOR STREAM MITIGATION

PATTERN TO BE REPEATED AS NECESSARY



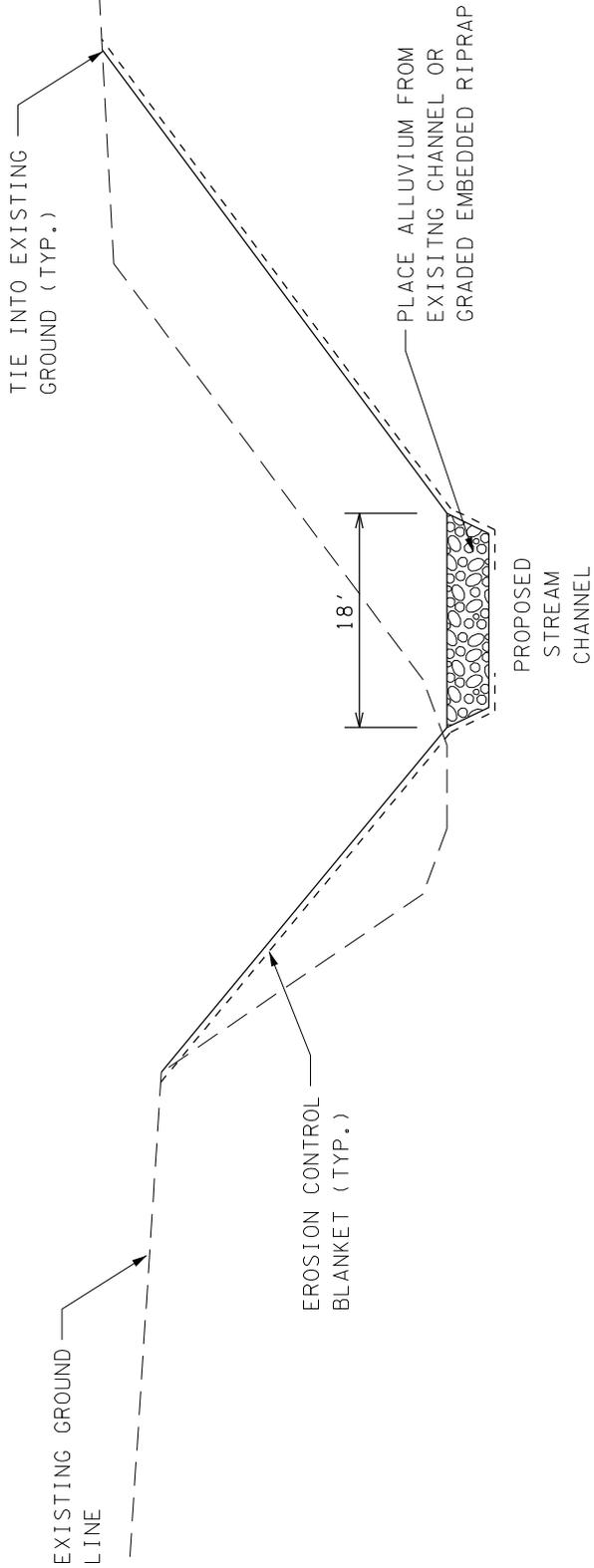
SEE SHEET 12B FOR STREAM LOCATION & PROPOSED TREES.

TREE SPECIES TO BE PLANTED
(15' CENTERS):

- AMERICAN ELM - ULMUS AMERICANA
- AMERICAN SYCAMORE - PLATANUS OCCIDENTAILS
- SOUTHERN RED OAK - QUERCUS FALCATA
- GREEN ASH - FRAXINUS PENNSYLVANICA
- WHITE OAK - QUERCUS ALBA

APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 36010-1215-14
PIN # 100322.04
SR-128 FROM SOUTH OF OPEL ROAD TO
SR-15 IN SAVANNAH

Permit Sketch
Stream Relocation (STR-3)



STREAM RELOCATION DETAIL -
TYPICAL CROSS SECTION

SCALE: NTS

APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 36010-1215-14
PIN # 100322.04
SR-128 FROM SOUTH OF OPEL ROAD TO
SR-15 IN SAVANNAH

Melanie Bumpus

From: Sinclair, William E LRN <William.E.Sinclair@usace.army.mil>
Sent: Tuesday, February 03, 2015 4:21 PM
To: Melanie Bumpus
Cc: Strickland, Samantha J; Wilder, Timothy C LRN
Subject: RE: Hardin County, PIN 100322.04 (UNCLASSIFIED)

*** This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. - OIR-Security***

Classification: UNCLASSIFIED
Caveats: NONE

Melanie, thank you for discussing the Hardin County, PIN 100322.04, SR-128 project with me today. I conducted a site visit of the project on Monday January 26, 2015. As discussed, based on my review of the information you submitted to our office by cover letter dated December 26, 2014, and information obtained during my site inspection, none of the proposed impacts to waters of the U.S. require pre-construction notification. Please reply to this e-mail if you would like to withdraw your request for USACE written verification that the activity may proceed under Nationwide Permit #14.

William "Eric" Sinclair
Regulatory Project Manager
WRFO/Regulatory Branch
U.S. Army Corps of Engineers
Nashville District

Phone: (256)350-5620

Internet: <http://www.lrn.usace.army.mil/>
Facebook: <http://facebook.com/nashvillecorps>

-----Original Message-----

From: Melanie Bumpus [<mailto:Melanie.Bumpus@tn.gov>]
Sent: Wednesday, January 28, 2015 3:18 PM
To: Sinclair, William E LRN
Subject: [EXTERNAL] Hardin County, PIN 100322.04

Mr. Sinclair,

Samatha Strickland will be the TVA permit writer for this project.

Melanie Bumpus

Senior Transportation Project Specialist

Tennessee Department of Transportation

Environmental Division

Permitting Section

Suite 900, James K Polk Building

Nashville, TN 37243

phone 615.253.2466

Classification: UNCLASSIFIED

Caveats: NONE

RECEIVED

By Melanie Bumpus at 9:19 am, Mar 30, 2015



STATE OF TENNESSEE
TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11TH Floor
Nashville, Tennessee 37243-1102

March 30, 2015

Ms. Melanie Bumpus
Tennessee Department of Transportation
Environmental Division
Suite 900, James K. Polk Bldg.
505 Deaderick St.
Nashville, TN 37243

Subject: Aquatic Resource Alteration Permit **NRS 14.340**.
Project #36010-1215-14 (A) PIN #100322.04 - Widen SR 128 from South of Opel Road to SR 15 (US64)
at Unnamed Tributary to Julius Pond Branch, Town Branch and an Unnamed Tributary to Town Branch.
Hardin County (Lat: 35.2007/Lon: -88.2446) - CORRECTION.

Dear Ms. Bumpus:

Thank you for alerting me to an error in the cover letter of the above referenced permit. The letter indicates that the permit is effective March 4, 2015 and expires March 3, 2015. The database displays the correct expiration date of March 4, 2020. By copy of this letter, the permit is amended to read the correct expiration date. Please attach a copy of this letter to the facing page of the permit.

If you need additional information or clarification, please contact Brian Canada at 615-532-0660 or by e-mail brian.canada@tn.gov.

Sincerely,

Brian Canada, M.S., Q.H.P.
Natural Resources Unit

Cc: file copy



STATE OF TENNESSEE
TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11TH Floor
Nashville, Tennessee 37243-1102

March 4, 2015

RECEIVED

Ms. Melanie Bumpus
Tennessee Department of Transportation
Environmental Division
Suite 900, James K. Polk Bldg.
505 Deaderick St.
Nashville, TN 37243

MAR 27 2015

TDOT Environmental Division
Permits section

Subject: Aquatic Resource Alteration Permit **NRS 14.340**.
Project #36010-1215-14 (A) PIN #100322.04 - Widen SR 128 from South of Opel Road to SR 15 (US64)
at Unnamed Tributary to Julius Pond Branch, Town Branch and an Unnamed Tributary to Town Branch.
Hardin County (Lat: 35.2007/Lon: -88.2446).

Dear Ms. Bumpus:

We have reviewed your application for the proposed stream alterations in support of the widening of SR 128 from South of Opel Road to SR 15 (US64) at Unnamed Tributary to Julius Pond Branch, Town Branch and an Unnamed Tributary to Town Branch. Hardin County. Pursuant to the *Tennessee Water Quality Control Act of 1977* (T. C. A. § 69-3-101 et seq.) and supporting regulations, the Division of Water Resources is required to determine whether the activity proposed will violate applicable water quality standards.

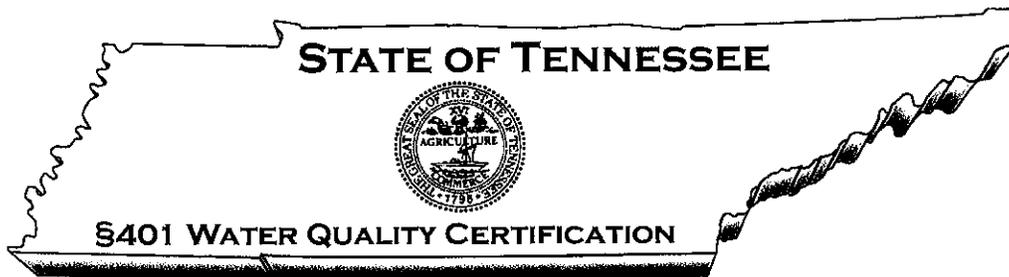
Subject to conformance with accepted plans, specifications and other information submitted in support of application NRS 14.340, the state of Tennessee hereby issues an aquatic resources alteration permit (enclosed). Failure to comply with the terms of this permit or other violations of the *Tennessee Water Control Act of 1977* is subject to penalty in accordance with T.C.A. § 69-3-115.

It is the responsibility of the permittee to ensure that all contractors involved with this project have read and understood the permit conditions before the project begins. If you need additional information or clarification, please contact Brian Canada at 615-532-0660 or by e-mail brian.canada@tn.gov.

Sincerely,

Brian Canada, M.S., Q.H.P.
Natural Resources Unit

Cc: Jackson Environmental Field Office
U.S. Army Corps of Engineers, Nashville District
file copy



NRS14.340

Pursuant to §401 of *The Federal Clean Water Act* (33 U.S.C. 1341), the State of Tennessee is required to certify whether the activity described below will violate applicable water quality standards. Accordingly, the Division of Water Resources requires reasonable assurance that the activity will not violate provisions of *The Tennessee Water Quality Control Act of 1977* (T.C.A. §69-3-101 et seq.) or provisions of §§301, 302, 303, 306 or 307 of *The Clean Water Act*.

Subject to conformance with accepted plans, specifications and other information submitted in support of the application, pursuant to 33 U.S.C. 1341 the State of Tennessee hereby certifies the activity described below. This shall serve as authorization under T.C.A. §69-3-101 et seq.

PERMITTEE Tennessee Department of Transportation

AUTHORIZED WORK: 435 ft. of stream encapsulation and permanent impact to 0.03 acre of wetlands required to Widen SR 128 from South of Opel Road to SR 15 (US64).

LOCATION: SR 128 from South of Opel Road to SR 15 (US64) at Unnamed Tributary to Julius Pond Branch, Town Branch and an Unnamed Tributary to Town Branch. Hardin County (Lat: 35.2007/Lon: -88.2446)

EFFECTIVE DATE: March 4, 2015

EXPIRATION DATE: March 3, 2015

A handwritten signature in black ink, appearing to read "Tisha", is written over a horizontal line.

Tisha Calabrese Benton
Director, Division of Water Resources

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PART I

Specific Impacts:

Impact 1: Latitude: 35.2007 Longitude: -88.2446
Wetland Station 874+10(Rt.) to Sta. 875+10(Rt.)

Permanent impact (filling) to 0.03 acre of wetlands.

Wetland Debit 0.0

Impact 2: Latitude: 35.2023 Longitude: -88.2452
Unnamed trib. To Julius Pond Branch Station 880+58.32

Existing 53 ft. of 8X5' box culvert (to be removed) and 116 ft. of open stream to be replaced with 122 ft. of 8X6 box culvert with 23' riprap lined channel at the inlet and 24' riprap lined channel at the outlet.

Debits: 122

Impact 3: Latitude: 35.2100 Longitude: -88.2463
Unnamed trib. To Town Branch Station 945+66.71

Existing 160 ft. of 72" CMP, 94 ft. of 6X5' box culvert and 46ft. of 6X5' box culvert (total 300' to remain) and 83 ft. of open stream. Proposed extension of first culvert 14 ft. the second culvert by 53 ft. and the third by 16 ft. for a total extension of 83 ft.

Debits: 83

Impact 4: Latitude: 35.2224 Longitude: -88.2466
Town Branch Station 954+43+/-

Existing 142 ft. of 8X5' box culvert (to be removed) and 239 ft. of open stream to be replaced with 230 ft. of 12X10' box culvert with 15' of riprap at the inlet and 36' of riprap at the outlet and 100 ft. open stream relocation.

Debits: 230

General Conditions:

- a. It is the responsibility of the applicant to convey all terms and conditions of this permit to all contractors. A copy of this permit, approved plans and any other documentation pertinent to the activities authorized by this permit shall be maintained on site at all times during periods of construction activity.
- b. Work shall not commence until the applicant has received the federal §404 permit from the U. S. Army Corps of Engineers, a §26a permit from the Tennessee Valley Authority or authorization under a Tennessee NPDES Storm Water Construction Permit where necessary. The applicant is responsible for obtaining these permits.

§401 Water Quality Certification

- c. The work shall be accomplished in conformance with the accepted plans, specifications, data and other information submitted in support of application NRS14.340 and the limitations, requirements and conditions set forth herein.
- d. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in Rule 0400-40-03-.03 of the Rules of the Tennessee Department of Environment and Conservation. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of waters of the state for any of the uses designated by Rule 0400-40-04. These uses include fish and aquatic life (including trout streams and naturally reproducing trout streams), livestock watering and wildlife, recreation, irrigation, industrial water supply, domestic water supply, and navigation.
- e. Impacts to waters of the state other than those specifically addressed in the plans and this permit are prohibited. All streams, springs and wetlands shall be fully protected prior, during and after construction until the area is stabilized. Any questions, problems or concerns that arise regarding any stream, spring or wetland either before or during construction, shall be addressed to the Division of Water Resource's Jackson Environmental Field Office (731-512-1300), or the permit coordinator in the division's Natural Resources Section (615-532-0660).
- f. Adverse impact to formally listed state or federal threatened or endangered species or their critical habitat is prohibited.
- g. This permit does not authorize adverse impacts to cultural, historical or archeological features or sites.

PART II

Mitigation Requirements and Monitoring Procedures

Required Mitigation Activities

The 435 ft. of stream encapsulation shall be mitigated by purchasing 435 available credits from the Tennessee Stream Mitigation Program Lower Tennessee Service Area. Payment shall be made to TSMP with proof of purchase submitted to the Division within 90 days of the effective date of this permit.

Relocated channels shall be replaced in kind with natural bottoms unless specifically noted in this permit. Streams shall be diverted into the new channel and the original channel allowed to remain open for 48 hours to allow aquatic organisms time to migrate out prior to filling. Relocated channels greater than 200 feet shall be constructed to mimic the morphological, habitat and in-stream flow characteristics of the regional reference conditions to the maximum extent practicable. Vegetated buffer strips should be maintained along the relocated channels with mowing exclusion signage placed at beginning and end of relocated streams.

Monitoring Requirements and Procedures

- a. Monitoring shall be required for all relocations and restored temporary wetland impacts.
- b. Qualitative Habitat Assessment - The RBP (Rapid Bioassessment Protocols) Habitat Assessment score for the mitigation project must be greater than 75% of the regional

habitat assessment guideline score as found in the 2011 TDEC standard operating procedure for macroinvertebrate stream surveys.

- c. Vegetation - Vegetative species must be on approved native species planting list.
- d. Morphology - The monitored morphology success criteria values for the restored reach shall not deviate from the actual as-built values by more than 20% in any monitoring year.
- e. Stability - A Channel Stability Rating (CSR) of at least "Good" must be achieved during every monitoring year.
- f. Hydrology – Each year of monitoring the applicant shall perform a Hydrologic Determination (HD) using the Division of Water Resources HD methodology (between February and April) to ensure that the relocated channels score as streams.

Recording of Results

- a. For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:
 - 1. The exact place, date and time of sampling;
 - 2. The exact person(s) collecting samples;
 - 3. The dates and times the analyses were performed;
 - 4. The person(s) or laboratory who performed the analyses;
 - 5. The analytical techniques or methods used;
 - 6. The results of all required analyses;
 - 7. Narrative descriptions, photo-documentation, riparian vegetation surveys, channel morphology surveys, stability assessments, and hydrology surveys/documentation, and;
 - 8. A habitat assessment using EPA Rapid Bioassessment Protocol will be conducted and submitted in Year 5.
- b. In the event any portion or aspect of the mitigation project does not meet the specified success criteria based on reporting and/or additional visual observations in a monitoring year, the nature and cause(s) of the resulting condition shall be investigated and documented. If it is determined that corrective actions are not warranted at the time, the rationale for the decision shall be stated. Continued monitoring of the condition or area using more detailed methodology may be appropriate and must be documented. In instances where corrective actions are necessary, a plan shall be prepared that includes proposed actions, a time schedule for activities, and revised monitoring plan.

Submission of Monitoring Results

- a. The permittee shall submit the following monitoring information on an annual basis, for a term of three years (3 years).
- b. All monitoring reports and information shall be submitted in report-form to the division's Natural Resources Unit, located in the William R. Snodgrass – Tennessee Tower, 11th Floor, 312 Rosa L. Parks, Nashville, Tennessee 37243-1102. Copies shall also be

provided to the appropriate Water Resources Environmental Field Office, and the U.S. Army Corps of Engineers District Office.

- c. The monitoring reports shall be due by October 31st of each monitoring year.

Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation shall be retained for a minimum of five (5) years, or longer, if requested by the Division of Water Resources.

Falsifying Results and/or Reports

Knowingly making any false statement on any report required by this permit or falsifying any result may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in Section 69-3-115 of the Tennessee Water Quality Control Act.

Monitoring Closeout

The applicant shall notify the agencies in writing when the monitoring period is complete. Following receipt of the final report, the agencies will contact the applicant (or agent) as soon as possible to schedule a site visit to confirm the completion of the compensatory mitigation site. The compensatory mitigation shall not be considered complete without an on-site inspection by regulatory staff and written confirmation that the site is functioning as proposed.

PART III

Duty to Reapply

Permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Resources. Such applications must be properly signed and certified.

Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

Other Information

If the permittee becomes aware that he/she failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he/she shall promptly submit such facts or information.

Changes Affecting the Permit

Transfer/Change of Ownership

- a. This permit may be transferred to another party, provided there are no activity or project modifications, no pending enforcement actions, or any other changes which might affect the permit conditions contained in the permit, by the permittee if:
- b. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;
- c. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and contractual liability between them; and
- d. The Director does not notify the current permittee and the new permittee, within 30 days, of his intent to modify, revoke, reissue, or terminate the permit, or require that a new application be filed rather than agreeing to the transfer of the permit.
- e. The permittee must provide the following information to the division in their formal notice of intent to transfer ownership:
 1. the permit number of the subject permit;
 2. the effective date of the proposed transfer;
 3. the name and address of the transferor;
 4. the name and address of the transferee;
 5. the names of the responsible parties for both the transferor and transferee;
 6. a statement that the transferee assumes responsibility for the subject permit;
 7. a statement that the transferor relinquishes responsibility for the subject permit;
 8. the signatures of the responsible parties for both the transferor and transferee, and;
 9. a statement regarding any proposed modifications to the permitted activities or project, its operations, or any other changes which might affect the permit conditions contained in the permit.

Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

Noncompliance

Effect of Noncompliance

All discharges shall be consistent with the terms and conditions of this permit. Any permit noncompliance constitutes a violation of applicable State and Federal laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

Reporting of Noncompliance

24-Hour Reporting

- a. In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the Division of Water Resources in the appropriate Environmental Field Office within 24-hours from the time the permittee becomes aware of the circumstances. (The Environmental Field Office should be contacted for names and phone numbers of environmental response personnel).
- b. A written submission must be provided within five (5) days of the time the permittee becomes aware of the circumstances unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:
 1. A description of the discharge and cause of noncompliance;
 2. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
 3. The steps being taken to reduce, eliminate, and prevent recurrence of the non-complying discharge.

Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph a. above, the permittee shall report the noncompliance by contacting the permit coordinator, and provide all information concerning the steps taken or planned to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including but not limited to, accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

Liabilities

Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of pollutants to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the

responsibility of the permittee to conduct its discharge activities in a manner such that public or private nuisances or health hazards will not be created.

Liability under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or the Federal Water Pollution Control Act, as amended.

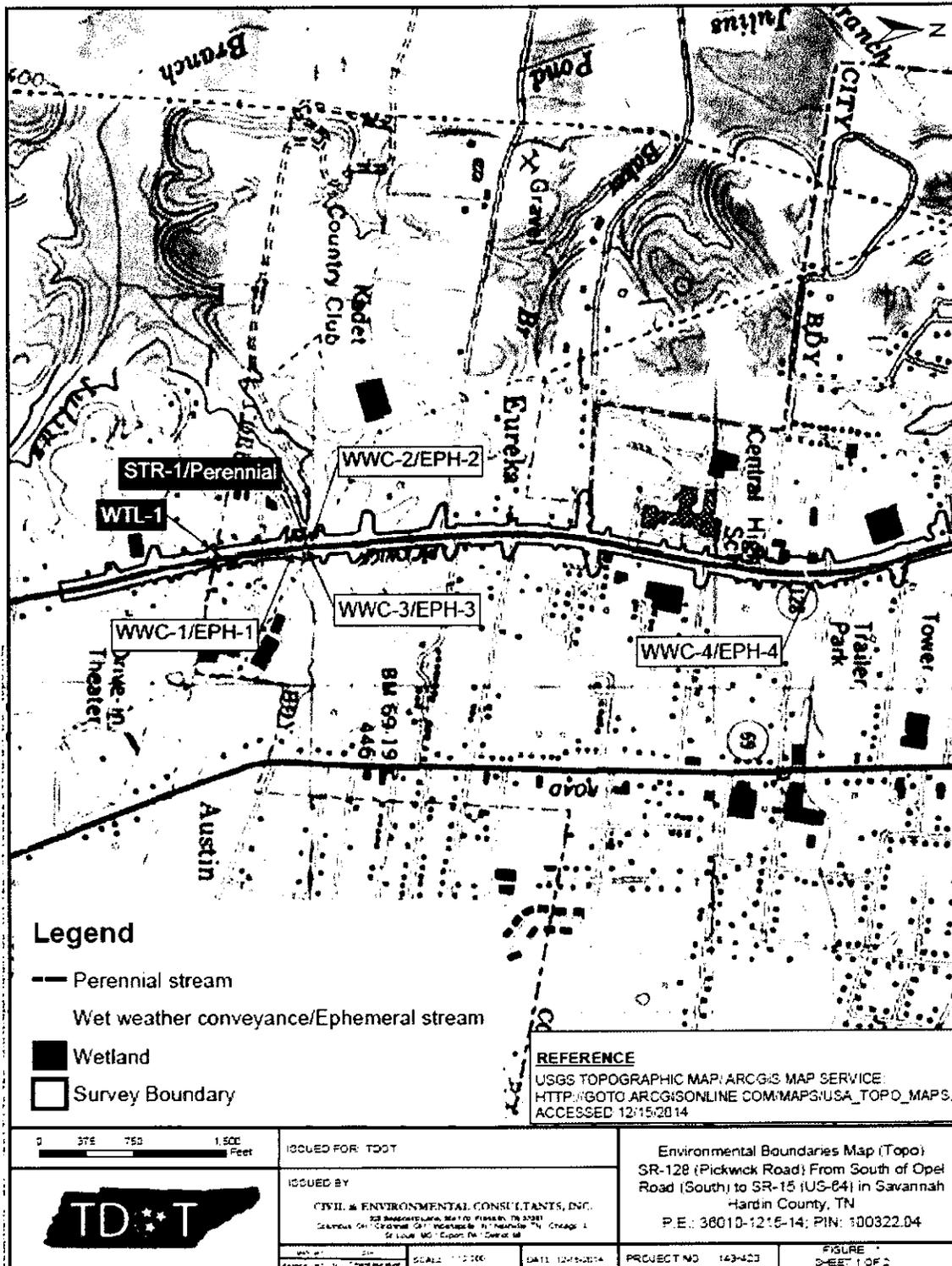
This permit does not preclude requirements of other federal, state or local laws. This permit also serves as a State of Tennessee Aquatic Resource Alteration Permit (ARAP) pursuant to the Tennessee Water Quality Control Act of 1977 (T.C.A. §69-3-101 et seq.).

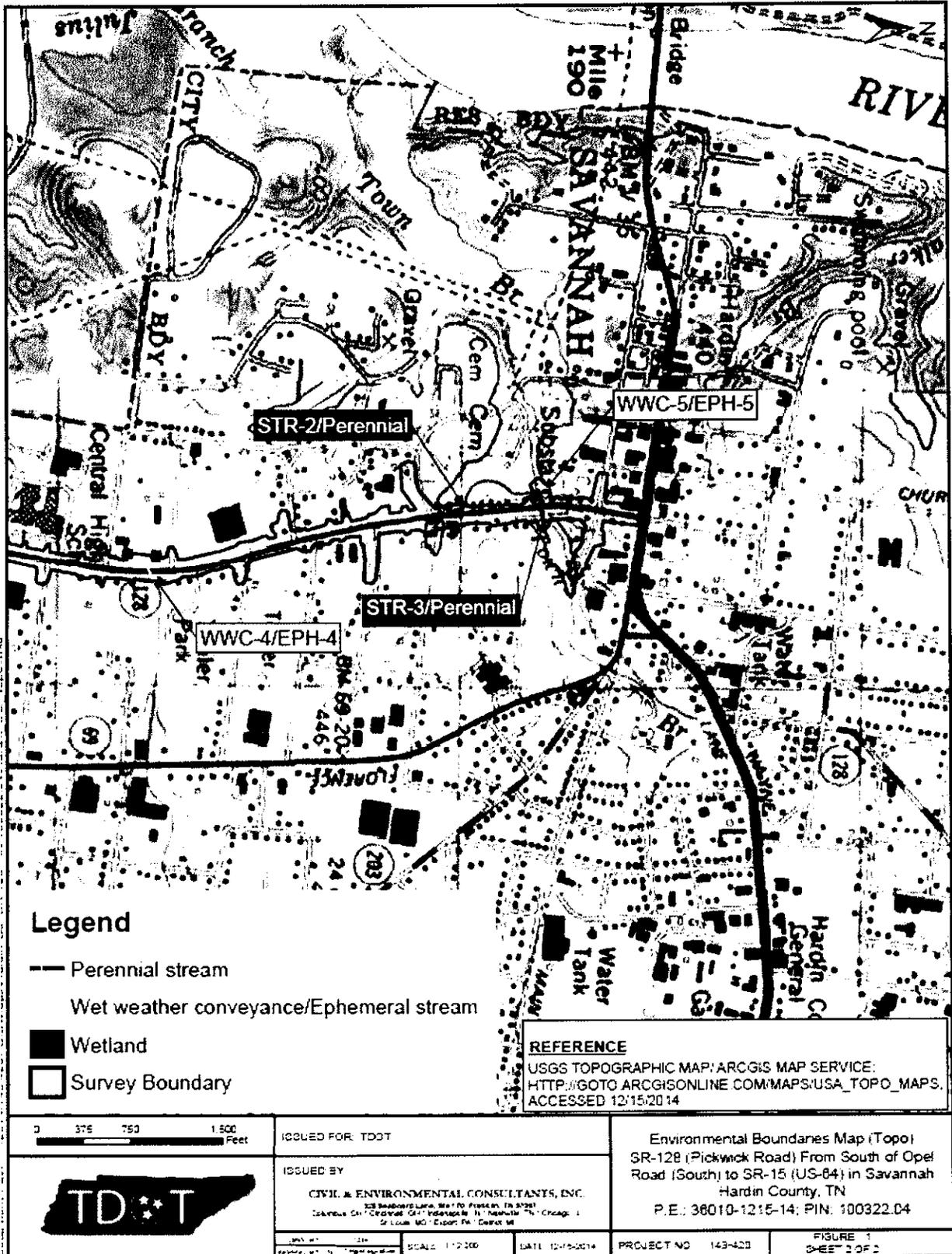
The State of Tennessee may modify, suspend or revoke this permit or seek modification or revocation should the state determine that the activity results in more than an insignificant violation of applicable water quality standards or violation of the act. Failure to comply with permit terms may result in penalty in accordance with T.C.A. §69-3-115.

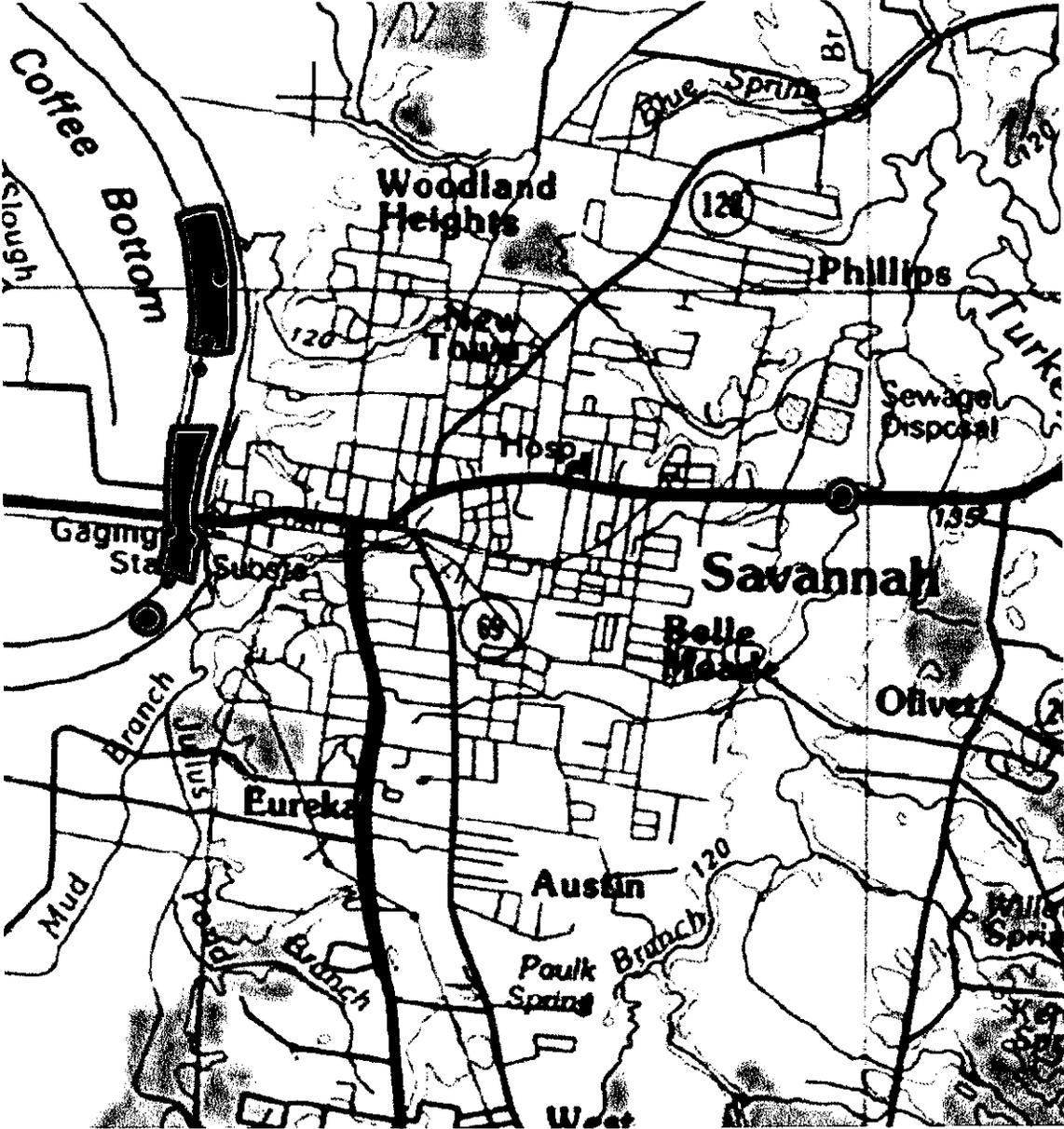
An appeal of this action may be made as provided in T.C.A. §69-3-105(i) and Rule 0400-40-03-.12 by submitting a petition for appeal. This petition must be filed within THIRTY (30) DAYS after public notice of the issuance of the permit. The petition must specify what provisions are being appealed and the basis for the appeal. It should be addressed to the technical secretary of the Tennessee Board of Water Quality, Oil and Gas at the following address: Tisha Calabrese-Benton, Director, Division of Water Resources, 11th Floor William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Ave., Nashville, Tennessee 37243. Any hearing would be in accordance with T.C.A. §§69-3-110 and 4-5-301 et seq.

APPENDIX I

Topographic Maps









Tennessee Valley Authority
Section 26a Approval

RECEIVED

By Melanie Bumpus at 9:00 am, Mar 30, 2015

Permit # 268714 **Reservoir** Paris - Off **Category** 3
DOT Project # PIN 100322.04

Name	Company	Address	Phone/Email
	Tennessee Department of Transportation	Suite 900 J.K. Polk Building 505 Deaderick Street Nashville TN 37243	615-253-2477 Melanie.Bumpus@tn.gov

Tract(s)

Subdivision/Lot(s)	Stream	Mile	Bank	Map Sheet(s)
Subdivision: N/A	Town Br	0.8	B	24 Quad Sheet NW
	Unnamed Tributary	0.5	B	
	Unnamed Tributary	0.7	B	

The facilities and/or activities listed below are APPROVED subject to the plans and general and special conditions attached.

1. Culvert - Roadway	Length (ft., in.): 122'; Width (ft., in.): 8'
2. Riprap	Length (ft., in.): 47'
3. Riprap	Length (ft., in.): 47'
4. Culvert - Roadway	Length (ft., in.): 160'; Width (ft., in.): 72"
5. Culvert - Roadway	Length (ft., in.): 161'; Width (ft., in.): 6'
6. Culvert - Roadway	Length (ft., in.): 62'; Width (ft., in.): 6'
7. Culvert - Roadway	Length (ft., in.): 230'; Width (ft., in.): 12'
8. Riprap	Length (ft., in.): 51'
9. Riprap	Length (ft., in.): 51'
10. Fill - Causeway/Roadway	Length (ft., in.): 100'

This permit SUPERSEDES all previous TVA approvals at this location including permits approved under land record numbers:



Tennessee Valley Authority
Section 26a Approval

TVA Representative: Samantha J Strickland Date: 03-30-2015

May require review by U.S. Army Corps of Engineers (USACE). Plans have been forwarded to the USACE.

No construction shall commence until you have written approval or verification that no permit is required.

Applicant is also responsible for all local and state approvals that may be required relating to water quality.

No construction shall commence until you have written approval or verification that no permit is required.

GENERAL AND STANDARD CONDITIONS

Section 26a

General Conditions

- 1) You agree to make every reasonable effort to construct and operate the facility authorized herein in a manner so as to minimize any adverse impact on water quality, aquatic life, wildlife, vegetation, and natural environmental values.
- 2) This permit may be revoked by TVA by written notice if:
 - a) the structure is not completed in accordance with approved plans;
 - b) if in TVA's judgment the structure is not maintained in a good state of repair and in good, safe, and substantial condition;
 - c) the structure is abandoned;
 - d) the structure or work must be altered or removed to meet the requirements of future reservoir or land management operations of the United States or TVA;
 - e) TVA finds that the structure has an adverse effect upon navigation, flood control, or public lands or reservations;
 - f) all invoices related to this permit are not timely paid;
 - g) you no longer have sufficient property rights to maintain a structure at this location; or
 - h) a land use agreement (e.g., license, easement, lease) for use of TVA land at this location related to this permit expires, is terminated or cancelled, or otherwise ceases to be effective.
- 3) If this permit for this structure is revoked, you agree to remove the structure, at your expense, upon written notice from TVA. In the event you do not remove the structure within 30 days of written notice to do so, TVA shall have the right to remove or cause to have removed, the structure or any part thereof. You agree to reimburse TVA for all costs incurred in connection with removal.
- 4) In issuing this Approval of Plans, TVA makes no representations that the structures or work authorized or property used temporarily or permanently in connection therewith will not be subject to damage due to future operations undertaken by the United States and/or TVA for the conservation or improvement of navigation, for the control of floods, or for other purposes, or due to fluctuations in elevations of the water surface of the river or reservoir, and no claim or right to compensation shall accrue from any such damage. By the acceptance of this approval, applicant covenants and agrees to make no claim against TVA or the United States by reason of any such damage, and to indemnify and save harmless TVA and the United States from any and all claims by other persons arising out of any such damage.
- 5) In issuing this Approval of Plans, TVA assumes no liability and undertakes no obligation or duty (in tort, contract, strict liability or otherwise) to the applicant or to any third party for any damages to property (real or personal) or personal injuries (including death) arising out of or in any way connected with applicant's construction, operation, or maintenance of the facility which is the subject of this Approval of Plans.
- 6) This approval shall not be construed to be a substitute for the requirements of any federal, state, or local statute, regulation, ordinance, or code, including, but not limited to, applicable building codes, now in effect or hereafter enacted. State 401 water quality certification may apply.
- 7) The facility will not be altered, or modified, unless TVA's written approval has been obtained prior to commencing work.
- 8) You understand that covered second stories are prohibited by Section 1304.204 of the Section 26a Regulations.
- 9) You agree to notify TVA of any transfer of ownership of the approved structure to a third party. Third party is required to make application to TVA for permitting of the structure in their name (1304.10). Any permit which is not transferred within 60 days is subject to revocation.
- 10) You agree to stabilize all disturbed areas within 30 days of completion of the work authorized. All land-disturbing activities shall be conducted in accordance with Best Management Practices as defined by Section 208 of the Clean Water Act to control erosion and sedimentation to prevent adverse water quality and related aquatic impacts. Such practices shall be consistent with sound engineering and construction principles; applicable federal, state, and local statutes, regulations, or ordinances; and proven techniques for controlling erosion and sedimentation, including any required conditions under Section 6 of the Standard Conditions.
- 11) You agree not to use or permit the use of the premises, facilities, or structures for any purposes that will result in draining or dumping into the reservoir of any refuse, sewage, or other material in violation of applicable standards or requirements relating to pollution control of any kind now in effect or hereinafter established.

- 12) The Native American Graves Protection and Repatriation Act and the Archaeological Resources Protection Act apply to archaeological resources located on the premises of land connected to any application made unto TVA. If LESSEE {or licensee or grantee (for easement) or applicant (for 26a permit)} discovers human remains, funerary objects, sacred objects, objects of cultural patrimony, or any other archaeological resources on or under the premises, LESSEE {or licensee, grantee, or applicant} shall immediately stop activity in the area of the discovery, make a reasonable effort to protect the items, and notify TVA by telephone (865-228-1374). Work may not be resumed in the area of the discovery until approved by TVA.
- 13) You should contact your local government official(s) to ensure that this facility complies with all applicable local floodplain regulations.
- 14) You agree to abide by the conditions of the vegetation management plan. Unless otherwise stated on this permit, vegetation removal is prohibited on TVA land.
- 15) You agree to securely anchor all floating facilities to prevent them from floating free during major floods.
- 16) You are responsible for accurately locating your facility, and this authorization is valid and effective only if your facility is located as shown on your application or as otherwise approved by TVA in this permit. The facility must be located on land owned or leased by you, or on TVA land at a location approved by TVA.
- 17) You agree to allow TVA employees access to your water use facilities to ensure compliance with any TVA issued approvals.
- 18) It is understood that you own adequate property rights at this location. If at any time it is determined that you do not own sufficient property rights, or that you have only partial ownership rights in the land at this location, this permit may be revoked. TVA may require the applicant to provide appropriate verification of ownership.
- 19) In accordance with 18 CFR Part 1304.9, Approval for construction covered by this permit expires 18 months after the date of issuance unless construction has been initiated.

Standard Conditions (Only items that pertain to this request have been listed.)

3) Shoreline Modification and Stabilization

- c) Bank, shoreline, and floodplain stabilization will be permanently maintained in order to prevent erosion, protect water quality, and preserve aquatic habitat.

5) Bridges and Culverts

- b) Applicant agrees to construct culvert in phases, employing adequate streambank protection measures, such that the diverted streamflow is handled without creating streambank or streambed erosion/sedimentation and without preventing fish passage.
- c) Concrete box culverts and pipe culverts (and their extensions) must create/maintain velocities and flow patterns which offer refuge for fish and other aquatic life, and allow passage of indigenous fish species, under all flow conditions. Culvert floor slabs and pipe bottoms must be buried below streambed elevation, and filled with naturally occurring streambed materials. If geologic conditions do not allow burying the floor, it must be otherwise designed to allow passage of indigenous fish species under all flow conditions.
- e) You agree to remove demolition and construction by-products from the site for recycling if practicable, or proper disposal--outside of the 100-year floodplain. Appropriate BMPs will be used during the removal of any abandoned roadway or structures.

6) Best Management Practices

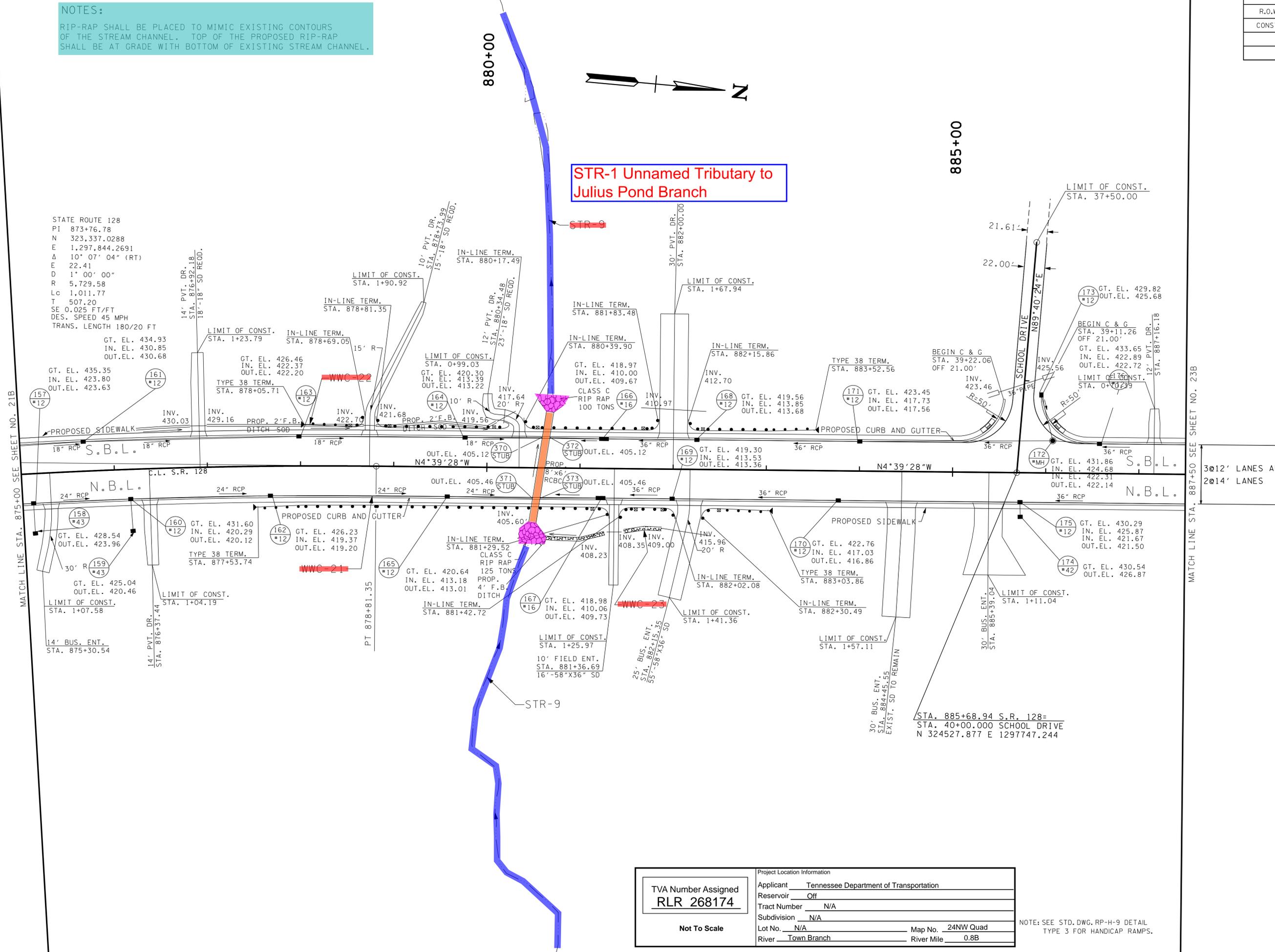
- b) You agree to installation of cofferdams and/or silt control structures between construction areas and surface waters prior to any soil-disturbing construction activity, and clarification of all water that accumulates behind these devices to meet state water quality criteria at the stream mile where activity occurs before it is returned to the unaffected portion of the stream. Cofferdams must be used wherever construction activity is at or below water elevation.
- d) You agree to keep equipment out of the reservoir or stream and off reservoir or stream banks, to the extent practicable (i.e., performing work "in the dry").
- e) You agree to avoid contact of wet concrete with the stream or reservoir, and avoid disposing of concrete washings, or other substances or materials, in those waters.
- f) You agree to use erosion control structures around any material stockpile areas.
- g) You agree to apply clean/shaken riprap or shot rock (where needed at water/bank interface) over a water permeable/soil impermeable fabric or geotextile and in such a manner as to avoid stream sedimentation or disturbance, or that any rock used for cover and stabilization shall be large enough to prevent washout and provide good aquatic habitat.

Additional Conditions

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2004	STP-128(11)	22B
CONST.	2015	NH-128(27)	6B

NOTES:
 RIP-RAP SHALL BE PLACED TO MIMIC EXISTING CONTOURS OF THE STREAM CHANNEL. TOP OF THE PROPOSED RIP-RAP SHALL BE AT GRADE WITH BOTTOM OF EXISTING STREAM CHANNEL.

STR-1 Unnamed Tributary to Julius Pond Branch



STATE ROUTE 128
 PI 873+76.78
 N 323,337.0288
 E 1,297,844.2691
 Δ 10° 07' 04" (RT)
 E 22.41
 D 1' 00' 00"
 R 5,729.58
 Lc 1,011.77
 T 507.20
 SE 0.025 FT/FT
 DES. SPEED 45 MPH
 TRANS. LENGTH 180/20 FT

GT. EL. 434.93
 IN. EL. 430.85
 OUT. EL. 430.68

GT. EL. 435.35
 IN. EL. 423.80
 OUT. EL. 423.63

IN. EL. 429.16
 INV. 429.16

IN. EL. 422.37
 OUT. EL. 422.20

IN. EL. 422.70
 INV. 422.70

IN. EL. 421.68
 INV. 421.68

IN. EL. 419.56
 INV. 419.56

IN. EL. 417.64
 INV. 417.64

IN. EL. 410.00
 OUT. EL. 409.67

IN. EL. 412.70
 INV. 412.70

GT. EL. 419.56
 IN. EL. 413.85
 OUT. EL. 413.68

GT. EL. 423.45
 IN. EL. 417.73
 OUT. EL. 417.56

GT. EL. 429.82
 OUT. EL. 425.68

GT. EL. 433.65
 IN. EL. 422.89
 OUT. EL. 422.72

GT. EL. 431.86
 IN. EL. 424.68
 OUT. EL. 422.14

GT. EL. 430.29
 IN. EL. 425.87
 IN. EL. 421.67
 OUT. EL. 421.50

GT. EL. 430.54
 OUT. EL. 426.87

GT. EL. 418.97
 IN. EL. 410.00
 OUT. EL. 409.67

GT. EL. 418.98
 IN. EL. 410.06
 OUT. EL. 409.73

GT. EL. 422.76
 IN. EL. 417.03
 OUT. EL. 416.86

GT. EL. 422.76
 IN. EL. 417.03
 OUT. EL. 416.86

TVA Number Assigned RLR 268174	Project Location Information
	Applicant <u>Tennessee Department of Transportation</u>
Not To Scale	Reservoir <u>Off</u>
	Tract Number <u>N/A</u>
Not To Scale	Subdivision <u>N/A</u>
	Lot No. <u>N/A</u> Map No. <u>24NW Quad</u>
Not To Scale	River <u>Town Branch</u> River Mile <u>0.8B</u>

CONST. FIELD REVIEW

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

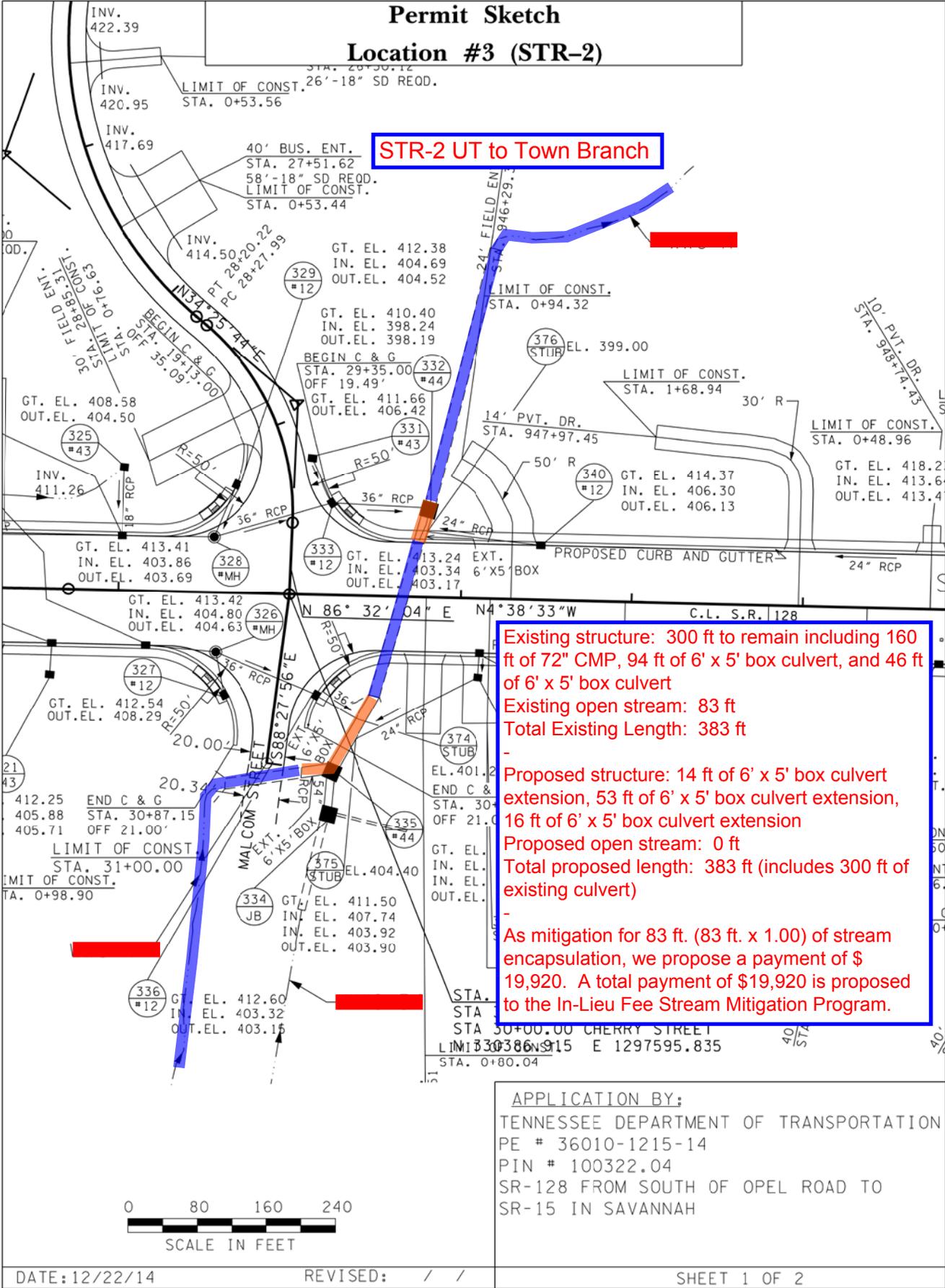
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT
 STA. 875+00 TO STA. 887+50
 SCALE: 1" = 50'

NOTE: SEE STD. DWG. RP-H-9 DETAIL TYPE 3 FOR HANDICAP RAMPS.

I:\13\2014 9:59:43 AM T:\projects\transportation\dr-affing\jobs\civil\015\const\function02\006B.SHT

TVA Number Assigned RLR 268174 Not To Scale	Project Location Information	
	Applicant	Tennessee Department of Transportation
	Reservoir	Off
	Tract Number	N/A
	Subdivision	N/A
Lot No.	N/A	Map No. 24NW Quad
River	Town Branch	River Mile 0.8B



Existing structure: 300 ft to remain including 160 ft of 72" CMP, 94 ft of 6' x 5' box culvert, and 46 ft of 6' x 5' box culvert

Existing open stream: 83 ft

Total Existing Length: 383 ft

-

Proposed structure: 14 ft of 6' x 5' box culvert extension, 53 ft of 6' x 5' box culvert extension, 16 ft of 6' x 5' box culvert extension

Proposed open stream: 0 ft

Total proposed length: 383 ft (includes 300 ft of existing culvert)

-

As mitigation for 83 ft. (83 ft. x 1.00) of stream encasulation, we propose a payment of \$ 19,920. A total payment of \$19,920 is proposed to the In-Lieu Fee Stream Mitigation Program.

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 36010-1215-14
 PIN # 100322.04
 SR-128 FROM SOUTH OF OPEL ROAD TO
 SR-15 IN SAVANNAH

TVA Number Assigned
RLR 268174

Not To Scale

Project Location Information

Applicant Tennessee Department of Transportation

Reservoir Off

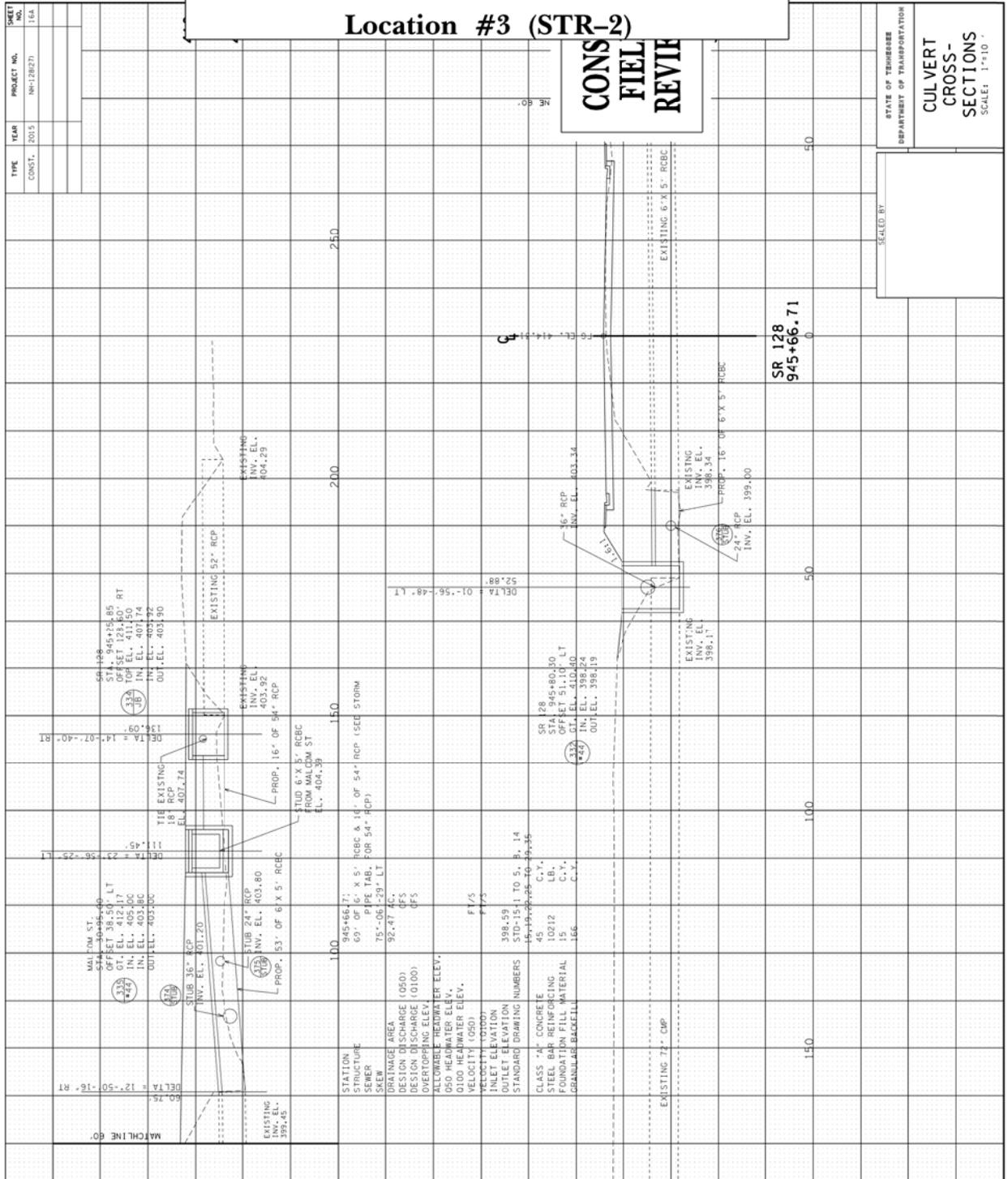
Tract Number N/A

Subdivision N/A

Lot No. N/A Map No. 24NW Quad

River Town Branch River Mile 0.8B

Permit Sketch Location #3 (STR-2)

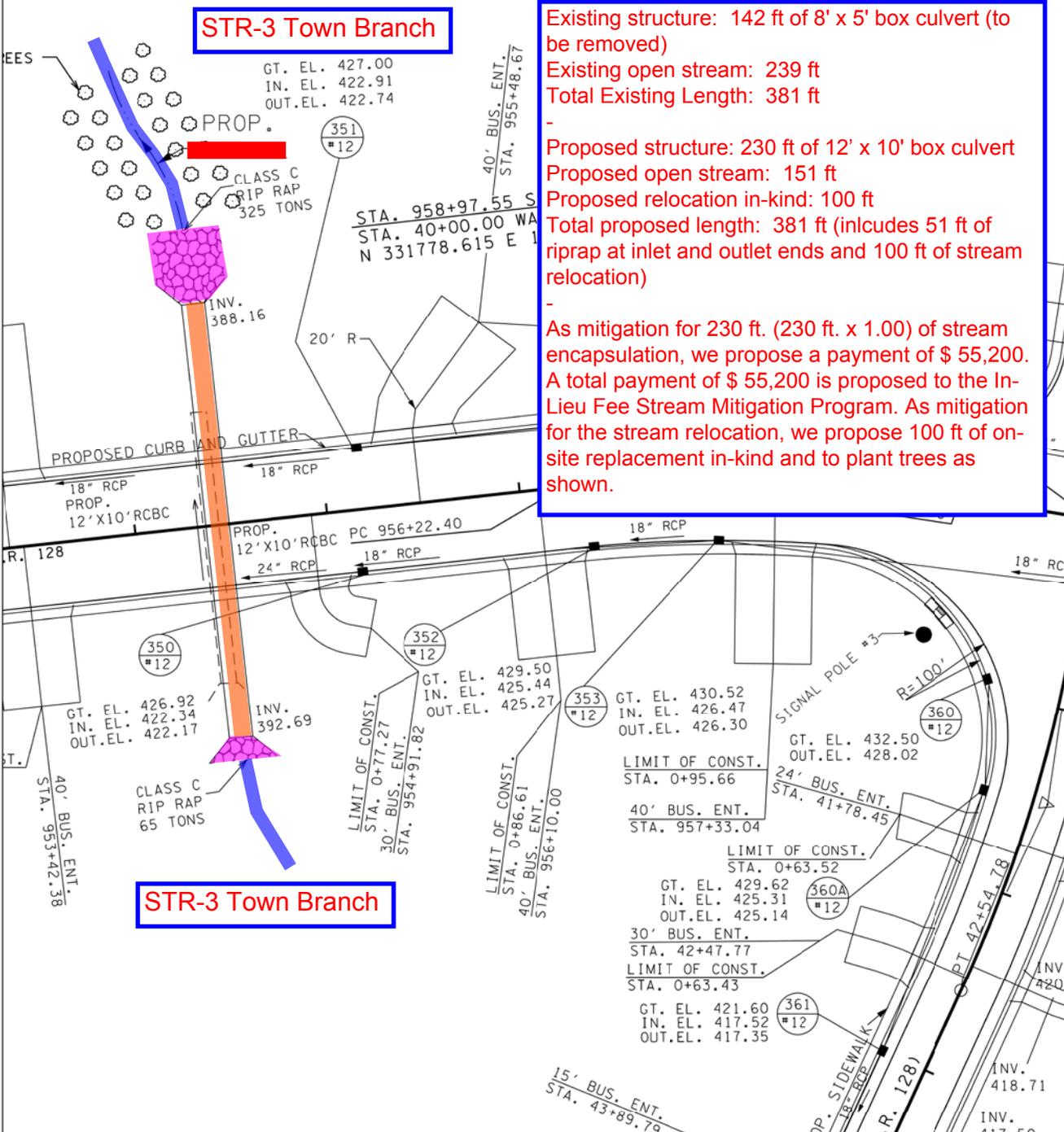


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
CULVERT
CROSS-
SECTIONS
SCALE: 1"=10'

APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 36010-1215-14
PIN # 100322.04
SR-128 FROM SOUTH OF OPEL ROAD TO
SR-15 IN SAVANNAH

Permit Sketch

Location #4 (STR-3)



Existing structure: 142 ft of 8' x 5' box culvert (to be removed)
 Existing open stream: 239 ft
 Total Existing Length: 381 ft

-

Proposed structure: 230 ft of 12' x 10' box culvert
 Proposed open stream: 151 ft
 Proposed relocation in-kind: 100 ft
 Total proposed length: 381 ft (includes 51 ft of riprap at inlet and outlet ends and 100 ft of stream relocation)

-

As mitigation for 230 ft. (230 ft. x 1.00) of stream encapsulation, we propose a payment of \$ 55,200. A total payment of \$ 55,200 is proposed to the In-Lieu Fee Stream Mitigation Program. As mitigation for the stream relocation, we propose 100 ft of on-site replacement in-kind and to plant trees as shown.

STR-3 Town Branch

STR-3 Town Branch



2206

WATER STREET
 P.I. 41+49.95
 N 331752.0017
 E 1297676.6587
 Δ 16°07'30" RT.

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 36010-1215-14
 PIN # 100322.04
 SR-128 FROM SOUTH OF OPEL ROAD TO
 SR-15 IN SAVANNAH

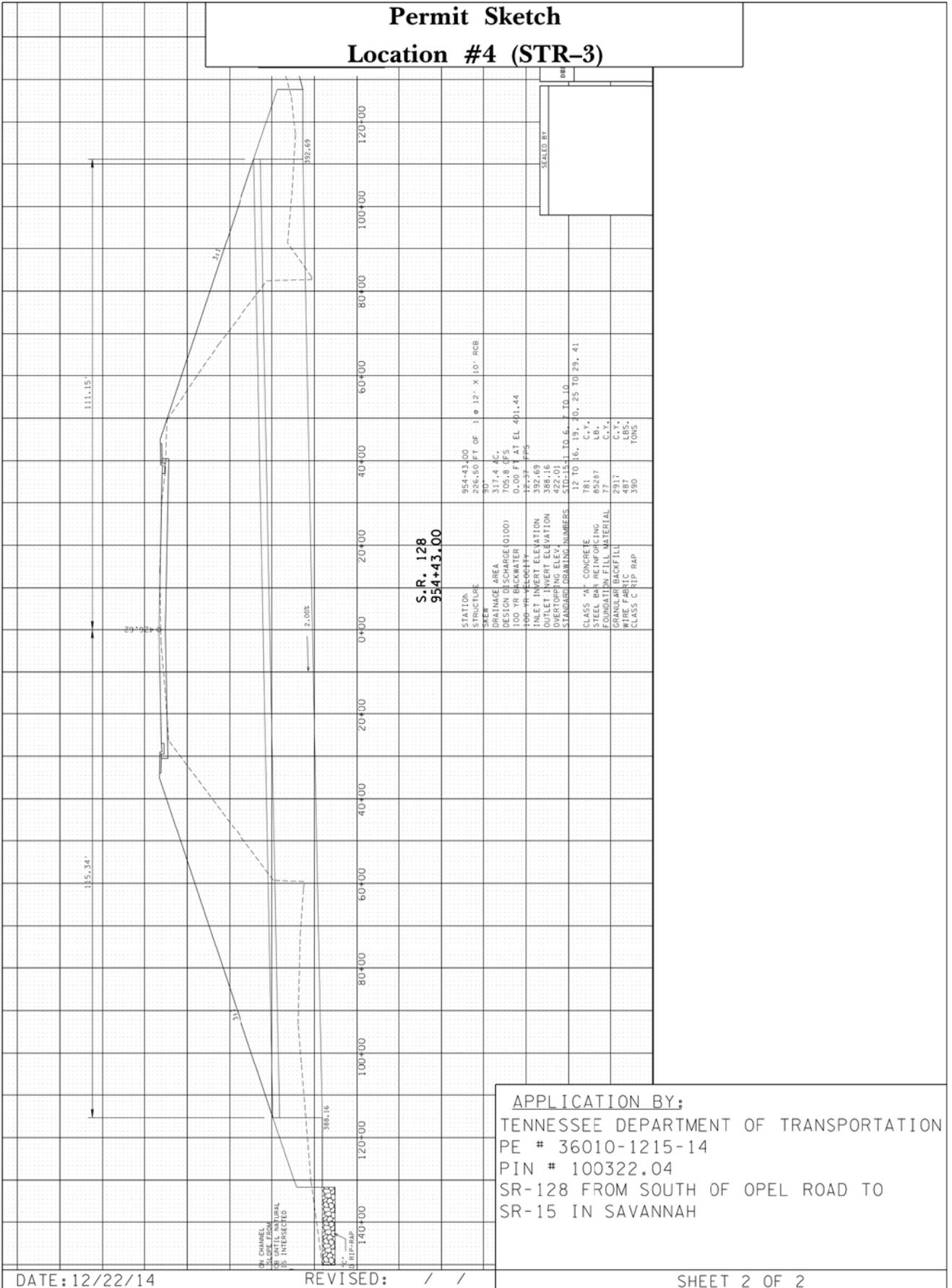
TVA Number Assigned
RLR 268174

Not To Scale

Project Location Information

Applicant Tennessee Department of Transportation
 Reservoir Off
 Tract Number N/A
 Subdivision N/A
 Lot No. N/A Map No. 24NW Quad
 River Town Branch River Mile 0.8B

Permit Sketch Location #4 (STR-3)



**S.R. 128
 954+43.00**

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 36010-1215-14
 PIN # 100322.04
 SR-128 FROM SOUTH OF OPEL ROAD TO
 SR-15 IN SAVANNAH

DATE: 12/22/14

REVISED: / /

SHEET 2 OF 2

TVA Number Assigned RLR 268174	Project Location Information	
	Applicant	Tennessee Department of Transportation
Not To Scale	Reservoir	Off
	Tract Number	N/A
	Subdivision	N/A
	Lot No.	N/A
River	Town Branch	Map No. 24NW Quad River Mile 0.8B

Permit Sketch
Stream Relocation (STR-3)

CHANNEL RELOCATION SEQUENCE AND IMPLEMENTATION NOTES FOR RELOCATED STREAM CHANNELS (IGNORE REFERENCES TO ITEMS NOT SPECIFIED)

1. The new channel shall be excavated and stabilized during a low-water period. Rip-rap (only as shown on plans), seeding, and sod shall be installed immediately following channel completion. Trees shall be installed in the first planting season following channel excavation. Water shall be diverted into the new channel only after it is completely stabilized, and only during a low-water period. Stabilized means that all specified rock and erosion control blanket or flexible channel liner is in place, and seeding and sod are in place and established.
2. CHANNEL RELOCATION SEQUENCE
 - a. Flag edge of the new channel top bank prior to clearing. Do not clear large trees in position to shade the new channel. Leave as many trees and shrubs as possible between toe of the new highway slope and the stream.
 - b. Excavate the new channel "in the dry" by leaving areas of undisturbed earth (diversion berms) in place at both ends.
 - c. Shape channel to specifications shown. Remove loose soils and debris.
 - d. Place topsoil, erosion control blanket or flexible channel liner, seed, and sod as specified.
 - e. Remove diversion berms, beginning with the most downstream, banks and bottom elevation of the old channel should transition smoothly into the new channel. The elevations of the new channel bottom at each end of the relocation sequence should match the elevations of the existing channel, and a steady percent slope should be maintained throughout the relocated channel centerline as specified.
 - f. Install trees according to standard specifications section 802.
3. Only rip-rap shown on plans should be used in the relocated channel reach. Any other proposed rip-rap should be coordinated with the Environmental Division through the TDOT Headquarters Construction Office.
4. Requests by any agency that would require the modification of channels, ditches, elevations, rip-rap or any other stream mitigation items associated with the channel relocations shall be referred to the TDOT Environmental Division via the Headquarters Construction Office for coordination with all involved agencies and TDOT divisions.

RIP-RAP PROPOSED IN BOTTOM OF STREAM CHANNEL

1. Rip-rap shall be placed as to mimic the existing contours of the stream channel. The top of the proposed rip-rap shall be at grade with the bottom of the existing stream channel. Voids within the rip-rap shall be filled with creek gravel to prevent loss of stream within rip-rap areas. Creek gravel can be removed from culvert excavation area.

EXCAVATION IN THE DRY NOTES

1. Any work within the wetland/stream channel area (e.g., for Pier Footing, Rip-rap Placement, Multi-Barrel Culvert/Bridge Construction etc.) shall be separated from flowing water or expected flow path and performed during low flow conditions. All items used within the wetland/stream channel area for diversion of flow (or expected flow), unless specified in the plans, shall not be paid for directly but shall be included in the cost of the other items. The note excludes any items specified in the plans for use with EC-STR-31 and EC-STR-32.

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 36010-1215-14
 PIN # 100322.04
 SR-128 FROM SOUTH OF OPEL ROAD TO
 SR-15 IN SAVANNAH

TVA Number Assigned RLR 268174	Project Location Information	
	Applicant	Tennessee Department of Transportation
Not To Scale	Reservoir	Off
	Tract Number	N/A
	Subdivision	N/A
	Lot No.	N/A
	Map No.	24NW Quad
	River	Town Branch
	River Mile	0.8B

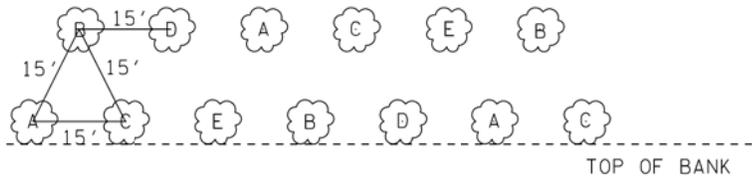
**Permit Sketch
Stream Relocation (STR-3)**

TREES NOTES

- No substitutions of tree species or sizes shall be allowed without the written approval of TDOT Environmental Division. Concerning stream mitigation, trees shall be of the variety requested and first quality. Concerning temporary wetland mitigation, trees shall be of the variety requested, well branched, bare root (roots must be kept moist at all times), and first quality. No clones or cultivars will be accepted. Any found to be incorrect species, or improperly planted, at any time prior to termination of the contract shall be removed and replaced at the contractor's expense. Stakes and wires shall be removed immediately prior to contract termination, unless otherwise directed by the engineer.
- The contractor should arrange several months ahead of time to obtain the correct tree species, as some may require some time to locate.
- All trees planted shall be wrapped as per section 802.07 of TDOT standard specification for the road and bridge construction.
- Trees shall be watered as required through the period of establishment to insure survival.

RECOMMENDED TREE REPLACEMENT FOR STREAM MITIGATION

PATTERN TO BE REPEATED AS NECESSARY



SEE SHEET 12B FOR STREAM LOCATION & PROPOSED TREES.

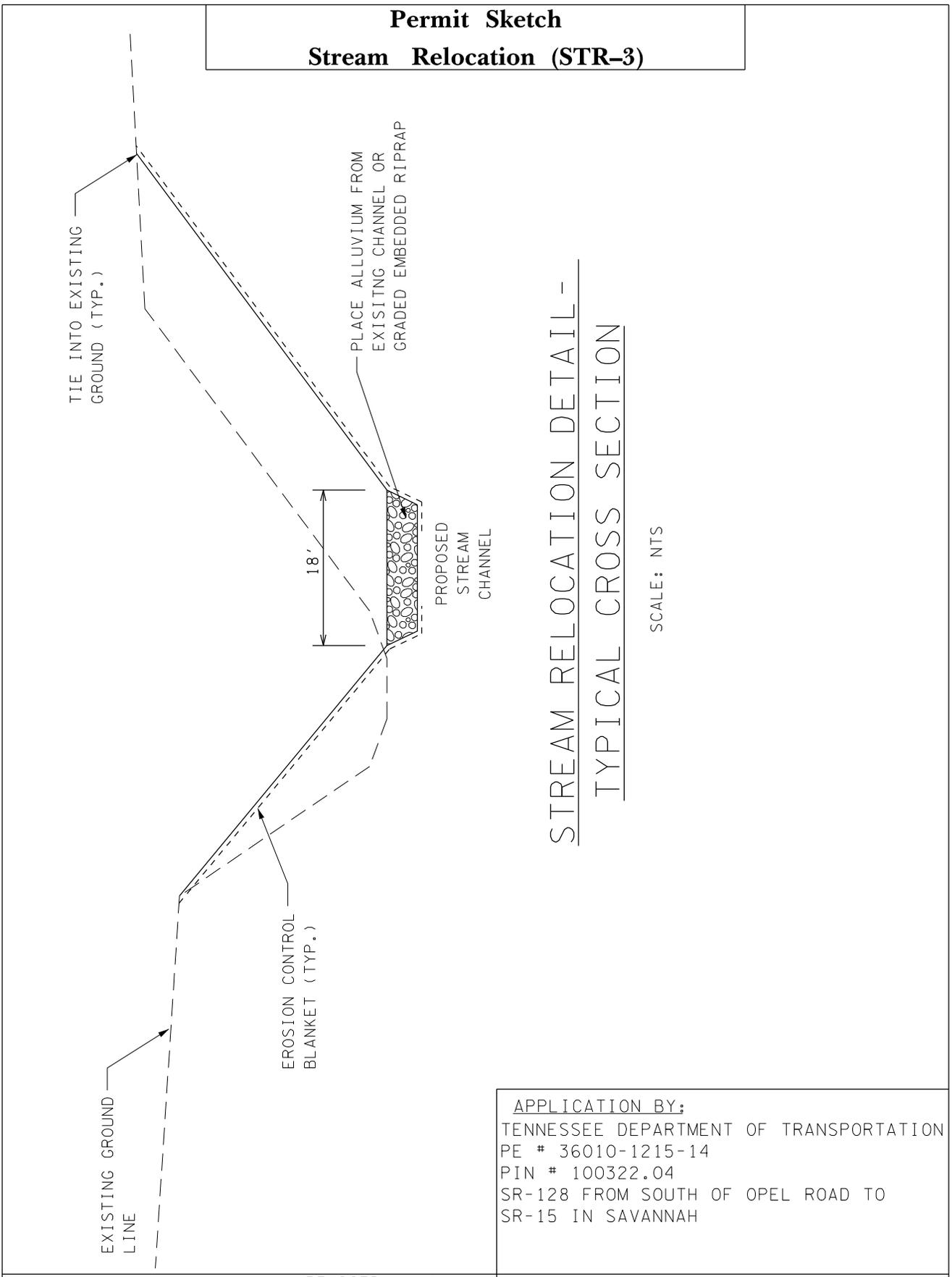
TREE SPECIES TO BE PLANTED
(15' CENTERS):

- AMERICAN ELM - ULMUS AMERICANA
- AMERICAN SYCAMORE - PLATANUS OCCIDENTAILS
- SOUTHERN RED OAK - QUERCUS FALCATA
- GREEN ASH - FRAXINUS PENNSYLVANICA
- WHITE OAK - QUERCUS ALBA

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 36010-1215-14
 PIN # 100322.04
 SR-128 FROM SOUTH OF OPEL ROAD TO
 SR-15 IN SAVANNAH

TVA Number Assigned RLR 268174	Project Location Information	
	Applicant	Tennessee Department of Transportation
Not To Scale	Reservoir	Off
	Tract Number	N/A
	Subdivision	N/A
	Lot No.	N/A
	Map No.	24NW Quad
	River	Town Branch
	River Mile	0.8B

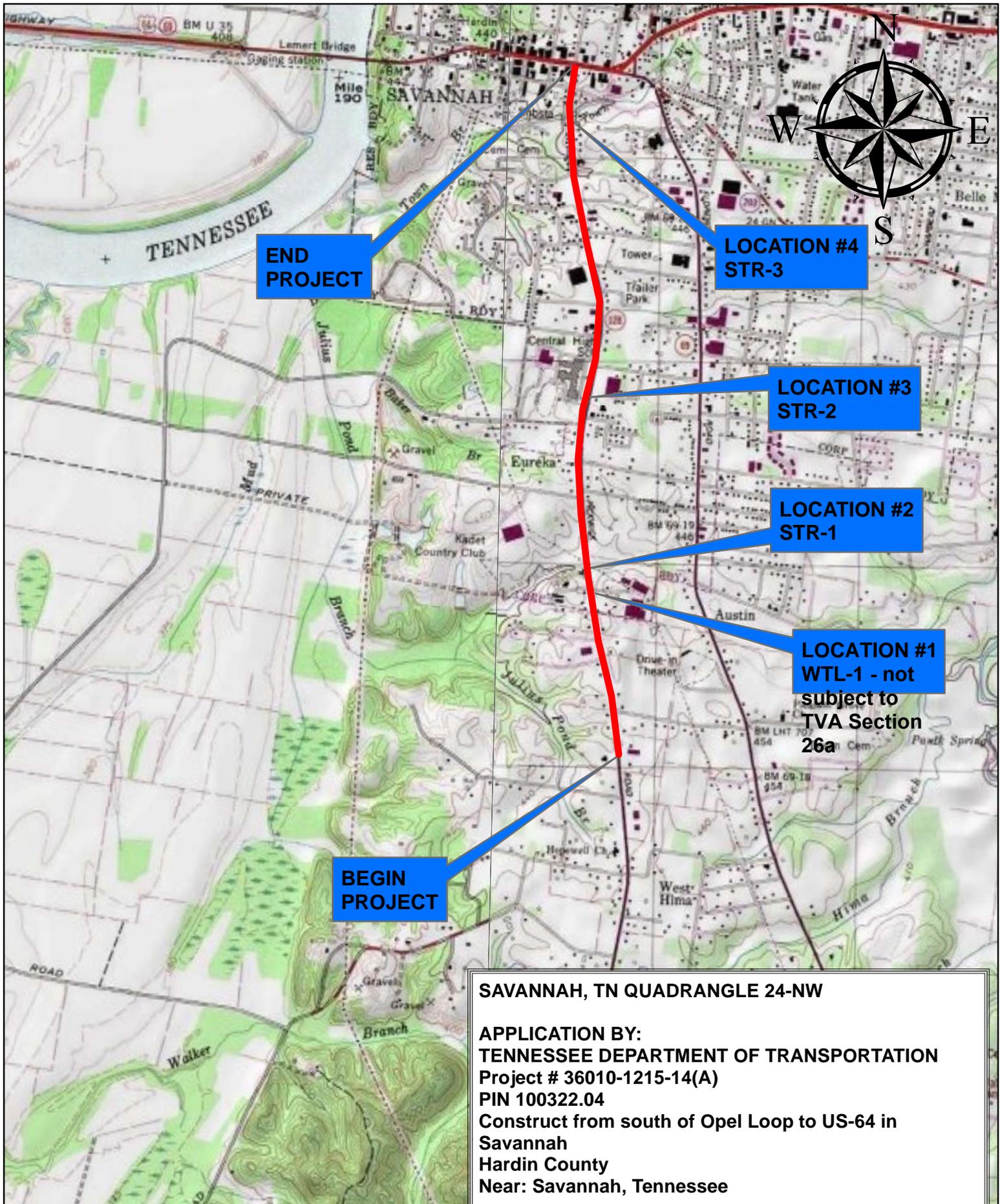
Permit Sketch
Stream Relocation (STR-3)



STREAM RELOCATION DETAIL -
TYPICAL CROSS SECTION

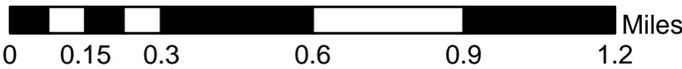
SCALE: NTS

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 36010-1215-14
 PIN # 100322.04
 SR-128 FROM SOUTH OF OPEL ROAD TO
 SR-15 IN SAVANNAH



SAVANNAH, TN QUADRANGLE 24-NW

APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
 Project # 36010-1215-14(A)
 PIN 100322.04
 Construct from south of Opel Loop to US-64 in
 Savannah
 Hardin County
 Near: Savannah, Tennessee



TVA Number Assigned
RLR 268174

Not To Scale

Project Location Information	
Applicant	Tennessee Department of Transportation
Reservoir	Off
Tract Number	N/A
Subdivision	N/A
Lot No.	N/A
Map No.	24NW Quad
River	Town Branch
River Mile	0.8B

TVA RESTRICTED INFORMATION

List of previous DA/TVA permits/approvals DA _____ TVA _____
Permit Number Date

Previous Property Owner (if known) _____

Is any portion of the activity for which authorization is sought now complete? Yes No (If "Yes" attach explanation)
 Month and year the activity was completed: _____ . Indicate the existing work on the drawings.

List all approvals or certifications required by other federal, interstate, state, or local agencies for any structures, construction, discharges, deposits, or other activities described in this application.

Issuing Agency	Type Approval	Identification No.	Date of Application	Date of Approval
TDEC	ARAP		Pending	
TDEC	CGP		Pending	

Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein?
 Yes No (If "Yes" attach explanation)

Project plans or drawings, on paper suitable for reproduction no larger than 11 x 17 inches or in electronic format (dxf, docx, or pdf), must accompany the application. Submit the application to the appropriate TVA and U.S. Army Corps of Engineers offices. An application that is not complete will be returned for additional information.

U.S.A.C.E. Offices		TVA Offices	
U.S. Army Corps of Engineers Eastern Regulatory Field Office 501 Adesa Parkway., Suite 250 Lenoir City, Tennessee 37771 (865) 986-7296	U.S. Army Corps of Engineers Savannah District The Plaza, Suite 130 1590 Adamson Parkway Morrow, Georgia 30260-1763 (678) 422-2729	Tennessee Valley Authority Chattanooga Regional Office 1101 Market Street, PSC 1E-C Chattanooga, Tennessee 37402-2801 1-800-882-5263	Tennessee Valley Authority Morristown Regional Office 3726 E. Morris Boulevard Morristown, Tennessee 37813-1270 1-800-882-5263
U.S. Army Corps of Engineers Regulatory Branch 3701 Bell Road Nashville, Tennessee 37214 (615) 369-7500	U.S. Army Corps of Engineers Western Regulatory Field Office 2042 Beltline Road, SW, Bldg C, Suite 415 Decatur, Alabama 35602 (256) 350-5620	Tennessee Valley Authority Gray Regional Office 106 Tri-Cities Business Park Drive Gray, Tennessee 37615 1-800-882-5263	Tennessee Valley Authority Murphy Regional Office 4800 US Highway 64 West, Suite 102 Murphy, North Carolina 28906 1-800-882-5263
U.S. Army Corps of Engineers Norfolk District P.O. Box 338 Abingdon, Virginia 24212 (276) 623-5259	U.S. Army Corps of Engineers Asheville Regulatory Field Office 151 Patton Avenue, Room 208 Asheville, North Carolina 28801-5006 (828) 271-4856	Tennessee Valley Authority Guntersville Regional Office 3696 Alabama Highway 69, CAB 1A-GVA Guntersville, Alabama 35976-7196 1-800-882-5263	Tennessee Valley Authority Muscle Shoals Regional Office Post Office Box 1010, MPB 1H Muscle Shoals, Alabama 35662-1010 1-800-882-5263
		Tennessee Valley Authority Lenoir City Regional Office 260 Interchange Park Drive, LCB 1A-LCT Lenoir City, Tennessee 37772-5664 1-800-882-5263	Tennessee Valley Authority Paris Regional Office 2835-A East Wood Street Paris, Tennessee 38242-5948 1-800-882-5263

Privacy Act Statement

This information is being requested in accordance with Section 26a of the TVA Act as cited on the front page of this form. Disclosure of the information requested is voluntary; however, failure to provide any required information or documents may result in a delay in processing your application or in your being denied a Section 26a permit. An application that is not complete will be returned for additional information. TVA uses this information to assess the impact of the proposed project on TVA programs and the environment and to determine if the project can be approved. Information in the application is made a matter of public record through issuance of a public notice if warranted. Routine uses of this information include providing to federal, state, or local agencies, and to consultants, contractors, etc., for use in program evaluations, studies, or other matters involving support services to the program; to respond to a congressional inquiry concerning the application or Section 26a program; and for oversight or similar purposes, corrective action, litigation or law enforcement.

Burden Estimate Statement

Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Agency Clearance Officer, Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402; and to the Office of Management and Budget, Paperwork Reduction Project (3316-0060), Washington, D.C. 20503.



**Section 26a Permit and Land Use Application
Applicant Disclosure Form**

By signing the Joint Application Form (Department of Army/TVA) or TVA's Land Use Application and again below, you agree to disclose any business, political, or financial interest that may present an actual or potential conflict of interest with TVA. If a new significant business, political, or financial interest is obtained during the period of the time that the application is under review, you agree to file an additional disclosure.

Disclose if any of the following apply to you (check all that apply). I am:

- An elected government official
- A policy making level employee of an entity that regulates TVA or its activities
- A management level employee of a power customer of TVA
- A TVA Director
- A TVA employee
- An immediate family member of one of the above
- A representative of a corporation or entity submitting an application and one of the above applies to me. Print entity or corporation name, and identify which of the above applies to you.

Project #36010-1215-14
PIN 100322.04
SR 128: Construct from south of Opel Loop
to US-64 in Savannah
Hardin County

- A representative of a corporation or entity submitting an application and the corporation or entity has partners, investors, or senior management that are one of the above. Print entity or corporation name, and identify the partner(s), investor(s), or senior manager(s) and which of the above applies.

None of the above

Do you have any other business or personal relationships not covered in your answers above that could appear to be a conflict of interest? (check one) **Yes** **No** If yes, provide more detail here.

By signing this form, you consent to this Applicant Disclosure Form being made available to the public in response to an appropriate request, including, without limitation, a request made under the Freedom of Information Act.

Please sign and return this form with your application package. Your application cannot be processed without receipt of this signed form.

Melanie Bumpus		12/22/2014
Name of applicant (Printed)	Signature of Applicant	Date

All applications and communications that occur as part of the application process may be made public to the extent permitted by applicable law, including the Freedom of Information Act and the Privacy Act, and could be reviewed formally by the Office of Inspector General (OIG). All written correspondence regarding your request may be forwarded to the TVA Chief Ethics and Compliance Officer (CECO) and the OIG, and all oral communication between TVA and the applicant regarding this request may be documented and maintained by TVA. Inquiries concerning your application from any person who falls into one of the categories described above will be disclosed to the CECO and OIG.

Privacy Act Statement

This information is being requested in accordance with Sections 4(k), 15d, 26a, and/or 31 of the TVA Act; 40 U.S.C. § 1314; 30 U.S.C. § 185; 16 U.S.C. § 667b; and/or 40 U.S.C. § 483. Disclosure of the information requested is voluntary; however, failure to provide any required information or documents may result in a delay in processing your application or in your application being denied. An application that is not complete will be returned for additional information. TVA uses this information to assess the impact of the proposed project on TVA programs and the environment and to determine if the project can be approved. Information in the application is made a matter of public record through issuance of a public notice if warranted. Routine uses of this information include providing to federal, state, or local agencies, and to consultants, contractors, etc., for use in program evaluations, studies, or other matters involving support services to the program; to respond to a congressional inquiry concerning the application or the applicable program; and for oversight or similar purposes, corrective action, litigation, or law enforcement.

8 – ECOLOGY REPORT



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3655

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

MEMORANDUM

To: Tabitha Cavaness
Design Division

From: Tim Nehus
Environmental Division

Date: December 16, 2014

Subject: ENVIRONMENTAL BOUNDARIES AND MITIGATION DESIGN FOR:
Hardin County; SR-128 from South of Opel Loop Road to SR-15 (US-64) in Savannah; P.E. 36010-1215-14, PIN 100322.04

A ecological evaluation of the subject project has been conducted with the following results:

- Wetlands present: One Wetland was located near the southern terminus (see Note below).
- No wetlands identified:
- Streams are present: Three streams, all perennial were located during the survey.
- No streams present in project impact area
- Protected species present:
- No protected species identified in project impact area: see Note below.
- Special haul road provisions needed:

THE FOLLOWING ITEMS ARE ATTACHED FOR YOUR USE:

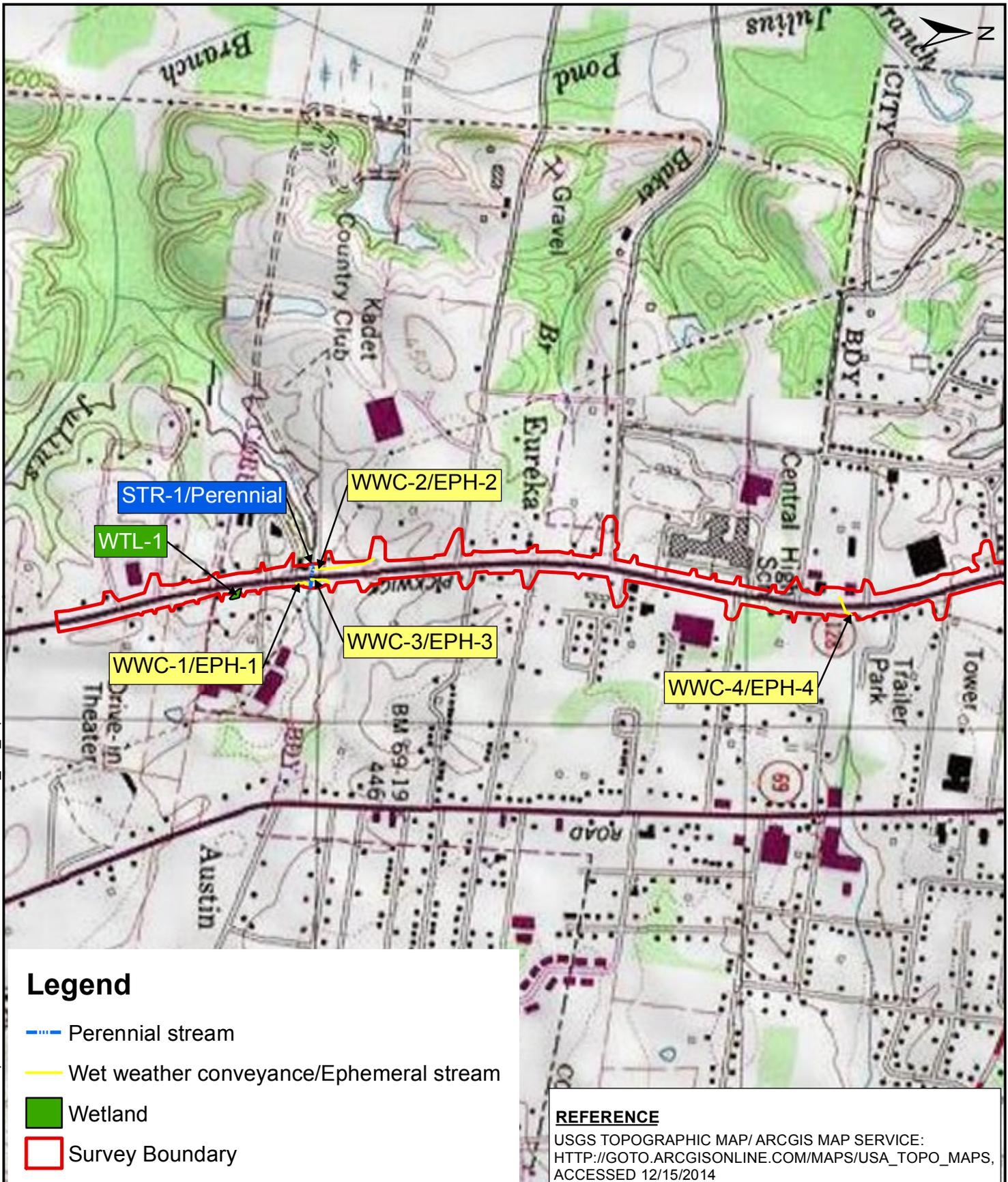
- Environmental Boundaries
- Mitigation Design Sketches
- Narrative Mitigation Plan
- Other : *Protected species correspondence*

Wetland Note: Wetland WTL-1 is located east of the existing road and is approximately 0.08 acres with 0.02 acres of permanent impact.

Protected Species Note: Bat Surveys were conducted in 2012 and 2014 and a Biological Assessment was completed in 2012 for federally listed mussels. USFWS has concurred with TDOT's Not Likely to Adversely Affect determination for all species of concern. All correspondence is attached.

Your assistance is appreciated. If you have any questions or comments, please contact Tim Nehus in the Environmental Division at 615-532-5580 or tim.nehus@tn.gov.

xc: Jennifer Lloyd w/ attachments
Shane Hester w/ attachments
Freddy Miller w/ attachments
John Hewitt w/ attachments
Michael Horlacher w/ attachments
Jon Zirkle w/ attachments
Project File

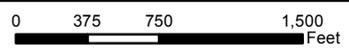


Legend

-  Perennial stream
-  Wet weather conveyance/Ephemeral stream
-  Wetland
-  Survey Boundary

REFERENCE

USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/USA_TOPO_MAPS](http://gto.arcgis.com/maps/usa_topo_maps),
 ACCESSED 12/15/2014



ISSUED FOR: TDOT

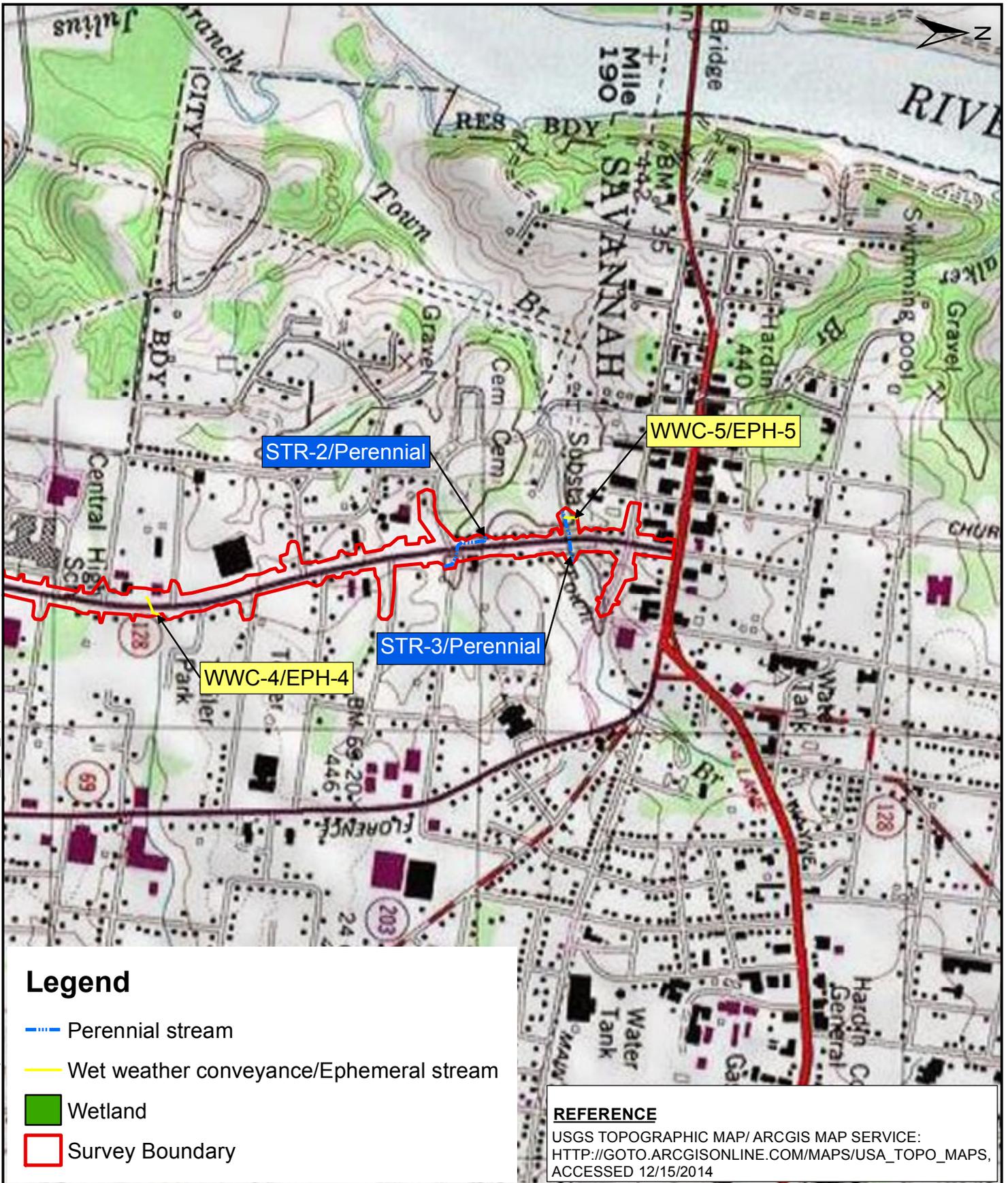
ISSUED BY: 
CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
 325 Seaboard Lane, Ste 170, Franklin, TN 37067
 Columbus, OH * Cincinnati, OH * Indianapolis, IN * Nashville, TN * Chicago, IL
 St. Louis, MO * Export, PA * Detroit, MI

Environmental Boundaries Map (Topo)
 SR-128 (Pickwick Road) From South of Opel
 Road (South) to SR-15 (US-64) in Savannah
 Hardin County, TN
 P.E.: 36010-1215-14; PIN: 100322.04



DWN. BY: CDH
 APPRVD BY: TN  SCALE: 1:12,000 DATE: 12-15-2014

PROJECT NO.: 143-420 FIGURE: 1
 SHEET 1 OF 2

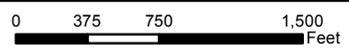


Legend

-  Perennial stream
-  Wet weather conveyance/Ephemeral stream
-  Wetland
-  Survey Boundary

REFERENCE

USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/USA_TOPO_MAPS](http://gto.arcgis.com/maps/usa_topo_maps),
 ACCESSED 12/15/2014



ISSUED FOR: TDOT

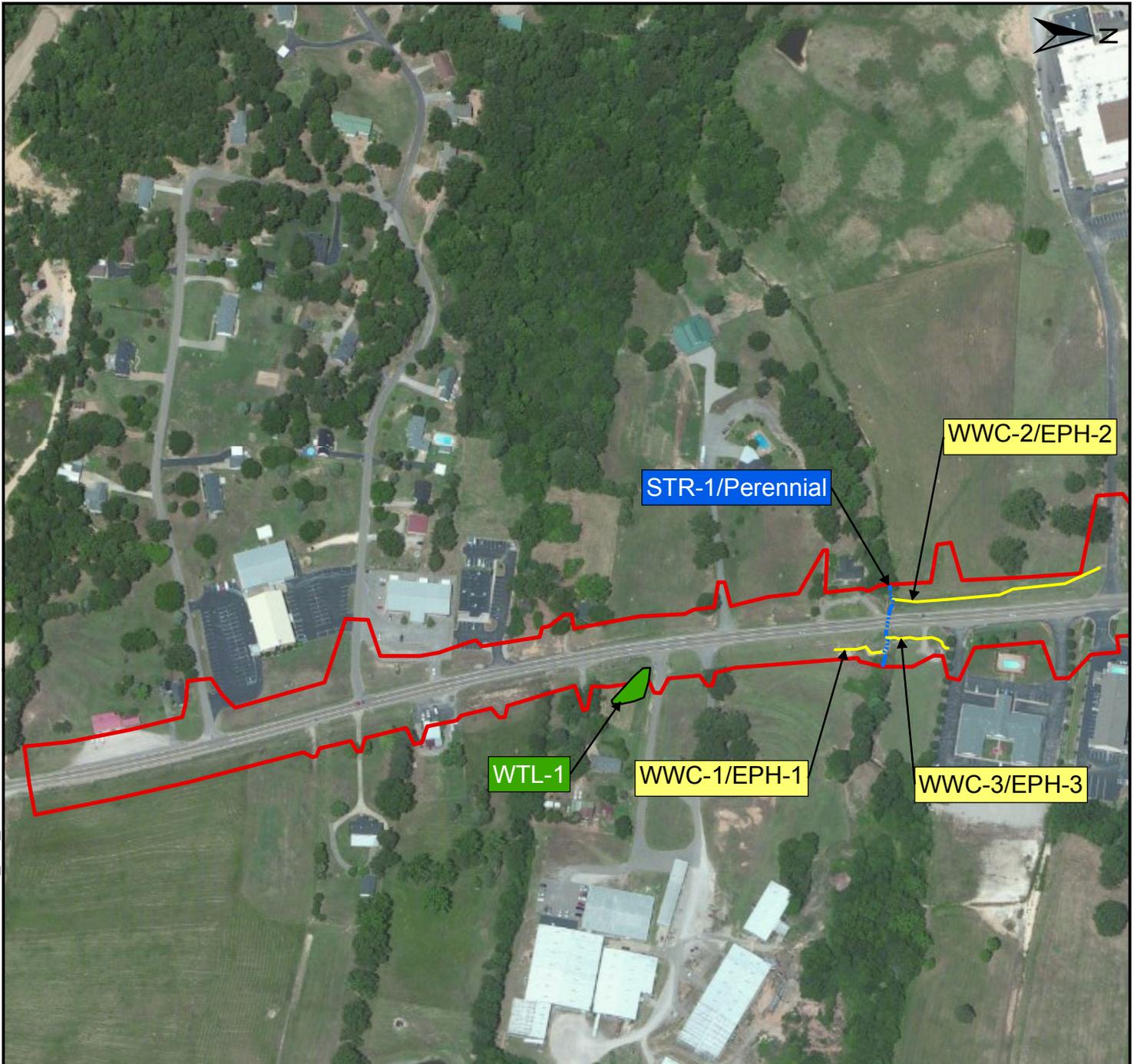
Environmental Boundaries Map (Topo)
 SR-128 (Pickwick Road) From South of Opel
 Road (South) to SR-15 (US-64) in Savannah
 Hardin County, TN
 P.E.: 36010-1215-14; PIN: 100322.04



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 St. Louis, MO * Export, PA * Detroit, MI

DWN. BY: CDH
 APPRVD BY: TN  on file
 SCALE: 1:12,000
 DATE: 12-15-2014

PROJECT NO.: 143-420
 FIGURE: 1
 SHEET 2 OF 2



Legend

- - - Perennial stream
- Wet weather conveyance/Ephemeral stream
- Wetland
- Survey Boundary

REFERENCE

ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery),
 ACCESSED 12/15/2014, IMAGERY DATE: 2014.

0 125 250 500 Feet



ISSUED FOR: TDOT

ISSUED BY:



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 325 Seaboard Lane, Ste 170, Franklin, TN 37067
 Columbus, OH * Cincinnati, OH * Indianapolis, IN * Nashville, TN * Chicago, IL
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Environmental Boundaries Map (Aerial)
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 Hardin County, TN
 P.E.: 36010-1215-14; PIN: 100322.04

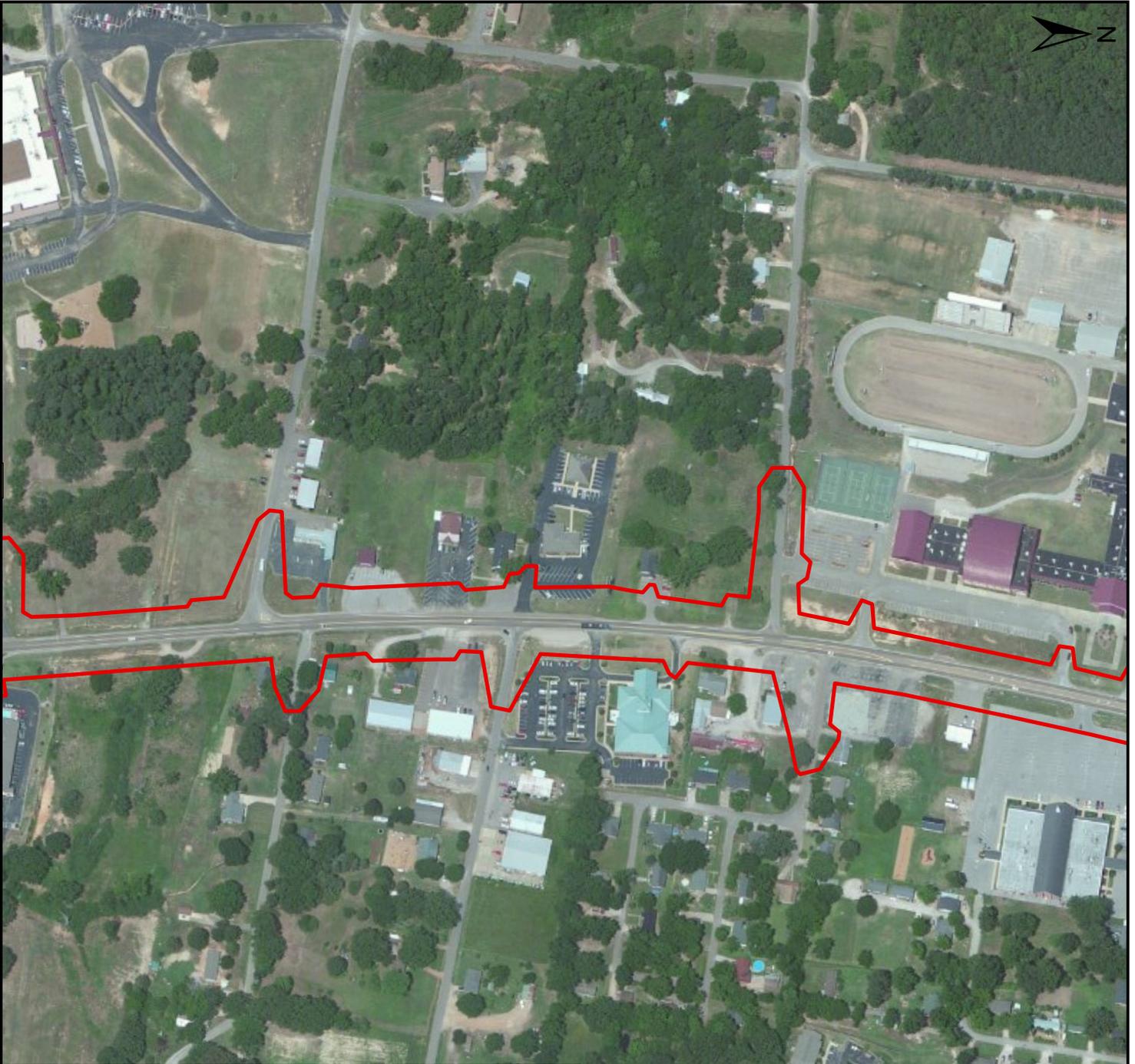
DWN. BY: CDH
 APPRVD BY: TN * Hand signature on file

SCALE: 1:4,000

DATE: 12-15-2014

PROJECT NO.: 143-420

FIGURE: 2
 SHEET 1 OF 4

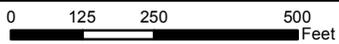


Legend

-  Perennial stream
-  Wet weather conveyance/Ephemeral stream
-  Wetland
-  Survey Boundary

REFERENCE

ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery),
 ACCESSED 12/15/2014, IMAGERY DATE: 2014.



ISSUED FOR: TDOT

ISSUED BY:



CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
 325 Seaboard Lane, Ste 170, Franklin, TN 37067
 Columbus, OH * Cincinnati, OH * Indianapolis, IN * Nashville, TN * Chicago, IL
 St. Louis, MO * Export, PA * Detroit, MI

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 Road (South) to SR-15 (US-64) in Savannah
 Hardin County, TN
 P.E.: 36010-1215-14; PIN: 100322.04



DWN. BY: CDH
 APPRVD BY: TN * Hand signature on file

SCALE: 1:4,000

DATE: 12-15-2014

PROJECT NO.: 143-420

FIGURE: 2
 SHEET 2 OF 4

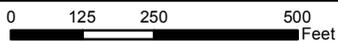


Legend

-  Perennial stream
-  Wet weather conveyance/Ephemeral stream
-  Wetland
-  Survey Boundary

REFERENCE

ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery),
 ACCESSED 12/15/2014, IMAGERY DATE: 2014.



ISSUED FOR: TDOT

ISSUED BY:



CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
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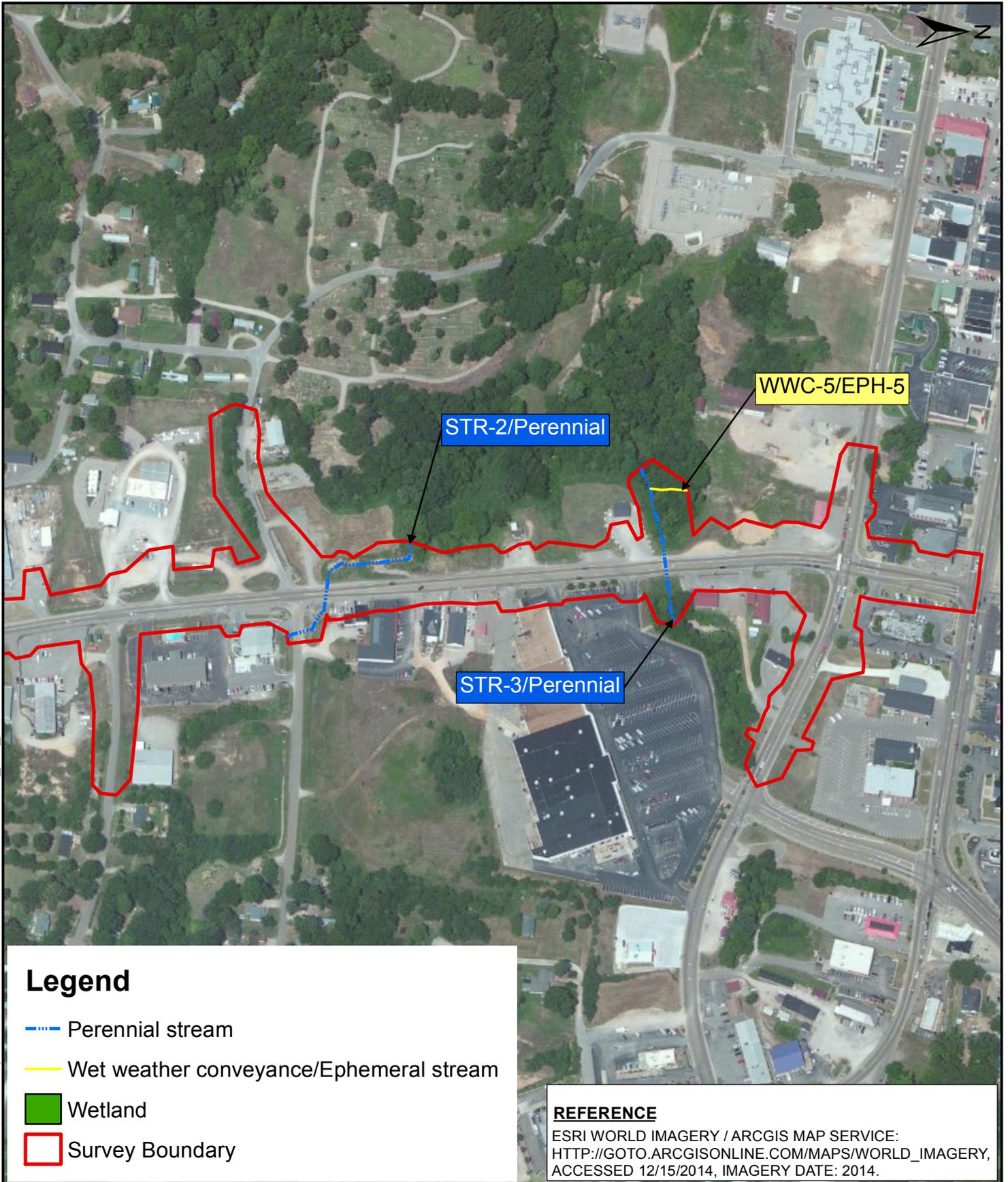
DWN. BY: CDH
 APPRVD BY: TN * Hand signature on file

SCALE: 1:4,000

DATE: 12-15-2014

PROJECT NO.: 143-420

FIGURE: 2
 SHEET 3 OF 4



Legend

-  Perennial stream
-  Wet weather conveyance/Ephemeral stream
-  Wetland
-  Survey Boundary

REFERENCE

ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery),
 ACCESSED 12/15/2014, IMAGERY DATE: 2014.

0 125 250 500 Feet



ISSUED FOR: TDOT

ISSUED BY:



CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
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DWN. BY: CDH
 APPRVD BY: TN * Hand signature on file

SCALE: 1:4,000

DATE: 12-15-2014

PROJECT NO.: 143-420

FIGURE: 2
 SHEET 4 OF 4

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SR-128 (Pickwick Road) from south of Opel Road to SR-15 Map Label: WTL-1
 P.E. and PIN: P.E. 36010-1215-14; PIN 100322.04 Date: 12/1/2014 Station: 874+10 R - 875+10 R
 Investigator(s): B. Mock C. Hertwig HUC 12 (Code and Name): 060400010504; Tennessee River-Mud Creek
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 2%
 Subregion (LRR or MLRA): LRR-P Lat: N35.200722 Long: W88.244623 Datum: _____
 Soil Map Unit Name: WgD3, Waynesboro gravelly clay loam NWI classification: PEM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Photos: <u>1, 2</u> Buffer(ft): <u>0</u> Approximate size(ac.): <u>0.08</u> Portion affected (permaent)(ac.): <u>0.02</u> Portion affected (temporary)(ac.): <u>0.00</u>	Confirmation (by, date): <u>Not required</u> Mitigation (include on Form J): <u>No</u> Notes:

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
--	--

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <u>X</u> No _____ Depth (inches): <u>8-16"</u>	Wetland Hydrology Present? Yes <u>X</u> No _____
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Map Label: WTL-1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet:
50% of total cover: _____ 20% of total cover: _____				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
<u>Herb Stratum</u> (Plot size: _____)				
1. <u>Panicum rigidulum</u>	20	Yes	FACW	
2. <u>Rumex crispus</u>	5		FAC	
3. <u>Cyperus esculentus</u>	15	Yes	FAC	
4. <u>Echinochloa muricata</u>	5		FACW	
5. <u>Symphytotrichum ontarionis</u>	5		FAC	
6. <u>Solidago gigantea</u>	5		FACW	
7. <u>Carex vulpinoidea</u>	15	Yes	OBL	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: _____ 20% of total cover: _____				
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remarks: (If observed, list morphological adaptations below).				

SOIL

Map Label: WTL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16"	10YR 5/2	80	7.5YR 5/8	20	RM	M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Wetland Background Information

Name(s) of Field Personnel: Brent Mock	
Assessment Date 12/1/2014	
Agency/Organization: Civil & Environmental Consultants, Inc.	
Office Address: 325 Seaboard Lane, Suite 170, Franklin, Tn 37067	
Phone Number: 615-333-7797	
e-mail address: bmock@cecinc.com	
Wetland Location: East of SR-128 located just north of Opel Loop(north)	
<p>Include county, road or street address, distances from easily located points, nearby landmarks, etc. If possible, attach map showing location. Include north arrow and scale of miles.</p> <p>WTL-1 - See attached map.</p>	
Lat/Long or UTM Coordinate	
USGS Quad Name	Savannah
National Wetland Inventory Map	Emergent
Hydrological Unit Code	PEM1B
Soil Survey Map Sheet	WgD3, Waynesboro gravelly clay loam
Delineation Report Attached (Y/N)	Field form attached

Wetland Description: WTL-1

Include landscape position, hydrologic source, all plant communities present (e.g., young forest, mature forest, scrub/shrub, herbaceous, etc.), presence of open water, dominant plant species, size of overall wetland and of different communities, types of disturbance, and any other significant feature(s).

Feature is located on the east side of SR-128 within a road side ditch, and is approximately 0.08 acres in size. Hydrology is provided by stormwater overland flow. The wetland does not have any forest or shrub layer. It only contains herbaceous plants, the dominate plant communities are comprised by sedges, panic grass, and yellow nutsedge. The area has had historical disturbance as it is located along SR-128.

TRAM Summary Worksheet

		Check if applicable
Red Flags	1. ORNW	N/A
	2. Documented High Quality or State Natural Area	N/A
	3. Federally or State Listed Species	N/A
	4. Critical Habitat	N/A
	5. Bog	N/A
	6. Fen	N/A
	7. Wet Prairie/Meadow	N/A
	8. Old Growth/Mature Forested wetlands.	N/A
	9. Regionally or Locally Significant Wildlife Concentration	N/A
		Points
Value Added	Significant Size	N/A
	Other Significant Value	N/A
Quantitative Rating	Function: Hydrologic Regime	0.354
	Function: Biogeochemical Processes	0.297
	Function: Retain Particulates	
	Function: Plant Community	0.229
	Function: Wildlife Community	0.240
	Quantitative Score (Average of FCIs x 100)	28.0
	Value Added Total	0.00
	Total of Quantitative and Value Added Scores	TOTAL SCORE

**HGM FUNCTIONAL ASSESSMENT
SLOPE WETLANDS**

Date: 12/1/14

Project Name SR-128

Field Personnel B. Mock C. Hertwig

Location/Address Savannah TN

Read instructions prior to conducting assessments. If project area is large or highly heterogeneous requiring the designation of several WAAs, a separate assessment should be performed for each WAA. CHECK THE APPROPRIATE BLANK(S) BELOW.

V1: Hydroperiod (HYDRO)

- | | | |
|--|---|---|
| 1. Hydrology not altered (SI = 1.0) | <input type="checkbox"/> no fill material or excessive sediment | <input type="checkbox"/> no roads or other impediments to surface ground water |
| | <input type="checkbox"/> no ditches/drainage tiles | <input type="checkbox"/> no excavation |
| 2. Hydrology slightly altered (SI = 0.75) | <input type="checkbox"/> portion of site with fill or excessive sediment | <input type="checkbox"/> roads or other impediments, water flow slightly impeded |
| | <input type="checkbox"/> portion of site with drainage ditches/tiles | <input type="checkbox"/> portion of site excavated |
| 3. Hydrology moderately altered (SI = 0.5) | <input checked="" type="checkbox"/> portion of site with fill or excessive sediment | <input checked="" type="checkbox"/> roads or other impediments, water flow moderately impeded |
| | <input checked="" type="checkbox"/> portion of site with drainage ditches/tiles | <input type="checkbox"/> portion of site excavated |
| 4. Hydrology significantly altered (SI = 0.25) | <input type="checkbox"/> portion of site with fill or excessive sediment | <input type="checkbox"/> roads or other impediments, water flow significantly impeded |
| | <input type="checkbox"/> portion of site with drainage ditches/tiles | <input type="checkbox"/> portion of site excavated |
| 5. Hydrology severely altered (SI = 0.1) | <input type="checkbox"/> entire site impacted by fill or excessive sediment | <input type="checkbox"/> roads or other impediments, water flow completely blocked |
| | <input type="checkbox"/> entire site with numerous drainage ditches/tiles | <input type="checkbox"/> entire site excavated |

V2: Wetland Watershed Integrity (WSHEDINT)

- | | | |
|---|--|---|
| 1. Watershed not impacted (SI = 1.0) | <input type="checkbox"/> watershed mostly to entirely forested | <input type="checkbox"/> no impervious surfaces |
| 2. Percent watershed slightly impacted (SI = 0.75) | <input type="checkbox"/> orchards/tree farms | <input type="checkbox"/> parks/golf courses |
| | <input type="checkbox"/> pasture/hayfield | <input type="checkbox"/> low density residential |
| 3. Percent watershed moderately impacted (SI = 0.5) | <input type="checkbox"/> cropland | <input type="checkbox"/> high density residential |
| | <input type="checkbox"/> construction areas | <input type="checkbox"/> other similar (list) |
| 4. Percent watershed significantly impacted (SI = 0.25) | <input type="checkbox"/> cropland | <input checked="" type="checkbox"/> high density residential |
| | <input type="checkbox"/> construction areas | <input checked="" type="checkbox"/> other similar (list) <u>Roadway</u> |
| 5. Percent watershed severely impacted (SI = 0.1) | <input type="checkbox"/> commercial | <input checked="" type="checkbox"/> parking lots |
| | <input type="checkbox"/> industrial | <input type="checkbox"/> other similar (list) |

V3: Canopy Tree Size Class (TSIZE)

1. Average size of canopy trees > 3 in. DBH
- ≥ 15 in. (SI = 1.0) 10 – 14 in. (SI = 0.75) 6 – 9 in. (SI = 0.5) 4 – 5 in. (SI = 0.25)
- < 4 in. or no trees present, go to V5

V4: Canopy Tree Density (TDEN)

1. Average number of canopy trees (> 3 in. DBH) per 30-ft. radius plot
- 5 – 10 (SI = 1.0) 11 – 15 (SI = 0.75) > 15 (SI = 0.5) 1 – 4 (SI = 0.5)

V5: Shrub Cover (SCOV)

1. Average percent cover of shrubs (woody stems < 3 in. DBH and taller than 3 ft.) per 30-ft. radius plot
- ≥ 70 (SI = 1.0) 55 – 69 (SI = 0.75) 45 – 54 (SI = 0.5) 30 – 44 (SI = 0.25) 20 – 29 (SI = 0.1)
- < 20, go to V6 None

V6: Ground Vegetation Cover (GVC)

1. Average percent cover of ground vegetation per 30-ft. radius plot

≥ 20 (SI = 1.0) 15 – 19 (SI = 0.75) 10 – 14 (SI = 0.5) 5 – 9 (SI = 0.25) < 5 (SI = 0.1)
 no ground vegetation present (SI = 0.0)

V7: Vegetation Composition and Diversity (COMP)

1. Check the dominant species from Groups 1, 2, and 3 below using the 50/20 rule. If tree cover is $< 20\%$, check the dominants in the next tallest stratum. If a dominant does not appear in lists below, but is a native species, it can be added as a Group 2 species. Native shrub and herbaceous species are assigned to Group 2. For both, write in the number of species.

GROUP 1 (Reference Standard)		GROUP 2 (Native Ubiquitous)		GROUP 3 (Invasive)
<input type="checkbox"/> Bur oak	<input type="checkbox"/> Overcup oak	<input type="checkbox"/> American elm	<input type="checkbox"/> Sugarberry	<input type="checkbox"/> European/Chinese privet
<input type="checkbox"/> Overcup oak	<input type="checkbox"/> Shellbark hickory	<input type="checkbox"/> Slippery elm	<input type="checkbox"/> Boxelder	<input type="checkbox"/> Japanese honeysuckle
<input type="checkbox"/> Pin oak	<input type="checkbox"/> Water tupelo	<input type="checkbox"/> Green ash	<input type="checkbox"/> Pawpaw	<input type="checkbox"/> Japanese stiltgrass
<input type="checkbox"/> Swamp chestnut oak	<input type="checkbox"/> S. black gum	<input type="checkbox"/> Red maple	<input type="checkbox"/> Black willow	<input type="checkbox"/> Purple loosestrife
<input type="checkbox"/> Water oak	<input type="checkbox"/> Persimmon	<input type="checkbox"/> Silver maple	<input type="checkbox"/> Native shrub	<input type="checkbox"/> Giant reed
<input type="checkbox"/> Willow oak	<input type="checkbox"/> Am. hornbeam	<input type="checkbox"/> Sweetgum	<input checked="" type="checkbox"/> Native herbaceous ^{x3}	<input type="checkbox"/> Tall fescue
<input type="checkbox"/> Shumard oak	<input type="checkbox"/>	<input type="checkbox"/> Silky dogwood	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Nuttall oak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Using the checked dominants in Groups 1, 2, and 3 above, calculate a quality index (Q) using the following formula: $[(1.0 \times \# \text{ of checked dominants in Group 1}) + (0.66 \times \# \text{ of checked dominants in Group 2}) + (0.0 \times \# \text{ of checked dominants in Group 3})] / \text{total } \# \text{ of checked dominants in all groups} = \underline{0.66}$

3. Multiply Q above by one of the following constants that reflects species richness:¹

- a) if ≥ 4 species from Groups 1 and/or 2 occur as dominants, multiply Q by 1.0
- b) if 3 species from Groups 1 and/or 2 occur as dominant, multiply Q by 0.75
- c) if 2 species from Groups 1 and/or 2 occur as dominants, multiply Q by 0.50
- d) if 1 species from Groups 1 and/or 2 occurs as dominant, multiply Q by 0.25
- e) if no species from Groups 1 and/or 2 occurs as dominant, multiply Q by 0.0

0.495

4. Calculate the square root of the value from Step 3 above. This is the SI for V7

0.703

¹ If native shrub and/or native herbaceous are checked in step 1, use the total number of species present for calculating Q in step 2 and species richness in step 3.

² In some Slope wetlands and in some small WAAs (e.g., < 0.5 acres), relatively few species (e.g., overcup oak) may be present. In cases in which this is the normal condition, Q can be multiplied by 1.0 if only 1 or 2 species are dominant.

V8: Soil Organic Matter (ORGANIC)

1. Surface horizons unaltered

100 percent cover of O and/or A horizon present (SI = 1.0)

2. Surface horizons altered. Estimate the percent of the WAA in which neither an O or A horizon is present due to one or more of the following:

10 land leveling 5 construction/development 50 fill other
10 grading excessive sediment deposits surface mining

3. Subtract the sum of the values from Step 2 from 100. Convert this value to a decimal. This is the SI for V8 (e.g., if 75 % of the WAA does not have an O or A horizon due to a significant disturbance, it will have an SI of 0.25).

V9: Buffer (BUFFER)

1. Determine a Connection Index (CI) by estimating the percent of the wetland surrounded by suitable buffer habitat.

90% – 100% (CI = 1.0) 75% – 89% (CI = 0.75) 40% – 74% (CI = 0.5) 10% – 39% (CI = 0.25)
 $< 10\%$ (CI = 0.1)

2. Multiply the CI by one of the following values:

- a) if average buffer width is ≥ 492 ft., multiply by 1.0
- b) if average buffer is 98 ft to 491 ft., multiply by 0.66
- c) if average buffer width is 33 ft to 97 ft., multiply by 0.33
- d) if average buffer width is < 33 ft., multiply by 0.1

3. This value is the SI for V9.

VALUES USED TO CALCULATE FUNCTIONAL CAPACITY INDICES (FCIs)

SUBINDEX VALUES:

V1 0.5 (HYDRO) V3 0 (TSIZE) V5 0 (SCOV) V7 0.703 (COMP) V9 0.01 (BUFFER)
 V2 0.25 (WSHEDINT) V4 0 (TDEN) V6 1 (GVC) V8 0.25 (ORGANIC)

WETLAND FUNCTIONS

FUNCTION 1: MAINTAIN HYDROLOGIC REGIME

$$\text{FCI: } (V1 \times V2)^{1/2} \Rightarrow (0.5 \times 0.25)^{1/2} = 0.354$$

FUNCTION 2: MAINTAIN BIOGEOCHEMICAL PROCESSES

$$\text{FCI (trees present)} = \left((V1 \times V2)^{1/2} \times \left(\frac{V3+V4+V8}{2} \right) \right)^{1/2} \Rightarrow \left((__ \times __)^{1/2} \times \left(\frac{__ + __ + __}{2} \right) \right)^{1/2} = \text{N/A}$$

$$\text{FCI (shrubs present)} = \left((V1 \times V2)^{1/2} \times \frac{V5+V8}{3} \right)^{1/2} \Rightarrow \left((__ \times __)^{1/2} \times \frac{__ + __}{3} \right)^{1/2} = \text{N/A}$$

$$\text{FCI (ground cover)} = \left((V1 \times V2)^{1/2} \times \frac{V6+V8}{5} \right)^{1/2} \Rightarrow \left((0.5 \times 0.25)^{1/2} \times \frac{1 + 0.25}{5} \right)^{1/2} = 0.297$$

FUNCTION 3: MAINTAIN CHARACTERISTIC PLANT COMMUNITY

$$\text{FCI (trees present)} = \frac{(V1 \times V2)^{1/2} + 2 \left(\frac{V3+V4+V7}{3} \right)}{3} \Rightarrow \frac{(__ \times __)^{1/2} + 2 \left(\frac{__ + __ + __}{3} \right)}{3} = \text{N/A}$$

$$\text{FCI (shrubs present)} = \frac{(V1 \times V2)^{1/2} + 2 \left(\frac{V5+V7}{2} \right)}{6} \Rightarrow \frac{(__ \times __)^{1/2} + 2 \left(\frac{__ + __}{2} \right)}{6} = \text{N/A}$$

$$\text{FCI (groundcover)} = \frac{(V1 \times V2)^{1/2} + 2 \left(\frac{V6+V7}{2} \right)}{9} \Rightarrow \frac{(0.5 \times 0.25)^{1/2} + 2 \left(\frac{1 + 0.703}{2} \right)}{9} = \text{0.229}$$

FUNCTION 4: MAINTAIN CHARACTERISTIC WILDLIFE COMMUNITY

$$\text{FCI (trees)} = \frac{(V1 \times V2)^{1/2} + 2 \left(\frac{V3+V4+V7}{3} \right) + V9}{4} \Rightarrow \frac{(__ \times __)^{1/2} + 2 \left(\frac{__ + __ + __}{3} \right) + __}{4} = \text{N/A}$$

$$\text{FCI (shrubs present)} = \frac{(V1 \times V2)^{1/2} + 2 \left(\frac{V5+V7}{2} \right) + V9}{6} \Rightarrow \frac{(__ \times __)^{1/2} + 2 \left(\frac{__ + __}{2} \right) + __}{6} = \text{N/A}$$

$$\text{FCI (groundcover)} = \frac{(V1 \times V2)^{1/2} + 2 \left(\frac{V6+V7}{2} \right) + V9}{9} \Rightarrow \frac{(0.5 \times 0.25)^{1/2} + 2 \left(\frac{1 + 0.703}{2} \right) + 0.01}{9} = 0.230$$

Ecology Field Data Sheet: Water Resources

Project: Hardin County; SR-128; From South of Opel Road to SR-15 (US-64)

P.E.: 36010-1215-14; PIN: 100322.04

Date of survey: 12/1/2014

Biologist: B. Mock, C. Hertwig

Affiliation: CEC, Inc.

1-Station: from plans	880+70 CL
2-Map label and name	STR-1 (Unnamed Tributary to Julius Pond Branch)
3-Latitude/Longitude	N35.202238, W88.244372
4-Potential impact	Crossing/encapsulation/runoff
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	5'
top of bank width	20'
bank height and slope ratio	8'; 2:1
avg. gradient of stream (%)	1%
substratum	Cobble, gravel, leaf litter
riffle/run/pool	20/70/10
width of buffer zone	LB: 20' RB: 20'
water flow	Yes
water depth	6"
water width	2'
general water quality	Good
OHWM indicators	Wrack lines, bent vegetation, scouring
groundwater connection	Unknown
bank stability: LB, RB	LB: Undercut RB: Eroding
dominant species: LB, RB	Both: privet, willow oak, Christmas fern, soft rush, red maple, southern red oak, hackberry, American elm
overhead canopy (%)	60%
benthos	Caddis fly case (2)
fish	None observed
algae or other aquatic life	Filamentous green algae
habitat assessment score	86
photo number (s)	3 u/s, 4 d/s, 5 d/s at SR-128 culvert
rainfall information	0.82" on 12/1/2014; no rain in previous 7 days
6- HUC code & name (12-digit)	060400010504; Tennessee River-Mud Creek
7-Confirmed by:	Not required
8-Mitigation	No <input checked="" type="checkbox"/> Yes _____ : (include on Form J)
9-ETW	No <input checked="" type="checkbox"/> Yes _____
10-303 (d) List	No <input checked="" type="checkbox"/> Yes _____: Habitat _____ Siltation _____
11-Assessed	No <input checked="" type="checkbox"/> Yes _____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	STR-1 flows to the west into Julius Pond Branch (off Right of Way). The confluence of WWC-1/EPH-1, WWC-3/EPH-3, and STR-1 is located on the eastern side of SR-128. The confluence of WWC-2/EPH-2 and STR-1 is located on the western side of SR-128.

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

STREAM NAME STR-1		LOCATION SR-128 Savannah, TN	
STATION # 880+70	REACH ID# N/A	STREAM CLASS N/A	
UTM N 35.202238	UTM E -88.244372	RIVER BASIN Tennessee River	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS B. Mock C. Hertwig			
FORM COMPLETED BY B. Mock		DATE 12/1/2014 TIME 12:30 PM	REASON FOR SURVEY TDOT - SR-128 Widening

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover SCORE 11	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization SCORE 11	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability SCORE 8	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition SCORE 9	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status SCORE 12	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Parameters to be evaluated in sampling reach

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS STR-1

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE 7	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE 5	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 2 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 3 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 3 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 6 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
SCORE 3 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 3 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Parameters to be evaluated broader than sampling reach

Total Score 83

Ecology Field Data Sheet: Water Resources

Project: Hardin County; SR-128; From South of Opel Road to SR-15 (US-64)

P.E.: 36010-1215-14; PIN: 100322.04

Date of survey: 12/1/2014

Biologist: B. Mock, C. Hertwig

Affiliation: CEC, Inc.

1-Station: from plans	879+30 R – 880+50 R
2-Map label and name	WWC-1/EPH-1
3-Latitude/Longitude	N35.202087, W88.244976
4-Potential impact	Fill/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	2'
top of bank width	10'
bank height and slope ratio	5'; 1:1
avg. gradient of stream (%)	1%
substratum	Hardpan clay
riffle/run/pool	N/A
width of buffer zone	LB: 0' RB: 0'
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	N/A
groundwater connection	No
bank stability: LB, RB	LB: Eroding RB: Eroding
dominant species: LB, RB	Both: Bermuda grass, barnyard grass, goldenrod, privet, clover, dandelion
overhead canopy (%)	0%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	34
photo number (s)	6 u/g, 7 d/g
rainfall information	0.82" on 12/1/2014; no rain in previous 7 days
6- HUC code & name (12-digit)	060400010504; Tennessee River-Mud Creek
7-Confirmed by:	Not required
8-Mitigation	No <input checked="" type="checkbox"/> Yes _____ : (include on Form J)
9-ETW	No <input checked="" type="checkbox"/> Yes _____
10-303 (d) List	No <input checked="" type="checkbox"/> Yes _____: Habitat _____ Siltation _____
11-Assessed	No <input checked="" type="checkbox"/> Yes _____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	WWC-1/EPH-1 begins at a head cut in a road side ditch on the eastern side of SR-128. This feature flows north to STR-1. Hydrologic determination score = 13.5.

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Hardin	Named Waterbody: N/A	Date/Time: 12/01/2014; 2:02 pm
Assessors/Affiliation: C. Hertwig/B. Mock; CEC, Inc.		Project ID: WWC-1/EPH-1
Site Name/Description: SR-128; From South of Opel Road to SR-15 (US-64)		
Site Location: Savannah, TN		
USGS quad: Savannah	HUC (12 digit): 060400010504; Tennessee River-Mud Creek	Lat/Long: N35.202087, W88.244976
Previous Rainfall (7-days) : 0.82" day of survey, 0.00" previous 7 days		
Precipitation this Season vs. Normal : very wet wet average dry drought unknown		
Source of recent & seasonal precip data : http://www.tva.com/river/lakeinfo/precip.htm		
Watershed Size : < 5 acres	Photos: Yes	Number : 6 u/g, 7d/g
Soil Type(s) / Geology : Collins loam, local alluvium		
Surrounding Land Use : Lawn/Roadway		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes) :		
Severe	Moderate	Slight Absent

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	✓	WWC
2. Defined bed and bank absent, dominated by upland vegetation / grass	✓	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions N/A		WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	✓	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	✓	Stream
6. Presence of fish (except <i>Gambusia</i>)	✓	Stream
7. Presence of naturally occurring ground water table connection	✓	Stream
8. Flowing water in channel and 7 days since last precipitation in local watershed	✓	Stream
9. Evidence watercourse has been used as a supply of drinking water	✓	Stream

NOTE : If any Primary Indicators 1-9 = "Yes", then STOP; absent directly contradictory evidence, determination is complete.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in *TDEC-WPC Guidance For Making Hydrologic Determinations, Version 1.4*

Overall Hydrologic Determination = Wet weather conveyance/Ephemeral stream

Secondary Indicator Score (if applicable) = 13.5

Justification / Notes : WWC-1/EPH-1 drains north along SR-128 and into STR-1. This feature is surrounded by lawn and roadway.

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

STREAM NAME WWC-1/EPH-1		LOCATION SR-128 Savannah, TN	
STATION # 880+00 R REACH ID# N/A		STREAM CLASS N/A	
UTM N 35.202087 UTM E -88.244976		RIVER BASIN Tennessee River	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS B. Mock C. Hertwig			
FORM COMPLETED BY B. Mock		DATE 12/1/2014 TIME 1:30 PM	REASON FOR SURVEY TDOT - SR-128 Widening

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover SCORE 4	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization SCORE 2	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability SCORE 0	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition SCORE 5	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status SCORE 7	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Parameters to be evaluated in sampling reach

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS WWC-1/EPH-1

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration SCORE 3	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity SCORE 7	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank) SCORE 2 (LB) SCORE 2 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 0 (LB) SCORE 0 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 1 (LB) SCORE 1 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Parameters to be evaluated broader than sampling reach

Total Score 34

Ecology Field Data Sheet: Water Resources

Project: Hardin County; SR-128; From South of Opel Road to SR-15 (US-64)

P.E.: 36010-1215-14; PIN: 100322.04

Date of survey: 12/1/2014

Biologist: B. Mock, C. Hertwig

Affiliation: CEC, Inc.

1-Station: from plans	880+80 L – 885+50 L
2-Map label and name	WWC-2/EPH-2
3-Latitude/Longitude	N35.202414, W88.245361
4-Potential impact	Fill/Runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	1'
top of bank width	2'
bank height and slope ratio	2'; 2:1
avg. gradient of stream (%)	1%
substratum	Hardpan clay, gravel
riffle/run/pool	50/50/0
width of buffer zone	LB: 0' RB: 0'
water flow	Yes
water depth	4"
water width	1'
general water quality	Poor
OHWM indicators	Bent vegetation
groundwater connection	No
bank stability: LB, RB	LB: Eroding RB: Eroding
dominant species: LB, RB	Both: Bermuda grass, barnyard grass, goldenrod, privet, clover, dandelion
overhead canopy (%)	0%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	39
photo number (s)	8 u/g, 9 d/g
rainfall information	0.82" on 12/1/2014; no rain in previous 7 days
6- HUC code & name (12-digit)	060400010504; Tennessee River-Mud Creek
7-Confirmed by:	Not required
8-Mitigation	No <input checked="" type="checkbox"/> Yes _____ : (include on Form J)
9-ETW	No <input checked="" type="checkbox"/> Yes _____
10-303 (d) List	No <input checked="" type="checkbox"/> Yes _____: Habitat _____ Siltation _____
11-Assessed	No <input checked="" type="checkbox"/> Yes _____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	WWC-2/EPH-2 is located on the western side of SR-128. This feature flows south to STR-1. Hydrologic determination score = 15.5.

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Hardin	Named Waterbody: N/A	Date/Time: 12/01/2014; 2:10 pm
Assessors/Affiliation: C. Hertwig/B. Mock; CEC, Inc.		Project ID: WWC-2/EPH-2
Site Name/Description: SR-128; From South of Opel Road to SR-15 (US-64)		
Site Location: Savannah, TN		
USGS quad: Savannah	HUC (12 digit): 060400010504; Tennessee River-Mud Creek	Lat/Long: N35.202414, W88.245361
Previous Rainfall (7-days) : 0.82" day of survey, 0.00" previous 7 days		
Precipitation this Season vs. Normal : very wet wet average dry drought unknown		
Source of recent & seasonal precip data : http://www.tva.com/river/lakeinfo/precip.htm		
Watershed Size : < 10 acres	Photos: Yes	Number : 8 u/g, 9 d/g
Soil Type(s) / Geology : Waynesboro gravelly clay loam/Collins loam, local alluvium		
Surrounding Land Use : Lawn/Roadway		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes) :		
Severe	Moderate	Slight Absent

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	✓	WWC
2. Defined bed and bank absent, dominated by upland vegetation / grass	✓	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions N/A		WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	✓	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	✓	Stream
6. Presence of fish (except <i>Gambusia</i>)	✓	Stream
7. Presence of naturally occurring ground water table connection	✓	Stream
8. Flowing water in channel and 7 days since last precipitation in local watershed	✓	Stream
9. Evidence watercourse has been used as a supply of drinking water	✓	Stream

NOTE : If any Primary Indicators 1-9 = "Yes", then STOP; absent directly contradictory evidence, determination is complete.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in *TDEC-WPC Guidance For Making Hydrologic Determinations, Version 1.4*

Overall Hydrologic Determination = Wet weather conveyance/Ephemeral stream

Secondary Indicator Score (if applicable) = 15.5

Justification / Notes : WWC-2/EPH-2 drains south along SR-128 and into STR-1. This feature is located in the roadside ditch along SR-128 and appears to be historically altered from SR-128 construction.

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

STREAM NAME WWC-2/EPH-2		LOCATION SR-128 Savannah, TN	
STATION # 881+00 L REACH ID# N/A		STREAM CLASS N/A	
UTM N 35.202414 UTM E -88.245361		RIVER BASIN Tennessee River	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS B. Mock C. Hertwig			
FORM COMPLETED BY B. Mock		DATE 12/1/2014 TIME 1:30 PM	REASON FOR SURVEY TDOT - SR-128 Widening

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover SCORE 6	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization SCORE 2	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability SCORE 2	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition SCORE 4	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status SCORE 8	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Parameters to be evaluated in sampling reach

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS WWC-2/EPH-2

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration SCORE 2	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity SCORE 5	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank) SCORE 2 (LB) SCORE 2 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 2 (LB) SCORE 2 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 1 (LB) SCORE 1 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Parameters to be evaluated broader than sampling reach

Total Score 39

Ecology Field Data Sheet: Water Resources

Project: Hardin County; SR-128; From South of Opel Road to SR-15 (US-64)

P.E.: 36010-1215-14; PIN: 100322.04

Date of survey: 12/1/2014

Biologist: B. Mock, C. Hertwig

Affiliation: CEC, Inc.

1-Station: from plans	880+60 R – 881+90 R
2-Map label and name	WWC-3/EPH-3
3-Latitude/Longitude	N35.202537, W88.245088
4-Potential impact	Fill/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	2'
top of bank width	4'
bank height and slope ratio	6'; 2:1
avg. gradient of stream (%)	2%
substratum	Hardpan clay, gravel
riffle/run/pool	50/50/0
width of buffer zone	LB: 0' RB: 0'
water flow	Yes
water depth	4"
water width	1'
general water quality	Poor
OHWM indicators	Bent Vegetation
groundwater connection	No
bank stability: LB, RB	LB: Eroding RB: Eroding
dominant species: LB, RB	Both: Bermuda grass, barnyard grass, goldenrod, privet, clover, dandelion, Bradford pear, Japanese honeysuckle
overhead canopy (%)	0%
benthos	None
fish	None
algae or other aquatic life	None
habitat assessment score	45
photo number (s)	10 u/g, 11 d/g
rainfall information	0.82" on 12/1/2014; no rain in previous 7 days
6- HUC code & name (12-digit)	060400010504; Tennessee River-Mud Creek
7-Confirmed by:	Not required
8-Mitigation	No <input checked="" type="checkbox"/> Yes _____ : (include on Form J)
9-ETW	No <input checked="" type="checkbox"/> Yes _____
10-303 (d) List	No <input checked="" type="checkbox"/> Yes _____: Habitat _____ Siltation _____
11-Assessed	No <input checked="" type="checkbox"/> Yes _____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	WWC-3/EPH-3 is located on the eastern side of SR-128. This feature flows south to STR-1. Hydrologic determination score = 14.

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Hardin	Named Waterbody: N/A	Date/Time: 12/01/2014; 2:15 pm
Assessors/Affiliation: C. Hertwig/B. Mock; CEC, Inc.		Project ID: WWC-3/EPH-3
Site Name/Description: SR-128; From South of Opel Road to SR-15 (US-64)		
Site Location: Savannah, TN		
USGS quad: Savannah	HUC (12 digit): 060400010504; Tennessee River-Mud Creek	Lat/Long: N35.202537, W88.245088
Previous Rainfall (7-days) : 0.82" day of survey, 0.00" previous 7 days		
Precipitation this Season vs. Normal : very wet wet <u>average</u> dry drought unknown		
Source of recent & seasonal precip data : http://www.tva.com/river/lakeinfo/precip.htm		
Watershed Size : < 10 acres	Photos: Yes	Number : 10 u/g, 11 d/g
Soil Type(s) / Geology : Collins loam, local alluvium		
Surrounding Land Use : Lawn/Roadway		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes) :		
Severe	<u>Moderate</u>	Slight Absent

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	✓	WWC
2. Defined bed and bank absent, dominated by upland vegetation / grass	✓	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions N/A		WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	✓	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	✓	Stream
6. Presence of fish (except <i>Gambusia</i>)	✓	Stream
7. Presence of naturally occurring ground water table connection	✓	Stream
8. Flowing water in channel and 7 days since last precipitation in local watershed	✓	Stream
9. Evidence watercourse has been used as a supply of drinking water	✓	Stream

NOTE : If any Primary Indicators 1-9 = "Yes", then STOP; absent directly contradictory evidence, determination is complete.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in *TDEC-WPC Guidance For Making Hydrologic Determinations, Version 1.4*

Overall Hydrologic Determination = Wet weather conveyance/Ephemeral stream

Secondary Indicator Score (if applicable) = 14

Justification / Notes : WWC-3/EPH-3 drains south along SR-128 and into STR-1. This feature is surrounded by commercial property and appears to be historically altered.

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

STREAM NAME WWC-3/EPH-3		LOCATION SR-128 Savannah, TN	
STATION # 881+00 R REACH ID# N/A		STREAM CLASS N/A	
UTM N 35.202537 UTM E -88.245088		RIVER BASIN Tennessee River	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS B. Mock C. Hertwig			
FORM COMPLETED BY B. Mock		DATE 12/1/2014 TIME 1:30 PM	REASON FOR SURVEY TDOT - SR-128 Widening

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover SCORE 8	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization SCORE 8	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability SCORE 3	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition SCORE 2	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status SCORE 4	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Parameters to be evaluated in sampling reach

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS WWC-3/EPH-3

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration SCORE 2	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity SCORE 4	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank) SCORE 2 (LB) SCORE 2 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 4 (LB) SCORE 4 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 1 (LB) SCORE 1 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Parameters to be evaluated broader than sampling reach

Total Score 45

Ecology Field Data Sheet: Water Resources

Project: Hardin County; SR-128; From South of Opel Road to SR-15 (US-64)

P.E.: 36010-1215-14; PIN: 100322.04

Date of survey: 12/1/2014

Biologist: B. Mock, C. Hertwig

Affiliation: CEC, Inc.

1-Station: from plans	921+50 L – 922+70 R
2-Map label and name	WWC-4/EPH-4
3-Latitude/Longitude	N35.21385, W88.244047
4-Potential impact	Crossing/encapsulation/fill
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	2'
top of bank width	6'
bank height and slope ratio	2'; 2:1
avg. gradient of stream (%)	2%
substratum	Vegetation, gravel
riffle/run/pool	0/100/0
width of buffer zone	LB: 0' RB: 0'
water flow	Yes
water depth	4"
water width	1'
general water quality	Poor
OHWM indicators	Bent vegetation
groundwater connection	No
bank stability: LB, RB	LB: Stable RB: Stable
dominant species: LB, RB	Both: Bermuda grass, barnyard grass, fescue, goldenrod, privet, clover, dandelion, black willow, cottonwood
overhead canopy (%)	0%
benthos	None
fish	None
algae or other aquatic life	None
habitat assessment score	41
photo number (s)	12 u/g, 13 d/g
rainfall information	0.82" on 12/1/2014; no rain in previous 7 days
6- HUC code & name (12-digit)	060400010304; Horse Creek Lower
7-Confirmed by:	Not required
8-Mitigation	No <input checked="" type="checkbox"/> Yes _____ : (include on Form J)
9-ETW	No <input checked="" type="checkbox"/> Yes _____
10-303 (d) List	No <input checked="" type="checkbox"/> Yes _____: Habitat _____ Siltation _____
11-Assessed	No <input checked="" type="checkbox"/> Yes _____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	WWC-4/EPH-4 flows east to Horse Creek which is located off Right of Way. Hydrologic determination score = 10.5.

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Hardin	Named Waterbody: N/A	Date/Time: 12/01/2014; 2:45 pm
Assessors/Affiliation: C. Hertwig/B. Mock; CEC, Inc.		Project ID: WWC-4/EPH-4
Site Name/Description: SR-128; From South of Opel Road to SR-15 (US-64)		
Site Location: Savannah, TN		
USGS quad: Savannah	HUC (12 digit): 060400010304; Horse Creek Lower	Lat/Long: N35.21385, W88.244047
Previous Rainfall (7-days) : 0.82" day of survey, 0.00" previous 7 days		
Precipitation this Season vs. Normal : very wet wet <u>average</u> dry drought unknown		
Source of recent & seasonal precip data : http://www.tva.com/river/lakeinfo/precip.htm		
Watershed Size : < 5 acres	Photos: Yes	Number : 12 u/g, 13 d/g
Soil Type(s) / Geology : Robertsville silt loam		
Surrounding Land Use : Lawn/Roadway		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes) :		
Severe	<u>Moderate</u>	Slight Absent

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	✓	WWC
2. Defined bed and bank absent, dominated by upland vegetation / grass	✓	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions N/A		WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	✓	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	✓	Stream
6. Presence of fish (except <i>Gambusia</i>)	✓	Stream
7. Presence of naturally occurring ground water table connection	✓	Stream
8. Flowing water in channel and 7 days since last precipitation in local watershed	✓	Stream
9. Evidence watercourse has been used as a supply of drinking water	✓	Stream

NOTE : If any Primary Indicators 1-9 = "Yes", then STOP; absent directly contradictory evidence, determination is complete.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in *TDEC-WPC Guidance For Making Hydrologic Determinations, Version 1.4*

Overall Hydrologic Determination = Wet weather conveyance/Ephemeral stream

Secondary Indicator Score (if applicable) = 10.5

Justification / Notes : This feature appears to have been historically altered by the surrounding commercial development.

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

STREAM NAME WWC-4/EPH-4		LOCATION SR-128 Savannah, TN	
STATION # 922+00 R REACH ID# N/A		STREAM CLASS N/A	
UTM N 35.21385	UTM E -88.244047	RIVER BASIN Tennessee River	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS B. Mock C. Hertwig			
FORM COMPLETED BY B. Mock		DATE 12/1/2014 TIME 1:30 PM	REASON FOR SURVEY TDOT - SR-128 Widening

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover SCORE 4	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization SCORE 0	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability SCORE 2	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition SCORE 2	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status SCORE 8	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Parameters to be evaluated in sampling reach

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS WWC-4/EPH-4

Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
	SCORE 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.	
	SCORE 1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.	
	SCORE 5 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	SCORE 5 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
	SCORE 6 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	SCORE 6 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.	
	SCORE 0 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	SCORE 0 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Parameters to be evaluated broader than sampling reach

Total Score 41

Ecology Field Data Sheet: Water Resources

Project: Hardin County; SR-128; From South of Opel Road to SR-15 (US-64)

P.E.: 36010-1215-14; PIN: 100322.04

Date of survey: 12/1/2014

Biologist: B. Mock, C. Hertwig

Affiliation: CEC, Inc.

1-Station: from plans	944+60 R – 948+00 L
2-Map label and name	STR-2 (Unnamed Tributary to Town Branch)
3-Latitude/Longitude	N35.219906, W88.246038
4-Potential impact	Crossing/encapsulation/fill
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	5'
top of bank width	15'
bank height and slope ratio	15'; 2:1
avg. gradient of stream (%)	2%
substratum	Gravel, hardpan clay
riffle/run/pool	50/50/0
width of buffer zone	LB: 0' RB: 0'
water flow	Yes
water depth	2'
water width	5'
general water quality	Poor
OHWM indicators	Clear Line
groundwater connection	Unknown
bank stability: LB, RB	LB: Eroding RB: Eroding
dominant species: LB, RB	Both: privet, English ivy, hackberry
overhead canopy (%)	90%
benthos	None observed
fish	None observed
algae or other aquatic life	None observed
habitat assessment score	88
photo number (s)	14 u/s on east side of SR-128, 15 u/s, 16 d/s
rainfall information	0.82" on 12/1/2014; no rain in previous 7 days
6- HUC code & name (12-digit)	060400010504; Tennessee River-Mud Creek
7-Confirmed by:	Not required
8-Mitigation	No ___ Yes <u>X</u> : (include on Form J)
9-ETW	No <u>X</u> Yes ___
10-303 (d) List	No <u>X</u> Yes ___: Habitat ___ Siltation ___
11-Assessed	No <u>X</u> Yes ___
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	STR-2 begins off right of way on the east side of SR-128. The confluence of STR-2 and STR-3 (Town Branch) is located on the western side of SR-128 (off Right of Way). Mitigation is required for encapsulation that exceeds 200'.

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

STREAM NAME STR-2		LOCATION SR-128 Savannah, TN	
STATION # 945+70 C REACH ID# N/A		STREAM CLASS N/A	
UTM N 35.219906 UTM E -88.246038		RIVER BASIN Tennessee River	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS B. Mock C. Hertwig			
FORM COMPLETED BY B. Mock		DATE 12/1/2014 TIME 12:30 PM	REASON FOR SURVEY TDOT - SR-128 Widening

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover SCORE 11	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization SCORE 4	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability SCORE 3	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition SCORE 17	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status SCORE 16	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Parameters to be evaluated in sampling reach

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS STR-2

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration SCORE 9	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity SCORE 10	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank) SCORE 3 (LB) SCORE 3 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 2 (LB) SCORE 2 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 4 (LB) SCORE 4 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Parameters to be evaluated broader than sampling reach

Total Score 88

Ecology Field Data Sheet: Water Resources

Project: Hardin County; SR-128; From South of Opel Road to SR-15 (US-64)

P.E.: 36010-1215-14; PIN: 100322.04

Date of survey: 12/1/2014

Biologist: B. Mock, C. Hertwig

Affiliation: CEC, Inc.

1-Station: from plans	954+40 CL
2-Map label and name	STR-3 (Town Branch)
3-Latitude/Longitude	N35.222329, W88.246902
4-Potential impact	Crossing/encapsulation/fill
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	15'
top of bank width	40'
bank height and slope ratio	20'; 2:1
avg. gradient of stream (%)	2%
substratum	Gravel, hardpan clay
riffle/run/pool	50/50/0
width of buffer zone	LB: 0' RB: 0'
water flow	Yes
water depth	2'
water width	5'
general water quality	Poor
OHWM indicators	Clear line
groundwater connection	Unknown
bank stability: LB, RB	LB: Eroding RB: Eroding
dominant species: LB, RB	Both: privet, English ivy, hackberry, sycamore
overhead canopy (%)	90%
benthos	None observed
fish	None observed
algae or other aquatic life	None observed
habitat assessment score	78
photo number (s)	17 u/s, 18 d/s
rainfall information	0.82" on 12/1/2014; no rain in previous 7 days
6- HUC code & name (12-digit)	060400010504; Tennessee River-Mud Creek
7-Confirmed by:	Not required
8-Mitigation	No ___ Yes <u>X</u> : (include on Form J)
9-ETW	No <u>X</u> Yes ___
10-303 (d) List	No <u>X</u> Yes ___: Habitat ___ Siltation ___
11-Assessed	No <u>X</u> Yes ___
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	STR-3 (Town Creek) flows east into the Tennessee River. Mitigation is required because encapsulation exceeds 200'.

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

STREAM NAME STR-3		LOCATION SR-128 Savannah, TN	
STATION # 954+40 G REACH ID# N/A		STREAM CLASS N/A	
UTM N 35.222329	UTM E -88.246902	RIVER BASIN Tennessee River	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS B. Mock C. Hertwig			
FORM COMPLETED BY B. Mock		DATE 12/1/2014 TIME 1:30 PM	REASON FOR SURVEY TDOT - SR-128 Widening

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover SCORE 9	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization SCORE 8	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability SCORE 5	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition SCORE 16	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status SCORE 15	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Parameters to be evaluated in sampling reach

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS STR-3

Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
	SCORE 7	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.	
	SCORE 4	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.	
	SCORE 3 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	SCORE 3 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
	SCORE 2 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	SCORE 2 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.	
	SCORE 2 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	SCORE 2 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Parameters to be evaluated broader than sampling reach

Total Score 78

Ecology Field Data Sheet: Water Resources

Project: Hardin County; SR-128; From South of Opel Road to SR-15 (US-64)

P.E.: 36010-1215-14; PIN: 100322.04

Date of survey: 12/1/2014

Biologist: B. Mock, C. Hertwig

Affiliation: CEC, Inc.

1-Station: from plans	954+30 L – 956+00 L
2-Map label and name	WWC-5/EPH-5
3-Latitude/Longitude	N35.222744, W88.247248
4-Potential impact	Runoff
5-Feature description:	
what is it	Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	2'
top of bank width	4'
bank height and slope ratio	6'; 2:1
avg. gradient of stream (%)	2%
substratum	Hardpan clay, gravel, vegetation
riffle/run/pool	50/50/0
width of buffer zone	LB: 0' RB: 0'
water flow	Yes
water depth	4"
water width	1'
general water quality	Poor
OHWM indicators	Bent Vegetation
groundwater connection	No
bank stability: LB, RB	LB: Eroding RB: Eroding
dominant species: LB, RB	Both: Bermuda grass, barnyard grass, goldenrod, privet, clover, dandelion, Bradford pear, Japanese honeysuckle
overhead canopy (%)	0%
benthos	None
fish	None
algae or other aquatic life	None
habitat assessment score	35
photo number (s)	19 u/g, 20 d/g
rainfall information	0.82" on 12/1/2014; no rain in previous 7 days
6- HUC code & name (12-digit)	060400010504; Tennessee River-Mud Creek
7-Confirmed by:	Not required
8-Mitigation	No <input checked="" type="checkbox"/> Yes _____ : (include on Form J)
9-ETW	No <input checked="" type="checkbox"/> Yes _____
10-303 (d) List	No <input checked="" type="checkbox"/> Yes _____: Habitat _____ Siltation _____
11-Assessed	No <input checked="" type="checkbox"/> Yes _____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	WWC-5/EPH-5 is located on the western side of SR-128. This feature flows south to STR-3. Hydrologic determination score = 12.5.

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Hardin	Named Waterbody: N/A	Date/Time: 12/01/2014; 3:15 pm
Assessors/Affiliation: C. Hertwig/B. Mock; CEC, Inc.		Project ID: WWC-5/EPH-5
Site Name/Description: SR-128; From South of Opel Road to SR-15 (US-64)		
Site Location: Savannah, TN		
USGS quad: Savannah	HUC (12 digit): 060400010504; Tennessee River-Mud Creek	Lat/Long: N35.222744, W88.247248
Previous Rainfall (7-days) : 0.82" day of survey, 0.00" previous 7 days		
Precipitation this Season vs. Normal : very wet wet average dry drought unknown		
Source of recent & seasonal precip data : http://www.tva.com/river/lakeinfo/precip.htm		
Watershed Size : < 5 acres	Photos: Yes	Number : 19 u/g, 20 d/g
Soil Type(s) / Geology : Falaya silt loam		
Surrounding Land Use : Field		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes) :		
Severe	Moderate	Slight
		Absent

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	✓	WWC
2. Defined bed and bank absent, dominated by upland vegetation / grass	✓	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions N/A		WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	✓	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	✓	Stream
6. Presence of fish (except <i>Gambusia</i>)	✓	Stream
7. Presence of naturally occurring ground water table connection	✓	Stream
8. Flowing water in channel and 7 days since last precipitation in local watershed	✓	Stream
9. Evidence watercourse has been used as a supply of drinking water	✓	Stream

NOTE : If any Primary Indicators 1-9 = "Yes", then STOP; absent directly contradictory evidence, determination is complete.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in *TDEC-WPC Guidance For Making Hydrologic Determinations, Version 1.4*

Overall Hydrologic Determination = Wet weather conveyance/Ephemeral stream

Secondary Indicator Score (if applicable) = 12.5

Justification / Notes : This is an erosional feature that drains stormwater runoff into STR-3.

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

STREAM NAME WWC-5/EPH-5		LOCATION SR-128 Savannah, TN	
STATION # 955+00 L REACH ID# N/A		STREAM CLASS N/A	
UTM N 35.222744 UTM E -88.247248		RIVER BASIN Tennessee River	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS B. Mock C. Hertwig			
FORM COMPLETED BY B. Mock		DATE 12/1/2014 TIME 1:30 PM	REASON FOR SURVEY TDOT - SR-128 Widening

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover SCORE 4	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization SCORE 0	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability SCORE 1	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition SCORE 4	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status SCORE 5	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Parameters to be evaluated in sampling reach

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS WWC-5/EPH-5

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration SCORE 4	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity SCORE 1	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank) SCORE 3 (LB) SCORE 3 (RB)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream. SCORE 4 (LB) SCORE 4 (RB)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE 1 (LB) SCORE 1 (RB)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
	Left Bank 10 9	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Parameters to be evaluated broader than sampling reach

Total Score 35

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2004	STP-128(11)	20
CONST.	2015	NH-128(27)	4

REV. 05/24/05: CHANGED SLOPES ON DRIVES AT STA. 853+28 RT. AND 850+02 LT. ADDED UTILITY INFORMATION. ADDED GAS EASEMENT.

REV. 07/12/05: ADDED SIGN AND COLUMN TRACT 109. ADDED FENCE TRACT 111. ADDED FIELD SEPTIC LINE TRACTS 113 & 115.

REV. 05/08/06: ADDED DRIVE AT STA. 850+53.37 LT. TRACT 110.

STATE PROJ. NO. 36010-3226-14
 BEGIN PROJ. NO. STP-128(27) (CONST.)
 S.R. 128 STA. 861+74.00
 N 322171.1439 E 1298139.0496

NOT TO BE INCLUDED IN PROJ. NO. ***-***(27)CONST.

Limit of investigation boundary

NOT TO BE INCLUDED IN PROJ. NO. ***-***(27)CONST.

R.O.W. FIELD REVIEW

SEALED 01

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00001 AND TIED TO THE TCRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

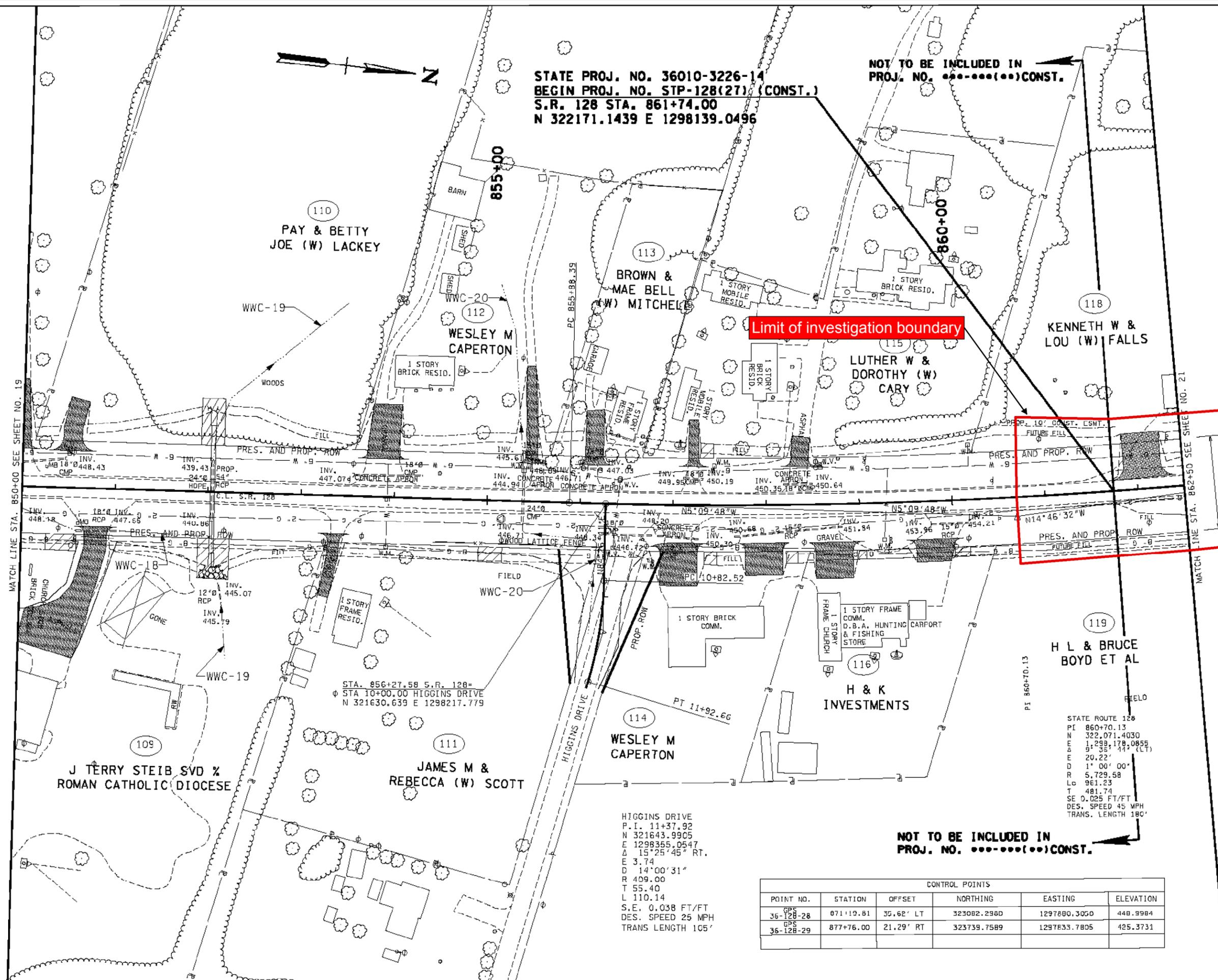
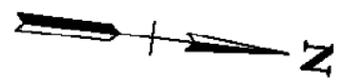
STA. 850+00 TO STA. 862+50

SCALE: 1" = 50'

POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
36-128-28	071+19.81	35.62' LT	323082.2900	1297800.3050	448.9984
36-128-29	877+76.00	21.29' RT	323739.7589	1297833.7805	425.3731

HIGGINS DRIVE
 P.I. 11+37.92
 N 321643.9905
 E 1298355.0547
 Δ 15°25'45" RT.
 E 3.74
 D 14°00'31"
 R 409.00
 T 55.40
 L 110.14
 S.E. 0.038 FT/FT
 DES. SPEED 25 MPH
 TRANS LENGTH 105'

STATE ROUTE 128
 PI 860+70.13
 N 322,071.4030
 E 1,298,178.0855
 Δ 9°35'17" (LT)
 E 20.22'
 D 1°00'00"
 R 5,729.58
 Lc 961.23
 T 481.74
 SE 0.025 FT/FT
 DES. SPEED 45 MPH
 TRANS. LENGTH 180'



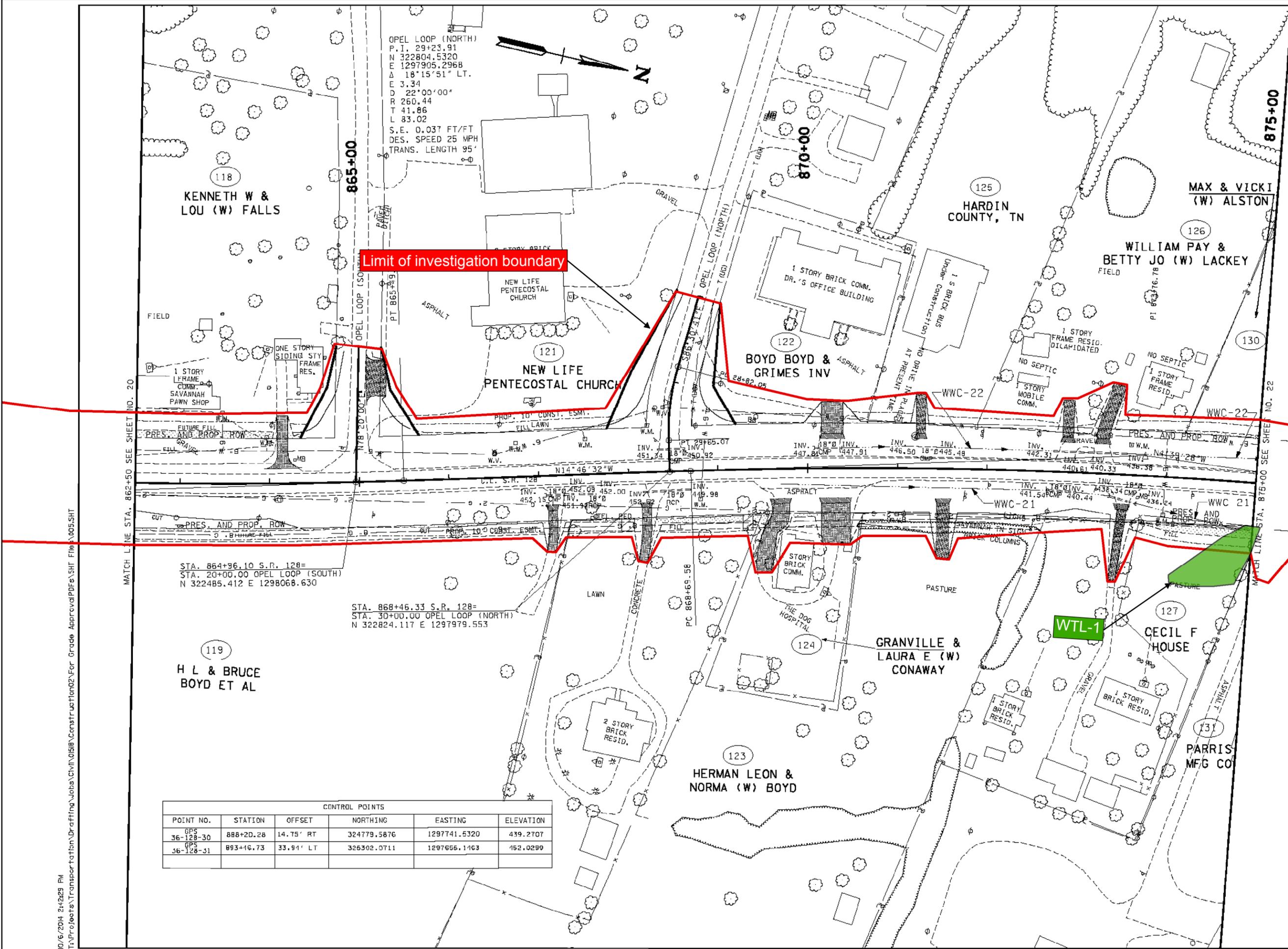
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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2004	STP-128(11)	21
CONST.	2015	NH-128(27)	5

REV. 05/24/05: ADDED UNDERGROUND TELEPHONE LINE ON OPEL LOOP NORTH. ADDED GAS EASEMENT.

REV. 07/12/05: ADDED BUILDING AND TEXT TRACT 125. ADDED SIGN, COLUMN AND LIGHT TRACT 123.

REV. 05/08/06: ADDED CURB CUT AT STA. 864+09.84 RT. TRACT 119. ADDED DRIVE AT STA. 871+51.45 RT. TRACT 123.



Limit of investigation boundary

R.O.W. FIELD REVIEW

CONTROL POINTS					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
GPS 36-128-30	888+20.28	14.75' RT	324779.5876	1297741.5320	439.2707
GPS 36-128-31	893+16.73	33.91' LT	325302.0711	1297656.1163	452.0299

COORDINATES ARE NAD(83)(95), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000 AND TIED TO THE TCRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 862+50 TO STA. 875+00

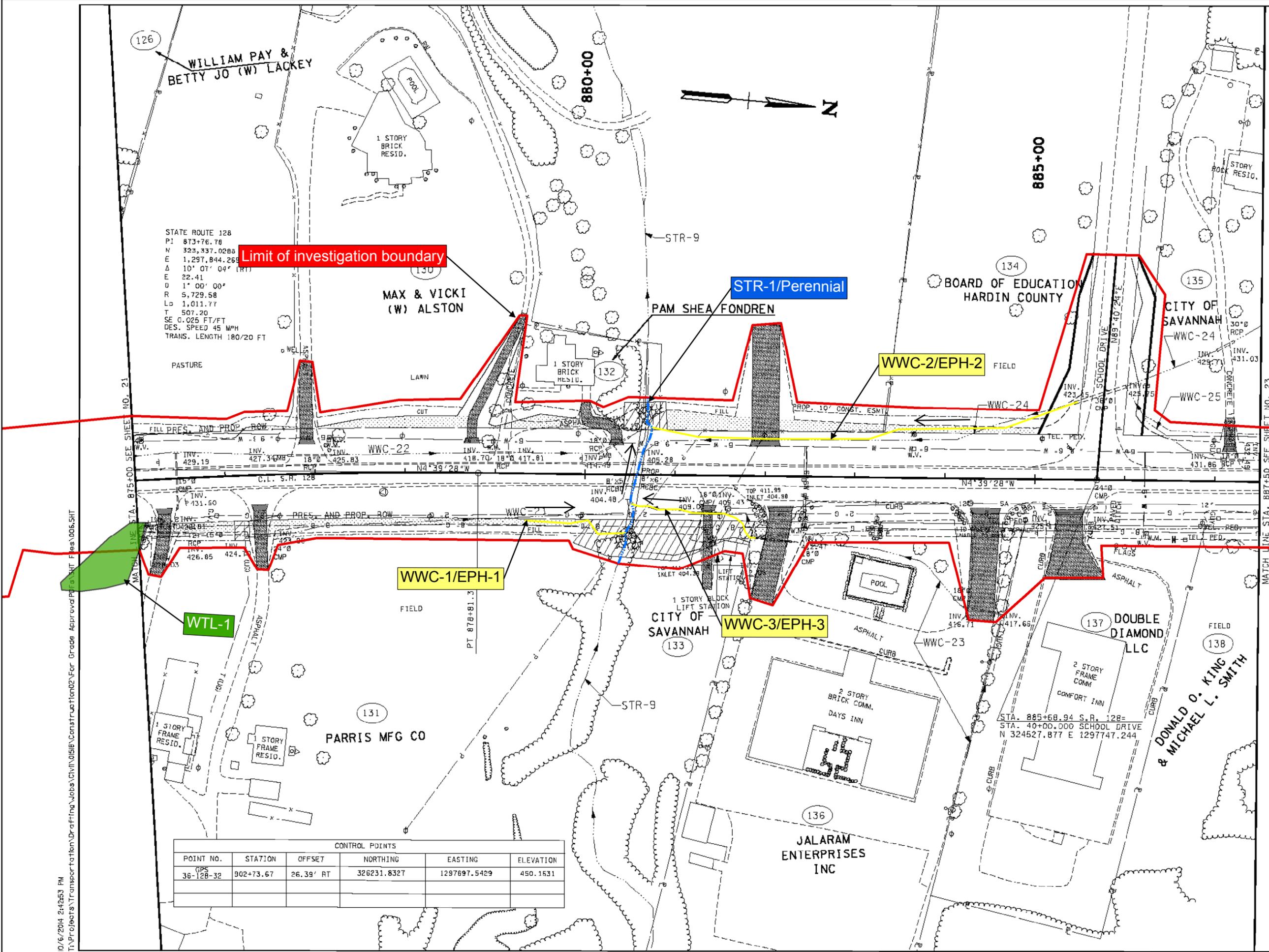
SCALE: 1" = 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2004	STP 120(11)	22
CONST.	2015	NH-126(27)	6

REV. 05/24/05: ADDED UNDERGROUND TELEPHONE LINE ON TRACT NO. 131. ADDED GAS EASEMENT.

REV. 10/02/06: CHANGED PROPERTY OWNER NAME TRACT NO. 138.



STATE ROUTE 128
 P1 873+76.76
 N 323,337.0288
 E 1,297,844.265
 Δ 10° 01' 04" (RT)
 E 22.41
 D 1' 00" 00"
 R 5,729.58
 Lb 1,011.77
 T 507.20
 SE 0.025 FT/FT
 DES. SPEED 45 MPH
 TRANS. LENGTH 180/20 FT

Limit of investigation boundary

STR-1/Perennial

WWC-2/EPH-2

WWC-1/EPH-1

WWC-3/EPH-3

WTL-1

CONTROL POINTS					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
GPS 36-128-32	902+73.67	26.39' RT	326231.8327	1297697.5429	450.1531

100' PRESENT R.O.W.

**R.O.W.
FIELD
REVIEW**

SCALE: 01

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**PRESENT
LAYOUT**

STA. 875+00 TO STA. 887+50

SCALE: 1" = 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2004	STP-128(11)	23
CONST.	2015	NH-128(27)	7

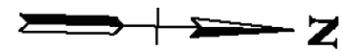
REV. 05/24/05: CHANGED NAME ON TRACT 139 TO CITY OF SAVANNAH. ADDED UTILITY INFORMATION. ADDED GAS EASEMENT.

REV. 07/12/05: ADDED DRIVE AT STA. 895+88 RT.

REV. 10/10/05: WIDENED DRIVES AT STA. 10+86 ON GEANS LN. AND STA. 894+35 ON SR128.

REV. 05/08/06: REMOVED 40' DRIVE TO TRACT 146 AND REPLACED WITH 2 - 20' DRIVES. ADDED NOTE FOR EXISTING SIGN TO BE PROTECTED ON TRACT 151.

REV. 10/02/06: CHANGED PROPERTY OWNER NAME TRACT NO. 138



Limit of investigation boundary

**R.O.W.
FIELD
REVIEW**

SEALED 01

COORDINATES ARE NAD/83(1985), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000 AND TIED TO THE TCN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**PRESENT
LAYOUT**

STA. 887+50 TO STA. 900+00

SCALE: 1" = 50'

CONTROL POINTS					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
36-128-33	911+05.62	38.26' RT	327039.4462	1297907.7465	445.8488
36-128-34	921+15.04	34.19' RT	328044.8015	1298044.2748	443.6014

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2004	STP-128(11)	24
CONST.	2015	NH-128(27)	8

REV. 05/24/05: REMOVED CONST. ESMT. AND LINED OUT TRACT 158. ADDED UTILITY INFORMATION. ADDED GAS ESMT.

REV. 07/12/05: ADDED FENCE TRACT 156. ADDED MISC. SURVEY INFO. TRACT 159.

REV. 01/27/06: REMOVED Z BAR FROM TRACT 156. ADDED TRACT 157.

REV. 05/08/06: ADDED NOTE TO PROTECT EXISTING SIGNS ON TRACT 159.

Limit of investigation boundary

R.O.W. FIELD REVIEW

CONTROL POINTS					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
36-128-35	929+80.06	33.54' LT	320887.0862	1297840.6856	442.3121

COORDINATES ARE NAD(83)1995, ARE DATUM ADJUSTED BY THE FACTOR OF 1.00001 AND TIED TO THE TCN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

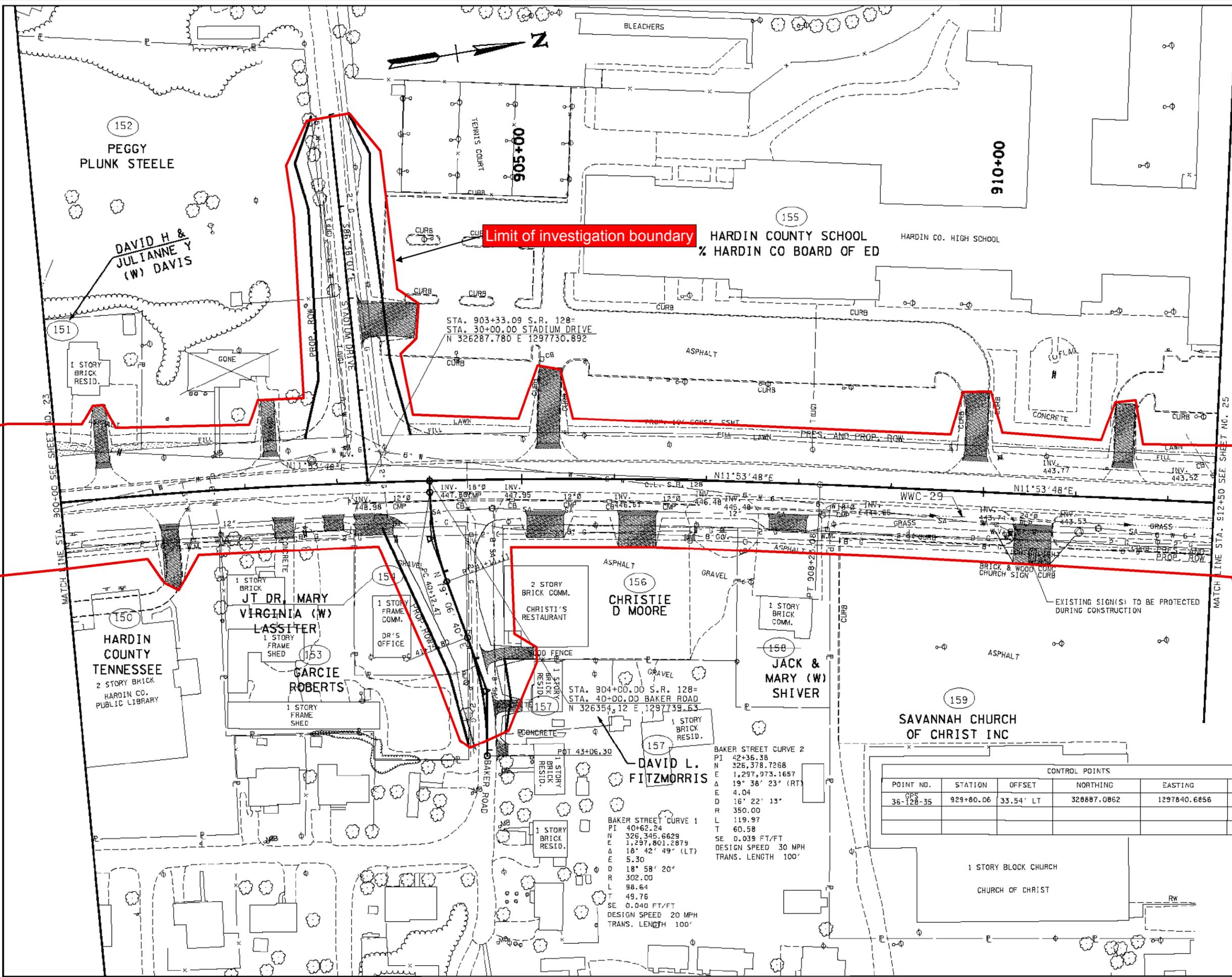
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 900+00 TO STA. 912+50

SCALE: 1" = 50'

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152
PEGGY
PLUNK STEELE

DAVID H &
JULIANNE Y
(W) DAVIS

STA. 903+33.09 S.R. 128=
STA. 30+00.00 STADIUM DRIVE
N 326287.780 E 1297730.892

155
HARDIN COUNTY SCHOOL
% HARDIN CO BOARD OF ED

150
HARDIN COUNTY
TENNESSEE
2 STORY BRICK
HARDIN CO.
PUBLIC LIBRARY

151
JT DR. MARY
VIRGINIA (W)
LASSITER

153
GARCIE
ROBERTS

156
CHRISTIE
D MOORE

158
JACK &
MARY (W)
SHIVER

159
SAVANNAH CHURCH
OF CHRIST INC

157
DAVID L.
FITZMORRIS

BAKER STREET CURVE 1
PI 40+62.24
N 326,345.6629
E 1,297,801.2879
Δ 18° 42' 49" (LT)
E 5.30
D 18° 58' 20"
R 302.00
L 98.64
T 49.76
SE 0.040 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 100'

BAKER STREET CURVE 2
PI 42+36.58
N 326,378.7268
E 1,297,973.1657
Δ 19° 38' 23" (RT)
E 4.04
D 16° 22' 13"
R 350.00
L 119.97
T 60.98
SE 0.039 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 100'

1 STORY BLOCK CHURCH
CHURCH OF CHRIST

100' PRESENT R.O.W.

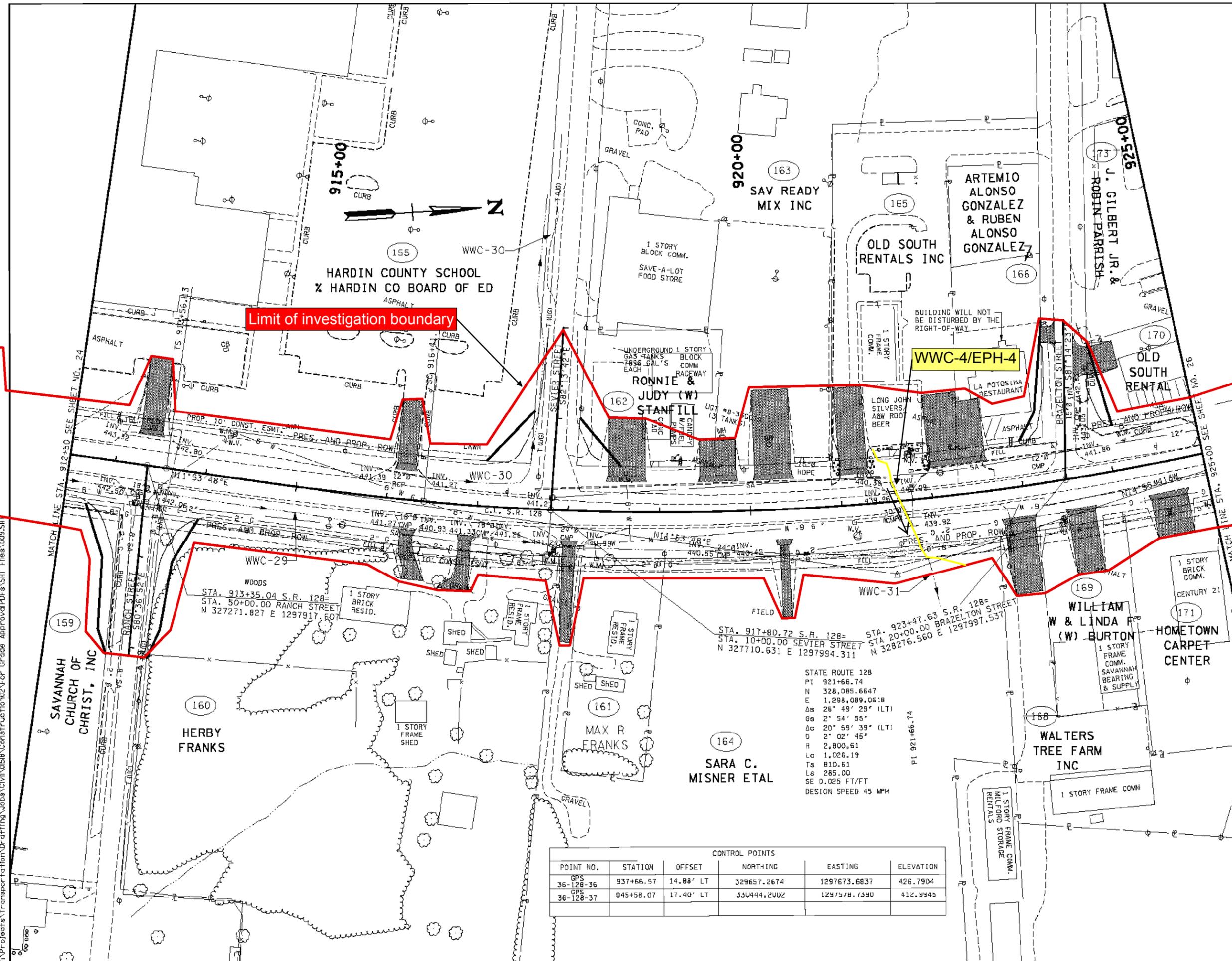
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2004	STP-128(11)	25
CONST.	2015	NH-128(27)	9

REV. 05/24/05: ADD 30' DRIVE OFF BRAZELTON ST. AT STA. 18+69 LT. CHANGED SLOPES ON DRIVES AT STA. 918+02 RT. 921+15 LT. ADJUSTED DRIVE AND SLOPES AT STA. 922+91. ADJUSTED ROW AT BRAZELTON STREET AND ADDED NOTE TO TRACT 166. ADDED UTILITY INFORMATION. ADDED GAS EASEMENT.

REV. 07/12/05: ADDED GAS TANKS AND CONC PAD TRACT 162. ADDED PARKING LINES TRACTS 166 & 170.

REV. 10/28/05: ADDED DRIVE AT STA. 919+65.02 LT.

REV. 05/08/06: CHANGED NAME ON TRACT 171.



Limit of investigation boundary

R.O.W. FIELD REVIEW

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 10000 AND TIED TO THE TCRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 912+50 TO STA. 925+00

SCALE: 1" = 50'

STATE ROUTE 128
 PI 921+66.74
 N 328,085.6647
 E 1,298,089.0618
 Δs 26° 49' 29" (LT)
 Δθ 2° 54' 55"
 Δc 20° 59' 39" (LT)
 D 2° 02' 45"
 R 2,800.61
 Lc 1,026.19
 Ts 810.61
 Ls 285.00
 SE 0.025 FT/FT
 DESIGN SPEED 45 MPH

POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
GPS 36-128-36	937+66.97	14.88' LT	329657.2674	1297673.6837	426.7904
GPS 36-128-37	945+58.07	17.40' LT	330444.2002	1297578.7590	412.9940

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2004	STP-128(11)	26
CONST.	2015	NH-128(27)	10

REV. 05/24/05: CHANGED NAME ON TRACT 172. WIDENED DRIVE AT STA. 926+56 LT. PLACED Z BAR ACROSS SR128 ON TRACT 176. CHANGED SLOPES ON DRIVE AT STA. 926+98.88 RT. ADJUSTED DRIVES AND SLOPES AT STA. 933+89 LT AND 936+86 LT. REMOVED CONST. ESMT. ON TRACTS 174 AND 183. LINED OUT TRACT 174. ADDED UTILITY INFORMATION. ADDED GAS EASEMENT.

REV. 07/12/05: CHANGED NAME TRACTS 179 & 186. ADDED PARKING LINES TRACT 170. ADDED MISC. SURVEY INFO TRACT 178. WIDENED DRIVE AT STA. 937+23 LT.

REV. 10/10/05: MOVED DRIVE AT STA. 928+10 LT. TO STA. 927+56 LT. ADDED DRIVE AT 937+67 RT.

REV. 05/08/06: CHANGED NAME ON TRACT 172.

REV. 10/02/06: CHANGED NAME ON TRACT 182. ADDED DELETE LINE TRACT 184. ADDED Z-BAR AND PROPERTY LINES TRACT 180.

REV. 07/19/06: CHANGED NAME ON TRACT 182. ADDED TRACT 178A. ADDED 5' TO EXISTING R.O.W. ON LEWIS STREET.

100' PRESENT R.O.W.

R.O.W. FIELD REVIEW

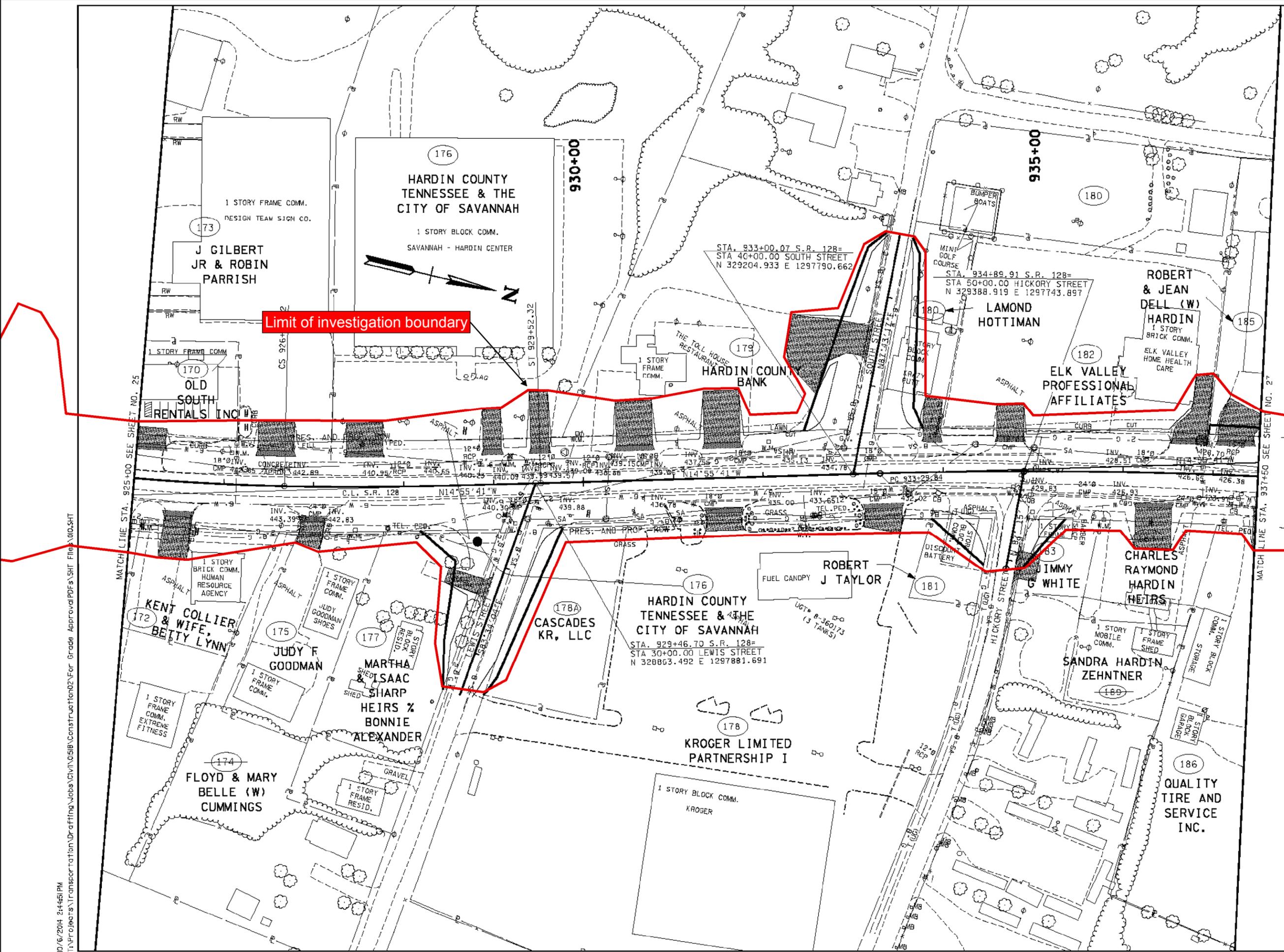
COORDINATES ARE NAD/83(1995) ARE DATUM ADJUSTED BY THE FACTOR OF 1.00001 AND TIED TO THE TCN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 88B.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 925+00 TO STA. 937+50

SCALE: 1" = 50'



Limit of investigation boundary

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2004	STP-128(11)	27
CONST.	2015	NH-128(27)	11

REV. 05/24/05: REMOVED CONST. ESMT. AND LINED OUT TRACT 202, REALIGNED CHERRY STREET TO MINIMIZE BUSINESS IMPACT. ADDED UTILITY INFORMATION. ADDED PERMANENT DRAINAGE ESMT. TO TRACT 191.

REV. 07/12/05: CHANGED NAME TRACTS 186 & 188. MOVED DRIVE AT STA. 943+33 LT TO 943+13 LT. WIDENED DRIVES AT 940+23 LI, 941+51 LI, 943+13 LT, AND 938+32 LT.

REV. 08/30/05: ADDED DRIVE AT STA. 946+96 RT.

REV. 10/10/05: ADDED DRIVE AT STA 937+67 RT.

REV. 05/08/06: ADDED DRIVE AT STA 943+16.09 RT. ADDED DRIVE ON CHERRY ST. STA. 27+51± LT.

REV. 10/02/06: ADDED DELETE LINE TRACT 194. CHANGED PROPERTY LINES FOR TRACT 192 AND 193.

REV. 12/15/06: ADDED DRIVE ON CHERRY STREET AT STA 28+85.31.

REV. 02/16/07: RELOCATED DRIVE AT STA. 945+81.25 RT. TO STA. 945+79.51 RT. AND ADDED DRIVE AT STA. 946+17.01 RT.

REV. 03/05/07: CHANGED THE NAME OF THE OWNER ON TRACT 195.

60' PRESENT R.O.W.

R.O.W. FIELD REVIEW

SCALE: 1" = 50'

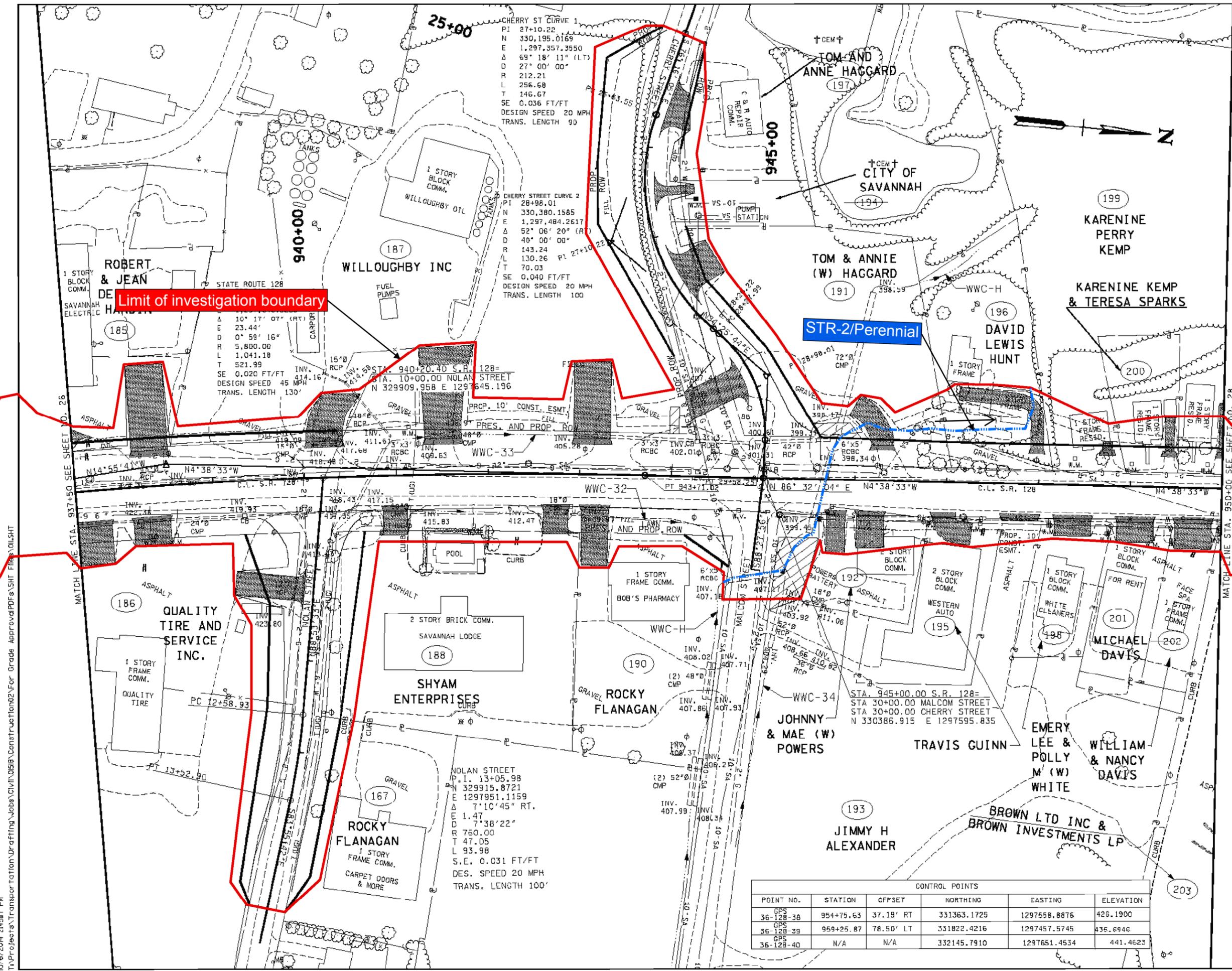
COORDINATES ARE NAD/83(1985), ARE DATUM ADJUSTED BY THE FACTOR OF 10000 AND TIED TO THE TCN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 937+50 TO STA. 950+00

SCALE: 1" = 50'



CONTROL POINTS					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
GPS 36-128-38	954+75.63	37.19' RT	331363.1725	1297558.8876	426.1900
GPS 36-128-39	959+25.87	78.50' LT	331822.4216	1297457.5745	436.6946
GPS 36-128-40	N/A	N/A	332145.7910	1297651.4534	441.4623

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2004	STP-128(11)	29
CONST.	2015	NH-126(27)	12

REV. 05/24/05: ADDED UNDERGROUND TELEPHONE LINE ON SR128 AND WATER STREET. ADDED UTILITY INFORMATION. ADJUSTED CONST. ESMT. TRACT NO.208.

REV. 07/12/05: CHANGED NAME TRACT 205. ADDED MISC. SURVEY TEXT TRACT 207. ADDED PARKING LINES TRACT 210.

REV. 08/30/05: ADDED DRIVE AT STA. 954+91 RT. MOVED DRIVE AT STA. 955+89 RT TO 956+10 RT. REMOVED DRIVE AT STA. 956+46 RT.

REV. 10/02/06: CHANGED PRESENT ROW WIDTHS ON SR 15 AND WATER STREET.

REV. 10/06/08: CHANGED PRESENT ROW WIDTHS ON SR 15 AND ADJUSTED PROPOSED R.O.W. ACCORDINGLY.

REV. 12/03/08: ADJUSTED EXISTING R.O.W. LINE RIGHT OF STA. 959+00 THROUGH STA. 962+30.

REV. 12/16/08: REMOVED SLOPE EASEMENT FROM TRACT 208.

REV. 06/19/09: CORRECTED EXISTING R.O.W. ON TRACTS 212 & 214 RESULTING IN THE REMOVAL OF TRACT NO. 214.

STATE PROJ. NO. 36010-2220-14
END PROJ. NO. STP-128(11) (R.O.W.)
S.R. 128 STA. 962+09.19
N 332084.6404 E 1297587.9512

STATE PROJ. NO. 36010-3226-14
END PROJ. NO. STP-126(27) (CONST.)
S.R. 128 STA. 962+19.97
N 332094.8382 E 1297589.9126

REV. 08/31/09: CHANGED NAME ON TRACT 212; ADDED EXISTING DRIVE AND RELOCATED PROPOSED DRIVE ON TRACT 212; ADDED NOTE TO TRACT NO. 214.

REV. 12/28/11: MOVED BUS. ENT. FROM STA. 9610+00 TO STA. 96175.00 AND ADDED 205S, DRAINAGE 203S A

REV. 02 INFORM: 211S AT LEGEND.

REV. 1 NAME 0

R.O.W. FIELD REVIEW

SCALE: 01

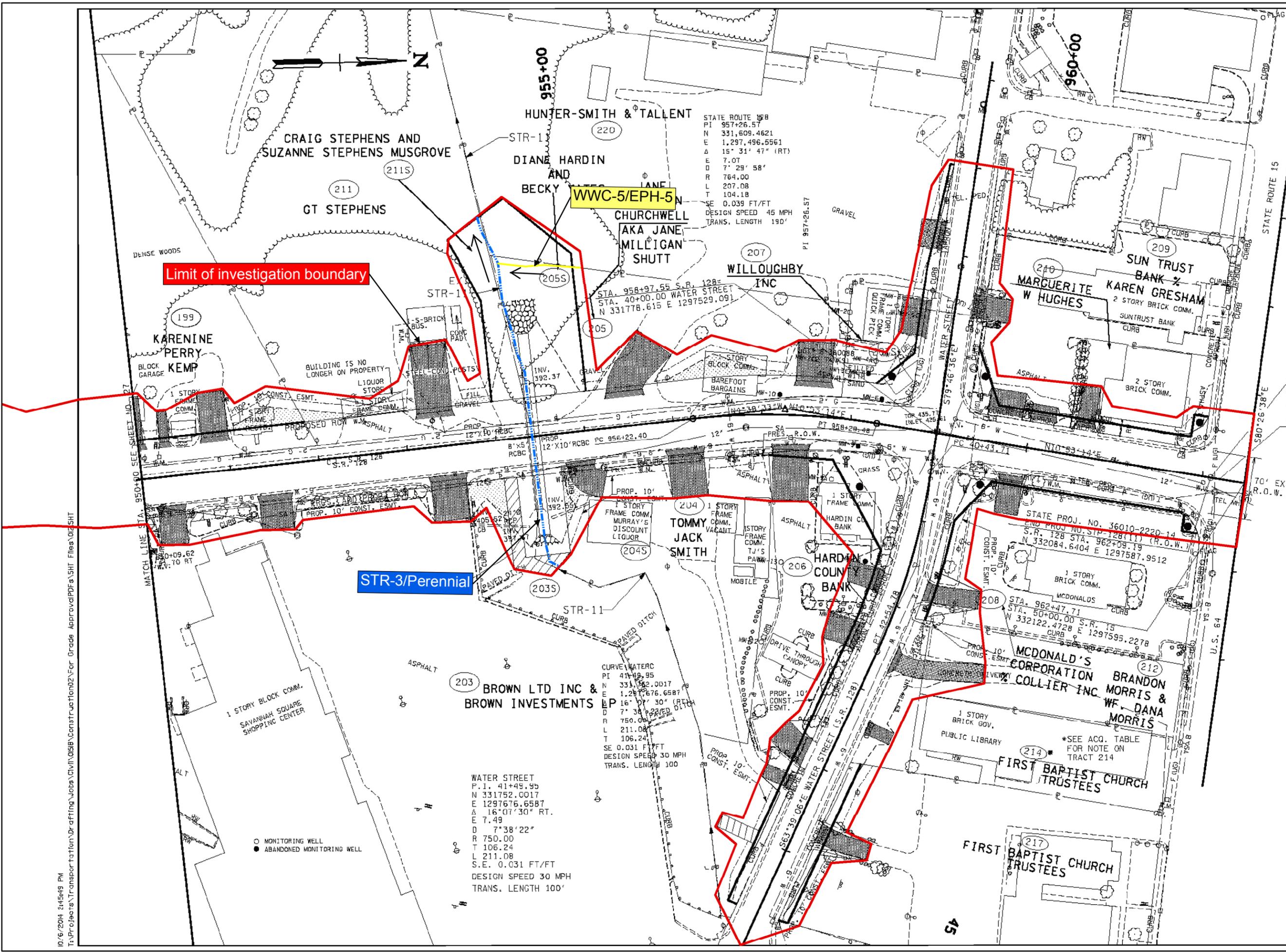
COORDINATES ARE NAD(83)1985, ARE DATUM ADJUSTED BY THE FACTOR OF LOG000 AND TIED TO THE CORN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 950+00 TO STA. 962+45

SCALE: 1" = 50'



Limit of investigation boundary

STR-3/Perennial

WWC-5/EPH-5

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Photo Summary: December 1, 2014
Project Description: SR-128; From South of Opel Road to SR-15 (US-64); Hardin County
PIN: 100322.04; Project#: 36010-1215-14



Photo 1. View of Soil Matrix at WTL-1.
Coordinate location: N35.200722, W88.244623



Photo 2. Southeastern view of WTL-1.
Coordinate location: N35.200722, W88.244623

Photo Summary: December 1, 2014
Project Description: SR-128; From South of Opel Road to SR-15 (US-64); Hardin County
PIN: 100322.04; Project#: 36010-1215-14



Photo 3. Eastern upstream view of STR-1. Photo located on the eastern side of SR-128. Coordinate location: N35.202238, W88.244372



Photo 4. Western downstream view of STR-1. Photo located on the eastern side of SR-128. Coordinate location: N35.202238, W88.244372

Photo Summary: December 1, 2014
Project Description: SR-128; From South of Opel Road to SR-15 (US-64); Hardin County
PIN: 100322.04; Project#: 36010-1215-14



Photo 5. Western downstream view of STR-1 at the confluence of WWC-1/EPH-1 and WWC-3/EPH-3.



Photo 6. Up gradient southern view WWC-1/EPH-1.
Coordinate location: N35.202087, W88.244976

Photo Summary: December 1, 2014
Project Description: SR-128; From South of Opel Road to SR-15 (US-64); Hardin County
PIN: 100322.04; Project#: 36010-1215-14



Photo 7. Northern down gradient view of WWC-1/EPH-1.
Coordinate location: N35.202087, W88.244976



Photo 8. Northern up gradient view of WWC-2/EPH/2.
Coordinate location: N35.202414, W88.245361

Photo Summary: December 1, 2014
Project Description: SR-128; From South of Opel Road to SR-15 (US-64); Hardin County
PIN: 100322.04; Project#: 36010-1215-14



Photo 9. Southern down gradient view of WWC-2/EPH-2 at the confluence with STR-1. Coordinate location: N35.202414, W88.245361



Photo 10. Northern up gradient view of WWC-3/EPH-3.
Coordinate location: N35.202537, W88.245088

Photo Summary: December 1, 2014
Project Description: SR-128; From South of Opel Road to SR-15 (US-64); Hardin County
PIN: 100322.04; Project#: 36010-1215-14



Photo 11. Southern down gradient view of WWC-3/EPH-3 at the confluence with STR-1. Coordinate location: N35.202537, W88.245088



Photo 12. Western up gradient view of WWC-4/EPH-4.
Coordinate location: N35.21385, W88.244047

Photo Summary: December 1, 2014

Project Description: SR-128; From South of Opel Road to SR-15 (US-64); Hardin County

PIN: 100322.04; Project#: 36010-1215-14



Photo 13. Eastern down gradient view of WWC-4/EPH-4.
Coordinate location: N35.21385, W88.244047



Photo 14. Southern upstream view of STR-2. Photo of box culvert at Malcom Street.

Photo Summary: December 1, 2014
Project Description: SR-128; From South of Opel Road to SR-15 (US-64); Hardin County
PIN: 100322.04; Project#: 36010-1215-14



Photo 15. Eastern upstream view of STR-2. Photo located on the western side of SR-128. Coordinate location: N35.219906, W88.246038



Photo 16. Western downstream view of STR-2. Photo located on the western side of SR-128. Coordinate location: N35.219906, W88.246038

Photo Summary: December 1, 2014

Project Description: SR-128; From South of Opel Road to SR-15 (US-64); Hardin County

PIN: 100322.04; Project#: 36010-1215-14



Photo 17. Northeastern upstream view of STR-3. Photo located on the western side of SR-128. Coordinate location: N35.222329, W88.246902



Photo 18. Southwestern downstream view of STR-3. Photo located on the western side of SR-128. Coordinate location: N35.222329, W88.246902

Photo Summary: December 1, 2014
Project Description: SR-128; From South of Opel Road to SR-15 (US-64); Hardin County
PIN: 100322.04; Project#: 36010-1215-14



Photo 19. Northern up gradient view of WWC-5/EPH-5. Feature flows south into STR-3. Coordinate location: N35.222744, W88.247248



Photo 20. Southern down gradient view of WWC-5/EPH-5.
Coordinate location: N35.222744, W88.247248



United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

December 11, 2014

Mr. Tim Nehus
Tennessee Department of Transportation
Environmental Planning and Permits
James K. Polk Building, Suite 900
505 Deaderick Street
Nashville, Tennessee 37243-0334

Subject: FWS# 12-I-0160. Proposed State Route (SR) 128 (Pickwick Road) improvements from south of Opel Loop to SR 15 (U.S. Highway 64) in Savannah; PIN# 100322.00, P.E. 36010-1215-14, Hardin County, Tennessee.

Dear Mr. Nehus:

Thank you for the email correspondence dated November 18, 2014, transmitting mist netting survey results for the proposed construction of SR 28 from south of Opel Loop to SR 15 in Savannah, Hardin County, Tennessee. The Tennessee Department of Transportation (TDOT) requests concurrence on the determinations of "not likely to adversely affect" for the federally endangered Indiana bat (*Myotis sodalis*) and the proposed northern long-eared bat (NLEB) (*Myotis septentrionalis*) due to negative survey results for these species. Personnel of the U.S. Fish and Wildlife Service have reviewed the information provided and offer the following comments.

A mist netting study was performed on August 9 and August 10, 2014, at one site determined to be a suitable netting location. No bats were captured during the surveys. Due to negative survey results for the Indiana bat and the NLEB, we concur with TDOT's determinations of "not likely to adversely affect" for these species. Unless new information otherwise indicates their use of the area, this survey will be valid until April 1, 2017. Although there is no requirement to implement a winter tree cutting timeframe restriction on this project, we would appreciate consideration given to the removal of trees with a DBH (diameter at breast height) of three inches or greater from October 15 through March 31 to further minimize potential for harm.

We are unaware of any federally listed or proposed species that would be impacted by this project. Therefore, based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act of 1973, as amended, are fulfilled for all species that currently receive protection under the Act. Obligations under the Act must be reconsidered if (1) new information reveals impacts of the proposed action that may affect listed species or critical

habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

If you have any questions regarding our comments, please contact John Griffith of my staff at 931/525-4995 or by email at john_griffith@fws.gov.

Sincerely,

A handwritten signature in cursive script that reads "Mary E. Jennings". The signature is written in black ink and is positioned above the typed name and title.

Mary E. Jennings
Field Supervisor



United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

November 20, 2012

Mr. Gary Fottrell
Environmental Program Engineer
Federal Highway Administration
404 BNA Drive, Suite 508
Nashville, Tennessee 37217

Subject: FWS# 13-CPA-0055. Biological Assessment for the proposed State Route 128 widening from State Route 226 (Airport Road) to State Route 15 (U.S. Highway 64) in Savannah; P.E. 36010-1215-14, PIN# 100322.00, Hardin County, Tennessee.

Dear Mr. Fottrell:

Thank you for your letter dated October 25, 2012, transmitting a Biological Assessment (BA) for the proposal to widen State Route (SR) 128 from SR 226 to SR 15 in Hardin County, Tennessee. Because the project involves replacement of a crossing to Town Branch one mile upstream of the Tennessee River, our office requested that the Tennessee Department of Transportation (TDOT) assess potential impacts to the federally listed ring pink (*Obavaria retusa*), eastern fanshell pearlymussel (*Cyprogenia stegaria*), white wartyback (*Plethobasus cicatricosus*), pink mucket (*Lampsilis abrupta*), orangefoot pimpleback (*Plethobasus cooperianus*), rough pigtoe (*Pleurobema plenum*) and cracking pearlymussel (*Hemistena lata*). We also requested that TDOT assess whether removal of forested habitat for the project would result in an adverse effect to the Indiana bat (*Myotis sodalis*). The Federal Highway Administration agrees with TDOT's determination of "not likely to adversely affect" for the aforementioned species and requests our concurrence. Personnel of the U.S. Fish and Wildlife Service (Service) have reviewed the subject proposal and offer the following comments.

Joint mist netting and acoustical studies were performed during the period of July 16 through July 22, 2012, at five sites determined to have the highest potential for use by Indiana bats. The acoustical study resulted in the recording of 2,984 bat calls, of which none were identified as Indiana bats. The mist netting efforts resulted in the capture of seventeen bats, representing five non-listed species. Due to negative Indiana bat survey results, we concurred with TDOT's determination of "not likely to adversely affect" for this species in a letter dated October 3, 2012. Unless new information otherwise indicates Indiana bat use of the area, this survey will be valid until April 1, 2015.

A site visit was conducted on August 29, 2012, to determine habitat suitability for mussels at the Town Branch crossing. The BA indicates that Town Branch is a small first order stream in the area of the crossing having a substrate comprised of sand, gravel, and silt. The area is largely commercial with little riparian buffer and pollution from nearby parking lots is channeled directly into the stream. Based on a lack of suitable mussel habitat at the site, slackwater conditions along the lower 0.4-mile stretch of Town Branch, and the commitment to water quality measures; TDOT has determined that the project is “not likely to adversely affect” listed mussels, with which we concur.

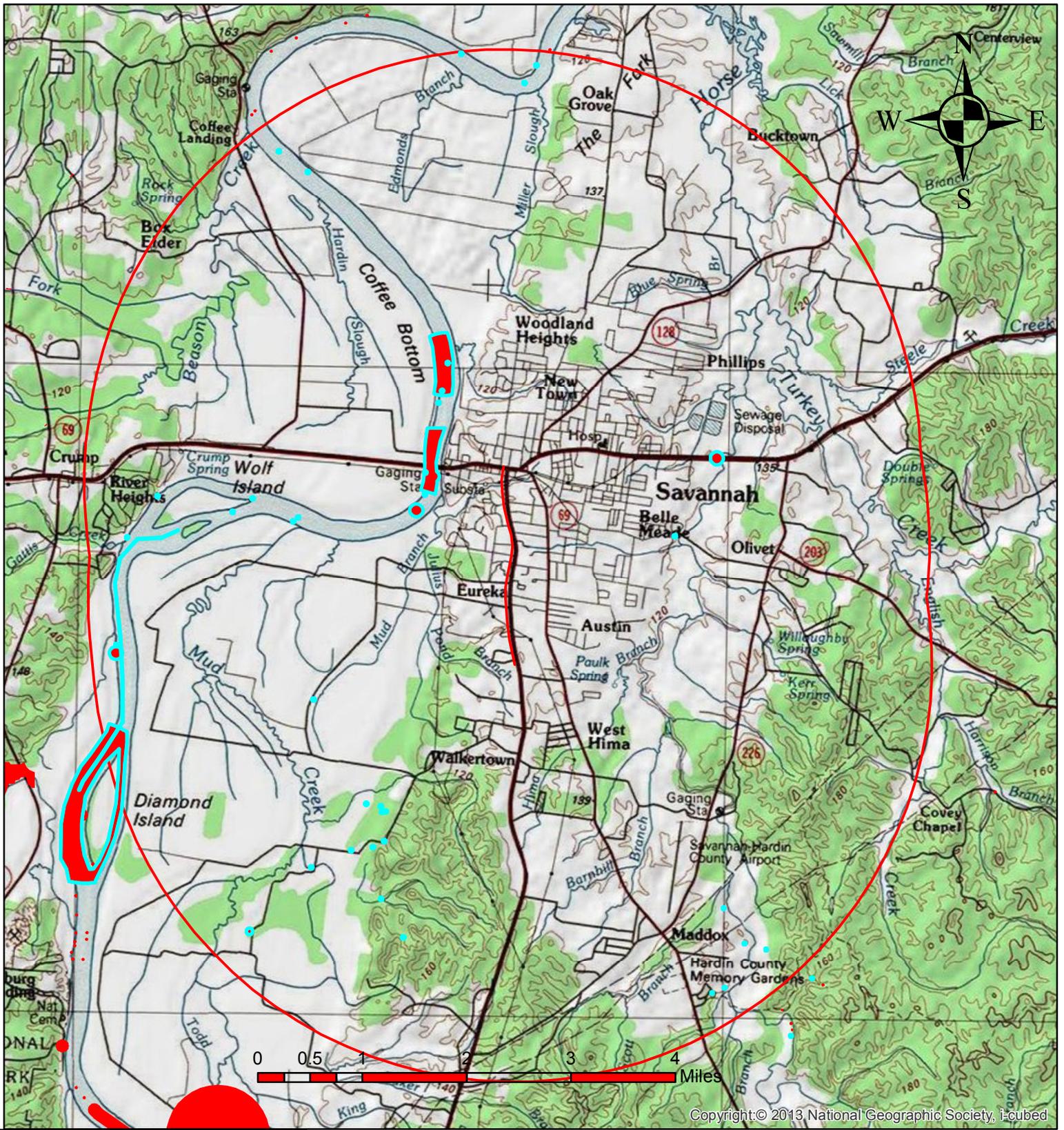
We do not anticipate impacts to any federally listed or proposed species or their habitats as a result of this project. Therefore, based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. Obligations under section 7 of the Act must be reconsidered if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

If you have any questions regarding our comments, please contact John Griffith of my staff at 931/525-4995 or by email at john_griffith@fws.gov.

Sincerely,


for Mary E. Jennings
Field Supervisor

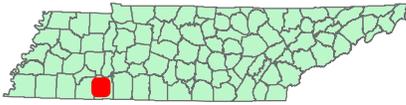
xc: Robert Todd, TWRA, Nashville, TN



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Species Map 12.16.2014
Hardin County, SR-128, from South of Opel
Loop Road to US-64 in Savannah

P.E. 36010-1215-14
PIN 100322.04



Four Mile Radius 12.16.2014

SCIENTIFIC_NAME	COMMON_NAME	FED_PROTECTION	ST_PROTECTION	LAST_OBS_DATE	EO_RANK
Lithasia salebrosa	Muddy Rocksnail	--	Rare, Not State Listed	1979-PRE	Verified extant (viability not assessed)
Lithasia salebrosa	Muddy Rocksnail	--	Rare, Not State Listed	1979-PRE	Verified extant (viability not assessed)
Carpiodes velifer	Highfin Carpsucker	--	D	2004-05-13	Verified extant (viability not assessed)
Hemitremia flammea	Flame Chub	--	D	1992-02-29	Verified extant (viability not assessed)
Lampsilis abrupta	Pink Mucket	LE	E	1999-10-20	Verified extant (viability not assessed)
Melanthium virginicum	Virginia Bunchflower	--	E	1989-07-06	Verified extant (viability not assessed)
Plethobasus cooperianus	Orangefoot Pimpleback	LE	E	1979-PRE	Verified extant (viability not assessed)
Hemistena lata	Cracking Pearlymussel	LE	E	1970-00-00	Historical
Cyprogenia stegaria	Fanshell	LE	E	1964-07-02	Historical
Iris brevicaulis	Lamance Iris	--	E	2009-06-17	Good or fair estimated viability
Carex lacustris	Lake-bank Sedge	--	T	1989-06-16	Verified extant (viability not assessed)
Pleurobema plenum	Rough Pigtoe	LE	E	1982-03-21	Verified extant (viability not assessed)
Lithasia salebrosa	Muddy Rocksnail	--	Rare, Not State Listed	1979-PRE	Verified extant (viability not assessed)
Lampsilis abrupta	Pink Mucket	LE	E	1998-11-12	Verified extant (viability not assessed)
Lampsilis abrupta	Pink Mucket	LE	E	1999	Verified extant (viability not assessed)
Plethobasus cicatricosus	White Wartyback	LE	E	1982-01-06	Verified extant (viability not assessed)
Lithasia salebrosa	Muddy Rocksnail	--	Rare, Not State Listed	1979-PRE	Verified extant (viability not assessed)
Plethobasus cooperianus	Orangefoot Pimpleback	LE	E	1931-08	Historical
Iris brevicaulis	Lamance Iris	--	E	1993-06-12	Verified extant (viability not

SCIENTIFIC_NAME	COMMON_NAME	FED_PROTECTION	STATE_PROTECTION	LAST_OBS_DATE	EO_RANK
Obovaria retusa	Ring Pink	LE	E	1931-08-00	assessed) Historical
Plethobasus cooperianus	Orangefoot Pimpleback	LE	E	1996-03-13	Verified extant (viability not assessed)
Lampsilis abrupta	Pink Mucket	LE	E	1992-03-31	Verified extant (viability not assessed)
Lithasia salebrosa	Muddy Rocksnail	--	Rare, Not State Listed	1979-PRE	Verified extant (viability not assessed)
Chondestes grammacus	Lark Sparrow	--	T	2008-05-17	Verified extant (viability not assessed)
Heron rookery	Heron Rookery	--	Rare, Not State Listed	2009-05-15	Verified extant (viability not assessed)
Lampsilis abrupta	Pink Mucket	LE	E	2003-09-19	Verified extant (viability not assessed)
Hottonia inflata	Featherfoil	--	S	2009-04-24	Fair or poor estimated viability
Cyprogenia stegaria	Fanshell	LE	E	1991-10	Verified extant (viability not assessed)
Lithasia salebrosa	Muddy Rocksnail	--	Rare, Not State Listed	1979-PRE	Verified extant (viability not assessed)
Erythronium rostratum	Beaked Trout-lily	--	S	2005-04-16	Excellent or good estimated viability
Cryptobranchus alleganiensis	Hellbender	No Status	D	2011-05-01	Verified extant (viability not assessed)
Lithasia salebrosa	Muddy Rocksnail	--	Rare, Not State Listed	1979-PRE	Verified extant (viability not assessed)
Lampsilis abrupta	Pink Mucket	LE	E	1982-01-06	Verified extant (viability not assessed)
Lithasia salebrosa	Muddy Rocksnail	--	Rare, Not State Listed	1979-PRE	Verified extant (viability not assessed)
Lampsilis abrupta	Pink Mucket	LE	E	1998	Verified extant (viability not assessed)
Lampsilis abrupta	Pink Mucket	LE	E	1998	Verified extant (viability not assessed)
Carex lacustris	Lake-bank Sedge	--	T	1993-06-12	Verified extant (viability not assessed)

9 – TDEC LEVEL 1 TRAINING CERTIFICATIONS

10 – TMDL INFORMATION REQUIRED

NO TMDL CONSULTATION IS REQUIRED FOR THIS PROJECT

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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4A-28A	PROPOSED R.O.W. LAYOUTS
4B-28B	PROPOSED LAYOUTS
4C-28C	PROFILE (SR128)
29-29N	PROFILE OF RAMPS AND SIDE ROADS
30-30DD	PRIVATE DRIVE PROFILES
31	DRAINAGE MAP
32-32L	CULVERT CROSS-SECTIONS
32M-32X	EROSION CONTROL
33-209	RDY CROSS-SECTIONS (S.R. 128)
210-273	RDY CROSS-SECTIONS (SIDE RDS.)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HARDIN COUNTY

SR 128 (PICKWICK ROAD)
FROM S.R. 226 (AIRPORT ROAD)
TO S.R. 15 (U.S. 64) IN SAVANNAH

RIGHT-OF-WAY

STATE HIGHWAY NO. 128 F.A.H.S. NO. NA

TENN.	YEAR	SHEET NO.
	2004	1
FED. AID PROJ. NO.	STP-128(11)	
STATE PROJ. NO.	36010-2220-14	



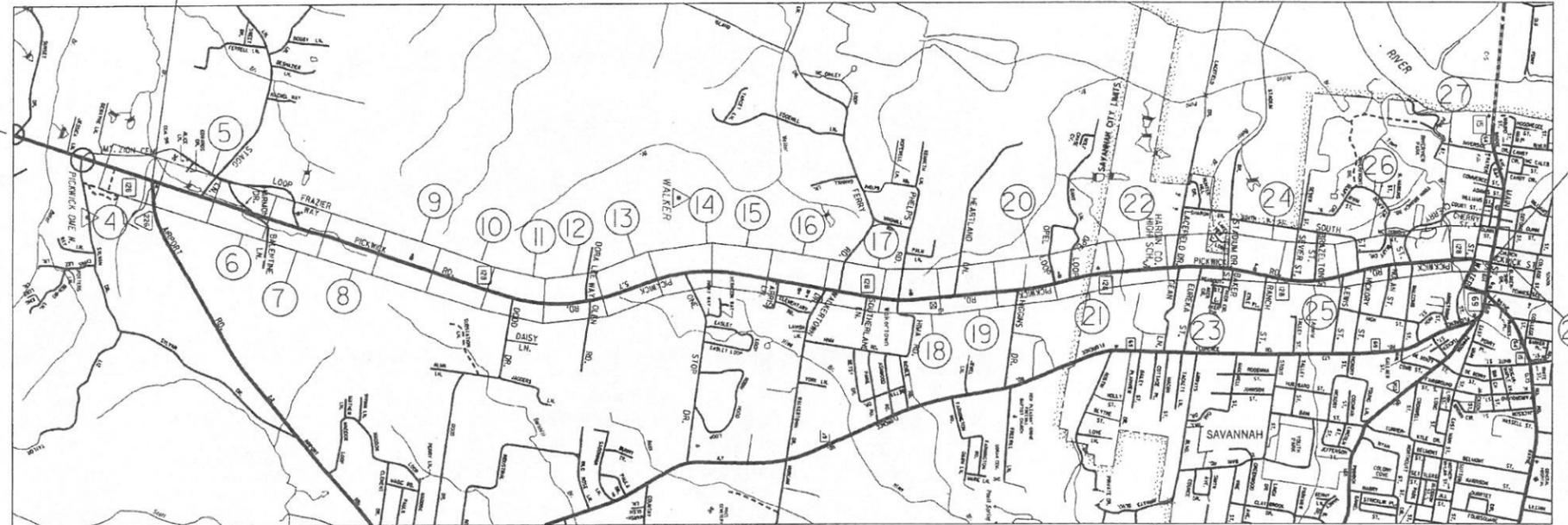
SR 128 HARDIN COUNTY
STP-128(11)

STATE PROJ. NO. 36010-2220-14
BEGIN PROJECT STP-128(11) (R.O.W.)
STATE ROUTE 128 STA. 660+79.51
N 302678.6304 E 1295834.7915

STATE PROJ. NO. 36010-2220-14
END PROJECT STP-128(11) (R.O.W.)
STATE ROUTE 128 STA. 962+09.19
N 332084.6404 E 1297587.9512



TO PICKWICK
DAM & IUKA, MS
ADJACENT PROJECT IS:
PROJECT NUMBER
STP-128(13) (R.O.W.)



LOCATION MAP
SCALE: 1" = 2500'

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 1995 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT

R.O.W. LENGTH 5.706 MILES

TDOT C.E. MANAGER 1: JANE JONES, REG. 4

DESIGNED BY TRC INTERNATIONAL LTD.

DESIGNER BRADY GRIGGS

P.E. NO. 36010-1215-14



APPROVED: Paul D. Jones
CHIEF ENGINEER

DATE: _____
APPROVED: Donald F. Kelly
COMMISSIONER

**NO EXCLUSIONS
NO EQUATIONS**

SURVEY DATE: 08/18/02

TRAFFIC DATA	
ADT (2006)	8,880
ADT (2026)	12,040
DHV (2026)	1,324
D	55 - 45
T (ADT)	9 %
T (DHV)	6 %
V	45 MPH (C&G SECTION)
V	70 MPH (RURAL)

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED: _____
DIVISION ADMINISTRATOR DATE

Hardin Co. Pin No. 100322.00
S.R. 128 From SR 226 (Airport Rd) To SR 15 in Savannah
Consultant: TRC (ROW Plans w/mylar Title Sheet)

F:\...+ing\roads\CHIN\0218\SR.O.W\111\sheet\hardin.dgn
10/22/2004



Index Of Sheets
SEE SHEET IA

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

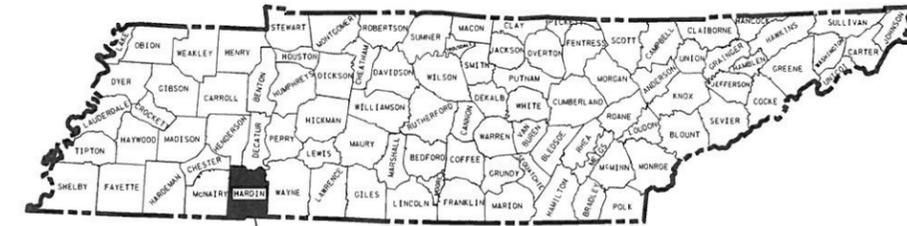
TENN.	YEAR 2015	SHEET NO. 1
FED. AID PROJ. NO.	NH-128(27)	
STATE PROJ. NO.	36010-3226-14	

HARDIN COUNTY

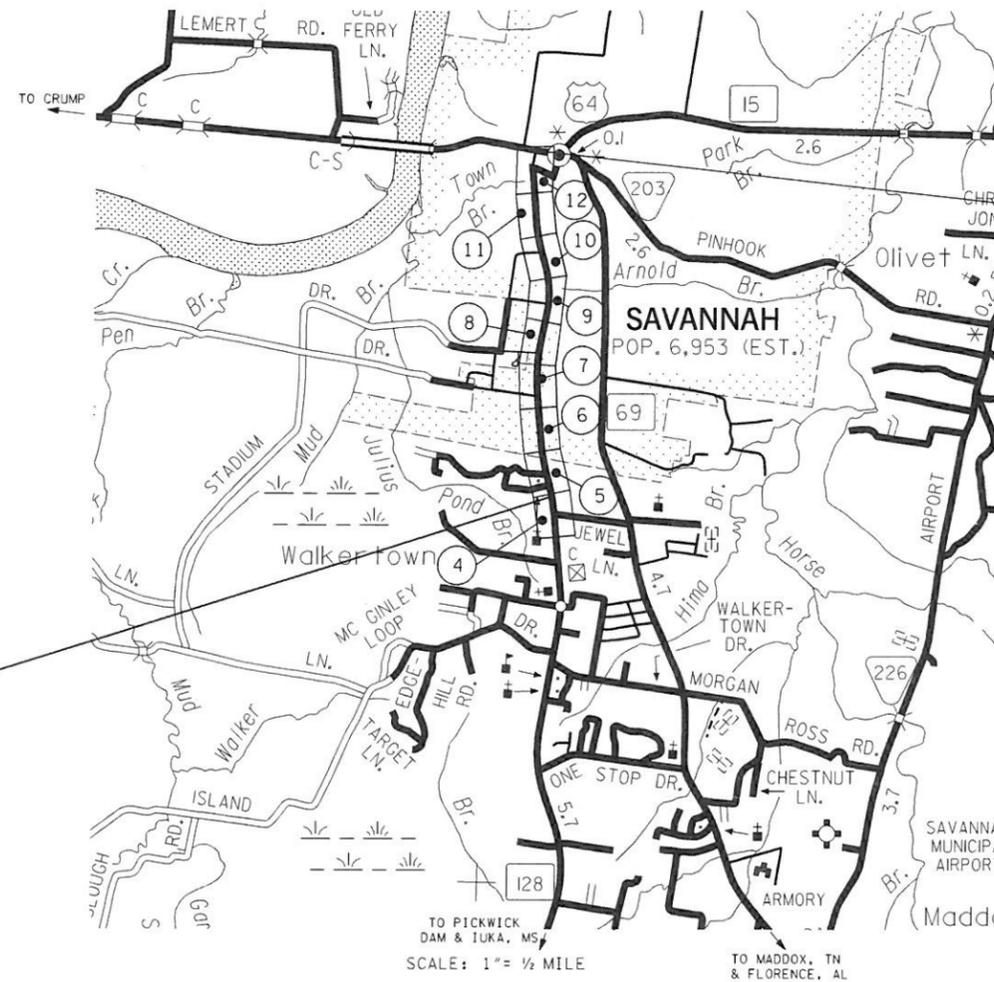
S.R. 128 (PICKWICK ROAD)
FROM SOUTH OF OPEL ROAD
TO S.R. 15 (U.S.64) IN SAVANNAH

CONSTRUCTION

GRADE, DRAIN, PAVE, SIGNAL, AND SIGNING
STATE HIGHWAY NO. 128 F.A.H.S. NO. NA



PROJECT LOCATION



STATE PROJ. NO. 36010-3226-14
END PROJECT NH-128(27) (CONST.)
STATE ROUTE 128 STA. 962+19.57

STATE PROJ. NO. 36010-3226-14
BEGIN PROJECT NH-128(27) (CONST.)
STATE ROUTE 128 STA. 861+74.00

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

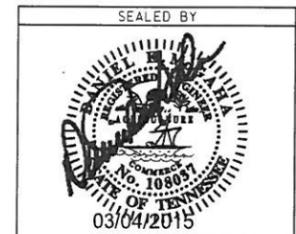
THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT C.E. MANAGER 1 TABITHA T. CAVANESS, P.E., REG. 4
DESIGNED BY TRC WORLDWIDE ENGINEERING INC.
DESIGNER ANTHONY SMITH CHECKED BY DAN McGAHA, P.E.
P.E. NO. 36010-1215-14
PIN 100322.04

ROADWAY LENGTH	1.903 MILES
BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES
PROJECT LENGTH	1.903 MILES

SURVEY DATE 08/18/2002
NO EXCLUSIONS
NO EQUATIONS

TRAFFIC DATA	
ADT (2015)	8,640
ADT (2035)	10,360
DHV (2035)	1,243
D	60 - 40
T (ADT)	3 %
T (DHV)	2 %
V	45 MPH



APPROVED: Paul D. Degges
PAUL D. DEGGES, CHIEF ENGINEER

DATE: _____

APPROVED: [Signature]
JOHN SCHROER, COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED: _____
DIVISION ADMINISTRATOR DATE

3/3/2015 14:32:23 PM I:\Projects\Transportation\Drafting\Jobs\Civil\0518\Construction\02\001.SHT

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	1A

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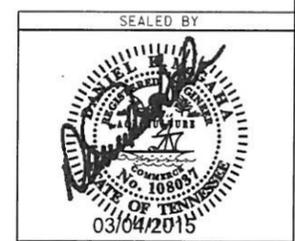
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NATURAL STREAM DESIGN PLAN.....	NS-series (TBD)
NATURAL STREAM DESIGN PLAN INDEX.....	NS-1

NOTE: SHEET NO. 2"o", AND 28"o" NOT USED

DWG. NO	REV.	DESCRIPTION
STANDARD BRIDGE DRAWINGS		
DWG. NO.	REV.	DESCRIPTION
BRIDGE APPURTENANCES ENGLISH (BOX CULVERTS)		
STD-15-1	11-06-08	INDEX OF DRAWINGS AND TERMINOLOGY
STD-15-2	3-28-08	GENERAL NOTES
STD-15-3	2-28-03	DESIGN SECTION LIMITS
STD-15-4	12-07-01	TYPICAL SECTION AND DETAILS
STD-15-5	2-28-03	TYPICAL ELEVATION
STD-15-6	3-28-08	CURB AND RAIL DETAILS - SKEW NOT LESS THAN 45 DEG.
STD-15-7	3-02-02	STANDARD EDGE BEAM DETAILS FOR FILLS GREATER THAN 3' - 8"
STD-15-8	12-07-01	INTERIOR WALL END TREATMENTS
STD-15-9	2-28-03	TYPICAL WINGWALL DETAILS AND NOTES
STD-15-10	11-06-08	WINGWALL DIMENSIONS AND QUANTITIES
STD-15-12	3-28-08	WINGWALL & SPECIAL RETAINING WALL DESIGN SECTION
STD-15-13		WINGWALL DESIGN SECTION
STD-15-14	2-28-03	BACKFILL AND DRAINAGE DETAILS
STD-15-15		BACKFILL AND DRAINAGE DETAILS
STD-15-16	12-07-01	PAVED OUTLET DETAIL
STD-15-19		SIDEWALK AND MISCELLANEOUS DETAILS
STD-15-20		WARPED SLOPE DETAIL
STD-15-22	2-28-03	EXTENSION DETAILS
STD-15-24	12-07-01	END SECTION DETAILS
STD-15-25	11-01-10	PRECAST BOX CULVERT DETAILS
STD-15-26		PRECAST BOX CULVERT DETAILS
STD-15-27		PRECAST BOX CULVERT DETAILS
STD-15-28		PRECAST BOX CULVERT DETAILS
STD-15-29		PRECAST BOX CULVERT DETAILS
STD-15-35		BOX BRIDGE, 1 BARREL AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL
STD-15-37	05-01-14	BOX BRIDGE, 1 BARREL AT 8', CLEAR HTS. 5' - 8', 0 - 60' FILL
STD-15-40		BOX BRIDGE, 1 BARREL AT 12', CLEAR HTS. 4' - 7', 0 TO 60' FILL
STD-15-41		BOX BRIDGE, 1 BARREL AT 12', CLEAR HTS. 8' - 12', 0 -
ROADWAY DESIGN STANDARDS		
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-3	04-15-04	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-4	04-15-04	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-5	05-01-08	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL

DWG. NO	REV.	DESCRIPTION
RD-L-6	03-30-10	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-7	05-24-12	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-8		STANDARD LEGEND FOR NATURAL STREAM DESIGN
RD-UD-3	09-05-96	UNDERDRAIN DETAILS
R01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD01-S-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
RD01-SD-1		INTERSECTION SIGHT DISTANCE DESIGN AND GENERAL NOTES
RD01-SD-3		INTERSECTION SIGHT DISTANCE 2-LANE ROADWAYS
RD01-SD-4		INTERSECTION SIGHT DISTANCE 5-LANE AND 4-LANE UNDIVIDED ROADWAYS
RD01-SE-2	10-15-02	URBAN SUPERELEVATION DETAILS
RD01-SE-3	10-15-02	RURAL SUPERELEVATION DETAILS
RD01-TS-1	10-15-02	DESIGN STANDARDS FOR LOCAL ROADS AND STREETS
RD01-TS-1A		DESIGN STANDARDS FOR LOW-VOLUME LOCAL ROADS (ADT<=400)
RD01-TS-2	10-15-02	DESIGN STANDARDS FOR COLLECTOR ROADS AND STREETS
RD01-TS-3C	10-15-02	DESIGN STANDARDS 4 AND 6 LANE ARTERIAL HIGHWAYS WITH FLUSH MEDIANS
RD01-TS-6	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITH SHOULDER
RD01-TS-6A	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITHOUT SHOULDER
RD01-TS-7A	10-15-02	DESIGN STANDARDS 2-LANE CURB & GUTTER WITH CONTINUOUS 2-WAY LEFT-TURN LANE

DRAINAGE - CULVERTS AND ENDWALL		
DWG. NO	REV.	DESCRIPTION
D-PB-1	01-02-13	STANDARD DETAILS CLASS "B" BEDDING AND CULVERT EXCAVATION
D-PB-2	01-29-14	STANDARD DETAILS FOR PLASTIC PIPE INSTALLATION
D-PB-3		INDUCED TRENCH SOIL EMBANKMENT FOR PIPE)
D-PE-24A	01-06-15	24" CONCRETE ENDWALL CROSS DRAIN
D-PE-24B		24" CONCRETE ENDWALL CROSS DRAIN
D-PE-36A	06-14-13	36" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-36B		36" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**INDEX
AND
STANDARD
DRAWINGS**

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	1 A1

STANDARD ROADWAY DRAWINGS (CONT'D)

DWG. NO	REV.	DESCRIPTION
DRAINAGE-CATCH BASINS AND MANHOLES		
D-CB-12P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-12RA	03-11-14	STANDARD PRECAST 48" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RB	03-11-14	STANDARD PRECAST 60" AND 72" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-12SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SC	03-11-14	STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-14P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-14RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 14RB CATCH BASIN
D-CB-14S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-16S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 16 CATCH BASIN
D-CB-42RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 42 CATCH BASIN
D-CB-42S	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SC	03-11-14	STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-43R	03-11-14	STANDARD PRECAST CIRCULAR NO. 43R CATCH BASIN
D-CB-43SB	03-11-14	STANDARD 8' X 4' RECTANGULAR CONCRETE NO. 43SB CATCH BASIN
D-CB-43SC	03-11-14	STANDARD 8' X 5'2" RECTANGULAR CONCRETE NO. 43SC CATCH BASIN
D-CB-44SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 44 CATCH BASIN
D-CB-99	06-07-13	MISCELLANEOUS DETAILS FOR RECTANGULAR STRUCTURES
D-CB-99R	03-11-14	MISCELLANEOUS DETAILS FOR ROUND STRUCTURES
D-CB-99RA	03-19-14	BILL OF STEEL FOR ROUND CATCH BASIN LIDS
D-CBB-12A	05-27-01	TYPE "B" CAST IRON FRAME, GRATE & NONMOUNTABLE INLET DETAILS FOR NOS. 10, 12, 14, 16, & 17 TYPE CATCH BASINS
D-CBB-42	05-27-01	CAST IRON GRATE DETAILS FOR NOS. 42, 43 & 44 TYPE CATCH BASINS
D-JBS-5	08-01-12	STANDARD 9' X 9' SQUARE CONCRETE NO. 5 JUNCTION BOX
D-MH-2	08-01-12	STANDARD MASONRY & PRECAST NO. 3 MANHOLE
D-MH-3	04-21-14	STANDARD PRECAST CIRCULAR LID DETAILS FOR NO. 3 MANHOLE
D-MH-3A	08-01-12	STANDARD PRECAST CIRCULAR LID DETAILS FOR NO. 3 MANHOLE (96" AND 108" DIA.)
D-MH-4	08-01-12	STANDARD NO. 3 MANHOLE CASTINGS AND STEPS

DWG. NO	REV.	DESCRIPTION
D-RF-1		STANDARD PRECAST RISER
DRAINAGE - NATURAL STREAM DESIGN		
D-NSD-1		BOULDER CLUSTERS
D-NSD-2		ROCK VANES
D-NSD-3		LOG DEFLECTORS AND LOG VANES
D-NSD-4		LOG DROPS AND STEP POOLS
D-NSD-5		BOULDER RIFFLES
D-NSD-6		CONSTRUCTED RIFFLES
D-NSD-7		COCONUT FIBER ROLLS AND LIVE SILTATION
D-NSD-8		LIVE FASCINES AND WILLOW CUTTINGS
D-NSD-9		BRUSH MATTRESS
D-NSD-10		LARGE WOODY DEBRIS
D-NSD-11		VEGETATED RIPRAP AND GABIONS
D-NSD-12		VEGETATED MSE WALLS
D-NSD-13		LONGITUDINAL STONE TOE AND ARTICULATED CONCRETE MAT
ROADWAY AND PAVEMENT APPURTENANCES		
RP-D-15	07-15-08	DETAILS OF STANDARD CONCRETE DRIVEWAYS
RP-D-16	07-15-08	DETAILS OF LOWERED STANDARD CONCRETE DRIVEWAYS
RP-H-3	01-30-15	HANDICAP RAMP AND TRUNCATED DOME SURFACE DETAIL
RP-H-4	01-30-15	PERPENDICULAR CURB RAMP
RP-H-5	01-30-15	PARALLEL CURB RAMP
RP-H-9	01-30-15	PARALLEL CURB RAMP TYPE 3 AND 4
RP-I-5	12-18-96	EXAMPLES OF STREET AND ALLEY INTERSECTIONS
RP-NMC-10	07-29-03	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-11	02-28-02	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-R-1	05-27-01	STANDARD RAMPS TO SIDE ROADS
RP-S-7	06-04-13	DETAILS FOR STANDARD CONCRETE SIDEWALKS
SAFETY APPURTENANCES AND FENCE		
S-F-1	05-24-12	HIGH VISIBILITY FENCE
S-RP-2	01-19-99	STANDARD CONCRETE RIGHT-OF-WAY MARKERS
S-CZ-1		CLEAR ZONE CRITERIA
S-PL-1		SAFETY PLAN AT ROADSIDE HAZARDS
S-PL-2		SAFETY PLAN AT SIDE ROADS OR PRIVATE DRIVES
S-PL-6	12-01-14	SAFETY PLAN SAFETY HARDWARE PLACEMENT
S-GR31-1	12-01-14	W-BEAM GUARDRAIL
S-GRT-2	11-03-14	TYPE 38 GUARDRAIL TERMINAL
S-GRT-2P		EARTH PAD FOR TYPE 38 TERMINAL
TRAFFIC CONTROL APPURTENANCES		
T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS

DWG. NO	REV.	DESCRIPTION
T-M-2	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-4	07-24-14	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-10	06-15-12	SIGNING AND PAVEMENT MARKINGS FOR SHARED-USE PATHS
T-M-11	12-01-14	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES AND ROUTES ON RURAL ROADS
T-M-12	01-30-15	SIGNING AND PAVEMENT MARKINGS FOR URBAN BICYCLE LANES
T-M-13		SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES
T-PBR-1	06-30-09	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2	11-01-11	DETAIL FOR VERTICAL PANELS AND FLEXIBLE DELINEATORS
T-S-8	07-15-91	HIGHWAY SHIELDS USED ON STATE NUMBERED ROUTES AND ARROWS
T-S-9	06-10-14	STANDARD LAYOUT GROUND MOUNTED SIGNS
T-S-10	04-04-12	STANDARD MOUNTING DETAILS FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-16	06-05-14	GROUND MOUNTED ROADSIDE SIGN AND DETAILS
T-S-17	07-19-13	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-18	02-14-14	END OF ROADWAY AND DEAD END SIGNS, METAL BARRICADES (TYPE III) & WORK ZONE SPEED SIGNS
T-S-19	07-19-13	STANDARD STEEL SIGN SUPPORTS
T-S-20	11-01-11	SIGN DETAILS
T-S-23A	07-19-13	MULTI-DIRECTIONAL SLIP BASE BREAKAWAY SQUARE TUBE SIGN SUPPORT
T-SG-2	07-29-04	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3	11-11-04	STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
T-SG-3A		ALTERNATE DETECTION DETAILS
T-SG-5	12-04-13	CONTROLLER CABINET DETAILS
T-SG-7	11-01-11	SIGNAL HEAD ASSEMBLIES AND PEDESTRIAN PUSH BUTTON SIGNS
T-SG-7A	11-01-11	TYPICAL SIGNAL HEAD PLACEMENT
T-SG-9	12-04-13	DETAILS OF CANTILEVER SIGNAL SUPPORT
T-SG-10	06-11-14	MAST ARM POLE AND STRAIN POLES FOUNDATION DETAILS
T-SG-11	07-08-14	MAINTENANCE OF EXISTING SIGNALS DURING HIGHWAY CONSTRUCTION
T-SG-12	11-01-11	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS
T-SG-13	06-01-09	FLASHING BEACON DETAIL

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD DRAWINGS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	1 A2

STANDARD ROADWAY DRAWINGS (CONT'D)

DWG. NO	REV.	DESCRIPTION	DWG. NO	REV.	DESCRIPTION	DWG. NO	REV.	DESCRIPTION
TRAFFIC CONTROL APPURTENANCES (CONT'D)								
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS	EC-STR-44A		CATCH BASIN FILTER ASSEMBLY (TYPE 4) SLIPCOVER DETAILS			
T-WZ-21	03-15-11	LANE CLOSURE WITH LEFT HAND MERGE AND LANE SHIFT	EC-STR-45		CATCH BASIN FILTER ASSEMBLY (TYPE 5)			
T-WZ-30	09-01-05	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (40 MPH OR LESS)	EC-STR-45A		CATCH BASIN FILTER ASSEMBLY (TYPE 5) SLIPCOVER DETAILS			
T-WZ-31	09-01-05	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (GREATER THAN 40 MPH)	EC-STR-46		CATCH BASIN FILTER ASSEMBLY (TYPE 6)			
T-WZ-36	04-02-12	LANE CLOSURE ON LOW-VOLUME 2-LANE HIGHWAY	EC-STR-46A		CATCH BASIN FILTER ASSEMBLY (TYPE 6) SLIPCOVER DETAILS			
T-WZ-40	04-02-12	RIGHT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS	EC-STR-47		CATCH BASIN FILTER ASSEMBLY (TYPE 7)			
T-WZ-41	04-02-12	LEFT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS	EC-STR-47A		CATCH BASIN FILTER ASSEMBLY (TYPE 7) SLIPCOVER DETAILS			
T-WZ-42	04-02-12	CENTER LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS	EC-STR-48		CATCH BASIN FILTER ASSEMBLY (TYPE 8)			
T-WZ-55		SIDEWALK TRAFFIC CONTROL	EC-STR-48A		CATCH BASIN FILTER ASSEMBLY (TYPE 8) SLIPCOVER DETAILS			
EROSION PREVENTION AND SEDIMENT CONTROL								
EC-STR-1	08-01-12	DEWATERING STRUCTURE	EC-STR-50		CATCH BASIN FILTER ASSEMBLY (TYPE 10)			
EC-STR-2	08-01-12	SEDIMENT FILTER BAG	EC-STR-50A		CATCH BASIN FILTER ASSEMBLY (TYPE 10) SLIPCOVER DETAILS			
EC-STR-3B	08-01-12	SILT FENCE	EL-W-2	05-27-01	STANDARD GRAVITY-TYPE RETAINING WALLS			
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING						
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS						
EC-STR-6	08-01-12	ROCK CHECK DAM						
EC-STR-6A	08-01-12	ENHANCED ROCK CHECK DAM						
EC-STR-7	08-01-12	SEDIMENT TRAP WITH CHECK DAM						
EC-STR-8	08-01-12	FILTER SOCK						
EC-STR-11	08-01-12	CULVERT PROTECTION TYPE 1						
EC-STR-11A	08-01-12	CULVERT PROTECTION TYPE 2						
EC-STR-19	04-01-08	CATCH BASIN PROTECTION						
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD						
EC-STR-27	08-01-12	TEMPORARY SLOPE DRAIN AND BERM						
EC-STR-31	08-01-12	TEMPORARY DIVERSION CHANNEL						
EC-STR-31A	04-01-08	TEMPORARY DIVERSION CHANNEL DESIGN						
EC-STR-32	08-01-12	TEMPORARY DIVERSION CULVERTS						
EC-STR-33	08-01-12	SUSPENDED PIPE DIVERSION (DOWNSTREAM)						
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION						
EC-STR-36	08-01-12	TURF REINFORCEMENT MAT FOR CHANNEL INSTALLATION						
EC-STR-37	08-01-12	SEDIMENT TUBE						
EC-STR-39A	08-01-12	CURB INLET PROTECTION TYPE 3 & 4						
EC-STR-40		CATCH BASIN FILTER ASSEMBLY FOR CIRCULAR STRUCTURES						
EC-STR-41		CATCH BASIN FILTER ASSEMBLY (TYPE 1)						
EC-STR-41A		CATCH BASIN FILTER ASSEMBLY (TYPE 1) SLIPCOVER DETAILS						
EC-STR-44		CATCH BASIN FILTER ASSEMBLY (TYPE 4)						

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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

STANDARD DRAWINGS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	1B

PROJECT COMMITMENTS			
COMMITMENT ID	SOURCE DIVISON	DESCRIPTION	STA. / LOCATION
EDHZ004	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	IN THE EVENT HAZARDOUS SUBSTANCES/WASTES ARE ENCOUNTERED WITHIN THE PROPOSED RIGHT-OF-WAY, THEIR MANAGEMENT AND DISPOSITION SHALL BE SUBJECT TO ALL APPLICABLE REGULATIONS, INCLUDING THE FEDERAL RESOURCE CONSERVATION AND RECOVERY ACT, AS AMENDED; AND THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED; AND THE TENNESSEE HAZARDOUS WASTE MANAGEMENT ACT OF 1983, AS AMENDED.	APPLICABLE TRACTS
EDHZ003	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	5. A TDEC-OWNED SOIL VAPOR EXTRACTION SYSTEM IS CURRENTLY IN PLACE AND OPERATING ON TRACT 207. TWO OF THE RECOVERY WELLS THAT ARE PART OF THIS SYSTEMS ARE WITHIN THE RIGHT-OF-WAY OF THIS PROJECT. ABANDONMENT AND REPLACEMENT OF THESE WELLS WILL BE REQUIRED PRIOR TO CONSTRUCTION IN THIS AREA (TDEC RESPONSIBILITY SINCE THEY ARE IN THE RIGHT-OF-WAY).	TRACT 207
EDHZ002	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	1. PETROLEUM CONTAMINATED SOIL WAS DETECTED AT LEVELS ABOVE THE EPA REGIONAL SCREENING LEVEL FOR COMMERCIAL SITES WITHIN THE RIGHT-OF-WAY ON TRACTS 162, 187, 198, AND 207. 2. IF SOIL IS ENCOUNTERED THAT IS DISCOLORED OR EXHIBITS AN ODOR, WORK IN THESE AREAS SHOULD BE STOPPED AND THE TDOT HAZARDOUS MATERIALS MANAGER SHOULD BE NOTIFIED AT 615-532-8684. 3. THE TDOT ENVIRONMENTAL DIVISION WILL BE RESPONSIBLE FOR COORDINATING THE SAMPLING AND DISPOSITION OF THE EXCAVATED MATERIAL. 4. THE TDOT ENVIRONMENTAL DIVISION RECOMMENDS THAT ALL PERSONNEL USE ENGINEERING CONTROLS (RUBBER BOOTS, GLOVES) AND GOOD HYGIENIC PRACTICES IF THEY MUST COME INTO CONTACT WITH THE SOIL. CONTRACTORS SHOULD FOLLOW THEIR COMPANY HEALTH AND SAFETY PLAN IF CONTACTING POTENTIALLY CONTAMINATED SOIL.	TRACTS 162, 187, 198

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**PROJECT
COMMITMENTS**

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	2A

ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
201-01	CLEARING AND GRUBBING	LS	1
202-04.51	REMOVAL OF STRUCTURES (8' X 5' RCBC, STA. 880+58.32)	LS	1
202-04.52	REMOVAL OF STRUCTURES (3' X 3' RCBC, STA. 940+70.52)	LS	1
202-04.53	REMOVAL OF STRUCTURES (3' X 3' RCBC, LT. STA. 942+95-944+84)	LS	1
202-04.54	REMOVAL OF STRUCTURES (8' X 5' RCBC, STA. 954+39.29)	LS	1
9),10) 10)	203-01 ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	29990
	203-03 BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	5758
	204-08 FOUNDATION FILL MATERIAL	C.Y.	126
1)	209-05 SEDIMENT REMOVAL	C.Y.	1283
	209-08.02 TEMPORARY SILT FENCE (WITH BACKING)	L.F.	73518
1)	209-08.07 ROCK CHECK DAM PER	EACH	134
1)	209-08.08 ENHANCED ROCK CHECK DAM	EACH	90
1)	209-09.01 SANDBAGS	BAG	1050
1)	209-09.03 SEDIMENT FILTER BAG (15' X 15')	EACH	6
	209-09.43 CURB INLET PROTECTION (TYPE 4)	EACH	3
	209-10.43 TEMPORARY DEWATERING STRUCTURE	C.Y.	500
	209-20.03 POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y	10000
	209-40.33 CATCH BASIN PROTECTION (TYPE D)	EACH	80
	209-40.41 CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EACH	45
	209-40.44 CATCH BASIN FILTER ASSEMBLY (TYPE 4)	EACH	2
	209-40.45 CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EACH	2
	209-40.46 CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EACH	124
	209-40.47 CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EACH	2
	209-40.48 CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EACH	19
	209-40.50 CATCH BASIN FILTER ASSEMBLY (TYPE 10)	EACH	5
	209-65.03 TEMPORARY DIVERSION CHANNEL	L.F.	530
7)	303-01.01 GRANULAR BACKFILL (ROADWAY)	TON	6878
7)	303-01.03 GRANULAR BACKFILL (RETAINING WALLS)	TON	22
11)	303-10.01 MINERAL AGGREGATE (SIZE 57)	TON	124
7)	303-10.03 MINERAL AGGREGATE (SIZE 68)	TON	45
	415-01.01 COLD PLANING BITUMINOUS PAVEMENT	TONS	347
6)	604-01.01 CLASS A CONCRETE (ROADWAY)	C.Y.	835
	604-01.02 STEEL BAR REINFORCEMENT (ROADWAY)	LB.	121461
	606-24.12 TEMPORARY SHEET PILES	S.F.	63970
	607-03.30 18" PIPE CULVERT	L.F.	8979
	607-05.30 24" PIPE CULVERT	L.F.	1614
	607-06.30 30" PIPE CULVERT	L.F.	1890
	607-07.30 36" PIPE CULVERT	L.F.	4726
	607-08.30 42" PIPE CULVERT	L.F.	3843
	607-10.30 54" PIPE CULVERT	L.F.	16
	607-20.04 36" CROSSDRAIN PIPE CULVERT (COLLECTORS & LOCAL ROADS)	L.F.	50
	607-39.01 15" PIPE CULVERT (SIDE DRAIN)	L.F.	44
	607-39.02 18" PIPE CULVERT (SIDE DRAIN)	L.F.	636
	607-39.03 24" PIPE CULVERT (SIDE DRAIN)	L.F.	70
	607-57.06 REINFORCED CONCRETE PIPE ARCH (58" X 36")	L.F.	71

ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
611-01.02	MANHOLES, > 4' - 8' DEPTH	EACH	4
611-01.03	MANHOLES, > 8' - 12' DEPTH	EACH	11
611-01.04	MANHOLES, > 12' - 16' DEPTH	EACH	5
611-01.05	MANHOLES, > 16' - 20' DEPTH	EACH	3
611-02.14	JUNCTION BOX, TYPE 5	EACH	1
611-07.57	24IN ENDWALL (CROSS DRAIN) 3:1	EACH	1
611-07.63	36IN ENDWALL (CROSS DRAIN) 3:1	EACH	2
611-12.01	CATCH BASINS, TYPE 12, 0' - 4' DEPTH	EACH	9
611-12.02	CATCH BASINS, TYPE 12, > 4' - 8' DEPTH	EACH	69
611-12.03	CATCH BASINS, TYPE 12, > 8' - 12' DEPTH	EACH	24
611-12.04	CATCH BASINS, TYPE 12, > 12' - 16' DEPTH	EACH	15
611-12.05	CATCH BASINS, TYPE 12, > 16' - 20' DEPTH	EACH	7
611-12.06	CATCH BASINS, TYPE 12, > 20' - 24' DEPTH	EACH	2
611-14.02	CATCH BASINS, TYPE 14, > 4' - 8' DEPTH	EACH	1
611-14.03	CATCH BASINS, TYPE 14, > 8' - 12' DEPTH	EACH	1
611-16.02	CATCH BASINS, TYPE 16, > 4' - 8' DEPTH	EACH	1
611-16.03	CATCH BASINS, TYPE 16, > 8' - 12' DEPTH	EACH	2
611-42.01	CATCH BASINS, TYPE 42, 0' - 4' DEPTH	EACH	38
611-42.02	CATCH BASINS, TYPE 42, > 4' - 8' DEPTH	EACH	7
611-43.01	CATCH BASINS, TYPE 43, > 0' - 4' DEPTH	EACH	5
611-43.02	CATCH BASINS, TYPE 43, > 4' - 8' DEPTH	EACH	13
611-44.02	CATCH BASINS, TYPE 44, > 4' - 8' DEPTH	EACH	3
611-44.03	CATCH BASINS, TYPE 44, > 8' - 12' DEPTH	EACH	2
8)	701-01.01 CONCRETE SIDEWALK (4")	S.F.	65118
	701-02 CONCRETE DRIVEWAY	S.F.	19443
	701-02.03 CONCRETE HANDICAP RAMP	S.F.	3560
	702-03 CONCRETE COMBINED CURB & GUTTER	C.Y.	1528
	705-02.02 SINGLE GUARDRAIL (TYPE 2)	L.F.	788
	705-04.05 GUARDRAIL TERMINAL (TYPE-IN-LINE)	EACH	10
5)	705-04.07 TAN ENERGY ABSORBING TERM (NCHRP 350, TL3)	EACH	4
	705-08.51 PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	2
	708-02.01 MARKERS (CONCRETE R.O.W. POSTS)	EACH	155
4)	709-05.05 MACHINED RIP-RAP (CLASS A-3)	TON	200
	709-05.06 MACHINED RIP-RAP (CLASS A-1)	TON	1942
	709-05.09 MACHINED RIP-RAP (CLASS C)	TON	500
	710-02 AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	13700
	712-01 TRAFFIC CONTROL	LS	1
	712-02.02 INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	9000
	712-04.01 FLEXIBLE DRUMS (CHANNELIZING)	EACH	333
	712-06 SIGNS (CONSTRUCTION)	S.F.	1484
	712-06.01 VERTICAL PANELS	S.F.	2492
	712-07.03 TEMPORARY BARRICADES (TYPE III)	L.F.	48

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ESTIMATED ROADWAY QUANTITIES

NOTE: SEE SHEET 2A1 FOR FOOTNOTES

ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
716-01.21	SNWPLWBLE PVMT MRKRS (BI-DIR)(1 COLOR)	EACH	250
716-01.22	SNWPLWBLE PVMT MRKRS (MONO-DIR)(1 COLOR)	EACH	270
2) 716-02.04	PLASTIC PAVEMENT MARKING (CHANNELIZATION STRIPING)	S.Y.	128
2) 716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	485
2) 716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	60
2) 716-02.09	PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSS-WALK)	L.F.	1614
716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	11
716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	11
717-01	MOBILIZATION	LS	1
740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	3619
740-11.02	TEMPORARY SEDIMENT TUBE 12IN (DESCRIPTION)	L.F.	11314
740-11.04	TEMPORARY SEDIMENT TUBE 20IN (DESCRIPTION)	L.F.	11314
801-01	SEEDING (WITH MULCH)	UNIT	10
801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	480
801-02	SEEDING (WITHOUT MULCH)	UNIT	5
801-03	WATER (SEEDING & SODDING)	M.G.	616
802-01.10	TREES (AMERICAN ELM - ULMUS AMERICANA)	EACH	5
802-01.11	TREES (AMERICAN SYCAMORE - PLATANUS OCCIDENTALS)	EACH	5
802-01.12	TREES (SOUTHERN RED OAK - QUERCUS FALCATA)	EACH	5
802-01.13	TREES (GREEN ASH - FRAXINUS PENNSYLVANICA)	EACH	5
802-01.14	TREES (WHITE OAK - QUERCUS ALBA)	EACH	4
803-01	SODDING (NEW SOD)	S.Y.	53238
805-01.03	TURF REINFORCEMENT MAT (CLASS II)	S.Y.	110
805-12.01	EROSION CONTROL BLANKET (TYPE I)	S.Y.	450
3) 806-02.03	PROJECT MOWING	CYCL	6

ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
PAVEMENT DESIGN ALTERNATE AA1 - TOTALS FOR PROJECT			
203-06	WATER	M.G.	3997
12) 303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	92949
13) 307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	22721
14) 307-01.02	ASPHALT CEMENT (PG64-22) (BPMB-HM) GRADING A-S	TON	456
15) 307-01.03	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	13552
16) 307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	17962
402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	139
402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	458
17) 403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	60
411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	136
18) 411-01.10	ACS MIX (PG64-22) GRADING D	TON	7458
19) 411-02.10	ACS MIX (PG70-22) GRADING D	TON	320
PAVEMENT DESIGN ALTERNATE AA2 - TOTALS FOR PROJECT			
203-06	WATER	M.G.	5496
12) 303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	65424
13) 307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	22721
14) 307-01.02	ASPHALT CEMENT (PG64-22) (BPMB-HM) GRADING A-S	TON	456
15) 307-01.03	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	13552
16) 307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	16926
309-01.01	MINERAL AGGREGATE (A-CBC)	TON	21984
309-01.02	PORTLAND CEMENT (A-CBC)	TON	849
309-02	BITUMINOUS MATERIAL (A-CBC)	TON	71
402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	139
402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	458
17) 403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	60
411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	136
18) 411-01.10	ACS MIX (PG64-22) GRADING D	TON	7458
19) 411-02.10	ACS MIX (PG70-22) GRADING D	TON	320

- FOOTNOTES
- SEE SUBSECTION 209-07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
 - THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
 - ITEM INCLUDES LITTER AND TRASH REMOVAL. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE COST OF ITEM 806-02.03, PROJECT MOWING, CYCL.
 - INCLUDES 1,535 TONS FOR EROSION CONTROL AND 407 TONS FOR SPECIAL DITCHES.
 - THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. EXAMPLES WOULD BE A QUAD-GUARD, A REACT 350 OF OR A TRACC. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWINGS.
 - QUANTITY INCLUDES 25 C.Y. FOR RETAINING WALL RT. STA 960+03.81 TO 931+69.60.
 - ITEM FOR RETAINING WALL RT. STA 960+03.81 TO 931+69.60 (REFER TO STD. DWG. EL-W-2).
 - QUANTITY INCLUDES 14,603 S.F. FOR CONCRETE DRIVEWAY PADS AT SIDEWALKS AND 4,840 S.F. TO REPLACE EXISTING CONCRETE DRIVES.
 - QUANTITY INCLUDES 50 C.Y. FOR E.P.S.C.
 - REFER TO SPECIAL NOTES.
 - QUANTITY FOR E.P.S.C.
 - INCLUDES 27,792 TONS FOR TRAFFIC CONTROL PHASING.
 - INCLUDES 8,502 TONS FOR TRAFFIC CONTROL PHASING.
 - INCLUDES 134 TONS FOR TRAFFIC CONTROL PHASING.
 - INCLUDES 3,974 TONS FOR TRAFFIC CONTROL PHASING.
 - INCLUDES 5,569 TONS FOR TRAFFIC CONTROL PHASING.
 - INCLUDES 2 TONS FOR RESURFACING ALONG SR-15 AND N. PICKWICK STREET.
 - INCLUDES 27 TONS FOR RESURFACING ALONG N. PICKWICK STREET.
 - INCLUDES 320 TONS FOR RESURFACING ALONG SR-15.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ESTIMATED ROADWAY QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	2K

GENERAL NOTES

GRADING

- (1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- (2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.
- (3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

GUARDRAIL

- (1) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.
- (2) GUARDRAIL IS TO BE COMPLETE IN PLACE BEFORE THE MAINLINE ROADWAY IS OPENED TO TRAFFIC.

DRAINAGE

- (1) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.
- (2) EXCAVATION FOR PIPES, CULVERTS AND CONDUITS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE (PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES).
- (3) CULVERT EXCAVATION FOR CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.
- (4) THE CUTTING OF INLET AND OUTLET DITCHES WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER WILL BE MEASURED AND PAID FOR AS ITEM NO. 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED).
- (5) WHERE A CULVERT (PIPE, SLAB OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION, NO INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT WILL BE MADE DUE TO SUCH CHANGE.
- (6) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.

UTILITIES

- (1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.
- (2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR IT'S REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.

- (3) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

- (4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

- (5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

FENCING

- (6) THE CONTRACTOR SHALL GIVE THE AFFECTED PROPERTY OWNERS TWO WEEKS NOTICE PRIOR TO CUTTING FENCES.

MISCELLANEOUS

- (1) ALL DETOUR, ACCESS, SERVICE AND FRONTAGE ROADS SHALL BE CONSTRUCTED WITH A MINIMUM OF ONE (1) COURSE OF BASE MATERIAL BEFORE TRAFFIC IS INTERRUPTED ON EXISTING ROADS.
- (2) THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES WHERE AND AS DIRECTED BY THE ENGINEER.
- (3) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA

ROAD CLOSURE

- (1) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS

- (1) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), L.M.
- (2) WIDE (8 INCH) TEMPORARY PAVEMENT MARKING LINE WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02 PAINTED PAVEMENT MARKING (8" BARRIER LINE), LIN. FT.

FINAL PAVEMENT MARKING IF 6" ENHANCED FLATLINE THERMOPLASTIC IS USED

- (3) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PAVEMENT MARKING (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING

REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

- (4) THE PAVEMENT MARKING ON THE LANE SHIFT(S) FOR THE CENTERLINE AND EDGELINES WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, LIN. MI.
- (5) BEFORE OPENING THE LANE SHIFT(S) TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM 712-09.01 REMOVABLE PAVEMENT MARKING LINE, LIN. FT. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01 TRAFFIC CONTROL, LUMP SUM.
- (6) BEFORE OPENING THE LANE SHIFT(S) TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01 TRAFFIC CONTROL, LUMP SUM.

PAVEMENT

PAVING

- (1) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.
- (2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.
- (3) THE CONTRACTOR SHALL ATTACH A DEVICE TO THE SCREED OF THE PAVER SUCH THAT MATERIAL IS CONFINED AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CONSOLIDATED WEDGE-SHAPE PAVEMENT EDGE OF APPROXIMATELY 25 TO 30 DEGREES AS IT LEAVES THE PAVER (MEASURED FROM A LINE PARALLEL TO THE PAVEMENT SURFACE.) THE DEVICE SHALL MEET THE REQUIREMENTS THAT ARE CURRENTLY SET FORTH IN SPECIAL PROVISION 407SE.

RESURFACING

- (1) IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.
- (2) ON URBAN TYPICAL SECTIONS, (CURB AND GUTTER), RESIDENTIAL DRIVEWAYS AND BUSINESS ENTRANCES SHALL HAVE A MINIMUM WIDTH OF MATERIAL NOT LESS THAN ONE FOOT USED IN THE TRANSITION TO FEATHER THE PAVEMENT EDGE.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL
NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	2L

GENERAL NOTES (CONT'D)

SIGNING

- (1) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUTOUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND. THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL EXTRUDED PANEL SIGNS SHALL BE DEMOUNTABLE AND ATTACHED TO THE SIGN FACE, AS OUTLINED IN THE STANDARD SPECIFICATIONS. ALL SHIELDS ON GUIDE SIGNS SHALL BE DEMOUNTABLE AND ATTACHED TO THE SIGN FACE AS OUTLINED IN THE STANDARD SPECIFICATIONS.
- (2) THE TOP OF THE SIGN FOOTINGS SHALL BE PLACED LEVEL WITH THE GROUND LINE.
- (3) AFTER THE SIGN LOCATIONS HAVE BEEN STAKED, BUT PRIOR TO ORDERING ANY MATERIAL FOR THE SUPPORTS, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE REGIONAL CONSTRUCTION OFFICE.
- (4) THE CONTRACTOR SHALL BE REQUIRED TO FURNISH LAYOUT DRAWINGS (3 SETS) OF ALL EXTRUDED PANEL SIGNS WITH SPACING OF ALL LETTERS, NUMERALS, SHIELDS, AND ARROWS. THE LAYOUT DRAWINGS SHALL BE SENT TO THE ROADWAY DESIGN DIVISION, SIGNING AND MARKING SECTION, SUITE 1300, J. K. POLK BUILDING, NASHVILLE, TN 37243-1402.
- (5) ALL SIGNS MARKED "TO BE REMOVED" ARE TO BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER ITEM 713-15 AND BECOME THE PROPERTY OF THE CONTRACTOR.
- (6) THE EXISTING FOOTINGS ARE TO BE REMOVED 6 INCHES BELOW GROUND LINE.
- (7) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUT-OUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND, OR BROWN BACKGROUND.
- (8) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR

SIGNALIZATION

- (1) EQUIPMENT AND INSTALLATION OF TRAFFIC SIGNALS SHALL COMPLY WITH TDOT STANDARD SPECIFICATIONS, SECTION 730.
- (2) SALVAGEABLE EQUIPMENT SHALL BECOME THE PROPERTY OF THE CITY OF SAVANNAH AND SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE ENGINEER FOR PICKUP BY THE CITY OF SAVANNAH.
- (3) IF RESURFACING IS INCLUDED IN THE PROJECT, SIGNAL DETECTION LOOPS SHALL BE INSTALLED BEFORE THE FINAL SURFACE IS APPLIED.
- (4) ANY SIGNAL HEADS, WHEN VISIBLE TO DRIVERS BUT NOT OPERATIONAL, SHALL BE COMPLETELY COVERED.
- (5) SIGNAL HEADS SHALL FLASH A MINIMUM OF SEVEN (7) DAYS PRIOR TO ACTIVATION OF THE SIGNAL.
- (6) THE CONTRACTOR SHALL CONTACT CITY OF SAVANNAH A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE SIGNAL TO OBTAIN THE INITIAL SIGNAL TIMINGS.
- (7) THE PROJECT ENGINEER SHALL NOTIFY THE LOCAL GOVERNMENTAL AGENCY RESPONSIBLE FOR TRAFFIC CONTROL MAINTENANCE AT LEAST ONE DAY IN ADVANCE OF THE COLD PLANING ACTIVITY AT SIGNALIZED INTERSECTIONS WHERE DETECTOR LOOPS ARE ON THE PAVEMENT. THE MAINTAINING AGENCY WILL THEN BE RESPONSIBLE FOR DISCONNECTING THE LOOP DETECTORS AND MAKING ANY NECESSARY TIMING ADJUSTMENTS IN THE SIGNAL CONTROLLER PRIOR TO THE CONSTRUCTION.
- (8) THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR SUPPLYING THE CONTRACTOR WITH AS BUILT SIGNAL PLANS AT THE PRE-CONSTRUCTION CONFERENCE. THESE PLANS WILL PROVIDE THE CONTRACTOR WITH THE DESIRED LOCATION FOR DETECTOR LOOP REPLACEMENT.
- (9) LOOPS SHALL BE INSTALLED IN THE LEVELING COURSE IF A LEVELING COURSE IS PROVIDED.
- (10) LOOP REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 730 OF THE STANDARD SPECIFICATIONS.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

- (1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- (2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- (3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- (4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- (5) USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- (8) ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED AND THE VERTICAL PANELS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.

LIGHTING

- (1) INSTALLATION AND MATERIALS SHALL COMPLY WITH SECTIONS 714 AND 917 OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED MARCH 1, 2006 AND WITH THE LATEST REVISIONS TO THE NATIONAL ELECTRIC CODE, NFPA 70.
- (2) ALL WIRING SHALL BE CONCEALED UNDERGROUND IN 2-INCH SCHEDULE 40 PVC RIGID CONDUIT.
- (3) THE GROUND WIRE SHALL BE RUN INSIDE CONDUIT WITHIN STRUCTURES, SHALL BE COLORED GREEN AND HAVE THW INSULATION.
- (4) EXISTING FOUNDATIONS TO BE REMOVED A MINIMUM OF SIX INCHES BELOW GRADE.

- (5) ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED IN 714 ITEMS WHETHER SPECIFICALLY NOTED OR NOT.
- (6) LIGHT STANDARDS SHALL BE ROUND TAPERED POLES. LENGTH SHALL BE DETERMINED BY REQUIRED MOUNTING HEIGHT.
- (7) STANDARDS SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.
- (8) STANDARDS SHALL BE DESIGNED FOR 80-MPH WIND PRESSURE AND SHALL SUPPORT A 62-POUND LUMINAIRE ON A 15-FOOT ARM.
- (9) ALL NEW ROADWAY LIGHT STANDARDS SHALL BE MOUNTED ON BASES WITH ACCESS DOOR. TRANSFORMER BASES SHALL MEET AASHTO SPECIFICATIONS AND HAVE FHWA APPROVAL. STANDARDS SHALL BE ALUMINUM WITH TRANSFORMER BASES.
- (10) BRACKET ARMS SHALL BE ROUND TAPERED TRUSS TYPE WITH STRAP MOUNTING AND LENGTHS AS SCHEDULED.
- (11) BRACKET ARM UPSWEEP SHALL BE THE SAME FOR ALL LIGHT STANDARDS OF THE SAME TYPE.

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA

- (1) AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.
- (2) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.
- (3) CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.
- (4) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.
- (5) CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.
- (6) NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT. OFF-SITE BORROW OR WASTE AREAS ARE TO BE INCLUDED IN THE TOTAL DISTURBED AREA IF THE BORROW OR WASTE AREA IS EXCLUSIVE TO THE PROJECT PER TDOT'S WASTE AND BORROW MANUAL.

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GENERAL NOTES (CONT'D)

SEDIMENT CONTROL

- (1) EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- (2) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
- (3) WATER PUMPED FROM WORK AREAS AND EXCAVATION MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE INTO SURFACE WATERS. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND FULLY DESCRIBED IN THE EPSC PLANS. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL-VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. DISCHARGES FROM BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. DISCHARGES MUST NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITH THE RECEIVING STREAM.
- (4) CHECK DAMS SHALL BE USED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, GABION, OR SANDBAG CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO REDUCE VELOCITY AND CONTROL EROSION.
- (5) FOR AN OUTFALL IN A DRAINAGE AREA OF 10 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.
- (6) IF PERMANENT OR TEMPORARY VEGETATION IS TO BE USED AS AN EPSC MEASURE, THEN THE TIMING OF PLANTING OF VEGETATION SHALL BE SHOWN IN THE SWPPP. DELAYING PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.
- (7) OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.
- (8) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

STREAM/WETLAND

- (9) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT WATER QUALITY MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS IN ACCORDANCE WITH TDOT STANDARDS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
- (10) NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.

- (11) INSTREAM EPSC DEVICES REQUIRE THE ENVIRONMENTAL DIVISION'S PERMITS SECTION REVIEW AND MUST BE PROCESSED BY THE PERMITS SECTION TO OBTAIN TDEC, USACE, AND TVA PERMITS.
- (12) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS, SHALL BE ONLY AS SHOWN ON THE PROJECT PLANS AND/OR AS SO SPECIFIED IN THE ARAP/401, SECTION 404 PERMIT(S) AND/OR TVA26(A), IF APPLICABLE. ANY ADDITIONAL PERMITS REQUIRED BY THE CONTRACTOR'S METHOD OF OPERATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN, AFTER RECEIVING THE APPROVAL OF TDOT ENVIRONMENTAL DIVISION.
- (13) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING.
- (14) STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CROSSINGS MUST BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES MUST BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK MUST BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS MUST BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO THEIR PREEXISTING ELEVATION. ALL TEMPORARY CROSSINGS MUST BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK OR THE APPROPRIATE USE OF BARGES AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.
- (15) HEAVY EQUIPMENT WORKING IN WETLANDS MUST BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT MUST BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED.
- (16) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.

SPECIES

- (17) NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA. THE SWPPP SHALL BE MODIFIED TO INCLUDE EPSC MEASURES TO PREVENT NEGATIVE IMPACTS TO LEGALLY PROTECTED STATE OR FEDERAL FAUNA OR FLORA OR AS INDICATED IN THE ECOLOGICAL STUDIES OR ON THE PERMIT(S).

INSPECTION, MAINTENANCE, REPAIR

- (18) EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES.
- (19) INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.
- (20) SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/U.S. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR ITEM NO. 209-05 SEDIMENT REMOVAL, C.Y.
- (21) THE CONTRACTOR SHALL INSTALL A RAIN GAUGE EVERY LINEAR MILE AT ALL SITES WHERE CLEARING, GRUBBING, EXCAVATION, GRADING CUTTING OR FILLING IS BEING ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED. IF THE PROJECT LENGTH IS LESS THAN ONE LINEAR MILE, ONE RAIN GAUGE SHALL BE INSTALLED AT THE CENTER OF THE PROJECT OR AS INDICATED BY THE TDOT EPSC INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT EACH GAUGE IS MAINTAINED IN GOOD WORKING CONDITION. TDOT AND/OR THE CONTRACTOR SHALL RECORD DAILY PRECIPITATION AND FORECASTED

PERCENTAGE OF PRECIPITATION IN DETAILED RECORDS OF RAINFALL EVENTS INCLUDING DATES, AMOUNTS OF RAINFALL PER GAUGE, THE ESTIMATED DURATION (OR STARTING AND ENDING TIMES), AND FORECASTED PERCENTAGE OF PRECIPITATION FOR THE PROJECT. THIS INFORMATION SHALL BE PROVIDED TO THE ENGINEER ON A MONTHLY BASIS. THE COST FOR THE RAIN GAUGES IS TO BE INCLUDED IN THE UNIT BID PRICES FOR OTHER ITEMS. RAIN GAUGES SHALL BE AS SPECIFIED IN THE APPROVED TDOT RAINFALL MONITORING PLAN.

- (22) INSPECTION OF EPSC MEASURES SHALL BE DONE AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE/QUALITY CONTROL SITE ASSESSMENT OF EPSC SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION'S COMPREHENSIVE INSPECTION OFFICE GUIDELINES.
- (23) OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
- (24) UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.
- (25) THE TDOT PROJECT SUPERVISOR (OR THEIR DESIGNEE) AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT PROJECT SUPERVISOR OR THEIR DESIGNEE WILL COMPLETE THE INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

MATERIALS

- (26) WASTE AND BORROW AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPDES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.

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GENERAL NOTES (CONT'D)

SWPPP, PERMITS, PLANS, RECORDS

- (1) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS.
- (2) ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT ENGINEER. THE ENVIRONMENTAL DIVISION, ROADWAY DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
- (3) THE FOLLOWING INFORMATION SHALL BE MAINTAINED ON OR NEAR THE SITE: DATES THAT MAJOR GRADING ACTIVITIES OCCUR, DATES WHERE CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED, EPSC INSPECTION RECORDS, QUALITY ASSURANCE SITE ASSESSMENT RECORDS, PRECIPITATION RECORDS, SWPPP, PROJECT ENVIRONMENTAL PERMITS, AND A COPY OF THE PROJECT EPSC INSPECTOR'S TDEC LEVEL 1 CERTIFICATION.
- (4) ALL WATER QUALITY AND STORM WATER PERMITS, INCLUDING A COPY OF THE NOC WITH NPDES PERMIT TRACKING NUMBER AND THE LOCATION OF THE SWPPP, SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BRIEF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.
- (5) IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS OR MODIFICATIONS OF THE SWPPP ARE NEEDED. THE ROADWAY DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.
- (6) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED WHEN MAJOR DESIGN REVISIONS ARE REQUESTED BY CONSTRUCTION. THE ENVIRONMENTAL DIVISION MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS. A COPY OF ANY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS SHALL BE RETAINED IN THE SWPPP.
- (7) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER A CHANGE IN CHEMICAL TREATMENT METHODS IS MADE INCLUDING USE OF A DIFFERENT CHEMICAL, DIFFERENT DOSAGE OR APPLICATION RATE, OR A DIFFERENT AREA OF APPLICATION.
- (8) IF A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION) THE SWPPP SHALL BE MODIFIED OR UPDATED.
- (9) PROJECT INSPECTORS AND SUPERVISORS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION. A COPY OF CERTIFICATION RECORDS FOR THE COURSES SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.

LITTER, DEBRIS, WASTE, PETROLEUM

- (10) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS

WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS. AFTER USE, MATERIALS USED FOR EPSC WILL BE REMOVED FROM THE SITE.

- (11) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

SPECIAL NOTES

GRADING

- (1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.
- (2) BORING DEPICTIONS SHOWN ON THE FOUNDATION DATA SHEETS, SOILS SHEETS, PLANS, AND CROSS-SECTIONS INDICATE SOIL AND ROCK CONDITIONS AT THE SPECIFIC BORING LOCATIONS. ANY SOIL PROFILE AND/OR ROCK LINE IS INTERPRETIVE BASED ON THE JUDGMENT OF THE GEOTECHNICAL ENGINEER/GEOLOGIST. THE TRANSITION BETWEEN BORINGS AND LAYERS MAY VARY SIGNIFICANTLY DEPENDING ON THE GEOLOGIC FORMATIONS ENCOUNTERED.
- (3) TO ASSIST IN BID PREPARATION FOR EARTHWORK AND FOUNDATION CONSTRUCTION, DETAIL ROCK AND SOIL DESCRIPTION AND ON SOME PROJECTS, ROCK CORE SAMPLES ARE AVAILABLE FOR INSPECTION AT THE MATERIALS AND TESTS HEADQUARTERS AT 6601 CENTENNIAL BOULEVARD, NASHVILLE, TN OR AT THE TDOT REGION 1 BUILDING IN KNOXVILLE, TN.
- (4) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.
- (5) EARTHWORK IS PAID FOR UNDER ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.

PAVEMENT

RESURFACING

- (1) SURFACE IS TO BE CROWNED AS DIRECTED BY THE ENGINEER.
- (2) ALL SIGNS WHICH INTERFERE WITH CONSTRUCTION WILL BE RELOCATED OUTSIDE LIMITS OF CONSTRUCTION BY THE CONTRACTOR. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR WILL RESTORE THE SIGNS TO ORIGINAL LOCATION. COST TO BE INCLUDED IN ITEM NO. 712-06.
- (3) IF THE CONTRACTOR ELECTS TO UTILIZE SIGN POST ANCHORS (STUBS) FOR SIGN ERECTION, THESE SHALL BE REMOVED WHEN THE SIGNS ARE REMOVED TO AVOID FUTURE DAMAGE TO MOWERS OR OTHER MACHINERY.
- (4) UNDER THE DIRECTION OF THE ENGINEER, THE CONTRACTOR MAY BE REQUIRED TO APPLY PAINTED MARKINGS IN THE PAVEMENT AREAS NOT SPECIFICALLY DETAILED IN THE PLANS. PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR ITEM NO. 716-05.01.

- (5) UNDER THE DIRECTION OF THE ENGINEER, THE CONTRACTOR MAY BE REQUIRED TO APPLY PLASTIC MARKINGS IN THE PAVEMENT AREAS NOT SPECIFICALLY DETAILED IN THE PLANS. PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR 716-SERIES ITEMS.
- (6) THE CONTRACTOR SHALL PROPERLY ADJUST ALL MANHOLES. ALL UTILITY VALVE COVERS AND LIKE STRUCTURES TO THE FINISHED GRADE OF THE PAVEMENT. IF EXTENSION RINGS ARE USED, THEY WILL BE SPOT WELDED A MINIMUM OF FIVE TIMES. COST OF ADJUSTMENT IS TO BE INCLUDED IN ITEM 411-01, ADJUSTMENT IS TO BE MADE PRIOR TO THE LAYING OF ITEM 411-01.
- (7) TAPER AROUND ALL CATCH BASINS.
- (8) THE CONTRACTOR SHALL KEEP TWO TRAFFIC LANES, ONE IN EACH DIRECTION, OPEN TO TRAFFIC DURING NON-WORK HOURS / OR NON-WORK DAYS.
- (9) THE CONSTRUCTION OFFICE SHOULD CONTACT THE CITY ENGINEER FOR ADVICE ON LOCATING THE ADVANCE DETECTION LOOPS.
- (10) THE CONTRACTOR SHALL NOT DISTURB EXISTING LOOP DETECTORS WHILE BREAKING OUT AND REMOVING EXISTING PAVEMENTS.
- (11) THE BITUMINOUS MATERIAL DESIGNATED TO RESTORE THE COLD PLANING AREA WILL BE PLACED WITHIN 48 HOURS OF THE COMMENCEMENT OF COLD PLANING OPERATIONS. COLD PLANING OPERATIONS WILL BE LIMITED TO AN AREA EQUAL TO THAT WHICH CAN BE COVERED WITH BITUMINOUS MATERIAL WITHIN THE TIME LIMITS SPECIFIED. EVEN IF COLD PLANING OPERATIONS MUST BE SUSPENDED UNTIL PAVING CATCHES UP.
- (12) THE RAISED REFLECTOR SHALL BE REMOVED BEFORE COLD PLANING.

SIGNALIZATION

- (1) THE DESIGN OF TRAFFIC SIGNAL SUPPORT POLES, MAST ARMS, STRAIN POLES, ETC. SHALL BE IN CONFORMANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, CURRENT EDITION. OVERHEAD CANTILEVERED TRAFFIC SIGNAL STRUCTURES SHALL BE DESIGNED FOR FATIGUE CATEGORY 1.

EROSION PREVENTION AND SEDIMENT CONTROL

NPDES

- (1) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHEET 17, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

ENVIRONMENTAL

ECOLOGY

- (1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING CONCERNING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR DESIGNATED CONSULTANT WILL NEED TO BE ON-SITE FOR WORK BEING DONE WHICH COULD AFFECT THE STREAM OR SPECIES.
- (2) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED BRIDGE WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS WHICH MUST BE FOLLOWED.

STREAM RELOCATION

ONCE WATER IS DIVERTED INTO A NEWLY CONSTRUCTED AND STABILIZED RELOCATED STREAM / CHANNEL THE ECOLOGY SECTION MUST BE NOTIFIED. THE STREAM NAME, STREAM NUMBER, AND DATE THE WATER WAS DIVERTED INTO THE STREAM / CHANNEL IS TO BE SUPPLIED WITH THE NOTIFICATION.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

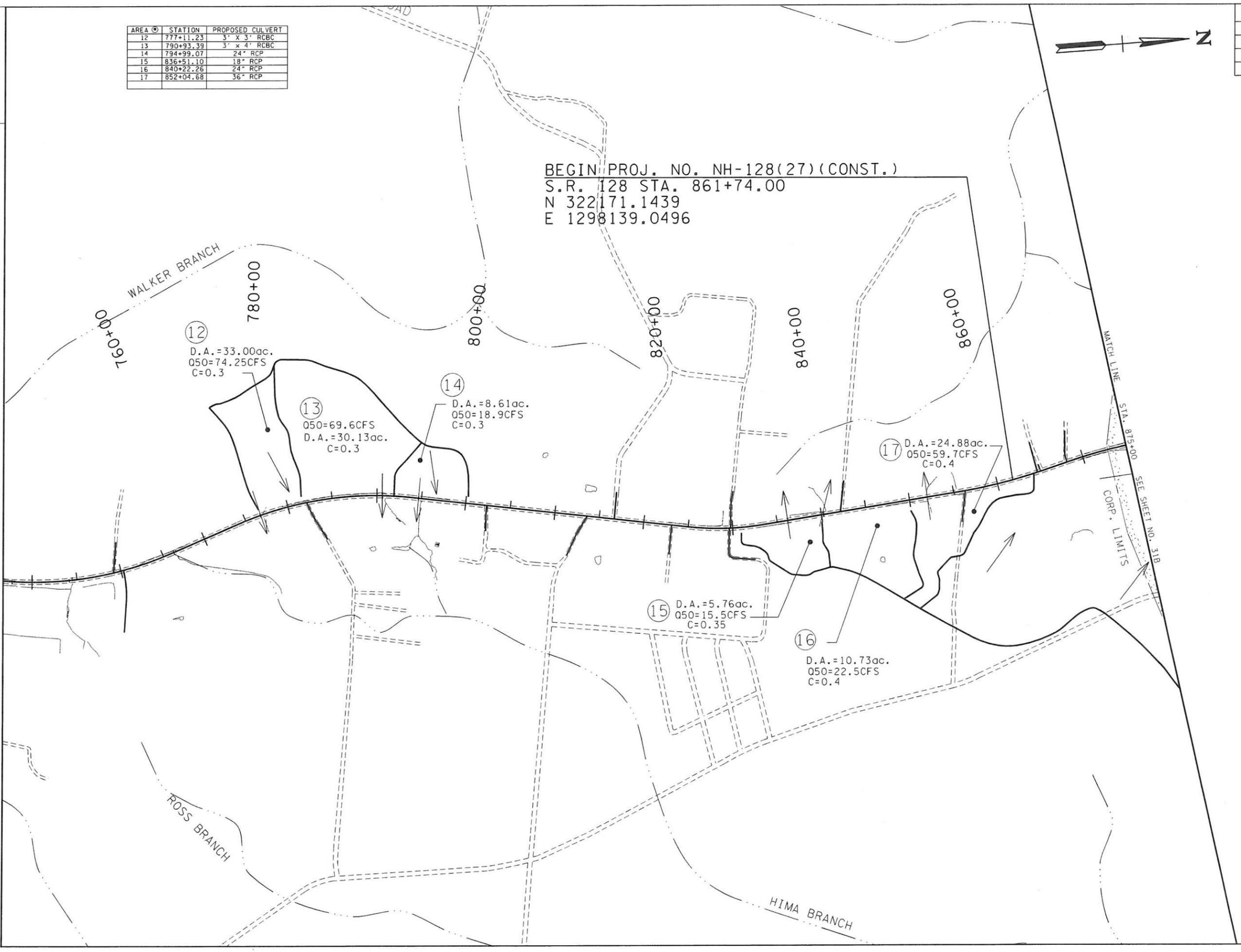
GENERAL NOTES
AND
SPECIAL NOTES

AREA	STATION	PROPOSED CULVERT
12	777+11.23	3' x 3' RCBC
13	790+93.39	3' x 4' RCBC
14	794+99.07	24" RCP
15	836+51.10	18" RCP
16	840+22.26	24" RCP
17	852+04.68	36" RCP

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2004	STP-128(11)	31
CONST.	2015	NH-128(27)	15



BEGIN PROJ. NO. NH-128(27)(CONST.)
S.R. 128 STA. 861+74.00
N 322171.1439
E 1298139.0496



12
D.A. = 33.00ac.
Q50 = 74.25CFS
C = 0.3

13
Q50 = 69.6CFS
D.A. = 30.13ac.
C = 0.3

14
D.A. = 8.61ac.
Q50 = 18.9CFS
C = 0.3

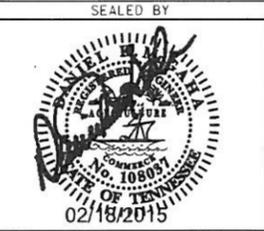
17
D.A. = 24.88ac.
Q50 = 59.7CFS
C = 0.4

15
D.A. = 5.76ac.
Q50 = 15.5CFS
C = 0.35

16
D.A. = 10.73ac.
Q50 = 22.5CFS
C = 0.4

MATCH LINE
STA. 815+00
CORP. LIMITS
SEE SHEET NO. 31B

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

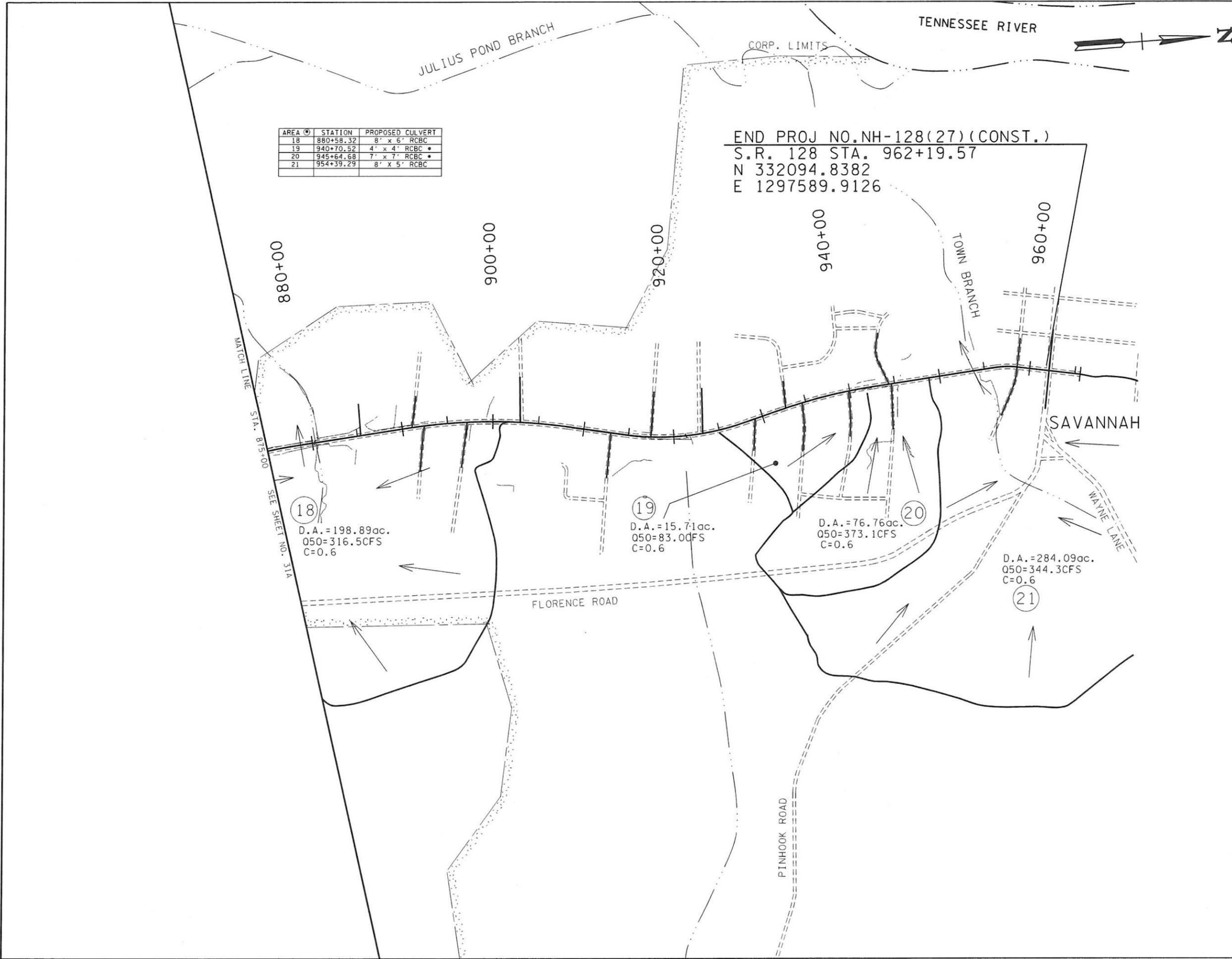
**DRAINAGE
MAP**

STA. 778+00 TO STA. 875+00
SCALE: 1"=500'

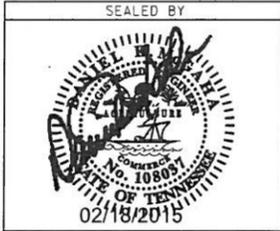
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	15A

AREA	STATION	PROPOSED CULVERT
18	880+58.32	8' x 5' RCBC
19	940+70.52	4' x 4' RCBC
20	945+64.68	7' x 7' RCBC
21	954+39.29	8' x 5' RCBC

END PROJ NO. NH-128(27) (CONST.)
 S.R. 128 STA. 962+19.57
 N 332094.8382
 E 1297589.9126



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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
DRAINAGE MAP
 STA. 875+00 TO END OF PROJ.
 SCALE: 1"=500'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	17

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

STREAM/WETLAND

- (1) ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., FOR PIER FOOTING, RIP-RAP PLACEMENT, MULTI-BARREL CULVERT/BRIDGE CONSTRUCTION, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS. THIS NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR THE TEMPORARY DIVERSION CHANNELS, EC-STR-31 AND TEMPORARY DIVERSION CULVERTS, EC-STR-32 FOR SINGLE BARREL CULVERT CONSTRUCTION.
- (2) A 30 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE 30 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 15 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPs) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

NPDES

- (3) NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.
- (4) THE EPSC MEASURES AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.
- (5) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:
 - A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
 - B. NO OTHER CLEARING AND GRUBBING OPERATIONS SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
 - C. NO CULVERT OR BRIDGE CONSTRUCTION SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
 - D. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
- (6) PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME UNTIL AFTER 14 CALENDAR DAYS. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE. UNPACKED

- GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE.
- (7) STEEP SLOPES (A NATURAL OR CREATED SLOPE OF 35% GRADE (2.8H:1V) OR GREATER REGARDLESS OF HEIGHT) SHALL BE TEMPORARILY STABILIZED NO LATER THAN 7 CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.
 - (8) FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION SUPPORT ACTIVITIES; TDOT PROJECTS ARE COVERED UNDER THE "WASTE AND BORROW" MANUAL PER THE SSWMP.
 - (9) EXCEPT AS OTHERWISE SPECIFIED, THERE ARE NO KNOWN SPECIAL ENVIRONMENTAL FACTORS PRESENT ON THIS PROJECT THAT INDICATE A NEED FOR SEASONAL LIMITATIONS ON THE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OPERATIONS OR ON THE TOTAL AREA OF EXPOSED SOIL.

UTILITY RELOCATION

- (10) RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.
- (11) SILT FENCE SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY
- (12) UTILITY CROSSINGS FOR PERENNIAL STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO UTILITIES IN THIS PROJECT IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC). THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP).
- (13) IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM THEIR OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.
- (14) FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOIL OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE STATE UTILITY CONTRACTOR UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.
- (15) IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC), TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS IN THIS PROJECT, THEREFORE, THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTIONS PREVENTION PLANS (SWPPP). THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT WORK.
- (16) TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORM WATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.
- (17) FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH FINAL VEGETATIVE COVER.

- (18) THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS (AS APPROVED BY THE TDOT PROJECT ENGINEER).
- (19) THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES TO REPLACE IN-PLACE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE TDOT PROJECT ENGINEER BEFORE COMMENCING WORK.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION
PREVENTION
AND SEDIMENT
CONTROL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	17A

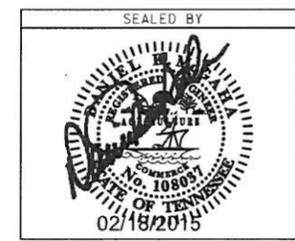
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES						
ITEM NO.	DESCRIPTION	UNIT	PHASE I	PHASE II	PHASE III	QUANTITY
1) 203-01	ROAD & DRAINAGE EXC. (UNCLASSIFIED)	C.Y.	0	0	0	50
209-05	SEDIMENT REMOVAL	C.Y.	0	0	0	1283
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	23503	25355	24660	73518
209-08.07	ROCK CHECK DAM PER	EACH	11	67	56	134
209-08.08	ENHANCED ROCK CHECK DAM	EACH	43	21	26	90
209-09.01	SANDBAGS	BAG	300	750	0	1050
209-09.03	SEDIMENT FILTER BAG (15' X 15')	EACH	0	4	2	6
209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	3	0	0	3
2) 209-10.01	TEMPORARY DEWATERING STRUCTURE	C.Y.	0	0	0	500
3) 209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	0	0	0	10000
209-40.33	CATCHBASIN PROTECTION (TYPE D)	EACH	12	0	68	80
209-40.41	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EACH	0	45	0	45
209-40.44	CATCH BASIN FILTER ASSEMBLY (TYPE 4)	EACH	0	2	0	2
209-40.45	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EACH	0	2	0	2
209-40.46	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EACH	0	124	0	124
209-40.47	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EACH	0	2	0	2
209-40.48	CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EACH	0	19	0	19
209-40.50	CATCH BASIN FILTER ASSEMBLY (TYPE 10)	EACH	0	5	0	5
209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	70	585	0	655
303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	71	27	26	124
1) 709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	0	0	0	200
709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	567	834	134	1535
4) 740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	1178	1775	322	3619
740-11.02	TEMP. SEDIMENT TUBE 12IN (DESCRIPTION)	L.F.	978	5310	5026	11314
740-11.04	TEMP. SEDIMENT TUBE 20IN (DESCRIPTION)	L.F.	978	5310	5026	11314
801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	0	0	0	480
6) 801-02	SEEDING (WITHOUT MULCH)	UNIT	0	0	0	5
5) 805-01.03	TURF REINFORCEMENT MAT (CLASS II)	S.Y.	0	0	0	110
2) 805-12.01	EROSION CONTROL BLANKET (TYPE I)	S.Y.	0	0	0	450

- FOOTNOTES:**
- 1) QUANTITY BASED ON FOUR CONSTRUCTION ENTRANCES/EXITS.
 - 2) ITEM TO BE USED AS DIRECTED BY THE ENGINEER.
 - 3) ITEM TO BE USED TO COVER EXPOSED SOILS DURING BOX CONSTRUCTION.
 - 4) TOTAL INCLUDES 344 S.Y. FOR CONSTRUCTION ENTRANCES/EXITS.
 - 5) ITEM TO BE USED WITH SPECIAL DITCH AND CHANNEL RELOCATION DURING CONSTRUCTION.
 - 6) ITEM FOR USE WITH TURF REINFORCEMENT MAT AND EROSION CONTROL BLANKET.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
	SEDIMENT FILTER BAG	EC-STR-2
	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
	CULVERT PROTECTION (TYPE 2)	EC-STR-11A
	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	RIPRAP	EC-STR-27
	TEMPORARY DIVERSION CHANNEL (DESCRIBE-SIZE AND TYPE OF LINING)	EC-STR-31
	SAND BAG BERM	EC-STR-33
	SEDIMENT TUBE	EC-STR-37
	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
	CATCH BASIN FILTER ASSEMBLY (TYPE 4)	EC-STR-44
	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EC-STR-45
	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47
	CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EC-STR-48
	CATCH BASIN FILTER ASSEMBLY (TYPE 10)	EC-STR-50

- (A) TEMPORARY CONSTRUCTION EXIT TO BE LOCATED BY THE ENGINEER.
 (B) TEMPORARY DIVERSION CHANNEL
 STA. 880+58.32 BOTTOM = 8' WITH GEOTEXTILE (TYPE(III)) & RIP-RAP (CLASS A-1)
 STA. 945+66.71 BOTTOM = 6' WITH GEOTEXTILE (TYPE(III)) & RIP-RAP (CLASS A-1)
 STA. 954+43.00 BOTTOM = 12' WITH GEOTEXTILE (TYPE(III)) & RIP-RAP (CLASS A-1)



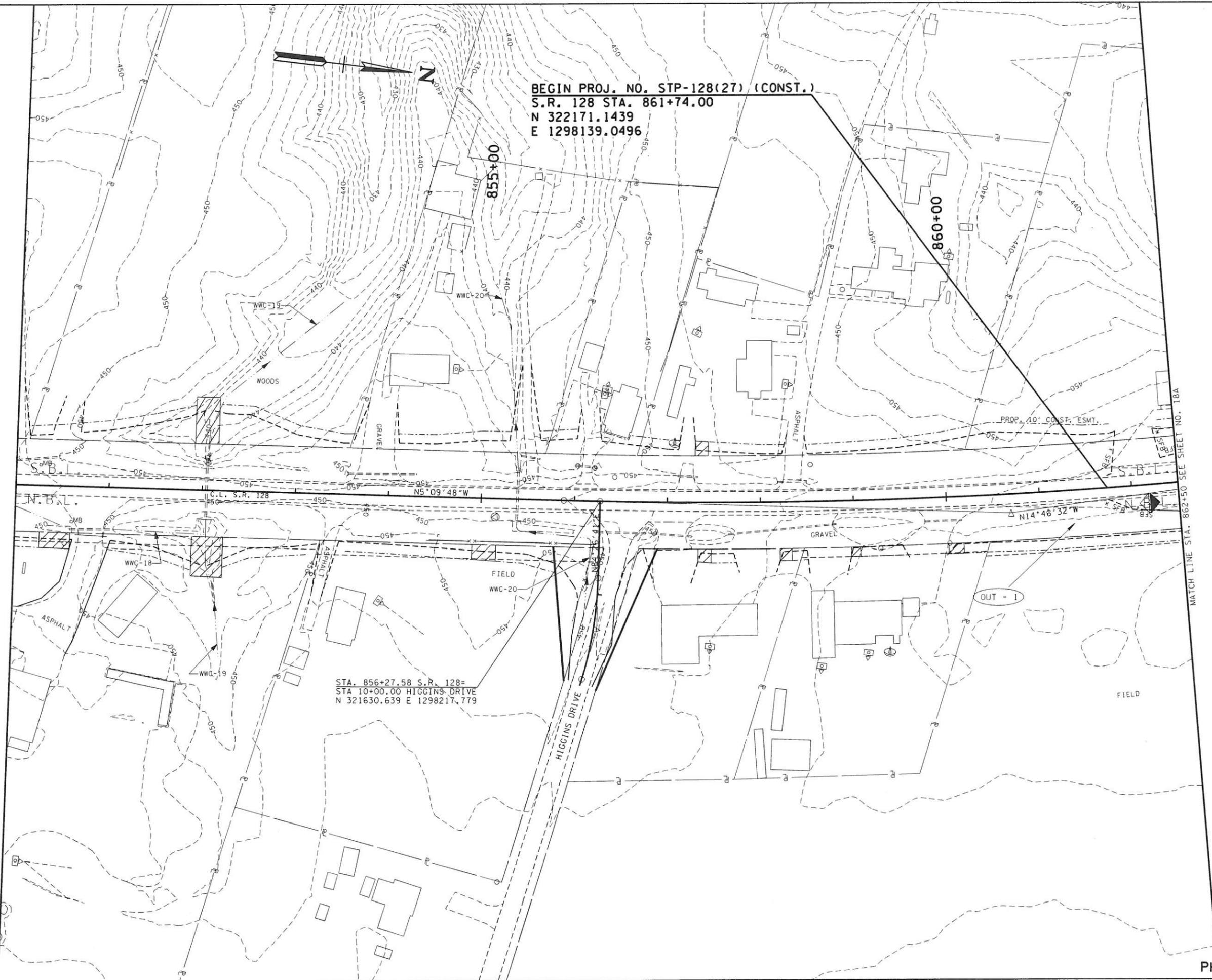
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED
E.P.S.C.
QUANTITIES

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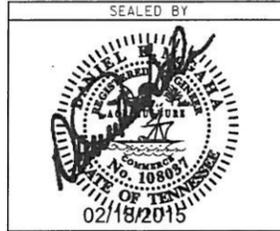
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	18

BEGIN PROJ. NO. STP-128(27) (CONST.)
 S.R. 128 STA. 861+74.00
 N 322171.1439
 E 1298139.0496



STA. 856+27.58 S.R. 128=
 STA 10+00.00 HIGGINS DRIVE
 N 321630.639 E 1298217.779

MATCH LINE STA. 862+50 SEE SHEET NO. 18A



COORDINATES ARE NAD(83)(995).
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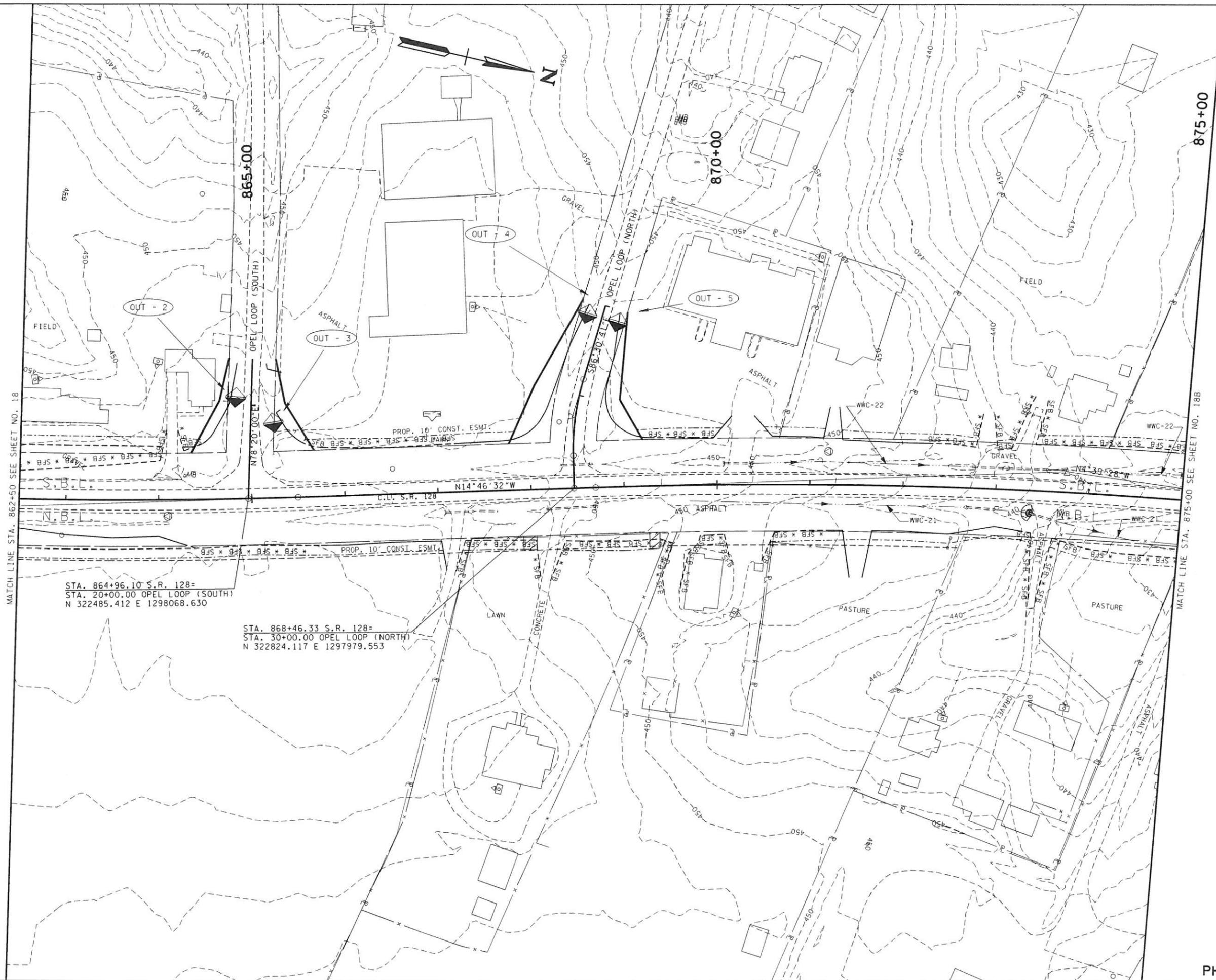
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**
 STA. 850+00 TO STA. 862+50
 SCALE: 1" = 50'

PHASE I

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	18A



MATCH LINE STA. 862+50 SEE SHEET NO. 18

MATCH LINE STA. 875+00 SEE SHEET NO. 18B

STA. 864+96.10 S.R. 128=
 STA. 20+00.00 OPEL LOOP (SOUTH)
 N 322485.412 E 1298068.630

STA. 868+46.33 S.R. 128=
 STA. 30+00.00 OPEL LOOP (NORTH)
 N 322824.117 E 1297979.553

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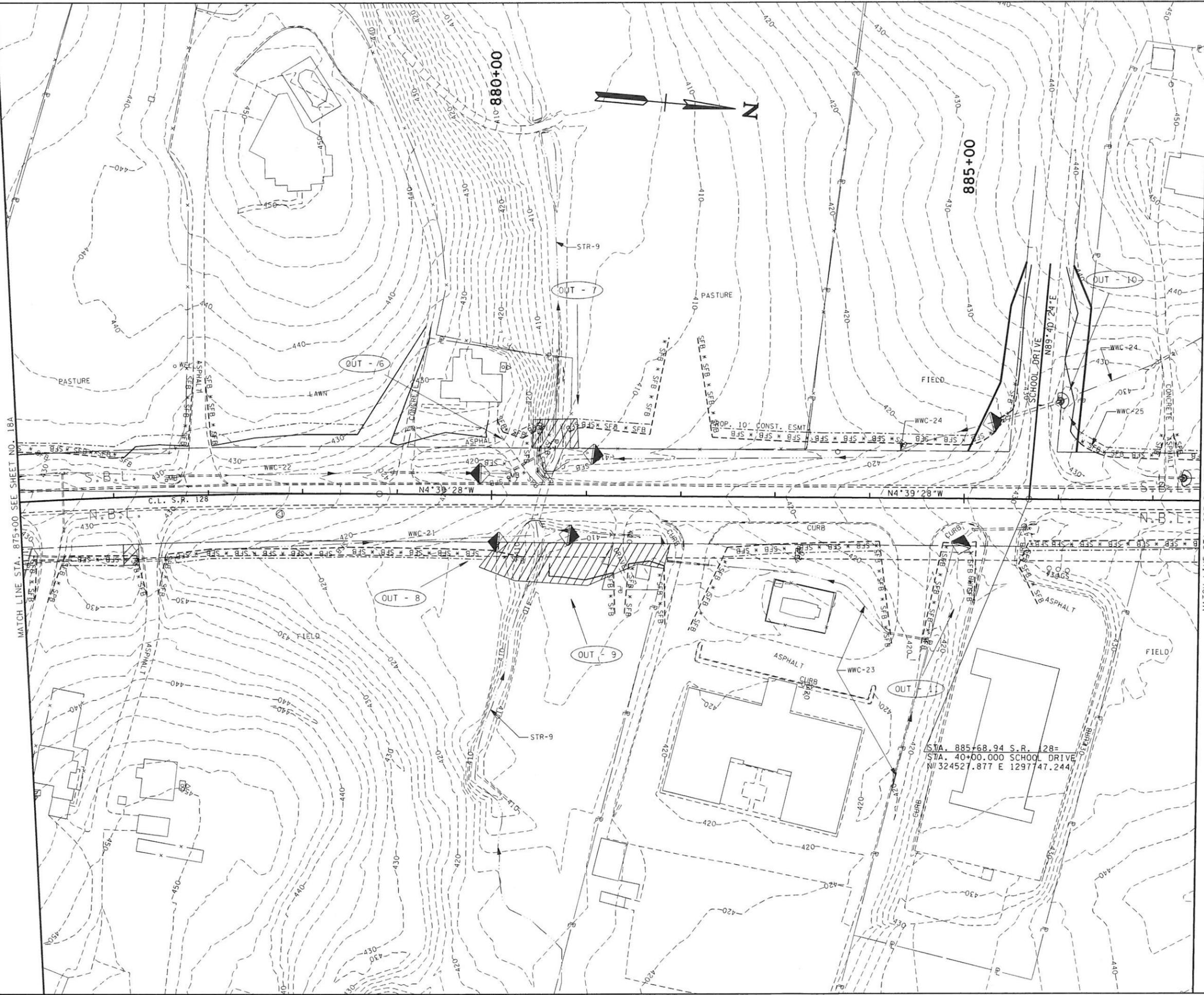
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

STA. 862+50 TO STA. 875+00
 SCALE: 1" = 50'

PHASE I

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	18B



MATCH LINE STA. 875+00 SEE SHEET NO. 18A

MATCH LINE STA. 887+50 SEE SHEET NO. 18C

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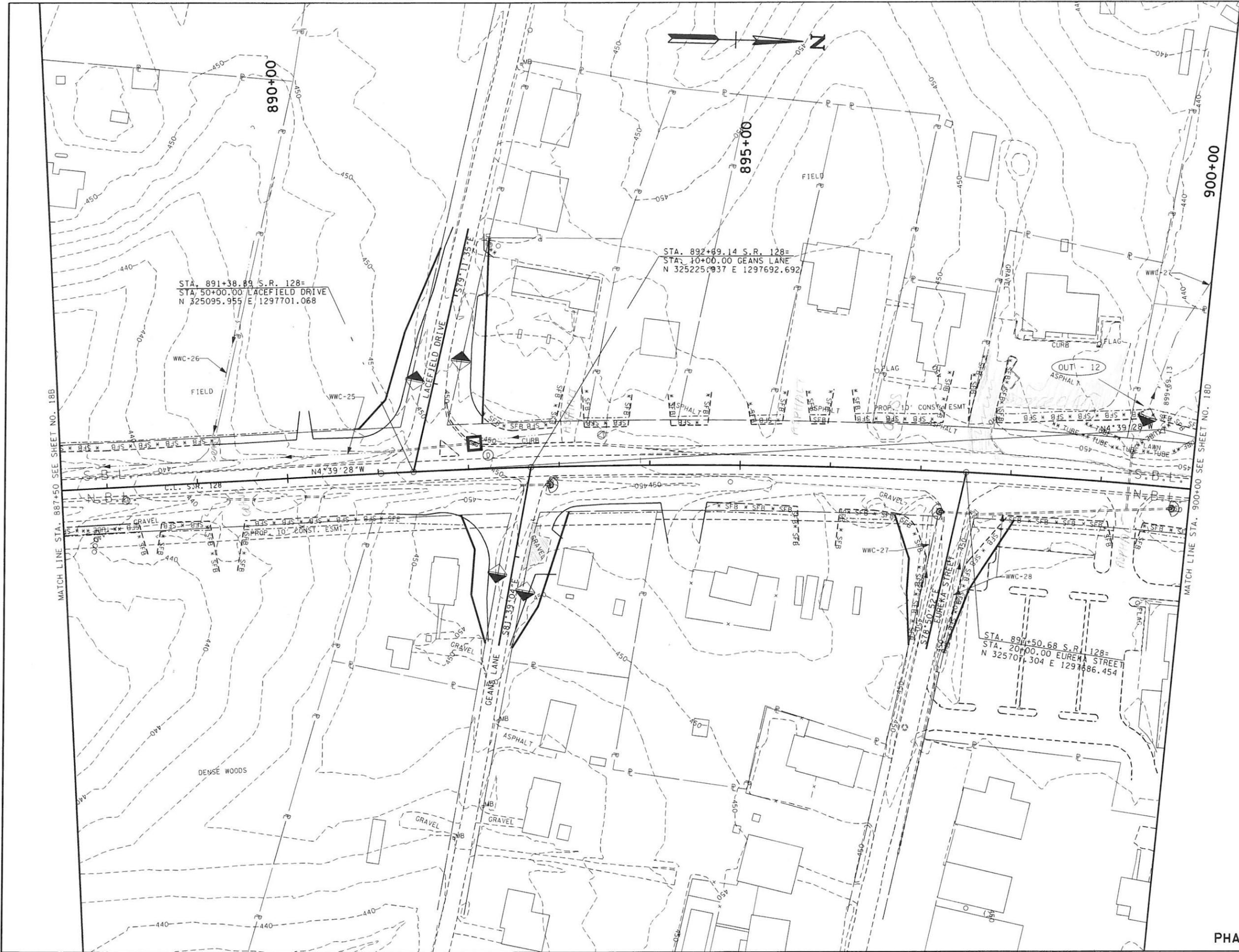
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

PHASE I
STA. 875+00 TO STA. 887+50
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	18C



MATCH LINE STA. 887+50 SEE SHEET NO. 18B

MATCH LINE STA. 900+00 SEE SHEET NO. 18D



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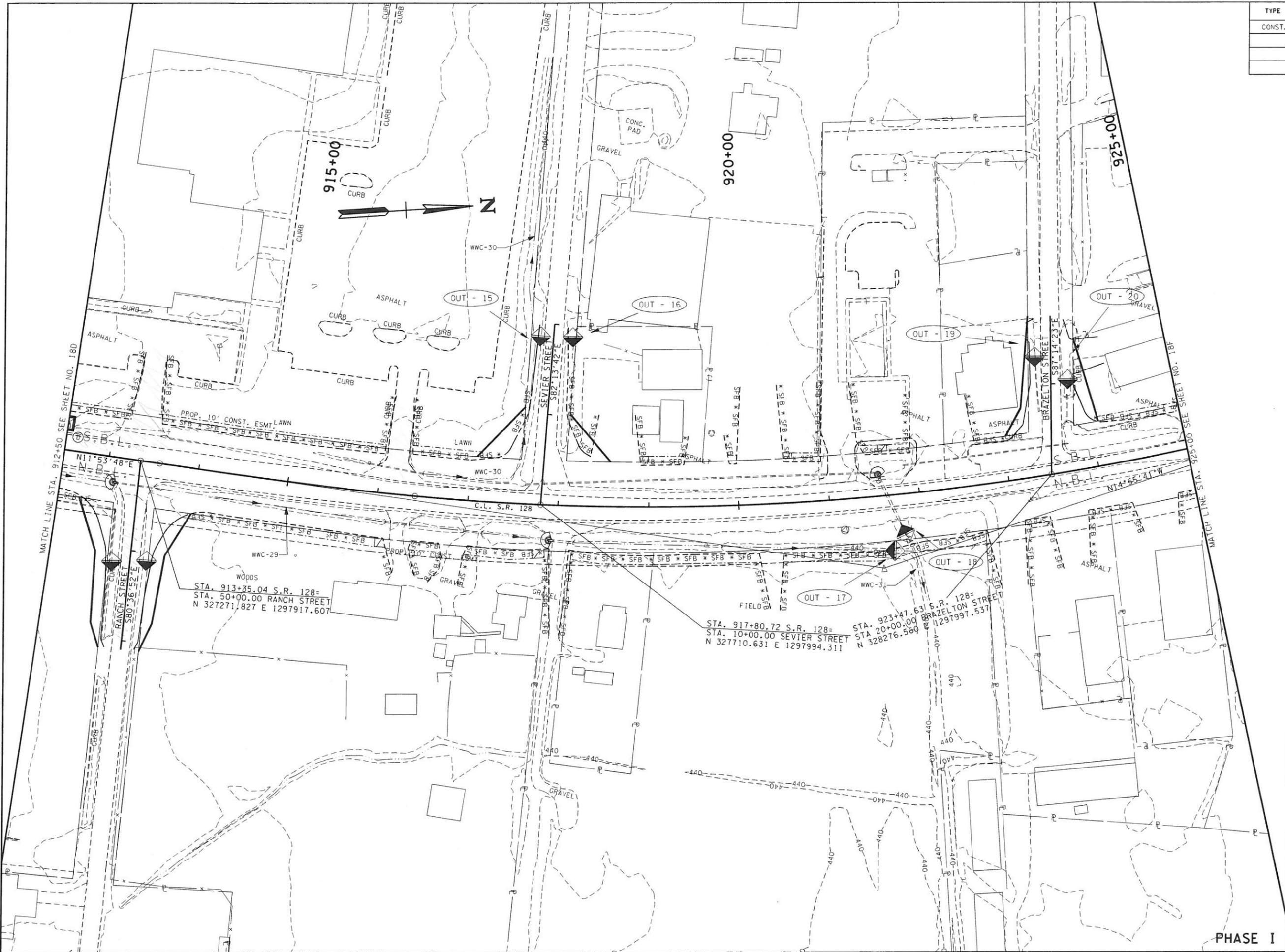
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

PHASE I STA. 887+50 TO STA. 900+00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	1BE



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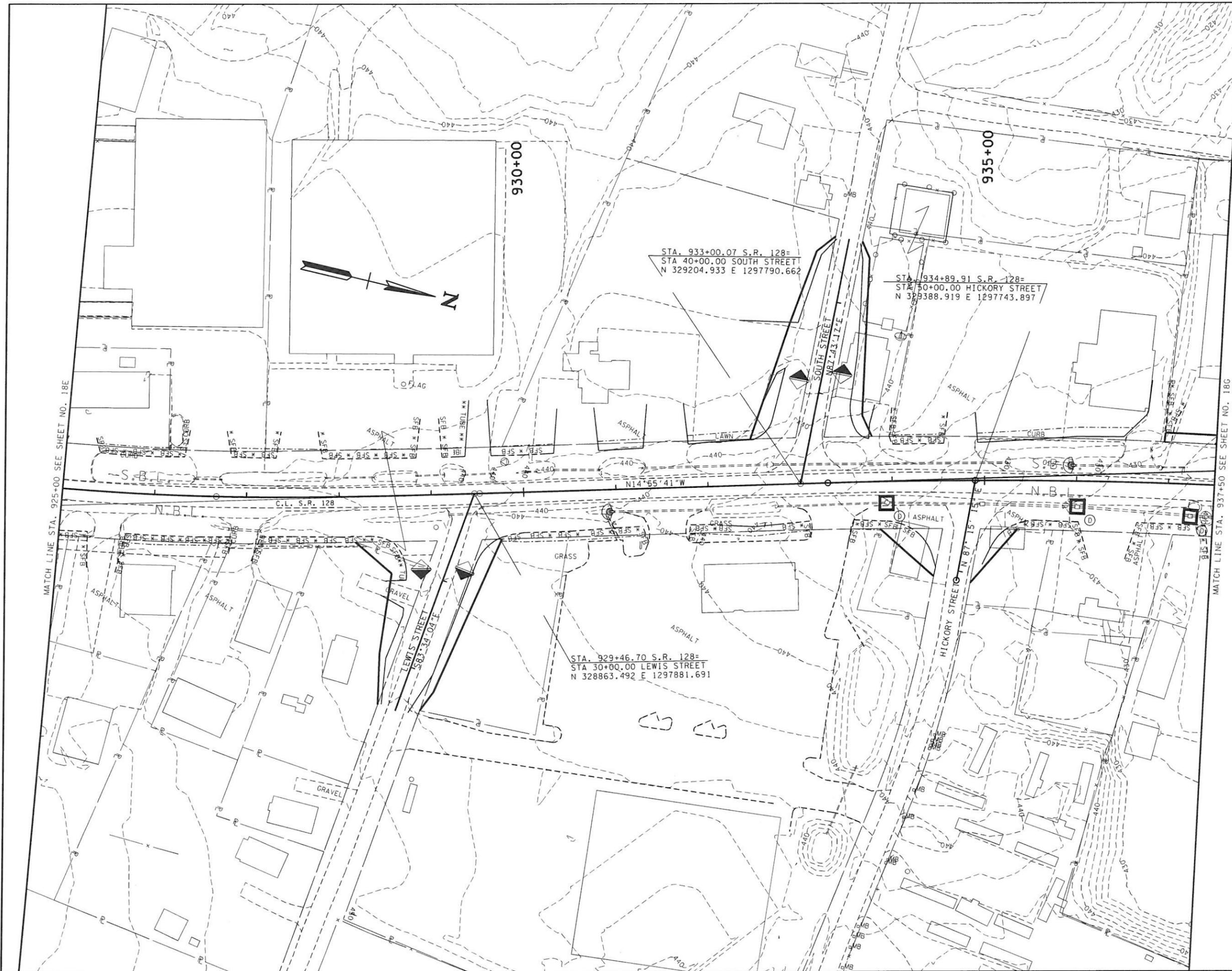


COORDINATES ARE NAD(83)(95).
 ARE DATUM ADJUSTED BY THE
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 THE TGRN. ALL ELEVATIONS ARE
 REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**
 PHASE I
 STA. 912+50 TO STA. 925+00
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	18F



MATCH LINE STA. 925+00 SEE SHEET NO. 18E

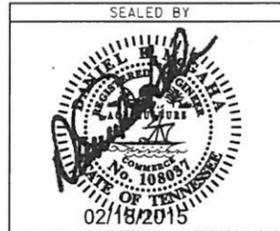
MATCH LINE STA. 937+50 SEE SHEET NO. 18G

STA. 933+00.07 S.R. 128=
STA 40+00.00 SOUTH STREET
N 329204.933 E 1297790.662

STA. 934+89.91 S.R. 128=
STA 50+00.00 HICKORY STREET
N 329388.919 E 1297743.897

STA. 929+46.70 S.R. 128=
STA 30+00.00 LEWIS STREET
N 328863.492 E 1297881.691

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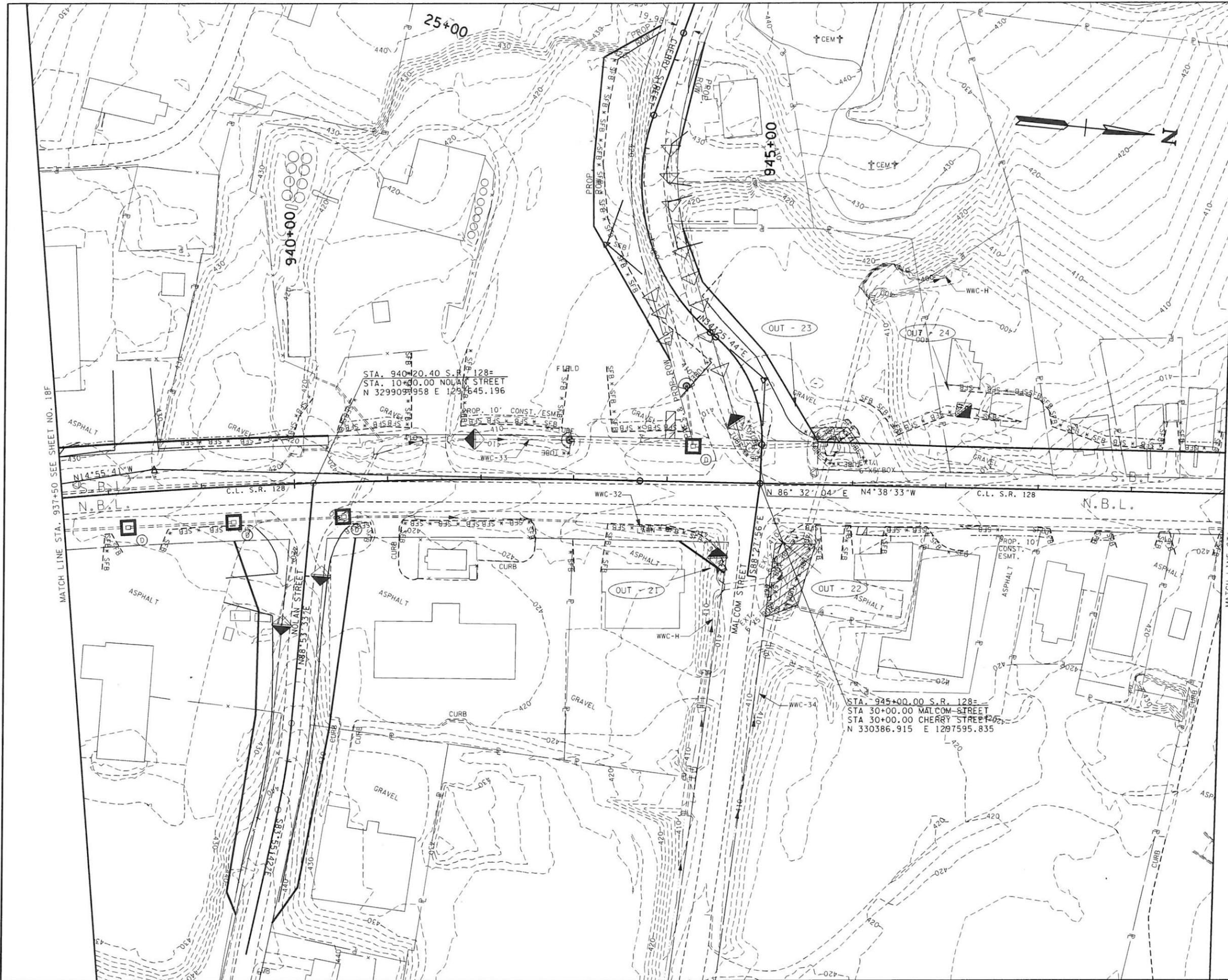
COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

PHASE I STA. 925+00 TO STA. 937+50
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	186



MATCH LINE STA. 937+50 SEE SHEET NO. 18F

MATCH LINE STA. 950+00 SEE SHEET NO. 18H

STA. 940+20.40 S.R. 128=
 STA. 10+00.00 NOLAN STREET
 N 32990.99 E 1297645.196

STA. 945+00.00 S.R. 128=
 STA 30+00.00 MALCOM STREET
 STA 30+00.00 CHERRY STREET
 N 330386.915 E 1297595.835



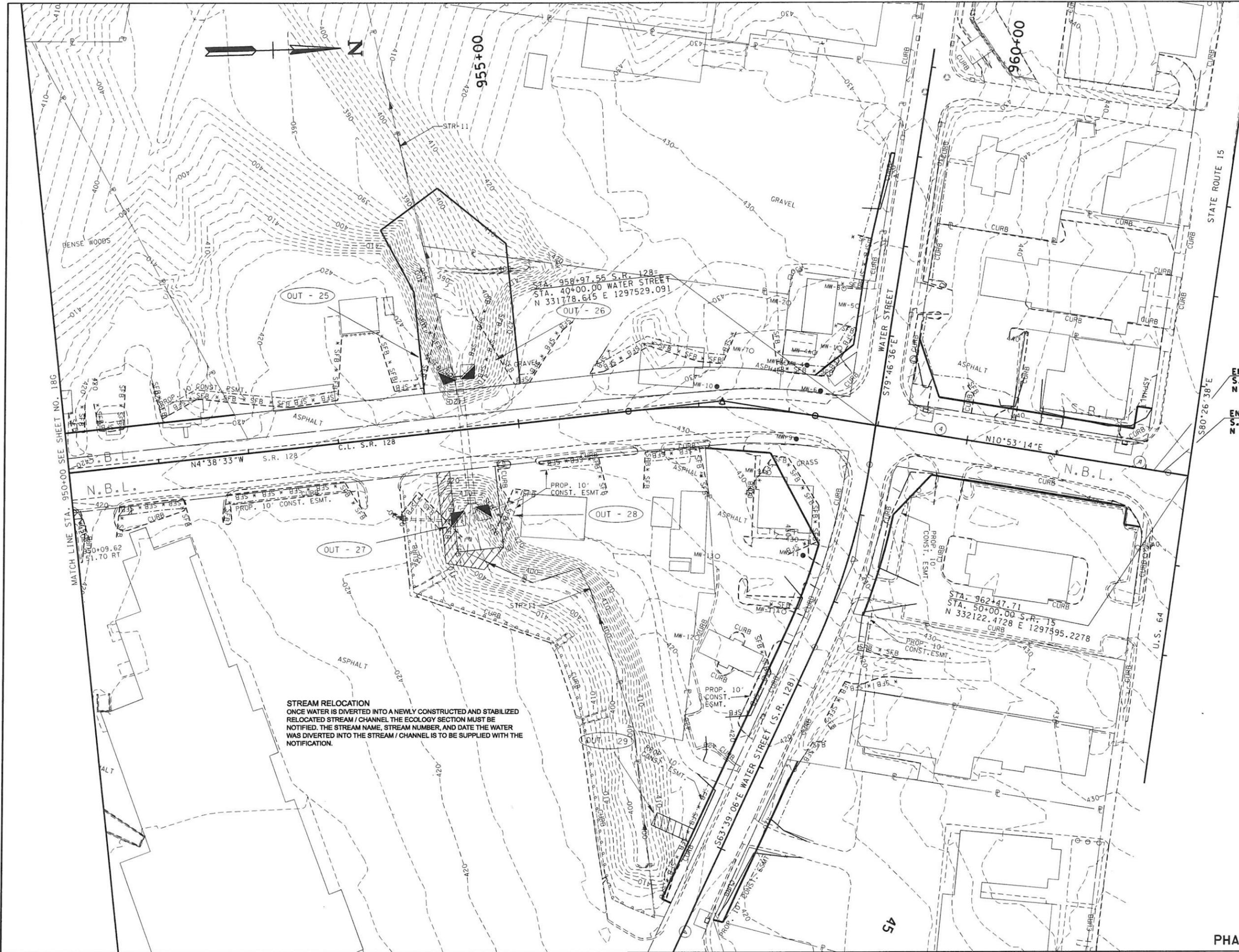
COORDINATES ARE NAD(83)(995).
 ARE DATUM ADJUSTED BY THE
 FACTOR OF 1.00001 AND TIED TO
 THE TGRN. ALL ELEVATIONS ARE
 REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

PHASE I STA. 937+50 TO STA. 950+00
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	18H



MATCH LINE STA. 950+00 SEE SHEET NO. 18G

STREAM RELOCATION
 ONCE WATER IS DIVERTED INTO A NEWLY CONSTRUCTED AND STABILIZED RELOCATED STREAM / CHANNEL THE ECOLOGY SECTION MUST BE NOTIFIED. THE STREAM NAME, STREAM NUMBER, AND DATE THE WATER WAS DIVERTED INTO THE STREAM / CHANNEL IS TO BE SUPPLIED WITH THE NOTIFICATION.

END PROJ NO. STP-128(11) (R.O.W.)
 S.R. 128 STA. 962+09.19
 N 332084.6404 E 1297587.9512

END PROJ NO. STP-128(27) (CONST.)
 S.R. 128 STA. 962+19.57
 N 332094.8382 E 1297589.9126



COORDINATES ARE NAD(83)(95), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

PHASE I
 STA. 950+00 TO STA. 962+46
 SCALE: 1"=

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	19

BEGIN PROJ. NO. STP-128(27) (CONST.)
 S.R. 128 STA. 861+74.00
 N 322171.1439
 E 1298139.0496

STA. 856+27.58 S.R. 128=
 STA 10+00.00 HIGGINS DRIVE
 N 321630.639 E 1298217.779

MATCH LINE STA. 862+50 SEE SHEET NO. 19A



COORDINATES ARE NAD/83(1995),
 ARE DATUM ADJUSTED BY THE
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 REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

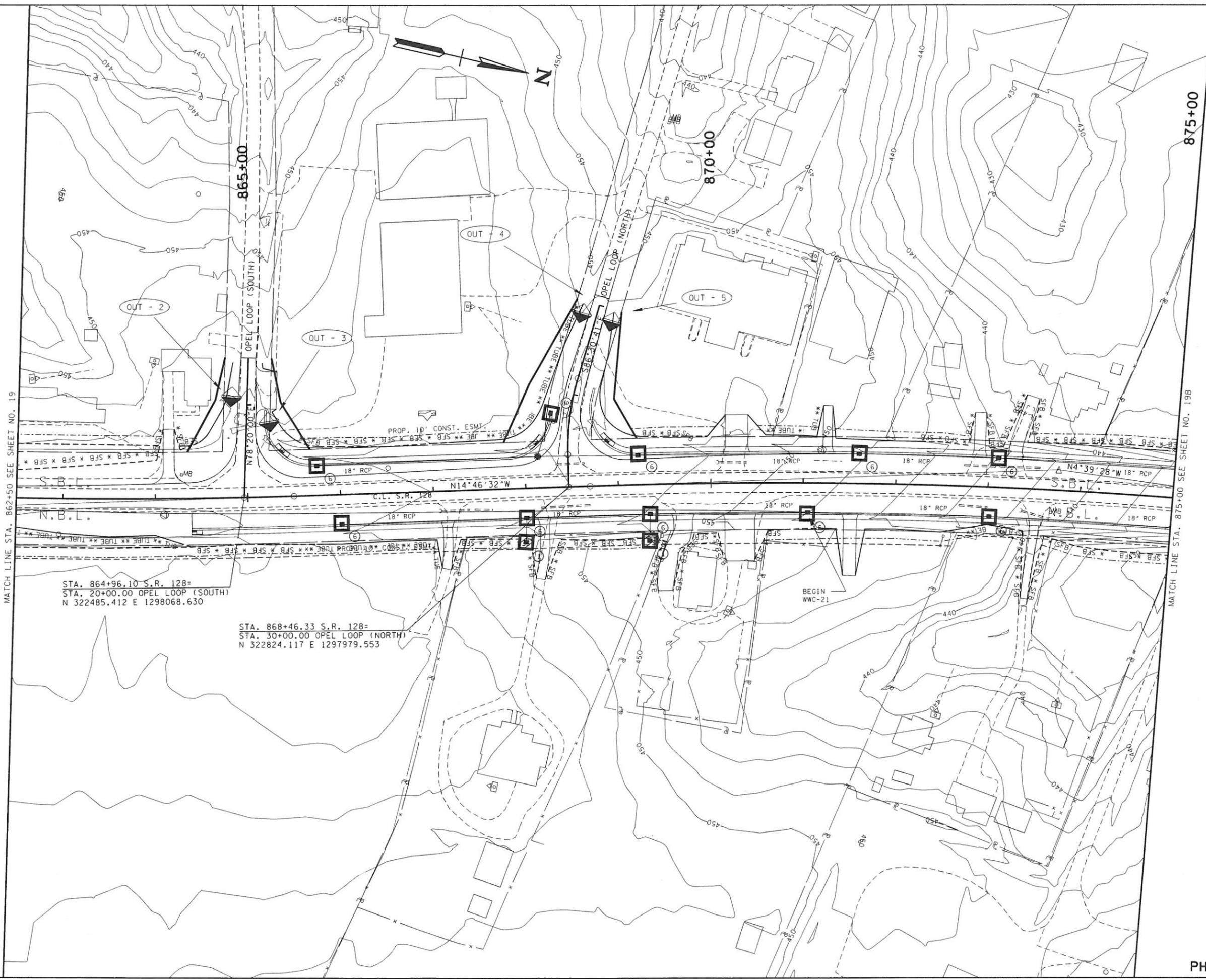
**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

STA. 850+00 TO STA. 862+50
 SCALE: 1" = 50'

PHASE II

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	19A



MATCH LINE STA. 862+50 SEE SHEET NO. 19

MATCH LINE STA. 875+00 SEE SHEET NO. 19B

STA. 864+96.10 S.R. 128=
 STA. 20+00.00 OPEL LOOP (SOUTH)
 N 322485.412 E 1298068.630

STA. 868+46.33 S.R. 128=
 STA. 30+00.00 OPEL LOOP (NORTH)
 N 322824.117 E 1297979.553

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COORDINATES ARE NAD(83)(1995),
 ARE DATUM ADJUSTED BY THE
 FACTOR OF 1.00001 AND TIED TO
 THE TGRN. ALL ELEVATIONS ARE
 REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

PHASE II
 STA. 862+50 TO STA. 875+00
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-1281271	19B



MATCH LINE STA. 887+50 SEE SHEET NO. 19C

MATCH LINE STA. 875+00 SEE SHEET NO. 19A

STA. 885+68.94 S.R. 128=
 STA. 40+00.000 SCHOOL DRIVE
 N 324527.877 E 1297747.244

NOTE: SEE STD. DWG. RP-H-9 DETAIL
 TYPE B FOR HANDICAP RAMPS.



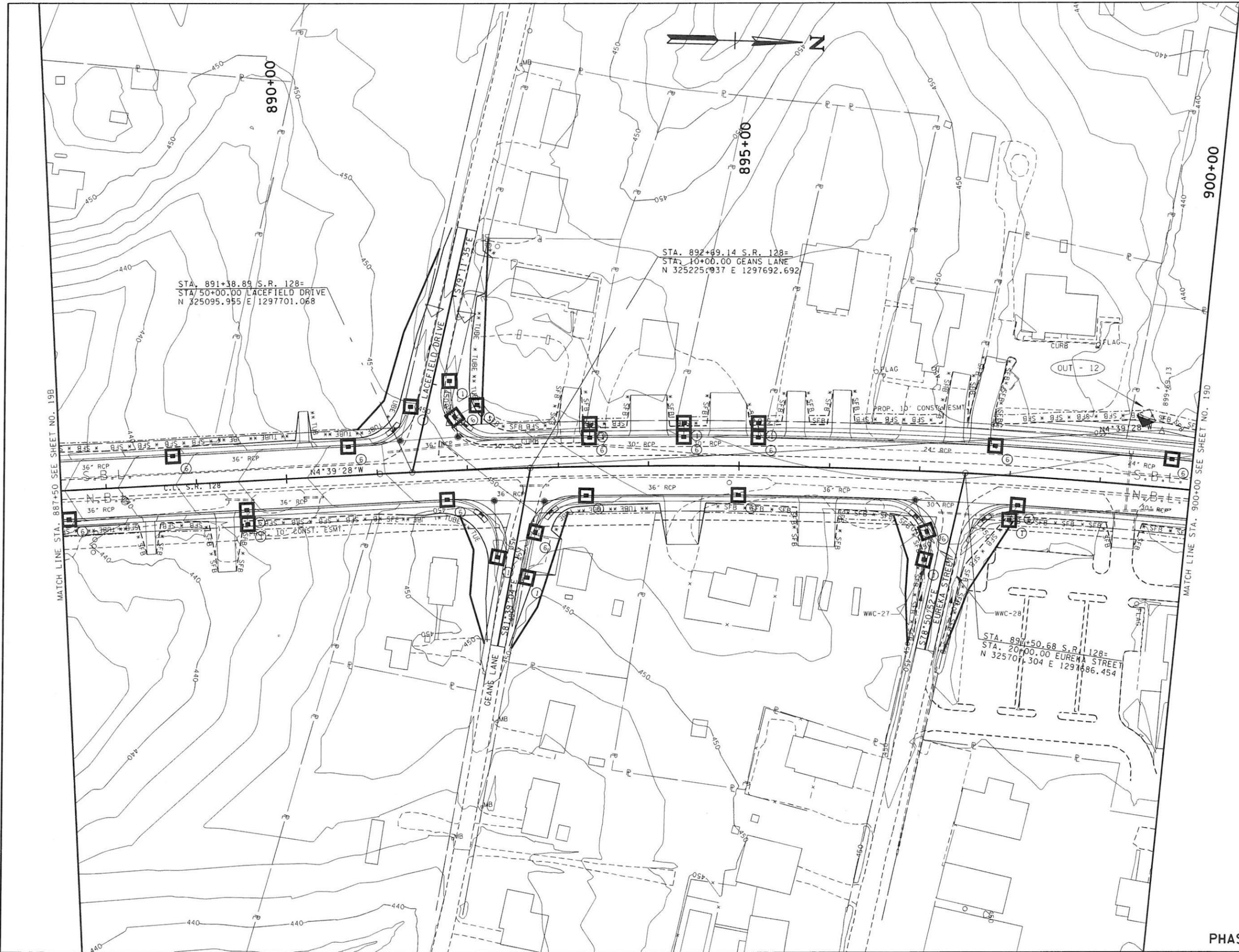
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 ARE DATUM ADJUSTED BY THE
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 REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

PHASE II STA. 875+00 TO STA. 887+50
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	19C



MATCH LINE STA. 887+50 SEE SHEET NO. 19B

MATCH LINE STA. 900+00 SEE SHEET NO. 19D



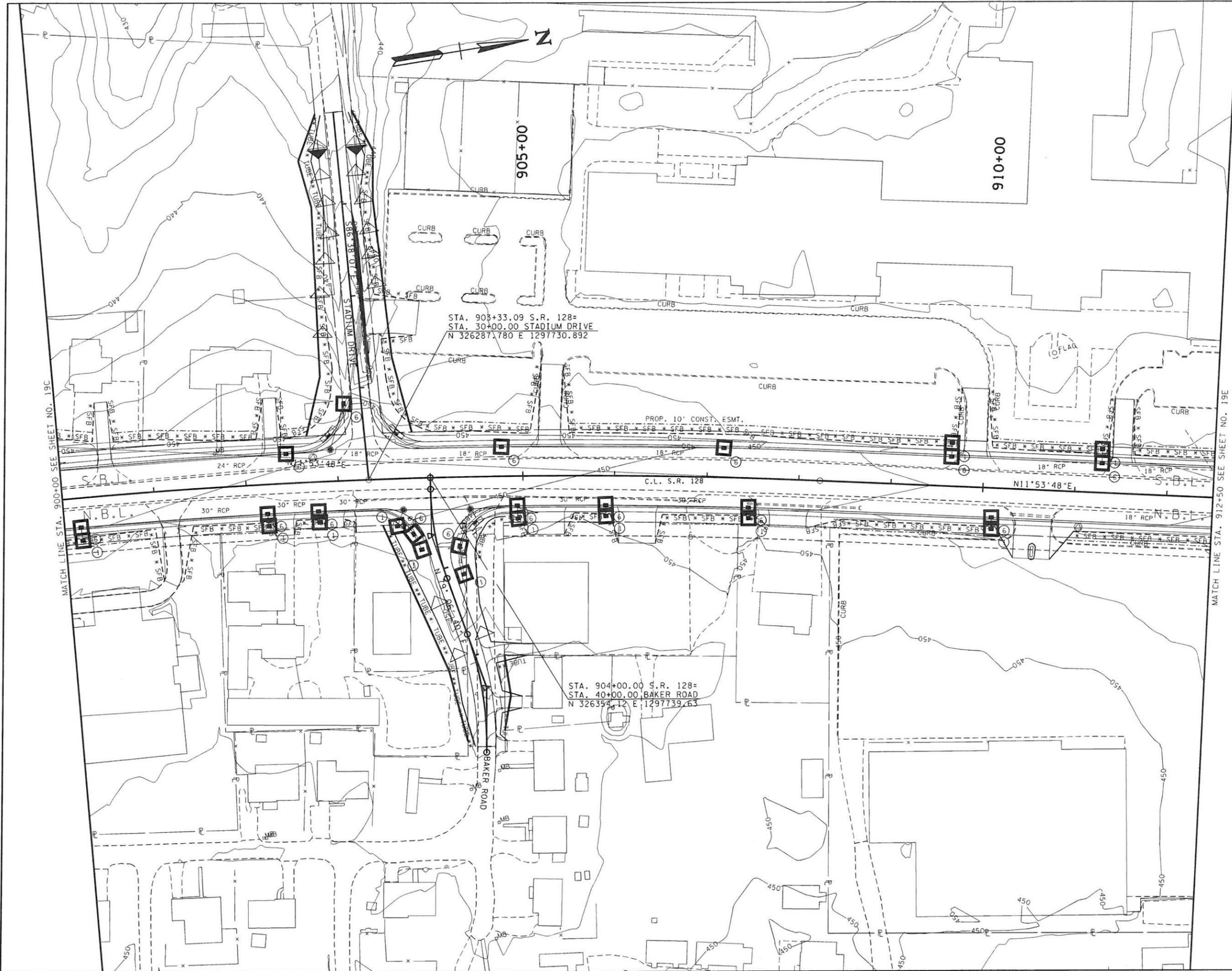
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

PHASE II STA. 887+50 TO STA. 900+00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	19D



MATCH LINE STA. 900+00 SEE SHEET NO. 19C

MATCH LINE STA. 912+50 SEE SHEET NO. 19E

STA. 903+33.09 S.R. 128=
STA. 30+00.00 STADIUM DRIVE
N 326287.780 E 1297730.892

STA. 904+00.00 S.R. 128=
STA. 40+00.00 BAKER ROAD
N 326354.12 E 1297739.63



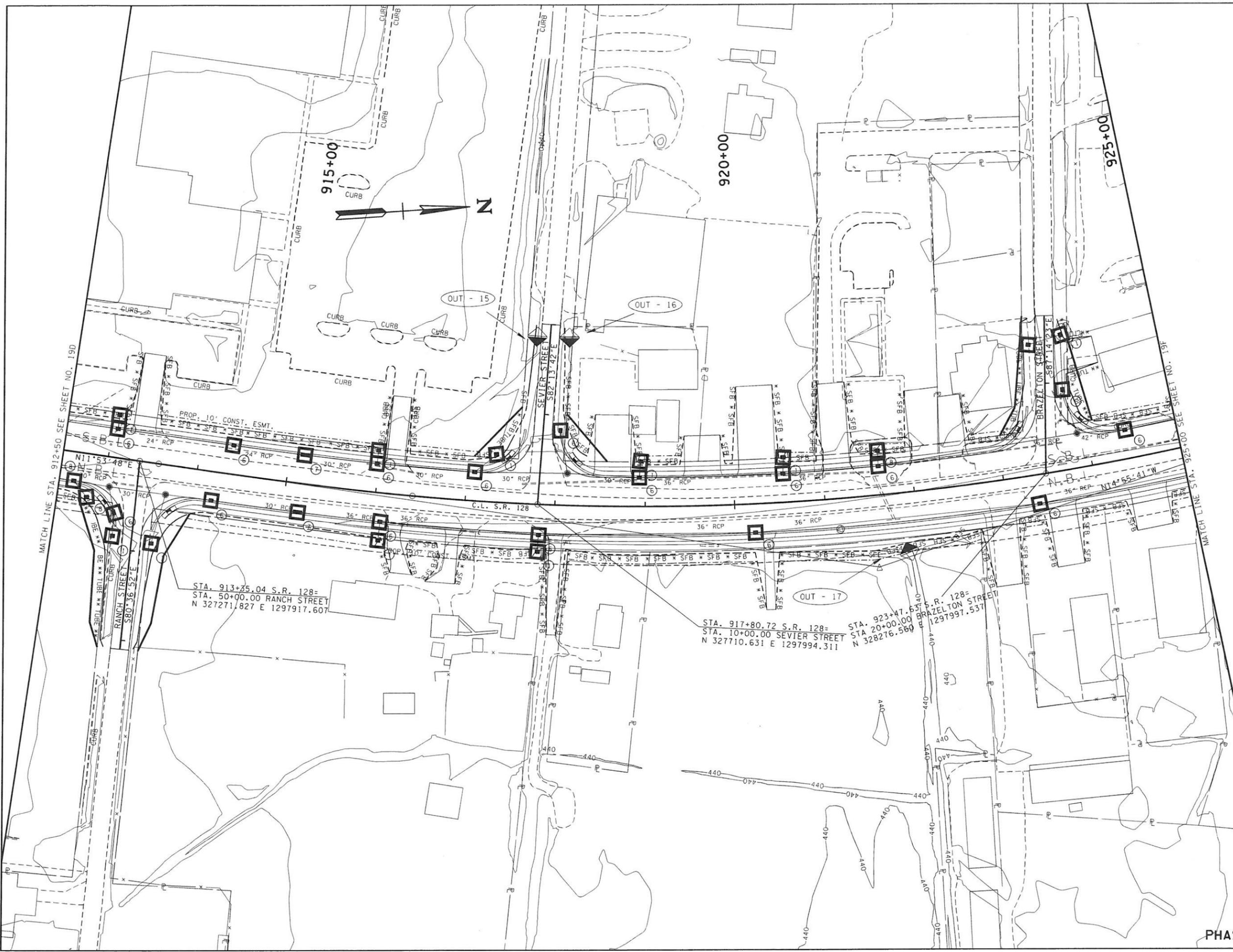
COORDINATES ARE NAD83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

PHASE II STA. 900+00 TO STA. 912+50
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	19E



MATCH LINE STA. 912+50 SEE SHEET NO. 19D

MATCH LINE STA. 925+00 SEE SHEET NO. 19F

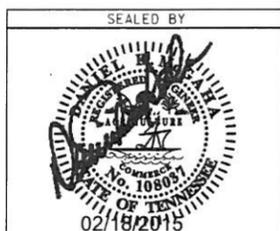
STA. 913+35.04 S.R. 128=
 STA. 50+00.00 RANCH STREET
 N 327271.827 E 1297917.607

STA. 917+80.72 S.R. 128=
 STA. 10+00.00 SEVIER STREET
 N 327710.631 E 1297994.311

STA. 923+47.63 S.R. 128=
 STA. 20+00.00 BRAZELTON STREET
 N 328276.569 E 1297997.537



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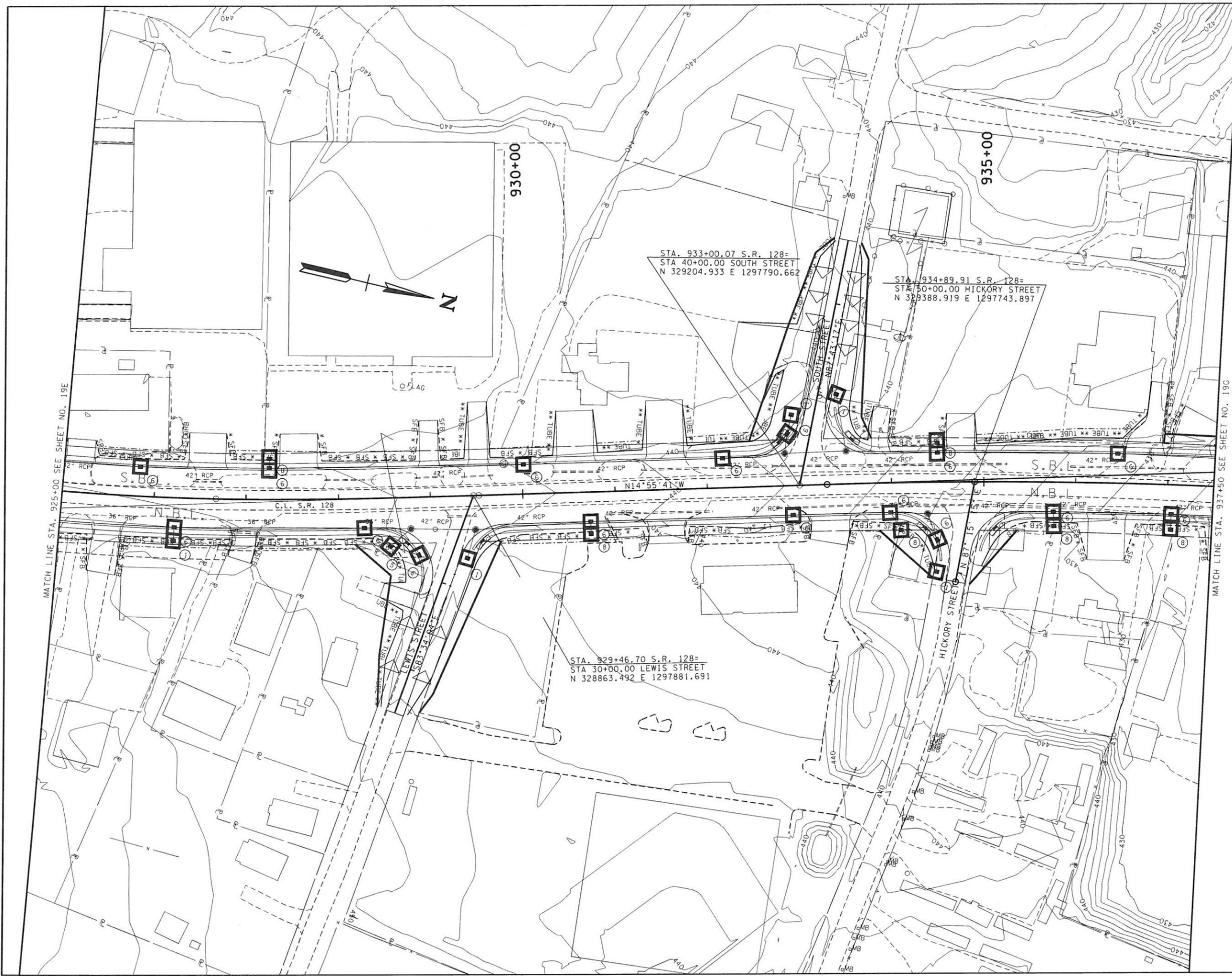
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

PHASE II STA. 912+50 TO STA. 925+00
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	19F



MATCH LINE STA. 925+00 SEE SHEET NO. 19E

MATCH LINE STA. 937+50 SEE SHEET NO. 19G

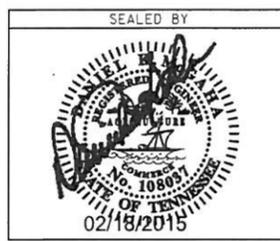


STA. 933+00.07 S.R. 128=
STA 40+00.00 SOUTH STREET
N 329204.933 E 1297790.662

STA. 934+89.91 S.R. 128=
STA 50+00.00 HICKORY STREET
N 329388.919 E 1297743.897

STA. 929+46.70 S.R. 128=
STA 30+00.00 LEWIS STREET
N 328863.492 E 1297881.691

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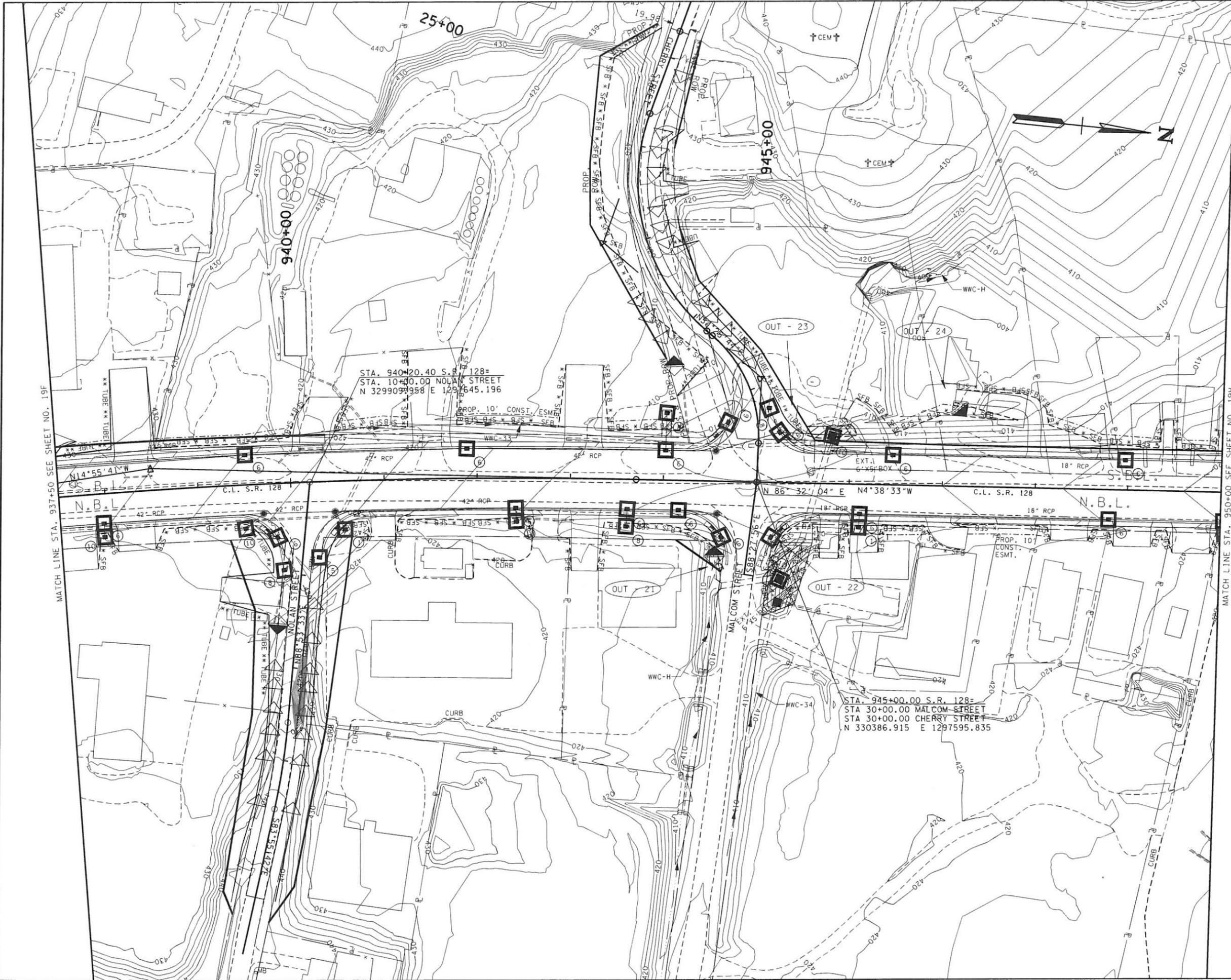
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THE TGRN. ALL ELEVATIONS ARE
REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**EROSION
PREVENTION
AND SEDIMENT
CONTROL PLAN**

PHASE II STA. 925+00 TO STA. 937+50
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	196

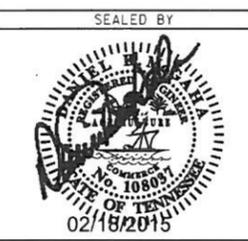


MATCH LINE STA. 937+50 SEE SHEET NO. 19F

MATCH LINE STA. 950+00 SEE SHEET NO. 19H

STA. 940+20.40 S.R. 128 =
 STA. 10+00.00 NOLAN STREET
 N 329909.958 E 1297645.196

STA. 945+00.00 S.R. 128 =
 STA 30+00.00 MALCOM STREET
 STA 30+00.00 CHERRY STREET
 N 330386.915 E 1297595.835



COORDINATES ARE NAD/83(1995),
 ARE DATUM ADJUSTED BY THE
 FACTOR OF 1.00001 AND TIED TO
 THE TGRN. ALL ELEVATIONS ARE
 REFERENCED TO THE NAVD 1988.

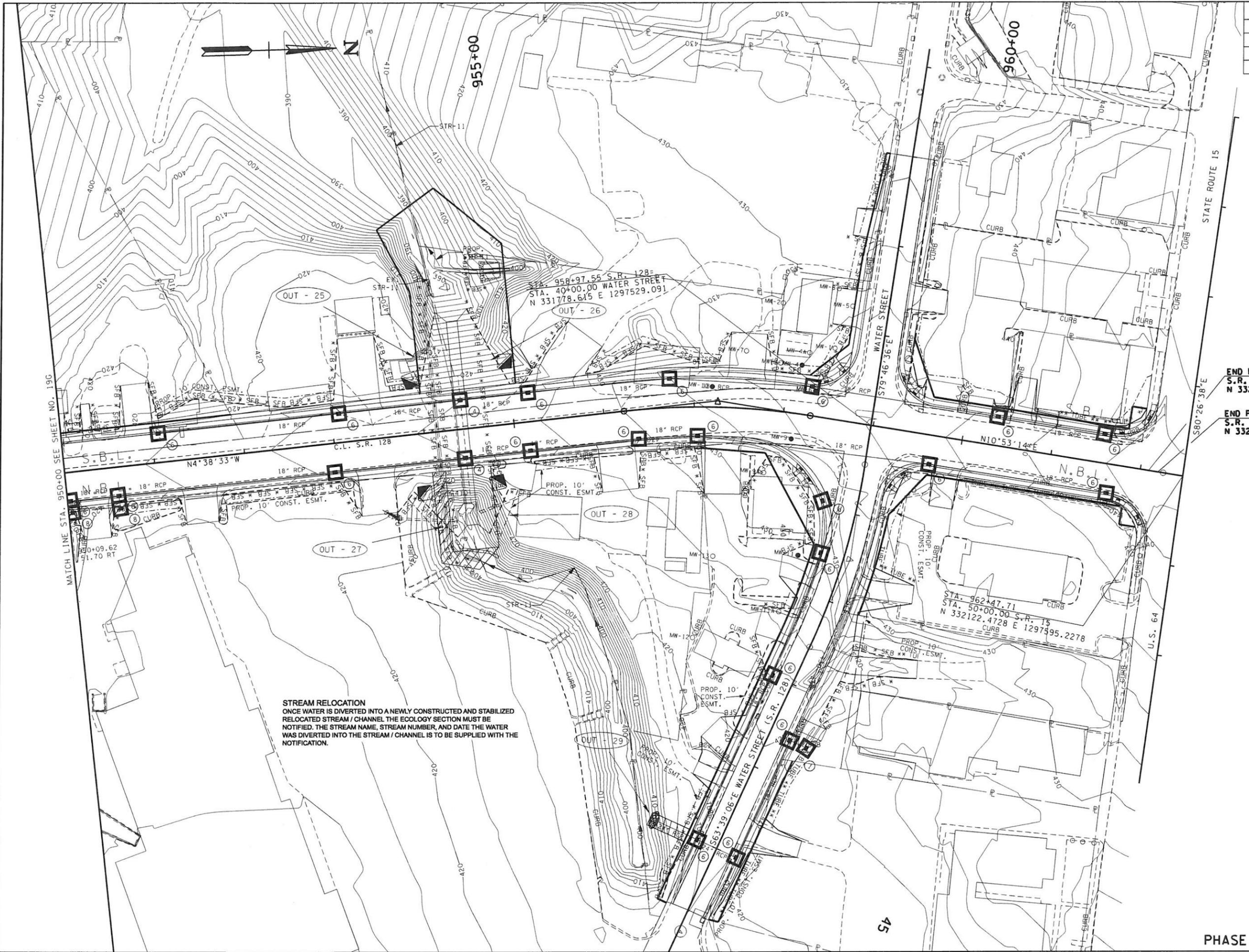
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

PHASE II STA. 937+50 TO STA. 950+00
 SCALE: 1" = 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	19H



STREAM RELOCATION
 ONCE WATER IS DIVERTED INTO A NEWLY CONSTRUCTED AND STABILIZED RELOCATED STREAM / CHANNEL THE ECOLOGY SECTION MUST BE NOTIFIED. THE STREAM NAME, STREAM NUMBER, AND DATE THE WATER WAS DIVERTED INTO THE STREAM / CHANNEL IS TO BE SUPPLIED WITH THE NOTIFICATION.

END PROJ NO. STP-128(11) (R.O.W.)
 S.R. 128 STA. 962+09.19
 N 332084.6404 E 1297587.9512

END PROJ NO. STP-128(27) (CONST.)
 S.R. 128 STA. 962+19.57
 N 332094.8382 E 1297589.9126

STA. 962+47.71
 STA. 50+00.00 S.R. 15
 N 332122.4728 E 1297595.2278



COORDINATES ARE NAD/83(1995),
 ARE DATUM ADJUSTED BY THE
 FACTOR OF 1.00001 AND TIED TO
 THE TGRN. ALL ELEVATIONS ARE
 REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

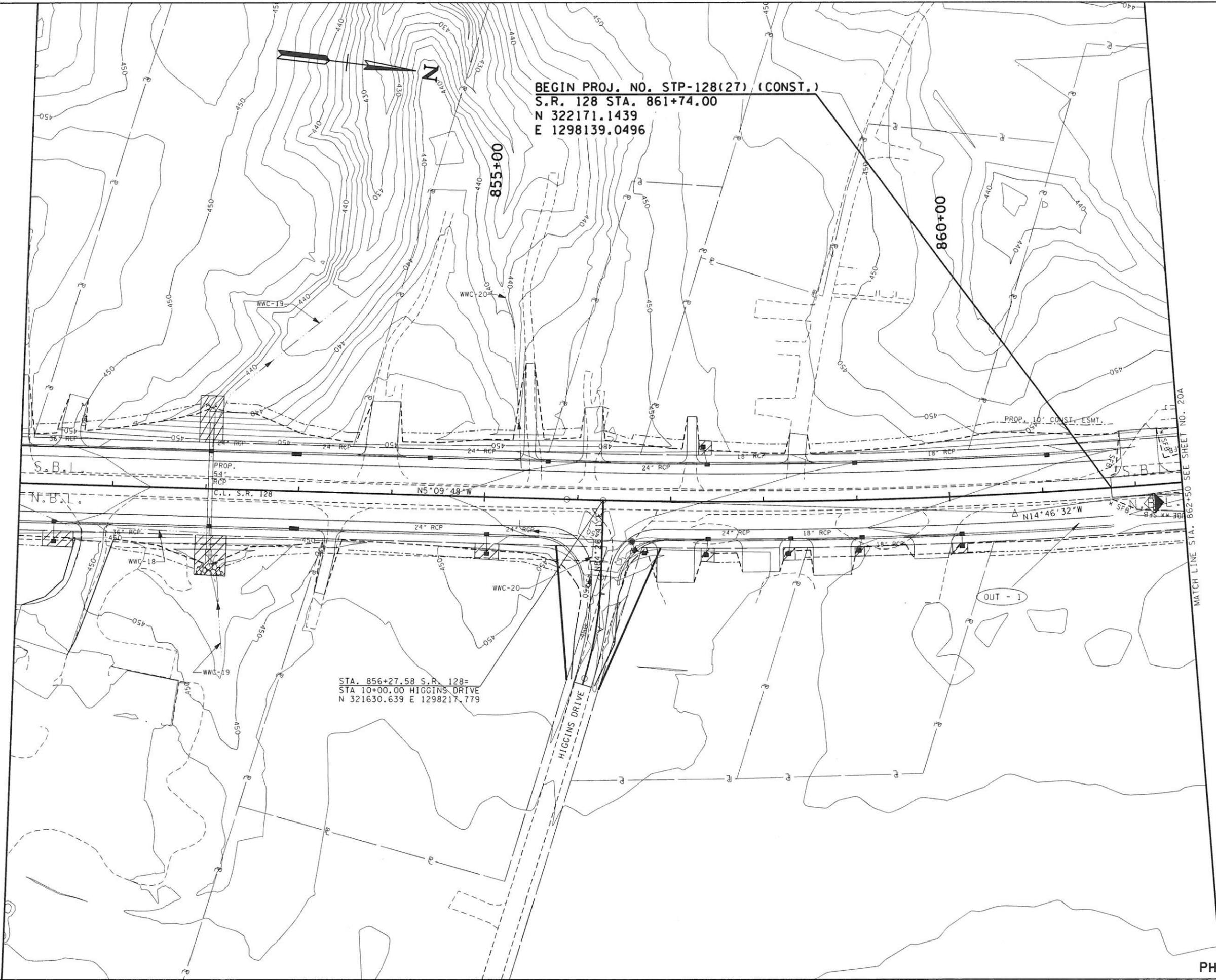
PHASE II
 STA. 950+00 TO STA. 962+46
 SCALE: 1"=

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	20

BEGIN PROJ. NO. STP-128(27) (CONST.)
 S.R. 128 STA. 861+74.00
 N 322171.1439
 E 1298139.0496

855+00

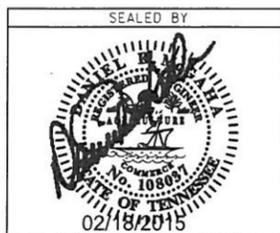
860+00



STA. 856+27.58 S.R. 128=
 STA 10+00.00 HIGGINS DRIVE
 N 321630.639 E 1298217.779

MATCH LINE STA. 862+50 SEE SHEET NO. 20A

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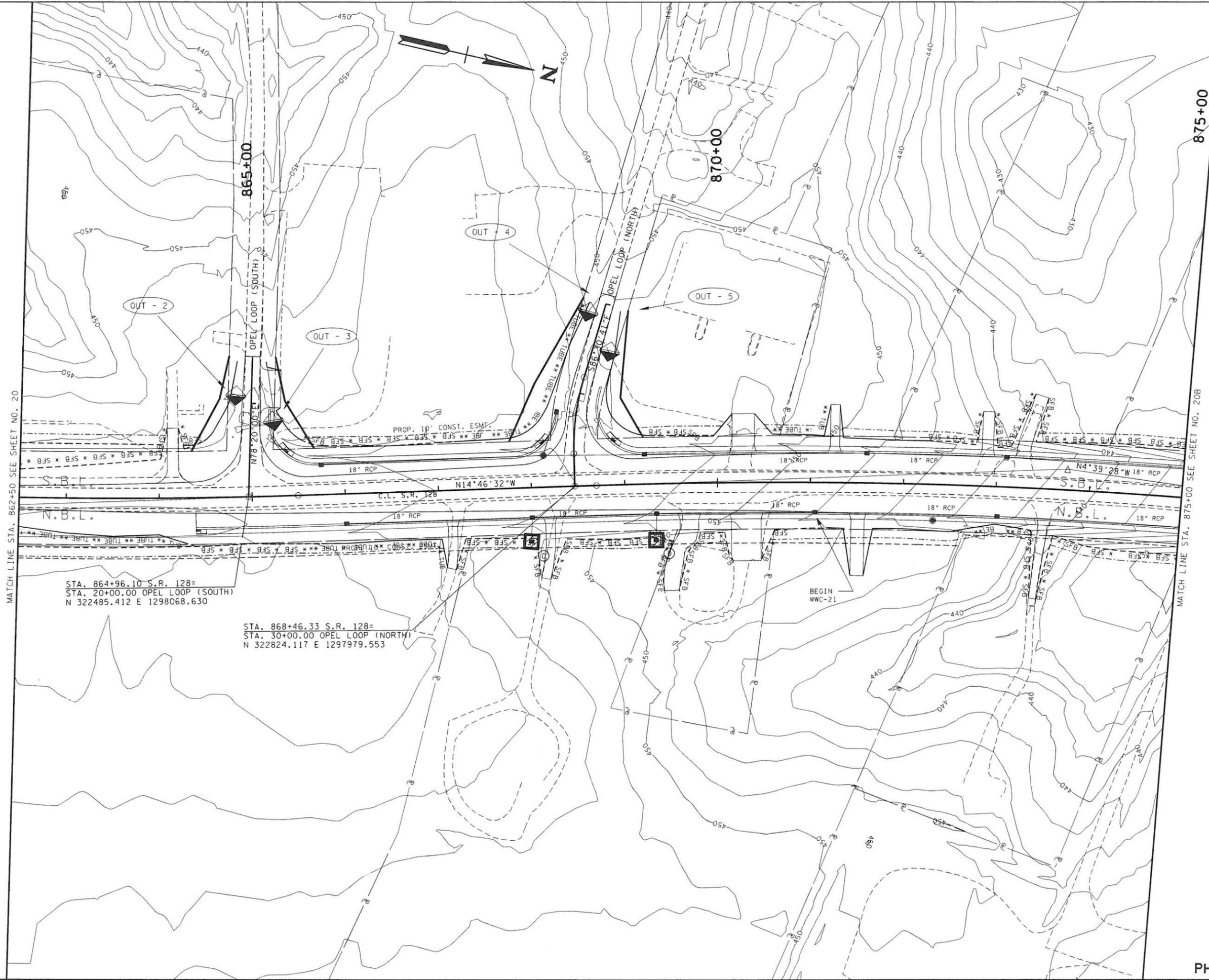
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 REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

PHASE III STA. 850+00 TO STA. 862+50
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	20A



MATCH LINE STA. 862+50 SEE SHEET NO. 20

MATCH LINE STA. 875+00 SEE SHEET NO. 20B

STA. 864+96.10 S.R. 128=
 STA. 20+00.00 OPEL LOOP (SOUTH)
 N 322485.412 E 1298068.630

STA. 868+46.33 S.R. 128=
 STA. 30+00.00 OPEL LOOP (NORTH)
 N 322824.117 E 1297979.553

PROP. 10' CONST. ESMT.

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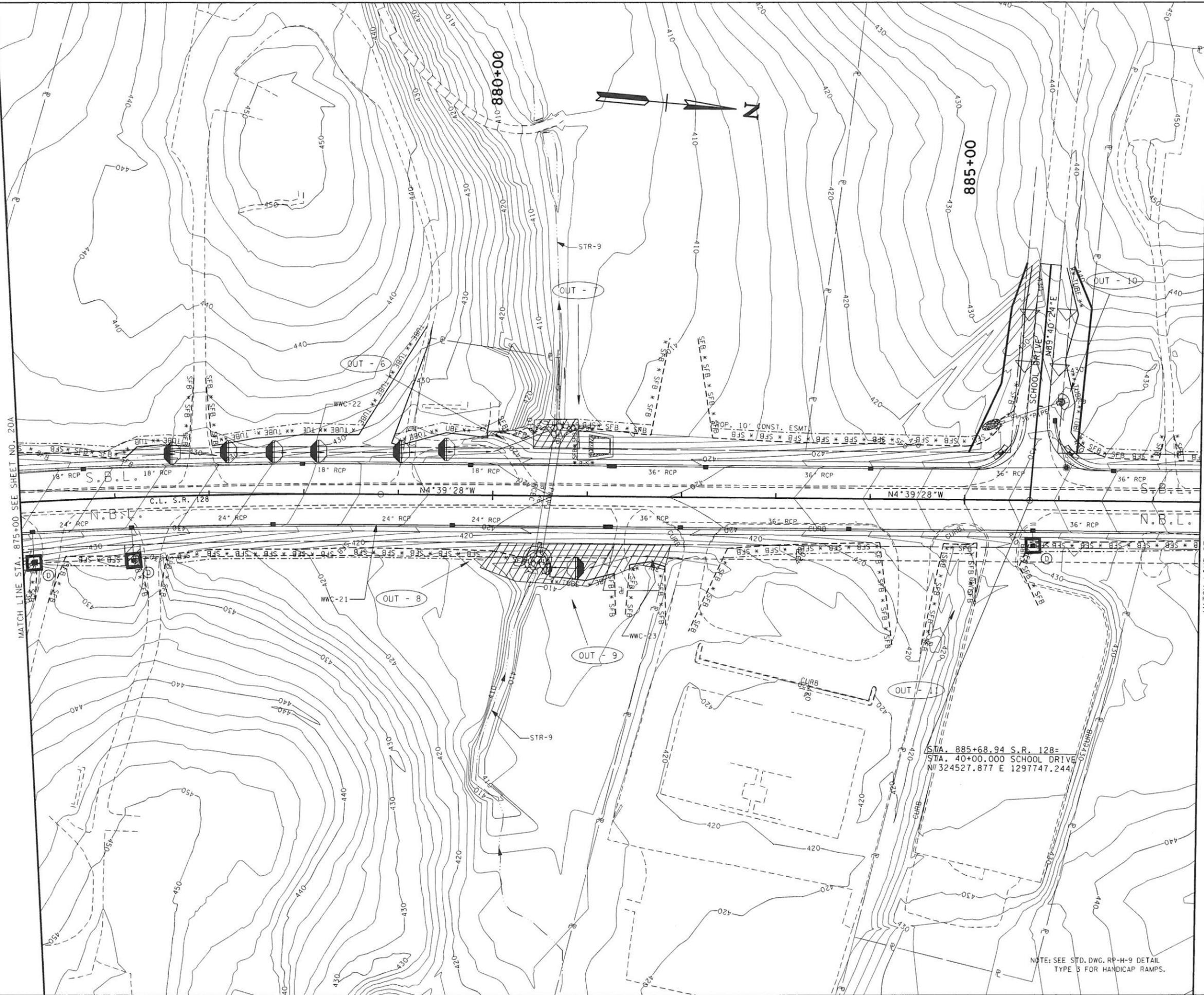
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

PHASE III
 STA. 862+50 TO STA. 875+00
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	20B



MATCH LINE STA. 875+00 SEE SHEET NO. 20A

MATCH LINE STA. 887+50 SEE SHEET NO. 20C

STA. 885+68.94 S.R. 128=
 STA. 40+00.000 SCHOOL DRIVE
 N 324527.877 E 1297747.244

NOTE: SEE STD. DWG. RP-H-9 DETAIL
 TYPE B FOR HANDICAP RAMPS.



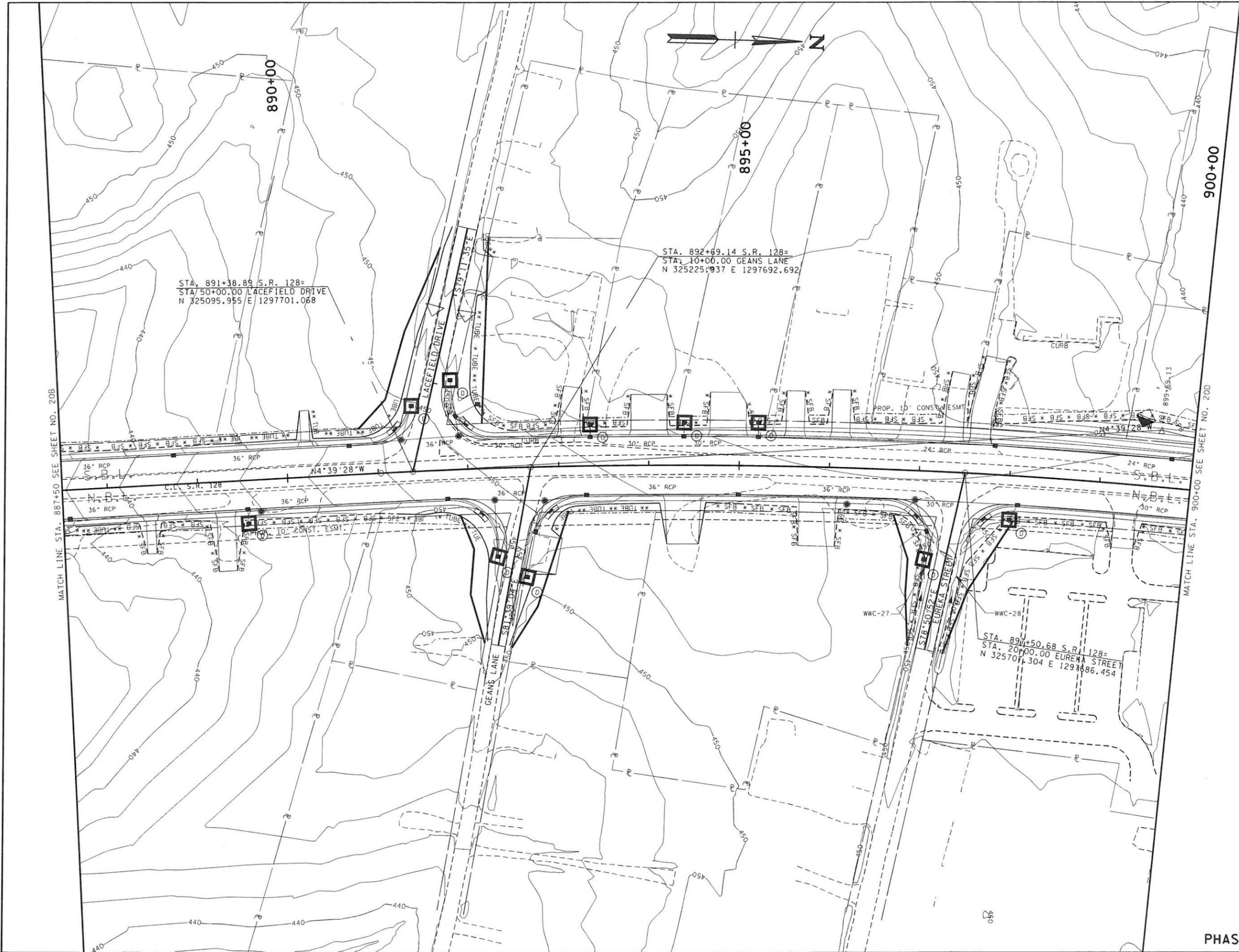
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 ARE DATUM ADJUSTED BY THE
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

PHASE III STA. 875+00 TO STA. 887+50
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	20C



MATCH LINE STA. 887+50 SEE SHEET NO. 20B

MATCH LINE STA. 900+00 SEE SHEET NO. 20D

STA. 891+38.89 S.R. 128=
STA. 50+00.00 LACEFIELD DRIVE
N 325095.955 E 1297701.068

STA. 892+69.14 S.R. 128=
STA. 10+00.00 GEANS LANE
N 325225.937 E 1297692.692

STA. 890+50.68 S.R. 128=
STA. 20+00.00 EUREKA STREET
N 325707.304 E 1297886.454



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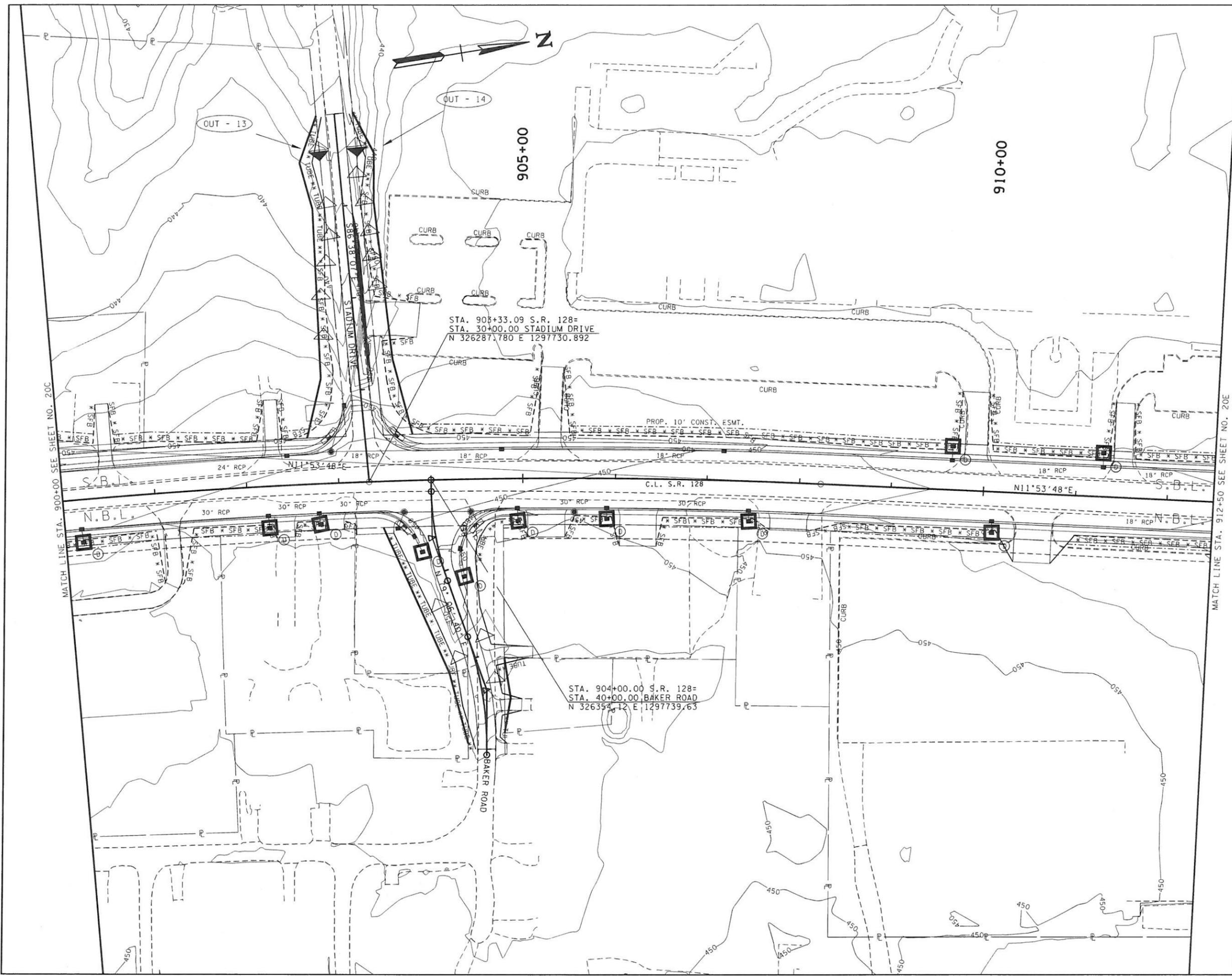
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**EROSION
PREVENTION
AND SEDIMENT
CONTROL PLAN**

PHASE III STA. 887+50 TO STA. 900+00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	200



STA. 903+33.09 S.R. 128=
 STA. 30+00.00 STADIUM DRIVE
 N 326287.780 E 1297730.892

STA. 904+00.00 S.R. 128=
 STA. 40+00.00 BAKER ROAD
 N 326354.12 E 1297739.63

MATCH LINE STA. 900+00 SEE SHEET NO. 20C

MATCH LINE STA. 912+50 SEE SHEET NO. 20E

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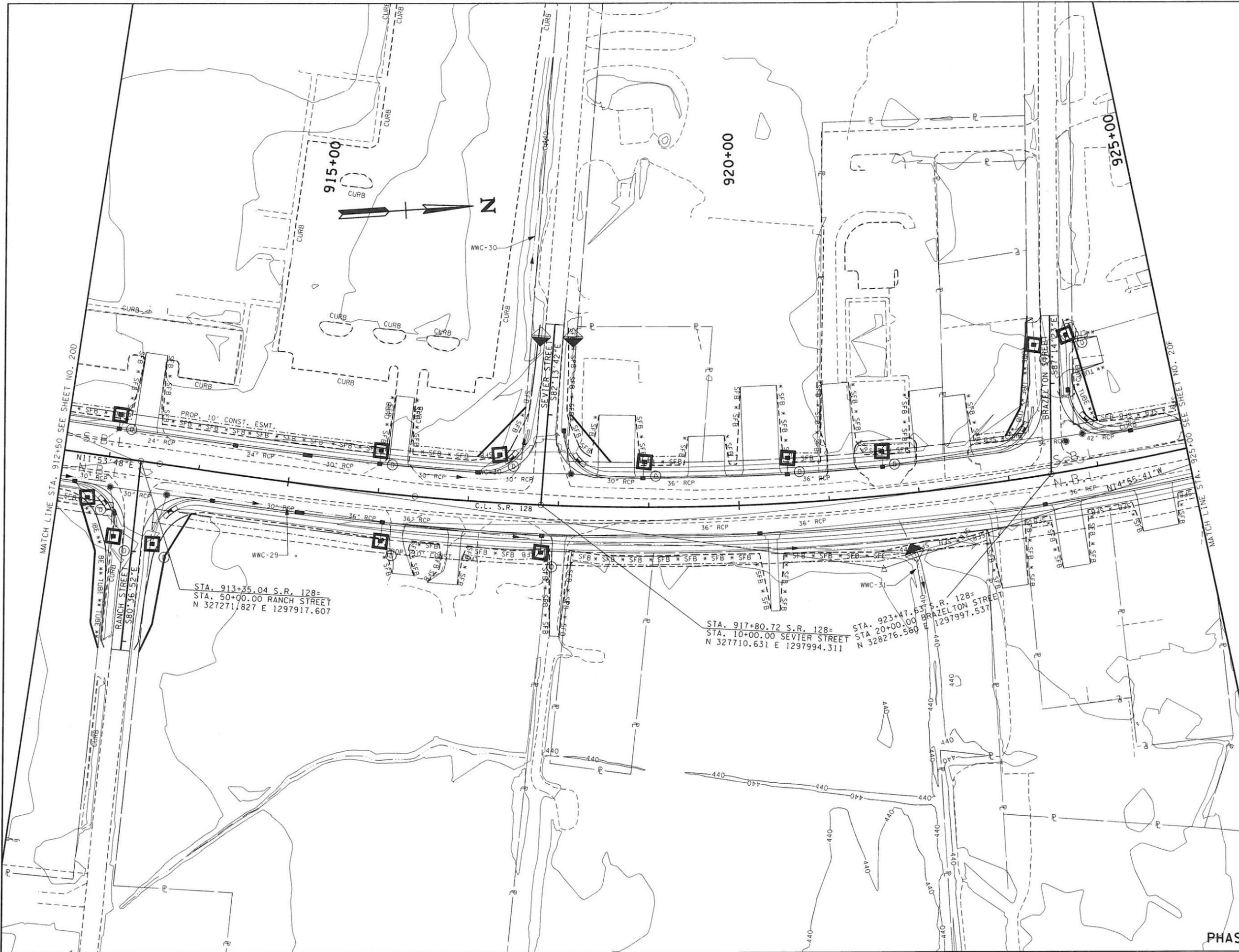
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

PHASE III STA. 900+00 TO STA. 912+50
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	20E



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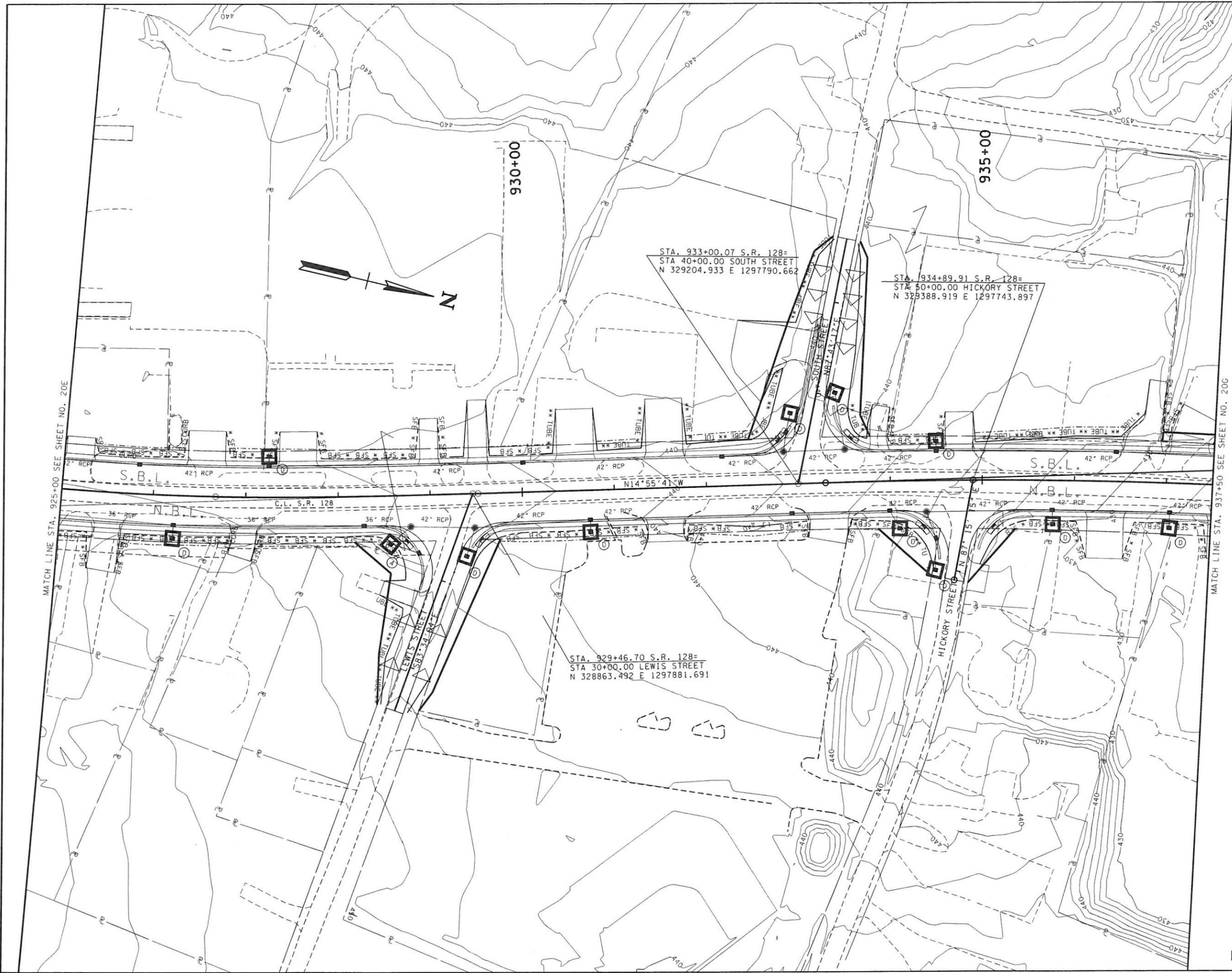
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

PHASE III STA. 912+50 TO STA. 925+00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	20F



MATCH LINE STA. 925+00 SEE SHEET NO. 20E

MATCH LINE STA. 937+50 SEE SHEET NO. 20G

STA. 933+00.07 S.R. 128=
 STA 40+00.00 SOUTH STREET
 N 329204.933 E 1297790.662

STA. 934+89.91 S.R. 128=
 STA 50+00.00 HICKORY STREET
 N 329388.919 E 1297743.897

STA. 929+46.70 S.R. 128=
 STA 30+00.00 LEWIS STREET
 N 328863.492 E 1297881.691

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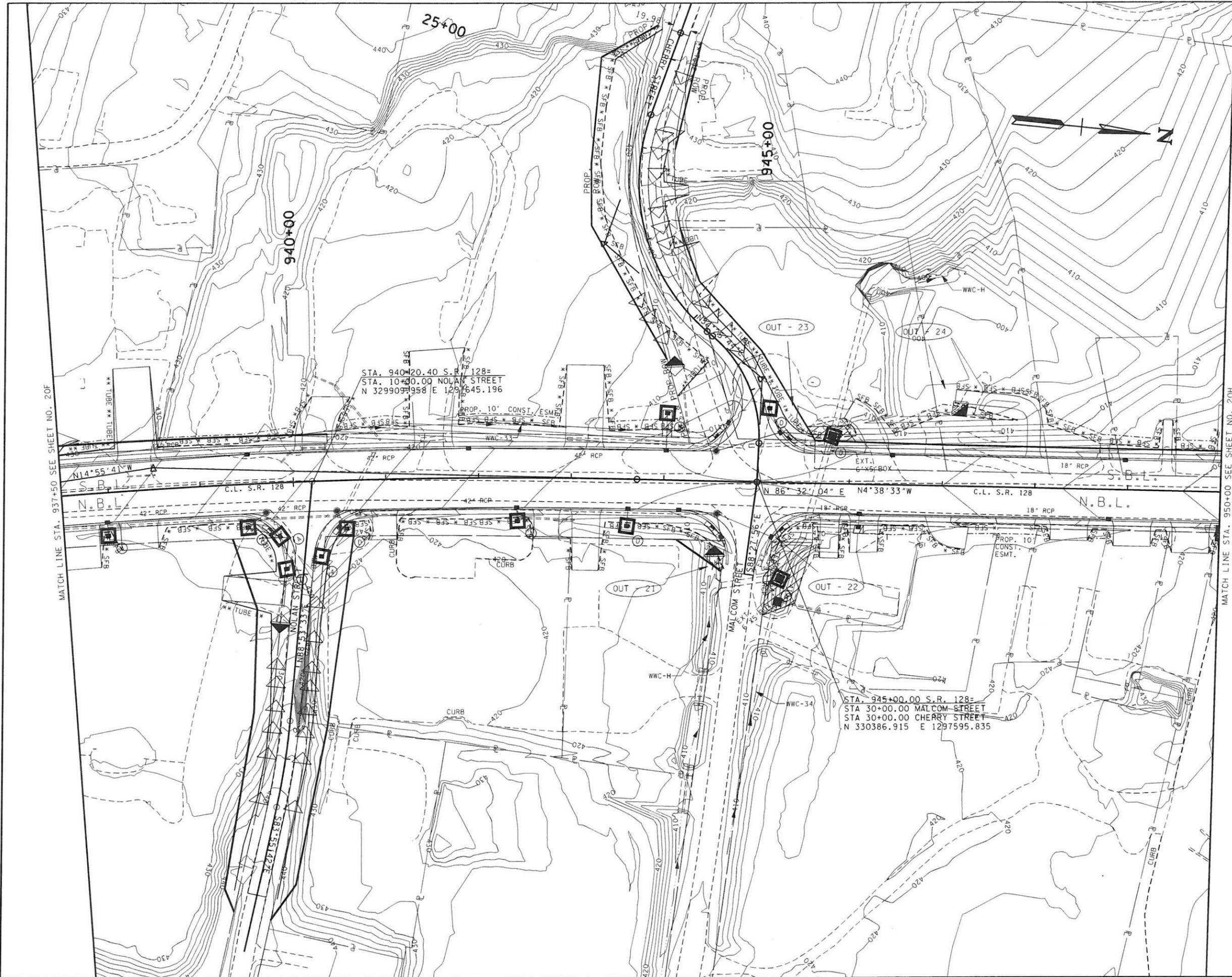
COORDINATES ARE NAD/83(1995).
 ARE DATUM ADJUSTED BY THE
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

PHASE III STA. 925+00 TO STA. 937+50
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	206



MATCH LINE STA. 937+50 SEE SHEET NO. 20F

MATCH LINE STA. 950+00 SEE SHEET NO. 20H

STA. 940+20.40 S.R. 128=
 STA. 10+00.00 NOLAN STREET
 N 329909.958 E 1297645.196

STA. 945+00.00 S.R. 128=
 STA. 30+00.00 MALCOM STREET
 STA. 30+00.00 CHERRY STREET
 N 330386.915 E 1297595.835



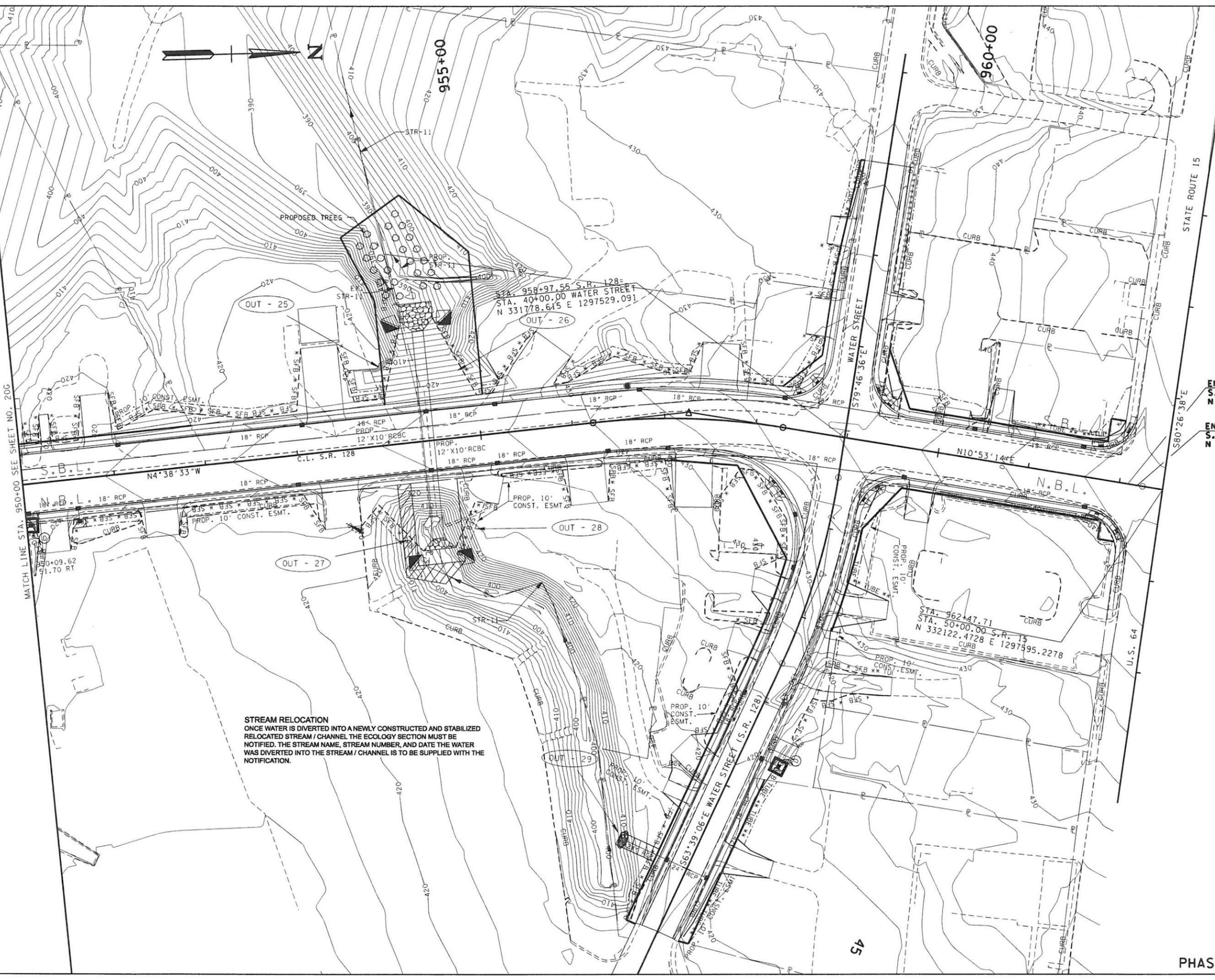
COORDINATES ARE NAD(83)(95),
 ARE DATUM ADJUSTED BY THE
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 THE TGRN. ALL ELEVATIONS ARE
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

PHASE III STA. 937+50 TO STA. 950+00
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-128(27)	20H

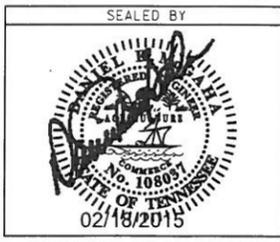


MATCH LINE STA. 950+00 SEE SHEET NO. 20G

STREAM RELOCATION
 ONCE WATER IS DIVERTED INTO A NEWLY CONSTRUCTED AND STABILIZED RELOCATED STREAM / CHANNEL THE ECOLOGY SECTION MUST BE NOTIFIED. THE STREAM NAME, STREAM NUMBER, AND DATE THE WATER WAS DIVERTED INTO THE STREAM / CHANNEL IS TO BE SUPPLIED WITH THE NOTIFICATION.

END PROJ NO. STP-128(11) (R.O.W.)
 S.R. 128 STA. 962+09.19
 N 332084.6404 E 1297587.9512

END PROJ NO. STP-128(27) (CONST.)
 S.R. 128 STA. 962+19.57
 N 332094.8382 E 1297589.9126



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

PHASE III STA. 950+00 TO STA. 962+46
 SCALE: 1" = 40'