



**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

July 27, 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 # 58015-1210-14, PIN 103774.00
SR-150 From: Existing SR-150, To: SR-28 North of Jasper
Marion County

By copy of this letter, we are sending three hard copies 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)253-2545 if I can be of any assistance.

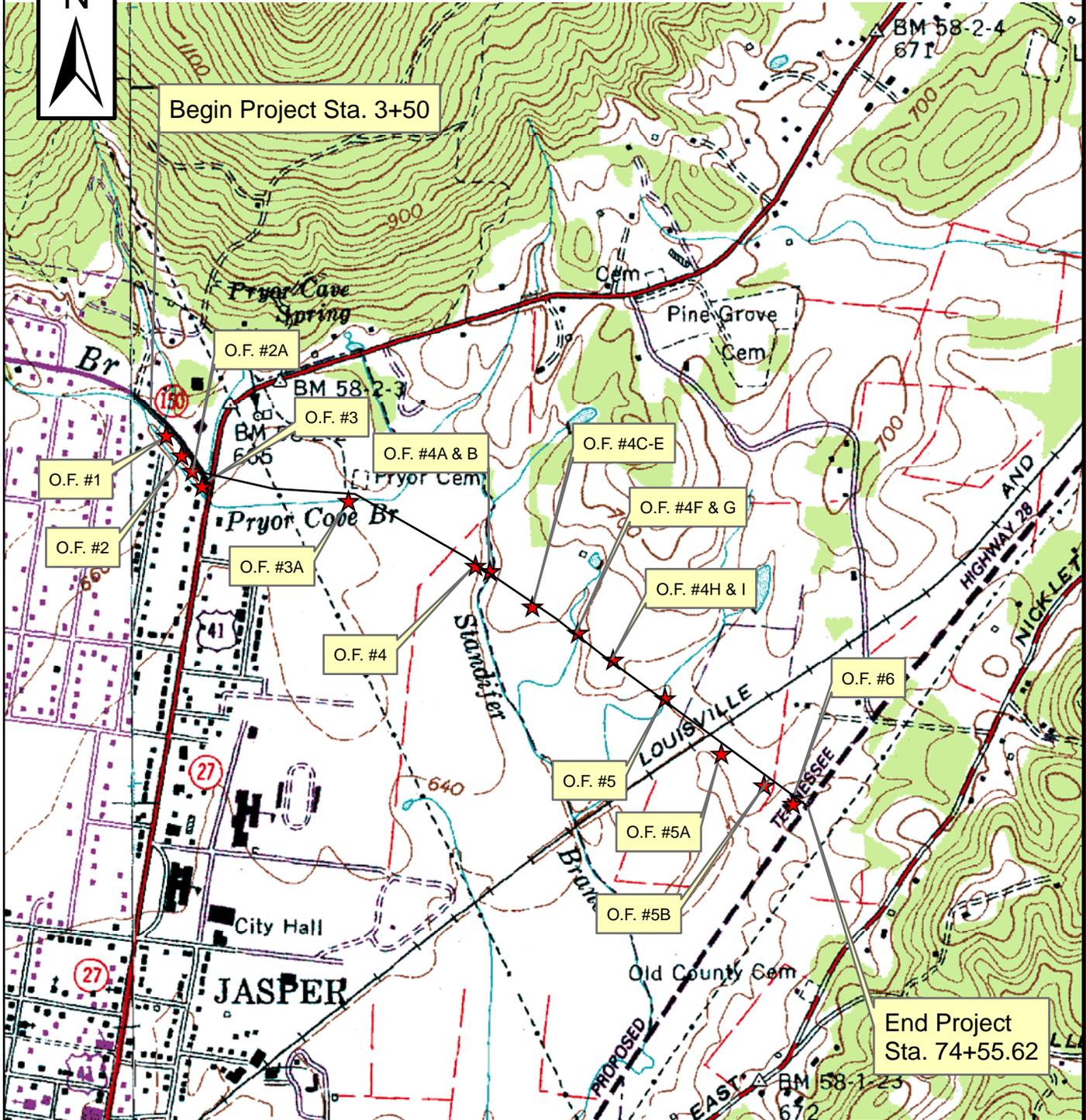
Sincerely,

A handwritten signature in blue ink, appearing to read "Andrew Wisniewski".

Andrew Wisniewski
Environmental Permits Section

Enclosures
JLH: APW: CSS: PC

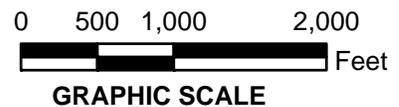
Enclosures for:
cc: Mr. Ken Flynn, Region 2 Construction (CD)
Reading File, NPDES File



★ Approx. Outfall Location

USGS TOPOGRAPHIC MAP

Source:
USGS Topographic Maps
Sequatchie, Tennessee Quadrangle Map (1985)



Stormwater Pollution Prevention Plan
S.R. 150
From Existing S.R. 150
to S.R. 28 North of Jasper
Marion County, Tennessee

Proj. No. 58015-1210-14
PIN 103774.00
Figure 1

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-150, From existing SR-150 to SR-26 North of Jasper
COUNTY: Marion
PIN: 103774.00
- 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) 23-23G, DRAINAGE MAP SHEET(S) 14-10A, 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): 40.4 ACRES
- 2.7. TOTAL AREA TO BE DISTURBED (3.5.1.c): 23.9 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 _____ (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)
Etowah silty clay loam	B	6.2	0.37
Melvin silty clay loam	B/D	13.6	0.37
Pace silt loam	C	4.7	0.43
Prader silt loam	C/D	17.1	0.43
Sequatchie loam	B	29.4	0.32
Staser fine sandy loam	B	13.6	0.20
Waynesboro loam	B	4.0	0.32
Whitwell loam	C	3.2	0.32
Impervious Areas	N/A	8.2	N/A

- 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	3.3	8.2	98	N/A
Etowah silty clay loam	2.5	6.2	58	N/A
Melvin silty clay loam	5.5	13.6	68	N/A
Pace silt loam	1.9	4.7	71	N/A
Prader silt loam	6.9	17.1	75	N/A
Sequatchie loam	11.9	29.4	58	N/A
Staser fine sandy loam	5.5	13.6	55	N/A
Waynesboro loam	1.6	4.0	55	N/A
Whitwell loam	1.3	3.2	70	N/A
WEIGHTED CURVE NUMBER OR C-FACTOR =			66	N/A

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	11.8	29.2	98	N/A
Etowah silty clay loam	1.9	4.7	58	N/A
Melvin silty clay loam	4.2	10.4	68	N/A
Pace silt loam	1.5	3.7	71	N/A
Prader silt loam	5.3	13.1	75	N/A
Sequatchie loam	9.2	22.8	58	N/A
Staser fine sandy loam	4.2	10.4	55	N/A
Waynesboro loam	1.3	3.2	55	N/A
Whitwell loam	1.0	2.5	70	N/A
WEIGHTED CURVE NUMBER OR C-FACTOR =			73	N/A

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

- 3.1. SPECIAL SEQUENCING REQUIREMENTS (SEE SHEETS N/A)
- 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.

TYPE	YEAR	PROJECT NO.	SHEET NO.
SWPPP	2015	58015-3215-14	SI

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TYPE	YEAR	PROJECT NO.	SHEET NO.
SWPPP	2015	58015-3215-14	S2

- 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	Pryor Cove Branch	YES	NO	YES	YES
STR-2	Unnamed Tributary to Pryor Cove Branch	YES	NO	YES	YES
STR-3	Unnamed Tributary to Standifer Branch	NO	NO	YES	YES
STR-4	Standifer Branch	YES	NO	YES	YES
STR-5	Unnamed Tributary to Standifer Branch	NO	NO	YES	YES
STR-6	Unnamed Tributary to Standifer Branch	NO	NO	YES	YES

- 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
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	47+10 CL	49+00 CL	0.000	0.818
WTL-2	49+60 CL	50+00 CL	0.000	0.156
WTL-3	51+05 CL	51+25 CL	0.000	0.081
WTL-4	54+60 CL	55+00 CL	0.000	0.176
WTL-5	62+25 RT	62+55 RT	0.000	0.007
WTL-6	69+70 RT	70+80 RT	0.000	0.000

- 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. 2G3

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 5-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 22 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 22 (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 S5. ALL PERMITS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER.

TYPE	YEAR	PROJECT NO.	SHEET NO.
SWPPP	2015	58015-3215-14	S3

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 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 (½) 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): N/A
- 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

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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 PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.
11.1.1.3.2. 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.

11.2. 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:
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.

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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.

- 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 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
 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.

STANDARD ROADWAY DRAWINGS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-150(4)	1B

DRAINAGE - CULVERTS AND ENDWALL (CONTINUE)

D-PE-24B		24" CONCRETE ENDWALL CROSS DRAIN
D-PE-30A	01-06-15	30" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-30B		30" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-48A	06-14-13	48" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-48B		48" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE

DRAINAGE-CATCH BASINS AND MANHOLES

D-CB-38RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 38 CATCH BASIN
D-CB-38S	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 38 CATCH BASIN
D-CB-38SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 38 CATCH BASIN
D-CB-38SC	03-11-14	STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 38 CATCH BASIN

ROADWAY AND PAVEMENT APPURTENANCES

RP-H-4	06-04-13	PERPENDICULAR CURB RAMP
RP-H-7	06-04-13	PERPENDICULAR CURB RAMP TYPE 1
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-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-3		SAFETY PLAN: MINIMUM INSTALLATION AT BRIDGE ENDS
S-PL-6		SAFETY PLAN SAFETY HARDWARE PLACEMENT
S-GR31-1		W-BEAM GUARDRAIL
S-GRS-1		SPECIAL CASE LONG SPAN GUARDRAIL, ONE SPAN OMITTED
S-GRS-2		SPECIAL CASE: GUARDRAIL ATTACHMENT TO CONCRETE DECKS
S-GRC-1		GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL
S-GRT-2		TYPE 38 GUARDRAIL TERMINAL
S-GRT-2P		EARTH PAD FOR TYPE 38 TERMINAL
S-GRT-2R		EARTH PAD FOR TYPE 38 TERMINAL (RETROFIT)
S-GRA-1		GUARDRAIL ANCHOR FOR TYPE 12 TERMINAL

S-GRA-3		GUARDRAIL ANCHOR FOR TYPE 12, 13 AND IN-LINE TERMINALS
S-BPR-1		BIKE/PEDESTRIAN SAFETY RAIL
S-SSMB-6	10-24-13	GUARDRAIL ATTACHMENT TO SINGLE SLOPE CONCRETE BARRIER WALL

TRAFFIC CONTROL APPURTENANCES

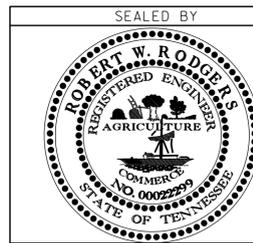
T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-3	07-24-14	MARKING STANDARDS FOR TRAFFIC ISLANDS, MEDIANS & PAVED SHOULDERS ON CONVENTIONAL ROADS
T-M-4	07-24-14	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-16	11-01-11	ASPHALT SHOULDER RUMBLE STRIPE INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED ROUTES
T-S-7	02-12-91	HIGHWAY SHIELDS USED ON INTERSTATE AND U.S. NUMBERED ROUTES
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-16	06-05-14	GROUND MOUNTED ROADSIDE SIGN AND DETAILS
T-S-16A	11-01-11	GROUND MOUNTED ROADSIDE SIGN PLACEMENT 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 MEMBERS BENDAWAY SIGN SUPPORTS STEEL DESIGN
T-S-20	11-01-11	SIGN DETAILS
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-4		SPAN WIRE AND MESSENGER CABLE 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-8	12-04-13	STRAIN POLE DETAILS FOR SPAN MOUNTED SIGNALS
T-SG-9A	12-04-13	MISCELLANEOUS SIGNAL DETAILS
T-SG-10	12-04-13	MAST ARM POLE AND STRAIN POLES FOUNDATION DETAILS
T-SG-12	11-01-11	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-3B	08-01-12	SILT FENCE
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EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3D	04-01-08	ENHANCED SILT FENCE
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-4A	08-01-12	ENHANCED SILT FENCE CHECK (V-DITCH)
EC-STR-4B	08-01-12	ENHANCED SILT FENCE CHECK DETAILS
EC-STR-6	08-01-12	ROCK CHECK DAM
EC-STR-6A	08-01-12	ENHANCED ROCK CHECK DAM
EC-STR-11	08-01-12	CULVERT PROTECTION TYPE 1
EC-STR-11A	08-01-12	CULVERT PROTECTION TYPE 2
EC-STR-12	08-01-12	ROCK SEDIMENT DAM
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-29	08-01-12	PERMANENT SLOPE DRAIN PIPE
EC-STR-30		INSTREAM DIVERSION (WITHOUT TRAFFIC)
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-33A	08-01-12	SUSPENDED PIPE DIVERSION (UPSTREAM)
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	06-10-14	SEDIMENT TUBE
EC-STR-39A	08-01-12	CURB INLET PROTECTION TYPE 3 & 4

16-JUN-2015 10:28 \\J02WF01.tdot.stcfe.tn.us\02Shor.ed\Design County Folder\SR150FromSR150toSR28\FINAL CONSTRUCTION This is it\001B.std dwg index.sht



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX
AND
STANDARD
DRAWINGS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-150(4)	202

GENERAL NOTES

SEDIMENT CONTROL (CONTINUE)

- (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

- (1) 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.
- (2) 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.
- (3) 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.
- (4) 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.
- (5) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING.
- (6) 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.

- (7) 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.
- (8) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.

SPECIES

- (1) 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

- (1) EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES.
- (2) 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.
- (3) 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.
- (4) 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.
- (5) 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.
- (6) 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.

- (7) 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.
- (8) 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.

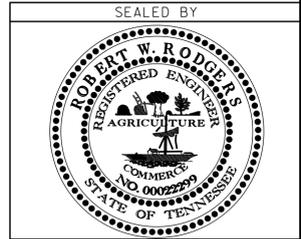
MATERIALS

- (1) 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.

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, 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 DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.

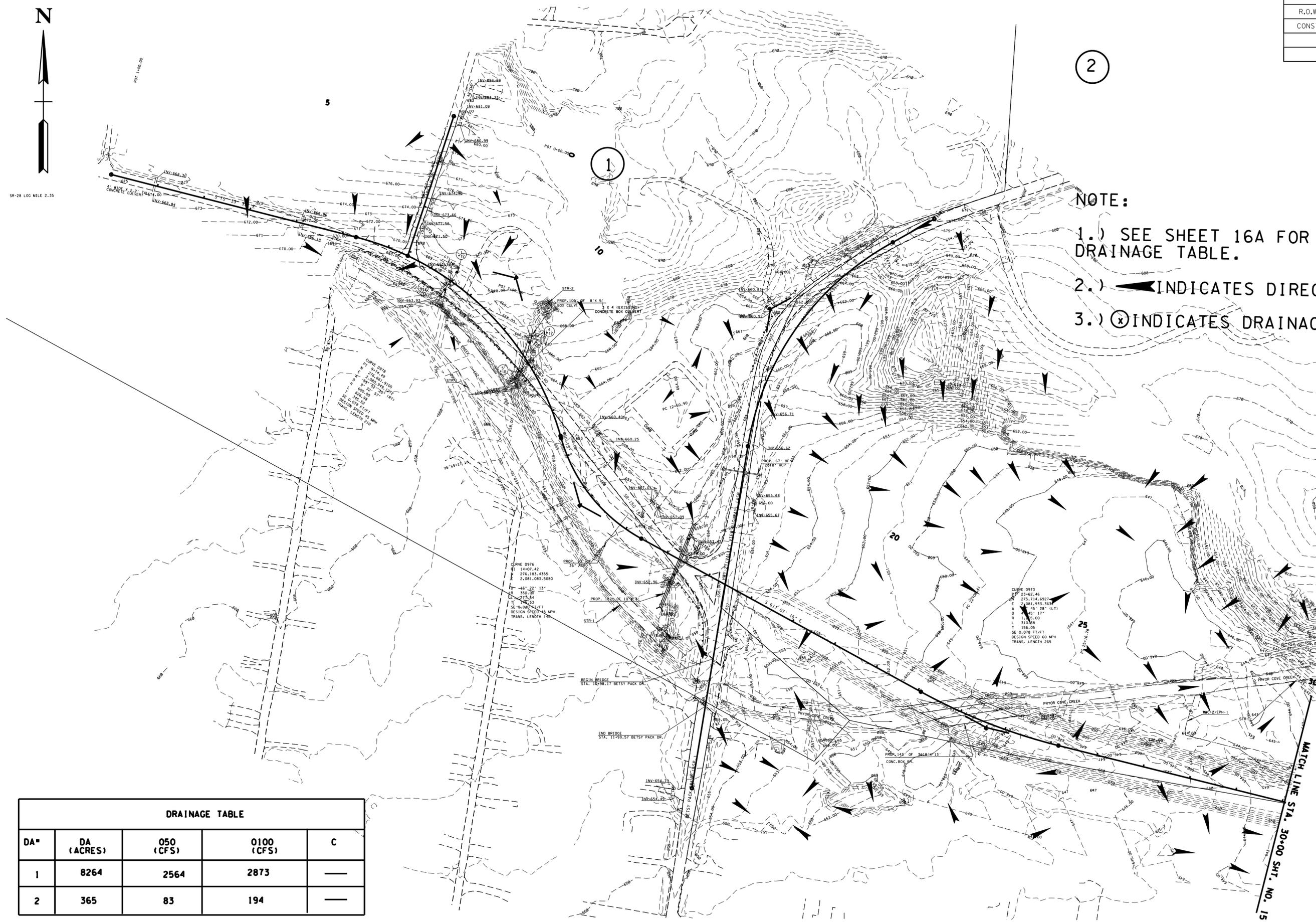
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STATE OF TENNESSEE
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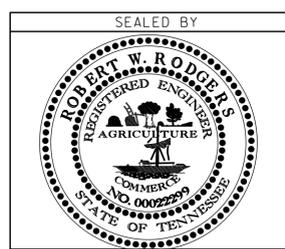
GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	14
CONST.	2015	STP-150(4)	14



- NOTE:**
- 1.) SEE SHEET 16A FOR COMPLETE DRAINAGE TABLE.
 - 2.) INDICATES DIRECTION OF FLOW.
 - 3.) INDICATES DRAINAGE AREA NUMBER.

DRAINAGE TABLE				
DA#	DA (ACRES)	050 (CFS)	0100 (CFS)	C
1	8264	2564	2873	—
2	365	83	194	—



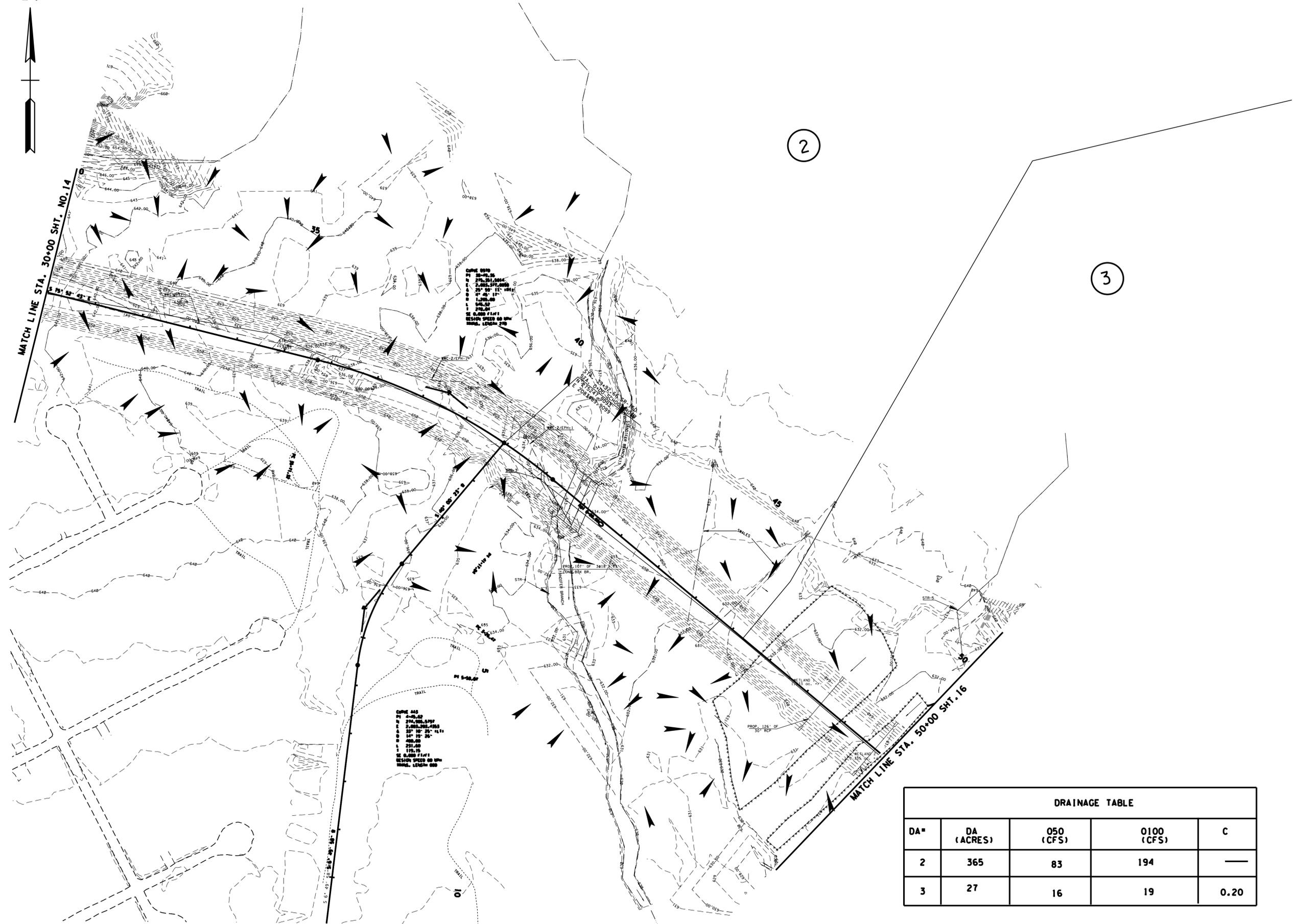
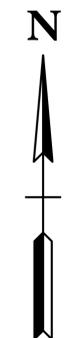
COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 00+00 TO STA. 30+00
SCALE: 1"=100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	14A
CONST.	2015	STP-150(4)	15



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DRAINAGE TABLE				
DA*	DA (ACRES)	O50 (CFS)	O100 (CFS)	C
2	365	83	194	—
3	27	16	19	0.20



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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

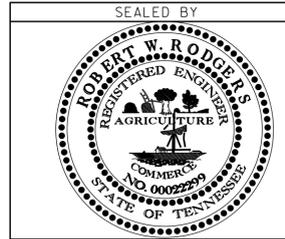
DRAINAGE MAP
 STA. 30+00 TO STA. 50+00
 SCALE: 1"=100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	14C
CONST.	2015	STP-150(4)	16A



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DRAINAGE TABLE				
DA*	DA (ACRES)	050 (CFS)	0100 (CFS)	C
1	8264	2564	2873	----
2	365	83	194	----
3	27	16	19	0.20
4	8	9.3	10.4	0.20
5	96	61	71	0.20
6	10	13	14	0.20
7	8	5.9	6.7	0.20
8	19	14	16	0.20



COORDINATES ARE NAD/83(1995),
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 FACTOR OF 0.99999 AND TIED TO
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 513+00 TO STA. 525+00
 SCALE: 1"=100'

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	15
CONST.	2015	STP-150(4)	22

Rev. 10/31/2013
Update EPSC notes and quantities.

STREAM/WETLAND

- 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.

NPDES

- 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.
- 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.
- 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:
 - 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.
 - 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.
 - 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.
 - 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.
- 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.
- 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.
- FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION SUPPORT ACTIVITIES; TDOT PROJECTS ARE COVERED UNDER THE "WASTE AND BORROW" MANUAL PER THE SSWMP.
- 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

- RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.
- 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
- 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).
- 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.
- 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.
- 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.
- 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.
- 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.
- THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS (AS APPROVED BY THE TDOT PROJECT ENGINEER).
- 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.

EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203-01	Road & Drainage Exc. (Unclassified)	C.Y.	8011
209-02.03	8" Temporary Slope Drain	LF	2386
209-05	Sediment Removal	C.Y.	2152
209-08.02	Temporary Silt Fence (With Backing)	LF	46587
209-08.07	Rock Check Dam Per	Each	44
209-09.03	Sediment Filter Bag (15'x15')	EACH	8
209-09.24	Jute Mesh Fabric	S.Y.	6504
209-09.43	Curb Inlet Protection (Type 4)	EACH	13
209-40.47	Catch Basin Filter Assembly (Type 7)	EACH	2
209-65.03	Temporary Diversion Channel	LF	323
209-65.04	Temporary Instream Diversion	LF	1019
707-08.11	High Visibility Fence	LF	9571
709-05.06	Machined Rip-Rap (Class - A1)	TON	380
740-11.05	Sediment Tube - 24"	LF	4552
805-12.01	Erosion Control Blanket (Type I)	S.Y.	30084
805-12.02	Erosion Control Blanket (Type II)	S.Y.	38400
••••••••	Culvert Protection (Type 1)	•••••	••••••••
303-10.01	Mineral Aggregate (Size 57)	TON	406
709-05.06	Machined Rip-Rap (Class - A1)	TON	406
740-10.03	Geotextile (Type III) (Erosion Control)	S.Y.	952
••••••••	Temporary Construction Exit	•••••	••••••••
709-05.05	Machined Rip-Rap (Class A-3)	TON	300
740-10.03	Geotextile (Type III) (Erosion Control)	S.Y.	516

* For Temporary Berm



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

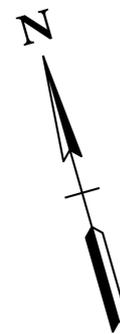
EROSION PREVENTION AND SEDIMENT CONTROL NOTES

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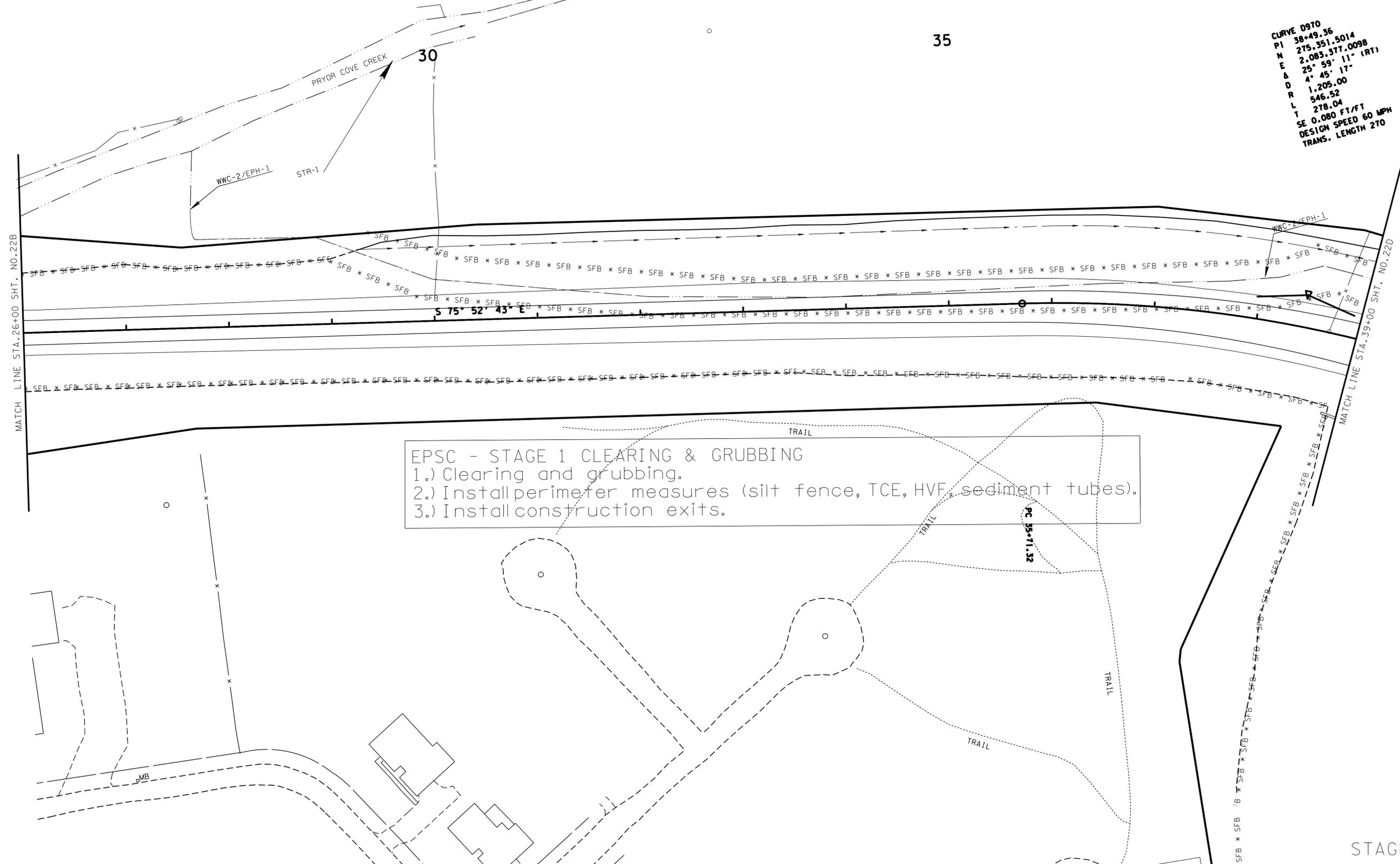
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	15C
CONST.	2015	STP-150(4)	22C

- WWC-2 Relocation Notes:
- 1.) Relocate existing WWC-2 from Sta. 29+21 to Sta. 41+45.
 - 2.) Relocate WWC-2 to the North side of proposed SR 150, between the propose ROW and toe of the fills.
 - 3.) Maintain the 1% slope, 3' depth, and 6' channel bottom of the existing WWC-2.

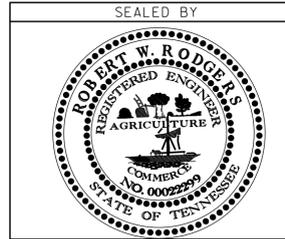


35

CURVE D970
PI 38+49.36
N 275.351.5014
E 2.083.377.0098
Δ 25° 59' 11" (RT)
D 4' 45' 17"
R 1.205.00
L 546.52
T 278.04
SE 0.080 FT/FT
DESIGN SPEED 60 MPH
TRANS. LENGTH 270



EPSC - STAGE 1 CLEARING & GRUBBING
1.) Clearing and grubbing.
2.) Install perimeter measures (silt fence, TCE, HVE, sediment tubes).
3.) Install construction exits.



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

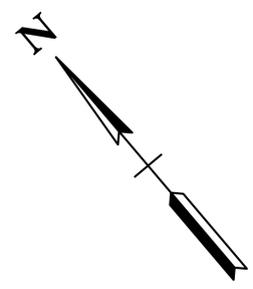
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STAGE 1

STA. 26+00 TO STA. 39+00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	15E
CONST.	2015	STP-150(4)	22E

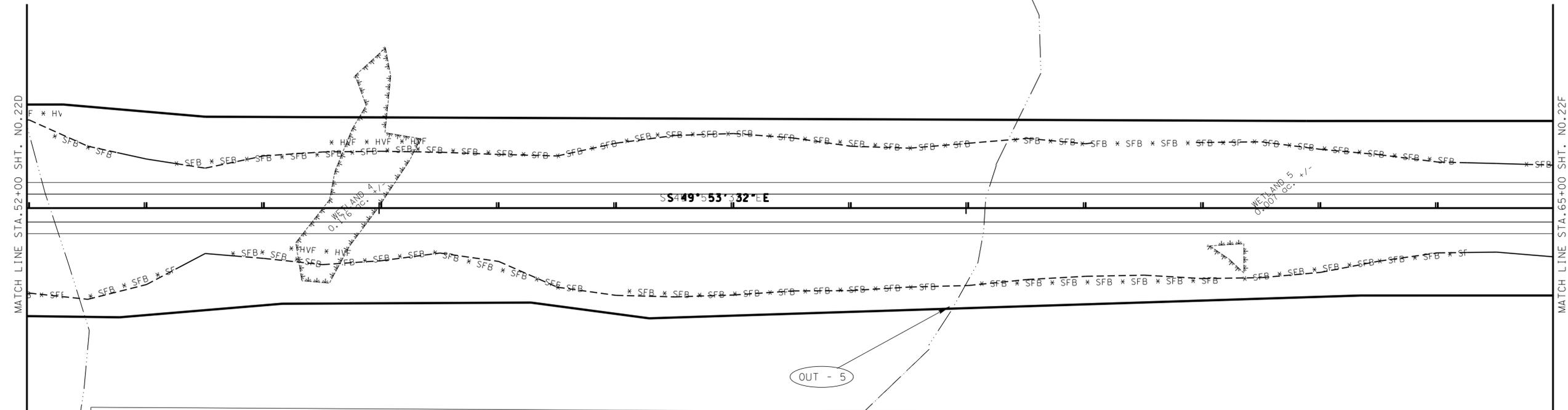


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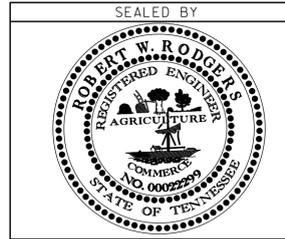
65

OUTFALL	AREA (AC.)	SLOPE (%)
OUT - 5	1.84	0.37



EPSC - STAGE 1 CLEARING & GRUBBING
 1.) Clearing and grubbing.
 2.) Install perimeter measures (silt fence, TCE, HVF, sediment tubes).
 3.) Install construction exits.

PROTECTION NOTE:
 THE CONTRACTOR SHALL USE ANY MEASURES NECESSARY TO ENSURE THAT THE REMAINING WETLANDS WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS.



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 DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

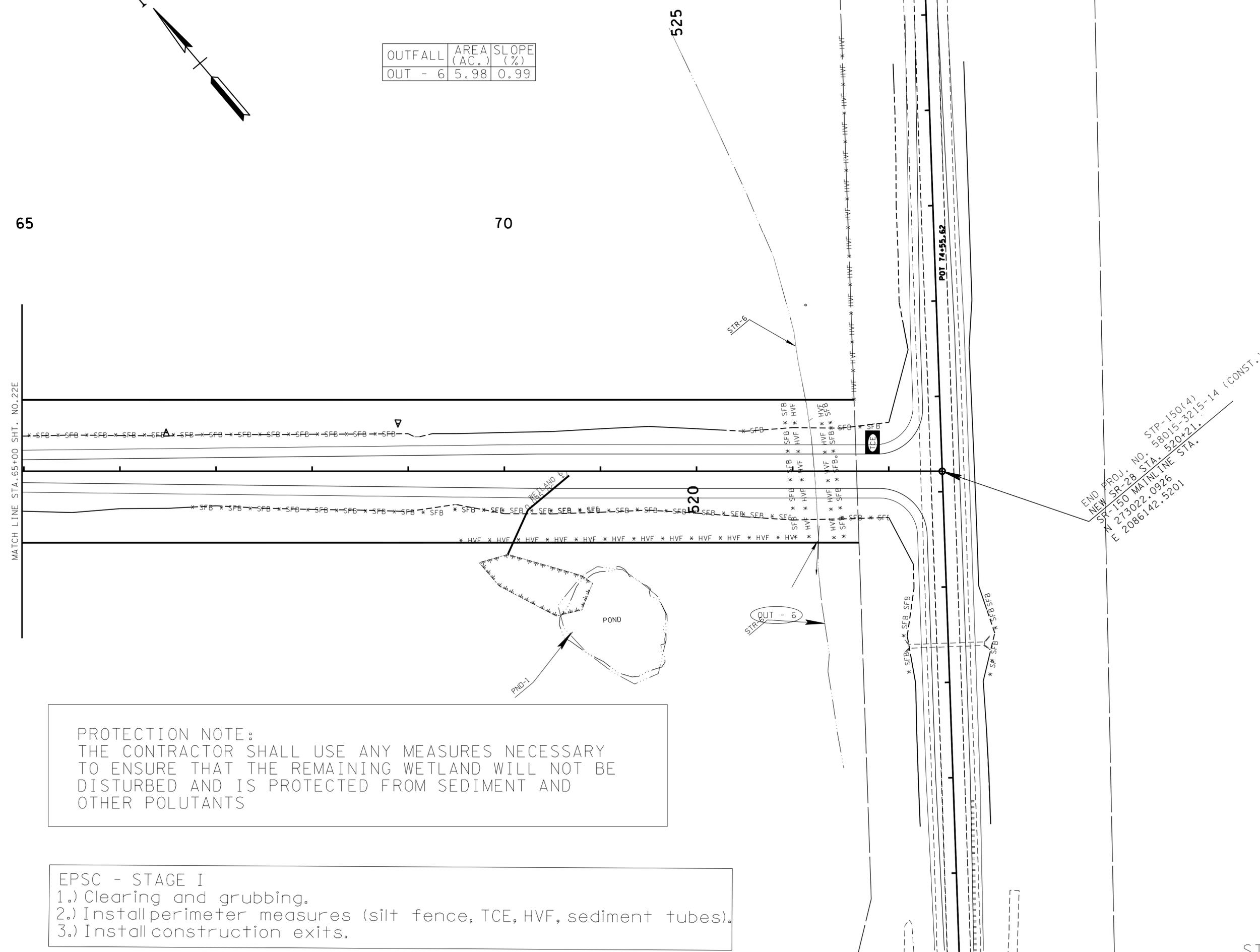
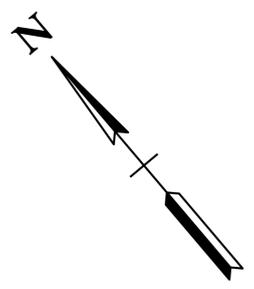
STAGE 1

STA. 52+00 TO STA. 65+00
 SCALE: 1" = 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	15F
CONST.	2015	STP-150(4)	22F

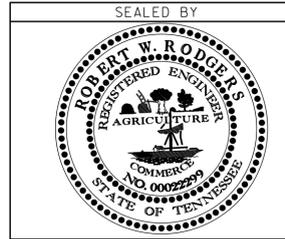
OUTFALL	AREA (AC.)	SLOPE (%)
OUT - 6	5.98	0.99



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PROTECTION NOTE :
THE CONTRACTOR SHALL USE ANY MEASURES NECESSARY TO ENSURE THAT THE REMAINING WETLAND WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLUTANTS

EPSC - STAGE I
1.) Clearing and grubbing.
2.) Install perimeter measures (silt fence, TCE, HVF, sediment tubes).
3.) Install construction exits.



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 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

STAGE 1

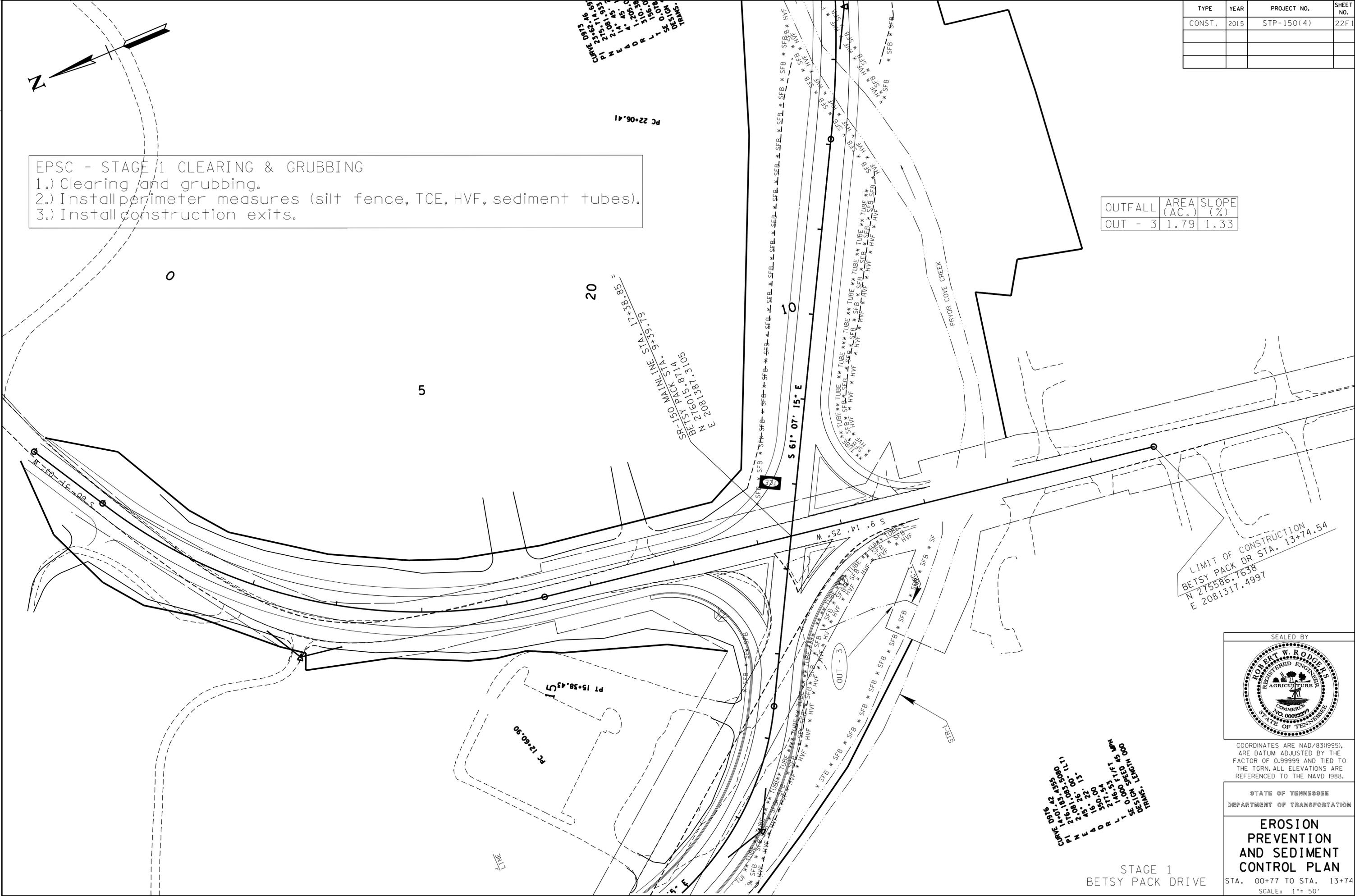
STA. 65+00 TO STA. 75+00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-150(4)	22F1

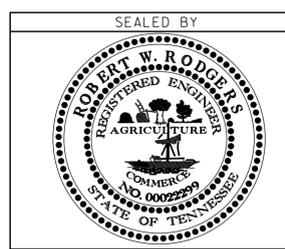
EPSC - STAGE 1 CLEARING & GRUBBING
 1.) Clearing and grubbing.
 2.) Install perimeter measures (silt fence, TCE, HVF, sediment tubes).
 3.) Install construction exits.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT - 3	1.79	1.33

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LIMIT OF CONSTRUCTION
 BETSY PACK DR STA. 13+74.54
 N 275586.7638
 E 2081317.4997



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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

STA. 00+77 TO STA. 13+74
 SCALE: 1" = 50'

TRANS. LENGTH 000
 DESIGN SPEED 45 MPH
 STATION 17+71.1
 1 146.53
 2 271.04
 3 150.15
 4 214.00
 5 208.13
 6 208.13
 7 14.01
 8 14.01
 9 14.01
 10 14.01
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STAGE 1
 BETSY PACK DRIVE

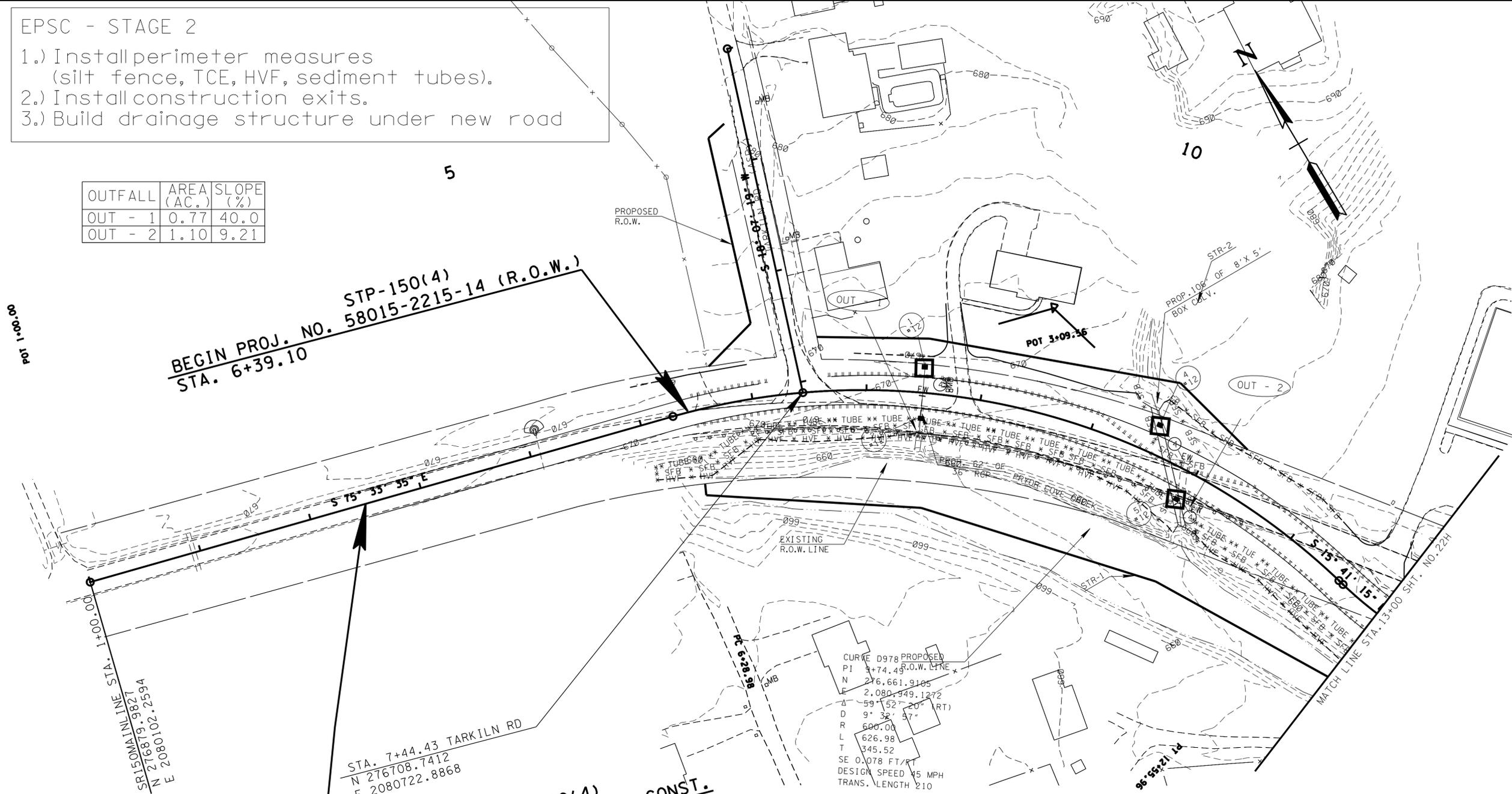
EPSC - STAGE 2

- 1.) Install perimeter measures (silt fence, TCE, HVF, sediment tubes).
- 2.) Install construction exits.
- 3.) Build drainage structure under new road

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	15A
CONST.	2015	STP-150(4)	22G

Rev. 10/11/2012
Add high visibility fencing, triple sediment tubes installation detail.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT - 1	0.77	40.0
OUT - 2	1.10	9.21



BEGIN PROJ. NO. 58015-2215-14 CONST.
STA. 3+50.00

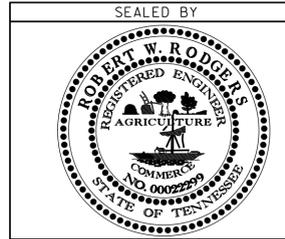
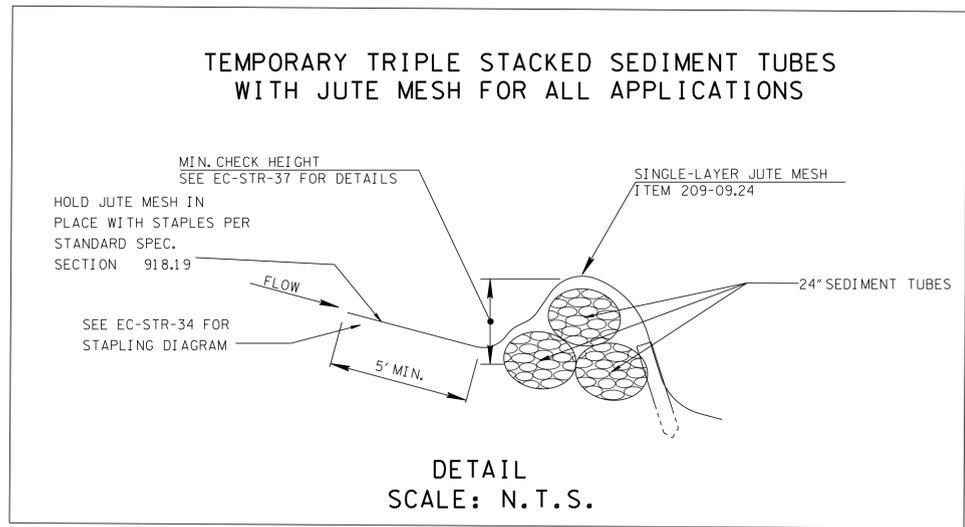
EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
	TEMPORARY BERM	EC-STR-27
*SFB*SFB*SFB*	SILT FENCE WITH WIRE BACKING	EC-STR-3C
▽	ROCK CHECK DAM (V-DITCH)	EC-STR-6
—○—	TEMPORARY SLOPE DRAIN	EC-STR-27
*HVF*HVF	HIGH VISIBILITY FENCE	S-F-1
TUBETUBE**	SEDIMENT TUBE	EC-STR-37
⊙	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
≡≡≡	TEMPORARY DIVERSION CHANNEL (DESCRIBE SIZE AND TYPE OF LINING)	EC-STR-31
—IN—DIV—	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
④	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A

PHASING NARRATION

STAGE 1: CLEARING AND GRUBBING.

STAGE 2: TRAFFIC TO USE EXISTING ROAD. CONSTRUCT PROPOSED ROAD. BUILD DRAINAGE STRUCTURES UNDER NEW ROAD. MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND SIDE ROADS.

STAGE 3: SHIFT TRAFFIC TO NEW ROADWAY AREA. BUILD REMAINING ROAD AND ACCESS. FINISH DRAINAGE STRUCTURES.



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0009999 AND THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 1+00 TO STA. 13+00
SCALE: 1" = 50'

STAGE 2

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	15B
CONST.	2015	STP-150(4)	22H

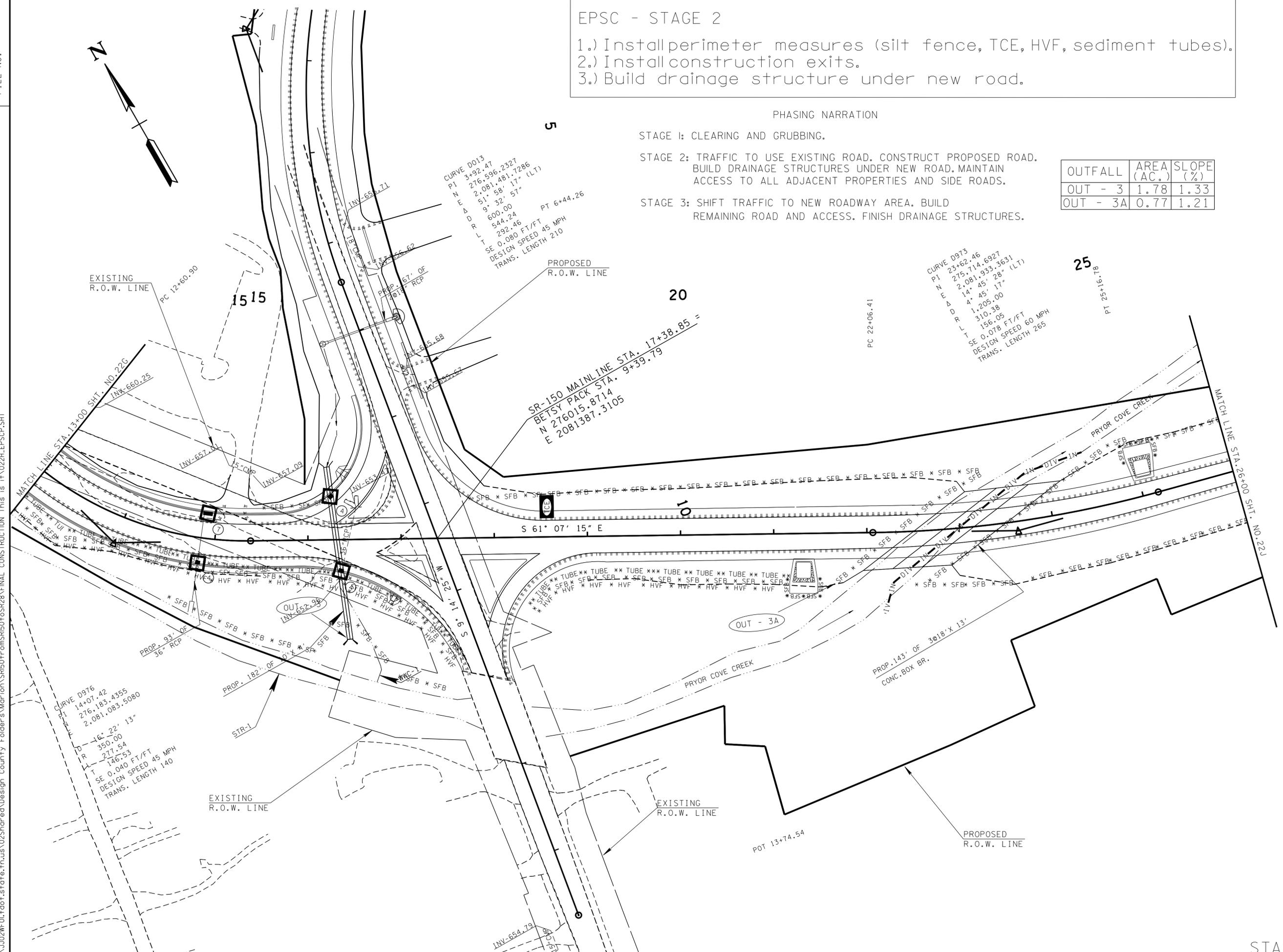
Rev. 10/11/2012
Add high visibility fencing and triple sediment tubes.

EPSC - STAGE 2
1.) Install perimeter measures (silt fence, TCE, HVF, sediment tubes).
2.) Install construction exits.
3.) Build drainage structure under new road.

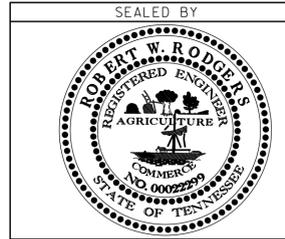
PHASING NARRATION

- STAGE 1: CLEARING AND GRUBBING.
- STAGE 2: TRAFFIC TO USE EXISTING ROAD. CONSTRUCT PROPOSED ROAD. BUILD DRAINAGE STRUCTURES UNDER NEW ROAD. MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND SIDE ROADS.
- STAGE 3: SHIFT TRAFFIC TO NEW ROADWAY AREA. BUILD REMAINING ROAD AND ACCESS. FINISH DRAINAGE STRUCTURES.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT - 3	1.78	1.33
OUT - 3A	0.77	1.21



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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 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

STA. 13+00 TO STA. 26+00
SCALE: 1" = 50'

STAGE 2

WWC-2 Relocation Notes:

- 1.) Relocate existing WWC-2 from Sta. 29+21 to Sta. 41+45.
- 2.) Relocate WWC-2 to the North side of proposed SR 150, between the propose ROW and toe of the fills.
- 3.) Maintain the 1% slope, 3' depth, and 6' channel bottom of the existing WWC-2.

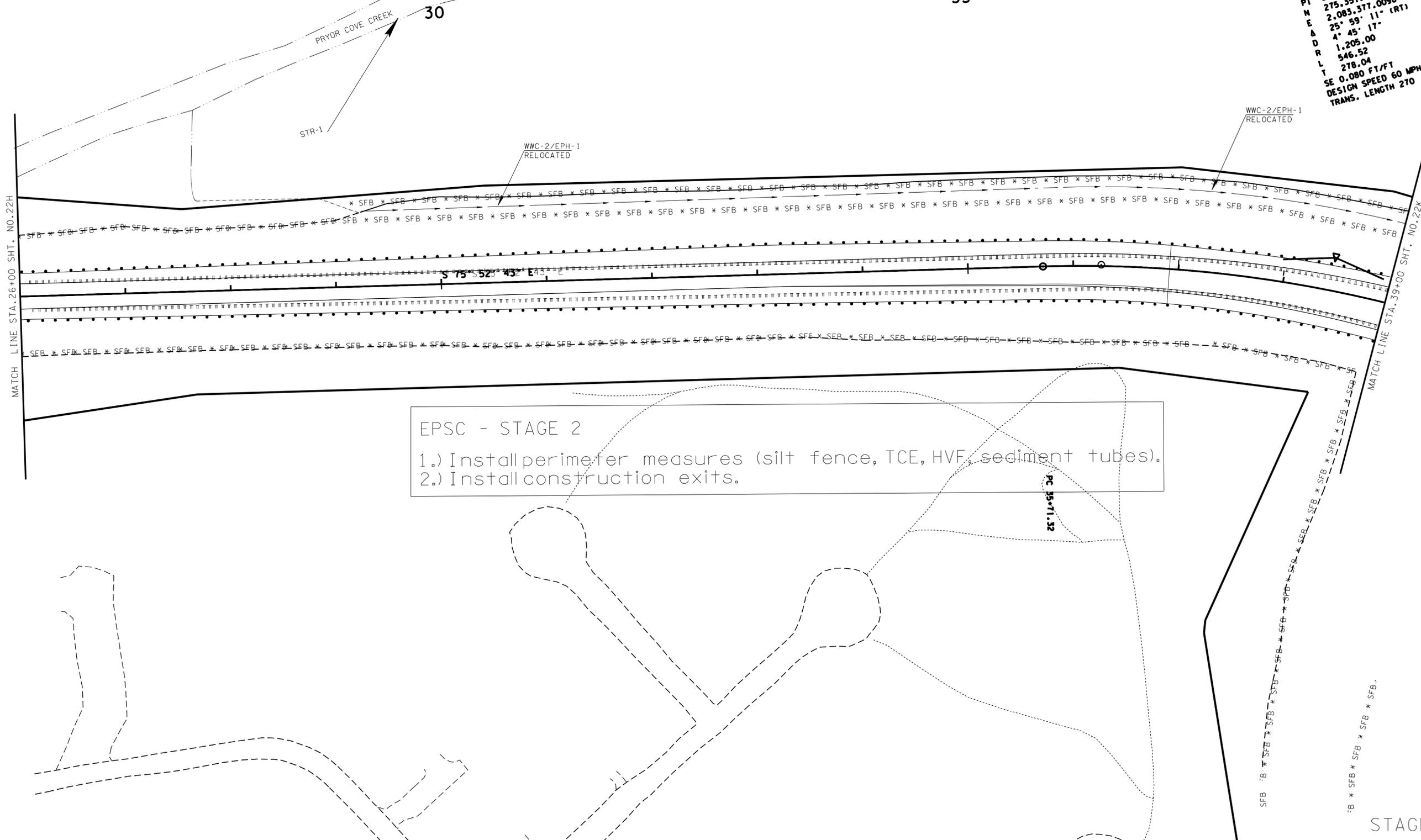
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	15C
CONST.	2015	STP-150(4)	22J

Rev. 10/11/2012
Label environmental boundaries.

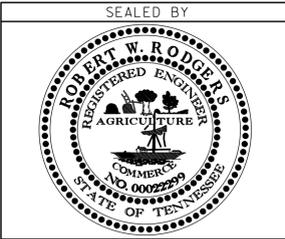


35

CURVE D970
PI 38+49.36
N 275,351.5014
E 2,083,377.0098
Δ 25° 59' 11" (RT)
D 4' 45' 17"
R 1,205.00
L 546.52
T 278.04
SE 0.080 FT/FT
DESIGN SPEED 60 MPH
TRANS. LENGTH 270



EPSC - STAGE 2
1.) Install perimeter measures (silt fence, TCE, HVE, sediment tubes).
2.) Install construction exits.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 26+00 TO STA. 39+00
SCALE: 1" = 50'

STAGE 2

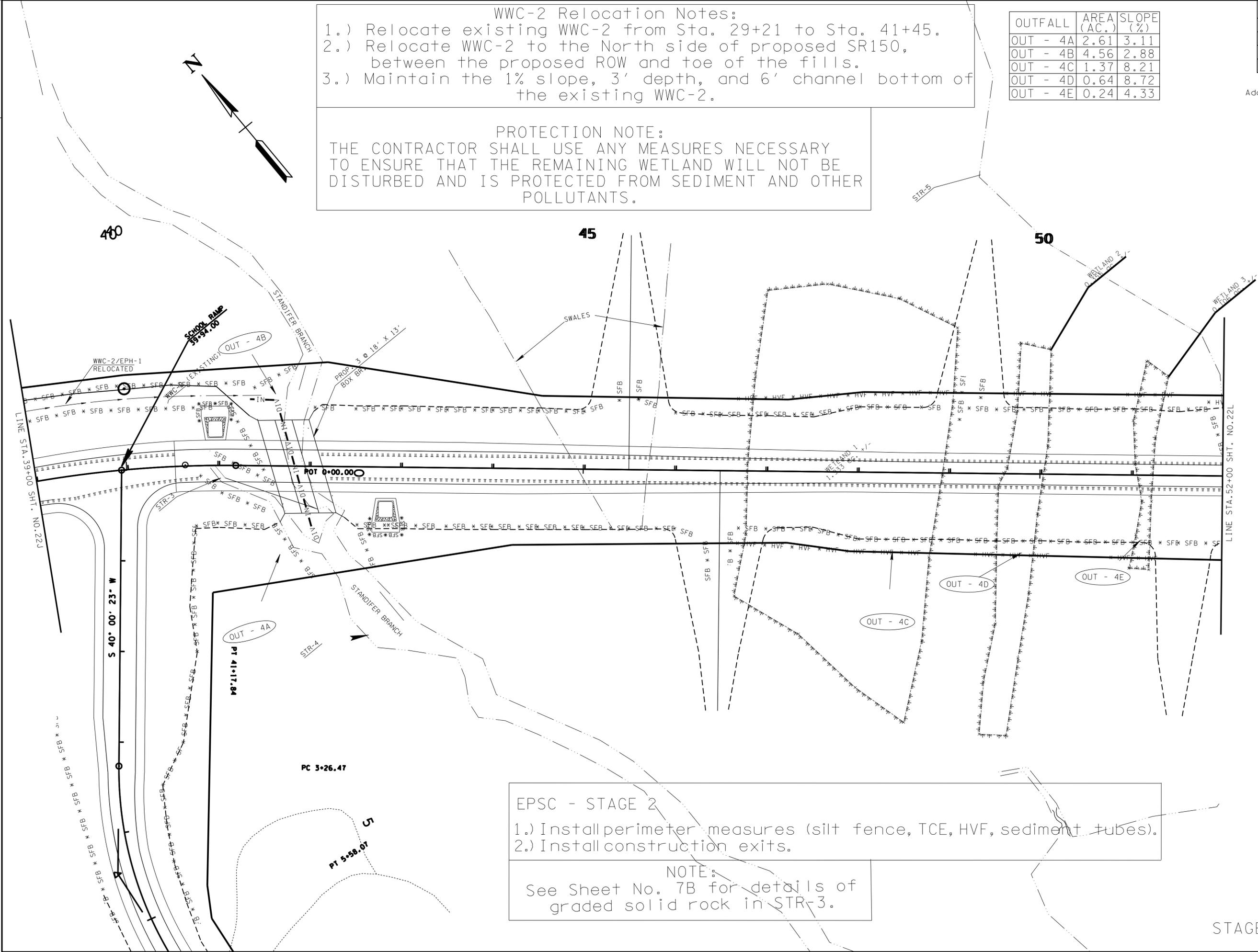
WVC-2 Relocation Notes:
 1.) Relocate existing WVC-2 from Sta. 29+21 to Sta. 41+45.
 2.) Relocate WVC-2 to the North side of proposed SR150,
 between the proposed ROW and toe of the fills.
 3.) Maintain the 1% slope, 3' depth, and 6' channel bottom of
 the existing WVC-2.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT - 4A	2.61	3.11
OUT - 4B	4.56	2.88
OUT - 4C	1.37	8.21
OUT - 4D	0.64	8.72
OUT - 4E	0.24	4.33

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	150
CONST.	2015	STP-150(4)	22K

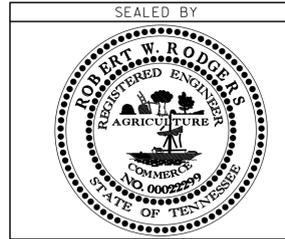
Rev. 10/11/2012
 Add environmental boundaries and High Visibility Fencing.

PROTECTION NOTE:
 THE CONTRACTOR SHALL USE ANY MEASURES NECESSARY
 TO ENSURE THAT THE REMAINING WETLAND WILL NOT BE
 DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER
 POLLUTANTS.



EPSC - STAGE 2
 1.) Install perimeter measures (silt fence, TCE, HVF, sediment tubes).
 2.) Install construction exits.

NOTE:
 See Sheet No. 7B for details of
 graded solid rock in STR-3.



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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**EROSION
 PREVENTION
 AND SEDIMENT
 CONTROL PLAN**

STAGE 2

STA. 39+00 TO STA. 52+00
 SCALE: 1" = 50'

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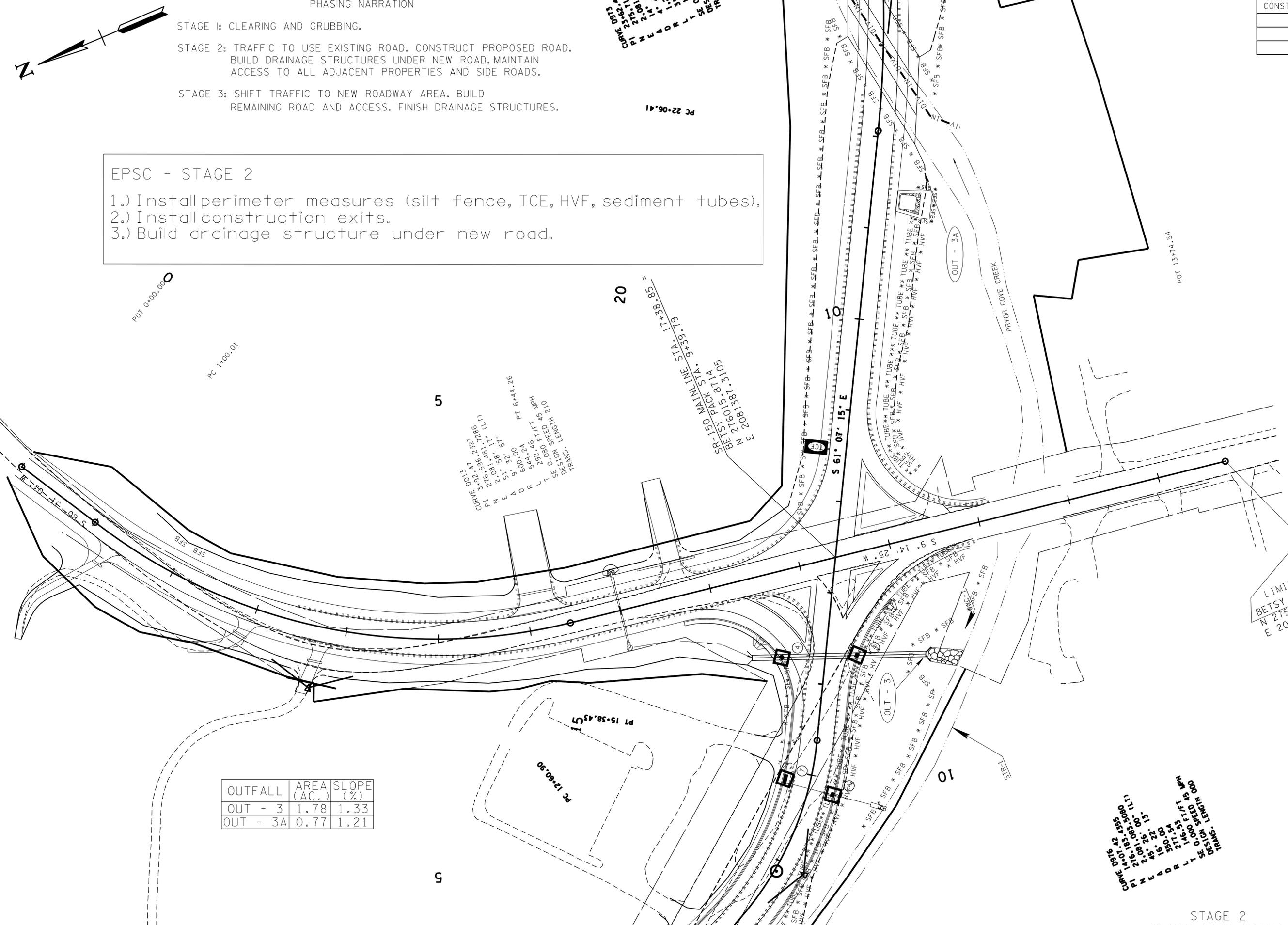
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-150(4)	22M1

PHASING NARRATION

- STAGE 1: CLEARING AND GRUBBING.
STAGE 2: TRAFFIC TO USE EXISTING ROAD. CONSTRUCT PROPOSED ROAD. BUILD DRAINAGE STRUCTURES UNDER NEW ROAD. MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND SIDE ROADS.
STAGE 3: SHIFT TRAFFIC TO NEW ROADWAY AREA. BUILD REMAINING ROAD AND ACCESS. FINISH DRAINAGE STRUCTURES.

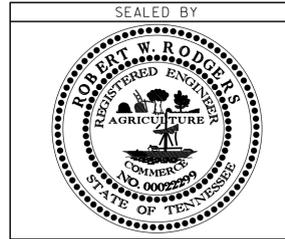
EPSC - STAGE 2
1.) Install perimeter measures (silt fence, TCE, HVF, sediment tubes).
2.) Install construction exits.
3.) Build drainage structure under new road.

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OUTFALL	AREA (AC.)	SLOPE (%)
OUT - 3	1.78	1.33
OUT - 3A	0.77	1.21

LIMIT OF CONSTRUCTION
BETSY PACK DR STA. 13+74.54
N 275586.7638
E 2081317.4997



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 00+77 TO STA. 13+74
SCALE: 1" = 50'

CURVE DATA
PT 14+07.42
N 14.07.42
P 14.07.42
T 216.183.4355
S 26.13.00 (LT)
DESIGN SPEED 45 MPH
TRANS. LENGTH 000

CURVE DATA
PT 15.38.437
N 15.38.437
P 15.38.437
T 2081317.3105
S 9.14.25 W
DESIGN SPEED 45 MPH
TRANS. LENGTH 210

CURVE DATA
PT 22+06.41
N 22.06.41
P 22.06.41
T 2081317.3105
S 61.07.15 E
DESIGN SPEED 45 MPH
TRANS. LENGTH 210

PC 22+06.41

20

5

5

5

10

10

POT 13+74.54

POT 0+00.00

PC 1+00.01

PC 12+60.90

PT 15.38.437

SR 150 MAINLINE STA. 17+38.88
BETSY PACK STA. 9+39.79
N 2081317.3105
E 216015.814

S 61° 07' 15" E

S 9° 14' 25" W

PRYOR COVE CREEK

OUT - 3A

OUT - 3

10

STAGE 2
BETSY PACK DRIVE

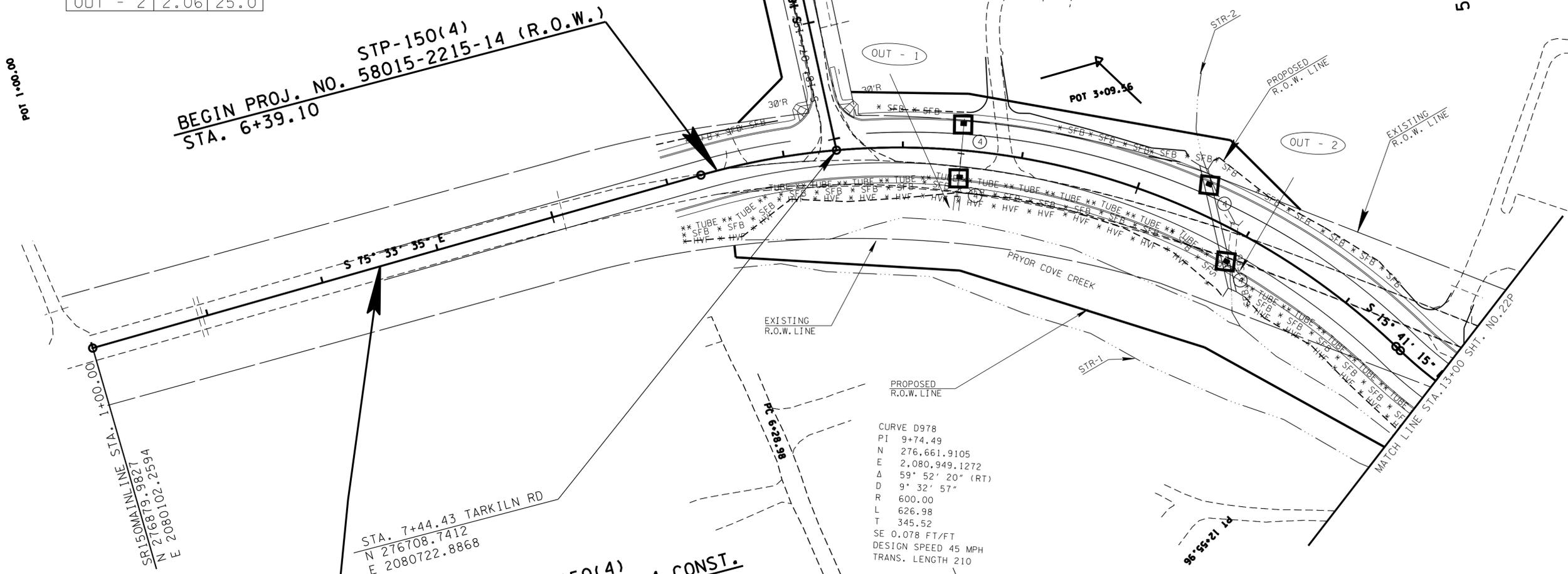
EPSC - STAGE 3

- 1.) INSTALL ADDITIONAL INLET PROTECTION, SLOPE DRAINS, ROCK CHECK DAMS, BERMS, DIVERSIONS, ETC.
- 2.) FINISH DRAINAGE STRUCTURES WHEN TRAFFIC IS SHIFTED TO NEW ROADWAY AREA.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	15G
CONST.	2015	STP-150(4)	22N

Rev. 10/11/2012
Add high visibility fencing, triple sediment tubes installation detail.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT - 1	0.35	39.5
OUT - 2	2.06	25.0

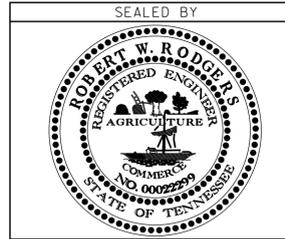
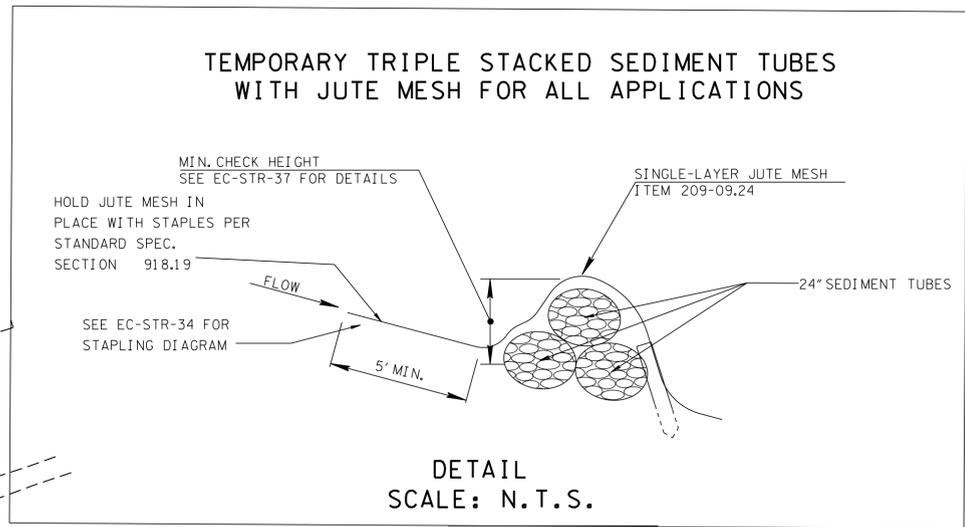


CURVE D978
PI 9+74.49
N 276,661.9105
E 2,080,949.1272
Δ 59° 52' 20" (RT)
D 9° 32' 57"
R 600.00
L 626.98
T 345.52
SE 0.078 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 210

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
	TEMPORARY BERM	EC-STR-27
*SFB*SFB*SFB*	SILT FENCE WITH WIRE BACKING	EC-STR-3C
▲	ROCK CHECK DAM (V-DITCH)	EC-STR-6
—○—	TEMPORARY SLOPE DRAIN	EC-STR-27
*HVF*HVF*	HIGH VISIBILITY FENCE	S-F-1
TUBETUBE**	SEDIMENT TUBE	EC-STR-37
⊙	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
≡≡≡	TEMPORARY DIVERSION CHANNEL (DESCRIBE SIZE AND TYPE OF LINING)	EC-STR-31
—IN—DIV—	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
④	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A

BEGIN PROJ. NO. 58015-2215-14 CONST.
STA. 3+50.00

- PHASING NARRATION
- STAGE 1: CLEARING AND GRUBBING.
 - STAGE 2: TRAFFIC TO USE EXISTING ROAD. CONSTRUCT PROPOSED ROAD. BUILD DRAINAGE STRUCTURES UNDER NEW ROAD. MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND SIDE ROADS.
 - STAGE 3: SHIFT TRAFFIC TO NEW ROADWAY AREA. BUILD REMAINING ROAD AND ACCESS. FINISH DRAINAGE STRUCTURES.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 1+00 TO STA. 13+00
SCALE: 1" = 50'

STAGE 3

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	15H
CONST.	2015	STP-150(4)	22P

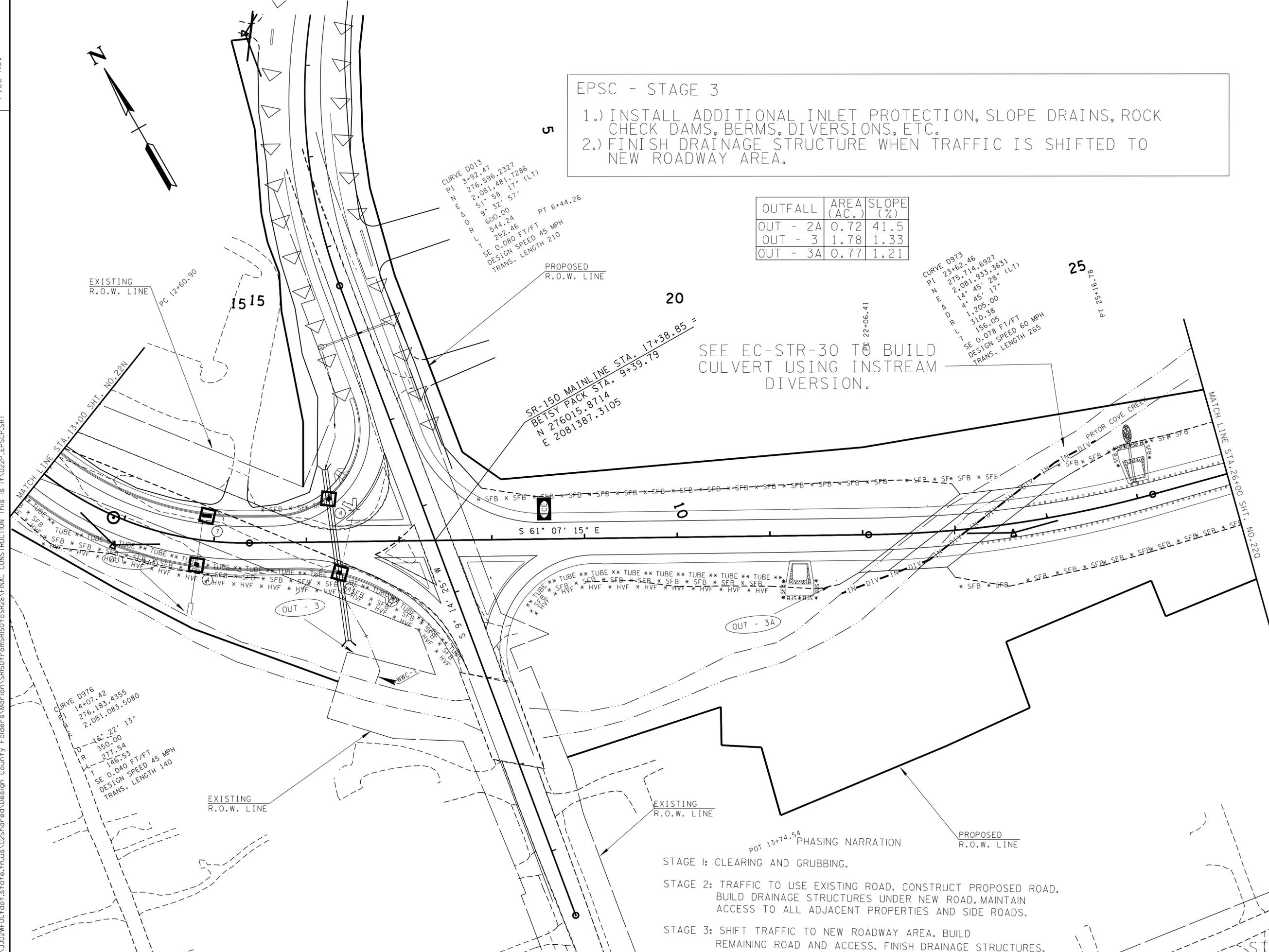
Rev. 10/11/2012
Add high visibility fencing and triple sediment tubes.

EPSC - STAGE 3
1.) INSTALL ADDITIONAL INLET PROTECTION, SLOPE DRAINS, ROCK CHECK DAMS, BERMS, DIVERSIONS, ETC.
2.) FINISH DRAINAGE STRUCTURE WHEN TRAFFIC IS SHIFTED TO NEW ROADWAY AREA.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT - 2A	0.72	41.5
OUT - 3	1.78	1.33
OUT - 3A	0.77	1.21

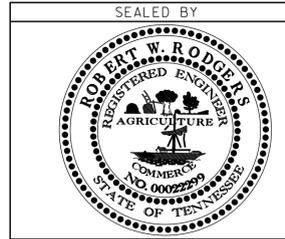
CURVE D013
PI 3+92.47
276,596.2327
2,081,481.7286
51° 58' 17" (LT)
9° 32' 57"
600.00
544.24
292.46
SE 0.080 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 210
PT 6+44.26

CURVE D973
PI 23+62.46
276,714.6927
2,081,933.3631
14° 45' 17" (LT)
4° 45' 17"
1,205.00
310.38
156.05
SE 0.078 FT/FT
DESIGN SPEED 60 MPH
TRANS. LENGTH 265
PT 22+06.41



SEE EC-STR-30 TO BUILD CULVERT USING INSTREAM DIVERSION.

- PHASING NARRATION
- STAGE 1: CLEARING AND GRUBBING.
 - STAGE 2: TRAFFIC TO USE EXISTING ROAD. CONSTRUCT PROPOSED ROAD. BUILD DRAINAGE STRUCTURES UNDER NEW ROAD. MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND SIDE ROADS.
 - STAGE 3: SHIFT TRAFFIC TO NEW ROADWAY AREA. BUILD REMAINING ROAD AND ACCESS. FINISH DRAINAGE STRUCTURES.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 13+00 TO STA. 26+00
SCALE: 1" = 50'

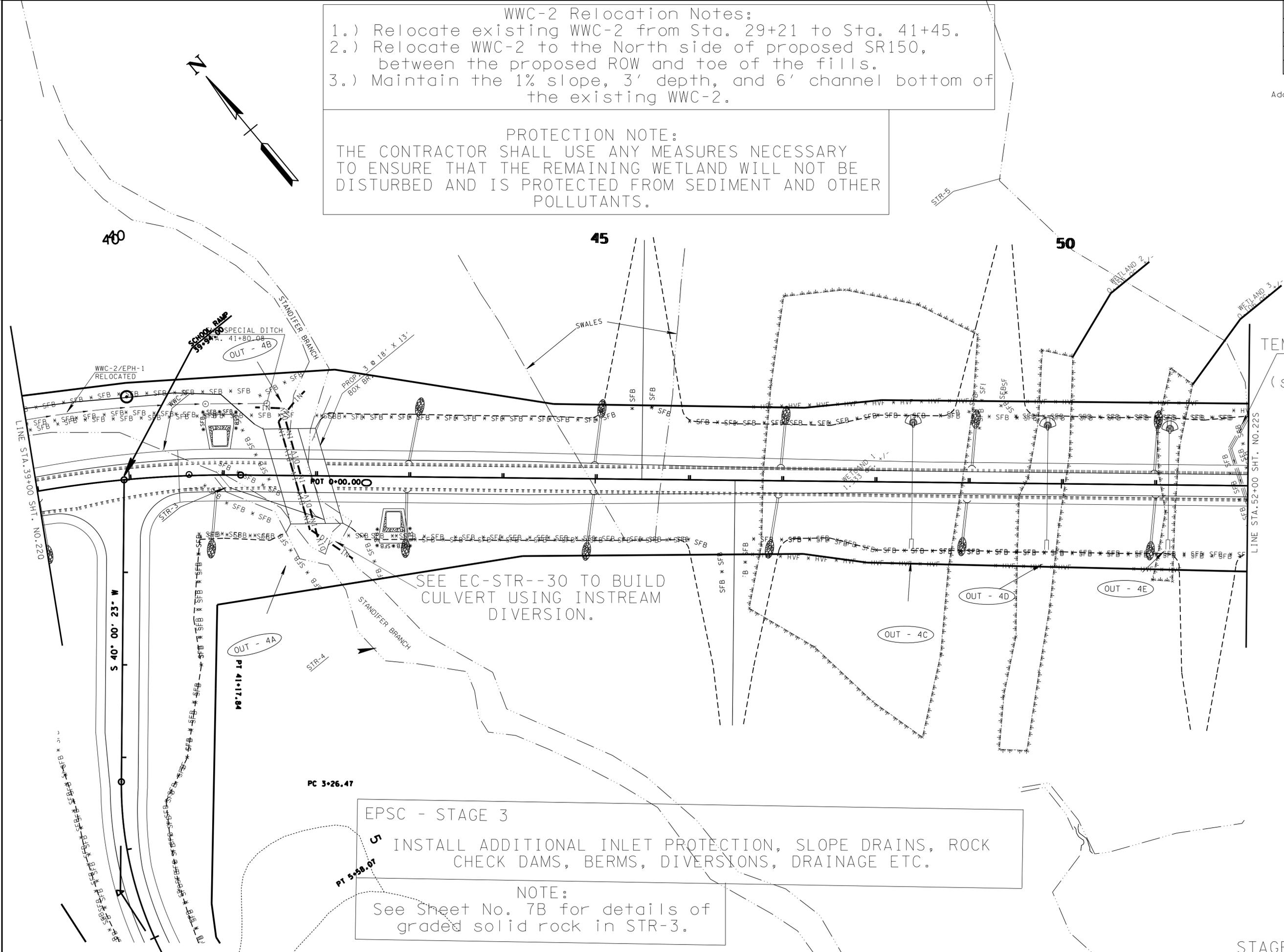
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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	15K
CONST.	2015	STP-150(4)	22R

Rev. 10/11/2012
Add environmental boundaries and High Visibility Fencing.

WVC-2 Relocation Notes:
 1.) Relocate existing WVC-2 from Sta. 29+21 to Sta. 41+45.
 2.) Relocate WVC-2 to the North side of proposed SR150, between the proposed ROW and toe of the fills.
 3.) Maintain the 1% slope, 3' depth, and 6' channel bottom of the existing WVC-2.

PROTECTION NOTE:
 THE CONTRACTOR SHALL USE ANY MEASURES NECESSARY TO ENSURE THAT THE REMAINING WETLAND WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS.



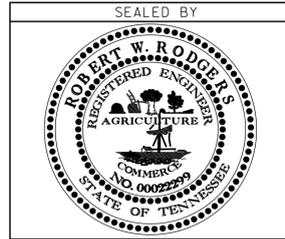
TEMPORARY DIVERSION CHANNEL STR-5 (see SHT# 15K for details)

OUTFALL	AREA (AC.)	SLOPE (%)
OUT - 4A	2.61	3.11
OUT - 4B	4.56	2.88
OUT - 4C	1.37	8.21
OUT - 4D	0.64	8.72
OUT - 4E	0.24	4.33

SEE EC-STR--30 TO BUILD CULVERT USING INSTREAM DIVERSION.

EPSC - STAGE 3
 INSTALL ADDITIONAL INLET PROTECTION, SLOPE DRAINS, ROCK CHECK DAMS, BERMS, DIVERSIONS, DRAINAGE ETC.

NOTE:
 See Sheet No. 7B for details of graded solid rock in STR-3.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STAGE 3

STA. 39+00 TO STA. 52+00
SCALE: 1" = 50'

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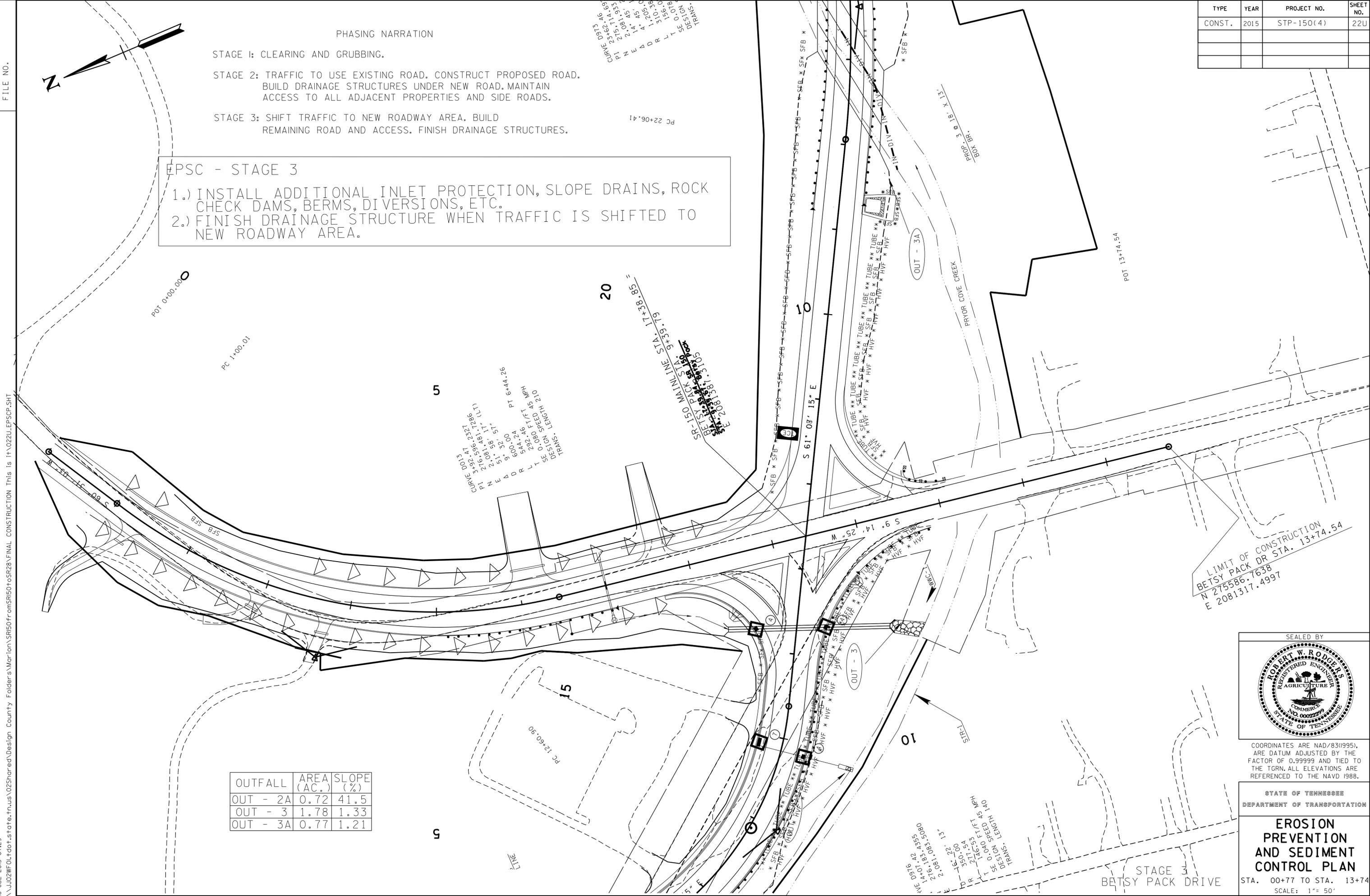
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-150(4)	22U

PHASING NARRATION

- STAGE 1: CLEARING AND GRUBBING.
- STAGE 2: TRAFFIC TO USE EXISTING ROAD. CONSTRUCT PROPOSED ROAD. BUILD DRAINAGE STRUCTURES UNDER NEW ROAD. MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND SIDE ROADS.
- STAGE 3: SHIFT TRAFFIC TO NEW ROADWAY AREA. BUILD REMAINING ROAD AND ACCESS. FINISH DRAINAGE STRUCTURES.

EPSC - STAGE 3

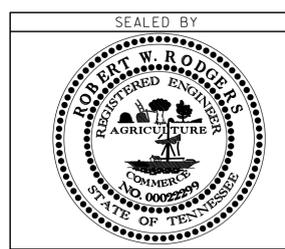
- 1.) INSTALL ADDITIONAL INLET PROTECTION, SLOPE DRAINS, ROCK CHECK DAMS, BERMS, DIVERSIONS, ETC.
- 2.) FINISH DRAINAGE STRUCTURE WHEN TRAFFIC IS SHIFTED TO NEW ROADWAY AREA.



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OUTFALL	AREA (AC.)	SLOPE (%)
OUT - 2A	0.72	41.5
OUT - 3	1.78	1.33
OUT - 3A	0.77	1.21

LIMIT OF CONSTRUCTION
 BETSY PACK DR STA. 13+74.54
 N 275586.7638
 E 2081317.4997



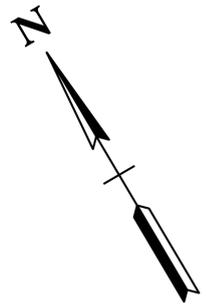
COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.999999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 00+77 TO STA. 13+74.54
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	16
CONST.	2015	STP-150(4)	23



POT 1+00.00

BEGIN PROJ. NO. 58015-2215-14 (R.O.W.)
 STA. 6+39.10

SRI50MAINLINE STA. 1+00.00
 N 216879.9821
 E 2080102.2594

BEGIN PROJ. NO. 58015-2215-14 CONST.
 STA. 3+50.00

STA. 7+44.43 TARKILN RD
 N 216708.7412
 E 2080722.8868

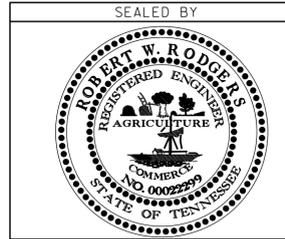
CURVE D978
 PI 9+74.49
 N 276,661.9105
 E 2,080,949.1272
 Δ 59° 52' 20" (RT)
 D 9° 32' 57"
 R 600.00
 L 626.98
 T 345.52
 SE 0.078 FT/FT
 DESIGN SPEED 45 MPH
 TRANS. LENGTH 210

POT 3+09.56

POT 12+95.96

MATCH LINE STA. 13+00 SHT. NO. 23A

16-JUN-2015 07:36
 \\J02WF01.tdot.state.tn.us\02Shor\ed\Design County Folder\s\Marion\SRI50\Final Construction This is H\023.ex contours.sht



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 REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

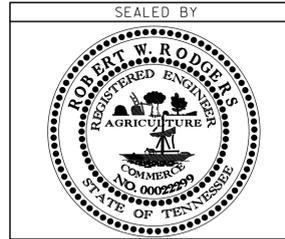
EXISTING CONTOURS

STA. 1+00 TO STA. 13+00

SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	16B
CONST.	2015	STP-150(4)	23B

6-JUN-2015 07:36
\\J02WF01.tdot.state.tn.us\02Shored\Design County Folder\SR150\omsSR150\SR2B\FINAL CONSTRUCTION This is it\023B.ex contours.SHT



COORDINATES ARE NAD/83(1995),
ARE DATUM ADJUSTED BY THE
FACTOR OF 0.99999 AND TIED TO
THE TGRN. ALL ELEVATIONS ARE
REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

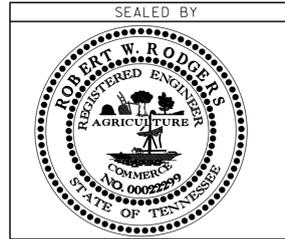
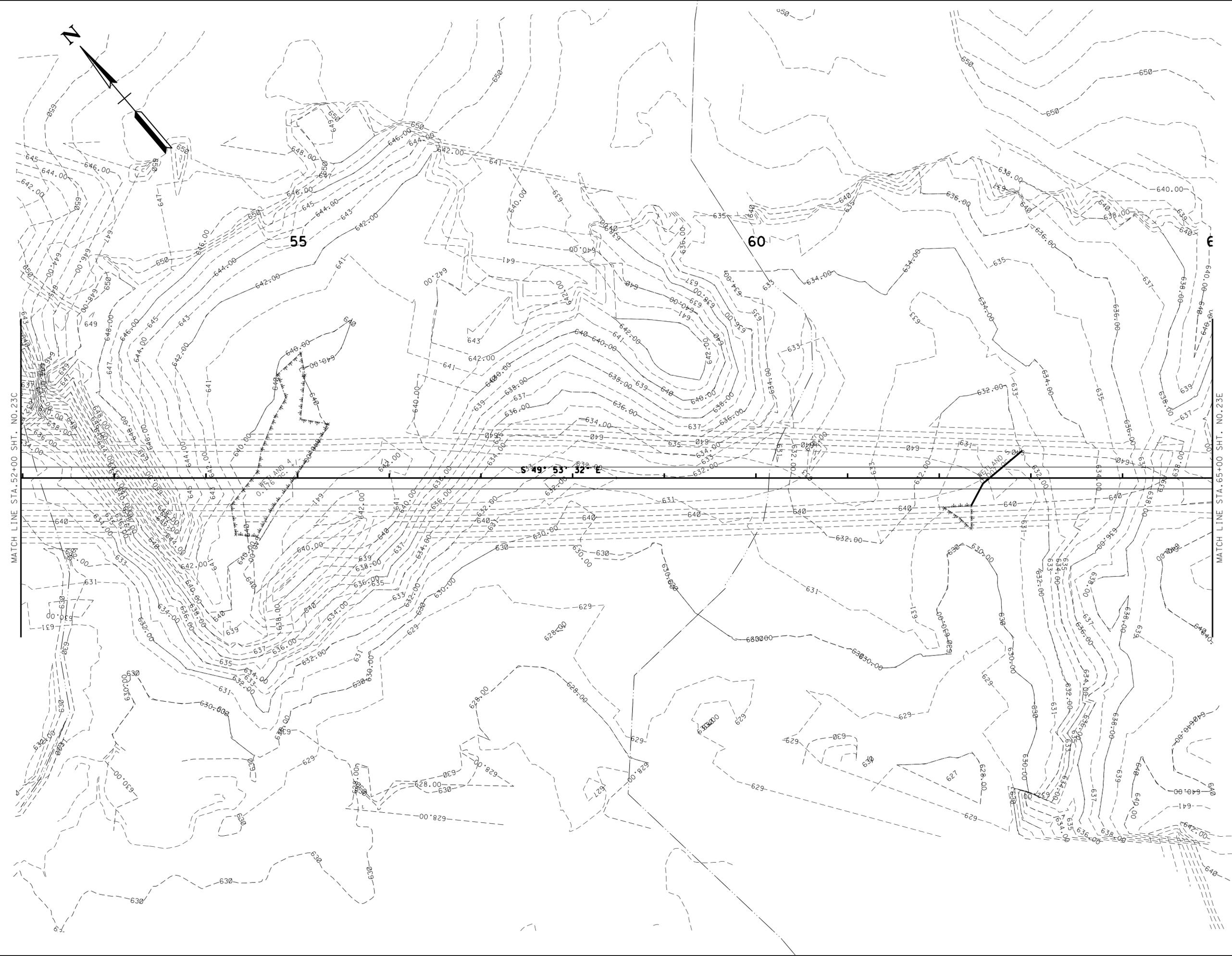
EXISTING CONTOURS

STA. 26+00 TO STA. 39+00

SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	160
CONST.	2015	STP-150(4)	230

6-JUN-2015 07:36
 \\J02WF01.tdot.state.tn.us\02Shor.ed\Design County Folder\S\Marion\SR150\omsSR150+SR2B\FINAL CONSTRUCTION This is it\023D.ex contour.sht



COORDINATES ARE NAD/83(1995),
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

EXISTING CONTOURS

STA. 52+00 TO STA. 65+00

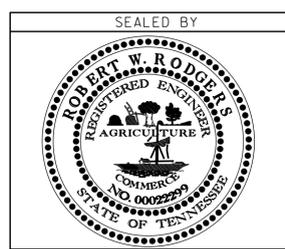
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	16E
CONST.	2015	STP-150(4)	23E

6 JUN 2015 07:36
 \\J02WF01.tdot.state.tn.us\02Shored\Design County Folder\SR150\SR150+SR28\FINAL CONSTRUCTION This is it\023E.ex contours.sht



END PROJ. NO. STP-150(4)
 NEW SR 28 STA. 580+15.32 TO 580+15.32
 N 27°02'22.0926 MAINTLINE STA. 74+55.62 (CONST.)
 E 2086142.5201



COORDINATES ARE NAD/83(1995),
 ARE DATUM ADJUSTED BY THE
 FACTOR OF 0.99999 AND TIED TO
 THE TGRN. ALL ELEVATIONS ARE
 REFERENCED TO THE NAVD 1988.

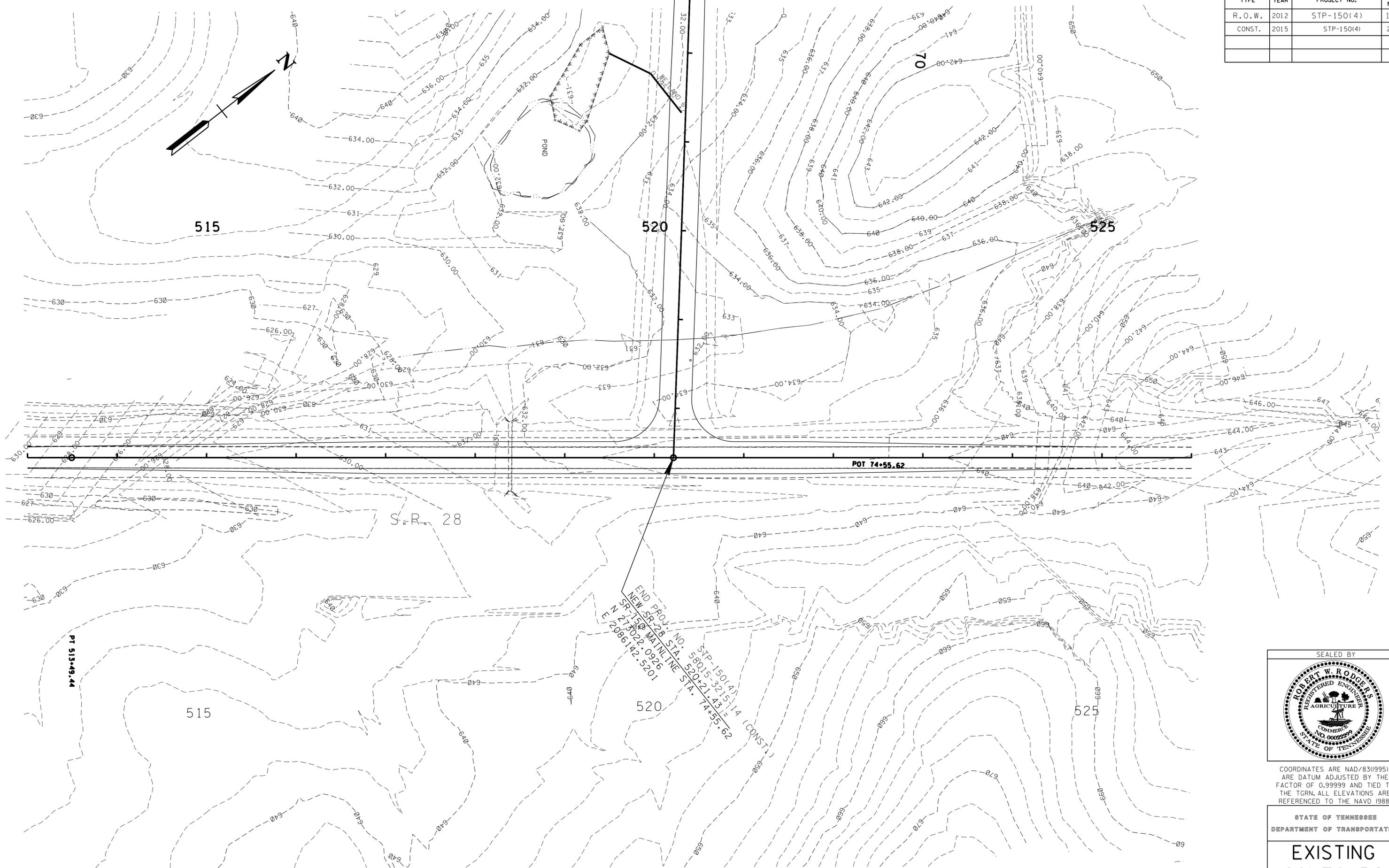
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

EXISTING CONTOURS

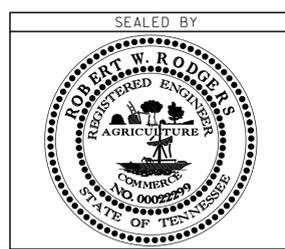
STA. 65+00 TO STA. 75+00

SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	16G
CONST.	2015	STP-150(4)	23G



6-JUN-2015 07:36
\\J02WF01.tdot.state.tn.us\02Shor\ed\Design County Folder\SR150\SR150\SR150\SR150\FINAL CONSTRUCTION This is it\0236.ex contour.sht



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

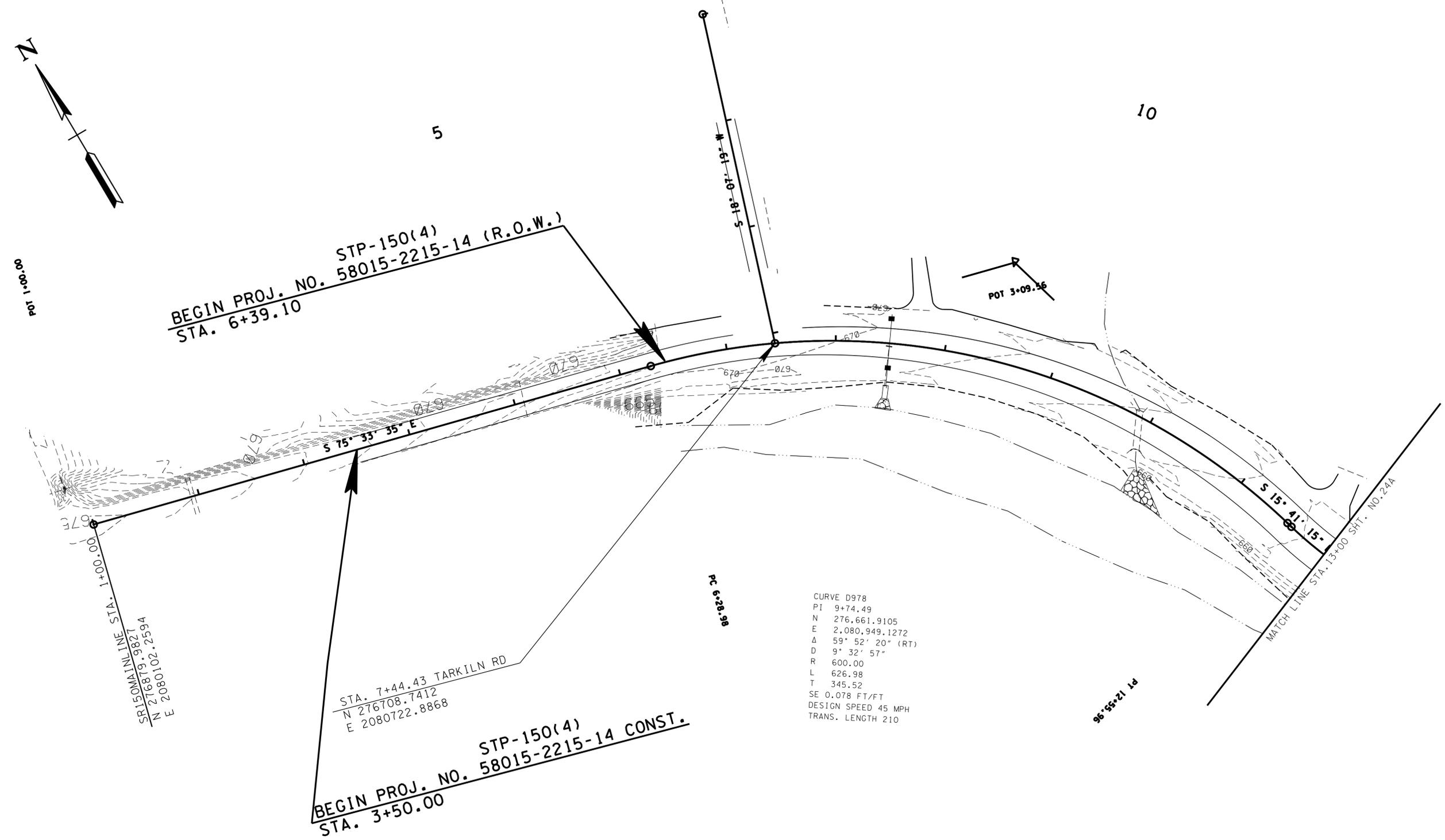
EXISTING CONTOURS

STA. 513+00 TO STA. 526+00

SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	21
CONST.	2015	STP-150(4)	24

16-JUN-2015 07:36
 \\J02WF01.tdot.state.tn.us\02Shor.ed\Design County Folder\s\Marion\SR150\fromSR150toSR28\FINAL CONSTRUCTION This is H\024-prop contours.sht



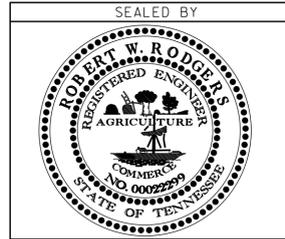
CURVE D978
 PI 9+74.49
 N 276,661.9105
 E 2,080,949.1272
 Δ 59° 52' 20" (RT)
 D 9° 32' 57"
 R 600.00
 L 626.98
 T 345.52
 SE 0.078 FT/FT
 DESIGN SPEED 45 MPH
 TRANS. LENGTH 210

BEGIN PROJ. NO. 58015-2215-14 CONST.
 STA. 3+50.00

STA. 7+44.43 TARKILN RD
 N 276708.7412
 E 2080722.8868

BEGIN PROJ. NO. 58015-2215-14 (R.O.W.)
 STA. 6+39.10

SRI50MAINLINE STA. 1+00.00
 N 216879.9821
 E 2080102.2594



COORDINATES ARE NAD/83(1995),
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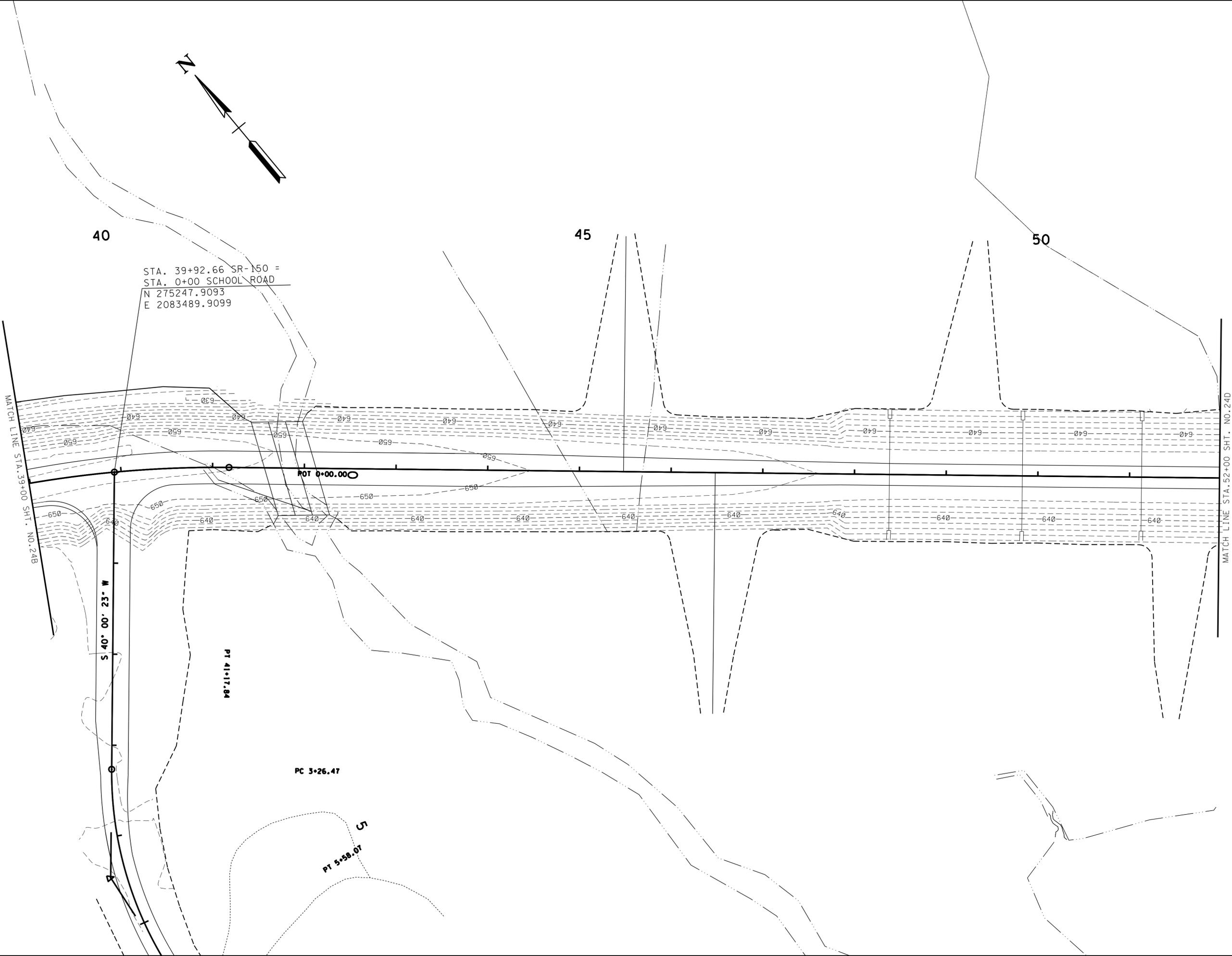
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**PROPOSED
 CONTOURS**

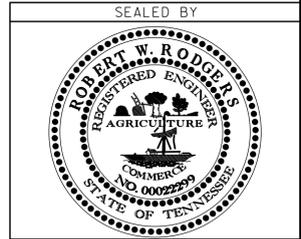
STA. 1+00 TO STA. 13+00
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	21C
CONST.	2015	STP-150(4)	24C

6-JUN-2015 07:36 \\J02WF01.tdot.state.tn.us\02Shored\Design County Folder\s\Marion\SR150\omSR150toSR28\FINAL CONSTRUCTION This is h\024c.prop contours.sht



STA. 39+92.66 SR-150 =
STA. 0+00 SCHOOL ROAD
N 275247.9093
E 2083489.9099



COORDINATES ARE NAD/83(1995),
ARE DATUM ADJUSTED BY THE
FACTOR OF 0.99999 AND TIED TO
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

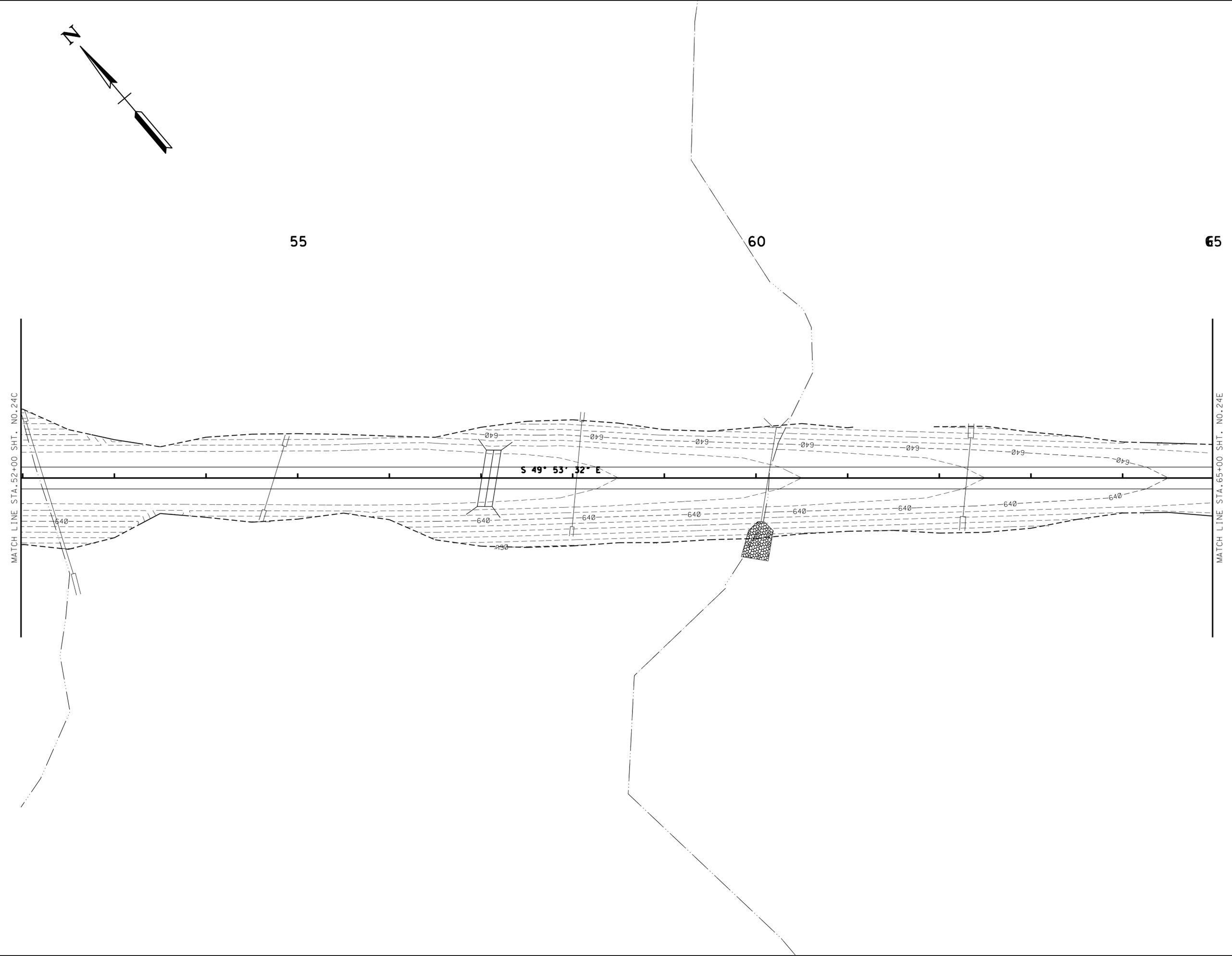
PROPOSED CONTOURS

STA. 39+00 TO STA. 52+00

SCALE: 1" = 1'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	21D
CONST.	2015	STP-150(4)	24D

6-JUN-2015 07:36
 \\J02WF01.tdot.state.tn.us\02Shor.ed\Design County Folders\Marion\SR150\FromSR150toSR28\FINAL CONSTRUCTION This is H\024D.prop contours.SHT



COORDINATES ARE NAD/83(1995),
 ARE DATUM ADJUSTED BY THE
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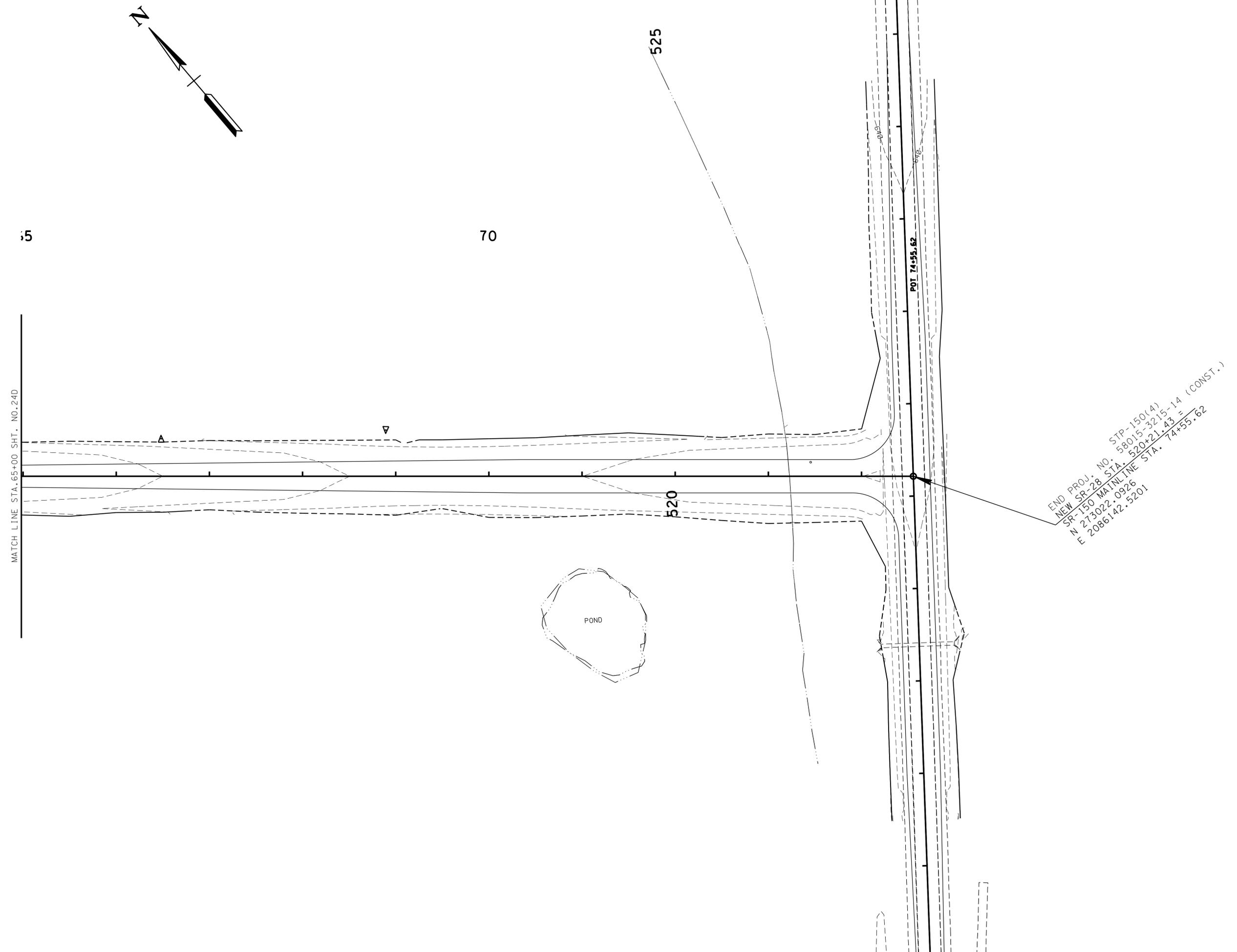
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

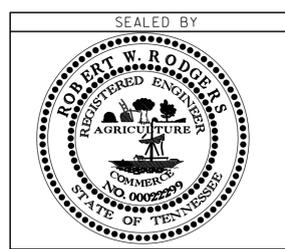
STA. 52+00 TO STA. 65+00

SCALE: 1" = 50'

6-JUN-2015 07:36
\\J02WF01.tdot.state.tn.us\02Shor.ed\Design County Folder\s\Marion\SR150\fromSR150toSR28\FINAL CONSTRUCTION This is H\024E.prop contours.sht



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	21E
CONST.	2015	STP-150(4)	24E



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

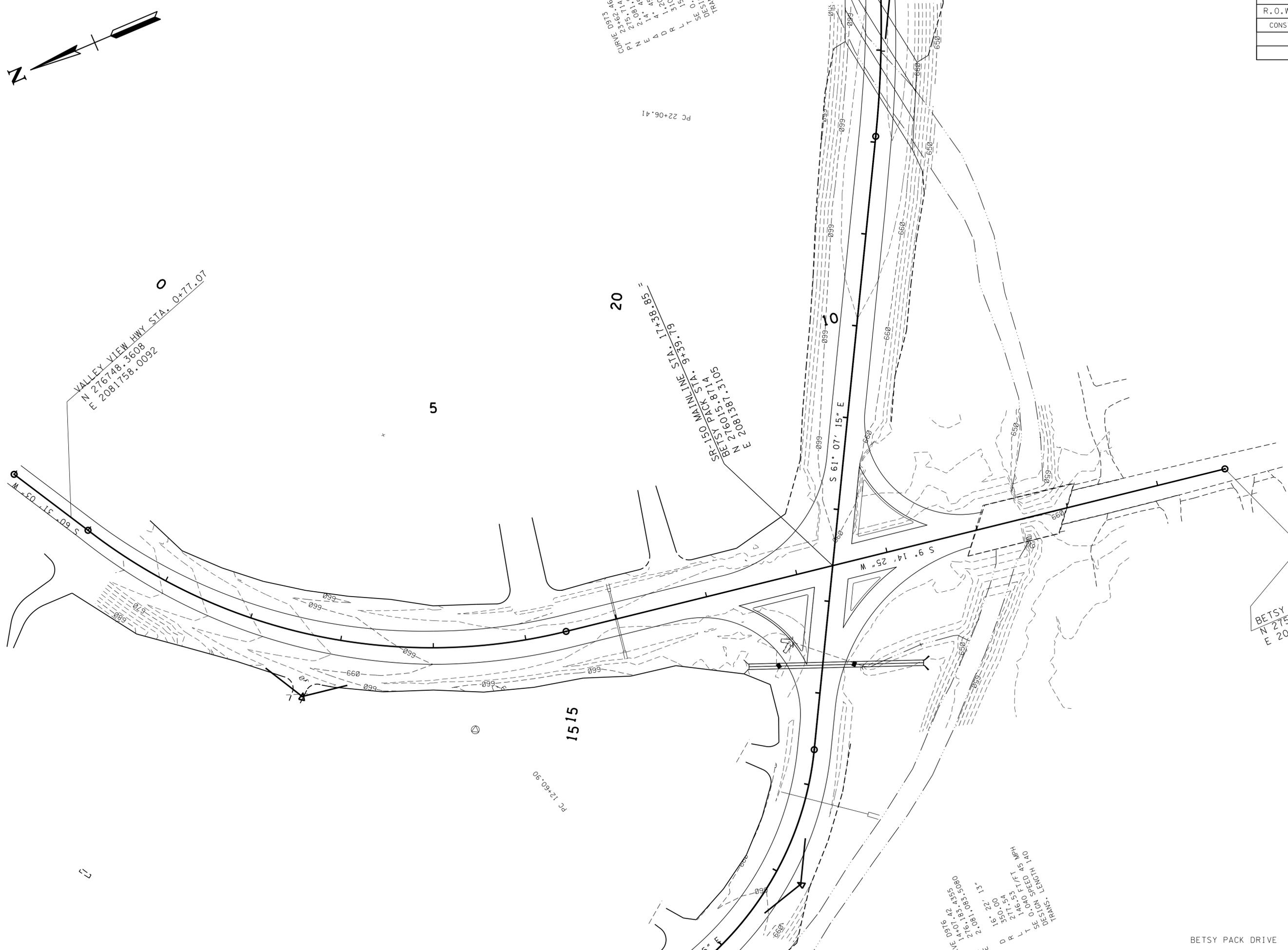
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

STA. 65+00 TO STA. 75+00

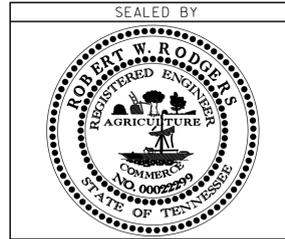
SCALE: 1" = 50'

6-JUN-2015 07:36
 \\J02WF01.tdot.state.tn.us\02Shored\Design County Folder\s\Marion\SR150\oms\SR150+SR28\FINAL CONSTRUCTION This is it\024F_prop contours.sht



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	STP-150(4)	21F
CONST.	2015	STP-150(4)	24F

BETSY PACK DR. STA. 13+74.52
 N 275586.7638
 E 2081317.4997



COORDINATES ARE NAD/83(1995),
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

STA. 00+77 TO STA. 13+74

SCALE: 1" = 50'

BETSY PACK DRIVE

TRANS. LENGTH 141
 DESIGN SPEED 45 MPH
 SE 0.00
 T 146.5
 R 146.5
 D R L
 1. 1407.42
 2. 2081.0835080
 3. 16.2213
 4. 16.2213
 5. 16.2213
 6. 16.2213
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 96. 16.2213
 97. 16.2213
 98. 16.2213
 99. 16.2213
 100. 16.2213

SR 150 MAINLINE STA. 11+38.88
 BETSY PACK STA. 9+39.19
 VALLEY VIEW HWY STA. 0+77.07
 CURVE DATA
 PC 22+08.41
 PT 22+08.41
 N 1.45
 E 1.45
 S 1.45
 W 1.45
 CURVE DATA
 PC 22+08.41
 PT 22+08.41
 N 1.45
 E 1.45
 S 1.45
 W 1.45



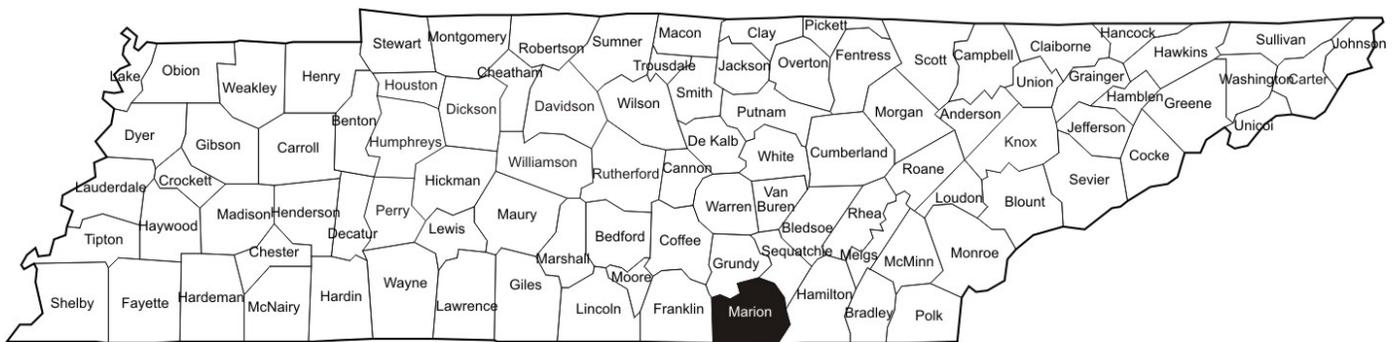
Documentation and Permits Binder

Project Name: SR-150 From: Existing SR-150 To: SR-28 North of Jasper

Project No.: 58015-1210-14

PIN: 103774.00

Marion County, Tennessee



Project Site

**Prepared for:
Tennessee Department of Transportation – TDOT**



Consultant Reference No.: 11187.001

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Blank NOT.....

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Environmental Permits.....

Ecology Report.....

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TMDL Information.....

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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								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
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: Jasper, Tennessee, US*
Latitude: 35.0898°, Longitude: -85.6132°
Elevation: 651 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	0.388 (0.355-0.427)	0.459 (0.421-0.505)	0.544 (0.497-0.598)	0.615 (0.560-0.674)	0.712 (0.644-0.779)	0.790 (0.711-0.862)	0.873 (0.780-0.952)	0.960 (0.848-1.05)	1.08 (0.942-1.18)	1.18 (1.02-1.29)
10-min	0.619 (0.568-0.682)	0.734 (0.673-0.808)	0.871 (0.796-0.958)	0.984 (0.896-1.08)	1.14 (1.03-1.24)	1.26 (1.13-1.37)	1.39 (1.24-1.51)	1.52 (1.35-1.66)	1.71 (1.49-1.86)	1.86 (1.60-2.02)
15-min	0.774 (0.710-0.852)	0.923 (0.846-1.02)	1.10 (1.01-1.21)	1.24 (1.13-1.36)	1.44 (1.30-1.57)	1.59 (1.43-1.74)	1.75 (1.57-1.91)	1.92 (1.70-2.09)	2.15 (1.88-2.34)	2.33 (2.01-2.54)
30-min	1.06 (0.973-1.17)	1.27 (1.17-1.40)	1.57 (1.43-1.72)	1.80 (1.64-1.98)	2.13 (1.93-2.33)	2.40 (2.16-2.62)	2.69 (2.40-2.93)	2.99 (2.64-3.25)	3.42 (2.98-3.72)	3.77 (3.25-4.11)
60-min	1.32 (1.21-1.46)	1.60 (1.47-1.76)	2.01 (1.83-2.21)	2.35 (2.14-2.57)	2.84 (2.57-3.10)	3.25 (2.92-3.55)	3.70 (3.30-4.03)	4.19 (3.70-4.56)	4.91 (4.28-5.34)	5.51 (4.74-6.01)
2-hr	1.56 (1.43-1.73)	1.88 (1.72-2.08)	2.36 (2.15-2.61)	2.77 (2.51-3.04)	3.36 (3.03-3.69)	3.87 (3.47-4.24)	4.42 (3.92-4.83)	5.02 (4.42-5.48)	5.91 (5.12-6.44)	6.66 (5.69-7.26)
3-hr	1.70 (1.55-1.87)	2.04 (1.86-2.25)	2.54 (2.32-2.80)	2.97 (2.70-3.26)	3.58 (3.23-3.93)	4.10 (3.68-4.48)	4.66 (4.15-5.09)	5.27 (4.65-5.75)	6.16 (5.36-6.73)	6.91 (5.93-7.54)
6-hr	2.10 (1.93-2.30)	2.51 (2.31-2.75)	3.08 (2.83-3.37)	3.57 (3.26-3.90)	4.27 (3.88-4.65)	4.85 (4.39-5.27)	5.47 (4.91-5.94)	6.14 (5.47-6.66)	7.10 (6.24-7.71)	7.90 (6.87-8.58)
12-hr	2.60 (2.40-2.82)	3.10 (2.86-3.38)	3.80 (3.50-4.12)	4.37 (4.02-4.74)	5.18 (4.74-5.61)	5.86 (5.33-6.33)	6.57 (5.94-7.09)	7.32 (6.57-7.90)	8.39 (7.44-9.06)	9.26 (8.13-10.0)
24-hr	3.16 (2.96-3.38)	3.77 (3.53-4.05)	4.60 (4.30-4.93)	5.25 (4.90-5.62)	6.14 (5.71-6.55)	6.83 (6.35-7.29)	7.55 (6.99-8.04)	8.27 (7.63-8.81)	9.25 (8.50-9.84)	10.0 (9.16-10.6)
2-day	3.81 (3.56-4.09)	4.55 (4.26-4.89)	5.55 (5.18-5.95)	6.33 (5.90-6.78)	7.39 (6.87-7.91)	8.23 (7.64-8.80)	9.09 (8.41-9.70)	9.95 (9.17-10.6)	11.1 (10.2-11.9)	12.0 (11.0-12.8)
3-day	4.06 (3.79-4.35)	4.86 (4.54-5.20)	5.89 (5.50-6.31)	6.70 (6.25-7.17)	7.77 (7.23-8.31)	8.61 (8.00-9.20)	9.45 (8.76-10.1)	10.3 (9.50-11.0)	11.4 (10.5-12.2)	12.3 (11.2-13.1)
4-day	4.31 (4.03-4.62)	5.16 (4.82-5.52)	6.24 (5.83-6.67)	7.06 (6.59-7.55)	8.15 (7.59-8.70)	8.99 (8.36-9.59)	9.81 (9.11-10.5)	10.6 (9.84-11.3)	11.7 (10.8-12.5)	12.5 (11.5-13.3)
7-day	5.16 (4.83-5.51)	6.15 (5.76-6.57)	7.37 (6.90-7.87)	8.29 (7.75-8.84)	9.47 (8.85-10.1)	10.4 (9.67-11.1)	11.2 (10.5-12.0)	12.1 (11.2-12.9)	13.2 (12.2-14.0)	14.0 (12.9-14.9)
10-day	5.90 (5.53-6.30)	7.00 (6.56-7.48)	8.33 (7.79-8.89)	9.33 (8.72-9.95)	10.6 (9.93-11.3)	11.6 (10.8-12.4)	12.6 (11.7-13.4)	13.6 (12.6-14.5)	14.8 (13.7-15.8)	15.7 (14.5-16.8)
20-day	8.04 (7.60-8.50)	9.49 (8.97-10.0)	11.0 (10.4-11.7)	12.1 (11.5-12.8)	13.5 (12.8-14.3)	14.5 (13.7-15.4)	15.5 (14.5-16.4)	16.3 (15.3-17.3)	17.4 (16.3-18.4)	18.1 (17.0-19.2)
30-day	9.90 (9.39-10.4)	11.6 (11.0-12.3)	13.3 (12.6-14.0)	14.5 (13.8-15.3)	16.0 (15.1-16.8)	17.0 (16.1-17.9)	18.0 (17.0-18.9)	18.8 (17.8-19.9)	19.9 (18.7-21.0)	20.6 (19.4-21.7)
45-day	12.6 (12.0-13.2)	14.7 (14.0-15.4)	16.7 (15.9-17.5)	18.1 (17.2-19.0)	19.8 (18.9-20.8)	21.0 (20.0-22.1)	22.1 (21.0-23.2)	23.1 (22.0-24.3)	24.3 (23.1-25.5)	25.1 (23.8-26.4)
60-day	15.1 (14.4-15.8)	17.6 (16.8-18.5)	19.9 (19.0-20.9)	21.5 (20.6-22.6)	23.5 (22.4-24.7)	24.9 (23.7-26.1)	26.1 (24.9-27.4)	27.2 (25.9-28.5)	28.5 (27.1-29.9)	29.3 (27.9-30.8)

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.

[Back to Top](#)

EPSC Inspection Reports



**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



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):		Current approximate disturbed acreage:
County(ies):	TDOT PIN:	NPDES Tracking Number: TNR	Number of New Corrective Actions/Deficiencies:	Number of Un-Corrected Sediment Releases:
TDOT Project No.:	TDOT Contract No.:	Contractor:	Number of Recurring Corrective Actions/Deficiencies:	Number of New Sediment Releases:

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)

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

CIRCULAR LETTER

SECTION: 209.01
NUMBER: 209.01-04
SUBJECT: TDOT INSPECTION OF CONTRACTOR WASTE & BORROW SITES
DATE: MAY 1, 2012

Effective with the June 18, 2010 Letting, Waste & Borrow Sites for TDOT projects will be subject to the requirements of the Procedures for Providing Offsite Waste and Borrow on TDOT Construction Projects.

After the contractor has secured approval for use of an Exclusive waste and/or borrow site, he/she is responsible for performing twice weekly EPSC Inspections of that site. The contractor must have a certified EPSC inspector as required by the TDEC Construction General Permit (CGP). The certified EPSC inspector must document the inspections on the inspection form in the CGP or on TDOT's inspection report (see CL 209.01-02).

TDOT is responsible for ensuring that EPSC inspections are being performed by the contractor and shall perform a weekly review of the contractor's EPSC inspection reports. This review shall be documented using the attached form "TDOT Construction Exclusive Waste/Borrow Site Weekly EPSC Inspection Review Report" (Inspection Review Report). The TDOT EPSC representative will perform the weekly review, and shall sign a copy of the Inspection Review Report. The contractor's certified EPSC inspector shall sign a copy of the Inspection Review Report and shall be responsible for initiating and completing corrective actions for any deficiencies found during the review.

A copy of the completed Inspection Review Report shall be posted in the TDOT EPSC folder for the appropriate project on the TDOT VPN (see CL 209.01-02 for posting instructions).

TDOT Construction Exclusive Waste/Borrow Site Weekly EPSC Inspection Review Report

Date of Review:	County :
TDOT Project Description:	
TDOT Contract Number:	Contractor:
Contractor's Waste/Borrow Area Name/Description:	
Waste/Borrow NPDES Number:	
Contractor's Certified EPSC Inspector:	Inspector's Certification Number:
Location of Contractor's Waste/Borrow Area Permits:	
Dates of Contractor's EPSC inspections (since last review):	
Name of TDOT Representative Completing Documentation Review:	

Instructions: This checklist covers the basic erosion prevention and sediment control and other stormwater construction requirements for Exclusive Waste/Borrow Areas used for TDOT projects. This report shall be completed weekly by the TDOT EPSC Representative verifying the documentation of the contractor's previous week's twice weekly EPSC inspection reports. Questions that are not applicable for the site must be marked as "N/A". Checks placed under the "No" column that indicate a deficiency requires a written explanation and/or a written corrective action and required completion date in the "TDOT EPSC Representative's Comments and Corrective Actions" section of this form. Both the TDOT EPSC Representative and the Contractor's Certified EPSC Inspector should sign the form immediately following each review.

General Information – Only need to complete during first review unless there are changes to report at subsequent reviews

- | | Yes | No | N/A | |
|-----|--------------------------|--------------------------|--------------------------|--|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is the waste/borrow area exclusive to the above referenced TDOT project? (If not exclusive or if exempt exclusive, do not complete or answer any other questions.) |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is the NOC posted on site? |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are the SWPPP and other required CGP information available on site? |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are rain gages present and installed per requirements? |
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are Streams/Wetlands/Sinkholes present on site? |
| 6. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | If 5 is "Yes", have the applicable permits been obtained for the impacts (ARAP, USACE, TVA)? |
| 7. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | If 5 is "Yes", are Streams/Wetlands/Sinkholes shown in the SWPPP with appropriate buffers noted? |
| 8. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Do the EPSC measures shown in the SWPPP and installed in the field appear adequate for the site? |
| 9. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are outfall locations shown in the SWPPP? Are there outfalls in the field that aren't included in the SWPPP? |
| 10. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are on-site outfall drainage areas included in the SWPPP? |
| 11. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is a sediment basin required at any on-site outfalls per the TN CGP? |
| 12. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | If 11 is "Yes", are a sediment basin and its calculations included in the SWPPP? |
| 13. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Does the SWPPP limit the disturbed area of the Waste/Borrow site to less than 50 acres at one time? |
| 14. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Does the SWPPP include at least two separate EPSC plan sheets (sites disturbing < 5 acres) or at least 3 separate EPSC plan sheets (sites disturbing > 5 acres) as required by TN CGP? |

Site Specific Information – Complete during each review

Yes No N/A

- 15. Have EPSC inspections been documented twice weekly and at least 72 hours apart?
- 16. Do the EPSC inspection reports document daily rainfall for the site?
- 17. Do the EPSC inspection reports document that the project outfalls have been inspected?
- 18. Did the EPSC inspection report document sediment deposits off the permitted area?
- 19. If 18 is “Yes”, did the EPSC inspection report the sediment release was into a Stream or Wetland?
- 20. If 19 is “Yes”, did the EPSC inspection report document that contractor self-reported the sediment release to TDEC EFO?
- 21. If 19 is “No”, did the EPSC inspection report document that the off site sediment was removed or stabilized?
- 22. Have any new project outfalls been added according to the EPSC inspection reports?
- 23. If 22 is “Yes”, have new project outfalls been updated in the SWPPP?
- 24. Do the EPSC inspection reports document that EPSC measures have been installed per the SWPPP in all active areas?
- 25. Do the EPSC inspection reports document that the installed EPSC measures appear to be adequate for the site?
- 26. Do the EPSC inspection reports document that the EPSC measures are being maintained according to the SWPPP and the CGP?
- 27. Do the EPSC inspection reports document any new EPSC measures being installed?
- 28. If 27 is “Yes”, has the SWPPP been updated to reflect the new EPSC measures?
- 29. Have the dates of major grading activities been documented in accordance with the SWPPP?
- 30. Have the dates when construction activities temporarily or permanently ceased been documented in accordance with the SWPPP?
- 31. Do the EPSC inspection reports document that disturbed areas idle for more than 14 days have been temporarily or permanently stabilized?
- 32. Do the EPSC inspection reports document that temporary stabilization has been applied to any areas of the site?
- 33. Do the EPSC inspection reports document that permanent stabilization has been applied to any areas of the site?
- 34. Do the EPSC inspection reports document that steep slope areas have been stabilized in 7 days?
- 35. Do the inspection reports document the total disturbed acreage, including haul roads, stockpile areas, and other disturbances?

TDOT EPSC Representative's Comments and Corrective Actions

Signatures - Complete during each review

I certify that I have completed the inspection review documented in this report.

TDOT EPSC Representative's Signature Date

I certify that any EPSC deficiency noted in the twice-weekly inspection report will be addressed in conformance with the requirements of the TN CGP. I also agree that items listed above are accurate and that any discrepancies to this report are listed below in the comments section.

Contractor's Certified Inspector Signature Date

Contractor's Certified Inspector's Comments

NOI & NOC



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Water Resources

William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 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)

Form section containing Site or Project Name, Existing NPDES Tracking Number, Street Address or Location, Site Activity Description, County, MS4 Jurisdiction, and receiving waters information.

Form section containing Site Owner/Developer Entity, Site Owner/Developer Signatory, and Mailing Address information.

Form section containing Optional Contact information, including name, title, and contact details.

Owner or Developer Certification section, including a signature and date for Jim Ozment.

Contractor(s) Certification section, including a signature and date for the contractor.

Other Contractor company name and signatory information section.

OFFICIAL STATE USE ONLY

Official State Use Only section containing administrative fields like Received Date, Reviewer, Field Office, Permit Number, and Fee(s).

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR10000)

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).

Acres Disturbed	= or > 150 acres	= or > 50 < 150 acres	= or > 20 < 50 acres	= or > 5 < 20 acres	= or > 1 < 5 acres	Subsequent coverage*
Fee	\$10,000	\$6,000	\$3,000	\$1,000	\$250	\$100

* Subsequent Primary Operators seeking coverage under an actively covered larger common plan of development or sale

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.

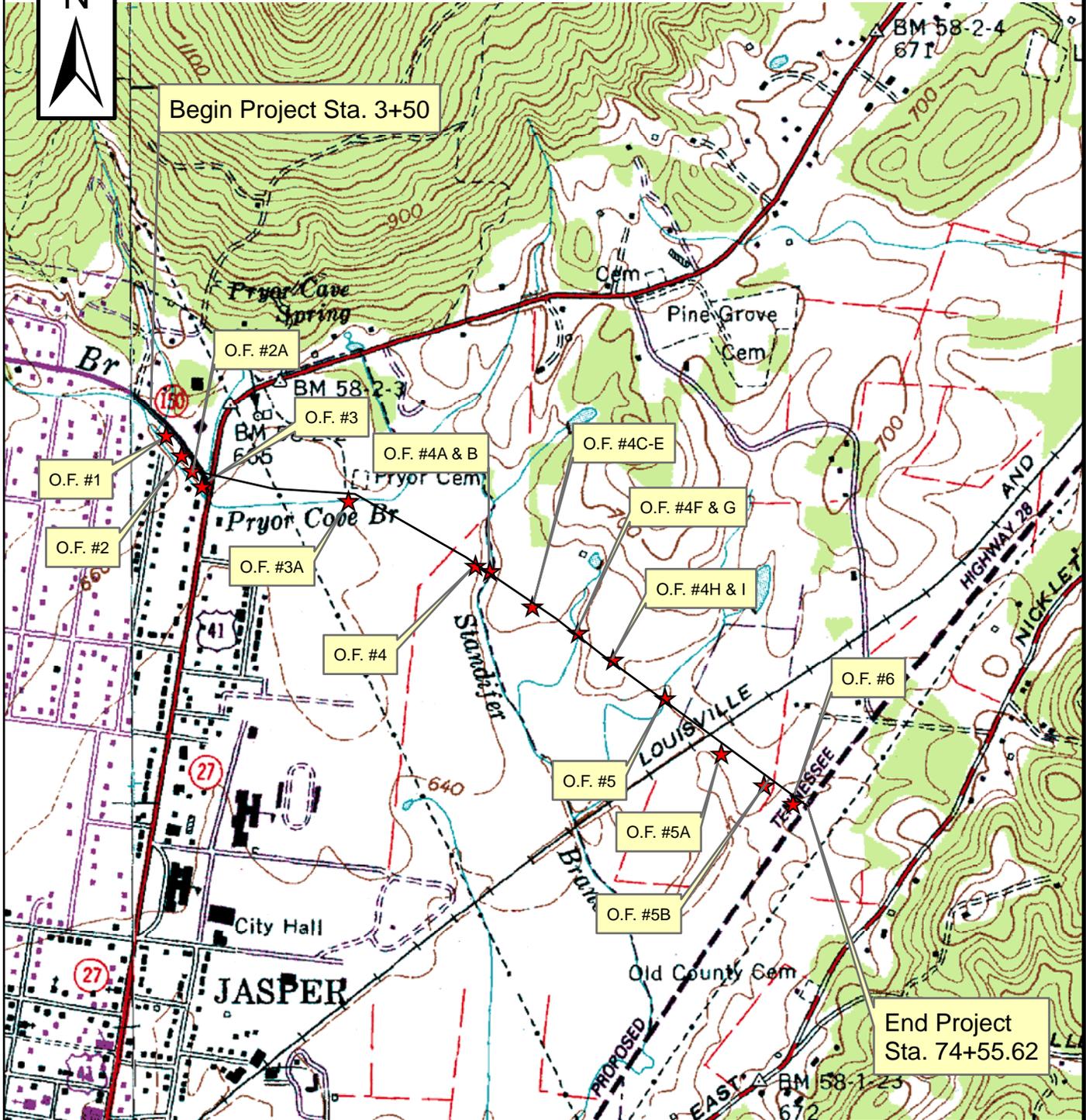
MS4 Jurisdiction: If this construction site is located within a Municipal Separate Storm Sewer System (MS4), please list name of MS4. A current list of MS4s in Tennessee may be found at http://www.state.tn.us/environment/water/water-quality_storm-water.shtml

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.**

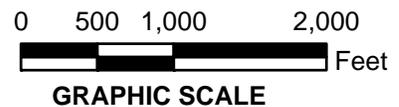
EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	1301 Riverfront Parkway, Suite 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601



★ Approx. Outfall Location

USGS TOPOGRAPHIC MAP

Source:
USGS Topographic Maps
Sequatchie, Tennessee Quadrangle Map (1985)



Stormwater Pollution Prevention Plan
S.R. 150
From Existing S.R. 150
to S.R. 28 North of Jasper
Marion County, Tennessee

Proj. No. 58015-1210-14
PIN 103774.00
Figure 1

Blank NOT



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)

Division of Water Resources

William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, 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 DWR 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.

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.

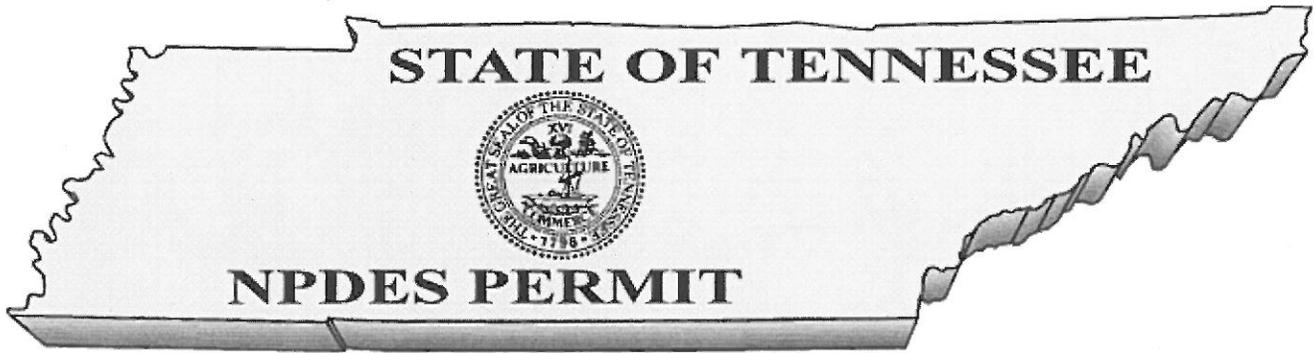
For the purposes of this certification, elimination of stormwater discharges associated with construction activity means that all stormwater discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have been eliminated from the portion 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:
---------------------------------	------------	-------

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	1301 Riverfront Parkway, Ste. 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

Construction General Permit



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 cursive script, appearing to read "P. E. Davis".

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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- APPENDIX A – Notice of Intent (NOI) Form
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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

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

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- 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/tu_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(1)). 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:

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:
---------------------------------	------------	-------

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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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

February 12, 2015

Ms. Tammy Turley
U.S. Army Corps of Engineers
Regulatory Branch
3701 Bell Road
Nashville, TN 37214-2660

Subject: TDOT Project 58015-1210-14
PIN 103774.00
State Route 150
From: Existing SR 150
To: SR 28, North of Jasper
Marion County

Dear Ms. Turley:

The Tennessee Department of Transportation is proposing to extend State Route 150 (US-41) from Tar Kiln Ave to Valley View Highway (Old TN-28) (near Jasper) in Marion County. The project involves building a subject roadway consists of two (2) 12 ft. wide travel lanes, 10 ft. wide shoulders, curb and gutter in each direction, in addition to provide turn lanes at the major intersections. Also included within the project scope are the crossing/impact of six (6) streams, five (5) wetlands, and utility crossings. The project scope also includes all associated drainage improvements. The total proposed length of roadway construction and improvements equals 3.513 miles. We are enclosing DA form 4345, along with a copy of appropriate plan sheets and drawings; mitigation notes; and portions of the USGS quad map for Sequatchie, TN (Quad 100-SE), showing the location where we believe an Individual Section 404 Permit may be required on the subject project.

Purpose and Need

The primary purpose of the proposed project is to enhance accessibility, to improve traffic flow, to increase capacity, and to provide a safe and efficient roadway that meets current design standards. The proposed extension would improve existing north/south route to serve the demand for improved local access and for regional accessibility/linkage to the interstate highway system (US-41). The accessibility would provide connectivity to SR -28 by linking SR-150 to SR-28 in northern Jasper. Other benefits include the possibility of enhancing economic

Ms. Turley:
February 11, 2015
Page 2

growth and improving access to future commercial and residential sites along with enhancing public transportation services that are currently available.

Permits

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 at the wetlands as described within the enclosed feature impact tables, meet the criteria of the nationwide permit identified.

Also, we are submitting a pre-construction notification and requesting concurrence at the WWC-2/EPH-1. The impact to WWC-2/EPH-1 is more than 0.10 of an acre. Due to the location of this feature, the proposed plan is to relocate WWC-2/EPH-1 to maintain flow between STR-1 and STR-4. Relocation of this feature is minimizing our impact.

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.

In addition, and in accordance with T.C.A. 69-3-108(b), this office is submitting form CN-1091 identifying where permits may be needed. See enclosed feature impact tables identifying where permits and types required.

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.

This project includes a total permanent wetland impact of 1.24 acres. We propose to mitigate the permanent wetland impacts by debiting, at a 2:1 ratio, 2.48 acres from available wetland credits at the Sequatchie Valley Wetland Mitigation Bank. A debit sheet is enclosed.

As mitigation for 705 ft. (705 ft. x 1.0) of stream [encapsulation] [length losses], we propose a total payment of \$169,200.00 to the In-Lieu Fee Stream Mitigation Program. Please cite this payment to the TWRF in your permits.

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 search of the TDEC Division of Natural Areas, endangered species database, was conducted on April 23, 2012. This database search, paired with the findings from a site visit conducted on March 20-21, 2012, identified six (6) state and or federally listed species within one mile and thirteen (13) listed species within four miles of the proposed site. USFWS and TWRA have stated that proposed BMP's are sufficient to protect the species:

An email was sent from TDOT to the TWRA on May 14, 2010, requesting information on species that may be present in the vicinity of the proposed project. In a response email dated May 14, 2010 (enclosed), the TWRA stated that the proposed BMP's would be sufficient to minimize impacts to rare species for this project.

Indiana Bat:

Ms. Turley:
February 11, 2015
Page 3

On August 31, 2011 TDOT sent a letter to the United States Fish Wildlife Service (USFWS), regarding the bat survey that was conducted and TDOT's findings and information regarding the Indiana bat. In a response letter dated On September 21, 2011 USFWS has concurred with TDOT findings of "not likely to adversely affect for this species."

On October 3, 2014 TDOT sent and updated information on a bat survey via mist netting study from June 22 through June 25, 2014 to identify the potential impact of the Indiana bat. Due to the negative results for the Indian bat survey. TDOT has concluded that the project is "not likely to adversely affect." On October 23, 2015 USFWS responded with a letter and has concurred with TDOT findings of "not likely to adversely affect for this species. USFWS did make a request to consider only remove trees with a DBH (diameter at breast height) of five inches or greater from October 15 to March 31 to further minimize potential impact to species.

In a letter dated August 31, 2004, considering the information provided the TN-SHPO finds the area of potential effect contains no architectural resources eligible for listing in the National Register of Historic Places.

In a letter dated July 8, 2009, the TN-SHPO stated based the information provided in the archaeological report; the project area contains no cultural resources eligible for listing in the National Register of Historic Places.

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

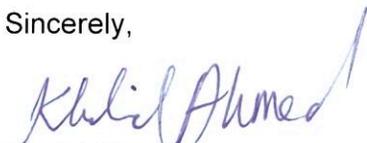
It is the opinion of this office that all other aspects of the project not specifically mentioned in this letter meet the criteria for the General Permit for Wet Weather Conveyances. Please refer to the enclosed Form G for more information.

By copy of this letter, we are also requesting that the TDEC, Corps of Engineers, 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 June 17, 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) 253-0021 or Andrew Wisniewski at (615) 253-2545.

Sincerely,



Khalid Ahmed

Senior Transportation Project Specialist, Environmental Permits Section

Ms. Turley:
February 11, 2015
Page 4

Enclosures

JLH: KMA: APW

cc: Mr. Jimmy Smith, TDEC
Mr. Robert Wayne, TDEC
Ms. Kelly Baxter, TVA

ec:

Region 2

Ms. Jeanene Woodruff, TDEC
Mr. Scott Medlin, Project Management Office
Mr. Robert Rodgers, Design Manager
Mr. Ken Flynn, Region 2 Construction Office
Mr. Wesley Huguen, Region 2 Project Development
Mr. Jason Blankenship, HQ Construction Division
Mr. Tommy Paul, Region 2 Environmental Coordinator
Mr. Rob Howard, Region 2 Ecology Section
Mr. Matt Richards, HQ Ecology Section
Mr. Ben Brown, Mitigation
Mr. Ronnie Porter, Program Operations Office
Mr. Hugh (Chip) Hannah, TDOT Compliance
Ms. Jennifer Stover, TDOT Compliance
Mr. John Hewitt, Natural Resources Office

Permit File

FEATURE SUMMARY TABLE:

FEATURE SUMMARY TABLE:																						
Location Information							Impact Description										Mitigation Description					Comments
Location #	Stationing	Feature Name	Jurisdictional Determination	Waterbody ID	Latitude	Longitude	Brief Impact Description	Impact Acreage to Waters of the US (ac.)	Corps Notification (Y/N)	Existing Structure	Existing Stream	Total Existing Stream Length (ft.)	Proposed Structure	U type endwalls	Proposed Stream	Total Proposed Stream Length (ft.)	Encapsul. Length @ 1.0 Ratio (ft.)	Stream Length Losses @ 1.0 Ratio (ft.)	Rip-rap Length @ 0.75 Ratio (ft.)	Canopy Length Losses @ 0.50 Ratio (ft.)	Total In-Lieu Fee (@ \$240 per LF)	Location-Specific Miscellaneous Comments
2	23+00	STR-1	Intermittent Stream	TN0602000401_0120	35.0916°	85.6239°	Encap	0.15	Y	0	223	223	143		80	223	143	-		-	\$34,320	-
3	41+00	STR-3	Intermittent Stream	TN0602000401_0120	35.0887°	85.6153°	Fill	0.034	Y	0	150	150	0		0	0	0	150		-	\$36,000	-
3	41+90	STR-4	Perennial Stream	TN0602000401_0120	35.0883°	85.6152°	Encap	0.033	Y	0	220	220	107		100	207	107	13	100	-	\$46,800	-
5	52+22	STR-5	Perennial Stream	TN0602000401_0120	35.0868°	85.6123°	Encap	0.014	N	0	209	209	175	24	10	209	199		10	-	\$49,560	-
8	73+22	STR-6	Intermittent Stream	TN0602000401_0120	35.0830°	85.6070°	Encap	0.006	N	0	111	111	65	28	18	111	93	-	18	-	\$25,560	-
Project Totals:								0.241	-			913				750	542	163	128	0	\$192,240	-

WET WEATHER CONVEYANCE/EPHEMERAL SUMMARY TABLE:

Location Information						Impact Description								Mitigation			Comments			
Location	Feature Name	Jurisdictional Determination	Latitude	Longitude	Stationing	Brief Impact Description	Existing Structure (ft.)	Existing Stream (ft.)	Total Existing Feature Length (ft.)	Proposed Structure (ft.)	Proposed Stream (ft.)	Total Proposed Feature Length (ft.)	Total Feature Impact Area (ac.)	Rip-rap Length @ 0.25 Ratio (ft.)	Stream Loss @ 0.25 Ratio (ft.)	Total In-Lieu Fee (@ \$240 per LF)	Location-Specific Miscellaneous Comments			
Location 1	STR-2	Ephemeral	35.0923°	85.6240°	10+72	Encap	36	111	147	106	41	147	0.012	-			-			
Location 3	WWC-2/EPH-1	Ephemeral	35.08951° to 35.0890	85.6174° to 85.6175	34+00-41+45L	Relocation	0	700	700	0	1,250	1,250	0.112		700	\$21,000	This stream has a low resource value, with habitat assessment score of 60. Mitigation for the stream loss is at 0.25 ratio			
Location 7	WWC-3/EPH-2	Ephemeral	35.0852°	85.6104°	60+10	Encap	0	160	160	106	54	160	0.012	43		\$1,290	This stream has a low resource value, with habitat assessment score of 70. Mitigation for the rip-rap at the end of the pipe is at 0.25 ratio.			
							1,007						1,557		0.137		43		175	\$21,000

WETLAND SUMMARY TABLE:											
Location Information					Impact Description				Mitigation Description		Comments
Location #	Feature Name	Latitude	Longitude	Stationing	Brief Impact Description	Impact Acreage to Waters of the US (ac.)	Corps Non-Notification (Y/N)	Permanent Wetland Impact Area (ac.)	Wetland Debit (ac.) (@ 2:1 ratio)	Wetland Mitigation Bank Name	Location-Specific Miscellaneous Comments
4	WTL-1	35.0874°	-85.6136°	47+00-49+00	Partial Fill	1.636	N	0.818	1.64	Sequatchie Valley Wetland Bank	-
4	WTL-2	35.0870°	-85.6132°	49+60-50+00	Partial Fill	0.188	N	0.156	0.31	Sequatchie Valley Wetland Bank	-
4	WTL-3	35.0870°	-85.6130°	51+05-51+20	Partial Fill	0.102	N	0.081	0.16	Sequatchie Valley Wetland Bank	-
6	WTL-4	35.0863°	-85.6120°	54+60-55+00	Fill entire	0.176	N	0.176	0.35	Sequatchie Valley Wetland Bank	-
7	WTL-5	35.0848°	-85.6100°	62+25-62+55R	Fill entire	0.007	N	0.007	0.01	Sequatchie Valley Wetland Bank	-
-	WTL-6	35.0833°	-85.6181°	69+60-70+70R	No Impact	-	-	-	-	-	-
Project Totals:						2.109	-	1.238	2.48	0.00	-

FEATURE IMPACT TABLE:		Location #1 / STR-2 (UT to Pryor Cove Branch) TN06020004001_0121
Location Information		
Location #	Location #1	
Feature Name:	STR-2 (UT to Pryor Cove Branch) TN06020004001_0121	
Latitude:	35.0923°	
Longitude:	-85.6239°	
Stationing:	Sta. 10+72 ± (SR-150)	
FEMA Floodplain Designation :	Zone X	
Permits		
TDEC:	GENERAL AQUATIC RESOURCE ALTERATION PERMIT	
Permits Required - Corps:	<p>Non-Notification - Nationwide #14: (no verification needed)</p> <p>This roadway crossing meets all of the following criteria required for non-notification under Nationwide #14:</p> <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 <p>All conditions of the Nationwide #14 General Permit will be followed during construction.</p>	
Permits Required - TVA:	Section 26A	
CN-1091 Section 6: Project Description		
Narrative description of project scope		Encapsulation
Existing feature characteristics	<p>Existing structure: 36 ft of 3' x 4' box culvert</p> <p>Existing open stream: 111 ft</p> <p>Total Existing Length: 147 ft</p> <p>Please refer to the enclosed Environmental Boundaries Report for more information</p>	
Proposed feature characteristics	<p>Proposed structure: 106 ft of 8' x 5' box culvert</p> <p>Proposed open stream/rip rap length: 37 ft</p> <p>Total proposed length: 143 ft</p> <p><u>Utility Crossings:</u></p> <ol style="list-style-type: none"> 1. Jasper Water and Sewer: remove or abandon water line and add new water and sewer line. 2. Marion Natural Gas: remove or abandon gas line and add new line. 	
* Impact acreage to waters of the US (acres):		0.015
Alternatives and Impact minimization	<p>Used steeper than typical 6:1 side slopes to reduce the structure length. Side slopes are 3.4:1.</p> <p>It is more economical to use box culvert instead span bridge.</p>	
Stream Mitigation	N/A	
Wetland Mitigation	N/A	
Water Resources Degradtion (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.		

FEATURE IMPACT TABLE:		Location #2 / STR-1 (Pryor Cove Branch) TN06020004001 0120
Location Information		
Location #	Location #2	
Feature Name:	STR-1 (Pryor Cove Branch) TN06020004001_0120	
Latitude:	35.0916°	
Longitude:	-85.6239°	
Stationing:	Sta. 23+00 (SR-150)	
FEMA Floodplain Designation :	Zone AE (No-Rise Certification is Enclosed)	
Permits		
TDEC:	INDIVIDUAL AQUATIC RESOURCE ALTERATION PERMIT	
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		
Narrative description of project scope		Encapsulation
Existing feature characteristics	Existing structure: None Existing open stream: 223 ft Total Existing Length: 223 ft Please refer to the enclosed Environmental Boundaries Report for more information	
Proposed feature characteristics	Proposed structure: 143 ft of 3@ 18' x 13' Conc. Box Bridge Proposed Rip-Rap: each side @40 ft, 2x40 = 80 ft Proposed open stream: 80 ft Total proposed length: 223 ft Outfalls: Sta. 8+50, from proposed 36" RCP Sta. 14+85, from proposed 36" RCP	
* Impact acreage to waters of the US (acres):		0.15
Alternatives and Impact minimization	Used steeper than typical 6:1 side slopes to reduce the structure length. Side slopes are 3.4:1. It is more economical to use multiple box culvert over span bridge. No build does not fulfill the purpose and need. Low flow standard drawing STD-15-16A will be used to allow low flow at inlet and outlet of the proposed culvert. To minimize impact to environment, we propose to mitigate impact.	
Stream Mitigation	Due to cumulative impacts we to mitigate for 143 ft. (143 ft. x 1.0) of stream [encapsulation] [length losses], we propose a total payment of \$34,320 to the In-Lieu Fee Stream Mitigation Program.	
Wetland Mitigation	N/A	
Water Resources Degradtion (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.		

FEATURE IMPACT TABLE:		Location #3 / STR-3 & STR-4 (UT to Standifer Branch and Standifer Branch) TN06020004001_0120
Location Information		
Location #	Location #3	
Feature Name:	STR-3 & STR-4 (UT to Standifer Branch and Standifer Branch) TN06020004001_0120	
Latitude:	35.0883°	
Longitude:	-85.6151°	
Stationing:	Sta. 41+00 and 41+90	
FEMA Floodplain Designation:	Zone AE (No-Rise Certification is Enclosed)	
Permits		
TDEC:	INDIVIDUAL AQUATIC RESOURCE ALTERATION PERMIT	
Permits Required - Corps:	Pre-Construction Notification- Nationwide #14: Due to cumulative and connected impacts at this site exceed one tenth of an acre; therefore, Pre-Construction Notification is required.	
Permits Required - TVA:	Section 26A	
CN-1091 Section 6: Project Description		
Narrative description of project scope	Fill and Encapsulation	
Existing feature characteristics	<p>STR-3 Existing structure: None Existing open stream: 150 ft Total existing length: 150 ft</p> <p>STR-4 Existing structure: None Existing open stream: 220 ft Total existing length: 220 ft Please refer to the enclosed Environmental Boundaries Report for more information</p>	
Proposed feature characteristics	<p>STR-3 Proposed action: fill 150 ft of stream with graded rock Proposed open stream: 0 ft Total proposed length: 150 ft</p> <p>STR-4 Propose structure: 107 of 3 @ 18' x 13' Conc. Box Bridge Proposed Rip-rap: Proposed open stream: 100 ft including rip -rap 50 ft each side ,2 x 50 = 100 ft Total proposed length: 207 ft</p>	
* Impact acreage to waters of the US (acres):		0.067
Alternatives and Impact minimization	<p>STR-4 Used steeper than typical 6:1 side slopes to reduce the structure length. Side slopes are 2:1. It is more economical to use multiple box culvert over span bridge. Low flow standard drawing STD-15-16A will be used to allow low flow at inlet and outlet of the proposed culvert.</p> <p>STR-3 It is not desirable to build a culvert at that angle right next to another proposed culvert. Spanning both streams with a bridge is not very economical. Relocate WWC-2 allows the flow to continue to STR-4 To minimize impact to environment, we propose to mitigate impact. No build does not fulfill the purpose and need.</p>	
Stream Mitigation	Due to cumulative impacts we to mitigate for 270 ft. (270 ft. x 1.0) of stream [encapsulation] [length losses], we propose a total payment of \$64,800 to the In-Lieu Fee Stream Mitigation Program.	
Wetland Mitigation	N/A	
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.	

FEATURE IMPACT TABLE:		Location #4 / WTL-1, WTL-2, & WTL-3	
Location Information			
Location #	Location #4		
Feature Name:	WTL-1, WTL-2, & WTL-3		
Latitude:	35.0874°		
Longitude:	-85.0874°		
Stationing:	Sta. 47+00-51+00 ± (SR-150)		
FEMA Floodplain Designation:	Zone AE		
Permits			
TDEC:	INDIVIDUAL AQUATIC RESOURCE ALTERATION PERMIT		
Permits Required - Corps:	Pre-Construction Notification- Individual-404: Impact exceeds 0.5 acres; therefore, Pre-Construction Notification is required.		
Permits Required - TVA:	Section 26A		
CN-1091 Section 6: Project Description			
Narrative description of project scope	Partial Fill		
Existing feature characteristics	WTL-1 1.93 acres		
	WTL-2 0.385 acres		
	WTL-3 0.096 acres		
	Please refer to the enclosed Environmental Boundaries Report for more information		
Proposed feature characteristics	WTL-1 Permanent impact: 0.818 acres		
	WTL-2 Permanent impact: 0.156 acres		
	WTL-3 Permanent impact: 0.081 acres		
	Total permanent impact: 1.055 acres		
	* Impact acreage to waters of the US (acres): 1.055		
Alternatives and Impact minimization	Minimized impact by reducing typical road section from 36' to 24'. Turn lane was not used from Sta. 47+00-65+00. Remaining wetland, left and right side of the road reconnected with 30 inch pipe. To minimize impact to environment, we propose to mitigate impact. No build does not fulfill the purpose and need.		
Stream Mitigation	N/A		
Wetland Mitigation	WETLANDS We propose to mitigate the permanent wetland impacts by debiting, at a 2:1 ratio, 2.11 acres from available wetland credits at the Sequatchie Valley Wetland Bank. A debit sheet is enclosed.		
Water Resources Degradtion (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.			

FEATURE IMPACT TABLE:		Location #5 / STR-5 (UT to Standifer Branch) TN06020004001 0120
Location Information		
Location #	Location #5	
Feature Name:	STR-5 (UT to Standifer Branch) TN06020004001_0120	
Latitude:	35.0923°	
Longitude:	-85.6239°	
Stationing:	Sta. 52+22 ± (SR-150)	
FEMA Floodplain Designation:	Zone X	
Permits		
TDEC:	INDIVIDUAL AQUATIC RESOURCE ALTERATION PERMIT	
Permits Required - Corps:	<p>Non-Notification - Nationwide #14: (no verification needed)</p> <p>This roadway crossing meets all of the following criteria required for non-notification under Nationwide #14:</p> <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 <p>All conditions of the Nationwide #14 General Permit will be followed during construction.</p>	
Permits Required - TVA:	Section 26A	
CN-1091 Section 6: Project Description		
Narrative description of project scope	Encapsulation	
Existing feature characteristics	<p>Existing structure: None</p> <p>Existing open stream: 209 ft</p> <p>Total Existing Length: 209 ft</p> <p>Please refer to the enclosed Environmental Boundaries Report for more information</p>	
Proposed feature characteristics	<p>Proposed structure: 175' of 36" Reinforced Concrete Pipe</p> <p>U-type endwalls: inlet 12 ft + outlet 12 ft =24 ft</p> <p>Proposed open stream: 10 ft inclding rip-rap</p> <p>Total proposed length: 175+24+10 = 209 ft</p>	
* Impact acreage to waters of the US (acres):		0.014
Alternatives and Impact minimization	<p>Used steeper than typical 6:1 slide slopes to reduce the structure length. Side slopes are 3.1:1.</p> <p>It is more economical to use pipe culvert over box culvert for such a small crossing.</p> <p>To minimize impact to environment, we propose to mitigate impact. No build does not fulfill the purpose and need.</p>	
Stream Mitigation	<p>Due to cumulative impacts we to mitigate for 199 ft. (199 ft. x 1.0) of stream [encapsulation] [length losses], we propose a toal payment of \$47,760 to the In-Lieu Fee Stream Mitigation Program.</p>	
Wetland Mitigation	N/A	
Water Resources Degradtion (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.		

FEATURE IMPACT TABLE:		Location #6 / WTL-4
Location Information		
Location #	Location #6	
Feature Name:	WTL-4	
Latitude:	35.0874°	
Longitude:	-85.0874°	
Stationing:	Sta. 54+50-55+00 ± (SR-150)	
FEMA Floodplain Designation:	Zone X	
Permits		
TDEC:	INDIVIDUAL AQUATIC RESOURCE ALTERATION PERMIT	
Permits Required - Corps:	Pre-Construction Notification- Nationwide #14: Impacts at this site are proposed to wetlands; therefore, Pre-Construction Notification is required.	
Permits Required - TVA:	Section 26A	
CN-1091 Section 6: Project Description		
Narrative description of project scope	Fill wetland	
Existing feature characteristics	WTL-4 0.176 acres Please refer to the enclosed Environmental Boundaries Report for more information	
Proposed feature characteristics	WTL-4 Permanent impact: 0.176 acres	
* Impact acreage to waters of the US (acres):	0.176	
Alternatives and Impact minimization	To minimize impact to environment, we propose to mitigate impact. No build does not fulfill the purpose and need.	
Stream Mitigation	N/A	
Wetland Mitigation	We propose to mitigate the permanent wetland impacts by debiting, at a 2:1 ratio, 0.35 acres from available wetland credits at the Sequatchie Valley Wetland Bank. A debit sheet is enclosed.	
Water Resources Degradtion (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.		

FEATURE IMPACT TABLE:		Location #7 / WTL-5
Location Information		
Location #	Location #7	
Feature Name:	WTL-5	
Latitude:	35.0874°	
Longitude:	-85.0874°	
Stationing:	Sta. 62+30 ± (SR-150)	
FEMA Floodplain Designation:	Zone X	
Permits		
TDEC:	INDIVIDUAL AQUATIC RESOURCE ALTERATION PERMIT	
Permits Required - Corps:	Pre-Construction Notification- Nationwide #14: Impacts at this site are proposed to wetlands; therefore, Pre-Construction Notification is required.	
Permits Required - TVA:	Section 26A	
CN-1091 Section 6: Project Description		
Narrative description of project scope	Fill wetland	
Existing feature characteristics	WTL-5 = 0.007 acres Please refer to the enclosed Environmental Boundaries Report for more information	
Proposed feature characteristics	WTL-5 Permanent impact: 0.007 acres	
* Impact acreage to waters of the US (acres):	0.007	
Alternatives and Impact minimization	To minimize impact to environment, we propose to mitigate impact. No build does not fulfill the purpose and need.	
Stream Mitigation	N/A	
Wetland Mitigation	We propose to mitigate the permanent wetland impacts by debiting, at a 2:1 ratio, 0.01 acres from available wetland credits at the Sequatchie Valley Wetland Bank. A debit sheet is enclosed.	
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.		

FEATURE IMPACT TABLE:		Location #8 / STR-6 (UT to Standifer Branch) TN06020004001_0120
Location Information		
Location #	Location #8	
Feature Name:	STR-6 (UT to Standifer Branch) TN06020004001_0120	
Latitude:	35.0830°	
Longitude:	-85.6070°	
Stationing:	Sta. 73+22 ± (SR-150)	
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone X	
Permits		
TDEC:	INDIVIDUAL AQUATIC RESOURCE ALTERATION PERMIT	
Permits Required - Corps:	<p><u>Non-Notification - Nationwide #14: (no verification needed)</u> This roadway crossing meets all of the following criteria required for non-notification under Nationwide #14:</p> <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 <p>All conditions of the Nationwide #14 General Permit will be followed during construction.</p>	
Permits Required - TVA:	Section 26A	
CN-1091 Section 6: Project Description		
Narrative description of project scope	Encapsulation	
Existing feature characteristics	Existing structure: None Existing open stream: 111 ft Total Existing Length: 111 ft Please refer to the enclosed Environmental Boundaries Report for more information	
Proposed feature characteristics	Proposed structure: 65' of 36" Reinforced Concrete Pipe (RCP) Proposed u-type endwalls: Inlet 14 ft outle 14 ft = 28 ft. Proposed open stream: 18 ft including rip-rap Total proposed length: 65+28+18=111 ft	
* Impact acreage to waters of the US (acres):	0.06	
Alternatives and Impact minimization	Used steeper than typical 6:1 slide slopes to reduce the structure length. Side slopes are 4:1. It is more economical to use box culvert over slab bridge for such a small crossing. To minimize impact to environment, we propose to mitigate impact. No build does not fulfill the purpose and need.	
Stream Mitigation	Due to cumulative impacts we to mitigate for 93 ft. (93 ft. x 1.0) of stream [encapsulation] [length losses], we propose a total payment of \$22,320 to the In-Lieu Fee Stream Mitigation Program.	
Wetland Mitigation	N/A	
Water Resources Degradtion (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.		



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: Khalid Ahmed
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) 253-0021 | Fax: N/A | E-mail: Khalid.Ahmed@tn.gov

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

Alternate Contact Name: Andrew Wisniewski
Company: Tennessee Department of Transportation | Title or Position: Graduate Transportation Associate
Mailing Address: 505 Deaderick Street Suite 900 J.K. Polk Bldg. | City: Nashville | State: TN | Zip: 37243
Phone: (615) 253-2545 | Fax: N/A | E-mail: Andrew.Wisniewski@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 SR-150 | Nearest City, Town or Major Landmark: Near Jasper
Street Address or Location: From: Existing SR-150, To: SR-28
County(ies): Marion | 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: Unnamed Tributary to Pryor Cove, Standifer Branch, and Unnamed Tributary to Standifer Branch
Brief Project Description (a more detailed description is required under Section 8):
Construct a new section of SR-150 from existing SR-150 to SR-28, by crossing several streams and wetlands to accommodate the proposed road and curb and gutter section.
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: _____
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: 9/28/15 | Estimated end date: 9/28/20
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 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. Please refer to the enclosed feature impact and summary tables.

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 checked="" 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 checked="" type="checkbox"/>
11.3	Provide a detailed monitoring plan for the compensatory mitigation site	<input type="checkbox"/>	<input checked="" 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 checked="" 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."

<u>Khalid Ahmed</u>	<u>Sr. Transportation Project Specialist</u>		<u>02/12/2015</u>
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:
Date:	Impaired Receiving Stream:		
Check #:	Exceptional TN Water:		<input type="checkbox"/> Deficient Date: _____ <input type="checkbox"/> Complete Date: _____

JOINT APPLICATION FORM

Department of the Army/TVA

The Department of the Army (DA) permit program is authorized by **Section 10 of the Rivers and Harbors Act of 1899** and **Section 404 of the Clean Water Act (P.L. 95-217)**. These laws require permits authorizing structures and work in or affecting navigable waters of the United States and the discharge of dredged or fill material into waters of the United States. **Section 26a of the Tennessee Valley Authority Act**, as amended, prohibits the construction, operation, or maintenance of any structure affecting navigation, flood control, or public lands or reservations across, along, or in the Tennessee River or any of its tributaries until plans for such construction, operation, and maintenance have been submitted to and approved by the Tennessee Valley Authority (TVA).

Name and Address of Applicant: Tennessee Department of Transportation 505 Deaderick Street, Suite 900 Nashville, TN 37243	Name, Address, and Title of Authorized Agent:
Telephone Number: Home _____ Office (615) 253-0021	Telephone Number: Home _____ Office _____

Location where activity exists or will occur (include Stream Name and Mile, if known):

SR-150 from Existing SR-150 to SR-28 North of Jasper

Application submitted to DA TVA
Date activity is proposed to commence: 9/28/2015 Date activity is proposed to be completed: 9/28/2020

Describe in detail the proposed activity, its purpose and intended use (private, public, commercial, or other). Describe structures to be erected including those placed on fills, piles, or floating platforms. Also describe the type, composition, and quantity of materials to be discharged or placed in the water; the means of conveyance; and the source of discharge or fill material. Please attach additional sheets if needed.

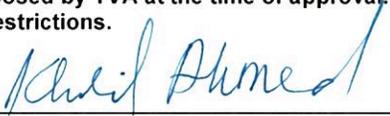
PIN 103774.00

The applicant proposes to construct approximately 1.5 mi of extension of SR-150 to SR-28 for public use. The proposed typical section consists of two 12' travel lanes (one 12' lane in each direction), 10' shoulders with ditches on both sides of the roadway, and 120' right-of-way with easements as required.

This project will not cause any loss of flood storage or power storage volumes.

Application is hereby made for approval of the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. **I agree that, if this application is approved by TVA, I will comply with the attached terms and conditions and any special conditions that may be imposed by TVA at the time of approval. Please note the U.S. Army Corps of Engineers may impose additional conditions or restrictions.**

2/12/2015
Date


Signature of Applicant

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both. The appropriate DA fee will be assessed when a permit is issued.

Names, addresses, and telephone numbers of adjoining property owners, lessees, etc., whose properties also join the waterway:
See attached

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

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	GARAP			
TDEC	NPDES			

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 should accompany the application. These should be on paper suitable for reproduction no larger than 11 x 17 inches or contained on a 3-1/2 inch floppy computer disc in "dxf" format, and should be submitted 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 Office Location
U.S. Army Corps of Engineers Eastern Regulatory Field Office Spring Cress Business Park 501 Adessa Blvd., 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
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	
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	

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 1.5 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.

Disclose if any of the following apply to you (check all that apply [X]). 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.

Project # 58015-1210-14
PIN 103774.00
SR 150/US 41
From Existing SR 150 (N of Jasper)
To SR 28
Marion 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.

[X] 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 [X] 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.

Name of applicant (Printed) Khalid Ahmed

Signature of Applicant [Handwritten Signature] Date 2/12/2015

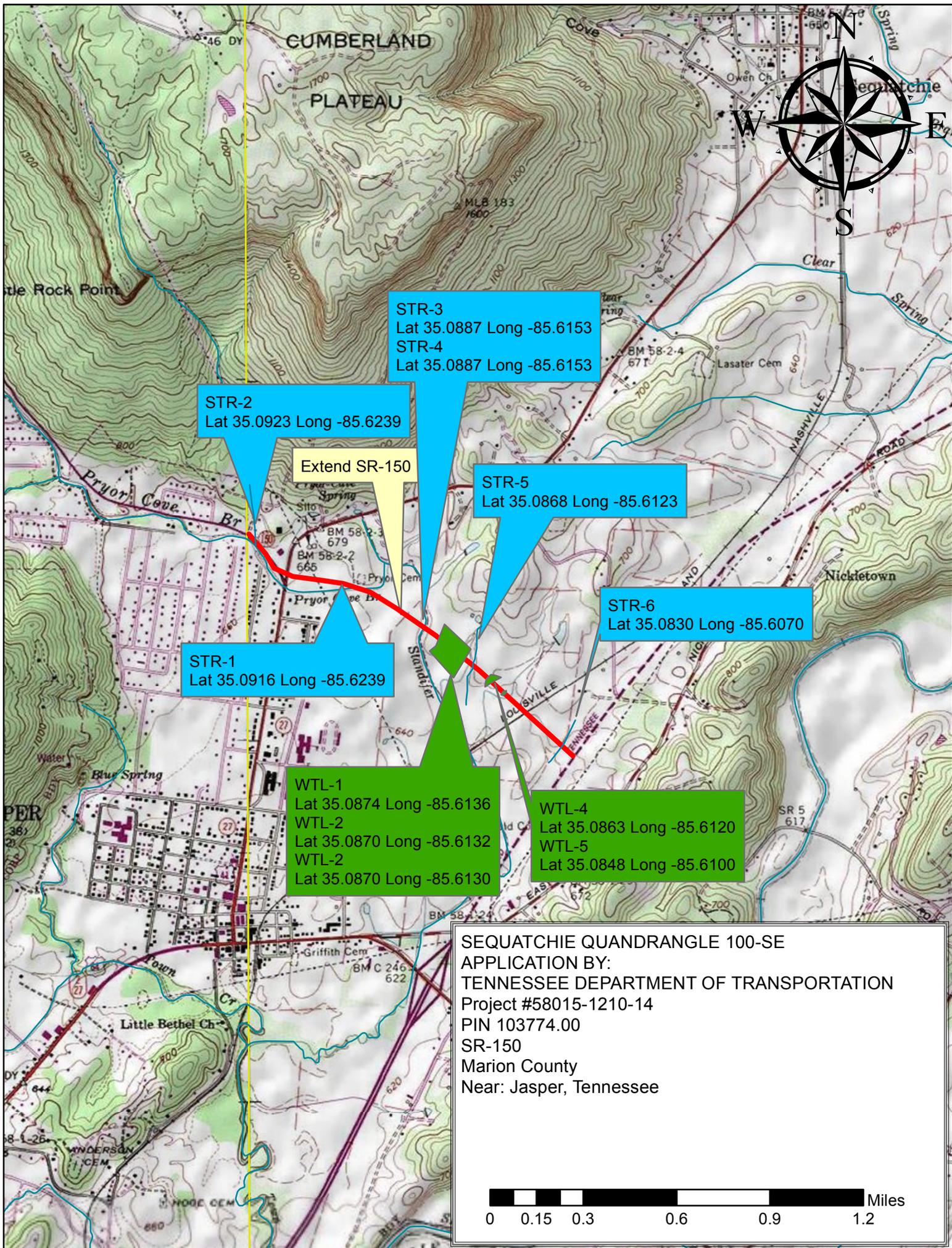
All applications and communications that occur as part of the application process may be made public to the extent permitted by applicable law, including the Freedom of Information Act and the Privacy Act, and could be reviewed formally by the Office of Inspector General (OIG).

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.

Property Owner Names and Addresses:

- (10) Agnes Rose Joels 142 Hunters Ridge Dr. Tullahoma, TN 37388
- (11) Veronica Owens 80 Tarklin Road Jasper, TN 37347
- (12) Darline Moore 240 Pleasant View Circle Jasper, TN 3734
- (13) Sam Ferrell III 1315 Valley View Highway Jasper, TN 37347
- (14) Trustees of McKendree United Methodist Church 106 State Hwy 150 Jasper, TN 37347
- (15) Georgia Hoge Trust C/O John Hoge Ferrell Jr. Trustee 395 W. Main St. Hull IL 62343
- (16) John Gunter II ETUX Shelly P.O. Box 761 Jasper, TN 37347
- (18) Sam Ferrell III & Bobby Gravitt Jr. 1315 Valley View Hwy Jasper, TN 37347
- (19) James & Wanda Barker Gentry 1400 Valley View Hwy Jasper, TN 37347
- (20) Ben May 915 Mayfair Ave. Jasper, TN 37347
- (26) Ronald-Vicki L. Nunley Sr. 4381 Hwy 150 Sequatchie, TN 37347
- (27) Marion Board of Education 206 Betsy Pack Drive Jasper, TN 37347
- (31) Hilda-Trustee 1050 Bobo Section Rd Hazel Green, AL 35750
- (50) John Dobbs 1369 Valley View Hwy Jasper, TN 37347
- (51) Jimmy&Betty Sue Jones 1411 Valley view Hwy Jasper, TN 3734
- (52) Richard Sisemore 95 Tarklin Rd. Jasper, TN 37347



STR-3
 Lat 35.0887 Long -85.6153
 STR-4
 Lat 35.0887 Long -85.6153

STR-2
 Lat 35.0923 Long -85.6239

Extend SR-150

STR-5
 Lat 35.0868 Long -85.6123

STR-6
 Lat 35.0830 Long -85.6070

STR-1
 Lat 35.0916 Long -85.6239

WTL-1
 Lat 35.0874 Long -85.6136
 WTL-2
 Lat 35.0870 Long -85.6132
 WTL-2
 Lat 35.0870 Long -85.6130

WTL-4
 Lat 35.0863 Long -85.6120
 WTL-5
 Lat 35.0848 Long -85.6100

SEQUATCHIE QUADRANGLE 100-SE
 APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 Project #58015-1210-14
 PIN 103774.00
 SR-150
 Marion County
 Near: Jasper, Tennessee

0 0.15 0.3 0.6 0.9 1.2 Miles



STR-2
Lat 35.0923 Long -85.6239

STR-3
Lat 35.0887 Long -85.6153
STR-4
Lat 35.0887 Long -85.6153

Extend SR-150

STR-5
Lat 35.0868 Long -85.6123

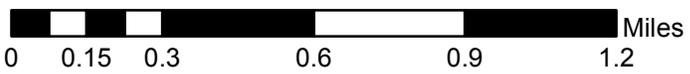
STR-1
Lat 35.0916 Long -85.6239

STR-6
Lat 35.0830 Long -85.6070

WTL-1
Lat 35.0874 Long -85.6136
WTL-2
Lat 35.0870 Long -85.6132
WTL-2
Lat 35.0870 Long -85.6130

WTL-4
Lat 35.0863 Long -85.6120
WTL-5
Lat 35.0848 Long -85.6100

SEQUATCHIE QUADRANGLE 100-SE
APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
Project #58015-1210-14
PIN 103774.00
SR-150
Marion County
Near: Jasper, Tennessee





REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
3701 BELL ROAD
NASHVILLE, TENNESSEE 37214

July 8, 2015

RECEIVED

JUL 08 2015

TDOT Environmental Division
Permits section

Regulatory Branch

SUBJECT: File No. 2015-00190, Tennessee Department of Transportation; Proposed extension of State Route (SR) 150 from Tar Kiln Avenue to Valley View Highway, Sandifer Branch, Pryor Cove Branch, unnamed tributaries (UT) and adjacent wetlands located in Jasper, Marion Co., Tennessee

Mr. Khalid Ahmed
Tennessee Department of Transportation
505 Deaderick Street, Suite 900
Nashville, TN 37243

Dear Mr. Ahmed:

Enclosed is a Department of the Army permit for the subject activity. If changes in the location or plans of the proposed work are necessary for any reason, revised plans should be submitted promptly to this office. No deviations should be made in the approved plans without first obtaining approval from this office.

If you have any questions or comments please contact Travis Wiley at the above address, e-mail travis.a.wiley@usace.army.mil, or telephone (615) 369-7517. For additional information about our Regulatory Program, please visit our web site at <http://www.lrn.usace.army.mil/Missions/Regulatory.aspx>.

Sincerely,

Eric G. Reusch
Chief, Eastern Regulatory Section
Operations Division

Enclosures

DEPARTMENT OF THE ARMY PERMIT

PERMITTEE: Tennessee Department of Transportation (TDOT)

PERMIT NUMBER: LRN-2015-00190

ISSUING OFFICE: Nashville District Corps of Engineers

NOTE: The term you and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer. You are authorized to perform work in accordance with the terms and conditions specified below.

PROJECT DESCRIPTION: The proposed work consists of the permanent discharge of approximately 1,688 cubic yards of fill material into 1,047 linear feet of ephemeral stream, 484 linear feet of intermittent stream, 429 linear feet of perennial stream and 1.238 acres of adjacent wetlands associated with the extension of SR-150 from Tar Kiln Avenue to Valley View Highway. The proposed work is described in the attached plans labeled "TDOT, 2015-00190 Permit Drawings; Figures 1-20"

PROJECT LOCATION: Sandifer Branch, Pryor Cove Branch, unnamed tributaries (UT) and adjacent wetlands located in Jasper, Marion Co., Tennessee. The project is located within the Sequatchie River Watershed (HUC 06020004). Latitude N. 35.0887°, Longitude W. -85.6153°.

PERMIT CONDITIONS:

1. The time limit for completing the work authorized ends on July 8, 2020. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you must make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity, or should you desire to abandon it without a good faith transfer, you may obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions: See Page 4 “**Special Permit Conditions (File No. 2015-00190)**”.

Further Information:

Congressional Authorities. You have been authorized to undertake activity described above pursuant to:

() Section 10 of the Rivers and Harbors Act of 1899

(X) Section 404 of the Clean Water Act

Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, state or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

Special Permit Conditions (File No. 2015-00190)

- (1) Permit Drawings: The work must be completed in accordance with the plans and information submitted in support of the proposed work, attached as "TDOT, 2015-00190 Permit Drawings; Figures 1-20"
- (2) Fill Material: The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, asphalt, construction materials, and concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.
- (3) Erosion Control: Prior to the initiation of any work authorized by this permit, the Permittee shall install erosion control measures along the perimeter of all work areas to prevent the displacement of fill material outside the work area. Immediately after completion of the final grading of the land surface, all slopes, land surfaces, and filled areas shall be stabilized using sod, degradable mats, barriers, or a combination of similar stabilizing materials to prevent erosion. The erosion control measures shall remain in place and be maintained until all authorized work has been completed and the site has been stabilized.
- (4) Compensatory Mitigation (Wetlands): To compensate for the permanent loss of 1.238 acres of wetland, the permittee shall provide receipt of purchase for 2.48 wetland mitigation credits from the Sequatchie Wetland Mitigation Bank prior to commencing work in waters of the U.S. The permittee shall submit to the U.S. Army Corps of Engineers, Nashville District, Regulatory Branch documentation on the completed mitigation bank transaction prior to performing work authorized by this permit. All submittals must prominently display the reference number LRN-2015-00190.
- (5) Compensatory Mitigation (Streams): To compensate for the permanent loss of 1,920 linear feet of stream, the permittee shall provide receipt of purchase for 1,049 mitigation credits from the Tennessee Stream Mitigation Program prior to commencing work in waters of the U.S. The permittee shall submit to the U.S. Army Corps of Engineers, Nashville District, Regulatory Branch documentation on the completed mitigation bank transaction prior to performing work authorized by this permit. All submittals must prominently display the reference number LRN-2015-00190.
- (6) All culverts placed in tributaries shall be installed in a manner that will not restrict the movement of aquatic life indigenous to the affected waterbodies.
- (7) Potential Modifications: Should changes to the work authorized or obligated by this permit become necessary, the Permittee is advised that a modification to this permit instrument is required prior to initiation of those changes. It is the Permittee's responsibility to request a modification of this permit from the Nashville District Regulatory Office.

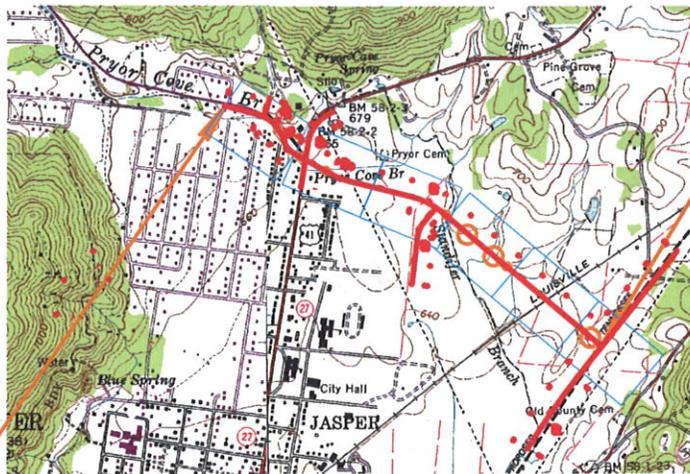
Special Permit Conditions (File No. 2015-00190) Continued

(8) Trees with a diameter breast height of 5" or greater shall be removed between October 15 and March 31 to minimize potential harm to the Indiana bat.

VICINITY MAP



END PROJECT CONST
STA.74+55.61



BEGIN PROJECT CONST
STA.3+50.00

TDOT, 2015-00190 Permit
Drawings; Figure 1



MARION COUNTY

APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 58015-1210-14
PIN 103774.00
FED. CONST. PROJ. # STP-150(4)

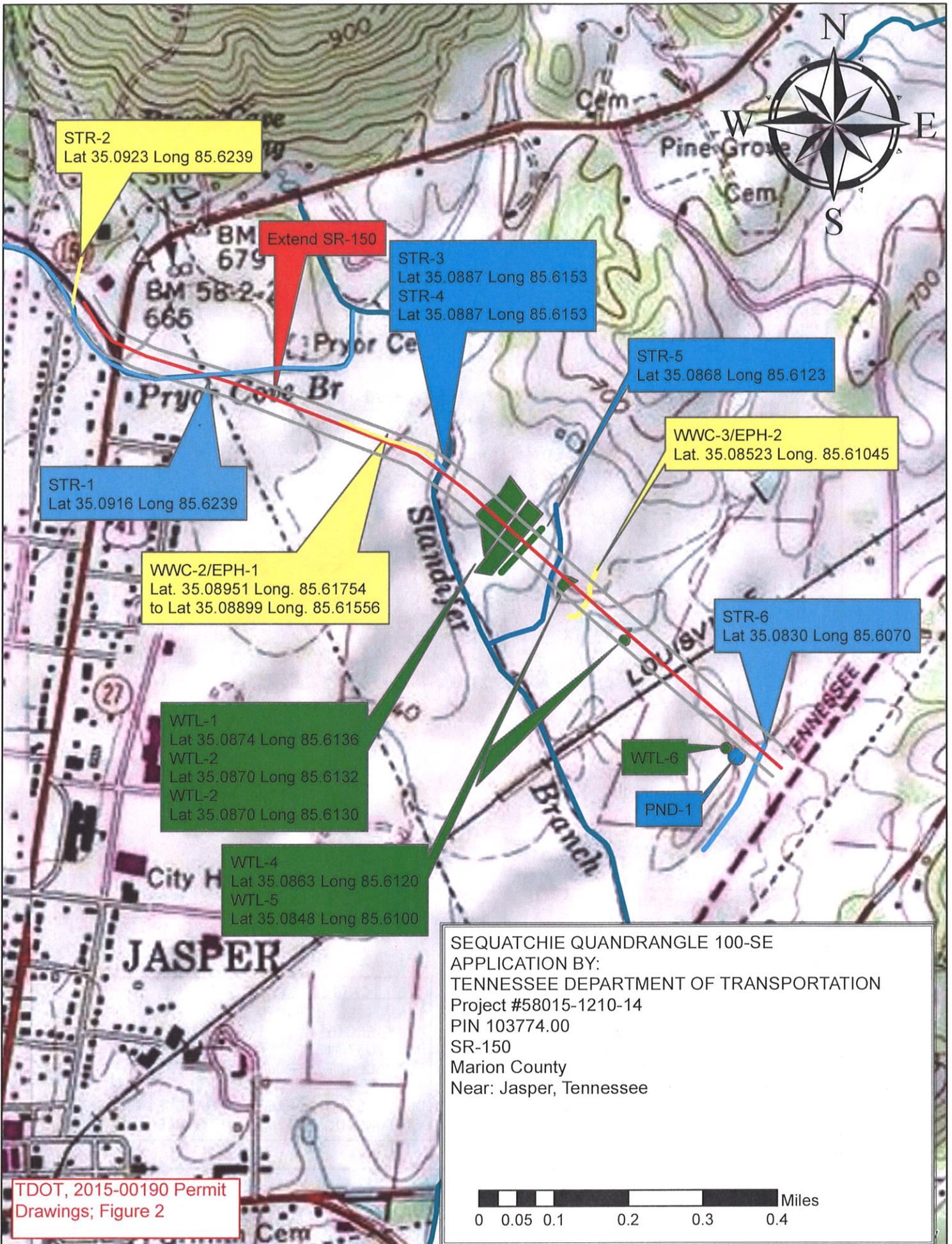
QUAD: SEQUATCHIE QUADRANGLE, TENNESSEE -
MARION CO. 7.5 MINUTE SERIES 100-SE

DATE: 10/11/12 REVISED: 04/14/15 SHEET 1 OF 21

SCALE = 1:3000

CONTOUR INTERVAL 20 FEET





STR-2
Lat 35.0923 Long 85.6239

Extend SR-150

STR-3
Lat 35.0887 Long 85.6153
STR-4
Lat 35.0887 Long 85.6153

STR-5
Lat 35.0868 Long 85.6123

WWC-3/EPH-2
Lat. 35.08523 Long. 85.61045

STR-1
Lat 35.0916 Long 85.6239

WWC-2/EPH-1
Lat. 35.08951 Long. 85.61754
to Lat 35.08899 Long. 85.61556

STR-6
Lat 35.0830 Long 85.6070

WTL-1
Lat 35.0874 Long 85.6136
WTL-2
Lat 35.0870 Long 85.6132
WTL-2
Lat 35.0870 Long 85.6130

WTL-6

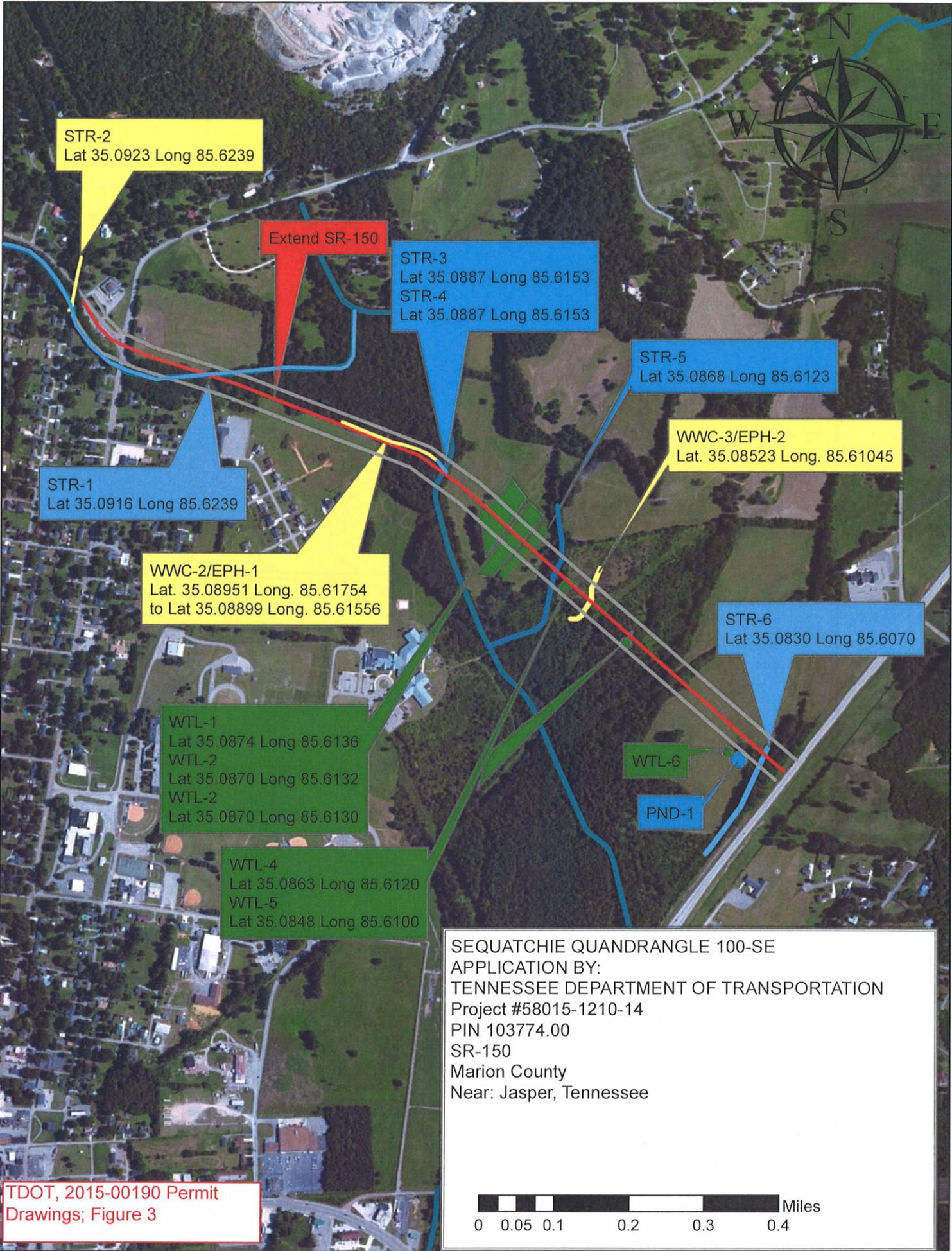
PND-1

WTL-4
Lat 35.0863 Long 85.6120
WTL-5
Lat 35.0848 Long 85.6100

SEQUATCHIE QUADRANGLE 100-SE
APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
Project #58015-1210-14
PIN 103774.00
SR-150
Marion County
Near: Jasper, Tennessee

0 0.05 0.1 0.2 0.3 0.4 Miles

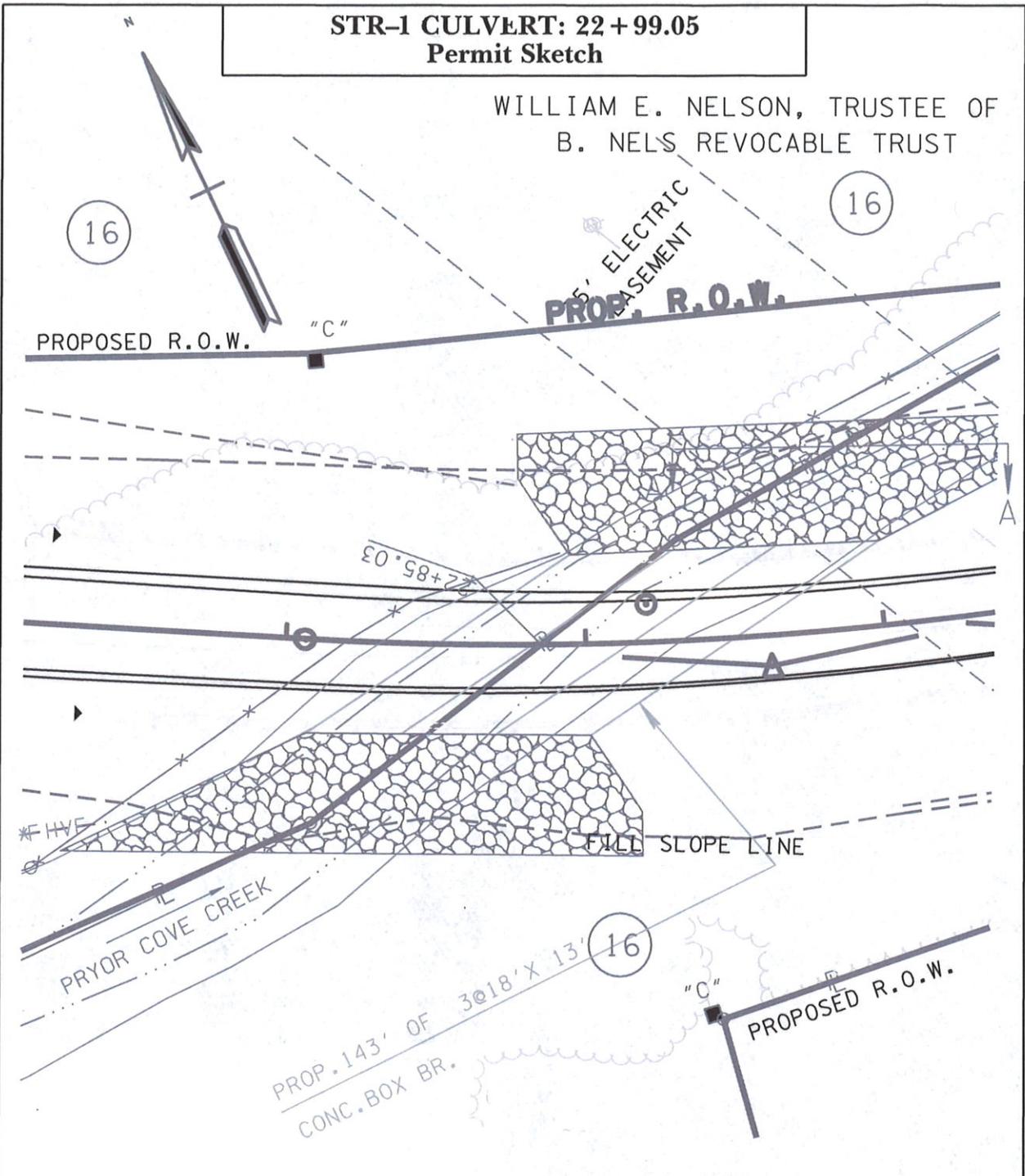
TDOT, 2015-00190 Permit Drawings; Figure 2



TDOT, 2015-00190 Permit Drawings; Figure 3

**STR-1 CULVERT: 22 + 99.05
Permit Sketch**

WILLIAM E. NELSON, TRUSTEE OF
B. NELS REVOCABLE TRUST



TDOT, 2015-00190 Permit
Drawings; Figure 4



APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 58015-1210-14
PIN # 103774.00
SR-150 FROM EXISTING SR-150 TO SR-28
NORTH OF JASPER
MARION COUNTY

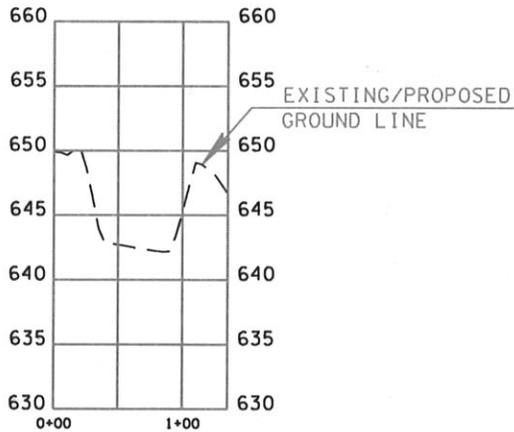
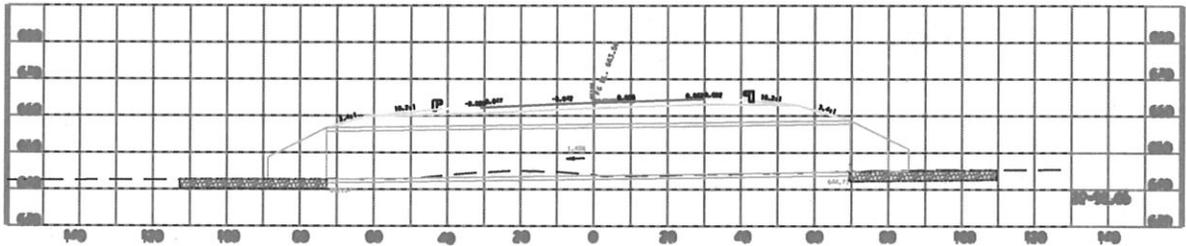
DATE: 10/11/12

REVISED: 01/23/15

SHEET 4 OF 14

STR-1 CULVERT: 22 + 99.05 Permit Sketch

STATION	22+99.05
STRUCTURE	143' of 30'x13' BOX CULVERT
SKEW	37' LT
DRAINAGE AREA	8264 AC.
DESIGN DISCHARGE (050)	2564 CFS
DESIGN DISCHARGE (0100)	2973 CFS
OVERTOPPING ELEV.	663.59
050 HEADWATER ELEV.	654.62
0100 HEADWATER ELEV.	654.62
VELOCITY (050)	17.8 FT/S
VELOCITY (0100)	18.4 FT/S
INLET ELEVATION	644.71
OUTLET ELEVATION	642.70
STANDARD DRAWING NUMBERS	STD-15-89



Section A-A View
OUTLET

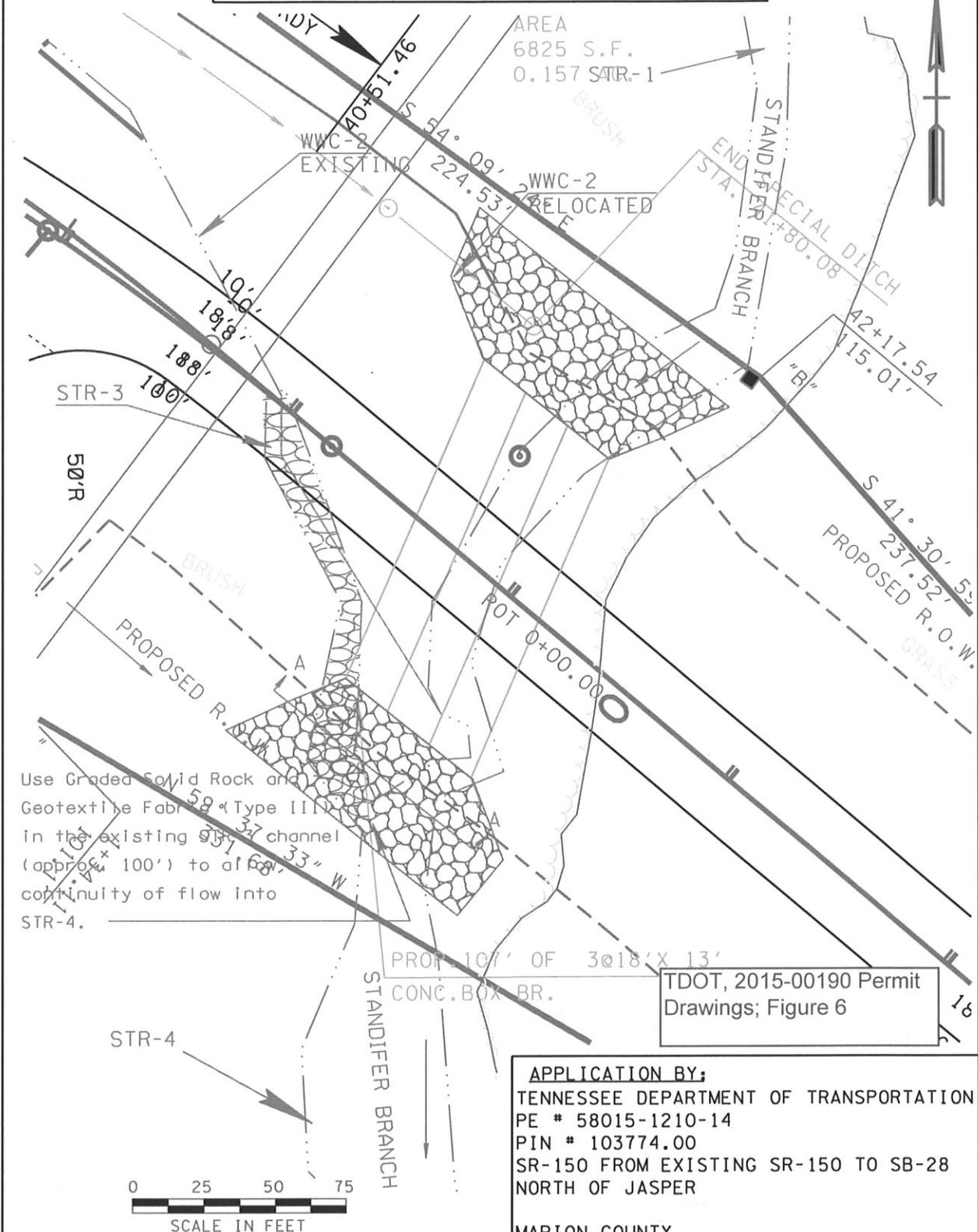


TDOT, 2015-00190 Permit
Drawings; Figure 5

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 58015-1210-14
 PIN # 103774.00
 SR-150 FROM EXISTING SR-150 TO SR-28
 NORTH OF JASPER

MARION COUNTY

**STR-3 & 4 CULVERT: 41+86.04
Permit Sketch**



Use Graded Solid Rock and Geotextile Fabric (Type III) in the existing channel (approx. 100') to allow continuity of flow into STR-4.

TDOT, 2015-00190 Permit Drawings; Figure 6

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 58015-1210-14
 PIN # 103774.00
 SR-150 FROM EXISTING SR-150 TO SB-28
 NORTH OF JASPER
 MARION COUNTY

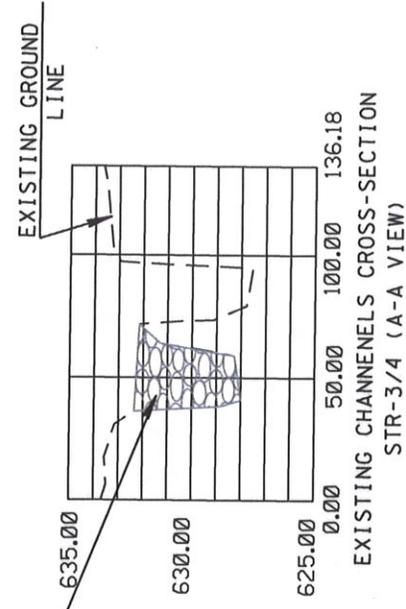


**STR-3 & 4 CULVERT: 41+86.04
Permit Sketch**

Notes:

- 1.) Use standard drawing STD-15-16A at the inlet and outlet of the proposed box culvert. This will allow low flow directed into the first Eastern barrel.
- 2.) Use GRADED SOLID ROCK and GEOTEXTILE FABRIC (TYPE III) in the existing STR-3 channel (approximately 100') to allow continuity of flow into STR-4.

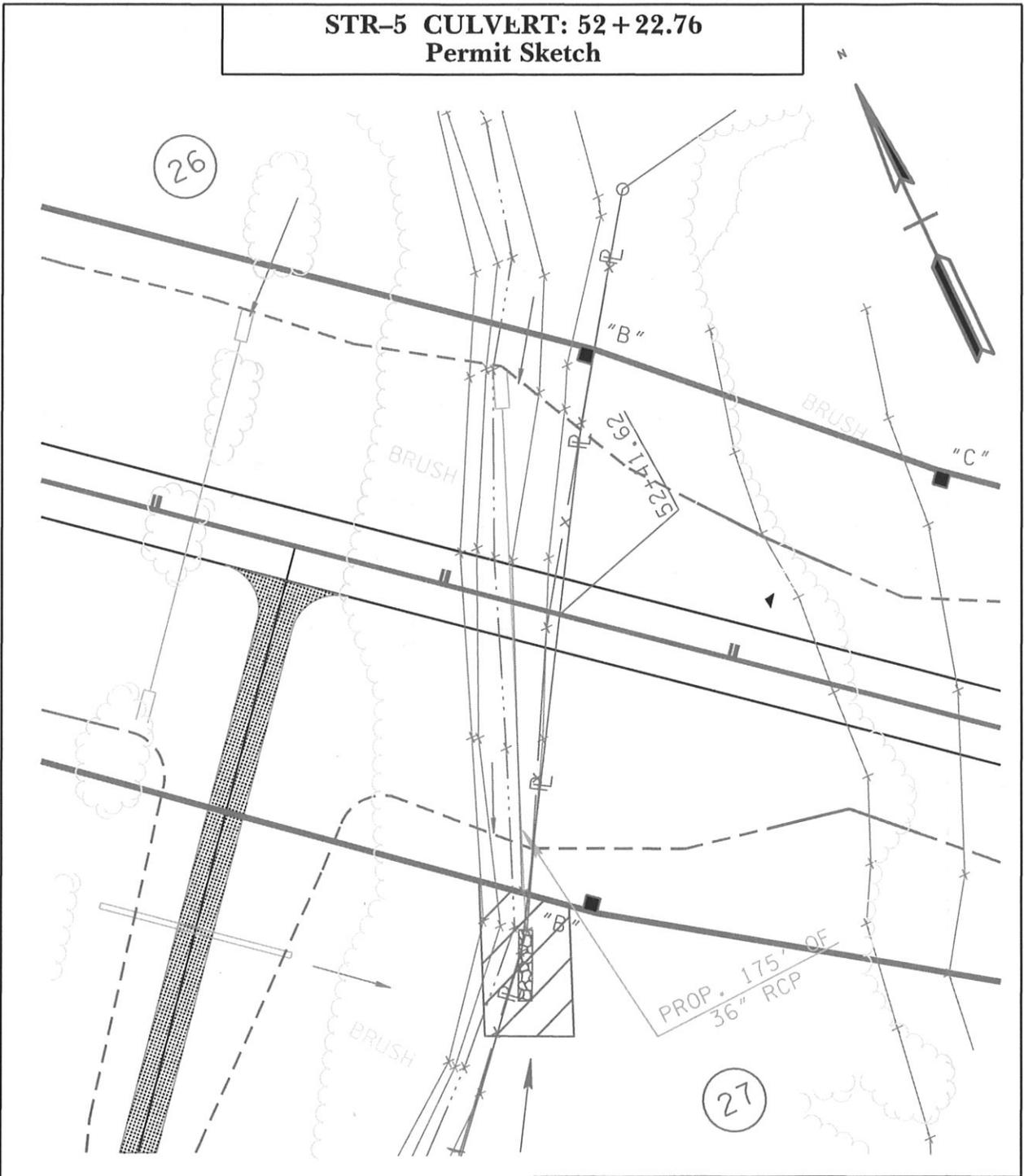
PROPOSED GRADED SOLID ROCK
WRAPPED IN GEOTEXTILE FABRIC
(TYPE III)



APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 58015-1210-14
 PIN # 103774.00
 SR - 150 FROM EXISTING SR - 150 TO SR
 NORTH OF JASPER.
 MARION COUNTY

TDOT, 2015-00190 Permit
Drawings; Figure 7

**STR-5 CULVERT: 52 + 22.76
Permit Sketch**



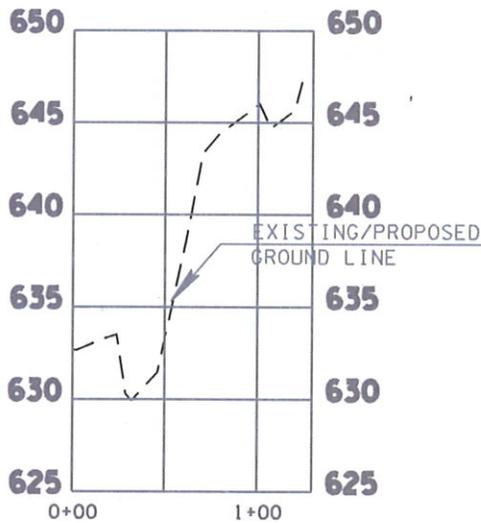
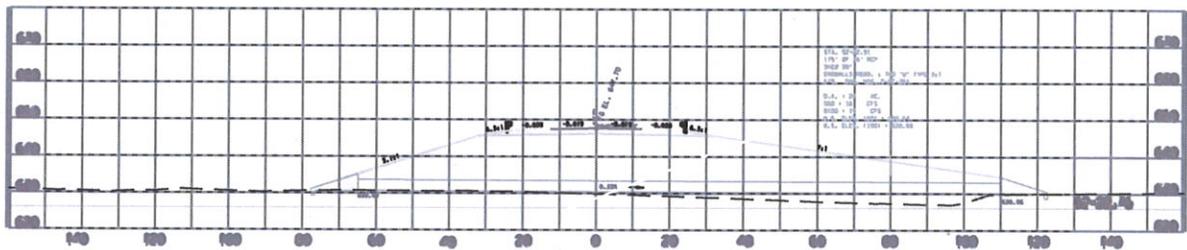
TDOT, 2015-00190 Permit
Drawings; Figure 8



APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 58015-1210-14
 PIN # 103774.00
 SR-150 FROM EXISTING SR-150 TO SR-28
 NORTH OF JASPER
 MARION COUNTY

STR-5 CULVERT: 52+22.76 Permit Sketch

STATION	52+22.91
STRUCTURE	175' OF 36" RCP
SKEW	90°
DRAINAGE AREA	28 AC.
DESIGN DISCHARGE (050)	16 CFS
DESIGN DISCHARGE (0100)	19 CFS
W.S. ELEV. (50)	630.64
W.S. ELEV. (100)	630.68
STANDARD DRAWING NUMBERS	D-PE-36A



Section A-A View
OUTLET



TDOT, 2015-00190 Permit
Drawings; Figure 9

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 58015-1210-14
 PIN # 103774.00
 SR-150 FROM EXISTING SR-150 TO SR-28
 NORTH OF JASPER

MARION COUNTY

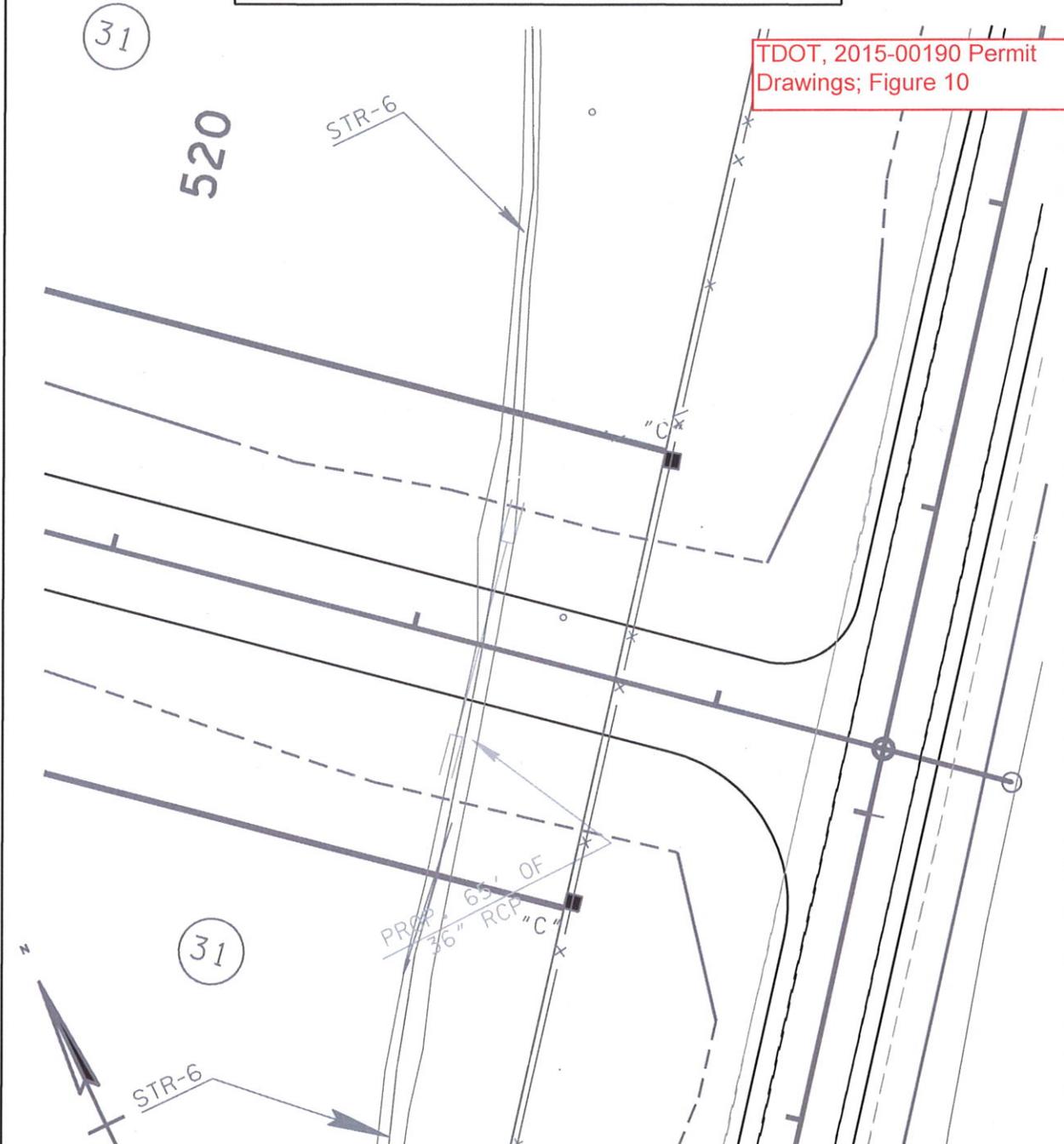
DATE: 01/23/15

REVISED: / /

SHEET 9 OF 14

**STR-6 CULVERT: 73 + 22.14
Permit Sketch**

TDOT, 2015-00190 Permit
Drawings; Figure 10



APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 58015-1210-14
PIN # 103774.00
SR-150 FROM EXISTING SR-150 TO SR-28
NORTH OF JASPER
MARION COUNTY

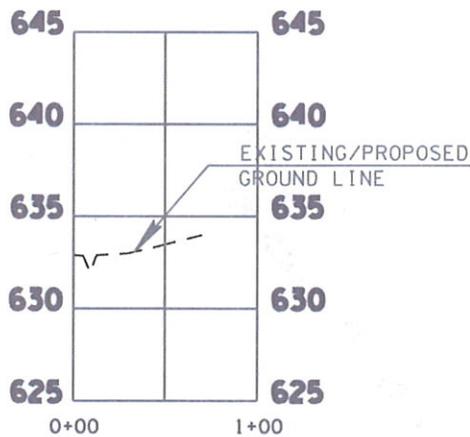
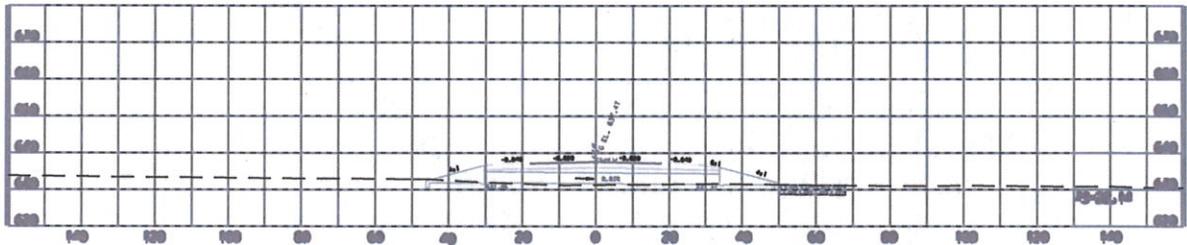
DATE: 01/23/15

REVISED: / /

SHEET 10 OF 14

STR-6 CULVERT: 73 + 22.14 Permit Sketch

STATION	73+22.14
STRUCTURE	65' OF 36" RCP
SKEW	90°
DRAINAGE AREA	19 AC.
DESIGN DISCHARGE (050)	14 CFS
DESIGN DISCHARGE (0100)	18 CFS
W.S. ELEV. (50)	632.43
W.S. ELEV. (100)	632.49
STANDARD DRAWING NUMBERS	D-PE-36A



Section A-A View
OUTLET



TDOT, 2015-00190 Permit
Drawings; Figure 11

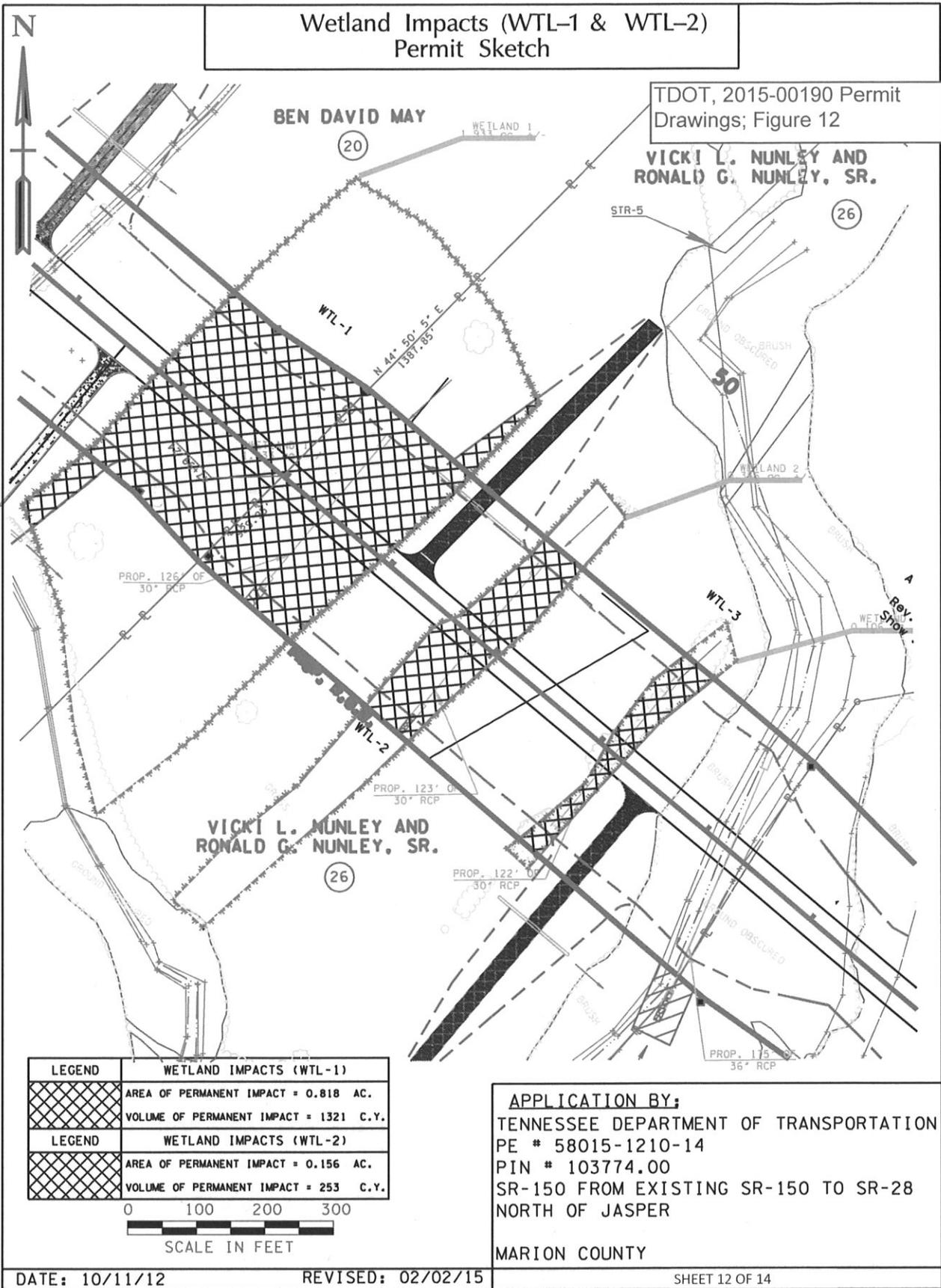
APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 58015-1210-14
 PIN # 103774.00
 SR-150 FROM EXISTING SR-150 TO SR-28
 NORTH OF JASPER

MARION COUNTY

DATE: 01/23/15

REVISED: / /

SHEET 11 OF 14



**Wetland Impacts (WTL-1 & WTL-2)
Permit Sketch**

TDOT, 2015-00190 Permit Drawings; Figure 12

VICKI L. NUNLEY AND RONALD G. NUNLEY, SR.



LEGEND	WETLAND IMPACTS (WTL-1)
	AREA OF PERMANENT IMPACT = 0.818 AC. VOLUME OF PERMANENT IMPACT = 1321 C.Y.
LEGEND	WETLAND IMPACTS (WTL-2)
	AREA OF PERMANENT IMPACT = 0.156 AC. VOLUME OF PERMANENT IMPACT = 253 C.Y.



APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 58015-1210-14
 PIN # 103774.00
 SR-150 FROM EXISTING SR-150 TO SR-28
 NORTH OF JASPER
 MARION COUNTY

Wetland Impacts (WTL-3 & WTL-4) Permit Sketch

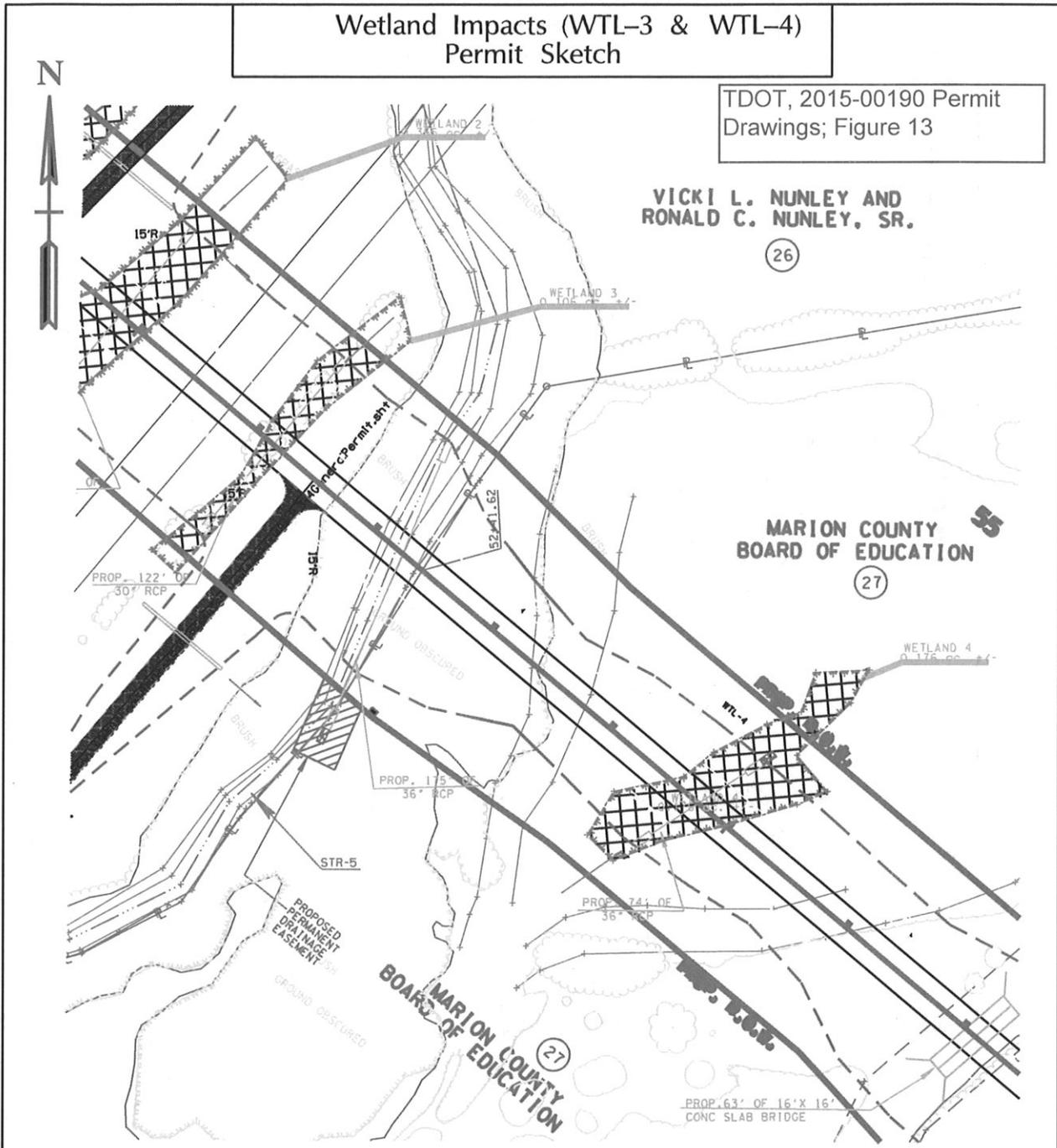
TDOT, 2015-00190 Permit Drawings; Figure 13

**VICKI L. NUNLEY AND
RONALD C. NUNLEY, SR.**

(26)

**MARION COUNTY
BOARD OF EDUCATION**

(27)



LEGEND	WETLAND IMPACTS (WTL-3)
	AREA OF PERMANENT IMPACT = 0.081 AC. VOLUME OF PERMANENT IMPACT = 132 C.Y.
LEGEND	WETLAND IMPACTS (WTL-4)
	AREA OF PERMANENT IMPACT = 0.176 AC. VOLUME OF PERMANENT IMPACT = 284 C.Y.



APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 58015-1210-14
 PIN # 103774.00
 SR-150 FROM EXISTING SR-150 TO SR-28
 NORTH OF JASPER

MARION COUNTY

**Wetland Impact (WTL-5)
Permit Sketch**

TDOT, 2015-00190 Permit
Drawings; Figure 14

N



OR. 106% OF
60" RCP

(27)

MARION BOARD OF EDUCATION

PROPOSED R.O.W.

(31)

HILDA L. LINTON
TRUSTEE OF
HILDA L. LINTON
FAMILY TRUST

WETLAND 5
0.007 ac. +/-

(27)

PROPOSED R.O.W.

PROP. 87% OF
42" RCP

MARION BOARD OF EDUCATION

"C"

LEGEND	WETLAND IMPACTS (WTL-5)
	AREA OF PERMANENT IMPACT = 0.007 AC. VOLUME OF PERMANENT IMPACT = 11.3 C.Y.



APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 58015-1210-14
PIN # 103774.00
SR-150 FROM EXISTING SR-150 TO SR-28
NORTH OF JASPER:

MARION COUNTY

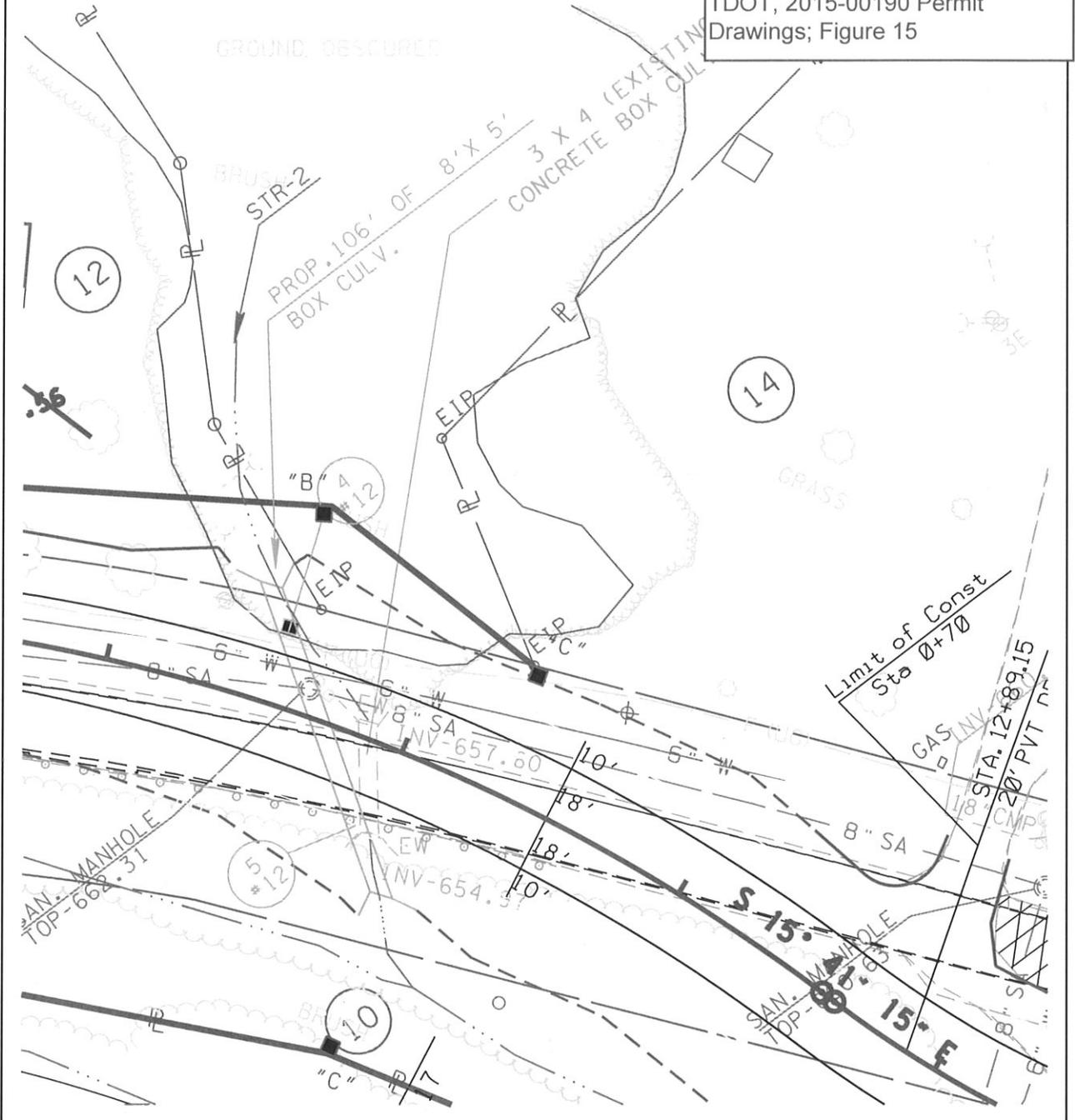
DATE: 10/11/12

REVISED: 01/23/15

SHEET 14 OF 14

STR-2 CULVERT: 10+71.53
Permit Sketch

TDOT, 2015-00190 Permit
Drawings; Figure 15



APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 58015-1210-14
PIN # 103774.00
SR-150 FROM EXISTING SR-150 TO SR-28
NORTH OF JASPER
MARION COUNTY

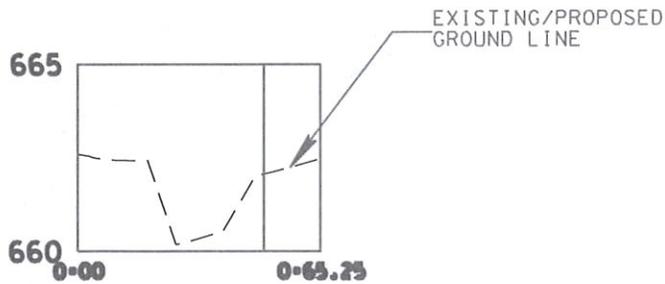
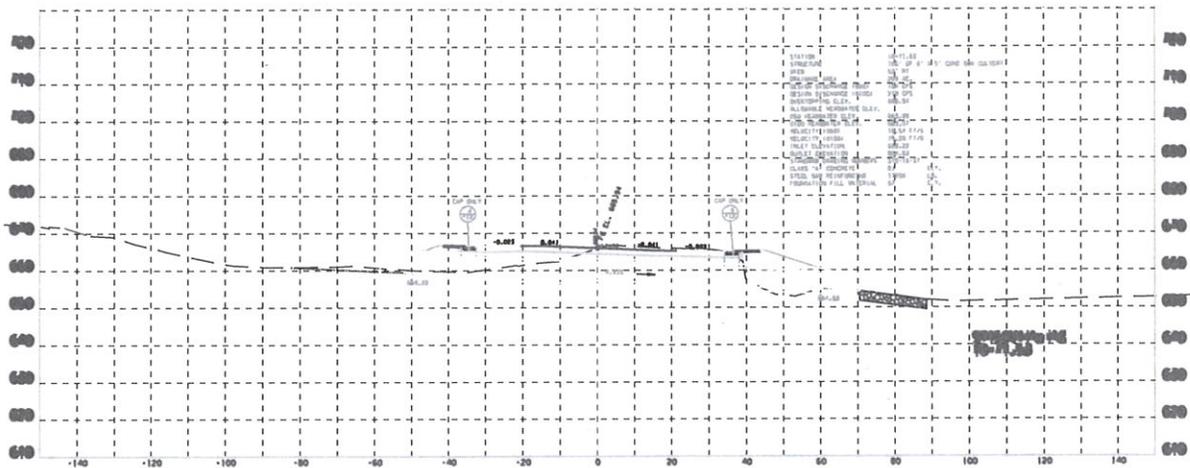
DATE: 04/14/15

REVISED: / /

SHEET 16 OF 21

STR-2 CULVERT 10+71.53
Permit Sketch

TDOT, 2015-00190 Permit
Drawings; Figure 16



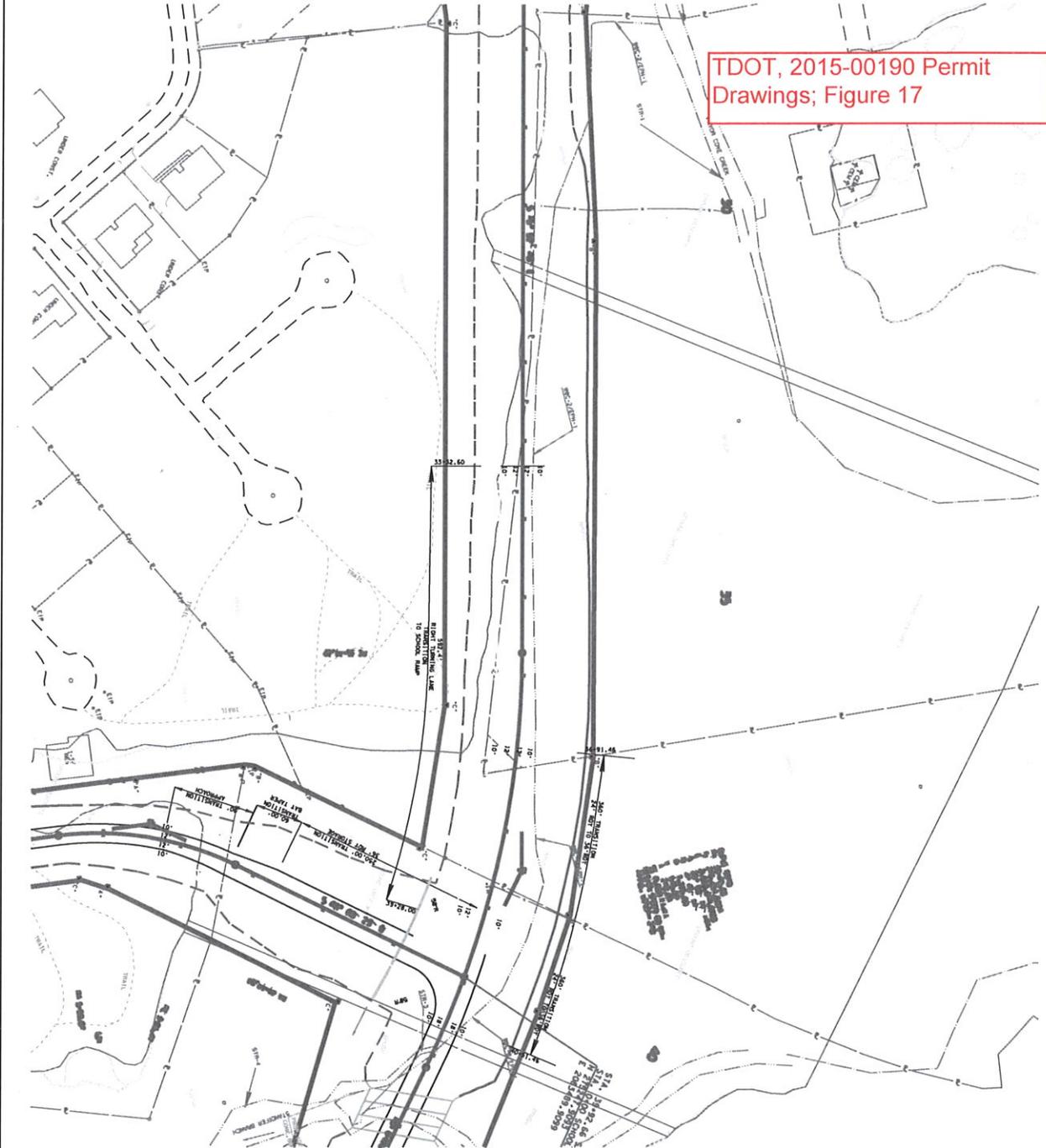
Section A-A View
OUTLET



APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 58015-1210-14
PIN # 103774.00
SR-150 FROM EXISTING SR-150 TO SR-28
NORTH OF JASPER
MARION COUNTY

WWC-2/EPH-1
Permit Sketch

TDOT, 2015-00190 Permit
Drawings; Figure 17

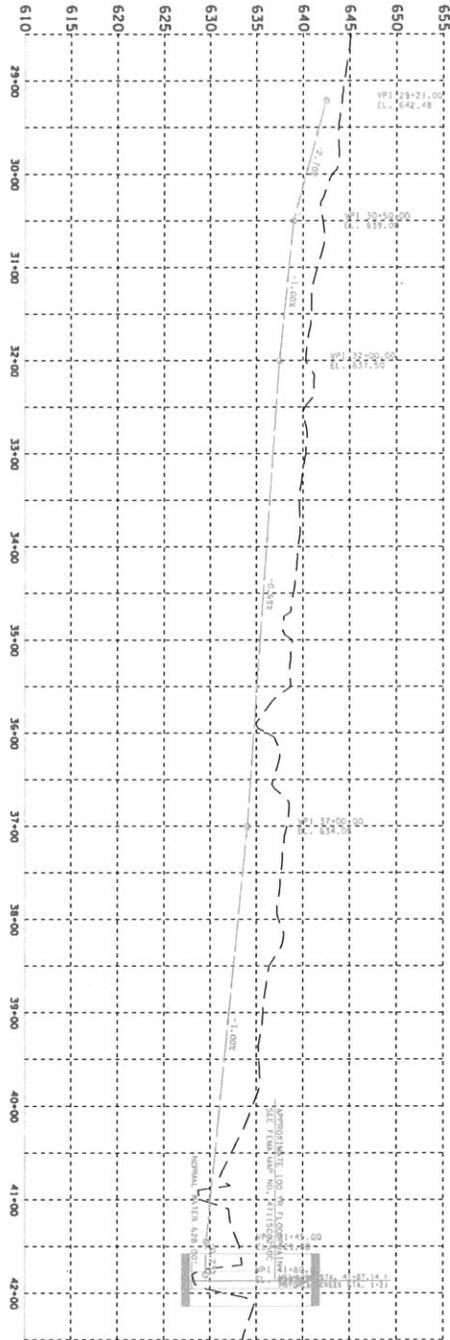


APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 58015-1210-14
PIN # 103774.00
SR-150 FROM EXISTING SR-150 TO SR-28
NORTH OF JASPER
MARION COUNTY



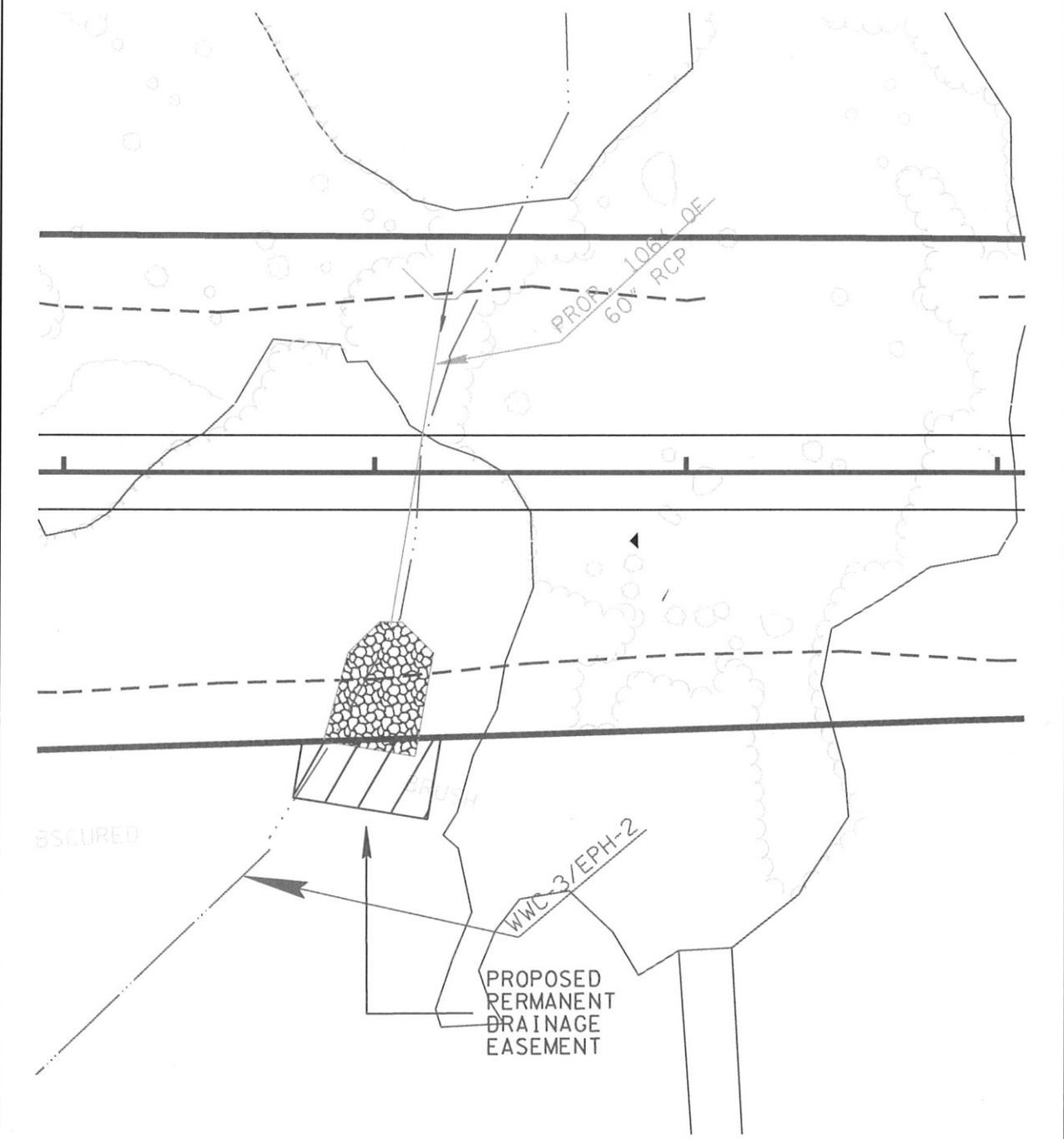
WWC-2/EPH-1
Permit Sketch

TDOT, 2015-00190 Permit
Drawings; Figure 18



APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 58015-1210-14
 PIN # 103774.00
 SR-150 FROM EXISTING SR-150 TO SR-28
 NORTH OF JASPER
 MARION COUNTY

WWC-3/EPH-2 CULVERT 60+13.14
Permit Sketch

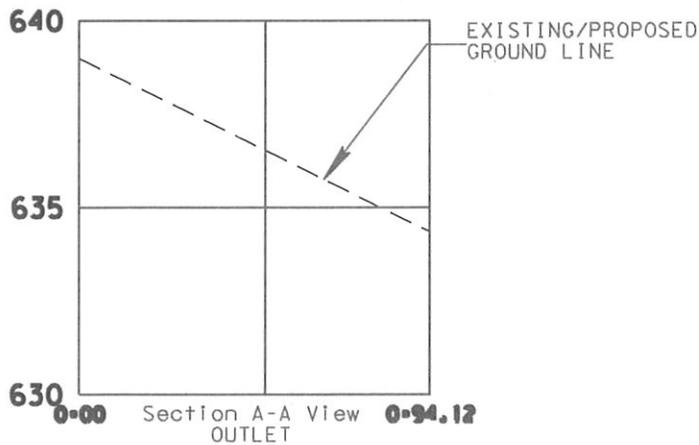
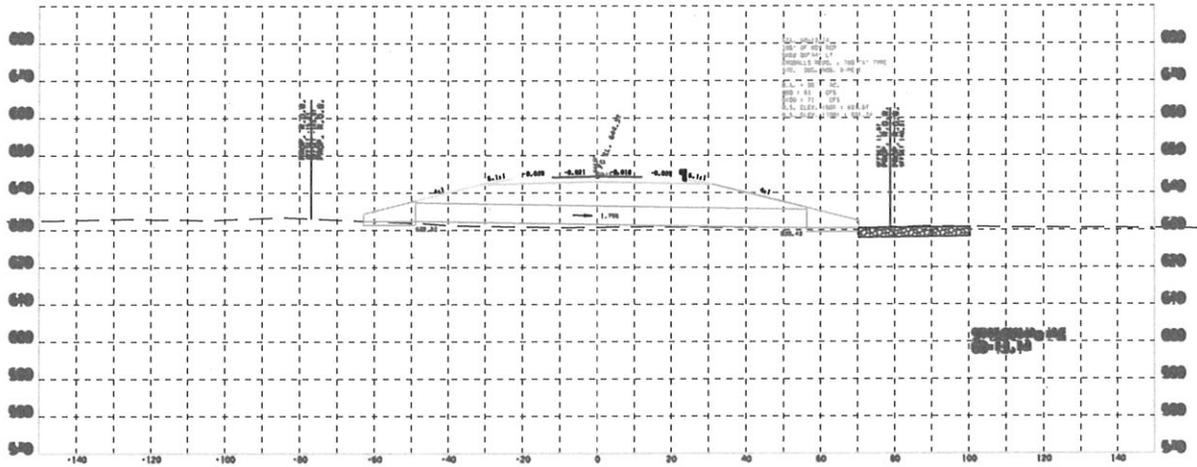


TDOT, 2015-00190 Permit Drawings; Figure 19



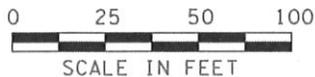
APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
PE # 58015-1210-14
PIN # 103774.00
SR-150 FROM EXISTING SR-150 TO SR-28
NORTH OF JASPER
MARION COUNTY

**WWC-3/EPH-2 CULVERT 60+13.14
Permit Sketch**



TDOT, 2015-00190 Permit
Drawings; Figure 20

APPLICATION BY:
 TENNESSEE DEPARTMENT OF TRANSPORTATION
 PE # 58015-1210-14
 PIN # 103774.00
 SR-150 FROM EXISTING SR-150 TO SR-28
 NORTH OF JASPER
 MARION COUNTY



NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Tennessee Department of Transportation		File Number: 2015-00190	Date: 8 July 2015
Attached is:		See Section below	
<input checked="" type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
	PERMIT DENIAL	C	
	APPROVED JURISDICTIONAL DETERMINATION	D	
	PRELIMINARY JURISDICTIONAL DETERMINATION	E	

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:
Travis Wiley
Corps of Engineers, Regulatory Branch
3701 Bell Road
Nashville, TN 37214

If you only have questions regarding the appeal process you may also contact:
U.S. Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10032
Cincinnati, OH 45202

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:
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REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
3701 BELL ROAD
NASHVILLE, TENNESSEE 37214-2660

July 8, 2015

Regulatory Branch

SUBJECT: File No. 2015-00190, Tennessee Department of Transportation; extension of State Route 150 between existing Tar Kiln Avenue to Valley View Highway in Marion County, Tennessee

Mr. Khalid Ahmed
Tennessee Department of Transportation
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, TN 37243

Dear Mr. Ahmed:

This letter is in regard to your delineation of waters of the United States (WOUS) dated April 9, 2015 which documented potential waters of the United States on a survey area of approximately 36.2 acres. The permit application associated with the extension of SR-150 in Marion County, Tennessee, indicated your preference for potential waters of the U.S. on the survey area to be reviewed as a preliminary jurisdictional determination (PJD). This project has been assigned File No. LRN-2015-00190, please refer to this number in any future correspondence.

The U.S. Army Corps of Engineers (USACE) has regulatory responsibilities pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). Under Section 10, the USACE regulates any work in, or affecting, navigable waters of the U.S. It appears the project area does not include navigable waters of the U.S. and would not be subject to the provisions of Section 10. Under Section 404, the USACE regulates the discharge of dredged and/or fill material into waters of the U.S., including wetlands.

Based on a field review of the survey area on April 7, 2015, eight reaches of stream totaling 2,575 linear feet (1,190' ephemeral, 905' intermittent and 480' perennial) and 2.109 acres of wetlands were documented within the survey area. This office has determined these features **may** be jurisdictional waters of the U.S. in accordance with 33 C.F.R. 331.2 and a PJD has been prepared. The PJD is non-binding, cannot be appealed and only provides a written indication that waters of the U.S, including wetlands, may be present on-site. For purposes of computation of impacts, compensatory mitigation requirements and other resource protection measures, a permit decision made on the basis of a PJD will treat all waters that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S. If you wish, you may request an approved JD (which may be appealed), by contacting this office. Also, you may provide new

information for further consideration by the Corps to re-evaluate the PJD. This PJD is only valid for the review area shown on the attached " LRN-2015-00190; Figure 1".

Enclosed with this letter are two copies of the PJD. If you agree with the findings of this PJD and understand your options regarding the same, please sign and date one copy of the form and return it to this office within 30 days of receipt of this letter. You should submit the signed copy to the following address:

U.S. Army Corps of Engineers
Nashville District
3701 Bell Rd.
Nashville, TN 37214
Attn: Travis Wiley

We appreciate your awareness of the USACE regulatory program. If you have any questions, you may contact Travis Wiley at (615) 369-7517 or by e-mail at [travis.a.wiley @usace.army.mil](mailto:travis.a.wiley@usace.army.mil).

Sincerely,



Eric G. Reusch
Chief, Eastern Regulatory Section
Operations Division

Enclosures

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): 7/8/2015

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
Mr. Khalid Ahmed
Tennessee Department of Transportation
505 Deaderick Street, Suite 900
Nashville, TN 37243

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Nashville District, SR-150 Extension, LRN-2015-00190

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)**

State: Tennessee County/parish/borough: Marion City: Jasper
Center coordinates of site (lat/long in degree decimal format):
Lat. 35.0887° N, Long. 85.6153°W.

Universal Transverse Mercator: **NAD 83**

Name of nearest waterbody: Standifer Branch and Pryor Cove Creek.

Identify (estimate) amount of waters in the review area: SEE TABLE
Non-wetland waters: Streams- 2,575 linear feet: 6' width (ft) and/or 0.36 acres.

Cowardin Class: Riverene

Stream Flow: 1,190' Ephemeral; 905' Intermittent; 480' Perennial

Wetlands: 2.109 acres.

Cowardin Class: 1.926 acre emergent, 0.176 acre scrub-shrub, 0.007 acre forested.

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: N/A

Non-Tidal: N/A

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date:

Field Determination. Date(s): April 7, 2015

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to

request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "*may be*" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply

- checked items should be included in case file and, where checked and requested, appropriately reference sources below):

Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Aerial Maps, Topographic Maps, Photographs, Soil Maps, etc. submitted by TDOT in January 2015.

Data sheets prepared/submitted by or on behalf of the applicant/consultant.

Office concurs with data sheets/delineation report.

Office does not concur with data sheets/delineation report.

Data sheets prepared by the Corps:

Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas:

USGS NHD data.

USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s). Cite scale & quad name: 1:24000, Sequatchie, Tennessee.

USDA Natural Resources Conservation Service Soil Survey. Citation: Marion County, Tennessee Soilweb.

National wetlands inventory map(s). Cite name:

State/Local wetland inventory map(s):

FEMA/FIRM maps:

100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

Photographs: Aerial (Name & Date): Submitted with project application January 2015

or Other (Name & Date): Site visit photos April 7, 2015.

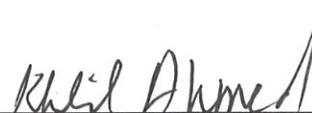
Previous determination(s). File no. and date of response letter:

Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

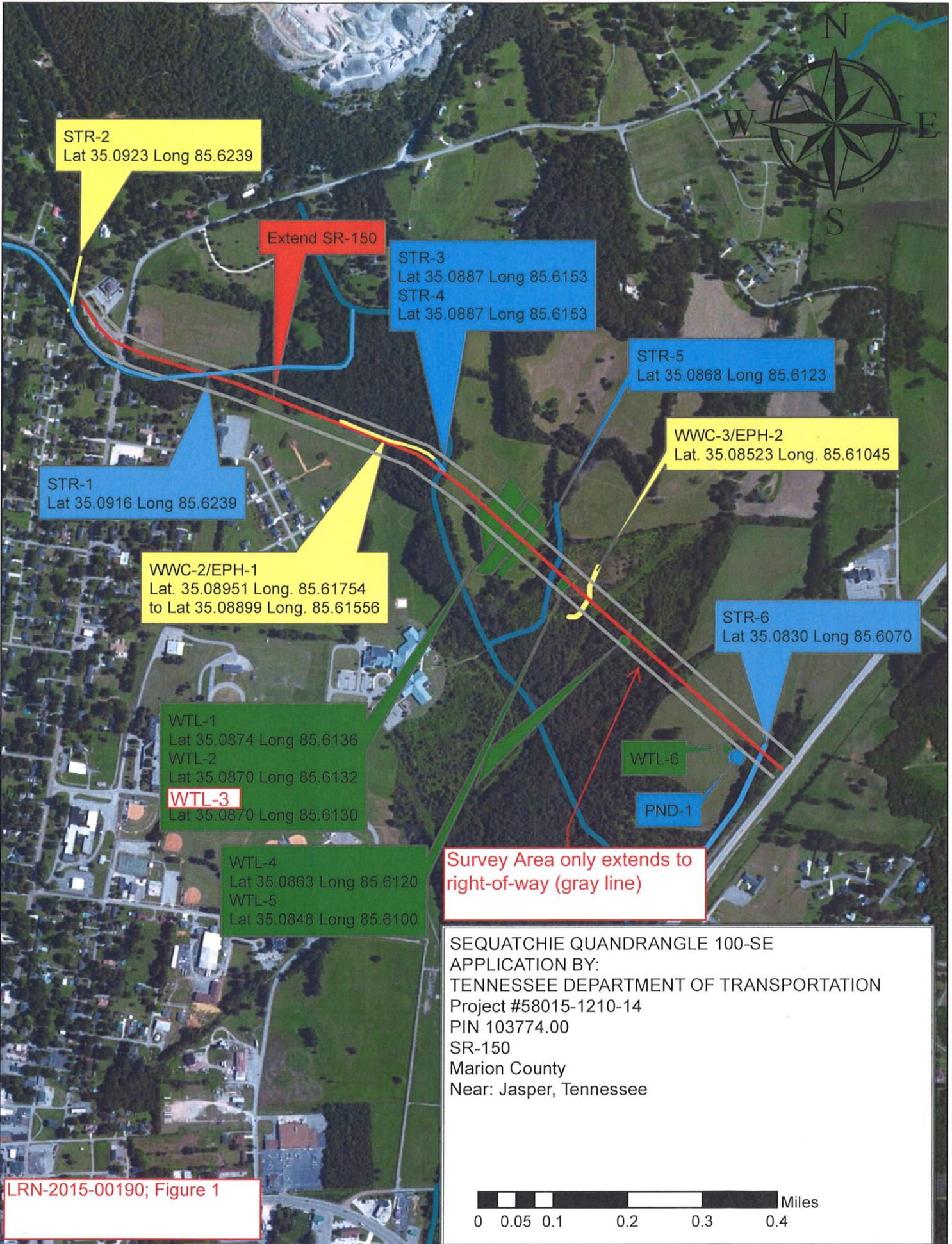


Signature and date of
Section Chief
(REQUIRED)



Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining
the signature is impracticable)

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
WWC-2/EPH-1	35.0895	-85.6174	R6 (Ephemeral)	700 LF	Non Section 10-NRPW
WWC-3/EPH-2	35.0852	-85.6104	R6 (Ephemeral)	170 LF	Non Section 10-NRPW
STR-1	35.0916	-85.6239	R4 (Intermittent)	755 LF	Non Section 10-NRPW
STR-2	35.0923	-85.6240	R6 (Ephemeral)	170 LF	Non Section 10-NRPW
STR-3	35.0887	-85.6153	R4 (Intermittent)	150 LF	Non Section 10-RPW (Seasonal)
STR-4	35.0883	-85.6152	R3 (Perennial)	250 LF	Non Section 10-RPW (Seasonal)
STR-5	35.0868	-85.6123	R3 (Perennial)	230 LF	Non Section 10-RPW
STR-6	35.0830	-85.6070	R6 (Ephemeral)	150 LF	Non Section 10-RPW
WTL-1	35.0874	-85.6136	PEM (Emergent)	1.636 ac.	Non Section 10-Wetland
WTL-2	35.0870	-85.6132	PEM (Emergent)	0.188 ac.	Non Section 10-Wetland
WTL-3	35.0870	-85.6130	PEM (Emergent)	0.102 ac.	Non Section 10-Wetland
WTL-4	35.0863	-85.6120	PSS (Scrub-Shrub)	0.176 ac.	Non Section 10-Wetland
WTL-5	35.0833	-85.6100	PFO (Forested)	0.007 ac.	Non Section 10-Wetland



STR-2
Lat 35.0923 Long 85.6239

Extend SR-150

STR-3
Lat 35.0887 Long 85.6153
STR-4
Lat 35.0887 Long 85.6153

STR-5
Lat 35.0868 Long 85.6123

WWC-3/EPH-2
Lat. 35.08523 Long. 85.61045

STR-1
Lat 35.0916 Long 85.6239

WWC-2/EPH-1
Lat. 35.08951 Long. 85.61754
to Lat 35.08899 Long. 85.61556

STR-6
Lat 35.0830 Long 85.6070

WTL-1
Lat 35.0874 Long 85.6136
WTL-2
Lat 35.0870 Long 85.6132
WTL-3
Lat 35.0870 Long 85.6130

WTL-6

PND-1

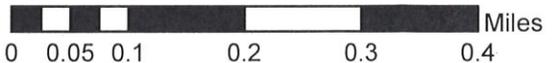
WTL-4
Lat 35.0863 Long 85.6120
WTL-5
Lat 35.0848 Long 85.6100

Survey Area only extends to right-of-way (gray line)

SEQUATCHIE QUADRANGLE 100-SE

APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
Project #58015-1210-14
PIN 103774.00
SR-150
Marion County
Near: Jasper, Tennessee

LRN-2015-00190; Figure 1





REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
3701 BELL ROAD
NASHVILLE, TENNESSEE 37214

July 8, 2015

Regulatory Branch

SUBJECT: File No. 2015-00190, Tennessee Department of Transportation; Proposed extension of State Route (SR) 150 from Tar Kiln Avenue to Valley View Highway, Sandifer Branch, Pryor Cove Branch, unnamed tributaries (UT) and adjacent wetlands located in Jasper, Marion Co., Tennessee

Mr. Khalid Ahmed
Tennessee Department of Transportation
505 Deaderick Street, Suite 900
Nashville, TN 37243

Dear Mr. Ahmed:

This correspondence is in regard to your Department of the Army (DA) permit for the discharge of fill material into in waters of the U.S. associated with the proposed extension of State Route (SR) 150 from Tar Kiln Avenue to Valley View Highway in Marion County, Tennessee (latitude N. 35.0887°, longitude W. -85.6153). This project has been assigned number (LRN-2015-00190). Please refer to this number in all communication concerning this matter.

Enclosed are two copies of an initial proffered DA permit for the proposed work. If you have no objections to the permit, please sign, date, and return *both* copies to this office for validation. The signed permit copies should be returned as soon as possible. Upon receipt of the signed copies, the permit will be validated and returned to you without delay. Your DA permit will not be valid until we have returned a copy to you bearing both your signature and the signature of the appropriate Corps official.

If you object to this decision, you may request an administrative appeal under Corps regulations at 33 C.F.R. Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination, you must submit a completed RFA form to the Great Lakes and Ohio River Division Office at the following address:

Appeal Review Officer
U.S. Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10032
Cincinnati, Ohio 45202-3222
PHONE (513) 684-6212; FAX (513) 684-2460

In order for an RFA to be accepted by the Corps, must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. **It is not necessary to submit an RFA form to the Division office if you do not object to the decision in this letter.**

It should be understood that this is **not** an authorization to commence construction. No work shall be performed in waters of the United States until you have received a validated copy of the permit.

If you have any questions or comments please contact Travis Wiley at the above address, e-mail travis.a.wiley@usace.army.mil, or telephone (615) 369-7517.

Sincerely,



Eric G. Reusch
Chief, Eastern Regulatory Section
Operations Division

Enclosures



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

April 23, 2015

Mr. Khalid Ahmed
Tennessee Department of Transportation
Environmental Division
Suite 900, James K. Polk Bldg.
505 Deaderick St.
Nashville, TN 37243

Subject: Aquatic Resource Alteration Permit **NRS 15.039**.
TDOT58015-1210-14 PIN103774.00 SR150 File# NRS 15.039
Marion County (Lat: 35.0923 Lon: -85.6239).

Dear Mr. Ahmed:

We have reviewed your application for the proposed filling of 1.24 acre of wetland and 705 ft. of stream encapsulation in support of the extension of SR150 in Marion 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 15.039, 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: Chattanooga Environmental Field Office
U.S. Army Corps of Engineers, Nashville District
file copy



NRS15.039

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 TDOT58015-1210-14
PIN103774.00,

AUTHORIZED WORK: Filling of 1.24 acre of wetland and 705 ft. of stream encapsulation in support of the extension of SR150 in Marion County.

LOCATION: Pryor Branch Cove, unnamed tributaries and associated wetlands, Marion County
(Lat: 35.0923 Lon: -85.6239).

EFFECTIVE DATE: April 21, 2015

EXPIRATION DATE: April 20, 2019

A handwritten signature in blue ink, appearing to read "Tisha Calabrese Benton", 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: 35.0923 Longitude: -85.6239
Unnamed tributary to Pryor Cove Branch Station 10+72+/-

Existing 36 ft. of 3X4' box culvert and 111 ft. of open stream shall be replaced with 106 ft. of 8X5' box culvert and 37' of riprap lined channel.
Required Mitigation: $74 ((106_{\text{new}} - 36_{\text{original}}) + 4_{\text{loss}})$

Impact 2: Latitude: 35.0916 Longitude: -85.6239
Pryor Cove Branch Station 23+00

Existing 223 ft. of open channel shall be replaced with 143 ft. 3@18X13' concrete box bridge with 40 ft. of riprap transition at the inlet and outlet. Storm water outfalls 36" RCP shall be installed at Sta. 8+50 and 14+85.
Required Mitigation: $143 (143_{\text{new structure}})$

Impact 3: Latitude: 35.0883 Longitude: -85.6152
Unnamed tributary to Standifer Branch/Standifer Branch Station 41.00 and 41+90

Existing 150' (Unnamed trib) shall be filled with graded solid rock. Standifer Branch – existing 220 ft. open stream shall be replaced with 107 ft. of 3@18X13' Concrete box bridge with 50 ft. of riprap transition at inlet and outlet.
Required Mitigation: $270 (107_{\text{new}} + 163_{\text{loss}})$

Impact 4: Latitude: 35.0874 Longitude: -85.6136
Wetlands 1, 2, 3 Station 47+00-51+00+/-

Permanent impact (fill) of 1.055 acres of wetlands.
Required Mitigation: 1.055 ac wetlands

Impact 5: Latitude: 35.0868 Longitude: -85.6123
Unnamed tributary to Standifer Branch Station 52+22+/-

Existing 209 ft. of open stream shall be replaced with 175 ft. of 36" RCP with 12' u-type end walls at inlet and outlet and 10' of riprap lined channel.
Required Mitigation: $199 (175_{\text{new}} + 24_{\text{endwalls}})$

Impact 6: Latitude: 35.0863 Longitude: -85.6120
Wetlands Station 54+50-50+00+/-

Permanent impact (fill) of 0.176 acre of wetlands.
Required Mitigation: 0.176 ac wetlands

Impact 7: Latitude: 35.0848 Longitude: -85.6100

Wetlands

Station 62+30+/-

Permanent impact (fill) of 0.007 acre of wetlands.

Required Mitigation: 0.007 ac wetlands

Impact 8: Latitude: 35.0830

Longitude: -85.6070

Unnamed tributary to Standifer Branch

Station 73+22+/-

Existing 111 ft. of open stream shall be replaced with 65 ft. of 36" RCP with 14' u-type end walls at inlet and outlet and 18' of riprap lined channel.

Required Mitigation: 93 (65_{new}+28_{endwalls})

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.
- c. The work shall be accomplished in conformance with the accepted plans, specifications, data and other information submitted in support of application NRS15.039 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 Chattanooga Environmental Field Office (423-634-5745), 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.
- h. 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.

- i. Culverts shall be designed such that they neither create impoundment nor present a barrier to the passage of fish or aquatic life. Multiple barrel culverts shall not result in over widening of the stream and shall be constructed in a manner that allows additional flowage for storm events to enter the additional space only after the original channel has exceeded bankfull.

PART II

Mitigation Requirements and Monitoring Procedures

Required Mitigation Activities

The permittee shall provide mitigation for the permanent impact to 1.24 acre of wetlands by debiting, at a 2:1 ratio, 2.48 acre of available credit from the Sequatchie Valley Wetland Mitigation Bank. Proof of purchase submitted to the Division within prior to commencement of construction. Temporary impacts to wetlands shall be mitigated by removal and stockpiling of the existing topsoil. Upon completion of construction activities, all temporary wetland impact areas shall be restored to pre-construction contours and the stockpiled wetland topsoil spread to restore these areas to preconstruction elevation.

The 705 ft. of stream encapsulation shall be mitigated by purchasing 705 ft. of available credits from the Tennessee Stream Mitigation Program Upper Tennessee Service Area. Please be advised that the stream impacts associated with this mitigation are not authorized to proceed until the specified mitigation credits have been reserved.

Upon receipt of proof of purchase legal liability for mitigation shall be transferred to the mitigation agency granting credit.

Monitoring Requirements and Procedures

No monitoring shall be required for this project.

PART III

Reopener Clause

Permittee is This permit may be revoked, suspended, or modified for cause, including:

- (1) Violation of any of the terms or conditions of this permit or of T.C.A § 69-3-101 et. seq.;
- (2) Obtaining the permit by misrepresentation or failing to disclose fully all relevant facts;
- (3) A change in any condition that requires either a temporary or permanent change in the conditions of this permit.

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.

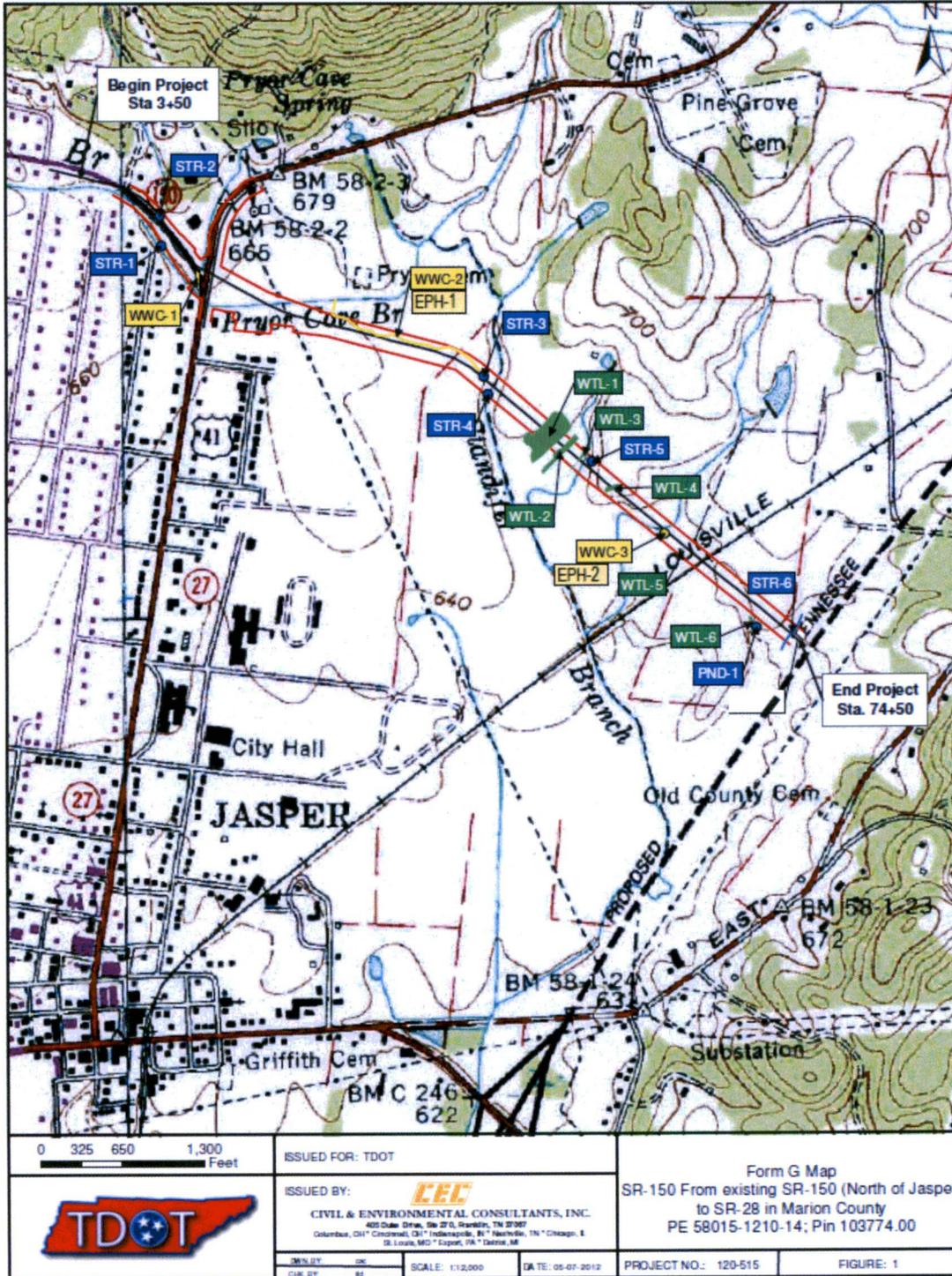
This permit does not preclude requirements of other federal, state or local laws. This permit also serves as a State of Tennessee Aquatic Resource Alteration Permit (ARAP) pursuant to the Tennessee Water Quality Control Act of 1977 (T.C.A. §69-3-101 et seq.).

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 D.O.T. DESIGN DIVISION																																					
FILE NO.																																					
<p>Index of Sheets</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SHEET NO.</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td>1</td><td>TITLE SHEET</td></tr> <tr><td>2-2C</td><td>TYPICAL SECTIONS (4 SHEETS)</td></tr> <tr><td>3-3B</td><td>R.O.W. ACQUISITION TABLE & PROPERTY MAPS</td></tr> <tr><td>4-11</td><td>PRESENT LAYOUTS (8 SHEETS)</td></tr> <tr><td>4A-11A</td><td>R.O.W. DETAILS (8 SHEETS)</td></tr> <tr><td>4B-11B</td><td>PROPOSED LAYOUTS (8 SHEETS)</td></tr> <tr><td>4C-11C</td><td>MAINLINE PROFILES (8 SHEETS)</td></tr> <tr><td>12-13</td><td>PRIVATE DRIVE PROFILE</td></tr> <tr><td>14-14C</td><td>DRAINAGE MAPS (4 SHEETS)</td></tr> <tr><td>15-15G</td><td>EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS</td></tr> <tr><td>16-16G</td><td>EXISTING CONTOURS (8 SHEETS)</td></tr> <tr><td>20-20E</td><td>CURB CROSS-SECTIONS (8 SHEETS)</td></tr> <tr><td>21-21C</td><td>PROPOSED CONTOURS (8 SHEETS)</td></tr> <tr><td>22-60</td><td>EXISTING & PROPOSED SP150 CROSS-SECTION (39 SHEETS)</td></tr> <tr><td>61-67</td><td>EXISTING & PROPOSED SP150 CROSS-SECTION (7 SHEETS)</td></tr> <tr><td>68-73</td><td>BEYSY PACK DR. PROPOSED CROSS SECTION (6 SHEETS)</td></tr> <tr><td></td><td>SR 28 PROPOSED CROSS SECTION (6 SHEETS)</td></tr> </tbody> </table>	SHEET NO.	DESCRIPTION	1	TITLE SHEET	2-2C	TYPICAL SECTIONS (4 SHEETS)	3-3B	R.O.W. ACQUISITION TABLE & PROPERTY MAPS	4-11	PRESENT LAYOUTS (8 SHEETS)	4A-11A	R.O.W. DETAILS (8 SHEETS)	4B-11B	PROPOSED LAYOUTS (8 SHEETS)	4C-11C	MAINLINE PROFILES (8 SHEETS)	12-13	PRIVATE DRIVE PROFILE	14-14C	DRAINAGE MAPS (4 SHEETS)	15-15G	EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS	16-16G	EXISTING CONTOURS (8 SHEETS)	20-20E	CURB CROSS-SECTIONS (8 SHEETS)	21-21C	PROPOSED CONTOURS (8 SHEETS)	22-60	EXISTING & PROPOSED SP150 CROSS-SECTION (39 SHEETS)	61-67	EXISTING & PROPOSED SP150 CROSS-SECTION (7 SHEETS)	68-73	BEYSY PACK DR. PROPOSED CROSS SECTION (6 SHEETS)		SR 28 PROPOSED CROSS SECTION (6 SHEETS)	<p style="text-align: center;">STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING</p> <p style="text-align: center;">MARION COUNTY STATE ROUTE 150 FROM EXISTING SR 150 TO S.R. 28 NORTH OF JASPER RIGHT-OF-WAY</p> <p style="text-align: center;">Form 5 Plans</p>
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<p>END PROJ. NO. 58015-2215-14 STA. 3+50 (R.O.W.)</p> <p>STP-150(4) END PROJ. NO. 58015-2215-14 STA. 3+50 (R.O.W.)</p> <p>BEGIN PROJ. NO. 58015-2215-14 STA. 74+50 (R.O.W.)</p> <p>STP-150(4) BEGIN PROJ. NO. 58015-2215-14 STA. 74+50 (R.O.W.)</p>																																					
<p>NO EXCLUSIONS NO EQUATIONS</p>																																					
<p>MARION COUNTY PROJ. NO. STP-150(4)</p>																																					
<p>TRAFFIC DATA</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ADT (2011)</th> <th>ADT (2012)</th> <th>ADT (2013)</th> <th>ADT (2014)</th> </tr> </thead> <tbody> <tr> <td>3800</td> <td>3800</td> <td>3800</td> <td>3800</td> </tr> <tr> <td>5200</td> <td>5200</td> <td>5200</td> <td>5200</td> </tr> <tr> <td>60</td> <td>60</td> <td>60</td> <td>60</td> </tr> <tr> <td>5.5</td> <td>5.5</td> <td>5.5</td> <td>5.5</td> </tr> <tr> <td>3.5</td> <td>3.5</td> <td>3.5</td> <td>3.5</td> </tr> <tr> <td>45 MPH</td> <td>45 MPH</td> <td>45 MPH</td> <td>45 MPH</td> </tr> </tbody> </table>		ADT (2011)	ADT (2012)	ADT (2013)	ADT (2014)	3800	3800	3800	3800	5200	5200	5200	5200	60	60	60	60	5.5	5.5	5.5	5.5	3.5	3.5	3.5	3.5	45 MPH	45 MPH	45 MPH	45 MPH								
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45 MPH	45 MPH	45 MPH	45 MPH																																		
<p>APPROVED: PAUL D. GEDDES, CHIEF ENGINEER DATE: _____</p> <p>APPROVED: JOHN LAMBERT, COMMISSIONER DATE: _____</p> <p>U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION</p> <p>APPROVED: _____ DATE: _____ DIVISION ADMINISTRATOR</p>																																					
<p>SURVEY DATE: APRIL 30, 2010</p>																																					
<p>SPECIAL NOTES</p> <p>PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES EXCEEDS THE ESTIMATED UNIT PRICES. THE RESPONSIBLE COST ANALYSIS VALUE IS THE RESPONSIBLE COST ANALYSIS VALUE.</p> <p>THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.</p> <p>TRIP C.T. MANAGER: JAMES A. JOHNSON, P.E. DESIGNER: A. JAMILL LAMBERT, P.E. CHECKED BY: _____ P.E. NO. 58015-1210-14 PIN NO. 103774.00</p>																																					

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

- 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

- a) You agree that removal of vegetation will be minimized, particularly any woody vegetation providing shoreline/streambank stabilization.
- 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.
- h) You agree to remove, redistribute, and stabilize (with vegetation) all sediment which accumulates behind cofferdams or silt control structures.

Additional Conditions



**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

February 12, 2015

Ms. Tammy Turley
U.S. Army Corps of Engineers
Regulatory Branch
3701 Bell Road
Nashville, TN 37214-2660

Subject: TDOT Project 58015-1210-14
PIN 103774.00
State Route 150
From: Existing SR 150
To: SR 28, North of Jasper
Marion County

Dear Ms. Turley:

The Tennessee Department of Transportation is proposing to extend State Route 150 (US-41) from Tar Kiln Ave to Valley View Highway (Old TN-28) (near Jasper) in Marion County. The project involves building a subject roadway consists of two (2) 12 ft. wide travel lanes, 10 ft. wide shoulders, curb and gutter in each direction, in addition to provide turn lanes at the major intersections. Also included within the project scope are the crossing/impact of six (6) streams, five (5) wetlands, and utility crossings. The project scope also includes all associated drainage improvements. The total proposed length of roadway construction and improvements equals 3.513 miles. We are enclosing DA form 4345, along with a copy of appropriate plan sheets and drawings; mitigation notes; and portions of the USGS quad map for Sequatchie, TN (Quad 100-SE), showing the location where we believe an Individual Section 404 Permit may be required on the subject project.

Purpose and Need

The primary purpose of the proposed project is to enhance accessibility, to improve traffic flow, to increase capacity, and to provide a safe and efficient roadway that meets current design standards. The proposed extension would improve existing north/south route to serve the demand for improved local access and for regional accessibility/linkage to the interstate highway system (US-41). The accessibility would provide connectivity to SR -28 by linking SR-150 to SR-28 in northern Jasper. Other benefits include the possibility of enhancing economic

Ms. Turley:
February 11, 2015
Page 2

growth and improving access to future commercial and residential sites along with enhancing public transportation services that are currently available.

Permits

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 at the wetlands as described within the enclosed feature impact tables, meet the criteria of the nationwide permit identified.

Also, we are submitting a pre-construction notification and requesting concurrence at the WWC-2/EPH-1. The impact to WWC-2/EPH-1 is more than 0.10 of an acre. Due to the location of this feature, the proposed plan is to relocate WWC-2/EPH-1 to maintain flow between STR-1 and STR-4. Relocation of this feature is minimizing our impact.

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.

In addition, and in accordance with T.C.A. 69-3-108(b), this office is submitting form CN-1091 identifying where permits may be needed. See enclosed feature impact tables identifying where permits and types required.

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.

This project includes a total permanent wetland impact of 1.24 acres. We propose to mitigate the permanent wetland impacts by debiting, at a 2:1 ratio, 2.48 acres from available wetland credits at the Sequatchie Valley Wetland Mitigation Bank. A debit sheet is enclosed.

As mitigation for 705 ft. (705 ft. x 1.0) of stream [encapsulation] [length losses], we propose a total payment of \$169,200.00 to the In-Lieu Fee Stream Mitigation Program. Please cite this payment to the TWRF in your permits.

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 search of the TDEC Division of Natural Areas, endangered species database, was conducted on April 23, 2012. This database search, paired with the findings from a site visit conducted on March 20-21, 2012, identified six (6) state and or federally listed species within one mile and thirteen (13) listed species within four miles of the proposed site. USFWS and TWRA have stated that proposed BMP's are sufficient to protect the species:

An email was sent from TDOT to the TWRA on May 14, 2010, requesting information on species that may be present in the vicinity of the proposed project. In a response email dated May 14, 2010 (enclosed), the TWRA stated that the proposed BMP's would be sufficient to minimize impacts to rare species for this project.

Indiana Bat:

Ms. Turley:
February 11, 2015
Page 3

On August 31, 2011 TDOT sent a letter to the United States Fish Wildlife Service (USFWS), regarding the bat survey that was conducted and TDOT's findings and information regarding the Indiana bat. In a response letter dated On September 21, 2011 USFWS has concurred with TDOT findings of "not likely to adversely affect for this species."

On October 3, 2014 TDOT sent and updated information on a bat survey via mist netting study from June 22 through June 25, 2014 to identify the potential impact of the Indiana bat. Due to the negative results for the Indian bat survey. TDOT has concluded that the project is "not likely to adversely affect." On October 23, 2015 USFWS responded with a letter and has concurred with TDOT findings of "not likely to adversely affect for this species. USFWS did make a request to consider only remove trees with a DBH (diameter at breast height) of five inches or greater from October 15 to March 31 to further minimize potential impact to species.

In a letter dated August 31, 2004, considering the information provided the TN-SHPO finds the area of potential effect contains no architectural resources eligible for listing in the National Register of Historic Places.

In a letter dated July 8, 2009, the TN-SHPO stated based the information provided in the archaeological report; the project area contains no cultural resources eligible for listing in the National Register of Historic Places.

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

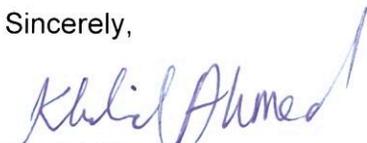
It is the opinion of this office that all other aspects of the project not specifically mentioned in this letter meet the criteria for the General Permit for Wet Weather Conveyances. Please refer to the enclosed Form G for more information.

By copy of this letter, we are also requesting that the TDEC, Corps of Engineers, 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 June 17, 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) 253-0021 or Andrew Wisniewski at (615) 253-2545.

Sincerely,



Khalid Ahmed
Senior Transportation Project Specialist, Environmental Permits Section

Ms. Turley:
February 11, 2015
Page 4

Enclosures

JLH: KMA: APW

cc: Mr. Jimmy Smith, TDEC
Mr. Robert Wayne, TDEC
Ms. Kelly Baxter, TVA

ec:

Region 2

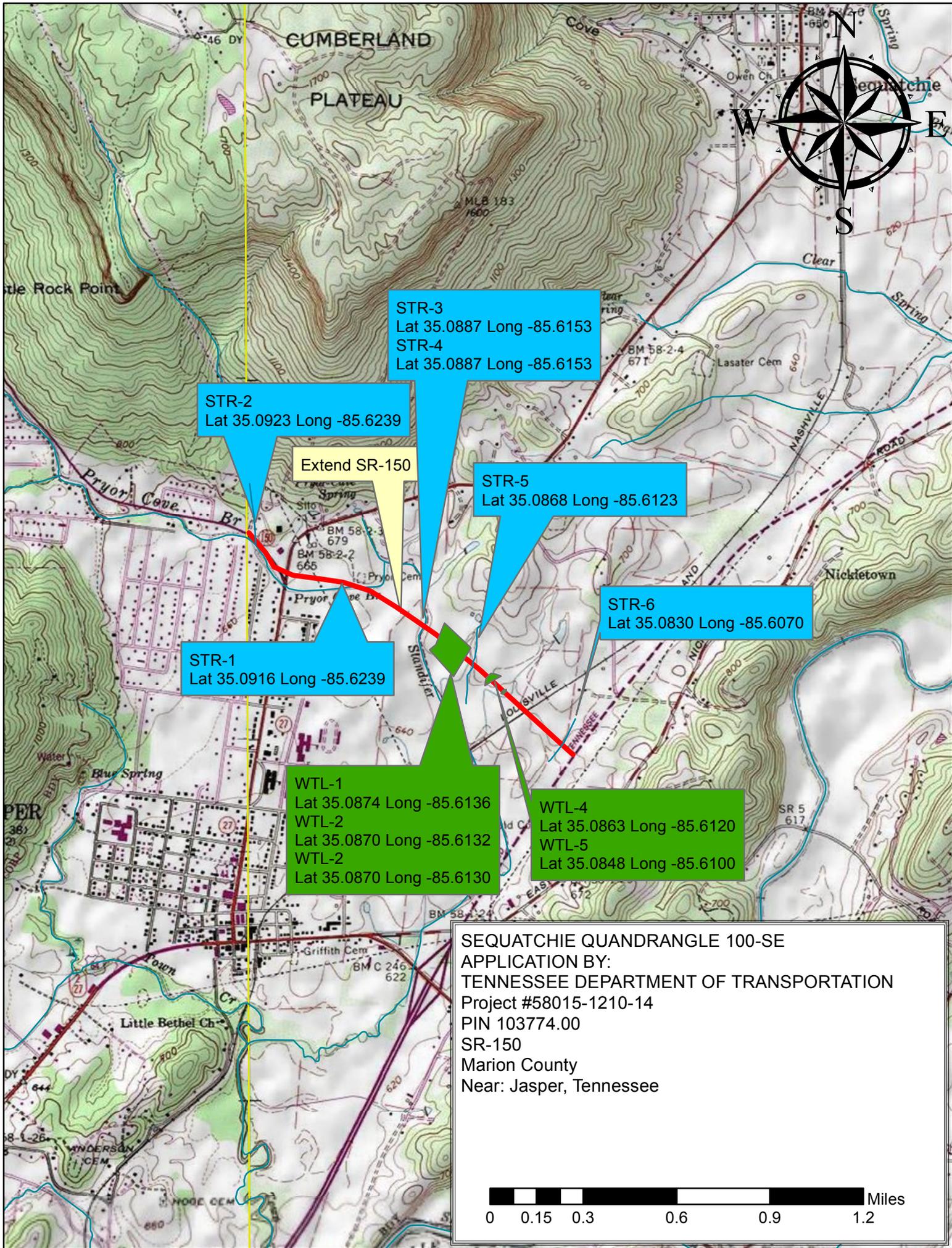
Ms. Jeanene Woodruff, TDEC
Mr. Scott Medlin, Project Management Office
Mr. Robert Rodgers, Design Manager
Mr. Ken Flynn, Region 2 Construction Office
Mr. Wesley Huguen, Region 2 Project Development
Mr. Jason Blankenship, HQ Construction Division
Mr. Tommy Paul, Region 2 Environmental Coordinator
Mr. Rob Howard, Region 2 Ecology Section
Mr. Matt Richards, HQ Ecology Section
Mr. Ben Brown, Mitigation
Mr. Ronnie Porter, Program Operations Office
Mr. Hugh (Chip) Hannah, TDOT Compliance
Ms. Jennifer Stover, TDOT Compliance
Mr. John Hewitt, Natural Resources Office

Permit File

FEATURE SUMMARY TABLE:																									
Location Information							Impact Description												Mitigation Description					Comments	
Location #	Stationing	Feature Name	Jurisdictional Determination	Waterbody ID	Latitude	Longitude	Brief Impact Description	Impact Acreage to Waters of the US (ac.)	CY fill	Corridor Area	Corps Notification (Y/N)	Existing Structure	Existing Stream	Total Existing Stream Length (ft.)	Existing Corridor Length (ft.)	Proposed Structure	U type endwalls	Proposed Stream	Total Proposed Stream Length (ft.)	Encapsul. Length @ 1.0 Ratio (ft.)	Stream Length Losses @ 1.0 Ratio (ft.)	Rip-rap Length @ 0.75 Ratio (ft.)	Canopy Length Losses @ 0.50 Ratio (ft.)	Total In-Lieu Fee (@ \$240 per LF)	Location-Specific Miscellaneous Comments
2	23+00	STR-1	Intermittent Stream	TN060200040_01_0120	35.0916°	85.6239°	Encap	0.15	356	0.52	Y	0	223	223	755	143		80	223	143	-		-	\$34,320	-
3	41+00	STR-3	Intermittent Stream	TN060200040_01_0120	35.0887°	85.6153°	Fill	0.034	278	0.034	Y	0	150	150	150	0		0	0	0	150		-	\$36,000	-
3	41+90	STR-4	Perennial Stream	TN060200040_01_0120	35.0883°	85.6152°	Encap	0.069	457	0.033	Y	0	220	220	250	107		100	207	107	13	100	-	\$46,800	-
5	52+22	STR-5	Perennial Stream	TN060200040_01_0120	35.0868°	85.6123°	Encap	0.014	54	0.016	N	0	209	209	230	175	24	10	209	199		10	-	\$49,560	-
8	73+22	STR-6	Intermittent Stream	TN060200040_01_0120	35.0830°	85.6070°	Encap	0.006	20	0.010	N	0	111	111	150	65	28	18	111	93	-	18	-	\$25,560	-
Project Totals:								0.277			-			913					750	542	163	96	0	\$192,240	-

Encap=107
+199=306

Rip-rap=100
+10=110





STR-2
Lat 35.0923 Long -85.6239

STR-3
Lat 35.0887 Long -85.6153
STR-4
Lat 35.0887 Long -85.6153

Extend SR-150

STR-5
Lat 35.0868 Long -85.6123

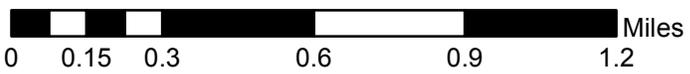
STR-1
Lat 35.0916 Long -85.6239

STR-6
Lat 35.0830 Long -85.6070

WTL-1
Lat 35.0874 Long -85.6136
WTL-2
Lat 35.0870 Long -85.6132
WTL-2
Lat 35.0870 Long -85.6130

WTL-4
Lat 35.0863 Long -85.6120
WTL-5
Lat 35.0848 Long -85.6100

SEQUATCHIE QUADRANGLE 100-SE
APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
Project #58015-1210-14
PIN 103774.00
SR-150
Marion County
Near: Jasper, Tennessee



JOINT APPLICATION FORM

Department of the Army/TVA

The Department of the Army (DA) permit program is authorized by **Section 10 of the Rivers and Harbors Act of 1899** and **Section 404 of the Clean Water Act (P.L. 95-217)**. These laws require permits authorizing structures and work in or affecting navigable waters of the United States and the discharge of dredged or fill material into waters of the United States. **Section 26a of the Tennessee Valley Authority Act**, as amended, prohibits the construction, operation, or maintenance of any structure affecting navigation, flood control, or public lands or reservations across, along, or in the Tennessee River or any of its tributaries until plans for such construction, operation, and maintenance have been submitted to and approved by the Tennessee Valley Authority (TVA).

Name and Address of Applicant: Tennessee Department of Transportation 505 Deaderick Street, Suite 900 Nashville, TN 37243	Name, Address, and Title of Authorized Agent:
Telephone Number: Home _____ Office (615) 253-0021	Telephone Number: Home _____ Office _____

Location where activity exists or will occur (include Stream Name and Mile, if known):

SR-150 from Existing SR-150 to SR-28 North of Jasper

Application submitted to DA TVA
Date activity is proposed to commence: 9/28/2015 Date activity is proposed to be completed: 9/28/2020

Describe in detail the proposed activity, its purpose and intended use (private, public, commercial, or other). Describe structures to be erected including those placed on fills, piles, or floating platforms. Also describe the type, composition, and quantity of materials to be discharged or placed in the water; the means of conveyance; and the source of discharge or fill material. Please attach additional sheets if needed.

PIN 103774.00

The applicant proposes to construct approximately 1.5 mi of extension of SR-150 to SR-28 for public use. The proposed typical section consists of two 12' travel lanes (one 12' lane in each direction), 10' shoulders with ditches on both sides of the roadway, and 120' right-of-way with easements as required.

This project will not cause any loss of flood storage or power storage volumes.

Application is hereby made for approval of the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. **I agree that, if this application is approved by TVA, I will comply with the attached terms and conditions and any special conditions that may be imposed by TVA at the time of approval. Please note the U.S. Army Corps of Engineers may impose additional conditions or restrictions.**

2/12/2015 Date Abdul Ahmed Signature of Applicant

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both. The appropriate DA fee will be assessed when a permit is issued.

Names, addresses, and telephone numbers of adjoining property owners, lessees, etc., whose properties also join the waterway:
See attached

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

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	GARAP			
TDEC	NPDES			

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 should accompany the application. These should be on paper suitable for reproduction no larger than 11 x 17 inches or contained on a 3-1/2 inch floppy computer disc in "dxf" format, and should be submitted 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 Office Location
U.S. Army Corps of Engineers Eastern Regulatory Field Office Spring Cress Business Park 501 Adessa Blvd., 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
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	
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	

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 1.5 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.

Disclose if any of the following apply to you (check all that apply [X]). 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.

Project # 58015-1210-14
PIN 103774.00
SR 150/US 41
From Existing SR 150 (N of Jasper)
To SR 28
Marion 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.

[X] 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 [X] 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.

Name of applicant (Printed) Khalid Ahmed

Signature of Applicant [Handwritten Signature] Date 2/12/2015

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).

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.

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: Robert Rodgers
TDOT Design Division

From: Christina Richards
Ecology Section

Date: 5 June 2012

Subject: ENVIRONMENTAL BOUNDARIES AND MITIGATION DESIGN FOR: **Marion County:
SR-150 From Existing SR-150 to SR-28 North of Jasper; PE No. 58015-
1210-14; PIN 103774.00**

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

 x Wetlands present: There are six wetlands within the project impact area. If the Sequatchie Valley Wetland Preserve Mitigation Bank is approved for use by the time of the permit application mitigate at that bank. If it is not available the mitigate at the Coffee County Wetland Mitigation Bank at a ratio of 4:1. Please see Form G and J for details of these wetlands and mitigation recommendations.

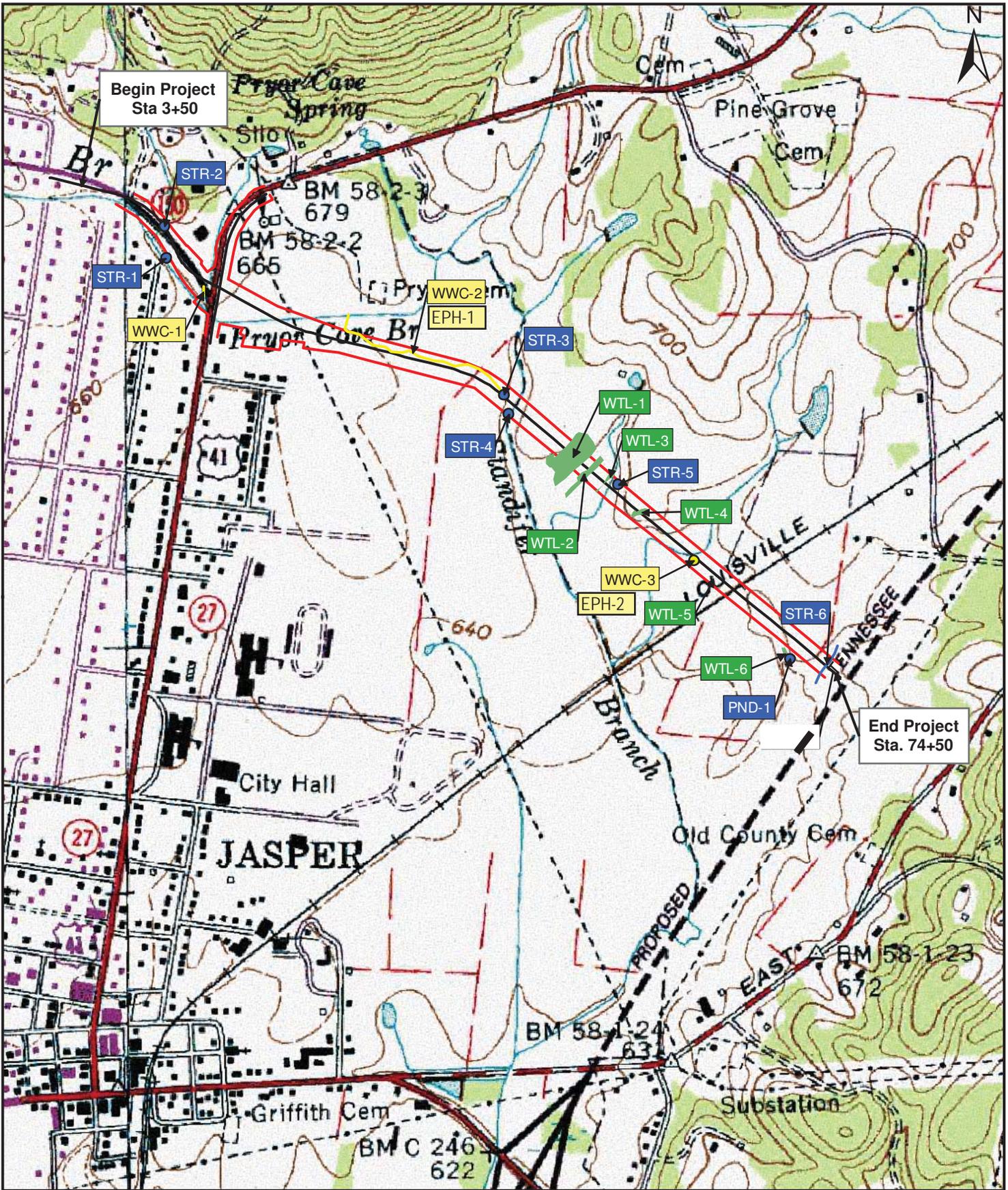
 x Streams present: There are six (6) streams within the project impact area. The proposed box culvert over Standifer Branch (STR-4) is much wider than the current stream. A low flow channel should be applied to this crossing, running the stream through the eastern-most barrel using STD 15-16A (standard drawing). Do not overwiden the stream at the box culvert. Please see Form G and J for details of these streams and their mitigation recommendations.

There are four (4) wet weather conveyances within the project impact area. No mitigation is required for these features.

 x Protected species identified within four miles: There are six (6) state or federally listed species within one mile and thirteen (13) state or federally listed species from one to four miles of the project impact area. USFWS and TWRA have stated that best management practices are sufficient to protect these species. Please see Form N for a list and details of these species.

If you have any questions or comments please contact me at Christina.Richards@state.tn.us or 615-253-8690. Thank you very much.

Copy: Permits: Memo, Photos, Topo, Form G, J, and N
Project file: Memo, Photos, Topo, Form G, J, and N
John Hewitt: Memo, Photos, Topo, Form G, J, and N



0 325 650 1,300 Feet

ISSUED FOR: TDOT



ISSUED BY:



CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
 405 Duke Drive, Ste 270, Franklin, TN 37067
 Columbus, OH * Cincinnati, OH * Indianapolis, IN * Nashville, TN * Chicago, IL
 St. Louis, MO * Export, PA * Detroit, MI

Form G Map
 SR-150 From existing SR-150 (North of Jasper)
 to SR-28 in Marion County
 PE 58015-1210-14; Pin 103774.00

DWN. BY: cec
 CHK. BY: td

SCALE: 1:12,000

DATE: 05-07-2012

PROJECT NO.: 120-515

FIGURE: 1

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (FRONT)

(See Protocol E for detailed descriptions and rank information)

MARION CO, SR-150, FROM EXISTING BR-150 TO SR-28 PIN 103774.00

STATION ID: 17+40 23+00		HABITAT ASSESSED BY: KBC, RMT, RLH														
STREAM NAME: PRYOR COVE BR (STR-1)		DATE: 01.28.2015					TIME: 1115									
STATION LOCATION:		ECOREGION: 686 QC: Consensus Duplicate														
WBID/HUC: 060200040305-Town		GROUP:		ASSOCIATED LOG #:												
	Optimal	Suboptimal					Marginal					Poor				
1. Epifaunal Substrate/ Available Cover	Over 70% of stream reach has natural stable habitat suitable for colonization by fish and/or macroinvertebrates. Four or more productive habitats are present.	Natural stable habitat covers 40-70% of stream reach. Three or more productive habitats present. (If near 70% and more than 3 go to optimal.)					Natural stable habitat covers 20 -40% of stream reach or only 1-2 productive habitats present. (If near 40% and more than 2 go to suboptimal.)					Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
SCORE 20	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Comments																
2. Embeddedness of Riffles	Gravel, cobble, and boulders 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space. If near 25% drop to suboptimal if riffle not layered cobble.	Gravel, cobble and boulders 25-50% surrounded by fine sediment. Niches in bottom layers of cobble compromised. If near 50% & riffles not layered cobble drop to marginal.					Gravel, cobble, and boulders are 50-75% surrounded by fine sediment. Niche space in middle layers of cobble is starting to fill with fine sediment.					Gravel, cobble, and boulders are more than 75% surrounded by fine sediment. Niche space is reduced to a single layer or is absent.				
SCORE 16	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Comments		MULTIPLE LAYERS OF COBBLE AVAILABLE														
3. Velocity/ Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow).	Only 3 of the 4 regimes present (if fast-shallow is missing score lower). If slow-deep missing score 15.					Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).					Dominated by 1 velocity/depth regime. Others regimes too small or infrequent to support aquatic populations.				
SCORE 14	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Comments		FOUR REGIMES, FAST SHALLOW DOMINANT														
4. Sediment Deposition	Sediment deposition affects less than 5% of stream bottom in quiet areas. New deposition on islands and point bars is absent or minimal.	Sediment deposition affects 5-30% of stream bottom. Slight deposition in pool or slow areas. Some new deposition on islands and point bars. Move to marginal if build-up approaches 30%.					Sediment deposition affects 30-50% of stream bottom. Sediment deposits at obstruction, constrictions and bends. Moderate pool deposition.					Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.				
SCORE 15	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Comments																
5. Channel Flow Status.	Water reaches base of both lower banks and streambed is covered by water throughout reach. Minimal productive habitat is exposed.	Water covers > 75% of streambed or 25% of productive habitat is exposed.					Water covers 25-75% of streambed and/or productive habitat is mostly exposed.					Very little water in channel and mostly present as standing pools. Little or no productive habitat due to lack of water.				
SCORE 1	20 19 18 17 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Comments																

STR-1

10377A.06

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (BACK)

Station ID	23100		Date	01.28.2015		Initials	KRL, RMT, RLH		
6. Channel Alteration	Optimal	Channelization, dredging rock removal or 4-wheel activity (past or present) absent or minimal; natural meander pattern. NO artificial structures in reach. Upstream or downstream structures do not affect reach.	Suboptimal	Channelization, dredging or 4-wheel activity up to 40%. Channel has stabilized. If larger reach, channelization is historic and stable. Artificial structures in or out of reach do not affect natural flow patterns.	Marginal	Channelization, dredging or 4-wheel activity 40-80% (or less that has not stabilized.) Artificial structures in or out of reach may have slight affect.	Poor	Over 80% of reach channelized, dredged or affected by 4-wheelers. Instream habitat greatly altered or removed. Artificial structures have greatly affected flow pattern.	
	SCORE	(14) 20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1				
	Comments								
7. Frequency of re-oxygenation zones. Use frequency of riffle or bends for category. Rank by quality.	Optimal	Occurrence of re-oxygenation zones relatively frequent; ratio of distance between areas divided by average stream width <7:1.	Suboptimal	Occurrence of re-oxygenation zones infrequent; distance between areas divided by average stream width is 7 - 15.	Marginal	Occasional re-oxygenation area. The distance between areas divided by average stream width is over 15 and up to 25.	Poor	Generally all flat water or flat bedrock; little opportunity for re-oxygenation. Distance between areas divided by average stream width >25.	
	SCORE	(15) 20 19 18 17 16	(15) 14 13 12 11	10 9 8 7 6	5 4 3 2 1				
	Comments		HIGH QUALITY CORBLE RIFFLES AVAILABLE						
8. Bank Stability (score each bank) Determine left or right side by facing downstream.	Optimal	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems <5% of bank affected.	Suboptimal	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion. If approaching 30% score marginal if banks steep.	Marginal	Moderately unstable; 30-60 % of bank in reach has areas of erosion; high erosion potential during floods, If approaching 60% score poor if banks steep.	Poor	Unstable; many eroded area; raw areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.	
	SCORE (LB)	(9) Left Bank 10 9	8 7 6	5 4 3	2 1 0				
	SCORE (RB)	(9) Right Bank 10 9	8 7 6	5 4 3	2 1 0				
Comments									
9. Vegetative Protective (score each bank) includes vegetation from top of bank to base of bank. Determine left or right side by facing downstream	Optimal	More than 90% of the bank covered by undisturbed vegetation. All 4 classes (mature trees, understory trees, shrubs, groundcover) are represented and allowed to grow naturally. All plants are native.	Suboptimal	70-90% of the bank covered by undisturbed vegetation. One class may not be well represented. Disruption evident but not effecting full plant growth. Non-natives are rare (< 30%)	Marginal	50-70% of the bank covered by undisturbed vegetation. Two classes of vegetation may not be well represented. Non-native vegetation may be common (30-50%).	Poor	Less than 50% of the bank covered by undisturbed vegetation or more than 2 classes are not well represented or most vegetation has been cropped. Non-native vegetation may dominate (> 50%)	
	SCORE (LB)	(3) Left Bank 10 9	8 7 6	5 4 3	2 1 0				
	SCORE (RB)	(3) Right Bank 10 9	8 7 6	5 4 3	2 1 0				
Comments		OPEN DOMINANT SHADY LAYER							
10. Riparian Vegetative Zone Width (score each bank.) Zone begins at top of bank.	Optimal	Average width of riparian zone > 18 meters. Unpaved footpaths may score 9 if run-off potential is negligible.	Suboptimal	Average width of riparian zone 12-18 meters. Score high if areas < 18 meters are small or are minimally disturbed.	Marginal	Average width of riparian zone 6-11 meters. Score high if areas less than 12 meters are small or are minimally disturbed.	Poor	Average width of riparian zone <6 meters. Score high if areas less than 6 meters are small or are minimally disturbed.	
	SCORE (LB)	(2) Left Bank 10 9	8 7 6	5 4 3	(2) 1 0				
	SCORE (RB)	(1) Right Bank 10 9	8 7 6	5 4 3	2 (1) 0				
Comments									

total Score 127

Comparison to Ecoregion Guidelines (circle): ABOVE or BELOW

If score is below guidelines, result of (circle): Natural Conditions or Human Disturbance

describe

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (FRONT)

(See Protocol E for detailed descriptions and rank information)

MARION CO, SR-150 FROM EXISTING SR-150 TO SR-28 PIN 103774.00

STATION ID: 10185		HABITAT ASSESSED BY: KBC, RLH, RMT		
STREAM NAME: STR-2 (TRIB TO DRYOR)		DATE: 01.28.2015 TIME: 1040		
STATION LOCATION:		ECOREGION: 68b QC: Consensus Duplicate		
WBID/HUC: 060200040305-Town		GROUP: ASSOCIATED LOG #: —		
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Over 70% of stream reach has natural stable habitat suitable for colonization by fish and/or macroinvertebrates. Four or more productive habitats are present.	Natural stable habitat covers 40-70% of stream reach. Three or more productive habitats present. (If near 70% and more than 3 go to optimal.)	Natural stable habitat covers 20 -40% of stream reach or only 1-2 productive habitats present. (If near 40% and more than 2 go to suboptimal.)	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE (20)	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Comments	COBBLE RIVE RIFFLE DOMINANT			
2. Embeddedness of Riffles	Gravel, cobble, and boulders 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space. If near 25% drop to suboptimal if riffle not layered cobble.	Gravel, cobble and boulders 25-50% surrounded by fine sediment. Niches in bottom layers of cobble compromised. If near 50% & riffles not layered cobble drop to marginal.	Gravel, cobble, and boulders are 50-75% surrounded by fine sediment. Niche space in middle layers of cobble is starting to fill with fine sediment.	Gravel, cobble, and boulders are more than 75% surrounded by fine sediment. Niche space is reduced to a single layer or is absent.
SCORE (18)	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Comments	MULTIPLE LAYERS OF COBBLE			
3. Velocity/ Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow).	Only 3 of the 4 regimes present (if fast-shallow is missing score lower). If slow-deep missing score 15.	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime. Others regimes too small or infrequent to support aquatic populations.
SCORE (14)	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Comments	3/4 REGIMES; FAST SHALLOW DOMINANT			
4. Sediment Deposition	Sediment deposition affects less than 5% of stream bottom in quiet areas. New deposition on islands and point bars is absent or minimal.	Sediment deposition affects 5-30% of stream bottom. Slight deposition in pool or slow areas. Some new deposition on islands and point bars. Move to marginal if build-up approaches 30%.	Sediment deposition affects 30-50% of stream bottom. Sediment deposits at obstruction, constrictions and bends. Moderate pool deposition.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE (15)	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Comments				
5. Channel Flow Status.	Water reaches base of both lower banks and streambed is covered by water throughout reach. Minimal productive habitat is exposed.	Water covers > 75% of streambed or 25% of productive habitat is exposed.	Water covers 25-75% of streambed and/or productive habitat is mostly exposed.	Very little water in channel and mostly present as standing pools. Little or no productive habitat due to lack of water.
SCORE (1)	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Comments	CHANNEL IS DRY			

 51
 61
 12

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (BACK)

Station ID	STR-2 (10+85)		Date	01.28.2015		Initials	KBC/RMT/RH+	
6. Channel Alteration	Optimal Channelization, dredging rock removal or 4-wheel activity (past or present) absent or minimal; natural meander pattern. NO artificial structures in reach. Upstream or downstream structures do not affect reach.	Suboptimal Channelization, dredging or 4-wheel activity up to 40%. Channel has stabilized. If larger reach, channelization is historic and stable. Artificial structures in or out of reach do not affect natural flow patterns.	Marginal Channelization, dredging or 4-wheel activity 40-80% (or less that has not stabilized.) Artificial structures in or out of reach may have slight affect.	Poor Over 80% of reach channelized, dredged or affected by 4-wheelers. Instream habitat greatly altered or removed. Artificial structures have greatly affected flow pattern.				
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1				
Comments	CULVERT W/ EVALUATED REACH - CULVERT NOT IN PROPER ALIGNMENT							
7. Frequency of re-oxygenation zones. Use frequency of riffle or bends for category. Rank by quality.	Occurrence of re-oxygenation zones relatively frequent; ratio of distance between areas divided by average stream width <7:1.	Occurrence of re-oxygenation zones infrequent; distance between areas divided by average stream width is 7 - 15.	Occasional re-oxygenation area. The distance between areas divided by average stream width is over 15 and up to 25.	Generally all flat water or flat bedrock; little opportunity for re-oxygenation. Distance between areas divided by average stream width >25.				
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1				
Comments	FREQUENT RE-OXYGENATION, HIGH QUALITY COBBLE RIFFLES							
8. Bank Stability (score each bank) Determine left or right side by facing downstream.	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. If approaching 30% score marginal if banks steep.	Moderately unstable; 30-60 % of bank in reach has areas of erosion; high erosion potential during floods, If approaching 60% score poor if banks steep.	Unstable; many eroded area; raw areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.				
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0				
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0				
Comments								
9. Vegetative Protective (score each bank) includes vegetation from top of bank to base of bank. Determine left or right side by facing downstream	More than 90% of the bank covered by undisturbed vegetation. All 4 classes (mature trees, understory trees, shrubs, groundcover) are represented and allowed to grow naturally. All plants are native.	70-90% of the bank covered by undisturbed vegetation. One class may not be well represented. Disruption evident but not effecting full plant growth. Non-natives are rare (< 30%)	50-70% of the bank covered by undisturbed vegetation. Two classes of vegetation may not be well represented. Non-native vegetation may be common (30-50%).	Less than 50% of the bank covered by undisturbed vegetation or more than 2 classes are not well represented or most vegetation has been cropped. Non-native vegetation may dominate (> 50%)				
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0				
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0				
Comments	NO TREE LAYERS; INVASIVES (PRIVET, JAPANESE STILT GRASS)							
10. Riparian Vegetative Zone Width (score each bank.) Zone begins at top of bank.	Average width of riparian zone > 18 meters. Unpaved footpaths may score 9 if run-off potential is negligible.	Average width of riparian zone 12-18 meters. Score high if areas < 18 meters are small or are minimally disturbed.	Average width of riparian zone 6-11 meters. Score high if areas less than 12 meters are small or are minimally disturbed.	Average width of riparian zone <6 meters. Score high if areas less than 6 meters are small or are minimally disturbed.				
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0				
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0				
Comments	RDB < 6M LAWN; LDB - 6-11M							

total Score 122 Comparison to Ecoregion Guidelines (circle): ABOVE or BELOW

Score is below guidelines, result of (circle): Natural Conditions or Human Disturbance

Describe Drainage is 0.91 mi²

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (FRONT)

(See Protocol E for detailed descriptions and rank information)

MARION CO, SR-150, FROM EXISTING SR-150 TO CR-28

PIN 10377A.00

STATION ID: 16125 RT		HABITAT ASSESSED BY: KBC, RMT, RLH			
STREAM NAME: WWC-1		DATE: 01.28.2015		TIME: 1010	
STATION LOCATION:		ECOREGION: 686 QC: Consensus Duplicate			
WBID/HUC: 060200040305 - Town		GROUP:		ASSOCIATED LOG #: —	
	Optimal	Suboptimal	Marginal	Poor	
1. Epifaunal Substrate/ Available Cover	Over 70% of stream reach has natural stable habitat suitable for colonization by fish and/or macroinvertebrates. Four or more productive habitats are present.	Natural stable habitat covers 40-70% of stream reach. Three or more productive habitats present. (If near 70% and more than 3 go to optimal.)	Natural stable habitat covers 20 -40% of stream reach or only 1-2 productive habitats present. (If near 40% and more than 2 go to suboptimal.)	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
SCORE ①	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 ①	
Comments	NO NATURAL SUBSTRATE				
2. Embeddedness of Riffles	Gravel, cobble, and boulders 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space. If near 25% drop to suboptimal if riffle not layered cobble.	Gravel, cobble and boulders 25-50% surrounded by fine sediment. Niches in bottom layers of cobble compromised. If near 50% & riffles not layered cobble drop to marginal.	Gravel, cobble, and boulders are 50-75% surrounded by fine sediment. Niche space in middle layers of cobble is starting to fill with fine sediment.	Gravel, cobble, and boulders are more than 75% surrounded by fine sediment. Niche space is reduced to a single layer or is absent.	
SCORE N/A	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1	
Comments	NO RIFFLES				
3. Velocity/ Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow).	Only 3 of the 4 regimes present (if fast-shallow is missing score lower). If slow-deep missing score 15.	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime. Others regimes too small or infrequent to support aquatic populations.	
SCORE N/A	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1	
Comments	NO FLOW				
4. Sediment Deposition	Sediment deposition affects less than 5% of stream bottom in quiet areas. New deposition on islands and point bars is absent or minimal.	Sediment deposition affects 5-30% of stream bottom. Slight deposition in pool or slow areas. Some new deposition on islands and point bars. Move to marginal if build-up approaches 30%.	Sediment deposition affects 30-50% of stream bottom. Sediment deposits at obstruction, constrictions and bends. Moderate pool deposition.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
SCORE 4	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 ④ 3 2 1	
Comments					
5. Channel Flow Status.	Water reaches base of both lower banks and streambed is covered by water throughout reach. Minimal productive habitat is exposed.	Water covers > 75% of streambed or 25% of productive habitat is exposed.	Water covers 25-75% of streambed and/or productive habitat is mostly exposed.	Very little water in channel and mostly present as standing pools. Little or no productive habitat due to lack of water.	
SCORE 1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 ①	
Comments	NO FLOW				

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (BACK)

Station ID	Date										Initials														
WNC-1	16+25 RT										01.28.2015					KBC, RMT, RLH									
	Optimal					Suboptimal					Marginal					Poor									
6. Channel Alteration	Channelization, dredging rock removal or 4-wheel activity (past or present) absent or minimal; natural meander pattern. NO artificial structures in reach. Upstream or downstream structures do not affect reach.					Channelization, dredging or 4-wheel activity up to 40%. Channel has stabilized. If larger reach, channelization is historic and stable. Artificial structures in or out of reach do not affect natural flow patterns.					Channelization, dredging or 4-wheel activity 40-80% (or less that has not stabilized.) Artificial structures in or out of reach may have slight affect.					Over 80% of reach channelized, dredged or affected by 4-wheelers. Instream habitat greatly altered or removed. Artificial structures have greatly affected flow pattern.									
SCORE	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1									
Comments	CONSTRUCTED FEATURE ENCAPSULATED																								
7. Frequency of re-oxygenation zones.	Occurrence of re-oxygenation zones relatively frequent; ratio of distance between areas divided by average stream width <7:1.					Occurrence of re-oxygenation zones infrequent; distance between areas divided by average stream width is 7 - 15.					Occasional re-oxygenation area. The distance between areas divided by average stream width is over 15 and up to 25.					Generally all flat water or flat bedrock; little opportunity for re-oxygenation. Distance between areas divided by average stream width >25.									
SCORE	N/A					20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1				
Comments	NO RE-OXYGENATION ZONES AVAILABLE																								
8. Bank Stability	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. If approaching 30% score marginal if banks steep.					Moderately unstable; 30-60 % of bank in reach has areas of erosion; high erosion potential during floods, If approaching 60% score poor if banks steep.					Unstable; many eroded area; raw areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.									
SCORE (LB)	9					8 7 6					5 4 3					2 1 0									
SCORE (RB)	9					8 7 6					5 4 3					2 1 0									
Comments																									
9. Vegetative Protective	More than 90% of the bank covered by undisturbed vegetation. All 4 classes (mature trees, understory trees, shrubs, groundcover) are represented and allowed to grow naturally. All plants are native.					70-90% of the bank covered by undisturbed vegetation. One class may not be well represented. Disruption evident but not effecting full plant growth. Non-natives are rare (< 30%)					50-70% of the bank covered by undisturbed vegetation. Two classes of vegetation may not be well represented. Non-native vegetation may be common (30-50%).					Less than 50% of the bank covered by undisturbed vegetation or more than 2 classes are not well represented or most vegetation has been cropped. Non-native vegetation may dominate (> 50%)									
SCORE (LB)	9					8 7 6					5 4 3					2 1 0									
SCORE (RB)	9					8 7 6					5 4 3					2 1 0									
Comments	MOWED LAWN GRASSES																								
10. Riparian Vegetative Zone Width	Average width of riparian zone > 18 meters. Unpaved footpaths may score 9 if run-off potential is negligible.					Average width of riparian zone 12-18 meters. Score high if areas < 18 meters are small or are minimally disturbed.					Average width of riparian zone 6-11 meters. Score high if areas less than 12 meters are small or are minimally disturbed.					Average width of riparian zone <6 meters. Score high if areas less than 6 meters are small or are minimally disturbed.									
SCORE (LB)	9					8 7 6					5 4 3					2 1 0									
SCORE (RB)	9					8 7 6					5 4 3					2 1 0									
Comments	MOWED / MAINTAINED																								

Total Score 29 Comparison to Ecoregion Guidelines (circle): ABOVE or BELOW

If score is below guidelines, result of (circle): Natural Conditions or Human Disturbance

Describe

WNC-2 / EP4-1

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (FRONT)

(See Protocol E for detailed descriptions and rank information)

MARION CO, SR-150, FROM EXISTING SR-150 TO SR-28 PIN 103774.00

STATION ID: 27+60 LT TO 40+70 LT		HABITAT ASSESSED BY: WBC, RMT, RLH		
STREAM NAME: WNC-2/EP4-1		DATE: 01.28.2015		TIME: 1300
STATION LOCATION:		ECOREGION: 68b QC: Consensus Duplicate		
WBID/HUC: 060200040305-Town		GROUP: ASSOCIATED LOG #: —		
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Over 70% of stream reach has natural stable habitat suitable for colonization by fish and/or macroinvertebrates. Four or more productive habitats are present.	Natural stable habitat covers 40-70% of stream reach. Three or more productive habitats present. (If near 70% and more than 3 go to optimal.)	Natural stable habitat covers 20 -40% of stream reach or only 1-2 productive habitats present. (If near 40% and more than 2 go to suboptimal.)	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE (1)	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 (1)
Comments	NO NATURAL STABLE HABITATS WITHIN THE REACH			
2. Embeddedness of Riffles	Gravel, cobble, and boulders 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space. If near 25% drop to suboptimal if riffle not layered cobble.	Gravel, cobble and boulders 25-50% surrounded by fine sediment. Niches in bottom layers of cobble compromised. If near 50% & riffles not layered cobble drop to marginal.	Gravel, cobble, and boulders are 50-75% surrounded by fine sediment. Niche space in middle layers of cobble is starting to fill with fine sediment.	Gravel, cobble, and boulders are more than 75% surrounded by fine sediment. Niche space is reduced to a single layer or is absent.
SCORE N/A	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Comments				
3. Velocity/ Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow).	Only 3 of the 4 regimes present (if fast-shallow is missing score lower). If slow-deep missing score 15.	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime. Others regimes too small or infrequent to support aquatic populations.
SCORE (1)	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 (1)
Comments	NO FLOW			
4. Sediment Deposition	Sediment deposition affects less than 5% of stream bottom in quiet areas. New deposition on islands and point bars is absent or minimal.	Sediment deposition affects 5-30% of stream bottom. Slight deposition in pool or slow areas. Some new deposition on islands and point bars. Move to marginal if build-up approaches 30%.	Sediment deposition affects 30-50% of stream bottom. Sediment deposits at obstruction, constrictions and bends. Moderate pool deposition.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 4	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 (4) 3 2 1
Comments				
5. Channel Flow Status.	Water reaches base of both lower banks and streambed is covered by water throughout reach. Minimal productive habitat is exposed.	Water covers > 75% of streambed or 25% of productive habitat is exposed.	Water covers 25-75% of streambed and/or productive habitat is mostly exposed.	Very little water in channel and mostly present as standing pools. Little or no productive habitat due to lack of water.
SCORE (1)	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 (1)
Comments	DRY CHANNEL			

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (BACK)

Station ID	27+60 LT TO 40+70 LT		Date	01.28.2015		Initials	KBC, RMT, RHH	
	Optimal	Suboptimal	Marginal	Poor				
6. Channel Alteration	Channelization, dredging rock removal or 4-wheel activity (past or present) absent or minimal; natural meander pattern. NO artificial structures in reach. Upstream or downstream structures do not affect reach.	Channelization, dredging or 4-wheel activity up to 40%. Channel has stabilized. If larger reach, channelization is historic and stable. Artificial structures in or out of reach do not affect natural flow patterns.	Channelization, dredging or 4-wheel activity 40-80% (or less that has not stabilized.) Artificial structures in or out of reach may have slight affect.	Over 80% of reach channelized, dredged or affected by 4-wheelers. Instream habitat greatly altered or removed. Artificial structures have greatly affected flow pattern.				
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1				
Comments	20							
7. Frequency of re-oxygenation zones. Use frequency of riffle or bends for category. Rank by quality.	Occurrence of re-oxygenation zones relatively frequent; ratio of distance between areas divided by average stream width <7:1.	Occurrence of re-oxygenation zones infrequent; distance between areas divided by average stream width is 7 - 15.	Occasional re-oxygenation area. The distance between areas divided by average stream width is over 15 and up to 25.	Generally all flat water or flat bedrock; little opportunity for re-oxygenation. Distance between areas divided by average stream width >25.				
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1				
Comments	2							
8. Bank Stability (score each bank) Determine left or right side by facing downstream.	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. If approaching 30% score marginal if banks steep.	Moderately unstable; 30-60 % of bank in reach has areas of erosion; high erosion potential during floods, If approaching 60% score poor if banks steep.	Unstable; many eroded area; raw areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.				
SCORE (LB)	3	Left Bank 10 9	8 7 6	5 4 3		2 1 0		
SCORE (RB)	6	Right Bank 10 9	8 7 6	5 4 3		2 1 0		
Comments	GENERALLY FLAT, LIMITED OXYGENATION OPPORTUNITIES							
9. Vegetative Protective (score each bank) includes vegetation from top of bank to base of bank. Determine left or right side by facing downstream	More than 90% of the bank covered by undisturbed vegetation. All 4 classes (mature trees, understory trees, shrubs, groundcover) are represented and allowed to grow naturally. All plants are native.	70-90% of the bank covered by undisturbed vegetation. One class may not be well represented. Disruption evident but not effecting full plant growth. Non-natives are rare (<30%)	50-70% of the bank covered by undisturbed vegetation. Two classes of vegetation may not be well represented. Non-native vegetation may be common (30-50%).	Less than 50% of the bank covered by undisturbed vegetation or more than 2 classes are not well represented or most vegetation has been cropped. Non-native vegetation may dominate (>50%)				
SCORE (LB)	8	Left Bank 10 9	8 7 6	5 4 3		2 1 0		
SCORE (RB)	8	Right Bank 10 9	8 7 6	5 4 3		2 1 0		
Comments	PRIVET/ TRIFOLIATE ORANGE DOMINANT							
10. Riparian Vegetative Zone Width (score each bank.) Zone begins at top of bank.	Average width of riparian zone > 18 meters. Unpaved footpaths may score 9 if run-off potential is negligible.	Average width of riparian zone 12-18 meters. Score high if areas < 18 meters are small or are minimally disturbed.	Average width of riparian zone 6-11 meters. Score high if areas less than 12 meters are small or are minimally disturbed.	Average width of riparian zone <6 meters. Score high if areas less than 6 meters are small or are minimally disturbed.				
SCORE (LB)	10	Left Bank 10 9	8 7 6	5 4 3		2 1 0		
SCORE (RB)	9	Right Bank 10 9	8 7 6	5 4 3		2 1 0		
Comments								

total Score 60

Comparison to Ecoregion Guidelines (circle): ABOVE or BELOW

Score is below guidelines, result of (circle): Natural Conditions or Human Disturbance

describe

HABITAT ASSESSMENT FIELD DATA SHEET—HIGH GRADIENT STREAMS

STREAM NAME STR-3		LOCATION Marion Co., SR-150	
SITE ID # N/A REACH ID N/A		STREAM CLASS N/A	
UTM N 35.088733 UTM E -85.615301		RIVER BASIN Town Creek	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS M. Skelton/C. Hertwig			
FORM COMPLETED BY C. Hertwig		DATE 3/20/2012 TIME 10:45 AM	REASON FOR SURVEY TDOT Environmental boundaries

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 70% 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 not transient)	40-70% 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).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 14	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
SCORE 12	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
SCORE 12	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% 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 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 12	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	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.
SCORE 18	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—HIGH GRADIENT STREAMS Stream name: 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 17	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
7. Frequency of Riffles (or bends)	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.					Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.					Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.					Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.					
SCORE 12	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) Note: determine left or right side by facing downstream.	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 2 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 4 LB)	Left Bank	10	9	8	7	6	5	4	3	2	1	0									
SCORE 4 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 9 LB)	Left Bank	10	9	8	7	6	5	4	3	2	1	0									
SCORE 9 RB)	Right Bank	10	9	8	7	6	5	4	3	2	1	0									

Parameters to be evaluated broader than sampling reach

Total Score 127

HABITAT ASSESSMENT FIELD DATA SHEET—HIGH GRADIENT STREAMS

STREAM NAME STR-4		LOCATION Marion Co., SR-150	
SITE ID # N/A REACH ID N/A		STREAM CLASS N/A	
UTM N 35.088331 UTM E -85.615177		RIVER BASIN Town Creek	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS M. Skelton/C. Hertwig			
FORM COMPLETED BY C. Hertwig		DATE 3/20/2012 TIME 11:00 AM	REASON FOR SURVEY TDOT Environmental boundaries

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover SCORE 16	Greater than 70% 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 not new fall and not transient)	40-70% 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).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% 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. Embeddedness SCORE 12	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Velocity/Depth Regime SCORE 16	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
	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 12	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% 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 50% 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 18	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—HIGH GRADIENT STREAMS Stream name: STR-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 19	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
7. Frequency of Riffles (or bends)	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.					Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.					Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.					Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.					
SCORE 17	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) Note: determine left or right side by facing downstream.	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 4 LB)	Left Bank	10	9	8	7	6	5	4	3	2	1	0	2	1	0	2	1	0	2	1	0
SCORE 4 RB)	Right Bank	10	9	8	7	6	5	4	3	2	1	0	2	1	0	2	1	0	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	2	1	0	2	1	0	2	1	0
SCORE 6 RB)	Right Bank	10	9	8	7	6	5	4	3	2	1	0	2	1	0	2	1	0	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 4 LB)	Left Bank	10	9	8	7	6	5	4	3	2	1	0	2	1	0	2	1	0	2	1	0
SCORE 10 RB)	Right Bank	10	9	8	7	6	5	4	3	2	1	0	2	1	0	2	1	0	2	1	0

Total Score 144

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28 Map Label: WTL-1
 P.E. and PIN: P.E.: 58015-1210-14, PIN: 103774.00 Date: 03/20/2012 Station: 47+10 - 49+00 CL
 Investigator(s): M. Skelton/C. Hertwig HUC 12 (code and name): 060200040204, Town Creek
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1%
 Subregion (LRR or MLRA): LRR Lat: N35.087424 Long: W85.613588 Datum: WGS 84
 Soil Map Unit Name: Prader silt loam (Purdy) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes 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 <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: Photos: <u>29 soil, 30, 31</u> Buffer (ft.): <u>0</u> Approximate Size (ac.): <u>> 1.71</u> Portion Affected (permanent) (ac.): <u>0.50</u> Portion Affected (temporary) (ac.): <u>0.12</u>	Confirmation (by, date): <u>Not required</u> Mitigation (to be included in design): <u>Yes</u> Notes:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	____ Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Surface Water (A1)	____ Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Drift Deposits (B3)	____ Saturation Visible on Aerial Imagery (C9)
____ Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Iron Deposits (B5)	____ Geomorphic Position (D2)
____ Inundation Visible on Aerial Imagery (B7)	____ Shallow Aquitard (D3)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	____ Microtopographic Relief (D4)
____ Aquatic Fauna (B13)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0 - 3"</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Iron is present in the inundated portion of the wetland south of the proposed alignment.

VEGETATION (Four Strata) – Use scientific names of plants.

Map Label: WTL-1

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: _____)					
1. <u>Acer rubrum</u>	5%	Yes	FAC	Dominance Test worksheet: 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. <u>Fraxinus pennsylvanica</u>	5%	Yes	FACW		
3. <u>Salix nigra</u>	10%	Yes	OBL		
4. <u>Ligustrum sinense</u>	5%	Yes	FAC		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
_____ = Total Cover				Prevalence Index worksheet: 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 = _____	
Sapling/Shrub Stratum (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
_____ = Total Cover					
Herb Stratum (Plot size: _____)					
1. <u>Carex sp.</u>	15%	Yes	FACW	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"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Schedonorus phoenix</u>	20%	Yes	FAC		
3. <u>Rumex crispus</u>	5%	Yes	FAC		
4. <u>Juncus effusus</u>	10%	Yes	FACW		
5. <u>Andropogon virginicus</u>	10%	Yes	FAC		
6. <u>Valerianella radiata</u>	5%	Yes	FAC		
7. <u>Dicanthelium clandestinum</u>	5%	Yes	FACW		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
_____ = 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.	
Woody Vine Stratum (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)					

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28 Map Label: WTL-2
 P.E. and PIN: P.E.: 58015-1210-14, PIN: 103774.00 Date: 03/20/2012 Station: 49+60 - 50+00 CL
 Investigator(s): M. Skelton/C. Hertwig HUC 12 (code and name): 060200040204, Town Creek
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1%
 Subregion (LRR or MLRA): LRR Lat: N35.087038 Long: W85.613236 Datum: WGS 84
 Soil Map Unit Name: Prader silt loam (Purdy) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Photos: <u>32 soil, 33, 34</u> Buffer (ft.): <u>0</u> Approximate Size (ac.): <u>0.385</u> Portion Affected (permanent) (ac.): <u>0.13</u> Portion Affected (temporary) (ac.): <u>0.04</u>	Confirmation (by, date): <u>Not required</u> Mitigation (to be included in design): <u>Yes</u> Notes: _____

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) _____ Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Sediment Deposits (B2) _____ Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> Drift Deposits (B3) _____ Thin Muck Surface (C7) _____ Algal Mat or Crust (B4) _____ Other (Explain in Remarks) <input checked="" type="checkbox"/> Iron Deposits (B5) _____ Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) _____ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0 - 3"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Water table varies from 0 - 3" depending on where you are in the wetland.

VEGETATION (Four Strata) – Use scientific names of plants.

Map Label: WTL-2

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: _____)					
1. <u>Acer rubrum</u>	5%	Yes	FAC	Dominance Test worksheet: 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. <u>Fraxinus pennsylvanica</u>	5%	Yes	FACW		
3. <u>Salix nigra</u>	5%	Yes	OBL		
4. <u>Ligustrum sinense</u>	5%	Yes	FAC		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
_____ = Total Cover				Prevalence Index worksheet: 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 = _____	
Sapling/Shrub Stratum (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
_____ = 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"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
Herb Stratum (Plot size: _____)					
1. <u>Carex sp.</u>	15%	Yes	FACW		
2. <u>Schedonorus phoenix</u>	20%	Yes	FAC		
3. <u>Rumex crispus</u>	5%	Yes	FAC		
4. <u>Juncus effusus</u>	10%	Yes	FACW		
5. <u>Andropogon virginicus</u>	5%	Yes	FAC		
6. <u>Valerianellaradiata</u>	5%	Yes	FAC		
7. <u>Dicanthelium clandestinum</u>	5%	Yes	FACW		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
_____ = 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.	
Woody Vine Stratum (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)					

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28 Map Label: WTL-3
 P.E. and PIN: P.E.: 58015-1210-14, PIN: 103774.00 Date: 03/20/2012 Station: 51+25 CL
 Investigator(s): M. Skelton/C. Hertwig HUC 12 (code and name): 060200040204, Town Creek
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1%
 Subregion (LRR or MLRA): LRR Lat: N35.086985 Long: W85.612635 Datum: WGS 84
 Soil Map Unit Name: Prader silt loam (Purdy) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Photos: <u>35 soil, 36, 37</u> Buffer (ft.): <u>0</u> Approximate Size (ac.): <u>0.096</u> Portion Affected (permanent) (ac.): <u>0.05</u> Portion Affected (temporary) (ac.): <u>0.025</u>	Confirmation (by, date): <u>Not required</u> Mitigation (to be included in design): <u>Yes</u> Notes: _____

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) _____ Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Water Marks (B1) _____ Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Sediment Deposits (B2) _____ Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> Drift Deposits (B3) _____ Thin Muck Surface (C7) _____ Algal Mat or Crust (B4) _____ Other (Explain in Remarks) <input checked="" type="checkbox"/> Iron Deposits (B5) _____ Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) _____ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0 - 6"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland is present due to a man made drainage swale.
 Water table varies from 0 - 6" depending on where you are in the wetland. It is more inundated north of the proposed alignment.

VEGETATION (Four Strata) – Use scientific names of plants.

Map Label: WTL-3

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: _____)					
1. <u>Fraxinus pennsylvanica</u>	15%	Yes	FACW	Dominance Test worksheet: 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. <u>Juniperus virginiana</u>	5%	Yes	FACU		
3. <u>Acer saccharinum</u>	10%	Yes	FACW		
4. <u>Liquidambar styraciflua</u>	15%	Yes	FACW		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
_____ = Total Cover				Prevalence Index worksheet: 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 = _____	
Sapling/Shrub Stratum (Plot size: _____)					
1. <u>Ligustrum sinense</u>	10%	Yes	FAC		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
_____ = 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"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
Herb Stratum (Plot size: _____)					
1. <u>Juncus effusus</u>	5%	Yes	FACW		
2. <u>Carex sp.</u>	5%	Yes	FACW		
3. <u>Schedonours phoenix</u>	10%	Yes	FAC		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
_____ = 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.	
Woody Vine Stratum (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)					

HABITAT ASSESSMENT FIELD DATA SHEET—HIGH GRADIENT STREAMS

STREAM NAME STR-5		LOCATION Marion Co., SR-150	
SITE ID # N/A REACH ID N/A		STREAM CLASS N/A	
UTM N 35.086831 UTM E -85.612377		RIVER BASIN Town Creek	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS M. Skelton/C. Hertwig			
FORM COMPLETED BY C. Hertwig		DATE 3/20/2012 TIME 1:00 PM	REASON FOR SURVEY TDOT Environmental boundaries

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 70% 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 not transient).	40-70% 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).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	SCORE 9	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
	SCORE 8	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
3. Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
	SCORE 9	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% 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 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	SCORE 8	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
5. Channel Flow Status	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.
	SCORE 13	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6

Parameters to be evaluated in sampling reach

HABITAT ASSESSMENT FIELD DATA SHEET—HIGH GRADIENT STREAMS Stream name: STR-5

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 12	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Frequency of Riffles (or bends)	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.
SCORE 8	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) Note: determine left or right side by facing downstream.	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 7 LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 7 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 7 LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 7 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 4 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

Total Score 101

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28 Map Label: WTL-4
 P.E. and PIN: P.E.: 58015-1210-14, PIN: 103774.00 Date: 03/20/2012 Station: 54+60 - 55+00 CL
 Investigator(s): M. Skelton/C. Hertwig HUC 12 (code and name): 060200040204, Town Creek
 Landform (hillslope, terrace, etc.): Slight hillslope Local relief (concave, convex, none): Concave Slope (%): 2%
 Subregion (LRR or MLRA): LRR Lat: N35.086251 Long: W85.611821 Datum: WGS 84
 Soil Map Unit Name: Waynesboro clay loam, severely eroded hilly phase NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Photos: <u>40 soil, 41, 42</u> Buffer (ft.): <u>> 100'</u> Approximate Size (ac.): <u>0.12</u> Portion Affected (permanent) (ac.): <u>0.08</u> Portion Affected (temporary) (ac.): <u>0.035</u>	Confirmation (by, date): <u>Not required</u> Mitigation (to be included in design): <u>Yes</u> Notes:

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ True Aquatic Plants (B14) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) ___ Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Water Marks (B1) ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3) ___ Thin Muck Surface (C7) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> 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-4

<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: 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 = _____
<u>Sapling/Shrub Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus pennsylvanica</u>	40%	Yes	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = 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"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
<u>Herb Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Juncus effusus</u>	10%	Yes	FACW	
2. <u>Andropogon virginicus</u>	15%	Yes	FAC	
3. <u>Scirpus cyperinus</u>	5%	Yes	OBL	
4. <u>Coreopsis tripteris</u>	5%	Yes	FAC	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = 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.
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Lonicera japonica</u>	5%	Yes	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Map Label: **WTL-4**

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 - 8"	10YR 4/3	100%						
8" - 16"	2.5Y 8/1	60%	5YR 5/6	40%			Cherty clay	Abundant mottles

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> (MLRA 147, 148)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19)	
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> (MLRA 136, 147)	
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	<input checked="" type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)		
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)		
<input type="checkbox"/> Stripped Matrix (S6)			

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 <input checked="" type="checkbox"/> No _____
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Remarks:

WNC-3/EPH-2

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (FRONT)

(See Protocol E for detailed descriptions and rank information)

MARION W SR-150, EXISTING SR-150 TO SR-28 PIN 10377A.00

STATION ID: 60+15	HABITAT ASSESSED BY: KBC, RLH, RMT
STREAM NAME: WNC-3/EPH-2	DATE: 01.28.2015 TIME: 1400
STATION LOCATION:	ECOREGION: 686 QC: Consensus Duplicate
WBID/HUC: 060200040305-Townck GROUP:	ASSOCIATED LOG #: —

	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Over 70% of stream reach has natural stable habitat suitable for colonization by fish and/or macroinvertebrates. Four or more productive habitats are present.	Natural stable habitat covers 40-70% of stream reach. Three or more productive habitats present. (If near 70% and more than 3 go to optimal.)	Natural stable habitat covers 20 -40% of stream reach or only 1-2 productive habitats present. (If near 40% and more than 2 go to suboptimal.)	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1

Comments: SUBSTRATE LACKING

2. Embeddedness of Riffles	Gravel, cobble, and boulders 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space. If near 25% drop to suboptimal if riffle not layered cobble.	Gravel, cobble and boulders 25-50% surrounded by fine sediment. Niches in bottom layers of cobble compromised. If near 50% & riffles not layered cobble drop to marginal.	Gravel, cobble, and boulders are 50-75% surrounded by fine sediment. Niche space in middle layers of cobble is starting to fill with fine sediment.	Gravel, cobble, and boulders are more than 75% surrounded by fine sediment. Niche space is reduced to a single layer or is absent.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1

Comments: N/A

3. Velocity/ Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow).	Only 3 of the 4 regimes present (if fast-shallow is missing score lower). If slow-deep missing score 15.	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime. Others regimes too small or infrequent to support aquatic populations.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1

Comments: SLOW/SHALLOW DOMINATE

4. Sediment Deposition	Sediment deposition affects less than 5% of stream bottom in quiet areas. New deposition on islands and point bars is absent or minimal.	Sediment deposition affects 5-30% of stream bottom. Slight deposition in pool or slow areas. Some new deposition on islands and point bars. Move to marginal if build-up approaches 30%.	Sediment deposition affects 30-50% of stream bottom. Sediment deposits at obstruction, constrictions and bends. Moderate pool deposition.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1

Comments: N/A DUE TO LACK OF FLOW

5. Channel Flow Status.	Water reaches base of both lower banks and streambed is covered by water throughout reach. Minimal productive habitat is exposed.	Water covers > 75% of streambed or 25% of productive habitat is exposed.	Water covers 25-75% of streambed and/or productive habitat is mostly exposed.	Very little water in channel and mostly present as standing pools. Little or no productive habitat due to lack of water.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1

Comments: DRY

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (BACK)

Station ID	6015		Date	01.28.2015		Initials	KTC, RMT, RLH	
6. Channel Alteration	Optimal	Suboptimal	Marginal	Poor				
	Channelization, dredging rock removal or 4-wheel activity (past or present) absent or minimal; natural meander pattern. NO artificial structures in reach. Upstream or downstream structures do not affect reach.	Channelization, dredging or 4-wheel activity up to 40%. Channel has stabilized. If larger reach, channelization is historic and stable. Artificial structures in or out of reach do not affect natural flow patterns.	Channelization, dredging or 4-wheel activity 40-80% (or less that has not stabilized.) Artificial structures in or out of reach may have slight affect.	Over 80% of reach channelized, dredged or affected by 4-wheelers. Instream habitat greatly altered or removed. Artificial structures have greatly affected flow pattern.				
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1				
Comments	20							
7. Frequency of re-oxygenation zones. Use frequency of riffle or bends for category. Rank by quality.	Optimal	Suboptimal	Marginal	Poor				
	Occurrence of re-oxygenation zones relatively frequent; ratio of distance between areas divided by average stream width <7:1.	Occurrence of re-oxygenation zones infrequent; distance between areas divided by average stream width is 7 - 15.	Occasional re-oxygenation area. The distance between areas divided by average stream width is over 15 and up to 25.	Generally all flat water or flat bedrock; little opportunity for re-oxygenation. Distance between areas divided by average stream width >25.				
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1				
Comments	2							
8. Bank Stability (score each bank) Determine left or right side by facing downstream.	Optimal	Suboptimal	Marginal	Poor				
	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. If approaching 30% score marginal if banks steep.	Moderately unstable; 30-60 % of bank in reach has areas of erosion; high erosion potential during floods, If approaching 60% score poor if banks steep.	Unstable; many eroded area; raw areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.				
SCORE (LB)	10	8 7 6	5 4 3	2 1 0				
SCORE (RB)	10	8 7 6	5 4 3	2 1 0				
Comments								
9. Vegetative Protective (score each bank) includes vegetation from top of bank to base of bank. Determine left or right side by facing downstream	Optimal	Suboptimal	Marginal	Poor				
	More than 90% of the bank covered by undisturbed vegetation. All 4 classes (mature trees, understory trees, shrubs, groundcover) are represented and allowed to grow naturally. All plants are native.	70-90% of the bank covered by undisturbed vegetation. One class may not be well represented. Disruption evident but not effecting full plant growth. Non-natives are rare (< 30%)	50-70% of the bank covered by undisturbed vegetation. Two classes of vegetation may not be well represented. Non-native vegetation may be common (30-50%).	Less than 50% of the bank covered by undisturbed vegetation or more than 2 classes are not well represented or most vegetation has been cropped. Non-native vegetation may dominate (> 50%)				
SCORE (LB)	10 9	8 7 6	5 4 3	2 1 0				
SCORE (RB)	10 9	8 7 6	5 4 3	2 1 0				
Comments	NON-NATIVE (PINE) DOMINANT							
10. Riparian Vegetative Zone Width (score each bank.) Zone begins at top of bank.	Optimal	Suboptimal	Marginal	Poor				
	Average width of riparian zone > 18 meters. Unpaved footpaths may score 9 if run-off potential is negligible.	Average width of riparian zone 12-18 meters. Score high if areas < 18 meters are small or are minimally disturbed.	Average width of riparian zone 6-11 meters. Score high if areas less than 12 meters are small or are minimally disturbed.	Average width of riparian zone <6 meters. Score high if areas less than 6 meters are small or are minimally disturbed.				
SCORE (LB)	10 9	8 7 6	5 4 3	2 1 0				
SCORE (RB)	10 9	8 7 6	5 4 3	2 1 0				
Comments								

total Score 70 Comparison to Ecoregion Guidelines (circle): ABOVE or BELOW

Score is below guidelines, result of (circle): Natural Conditions or Human Disturbance

describe

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28 Map Label: WTL-5
 P.E. and PIN: P.E.: 58015-1210-14, PIN: 103774.00 Date: 03/21/2012 Station: 62+25 R - 62+55 R
 Investigator(s): M. Skelton/C. Hertwig HUC 12 (code and name): 060200040204, Town Creek
 Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 1%
 Subregion (LRR or MLRA): LRR Lat: N35.084828 Long: W85.609962 Datum: WGS 84
 Soil Map Unit Name: Prader silt loam (Purdy) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Photos: <u>45 soil, 46</u> Buffer (ft.): <u>> 100'</u> Approximate Size (ac.): <u>0.009</u> Portion Affected (permanent) (ac.): <u>0.007</u> Portion Affected (temporary) (ac.): <u>0.002</u>	Confirmation (by, date): <u>Not required</u> Mitigation (to be included in design): <u>Yes</u> Notes: _____

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) ___ Sediment Deposits (B2) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3) ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4) ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland is located in a low spot of an access road.

VEGETATION (Four Strata) – Use scientific names of plants.

Map Label: WTL-5

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Fraxinus pennsylvanica</u>	10%	Yes	FACW	Dominance Test worksheet: 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: 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 = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Ligustrum sinense</u>	10%	Yes	FAC		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"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
_____ = 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.	
<u>Herb Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Carex sp.</u>	10%	Yes	FACW		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. <u>Junus effusus</u>	10%	Yes	FACW		
3. <u>Eleocharis palustris</u>	5%	Yes	OBL		
4. <u>Schedonorus phoenix</u>	10%	Yes	FAC		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
_____ = Total Cover					
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Lonicaer japonica</u>	5%	Yes	FAC		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL

Map Label: WTL-5

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 4/2	90%	7.5YR 4/6	10%			Silty clay	Faint mottles

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> (MLRA 147, 148)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19)	
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> (MLRA 136, 147)	
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)		
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)		
<input type="checkbox"/> Stripped Matrix (S6)			

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 <input checked="" type="checkbox"/> No _____
---	--

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28 Map Label: WTL-6
 P.E. and PIN: P.E.: 58015-1210-14, PIN: 103774.00 Date: 03/21/2012 Station: 69+70 R - 70+80 R
 Investigator(s): M. Skelton/C. Hertwig HUC 12 (code and name): 060200040204, Town Creek
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1%
 Subregion (LRR or MLRA): LRR Lat: N35.083271 Long: W85.608097 Datum: WGS 84
 Soil Map Unit Name: Whitwell loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Photos: <u>50 soil, 51, 52</u> Buffer (ft.): <u>0</u> Approximate Size (ac.): <u>0.067</u> Portion Affected (permanent) (ac.): <u>None</u> Portion Affected (temporary) (ac.): <u>None</u>	Confirmation (by, date): <u>Not required</u> Mitigation (to be included in design): <u>No</u> Notes:

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ True Aquatic Plants (B14) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) ___ Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Water Marks (B1) ___ Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Sediment Deposits (B2) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3) ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4) ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> 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-6

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1. <u>Acer saccharinum</u>	10%	Yes	FACW	
2. <u>Liquidambar styraciflua</u>	10%	Yes	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
				_____ = Total Cover
Herb Stratum (Plot size: _____)				
1. <u>Juncus effusus</u>	10%	Yes	FACW	
2. <u>Carex sp.</u>	20%	Yes	FACW	
3. <u>Schedonorus phoenix</u>	40%	Yes	FAC	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
				_____ = Total Cover
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
				_____ = Total Cover

Dominance Test worksheet:

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)

Prevalence Index worksheet:

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 = _____

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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 No

Remarks: (Include photo numbers here or on a separate sheet.)

HABITAT ASSESSMENT FIELD DATA SHEET—HIGH GRADIENT STREAMS

STREAM NAME STR-6		LOCATION Marion Co., SR-150	
SITE ID # N/A	REACH ID N/A	STREAM CLASS N/A	
UTM N 35.083043	UTM E -85.607042	RIVER BASIN Town Creek	
STORET #		AGENCY CEC, Inc.	
INVESTIGATORS M. Skelton/C. Hertwig			
FORM COMPLETED BY C. Hertwig		DATE 3/21/2012 TIME 9:00 AM	REASON FOR SURVEY TDOT Environmental boundaries

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 70% 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 not transient)	40-70% 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).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 7	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
SCORE 8	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
SCORE 7	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% 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 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 8	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	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.
SCORE 10	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—HIGH GRADIENT STREAMS Stream name: STR-6

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 13	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Frequency of Riffles (or bends)	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.
SCORE 7	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) Note: determine left or right side by facing downstream.	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 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
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 4 LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 8 RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Parameters to be evaluated broader than sampling reach

Total Score 96

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 1 (9365): SR-150 Western Approach
View of western approach of SR-150 near beginning of project.



Photo 2 (9366): SR-150
Alternate view looking east from begin project.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 3 (9367): Tarklin Road.
General view of Tarklin Road from SR-150. View is to the northeast.



Photo 4 (9371): STR-1 Pryor Cove Branch (Sta. 8+00)
View is looking upstream to the west.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 5 (9372): STR-1 (Sta. 8+00)
Downstream view looking east.



Photo 6 (9368): STR-2
Upstream view of stream from culvert inlet headwall.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 7 (1382): STR-2
View is downstream from culvert outlet headwall.



Photo 8 (9373): No feature
View is looking northeast from SR-150. Depicted as a blue line on USGS topo map.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 9 (9379): WWC-1
View is looking down gradient from culvert outlet.



Photo 10 (9374):
View is to the south from intersection of SR-150 and HWY 27.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 11 (9375):
View is to the north from intersection of SR-150 and HWY 27.



Photo 12 (9376):
View is to the east from intersection of SR-150 and HWY 27.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 13 (9377): No feature
View is to the southwest. Photo depicts down-gradient view of drainage swale.



Photo 14 (9378): HWY 27 (Valley View Highway)
General view is to the southwest from STA. 0+77.07.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 15 (9380): STR-1 (Sta. 11+45 CL, HWY 27)
View of channel looking upstream (west side of HWY 27).



Photo 16 (9382): STR-1 (Sta. 11+45 CL, HWY 27)
View of channel looking downstream from bridge (east side of HWY 27).

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 17 (9381): HWY 27 (Valley View Highway)
View is to the south from Bridge over STR-1.



Photo 18 (9385): WWC-2
View of conveyance looking up-gradient toward Pryor Cove Branch.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 19 (9386): WWC-2
View of channel looking down-gradient from previous photo location.



Photo 20 (9387): WWC-2
General view of channel looking down-gradient from near Sta. 31+00 LT.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 21 (9388): WWC-2
View of channel looking down-gradient from near Sta. 33+00 LT.



Photo 22 (9389): STR-3
Southern view of channel looking downstream from its origin.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 23 (9390): STR-3
View of channel looking upstream near Sta. 41+70 RT.



Photo 24 (9392): STR-3
Upstream view of channel near confluence with STR-4.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 25 (9393): STR-4 (Standifer Branch)
Upstream view of channel near Sta. 42+00.



Photo 26 (1404): STR-4 (Standifer Branch)
Downstream view of channel from confluence with STR-3.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 27 (9395): Field Swale
General view of manmade field drainage looking north from Sta. 45+00.



Photo 28 (9396): Field Swale
General view of manmade field drainage looking northeast from Sta. 46+00.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 29 (9401): WTL-1
Soil profile: Matrix – 10YR 4/2, Mottles – 7.5YR 3/4



Photo 30 (9398): WTL-1
General view of wetland looking southwest from near centerline.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 31 (9399): WTL-1
General view of wetland looking northeast.



Photo 32 (9404): WTL-2
Soil profile: Matrix – 10YR 4/2, Mottles – 7.5YR 3/4

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 33 (9402): WTL-2
Southwestern view of wetland.



Photo 34 (9404): WTL-2
View of wetland looking northeast.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 35 (9405): WTL-3
Soil profile: Matrix – 10YR 4/1, Mottles – 7.5YR 3/4



Photo 36 (9406): WTL-3
View is to the northeast from near the LT ROW.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 37 (9407): WTL-3

View is to the southwest from same location as previous photo.



Photo 38 (9408): STR-5

View of channel looking upstream to the north.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 39: (9409): STR-5
Downstream view of channel. This area is heavily vegetated.



Photo 40 (9412): WTL-4
Soil profile: Matrix – 10YR 4/3, Mottles – 2.5Y 8/1

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 41 (9410): WTL-4
View of wetland looking east.



Photo 42 (9411): WTL-4
View of wetland to the west.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 43 (9415): WWC-3 (Confirmation required)
View of conveyance looking down gradient.



Photo 44 (9416): WWC-3 (Confirmation required)
View of conveyance looking up gradient.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 45 (9417): WTL-5
Soil profile: Matrix – 10YR 4/2, Mottles – 7.5Y 4/6



Photo 46 (9418): WTL-5
View of wetland looking north.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 47 (1426): No Feature
General view of proposed centerline across pasture.



Photo 48 (9420): PND-1
Southeastern view of pond. No outlet was observed.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 49 (9421): PND-1
Alternate view of pond from same location as previous photo.



Photo 50 (9424): WTL-6
Soil profile: Matrix – 10YR 5/2, Mottles – 7.5Y 4/6

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 51 (1430): WTL-6
Northwestern view of wetland from near PND-1.



Photo 52 (1431): WTL-6
Southeastern view of wetland looking towards PND-1.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 53 (9425): STR-6
View of channel looking upstream.



Photo 54 (9426): STR-6
View of channel looking downstream.

Photo Summary

Marion County; SR-150, from existing SR-150 (North of Jasper) to SR-28; P.E.: 58015-1210-14, PIN: 103774.00



Photo 55 (9427): STR-6
General view of channel looking downstream near the LT ROW.

Natural Resources Mitigation Sketches/Information

County: Marion

Route: SR-150

LM: N/A

PE No: 58015-1210-14

PIN: 103774.00

Project Description: SR-150, from existing SR-150 (North of Jasper) to SR-28

Date of survey: March 20-21, 2012

Biologist: Matthew Skelton/Casey Hertwig

Affiliation: CEC, Inc.

Station	Map label	Attachments: Marked-up plans sheet (A); notes (B); mitigation plan (C) attached	Calculate permanent & temporary wetland impacts & provide to (name of regional biologist) and John Hewitt ("X")	Apply "standard" stream relocation configuration & instructions ("X")	Survey boundaries as flagged in field ("X")	General notes and/or specific changes requested
41+00 CL	STR-3	A, B		X		Rock fill and cover with geo-textile material approximately 100' of the stream channel as shown in the form J plans. Relocate channel outside the proposed fill line and back into the existing channel to maintain hydrology. Mitigate with TSMP.
41+80 CL	STR-4	A, B				Create a low flow channel through the right (eastern-most) barrel using STD 15-16A (standard drawing). Do not over-widen stream at box culvert crossing. Tie stream into existing channel, mimicking the current design.
47+10 – 49+00 CL	WTL-1	A, B	X		X	Approximately 0.50 acres of wetland will be permanently impacted. Mitigate with Sequatchie Valley Wetland Preserve Mitigation Bank if approved for use by time of permit application otherwise use the Coffee Co Wetland Mitigation Bank at a ratio of 4:1. Approximately 0.12 acres of wetland is subject to temporary impacts. Restore area after work is complete using the temporary impact procedures. Wetland is emergent in area of impact, no trees will need to be planted. Mark ROW limits with orange fencing to prevent further impacts that would require additional mitigation.
49+60 – 50+00 CL	WLT-2	A, B	X		X	Approximately 0.13 acres of wetland will be permanently impacted.

Station	Map label	Attachments: Marked-up plans sheet (A); notes (B); mitigation plan (C) attached	Calculate permanent & temporary wetland impacts & provide to (name of regional biologist) and John Hewitt ("X")	Apply "standard" stream relocation configuration & instructions ("X")	Survey boundaries as flagged in field ("X")	General notes and/or specific changes requested
						Mitigate with Sequatchie Valley Wetland Preserve Mitigation Bank if approved for use by time of permit application otherwise use the Coffee Co Wetland Mitigation Bank at a ratio of 4:1. Approximately 0.04 acres of wetland is subject to temporary impacts. Restore area after work is complete using the temporary impact procedures. Wetland is emergent in area of impact, no trees will need to be planted. Mark ROW limits with orange fencing to prevent further impacts that would require additional mitigation.
51+25 CL	WTL-3	A, B	X		X	Approximately 0.05 acres of wetland will be permanently impacted. Mitigate with Sequatchie Valley Wetland Preserve Mitigation Bank if approved for use by time of permit application otherwise use the Coffee Co Wetland Mitigation Bank at a ratio of 4:1. Approximately 0.025 acres of wetland is subject to temporary impacts. Restore area after work is complete using the temporary impact procedures. Wetland is emergent in area of impact, no trees will need to be planted. Mark ROW limits with orange fencing to prevent further impacts that would require additional mitigation.
54+60 – 55+00CL	WTL-4	A, B	X		X	Since all of this wetland is within ROW and will be impacted in some way, mitigate for entire wetland, approx. 0.115 acres. Mitigate with Sequatchie Valley Wetland Preserve Mitigation Bank if approved for use by time of permit application

Station	Map label	Attachments: Marked-up plans sheet (A); notes (B); mitigation plan (C) attached	Calculate permanent & temporary wetland impacts & provide to (name of regional biologist) and John Hewitt ("X")	Apply "standard" stream relocation configuration & instructions ("X")	Survey boundaries as flagged in field ("X")	General notes and/or specific changes requested
						otherwise use the Coffee Co Wetland Mitigation Bank at a ratio of 4:1.
62+25R – 62+55R	WTL-5	A, B	X		X	Since all of this wetland is within ROW and will be impacted in some way, mitigate for entire wetland, approx. 0.011 acres. Mitigate with Sequatchie Valley Wetland Preserve Mitigation Bank if approved for use by time of permit application otherwise use the Coffee Co Wetland Mitigation Bank at a ratio of 4:1.

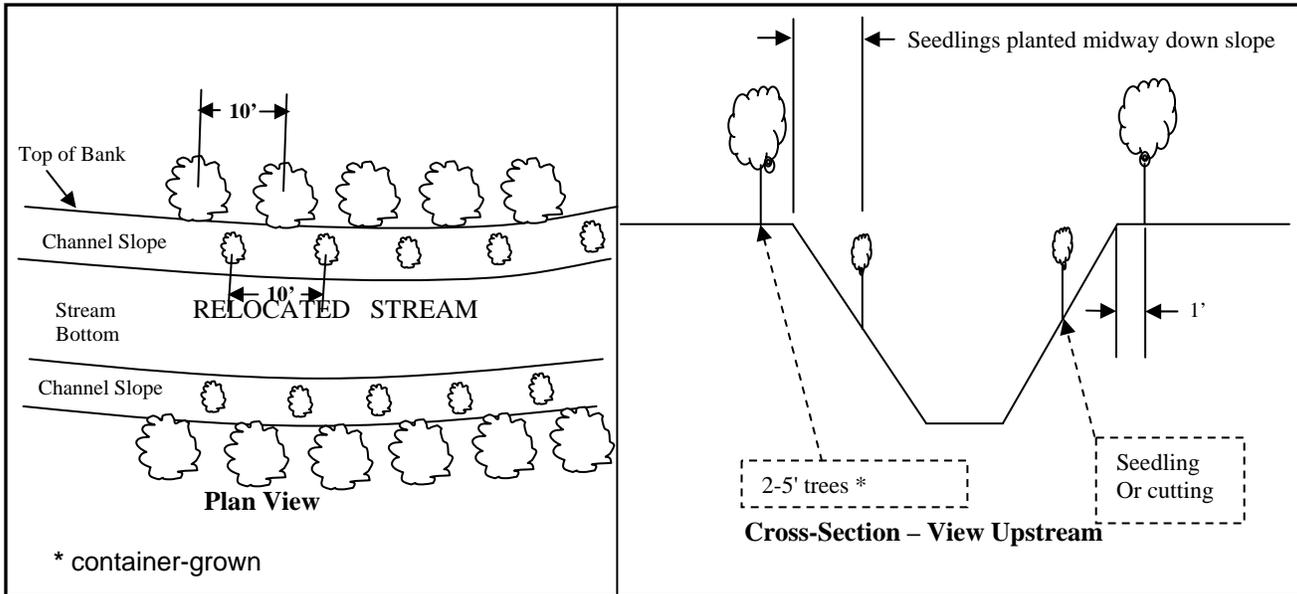
Standard Stream Mitigation (STR-3 and STR-4)

Apply these measures to all applicable streams listed in Form J. Duplicate the length, bottom channel width, elevations, side slopes, meander wavelength, and curvature of the existing channels to the extent possible. Each channel should transition smoothly from its beginning elevation to its tie-in elevation in the receiving stream, without profile drops or jumps. Locate the new channels in as flat an area as possible to avoid unusually high side slopes; this may require some additional right-of-way. Channel length placed in spring-boxes or culverts counts as part of the new channel length (but may require off-site compensatory mitigation that would not be required for an open channel). Channel side slopes should mimic existing channel side slopes, unless otherwise indicated, and be stabilized using appropriate BMPs – the use of rip-rap should be avoided if possible. If rip-rap is required, the rip-rap should be embedded into the soil such that (1) the top of the rip-rap is flush with the bottom and sides of the channel, (2) the voids are filled with material similar to the original channel bottom, and (3) water will flow on top of the embedded riprap and soil material to enable the water to be visible.

Plant two alternating rows of tree or shrub species on both sides of the new channels; the first row shall be bare root seedlings that are planted on the channel slope, centered on the midpoint of the slope. Along top of bank, two- to five-foot (2-5 ft) container grown trees are to be planted within one foot of the top of bank. If needed, cutting stakes will be installed along the edge of water in the new channel. The stakes will be fresh material cut in approximately foot lengths. The stakes will be installed on approximately five foot centers at the edge of water in the new channel. The stakes are to be driven in such that approximately six inches of the stake are left above ground. The bare root seedlings will be the same species as the trees, unless otherwise indicated.

Rip-rap, if required, should be limited to ends of culverts. All relocated channels and their accompanying mitigation features, including trees, are to be placed in right-of-way rather than easements; this may require acquisition of additional right-of-way. Use the following specifications for planted species.

SPACING FOR PLANTING ALONG RELOCATED STREAM



Tree species for stream:

Item #	Description	Unit
802-11.04	<i>ACER SACCHARUM</i> (SUGAR MAPLE 2-5FT CNTNR GRWN)	Each
802-11.40	<i>SALIX NIGRA</i> (BLACK WILLOW 2-5FT CNTNR GRWN)	Each
802-13.05	<i>HAMAMELIS VIRGINIANA</i> (WITCH HAZEL 2-5FT CNTNR GRWN)	Each
802-12.03	<i>ACER SACCHARINUM</i> (SILVER MAPLE SEEDLNG B.R.)	Each
802-12.40	<i>SALIX NIGRA</i> (BLACK WILLOW SEEDLNG B.R.)	Each
802-13.55	<i>HAMAMELIS VIRGINIANA</i> (WITCH HAZEL SDLNG BARE ROOT)	
802-02.32	<i>CUTTINGS: CORNUS AMOMUM</i> (SILKY DOGWOOD, 18IN-24IN)	Each
802-02.33	<i>CUTTINGS: SAMBUCUS CANADENSIS</i> (ELDERBERRY, 18IN-24IN)	Each

Standard On-site Mitigation for Temporary Wetland Impact Areas

Apply these measures to all applicable temporary wetland impact areas listed in Form J. For temporary wetland impact areas, remove the top 12" of topsoil and stockpile it until construction is complete. Once construction activities are completed, restore all temporary wetland impact areas to pre-construction conditions. This includes removing haul roads (if applicable), restoring the site to the original (pre-construction) elevation and spreading stockpiled topsoil back over the wetland site. The area of temporary impacts will be stabilized according to standard practices. Wetland areas located outside of proposed right-of-way and construction easements are to be clearly marked and not disturbed.

Please place the following notes in the Special Notes section of the plans:

1. Topsoil is to be removed from all areas of temporary wetland impacts and stockpiled prior to construction.
2. Upon completion of construction activities, temporary haul roads are to be removed. Excavated material from the haul roads is to be disposed of as directed by the engineer.

Plans Notes**Please add the following information verbatim to the Final Plans:****CHANNEL RELOCATION SEQUENCE AND IMPLEMENTATION NOTES FOR RELOCATED STREAM CHANNELS (IGNORE REFERENCES TO ITEMS NOT SPECIFIED)**

1. If the relocated channel flows into a proposed culvert, the new channel shall be relocated prior to installation of the culvert to ensure correct elevation levels are set for the inlet. The new channel shall be excavated and stabilized during a low-water period. Rip-rap (only as shown on plans), seeding, and/or 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, erosion control blankets, seeding, sod, or materials 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, seed, sod, or other material 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 or 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 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. Tennessee Department of Environment and Conservation may make recommendations concerning erosion control via the engineer without such referral.

TREES

No substitutions of tree species or sizes shall be allowed without the written approval of TDOT Environmental Division. Trees shall be of the variety requested, between 2 and 5 feet in height, containerized, and first quality. Bare root trees shall be of the variety requested, well branched, and first quality. Bare roots must be kept moist at all times. 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 Environmental Division.

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 specifications for the road and bridge construction.

Trees shall be watered as required through the period of establishment to ensure survival.

Index Of Sheets

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-2C	TYPICAL SECTIONS (4 SHEETS)
3-3B	R.O.W. ACQUISITION TABLE & PROPERTY MAPS
4-11	PRESENT LAYOUTS (8 SHEETS)
4A-11A	R.O.W. DETAILS (8 SHEETS)
4B-11B	PROPOSED LAYOUTS (8 SHEETS)
4C-11C	MAINLINE PROFILES (8 SHEETS)
12-13	PRIVATE DRIVE PROFILE
14-14C	DRAINAGE MAPS (4 SHEETS)
15-15G	EROSION PROVENTION & SEDIMENT CONTROL (EPSC) PLANS
16-16G	EXISTING CONTOURS (8 SHEETS)
20-20E	CULVERT CROSS-SECTIONS (6 SHEETS)
21-21G	PROPOSED CONTOURS (8 SHEETS)
22-60	EXISTING & PROPOSED SR150 CROSS-SECTION (39 SHEETS)
61-67	BETSY PACK DR. PROPOSED CROSS SECTIONS (7 SHEETS)
68-73	SR 28 PROPOSED CROSS SECTION (6 SHEETS)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

MARION COUNTY

STATE ROUTE 150

FROM EXISTING SR 150
TO S.R. 28 NORTH OF JASPER

RIGHT-OF-WAY

STATE HIGHWAY NO. 150 F.A.H.S. NO. 150



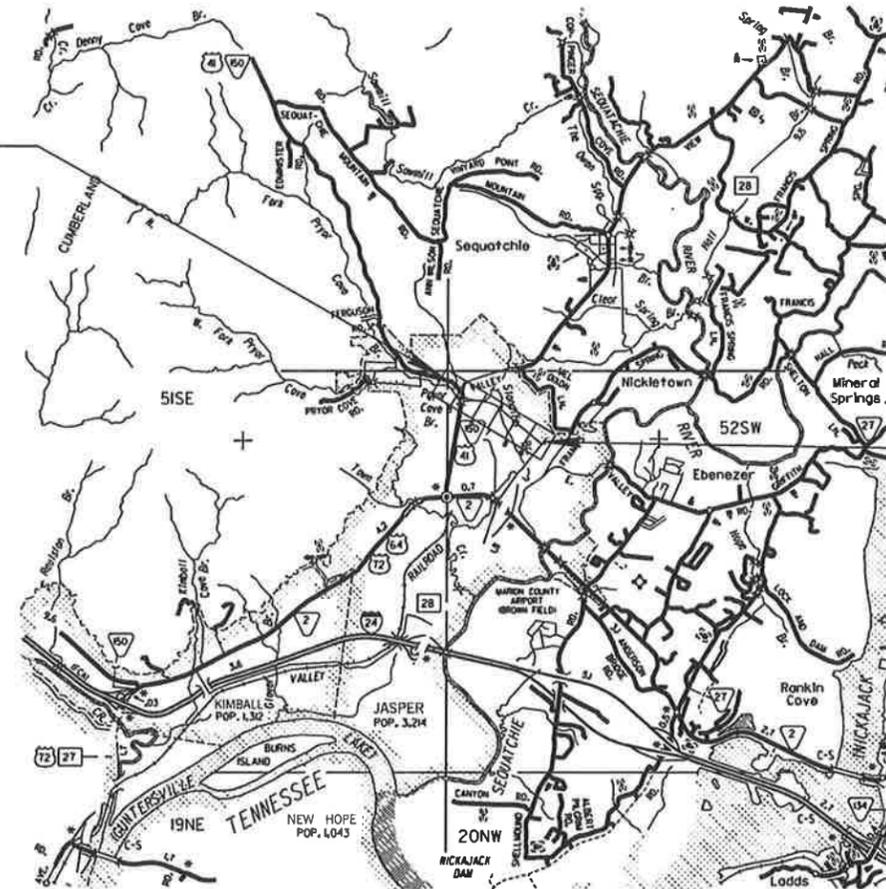
Form G Plans

STP-150(4)
END PROJ. NO. 58015-2215-14
STA. 3+50 (R.O.W.)

MARION COUNTY
PROJ. NO. STP-150(4)

NO EXCLUSIONS
NO EQUATIONS

STP-150(4)
BEGIN PROJ. NO. 58015-2215-14
STA. 74+50 (R.O.W.)



SCALE: 1" = 5280'



R.O.W. LENGTH 1.08 MILES

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, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT C.E. MANAGER 1 JAMES A. JOHNSTON, P.E.
TDOT ROAD SP. SV. 2 ROBERT RODGERS, P.E.
DESIGNER L. DAVID LAWSON CHECKED BY _____
P.E. NO. 58015-1210-14
PIN NO. 103774.00

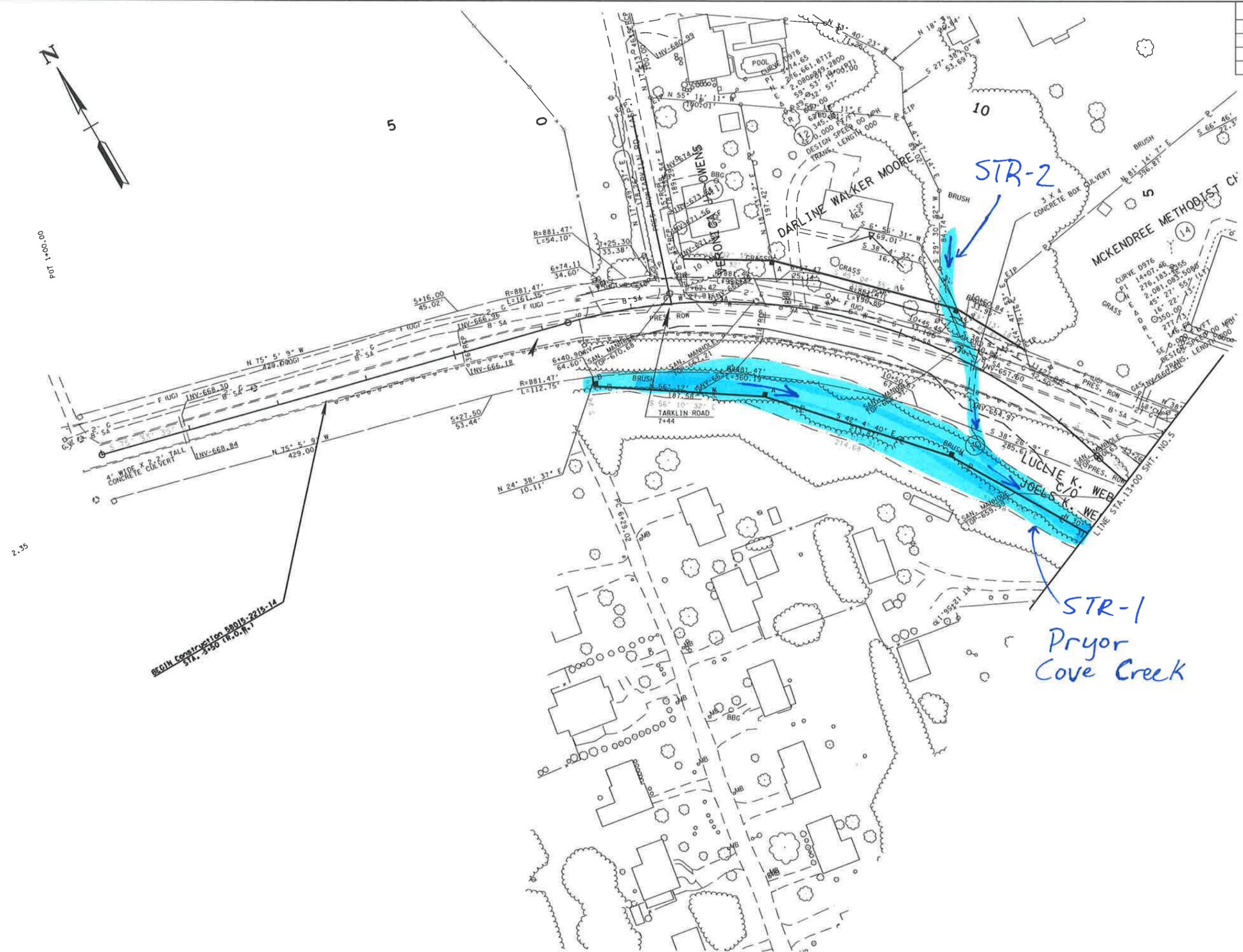
TRAFFIC DATA	
ADT (2013)	3850
ADT (2033)	5200
DHV (2033)	520
D	60 - 40
T (ADT)	5 %
T (DHV)	3 %
V	60 MPH
V (Curb/Gutter)	45 MPH

APPROVED: Paul D. Degges
PAUL D. DEGGES, CHIEF ENGINEER
DATE: _____
APPROVED: John Schroer
JOHN SCHROER, COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED: _____
DIVISION ADMINISTRATOR DATE

SURVEY DATE: APRIL 30, 2010

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	58015-2215-14	4



2.35

BEGIN Construction 58015-2215-14
 STA. 5+50 TO 13+00

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**R.O.W.
 FIELD
 REVIEW**

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
**PRESENT
 LAYOUT**
 STA. 1 + 00 TO STA. 13 + 00
 SCALE: 1"=50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	58015-2215-14	5

NOTE: See Sheets 10, 10A, 10B, & 10C for Betsy Pack Drive

CURVE D876
PI 1A+07.45
276,183.4355
2,081,083.5080
45° 27' 55" (LT)
15° 22' 13"
350.00
277.73
146.64
SE 0.000 FT/FT
DESIGN SPEED 00 MPH
TRANS. LENGTH 000

CURVE D873
PI 23+62.45
215,714.6927
14° 50' 32" (LT)
4° 45' 17"
1,205.00
312.15
156.95
SE 0.000 FT/FT
DESIGN SPEED 00 MPH
TRANS. LENGTH 000

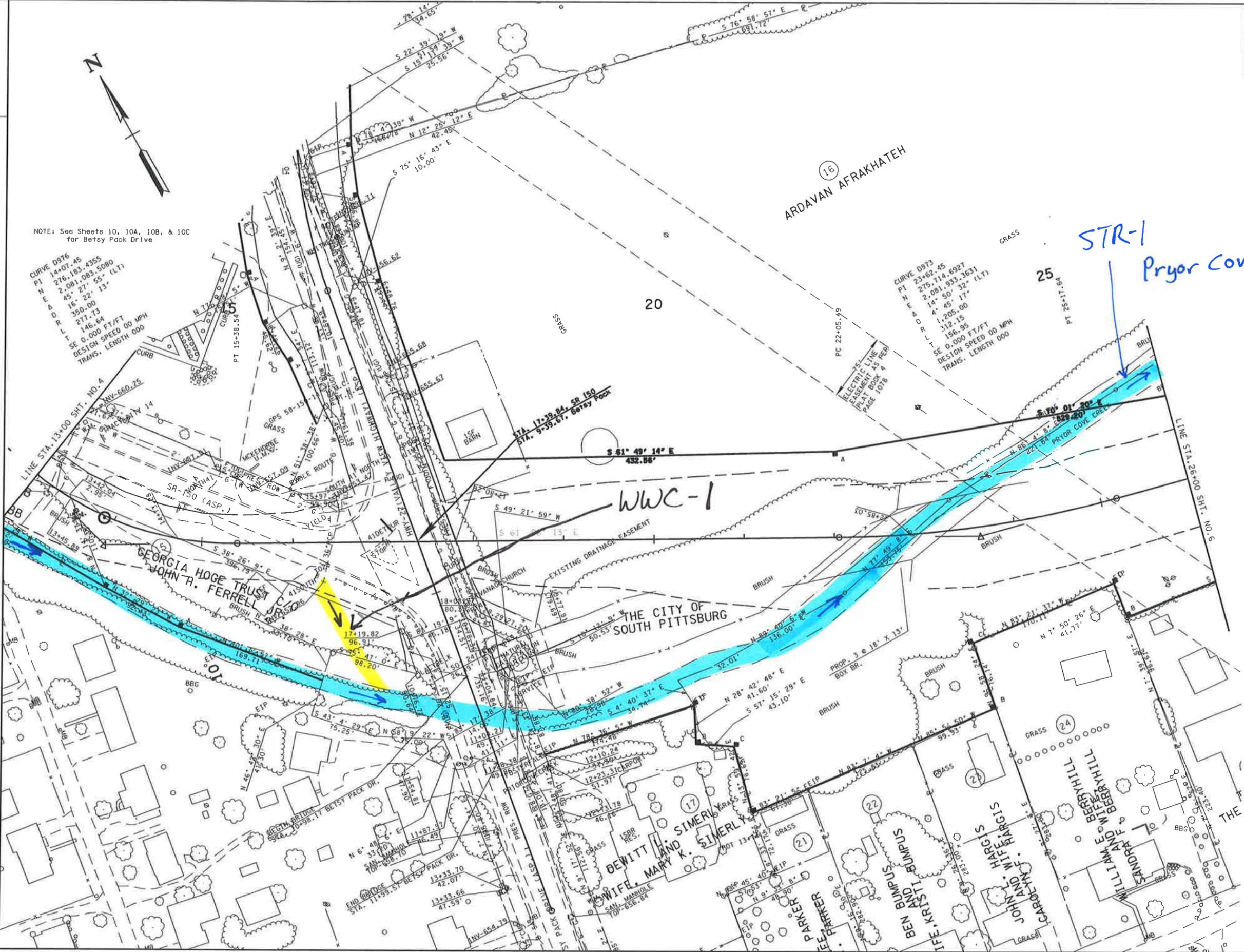
STR-1
Pryor Cove Creek

WWC-1

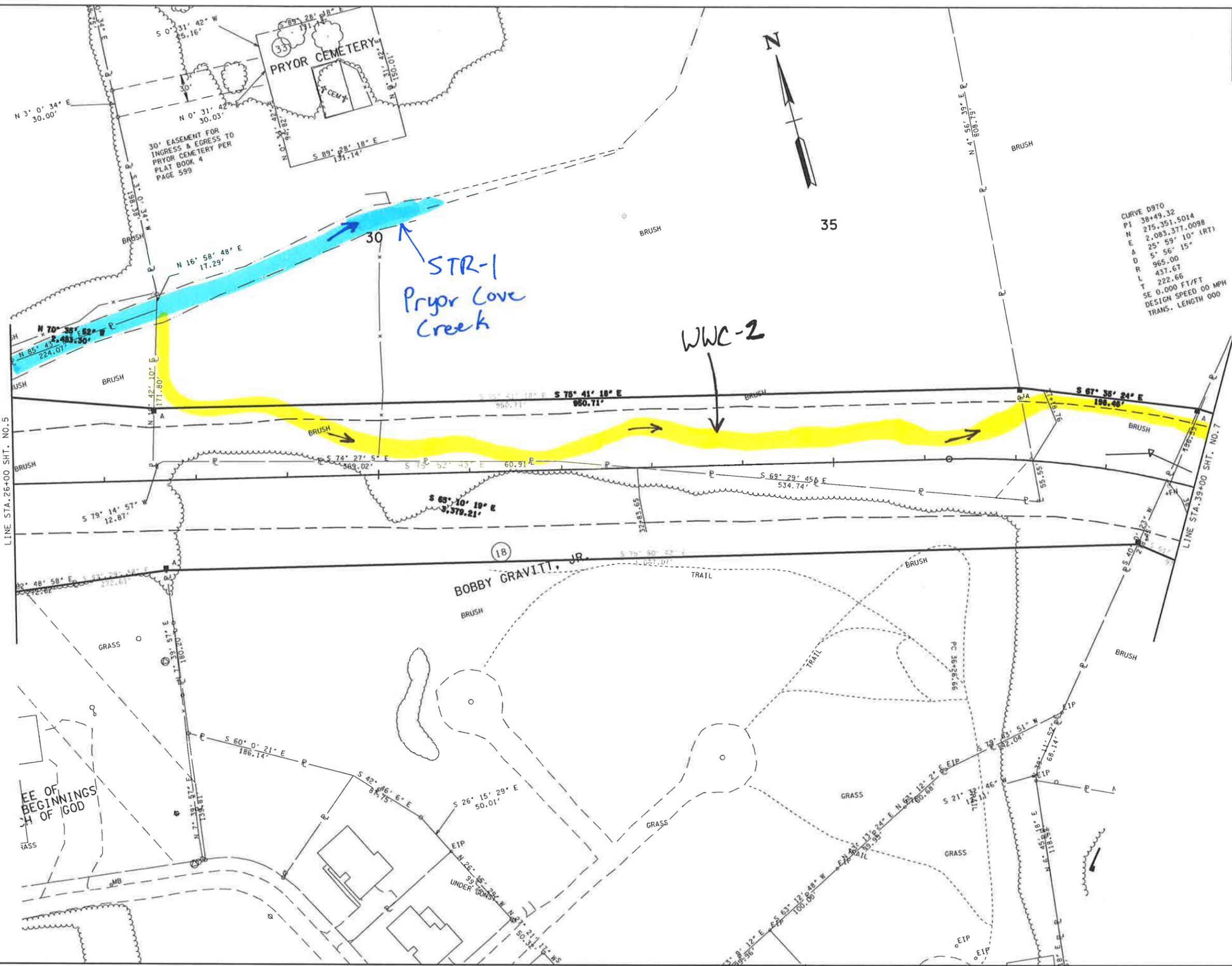
R.O.W.
FIELD
REVIEW

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
PRESENT
LAYOUT
STA. 13+00 TO STA. 26+00
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	58015-2215-14	6



CURVE D970
 PI 38+49.32
 N 275.351, 5014
 E 2,083.377, 0098
 Δ 25° 59' 10" (RT)
 D 5' 56' 15"
 R 965.00
 L 437.67
 T 222.66
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000

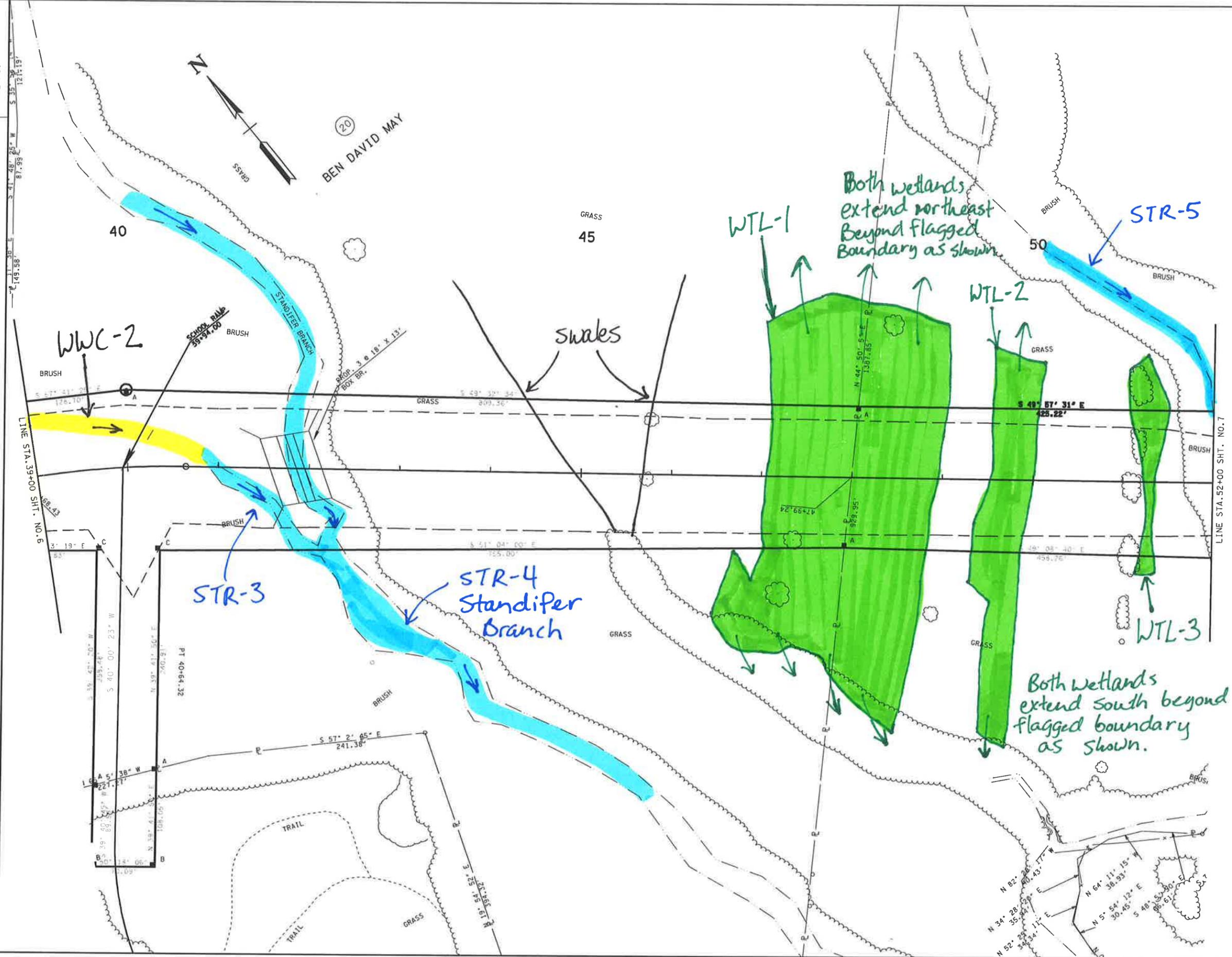


**R.O.W.
FIELD
REVIEW**

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
**PRESENT
 LAYOUT**
 STA. 26 +00 TO STA. 39+00
 SCALE: 1"=50'

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R.O.W.	2012	58015-2215-14	7

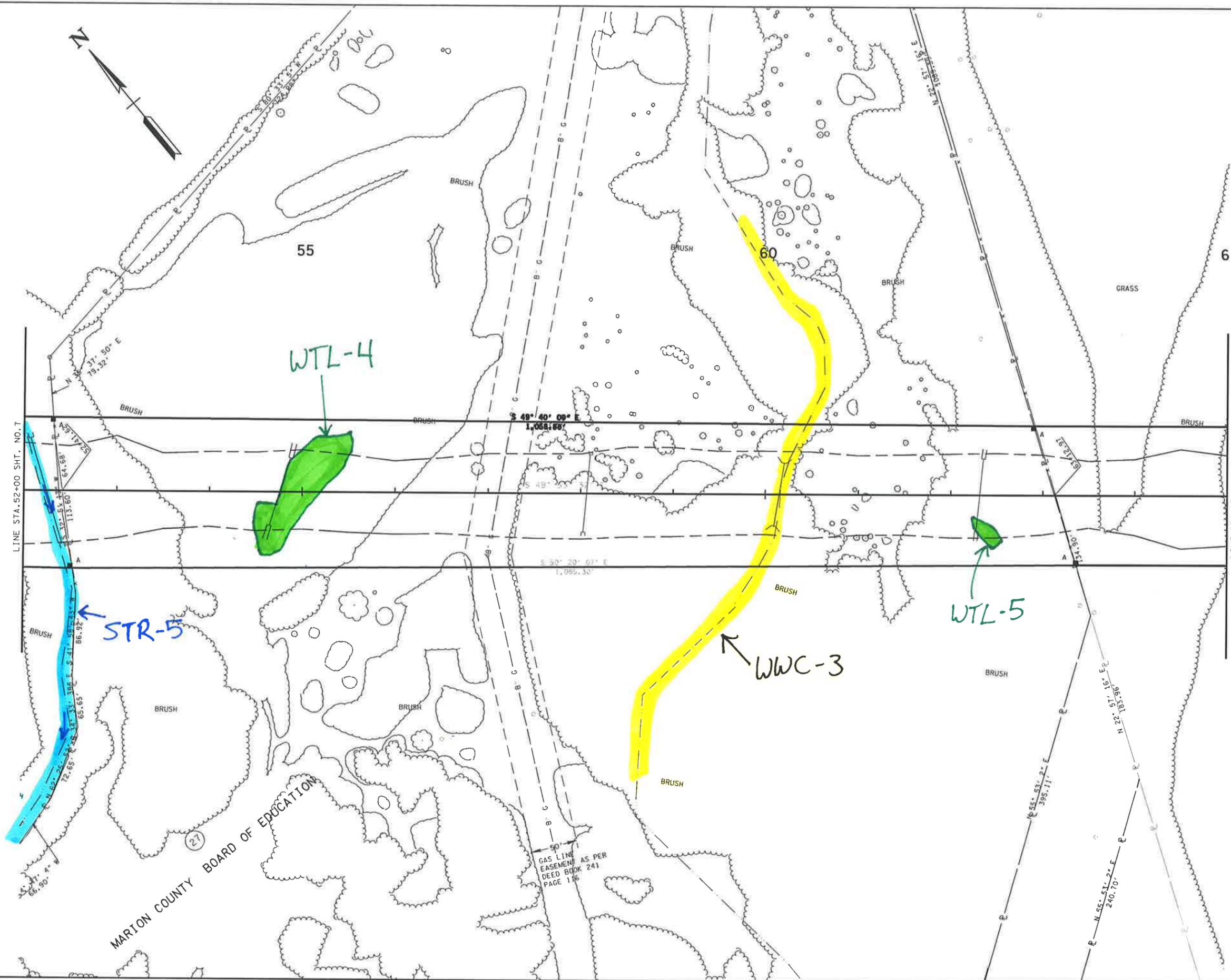


**R.O.W.
FIELD
REVIEW**

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
**PRESENT
LAYOUT**
STA. 39+00 TO STA. 52+00
SCALE: 1" = 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	58015-2215-14	8



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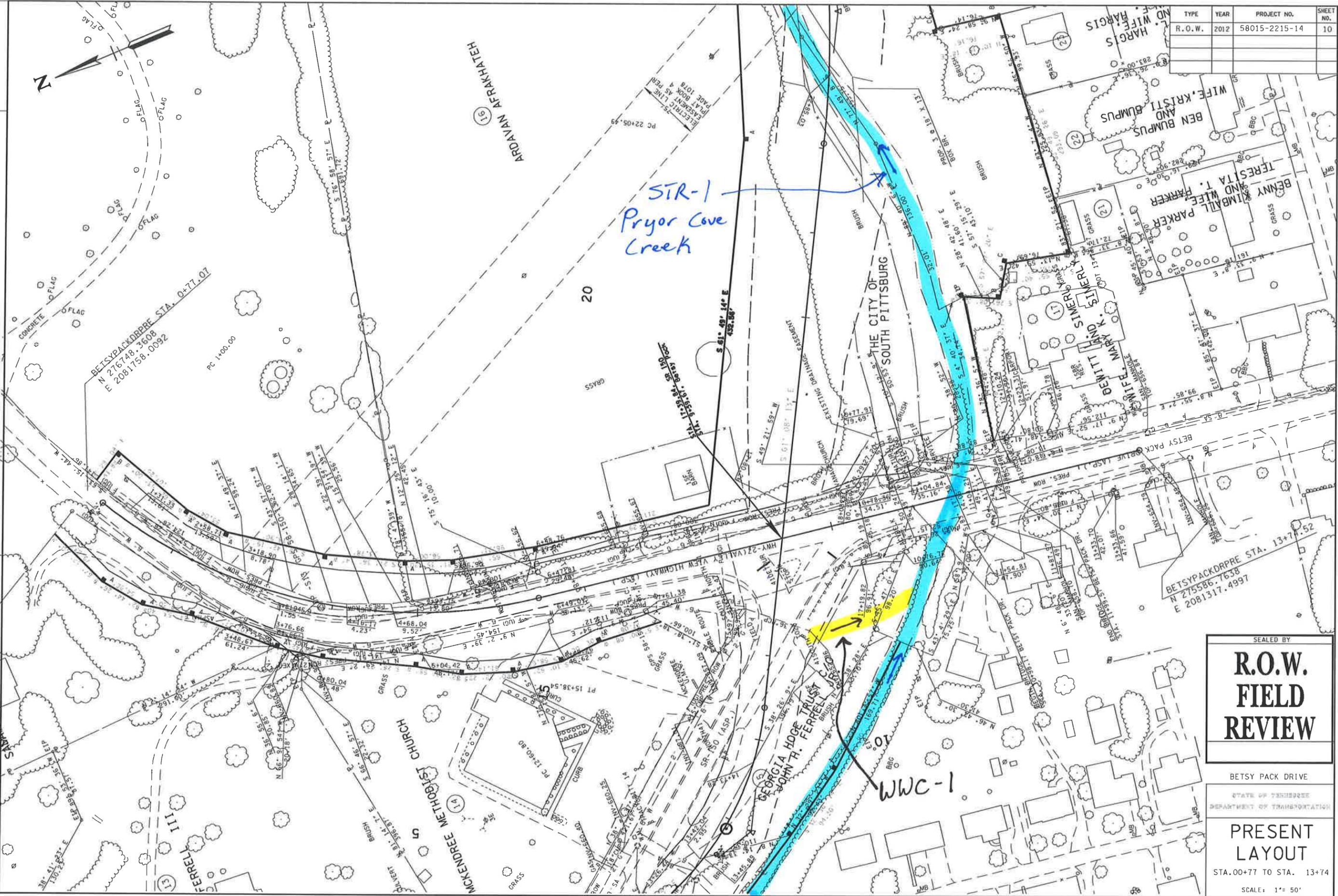
MARTON COUNTY BOARD OF EDUCATION

**R.O.W.
 FIELD
 REVIEW**

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
**PRESENT
 LAYOUT**
 STA. 52+00 TO STA. 65+00
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2012	58015-2215-14	10

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SEALED BY
**R.O.W.
FIELD
REVIEW**

BETSY PACK DRIVE
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
**PRESENT
LAYOUT**
STA. 00+77 TO STA. 13+74
SCALE: 1" = 50'

Training Certifications

TMDL Information

NO TMDL CONSULTATION IS REQUIRED FOR THIS PROJECT