STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, J. K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TN 37243-0334
TELEPHONE: (615) 253-2477 FAX: (615) 741-1098

April 14, 2009

Mr. Jim McAdoo, Permit Section
TN Department of Environment and Conservation
Division of Water Pollution Control
6th Floor L&C Annex, 401 Church Street
Nashville, TN 37243-1534

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). The *"finding of the EPSC plan"*, known as Exhibit "A" in the consent order, is located within the SWPPP appendix.

Project #: 14002-1242-04, PIN: 101042.00,
SR-52, from east of New Hope Branch to bridge over Cumberland River, west of Celina
Clay 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 to the contractor) and one CD to the Design Division.

Please forward our office the Notice of Coverage (NOC) for this project as soon as it becomes available. Please contact me at (615)253-0021 if I can be of any assistance.

Sincerely,

Khalid Ahmed
Roadway Specialist 3, Environmental Permits Office

Enclosures

JLH: KMA: RMS

Enclosures for:
Mr. Jeff Jones, Design Division Director (CD)
Mr. Ken Flynn, Region 2 Construction
Reading File

cc: Ms. Patty Peyton, HQ Const. (NOI, CD)
Mr. Greg Russell, Region 2 Env. Coord.

Shaleen McCormick

From: Khalid Ahmed
Sent: Friday, August 08, 2014 3:39 PM
To: Shaleen McCormick
Subject: FW: ARAP Permit #NRS14.215 PIN #101042.00
Attachments: TDOTNRS14.215PermitIssued.pdf

From: Jeanene Woodruff
Sent: Friday, August 08, 2014 2:49 PM
To: John Hewitt
Cc: Brian Canada; Johnny K. Walker; NashvilleRegulatory@usace.army.mil; Khalid Ahmed; tmeggs@cookeville-tn.org
Subject: ARAP Permit #NRS14.215 PIN #101042.00

Attached is a copy of the ARAP Permit #NRS14.215 PIN #101042.00 issued on 08/08/2014. If you have any questions please contact Brian Canada at 615-532-0660 or by email at Brian.Canada@tn.gov

Note: This email was sent on behalf of Brian Canada. Original to follow.

Jeanene Woodruff
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243
Office: 615-532-0645
Email: Jeanene.Woodruff@tn.gov

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

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

August 8, 2014

Mr. John L. Hewitt, P.E.
Manager, Environmental Permitting
Tennessee Department of Transportation
505 Deaderick St.
Suite 900 James K. Polk Bldg.
Nashville, TN 37243

Subject: **General Permit for Construction of Intake and Outfall Structures**
File # NRS14.215
Tennessee Department of Transportation, SR-52, Unnamed tributary to Proctor creek, Celina, Clay County, Tennessee

Dear Mr. Hewitt:

We have reviewed your proposal to construct an outfall from a 30" storm drain and 2 ft. flat bottom special ditch in an unnamed tributary to Proctor Creek. The attached Notice of Coverage authorizes the work as proposed.

This activity is governed by the *General Permit for Construction of Intake and Outfall Structures*. The work must be accomplished in conformance with accepted plans and information submitted in support of application NRS14.215 and the limitations and conditions set forth in the general permit (enclosed). It is the responsibility of the permittee to ensure that all contractors involved with this project have read and understand the permit conditions before the project begins.

Annual Maintenance and Coverage Termination

Effective July 1, 2014, permit fees for Aquatic Resource Alteration General Permits have been revised. Annual maintenance fees are now required for projects that exceed one year of coverage. For every subsequent year coverage is maintained, the applicant will be assessed this fee, due upon receipt of invoice. Please note that this maintenance fee does not grant the right to extend coverage past the expiration date of the General Permit itself.

Permittees wishing to terminate coverage must submit a completed notice of termination (NOT) form, which is available on the division's webpage at http://www.tn.gov/environment/permits/arap.shtml. The division will review the NOT for completeness and accuracy and, when necessary, investigate the proposed site for which the NOT was submitted. A complete NOT should include photodocumentation of the finished project area. The division will notify the applicant that either the NOT form was received and accepted, or that the permit coverage is not eligible for termination (due to existing deficiencies) and has not been terminated.

Because the General Permit for Construction of Intake and Outfall Structures expires on June 30, 2015 (less than one year after NRS14.215 notice of coverage issuance), the proposed activites covered under this NOC will not be subject to an annual maiantence fee. Authorization under this NOC cannot be extended beyond the expiration date. If all work is not completed on or before June 30, 2015 it is the applicants responsibility to apply for additional coverage.

Thank you for your time and consideration. If you have any questions please contact the permit coordinator, Mr. Brian Canada, by e-mail at *Brian.Canada@tn.gov* or by phone at (615) 532-0660.

Sincerely,

Jimmy R. Smith
Manager, Natural Resources Unit

Encl: NOC and copy of general permit
CC: DWR, Cookeville Environmental Field Office
Celina MS4 City Engineer/Stormwater Manager
U.S. Army Corps of Engineers, Nashville Regulatory Branch
Mr. Khalid Ahmed, Roadway Specialist 3,Tennessee Department of Transportation Environmental.NPDES.TDOT@tn.gov
File copy

Under the Aquatic Resource Alteration

General Permit for Construction of Intake and Outfall Structures

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

ARAP - NRS14.215

Under authority of the Tennessee Water Quality Control Act of 1977 (TWQCA, T.C.A. 69-3-101 et seq.) the Division of Water Resources has determined the activity described below would not violate applicable water quality standards.

This activity is governed by the *General Permit for Construction of Intake and Outfall Structures* (effective July 1, 2010) issued pursuant to the TWQCA. The work must be accomplished in conformance with accepted plans, specifications, data and other information submitted in support of application NRS14.215 and the terms and conditions set forth in the general permit.

PERMITTEE: Tennessee Department of Transportation (TDOT)

AUTHORIZED WORK: Construction of an outfall from a 30" storm drain and 2 ft. flat bottom special ditch.

LOCATION: SR-52 from 0.24 mies Southeast of Proctor Crk Rd in Celina, to 0.39 miles northwest of Cumberland River Bridge in Celina, Clay County (Lat:36.5689/ Lon:-85.5309).

WATERBODY NAME: Unnamed tributary to Proctor creek

EFFECTIVE DATE: 08-AUG-14 **EXPIRATION DATE**: 30-JUN-15

This does not preclude requirements of other federal, state or local laws. In particular, 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. This permit may also serve as a §401 water quality certification (pursuant to 40 C.F.R. §121.2). The planned activity was reviewed and the division has reasonable assurance that the activity will be conducted in a manner that will not violate applicable water quality standards (T.C.A. § 69-3-101 et seq. or of § 301, 302, 303, 306 or 307 of *The Clean Water Act*).

The state of Tennessee may modify, suspend or revoke this authorization 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 TWQCA. Failure to comply with permit terms may result in penalty in accordance with T.C.A. §69-3-115.

Shaleen McCormick

From: Khalid Ahmed
Sent: Monday, July 14, 2014 9:34 AM
To: Shaleen McCormick
Subject: FW: PIN 101042.00 SR-52 New Hope-Celina Modification (UNCLASSIFIED)
Attachments: document2014-07-11-161737.pdf

-----Original Message-----
From: Tuck, Deborah T LRN [mailto:Deborah.T.Tuck@usace.army.mil]
Sent: Friday, July 11, 2014 5:02 PM
To: Khalid Ahmed
Subject: PIN 101042.00 SR-52 New Hope-Celina Modification (UNCLASSIFIED)

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

Classification: UNCLASSIFIED
Caveats: FOUO

For you :)

Deborah T. Tuck
Regulatory Specialist
U.S. Army Corps of Engineers
3701 Bell Road
Nashville, TN 37214
Ph: (615) 369-7518
Fx: (615) 369-7501
Email: deborah.t.tuck@usace.army.mil
Internet (Regulatory Branch) http://www.lrn.usace.army.mil/Missions/Regulatory.aspx
Internet (Nashville District Corps) http://www.lrn.usace.army.mil/
Facebook: http://www.facebook.com/nashvillecorps
We would appreciate your feedback on how we are performing our duties. Our automated Customer Service Survey is located at http://per2.nwp.usace.army.mil/survey.html.
Thank you for taking the time to visit this site and complete the survey.

> -----Original Message-----
> From: Deborah.T.Tuck@usace.army.mil [mailto:Deborah.T.Tuck@usace.army.mil]
> Sent: Friday, July 11, 2014 4:18 PM
> To: Tuck, Deborah T LRN
> Subject: Scanned Document
>
> Please see the attached document.

Khalid

TDEC 401 Water Quality Certification NRS 09.096
Corps Permit file # 200900639
Project #: 14002-1242-04
FED #: STP-52(35)
PIN101042.00
SR-52, from east of New Hope Branch to
Bridge over Cumberland River west of Celina
Clay County

TDEC

I concur with the request to extend the TDEC permit to _____; and modify the permit to include the proposed new outfall to STR-2.

_____ _____
Signed Date

USACE

I concur with the request to include the proposed new outfall to STR-2 with the existing permit.

Debra Tuck 7/11/14
Signed Date

cc: Deborah
Ms. ~~Debra~~ Tuck, USACE
Ms. Jeanene Woodruff, TDEC
Mr. Tommy Paul, Region 2 Environmental Coordinator
Mr. Rob Howard, Region 2 Biologist
Mr. Hugh (Chip) Hannah, TDOT Compliance
Ms. Jennifer Stover, TDOT Compliance
Mr. Seth Clinard, TDOT Construction
Mr. John Hewitt, Natural Resources Office
Mr. Ken Flynn, Region 2 Construction Office
Permit File

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL PLANNING AND PERMITS DIVISION
SUITE 900, J. K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TN 37243-0334
TELEPHONE: (615) 253-2477 FAX: (615) 741-1098

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

June 25, 2014

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

Subject: **Permit Modification**
TDEC 401 Water Quality Certification NRS 09.096
Corps Permit File # 200900639
Project #: 14002-1242-04
FED #: STP-52(35)
PIN 101042.00
SR-52, from east of New Hope Branch to
Bridge over Cumberland River west of Celina
Clay County

Dear Mr. Smith:

While under construction, TDOT Design Division redesigned about 0.66 mile of the subject project due to slope failures occurring between Sta. 173+26.35 through Sta. 208+40.00. The proposed change resulted in an additional impact to the stream (STR-2). Please see the attached updated documentation for additional information.

The previous and new impacts are listed in the table below.

Site #1 Sta. 208+30.45 on State Route 52 Longitude 85.5309°, Latitude 36.5689°	
• Sta. 208+30.45 on State Route 52	**Channel Relocation and Culvert Replacement (STR-2) (IARAP #1)** Unnamed tributary to Proctor Creek (STR-2) Existing: ▪ 123.5 ft. open stream channel ▪ 36.5 ft. of 16 ft. x 2 ft. box culvert Total existing length = 160 ft. **Previously permitted and constructed:** ▪ Remove existing box culvert ▪ 67 ft. of 2 @ 8 ft. x 3 ft. box culvert. ▪ 36.2 ft. of rip-rap at the inlet of the proposed culvert ▪ 49.2 ft. of open channel impact at outlet of proposed culvert Total proposed = 152 ft. Stream channel loss = 8 ft. **New impact:** Outfall from 30-in storm drain pipe and 2 ft. flat-bottom Special Ditch.
Mitigation: (change in the mitigation would not be required)	

The Tennessee Department of Environment and Conservation (TDEC) permit (NRS 09.096) will expire on July 19, 2014. We respectfully request TDEC to extend the permit for another 3 years at this location and modify the permit to include the above new impact.

The United States Army Corps of Engineers (USACE) permit (File # 200900639) is active until March 18, 2017. We respectfully request USACE amend the existing permit to include the above new impact.

For your convenience, we have included a concurrence signature line at the bottom of this letter.

If you have any questions or we can provide further assistance please contact me at (615) 253-0021.

Sincerely,

Khalid Ahmed

Khalid Ahmed
Environmental Permits Section
Enclosures

JLH: KMA

Khalid Ahmed

From: Jim McAdoo
Sent: Monday, August 26, 2013 7:52 AM
To: Khalid Ahmed
Subject: RE: NPDES permit, TNR190918

Khalid,

That is alright. Submit a NOI with the new contractor.

Jim McAdoo

Division of Water Resources
11th Floor
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue
Nashville, TN 37243

615.532.0684 (O)
615.532.0686 (F)
Jim.McAdoo@tn.gov

We accept and encourage electronic document submittals.

From: Khalid Ahmed
Sent: Friday, August 23, 2013 3:59 PM
To: Jim McAdoo
Subject: NPDES permit, TNR190918

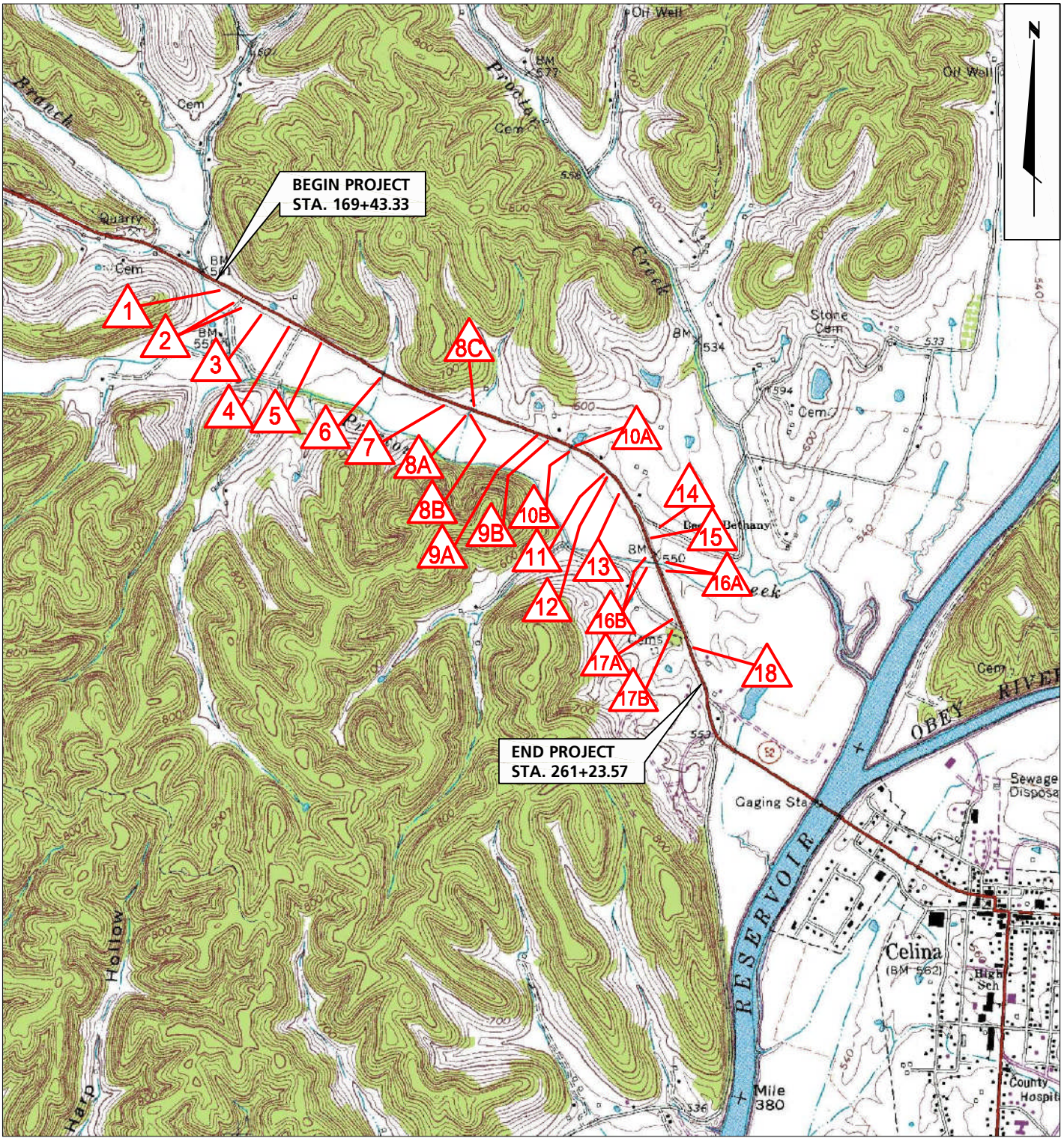
Hi Jim,

I have an NPDES storm water permit question: We have the active TDOT project with NPDES permit # TNR190918 (State route 52, construct from E of New Hope Rd Branch to bridge over Cumberland River W of Celina , Clay County), the contractor finished and finalized most part of the project, however slope slide occurred on some locations of the project. To fix the problem, TDOT redesigned and developed revised plans for about 0.665 mile of the project and intend to let and assign the job to a new contractor on the near future; is that OK if we send you revised NOI with name of the new contractor along with the revised EPSC plans so that the work to be done under the original NOC (TNR1909180). In this case do you send us revised NOC with the name of the new contractor?

Please let me know if you need additional information. I greatly appreciate your advice.

Thanks,

Khalid Ahmed
Senior Transportation Project Specialist
TDOT Environmental Permits Office
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334
615-253-0021



1 – APPROXIMATE OUTFALL LOCATION

TOPOGRAPHIC MAP SOURCE: 2000 DeLorme TopoTools USGS 7.5-MINUTE
TOPOGRAPHIC MAPS: CELINA, TN AND DALE HOLLOW DAM QUADRANGLES

0 2000' 4000'

1" = 2000'

TDOT

REGION 2, DISTRICT 24
COOKEVILLE, TN

STORM WATER POLLUTION PREVENTION PLAN

TOPOGRAPHIC (USGS) MAP

STATE ROUTE 52
FROM EAST OF NEW HOPE BRANCH
TO BRIDGE OVER CUMBERLAND RIVER,
WEST OF CELINA

CLAY COUNTY, TN

DRAWN BY:	CHECKED BY:
JRC	JTH
PIN	101042.00
PROJECT NO.	14002-1242-04
FIGURE: 1	DATE: 4-7-2009

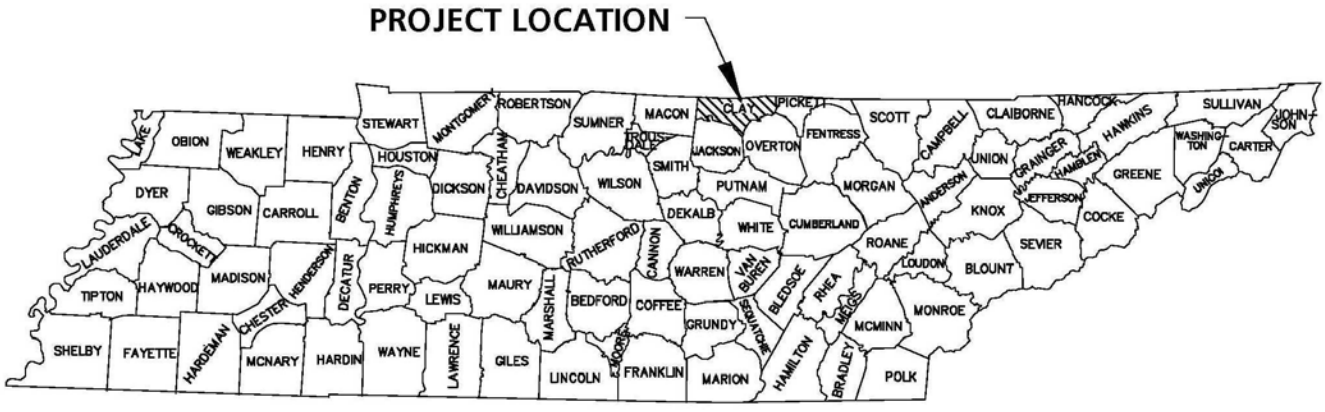
Storm Water Pollution Prevention Plan

Tennessee Department of Environment and Conservation
General NPDES Permit for Discharges of Storm Water Associated with Construction Activities
Permit No. TNR100000
Part 3.5. Storm Water Pollution Prevention Plan (SWPPP)

Project No.: 14002-1242-04
PIN: 101042.00

Project Name: State Route 52; From East of New Hope Branch to Bridge Over Cumberland River, West of Celina

Clay County, Tennessee



Prepared for:
Tennessee Department of Transportation – TDOT

Prepared by:
ARCADIS

Consultant Reference No.: CTT01014.0000.00001

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Preamble

The Tennessee Department of Transportation (Department) as the owner and the general contractor (Operator) are proposing to perform the construction activities described in this Storm Water Pollution Prevention Plan (SWPPP) under the authority of a Tennessee Department of Environment and Conservation (TDEC) General NPDES Permit TNR100000 for Discharges of Storm Water Associated with Construction Activities. The Department will ensure that both Operator and Department personnel are qualified to perform this work as defined by the regulations. The Department is aware of the importance of compliance with all conditions of the permit and that any non-compliance constitutes a violation of the Tennessee Water Quality Control Act and the Clean Water Act and is grounds for an enforcement action, termination of permit coverage, or denial of a permit renewal application.

General Purpose

This SWPPP has been developed and prepared in accordance with good engineering practices. See Appendix A for Finding of the Erosion Prevention and Sediment Control (EPSC) Plan. This SWPPP identifies potential sources of pollution that one would reasonably expect to affect the quality of storm water discharges from this construction site. The SWPPP describes the implementation practices that will be used to ensure a reduction of pollutants in storm water associated with construction activities at this site. It has been designed to comply with the terms and conditions of the Tennessee General Permit No. TNR100000 (Discharges of Storm Water Associated with Construction Activities).

Site / Owner Information

Project Name:	State Route 52; From East of New Hope Branch to Bridge Over Cumberland River, West of Celina
Project No.:	14002-1242-04
PIN:	101042.00
Site Location (County):	Clay
Owner/Primary Permittee:	Tennessee Department of Transportation
Owner/Primary Address:	John Hewitt, PE 505 Deaderick Street Suite 900 James K. Polk Bldg. Nashville, TN 37243
General Contractor (Operator):	To be Determined at Letting
General Contractor (Address/Phone):	Not Currently Available
Description of Proposed Project:	This project will involve the reconstruction/widening of an existing roadway, the associated grading, drainage, and paving activities. The project is 1.739 miles in length.
Seasonal or Acreage Limitations:	There are no known special environmental factors present on this project that indicate a need for seasonal or acreage limitations for grading, cutting, or filling operations.
Date Right-of-Way Plans Finalized:	This project does not meet the Exemption Requirements of Section 4.4.3 of the CGP.
Standard that EPSC Measures Meet:	5-year / 24-hour Storm Event

Discharges to Waters Impaired by Siltation or Habitat Alteration:	**No**	Discharges to Known Exceptional Waters:	**No**
Discharges to Waters with an approved TMDL for siltation:	**No**	Discharges to City or County MS4:	**No**

TDOT MS4 Permit: TNS077585

INTRODUCTION

In accordance with Part 3.5 of the Tennessee Department of Environment and Conservation's (TDEC) General National Pollutant Discharge Elimination System (NPDES) Permit TNR100000 (Permit), the components of the Storm Water Pollution Prevention Plan (SWPPP) for this site have been included herein.

1.0 SITE DESCRIPTION

a) A description of all the construction activities at the site (not just grading and street construction).

The project is located approximately 1.5 miles northwest of Celina in Clay County on State Route 52. The beginning of the project is located east of New Hope Road and extends southeast along the existing roadway for 1.739 miles over Proctor Creek. The end of the project is near the entrance to an existing school. This project will involve the reconstruction and widening of an existing roadway. The existing site contains undeveloped land surrounded by grass, tree, brush, and residential areas. See figures 1 and 2 for topographic (USGS) and site vicinity maps. See Figure 3 for an aerial photograph of the site.

The construction activities proposed for coverage by this SWPPP include clearing and grubbing, scarifying existing roadways, grading and excavating for roadways and drainage, removing and installing pipe, constructing reinforced concrete box culverts (RCBC), bridge construction, demolition of an existing bridge, spreading topsoil, paving with bituminous asphalt concrete materials, installing erosion prevention and sediment control measures, and traffic striping and signing for a roadway.

Current design plans do not include utilization of an off-site borrow or stockpile area, thus descriptions of those areas are not included in this SWPPP.

b) A description of the general sequence of major activities that disturb soils for major portions of the site (e.g., grubbing, excavation, grading, utilities, and infrastructure installation, etc.).

1) Installation of initial sedimentation and erosion control devices, including construction entrances, silt fence with and without backing, temporary berms, riprap, culvert protection, rock check dams and enhanced rock check dams.

2) Clearing, grubbing, and topsoil stripping.

3) Construction of temporary diversion channels. Drainage pipe, RCBC, ditches, and associated drainage structure installations.

4) Installation of additional sedimentation and erosion control devices, including construction entrances, rock check dams, silt fence with and without backing, temporary berm, slope drains, riprap, culvert protection, sediment filter bags, and enhanced rock check dams.

5) Construction of roadway and bridge.

6) Installation of base stone and paving.

7) Traffic striping and signage.

8) Scarifying and removal of existing roadway. Demolition of existing bridge.

9) Final stabilization (topsoil, seeding, mulch, erosion control blanket, sod, etc.).

Note: Utility installations/relocations are required with this project.

The general sequence of major activities above will be replaced by the "Plan of Operation" provided by the operator at the pre-construction meeting. This Plan of Operation will indicate the operator's intended sequence of construction activities at the site. It shall be attached (following the pre-construction meeting) and included as part of the SWPPP.

c) Estimate of the total area of the site, and total area that is expected to be disturbed by excavation, grading, filling, or other construction activities.

Total Project Area: Approximately 36.24 acres
Total Disturbed Area: Approximately 28.60 acres

d) A description of the topography of the site including an estimation of the percent slope and the variation in percent slope found on site (such estimation should be on a basis of a drainage area serving each outfall).

The existing site is located in rolling to mountainous terrain surrounded by residential, grass, tree and brush areas. Wet weather conveyances, streams, springs and wetlands are located within the project limits. See Table 3 for estimated percent slope by outfall.

e) Any data describing the soil (data may be referenced or summarized) and how the soil type will dictate the needed control measures and the expected quality of any discharge from the site.

The project is located in Clay County, Tennessee. According to maps obtained through the National Cooperative Soil Survey Web Soil Survey 2.0 maintained by the United States Department of Agriculture (USDA) Natural Resources conservation Service (NRCS), the soils within the project site consist of rock outcroppings, gravelly silt loam and silt loam soils. Refer to Appendix C for additional soils information.

Loams are susceptible to erosion and require EPSC devices designed to allow settling of soil particles. Retention or ponding of water will be the preferred method to remove suspended sediment. Rock check dams and enhanced rock check dams, silt fence with and without backing and other filtering EPSC devices will be used primarily as a final polishing measure prior to outfall at the discharge point. The quality of discharge from properly implemented and

maintained EPSC measures is expected to be sufficient to comply with the terms and conditions of this permit.

f) An estimate of the runoff curve number 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.

The pre-developed runoff coefficient was calculated using the 36.24-acre project size. The pre-developed project area is depicted in Table 1.

TABLE 1

Existing Conditions

Area Type	Area (Acres)	Runoff Coefficient
Impervious (Asphalt roads, etc.)	6.04	0.95
Semi-pervious (gravel, riprap, etc.)	0.25	0.80
Pervious (grass, forests, etc.)	29.95	0.30

A pre-developed weighted runoff coefficient value was calculated from the above information and was determined to be 0.41.

The project will involve the reconstruction and widening of an existing two lane roadway and bridge with paved shoulders. Therefore, the runoff coefficient will change from pre-developed conditions due to an increase in impervious area. The post-developed runoff coefficient was calculated using the 36.24-acre project size. The post-developed project area is depicted in Table 2.

TABLE 2

Post-Construction Conditions

Area Type	Area (Acres)	Runoff Coefficient
Impervious (Asphalt roads, etc.)	11.66	0.95
Semi-pervious (gravel, riprap, etc.)	0.95	0.80
Pervious (grass, forests, etc.)	23.63	0.35

A post-developed weighted runoff coefficient was calculated from the above information and was determined to be 0.55.

Calculations for the runoff coefficients depicted in the pre and post-developed conditions are located in Appendix D.

The stabilized site, roadside V and flat bottom ditches, storm drainage system and other riprap, sod and/or grassed waterways constructed as directed by the engineer will be used to convey flow in a non-erosive manner. Ditches and culverts will discharge to wet weather

conveyances, unnamed tributaries to Proctor Creek and Proctor Creek throughout the project. Additionally, the moderate cut and fill slopes 6 horizontal to 1 vertical (6H:1V) to 2H:1V incorporated into this design will minimize the velocities generated from this project after completion.

g) An erosion prevention and sediment control map of the site with the proposed construction area clearly outlined. The map 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; designation of runoff receiving waters or MS4; and careful identification on the site map of outfall points intended for coverage under the general permit for storm water discharges from the site.

1) See the attached erosion prevention and sediment control (EPSC) Plan (Appendix B), Drainage Map (Appendix E), and the United States Geological Survey (USGS) topographic map (Figure 1) for the EPSC plan, construction boundaries, and drainage patterns.

2) According to the construction plans, the typical sections of the roadway will be 6H:1V to 2H:1V side slopes with ditches in cut areas. Side roads and driveways will be 2H:1V side slopes with ditches in cut areas.

3) The majority of the areas that will have soil disturbance are designated on the EPSC plans as slope lines and easement areas. Silt fence with and without backing, berms, enhanced rock check dams, and riprap outlet protection are located along these lines/boundaries to protect receiving waters.

4) Areas within the proposed construction limits that are to be left undisturbed are located outside the slope lines as depicted on the EPSC plans in Appendix B.

5) The location of major structural and non-structural erosion controls are located on the EPSC plans in Appendix B. For details not provided on the erosion prevention and sediment control plans, refer to the TDOT standard roadway drawings.

6) Stabilization with erosion control measures will occur in selected areas. Seeding, mulch, and erosion control blankets will be used to stabilize slopes. Enhanced rock check dams, rock check dams and riprap outlet protection will be used along the roadway to reduce the storm water velocities so that sediments will be removed prior to traveling off site. Inlet and/or outlet protection will be installed at designated inlets to drainage structures so that sediment will be removed prior to traveling off site.

7) Site runoff will either flow overland or be collected into drainage ditches that parallel the roadway and culverts.

8) This project will discharge directly and indirectly by wet weather conveyances and culverts into the following: (1) Proctor Creek, WB ID TN05130103001_0100; and (2) Unnamed Tributaries to Proctor Creek, WB ID TN05130103001_0100

Proctor Creek and its tributaries are located within the Upper Cumberland River watershed (USGS Hydrologic Unit Code 05130103). Proctor Creek is not listed as being impaired for siltation or habitat alteration on the Final 2008 303(d) list provided by TDEC. This project is located within a sub-watershed of the Upper Cumberland River that does not have an approved USEPA TMDL or a waste load allocation for siltation or habitat alteration. Additionally, the project will not discharge to a city or county municipal separate storm sewer system (MS4).

Proctor Creek discharges into the Cumberland River within less than one radius mile downstream. Proctor Creek and the Cumberland River are not listed as a Known Exceptional Tennessee Waters on the list provided by TDEC. Therefore, this project will not discharge into high quality waters.

See Appendix E for site drainage maps.

9) Refer to Table 4 for wetland locations and impact information.

See Appendix F for the complete ecology information and Appendix G for the permit information.

10) This project **does not** discharge into Known Exceptional Tennessee Waters. This project **does not** discharge into waters impaired by siltation and habitat alteration or a municipal separate storm sewer system (MS4). This project **does not** discharge into a watershed with an approved USEPA TMDL or waste load allocation for siltation.

11) This project has 24 outfall points. The outfall points are depicted on Figure 1 and the EPSC plan in Appendix B. Table 3 lists the location, impacted drainage feature that could transport pollutants off site, and the associated outfall point number.

TABLE 3

Outfall Information

Outfall Point No.	Road Station	Drainage Location		Impacted Drainage Feature	Estimated Percent Slope Within ROW
		LT or RT	Description		
1	169+50	RT	"V" Ditch	WWC to STR-1	3.0%
2	6+60 Celina Lane	LT & RT	"V" and T Riprap" Ditches	WWC to STR-1	2.0%
3	175+50	RT	Temporary Slope Drain and "V" Ditch	WWC to STR-1	5.0%
4	180+78	RT	42-inch RCP	WWC-2	1.0%
5	185+50	RT	24-inch RCP	WWC-3	4.0%

Outfall Point No.	Road Station	Drainage Location		Impacted Drainage Feature	Estimated Percent Slope Within ROW
		LT or RT	Description		
6	194+90	RT	8-ft x 6-ft Concrete Box Bridge	WWC-5	2.0%
7	204+50	RT	30-inch RCP	WWC to STR-2	1.0%
8A	208+10	RT	2 @ 8-ft x 3-ft RCBC	STR-2	5.0%
8B	208+25	RT	"V" Ditch	STR-2	2.0%
8C	208+70	LT	"V" Ditch	STR_2	2.0%
9A	218+80	CL	Existing Ditch	STR-3	2.0%
9B	219+80	RT	36-inch RCP	STR-3	3.0%
10A	223+00	LT	"V" Sod Ditch	STR-4	12.0%
10B	223+00	RT	48-inch RCP	STR-4	2.0%
11	228+70	RT	18-inch Perforated Pipe	STR-5	1.0%
12	229+00	RT	30-inch RCP	STR-5	2.0%
13	232+00	RT	15-inch Temporary Pipe	WWC to STR-5	2.0%
14	13+80 Proctor Creek Road	LT	"V" Ditch	WWC to STR-7	7.0%
15	240+50	LT	36-inch RCP	WWC to STR-7	3.0%
16A	243+50	LT	Concentrated Runoff & Temporary Sediment Filter Bags	STR-7	30.0%
16B	243+50	RT	Concentrated Runoff & Temporary Sediment Filter Bags	STR-7	30.0%
17A	26+00 Russ Boles Road	RT	Existing 24-inch RCP	STR-8 & WTL-1	5.0%
17B	26+00 Russ Boles Road	LT	Existing Ditch/Swale	STR-8 & WTL-1	5.0%
18	256+00	LT	Existing 36-inch RCP	WWC	4.0%

h) *A description of any discharge associated with industrial activity other than construction storm water that originates on site and the location of that activity and its permit number.*

There are no discharges associated with industrial activities affecting the project site.

i) *Identification of any stream wetland on or adjacent to the project, a description of any anticipated Alteration of these waters and the permit number or tracking number of the Aquatic Resources Alteration Permit or Section 401 Certification issued for the alteration.*

The TDOT Environmental Division has applied for the necessary permits to disturb the streams, wetlands and springs located within the project limits.

The project shall be constructed in accordance with the permit conditions. Any disagreement between the project plans, the SWPPP, the project as constructed, and the permit or permits issued shall be brought to the attention of the engineer prior to finalization of the project. In general, permit conditions will prevail.

j) The name of the receiving water(s) and approximate size and location of affected wetland acreage at the site.

The receiving waters are as follows:

- Proctor Creek, STR-7 (WB ID TN05130103001_0100)
- Unnamed Tributaries to Proctor Creek, STR-1 – STR-6 (WB ID TN05130103001_0100)

There are wetlands located within the project area.

TABLE 4

Wetland Location

Wetland Identification	From Road Station	To Road Station	Lt. or Rt.	Affected Wetland Area (Acres)
WTL-1	249+70	249+90	Rt.	0.031
			Total Affected Wetland Area	0.031

k) Identify and outline buffer zones established to protect waters of the state located within boundaries of the project.

This project **does not** discharge into Known Exceptional Tennessee Waters. An Aquatic Resource Alteration Permit will be obtained for alterations to jurisdictional waters where required.

l) For projects which will be subdivided, the developer/owner must describe how he will prevent erosion and/or control any sediment from portions of the property that will be sold prior to the completion of construction.

This does not apply to TDOT projects.

m) Projects of more than 50 acres, the construction phases must be described.

This project will not require more than 50 acres of land disturbance.

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 (e.g. caution fence, stream side buffer zones, etc.).

There are no significant portions of the site that are to be left undisturbed. Therefore, no protections are needed.

o) The name and number of the previously permitted Municipal Separate Storm Sewer the project discharges into.

This project does not discharge into a municipal separate storm sewer system (MS4) with coverage under the current CGP.

2.0 EROSION PREVENTION AND SEDIMENT CONTROL

The goal of this SWPPP is to maintain and protect the natural, physical, and biological characteristics and functions (e.g., no significant changes in the hydrological regime or pollutant input) of the receiving water by minimizing the dislodging and suspension of soil in runoff and by retaining mobilized sediment on-site.

2.1 Preconstruction and During Construction

Preconstruction planning should be used to sequence major grading activities to minimize the exposure time of graded or denuded areas. The EPSC measures and/or plans shall be modified as necessary so that they are effective at all times throughout the course of the project. The Operator will be responsible for the implementation and execution of all storm water runoff controls. Preconstruction ground cover will not be destroyed, removed, or disturbed more than 10 days prior to grading or earth moving unless the area is seeded and/or mulched or other temporary cover is installed. Temporary erosion control measures may be removed at the beginning of the workday, but will be replaced at the end of the day. The structural controls to be used on this project and their placement are identified on the EPSC plans in Appendix B.

2.2 Stabilization, Structural, and Non-Structural Controls

Storm water runoff controls for the proposed project will consist of the structural control measures themselves and the maintenance and inspection practices discussed later in this SWPPP. They have been designed to retain sediment on the project site. The following paragraphs describe the sequence of major construction activities that are planned for the site and the general stabilization and structural practices that will be associated with each activity. They also identify the party responsible for implementing the SWPPP.

2.2.1 Clearing and Grubbing

General Requirements: Clearing and grubbing must be held to the minimum necessary for grading and equipment operation. EPSC structures must be in place and functional before clearing, grubbing, excavation, grading, cutting or filling occurs, except as such work may be necessary to install EPSC measures. Project plans, proposal contract, and TDOT standard drawings referenced in the project plans provide additional information regarding requirements for EPSC and protection of waters of the State and the United States.

Stabilization: Interim and permanent stabilization practices at site-specific locations are detailed on the EPSC plans in Appendix B. Only the areas where grading and earth-moving activities are

planned within 10 days will be cleared unless they are to be subsequently seeded and/or mulched or other temporary cover is installed. Stabilization practices rely primarily on seeding (with mulch) of cleared and grubbed areas prior to other construction activities. Temporary seeding will be accomplished by using seed groups adapted for germination and growth during the subject season. Section 918.14 of the TDOT Standard Specifications for Road and Bridge Construction establishes seeding groups and seeding dates that will be followed. Delay in planting cover vegetation until winter months (December – March) should be avoided, if possible.

Structural Practices: Structural practices include silt fence with backing, silt fence, enhanced rock check dams, rock check dams, temporary construction exits, temporary berms, slope drains, culvert protection, and riprap. These items will be installed prior to and during clearing operations.

Responsible Party: The site operator will be responsible for the implementation, maintenance, and inspection of the SWPPP structural practices during this construction activity.

2.2.2 Bridge and Culvert Construction

General Requirements: Project plans, proposal contract, and TDOT standard drawings referenced in the project plans provide additional information regarding requirements for EPSC and protection of waters of the State and the United States.

Stabilization Practices: Stabilization practices for bridge and culvert construction rely primarily on installation of riprap, seeding and mulch of cleared and grubbed areas prior to other construction activities. Stabilization will be completed within 15 days of final grading or earth-moving activities. Additionally, temporary diversion channels will be stabilized with rock, geotextile, or seeding while structures (as directed by the engineer) are constructed. Bridge and culvert construction and bank grading shall be complete and stabilized prior to flow being diverted back to its original course.

Structural Practices: Construct diversion, if required, for bridge or culvert construction. Divert flow into diversion and construct bridge portion. Backfill structures as required and construct final contours. Stabilize with final erosion control measures (riprap, erosion control blanket, or seeding and mulch).

Responsible Party: The site operator will be responsible for the implementation, maintenance, and inspection of the SWPPP structural practices during this construction activity. The Department will also be responsible for inspection of SWPPP structural practices and required reporting to TDEC.

2.2.3 Grading and Excavation

General Requirements: Project plans, proposal contract, and TDOT Standard Drawings referenced in the project plans provide additional information regarding requirements for EPSC and protection of waters of the State and the United States.

Stabilization Practices: Stabilization practices for this sequence include bringing cut and fill slopes to final grade and stabilizing during the embankment construction with erosion control blanket, and/or seeding, and mulching as construction allows. Stabilization measures shall be initiated as

soon as practicable on portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 15 days after the construction activity on that portion of the site has temporarily or permanently ceased. Except in the following two situations: (1) where the initiation of stabilization measures is precluded by snow cover or frozen ground conditions or adverse conditions, stabilization measures shall be initiated as soon as practicable; or (2) where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 15 working days, temporary stabilization measures do not have to be initiated on that portion of the site. Temporary or permanent stabilization will be completed within 15 days of final grading or earth-moving activities. Permanent or temporary seeding will be accomplished by using seed groups adapted for germination and growth during the subject season. Section 918.14 of the TDOT Standard Specifications for Road and Bridge Construction establishes seeding groups and seeding dates that will be followed. Delay in planting cover vegetation until winter months (December – March) should be avoided, if possible.

Structural Practices: Structural practices for grading and excavation will include the following: silt fence with backing, silt fence, enhanced rock check dams, rock check dams, temporary construction exits, temporary berms, slope drains, culvert protection, and riprap. This will include the final dressing of slopes, placement of topsoil, seed, erosion control blankets and mulch. Machined riprap pads will be placed at outflows of pipes to reduce energy.

Responsible Party: The site operator will be responsible for the implementation, maintenance, and inspection of the SWPPP structural practices during this construction activity. The Department will also be responsible for inspection of SWPPP structural practices and required reporting to TDEC.

2.2.4 Final Stabilization

General Requirements: Project plans, proposal contract, and TDOT Standard Drawings referenced in the project plans provide additional information regarding requirements for EPSC and protection of waters of the State and the United States.

Stabilization Practices: Place aggregate base to protect earth roadway subgrade from erosion until paving is completed. Unpacked gravel containing fines or crusher runs will not be considered a non-eroding surface. Permanent or temporary seeding will be accomplished by using seed groups adapted for germination and growth during the subject season. Section 918.14 of the TDOT Standard Specifications for Road and Bridge Construction establishes seeding groups and seeding dates that will be followed. Delay in planting cover vegetation until winter months (December – March) should be avoided, if possible. Stabilization will be completed within 15 days after final grading or earth-moving activities have ceased.

Structural Practices: All permanent structural practices have been completed at this point of the project. After final stabilization has been achieved, all silt fencing, inlet protection, sediment filter bags, slope drains, enhanced rock check dams and rock check dams will be removed to prevent them from becoming pollutants.

Responsible Party: The site operator will be responsible for the implementation, maintenance, and inspection of the SWPPP structural practices during this construction activity. The Department will also be responsible for inspection of SWPPP structural practices and required reporting to TDEC.

2.3 Post-Construction

The Department does not anticipate any project-derived pollutants will occur after construction operations have been completed. The stabilized site and grassed waterways should not present a significant increase in runoff or pollutants into the receiving waterway. Although maintenance and operation of the storm water management measures is not required by the permit, after discharges associated with construction activities have been eliminated from the site, the Department will provide for routine maintenance of highway facilities.

2.3.1 Pollutant Controls

Such procedures will include debris removal from drainage structures and trash removal and disposal from right-of-way. Additionally, the Department has a continuous maintenance program to mow and maintain the turf grasses at these type projects. Grassed slopes and waterways provide for water quality improvements through pollutant removal (sediment) and nutrient uptake. Typically, solid or liquid from over-the-road vehicles are kept from entering waters of the State by cooperative efforts of the Department, Tennessee Department of Safety, Tennessee Emergency Management Agency, and others. However, no special structures are included in this project to address these types of pollutants.

2.3.2 Velocity Controls

The project includes the installation of riprap, rock check dams, enhanced rock check dams, temporary berms and slope drains and mulch to reduce flow velocities after construction is complete. Additionally, the grassed and riprap ditches that parallel the roadway and the moderate cut and fill slopes (6H:1V to 2H:1V) incorporated into this design will minimize the velocities generated from this project after completion.

3.0 STORM WATER MANAGEMENT

3.1 Required Records

The operator will maintain at the site the following records of construction activities:

a. The dates when major grading activities occur;

b. The dates when construction activities temporarily or permanently cease on a portion of the site;

c. The dates when stabilization measures are initiated;

d. Records of inspections and corrective measures, including photographs of representative items requiring correction and the corrective action taken for it; and

e. Detailed records of rainfall events including dates, amounts of rainfall, and the approximate duration or starting and ending times (see Appendix H for sample form).

3.2 Rainfall Monitoring Plan

EPSC measures and devices are utilized to minimize the dislodging and suspension of soil in runoff and to retain mobilized sediment on site. Storm water runoff is directly proportional to the intensity and duration of a given rainfall event. Rainfall monitoring is necessary in order to estimate the effectiveness of EPSC measures and devices at the construction site. The intent of the plan is to provide a means to record the volume of rainfall and the time period in which it fell in order to estimate the intensity of the rainfall event.

3.2.1 Equipment

At a minimum, a fence post type rain gauge will be used to measure rainfall. The standard fence post rain gauge shall be a wedge-shaped gauge that measures up to 6 inches (150mm) of rainfall (e.g. Tru-Chek® Direct-Reading Rain Gauge). An English scale should be provided on one face, with a metric scale on the other face. Graduation shall be permanently molded in durable weather-resistant plastic. The minimum graduations shall be 0.01 inch (or 0.1mm). An aluminum bracket with screws may be used for mounting the gauge on a wooden support.

3.2.2 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, gutters, trees, etc.). At least one rain gauge will be located within each linear mile (as measured along the centerline of the primary alignment) of the project where clearing, grubbing, excavation, grading, cutting or filling is being actively performed, or exposed soil has not yet been permanently stabilized.

3.2.3 Methods

The rain gauge shall be checked after every rainfall event occurring on the project site. Detailed records of the rainfall event(s) including dates, amounts of rainfall, and the approximate duration or starting and ending times shall be maintained.

3.3 Maintenance

Maintenance activities will be undertaken to ensure that vegetation, erosion and sediment control measures, and other protective measures identified in the site EPSC Plans (Appendix B) are kept in good and effective operating condition. Maintenance needs identified in inspections or by other means shall be accomplished within 24 hours after the inspection, unless conditions make a particular activity impracticable. In a case where the activity is deemed impracticable, any such conditions shall be documented. The need for maintenance will be determined through the inspection procedures listed below and will include, but not be limited to, the following practices:

a. Observation of control measures to determine compliance with the manufacturer's specifications and good engineering practices for installation and use of the control;

b. Removal of off-site sediment accumulations from the project site that have not reached a sinkhole and/or stream such that off-site impacts are minimized (Note: Sediment accumulations from the project site that have reached sinkholes and/or streams must not be removed until after consultation with TDEC);

c. Removal of sediment from silt fence, and other sediment controls when the design capacity has been reduced by 50 percent; and

d. Pickup or otherwise prevention of litter, construction debris, and construction chemicals from becoming a pollutant source prior to anticipated storm events.

In addition to the practices listed above, the project will be inspected as required by this SWPPP and TDOT Department Standards and Guidelines to ensure the maintenance and effectiveness of the EPSC measures. In case of failure of the operator to control project related erosion or siltation, either on or off the rights-of-way, the Department may withhold payment of future progress estimates until the operator has satisfactorily performed the necessary corrective measures. If deemed necessary, the Department may employ outside assistance or use in-house forces to provide the needed protective measures with all incurred direct costs plus project engineering costs being charged to the operator by appropriate deductions from the operator's monthly progress estimate.

3.4 Inspection

The inspection schedule and documentation procedures have been designed to ensure that vegetation, erosion, sediment control measures, and other protective measures identified in the SWPPP are kept in good and effective operating condition. If the site description and pollution prevention measures in the SWPPP need to be revised based on the results of the inspection, those revisions will be completed as appropriate, no later than 7 calendar days following the inspection identifying the need.

3.4.1 Schedule

Our review of the Tennessee Department of Environment and Conservation's (TDEC) Final 2008 303(d) List indicates that the project **will not** discharge to streams listed for siltation or habitat alteration, **will not** discharge into Known Exceptional Tennessee Waters, and **will not** discharge to waters with an approved TMDL for siltation or waste load allocation. Per the Amended Consent Order and agreement dated March 10, 2004 and the current NPDES CGP (Permit), the schedule for EPSC inspections will be as follows (until the applicable section of the Statewide Storm Water Management Plan (SSWMP) is completed and approved by TDEC):

a. Before anticipated storm events or series of events such as intermittent showers over 1 or more days (when a 50% or higher chance of rainfall is predicted from a recognized weather source). The weather source should be consistent and checked at the same time each day for the following day. The weather source should be checked A minimum of 24 hours and maximum of 48 hours in advance of the work day in question. Inspections and associated necessary repairs done 60 hours before a rain event constitute compliance with "before anticipated storm events";

b. During or within 24 hours after the completion of any storm event of 0.5 inch or greater;

c. At least twice per calendar week, at least 72 hours apart, during any construction and thereafter until the site is fully constructed and all disturbed areas not paved, concreted, or cover by stone are permanently stabilized with a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent.

3.4.2 Documentation Requirements

Inspections will be documented in writing and include the following;

a. Scope of the inspection (i.e. pre-rainfall, post-rainfall, during rainfall, 1st inspection for week, 2nd inspection for week);

b. Name(s) and title or qualifications of personnel making the inspection;

c. The date(s) of the inspection;

d. Major observations relating to the implementation of the SWPPP, including the location(s) of discharges of sediment or other pollutants from the site and of any control devices that failed to operate as designated or proved inadequate for a particular location; and

e. Actions taken to replace, modify, or repair any control measures identified as inadequate or in disrepair during inspections.

A sample inspection form for this project is included as Appendix H. In accordance with the current NPDES CGP (Permit), the Department must certify on a quarterly basis, on the form provided in Appendix H: (1) that the twice weekly inspections of erosion prevention and sediment controls and of outfall points were performed; and (2) whether all planned and designed erosion prevention and sediment controls are installed and in working order. Inspection reports must be signed by an eligible person or his or her duly authorized representative. The record of certifications must be kept at the construction site with a copy of the SWPPP.

3.4.3 Areas to be Inspected

Qualified personnel will inspect disturbed areas of the construction site that have not been finally stabilized for evidence of, or the potential for, pollutants to enter the drainage system. These areas include, but are not limited to, the following:

a. Disturbed areas and areas used for storage of materials that are exposed to precipitation;

b. EPSC measures identified in the SWPPP;

c. Outfall points (where discharges leave the site or enter waters of the State). Where outfall locations are inaccessible, the nearest possible downstream locations shall be inspected;

d. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking; and

e. Fueling station(s) on-site (if applicable – See Section 5.3).

These inspection requirements do not apply to definable areas of the site that have met the final stabilization requirement and have been noted in the SWPPP.

3.4.4 Repair, Modifications, and Revision

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, within 24 hours after the inspection, unless conditions make a particular activity impracticable. In a case where the activity is deemed impracticable, any such conditions shall be documented.

4.0 OTHER ITEMS REQUIRING CONTROL

4.1 Construction Materials

Construction materials that are anticipated to be present at this construction site include:

- Lumber
- Concrete
- Traffic Control Devices
- Concrete and Corrugated Metal Pipe
- Mineral Aggregates
- Earth
- Asphalt
- Traffic Striping Materials
- Rock
- Guardrail
- Curing Compound
- Paint

Stockpiled erodible construction materials will be secured by control measures down gradient of the stockpiles. Non-erodible materials will be picked up to prevent them from polluting storm water.

The operator may keep several portable storage units on the project site to store construction equipment.

4.2 Waste Materials

Waste material (earth, rock, asphalt, concrete, etc.) not required for the construction of the project shall be disposed of by the operator. The operator will be required to obtain any and all necessary permits including, but not limited to, NPDES, Aquatic Resources Alternation Permit(s), Corps of Engineers Section 404 permits, and TVA Section 26A permits to dispose of waste material.

4.3 Other Materials

Other materials not used for construction, but needed for construction at the proposed site must also be controlled to prevent pollution of the receiving waters. These items include, but are not limited to, the storage and dispensing of the following:

- Fertilizers and Lime
- Diesel and Gas
- Machinery Lubricants (oil and grease)

Soils at fueling stations should be checked daily for signs of spillage or staining of the soil. Any fixed fueling station/tank storage shall have a containment system to prevent runoff by potential spills or tank rupture. Machinery should be serviced or repaired to prevent leaks of fluids.

The operator will be responsible for compliance with all applicable Environmental Protection Agency (EPA) and USDOT guidelines regarding equipment-related fluids as well as all National Fire Protection Association regulations regarding flammable liquids. No construction materials are expected to produce pollutant runoff.

4.4 Non-Storm Water Discharges

The following non-storm water discharges have potential for occurring from the site during the construction period:

a. Groundwater may be intercepted during the construction of this project. While these locations are yet unknown, the SWPPP will be modified to incorporate these areas should they arise.

b. Pavement wash waters (where there have been no spills or leaks of toxic or hazardous materials).

c. Dust suppression water.

d. Water used to wash vehicles (where detergents are not used and detention and/or filtering are provided before the water leaves the site).

All non-storm water discharges will be directed to stable discharge reduction structures prior to leaving the site outfall. Wash down or waste discharge of concrete trucks will not be permitted on-site unless a proper settlement area has been constructed in accordance with both state and federal regulations as required by Department contractual provisions.

5.0 REQUIREMENTS FOR PLANS AND REPORTS

5.1 Keeping SWPPP Current

The Department will amend the SWPPP when any of the following conditions apply:

a. 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;

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 construction activity sources, or is otherwise not achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity;

c. When any new operator and/or sub-operator is assigned or relieved of their responsibility to implement a portion of the SWPPP; and

d. When the SWPPP must be modified to prevent a negative impact to legally protected state or federally listed or proposed threatened or endangered aquatic fauna.

5.2 Making Plans Accessible

The operator will retain a copy of this SWPPP (including a copy of the permit language and all reports) at the construction site (or other local location accessible to TDEC and the public) from the date construction commences to the date of final stabilization. The operator (who will have operations control over daily pollution prevention plan implementation) 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.

Prior to the initiation of land disturbing activities and until the site has met the final stabilization criteria, the operator will post a notice near the main entrance of the construction site with the following information:

a. A copy of the Notice of Coverage (NOC) with the NPDES permit number for the project;

b. The name and telephone number of a local contact person;

c. A brief description of the project; and

d. The location of the SWPPP (Especially important if the site is inactive or does not have an on-site location at which to store the SWPPP).

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 are underway and moved as necessary. The Department understands that this permit does not provide the public with any right to trespass or require that the Department

allow members of the public to access a construction site for any reason, including inspection of a site.

5.3 Notice of Termination

When all storm water discharges from construction activities that are authorized by the permit are eliminated by final stabilization, the Department will submit a Notice of Termination (NOT) that is signed in accordance with the permit. For the purposes of the certification required by the NOT, the elimination of storm water discharges associated with the construction activity is understood to mean the following:

a. That all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized;

b. Temporary erosion and sediment control measures have been or will be removed at an appropriate time to ensure final stabilization is maintained; or

c. That all storm water 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.

The NOT will be submitted on the Division's NOT form provided in Appendix I of this SWPPP.

5.4 Retention of Records

The Department 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 3 years from the date the NOT was filed. The Department is aware the period may be extended by written request of the Director.

6.0 CERTIFICATION

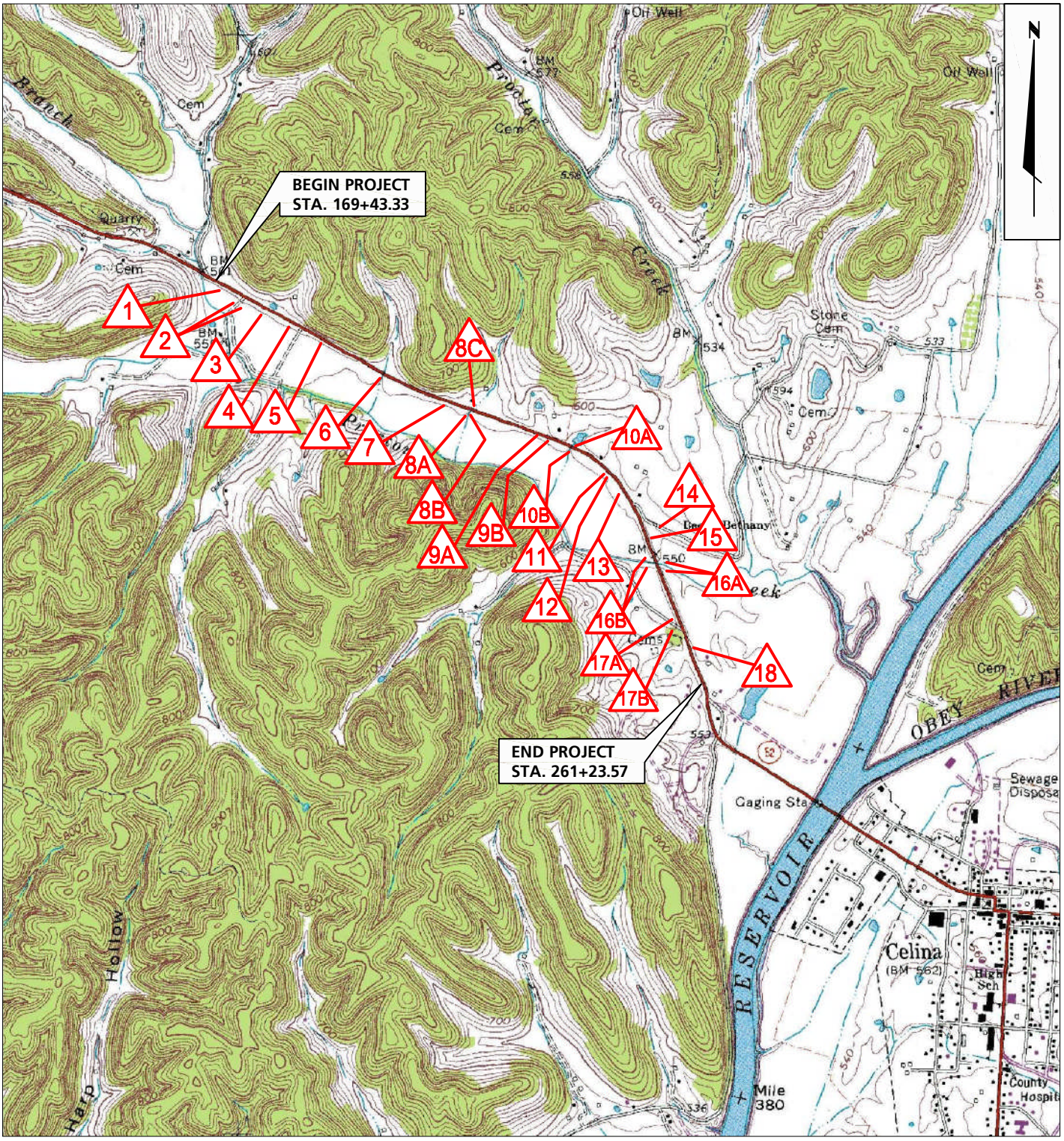
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage 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.

Suzanne B. Herron
Printed Name

Signature

Environmental Division Director
Title

4/15/09
Date



1 – APPROXIMATE OUTFALL LOCATION

TOPOGRAPHIC MAP SOURCE: 2000 DeLorme TopoTools USGS 7.5-MINUTE
TOPOGRAPHIC MAPS: CELINA, TN AND DALE HOLLOW DAM QUADRANGLES

0 2000' 4000'

1" = 2000'

TDOT

REGION 2, DISTRICT 24
COOKEVILLE, TN

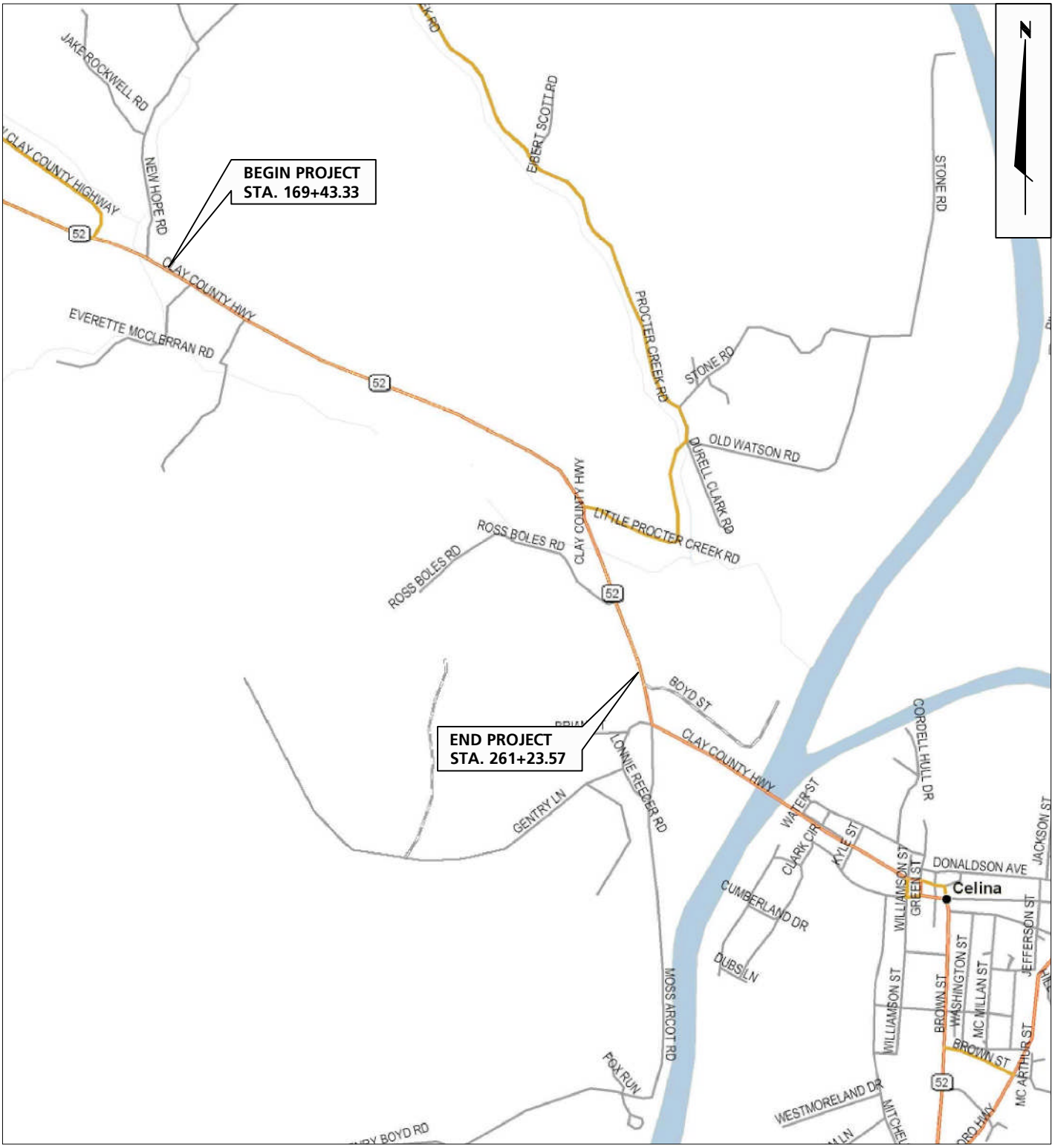
STORM WATER POLLUTION PREVENTION PLAN

TOPOGRAPHIC (USGS) MAP

STATE ROUTE 52
FROM EAST OF NEW HOPE BRANCH
TO BRIDGE OVER CUMBERLAND RIVER,
WEST OF CELINA

CLAY COUNTY, TN

DRAWN BY:	CHECKED BY:
JRC	JTH
PIN	101042.00
PROJECT NO.	14002-1242-04
FIGURE: 1	DATE: 4-7-2009



0 2000' 4000'

1" = 2000'

TDOT

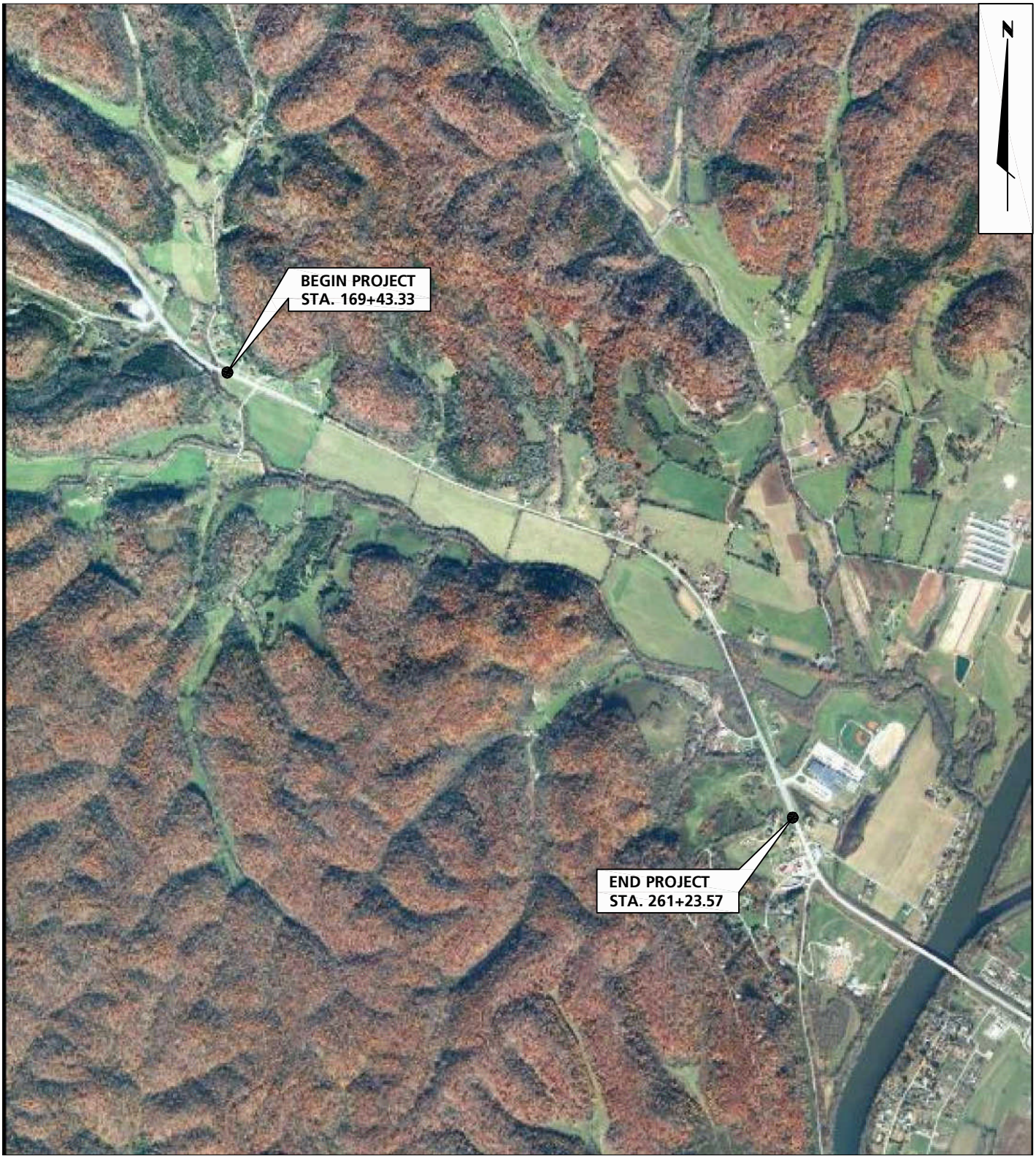
REGION 2, DISTRICT 24
COOKEVILLE, TN

STORM WATER POLLUTION PREVENTION PLAN

SITE VICINITY MAP

STATE ROUTE 52
FROM EAST OF NEW HOPE BRANCH
TO BRIDGE OVER CUMBERLAND RIVER,
WEST OF CELINA
CLAY COUNTY, TN

DRAWN BY:	CHECKED BY:
JRC	JTH
PIN	101042.00
PROJECT NO.	14002-1242-04
FIGURE: 2	DATE: 4-7-2009



MAP SOURCE: UNITED STATES DEPT. OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE (HTTP://WEBSOILSURVEY.NRCS.USDA.GOV)

TDOT

REGION 2, DISTRICT 24
COOKEVILLE, TN

STORM WATER POLLUTION PREVENTION PLAN

AERIAL PHOTOGRAPH

STATE ROUTE 52
FROM EAST OF NEW HOPE BRANCH
TO BRIDGE OVER CUMBERLAND RIVER,
WEST OF CELINA

CLAY COUNTY, TN

DRAWN BY:	CHECKED BY:
JRC	JTH
PIN	101042.00
PROJECT NO.	14002-1242-04
FIGURE	DATE:
3	4-7-2009

Appendix A

Finding of the EPSC Plan

Finding of the EPSC plan

I **Jeffery T. Hoilman** am currently CPESC certified. I have reviewed the EPSC plan for the TDOT project known as **State Route 52; From East of New Hope Branch to Bridge Over Cumberland River, West of Celina; County: Clay; Dated: April 8, 2009** and I find that the BMPs therein are designed so that, if properly implemented, installed and maintained, they will manage erosion and prevent sediment accumulation in the waters of the state and comply with the terms of the General Permit.

Date: April 8, 2009

Signature

CPESC No. 2802

Appendix B

Erosion Prevention and Sediment Control Plans

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

Index Of Sheets

SEE SHEET 1A FOR INDEX

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

CLAY COUNTY

TENN.	YEAR	SHEET NO.
	2009	1
FED. AID PROJ. NO.	STP-52(35)	
STATE PROJ. NO.	14002-3247-14	

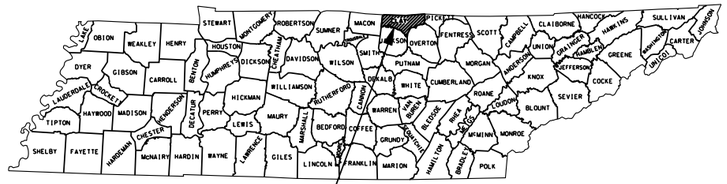
STATE ROUTE 52

FROM EAST OF NEW HOPE BRANCH TO BRIDGE OVER
CUMBERLAND RIVER WEST OF CELINA

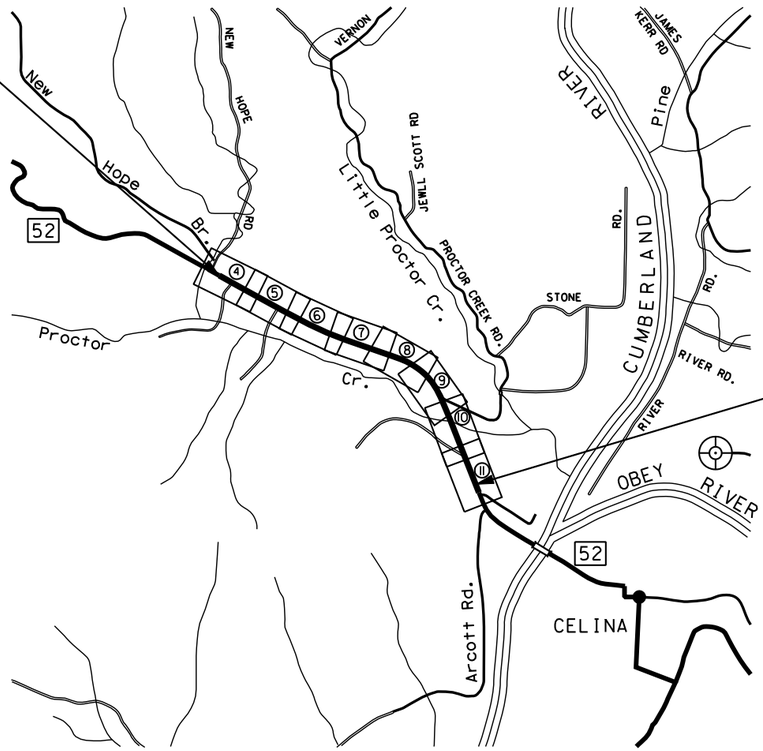
CONSTRUCTION

GRADE, DRAIN, GUARDRAIL, SIGN AND PAVE

STATE HIGHWAY NO. 52 F.A.H.S. NO. 52



BEGIN PROJECT
N. STP-52(35)
NO. 14002-3247-14 (CONST.)
STA. 169+43.33 (S.R. 52)



N

NO EQUATIONS
NO EXCLUSIONS

END PROJECT
NO. STP-52(35)
NO. 14002-3247-14 (CONST.)
STA. 261+23.57 (S.R. 52)

SCALE: 1"= 0.4 MILE

0 0.4 0.8 1.2 MILE

ROADWAY LENGTH	1.668 MILES
BRIDGE LENGTH	0.046 MILES
BOX BRIDGE LENGTH	0.025 MILES
PROJECT LENGTH	1.739 MILES

APPROVED: Paul D. Degges
CHIEF ENGINEER

DATE:

APPROVED: Gerald F. Nicely
COMMISSIONER

DESIGN DATA		
A.D.T.	2009	3833
A.D.T.	2029	6619
D.H.V.	2029	810
D	60	40
T	D.H.V.	12%
T	A.D.T.	14%
V	M.P.H.	60

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

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 ROAD CE MGR. 1 LIA OBAID, P.E.

DESIGNER COMPLIANCE ENGINEERING, L.P. CHECKED BY MARK D. HARPER, P.E.

P.E. NO. 14002-1242-04

P.I.N. NO. 101042.00

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3/14/2009

Survey & Design Division

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	1B

STANDARD ROADWAY DRAWINGS

TRAFFIC CONTROL APPURTENANCES

T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-M-1	04-15-04	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	04-15-04	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-PBR-1	02-22-04	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2		DETAIL FOR VERTICAL PANELS
T-S-8	07-15-91	HIGHWAY SHIELDS USED ON STATE ROUTES AND ARROWS
T-S-9	05-27-03	LAYOUT - GROUND MOUNTED SIGNS
T-S-10	05-27-03	MOUNTING DETAILS - FLAT SHEET SIGNS, ALUMINUM-STEEL DESIGN
T-S-16	05-27-01	GROUND MOUNTED SIGN AND DETAILS
T-S-17	10-26-96	GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-18	05-27-01	END OF ROADWAY AND DEAD END SIGNS, METAL BARRICADES (TYPE III) & WORK ZONE SPEED SIGNS
T-S-19	07-29-91	STANDARD MEMBERS BENDAWAY SIGN SUPPORTS STEEL DESIGN
T-S-20	05-27-01	SIGN DETAILS
T-SG-1	07-29-96	DETAIL OF WOODEN POLE, CONDUIT AND SPAN WIRE CONNECTORS
T-WZ-31	04-15-04	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (GREATER THAN 40 MPH)

EROSION CONTROL AND LANDSCAPING

EC-STR-2	04-01-08	SEDIMENT FILTER BAG
EC-STR-3B	04-01-08	SILT FENCE
EC-STR-3C	04-01-08	SILT FENCE WITH WIRE BACKING
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-6	04-01-08	ROCK CHECK DAM
EC-STR-6A		ENHANCED ROCK CHECK DAM
EC-STR-8		FILTER SOCK
EC-STR-11	04-01-08	CULVERT PROCTECTION TYPE 1
EC-STR-25	04-01-08	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-31	04-01-08	TEMPORARY DIVERSION CHANNEL
EC-STR-31A	04-01-08	TEMPORARY DIVERSION CHANNEL DESIGN
EC-STR-34	04-01-08	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION

MARK HARPER
REGISTERED ENGINEER
No. 022927
STATE OF TENNESSEE

4/8/09

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

4/5/2009
F:\98000\Sheets\CYSR52Index8.SHT

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	2

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
	201-01	CLEARING AND GRUBBING	LS	1
(1)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	96,075
	203-01.11	PRESPLITTING OF ROCK EXCAVATION	S.Y.	5,338
(15)	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	876
	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	95,177
	203-04	PLACING AND SPREADING TOPSOIL	C.Y.	6,893
(11)	203-05	UNDERCUTTING	C.Y.	3,000
	203-06	WATER	M.G.	911
	204-08	FOUNDATION FILL MATERIAL	C.Y.	45
(4)	209-02.05	12" TEMPORARY SLOPE DRAIN	L.F.	373
(4)	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F	204
(4),(5)	209-05	SEDIMENT REMOVAL	C.Y.	602
(4), (14)	209-06.02	18" COIR LOG	L.F.	67
(4)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	11,060
(4)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	14,879
(4)	209-08.07	ROCK CHECK DAM PER	EACH	61
(4)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	21
(4)	209-09.01	SANDBAGS	BAG	1,275
(4)	209-08.02	TEMPORARY SEDIMENT FILTER BAG (14'6" X 2'0" X 13'3")	BAG	12
(6)	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	50,800
	303-01.01	GRANULAR BACKFILL (ROADWAY)	TON	491
	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	510
(6)	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	7,663
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	4,121
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	81
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	313
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	8
	411-01.07	ASPHALT CONCRETE MIX (PG64-22) (ACS) GRADING E (SHOULDER)	TON	2,123
	411-01.10	ACS MIX(PG64-22) GRADING D	TON	1,715
(13)	604-01.01	CLASS A CONCRETE (ROADWAY)	C.Y.	165
	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	LB.	37,375
	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	72
	607-06.02	30" CONCRETE PIPE CULVERT (CLASS III)	L.F.	196
	607-07.03	36" CONCRETE PIPE CULVERT (CLASS IV)	L.F.	145
	607-08.02	42" CONCRETE PIPE CULVERT (CLASS III)	L.F.	146
	607-09.02	48" CONCRETE PIPE CULVERT (CLASS III)	L.F.	240
	607-39.02	18" PIPE CULVERT (SIDE DRAIN)	L.F.	276
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	61
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	5,379
	611-07.03	STRUCTURAL STEEL (PIPE ENDWALLS)	LB.	1,790
	701-02	CONCRETE DRIVEWAY	S.F.	2,033
	705-01.01	GUARDRAIL AT BRIDGE ENDS	L.F.	108
	705-02.02	SINGLE GUARDRAIL (TYPE 2)	L.F.	7,116
	705-04.04	GUARDRAIL TERMINAL (TYPE 21)	EACH	2
	705-04.05	GUARDRAIL TERMINAL (TYPE IN-LINE)	EACH	16
	705-04.07	TAN ENERGY ABSORBING TERM (NCHRP 350, TL3)	EACH	9
	705-08.50	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-2	EACH	11
	708-02.01	MARKERS (CONCRETE R.O.W. POSTS)	EACH	34
(2)	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	910
	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	838
	709-05.21	DUMPED RIP-RAP	TON	258
(16)	712-01	TRAFFIC CONTROL	LS	1
(4)	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	5,895
(4)	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	225
(4)	712-05.01	WARNING LIGHTS (TYPE A)	EACH	65
(4)	712-05.03	WARNING LIGHTS (TYPE C)	EACH	112
(4)	712-06	SIGNS (CONSTRUCTION)	S.F.	459
(4)	712-06.01	VERTICAL PANELS	S.F.	492
(4)	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	324
	713-11.01	"U" SECTION STEEL POSTS	LB.	321
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	358

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	44
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	80
(8)	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	1
(10)	716-02.01	PLASTIC PAVEMENT MARKING (4" LINE)	L.M.	11.0
	716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.	494
	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	158
	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	3
	716-02.10	PLASTIC PAVEMENT MARKING (6" LINE)	L.M.	8.5
	716-02.11	PLASTIC PAVEMENT MARKING (6" DOTTED LINE)	L.F.	482
	716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	1
(18)	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	1.0
	717-01	MOBILIZATION	LS	1
(9)	730-01.08	SCHOOL SPEED LIMIT FLASHING SIGNAL INSTALLED	EACH	1
(12)	740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	3,665
(17)	801-01.01	SEEDING (SERICEA LESPEDEZA)	UNIT	626
(14)	801-01.06	SEEDING (SPECIAL MIXTURE)	UNIT	2
	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	31
	801-01.65	TEMPORARY MULCH	UNIT	440
	801-03	WATER (SEEDING & SODDING)	M.G.	100
	802-01.10	ACER RUBRUM (RED MAPLE) 2'-5' HT., CONTAINERIZED	EACH	10
	802-01.11	QUERCUS ALBA (WHITE OAK) 2'-5' HT., CONTAINERIZED	EACH	9
	802-01.12	PLANTANUS OCCIDENTALIS (SYCAMORE) 2'-5' HT., CONTAINERIZED	EACH	8
	802-01.13	CARYA TOMENTOSA (MOCKERNUT HICKORY) 2'-5' HT., CONTAINERIZED	EACH	6
	803-01	SODDING (NEW SOD)	S.Y.	3,409
	805-12.03	EROSION CONTROL BLANKET (TYPE III)	S.Y.	34,215

FOOTNOTES:

1) INCLUDE: 1,991 CY. (6,635 LF. TEMPORARY BERM) FOR EROSION PREVENTION SEDIMENT CONTROL, 1,262 C.Y. FOR DRAINAGE.
2) INCLUDE: 214 TON FOR EROSION PREVENTION AND SEDIMENT CONTROL
3) INCLUDE: 615 S.Y. FOR EROSION PREVENTION AND SEDIMENT CONTROL
4) QUANTITIES MAY BE INCREASED OR DECREASED AS DIRECTED BY THE ENGINEER.
5) TO BE USE AS MUCH
6) INCLUDE: 337 TON ITEM NO. 303-01 FOR TEMPORARY PAVEMENT (TRAFFIC CONTROL)
7) INCLUDE: 111 TONS ITEM NO. 307-01.01 FOR TEMPORARY PAVEMENT (TRAFFIC CONTROL)
8) REMOVE ALL SIGNS AND SUPPORTS (NO FOOTINGS ON THESE SIGNS) WITHIN THE PROJECT LIMITS. REMOVE EXISTING SCHOOL FLASHING SIGN, CABLES, WOOD POLES AND GUYING AS DIRECTED BY THE ENGINEER.
9) ITEM NO. TO INCLUDE ONE (1) SIGN FACE (TN-8-OH) SCHOOL FLASHING SIGN, TWO (2) 35'-0" CLASS 3 WOOD POLES, GUYING, CABLE TETHER WIRE, LOCKING CONTROLER BOX WITH LOCK KEYS, ALL ELECTRICAL: FLASHING LIGHTS, WIRING AND CONNECTORS (AS SPECIFIED IN T.D.O.T. STANDARD SPECIFICATION BOOK (730.28) FLASHING SCHOOL SIGNAL) AND ALL OTHER INCIDENTALS NECESSARY FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM AS LOCATED IN THE PLANS.
10) INCLUDE: 0.5 L.M. FOR SIDE ROADS PAVEMENT MARKING, 10.5 LM. FROM TRAFFIC CONTROL
11) GEOTECHNICAL RECOMMENDATION TO STABILIZED SLOPE WHERE SLOPE STEPPED THAN 2:1
12) INCLUDE 1,685 S.Y FOR ROCK FILL FROM SHT. 8A
13) INCLUDE 1.0 C.Y. FOR LOW FLOW CHANNEL CONCRETE LIP SEE SHT 2I
14) FOR LOW FLOW CHANNEL TRANSITION SEE SHEET 2I AND SDT-15-16A FOR DETAIL
15) ROCK FILL FOR ABANDONED STREAM STR-3, SPRING SPG-2 SEE SHT 8A
16) REMOVAL OF CONFLICTING EXISTING MARKINGS
17) TO BE USED WHERE THE SLOPE 3:1 OR FLATTER
18) FOR TRAFFIC SHIFT OF EACH END ON TRAFFIC CONTROL

MARK HARPER — REGISTERED ENGINEER — No. 102451 — STATE OF TENNESSEE — 4/8/09

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

4/5/2009
F:\98000\Sheets\CYSR52Estimated-Quantities2A.SHT

TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	2D

GENERAL NOTES

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

(2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.

(3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

SEEDING AND SODDING

(4) ALL EXISTING ROADS WITHIN THE RIGHT-OF-WAY AND NOT IN THE GRADED AREA THAT ARE TO BE ABANDONED SHALL BE SCARIFIED, OBLITERATED, TOPSOILED AND SEEDED. SCARIFYING AND OBLITERATING THE PAVEMENT WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS. TOPSOIL, IN ACCORDANCE WITH SECTION 203 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEMS 203-04 AND/OR 203-07. SEEDING, IN ACCORDANCE WITH SECTION 801 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEM 801-01.

(5) ITEM NO. 801-02, EROSION CONTROL BLANKET AND SEEDING (WITHOUT MULCH), SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS AS WELL AS LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL

(6) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

(7) IF ANY APPROACH END OF A SECTION OF GUARDRAIL OR BRIDGE RAIL MUST TEMPORARILY BE LEFT INCOMPLETE AND EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL USE TWO (2) TEMPORARY BARRICADES OR DRUMS WITH TYPE A LIGHTS AND ROUNDED END ELEMENTS AS MINIMUM MEASURES TO PROTECT TRAFFIC FROM THE HAZARD OF AN EXPOSED END. ALL COST OF FURNISHING AND INSTALLING A TEMPORARY ROUNDED END ELEMENT SHALL BE INCLUDED IN THE COST OF THE PROPOSED GUARDRAIL.

(8) GUARDRAIL IS TO BE COMPLETE IN PLACE BEFORE THE MAINLINE ROADWAY IS OPENED TO TRAFFIC.

DRAINAGE

(9) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(10) EXCAVATION FOR PIPE CULVERT WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE.

(11) THE CUTTING OF INLET AND OUTLET DITCHES WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER WILL BE MEASURED AND PAID FOR AS ITEM NO. 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED).

(12) WHERE A CULVERT (PIPE, SLAB OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION, NO INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT WILL BE MADE DUE TO SUCH CHANGE.

(13) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.

UTILITIES

(14) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.

(15) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR IT'S REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.

(16) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(17) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

(18) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

MISCELLANEOUS

(19) ALL DETOUR, ACCESS, SERVICE AND FRONTAGE ROADS SHALL BE CONSTRUCTED WITH A MINIMUM OF ONE (1) COURSE OF BASE MATERIAL BEFORE TRAFFIC IS INTERRUPTED ON EXISTING ROADS.

(20) THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES WHERE AND AS DIRECTED BY THE ENGINEER.

(21) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS

(22) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS BEFORE DARK HOURS. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-02.01 PLASTIC PAVEMENT MARKING (4" LINE), LIN. MI.

FINAL PAVEMENT MARKING IF THERMOPLASTIC IS USED

(23) IF THERMOPLASTIC IS USED ON THE FINAL SURFACE, THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKING AFTER THE PAVING OPERATION IS COMPLETED. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-02.10 PLASTIC PAVEMENT (6" LINE), LIN. MI.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(24) BEFORE OPENING THE S.R. 52 TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01 TRAFFIC CONTROL, LUMP SUM.

PAVEMENT

PAVING

(25) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.

GRADED SOLID ROCK

(26) THE ROCK FILL (GRADED SOLID ROCK) MATERIAL SHALL CONSIST OF SOUND, NON-DEGRADABLE LIMESTONE OR SANDSTONE WITH A MAXIMUM SIZE OF 3'-0". AT LEAST 50% (BY WEIGHT) OF THE ROCK SHALL BE UNIFORMLY DISTRIBUTED BETWEEN 1'-0" AND 3'-0" IN DIAMETER, AND NO GREATER THAN 10% (BY WEIGHT) SHALL BE LESS THAN 2" IN DIAMETER. THE MATERIAL SHALL BE ROUGHLY EQUIDIMENSIONAL; THIN, SLABBY MATERIALS WILL NOT BE ACCEPTED. THE CONTRACTOR SHALL BE REQUIRED TO PROCESS THE MATERIAL WITH AN ACCEPTABLE MECHANICAL MEANS (A SCREENING PROCESS CAPABLE OF PRODUCING THE REQUIRED GRADATION). THE ROCK SHALL BE APPROVED BY A REPRESENTATIVE OF THE DIVISION OF MATERIALS AND TESTS BEFORE USE.

RIPRAP

(27) RIPRAP SHALL CONSIST OF FURNISHING AND PLACING EITHER RUBBLE STONES BY HAND OR MACHINED. RUBBLE STONE SHALL MEET THE REQUIREMENTS OF SECTION 709 OF THE STANDARD SPECIFICATIONS AND SHALL BE CLEAN (FREE FROM ORGANIC MATTER), DURABLE, ANGULAR WITH FRACTURED FACES, NEARLY RECTANGULAR IN SHAPE WITH A BREADTH OR THICKNESS AT LEAST ONE-THIRD ITS LENGTH.

SIGNING

(28) THE TOP OF THE SIGN FOOTINGS SHALL BE PLACED LEVEL WITH THE GROUND LINE.

(29) AFTER THE SIGN LOCATIONS HAVE BEEN STAKED, BUT PRIOR TO ORDERING ANY MATERIAL FOR THE SUPPORTS, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE REGIONAL CONSTRUCTION OFFICE.

(30) ALL SIGNS MARKED "TO BE REMOVED" ARE TO BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER ITEM 713-15 AND BECOME THE PROPERTY OF THE CONTRACTOR.

(31) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUT-OUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND, OR BROWN BACKGROUND.

(32) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ERECTION.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

(33) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

MARK HARPER — REGISTERED ENGINEER — No. 024927 — STATE OF TENNESSEE — 4/8/09

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

4/5/2009
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	2E

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

GENERAL NOTES

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL (CONTINUED)

(34) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

(33) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

(34) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

(35) USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(36) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF A OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE.. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(37) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

(38) ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED AND THE VERTICAL PANELS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA

(39) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 10 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.

(40) CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

(41) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.

(42) CONSTRUCTION SHALL BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS AND SHALL BE PHASED FOR PROJECTS THAT HAVE OVER 50 ACRES OF SOIL DISTURBANCE. NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION PROJECT, UNLESS APPROVED IN WRITING BY THE ENVIRONMENTAL DIVISION.

SEDIMENT CONTROL

(43) EPSC MEASURES SHALL BE INSTALLED CONCURRENTLY WITH CLEARING OPERATIONS, SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

(44) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT

(45) WATER PUMPED FROM WORK AREAS AND EXCAVATION MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION PRIOR TO ITS DISCHARGE INTO SURFACE WATERS. 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.

(46) 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.

(47) 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.

(48) 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.

(49) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

STREAM/WETLAND

(50) 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.

(51) 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.

(52) INSTREAM EPSC DEVICES ARE NOT APPROVED, UNLESS SPECIFIED IN WRITING BY THE ENVIRONMENTAL DIVISION.

(53) 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.

(54) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING.

(55) 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. NO. 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.

(56) 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.

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

SPECIES

(58) 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).

(59) INSPECTION OF EPSC MEASURES SHALL BE DONE BEFORE ANTICIPATED STORM EVENTS (OR SERIES OF STORM EVENTS SUCH AS INTERMITTENT SHOWERS OVER ONE OR MORE DAYS), DURING, OR WITHIN TWENTY-FOUR (24) HOURS AFTER THE END OF A STORM EVENT OF 0.5 INCH OR GREATER, AND AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. AN ANTICIPATED STORM EVENT IS DEFINED AS A 50% OR GREATER CHANCE OF RAINFALL ACCORDING TO A DOCUMENTED LOCAL OR NATIONAL SOURCE (I.E., NOAA, WEATHER.COM, LOCAL NEWSPAPER).

(60) 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.

INSPECTION, MAINTENANCE, REPAIR

(61) 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.

MARK HARPER
STATE OF TENNESSEE
4/8/09

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

4/4/2009
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TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	2F

GENERAL NOTES

INSPECTION, MAINTENANCE, REPAIR (CONTINUED)

(62) 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.

(63) 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.

(64) INSPECTION OF EPSC MEASURES SHALL BE DONE BEFORE ANTICIPATED STORM EVENTS (OR SERIES OF STORM EVENTS SUCH AS INTERMITTENT SHOWERS OVER ONE OR MORE DAYS), DURING, OR WITHIN TWENTY-FOUR (24) HOURS AFTER THE END OF A STORM EVENT OF 0.5 INCH OR GREATER, AND AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. AN ANTICIPATED STORM EVENT IS DEFINED AS A 50% OR GREATER CHANCE OF RAINFALL ACCORDING TO A DOCUMENTED LOCAL OR NATIONAL SOURCE (I.E., NOAA, WEATHER.COM, LOCAL NEWSPAPER).

(65) 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.

(66) 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.

MATERIALS

(67) 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

(68) 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.

(69) 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.

(70) 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 AND PRECIPITATION RECORDS.

(71) ALL WATER QUALITY AND STORM WATER PERMITS, INCLUDING THE LOCATION OF THE SWPPP, SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. 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.

(72) IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS ARE NEEDED. THE DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.

(73) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER EPSC INSPECTIONS INDICATE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED WHEN MAJOR DESIGN REVISIONS ARE REQUESTED BY CONSTRUCTION. THE ENVIRONMENTAL DIVISION MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS.

(74) PROJECT INSPECTORS AND SUPERVISORS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL I - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE OR EQUIVALENT COURSE. A COPY OF CERTIFICATION RECORDS FOR THIS COURSE SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.

LITTER, DEBRIS, WASTE, PETROLEUM

(75) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S.

(76) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR

SPECIAL NOTES

GRADING

(1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.

(2) BORING DEPICTIONS SHOWN ON THE FOUNDATION DATA SHEETS, SOILS SHEETS, PLANS, AND CROSS-SECTIONS INDICATE SOIL AND ROCK CONDITIONS AT THE SPECIFIC BORING LOCATIONS. ANY SOIL PROFILE AND/OR ROCK LINE IS INTERPRETIVE BASED ON THE JUDGMENT OF THE GEOTECHNICAL ENGINEER/GEOLOGIST. THE TRANSITION BETWEEN BORINGS AND LAYERS MAY VARY SIGNIFICANTLY DEPENDING ON THE GEOLOGIC FORMATIONS ENCOUNTERED.

(3) TO ASSIST IN BID PREPARATION FOR EARTHWORK AND FOUNDATION CONSTRUCTION, DETAIL ROCK AND SOIL DESCRIPTION AND ON SOME PROJECTS, ROCK CORE SAMPLES ARE AVAILABLE FOR INSPECTION AT THE MATERIALS AND TESTS HEADQUARTERS AT 6601 CENTENNIAL BOULEVARD, NASHVILLE, TN OR AT THE TDOT REGION 1 BUILDING IN KNOXVILLE, TN.

(4) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

(5) EARTHWORK IS PAID FOR UNDER ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.

EROSION PREVENTION AND SEDIMENT CONTROL

STREAM/WETLAND

(6) 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

(4) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHEET 20, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

ENVIRONMENTAL

ECOLOGY

(7) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING CONCERNING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR DESIGNATED CONSULTANT WILL NEED TO BE ON-SITE FOR WORK BEING DONE WHICH COULD AFFECT THE STREAM OR SPECIES.

(8) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED BRIDGE WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS WHICH MUST BE FOLLOWED.

(9) ALL BRIDGE PROJECTS WITH THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT IDENTIFIED MUST HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER THE STREAM.

MARK HARPER — REGISTERED ENGINEER — No. 93427 — STATE OF TENNESSEE — 4/8/09

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

4/4/2009
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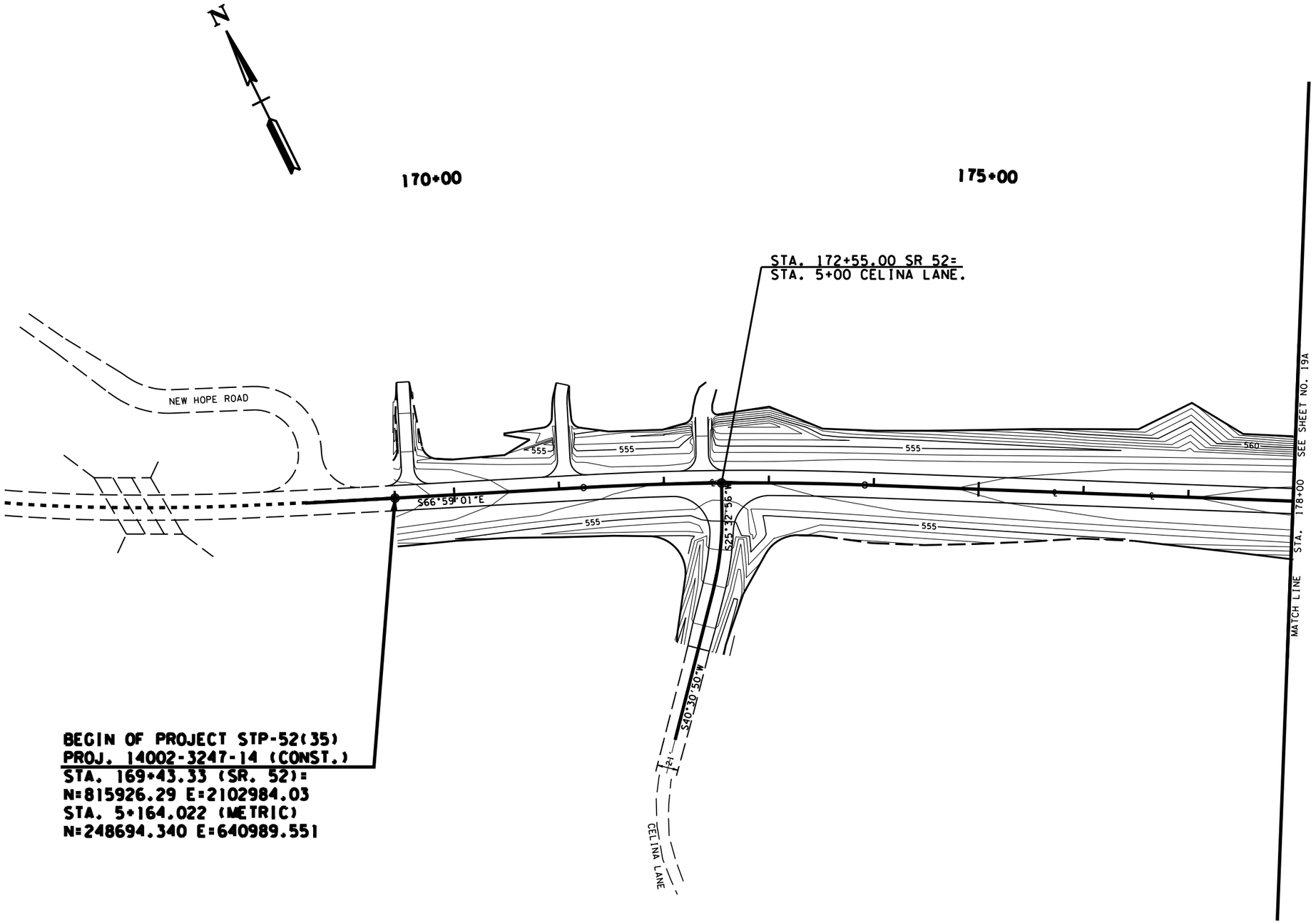
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2005	STP-52(35)	19
CONST.	2009	STP-52(35)	19



BEGIN OF PROJECT STP-52(35)
PROJ. 14002-3247-14 (CONST.)
STA. 169+43.33 (SR. 52)=
N=815926.29 E=2102984.03
STA. 5+164.022 (METRIC)
N=248694.340 E=640989.551

3/20/2009
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Survey & Design Division

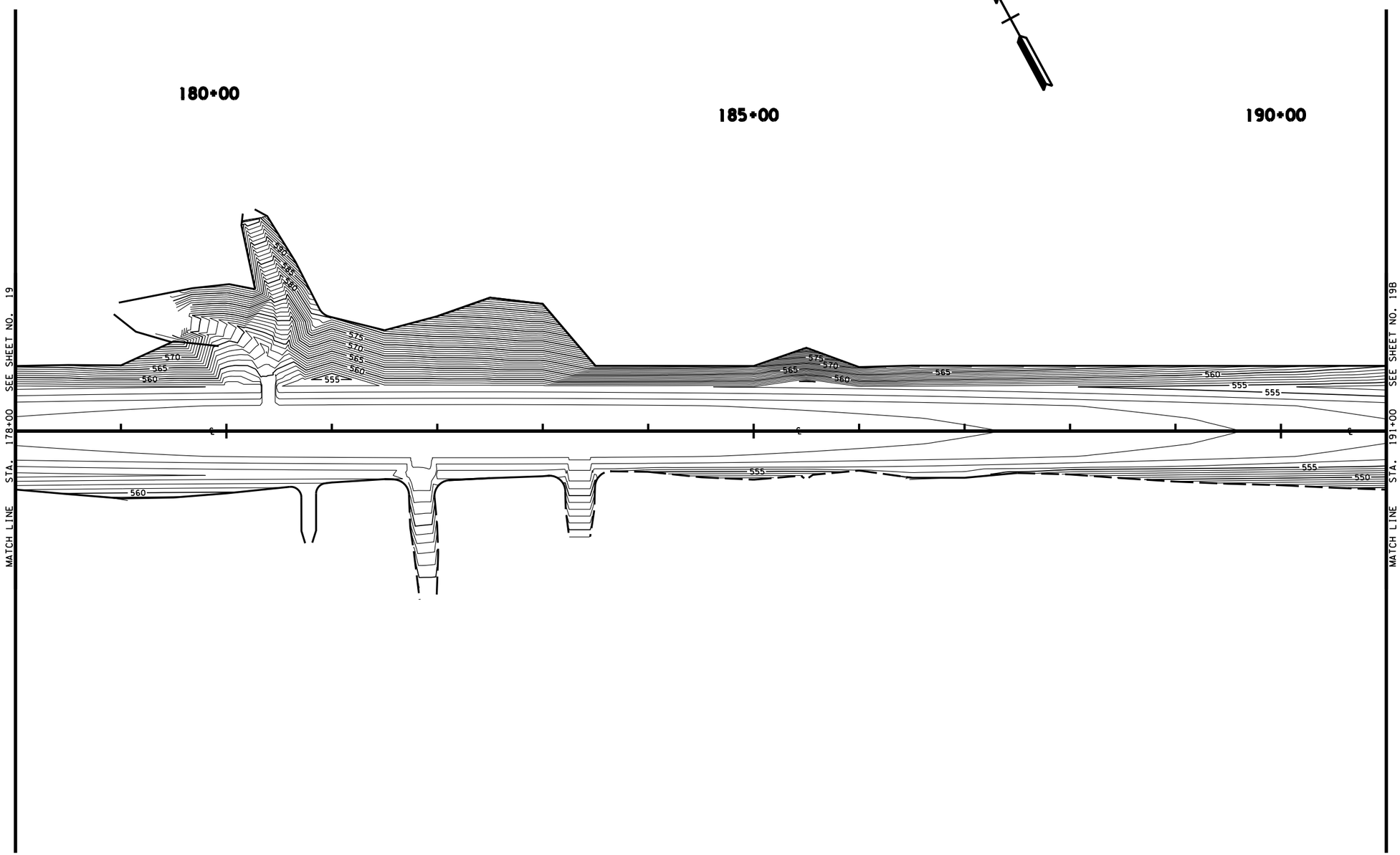
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED CONTOURS

BEG. OF PROJ.TO STA.178+00
SCALE: 1"= 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2005	STP-52(35)	19A
CONST.	2009	STP-52(35)	19A



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Survey & Design Division

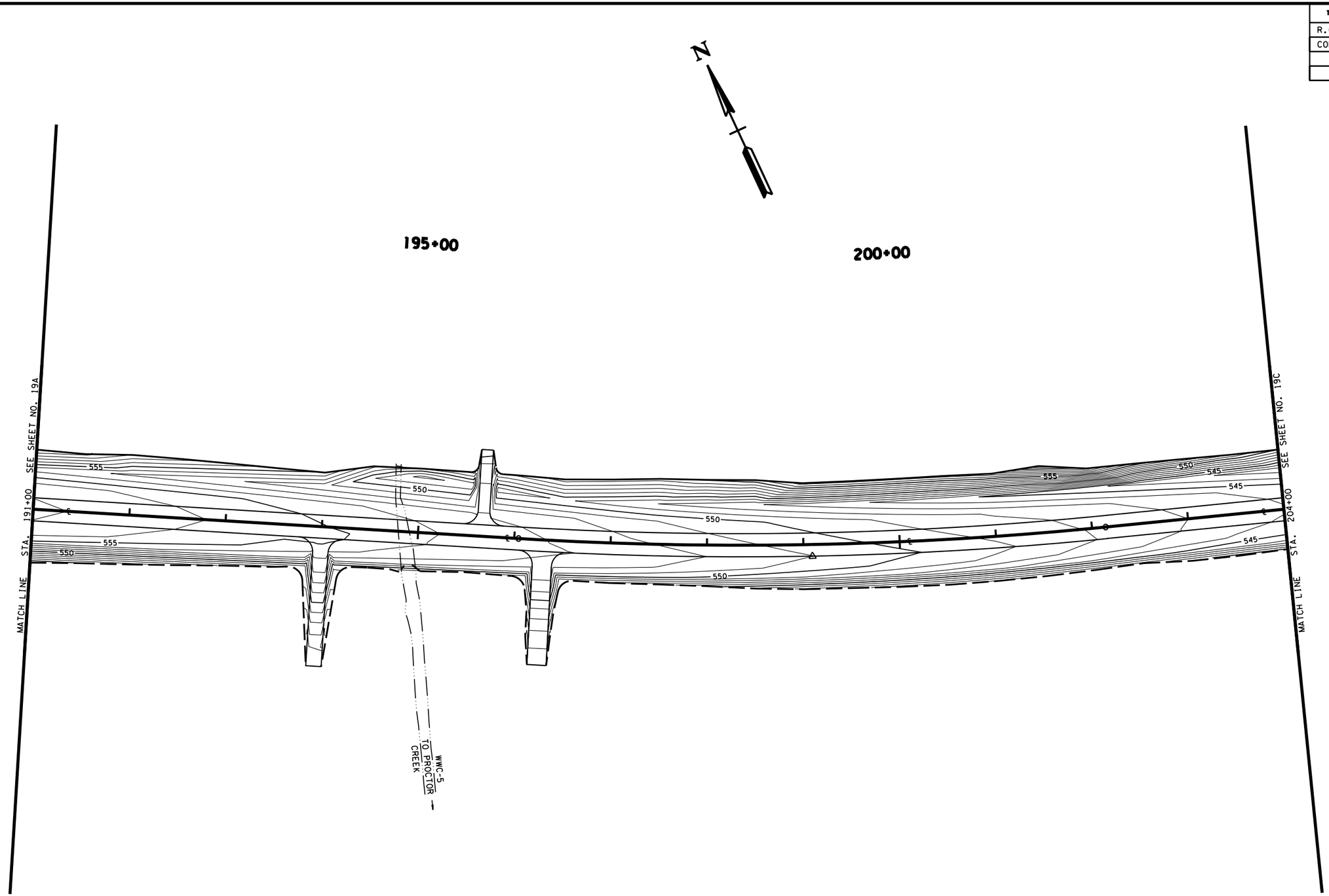
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED CONTOURS

STA. 178+00 TO STA. 191+00
SCALE: 1"= 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2005	STP-52(35)	19B
CONST.	2009	STP-52(35)	19B



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Survey & Design Division

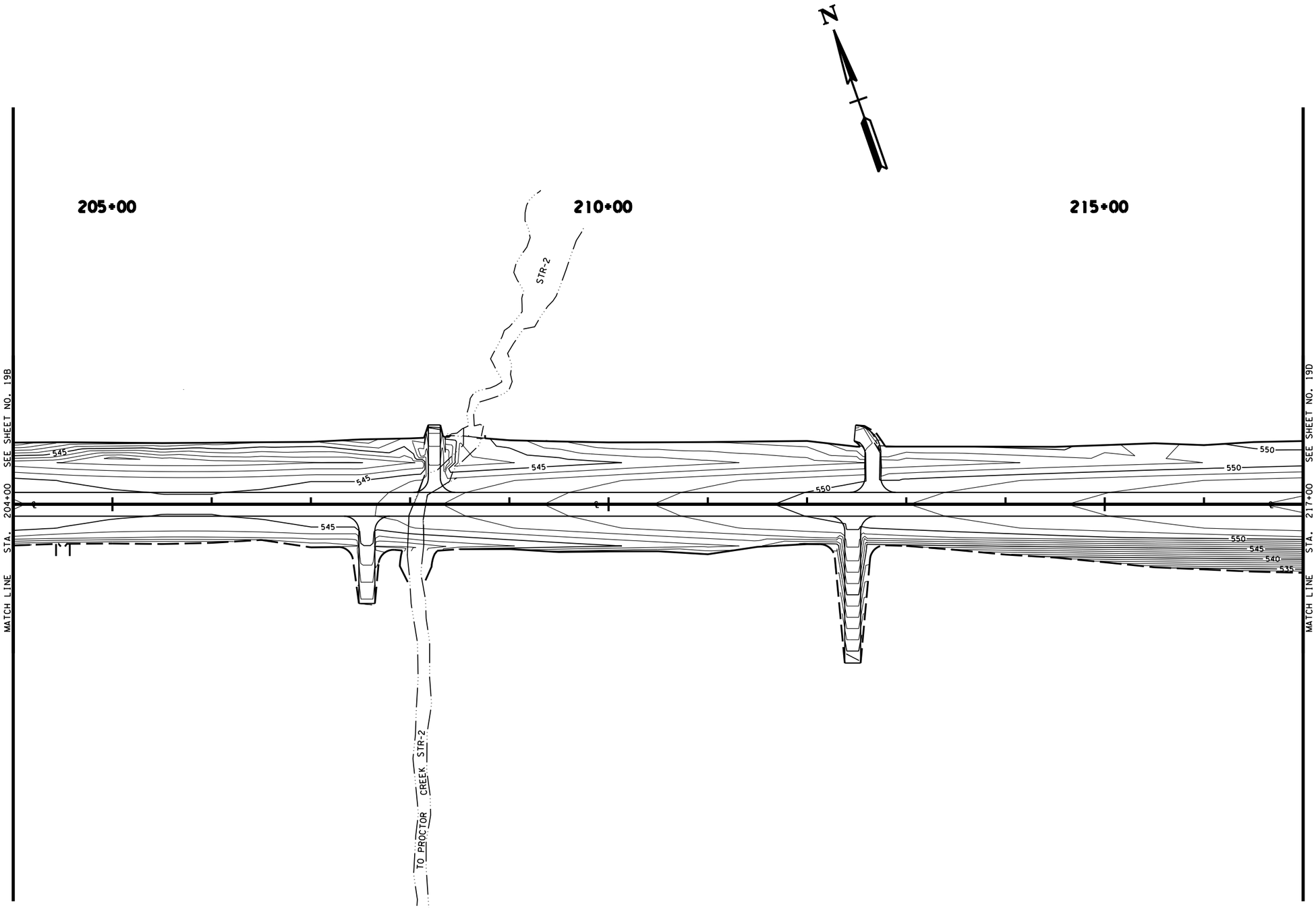
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED CONTOURS

STA. 191+00 TO STA. 204+00
SCALE: 1"= 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2005	STP-52(35)	19C
CONST.	2009	STP-52(35)	19C



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Survey & Design Division

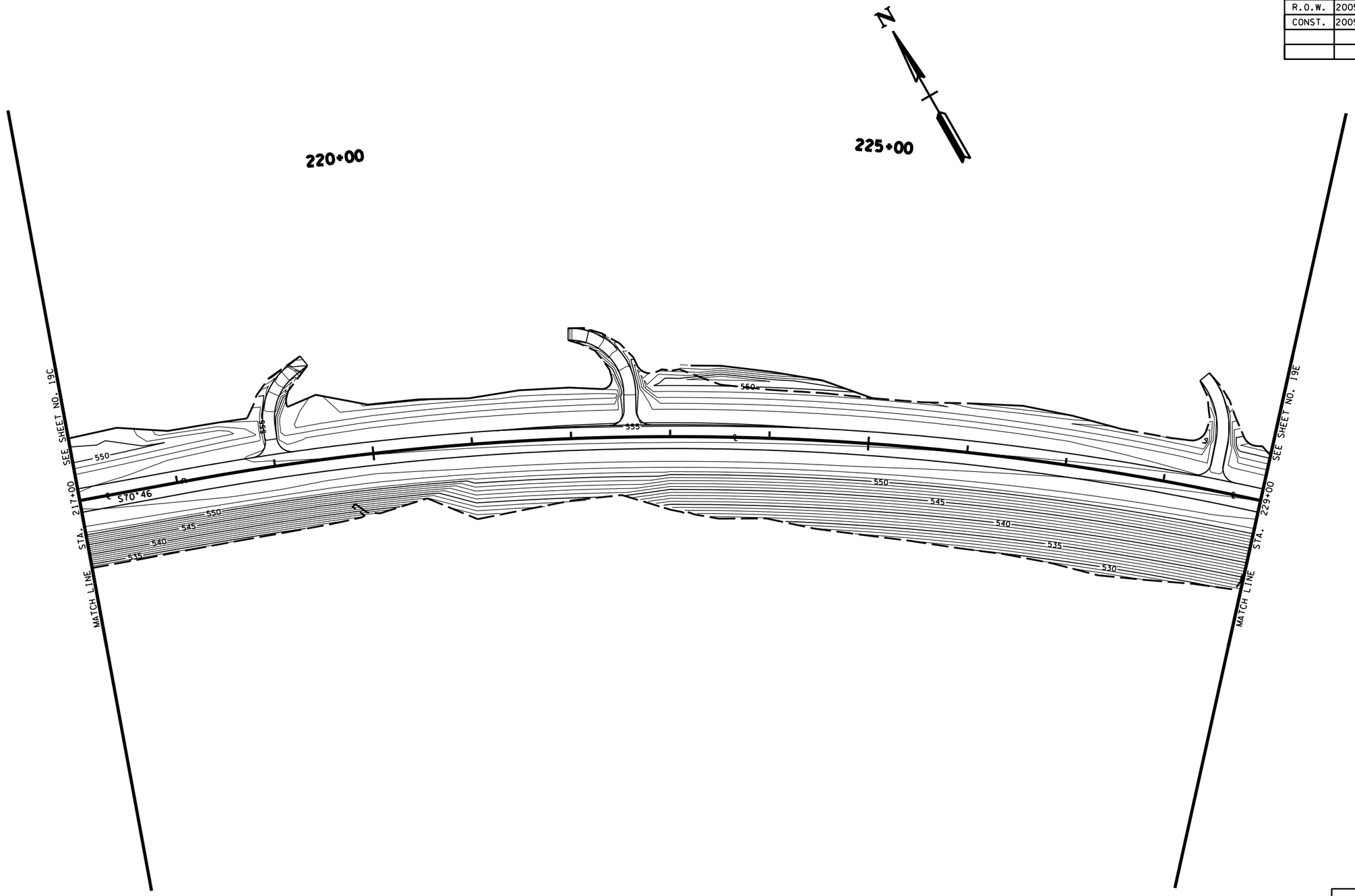
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED CONTOURS

STA. 204+00 TO STA. 217+00
SCALE: 1"= 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2005	STP-52(35)	19D
CONST.	2009	STP-52(35)	19D



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Survey & Design Division

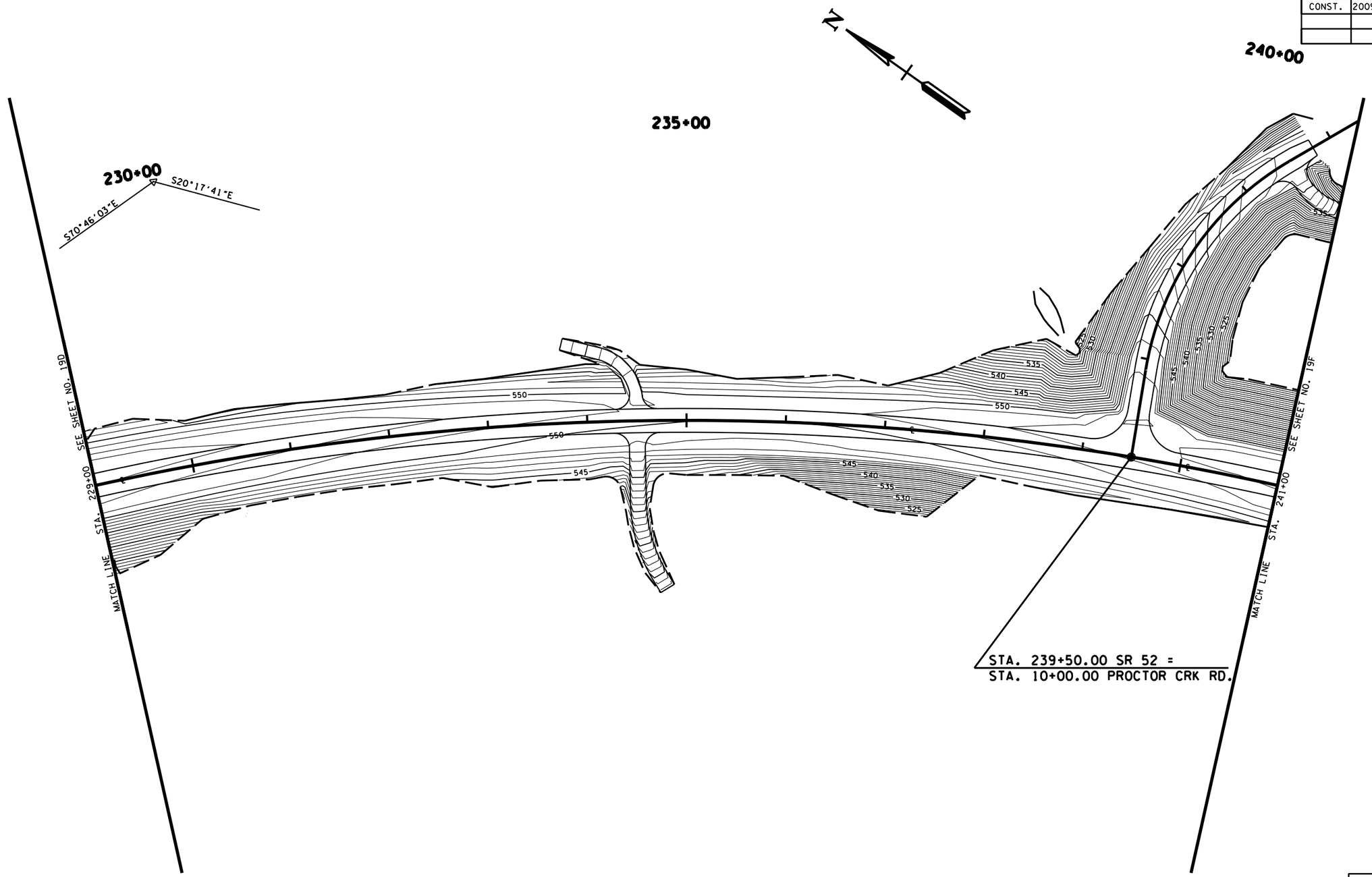
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED CONTOURS

STA. 217+00 TO STA. 229+00
SCALE: 1"= 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2005	STP-52(35)	19E
CONST.	2009	STP-52(35)	19E



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Survey & Design Division

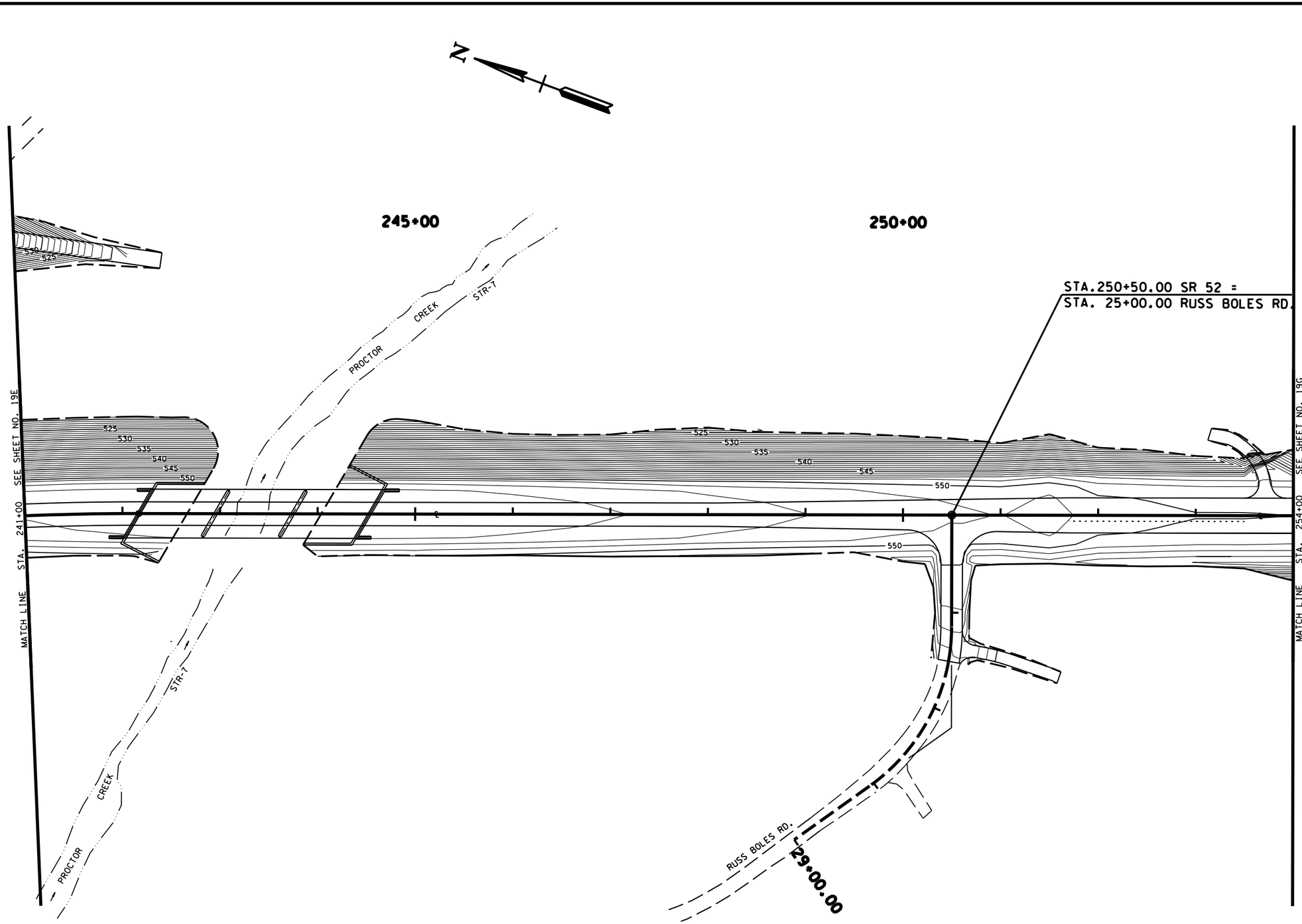
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED CONTOURS

STA. 229+00 TO STA. 241+00
SCALE: 1"= 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2005	STP-52(35)	19F
CONST.	2009	STP-52(35)	19F



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Survey & Design Division

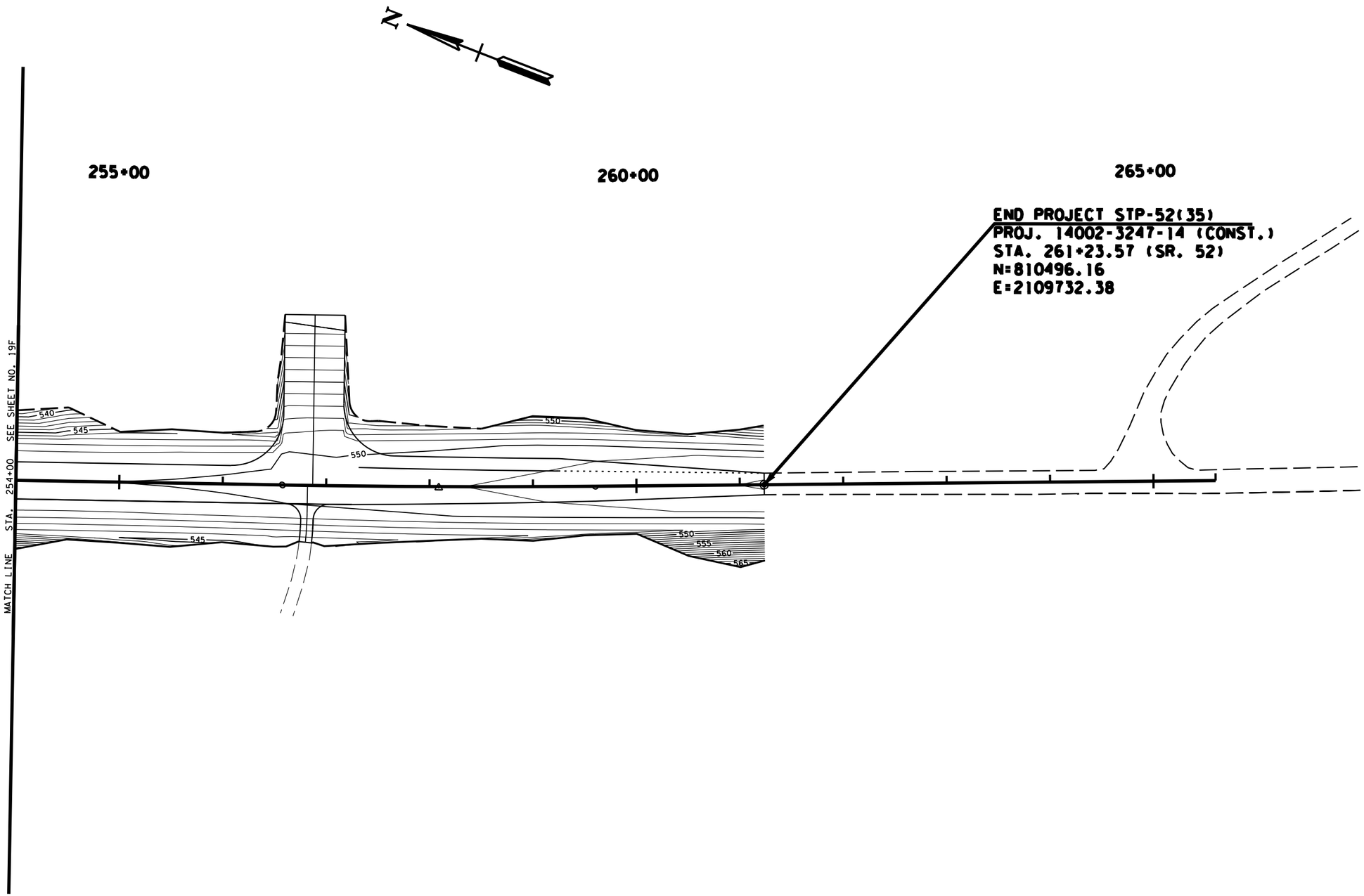
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED CONTOURS

STA. 241+00 TO STA. 254+00
SCALE: 1"= 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2005	STP-52(35)	19G
CONST.	2009	STP-52(35)	19G



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Survey & Design Division

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPOSED CONTOURS

STA.254+00 TO END OF PROJ.
SCALE: 1"= 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20

EROSION PREVENTION AND SEDIMENT CONTROL SPECIAL NOTES

NPDES

(1) 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.

(2) 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.

(3) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:

A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

B. NO OTHER CLEARING AND GRUBBING OPERATIONS SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

C. NO CULVERT OR BRIDGE CONSTRUCTION SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

D. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

(4) PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 15 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 15 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 RUNS WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE.

(5) 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.

(6)

UTILITY RELOCATION

(7) RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.

(8) 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.

(9) 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).

(10) 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.

(11) 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.

(12) 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.

(13) 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.

(14) 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.

(15) THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS (AS APPROVED BY THE TDOT PROJECT ENGINEER).

(16) 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 CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
203-1	ROAD AND DRAINAGE	1,891	C.Y.
209-02.05	12" TEMPORARY SLOPE DRAIN	373	L.F.
209-02.07	18" TEMPORARY SLOPE DRAIN	204	L.F.
209-05	SEDIMENT REMOVAL	602	C.Y.
209-08.02	TEMPORARY SILT FENCE WITH BACKING	11,060	L.F.
209-08.03	TEMPORARY SILT FENCE	14,879	L.F.
209-08.07	ROCK CHECK DAMS	61	EACH
209-08.08	ENHANCED ROCK CHECK DAMS	21	EACH
209-09.01	SANDBAGS	1,275	BAG
209-09.02	TEMPORAR SEDIMENT FILTER BAGS	12	BAG
303-10.01	MINERAL AGGREGATE (NO. 57)	510	TON
709-05.06	MACHINED RIP RAP (CLASS A-1)	214	TON
709-05.21	DUMPED RIP-RAP	258	TON
709-65.03	TEMPORARY DIVERSION CHANNEL	952	L.F.
740-10.03	GEOTEXTILE (TYPE III)	615	S.Y.
805-12.03	EROSION CONTROL BLANKET (TYPE III)	34,215	S.Y.

(1) 1 FOR TEMPORARY BERM; 6,635 LF.

EROSION CONTROL LEGEND

SYMBOL	ITEM & DESCRIPTION	STD. DWG.
SFB SFB	209-09.02: TEMPORARY SEDIMENT FILTER BAG	EC-STR-2
SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	209-08.07: TEMPORARY ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	CULVERT PROTECTION TYPE I	EC-STR-11
	709-05.21: DUMPED RIP-RAP	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY BERM	EC-STR-27
	209-65.03: TEMPORARY DIVERSION CHANNEL	EC-STR-31
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34
	TEMPORARY PAVEMENT	
	209-09.01: SAND BAGS	

MARK HARPER REGISTERED ENGINEER No. 024937 STATE OF TENNESSEE
4/8/09

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

4/4/2009
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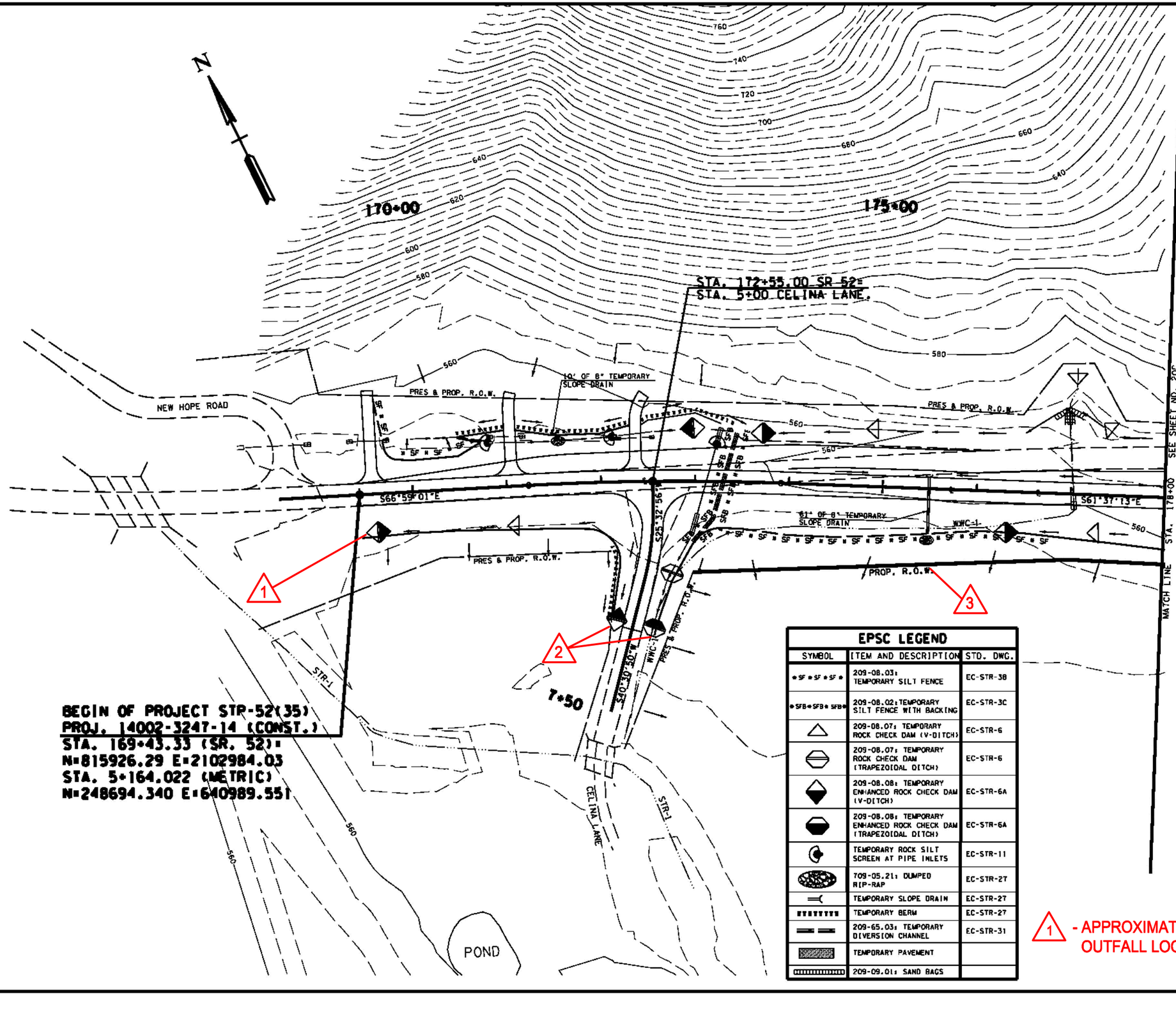
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20A



BEGIN OF PROJECT STP-52(35)
PROJ. 14002-3247-14 (CONST.)
STA. 169+43.33 (SR. 52)=
N=815926.29 E=2102984.03
STA. 5+164.022 (METRIC)
N=248694.340 E=640989.551

EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	209-08.07: TEMPORARY ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	TEMPORARY ROCK SILT SCREEN AT PIPE INLETS	EC-STR-11
	709-05.21: DUMPED RIP-RAP	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY BERM	EC-STR-27
	209-65.03: TEMPORARY DIVERSION CHANNEL	EC-STR-31
	TEMPORARY PAVEMENT	
	209-09.01: SAND BAGS	

1 - APPROXIMATE OUTFALL LOCATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 1

BEG. OF PROJ. TO STA. 178+00
SCALE: 1" = 50'

3/23/2009
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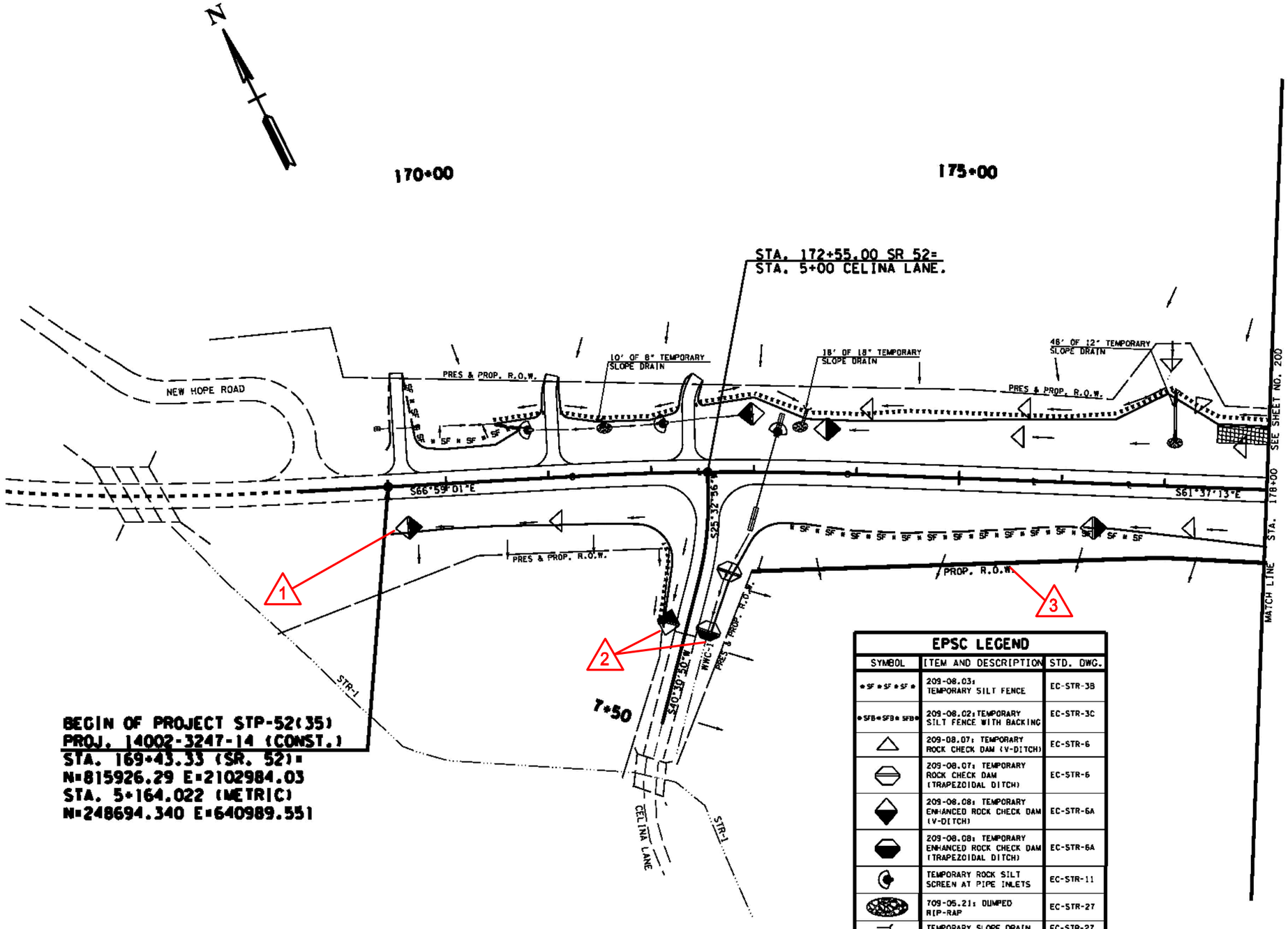
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	208



BEGIN OF PROJECT STP-52(35)
PROJ. 14002-3247-14 (CONST.)
STA. 169+43.33 (SR. 52)=
N=815926.29 E=2102984.03
STA. 5+164.022 (METRIC)
N=248694.340 E=640989.551

EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	209-08.07: TEMPORARY ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	TEMPORARY ROCK SILT SCREEN AT PIPE INLETS	EC-STR-11
	709-05.21: DUMPED RIP-RAP	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY BERM	EC-STR-27
	209-65.03: TEMPORARY DIVERSION CHANNEL	EC-STR-31
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34

1 - APPROXIMATE OUTFALL LOCATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 2

BEG. OF PROJ. TO STA. 178+00
SCALE: 1" = 50'

3/23/2009
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20C

180+00
185+00
190+00
STATE ROUTE 52
PROP. R.O.W.
PRES. & PROP. R.O.W.
60' OF 8" TEMPORARY SLOPE DRAIN
WWC-1
WWC-2
WWC-3
WWC-4
S61°37'13"E
PROP. R.O.W.
PERM. DRAINAGE ESMT.
JOHN BUTLER RD.
SEE SHEET NO. 20A
STA. 178+00
MATCH LINE
SEE SHEET NO. 20E
STA. 191+00
MATCH LINE

4
5

EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
SF SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	709-05.21: DUMPED RIP-RAP	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34

1 - APPROXIMATE OUTFALL LOCATION

MARK HARPER
REGISTERED ENGINEER
No. 022937
STATE OF TENNESSEE
4/8/09

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

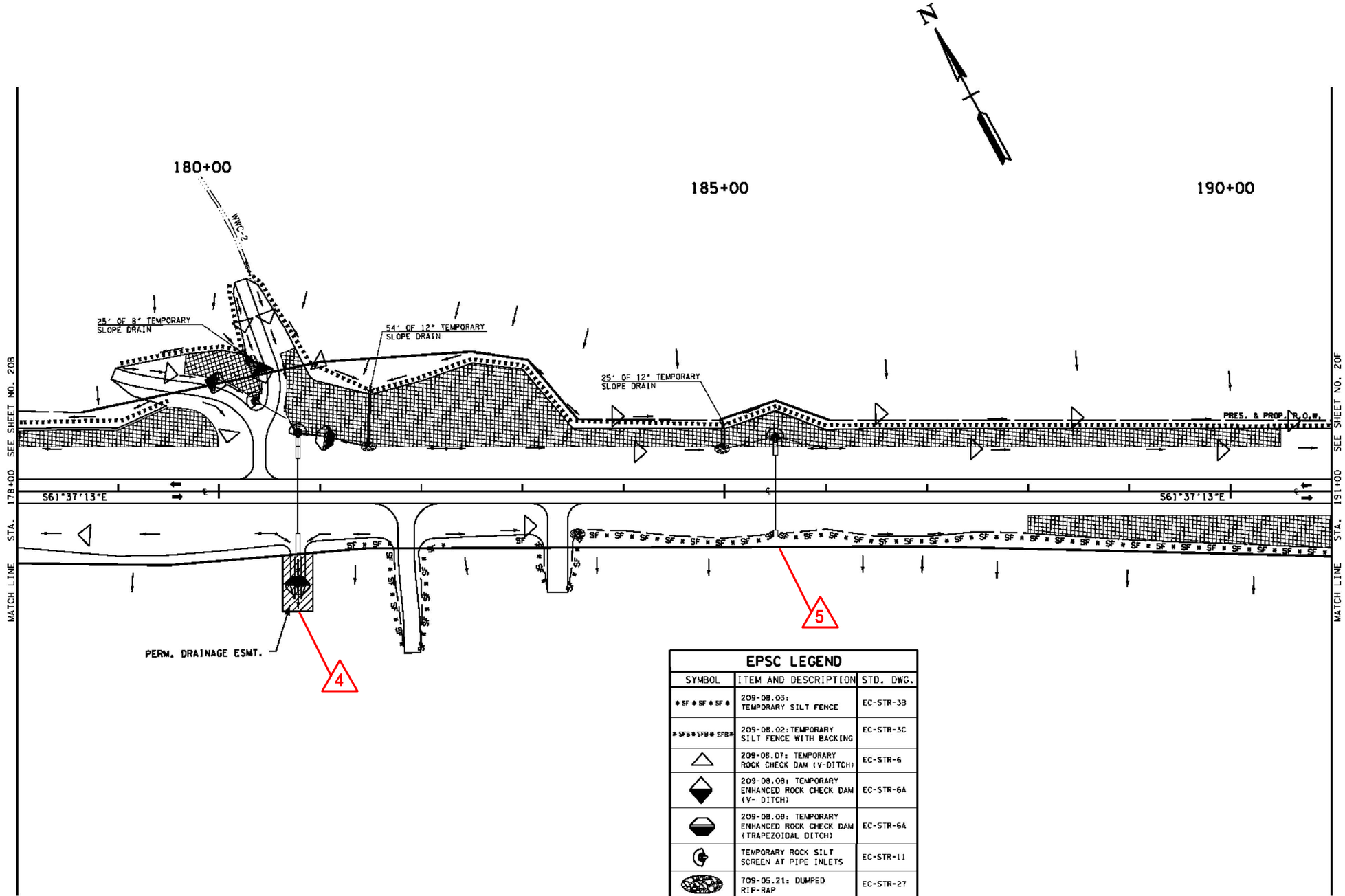
EPSC PLAN PHASE 1

STA. 178+00 TO STA. 191+00
SCALE: 1" = 50'

4/4/2009
F:\95000\Sheets\CYSR5220C.SHT

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20D



EPSC LEGEND		
SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (V- DITCH)	EC-STR-6A
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	TEMPORARY ROCK SILT SCREEN AT PIPE INLETS	EC-STR-11
	709-05.21: DUMPED RIP-RAP	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY BERM	EC-STR-27
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34

1 - APPROXIMATE OUTFALL LOCATION

03/26/2009
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Bureau of Planning & Development

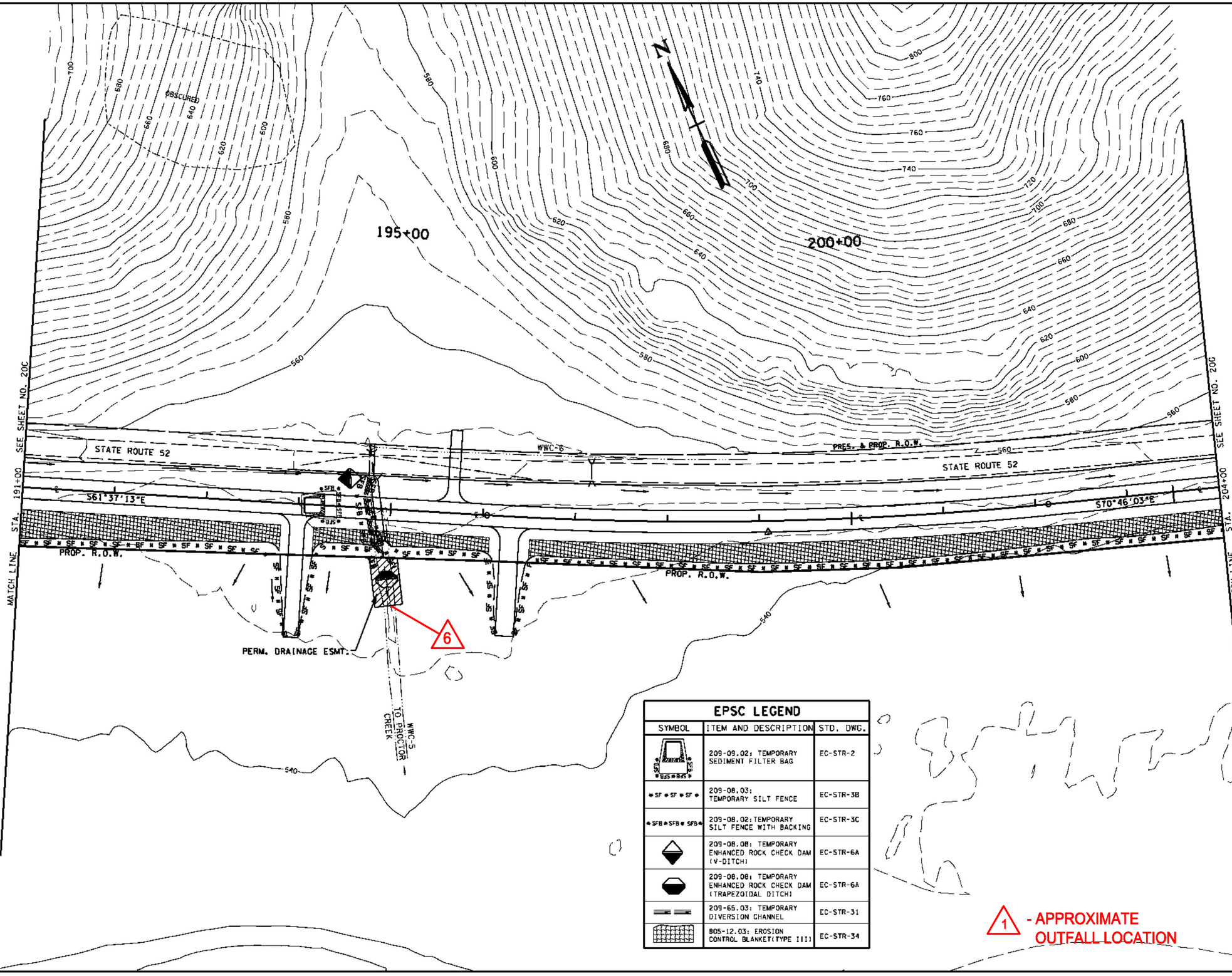
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 2

STA. 178+00 TO STA. 191+00
SCALE: 1"= 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20E



EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
	209-09.02: TEMPORARY SEDIMENT FILTER BAG	EC-STR-2
SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	209-65.03: TEMPORARY DIVERSION CHANNEL	EC-STR-31
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 1

STA. 191+00 TO STA. 204+00
SCALE: 1"= 50'

03/26/2009
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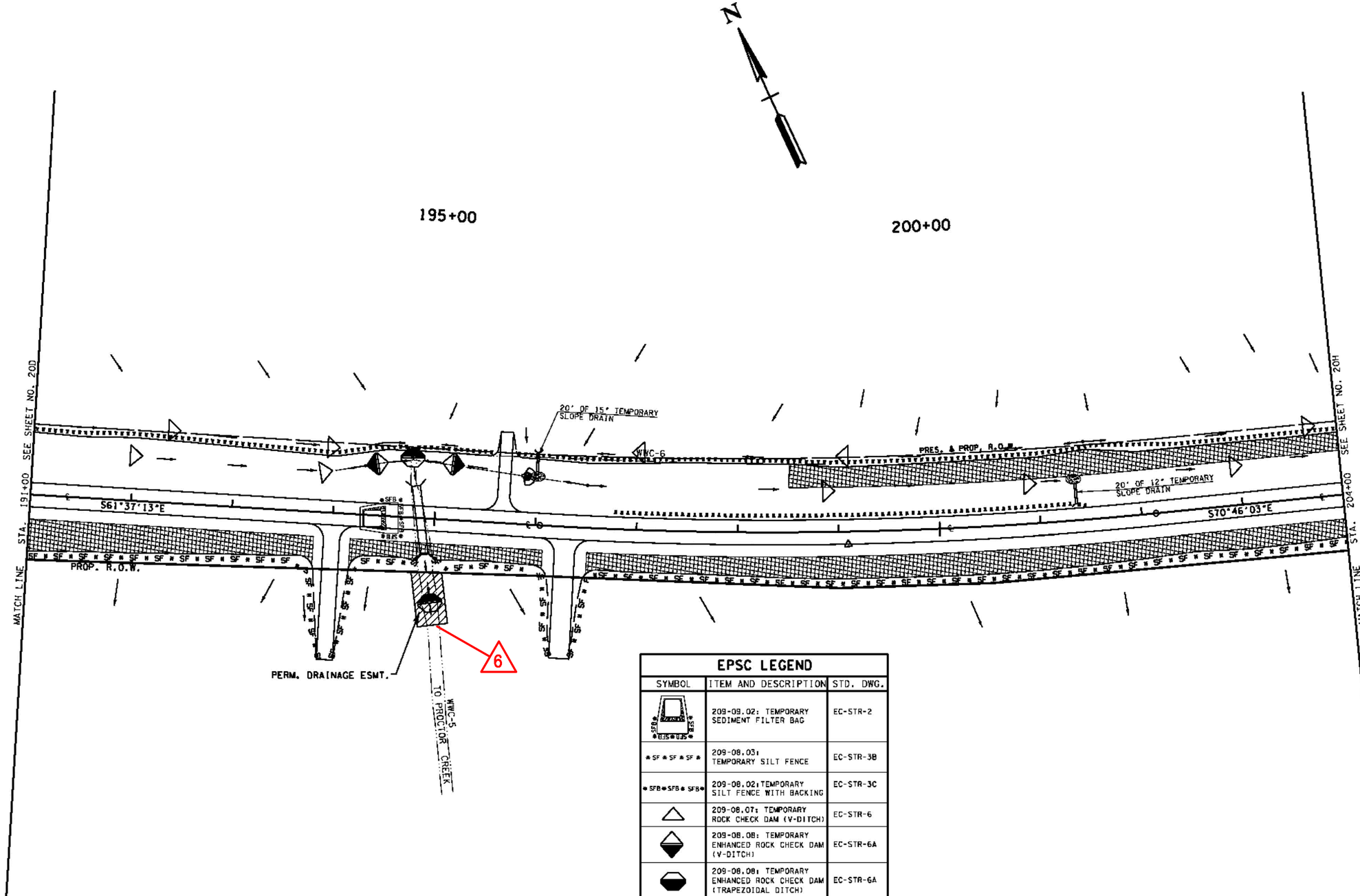
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20F



EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
	209-08.02: TEMPORARY SEDIMENT FILTER BAG	EC-STR-2
* SF * SF * SF *	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	TEMPORARY ROCK SILT SCREEN AT PIPE INLETS	EC-STR-11
	709-05.21: DUMPED RIP-RAP	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY BERM	EC-STR-27
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34

1 - APPROXIMATE OUTFALL LOCATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 2

STA. 191+00 TO STA. 204+00
SCALE: 1"= 50'

03/26/2009
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20C

205+00
210+00
215+00
N
POND
STR-2
30' OF 30" TEMP. PIPE
8C
WWC-7
WWC-8
WWC-9
PRES. & PROP. R.O.W.
PRES. & PROP. R.O.W.
SEE SHEET NO. 20E
STA. 204+00
MATCH LINE
SEE SHEET NO. 201
STA. 217+00
MATCH LINE
PROP. R.O.W.
PROP. R.O.W.
7
8B
8A
PERM. DRAINAGE ESMT.
TO PROCTOR CREEK STR-2
560
580
600
620
660
680
540

EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
	209-09.02: TEMPORARY SEDIMENT FILTER BAG	EC-STR-2
SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	209-65.03: TEMPORARY DIVERSION CHANNEL	EC-STR-31
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34

1 - APPROXIMATE OUTFALL LOCATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

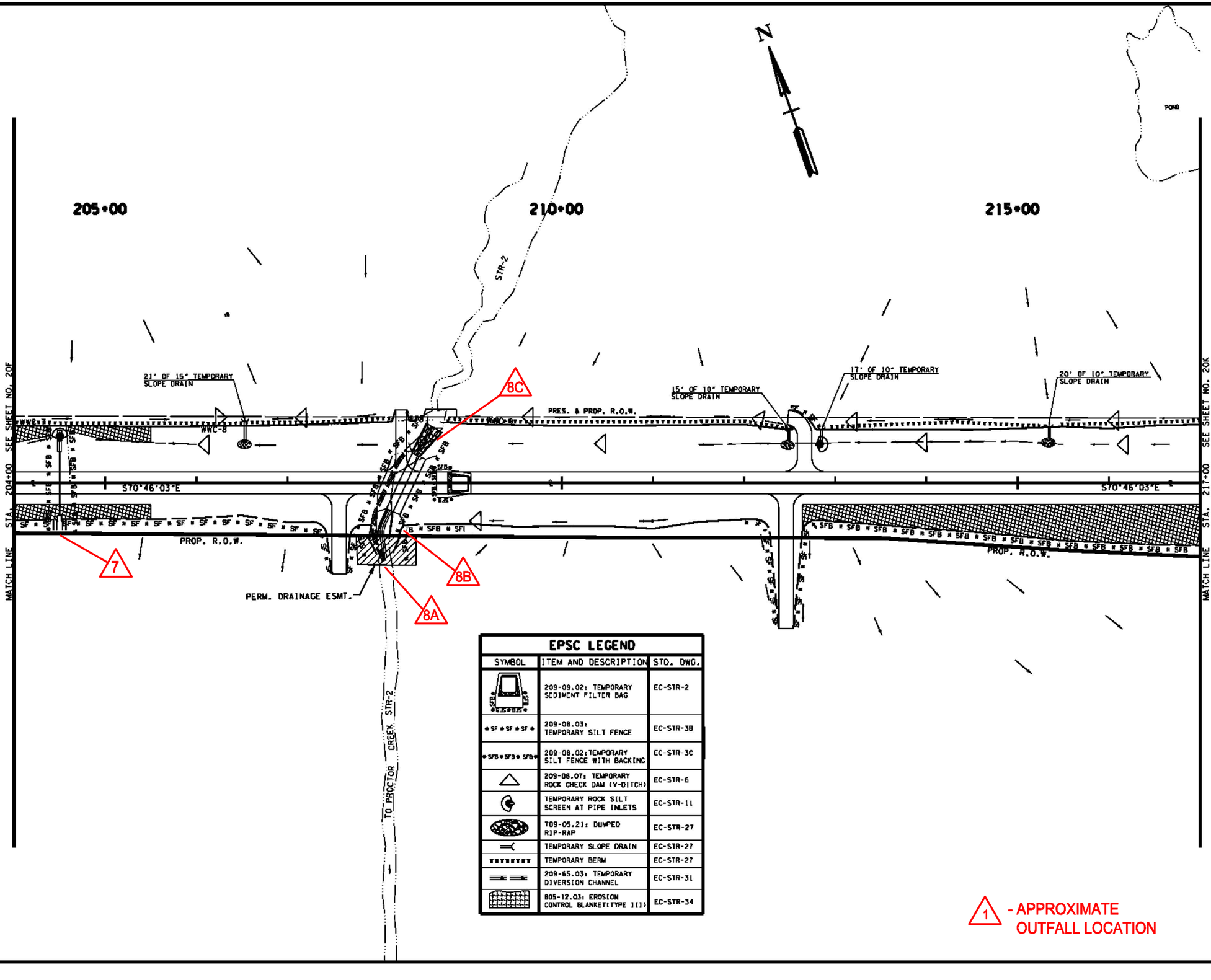
EPSC PLAN PHASE 1

STA. 204+00 TO STA. 217+00
SCALE: 1"= 50'

03/26/2009
F:\98000\Sheets\CYSR52206.SHT

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20H



EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
	209-09.02: TEMPORARY SEDIMENT FILTER BAG	EC-STR-2
	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	TEMPORARY ROCK SILT SCREEN AT PIPE INLETS	EC-STR-11
	709-05.21: DUMPED RIP-RAP	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY BERM	EC-STR-27
	209-65.03: TEMPORARY DIVERSION CHANNEL	EC-STR-31
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34

1 - APPROXIMATE OUTFALL LOCATION

3/23/2009
G:\98000\Sheets\CYSR5220H.SHT

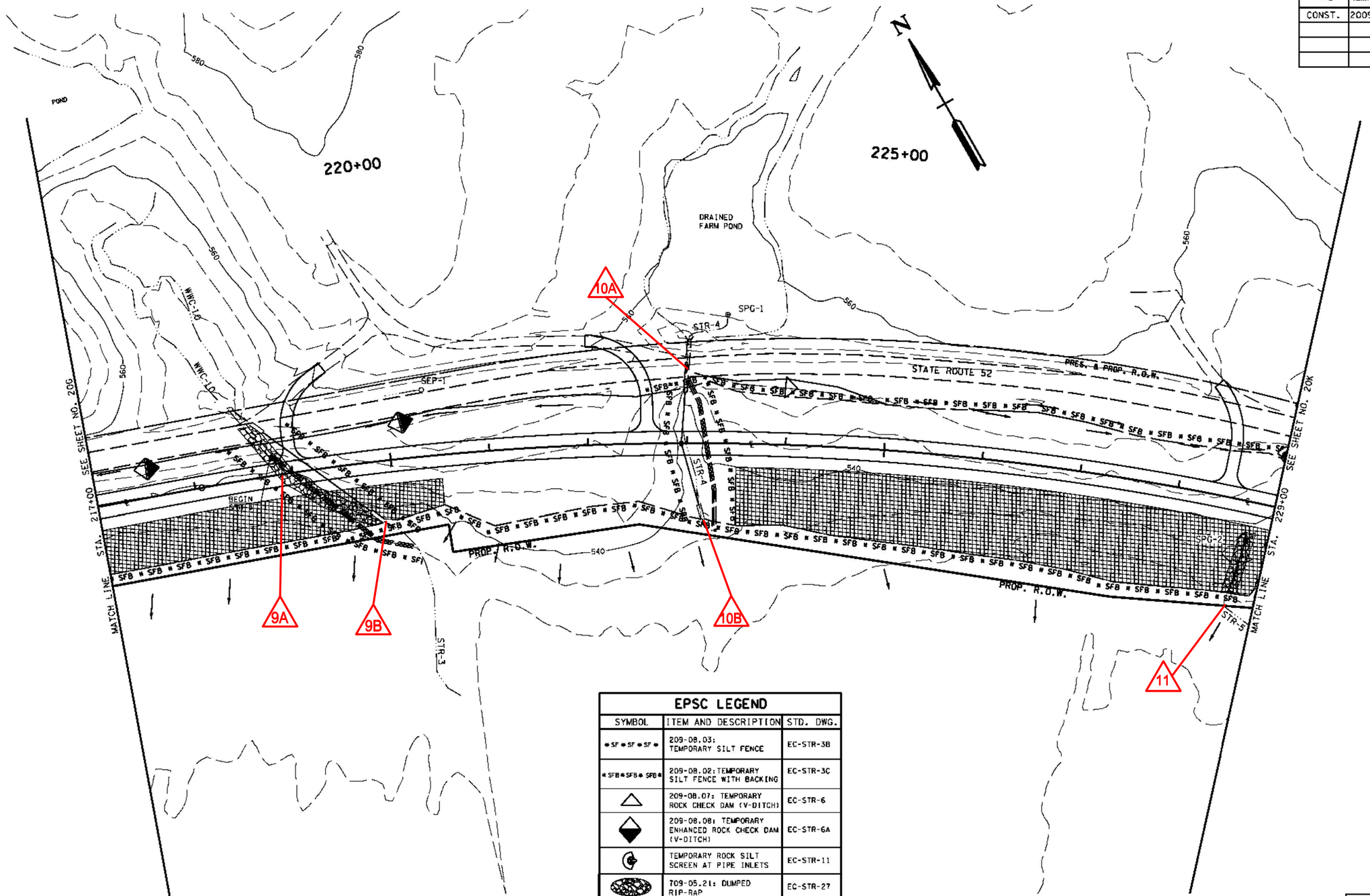
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 2

STA. 204+00 TO STA. 217+00
SCALE: 1" = 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20I



EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	TEMPORARY ROCK SILT SCREEN AT PIPE INLETS	EC-STR-11
	709-05.21: DUMPED RIP-RAP	EC-STR-27
	TEMPORARY BERM	EC-STR-27
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34

1 - APPROXIMATE OUTFALL LOCATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 1

STA. 217+00 TO STA. 229+00
SCALE: 1"= 50'

03/26/2009
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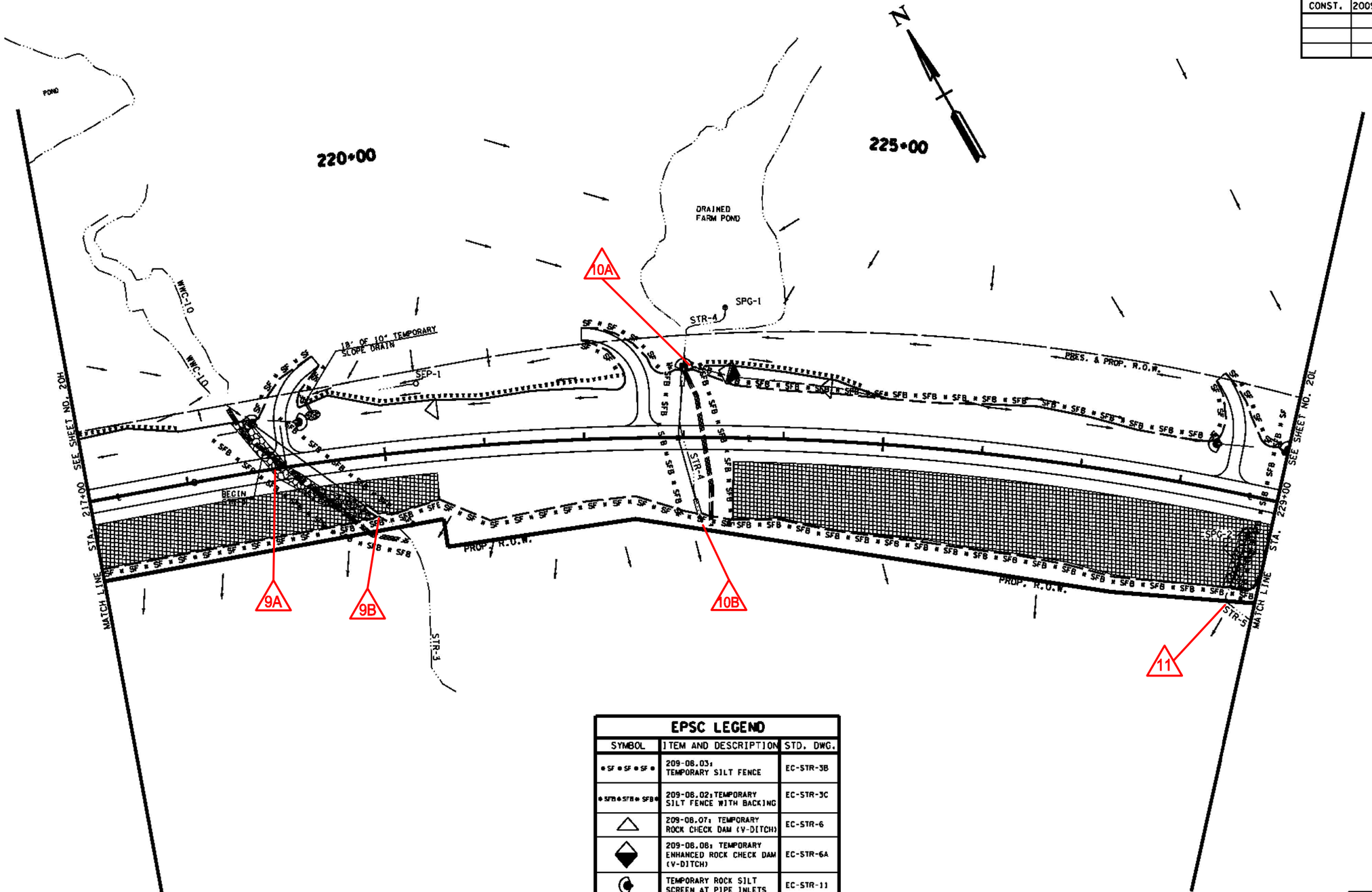
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20J



EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	TEMPORARY ROCK SILT SCREEN AT PIPE INLETS	EC-STR-11
	709-05.21: DUMPED RIP-RAP	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY BERM	EC-STR-27
	805-12.03: EROSION CONTROL BLANKET(TYPE II(1)	EC-STR-34

1 - APPROXIMATE OUTFALL LOCATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 2

STA. 217+00 TO STA. 229+00
SCALE: 1"= 50'

3/23/2009
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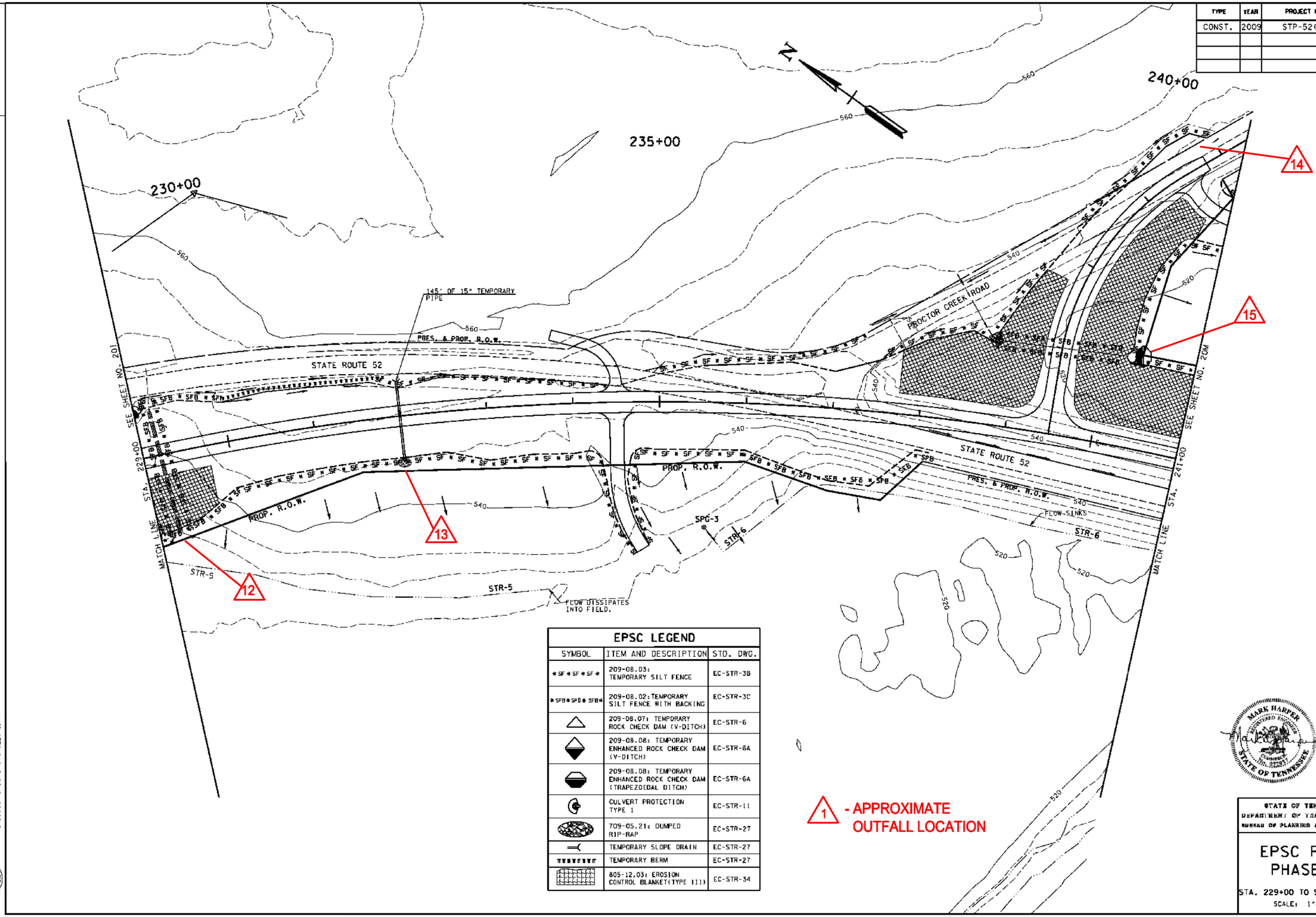
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20K



EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
*SF*SF*SF*	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
*SFB*SFB*SFB*	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	CULVERT PROTECTION TYPE 1	EC-STR-11
	709-05.21: DUMPED RIP-RAP	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY BERM	EC-STR-27
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34

1 - APPROXIMATE OUTFALL LOCATION

MARK HARPER
REGISTERED ENGINEER
No. 102937
STATE OF TENNESSEE
4/8/09

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 1

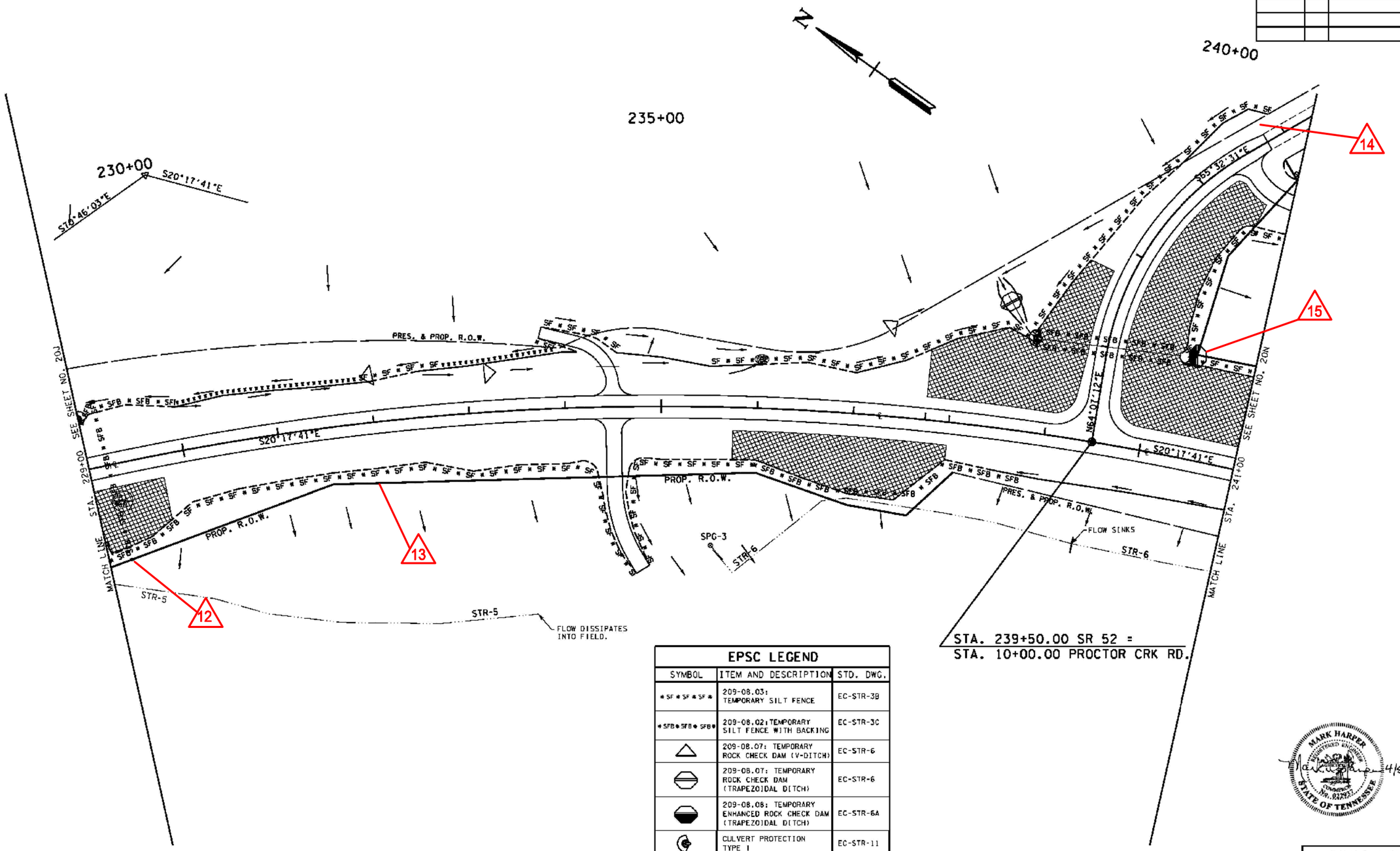
STA. 229+00 TO STA. 241+00

SCALE: 1"= 50'

4/4/2009
F:\98000\Sheets\CYSR5220K.SHT

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20L



STA. 239+50.00 SR 52 =
STA. 10+00.00 PROCTOR CRK RD.

EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
* SF * SF * SF *	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
△	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
⬭	209-08.07: TEMPORARY ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
⬬	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	CULVERT PROTECTION TYPE I	EC-STR-11
	709-05.21: DUMPED RIP-RAP	EC-STR-27
▼▼▼▼▼▼▼▼	TEMPORARY BERM	EC-STR-27
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34

1 - APPROXIMATE OUTFALL LOCATION

MARK HARPER
REGISTERED ENGINEER
No. 012927
STATE OF TENNESSEE
4/8/09

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 2

STA. 229+00 TO STA. 241+00
SCALE: 1"= 50'

4/4/2009
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20M

EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
	209-09.02: TEMPORARY SEDIMENT FILTER BAG	EC-STR-2
SF SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	709-05.21: DUMPED RIP-RAP	EC-STR-27
	TEMPORARY BERM	EC-STR-27
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34
	209-09.01: SAND BAGS	

STA. 250+50.00 SR 52 =
STA. 25+00.00 RUSS BOLES RD.

PROCTOR CREEK ROAD
245+00
250+00
PROCTOR CREEK
STR-7
SNK-2
16A
PROP. R.O.W.
PRES. & PROP. R.O.W.
SEE SHEET NO. 20K
SEE SHEET NO. 20P
STA. 241+00
STA. 254+00
MATCH LINE
S20°17'41"E
STATE ROUTE 52
540
520
560
16B
17A
17B
STR-6
STR-8
STR-T
SNK-1A
SNK-1B
SNK-1C
STR-8 END FLOW INTO 1.5' DIA. HOLE IN STREAM BED.
WETLAND WTL-1
UPLAND
SPG-A
RUSS BOLES ROAD
29+00.00

1 - APPROXIMATE OUTFALL LOCATION

MARK HARPER
REGISTERED ENGINEER
No. 027427
STATE OF TENNESSEE
4/8/09

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 1

STA. 241+00 TO STA. 254+00
SCALE: 1"= 50'

4/4/2009
F:\98000\Sheets\CYSR5220M.SHT

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20N

N

PROCTOR CREEK ROAD

245+00

250+00

STA.250+50.00 SR 52 =
STA. 25+00.00 RUSS BOLES RD.

16A

PROPAGATOR CREEK

STR-7

SNK-2

PROP. R.O.W.

PRES. & PROP. R.O.W.

SEE SHEET NO. 20L

STA. 241+00

MATCH LINE

S20°17'41"E

SEE SHEET NO. 20P

STA. 254+00

MATCH LINE

16B

STR-6

PROCTOR CREEK

STR-7

SNK-1A

SNK-1B

SNK-1C

STR-8 END FLOW INTO 1.5' DIA. HOLE IN STREAM BED.

STR-8

WETLAND WTL-1

UPLAND

17A

17B

SPG-4

PRES. & PROP. R.O.W.

RUSS BOLES ROAD

29+00.00

EPSC LEGEND

SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
	209-09.02: TEMPORARY SEDIMENT FILTER BAG	EC-STR-2
SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
	TEMPORARY BERM	EC-STR-27
	805-12.03: EROSION CONTROL BLANKET(TYPE III)	EC-STR-34
	209-09.01: SAND BAGS	

1 - APPROXIMATE OUTFALL LOCATION

MARK HARPER
REGISTERED ENGINEER
No. 022927
STATE OF TENNESSEE
4/8/09

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EPSC PLAN PHASE 2

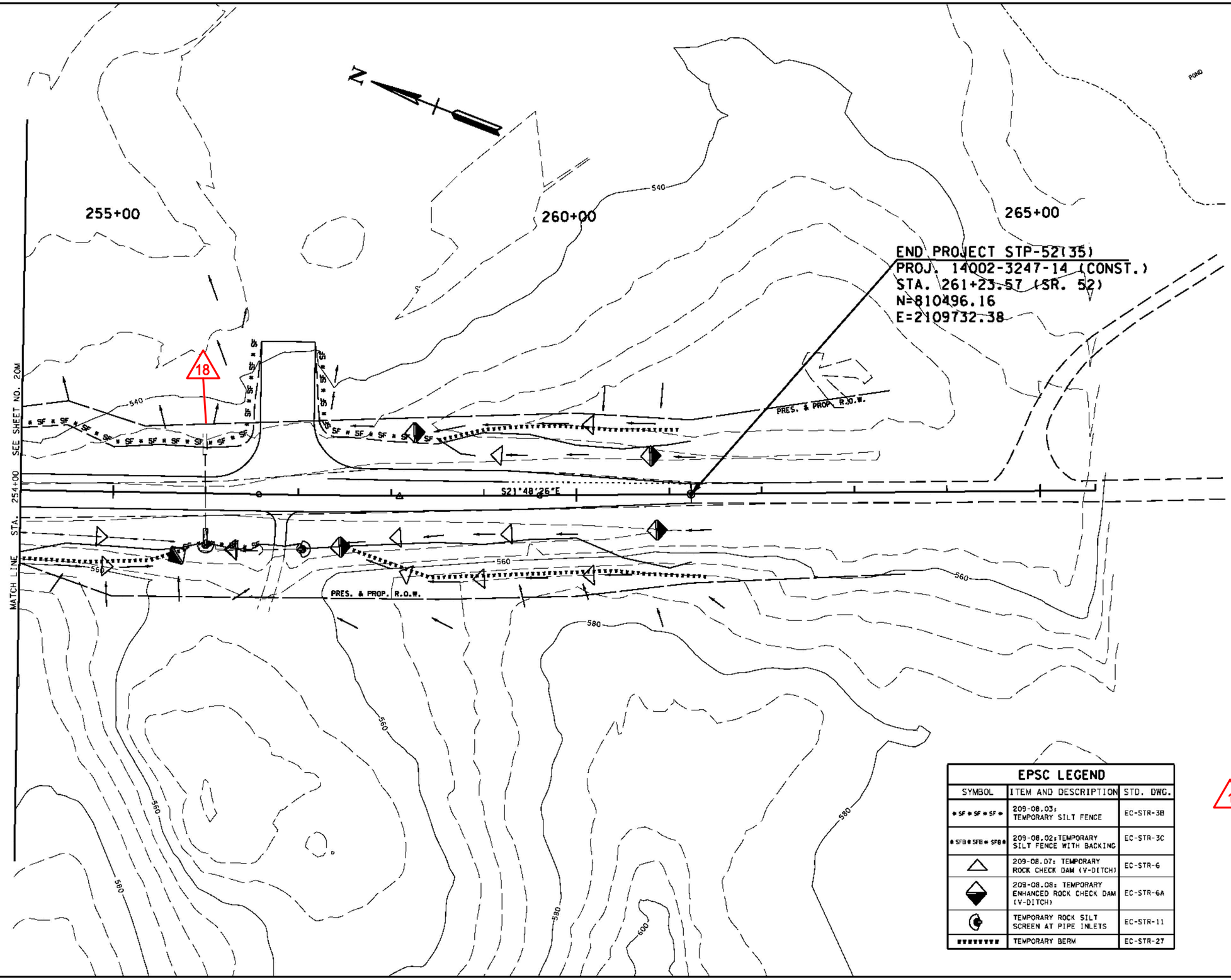
STA. 241+00 TO STA. 254+00

SCALE: 1"= 50'

4/4/2009
F:\98000\Sheets\CYSR522ON.SHT

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	20P



END PROJECT STP-52(35)
PROJ. 14002-3247-14 (CONST.)
STA. 261+23.57 (SR. 52)
N=810496.16
E=2109732.38

EPSC LEGEND		
SYMBOL	ITEM AND DESCRIPTION	STD. DWG.
SF SF SF	209-08.03: TEMPORARY SILT FENCE	EC-STR-3B
SFB SFB SFB	209-08.02: TEMPORARY SILT FENCE WITH BACKING	EC-STR-3C
△	209-08.07: TEMPORARY ROCK CHECK DAM (V-DITCH)	EC-STR-6
◆	209-08.08: TEMPORARY ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	TEMPORARY ROCK SILT SCREEN AT PIPE INLETS	EC-STR-11
	TEMPORARY BERM	EC-STR-27

1 - APPROXIMATE OUTFALL LOCATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

EROSION CONTROL PLAN PHASE 1 & 2

STA.254+00 TO END OF PROJ.

SCALE: 1"= 50'

03/26/2009
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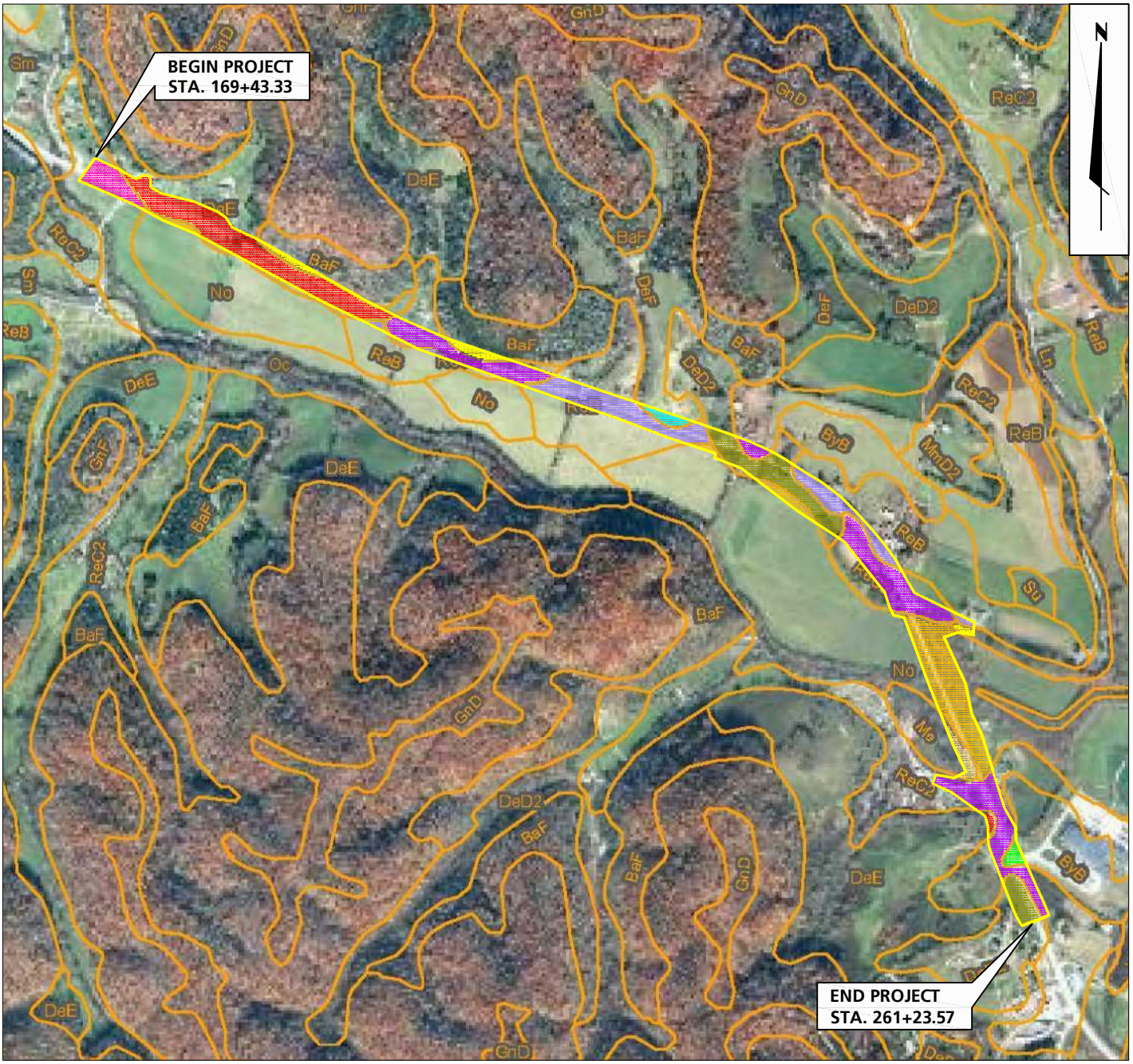
Appendix C

Soils Information



SOILS LEGEND

- BaF – BARFIELD–GLADDICE–ROCK OUTCROP COMPLEX, 20%–70% SLOPES
- ByB – BYLER SILT LOAM, 2%–5% SLOPES
- DeD2 – DELLROSE GRAVELLY SILT LOAM, 12%–20% SLOPES, ERODED
- DeE – DELLROSE GRAVELLY SILT LOAM, 20%–45% SLOPES
- DeF – DELLROSE GRAVELLY SILT LOAM, 20%–60% SLOPES
- Me – MELVIN SILT LOAM, PONDED
- No – NOLIN SILT LOAM, OCCASIONALLY FLOODED
- Oc – OCANA GRAVELLY SILT LOAM, OCCASIONALLY FLOODED
- ReB – RENOX SILT LOAM, 2%–5% SLOPES
- ReC2 – RENOX SILT LOAM, 5%–12% SILT SLOPES, ERODED

MAP SOURCE: U.S. DEPT. OF AGRICULTURE,
NATURAL RESOURCES CONSERVATION SERVICE
(HTTP://WEBSOILSURVEY.NRCS.USDA.GOV)

TDOT

REGION 2, DISTRICT 24
COOKEVILLE, TN

STORM WATER POLLUTION PREVENTION PLAN

SOILS MAP

STATE ROUTE 52
FROM EAST OF NEW HOPE BRANCH
TO BRIDGE OVER CUMBERLAND RIVER,
WEST OF CELINA

CLAY COUNTY, TN

DRAWN BY:	CHECKED BY:
JRC	JTH
PIN	101042.00
PROJECT NO.	14002-1242-04
FIGURE	DATE:
C	4-7-2009

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	24A

GEOTECHNICAL NOTES

1. The natural moisture contents of the overburden soils at the time of drilling are typically near or above the upper limit of the 95% compaction moisture range. Drying, handling, and manipulation of the soils is likely to be required in order to get the proper moisture content required to satisfy the compaction requirement.

2. Some of the highly plastic A-7 soils encountered have low dry densities as determined by the standard proctor test. All material within three feet of the final subgrade elevation in both cut and embankment sections shall have a minimum compacted dry density of 95 PCF or greater. This will require undercutting and refilling when the poor quality soils are encountered at the final subgrade elevation in cut sections. Furthermore, if the earthwork balance for the project is a waste situation, the highly plastic A-7 soils should be the material that is wasted.

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No. 109238
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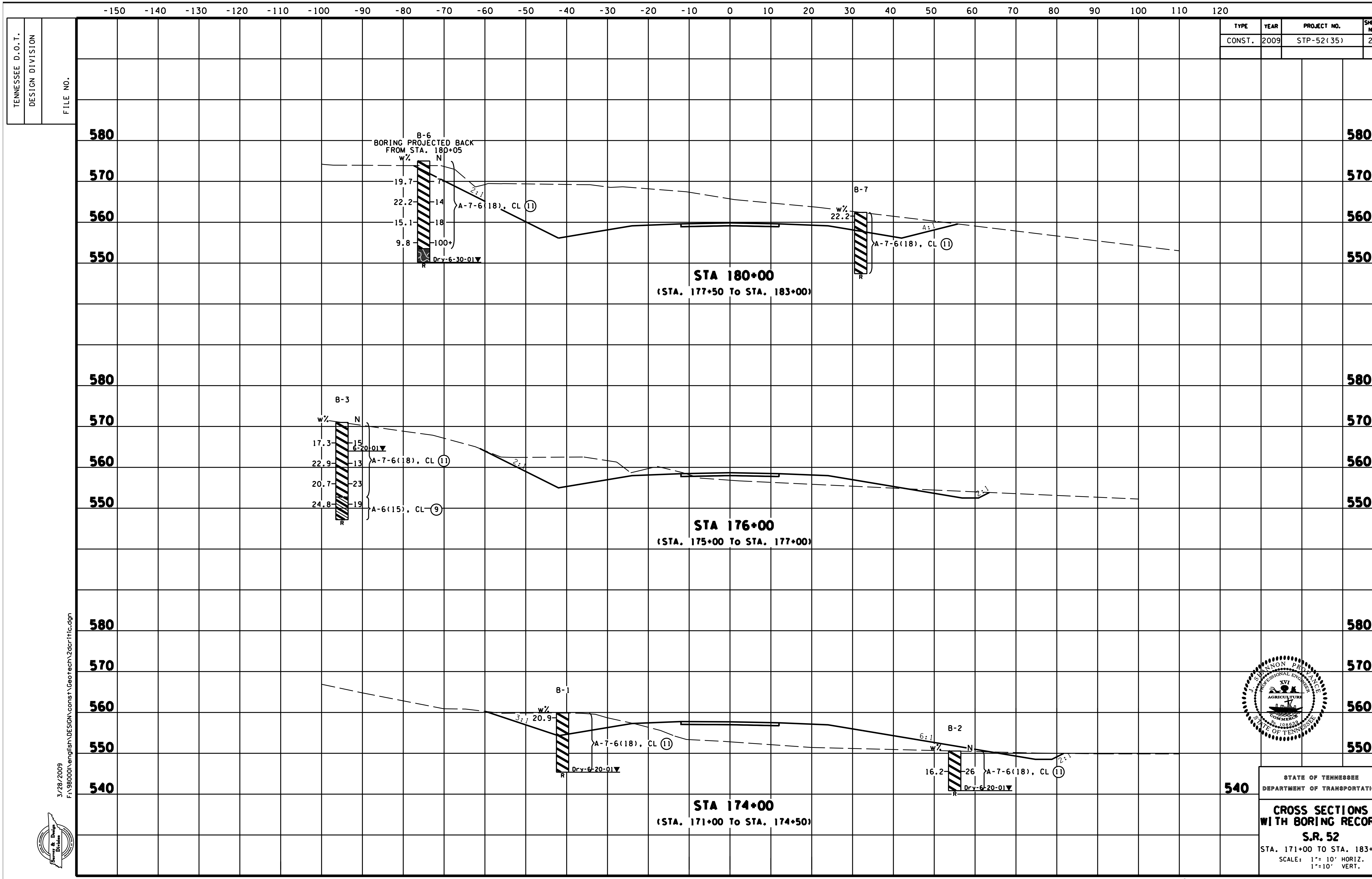
BUREAU OF PLANNING & DEVELOPMENT

GEOTECHNICAL NOTES



TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.
B-6
BORING PROJECTED BACK
FROM STA. 180+05
w%
N
19.7
7
22.2
14
15.1
18
9.8
100+
A-7-6(18), CL 11
Dry-6-30-01
R
2:1
B-7
22.2
A-7-6(18), CL 11
4:1
STA 180+00
(STA. 177+50 To STA. 183+00)
B-3
w%
N
17.3
15
6-20-01
22.9
13
A-7-6(18), CL 11
20.7
23
24.8
19
A-6(15), CL 9
2:1
STA 176+00
(STA. 175+00 To STA. 177+00)
B-1
w%
20.9
3:1
A-7-6(18), CL 11
Dry-6-20-01
B-2
6:1
w%
N
16.2
26
A-7-6(18), CL 11
Dry-6-20-01
2:1
STA 174+00
(STA. 171+00 To STA. 174+50)
580
570
560
550
540
-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120
3/28/2009
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	24B

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS WITH BORING RECORD

S.R. 52

STA. 171+00 TO STA. 183+00

SCALE: 1"= 10' HORIZ.
1"=10' VERT.

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	24C

B-17
BORING PROJECTED AHEAD
FROM STA. 188+95
w% N
12.5 12
14.2 100+/
Rec(%) RQD
? ?

2:1

INTERPRETED ROCKLINE

2:1

B-18
w%
Dry-6-19-01
R

STA 189+00
(STA. 187+50 To STA. 190+00)

B-13A
w%
Rec(%) RQD
? ?

INTERPRETED ROCKLINE

VARIES

B-12
w%
14.7
Dry-6-29-01 (13)
R

2:1

NOTE: THE PROPOSED ROCK SLOPE FROM STATION 186+00 TO STATION 187+00 LEFT SIDE WILL EXTEND FROM THE PROPOSED DITCH TO THE EXISTING DITCH LINE ON A VARIABLE SLOPE.

STA 186+00
(STA. 186+00 To STA. 187+00)

VARIES

2:1

INTERPRETED ROCKLINE

B-12
w%
21.0 21 A-6(15), CL (9)
20.2 24 A-7-6(18), CL (11)
Dry-6-19-01
R

NOTE: THE PROPOSED ROCK SLOPE FROM STATION 183+50 TO STATION 185+50 LEFT SIDE WILL EXTEND FROM THE PROPOSED DITCH TO THE EXISTING DITCH LINE ON A VARIABLE SLOPE.

STA 185+00
(STA. 183+50 To STA. 185+50)

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DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS WITH BORING RECORD
S.R. 52
STA. 183+50 TO STA. 190+00
SCALE: 1"= 10' HORIZ.
1"=10' VERT.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	24D

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

570
560
550
540
530

B-23
BORING PROJECTED AHEAD
FROM STA. 198+76

w%	N	
19.7	14	6-17-01▼
22.6	15	A-6(15), CL (8)
26.4	14	
32.1	23	

R

2:1

2:1

STA 199+00
(STA. 198+00 To STA. 200+50)

4:1

B-22

2:1

w%	N	
16.6	14	A-7-6(18), CL (11)
19.5	8	A-6(11), CL (10)
		Dry-6-19-01▼

R

STA 197+00
(STA. 195+50 To STA. 197+50)

4:1

2:1

B-19

w%	N	
17.9	9	A-7-6(18), CL (11)
18.1	17	
		Dry-6-19-01▼

R

STA 193+00
(STA. 190+50 To STA. 195+00)

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS WITH BORING RECORD

S.R. 52

STA. 190+50 TO STA. 200+50

SCALE: 1"= 10' HORIZ.
1"=10' VERT.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	24E

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

560 550 540 530 570 560 550 540 530 590 580 570 560 550 540 530

4:1

B-30
w%
N
20.8 — 15 — A-6(15), CL (9)
21.6 — 15 — A-7-6(18), CL (11)
19.0 — 100+
R
Dry-6-17-01

2:1

STA 205+00
(STA. 204+50 To STA. 208+00)

B-28
BORING PROJECTED BACK
FROM STA. 203+03
w%
N
18.4 — 15 — A-6(15), CL (9)
12.8 — 100+ — A-6(13), CL (6)
Rec(%) ROD
? ? ? ? ? ? ? ?
R

2:1

INTERPRETED ROCKLINE

2:1

STA 203+00
(STA. 203+00 To STA. 204+00)

VARIES

2:1

B-26
w%
N
21.4 — 18 — A-6(15), CL (9)
21.0 — 18 — A-7-6(18), CL (11)
R
Dry-6-19-01

INTERPRETED ROCKLINE

STA 201+00
(STA. 201+00 To STA. 202+50)

NOTE: THE PROPOSED ROCK SLOPE FROM STATION 201+00 TO STATION 202+50 LEFT SIDE WILL EXTEND FROM THE PROPOSED DITCH TO THE EXISTING DITCH LINE ON A VARIABLE SLOPE.

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CROSS SECTIONS WITH BORING RECORD
S.R. 52
STA. 201+00 TO STA. 208+00
SCALE: 1"= 10' HORIZ.
1"=10' VERT.

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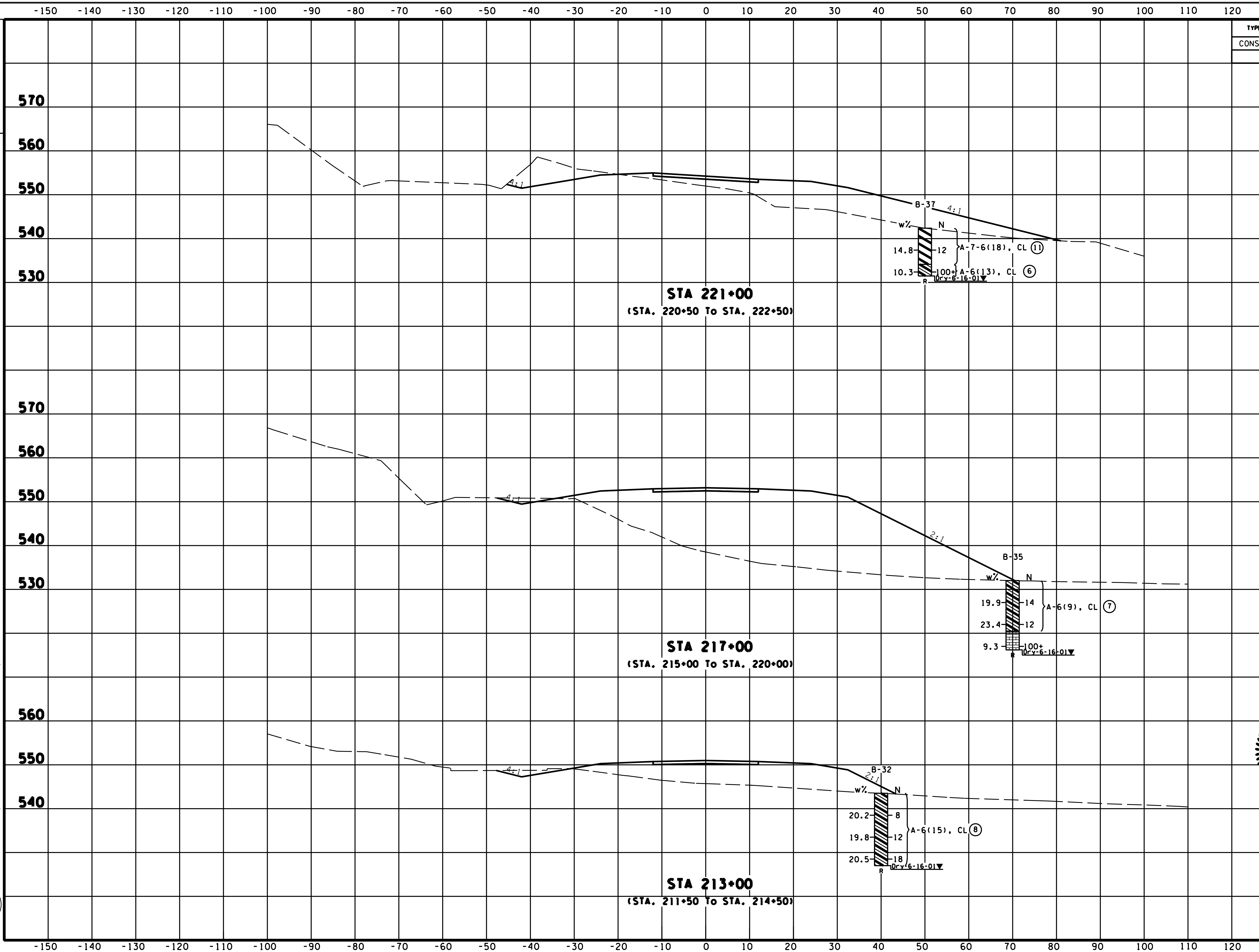
Survey & Design Division

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	24F

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS WITH BORING RECORD

S.R. 52

STA. 208+50 TO STA. 222+50

SCALE: 1"= 10' HORIZ.
1"=10' VERT.

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	24C

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

560 550 540 530 520

4:1

B-44
w% N
18.3 12 A-7-6(13), CL (4)
29.0 16
R Dry 6-14-01

6:1

STA 233+00
(STA. 230+50 To STA. 235+00)

6:1

3:1

B-43
BORING PROJECTED BACK
FROM STA. 229+23
w% N
16.1 100+ A-7-6(18), CL (11)
R Dry-6-14-01

STA 229+00
(STA. 227+00 To STA. 230+00)

6:1

3:1

B-40
BORING PROJECTED AHEAD
FROM STA. 224+97
w% N
24.2 13 A-6(6), CL (12)
R Dry-6-15-01

STA 225+00
(STA. 223+00 To STA. 227+00)

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DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS WITH BORING RECORD
S.R. 52
STA. 223+00 TO STA. 235+00
SCALE: 1"= 10' HORIZ.
1"=10' VERT.

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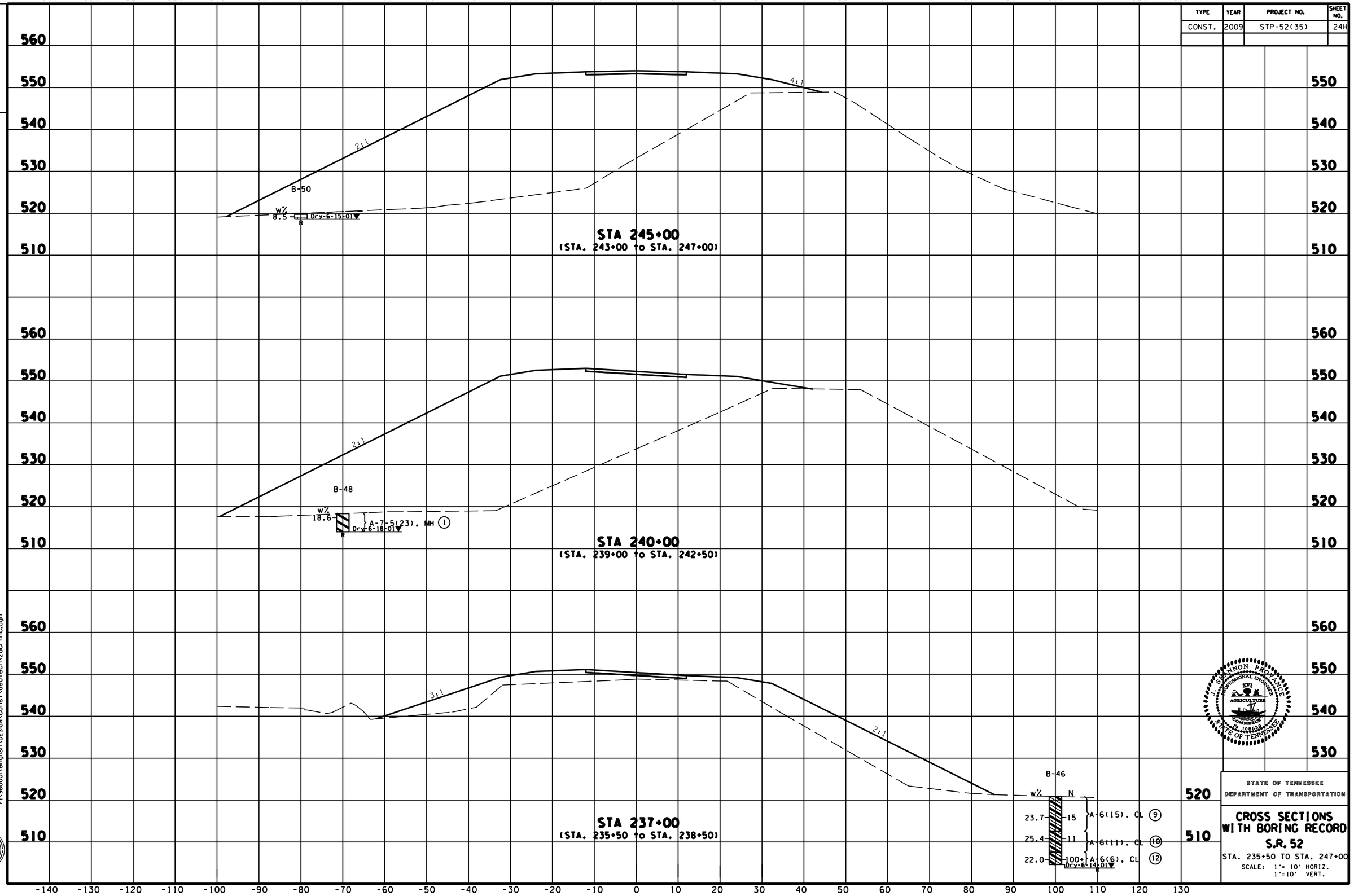
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	24H



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COMMERCE
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Survey & Data Division

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS WITH BORING RECORD
S.R. 52

STA. 235+50 TO STA. 247+00

SCALE: 1"= 10' HORIZ.
1"=10' VERT.

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	241

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

560 550 540 530 520 510

B-58
BORING PROJECTED BACK
FROM STA. 256+05

w%	N	
16.5	11	A-6(10), CL (2)
25.8	14	
20.9	16	A-6(6), CL (3)
36.4	5	A-7-5(23), MH (1)

NR Dry-7-3-01

4:1

STA 256+00
(STA. 254+50 to STA. 256+50)

B-56

w%	N	
20.3	14	A-7-5(23), MH (1)
16.1	100+	

@ Dry-6-13-01

2:1 4:1

STA 253+00
(STA. 251+00 to STA. 254+00)

B-53

w%	N	
16.6	29	A-6(6), CL (3)
12.2	100+	

@ Dry-6-14-01

2:1 2:1

STA 249+00
(STA. 247+50 to STA. 250+50)

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No. 108239
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS WITH BORING RECORD

S.R. 52

STA. 247+50 TO STA. 256+50

SCALE: 1"= 10' HORIZ.
1"=10' VERT.

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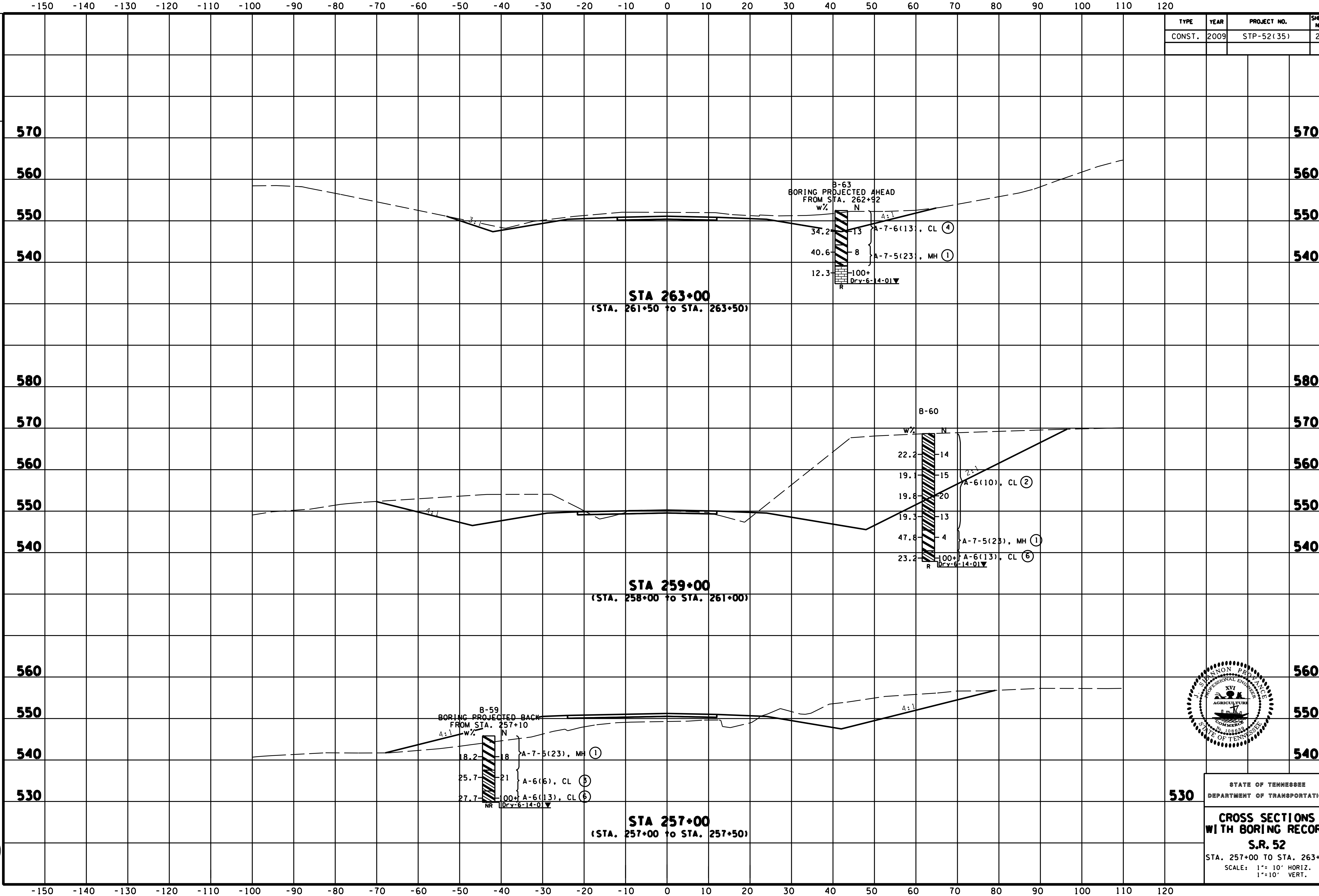
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	24J

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



B-63
BORING PROJECTED AHEAD
FROM STA. 262+92
w%
N
34.2
13
A-7-6(13), CL 4
40.6
8
A-7-5(23), MH 1
12.3
100+
Dry-6-14-01
R
4:1
3:1
STA 263+00
(STA. 261+50 to STA. 263+50)
B-60
w%
N
22.2
14
19.1
15
19.8
20
19.3
13
47.8
4
23.2
100+
A-6(10), CL 2
A-7-5(23), MH 1
A-6(13), CL 6
R
Dry-6-14-01
2:1
4:1
STA 259+00
(STA. 258+00 to STA. 261+00)
B-59
BORING PROJECTED BACK
FROM STA. 257+10
w%
N
18.2
18
A-7-5(23), MH 1
25.7
21
A-6(6), CL 3
27.7
100+
A-6(13), CL 6
NR
Dry-6-14-01
4:1
4:1
STA 257+00
(STA. 257+00 to STA. 257+50)

3/28/2009
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS WITH BORING RECORD

S.R. 52

STA. 257+00 TO STA. 263+50

SCALE: 1"= 10' HORIZ.
1"=10' VERT.

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	STP-52(35)	24K

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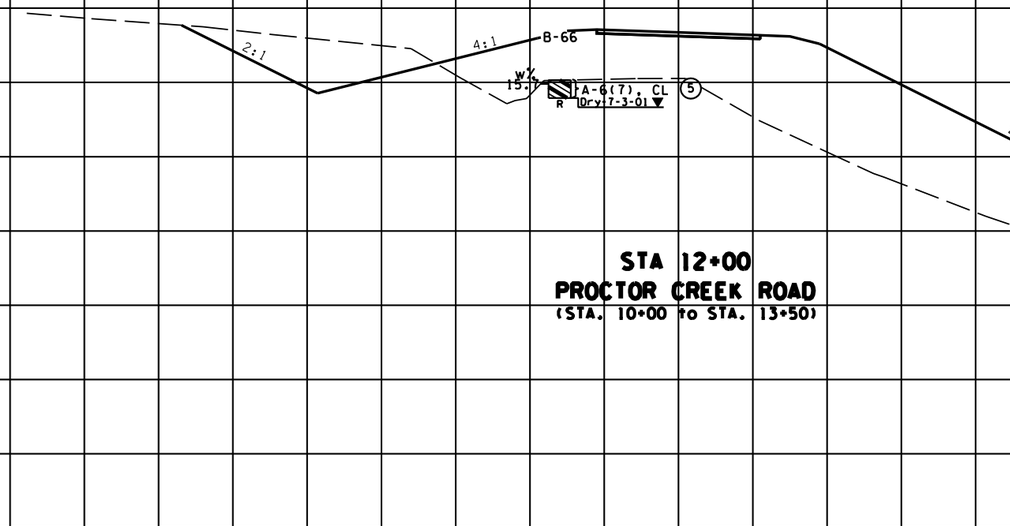
560 550 540 530 520 510



STA 12+00
PROCTOR CREEK ROAD
(STA. 10+00 to STA. 13+50)

STA 28+00
RUSS BOLES ROAD
(STA. 25+00 to STA. 28+50)

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STATE OF TENNESSEE
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CROSS SECTIONS WITH BORING RECORD
RUSS BOLES ROAD
PROCTOR CREEK ROAD

SCALE: 1"= 10' HORIZ.
1"=10' VERT.

Survey & Design Division

3/28/2009
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Appendix D

Runoff Calculations

Project: State Route 52; From East of New Hope Branch to Bridge Over Cumberland River, West of Celina — By JRC — Date 4/3/2009

Location: Clay County, TN — Checked JTH — Date 4/8/2009

PIN 101042.00

Project No. 14002-1242-04

Check One: Present X Developed ____

Total Area 36.24 Acres

Total Disturbed Area 28.60 Acres

1. Runoff Coefficient "c"

Land Use	Slope Type	Soil Type	"c" Value*	Area (ac.)	Product of c X area
Asphalt Roads	Rolling	N/A	0.95	6.04	5.74
Semi-pervious (Gravel)	Rolling	Silt Loam	0.80	0.25	0.20
Pervious Grass/Brush/Trees	Rolling	Silt Loam	0.30	29.95	8.99
					0.00
					0.00
					0.00
					0.00
					0.00
					0.00
					0.00
			Totals	36.24	14.92

c (weighted)= total product / total area = 14.923 / 36.24 = 0.4118

Use c = 0.41

* See attached tables for "c" values

Project: State Route 52; From East of New Hope Branch to Bridge Over Cumberland River, West of Celina — By JRC — Date 4/3/2009

Location: Clay County, TN — Checked JTH — Date 4/8/2009

PIN 101042.00

Project No. 14002-1242-04

Check One: Present ____ Developed X

Total Area 36.24 Acres

Total Disturbed Area 28.60 Acres

1. Runoff Coefficient "c"

Land Use	Slope Type	Soil Type	"c" Value*	Area (ac.)	Product of c X area
Asphalt Roads	Rolling	N/A	0.95	11.66	11.08
Semi-pervious (Gravel)	Rolling	Silt Loam	0.80	0.95	0.76
Pervious Grass/Brush/Trees	Rolling	Silt Loam	0.35	23.63	8.27
					0.00
					0.00
					0.00
					0.00
					0.00
					0.00
					0.00
			Totals	36.24	20.11

c (weighted)= total product / total area = 20.1075 / 36.24 = 0.5548

Use c = 0.55

* See attached tables for "c" values

Slope	Land-Use	Sandy Soils Min.	Sandy Soils Max.	Clay Soils Min.	Clay Soils Max.
Flat (0-2%)	Woodlands	0.10	0.15	0.15	0.20
	Pasture, grass & farmland[b]	0.15	0.20	0.20	0.25
	Rooftops and pavement	0.95		0.95	
	Single family residential:				
	½-acre lots & larger	0.30	0.35	0.35	0.45
	Smaller lots	0.35	0.45	0.40	0.50
	Multi-family residential:				
	Duplexes	0.35	0.45	0.40	0.50
	Apartments, townhouses, and condominums	0.45	0.60	0.50	0.70
	Commercial and Industrial	0.50	0.95	0.50	0.95
Rolling (2-7%)	Woodlands	0.15	0.20	0.20	0.25
	Pasture, grass & farmland[a]	0.20	0.25	0.25	0.30
	Rooftops and pavement	0.95		0.95	
	Single family residential:				
	½-acre lots & larger	0.35	0.50	0.40	0.55
	Smaller lots	0.40	0.55	0.45	0.60
	Multi-family residential:				
	Duplexes	0.40	0.55	0.45	0.60
	Apartments, townhouses, and condominums	0.50	0.70	0.60	0.80
	Commercial and Industrial	0.50	0.95	0.60	0.95
Steep (7%+)	Woodlands	0.20	0.25	0.25	0.30
	Pasture, grass & farmland[a]	0.25	0.35	0.30	0.40
	Rooftops and pavement	0.95		0.95	
	Single family residential:				
	½-acre lots & larger	0.40	0.55	0.50	0.65
	Smaller lots	0.45	0.60	0.55	0.70
	Multi-family residential:				
	Duplexes	0.45	0.60	0.55	0.70
	Apartments, townhouses, and condominiums	0.60	0.75	0.65	0.85
	Commercial and Industrial	0.60	0.95	0.65	0.95

Source: DeKalb County Drainage Procedures Manual, December 1976.

[a]Weighted coefficient based on percentage of impervious surfaces and green areas must be selected for each site.

[b]Coefficients assume good ground cover and conservation treatment.

Table 5-2
VALUES OF RUNOFF COEFFICIENT (C) FOR RATIONAL FORMULA

Land use	C
Business:	
Downtown areas	0.70-0.95
Neighborhood areas	0.50-0.70
Residential:	
Single-family areas	0.30-0.50
Multi units, detached	0.40-0.60
Multi units, attached	0.60-0.75
Suburban	0.25-0.40
Industrial:	
Light areas	0.50-0.80
Heavy areas	0.60-0.90
Parks, cemeteries	0.10-0.25
Playgrounds	0.20-0.35
Railroad yard areas	0.20-0.40
Unimproved areas	0.10-0.30
Streets:	
Asphaltic	0.70-0.95
Concrete	0.80-0.95
Brick	0.70-0.85
Drives and walks	0.75-0.85
Roofs	0.75-0.95

Land use	C
Lawns:	
Sandy soil, flat, 2%	0.05-0.10
Sandy soil, average, 2-7%	0.10-0.15
Sandy soil, steep, 7%	0.15-0.20
Heavy soil, flat, 2%	0.13-0.17
Heavy soil, average, 2-7%	0.18-0.22
Heavy soil, steep, 7 %	0.25-0.35
Agricultural land:	
Bare packed soil	
Smooth	0.30-0.60
Rough	0.20-0.50
Cultivated rows	
Heavy soil no crop	0.30-0.60
Heavy soil with crop	0.20-0.50
Sandy soil no crop	0.20-0.40
Sandy soil with crop	0.10-0.25
Pasture	
Heavy soil	0.15-0.45
Sandy soil	0.05-0.25
Woodlands	0.05-0.25

Note: The designer must use judgement to select the appropriate C value within the range. Generally, larger areas with permeable soils, flat slopes and dense vegetation should have lowest (C) values. Smaller areas with dense soils, moderate to steep slopes, and sparce vegetation should be assigned highest (C) values.

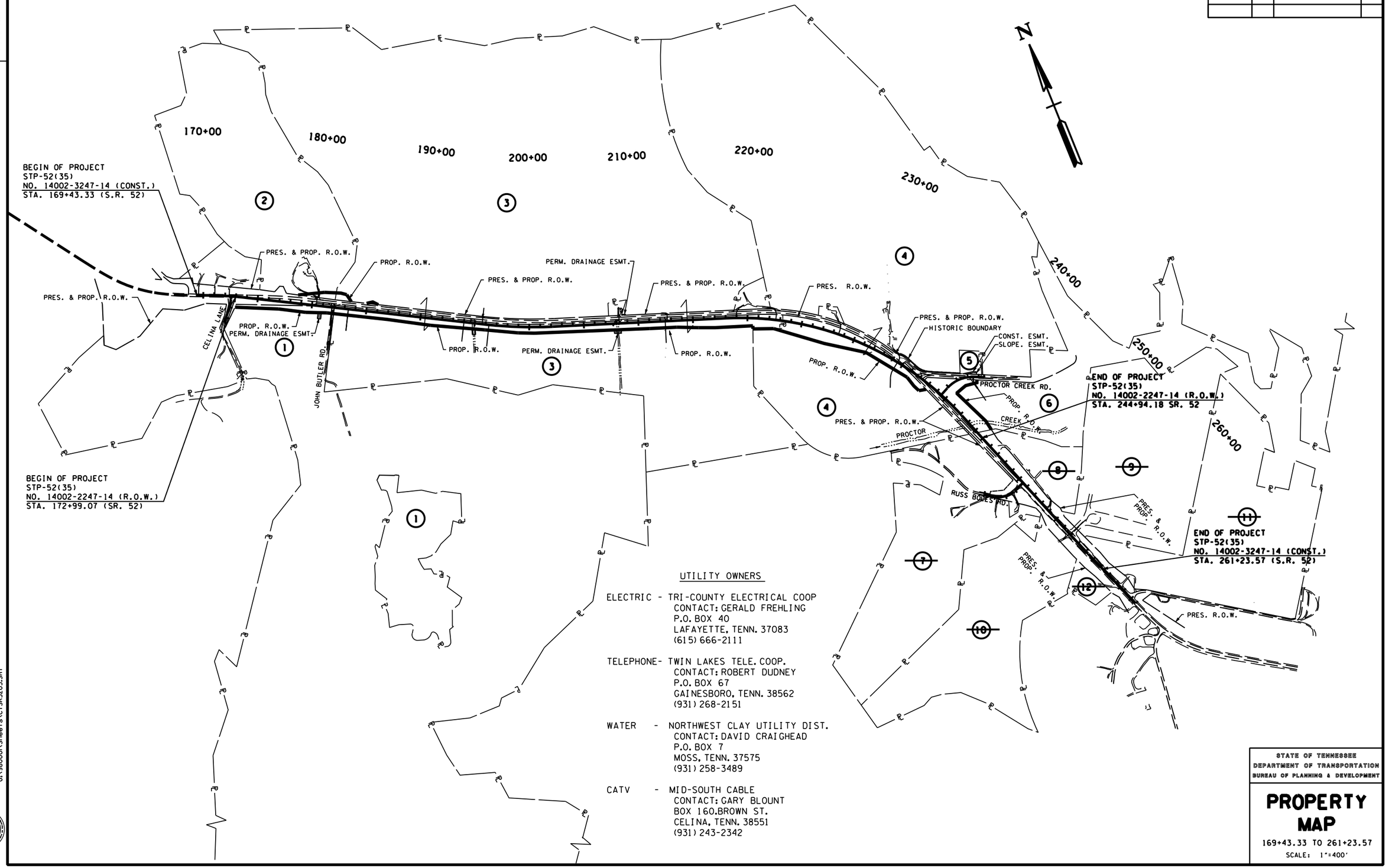
Source: American Society of Civil Engineers

Appendix E

Drainage Maps

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2005	STP-52(35)	3
CONST.	2009	STP-52(35)	3



UTILITY OWNERS

ELECTRIC - TRI-COUNTY ELECTRICAL COOP
CONTACT: GERALD FREHLING
P.O. BOX 40
LAFAYETTE, TENN. 37083
(615) 666-2111

TELEPHONE- TWIN LAKES TELE. COOP.
CONTACT: ROBERT DUDNEY
P.O. BOX 67
GAINESBORO, TENN. 38562
(931) 268-2151

WATER - NORTHWEST CLAY UTILITY DIST.
CONTACT: DAVID CRAIGHEAD
P.O. BOX 7
MOSS, TENN. 37575
(931) 258-3489

CATV - MID-SOUTH CABLE
CONTACT: GARY BLOUNT
BOX 160.BROWN ST.
CELINA, TENN. 38551
(931) 243-2342

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PROPERTY MAP

169+43.33 TO 261+23.57

SCALE: 1"=400'

3/15/2009
G:\98000\Sheets\CYSR5203.SHT

Survey & Design Division

Appendix F

TDOT Ecology Report

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		West of Begin Project @ 169+43
2-Map label		STR-1
3-Potential impact		Runoff
4-Feature name		New Hope Branch
5-Feature description:		
what is it		Perennial Stream
blue-line on topo? (y/n)		Y
defined channel (y/n)		Y
channel bottom width		20’ – 25’
top of bank width		35’
bank height		3’
substratum		Cobble/gravel/sand
riffle/run/pool		30/55/15
width of buffer zone LB, RB		LB 25’, RB 40’
water flow (y/n)		Y
water depth		4” – 6”
water width		20’
groundwater connection		Yes
bank stability LB, RB		LB and RB Stable
dominant species LB, RB		LB and RB Sycamore, American elm, honeysuckle, multiflora rose
overhead canopy (%)		40
benthos		Ephemerillidae, Perlidae, Isopoda, Hydropsychidae, Heptageniidae, Chironomidae
fish		Yes
algae		Filamentous green algae, brown algae
other aquatic life		Cambaridae
habitat assessment score		150
photo number (s)		2- d/s, 3- u/s
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Perennial Stream
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Never enters proposed ROW.

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		173+00R – 177+00
2-Map label		WWC-1
3-Potential impact		Crossing/encapsulation, runoff
4-Feature name		None
5-Feature description:		
what is it		Wet Weather Conveyance
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		0.5’ – 2.0’
top of bank width		1’
bank height		0.5’
substratum		Rip-rap
riffle/run/pool		N/A
width of buffer zone LB, RB		LB and RB 0
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		No
bank stability LB, RB		LB and RB Moderately stable
dominant species LB, RB		LB and RB Fescue
overhead canopy (%)		0
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		5- up gradient, 6- down gradient
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Wet Weather Conveyance
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Disposition of existing culvert is unknown- no removal note on present layout and culvert not shown on proposed layout.

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		180+80L – 182+20L
2-Map label		WWC-2
3-Potential impact		Runoff
4-Feature name		None
5-Feature description:		
what is it		Wet Weather Conveyance
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		0.75’
top of bank width		1.5’
bank height		1’
substratum		Fescue
riffle/run/pool		N/A
width of buffer zone LB, RB		LB and RB 0
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		No
bank stability LB, RB		LB and RB Stable
dominant species LB, RB		LB and RB Henbit, fescue, Johnson grass, boxelder
overhead canopy (%)		0
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		7- concrete ditch, 8- up gradient, 9- down gradient
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Wet Weather Conveyance
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Short conveyance beginning at Sta. 182+20L and ending at culvert inlet. No watercourse below culvert outlet. Concrete ditch north of WWC along private drive (Photo 7).

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		185+20
2-Map label		WWC-3
3-Potential impact		Crossing/encapsulation, runoff
4-Feature name		None
5-Feature description:		
what is it		Wet Weather Conveyance
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		0.5’
top of bank width		1’
bank height		0.5’
substratum		Fescue
riffle/run/pool		N/A
width of buffer zone LB, RB		LB and RB 0
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		No
bank stability LB, RB		LB and RB Stable
dominant species LB, RB		LB and RB Fescue
overhead canopy (%)		0
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		10- down gradient
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Wet Weather Conveyance
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Short conveyance, begins at culvert outlet and channel ends in pasture within proposed ROW.

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		189+25
2-Map label		WWC-4
3-Potential impact		Crossing/unknown, runoff
4-Feature name		None
5-Feature description:		
what is it		Wet Weather Conveyance
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		1’
top of bank width		2’
bank height		0.5’
substratum		Soil, fescue
riffle/run/pool		N/A
width of buffer zone LB, RB		LB and RB 0
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		No
bank stability LB, RB		LB and RB Stable
dominant species LB, RB		LB and RB Fescue
overhead canopy (%)		0
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		11- down gradient, 12- up gradient
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Wet Weather Conveyance
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Type of crossing structure is unknown, no culvert shown on plans. Conveyance channel ends within proposed ROW, Sheet flow only through pasture.

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		194+80
2-Map label		WWC-5
3-Potential impact		Crossing/encapsulation, runoff
4-Feature name		None
5-Feature description:		
what is it		Wet Weather Conveyance
blue-line on topo? (y/n)		Y
defined channel (y/n)		Y
channel bottom width		6’
top of bank width		10’
bank height		3’
substratum		Soil, fescue
riffle/run/pool		N/A
width of buffer zone LB, RB		LB and RB <10’
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		No
bank stability LB, RB		LB and RB Eroding
dominant species LB, RB		LB and RB Fescue, black cherry, American elm.
overhead canopy (%)		65
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		13- down gradient, 14 up gradient
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Wet Weather Conveyance
8-Determination: Confirmed? By?		WWC – Brandon Chance (TDEC) and C. Richards (TDOT)
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Shown as blue line (intermittent) on USGS Celina Quadrangle (324 SE).

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		194+80L – 198+80L
2-Map label		WWC-6
3-Potential impact		Cut/eliminate, Runoff
4-Feature name		None
5-Feature description:		
what is it		Wet Weather Conveyance
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		0.5’ – 1’
top of bank width		1.5’
bank height		1’
substratum		Fescue
riffle/run/pool		N/A
width of buffer zone LB, RB		LB and RB 0
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		No
bank stability LB, RB		LB and RB Stable
dominant species LB, RB		LB and RB Fescue
overhead canopy (%)		0
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		15- down gradient, 16- up gradient
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Wet Weather Conveyance
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Conveyance begins at Sta. 198+80L and ends at WWC-5. WWC is located within cut slope on plans.

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		203+20L – 204+50
2-Map label		WWC-7
3-Potential impact		Crossing/encapsulation
4-Feature name		None
5-Feature description:		
what is it		Wet Weather Conveyance
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		1’
top of bank width		1.5’
bank height		1’
substratum		Fescue
riffle/run/pool		N/A
width of buffer zone LB, RB		LB and RB 0
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		No
bank stability LB, RB		LB and RB Stable
dominant species LB, RB		LB and RB Fescue
overhead canopy (%)		0
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		17- down gradient, 18- up gradient
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Wet Weather Conveyance
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Conveyance ends ~20’ below existing culvert outlet.

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		205+80L – 208+50L
2-Map label		WWC-8
3-Potential impact		Runoff
4-Feature name		None
5-Feature description:		
what is it		Wet Weather Conveyance
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		1.0’ – 1.5’
top of bank width		2’ – 3’
bank height		1’
substratum		Soil, fescue
riffle/run/pool		N/A
width of buffer zone LB, RB		LB and RB 0
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		No
bank stability LB, RB		LB and RB Stable
dominant species LB, RB		LB and RB Fescue
overhead canopy (%)		0
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		19- down gradient, 20- up gradient
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Wet Weather Conveyance
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Roadside stormwater drainage only.

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		208+10
2-Map label		STR-2
3-Potential impact		Crossing/encapsulation, runoff
4-Feature name		None
5-Feature description:		
what is it		Intermittent Stream
blue-line on topo? (y/n)		Y
defined channel (y/n)		Y
channel bottom width		4’
top of bank width		6’
bank height		1.5’ – 2’
substratum		Cobble/gravel/sand
riffle/run/pool		N/A
width of buffer zone LB, RB		North (upstream) 0, South (downstream) <15’
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		N
bank stability LB, RB		LB and RB Moderately stable
dominant species LB, RB		North fescue, South fescue, cherry, hackberry
overhead canopy (%)		North 0, South 60
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		21- d/s, 22- u/s
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Intermittent Stream
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Mimic stream at transitions. Box culvert is <200’ so there is no need for mitigation.

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		208+70L – 209+40L
2-Map label		WWC-9
3-Potential impact		Runoff
4-Feature name		None
5-Feature description:		
what is it		Wet Weather Conveyance
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		1.5’
top of bank width		2’
bank height		1’
substratum		Roadside gravel
riffle/run/pool		N/A
width of buffer zone LB, RB		LB and RB 0
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		No
bank stability LB, RB		LB and RB Unstable
dominant species LB, RB		LB and RB Field mustard, henbit
overhead canopy (%)		0
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		23- down gradient, 24- up gradient
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Wet Weather Conveyance
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Incised roadside ditch.

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		218+80
2-Map label		WWC-10
3-Potential impact		Crossing/encapsulation, runoff
4-Feature name		None
5-Feature description:		
what is it		Wet Weather Conveyance
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		1’
top of bank width		1.5’
bank height		0.5’
substratum		Gravel/sand
riffle/run/pool		N/A
width of buffer zone LB, RB		LB and RB ~10
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		No
bank stability LB, RB		LB and RB Stable
dominant species LB, RB		LB and RB Hackberry
overhead canopy (%)		40
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		26- pasture above WWC, 27- WWC from culvert toward ROW fence
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Wet Weather Conveyance
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Plans indicate a surveyed channel from pond north of ROW, channel does not exist (see Photo 26). Conveyance begins at ROW and ends at culvert inlet, STR-3 begins at culvert outlet.

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		218+80R
2-Map label		STR-3
3-Potential impact		Crossing/encapsulation, runoff
4-Feature name		None
5-Feature description:		
what is it		Intermittent Stream
blue-line on topo? (y/n)		Y
defined channel (y/n)		N
channel bottom width		2’
top of bank width		4’
bank height		1’ – 2’
substratum		Silt/gravel/cobble
riffle/run/pool		N/A
width of buffer zone LB, RB		LB 50, RB 20
water flow (y/n)		N
water depth		N/A
water width		N/A
groundwater connection		No
bank stability LB, RB		LB and RB Moderately stable
dominant species LB, RB		LB and RB Hackberry, black cherry
overhead canopy (%)		80
benthos		N/A
fish		N/A
algae		N/A
other aquatic life		N/A
habitat assessment score		N/A
photo number (s)		28- d/s, 29- u/s
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Intermittent Stream
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No (see notes)
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Stream crosses fill line at proposed culvert outlet and length of encapsulation is <200’.

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		220+20L
2-Map label		SEP-1
3-Potential impact		Runoff
4-Feature name		None
5-Feature description:		
what is it		Seep
blue-line on topo? (y/n)		N
defined channel (y/n)		N
channel bottom width		N/A
top of bank width		N/A
bank height		N/A
substratum		Leaf litter
riffle/run/pool		N/A
width of buffer zone LB, RB		0
water flow (y/n)		N- standing water only
water depth		2”
water width		1.5’ wide X 40’
groundwater connection		Yes
bank stability LB, RB		Stable
dominant species LB, RB		Fescue
overhead canopy (%)		0
benthos		No
fish		No
algae		No
other aquatic life		None seen
habitat assessment score		N/A
photo number (s)		30
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Seep
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No (see notes)
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Located outside of cut line on plans.

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		223+50L
2-Map label		SPG-1
3-Potential impact		Runoff
4-Feature name		None
5-Feature description:		
what is it		Perennial Spring
blue-line on topo? (y/n)		N
defined channel (y/n)		N
channel bottom width		N/A
top of bank width		N/A
bank height		N/A
substratum		Sand/gravel
riffle/run/pool		N/A
width of buffer zone LB, RB		~10’
water flow (y/n)		Y
water depth		1”
water width		1.5’ X 1.5’
groundwater connection		Yes
bank stability LB, RB		Stable
dominant species LB, RB		Fescue, blackberry
overhead canopy (%)		20
benthos		Few Isopoda
fish		No
algae		No
other aquatic life		None seen
habitat assessment score		N/A
photo number (s)		32
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Perennial Spring
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No (see notes)
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Off ROW

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		223+00
2-Map label		STR-4
3-Potential impact		Crossing/encapsulation, runoff
4-Feature name		None
5-Feature description:		
what is it		Perennial Stream
blue-line on topo? (y/n)		Y
defined channel (y/n)		Y
channel bottom width		1’ – 1.5’
top of bank width		3’
bank height		1’
substratum		Sand/gravel/silt
riffle/run/pool		0/100/0
width of buffer zone LB, RB		LB and RB 10’
water flow (y/n)		Y
water depth		0.25” – 0.5”
water width		1’ – 1.5’
groundwater connection		Y- SPG-1
bank stability LB, RB		LB and RB Stable
dominant species LB, RB		LB and RB Blackberry, boxelder
overhead canopy (%)		90
benthos		Few Planariidae, Isopoda
fish		No
algae		No
other aquatic life		None seen
habitat assessment score		94
photo number (s)		33, 34- d/s, 35- u/s
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Perennial Stream
8-Determination: Confirmed? By?		Perennial Stream – Brandon Chance (TDEC) and C. Richards (TDOT)
9-Mitigation: to be included in design		N – encapsulation is <200’
10-Notes Indicate if stream is Tier II/III or on 303(d) list		

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		228+90R
2-Map label		SPG-2/STR-5
3-Potential impact		Fill, runoff
4-Feature name		None
5-Feature description:		
what is it		Perennial Spring and Stream
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		2' – 3'
top of bank width		5'
bank height		1.5'
substratum		Sand/gravel/cobble
riffle/run/pool		20/80/0
width of buffer zone LB, RB		SPG 0, LB 20', RB <5'
water flow (y/n)		Y
water depth		1"
water width		1'
groundwater connection		Yes
bank stability LB, RB		LB and RB Moderately Stable
dominant species LB, RB		LB and RB Hackberry, e. red cedar, boxelder
overhead canopy (%)		STR 90, SPG 40
benthos		*Physella* sp., Isopoda, Perlidae
fish		No
algae		No
other aquatic life		None seen
habitat assessment score		121
photo number (s)		37- Spring, 38- d/s, 39- u/s
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Perennial Spring and Stream
8-Determination: Confirmed? By?		Perennial spring and stream – B. Chance (TDEC), C. Richards (TDOT)
9-Mitigation: to be included in design		N – encapsulation is <200
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Spring is ~30' X 30' and located w/in fill line on plans. Spring will need a French drain to allow for continued flow.

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		235+30R
2-Map label		SPG-3/STR-6
3-Potential impact		Runoff
4-Feature name		None
5-Feature description:		
what is it		Perennial Spring and Stream
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		5’
top of bank width		5’
bank height		0.25’
substratum		Cobble/sand/gravel
riffle/run/pool		20/80/0
width of buffer zone LB, RB		LB and RB ~50’
water flow (y/n)		Y
water depth		0.25” – 0.5”
water width		5’
groundwater connection		Y
bank stability LB, RB		LB and RB Stable
dominant species LB, RB		LB and RB Privet, hackberry, multiflora rose
overhead canopy (%)		75
benthos		Hydropsychidae, Isopoda
fish		No
algae		Filamentous green algae
other aquatic life		None seen
habitat assessment score		152
photo number (s)		42- SPG, 43- u/s
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Perennial Spring and Stream
8-Determination: Confirmed? By?		Perennial Spring and Stream – B. Chance (TDEC), C. Richards (TDOT)
9-Mitigation: to be included in design		No (off ROW)
10-Notes Indicate if stream is Tier II/III or on 303(d) list		~5’ wide spring emerges from rock outcrop, spring and stream are located well beyond proposed ROW. Fill line comes right up to edge of stream. Please be sure to stay out of stream channel.

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 13 March 2007 Biologist: T. Nehus, M. Skelton, C. Richards Affiliation: CEC, Inc., TDOT

1-Station: from plans		243+30
2-Map label		STR-7
3-Potential impact		Crossing/bridge, runoff
4-Feature name		Procter Creek
5-Feature description:		
what is it		Perennial Stream
blue-line on topo? (y/n)		Y
defined channel (y/n)		Y
channel bottom width		15’ – 20’
top of bank width		35’
bank height		10’
substratum		Cobble/gravel/boulder
riffle/run/pool		30/30/40
width of buffer zone LB, RB		LB and RB >50’
water flow (y/n)		Y
water depth		0.5’ – 1’
water width		15’ – 20’
groundwater connection		Yes
bank stability LB, RB		LB and RB Stable
dominant species LB, RB		LB and RB Cottonwood, sycamore
overhead canopy (%)		90
benthos		Heptageniidae, Gerridae, Hydropsychidae
fish		Yes
algae		Filamentous green algae
other aquatic life		*Orconectes* sp.
habitat assessment score		174
photo number (s)		44- d/s, 45- u/s, 46- floodplain (southeast quadrant)
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Perennial Stream
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No
10-Notes Indicate if stream is Tier II/III or on 303(d) list		

Ecology Field Data Sheet: **Other Resource Features** Form G
(Caves/Rock Houses; Sinkholes; Specialized Habitats; Other)

County: Clay **Route: SR-52** **LM N/A** **PE No. 14002-1242-04** **PIN No. 101042.00**
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 14 March 2007 **Biologist: T. Nehus, M. Skelton** **Affiliation: CEC, Inc.**

1-Station: from plans		244+40R	248+70L
2-Map label		SNK-1	SNK-2
3-Potential impact		Runoff	Runoff
4-Feature name		None	None
5-Feature description:			
what is it		Sinkholes	Sinkholes
portion affected		None	None
approximate size		a = 1.5', b = 6', c = 1.5'	a = 7' X 4', b = 1'
photo number		48- a, 49- b, 50- c	51- a, 52- b
other			
6-Watershed	HUC code	05130103	05130103
	HUC name	Upper Cumberland – Lake Cumberland	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Sinkholes	Sinkholes
8-Determination: Confirmed? By?		Not Required	Not Required
9-Mitigation: to be included in design		No	No
10-Notes		Area of three sinkholes north of the end of STR-8's channel. Located well beyond present and proposed ROW.	SNK-2a is partially filled with bags of concrete. Located east of present and proposed ROW.

Ecology Field Data Sheet: **Water Resources** Form G

County: Clay Route: SR-52 LM N/A PE No. 14002-1242-04 PIN No. 101042.00
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 14 March 2007 Biologist: T. Nehus, M. Skelton Affiliation: CEC, Inc.

1-Station: from plans		251+40R
2-Map label		SPG-4
3-Potential impact		Runoff
4-Feature name		None
5-Feature description:		
what is it		Perennial Spring
blue-line on topo? (y/n)		N
defined channel (y/n)		N
channel bottom width		N/A
top of bank width		N/A
bank height		N/A
substratum		Gravel/sand/cobble
riffle/run/pool		N/A
width of buffer zone LB, RB		~5’
water flow (y/n)		Y
water depth		1.5”
water width		1.5’ X 1.5’
groundwater connection		Yes
bank stability LB, RB		Moderately stable
dominant species LB, RB		Black cherry, osage orange
overhead canopy (%)		40
benthos		Few Isopoda, Planariidae
fish		No
algae		No
other aquatic life		None seen
habitat assessment score		N/A
photo number (s)		53
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Perennial Spring
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No (off ROW)
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Spring feds STR-8.

County: Clay **Route: SR-52** **LM N/A** **PE No. 14002-1242-04** **PIN No. 101042.00**
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 14 March 2007 **Biologist: T. Nehus, M. Skelton** **Affiliation: CEC, Inc.**

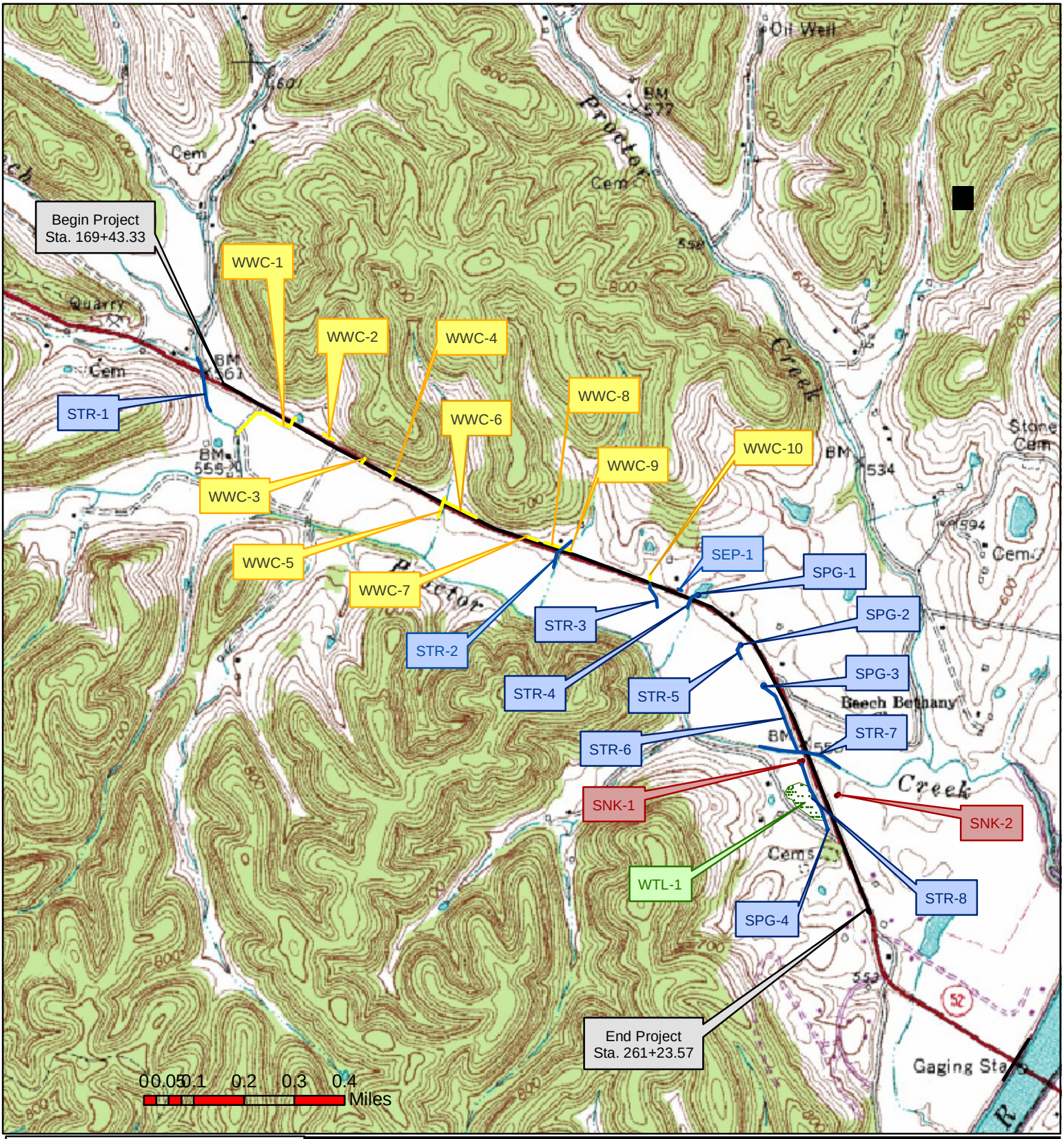
1-Station: from plans		244+60R – 251+40R
2-Map label		STR-8
3-Potential impact		Runoff
4-Feature name		None
5-Feature description:		
what is it		Perennial Stream
blue-line on topo? (y/n)		N
defined channel (y/n)		Y
channel bottom width		1.5’ – 2’
top of bank width		3’
bank height		0.5’
substratum		Gravel/sand/cobble
riffle/run/pool		30/65/5
width of buffer zone LB, RB		LB and RB 30’
water flow (y/n)		Y
water depth		1.5”
water width		1.5’
groundwater connection		Yes- SPG-4
bank stability LB, RB		LB and RB Moderately stable
dominant species LB, RB		LB and RB Boxelder, privet, bl. cherry, osage orange, multiflora rose
overhead canopy (%)		60
benthos		Hydropsychidae, Limnephilidae, Planariidae, Chironomidae, Ephemerellidae
fish		No
algae		Filamentous green algae
other aquatic life		Salamanders
habitat assessment score		128
photo number (s)		54- d/s, 55- u/s, 56
rainfall information		None previous 3 days
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Perennial Stream
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No (off ROW)
10-Notes Indicate if stream is Tier II/III or on 303(d) list		Stream emerges from SPG-4 south of Russ Boles Rd. flows through WTL-1 and into 1.5’ diameter hole near SNK-1. No channel from there to Procter Creek.

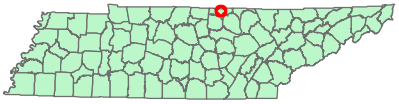
County: Clay **Route: SR-52** **LM N/A** **PE No. 14002-1242-04** **PIN No. 101042.00**
Project Description: SR-52 from East of New Hope Branch to Bridge over Cumberland River, West of Celina
Date of survey: 14 March 2007 **Biologist: T. Nehus, M. Skelton** **Affiliation: CEC, Inc.**

1-Station: from plans		246+00R – 250+00R
2-Map label		WTL-1
3-Potential impact		Runoff
4-Feature name		None
5-Feature description:		
wetland type*		Emergent/Forested
dominant wetland plant species		Cattail, Frank's sedge, soft rush, bl. willow, sycamore, seedbox, woolgrass, cottonwood
surface water connection (y/n)**		Y- STR-8
ground water connection (y/n/unkn)**		Y
avg. water depth		1"
Munsell soil colors		10YR6/1 matrix 2.5YR2.5/4 mottles, abundant
approximate size (acres)		1.578
portion affected (acres) (permanent)		0
portion affected (acres) (temporary)		0
width of buffer zone (ft)		0 – 50'
photo number (s)		57- northwest view
6-Watershed	HUC code	05130103
	HUC name	Upper Cumberland – Lake Cumberland
7-Determination: TDOT/ consultant		Contiguous Wetland
8-Determination: Confirmed? By?		Not Required
9-Mitigation: to be included in design		No (off ROW)
10-Notes		Wetland is significantly larger than the wetland depicted on the plans.

* Forested, Scrub-shrub, Emergent or Bog

** Y = Contiguous N = Isolated Unkn = Unknown, connection to ground water can not be determined





Clay County: SR-52 from east of New Hope Branch to bridge over the Cumberland River, west of Celina

22 June 2007

USGS Celina and Dale-Hollow Dam Qudarangles

PE No. 14002-1242-04

PIN NO. 101042.00

TDOT

Photo: 1 (0243)
By: T. Nehus
Date: 13 March 2007
Station: 169+43
Feature: SR-52

Eastern view of SR-52 from Begin Project.

Photo: 2 (0246)
By: T. Nehus
Date: 13 March 2007
Station: East of 169+43R
Feature: STR-1

Downstream view of STR-1 (New Hope Branch) taken south of existing box bridge.

Photo: 3 (0247)
By: T. Nehus
Date: 13 March 2007
Station: East of 169+43R
Feature: STR-1

Upstream view of STR-1 (New Hope Branch) taken south of existing box bridge.

Photo: 4 (0248)
By: T. Nehus
Date: 13 March 2007
Station: 170+00L
Feature: None

Grass lined swale, no defined watercourse present.

Photo: 5 (0249)
By: T. Nehus
Date: 13 March 2007
Station: 177+00
Feature: WWC-1

Up gradient view of WWC-1 from culvert inlet. Numerous small braided channels.

Photo: 6 (0251)
By: T. Nehus
Date: 13 March 2007
Station: 177+00
Feature: WWC-1

Down gradient view of WWC-1, a rip-rap lined ditch.

Photo: 7 (0252)
By: T. Nehus
Date: 13 March 2007
Station: 180+80L
Feature: None

Northern view of concrete ditch ending at WWC-2 near culvert inlet.

Photo: 8 (0253)
By: T. Nehus
Date: 13 March 2007
Station: 180+80
Feature: WWC-2

Up gradient view of WWC-2. Conveyance ends at culvert.

Photo: 9 (0254)
By: T. Nehus
Date: 13 March 2007
Station: 180+80
Feature: WWC-2

Southwest view from culvert outlet, no watercourse present. Sheet flow only from culvert outlet.

Photo: 10 (0255)
By: T. Nehus
Date: 13 March 2007
Station: 185+20
Feature: WWC-3

Down gradient view of WWC-3 taken from culvert outlet. Conveyance begins near culvert inlet and ends in pasture near center of photo.

Photo: 11 (0256)
By: T. Nehus
Date: 13 March 2007
Station: 189+25
Feature: WWC-4

Down gradient view of WWC-4 taken from culvert outlet.

Photo: 12 (0257)
By: T. Nehus
Date: 13 March 2007
Station: 189+25
Feature: WWC-4

Up gradient view of WWC-4 taken from culvert inlet.

Photo: 13 (0258)
By: T. Nehus
Date: 13 March 2007
Station: 194+80
Feature: WWC-5

Down gradient view of WWC-5 toward Procter Creek (STR-7).

Photo: 14 (0259)
By: T. Nehus
Date: 13 March 2007
Station: 194+80
Feature: WWC-5

Up gradient view of WWC-5. Conveyance begins at eroded area near center of photo, no defined channel above that point.

Photo: 15 (0260)
By: T. Nehus
Date: 13 March 2007
Station: 197+20L
Feature: WWC-6

Down gradient view of WWC-6.

Photo: 16 (0261)
By: T. Nehus
Date: 13 March 2007
Station: 197+20L
Feature: WWC-6

Up gradient view of WWC-6.

Photo: 17 (0262)
By: T. Nehus
Date: 13 March 2007
Station: 204+50
Feature: WWC-7

Down gradient view of WWC-7 taken from culvert outlet. Conveyance ends at culvert outlet, sheet flow only from outlet.

Photo: 18 (0263)
By: T. Nehus
Date: 13 March 2007
Station: 204+50
Feature: WWC-7

Up gradient view of WWC-7 taken from culvert inlet.

Photo: 19 (0264)
By: T. Nehus
Date: 13 March 2007
Station: 207+50L
Feature: WWC-8

Down gradient view of WWC-8.

Photo: 20 (0265)
By: T. Nehus
Date: 13 March 2007
Station: 207+50L
Feature: WWC-8

Up gradient view of WWC-8.

Photo: 21 (0266)
By: T. Nehus
Date: 13 March 2007
Station: 208+10
Feature: STR-2

Downstream view of STR-2 taken from existing bridge.

Photo: 22 (0267)
By: T. Nehus
Date: 13 March 2007
Station: 208+10
Feature: STR-2

Upstream view of STR-2 taken from existing bridge.

Photo: 23 (0268)
By: T. Nehus
Date: 13 March 2007
Station: 209+00L
Feature: WWC-9

Down gradient view of WWC-9 toward STR-2.

Photo: 24 (0269)
By: T. Nehus
Date: 13 March 2007
Station: 209+00L
Feature: WWC-9

Up gradient view of WWC-9

Photo: 25 (0270)
By: T. Nehus
Date: 13 March 2007
Station: 215+25
Feature: None

Outlet of culvert at above referenced station, no watercourse present. Culvert not shown on plans.

Photo: 26 (0271)
By: T. Nehus
Date: 13 March 2007
Station: 218+80L
Feature: WWC-10

No channel present from surveyed pond to north ROW. Poorly defined channel begins at ROW.

Photo: 27 (0272)
By: T. Nehus
Date: 13 March 2007
Station: 218+80L
Feature: WWC-10

View of WWC-10, a poorly defined channel from north ROW fence to culvert inlet.

Photo: 28 (0273)
By: T. Nehus
Date: 13 March 2007
Station: 218+80R
Feature: STR-3

Downstream view of STR-3. Stream begins at culvert outlet.

Photo: 29 (0274)
By: T. Nehus
Date: 13 March 2007
Station: 218+80R
Feature: STR-3

Upstream view of STR-3 toward culvert outlet.

Photo: 30 (0275)
By: T. Nehus
Date: 13 March 2007
Station: 220+00L
Feature: SEP-1

Eastern view of SEP-1.

Photo: 31 (0276)
By: T. Nehus
Date: 13 March 2007
Station: 222+60L
Feature: None

View of area surveyed as pond on plans. Has been drained.

Photo: 32 (0277)
By: T. Nehus
Date: 13 March 2007
Station: 223+40L
Feature: SPG-1

Northern view of SPG-1.

Photo: 33 (0278)
By: T. Nehus
Date: 13 March 2007
Station: 223+00
Feature: STR-4

View of STR-4 at SPG-1.

Photo: 34 (0279)
By: T. Nehus
Date: 13 March 2007
Station: 223+00
Feature: STR-4

Downstream view of STR-4

Photo: 35 (0280)
By: T. Nehus
Date: 13 March 2007
Station: 223+00
Feature: STR-4

Downstream view of STR-4 toward culvert outlet.

Photo: 36 (0281)
By: T. Nehus
Date: 13 March 2007
Station: 223+00R
Feature: None

Grass lined swale.

Photo: 37 (0282)
By: T. Nehus
Date: 13 March 2007
Station: 228+90R
Feature: SPG-2

Southern view of SPG-2.

Photo: 38 (0283)
By: T. Nehus
Date: 13 March 2007
Station: 228+90R
Feature: STR-5

Downstream view of STR-5.

Photo: 39 (0286)
By: T. Nehus
Date: 13 March 2007
Station: 228+90R
Feature: STR-5

Upstream view of STR-5 taken at grass-berm around field where stream sinks.

Photo: 40 (0284)
By: T. Nehus
Date: 13 March 2007
Station: 229+20L
Feature: None

Broad swale/excavated area at outlet of existing culvert at above referenced station.

Photo: 41 (0285)
By: T. Nehus
Date: 13 March 2007
Station: 229+20L
Feature: None

Low lying area filled with tobacco stalks. Photo taken from existing culvert inlet at above referenced location.

Photo: 42 (0287)
By: T. Nehus
Date: 13 March 2007
Station: 235+30R
Feature: SPG-3

Northeast view of SPG-3.

Photo: 43 (0288)
By: T. Nehus
Date: 13 March 2007
Station: 235+30R
Feature: STR-6

Upstream view of STR-6 toward SPG-3.

Photo: 44 (0289)
By: T. Nehus
Date: 13 March 2007
Station: 243+30
Feature: STR-7

Downstream view of STR-7 (Procter Creek).

Photo: 45 (0290)
By: T. Nehus
Date: 13 March 2007
Station: 243+30
Feature: STR-7

Upstream view of STR-7 (Procter Creek).

Photo: 46 (0291)
By: T. Nehus
Date: 14 March 2007
Station: 243+50L
Feature: None

Northern view of flood plain of STR-7 (Procter Creek).

Photo: 47 (0292)
By: T. Nehus
Date: 14 March 2007
Station: 238+80L
Feature: None

View of existing culvert outlet at above referenced location on Procter Creek Road. No watercourse present.

Photo: 48 (0296)
By: T. Nehus
Date: 14 March 2007
Station: 244+40R
Feature: SNK-1

View of SNK-1a.

Photo: 49 (0297)
By: T. Nehus
Date: 14 March 2007
Station: 244+10R
Feature: SNK-1

View of SNK-1b.

Photo: 50 (0298)
By: T. Nehus
Date: 14 March 2007
Station: 244+00R
Feature: SNK-1

View of SNK-1c.

Photo: 51 (0302)
By: T. Nehus
Date: 14 March 2007
Station: 248+70L
Feature: SNK-2

View of SNK-2a

Photo: 52 (0303)
By: T. Nehus
Date: 14 March 2007
Station: 248+80L
Feature: SNK-2

View of SNK-2b.

Photo: 53 (0293)
By: T. Nehus
Date: 14 March 2007
Station: 251+40R
Feature: SPG-4

Southern view of SPG-4.

Photo: 54 (0294)
By: T. Nehus
Date: 14 March 2007
Station: 251+40R
Feature: STR-8

Downstream view of STR-8 taken from SPG-4.

Photo: 55 (0300)
By: T. Nehus
Date: 14 March 2007
Station: 245+00R
Feature: STR-8

Upstream view of STR-8 taken downstream of WTL-1.

Photo: 56 (0299)
By: T. Nehus
Date: 14 March 2007
Station: 244+60R
Feature: STR-8

View of STR-8 as it flows underground.

Photo: 57 (0295)
By: T. Nehus
Date: 14 March 2007
Station: 250+00R
Feature: WTL-1

Northwestern view of WTL-1.

Photo: 58 (0304)
By: T. Nehus
Date: 14 March 2007
Station: 256+00
Feature: None

View of existing culvert at above referenced location. No watercourse present.

Photo: 59 (0305)
By: T. Nehus
Date: 14 March 2007
Station: 261+23
Feature: SR-52

Northern view of SR-52 taken from End Project.

Appendix G

Water Quality Permits Application

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, J. K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TN 37243-0334
TELEPHONE: (615) 253-2477 FAX: (615) 741-1098

March 26, 2009

Mr. Daniel C. Eagar
Manager, Natural Resource Section
Tennessee Department of Environment and Conservation
7th Floor L & C Annex
401 Church Street
Nashville, Tennessee 37243-1534

Subject: Project #: 14002-1242-04
FED #: STP-52(35)
PIN101042.00
SR-52, from east of New Hope Branch to Bridge over Cumberland River west of Celina
Clay County

Dear Mr. Eagar:

In accordance with T.C.A. 69-3-108(b), this office is enclosing ARAP form CN-1091; drawings; portions of the USGS quad map for Celina, TN (324-SE) showing locations of all streams and wetlands; and a half-size set of plans with a location map on the plans cover sheet; where we believe permits may be needed.

This is a high priority project which has been placed in TDOT's Economic Stimulus program. The current Turn-in date for the project, including all permits, is April 8, 2009.

These locations are as follows:

SECTIONS 8.1, 10, and 11 of TDEC form CN-1091

Site #1 Sta. 208+30.45 on State Route 52 Longitude 85.5309°, Latitude 36.5689°	
• Sta. 208+30.45 on State Route 52	**Channel Relocation and Culvert Replacement (STR-2) (IARAP #1)** Unnamed tributary to Proctor Creek (STR-2) Existing: ▪ 123.5 ft. open stream channel ▪ 36.5 ft. of 16 ft. x 2 ft. box culvert Total existing length = 160 ft.

	Proposed: ▪ Remove existing box culvert ▪ 67 ft. of 2 @ 8 ft. x 3 ft. box culvert. ▪ 36.2 ft. of rip-rap at the inlet of the proposed culvert ▪ 49.2 ft. of open channel impact at outlet of proposed culvert Total proposed = 152 ft. Stream channel loss = 8 ft.
• Sta. 208+05± Right on State Route 52	**Utility Line Crossing (STR-2) (GARAP #1)** Relocated 6 in. ductile iron water line to cross stream.

Mitigation:

STR-2:

- For 8 ft. (8 ft. x1) of stream channel loss, we propose a payment of $1600 to the In-Lieu Fee Stream Mitigation Program.
- For about 86 ft. of open channel impact at culvert inlet and outlet, we propose to do onsite mitigation, plant trees, and create low flow channel by using 12 in. coir logs. Please see the proposed layout sheet (sheet #7A) for more details.

Alternatives:

1. Shifting of Horizontal alignment: The shifting of the alignment to the north or south of the proposed alignment will not lessen the impact on STR-2. The location of the proposed alignment to the south of the existing SR 52 centerline is the desirable for this location due to the following:
   1) It lessens the impact to properties and homes on the north side of the existing roadway.
   2) It enables traffic to continue on existing SR 52 while the new box culvert is being built. Upon completion of the new culvert, traffic can be routed onto the proposed roadway and over the new culvert and the existing culvert can be removed.

2. Changing of vertical alignment: The changing of the vertical alignment will not lessen the impact on STR-2. This alignment is set to allow traffic to continue on existing SR 52 while the proposed culvert and proposed roadway are being constructed and a change is not recommended.

3. The location and the skew of the proposed box culvert have been set to allow for stage construction of the box in the dry and to allow for continued flow during its construction. The altering of either of these would not lessen the impact on STR-2.

Site #2
Sta. 218+90 to Sta. 229+00
on State Route 52
Longitude 85.5253°, Latitude 36.5675°

• Sta. 219+21.62 on State Route 52	**Encapsulation and Channel fill (STR-3) (IARAP #2)** Existing: ▪ 130 ft. of open channel starting at outlet of existing 4 ft. X 3 ft. box culvert. ▪ 64.1 ft. of 4 ft. X 3 ft. box culvert connecting WWC-10 channel at left side of existing road to the beginning of STR-3. Total length of existing channel = 130 ft. Proposed: ▪ Remove existing culvert. ▪ 172 ft. of rock fill in the existing channel which includes 130 ft. of existing STR-3 channel and about 42 ft. extension under the removed existing culvert. ▪ 136 ft. of 48 in. RCP connecting WWC-10 to the unaffected portion of STR-3 channel. ▪ 28.3 ft. of rip-rap in WWC-10 channel connecting to the inlet of proposed culvert. ▪ 15 ft. of U type concrete end wall at the inlet of the proposed culvert ▪ 15 ft. of U type concrete end wall and 10 ft. rip-rap at the outlet of the proposed culvert. Total proposed length between WWC-10 channel and unaffected portion of STR-3 channel = 205 ft. Total length of the STR-3 channel required for mitigation =130 ft.
• Sta. 220+00± Right on State Route 52	**Utility Line Crossing (STR-3) (GARAP #2)** Relocated 6 in. ductile iron water line to cross stream.
• Sta. 222+94.30 on State Route 52	**Channel encapsulation (STR-4) (IARAP #3)** Existing: ▪ 149.5 ft. of open channel ▪ 53.5 ft. of 3.5 ft. x 3 ft. box culvert Total existing length = 203 ft. Proposed: ▪ Remove existing culvert ▪ 116.5 ft. of 48 in. RCP including one proposed junction box. ▪ 41.7 ft. of rip-rap at inlet of proposed culvert ▪ 15 ft. of U type concrete end wall at the inlet of the proposed culvert

	▪ 15 ft. of U type concrete end wall at the outlet of the proposed culvert ▪ 15 ft. of rip-rap at outlet of proposed culvert. Total proposed = 203 ft. Length of stream channel required for mitigation = 0
• Sta. 222+90± Right on State Route 52	**Utility Line Crossing (STR-4) (GARAP #3)** Relocated 6 in. ductile iron water line to cross stream.
• Sta. 228+70± Right on State Route 52	**Encapsulation and Fill (STR-5 &SPG-2) (IARAP #4)** Existing: ▪ Spring (SPG-2) and 57 ft. of associated stream channel from the existing spring box to the toe line of fill. Total existing length = 57 ft. Proposed: ▪ Remove existing spring box. ▪ New spring box. ▪ 64 ft. of rock fill with 57 ft. of 18 in. perforated pipe. Total length required for mitigation = 57 ft.
• Sta. 228+60± Right on State Route 52	**Utility Line Crossing (STR-5) (GARAP #4)** Relocated 6 in. ductile iron water line to cross stream.

Mitigation:

STR-3:

- For 130 ft. (130 ft. x 1.0) of stream channel loss, we propose a payment of $26,000 to the In-Lieu Fee Stream Mitigation Program.
- According to the ecology report and plans, STR-3 starts from the outlet of existing culvert, therefore rock fill was proposed to allow flow to continue into the unaffected portion of the stream channel at the outlet of proposed culvert. Also, the proposed 136 ft. of 48 in. RCP will allow any water from left side of the proposed roadway flows into the unaffected portion of STR-3.

STR-4:

No mitigation will be required.

STR-5 & SPG-2:

- For 57 ft. (57 ft. x 1.0) of stream channel loss, we propose a payment of $11,400 to the In-Lieu Fee Stream Mitigation Program.
- Spring box, rock fill, and perforated pipe will be used to allow flow to continue into the unaffected portion of STR-5 channel.

Alternatives:

1. Shifting of Horizontal alignment: The shifting of the alignment to the north would lessen the impact on STR-3, STR-4 and STR-5 but is not recommended for the following:
   1) The homes in this area are on the north side of the existing SR 52 and shifting the alignment to the north would have a greater impact on these properties and homes by requiring the purchase of more ROW.
   2) It would impact the historical boundary left of Sta. 237+00±.
   3) The shifting to the north would interfere with the maintenance of traffic on existing SR 52 during the construction of proposed SR 52.

2. Changing of vertical alignment: The changing of the vertical alignment will not lessen the impact on STR-3, STR-4 and STR-5. This alignment is set to allow traffic to continue on existing SR 52 while the proposed culvert and proposed roadway are being constructed and a change is not recommended.

Site #3 Sta. 236+75± Right to Sta. 237+80± Right on State Route 52 Longitude 85.5219°, Latitude 36.5634°	
• Sta. 236+75± Right and Sta. 237+80± Right on State Route 52	**Utility Line Crossing (STR-6) (GARAP #5)** Relocated 6 in. ductile iron water line to cross stream with possible second crossing at tie-in location with existing line.

Site #4 Sta. 243+35 to Sta. 249+90 on State Route 52 Longitude 85.5219°, Latitude 36.5634°	
• Sta. 243+35 on State Route 52	**Bridge Replacement** **Proctor Creek (STR-7) (GARAP #6)** Existing: 148 ft. of 4-span concrete bridge. Proposed: ▪ Remove existing bridge. ▪ 241.08 ft. of 3-span Concrete bridge with an out to out width of 50 ft. and associated rip-rap for the slope protection at the bridge abutments.
• Sta. 249+70± to Sta. 249+90± right on State Route 52	**Wetland impact** **Wetland (WTL-1) (GARAP #7)** Area of permanent wetland impact = 0.000 acre Area of temporary wetland impact = 0.031 acre
Mitigation: **STR-7:** No mitigation will be required	

WTL-1: we propose the following mitigation:
Temporary wetland Impacts
Topsoil is to be removed from all areas of temporary wetland impacts and stockpiled prior to construction. Upon completion of construction activities, all temporary wetland impact areas are to be restored to preconstruction contours and the stockpiled wetland soil spread, to restore these areas to preconstruction elevation. Please see Sheet # 2H for more details.

Alternatives:

1. Shifting of Horizontal alignment: The shifting of the alignment would not lessen the impact on STR-7 and is not recommended. The proposed alignment is at the best possible location for the following:

    1) It avoids impact to STR-6, STR-8, sinkholes SNK-1A, SNK-1B, SNK-1C, SNK-2, WTL-1, and SPG-4.
    2) It allows for the maintenance of traffic on existing SR 52 during the construction of the new bridge over STR-7.
    3) It allows for the tying of the proposed alignment to the centerline of existing SR 52 at the end of the project.
    4) It would not impact properties and homes on the north side of the existing roadway to require the purchase of more ROW.
    5) It would not impact the historical boundary left of Sta. 237+00±.

2. Changing of vertical alignment: The changing of the vertical alignment will not lessen the impact on STR-7. The alignment is set to allow traffic to continue on existing SR 52 while the proposed bridge and proposed roadway are being constructed and a change is not recommended.

This project includes a total temporary wetland impact of 0.031 acre.

For the above stream impacts, a total payment of $39,000 is proposed to the In-Lieu Fee Stream Mitigation Program. Please cite this payment to the TWRF in your permits.

It is the opinion of the TDOT biologist that ten wet weather conveyances are present in the project area. Additionally, WWC-5 is shown on the topographic map as a blue line stream. A field visit by TDEC has determined that this is not a stream, but a wet weather conveyance. Additional stream confirmations are the locations and channels of SPG-2/STR-5 and SPG-3/STR-6. Please refer to enclosed ecology field data sheets for additional details on all the environmental features.

It is the opinion of this office that the following environmental features will not be affected by the project: STR-1, SPG-1, SPG-3, SPG-4, and STR-8.

It is the opinion of this office that all other aspects of the project not specifically mentioned in this letter meet the criteria for a Wet Weather Conveyance.

By copy of this letter, we request the concurrence of the Corps of Engineers, Nashville District, that this project meets the criteria of one of the Nationwide Permits. We request approval of this project under Nationwide #23, Approved Categorical Exclusions. This project is improving a deficient existing road. A copy of the FHWA approved Categorical Exclusion signed March 2, 2009 is enclosed for your use in permit processing. Since Corps of Engineer land acquisition is

present in the project area, TDOT design calculated fill volumes and informed our office that no fills are proposed below the following elevations, therefore we believe that no offset plans will be required, please advise us if additional information will be required:
Flood storage zone - between 499 and 504
Power storage zone - between 504 and 508
Flowage easement - between 508 and 512

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

By copy of this letter, we are also requesting that TDEC, and the Corps of Engineers please include approval of a potential temporary stream crossing at each site in your permits. Any temporary crossing 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.

SECTION 9 of TDEC form CN-1091 Purpose and Justification

The applicant proposes to improve 1.672 miles of State Route 52 from east of New Hope Branch to Bridge over Cumberland River west of Celina for public use in Clay County. The proposed typical section will consist of two (12 ft.) traffic lanes, shoulders and ditches as required within a 150 ft. right-of-way. A 60 mph design speed is proposed throughout the project limits. A new structure over Proctor Creek will be constructed with traffic being maintained over the existing structure during the construction period.

A no-build alternative is not feasible for this project because the existing road is deficient. The traffic volumes have increased at this location and improvements are necessary. The existing route deficiencies include geometric, drainage, and structural characteristics. Geometric deficiencies include lane and shoulder widths, and horizontal and vertical alignment. Drainage deficiencies include culvert conditions and roadside drainage. Structural deficiencies include the width and conditions of the structures involved.

It is proposed to improve the existing road along its present location. This proposal is to construct a new roadway adjacent to the north or south side of the present road. Avoiding or minimizing impacts to the historic sites, properties, and environmental features present on north and south side of the existing road was considered in selecting this alternative. The proposed alternative will minimize cost, relieve future traffic congestion, and provide a wider, safer and more efficient traffic facility for the motoring public.

Our office has checked the Flood Hazard Boundary Map for the subject project. Sections of this project are in FEMA designated floodplain, but no detailed study has been done by FEMA. Our department has conducted a study on the project area and we have not increased the pre-project flood elevations by more than one foot. Therefore the design of our roadway system is in compliance with the floodplain management criteria set forth in the National Flood Insurance Regulations of Title 44 of the Code of Federal Regulations (CFR). It is also consistent with requirements of floodplain management guidelines for implementing Executive Order 11988 and Federal Highway Administration guidelines 23 CFR 650A. Please see attached FEMA maps for map numbers and project locations.

A coordination letter from the USFWS signed on May 16, 2007, stated that no significant adverse impacts to wetlands or federally listed endangered or threatened species are anticipated from this proposal. A search of the TDEC, Division of Natural Areas database conducted on February 6, 2007 and updated on January 26, 2009, revealed that there are three protected species within a one-mile radius of this project and two protected species within one to four-mile radius of this project. It is the opinion of the TDOT biologist that none of these species are affected by this project because they are considered not likely present in the ROW due to one or both of the following two reasons: present habitat unsuitable and not observed during site visit. A TDOT email was sent to TWRA on April 20, 2007 requesting their comments regarding the animal species; in response to the TDOT email on June 21, 2007, they concurred that BMPs would be sufficient to minimize impacts to rare species for this project. The species review form and the TDOT correspondences are enclosed for your use in permit processing.

The SHPO letter dated April 29, 1999, stated that the project area contains a cultural resource eligible for listing in the National Register of Historic Places: Hayes House. They further found that the project as currently proposed will not adversely affect this resource. Another SHPO letter dated October 3, 2003, stated that project area contains no archaeological resources eligible for listing in the National Register of Historic Places. SHPO letters are enclosed for your information and use in permit processing.

The current Turn-in date for the project is April 8, 2009. We would greatly appreciate your initial review and request for additional information needed, or issuance of the public notice and issuance of these permits as soon as possible.

Please advise us if you have any questions or if we can be of any assistance.

Sincerely,

Khalid Ahmed
Roadway Specialist 3, Natural Resource Office

Enclosures

JLH: KMA: RMS

cc: Mr. Ron Gatlin, Nashville District Corps of Engineers
Mr. Eric Chance, TSMP (via email)
Mr. Ronnie Porter, Program Operations Office (via email)
Mr. N.E. Christianson, Chief Engineer Office (via email)
Mr. Brandon Crowley, HQ Construction Office (via email)
Mr. Ken Flynn, Region 2 Construction Office (via email)
Mr. Greg Russell, Region 2 Environmental Coordinator (via email)
Permit File
Reading file (letter only)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, J. K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TN 37243-0334
TELEPHONE: (615) 253-2477 FAX: (615) 741-1098

March 27, 2009

Mr. Scotty Sorrells
Tennessee Department of Environment and Conservation
Division of Water Supply
6th Floor L. & C. Tower
401 Church Street
Nashville, Tennessee 37243-1549

Subject: Project #: 14002-1242-14
Fed #: STP-52(35)
PIN: 101042.00
SR-52, from east of New Hope Branch
to Bridge over Cumberland River west of Celina
Clay County

Dear Mr. Sorrells:

In accordance with Tennessee Department of Environment and Conservation's Rule 1200-4-6 regarding Class V Injection Wells, this office is providing a portion of the USGS quad map for Celina, TN (324-SE) showing locations of all sinkholes, and an application for the Authorization for Discharge of Stormwater into the Subsurface and a half-size set of plans showing sinkhole locations.

The attached application is for two sinkholes located on the subject project. No fills or cuts are proposed to the sinkholes.

The Department does not intend to utilize these sinkholes as drainage structures, other than for water currently flowing toward them under existing conditions.

If the authorization will contain any special conditions other than those contained in the enclosed materials, please provide us with a draft copy for our review, prior to your final issuance.

This is a high priority project which has been placed in TDOT's Economic Stimulus program. The current Turn-in date for the project, including all permits, is April 8, 2009. We would greatly appreciate your initial review and request for additional information needed, or issuance of these permits as soon as possible.

Please advise us if you have any questions or if we can be of any assistance.

Sincerely,

Khalid Ahmed
Roadway Specialist 3, Natural Resource Office

Enclosures

JLH: KMA: RMS

cc:

Mr. Brandon Crowley, HQ Construction Office (via email)
Mr. Ken Flynn, Region 2 Construction Office (via email)
Mr. Greg Russell, Region 2 Environmental Coordinator (via email)
Permit File
Reading file (letter only)

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
WATER SUPPLY
9 th Floor, 401 Church Street
Nashville, Tennessee 37243-1549
(615) 532-0191

APPLICATION FOR AUTHORIZATION TO OPERATE A CLASS V UNDERGROUND INJECTION WELL OR STORM WATER DISCHARGE TO THE SUBSURFACE

In accordance with the provisions of Tennessee Code Annotated Section 69-3-105 and Regulations of the Tennessee Water Quality Control Board, application is hereby made to operate:

☐ **Class V Underground Injection Well**
■ **Discharge of Storm Water into the Subsurface**

Part A - General Information

1. Site or Facility Name State Route 52, from New Hope Branch to Bridge over Cumberland River West of Celina

   Street or Highway Address: _____

   _____

   City: Celina Zip Code _____

   County: Clay Telephone ( ) _____

2. Describe the activities conducted by the applicant which require it to obtain a Class V permit authorization:

   Two sinkholes are located outside of the project right-of-way and no fills or cuts are proposed.
   The storm water runoff to the sinkhole may be inadvertently affected by the project, but no specific changes to the runoff are intended.

3. USGS topographic coordinates of the injection well or facility location (if multiple wells are at the same site, then give principal site latitude and longitude, and average elevation):

1. Quadrangle Name Celina, TN (324-SE)

   Latitude 36 o 33 ' 46 " North

   Longitude 85 o 31 ' 20 " West

   Station: 244+60± (Right) SNK-1 (made up with 3 holes)

2. Quadrangle Name Celina, TN (324-SE)

   Latitude 36 o 33 ' 43 " North

   Longitude 85 o 31 ' 14 " West

   Station: 248+90± (Left) SNK-2 (made up with 2 holes)

3. Quadrangle Name _____

   Latitude _____ o _____ ' _____ " North

   Longitude _____ o _____ ' _____ " West

   Station: _____

4. Quadrangle Name _____

   Latitude _____ o _____ ' _____ " North

   Longitude _____ o _____ ' _____ " West

   Station: _____

5. Quadrangle Name _____

   Latitude _____ o _____ ' _____ " North

Longitude _____ o _____' _____" West

Station: _____

4. Name and address of owner of injection well or facility:

Individual or Firm Name: Tennessee Dept. of Transportation

Street or RFD: 505 Deaderick St., Suite 900 James K. Polk Bldg.

City: Nashville State: Tennessee

Zip Code 37243-0334 Telephone (615) 741-2612

5. Type of Business: _____ Federal ___X___ State _____ Public
_____ Private _____ Other

6. Nature of Business:

Highway system for public use.

7. List up to four standard industrial codes (SIC) which best reflect the principal products or services provided by the facility:

a. **23411**
b. _____
c. _____
d. _____

8. Name and address of legal contact or person responsible for the operation of the Class V injection well or facility:

Name Suzanne B. Herron

Street or RFD 505 Deaderick St., Suite 900 James K. Polk Bldg.

P.O. Box

City Nashville State TN

Zip Code 37243-0334 Telephone (615) 741-2612

9. Is the facility located on Indian Lands? ____ Yes X No

10. Permit Status: ____a. new well or facility
X b. modification of existing well or facility
____c. reapplication for previously permitted well or facility

11. List all other permits or construction approvals received or applied for under any of the following programs:

a. Hazardous waste management program under federal or state law
b. UIC program under federal or state law
c. NPDES program under federal or state law
d. Prevention of Significant Deterioration (PSD) program under federal or state law
e. Nonattainment area program under federal or state law
f. National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under federal or state law
g. Ocean dumping permits under the Marine Protection Research and Sanctuaries Act
h. Dredge and fill permits under Section 404 of the Clean Water Act, 33 U.S.C. 1344
i. Comprehensive Environmental Response, Compensation and Liability Act (Federal Superfund) or Tennessee Hazardous Waste Management Act (Tennessee Superfund)
j. UST program under federal or state law
k. Groundwater Protection permits from Tennessee Division of Ground Water Protection
l. Other relevant environmental permits

Permit No.	Type	Date Issued
	NPDES Construction Stormwater	
	ARAPS	
	Section 404 Permits	

Part B - Facility Description

1. Nature, type or purpose of injection well:

No changes to storm water discharge into the sinkhole are proposed.

2. Description of injection well or facility, including monitoring wells and other associated structures (attach additional information or diagrams, if necessary):

Sinkholes are located outside the right of way limits and will not be impacted by roadway construction.

3. Depth of injection zone: N/A feet below ground level

4. Operating status of well or facility: __X__ proposed _____ active
_____ inactive _____ abandoned

5. Date injection began (if not in operation, projected date of beginning)Summer 09
If inactive or abandoned well, approximate date injection ceased _____

6. For previously active facilities, give history of injection or operation:

N/A

7. Mode of operation: _____ continuous _____ intermittent

8. Volume of injected fluid: _____ gallons _____ or cubic yards

_____ per day _____ per month _____ per year

9. Nature of injected fluid, including physical, chemical, biological and/or radiological properties:

N/A

10. Origin of injected fluid:

N/A

11. Description of treatment of fluid prior to injection:

N/A

12. Type of injection: _____ pump ____X____ gravity _____ other

Description of pump(s):

N/A

13. Operating parameters of injection well:

a. fluid flow _____ gpm

b. fluid pressure _____ psig

c. fluid temperature _____ Celsius

d. other significant operating information (attach additional information or diagrams, if necessary):

Part C - Description of Area of Review

The area of review (AOR) for each authorized or permitted Class V injection well shall, unless otherwise specified by the Department, consist of the area lying within and below a one mile radius of the injection well pump site or facility, and shall include, but not be limited to surface geographic features, subsurface geology, and demographic and cultural features within the area. Attach to this part of the application a complete characterization of the AOR, including the following:

1. Description of all past and present uses of groundwater within the AOR, as documented by public record.

2. Description of the groundwater hydrology within the AOR, including characteristics of all subsurface aquifers, presence or absence of solution development features, general direction of groundwater movement, and chemical characteristics of the groundwaters in the AOR.

3. Description of the population and cultural development within the AOR, including the number of persons living within one mile of the well or facility, land uses within the AOR, and the existence of any community, state, regional or national parks, wildlife refuges, natural or wilderness areas, recreational or other public-use areas, or any other environmentally sensitive features within the area of review.

4. Identify all sources of publicly-supplied drinking water for persons living or working within the AOR.

5. Identify any single or multi-family residences, churches, schools, businesses or other inhabited structures within the AOR which do not have access to a public drinking water supply system.

6. If groundwater is used for drinking water within the area of review, then identify and locate on Attachment 1, all groundwater withdrawal points within the AOR which supply public or private drinking water systems.

7. Identify any surface water bodies or features within the area of review which may be impacted by groundwater discharge to surface waters.

8. Identify any surface water intake which supplies a public water distribution system and is located within the AOR or within three miles topographically downgradient from the well or facility. If any such intake(s) exist, then locate on Attachment 1.

Part D - Signature and Certification

This application should be signed by a person having responsibility for the operation of the injection well or facility as follows:

1. For a corporation, by a responsible corporate officer (i.e., president, secretary, treasurer, vice-president, or equivalent person) who performs policy or decision making functions; or

2. The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million if authority to sign documents has been assigned or delegated to the manager in accordance with operating procedures; or

3. For a partnership, by a general partner or the proprietor; or

4. By a duly authorized representative (a duly authorized representative may be either a named individual or any individual occupying a named position) only if:

   a. The authorization is made in writing by a person described in (1), (2), or (3) above;

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, or position of equivalent responsibility, or

   c. For municipality, state, federal, or other public agency by either a principal executive officer or ranking elected official.

5. The owner of the property or facility on which the injection well is located.

I certify under penalty of law I have personally examined and am familiar with the information submitted in the attached document; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Suzanne B. Herron, P.E., CPESC, Environmental Division Director — Name & Title (print or type)

104919 — License No.

Suzanne B. Herron — Signature

3/26/09 — Date

Name & Title (print or type)

License No.

Signature

Date

CN-1106

RDA- 2474

Attachments

1. USGS topographic quadrangle map showing the location of the Class V injection well or facility and a one-mile radius area surrounding the well or facility.

2. USGS geologic quadrangle or regional geologic map showing the subsurface structure in the area of the well or facility, from the surface to the injection zone.

3. Schematic diagram of the injection well showing construction details and materials of the injection well.

4. Chemical analysis data of injection fluid, if required.

5. Process description of the treatment or other process which is the source of the injection fluid, if required.

6. Procedure for operation and maintenance of the injection well or facility, if required.

7. Geologic/hydrogeologic information collected during the planning, construction and design phases of the facility and injection well.

8. Blueprints from the facility showing the injection well and portions of the facility which will or may contribute injectate to the injection well, including storm runoff waters.

9. Construction diagrams depicting erosion and sediment controls.

Appendix H

Inspection Forms

TENNESSEE DEPARTMENT OF TRANSPORTATION
EROSION PREVENTION/SEDIMENT CONTROL
INSPECTION REPORT

Reason For Inspection (Circle One): Pre-Rainfall / 0.5 Inch Rain Event / 1st Weekly / 2nd Weekly

DATE: _____

State Route (SR) / US Route or Road Name and Description:			**Are corrective actions required by this inspection report (Y/N):**			
County(ies):	**TDOT PIN:**	**NPDES Permit (NOC) No.:**	**Number of New Corrective Actions Required:**		**Number of Recurring Corrective Actions Required:**	
TDOT Construction No.:	**TDOT Contract No.:**		**Number of Previously Reported New Corrective Actions Required:**		**Number of Previously Reported Recurring Corrective Actions Required:**	

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 gathered and evaluated information presented. Based on my inquiry of the person or persons 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 as recorded in the table above. I certify that erosion and sediment controls in the drainage area of the identified outfall were installed as planned and designed in working order as recorded in the table above. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	**TDOT/Consultant EPSC Inspector and Title (print or type):**	**Signature:**
	Contractor EPSC Inspector and Title (print or type):	**Signature:**
	TDOT Project Supervisor/Designee and Title (print or type):	**Signature:**

TDOT EPSC Inspection Weekly Rainfall Data Log

Date	Day of Week	Predicted Precipitation (%)[1]	Rainfall Gage 1 (in)	Rainfall Gage 2 (in)	Rainfall Gage 3 (in)	Rainfall Gage 4 (in)	Rainfall Gage 5 (in)	Duration (hr)
	Sunday							
	Monday							
	Tuesday							
	Wednesday							
	Thursday							
	Friday							
	Saturday							

[1]Predicted Precipitation Source: _____

TDOT/Contractor Agrees with Inspection Report: NO or YES (Circle One)

If No, explain and initial:

(Additional pages may be attached, if needed)

State/US Route or Road Name:_____ TDOT Construction No.:_____ TDOT Contract No.: _____

Date _____

Outfall Name or Station No.	Approx. Station No. From/To	Rain Gage No.	LT, RT or Centerline	Date Last Disturbed	Date of Stabilization and T=Temp. P=Perm.	Existing EPSC Control Measure Codes*	Current Condition Codes*	Corrective Action(s) or Comments

EROSION AND SEDIMENT CONTROL MEASURE CODES

1. Temporary Silt Fence / Filter Barrier
2. Temporary Diversion Berm or Ditch
3. Temporary Slope Drain
4. Rock Check Dams
5. Brush Barrier
6. Sediment Removal
7. Straw Bale Check
8. Sand Bags
9. Sediment Trap / Basin
10. Temporary Sediment Filter Bag
11. Polyethylene Sheeting
12. Machined Rip Rap
13. Geotextile
14. Permanent Seeding with Mulch or Sod
15. Temporary Seeding with Mulch
16. Temporary Mulching
17. Erosion Control Blanket
18. Flexible Channel Liner
19. Catch Basin / Storm Inlet Protection
20. Riprap Outlet Structure
21. Riprap Energy / Velocity Dissipater
22. Curb, Gutter, or Storm Sewer Protection
23. Temporary at Construction Exit
24. Temporary Stream Crossing
25. Turbidity Barrier / Silt Boom
26. Temporary Stream Diversion
27. Preserve Natural Resource / Buffer Zone
28. Mineral Aggregate Base on Subgrade
29. Excess Dirt Removed from Rdwy. Daily
30. Haul Roads Dampened for Dust Control
31. Ditch Liner
32. Rock Silt Screen
33. Silt Fence with Backing
34. Enhanced Silt Fence
35. _____
36. _____

CONDITION CODES

U Upgrade Needed (Failure Noted)
R Replacement Needed
M Maintenance Needed
FM Future Maintenance
C Cleaning Needed
I Increase Measures
S Stable (No Action Needed)
R Repeat Occurrence

Other (O#1): _____

Other (O#2): _____

Other (O#3): _____

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: _____

Department of Environment and Conservation
Division of Water Pollution Control

Construction Storm Water Inspection Certification

(Twice weekly inspections are required only for discharges into streams impaired by siltation and into high quality waters.)

Construction Site Information **Outfall No.___ (or station no. or other identifier of drainage area represented)**

NPDES Permit No. TNR _____________ Notice of Coverage (NOC) Date: ________________ County: ____________________

Name of Project: ____

Developer and/or Contractor Name: ____

Month/Year	Week 1	Week 2	Week 3	Week 4	Week 5
	Yes or ***No*** / Initials	***Yes*** or ***No*** / Initials	***Yes*** or ***No*** / Initials	***Yes*** or ***No*** / Initials	***Yes*** or ***No*** / Initials
________ , _______	Date:	Date:	Date:	Date:	Date:
Inspections Performed	/	/	/	/	/
E&S Controls in Order	/	/	/	/	/
________ , _______	Date:	Date:	Date:	Date:	Date:
Inspections Performed	/	/	/	/	/
E&S Controls in Order	/	/	/	/	/
________ , _______	Date:	Date:	Date:	Date:	Date:
Inspections Performed	/	/	/	/	/
E&S Controls in Order	/	/	/	/	/
________ , _______	Date:	Date:	Date:	Date:	Date:
Inspections Performed	/	/	/	/	/
E&S Controls in Order	/	/	/	/	/
________ , _______	Date:	Date:	Date:	Date:	Date:
Inspections Performed	/	/	/	/	/
E&S Controls in Order	/	/	/	/	/
________ , _______	Date:	Date:	Date:	Date:	Date:
Inspections Performed	/	/	/	/	/
E&S Controls in Order	/	/	/	/	/

Provide the following information for the person(s) who have performed and initialed the above inspections. If more than two persons have performed these inspections, give information for the two persons who performed the most numbers of inspections.

Initials: _________	Name: ____________________________ Phone No. _______________________________
Initials: _________	Name: ____________________________ Phone No. _______________________________

Quarterly Inspection Certification

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 gathered and evaluated information presented. Based on my inquiry of the person or persons 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 as recorded in the table above. I certify that erosion prevention and sediment controls in the drainage area of the identified outfall were installed as planned and designed and in working order as recorded in the table above. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name _______________________ Title ________________________ Signature ________________________________

Company ____ Date ____________________________________

Environmental Field Offices - Division of Water Pollution Control - Addresses

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	2510 Mt. Moriah Road, Suite E-645	38115-1520	Cookeville	1221 South Willow Ave.	38506
Jackson	362 Carriage House Drive	38305-2222	Chattanooga	540 McCallie Avenue, Suite 550	37402-2013
Nashville	711 R.S. Gass Blvd	37243	Knoxville	2700 Middlebrook Pike, Suite 220	37921
Columbia	2484 Park Plus Drive	38401	Johnson City	2305 Silverdale Road	37601

Information and Instructions

The purpose of this form is to certify that inspections of storm water discharge points and erosion prevention and sediment controls (E&S Controls) at the construction site have been performed. You are required to complete this form for your weekly (at a minimum) inspections for all sites, but are only required to perform twice-weekly inspections if discharges from the construction site enter waters that have been identified as being impaired by siltation, or if they enter high quality waters. You can determine whether you are discharging to an impaired or high quality stream by looking at the Notice of Coverage (NOC) returned to you after you applied for coverage under the TNCGP. You may also call your local Environmental Field Office (EFO) at the toll-free number of 1-888-891-TDEC.

You are required to inspect outfall points (where discharges leave the site or enter waters of the state) to ascertain whether your erosion prevention and sediment control measures are effective in preventing soil from leaving the construction site and entering nearby streams. You are also required to inspect the erosion prevention and sediment control measures being used at the site, whether these controls have been installed according to the storm water pollution prevention plan (SWPPP), and whether these controls are in working order. These inspections must be performed at the frequency indicated in the appropriate section of the permit.

To record the inspections and observations, write the date that inspections were performed, in the appropriate week's column; write ***Yes*** or ***No*** to indicate if the inspections, both of the outfall points and of the erosion prevention and sediment control measures, were performed; and write ***Yes*** or ***No*** to indicate whether or not erosion prevention and sediment controls are installed and in working order. Sign your initials under the date for that week and to the right of the Yes or No. Certification of inspections is required at the end of each quarter and covers all inspections performed during the quarter.

The inspection results shall be kept at the construction site with a copy of the SWPPP. Use a new form for each quarter until the Notice of Termination is filed.

Appendix I

Notice of Termination Form

State of Tennessee
Department of Environment & Conservation - Division of Water Pollution Control

NOTICE OF TERMINATION
Construction Activity General Permit

The purpose of this form is to notify the Tennessee Department of Environment and Conservation that you, as a permitted operator of storm water discharges from a construction activity, no longer have responsibilities related to erosion and sediment controls at the construction site. Type or print clearly, using ink and not markers or pencil.
NPDES Permit Number TNR __ __ __ __ __ __ (Include the NPDES permit number for the site.)
Name of the construction project (site):
Street address (or description of location):
Legal name of the construction site operator:

Mailing address:	Telephone and/or E-mail address:

Have the storm water discharges associated with construction activity been eliminated?	❑ Yes	❑ No
If YES, provide the date at which the construction site was finally stabilized:		
Construction activities at the site continue, but my responsibilities with respect to the construction activities have ceased.	❑ Yes	❑ No
If YES, provide the name, mailing address and telephone number of any new operators (for instance, an operator who has taken over your responsibilities) involved with soil disturbance at the construction site:		

Certification and Signature (must be signed by president, V.P. or equivalent, or ranking elected official)

I certify under penalty of law that either: (a) all storm water 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 storm water associated with construction activity under this general permit, and that discharging pollutants in storm water 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 storm water 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 and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time to insure final stabilization is maintained, or that all storm water 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.

Printed name (construction site operator)	Signature	Date

Permittees who are presently covered under the Tennessee General NPDES Permit to Discharge Storm Water Associated with Construction Activity must submit an NOT after completion of their construction activities and final stabilization of their portion of the site, or within 30 days after another operator has taken over all of their responsibilities at the site. A permittee cannot submit an NOT without final stabilization unless another party has agreed to assume responsibility for final stabilization of the site. **For Tennessee Department of Transportation projects only**, submit the completed NOI form to the address below, addressed with **Attention: Storm Water NOI Processing**.

Division of Water Pollution Control - Address

Tennessee Department of Environment and Conservation
Division of Water Pollution Control, Permit Section
Attn: Storm Water NOI Processing
6th Floor L & C Annex
401 Church Street
Nashville, TN 37243-1534

(Draft form; use until replaced.)

Appendix J

TMDL Consultation

No TMDL consultation required for this project.