STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION **BUREAU OF ENGINEERING**

YEAR TENN. 2019 1-1 FED AID PROJ NO NH-I-440-4(84) STATE PROJ. NO. 19014-3171-44

DESIGN-BUILD PROJECT

INTERSTATE

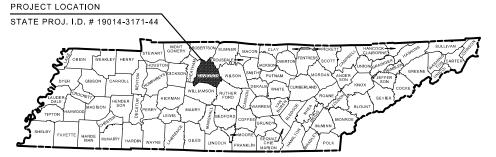
DAVIDSON COUNTY

INTERSTATE 440 (WIDENING) FROM INTERSTATE 40 TO INTERSTATE 24

READY FOR CONSTRUCTION PACKAGE #1

GRADING, PAVING, DRAINAGE, SIGNS, STRIPING, ITS, & STRUCTURE REPAIR

STATE HIGHWAY NO. I - 440 F.A.H.S. NO. I - 440



EXCLUSIONS				
STATION TO STATION	LENGTH (FT.)			
1018+56.27 - 1020+44.93	188.66			
-				
-				
TOTAL=	188.66			

EQUATIONS				
DESCRIPTION	NET EFFECT ON NUMERATION			
STA. 13007+21.96 BK. = STA. 1000+00.00 AH.	+ 1,200,721.96			

Digitally signed by David Barnes Date: 2019.03.08 10:25:09



END PROJECT NO. NH-I-440-4(84) 19014-3171-44

I-440 STA, 1376+41.58

N 653408.5878 E 1752826.7792

APPROVED:

DATE

U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

DIVISION ADMINISTRATOR

SURVEY 5-4-2016	TRAFFIC	DATA
	ADT (2021)	103,000
	ADT (2041)	123,720
	DHV (2041)	13,610
	D	55 - 45
	T (ADT)	7 %
	T (DHV)	5 %
	V	60 MPH

APPROVED:



BEGIN PROJECT NO. NH-I-440-4(84) 19014-3171-44

RAMP I-40 WB TO I-440 EB STA. 13003+89.38

N 663853.9563 E 1725682.6990

BEGIN PACKAGE 1

STA. 13003+89.38

(RAMP I-40 WB TO I-440 EB)

RAMP I-440 WB TO I-40 WB STA. 12006+81.41= RAMP I-40 WB TO I-440 EB STA. 13007+21.36=

I-440 STA. 1000+00.00

END PACKAGE 1

CHECKED BY LARRY RIDLEN, P.E.

I-440 STA, 1022+00,00

SPECIAL NOTES

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT DESIGN MANAGER: SHANE HESTER, P.E., PROJECT DEVELOPMENT DIRECTOR

DESIGNER: DAVID H. BARNES, P.E.

19014-1174-44 (DESIGN)

DB 1701 Pkg. 1 ROADWAY LENGTH 6.955 MILES 0.397 MILES BRIDGE LENGTH 0.237 MILES 0.083 MILES BOX BRIDGE LENGTH ▲ 0.00 MILES 0.000 MILES PROJECT LENGTH 7.192 MILES 0.480 MILES

SCALE: 1" = 4,000"

▲ Not included in the project length.

4,000' 8,000' 12,000'

NASHVILLE

RIVER

COORDINATE VALUES ARE NAD/83 (1995), AND ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006, AND ARE TIED TO THE TENNESSEE GEODETIC REFERENCE NETWORK. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

	PROJECT COMMITMENTS					
COMMITMENT ID	SOURCE DIVISON	DESCRIPTION	STA. / LOCATION			
EDAC001	ENVIRONMENTAL DIVISION, ARCHEOLOGICAL	Avoid all construction activities behind (outside of) the sound wall and/or control fences at the properties in all four (northwest, southwest, northeast, and southeast) quadrants of the intersection of Granny White Pike and Gale Lane on the north side of I-440, in the areas marked "Sensitive Environmental Area". Construction activities to avoid in this area include all earthmoving and ground disturbing activities, staging of heavy equipment, excavation of borrow materials, and vegetation removal.	All four quadrants of the Granny White Pike/Gale Lane intersection.			
EDAC002	ENVIRONMENTAL DIVISION, ARCHEOLOGICAL	The Cherokee Nation has requested that TDOT archaeologists monitor portions of the project in the vicinity of Granny White Pike, Gale Lane, and Battlefield Drive to ensure that all construction activities are confined to previously disturbed existing right-of-way. TDOT Archaeology will monitor the construction schedule, make bi-monthly site inspections throughout construction, and provide written reports and photographs to The Cherokee Nation documenting avoidance of archaeological sites abutting I-440.	I-440 at Granny White Pike, Granny White Pike at Gale Lane and Battlefield Drive			
EDHZ004	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	Asbestos Containing Material (ACM) surveys were conducted on the following bridges. No ACM was detected on any bridge. See Note EDHZ001 Bridge No. 19l04400015, Sharondale Dr over I-440 LM 2.09 (19-0F107-00.44) Bridge No. 19l04400017, Woodlawn Dr over I-440 LM 2.36 (19-04891-01.93) Bridge No. 19l04400019, SR-106 (Hillsboro Pike) over I-440 LM 2.85 (19-SR106-06.37) Bridge No. 19l04400021, Brightwood Ave over I-440 LM 3.33 (19-0F007-00.44) Bridge No. 19l04400023, Belmont Blvd over I-440 LM 3.53 (19-04883-01.44) Bridge No. 19l04400025, Granny White Pike over I-440 LM 3.90 (19-03248-05.55)	Corridor			
EDPL001	ENVIRONMENTAL DIVISION, PLANNING	A portion of the I-440 Greenway, which is currently under construction, is located under the I-440 bridges adjacent to the CSXT Railroad approximately 1,900 feet south of Charlotte Avenue. If it is necessary to close the greenway as part of the I-440 transportation project, the TDOT Contractor would notify Metropolitan Nashville and Davidson County's Parks and Recreation Department regarding any temporary closures to the I-440 Greenway. If construction of the greenway is complete at the time of construction work on the I-440 bridges, the Contractor shall be responsible for installing and removing greenway closure signs at each trail-head and along the greenway. Once any construction activities around the greenway are completed, the TDOT Contractor shall restore the area to pre-construction conditions.	Greenway under I-440 bridges adjacent to the CSXT RR approximately 1,900 ft south of Charlotte Ave.			

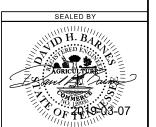
No special accommodations for demolition and waste disposal are anticipated for these structures and the material can be deposited in a C&D landfill. Prior to the demolition or rehabilitation of any structure (bridge or building), the contractor is required to submit

the National Emission Standards for Hazardous Air Pollutants standard 10-day notice of

Specifications for Road and Bridge Construction (January 1, 2015) Sections 107.08 D

demolition to the TDEC Division of Air Pollution Control (per TDOT Standard

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RFC	2019	NH-I-440-4(84)	1 - 1B



Project corridor

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

PROJECT COMMITMENTS

EDHZ001

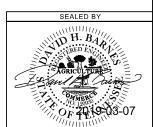
ENVIRONMENTAL DIVISION,

HAZARDOUS MATERIALS

and 202.03).

		PROJECT COMMITMENTS	
COMMITMENT ID	SOURCE DIVISON	DESCRIPTION	STA. / LOCATION
EDHZ002	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	Asbestos Containing Material (ACM) surveys were conducted on the following bridges, no asbestos was detected. See Note EDHZ001. Bridge No. 19I04400027, EB I-440 over Lealand Lane, LM 4.17 (19-I0440-04.17R) Bridge No. 19I04400028, WB I-440 over Lealand Lane, LM 4.17 (19-I0440-04.17L) Bridge No. 19I04400029, EB I-440 over Craig Ave, LM 4.36 (19-I0440-04.36R) Bridge No. 19I04400030, WB I-440 over Craig Ave, LM 4.36 (19-I0440-04.36L) Bridge No. 19I04400041, I-440 over Bransford Ave, LM 5.44 (19-I0440-05.44)	Bridges 19l04400027, 19l04400028, 19l04400029, 19l04400030, 19l04400041
EDHZ003	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	Bridge 19l04400027 (EB I-440 over Lealand Lane) and Bridge 190l04400029 (EB I-440 over Craig Avenue) both have electrical conduits attached to each bridge. The bridge reports were revised to identify and discuss the conduits. The conduits were not identified as metal or plastic and are therefore suspect materials and must be sampled prior to utility work or removal. These conduits were not sampled due to safety concerns with live electrical lines. Electrical conduits have not been checked for ACM and must be sampled prior to working with these conduits.	Bridge 19l04400027, 19l04400029
EDHZ007	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	This note corrects the list in commitment EDHZ005. Asbestos Containing Material (ACM) surveys were conducted on the following bridges. No ACM was detected on any bridge. See Commitment EDHZ001. Bridge No. 19I04400001, EB I-440 over Charlotte Ave, LM 0.36 (19-I0440-00.36R) Bridge No. 19I04400002, WB I-440 over Charlotte Ave, LM 0.36 (19-I0440-00.36L) Bridge No. 19I04400004, WB I-440 over CSXT RR, LM 0.72 (19-I0440-00.72L) Bridge No. 19I04400005, Acklen Park Dr over I-440 LM 1.05 (19-OF314-00.39) Bridge No. 19I04400007, Murphy Rd over I-440 LM 1.29 (19-03255-01.92) Bridge No. 19I04400009, SR-1 (West End Ave) over I-440 LM 1.50 (19-SR001-14.84) Bridge No. 19I04400013, Richardson Ave over I-440 LM 1.77 (19-OF109-00.27) Bridge No. 19I04400053, EB I-440 over Glenrose Ave and CSXT RR, LM 7.04 (19-I0440-07.04R)	Corridor
EDHZ008	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	This note corrects the list in commitment EDHZ006. Asbestos Containing Material (ACM) surveys were conducted on the following bridges and although no ACM was detected, suspect live utility conduit that was not sampled due to safety concerns still remains. If this conduit is to be disturbed in the future, an asbestos sample must be collected. Bridge No. 19I04400003, EB I-440 over CSXT RR, LM 0.72 (19-I0440-00.72R) Bridge No. 19I04400011, SR-1 Ramp over I-440 LM 1.61 (19-SR001-14.88) Bridge No. 19I04400054, WB I-440 over Glenrose Ave and CSXT RR, LM 7.04 (19-I0440-07.04L)	Corridor
EDHZ009	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	Asbestos Containing Material (ACM) surveys were conducted on the following bridges. No ACM was detected on any bridge. See Commitment EDHZ001. Bridge No. 19I04400039, SR-11 (Nolensville Pike) over I-440 LM 6.32 (19-SR011-10.34) Bridge No. 19I04400043, Winford Ave over I-440 LM 6.05 (19-0F482-00.21) Bridge No. 19I04400047, CSXT RR over I-440 LM 6.40 (19-I0440-06.40) Bridge No. 19I04400049, Pedestrian Crosswalk over I-440 LM 6.62 (19-I0440-06.62) Bridge No. 19I04400051, Foster Ave over I-440 LM 6.82 (19-04165-00.92) Bridge No. 19I04400055, Lyle Ave over I-440 LM 7.30 (19-0F573-00.06) Bridge No. 19I04400057, CSXT RR over I-440 Ramp LM 6.45 (19-I0440-06.45) Bridge No. 19I00240093, I-440 Ramp G over I-24 LM 7.59 (19-I0440-07.59) Bridge No. 19I00240095, I-24 Ramp C over I-24 LM 17.19 (19-I00240-17.19) Bridge No. 19I00240097, I-24 Ramp F over Lafayette LM 17.08 (19-I00240-17.08)	Corridor

TYPE	YEAR	PROJECT NO.	SHEET NO.
RFC	2019	NH-I-440-4(84)	1-1B1



STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

PROJECT COMMITMENTS

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 (FEMA) WITHOUT APPROVAL BY FEMA. 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

(1) SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.

GUARDRAIL

- (1) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD
- (2) 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.
- (3) GUARDRAIL IS TO BE COMPLETE IN PLACE BEFORE THE MAINLINE ROADWAY IS OPENED TO TRAFFIC.

DRAINAGE

- (1) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN.
- (2) ALL EXISTING PIPES AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER THAT ARE TO BE LEFT IN PLACE AND ABANDONED MUST BE BACKFILLED AND PLUGGED.

MISCELLANEOUS

- (1) ALL DETOUR, ACCESS, SERVICE AND FRONTAGE ROADS SHALL BE CONSTRUCTED WITH A MINIMUM OF ONE (1) COURSE OF BASE MATERIAL BEFORE TRAFFIC IS INTERRUPTED ON EXISTING ROADS.
- (2) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

ROAD CLOSURE

(1) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKINGS ON INTERMEDIATE LAYERS

(1) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED.

FINAL PAVEMENT MARKING

- (1) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED.
- 2) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED.
- (3) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 8" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

- (1) THE PAVEMENT MARKING ON THE DETOURS FOR LANE LINES WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT.
- (2) BEFORE OPENING THE DETOURS TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS

PAVING

- (1) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.
- (2) THE CONTRACTOR SHALL ATTACH A DEVICE TO THE SCREED OF THE PAVER SUCH THAT MATERIAL IS CONFINED AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CONSOLIDATED WEDGE-SHAPE PAVEMENT EDGE OF APPROXIMATELY 25 TO 30 DEGREES AS IT LEAVES THE PAVER (MEASURED FROM A LINE PARALLEL TO THE PAVEMENT SURFACE.) THE DEVICE SHALL MEET THE REQUIREMENTS THAT ARE CURRENTLY SET FORTH IN SPECIAL PROVISION 407SE.

SIGNING

- (1) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUTOUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND. THE LETTERS, DIGITS, ARROWS, EORDERS, AND ALPHABET ACCESSORIES ON ALL EXTRUDED PANEL SIGNS SHALL BE DEMOUNTABLE AND ATTACHED TO THE SIGN FACE, AS OUTLINED IN THE STANDARD SPECIFICATIONS. ALL SHIELDS ON GUIDE SIGNS SHALL BE DEMOUNTABLE AND ATTACHED TO THE SIGN FACE AS OUTLINED IN THE STANDARD SPECIFICATIONS.
- (2) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE LENGTHS WERE COMPUTED FROM THE CROSS-SECTIONS CONTAINED IN THE CONSTRUCTION PLANS. IN THE EVENT THE SUPPORT LENGTHS ARE 2 FEET SHORTER OR LONGER THAN SHOWN ON THE PLANS, THE ENGINEER SHALL VERIFY THE SUPPORT TYPE WITH THE TRAFFIC OPERATIONS DIVISION, SIGNING SECTION, TELEPHONE NO. (615)-741-0802. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ORDERING MATERIAL.
- (3) THE TOP OF THE SIGN FOOTINGS SHALL BE PLACED LEVEL WITH THE GROUND LINE.
- (4) 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.
- (5) THE CONTRACTOR SHALL BE REQUIRED TO FURNISH LAYOUT DRAWINGS OF ALL EXTRUDED PANEL SIGNS WITH SPACING OF ALL LETTERS, NUMERALS, SHIELDS, AND ARROWS. ONE PDF SET OF THE LAYOUT DRAWINGS SHALL BE SENT TO THE TRAFFIC OPERATIONS DIVISION, SIGNING SECTION (TDOT.TrafficOps@TN.GOV) FOR REVIEW. ONE PDF SET OF THE LAYOUT DRAWINGS SHALL BE SENT TO THE REGIONAL SIGN DESIGNER FOR REVIEW.
- (6) ALL SIGNS MARKED "TO BE REMOVED" ARE TO BE REMOVED BY THE CONTRACTOR AND BECOME THE PROPERTY OF THE CONTRACTOR.
- (7) THE EXISTING FOOTINGS ARE TO BE REMOVED 6 INCHES BELOW GROUND LINF
- (8) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ERECTION.
- (9) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS

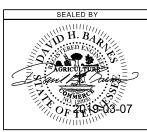
RFC 2019 NH-I-440-4(84) 1-2D

PROJECT NO.

SHEET NO

TYPE

YEAR



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00006 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

> GENERAL NOTES 1 OF 3

TRAFFIC CONTROL DIRECTIONAL SIGNING

- 1) ON ALL ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL UTILIZE ALL EXISTING DIRECTIONAL SIGNING FOR AS LONG AS POSSIBLE. THESE EXISTING SIGNS CAN BE MOVED USING TEMPORARY SUPPORTS AS NEEDED. AS SOON AS THESE EXISTING DIRECTIONAL SIGNS COME DOWN PERMANENTLY, THE CONTRACTOR SHALL HAVE UP AT LEAST ONE NEW TEMPORARY "ADVANCE GUIDE SIGN" AND ONE NEW TEMPORARY "EXIT DIRECTIONAL SIGN" AT ALL EXIT RAMPS. THESE SIGNS ARE TO BE MAINTAINED WITHIN CLEAR VIEW OF THE PUBLIC ON THE RIGHT SIDE OF THE HIGHWAY AND SHALL BE REPLACED IF DAMAGED, DURING ALL PHASES OF CONSTRUCTION, AS DIRECTED BY THE ENGINEER.
- (2) THE SIZE OF THESE NEW TEMPORARY SIGNS WILL BE DETERMINED BY THE MESSAGE. THE MESSAGE SHALL BE THE SAME AS THE EXISTING SIGN THAT THESE NEW TEMPORARY SIGNS WILL BE REPLACING. THE LETTER SIZE SHALL BE A MINIMUM OF 8 INCH, "D" UPPER CASE LETTER. THE DIRECTIONAL ARROW WILL BE A "B" ARROW AT A 45 DEGREE ANGLE (SAME ANGLE AS THE EXISTING ARROW). THE MATERIAL SHALL BE 0.100 INCH SHEET ALUMINUM; THE COLOR SHALL BE A REFLECTIVE GREEN BACKGROUND WITH REFLECTIVE WHITE COPY.
- (3) SOME OF THESE DIRECTIONAL SIGNS WILL NEED AN INTERSTATE, U.S., OR A STATE HIGHWAY SHIELD, A CARDINAL DIRECTION, AND A DIRECTION ARROW TO ACCOMPANY THE DIRECTIONAL SIGN. THESE SIGNS SHALL BE MOUNTED BELOW THE DIRECTIONAL SIGN.
- (4) ALL EXISTING "EMERGENCY REFERENCE MARKERS" AND "HOSPITAL SIGNS" SHALL BE MAINTAINED WITHIN FULL VIEW OF THE MOTORING PUBLIC THROUGHOUT ALL PHASES OF CONSTRUCTION.
- (5) WHEN "LOGO" SIGNS ARE ON ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE SIGNS IN FULL VIEW TO THE MOTORING PUBLIC DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE TO THE DEPARTMENT FOR THE REIMBURSEMENT OF THE SIGN FACE IF IT IS DAMAGED.

SIGNALIZATION

(1) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE TDOT "SPECIAL PROVISIONS REGARDING SECTION 730N-TRAFFIC SIGNALS."

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

- (1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- (2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER.
- (3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- (4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- USE OF BARRICADES, PORTABLE BARRIER RAILS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK. THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR

ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

- (7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- (8) ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED, AND FLEXIBLE DRUMS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC

LIGHTING

- (1) INSTALLATION AND MATERIALS SHALL COMPLY WITH SECTIONS 714 AND 917 OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED JANUARY 1, 2015 AND WITH THE LATEST REVISIONS TO THE NATIONAL ELECTRIC CODE, NFPA 70.
- 2) ALL WIRING SHALL BE CONCEALED UNDERGROUND IN 2-INCH SCHEDULE 40 PVC RIGID CONDUIT.
- (3) THE GROUND WIRE SHALL BE RUN INSIDE CONDUIT WITHIN STRUCTURES, SHALL BE COLORED GREEN AND HAVE THW INSULATION.
- (4) EXISTING FOUNDATIONS TO BE REMOVED A MINIMUM OF SIX INCHES BELOW GRADE.
- (5) ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED IN 714 ITEMS WHETHER SPECIFICALLY NOTED OR NOT.
- LIGHT STANDARDS SHALL BE ROUND 40' TAPERED POLES.
- (7) STANDARDS SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.
- (8) LIGHTING POLES SHALL BE DESIGNED FOR 80-MPH WIND PRESSURE AND SHALL SUPPORT A 21-POUND LUMINAIRE POST TOP MOUNTED. POLE MANUFACTURER TO CONFIRM WITH POLE CALCULATIONS.
- (9) ALL NEW ROADWAY LIGHTING POLES SHALL BE MOUNTED ON BASES WITH ACCESS DOOR. TRANSFORMER BASES SHALL MEET AASHTO SPECIFICATIONS AND HAVE FHWA APPROVAL. STANDARDS SHALL BE ALUMINUM WITH TRANSFORMER BASES.

EROSION PREVENTION AND SEDIMENT CONTROL

NATURAL RESOURCES

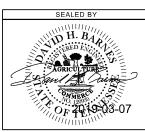
- (1) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT NATURAL RESOURCES AND WATER QUALITY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG NATURAL RESOURCES IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS, WETLANDS OR OTHER NATURAL FEATURES IN ACCORDANCE WITH TDOT STANDARDS. EPSC MEASURES SHALL BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
- (2) NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.
- (3) INSTREAM EPSC DEVICES REQUIRE THE TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION REVIEW AND MUST BE PROCESSED BY THE PERMITS SECTION TO OBTAIN WATER QUALITY PERMITS.
- (4) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS AND EPHEMERAL, INTERMITTENT, AND PERENNIAL STREAMS, IS NOT ALLOWED.

- (5) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING, NOT TO EXCEED THE WIDTH SPECIFIED IN THE STANDARD DRAWING.
- STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CULVERT CROSSINGS SHALL BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES SHALL BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK SHALL 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 SHALL BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO PREEXISTING ELEVATIONS. ALL TEMPORARY CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (E.G. BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK OR THE APPROPRIATE USE OF BARGES AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.
- (7) HEAVY EQUIPMENT WORKING IN WETLANDS WITH PERMITTED TEMPORARY IMPACTS SHALL BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE AND COMPACTION UNLESS SPECIFICALLY ADDRESSED IN THE CONSTRUCTION PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT SHALL BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED. ALL AFFECTED AREAS SHOULD BE RETURNED TO PRE-EXISTING CONDITIONS.
- (8) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION PLANS AND PERMITS.
- 9) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS PRIOR TO ANY CONSTRUCTION AND MAINTENANCE ACTIVITIES TO ENSURE THAT ENVIRONMENTAL FEATURES (E.G., STREAMS, WETLANDS, SPRINGS, ETC.) ARE NOT IMPACTED BEYOND PERMITTED LOCATIONS. IF THE CONTRACTOR OR TDOT INSPECTOR IS UNSURE OF THE IDENTITY OF AN ENVIRONMENTAL FEATURE, THE INSPECTOR SHALL CONTACT THE TDOT REGION ENVIRONMENTAL TECH GROUP IMMEDIATELY.

SPECIES

- (1) NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA.
- (2) SHOULD CLIFF SWALLOW OR BARN SWALLOW NESTS, EGGS, OR BIRDS (YOUNG AND ADULTS) BE PRESENT, THE CONTRACTOR SHALL CONTACT THE REGIONAL ECOLOGY OFFICE TO DETERMINE IF SEASONAL RESTRICTIONS WILL BE NECESSARY. GENERALLY, BIRDS, NESTS, AND EGGS MAY NOT BE DISTURBED BETWEEN APRIL 15 AND JULY 31. FROM AUGUST 1 TO APRIL 14, NESTS CAN BE REMOVED OR DESTROYED SO LONG AS BIRDS OR EGGS ARE NOT PRESENT, AND MEASURES IMPLEMENTED TO PREVENT FUTURE NEST BUILDING AT THE SITE (I.E., CLOSING OFF AREA USING NETTING).
- (3) IF THE REMOVAL OF ANY TREES WITH A DIAMETER AT BREAST HEIGHT (DBH) GREATER THAN 3 INCHES IS DEEMED NECESSARY THE TDOT SUPERVISOR SHALL CONTACT THE TDOT ENVIRONMENTAL DIVISION, ECOLOGY SECTION IMMEDIATELY.

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STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

> GENERAL NOTES 2 OF 3

INSPECTION, MAINTENANCE & REPAIR

(1) REFER TO THE STORM WATER POLLUTION AND PREVENTION PLAN SHEETS (S-1) FOR SWPPP, PERMITS, AND RECORDS NOTES.

PERMITS, PLANS & RECORDS

- (1) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO ARCHAEOLOGY, ECOLOGY, HISTORICAL, HAZARDOUS MATERIALS, AIR AND NOISE, TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING ANY MATERIAL AND STAGING AREAS AND THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS TO BE USED. ANY SUCH PERMITS SHALL BE SUPPLIED TO THE TDOT PROJECT RESPONSIBLE PARTY PRIOR TO THE USE OF THE PERMITTED AREA(S).
- (2) ANY DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT RESPONSIBLE PARTY. THE ENVIRONMENTAL DIVISION, DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
- (3) IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE TDOT PERMIT SECTION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS ARE NEEDED. THE ROADWAY DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.
- (4) THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATE. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS.
- (5) ALL WATER QUALITY PERMITS SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BRIEF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

- (1) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS SHALL BE REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFFSITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EPSC SHALL BE REMOVED FROM THE SITE
- (2) 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. APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED.
- (3) CONTRACTORS SHALL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED, NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE, AND PROPERLY SIGNED. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS SHALL NOT BE PERMITTED ONSITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGUI ATIONS
- (4) WHEEL WASH WATER SHALL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER SHALL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM.

- IF PORTABLE SANITARY FACILITIES ARE PROVIDED ON CONSTRUCTION SITES, SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY REGULATIONS. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.
- (6) ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ONSITE BY THE CONTRACTOR. THE CONTRACTOR SHALL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING SHALL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S RESPONSIBLE PARTY SHALL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.
- (7) WHEN POSSIBLE, ALL PRODUCTS SHALL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFFSITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS SHALL BE FOLLOWED.
- (8) ALL PAINT CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.
- (9) ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.
- (10) OPEN BURNING IS PROHIBITED UNLESS IT IS SPECIFICALLY ALLOWED BY LAW. IF ALLOWED, NATURAL VEGETATION, TREES, AND UNTREATED LUMBER SHALL BE THE ONLY MATERIALS THAT CAN BE OPEN BURNED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE STATE AND LOCAL PERMITS PRIOR TO ANY BURNING.
- (11) DISPOSAL OF ONSITE VEGETATION AND TREES BY CHIPPING THEM INTO MULCH IS PREFERABLE TO OPEN BURNING. THIS MULCH MAY BE USED AS AN ONSITE SOIL STABILIZATION MEASURE WHERE APPROPRIATE.
- (12) WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S), CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

SUPPORT ACTIVITIES

(1) MATERIALS AND STAGING AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY ENVIRONMENTAL PERMITS, OBTAINED SOLELY BY THE CONTRACTOR. THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATES. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS.

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RFC	2019	NH-I-440-4(84)	1 - 2D2



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STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

> GENERAL NOTES 3 OF 3

SPECIAL NOTES

GRADING

- (1) 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.
- (2) 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.

SEEDING AND SODDING

(1) ALL EXISTING ROADS WITHIN THE RIGHT-OF-WAY AND NOT IN THE GRADED AREA THAT ARE TO BE ABANDONED SHALL BE SCARIFIED, OBLITERATED, AND SODDED.

PAVEMENT

RESURFACING

- (1) TRAFFIC WILL BE ALLOWED TO TEMPORARILY DRIVE ON THE MILLED SURFACE OF THE ROADWAY UNDER THE FOLLOWING CONDITIONS ONLY:
 - 1. THE MILLED SURFACE IS FINE TEXTURED. THE FINE TEXTURE SHALL BE OBTAINED BY A MILLING MACHINE UTILIZING A MILLING HEAD WITH TEETH SPACING 3/8" OR LESS OPERATING AT LESS THAN 80 FFFT PER MINUTE
 - THE SURFACE SHALL BE SWEPT AND CLEANED OF ALL LOOSE MATERIALS.
 - c. THE DIFFERENCE IN ELEVATION BETWEEN THE MILLED SURFACE AND THE ADJACENT LANE SHALL NOT EXCEED 1 1/2 INCHES.
 - d. THE MILLED SURFACE SHALL BE PAVED WITHIN 72 HOURS IF THE CURRENT ADT IS ≥ 70,000 OR WITHIN 96 HOURS IF THE CURRENT ADT IS < 70,000.</p>
 - e. RAIN OR INCLEMENT WEATHER IS NOT EXPECTED OR FORECASTED WITHIN 48 HOURS AFTER MILLING.
 - f. ALL APPLICABLE SIGNING IS INSTALLED IN ACCORDANCE WITH THE MUTCD. SIGNING SHALL INCLUDE MOTORCYCLE WARNING SIGNS (TN-64) PLACED IN ADVANCE OF ANY MILLED AREAS
 - J. IF MILLED SURFACE BEGINS TO DETERIORATE, PAVING TO COVER UP DETERIORATING MILLED SURFACES SHOULD OCCUR AS DIRECTED BY THE ENGINEER DURING THE NEXT WORKING DAY. IF SEVERE DISTRESS OCCURS, IMMEDIATE RESPONSE WILL BE REQUIRED.
 - ONLY ONE LANE IN EACH DIRECTION SHALL HAVE A MILLED SURFACE AT ONE TIME.

EROSION PREVENTION AND SEDIMENT CONTROL

ENVIRONMENTAL

(1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE SHALL BE INVITED TO ALL PRE-CONSTRUCTION MEETINGS.

ECOLOGY

- (1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR A DESIGNATED CONSULTANT WILL NEED TO BE ONSITE FOR WORK BEING DONE WHICH COULD AFFECT WATERS OF THE STATE/U.S. OR SPECIES.
- 2) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S

PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS THAT MUST BE FOLLOWED.

(3) ALL PROJECTS WITH LEGALLY PROTECTED SPECIES OR CRITICAL HABITAT IDENTIFIED SHALL HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER WATERS OF THE STATE/U.S.

PROJECT COMMITMENTS

SEE PROJECT COMMITMENTS, SHEET 4-1B AND 4-1B1 FOR DETAILS
 RELATING TO SPECIAL ENVIRONMENTAL COMMITMENTS REQUIRED BY THIS
 PROJECT.

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> STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

> > SPECIAL NOTES

EROSION PREVENTION AND SEDIMENT CONTROL (E.P.S.C.) NOTES

PACKAGE #1 (WEST NON-WIDENING)

ESTIMATED DISTURBED AREA. 4 ACRES

ORDER OF CONSTRUCTION ACTIVITIES

STAGE I (CLEARING AND GRUBBING)

- (1) STAGE I CONSISTS OF CLEARING AND GRUBBING ACTIVITIES CONDUCTED PRIOR TO LAND GRADING OPERATIONS.
- (2) CONTRACTOR SHALL LIMIT INITIAL CLEARING AND GRUBBING TO THAT NECESSARY TO INSTALL ALL APPLICABLE E.P.S.C. DEVICES IN ACCORDANCE WITH STAGE I E.P.S.C. PLANS.
- (3) CONTRACTOR SHALL NOT COMMENCE ADDITIONAL GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK BEFORE E.P.S.C. DEVICES ARE IN PLACE.

STAGE II (INTERMEDIATE GRADING — TRAFFIC CONTROL PHASE I)

- (1) STAGE II CONSISTS OF MASS GRADING AND CONSTRUCTION OF SITE FEATURES INSIDE PHASE LINES WHILE TRAFFIC IS MAINTAINED OUTSIDE PHASE LINES ON EXISTING ROADWAY AS SHOWN IN PHASE I TRAFFIC CONTROL PLANS.
- (2) STAGE II INCLUDES CONSTRUCTION OF ALL PROPOSED STORMWATER INLETS, CATCH BASINS, JUNCTION BOXES, MANHOLES, CULVERTS, AND ENDWALLS, AS WELL AS MODIFICATION OR ABANDONMENT OF EXISTING STRUCTURES AND CULVERTS, LOCATED INSIDE PHASE LINES AS SHOWN IN PHASE I TRAFFIC CONTROL PI ANS

STAGE III (INTERMEDIATE GRADING — TRAFFIC CONTROL PHASE II)

- (1) STAGE III CONSISTS OF MASS GRADING AND CONSTRUCTION OF SITE FEATURES OUTSIDE PHASE LINES WHILE TRAFFIC IS MAINTAINED INSIDE PHASE LINES ON NEW ROADWAY AS SHOWN IN PHASE II TRAFFIC CONTROL PLANS.
- (2) STAGE III INCLUDES CONSTRUCTION OF ALL PROPOSED STORMWATER INLETS, CATCH BASINS, JUNCTION BOXES, MANHOLES, CULVERTS, AND ENDWALLS, AS WELL AS MODIFICATION OR ABANDONMENT OF EXISTING STRUCTURES AND CULVERTS, LOCATED OUTSIDE PHASE LINES AS SHOWN IN PHASE II TRAFFIC CONTROL PLANS.

STAGE IV (FINAL CONSTRUCTION)

- (1) STAGE IV CONSISTS OF ACTIVITIES NECESSARY TO ACHIEVE FINAL GRADING AND PERMANENTLY STABILIZE REMAINING DISTURBED AREAS.
- (2) CONTRACTOR SHALL INSTALL PERMANENT E.P.S.C. DEVICES WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING.

STREAMS, WETLANDS & BUFFER ZONES

(1) CONTRACTOR SHALL NOT PERFORM ANY WORK WITHIN STREAM CHANNELS OR BANKS.

RAILROAD ENVIRONMENTAL

(1) THE CONTRACTOR SHALL MAINTAIN A COMPLETE AND COMPREHENSIVE EPSC PLAN AND SWPPP TO PREVENT ROADWAY AND/OR CONSTRUCTION SEDIMENT OR DEBRIS AND ANY PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, PAINTS OR COATINGS ETC. FROM FALLING ONTO THE RAILROAD'S RIGHT OF WAY AND/OR FROM ENTERING THE DRAINAGE DITCHES OR DRAINAGE STRUCTURES OF THE RAILROAD, AND ANY SEDIMENT OR DEBRIS OR PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, ETC. THAT DO ENTER SUCH DRAINAGE AREAS OF THE RAILROAD'S RIGHT-OF-WAY ARE TO BE REMOVED IN ACCORDANCE WITH RULES SET FORTH BY CSXT AND AT THE CONTRACTOR'S EXPENSE.

ENVIRONMENTA

(1) FXCEPT 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.

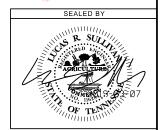
RFC 2019 NH-I-440-4(84) 1-ES1

PROJECT NO.

SHEET NO

YEAR

Digitally signed by Lucas R. Sullivan DN: c=US, st=Tennessee, I=Nashville, o=WSP USA, cn=Lucas R. Sullivan, email=luke.sullivan@wsp.com Date: 2019.03.08 09:51:01 -06'00'



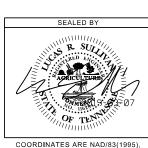
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> STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

	TABULATED EROSION PREVENTION AND SEDIMENT CONTROL (E.P.S.C.) QUANTITIES						
ITEM NO.	DESCRIPTION	UNIT	STAGE I QUANTITY	STAGE II QUANTITY	STAGE III QUANTITY	STAGE IV QUANTITY	QUANTITY TOTAL
203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	70	35	35	0	140
203-01	NOAD & BIGHNACE EXCAVATION (UNCLASSIFIED)	0.1.	70	33		· ·	140
209-05	SEDIMENT REMOVAL	C.Y.	17	17	17	17	68
209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	1,250	1,250	1,250	1,250	5,000
209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	0	0	5	5	10
209-40.33	CATCH BASIN PROTECTION (TYPE D)	EACH	24	10	5	12	51
209-40.41	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EACH	0	13	7	0	20
709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	122	61	61	0	244
740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	210	105	105	0	420
740-11.04	TEMPORARY SEDIMENT TUBE 20 IN.	L.F.	432	432	432	432	1,728
801-01	SEEDING (WITH MULCH)	UNIT	0	0	0	218	218
801-03	WATER (SEEDING & SODDING)	M.G.	0	0	0	18	18
803-01	SODDING (NEW SOD)	S.Y.	0	0	0	50	50
		1	-			1	

TYPE	YEAR	PROJECT NO.	SHEET NO.
RFC	2019	NH-I-440-4(84)	1-ES2

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND									
SYMBOL	/MBOL I TEM								
* SF * SF * SF *	SILT FENCE	EC-STR-3B							
lack lack	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A							
	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19							
•	TEMPORARY CONSTRUCTION EXIT	EC-STR-25							
* TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37							
4	CURB INLET PROTECTION (TYPE 4)								
	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41							



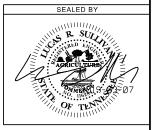
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EROSION
PREVENTION &
SEDIMENT CONTROL
(EPSC) LEGEND &
TABULATION

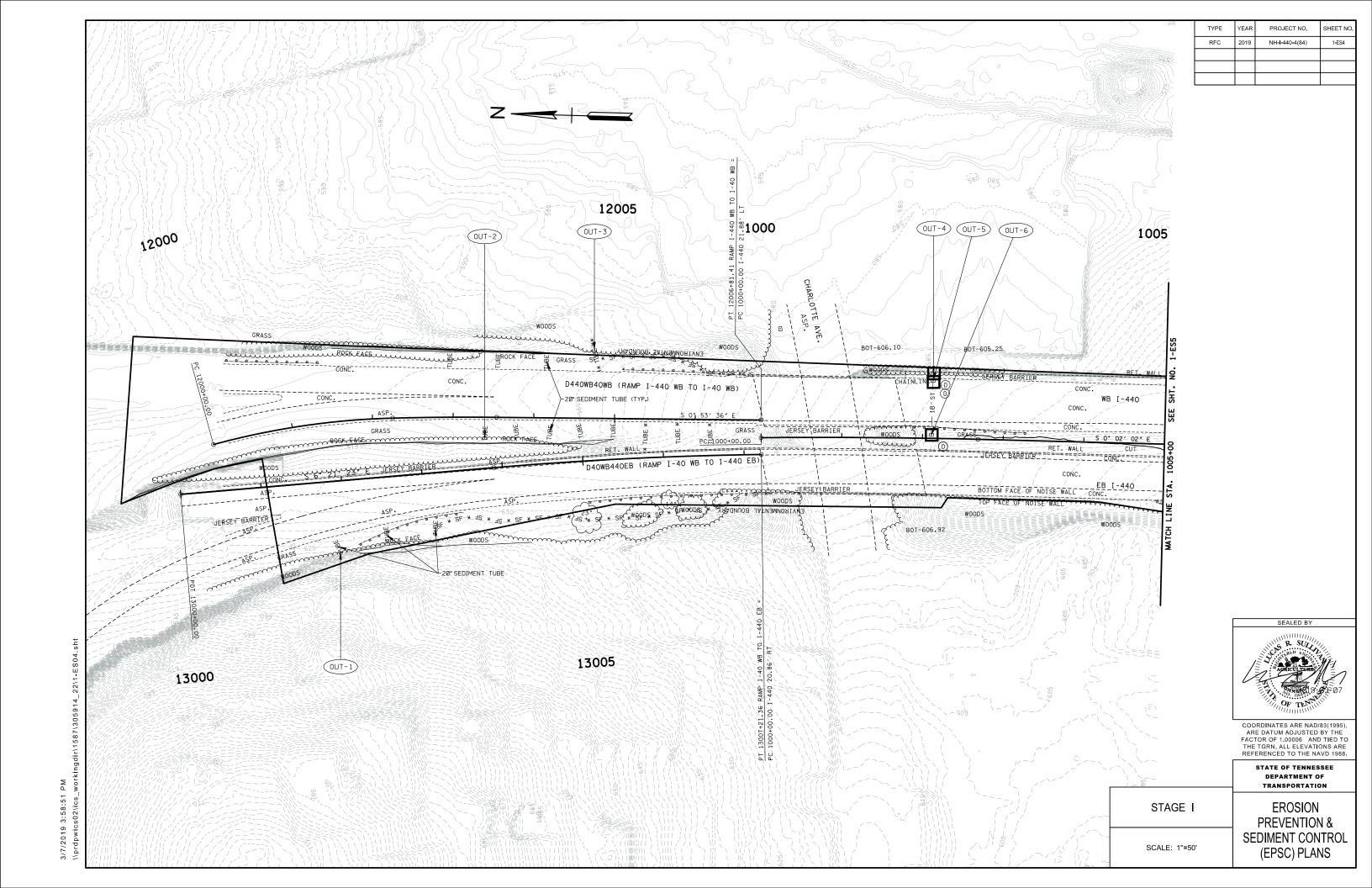
	CTODMWATER DISCUARCE OUTEAU DOINTS - DACKAGE #4 (MEST NON MIRENING)																				
	STORMWATER DISCHARGE OUTFALL POINTS – PACKAGE #1 (WEST NON-WIDENING)																				
NO.	STATION	OFFSET (FT.)	SIDE	SUB-OUTFALLS	DESCRIPTION	IMPACTED DRAINAGE FEATURE	STAGE 1 DISTURBED DRAINAGE ARE, (AC.)	STAGE 1 UNDISTURBED DRAINAGE ARFA (AC.)	STAGE 1 TOTAL DRAINAGE ARE/ (AC.)	STAGE 2 DISTURBED DRAINAGE AREA (AC.)	STAGE 2 UNDISTURBED DRAINAGE AREA (AC.)	STAGE 2 TOTAL DRAINAGE ARE (AC.)	STAGE 3 DISTURBED DRAINAGE ARI (AC.)	STAGE 3 UNDISTURBED DRAINAGE AREA (AC.)	STAGE 3 TOTAL DRAINAGE ARE. (AC.)	STAGE 4 DISTURBED DRAINAGE ARE. (AC.)	STAGE 4 UNDISTURBED DRAINAGE AREA (AC.)	STAGE 4 TOTAL DRAINAGE ARE (AC.)	SEDIMENT BASIN OR EQUIVALENT MEASURE	ESTIMATED PERCENT SLOPE WITHIN R.O.W.	COMMENTS
1	12001+46	161	LT.	#N/A	EX. DITCH	DITCH	0.520	0.000	0.520	0.520	0.000	0.520	0.520	0.000	0.520	0.520	0.000	0.520	#N/A	2.50%	#N/A
2	12003+13	26	RT.	#N/A	EX. DITCH	DITCH	0.470	0.000	0.470	0.470	0.000	0.470	0.470	0.000	0.470	0.470	0.000	0.470	#N/A	3.75%	#N/A
3	12004+73	85	RT.	#N/A	EX. DITCH	DITCH	0.110	0.000	0.110	0.110	0.000	0.110	0.110	0.000	0.110	0.110	0.000	0.110	#N/A	2.25%	#N/A
4	1002+12	79	RT.	#N/A	EX. C.B.	SYSTEM	0.100	0.000	0.100	0.100	0.000	0.100	0.100	0.000	0.100	0.100	0.000	0.100	#N/A	2.50%	#N/A
5	1002+12	72	RT.	#N/A	EX. C.B.	SYSTEM	0.450	0.000	0.450	0.450	0.000	0.450	0.450	0.000	0.450	0.450	0.000	0.450	#N/A	2.50%	#N/A
6	1002+11	4	RT.	#N/A	EX. C.B.	SYSTEM	0.190	0.000	0.190	0.190	0.000	0.190	0.190	0.000	0.190	0.190	0.000	0.190	#N/A	2.50%	#N/A
7	1006+00	71	RT.	#N/A	NO. 10M C.B. (STRUC. NO. A5)	SYSTEM	#N/A	#N/A	#N/A	0.340	0.000	0.340	0.340	0.000	0.340	0.340	0.000	0.340	#N/A	2.00%	#N/A
8	1008+69	70	LT.	#N/A	NO. 10M C.B. (STRUC. NO. A6)	SYSTEM	0.350	0.000	0.350	0.350	0.000	0.350	0.350	0.000	0.350	0.350	0.000	0.350	#N/A	1.75%	#N/A
9	1008+69	16	LT.	#N/A	EX. C.B. (STRUC. NO. A7)	SYSTEM	0.090	0.000	0.090	0.090	0.000	0.090	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.75%	EX. C.B. CAPPED
10	1008+69	0	#N/A	#N/A	NO. 2. JCT. BOX (STRUC. NO. A8)	SYSTEM	#N/A	#N/A	#N/A	0.490	0.000	0.490	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.75%	#N/A
11	1008+69	16	RT.	#N/A	NO. 45 C.B. (STRUC. NO. A9)	SYSTEM	0.230	0.000	0.230	0.230	0.000	0.230	0.230	0.000	0.230	0.230	0.000	0.230	#N/A	1.75%	#N/A
12	1008+69	70	RT.	#N/A	NO. 10M C.B. (STRUC. NO. A10)	SYSTEM	0.300	0.000	0.300	0.300	0.000	0.300	0.300	0.000	0.300	0.300	0.000	0.300	#N/A	1.75%	#N/A
13	1011+66	70	LT.	#N/A	NO. 10M C.B. (STRUC. NO. A11)	SYSTEM	0.320	0.000	0.320	0.320	0.000	0.320	0.320	0.000	0.320	0.320	0.000	0.320	#N/A	1.25%	#N/A
14	1011+66	16	RT.	#N/A	EX. C.B. (STRUC. NO. A12)	SYSTEM	0.070	0.000	0.070	0.070	0.000	0.070	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.25%	EX. C.B. CAPPED
15	1011+69	1	RT.	#N/A	NO. 2. JCT. BOX (STRUC. NO. A13)	SYSTEM	#N/A	#N/A	#N/A	0.480	0.000	0.480	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.25%	#N/A
16	1011+66	16	RT.	#N/A	NO. 45 C.B. (STRUC. NO. A14)	SYSTEM	0.320	0.000	0.320	0.320	0.000	0.320	0.320	0.000	0.320	0.320	0.000	0.320	#N/A	1.25%	#N/A
17	1011+67	70	RT.	#N/A	NO. 10M C.B. (STRUC. NO. A15)	SYSTEM	0.310	0.000	0.310	0.310	0.000	0.310	0.310	0.000	0.310	0.310	0.000	0.310	#N/A	1.25%	#N/A
18	1014+44	70	LT.	#N/A	NO. 10M C.B. (STRUC. NO. A16)	SYSTEM	0.330	0.000	0.330	0.330	0.000	0.330	0.330	0.000	0.330	0.330	0.000	0.330	#N/A	1.50%	#N/A
19	1014+42	16	LT.	#N/A	EX. C.B. (STRUC. NO. A17)	SYSTEM	0.060	0.000	0.060	0.060	0.000	0.060	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.50%	EX. C.B. CAPPED
20	1014+42	3	LT.	#N/A	NO. 2. JCT. BOX (STRUC. NO. A18)	SYSTEM	#N/A	#N/A	#N/A	0.460	0.000	0.460	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.50%	#N/A
21	1014+41	16	RT.	#N/A	NO. 45 C.B. (STRUC. NO. A19)	SYSTEM	0.280	0.000	0.280	0.280	0.000	0.280	0.280	0.000	0.280	0.280	0.000	0.280	#N/A	1.50%	#N/A
22	1011+39	89	RT.	#N/A	EX. C.B. (STRUC. NO. A22)	SYSTEM	0.350	0.000	0.350	0.350	0.000	0.350	0.350	0.000	0.350	0.350	0.000	0.350	#N/A	1.50%	#N/A
23	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NOT USED THIS PACKAGE.
24	1017+18	1	RT.	#N/∧	NO. 42 C.B. STRUC. NO. Λ20)	SYSTEM	#N/Λ	#N/∧	#N/A	0.790	0.000	0.790	0.790	0.000	0.790	0.790	0.000	0.790	#N/Λ	1.25%	#N/Λ
25	1017+18	94	RT.	#N/A	EX. C.B. (STRUC. NO. A23)	SYSTEM	0.440	0.000	0.440	0.440	0.000	0.440	0.440	0.000	0.440	0.440	0.000	0.440	#N/A	3.25%	#N/A
26	1017+33	139	LT.	25, 27–28	TYPE "A" E.W. (STRUC. NO. A26)	SHT. FLOW	0.950	0.000	0.950	0.950	0.000	0.950	0.950	0.000	0.950	0.950	0.000	0.950	#N/A	1.50%	#N/A
27	1017+91	19	LT.	#N/A	NO. 45 C.B. (STRUC. NO. A25)	SYSTEM	0.180	0.000	0.180	0.180	0.000	0.180	0.180	0.000	0.180	0.180	0.000	0.180	#N/A	0.75%	#N/A
28	1017+91	18	RT.	#N/A	NO. 45 C.B. (STRUC. NO. A24)	SYSTEM	0.330	0.000	0.330	0.330	0.000	0.330	0.330	0.000	0.330	0.330	0.000	0.330	#N/A	0.75%	#N/A

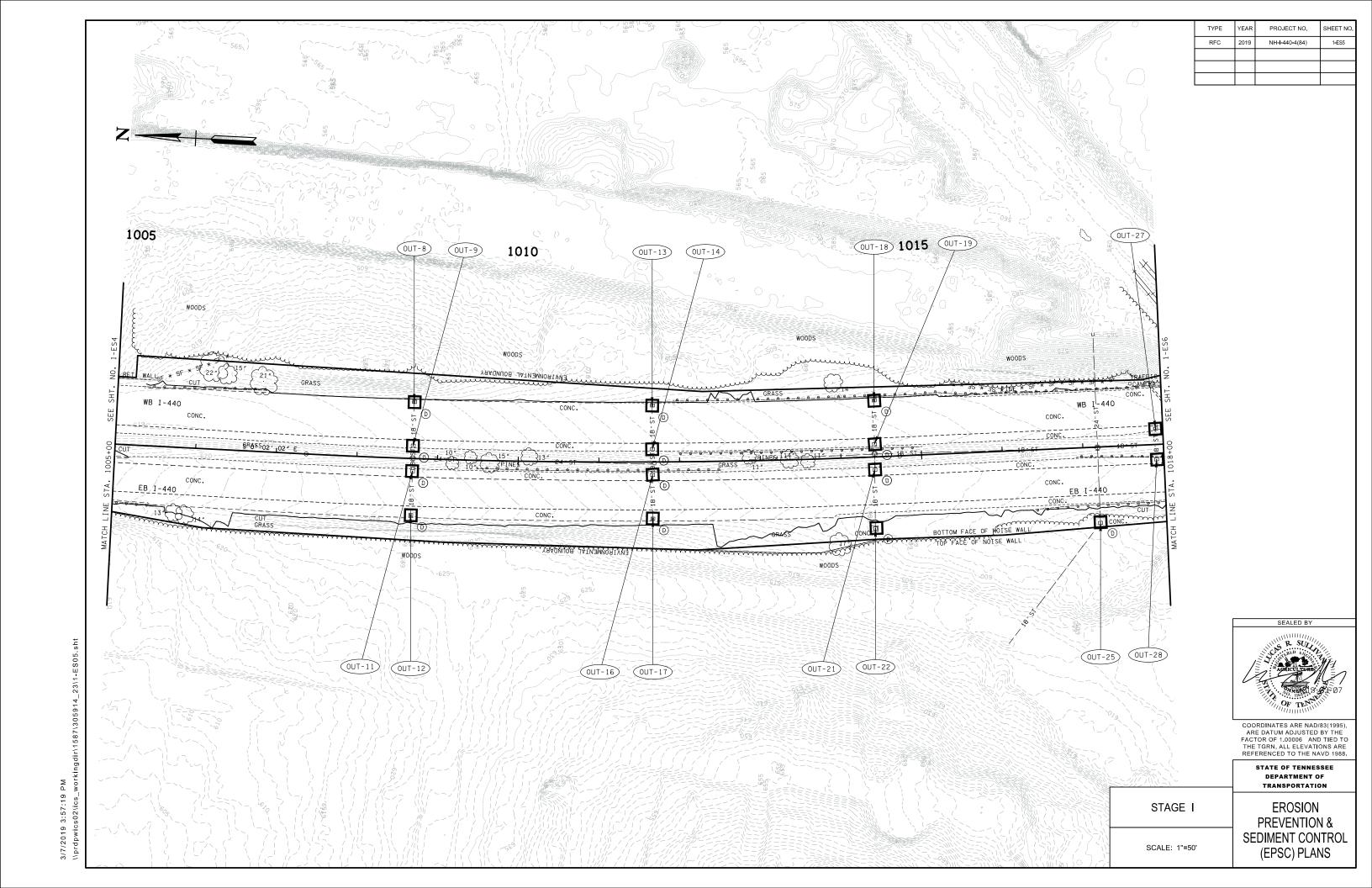
TYPE	YEAR	PROJECT NO.	SHEET NO.
RFC	2019	NH-I-440-4(84)	1 - ES3

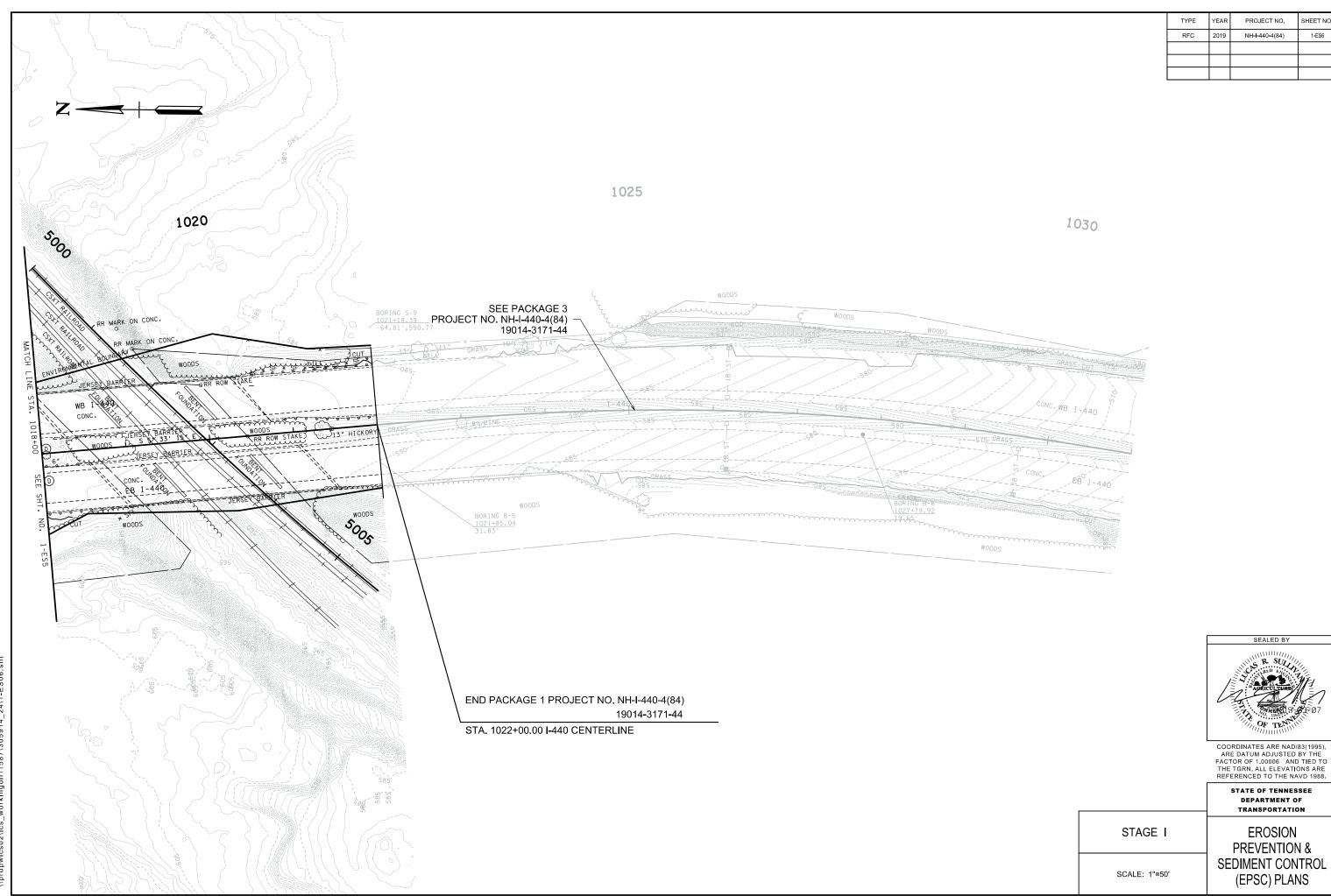


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STORMWATER DISCHARGE OUTFALL POINTS



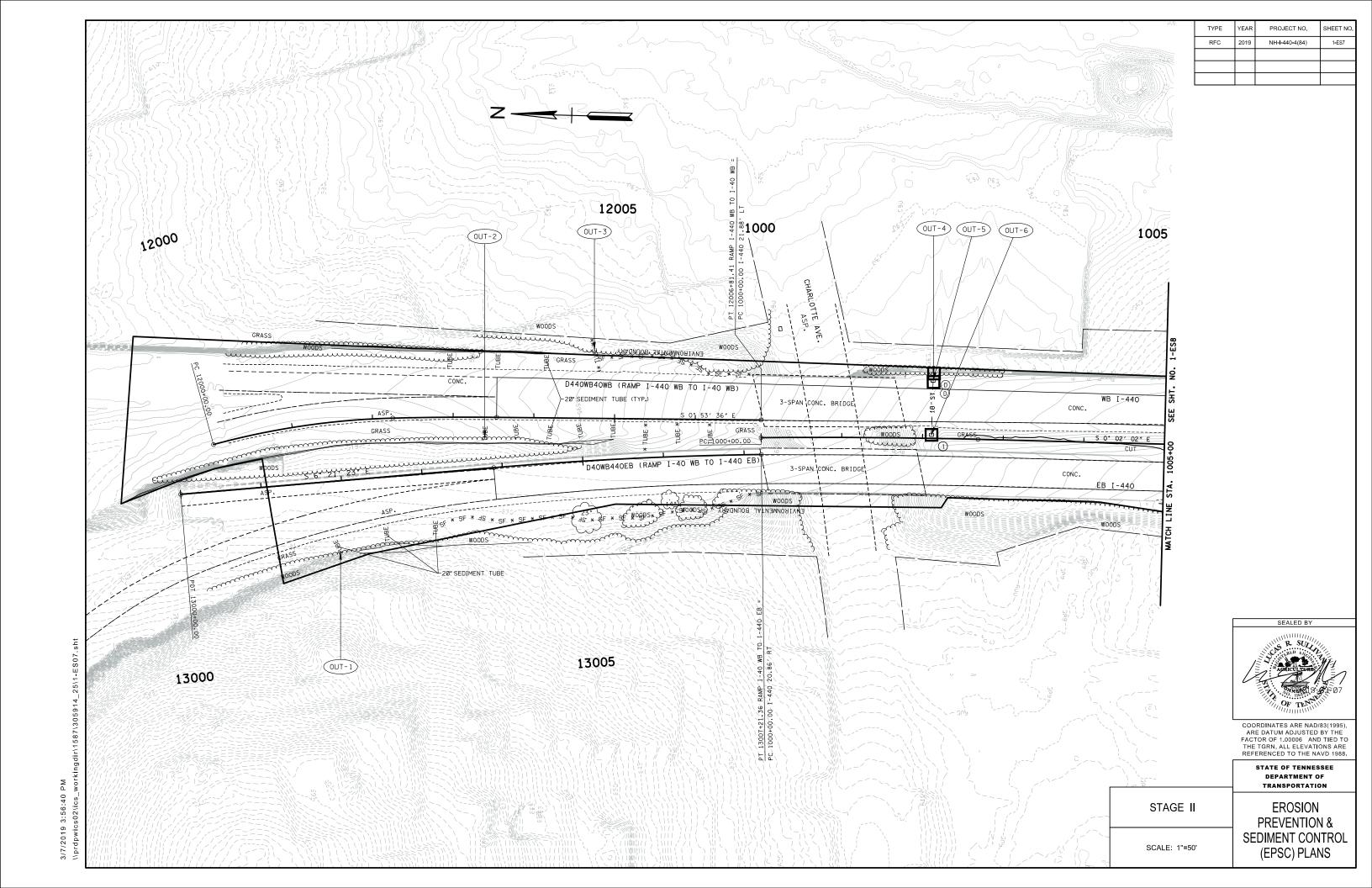


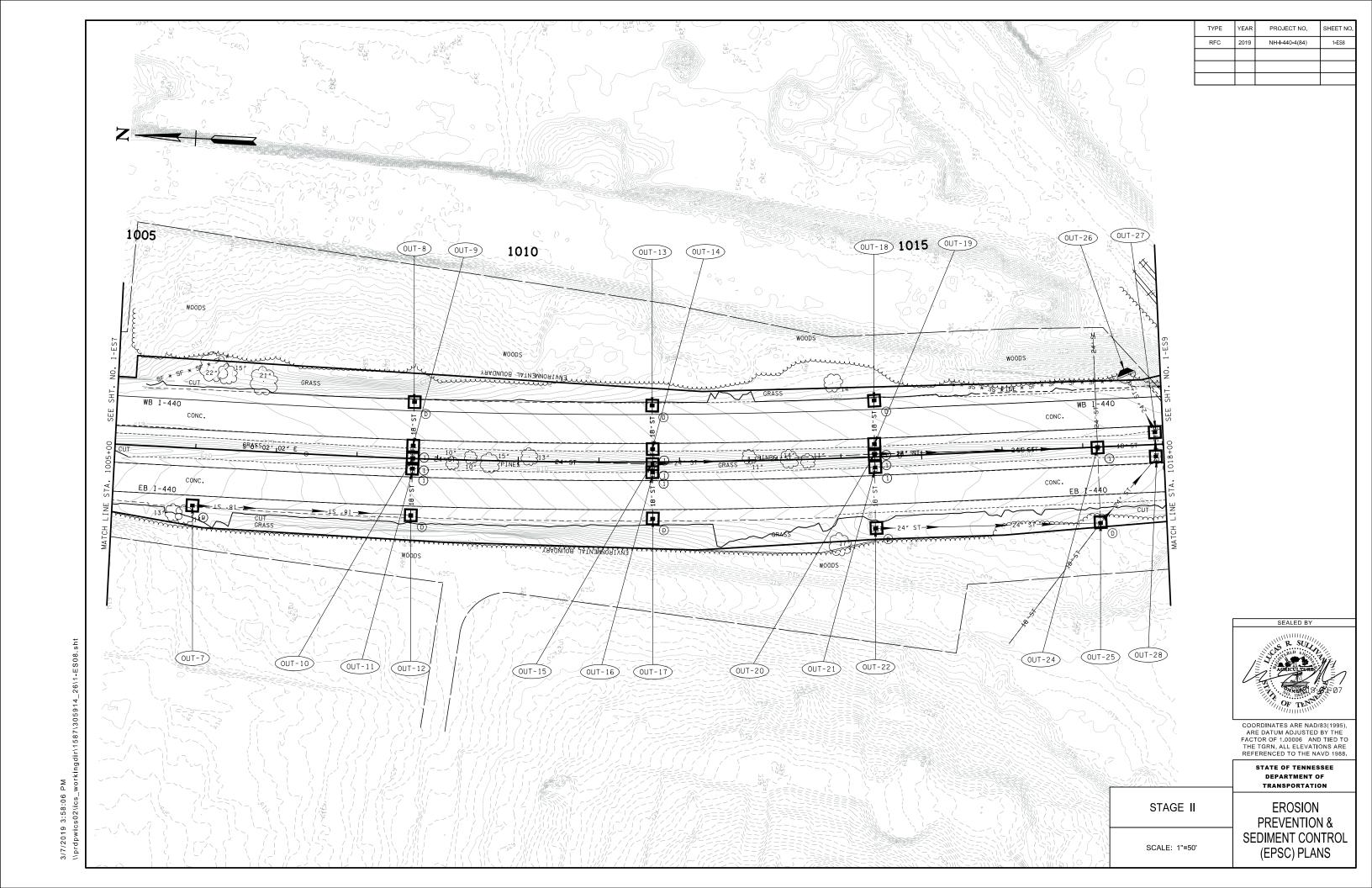


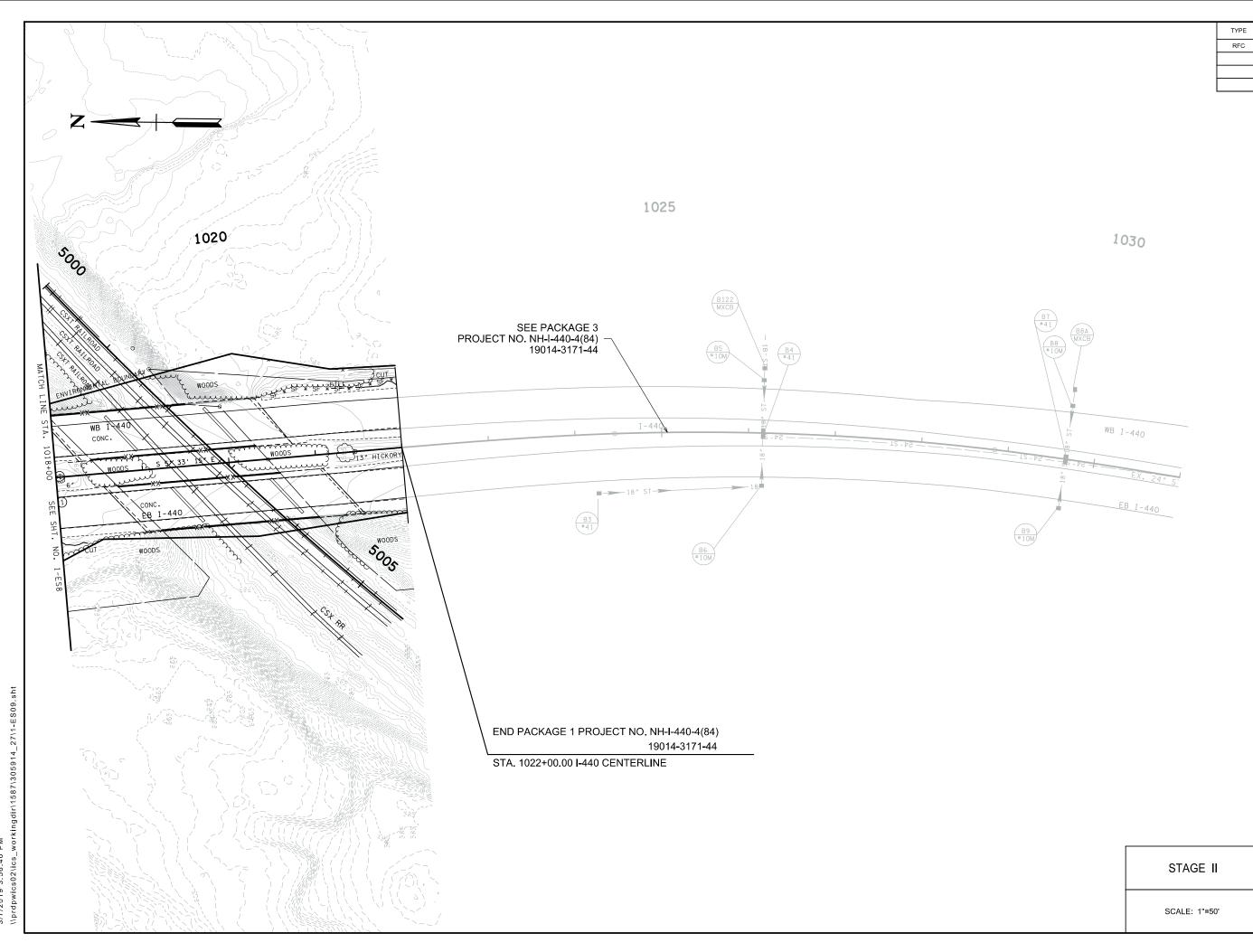
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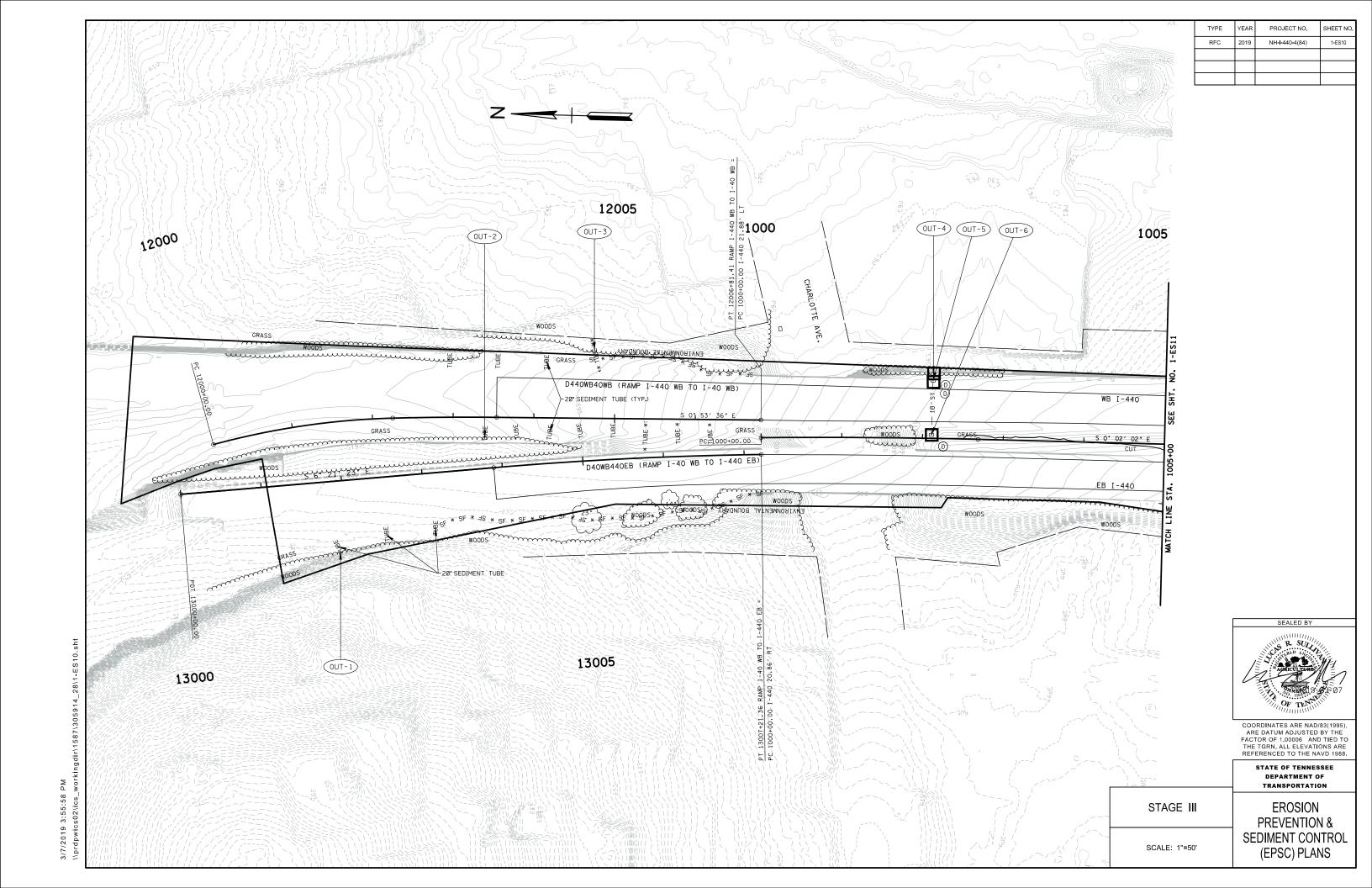
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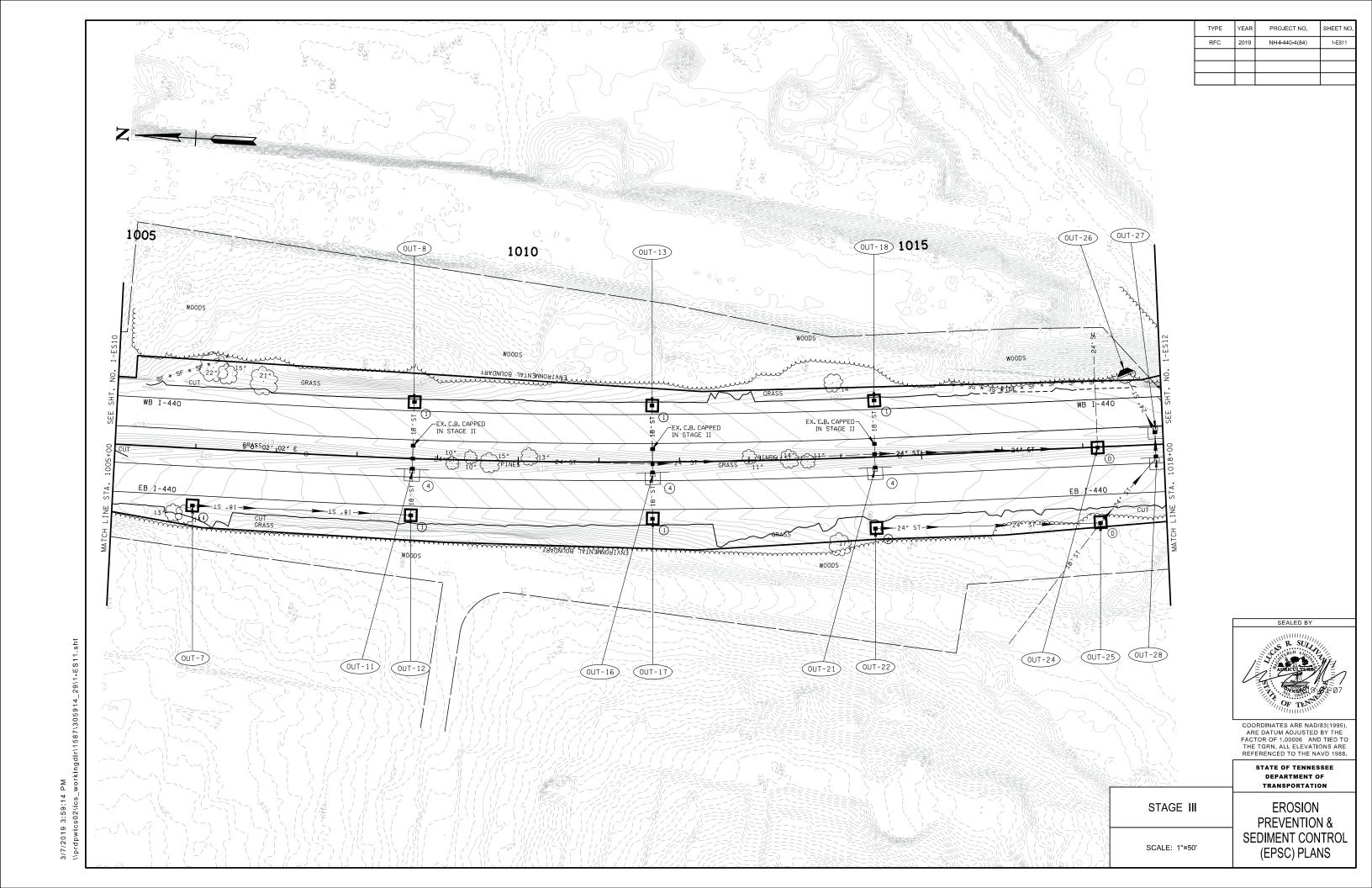
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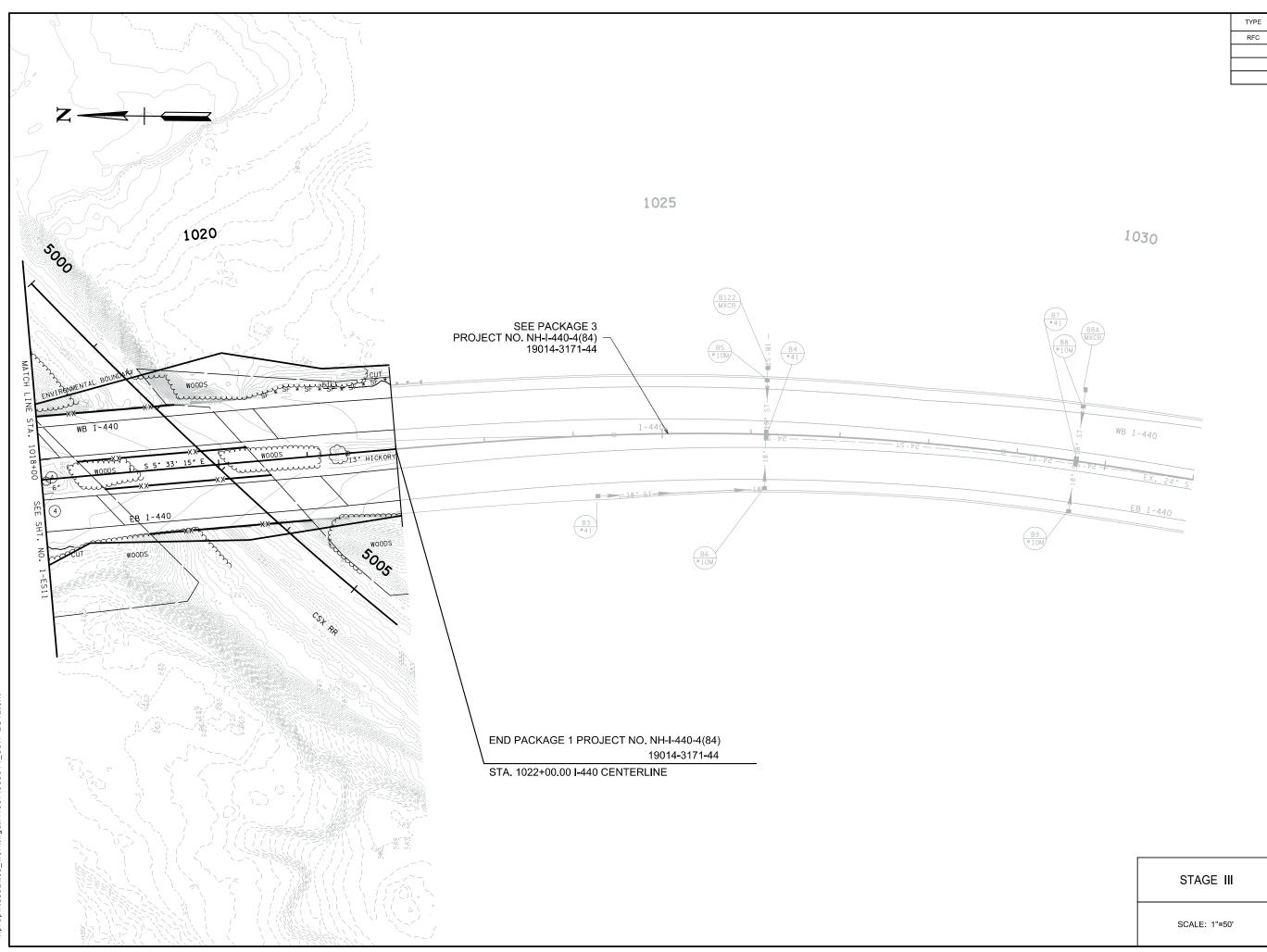
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PROJECT NO.

NH-I-440-4(84)

SHEET NO.

1-ES12

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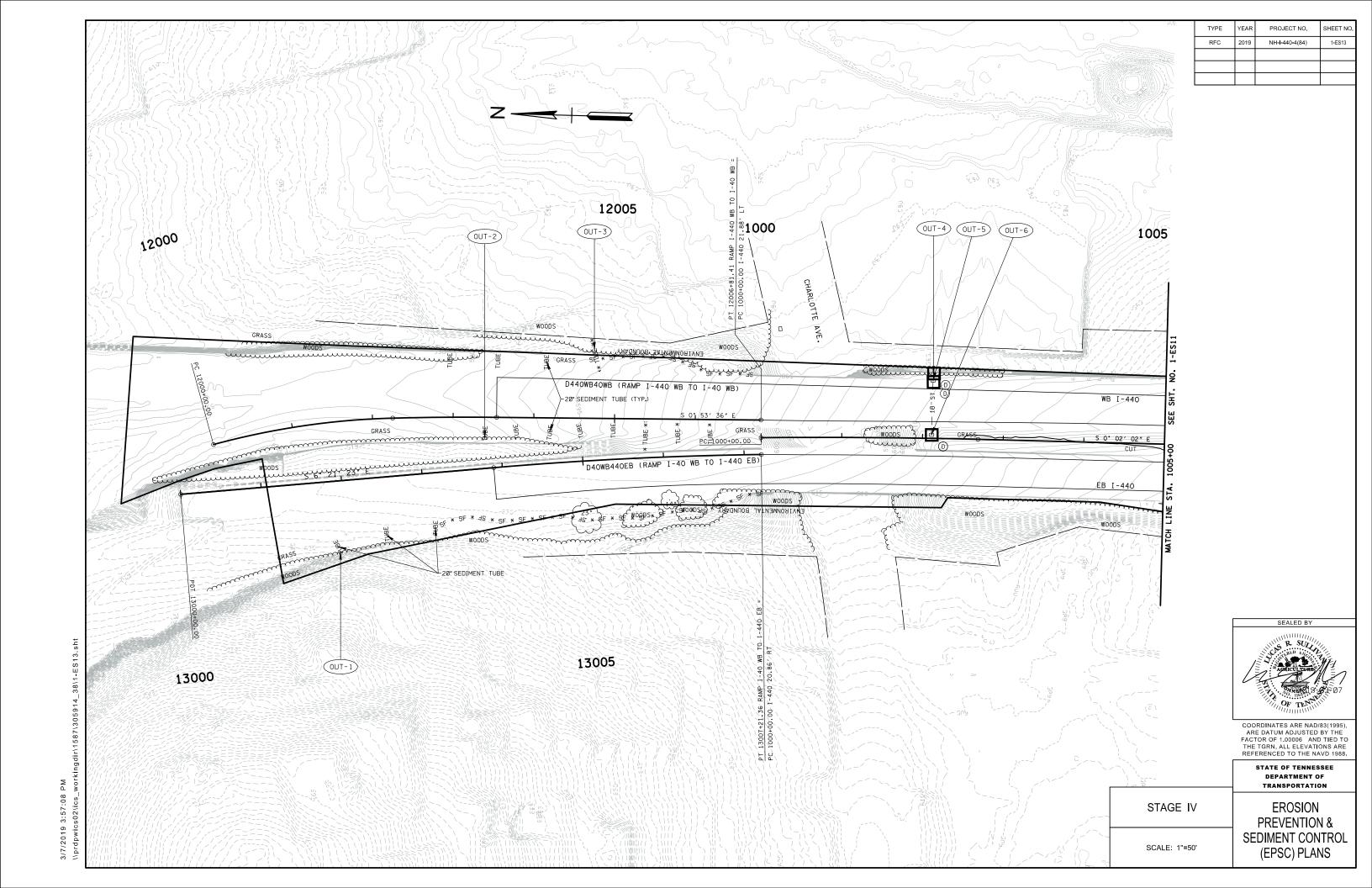
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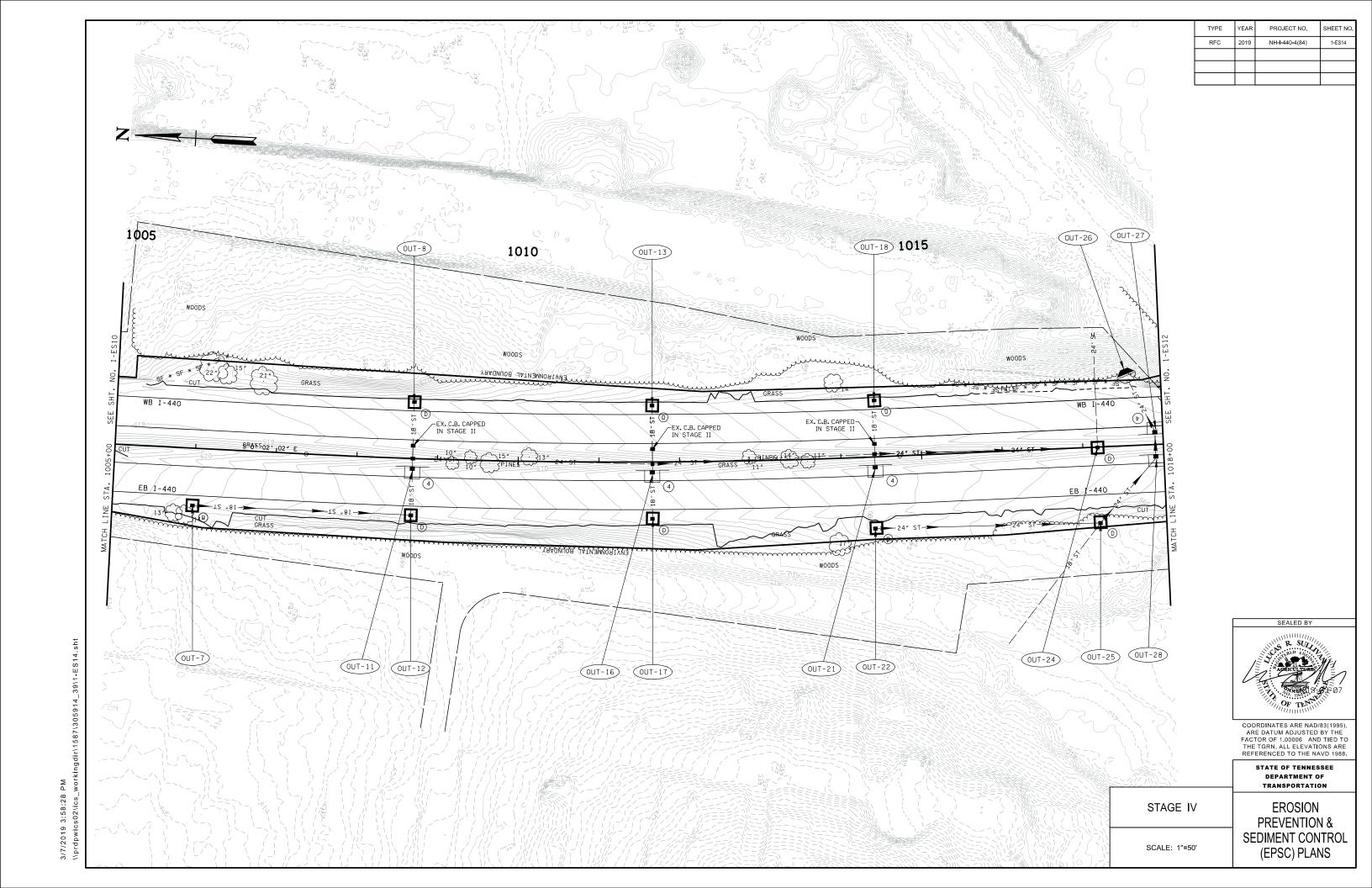
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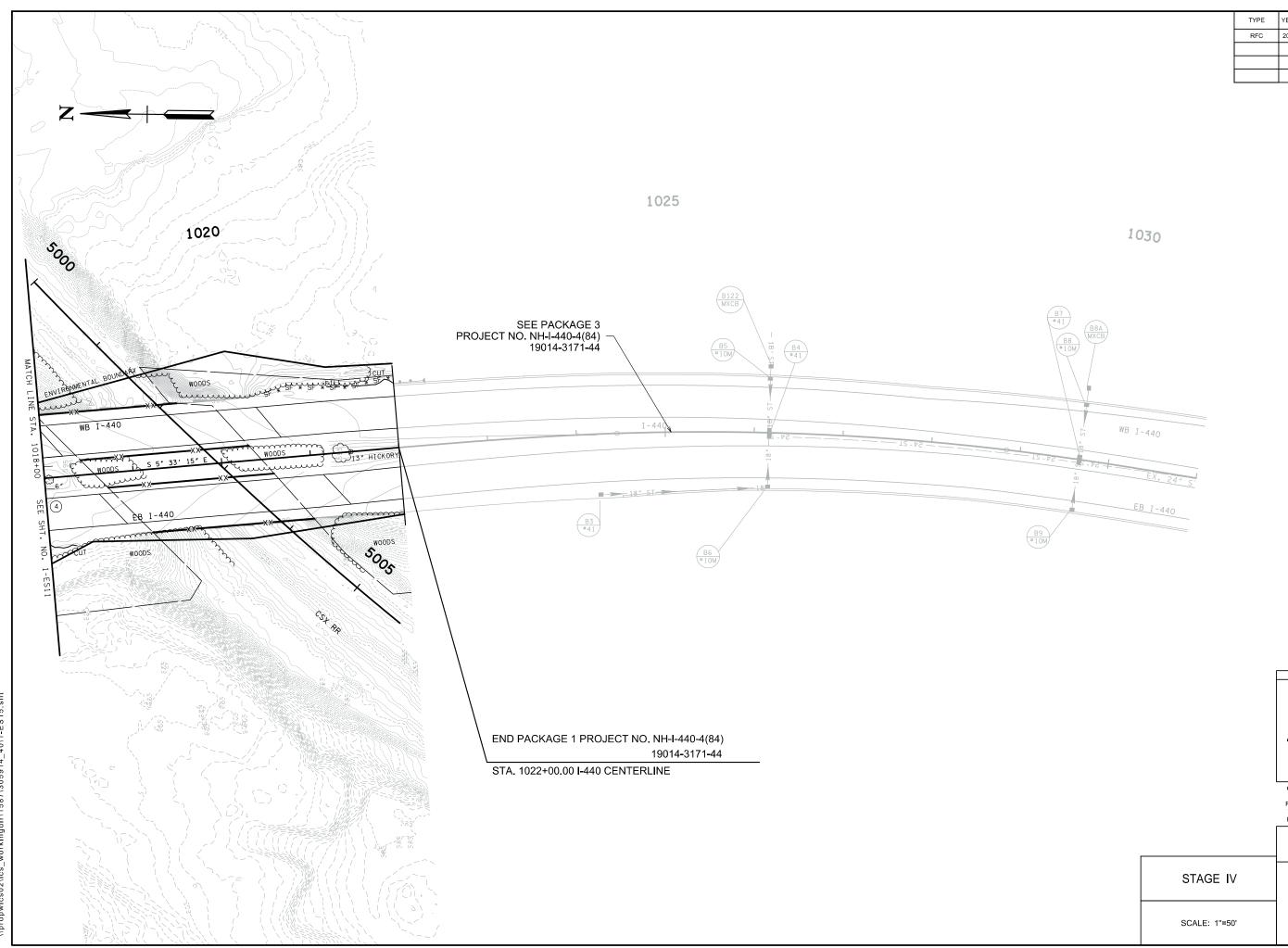
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