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

TYPE	YEAR	PROJECT NO.	SHEET NO.
P.E.	2014	95012-1221-14	
CONST.	2018	NH-109(31)	S-1

SWPPP INDEX OF SHEETS

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

1. SWPPP REQUIREMENTS (3.0)

1.1. HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING LICENSING AND/OR CERTIFICATIONS (3.1.1)?

☒ YES (CHECK ALL THAT APPLY BELOW) OR ☐ NO

- ☒ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC)
- ☒ A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
- ☒ HAS SUCCESSFULLY COMPLETED TDEC LEVEL II COURSE

1.2. DO THE EPSC PLANS INVOLVE STRUCTURAL DESIGN, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS FOR EPSC STRUCTURAL MEASURES (E.G. SEDIMENT BASINS) (3.1.1)? YES ☐ NO ☒

IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT? ☒ YES ☐ NO

1.3. DO THE PROJECT STORMWATER OUTFALLS DIRECTLY DISCHARGE INTO THE FOLLOWING (5.4.1)? ☐ YES (CHECK ALL THAT APPLY BELOW) ☒ NO

- ☐ WATERS WITH UNAVAILABLE PARAMETERS (303d FOR SILTATION OR HABITAT ALTERATION)
- ☐ EXCEPTIONAL TENNESSEE WATERS

IF YES TO SECTION 1.3, HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING LICENSING AND/OR CERTIFICATIONS (5.4.1.b)?

☐ YES (CHECK ALL THAT APPLY BELOW) ☐ NO

- ☐ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC)
- ☐ A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
- ☐ HAS SUCCESSFULLY COMPLETED TDEC LEVEL II COURSE

2. SITE DESCRIPTION (3.5.1)

2.1. PROJECT LIMITS (3.5.1.h): REFER TO TITLE SHEET

2.2. PROJECT DESCRIPTION (3.5.1.a):

TITLE: State Route 109, Reconstruct from North of State Route 24 (US-70) to South of Dry Fork Creek
COUNTY: Wilson
PIN: 100281.02

2.3. SITE MAP(S) (2.6.2.): REFER TO TITLE SHEET

2.4. DESCRIPTION OF EXISTING SITE TOPOGRAPHY (3.5.1.d): REFER TO EXISTING CONTOURS SHEET(S) 42-42N, DRAINAGE MAP SHEET(S) 31-31, USGS QUAD MAP, AND THE OUTFALL TABLE IN SECTION 4.3.

2.5. MAJOR SOIL DISTURBING ACTIVITIES (3.5.1.b) (CHECK ALL THAT APPLY):

- ☒ CLEARING AND GRUBBING
- ☒ EXCAVATION
- ☒ CUTTING AND FILLING
- ☒ FINAL GRADING AND SHAPING
- ☒ UTILITIES
- ☐ OTHER (DESCRIBE): ____

2.6. TOTAL PROJECT AREA (3.5.1.c): 81.1 ACRES

2.7. TOTAL AREA TO BE DISTURBED (3.5.1.c): 76.958 ACRES

2.8. NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT.

2.9. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? ☐ YES ☒ NO

IF YES, LIST THE CORRESPONDING PLAN SHEET: ____

2.10. WAS ROW FINALIZED PRIOR TO FEBRUARY 1, 2010 (4.1.2.2)?

☐ YES _____ (DATE) ☒ NO

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

2.11. SOIL PROPERTIES (3.5.1.f) (4.1.1).

SOIL PROPERTIES FOR THE PRIMARY SOILS ARE LISTED IN THE TABLE BELOW.

SOIL PROPERTIES

PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
Ag - Agee silty clay loam, rarely flooded	D	2.3%	0.37
BrB2 - Bradyville silt loam, 2 to 5 percent slopes	C	18.0%	0.43
BrC2 - Bradyville silt loam, 5 to 12 percent slopes	C	3.8%	0.43
ByB - Byler silt loam, 2 to 5 percent slopes	C	3.8%	0.43
CaB - Capshaw silt loam, 2 to 6 percent slopes	D	0.9%	0.43
Ea - Eagleville silty clay loam, occasionally flooded	D	3.5%	0.28
Ld - Lindell silt loam, 0 to 2 percent slopes, occasionally flooded	B/D	20.7%	0.32
TaB2 - Talbott silt loam, 2 to 5 percent slopes, eroded	C	25.8%	0.43
TaC2 - Talbott silt loam, 5 to 12 percent slopes, eroded	C	1.6%	0.43
TrC2 - Talbott silt loam, 5 to 20 percent slopes, eroded, rocky	C	17.4%	0.43
W - Water	W	0.4%	0.00
WaC2 - Waynesboro loam, 5 to 12 percent slopes, eroded	B	1.8%	0.28

2.12. IS ACID PRODUCING ROCK (APR) (i.e. PYRITE) LOCATED WITHIN THE PROJECT LIMITS? ☐ YES ☒ NO

2.12.1. IF YES TO SECTION 2.13, HAVE APR LOCATIONS BEEN IDENTIFIED WITHIN THE CONSTRUCTION PLANS AND/OR THE GEOTECHNICAL REPORT? ☐ YES ☐ NO; AND

2.12.2. IF YES TO SECTION 2.12.1, HAS A SPECIAL HANDLING PLAN AND/OR ADAPTIVE MANAGEMENT PLAN (AMP) BEEN PREPARED FOR THE PROJECT? ☐YES ☐ NO ☐ N/A (TDOT SP107L WILL BE APPLIED.)

2.13. PROJECT RUNOFF COEFFICIENTS AND AREA PERCENTAGES (3.5.1.g).

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS

AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
Impervious	16.80	20.7%		0.90
Pervious (B)	1.20	1.5%		0.20
Pervious (C)	45.00	55.5%		0.30
Pervious (D)	4.20	5.2%		0.40
Pervious (B/D)	13.70	16.9%		0.30
Pervious (W)	0.20	0.2%		0.00
WEIGHTED CURVE NUMBER OR C-FACTOR =				0.43

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS

AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
Impervious	35.70	44.0%		0.90
Pervious (B)	0.80	1.0%		0.20
Pervious (C)	31.40	38.7%		0.30
Pervious (D)	2.80	3.5%		0.40
Pervious (B/D)	10.10	12.5%		0.30
Pervious (W)	0.30	0.4%		0.00
WEIGHTED CURVE NUMBER OR C-FACTOR =				0.57

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

CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO: MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION. 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 ORDER OF CONSTRUCTION ACTIVITIES AND THE BASIC EPSC DEVICES DEPICTED ON THE EPSC PLAN CONTAINED WITHIN THE APPROVED SWPPP.

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

3.2. INSTALL STABILIZED CONSTRUCTION EXITS.

3.3. INSTALL PERIMETER PROTECTION WHERE RUNOFF SHEET FLOWS FROM THE SITE.

3.4. INSTALL INITIAL EPSC MEASURES BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CULVERT OR BRIDGE CONSTRUCTION, CUTTING, FILLING, OR ANY OTHER EARTHWORK OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.

3.5. PERFORM CLEARING AND GRUBBING (NOT MORE THAN 14 DAYS PRIOR TO GRADING OR EARTH-MOVING. REFER TO THE STABILIZATION PRACTICES BELOW.).

3.6. REMOVE AND STORE TOPSOIL.

3.7. STABILIZE DISTURBED AREAS WITHIN 14 DAYS OF COMPLETING ANY STAGE AND/OR PHASE OF ACTIVITY.

3.8. INSTALL UTILITIES, STORM SEWERS, CULVERTS AND BRIDGE STRUCTURES.

3.9. INSTALL INLET AND CULVERT PROTECTION ONCE STRUCTURES ARE IN PLACE AND CAPABLE OF INTERCEPTING FLOW.

3.10. PERFORM FINAL GRADING AND INSTALL BASE STONE.

3.11. COMPLETE FINAL PAVING AND SEALING OF CONCRETE.

3.12. INSTALL TRAFFIC CONTROL AND PROTECTION DEVICES.

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3.13. COMPLETE FINAL STABILIZATION (TOPSOIL, SEEDING, MULCH, EROSION CONTROL BLANKET, SOD, ETC.)

3.14. REMOVE TEMPORARY EROSION CONTROLS AND ACCUMULATED SEDIMENT FROM AREAS THAT HAVE ESTABLISHED AT LEAST 70 PERCENT UNIFORM PERMANENT VEGETATIVE COVER.

3.15. RE-STABILIZE AREAS DISTURBED BY REMOVAL ACTIVITIES.

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

4.1. STREAM INFORMATION (3.5.1.j, 3.5.1.k)

4.1.1. WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS WITHIN THE PROJECT LIMITS? ☒ YES ☐ NO

IF YES, THE IMPACT(S) HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE WATER QUALITY PERMITS.

4.1.2. HAVE ANY OF THE RECEIVING STATE WATERS LESS THAN OR EQUAL TO 1 FLOW MILE DOWN GRADIENT OF THE PROJECT LIMITS BEEN CLASSIFIED BY TDEC AS FOLLOWS (CHECK ALL THAT APPLY):

☐ 303d WITH UNAVAILABLE PARAMETERS FOR SILTATION

☐ 303d WITH UNAVAILABLE PARAMETERS FOR HABITAT ALTERATION

☐ EXCEPTIONAL TENNESSEE WATERS (ETW)

4.1.3. RECEIVING WATERS OF THE STATE (3.5.1.k).

RECEIVING WATERS OF THE STATE INFORMATION

TDOT STATE WATER LABEL FROM EBR	NAME OF RECEIVING STATE WATER	303d WITH UNAVAILABLE PARAMETERS FOR SILTATION OR HABITAT ALTERATION (YES OR NO)	ETW (YES OR NO)	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)
STR-1	SPENCER CREEK	NO	NO	YES	YES
STR-2		NO	NO	NO	YES
STR-3		NO	NO	YES	YES
STR-3A		NO	NO	YES	YES
STR-3.5		NO	NO	YES	YES
STR-4		NO	NO	YES	YES
	Dry Fork Branch	YES	NO	NO	NO

Please note: At the end of this project, a portion of Dry Fork Branch that is listed on the 303d List for Siltation and Habitat Alteration is located adjacent to the project. However, our project does not directly or indirectly discharge into this portion of Dry Fork Branch.

4.1.4. **ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES RE**QUIRED FOR WATERS OF THE STATE? (4.1.2, 5.4.2)

☐ YES ☒ NO

BUFFER ZONE REQUIREMENTS ARE NOT REQUIRED FOR PRE-APPROVED SITES (4.1.2.2.)

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____.

IF YES, CHECK THE APPROPRIATE BOX BELOW FOR SIZE OF BUFFER.

☐ 60-FEET FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET).

A 60 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM WITH THIS DESIGNATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 30 FEET AT ANY MEASURED LOCATION. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

☐ 30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET).

A 30 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 30 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 15 FEET AT ANY MEASURED LOCATION. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

4.1.5. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES NOT REQUIRED FOR STATE WATERS DUE TO A TDEC ARAP? (9.0)

☒ YES ☐ NO

4.1.6. ARE THERE WATER QUALITY RIPARIAN BUFFER ZONE EXEMPTIONS? (4.1.2.1) ☐ YES ☒ NO

IF YES, EXISTING CONDITIONS DESCRIPTION:_____

4.1.7. EVERY ATTEMPT SHOULD BE MADE FOR CONSTRUCTION ACTIVITIES TO NOT TAKE PLACE WITHIN THE WATER QUALITY RIPARIAN BUFFER ZONE AND FOR EXISTING FORESTED AREAS TO BE PRESERVED. (5.4.2.)

4.1.8. BECAUSE OF HEAVY SEDIMENT LOAD ASSOCIATED WITH CONSTRUCTION SITE RUNOFF, WATER QUALITY RIPARIAN BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE WATER QUALITY RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA.

4.1.9. WHERE IT IS NOT PRACTICABLE TO MAINTAIN A FULL WATER QUALITY RIPARIAN BUFFER, BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MUST BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CGP. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

4.2. RECEIVING WATERS OF THE UNITED STATES (WOTUS) (EPHEMERAL)

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WOTUS (EPHEMERAL)? ☒ YES ☐ NO

RECEIVING WOTUS (EPHEMERAL) INFORMATION

TDOT WOTUS LABEL	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN 15-FT OF THE PROJECT LIMITS (YES OR NO)
WWC-1/EPH-1	YES	YES
WWC-2/EPH-2	YES	YES
WWC-3/EPH-3	YES	YES
WWC-4/EPH-4	YES	YES
WWC-5/EPH-5	YES	YES
WWC-6/EPH-6	YES	YES

4.2.1. ARE WATER QUALITY RIPARIAN BUFFER ZONES REQUIRED FOR WOTUS (4.1.2)? ☐ YES ☒ NO

IF YES, A 15 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING EPHEMERAL STREAM IDENTIFIED AS A WOTUS (EPHEMERAL) BY THE U.S. ARMY CORPS OF ENGINEERS (USACE) OR THE ENVIRONMENTAL PROTECTION AGENCY SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE.

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____

4.2.2. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES NOT REQUIRED FOR WOTUS (EPHEMERAL) DUE TO A USACE PERMIT?

☒ YES ☐ NO

4.3. OUTFALL INFORMATION

4.3.1. OUTFALL TABLE (3.5.1.e). SEE SWPPP SHEET S-8 – S-9 FOR OUTFALL INFORMATION.

4.3.2. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (3.5.1.h)? ☒ YES ☐ NO

4.3.3. HAVE ALL OUTFALLS BEEN LABELED ON A USGS TOPOGRAPHIC MAP INCLUDED IN THE "DOCUMENTATION AND PERMITS" BINDER (2.6.2)? ☒YES ☐ NO

4.3.4. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED AROUND OR THROUGH THE PROJECT TO ELIMINATE CONTACT WITH DISTURBED AREAS OF THE PROJECT AND SEPARATE IT FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA OF TO THE OUTFALLS IN THIS AREA?

☒ YES ☐ NO ☐ N/A

4.3.5. ARE EQUIVALENT MEASURES BEING SUBSTITUTED FOR A SEDIMENT BASIN(S)? ☐ YES ☒ NO ☐ N/A

4.3.6. A SEDIMENT BASIN OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

OF TEN ACRES OR MORE FOR AN OUTFALL(S) THAT DOES NOT DISCHARGE TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS. A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. (3.5.3.3)

OR

OF FIVE ACRES OR MORE FOR AN OUTFALL(S) THAT DISCHARGES TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS. A TEMPORARY (OR PERMANENT) SEDIMENT BASIN THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/ 24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. (5.4.1.g).

IN BOTH INSTANCES, THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.

4.4. WETLAND INFORMATION

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WETLANDS? ☒ YES ☐ NO

IF YES, THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND IN THE WATER QUALITY PERMITS.

WETLAND INFORMATION

TDOT WETLAND LABEL	FROM STATION LT OR RT	TO STATION LT OR RT	TEMPORARY IMPACTS (AC)	PERMANENT IMPACTS (AC)
WTL-1	41+80 RT	50+94 RT	0.000	0.410
WTL-2	48+40 LT	48+70 LT	0.000	0.000
WTL-3	57+60 LT	61+30 LT	0.000	0.050
WTL-4	85+40 RT	86+40 RT	0.001	0.000
WTL-5	87+15 RT	87+35 RT	0.000	0.010
WTL-6	88+00 RT	89+80 RT	0.000	0.080
WTL-7	87+50 LT	88+30 LT	0.000	0.080

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
P.E.	2014	95012-1221-14	
CONST.	2018	NH-109(31)	S-3

4.5. TOTAL MAXIMUM DAILY LOADS (TMDL) INFORMATION (3.5.10)

4.5.1. IS THIS PROJECT LOCATED IN A HUC-8 WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION AND HABITAT ALTERATION?

☐YES ☒ NO

4.5.2. IF YES, IS THIS PROJECT LOCATED WITHIN A HUC-12 SUBWATERSHED WITH A WASTE LOAD ALLOCATION (WLA)?

☐ YES ☐ NO

4.5.3. IF YES, DOES THE PROJECT HAVE A DIRECT DISCHARGE TO A 303(d) LISTED STREAM FOR SILTATION OR HABITAT ALTERATION?

☐ YES ☐ NO

4.5.4. IF YES, HAS A SUMMARY OF THE CONSULTATION LETTER BEEN SUBMITTED/RECEIVED?

☐ YES ☐ NO

4.6. ECOLOGY INFORMATION (3.5.5.e)

DOES THE TDOT ENVIRONMENTAL BOUNDARIES REPORT SPECIFY SPECIAL NOTES TO BE ADDED TO THE PLAN SHEETS?

☐ YES ☒ NO

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____.

4.7. ENVIRONMENTAL COMMITMENTS

ARE THERE ANY NOTES ON THE ENVIRONMENTAL COMMITMENT SHEET?

☒ YES ☐ NO

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) 1B.

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

5.1. EPSC MEASURES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE EROSION (4.1.1).

5.2. EPSC MEASURES MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS, STREAM CHANNELS, AND STREAM BANKS. (4.1.1)

5.3. HAVE THE CONTROL MEASURES BEEN DESIGNED PER THE SIZE AND SLOPE OF THE DISTURBED DRAINAGE AREA (3.5.3.3)?

☒YES ☐ NO

5.4. THE CONTROL MEASURES HAVE, AT A MINIMUM, BEEN DESIGNED FOR THE 2-YEAR, 24 HOUR STORM EVENT (3.5.3.3, 5.4.1.a).

5.5. ARE THE LIMITS OF DISTURBANCE CLEARLY MARKED ON THE EPSC PLANS (3.5.1.h)? ☒ YES ☐ NO

5.6. AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.

5.7. UNLESS OTHERWISE NOTED IN THE PLANS, THE CONTRACTOR SHALL NOT CLEAR/DISTURB ANY AREA BEYOND 15 FEET FROM SLOPE LINES OR ROW/ EASEMENT LINE, WHICHEVER IS LESSER.

5.8. CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION, INCLUDING STREAM AND WETLAND BUFFERS (UNLESS PERMITTED), SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

5.9. HAVE STAGED EPSC PLANS BEEN PREPARED FOR THE PROJECT (3.5.2)?

YES ☒ NO ☐ (IF YES, CHECK ONE BELOW)

5.9.1. ☐ PROJECT DISTURBED AREA IS THAN LESS THAN 5 ACRES (MINIMUM OF TWO STAGES OF EPSC PLANS)

5.9.2. ☒ PROJECT DISTURBED AREA IS GREATER THAN 5 ACRES (MINIMUM OF THREE STAGES OF EPSC PLANS)

5.10. STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR GREATER REGARDLESS OF HEIGHT. HAVE STEEP SLOPES BEEN MINIMALLY DISTURBED AND/OR PROTECTED BY CONVEYING RUNOFF NON-EROSIVELY AROUND OR OVER THE SLOPE (3.5.3.2) (10. "STEEP SLOPE")? ☒ YES ☐ NO ☐ N/A

5.11. THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE AQUATIC RESOURCE ALTERATION (ARAP) PERMIT OR SECTION 401 CERTIFICATION (3.5.1.j). REFER TO THE LIST OF APPLICABLE ENVIRONMENTAL PERMITS LOCATED ON SWPPP SHEET S-7. ALL PERMITS WILL BE MAINTAINED ON SITE WITHIN THE "DOCUMENTATION AND PERMITS" BINDER.

5.12. THE EPSC CONTROL MEASURES LISTED IN THE QUANTITIES TABLE ON SHEET 41A HAVE BEEN SELECTED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES (3.5.3.1.b).

5.13. EPSC MEASURES SHALL BE INSTALLED PER TDOT STANDARDS (i.e. STANDARD DRAWINGS) AND SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS.

5.14. EPSC MEASURES WILL NOT BE INSTALLED WITHIN A STREAM WITHOUT FIRST OBTAINING APPROVAL FROM THE PERMITS SECTION.

5.15. TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REINSTALLED AT THE END OF THE WORKDAY OR BEFORE A PRECIPITATION EVENT.

5.16. EPSC MEASURES LOCATED IN WOTUS (EPHEMERAL STREAMS) MUST BE CONSIDERED TEMPORARY AND SHALL BE REMOVED AT THE END OF CONSTRUCTION.

5.17. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT OFF THE PROJECT LIMITS (E.G. R.O.W., EASEMENTS, ETC.), INTO WATERS OF THE STATE/U.S., OR ONTO ROADWAYS USED BY THE PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED TO A LEVEL 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. SEDIMENT THAT MIGRATES INTO WATERS OF THE STATE/US SHALL NOT BE REMOVED WITHOUT GUIDANCE FROM TDOT ENVIRONMENTAL PERSONNEL.

5.18. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION EXIT (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.

5.19. THE QUANTITIES REQUIRED FOR STABILIZED CONSTRUCTION EXITS PER TDOT STANDARDS HAVE BEEN SPECIFIED ON SHEET 2A - 2A1- (3.5.3.1.n).

5.20. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY APPROPRIATE CONTROLS THAT PROVIDE THE LEVEL OF TREATMENT (FILTRATION) NECESSARY TO COMPLY WITH PERMIT REQUIREMENTS. (4.1.4).

5.21. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED PER 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.

5.22. DISCHARGES FROM SEDIMENT BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE, WELL- VEGETATED AND/OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. (4.1.7).

5.23. THE DEWATERING OF WORK AREAS, TRENCHES, FOUNDATIONS, EXCAVATIONS, ETC. THAT HAVE COLLECTED STORMWATER, WATER FROM VEHICLE WASH AREAS, OR GROUNDWATER SHALL BE EITHER HELD IN SETTLING BASINS OR TREATED BY FILTRATION AND/OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.

5.24. WATER DISCHARGED FROM DEWATERING ACTIVITIES SHALL NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITHIN THE RECEIVING NATURAL RESOURCE. WATER MUST BE HELD WITHIN SETTLING BASINS UNTIL IT IS AT LEAST AS CLEAR AS THE RECEIVING WATERS.

5.25. DEWATERING STRUCTURES, SEDIMENT FILTER BAGS, SEDIMENT BASINS AND TRAPS SHALL NOT BE LOCATED CLOSER THAN 30 FEET (60 FEET DESIRABLE VEGETATIVE BUFFER) FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS AND 15 FEET (30 FEET DESIRABLE VEGETATIVE BUFFER) FOR ALL OTHER FEATURES FROM THE TOP BANK OF A STREAM, WOTUS (EPHEMERAL), WETLAND OR OTHER NATURAL RESOURCE AND SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED.

5.26. STABILIZATION PRACTICES: PRE-CONSTRUCTION VEGETATIVE COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 14 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA WILL BE SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED (3.5.3.1.h).

5.27. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT STABILIZATION WILL BE COMPLETED WITHIN 14 DAYS AFTER ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IN THAT AREA. PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE (3.5.3.2).

5.28. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE

5.29. DELAYING THE PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.

5.30. A SOIL ANALYSIS SHALL BE PERFORMED PRIOR TO THE APPLICATION OF FERTILIZERS TO ANY PORTION OF THE STE. SOILS SHOULD BE ANALYZED FOR pH, BUFFER VALUE, PHOSPHOROUS, POTASSIUM, CALCIUM AND MAGNESIUM. SOIL SAMPLES SHOULD BE REPRESENTATIVE OF THE AREA FOR WHICH FERTILIZER WILL BE APPLIED. SAMPLE TYPE SHOULD BE COLLECTED AND ANALYZED IN ACCORDANCE WITH THE UT EXTENSION "SOIL TESTING" BROCHURE PB1061. (4.1.5.)

5.31. FERTILIZERS SHALL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED FROM THE ANALYSES. ONCE APPLIED, FERTILIZERS SHALL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER.

5.32. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED. (3.5.3.2).

6. FLOCCULANTS (3.5.3.1.b)

IS ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF NECESSARY (5.4.1.a)? ☐ YES ☒ NO

IF YES, THE FOLLOWING NOTES APPLY:

6.1. POLYACRYLAMIDES (PAM) SHALL BE OF THE ANIONIC OR NEUTRALLY CHARGED TYPE ONLY. PAM REQUIREMENTS ARE AS FOLLOWS:

6.1.1. CATIONIC PAM IS NOT ALLOWED BECAUSE OF ITS TOXICITY TO FISH AND AQUATIC LIFE.

6.1.2. ANIONIC AND NEUTRALLY CHARGED PAM SHALL MEET THE EPA AND FDA ACRYLAMIDE MONOMER LIMITS OF EQUAL TO OR LESS THAN 0.05% BY WEIGHT ACRYLAMIDE MONOMER.

6.1.3. ANIONIC AND NEUTRALLY CHARGED PAM SHALL HAVE A DENSITY OF 10% TO 55% BY WEIGHT AND A MOLECULAR WEIGHT OF 16 TO 24 MG/MOLES.

6.1.4. PAM MIXTURES SHALL BE NON-COMBUSTIBLE.

6.1.5. PAM SHALL CONTAIN ONLY MANUFACTURER-RECOMMENDED ADDITIVES.

6.2. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE RESEARCHED, APPLIED IN ACCORDANCE WITH MANUFACTURE'S GUIDELINES AND FULLY DESCRIBED ON THE EPSC PLANS (3.5.3.1.b).

6.3. FLOCCULANTS SHALL BE HANDLED IN ACCORDANCE WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS AND SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE SPECIFIED USE CONFORMING TO ALL FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS.

6.4. ALL VENDORS AND SUPPLIERS OF FLOCCULANTS SHALL PRESENT OR SUPPLY A WRITTEN TOXICITY REPORT FOR BOTH ACUTE AND CHRONIC TOXICITY TESTS WHICH VERIFIES THAT THE FLOCCULANT EXHIBITS ACCEPTABLE TOXICITY PARAMETERS WHICH MEET OR EXCEED THE EPA REQUIREMENTS FOR THE STATE AND FEDERAL WATER QUALITY STANDARDS. WHOLE EFFLUENT TESTING DOES NOT MEET THIS REQUIREMENT AS PRIMARY REACTIONS HAVE OCCURRED AND TOXIC POTENTIALS HAVE BEEN REDUCED.

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6.5. DO NOT APPLY FLOCCULANTS DIRECTLY TO, OR WITHIN 60 FEET, OF ANY STREAMS, WETLANDS, OR OTHER NATURAL WATER RESOURCE LOCATED ON OR ADJACENT TO THE CONSTRUCTION SITE. DO NOT APPLY FLOCCULANTS DIRECTLY INTO WATERS CONTAINED WITHIN SEDIMENT PONDS OR TO SLOPES THAT PRODUCE RUNOFF DIRECTLY INTO A STREAM, WETLAND, OR OTHER NATURAL WATER RESOURCE. DO NOT APPLY FLOCCULANTS IMMEDIATELY AT A STORMWATER OUTFALL WHERE RUNOFF LEAVES THE PROJECT LIMITS.

6.6. BEFORE FLOCCULANTS CAN BE USED ON A CONSTRUCTION PROJECT, SITE-SPECIFIC SOIL SAMPLES MUST BE OBTAINED AND TESTED BY THE MANUFACTURER OR THEIR REPRESENTATIVE, TO IDENTIFY THE OPTIMUM FLOCCULANT TYPE AND APPLICATION RATE. SINCE FLOCCULANT EFFICACY IS HIGHLY DEPENDENT ON SOIL TYPE, SOIL SAMPLES WILL NEED TO BE OBTAINED FROM EACH SOIL HORIZON THAT WILL BE ACCESSED DURING EXCAVATION. FLOCCULANTS SHOULD BE APPLIED ON A CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED APPLICATION OR DOSAGE RATE. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA. DO NOT APPLY EMULSION FORMS OF FLOCCULANTS DIRECTLY TO STORMWATER RUNOFF OR TO STREAMS, WETLANDS, OR OTHER WATER RESOURCES DUE TO SURFACTANT TOXICITY.

6.7. FLOCCULANT POWDER MAY BE APPLIED BY A HAND SPREADER OR A MECHANICAL SPREADER. IF APPROVED BY THE MANUFACTURER, FLOCCULANT MAY BE MIXED WITH DRY SILICA SAND, FERTILIZER, SEED, OR OTHER SOIL AMENDMENTS TO AID IN SPREADING. FLOCCULANTS MAY ALSO BE APPLIED WITH A WATER TRUCK OR AS PART OF HYDRO-SEEDING. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA.

6.8. MANUFACTURER'S GUIDANCE SHOULD BE FOLLOWED FOR BLOCK, LOG AND SOCK SPACING CONFIGURATIONS. BEFORE FLOCCULANTS CAN BE USED ON A CONSTRUCTION PROJECT, SITE-SPECIFIC SOIL SAMPLES MUST BE OBTAINED AND TESTED BY THE MANUFACTURER OR THEIR REPRESENTATIVE, TO IDENTIFY THE OPTIMUM FLOCCULANT TYPE AND APPLICATION RATE. SINCE FLOCCULANT EFFICACY IS HIGHLY DEPENDENT ON SOIL TYPE, SOIL SAMPLES WILL NEED TO BE OBTAINED FROM EACH SOIL HORIZON THAT WILL BE ACCESSED DURING EXCAVATION. FLOCCULANTS SHOULD BE APPLIED ON A CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED APPLICATION OR DOSAGE RATE.

7. UTILITY RELOCATION

ARE UTILITIES INCLUDED IN THE CONTRACT? ☒ YES ☐ NO

IF YES, THE FOLLOWING APPLY:

7.1. STORMWATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND TREATED PRIOR TO DISCHARGE.

7.2. SILT FENCE SHALL BE INSTALLED ON THE DOWNGRADIENT SIDE OF STOCKPILED SOIL. ANY TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING DRY CONDITIONS, REMOVED AND STABILIZED BY THE END OF THE WORK DAY.

7.3. UTILITY CROSSINGS IN ENVIRONMENTAL FEATURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. ENVIRONMENTAL PERMITS APPLY TO UTILITIES IN THIS PROJECT. THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE PERMITS.

7.4. IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR TO PROTECT EXPOSED EARTH FROM EROSION AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE EPSC 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.

7.5. 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 FOURTEEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOILS OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT 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 THE TRENCH IS BACKFILLED.

7.6. IN REGARDS TO EPSC, TDEC REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS ON THIS PROJECT. THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT.

7.7. TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORMWATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EPSC MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.

7.8. FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EPSC MEASURES 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.

7.9. THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS AS APPROVED BY THE TDOT RESPONSIBLE PARTY.

7.10. THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EPSC MEASURES TO REPLACE ONSITE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE TDOT ENGINEER BEFORE COMMENCING WORK.

7.11. FOR UTILITY CROSSINGS THAT UTILIZE HORIZONTAL DIRECTIONAL DRILLING THE FOLLOWING SHALL APPLY:

7.11.1. THE ENTRY AND EXIT POINTS SHALL BE AT LEAST 50 FEET FROM THE STREAM BANK OR WETLAND BOUNDARY.

7.11.2. THE DEPTH OF BORE BELOW THE STREAMBED IS SUFFICIENT TO PREVENT RELEASE OF DRILLING FLUID, BASED ON THE PARENT MATERIAL.

7.11.3. A SITE-SPECIFIC CONTINGENCY AND CONTAINMENT PLAN FOR INADVERTENT RELEASE OF DRILLING FLUID SHALL BE ESTABLISHED PRIOR TO COMMENCEMENT OF WORK. THIS PLAN SHALL BE SUBMITTED TO THE TDOT PROJECT ENGINEER AND THE TDOT ENVIRONMENTAL DIVISION PERMITS AND/OR COMPLIANCE AND FIELD SERVICES OFFICE FOR REVIEW AND APPROVAL.

8. MAINTENANCE AND INSPECTION

8.1. INSPECTION PRACTICES (3.5.8)

8.1.1. PROJECT EPSC INSPECTORS AND ENGINEERS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE INSPECTION, IMPLEMENTATION, MAINTENANCE. AND/OR REPAIR OF EPSC MEASURES SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS (3.5.8.1.):

8.1.1.1. SUCCESSFULLY COMPLETED THE TDOT EPSC INSPECTIONS TRAINING AND ANY RECERTIFICATION COURSE AS REQUIRED.

8.1.1.2. SUCCESSFULLY COMPLETED THE TDEC "LEVEL I - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL" COURSE AND ANY RECERTIFICATION COURSES AS REQUIRED.

8.1.1.3. BE A CURRENT TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT.

8.1.1.4. BE A CURRENT CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC).

8.1.1.5. SUCCESSFULLY COMPLETED TDEC "LEVEL II – DESIGN PRINCIPLES FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY RECERTIFICATION COURSE AS REQUIRED.

8.1.2. THE TDOT CONSTRUCTION ENGINEER (OR THEIR DULY AUTHORIZED REPRESENTATIVE) AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT CONSTRUCTION ENGINEER OR THEIR DULY AUTHORIZED REPRESENTATIVE SHALL COMPLETE THE EPSC INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

8.1.3. THE INSPECTOR SHALL CONDUCT PRE-CONSTRUCTION INSPECTIONS TO VERIFY AREAS THAT ARE NOT TO BE DISTURBED HAVE BEEN MARKED IN THE SWPPP AND IN THE FIELD BEFORE LAND DISTURBANCE ACTIVITIES BEGIN AND INITIAL MEASURES HAVE BEEN INSTALLED (10 "INSPECTOR") (3.5.1.o).

8.1.4. EPSC CONTROLS SHALL BE INSPECTED TO VERIFY MEASURES HAVE BEEN INSTALLED AND MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS, SPECIFICATIONS, AND GOOD ENGINEERING PRACTICES. EPSC INSPECTIONS SHALL BE DOCUMENTED ON THE TDOT EPSC INSPECTION REPORT FORM AND THE TDEC CONSTRUCTION STORMWATER INSPECTION CERTIFICATION (TWICE-WEEKLY INSPECTIONS) FORM.

8.1.5. OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING EROSION AND CONTROLLING SEDIMENT INCLUDING SIGNIFICANT IMPACTS TO SURROUNDING STATE WATERS, WOTUS (EPHEMERAL), WETLANDS, OTHER NATURAL RESOURCES AND ADJACENT PROPERTY OWNERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWN GRADIENT LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.

8.1.6. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS APART (3.5.8.2.a). A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE INSPECTIONS OF TDOT EPSC, NPDES AND WATER QUALITY PERMIT REQUIREMENTS SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE.

8.1.7. THE FREQUENCY OF EPSC INSPECTIONS MAY BE REDUCED TO ONCE A MONTH WHERE SITES OR PORTIONS OF SITES HAVE BEEN TEMPORARILY STABILIZED UNTIL CONSTRUCTION ACTIVITIES RESUME WITH WRITTEN NOTIFICATION BY THE TDOT REGIONAL ENGINEER TO TDEC NASHVILLE CENTRAL OFFICE AND SUBSEQUENT TDEC APPROVAL. WRITTEN NOTIFICATION MUST INCLUDE THE INTENT TO CHANGE FREQUENCY AND JUSTIFICATION (3.5.8.2.a).

8.1.8. ALL DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR MATERIAL STORAGE THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL WILL BE INSPECTED (3.5.8.2.b).

8.1.9. THE INSPECTOR WILL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, USACE SECTION 404, AND TVA SECTION 26a PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE (10 "INSPECTOR").

8.1.10. THE SWPPP WILL BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. REVISION(S) WILL BE RECORDED WITHIN 7 DAYS OF THE INSPECTION. REVISION(S) WILL BE IMPLEMENTED WITHIN 14 DAYS OF THE INSPECTION (3.5.8.2.e AND 3.5.8.2.f).

8.1.11. DOCUMENTATION OF INSPECTIONS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER. REPORTS WILL BE SUBMITTED TO THE TDOT PROJECT ENGINEER PER THE CONTRACT.

8.1.12. THESE INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS OF THE SITE THAT HAVE MET FINAL STABILIZATION REQUIREMENTS AND HAVE BEEN NOTED IN THE SWPPP.

8.1.13. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES (3.5.8.2.h).

8.2. DULY AUTHORIZED REPRESENTATIVE (7.7.3)

THE PROJECT ENGINEER MAY DELEGATE AN INDIVIDUAL AND/OR CONSULTANT TO SIGN EPSC INSPECTIONS REPORTS. FOR SATISFYING SIGNATORY REQUIREMENTS FOR EPSC INSPECTION REPORTS, THE PROJECT ENGINEER AND NEWLY AUTHORIZED INDIVIDUAL ACCEPTING RESPONSIBILITY MUST COMPLETE AND SIGN THE TDOT CONSTRUCTION DIVISION EPSC DELEGATION OF AUTHORITY.

8.3. MAINTENANCE PRACTICES (3.5.3.1 AND 3.5.7)

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8.3.1. ALL CONTROLS WILL BE MAINTAINED IN GOOD AND EFFECTIVE OPERATING ORDER AND IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES. (3.5.3.1.b)

8.3.2. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

8.3.3. 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 24-HOUR TIMEFRAME, WRITTEN DOCUMENTATION PROVIDED BY THE CONTRACTOR SHALL BE PLACED IN THE FIELD DIARY AND EPSC INSPECTION REPORT. AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION. (3.5.8.2.e).

8.3.4. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES (SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, OTHER CONTROLS, ETC.) WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). (3.5.3.1.e).

8.3.5. DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE STEPS TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE EPSC MEASURES AT THE CONTRACTOR'S OWN EXPENSE.

8.3.6. CHECK DAMS WILL BE INSPECTED FOR STABILITY. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES ONE-HALF (½) THE HEIGHT OF THE DAM.

8.3.7. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS, DOES NOT MIGRATE INTO FEATURES REMOVED FROM, AND DOES NOT MIGRATE ONTO ADJACENT PROPERTIES AND/OR INTO WATERS OF THE STATE/U.S.

8.3.8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EROSION CONTROL WILL BE REMOVED (3.5.3.1.f).

8.3.9. ALL SEEDED AREAS WILL BE CHECKED FOR BARE SPOTS, EROSION WASHOUTS, AND VIGOROUS GROWTH FREE OF SIGNIFICANT WEED INFESTATIONS.

9. SITE ASSESSMENTS (3.1.2)

QUALITY ASSURANCE SITE ASSESSMENTS OF EROSION PREVENTION AND SEDIMENT CONTROLS SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE GUIDELINES.

10. STORMWATER MANAGEMENT (3.5.4)

10.1. STORMWATER MANAGEMENT WILL BE HANDLED BY TEMPORARY CONTROLS OUTLINED IN THIS SWPPP AND ANY PERMANENT CONTROLS NEEDED TO MEET PERMANENT STORMWATER MANAGEMENT NEEDS IN THE POST CONSTRUCTION PERIOD. PERMANENT CONTROLS WILL BE DEPICTED ON THE PLANS AND NOTED AS PERMANENT.

10.2. DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (3.5.4): Final side slopes will be protected with seed and mulch or sod. Steep slopes will be protected with seeding and erosion control blankets

10.3. OTHER ITEMS NEEDING CONTROL (3.5.5)

CONSTRUCTION MATERIALS: THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

☒ LUMBER, GUARDRAIL, TRAFFIC CONTROL DEVICES
☒ CONCRETE WASHOUT
☒ PIPE CULVERTS (I.E. CONCRETE, CORRUGATED METAL, HDPE, ETC.)
☒ MINERAL AGGREGATES, ASPHALT
☒ EARTH
☒ LIQUID TRAFFIC STRIPING MATERIALS, PAINT
☒ ROCK
☒ CURING COMPOUND
☒ EXPLOSIVES
☐ OTHER _____

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

10.4. WASTE MATERIALS (3.5.5.b)

WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH THE TDOT CONSTRUCTION CONTRACT AND FEDERAL AND STATE REGULATIONS. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN 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.

10.5. HAZARDOUS WASTE (3.5.5.c) (7.9)

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S ON-SITE REPRESENTATIVE WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

10.6. SANITARY WASTE (3.5.5.b)

PORTABLE SANITARY FACILITIES WILL BE PROVIDED ON ALL CONSTRUCTION SITES. SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY LOCAL REGULATIONS. THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

10.7. OTHER MATERIALS

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

☒ FERTILIZERS AND LIME
☒ PESTICIDES AND/OR HERBICIDES
☒ DIESEL AND GASOLINE
☒ MACHINERY LUBRICANTS (OIL AND GREASE)

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

11. NON-STORMWATER DISCHARGES (3.5.9)

11.1. THE FOLLOWING NON-STORMWATER DISCHARGES ARE ANTICIPATED DURING THE CONSTRUCTION OF THIS PROJECT (CHECK ALL THAT APPLY):

☒ DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER.
☒ WATERS USED TO WASH VEHICLES (OF DUST AND SOIL) WHERE DETERGENTS ARE NOT USED AND DETENTION AND/OR FILTERING IS PROVIDED BEFORE THE WATER LEAVES THE SITE.
☒ WATER USED TO CONTROL DUST. (3.5.3.1.n)
☒ POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHING FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE.
☒ UNCONTAMINATED GROUNDWATER OR SPRING WATER.
☒ FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS.
☐ OTHER: _____

11.2. ALL ALLOWABLE NON-STORMWATER DISCHARGES WILL BE DIRECTED TO STABLE DISCHARGE STRUCTURES PRIOR TO LEAVING THE SITE. FILTERING OR CHEMICAL TREATMENT MAY BE NECESSARY PRIOR TO DISCHARGE. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.

11.3. THE DESIGN OF ALL IMPACTED EPSC MEASURES RECEIVING FLOW FROM ALLOWABLE NON-STORMWATER DISCHARGES MUST BE DESIGNED TO HANDLE THE VOLUME OF THE NON-STORMWATER COMPONENT.

11.4. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON-SITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.

11.5. ARE ANY DISCHARGES ASSOCIATED WITH INDUSTRIAL (NON-CONSTRUCTION STORMWATER) ACTIVITY EXPECTED (3.5.1.i)?

☐ YES ☒ NO

IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER: _____

12. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (3.5.5.c, 5.1)

12.1. SPILL PREVENTION (3.5.5.c)

12.1.1. CONTRACTOR'S BULK FUEL AND PETROLEUM PRODUCTS STORED ON-SITE OR ADJACENT TO THE R.O.W. IN ABOVE GROUND STORAGE TANKS WITH AGGREGATE STORAGE CAPACITY IN EXCESS OF 1,320 GALLONS SHALL HAVE SECONDARY CONTAINMENT.

12.1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN AS REQUIRED BY TDOT SPECIAL PROVISION 107FP (REGARDING WATER QUALITY AND STORM WATER PERMITS) AND THE LAW.

12.1.3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ANY NECESSARY LOCAL, STATE, AND FEDERAL PERMITS. THE SPCC PLAN AND/OR PERMITS SHALL BE KEPT ON-SITE AND A COPY PROVIDED TO THE TDOT CONSTRUCTION ENGINEER.

12.2. MATERIAL MANAGEMENT

12.2.1. HOUSEKEEPING

ONLY NEEDED PRODUCTS WILL BE STORED ON-SITE BY THE CONTRACTOR. EXCEPT FOR BULK MATERIALS THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL. DUST GENERATED WILL BE CONTROLLED IN AN ENVIRONMENTALLY SAFE MANNER. VEGETATION AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.

12.2.2. HAZARDOUS MATERIALS

PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RE-SEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S LABEL DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM. POTENTIAL pH-MODIFYING MATERIALS SUCH AS: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS AND CURING WATERS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON SITE AND MANAGED TO PREVENT CONTAMINATION OF STORMWATER RUNOFF.

12.3. PRODUCT SPECIFIC PRACTICES

12.3.1. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.

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

12.3.2. FERTILIZERS: FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY THE SOIL ANALYSIS OR TDOT. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA UNDER COVER. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.

12.3.3. PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. THE EXCESS WILL BE DISPOSED OF PER THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.

12.3.4. CONCRETE TRUCKS: CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED.

12.4. SPILL MANAGEMENT

IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP IF NECESSARY:

12.4.1. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.

12.4.2. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. AS APPROPRIATE, EQUIPMENT AND MATERIALS MAY INCLUDE ITEMS SUCH AS BOOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR CLEAN UP PURPOSES.

12.4.3. ALL SPILLS WILL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

12.4.4. THE CONTRACTOR'S RESPONSIBLE PARTY WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.

12.4.5. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING THE SITE AND ENTERING RECEIVING WATERS, PERSONNEL WILL RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE SUPERINTENDENT AFTER THE SITUATION HAS BEEN STABILIZED.

12.4.6. IF AN OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.

12.4.7. IF A SPILL OCCURS THE CONTRACTOR'S SITE SUPERINTENDENT SHALL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE TDOT CONSTRUCTION ENGINEER AND/OR PROJECT ENGINEER. 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.

12.4.8. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT SHALL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. SPILL RESPONSE EQUIPMENT SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.

12.5. SPILL NOTIFICATION (5.1)

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

12.5.1. THE TDOT PROJECT ENGINEER IS RESPONSIBLE FOR NOTIFYING THE REGIONAL PROJECT DEVELOPMENT OFFICE (E.G. TRANSPORTATION ENVIRONMENTAL STUDIES SPECIALIST) AS SOON AS HE OR SHE HAS KNOWLEDGE OF THE DISCHARGE.

12.5.2. THE TDOT REGIONAL PROJECT DEVELOPMENT OFFICE WILL NOTIFY THE LOCAL TDEC ENVIRONMENTAL FIELD OFFICE AND ANY OTHER APPLICABLE REGULATORY AGENCIES WITHIN 24 HOURS OF THE SPILL.

12.5.3. IN ADDITION TO ANY FOLLOW UP NOTIFICATIONS REQUIRED BY FEDERAL LAW, A WRITTEN DESCRIPTION OF THE RELEASE, DATE OF RELEASE AND CIRCUMSTANCES LEADING TO THE RELEASE, WHAT ACTIONS WERE TAKEN TO MITIGATE EFFECTS OF THE RELEASE, AND STEPS TAKEN TO MINIMIZE THE CHANCE OF FUTURE OCCURRENCES WILL BE SUBMITTED TO THE APPROPRIATE TDEC ENVIRONMENTAL FIELD OFFICE WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE.

12.5.4. THE SWPPP MUST BE MODIFIED WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE PROVIDING A DESCRIPTION OF THE RELEASE, CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF RELEASE. THE SWPPP WILL BE REVIEWED AND MODIFIED AS NECESSARY TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES.

13. RECORD-KEEPING

13.1. REQUIRED RECORDS

TDOT OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MAINTAIN AT THE SITE THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES (3.5.3.1.m) (4.1.5.) (6.2.1):

13.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR.

13.1.2. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.

13.1.3. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

13.1.4. RECORDS EPSC INSPECTION REPORTS AND CORRECTIVE MEASURES.

13.1.5. RECORDS OF QUALITY ASSURANCE SITE ASSESSMENTS.

13.1.6. COPY OF SITE EPSC INSPECTOR'S CERTIFICATION AND/OR LICENSING

13.1.7. COPY OF REQUIRED SOIL ANALYSIS

13.1.8. A COPY OF ANY REGULATORY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE *SWPPP* OR EPSC CONTROLS.

13.2. RAINFALL MONITORING PLAN (3.5.3.1.o):

13.2.1. EQUIPMENT

AT A MINIMUM, THE CONTRACTOR WILL INSTALL A FENCE POST TYPE RAIN GAUGE TO MEASURE RAINFALL. THE STANDARD FENCE POST RAIN GAUGE WILL BE A WEDGE-SHAPED GAUGE THAT MEASURES UP TO 6 INCHES OF RAINFALL. AN ENGLISH SCALE WILL BE PROVIDED ON ONE FACE, WITH A METRIC SCALE ON THE OTHER FACE. GRADUATION WILL BE PERMANENTLY MOLDED IN DURABLE WEATHER-RESISTANT PLASTIC. THE MINIMUM GRADUATION WILL BE 0.01 INCH (OR 0.1MM). AN ALUMINUM BRACKET WITH SCREWS MAY BE USED TO MOUNT THE GAUGE ON A WOODEN SUPPORT.

13.2.2. 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, GUTTER, TREES, ETC.). AT LEAST ONE RAIN GAUGE PER LINEAR MILE IS REQUIRED ALONG (AS MEASURED ALONG THE CENTERLINE OF THE PRIMARY ALIGNMENT) THE PROJECT WHERE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING IS ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED.

13.2.3. METHODS

RAINFALL MONITORING WILL BE INITIATED PRIOR TO CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING, OR FILLING, EXCEPT AS SUCH MINIMAL CLEARING MAY BE NECESSARY TO INSTALL A RAIN GAUGE IN AN OPEN AREA. THE RAIN GAUGE WILL BE CHECKED FOR OPERATIONAL SOUNDNESS DAILY (DURING NORMAL BUSINESS HOURS) IN WET TIMES AND WEEKLY IN DRY TIMES. GAUGES WILL BE REPAIRED OR REPLACED ON THE SAME DAY IF FOUND TO BE NON-OPERATIONAL OR MISSING.

13.2.4. EACH RAIN GAUGE WILL BE READ (FOR DETAILED RECORDS OF RAINFALL) AND EMPTIED AFTER EVERY RAINFALL EVENT OCCURRING ON THE PROJECT SITE AT APPROXIMATELY THE SAME TIME OF THE DAY (DURING NORMAL BUSINESS HOURS). DURING PERIODS OF DRY CONDITIONS, IT WILL NOT BE NECESSARY TO READ THE RAIN GAUGE EVERY DAY. IN LIEU OF THIS REQUIREMENT ON WEEKENDS AND ON STATE HOLIDAYS, THE RAIN GAUGES CAN BE EMPTIED THE NEXT BUSINESS DAY AND A REFERENCE SITE USED FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION FOR THOSE DAYS. A REFERENCE SITE IS THE DOCUMENTATION FROM THE CLOSEST GAUGE WITHIN PROXIMITY OF THE PROJECT FROM A RECOGNIZED SOURCE SUCH AS THE NOAA NATIONAL WEATHER SERVICE.

13.2.5. DETAILED RECORDS WILL BE RECORDED OF RAINFALL EVENTS INCLUDE DATES, AMOUNTS OF RAINFALL, AND THE APPROXIMATE DURATION (OR THE STARTING AND ENDING TIMES). THE RAINFALL RECORDS SHALL BE RECORDED ON THE TDOT RAINFALL RECORD SHEET AND SHALL BE MAINTAINED IN THE "DOCUMENTATION AND PERMITS" BINDER.

13.2.6. IF THE RAINFALL EVENT IS STILL IN PROGRESS AT THE DAILY RECORDING TIME, THE GAUGE WILL BE EMPTIED AND THE RECORD WILL INDICATE THAT THE STORM EVENT WAS STILL IN PROGRESS.

13.2.7. RAIN GAUGE INFORMATION (DETAILED RECORDS), INCLUDING THE LOCATION OF THE NEAREST OUTFALL, WILL BE RECORDED ON THE EPSC INSPECTION REPORT FORMS AT THE TIME OF MEASUREMENT.

13.3. KEEPING PLANS CURRENT (3.4)

13.3.1. THE EPSC PLAN IS TO SERVE AS AN INITIAL GUIDE FOR SITE PERSONNEL AS THE CONSTRUCTION PROCESS DEVELOPS. IT MUST BE AMENDED, MODIFIED, AND UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL REGULATORY OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.

13.3.2. THE STAGES DEPICTED WITHIN THE EPSC PLANS MAY NOT COINCIDE WITH THE ACTUAL STAGES OF CONSTRUCTION ESTABLISHED BY THE CONTRACTOR DURING CONSTRUCTION, THUS MODIFICATIONS WILL BE REQUIRED TO ENSURE THE EPSC PLAN IS MAINTAINED TO DEPICT CURRENT SITE CONDITIONS. IT SHOULD BE MAINTAINED SUCH THAT IT WILL ALWAYS REFLECT THE MEASURES THAT ARE INSTALLED DURING THE VARIOUS STAGES OF CONSTRUCTION. IT IS IMPRACTICAL TO DETERMINE ALL THE INTERMEDIATE STAGES OF CONSTRUCTION THAT WILL OCCUR, THUS THESE DOCUMENTS MUST BE UPDATED THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT.

13.3.3. THE TDOT EPSC INSPECTOR OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MODIFY AND UPDATE THE SWPPP WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:

13.3.3.1. WHENEVER THERE IS A CHANGE IN THE SCOPE OF THE PROJECT THAT WOULD BE EXPECTED TO HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE SWPPP;

13.3.3.2. WHENEVER INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE, OR FEDERAL OFFICIALS INDICATE THE SWPPP IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM CONSTRUCTION ACTIVITY SOURCES, OR IS OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY; WHERE LOCAL, STATE, OR FEDERAL OFFICIALS DETERMINE THAT THE SWPPP IS INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT

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SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP;

13.3.3.3. WHEN ANY NEW OPERATOR AND/OR SUB-OPERATOR IS ASSIGNED OR RELIEVED OF THEIR RESPONSIBILITY TO IMPLEMENT A PORTION OF THE SWPPP;

13.3.3.4. TO PREVENT A NEGATIVE IMPACT TO LEGALLY PROTECTED STATE OR FEDERALLY LISTED OR PROPOSED THREATENED OR ENDANGERED AQUATIC FAUNA;

13.3.3.5. WHEN THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS INCLUDING: USE OF DIFFERENT TREATMENT CHEMICALS, DIFFERENT DOSAGE OR APPLICATION RATES OR A DIFFERENT AREA OF APPLICATION NOT SPECIFIED ON THE EPSC PLANS.

13.3.3.6. ALL SWPPP REVISION(S) SHALL BE RECORDED WITHIN 7 DAYS BY THE PROJECT EPSC INSPECTOR.

13.3.3.7. WHEN A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION), CONSTRUCTION SHALL NOTIFY THE PERMITS SECTION FOR PROPER COORDINATION.

13.4. MAKING PLANS ACCESSIBLE

13.4.1. TDOT WILL RETAIN A COPY OF THIS SWPPP (INCLUDING A COPY OF THE "DOCUMENTATION AND PERMITS" BINDER AT THE CONSTRUCTION SITE (OR OTHER LOCATION ACCESSIBLE TO TDEC AND THE PUBLIC) FROM THE DATE CONSTRUCTION COMMENCES TO THE DATE OF FINAL STABILIZATION. TDOT WILL HAVE A COPY OF THE SWPPP AVAILABLE AT THE LOCATION WHERE WORK IS OCCURRING ON-SITE FOR THE USE OF OPERATORS AND THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE SWPPP WHENEVER THEY ARE ON THE CONSTRUCTION SITE (6.2).

13.4.2. PRIOR TO THE INITIATION OF LAND DISTURBING ACTIVITIES AND UNTIL THE SITE HAS MET THE FINAL STABILIZATION CRITERIA, TDOT OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL POST A NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION (3.3.3) (6.2.1):

13.4.2.1. A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT NUMBER FOR THE PROJECT;

13.4.2.2. THE INDIVIDUAL NAME, COMPANY NAME, E-MAIL ADDRESS (IF APPLICABLE) AND TELEPHONE NUMBER OF THE LOCAL PROJECT SITE OWNER AND OPERATOR CONTACT;

13.4.2.3. A BRIEF DESCRIPTION OF THE PROJECT; AND

13.4.2.4. THE LOCATION OF THE SWPPP.

13.4.3. ALL INFORMATION DESCRIBED IN SECTION 13.4.2 MUST BE MAINTAINED IN LEGIBLE CONDITION. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE DUE TO SAFETY CONCERNS, THE NOTICE SHALL BE POSTED IN A LOCAL BUILDING. THE NOTICE MUST BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION WHERE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY.

13.5. NOTICE OF TERMINATION (8.0)

13.5.1. WHEN ALL STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED BY FINAL STABILIZATION, THE TDOT REGIONAL ENGINEER WILL SUBMIT A NOTICE OF TERMINATION (NOT) THAT IS SIGNED IN ACCORDANCE WITH THE PERMIT TO THE TDEC CENTRAL OFFICE IN NASHVILLE, TN.

13.5.2. FOR THE PURPOSES OF THE CERTIFICATION REQUIRED BY THE NOT, THE ELIMINATION OF STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY MEANS THE

13.5.2.1. ALL EARTH-DISTURBING ACTIVITIES ON THE SITE ARE COMPLETED AND ALL DISTURBED SOILS AT THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL HAVE BEEN FINALLY STABILIZED; AND

13.5.2.2. ALL CONSTRUCTION MATERIALS, WASTE AND WASTE HANDLING DEVICES, AND ALL EQUIPMENT, AND VEHICLES THAT WERE USED DURING CONSTRUCTION HAVE BEEN REMOVED AND PROPERLY DISPOSED; AND

13.5.2.3. ALL STORMWATER CONTROLS THAT WERE INSTALLED AND MAINTAINED DURING CONSTRUCTION, EXCEPT THOSE THAT ARE INTENDED FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE, HAVE BEEN REMOVED; AND

13.5.2.4. ALL POTENTIAL POLLUTANTS AND POLLUTANT GENERATING ACTIVITIES ASSOCIATED WITH CONSTRUCTION HAVE BEEN REMOVED; AND

13.5.2.5. THE PERMITTEE HAS IDENTIFIED WHO IS RESPONSIBLE FOR ONGOING MAINTENANCE OF ANY STORMWATER CONTROLS LEFT ON THE SITE FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE; AND

13.5.2.6. TEMPORARY EPSC MEASURES HAVE BEEN OR WILL BE REMOVED AT AN APPROPRIATE TIME TO ENSURE FINAL STABILIZATION IS MAINTAINED; AND

13.5.2.7. ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDENTIFIED SITE THAT ARE AUTHORIZED BY A NPDES GENERAL PERMIT HAVE OTHERWISE BEEN ELIMINATED FROM THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL.

13.6. RETENTION OF RECORDS (6.2)

TDOT WILL RETAIN COPIES OF THE SWPPP, ALL REPORTS REQUIRED BY THE PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT FOR THE PROJECT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THE NOT WAS FILED.

14. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (7.7.5)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED BY ME, OR UNDER MY DIRECTION OR SUPERVISION. THE SUBMITTED INFORMATION IS TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

John L. Hewitt

AUTHORIZED TDOT PERSONNEL SIGNATURE (3.3.1)

John Hewitt

PRINTED NAME

CE Manager 2

TITLE

10/5/2017

DATE

15. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (7.7.6)

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE REVIEWED THIS DOCUMENT, ANY ATTACHMENTS, AND THE SWPPP REFERENCED ABOVE. BASED ON MY INQUIRY OF THE CONSTRUCTION SITE OWNER/DEVELOPER IDENTIFIED ABOVE AND/OR MY INQUIRY OF THE PERSON DIRECTLY RESPONSIBLE FOR ASSEMBLING THIS NOI AND SWPPP, I BELIEVE THE INFORMATION SUBMITTED IS ACCURATE. I AM AWARE THAT THIS NOI, IF APPROVED, MAKES THE ABOVE-DESCRIBED CONSTRUCTION ACTIVITY SUBJECT TO NPDES PERMIT NUMBER TNR100000, AND THAT CERTAIN OF MY ACTIVITIES ONSITE ARE THEREBY REGULATED. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS, AND FOR FAILURE TO COMPLY WITH THESE PERMIT REQUIREMENTS. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

AUTHORIZED TDOT PERSONNEL SIGNATURE (3.3.1)

PRINTED NAME

TITLE

DATE

16. ENVIRONMENTAL PERMITS (9.0)

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

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

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
P.E.	2014	95012-1221-14	
CONST.	2018	NH-109(31)	S-8

OUTFALL TABLE (3.5.1.d, 5.4.1.g)

EPSC STAGE	OUTFALL LABEL	SUB OUT-FALL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	STAGE 1 DRAINAGE AREA (AC)	STAGE 2 DRAINAGE AREA (AC)	STAGE 3 DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING RESOURCE (TDOT EBR LABEL) OR OTHER	COMMENTS
2 & 3	1		26+30 RT	2.7		0.3	12.8	NO	STR-1	SEE SEQUENCING NOTES SLOPE IN STAGE 3 = 13.7%
2		1A	24+80 LT	7.4		1.3		N/A	STR-1	
2		1B	24+80 RT	5.5		0.3		N/A	STR-1	
1 & 2	2		35+75 RT	5.75	9.06	9.6		N/A	WWC-1/EPH-1	
1, 2 & 3	3		39+60 LT	1.5	8.8	8.8	13.3	NO	STR-1	SEE TEMPORARY DIVERSION CHANNEL STATION IN STAGE 2 & 3 = 39+90 LT SLOPE IN STAGE 3 = 8.3%
1, 2 & 3	4		42+00 RT	5.5	2.2	6.11	6.11	N/A	STR-3A/RELOCATED STR-3	STATION IN STAGE 2 & 3 = 42+20 RT SLOPE IN STAGE 2 & 3 = 2.4%
1, 2 & 3	5		58+30 LT	2.1	1.2	6.4	4.7	N/A	WTL-3	SLOPE IN STAGE 2 = 5.5% SLOPE IN STAGE 3 = 6.8%
1		5A	58+40 RT	6.8	4.6			N/A	WTL-3	
1		5B	58+60 RT	3.7	1.8			N/A	WTL-3	
1, 2 & 3	6		64+00 LT	1.2	0.2	0.2	1.2	N/A	STR-3.5	
1, 2 & 3	7		64+20 LT	1.4	0.2	0.2	1.1	N/A	STR-3.5	
1, 2 & 3	8		63+90 RT	2.2	3.7	3.7	5.5	N/A	STR-3.5	
1, 2 & 3	9		64+20 RT	0.5	2.6	2.6	2.6	N/A	STR-3.5	
1, 2 & 3	10		68+60 LT	11.6	0.7	0.3	16.3	NO	STR-1	SUB OUTFALLS SLOPE IN STAGE 2 = 1.2% SLOPE IN STAGE 3 = 5.2%
1		10A	68+50 LT	2.2	0.4			N/A	STR-1	
1		10B	68+70 LT	9.3	1.0			N/A	STR-1	
1 & 2		10C	68+50 RT	5.5	0.1	0.1		N/A	STR-1	
1 & 2		10D	68+80 RT	0.5	7.7	7.7		N/A	STR-1	
1 & 2	11		72+70 LT	2.1	0.87	0.3		N/A		SLOPE IN STAGE 2 = 1.5%
1, 2 & 3	12		77+75 LT	0.8	0.1	0.1	5.6	N/A		SLOPE IN STAGE 3 = 5.2%
1 & 2		12A	77+70 LT	0.8	0.1	0.1		N/A		
1 & 2		12B	77+80 LT	1.6	0.8	0.8		N/A		
1 & 2		12C	77+75 RT	5.2	5.6	5.6		N/A		
1, 2 & 3	13		86+50 LT	2.3	0.3	0.87	0.7	N/A	STR-4	SLOPE IN STAGE 2 = 5.53% SLOPE IN STAGE 3 = 2.3%
1, 2 & 3	14		88+20 LT	2.2	4.5	0.87	0.5	N/A	WTL-7/STR-4	STATION IN STAGE 2 & 3 = 87+50 LT SLOPE IN STAGE 2 = 2.72% SLOPE IN STAGE 3 = 8.9%
2 & 3	15		86+10 RT	6.4		0.1	0.4	N/A	WTL-4/STR-4	SLOPE IN STAGE 3 = 13.0%
1, 2 & 3	16		87+35 RT	1.1	3.2	3.2	0.4	N/A	WTL-5/STR-4	STATION IN STAGE 2 & 3 = 86+50 RT SLOPE IN STAGE 3 = 13.0%
1, 2 & 3	17		KNOLLWOOD LANDING 26+40 RT	4.1	0.3	0.3	1.0	N/A		SLOPE IN STAGE 3 = 13.1%
1, 2 & 3	18		KNOLLWOOD LANDING 26+40 LT	4.6	0.2	0.2	0.8	N/A		SLOPE IN STAGE 3 = 6.5%
1, 2 & 3	19		113+10 LT	12.1	0.1	1.0	1.7	N/A	WWC-4/EPH-4	STATION IN STAGE 2 & 3 = 114+70 LT SLOPE IN STAGE 2 = 6.6% SLOPE IN STAGE 3 = 7.2%
1, 2 & 3		19A	113+00 LT	6.6	1.0	1.0	1.0	N/A	WWC-4/EPH-4	STATION IN STAGE 2 & 3 = 113+50 LT SLOPE IN STAGE 3 = 5.0%
1, 2 & 3		19B	113+05 RT	2.4	0.1	1.9	13.9	NO	WWC-4/EPH-4	STATION IN STAGE 2 & 3 = 112+50 RT SLOPE IN STAGE 2 = 2.5% SLOPE IN STAGE 3 = 8.4%
1		19C	114+00 RT	0.8	3.5			N/A	WWC-4/EPH-4	
1		19D	111+50 RT	2.5	1.8			N/A	WWC-4/EPH-4	

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
P.E.	2014	95012-1221-14	
CONST.	2018	NH-109(31)	S-9

EPSC STAGE	OUTFALL LABEL	SUB OUT-FALL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	STAGE 1 DRAINAGE AREA (AC)	STAGE 2 DRAINAGE AREA (AC)	STAGE 3 DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING RESOURCE (TDOT EBR LABEL) OR OTHER	COMMENTS
1, 2 & 3	20		127+50 LT	4.0	0.3	0.4	1.8	N/A		SLOPE IN STAGE 2 = 3.8% SLOPE IN STAGE 3 = 7.9%
1		20A	127+50 LT	4.0	0.3			N/A		
1		20B	127+70 LT	3.8	0.1			N/A		
1		20C	127+40 RT	2.5	9.3			N/A		
1		20D	127+60 RT	3.1	0.5			N/A		
1	21		NORTHERN ROAD 24+50 RT	7.3	2.74			N/A	STR-1	
2 & 3	22		NORTHERN ROAD 22+00 RT	2.1		10.84	24.1	NO	STR-1	SEE SEQUENCING NOTES SLOPE IN STAGE 3 = 7.3%
2 & 3	23		NORTHERN ROAD 22+90 RT	2.3		10.84	12.7	NO	STR-1	SEE SEQUENCING NOTES SLOPE IN STAGE 3 = 7.3%
3	24		135+60 LT	9.5			1.3	N/A		
1, 2 & 3	25		138+70 LT	0.4	1.2	1.7	1.9	N/A		SLOPE IN STAGE 2 = 1.6%
1		25A	138+40 LT	9.5	1.3			N/A		
1, 2 & 3		25B	138+40 RT	2.9	2.0	2.0	0.2	N/A		SLOPE IN STAGE 3 = 5.3%
1, 2 & 3		25C	138+70 RT	3.6	1.0	1.0	1.2	N/A		SLOPE IN STAGE 3 = 4.9%
1, 2 & 3	26		143+40 LT	4.6	2.2	1.0	2.3	N/A	WWC-5/EPH-5	STATION IN STAGE 2 & 3 = 142+75 LT SLOPE IN STAGE 2 & 3 = 3.6%
1, 2 & 3		26A	143+75 RT	15.9	0.2	3.3	0.2	N/A	WWC-5/EPH-5	STATION IN STAGE 2 = 143+90 RT STATION IN STAGE 2 = 143+50 RT SLOPE IN STAGE 3 = 15.9%
1 & 3		26B	144+10 RT	9.7	3.6		3.6	N/A	WWC-5/EPH-5	STATION IN STAGE 3 = 143+80 RT
1 & 2		26C	144+40 LT	4.6	2.2	2.1		N/A	WWC-5/EPH-5	STATION IN STAGE 2 = 143+30 LT SLOPE IN STAGE 2 = 2.6%
1 & 2	27		159+00 RT	4	3.1	3.1		N/A		
1, 2 & 3	28		160+80 RT	14.0	0.3	0.7	1.7	N/A	WWC-6/EPH-6	STATION IN STAGE 2 & 3 = 161+50 RT SLOPE IN STAGE 2 = 11.2% SLOPE IN STAGE 3 = 18.9%
1, 2 & 3	29		173+00 LT	4.7	0.4	1.1	2.4	N/A		STATION IN STAGE 2 & 3 = 174+00 RT SLOPE IN STAGE 2 = 3.6% SLOPE IN STAGE 3 = 2.8%
1, 2 & 3		29A	173+20 LT	3.7	3.9	1.8	1.3	N/A		STATION IN STAGE 2 & 3 = 172+20 LT SLOPE IN STAGE 2 = 4.8% SLOPE IN STAGE 3 = 4.9%
1, 2 & 3		29B	173+70 RT	1.0	0.6	1.0	0.6	N/A		STATION IN STAGE 2 & 3 = 172+40 LT SLOPE IN STAGE 2 & 3 = 6.6%
2		29C	173+60 RT	2.8		2.4		N/A		
1, 2 & 3	30		DOUBLE LOG CABIN ROAD 52+75 RT	3.0	0.1	0.1	0.1	N/A		
1, 2 & 3	31		DOUBLE LOG CABIN ROAD 52+75 LT	3.0	0.1	0.1	0.1	N/A		
1, 2 & 3	32		183+00 LT	7.3	1.5	1.5	9.0	N/A		
1, 2 & 3	33		183+00 RT	5.7	0.1	0.1	0.9	N/A	WTL-8	SLOPE IN STAGE 3 = 8.9%

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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

Index Of Sheets

SEE SHEET NO. 1A FOR INDEX

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

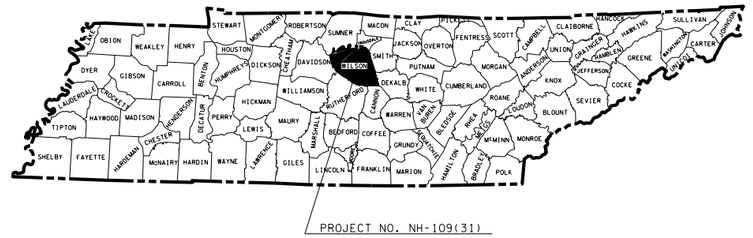
TENN.	YEAR	SHEET NO.
	2017	1
FED. AID PROJ. NO.	NH-109(31)	
STATE PROJ. NO.	95012-3221-14	

WILSON COUNTY

S.R. 109
FROM: 0.28 MILES NORTH OF S.R. 24 (U.S. 70)
TO: 0.48 MILES SOUTH OF DRY FORK BRANCH

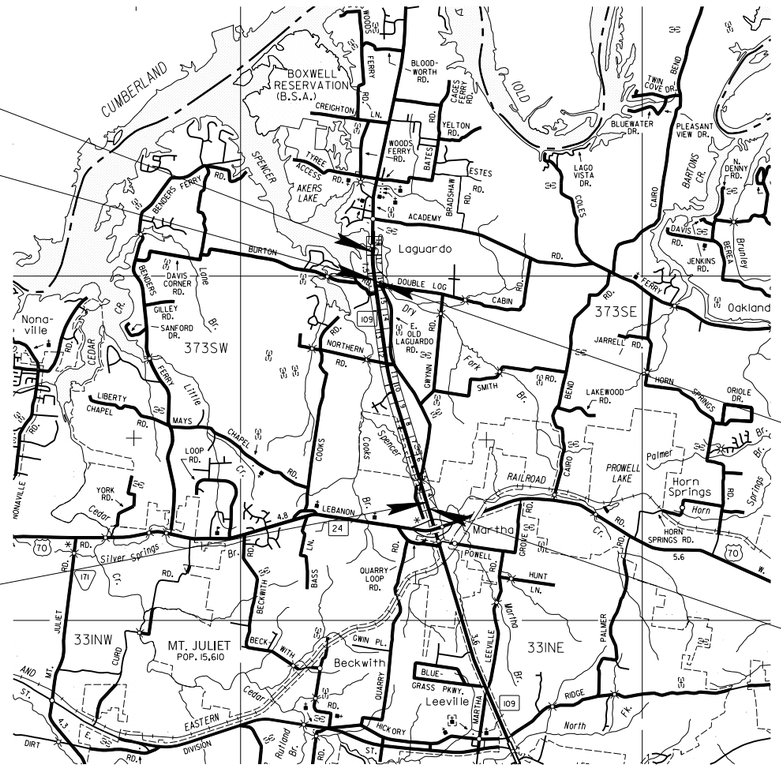
GRADE, DRAIN, BRIDGE, PAVE, SIGN & MARKING

STATE HIGHWAY NO. 109 F.A.H.S. NO. N/A



95012-2221-14
END PROJECT NO. NH-109(31) R.O.W.
STA. 203+44.66

95012-2222-14
BEGIN PROJECT NO. NH-109(32) R.O.W.
STA. 184+36.86
(ADJACENT PROJECT)



SCALE: 1"= 1 MILE

95012-2221-14
BEGIN PROJECT NO. NH-109(31) R.O.W.
STA. 24+60.00

95012-3221-14
END PROJECT NO. NH-109(31) CONST.
STA. 183+00.00
N 708999.4056
E 1837946.2440

95012-3221-14
BEGIN PROJECT NO. NH-109(31) CONST.
STA. 20+00.00
N 693107.1817
E 1841646.5388

NO EXCLUSIONS
NO EQUATIONS

SEALED BY

APPROVED: Paul D. Degges
PAUL D. DEGGES, CHIEF ENGINEER

DATE:

APPROVED:
JOHN SCHROER, COMMISSIONER

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

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

TDOT DESIGN MANAGER 1 JERRY HUGHES, SR.
DESIGNED BY BWSC, INC.
DESIGNER MICHAEL TAPP, P.E. CHECKED BY ANN WEIS, P.E.
P.E. NO. 95012-1221-14 (DESIGN)
PIN 100281.02

ROADWAY LENGTH	3.061 MILES
BRIDGE LENGTH	0.026 MILES
BOX BRIDGE LENGTH	0.000 MILES
PROJECT LENGTH	3.087 MILES

TRAFFIC DATA	
ADT (2018)	23,880
ADT (2038)	44,890
DHV (2038)	4,938
D	60 - 40
T (ADT)	18 %
T (DHV)	12 %
V	60 MPH

SURVEY DATE: JANUARY 2, 2012

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

9/28/2017
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	1A

ROADWAY INDEX

SHEET NAME	SHEET NO.
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STANDARD TRAFFIC OPERATIONS & STRUCTURE DRAWINGS	1A2
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UTILITIES INDEX	U1-1

STANDARD ROADWAY DRAWINGS

ROADWAY DESIGN STANDARDS

DWG.	REV.	DESCRIPTION
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-5	05-01-08	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-6	03-30-10	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-7	05-24-12	STANDARD LEGEND FOR EROSION PREVENTION AND
RD01-TS-1	02-05-16	DESIGN STANDARDS FOR LOCAL ROADS AND STREETS
RD01-TS-1A	02-05-16	DESIGN STANDARDS FOR LOW-VOLUME LOCAL ROADS (ADT<=400)
RD01-TS-2	03-16-17	DESIGN STANDARDS FOR COLLECTOR ROADS AND STREETS
RD01-TS-3C	10-15-02	DESIGN STANDARDS 4 AND 6 LANE ARTERIAL HIGHWAYS WITH FLUSH MEDIANS
RD01-TS-6	10-10-16	TYPICAL CURB AND GUTTER SECTIONS WITH SHOULDER
RD01-TS-6A	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITHOUT SHOULDER
RD01-TS-6B		TYPICAL CURB AND GUTTER FOR HIGH SPEED SUBURBAN ROADWAYS
RD01-SE-3	10-15-02	RURAL SUPERELEVATION DETAILS
RD01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD01-S-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
RD01-S-11B	10-15-02	DESIGN AND CONSTRUCTION DETAILS FOR ROCK CUT SLOPE AND CATCHMENT
RD01-SD-1		INTERSECTION SIGHT DISTANCE DESIGN AND GENERAL NOTES
RD01-SD-4		INTERSECTION SIGHT DISTANCE 5-LANE AND 4-LANE UNDIVIDED ROADWAYS
RD-UD-3	09-05-96	UNDERDRAIN DETAILS
RD-UD-4	01-25-16	UNDERDRAIN LATERAL DETAILS
RD-UD-9	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 6:1 SLOPES

PIPE CULVERTS AND ENDWALLS

DWG.	REV.	DESCRIPTION
D-PB-1	03-16-17	STANDARD DETAILS FOR CONCRETE PIPE INSTALLATION
D-PB-2	01-29-14	STANDARD DETAILS FOR FLEXIBLE PIPE INSTALLATION
D-PB-3		INDUCED TRENCH SOIL EMBANKMENT FOR PIPE CULVERT INSTALLATION
D-PG-3	04-15-97	FERROUS AND ALUMINUM CORRUGATED METAL PIPE
D-PO-1	05-27-01	OVAL & FLAT BASE CONCRETE CULVERT PIPE
D-PE-18A	01-06-15	18" CONCRETE ENDWALL CROSS DRAIN
D-PE-18B		18" CONCRETE ENDWALL CROSS DRAIN
D-PE-24A	01-21-16	24" CONCRETE ENDWALL CROSS DRAIN
D-PE-24B		24" CONCRETE ENDWALL CROSS DRAIN
D-PE-30A	10-10-16	30" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-30B		30" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-42A	06-14-13	42" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-42B		42" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-99	11-01-13	PIPE GRATE & SKEWED CONNECTION DETAILS FOR "U" ENDWALLS
D-SEW-1A	03-16-17	SIDE DRAIN CONCRETE ENDWALL WITH STEEL PIPE GRATE
D-PE-1	02-12-76	TYPE "A" CONCRETE ENDWALL (2:1 SLOPE. 36" TO 78")
D-PE-4	10-10-16	STRAIGHT TYPE CONCRETE ENDWALL

CATCH BASINS AND MANHOLES

DWG.	REV.	DESCRIPTION
D-CB-42S	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SC	03-11-14	STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-44SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 44 CATCH BASIN
D-CB-99	05-20-14	MISCELLANEOUS DETAILS FOR RECTANGULAR STRUCTURES
D-CBB-42	05-27-01	CAST IRON GRATE DETAILS FOR NOS. 42, 43 & 44 TYPE CATCH BASINS

ROADWAY AND PAVEMENT APPURTENANCES

DWG.	REV.	DESCRIPTION
RP-I-5	12-18-96	EXAMPLES OF STREET AND ALLEY INTERSECTIONS
RP-R-1	05-27-01	STANDARD RAMPS TO SIDE ROADS
RP-MC-1	02-28-02	STANDARD 4" SLOPING (MOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-MC-2	02-28-02	STANDARD 6" SLOPING (MOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-10	07-29-03	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-11	02-28-02	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-H-3	10-10-16	CURB RAMP AND TRUNCATED DOME SURFACE DETAIL
RP-H-4	10-10-16	PERPENDICULAR CURB RAMP
RP-H-7	10-10-16	PERPENDICULAR CURB RAMP IN CURVE
RP-S-7	02-05-16	DETAILS FOR CONCRETE SIDEWALKS

SAFETY DESIGN AND FENCES

DWG.	REV.	DESCRIPTION
S-CZ-1		CLEAR ZONE CRITERIA
S-PL-1		SAFETY PLAN AT ROADSIDE HAZARDS
S-PL-2	10-10-16	SAFETY PLAN AT SIDEROADS OR PRIVATE DRIVES
S-PL-3	10-10-16	SAFETY PLAN: MINIMUM INSTALLATION AT BRIDGE ENDS

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS

9/28/2017
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	1 A1

STANDARD ROADWAY DRAWINGS

DWG. NO.	REV.	DESCRIPTION
SAFETY DESIGN AND FENCES		
S-GRT-2	03-28-17	TYPE 38 GUARDRAIL TERMINAL
S-GRT-2P	10-10-16	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINAL
S-GRT-3	03-28-17	TYPE 21 GUARDRAIL END TERMINAL
S-GRA-4	03-28-17	IN-LINE GUARDRAIL ANCHOR
S-F-1	05-24-12	HIGH VISIBILITY FENCE
S-RP-2	02-08-16	STANDARD CONCRETE RIGHT-OF-WAY MARKERS
DESIGN - TRAFFIC CONTROL		
T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-4	10-10-16	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-11	10-10-16	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES AND ROUTES ON RURAL ROADS
T-M-13		SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES
T-M-15A	01-30-15	ROUTES ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED ROUTES
T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-PBR-1	03-16-17	INTERCONNECTED PORTABLE BARRIER RAIL
T-WZ-11	03-05-17	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-30	09-01-05	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (40 MPH OR LESS)
T-WZ-31	09-01-05	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (GREATER THAN 40 MPH)
EROSION PREVENTION AND SEDIMENT CONTROL		
EC-STR-2	08-01-12	SEDIMENT FILTER BAG
EC-STR-3B	03-16-17	SILT FENCE
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-8	06-10-14	FILTER SOCK
EC-STR-27	08-01-12	TEMPORARY SLOPE DRAIN AND BERM
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	06-10-14	SEDIMENT TUBE
EC-STR-6	05-06-16	ROCK CHECK DAM
EC-STR-6A	05-06-16	ENHANCED ROCK CHECK DAM
EC-STR-7	08-01-12	SEDIMENT TRAP WITH CHECK DAM
EC-STR-11	03-16-17	CULVERT PROTECTION TYPE 1
EC-STR-19	04-01-08	CATCH BASIN PROTECTION
EC-STR-39	08-01-12	CURB INLET PROTECTION TYPE 1 & 2
EC-STR-39A	08-01-12	CURB INLET PROTECTION TYPE 3 & 4
EC-STR-41		CATCH BASIN FILTER ASSEMBLY (TYPE 1)
EC-STR-41A		CATCH BASIN FILTER ASSEMBLY (TYPE 1) SLIPCOVER DETAILS
EC-STR-45		CATCH BASIN FILTER ASSEMBLY (TYPE 5)
EC-STR-45A		CATCH BASIN FILTER ASSEMBLY (TYPE 5) SLIPCOVER DETAILS

DWG. NO.	REV.	DESCRIPTION
EC-STR-11A	08-01-12	CULVERT PROTECTION TYPE 2
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-30A		INSTREAM DIVERSION (WITH TRAFFIC)
EC-STR-31	08-01-12	TEMPORARY DIVERSION CHANNEL
EC-STR-31A	04-01-08	TEMPORARY DIVERSION CHANNEL DESIGN
EC-STR-32	08-01-12	TEMPORARY DIVERSION CULVERTS
EC-STR-33	08-01-12	SUSPENDED PIPE DIVERSION (DOWNSTREAM)
EC-STR-33A	08-01-12	SUSPENDED PIPE DIVERSION (UPSTREAM)
EC-STR-36	08-01-12	TURF REINFORCEMENT MAT FOR CHANNEL INSTALLATION

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD ROADWAY DRAWINGS

9/28/2017
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	1A2

STANDARD TRAFFIC OPERATIONS DRAWINGS

DWG.	REV.	DESCRIPTION
SIGNS		
T-S-8	07-15-91	HIGHWAY SHIELDS USED ON STATE NUMBERED ROUTES AND ARROWS
T-S-10	04-04-12	STANDARD MOUNTING DETAILS - FLAT SHEET SIGNS, ALUMINUM-STEEL DESIGN
T-S-11	06-06-11	DELINEATOR AND MILEPOST DETAILS
T-S-16	07-02-15	GROUND MOUNTED ROADSIDE SIGN AND DETAILS
T-S-17	07-02-15	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-18	02-14-14	END OF ROADWAY AND DEAD END SIGNS, METAL BARRICADES (TYPE III) & WORK ZONE SPEED SIGNS
T-S-19	07-19-15	STANDARD STEEL SIGN SUPPORTS
T-S-20	11-01-11	SIGN DETAILS

STANDARD STRUCTURE DRAWINGS

DWG.	REV.	DESCRIPTION
LRFD BOX CULVERTS		
STD-17-1		INDEX OF DRAWINGS
STD-17-2		TERMINOLOGY
STD-17-3		GENERAL NOTES
STD-17-4		DESIGN SECTION LIMITS
STD-17-5		TYPICAL SECTION AND DETAILS
STD-17-6		TYPICAL ELEVATIONS
STD-17-7		CURB, RAIL & EDGE BEAM DETAILS - SKEW NOT LESS THAN 45 DEG.
STD-17-8		EDGE BEAM DETAILS FOR FILLS GREATER THAN 3' - 6"
STD-17-9		INTERIOR WALL END TREATMENTS
STD-17-10		TYPICAL WINGWALL DETAILS AND NOTES
STD-17-11		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-15		WINGWALL & SPECIAL RETAINING WALL DESIGN SECTION
STD-17-16		WINGWALL DESIGN SECTION
STD-17-17	06-01-11	BACKFILL AND DRAINAGE DETAILS
STD-17-18		BACKFILL DETAILS
STD-17-20		LOW FLOW CHANNEL CONSTRUCTION DETAILS FOR CULVERT INLET AND OUTLET
STD-17-23		SIDEWALK AND MISCELLANEOUS DETAILS
STD-17-24		WARPED SLOPE DETAIL
STD-17-25		STAGE CONSTRUCTION JOINT DETAIL (FILL ABOVE TOP OF SLAB NOT GREATER THAN 3'-6")
STD-17-29		PRECAST BOX CULVERT DETAILS
STD-17-116		SLAB BRIDGE, 1 BARREL AT 12', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-131		SLAB BRIDGE, 2 BARRELS AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL

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DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC OPERATIONS & STRUCTURE DRAWINGS

9/28/2017
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	1B

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISON	DESCRIPTION	STA. / LOCATION
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	1. TO MINIMIZE THE RISK TO CONSTRUCTION WORKERS, TDOT IS COMMITTED TO THE REMOVAL OF ASBESTOS-CONTAINING MATERIALS (ACM) FROM BRIDGES THAT ARE BEING DEMOLISHED, REHABILITATED OR REPAIRED. 2. BRIDGE NO. 95SR109005, SR-109 OVER BRANCH (SPENCER CREEK), LM 8.21 (95-SR109-8.21), HAS ACM IN THE DECK DRAINS. ABATEMENT OF THIS MATERIAL WILL BE REQUIRED IF IT WILL BE DISTURBED PRIOR TO DEMOLITION OF THE BRIDGE. ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. ACM ABATEMENT SHOULD BE COMPLETED PRIOR TO ANY DEMOLITION ACTIVITIES. 3. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS. 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT OR DEMOLITION.	39+31 ±, SPENCER CREEK

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DEPARTMENT OF TRANSPORTATION

PROJECT COMMITMENTS

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	2A

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	0.5
	201-01	CLEARING AND GRUBBING	LS	0.5
(1)(2)	202-01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	0.5
(3)	202-03	REMOVAL OF RIGID PAVEMENT, SIDEWALK, ETC.	S.Y.	1612
(2)	202-04.50	REMOVAL OF STRUCTURES (42 L.F.- 5' X 6' R.C.B.C., STA. 64+08)	LS	1
(2)	202-04.51	REMOVAL OF STRUCTURES (42 L.F.- 5' X 4' R.C.B.C., STA. 87+04)	LS	1
(25)	202-06.07	REMOVAL OF BUILDINGS (TRACT NO. 38)	LS	1
(25)	202-06.08	REMOVAL OF BUILDINGS (TRACT NO. 48)	LS	1
(25)	202-06.09	REMOVAL OF BUILDINGS (TRACT NO. 80)	LS	1
(25)	202-06.10	REMOVAL OF BUILDINGS (TRACT NO. 88)	LS	1
(4)	202-08.15	REMOVAL OF CURB AND GUTTER	L.F.	845
(5)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	182912
(21)	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	30196
	203-04	PLACING AND SPREADING TOPSOIL	C.Y.	43892
	203-06	WATER	M.G.	380
	204-08.01	BACKFILL MATERIAL (FLOWABLE FILL)	C.Y.	140
(6)	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	2332
(6)	209-03.23	FILTER SOCK (24 INCH)	L.F.	225
(6)	209-05	SEDIMENT REMOVAL	C.Y.	2617
(6)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	20020
(6)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	14163
(6)	209-08.07	ROCK CHECK DAM PER	EACH	191
(6)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	89
(6)	209-09.01	SANDBAGS	BAG	7500
(6)	209-09.03	SEDIMENT FILTER BAG (15' X 15')	EACH	6
(6)	209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	2
(6)	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	315
(6)	209-40.33	CATCH BASIN PROTECTION (TYPE D)	EACH	2
(6)	209-40.41	CATCH BASIN FILTER ASSEMBLY(TYPE 1)	EACH	2
(6)	209-40.45	CATCH BASIN FILTER ASSEMBLY(TYPE 5)	EACH	2
(6)	209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	713
(24)	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	16021
	303-01.01	GRANULAR BACKFILL (ROADWAY)	TON	1065
(7)	303-02	MINERAL AGGREGATE, TYPE B BASE, GRADING D	TON	700
(6)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	924
	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	306
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	1258
	307-02.01	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A	TON	26660
	307-01.21	ASP. CONC. MIX(PG70-22) (BPMB-HM) GR. A-S	TON	15650
	307-02.08	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2	TON	13099
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	240
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	950
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	73
	411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	2333
	411-01.10	ACS MIX(PG64-22) GRADING D	TON	862
	411-02.10	ACS MIX(PG70-22) GRADING D	TON	7484
	411-12.02	SCORING SHOULDERS (NON-CONTINUOUS) (16IN WIDTH)	L.M.	5.6

FOOTNOTES:

(1) SEE SHEET NO. 2E5 FOR TABULATED QUANTITIES.
(2) SALVAGED ITEMS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
(3) INCLUDES 1612 S.Y. FOR CONCRETE DRIVEWAYS AND SIDEWALK.
(4) INCLUDES 485 L.F. AT ROCK CASTLE DRIVE AND 360 L.F. AT SPENCE CREEK DRIVE
(5) SEE SPECIAL GRADING NOTES ON SHEET NO. 2D. INCLUDES 8,794 C.Y. FOR EPSC.
(6) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT. ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.
(7) FOR DRIVEWAY MAINTENANCE DURING CONSTRUCTION.
(8) STANDARD DRAWING STD-1-7 (OR STD-1-11) IS TO BE USED FOR BURIAL OF THE OUTLET PIPE AND FOR END TREATMENT DETAILS.
(9) FOR ROCK CASTLE DRIVE AND SPENCE CREEK DRIVE.
(10) THIS ITEM SHALL BE A PORTABLE ENERGY ASORBING TERMINAL MEETING THE REQUIREMENTS OF MASH FOR TEST LEVEL 3. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWING.
(11) INCLUDES 276 TONS FOR DITCHES, 5,133 TONS FOR PIPE INLET PROTECTION, 172 TONS FOR SLOPE
(12) INCLUDES 2046 TONS FOR BRIDGE PROTECTION, 497 TONS FOR OUTLET PROTECTION, AND 22 TONS FOR SLAB CULVERT.
(13) INCLUDES 170 TONS FOR OUTLET PROTECTION.
(14) INCLUDES THE REMOVAL OF ANY SIGNS WITHIN THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER.

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	4270
	604-01.01	CLASS A CONCRETE (ROADWAY)	C.Y.	258
	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	LB.	54832
	607-03.30	18" PIPE CULVERT	L.F.	532
	607-05.30	24" PIPE CULVERT	L.F.	229
	607-06.30	30" PIPE CULVERT	L.F.	533
	607-07.30	36" PIPE CULVERT	L.F.	134
	607-08.30	42" PIPE CULVERT	L.F.	299
	607-16.04	38"X 24" HORIZONTAL OVAL CONCRETE PIPE CULVERT	L.F.	114
	607-39.02	18" PIPE CULVERT (SIDE DRAIN)	L.F.	1723
	607-39.04	30" PIPE CULVERT (SIDE DRAIN)	L.F.	246
	607-39.05	36" PIPE CULVERT (SIDE DRAIN)	L.F.	134
	607-40.05	CORRUGATED METAL PIPE ARCH (SIZE EQUIV. 30" ROUND)	L.F.	76
(8)	610-07.03	18" PIPE DRAIN (BRIDGE DRAIN)	L.F.	110
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	12
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	258
	611-07.54	18IN ENDWALL (CROSS DRAIN) 3:1	EACH	8
	611-07.55	18IN ENDWALL (CROSS DRAIN) 4:1	EACH	2
	611-07.56	18IN ENDWALL (CROSS DRAIN) 6:1	EACH	1
	611-07.57	24IN ENDWALL (CROSS DRAIN) 3:1	EACH	2
	611-07.58	24IN ENDWALL (CROSS DRAIN) 4:1	EACH	1
	611-07.59	24IN ENDWALL (CROSS DRAIN) 6:1	EACH	2
	611-07.60	30IN ENDWALL (CROSS DRAIN) 3:1	EACH	2
	611-07.61	30IN ENDWALL (CROSS DRAIN) 4:1	EACH	2
	611-07.62	30IN ENDWALL (CROSS DRAIN) 6:1	EACH	3
	611-07.64	36IN ENDWALL (CROSS DRAIN) 4:1	EACH	2
	611-07.67	42IN ENDWALL (CROSS DRAIN) 4:1	EACH	1
	611-07.68	42IN ENDWALL (CROSS DRAIN) 6:1	EACH	3
	611-42.01	CATCH BASINS, TYPE 42, 0' - 4' DEPTH	EACH	1
	611-42.02	CATCH BASINS, TYPE 42, > 4' - 8' DEPTH	EACH	1
	611-44.04	CATCH BASINS, TYPE 44, > 12' - 16' DEPTH	EACH	1
(6)	621-03.02	18" TEMPORARY DRAINAGE PIPE	L.F.	504
(6)	621-03.03	24" TEMPORARY DRAINAGE PIPE	L.F.	66
(6)	621-03.04	30" TEMPORARY DRAINAGE PIPE	L.F.	143
(6)	621-03.05	36" TEMPORARY DRAINAGE PIPE	L.F.	40
(6)	621-03.07	48" TEMPORARY DRAINAGE PIPE	L.F.	288
	701-01.01	CONCRETE SIDEWALK (4 ")	S.F.	1550
	701-02	CONCRETE DRIVEWAY	S.F.	10042
	701-02.03	CONCRETE CURB RAMP	S.F.	200
(9)	702-03	CONCRETE COMBINED CURB & GUTTER	C.Y.	10
	705-01.01	GUARDRAIL AT BRIDGE ENDS	L.F.	108
	705-01.04	METAL BEAM GUARD FENCE	L.F.	38

FOOTNOTES:

(15) THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
(16) FOR TEMPORARY TRAFFIC CONTROL.
(17) FOR WASTE AREAS.
(18) INCLUDES 197 THOUSAND GALLONS FOR EROSION PREVENTION AND SEDIMENT CONTROL.
(19) ITEM INCLUDES LITTER AND TRASH REMOVAL. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE COST OF ITEM NO. 806-02.03, PROJECT MOWING, CYCL.
(21) FOR AREAS WITH SOFT OR WET SOILS. SEE SOILS SHEETS FOR LOCATION DETAILS.
(22) FOR TEMPORARY CONSTRUCTION EXITS.
(23) TO BE USED FOR SUBGRADE STABILIZATION.
(24) INCLUDES 7300 TONS FOR SHOULDER WEDGE.
(25) BID PRICE INCLUDES ALL SALVAGE VALUE OF MATERIAL. SEE TABULATED QUANTITIES SHEET NO. 2E5 FOR REMOVAL OF BUILDINGS AND OBSTRUCTIONS DESCRIPTIONS BLOCK.
(26) THE PORTABLE SMART WORK ZONE SYSTEM (SWZS) DESCRIPTION CAN BE FOUND IN THE SPECIAL PROVISION. PAY ITEM 725-21.07 PORTABLE SMART WORK ZONE SYSTEM SHALL INCLUDE SEVEN (7) PORTABLE FULL MATRIX CHANGEABLE MESSAGE SIGNS (PCMS), ONE (1) PORTABLE RADAR DETECTION STATION (PRDS), AND ALL NECESSARY REMOTE CLIENT OPERATIONAL SOFTWARE, MAINTENANCE, COMMUNICATIONS EQUIPMENT AND CELLUALAR FEES FOR A FULLY FUNCTIONING SWZS FOR THE DURATION OF THE PROJECT, AS DESCRIBED IN THE SPECIAL PROVISION (SP 725).

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DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	2A1

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	705-06.01	W BEAM GR (TYPE 2) MASH TL3	L.F.	6338
	705-06.11	GR TERMINAL (IN-INLINE) MASH TL3	EACH	19
	705-06.20	TANGENT ENERGY ABSORBING TERM MASH TL-3	EACH	16
	705-06.30	GR TERMINAL (TYPE 21) MASH TL2	EACH	5
(10)	705-20.25	TEMPORARY CRASH CUSHION (MASH TL-3)	EACH	2
	706-01	GUARDRAIL REMOVED	L.F.	1545
	706-06.06	RADIUS RAIL LONG POST (9-12 FT)	L.F.	300
	706-10.26	ROUNDED END ELEMENT	EACH	15
	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	3423
	708-02.01	MARKERS (CONCRETE R.O.W. POSTS)	EACH	188
(8)	709-01.01	RUBBLE STONE RIP-RAP	C.Y.	11
(6)(21)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	1150
(6)(11)	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	4970
(12)	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	2565
(13)	709-05.09	MACHINED RIP-RAP (CLASS C)	TON	170
	710-02	AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	29490
	710-05	LATERAL UNDERDRAIN	L.F.	3850
	710-06.15	LATERAL UNDERDRAIN ENDWALL (6:1)	EACH	150
	712-01	TRAFFIC CONTROL	LS	0.5
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	380
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	975
	712-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	20
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	12
	712-06	SIGNS (CONSTRUCTION)	S.F.	711
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	198
	712-08.01	UNIFORMED POLICE OFFICER	DOLL	
	712-08.03	ARROW BOARD (TYPE C)	EACH	2
	713-11.01	"U" SECTION STEEL POSTS	LB.	1000
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	220
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	160
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	80
(14)	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	0.5
	713-15.02	REMOVAL & RELOCATION OF SIGN & SUPPORT	EACH	5
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	4
	713-16.23	SIGNS (PROTECTED AREA)	EACH	7
	716-01.07	TEMPORARY RAISED PAVEMENT MARKER,YELLOW	EACH	84
	716-01.11	RAISED PVMT MARKERS (BI-DIRECTIONAL) (1 COLOR LENS)	EACH	4
	716-01.12	RAISED PVMT MARKERS (MONO-DIRECTIONAL) (1 COLOR LENS)	EACH	4
	716-01.21	SNWPLWBLE PVMT MRKRS (BI-DIR)(1 COLOR)	EACH	425
	716-01.22	SNWPLWBLE PVMT MRKRS (MONO-DIR)(1 COLOR)	EACH	432
(15)	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	205
(15)	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	17
(15)	716-04.02	PLASTIC PAVEMENT MARKING (DOUBLE TURNING ARROW)	EACH	13
(15)	716-04.05	PLASTIC PAVEMENT MARKING (STRAIGHT ARROW)	EACH	2

FOOTNOTES:

(1) SEE SHEET NO. 2E5 FOR TABULATED QUANTITIES.
(2) SALVAGED ITEMS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
(3) INCLUDES 1612 S.Y. FOR CONCRETE DRIVEWAYS AND SIDEWALK.
(4) INCLUDES 485 L.F. AT ROCK CASTLE DRIVE AND 360 L.F. AT SPENCE CREEK DRIVE
(5) SEE SPECIAL GRADING NOTES ON SHEET NO. 2D. INCLUDES 8,794 C.Y. FOR EPSC.
(6) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT. ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.
(7) FOR DRIVEWAY MAINTENANCE DURING CONSTRUCTION.
(8) STANDARD DRAWING STD-1-7 (OR STD-1-11) IS TO BE USED FOR BURIAL OF THE OUTLET PIPE AND FOR END TREATMENT DETAILS.
(9) FOR ROCK CASTLE DRIVE AND SPENCE CREEK DRIVE.
(10) THIS ITEM SHALL BE A PORTABLE ENERGY ASORBING TERMINAL MEETING THE REQUIREMENTS OF MASH FOR TEST LEVEL 3. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWING.
(11) INCLUDES 276 TONS FOR DITCHES, 5,133 TONS FOR PIPE INLET PROTECTION, 172 TONS FOR SLOPE
(12) INCLUDES 2046 TONS FOR BRIDGE PROTECTION, 497 TONS FOR OUTLET PROTECTION, AND 22 TONS FOR SLAB CULVERT.
(13) INCLUDES 170 TONS FOR OUTLET PROTECTION.
(14) INCLUDES THE REMOVAL OF ANY SIGNS WITHIN THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER.

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(16)	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	17.1
(16)	716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)	L.F.	96
	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	17.1
	717-01	MOBILIZATION	LS	0.5
	725-21.07	PORTABLE SMART WORK ZONE SYSTEM	DAY	780
(6)	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	11276
	740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	26323
	740-11.02	TEMPORARY SEDIMENT TUBE 12IN	L.F.	19900
	740-11.05	TEMPORARY SEDIMENT TUBE 24IN	L.F.	18500
(17)	801-01	SEEDING (WITH MULCH)	UNIT	156
(6)	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	930
	801-02	SEEDING (WITHOUT MULCH)	UNIT	713
	801-02.01	CROWN VETCH MIXTURE (WITHOUT MULCH)	UNIT	170
(18)	801-03	WATER (SEEDING & SODDING)	M.G.	390
	802-11.04	ACER SACCHARUM (SUGAR MAPLE 2-5FT CNTNR GRWN)	EACH	8
	802-11.09	CARYA OVATA (SHAGBARK HICKORY 2-5FT CNTNR GRWN)	EACH	7
	802-11.18	LIQUIDAMBER STYRACIFLUA (SWEETGUM 2-5FT CNTNR GRWN)	EACH	7
	802-11.26	PLATANUS OCCIDENTALIS (SYCAMORE 2-5FT CNTNR GRWN)	EACH	7
	802-11.31	QUERCUS FALCATA (SOUTHERN RED OAK 2-5FT CNTNR GRWN)	EACH	7
	802-12.01	ACER NEGUNDO (BOX ELDER SEEDLNG B.R.)	EACH	12
	802-12.18	LIQUIDAMBER STYRACIFLUA (SWEETGUM SEEDLNG B.R.)	EACH	16
	802-12.35	QUERCUS NIGRA (WATER OAK SEEDLNG B.R.)	EACH	16
	802-12.37	QUERCUS PALUSTRIS (PIN OAK SEEDLNG B.R.)	EACH	15
	802-12.40	SALIX NIGRA (BLACK WILLOW SEEDLNG B.R.)	EACH	26
	803-01	SODDING (NEW SOD)	S.Y.	19220
	805-01.01	TURF REINFORCEMENT MAT (CLASS I)	S.Y.	2290
	805-12.01	EROSION CONTROL BLANKET (TYPE I)	S.Y.	79135
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	25580
(19)	806-02.03	PROJECT MOWING	CYCL	20
		ALTERNATE AA1		
	203-06	WATER	M.G.	837
	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	112136
		ALTERNATE AA2		
	203-06	WATER	M.G.	609
	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	81498
	309-01.01	MINERAL AGGREGATE (A-CBC)	TON	31323
	309-01.02	PORTLAND CEMENT (A-CBC)	TON	1210
	309-02	BITUMINOUS MATERIAL (A-CBC)	TON	101
		ALTERNATE AB1		
(23)	302-01.01	HYDRATED LIME	TON	3470
		ALTERNATE AB2		
(23)	740-07.01	GEO GRID REINFORCEMENT	S.Y.	190000

FOOTNOTES:

(15) THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
(16) FOR TEMPORARY TRAFFIC CONTROL.
(17) FOR WASTE AREAS.
(18) INCLUDES 197 THOUSAND GALLONS FOR EROSION PREVENTION AND SEDIMENT CONTROL.
(19) ITEM INCLUDES LITTER AND TRASH REMOVAL. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE COST OF ITEM NO. 806-02.03, PROJECT MOWING, CYCL.
(21) FOR AREAS WITH SOFT OR WET SOILS. SEE SOILS SHEETS FOR LOCATION DETAILS.
(22) FOR TEMPORARY CONSTRUCTION EXITS.
(23) TO BE USED FOR SUBGRADE STABILIZATION.
(24) INCLUDES 7300 TONS FOR SHOULDER WEDGE.
(25) BID PRICE INCLUDES ALL SALVAGE VALUE OF MATERIAL. SEE TABULATED QUANTITIES SHEET NO. 2E5 FOR REMOVAL OF BUILDINGS AND OBSTRUCTIONS DESCRIPTIONS BLOCK.
(26) THE PORTABLE SMART WORK ZONE SYSTEM (SWZS) DESCRIPTION CAN BE FOUND IN THE SPECIAL PROVISION. PAY ITEM 725-21.07 PORTABLE SMART WORK ZONE SYSTEM SHALL INCLUDE SEVEN (7) PORTABLE FULL MATRIX CHANGEABLE MESSAGE SIGNS (PCMS), ONE (1) PORTABLE RADAR DETECTION STATION (PRDS), AND ALL NECESSARY REMOTE CLIENT OPERATIONAL SOFTWARE, MAINTENANCE, COMMUNICATIONS EQUIPMENT AND CELLUALAR FEES FOR A FULLY FUNCTIONING SWZS FOR THE DURATION OF THE PROJECT, AS DESCRIBED IN THE SPECIAL PROVISION (SP 725).

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ESTIMATED ROADWAY QUANTITIES

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	2A2

ESTIMATED UTILITIES QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
790-03.03	POLE 40FT CLASS 4 WOOD	EACH	5
790-04.02	POLE 45FT CLASS 2 WOOD	EACH	47
790-04.04	POLE 45FT CLASS 4 WOOD	EACH	2
790-05.02	POLE 50FT CLASS 2 WOOD	EACH	24
790-05.07	POLE 50FT CLASS H1 METAL	EACH	1
790-05.08	POLE 50FT CLASS H2 METAL	EACH	1
790-06.02	POLE 55FT CLASS 2 WOOD	EACH	4
790-07.02	POLE 60FT CLASS 2 WOOD	EACH	1
790-22.01	1PH SGL PRIMARY SUPPORT 25KV	EACH	5
790-22.11	1PH DDE ANGLE 25KV	EACH	2
790 22.13	1PH DEAD END 25KV	EACH	12
790-22.14	1PH DEAD END TAP 25KV	EACH	2
790-22.15	1PH DEAD END TAP W/ EXTENSION 25KV	EACH	22
790-22.16	1PH DDE TANGENT 25KV	EACH	1
790-26.02	3PH CROSSARM DBL LRG COND 25KV	EACH	64
790-26.15	3PH XARM DBL 10FT LRG COND SM ANGLE 25KV	EACH	6
790-26.21	3PH VERTICAL DDE ANGLE 25KV	EACH	1
790-26.26	3PH CROSSARM DEAD END 25KV	EACH	4
790-26.27	3PH CROSSARM DBL DDE 25KV	EACH	1
790-26.29	3PH DDE UNBALANCED LOAD 25KV	EACH	1
790-26.30	3PH CROSSARM DBL-DDE-INV ARM 25KV	EACH	1
790-30.03	SECONDARY ASSEMBLIES DEADEND	EACH	1
790-30.04	SECONDARY ASSEMBLIES MISC	EACH	1
790-31.02	SERVICE ASSEMBLY-POLE TYPE	EACH	17
790-31.04	SERVICE CONDUCTOR 6 AL DUPLEX	L.F.	333
790-31.16	SERVICE CONDUCTOR__AL TRIPLEX	L.F.	250
790-32.01	DOWN GUY - THROUGH BOLT TYPE	EACH	83
790-32.19	DN GUY HVY CONST - 1 PREFORM	EACH	18
790-33.16	ROCK ANCHOR TRIPLE EYE	EACH	1
790-33.21	ANCHOR TWIN EYE POWER INSTALLED	EACH	59
790-36.04	TRANSFER SERVICE	EACH	12
790-36.06	TRANSFER LIGHT	EACH	6
790-36.14	TRANSFER CONDUCTOR	EACH	26
790-40.02	OH COND 2 7/1 ACSR SPARATE	L.F.	6616
790-40.03	OH COND 1/0 6/1 ACSR RAVEN	L.F.	1585
790-40.05	OH COND 3/0 6/1 ACSR PIGEON	L.F.	15356
790-40.49	OH COND 795 37 AAC ARBUTUS	L.F.	44331
790-41.12	UG PRI COND 1 AL 25KV	L.F.	448
790-43.27	OUTDOOR TERMINATOR URD 25KV	EACH	1
790-43.46	SECONDARY PULLBOX LARGE	EACH	8
790-43.50	SECONDARY RISER W/ 2IN CONDUIT	EACH	1
790-43.51	SECONDARY RISER W/ 3IN CONDUIT	EACH	8
790-43.60	PRIMARY RISER (DESCRIPTION)	EACH	3
790-46.01	1PH TRANSFORMER	EACH	25
790-49.02	3PH XFMR BNK POLE MTD W/ FUSE/ARRESTERS	EACH	1
790-59.03	CUTOUT KNIFE SWITCH-SNGL LOADBREAK 25KV	EACH	6
790-59.05	GOLB SWITCH 25KV	EACH	1
790-61.01	1PH FUSE CUTOUT XARM MOUNT 25KV	EACH	40
790-61.10	3PH SECTLR OR RECL W/ BYPASS SW 25KV	EACH	1
790-65.06	LIGHTNING ARRESTER POLE MTD 18 KV	EACH	3
790-65.07	LIGHTNING ARRESTOR 18KV INTERMEDIATE	EACH	6
790-68.01	POLE GROUND ROD TYPE	EACH	84
790-68.02	POLE GROUND PLATE TYPE	EACH	1
790-68.10	MISCELLANEOUS ASSEMBLIES	EACH	5
790-68.13	SGL PHASE MOUNTING BRACKET - FIBERGLASS	EACH	7
790-69.02	CROSSARM - 10FT	EACH	2
790-69.03	10FT DBL CROSSARM	EACH	1
790-69.06	HARDWARE FOR SGL PH CONV TRANS	EACH	16
790-69.07	HARDWARE FOR SGL PH CONV TRANS DE	EACH	6
790-69.27	EXTENSION LINK - EPOXY -4FT	EACH	53
790-70.11	STREET LIGHT - HPS (DESCRIPTION)	EACH	1

ESTIMATED UTILITIES QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
790-98.01	REMOVE WIRE	L.F.	64460
790-98.02	REMOVE POLES	EACH	61
790-98.03	REMOVE FRAMING/ASSOCIATED APPARATUS	EACH	359
790-98.20	TREE AND BRUSH REMOVAL OFF ROW	LS	1
791-01.20	8IN HIGH PRESSURE STEEL GAS MAIN	L.F.	2040
791-01.21	8IN PWRCRETE COATED HP STL GAS MN- OPEN CUT	L.F.	40
791-01.22	8IN POWERCRETE CTD HP STL GAS MN-DIR DRILL	L.F.	420
791-03.04	4IN HDPE GAS MAIN	L.F.	2380
791-03.05	6IN HDPE GAS MAIN	L.F.	150
791 06.03	CONNECT TO 4IN EX. PE MAIN	EACH	3
791-06.34	CONNECT TO 8IN EX. STL MAIN W/ STOPPLE	EACH	2
791-07.02	4IN PE GAS VALVE ASSEMBLY	EACH	6
791-07.12	8IN STEEL GAS VALVE ASSEMBLY	EACH	4
791-08.30	RECONNECT SERVICE ASSEMBLY	EACH	10
791-09.05	RESTORE ASPHALT	S.Y.	150
791-09.06	RESTORE CONCRETE	S.Y.	150
791-09.07	RESTORE GRAVEL	S.Y.	100
791-09.10	RESTORE RIP-RAP - 12 IN AVERAGE DIAMETER	TONS	360
791-09.11	SEEDING AND MULCHING	L.F.	5430
791-10.10	RETIRE GAS MAIN	LS	1
793-01.08	POLE 35FT CLASS 5 WOOD	EACH	2
793-01.41	ANCHOR 1IN	EACH	26
793-13.07	4IN SCHEDULE 40 PVC	L.F.	1005
793-13.12	1 DUCT FORMATION @ 36IN DEPTH	L.F.	683
793-13.17	2 DUCT FORMATION @ 36IN DEPTH	L.F.	161
793-98.04	REMOVE POLES ALL SIZES	EACH	12
795-01.04	6IN DIP SLIP JOINT WATER LINE	L.F.	200
795-01.06	8IN DIP SLIP JOINT WATER LINE	L.F.	1430
795-01.10	12IN DIP SLIP JOINT WATER LINE	L.F.	15605
795-02.07	12IN HDPE WATER LINE	L.F.	80
795-05.77	BORE/JACK 12IN STEEL CASING PIPE-ROCK.	L.F.	55
795-05.79	BORE/JACK 16IN STEEL CASING PIPE-ROCK.	L.F.	330
795-05.82	BORE/JACK 24IN STEEL CASING PIPE-ROCK.	L.F.	240
795-15.25	16IN STEEL CASING PIPE OPEN CUT METHOD	L.F.	435
795-15.07	24IN STEEL CASING PIPE OPEN CUT METHOD	L.F.	50
795-07.03	6IN X 6IN TAPPING SLEEVE AND VALVE	EACH	3
795 07.06	8IN X 8IN TAPPING SLEEVE AND VALVE	EACH	1
795-08.01	2IN GATE VALVE ASSEMBLY	EACH	1
795-08.04	6IN GATE VALVE ASSEMBLY	EACH	21
795-08.05	8IN GATE VALVE ASSEMBLY	EACH	12
795-08.08	12IN BUTTERFLY VALVE ASSEMBLY	EACH	48
795-11.02	FIRE HYDRANT ASSEMBLY	EACH	15
795-13.01	DI FITTINGS	LB.	7500
795-09.01	3/4IN WATER SERVICE METER ASSEMBLY	EACH	60
795-09.37	3/4 IN WATER SERVICE PIPE	L.F.	4800
795-09.25	TI OF 2IN HDPE CASING FOR SERVICE PIPE-ROCK	L.F.	2600
795-14.05	CONCRETE ENCASEMENT	L.F.	700
795-14.08	RESTORE ASPHALT	S.Y.	100
797-03.07	8IN PVC FORCE MAIN	L.F.	3300
797-06.90	OPEN CUT 16IN STEEL CASING PIPE	L.F.	140
797-06.99	HDD 10IN HDPE CARRIER PIPE-ROCK	L.F.	250
797-08.01	DI FITTINGS	LB.	1900
797-09.08	8IN PLUG VALVE ASSEMBLY	EACH	2
797-09.20	2IN COMBO AIR RELEASE VALVE ASSEMBLY	EACH	3
797-10.12	CONNECT TO EXISTING PUMP STATION	EACH	1
797-10.18	CONNECT TO 8IN FORCE MAIN	EACH	2

SEE SHEET U1-1 FOR INDEX OF UTILITY SHEETS

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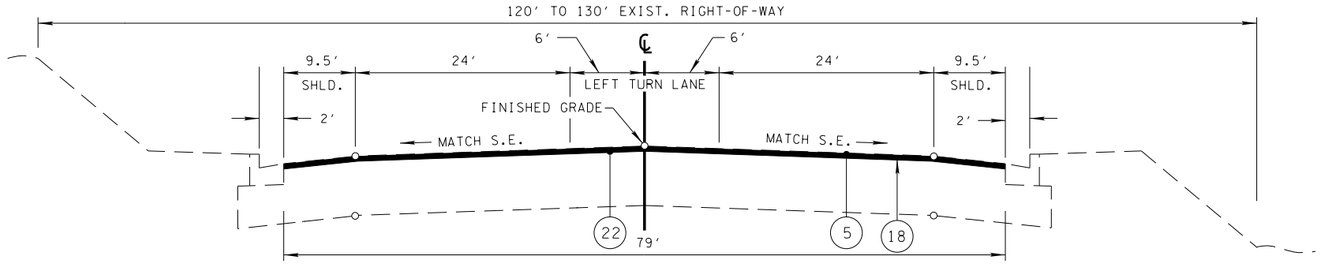
DEPARTMENT OF TRANSPORTATION

ESTIMATED UTILITIES QUANTITIES

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

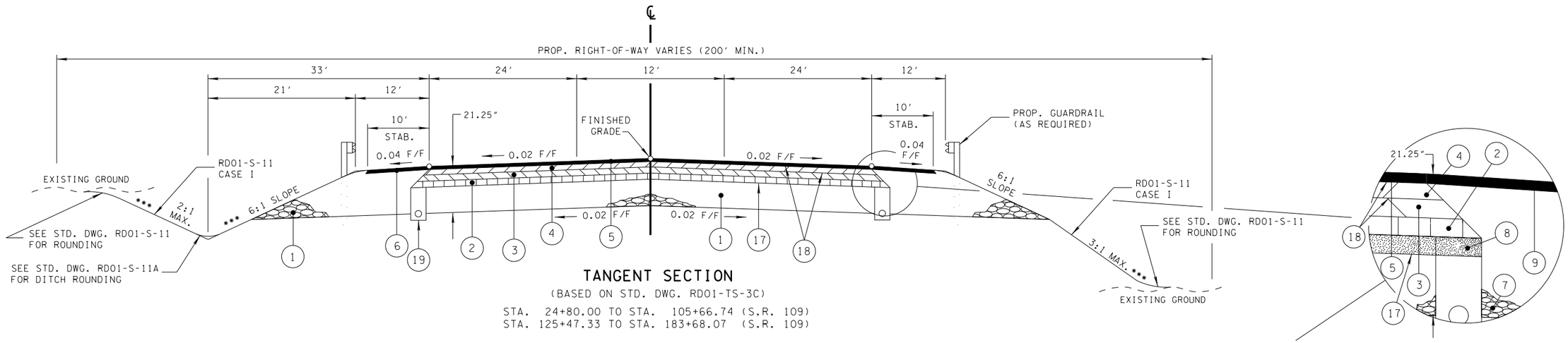
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	2
CONST.	2017	NH-109(31)	2B



TANGENT SECTION

(BASED ON STD. DWG. RDO1-TS-6)

STA. 20+00.00 TO STA. 24+80.00 (S.R. 109)



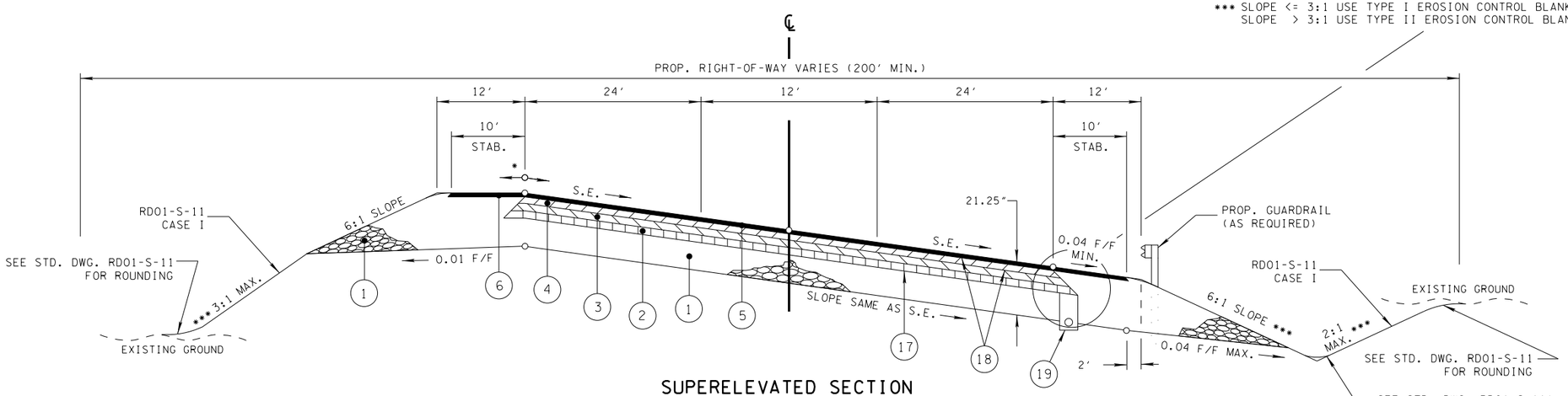
TANGENT SECTION

(BASED ON STD. DWG. RDO1-TS-3C)

STA. 24+80.00 TO STA. 105+66.74 (S.R. 109)
STA. 125+47.33 TO STA. 183+68.07 (S.R. 109)

NOTE: ALL ROADSIDE DITCHES TO BE LINED WITH SOD.

*** SLOPE <= 3:1 USE TYPE I EROSION CONTROL BLANKET WITH SEEDING
SLOPE > 3:1 USE TYPE II EROSION CONTROL BLANKET WITH CROWN VETCH



SUPERELEVATED SECTION

(BASED ON STD. DWG. RDO1-TS-3C)

STA. 105+66.74 TO STA. 125+47.33 (S.R. 109)

SEE STD. DWG. RDO1-SE-3 FOR SUPERELEVATION DETAILS

* THE SLOPE OF SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 7.0%

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DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

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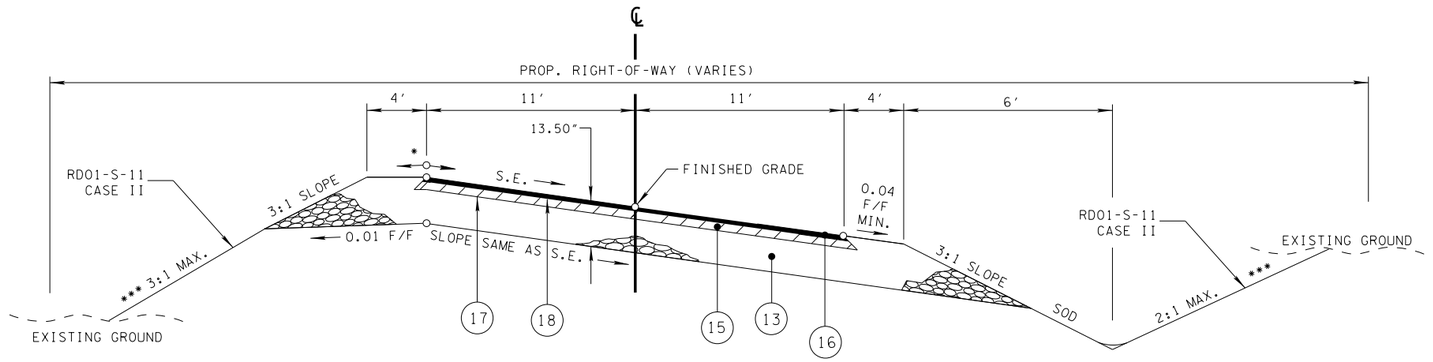
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	2A
CONST.	2017	NH-109(31)	2B1



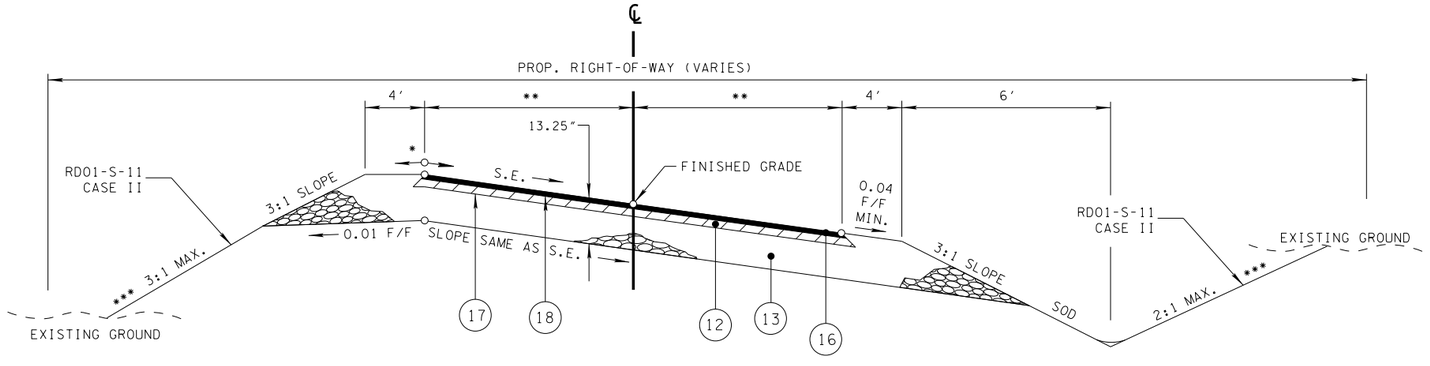
SUPERELEVATED SECTION

(BASED ON STD. DWG. RDO1-TS-1)

STA. 9+30.00 TO STA. 12+50.00 (OLD LAGUARDO ROAD - EAST)

NOTE: ALL ROADSIDE DITCHES TO BE LINED WITH SOD.

*** SLOPE <= 3:1 USE TYPE I EROSION CONTROL BLANKET WITH SEEDING
SLOPE > 3:1 USE TYPE II EROSION CONTROL BLANKET WITH CROWN VETCH



SUPERELEVATED SECTION

(BASED ON STD. DWG. RDO1-TS-1)

SEE STD. DWG. RDO1-SE-3 FOR SUPERELEVATION DETAILS

* THE SLOPE OF SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 7.0%

** STA. 5+50.00 TO STA. 7+70.00 (OLD LAGUARDO ROAD - WEST) (11' LANES)
** STA. 27+75.00 TO STA. 29+70.00 (KNOLLWOOD LANDING) (14' LANES)

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TYPICAL SECTIONS

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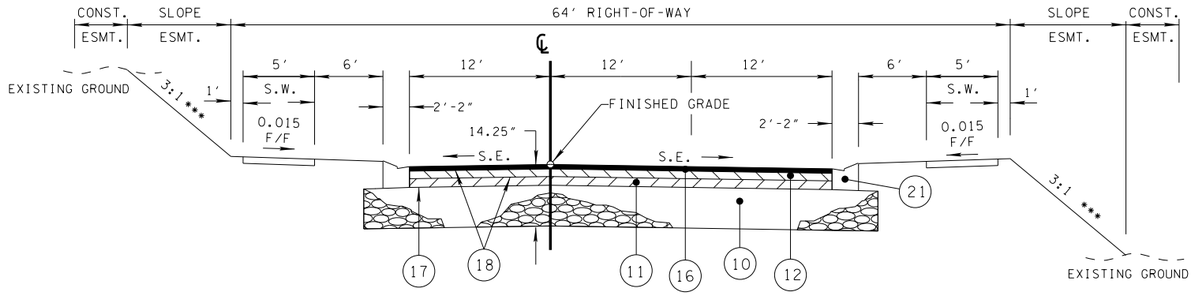
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	2B
CONST.	2017	NH-109(31)	2B2

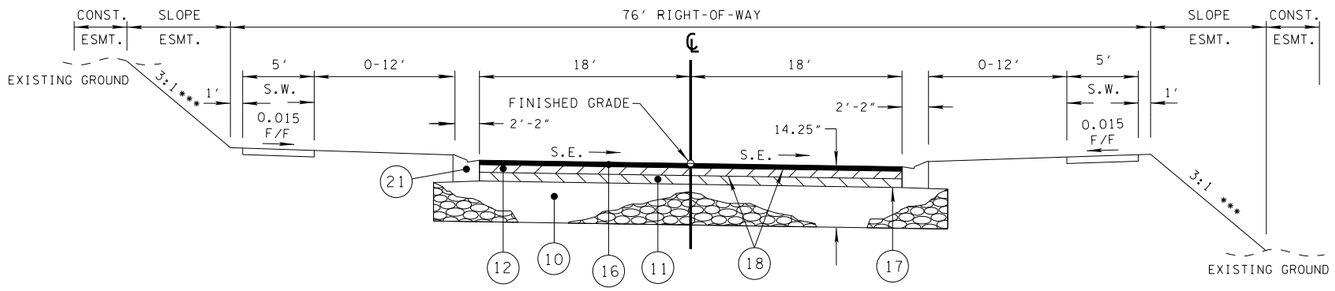
REV. 12-19-14: ADDED TYPICAL FOR FRONTAGE ROAD "A".



SUPERELEVATED SECTION

(BASED ON STD. DWG. RD01-TS-1)

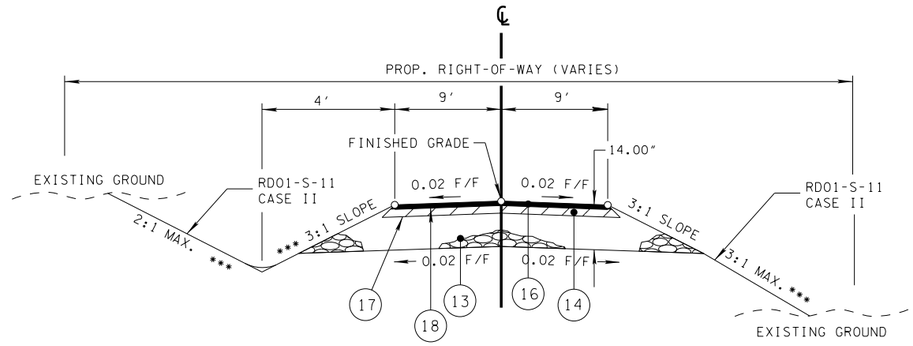
STA. 13+50.00 TO 14+70.00 (ROCK CASTLE DRIVE)



SUPERELEVATED SECTION

(BASED ON STD. DWG. RD01-TS-1)

STA. 23+00.00 TO 23+70.00 (SPENCE CREEK DRIVE)



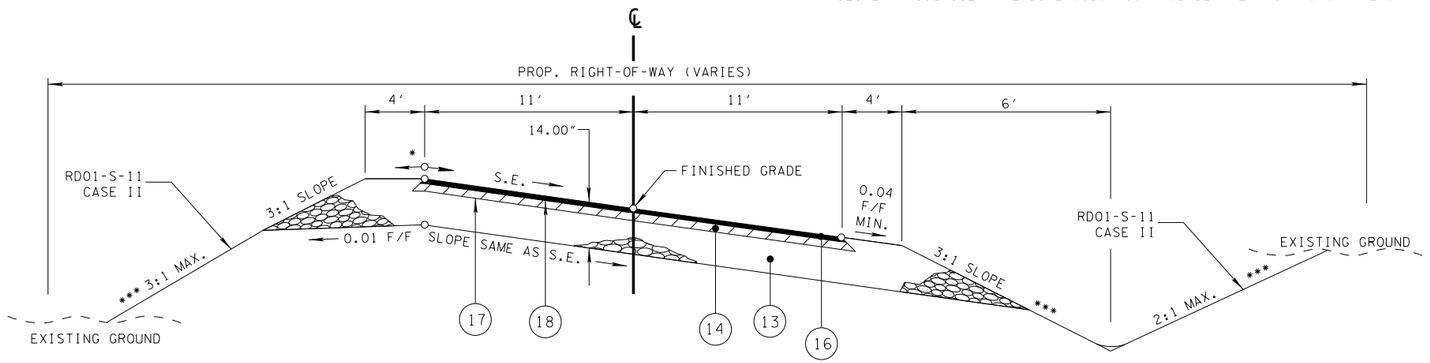
TYPICAL SECTION

(BASED ON STD. DWG. RD01-TS-1A)

STA. 50+82.01 TO 54+89.00 (FRONTAGE ROAD "A")

NOTE: ALL ROADSIDE DITCHES TO BE LINED WITH SOD.

*** SLOPE <= 3:1 USE TYPE I EROSION CONTROL BLANKET WITH SEEDING
SLOPE > 3:1 USE TYPE II EROSION CONTROL BLANKET WITH CROWN VETCH



SUPERELEVATED SECTION

(BASED ON STD. DWG. RD01-TS-1)

STA. 32+50.00 TO STA. 35+69.45 (NORTHERN ROAD)
STA. 36+30.56 TO STA. 37+00.00 (NORTHERN ROAD)
STA. 38+00.00 TO STA. 38+40.71 (NORTHERN ROAD)

NOTE: ALL ROADSIDE DITCHES TO BE LINED WITH SOD.

SLOPE <= 3:1 USE TYPE I EROSION CONTROL BLANKET WITH SEEDING
SLOPE > 3:1 USE TYPE II EROSION CONTROL BLANKET WITH CROWN VETCH

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DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

9/28/2017
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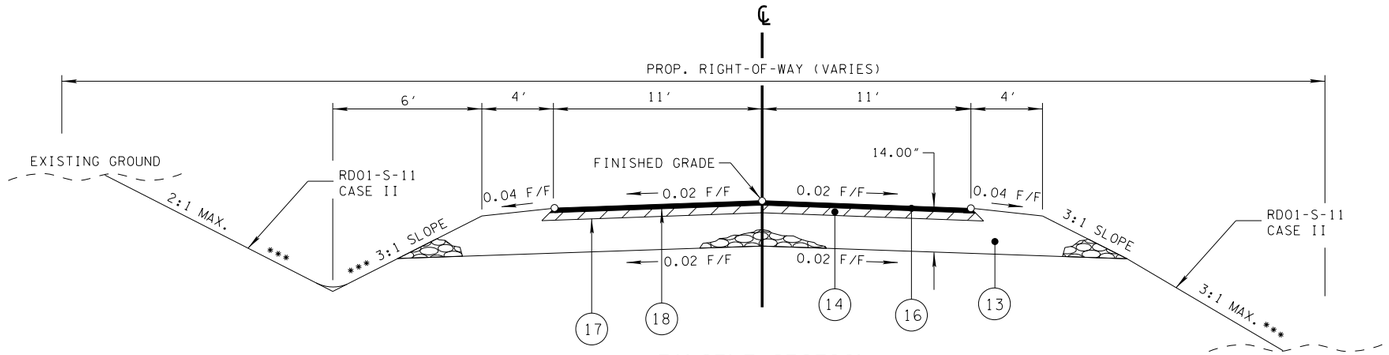
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	2C
CONST.	2017	NH-109(31)	2B3



TANGENT SECTION

(BASED ON STD. DWG. RDO1-TS-1)

STA. 37+00.00 TO 38+00.00 (NORTHERN ROAD)

SEE STD. DWG. RDO1-SE-3 FOR SUPERELEVATION DETAILS

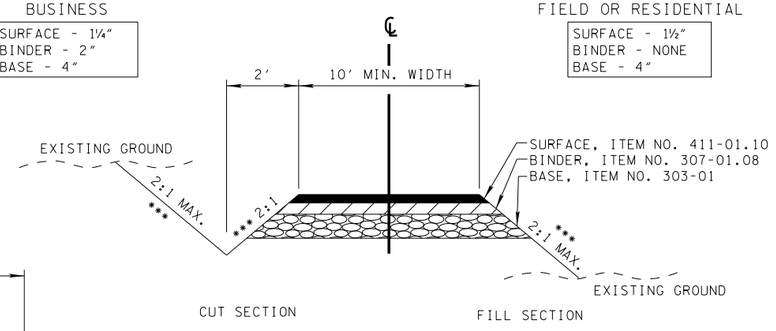
THE SLOPE OF SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 7.0%

BUSINESS

SURFACE - 1¼″
BINDER - 2″
BASE - 4″

FIELD OR RESIDENTIAL

SURFACE - 1½″
BINDER - NONE
BASE - 4″



TYPICAL SECTION

PRIVATE DRIVE TO BUSINESS, FIELD, OR RESIDENTIAL PROPERTY

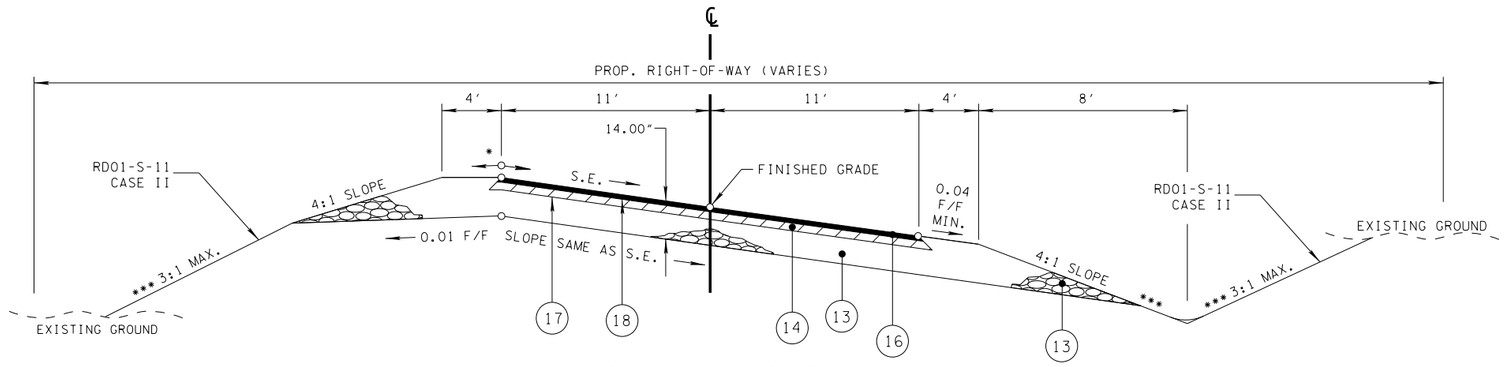
NOTES:

DITCH TO BE CONSTRUCTED WHERE DIRECTED BY THE ENGINEER.

ALL BUSINESS ENTRANCES SHALL HAVE 12:1 SIDE SLOPES.

NOTE: ALL ROADSIDE DITCHES TO BE LINED WITH SOD.

*** SLOPE <= 3:1 USE TYPE I EROSION CONTROL BLANKET WITH SEEDING
SLOPE > 3:1 USE TYPE II EROSION CONTROL BLANKET WITH CROWN VETCH

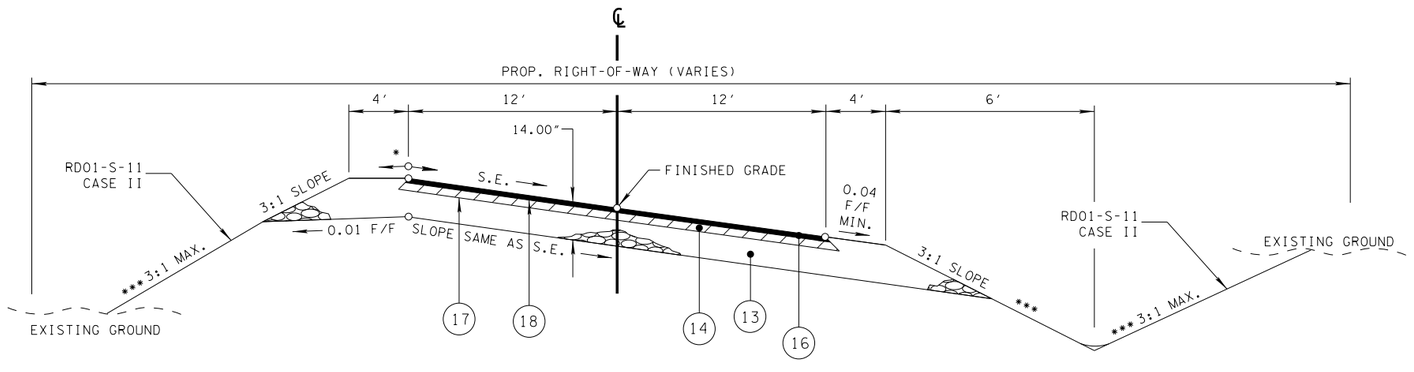


(BASED ON STD. DWG. RDO1-TS-2)

STA. 46+30.00 TO STA. STA. 49+70.00 (BURTON ROAD)

SEE STD. DWG. RDO1-SE-3 FOR SUPERELEVATION DETAILS

* THE SLOPE OF SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 7.0%



SUPERELEVATED SECTION

(BASED ON STD. DWG. RDO1-TS-1)

STA. 51+30.00 TO STA. 52+75.00 (DOUBLE LOG CABIN ROAD)

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TYPICAL SECTIONS

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	2D
CONST.	2017	NH-109(31)	2B4

PROPOSED PAVEMENT SCHEDULE

(1) (S.R. 109) (ALT. A) MINERAL AGGREGATE BASE (10"± DEPTH UNDER ROADWAY) ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	(2) (S.R. 109) BLACK BASE (4"± THICK) (APPROX. 360 LBS./S.Y.) ITEM NO. 307-02.02 ASPHALT CEMENT (PG70-22) (BPMB-HM) GRADING A-S ITEM NO. 307-02.03 AGGREGATE (BPMB-HM) GRADING A-S	(3) (S.R. 109) BLACK BASE (4"± THICK) (APPROX. 460 LBS./S.Y.) ITEM NO. 307-02.01 ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A
(4) (S.R. 109) BITUMINOUS BINDER (2"± THICK) (APPROX. 226 LBS./S.Y.) ITEM NO. 307-02.08 ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2	(5) (S.R. 109) BITUMINOUS SURFACING (ROADWAY) (1.25"± THICK) (APPROX. 132.5 LBS./S.Y.) ITEM NO. 411-02.10 ASPHALT CONCRETE MIX (PG70-22) (ACS) GRADING D	(6) (S.R. 109) (ALT. A) BITUMINOUS SURFACING (SHOULDERS) (1.25"± THICK) (APPROX. 128.75 LBS/S.Y.) ITEM NO. 411-01.07 ASPHALT CONCRETE MIX (PG64-22) (ACS) GRADING E (SHOULDER)
(7) (S.R. 109) (ALT. B) MINERAL AGGREGATE BASE (5"± DEPTH UNDER ROADWAY) ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	(8) (S.R. 109) (ALT. B) AGGREGATE CEMENT BASE COURSE - LIMESTONE (5"± THICK) ITEM NO. 309-01.01 MINERAL AGGREGATE (A-CBC) ITEM NO. 309-01.02 PORTLAND CEMENT (A-CBC) ITEM NO. 309-02 BITUMINOUS MATERIAL (A-CBC)	(9) (S.R. 109) (ALT. B) BITUMINOUS SURFACING (SHOULDERS) (1.5"± THICK) (APPROX. 154.5 LBS/S.Y.) ITEM NO. 411-01.07 ASPHALT CONCRETE MIX (PG64-22) (ACS) GRADING E (SHOULDER)
(10) (ROCK CASTLE DRIVE, SPENCE CREEK DRIVE) MINERAL AGGREGATE BASE (8"± DEPTH UNDER ROADWAY) ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	(11) (ROCK CASTLE DRIVE, SPENCE CREEK DRIVE) BLACK BASE (3"± THICK) (APPROX. 345 LBS./S.Y.) ITEM NO. 307-01.01 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	(12) (W. OLD LAGUARDO ROAD, ROCK CASTLE DRIVE, SPENCE CREEK DRIVE, KNOLLWOOD LANDING) BITUMINOUS BINDER (2"± THICK) (APPROX. 226 LBS./S.Y.) ITEM NO. 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2
(13) (ALL SIDE ROADS, EXCEPT ROCK CASTLE DRIVE AND SPENCE CREEK DRIVE) MINERAL AGGREGATE BASE (10"± DEPTH UNDER ROADWAY) ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	(FRONTAGE ROAD "A", NORTHERN ROAD, BURTON ROAD, DOUBLE LOG CABIN ROAD) (14) BITUMINOUS BINDER (2.75"± THICK) (APPROX. 310.75 LBS./S.Y.) ITEM NO. 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	(15) (E. OLD LAGUARDO ROAD) BITUMINOUS BINDER (2.25"± THICK) (APPROX. 254.25 LBS./S.Y.) ITEM NO. 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2
(16) (ALL SIDE ROADS) BITUMINOUS SURFACING (ROADWAY) (1.25"± THICK) (APPROX. 132.5 LBS./S.Y.) ITEM NO. 411-01.10 ASPHALT CONCRETE MIX (PG64-22) (ACS) GRADING D	(17) BITUMINOUS PRIME COAT ITEM NO. 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) @ 0.30 - 0.35 GAL./S.Y. ITEM NO. 402-02 AGGREGATE FOR COVER MATERIAL (PC) @ 8 - 12 LBS./S.Y.	(18) BITUMINOUS TACK COAT ITEM NO. 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) @ 0.07 GAL./S.Y.
(19) AGGREGATE UNDER DRAIN WITH PIPE (SEE STD. DWG. RD-UD-3) ITEM NO. 710-02 AGGREGATE UNDER DRAIN (WITH PIPE)	(20) TYPE 6-30 CURB & GUTTER ITEM NO. 702-03 CONCRETE COMBINED CURB & GUTTER	(21) MOUNTABLE CURB & GUTTER (MATCH EXIST.) ITEM NO. 702-03 CONCRETE COMBINED CURB & GUTTER
(22) COLD PLANING (1.25"± DEPTH) (APPROX. 131.25 LBS./S.Y.) ITEM NO. 415-01.02 COLD PLANING BITUMINOUS PAVEMENT		

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PAVEMENT SCHEDULE

9/28/2017
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	2C

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

(1) 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.

(2) 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.

(3) ITEM NO. 801-02.02, CROWN VETCH MIXTURE (WITH MULCH), SHALL BE USED ON SLOPES 3:1 OR STEEPER AND OTHER AREAS AS INDICATED IN THE PLANS THAT ARE INACCESSIBLE FOR MOWING.

(4) ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.

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

GUARDRAIL

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

(2) 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.

DRAINAGE

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

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

(3) CULVERT EXCAVATION FOR CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

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

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

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

(7) 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. ALL COST FOR THIS WORK SHALL BE INCLUDED IN ITEM NO. 204-08.01, BACKFILL MATERIAL (FLOWABLE FILL), C.Y.

MISCELLANEOUS

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

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

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

ROAD CLOSURE

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

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS

(1) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.20, PAINTED PAVEMENT MARKING (6IN LINE), L.M.

S.R. 109

(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. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

SIDE ROADS

(3) PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01 PAINTED PAVEMENT MARKING (4IN LINE), L.M.

LANE SHIFTS

(4) THE PAVEMENT MARKING ON THE LANE SHIFT FOR CENTERLINES AND EDGE 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. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. ITEM NO. 716-05.20, PAINTED PAVEMENT MARKING (6IN LINE), LIN. MI.

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

PAVEMENT

PAVING

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

(2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

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

GRADED SOLID ROCK

(1) 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.

(2) THIS GRADED SOLID ROCK MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING FIVE FEET IN DEPTH.

SIGNING

(1) 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.

(2) 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.

(3) THE EXISTING FOOTINGS ARE TO BE REMOVED 6 INCHES BELOW GROUND LINE.

(4) 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.

(5) 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.

(6) THE LETTERS, DIGITS, ARROWS, BORDERS AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS.

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DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

9/28/2017
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	2C1

GENERAL NOTES

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

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

(2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.

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

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

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

(6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF 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.

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

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

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.

(6) 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

(10) 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.

(11) 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).

INSPECTION, MAINTENANCE & REPAIR

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

PERMITS, PLANS & RECORDS

(13) 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).

(14) 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.

(15) 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.

(16) 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.

(17) 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

(18) 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.

(19) 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.

(20) 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 REGULATIONS.

(21) 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.

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GENERAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
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GENERAL NOTES

EROSION PREVENTION AND SEDIMENT CONTROL (CONT'D)

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

(23) 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.

(24) 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.

(25) 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.

(26) 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.

(27) 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.

(28) 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.

(29) 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.

(30) 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

(31) 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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GENERAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	2D

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.

DEMOLITION

DEMOLITION, REPAIR OR REHABILITATION OF BRIDGES

(1) THE CONTRACTOR SHALL VERIFY THAT AN ASBESTOS SURVEY HAS BEEN COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATION ACTIVITIES (NOT INCLUDING ASPHALT MILLING OR OVERLAY).

(2) ASBESTOS-CONTAINING MATERIALS (ACM) ABATEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATION OF BRIDGE(S). ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.

(3) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT, DEMOLITION OR MAJOR REPAIR INVOLVING THE REMOVAL/REPLACEMENT OF A STRUCTURAL COMPONENT.

HISTORICAL

(1) THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING AND COORDINATING WITH THE TDOT REGIONAL SIGN SHOP FOR STORING HISTORIC MARKER(S). AT THE TIME THE MARKER(S) IS TAKEN DOWN, LINDA WYNN WITH THE TENNESSEE HISTORICAL COMMISSION SHOULD BE NOTIFIED AT (615)-770-1093. AT THE END OF CONSTRUCTION, MARKER(S) WILL BE RESET BY THE SIGN SHOP AT THE DIRECTION OF THE REGIONAL TRAFFIC ENGINEER. IF THE MARKER CANNOT BE RESET OUTSIDE OF THE CLEAR ZONE, THE REGIONAL TRAFFIC ENGINEER WILL CONTACT THE TENNESSEE HISTORIC COMMISSION AND RETURN THE MARKER(S).

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

(2) 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.

(3) 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.

(4) 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

(5) SEE PROJECT COMMITMENTS, SHEET 1B, FOR DETAILS RELATING TO SPECIAL ENVIRONMENTAL COMMITMENTS REQUIRED BY THIS PROJECT.

MITIGATION

(6) TOPSOIL TO BE REMOVED FROM ALL AREAS OF TEMPORARY WETLAND IMPACTS AND STOCKPILED PRIOR TO CONSTRUCTION.

(7) UPON COMPLETION OF CONSTRUCTION ACTIVITIES, TEMPORARY HAUL ROADS ARE TO BE REMOVED. EXCAVATED MATERIAL FROM THE HAUL ROADS IS TO BE DISPOSED OF AS DIRECTED BY THE ENGINEER.

(8) UPON COMPLETION OF CONSTRUCTION ACTIVITIES, ALL TEMPORARY WETLAND IMPACT AREAS ARE TO BE RESTORED TO PRE-CONSTRUCTION CONTOURS AND THE STOCKPILED WETLAND TOPSOIL SPREAD TO RESTORE THESE AREAS TO PRE-CONSTRUCTION ELEVATION.

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ESTIMATED GRADING QUANTITIES

	STATION TO STATION	ROAD & DRAINAGE EXC. (UNCL.)		BORROW EXCAVATION		EMB. C.Y.
		COMMON - C.Y.	S. ROCK - C.Y.	UNCL. - C.Y.	GRADED S. ROCK - C.Y.	
(1)	S.R. 109	98620	57678		17122	98995
	OLD LAGUARDO ROAD - WEST	222				1723
	OLD LAGUARDO ROAD - EAST	134				2534
	FRONTAGE ROAD "A"	0				506
	ROCK CASTLE DRIVE	161				22
	SPENCE CREEK DRIVE	196				
	KNOLLWOOD LANDING	631	273			
	NORTHERN ROAD	5082				550
	BURTON ROAD	4602				
	DOUBLE LOG CABIN ROAD	102				19
	PRIVATE DRIVES	699				3759
	TOPSOIL FROM EMB. AREAS	14512				14512
	TOTALS	**124961**	**57951**	**0**	**17122**	**122620**

(1) SEE PROPOSED LAYOUTS FOR GRADED SOLID ROCK LOCATIONS

PAVEMENT QUANTITIES

LOCATION	PAY ITEMS																		
	303-01 (TON)			307-01.01 (TON)	307-01.08 (TON)	307-02.01 (TON)	307-02.02 (TON)	307-02.03 (TON)	307-02.08 (TON)	309-01.01 (TON)	309-01.02 (TON)	309-02 (TON)	402-01 (TON)	402-02 (TON)	403-01 (TON)	411-01.07 (TON)	411-01.10 (TON)	411-02.10 (TON)	701-02 (S.F.)
		ALT. AA1	ALT. AA2							ALT. AA2	ALT. AA2	ALT. AA2							
S.R. 109		112136.25	81497.43			26659.84	678.09	20186.13	13098.09	31322.09	1209.03	100.36	219.53	869.34	70.25	2333.00		7483.91	
OLD LAGUARDO ROAD - WEST	530.96				63.95								0.86	3.40	0.17		37.49	.	
OLD LAGUARDO ROAD - EAST	811.87				109.09								1.30	5.15	0.26		56.85		
FRONTAGE ROAD "A"	805.65				174.69								1.70	6.75	0.34		74.49		
ROCK CASTLE DRIVE	279.44			90.16	59.06								0.86	3.39	0.32		34.63		
SPENCE CREEK DRIVE	190.53			61.87	40.53								0.61	2.40	0.22		23.76		
KNOLLWOOD LANDING	555.90				100.94								0.98	3.90	0.20		43.04		
NORTHERN ROAD	1515.85				225.90								2.20	8.72	0.44		96.32		
BURTON ROAD	858.66				134.55								1.31	5.20	0.26		57.37		
DOUBLE LOG CABIN ROAD	398.50				66.76								0.65	2.58	0.13		28.47		
PRIVATE DRIVES	2151.53				180.84								8.50	33.67	0.14		409.23		10042.00
TEMPORARY DETOURS	621.32			153.35	100.46								1.35	5.33	0.27				
TOTALS	**8721**	**112137**	**81498**	**306**	**1258**	**26660**	**679**	**20187**	**13099**	**31323**	**1210**	**101**	**240**	**950**	**73**	**2333**	**862**	**7484**	**10042**

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TABULATED QUANTITIES

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SLAB CULVERT TABULATION

STATION	LOCATION	SPAN	HEIGHT	LENGTH	SKEW	DRAINAGE AREA ACRES	CLASS B RIP-RAP 709-05.08 (TON)	CLASS "A" CONC. CU. YD.	REINF. STEEL LBS.	DRAWING NO.	BACKFILL ITEM 303-01.01 DWG. STD-10-1 TONS	FOUNDATION FILL MATERIAL CU. YD.
64+07	S.R. 109	2 - 6'	5'	110'	90°	164.8		121.02	23580	STD-17-131	456.6	
86+68	S.R. 109	12'	4'	156'	64°	135.5	21.51	136.31	31252	STD-17-116	607.8	
TOTALS							**21.51**	**257.33**	**54832**		**1064.4**	**0**

CULVERT EXCAVATION FOR CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

CROSS DRAIN TABULATION

STATION	RCP CLASS III OR CMP (SEE FOOTNOTE (1)) OR PVC OR SRTRP OR HDPE OR PP (L.F.) FILL HEIGHT < OR = 16 FT.					RCP CLASS III HORIZONTAL OVAL FILL HEIGHT < OR = 10 FT.		SKEW	CLASS A RIP-RAP 709-05.06 (TON)	CLASS B RIP-RAP 709-05.08 (TON)	CLASS C RIP-RAP 709-05.09 (TON)	END TREATMENT				CLASS A CONC. 611-07.01 (C.Y.)	REINF. STEEL 611-07.02 (LB.)	REMARKS
												INLET		OUTLET				
	18"	24"	30"	36"	42"	38" X 24"						TYPE	DRAWING NO.	TYPE	DRAWING NO.			
7+23 OLD LAGUARDO ROAD - WEST		94						64° LT		43.75		3:1 "U"	D-PE-24A D-PE-24B	3:1 "U"	D-PE-24A D-PE-24B			
9+76 OLD LAGUARDO ROAD - EAST			80					83° LT		38.89		3:1 "U"	D-PE-30A D-PE-30B	3:1 "U"	D-PE-30A D-PE-30B			
51+61 FRONTAGE ROAD "A"	50							49° LT		14.58		STR.	D-PE-4	STR.	D-PE-4	2.00	90	
54+66 FRONTAGE ROAD "A"	44							82° RT		22.30		3:1 "U"	D-PE-18A D-PE-18B	3:1 "U"	D-PE-18A D-PE-18B			
14+15 ROCK CASTLE DRIVE	96							90°				3:1 "U"	D-PE-18A D-PE-18B	3:1 "U"	D-PE-18A D-PE-18B			
58+35 S.R. 109		127						90°		25.52		6:1 "U"	D-PE-24A D-PE-24B	4:1 "U"	D-PE-24A D-PE-24B			
68+73 S.R. 109			142					87° RT		59.82		6:1 "U"	D-PE-30A D-PE-30B	4:1 "U"	D-PE-30A D-PE-30B			
77+76 S.R. 109	116							90°				6:1 "U"	D-PE-18A D-PE-18B	4:1 "U"	D-PE-18A D-PE-18B			
29+37 KNOLLWOOD LANDING	43							90°				3:1 "U"	D-PE-18A D-PE-18B	3:1 "U"	D-PE-18A D-PE-18B			
113+83 S.R. 109			195					62° LT		24.31		CB	D-CB-44SE	4:1 "U"	D-PE-30A D-PE-30B			
124+24 S.R. 109			116					79° LT		25.93		6:1 "U"	D-PE-30A D-PE-30B	6:1 "U"	D-PE-30A D-PE-30B			
125+61 S.R. 109				134				70° RT		39.80		4:1 "U"	D-PE-36A D-PE-36B	4:1 "U"	D-PE-36A D-PE-36B			
138+38 S.R. 109					119			70° LT		105.73		6:1 "U"	D-PE-42A D-PE-42B	4:1 "U"	D-PE-42A D-PE-42B			
143+37 S.R. 109					180			75° RT			169.28	"A"	D-PE-1	"A"	D-PE-1	9.70	168	
161+69 S.R. 109	152							82° LT		9.02		CB	D-CB-42S	4:1 "U"	D-PE-18A D-PE-18B			
174+07 S.R. 109						114		73° LT		43.75		6:1 "U"	D-PE-42A D-PE-42B	6:1 "U"	D-PE-42A D-PE-42B			
51+63 DOUBLE LOG CABIN ROAD	31							90°		12.96		3:1 "U"	D-PE-18A D-PE-18B	3:1 "U"	D-PE-18A D-PE-18B			
TOTALS	**532**	**221**	**533**	**134**	**299**	**114**			**0.00**	**466.36**	**169.28**					**11.70**	**258**	

(1) ANY CMP USED ON S.R. 109 SHALL BE A MINIMUM OF 10 GA. ANY CMP ON THE SIDE ROADS SHALL BE A MINIMUM OF 14 GA.

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TABULATED QUANTITIES

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CONST.	2017	NH-109(31)	2E2

SIDE DRAIN TABULATION

STATION	ROUTE	LOCATION		DESCRIPTION	SURFACE WIDTH	RCP CLASS III OR CMP 16 GA. OR HDPE OR PVC (L.F.) FILL HEIGHT < OR = 10 FT.					END TREATMENT		REMARKS
		LT	RT		(L.F.)	18"	24"	30"	36"	38" X 24"	TYPE	DRAWING NO.	
21+00.00	S.R. 109		X	FIELD ENTRANCE	12'								ASPHALT
25+10.82	S.R.109	X		PRIVATE DRIVE	11'	20					NO. 42	D-CB-42S	ASPHALT
26+96.53	S.R. 109	X		BUSINESS ENTRANCE	18'	32							ASPHALT
27+09.47	S.R. 109		X	FIELD ENTRANCE	10'	22							ASPHALT
31+12.07	S.R. 109	X		BUSINESS ENTRANCE	30'	52							ASPHALT
6+80.48	W. OLD LAGUARDO RD.	X		PRIVATE DRIVE	10'	44							GRAVEL
50+82.01	FRONTAGE RD "A"	X		FIELD ENTRANCE	10'	26							GRAVEL
50+82.01	FRONTAGE RD "A"		X	PRIVATE DRIVE	10'								GRAVEL
52+06.41	FRONTAGE RD "A"		X	PRIVATE DRIVE	10'								GRAVEL
12+00.00	E. OLD LAGUARDO RD.	X		FIELD ENTRANCE	10'	28							GRAVEL
12+19.09	E. OLD LAGUARDO RD.		X	PRIVATE DRIVE	12'								ASPHALT
51+02.20	S.R. 109		X	PRIVATE DRIVE	10'	22							GRAVEL
55+93.82	S.R. 109		X	PRIVATE DRIVE	10'	24							ASPHALT
56+66.69	S.R. 109		X	PRIVATE DRIVE	10'	24							GRAVEL
59+33.12	S.R. 109		X	FIELD ENTRANCE	10'	22							GRAVEL
61+71.84	S.R. 109	X		FIELD ENTRANCE	10'	22							ASPHALT
62+09.42	S.R. 109		X	FIELD ENTRANCE	10'	20							GRAVEL
62+79.35	S.R. 109	X		BUSINESS ENTRANCE	16'								ASPHALT
65+63.31	S.R. 109		X	PRIVATE DRIVE	10'	24							ASPHALT
68+05.06	S.R. 109		X	PRIVATE DRIVE	10'	24							ASPHALT
68+07.97	S.R. 109	X		FIELD ENTRANCE	10'								ASPHALT
78+46.22	S.R. 109		X	PRIVATE DRIVE	10'	24							ASPHALT
78+94.12	S.R. 109		X	PRIVATE DRIVE	10'	24							ASPHALT
86+70.23	S.R. 109		X	PRIVATE DRIVE	10'			68					ASPHALT
87+78.94	S.R. 109		X	PRIVATE DRIVE	10'			68					ASPHALT
91+57.79	S.R. 109	X		PRIVATE DRIVE	10'	20							ASPHALT
92+53.00	S.R. 109	X		PRIVATE DRIVE	10'	24							CONCRETE
93+12.03	S.R. 109		X	PRIVATE DRIVE	10'	24							GRAVEL
96+23.67	S.R. 109	X		PRIVATE DRIVE	10'	24							CONCRETE
97+58.24	S.R. 109	X		FIELD ENTRANCE	16'	30							GRAVEL
98+37.50	S.R. 109		X	PRIVATE DRIVE	10'	24							ASPHALT
99+76.01	S.R. 109		X	PRIVATE DRIVE	10'	24							ASPHALT
99+81.47	S.R. 109	X		PRIVATE DRIVE	10'	24							ASPHALT
100+44.22	S.R. 109		X	PRIVATE DRIVE	10'	24							ASPHALT
102+87.55	S.R. 109	X		PRIVATE DRIVE	14'	28							GRAVEL
103+40.54	S.R. 109		X	PRIVATE DRIVE	10'	24							ASPHALT
27+92.95	KNOLLWOOD LANDING	X		PRIVATE DRIVE	10'	22							GRAVEL
107+40.22	S.R. 109	X		FIELD ENTRANCE	10'	24							GRAVEL
108+04.66	S.R. 109	X		FIELD ENTRANCE	10'	24							GRAVEL
109+28.19	S.R. 109		X	PRIVATE DRIVE	20'	34							GRAVEL
110+25.35	S.R. 109	X		PRIVATE DRIVE	12'	26							GRAVEL
111+16.18	S.R. 109		X	PRIVATE DRIVE	10'	24							GRAVEL
115+62.24	S.R. 109		X	PRIVATE DRIVE	40'	54							ASPHALT
115+71.95	S.R. 109	X		FIELD ENTRANCE	10'								ASPHALT
116+89.58	S.R. 109		X	PRIVATE DRIVE	10'	24							ASPHALT
117+28.69	S.R. 109	X		PRIVATE DRIVE	10'								ASPHALT
118+50.62	S.R. 109	X		PRIVATE DRIVE	10'	24							CONCRETE
119+34.48	S.R. 109	X		PRIVATE DRIVE	10'	24							GRAVEL
122+53.22	S.R. 109	X		PRIVATE DRIVE	10'	24							ASPHALT
23+92.15	NORTHERN ROAD		X	FIELD ENTRANCE	16'			30					ASPHALT
25+00.00	NORTHERN ROAD	X		FIELD ENTRANCE	10'				36				ASPHALT
27+77.40	NORTHERN ROAD	X		PRIVATE DRIVE	14'				20				CONCRETE
27+88.26	NORTHERN ROAD		X	PRIVATE DRIVE	10'					22			GRAVEL
29+62.83	NORTHERN ROAD		X	PRIVATE DRIVE	14'					28			GRAVEL
30+98.49	NORTHERN ROAD		X	PRIVATE DRIVE	12'					26			GRAVEL
SUBTOTALS (SEE SHEET NO. 2E3)						**1028**	**0**	**166**	**56**	**76**			

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DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

SHEET 3 OF 6

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	2E3

SIDE DRAIN TABULATION (CONT.)

STATION	ROUTE	LOCATION		DESCRIPTION	SURFACE WIDTH	RCP CLASS III OR CMP 16 GA. OR HDPE OR PVC (L.F.) FILL HEIGHT < OR = 10 FT.					END TREATMENT		REMARKS
		LT	RT		(L.F.)	18"	24"	30"	36"	38"X24"	TYPE	DRAWING NO.	
31+08.80	NORTHERN ROAD	X		FIELD ENTRANCE	12'				30				ASPHALT
32+52.45	NORTHERN ROAD	X		BUSINESS ENTRANCE	30'				48				ASPHALT
33+18.16	NORTHERN ROAD		X	PRIVATE DRIVE	14'			32					ASPHALT
34+77.27	NORTHERN ROAD		X	PRIVATE DRIVE	10'			48					ASPHALT
37+32.79	NORTHERN ROAD	X		BUSINESS ENTRANCE	90'	108							ASPHALT
130+45.45	S.R. 109	X		BUSINESS ENTRANCE	26'	40							ASPHALT
134+83.00	S.R. 109	X		PRIVATE DRIVE	17'	31							CONCRETE
136+30.00	S.R. 109	X		FIELD ENTRANCE	10'	24							ASPHALT
140+93.47	S.R. 109		X	PRIVATE DRIVE	12'	26							ASPHALT
146+93.75	S.R. 109	X		PRIVATE DRIVE	10'	18							ASPHALT
148+47.35	S.R. 109	X		PRIVATE DRIVE	10'	24							ASPHALT
149+13.77	S.R. 109	X		PRIVATE DRIVE	20'	34							GRAVEL
150+25.50	S.R. 109	X		PRIVATE DRIVE	12'	30							GRAVEL
150+61.09	S.R. 109	X		PRIVATE DRIVE	12'	32							ASPHALT
151+05.32	S.R. 109		X	PRIVATE DRIVE	16'	30							CONCRETE
152+93.17	S.R. 109	X		PRIVATE DRIVE	10'	24							ASPHALT
154+56.31	S.R. 109		X	PRIVATE DRIVE	10'	24							ASPHALT
154+79.88	S.R. 109	X		PRIVATE DRIVE	14'	28							ASPHALT
155+30.46	S.R. 109		X	PRIVATE DRIVE	10'	24							CONCRETE
156+73.29	S.R. 109	X		PRIVATE DRIVE	10'	24							GRAVEL
156+76.32	S.R. 109		X	PRIVATE DRIVE	10'	24							CONCRETE
157+09.41	S.R. 109	X		PRIVATE DRIVE	15'	26							CONCRETE
157+26.98	S.R. 109		X	PRIVATE DRIVE	10'	24							CONCRETE
159+38.41	S.R. 109		X	PRIVATE DRIVE	15'								ASPHALT
160+01.68	S.R. 109	X		PRIVATE DRIVE	10'	24							GRAVEL
160+78.54	S.R. 109	X		BUSINESS ENTRANCE	10'	28							ASPHALT
175+05.19	S.R. 109		X	FIELD ENTRANCE	10'	24							ASPHALT
47+00.00	BURTON ROAD		X	FIELD ENTRANCE	10'	24							GRAVEL
SUBTOTALS						**695**	**0**	**80**	**78**	**0**			
SUBTOTALS FROM SHEET NO. 2E2						**1028**	**0**	**166**	**56**	**76**			
TOTALS						**1723**	**0**	**246**	**134**	**76**			

BRIDGE DRAINS

STATION	LOCATION	SPILLWAY WIDTH	RUBBLE-STONE RIP-RAP 709-01.01 (CU. YD.)	18" PIPE DRAIN (BRIDGE DRAIN) 610-07.03 (L.F.)	REMARKS
38+63.72	S.R. 109	4'-8"	2.6	22	
39+13.61	S.R. 109	4'-8"	2.6	26	
40+24.39	S.R. 109	4'-8"	2.6	32	
40+74.28	S.R. 109	4'-8"	2.6	30	
TOTALS			**10.4**	**110**	

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TABULATED QUANTITIES

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	2E4

PROPOSED GUARDRAIL

SHEET NO.	LOCATION	SIDE		STATION		GUARDRAIL				TERMINAL ANCHORS				REMARKS
		LT	RT	FROM	TO	BRIDGE ENDS 705-01.01 (L.F.)	METAL BEAM GUARD FENCE 705.01.04 (L.F.)	SINGLE TYPE 2 705-06.01 (L.F.)	RADIUS RAIL LONG POST 706-06.06 (L.F.)	TYPE IN-LINE 705-06.11 (EACH)	TYPE 38 705-06.20 (EACH)	TYPE 21 705-06.30 (EACH)	ROUNDED END ELEMENT 706-10.26 (EACH)	
4A-5A	S.R. 109	X		31+39.67	36+61.53			487.50	37.50	1	1			
4A-5A	S.R. 109		X	31+96.49	38+64.01	26.90		593.75			1			
5A	W. OLD LAGUARDO RD.		X	6+03.13	7+27.45			100.00				1		
5A	W. OLD LAGUARDO RD.	X		6+94.73	7+442.85			50.00	12.50	1			1	
5A	S.R. 109	X		37+33.19	39+22.83	26.90		162.50	25.00	1				
5A	S.R. 109		X	40+25.17	43+78.99	26.90		325.00	31.25	1				
5A-6A	S.R. 109	X		40+83.99	49+36.52	26.90		775.00			1			
5A	S.R. 109		X	44+50.03	50+24.03			525.00	31.25	1	1			
5A	E. OLD LAGUARDO RD.		X	9+42.00	9+87.22							1		
5A	E. OLD LAGUARDO RD.	X		9+42.00	9+87.22							1		
6A-7A	S.R. 109	X		55+91.50	61+51.80			512.50	12.50	1	1		1	
7A	S.R. 109		X	61+30.64	61+90.01			12.50	12.50	1	1		1	
7A	S.R. 109	X		61+90.19	62+58.94			68.75	25.00	2			2	
7A	S.R. 109		X	62+28.84	65+41.34		18.75	293.75	25.00	2			2	
7A	S.R. 109	X		63+02.30	66+33.94		18.75	281.25		1	1		1	
7A	S.R. 109		X	65+83.90	66+75.90			43.75	12.50	1	1		1	
8A-9A	S.R. 109		X	83+32.60	86+50.31			268.75	12.50	1	1		1	
8A-9A	S.R. 109	X		84+28.39	90+21.27			500.00			2			
9A	S.R. 109		X	86+90.18	87+58.93			68.75	25.00	2			2	
9A	S.R. 109		X	87+86.85	89+09.35			62.50	12.50	1	1		1	
12A	S.R. 109		X	129+84.16	130+73.38			43.75				2		ON OLD LAGUARDO RD - EAST
13A	S.R. 109	X		139+37.63	146+72.00			687.50	12.50	1	1		1	
13A	S.R. 109		X	141+09.88	146+72.38			468.75			2			
13A	S.R. 109	X		147+15.49	147+68.62			6.25	12.50	1	1		1	
TOTALS						**107.60**	**37.50**	**6337.50**	**300.00**	**19**	**16**	**5**	**15**	

DROP INLETS

SHEET NO.	LOCATION	STATION	OFFSET	DRAINAGE CODE	GRATE/TOP ELEV.	STRUCTURE TYPE	INSIDE DIMENSIONS	DEPTH	STANDARD DRAWING	PAY ITEMS		
										TYPE 42 611-42.01 0' - 4'	TYPE 42 611-42.02 4' - 8'	TYPE 44 611-44.04 12' - 16'
4A	S.R. 109	25+02.10	63.0' LT	3	503.66'	No. 42	32" X 32"	2.96'	D-CB-42S	1		
11A	S.R. 109	113+82.90	63.8' RT	4	493.33'	No. 44	108" X 108"	5.42'	D-CB-44SE			1
14A	S.R. 109	161+77.57	63.1' LT	5	501.10'	No. 42	32" X 32"	2.96'	D-CB-42S		1	
TOTALS										**1**	**1**	**1**

STORM DRAINAGE ENDWALLS

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	STRUCTURE TYPE	STANDARD DRAWING
4A	S.R. 109	24+83.05	50.7'	2	6:1 "U"	D-PE-24A, D-PE-24B
TOTALS						

STORM DRAINAGE PIPES

SHEET NO.	FROM		TO		% GRADE	RCP CLASS III OR HDPE OR PVC SIZE & LENGTH (L.F.)					RIP-RAP 709-05.06 (TON)
	CODE	OUTLET ELEV.	CODE	INLET ELEV.		18"	24"	30"	36"	48"	
4A	1	499.52	2	499.48	0.50		8				
TOTALS						**0**	**8**	**0**	**0**	**0**	**0**

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TABULATED QUANTITIES

SHEET 5 OF 6

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	2E5

REMOVAL OF STRUCTURES (ITEM NO. 202-01)

SHEET NO.	STATION	LOCATION	DESCRIPTION	REMARKS
4	24+86 (S.R. 109)	42' RT.	24" RCP & SAFETY ENDWALL	10 L.F.
4	27+06 (S.R. 109)	40' LT.	15" CMP	20 L.F.
4	27+11 (S.R. 109)	45' RT.	24" CMP	20 L.F.
4	31+12 (S.R. 109)	34' LT.	SIDE DRAIN	54 L.F.
5	38+30 (S.R. 109)	42' LT.	18" CMP & ENDWALLS	66 L.F.
5	39+64 (S.R. 109)	96' RT.	4 -12" PVC	4 @ 4 L.F.
5	41+12 (S.R. 109)	107' RT.	CATTLE GUARD & WINGWALLS	12 L.F.
5	41+26 (S.R. 109)	48' RT.	18" CMP & ENDWALLS	66 L.F.
5	41+58 (S.R. 109)	128' RT.	15" CMP	50 L.F.
6	51+18 (S.R. 109)	53' LT.	18" RCP & SAFETY ENDWALLS	74 L.F.
6	51+18 (S.R. 109)	32' RT.	SIDE DRAIN & ENDWALLS	24 L.F.
6	56+02 (S.R. 109)	16' RT.	12" CMP	30 L.F.
6	56+70 (S.R. 109)	18' RT.	18" CMP	40 L.F.
7	58+52 (S.R. 109)	℄	24" RCP & ENDWALLS	52 L.F.
7	61+79 (S.R. 109)	58' LT.	SIDE DRAIN	24 L.F.
7	65+60 (S.R. 109)	30' RT.	SIDE DRAIN	20 L.F.
7	68+65 (S.R. 109)	℄	18" RCP & ENDWALLS	64 L.F.
8	77+70 (S.R. 109)	℄	18" RCP & ENDWALLS	70 L.F.
8	78+84 (S.R. 109)	14' RT.	2 - 8" HDPE & ENDWALLS	2 @ 80 L.F.
9	86+50 (S.R. 109)	50' RT.	15" RCP	28 L.F.
9	86+72 (S.R. 109)	40' RT.	18" CMP	26 L.F.
9	87+78 (S.R. 109)	36' RT.	18" CMP	56 L.F.
9	90+54 (S.R. 109)	℄	18" RCP	62 L.F.
9	91+92 (S.R. 109)	20' LT.	15" HDPE	20 L.F.
9	92+65 (S.R. 109)	18' LT.	15" CMP	28 L.F.
9	93+02 (S.R. 109)	28' RT.	15" CMP	26 L.F.
9	96+16 (S.R. 109)	12' LT.	18" DIP	20 L.F.
9	97+40 (S.R. 109)	12' LT.	15" CMP	24 L.F.
10	98+35 (S.R. 109)	32' RT.	15" CMP	32 L.F.
10	99+66 (S.R. 109)	32' RT.	24" CMP	20 L.F.
10	99+80 (S.R. 109)	12' LT.	15" CMP	28 L.F.
10	100+49 (S.R. 109)	32' LT.	SIDE DRAIN	34 L.F.
10	104+62 (S.R. 109)	12' LT.	15" CMP & SAFETY ENDWALLS	82 L.F.
10	109+28 (S.R. 109)	32' RT.	15" CMP	44 L.F.
10	110+24 (S.R. 109)	10' LT.	CMP	48 L.F.
11	110+82 (S.R. 109)	74' RT.	15" CMP & ENDWALLS	20 L.F.
11	111+52 (S.R. 109)	58' RT.	18" CMP	124 L.F.
11	111+92 (S.R. 109)	44' RT.	18" CMP & ENDWALL	40 L.F.
11	112+60 (S.R. 109)	44' RT.	18" CMP & 2 AREA DRAINS	92 L.F.
11	113+05 (S.R. 109)	℄	30" RCP & ENDWALL	76 L.F.
11	113+42 (S.R. 109)	44' RT.	18" CMP & ENDWALL	72 L.F.
11	117+20 (S.R. 109)	14' LT.	18" HDPE	24 L.F.
11	122+22 (S.R. 109)	12' LT.	12" CMP	18 L.F.
11	122+74 (S.R. 109)	30' RT.	18" RCP (OR 15")	72 L.F.
12	123+56 (S.R. 109)	30' RT.	15" RCP	58 L.F.
12	124+30 (S.R. 109)	32' RT.	15" RCP & AREA DRAIN	52 L.F.
12	124+40 (S.R. 109)	12' LT.	12" RCP	16 L.F.
12	124+88 (S.R. 109)	34' RT.	15" RCP	62 L.F.
12	34+36 (NORTHERN RD.)	10' LT.	15" CMP	20 L.F.
12	36+90 (NORTHERN RD.)	6' RT.	15" CMP	112 L.F.
12	37+38 (NORTHERN RD.)	24' LT.	15" CMP	104 L.F.
12	127+54 (S.R. 109)	℄	18" RCP & ENDWALLS	48 L.F.
12	130+20 (S.R. 109)	36' RT.	15" CMP	40 L.F.
12	134+80 (S.R. 109)	24' LT.	12" CMP	30 L.F.

REMOVAL OF STRUCTURES (ITEM NO. 202-01)

SHEET NO.	STATION	LOCATION	DESCRIPTION	REMARKS
13	138+54 (S.R. 109)	℄	24" RCP & ENDWALLS	48 L.F.
13	143+64 (S.R. 109)	℄	36" RCP & ENDWALLS	112 L.F.
13	147+00 (S.R. 109)	16' LT.	18" CMP	38 L.F.
13	147+20 (S.R. 109)	34' RT.	15" CMP	20 L.F.
13	148+40 (S.R. 109)	12' LT.	15" CMP & ENDWALL	32 L.F.
13	149+16 (S.R. 109)	12' LT.	15" CMP	20 L.F.
14	150+40 (S.R. 109)	10' LT.	15" CMP	40 L.F.
14	150+88 (S.R. 109)	34' RT.	15" CMP & ENDWALLS	20 L.F.
14	152+72 (S.R. 109)	10' LT.	15" CMP	20 L.F.
14	156+76 (S.R. 109)	32' RT.	12" HDPE	20 L.F.
14	157+14 (S.R. 109)	12' LT.	15" CMP	20 L.F.
14	158+54 (S.R. 109)	℄	18" RCP & ENDWALLS	50 L.F.
14	160+06 (S.R. 109)	14' LT.	15" CMP	24 L.F.
14	160+85 (S.R. 109)	14' LT.	15" CMP	20 L.F.
14	161+84 (S.R. 109)	℄	18" RCP & ENDWALLS	50 L.F.
15	173+14 (S.R. 109)	℄	36" CMP & ENDWALLS	46 L.F.
16	180+18 (S.R. 109)	36' RT.	12" CMP	50 L.F.
16	181+32 (S.R. 109)	℄	30" CMP & ENDWALLS	42 L.F.

ALL PIPE TO BE FILLED WITH BACKFILL MATERIAL (FLOWABLE FILL) UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ALL ENDWALLS AND CATTLE GUARD TO BE REMOVED.

REMOVAL OF BUILDINGS AND OBSTRUCTIONS

PAY ITEM	TRACT NO.	DESCRIPTION
202-06.07	35	BURNED SINGLE WIDE, DETACHED GARAGE
202-06.08	48	ONE STORY BRICK RANCH
202-06.09	80	ONE STORY BRICK RANCH
202-06.10	88	DOUBLE WIDE FIXED TO SITE

NO ADDITIONAL COMPENSATION WILL BE MADE FOR THESE REMOVALS.

R.O.W. MARKERS

SHEET NO.	QUANTITIES			
	"A"	"B"	"C"	TOTALS
4	4	2	3	**9**
5	4	4	7	**15**
6	4	5	5	**14**
7	7	7	8	**22**
8	5	2	3	**10**
9	3	5	4	**12**
10	11	0	2	**13**
11	6	2	3	**11**
12	4	4	7	**15**
13	1	8	7	**16**
14	10	2	2	**14**
15	6	4	6	**16**
16	2	3	5	**10**
17	1	3	4	**8**
18	2	1	0	**3**
TOTALS	**70**	**52**	**66**	**188**

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

SHEET 6 OF 6

9/28/2017
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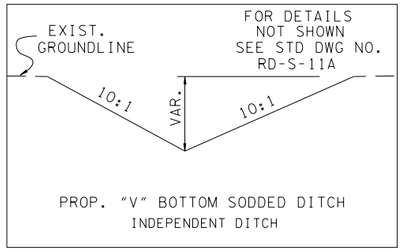
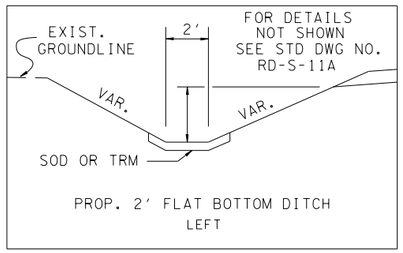
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	2E
CONST.	2017	NH-109(31)	2F



DETAIL NO. 1



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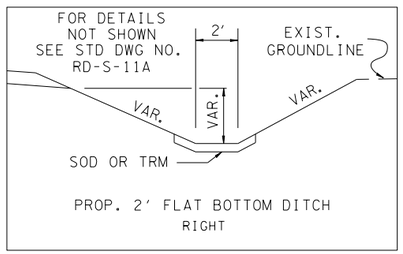
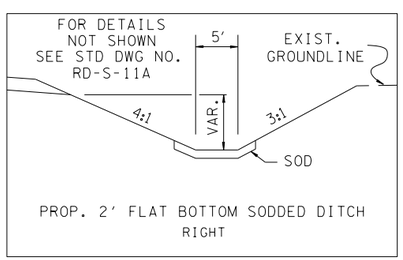


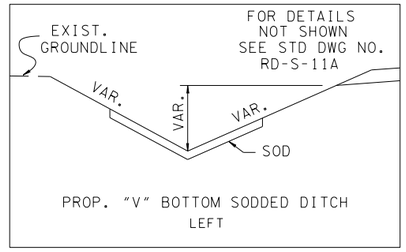
DETAIL NO. 3



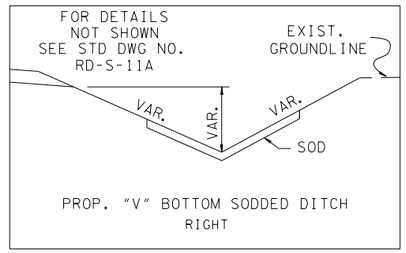
DETAIL NO. 4

SPECIAL DITCHES

ROAD	STATION		SLOPE			DETAIL NO.	TYPE
	FROM	TO	FORE (H/V)	BOTTOM WIDTH	BACK (H/V)		
S.R. 109 - RT	24+90.30	26+23.41	10:1		10:1	NO. 1	SOD
S.R. 109 - LT	26+00.00	32+50.00	4:1	2'	3:1	NO. 2	SOD
S.R. 109 - LT	32+50.00	34+00.00	3:1	2'	3:1	NO. 2	SOD
S.R. 109 - LT	34+00.00	36+00.00	2:1	2'	3:1	NO. 2	SOD
S.R. 109 - RT	41+17.26	45+00.00	3:1		3:1	NO. 3	SOD
S.R. 109 - LT	80+00.00	81+00.00	3:1		3:1	NO. 5	SOD
S.R. 109 - RT	86+25.00	89+53.36	4:1	5'	3:1	NO. 4	SOD
S.R. 109 - RT	112+50.00	113+75.00	6:1		4:1	NO. 6	SOD
S.R. 109 - LT	121+50.00	124+39.45	6:1		4:1	NO. 5	SOD
S.R. 109 - RT	122+50.00	124+09.91	6:1		4:1	NO. 6	SOD
S.R. 109 - RT	125+00.00	127+50.00	6:1		4:1	NO. 6	SOD
S.R. 109 - LT	160+50.00	162+00.00	6:1		2:1	NO. 5	SOD
S.R. 109 - LT	172+50.00	174+90.00	6:1		4:1	NO. 5	SOD
W. OLD LAGUARDO ROAD - LT	5+50.00	7+23.00	3:1		3:1	NO. 5	SOD
W. OLD LAGUARDO ROAD - RT	5+50.00	6+65.96	3:1		3:1	NO. 6	SOD
E. OLD LAGUARDO ROAD - LT	9+97.00	12+30.00	3:1		3:1	NO. 5	SOD
E. OLD LAGUARDO ROAD - RT	9+84.00	12+30.00	3:1		3:1	NO. 6	SOD
KNOLLWOOD LANDING - LT	27+50.00	28+00.00	3:1		3:1	NO. 5	SOD
KNOLLWOOD LANDING - RT	27+50.00	28+00.00	3:1		3:1	NO. 6	SOD
NORTHERN ROAD - LT	22+06.00	27+00.00	2:1	2'	2:1	NO. 2	TRM
NORTHERN ROAD - LT	27+00.00	35+00.00	3:1	2'	3:1	NO. 2	TRM
NORTHERN ROAD - RT	22+70.00	35+31.49	3:1	2'	3:1	NO. 3	TRM
NORTHERN ROAD - LT	36+82.00	38+00.00	3:1		3:1	NO. 7	RIP-RAP
NORTHERN ROAD - RT	36+72.00	38+20.00	3:1		3:1	NO. 8	RIP-RAP
BURTON ROAD - LT	46+30.00	46+80.00	4:1		4:1	NO. 5	SOD
BURTON ROAD - RT	46+30.00	46+80.00	4:1		4:1	NO. 6	SOD
BURTON ROAD - LT	49+00.00	49+37.00	4:1		2:1	NO. 5	SOD
BURTON ROAD - RT	49+00.00	49+37.00	4:1		2:1	NO. 6	SOD
DOUBLE LOG CABIN ROAD - LT	52+25.00	52+75.00	3:1		4:1	NO. 5	SOD
DOUBLE LOG CABIN ROAD - RT	52+25.00	52+75.00	3:1		4:1	NO. 6	SOD



DETAIL NO. 5



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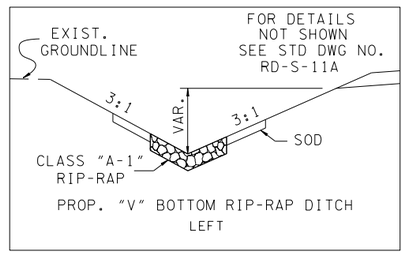
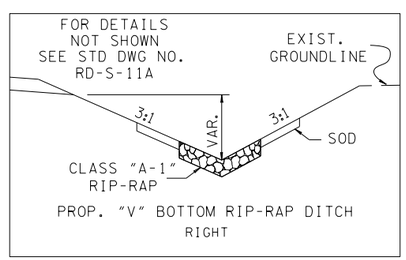


DETAIL NO. 7



DETAIL NO. 8

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL DITCH DETAILS

9/28/2017
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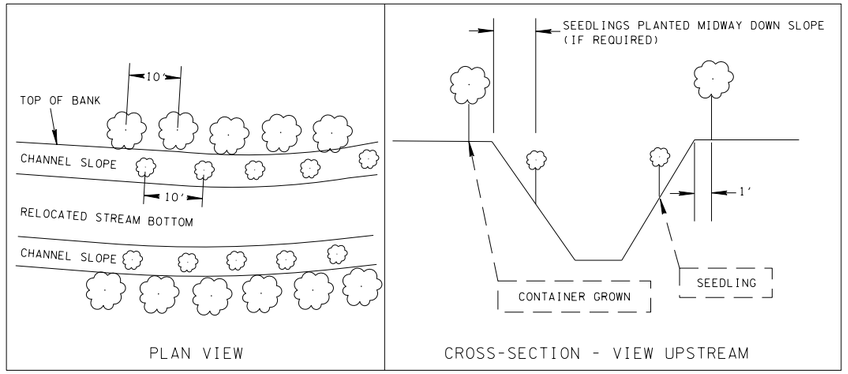
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	2F
CONST.	2017	NH-109(31)	2F1



TREE PLANTING SCHEME FOR STREAM RELOCATIONS

N.T.S.

TREES ALONG TOP OF STREAM BANK

ITEM #	DESCRIPTION	UNIT	QUANTITY
802-11.04	ACER SACCHARUM (SUGAR MAPLE 2-5FT CNTNR GRWN)	EACH	8
802-11.09	CARYA OVATA (SHAGBARK HICKORY 2-5FT CNTNR GRWN)	EACH	7
802-11.18	LIQUIDAMBER STYRACIFLUA (SWEETGUM 2-5FT CNTNR GRWN)	EACH	7
802-11.26	PLATANUS OCCIDENTALIS (SYCAMORE 2-5FT CNTNR GRWN)	EACH	7
802-11.31	QUERCUS FALCATA (SOUTHERN RED OAK 2-5FT CNTNR GRWN)	EACH	7

SEEDLINGS ALONG SLOPE OF STREAM BANK

ITEM #	DESCRIPTION	UNIT	QUANTITY
802-12.01	ACER NEGUNDO (BOX ELDER SEEDLNG B.R.)	EACH	12
802-12.18	LIQUIDAMBER STYRACIFLUA (SWEETGUM SEEDLNG B.R.)	EACH	16
802-12.35	QUERCUS NIGRA (BLACK WATER OAK SEEDLNG B.R.)	EACH	16
802-12.37	QUERCUS PALUSTRIS (PIN OAK SEEDLNG B.R.)	EACH	15
802-12.40	SALIX NIGRA (BLACK WILLOW SEEDLNG B.R.)	EACH	26

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

1. THE NEW CHANNEL SHALL BE EXCAVATED AND STABILIZED DURING A LOW-WATER PERIOD. RIP-RAP (ONLY AS SHOWN ON PLANS), SEEDING AND SOD SHALL BE INSTALLED IMMEDIATELY FOLLOWING CHANNEL COMPLETION. TREES SHALL BE INSTALLED IN THE FIRST PLANTING SEASON FOLLOWING CHANNEL EXCAVATION. WATER SHALL BE DIVERTED INTO THE NEW CHANNEL ONLY AFTER IT IS COMPLETELY STABILIZED, AND ONLY DURING A LOW-WATER PERIOD. STABILIZED MEANS THAT ALL SPECIFIED ROCK AND EROSION CONTROL BLANKET OR FLEXIBLE CHANNEL LINER MAT IS IN PLACE, AND SEEDING AND SOD ARE IN PLACE AND ESTABLISHED.

2. CHANNEL RELOCATION SEQUENCE

   A. FLAG EDGE OF THE NEW CHANNEL TOP BANK PRIOR TO CLEARING. DO NOT CLEAR LARGE TREES IN POSITION TO SHADE THE NEW CHANNEL. LEAVE AS MANY TREES AND SHRUBS AS POSSIBLE BETWEEN TOE OF THE NEW HIGHWAY SLOPE AND THE STREAM.

   B. EXCAVATE THE NEW CHANNEL "IN THE DRY" BY LEAVING AREAS OF UNDISTURBED EARTH (DIVERSION BERMS) IN PLACE AT BOTH ENDS.

   C. SHAPE CHANNEL TO SPECIFICATIONS SHOWN. REMOVE LOOSE SOILS AND DEBRIS.

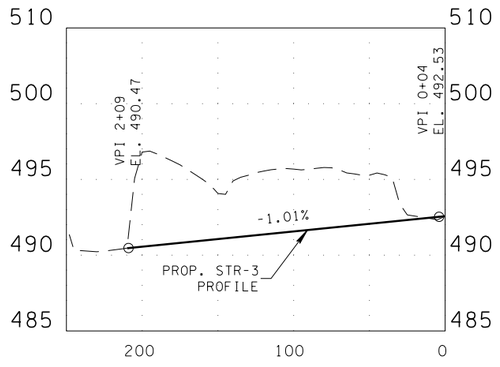
   D. PLACE TOPSOIL, EROSION CONTROL BLANKET OR FLEXIBLE CHANNEL LINER, SEED, AND SOD AS SPECIFIED.

   E. REMOVE DIVERSION BERMS, BEGINNING WITH THE MOST DOWNSTREAM, BANKS AND BOTTOM ELEVATION SHOULD TRANSITION SMOOTHLY INTO THE NEW CHANNEL. THE ELEVATIONS OF THE NEW CHANNEL BOTTOM AT EACH END OF THE RELOCATION SEQUENCE SHOULD MATCH THE ELEVATIONS OF THE EXISTING CHANNEL, AND A STEADY PERCENT SLOPE SHOULD BE MAINTAINED THROUGHOUT THE RELOCATED CHANNEL CENTERLINE OR AS SPECIFIED.

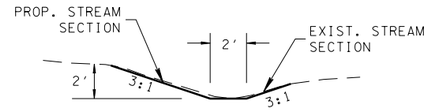
   F. INSTALL TREES ACCORDING TO STANDARD SPECIFICATIONS SECTION 802.

3. ONLY RIP-RAP SHOWN ON PLANS SHOULD BE USED IN THE RELOCATED CHANNEL REACH. ANY OTHER PROPOSED RIP-RAP SHOULD BE COORDINATED WITH THE ENVIRONMENTAL DIVISION THROUGH THE TDOT HEADQUARTERS CONSTRUCTION OFFICE.

4. REQUESTS BY ANY AGENCY THAT WOULD REQUIRE THE MODIFICATION OF CHANNELS, DITCHES, ELEVATIONS, RIP-RAP OR ANY OTHER STREAM MITIGATION ITEMS ASSOCIATED WITH THE CHANNEL RELOCATIONS SHALL BE REFERRED TO THE TDOT ENVIRONMENTAL DIVISION VIA THE HEADQUARTERS CONSTRUCTION OFFICE FOR COORDINATION WITH ALL INVOLVED AGENCIES AND TDOT DIVISIONS.



RELOC. STR-3 PROFILE



RELOC. STR-3 CROSS SECTION

STA. 39+24.04 TO STA. 41+05.58 RT.

SEE SHEET NO. 2F FOR ADDITIONAL MITIGATION DETAILS AND NOTES

PROTECTED AREA

1. THE PROTECTED AREA SIGN SHALL BE WHITE WITH BLACK LETTERING.
2. LINE 1, 2 & 3 SHALL BE 2 INCHES IN HEIGHT, LINE 4 & 5 SHALL BE 1 INCH IN HEIGHT.
3. PROTECTED AREA SIGN SHALL BE PAID FOR UNDER ITEM NO. 713-16.23, PER EACH. PAYMENT SHALL INCLUDE ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO CONSTRUCT AS SHOWN.

PROTECTED AREA

NO TREE CLEARING OR CUTTING ALLOWED

CONTACT TDOT ENVIRONMENTAL DIVISION (615) 741-3655

WETLAND NOTES

1. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT THE REMAINING WETLAND WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS.
2. NO WORK SHALL BE DONE 15 FEET OUTSIDE OF THE FILL SLOPE LINES. NO CONSTRUCTION OR CONSTRUCTION EQUIPMENT MAY IMPACT THE REMAINING WETLAND.

TREES

1. NO SUBSTITUTIONS OF TREE SPECIES OR SIZES SHALL BE ALLOWED WITHOUT THE WRITTEN APPROVAL OF TDOT ENVIRONMENTAL DIVISION. CONCERNING STREAM MITIGATION, TREES SHALL BE OF THE VARIETY REQUESTED AND FIRST QUALITY. CONCERNING TEMPORARY WETLAND MITIGATION, TREES SHALL BE OF THE VARIETY REQUESTED, WELL BRANCHED, BARE ROOT (ROOTS MUST BE KEPT MOIST AT ALL TIMES), AND FIRST QUALITY. NO CLONES OR CULTIVARS WILL BE ACCEPTED. ANY FOUND TO BE INCORRECT SPECIES, OR IMPROPERLY PLANTED, AT ANY TIME PRIOR TO TERMINATION OF THE CONTRACT SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. STAKES AND WIRES SHALL BE REMOVED IMMEDIATELY PRIOR TO CONTRACT TERMINATION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR SHOULD ARRANGE SEVERAL MONTHS AHEAD OF TIME TO OBTAIN THE CORRECT TREE SPECIES, AS SOME MAY REQUIRE SOME TIME TO LOCATE.
3. ALL TREES PLANTED SHALL BE WRAPPED AS PER SECTION 802.07 OF TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. TREES SHALL BE WATERED AS REQUIRED THROUGH THE PERIOD OF ESTABLISHMENT TO ENSURE SURVIVAL.

STREAM MITIGATION NOTES

1. RIP-RAP SHALL BE PLACED AS TO MIMIC THE EXISTING CONTOURS OF THE STREAM CHANNEL. THE TOP OF THE PROPOSED RIP-RAP SHALL BE AT GRADE WITH THE BOTTOM OF THE EXISTING STREAM CHANNEL. VOIDS WITHIN THE RIP-RAP SHALL BE FILLED WITH CREEK GRAVEL TO PREVENT LOSS OF STREAM WITHIN RIP-RAP AREAS. CREEK GRAVEL CAN BE REMOVED FORM CULVERT EXCAVATION AREA.
2. EXCAVATION AND FILL ACTIVITIES SHALL BE SEPARATED FROM FLOWING WATERS IN ACCORDANCE WITH THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, STANDARD DRAWING EC-STR-31 OR AN ALTERNATE METHOD APPROVED BY THE ENVIRONMENTAL DIVISION. ALL SURFACE WATER FLOWING TOWARD THE EXCAVATION OR FILL WORK SHALL BE DIVERTED THROUGH USE OF PIPES, COFFERDAMS, BERMS OR TEMPORARY CHANNELS. TEMPORARY DIVERSION CHANNELS SHALL BE USED TO DIVERT THE NORMAL STREAM FLOW PATH FROM AN ERODIBLE AREA UNTIL SUCH AREAS CAN BE STABILIZED. TEMPORARY DIVERSION CHANNELS MUST BE PROTECTED BY NON-ERODIBLE MATERIAL AND LINED TO THE EXPECTED HIGH WATER LEVEL IN ACCORDANCE WITH EC-STR-31. COFFERDAMS MUST BE CONSTRUCTED OF SANDBAGS, CLEAN ROCK, STEEL SHEETING OR OTHER NON-ERODIBLE MATERIAL. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION THAT CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

MITIGATION DETAILS AND NOTES

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	3
CONST.	2017	NH-109(31)	3

RIGHT - OF - WAY NOTES

(1) IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THERE FROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE CIVIL ENGINEERING MANAGER 2, DESIGN DIVISION IS TO BE NOTIFIED IN SUFFICIENT TIME TO PERMIT HAVING SUCH REMOVALS DESIGNATED AS A PART OF THE CONSTRUCTION CONTRACT.

(2) ALL RAMPS MUST CONFORM TO THE DEPARTMENT'S "POLICY ON FINANCING CONSTRUCTION OF PUBLIC ROAD INTERSECTIONS AND DRIVEWAYS ON HIGHWAY RESURFACING, RECONSTRUCTION AND CONSTRUCTION PROJECTS ON NEW LOCATIONS", THE MANUAL ON RULES AND REGULATIONS FOR CONSTRUCTING DRIVEWAYS ON STATE HIGHWAY RIGHT-OF-WAY, STANDARD DRAWING RP-R-1, AND OTHER ACCEPTED DESIGN AND SAFETY STANDARDS.

(3) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.

(4) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.

(5) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.

(6) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.

(7) NEW DRIVEWAYS PROVIDED IN THE PLANS WILL BE PAVED BASED ON THE 7 PERCENT CRITERIA. THOSE 7 PERCENT OR STEEPER IN GRADE WILL BE PAVED AND THOSE FLATTER THAN 7 PERCENT WILL BE COVERED WITH BASE STONE.

(8) ON NON-STATE ROUTES, ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS SHALL REQUIRE A PERMIT ONLY IF THE LOCAL AGENCY SPECIFIES THE NEED FOR THAT PERMIT.

UTILITY NOTES

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

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

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

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

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

UTILITY OWNERS AND CONTACTS

POWER
MIDDLE TENN. ELECTRIC MEMBERSHIP CORP.
555 NEW SALEM ROAD
MURFREESBORO, TN 37129
MATHUE BEAN
615-494-1548 - OFFICE
615-890-9762 - CELL
MBEAN@MTEMC.COM

WATER AND SEWER
LAUGUARDO UTILITY DISTRICT
355 WOODS FERRY ROAD
LEBANON, TN 37087
JOEY HARDIN
615-444-3378
JHARDIN@LAGUARDOUTILITY.COM

GAS
CITY OF LEBANON, GAS DEPT.
1017 SPARTA PIKE
LEBANON, TN 37087
JERRY SNODGRASS
615-443-2835
JSNODGRASS@LEBANONTN.ORG

TELEPHONE
AT&T
333 COMMERCE STREET, ROOM 23C-142
NASHVILLE, TN 37201
KIM BEAN
615-214-7318
KB1078@ATT.COM

CABLE TV
CHARTER COMMUNICATIONS
215 INDUSTRIAL BLVD.
TULLAHOMA, TN 37388
RICHARD RIDDLE
931-461-4315 - OFFICE
931-224-8787 - CELL
RICHARD.RIDDLE@CHARTER.COM

FIBER OPTIC
AT&T FIBER OPTIC
360 GEES MILL BUSINESS PKWY.
CONYERS, GA 30013
SCOTT LOGEMAN
SL1213@ATT.COM
770-335-8255 - OFFICE

POWER
TENNESSEE VALLEY AUTHORITY
1101 MARKET STREET, MR3F-C
CHATTANOOGA, TN 37402
SHANE K BEASLEY
423-751-2213 - OFFICE
423-827-8530 - CELL
SKBEASLEY@TVA.GOV

WATER AND SEWER
WEST WILSON UTILITY DISTRICT
10960 LEBANON ROAD
MOUNT JULIET, TN 37122
FREDDIE WESTON
615-758-5682
FREDDIEW@WESTWILSONUTILITY.COM

WATER AND SEWER
CITY OF LEBANON
215 MADDOX SIMPSON PKWY.
LEBANON, TN 37090
RANDY LAINE
615-444-3647 EX266
RANDY.LAINE@LEBANONTN.ORG

GAS
TRANSCANADA (FORMER COLUMBIA GULF TRANS.)
1700 MACCORKLE AVENUE SE
CHARLESTON, WV 25314
WALTER "BLAKE" ENGELS
304-357-2408 - OFFICE
681-945-0814 - CELL
WALTER_ENGELS@TRANSCANADA.COM

TELEPHONE
SPRINT COMMUNICATIONS
411 HUGER STREET
COLUMBIA, SC 29201
STEVE R. THOMPSON
404-649-2355- OFFICE
STEVE.R.THOMPSON@SPRINT.COM

CABLE TV
COMCAST
660 MAINSTREAM DRIVE
NASHVILLE, TN 37228
LARRY K. WINBURN
615-244-7462 EXT-1115140
LARRY_WINBURN@CABLE.COMCAST.COM

FIBER OPTIC
LEVEL 3 COMMUNICATIONS, INC.
1025 ELDORADO BLVD., 43C-420
BROOMFIELD, CO 80021
PATRICK PROVOST
720-888-4686- OFFICE
PATRICK.PROVOST@LEVEL3.COM

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. NOTES, UTILITY NOTES AND UTILITY OWNERS

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA ACRES			AREA TO BE ACQUIRED ACRES			AREA REMAINING ACRES		EASEMENT (SQUARE FEET)		
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE BK.	DEED DOCUMENT REFERENCE PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM. DRAINAGE	SLOPE	CONST.
1	LINEBERRY PROPERTIES, INC.	55	40	411	121	2.287		2.287				2.287				
2	WILSON INVESTORS, LLC	55	38	1229	1152		2.690	2.690					2.690			
3	ERIC L. GRISHAM AND WIFE DARLENE GRISHAM	55	36	450	885	1.616		1.616				1.616				
4	ROBERT WAYNE MURPHY AND WIFE, JACKIE MURPHY	55	37	1159	1702		1.326	1.326					1.326			
5	LINEBERRY PROPERTIES, INC.	48	44	459	878	2.055		2.055	3539 S.F.		3539 S.F.	1.974				
6	MICHIAL DENNIS VAUGHN, SR., TRUSTEE OF THE CALDONIA TRUST	48	43.01	1452	540		9.546	9.546		0.258	0.258		9.288			
7	BRENDA KAYE MARTIN AND DOUGLAS SUESS	48	45	1219	1841	2.916		2.916	0.301		0.301	2.615				
8	RANDY B. SHOOK AND WIFE, ANNA S. SHOOK	48	42	285	287		4.630	4.630		3936 S.F.	3936 S.F.		4.540			
9	MATTHEW WILSON	48	46	1447	1759	3.232		3.232	1.063		1.063	2.169				
10	HEYDEL REALTY PARTNERS, L.P. A 2/3 INTEREST, KEN LESTER, A 1/3 INTEREST	48	47.01	989	2337		1.848	1.848		1.133	1.133		0.715			
11	A. W. CHERRY, JR. AND WIFE, GWENDOLYN G. CHERRY	55	28	404	15	79.660		79.660	0.934		0.934	78.726				① 0.224 AC
12	MICHAEL E. BLAND AND WIFE, LESLIE E. BLAND	48	47.03	1125	2050		5.567	5.567		0.328	0.328		5.239			
13	CENTEX HOMES	48	64.13	1191	1366	312.972		312.972	2.129		2.129	310.843			37	① 0.135 AC
13A	CENTEX HOMES	48	64.13	1191	1366	2.773		2.773	0.214		0.214	2.559				
13B	CENTEX HOMES	48	64.13	1191	1366	3.998		3.998	0.495		0.495	3.503				
14	GARY BURTON AND BETTY BURTON	48	47	1072	1097		1.658	1.658		0.418	0.418		1.240			
15	DON "ROOSTER" GREEN	48	47.05	1349	1301		2043 S.F.	2043 S.F.					2043 S.F.			
16	PAULA L. ANDERSON	48	47.04	1584	507		0.925	0.925		0.255	0.255		0.670			
17	GUY PERRY AND WIFE, NEYNA HARP-PERRY	48	55, 55.01	1356, 1380	1486,925		2.973	2.973		0.400	0.400		2.573			
18	GUY PERRY AND WIFE, NEYNA HARP-PERRY	48	55.01	1380	925		1.259	1.259		2569 S.F.	2569 S.F.		1.200			
19	CHARLES E. FERRELL AND WIFE, HELEN FERRELL	48	49	171	598		7.570	7.570		0.294	0.294		7.276			
20	CITY OF LEBANON, TENNESSEE	48	52.04	452	269	1.662		1.662	0.196		0.196	1.466				
21	ANDREW J. HAYES, JR. AND WIFE, SUSAN F. HAYES	48	52.02	404	118		5.240	5.240		0.606	0.606		4.634			① 2400
22	GEORGE HERMAN MEDLIN AND WIFE, LINDA MEDLIN	48	52.01	366	160		3.052	3.052		0.421	0.421		2.631			
23	CLIFFODENE N. EVERETTE	48	52	1179	1347		43.133	43.133		1.583	1.583		41.550			
24	CLIFFODENE N. EVERETTE	48	52.03	1684	668		5.017	5.017		0.850	0.850		4.167			
25	WILLIAM D. COOPER, A MARRIED MAN	48	29	1367	2176		2.850	2.850		0.182	0.182		2.668			
26	JAMES TERRELL HARPER	48	28.01	1367, 405	2176, 370	14.073		14.073	1.000		1.000	13.073				① 1215
27	GERRY R. STRICKLAND AND WIFE, JANICE G. STRICKLAND	48	29.11	400	499		2.271	2.271		0.110	0.110		2.161			
28	JAMES TERRELL HARPER	48	28	405	370	11.175		11.175	0.376		0.376	10.799				
29	DONALD W. MOORE AND WIFE, ANITA L. MOORE	48	29.03	453	18		10.216	10.216		0.761	0.761		9.455			
30	STEPHEN A. FOSTER AND WIFE, KATHERINE W. FOSTER	48	27.01	411	115	2.668		2.668	0.288		0.288	2.380				
31	PHYLUS A. REDMON	48	29.04	1715	1784		5.108	5.108		0.275	0.275		4.833			① 447
32	DONALD EDWARD ROBINSON AND WIFE, REBA JOYCE ROBINSON	48	27.02	928	1943	1.032		1.032	0.194		0.194	0.838				
33	GEORGE BELOTE WEATHERBY	48	29.05	431	940		5.100	5.100		0.341	0.341		4.759			① 0.191 AC
34	DONALD E. ROBINSON AND WIFE, REBA J. ROBINSON	48	27	1118	2053	0.965		0.965	0.263		0.263	0.702				
35	JOHN D. GRIFFIN AND WIFE, BOBBIE J. GRIFFIN	33	43.02	452	815		1.013	1.013		0.443	0.443		0.570			
36	JAMES WATKINS AND WIFE, JEAN WATKINS	48	26.01	364	251	5.061		5.061	0.177		0.177	4.884				① 1330
37	STEWART INVESTMENTS, LLC	33	43.05	1274	1084		1.330	1.330		0.256	0.256		1.074			
38	HYRCO SOLUTIONS, INC.	48C	1	1660	987	1.513		1.513	0.265		0.265	1.248				
39	JAMES MICHAEL BARNETT	33	43.03	952	1312		0.922	0.922		3497 S.F.	3497 S.F.		0.842			③ 0.265 AC
40	L.M. DEITERS	48	26	434	586	35.860		35.860	0.305		0.305	35.555				② 3876
41	ARLIS CORDELL DUKE AND WIFE, ELIZABETH JARRARD DUKE	33	44.09	287	14	6.077		6.077	2518 S.F.		2518 S.F.	6.019				
42	STEWART INVESTMENTS, LLC	33	42	950	493		6.111	6.111		0.516	0.516		5.595			
43	GIGI BAGOLY AND DANIEL CIOLOS	33	44.08	1411	179	1.074		1.074	0.144		0.144	0.930				
44	JAMES L. LYNCH AND WIFE, JUDY C. LYNCH	33	41	413	40		1.933	1.933		0.262	0.262		1.671			
45	JAMES BUNCH AND WIFE, SHIRLEY BUNCH	33	44.03	1114	1096	1.000		1.000	0.148		0.148	0.852				
46	SUSAN CLARK	33	40.01	1081	1505		1.334	1.334		0.246	0.246		1.088			
47	JAMES H. BUNCH AND WIFE, SHIRLEY J. BUNCH	33	44.04	921	552	17.998		17.998	0.886		0.886	17.112				
48	STEWART INVESTMENTS, LLC	33	39, 40	1432	1622		1.872	1.872		0.681	0.681		1.191			③ 0.190 AC
49	BILLY C. ALLEN AND WIFE, MARTINA A. ALLEN	33	44.07	387	969	0.979		0.979	0.153		0.153	0.826				
50	STEWART INVESTMENTS, LLC	33	39	1432	1622		0.810	0.810		0.422	0.422		0.388			

① FOR WORKING ROOM AND EROSION CONTROL
② FOR MAINTAINANCE OF TRAFFIC
③ FOR REMOVAL OF BUILDING

DISTURBED AREA

IN BETWEEN SLOPE LINES	61.942 AC.
15 FOOT WIDE STRIP (OUTSIDE SLOPE LINES)	15.016 AC.
TOTAL DISTURBED AREA	76.958 AC.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	3A
CONST.	2017	NH-109(31)	3A

REV. 12-19-14: REV. AREA ACQUIRED RT. AND AREA REMAINING RT. FOR TRACT NOS. 6, 8 & 10.

REV. 6-26-15: REVISED OWNER NAME ON TRACT NO. 22.

REV. 10-29-15: MOVED LINE-OUT FROM TRACT NO. 5 TO TRACT NO. 1; REV. TOTAL AREA AND AREA TO BE ACQUIRED ON TRACT NO. 23.

REV. 11-23-15: REV. TOTAL AREA AND AREA REMAINING ON TRACT NO. 11.

REV. 1-25-16: CREATED TRACT NOS. 13A & 13B FROM TRACT NO 13 AND ADJUSTED AREAS ACCORDINGLY.

REV. 1-29-16: REV. OWNER NAME AND DEED REFERENCE ON TRACT NO. 38.

REV. 5-6-16: REV. AREA ACQUIRED LT. AND AREA REMAINING LT. FOR TRACT NOS. 7 & 9; REV. OWNER AND DEED REFERENCE ON TRACT NO. 16.

REV. 7-12-16: REV. OWNER NAME AND DEED REFERENCE ON TRACT NO. 16; REV. TOTAL AREA AND AREA REMAINING ON TRACT NO. 19.

REV. 8-12-16: COMBINED TRACT NOS. 26 & 28; REV. AREAS TO BE ACQUIRED AND REMAINING ON TRACT NOS. 26 & 30; REV. OWNER NAME ON TRACT NO. 43.

REV. 9-15-16: REV. AREA TO BE ACQUIRED ON TRACT NOS. 10 & 12; REVISED OWNER NAME ON TRACT NOS. 24 & 31.

REV. 10-17-16: REV. AREAS TO BE ACQUIRED AND REMAINING ON TRACT NO. 22.

REV. 11-15-16: REVISED CONST. EASEMENT ON TRACT NO. 35 AND ADDED CONST. EASEMENT ON TRACT NO. 39.

REV. 2-14-17: ELIMINATED CONST. EASEMENT ON TRACT NO. 35 DUE TO ADDITION OF TRACT NO. 8035 AS AN UNECONOMIC REMNANT; COMBINED TRACT NOS. 48 & 50 INTO TRACT NO. 48; ADDED CONST. EASEMENT TO TRACT NO. 48.

REV. 6-23-17: REV. OWNER NAME ON TRACT NO. 23.

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RIGHT-OF-WAY ACQUISITION TABLE

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA ACRES			AREA TO BE ACQUIRED ACRES			AREA REMAINING ACRES		EASEMENT (SQUARE FEET)		
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE BK.	DEED DOCUMENT REFERENCE PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM. DRAINAGE	SLOPE	CONST.
51	JAMES H. BUNCH AND WIFE, SHIRLEY J. BUNCH	33	44.01	1254	1247	1.180		1.180	0.148		0.148	1.032				
52	WILSON COUNTY	33	46.01	449	529		0.812	0.812		0.233	0.233		0.579			
53	PAUL R. WILLIAMS AND WIFE, JAMIE K. WILLIAMS	33	45	384	798	4.000		4.000	0.962		0.962	3.038				
54	CARLTON R. THURMAN AND WIFE, MARY I. THURMAN	33	26	446	461		2.273	2.273					2.273			
55	BILLEY E. JONES AND WIFE, MARGARET A. JONES	33	46	465	993	8.362		8.362	1.176		1.176	7.186				
56	CLAYTON GRAY AND WIFE, ROBBIE GRAY	33	27	1281	114		2.164	2.164					2.164			
57	ROY A. HORSTMEYER AND WIFE, JANET S. HORSTMEYER	33	27.01	394	646		1.810	1.810		4246 S.F.	4246 S.F.		1.713			
58	JAMES GRITTITH AND WIFE, PATRICIA GRIFFITH	33	28.01	1341	398		5.480	5.480					5.480			
59	WILSON COUNTY	33	28.13	454	845		2562 S.F.	2562 S.F.		2562 S.F.	2562 S.F.					
60	HARMAN W. SELLERS BETTY JANE SELLERS	33	28.05	1234	682		1.352	1.352					1.352			
61	JERRY W. KITTRELL AND WIFE, VALEDA KITTRELL	33	28.04	451	676		1.400	1.400		0.693	0.693		0.707			
62	HARAMON W. SELLERS AND BETTY JANE SELLERS	33	28.06	1239	929		1.399	1.399					1.399			
63	DENNIS A. WOODRUFF AND WIFE, DEBRA E. WOODRUFF	33	28.07	1310	2209		9.483	9.483					9.483			
64	CRAIG STAHL AND WIFE, PAMELA STAHL	33	28.08	1449	390		10.175	10.175					10.175			
65	BEAU BRANDON PINKSTON AND WIFE, JODEE KAE PINKSTON	33	28.09	851	1984		1.162	1.162					1.162			
66	SUSAN L. HART	33	28.1	824	532		1.160	1.160					1.160			
67	DARRIN WEISSINGER AND WIFE, HEATHER WEISSINGER	33	28.11	1444	1321		1.158	1.158					1.158			
68	CHARLES EDWARD OSBORNE JR.	33	28.12	1227	1451		1.156	1.156					1.156			
69	ZACHARY R. BULLARD	33	28.03	1589	1003		0.918	0.918		0.198	0.198		0.720			
70	DENNIS ADAMS AND WIFE, REBA ADAMS	33	29.02	1199	693		2.517	2.517		0.526	0.526		1.991			① 3591
71	KERRY LYNN ADAMS AND WIFE, TRACY ANNE ADAMS	33	37.16	1560	1195	8.230		8.230	0.441		0.441	7.789				
72	DAVID A. KAROTKO	33	37.22	434	697		0.931	0.931		0.108	0.108		0.823			① 1393
73	CASEY J. BINION AND WIFE, JANNA L. BINION	33	37.17	983	902	3.730		3.730	0.129		0.129	3.601				
74	RANDALL M. AYERS AND WIFE, JANIS E. AYERS	33	37.14	392	870		0.929	0.929		3872 S.F.	3872 S.F.		0.840			① 1300
75	JOHN E. BROWN AND WIFE, JOANADELIA A. BROWN	33	37.24	1241	227	0.925		0.925	0.129		0.129	0.796				
76	RONALD J. DEITERS AND WIFE, L. M. DEITERS	33	37.13	1082	480		0.962	0.962		3706 S.F.	3706 S.F.		0.877			
77	CARL N. PRICE AND WIFE, MARY H. PRICE	33	37.18	441	507	5.790		5.790	0.279		0.279	5.511				
78	RHONDA R.WIMBERLEY AND JOHN R. WIMBERLEY	33	37.12	1001	1247		1.029	1.029		3689 S.F.	3689 S.F.		0.944			
79	RONALD W. WATSON AND WIFE, DIANNE J. WATSON	33	37.19	390	874	6.190		6.190	0.312		0.312	5.878				
80	STEVEN F. PHELPS	33	37.11	1436	531		1.040	1.040		0.165	0.165		0.875			
81	KEVIN HACKER AND NATASHA M. HACKER	33	37.20	1722	1016	5.220		5.220	0.232		0.232	4.988				
82	WANDA S. MCALEER	33	37.09	1317	451		1.100	1.100		0.186	0.186		0.914			① 750
83	LOUIS PITTS AND WIFE, ALENE PITTS	33	37.21	399	790	5.380		5.380	0.209		0.209	5.171				
84	JOSH DRAHEIM AND CANDACE JOHNS	33	37.07	1299	991		0.913	0.913		0.157	0.157		0.756			① 1800
85	CECIL RAY PITTS AND WIFE, SUSAN ANNETTE PITTS	33	37.01	400	28	5.000		5.000	0.190		0.190	4.810				
86	BILLY J. DEERING, SR. AND WIFE, WILMA D. DEERING	33	37.05	434	712		0.920	0.920		0.154	0.154		0.766			
87	SOUTH CENTRAL BELL	33	9.01	384	192	0.128		0.128	2895 S.F.		2895 S.F.	2699 S.F.				
88	JOHN A. UTLEY	33	37.02	1310	454		1.220	1.220		0.212	0.212		1.008			
89	ADAMS FARM PARTNERS, LP	27	53	1470	119	21.475		21.475	2.147		2.147	19.328				
90	ALFRED ARMSTRONG ADAMS, VI	27	53.02	1383	955	2.147		2.147	1750 S.F.		1750 S.F.	2.107				
91	UNITED STATES OF AMERICA					2.035	5.880	7.915				2.035	5.880			
92	EDWARD EMERSON BARNARD, JR., AND WIFE, MARTA ANN BARNARD	48	41	226	375		7.960	7.960					7.960			
93	NELSON STEED AND WIFE, EMMIE LOU STEED	48	43.02	1452	543		28.874	28.874		1.589	1.589		27.285	0.280 AC		
94	GLEEN BURNS AND WIFE, PATRICIA	48C	28.00	1079	1472	1.128		1.128	11 S.F.		11 S.F.	1.128				② 180
95	BONNIE W. ESTES	33	44.02	365	102		1.490	1.490		4120 S.F.	4120 S.F.		1.395			
96	JAMES AND SUSAN ADAMS	33	44.05	1433	2125		2.498	2.498		2641 S.F.	2641 S.F.		2.437			
97	LAURA ANN ROBERTS	33	44.11	1208	2373		2.888	2.888		0.100	0.100		2.788			
98	EMILY MARIE ESTES AND HUSBAND, KENNETH DWAYNE ESTES	33	44.10	1575	315		8.473	8.473		4254 S.F.	4254 S.F.		8.375			
99	AMY MARIE LANE	33	44.12	1079	989		23.894	23.894		0.226	0.226		23.668			
100	BILLEY E. JONES AND WIFE, MARGARET A. JONES	33	46.02	1675	597	3.800		3.800	0.453		0.453	3.347				
55A	BILLEY E. JONES AND WIFE, MARGARET A. JONES	33	46	465	993	2.270		2.270	0.303		0.303	1.967				
55B	BILLEY E. JONES AND WIFE, MARGARET A. JONES	33	46	465	993	22.263		22.263	1.329		1.329	20.934				
89A	ADAMS FARM PARTNERS, LP	27	53	1470	119		20.859	20.859		1.455	1.455		19.404			
89B	ADAMS FARM PARTNERS, LP	27	53	1470	119		1.101	1.101		1.101	1.101					
89C	ADAMS FARM PARTNERS, LP	27	53	1470	119	62.906		62.906	3.941		3.941	58.965				
89D	ADAMS FARM PARTNERS, LP	27	53	1470	119	5.331		5.331	0.119		0.119	5.212				
89E	ADAMS FARM PARTNERS, LP	27	53	1470	119		0.750	0.750		0.750	0.750					
100A	RONALD LYNN THOMAS	33	46.03	1598	426	1.427		1.427	0.140		0.140	1.287				
8035	JOHN D. GRIFFIN AND WIFE, BOBBIE J. GRIFFIN	33	43.02	452	815		0.570	0.570		0.570	0.570					
8061	JERRY W. KITTRELL AND WIFE, VALEDA KITTRELL	33	28.04	451	676		0.707	0.707		0.707	0.707					
8080	STEVEN F. PHELPS	33	37.11	1436	531		0.875	0.875		0.875	0.875					
8088	JOHN A. UTLEY	33	37.02	1310	454		1.008	1.008		1.008	1.008					

① FOR WORKING ROOM AND EROSION CONTROL
② FOR MAINTENANCE OF TRAFFIC

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	3B
CONST.	2017	NH-109(31)	3B

REV. 9-05-14: ADDED TRACT NOS. 55A & 55B. ADJUSTED AREAS FOR TRACT NO. 55 ACCORDINGLY.

REV. 12-19-14: REVISED OWNER, BOOK & PAGE FOR TRACT NO. 89; CORRECTED PAGE NO. FOR TRACT NO. 97; REVISED AREA ACQUIRED RT. & REMAINING RT. ON TRACT NO. 93; ELIMINATED AQUISITION ON TRACT NO. 92.

REV. 2-13-15: CREATED TRACT NOS. 89A, 89B, 89C & 89D FROM TRACT NO. 89, ADJUSTED AREAS ACCORDINGLY AND REVISED OWNER NAME.

REV. 6-10-15: REVISED AREAS TO BE ACQUIRED AND REMAINING ON TRACT NO. 52; REVISED TOTAL AREA AND AREA REMAINING ON TRACT NO. 95; CREATED TRACT NO. 100A FROM TRACT NO. 100, REVISED OWNER NAME AND ADJUSTED AREAS ACCORDINGLY.

REV. 10-29-15: REVISED AREAS TO BE ACQUIRED AND REMAINING ON TRACT NO. 89.

REV. 11-23-15: REVISED OWNER AND DEED REFERENCE ON TRACT NO. 69.

REV. 1-25-16: REV. TOTAL AREA AND AREA REMAINING ON TRACT NO. 71.

REV. 1-29-16: REV. OWNER NAME AND DEED REFERENCE ON TRACT NO. 100.

REV. 5-18-16: REVISED AREAS TO BE ACQUIRED & REMAINING ON TRACT NO. 89B; ELIMINATED CONST. EASEMENT ON TRACT NO. 89B; CREATED TRACT NO. 89E FROM TRACT NO. 89B.

REV. 8-12-16: REV. AREAS TO BE ACQUIRED & REMAINING ON TRACT NOS. 53, 55, 55A, 55B, 97, 98 & 99; ELIMINATED CONST. EASEMENT ON TRACT NO. 77; REV. DEEDBOOK AND PAGE ON TRACT NO. 95.

REV. 9-15-16: CORRECTED OWNER NAME ON TRACT NO. 83.

REV. 11-15-16: ADDED CONST. EASEMENTS ON TRACT NOS. 80 & 88.

REV. 11-22-16: ADDED TRACT NO. 8061 TO PLANS AS AN UNECONOMIC REMNANT.

REV. 2-14-17: ADDED TRACT NOS. 8035 & 8088 TO PLANS AS UNECONOMIC REMNANTS; ELIMINATED CONST. EASEMENT ON TRACT NO. 88; CORRECTED COUNTY RECORD DATA ON TRACT NO. 8061; REVISED OWNER NAME AND DEED REFERENCE ON TRACT NO. 81.

REV. 3-20-17: ADDED TRACT NO. 8080 TO PLANS AS AN UNECONOMIC REMNANT AND ELIMINATED CONST. EASEMENT ON TRACT NO. 80.

REV. 9-13-17: REVISED OWNER NAME ON TRACT NO. 96.

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RIGHT-OF-WAY ACQUISITION TABLE

9/28/2017
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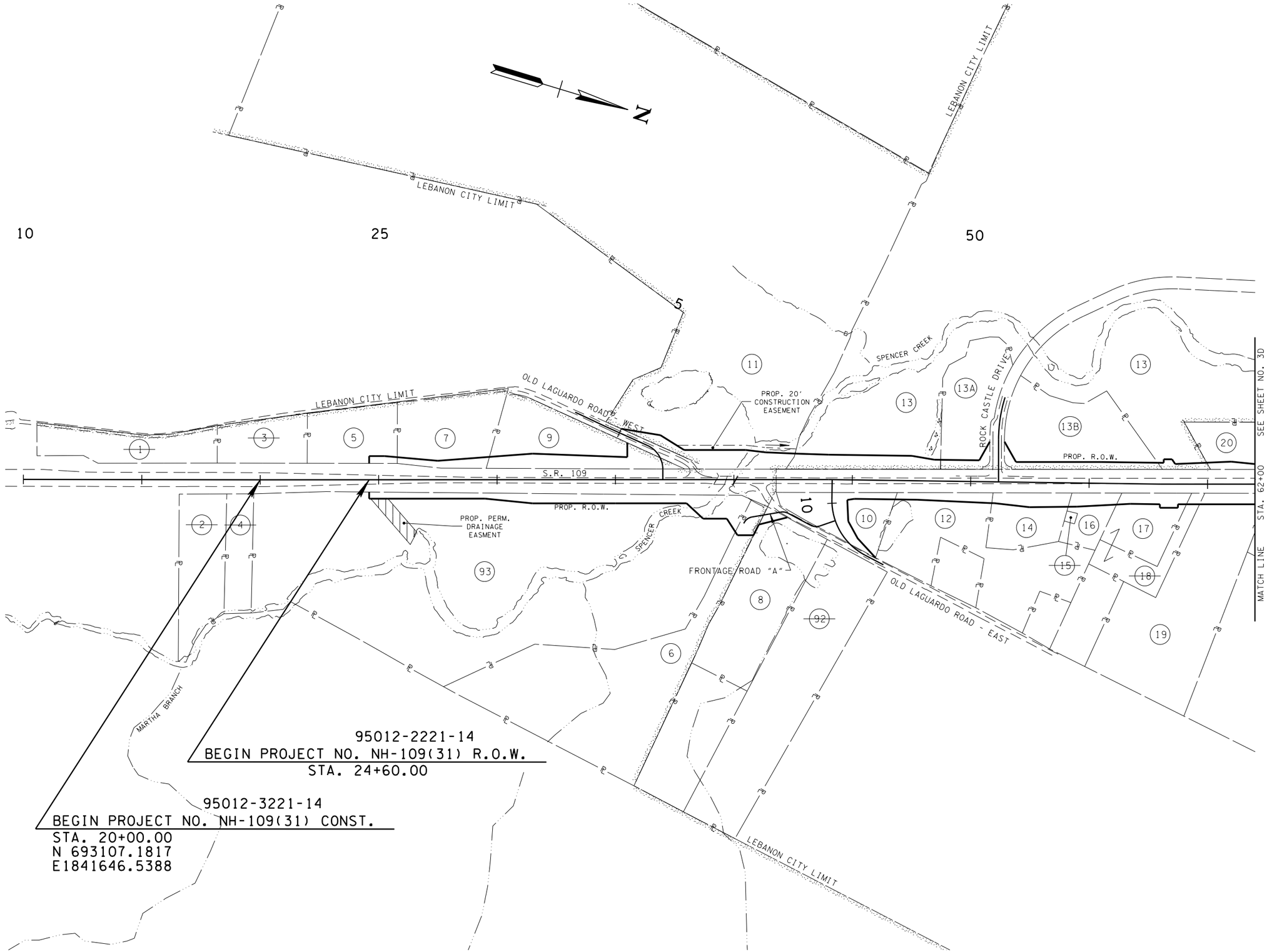
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	3C
CONST.	2017	NH-109(31)	3C

REV. 6-23-14: CORRECTED STATE R.O.W. PROJECT NO.

REV. 12-19-14: MOVED OLD LAGUARDO RD - EAST, ADDED FRONTAGE RD "A" AND ADJUSTED PROPOSED R.O.W. ON TRACT NOS. 6, 8, 10 & 93. ELIMINATED R.O.W. TAKE ON TRACT NO. 92.

REV. 10-29-15: COMBINED TRACT NO. 18 WITH TRACT NO. 17 TO MATCH PRESENT LAYOUT.

REV. 1-25-16: CREATED TRACT NOS. 13A & 13B FROM TRACT NO. 13.

REV. 5-6-16: REVISED PROP. R.O.W. ON TRACT NOS. 7 & 9.

REV. 7-12-16: REVISED PROPERTY LIMITS OF TRACT NO. 19.

REV. 9-15-16: REV. PROP. R.O.W. ON TRACT NOS. 10 & 12.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

B.O.P. TO STA. 62+00

SCALE: 1"= 200'

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	3D
CONST.	2017	NH-109(31)	3D

REV. 8-12-16: COMBINED TRACT NOS. 26 & 28; REVISED PROP. R.O.W. ON TRACT NOS. 26 & 30.

REV. 2-14-17: ADDED TRACT NO. 8035 TO PLANS AS AN UNECONOMIC REMNANT AND ELIMINATED CONST. EASEMENT ON TRACT NO. 35.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 62+00 TO STA. 114+00

SCALE: 1"= 200'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	3E
CONST.	2017	NH-109(31)	3E

REV. 9-05-14: ADDED TRACT NOS. 55A & 55B.

REV. 2-13-15: CREATED TRACT NOS. 89A, 89B, 89C & 89D FROM TRACT NO. 89.

REV. 6-10-15: REVISED R.O.W. TAKE ON TRACT NO. 52; CREATED TRACT NO. 100A FROM TRACT NO. 100.

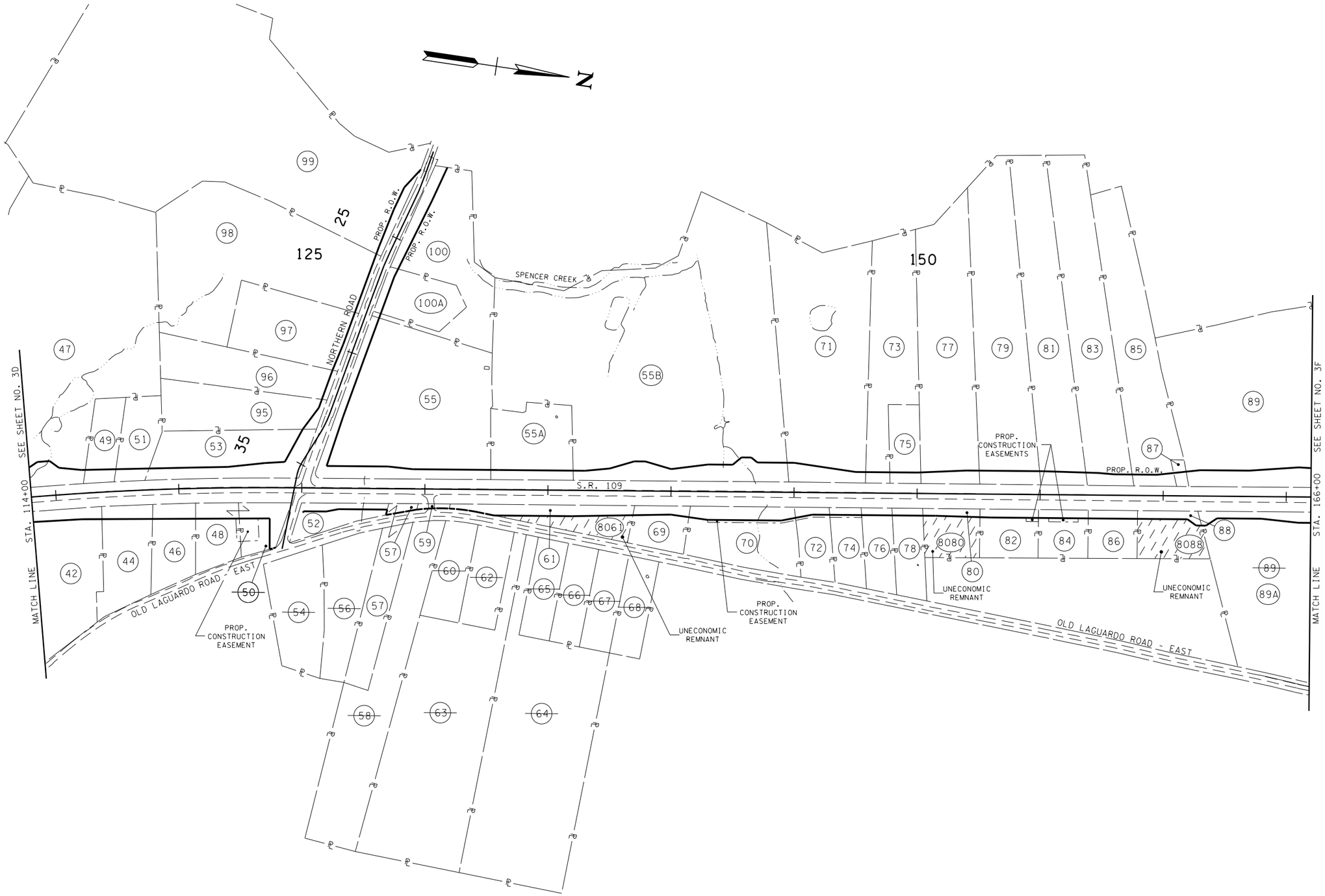
REV. 8-12-16: REVISED R.O.W. TAKE ON TRACT NOS. 53, 55, 55A, 55B, 97, 98 & 99; ELIMINATED CONST. EASEMENT ON TRACT NO. 77.

REV. 11-15-16: ADDED CONST. EASEMENTS TO TRACT NOS. 80 & 88.

REV. 11-22-16: ADDED TRACT NO. 8061 TO PLANS AS AN UNECONOMIC REMNANT.

REV. 2-14-17: ADDED TRACT NO. 8088 TO PLANS AS AN UNECONOMIC REMNANT AND ELIMINATED CONST. EASEMENT ON TRACT NO. 88; COMBINED TRACT NOS. 48 & 50 INTO TRACT NO. 48; ADDED CONST. EASEMENT TO TRACT NO. 48.

REV. 3-20-17: ADDED TRACT NO. 8080 TO PLANS AS AN UNECONOMIC REMNANT AND ELIMINATED CONST. EASEMENT ON TRACT NO. 80.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 114+00 TO STA. 166+00

SCALE: 1"= 200'

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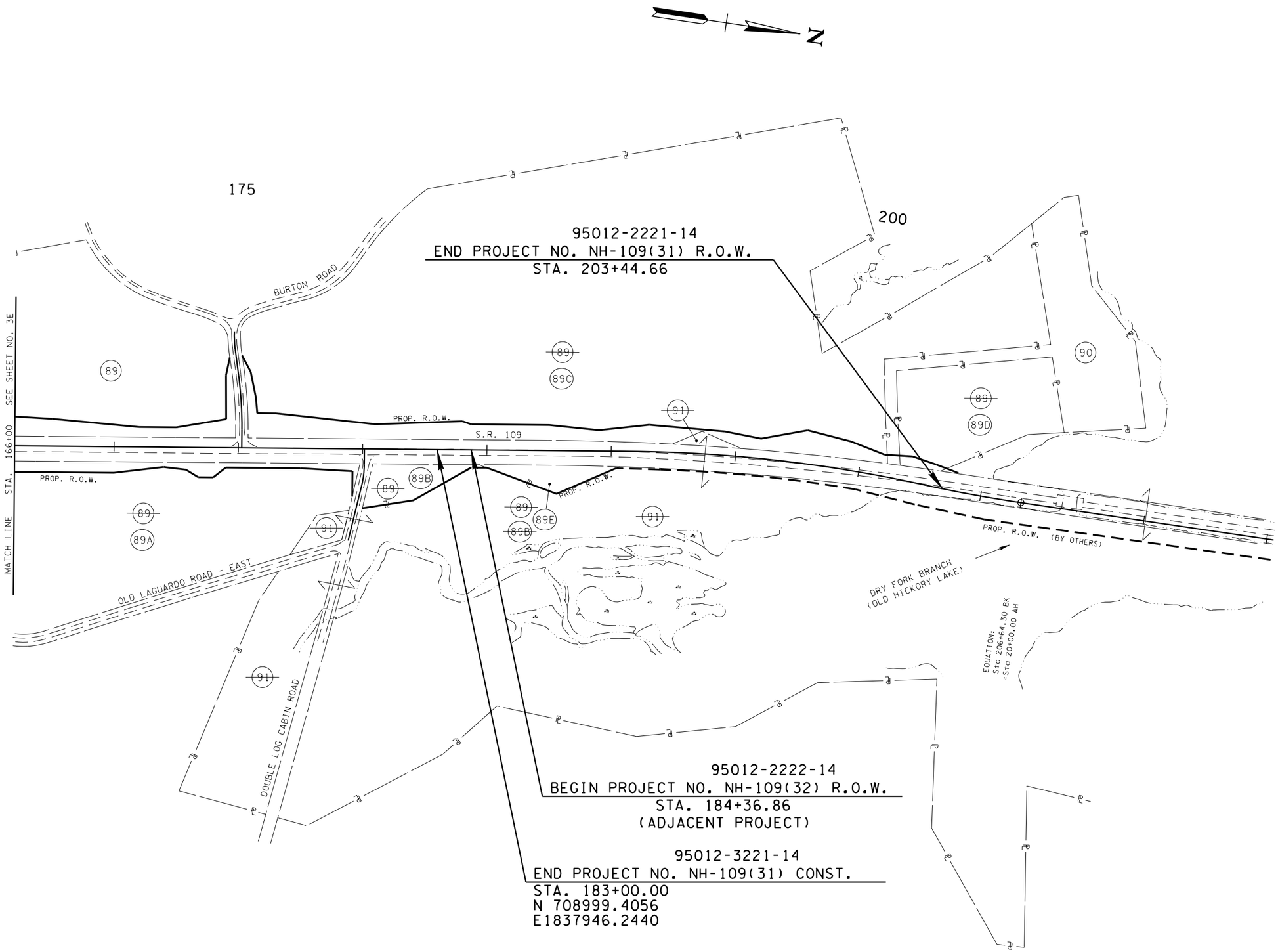
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	3F
CONST.	2017	NH-109(31)	3F

REV. 6-23-14: CORRECTED STATE R.O.W. PROJECT NO.

REV. 2-13-15: CREATED TRACT NOS. 89A, 89B, 89C & 89D FROM TRACT NO. 89.

REV. 5-18-16: REVISED PROP. R.O.W. ON TRACT NO. 89B; CREATED TRACT NO. 89E FROM TRACT NO. 89B.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 166+00 TO E.O.P.

SCALE: 1"= 200'

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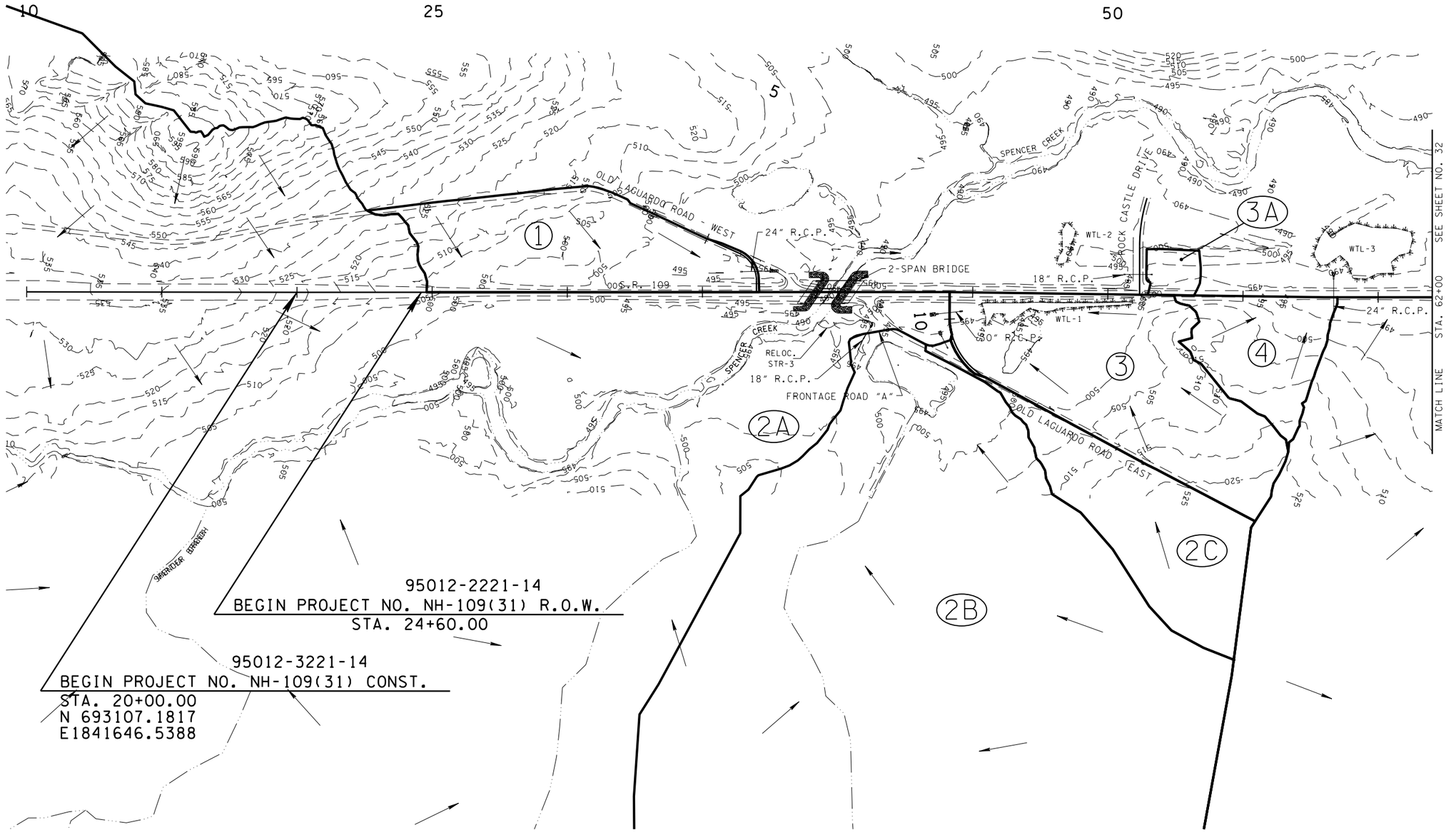
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	31
CONST.	2017	NH-109(31)	31

REV.12-19-14: ADDED DRAINAGE AREAS FOR NEW CULVERTS ON FRONTAGE ROAD "A".

DA#	LOCATION (STA.)	CROSS DRAIN SIZE	AREA (AC.)	RUNOFF COEF. "C"	Q 50 (CFS)	Q 100 (CFS)	TERRAIN
1	7+23 (OLD LAGUARDO ROAD WEST)	24" R.C.P.	9.06	0.45	23.28	24.87	ROLLING
2A,2B,2C,3	39+04 (S.R. 109)	2-SPAN BRIDGE	10.01 SQ.MI.	-	-	5406.23	ROLLING
2B	51+61 (FRONTAGE RD "A")	18" R.C.P.	168.62	0.34	4.05	4.21	ROLLING
2C	54+66 (FRONTAGE RD "A")	18" R.C.P.	8.33	0.34	7.48	8.35	ROLLING
3	9+76 (OLD LAGUARDO ROAD EAST)	30" R.C.P.	13.35	0.38	24.81	26.73	ROLLING
3A	14+25 (ROCK CASTLE DRIVE)	18" R.C.P.	0.75	0.37	3.75	4.02	ROLLING
4	58+35 (S.R. 109)	24" R.C.P.	4.72	0.59	9.71	10.39	ROLLING



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

B.O.P. TO STA. 62+00

SCALE: 1"= 200'

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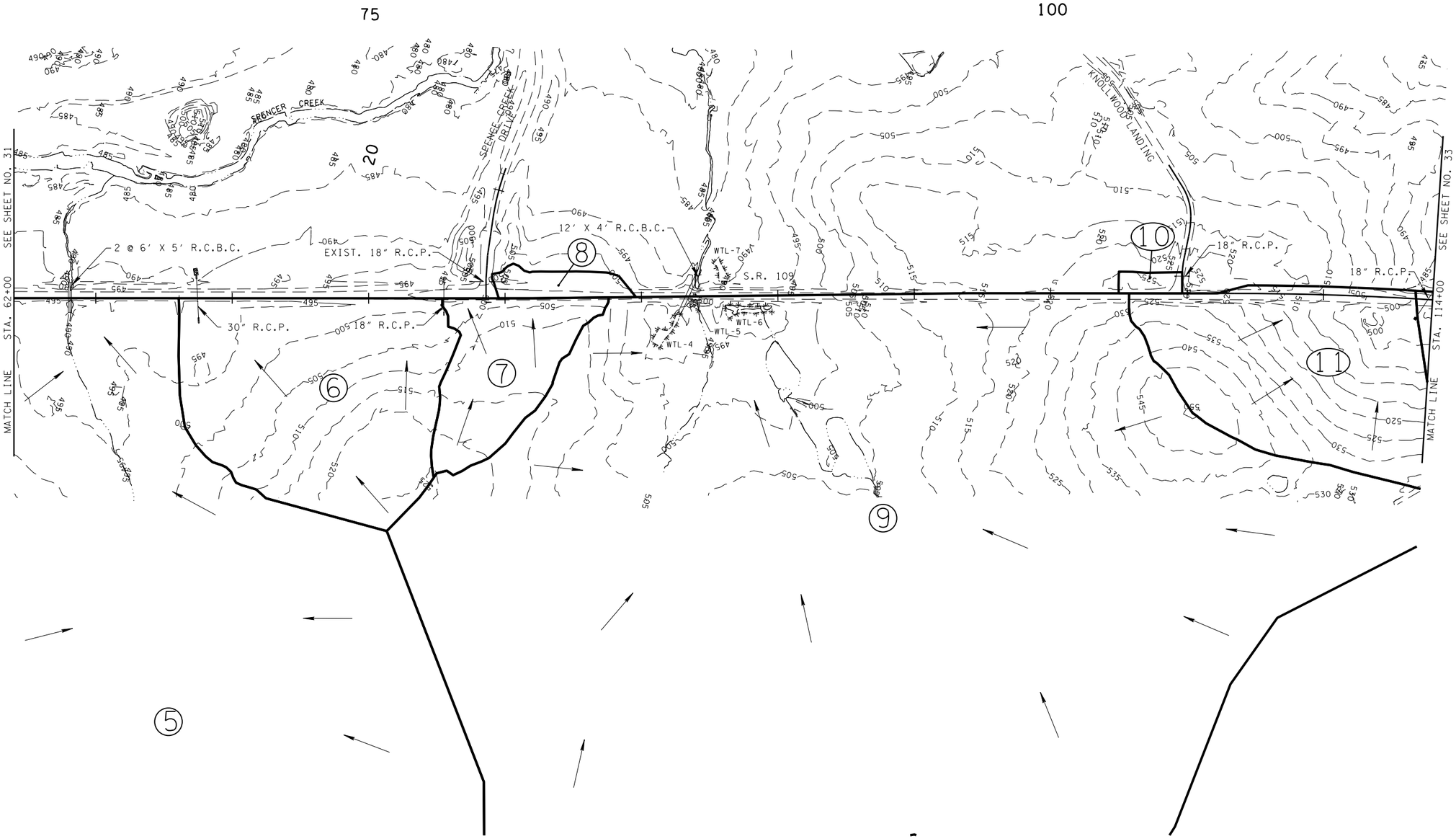
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	32
CONST.	2017	NH-109(31)	32

DA#	LOCATION (STA.)	CROSS DRAIN SIZE	AREA (AC.)	RUNOFF COEF. "C"	Q 50 (CFS)	Q 100 (CFS)	TERRAIN
5	64+07 (S.R. 109)	2 @ 6' X 5' R.C.B.C.	164.81	-	309.19	353.77	ROLLING
6	68+73 (S.R. 109)	30" R.C.P.	16.44	0.33	29.02	31.09	ROLLING
7	77+76 (S.R. 109)	18" R.C.P.	5.84	0.36	10.62	11.42	ROLLING
8	23+39 (SPENCE CREEK DRIVE)	EXIST. 18" R.C.P.	0.87	0.59	4.35	4.66	ROLLING
9	86+68 (S.R. 109)	12' X 4' R.C.B.C.	138.50	-	271.48	310.77	ROLLING
10	29+37 (KNOLLWOOD LANDING)	18" R.C.P.	0.41	0.65	2.26	2.42	ROLLING
11	113+80 (S.R. 109)	18" R.C.P.	13.94	0.37	30.43	32.49	ROLLING



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 62+00 TO STA. 114+00

SCALE: 1"= 200'

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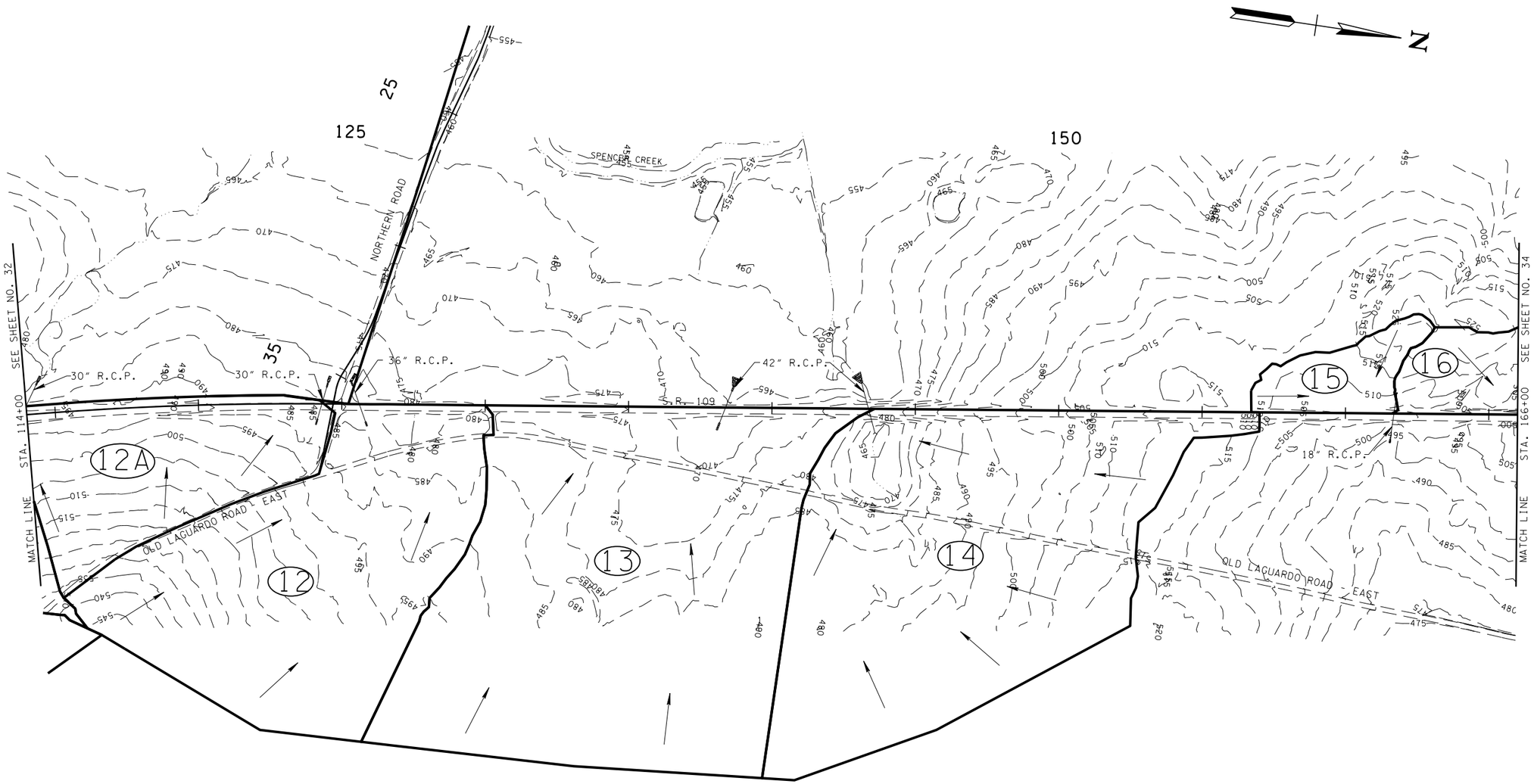
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	33
CONST.	2017	NH-109(31)	33

DA#	LOCATION (STA.)	CROSS DRAIN SIZE	AREA (AC.)	RUNOFF COEF. "C"	Q 50 (CFS)	Q 100 (CFS)	TERRAIN
12A	124+24 (S.R. 109)	30" R.C.P.	10.84	0.37	23.50	25.11	ROLLING
12	125+61 (S.R. 109)	36" R.C.P.	22.72	0.37	44.72	47.92	ROLLING
13	138+38 (S.R. 109)	42" R.C.P.	35.61	0.35	58.33	63.07	ROLLING
14	143+37 (S.R. 109)	42" R.C.P.	30.30	0.37	52.80	57.06	ROLLING
15	161+69 (S.R. 109)	18" R.C.P.	2.81	0.41	7.94	8.50	HILLY



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 114+00 TO STA. 166+00

SCALE: 1"= 200'

9/28/2017
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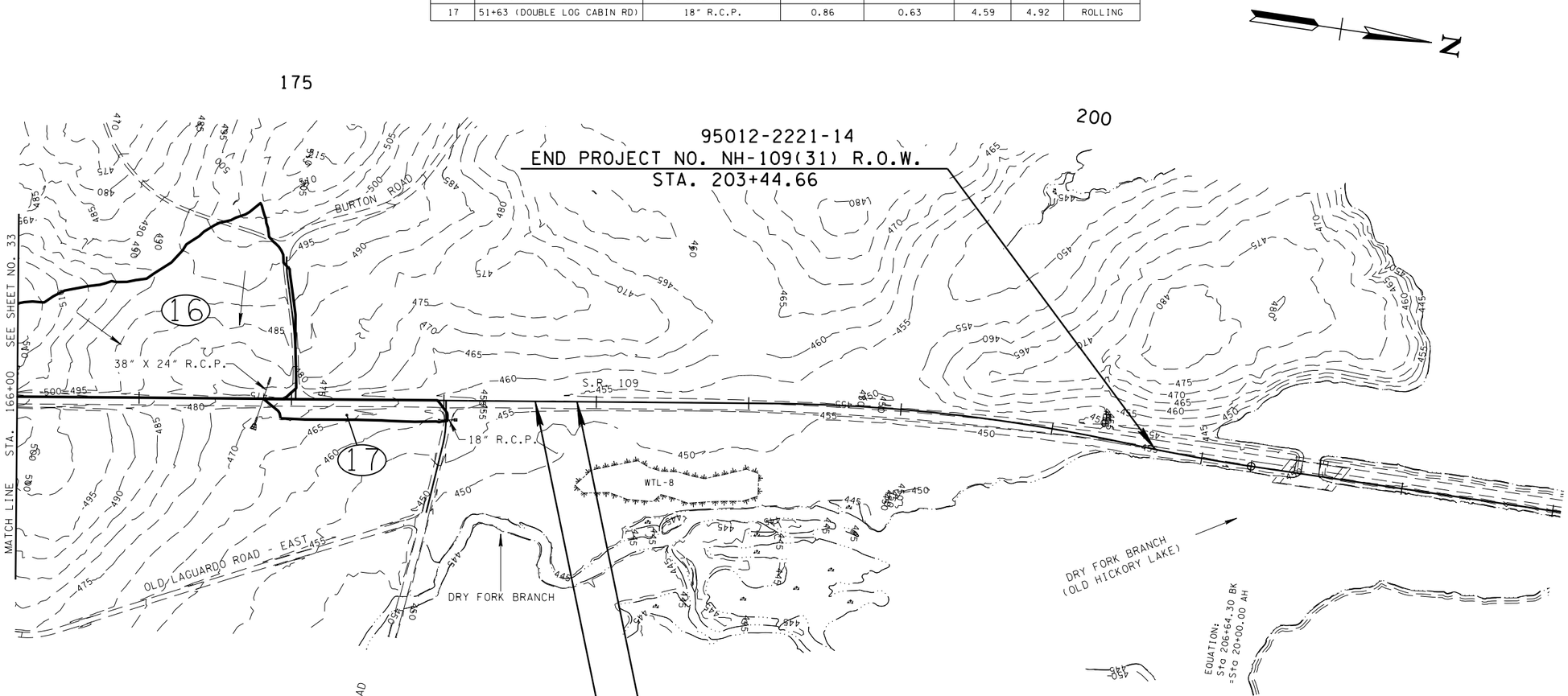
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	34
CONST.	2017	NH-109(31)	34

DA#	LOCATION (STA.)	CROSS DRAIN SIZE	AREA (AC.)	RUNOFF COEF. "C"	Q 50 (CFS)	Q 100 (CFS)	TERRAIN
16	173+07 (S.R. 109)	38" X 24" R.C.P.	11.90	0.37	27.25	29.15	HILLY
17	51+63 (DOUBLE LOG CABIN RD)	18" R.C.P.	0.86	0.63	4.59	4.92	ROLLING



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 166+00 TO E.O.P.

SCALE: 1"= 200'

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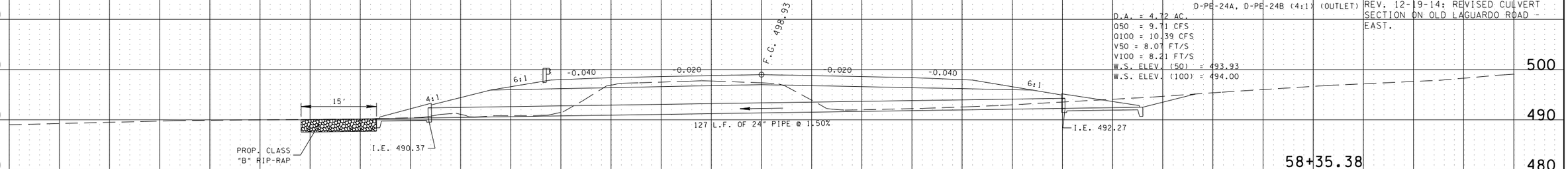
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

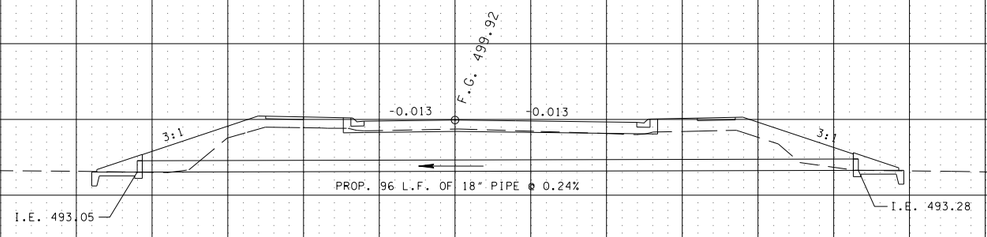
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	35
CONST.	2017	NH-109(31)	35

REV. 12-19-14: REVISED CULVERT SECTION ON OLD LAGUARDO ROAD - EAST.



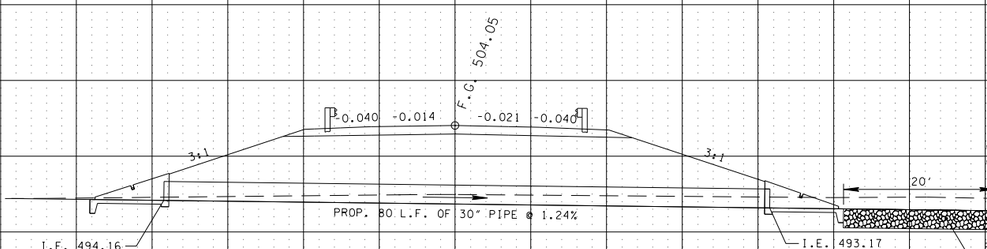
STA. 58+35
127 L.F. OF 24" PIPE
SKEW 90°
ENDWALLS REQ'D : TYPE "U"
STD. DWG. NOS. D-PE-24A, D-PE-24B (6:1) (INLET)
D-PE-24A, D-PE-24B (4:1) (OUTLET)
D.A. = 4.72 AC.
Q50 = 9.71 CFS
Q100 = 10.39 CFS
V50 = 8.07 FT/S
V100 = 8.21 FT/S
W.S. ELEV. (50) = 493.93
W.S. ELEV. (100) = 494.00

58+35.38
S.R. 109



STA. 14+15
96 L.F. OF 18" PIPE
SKEW 90°
ENDWALLS REQ'D: TYPE "U"
STD. DWG. NOS. D-PE-18A, D-PE-18B (3:1) (INLET)
D-PE-18A, D-PE-18B (3:1) (OUTLET)
D.A. = 0.75 AC.
Q50 = 3.75 CFS
Q100 = 4.02 CFS
V50 = 4.32 FT/S
V100 = 4.42 FT/S
W.S. ELEV. (50) = 494.45
W.S. ELEV. (100) = 494.51

14+14.96
ROCK CASTLE DR.



STA. 9+76
80 L.F. OF 30" PIPE
SKEW 83° RT
ENDWALLS REQ'D: TYPE "U" W/GRATE
STD. DWG. NOS. D-PE-30A, D-PE-30B (3:1) (INLET)
D-PE-30A, D-PE-30B (3:1) (OUTLET)
D.A. = 13.35 AC.
Q50 = 24.81 CFS
Q100 = 26.73 CFS
V50 = 7.01 FT/S
V100 = 7.24 FT/S
W.S. ELEV. (50) = 496.89
W.S. ELEV. (100) = 497.04

9+76.03
OLD LAGUARDO ROAD - EAST

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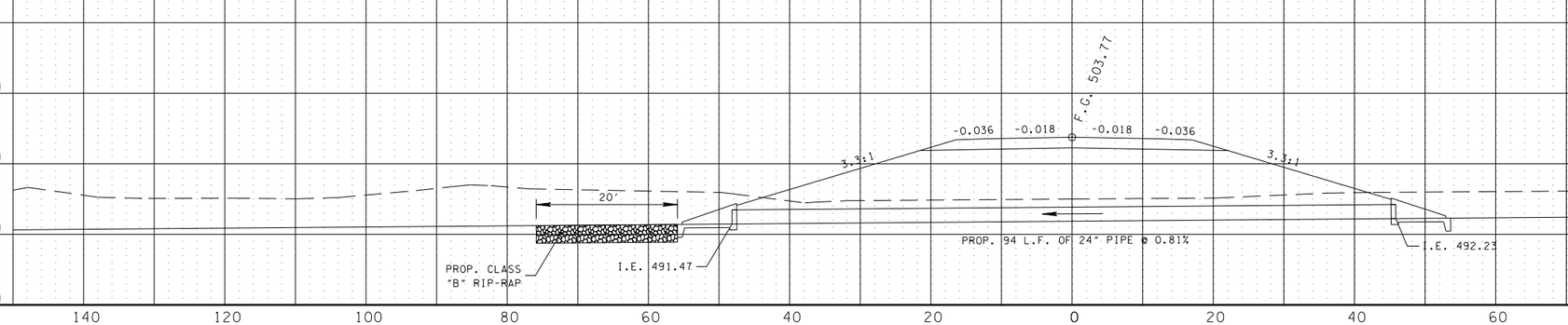

STA. 7+06
94 L.F. OF 24" PIPE
SKEW 64° LT.
ENDWALLS REQ'D: TYPE "U" WITH GRATE
STD. DWG. NOS. D-PE-24A, D-PE-24B (3:1) (INLET)
D-PE-24A, D-PE-24B (3:1) (OUTLET)
D.A. = 9.06 AC.
Q50 = 23.28 CFS
Q100 = 24.87 CFS
V50 = 8.12 FT/S
V100 = 8.50 FT/S
W.S. ELEV. (50) = 495.81
W.S. ELEV. (100) = 496.11

7+06.17
OLD LAGUARDO ROAD - WEST

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

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

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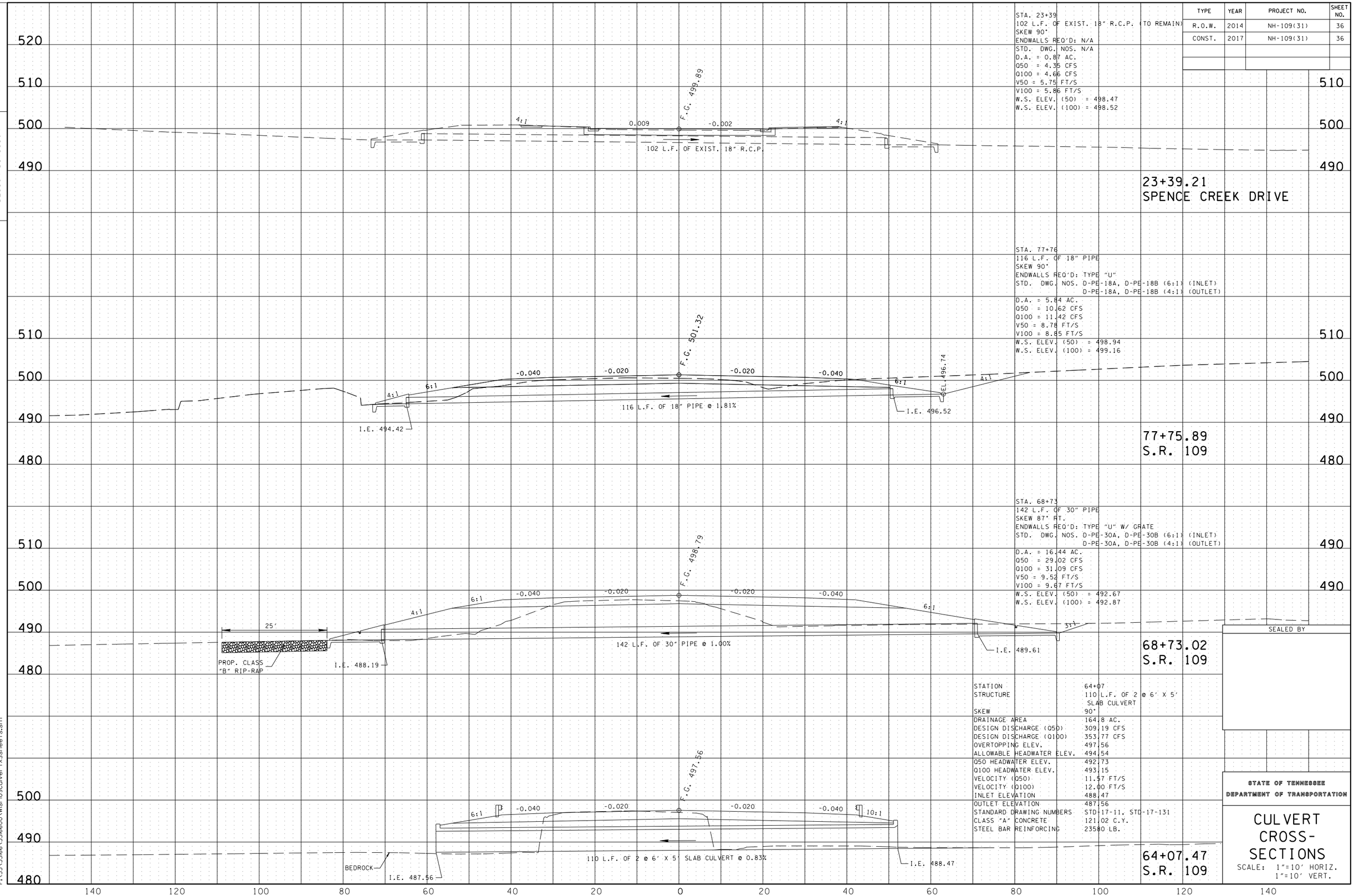
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	36
CONST.	2017	NH-109(31)	36



STA. 23+39
102 L.F. OF EXIST. 18" R.C.P. (TO REMAIN)
SKEW 90°
ENDWALLS REQ'D: N/A
STD. DWG. NOS. N/A
D.A. = 0.87 AC.
Q50 = 4.35 CFS
Q100 = 4.66 CFS
V50 = 5.75 FT/S
V100 = 5.86 FT/S
W.S. ELEV. (50) = 498.47
W.S. ELEV. (100) = 498.52

23+39.21
SPENCE CREEK DRIVE

STA. 77+76
116 L.F. OF 18" PIPE
SKEW 90°
ENDWALLS REQ'D: TYPE "U"
STD. DWG. NOS. D-PE-18A, D-PE-18B (6:1) (INLET)
D-PE-18A, D-PE-18B (4:1) (OUTLET)
D.A. = 5.84 AC.
Q50 = 10.62 CFS
Q100 = 11.42 CFS
V50 = 8.78 FT/S
V100 = 8.85 FT/S
W.S. ELEV. (50) = 498.94
W.S. ELEV. (100) = 499.16

77+75.89
S.R. 109

STA. 68+73
142 L.F. OF 30" PIPE
SKEW 87° RT.
ENDWALLS REQ'D: TYPE "U" W/ GRATE
STD. DWG. NOS. D-PE-30A, D-PE-30B (6:1) (INLET)
D-PE-30A, D-PE-30B (4:1) (OUTLET)
D.A. = 16.44 AC.
Q50 = 29.02 CFS
Q100 = 31.09 CFS
V50 = 9.52 FT/S
V100 = 9.67 FT/S
W.S. ELEV. (50) = 492.67
W.S. ELEV. (100) = 492.87

68+73.02
S.R. 109

STATION	64+07
STRUCTURE	110 L.F. OF 2 @ 6' X 5' SLAB CULVERT
SKEW	90°
DRAINAGE AREA	164.8 AC.
DESIGN DISCHARGE (Q50)	309.19 CFS
DESIGN DISCHARGE (Q100)	353.77 CFS
OVERTOPPING ELEV.	497.56
ALLOWABLE HEADWATER ELEV.	494.54
Q50 HEADWATER ELEV.	492.73
Q100 HEADWATER ELEV.	493.15
VELOCITY (Q50)	11.57 FT/S
VELOCITY (Q100)	12.00 FT/S
INLET ELEVATION	488.47
OUTLET ELEVATION	487.56
STANDARD DRAWING NUMBERS	STD-17-11, STD-17-131
CLASS "A" CONCRETE	121.02 C.Y.
STEEL BAR REINFORCING	23580 LB.

64+07.47
S.R. 109

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CULVERT CROSS-SECTIONS

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

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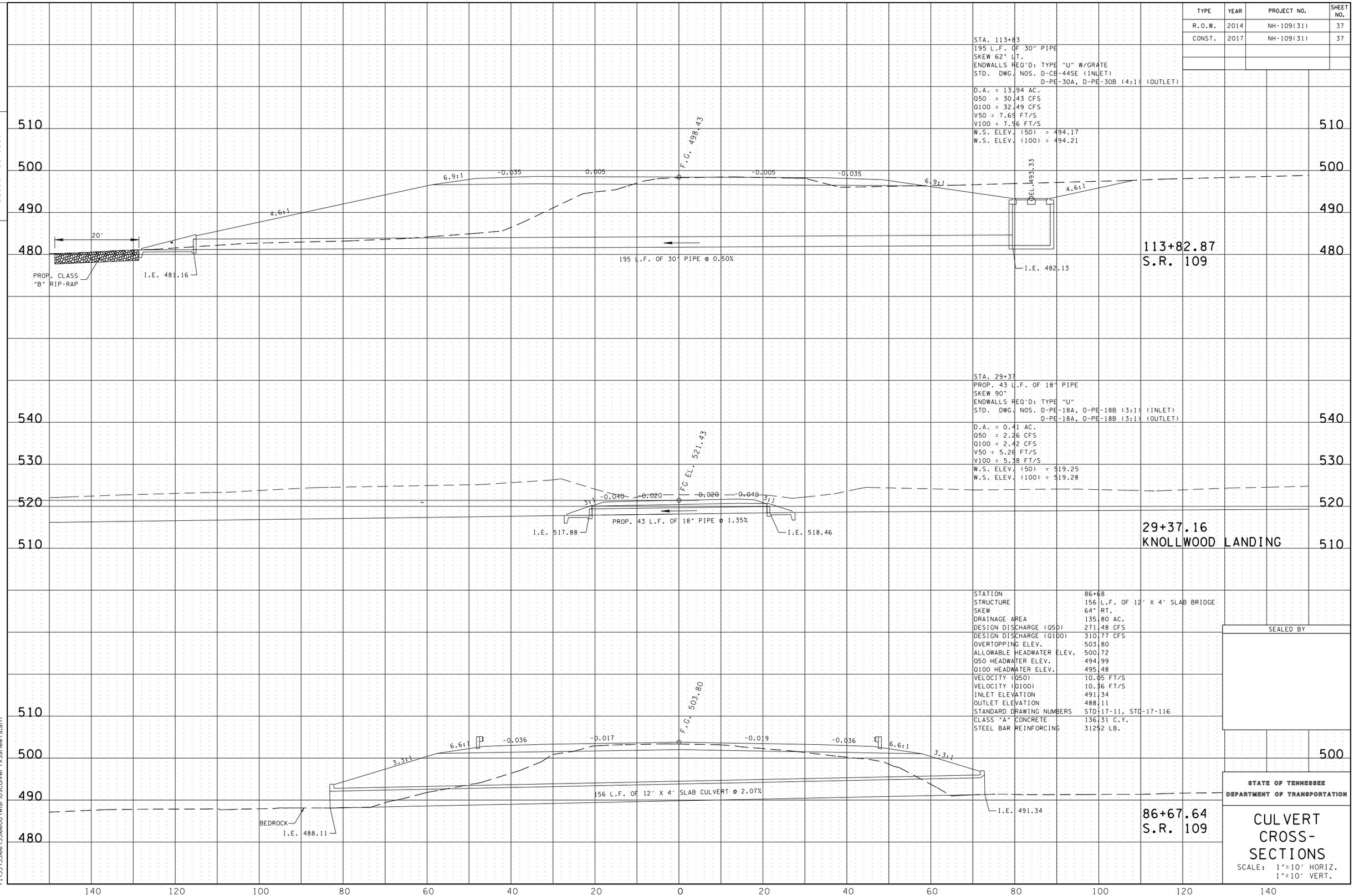
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	37
CONST.	2017	NH-109(31)	37



STA. 113+83
195 L.F. OF 30" PIPE
SKEW 62° LT.
ENDWALLS REQ'D: TYPE "U" W/GRATE
STD. DWG. NOS. D-CB-44SE (INLET)
D-PE-30A, D-PE-30B (4:1) (OUTLET)

D.A. = 13.94 AC.
Q50 = 30.43 CFS
Q100 = 32.49 CFS
V50 = 7.69 FT/S
V100 = 7.96 FT/S
W.S. ELEV. (50) = 494.17
W.S. ELEV. (100) = 494.21

STA. 29+37
PROP. 43 L.F. OF 18" PIPE
SKEW 90°
ENDWALLS REQ'D: TYPE "U"
STD. DWG. NOS. D-PE-18A, D-PE-18B (3:1) (INLET)
D-PE-18A, D-PE-18B (3:1) (OUTLET)

D.A. = 0.41 AC.
Q50 = 2.26 CFS
Q100 = 2.42 CFS
V50 = 5.26 FT/S
V100 = 5.38 FT/S
W.S. ELEV. (50) = 519.25
W.S. ELEV. (100) = 519.28

STATION	86+68
STRUCTURE	156 L.F. OF 12' X 4' SLAB BRIDGE
SKEW	64° RT.
DRAINAGE AREA	135.80 AC.
DESIGN DISCHARGE (Q50)	271.48 CFS
DESIGN DISCHARGE (Q100)	310.77 CFS
OVERTOPPING ELEV.	503.80
ALLOWABLE HEADWATER ELEV.	500.72
Q50 HEADWATER ELEV.	494.99
Q100 HEADWATER ELEV.	495.48
VELOCITY (Q50)	10.05 FT/S
VELOCITY (Q100)	10.36 FT/S
INLET ELEVATION	491.34
OUTLET ELEVATION	488.11
STANDARD DRAWING NUMBERS	STD-17-11, STD-17-116
CLASS "A" CONCRETE	136.31 C.Y.
STEEL BAR REINFORCING	31252 LB.

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CULVERT CROSS-SECTIONS

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

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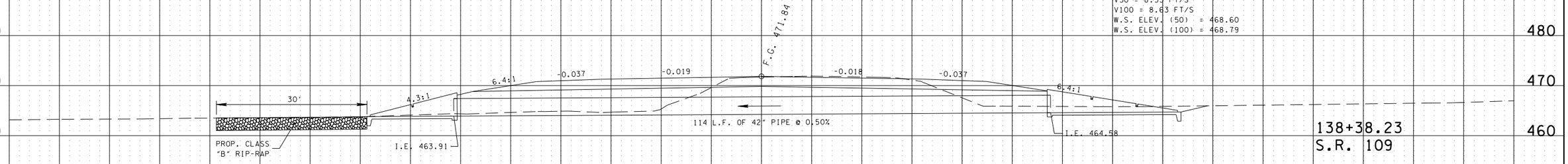
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

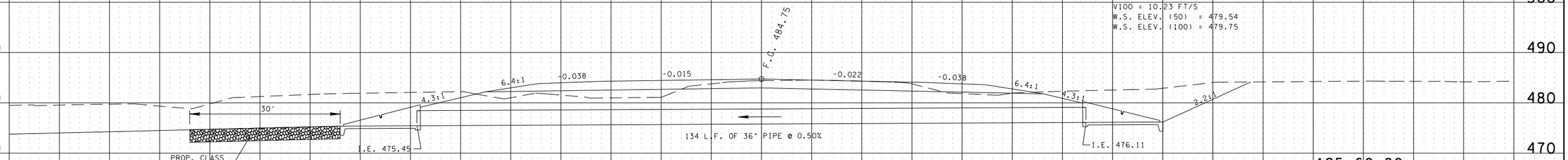
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	38
CONST.	2017	NH-109(31)	38

REV. 6-10-15: REVISED INLET BACKSLOPE ON CULVERT AT 125+60.80.



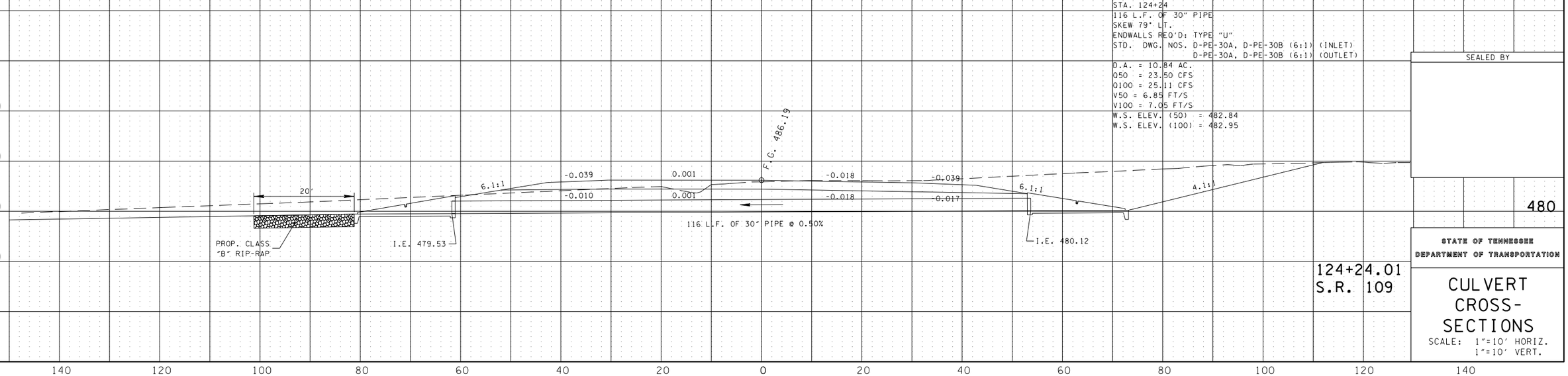
STA. 138+38
114 L.F. OF 42" PIPE
SKEW 70° LT.
ENDWALLS REQ'D: TYPE "U" W/GRATE
STD. DWG. NOS. D-PE-42A, D-PE-42B (6:1) (INLET)
D-PE-42A, D-PE-42B (4:1) (OUTLET)
D.A. = 35.61 AC.
Q50 = 58.33 CFS
Q100 = 63.07 CFS
V50 = 8.33 FT/S
V100 = 8.63 FT/S
W.S. ELEV. (50) = 468.60
W.S. ELEV. (100) = 468.79

138+38.23
S.R. 109



STA. 125+61
134 L.F. OF 36" PIPE
SKEW 79° LT.
ENDWALLS REQ'D: TYPE "U"
STD. DWG. NOS. D-PE-36A, D-PE-36B (4:1) (INLET)
D-PE-36A, D-PE-36B (4:1) (OUTLET)
D.A. = 22.72 AC.
Q50 = 44.72 CFS
Q100 = 47.92 CFS
V50 = 9.7 FT/S
V100 = 10.23 FT/S
W.S. ELEV. (50) = 479.54
W.S. ELEV. (100) = 479.75

125+60.80
S.R. 109



STA. 124+24
116 L.F. OF 30" PIPE
SKEW 79° LT.
ENDWALLS REQ'D: TYPE "U"
STD. DWG. NOS. D-PE-30A, D-PE-30B (6:1) (INLET)
D-PE-30A, D-PE-30B (6:1) (OUTLET)
D.A. = 10.84 AC.
Q50 = 23.50 CFS
Q100 = 25.11 CFS
V50 = 6.85 FT/S
V100 = 7.05 FT/S
W.S. ELEV. (50) = 482.84
W.S. ELEV. (100) = 482.95

124+24.01
S.R. 109

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CULVERT CROSS-SECTIONS

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

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

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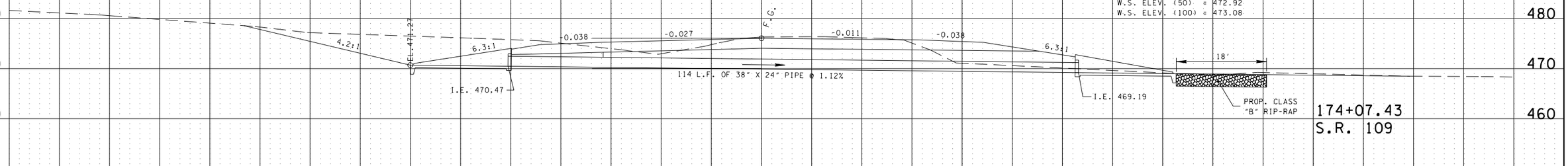
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

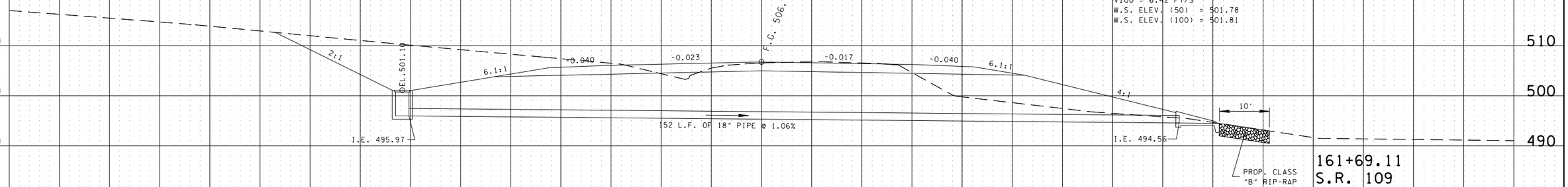
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	39
CONST.	2017	NH-109(31)	39

STA. 174+07
114 L.F. OF 38" X 24" PIPE
SKEW 73° LT.
ENDWALLS REQ'D: TYPE "U" W/GRATE
STD. DWG. NOS. D-PE-42A, D-PE-42B (6:1) (INLET)
D-PE-42A, D-PE-42B (6:1) (OUTLET)
D.A. = 11.90 AC.
Q50 = 27.25 CFS
Q100 = 29.15 CFS
V50 = 9.48 FT/S
V100 = 9.65 FT/S
W.S. ELEV. (50) = 472.92
W.S. ELEV. (100) = 473.08



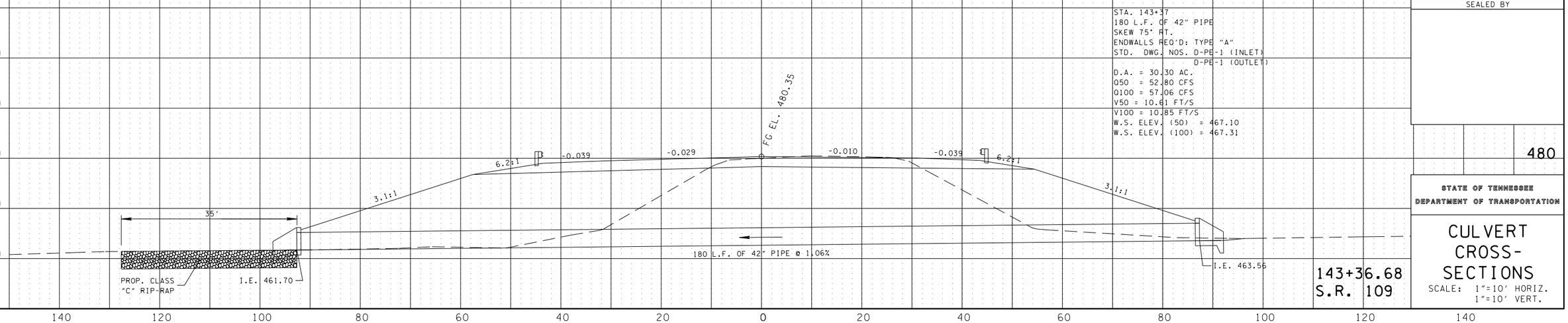
174+07.43
S.R. 109

STA. 161+69
152 L.F. OF 18" PIPE
SKEW 82° LT.
ENDWALLS REQ'D: TYPE "U"
STD. DWG. NOS. D-CB-42S (INLET)
D-PE-18A, D-PE-18B (4:1) (OUTLET)
D.A. = 2.81 AC.
Q50 = 7.94 CFS
Q100 = 8.50 CFS
V50 = 6.33 FT/S
V100 = 6.42 FT/S
W.S. ELEV. (50) = 501.78
W.S. ELEV. (100) = 501.81



161+69.11
S.R. 109

STA. 143+37
180 L.F. OF 42" PIPE
SKEW 75° RT.
ENDWALLS REQ'D: TYPE "A"
STD. DWG. NOS. D-PE-1 (INLET)
D-PE-1 (OUTLET)
D.A. = 30.30 AC.
Q50 = 52.80 CFS
Q100 = 57.06 CFS
V50 = 10.61 FT/S
V100 = 10.85 FT/S
W.S. ELEV. (50) = 467.10
W.S. ELEV. (100) = 467.31



143+36.68
S.R. 109

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CULVERT CROSS-SECTIONS

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

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

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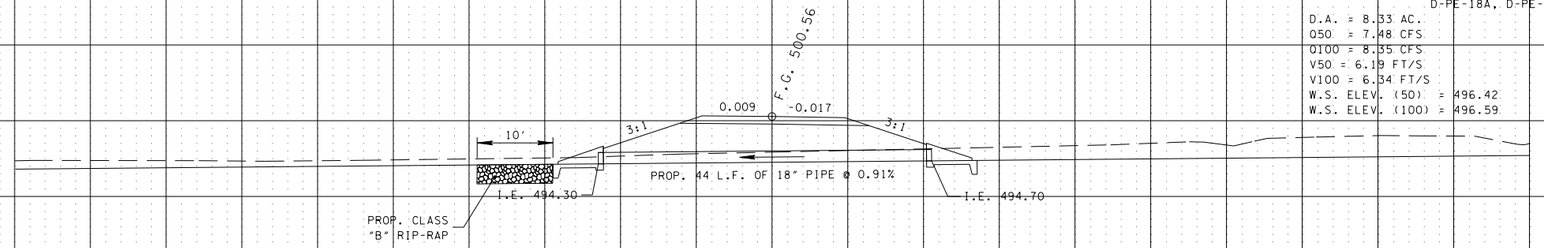
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

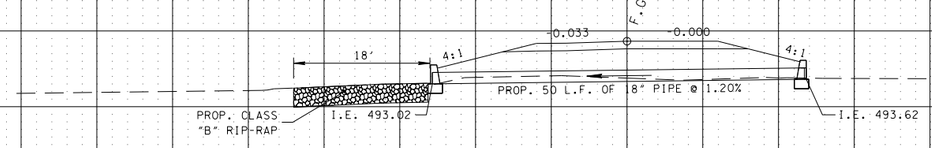
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	40
CONST.	2017	NH-109(31)	40

REV. 12-19-14: ADDED CULVERT SECTIONS FOR FRONTAGE ROAD "A".



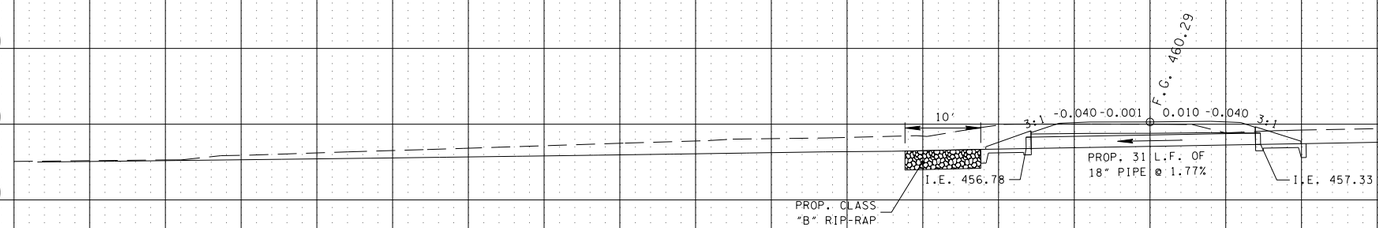
STA. 54+66
44 L.F. OF 18" PIPE
SKEW 82° RT
ENDWALLS REQ'D: TYPE "U"
STD. DWG. NOS. D-PE-18A, D-PE-18B (3:1) (INLET)
D-PE-18A, D-PE-18B (3:1) (OUTLET)
D.A. = 8.33 AC.
Q50 = 7.48 CFS
Q100 = 8.35 CFS
V50 = 6.19 FT/S
V100 = 6.34 FT/S
W.S. ELEV. (50) = 496.42
W.S. ELEV. (100) = 496.59

54+65.79
FRONTAGE ROAD "A"



STA. 51+61
50 L.F. OF 18" PIPE
SKEW 49° LT
ENDWALLS REQ'D: TYPE "STR"
STD. DWG. NOS. D-PE-4 (INLET)
D-PE-4 (OUTLET)
D.A. = 168.62 AC.
Q50 = 315 CFS
Q100 = 360 CFS
V50 = 9.98 FT/S
V100 = 9.91 FT/S
W.S. ELEV. (50) = 499.63
W.S. ELEV. (100) = 499.72

51+60.69
FRONTAGE ROAD "A"



STA. 51+63
31 L.F. OF 18" PIPE
SKEW 90°
ENDWALLS REQ'D: TYPE "U"
STD. DWG. NOS. D-PE-18A, D-PE-18B (3:1) (INLET)
D-PE-18A, D-PE-18B (3:1) (OUTLET)
D.A. = 0.86 AC.
Q50 = 4.59 CFS
Q100 = 4.92 CFS
V50 = 6.73 FT/S
V100 = 6.84 FT/S
W.S. ELEV. (50) = 458.55
W.S. ELEV. (100) = 458.60

51+63.13
DOUBLE LOG CABIN ROAD

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CULVERT CROSS-SECTIONS

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

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(31)	41

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

STREAMS, WETLANDS & BUFFER ZONES

(1) ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., PIER FOOTING, RIP-RAP PLACEMENT, CULVERT/BRIDGE CONSTRUCTION, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS. THIS NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR THE TEMPORARY DIVERSION CHANNELS (EC-STR-31) AND TEMPORARY DIVERSION CULVERTS (EC STR-32) FOR SINGLE BARREL CULVERT CONSTRUCTION.

(2) ONCE WATER IS DIVERTED INTO A NEWLY CONSTRUCTED AND STABILIZED RELOCATED STREAM / CHANNEL, THE ECOLOGY SECTION SHALL BE NOTIFIED. THE STREAM NAME, STREAM NUMBER, AND DATE THE WATER WAS DIVERTED INTO THE NEWLY CONSTRUCTED STREAM / CHANNEL SHALL BE SUPPLIED WITH THE NOTIFICATION.

ENVIRONMENTAL

(1) 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.

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EROSION PREVENTION & SEDIMENT CONTROL NOTES

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	41
CONST.	2017	NH-109(31)	41A

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
SFB SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	TEMPORARY SLOPE DRAIN	EC-STR-27
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
** SOCK ** SOCK **	FILTER SOCK	EC-STR-8
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
	CULVERT PROTECTION (TYPE 2)	EC-STR-11A
D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
** TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
TCC	TEMPORARY CULVERT CROSSING (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-25
IN DIV	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	TEMPORARY DIVERSION CHANNEL (DESCRIBE-SIZE AND TYPE OF LINING)	EC-STR-31
	TEMPORARY DIVERSION CULVERT (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-32
	SUSPENDED PIPE DIVERSION	EC-STR-33 EC-STR-33A
	SAND BAG BERM	EC-STR-33
	EROSION CONTROL BLANKET	EC-STR-34
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
5	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EC-STR-45

** TO BE PLACED AS DIRECTED BY THE PROJECT ENGINEER.

EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	635
209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	2332
209-05	SEDIMENT REMOVAL	C.Y.	2617
209-03.23	FILTER SOCK (24 INCH)	L.F.	225
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	20020
209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	14163
209-08.07	ROCK CHECK DAM PER	EACH	191
209-08.08	ENHANCED ROCK CHECK DAM PER	EACH	89
209-09.01	SANDBAGS	BAG	7500
209-09.03	SEDIMENT FILTER BAG (15' X 15')	EACH	6
209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	2
209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	315
209-40.33	CATCH BASIN PROTECTION (TYPE D)	EACH	2
209-40.41	CATCH BASIN FILTER ASSEMBLY(TYPE 1)	EACH	2
209-40.45	CATCH BASIN FILTER ASSEMBLY(TYPE 5)	EACH	2
209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	713
303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	924
621-03.02	18" TEMPORARY DRAINAGE PIPE	L.F.	504
621-03.03	24" TEMPORARY DRAINAGE PIPE	L.F.	66
621-03.04	30" TEMPORARY DRAINAGE PIPE	L.F.	143
621-03.05	36" TEMPORARY DRAINAGE PIPE	L.F.	40
621-03.07	48" TEMPORARY DRAINAGE PIPE	L.F.	288
707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	3423
709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	1150
709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	4970
740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	11276
740-11.02	SEDIMENT TUBE 12IN	L.F.	19900
740-11.05	SEDIMENT TUBE 24IN	L.F.	18500
801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	930
801-02	SEEDING (WITHOUT MULCH)	UNIT	713
805-12.02	EROSION CONTROL BLANCKET (TYPE II)	S.Y.	25580

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EROSION PREVENTION AND SEDIMENT CONTROL LEGEND AND TABULATION

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TENNESSEE D.O.T.
DESIGN DIVISION

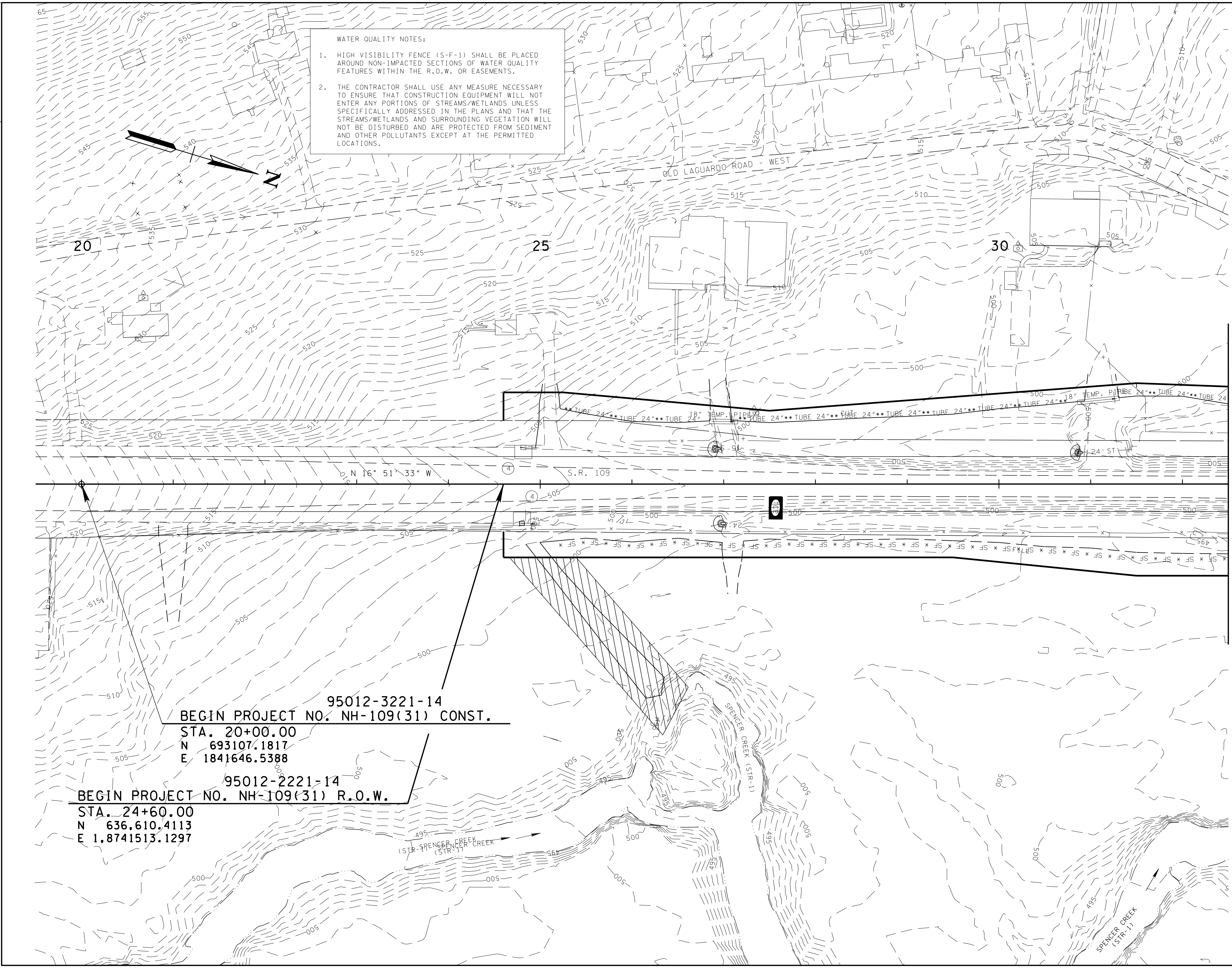
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	42
CONST.	2017	NH-109(31)	42

REV 6-23-14: CORRECTED STATE R.O.W. PROJECT NO.

WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.
2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.



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STATE OF TENNESSEE
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EROSION PREVENTION AND SEDIMENT CONTROL PLAN

B.O.P. TO STA.32+50
SCALE: 1"=50'

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TENNESSEE D.O.T.

DESIGN DIVISION

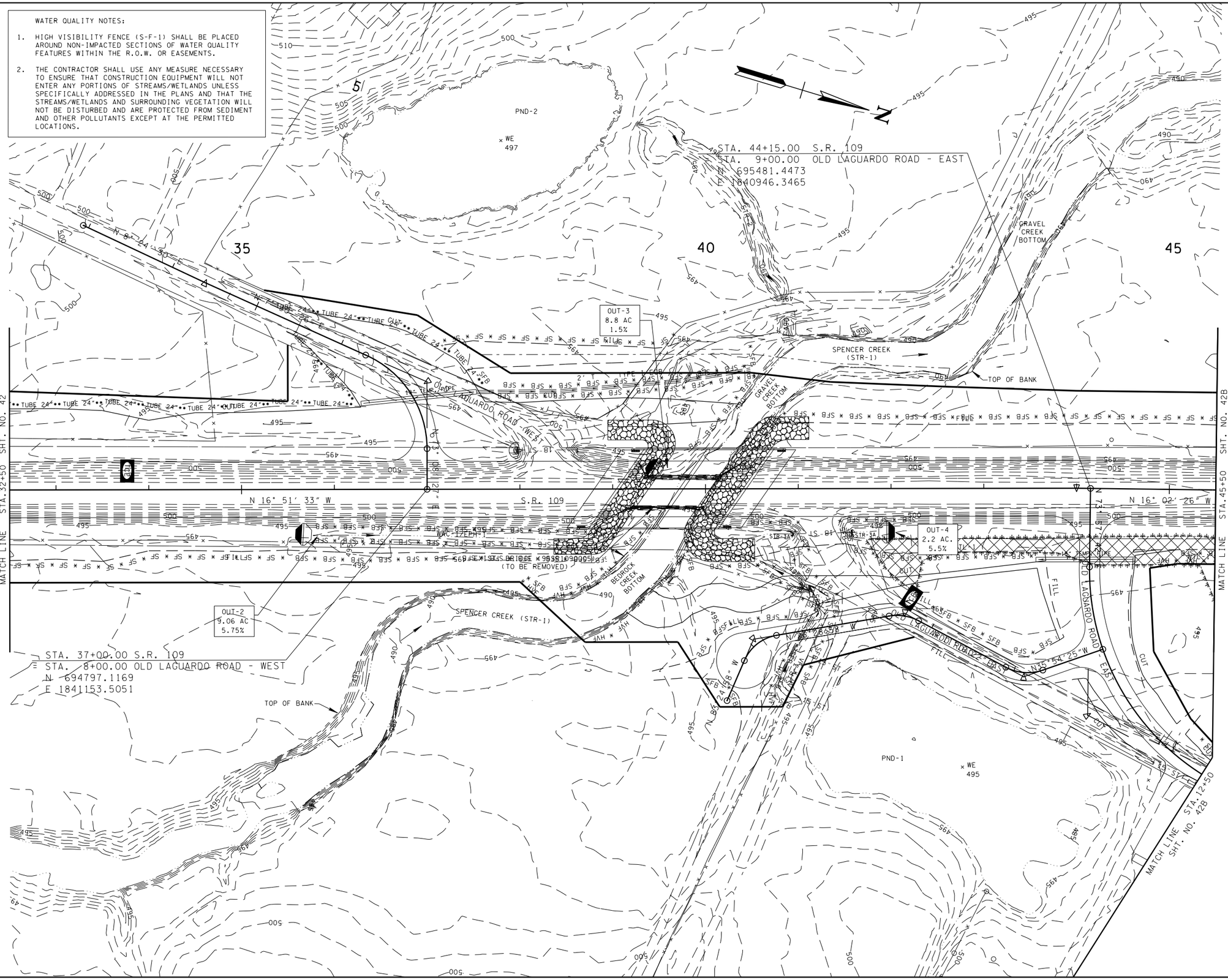
FILE NO.

WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	43
CONST.	2017	NH-109(31)	42A



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 32+50 TO STA. 45+50

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	44
CONST.	2017	NH-109(31)	42B

WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

STA. 51+17.42 S.R. 109
= STA. 15+00.00 ROCK CASTLE DR.
N 696156.5229
E 1840752.2539

SPENCER CREEK (STR-12)

ROCK CASTLE DRIVE

S.R. 109

N 13° 14' 26" E

N 76° 02' 26" W

N 10° 55' 22" E

OLD LAGUARDO ROAD - EAST

50

55

OUT-5
1.2 AC.
2.1%

OUT-5A
4.6 AC.
6.8%

WTL-1

WTL-2

WTL-3

PND-3

MATCH LINE STA.45+50 SHT. NO. 42A

MATCH LINE STA.58+50 SHT. NO. 42C

MATCH LINE STA.12+50 SHT. NO. 42A

24" TEMP. PIPE

18" SLOPE DRAIN

TUBE 24"

FILL

CUT

FLAG

CEM

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 48+50 TO STA. 58+50

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	45
CONST.	2017	NH-109(31)	42C

SPENCER CREEK
(STR-1)

60 65 70

WTL-3

OUT-6
0.2 AC.
1.2%

OUT-7
0.2 AC.
1.4%

OUT-10A
0.4 AC.
2.2%

OUT-10
0.7 AC.
11.6%

OUT-10B
1.0 AC.
9.3%

OUT-5B
1.8 AC.
3.7%

OUT-8
3.7 AC.
2.2%

OUT-9
2.6 AC.
0.5%

OUT-10C
0.1 AC.
5.5%

OUT-10D
7.7 AC.
0.5%

STR-3.5

STR-2.5

N 16° 48′ 56″ W

S.R. 109

MATCH LINE STA. 58+50 SHT. NO. 42B

MATCH LINE STA. 71+50 SHT. NO. 42D

18" SLOPE DRAIN

18" TEMP. PIPE

PIPE INLET
IMBEDDED TO
REDUCE SLOPE

WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

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DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 58+50 TO STA. 71+50

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	46
CONST.	2017	NH-109(31)	42D

N

OUT-11
0.87 AC.
2.1%

OUT-12
0.1 AC.
0.8%

OUT-12A
0.1 AC.
0.8%

OUT-12B
0.8 AC.
1.6%

OUT-12C
5.6 AC.
5.2%

SPENCE CREEK DRIVE

N 81° 30' 00" E

N 76° 52' 28" E

N 73° 12' 45" E

N 36° 11' 24" E

S.R. 109

N 16° 48' 56" W

N 17° 30' 13" W

18" SLOPE DRAIN

TUBE 24"

CUT

SHT. NO. 42C

SHT. NO. 42E

STA. 71+50

STA. 84+50

MATCH LINE

STA. 79+30.31 S.R. 109
℄ STA. 24+00.00 SPENCE CREEK DRIVE
N 698851.7466
E 1839947.3670

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STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 71+50 TO STA. 84+50

SCALE: 1"= 50'

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

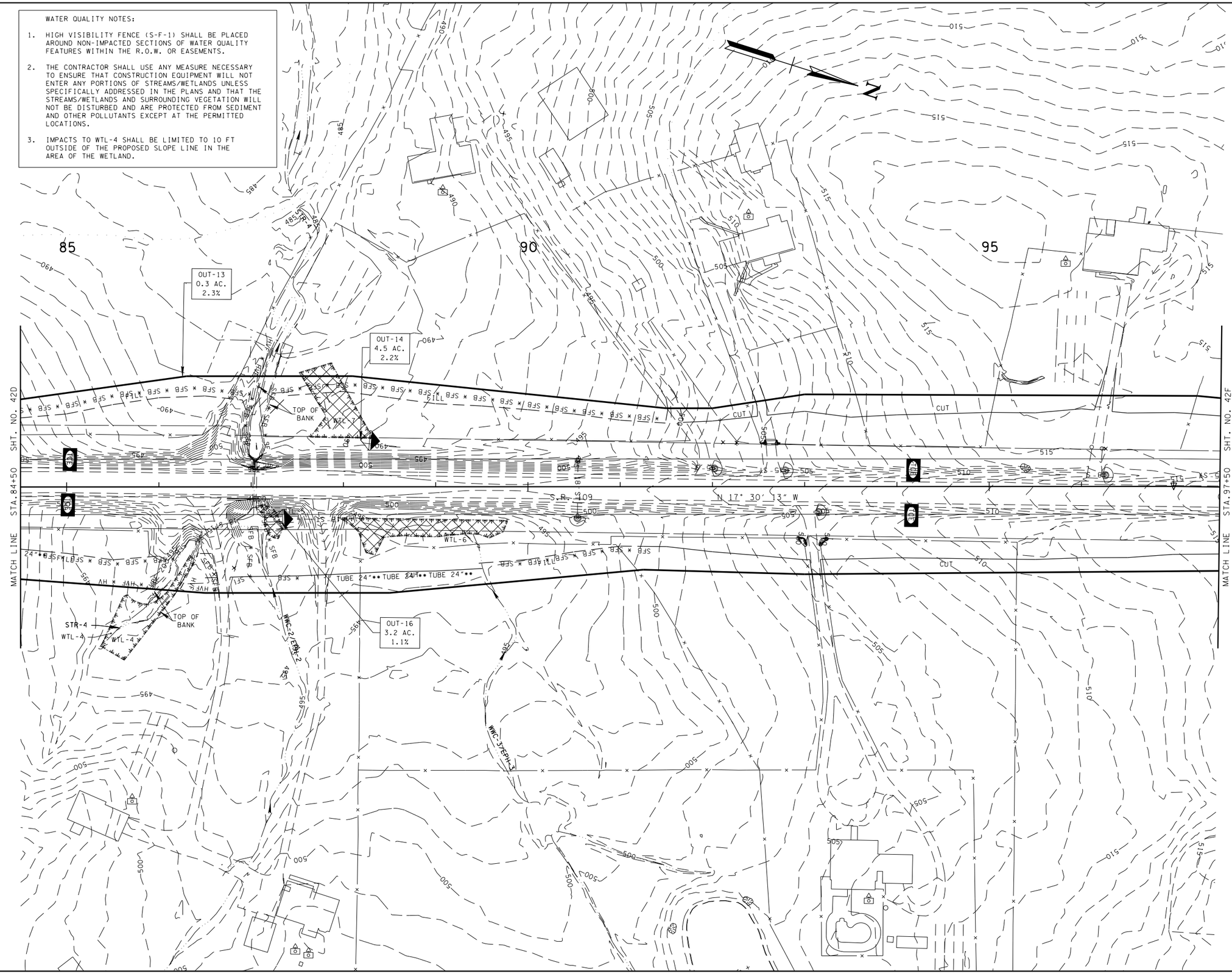
WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

3. IMPACTS TO WTL-4 SHALL BE LIMITED TO 10 FT OUTSIDE OF THE PROPOSED SLOPE LINE IN THE AREA OF THE WETLAND.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	47
CONST.	2017	NH-109(31)	42E



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STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 84+50 TO STA. 97+50

SCALE: 1"= 50'

9/28/2017
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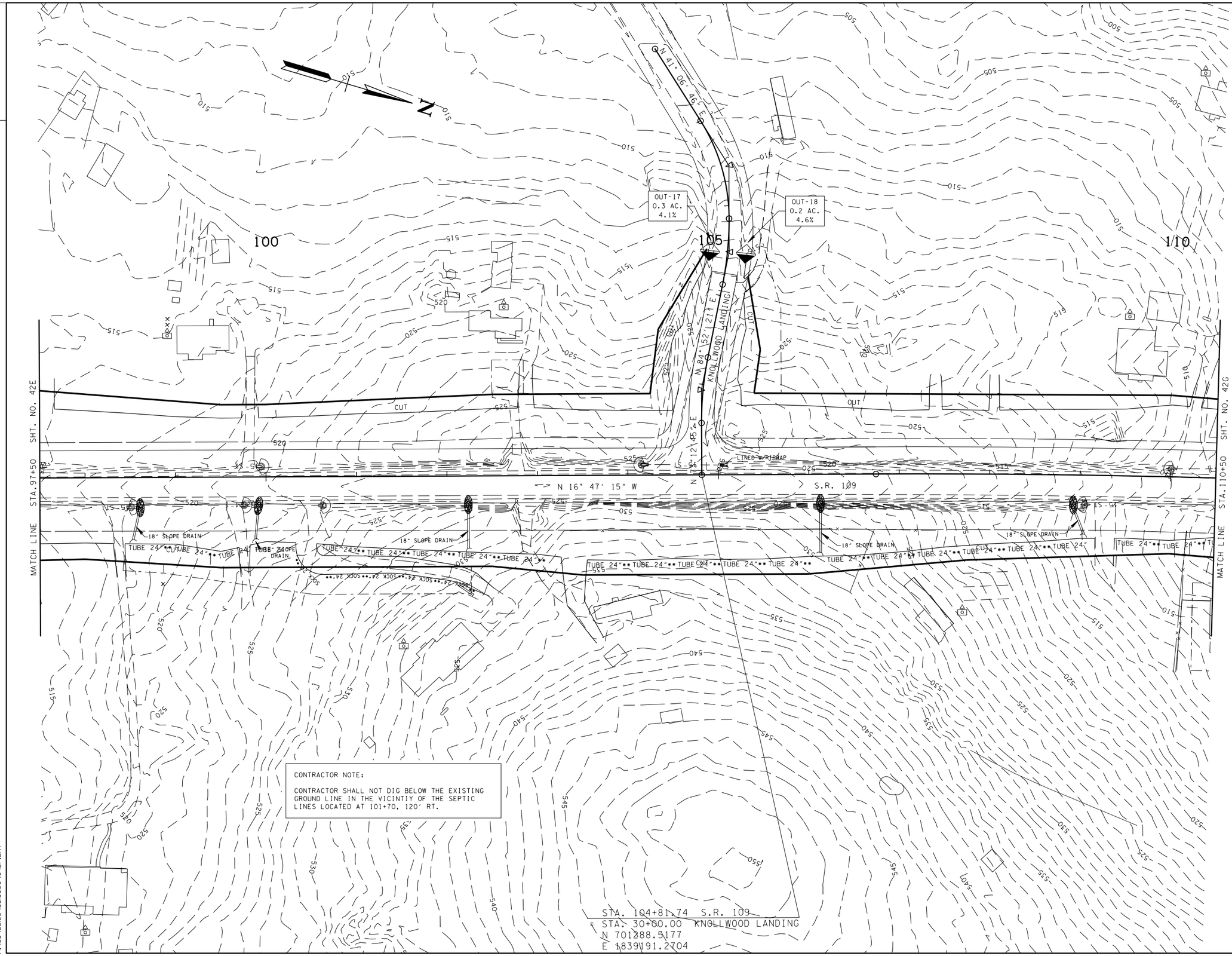
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	48
CONST.	2017	NH-109(31)	42F

REV. 2-14-17: REV. EPSC DEVICES IN THE VICINITY OF THE SEPTIC LINES LOCATED AT 101+70, 120' RT; ADDED CONTRACTOR NOTE.



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STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 97+50 TO STA. 110+50

SCALE: 1"= 50'

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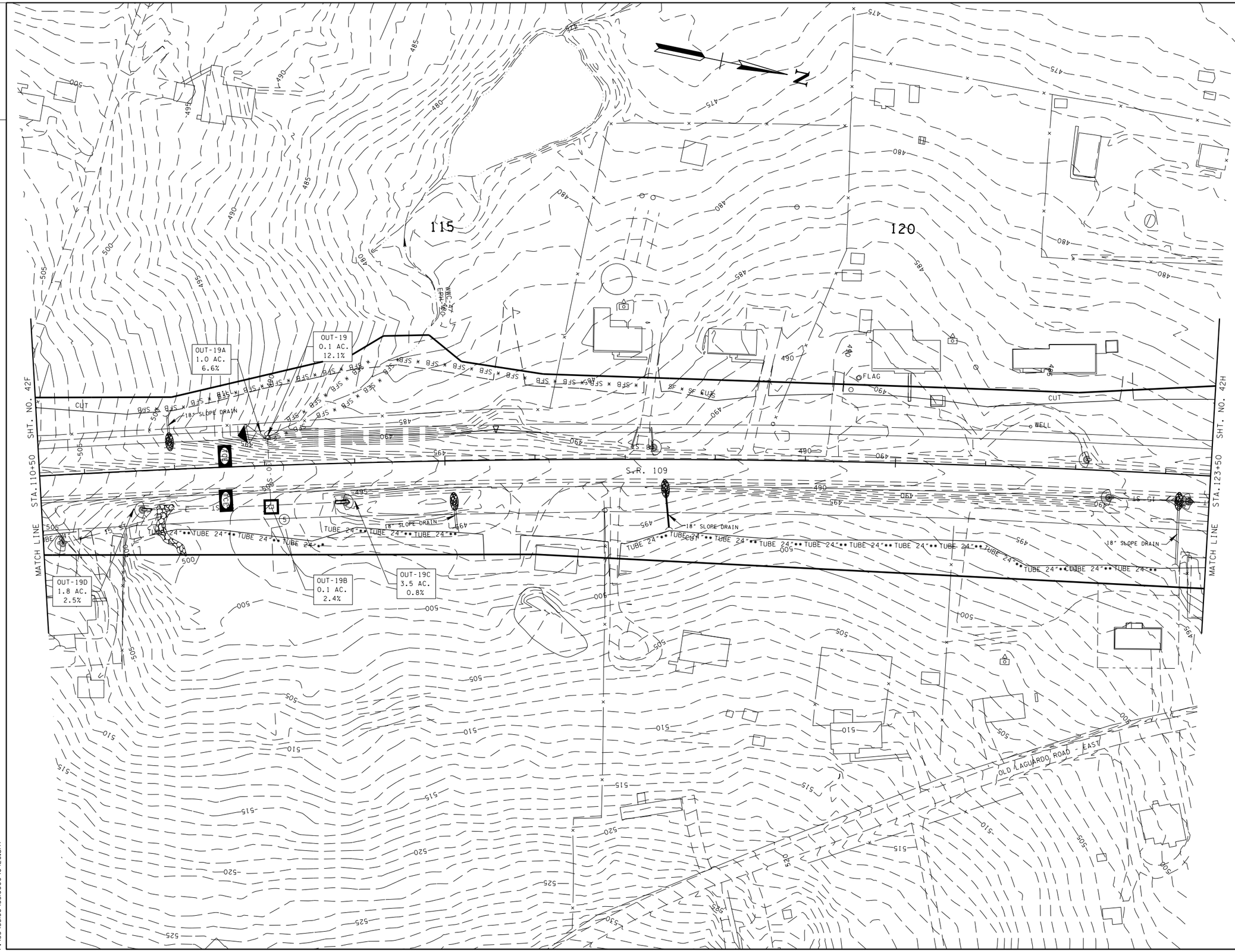
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	49
CONST.	2017	NH-109(31)	42G



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STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 110+50 TO STA. 123+50

SCALE: 1"= 50'

9/28/2017
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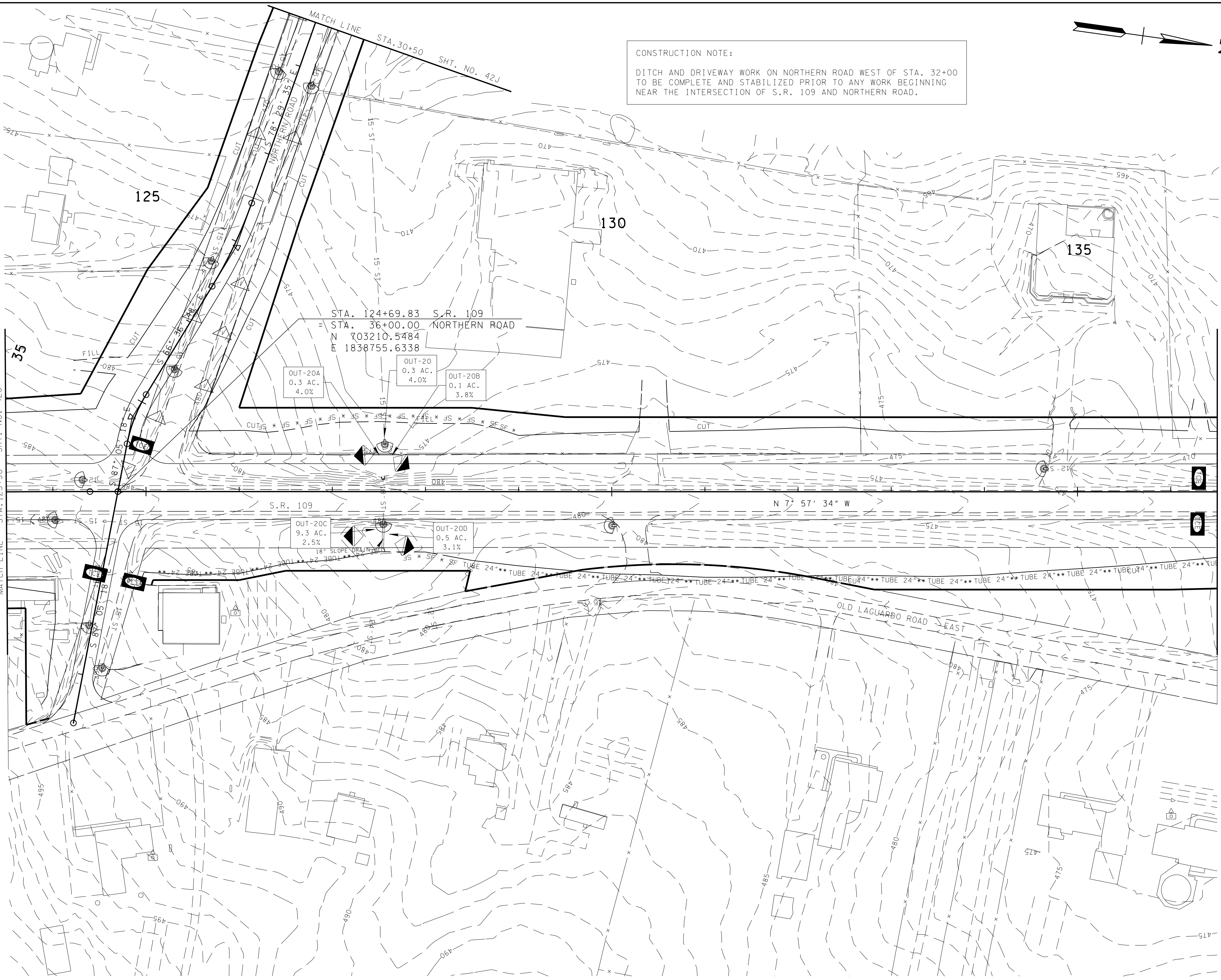
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	50
CONST.	2017	NH-109(31)	42H

CONSTRUCTION NOTE:

DITCH AND DRIVEWAY WORK ON NORTHERN ROAD WEST OF STA. 32+00 TO BE COMPLETE AND STABILIZED PRIOR TO ANY WORK BEGINNING NEAR THE INTERSECTION OF S.R. 109 AND NORTHERN ROAD.



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STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 123+50 TO STA. 136+50
SCALE: 1"= 50'

9/28/2017
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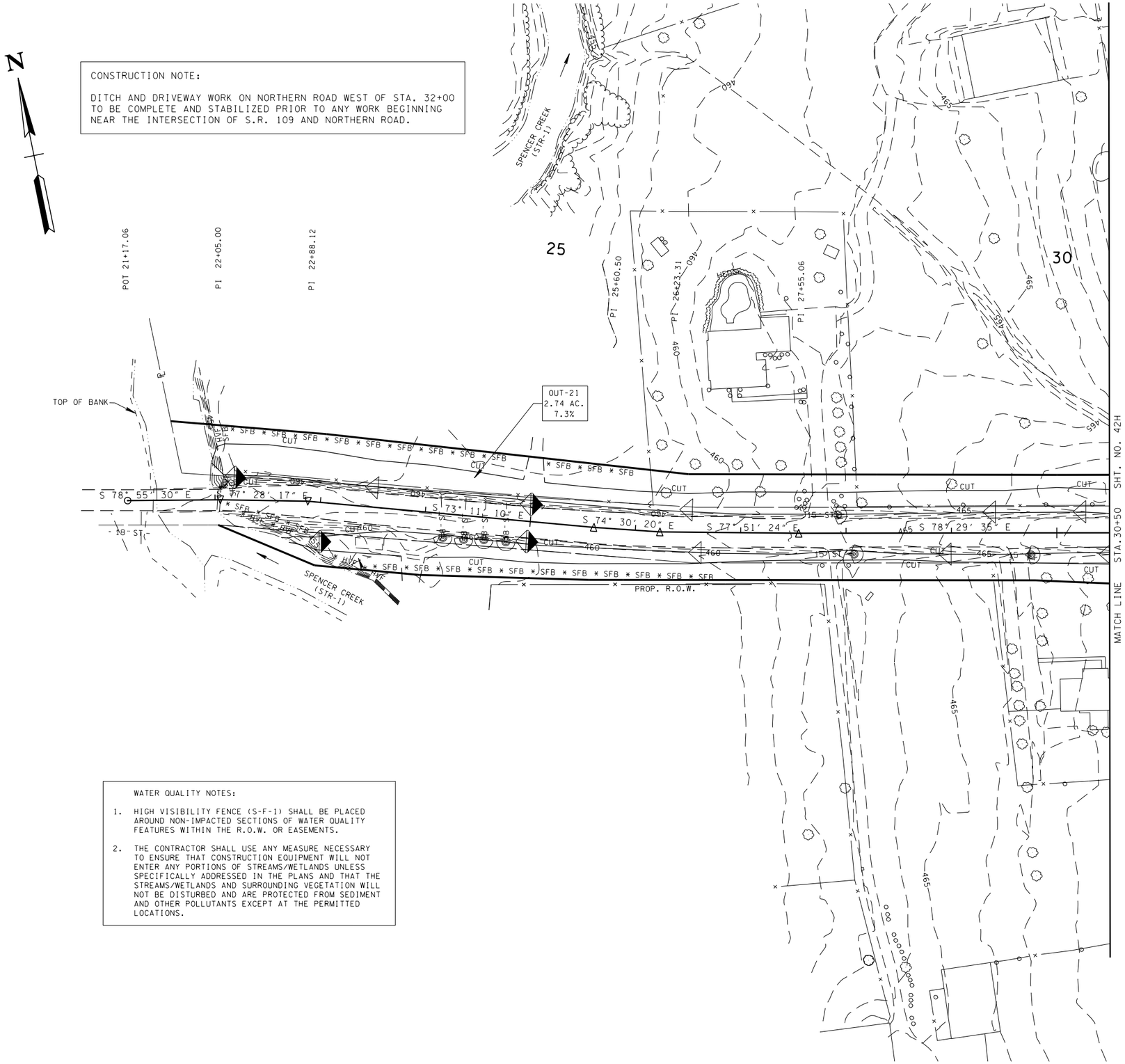
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	50A
CONST.	2017	NH-109(31)	42J

CONSTRUCTION NOTE:

DITCH AND DRIVEWAY WORK ON NORTHERN ROAD WEST OF STA. 32+00 TO BE COMPLETE AND STABILIZED PRIOR TO ANY WORK BEGINNING NEAR THE INTERSECTION OF S.R. 109 AND NORTHERN ROAD.



WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

SEALED BY

STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

B.O.P. TO STA.28+00
NORTHERN ROAD
SCALE: 1"= 50'

9/28/2017
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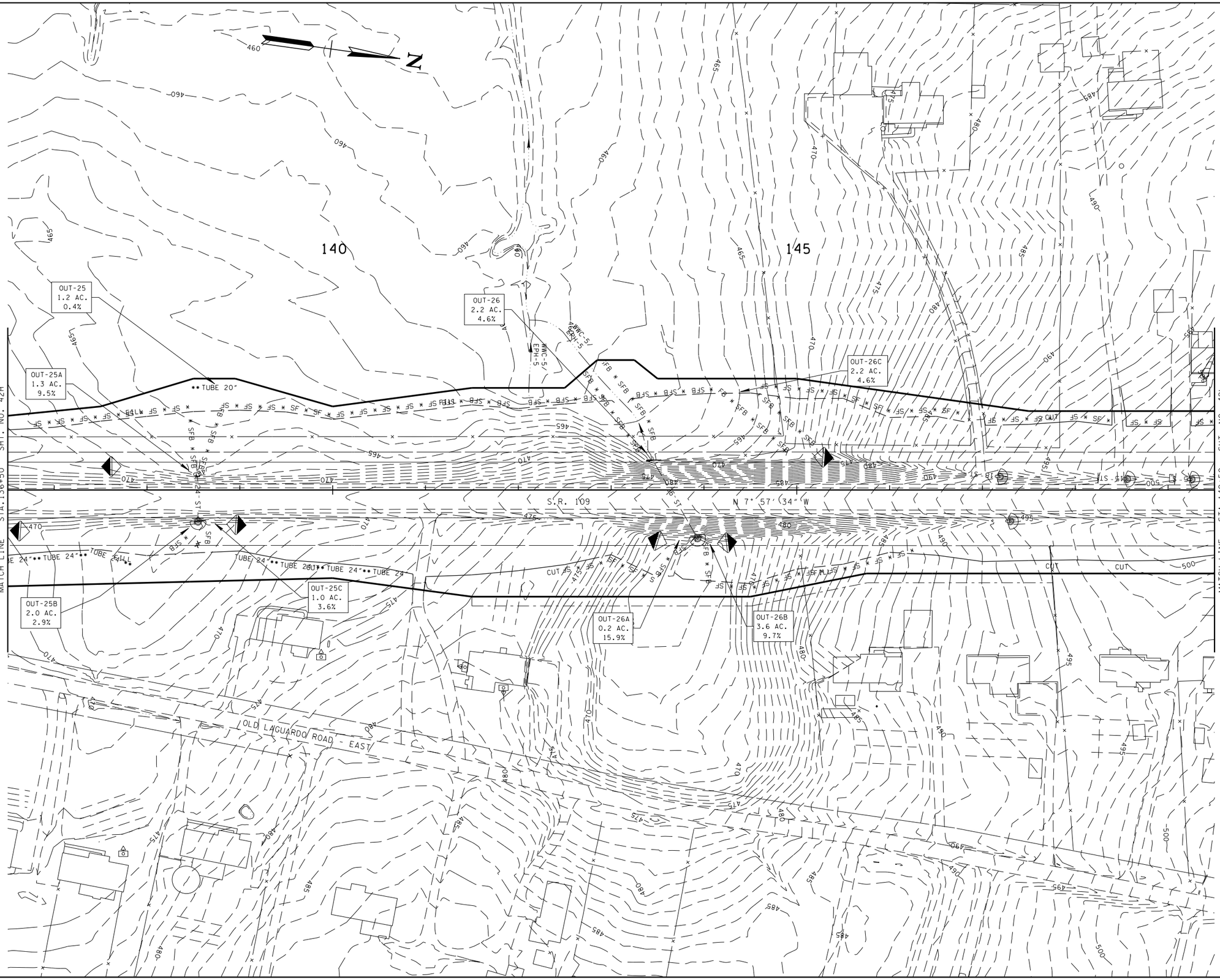
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	51
CONST.	2017	NH-109(31)	42K



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STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 136+50 TO STA. 149+50

SCALE: 1"= 50'

9/28/2017
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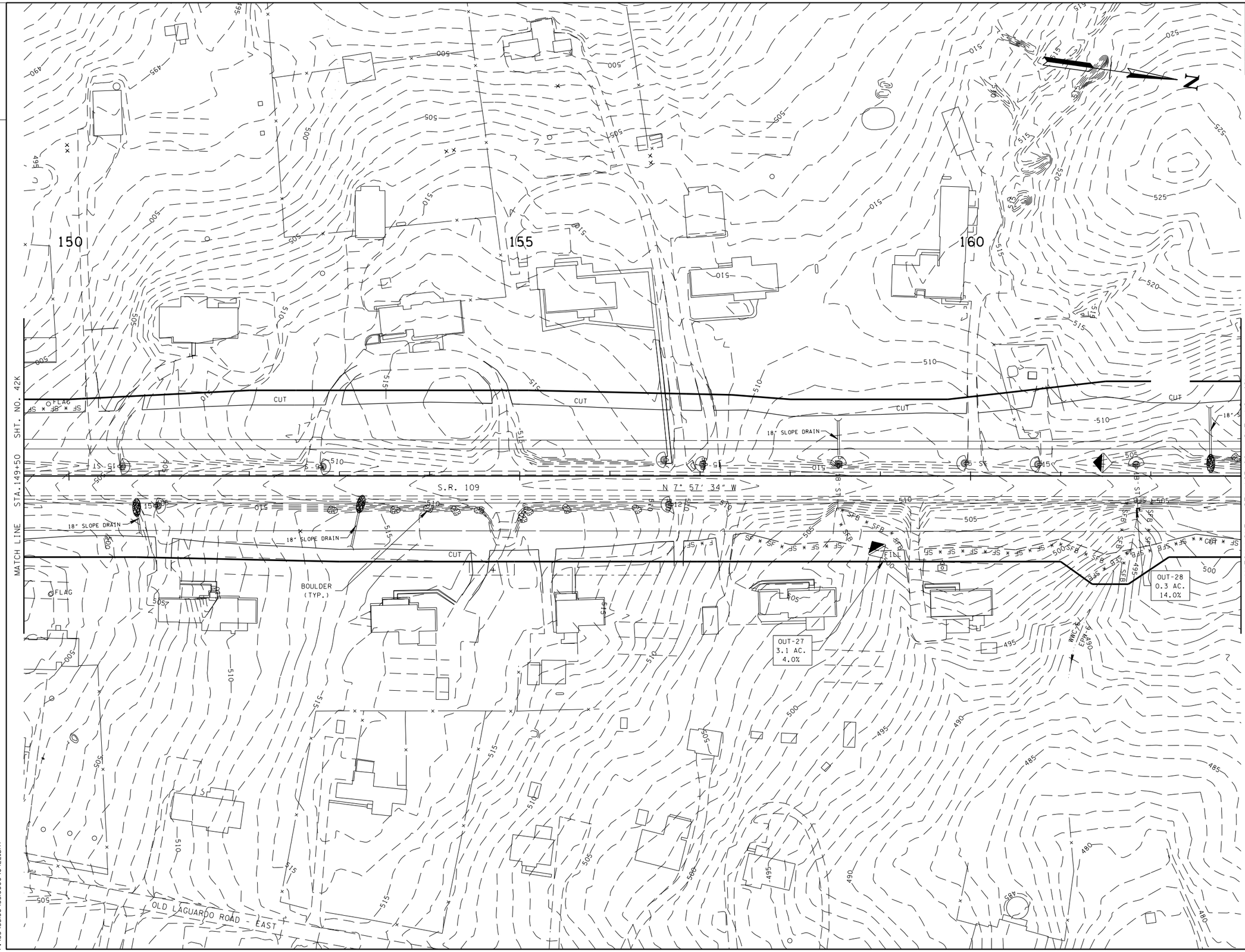
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	52
CONST.	2017	NH-109(31)	42L



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STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 149+50 TO STA. 163+00

SCALE: 1"= 50'

9/28/2017
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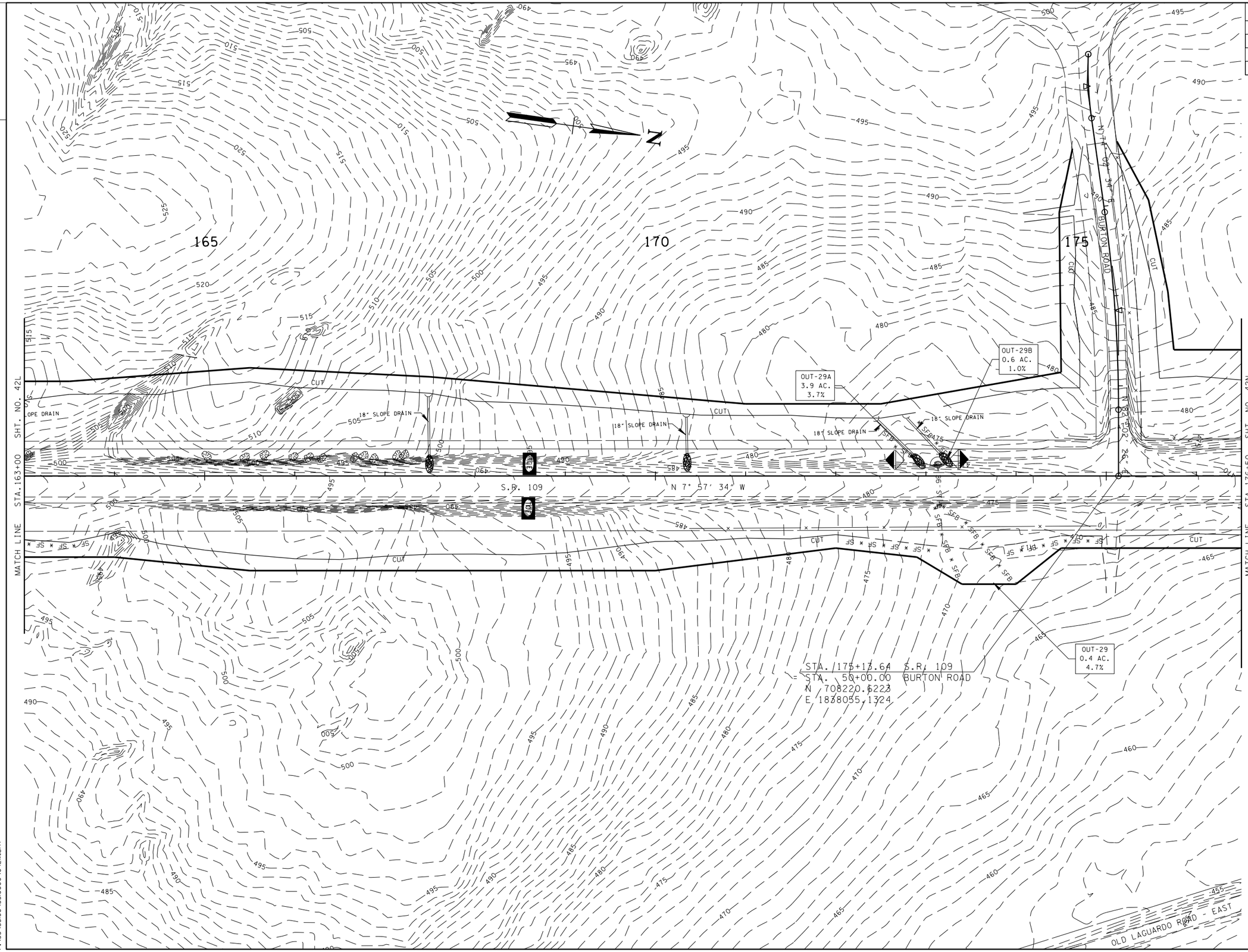
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	53
CONST.	2017	NH-109(31)	42M



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STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 163+00 TO STA. 176+50

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	54
CONST.	2017	NH-109(31)	42N

95012-3221-14
END PROJECT NO. NH-109(31) CONST.
STA. 183+00.00
N 708,999.4056
E 1,837,946.2440

STA. 180+06.93 S.R. 109
= STA. 51+00.00 DOUBLE LOG CABIN ROAD
N 708709.3958
E 1837986.7927

(ADJACENT PROJECT)
95012-2222-14
BEGIN PROJECT NO. NH-109(32) R.O.W.
STA. 184+36.86
N 709,134.9471
E 1,837,927.2928

180

185

MATCH LINE STA.176+50 SHT. NO. 42M

OUT-32
1.5 AC.
7.3%

OUT-33
0.1 AC.
5.7%

OUT-30
0.1 AC.
3.0%

OUT-31
0.1 AC.
3.0%

S.R. 109

N 7° 57' 34" W

S 84° 39' 47" E

CUT

WTL-8

DRY FORK BRANCH
(STR-5)

OLD LAGUARDO ROAD - EAST

DOUBLE LOG CABIN ROAD

SEALED BY

STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 176+50 TO STA. 188+50

SCALE: 1"= 50'

9/28/2017
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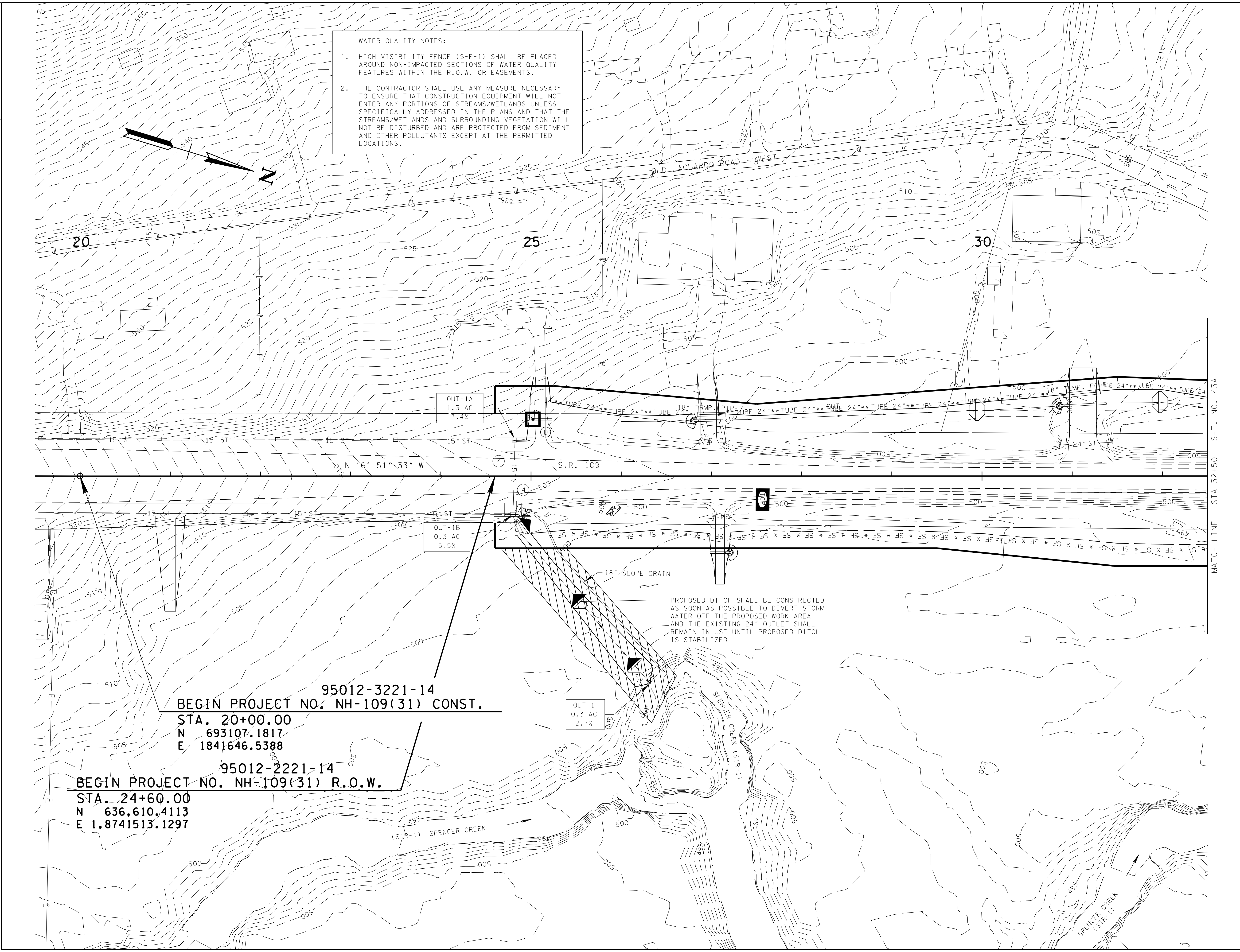
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	55
CONST.	2017	NH-109(31)	43

REV 6-23-14: CORRECTED STATE R.O.W. PROJECT NO.

WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.
2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.



PROPOSED DITCH SHALL BE CONSTRUCTED AS SOON AS POSSIBLE TO DIVERT STORM WATER OFF THE PROPOSED WORK AREA AND THE EXISTING 24" OUTLET SHALL REMAIN IN USE UNTIL PROPOSED DITCH IS STABILIZED

95012-3221-14
BEGIN PROJECT NO. NH-109(31) CONST.
STA. 20+00.00
N 693107.1817
E 1841646.5388

95012-2221-14
BEGIN PROJECT NO. NH-109(31) R.O.W.
STA. 24+60.00
N 636,610.4113
E 1,8741513.1297

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STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

B.O.P. TO STA.32+50
SCALE: 1"=50'

TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	56
CONST.	2017	NH-109(31)	43A

WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

NOTE:

SEE STANDARD DRAWING EC-STR-25 FOR TEMPORARY HAUL ROAD.

STA. 44+15.00 S.R. 109
= STA. 9+00.00 OLD LAGUARDO ROAD - EAST
N 695481.4473
E 1840946.3465

STA. 37+00.00 S.R. 109
= STA. 8+00.00 OLD LAGUARDO ROAD - WEST
N 694797.1169
E 1841153.5051

STR-3 WILL NEED TO BE RELOCATED PRIOR TO PLACING FILL FOR THE NEW ROADWAY. RELOCATED STR-3 WILL BE CONSTRUCTED AND STABILIZED PRIOR TO DISTURBING THE EXISTING STR-3 CHANNEL. WHERE CONSTRUCTION OF THENEW CHANNEL WILL EFFECTS THE EXISTING, THE EXISTING CHANNEL WILL BE PLUGGED WITH SAND BAGS AND THE STREAM WILL BE PUMPED AROUND THE EFFECTED AREA. ONCE CONSTRUCTION OF THE NEW STREAM CHANNEL IS COMPLETE, THE NEW CHANNEL WILL BE TIED INTO THE EXISTING STREAM CHANNEL. STR-3 SHALL BE ALLOWED TO FLOW THROUGH BOTH CHANNELS FOR 72 HOUR BEFORE FILLING THE EXISTING CHANNEL.

OUT-3
8.8 AC
1.5%

OUT-2
9.6 AC.
5.75 %

OUT-4
6.11 AC
2.4 %

PROPOSED 6-48" CMP STREAM CROSSING TO BE USED FOR CONSTRUCTION OF PROPOSED BRIDGE.

USE SANDBAG PLUG AND PUMP WATER AROUND CHANNEL CHANGE

PND-1

PND-2

SPENCER CREEK (STR-1)

RELOCATED STR-3

GRAVEL CREEK BOTTOM

BEDROCK CREEK BOTTOM

TOP OF BANK

BEGIN BRIDGE 39+04.00

END BRIDGE 40+44.00

PROP. 2-SPAN CONC. BIRDER BRIDGE

EXIST. BRIDGE (TO BE REMOVED)

PROP. 24" PIPE

PROP. 2'-0" TYPE I SFB

PROP. 2'-0" TYPE II SFB

PROP. 2'-0" TYPE III SFB

PROP. 2'-0" TYPE IV SFB

PROP. 2'-0" TYPE V SFB

PROP. 2'-0" TYPE VI SFB

PROP. 2'-0" TYPE VII SFB

PROP. 2'-0" TYPE VIII SFB

PROP. 2'-0" TYPE IX SFB

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	57
CONST.	2017	NH-109(31)	43B

WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.
2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

STA. 51+17.42 S.R. 109
= STA. 15+00.00 ROCK CASTLE DR.
N 696156.5229
E 1840752.2539

(STR-1) SPENCER CREEK

ROCK CASTLE DRIVE

PROP. 96 L.F. OF 18" PIPE

PROP. 127 L.F. OF 24" TEMP. PIPE

OUT-5
6.4 AC.
5.5%

WTL-1
WTL-2
WTL-3

PND-3

N 73° 14' 26" E

N 16° 02' 26" W

S.R. 109

N 10° 55' 25" E

OLD LAGUARDO ROAD - EAST

MATCH LINE STA. 45+50 SHT. NO. 43A

MATCH LINE STA. 58+50 SHT. NO. 43C

MATCH LINE STA. 12+50 SHT. NO. 43A

TUBE 24"

FILL

CUT

FLAG

CEM

WE

50

55

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 48+50 TO STA. 58+50

SCALE: 1"= 50'

9/28/2017
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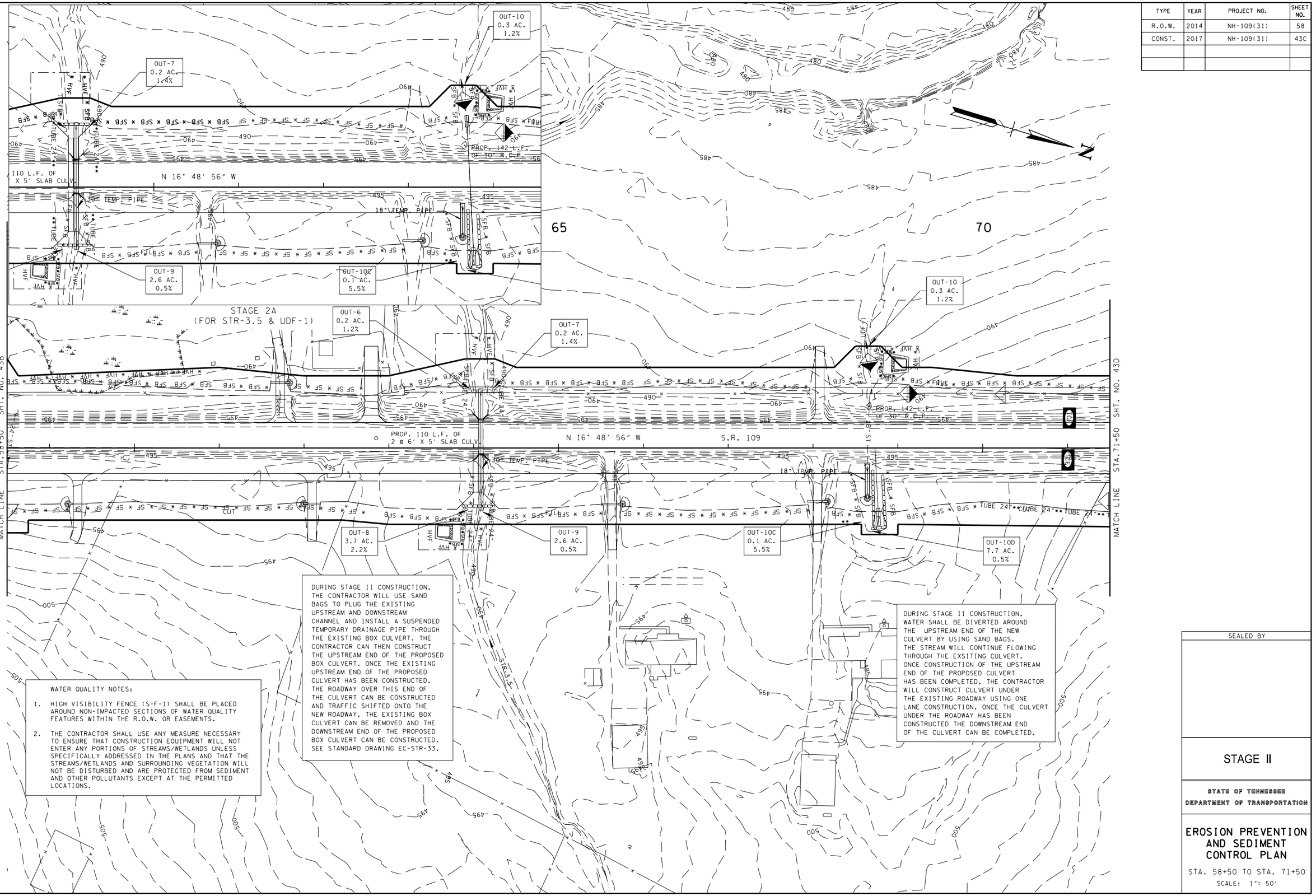
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	58
CONST.	2017	NH-109(31)	43C



WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.
2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

DURING STAGE II CONSTRUCTION, THE CONTRACTOR WILL USE SAND BAGS TO PLUG THE EXISTING UPSTREAM AND DOWNSTREAM CHANNEL AND INSTALL A SUSPENDED TEMPORARY DRAINAGE PIPE THROUGH THE EXISTING BOX CULVERT. THE CONTRACTOR CAN THEN CONSTRUCT THE UPSTREAM END OF THE PROPOSED BOX CULVERT. ONCE THE EXISTING UPSTREAM END OF THE PROPOSED CULVERT HAS BEEN CONSTRUCTED, THE ROADWAY OVER THIS END OF THE CULVERT CAN BE CONSTRUCTED AND TRAFFIC SHIFTED ONTO THE NEW ROADWAY. THE EXISTING BOX CULVERT CAN BE REMOVED AND THE DOWNSTREAM END OF THE PROPOSED BOX CULVERT CAN BE CONSTRUCTED. SEE STANDARD DRAWING EC-STR-33.

DURING STAGE II CONSTRUCTION, WATER SHALL BE DIVERTED AROUND THE UPSTREAM END OF THE NEW CULVERT BY USING SAND BAGS. THE STREAM WILL CONTINUE FLOWING THROUGH THE EXSITING CULVERT. ONCE CONSTRUCTION OF THE UPSTREAM END OF THE PROPOSED CULVERT HAS BEEN COMPLETED, THE CONTRACTOR WILL CONSTRUCT CULVERT UNDER THE EXISTING ROADWAY USING ONE LANE CONSTRUCTION. ONCE THE CULVERT UNDER THE ROADWAY HAS BEEN CONSTRUCTED THE DOWNSTREAM END OF THE CULVERT CAN BE COMPLETED.

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 58+50 TO STA. 71+50

SCALE: 1"= 50'

9/28/2017
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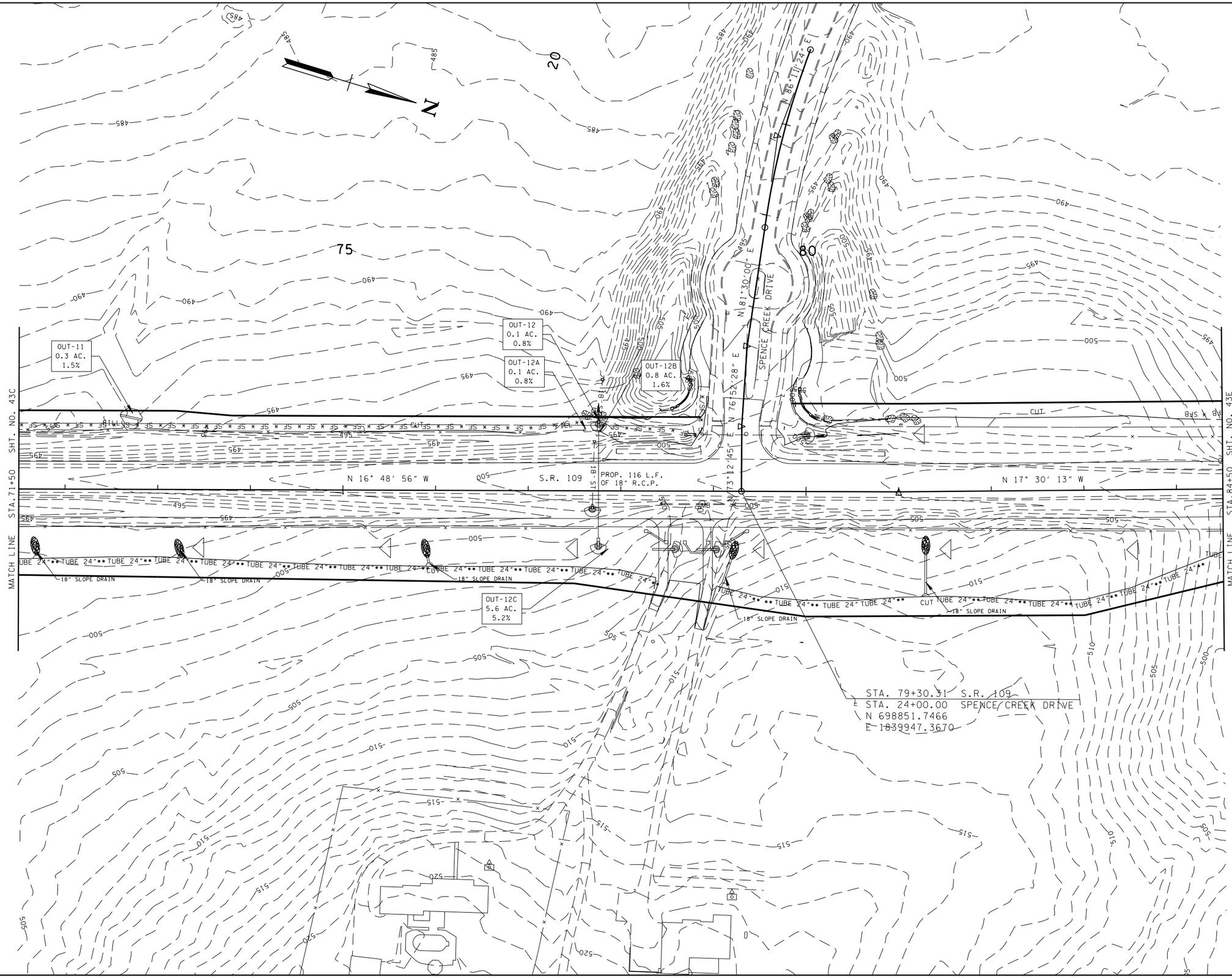
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	59
CONST.	2017	NH-109(31)	43D



SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 71+50 TO STA. 84+50

SCALE: 1"= 50'

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

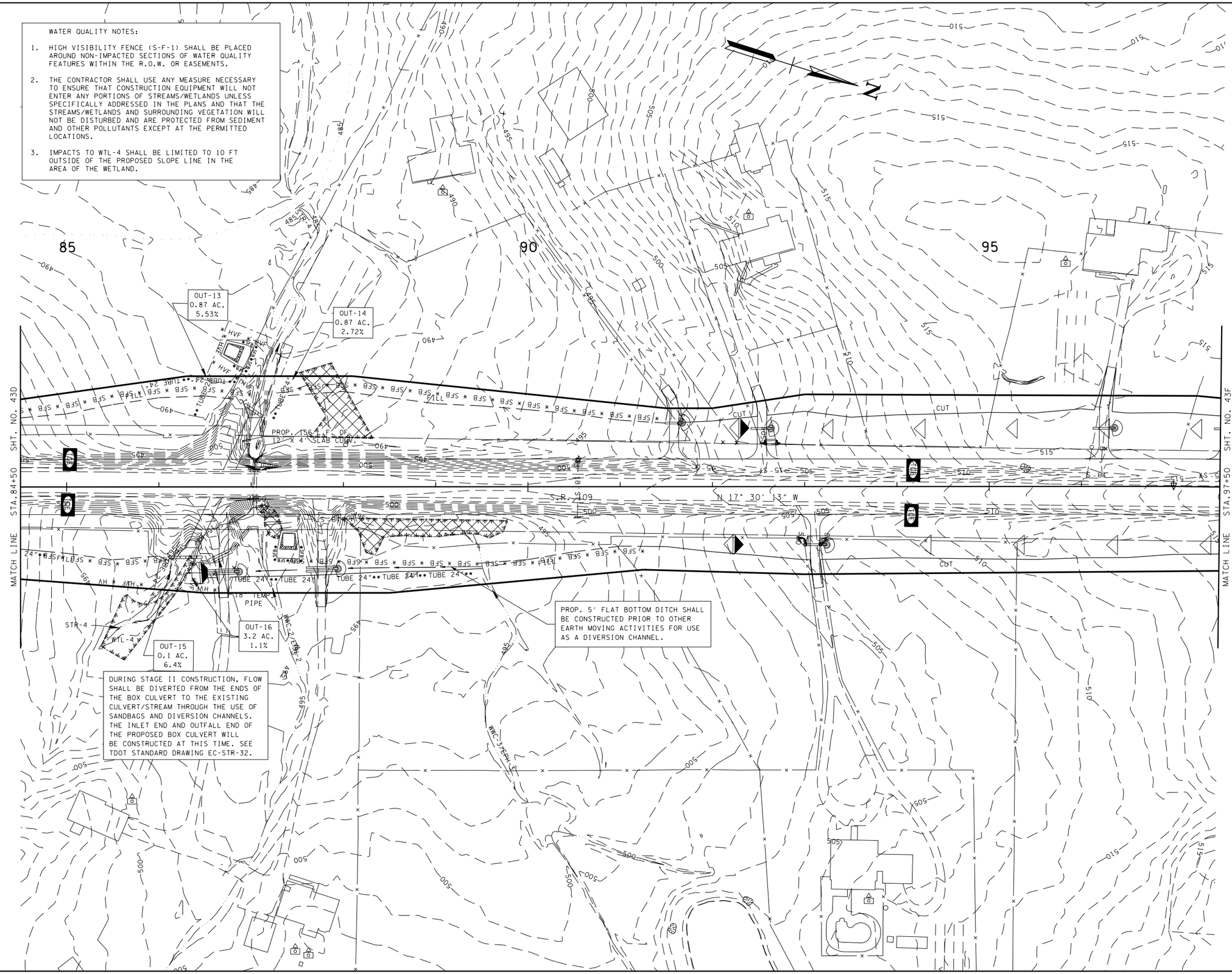
WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

3. IMPACTS TO WTL-4 SHALL BE LIMITED TO 10 FT OUTSIDE OF THE PROPOSED SLOPE LINE IN THE AREA OF THE WETLAND.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	60
CONST.	2017	NH-109(31)	43E



SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 84+50 TO STA. 97+50

SCALE: 1"= 50'

9/28/2017
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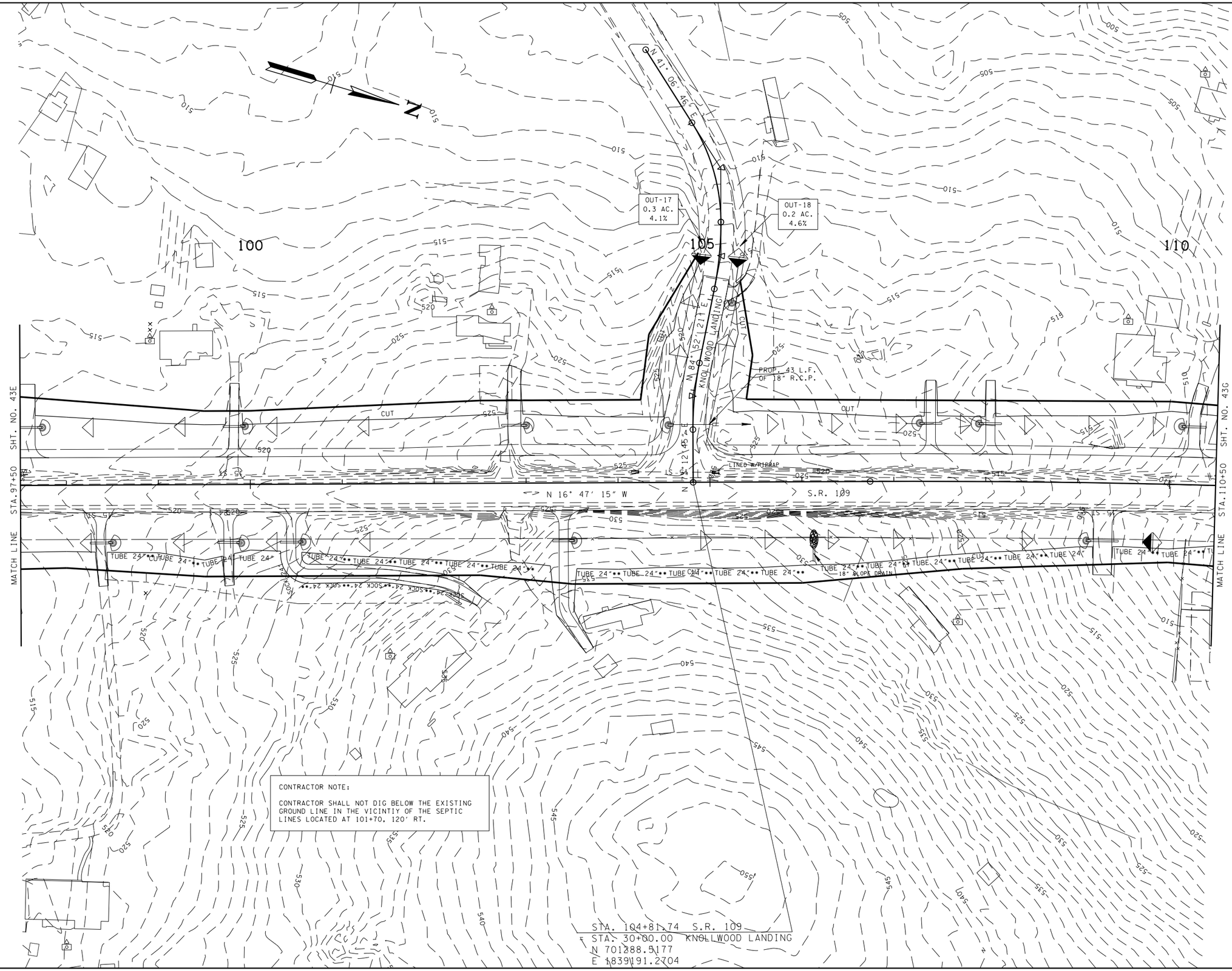
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	61
CONST.	2017	NH-109(31)	43F

REV. 2-14-17: REV. EPSC DEVICES IN THE VICINITY OF THE SEPTIC LINES LOCATED AT 101+70, 120' RT; ADDED CONTRACTOR NOTE.



SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 97+50 TO STA. 110+50

SCALE: 1"= 50'

9/28/2017
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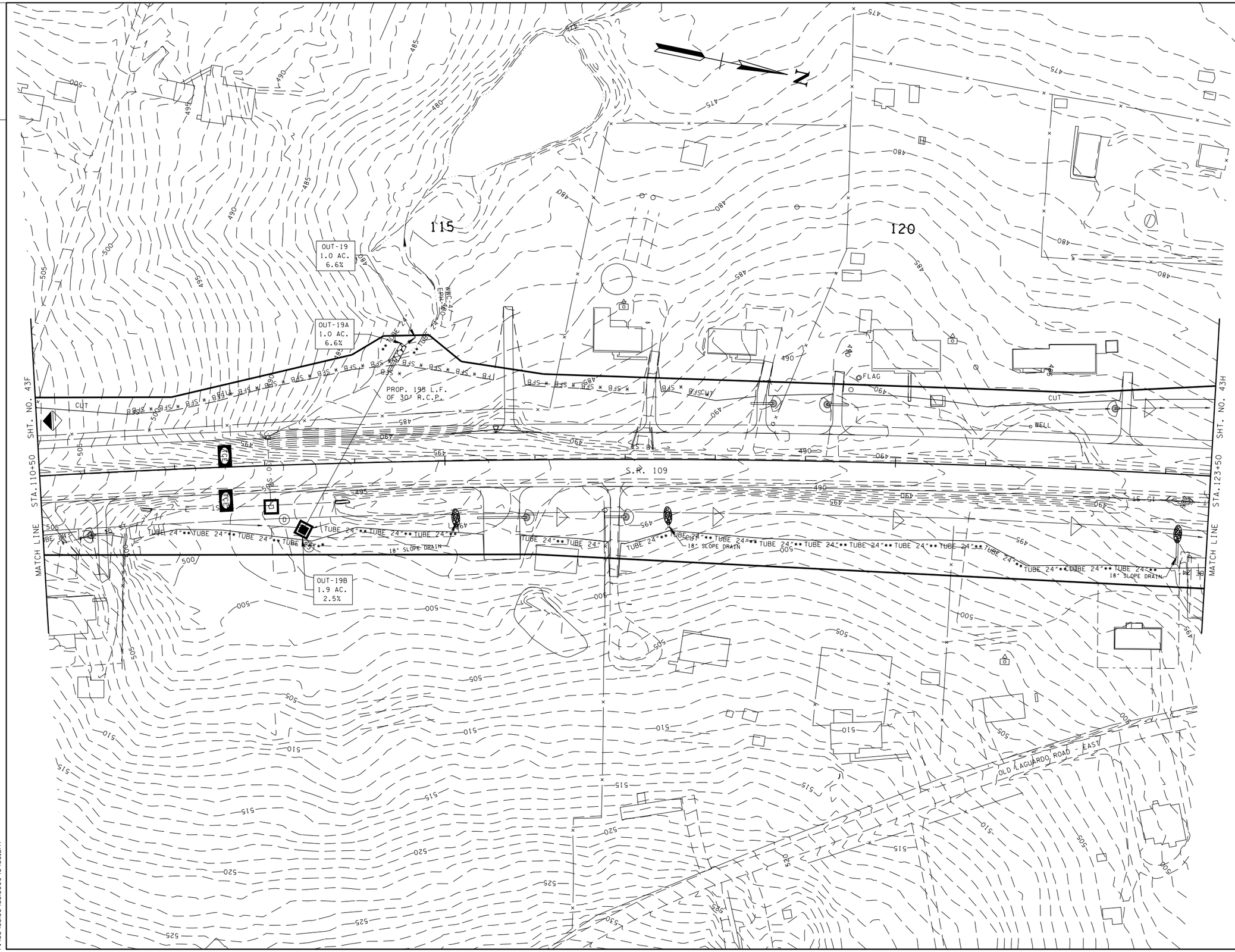
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	62
CONST.	2017	NH-109(31)	43G



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STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 110+50 TO STA. 123+50

SCALE: 1"= 50'

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	63
CONST.	2017	NH-109(31)	43H

CONSTRUCTION NOTE:

DITCH AND DRIVEWAY WORK ON NORTHERN ROAD WEST OF STA. 32+00 TO BE COMPLETE AND STABILIZED PRIOR TO ANY WORK BEGINNING NEAR THE INTERSECTION OF S.R. 109 AND NORTHERN ROAD.

N

MATCH LINE STA. 30+50 SHT. NO. 43J

NORTHERN ROAD

125 130 135

STA. 124+69.83 S.R. 109
= STA. 36+00.00 NORTHERN ROAD
N 703210.5484
E 1838755.6338

OUT-20
0.4 AC.
3.8%

PROP. 116 L.F. 30" R.C.P.

PROP. 130 L.F. 36" R.C.P.

TUBE 24"

S.R. 109

N 7° 57' 34" W

OLD LAGUARDO ROAD EAST

STA.123+50 SHT. NO. 43G

STA.136+50 SHT. NO. 43K

MATCH LINE

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 123+50 TO STA. 136+50

SCALE: 1"= 50'

9/28/2017
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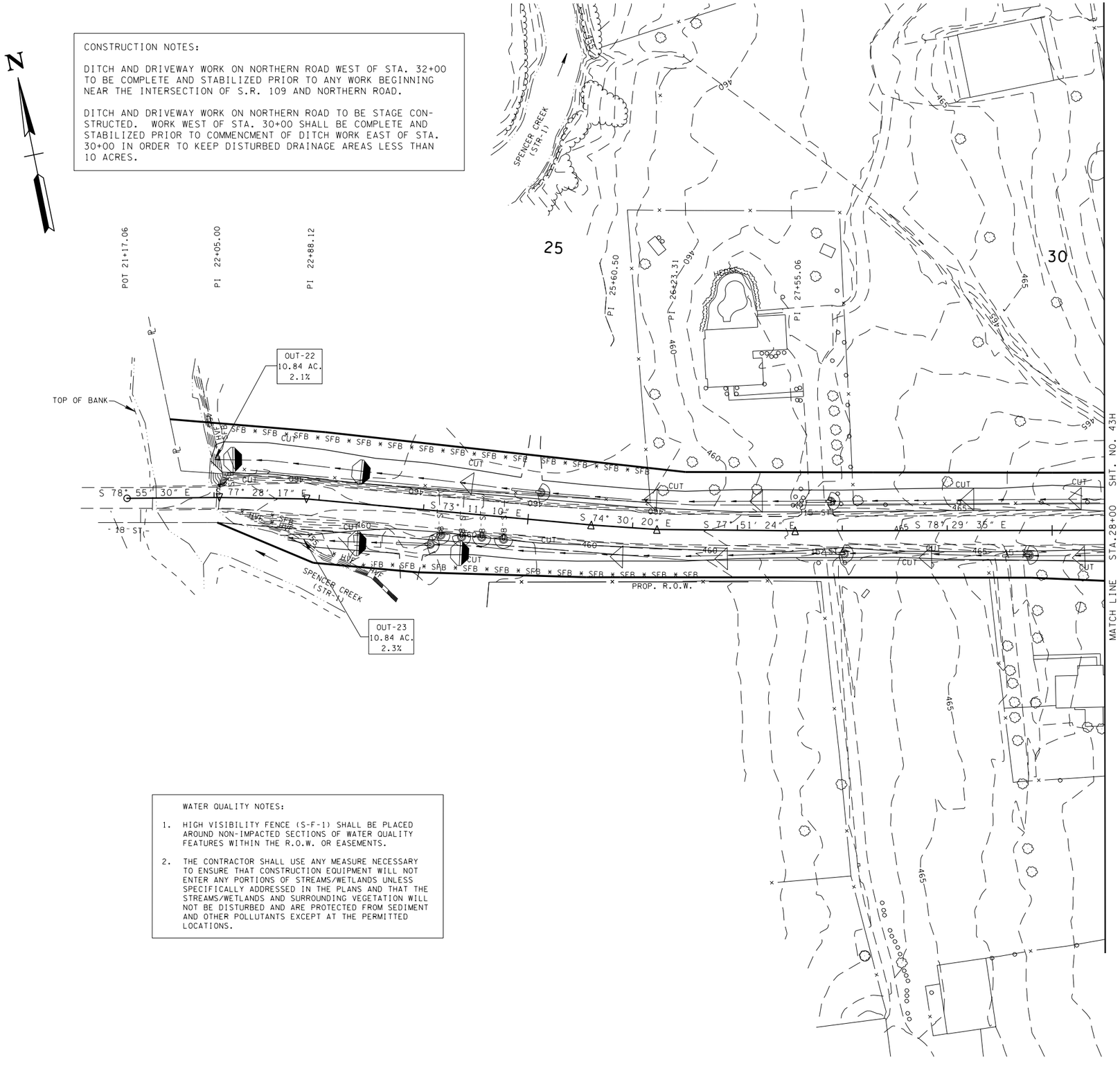
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	63A
CONST.	2017	NH-109(31)	43J

CONSTRUCTION NOTES:

DITCH AND DRIVEWAY WORK ON NORTHERN ROAD WEST OF STA. 32+00 TO BE COMPLETE AND STABILIZED PRIOR TO ANY WORK BEGINNING NEAR THE INTERSECTION OF S.R. 109 AND NORTHERN ROAD.

DITCH AND DRIVEWAY WORK ON NORTHERN ROAD TO BE STAGE CONSTRUCTED. WORK WEST OF STA. 30+00 SHALL BE COMPLETE AND STABILIZED PRIOR TO COMMENCMENT OF DITCH WORK EAST OF STA. 30+00 IN ORDER TO KEEP DISTURBED DRAINAGE AREAS LESS THAN 10 ACRES.



WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

B.O.P. TO STA.28+00
NORTHERN ROAD
SCALE: 1"= 50'

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	64
CONST.	2017	NH-109(31)	43K

OUT-25
1.2 AC.
0.4%

OUT-26
0.7 AC.
3.6%

OUT-26B
2.1 AC.
2.6%

PROP. 180 L.F.
OF 42" R.C.P.

PROP. 142 L.F.
OF 42" R.C.P.

S.R. 109

OUT-25B
2.0 AC.
2.9%

OUT-25C
1.0 AC.
3.6%

STAGE 2A
(FOR WWC-5/EPH-5)

OUT-25
1.7 AC.
1.6%

OUT-26
1.0 AC.
3.6%

OUT-26C
2.1 AC.
2.6%

145

SHT. NO. 43H

STA.136+50

MATCH LINE

SHT. NO. 43L

STA.149+50

MATCH LINE

PROP. 142 L.F.
OF 42" R.C.P.

S.R. 109

N 7° 57' 34" W

OUT-25B
2.0 AC.
2.9%

OUT-25C
1.0 AC.
3.6%

OUT-26A
3.3 AC.
4.2%

DURING STAGE II CONSTRUCTION, THE LOWER ENDS OF CULVERTS SHALL BE CONSTRUCTED. FLOW SHALL BE MAINTAINED IN THE EXIST. CULVERTS WITH SANDBAGS.

OLD LAGUARDO ROAD - EAST

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 136+50 TO STA. 149+50

SCALE: 1"= 50'

9/28/2017
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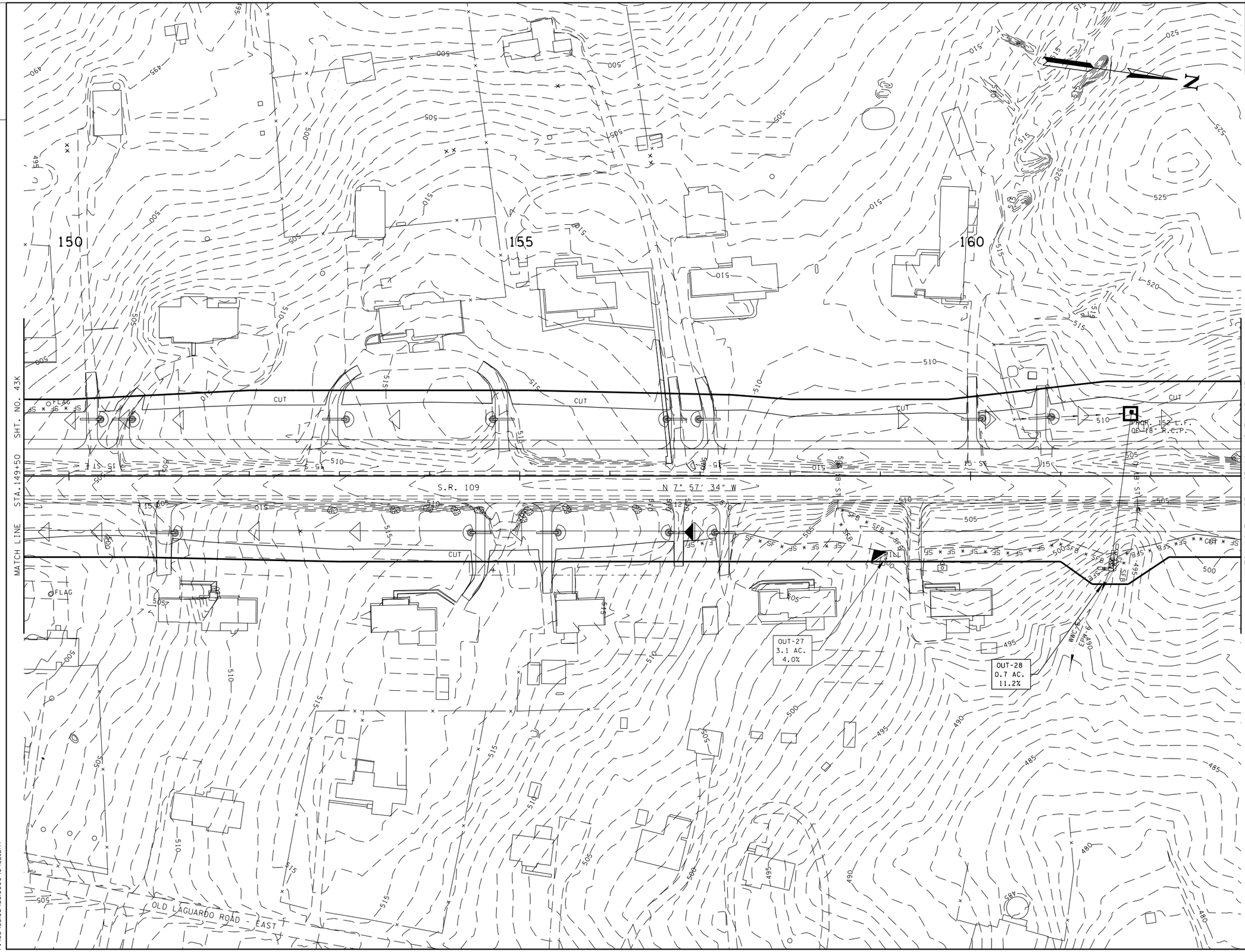
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	65
CONST.	2017	NH-109(31)	43L



SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 149+50 TO STA. 163+00

SCALE: 1"= 50'

9/28/2017
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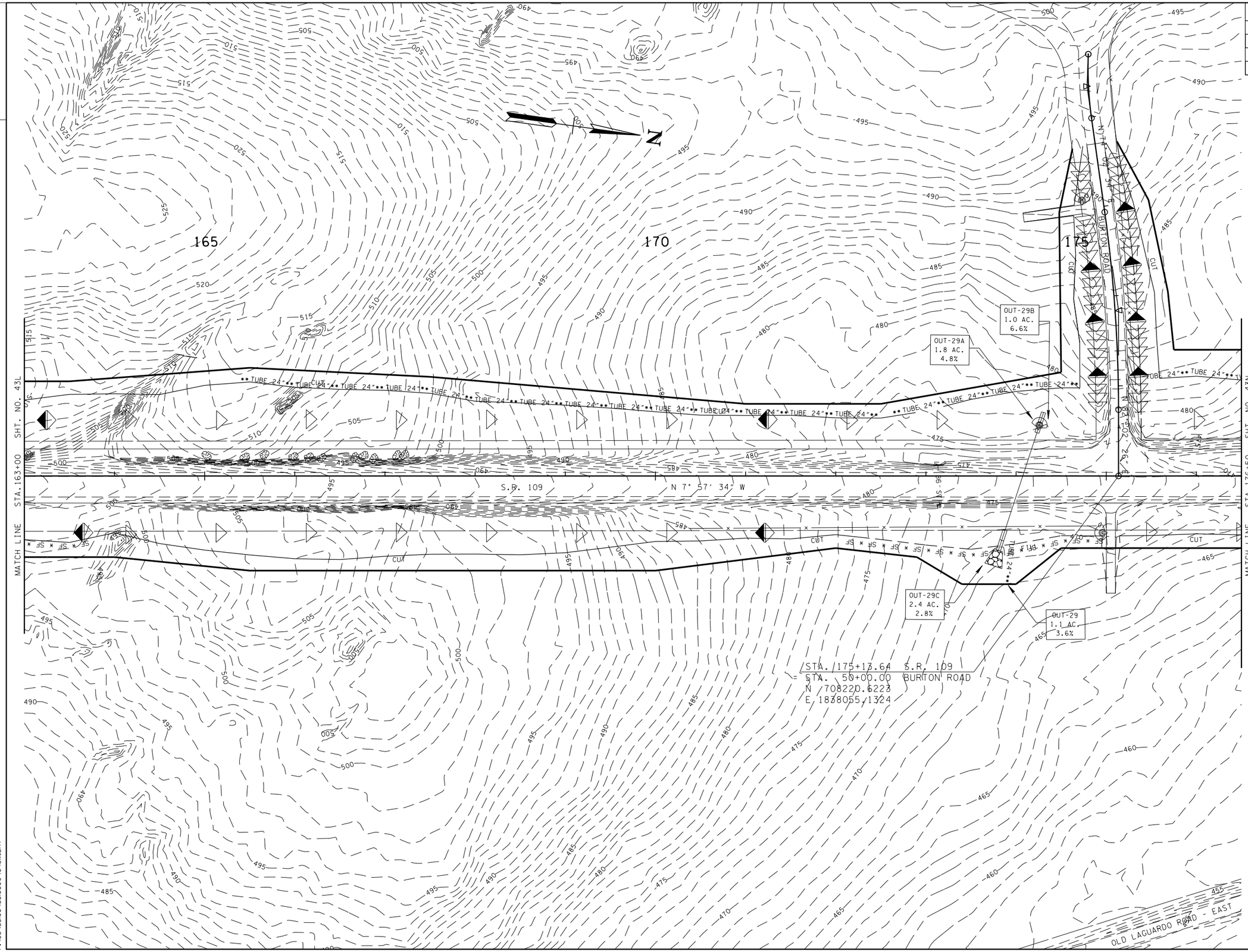
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	66
CONST.	2017	NH-109(31)	43M



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STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 163+00 TO STA. 176+50

SCALE: 1"= 50'

9/28/2017
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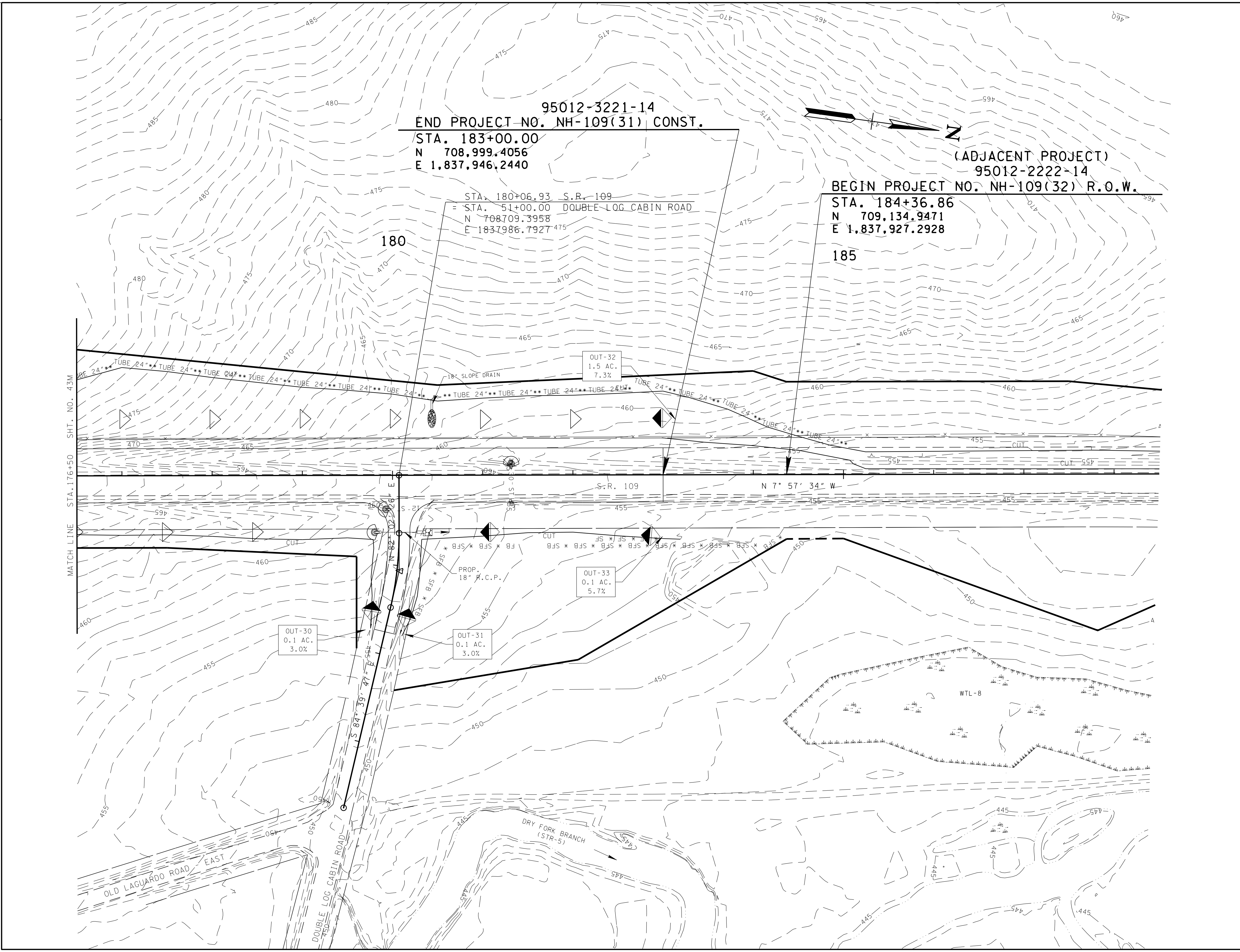
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	67
CONST.	2017	NH-109(31)	43N



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STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION
AND SEDIMENT
CONTROL PLAN

STA. 176+50 TO STA. 188+50
SCALE: 1"= 50'

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

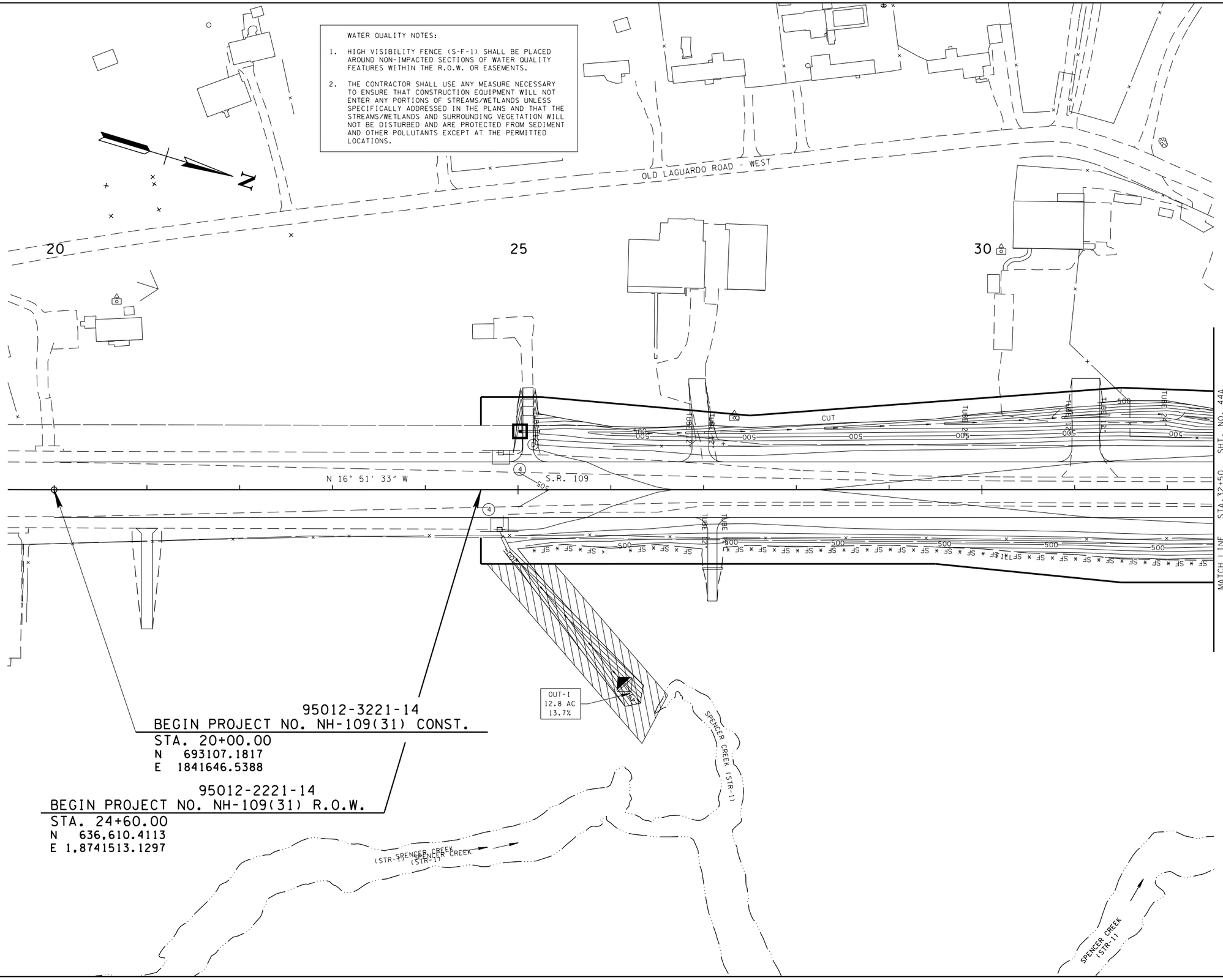
WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	68
CONST.	2017	NHE-109(31)	44

REV 6-23-14: CORRECTED STATE R.O.W. PROJECT NO.



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STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

B.O.P. TO STA.32+50

SCALE: 1"=50'

9/28/2017
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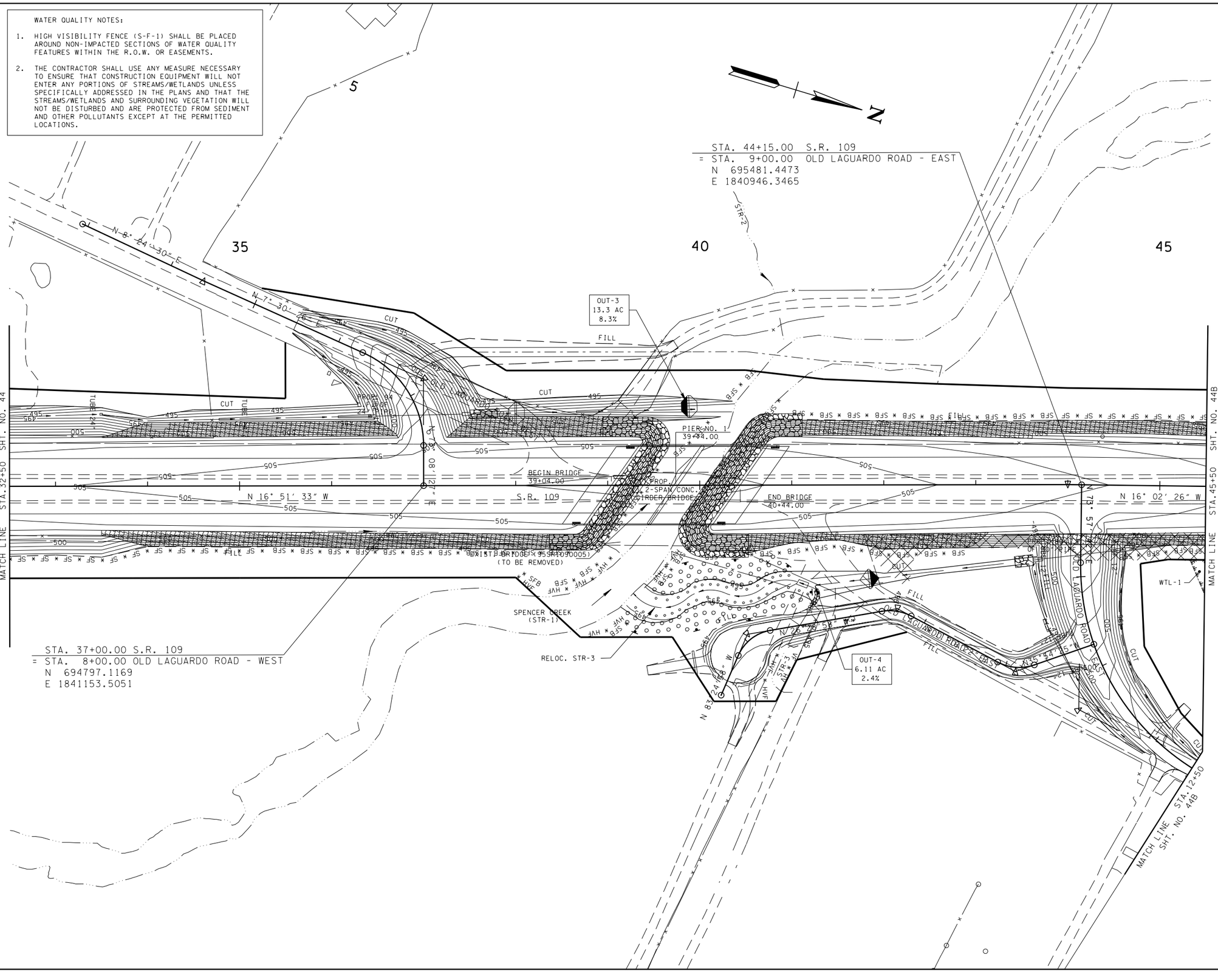
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	69
CONST.	2017	NHE-109(31)	44A



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STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 32+50 TO STA. 45+50

SCALE: 1"= 50'

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	70
CONST.	2017	NHE-109(31)	44B

WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

SPENCER CREEK (STR-1)

N

STA. 51+17.42 S.R. 109
= STA. 15+00.00 ROCK CASTLE DR.
N 696156.5229
E 1840752.2539

ROCK CASTLE DRIVE

50

55

WTL-2

WTL-3

PROP. 96 L.F. OF 18" PIPE

N 13° 14' 26" E

CUT 5%
4.7 AC.
6.8%

MATCH LINE STA. 45+50 SHT. NO. 44A

MATCH LINE STA. 58+50 SHT. NO. 44C

N 16° 02' 26" W

S.R. 109

PROP. 127 L.F. OF 24" PIPE

MB

CUT

WTL-1

PND-3

FLAG

CEM

MATCH LINE STA. 12+50 SHT. NO. 44A

N 10° 55' 23" E

OLD LAGUARDO ROAD - EAST

9/28/2017
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STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

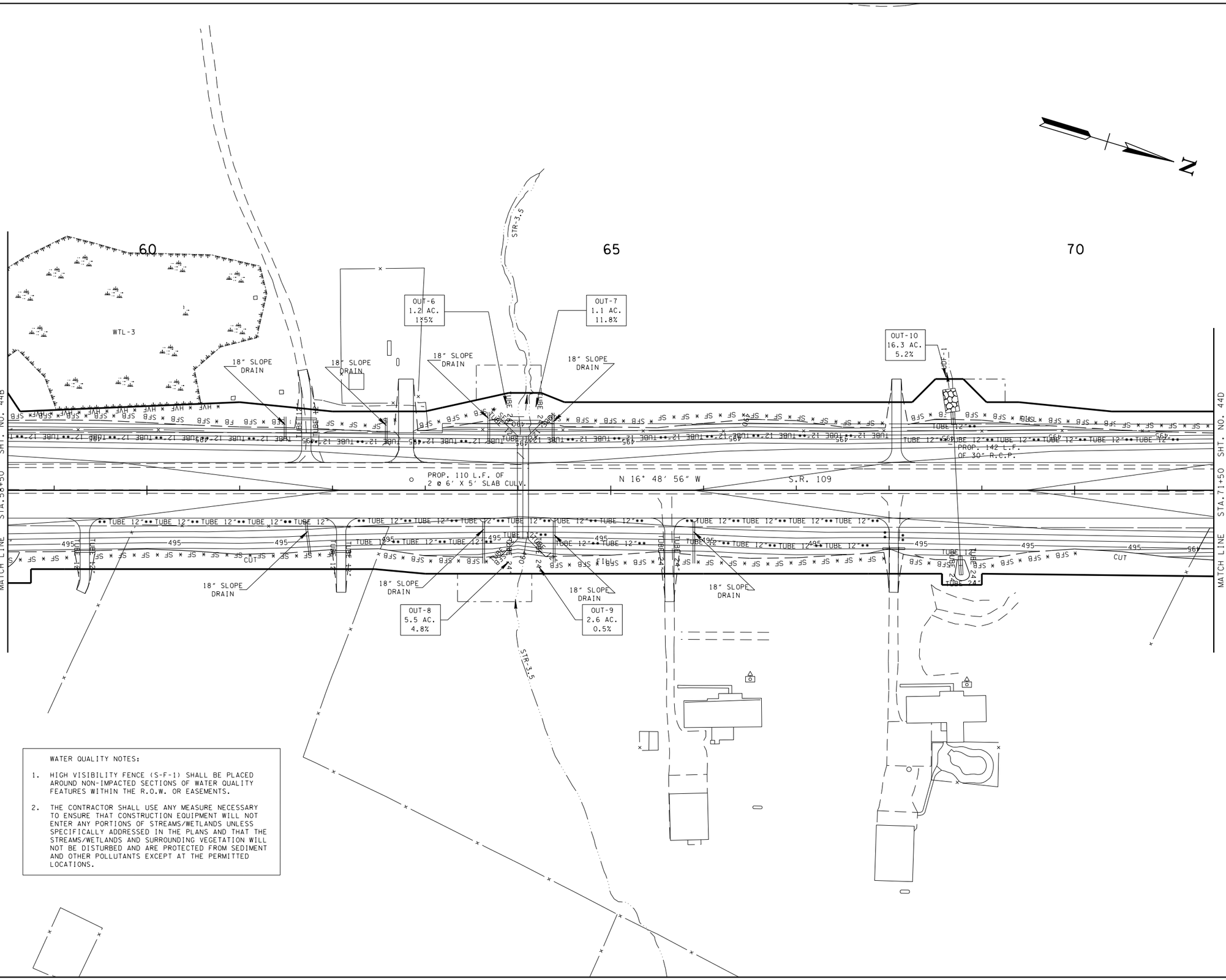
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 48+50 TO STA. 58+50

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	71
CONST.	2017	NHE-109(31)	44C



WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 58+50 TO STA. 71+50

SCALE: 1"= 50'

9/28/2017
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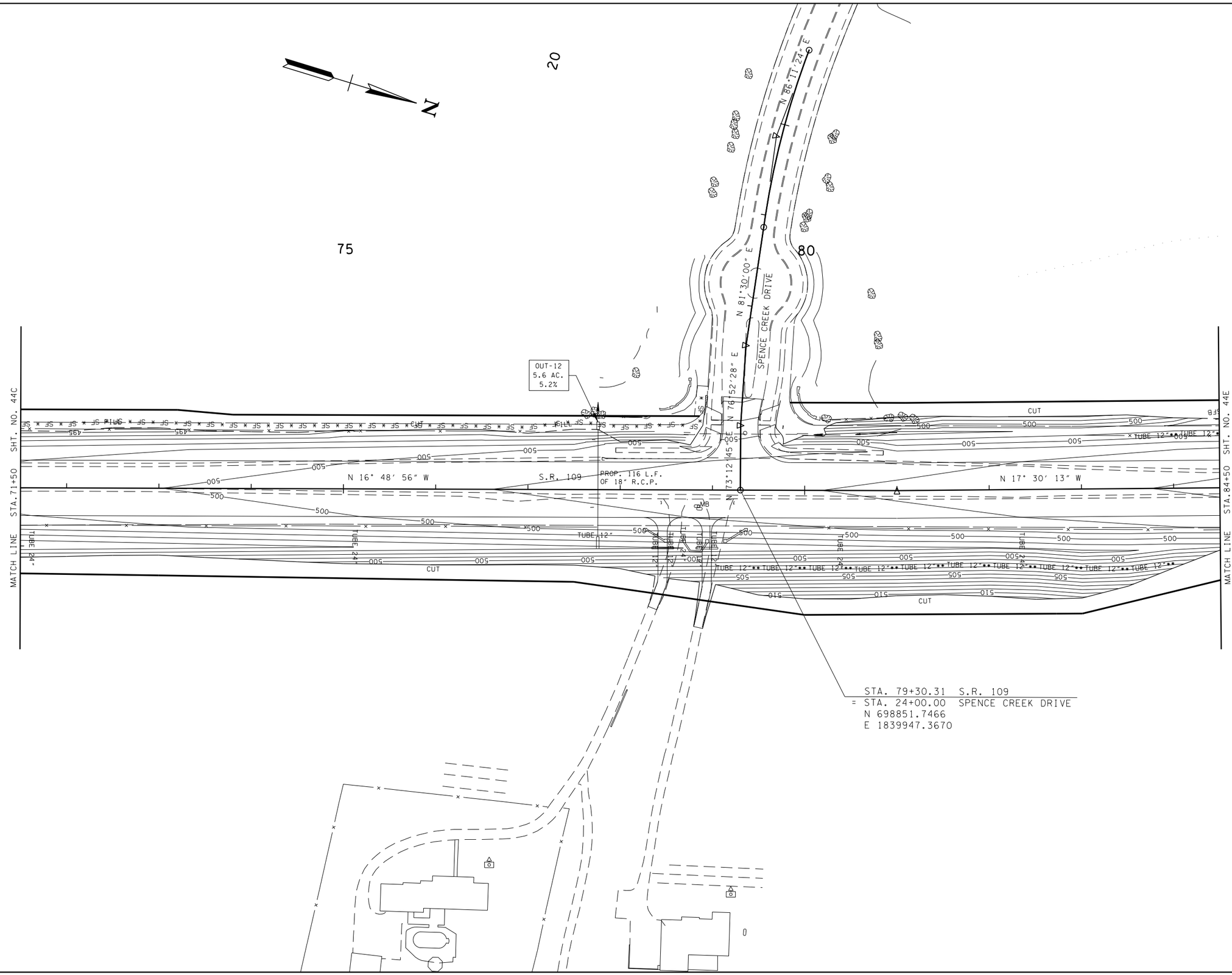
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	72
CONST.	2017	NHE-109(31)	44D



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 71+50 TO STA. 84+50

SCALE: 1"= 50'

9/28/2017
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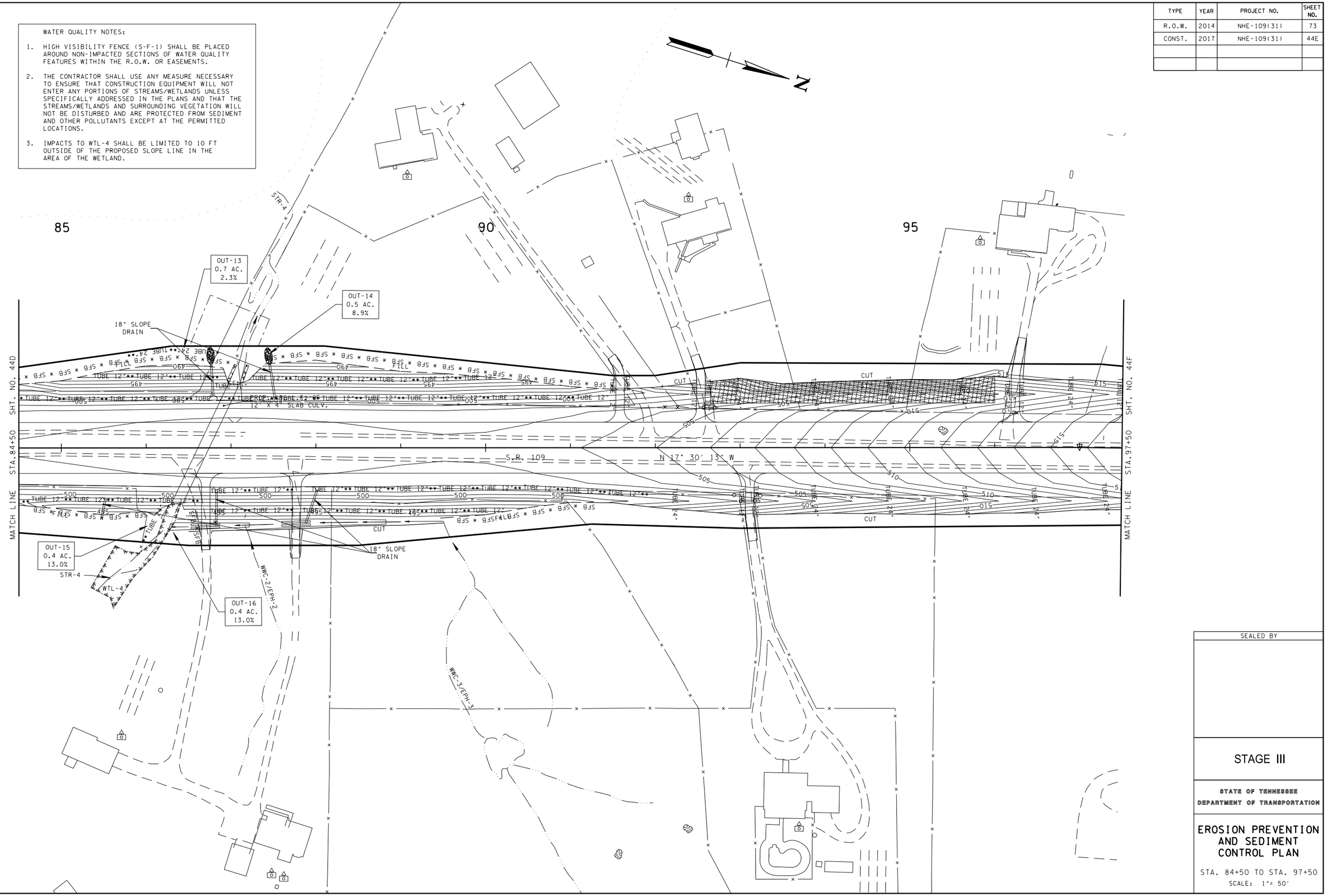
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.
2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.
3. IMPACTS TO WTL-4 SHALL BE LIMITED TO 10 FT OUTSIDE OF THE PROPOSED SLOPE LINE IN THE AREA OF THE WETLAND.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	73
CONST.	2017	NHE-109(31)	44E



SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 84+50 TO STA. 97+50
SCALE: 1"= 50'

9/28/2017
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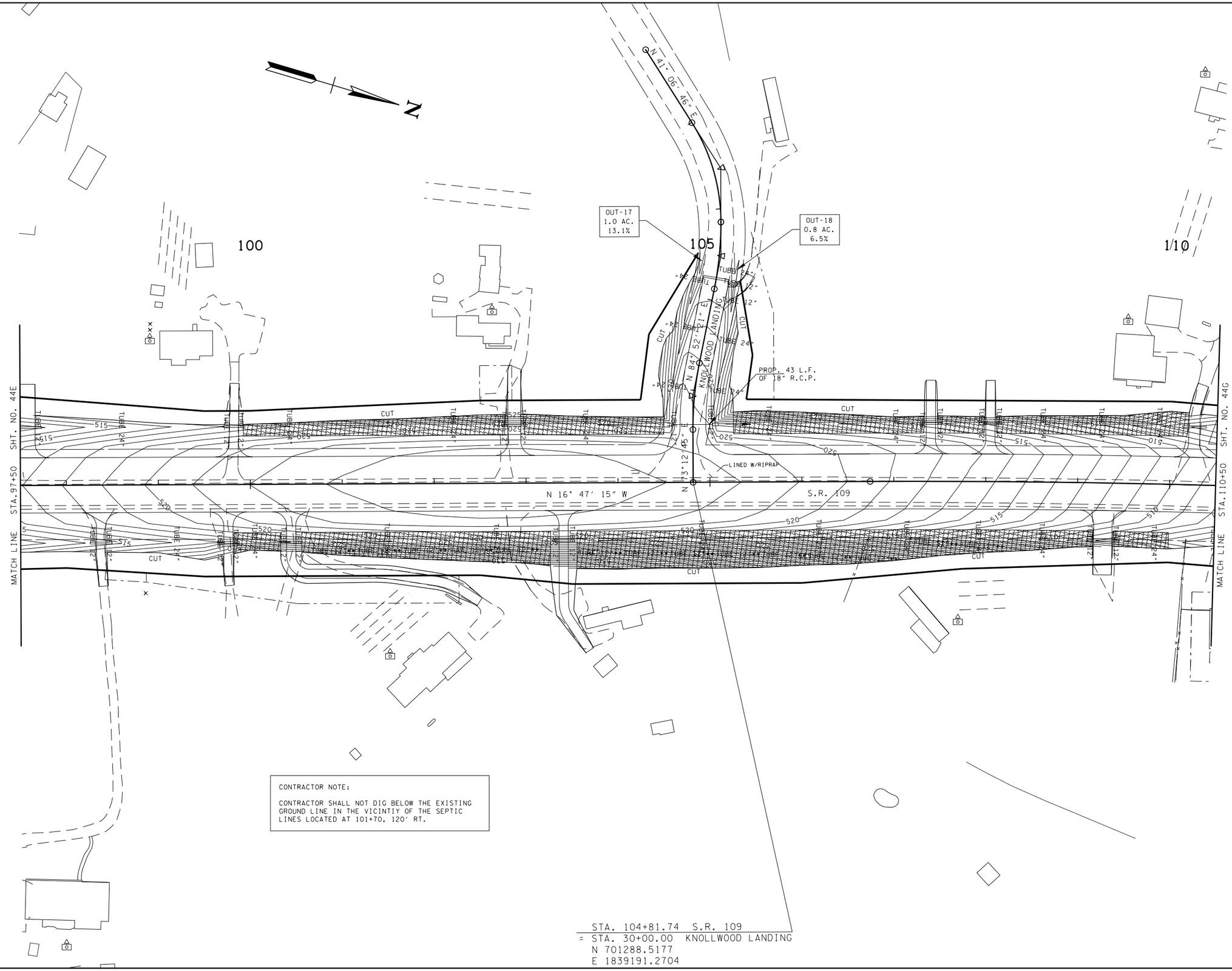
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	74
CONST.	2017	NHE-109(31)	44F

REV. 2-14-17: REV. EPSC DEVICES IN THE VICINITY OF THE SEPTIC LINES LOCATED AT 101+70, 120' RT; ADDED CONTRACTOR NOTE.



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STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 97+50 TO STA. 110+50
SCALE: 1"= 50'

9/28/2017
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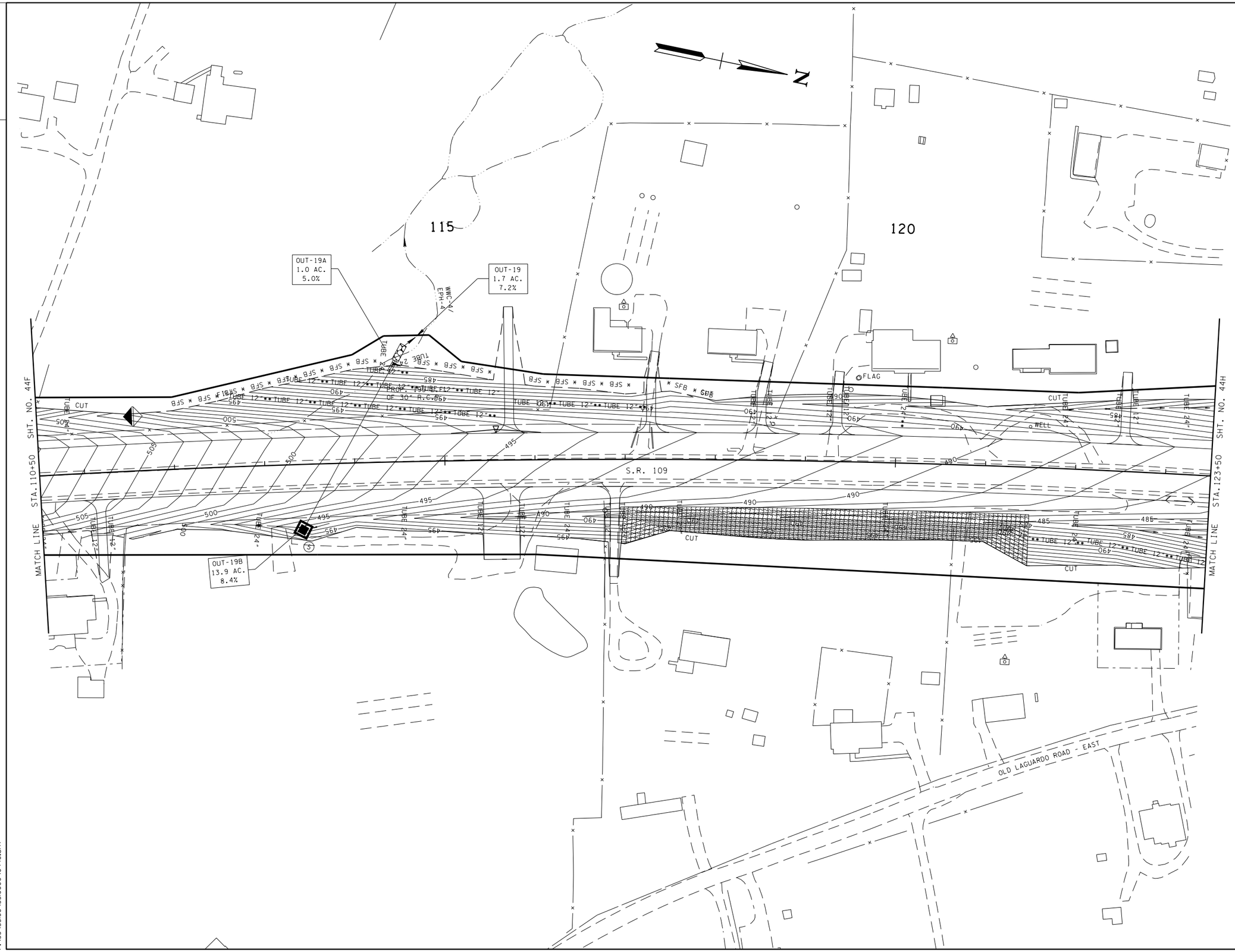
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	75
CONST.	2017	NHE-109(31)	44G



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STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 110+50 TO STA. 123+50
SCALE: 1"= 50'

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	76
CONST.	2017	NHE-109(31)	44H

CONSTRUCTION NOTE:

DITCH AND DRIVEWAY WORK ON NORTHERN ROAD WEST OF STA. 32+00 TO BE COMPLETE AND STABILIZED PRIOR TO ANY WORK BEGINNING NEAR THE INTERSECTION OF S.R. 109 AND NORTHERN ROAD.

N

MATCH LINE STA. 30+50 SHT. NO. 44J

125 130 135 35

NORTHERN ROAD

STA. 124+69.83 S.R. 109
= STA. 36+00.00 NORTHERN ROAD
N 703210.5484
E 1838755.6338

OUT-20
1.8 AC.
7.9%

PROP. 116 L.F. OF 30" R.C.P.

PROP. 134 L.F. OF 36" R.C.P.

S.R. 109

N 7° 57' 34" W

OLD LAGUARDO ROAD - EAST

MATCH LINE STA. 123+50 SHT. NO. 44G

MATCH LINE STA. 136+50 SHT. NO. 44K

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 123+50 TO STA. 136+50

SCALE: 1"= 50'

9/28/2017
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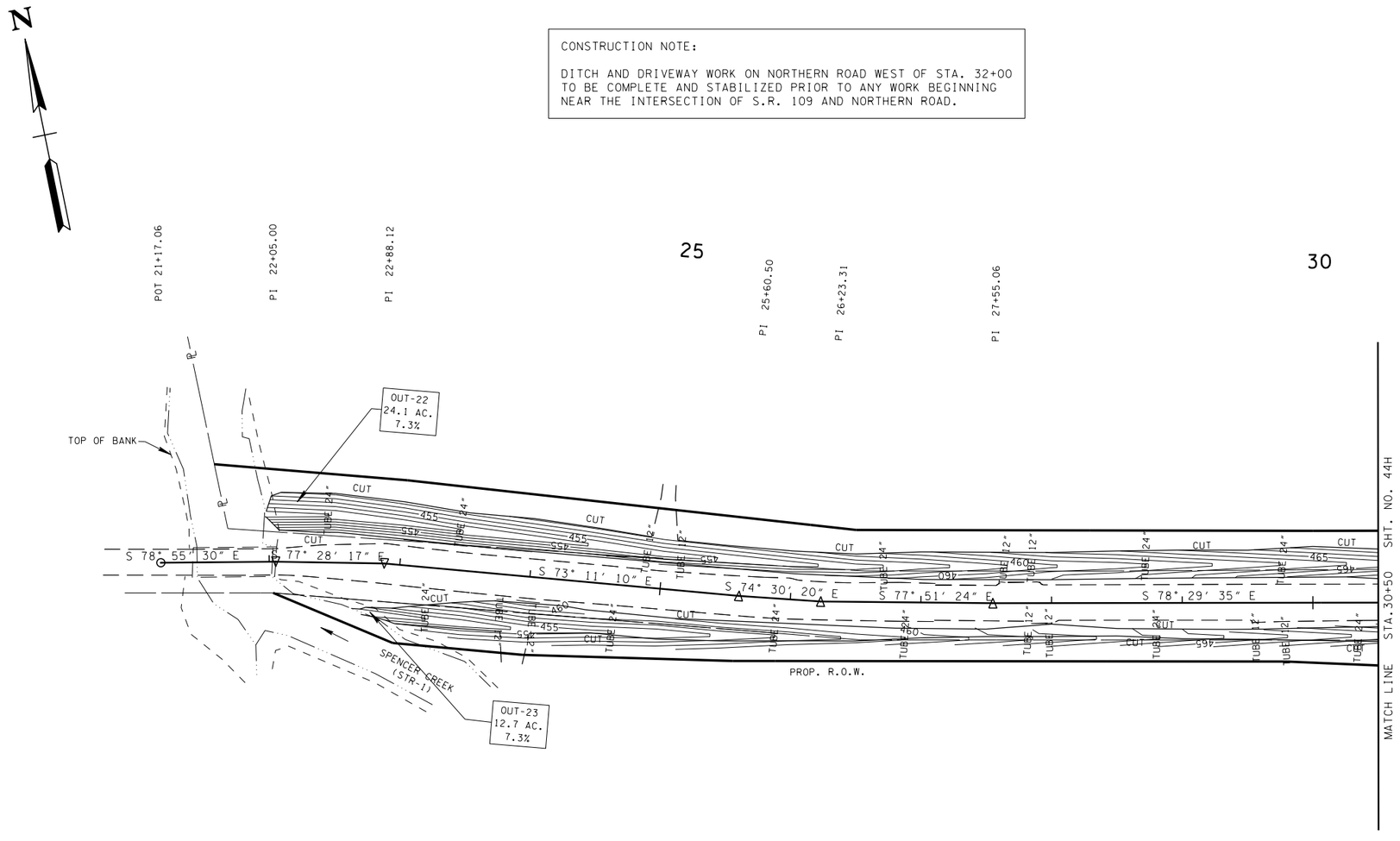
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(31)	76A
CONST.	2017	NH-109(31)	44J

CONSTRUCTION NOTE:

DITCH AND DRIVEWAY WORK ON NORTHERN ROAD WEST OF STA. 32+00 TO BE COMPLETE AND STABILIZED PRIOR TO ANY WORK BEGINNING NEAR THE INTERSECTION OF S.R. 109 AND NORTHERN ROAD.



WATER QUALITY NOTES:

1. HIGH VISIBILITY FENCE (S-F-1) SHALL BE PLACED AROUND NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES WITHIN THE R.O.W. OR EASEMENTS.

2. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTIONS OF STREAMS/WETLANDS UNLESS SPECIFICALLY ADDRESSED IN THE PLANS AND THAT THE STREAMS/WETLANDS AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

B.O.P. TO STA.28+00
NORTHERN ROAD
SCALE: 1"= 50'

9/28/2017
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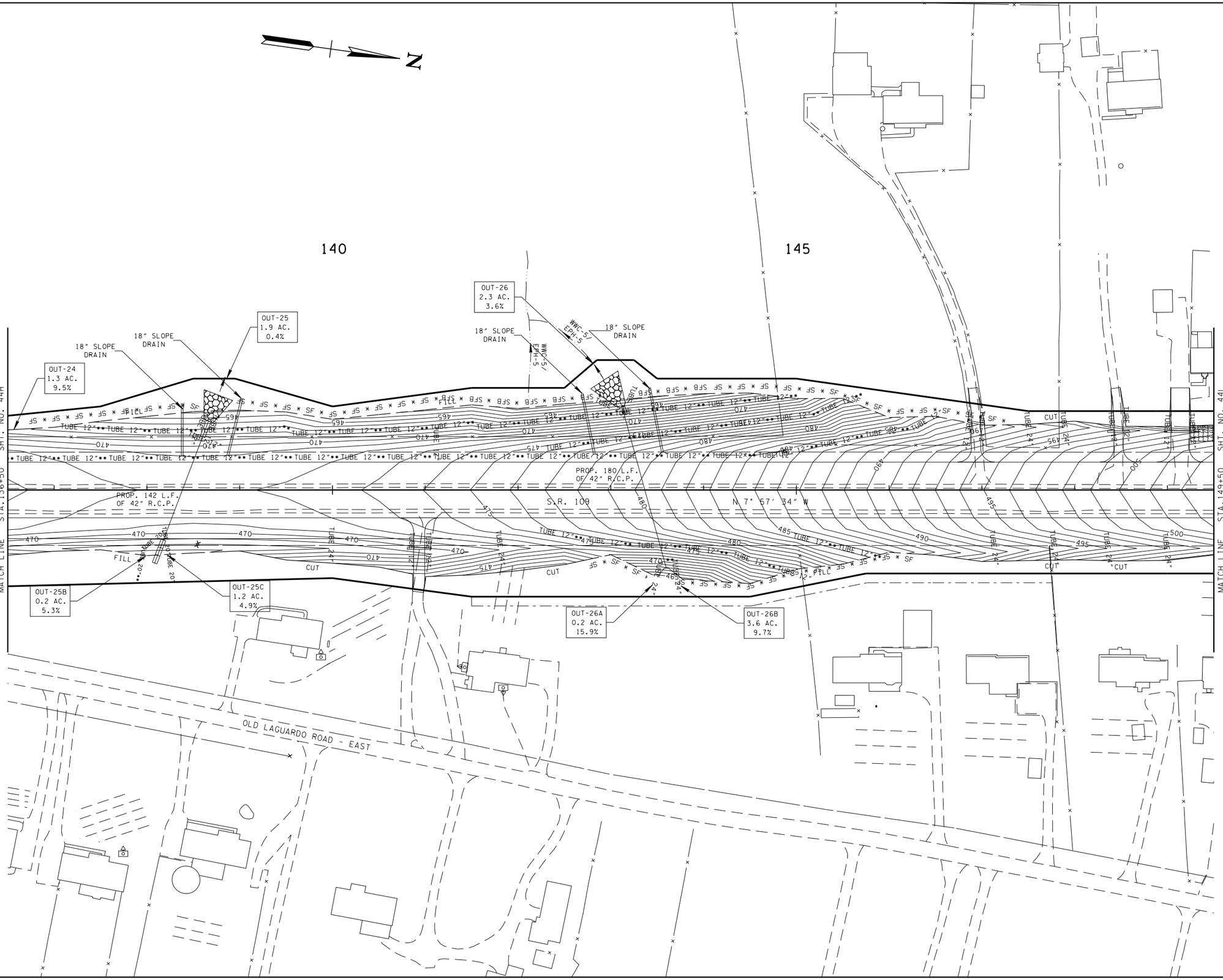
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	77
CONST.	2017	NHE-109(31)	44K



SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 136+50 TO STA. 149+50

SCALE: 1"= 50'

9/28/2017
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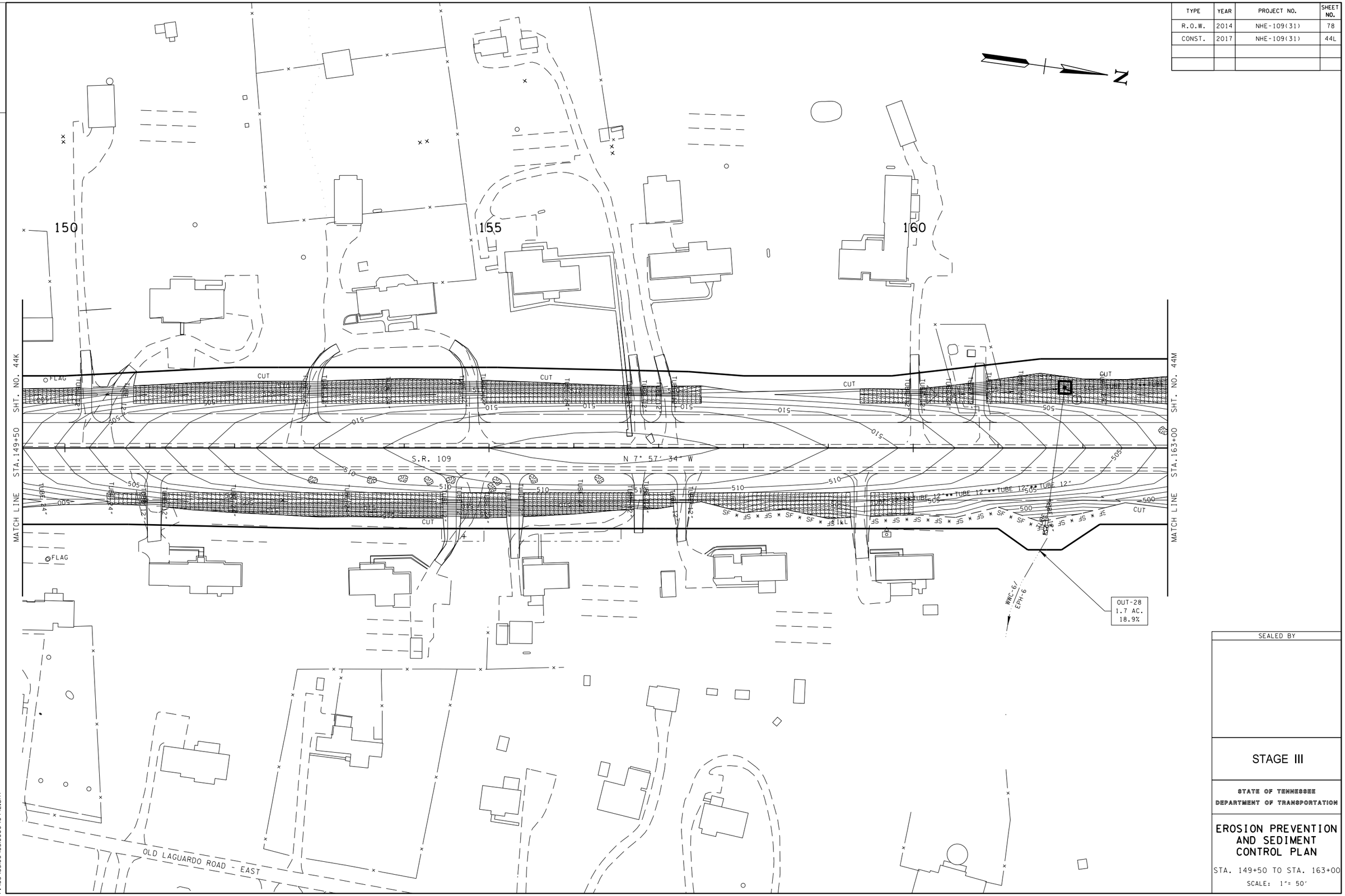
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	78
CONST.	2017	NHE-109(31)	44L



SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 149+50 TO STA. 163+00

SCALE: 1"= 50'

9/28/2017
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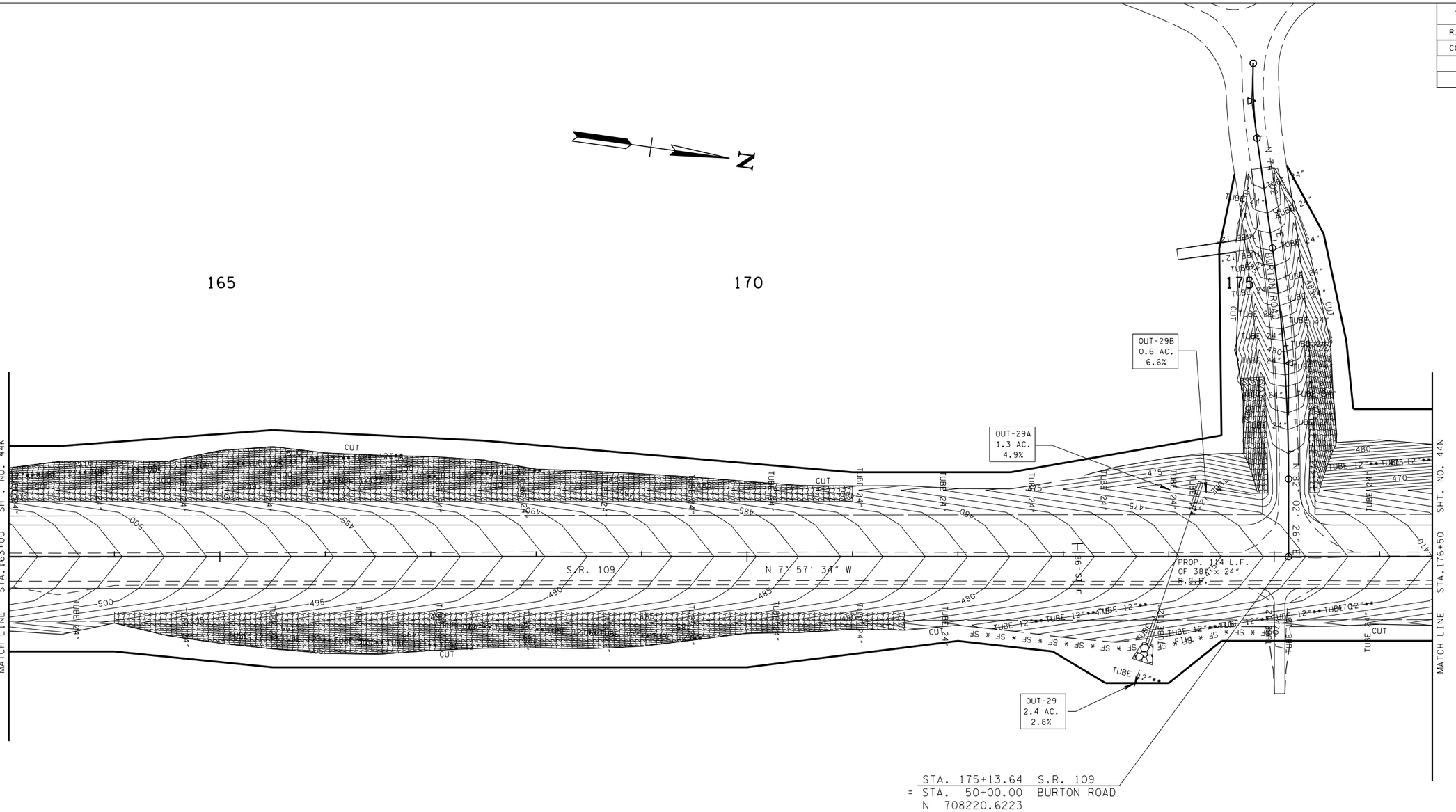
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	79
CONST.	2017	NHE-109(31)	44M



SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 163+00 TO STA. 176+50

SCALE: 1"= 50'

9/28/2017
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NHE-109(31)	80
CONST.	2017	NHE-109(31)	44N

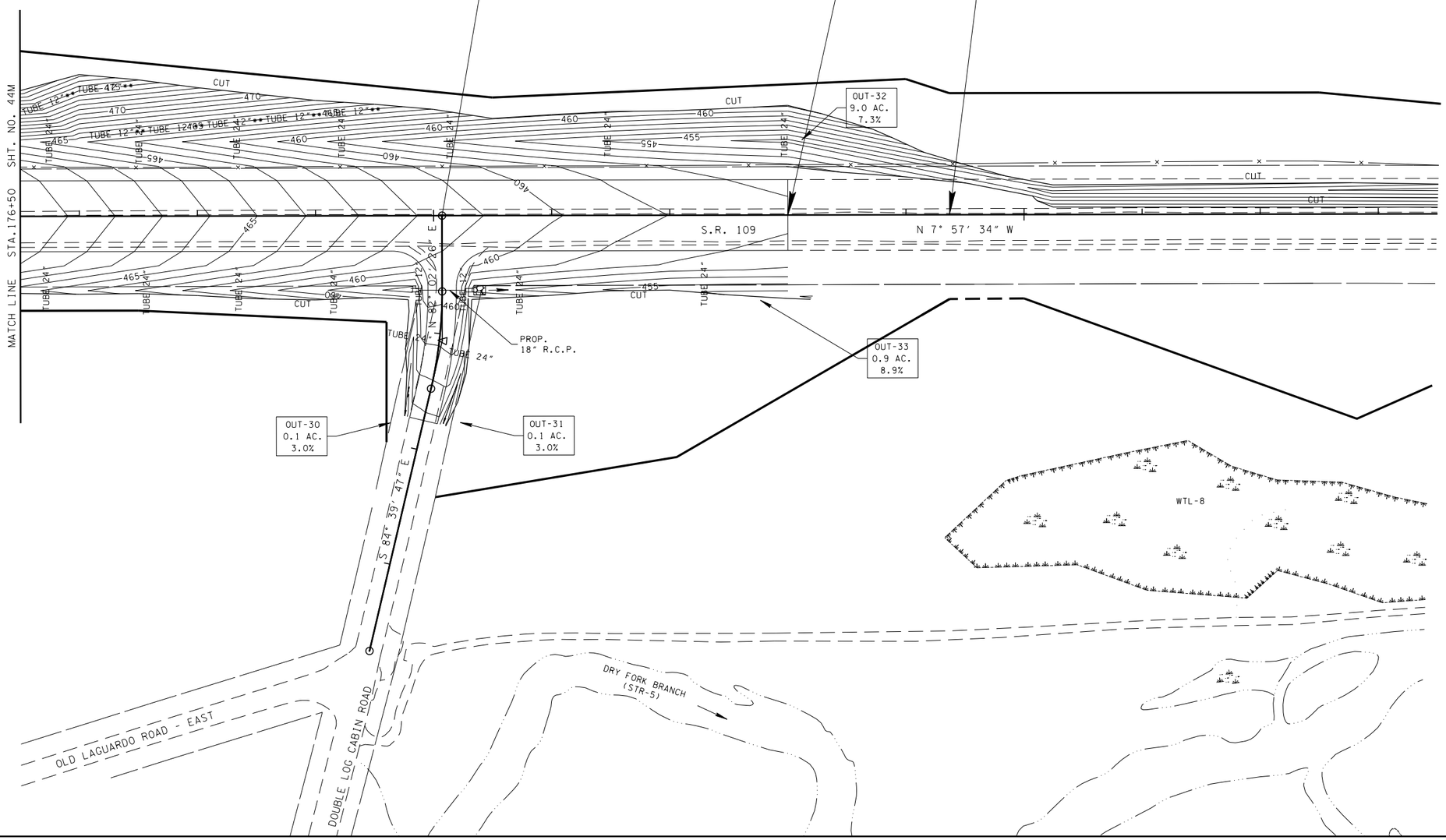
95012-3221-14
END PROJECT NO. NH-109(31) CONST.
STA. 183+00.00
N 708,999.4056
E 1,837,946.2440

STA. 180+06.93 S.R. 109
= STA. 51+00.00 DOUBLE LOG CABIN ROAD
N 708709.3958
E 1837986.7927

180

(ADJACENT PROJECT)
95012-2222-14
BEGIN PROJECT NO. NH-109(32) R.O.W.
STA. 184+36.86
N 709,134.9471
E 1,837,927.2928

185



SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 176+50 TO STA. 188+50
SCALE: 1"= 50'

9/28/2017
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