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

Index Of Sheets

SEE SHEET IA FOR INDEX

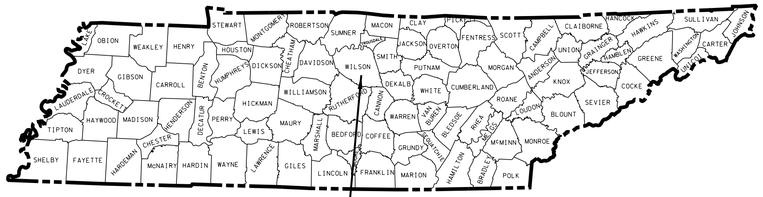
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2015	1
FED. AID PROJ. NO.	PHSIP-24(55)	
STATE PROJ. NO.	95004-3253-94	

REV. 10-20-14: UPDATED SHEET TITLES FOR SHEETS 2, 5A AND 7-8; ADDED SHEET 5B; UPDATED TDOT C.E. MANAGER.

WILSON COUNTY

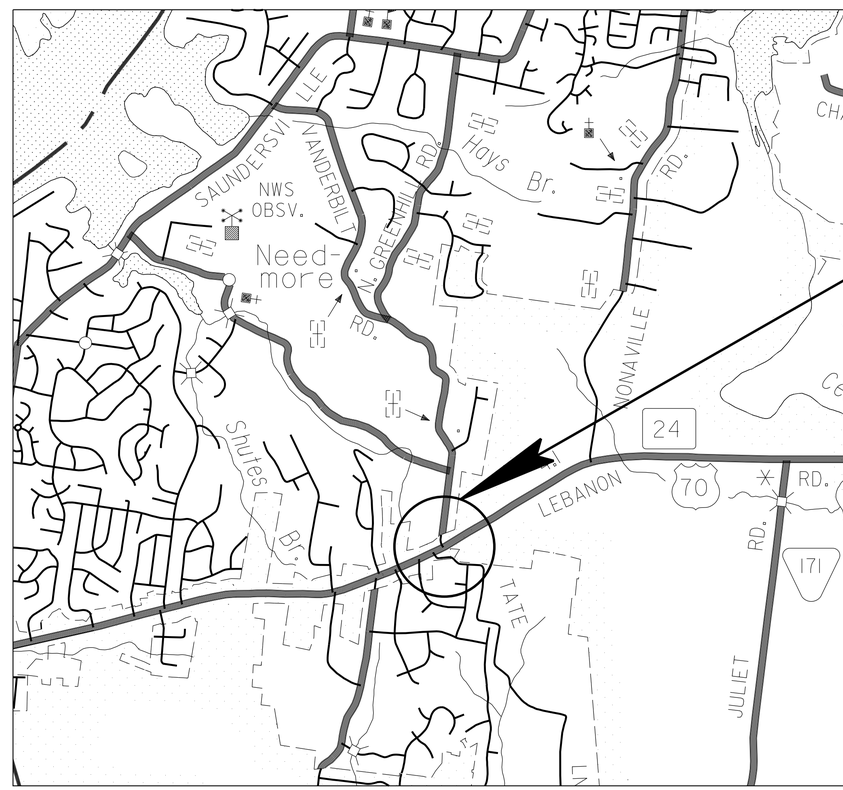
SR-24 INTERSECTION AT NORTH GREENHILL ROAD IN MT JULIET



CONSTRUCTION

STATE HIGHWAY NO. 24 F.A.H.S. NO. 70

NO EXCLUSIONS
NO EQUATIONS



SCALE: 1"= 2000'

PROJECT LOCATION
SR-24 INTERSECTION AT NORTH GREENHILL ROAD IN MT. JULIET

SEALED BY
UNOFFICIAL SET
NOT FOR BIDDING

APPROVED: 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 C.E. MANAGER 1 DAVID MOSS, P.E.
DESIGNED BY BOOKER ENGINEERING, INC.
DESIGNER BEATRICE ROSSMAN, PE CHECKED BY BRENDA K. BOOKER, PE

P.E. NO. 97095-1228-04

PIN NO. 117816.00

RIGHT-OF-WAY LENGTH 0.012 MILES

TRAFFIC DATA

	SR-24	GREENHILL
ADT (2014)	24,700	4,950
ADT (2034)	33,100	6,640
DHV (2034)	2917	641
D	60 - 40	60 - 40
T (ADT)	8 %	3 %
T (DHV)	5 %	2 %
V	40 MPH	40 MPH

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	PHSIP-24(55)	1A

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

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STANDARD ROADWAY DRAWINGS

ROADWAY DESIGN STANDARDS

DWG. NO	REV.	DESCRIPTION
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-3	04-15-04	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-4	04-15-04	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-5	05-01-08	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-6	03-30-10	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-7	05-24-12	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL

DRAINAGE - CULVERTS AND ENDWALLS

DWG. NO	REV.	DESCRIPTION
D-PG-3	04-15-97	FERROUS AND ALUMINUM CORREGATED METAL PIPE
D-PO-1	05-27-01	STANDARD OVAL & FLAT BASE CONCRETE CULVERT PIPE
D-PS-1	03-15-76	STRUTTING DETAILS FOR CORR. METAL & STRUCTURAL PLATE ROUND PIPE

DRAINAGE-CATCH BASINS AND MANHOLES

DWG. NO	REV.	DESCRIPTION
D-CB-12P	03-11-14	STANDARAD PRECAST RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-99	05-20-14	MISCELLANEOUS DETAILS FOR RECTANGULAR STRUCTURES
D-CBB-12A	05-27-01	TYPE “B” CAST IRON FRAME, GRATE & NONMOUNTABLE INLET DETAILS FOR NOS. 10, 12, 14, 16, AND 17 TYPE CATCH BASINS
D-RF-1		STANDARD PRECAST RISER

ROADWAY AND PAVEMENT APPURTENANCES

DWG. NO	REV.	DESCRIPTION
RP-NMC-10	07-29-03	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS

TRAFFIC CONTROL APPURTENANCES

DWG. NO	REV.	DESCRIPTION
T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-4	07-24-14	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-12	01-30-15	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES ON URBAN ROADWAYS
T-M-14	11-01-11	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES AT INTERSECTIONS
T-PBR-1	06-30-09	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2	11-01-11	DETAIL FOR VERTICAL PANELS AND FLEXIBLE DELINEATORS

TRAFFIC CONTROL APPURTENANCES CONTINUED

DWG. NO	REV.	DESCRIPTION
T-S-10	04-04-12	STANDARD MOUNTING DETAILS FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-17	07-19-13	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-19	07-19-13	STANDARD STEEL SIGN SUPPORTS
T-S-20	11-01-11	SIGN DETAILS
T-SG-2	07-29-04	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3	11-11-04	STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
T-SG-3A		ALTERNATE DETECTION DETAILS
T-SG-5	12-04-13	CONTROLLER CABINET DETAILS
T-SG-7	11-01-11	SIGNAL HEAD ASSEMBLIES AND PEDESTRIAN PUSH BUTTON SIGNS
T-SG-7A	11-01-11	TYPICAL SIGNAL HEAD PLACEMENT
T-SG-9	12-04-13	DETAILS OF CANTILEVER SIGNAL SUPPORT
T-SG-9A	05-01-14	MISCELLANEOUS SIGNAL DETAILS
T-SG-10	06-11-14	MAST ARM POLE AND STRAIN POLES FOUNDATION DETAILS
T-SG-12	11-01-11	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS
T-SG-13	06-01-09	FLASHING BEACON DETAIL
T-WZ-40	04-02-12	RIGHT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-41	04-02-12	LEFT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-51	04-02-12	TRAFFIC CONTROL FOR SIGNALS ONLY PROJECTS ON 4 OR 5 LANE MAJOR ROUTES

EROSION CONTROL AND LANDSCAPING

DWG. NO	REV.	DESCRIPTION
EC-STR-3B	08-01-12	SILT FENCE
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3D	04-01-08	ENHANCED SILT FENCE
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-6	08-01-12	ROCK CHECK DAM
EC-STR-19	04-01-08	CATCH BASIN PROTECTION
EC-STR-37	06-10-14	SEDIMENT TUBE
EC-STR-39	08-01-12	CURB INLET PROTECTION TYPE 1 & 2

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX AND STANDARD DRAWINGS

*** NO PROJECT COMMITMENTS SHEET INCLUDED IN THIS SET OF PLANS ***

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	PHSIP-24(55)	2

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
	201-01	CLEARING AND GRUBBING	LS	1
	202-02.19	REMOVAL OF PIPE (15" CMP, STA. 08+25.00)	L.F.	20
	202-08.15	REMOVAL OF CURB AND GUTTER (TYPE B)	L.F.	45
	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	500
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	250
	209-05	SEDIMENT REMOVAL	C.Y.	100
	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	500
	209-08.04	TEMPORARY ENHANCED SILT FENCE	L.F.	1362
(1, 2)	209-08.07	ROCK CHECK DAM PER	EACH	2
(3)	209-09.41	CURB INLET PROTECTION (TYPE 2)	EACH	1
(4)	209-40.34	CATCH BASIN PROTECTION (TYPE E)	EACH	1
	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	4311
	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	30
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	20
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	2.1
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	8.3
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	0.2
	411-01.10	ACS MIX (PG64-22) GRADING D	TON	119
(5)	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	25
(6)	607-37.02	18" CORRUGATED METAL PIPE CULVERT	L.F.	10
	611-01.21	REWORK MANHOLE	EACH	1
(7)	611-09.02	REWORK CATCHBASIN	EACH	2
(8)	611-12.01	CATCH BASINS, TYPE 12, 0' - 4' DEPTH	EACH	2
(9)	702-03	CONCRETE COMBINED CURB & GUTTER	C.Y.	3
	712-01	TRAFFIC CONTROL	LS	1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	200
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	11
(10)	712-05.01	WARNING LIGHTS (TYPE A)	EACH	5
(10)	712-05.03	WARNING LIGHTS (TYPE C)	EACH	5
	712-06	SIGNS (CONSTRUCTION)	S.F.	302
	712-08.03	ARROW BOARD (TYPE C)	EACH	1
(12)	713-15.36	REMOVE SIGN, SUPPORT & FOOTING	EACH	1
(13)	713-16.23	SIGNS (W3-3)	EACH	2
(11)	713-99.91	SIGNS	LS	1
(14)	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	140
(14)	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	3
(14)	716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	1
(14)	716-04.13	PLASTIC PAVEMENT MARKING (BIKELANE SYMBOL & ARROW)	EACH	4
	716-08.01	REMOVAL OF PAVEMENT MARKING (LINE)	L.F.	400
(14)	716-13.06	SPRAY THERMO PVMT MRKNG (40 mil) (4IN LINE)	L.M.	1
	717-01	MOBILIZATION	LS	1
	730-02.01	SIGNAL HEAD ASSEMBLY (110)	EACH	2
	730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH	7
(15)	730-02.17	SIGNAL HEAD ASSEMBLY (150 A2H WITH BACKPLATE)	EACH	1
	730-03.20	INSTALL PULL BOX (TYPE A)	EACH	2
	730-03.21	INSTALL PULL BOX (TYPE B)	EACH	6
(16)	730-05.01	ELECTRICAL SERVICE CONNECTION	EACH	2
(17)	730-05.03	SERVICE CABLE (#2 AWG)	L.F.	845
(18)	730-08.01	SIGNAL CABLE - 3 CONDUCTOR	L.F.	120
	730-08.03	SIGNAL CABLE - 7 CONDUCTOR	L.F.	840
(19)	730-12.01	CONDUIT 1" DIAMETER (PVC)	L.F.	470
(19)	730-12.02	CONDUIT 2" DIAMETER (PVC)	L.F.	205
(19)	730-12.13	CONDUIT 2" DIAMETER (JACK AND BORE)	L.F.	407
	730-13.01	VEHICLE LOOP DETECTOR (SHELF MOUNT)	EACH	12
(20)	730-13.02	VEHICLE DETECTOR (VIDEO)	EACH	1
	730-14.01	SHIELDED DETECTOR CABLE	L.F.	2240
	730-14.02	SAW SLOT	L.F.	1270
	730-14.03	LOOP WIRE	L.F.	3350
	730-15.32	CABINET (EIGHT PHASE BASE MOUNTED)	EACH	1
(21)	730-16.02	EIGHT PHASE ACTUATED CONTROLLER	EACH	1
	730-16.03	CONTROLLER (FLASHING BEACON)	EACH	1
(22)	730-22.02	GUYING DEVICE (ANGLE ANCHOR)	EACH	6
(23)	730-23.64	CANTILEVER SIGNAL SUPPORT (1 ARM @ 30')	EACH	1
(23)	730-23.80	CANTILEVER SIGNAL SUPPORT (1 ARM @ 40')	EACH	1
(23)	730-23.96	CANTILEVER SIGNAL SUPPORT (1 ARM @ 50')	EACH	1
(24)	730-23.97	CANTILEVER SIGNAL SUPPORT (2 @ 45' & 65')	EACH	1
(1)	740-11.02	TEMPORARY SEDIMENT TUBE 12IN (SLOPES)	L.F.	500
	801-03	WATER (SEEDING & SODDING)	M.G.	1.0
(1, 25)	803-01	SODDING (NEW SOD)	S.Y.	1092

PAY ITEM FOOTNOTES

(1) TO BE USED IN ALL DISTURBED AREAS AS DIRECTED BY THE ENGINEER.

(2) PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ROCK CHECK DAMS. INCLUDES THE COST OF THE GEOTEXTILE FABRIC (TYPE 3).

(3) PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF CURB INLET PROTECTION (TYPE 2).

(4) PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF CATCH BASIN PROTECTION.

(5) INCLUDES REMOVAL OF THE EXISITNG PIPE CULVERT.

(6) INCLUDED FOR EXTENDING THE 18" STORM DRAIN CROSSING N. GREENHILL ROAD TO THE NEW SLOPE LINE.

(7) INCLUDED FOR CONVERSION OF 2-EXISTING CURB INLETS TO 2-JUNCTION BOXES (32" X 32").

(8) INCLUDES THE COST OF THE RISER SECTION AND CAST IRON GRATE.

(9) INCLUDES 43 L.F. OF 6" NONMOUNTABLE CONCRETE CURB AND GUTTER (TYPE 6-30).

(10) TO BE USED AS DIRECTED BY THE ENGINEER.

(11) INCLUDED FOR PAYMENT OF SUSPENDED FLAT SHEET ALUMINUM SIGNS (0.080" THICK). INCLUDES ONE (1) LEFT TURN YIELD ON FLASHING YELLOW SIGN, R10-X12 (30" X 36") AND ONE (1) SIGNAL AHEAD SIGN, W3-3 (48" X 48").

(12) INCLUDED FOR REMOVAL OF ONE (1) STOP SIGN, POST AND FOOTING.

(13) SHALL BE SIGNAL AHEAD SIGN, W3-3 (36" X 36"). INCLUDES THE COST OF THE SIGN SUPPORT POST (PERFORATED/KNOCKOUT TUBE, TYPE P8).

(14) 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.

(15) FOR LEFT TURN OPERATION.

(16) THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL UTILITY TO OBTAIN THE ESTIMATE FOR PROVIDING ELECTRICAL SERVICE TO THE SIGNAL AND FLASHING BEACON CONTROLLERS. THESE CHARGES SHALL BE INCLUDED IN THE BID FOR THIS ITEM. INCLUDES THE COST OF THE STEEL CONDUIT RISER ASSEMBLIES AND PROPOSED POWER CABLE OVERHEAD AS REQUIRED. ALSO, INCLUDES THE COST OF THE DISCONNECTS AND METERS (AS REQUIRED) FOR THE SIGNAL AND FLASHING BEACON, AND ALL APPURTANCES FOR THE ELECTRICAL CONNECTION.

(17) INCLUDES TWO (2) WIRES FOR SERVICE TO FLASHING WARNING BEACONS AND TWO (2) WIRES FOR SERVICE FOR THE SIGNAL. INCLUDES 30 LF OF UNDERGROUND CABLE.

(18) INCLUDED FOR FLASHING BEACON.

(19) SHALL BE SCHEDULE 40.

(20) INCLUDES ONE (1) CAMERA SENSOR UNIT, ONE (1) PROCESSOR UNIT, HARDWARE, SOFTWARE, CAMERA MOUNTING ASSEMBLY, POWER CABLING, COAXIAL CABLING, CONDUIT, SURGE PROTECTION, AND ALL RELATED EQUIPMENT TO PROVIDE ALL DETECTION ZONES AS INDICATED ON THE PLANS. MIN. MOUNTING HEIGHT IS 35'. REFER TO STD. DWG. T-SG-3A FOR DETAILS.

(21) SHALL BE PEAK 3000 SIGNAL CONTROLLER.

(22) INCLUDED FOR MAKING ADJUSTMENTS TO 4 EXISTING GUYING DEVICES AND ADDING 2 NEW GUYING DEVICES AT POLES WITH PROPOSED OVERHEAD POWER CROSSING INSTALLATIONS.

(23) SIGNAL POLE AND MAST ARM SHALL BE BLACK. INCLUDES CLASS 'A' CONCRETE FOUNDATION. FOUNDATION SHALL BE 3 FT. DIAMETER WITH MIN. 15'-00" DEEP FOOTING, REFER TO TDOT STD. DWG T-SG-10.

(24) SIGNAL POLE AND MAST ARM SHALL BE BLACK. INCLUDES CLASS 'A' CONCRETE FOUNDATION. FOUNDATION SHALL BE 4 FT. DIAMETER WITH MIN. 15'-00" DEEP FOOTING. FOR 4' DIAMETER FOUNDATION, SEE ESTIMATED FOUNDATION QUANTITIES SCHEDULE ON SHEET 7.

(25) INCLUDES SODDING ASSOCIATED WITH EROSION PREVENTION AND SEDIMENT CONTROL PLAN AND TRENCHED CONDUIT INSTALLATION.

SUMMARY OF QUANTITIES
ITEM NO. 712-06

M.U.T.C.D. NO.	DESCRIPTION	SIZE (INCHES)	QTY.	AREA (S.F.)
G20-2A	END ROAD WORK	48 X 24	4	32
R3-8M	LANE MOVEMENT ARROW	30 X 30	2	14
W4-2L	LEFT LANE MERGE SYMBOL	48 X 48	1	16
W4-2R	RIGHT LANE MERGE SYMBOL	48 X 48	2	32
W20-1	ROAD WORK AHEAD	48 X 48	2	32
W20-1	ROAD WORK 500 FT	48 X 48	2	32
W20-1	ROAD WORK 1000 FT	48 X 48	2	32
W20-1	ROAD WORK 1500 FT	48 X 48	2	32
W20-5R	RIGHT LANE CLOSED 1000 FT	48 X 48	2	32
W20-5L	LEFT LANE CLOSED 1000 FT	48 X 48	1	16
W20-7A	FLAGGER AHEAD SYMBOL	48 X 48	2	32
			TOTAL QUANTITY	302

ITEM 712-06, SIGNS (CONSTRUCTION), INCLUDES SIGNS SHOWN WHICH ARE CONSIDERED A MINIMUM. ADDITIONAL SIGNS MAY BE REQUIRED BY THE ENGINEER AND WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 712-06.

SIGNS SHALL BE LOCATED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER.

CONSTRUCTION SIGNING AND TRAFFIC CONTROL SHALL CONFORM TO PART VI OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SECTION 712 OF THE TENNESSEE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

CONTRACTOR IS NOT RELIEVED OF ANY RESPONSIBILITY TO PROVIDE ADEQUATE AND SAFE TRAFFIC CONTROL MEASURES BY THE ABOVE.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

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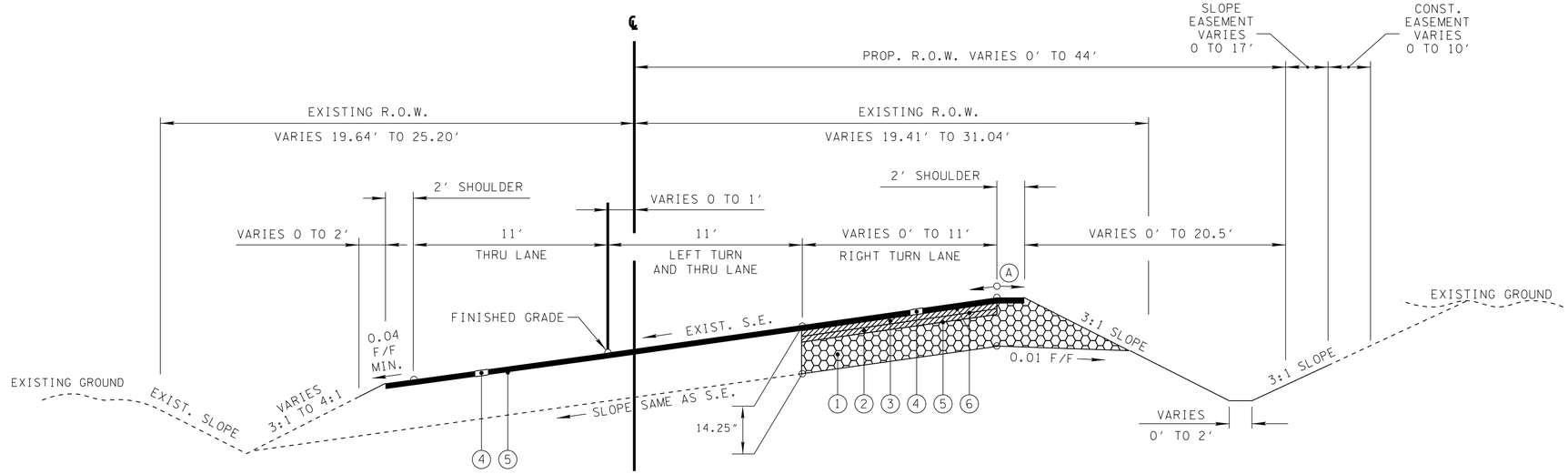
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

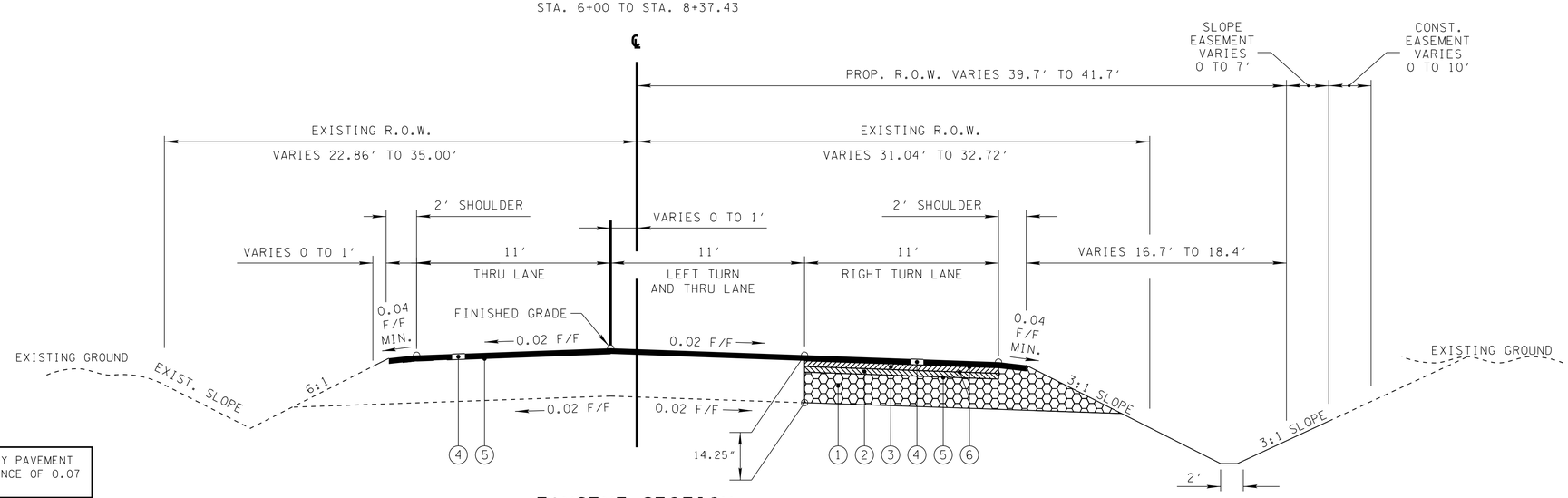
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	2
CONST.	2015	PHSIP-24(55)	2A



SUPERELEVATED SECTION

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

NORTH GREENHILL ROAD
STA. 6+00 TO STA. 8+37.43



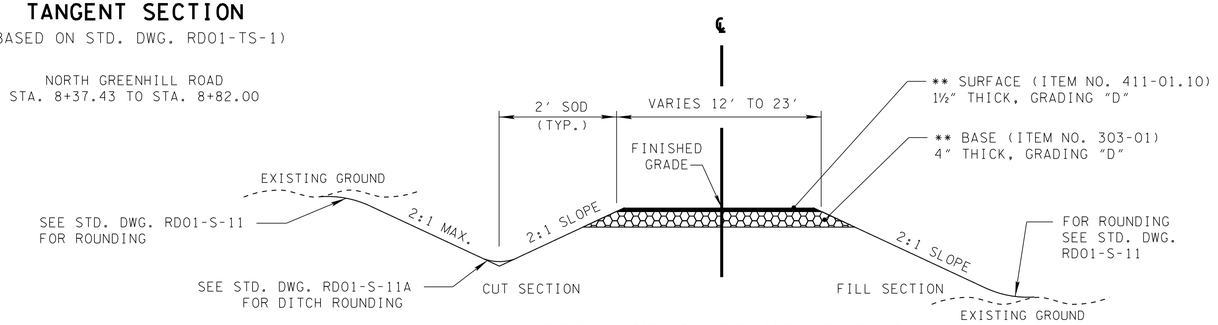
TANGENT SECTION

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

Ⓐ THE SLOPES OF THE SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07 FOOT PER FOOT.

PROPOSED RIGHT TURN LANE PAVEMENT SCHEDULE		
① MINERAL AGGREGATE BASE @ 8.00" THICK		
ITEM	303-01	MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D"
② BITUMINOUS COURSE (BINDER) @ 3.00" THICK (APPROX. 345.0 LBS./S.Y.)		
ITEM	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING "A"
③ BITUMINOUS COURSE (BINDER) @ 2.00" THICK (APPROX. 226.0 LBS./S.Y.)		
ITEM	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING "B-M2"
④ BITUMINOUS SURFACE (ACS) @ 1.25" THICK (APPROX. 132.5 LBS./S.Y.)		
ITEM	411-01.10	ACS MIX (PG64-22) GRADING "D"
⑤ PRIME COAT		
ITEM	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC) (0.30-0.35 GAL./S.Y.)
ITEM	402-02	AGGREGATE FOR COVER MATERIAL (PC) (8-12 LBS./S.Y.)
⑥ TACK COAT (0.02 GAL./S.Y.)		
ITEM	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)

NORTH GREENHILL ROAD
STA. 8+37.43 TO STA. 8+82.00



RESIDENTIAL DRIVE SECTION

PRIVATE DRIVEWAY
(NOT TO SCALE)

** NO BINDER

** WHERE SURFACE OF EXISTING DRIVE IS CONCRETE, SUBSTITUTE 6" CONCRETE FOR BASE AND SURFACE

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS AND PAVEMENT SCHEDULE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	PHSIP-24(55)	2B

GENERAL NOTES

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE 0F THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

(2) 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.

UTILITIES

(3) 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.

(4) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS 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.

(5) 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.

(6) 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.

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

MISCELLANEOUS

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

(9) 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.

RIGHT - OF – WAY

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

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

(12) 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.

RESURFACING

(13) WHERE DIRECTED BY THE TDOT ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SHAPE PUBLIC SIDE ROADS, BUSINESS ENTRANCES, AND PRIVATE DRIVES, AS WELL AS CLEANING OF EXISTING DRAINS BEFORE PLACING MATERIALS. ALL COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(14) ALL PUBLIC SIDE ROADS SHALL BE PAVED ONE PAVER WIDTH THROUGH THE INTERSECTION AS A MINIMUM. A SATISFACTORY TRANSITION FROM THE NEW PAVEMENT TO THE EXISTING GRADE OF THE INTERSECTING PUBLIC ROAD OR BUSINESS ENTRANCE SHALL BE PROVIDED. SHOULD THE PAVEMENT OF THE INTERSECTING PUBLIC ROAD BE DISTRESSED, THE RESURFACING WIDTH MAY BE INCREASED TO THE NORMAL RIGHT OF WAY LINE.

(15) PRIVATE DRIVEWAYS, FIELD ENTRANCES, AND BUSINESS ENTRANCES WILL BE RESURFACED A PAVER WIDTH (LANE WIDTH) AS A MINIMUM. A PAVEMENT TAPER TO TRANSITION THE NEW PAVEMENT SHALL BE REQUIRED, IT SHALL BE BASED ON AN ADDITIONAL ONE FOOT OF WIDTH PER ONE INCH DEPTH OF PAVEMENT. IF THE SHOULDER IS NARROW ENOUGH THAT THE SUM OF THE SHOULDER AND THE TRANSITION ARE LESS THAN A PAVER WIDTH, THE TRANSITION SHALL OCCUR WITHIN THE PAVER WIDTH. IF THE SUM OF THE SHOULDER AND THE TRANSITION IS GREATER THAN A PAVER WIDTH (LANE WIDTH), THE TRANSITION SHALL OCCUR OUTSIDE OF THE PAVER WIDTH.

(16) ON CURB AND GUTTER SECTIONS, PUBLIC ROAD INTERSECTIONS SHALL BE RESURFACED TO THE END OF RADIUS. A SATISFACTORY TRANSITION FROM THE NEW PAVEMENT TO THE EXISTING GRADE OF THE INTERSECTING PUBLIC ROAD SHALL BE PROVIDED.

(17) ON URBAN TYPICAL SECTIONS, (CURB AND GUTTER), RESIDENTIAL DRIVEWAYS AND BUSINESS ENTRANCES SHALL HAVE A MINIMUM WIDTH OF MATERIAL NOT LESS THAN ONE FOOT USED IN THE TRANSITION TO FEATHER THE PAVEMENT EDGE.

(18) IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

SIGNALIZATION

(19) EQUIPMENT AND INSTALLATION OF TRAFFIC SIGNALS SHALL COMPLY WITH TDOT STANDARD SPECIFICATIONS, SECTION 730.

(20) IF RESURFACING IS INCLUDED IN THE PROJECT, SIGNAL DETECTION LOOPS SHALL BE INSTALLED BEFORE THE FINAL SURFACE IS APPLIED.

(21) ANY SIGNAL HEADS, WHEN VISIBLE TO DRIVERS BUT NOT OPERATIONAL, SHALL BE COMPLETELY COVERED.

(22) SIGNAL HEADS SHALL FLASH A MINIMUM OF SEVEN (7) DAYS PRIOR TO ACTIVATION OF THE SIGNAL.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL NOTES

(23) 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.

(24) 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.

(25) 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.

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

(27) 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.

(28) 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.

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

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA

(30) AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.

(31) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.

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

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

(34) CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.

(35) NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT. OFF-SITE BORROW OR WASTE AREAS ARE TO BE INCLUDED IN THE TOTAL DISTURBED AREA IF THE BORROW OR WASTE AREA IS EXCLUSIVE TO THE PROJECT PER TDOT'S WASTE AND BORROW MANUAL.

SEDIMENT CONTROL

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

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND SPECIAL NOTES

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

6/11/2015 6:42:35 PM
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	PHSIP-24(55)	2C

GENERAL NOTES CONTINUED

SEDIMENT CONTROL CONTINUED

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

(38) CHECK DAMS SHALL BE USED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, GABION, OR SANDBAG CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO REDUCE VELOCITY AND CONTROL EROSION.

(39) IF PERMANENT OR TEMPORARY VEGETATION IS TO BE USED AS AN EPSC MEASURE, THEN THE TIMING OF PLANTING OF VEGETATION SHALL BE SHOWN IN THE SWPPP. DELAYING PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.

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

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

INSPECTION, MAINTENANCE, REPAIR

(42) EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES.

(43) INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.

(44) UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.

SPECIAL NOTES

MATERIALS

(45) WASTE AND BORROW AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPDES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.

GRADING

(46) 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.

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

PAVEMENT

RESURFACING

(48) TRAFFIC WILL BE ALLOWED TO TEMPORARILY DRIVE ON THE MILLED SURFACE OF THE ROADWAY UNDER THE FOLLOWING CONDITIONS ONLY:

A. THE MILLED SURFACE IS FINE TEXTURED. THE FINE TEXTURE SHALL BE OBTAINED BY A MILLING MACHINE UTILIZING A MILLING HEAD WITH TEETH SPACING 3/8" OR LESS OPERATING AT LESS THAN 80 FEET PER MINUTE.

B. THE SURFACE SHALL BE SWEPT AND CLEANED OF ALL LOOSE MATERIALS.

C. THE DIFFERENCE IN ELEVATION BETWEEN THE MILLED SURFACE AND THE ADJACENT LANE SHALL NOT EXCEED 1 1/2 INCHES.

D. THE MILLED SURFACE SHALL BE PAVED WITHIN 48 HOURS.

E. RAIN OR INCLEMENT WEATHER IS NOT EXPECTED OR FORECASTED WITHIN 48 HOURS AFTER MILLING.

F. ALL APPLICABLE SIGNING IS INSTALLED IN ACCORDANCE WITH THE MUTCD SIGNING SHALL INCLUDE MOTORCYCLE WARNING SIGNS (TN-64) PLACED IN ADVANCE OF ANY MILLED AREAS.

G. IF RAVELING OR DETERIORATION OF THE MILLED SURFACE IS OCCURRING WHILE TRAFFIC IS DRIVING ON THE MILLED SURFACE, THEN THIS PRACTICE WILL NOT BE ALLOWED AND PAVING SHALL BE COMPLETED IMMEDIATELY AFTER MILLING.

H. ONLY ONE LANE IN EACH DIRECTION SHALL HAVE A MILLED SURFACE AT ONE TIME.

SIGNALIZATION

(49) THE DESIGN OF TRAFFIC SIGNAL SUPPORT POLES, MAST ARMS, STRAIN POLES, ETC. SHALL BE IN CONFORMANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, CURRENT EDITION. OVERHEAD CANTILEVERED TRAFFIC SIGNAL STRUCTURES SHALL BE DESIGNED FOR FATIGUE CATEGORY 1.

(50) SALVAGEABLE EQUIPMENT SHALL BECOME THE PROPERTY OF THE CITY OF MT. JULIET AND SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE ENGINEER FOR PICKUP BY THE CITY, CONTACT ADAM MADDUX, (615) 773-7957.

SIGNAL HEADS

(51) ALL CIRCULAR AND ARROW INDICATIONS WITHIN ALL VEHICULAR SIGNAL HEADS PROPOSED FOR THIS PROJECT SHALL CONSIST OF AN LED (LIGHT EMITTING DIODE) SIGNAL MODULE UNLESS OTHERWISE NOTED IN THE PLANS.

(52) CIRCULAR INDICATIONS SHALL MEET "ITE VTCSH-LED CIRCULAR SIGNAL SUPPLEMENT" FOR EXPANDED/EXTENDED VIEW.

(53) ARROW INDICATIONS SHALL MEET "ITE VTCSH-3 LED ARROW SPECIFICATON" FOR EXPANDED/EXTENDED VIEW.

(54) INCANDESCENT OR SCREW-IN MODULES ARE NOT ACCEPTABLE.

(55) COMPATIBILITY WITH CONFLICT MONITORS AND LOAD SWITCHES SHALL BE TESTED AND CONFIRMED.

(56) MANUFACTURER SHALL PROVIDE A FIVE-YEAR WARRANTY FOR OPERATION OF THE UNIT.

(57) ALL VEHICULAR SIGNAL HEADS SHALL BE FABRICATED FROM ALUMINUM AND SHALL BE PAINTED YELLOW.

(58) SIGNAL HEADS SHALL INCLUDE LOUVERED BACKPLATES WITH A 1"MINIMUM YELLOW RETRO REFLECTIVE BORDER AROUND THE PERIMETER OF THE FACE OF THE BACKPLATE. THE RETRO REFLECTIVE BORDER TO BE MADE OF A TYPE III PRISMATIC OR BETTER MATERIAL.

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

(59) DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES OR TRAFFIC LANE AND SHOULDER WHERE THE TRAFFIC LANE IS BEING USED BY TRAFFIC, CAUSED BY BASE, PAVING OR RESURFACING:

1. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 0.75 INCH AND NOT EXCEEDING 2 INCHES:

   a. WARNING SIGNS, UNEVEN LANES (W8-11) AND/OR SHOULDER DROP-OFF WITH PLAQUE (W8-17 AND W8-17P), SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

   b. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY ADDED PAVEMENT SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

   c. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY COLD PLANING SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

   d. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE TRAFFIC LANE BEING UTILIZED BY TRAFFIC AND SHOULDER THE DIFFERENCE IN ELEVATION SHALL BE ELIMINATED WITHIN SEVEN WORKDAYS AFTER THE CONDITION IS CREATED.

2. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 6 INCHES BUT NOT EXCEEDING 18 INCHES, THE CONTRACTOR, WITH THE ENGINEER'S APPROVAL, MAY UTILIZE ONE OF THE FOLLOWING:

   a. THE CONTRACTOR SHALL ACCOMPLISH SEPARATION BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

   IN ORDER TO USE THIS METHOD, THE CONTRACTOR MUST REDUCE THE DIFFERENCE IN ELEVATION TO 6 INCHES OR LESS BY THE END OF THE WORKDAY THAT THE CONDITION IS CREATED.

   b. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a, AND CONSTRUCT A STONE WEDGE WITH A 4:1 SLOPE, OR FLATTER, TO ELIMINATE THE VERTICAL OFFSET IF THE LOWER ELEVATION IS AT OR BELOW SUBGRADE AT THE END OF EACH DAY.

   c. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a AND IF THE LOWER ELEVATION IS BASE STONE OR ASPHALT PAVEMENT, PLACEMENT OF SUBSEQUENT LAYERS OF PAVEMENT MUST BEGIN THE NEXT WORK DAY AND PROGRESS CONTINUOUSLY UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED OR REDUCED TO SIX INCHES OR LESS.

   d. THE CONTRACTOR SHALL PROVIDE SEPARATION BY PORTABLE BARRIER RAIL.

   FOR PRECEDING CONDITIONS a, b, AND c, THE CONTRACTOR SHALL USE THE SHOULDER DROP-OFF WARNING SIGN WITH PLAQUE (W8-17 AND W8-17P). IT SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN THE SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. IN THESE SITUATIONS, THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 1 MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

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UNOFFICIAL SET
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND SPECIAL NOTES

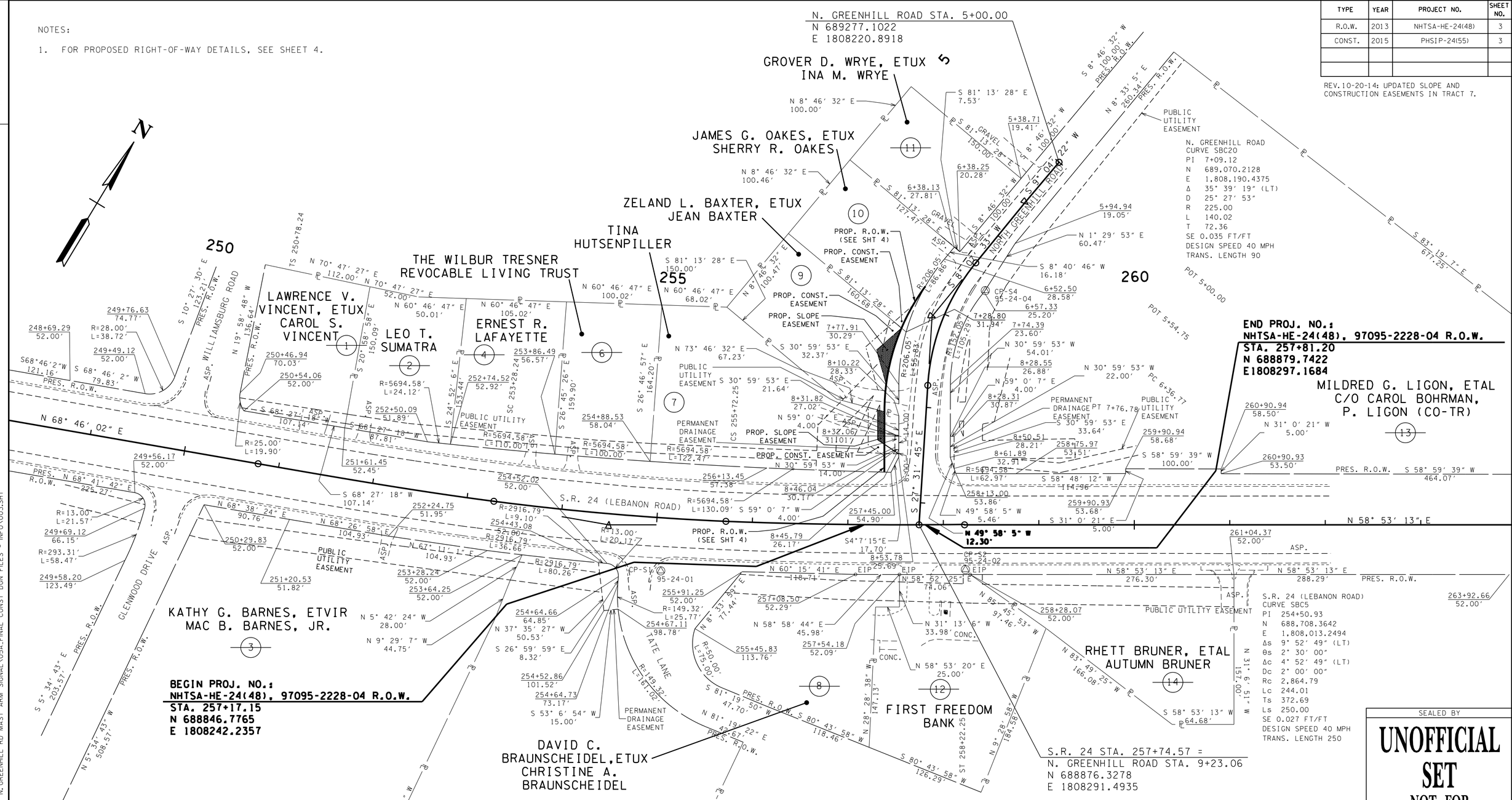
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

NOTES:

1. FOR PROPOSED RIGHT-OF-WAY DETAILS, SEE SHEET 4.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	3
CONST.	2015	PHSIP-24(55)	3

REV. 10-20-14: UPDATED SLOPE AND CONSTRUCTION EASEMENTS IN TRACT 7.



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	~~LAWRENCE V. VINCENT, ETUX CAROL S. VINCENT~~	~~53K A~~	~~28~~	~~400~~	~~402~~	~~0.395~~		~~0.395~~				~~0.395~~				
2	~~LEO T. SUMATRA~~	~~53K A~~	~~27~~	~~1371~~	~~1364~~	~~0.368~~		~~0.368~~				~~0.368~~				
3	~~KATHY G. BARNES, ETVIR MAC B. BARNES, JR.~~	~~53~~	~~111~~	~~1043~~	~~1452~~		~~4.166~~	~~4.166~~					~~4.166~~			
4	~~ERNEST R. LAFAYETTE~~	~~53K A~~	~~26~~	~~881~~	~~1495~~	~~0.387~~		~~0.387~~				~~0.387~~				
5	~~DAVID C. BRAUNSCHEIDEL, ETUX CHRISTINE A. BRAUNSCHEIDEL~~	~~53K D~~	~~1~~	~~449~~	~~660~~		~~3.474~~	~~3.474~~					~~3.474~~			
6	~~THE WILBUR TRESNER REVOCABLE LIVING TRUST~~	~~53K A~~	~~25~~	~~976~~	~~254~~	~~0.372~~		~~0.372~~				~~0.372~~				
7	TINA HUTSENPILLER	53K A	24	1251	1895	0.700		0.700	857 S.F.		857 S.F.	0.680			229	497
8	~~DAVID C. BRAUNSCHEIDEL, ETUX CHRISTINE A. BRAUNSCHEIDEL~~	~~53~~	~~110.01~~	~~1170~~	~~477~~		~~0.612~~	~~0.612~~					~~0.612~~			
9	ZELAND L. BAXTER, ETUX JEAN BAXTER	53K A	23	316	287	0.421		0.421	1002 S.F.		1002 S.F.	0.398			498	819
10	JAMES G. OAKES, ETUX SHERRY R. OAKES	53K A	22	315	61	0.341		0.341	149 S.F.		149 S.F.	0.338				124
11	~~GROVER D. WRYE, ETUX INA M. WRYE~~	~~53K A~~	~~21~~	~~1414~~	~~75~~	~~0.344~~		~~0.344~~				~~0.344~~				
12	~~FIRST FREEDOM BANK~~	~~53~~	~~110~~	~~1421~~	~~393~~		~~0.685~~	~~0.685~~					~~0.685~~			
13	~~MILDRED G. LIGON, ETAL C/O CAROL BOHRMAN / P. LIGON (CO-TR)~~	~~53~~	~~41~~	~~1393~~	~~2142~~	~~4.471~~		~~4.471~~				~~4.471~~				
14	~~RHETT BRUNER, ETUX AUTUMN BRUNER~~	~~53K E~~	~~2.01~~	~~1451~~	~~256~~		~~0.608~~	~~0.608~~					~~0.608~~			

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAPS AND RIGHT-OF-WAY ACQUISITION TABLE

SCALE: 1"= 50'

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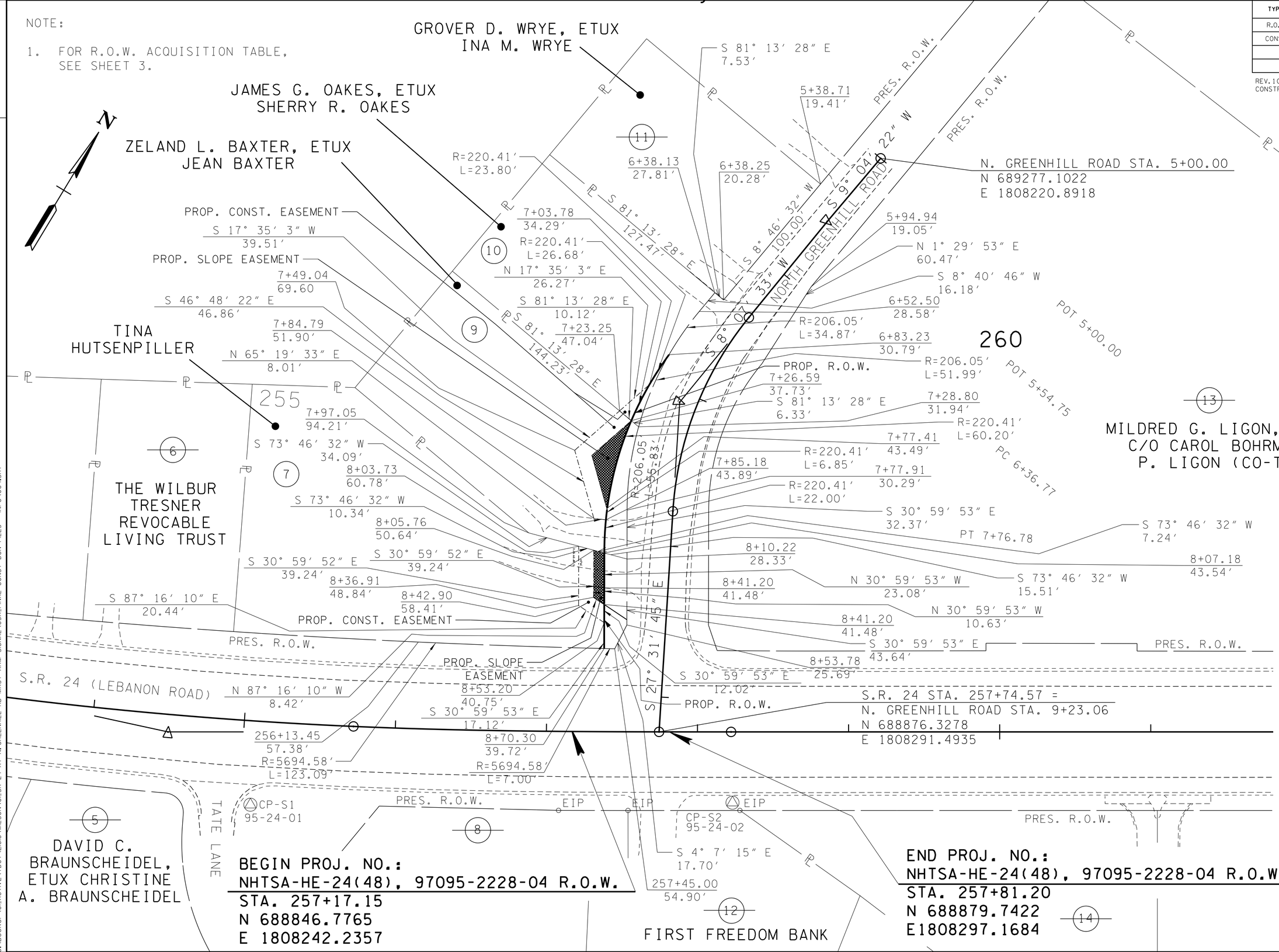
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	4
CONST.	2015	PHSIP-24(55)	4

REV. 10-20-14: UPDATED SLOPE AND CONSTRUCTION EASEMENTS IN TRACT 7.

NOTE:

1. FOR R.O.W. ACQUISITION TABLE, SEE SHEET 3.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY DETAILS

SCALE: 1"= 30'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	5
CONST.	2015	PHSIP-24(55)	5

REV.10-20-14: AT TRACT 7, ADDED PRIVATE DRIVEWAY OFF OF SR. 24 AT STA. 255+25.00. SCARIFIED EXISTING DRIVEWAY. ADDED CALL OUT FOR EXISTING 15"CMP TO BE REMOVED, AND UPDATED SLOPE AND CONSTRUCTION EASEMENTS.

UTILITY OWNERS

TELEPHONE:
AT&T
333 COMMERCE STREET, ROOM 23C-142
NASHVILLE, TN 37201
CONTACT: KIM BEAN
PHONE (O): 615-214-7318
EMAIL: kb1078@att.com

TDS TELECOM
5265 MURFREESBORO ROAD
LA VERGNE, TN 37086
CONTACT: RUSTY HARPER
PHONE (O): 615-641-5088
EMAIL: russell.harper@tdstelecom.com

WATER:
WEST WILSON UTILITIES
10960 LEBANON ROAD
MT. JULIET, TN 37122
CONTACT: FREDDIE WESTON
PHONE (O): 615-758-5682
EMAIL: freddiew@westwilsonutility.com

FIBER OPTIC:
AT&T FIBER OPTIC CABLE (AT&T CORP)
360 GEES MILL BUSINESS PARKWAY
CONYERS, GA 30013
CONTACT: SCOTT LOGEMAN
PHONE (C): 770-335-8255
EMAIL: sl1213@att.com

ELECTRIC:
MIDDLE TENNESEE
MEMBERSHIP CORPORATION
555 NEW SALEM ROAD
MURFREESBORO, TN 37129
CONTACT: TALLEY FLOYD
PHONE (O): 615-494-1540
PHONE (C): 615-890-9762
EMAIL: tfloyd@mtemc.com

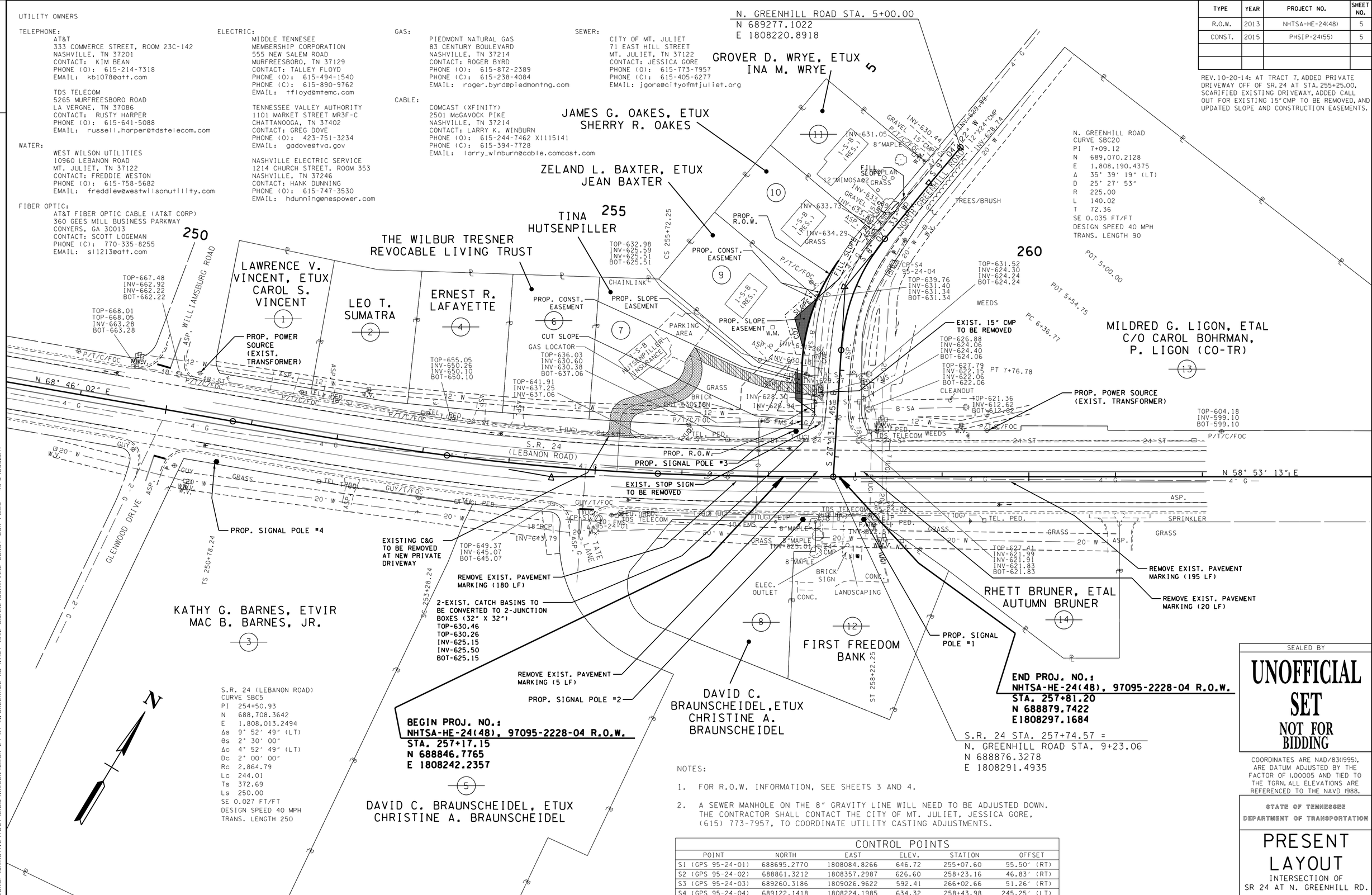
TENNESSEE VALLEY AUTHORITY
1101 MARKET STREET MR3F-C
CHATTANOOGA, TN 37402
CONTACT: GREG DOVE
PHONE (O): 423-751-3234
EMAIL: gadove@tva.gov

NASHVILLE ELECTRIC SERVICE
1214 CHURCH STREET, ROOM 353
NASHVILLE, TN 37246
CONTACT: HANK DUNNING
PHONE (O): 615-747-3530
EMAIL: hdunning@nespower.com

GAS:
PIEDMONT NATURAL GAS
83 CENTURY BOULEVARD
NASHVILLE, TN 37214
CONTACT: ROGER BYRD
PHONE (O): 615-872-2389
PHONE (C): 615-238-4084
EMAIL: roger.byrd@piedmontng.com

CABLE:
COMCAST (XFINITY)
2501 McGAVOCK PIKE
NASHVILLE, TN 37214
CONTACT: LARRY K. WINBURN
PHONE (O): 615-244-7462 X1115141
PHONE (C): 615-394-7728
EMAIL: larry_winburn@cable.comcast.com

SEWER:
CITY OF MT. JULIET
71 EAST HILL STREET
MT. JULIET, TN 37122
CONTACT: JESSICA GORE
PHONE (O): 615-773-7957
PHONE (C): 615-405-6277
EMAIL: jgore@cityofmtjuliet.org



NOTES:

1. FOR R.O.W. INFORMATION, SEE SHEETS 3 AND 4.
2. A SEWER MANHOLE ON THE 8" GRAVITY LINE WILL NEED TO BE ADJUSTED DOWN. THE CONTRACTOR SHALL CONTACT THE CITY OF MT. JULIET, JESSICA GORE, (615) 773-7957, TO COORDINATE UTILITY CASTING ADJUSTMENTS.

CONTROL POINTS

POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S1 (GPS 95-24-01)	688695.2770	1808084.8266	646.72	255+07.60	55.50' (RT)
S2 (GPS 95-24-02)	688861.3212	1808357.2987	626.60	258+23.16	46.83' (RT)
S3 (GPS 95-24-03)	689260.3186	1809026.9622	592.41	266+02.66	51.26' (RT)
S4 (GPS 95-24-04)	689122.1418	1808224.1985	634.32	258+43.98	245.25' (LT)

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT
INTERSECTION OF
SR 24 AT N. GREENHILL RD.
SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	5A
CONST.	2015	PHSIP-24(55)	5A

REV. 10-20-14: REMOVED EXISTING PRIVATE DRIVE WITH SIDE DRAIN TO PARKING AREA AND ADDED NEW DRIVEWAY OFF OF SR 24 AT STA. 255+25.00; RELOCATED PROFILE TO SHT 5B; ADDED NEW NOTES 4 AND 5; AT PRIVATE DRIVEWAY STA. 07+91.15 CHANGED TO 18" RCP.

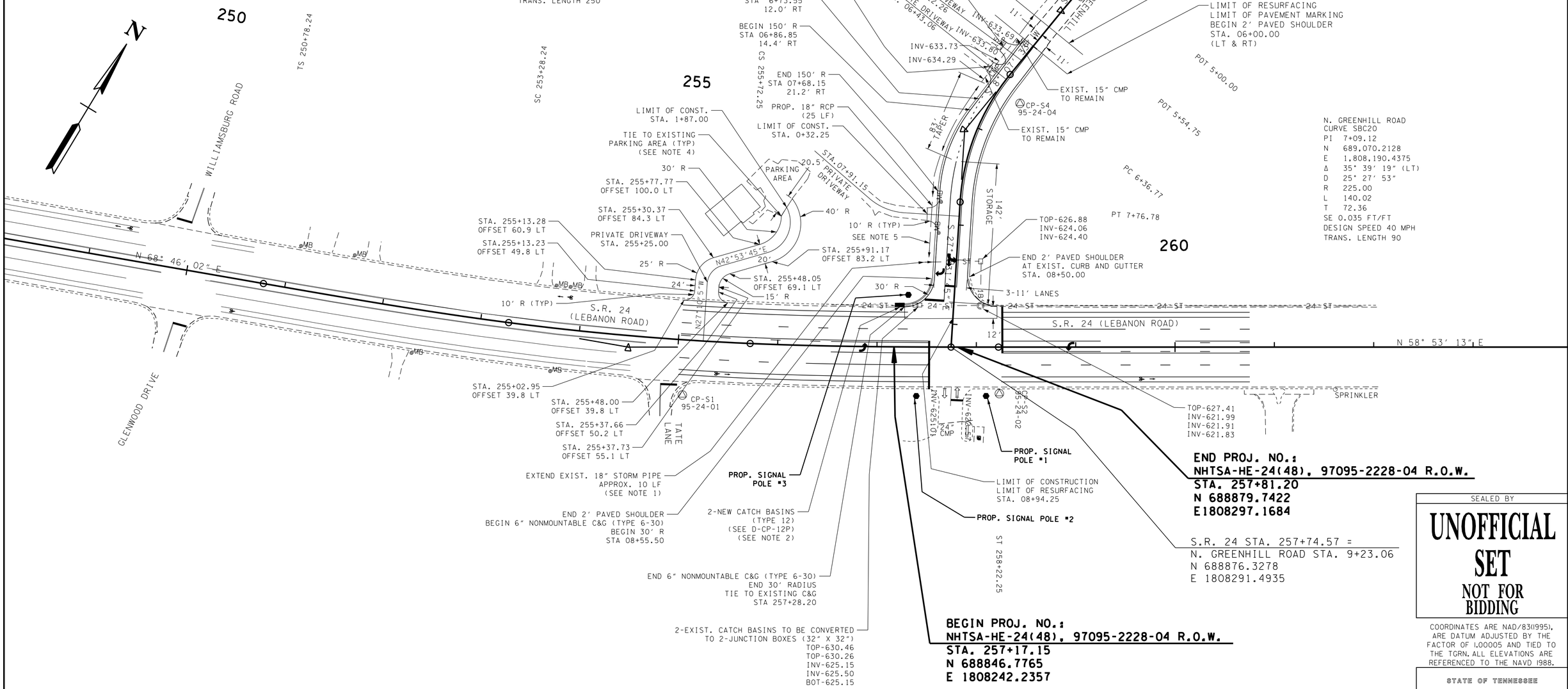
NOTES:

1. THE EXISTING 18" STORM PIPE CROSSING N. GREENHILL ROAD SHALL BE EXTENDED TO THE NEW SLOPE LINE. SEE DRAINAGE CROSS-SECTION, SHEET 14.
2. THE 2-EXISTING CATCH BASINS SHALL BE REMOVED AND 2-NEW CATCH BASINS (TYPE 12) INSTALLED AT THE END OF THE NEW RADIUS CURB LINE. ADJUST 24" STORM DRAIN.
3. FOR PROPOSED SIGNAL AND PAVEMENT MARKINGS, SEE SHEETS 7-8.
4. FOR PRIVATE DRIVEWAY OFF OF SR 24 AT STA. 255+25.00, THE CONTRACTOR SHALL STAKE AND FIELD VERIFY THE LOCATION OF THE PARKING AREA AND NEW PRIVATE DRIVEWAY FOR APPROVAL BY THE ENGINEER.
5. IN AREA OF EXISTING PRIVATE DRIVEWAY TO BE REMOVED, THE EXISTING 15" CMP SHALL BE REMOVED AND THE AREA SHALL BE REGRADED TO ESTABLISH A NEW DRAINAGE DITCH TO DIRECT THE FLOW OF WATER TOWARDS THE EXISTING 18" STORM PIPE.

S.R. 24 (LEBANON ROAD)
CURVE SBC5
PI 254+50.93
N 688,708.3642
E 1,808,013.2494
Δs 9° 52' 49" (LT)
θs 2° 30' 00"
Δc 4° 52' 49" (LT)
Dc 2° 00' 00"
Rc 2,864.79
Lc 244.01
Ts 372.69
Ls 250.00
SE 0.027 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 250

N. GREENHILL ROAD STA. 5+00.00
N 689277.1022
E 1808220.8918

N. GREENHILL ROAD
CURVE SBC20
PI 7+09.12
N 689,070.2128
E 1,808,190.4375
Δ 35° 39' 19" (LT)
D 25° 27' 53"
R 225.00
L 140.02
T 72.36
SE 0.035 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 90



END PROJ. NO.:
NHTSA-HE-24(48), 97095-2228-04 R.O.W.
STA. 257+81.20
N 688879.7422
E1808297.1684

S.R. 24 STA. 257+74.57 =
N. GREENHILL ROAD STA. 9+23.06
N 688876.3278
E 1808291.4935

BEGIN PROJ. NO.:
NHTSA-HE-24(48), 97095-2228-04 R.O.W.
STA. 257+17.15
N 688846.7765
E 1808242.2357

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

INTERSECTION OF
SR 24 AT N. GREENHILL RD.

SCALE: 1"= 50'

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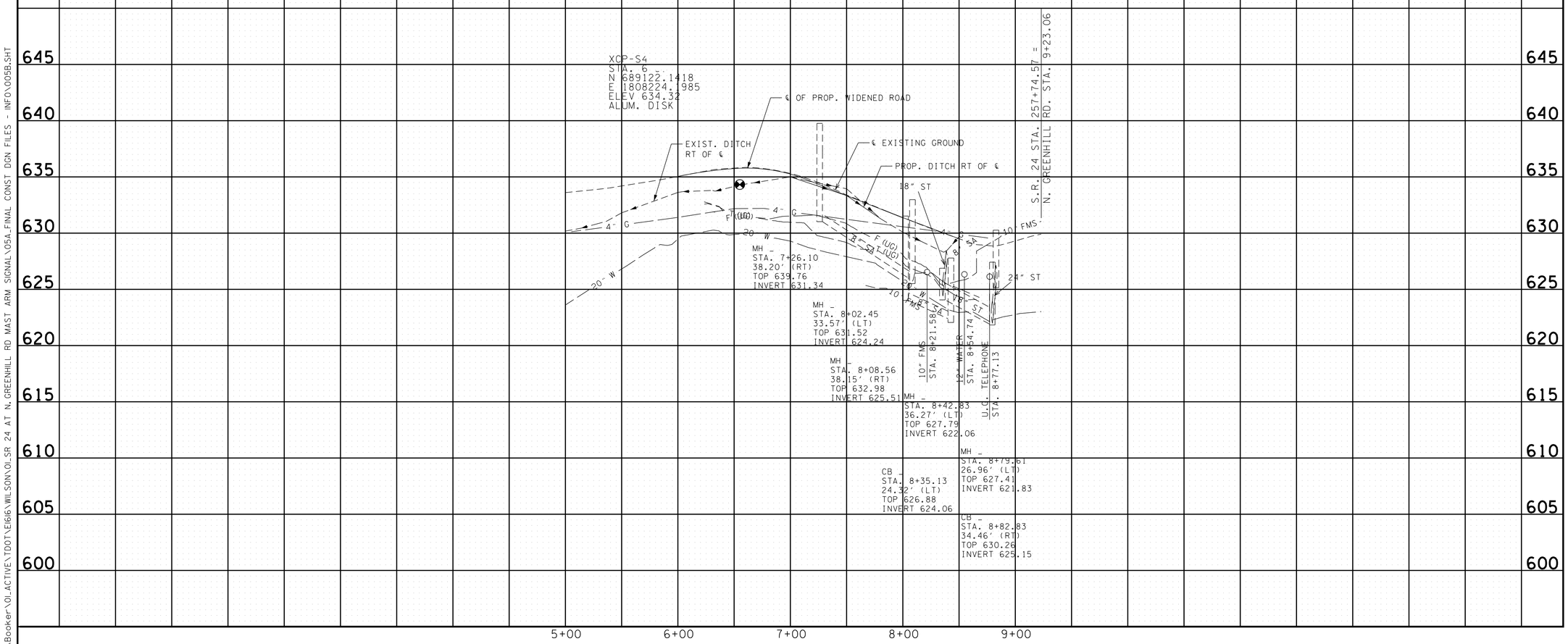
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	5B
CONST.	2015	PHSIP-24(55)	5B

REV. 10-20-14: ADDED NEW SHEET; RELOCATED PROFILE FROM SHT 5A.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED PROFILE

N. GREENHILL ROAD

SCALE: 1"=50' HORIZ.
1"=5' VERT.

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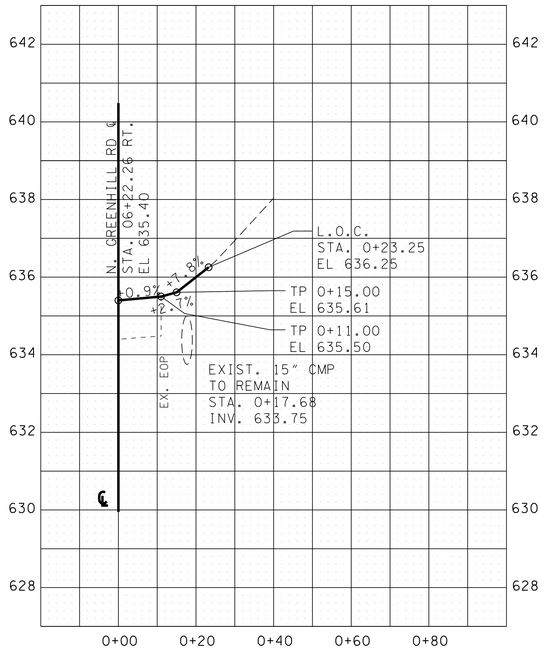
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

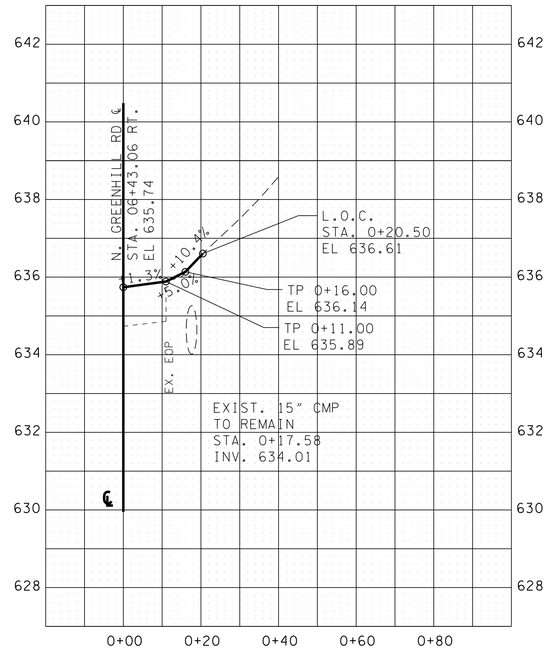
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	6
CONST.	2015	PHSIP-24(55)	6

REV. 10-20-14: REMOVED PROFILE FOR DRIVEWAY AT TRACT 7; AT TRACT 9, CHANGED TO 18" RCP; ADDED NEW NOTE 3.

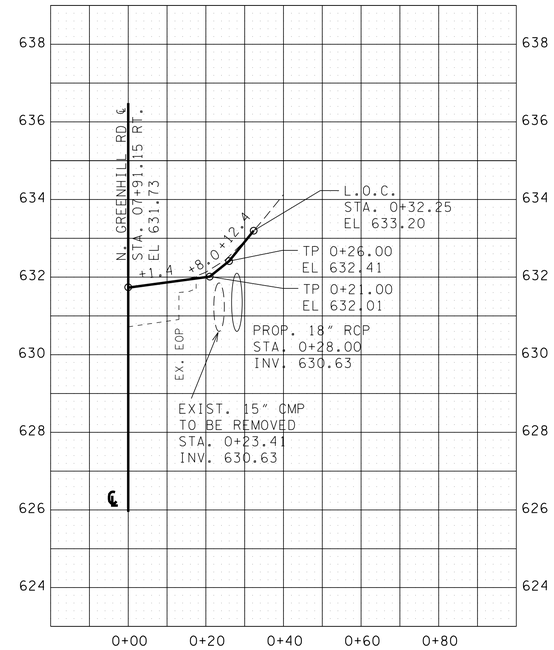
N. GREENHILL ROAD, STA. 06+22.26 RT.
PRIVATE DRIVEWAY, TRACT 11



N. GREENHILL ROAD, STA. 06+43.06 RT.
PRIVATE DRIVEWAY, TRACT 10



N. GREENHILL ROAD, STA. 07+91.15 RT.
PRIVATE DRIVEWAY, TRACT 9



NOTES:

1. THE DRIVEWAYS SHALL BE PAVED TO THE LIMIT SHOWN.
2. FOR DRIVEWAY PAVEMENT DESIGN, SEE SHEET 2.
3. FOR NEW DRIVEWAY AT TRACT 7, SEE NOTE 4 ON SHEET 5A.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVEWAYS

SCALE: 1"= 20' HORIZ.
1"= 2' VERT.

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	7
CONST.	2015	PHSIP-24(55)	7

NOTES:

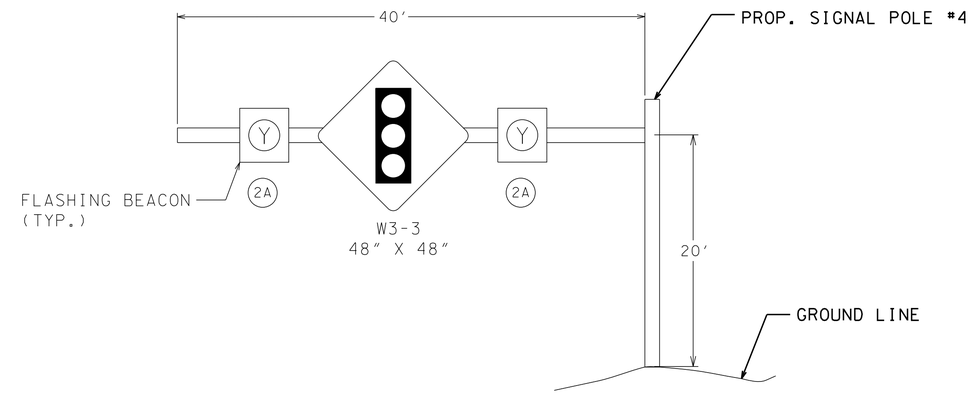
1. FLASHING SIGNAL CONTROLLER AND 20 AMP SINGLE CIRCUIT BREAKER TO BE LOCATED ON EXISTING WOOD POLE.

2. FOR CURVE DATA, REFER TO PRESENT LAYOUT SHEET 5.

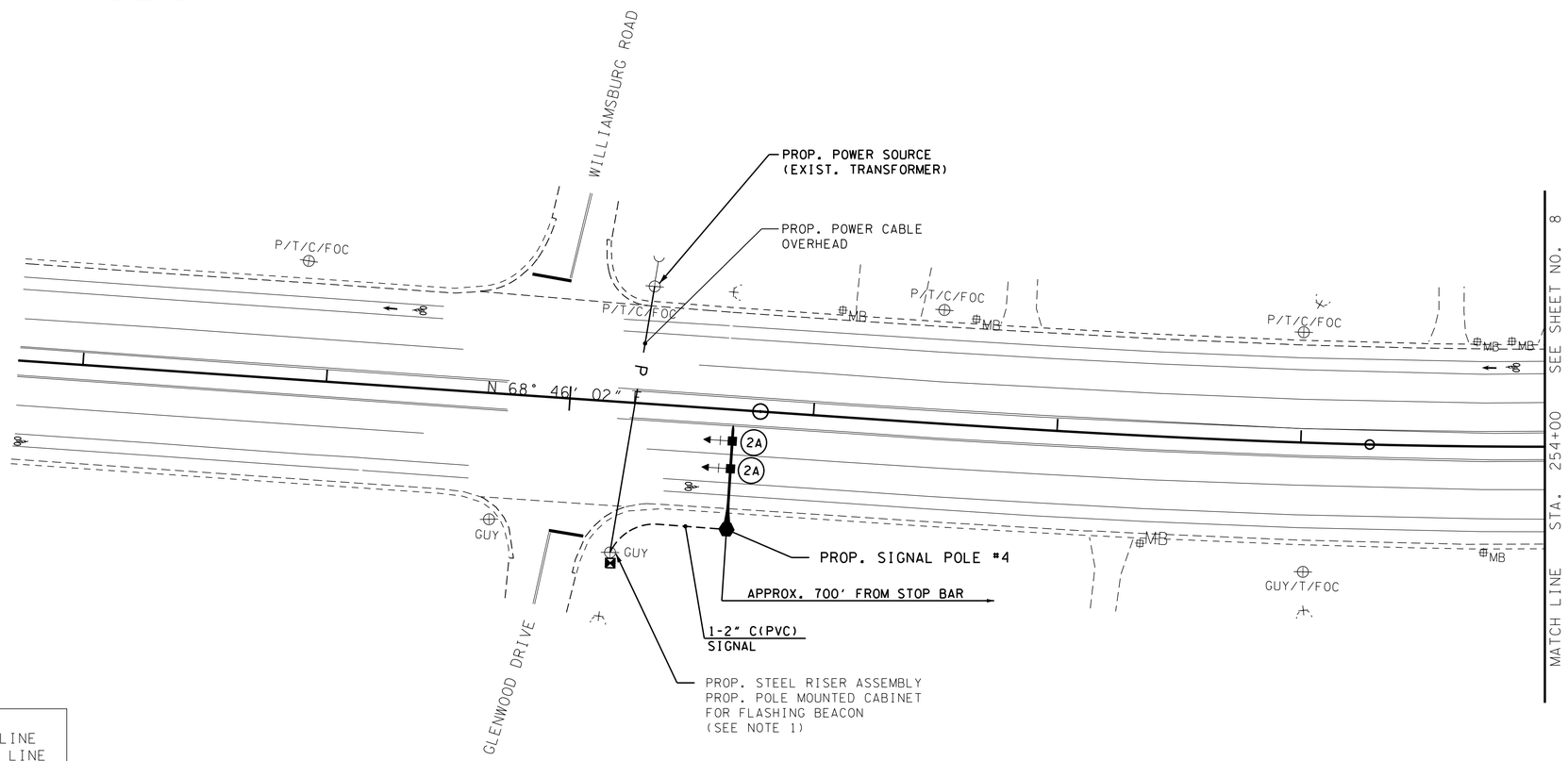
ESTIMATED FOUNDATION QUANTITIES (4 FT. DIAMETER)							
FOOTING DEPTH	1 T400 REINFORCING BARS			2 A700 REINFORCING BARS			CONCRETE (CUBIC YARDS)
	NUMBER OF BARS	LENGTH OF EACH BAR	TOTAL WEIGHT IN POUNDS	NUMBER OF BARS	LENGTH OF EACH BAR	TOTAL WEIGHT IN POUNDS	
15' - 0"	15	12' - 0"	121	8	14' - 6"	238	7.0
18' - 0"	18	12' - 0"	145	8	17' - 6"	287	8.4
19' - 0"	19	12' - 0"	153	8	18' - 6"	303	8.8
20' - 0"	20	12' - 0"	161	8	19' - 6"	319	9.3
21' - 0"	21	12' - 0"	169	8	20' - 6"	336	9.8
22' - 0"	22	12' - 0"	177	8	21' - 6"	352	10.2
24' - 0"	24	12' - 0"	193	10	23' - 6"	481	11.2
26' - 0"	26	12' - 0"	209	12	25' - 6"	626	12.1

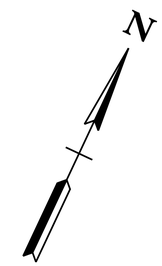
(1) CHANGE DIAMETER FROM 2 '- 6" TO 3' - 6"
(2) CHANGE MAXIMUM SPACING TO 1' - 6"

NOTE: SEE STANDARD DRAWING T-SG-10 FOR OTHER DETAILS.



MAST ARM DETAIL
N.T.S.





PAVEMENT MARKING LEGEND
SSWL - SINGLE SOLID WHITE LINE
SSYL - SINGLE SOLID YELLOW LINE
SBWL - SINGLE BROKEN WHITE LINE
SBYL - SINGLE BROKEN YELLOW LINE
DSYL - DOUBLE SOLID YELLOW LINE
DWL - DOTTED WHITE LINE

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED SIGNAL LAYOUT
INTERSECTION OF
SR 24 AT N. GREENHILL RD.

SCALE: 1"= 30'

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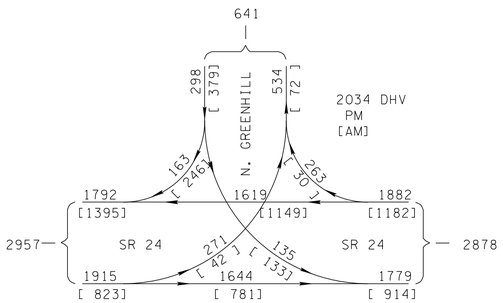
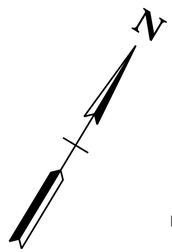
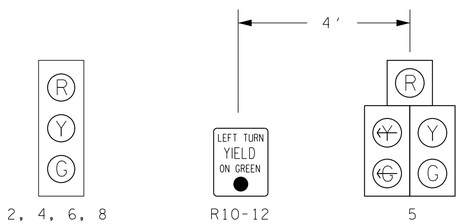
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	8
CONST.	2015	PHSIP-24(55)	8

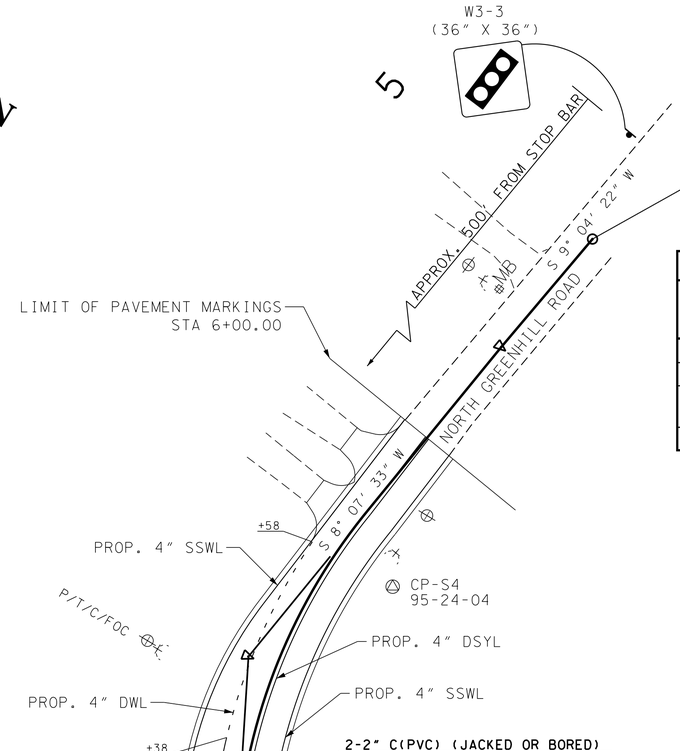
REV.10-20-14: ADDED ENTRY FOR NEW PRIVATE DRIVEWAY OFF OF SR 24 AT STA. 255+25.00.







PROPOSED SIGNAL HEADS



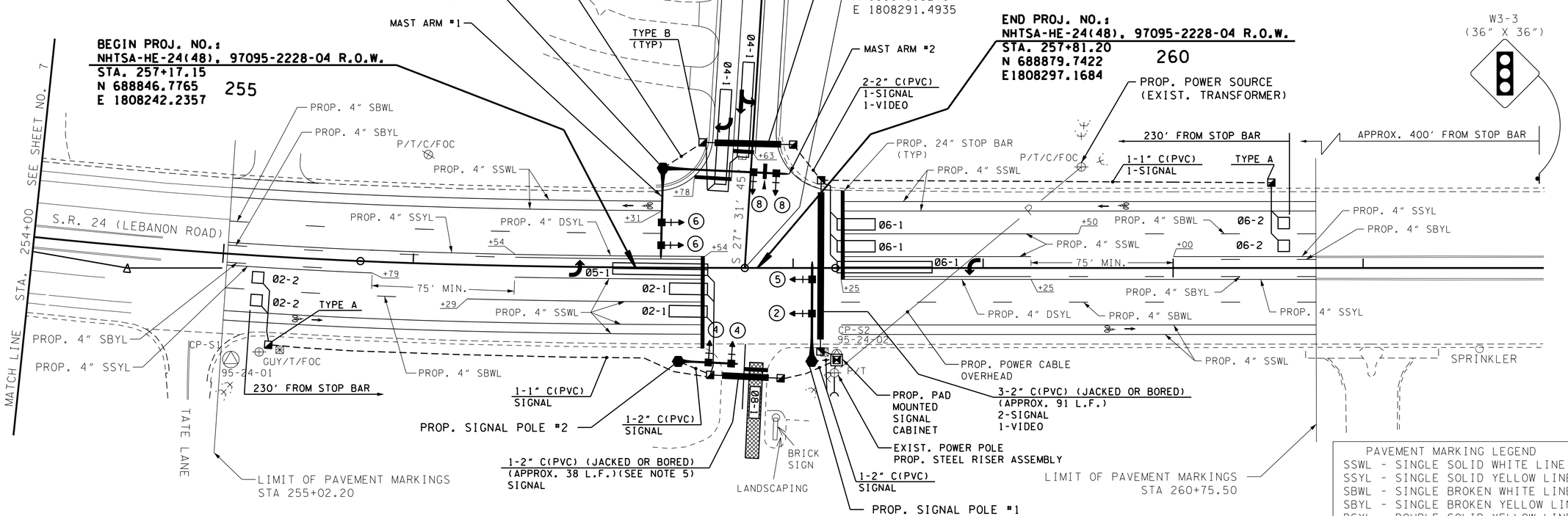
N. GREENHILL ROAD STA. 5+00.00
N 689277.1022
E 1808220.8918

SIGNAL SUPPORT POLE DATA								
POLE NO.	STATION	OFFSET/SIDE	NORTHING	EASTING	GRD. ELEV. @ POLE	ARM LENGTH (FT)	FOOTING DEPTH (MIN. FT)	FOOTING DIA. (MIN. FT)
1	258+10	49.3' RT	688816.0884	1808286.9264	626.7	50.0	15'-0"	3'-0"
2	257+40	49.2' RT	688852.4286	1808347.0734	631.5	30.0	15'-0"	3'-0"
3	257+31	52.4' LT	688899.1230	1808227.5119	631.8	MAST ARM #1 = 45.0 MAST ARM #2 = 65.0	15'-0"	4'-0" (1)
4	250+68	49.2' RT	688523.7173	1807673.7972	666.4	40.0	15'-0"	3'-0"

(1) FOR 4 FT. DIA. FOUNDATION, SEE ESTIMATED FOUNDATION QUANTITIES SCHEDULE ON SHEET 7.

NOTES:

1. LOCATION OF PROPOSED SIGNAL POLES ARE APPROXIMATE AND CAN BE ADJUSTED 5' TO 10' TO AVOID UTILITY CONFLICTS AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL VERIFY THAT ARM LENGTHS ARE STILL FUNCTIONAL PRIOR TO POLE RELOCATION.
2. SOME UTILITIES MAY REQUIRE LOCATION BY HAND DIGGING PRIOR TO PROPOSED SIGNAL POLE INSTALLATION.
3. FOR SBWL, QUANTITY SHOWN IS MARKED SURFACE ONLY, NOT RUNNING LENGTH.
4. FOR CURVE DATA, REFER TO PRESENT LAYOUT SHEET 5.
5. THE CONTRACTOR SHALL ENSURE THAT THE JACKED OR BORED CONDUIT BETWEEN SIGNAL POLES #1 AND #2 SHALL BE INSTALLED WITHIN THE TDOT RIGHT-OF-WAY. THE JACKED OR BORED CONDUIT IS SHOWN IN THIS LOCATION FOR CLARITY PURPOSES ONLY.



PAVEMENT MARKING LEGEND
SSWL - SINGLE SOLID WHITE LINE
SSYL - SINGLE SOLID YELLOW LINE
SBWL - SINGLE BROKEN WHITE LINE
SBYL - SINGLE BROKEN YELLOW LINE
DSYL - DOUBLE SOLID YELLOW LINE
DWL - DOTTED WHITE LINE

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED SIGNAL LAYOUT

INTERSECTION OF
SR 24 AT N. GREENHILL RD.

SCALE: 1"= 30'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	PHSIP-24(55)	9

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

*VOLUME - DENSITY TIMING (SECS)

PHASE	MIN GREEN (INITIAL INTERVAL)	MAX INITIAL	ADDED INITIAL PER ACTUATION	PASSAGE TIME	MINIMUM GAP	TIME BEFORE REDUCTION	TIME TO REDUCE	MAX I	MAX II	CLEARANCE		PEDESTRIAN		RECALL TO	MEMORY POSITION (1)
										YELLOW	ALL RED	WALK	FLASHING DON'T WALK		
2	15	21	2	4	3	13	13	40	—	4	2			—	L
6	15	21	2	4	3	13	13	40	—	4	2			—	L

* BASED ON V=40 MPH AND D=230' (D=DISTANCE OF VOLUME-DESNITY LOOP FROM STOP BAR)

BASIC OR FULLY ACTUATED TIMINGS (SECS)

PHASE	MIN GREEN (INITIAL INTERVAL)	VEHICLE INTERVAL	MAX I	MAX II	CLEARANCE		PEDESTRIAN		RECALL TO	MEMORY POSITION (1)	LEFT-TURN OPERATION (2)
					YELLOW	ALL RED	WALK	FLASHING DON'T WALK			
2	6	2.0	68	—	4	2			—	NL	—
4	6	2.0	18	—	4	2			—	NL	PERM
5	4	2.0	18	—	3	1			—	NL	P + P
6	6	2.0	68	—	4	2			—	NL	PERM
8	6	2.0	18	—	4	2			—	NL	PERM

(1) NL = NONLOCK
L = LOCK

(2) PERM = PERMITTED
PROT = PROTECTED
P + P = PROT / PERM

MAX I = MAXIMUM GREEN TIME (DOES NOT INCLUDE CLEARANCE TIME)

THESE TIMINGS ARE INITIAL AND SHOULD BE ADJUSTED BY THE CONTRACTOR BASED ON FIELD OBSERVATIONS TO PROVIDE EFFICIENT OPERATION.

VIDEO ZONE & AMP ASSIGNMENTS

VIDEO ZONE NO.	ZONE NO.	ZONE AREA	AMP MODE	ASSOC. PHASE	DETECTION ZONE SIZE
Ø8-1	1	THRU LANE	PRES	8	6' X 50'

REFER TO STD. DWG T-SG-3A FOR VIDEO DETECTION DETAILS.

ZONE NUMBERS CORRESPOND WITH INPUT PHASE NUMBERS.

LOOP & AMP ASSIGNMENTS

DETECTOR LOOP NO.	DETECTOR NO.	LOOP LENGTH	AMP MODE	ASSOC. PHASE
Ø2-1	1	2 @ 20	PRES	2
Ø2-2	2	2 @ 6	PULSE	2
Ø4-1	3	2 @ 50	PRES	4
*Ø5-1	4	2 @ 50	PRES	5
Ø6-1	5	2 @ 20	PRES	6
*Ø6-1	6	1 @ 50	PRES	6
Ø6-2	7	2 @ 6	PULSE	6

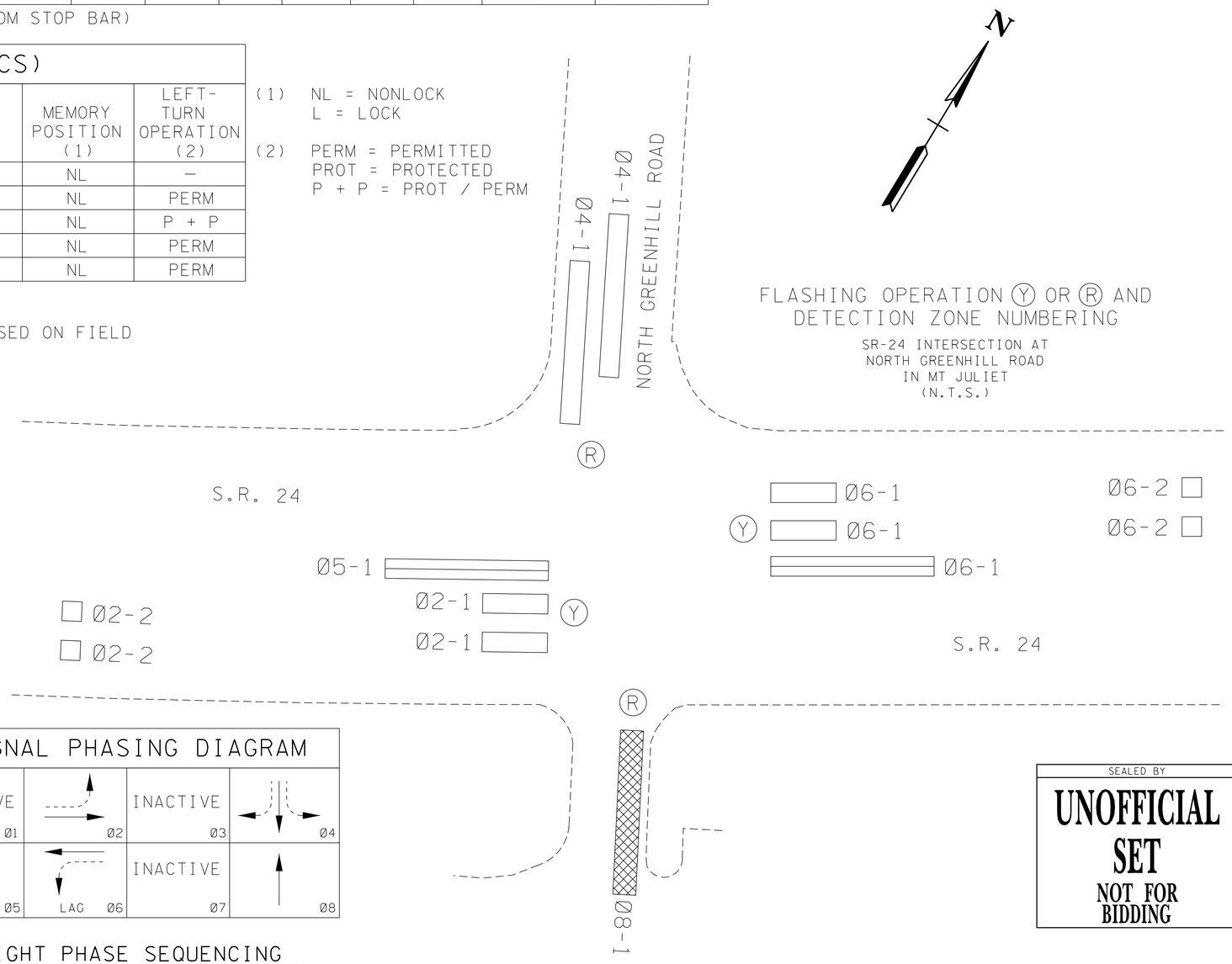
* SHALL BE A QUADROPOLE.

ALL LOOPS ARE 6' IN WIDTH AND CENTERED IN THE TRAFFIC LANE.

LOOP WIRE CONNECTIONS SHALL BE WIRED TO PROVIDE THE APPROPRIATE INDUCTANCE AS REQUIRED BY TDOT DWG. T-SG-3.

DETECTOR LOOP NUMBERS CORRESPOND WITH INPUT PHASE NUMBERS.

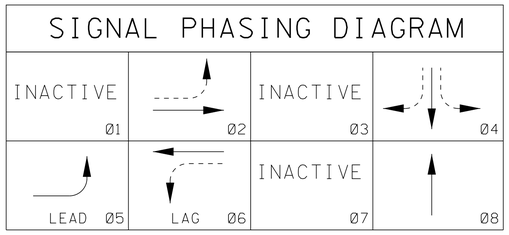
REFER TO TDOT STD. DWG T-SG-3 FOR NUMBER OF LOOP TURNS REQUIRED FOR EACH DETECTOR LOOP.



FLASHING OPERATION Ⓨ OR Ⓡ AND DETECTION ZONE NUMBERING

SR-24 INTERSECTION AT
NORTH GREENHILL ROAD
IN MT JULIET
(N.T.S.)

SIGNAL PHASING DIAGRAM



EIGHT PHASE SEQUENCING

ALL SIGNAL DISPLAYS AND CLEARANCES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

FULL SKIP CAPABILITY

PERMITTED VEHICULAR MOVEMENT

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PHASING, TIMING, AND DETECTOR ASSIGNMENT

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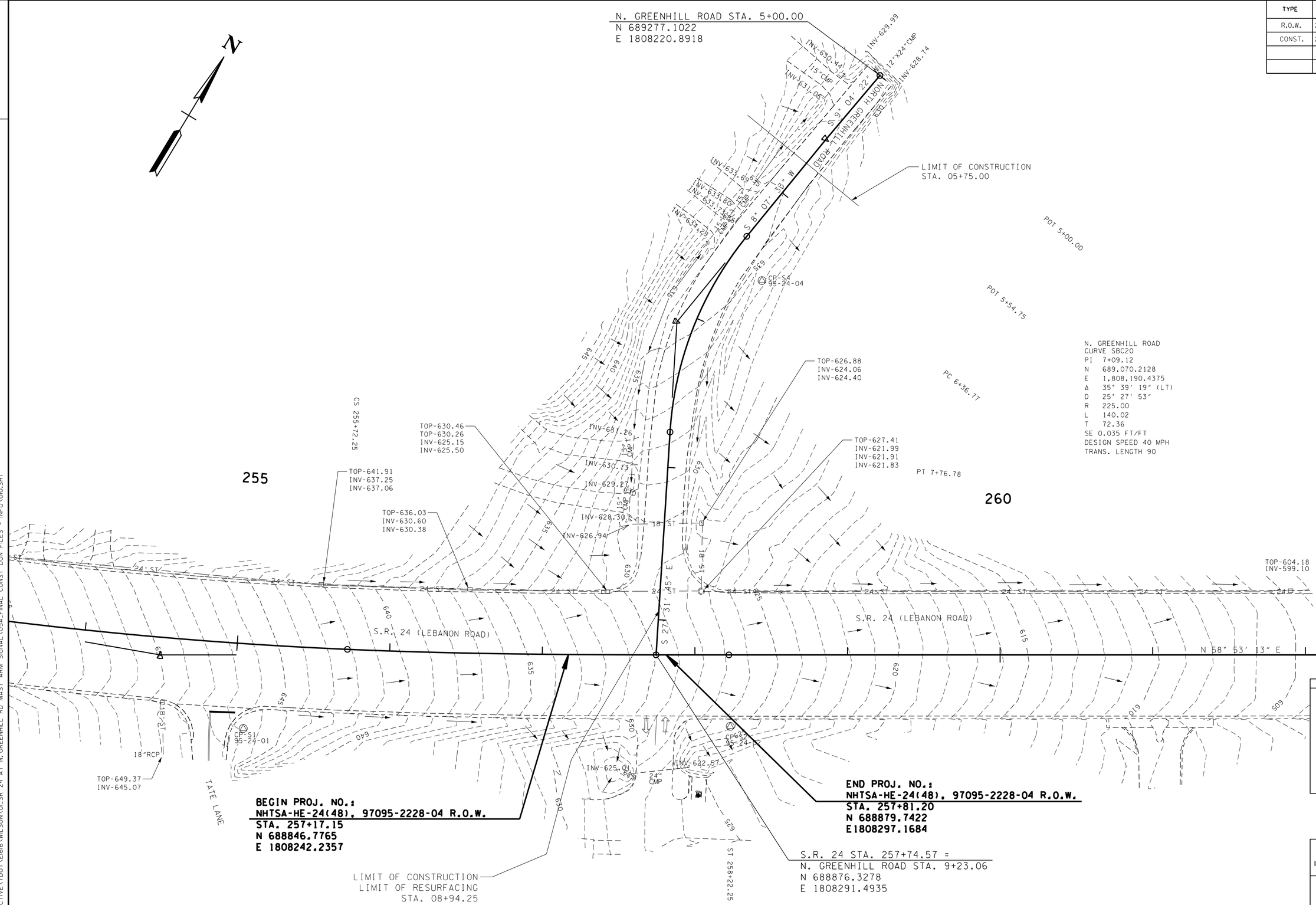
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	9
CONST.	2015	PHSIP-24(55)	10

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



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

INTERSECTION OF
SR 24 AT N. GREENHILL RD.

SCALE: 1"= 30′

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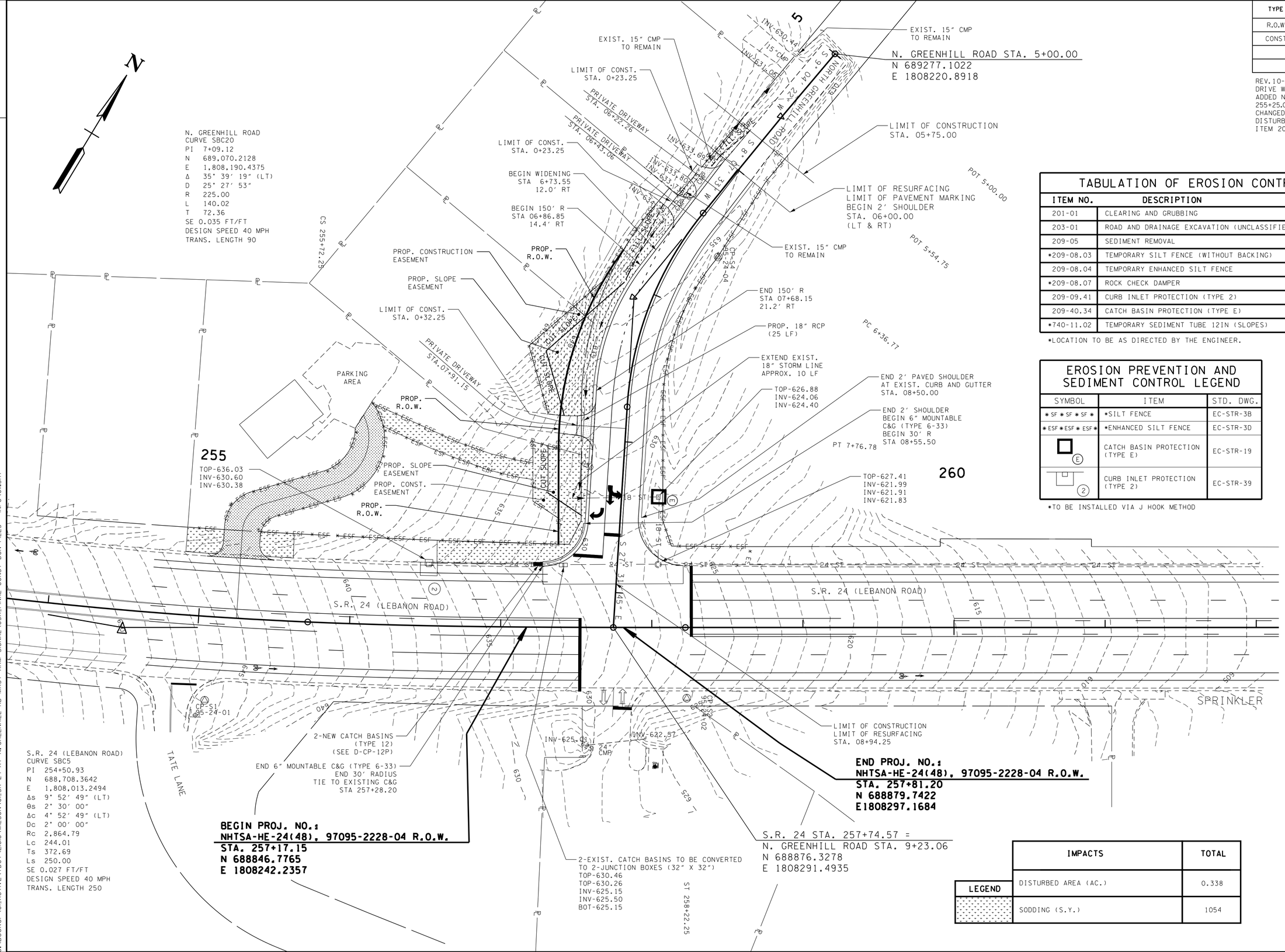
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	10
CONST.	2015	PHSIP-24(55)	11

REV. 10-20-14: REMOVED EXISTING PRIVATE DRIVE WITH SIDE DRAIN TO PARKING AREA AND ADDED NEW DRIVEWAY OFF OF SR 24 AT STA. 255+25.00; AT PRIVATE DRIVEWAY STA. 07+91.15 CHANGED TO 18"RCP; UPDATED QTY FOR DISTURBED AREA. AREA TO BE SODDED AND PAY ITEM 209-08.04.



TABULATION OF EROSION CONTROL FEATURES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
201-01	CLEARING AND GRUBBING	LS	1
203-01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED)	CY	500
209-05	SEDIMENT REMOVAL	CY	100
*209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	LF	500
209-08.04	TEMPORARY ENHANCED SILT FENCE	LF	1362
*209-08.07	ROCK CHECK DAMPER	EACH	2
209-09.41	CURB INLET PROTECTION (TYPE 2)	EA	1
209-40.34	CATCH BASIN PROTECTION (TYPE E)	EA	1
*740-11.02	TEMPORARY SEDIMENT TUBE 12IN (SLOPES)	LF	500

*LOCATION TO BE AS DIRECTED BY THE ENGINEER.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	*SILT FENCE	EC-STR-3B
* ESF * ESF * ESF *	*ENHANCED SILT FENCE	EC-STR-3D
E	CATCH BASIN PROTECTION (TYPE E)	EC-STR-19
2	CURB INLET PROTECTION (TYPE 2)	EC-STR-39

*TO BE INSTALLED VIA J HOOK METHOD

LEGEND	IMPACTS	TOTAL
	DISTURBED AREA (AC.)	0.338
	SODDING (S.Y.)	1054

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

SCALE: 1"= 30'

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DESIGN DIVISION
FILE NO.

GENERAL TRAFFIC CONTROL NOTES:

1. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBLITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. PORTABLE SIGNS MAY BE USED AT SOME LOCATIONS WITH THE ENGINEER'S APPROVAL. THE CONTRACTOR SHALL REFER TO SECTION 6 OF THE MUTCD REGARDING PORTABLE SIGNS.
3. PRIOR TO COMMENCEMENT OF ANY WORK, ALL NECESSARY ADVANCE WARNING SIGNS AND TRAFFIC CONTROL DEVICES SHALL BE ERECTED AS SHOWN IN THE PLANS AND IN ACCORDANCE WITH THE MUTCD AND TDOT STANDARD DRAWINGS.
4. DURING CONSTRUCTION PHASING, NO CONSTRUCTION SIGN OR PERMANENT SIGN SHALL BE LEFT UNCOVERED OR IN PLACE WHICH MAY GIVE CONFLICTING DIRECTION OR INFORMATION TO THE MOTORING PUBLIC,
5. ANY AND ALL NECESSARY EROSION AND SEDIEMENT CONTROL DEVICES AS SHOWN IN THE EROSION AND SEDIMENT CONTROL PLANS AND IN ACCORDANCE WITH TDOT STANDARD DRAWINGS, TDOT DRAINAGE MANUAL CHAPTER 10 AND ANY PERMIT REQUIREMENTS MUST BE IN PLACE AND PROPERLY MAINTAINED AND INSPECTED AT ALL TIMES.
6. WHERE TEMPORARY PORTABLE BARRIER RAIL IS USED, THE LANES SHALL BE SHIFTED AND THE LANE WIDTHS REDUCED TO 10 FEET AS SHOWN IN THE PLANS.
7. LANE CLOSURES ARE NOT PERMITTED BETWEEN 6:00 AM TO 9:00 AM AND 3:30 PM TO 6:00 PM.
8. LANE CLOSURE HOURS SHALL BE STRICTLY ENFORCED BY THE ENGINEER. IF NOT OBSERVED, THE CONTRACTOR SHALL BE CHARGED WITH LANE USAGE CHARGES/LIQUIDATED DAMAGES/LANE/HR, OR PORTION THERE OF.
9. FOR INTERCONNECTED PORTABLE BARRIER RAIL DETAILS AND SPECIFICATIONS SEE STD. DWG. NO. T-PBR-1 AND T-PBR-2.

PHASE I WORK INCLUDES

ON N. GREENHILL ROAD
- A. WIDENING AND RESURFACING (VARIES 0' TO 11') (INCLUDES 2' PAVED SHOULDER)
- B. REBUILD DITCHES (RT SIDE)
- C. INSTALL PROPOSED PIPE CULVERTS
- D. PAVE PRIVATE DRIVEWAYS
- E. SCARIFY EXISTING DRIVEWAY TO PARKING AREA
- F. RESET MAIL BOXES
- G. SODDING (RT SIDE)

SW QUADRANT OF N. GREENHILL ROAD AT S.R. 24:
- A. CONCRETE C&G AT RADIUS
- B. CONVERT 2-CATCH BASINS INTO 2-JUNCTION BOXES
- C. INSTALL 2-NEW CATCH BASINS
- D. INSTALL SIGNAL POLE #3

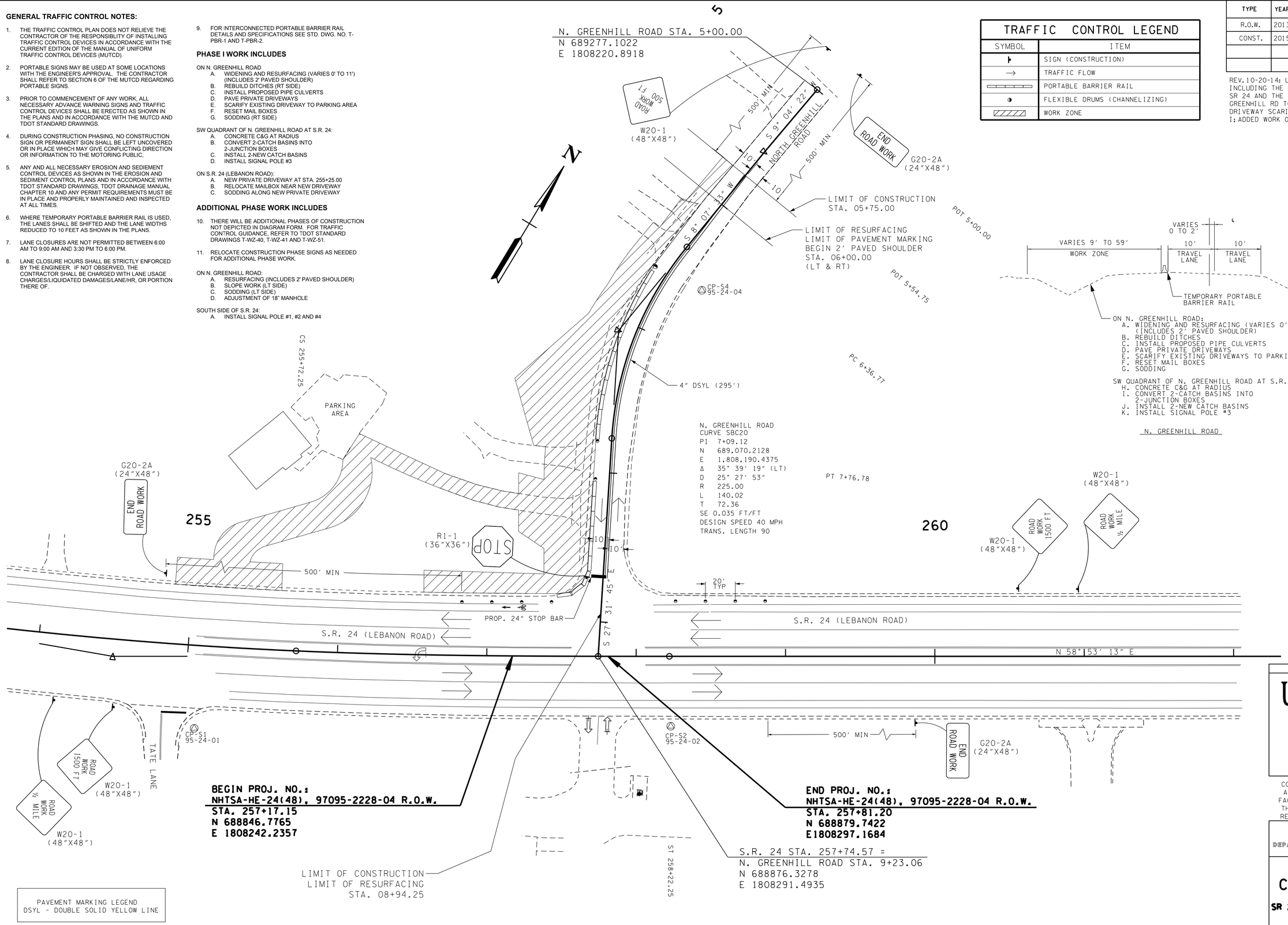
ON S.R. 24 (LEBANON ROAD):
- A. NEW PRIVATE DRIVEWAY AT STA. 255+25.00
- B. RELOCATE MAILBOX NEAR NEW DRIVEWAY
- C. SODDING ALONG NEW PRIVATE DRIVEWAY

ADDITIONAL PHASE WORK INCLUDES

10. THERE WILL BE ADDITIONAL PHASES OF CONSTRUCTION NOT DEPICTED IN DIAGRAM FORM. FOR TRAFFIC CONTROL GUIDANCE, REFER TO TDOT STANDARD DRAWINGS T-WZ-40, T-WZ-41 AND T-WZ-51.
11. RELOCATE CONSTRUCTION PHASE SIGNS AS NEEDED FOR ADDITIONAL PHASE WORK.

ON N. GREENHILL ROAD:
- A. RESURFACING (INCLUDES 2' PAVED SHOULDER)
- B. SLOPE WORK (LT SIDE)
- C. SODDING (LT SIDE)
- D. ADJUSTMENT OF 18" MANHOLE

SOUTH SIDE OF S.R. 24:
- A. INSTALL SIGNAL POLE #1, #2 AND #4

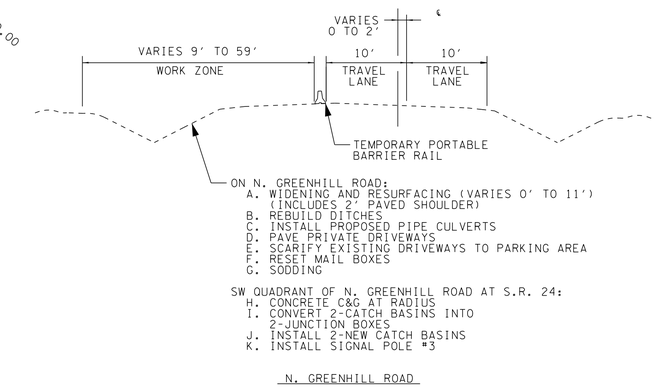


TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	WORK ZONE

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	11
CONST.	2015	PHSIP-24(55)	12

REV.10-20-14: UPDATED THE WORK ZONE BY INCLUDING THE NEW PRIVATE DRIVWAY OFF OF SR 24 AND THE EXISTING DRIVEWAY OFF OF N. GREENHILL RD TO BE SCARIFIED; ADDED PRIVATE DRIVEWAY SCARIFICATION TO GREENHILL PHASE I; ADDED WORK ON SR 24 TO PHASE I.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

INTERSECTION OF SR 24 AT N. GREENHILL RD. PHASE I

SCALE: 1"= 30'

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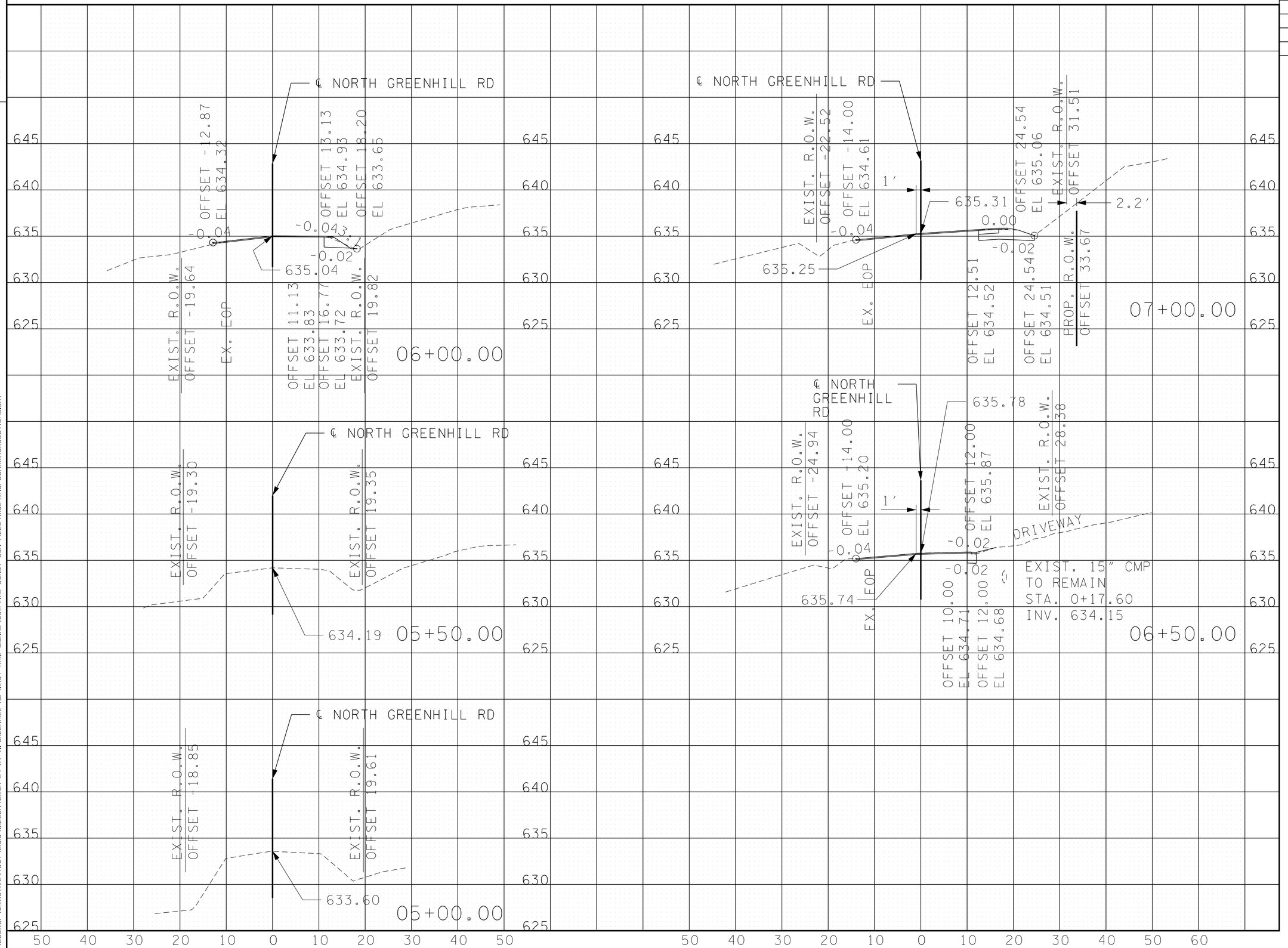
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

		PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	12
CONST.	2015	PHSIP-24(55)	13



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY CROSS-SECTIONS

N. GREENHILL ROAD

SCALE: 1"= 20' HORIZ.
1"= 10' VERT.

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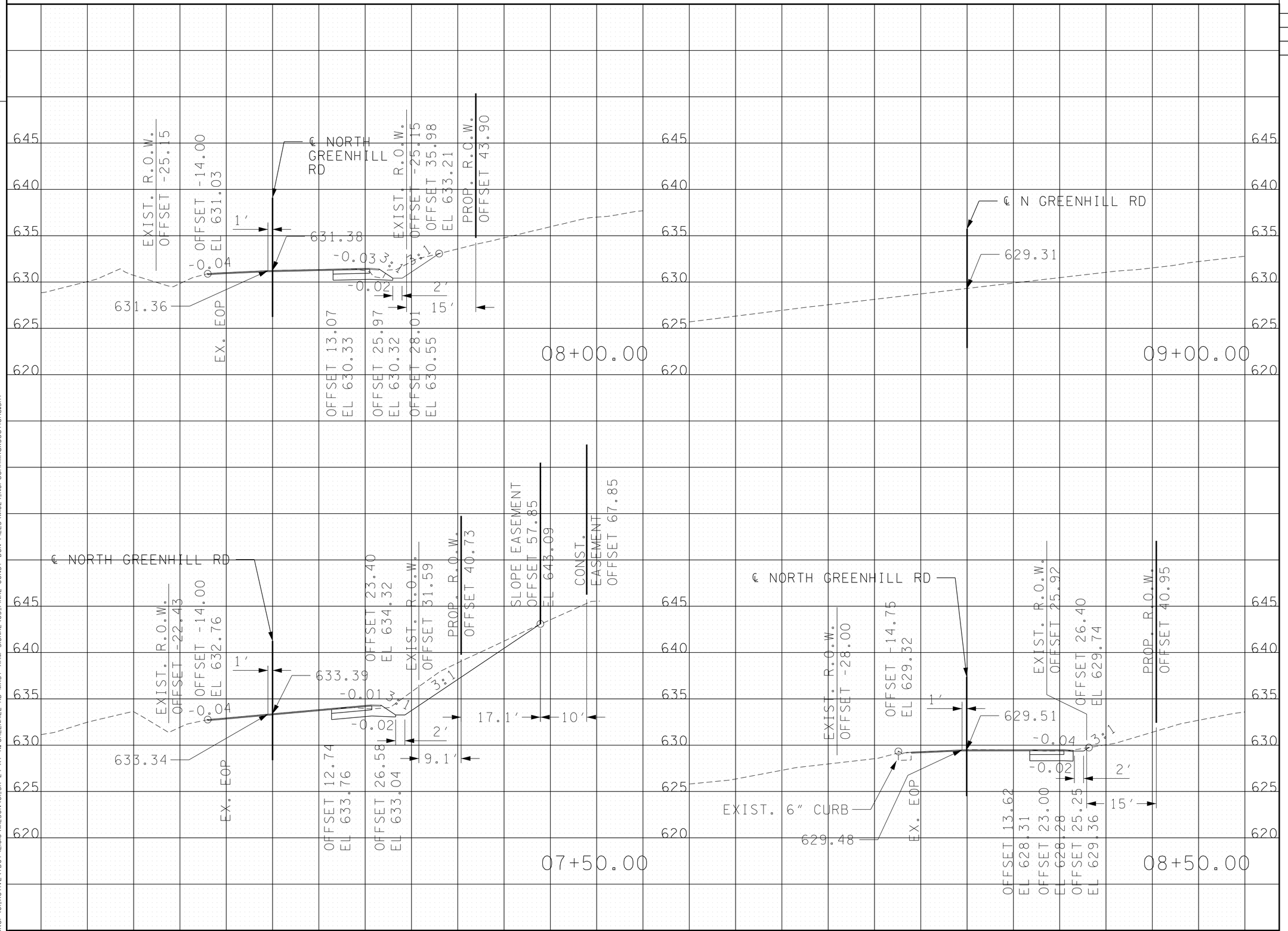
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

		PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	13
CONST.	2015	PHSIP-24(55)	14



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY CROSS-SECTIONS

N. GREENHILL ROAD

SCALE: 1"= 20' HORIZ.
1"= 10' VERT.

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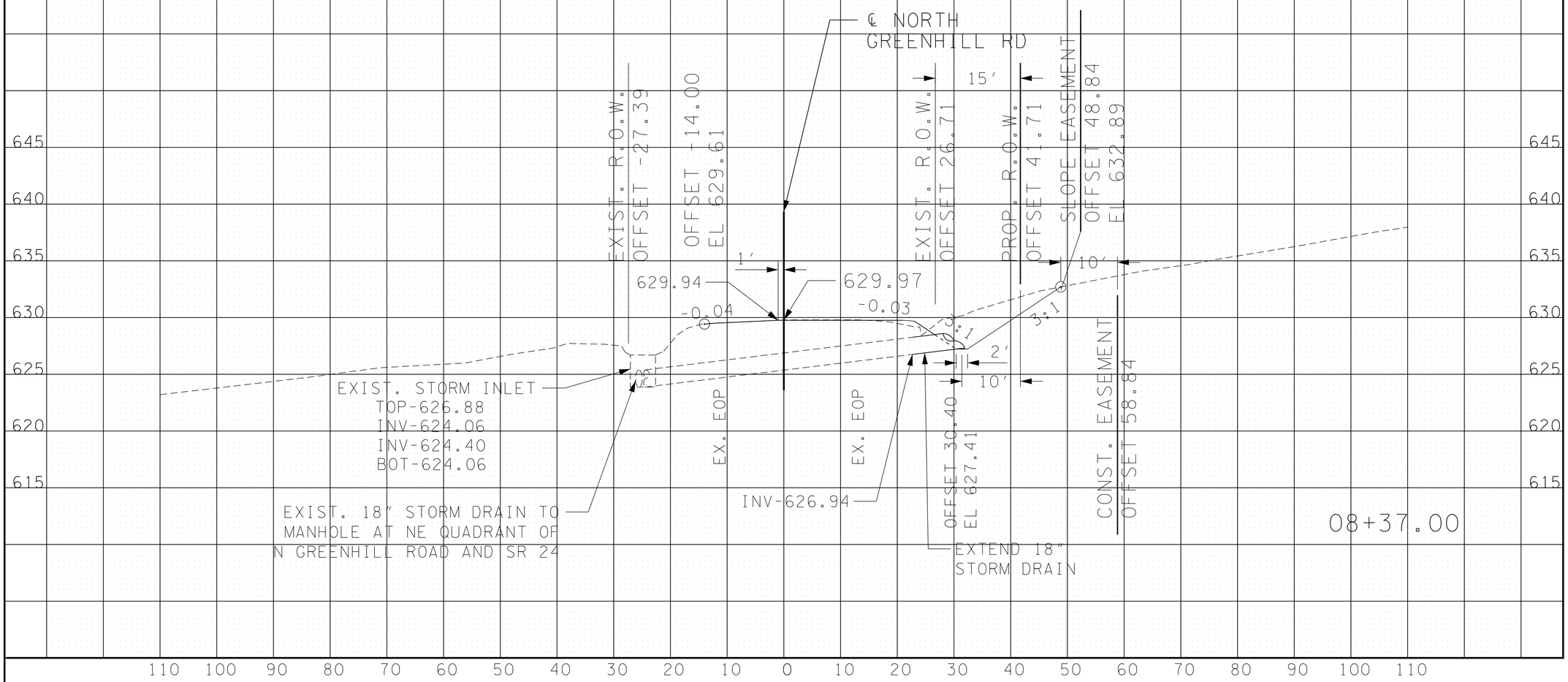
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

		PROJECT NO.	SHEET NO.
R.O.W.	2013	NHTSA-HE-24(48)	14
CONST.	2015	PHSIP-24(55)	15



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE CROSS-SECTIONS

N. GREENHILL ROAD

SCALE: 1"= 20' HORIZ.
1"= 10' VERT.

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