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HDR ENGINEERING, INC.
120 BRENTWOOD COMMONS WAY
SUITE 525
BRENTWOOD, TN 37027
DANIEL K. MCGAHA, P.E. NO. 108037

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
SIGNATURE SHEETS	ROADWAY-SIGN1
TITLE SHEET	1
ROADWAY INDEX, STANDARD ROADWAY DRAWINGS, AND STANDARD TRAFFIC DESIGN DRAWINGS	1A
ESTIMATED ROADWAY QUANTITIES	2
TYPICAL SECTIONS AND PAVEMENT SCHEDULE	2B, 2B1
GENERAL NOTES	2C
SPECIAL NOTES	2D, 2D1
ENVIRONMENTAL NOTES	2E, 2E1
TABULATED QUANTITIES	2F
DETAIL SHEETS	2G, 2G1-2G4
UTILITY NOTES AND UTILITY OWNERS	3
PAVEMENT EDGE DROP-OFF NOTES FOR TRAFFIC CONTROL	T1
TRAFFIC CONTROL PLANS	T2

\$\$\$SYTIME\$\$\$
 \$\$\$DGN\$SPEC\$\$\$

YEAR	PROJECT NO.	SHEET NO.
2025	NH-I-40-6(189)	ROADWAY-SIGN1
STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION		
SIGNATURE SHEET		

Index Of Sheets
SEE SHEET NO. 1A

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

CUMBERLAND COUNTY

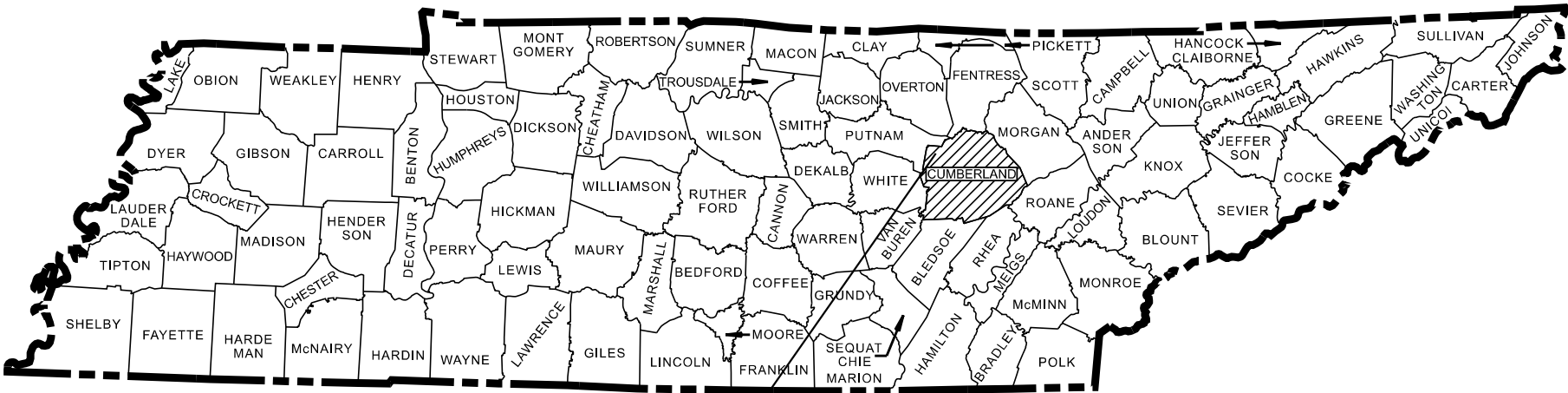
INTERSTATE 40
FROM NEAR PARKING AREA EXIT
TO EAST OF PLATEAU ROAD INTERCHANGE

RESURFACE
COLD PLANE, VRAM, RESURFACING, INTELLIGENT COMPACTION, FOG SEAL,
PAVEMENT MARKINGS AND NIGHT WORK

STATE HIGHWAY NO. N/A F.A.H.S. NO. I-40

DOES THIS PROJECT QUALIFY FOR UTILITY CHAPTER 86	YES	NO X
WORK ZONE SIGNIFICANCE DETERMINATION		
SIGNIFICANT	YES _	NO X

TENN.	YEAR	SHEET NO.
	2025	1
FED. AID PROJ. NO.	NH-I-40-6(189)	
STATE PROJ. NO.	18I040-F8-011	
STATE PROJ. NO.		



PROJECT LOCATION

BRIDGE ID. # 18I00400005R 18I00400005L 18I00400007
18I00400059 18I00400057

NO EXCLUSIONS

18I040-F8-011
BEGIN PROJECT NO. NH-I-40-6(189) RESURFACE
NEAR PARKING AREA EXIT (L.M. 2.00)

18I040-F8-011
END PROJECT NO. NH-I-40-6(189) RESURFACE
EAST OF PLATEAU ROAD INTERCHANGE (L.M. 6.80)

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, 2021 AND
ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS
AND IN THE PROPOSAL CONTRACT.

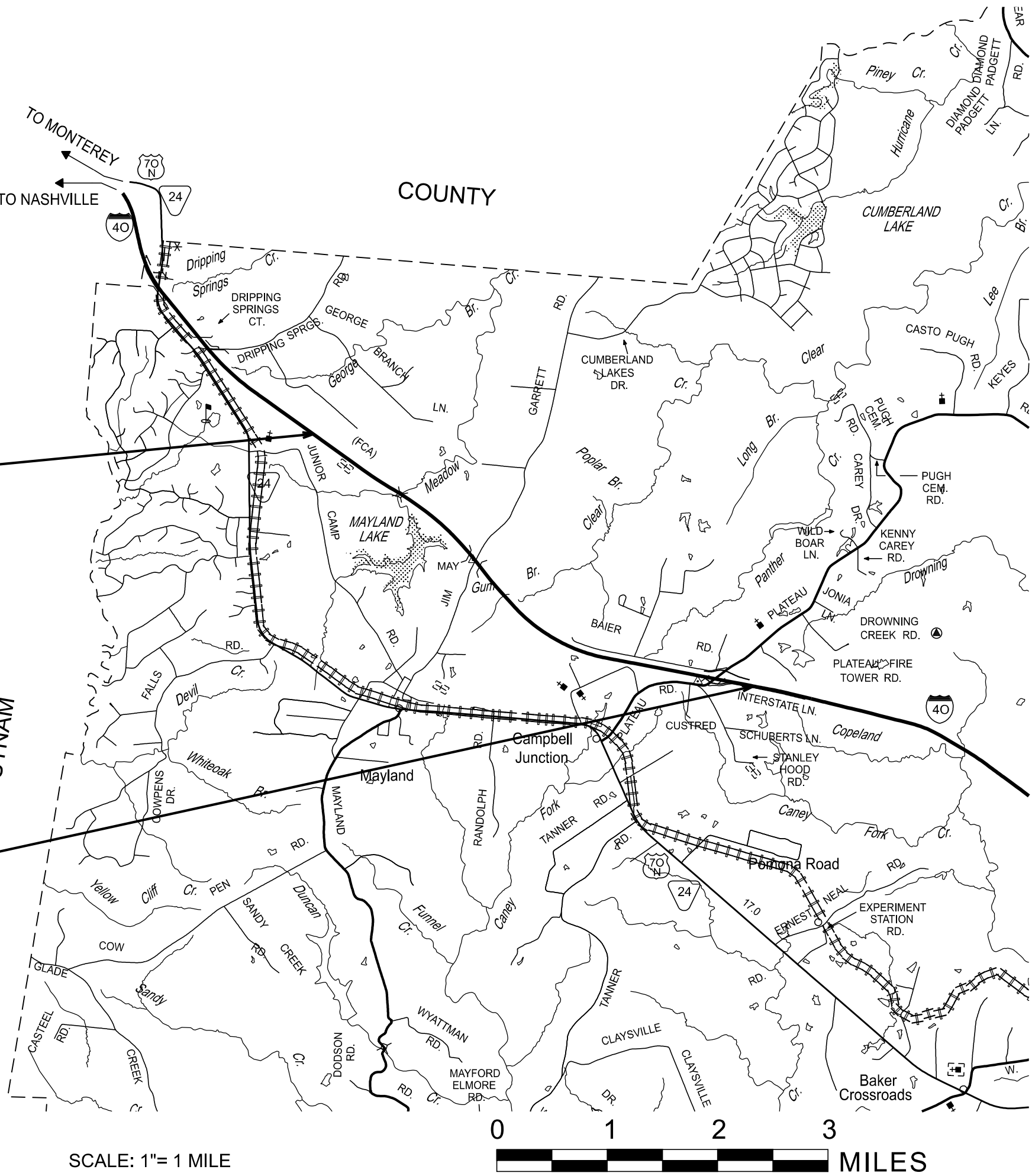
TDOT PROJECT MANAGER : ALLEN PETERFREUND , P.E., REGION 2

DESIGN FIRM : HDR ENGINEERING, INC.

DESIGNER : DANIEL K. MCGAHA, P.E. CHECKED BY BEN KAUSS, P.E.

P.E. NO. 98023-4113-04 (DESIGN)

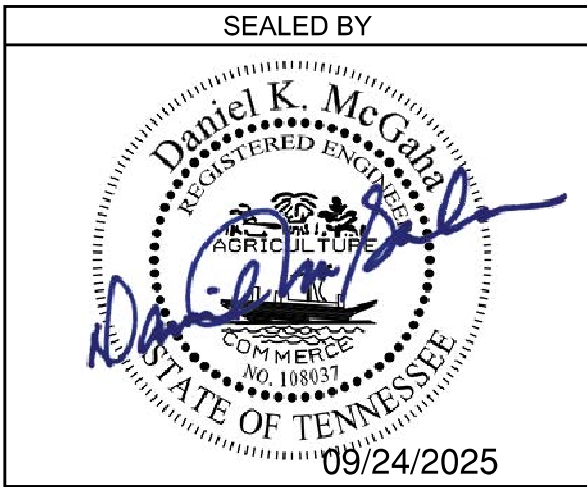
PIN NO. 133755.00



PROJECT LENGTH 4.80 MILES
TOTAL LANE MILES RESURFACED 19.20 MILES

TRAFFIC COUNTER, EMBEDDED DETECTION LOOPS & AUTOMATIC TRAFFIC READERS	
STATION LOCATION	LOG MILE
EDL #132 EB	3.950
EDL #132 WB	3.960

TRAFFIC DATA	
ADT (2025)	39,320
POSTED SPEED	70 MPH



APPROVED:

SHANE HESTER, CHIEF ENGINEER

DATE:

APPROVED:

WILL REID, COMMISSIONER

ROADWAY INDEX

SHEET NAME	SHEET NO.
SIGNATURE SHEETS.....	ROADWAY-SIGN1
TITLE SHEET.....	1
ROADWAY INDEX, STANDARD ROADWAY DRAWINGS, AND	
STANDARD TRAFFIC DESIGN DRAWINGS.....	1A
ESTIMATED ROADWAY QUANTITIES.....	2
TYPICAL SECTIONS AND PAVEMENT SCHEDULE.....	2B, 2B1
GENERAL NOTES.....	2C
SPECIAL NOTES	2D, 2D1
ENVIRONMENTAL NOTES.....	2E, 2E1
TABULATED QUANTITIES.....	2F
DETAIL SHEETS.....	2G, 2G1-2G4
UTILITY NOTES, AND UTILITY OWNERS.....	3
PAVEMENT EDGE DROP-OFF NOTES FOR TRAFFIC CONTROL ...	T1
TRAFFIC CONTROL PLANS	T2
NOTE: THE ALPHABETICAL LETTERS “I”, “O” & “Q” ARE NOT USED IN THE NUMBERING OF SHEETS.	
NO UTILITY SHEETS ARE INCLUDED IN THIS SET OF PLANS.	
NO PROJECT COMMITMENT SHEETS ARE INCLUDED IN THIS SET OF PLANS.	

STANDARD ROADWAY DRAWINGS

DWG.	REV.	DESCRIPTION
10-100.00 STANDARD ROADWAY TITLE SHEET, ABBREVIATIONS, AND LEGENDS		
RD-TP-1	10-01-24	STANDARD ROADWAY DRAWINGS TITLE SHEET
RD-A-1	02-20-20	STANDARD ABBREVIATIONS A THROUGH L
RD-A-2		STANDARD ABBREVIATIONS M THROUGH Z
RD-L-1	02-20-20	STANDARD LEGEND
RD-L-1A		STANDARD LEGEND

STANDARD TRAFFIC DESIGN DRAWINGS

DWG.	REV.	DESCRIPTION
10-201.00 SIGNALS		
T-SG-2	06-27-16	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3	07-11-17	STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
10-204.01 PAVEMENT MARKINGS		
T-M-5	01-24-25	MARKING DETAIL FOR FREEWAYS
T-M-6	01-24-25	MARKING DETAIL FOR EXPRESSWAY AND FREEWAY INTERCHANGES
T-M-7	01-24-25	GORE MARKING DETAILS FOR EXPRESSWAY & FREEWAY INTERCHANGES
T-M-8	01-24-25	MARKING DETAILS FOR EXPRESSWAYS & FREEWAYS
T-M-9	01-24-25	PAVEMENT MARKING AND SIGNING DETAILS FOR RAMP INTERSECTIONS
T-M-9B	01-24-25	PAVEMENT MARKING AND SIGNING DETAILS FOR RAMP INTERSECTIONS
T-M-15	01-24-25	ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR INTERSTATE AND ACCESS CONTROLLED ROUTES
T-M-18	01-24-25	FLEXIBLE DELINEATOR DETAILS
T-M-18A	01-24-25	DELINEATOR MOUNTING DETAILS
10-204.02 WORK ZONES		
T-WZ-10	03-26-25	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-11	03-26-25	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-12	03-26-25	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-21	03-26-25	LANE CLOSURE WITH LEFT HAND MERGE AND LANE SHIFT
T-WZ-60	03-26-25	FREEWAY RESURFACING SIGNING LAYOUT
T-WZ-63	03-26-25	WORK ZONE IN THE VICINITY OF AN ENTRANCE RAMP
T-WZ-64	03-26-25	WORK ZONE IN THE VICINITY OF AN EXIT
T-WZ-FAB1	03-26-25	FLASHING YELLOW ARROW BOARD

TYPE	YEAR	PROJECT NO.	SHEET NO.
RESURF.	2025	NH-L40-6(189)	1A

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX,
STANDARD ROADWAY
DRAWINGS, AND
STANDARD TRAFFIC
DESIGN DRAWINGS

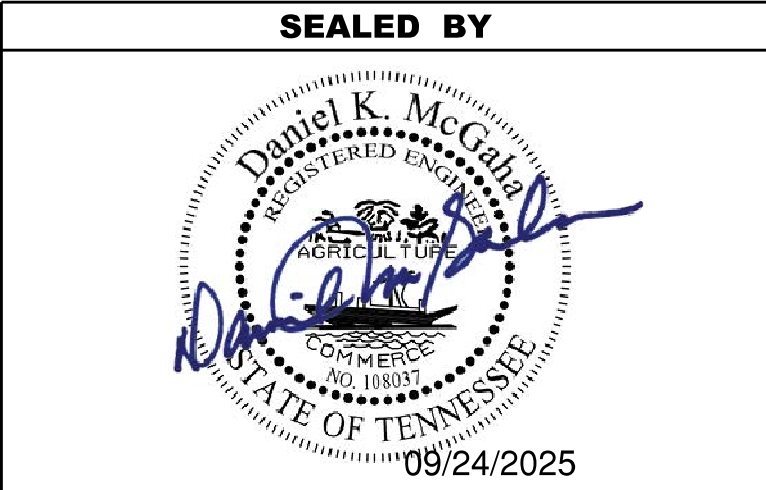
ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY 18I040-F8-011
(1)	208-01.05 BROOMING & DEGRASSING SHOULDERS	L.M.	19.2
(2)	303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	4012
(3)	402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	51
(4)	403-01.10 HIGH PERFORMANCE FOG SEALS	S.Y.	29570
(5)	403-02.01 TRACKLESS TACK COAT	TON	112
(6)	411-01.07 ACS MIX (PG64-22) GRADING E SHOULDER	TON	3965
(7)	411-01.51 VOID REDUCING ASPHALT MEMBRANE (VRAM) HALF-WIDTH	L.F.	101376
(8)	411-03.10 ACS MIX(PG76-22) GRADING D	TON	12875
	411-12.01 SCORING SHOULDERS (CONTINUOUS) (16IN WIDTH)	L.M.	17.4
(9)(10)	415-01.01 COLD PLANING BITUMINOUS PAVEMENT	TON	19345
(11)	712-01 TRAFFIC CONTROL	LS	1
	712-04.01 FLEXIBLE DRUMS (CHANNELIZING)	EACH	481
	712-05.01 WARNING LIGHTS (TYPE A)	EACH	70
	712-05.03 WARNING LIGHTS (TYPE C)	EACH	200
(12)	712-06 SIGNS (CONSTRUCTION)	S.F.	2087
(13)	712-06.16 SIGNS (CONSTRUCTION)(REDUCED SPEED WARNING)	EACH	4
	712-08.03 ARROW BOARD (TYPE C)	EACH	2
	712-08.08 SPEED FEEDBACK SIGN ASSEMBLY	EACH	2
(14)	712-08.09 DIGITAL SPEED LIMIT SIGN ASSEMBLY	EACH	8
(15)	712-08.14 PORTABLE QUEUE WARNING SYSTEM	DAY	42
	713-02.14 FLEXIBLE DELINEATOR (WHITE)	EACH	190
	713-02.15 FLEXIBLE DELINEATOR (YELLOW)	EACH	30
(16)	713-16.01 CHANGEABLE MESSAGE SIGN UNIT	EACH	4
(17)	716-01.23 SNOWPLOWABLE RAISED PAVEMENT MARKERS (BI-DIR)(2 COLOR)	EACH	1061
(18)	716-01.30 REMOVAL OF SNOWPLOWABLE REFLECTIVE MARKER	EACH	881
	716-02.04 PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.	577
(19)	716-02.05 PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	178
(19)	716-02.07 PLASTIC PAVEMENT MARKING (24" BARRIER LINE)	L.F.	2522
(19)	716-04.04 PLASTIC PAVEMENT MARKING (TRANSVERSE SHOULDER)	L.F.	565
(19)	716-04.06 PLASTIC PAVEMENT MARKING (WRONG WAY ARROW)	EACH	4
(20)	716-05.05 PAINTED PAVEMENT MARKING (STOP LINE)	L.F.	178
(20)(21)	716-05.20 PAINTED PAVEMENT MARKING (6" LINE)	L.M.	23.6
	716-08.05 REMOVAL OF PAVEMENT MARKING (STOP LINE)	L.F.	178
	716-08.30 HYDROBLAST REMOVAL OF PAVEMENT MARKING (LINE)	L.M.	0.4
(22)	716-09.86 CONTRAST PAVEMENT MARKING 6"	L.M.	0.4
(23)(24)	716-12.02 ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	23.6
(23)(25)	716-12.03 ENHANCED FLATLINE THERMO PVMT MRKNG (8IN BARRIER LINE)	L.F.	6917
(23)(26)	716-12.05 ENHANCED FLATLINE THERMO PVMT MRKNG (6IN DOTTED LINE)	L.F.	901
	717-01 MOBILIZATION	LS	1
(27)	730-14.02 SAW SLOT	L.F.	280
(27)	730-14.03 LOOP WIRE	L.F.	1400

THERE IS NO GUARDRAIL WORK ON THIS PROJECT

THERE ARE NO UTILITY ADJUSTMENTS WITHIN THE PROJECT LIMITS

FOOTNOTES	
(1)	INCLUDES THE COST OF REMOVING DEBRIS AND SWEEPING SHOULDERS PRIOR TO WORK. SEE SHEET 2C, PAVEMENT MARKINGS, FINAL PAVEMENT MARKING NOTE 6.
(2)	INCLUDES 201 TONS FOR EXIT #311 SHOULDERS. SEE SHEETS 2F, 2G & 2G1 FOR DETAILS.
(3)	TO BE USED AS DIRECTED BY THE ENGINEER FOR STONE SHOULDER STABILIZATION.
(4)	TO BE APPLIED TO SHOULDER SCORING BEFORE PERMANENT EDGELINE MARKINGS ARE IN PLACE. SEE SHEET 2B1 FOR PLACEMENT DETAIL.
(5)	INCLUDES 3.48 TONS FOR EXIT #306.5. AND 10.36 TONS FOR EXIT #311. SEE SHEETS 2F, 2G & 2G1 FOR DETAILS.
(6)	INCLUDES 47 TONS FOR CROSSOVER AT L.M. 2.51
(7)	THIS WILL BE USED ONLY AT THE LONGITUDINAL JOINT BETWEEN TRAVEL LANES AND WILL BE PLACED IN 9" WIDE STRIPS ON BOTH SIDES OF THE LONGITUDINAL JOINT AS EACH LANE IS PAVED. SEE SHEET 2D1 FOR NOTES.
(8)	INCLUDES 153 TONS FOR ENTRANCE/EXIT AREAS, 596 TONS FOR RAMP, AND 176 TONS FOR GORE AREAS FOR EXIT #306.5. INCLUDES 271 TONS FOR ENTRANCE/EXIT AREAS, 1018 TONS FOR RAMP, AND 213 TONS FOR GORE AREAS FOR EXIT #311. SEE SHEET 2F FOR TABULATION AND SHEETS 2G & 2G1 FOR DETAILS.
(9)	MILLED MATERIAL TO BECOME PROPERTY OF THE CONTRACTOR.
(10)	INCLUDES 445 TONS FOR EXIT #306.5 RAMPS & 1475 TONS FOR EXIT #311 RAMPS, SEE SHEETS 2F, 2G & 2G1 FOR DETAILS.
(11)	INCLUDES ALL COSTS ASSOCIATED WITH NIGHTTIME WORK ZONE LIGHTING.
(12)	SEE SHEET 2F FOR TABULATION.
(13)	ITEM TO BE USED ONLY WHEN A REDUCED SPEED LIMIT IS ESTABLISHED WITHIN THE PROJECT CONSTRUCTION WORK ZONE LIMITS. ITEM INCLUDES SIGN FACE, SUPPORTS, AND TWO TYPE "B" FLASHERS PER THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TURNING ON THE TYPE "B" FLASHERS WHEN WORKERS ARE IN THE CONSTRUCTION WORK ZONE AND TURNING THEM OFF WHEN WORKERS ARE NO LONGER IN THE CONSTRUCTION WORK ZONE. SEE SHEET T2 FOR SUGGESTED PLACEMENT DETAILS.
(14)	SEE SHEET T2 FOR SUGGESTED PLACEMENT DETAILS.
(15)	QUANTITY WILL PROVIDE QUEUE PROTECTION FOR NIGHTLY PAVING OPERATIONS AS DIRECTED BY THE ENGINEER.
(16)	INCLUDES TWO (2) MESSAGE BOARDS TO BE USED ON EXIT #311 ENTRANCE RAMPS TO I-40 AS DIRECTED BY THE ENGINEER.
(17)	INCLUDES QUANTITY FOR CLEAR/RED SPM'S ALONG TRANSVERSE SHOULDER STRIPING, CLEAR/RED SPM'S AT WRONG WAY ARROWS ON EXIT RAMPS, AND CLEAR/RED & YELLOW/RED SPM'S AT TIGHTER SPACING ALONG ROADWAY.
(18)	TO BECOME PROPERTY OF THE CONTRACTOR. INCLUDES ALL COST ASSOCIATED WITH REMOVAL AND PROPER DISPOSAL.
(19)	CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
(20)	FOR TEMPORARY PAVEMENT MARKINGS ON MILLED SURFACE AND INTERMEDIATE SURFACES.
(21)	INCLUDES 0.61 L.M. FOR EXIT #306.5, AND 1.75 L.M. FOR EXIT #311. SEE SHEET 2F FOR TABULATION.
(22)	FOR PERMANENT EDGE LINE MARKING ON CONCRETE SURFACES.
(23)	ENHANCED FLATLINE THERMO PVMT MARKING SHALL BE APPLIED USING RIBBON METHOD AS DIRECTED BY THE TDOT PROJECT ENGINEER.
(24)	INCLUDES 0.61 L.M. FOR EXIT #306.5, AND 1.83 L.M. FOR EXIT #311. SEE SHEET 2F FOR TABULATION.
(25)	INCLUDES 2218 L.F. FOR EXIT #306.5, AND 4699 L.F. FOR EXIT #311. SEE SHEET 2F FOR TABULATION.
(26)	INCLUDES 310 L.F. FOR EXIT #306.5, AND 591 L.F. FOR EXIT #311. SEE SHEET 2F FOR TABULATION.
(27)	EMBEDDED DETECTION LOOPS FOR EXISTING TRAFFIC COUNTER AT L.M. 3.95 EB AND L.M. 3.96 WB.

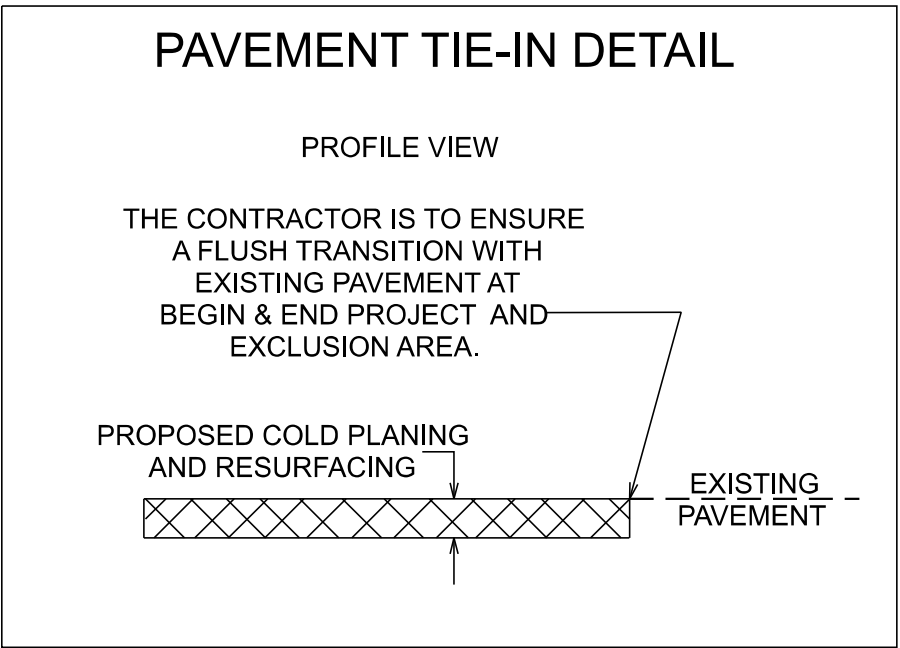
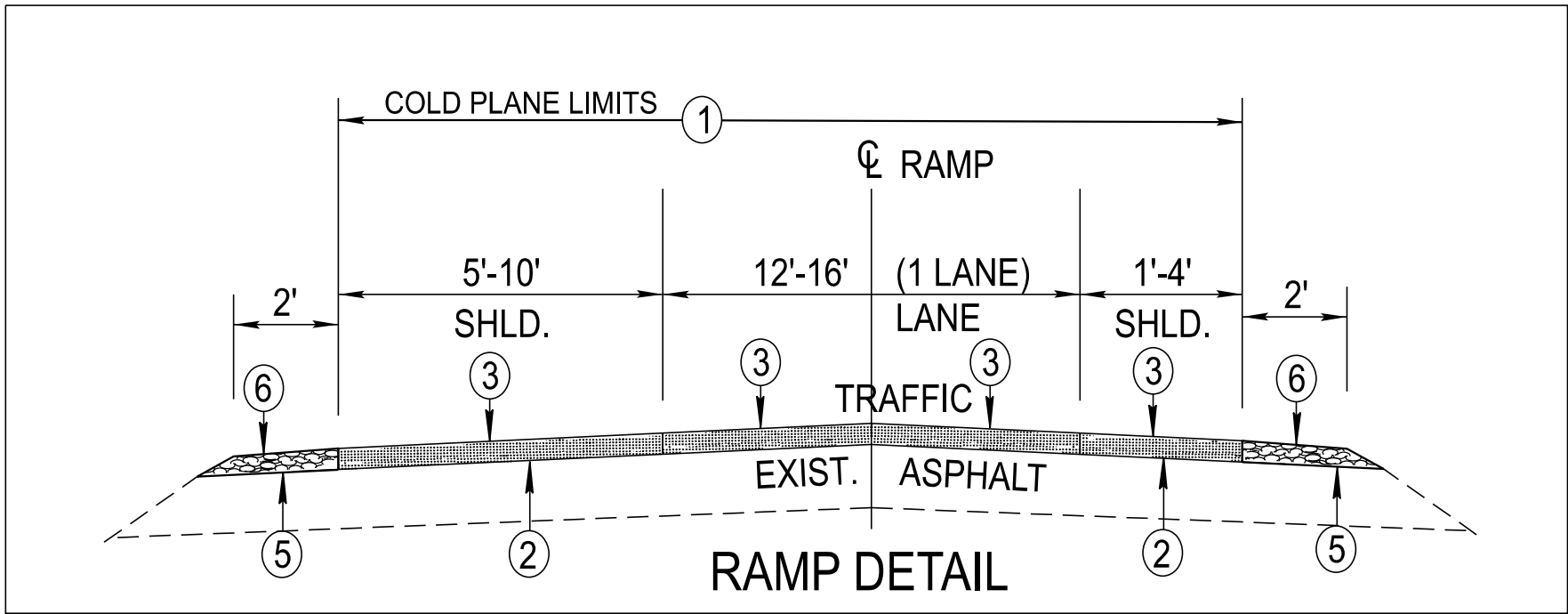
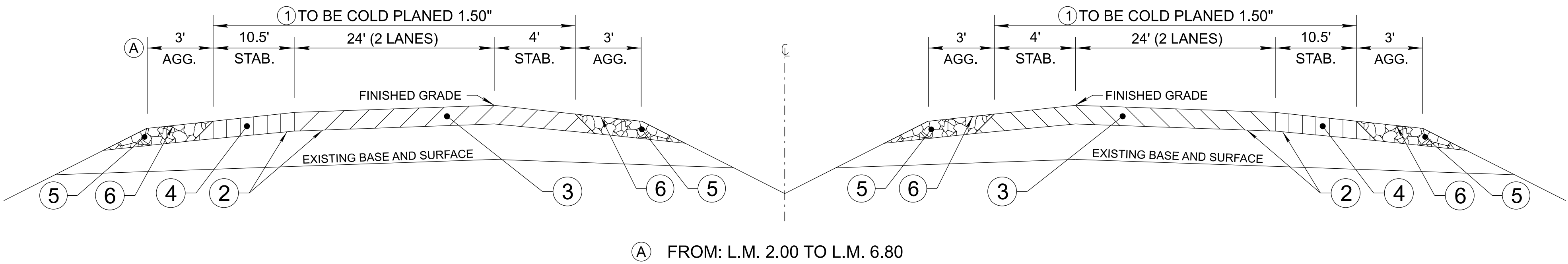
TYPE	YEAR	PROJECT NO.	SHEET NO.
RESURF.	2025	NH-I-40-6(189)	2



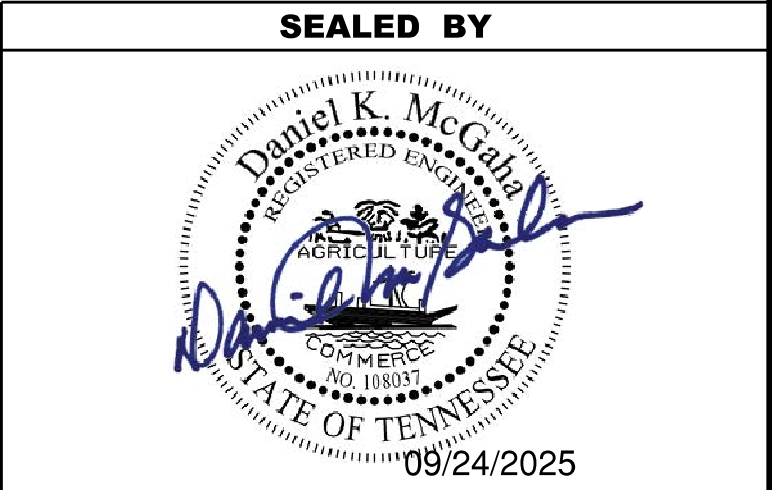
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED
ROADWAY
QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
RESURF.	2025	NH-L40-6(189)	2B



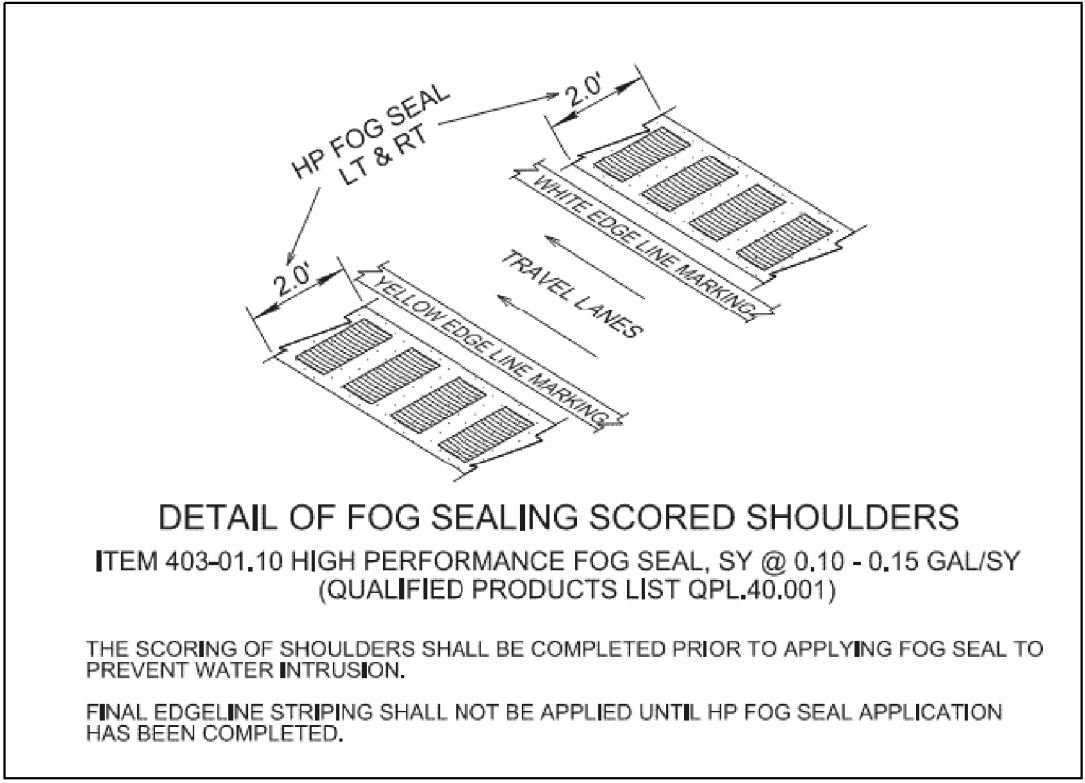
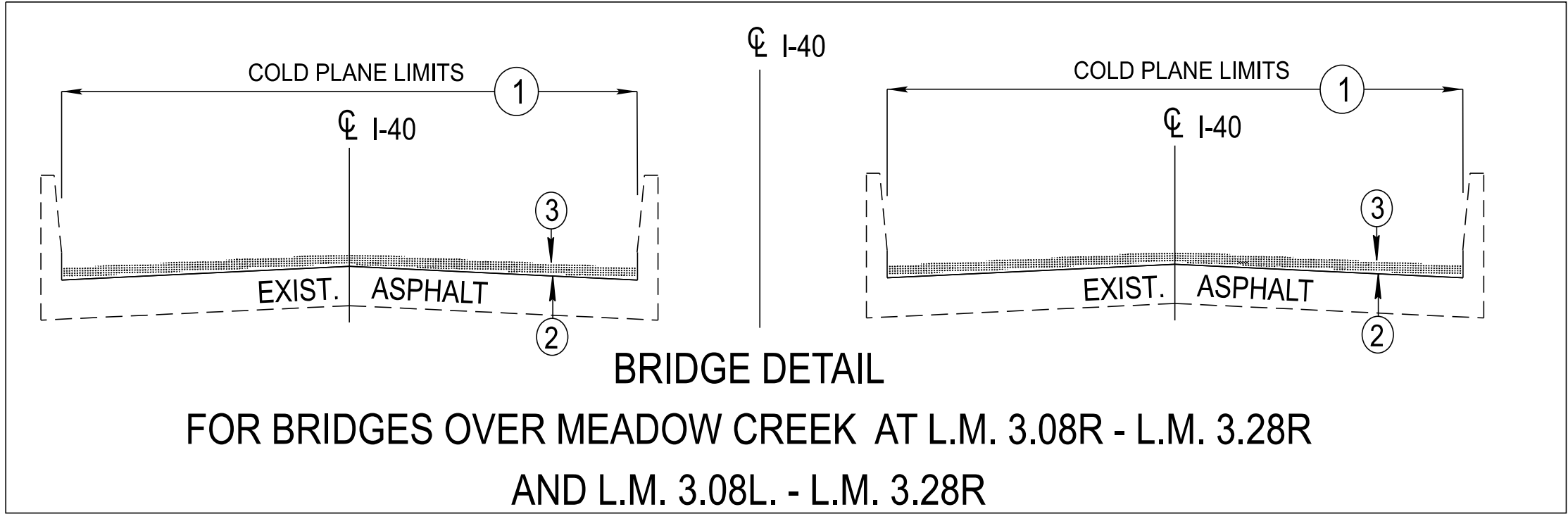
SEE SHEET 2B1 FOR PAVEMENT SCHEDULE



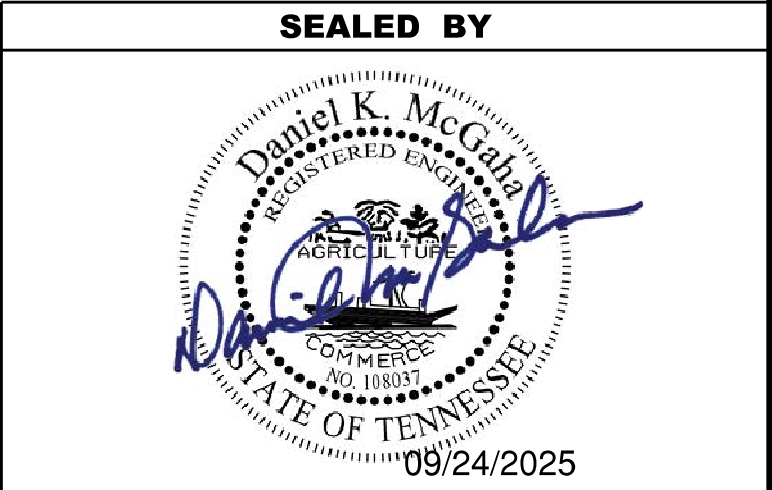
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL
SECTIONS AND
PAVEMENT
SCHEDULE

TYPE	YEAR	PROJECT NO.	SHEET NO.
RESURF.	2025	NH-I-40-6(189)	2B1



PROPOSED PAVEMENT SCHEDULE	
① COLD PLANING @ 1.50"± THICK (APPROX. 157.5 LBS./S.Y.) ITEM 415-01.01 COLD PLANING BITUMINOUS PAVEMENT	④ ASPHALTIC CONCRETE SURFACE (HM) @ 1.25"± THICK (APPROX. 132.5 LBS./S.Y.) ITEM 411-01.07 ACS MIX (PG64-22) GRADING "E" SHOULDER
② TRACKLESS TACK COAT ITEM 403-02.01 TRACKLESS TACK COAT (TC) SEE 403.05 FOR DETERMINING APPLICATION RATE IN THE FIELD	⑤ MINERAL AGGREGATE @ 2.00"± THICK FOR SHOULDERS ITEM 303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D"
③ ASPHALTIC CONCRETE SURFACE (HM) @ 1.25"± THICK (APPROX. 132.5 LBS./S.Y.) ITEM 411-03.10 ACS MIX (PG76-22) GRADING "D"	⑥ SHOULDER STONE STABILIZATION ITEM 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC), TON * PRIME COAT WIDTH SHALL BE A MINIMUM OF 3 FEET FROM EDGE OF PAVED SHOULDER AND AROUND GUARDRAIL POST AS DIRECTED BY TDOT ENGINEER.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL
SECTIONS AND
PAVEMENT
SCHEDULE

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

MISCELLANEOUS

- (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.

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKINGS ON INTERMEDIATE LAYERS

- (2) 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 DAY'S 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 (6" LINE), L.M.

FINAL PAVEMENT MARKING

- (6) THE CONTRACTOR WILL BE REQUIRED TO PERFORM THE FOLLOWING WORK:

a. BROOMING & DE-GRASSING SHOULDERS SHALL INCLUDE CLIPPING OF MATERIAL INTERFERING WITH PROPER DRAINAGE OF ROADWAY (INCLUDING PAVED AND GRAVEL SHOULDERS), AS DIRECTED BY THE ENGINEER.

b. ALL MATERIAL FROM CLIPPING, BROOMING AND DE-GRASSING SHOULDERS SHALL BE PICKED UP, REMOVED AND PROPERLY DISPOSED AS DIRECTED BY THE ENGINEER.

c. ALL COSTS ASSOCIATED WITH PICKING UP, REMOVAL AND PROPER DISPOSAL SHALL BE PAID FOR UNDER ITEM NO. 208-01.05.

d. REMOVE ALL GARBAGE AND CONSTRUCTION DEBRIS FROM PROJECT. THE COST FOR THIS WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- (8) 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.
- (9) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 8" 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. 716-12.03, ENHANCED FLATLINE THERMO PVMT MRKNG (8IN BARRIER LINE), L.F. 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.

SNOWPLOWABLE REFLECTIVE PAVEMENT MARKERS

- (19) REMOVE EXISTING SNOWPLOWABLE MARKERS PRIOR TO PAVING AND/OR COLD PLANING. REMOVE ALL ADHESIVES PRIOR TO PAVING. PATCH ANY HOLES OR DIVOTS RESULTING FROM THE REMOVAL OF A MARKER IN A MANNER WHICH ENSURES A UNIFORM PAVED SURFACE. PATCH WORK SHALL BE INCLUDED WITH COST OF OTHER ITEMS OF CONSTRUCTION.

PAVEMENT

PAVING

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

RESURFACING

- (9) 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.

SIGNING

- (12) ALL SIGNS WHICH INTERFERE WITH CONSTRUCTION WILL BE RELOCATED OUTSIDE LIMITS OF CONSTRUCTION BY THE CONTRACTOR. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR WILL RESTORE THE SIGNS TO ORIGINAL LOCATION. THE CONTRACTOR SHALL CHECK WITH THE REGIONAL TRAFFIC ENGINEER PRIOR TO MOVING ANY PERMANENT SIGNS.

SIGNALIZATION

- (11) THE PROJECT ENGINEER SHALL NOTIFY THE LOCAL GOVERNMENTAL AGENCY RESPONSIBLE FOR TRAFFIC CONTROL MAINTENANCE AT LEAST ONE DAY IN ADVANCE OF THE COLD PLANING ACTIVITY AT SIGNALIZED INTERSECTIONS WHERE DETECTOR LOOPS ARE ON THE PAVEMENT. THE MAINTAINING AGENCY WILL THEN BE RESPONSIBLE FOR DISCONNECTING THE LOOP DETECTORS AND MAKING ANY NECESSARY TIMING ADJUSTMENTS IN THE SIGNAL CONTROLLER PRIOR TO THE CONSTRUCTION.
- (12) THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR SUPPLYING THE CONTRACTOR WITH AS BUILT SIGNAL PLANS AT THE PRE-CONSTRUCTION CONFERENCE. THESE PLANS WILL PROVIDE THE CONTRACTOR WITH THE DESIRED LOCATION FOR DETECTOR LOOP REPLACEMENT.
- (13) LOOPS SHALL BE INSTALLED IN THE LEVELING COURSE IF A LEVELING COURSE IS PROVIDED.
- (14) LOOP REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 730 OF THE STANDARD SPECIFICATIONS.

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, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- (9) THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING CONSTRUCTION SIGNS. THE COST OF THIS WORK SHALL BE INCLUDED IN ITEM NO. 712-06, SIGNS (CONSTRUCTION), S.F.

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STATE OF TENNESSEE
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GENERAL
NOTES

SPECIAL NOTES

TRAFFIC CONTROL

- (1)

THE CONTRACTOR SHALL MAKE PROVISIONS TO SAFELY CONTROL TRAFFIC INGRESS AT ALL ROADWAY ENTRANCES WITHIN THE FLAGGED WORK ZONE TO THE SATISFACTION OF THE TDOT PROJECT ENGINEER, ALL COST ASSOCIATED WITH THE CONTROLS WILL BE INCLUDED IN THE PRICE BID FOR TRAFFIC CONTROL.
- (2)

EXISTING CONSTRUCTION, REGULATORY AND WARNING SIGNS WHICH CONFLICT WITH THE CONSTRUCTION SIGNING SHALL BE REMOVED DURING CONSTRUCTION AND REINSTALLED AS DIRECTED BY THE TDOT PROJECT ENGINEER. ALL COSTS TO BE INCLUDED IN THE PRICE BID FOR ITEM NO. 712-01, TRAFFIC CONTROL, PER LUMP SUM.
- (3)

THE CONTRACTOR SHALL GIVE THE TDOT PROJECT ENGINEER A MINIMUM OF SEVEN (7) DAYS NOTICE PRIOR TO STARTING WORK SO THAT SUFFICIENT NOTICE CAN BE PREPARED AND DISTRIBUTED TO THE MEDIA.
- (4)

IMMEDIATELY UPON COMPLETION OF EACH CONSTRUCTION PHASE, ALL TRAFFIC CONTROL ITEMS THAT ARE NOT NECESSARY FOR THE SUCCEEDING PHASE SHALL BE REMOVED, COVERED, OR TURNED TO FACE AWAY FROM THE TRAFFIC.
- (5)

THE CONTRACTOR SHALL PROVIDE FLAGGER AT EACH SIDEROAD WITHIN THE PAVING OPERATION.
- (6)

A MINIMUM OF TWO (2) TYPE “C” ARROW BOARDS WILL BE REQUIRED. IF THE CONTRACTOR SCHEDULES HIS OPERATIONS SUCH THAT MORE THAN TWO (2) ARROW BOARDS ARE REQUIRED. THE COST OF ALL ADDITIONAL ARROW BOARDS WILL BE AT THE CONTRACTOR’S EXPENSE.
- (7)

CHANGEABLE MESSAGE SIGNS UNITS (ITEM NO. 713-16.01) WILL BE REQUIRED ON THIS PROJECT. THE SIGNS WILL BE USED FOR ADVANCED WARNING OR AS DIRECTED BY THE ENGINEER.
- (8)

MESSAGE BOARDS SHALL BE DISPLAYED A MINIMUM OF SEVEN (7) DAYS PRIOR TO STARTING WORK TO INFORM PUBLIC OF UPCOMING CONSTRUCTION PROJECT.
- (9)

PRIOR TO DISPLAYING MESSAGES ON CHANGEABLE MESSAGE BOARDS, ALL MESSAGES SHALL BE APPROVED BY THE TDOT PROJECT ENGINEER AND REGION 2 TRAFFIC ENGINEER.
- (10)

INFORMATION ON CHANGEABLE MESSAGE BOARDS SHALL BE UPDATED TO REFLECT CURRENT CONSTRUCTION CONDITIONS ACTIVITIES AT ALL TIMES.

NIGHT WORK

- (1)

ALL COST ASSOCIATED WITH NIGHT WORK ZONE LIGHTING SHALL BE INCLUDED IN ITEM 712-01.
- (2)

THE CONTRACTOR SHALL COMPLY WITH SECTION 712.04 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION REGARDING NIGHT WORK LIGHTING.
- (3)

LIGHTS FOR NIGHT WORK TO BE APPROVED BY THE TDOT ENGINEER.
- (4)

NIGHT WORK SHALL BE DONE BETWEEN THE HOURS OF 7:00 PM AND 6:00 AM. ALL WORK TO BE DONE AT NIGHT SHALL BE DURING THESE HOURS. THIS INCLUDES CONSTRUCTION, MOBILIZATION OF EQUIPMENT AND PLACEMENT AND REMOVAL OF TRAFFIC CONTROL DEVICES.
- (5)

ALL CONSTRUCTION SIGNS THAT ARE TO REMAIN IN PLACE DURING CONSTRUCTION MAY BE INSTALLED DURING DAYTIME HOURS AS DIRECTED BY THE TDOT PROJECT SUPERVISOR.

END OF TRAFFIC QUEUE PROTECTION

- (1)

WHEN INTERSTATE LANE CLOSURES ARE PERFORMED, THE CONTRACTOR SHALL PROVIDE A MINIMUM OF TWO (2) TRUCK MOUNTED MOBILE CHANGEABLE MESSAGE SIGNS WITH TRUCK MOUNTED ATTENUATORS FOR EACH TRAVELING DIRECTION IN WHICH LANES ARE CLOSED, TO PROTECT THE END OF THE TRAFFIC QUEUE.

A.

AT LEAST ONE UNIT SHALL BE POSITIONED ON THE SHOULDER UPSTREAM FROM THE END OF THE TRAFFIC QUEUE AT ALL TIMES, BUT NO FURTHER THAN 1/2 MILE FROM THE QUEUE.

B.

THE CHANGEABLE MESSAGE SIGN SHALL DISPLAY TWO PHASES: “STOPPED TRAFFIC AHEAD” AND “BE PREPARED TO STOP”.

C.

IN THE EVENT THAT THE TRAFFIC QUEUE EXTENDS UPSTREAM BEYOND THE UNIT, A SECOND UNIT SHALL MOBILIZE IN ACCORDANCE WITH [A.]. THE DOWNSTREAM UNIT MAY DEPART WHEN THE SECOND UNIT HAS MOVED INTO POSITION.

D.

TRUCK MOUNTED CHANGEABLE MESSAGE SIGNS AND ATTENUATORS SHALL BE IN ACCORDANCE WITH THE NCHRP REPORT 350, MASH TL-3, MUTCD, AND MOUNTED PER THE MANUFACTURER’S RECOMMENDATIONS. TRUCK MOUNTED CHANGEABLE MESSAGE SIGNS SHALL BE LISTED ON QPL LIST 30, SECTION B, AND TRUCK MOUNTED ATTENUATORS SHALL BE LISTED ON QPL LIST 34, SECTION D.

E.

MOBILE CHANGEABLE MESSAGE SIGN UNITS WITH MOUNTED ATTENUATOR WILL BE PAID FOR AS ITEM NO. 712-08.12 QUEUE PROTECTION TRUCK, DAY. ALL COSTS ARE TO BE INCLUDED IN THE PRICE BID.

LANE CLOSURES

- (1)

THE RESTRICTION OF TRAFFIC TO ONE LANE SHALL NOT EXCEED ONE DAY’S PAVING OPERATION.
- (2)

THE CONTRACTOR SHALL KEEP ALL TRAFFIC LANES OPEN TO TRAFFIC DURING NON-WORKING HOURS AND/OR NON-WORK DAYS.
- (3)

DAYTIME LANE CLOSURES WILL NOT BE ALLOWED UNLESS DIRECTED BY THE TDOT PROJECT ENGINEER.
- (4)

THE CONTRACTOR SHALL NOT BE ALLOWED TO INTERRUPT TRAFFIC FLOW AND SHALL MAINTAIN ALL LANES OF TRAFFIC IN EACH DIRECTION ON THE FOLLOWING DAYS:

A.

OFFICIAL STATE HOLIDAYS.

B.

FRIDAY AT 6:00 AM UNTIL TUESDAY AT 7:00 PM, IF A STATE HOLIDAY OCCURS OR IS OBSERVED ON MONDAY.

C.

THURSDAY AT 6:00 AM UNTIL SUNDAY AT 7:00 PM, IF A STATE HOLIDAY OCCURS OR IS OBSERVED ON FRIDAY.

D.

DURING LOCAL FESTIVALS, GAMES OR EVENTS THAT COULD BE IMPEDED BY THE PAVING OPERATIONS WHERE AND AS DIRECTED BY THE TDOT PROJECT ENGINEER.

PAVING

- (1)

CONTRACTOR WILL BE REQUIRED TO PERFORM THE FOLLOWING WORK:

•

BROOMING & DEGRASSING SHOULDERS SHALL INCLUDE CLIPPING OF MATERIAL INTERFERING WITH PROPER DRAINAGE OR ROADWAY AND SHOULDERS AS DIRECTED BY THE TDOT PROJECT ENGINEER.

•

ALL MATERIAL FROM CLIPPING, BROOMING AND DE-GRASSING SHOULDERS SHALL BE PICKED UP, REMOVED AND PROPERLY DISPOSED.

•

ALL COSTS ASSOCIATED WITH CLIPPING, BROOMING AND DE-GRASSING SHALL BE PAID FOR UNDER ITEM NO. 208-01.05
- (2)

INTELLIGENT COMPACTION SHALL BE USED.
- (3)

ANY QUANTITY REMAINING ON ITEMS COMPLETED PRIOR TO THE PAVING OPERATION WILL NOT BE CONVERTED TO ADDITIONAL ASPHALT FOR THE ROADWAY.

- (4)

THE CONTRACTOR WILL BE REQUIRED TO PERFORM THE FOLLOWING WORK.

•

REMOVE ALL GARBAGE AND CONSTRUCTION DEBRIS FROM PROJECT. THE COST FOR THIS WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

PAVEMENT MARKING

- (1)

THE CONTRACTOR IS RESPONSIBLE FOR THE LAYOUT OF ALL PAVEMENT MARKING. ANY CHANGE FROM THE EXISTING PAVEMENT MARKINGS MUST BE APPROVED BY THE REGION 2 TRAFFIC MANAGER.
- (2)

RAMPS SHALL BE MARKED UP TO WHERE THEY CONNECT TO THE INTERSECTING ROADWAY.
- (3)

ENHANCED FLATLINE THERMO PVMT MARKING SHALL BE APPLIED USING RIBBON METHOD AS DIRECTED BY THE TDOT PROJECT ENGINEER.
- (4)

EDGE LINE AND LANE LINE MARKINGS ON CONCRETE SURFACE OF INTERCHANGE RAMPS SHALL BE CONTRAST MARKINGS.
- (5)

EXISTING MARKINGS ON CONCRETE SURFACE OF INTERCHANGE RAMPS SHALL BE REMOVED BY HYDROBLAST METHOD.

COLD PLANING

- (1)

THE CONTRACTOR WILL BE REQUIRED TO PAVE THE COLD PLANED PAVEMENT WITHIN A PERIOD OF 96 HOURS.
- (2)

PROVIDED THAT THE CONTRACTOR USES A COLD PLANING MACHINE WITH THE MILLING DRUM SPECIFICATIONS OF CLOSELY SPACED FINE TOOTH (5/16 INCHES OR SMALLER) MILLING DRUM, MOVING FORWARD AT MODERATE SPEED (50 TO 65 FPM.) AND THE UNDER SURFACE REMAINS INTACT (HAVING NO LOOSE MATERIAL OR GOUGES,) THEN THE CONTRACTOR MAY PERMISSION FROM THE REGION 2 PROJECT ENGINEER TO MILL ALL SURFACES BEFORE COVERING WITH BITUMINOUS MATERIAL.
- (3)

IF MILLED SURFACE BEGINS TO DETERIORATE, PAVING TO COVER UP DETERIORATING MILLED SURFACES SHOULD OCCUR AS DIRECTED BY THE TDOT PROJECT ENGINEER DURING THE NEXT WORKING DAY. IF SEVERE DISTRESS OCCURS, IMMEDIATE RESPONSE WILL BE REQUIRED.

FOG SEALING SHOULDERS

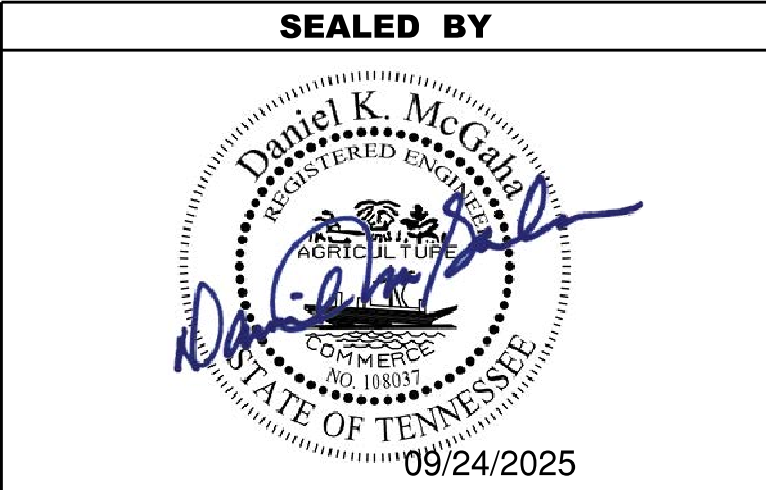
- (1)

THE CONTRACTOR SHALL USE HIGH PERFORMANCE (HP) FOG SEAL FROM QUALIFIED PRODUCTS LIST QPL40.001.
- (2)

THE SCORING OF SHOULDERS SHALL BE COMPLETED PRIOR TO APPLYING HP FOG SEAL TO PREVENT WATER INTRUSION.
- (3)

FINAL EDGE LINE STRIPING SHALL NOT BE APPLIED UNTIL HP FOG SEAL APPLICATION HAS BEEN COMPLETED.

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STATE OF TENNESSEE
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SPECIAL
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VOID REDUCING ASPHALT MEMBRANE SPECIAL NOTES

I. DESCRIPTION:

- (1) THIS SPECIFICATION COVERS THE REQUIREMENTS AND PRACTICES FOR APPLYING A VOID REDUCING ASPHALT MEMBRANE (VRAM) UNDERNEATH THE LONGITUDINAL CONSTRUCTION JOINT OF A COURSE OF A HOT-MIX ASPHALT (HMA) PAVEMENT. THE VRAM SHALL BE APPLIED BENEATH THE INTENDED AREA OF THE HMA PAVEMENT LONGITUDINAL CONSTRUCTION JOINT PRIOR TO THE INSTALLATION OF THE HMA COURSE. THIS WORK SHALL BE DONE ACCORDING TO THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED HEREIN.

II. MATERIALS:

- (1) THE BITUMINOUS MATERIAL USED FOR THE VRAM SHALL MEET THE REQUIREMENTS OF THE FOLLOWING TABLE. ELASTOMERS SHALL BE ADDED TO A BASE ASPHALT AND SHALL BE EITHER A STYRENE-BUTADIENE (SB), STYRENE-BUTADIENE-STYRENE (SBS), OR STYRENE-BUTADIENE RUBBER (SBR) COPOLYMER. IN ADDITION TO THE FOLLOWING TABLE, THE VRAM SHALL BE SUITABLE FOR CONSTRUCTION TRAFFIC TO DRIVE ON WITHIN 30 MINUTES OF PLACEMENT WITHOUT PICKUP OR TRACKING.

TEST	TEST REQUIREMENT	TEST METHOD
DYNAMIC SHEAR @ 88°C (UNAGED), G*Y/SIN Δ, KPA	1.00 MIN.	AASHTO T 315
CREEP STIFFNESS @ -18°C (UNAGED) STIFFNESS (S), MPA M-VALUE	300 MAX. 0.300 MIN.	AASHTO T 313
ASH, %	1.0 - 4.0	AASHTO T 111
ELASTIC RECOVERY, 100 MM ELONGATION, CUT TRIMMED., 25°C, %	70 MIN.	ASTM D6084 METHOD A
SEPARATION OF POLYMER, DIFFERENCE IN RING AND BALL, °C	3 MAX.	ASTM D1713

III. EQUIPMENT:

- (1) A PRESSURE DISTRIBUTOR SHALL BE PROVIDED THAT IS CAPABLE OF APPLYING THE VRAM AT THE DESIRED APPLICATION RATE. THE DISTRIBUTOR SHALL BE EQUIPPED WITH A HEATING AND RECIRCULATING SYSTEM ALONG WITH A FUNCTIONING AUGER AGITATING SYSTEM OR VERTICAL SHAFT MIXER IN THE HAULING TANK TO PREVENT LOCALIZED OVERHEATING.
- (2) THE CONTRACTOR MAY USE A MELTER KETTLE FOR TRANSPORTING AND/OR APPLICATION OF THE MATERIAL THAT IS CAPABLE OF APPLYING THE VRAM AT THE DESIRED APPLICATION RATE. THE MELTER KETTLE SHALL BE OF AN OIL JACKETED DOUBLE-BOILER TYPE WITH AGITATING AND RECIRCULATING SYSTEMS. MATERIAL FROM THE KETTLE MAY BE DISPENSED THROUGH A PRESSURE FEED WAND WITH AN APPLICATOR SHOE OR SPRAY BAR.

IV. CONSTRUCTION:

- (1) PRIOR TO THE APPLICATION OF THE VRAM, ENSURE THE AREA OF THE INTENDED LONGITUDINAL ASPHALT PAVEMENT JOINT IS THOROUGHLY CLEANED AND FREE OF DEBRIS. THE AREA MAY BE CLEANED BY SWEEPER/VACUUM TRUCK, POWER BROOM, AIR COMPRESSOR OR HAND TO THE SATISFACTION OF THE ENGINEER. ENSURE THE EXISTING SURFACE IS DRY AND FREE OF MOISTURE.
- (2) MILLED SURFACES MAY REQUIRE THE USE OF COMPRESSED AIR TO REMOVE DUST AND FINE MATERIALS FROM THE AREA WHERE VRAM WILL BE APPLIED. FINAL CLEANING WILL BE WITHIN 24 HOURS OF THE PLACEMENT OF VRAM AND PERFORMED TO THE ENGINEER'S APPROVAL.
- (3) THE CENTER OF THE VRAM APPLICATION WIDTH SHALL BE WITHIN 2" OF THE PROJECT ESTABLISHED CENTERLINE OR ESTABLISHED LANE EDGE. A STRINGLINE OR PAINT MARK SHALL BE USED AS A GUIDE FOR APPLICATION IN ORDER TO MAINTAIN A UNIFORM EDGE ALIGNMENT; IF ANY OTHER METHOD IS PROPOSED; IT SHALL MEET THE APPROVAL OF THE ENGINEER BEFORE BEING USED. WHEN ONLY ONE-HALF OF THE JOINT IS EXPOSED, SUCH AS A MILL AND INLAY PROJECT, THE APPLICATION SHALL BE APPLIED AT ONE-HALF THE PRESCRIBED WIDTH AND RATE AND SHALL BE ADJACENT TO THE CENTER OF THE JOINT, AND THE VERTICAL FACE OF THE COLD JOINT LEFT IN PLACE SHALL ALSO BE COATED.
- (4) THE VRAM SHALL BE APPLIED TO THE EXISTING SURFACE PRIOR TO OR FOLLOWING ANY OR ALL TACK COAT APPLICATIONS. TACK COAT MAY BE PLACED OVER THE VRAM AT THE ENGINEER'S DISCRETION. SHOULD THE TACK COAT APPLICATION SUPERSEDE PLACEMENT OF THE VRAM, THE TACK COAT SHALL BE FULLY CURED.

- (5) THE APPLICATION RATE OF VRAM SHALL BE DETERMINED FROM THE JOB MIX FORMULA (JMF) FOR THE PAVING PROJECT. FROM THE JMF, DETERMINE THE NOMINAL MAXIMUM AGGREGATE SIZE (NMAS) FOR THE MIXTURE. NMAS IS DEFINED AS ONE SIEVE SIZE LARGER THAN THE FIRST SIEVE TO RETAIN MORE THAN 10%. FROM THE FOLLOWING TABLE, DETERMINE IF THE MIXTURE IS DEFINED AS FINE-GRADED OR COARSE-GRADED. AFTER DETERMINING THE MIXTURE TYPE, THE APPLICATION RATE TABLE MAY BE REFERENCED.

DEFINITION OF FINE AND COARSE-GRADED MIXTURES*		
MIXTURE NMAS	COARSE-GRADED	FINE-GRADED
19MM (3/4")	< 35% PASSING 2.36MM (#8)	≥ 35% PASSING 2.36MM (#8)
12.5MM (1/2")	< 40% PASSING 2.36MM (#8)	≥ 40% PASSING 2.36MM (#8)
9.5MM (3/8")	< 45% PASSING 2.36MM (#8)	≥ 45% PASSING 2.36MM (#8)

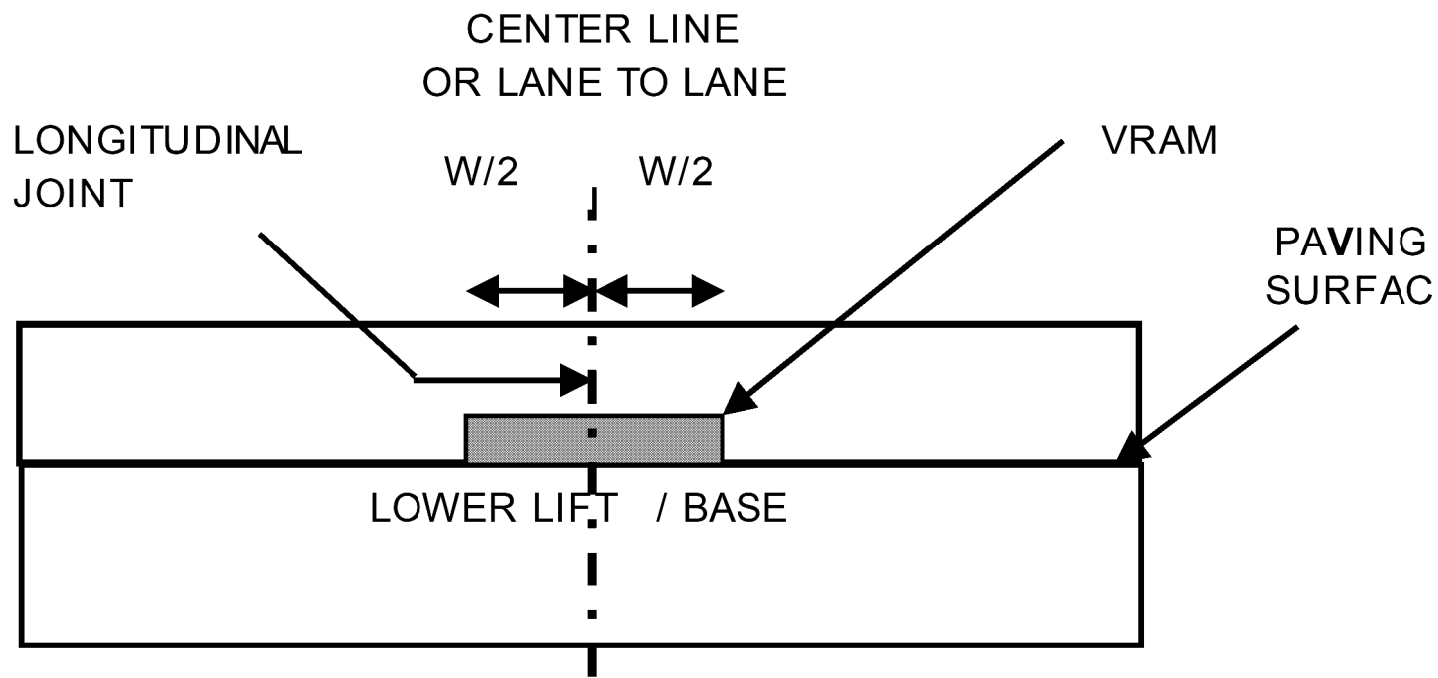
* HMA PAVEMENT MIX TYPE SELECTION GUIDE

- (6) THE VRAM, MEETING THE REQUIREMENTS SPECIFIED HEREIN, SHALL BE APPLIED TO THE EXISTING SURFACE AT THE WIDTH AND TARGET APPLICATION RATE AS SPECIFIED IN THE FOLLOWING TABLE:

VRAM Application Table ^{1/}		
Coarse-Graded HMA Mixtures ^{2/}		
Overlay Thickness, in	VRAM Width, in.	Application Rate, lb/ft
1	18	1.15
1 ¼	18	1.31
1 ½	18	1.47
1 ¾	18	1.63
≥ 2	18	1.80
Fine-Graded HMA Mixtures ²		
Overlay Thickness, in	VRAM Width, in.	Application Rate, lb/ft
1	18	0.80
1 ¼	18	0.88
≥ 1 ½	18	0.95

NOTES.

- A. 1/ EACH APPLICATION RATE HAS A SURFACE DEMAND FOR LIQUID INCLUDED IN IT. THEREFORE, TAKING A GIVEN RATE AND TRYING TO FACTOR IT UP TO A DIFFERENT THICKNESS WILL OVER PREDICT THE REQUIRED AMOUNT OF VRAM.
- B. 2/ IN THE EVENT OF A JOINT BETWEEN A COARSE-GRADED MIX AND A FINE-GRADED MIX, USE THE LOWER RATE.
- (7) THE VRAM APPLICATION RATE MAY BE ADJUSTED IN THE FIELD AT THE DISCRETION OF THE ENGINEER BASED ON OBSERVATIONS AND PERFORMANCE.



- (8) THE VRAM SHALL BE APPLIED IN A SINGLE PASS PLACED BY ANY APPLICATION METHOD LISTED IN THE EQUIPMENT SECTION. VRAM APPLICATION TEMPERATURE SHALL NOT EXCEED 330°F.

- (9) THE VRAM SHALL BE APPLIED AT A WIDTH OF NOT LESS OR GREATER THAN 1.5" OF THE WIDTH SPECIFIED IN THE PLANS. IF THE VRAM IS OUTSIDE OF THAT TOLERANCE, STOP AND REMEDIAL ACTION SHALL BE TAKEN SUBJECT TO THE ENGINEER'S APPROVAL.
- (10) THE VRAM SHALL BE SUITABLE FOR CONSTRUCTION TRAFFIC TO DRIVE ON WITHOUT PICKUP OR TRACKING OF THE VRAM WITHIN 30 MINUTES OF PLACEMENT. IF PICK UP OR TRACKING OCCURS; PLACEMENT OF THE VRAM WILL STOP AND REMEDIAL ACTION SHALL BE TAKEN SUBJECT TO THE ENGINEER'S APPROVAL.
- (11) PRIOR TO THE START OF PAVING OF A PAVEMENT COURSE, ENSURE THE PAVER END PLATE AND GRADE CONTROL DEVICE IS ADEQUATELY RAISED ABOVE THE FINISHED HEIGHT OF THE VRAM.
- (12) THE DEPARTMENT WILL REQUIRE A RANDOM SAMPLE OF VRAM. SAMPLES SHALL BE TAKEN AT THE BEGINNING OF THE PROJECT AND EVERY WEEK THEREAFTER. THE SAMPLE SHALL CONSIST OF ONE (1) 1-QUART METAL CONTAINER AND WILL BE TAKEN FROM A RANDOM HAUL TANKER, DISTRIBUTOR OR MELTING KETTLE. SAMPLES SHALL BE TAKEN BY THE CONTRACTOR IN THE PRESENCE OF THE PROJECT INSPECTOR.
- (13) THE CONTRACTOR SHALL SUBMIT EXAMPLES OF PREVIOUS PROJECTS THAT HAVE BEEN SUCCESSFULLY COMPLETED WITH THIS MATERIAL AND APPLICATION EQUIPMENT. IF NO PREVIOUS PROJECTS ARE AVAILABLE FOR REVIEW, THEN A DEMONSTRATION OF THE MATERIAL AND APPLICATION PROCESS SHALL BE SCHEDULED AT THE PRE-CONSTRUCTION CONFERENCE AND COMPLETED PRIOR TO THE START OF THE PROJECT.

V. ACCEPTANCE:

- (1) PROVIDE A BILL OF LADING TO THE ENGINEER FOR EVERY TANKER SUPPLYING MATERIAL TO THE PROJECT.
- (2) THE APPLICATION RATE OF VRAM WILL BE CHECKED BY THE VRAM CONTRACTOR WITHIN THE FIRST 1,000 LINEAR FEET OF THE PROJECT'S APPLICATION LENGTH DURING THE TEST STRIP AND EVERY DAY THEREAFTER. THE RATE WILL BE CHECKED BY WEIGHT PER FOOT. A SUITABLE PAPER OR PAN SHALL BE PLACED AT A RANDOM LOCATION IN THE PATH OF THE PLACEMENT FOR THE VRAM. AFTER APPLICATION OF THE VRAM, THE PAPER OR PAN SHALL BE PICKED UP AND WEIGHED. THE WEIGHT PER FOOT WILL BE CALCULATED. THE TOLERANCE FOR THE PLAN TARGET WEIGHT PER FOOT FROM THE VRAM APPLICATION RATE TABLE SHALL BE ± 10%. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING THE VRAM IN THE AREA WHERE THE APPLICATION RATE WAS CHECKED.

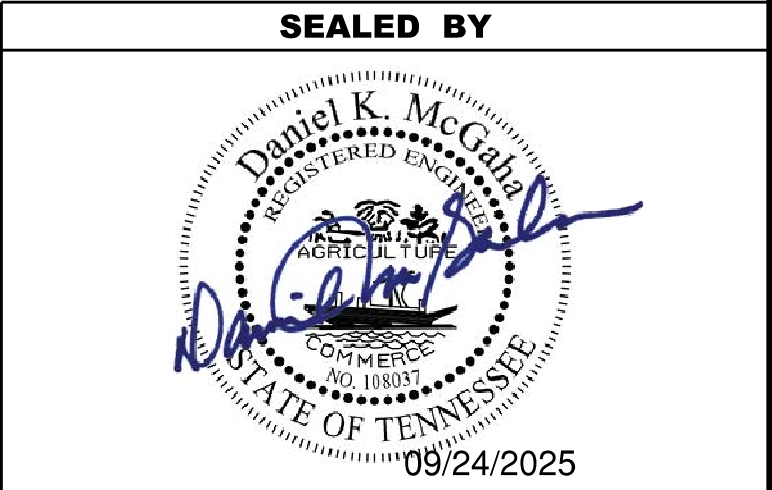
VI. MEASUREMENT:

- (1) THE AGENCY WILL MEASURE THE QUANTITY OF VRAM IN LINEAR FEET.

VII. BASIS OF PAYMENT:

- (1) VOID REDUCING ASPHALT MEMBRANE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR FULL WIDTH APPLICATIONS AS:
- A. 411-01.50 VOID REDUCING ASPHALT MEMBRANE (VRAM) FULL-WIDTH L.F.
- (2) VOID REDUCING ASPHALT MEMBRANE PLACED HALF WIDTH WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR HALF WIDTH APPLICATIONS AS:
- B. 411-01.51 VOID REDUCING ASPHALT MEMBRANE (VRAM) HALF-WIDTH L.F.

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STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION
SPECIAL NOTES

ENVIRONMENTAL NOTES

ENVIRONMENTAL GENERAL NOTES

NATURAL RESOURCES

- (4) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS AND EPHEMERAL, INTERMITTENT, AND PERENNIAL STREAMS, IS NOT ALLOWED.
- (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

- (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).
- (12) IF THE REMOVAL OF ANY TREES WITH A DIAMETER AT BREAST HEIGHT (DBH) GREATER THAN 3 INCHES IS DEEMED NECESSARY THE TDOT SUPERVISOR SHALL CONTACT THE TDOT ENVIRONMENTAL DIVISION, ECOLOGY SECTION IMMEDIATELY.

PERMITS, PLANS & RECORDS

- (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 ENGINEERING PRODUCTION SUPPORT DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.

ENVIRONMENTAL

- (20) 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.

ENVIRONMENTAL SPECIAL NOTES

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.

SCOPE OF WORK

- (6) THIS PROJECT INCLUDES MILL AND 411D, VRAM, INTELLIGENT COMPACTION, FOG SEAL SHOULDERS, PAVEMENT MARKINGS, AND NIGHT WORK.

EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

DISTURBED AREA

- (1) IF DISTURBED ACREAGE IS EQUAL TO ONE ACRE OR MORE, PLEASE CONTACT TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION AS SOON AS POSSIBLE BECAUSE AN NPDES PERMIT WILL BE REQUIRED.

SEDIMENT CONTROL

- (6) EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.
- (8) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFFSITE 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 GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFFSITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE NEGOTIATED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

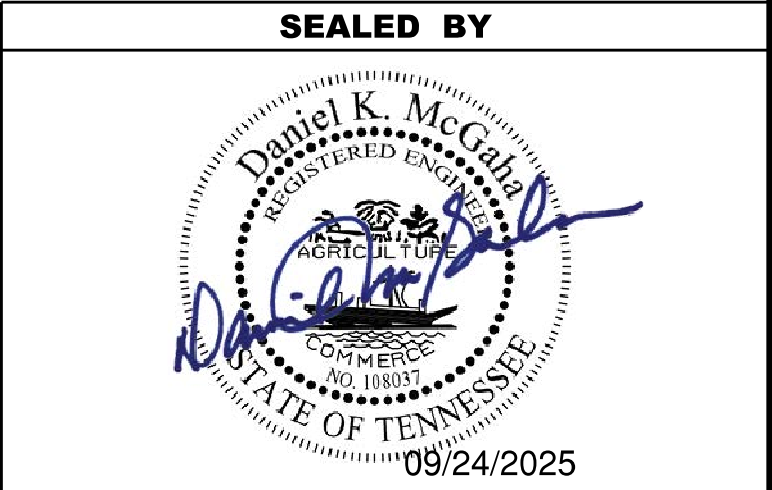
- (29) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS SHALL BE REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFFSITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EPSC SHALL BE REMOVED FROM THE SITE.
- (30) 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.
- (31) 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.
- (32) 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.
- (33) 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.
- (34) 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.

- (35) 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.
- (36) 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.
- (37) 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.
- (38) 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.
- (39) 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.
- (40) 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.

SPILL PREVENTION, MANAGEMENT & NOTIFICATION

- (44) ALL ONSITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE AND SPILLS.
- (45) FOR ALL HAZARDOUS MATERIALS STORED ONSITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP SHALL BE CLEARLY POSTED. SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.
- (46) APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT SHALL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ONSITE 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.
- (47) ALL SPILLS SHALL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- (48) THE CONTRACTOR'S RESPONSIBLE PARTY SHALL 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.
- (49) IF AN OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION SHALL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR SHALL 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.

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RESURF.	2025	NH-I-40-6(189)	2E



STATE OF TENNESSEE
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ENVIRONMENTAL
NOTES

ENVIRONMENTAL NOTES (CONT.)

EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES (CONT.)

SPILL PREVENTION, MANAGEMENT & NOTIFICATION (CONT.)

- (50) FERTILIZERS SHALL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED. ONCE APPLIED, FERTILIZERS SHALL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER.
- (51) IF A SPILL OCCURS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE TDOT PROJECT RESPONSIBLE PARTY. 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.
- (52) WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD, SEE THE LATEST TENNESSEE GENERAL PERMIT NO. TNR1000000 STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SECTION 5.1 FOR REPORTING REQUIREMENTS.
- (53) CONTRACTOR'S BULK FUEL AND PETROLEUM PRODUCTS STORED ONSITE OR ADJACENT TO THE R.O.W. IN ABOVE GROUND STORAGE CONTAINERS WITH A COMBINED CAPACITY OF 1320 GALLONS OR MORE SHALL HAVE SECONDARY CONTAINMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN FOR THE BULK STORAGE AND BE SOLELY RESPONSIBLE FOR OBTAINING ANY NECESSARY LOCAL, STATE, AND FEDERAL PERMITS. THE SPCC PLAN AND/OR PERMITS SHALL BE KEPT ONSITE AND A COPY PROVIDED TO THE TDOT PROJECT RESPONSIBLE PARTY PRIOR TO STORING 1320 GALLONS ON SITE.

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RESURF.	2025	NH-L40-6(189)	2E1

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ENVIRONMENTAL
NOTES

CUMBERLAND CO. I-40 EXITS #306.5, #311 ENTRANCE / EXIT RAMPS											
LOCATION		QUANTITY						QUANTITY			
EXIT	RAMP	STONE	COLD PLANE	ACS MIX GRADING "D" ENTRANCE/EXIT AREAS	ACS MIX GRADING "D" RAMPS	ACS MIX GRADING "D" GORE AREAS	TRACKLESS TACK COAT	PAINTED PVMT MARKING (6" LINE)	ENHANCED FLATLINE THERMO (6" LINE)	ENHANCED FLATLINE THERMO (8" BARRIER LINE)	ENHANCED FLATLINE THERMO (6" DOTTED LINE)
		303-01 TON	415-01.01 TON	411-03.10 TON	411-03.10 TON	411-03.10 TON	403-02.01 TON	716-05.20 L.M.	716-12.02 L.M.	716-12.03 L.F.	716-12.05 L.F.
#306.5 PARKING AREA / SALT BINS	I-40 WB EXIT (PARKING AREA)		190	31	91	68	1.49	0.22	0.22	1056	80
	I-40 WB ENT (PARKING AREA)		255	122	89	44	1.99	0.39	0.39	1162	230
	I-40 EB EXIT (SALT BINS)				164	36					
	I-40 EB ENT (SALT BINS)				252	28					
#306.5 SUBTOTAL		0	445	153	596	176	3.48	0.61	0.61	2218	310
#311 PLATEAU ROAD	I-40 EB EXIT	30	275	39	183	53	2.15	0.33	0.29	1056	83
	I-40 EB ENT	70	460	110	315	35	3.60	0.60	0.62	1214	240
	I-40 WB EXIT	52	270	42	177	78	0.94	0.43	0.42	1056	83
	I-40 WB ENT	49	470	80	343	47	3.67	0.39	0.50	1373	185
#311 SUBTOTAL		201	1475	271	1018	213	10.36	1.75	1.83	4699	591
TOTALS		201	1920	424	1614	389	13.84	2.36	2.44	6917	901

BRIDGE DECK RECOMMENDATIONS (RESURFACING)				
BRIDGE NUMBER	LOCATION LOG MILE	CROSSES OVER/UNDER	BRIDGE LENGTH	BRIDGE DECK RECOMMENDATIONS
18100400005	3.08 R	MEADOW CREAK	22.3'	PAVE WITH PLANS MIX/TREATMENT TYPE
18100400005	3.08 L	MEADOW CREAK	22.3'	PAVE WITH PLANS MIX/TREATMENT TYPE
18100400007	3.970	UNDERPASS JIM GARRETT RD VERTICAL CLEARANCE : EBL 16' 8" WBL 16' 11"	N/A	TO MAINTAIN MINIMUM VERTICAL CLEARANCE OF THE UNDERPASS COLD PLANE TO MATCH THE THICKNESS OF TREATMENT
18100400059	6.410	UNDERPASS PLATEAU RD/WB LNS ONLY VERTICAL CLEARANCE : WBL 18' 8"	N/A	TO MAINTAIN MINIMUM VERTICAL CLEARANCE OF THE UNDERPASS COLD PLANE TO MATCH THE THICKNESS OF TREATMENT
18100400057	6.450	UNDERPASS PLATEAU RD/EB LNS ONLY VERTICAL CLEARANCE : EBL 16' 5"	N/A	TO MAINTAIN MINIMUM VERTICAL CLEARANCE OF THE UNDERPASS COLD PLANE TO MATCH THE THICKNESS OF TREATMENT

TRAFFIC CONTROL SIGN TABULATION (RESURFACING)						
M.U.T.C.D. SIGN NO.	LEGEND \ DESCRIPTION	SIZE IN INCHES L x W	S.F.	TOTAL NUMBER REQUIRED	ITEM NO. 712-06 S.F.	
E5-1	EXIT	72" x 60"	30	2	60	
E5-2	EXIT OPEN	48" x 36"	12	2	24	
E5-2A	EXIT CLOSED	48" x 36"	12	2	24	
G20-1	ROAD WORK NEXT 5 MILES	48" x 24"	8	4	32	
G20-2	END ROAD WORK	48" x 24"	8	6	48	
R11-2	ROAD CLOSED	48" x 30"	10	2	20	
R1-2	YIELD	48" x 48"	16	2	32	
W1-4AR	REVERSE CURVE (RT)	48" x 48"	16	4	64	
W1-6R	ONE DIRECTION LARGE ARROW	48" x 24"	8	4	32	
W3-2	YIELD AHEAD	48" x 48"	16	2	32	
W4-1R	MERGING TRAFFIC	48" x 48"	16	2	32	
W4-2R	LANE ENDS SYMBOL	48" x 48"	16	4	64	
W8-11	UNEVEN LANES	48" x 48"	16	27	432	
W8-15	GROOVED PAVEMENT	48" x 48"	16	27	432	
W8-15P	MOTORCYCLE PLAQUE	30" x 24"	5	27	135	
W20-1	ROAD WORK 1 MILE	48" x 48"	16	4	64	
W20-1	ROAD WORK 1/2 MILE	48" x 48"	16	4	64	
W20-1	ROAD WORK 1000 FT	48" x 48"	16	4	64	
W20-1	ROAD WORK AHEAD	48" x 48"	16	7	112	
W20-5L	LEFT LANE CLOSED 1/2 MILE	48" x 48"	16	4	64	
W20-5L	LEFT LANE CLOSED 1500 FT	48" x 48"	16	4	64	
W20-5R	RIGHT LANE CLOSED 1/2 MILE	48" x 48"	16	4	64	
W20-5R	RIGHT LANE CLOSED 1500 FT	48" x 48"	16	4	64	
W21-2	FRESH OIL	48" x 48"	16	4	64	
THIS CONSTRUCTION SIGNING IS TO BE AS A MINIMUM. OTHER SIGNS AS DIRECTED BY THE ENGINEER MAY BE REQUIRED DURING DIFFERENT PHASES.				TOTAL	2087	

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RESURF.	2025	NH-I-40-6(189)	2F

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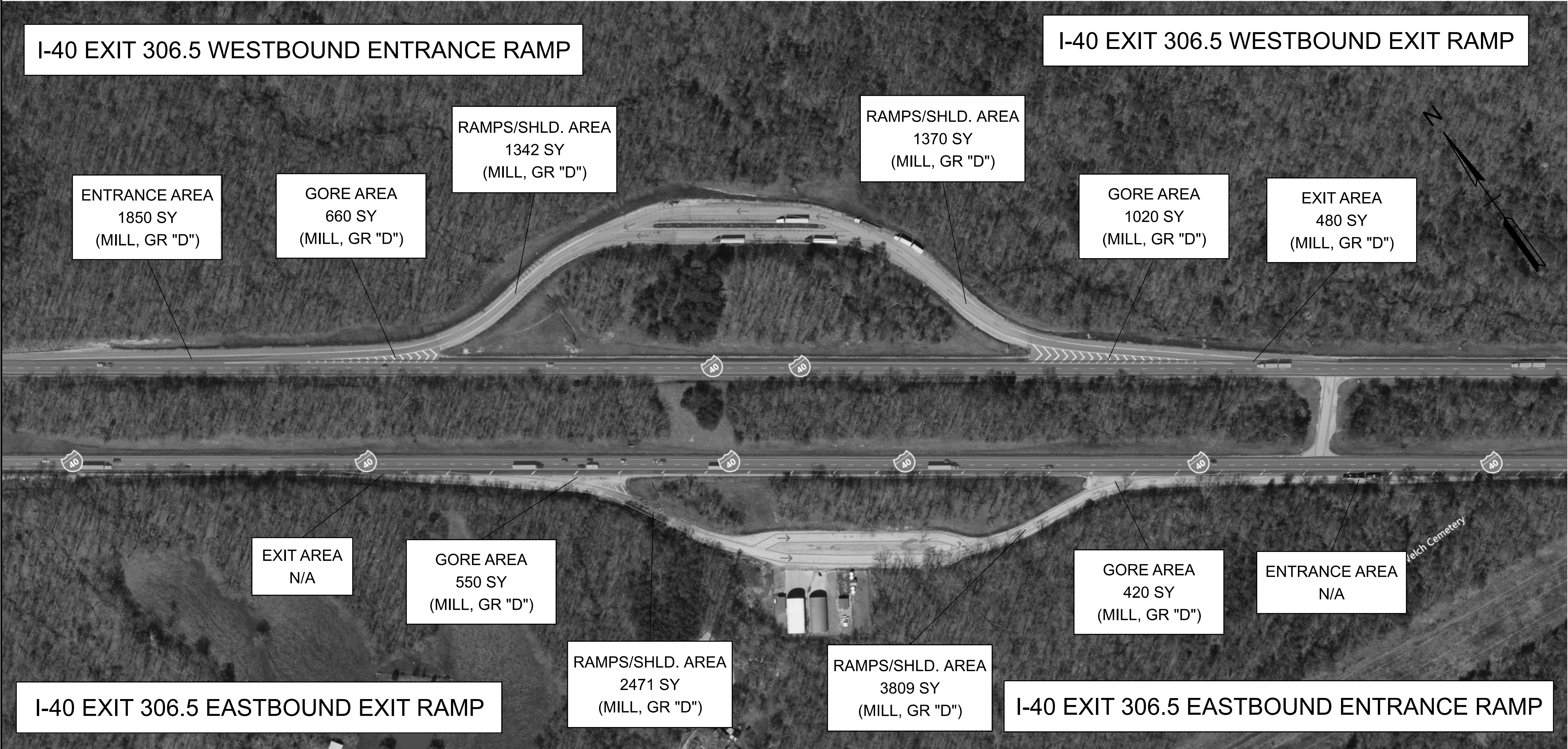


09/24/2025

STATE OF TENNESSEE
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TABULATED
QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
RESURF.	2025	NH-I-40-6(189)	2G1



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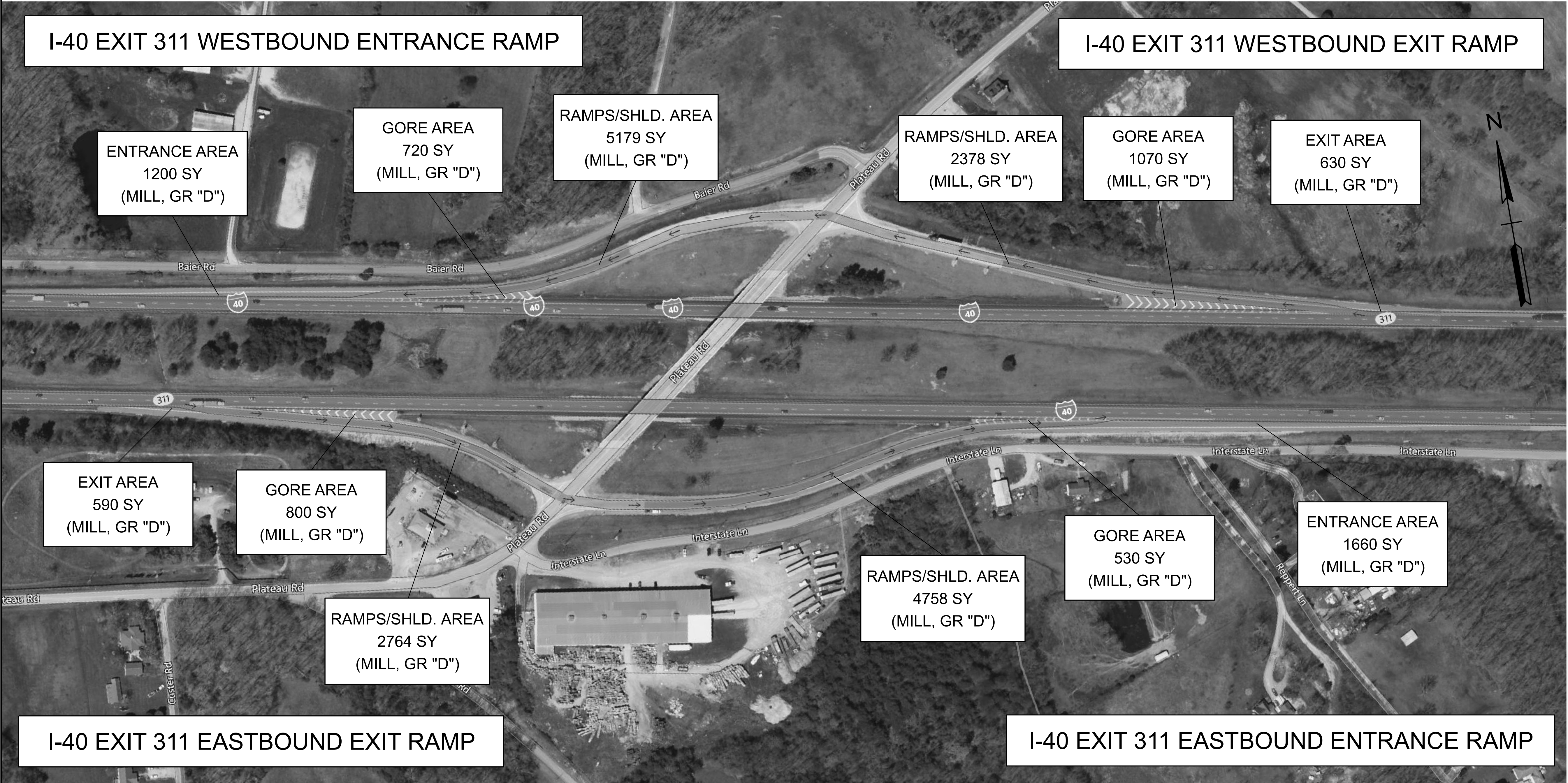
09/24/2025

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DETAIL
SHEETS

SHEET 2 OF 5

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RESURF.	2025	NH-I-40-6(189)	2G2



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DETAIL
SHEETS

SHEET 3 OF 5

I-40 EXIT 306.5 WESTBOUND ENTRANCE RAMP

6" DWL
2' DASH, 4' SPACE
STD DWG T-M-6

TRANSVERSE SHOULDER
MARKING DETAILS
STD DWG T-M-3

GORE MARKINGS
DETAILS
STD DWG T-M-7

I-40 EXIT 306.5 EASTBOUND EXIT RAMP

I-40 EXIT 306.5 WESTBOUND EXIT RAMP

GORE MARKINGS
DETAILS
STD DWG T-M-7

6" DWL
2' DASH, 4' SPACE
STD DWG T-M-6

TRANSVERSE SHOULDER
MARKING DETAILS
STD DWG T-M-3

I-40 EXIT 306.5 EASTBOUND ENTRANCE RAMP

TYPE	YEAR	PROJECT NO.	SHEET NO.
RESURF.	2025	NH-I-40-6(189)	2G3

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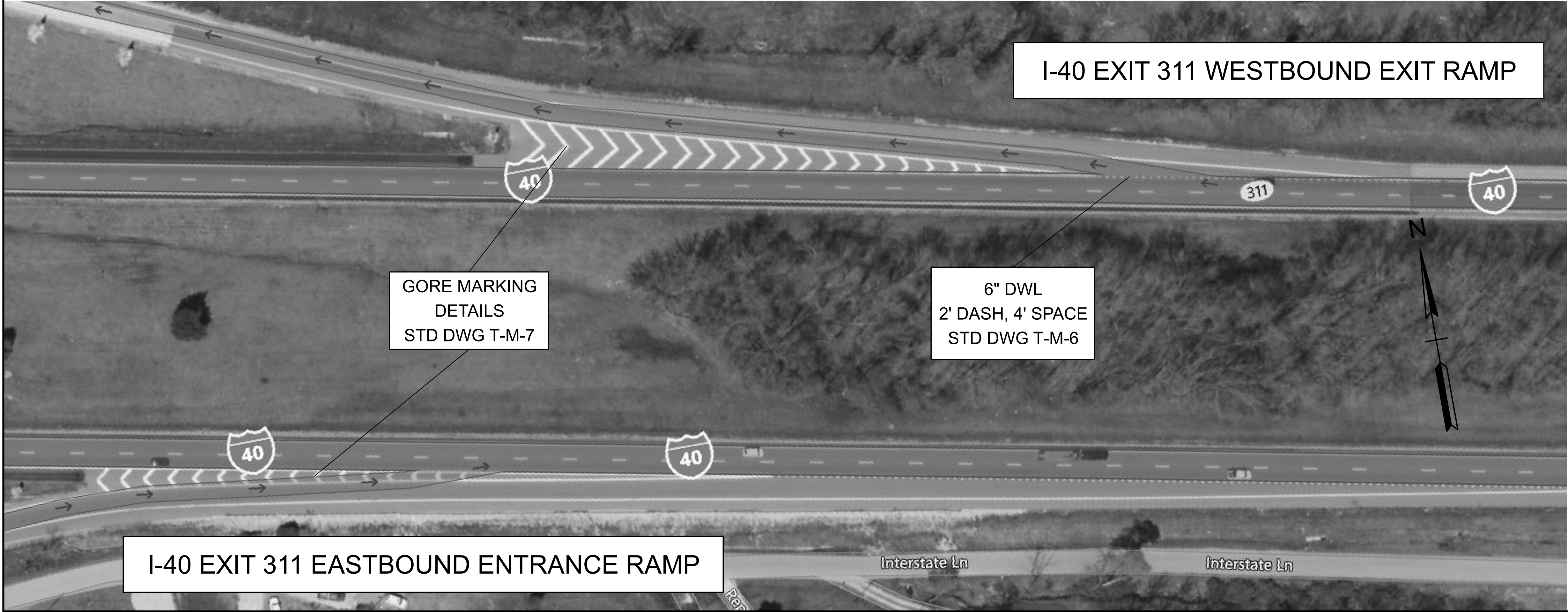
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAIL SHEETS

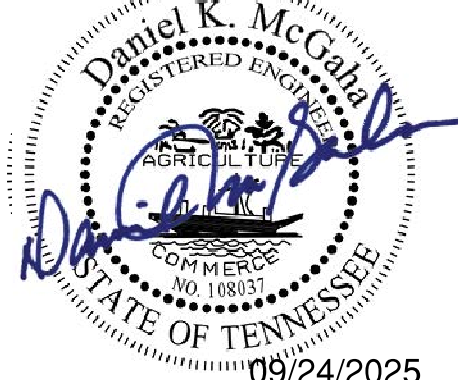
SHEET 4 OF 5



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RESURF.	2025	NH-I40-6(189)	2G4



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DETAIL
SHEETS

SHEET 5 OF 5

UTILITY NOTES

- (2) 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. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800- 351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.
- (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. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC AT 1-800-351-1111 WILL BE REQUIRED.

UTILITY OWNERS

CATV/FIBER:
CHARTER COMMUNICATIONS
851 SOUTH WILLOW AVENUE, SUITE 206
COOKEVILLE, TN 38501
CONTACT: MORGAN WILCHER
Email: Morgan.Wilcher@charter.com

FIBER OPTICS:
VOLFIRST
PO BOX 670
MCMINNVILLE, TN 37111
CONTACT: RICHARD BOYD
OFFICE PHONE: (931) 668-6692
Email: richardboyd@benlomand.org

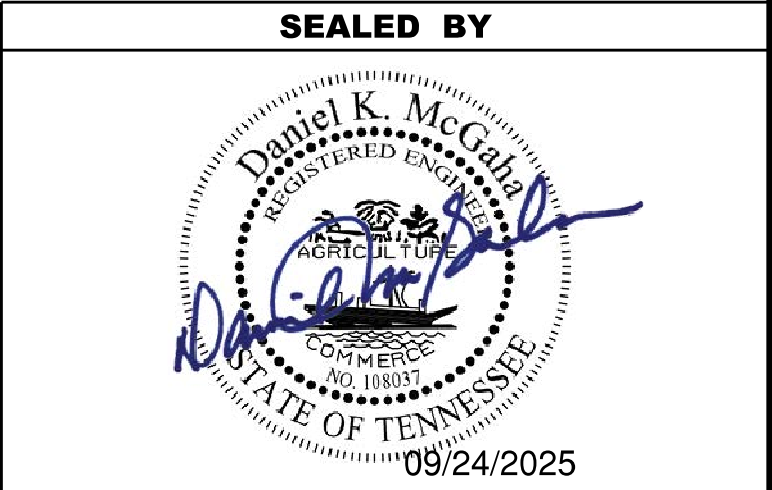
GAS:
MIDDLE TENNESSEE NATURAL GAS
PO BOX 670
SMITHVILLE, TN 37166
CONTACT: MATT STENNETT
OFFICE PHONE: (931) 754-3515
Email: mstennett@mtng.com

GAS:
VOLUNTEER ENERGY COOPERATIVE
PO BOX 277
DECATUR, TN 37322
CONTACT: MATTHEW TEAGUE
OFFICE PHONE: (423) 334-7040
Email: mteague@vec.org

TELEPHONE:
FRONTIER/CITIZENS COMMUNICATIONS COMPANY
2104 WEST EMORY ROAD
POWELL, TN 37849
CONTACT: JIM HEATHERLY
OFFICE PHONE: (865) 947-8260
Email: james.heatherly@ftr.com

WATER:
CRAB ORCHARD UTILITY DISTRICT
2089 EAST 1ST STREET
CROSSVILLE, TN 38555-4659
CONTACT: EVERETT BOLIN
OFFICE PHONE: (931) 484-6987
Email: ebolin.coud@frontiernet.net

TYPE	YEAR	PROJECT NO.	SHEET NO.
RESURF.	2025	NH-L-40-6(189)	3



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY NOTES
AND
UTILITY OWNERS

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

A. 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 1.75 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 1.75 INCHES AND NOT EXCEEDING 6 INCHES, TRAFFIC IS NOT TO BE ALLOWED TO TRAVERSE THIS DIFFERENCE IN ELEVATION.

a. SEPARATION SHALL BE ACCOMPLISHED 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.

b. IF THE DIFFERENCE IN ELEVATION IS ELIMINATED OR DECREASED TO 2 INCHES OR LESS BY THE END OF EACH WORKDAY, CONES MAY BE USED DURING DAYLIGHT HOURS IN LIEU OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES MENTIONED IN PARAGRAPH a, PROVIDED WARNING SIGNS ARE ERECTED. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) 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.

c. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE THROUGH TRAFFIC LANE AND THE SHOULDER AND THE ELEVATION DIFFERENCE IS LESS THAN 3 INCHES, THE CONTRACTOR MAY USE WARNING SIGNS AND/OR PROTECTIVE DEVICES AS APPLICABLE AND APPROVED BY THE REGIONAL TRAFFIC ENGINEER. SEE PARAGRAPH a REGARDING USE OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) WILL 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.

IN THESE SITUATIONS, THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 2 MILES 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 IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

3. 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 6 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.

4. FOR DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 18 INCHES.

SEPARATION WILL BE PROVIDED BY USE OF PORTABLE BARRIER RAIL.

IN THIS SITUATION 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 IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

B. IF THE DIFFERENCE IN ELEVATION IS WITHIN 30 FEET OF THE NEAREST TRAFFIC LANE BEING USED BY TRAFFIC CAUSED BY GRADING, EXCAVATION FOR UTILITIES, DRAINAGE STRUCTURES, UNDERCUTTING, ETC.:

1. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 0.75 INCH AND NOT EXCEEDING 2 INCHES.

a. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) 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. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 2 INCHES AND NOT EXCEEDING 6 INCHES:

a. SEPARATION SHALL BE ACCOMPLISHED 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.

b. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 6 INCHES:

a. SEPARATION SHALL BE ACCOMPLISHED 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.

b. ELIMINATE VERTICAL OFFSET BY CONSTRUCTING A STONE WEDGE OR GRADING TO A 4:1 SLOPE, OR FLATTER, OR USE PORTABLE BARRIER RAIL.

THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE WITHIN 8 FEET OF A TRAFFIC LANE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

C. IF THE DIFFERENCE IN ELEVATION IS FARTHER THAN 8 FEET FROM THE NEAREST TRAFFIC LANE BUT NOT MORE THAN 30 FEET FROM THE NEAREST TRAFFIC LANE:

SEPARATION SHALL BE ACCOMPLISHED 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.

THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

TYPE	YEAR	PROJECT NO.	SHEET NO.
RESURF.	2025	NH-I-40-6(189)	T1

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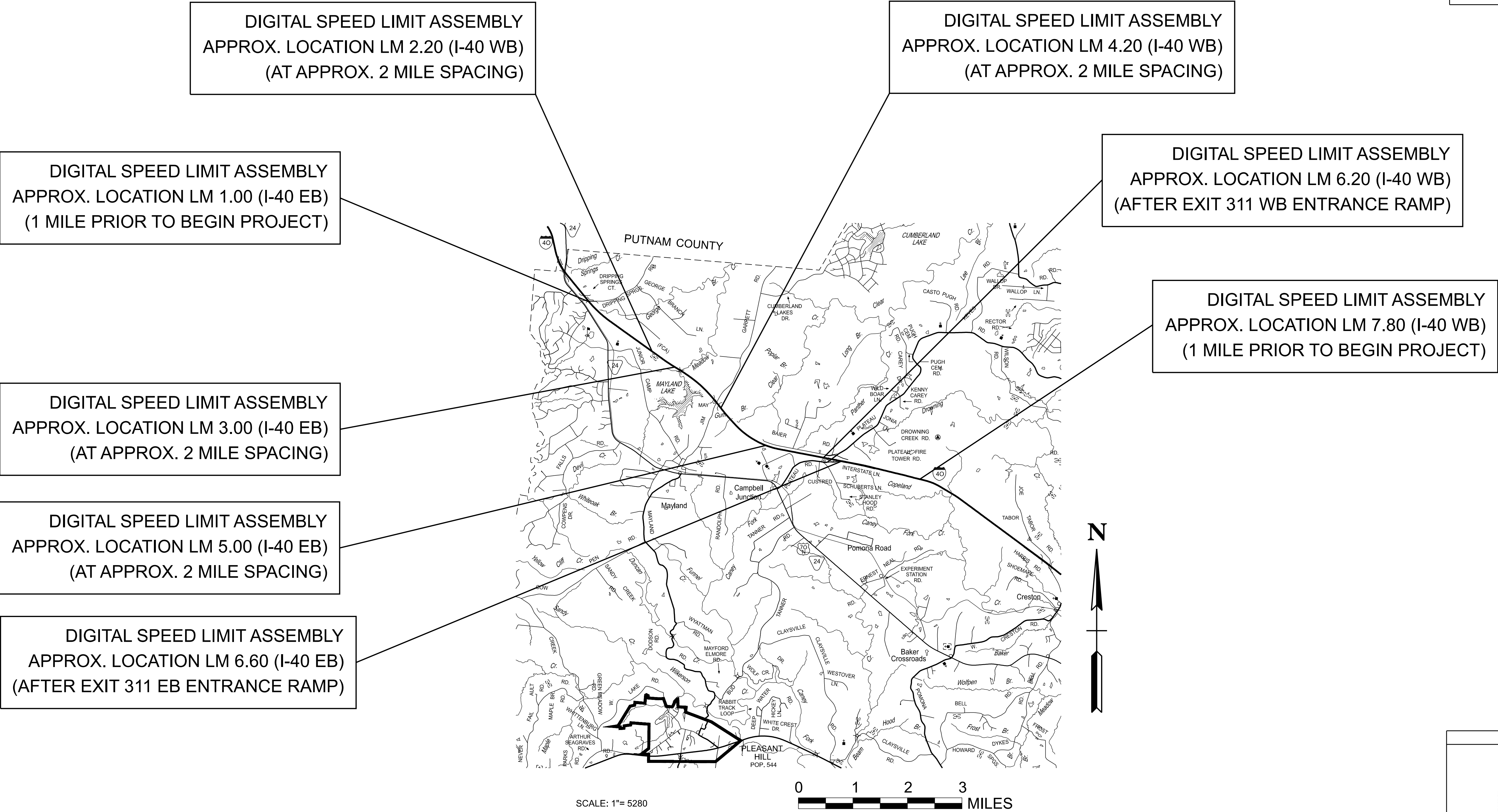


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE
DROP-OFF NOTES
FOR
TRAFFIC CONTROL

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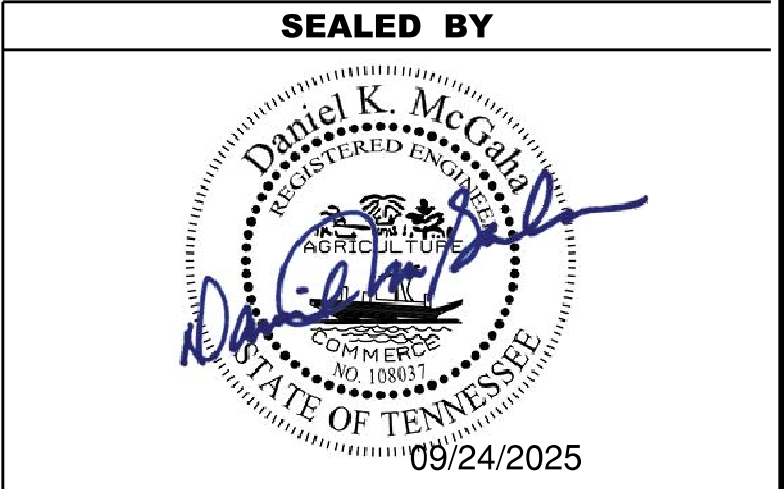
TYPE	YEAR	PROJECT NO.	SHEET NO.
RESURF.	2025	NH-I-40-6(189)	T2



DETAIL OF SUGGESTED LOCATIONS OF DIGITAL SPEED LIMIT ASSEMBLY

- (A) THE CONTRACTOR SHALL MONITOR ALL SPEED LIMIT ASSEMBLIES TO PREVENT COMMUNICATING CONFLICTING MESSAGES CONCERNING THE SPEED LIMIT.
- (B) EXISTING SPEED LIMIT SIGNS SHALL BE SUFFICIENTLY COVERED THROUGH THE ENTIRE WORK ZONE. IF THE COVERING BEGINS TO REVEAL THE EXISTING SPEED LIMIT SIGN, THE COVERING SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE TDOT PROJECT ENGINEER. SEE SPECIAL PROVISION 712DSL.
- (C) TAPE SHALL NOT BE AFFIXED TO THE REFLECTIVE SHEETING.

THE ESTIMATED TIME REQUIRED FOR THE PORTABLE QUEUE WARNING SYSTEM IS 500 HOURS. TO BE PAID FOR UNDER ITEM 712-08.14 PORTABLE QUEUE WARNING SYSTEM, 42 DAYS TOTAL. SEE SPECIAL PROVISION 712PQWS FOR INFORMATION.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC
CONTROL
PLANS