

Index Of Sheets
Resurfacing

SHEET NO.	DESCRIPTION
1 TITLE SHEET
2 ESTIMATED ROADWAY QUANTITIES AND TYPICAL SECTION
3 GENERAL NOTES
4 SPECIAL NOTES

STANDARD ROADWAY DRAWINGS

DWG. NO. REV. DESCRIPTION
ROADWAY DESIGN STANDARDS

RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND

SAFETY APPURTENANCES AND FENCE

S-GR31-1		W-BEAM GUARDRAIL
S-GRS-1		SPECIAL CASE: GUARDRAIL ATTACHMENT TO CONCRETE DECKS
S-GRT-2		TYPE 38 GUARDRAIL TERMINAL
S-GRT-2R		EARTH PAD FOR TYPE 38 (RETROFIT)
S-GRT-4		TYPE 13 GUARDRAIL TERMINAL (TRAILING END)
S-GRA-3		GUARDRAIL ANCHOR FOR TYPE 21, 13, AND IN-LINE TERMINALS

TRAFFIC CONTROL APPURTENANCES

T-M-1	11-01-11	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	11-15-13	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-3	09-19-91	MARKING STANDARDS FOR TRAFFIC ISLANDS, MEDIANS & PAVED SHOULDERS ON CONVENTIONAL ROADS
T-M-4	11-01-11	STANDARD INTERSECTION PAVEMENT MARKINGS

42008-4204-04

42008-3204-94

BEGIN PROJ. NO. HSIP-231(4)

(L.M. 0.00)

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 DECEMBER 1, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT ROAD SP. SV. 2 BILLY BINION

DESIGNER DARRELL GRAY CHECKED BY SCOTT JOHNSON

P.E. NO. 98034-4299-04

PIN NO. 084994.01

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HOUSTON COUNTY

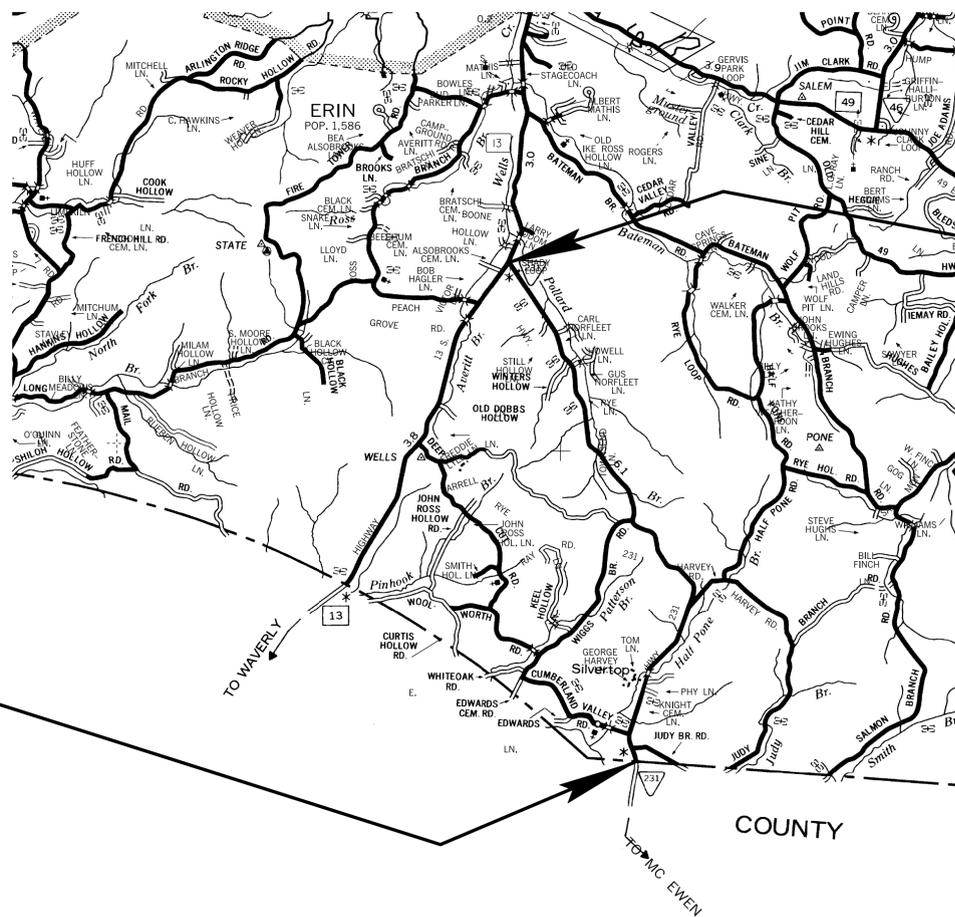
STATE ROUTE NO. 231

FROM HUMPHREYS COUNTY LINE (L.M. 0.00)

TO STATE ROUTE 13 (L.M. 6.13)

RESURFACING

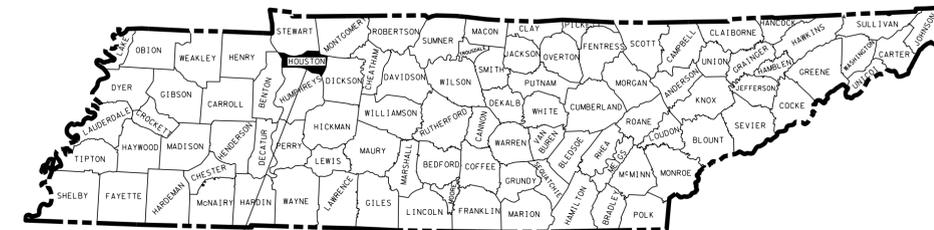
STATE HIGHWAY NO. 231 F.A.H.S. NO. N/A



SCALE: 1" = 1 MILE

PROJECT LENGTH **6.130 MILES**
TOTAL LANE MILES RESURFACED **12.3 MILES**

TENN.	YEAR	SHEET NO.
	2014	1
FED. AID PROJ. NO.	HSIP-231(4)	
STATE PROJ. NO.	42008-4204-04	
STATE PROJ. NO.	42008-3204-94	



PROJECT LOCATION

NO EXCLUSIONS

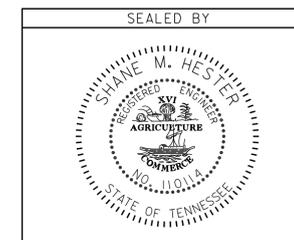
42008-4204-04

42008-3204-94

END PROJ. NO. HSIP-231(4)

(L.M. 6.13)

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BIDDING**



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

DATE: _____

APPROVED: [Signature]
JOHN SCHROER, COMMISSIONER

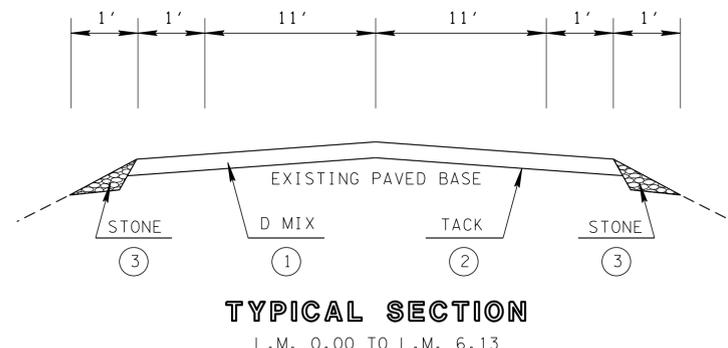
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

TRAFFIC DATA	
ADT (2014)	790
V	55 MPH

APPROVED: _____
DIVISION ADMINISTRATOR DATE

TYPE	YEAR	PROJECT NO.	SHEET NO.
RESURF.	2014	HS1P-231(4)	2

ESTIMATED ROADWAY QUANTITIES					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	QUANTITY	TOTAL QUANTITY
			42008-4204-04	42008-3204-94	
1	303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	1217	375	1592
2	307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	300		300
	403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	27		27
3,4,5	411-01.10 ACS MIX(PG64-22) GRADING D	TON	5838		5838
11	705-01.04 METAL BEAM GUARD FENCE	L.F.		200	200
	705-02.02 SINGLE GUARDRAIL (TYPE 2)	L.F.		2375	2375
	705-04.03 GUARDRAIL TERMINAL (TYPE 13)	EACH		9	9
	705-04.05 GUARDRAIL TERMINAL (TYPE-IN-LINE)	EACH		8	8
	705-04.07 TAN ENERGY ABSORBING TERM (NCHRP 350, TL3)	EACH		15	15
	706-01 GUARDRAIL REMOVED	L.F.		3325	3325
	706-06.03 RADIUS RAIL	L.F.		200	200
6	712-01 TRAFFIC CONTROL	LS	1		1
6	712-04.01 FLEXIBLE DRUMS (CHANNELIZING)	EACH	25		25
6	712-05.01 WARNING LIGHTS (TYPE A)	EACH	4		4
6,7	712-06 SIGNS (CONSTRUCTION)	S.F.	362		362
	716-01.21 SNWPLWBLE PVMT MRKRS (BI-DIR)(1 COLOR)	EACH		405	405
8	716-02.05 PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	30		30
8,9,10	716-13.06 SPRAY THERMO PVMT MRKNG (40 mil) (4IN LINE)	L.M.	24		24
	717-01 MOBILIZATION	LS	1		1



PAVING SCHEDULE	
1	GRADING "D" SURFACE @ 1.25" \ THICK (APPROX. 132.5 LBS/SY) 411-01.10 ASC MIX (PG64-22) GRADING D
2	TACK COAT 403-01 BITUMINOUS MATERIAL FOR TACK COAT @ 0.07 GAL./S.Y.
3	STONE WEDGE @ 3" THICK 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D

BRIDGE NOTES		
LOCATION	LENGTH (FT.)	RECOMMENDATION
L.M. 0.96	55.17	PAVE WITH PLANS QUANTITY

THESE ARE NO UTILITY ADJUSTMENTS ON THIS PROJECT

SIGNS (CONSTRUCTION) 712-06				
QUANTITY	M.U.T.C.D. NO.	DESCRIPTION	SIZE	712-06 S.F.
2	G20-1	ROAD WORK NEXT 6 MILES	36 x 18	9
3	G20-2	END ROAD WORK	36 x 18	13.5
3	W20-1	ROAD WORK 1500'	36 x 36	27
3	W20-1	ROAD WORK 1000'	36 x 36	27
3	W20-1	ROAD WORK 500'	36 x 36	27
12	W20-1	ROAD WORK AHEAD	36 x 36	108
2	W20-4	ONE LANE ROAD 1000' - PORTABLE	36 x 36	18
2	W20-7a	FLAGGER SYMBOL - PORTABLE	36 x 36	18
2	W16-2	SUPPLEMENTAL PLATE	24 x 18	6
2	W21-2	FRESH OIL - PORTABLE	36 x 36	18
2	W21-5	SHOULDER WORK - PORTABLE	36 x 36	18
2	W8-9a	SHOULDER DROP-OFF - PORTABLE	36 x 36	18
6	W8-11	UNEVEN LANES - PORTABLE	36 x 36	54
TOTAL S.F.				361.5

OTHER SIGNS, AS DIRECTED BY THE ENGINEER MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION AND WILL BE MEASURED AND PAID FOR AT THE UNIT BID PRICE. SEE CURRENT M.U.T.C.D. FOR STANDARDS AND TYPICAL APPLICATIONS.

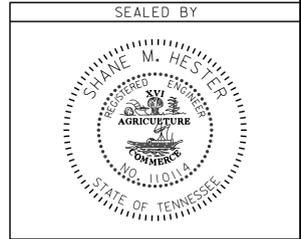
GUARDRAIL									
LOCATION (L.M.)	SIDE		GUARD FENCE 705-01.04 (L.F.)	GUARDRAIL SINGLE 705-02.02 (L.F.)	ANCHOR TYPE 13 705-04.03 (EACH)	ANCHOR IN-LINE 705-04.05 (EACH)	ANCHOR TYPE 38 705-04.07 (EACH)	GUARDRAIL REMOVED 706-01 (L.F.)	RADIUS RAIL 706-06.03 (L.F.)
	N	S							
0.8	X		62.5	812.5	4	4	2	975	100
0.87		X	62.5	562.5	4	4	0	625	100
1.03	X		0	325	0	0	2	425	0
1.96	X		0	375	0	0	2	475	0
3.36	X		0	75	0	0	2	175	0
3.36		X	0	75	1	0	1	125	0
3.88		X	75	0	0	0	2	175	0
5.88	X		0	75	0	0	2	175	0
5.88		X	0	75	0	0	2	175	0
			200	2375	9	8	15	3325	200

- FOOTNOTES**
- INCLUDES 375 TONS FOR GUARDRAIL TERMINALS.
 - TO BE USED FOR SPOT LEVELING AS DIRECTED BY THE ENGINEER.
 - INCLUDES 95 TONS FOR PRIVATE DRIVES, BUSINESS ENTRANCES AND COUNTY ROADS.
 - FOR MATERIAL TRANSFER DEVICE, SEE SPECIAL PROVISION NO. 407G.
 - FOR RIDEABILITY, SEE SPECIAL PROVISION 411C.
 - THE CONTRACTOR SHALL COMPLY WITH SECTION 712 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION REGARDING TEMPORARY TRAFFIC CONTROL AND THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - IN THE EVENT THAT A CONSTRUCTION AND/OR REGULATORY SIGN IS TEMPORARILY DESIGNATED NOT IN USE DURING THE CONSTRUCTION PHASE OF A PROJECT, THE CONTRACTOR SHALL CHOOSE A SIGN COVERING METHOD FROM A DESIGNATED LIST OF METHODS ACCEPTED BY THE DEPARTMENT. SAID SIGN COVERING METHOD SHALL BE SELECTED FROM QUALIFIED PRODUCTS LIST 10, SECTION D OR APPROVED BY THE DIVISION OF MATERIALS AND TEST AND SHALL BE USED TO COVER THESE SIGNS. NO OTHER METHOD FOR SIGN COVERING WILL BE ALLOWED. TEMPORARY SIGN COVERINGS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 712-06 SIGNS (CONSTRUCTION).
 - 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.
 - QUANTITY IS BASED ON 0 % PASS, 22 % NO PASS ONE SIDE, AND 78 % NO PASS BOTH SIDES AND EDGELINES FOR FINAL PAVEMENT MARKINGS.
 - SEE SPECIAL PROVISION 716ST FOR FINAL PAVEMENT MARKING DETAILS.
 - INCLUDES ALL COST OF ANY REMOVAL AND REPLACEMENT OF ROADWAY ASPHALT AS DIRECTED BY THE ENGINEER.

Test Performed by TDOT Road Profiler									Average Roughness Pre-Constuction HC-IRI Number Per Mile
Test Limits		Direction and Measured Roughness (HC-IRI Number Per Mile)							
Mile		NSEW	*Lane	Pre Ride Number	Payment Table	Max. # for Final Ride	Min. Required %Improvement	Percent Pay	72.8
From	To								
0.00	1.00	N	1	78	Table 1	55.0		100	
1.00	2.00	N	1	66	Table 1	55.0		100	
2.00	3.00	N	1	60	Table 1	55.0		100	
3.00	4.00	N	1	78	Table 1	55.0		100	
4.00	5.00	N	1	66	Table 1	55.0		100	
5.00	6.00	N	1	62	Table 1	55.0		100	
6.00	6.12	N	1	79	Table 1	55.0		100	
REMARKS									
0.00	1.00	S	1	79	Table 1	55.0		100	FROM HUMPHREYS CO LINE TO SR 13 (LM 0.00 TO LM 6.13)
1.00	2.00	S	1	71	Table 1	55.0		100	
2.00	3.00	S	1	77	Table 1	55.0		100	
3.00	4.00	S	1	63	Table 1	55.0		100	
4.00	5.00	S	1	75	Table 1	55.0		100	
5.00	6.00	S	1	81	Table 2	56.7	30	100	
6.00	6.13	S	1	84	Table 2	58.8	30	100	

*Lanes to be Left to Right each Direction - 1,2,3,4, etc. with 1 being the Inside Lane

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES AND TYPICAL SECTION

TYPE	YEAR	PROJECT NO.	SHEET NO.
RESURF.	2014	HS1P-231(4)	4

SPECIAL NOTES

MISCELLANEOUS

- (1) THE CONTRACTOR WILL BE REQUIRED TO PERFORM THE FOLLOWING WORK AND INCLUDE ALL COSTS THEREOF IN THE PRICES BID FOR OTHER ITEMS OF CONSTRUCTION:
 1. REPAIR OF SHOULDERS AND DITCHES THROUGHOUT THE LENGTH OF THE PROJECT. DEGRASS ALL SHOULDERS, MATERIAL SHALL BE PICKED UP AND REMOVED.
 2. CLEANING AND STRAIGHTENING ENDS OF EXISTING SIDEDRAINS AND CROSSDRAINS WHERE DIRECTED BY THE ENGINEER.
- (2) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS, BEFORE CLEANING OUT, REPAIRING OR REMOVAL/REPLACEMENT OF SIDE DRAINS AND CROSS DRAINS, TO ENSURE THAT THE DRAINAGE FEATURES / WATERCOURSES ARE NOT STREAMS OR WETLANDS. IF THE CONTRACTOR / TDOT INSPECTOR IS UNSURE WHETHER THE DRAINAGE FEATURES ARE STREAMS OR WETLANDS, THE INSPECTOR SHALL CONTACT THE TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION TO OBTAIN THE APPROPRIATE PERMITS.
- (3) THE CONTRACTOR SHALL TAKE EXTREME CARE WHEN WORKING AROUND EXISTING GUARDRAIL, HIGHWAY SIGNS, OR ANY DEPARTMENT OF TRANSPORTATION STRUCTURE TO AVOID DAMAGE DURING THE COURSE OF CONSTRUCTION. ANY DAMAGE WILL BE REPLACED OR REPAIRED AT HIS OWN EXPENSE.

PAVEMENT MARKINGS

- (4) THE CONTRACTOR WILL BE REQUIRED TO ESTABLISH AND LOCATE ALL NO-PASSING ZONES. THE ESTABLISHMENT OF NO-PASSING ZONES IS TO BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009, PART III, MARKING. ALL NO-PASSING ZONES WILL BE APPROVED BY THE ENGINEER WITH ADVICE FROM THE REGIONAL TRAFFIC ENGINEER PRIOR TO THE MARKING APPLICATION.
- (5) THE CONTRACTOR IS TO PROVIDE THE LAYOUT OF ALL EXISTING PAVEMENT MARKINGS BEFORE BEGINNING THE RESURFACING PROJECT. EXISTING MARKINGS SHALL BE REFERENCED AS NEEDED TO ENSURE THAT ALL NEW MARKINGS ARE REPLACED IN THEIR CORRESPONDING LOCATIONS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

PAVEMENT - PAVING

- (6) SURFACE TO BE CROWNED AS DIRECTED BY THE ENGINEER.
- (7) ALL SHOULDERS WILL BE DEGRASSED / CLIPPED AND CLEANED OF ALL VEGETATION, GRASS, AND DEBRIS. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

- (8) THE CONTRACTOR WILL BE RESPONSIBLE FOR STAKING CONSTRUCTION SIGNS. THE COST OF THIS WORK WILL BE INCLUDED IN OTHER ITEMS.
- (9) THE CONSTRUCTION SIGNS, FLAGMEN AND OTHER TRAFFIC CONTROL DEVICES WILL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- (10) ONE ADVANCE ROAD CONSTRUCTION AHEAD SIGN IS TO BE PLACED ON ALL SIDE ROADS PRIOR TO THEIR INTERSECTION WITH THE PROPOSED PROJECT. LOCATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER OR CONTRACTORS SUPERINTENDENT.

EROSION PREVENTION AND SEDIMENT CONTROL

FOR GUARDRAIL TERMINALS

- (11) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS BEFORE CONSTRUCTING EARTH PADS FOR THE TYPE 38 TERMINALS TO ENSURE THAT ENVIRONMENTAL FEATURES (STREAMS, WETLANDS, OR SPRINGS) ARE NOT IMPACTED DURING CONSTRUCTION. IF THE CONTRACTOR / TDOT INSPECTOR IS UNSURE WHETHER THE ENVIRONMENTAL FEATURES ARE STREAMS, SPRINGS OR WETLANDS, THE INSPECTOR SHALL CONTACT THE TDOT ENVIRONMENTAL DIVISION ECOLOGY OR PERMITS SECTION SO AN ACCURATE DETERMINATION CAN BE ASSESSED.
- (12) DURING CONSTRUCTION OF THE EARTH PADS FOR THE TYPE 38 GUARDRAIL TERMINALS, EXISTING VEGETATION WILL BE REQUIRED TO BE REMOVED FOR THE PROPOSED PAD AND SLOPES. IF DURING THE VEGETATION REMOVAL, ANY TREES GREATER THAN 3 INCHES IN DIAMETER ARE REQUIRED TO BE REMOVED, CONTACT THE TDOT ENVIRONMENTAL DIVISION ECOLOGY SECTION IMMEDIATELY. DUE TO THE RECENT MODIFICATION OF THE USFWS STANCE REGARDING THE INDIANA BAT NO TREES > 3" DBH SHOULD BE CUT WITHOUT CLEARANCE FROM THE TDOT ENVIRONMENTAL DIVISION ECOLOGY SECTION.

NPDES

- (13) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS, BEFORE CLEANING OUT OR REMOVAL/REPLACEMENT OF DITCHES, SIDE DRAINS, AND CROSS DRAINS, TO ENSURE THAT THE DRAINAGE FEATURES / WATERCOURSES ARE NOT STREAMS OR WETLANDS. IF THE CONTRACTOR / TDOT INSPECTOR IS UNSURE WHETHER THE DRAINAGE FEATURES ARE STREAMS OR WETLANDS, THE INSPECTOR SHALL CONTACT THE TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION TO OBTAIN THE APPROPRIATE PERMITS.
- (14) DUE TO THE TYPE OF WORK IT IS OUR UNDERSTANDING THAT THE PROJECT WILL NOT DISTURB MORE THAN ONE ACRE. IF THE DISTURBED AREA IS MORE THAN ONE ACRE, PLEASE CONTACT THE TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION BECAUSE A NPDES PERMIT WILL BE REQUIRED.

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

- (15) 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 PAVEMENT (W8-11) AND/OR SHOULDER DROP-OFF (W8-9A), 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.

WORK RESTRICTIONS

- (16) NO TIME RESTRICTIONS. ALL CONSTRUCTION ACTIVITIES SHALL NOT INTERFERE WITH SCHOOL OR WORK TRAFFIC EITHER AM OR PM OR AS DIRECTED BY THE ENGINEER.

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**SPECIAL
NOTES**