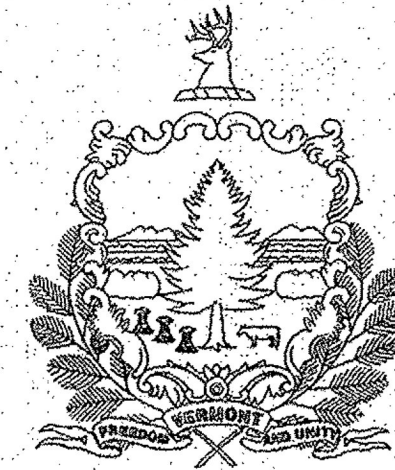
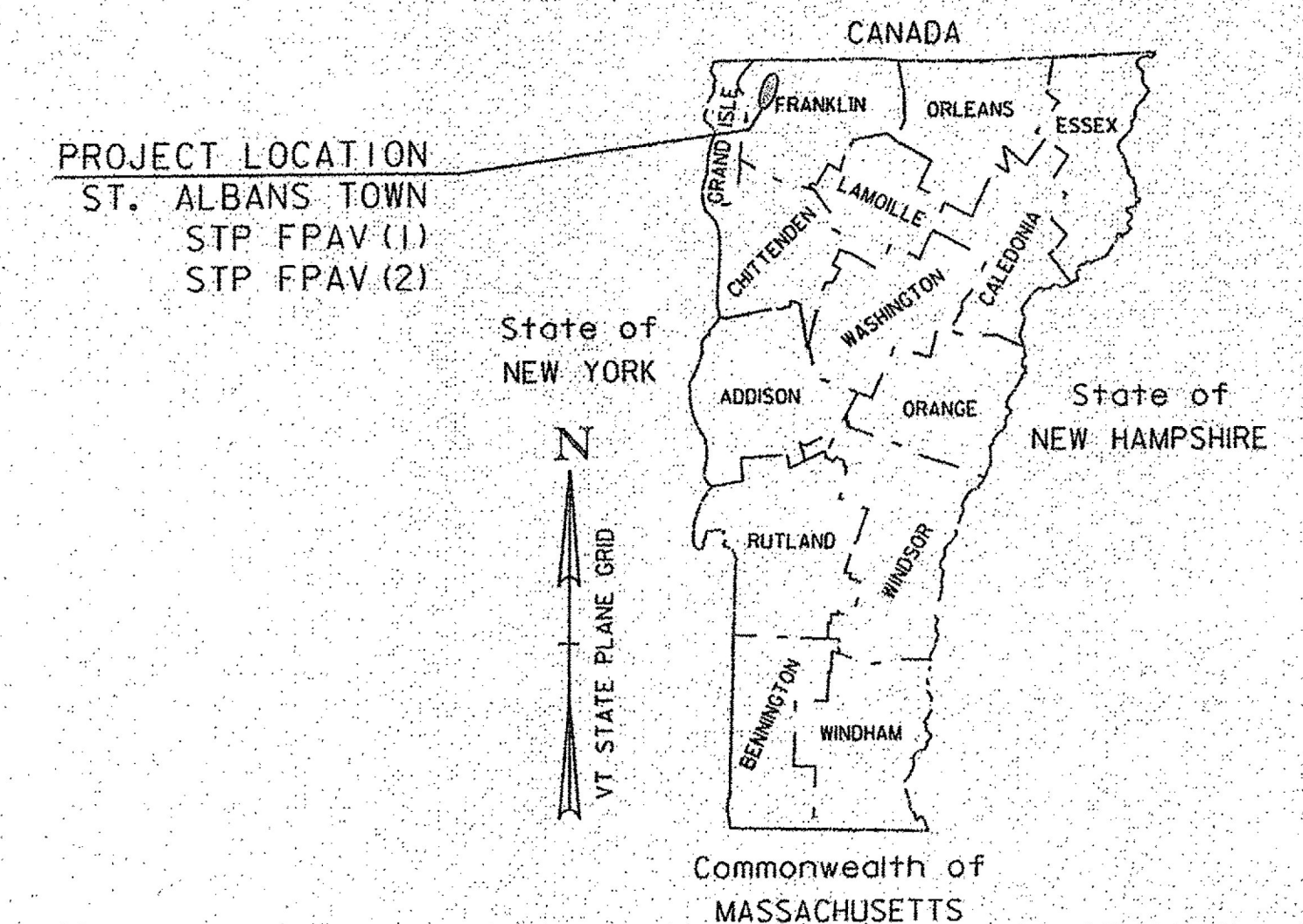


STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
TOWN OF ST. ALBANS
COUNTY OF FRANKLIN
VT ROUTE 36 - MAJOR COLLECTOR AND
VT ROUTE 38 - MAJOR COLLECTOR



RECORD PLANS

CONTRACTOR: F.W. WHITCOMB CONSTRUCTION CORP. - WALPOLE, NH

RESIDENT ENGINEER: SCOTT WHEATLEY

CONSTRUCTION BEGAN: APRIL 24, 2017

CONSTRUCTION COMPLETE: JUNE 02, 2017

RECORD PLANS BY: SCOTT WHEATLEY & JESSE IVES

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY
THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

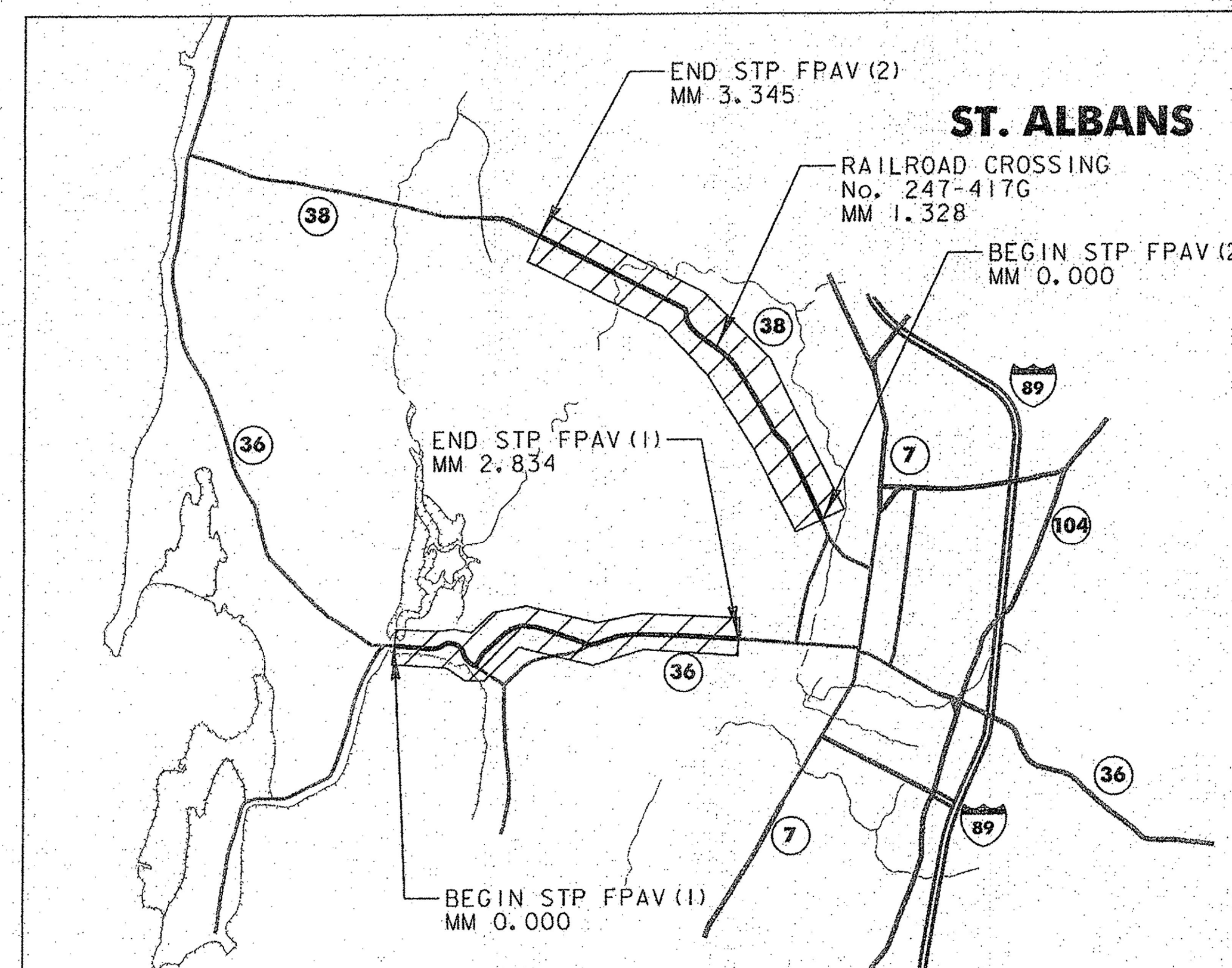
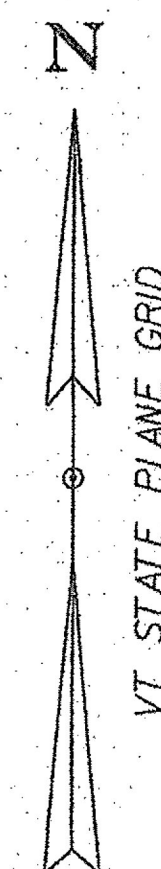
BY Scott Wheatley RESIDENT ENGINEER

DATE July 24, 2018

NOTE: Any further information concerning final quantities, amounts or other details
relative to this project may be found at Central Files in the electronic archives.

ST. ALBANS STP FPAV(1)
VT 36
(SEE SHEET 9 OF 32)

ST. ALBANS STP FPAV(2)
VT 38
(SEE SHEET 22 OF 32)



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE
WITH THESE PLANS AND THE STANDARD SPECIFICATIONS
FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE
FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011
FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT
REVISIONS AND SUCH REVISED SPECIFICATIONS AND
SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE
PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 3

SURVEYED BY : N/A

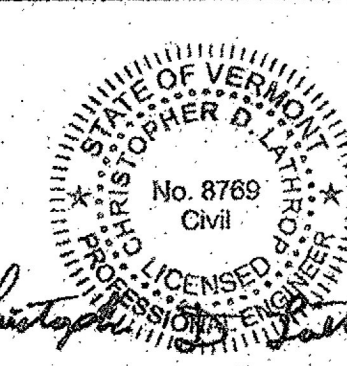
SURVEYED DATE : N/A

DATUM

VERTICAL N/A

HORIZONTAL N/A

DuBois
& King
INC.



DIRECTOR OF PROJECT DELIVERY

APPROVED Michael J. Fowler DATE 5/23/2018

PROJECT MANAGER : MICHAEL J. FOWLER, P.E.

PROJECT NAME : ST ALBANS TOWN

PROJECT NUMBER : STP FPAV(1)/STP FPAV(2)

SHEET 1 OF 32 SHEETS

INDEX OF SHEETS

1	COMPOSITE TITLE SHEET
2	COMPOSITE INDEX OF SHEETS
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6-7	COMPOSITE GUARDRAIL REPLACEMENT GUIDELINES SHEETS
8	COMPOSITE TRAFFIC CONTROL NOTES SHEET

ST. ALBANS TOWN STP FPAV(1)

9	TITLE SHEET
10	PROJECT NOTES SHEET
11-12	PROJECT TYPICAL SHEETS
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21	CONSTRUCTION APPROACH SIGNING SHEET

ST. ALBANS TOWN STP FPAV(2)

22	TITLE SHEET
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28	ITEM DETAIL SHEET
29-31	PLAN SHEETS
32	CONSTRUCTION APPROACH SIGNING SHEET

HIGHWAY SAFETY & DESIGN DETAIL

HSD-400.01 SAFETY EDGE DETAILS	03/29/16
HSD-621.06 GUARDRAIL TERMINAL END LABEL DETAIL	11/03/15

STRUCTURES DETAIL SHEET

SD-516.10 BRIDGE JOINT ASPHALTIC PLUG	08/29/11
---------------------------------------	----------

VAOT STANDARDS

D-15	06/01/94
E-193	08/18/95
G-1	11/10/15
GI-D	02/10/14
T-1	04/25/16
T-10	08/06/12
T-17	08/06/12
T-24	08/06/12
T-28	08/06/12
T-29	08/06/12
T-30	08/06/12
T-31	08/06/12
T-35	08/06/12
T-36	08/06/12

TRAFFIC DATA

VT ROUTE 36	AADT		DHV		%T		%D		ADTT		ESALS	
	2016	2026	2016	2026	2016	2026	2016	2026	2016	2026	(2016-2026)	(2016-2036)
BEGIN PROJECT TO CHURCH RD	2900	2900	330	330	9.0	10.9	60	60	230	280	486,000	1,054,000
CHURCH RD TO END PROJECT	4300	4300	480	480	7.1	8.5	58	58	310	370	866,000	1,804,000

SUPERPAVE BITUMINOUS CONCRETE PAVEMENT MIXTURE DESIGN CRITERIA	
DESIGN LANE/DESIGN LIFE ESALS	291,600
DESIGN NUMBER OF GYRATIONS	50
PERFORMANCE GRADE ASPHALT BINDER:	SEE SUBSECTION 490.03 (b)

VT ROUTE 38	AADT		DHV		%T		%D		ADTT		ESALS	
	2016	2026	2016	2026	2016	2026	2016	2026	2016	2026	(2016-2026)	(2016-2036)
BEGIN PROJECT TO END PROJECT	2300	2300	240	240	6.5	7.9	64	64	160	190	401,000	874,000

BITUMINOUS CONCRETE PAVEMENT MIXTURE DESIGN CRITERIA	
DESIGN LANE/DESIGN LIFE ESALS	256,640
DESIGN NUMBER OF GYRATIONS	50
PERFORMANCE GRADE ASPHALT BINDER:	SEE SUBSECTION 490.03 (b)

PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(1)/STP FPAV(2)	
FILE NAME: z16v020-composite.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
COMPOSITE INDEX OF SHEETS	SHEET 2 OF 32

GENERAL INFORMATION

SYMBOLGY LEGEND NOTE

THE SYMBOLGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLGY. THE SYMBOLGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R. O. W. ABBREVIATIONS (CODES) & SYMBOLS

POINT	CODE	DESCRIPTION
	CH	CHANNEL EASEMENT
	CONST	CONSTRUCTION EASEMENT
	CUL	CULVERT EASEMENT
	D&C	DISCONNECT & CONNECT
	DIT	DITCH EASEMENT
	DR	DRAINAGE EASEMENT
	DRIVE	DRIVEWAY EASEMENT
	EC	EROSION CONTROL
	HWY	HIGHWAY EASEMENT
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
▣	BNDNS	BOUND TO BE SET
●	IPNS	IRON PIN SET
◎	IPNS	IRON PIN TO BE SET
⊠	CALC	EXISTING ROW POINT
○	PROW	PROPOSED ROW POINT
[LENGTH]		LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT	CODE	DESCRIPTION
⌘	APL	BOUND APPARENT LOCATION
▣	BM	BENCHMARK
▣	BND	BOUND
▣	CB	CATCH BASIN
⊕	COMB	COMBINATION POLE
▣	DITHR	DROP INLET THROATED DNC
⊕	EL	ELECTRIC POWER POLE
⊙	FPOLE	FLAGPOLE
⊙	GASFIL	GAS FILLER
⊙	GP	GUIDE POST
×	GSO	GAS SHUT OFF
⊙	GUY	GUY POLE
⊙	GUYW	GUY WIRE
×	GV	GATE VALUE
⊕	H	TREE HARDWOOD
△	HCTRL	CONTROL HORIZONTAL
△	HVCTRL	CONTROL HORIZ. & VERTICAL
◇	HYD	HYDRANT
⊙	IP	IRON PIN
⊙	IPIPE	IRON PIPE
⊕	LI	LIGHT - STREET OR YARD
⊕	MB	MAILBOX
⊙	MH	MANHOLE (MH)
▣	MM	MILE MARKER
⊙	PM	PARKING METER
▣	PMK	PROJECT MARKER
POST	POST	POST STONE/WOOD
RRSIG	RRSIG	RAILROAD SIGNAL
RRSL	RRSL	RAILROAD SWITCH LEVER
S	S	TREE SOFTWOOD
SAT	SAT	SATELLITE DISH
SHRUB	SHRUB	SHRUB
SIGN	SIGN	SIGN
STUMP	STUMP	STUMP
TEL	TEL	TELEPHONE POLE
TIE	TIE	TIE
TSIGN	TSIGN	SIGN W/DOUBLE POST
VCTRL	VCTRL	CONTROL VERTICAL
WELL	WELL	WELL
WSO	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADUIS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLGY

UNDERGROUND UTILITIES

— UGU —		UTILITY (GENERIC-UNKNOWN)
— UT —		TELEPHONE
— UE —		ELECTRIC
— UC —		CABLE (TV)
— UEC —		ELECTRIC+CABLE
— UET —		ELECTRIC+TELEPHONE
— UCT —		CABLE+TELEPHONE
— UECT —		ELECTRIC+CABLE+TELEP.
— G —		GAS LINE
— W —		WATER LINE
— S —		SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

— AGU —		UTILITY (GENERIC-UNKNOWN)
— T —		TELEPHONE
— E —		ELECTRIC
— C —		CABLE (TV)
— EC —		ELECTRIC+CABLE
— ET —		ELECTRIC+TELEPHONE
— AER E&T —		ELECTRIC+TELEPHONE
— CT —		CABLE+TELEPHONE
— ECT —		ELECTRIC+CABLE+TELEP.
— .. —		UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLGY

PROJECT DESIGN & LAYOUT SYMBOLGY

— - - - CZ — - - -	CLEAR ZONE
—————	PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

△ — △ — △ — △	TOP OF CUT SLOPE
○ — ○ — ○ — ○	TOE OF FILL SLOPE
⊗ ⊗ ⊗ ⊗ ⊗ ⊗	STONE FILL
— — — — —	BOTTOM OF DITCH
== == == == ==	CULVERT PROPOSED
-----	STRUCTURE SUBSURFACE
PDF — PDF —	PROJECT DEMARCATION FENCE
BF — x — x — BF — x —	BARRIER FENCE
xxxxxxxxxxxxxxxxxxxx	TREE PROTECTION ZONE (TPZ)
//////////	STRIPING LINE REMOVAL
~~~~~	SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLGY

BOUNDARY LINES

—————	TOWN LINE	TOWN BOUNDARY LINE
—————	COUNTY LINE	COUNTY BOUNDARY LINE
—————	STATE LINE	STATE BOUNDARY LINE
——— / —— / ——		PROPOSED STATE R.O.W. (LIMITED ACCESS)
——— / —— / ——		PROPOSED STATE R.O.W.
——— / —— / ——		STATE ROW (LIMITED ACCESS)
——— / —— / ——		STATE ROW
——— / —— / ——		TOWN ROW
— . . . . . — . . . . .		PERMANENT EASEMENT LINE (P)
— . . . . . — . . . . .		TEMPORARY EASEMENT LINE (T)
— — — — —		SURVEY LINE
+ ——— + ——— + ———		PROPERTY LINE (P/L)
P ——— P ———		
L ——— L ———		
SR —○— SR —○— SR —○—		SLOPE RIGHTS
6f ——— 6f ———		6F PROPERTY BOUNDARY
4f ——— 4f ———		4F PROPERTY BOUNDARY
HAZ ——— HAZ ———		HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLGY

EPSC MEASURES

ONNOONNOONNO	FILTER CURTAIN
— x — x — x — x —	SILT FENCE
— x — x — x — x —	SILT FENCE WOVEN WIRE
▶ —▶ —▶ —▶ —▶	CHECK DAM
▣	DISTURBED AREAS REQUIRING RE-VEGETATION
▣	EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLGY

ENVIRONMENTAL RESOURCES

———	WETLAND BOUNDARY
- - - - -	RIPARIAN BUFFER ZONE
— — — — —	WETLAND BUFFER ZONE
- - - - -	SOIL TYPE BOUNDARY
——— T&E ———	THREATENED & ENDANGERED SPECIES
HAZ ——— HAZ ———	HAZARDOUS WASTE AREA
——— AG ———	AGRICULTURAL LAND
——— HABITAT ———	FISH & WILDLIFE HABITAT
——— FLOOD PLAIN ———	FLOOD PLAIN
——— OHW ———	ORDINARY HIGH WATER (OHW)
———	STORM WATER
———	USDA FOREST SERVICE LANDS
———	WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

——— ARCH ———	ARCHEOLOGICAL BOUNDARY
——— HISTORIC DIST ———	HISTORIC DISTRICT BOUNDARY
——— HISTORIC ———	HISTORIC AREA
(H)	HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLGY

EXISTING FEATURES

- - - - -	ROAD EDGE PAVEMENT
- - - - -	ROAD EDGE GRAVEL
- - - - -	DRIVEWAY EDGE
- - - - -	DITCH
—————	FOUNDATION
x — x — x — x —	FENCE (EXISTING)
□ — □ — □ — □ —	FENCE WOOD POST
○ — ○ — ○ — ○ —	FENCE STEEL POST
~~~~~	GARDEN
○ — ○ — ○ — ○ —	ROAD GUARDRAIL
	RAILROAD TRACKS
- - - - -	CULVERT (EXISTING)
ooooo	STONE WALL
- - - - -	WALL
~~~~~	WOOD LINE
~~~~~	BRUSH LINE
~~~~~	HEDGE
~~~~~	BODY OF WATER EDGE
~~~~~	LEDGE EXPOSED

PROJECT NAME:	ST ALBANS TOWN
PROJECT NUMBER:	STP FPAV(1)/STP FPAV(2)
FILE NAME: z16v020-composite.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: VAOT	CHECKED BY: C. LATHROP
COMPOSITE CONVENTIONAL SYMBOLGY LEGEND SHT	SHEET 3 OF 32



STATE OF VERMONT AGENCY OF TRANSPORTATION				COMPOSITE QUANTITY SHEET 1																							
				ST. ALBANS TOWN STP FPAV(1)						ST. ALBANS TOWN STP FPAV(2)						TOTALS			DESCRIPTIONS						DETAILED SUMMARY OF QUANTITIES		
				FEDERAL NON- PARTICIP.	ROADWAY	BRIDGE	FULL C.E. ITEMS	ROADWAY (ALTERNATE A)	ROADWAY (ALTERNATE B)	FEDERAL NON- PARTICIP.	ROADWAY	BRIDGE	FULL C.E. ITEMS	ROADWAY (ALTERNATE A)	ROADWAY (ALTERNATE B)	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT		ITEMS		
					150						100							250		CY	EARTH BORROW	203.30					
					1						1							2		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22					
					1100						1460							2560		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10					
					300						300							600		TON	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.28					
																					BEGIN OPTION AA						
					670						420							1090		CWT	EMULSIFIED ASPHALT (RS-1)	404.65					
					670						420							1090		CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-1H OR CRS-1H)	900.683					
																					END OPTION AA						
					1						1							2		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I)	406.50					
					6													6		EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I	604.412					
					20						30							50		HR	POWER GRADER RENTAL	608.15					
					75						85							160		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25					
					20						30							50		HR	POWER BROOM RENTAL, TYPE I	608.30					
					40						50							90		HR	POWER BROOM RENTAL, TYPE II	608.31					
					150						170							320		HR	TRUCK RENTAL	608.37					
					20						20							40		HR	LOADER RENTAL, TYPE I	608.40					
					250						175							425		LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20					
					6						4							10		EACH	ANCHOR FOR STEEL BEAM RAIL	621.6					
											1							1		EACH	REPLACE GUARDRAIL BEAM UNIT	621.77					
					679													679		LF	ADJUST HEIGHT OF GUARDRAIL	621.79					
					225						150							375		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80					
					500						500							1000		HR	UNIFORMED TRAFFIC OFFICERS	630.10					
					1500						1700							3200		HR	FLAGGERS	630.15					
											50							50		HR	FLAGGERS, RAILROAD	630.20					
							0.5						0.5					1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17					
					0.5						0.5							1		LS	MOBILIZATION/DEMOBILIZATION	635.11					
					1													1		EACH	TRAFFIC CONTROL (STP FPAV(1))	641.10					
											1							1		EACH	TRAFFIC CONTROL (STP FPAV (2))	641.10					
					2						2							4		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15					
					30500						36000							66500		LF	4 INCH WHITE LINE, WATERBORNE PAINT	646.201					
					31000						33000							64000		LF	4 INCH YELLOW LINE, WATERBORNE PAINT	646.2111					
					90													90		LF	8 INCH YELLOW LINE, WATERBORNE PAINT	646.231					
					30													30		LF	24 INCH STOP BAR, WATERBORNE PAINT	646.261					
					14													14		EA	LETTER OR SYMBOL, WATERBORNE PAINT	646.301					
											2							2		EA	RAILROAD CROSSING SYMBOL, WATERBORNE PAINT	646.321					
					30500						36000							66500		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602					
					31000						33000							64000		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612					
					90													90		LF	TEMPORARY 8 INCH YELLOW LINE, PAINT	646.652					
					30													30		LF	TEMPORARY 24 INCH STOP BAR, PAINT	646.682					
					14													14		EACH	TEMPORARY LETTER OR SYMBOL, PAINT	646.692					
																						PROJECT NAME: ST ALBANS TOWN					
																						PROJECT NUMBER: STP FPAV(1)/STP FPAV(2)					
																						FILE NAME: z16v020-composite.dgn		PLOT DATE: 05/10/2016			
																						PROJECT LEADER: C. LATHROP		DRAWN BY: J. GOODALL			
																						DESIGNED BY: J. GOODALL		CHECKED BY: C. LATHROP			
																						COMPOSITE QUANTITY SHEET 1		SHEET 4 OF 32			

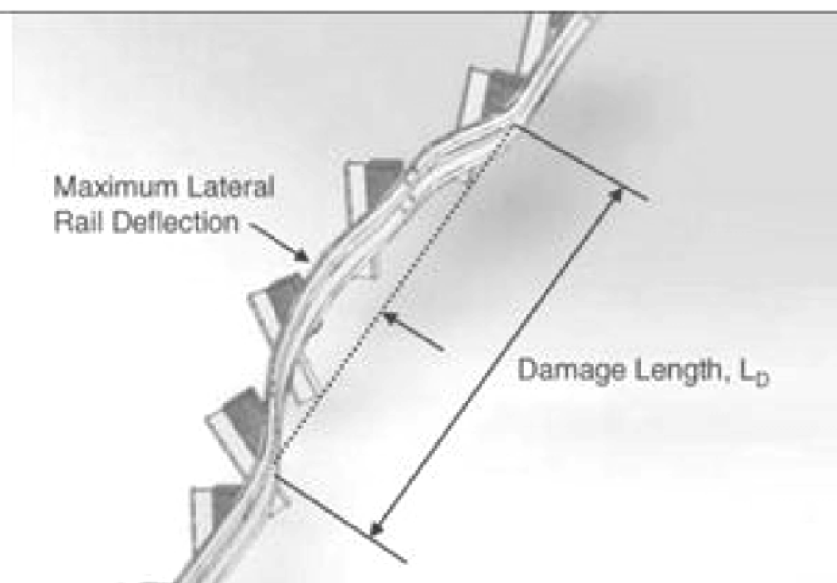
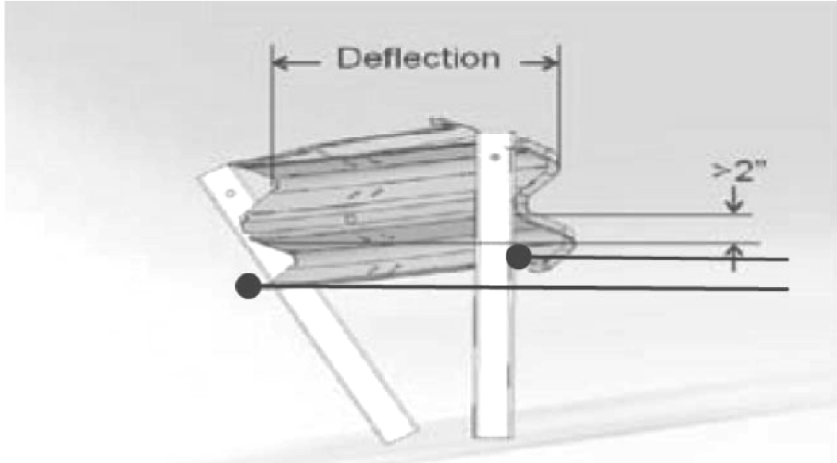
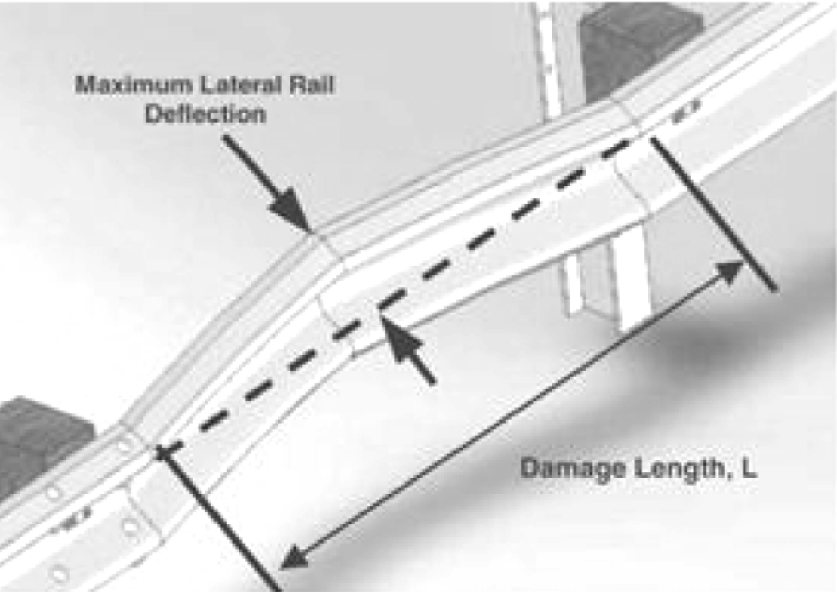
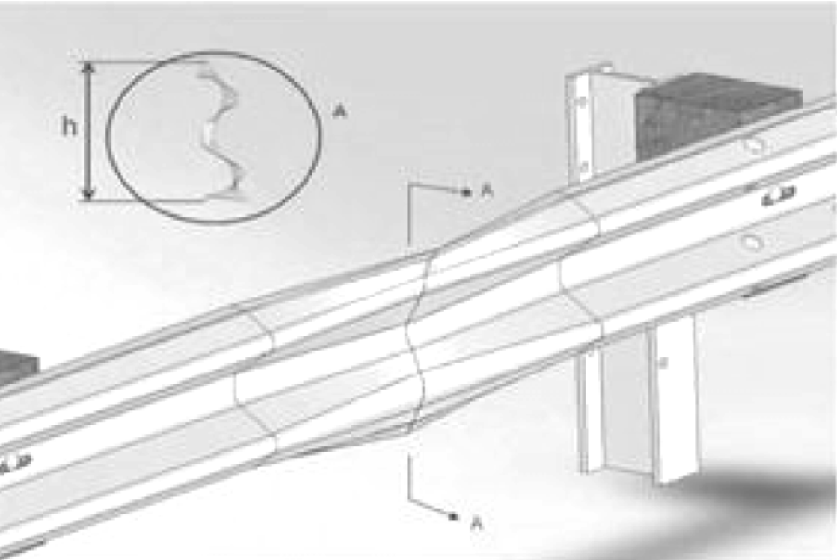
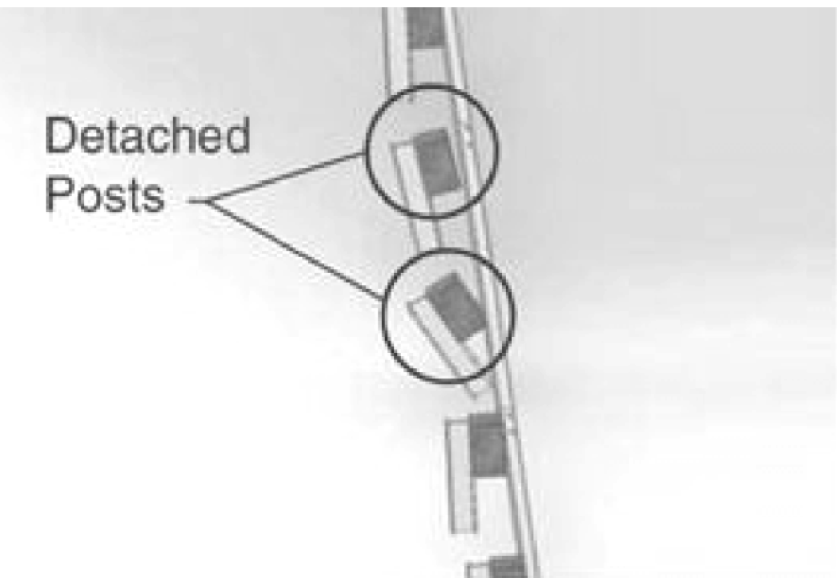


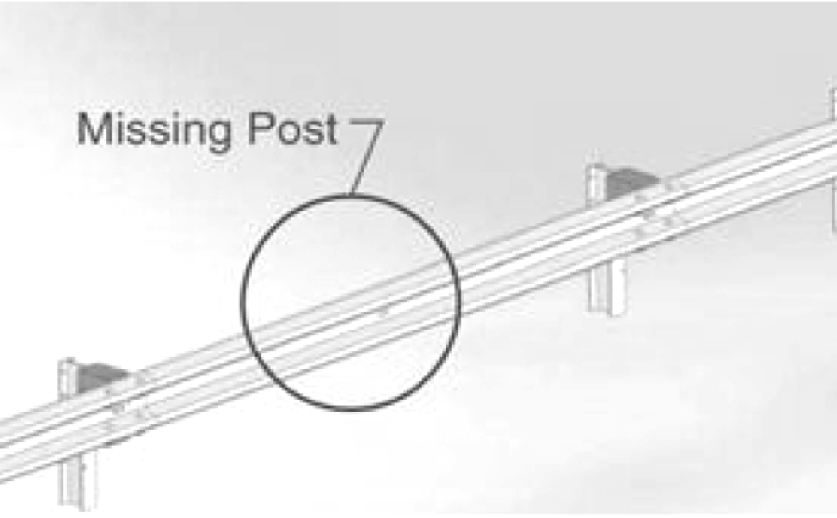
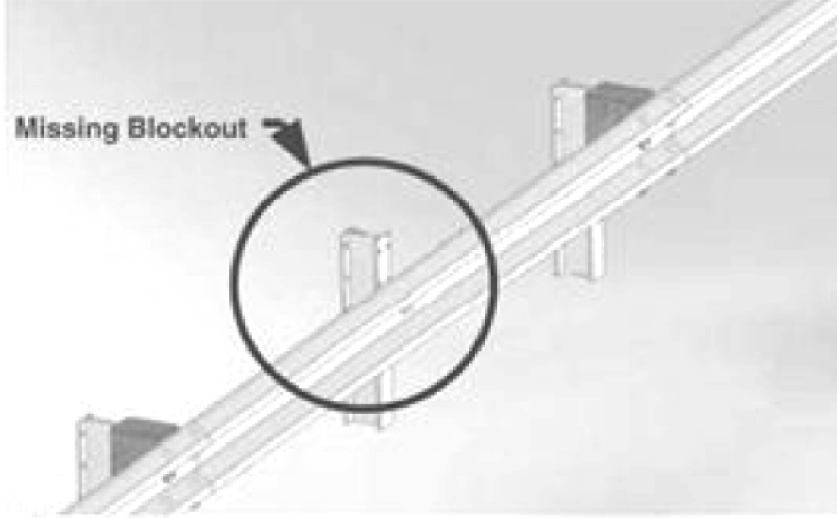
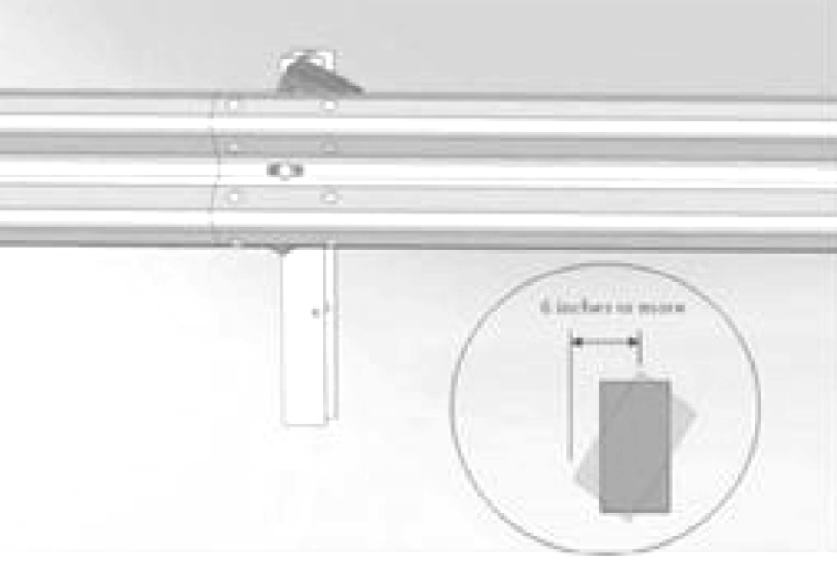
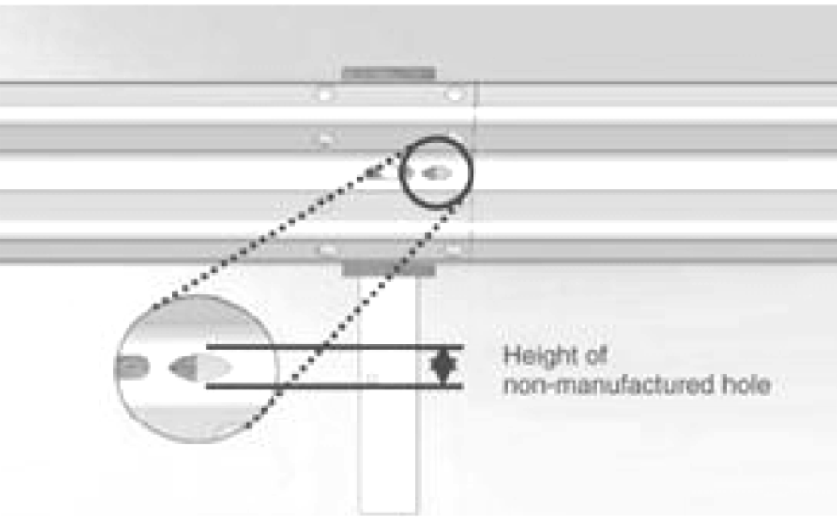
**STATE OF VERMONT  
AGENCY OF TRANSPORTATION**

# COMPOSITE QUANTITY SHEET 2

				ST. ALBANS TOWN STP FPAV(1)						ST. ALBANS TOWN STP FPAV(2)						TOTALS			DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES					
				FEDERAL NON- PARTICIP	ROADWAY	BRIDGE	FULL C.E. ITEMS	ROADWAY (ALTERNATE A)	ROADWAY (ALTERNATE B)	FEDERAL NON- PARTICIP	ROADWAY	BRIDGE	FULL C.E. ITEMS	ROADWAY (ALTERNATE A)	ROADWAY (ALTERNATE B)	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS			
											2						2		EACH	TEMPORARY RAILROAD CROSSING, PAINT	646.712						
					6200						7200						13400		EACH	LINE STRIPING TARGETS	646.76						
					15						10						25		LB	SEED	651.15						
					25						15						40		LB	FERTILIZER	651.18						
					1						1						2		TON	AGRICULTURAL LIMESTONE	651.20						
					1						1						2		TON	HAY MULCH	651.25						
					85						85						170		CY	TOPSOIL	651.35						
					150						100						250		SY	TEMPORARY EROSION MATTING	653.20						
					6						4						10		EACH	DELINEATOR WITH STEEL POST	676.10						
					6						4						10		EACH	REMOVAL OF EXISTING DELINEATOR	676.12						
					1						1						2		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50						
											60						60		LF	SPECIAL PROVISION (BAND JOINT @ PRECAST CONCRETE RAILROAD CROSSING)	900.640						
					500						650						1150		TON	SPECIAL PROVISION (AGGREGATE SHOULDERS, RAP WITH RAS)	900.680						
					50						50						100		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I)	900.680						
																				BEGIN ALTERNATE ZA1							
								5400						6400			11800		TON	MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT	406.27						
								1						1			2		TON	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	406.28						
																		TON	END ALTERNATE ZA1								
																				BEGIN ALTERNATE ZA2							
									5400						6400		11800		TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	490.30						
									1						1		2		LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31						
																				END ALTERNATE ZA2							
																						PROJECT NAME: ST ALBANS TOWN			PROJECT NUMBER: STP FPAV(1)/STP FPAV(2)		
																						FILE NAME: z16v020-composite.dgn			PLOT DATE: 05/10/2016		
																						PROJECT LEADER: C. LATHROP			DRAWN BY: J. GOODALL		
																						DESIGNED BY: J. GOODALL			CHECKED BY: C. LATHROP		
																						COMPOSITE QUANTITY SHEET 2			SHEET 5 OF 32		



DAMAGE TYPE	REPAIR THRESHOLD	RELATIVE PRIORITY	MEASUREMENT
POST AND RAIL DEFLECTION	ONE OR MORE OF THE FOLLOWING THRESHOLDS:    - MORE THAN 9 IN. OF LATERAL DEFLECTION ANYWHERE OVER A 25 FT LENGTH OF RAIL TOP OF RAIL   - HEIGHT 2 OR MORE IN. LOWER THAN ORIGINAL TOP OF RAIL HEIGHT	HIGH	
	6 - 9 IN. LATERAL DEFLECTION ANYWHERE OVER A 25-FT LENGTH OF RAIL	MEDIUM	 (WEAK POST W-BEAM SHOWN ONLY FOR CLARITY. EACH MEASUREMENT TAKEN AT THE RAIL'S MIDDLE FOLD)
	LESS THAN 6 IN. OF LATERAL DEFLECTION OVER A 25-FT LENGTH OF RAIL	LOW	
RAIL DEFLECTION ONLY	6 - 9 IN. OF LATERAL DEFLECTION BETWEEN ANY TWO ADJACENT POSTS.  NOTE: FOR DEFLECTION OVER 9 IN., USE POST/RAIL DEFLECTION GUIDELINES	MEDIUM	
	LESS THAN 6 IN. OF LATERAL DEFLECTION BETWEEN ANY TWO ADJACENT POSTS	LOW	
RAIL FLATTENING	ONE OR MORE OF THE FOLLOWING THRESHOLDS:    - RAIL CROSS SECTION HEIGHT MORE THAN 17 IN. (SUCH AS MAY OCCUR IF RAIL IS FLATTENED)   - RAIL CROSS SECTION HEIGHT LESS THAN 9 IN. (SUCH AS A DENT TO TOP EDGE)     * SEE NOTE 3 THIS SHEET.	MEDIUM	
	RAIL CROSS SECTION HEIGHT BETWEEN 9 AND 17 IN.	LOW	
POSTS SEPARATED FROM RAIL	2 OR MORE POSTS WITH BLOCKOUT ATTACHED WITH POST/RAIL SEPARATION LESS THAN 3 IN.    1 OR MORE POSTS WITH POST/RAIL SEPARATION WHICH EXCEEDS 3 IN.	MEDIUM	  NOTE: 1. IF THE BLOCKOUT IS NOT FIRMLY ATTACHED TO THE POST, USE THE MISSING BLOCKOUT GUIDELINES. 2. DAMAGE SHOULD ALSO BE EVALUATED AGAINST POST/RAIL DEFLECTION GUIDELINES.
	1 POST, WITH BLOCKOUT ATTACHED, WITH POST/RAIL SEPARATION LESS THAN 3 IN.	LOW	

DAMAGE TYPE	REPAIR THRESHOLD	RELATIVE PRIORITY	MEASUREMENT
MISSING/BROKEN POSTS	1 OR MORE POSTS    - MISSING   - CRACKED ACROSS THE GRAIN   - BROKEN   - ROTTED   - WITH METAL TEARS	HIGH	
MISSING BLOCKOUT	ANY BLOCKOUTS    - MISSING   - CRACKED ACROSS THE GRAIN   - CRACKED FROM TOP OR BOTTOM OF BLOCKOUT THROUGH POST BOLT HOLE   - ROTTED	MEDIUM	
TWISTED BLOCKOUTS	ANY MISALIGNED BLOCKOUTS, TOP EDGE OF BLOCK 6 IN. OR MORE FROM BOTTOM EDGE  NOTE: REPAIRS OF TWISTED BLOCKOUT ARE RELATIVELY QUICK AND INEXPENSIVE	LOW	
DAMAGE AT A RAIL SPLICE	MORE THAN 1 SPLICE BOLT:    - MISSING   - DAMAGED   - VISIBLY MISSING ANY UNDERLYING RAIL   - TORN THROUGH RAIL	HIGH	
	1 SPLICE BOLT:    - MISSING   - DAMAGED   - VISIBLY MISSING ANY UNDERLYING RAIL   - TORN THROUGH RAIL	MEDIUM	
NON-MANUFACTURED HOLE  (SUCH AS CRASH-INDUCED HOLES, LUG-NUT DAMAGE, OR HOLES RUSTED-THROUGH THE RAIL)	- MORE THAN 2 HOLES LESS THAN 1IN. HEIGHT IN A 12.5-FT LENGTH OF RAIL   - ANY HOLES GREATER THAN 1IN. IN HEIGHT   - ANY HOLE WHICH INTERSECTS EITHER THE TOP OR BOTTOM EDGE OF THE RAIL	HIGH	
	1- 2 HOLES LESS THAN 1IN. IN HEIGHT IN A 12.5-FT LENGTH OF RAIL	MEDIUM	

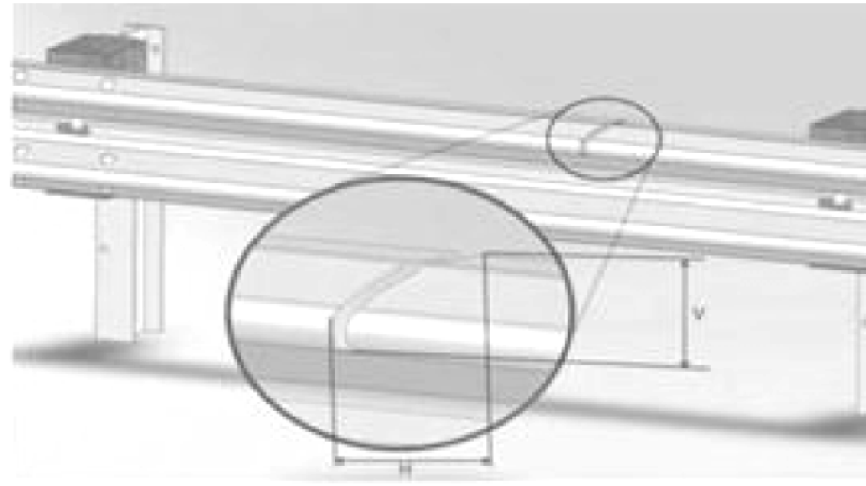
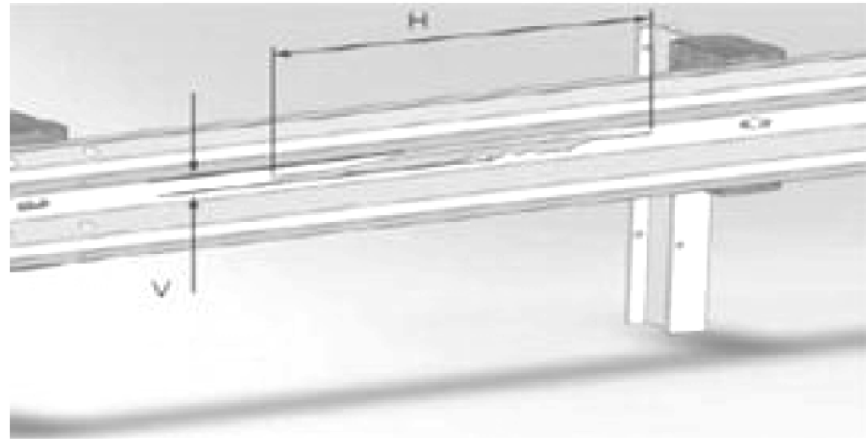
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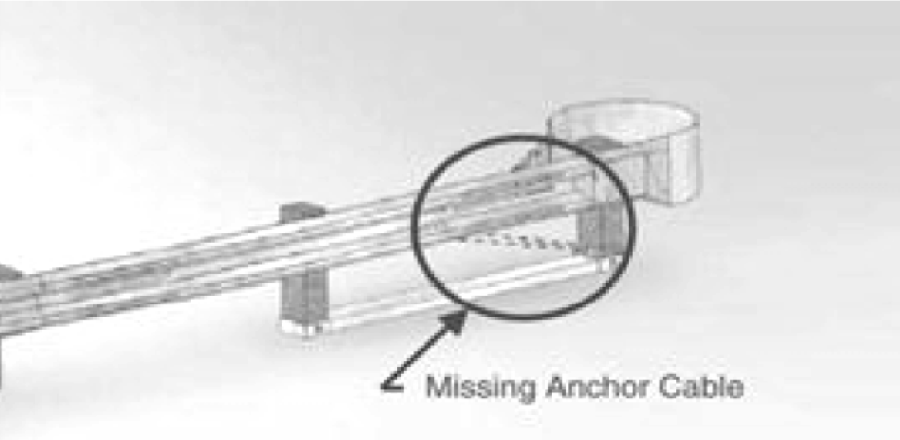
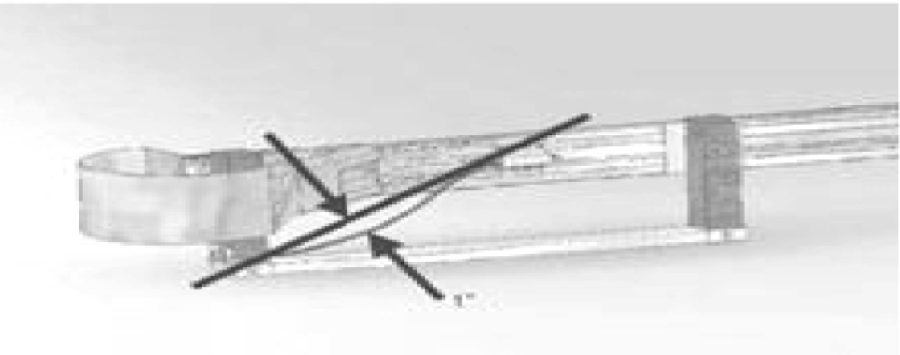
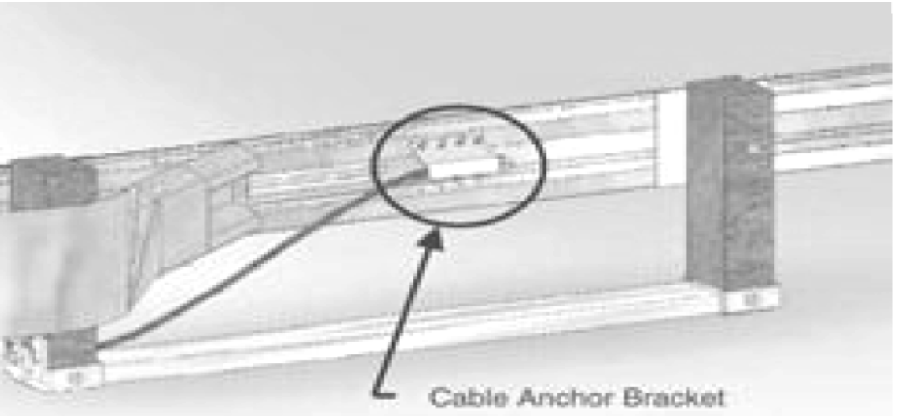
- THESE ARE GUIDELINES FOR THE EVALUATION OF EXISTING GUARDRAIL. THESE ARE GUIDELINES ONLY AND THE CONTRACTOR SHALL REPLACE GUARDRAIL AS DIRECTED BY THE ENGINEER.
- GUIDELINES ARE FROM THE NATIONAL HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 656, "CRITERIA FOR RESTORATION OF LONGITUDINAL BARRIERS", COPYRIGHT 2010.
- WHEN GUARDRAIL IS TO BE REMOVED AND RESET, PANELS WITH A RAIL CROSS SECTION HEIGHT OF 15 INCHES OR GREATER SHALL BE REPLACED

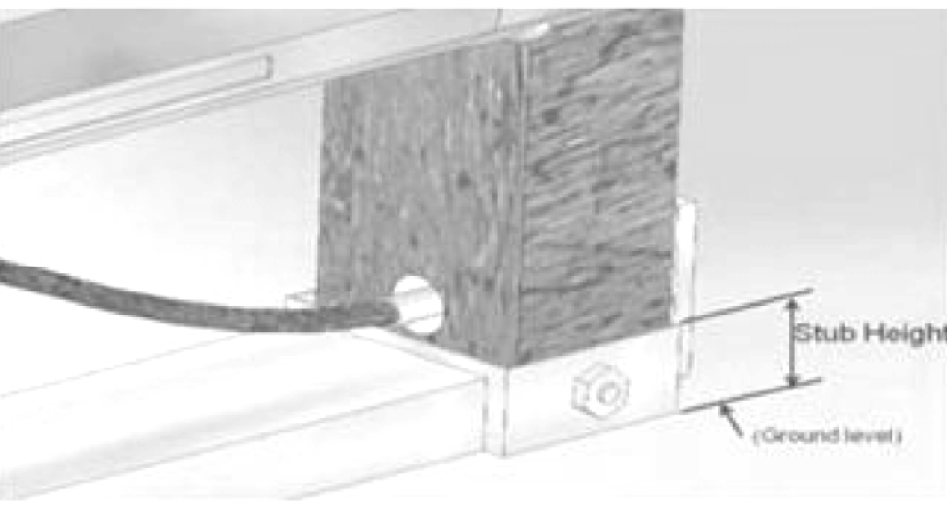
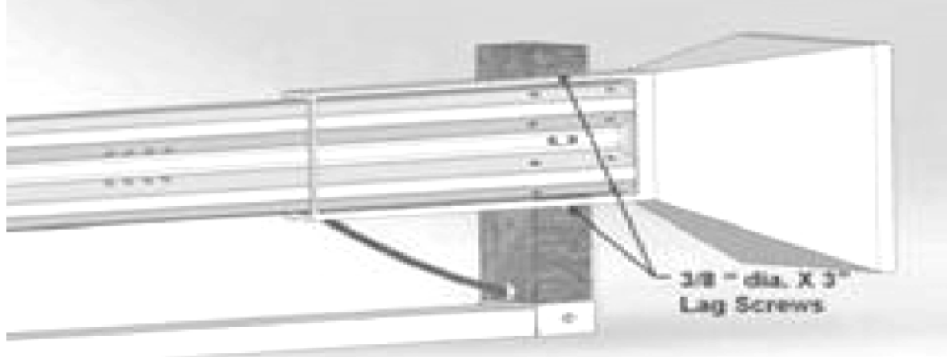
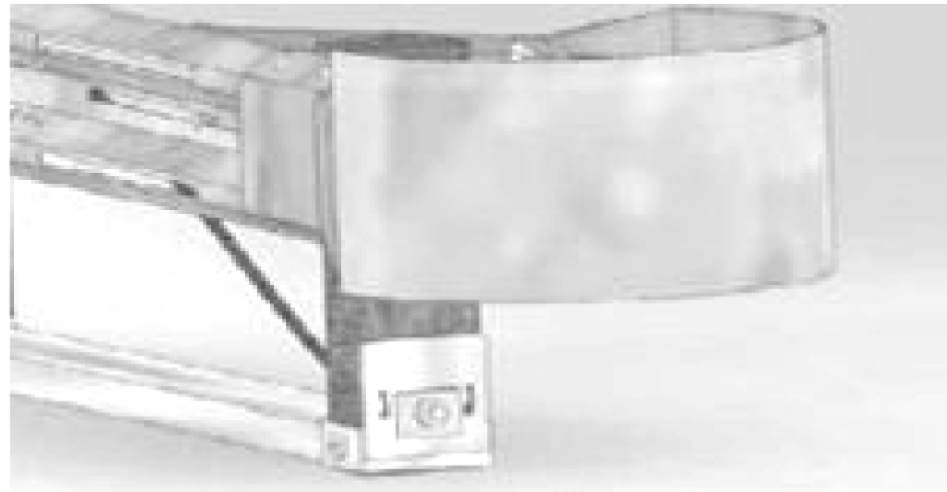
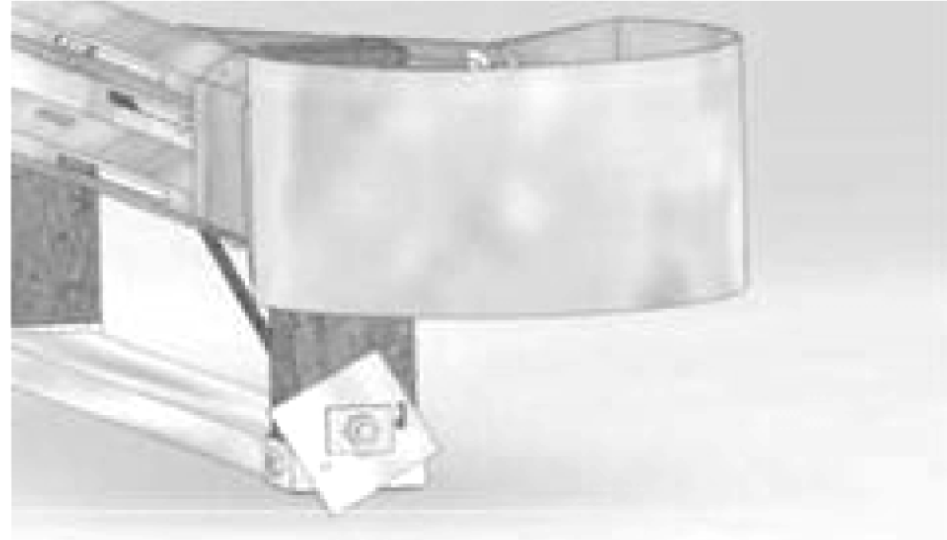
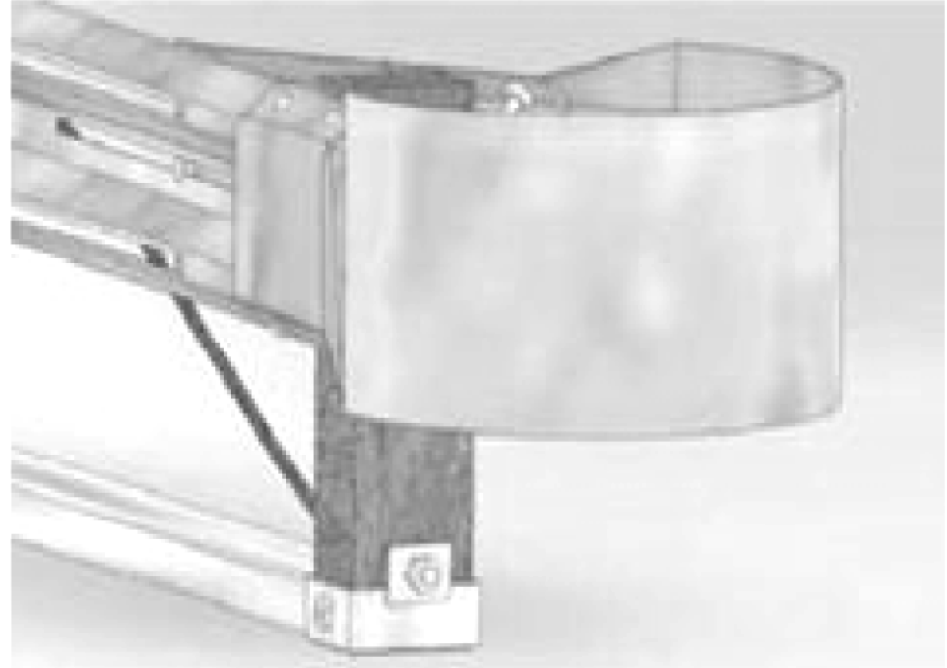
NOT TO SCALE

PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(1)/STP FPAV(2)	
FILE NAME: z16v020-composite.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
COMPOSITE GUARDRAIL REPLACEMENT GUIDELINES SHT 1 SHEET 6 OF 32	



DAMAGE TYPE	REPAIR THRESHOLD	RELATIVE PRIORITY	MEASUREMENT
VERTICAL TEAR	ANY LENGTH VERTICAL (TRANSVERSE) TEAR	HIGH	
HORIZONTAL TEAR	HORIZONTAL (LONGITUDINAL) GREATER THAN 12 IN. LONG AND GREATER THAN 0.5 IN. WIDE  NOTE: FOR HORIZONTAL TEARS LESS THAN 12 IN. IN LENGTH OR LESS THAN 0.5 IN. IN HEIGHT, USE THE NON-MANUFACTURED HOLES GUIDELINES	MEDIUM	

DAMAGE	REPAIR THRESHOLD	RELATIVE PRIORITY	MEASUREMENT
DAMAGED END POST	NOT FUNCTIONAL (SHEARED, ROTTED, CRACKED ACROSS THE GRAIN)	HIGH	
ANCHOR CABLE	MISSING	HIGH	
ANCHOR CABLE	LOOSE - MORE THAN 1 IN. OF MOVEMENT WHEN PUSHED DOWN BY HAND	MEDIUM	
CABLE ANCHOR BRACKET	LOOSE OR NOT FIRMLY SEATED IN RAIL	MEDIUM	

DAMAGE	REPAIR THRESHOLD	RELATIVE PRIORITY	MEASUREMENT
STUB HEIGHT	HEIGHT WHICH EXCEEDS 4 IN.	MEDIUM	
LAG SCREWS (ENERGY ABSORBING TERMINALS ONLY)	MISSING OR FAILED LAG SCREWS	HIGH	
BEARING PLATE	LOOSE OR MISALIGNED	MEDIUM	 (CORRECT BEARING PLATE)
			 (MISALIGNED BEARING PLATE)
	MISSING BEARING PLATE	HIGH	 (MISSING BEARING PLATE)

NOTES:

- THESE ARE GUIDELINES FOR THE EVALUATION OF EXISTING GUARDRAIL. THESE ARE GUIDELINES ONLY AND THE CONTRACTOR SHALL REPLACE GUARDRAIL AS DIRECTED BY THE ENGINEER.
- GUIDELINES ARE FROM THE NATIONAL HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 656, "CRITERIA FOR RESTORATION OF LONGITUDINAL BARRIERS", COPYRIGHT 2010.
- WHEN GUARDRAIL IS TO BE REMOVED AND RESET, PANELS WITH A RAIL CROSS SECTION HEIGHT OF 15 INCHES OR GREATER SHALL BE REPLACED

NOT TO SCALE

PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(1)/STP FPAV(2)	
FILE NAME: z16v020-composite.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: O. DALMER
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
COMPOSITE GUARDRAIL REPLACEMENT GUIDELINES SHT 2 SHEET 7 OF 32	



TRAFFIC CONTROL NOTES

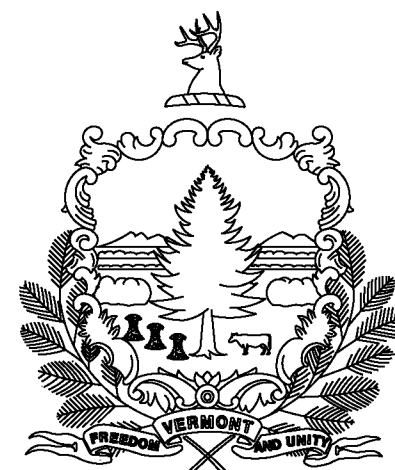
1. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION. CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL THE TRAFFIC CONTROL PLAN IS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL INCLUDE A CONSTRUCTION SIGN PACKAGE FOR EXPECTED LANE CLOSURES, WORK ZONE SPEED REDUCTIONS AND PEDESTRIAN ACCESS IN COMPLIANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE COST OF PREPARING THIS PLAN (AND MAKING CHANGES IF NECESSARY) WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10, "TRAFFIC CONTROL".
2. THE CONTRACTOR SHALL POSITION PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) WARNING MOTORISTS OF THE EXPECTED ROADWAY CONDITIONS AHEAD. THE MESSAGE TO BE DISPLAYED, AND THEIR PROPOSED LOCATIONS SHALL BE SUBMITTED TO THE ENGINEER IN ADVANCE FOR APPROVAL. THE PCMS SHOULD BE RELOCATED AS DETERMINED BY THE ENGINEER TO PROVIDE WORK ZONE TRAVEL INFORMATION THAT IS OTHERWISE DIFFICULT TO CONVEY WITH STATIC SIGNS. THE COST OF PROVIDING THESE MESSAGE SIGNS AND THEIR RELOCATION IF NECESSARY WILL BE PAID UNDER ITEM 641.15, "PORTABLE CHANGEABLE MESSAGE SIGN".
3. THE BID PRICE FOR TRAFFIC CONTROL, ITEM 641.10, SHALL INCLUDE BUT IS NOT LIMITED TO ALL OF THE FOLLOWING, AS NEEDED: APPROACH AND ON-PROJECT CONSTRUCTION SIGNING, PORTABLE FLASHING ARROW BOARDS, BARRIERS, BARRELS, CONES, BARRICADES, TEMPORARY REGULATORY AND WARNING SIGNS, AND POSTS AS DETAILED IN THE MUTCD AND VAOT STANDARDS. ALL ADJUSTING, RELOCATING AND REMOVING OF THESE DEVICES AS DIRECTED BY THE ENGINEER SHALL ALSO BE INCLUDED.
4. THE LATEST EDITION OF THE MUTCD SHALL BE THE STANDARD FOR ALL TRAFFIC CONTROL DEVICES. EXISTING SIGNS AND MARKINGS SHALL BE VALID UNTIL SUCH TIME AS THEY ARE REPLACED OR RECONSTRUCTED. WHEN NEW TRAFFIC CONTROL DEVICES ARE ERECTED OR PLACED, OR EXISTING TRAFFIC CONTROL DEVICES ARE REPLACED OR REPAIRED, THE EQUIPMENT, DESIGN, METHOD OF INSTALLATION, PLACEMENT OR REPAIR SHALL CONFORM WITH SUCH STANDARDS.
5. NO CONSTRUCTION SIGNS SHALL BE INSTALLED AS TO INTERFERE OR OBSTRUCT THE VIEW OF EXISTING TRAFFIC CONTROL DEVICES, STOPPING SIGHT DISTANCE, AND CORNER SIGHT DISTANCE FROM DRIVES AND TOWN HIGHWAYS. EXISTING SIGNS WHICH CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE COMPLETELY COVERED OR REMOVED.
6. SEE VAOT STANDARDS T-10 AND T-17 FOR ADDITIONAL SIGN PLACEMENT DETAILS.
7. CONSTRUCTION ZONE SIGN LAYOUT SHALL BE IN ACCORDANCE WITH SECTION 6 OF THE LATEST EDITION OF THE MUTCD, AND AS OUTLINED IN THE SPECIAL PROVISIONS.
8. CONSTRUCTION SIGNS SHALL BE IN NEW OR LIKE NEW CONDITION PER VAOT STANDARDS AND SPECIAL PROVISIONS.
9. DIAMOND SHAPED SIGNS SHALL BE FOUR FOOT BY FOUR FOOT WITH BLACK TEXT AND BORDER ON A RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND.
10. RETROREFLECTIVE SHEETING SHALL BE AS NOTED ON VAOT STANDARD T-1 AND IN SUBSECTION 750.08
11. WHERE TEMPORARY SIGNS ARE PLACED BEHIND GUARDRAIL, THEY SHALL BE ADJUSTED SUCH THAT THE BOTTOMS OF THE SIGNS ARE ABOVE THE TOP OF GUARDRAIL.
12. AS THE CONSTRUCTION OPERATION MOVES, FLAGGER SIGNS SHALL BE MOVED ACCORDINGLY. AT NO TIME SHOULD THE FLAGGER SYMBOL SIGN BE MORE THAN 500 FEET FROM THE FLAGGER STATION. FLAGGER SIGNS SHALL BE COVERED OR TURNED AWAY FROM TRAFFIC WHEN FLAGGING OPERATIONS CEASE FOR LONGER THAN 15 MINUTES.
13. BARRELS AND CONES SHALL BE USED TO CLEARLY DEFINE THE TRAVEL SPACE AND PROVIDE SEPARATION FROM THE WORK SPACE ALONG ITS ENTIRE LENGTH.
14. FOR TRAFFIC CONTROL GENERAL NOTES, SEE VAOT STANDARD T-1.

15. THE CONTRACTOR SHALL PROVIDE ACCESS THROUGH THE WORK ZONE AND MAINTAIN ACCESS TO ALL PROPERTIES FOR EMERGENCY VEHICLES AT ALL TIMES. ACCESS TO ALL COMMERCIAL AND MUNICIPAL PROPERTIES SHALL BE MAINTAINED DURING BUSINESS HOURS. ACCESS TO RESIDENTIAL PROPERTIES MAY BE RESTRICTED FOR A SHORT DURATION (A FEW HOURS). THIS WORK SHALL BE COORDINATED WITH THE OWNER. COORDINATE MAJOR WORK ON COMMERCIAL OR MUNICIPAL ACCESSES WITH THE OWNER AT LEAST ONE WEEK PRIOR TO STARTING THE WORK. ALL ACCESSES SHALL ALSO BE KEPT FREE OF WORK AND TRAFFIC CONTROLLED BY UNIFORMED TRAFFIC OFFICERS OR FLAGGERS AS REQUIRED BY THE ENGINEER.
16. A MINIMUM LANE WIDTH OF 10 FT. SHALL BE MAINTAINED.
17. WHEN COLD PLANED BITUMINOUS PAVEMENT IS OPEN TO TRAFFIC, A "MOTORCYCLES USE CAUTION" SIGN, AS PER VAOT STANDARD T-17, SHALL BE PROVIDED.
18. THE CONTRACTOR SHOULD LEAVE NO LONGITUDINAL DROP-OFFS DURING THE OVERNIGHT HOURS. THEREFORE, THE FULL ROADWAY WIDTH SHOULD BE COLD PLANED OR PAVED DURING THE DAILY WORK PERIOD. WHEN NECESSARY, DROP-OFF PROTECTION IN THESE AREAS SHALL CONFORM TO VAOT STANDARD T-36.
19. TRAFFIC SHALL NOT BE CHANGED FROM ONE TRAFFIC PATTERN TO THE NEXT TRAFFIC PATTERN UNTIL ALL TEMPORARY MARKINGS AND SIGNING WORK ARE COMPLETED. ANY CONFLICTING MARKINGS SHALL BE REMOVED.
20. ALL REASONABLE EFFORTS SHALL BE MADE TO ACCOMMODATE PEDESTRIAN TRAVEL AT ALL TIMES. THIS CAN INCLUDE, BUT IS NOT LIMITED TO A DEDICATED PEDESTRIAN ESCORT, SIGNAGE AND CONED OFF WALKING AREAS WITHIN CLOSED LANES. FLAGGERS SHALL NOT BE USED AS PEDESTRIAN ESCORTS. WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TEMPORARY TRAFFIC CONTROL ZONE, THE TEMPORARY FACILITIES SHALL BE DETECTABLE AND SHALL INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY. PAYMENT WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10 TRAFFIC CONTROL.
21. PLEASE NOTE THAT THE UTO (UNIFORMED TRAFFIC OFFICER), UNDER AUTHORITY GRANTED BY LAW (TITLE 23 VSA) MAY DIRECT AND CONTROL TRAFFIC. SUITABLE EXAMPLES IN WORK MIGHT INCLUDE THE DIRECTION AND CONTROLS OF TRAFFIC AT INTERSECTIONS WHERE SIGNALS ARE NOT FUNCTIONING OR ARE MALFUNCTIONING. IN THESE CASES, THE PRESENCE OF THE BLUE LIGHT MAY NOT BE SUITABLE OR NECESSARY. THE WEARING OF DEPARTMENTALLY REQUIRED AND APPROVED REFLECTIVE GARMENTS IS REQUIRED. UTO (UNIFORMED TRAFFIC OFFICER) SHALL BE PAID UNDER ITEM 630.10 "UNIFORMED TRAFFIC OFFICERS"

PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(1)/STP FPAV(2)	
FILE NAME: z16v020cas.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
COMPOSITE TRAFFIC CONTROL NOTES SHEET	SHEET 8 OF 32



STATE OF VERMONT  
AGENCY OF TRANSPORTATION

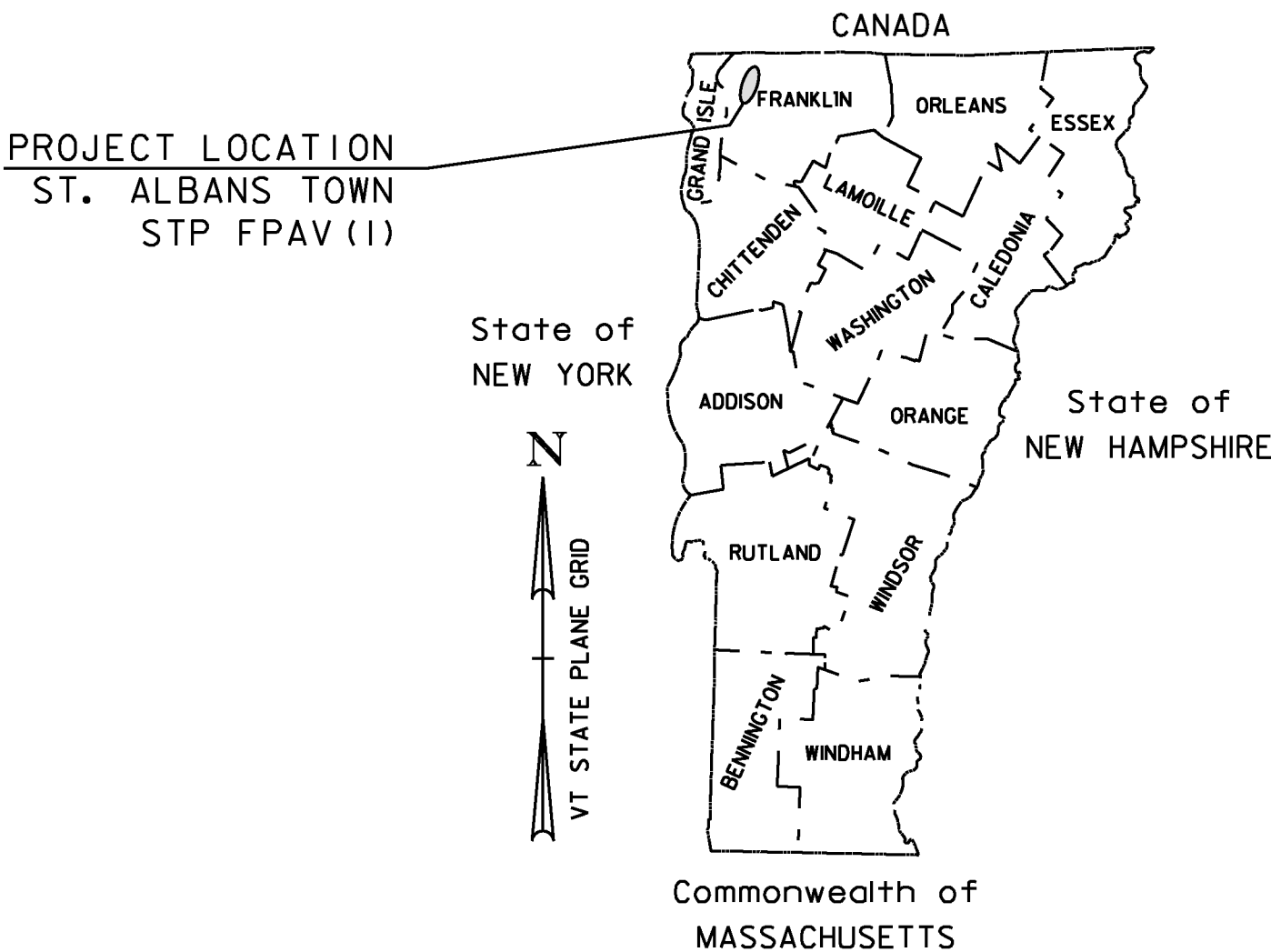
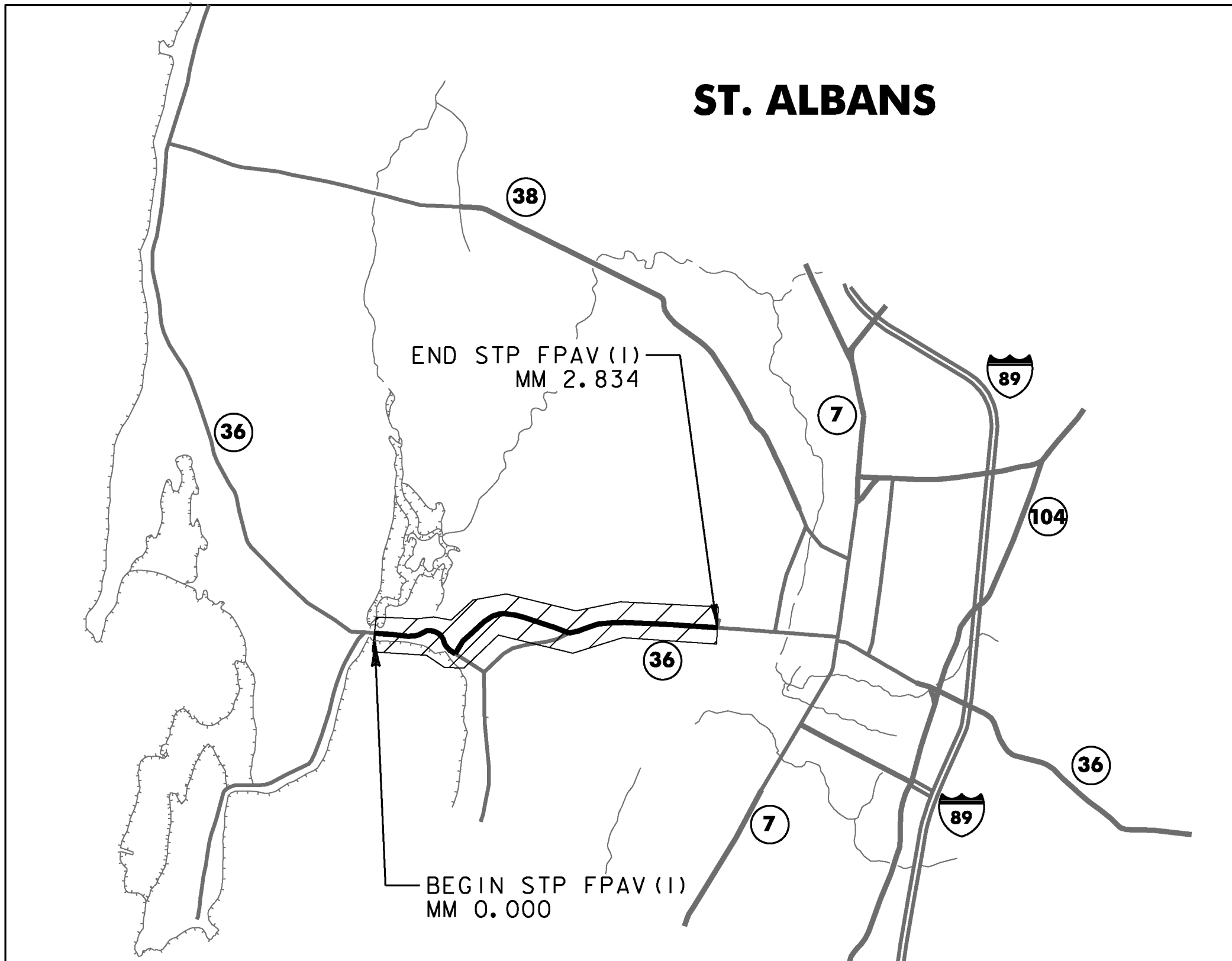


PROPOSED IMPROVEMENT  
TOWN OF ST. ALBANS  
COUNTY OF FRANKLIN  
VT ROUTE 36 - MAJOR COLLECTOR

BEGINNING IN THE TOWN OF ST. ALBANS AT MM 0.000  
AND EXTENDING EASTERLY ALONG VT ROUTE 36  
FOR A DISTANCE OF APPROXIMATELY 2.834 MILES TO MM 2.834

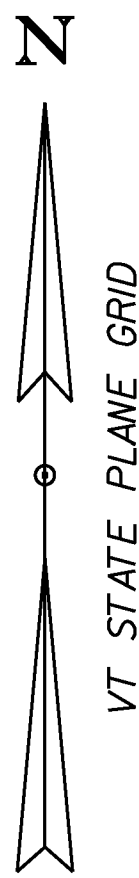
	LENGTH	
	(FEET)	(MILES)
TOWN OF ST. ALBANS MM 0.000 TO MM 2.834	14963.52	= 2.834
PROJECT TOTALS	14963.52	= 2.834

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES COLD PLANING, RESURFACING EXISTING HIGHWAY WITH A BITUMINOUS CONCRETE LEVELING COURSE AND A WEARING COURSE, NEW GUARDRAIL, PAVEMENT MARKINGS, DRAINAGE IMPROVEMENTS, AND OTHER HIGHWAY RELATED ITEMS.



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 3	
SURVEYED BY :	N/A
SURVEYED DATE :	N/A
DATUM	
VERTICAL	N/A
HORIZONTAL	N/A



PROJECT MANAGER :	MICHAEL J. FOWLER, P.E.
PROJECT NAME :	ST ALBANS TOWN
PROJECT NUMBER :	STP FPAV(I)
SHEET	9 OF 32 SHEETS



PROJECT PAVING LIMITS

TOWN AND ROUTE	BEGIN STATION	END STATION	LANE TYPICAL	WEARING DEPTH	LEVELING DEPTH	NOTES
RT 36						
ST. ALBANS						
	0.000	0.066	6'-11'-11'-6'	1½"	-	OVERLAY
	0.066	0.077	VARIES-11'-11'-VARIES	1½"	-	OVERLAY
	0.077	0.314	2'-11'-11'-2'	1½"	-	OVERLAY
	0.314	0.412	TRAFFIC CIRCLE	1½"	-	OVERLAY SEE PLAN SHEET 2
	0.412	0.800	3'-11'-11'-3'	1½"	-	OVERLAY
	0.800	2.834	3'-11'-11'-3'	1½"	VARIES	LEVEL AND OVERLAY
						LEVEL DEPTH AS DIRECTED
						BY ENGINEER

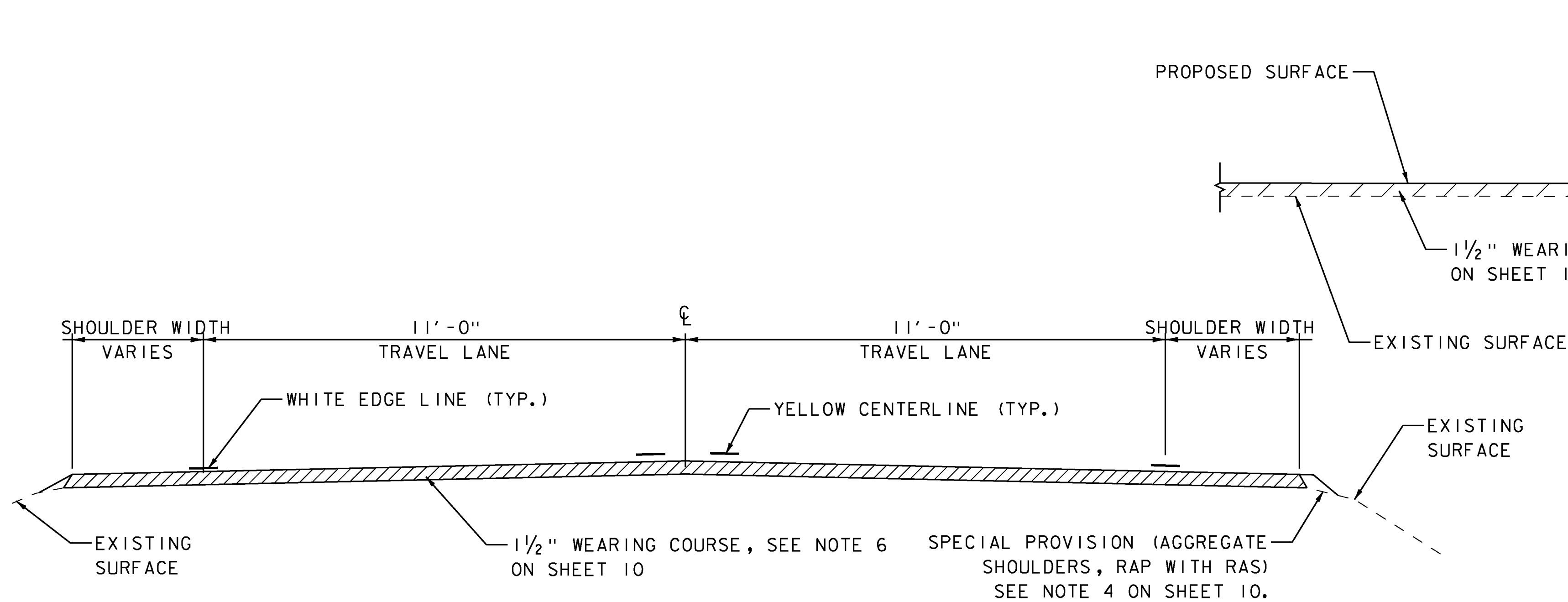
NOTES:

1. COLD PLANING SHALL BE COMPLETED ACCORDING TO THE TRANSITION DETAILS. THE COLD PLANING AND PAVING SHALL MATCH THE EXISTING CONDITIONS AT THE BEGINNING AND END OF THE CONSTRUCTION AREAS BY THE USE OF A BUTT JOINT. SEE DETAILS ON PROJECT TYPICAL SHEET 1.
2. ALL COLD PLANED AND EXISTING SURFACES SHALL HAVE SURFACE PREPARATION BEFORE PAVING, CONSISTING OF POTHOLE PATCHING AND PATCHING OF ALL CRACKS THAT ARE AT LEAST 1" IN WIDTH. THIS WILL BE PAID FOR UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE 1)".
3. EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE RESIDENT ENGINEER SHALL BE EXCAVATED TO A DEPTH OF THREE INCHES OR AS DIRECTED BY THE ENGINEER. EXCAVATION SHALL BE PAID UNDER ITEM 608.25 "ALL PURPOSE EXCAVATOR RENTAL, TYPE 1" AND ITEM 608.37 "TRUCK RENTAL". MATERIAL REMOVED SHALL BE REPLACED WITH ITEM 301.28 "SUBBASE OF CRUSHED GRAVEL, FINE GRADED" AS DIRECTED BY THE ENGINEER. EXCAVATED MATERIAL SHALL BE SPREAD ON THE ADJACENT SLOPES, OR REMOVED FROM THE PROJECT AS DIRECTED BY THE ENGINEER.
4. ALL EDGES OF PAVEMENT SHALL BE BACKED UP TO FULL HEIGHT WITH AGGREGATE SHOULDER MATERIAL AS DIRECTED BY THE ENGINEER AND WILL BE PAID UNDER ITEM 900.680 "SPECIAL PROVISION (AGGREGATE SHOULDERS, RAP WITH RAS)".
5. EMULSIFIED ASPHALT SHALL BE APPLIED ON EXISTING PAVEMENT SURFACES, BETWEEN ALL COURSES OF PAVEMENT AND ON COLD PLANE SURFACES. ALL COLD PLANE SURFACES SHALL HAVE AN APPLICATION RATE OF 0.08 GAL/SY. EMULSIFIED ASPHALT SHALL BE APPLIED ON ALL OTHER PAVED SURFACES AT THE RATE OF 0.025 TO 0.040 GAL/SY PAID UNDER OPTION ITEM 404.65 "EMULSIFIED ASPHALT (RS-1)" OR ITEM 900.683 "SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-1H OR CRS-1H)".
6. THE PAVEMENT WEARING AND LEVELING COURSES SHALL BE ITEM 490.30 "SUPERPAVE BITUMINOUS CONCRETE PAVEMENT" TYPE IVS OR ITEM 406.27 "MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT" TYPE IV. ALL ASPHALT CEMENT USED IN THE BITUMINOUS CONCRETE PAVEMENT SHALL BE AS SPECIFIED IN SUBSECTION 490.03 (b) OR 406.03 (b).
7. FOR ESTIMATING PURPOSES ½" LEVELING COURSE HAS BEEN QUANTIFIED FOR THE PROJECT. THE LEVELING COURSE DEPTH IS MEANT TO CORRECT PROFILE DEFICIENCIES PRIOR TO THE WEARING COURSE BEING PLACED. THE ENGINEER WILL WORK IN CONJUNCTION WITH VTRANS PAVEMENT DESIGN STAFF TO DETERMINE THE ACTUAL LEVELING COURSE DEPTH.
8. ALL PAVED AND GRAVEL RESIDENTIAL AND COMMERCIAL DRIVES, AND ALL FIELD AND WOODS DRIVES SHALL RECEIVE A TWO FOOT PAVED APRON UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER. ANY REQUIRED EXCAVATION OR REGRADING SHALL BE CONSIDERED INCIDENTAL TO ITEM 406.27 "MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT" OR ITEM 490.30 "SUPERPAVE BITUMINOUS CONCRETE PAVEMENT". THE NEW BITUMINOUS SURFACE WILL BE PAID FOR UNDER ITEM 406.27 "MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT" TYPE IV OR ITEM 490.30 "SUPERPAVE BITUMINOUS CONCRETE PAVEMENT" TYPE IVS.
9. BITUMINOUS CONCRETE PAVEMENT TOLERANCE = +/-¼ INCH (TOTAL THICKNESS, EXCLUDING LEVELING).
10. EDGES OF PAVEMENT SHALL INCLUDE A SAFETY EDGE AS SHOWN ON HSD-400.01.
11. AN ESTIMATED QUANTITY FOR ITEM 604.412 "REHAB DI, CB OR MH CLASS 1" HAS BEEN INCLUDED TO BE USED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. ALL DI'S SHALL BE RAISED OR REHABILITATED SUCH THAT THE NEW GRATE ELEVATION IS EVEN WITH THE SURROUNDING TERRAIN.
12. ANY DI'S, CROSS CULVERTS OR OTHER DRAINAGE FEATURES DAMAGED BY CONTRACTOR OPERATIONS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.
13. ESTIMATED QUANTITIES OF ITEMS 608.15 "POWER GRADER RENTAL", 608.25 "ALL PURPOSE EXCAVATOR RENTAL, TYPE 1", 608.37 "TRUCK RENTAL", AND 608.40 "LOADER RENTAL, TYPE 1" HAVE BEEN INCLUDED FOR THE PROVISION OF CONSTRUCTING GUARDRAIL END SECTIONS WITH EXCAVATED DITCHING MATERIAL AND THE REMOVAL OF BUILT UP EXCESS SHOULDER MATERIAL IN NON-GUARDRAIL LOCATIONS.
14. AN ESTIMATED QUANTITY OF ITEM 203.30 "EARTH BORROW" HAS BEEN INCLUDED FOR USE WITH THE GUARDRAIL END SECTIONS. 25 CY OF ITEM 203.30 "EARTH BORROW" HAS BEEN ESTIMATED FOR EACH NEW END SECTION. GUARDRAIL END SECTIONS SHALL BE CAPPED WITH AN ESTIMATED 3 INCH DEPTH OF ITEM 651.35 "TOPSOIL" UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE QUANTITIES INCLUDED REFLECT 5 CY OF ITEM 651.35 "TOPSOIL" FOR EACH NEW GUARDRAIL END SECTION. ITEM 653.20 "TEMPORARY EROSION MATTING" SHALL BE PLACED ON SLOPES GREATER THAN 1:6 CREATED BY THE GUARDRAIL END SECTIONS. THE QUANTITIES INCLUDED REFLECT 25 SY OF ITEM 653.20 "TEMPORARY EROSION MATTING" FOR EACH NEW GUARDRAIL END SECTION. PRIOR TO THE PLACEMENT OF TEMPORARY EROSION MATTING, THE AREA SHALL BE TOPSOILED AND SEEDED USING ITEM 651.35 "TOPSOIL" AND ITEM 651.15 "SEED".
15. STEEL BEAM GUARDRAIL WITH STEEL POSTS SHALL BE USED ON THIS PROJECT.
16. THE CONTRACTOR SHALL USE CAUTION WHEN COLD PLANING AND PAVING OPERATIONS OCCUR ON BRIDGE DECKS. SHOULD ANY DAMAGE OCCUR TO THE BRIDGE DECK OR MEMBRANE AS A RESULT OF THESE OPERATIONS, THE RESIDENT ENGINEER SHALL CONTACT THE VTRANS CONSTRUCTION STRUCTURES ENGINEER TO PROVIDE AN ASSESSMENT OF THE DAMAGE AND RECOMMEND ANY NECESSARY REPAIRS. THE CONSTRUCTION STRUCTURES ENGINEER WILL ALSO DETERMINE IF THE DAMAGE WAS AVOIDABLE. IF THE CONTRACTOR IS DETERMINED BY THE RESIDENT ENGINEER TO BE AT FAULT FOR THE DAMAGE, THE RECOMMENDED REPAIRS SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE STATE.

PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(I)	
FILE NAME: z16v020+yp.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PROJECT NOTES SHEET	SHEET 10 OF 32

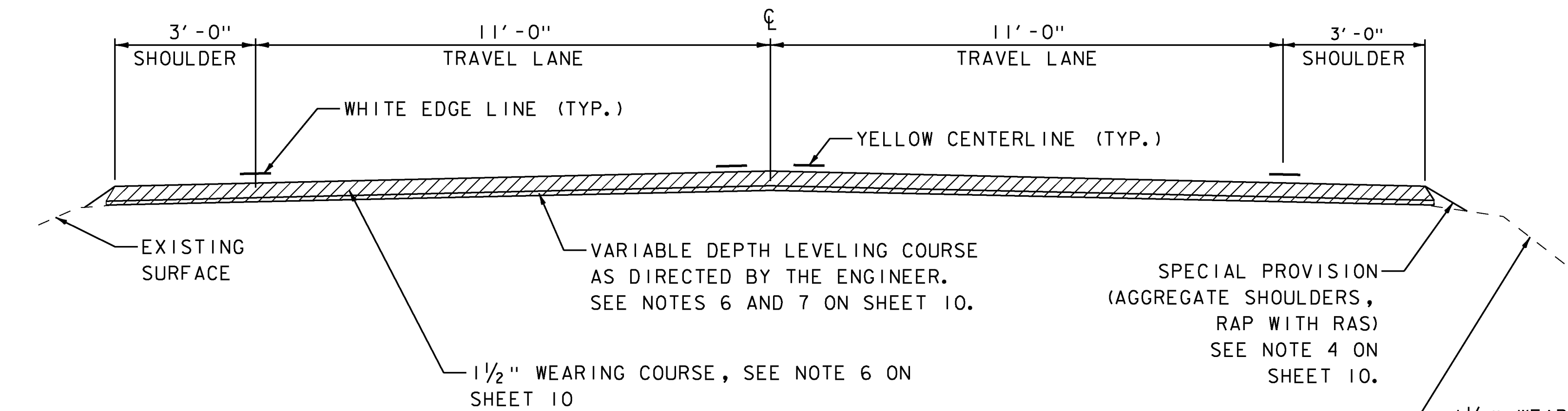
NOT TO SCALE





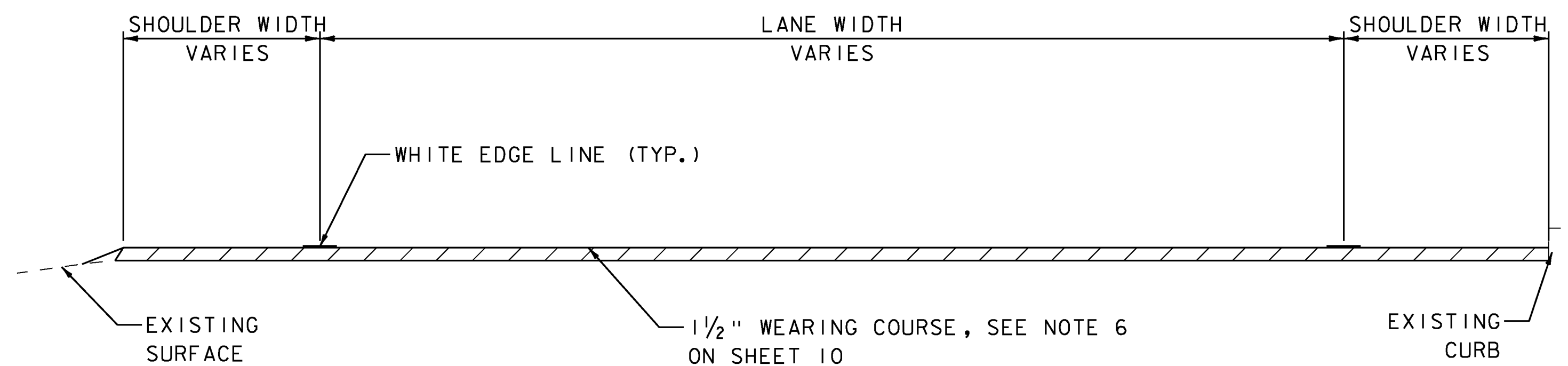
**TYPICAL SECTION**

MM 0.014 TO MM 0.314  
MM 0.412 TO MM 0.795



**LEVEL & OVERLAY TYPICAL SECTION**

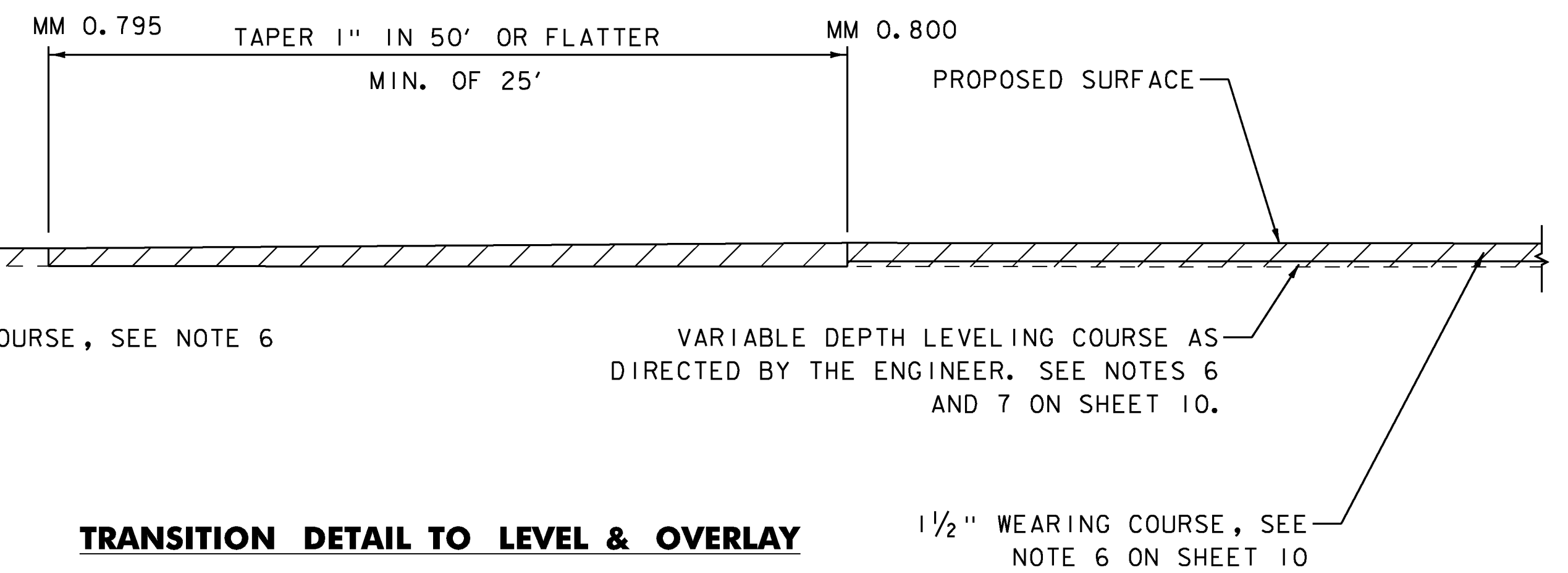
MM 0.800 TO MM 2.815



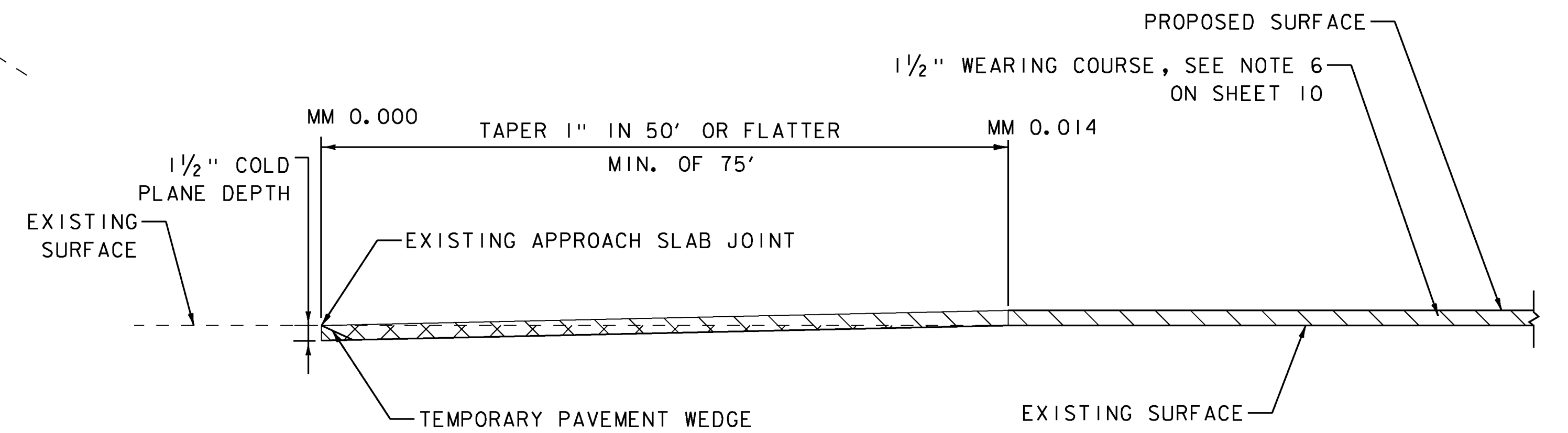
**TYPICAL SECTION**

TRAFFIC CIRCLE  
MM 0.314 - MM 0.412

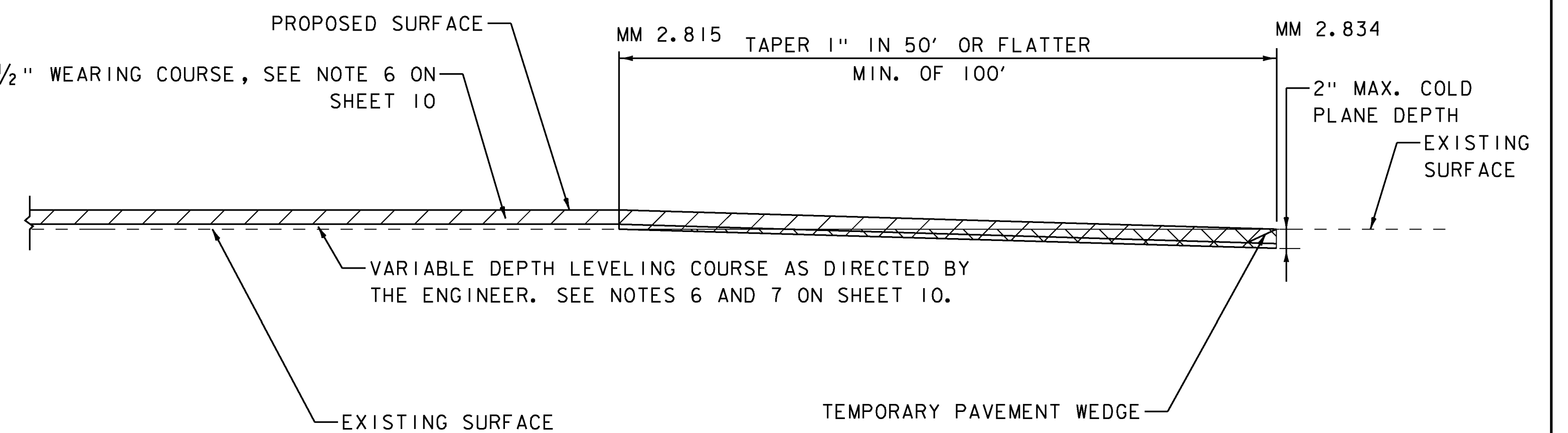
NOTE:  
DUE TO VARYING LANE WIDTHS IN THE TRAFFIC CIRCLE,  
REFER TO PLAN SHEET 2 FOR LANE WIDTHS.



**TRANSITION DETAIL TO LEVEL & OVERLAY**



**BEGIN PROJECT TRANSITION DETAIL  
EXISTING PAVEMENT TO OVERLAY**

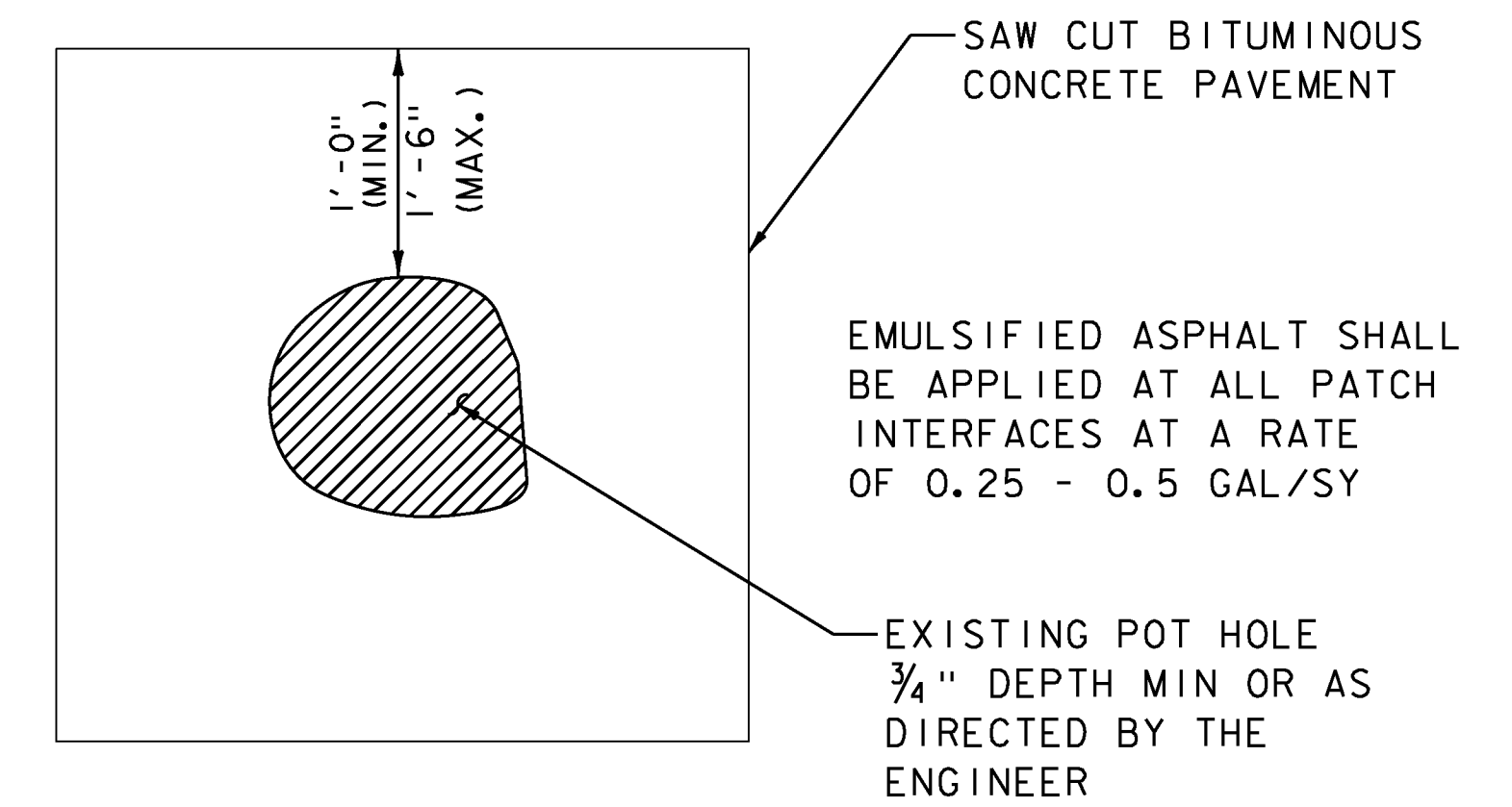
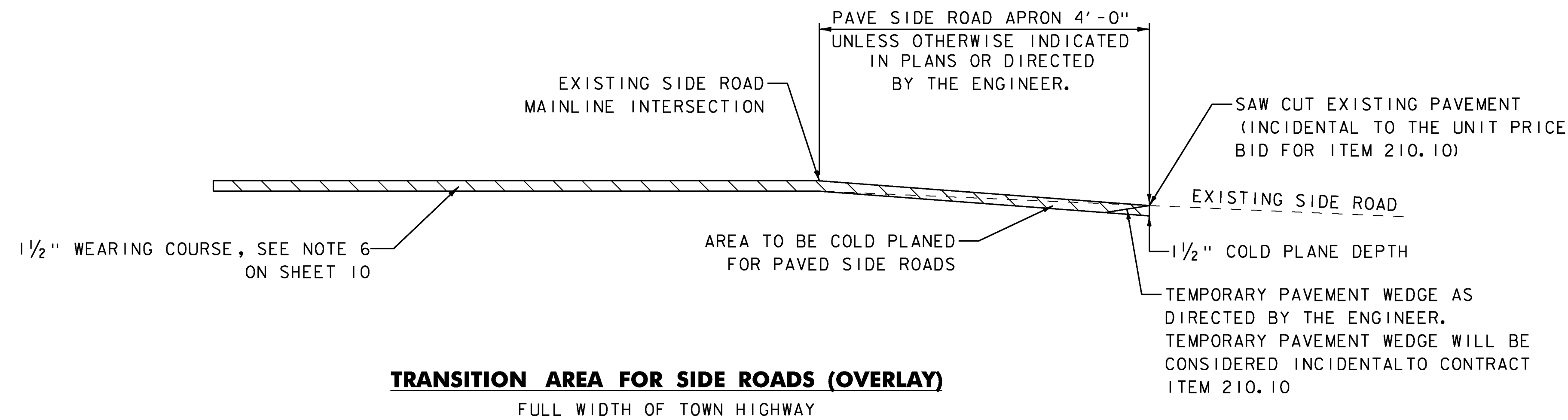


**END PROJECT TRANSITION DETAIL  
LEVEL & OVERLAY TO EXISTING PAVEMENT**

NOT TO SCALE

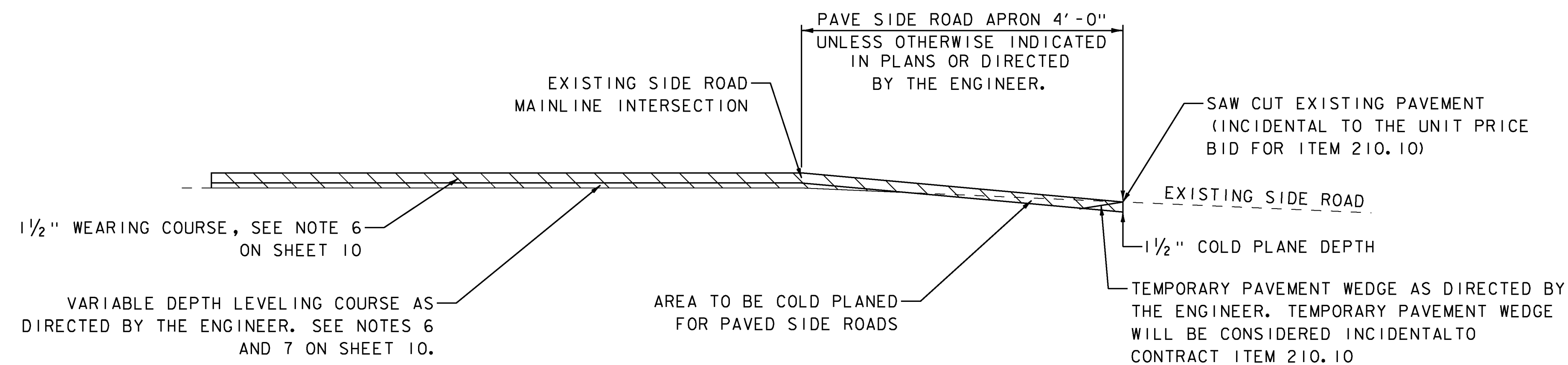
PROJECT NAME:	ST ALBANS TOWN
PROJECT NUMBER:	STP FPAV(I)
FILE NAME: z16v020typ.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PROJECT TYPICAL SHEET I	SHEET II OF 32





NOTE:

1. EMULSIFIED ASPHALT SHALL BE APPLIED AT ALL PATCH INTERFACES AT A RATE OF 0.25 - 0.50 GAL/SY. EMULSIFIED ASPHALT SHALL MEET THE REQUIREMENTS OF SECTION 404 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE 1)".
2. ALL WORK ASSOCIATED WITH POT HOLE REPAIR WILL BE PAID UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE 1)".



NOT TO SCALE

PROJECT NAME:	ST ALBANS TOWN
PROJECT NUMBER:	STP FPAV(1)
FILE NAME: z16v020typ.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PROJECT TYPICAL SHEET 2	SHEET 12 OF 32



STATE OF VERMONT AGENCY OF TRANSPORTATION														QUANTITY SHEET 1									
SUMMARY OF ESTIMATED QUANTITIES														TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
									ROADWAY	FULL C.E.	ROADWAY (ALTERNATE A)	ROADWAY (ALTERNATE B)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS		
									150				150		CY	EARTH BORROW	203.30	-					
									1				1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-					
									1100				1100		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	13					
									300				300		TON	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.28	EST.					
																BEGIN OPTION AA							
									670				670		CWT	EMULSIFIED ASPHALT (RS-1)	404.65	10					
									670				670		CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-1H OR CRS-1H)	900.683	10					
																END OPTION AA							
									1				1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-					
									6				6		EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I	604.412	-					
									20				20		HR	POWER GRADER RENTAL	608.15	EST.					
									75				75		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST.					
									20				20		HR	POWER BROOM RENTAL, TYPE I	608.30	EST.					
									40				40		HR	POWER BROOM RENTAL, TYPE II	608.31	EST.					
									150				150		HR	TRUCK RENTAL	608.37	EST.					
									20				20		HR	LOADER RENTAL, TYPE I	608.40	EST.					
									250				250		LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	13					
									6				6		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	-					
									679				679		LF	ADJUST HEIGHT OF GUARDRAIL	621.79	-					
									225				225		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	-					
									500				500		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.					
									1500				1500		HR	FLAGGERS	630.15	EST.					
									0.5				0.5		LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-					
									0.5				0.5		LS	MOBILIZATION/DEMObILIZATION	635.11	-					
									1				1		LS	TRAFFIC CONTROL (STP FPAV(1))	641.10	-					
									2				2		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-					
									30500				30500		LF	4 INCH WHITE LINE, WATERBORNE PAINT	646.201	315					
									31000				31000		LF	4 INCH YELLOW LINE, WATERBORNE PAINT	646.2111	764					
									90				90		LF	8 INCH YELLOW LINE, WATERBORNE PAINT	646.231	10					
									30				30		LF	24 INCH STOP BAR, WATERBORNE PAINT	646.261	-					
									14				14		EACH	LETTER OR SYMBOL, WATERBORNE PAINT	646.301	-					
									30500				30500		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	315					
									31000				31000		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	764					
									90				90		LF	TEMPORARY 8 INCH YELLOW LINE, PAINT	646.652	10					
									30				30		LF	TEMPORARY 24 INCH STOP BAR, PAINT	646.682	-					
									14				14		EACH	TEMPORARY LETTER OR SYMBOL, PAINT	646.692	-					
									6200				6200		EACH	LINE STRIPING TARGETS	646.76	148					
									15				15		LB	SEED	651.15	-					
									25				25		LB	FERTILIZER	651.18	-					
									1				1		TON	AGRICULTURAL LIMESTONE	651.20	0.91					
																		PROJECT NAME: ST ALBANS TOWN					
																		PROJECT NUMBER: STP FPAV(I)					
																		FILE NAME: z16v020qnty.dgn					
																		PLOT DATE: 05/10/2016					
																		PROJECT LEADER: C. LATHROP					
																		DRAWN BY: J. GOODALL					
																		DESIGNED BY: J. GOODALL					
																		CHECKED BY: C. LATHROP					
																		QUANTITY SHEET I					
																		SHEET 13 OF 32					



**STATE OF VERMONT  
AGENCY OF TRANSPORTATION**

## QUANTITY SHEET 2

[illegible]



## ITEM DETAIL SHEET

PROJECT NAME:	ST ALBANS TOWN		
PROJECT NUMBER:	STP FPAV(I)		
FILE NAME: z16v0201ds.dgn		PLOT DATE: 05/10/2016	
PROJECT LEADER: C. LATHROP		DRAWN BY: J. GOODALL	
DESIGNED BY: J. GOODALL		CHECKED BY: C. LATHROP	
ITEM DETAIL SHEET		SHEET 15 OF 32	



STEEL BEAM GUARDRAIL, GALVANIZED  
MM 0.018 - MM 0.025 LT  
MM 0.018 - MM 0.025 RT

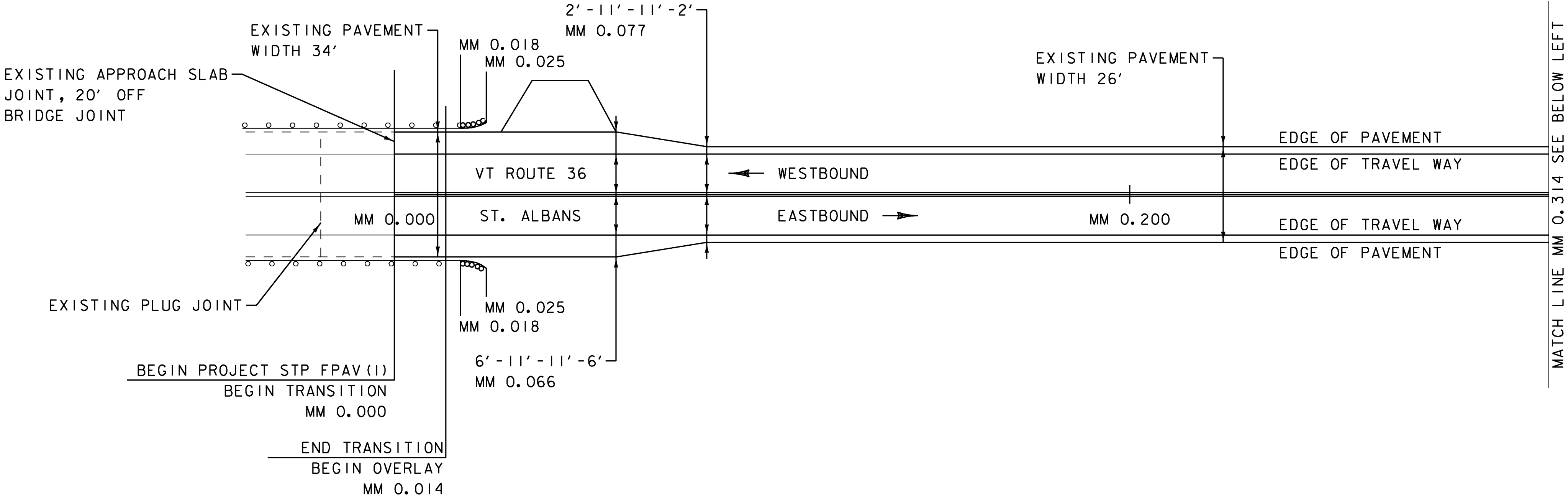
ANCHOR FOR STEEL BEAM RAIL  
MM 0.025 LT  
MM 0.025 RT

ADJUST HEIGHT OF GUARDRAIL  
MM 0.000 - MM 0.018 LT  
MM 0.000 - MM 0.018 RT

REMOVAL AND DISPOSAL OF GUARDRAIL  
MM 0.018 - MM 0.025 LT  
MM 0.018 - MM 0.025 RT

4 INCH WHITE LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH WHITE LINE, PAINT  
(ALL LINES WILL INCLUDE EDGE LINE BREAKS  
AND RADII AT TOWN HIGHWAYS)  
MM 0.000 - MM 0.314 (SOLID LT & RT)

4 INCH YELLOW LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH YELLOW LINE, PAINT  
(ALL LINES WILL INCLUDE CENTERLINE BREAKS  
AT TOWN HIGHWAYS)  
MM 0.000 - MM 0.314 (SOLID LT & RT)



NOT TO SCALE

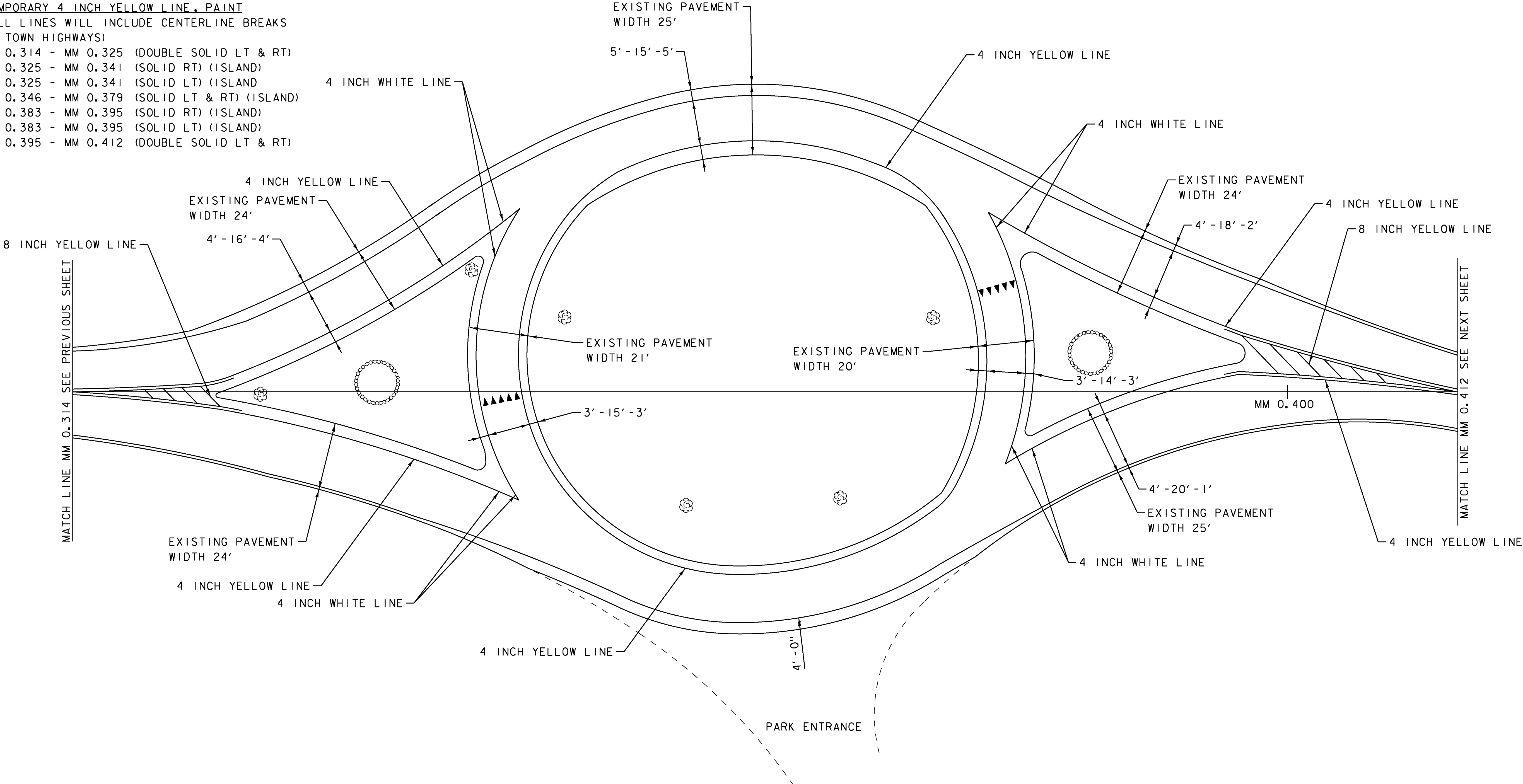
PROJECT NAME:	ST ALBANS TOWN
PROJECT NUMBER:	STP FPAV(I)
FILE NAME: z16v020bdr.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PLAN SHEET 1	SHEET 16 OF 32



4 INCH WHITE LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH WHITE LINE, PAINT  
(ALL LINES WILL INCLUDE EDGE LINE BREAKS  
AND RADII AT TOWN HIGHWAYS)  
MM 0.314 - MM 0.412 (SOLID LT & RT)  
MM 0.341 - MM 0.345 (SOLID LT & RT) (ISLAND)  
MM 0.390 - MM 0.395 (SOLID LT & RT) (ISLAND)

4 INCH YELLOW LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH YELLOW LINE, PAINT  
(ALL LINES WILL INCLUDE CENTERLINE BREAKS  
AT TOWN HIGHWAYS)  
MM 0.314 - MM 0.325 (DOUBLE SOLID LT & RT)  
MM 0.325 - MM 0.341 (SOLID RT) (ISLAND)  
MM 0.325 - MM 0.341 (SOLID LT) (ISLAND)  
MM 0.346 - MM 0.379 (SOLID LT & RT) (ISLAND)  
MM 0.383 - MM 0.395 (SOLID RT) (ISLAND)  
MM 0.383 - MM 0.395 (SOLID LT) (ISLAND)  
MM 0.395 - MM 0.412 (DOUBLE SOLID LT & RT)

8 INCH YELLOW LINE, WATERBORNE PAINT &  
TEMPORARY 8 INCH YELLOW LINE, PAINT  
MM 0.319 - MM 0.324 (HATCH RT)  
MM 0.397 - MM 0.407 (HATCH LT)  
  
LETTER OR SYMBOL, WATERBORNE PAINT &  
TEMPORARY LETTER OR SYMBOL, PAINT  
MM 0.353 RT (5 TRIANGLES)  
MM 0.382 LT (5 TRIANGLES)



NOT TO SCALE

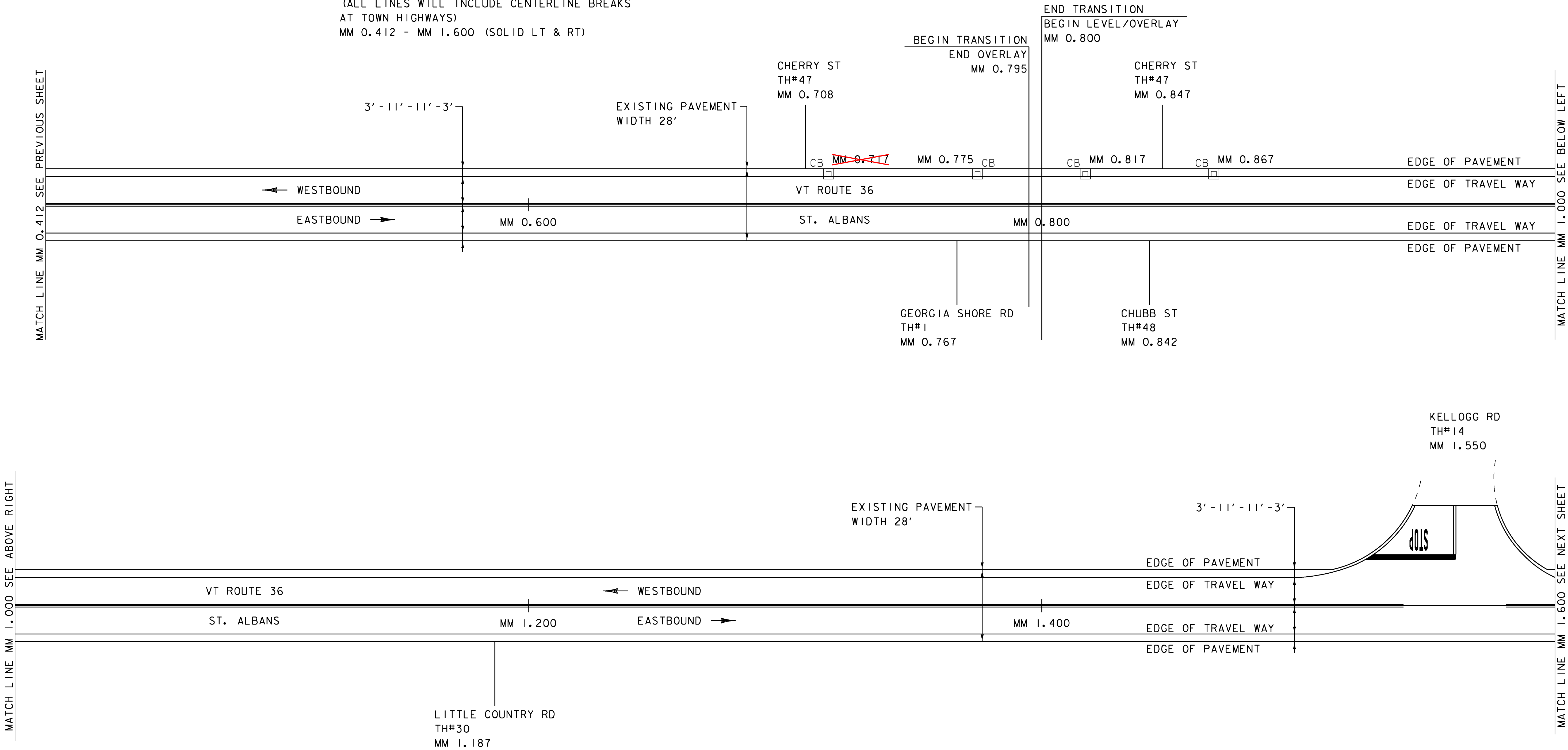
PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(I)	
FILE NAME: z16v020bdr.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PLAN SHEET 2	SHEET 17 OF 32



REHAB DROP INLETS CATCH BASINS OR  
MANHOLES, CLASS I, CLASS II, CLASS III  
~~MM 0.717 LT~~  
MM 0.775 LT  
MM 0.817 LT  
MM 0.867 LT

4 INCH WHITE LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH WHITE LINE, PAINT  
(ALL LINES WILL INCLUDE EDGE LINE BREAKS  
AND RADII AT TOWN HIGHWAYS)  
MM 0.412 - MM 1.600 (SOLID LT & RT)  
  
4 INCH YELLOW LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH YELLOW LINE, PAINT  
(ALL LINES WILL INCLUDE CENTERLINE BREAKS  
AT TOWN HIGHWAYS)  
MM 0.412 - MM 1.600 (SOLID LT & RT)

24 INCH STOP BAR, WATERBORNE PAINT &  
TEMPORARY 24 INCH STOP BAR, PAINT  
MM 1.544 - MM 1.550 LT (TH#14)  
  
LETTER OR SYMBOL, WATERBORNE PAINT &  
TEMPORARY LETTER OR SYMBOL, PAINT  
MM 1.547 LT (STOP) (TH#14)



PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(I)	
FILE NAME: z16v020bdr.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PLAN SHEET 3	SHEET 18 OF 32

NOT TO SCALE



REHAB DROP INLETS CATCH BASINS OR  
MANHOLES, CLASS I, CLASS II, CLASS III

~~MM 2.726 LT~~  
~~MM 2.753 LT~~

STEEL BEAM GUARDRAIL, GALVANIZED

MM 2.075 - MM 2.082 RT  
MM 2.163 - MM 2.170 RT  
MM 2.320 - MM 2.327 RT  
MM 2.389 - MM 2.397 RT

ANCHOR FOR STEEL BEAM RAIL

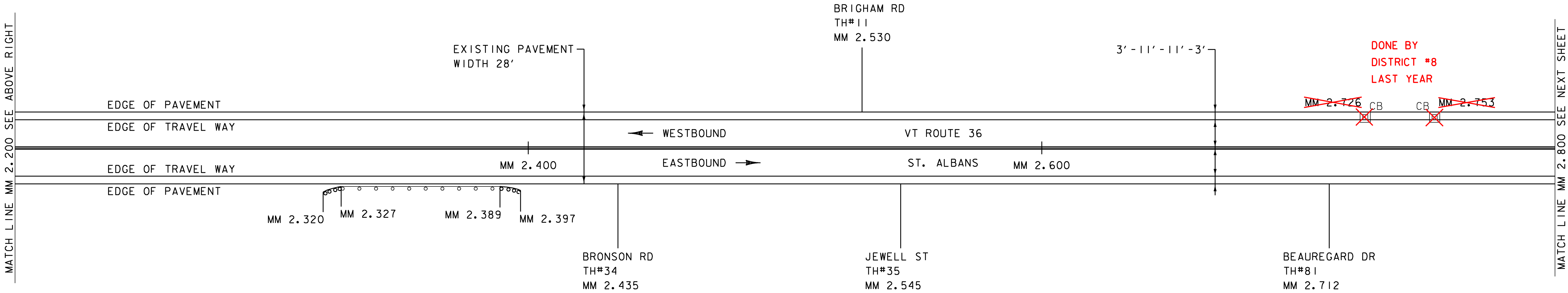
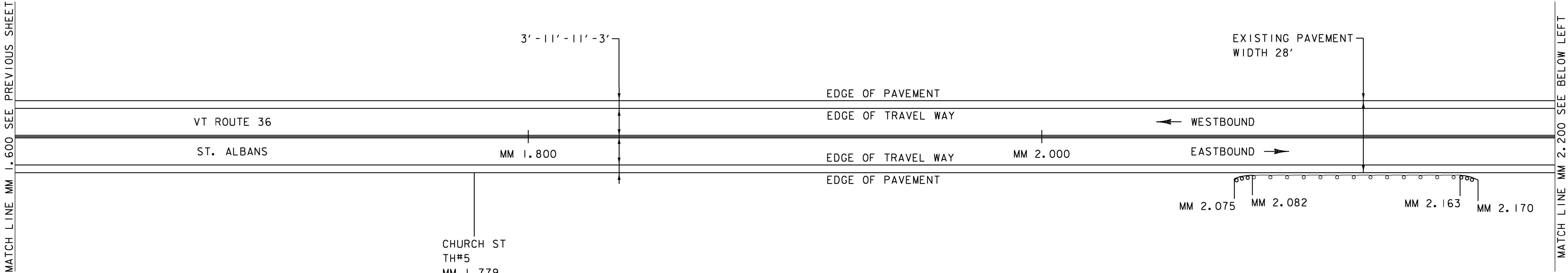
MM 2.075 RT  
MM 2.170 RT  
MM 2.320 RT  
MM 2.397 RT

REMOVAL AND DISPOSAL OF GUARDRAIL

MM 2.075 - MM 2.082 RT  
MM 2.163 - MM 2.170 RT  
MM 2.320 - MM 2.327 RT  
MM 2.389 - MM 2.397 RT

4 INCH WHITE LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH WHITE LINE, PAINT  
(ALL LINES WILL INCLUDE EDGE LINE BREAKS  
AND RADII AT TOWN HIGHWAYS)  
MM 1.600 - MM 2.800 (SOLID LT & RT)

4 INCH YELLOW LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH YELLOW LINE, PAINT  
(ALL LINES WILL INCLUDE CENTERLINE BREAKS  
AT TOWN HIGHWAYS)  
MM 1.600 - MM 2.800 (SOLID LT & RT)



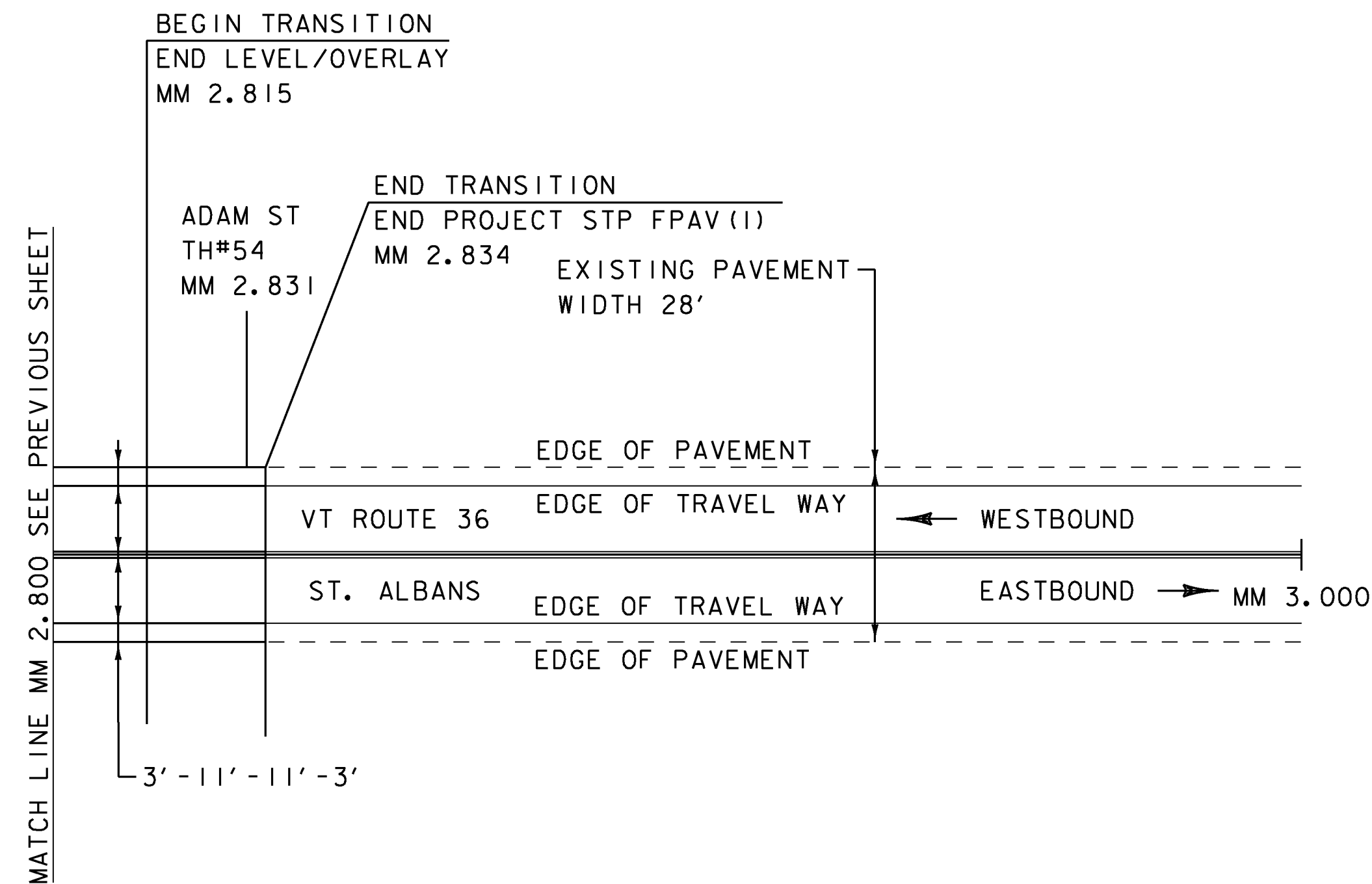
PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(I)	
FILE NAME: z16v020bdr.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PLAN SHEET 4	SHEET 19 OF 32

NOT TO SCALE



4 INCH WHITE LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH WHITE LINE, PAINT  
(ALL LINES WILL INCLUDE EDGE LINE BREAKS  
AND RADII AT TOWN HIGHWAYS)  
MM 2.800 - MM 2.834 (SOLID LT & RT)

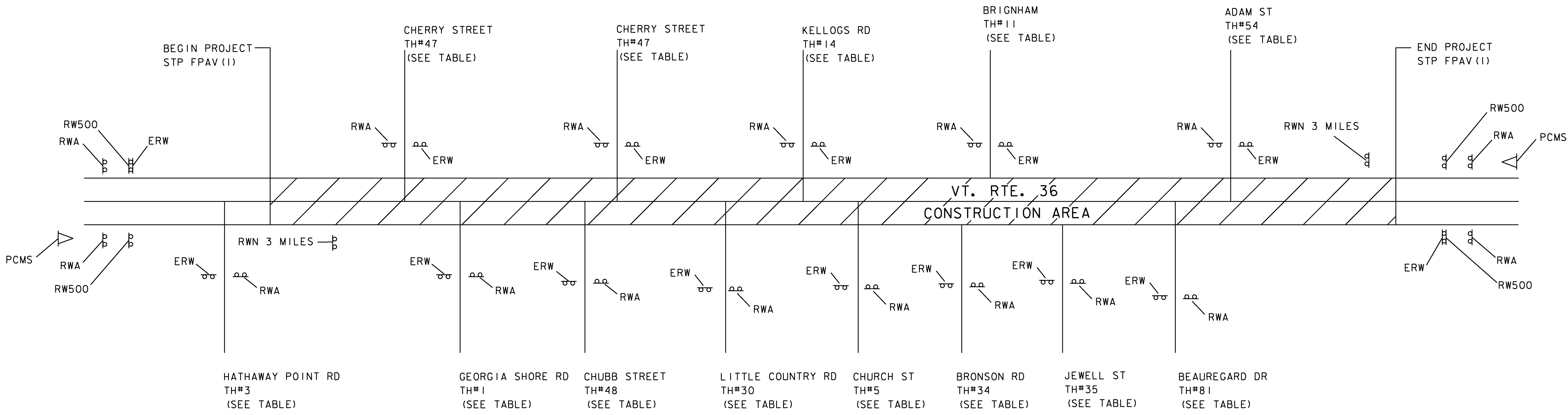
4 INCH YELLOW LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH YELLOW LINE, PAINT  
(ALL LINES WILL INCLUDE CENTERLINE BREAKS  
AT TOWN HIGHWAYS)  
MM 2.800 - MM 2.834 (SOLID LT & RT)



NOT TO SCALE

PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(I)	
FILE NAME: z16v020bdr.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PLAN SHEET 5	SHEET 20 OF 32





SEE VAOT STANDARD T-10 & T-17 FOR SIGN PLACEMENT.

LOCATION		ERW	RW500	RWA	RWN	▶
BEGIN PROJECT VT 36		1	2	2	1	1
HATHAWAY POINT RD	TH#3	1		1		
CHERRY STREET	TH#47	1		1		
GEORGIA SHORE RD	TH#1	1		1		
CHUBB STREET	TH#48	1		1		
CHERRY STREET	TH#47	1		1		
LITTLE COUNTRY RD	TH#30	1		1		
KELLOGS RD	TH#14	1		1		
CHURCH ST	TH#5	1		1		
BRONSON RD	TH#34	1		1		
BRIGHAM	TH#11	1		1		
JEWELL ST	TH#35	1		1		
BEAUREGARD DR	TH#81	1		1		
ADAM ST	TH#54	1		1		
END PROJECT VT 36		1	2	2	1	1
TOTALS		15	4	17	2	2

- LEGEND**
- ERW = END ROAD WORK
  - RW500 = ROAD WORK 500 FT
  - RWA = ROAD WORK AHEAD
  - RWN 3 MILES = ROAD WORK NEXT 3 MILES
  - ▶ = PORTABLE CHANGEABLE MESSAGE SIGN

PROJECT NAME:	ST ALBANS TOWN
PROJECT NUMBER:	STP FPAV(I)
FILE NAME: z16v020bdr.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: O. DALMER
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
CONSTRUCTION APPROACH SIGNING SHEET	SHEET 21 OF 32

NOT TO SCALE



STATE OF VERMONT  
AGENCY OF TRANSPORTATION

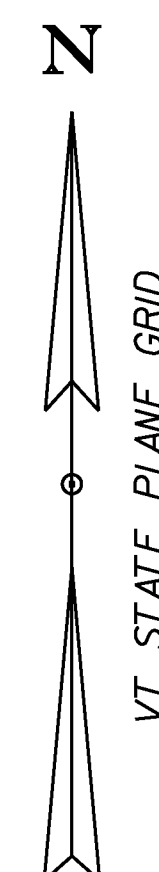
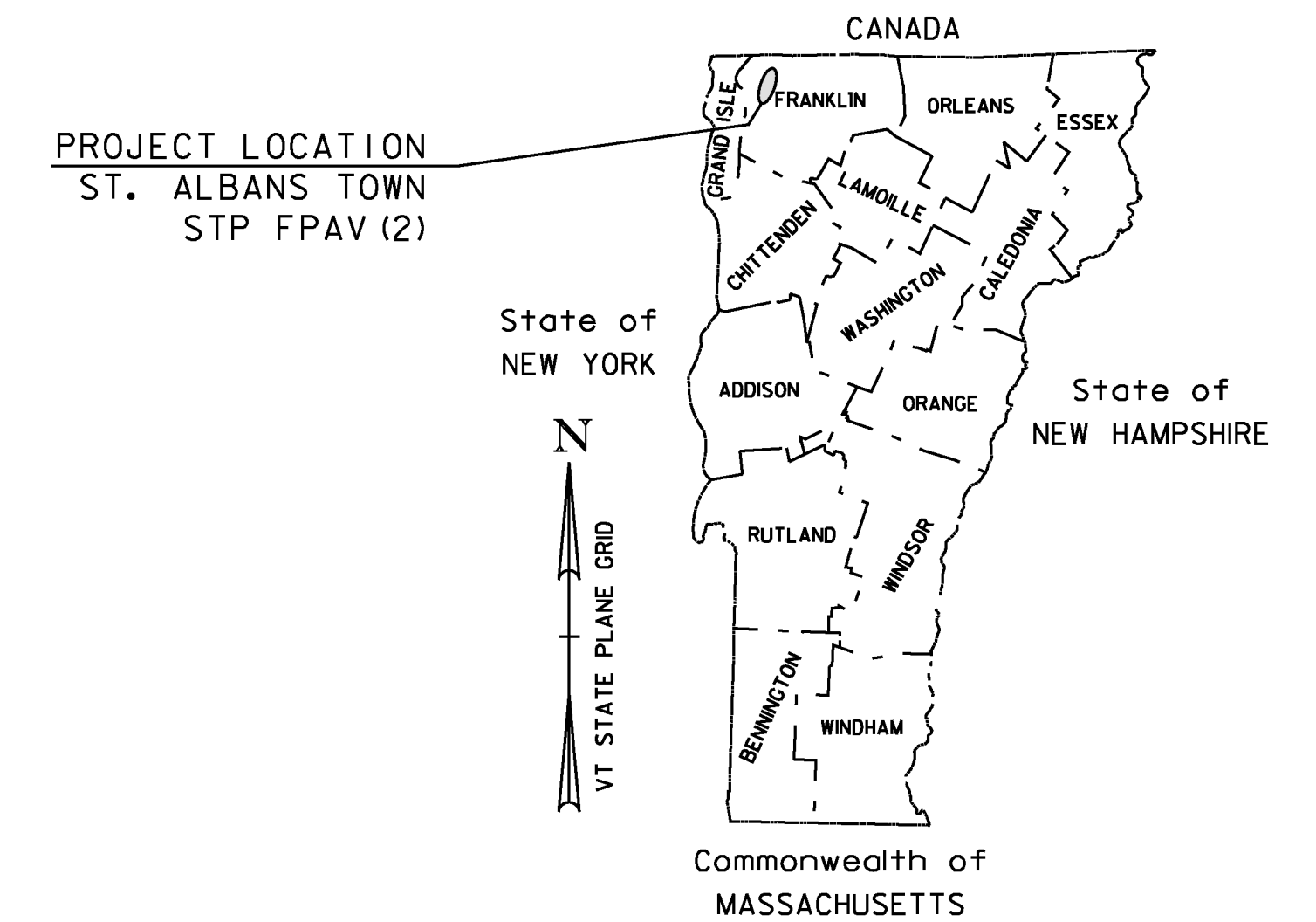


PROPOSED IMPROVEMENT  
TOWN OF ST. ALBANS  
COUNTY OF FRANKLIN  
VT ROUTE 38 - MAJOR COLLECTOR

BEGINNING IN THE TOWN OF ST. ALBANS AT MM 0.000  
AND EXTENDING NORTHERLY ALONG VT ROUTE 38  
FOR A DISTANCE OF APPROXIMATELY 3.345 MILES TO MM 3.345

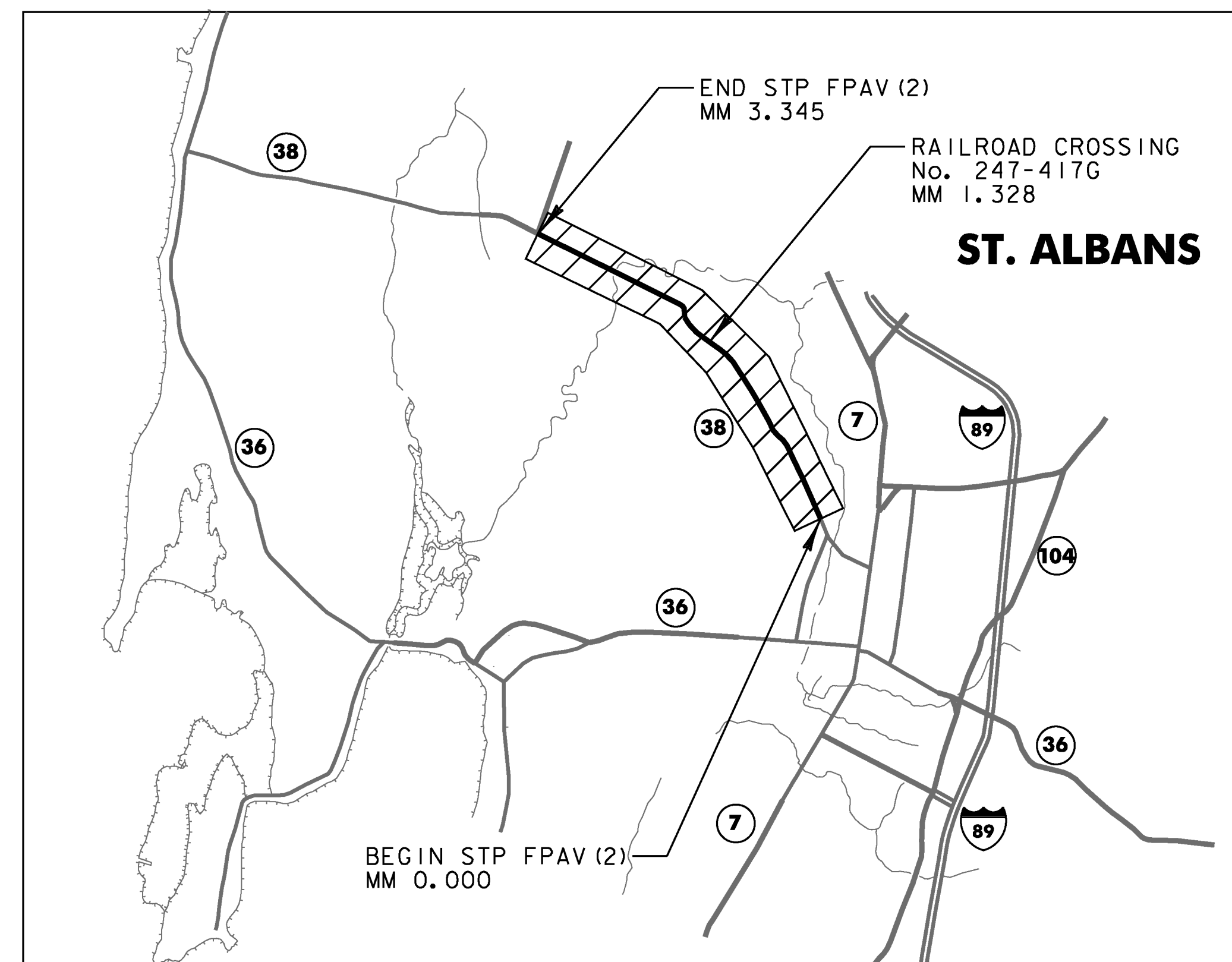
	LENGTH	
	(FEET)	(MILES)
TOWN OF ST. ALBANS MM 0.000 TO MM 3.345	17661.60	= 3.345
PROJECT TOTALS	17661.60	= 3.345

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES COLD PLANING, RESURFACING EXISTING  
HIGHWAY WITH A BITUMINOUS CONCRETE LEVELING COURSE AND A WEARING COURSE, NEW GUARDRAIL,  
PAVEMENT MARKINGS, AND OTHER HIGHWAY RELATED ITEMS.



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE  
WITH THESE PLANS AND THE STANDARD SPECIFICATIONS  
FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE  
FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011  
FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT  
REVISIONS AND SUCH REVISED SPECIFICATIONS AND  
SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE  
PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 3	
SURVEYED BY :	N/A
SURVEYED DATE :	N/A
DATUM	
VERTICAL	N/A
HORIZONTAL	N/A



**DuBois  
& King**  
INC.

PROJECT MANAGER :	MICHAEL J. FOWLER, P.E.
PROJECT NAME :	ST ALBANS TOWN
PROJECT NUMBER :	STP FPAV(2)
SHEET 22 OF 32 SHEETS	



PROJECT PAVING LIMITS

TOWN AND ROUTE	BEGIN STATION	END STATION	LANE TYPICAL	WEARING DEPTH	LEVELING DEPTH	NOTES
RT 38						
ST. ALBANS						
	0.000	0.100	1'-10'-10'-1'	1½"	VARIES	LEVEL AND OVERLAY
	0.100	2.200	1'-VARIES-VARIES-1'	1½"	VARIES	LEVEL AND OVERLAY
	0.200	2.360	1'-11'-11'-1'	1½"	VARIES	LEVEL AND OVERLAY
	2.360	2.460	VARIES-11'-11'-VARIES	1½"	VARIES	LEVEL AND OVERLAY
	2.460	3.345	2'-11'-11'-2'	1½"	VARIES	LEVEL AND OVERLAY

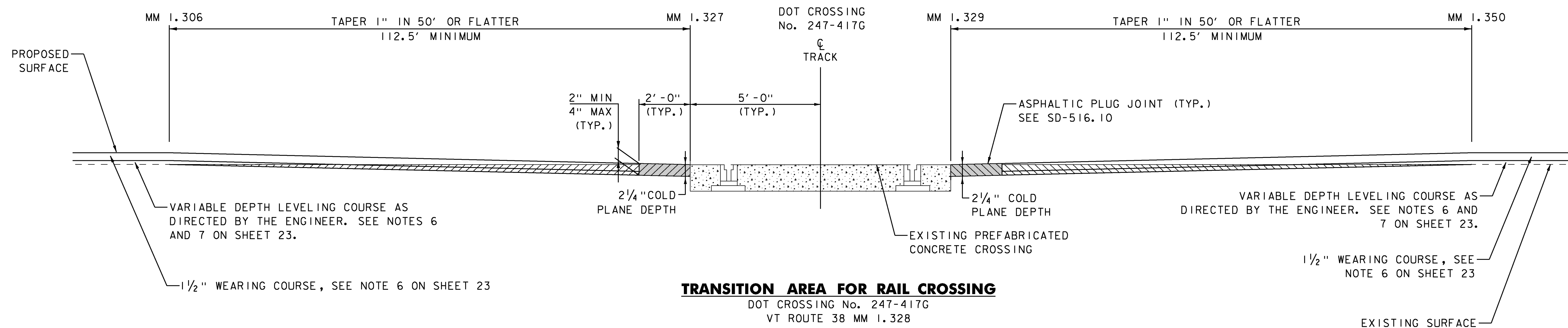
NOTES:

1. COLD PLANING SHALL BE COMPLETED ACCORDING TO THE TRANSITION DETAILS. THE COLD PLANING AND PAVING SHALL MATCH THE EXISTING CONDITIONS AT THE BEGINNING AND END OF THE CONSTRUCTION AREAS BY THE USE OF A BUTT JOINT. SEE DETAILS ON PROJECT TYPICAL SHEET 1.
2. ALL COLD PLANED AND EXISTING SURFACES SHALL HAVE SURFACE PREPARATION BEFORE PAVING, CONSISTING OF POTHOLE PATCHING AND PATCHING OF ALL CRACKS THAT ARE AT LEAST 1" IN WIDTH. THIS WILL BE PAID FOR UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE 1)".
3. EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE RESIDENT ENGINEER SHALL BE EXCAVATED TO A DEPTH OF THREE INCHES OR AS DIRECTED BY THE ENGINEER. EXCAVATION SHALL BE PAID UNDER ITEM 608.25 "ALL PURPOSE EXCAVATOR RENTAL, TYPE 1" AND ITEM 608.37 "TRUCK RENTAL". MATERIAL REMOVED SHALL BE REPLACED WITH ITEM 301.28 "SUBBASE OF CRUSHED GRAVEL, FINE GRADED" AS DIRECTED BY THE ENGINEER. EXCAVATED MATERIAL SHALL BE SPREAD ON THE ADJACENT SLOPES, OR REMOVED FROM THE PROJECT AS DIRECTED BY THE ENGINEER.
4. ALL EDGES OF PAVEMENT SHALL BE BACKED UP TO FULL HEIGHT WITH AGGREGATE SHOULDER MATERIAL AS DIRECTED BY THE ENGINEER AND WILL BE PAID UNDER ITEM 900.680 "SPECIAL PROVISION (AGGREGATE SHOULDERS, RAP WITH RAS)".
5. EMULSIFIED ASPHALT SHALL BE APPLIED ON EXISTING PAVEMENT SURFACES, BETWEEN ALL COURSES OF PAVEMENT AND ON COLD PLANE SURFACES. ALL COLD PLANE SURFACES SHALL HAVE AN APPLICATION RATE OF 0.08 GAL/SY. EMULSIFIED ASPHALT SHALL BE APPLIED ON ALL OTHER PAVED SURFACES AT THE RATE OF 0.025 TO 0.040 GAL/SY PAID UNDER OPTION ITEM 404.65 "EMULSIFIED ASPHALT (RS-1)" OR ITEM 900.683 "SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-1H OR CRS-1H)".
6. THE PAVEMENT WEARING AND LEVELING COURSES SHALL BE ITEM 490.30 "SUPERPAVE BITUMINOUS CONCRETE PAVEMENT" TYPE IVS OR ITEM 406.27 "MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT" TYPE IV. ALL ASPHALT CEMENT USED IN THE BITUMINOUS CONCRETE PAVEMENT SHALL BE AS SPECIFIED IN SUBSECTION 490.03 (b) OR 406.03 (b).
7. FOR ESTIMATING PURPOSES ¾" LEVELING COURSE HAS BEEN QUANTIFIED FOR THE PROJECT. THE LEVELING COURSE DEPTH IS MEANT TO CORRECT PROFILE DEFICIENCIES PRIOR TO THE WEARING COURSE BEING PLACED. THE ENGINEER WILL WORK WITH VTRANS PAVEMENT DESIGN STAFF TO DETERMINE THE ACTUAL LEVELING COURSE DEPTH.
8. ALL PAVED AND GRAVEL RESIDENTIAL AND COMMERCIAL DRIVES, AND ALL FIELD AND WOODS DRIVES SHALL RECEIVE A TWO FOOT PAVED APRON UNLESS OTHERWISE SHOWN ON PLANS OR DIRECTED BY THE ENGINEER. ANY REQUIRED EXCAVATION OR REGRAIDING SHALL BE INCIDENTAL TO ITEM 406.27 "MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT" OR ITEM 490.30 "SUPERPAVE BITUMINOUS CONCRETE PAVEMENT". THE NEW BITUMINOUS SURFACE WILL BE PAID FOR UNDER ITEM 406.27 "MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT" TYPE IV OR ITEM 490.30 "SUPERPAVE BITUMINOUS CONCRETE PAVEMENT" TYPE IVS.
9. BITUMINOUS CONCRETE PAVEMENT TOLERANCE = +/-¼ INCH (TOTAL THICKNESS, EXCLUDING LEVELING).
10. EDGES OF PAVEMENT SHALL INCLUDE A SAFETY EDGE AS SHOWN ON HSD-400.01.
11. ANY DI'S, CROSS CULVERTS OR OTHER DRAINAGE FEATURES DAMAGED BY CONTRACTOR OPERATIONS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.
12. ESTIMATED QUANTITIES OF ITEMS 608.15 "POWER GRADER RENTAL", 608.25 "ALL PURPOSE EXCAVATOR RENTAL, TYPE 1", 608.37 "TRUCK RENTAL", AND 608.40 "LOADER RENTAL, TYPE 1" HAVE BEEN INCLUDED FOR THE PROVISION OF CONSTRUCTING GUARDRAIL END SECTIONS WITH EXCAVATED DITCHING MATERIAL AND THE REMOVAL OF BUILT UP EXCESS SHOULDER MATERIAL IN NON-GUARDRAIL LOCATIONS.
13. AN ESTIMATED QUANTITY OF ITEM 203.30 "EARTH BORROW" HAS BEEN INCLUDED FOR USE WITH THE GUARDRAIL END SECTIONS. 25 CY OF ITEM 203.30 "EARTH BORROW" HAS BEEN ESTIMATED FOR EACH NEW END SECTION. GUARDRAIL END SECTIONS SHALL BE CAPPED WITH AN ESTIMATED 3 INCH DEPTH OF ITEM 651.35 "TOPSOIL" UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE QUANTITIES INCLUDED REFLECT 5 CY OF ITEM 651.35 "TOPSOIL" FOR EACH NEW GUARDRAIL END SECTION. ITEM 653.20 "TEMPORARY EROSION MATTING" SHALL BE PLACED ON SLOPES GREATER THAN 1:6 CREATED BY THE GUARDRAIL END SECTIONS. THE QUANTITIES INCLUDED REFLECT 25 SY OF ITEM 653.20 "TEMPORARY EROSION MATTING" FOR EACH NEW GUARDRAIL END SECTION. PRIOR TO THE PLACEMENT OF TEMPORARY EROSION MATTING, THE AREA SHALL BE TOPSOILED AND SEEDED USING ITEM 651.35 "TOPSOIL" AND ITEM 651.15 "SEED".
14. STEEL BEAM GUARDRAIL WITH STEEL POSTS SHALL BE USED ON THIS PROJECT.
15. THE CONTRACTOR SHALL USE CAUTION WHEN COLD PLANING AND PAVING OPERATIONS OCCUR ON BRIDGE DECKS. SHOULD ANY DAMAGE OCCUR TO THE BRIDGE DECK OR MEMBRANE AS A RESULT OF THESE OPERATIONS, THE RESIDENT ENGINEER SHALL CONTACT THE VTRANS CONSTRUCTION STRUCTURES ENGINEER TO PROVIDE AN ASSESSMENT OF THE DAMAGE AND RECOMMEND ANY NECESSARY REPAIRS. THE CONSTRUCTION STRUCTURES ENGINEER WILL ALSO DETERMINE IF THE DAMAGE WAS AVOIDABLE. IF THE CONTRACTOR IS DETERMINED BY THE RESIDENT ENGINEER TO BE AT FAULT FOR THE DAMAGE, THE RECOMMENDED REPAIRS SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE STATE.

NOT TO SCALE

PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(2)	
FILE NAME: z16v023typ.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PROJECT NOTES SHEET	SHEET 23 OF 32

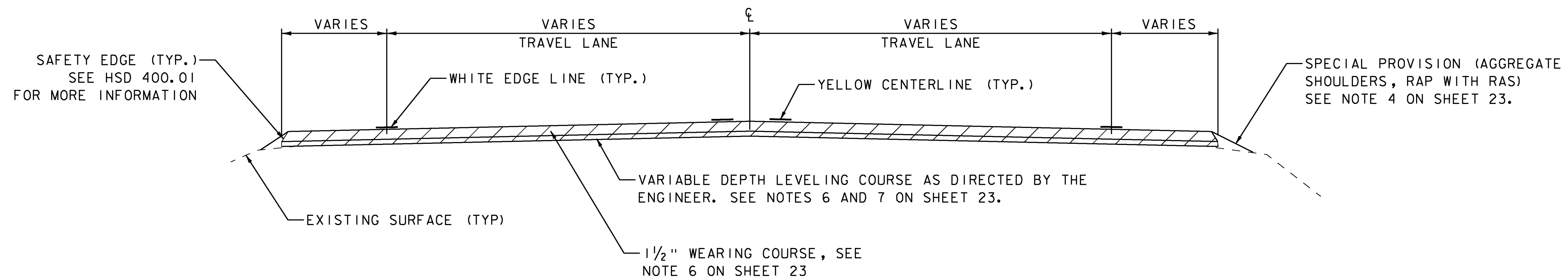




### TRANSITION AREA FOR RAIL CROSSING

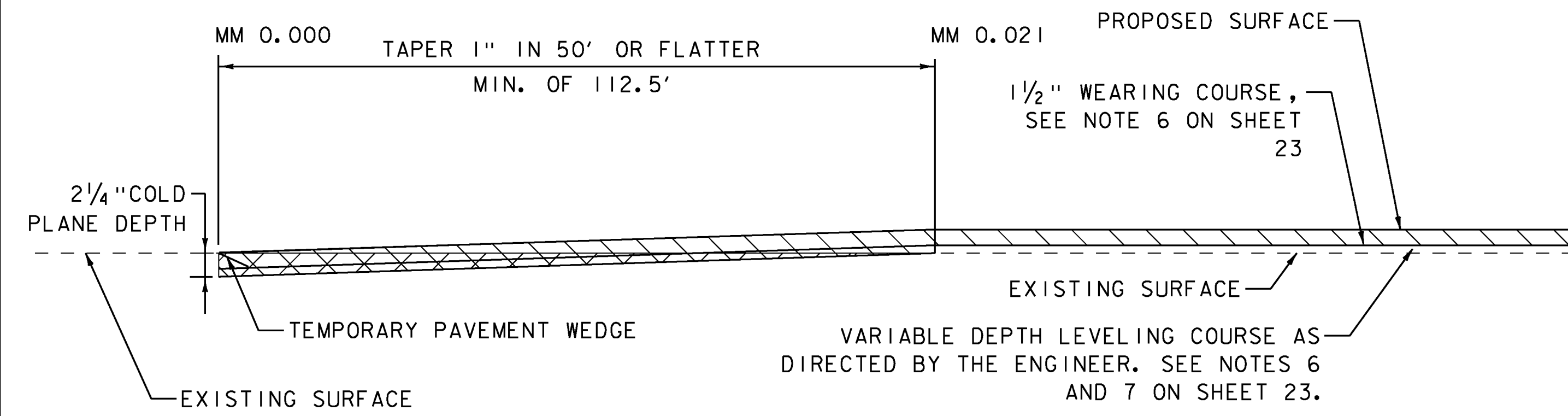
DOT CROSSING No. 247-417G  
VT ROUTE 38 MM 1.328

- NOTE:
1. ASPHALTIC PLUG JOINT WILL BE PAID FOR UNDER ITEM 900.640 "SPECIAL PROVISION (BAND JOINT @ PRECAST CONCRETE RAILROAD CROSSING)"

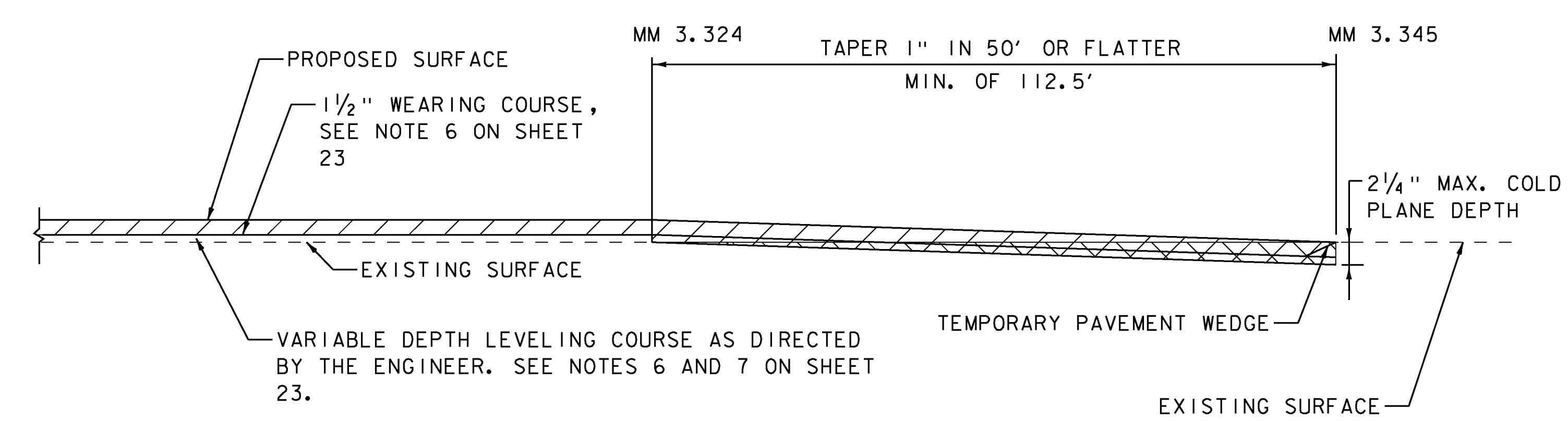


### LEVEL & OVERLAY TYPICAL SECTION

MM 0.000 (BEGIN PROJECT) TO MM 3.345 (END PROJECT)



### BEGIN PROJECT TRANSITION DETAIL EXISTING PAVEMENT TO LEVEL & OVERLAY

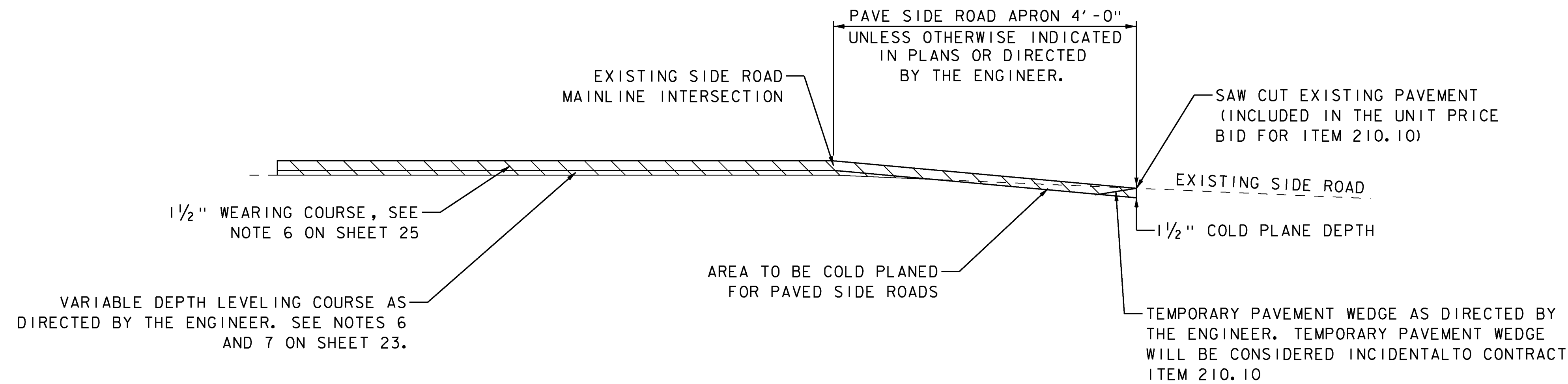


### END PROJECT TRANSITION DETAIL LEVEL & OVERLAY TO EXISTING PAVEMENT

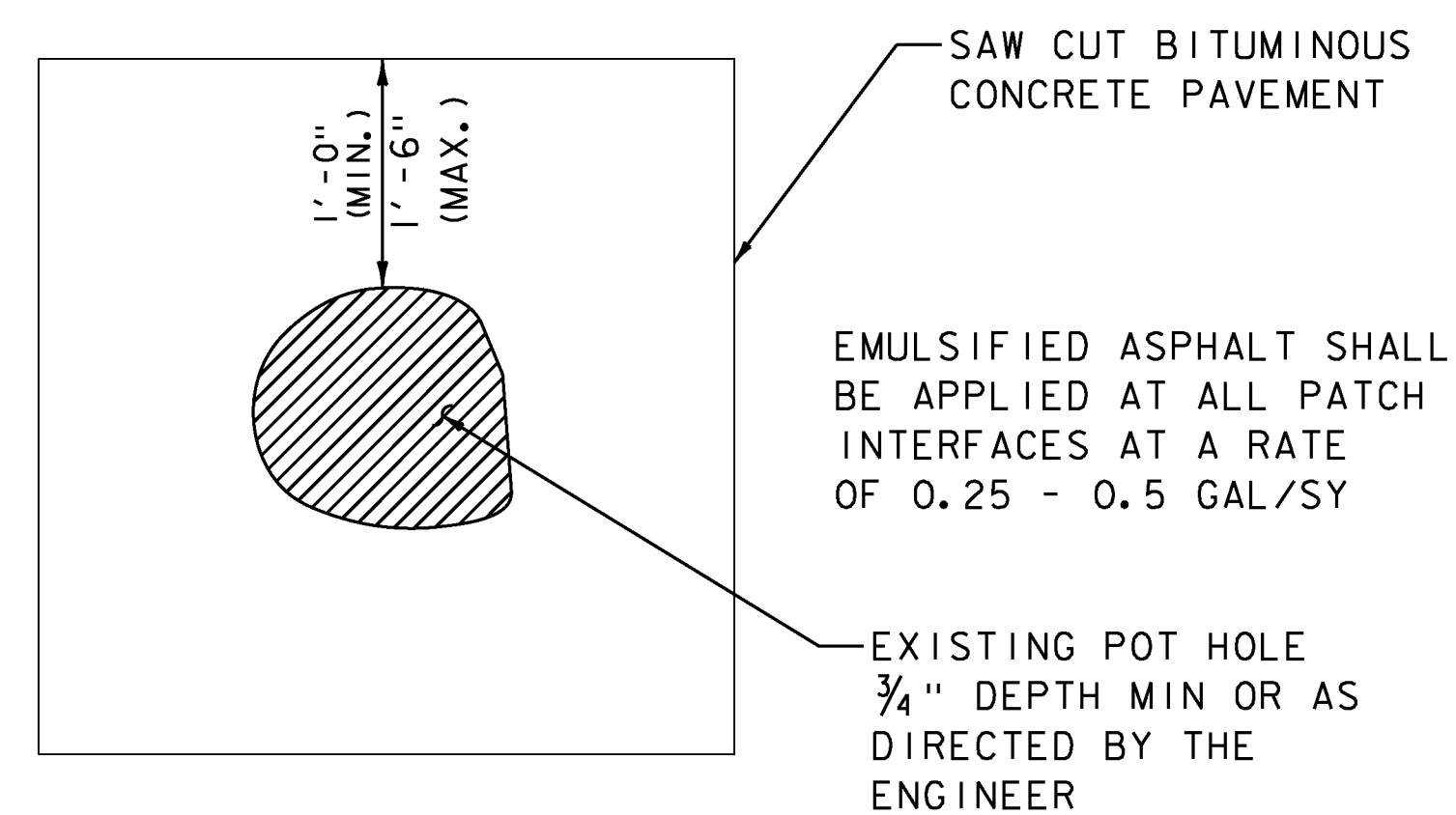
NOT TO SCALE

PROJECT NAME:	ST ALBANS TOWN
PROJECT NUMBER:	STP FPAV(2)
FILE NAME:	z16v023typ.dgn
PROJECT LEADER:	C. LATHROP
DESIGNED BY:	J. GOODALL
PROJECT TYPICAL SHEET 1	
PLOT DATE:	05/10/2016
DRAWN BY:	J. GOODALL
CHECKED BY:	C. LATHROP
SHEET	24 OF 32





**TRANSITION AREA FOR SIDE ROADS (LEVEL & OVERLAY)**  
FULL WIDTH OF TOWN HIGHWAY



**TYPICAL - POT HOLE REPAIR**

**NOTE:**

1. EMULSIFIED ASPHALT SHALL BE APPLIED AT ALL PATCH INTERFACES AT A RATE OF 0.25 - 0.50 GAL/SY. EMULSIFIED ASPHALT SHALL MEET THE REQUIREMENTS OF SECTION 404 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE 1)".
2. ALL WORK ASSOCIATED WITH POT HOLE REPAIR WILL BE PAID UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE 1)".

**NOT TO SCALE**

PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(2)	
FILE NAME: z16v023typ.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PROJECT TYPICAL SHEET 2	SHEET 25 OF 32



STATE OF VERMONT AGENCY OF TRANSPORTATION														QUANTITY SHEET 1									
SUMMARY OF ESTIMATED QUANTITIES														TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
									ROADWAY	FULL C.E.	ROADWAY (ALTERNATE A)	ROADWAY (ALTERNATE B)		GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS	
									100					100		CY	EARTH BORROW	203.30	EST.				
									1					1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-				
									1460					1460		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	18				
									300					300		TON	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.28	EST.				
																	BEGIN OPTION AA						
									420					420		CWT	EMULSIFIED ASPHALT (RS-1)	404.65	9				
									420					420		CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-1H OR CRS-1H)	900.683	9				
																	END OPTION AA						
									1					1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-				
									30					30		HR	POWER GRADER RENTAL	608.15	EST.				
									85					85		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST.				
									30					30		HR	POWER BROOM RENTAL, TYPE I	608.30	EST.				
									50					50		HR	POWER BROOM RENTAL, TYPE II	608.31	EST.				
									170					170		HR	TRUCK RENTAL	608.37	EST.				
									20					20		HR	LOADER RENTAL, TYPE I	608.40	EST.				
									175					175		LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	17				
									4					4		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	-				
									1					1		EACH	REPLACE GUARDRAIL BEAM UNIT	621.77	-				
									150					150		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	-				
									500					500		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.				
									1700					1700		HR	FLAGGERS	630.15	EST.				
									50					50		HR	FLAGGERS, RAILROAD	630.20	EST.				
									0.5					0.5		LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-				
									0.5					0.5		LS	MOBILIZATION/DEMOBILIZATION	635.11	-				
									1					1		LS	TRAFFIC CONTROL (STP FPAV(2))	641.10	-				
									2					2		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-				
									36000					36000		LF	4 INCH WHITE LINE, WATERBORNE PAINT	646.201	677				
									33000					33000		LF	4 INCH YELLOW LINE, WATERBORNE PAINT	646.2111	814				
									2					2		EACH	RAILROAD CROSSING SYMBOL, WATERBORNE PAINT	646.321	-				
									36000					36000		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	677				
									33000					33000		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	719				
									2					2		EACH	TEMPORARY RAILROAD CROSSING SYMBOL, PAINT	646.712	-				
									7200					7200		EACH	LINE STRIPING TARGETS	646.76	134				
									10					10		LB	SEED	651.15	-				
									15					15		LB	FERTILIZER	651.18	-				
									1					1		TON	AGRICULTURAL LIMESTONE	651.20	0.95				
									1					1		TON	HAY MULCH	651.25	0.95				
									85					85		CY	TOPSOIL	651.35	5				
									100					100		SY	TEMPORARY EROSION MATTING	653.20	EST.				
									4					4		EACH	DELINEATOR WITH STEEL POST	676.10	-				
																		PROJECT NAME: ST ALBANS TOWN					
																		PROJECT NUMBER: STP FPAV(2)					
																		FILE NAME: z16v023qnty.dgn					
																		PLOT DATE: 05/10/2016					
																		PROJECT LEADER: C. LATHROP					
																		DRAWN BY: J. GOODALL					
																		DESIGNED BY: O. DALMER					
																		CHECKED BY: C. LATHROP					
																		QUANTITY SHEET 1					
																		SHEET 26 OF 32					



## QUANTITY SHEET 2

[illegible]



## ITEM DETAIL SHEET

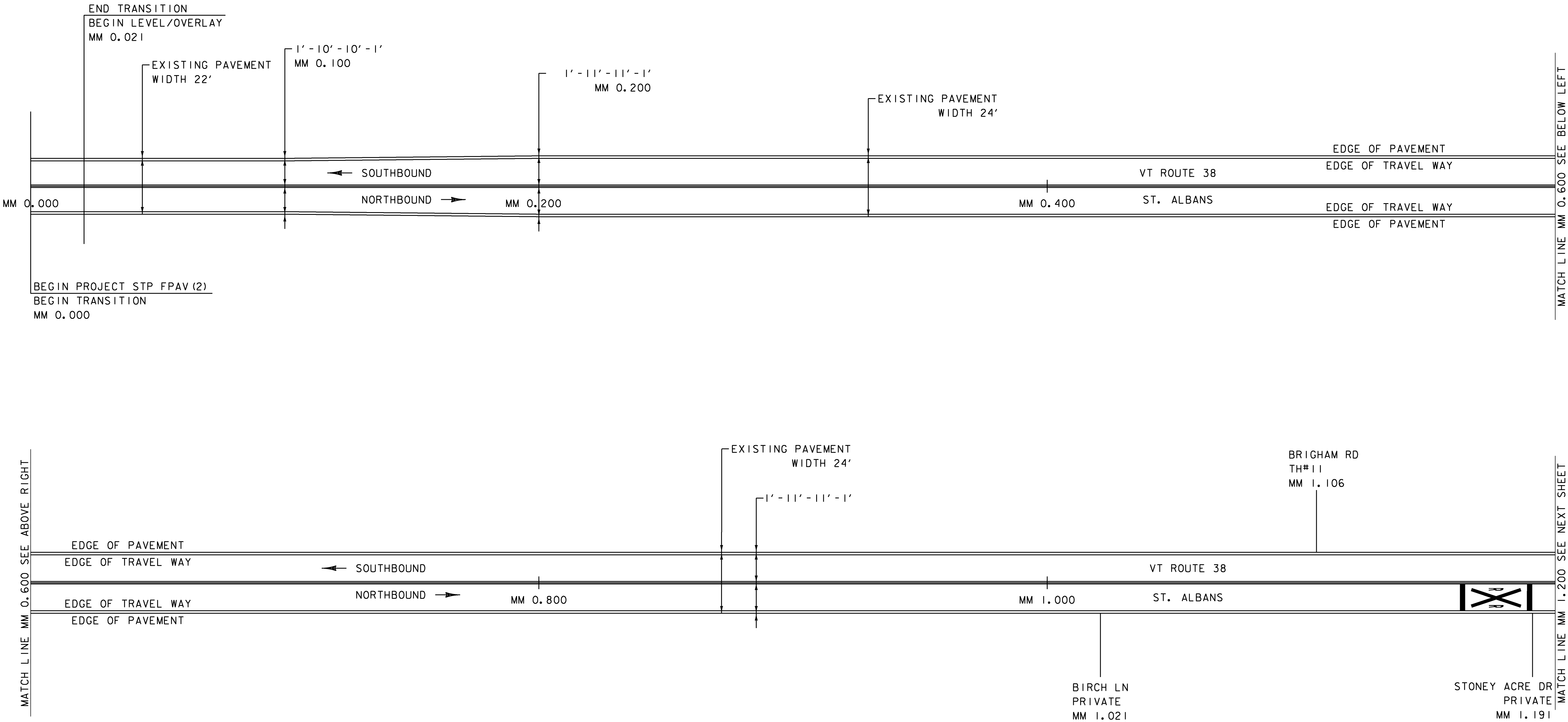
PROJECT NAME:	ST ALBANS TOWN		
PROJECT NUMBER:	STP FPAV(2)		
FILE NAME:	z16v0231ds.dgn	PLOT DATE:	05/10/2016
PROJECT LEADER:	C. LATHROP	DRAWN BY:	J. GOODALL
DESIGNED BY:	J. GOODALL	CHECKED BY:	C. LATHROP
ITEM DETAIL SHEET		SHEET	28 OF 32



4 INCH WHITE LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH WHITE LINE, PAINT  
(ALL LINES WILL INCLUDE EDGE LINE BREAKS  
AND RADII AT TOWN HIGHWAYS)  
MM 0.000 - MM 1.200 (SOLID LT & RT)

4 INCH YELLOW LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH YELLOW LINE, PAINT  
(ALL LINES WILL INCLUDE CENTERLINE BREAKS  
AT TOWN HIGHWAYS)  
MM 0.000 - MM 1.200 (SOLID LT & RT)

RAILROAD CROSSING SYMBOL, WATERBORNE PAINT &  
TEMPORARY RAILROAD CROSSING SYMBOL, PAINT  
MM 1.176 RT



PROJECT NAME:	ST ALBANS TOWN
PROJECT NUMBER:	STP FPAV(2)
FILE NAME: z16v023bdr.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PLAN SHEET 1	SHEET 29 OF 32

NOT TO SCALE



STEEL BEAM GUARDRAIL, GALVANIZED

MM 2.331 - MM 2.338 LT  
MM 2.331 - MM 2.338 RT  
MM 2.349 - MM 2.356 LT  
MM 2.354 - MM 2.361 RT

ANCHOR FOR STEEL BEAM RAIL

MM 2.331 LT  
MM 2.331 RT  
MM 2.356 LT  
MM 2.361 RT

REMOVAL AND DISPOSAL OF GUARDRAIL

MM 2.331 - MM 2.338 LT  
MM 2.331 - MM 2.338 RT  
MM 2.349 - MM 2.356 LT  
MM 2.354 - MM 2.361 RT

4 INCH WHITE LINE, WATERBORNE PAINT &

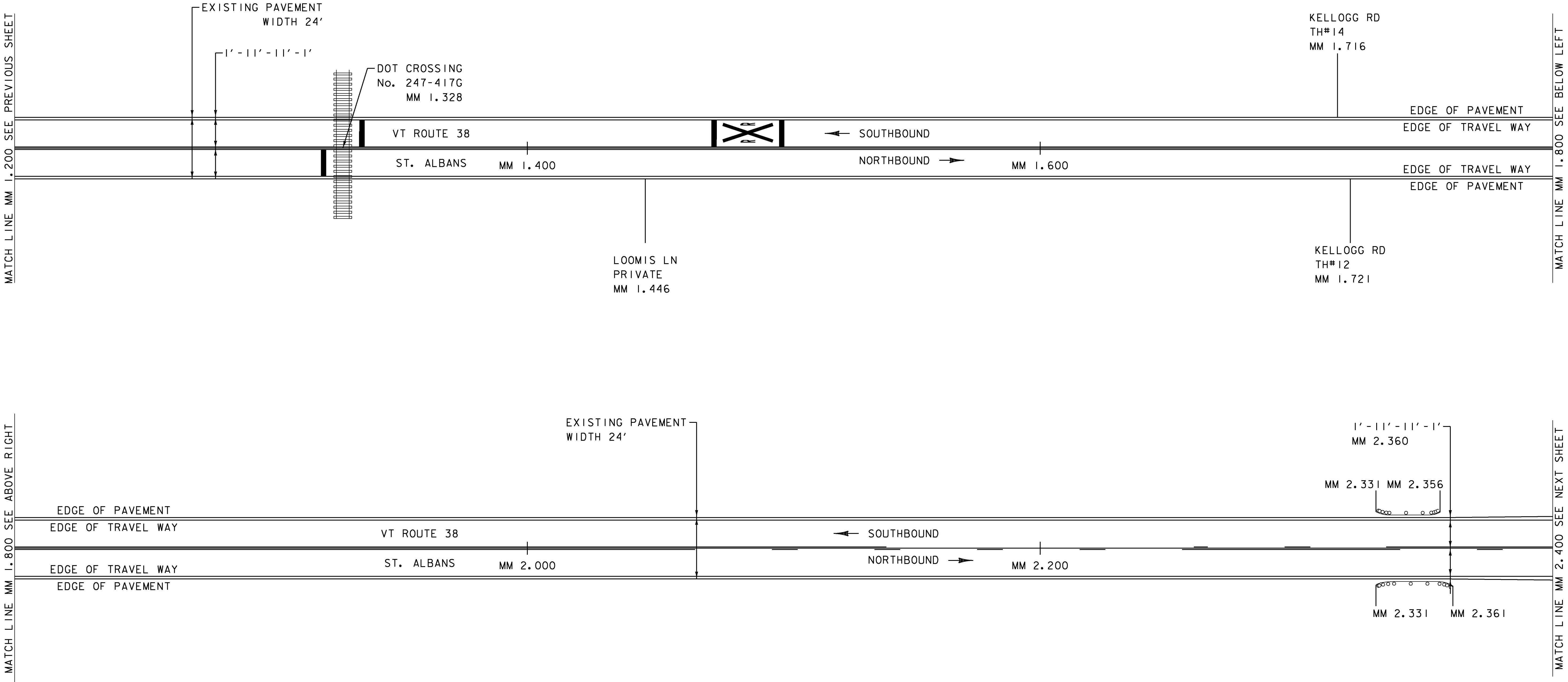
TEMPORARY 4 INCH WHITE LINE, PAINT  
(ALL LINES WILL INCLUDE EDGE LINE BREAKS  
AND RADII AT TOWN HIGHWAYS)  
MM 1.200 - MM 2.400 (SOLID LT & RT)

4 INCH YELLOW LINE, WATERBORNE PAINT &

TEMPORARY 4 INCH YELLOW LINE, PAINT  
(ALL LINES WILL INCLUDE CENTERLINE BREAKS  
AT TOWN HIGHWAYS)  
MM 1.200 - MM 2.060 (SOLID LT & RT)  
MM 2.060 - MM 2.140 (SOLID LT, DASHED RT)  
MM 2.140 - MM 2.260 (DASHED CTR)  
MM 2.260 - MM 2.335 (DASHED LT, SOLID RT)  
MM 2.335 - MM 2.400 (SOLID LT, DASHED RT)

RAILROAD CROSSING SYMBOL, WATERBORNE PAINT &

TEMPORARY RAILROAD CROSSING SYMBOL  
MM 1.486 LT



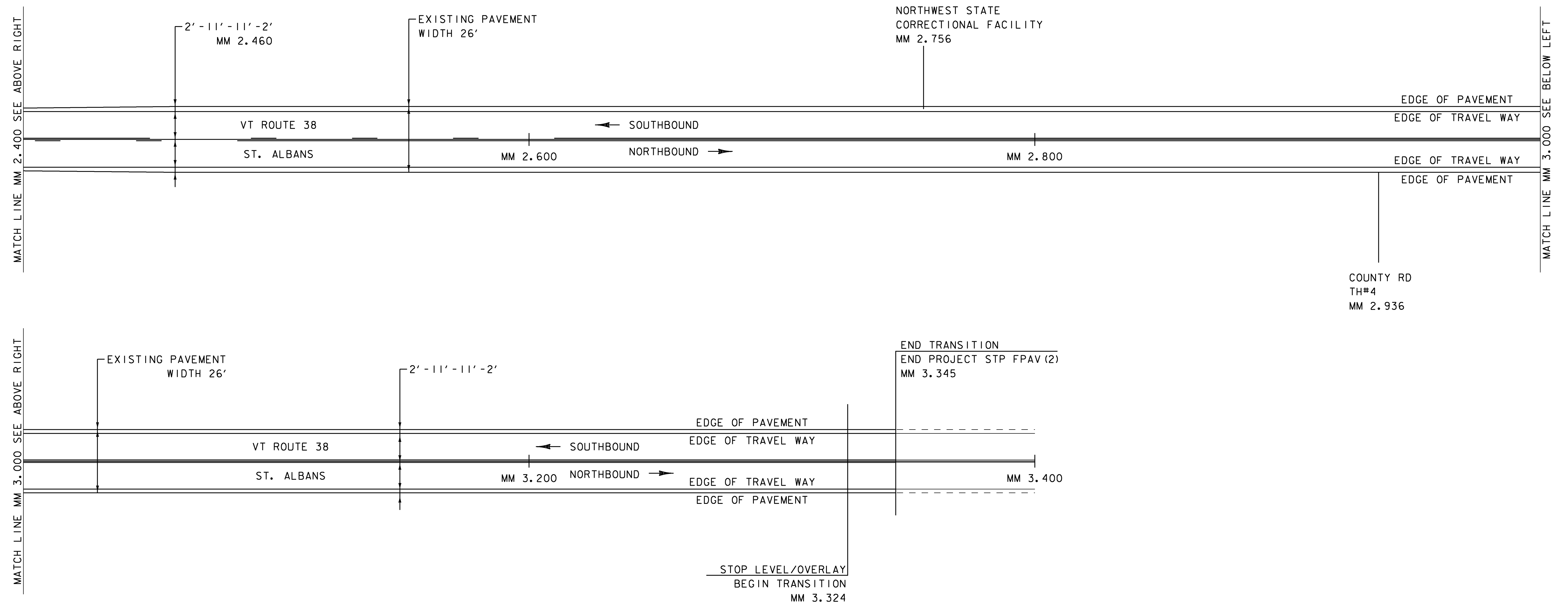
NOT TO SCALE

PROJECT NAME:	ST ALBANS TOWN
PROJECT NUMBER:	STP FPAV(2)
FILE NAME: z16v023bdr.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PLAN SHEET 2	SHEET 30 OF 32



4 INCH WHITE LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH WHITE LINE, PAINT  
(ALL LINES WILL INCLUDE EDGE LINE BREAKS  
AND RADII AT TOWN HIGHWAYS)  
MM 2.400 - MM 3.345 (SOLID LT & RT)

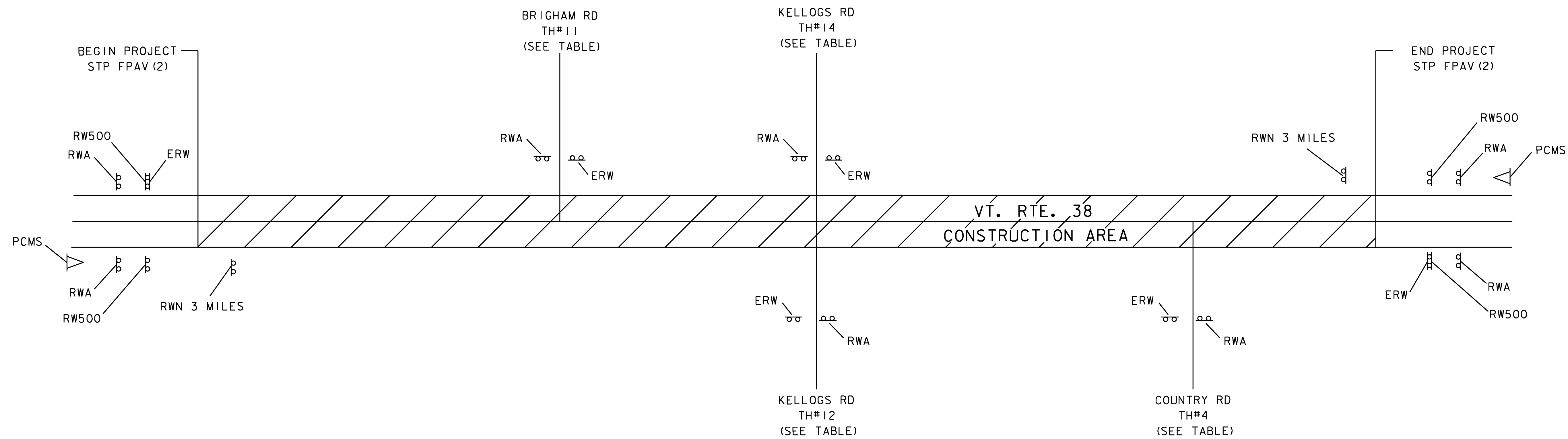
4 INCH YELLOW LINE, WATERBORNE PAINT &  
TEMPORARY 4 INCH YELLOW LINE, PAINT  
(ALL LINES WILL INCLUDE CENTERLINE BREAKS  
AT TOWN HIGHWAYS)  
MM 2.400 - MM 2.450 (SOLID LT, DASHED RT)  
MM 2.450 - MM 2.490 (DASHED CTR)  
MM 2.490 - MM 2.615 (DASHED LT, SOLID RT)  
MM 2.615 - MM 3.345 (SOLID LT & RT)



NOT TO SCALE

PROJECT NAME: ST ALBANS TOWN	
PROJECT NUMBER: STP FPAV(2)	
FILE NAME: z16v023bdr.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: J. GOODALL
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
PLAN SHEET 3	SHEET 31 OF 32





SEE VAOT STANDARD T-10 & T-17 FOR SIGN PLACEMENT.

LOCATION	ERW	RW500	RWA	RWN	▶
BEGIN PROJECT VT 38	1	2	2	1	1
BRIGHAM RD TH#11	1		1		
KELLOGS RD TH#14	1		1		
KELLOGS RD TH#12	1		1		
COUNTRY RD TH#4	1		1		
END PROJECT VT 38	1	2	2	1	1
TOTALS	6	4	8	2	2

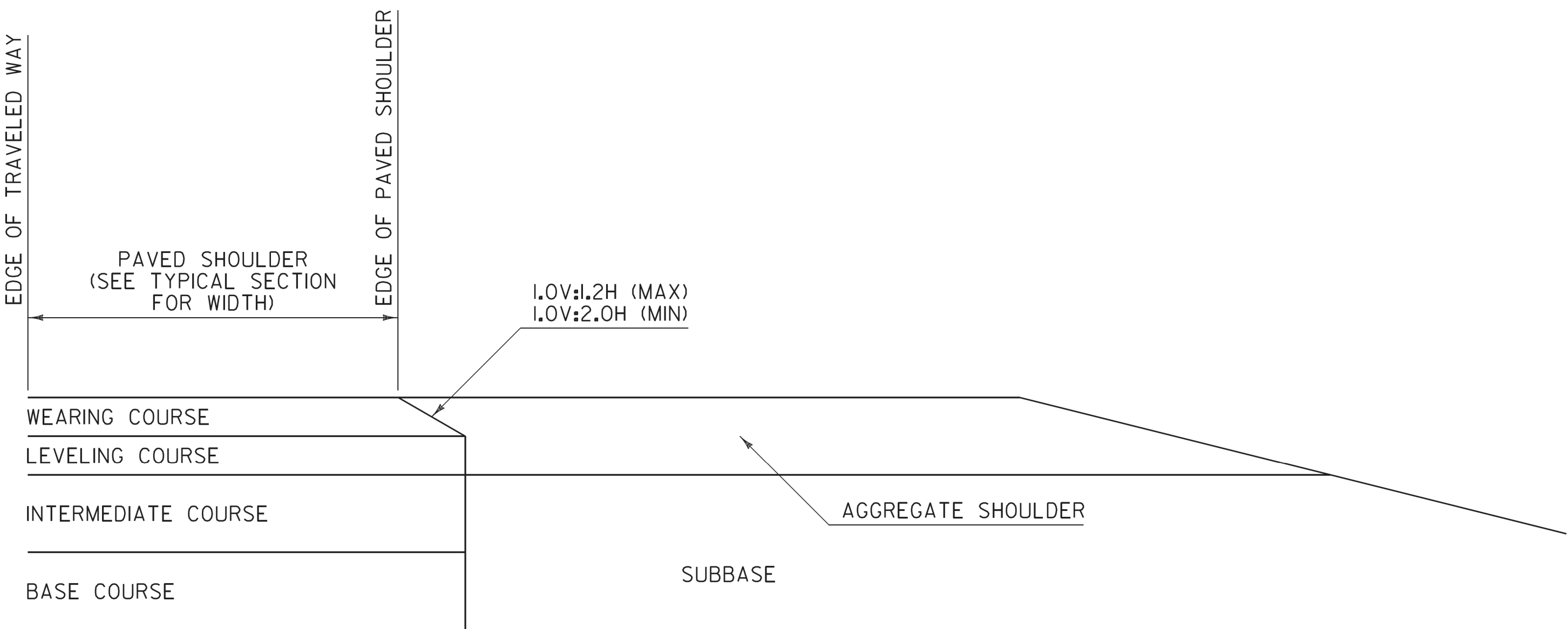
**LEGEND**

ERW = END ROAD WORK  
RW500 = ROAD WORK 500 FT  
RWA = ROAD WORK AHEAD  
RWN 3 MILES = ROAD WORK NEXT 3 MILES  
▶ = PORTABLE CHANGEABLE MESSAGE SIGN

PROJECT NAME:	ST ALBANS TOWN
PROJECT NUMBER:	STP FPAV(2)
FILE NAME: z16v023cas.dgn	PLOT DATE: 05/10/2016
PROJECT LEADER: C. LATHROP	DRAWN BY: O. DALMER
DESIGNED BY: J. GOODALL	CHECKED BY: C. LATHROP
CONSTRUCTION APPROACH SIGNING SHEET	SHEET 32 OF 32

NOT TO SCALE



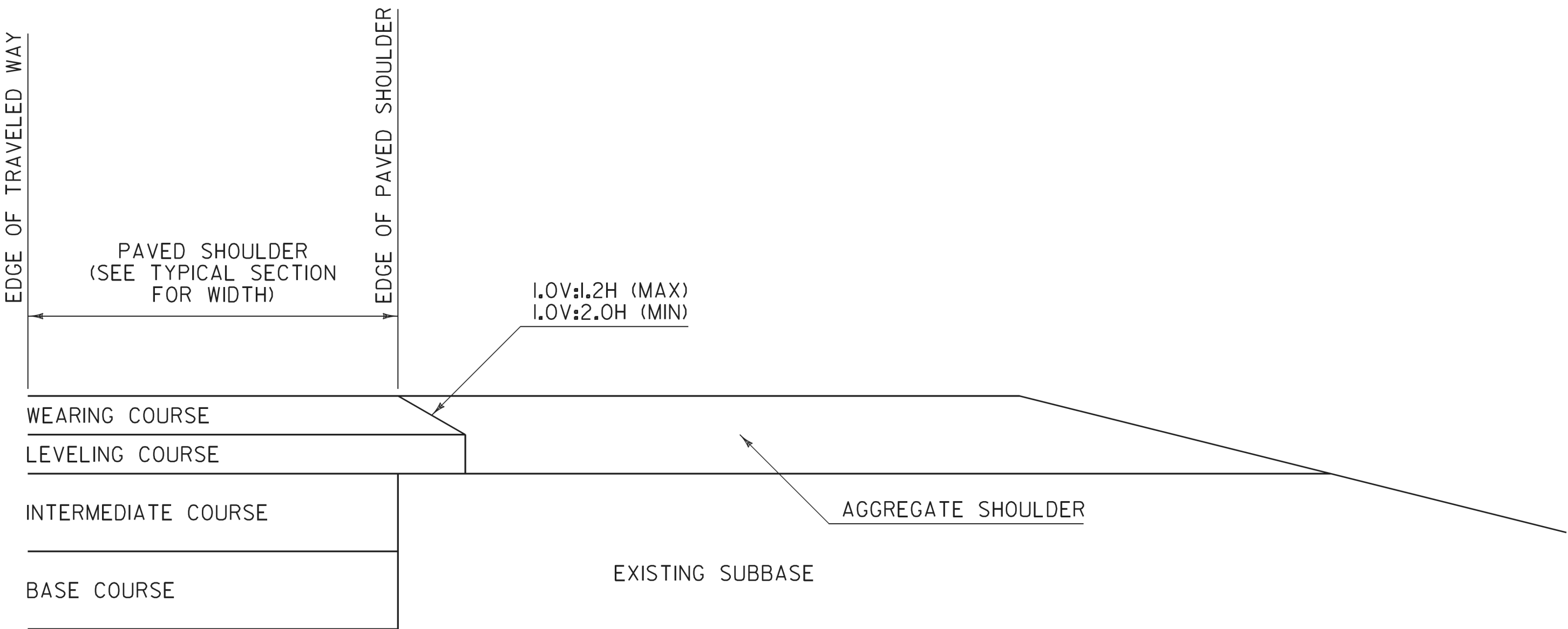


**NOTES:**

- 1. THIS DETAIL IS INTENDED FOR WHEN PAVING EXTENDS BELOW THE WEARING COURSE.
- 2. PRIOR TO PLACEMENT OF THE LEVELING AND/OR WEARING COURSE, THE SUBBASE LOCATED BENEATH THE AGGREGATE SHOULDER SHALL BE PREPARED FLUSH WITH THE BOTTOM OF THE LEVELING COURSE.
- 3. BASE COURSE LIMITS MAY VARY, SEE TYPICAL SECTIONS FOR WIDTH.

**SAFETY EDGE DETAIL  
FOR PAVING BELOW WEARING COURSE**

SAFETY EDGE WIDTH BASED ON WEARING COURSE THICKNESS AND A 1V:1.6H SLOPE	
WEARING COURSE THICKNESS (INCHES)	NOMINAL SAFETY EDGE WIDTH (INCHES)
1.25	2.000
1.50	2.375
1.75	2.750
2.00	3.125
2.25	3.500
2.50	4.000



**NOTES:**

- 1. THIS DETAIL IS INTENDED FOR WHEN ONLY THE LEVELING AND/OR WEARING COURSE IS TO BE PLACED.
- 2. PAVEMENT COURSES MAY VARY, SEE TYPICAL SECTIONS FOR ACTUAL PAVEMENT COURSES REQUIRED.

**SAFETY EDGE DETAIL  
FOR PAVING WEARING COURSE ONLY**

**GENERAL NOTES:**

- 1. PLACEMENT OF THE WEARING COURSE SHALL INCLUDE THE SAFETY EDGE, UNLESS THE FOLLOWING APPLIES:
  - A. THE ADJACENT SLOPE IS STEEPER THAN THE SAFETY EDGE.
  - B. THE EDGE OF PAVEMENT BEING PLACED ABUTS BOUND MATERIAL.
  - C. VEHICLES ARE RESTRICTED FROM LEAVING THE PAVED SURFACE (EXAMPLE: GUARDRAIL).
- 2. THE SAFETY EDGE SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE SLOPE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.
- 3. THE SAFETY EDGE SHALL NOT BE CONSIDERED PART OF THE PAVED SHOULDER.
- 4. THIS WORK SHALL BE INCIDENTAL TO THE RESPECTIVE BITUMINOUS CONCRETE PAVEMENT ITEM.

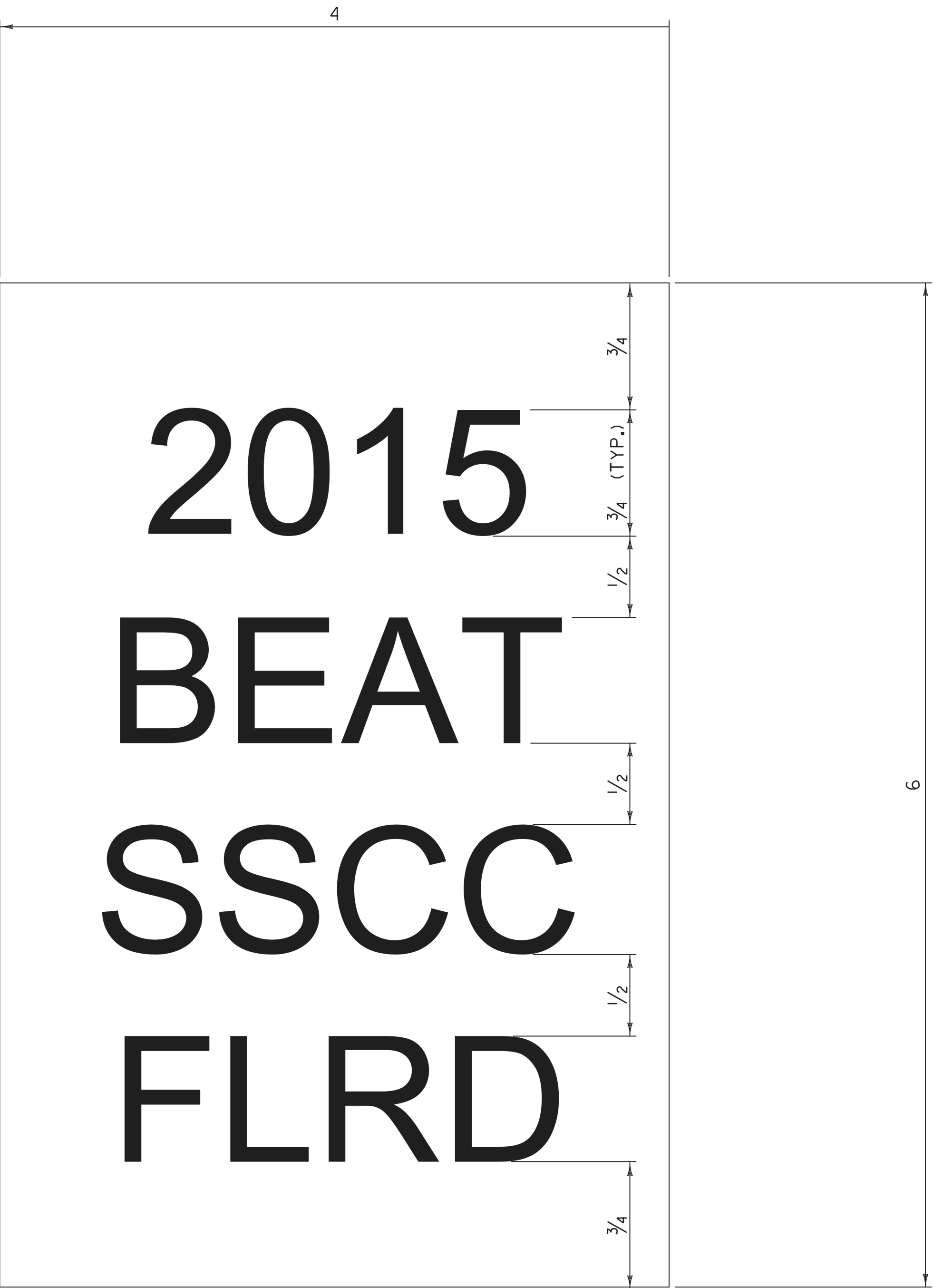
REV.	DATE	DESCRIPTION
0	MAR. 29, 2016	ORIGINAL APPROVAL
OTHER DETAILS REQUIRED: NONE		
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN		

SAFETY EDGE DETAILS



HIGHWAY SAFETY  
& DESIGN DETAIL  
HSD - 400.01





**GENERAL NOTES:**

- 1. LINE ONE SHALL INDICATE THE INSTALLATION YEAR (YYYY).
- 2. LINE TWO SHALL INDICATE THE MODEL AS IDENTIFIED ON THE APPROVED PRODUCTS LIST. FOR GENERIC INSTALLATIONS THE STANDARD DRAWING DESIGNATION OR NAME AS IDENTIFIED IN THE FHWA ELIGIBILITY LETTER SHALL BE USED.
- 3. LINE THREE SHALL SHALL INDICATE ADDITIONAL MODEL INFORMATION IF NECESSARY.
- 4. LINE FOUR SHALL INDICATE FLARED (FLRD) OR TANGENT (TANG).
- 5. LEGEND SHALL BE ONE ARIEL FONT.
- 6. LEGEND SHALL BE BLACK ON A WHITE BACKGROUND, LENGEND AND BACKGROUND SHALL NOT BE REFLECTIVE.
- 7. SUITABLE MATERIAL SHALL BE USED SO AS TO NOT DETERIORATE DURING EXPOSURE TO WEATHER.
- 8. LABELS SHALL BE APPLIED IN SUCH A WAY THAT THEY REMAIN INTACT DURING THE LIFE OF THE TERMINAL.
- 9. FOR W-BEAM GUARDRAIL, LABEL SHALL BE PLACED ON THE TOP OF POST ONE FACING AWAY FROM TRAFFIC.
- 10. FOR BOX BEAM GUARDRAIL, LABEL SHALL BE PLACED ON THE BOX BEAM ADJACENT TO POST ONE FACING AWAY FROM TRAFFIC.
- 11. PAYMENT SHALL BE INCIDENTAL TO OTHER TRAFFIC BARRIER ITEMS.
- 12. ALL DIMENSIONS IN INCHES.

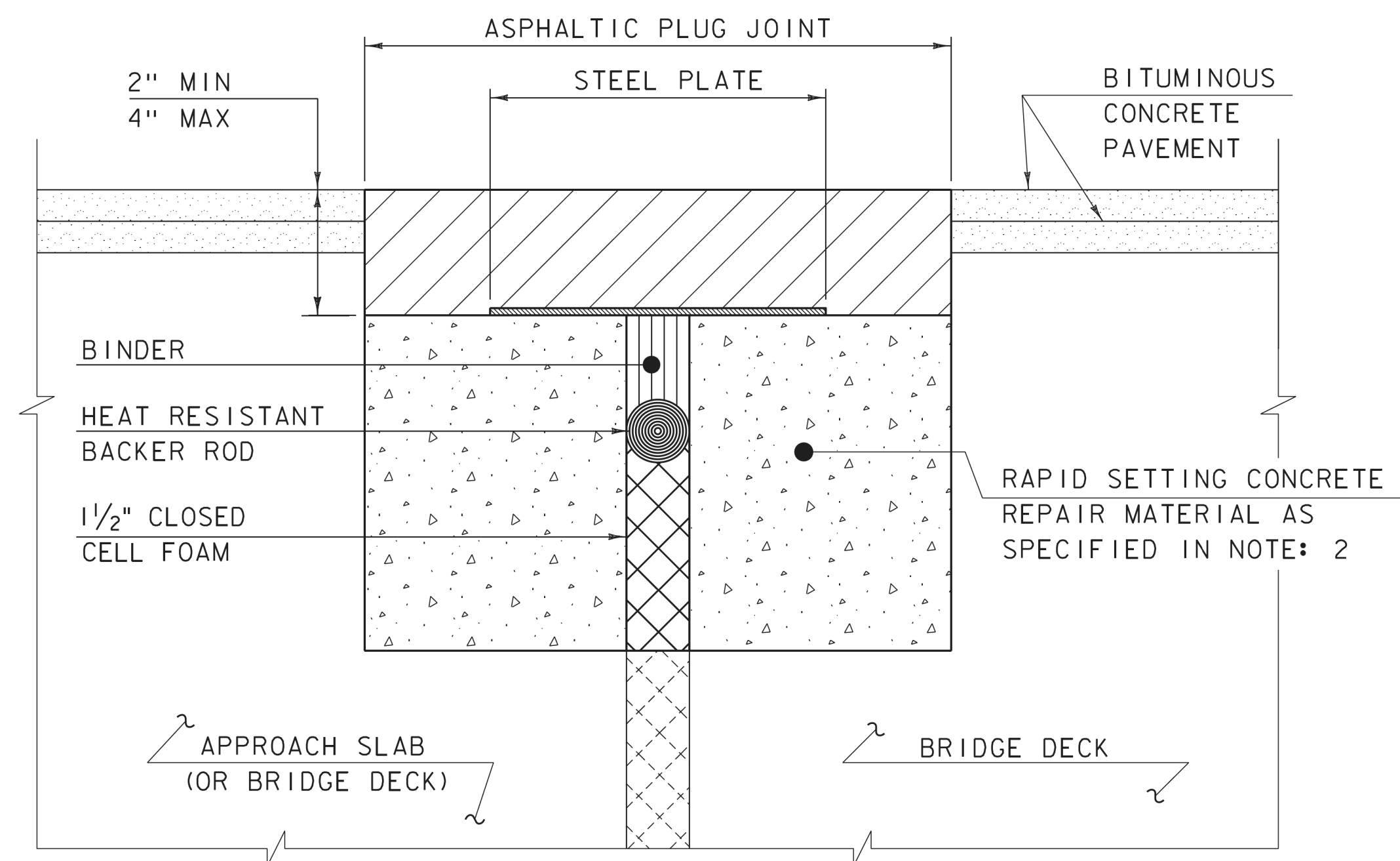
REV.	DATE	DESCRIPTION
0	NOV. 3, 2015	ORIGINAL APPROVAL
OTHER DETAILS REQUIRED: NONE		
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN		

GUARDRAIL TERMINAL LABEL DETAIL



HIGHWAY SAFETY  
& DESIGN DETAIL  
HSD - 621.06

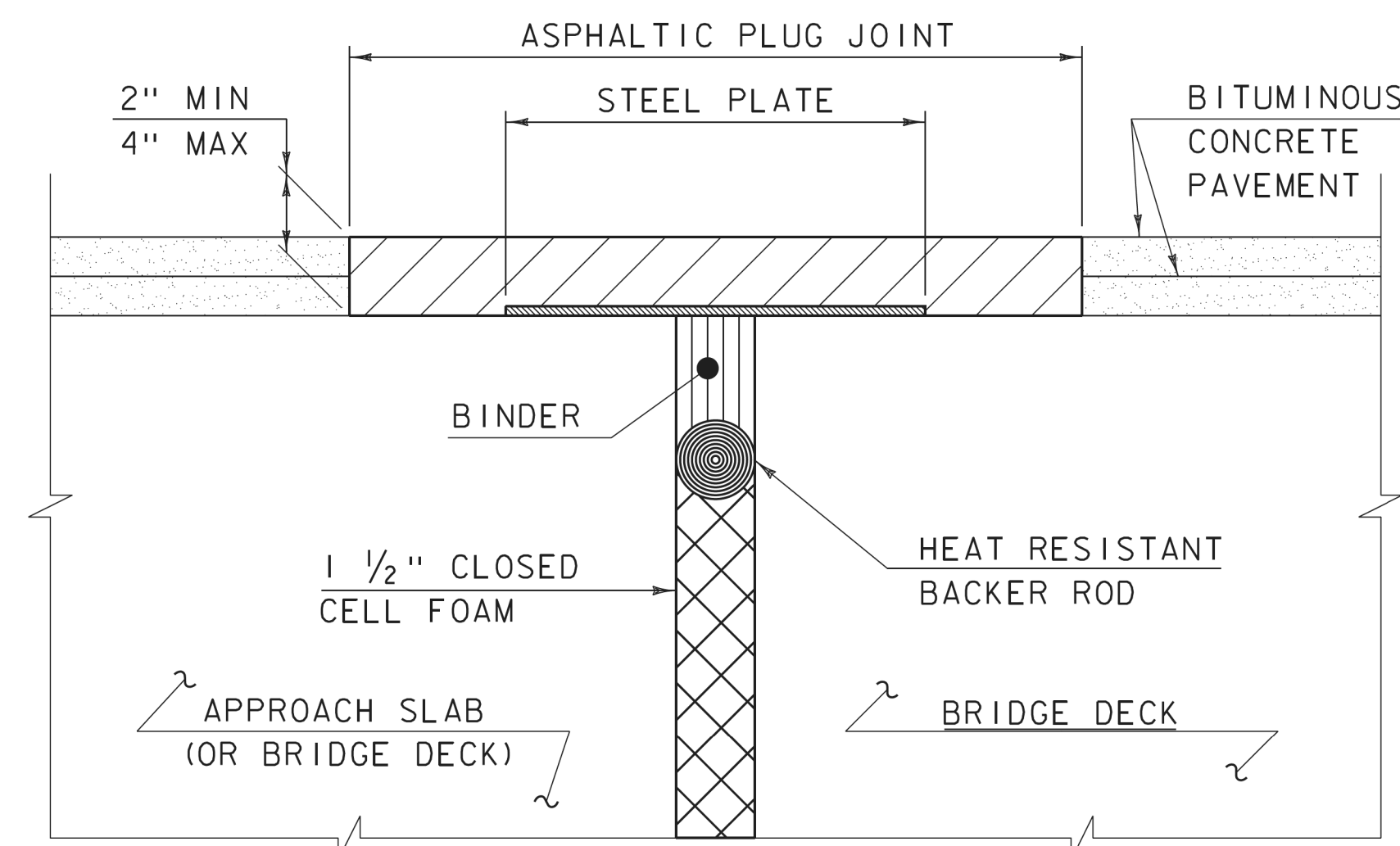




ASPHALTIC PLUG JOINT DETAIL - REHAB

**NOTES:**

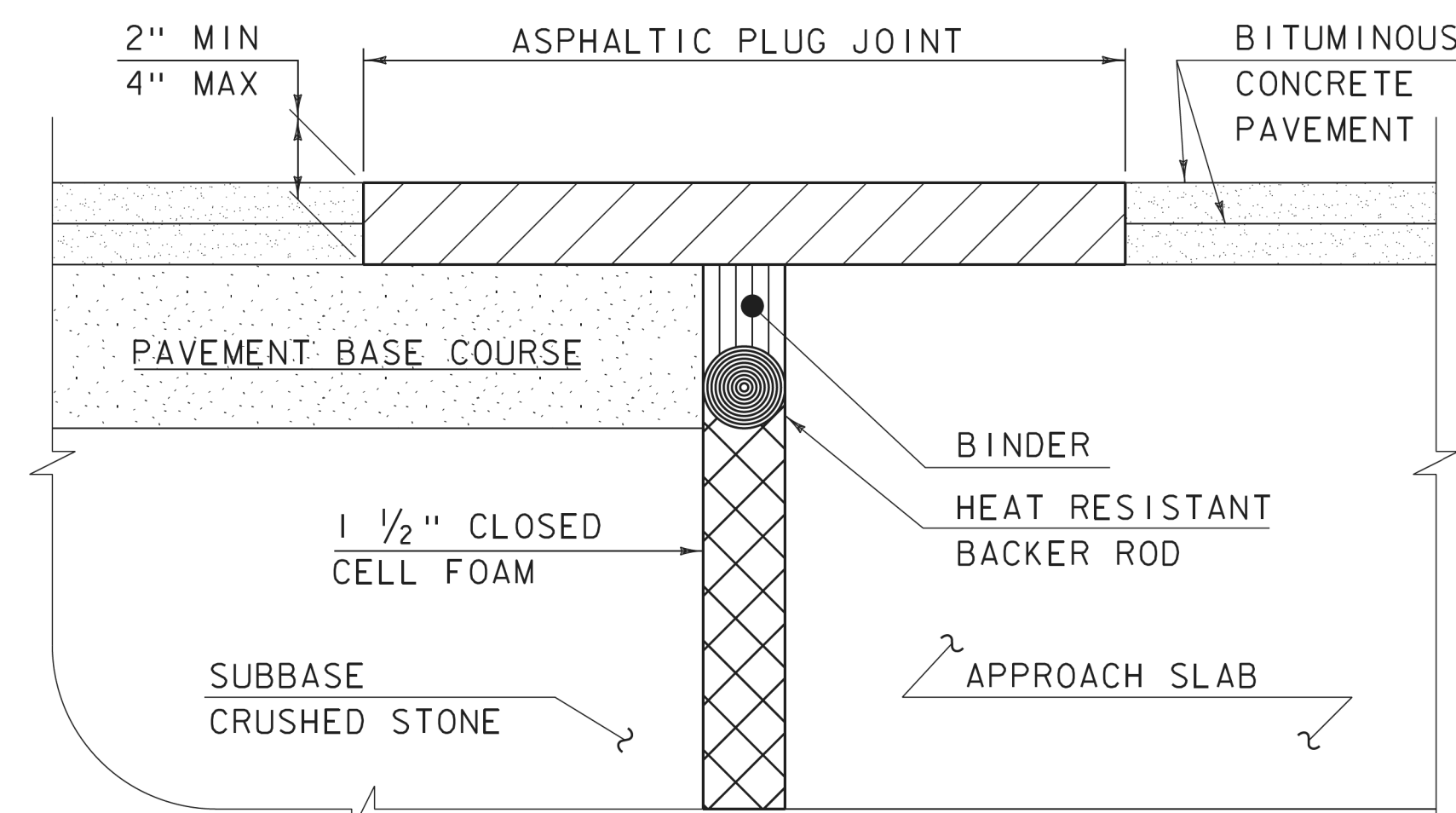
1. THE CONTRACTOR SHALL REMOVE ALL ASPHALTIC PLUG JOINT MATERIAL AND DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. REMOVAL OF THE FIRST 4 INCHES OF MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG. ANY REMOVAL OF MATERIAL GREATER THAN 4 INCHES SHALL BE INCLUDED IN THE BID PRICE OF ITEM 580.20 RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE.
2. THE CONTRACTOR SHALL REPLACE REMOVED MATERIAL THAT IS LESS THAN 4" FROM FINISHED GRADE WITH ASPHALTIC PLUG JOINT MATERIAL MEETING THE REQUIREMENTS OF SUBSECTION 707.15. ALL REMOVED MATERIAL THAT IS GREATER THAN 4 INCHES FROM FINISHED GRADE SHALL BE REPLACED WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.
4. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.



ASPHALTIC PLUG JOINT DETAIL "A" - NEW

**NOTE:**

PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER.



ASPHALTIC PLUG JOINT DETAIL "B" - NEW

**ASPHALTIC PLUG JOINT NOTES**

**INSTALLATION:**

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
5. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
6. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

**WEATHER LIMITATIONS**

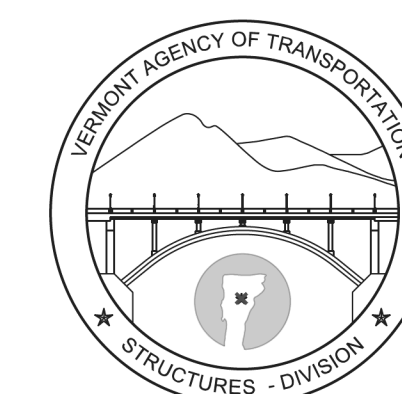
APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
2. THE ROAD SURFACE IS DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

DETAILS ON THIS SHEET ARE NOT TO SCALE.

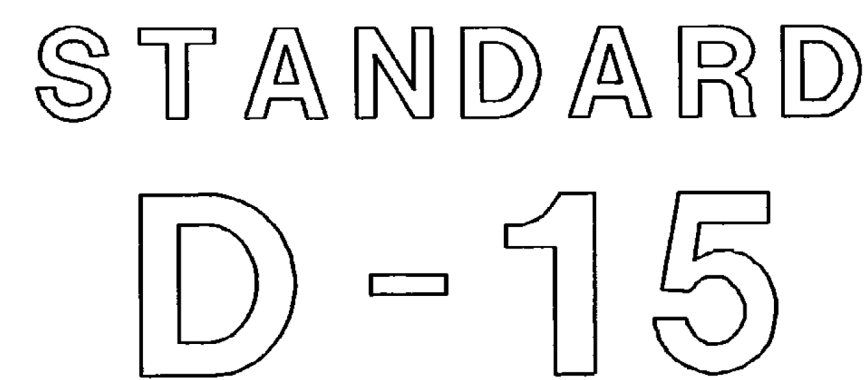
REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
AUGUST 29, 2011	ADD DETAIL "B" AND REV. NOTES

BRIDGE JOINT  
ASPHALTIC PLUG



STRUCTURES  
DETAIL  
SD-516.10



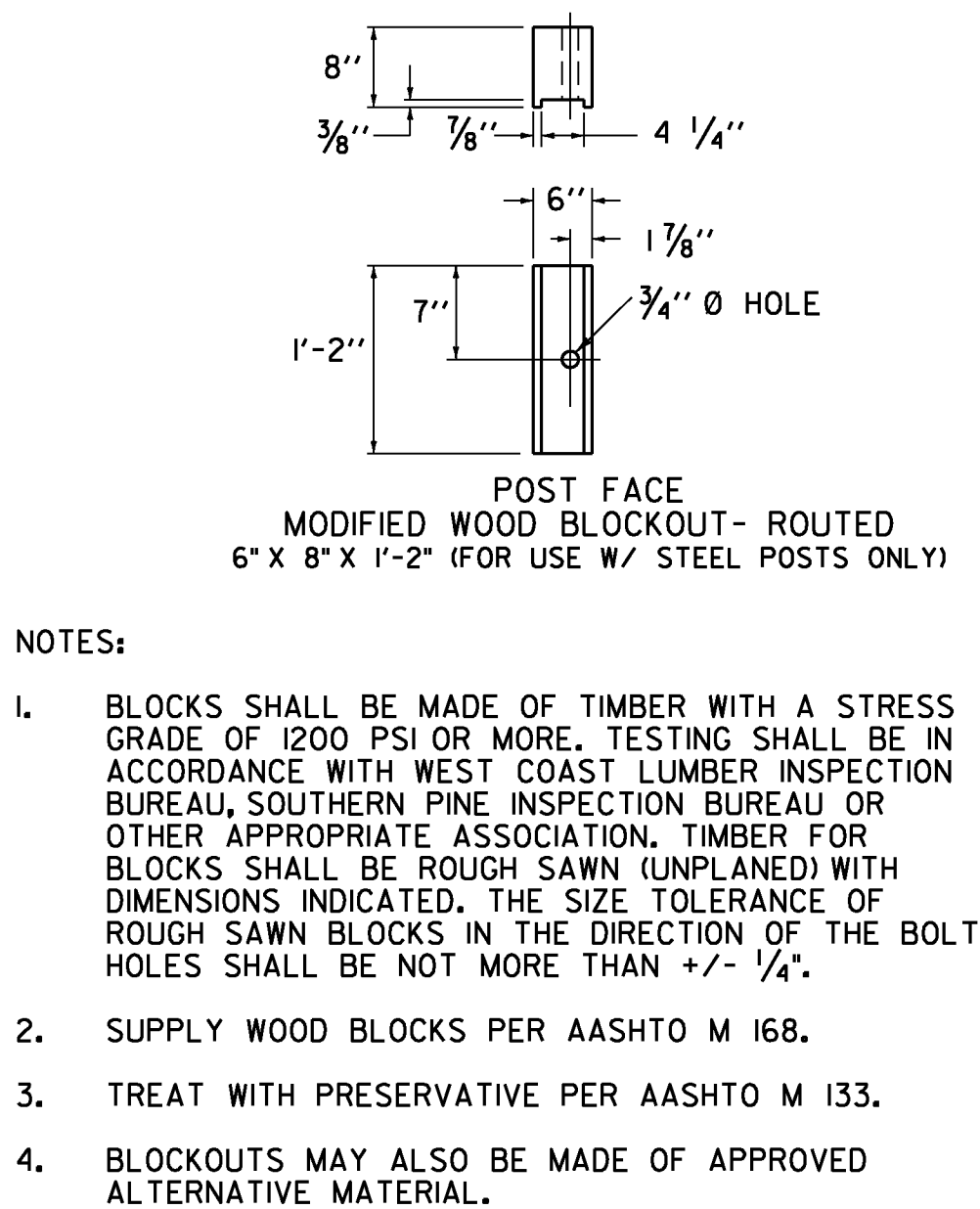
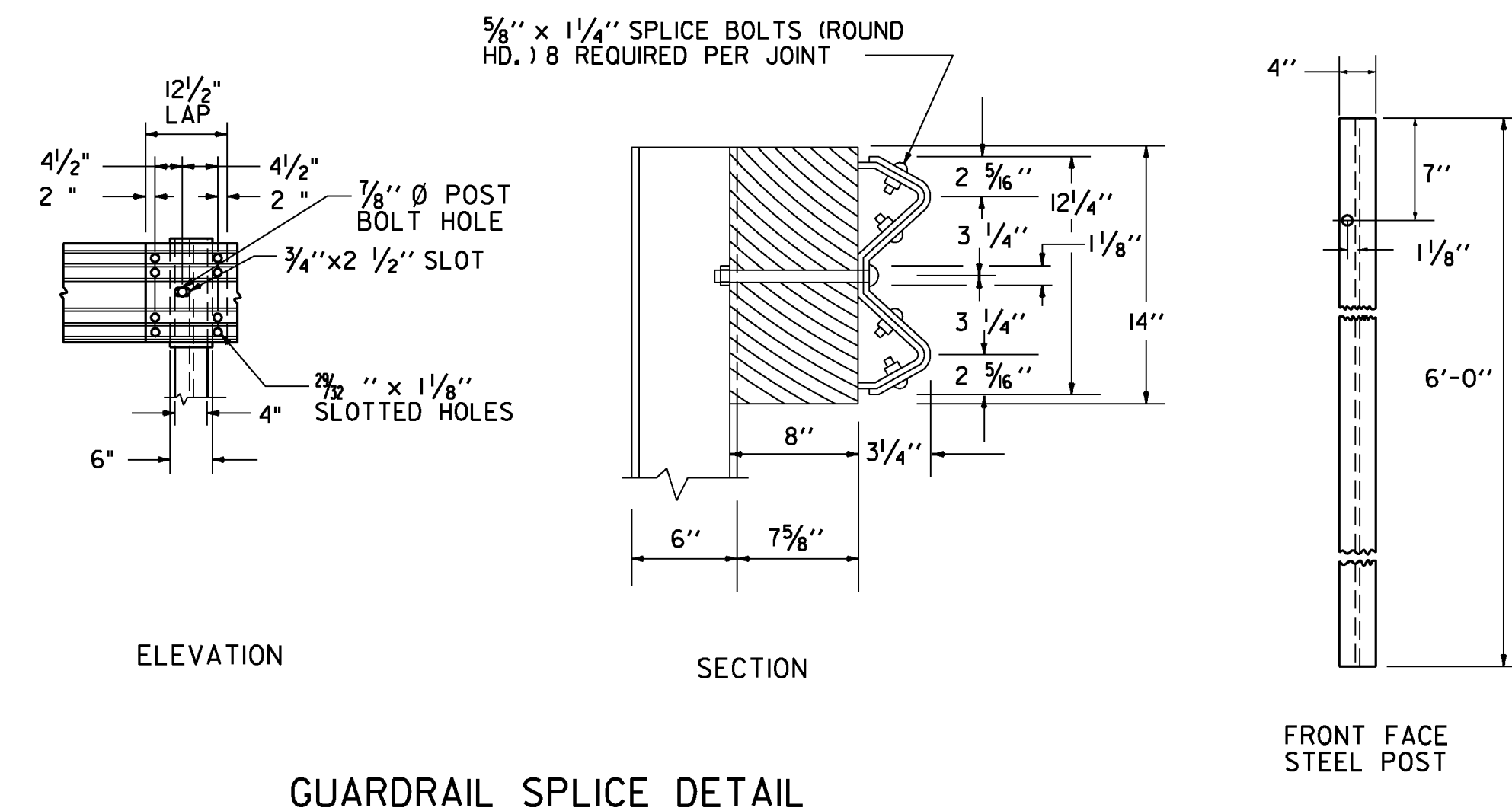
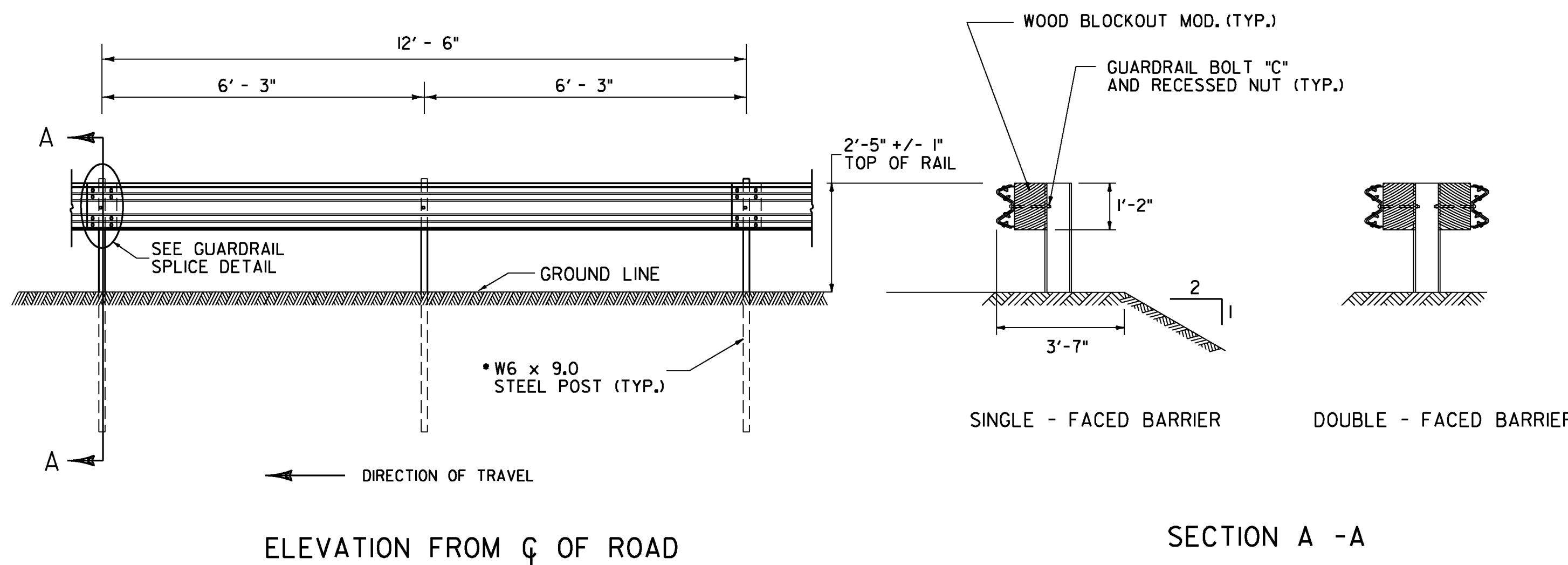




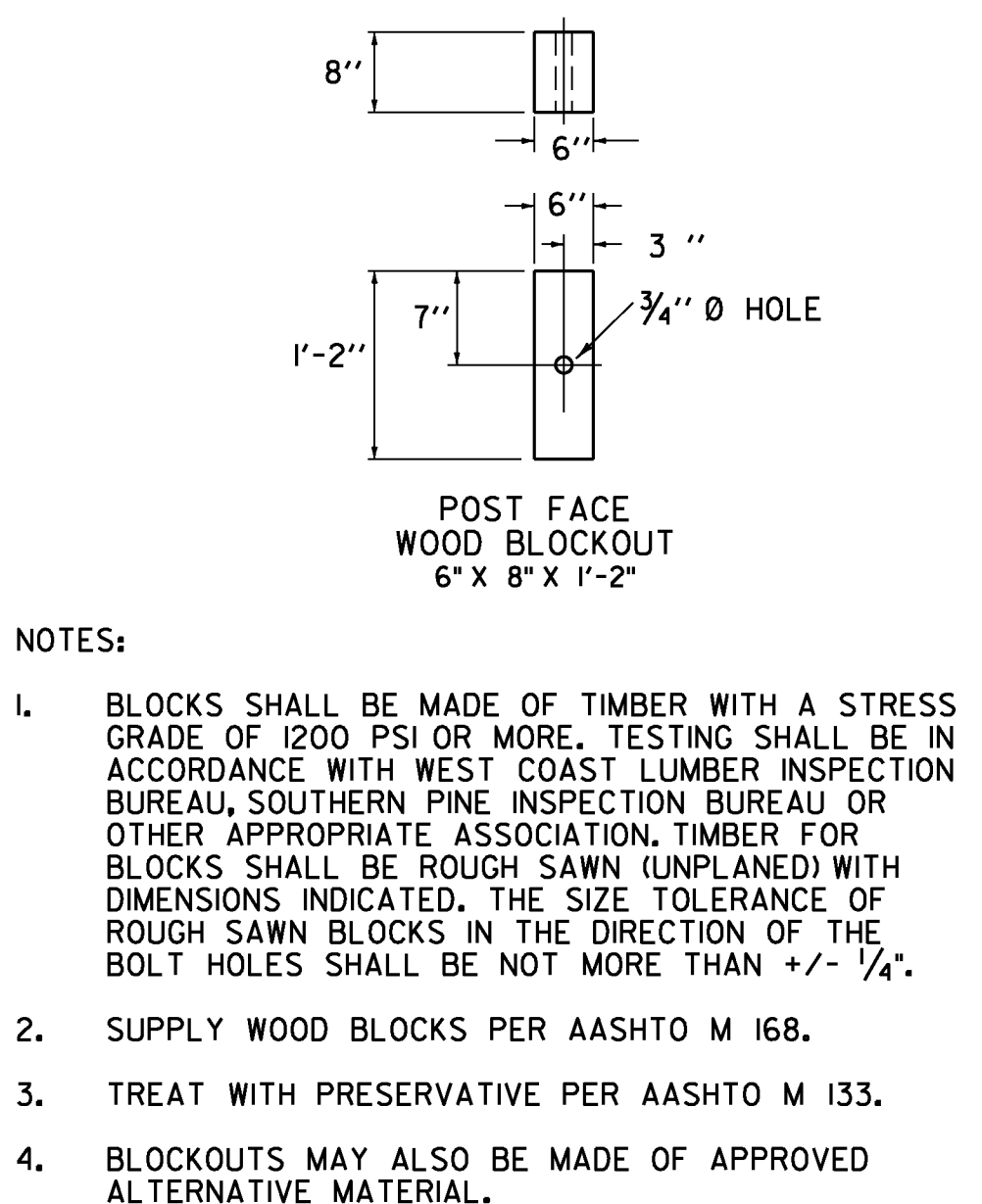
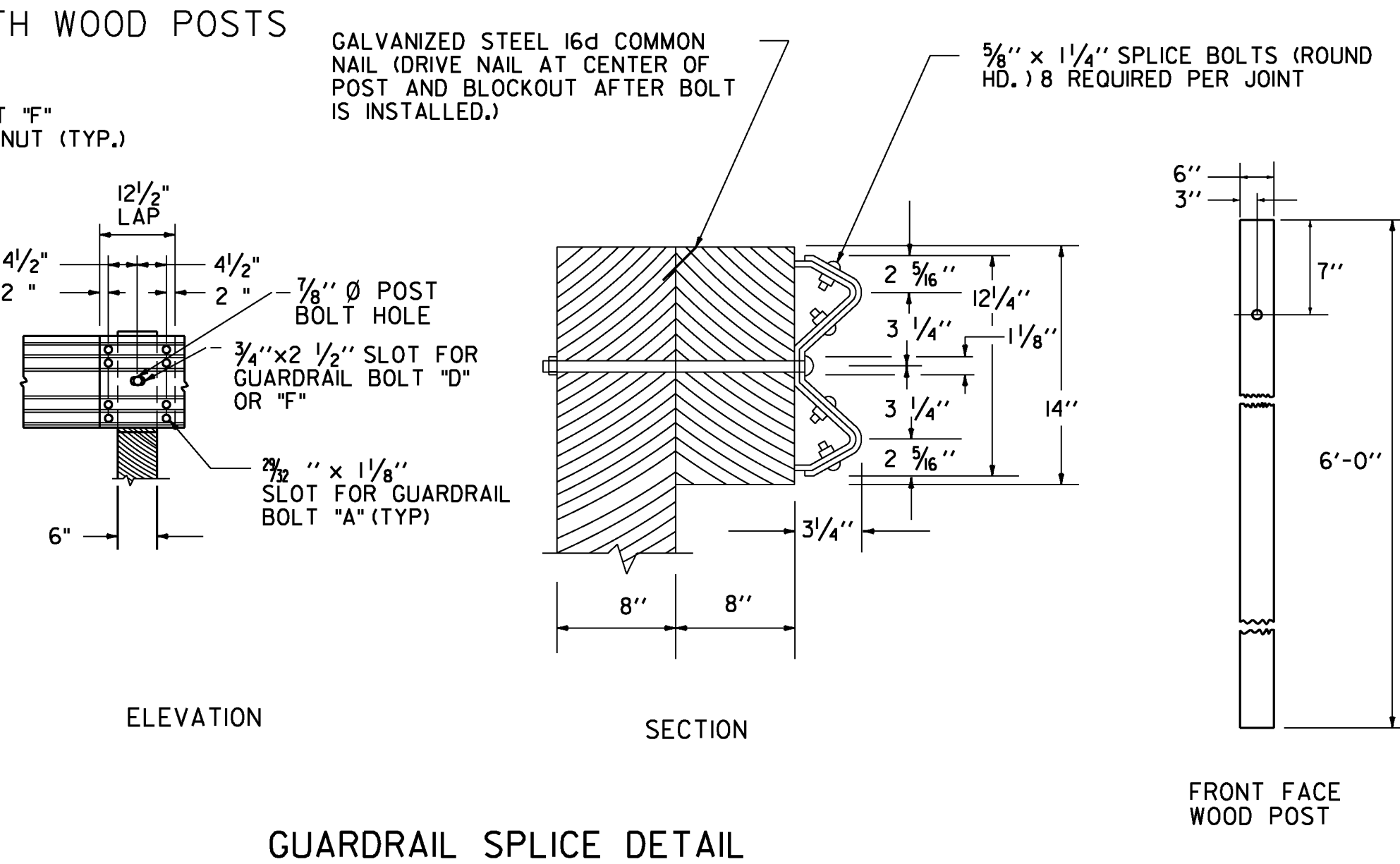
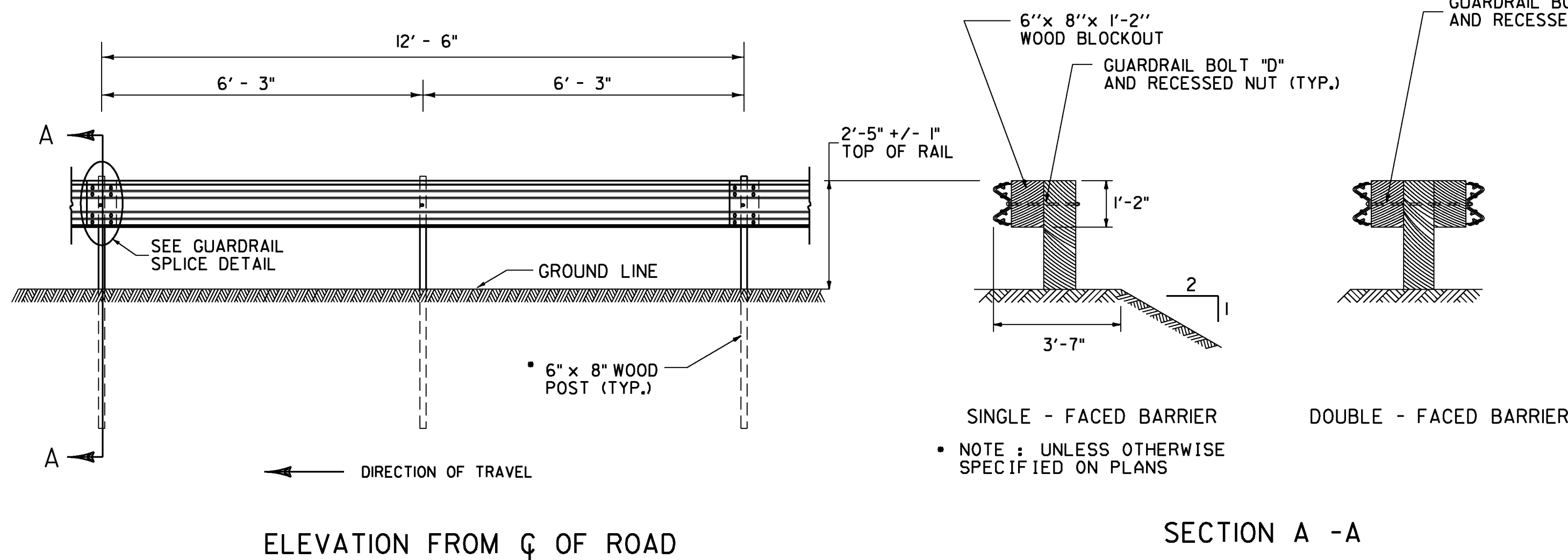




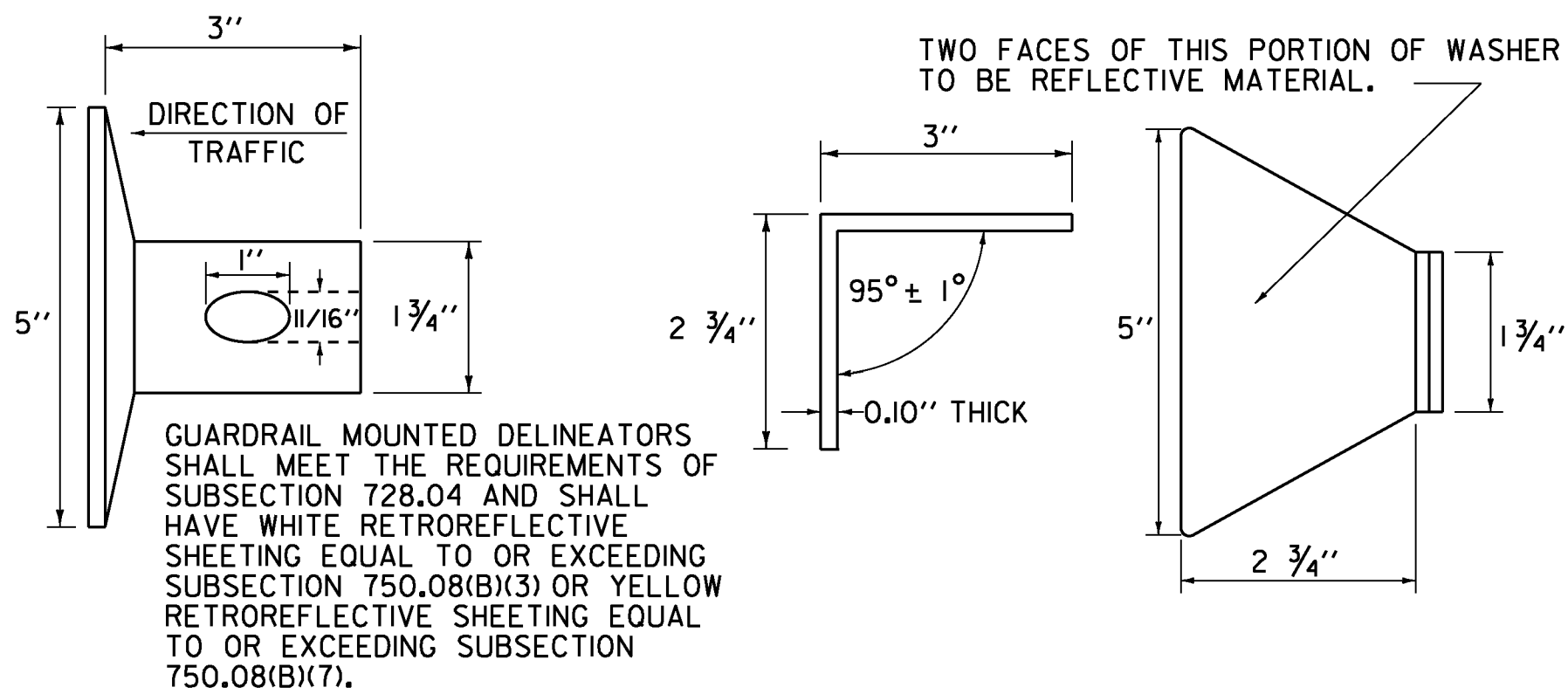
"W" BEAM GUARDRAIL WITH STEEL POSTS



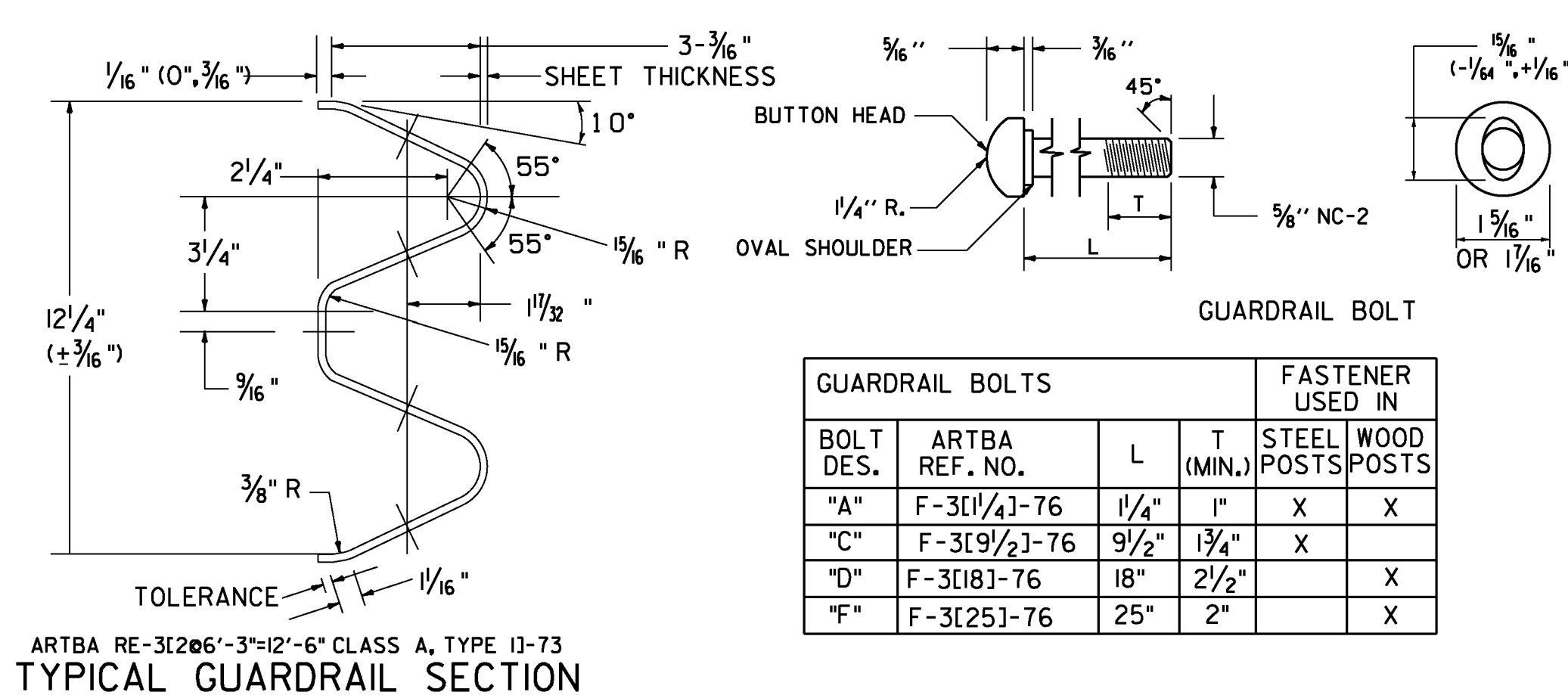
"W" BEAM GUARDRAIL WITH WOOD POSTS



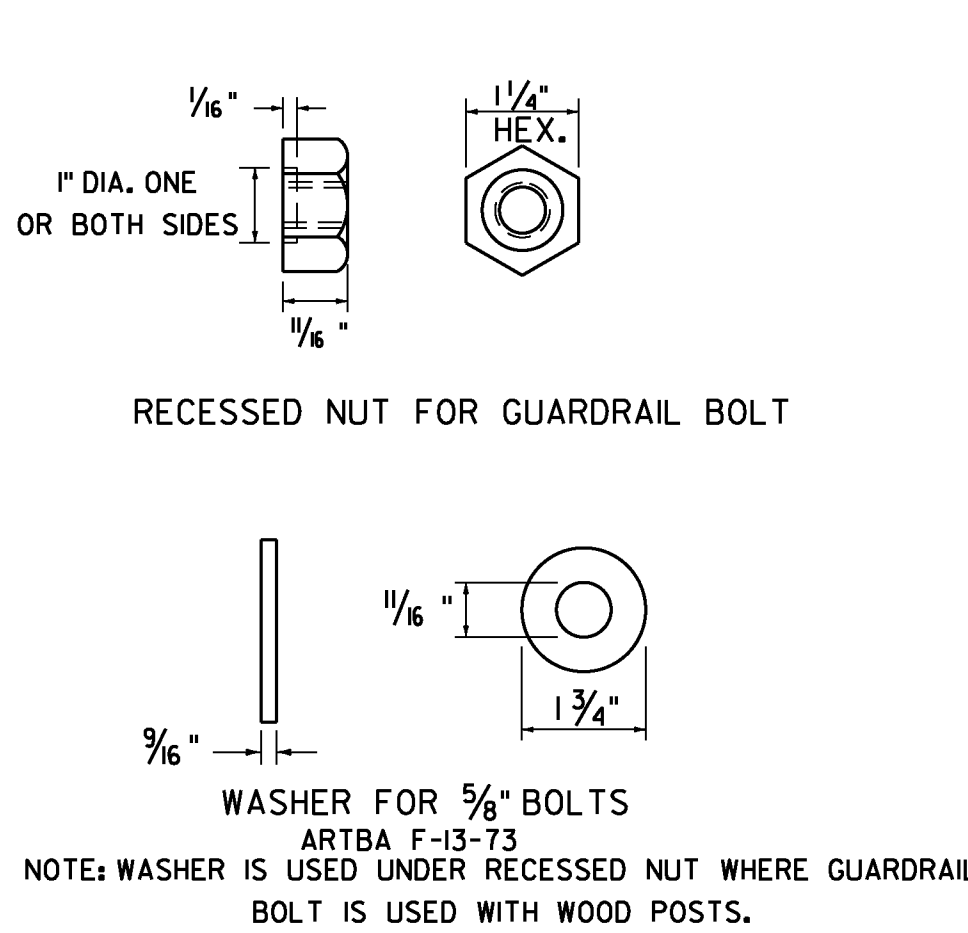
GUARDRAIL DELINEATOR



THIS REFLECTORIZED ALUMINUM WASHER IS TO BE PLACED IN VALLEY OF BEAM WHEN MOUNTING BEAM ONTO EACH FIFTH POST. WASHER SHALL MEET SPECIFICATION REQUIREMENTS FOR A.S.T.M. B-209 ALLOY 5052-H32.



GUARDRAIL BOLTS				FASTENER USED IN	
BOLT DES.	ARTBA REF. NO.	L	T (MIN.)	STEEL POSTS	WOOD POSTS
"A"	F-3[11/4]-76	1 1/4"	1"	X	X
"C"	F-3[9/2]-76	9/2"	1 3/4"	X	
"D"	F-3[18]-76	18"	2 1/2"		X
"F"	F-3[25]-76	25"	2"		X



- GENERAL NOTES:
- GUARDRAIL SHALL MEET THE REQUIREMENTS OF AASHTO M 180, CLASS A, TYPE 1, UNLESS OTHERWISE DESIGNATED.
  - GUARDRAIL SHALL BE SINGLE FACED UNLESS OTHERWISE DESIGNATED.
  - GUARDRAIL SECTIONS SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW FOR THE LANE NEAREST THE GUARDRAIL.
  - FOR DESCRIPTION AND SPECIFICATION OF PARTS IDENTIFIED BY (ARTBA ...) AND OTHER DETAILS OF POSTS, POST ACCESSORIES, FASTENERS & RAIL ELEMENTS, SEE AASHTO-AGC-ARTBA JOINT TASK FORCE NO.13, TITLED "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE", LATEST EDITION.
  - STANDARD STEEL BEAM TO BE 1/8" AND THE HEAVY DUTY TO BE 3/4" THICK.

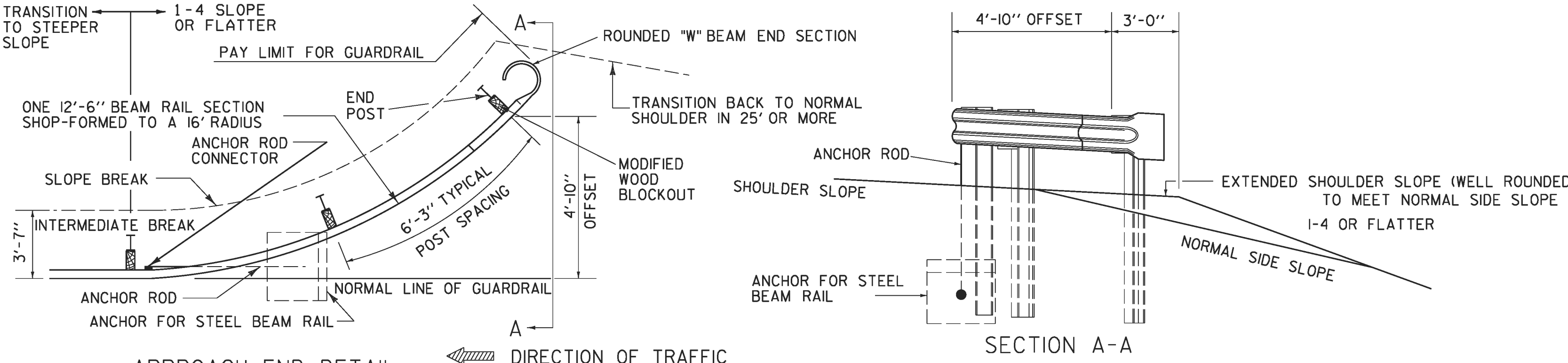
STEEL BEAM GUARDRAIL WITH STEEL POSTS  
STEEL BEAM GUARDRAIL WITH WOOD POSTS



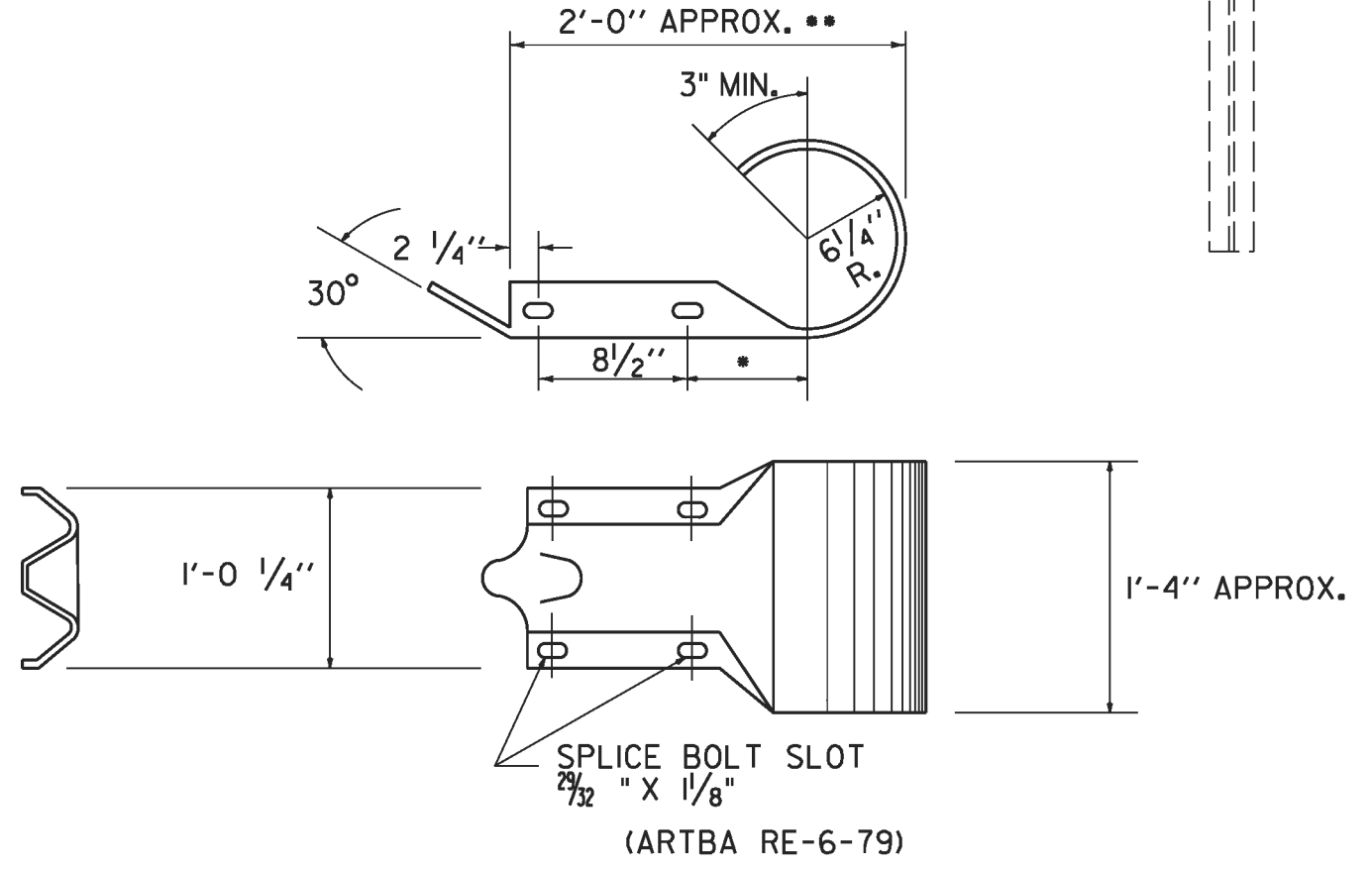
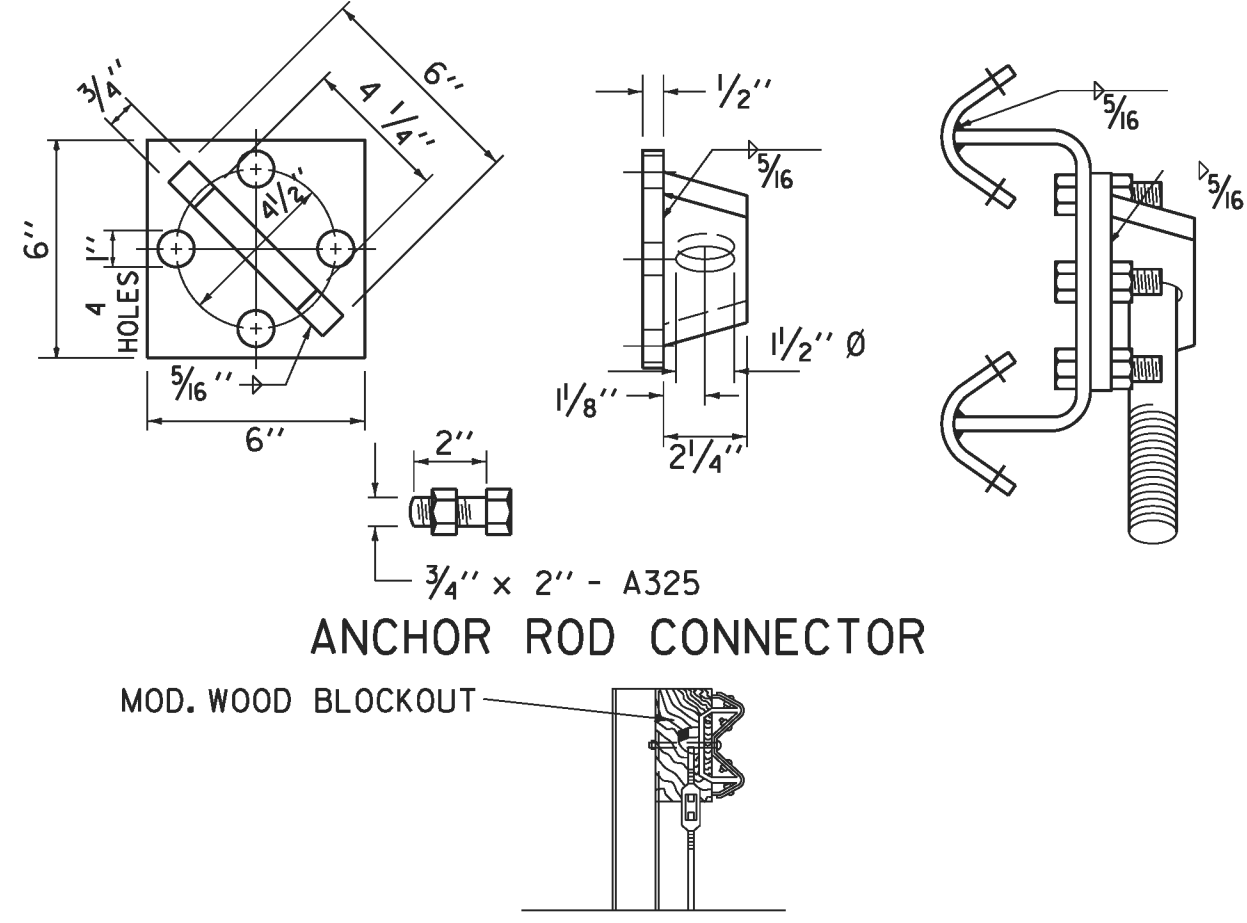
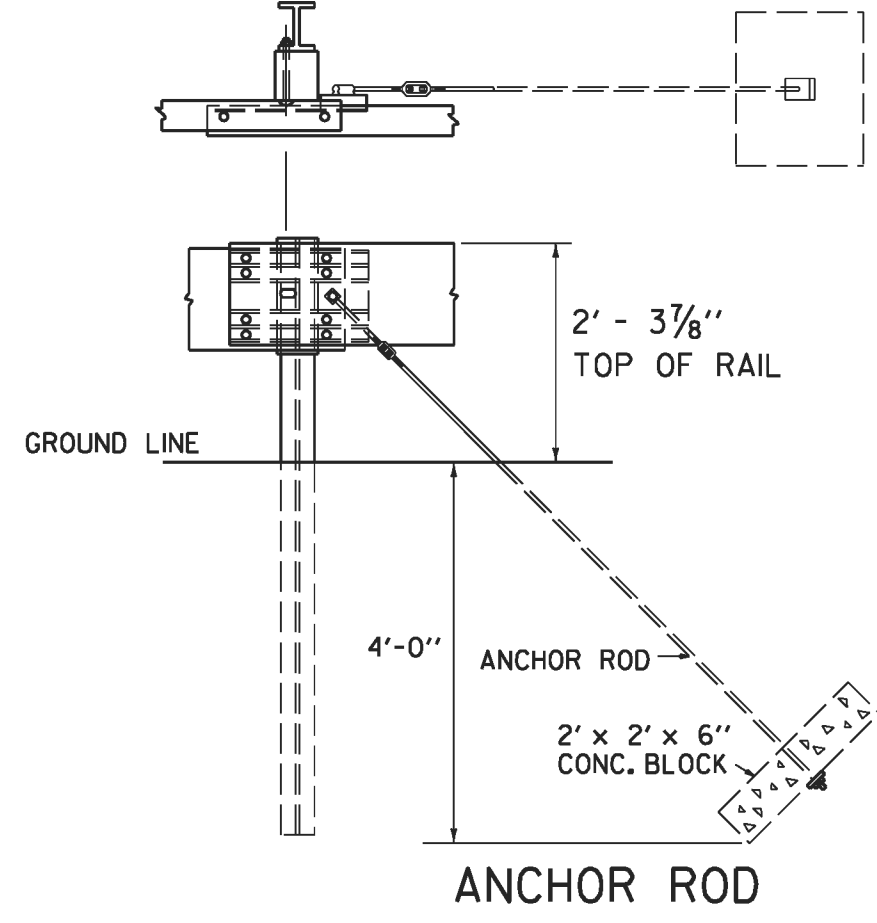
STANDARD  
G-1

REV.	DATE	DESCRIPTION
--	JAN. 3, 2000	UPDATED TO REFLECT METRIC STD. CHANGES
--	FEB. 10, 2014	UPDATED TO REFLECT GUARDRAIL HEIGHT OF 29"; FHWA LETTER (MAY 17, 2010)
--	NOV. 10, 2015	UPDATED DELINEATOR RETROREFLECTIVE SHEETING NOTES
OTHER STANDARDS REQUIRED: G-ID		
VTRANS AND FHWA APPROVAL ON FILE WITH CONTRACT ADMINISTRATION		

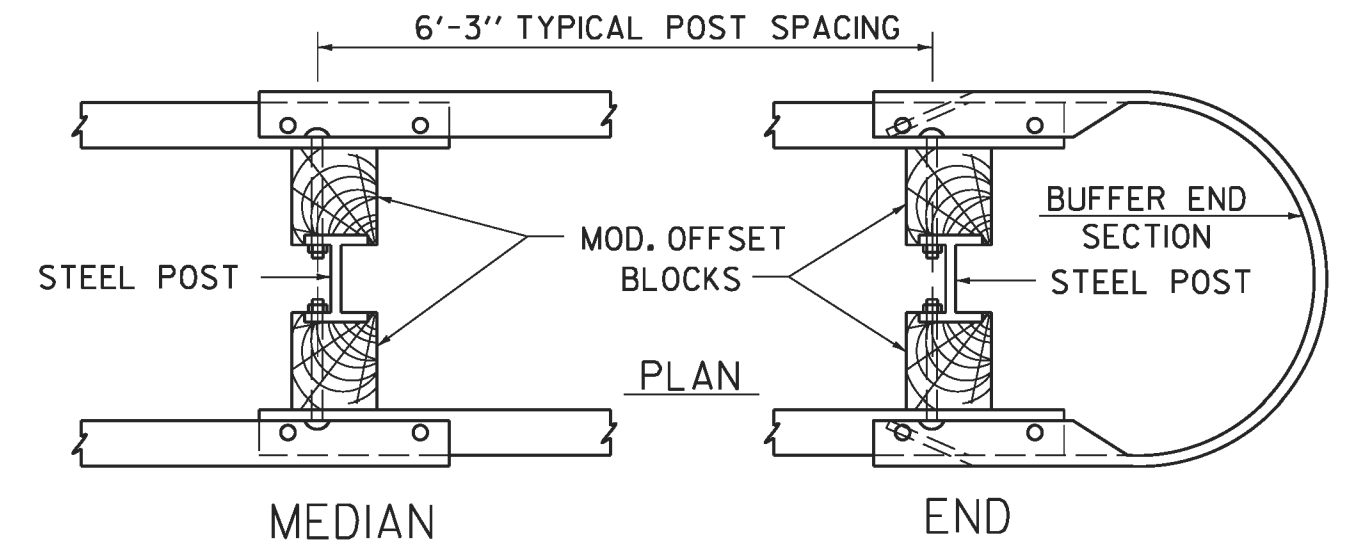
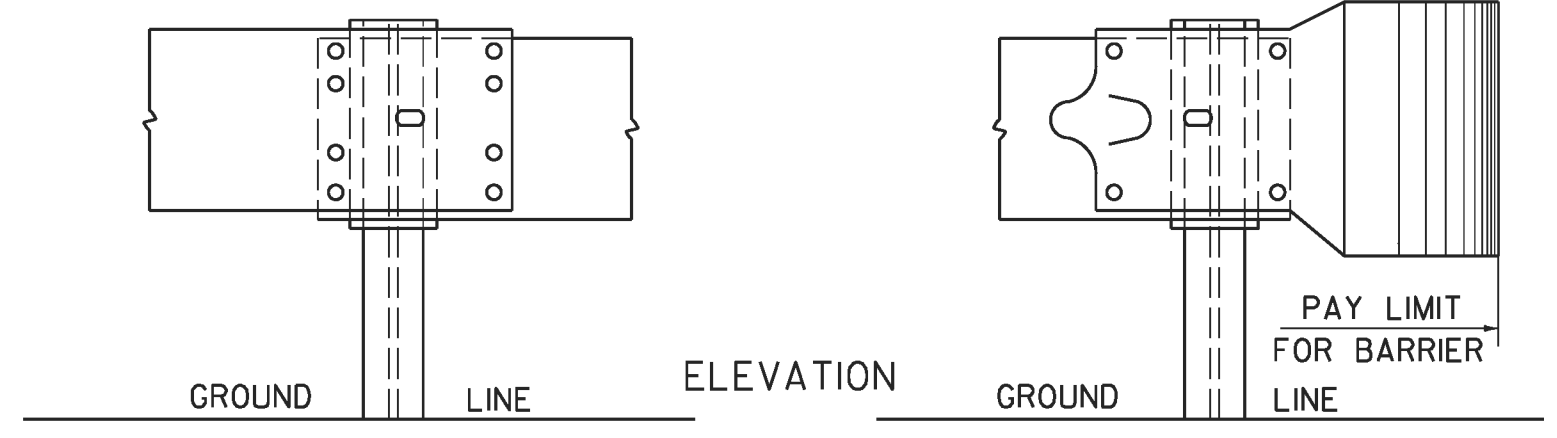




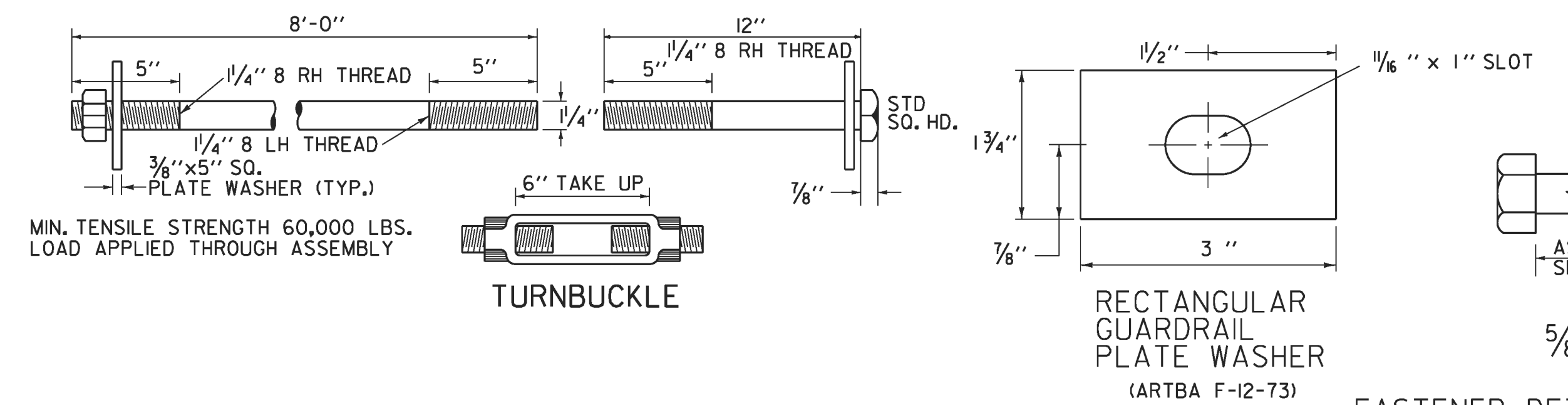
APPROACH END DETAIL  
NHS APPROVED FOR USE WHERE DESIGN SPEED IS 40 OR LESS MPH  
NON-NHS APPROVED FOR USE WHERE DESIGN SPEED IS 50 OR LESS MPH



ROUNDED "W" BEAM END SECTION  
* THIS DIMENSION IS 7 1/2" INRE-7-79. IF THE DIMENSION IS USED IN THIS PART, IT WILL GIVE AN ACCEPTABLE OVERALL LENGTH (**) OF APPROXIMATELY 2'- 11/2."



STEEL BEAM MEDIAN BARRIER  
NOTE: TO BE USED OUTSIDE CLEAR ZONE ONLY.



ASSEMBLY ELEVATION

TRAILING END TERMINAL FOR USE ON ONE-WAY HIGHWAYS

- GENERAL NOTES:
1. ALL METAL PARTS SHALL BE GALVANIZED
  2. ALL WOOD POSTS SHALL BE GIVEN A PRESERVATIVE TREATMENT
  3. DETAILS PERTINENT TO THE STANDARD INSTALLATION OF "W" BEAM SECTIONS WILL BE FOUND ON STANDARD DRAWING G-1
  4. FOR DESCRIPTION AND SPECIFICATIONS OF PARTS IDENTIFIED BY "ARTBA..." AND OTHER DETAILS OF POSTS, POST ACCESSORIES, FASTENERS AND RAIL ELEMENTS, SEE AASHTO-AGC-ARTBA JOINT TASK FORCE NO.13, TITLED "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE", LATEST EDITION.
  5. THE TRANSITION FROM THE APPROACH END TO THE STANDARD STEEL BEAM GUARDRAIL SHALL BE 25'-0" UNLESS OTHERWISE SPECIFIED.
  6. WHEN STANDARD STEEL BEAM CONNECTS TO BRIDGE APPROACH RAIL OF A DIFFERENT HEIGHT THE LENGTH NEEDED TO TRANSITION THE HEIGHT OF STANDARD STEEL BEAM TO MATCH THE BRIDGE APPROACH RAIL SHALL BE 25'-0" UNLESS OTHERWISE SPECIFIED.
  7. WHEN STANDARD STEEL BEAM CONNECTS TO A MANUFACTURED TERMINAL SECTION OF A DIFFERENT HEIGHT THE LENGTH NEEDED TO TRANSITION THE HEIGHT OF STANDARD STEEL BEAM TO MATCH THE MANUFACTURED TERMINAL SECTION SHALL BE 25'-0" UNLESS OTHERWISE SPECIFIED.

OTHER STANDARD REQUIRED: G-1

REVISIONS AND CORRECTIONS  
JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.  
JAN. 3, 2000 - UPDATED TO REFLECT METRIC STD. CHANGES  
FEB. 10, 2014 - UPDATED TO REFLECT GUARDRAIL HEIGHT OF 29"; AS NOTED IN FHWA LETTER DATED MAY 17, 2010

APPROVED  
*Mark D. Richter*  
HIGHWAY SAFETY & DESIGN ENGINEER  
*Mark D. Richter*  
DIRECTOR OF PROGRAM DEVELOPMENT  
*Mark D. Richter*  
FEDERAL HIGHWAY ADMINISTRATION

STEEL BEAM GUARDRAIL APPROACH END TERMINAL  
STEEL BEAM GUARDRAIL TRAILING END TERMINAL  
ANCHOR FOR STEEL BEAM GUARDRAIL  
STEEL BEAM MEDIAN BARRIER

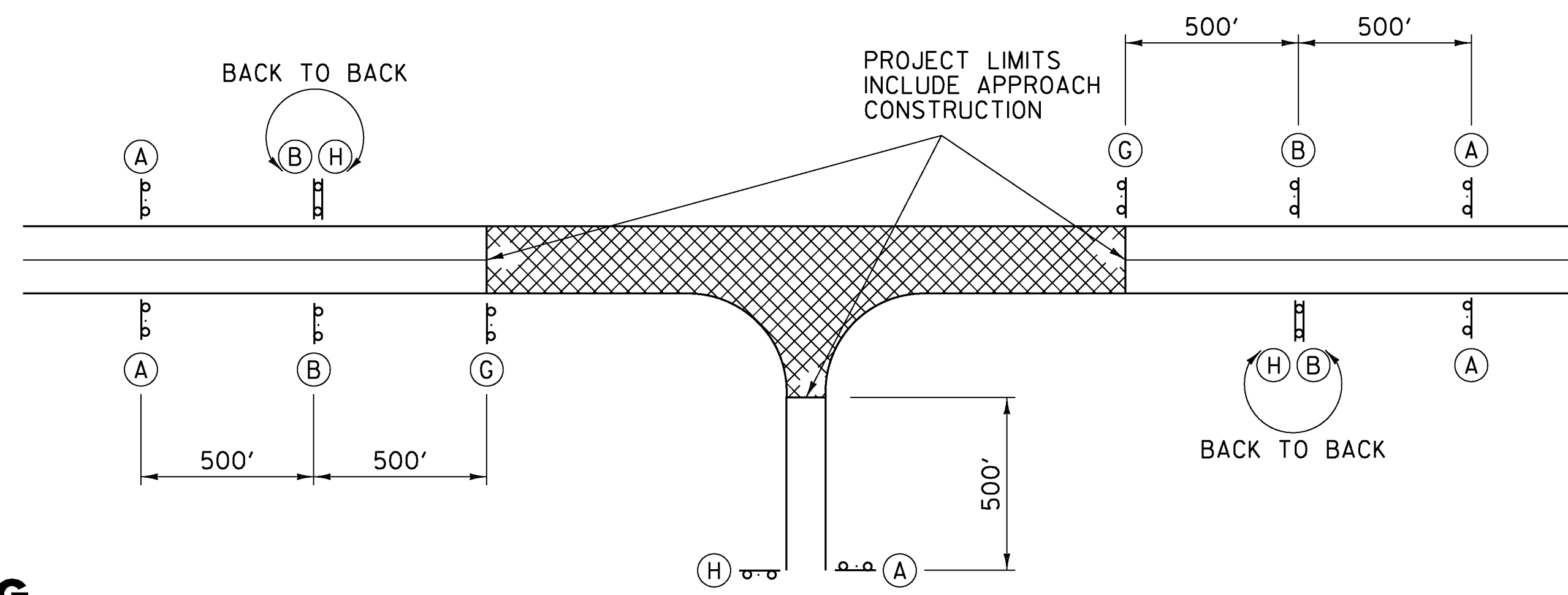
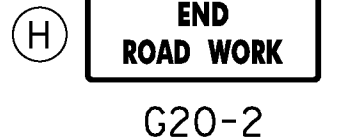
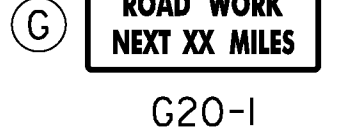
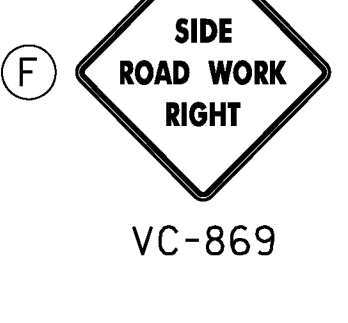
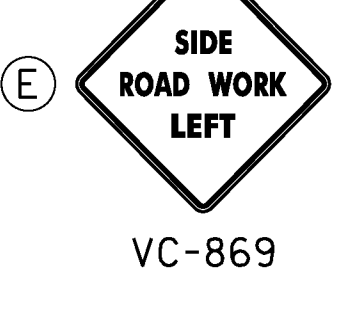
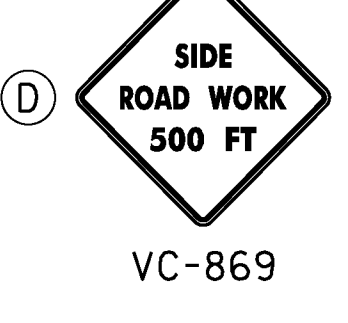
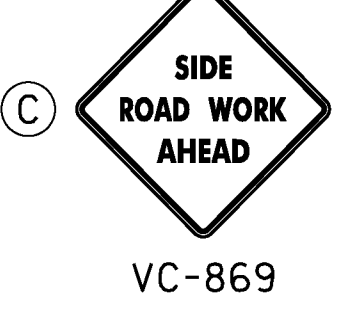
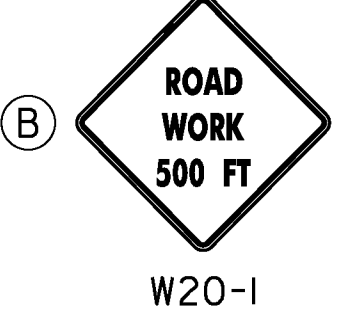
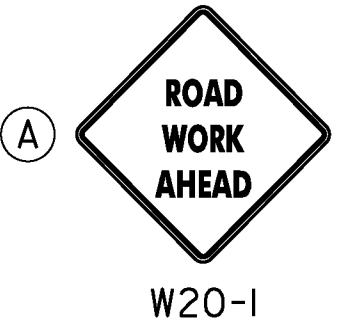
VERMONT AGENCY OF TRANSPORTATION  
STANDARD  
G-1d



1. TRAFFIC CONTROL DEVICES NOT DETAILED IN THE VERMONT AGENCY OF TRANSPORTATION (VAOT) "STANDARD DRAWINGS" OR THE PROJECT PLANS SHALL BE IN ACCORDANCE WITH THE CURRENT "MANUAL ON TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK, AND THEIR LATEST REVISIONS, (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).   2. CONSTRUCTION SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER.   3. DIAMOND SHAPED CONSTRUCTION SIGNS SHALL BE 48 INCH BY 48 INCH.   4. CONSTRUCTION SIGN COVERS SHALL CONSIST OF A PANEL, PAINTED FLAT BLACK, THE SAME SIZE AS THE SIGN IT COVERS. THE PANEL SHALL BE OF WOOD, PLYWOOD, HARDBOARD OR ANY MATERIAL SATISFACTORY TO THE ENGINEER. NO MATERIAL WILL BE APPROVED THAT WILL DETERIORATE BY EXPOSURE TO THE WEATHER DURING THE PROJECT. MOUNTING OF THE PANEL SHALL BE DONE IN SUCH A WAY AS NOT TO DAMAGE THE SIGN FACE MATERIAL.   5. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.   6. NO CROSS-BRACING OR BACK-BRACING TO KEEP POSTS PLUMB WILL BE ALLOWED. CONCRETE FOUNDATIONS, COLLARS OR SOIL BEARING PLATES ARE NOT PERMITTED.   7. CONSTRUCTION SIGNS INSTALLED ON POSTS SHALL BE SET SECURELY IN THE GROUND ON TWO POSTS. THE BOTTOM OF A SIGN SHALL BE AT LEAST FIVE FEET ABOVE THE EDGE OF PAVEMENT AND THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT, FOUR FEET OUTSIDE GUARDRAIL, OR TWO FEET OUTSIDE CURBING OR SIDEWALK. THE INSTALLATION OF SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER. IN URBAN AREAS, THE BOTTOM OF THE SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE SIDEWALK OR EDGE OF PAVEMENT, WHICHEVER IS HIGHER.   8. PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A MINIMUM OF ONE FOOT ABOVE THE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.   9. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.   10. ROLL UP CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE VI AND TYPE VII UNLESS OTHERWISE NOTED.   11. SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE VIII OR IX REQUIREMENTS UNLESS OTHERWISE NOTED.   12. WHERE CONSTRUCTION SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE AASHTO "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POSTS. WHEN ANCHORS ARE INSTALLED, STUBS SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.   13. ROADWAY AND SHOULDER WIDTHS DEPICTED ON THE STANDARD DRAWINGS MAY VARY.   14. THESE STANDARD DRAWINGS ARE INTENDED TO SERVE AS VTRANS STANDARD OPERATING PROCEDURE. IT IS NOTED THAT COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL WORK ZONE MAY BE MODIFIED DUE TO FIELD CONDITIONS AT THE DISCRETION OF THE ENGINEER.	TEMPORARY TRAFFIC CONTROL   GENERAL NOTES	VT  Trans   Working To Get You There  VERMONT AGENCY OF TRANSPORTATION     STANDARD   T - 1
REV.	DATE	DESCRIPTION
0	AUG. 6, 2012	ORIGINAL APPROVAL
1	APR. 25, 2016	INSERTED NOTE 3, UPDATED STANDARD NAME
OTHER STANDARDS REQUIRED: NONE		
VTRANS AND FHWA APPROVAL ON FILE WITH CONTRACT ADMINISTRATION		

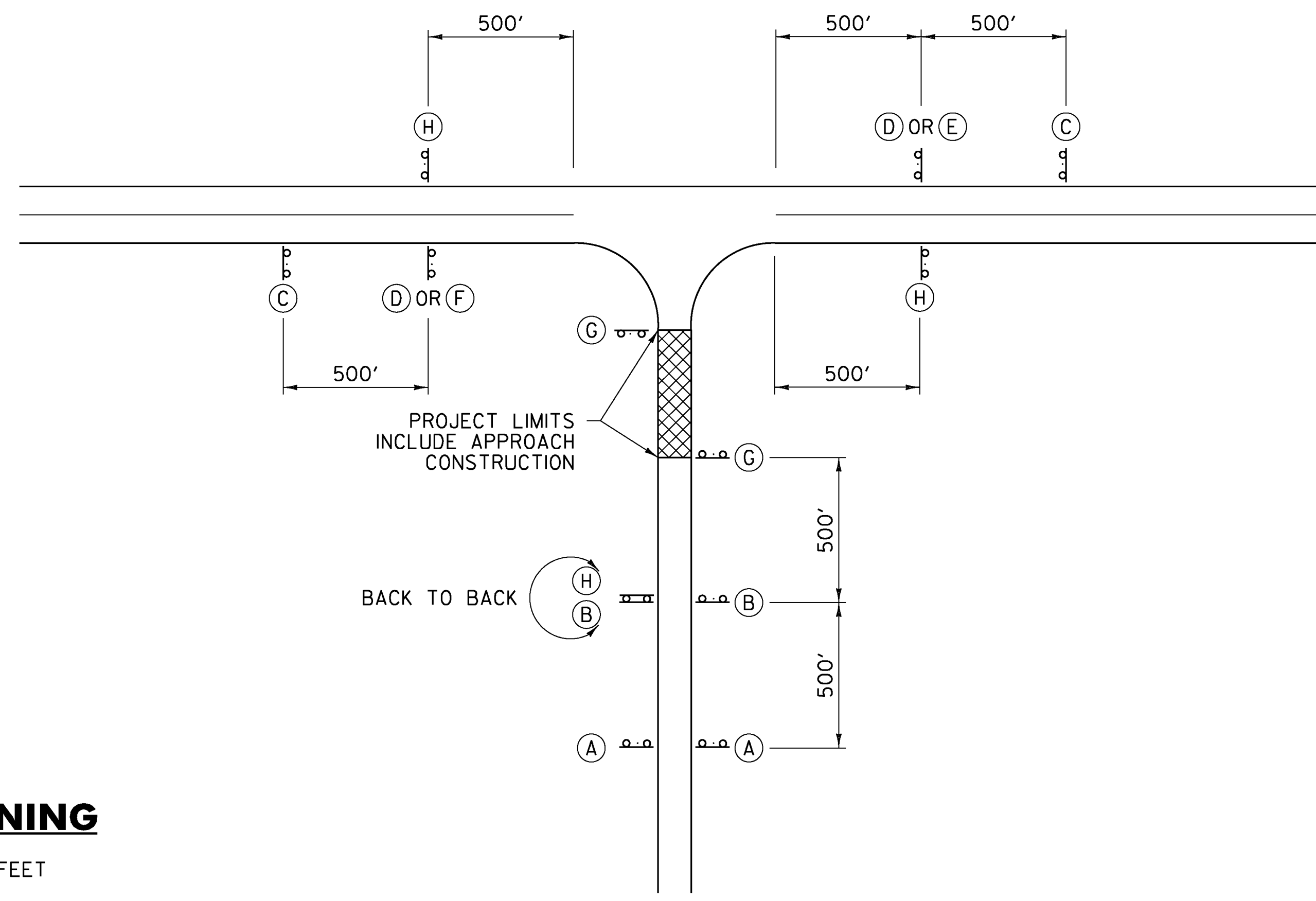


LEGEND



TYPICAL APPROACH SIGNING

FIELD CONDITIONS MAY DICTATE THE ACTUAL PLACEMENT.



SIDE ROAD APPROACH SIGNING

TO BE USED WHEN CONSTRUCTION IS UP TO 1000 FEET FROM THE INTERSECTION. FIELD CONDITIONS MAY DICTATE THE ACTUAL PLACEMENT.

GENERAL NOTES:

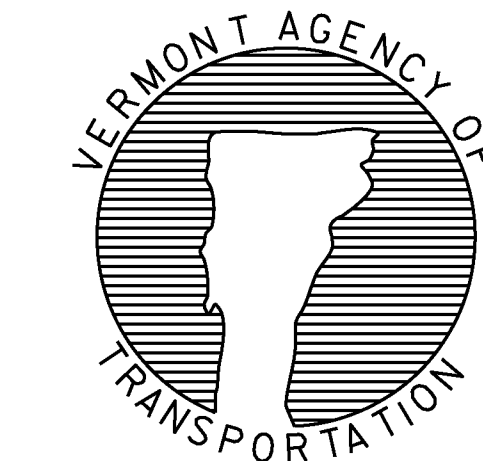
1. SIGNS SHOWN ON THIS SHEET ARE INTENDED FOR USE IN PROVIDING ADVANCE WARNING AND INFORMATION ON CONSTRUCTION PROJECTS OVER WHICH TRAFFIC WILL BE MAINTAINED. WHEN ADDITIONAL APPROACH SIGNS OR OTHER TYPES OF ADVANCE SIGNING OR CONTROL ARE NECESSARY, THE PLANS AND/OR THE SPECIFICATIONS FOR THAT PROJECT WILL GIVE THE DETAILS OF THE SIGNS AND DEVICES REQUIRED. FOR ON-PROJECT CONSTRUCTION SIGNS, REFER TO APPROPRIATE STANDARD SHEETS.
2. THE "ROAD WORK NEXT XX MILES" SIGN (G20-1) SHALL BE INSTALLED IN ADVANCE OF TEMPORARY TRAFFIC CONTROL ZONES THAT ARE MORE THAN TWO MILES IN LENGTH OR AS DIRECTED BY THE ENGINEER. DISTANCES SHALL BE STATED TO THE NEAREST WHOLE MILE.
3. SIGNS SHALL BE LOCATED AS DETAILED ON THIS SHEET OR AS OTHERWISE SHOWN ON THE PLANS. THEY SHALL APPEAR AT EACH END OF THE HIGHWAY UNDER CONSTRUCTION AND ON ALL INTERSECTING PUBLIC HIGHWAYS. THE ENGINEER SHALL DETERMINE THE EXACT LOCATIONS.

OTHER STDs. REQUIRED: T-1, T-28

REVISIONS AND CORRECTIONS  
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED  
*[Signature]*  
HIGHWAY SAFETY & DESIGN ENGINEER  
*[Signature]*  
DIRECTOR OF PROGRAM DEVELOPMENT  
*[Signature]*  
Mark D. Richter  
FEDERAL HIGHWAY ADMINISTRATION

CONVENTIONAL ROADS  
CONSTRUCTION APPROACH  
SIGNING

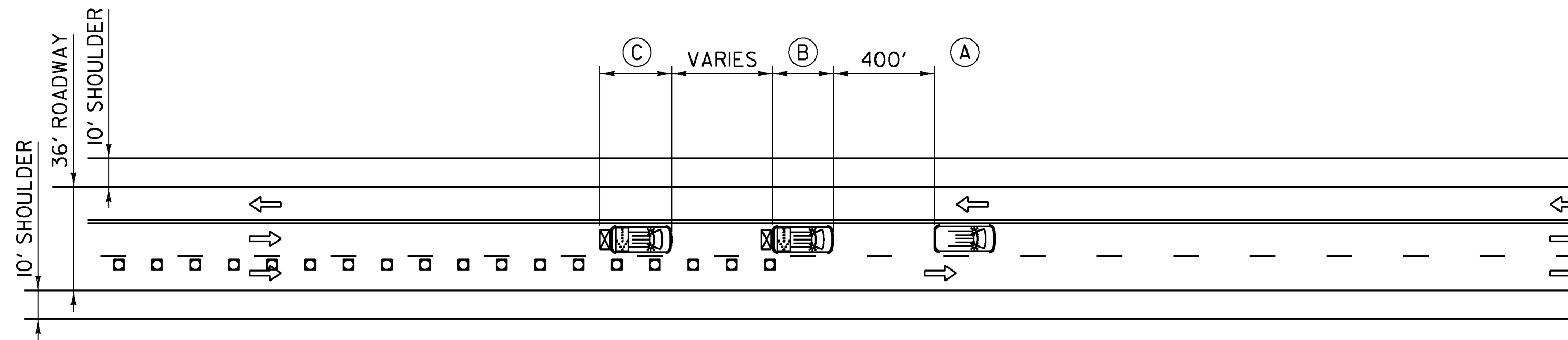


STANDARD  
T-10





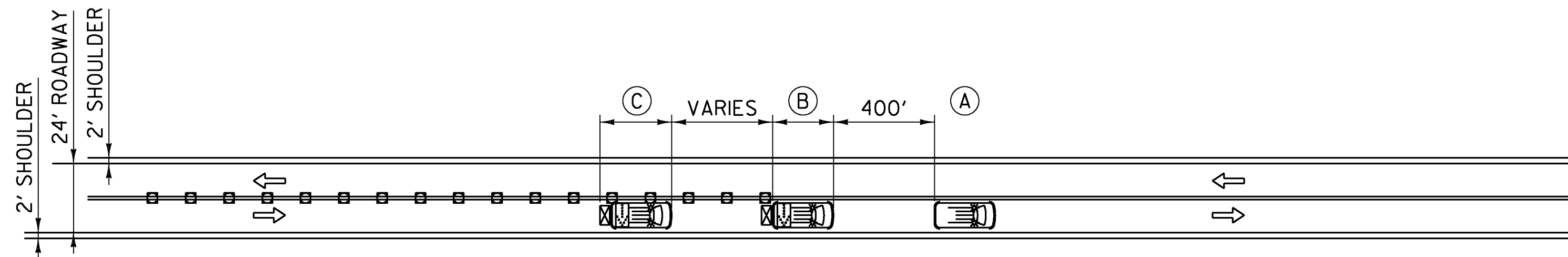




**PAVEMENT MARKING OPERATION  
ON MULTI-LANE ROAD**

**NOTES:**

1. PAVEMENT MARKING OPERATION VEHICLE (C) SHOULD TRAVEL AT A VARYING DISTANCE FROM THE PAVEMENT MARKING OPERATION SO AS TO PROVIDE ADEQUATE SIGHT DISTANCE FOR TRAFFIC APPROACHING FROM THE REAR.
2. ON HIGH SPEED ROADWAYS, A THIRD PROTECTION VEHICLE SHOULD BE USED - THE FIRST PROTECTION VEHICLE ON THE SHOULDER (IF POSSIBLE), THE SECOND PROTECTION VEHICLE IN THE CLOSED LANE, AND THE THIRD PROTECTION VEHICLE IN THE CLOSED LANE.
3. ARROW PANELS SHALL BE AS A MINIMUM TYPE B, 60 INCHES BY 30 INCHES (MUTCD FIGURE 6F-6, SECTION 6F.6I).
4. WORK SHOULD BE PERFORMED DURING OFF-PEAK TRAFFIC HOURS WHEN PRACTICAL.



**PAVEMENT MARKING OPERATION  
ON TWO LANE ROAD**

**NOTES:**

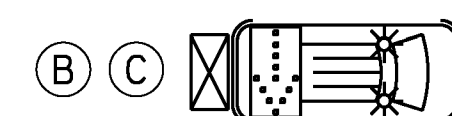
1. ALL PAVEMENT MARKING VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.
2. THE DISTANCE BETWEEN THE WORK AND PROTECTION VEHICLES MAY VARY ACCORDING TO TERRAIN AND OTHER FACTORS. PROTECTION VEHICLES ARE USED TO WARN TRAFFIC OF THE OPERATION AHEAD.
3. UNIFORMED TRAFFIC OFFICERS MAY BE USED TO CONTROL TRAFFIC AT INTERSECTIONS.
4. VEHICLE MOUNTED SIGNS SHALL BE MOUNTED WITH BOTTOM OF THE SIGN AT A MINIMUM HEIGHT OF ONE FOOT ABOVE THE PAVEMENT. SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.
5. ARROW PANELS ARE OPTIONAL; WHEN USED ARROW PANELS SHALL BE DISPLAYED IN CAUTION MODE.

- ⇒ FLOW OF TRAFFIC
- ⚡ FLASHING ARROW PANEL
- ⊠ TRUCK MOUNTED ATTENUATOR (TMA)
- CONE
- 🚚 PAVEMENT MARKING OPERATION VEHICLE
- Ⓐ PAVEMENT MARKING VEHICLE WITH FLASHING ARROW PANEL, "WET PAINT WITH LEFT ARROW" VC-886L, "WET PAINT WITH RIGHT ARROW" VC-886R SIGNS.
- Ⓑ PROTECTION VEHICLE WITH CONE CAPABILITIES AND TMA.
- Ⓒ PROTECTION VEHICLE WITH FLASHING ARROW PANEL, TMA, "WET PAINT" VC-885, "WET PAINT WITH LEFT ARROW" VC-886L, "WET PAINT WITH RIGHT ARROW" VC-886R SIGNS.

**GENERAL NOTES:**

1. ALL VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS IN ADDITION TO VEHICLE HAZARD LIGHTS.
2. PROTECTION VEHICLE SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
3. SIGNS LOCATED ON PAVEMENT MARKING OPERATION VEHICLES SHALL BE PLACED SO AS NOT TO OBSCURE OTHER SIGNS OR FLASHING ARROW PANELS.
4. REPEAT "WET PAINT" (VC-885) SIGN AS NEEDED AT SIDE ROADS
5. ALL DISTANCES ARE DESIRABLE MINIMUMS. FIELD CONDITIONS SHALL CONTROL THE ACTUAL SPACING OF THE VEHICLES.
6. CONE SPACING SHALL BE ADEQUATE SO THAT DRIVERS CAN ALWAYS SEE ONE CONE.

**OTHER STDS. REQUIRED: T-1, T-29**

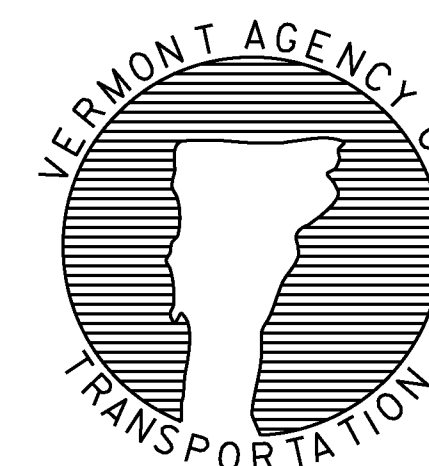


**OPERATION VEHICLE  
SYMBOLGY**

REVISIONS AND CORRECTIONS  
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

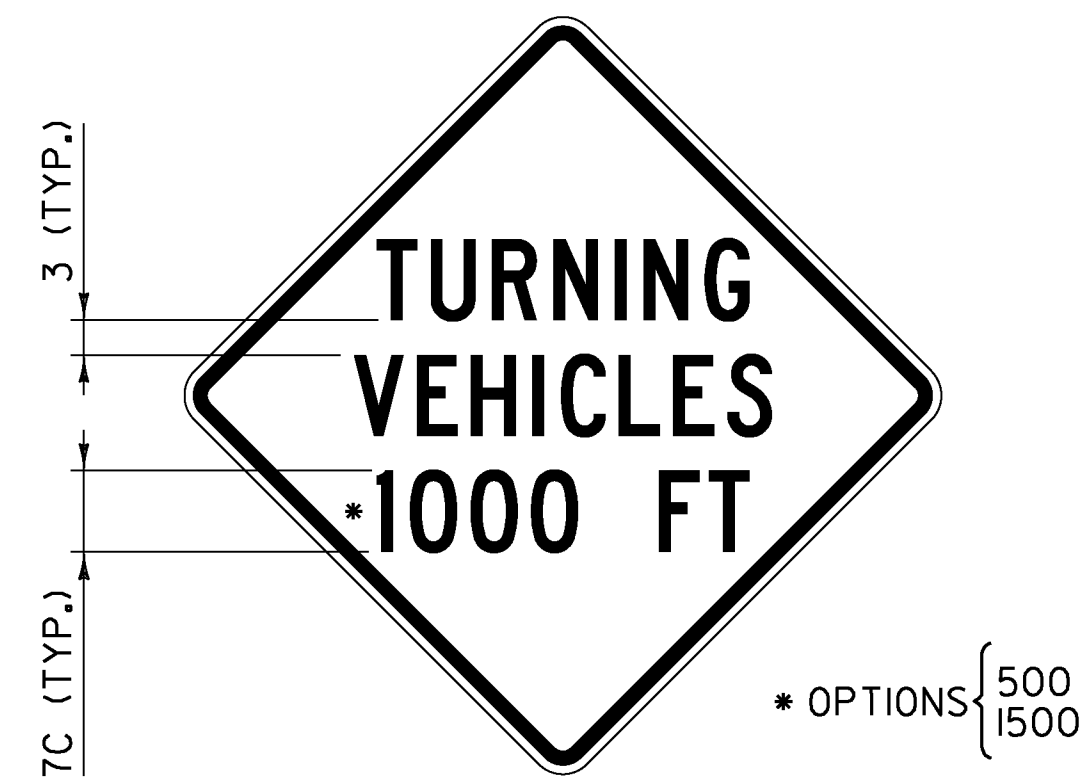
APPROVED  
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**TRAFFIC CONTROL FOR  
MAINTENANCE PAVEMENT  
MARKING OPERATION**

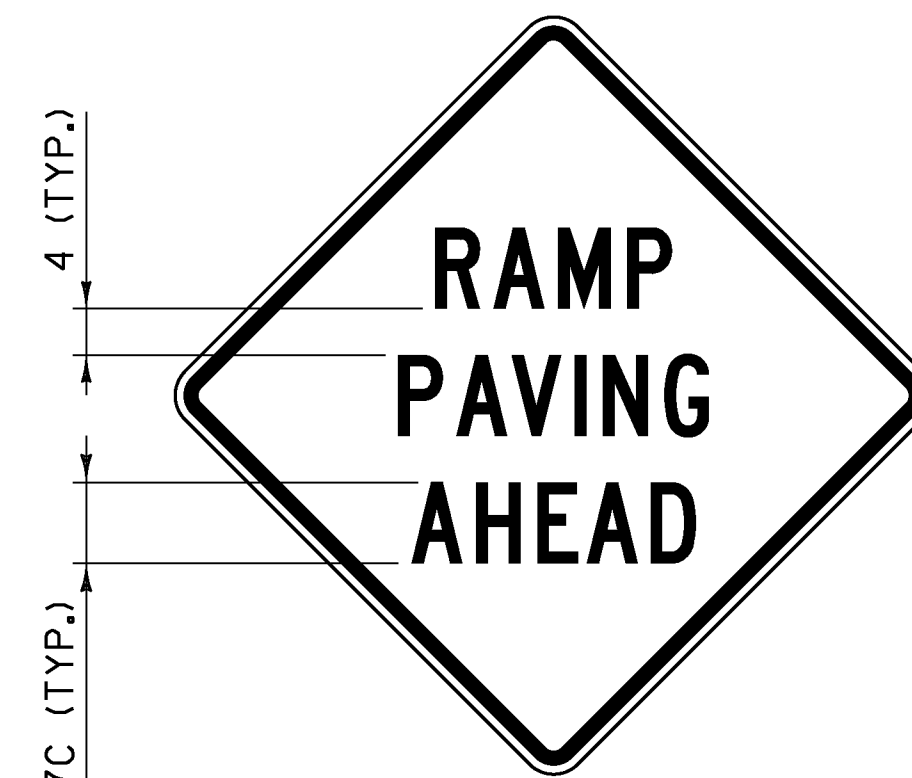


**STANDARD  
T-24**

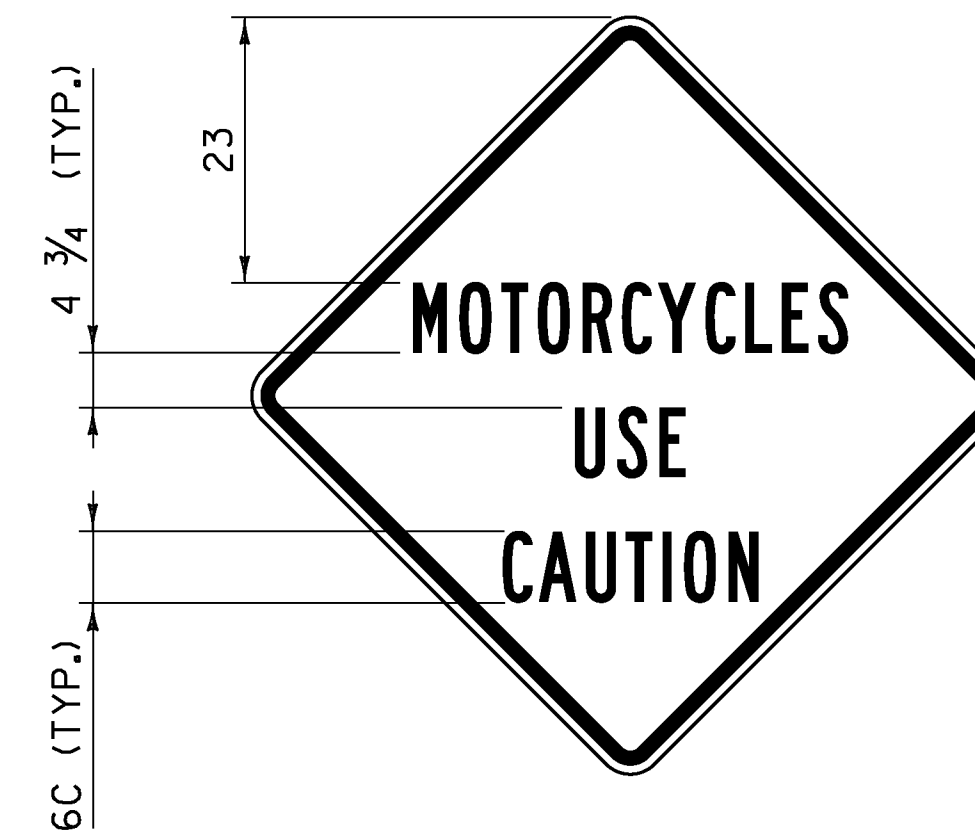




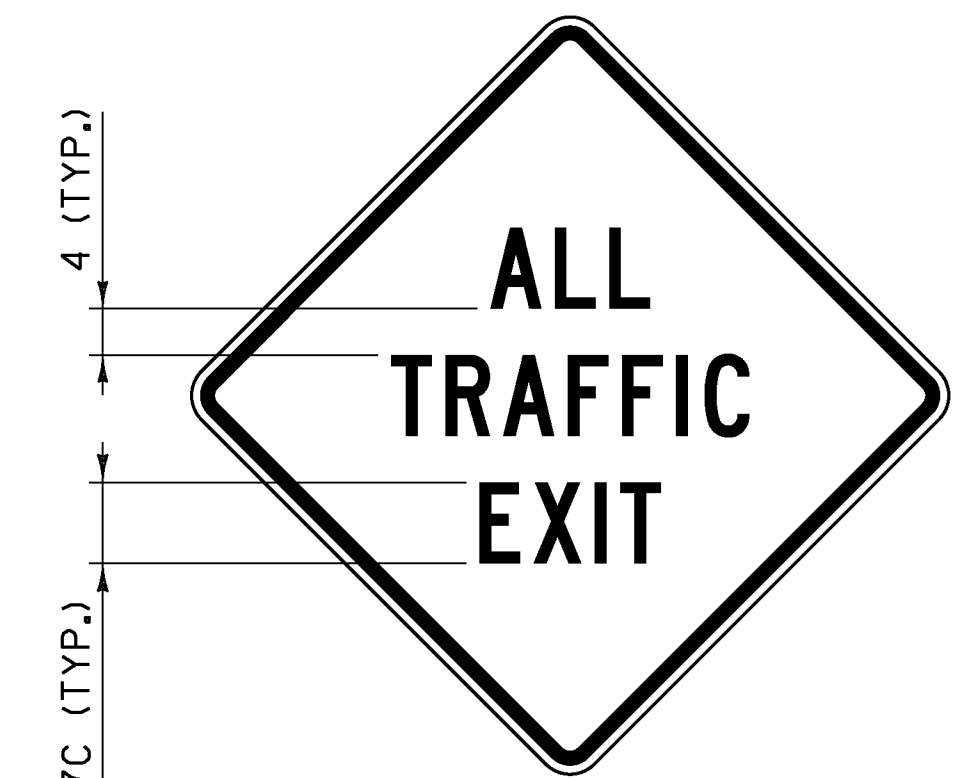
**VC-001**



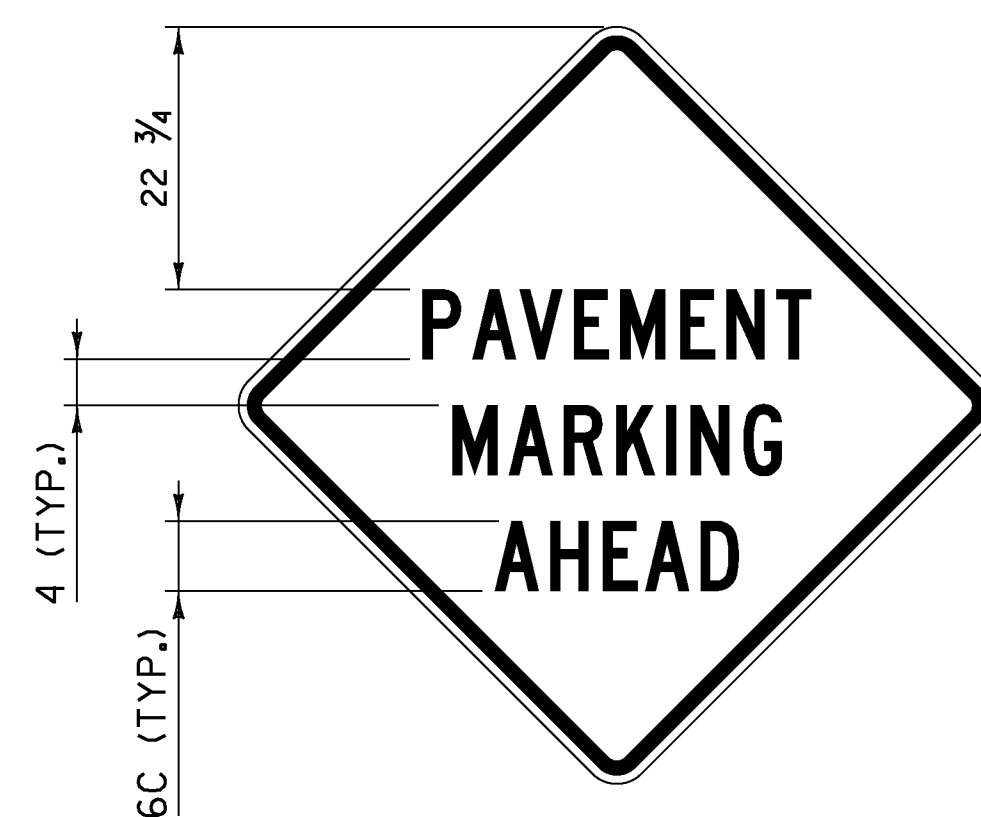
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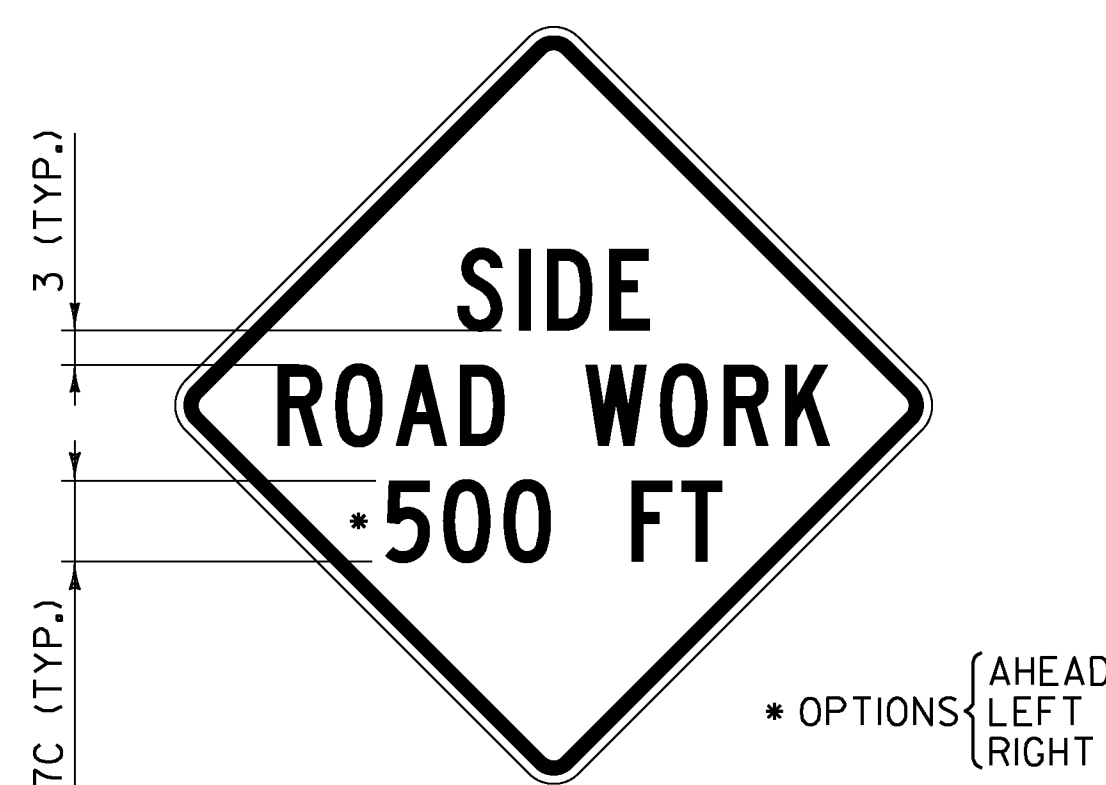
**VC-004**



**VC-008**



**VC-813**



**VC-869**



**VC-874**

**GENERAL NOTES:**

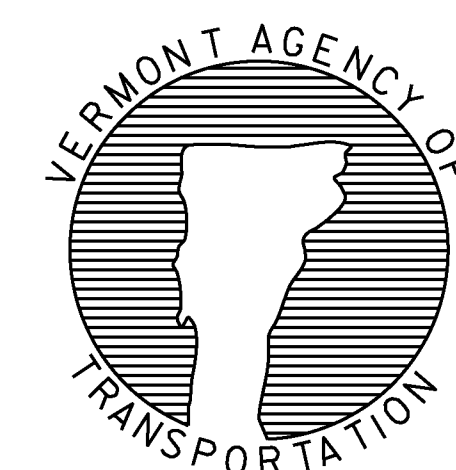
1. COLORS FOR SIGNS SHALL BE BLACK LEGEND AND BORDER ON FLUORESCENT ORANGE BACKGROUND.
2. CONSTRUCTION SIGNS SHALL BE 48 INCH BY 48 INCH. IF SOLID SUBSTRATE SIGNS ARE USED, SIGNS SHALL HAVE CORNERS ROUNDED TO A THREE INCH RADIUS.
3. SIGNS SHALL HAVE 1 1/4 INCH WIDE BORDERS THAT ARE INDENTED 3/4 INCH FROM THE EDGE OF THE SIGN.
4. SIGNS SHALL HAVE THE LEGEND CENTERED HORIZONTALLY AND VERTICALLY ON THE SIGN UNLESS OTHERWISE INDICATED.
5. ALL DIMENSIONS SHOWN IN INCHES.

**OTHER STDs. REQUIRED: T-1**

REVISIONS AND CORRECTIONS  
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

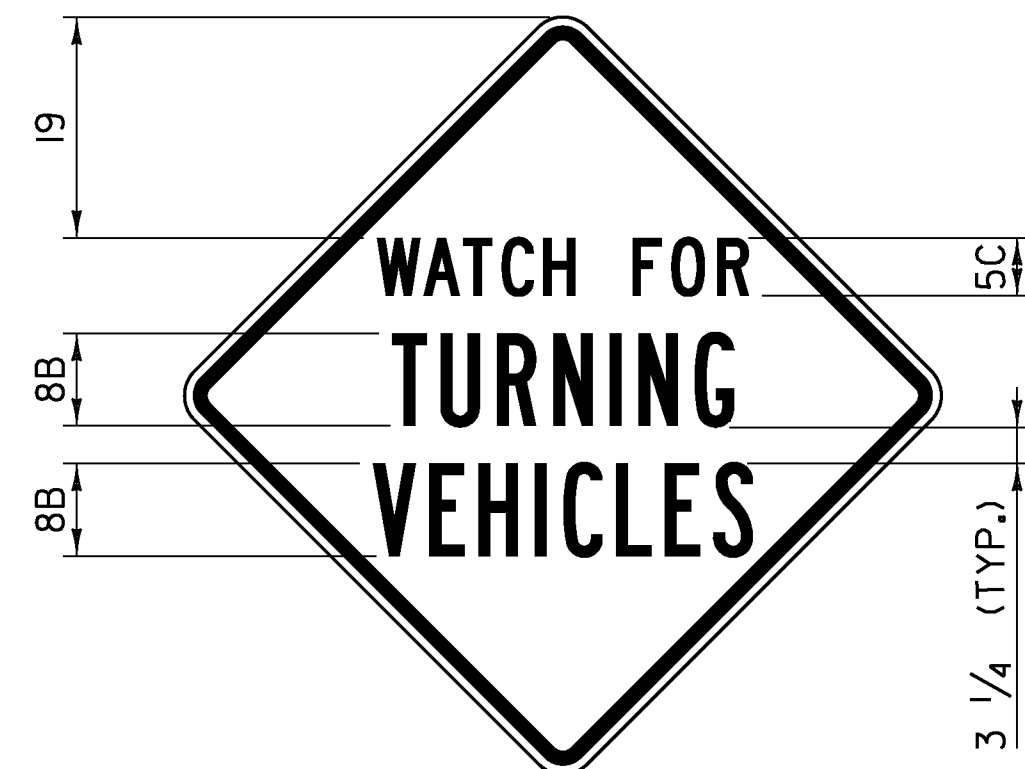
APPROVED  
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*Mark D. Richter*  
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CONSTRUCTION SIGN  
DETAILS

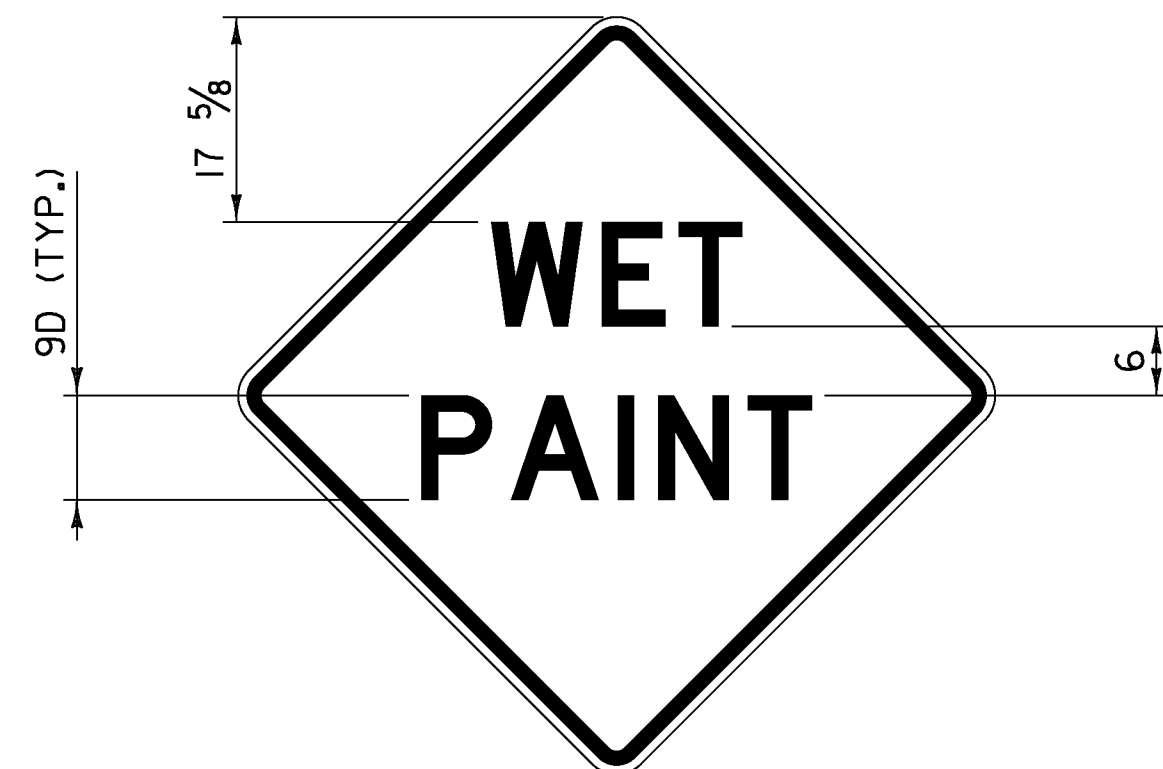


STANDARD  
T-28





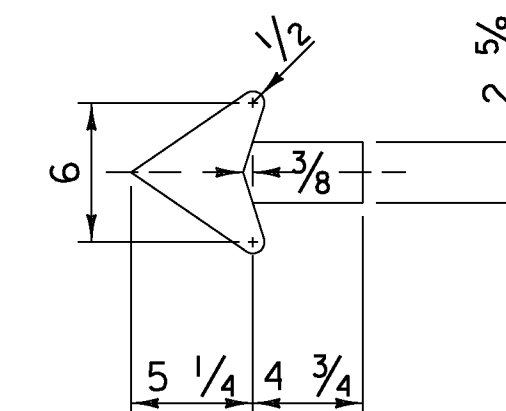
**VC-883**



**VC-885**



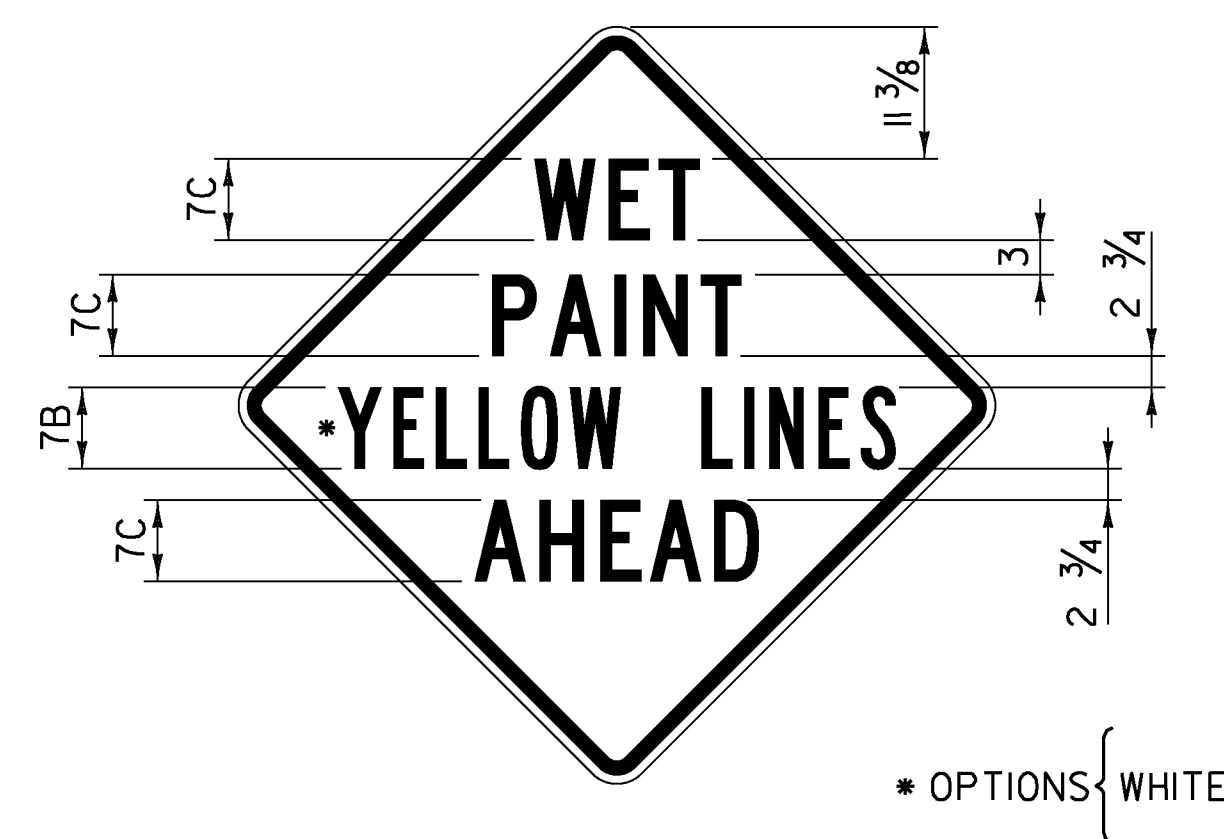
**VC-886L**



**VC-886R**

**NOTES:**

1. SIGNS SHALL BE 24 INCH BY 24 INCH. IF SOLID SUBSTRATE SIGNS ARE USED, SIGNS SHALL HAVE CORNERS ROUNDED TO A 1 1/2 INCH RADIUS.
2. SIGNS SHALL HAVE 5/8 INCH WIDE BORDERS THAT ARE INDENTED 3/8 INCH FROM THE EDGE OF THE SIGN.



**VC-887**

**GENERAL NOTES:**

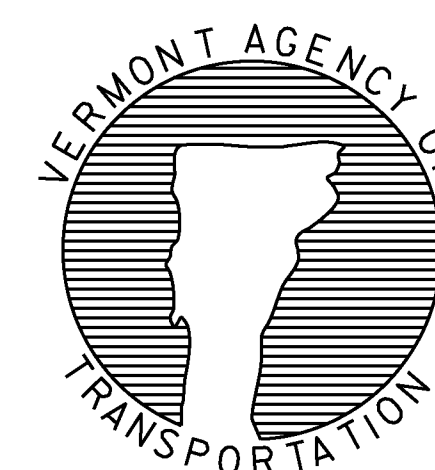
1. COLORS FOR SIGNS SHALL BE BLACK LEGEND AND BORDER ON FLUORESCENT ORANGE BACKGROUND.
2. CONSTRUCTION SIGNS SHALL BE 48 INCH BY 48 INCH UNLESS OTHERWISE NOTED. IF SOLID SUBSTRATE SIGNS ARE USED, SIGNS SHALL HAVE CORNERS ROUNDED TO A THREE INCH RADIUS UNLESS OTHERWISE NOTED.
3. SIGNS SHALL HAVE 1 1/4 INCH WIDE BORDERS THAT ARE INDENTED 3/4 INCH FROM THE EDGE OF THE SIGN UNLESS OTHERWISE NOTED.
4. SIGNS SHALL HAVE THE LEGEND CENTERED HORIZONTALLY AND VERTICALLY ON THE SIGN UNLESS OTHERWISE INDICATED.
5. ALL DIMENSIONS SHOWN IN INCHES.

**OTHER STDs. REQUIRED: T-1**

REVISIONS AND CORRECTIONS  
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

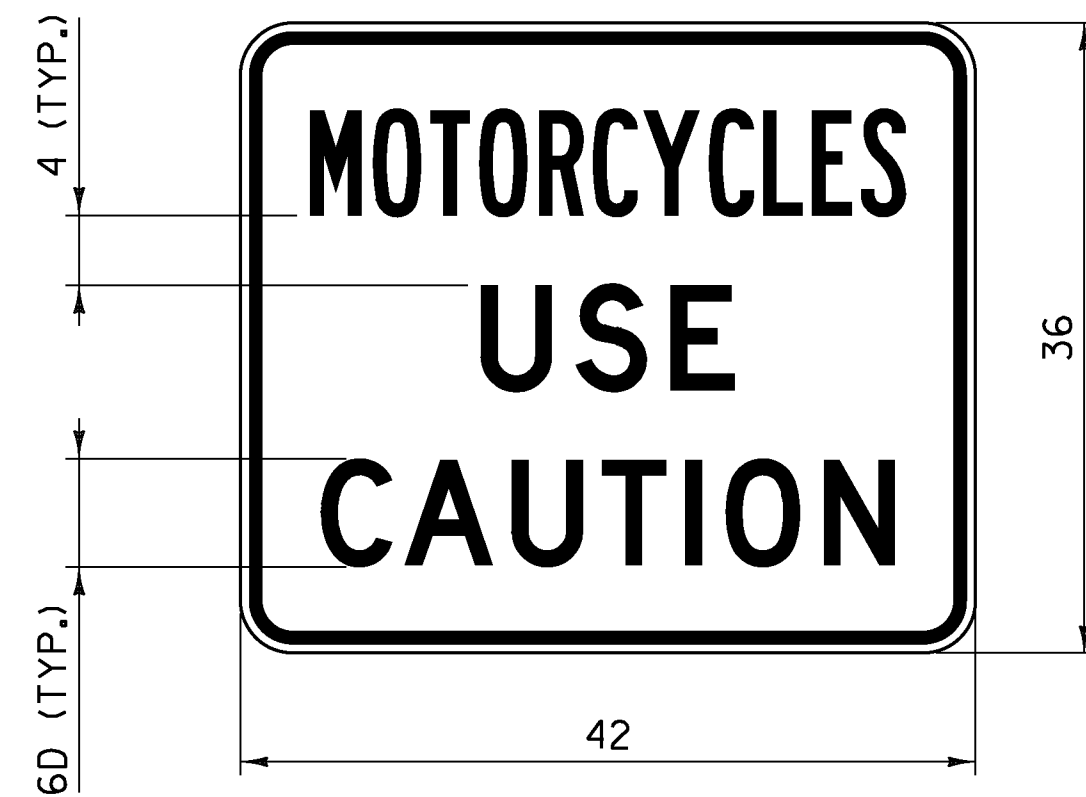
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CONSTRUCTION SIGN  
DETAILS



STANDARD  
T - 29

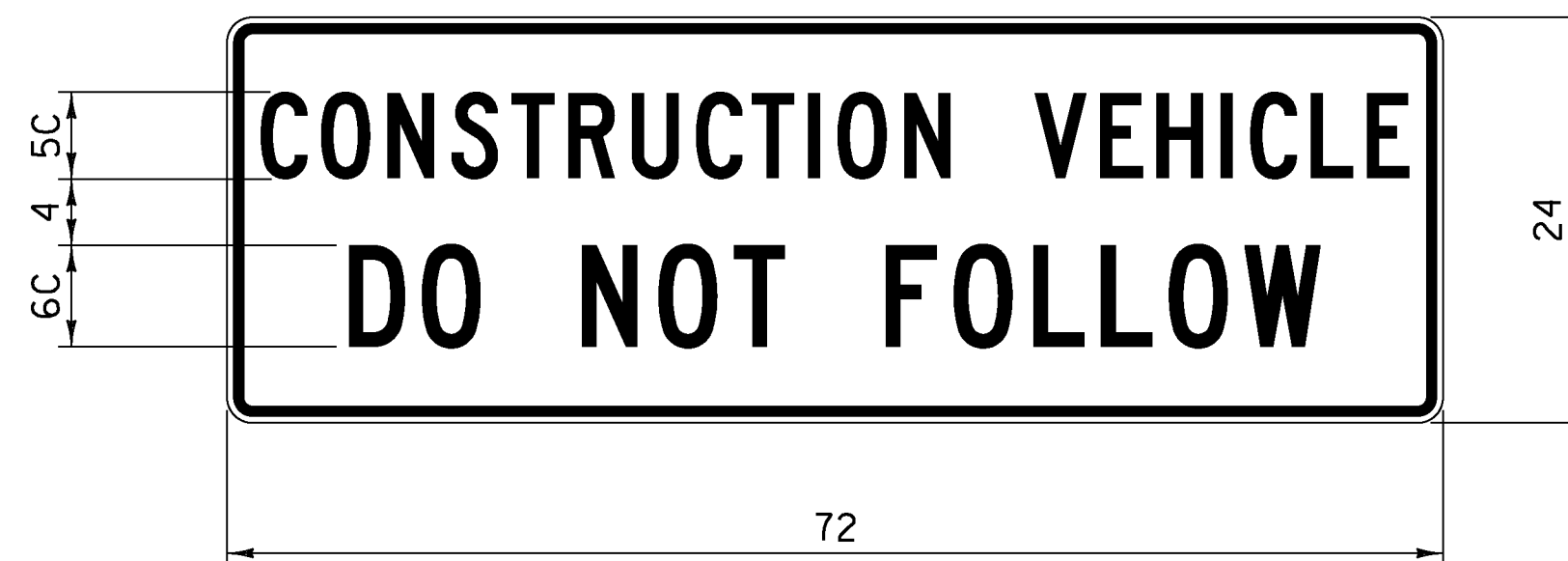




**VC-004P**

**NOTES:**

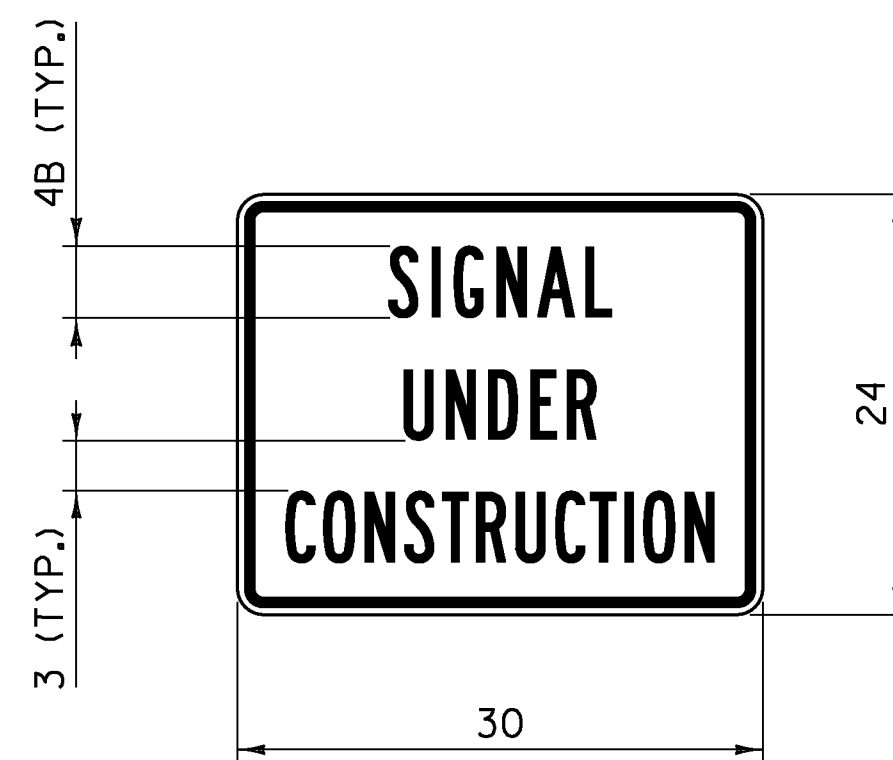
1. CORNERS SHALL BE ROUNDED TO A THREE INCH RADIUS.
2. THE BORDER SHALL BE  $\frac{3}{4}$  INCH WIDE WITH A  $\frac{1}{2}$  INCH INDENT FROM THE EDGE OF THE SIGN.
3. "MOTORCYCLES" SHALL HAVE A SPECIFIED WIDTH OF 34 INCHES.
4. "USE" SHALL HAVE A SPECIFIED WIDTH OF 14  $\frac{1}{2}$  INCHES.
5. "CAUTION" SHALL HAVE A SPECIFIED WIDTH OF 32  $\frac{3}{4}$  INCHES.
6. SIGN SHALL ONLY BE INSTALLED AS A SUPPLEMENTAL TO A PARENT WARNING SIGN AND SHALL NOT BE INSTALLED BY ITSELF.



**VC-007**

**NOTES:**

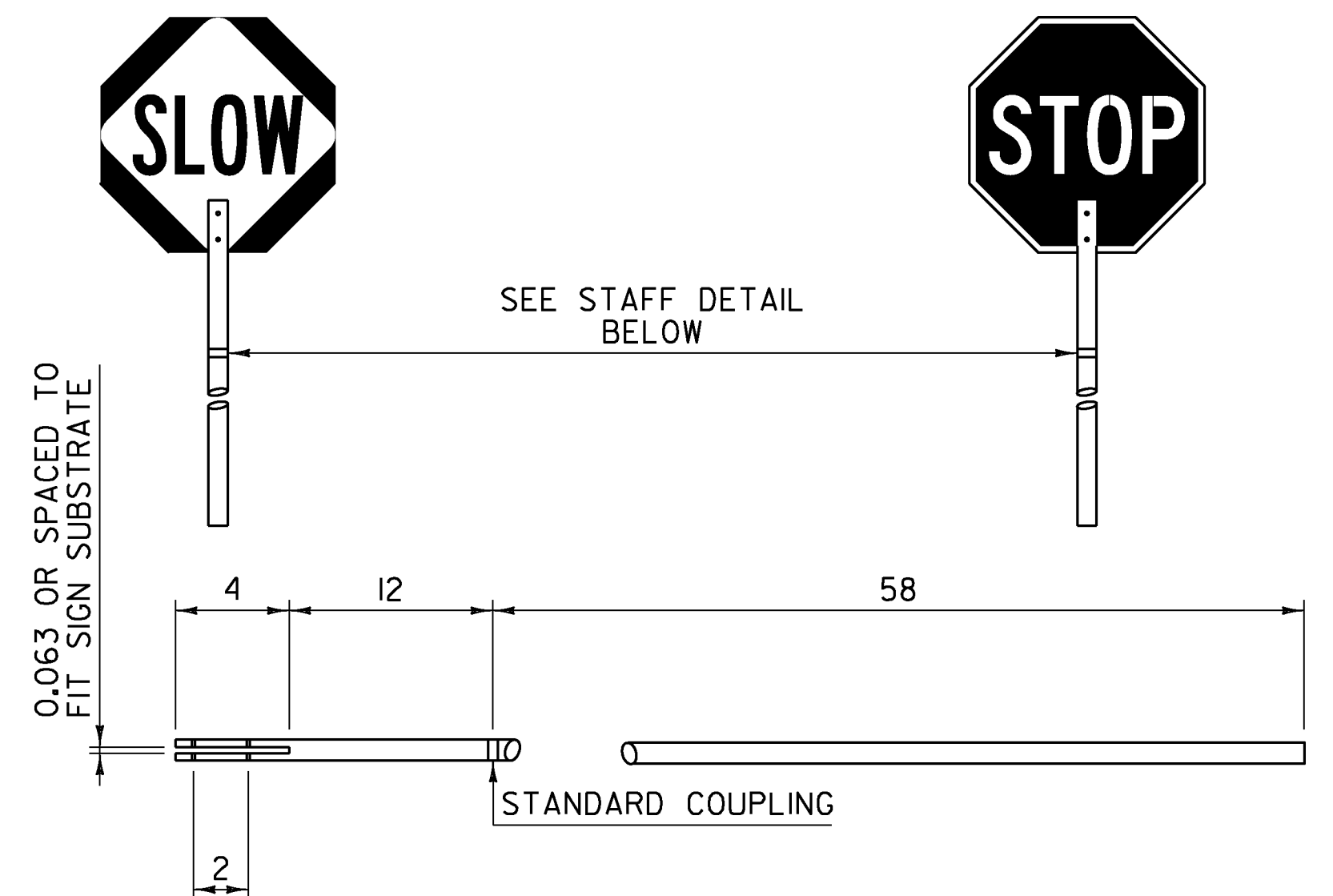
1. CORNERS SHALL BE ROUNDED TO A  $1\frac{1}{2}$  INCH RADIUS.
2. THE BORDER SHALL BE  $\frac{5}{8}$  INCH WIDE WITH A  $\frac{3}{8}$  INCH INDENT FROM THE EDGE OF THE SIGN.
3. "CONSTRUCTION VEHICLE" SHALL HAVE A SPECIFIED WIDTH OF 68 INCHES.
4. "DO NOT FOLLOW" SHALL HAVE A SPECIFIED WIDTH OF 57  $\frac{1}{2}$  INCHES.
5. SIGN SHALL BE MOUNTED IN A CONSPICUOUS LOCATION ON THE REAR OF THE CONSTRUCTION VEHICLE.
6. THE SIGN SHALL BE MOUNTED AS NOT TO INTERFERE WITH THE VISIBILITY OF DIRECTIONAL SIGNALS OR TAIL LIGHTS AS REQUIRED BY LAW.
7. SIGN SHALL BE COVERED OR REMOVED WHEN NOT IN USE.



**VC-820**

**NOTES:**

1. CORNERS SHALL BE ROUNDED TO A  $1\frac{1}{2}$  INCH RADIUS.
2. THE BORDER SHALL BE  $\frac{5}{8}$  INCH WIDE WITH A  $\frac{3}{8}$  INCH INDENT FROM THE EDGE OF THE SIGN.
3. "SIGNAL" SHALL HAVE A SPECIFIED WIDTH OF 12  $\frac{3}{4}$  INCHES.
4. "UNDER" SHALL HAVE A SPECIFIED WIDTH OF 11 INCHES.
5. "CONSTRUCTION" SHALL HAVE A SPECIFIED WIDTH OF 24  $\frac{1}{2}$  INCHES.
6. SIGN SHALL ONLY BE INSTALLED AS A SUPPLEMENTAL TO A PARENT WARNING SIGN AND SHALL NOT BE INSTALLED BY ITSELF.



**STOP-SLOW PADDLE & STAFF DETAIL**

**NOTES:**

1. REFER TO THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) "TEMPORARY TRAFFIC CONTROL - WARNING SIGNS" FOR THE STOP-SLOW PADDLE DESIGN.
2. COLORS FOR THE SLOW SIDE OF THE PADDLE SHALL BE BLACK LEGEND AND BORDER ON A FLUORESCENT ORANGE DIAMOND WITH RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 [ASTM D 4956] TYPE VII, VIII OR IX REQUIREMENTS.
3. COLORS FOR THE STOP SIDE OF THE PADDLE SHALL BE WHITE RETROREFLECTIVE LEGEND AND BORDER ON A RED RETROREFLECTIVE OCTAGON. BOTH COLORS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 [ASTM D 4956] TYPE III.
4. SIGN SUBSTRATE MATERIALS SHALL BE ALUMINUM, ACRYLONITRILE BUTADIENE STYRENE (ABS) PLASTIC OR EQUIVALENT.
5. THE STAFF MAY BE RIGID ABS PLASTIC OR WOOD WITH A ONE TO  $1\frac{1}{2}$  INCH DIAMETER.
6. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE COMPLETELY VISIBLE TO APPROACHING TRAFFIC AT ALL TIMES. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.

**GENERAL NOTES:**

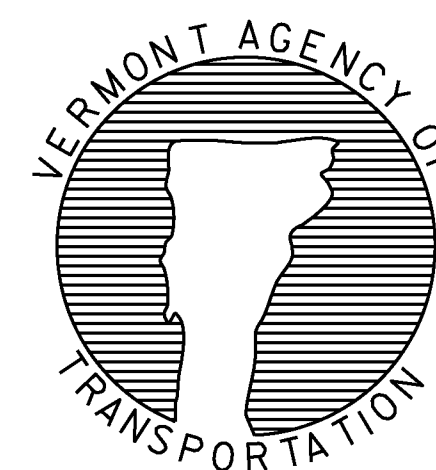
1. ALL LEGEND SHALL BE CENTERED VERTICALLY AND HORIZONTALLY UNLESS OTHERWISE NOTED.
2. COLORS FOR SIGNS SHALL BE BLACK LEGEND AND BORDER ON FLUORESCENT ORANGE BACKGROUND UNLESS OTHERWISE NOTED.
3. ALL DIMENSIONS IN INCHES.

**OTHER STDs. REQUIRED: T-1**

REVISIONS AND CORRECTIONS  
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

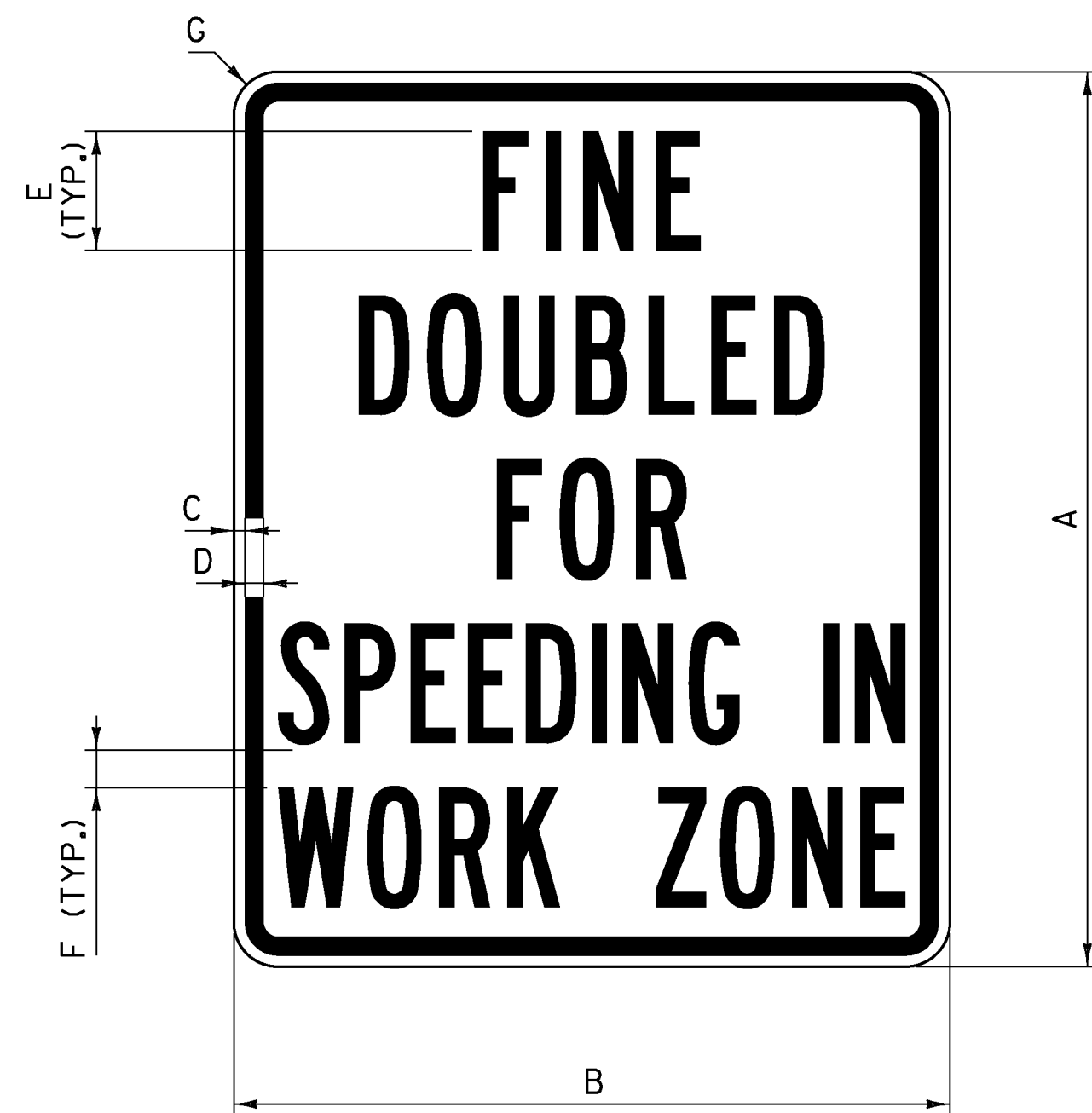
APPROVED  
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**CONSTRUCTION SIGN  
DETAILS**



**STANDARD  
T-30**



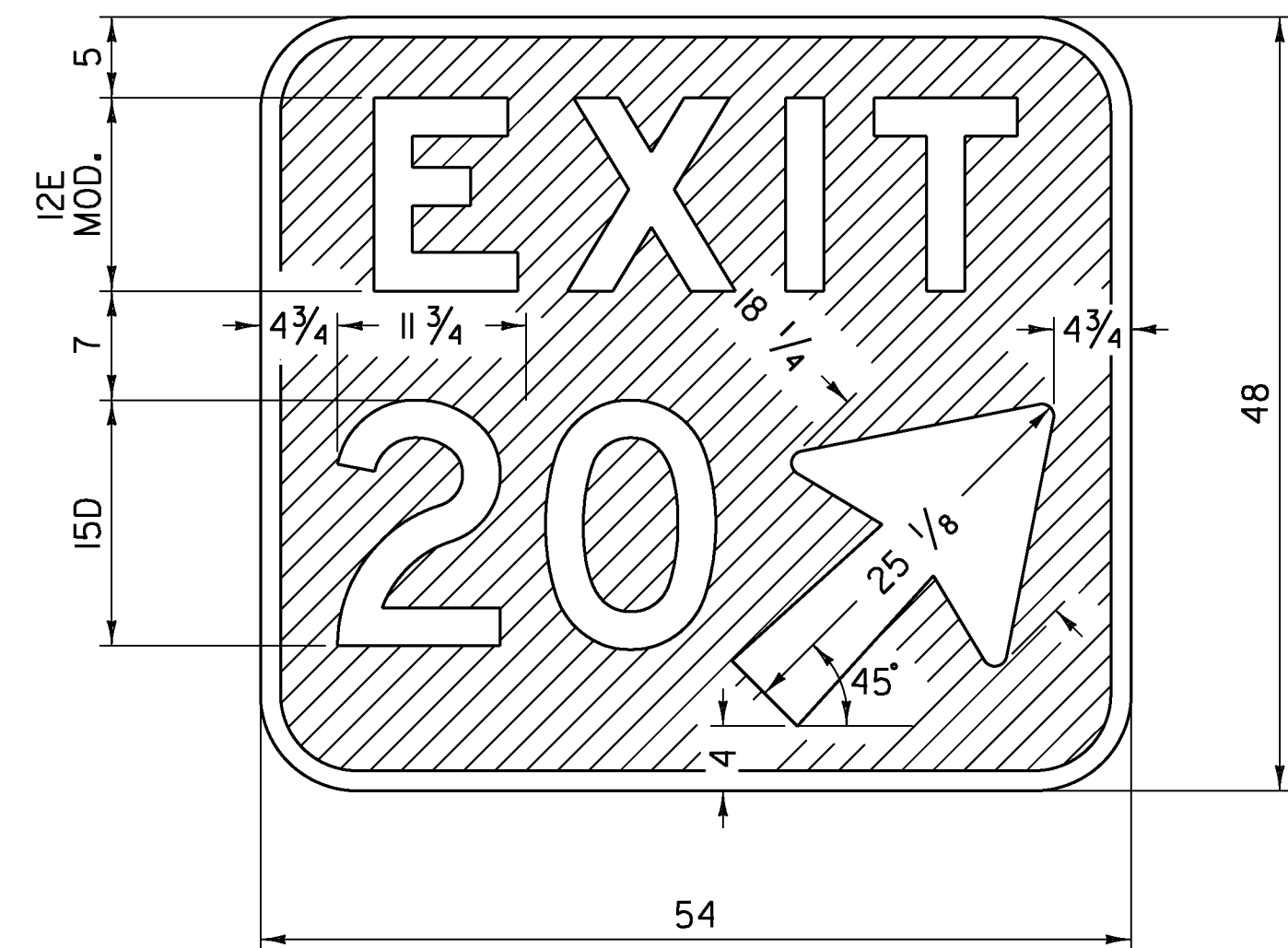


**VR-355**

SIGN	DIMENSIONS						
	A	B	C	D	E	F	G
STANDARD	36	30	1/2	3/4	4C	2 1/4	1 7/8
EXPRESSWAY/ FREEWAY	60	48	3/4	1 1/4	8B	3	3

**NOTES:**

1. "SPEEDING IN" AND "WORK ZONE" SHALL EACH HAVE A SPECIFIED WIDTH OF 26 INCHES FOR STANDARD AND 42 INCHES FOR EXPRESSWAY/FREEWAY.
2. THE SIGN SHALL HAVE BLACK LEGEND AND BORDER ON A WHITE BACKGROUND WITH RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE III.
3. LEGEND SHALL BE CENTERED HORIZONTALLY AND VERTICALLY.



**VC5-1A**

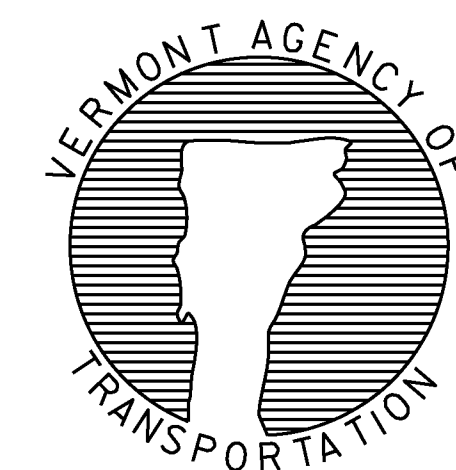
**NOTES:**

1. THE SIGN SHALL BE WHITE RETROREFLECTIVE LEGEND ON A GREEN RETROREFLECTIVE BACKGROUND, BOTH SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE III.
2. CORNERS SHALL BE ROUNDED TO A SIX INCH RADIUS.
3. THE SIGN SHALL HAVE A 1 1/4 INCH WIDE BORDER ALONG THE EDGE OF THE SIGN.
4. EXIT NUMBER SHALL BE AS PER PLANS, OPTICALLY SPACED.
5. "EXIT" SHALL BE CENTERED HORIZONTALLY.

**GENERAL NOTES:**

1. ALL DIMENSIONS IN INCHES.

**OTHER STDS. REQUIRED: T-1**



STANDARD  
T-31

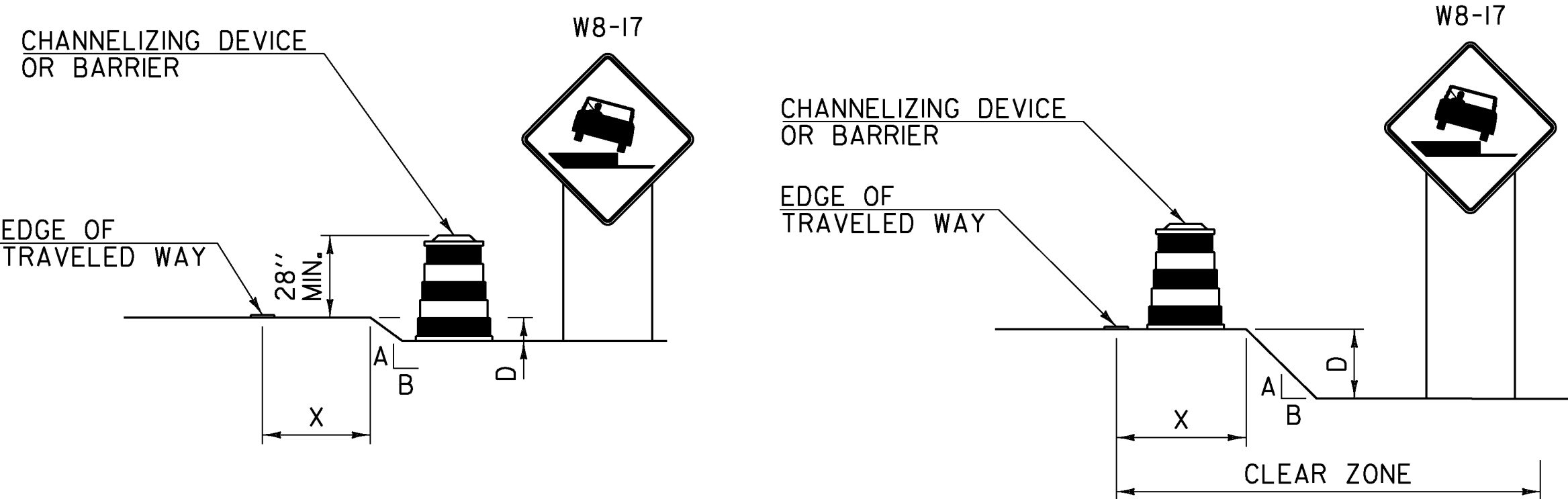
REVISIONS AND CORRECTIONS  
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

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CONSTRUCTION SIGN  
DETAILS



**DROP-OFF ADJACENT TO TRAVELED WAY**



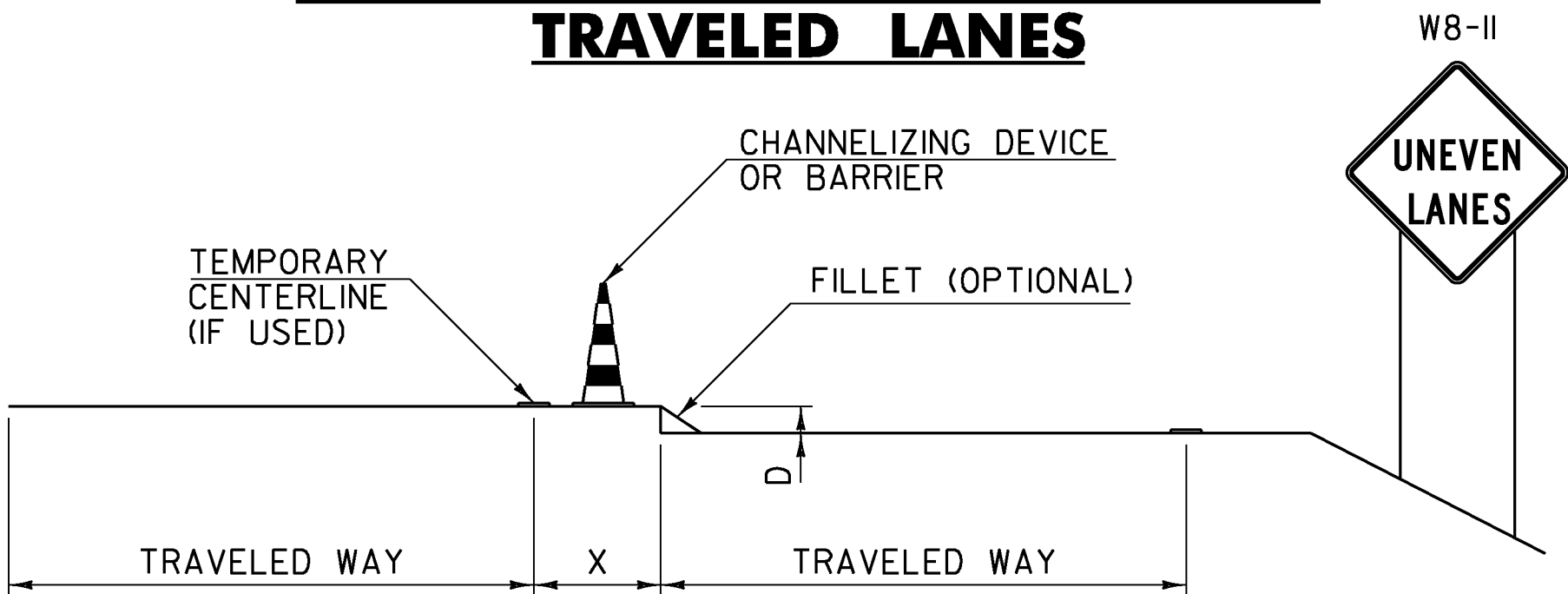
**TYPE 1**

**TYPE 2**

**NOTES:**

1. CHANNELIZING DEVICES OR BARRIER SHOULD BE PLACED TO MAXIMIZE THE WIDTH OF THE TRAVELED WAY.
2. SEE CHART "A" FOR SPECIFIC REQUIREMENTS.
3. IF THE DROP-OFF REQUIRES CHANNELIZING DEVICES TO REMAIN IN PLACE OVERNIGHT, THEN "SHOULDER DROP-OFF SYMBOL" (W8-17) SIGNS SHOULD BE INSTALLED.

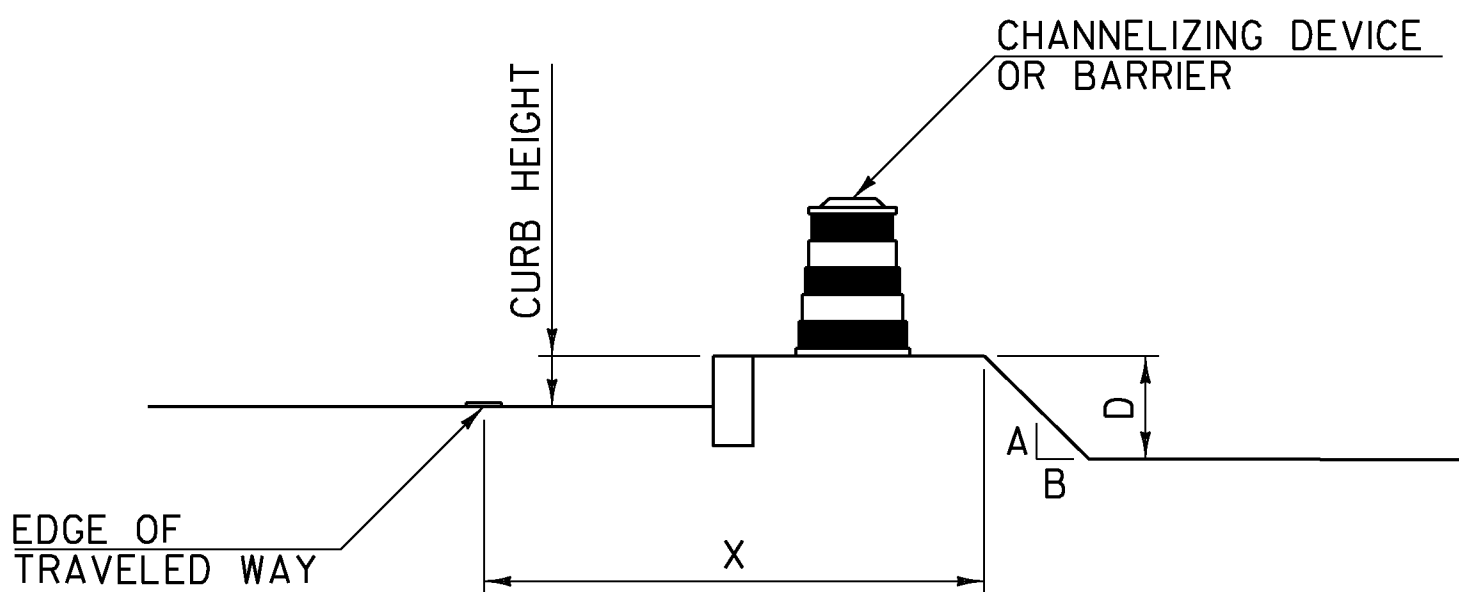
**DROP-OFF BETWEEN ADJACENT TRAVELED LANES**



**NOTES:**

1. WHENEVER A LONGITUDINAL DROP-OFF BETWEEN ADJACENT TRAVELED LANES IS TO BE LEFT OVERNIGHT, THEN "UNEVEN LANES" (W8-11) SIGNS AND CHANNELIZING DEVICES SHOULD BE INSTALLED.
2. IF REQUIRED, THE CHANNELIZING DEVICES USED SHOULD BE THOSE WHICH MAXIMIZE THE WIDTH OF THE TRAVELED LANE (I.E. CONES, VERTICAL PANELS OR TUBULAR MARKERS).
3. A BITUMINOUS CONCRETE FILLET WITH A 1.5:1 SLOPE MAY BE USED IN PLACE OF CHANNELIZING DEVICES, HOWEVER THE "UNEVEN LANES" (W8-11) SIGNS SHOULD STILL BE INSTALLED.
4. SEE CHART "A" FOR SPECIFIC REQUIREMENTS.

**DROP-OFF BEYOND SHOULDER OR CURB**



**NOTES:**

1. USE CHART "A" FOR VERTICAL CURBS UNDER SIX INCHES, MOUNTABLE CURBS OR ROADWAYS WITH A POSTED SPEED ABOVE 40 MPH.
2. USE CHART "B" FOR VERTICAL CURBS SIX INCHES OR GREATER.

**CHART "A"**  
**ALL SPEEDS WITH NO CURB OR MOUNTABLE CURB**

X (FEET)	DROP (D) (INCHES)	A:B SLOPE	RECOMMENDED DEVICE
0 TO 4'	LESS THAN 2"	ANY	NONE
	2" TO 6"	1:1.5 OR FLATTER	NONE
		STEEPER THAN 1:1.5	CHANNELIZING DEVICE
	GREATER THAN 6"	1:3 OR FLATTER	NONE
		STEEPER THAN 1:3	BARRIER
4' TO 10'	LESS THAN 6"	ANY	NONE
	6" TO 12"	1:3 OR FLATTER	NONE
		STEEPER THAN 1:3	BARRIER
	GREATER THAN 12"	1:3 OR FLATTER	NONE
		STEEPER THAN 1:3	BARRIER
10' TO CZ	LESS THAN OR EQUAL TO 12"	ANY	NONE
	GREATER THAN 12"	1:3 OR FLATTER	NONE
		STEEPER THAN 1:3	BARRIER

**NOTES:**

1. THE MINIMUM CLEAR ZONE FOR FREEWAYS IS TO BE DETERMINED PER THE CURRENT AASHTO ROADSIDE DESIGN GUIDE. ALL OTHER HIGHWAYS WILL BE DETERMINED PER THE CURRENT "VERMONT STATE STANDARDS" BOOK.
2. CHANNELIZING DEVICES MAY BE USED INSTEAD OF BARRIER FOR SHORT TERM OPERATIONS.
3. ON BORDERLINE CONDITIONS, THE ENGINEER SHOULD DETERMINE WHICH TREATMENT IS ADEQUATE FOR THE EXISTING CONDITIONS.

**CHART "B"**  
**40 MPH OR LESS WITH VERTICAL CURB**

X (FEET)	DROP (D) (INCHES)	DEVICE REQUIRED
0-10'	LESS THAN OR EQUAL TO 12"	NONE
0-10'	GREATER THAN 12"	CHANNELIZING DEVICE
GREATER THAN 10'	ANY	NONE

**GENERAL NOTES:**

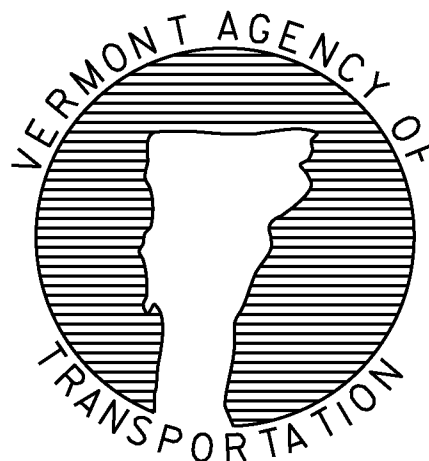
1. THESE CONDITIONS AND TREATMENTS ARE ONLY PART OF THE TRAFFIC CONTROL SYSTEM AND SHOULD BE USED IN ADDITION TO THE PROPER WORK ZONE SIGNING.
2. THE FOLLOWING ARE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) COMPLIANT CHANNELIZING DEVICES:
  - A. VERTICAL PANEL
  - B. TYPE I OR TYPE II BARRICADE
  - C. PLASTIC DRUM
  - D. CONE - WHERE APPLICABLE
  - E. TUBULAR MARKERS
- IF CHANNELIZING DEVICES ARE REQUIRED TO STAY IN PLACE DURING NIGHTTIME HOURS, THEY SHALL BE STABILIZED WHILE UNATTENDED IN ACCORDANCE WITH THE MUTCD.
3. WHERE BARRIER IS NECESSARY, THE BARRIER SHALL BE TAPERED BEYOND THE CLEAR ZONE. WHEN THE BARRIER CANNOT BE TAPERED BEYOND THE CLEAR ZONE, A MUTCD COMPLIANT END TREATMENT SHALL BE USED. BARRIER AND END TREATMENT SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION.
4. CHANNELIZING DEVICE SPACING ALONG A LONGITUDINAL DROP-OFF (TANGENT) SHALL BE AS FOLLOWS:
  - TANGENT - CHANNELIZING DEVICES SHALL BE SPACED "2S" ("S" IS EQUAL TO THE POSTED SPEED LIMIT IN FEET) APART.
5. "LOW SHOULDER" (W8-9) AND "SHOULDER DROP-OFF SYMBOL" (W8-17) SIGNS, WHEN USED, SHOULD BEGIN PRIOR TO THE DROP-OFF CONDITION AND SHOULD BE REPEATED EVERY 1500 FEET.

**OTHER STDS. REQUIRED: T-1**

REVISIONS AND CORRECTIONS  
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

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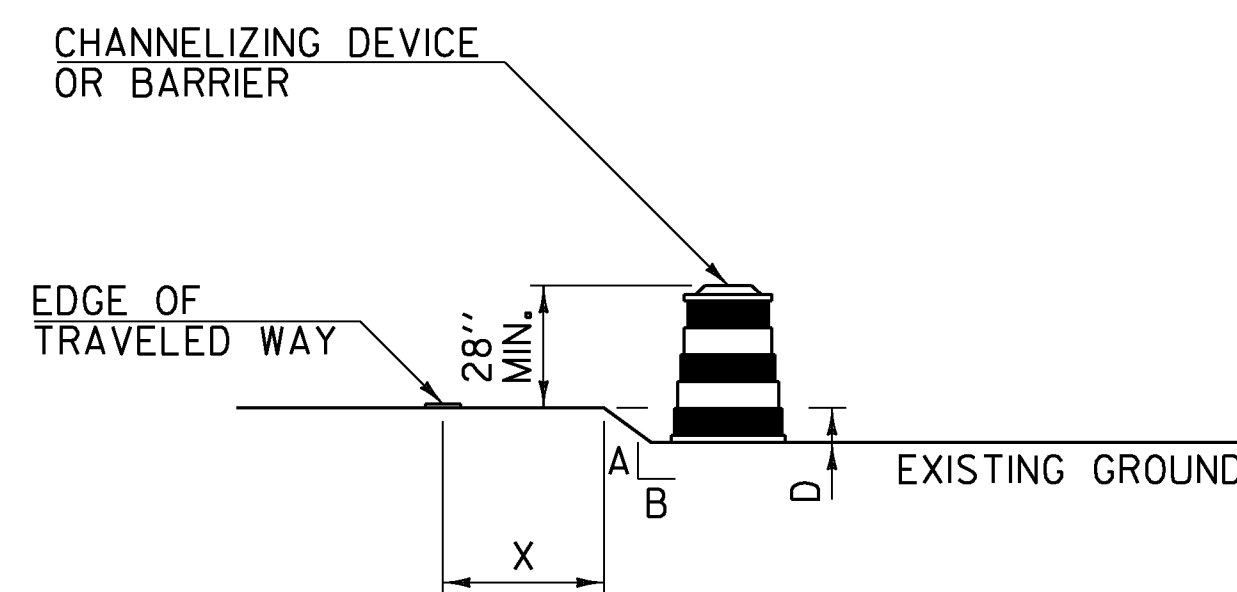
**CONSTRUCTION ZONE**  
**LONGITUDINAL DROP-OFFS**



**STANDARD**  
**T-35**



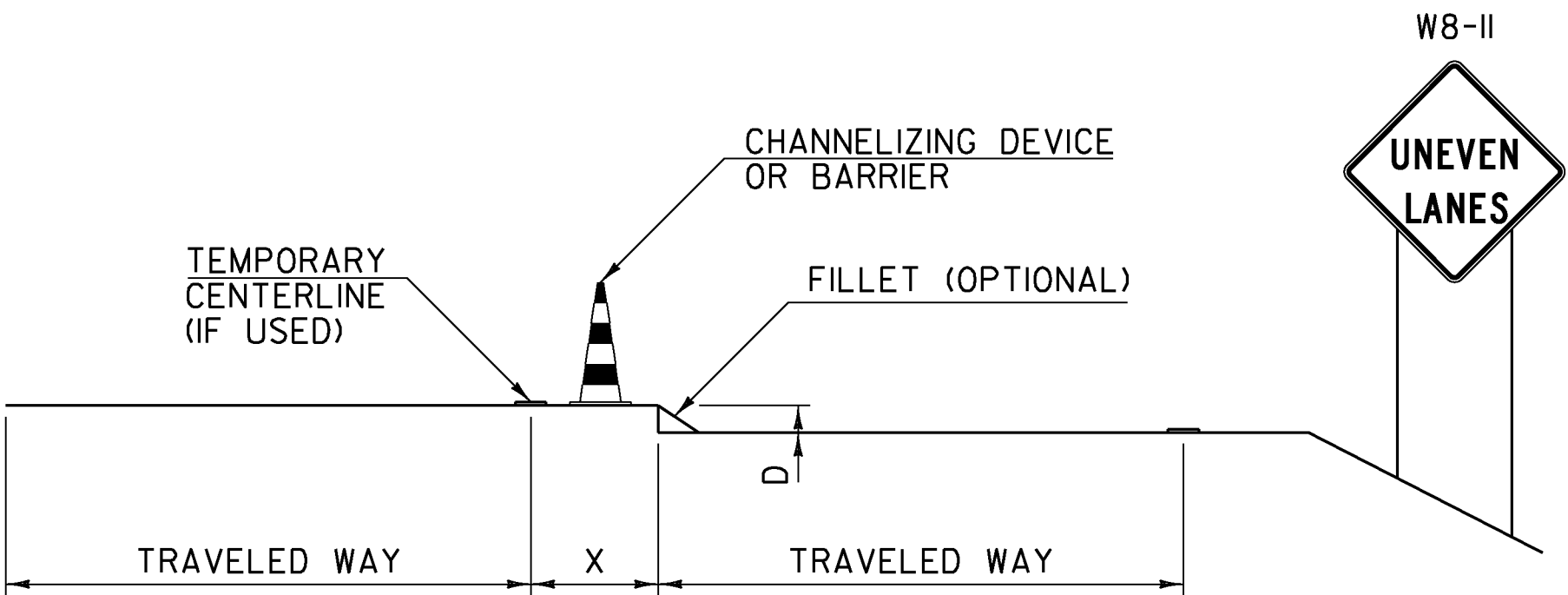
**DROP-OFF ADJACENT TO TRAVELED WAY**



**NOTES:**

1. CHANNELIZING DEVICES SHOULD BE PLACED TO MAXIMIZE THE WIDTH OF THE TRAVELED WAY.
2. SEE CHART "A" FOR SPECIFIC REQUIREMENTS.
3. IF THE DROP-OFF REQUIRES CHANNELIZING DEVICES TO REMAIN IN PLACE OVERNIGHT, THEN "LOW SHOULDER" (W8-9) OR "SHOULDER DROP-OFF SYMBOL" (W8-17) SIGNS SHOULD BE INSTALLED.

**DROP-OFF BETWEEN ADJACENT TRAVELED LANES**



**NOTES:**

1. WHENEVER A LONGITUDINAL DROP-OFF BETWEEN ADJACENT TRAVELED LANES IS TO BE LEFT OVERNIGHT, THEN "UNEVEN LANES" (W8-11) SIGNS AND CHANNELIZING DEVICES SHOULD BE INSTALLED.
2. IF REQUIRED, THE CHANNELIZING DEVICES USED SHALL BE THOSE WHICH MAXIMIZE THE WIDTH OF THE TRAVELED LANE (I.E. CONES, VERTICAL PANELS OR TUBULAR MARKERS).
3. A BITUMINOUS CONCRETE FILLET WITH A 1.5:1 SLOPE MAY BE USED IN PLACE OF CHANNELIZING DEVICES, HOWEVER THE "UNEVEN LANES" (W8-11) SIGNS SHOULD STILL BE INSTALLED.
4. SEE CHART "A" FOR SPECIFIC REQUIREMENTS.

**CHART "A"**  
**ALL SPEEDS WITH NO CURB**

X (FEET)	DROP (D) (INCHES)	A:B SLOPE	DEVICE REQUIRED
0 TO 4'	LESS THAN 2"	ANY	NONE
	2" TO 6"	1:1.5 OR FLATTER	NONE
		STEEPER THAN 1:1.5	CHANNELIZING DEVICE
	GREATER THAN 6"	1:3 OR FLATTER	NONE
		STEEPER THAN 1:3	BARRIER
4' TO 10'	LESS THAN 6"	ANY	NONE
	6" TO 12"	1:3 OR FLATTER	NONE
		STEEPER THAN 1:3	BARRIER

**NOTE:**

1. ON BORDERLINE CONDITIONS, THE ENGINEER SHOULD DETERMINE WHICH TREATMENT IS ADEQUATE FOR THE EXISTING CONDITIONS.

**GENERAL NOTES:**

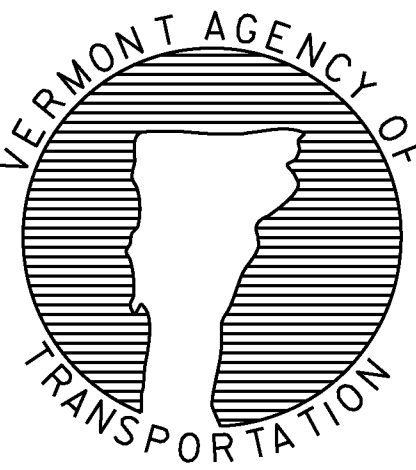
1. THESE CONDITIONS AND TREATMENTS ARE ONLY PART OF THE TRAFFIC CONTROL SYSTEM AND SHOULD BE USED IN ADDITION TO THE PROPER WORK ZONE SIGNING.
2. THE FOLLOWING ARE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) COMPLIANT CHANNELIZING DEVICES:  
  
A. VERTICAL PANEL  
B. TYPE I OR TYPE II BARRICADE  
C. PLASTIC DRUM  
D. CONE - WHERE APPLICABLE  
E. TUBULAR MARKERS  
  
IF CHANNELIZING DEVICES ARE REQUIRED TO STAY IN PLACE DURING NIGHTTIME HOURS, THEY SHALL BE STABILIZED WHILE UNATTENDED IN ACCORDANCE WITH THE MUTCD.
3. WHERE BARRIER IS NECESSARY, THE BARRIER SHALL BE TAPERED BEYOND THE CLEAR ZONE. WHEN THE BARRIER CANNOT BE TAPERED BEYOND THE CLEAR ZONE, A MUTCD COMPLIANT END TREATMENT SHALL BE USED. BARRIER AND END TREATMENT SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION.
4. CHANNELIZING DEVICE SPACING ALONG A LONGITUDINAL DROP-OFF (TANGENT) SHALL BE AS FOLLOWS:  
  
TANGENT - CHANNELIZING DEVICES SHALL BE SPACED "2S"  
("S" IS EQUAL TO THE POSTED SPEED LIMIT IN FEET) APART.
5. "LOW SHOULDER" (W8-9) AND "SHOULDER DROP-OFF SYMBOL" (W8-17) SIGNS, WHEN USED, SHOULD BEGIN PRIOR TO THE DROP-OFF CONDITION AND SHOULD BE REPEATED EVERY 1500 FEET.

**OTHER STDs.  
REQUIRED: T-1**

REVISIONS AND CORRECTIONS  
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED  
*W.A.C. Pl.*  
HIGHWAY SAFETY & DESIGN ENGINEER  
*Richard Thwait*  
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FEDERAL HIGHWAY ADMINISTRATION

**CONSTRUCTION ZONE  
LONGITUDINAL DROP-OFFS  
FOR PAVING**



**STANDARD  
T - 36**