

STATE OF VERMONT AGENCY OF TRANSPORTATION



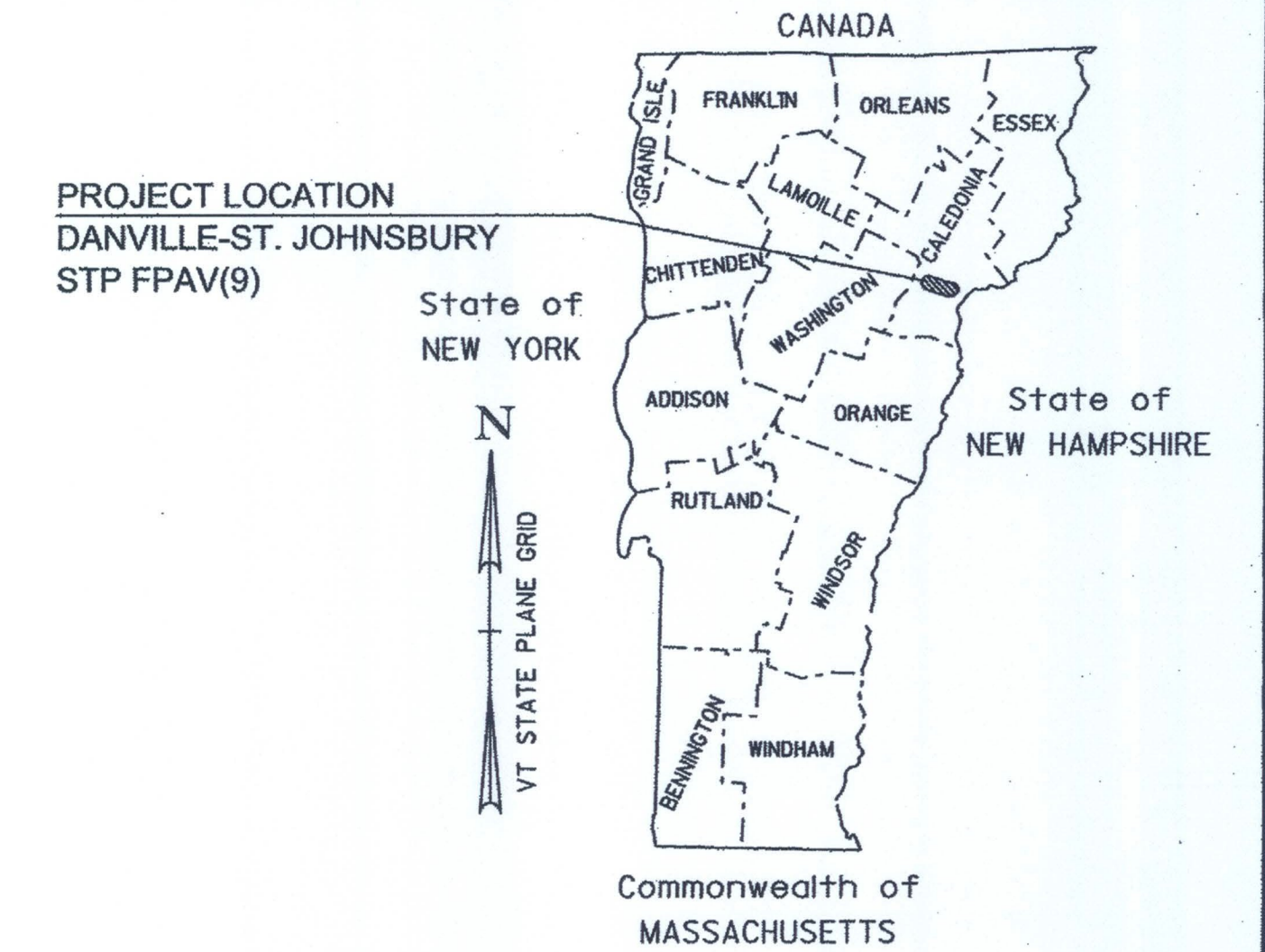
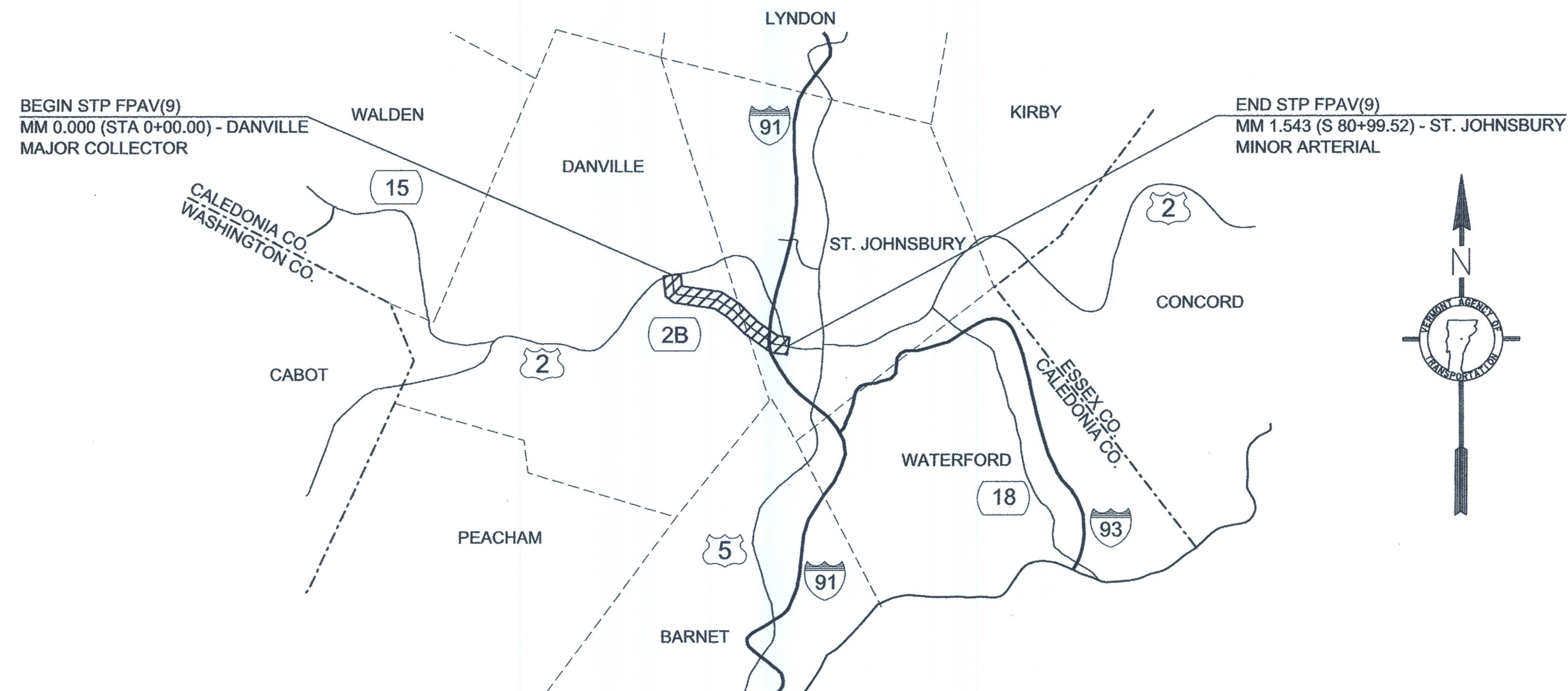
PROPOSED IMPROVEMENT TOWNS OF DANVILLE & ST. JOHNSBURY COUNTY OF CALEDONIA

VT ROUTE 2B (MAJOR COLLECTOR & MINOR ARTERIAL)

BEGINNING IN THE TOWN OF DANVILLE ON VT ROUTE 2B AT MM 0.000 AND EXTENDING EASTERLY
ALONG VT ROUTE 2B FOR A DISTANCE OF 18,263.52 FEET (3.459 MILES) AND STOPPING AT MM 1.543 IN THE TOWN OF ST. JOHNSBURY.

LENGTH OF ROADWAY = 18,263.52 FEET (3.459 MILES)
LENGTH OF PROJECT = 18,263.52 FEET (3.459 MILES)

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES PAVING THE
EXISTING HIGHWAY, PAVEMENT MARKINGS, GUARDRAIL AND OTHER HIGHWAY RELATED ITEMS.



RECORD PLANS	
CONTRACTOR:	PIKE INDUSTRIES, INC. - BERLIN, VT
RESIDENT ENGINEER:	JAY STRONG
CONSTRUCTION BEGAN:	SEPTEMBER 05, 2017
CONSTRUCTION COMPLETE:	MAY 01, 2018
RECORD PLANS BY:	JAY STRONG & JESSE IVES
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY	<i>Jay Strong</i> RESIDENT ENGINEER
DATE	5/30/2018
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found by contacting Vtrans Records Management.	

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 1	
SURVEYED BY :	NA
SURVEYED DATE :	NA
DATUM	
VERTICAL	NA
HORIZONTAL	NA

NOT TO SCALE

BUILT AS DESIGNED

DIRECTOR OF PROJECT DELIVERY	
APPROVED <i>J. K. M.</i>	DATE 5/19/2017
PROJECT MANAGER : BRANDON KIPP, P.E.	
PROJECT NAME : DANVILLE-ST. JOHNSBURY	
PROJECT NUMBER : STP FPAV(9)	
SHEET 1 OF 33 SHEETS	

INDEX OF SHEETS

INDEX OF SHEETS

1.	TITLE SHEET
2.	INDEX OF SHEETS
3.	CONVENTIONAL SYMBOLOGY LEGEND SHEET
4.	PROJECT NOTES SHEET
5.	TYPICAL SECTIONS SHEET
6.	DETAIL SHEET
7.-8.	QUANTITY SHEETS
9.	ITEM DETAIL SHEET
10.	HAND WORK DETAIL SHEET
11.-12.	GUARDRAIL REPLACEMENT DETAIL SHEETS
13.	BRIDGE RAILING DETAIL SHEET
14.	BRIDGE DETAIL SHEET
15.	FINGER JOINT ASPHALTIC PLUG DETAIL SHEET
16.-32.	PLAN SHEETS
33.	CONSTRUCTION APPROACH SIGNING SHEET

STRUCTURES DETAIL SHEETS

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

HIGHWAY SAFETY & DESIGN DETAIL SHEETS

HSD 400.01 - SAFETY EDGE DETAILS 03-29-16
HSD 621.06 - MISCELLANEOUS GUARDRAIL DETAILS 02-27-17

TRAFFIC DATA

VT ROUTE 2B	AADT		DHV		%T		%D		ADTT		ESALs	
	2017	2027	2017	2027	2017	2027	2017	2027	2017	2027	(2017~2027)	(2017~2037)
MM 0.000 (DANVILLE) - MM 1.543 (ST. JOHNSBURY)	340	360	50	55	2.7	3.6	60	60	15	20	36,000	91,000

BITUMINOUS CONCRETE PAVEMENT SUPERPAVE MIXTURE DESIGN CRITERIA	
DESIGN LANE / DESIGN LIFE ESAL	21,600
DESIGN NUMBER OF GYRATIONS	50
PERFORMANCE GRADE ASPHALT BINDER	58-34

VAOT DESIGN STANDARDS

B-71	STANDARDS FOR RESIDENTIAL AND COMMERCIAL DRIVES	07-08-05
E-193	PAVEMENT MARKING DETAILS	08-18-95
G-1	STEEL BEAM GUARDRAIL WITH STEEL POSTS, STEEL BEAM GUARDRAIL WITH WOOD POSTS	03-10-17
G-1d	STEEL BEAM GUARDRAIL APPROACH END TERMINAL, STEEL BEAM GUARDRAIL TRAILING END TERMINAL, ANCHOR FOR STEEL BEAM GUARDRAIL, STEEL BEAM MEDIAN BARRIER	03-10-17
G-19	GENERIC PLANS FOR GUARDRAIL END TERMINALS	11-15-02
S-367B	GUARDRAIL APPROACH SECTION, GALVANIZED HD STEEL BEAM	02-02-17
T-1	TRAFFIC CONTROL GENERAL NOTES	04-25-16
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-12
T-17	TRAFFIC CONTROL MISCELLANEOUS DETAILS	08-06-12
T-24	TRAFFIC CONTROL MAINTENANCE PAVEMENT MARKING OPERATION	08-06-12
T-28	CONSTRUCTION SIGN DETAILS	08-06-12
T-29	CONSTRUCTION SIGN DETAILS	08-06-12
T-30	CONSTRUCTION SIGN DETAILS	08-06-12
T-31	CONSTRUCTION SIGN DETAILS	08-06-12
T-35	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS	08-06-12
T-36	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS FOR PAVING	08-06-12

POSTED SPEED ZONES

VT ROUTE 2B	TOWN	SPEED (MPH)
MM 0.000 - MM 1.916	DANVILLE	50
MM 0.000 - MM 1.000	ST. JOHNSBURY	50
MM 1.000 - MM 1.543	ST. JOHNSBURY	35

PROJECT NAME:	DANVILLE-ST. JOHNSBURY		
PROJECT NUMBER:	STP FPAV(9)		
FILE NAME:	16v148.dgn	PLOT DATE:	05-JUN-2017
PROJECT LEADER:	B. KIPP	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
INDEX OF SHEETS		SHEET 2	OF 33

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
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 BENCH MARK
▣	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 VALVE
⊗	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 STONE/WOOD
⊗	RRSIG RAILROAD SIGNAL
⊕	RRSL RAILROAD SWITCH LEVER
⊗	S TREE SOFTWOOD
⊗	SAT SATELLITE DISH
⊗	SHRUB SHRUB
⊕	SIGN SIGN
⊕	STUMP STUMP
○	TEL TELEPHONE POLE
○	TIE TIE
⊕	TSIGN SIGN W/DOUBLE POST
⊕	VCTRL CONTROL VERTICAL
○	WELL WELL
×	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 RADIUS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLGY

SYMBOL	DESCRIPTION
— 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)

— 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

SYMBOL	DESCRIPTION
—	CLEAR ZONE
—	PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

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

**CONVENTIONAL BOUNDARY SYMBOLGY**

SYMBOL	DESCRIPTION
—	TOWN BOUNDARY LINE
—	COUNTY BOUNDARY 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)
SR	SLOPE RIGHTS
6f	6F PROPERTY BOUNDARY
4f	4F PROPERTY BOUNDARY
HAZ	HAZARDOUS WASTE

**EPSC LAYOUT PLAN SYMBOLGY**

SYMBOL	DESCRIPTION
—	FILTER CURTAIN
—	SILT FENCE
—	SILT FENCE WOVEN WIRE
—	CHECK DAM
—	DISTURBED AREAS REQUIRING RE-VEGETATION
—	EROSION MATTING

**ENVIRONMENTAL RESOURCES**

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

**ARCHEOLOGICAL & HISTORIC**

—	ARCHEOLOGICAL BOUNDARY
—	HISTORIC DISTRICT BOUNDARY
—	HISTORIC AREA
Ⓜ	HISTORIC STRUCTURE

**CONVENTIONAL TOPOGRAPHIC SYMBOLGY**

SYMBOL	DESCRIPTION
—	ROAD EDGE PAVEMENT
—	ROAD EDGE GRAVEL
—	DRIVEWAY EDGE
—	DITCH
—	FOUNDATION
—	FENCE (EXISTING)
—	FENCE WOOD POST
—	FENCE STEEL POST
—	GARDEN
—	ROAD GUARDRAIL
—	RAILROAD TRACKS
—	CULVERT (EXISTING)
—	STONE WALL
—	WALL
—	WOOD LINE
—	BRUSH LINE
—	HEDGE
—	BODY OF WATER EDGE
—	LEDGE EXPOSED

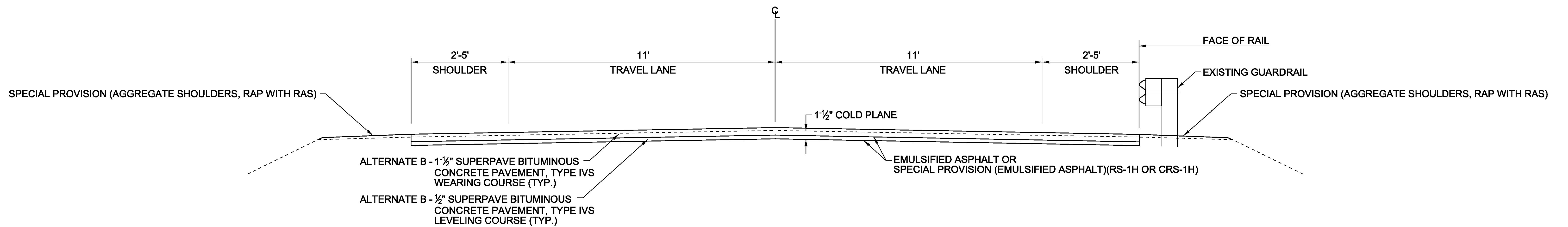
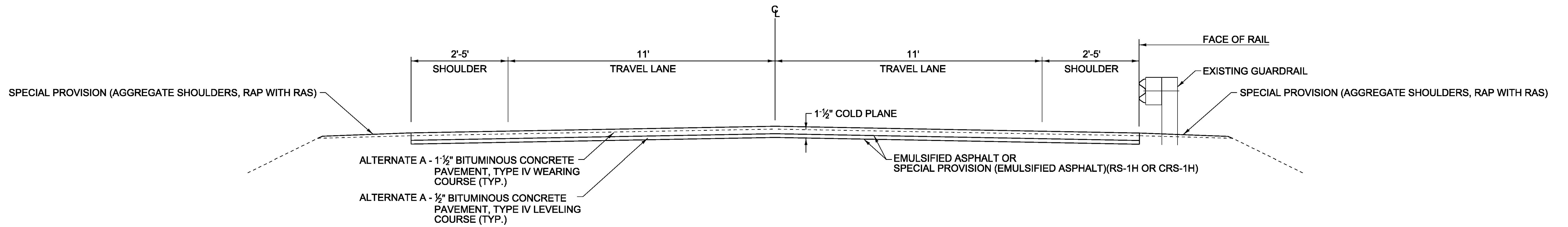
PROJECT NAME: DANVILLE-ST. JOHNSBURY  
PROJECT NUMBER: STP FPAV(9)

FILE NAME: 16v148.dgn PLOT DATE: 05-JUN-2017  
PROJECT LEADER: B. KIPP DRAWN BY: B. KIPP  
DESIGNED BY: B. KIPP CHECKED BY: M. FOWLER  
CONVENTIONAL SYMBOLGY SHEET SHEET 3 OF 33

**PROJECT NOTES**

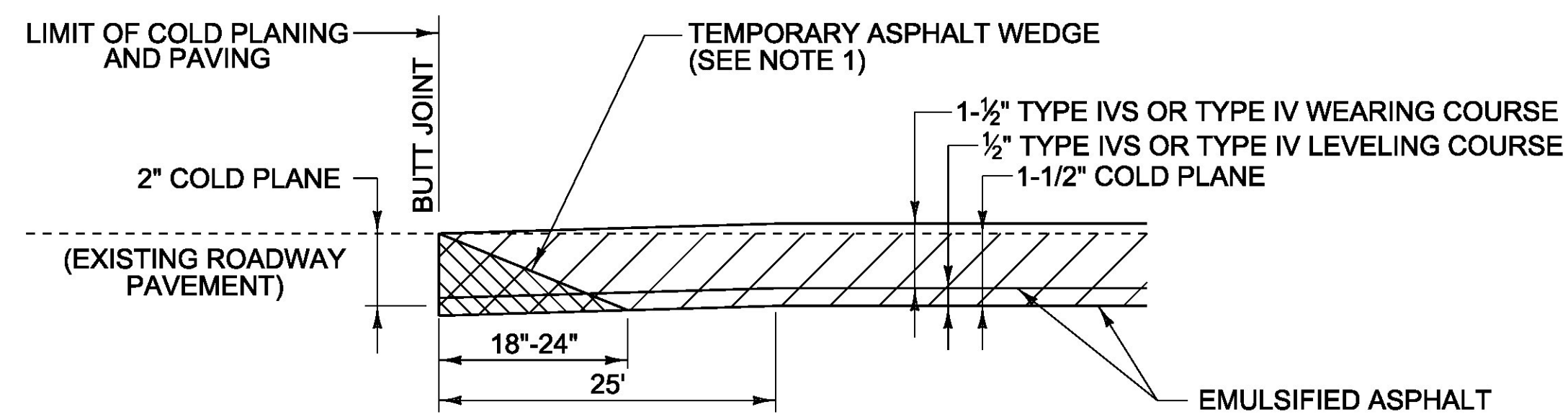
1. ALL PROPOSED WORK TO BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY.
2. COLD PLANING SHALL BE COMPLETED ACCORDING TO THE TYPICAL SECTIONS OR AS DENOTED OTHERWISE ON THE PLANS. A FULL DEPTH BUTT JOINT SHALL BE CONSTRUCTED AT THE PROEJCT BEGIN AND END OR AS OTHERWISE DIRECTED BY THE ENGINEER. ALL JOINTS SHALL BE SAW CUT, INCIDENTAL TO ITEM 210.10 COLD PLANING, BITUMINOUS CONCRETE PAVEMENT.
3. PRIOR TO PAVING, ANY EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE ENGINEER SHALL BE EXCAVATED TO A DEPTH OF THREE INCHES OR AS DIRECTED BY THE ENGINEER. EXCAVATION WILL BE PAID FOR USING THE APPROPRIATE RENTAL ITEMS. THE METHOD OF REMOVAL AND THEUSE OF RENTAL ITEMS SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY WORK BEING DONE. MATERIAL REMOVED SHALL BE REPLACED WITH ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED. EXCAVATED MATERIAL SHALL BE SPREAD ON THE ADJACENT SLOPES OR REMOVED FROM THE PROJECT AS DIRECTED BY TEH ENGINEER AT NO ADDITIONAL COST TO THE STATE.
4. ALL NECESSARY SURFACE PREPARATION INVOLVING PATCHING, POT HOLE REPAIR, AND CRACK SEALING SHALL BE PERFORMED FOLLOWING COLD PLANING AND PRIOR TO PAVING. THE PATCHING OF ALL CRACKS GREATER THAN ONE INCH AND POT HOLE REPAIR SHALL BE COMPLETED WITH ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I). AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED.
5. THE CONTRACTOR SHALL USE CAUTION WHEN COLD PLANING AND PAVING OPERATIONS OCCUR ON BRIDGE DECKS. SHOULD ANY DAMAGE OCCUR TO THE DECK OR MEMBRANE AS A RESULT OF THE CONTRACTOR'S OPERATIONS THE ENGINEER SHALL CONTRACT THE VAOT 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 ENGINEER TO BE AT FAULT FOR THE DAMAGE, THE RECOMMENDED REPAIRS SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE STATE.
6. EDGES OF PAVEMENT SHALL INCLUDE A SAFTEY EDGE. SEE SAFETY EDGE DETAILS (HIGHWAY SAFETY & DESIGN DETAIL HSD-400.01).
7. ALL SIDE ROADS ARE TO BE PAVED 25 FEET FROM THE EDGE OF MAINLINE SHOULDER UNLESS OTHERWISE SPECIFIED IN TEH PLANS OR AS DIRECTED BY THE ENGINEER.
8. ALL EDGES OF PAVEMENT SHALL BE BACKED UP TO FULL HEIGHT WITH AGGREGATE SHOULDER MATERIALS AS DIRECTED BY THE ENGINEER. THIS WORK WILL PAID FOR UNDER 900.680 SPECIAL PROVISION (AGGREGATE SHOULDERS, RAP WITH RAS).
9. ASPHALTIC PLUG-TYPE JOINT SHALL BE INSTALLED AT THE FOLLOWING LOCATION.  
SEE BRIDGE JOINT ASPHALTIC PLUG (STRUCTURES DETAIL SD-516.10)  
  
BRIDGE #7 - ST. JOHNSBURY (MM 1.370) - ASPHALTIC PLUG JOINT
10. THE PAVING PROJECT HAS CONCURRENT WORK ASSOCIATED WITH BF 7000(20). IT IS ANTICIPATED THAT THE WORK ASSOCIATED WITH BF 7000(20) WILL BE COMPLETED BEFORE THIS PROJECT BEGINS, HOWEVER THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES, INCLUDING TRAFFIC CONTROL, WITH THE CORRESPONDING CONTRACTOR. AN ESTIMATED QUANTITY OF BITUMINOUS CONCRETE PAVEMENT (PG 58-34) OR SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34) HAS BEEN INCLUDED FOR THE WEARING SURFACE WITH THE LIMITS OF BF 7000(20).
11. ESTIMATED QUANTITIES OF ITEM 608.15 POWER GRADER RENTAL, ITEM 608.25 ALL PURPOSE EXCAVATOR RENTAL, TYPE I, AND ITEM 608.37 TRUCK RENTAL HAVE BEEN INCLUDED FOR REMOVING BUILT UP SAND, SOD ETC. ADJACENT TO THE SHOULDER, IN NON-GUARDRAIL AREAS, TO ALLOW FREE DRAINAGE OFF THE SHOULDER AS DIRECTED BY THE ENGINEER.
12. GRASS GROWING ADJACENT TO THE PAVEMENT OR THROUGH CRACKS IN THE PAVEMENT , WHICH MAY HAMPER THE PLACEMENT OF NEW BITUMINOUS CONCRETE PAVEMENT, SHALL BE REMOVED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK WILL NOT BE MADE DIRECTLY, BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT (PG 58-34) OR ITEM 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34).
13. PAVEMENT WILL BE AN ALTERNATE AND PAID UNDER ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT (PG 58-34) OR ITEM 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34).
14. ALL BITUMINOUS CONCRETE PAVEMENT TOLERANCE = 1/4" +/- (TOTAL THICKNESS EXCLUDING THE LEVELING COURSE).
15. IF ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT (PG 58-34) ALTERNATE IS SELECTED, THE WEARING COURSE AND LEVELING COURSE SHALL BE TYPE IV BITUMINOUS CONCRETE PAVEMENT. ALL PG GRADED ASPHALT CEMENT USED IN TH E BITUMINOUS CONCRETE PAVEMENT SHALL BE PG 58-34. IF ITEM 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34) ALTERNATE IS SELECTED, THE WEARING COURSE AND LEVELING COURSE SHALL BE TYPE IVS SUPERPAVE BITUMINOUS CONCRETE PAVEMENT. ALL PG GRADED ASPHALT CEMENT USED IN THE SUPERPAVE BITUMINOUS CONCRETE PAVEMENT SHALL BE PG 58-34.
16. RUBBER TIRE COMPACTION ROLLERS SHALL BE USED ON THE LEVELING COURSE TO MAXIMIZE COMPACTION ON THE UNEVEN SURFACES.
17. EMULSIFIED ASPHALT SHALL BE APPLIED AS A TACK COAT ON ALL EXISTING OR COLD PLANED PAVEMENT SURFACES AT ATHE RATE OF 0.080/ GAL/SY AND BETWEEN ALL COURSES OF BITUMINOUS CONCRETE PAVEMENT AT THE RATE OF 0.025 TO 0.040 GAL/SY. EMULSIFIED ASPHALT WILL BE AN ALTERNATE AND PAID UNDER ITEM 404.65 EMULSIFIED ASPHALT OR ITEM 900.683 SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-1H OR CRS-1H).
18. STEEL BEAM GUARDRAIL WITH STEEL POSTS SHALL BE USED ON THIS PROJECT.
19. A 3'-7" OF BACKING IS REQUIRED BEHIND THE FACE OF GUARDRAIL WITH SIX FOOT POSTS. IF THIS CANNOT BE OBTAINED THEN EIGHT FOOT POSTS SHALL BE USED. PAYMENT WILL BE MADE UNDER ITEM 621.20 STEEL BEAM GUARDRAIL, GALVANIZED OR ITEM 621.205 STEEL BEAM GUARDRAIL, GALVANIZED W/8 FOOT POSTS, AS APPROPRIATE.
20. AN ESTIMATED QUANTITY OF ITEM 203.30 EARTH BORROW HAS BEEN INCLUDED FOR USE WITH GUARDRAIL END TERMINAL AREAS. 25 CY OF ITEM 203.30 EARTH BORROW HAS BEEN ESTIMATED FOR EACH NEW END TERMINAL AREA. GUARDRAIL END TERMINAL AREAS SHALL BE CAPPED WITH AN ESTIMATED THREE INCH DEPTH OF 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 TERMINAL AREA. ITEM 653.20 TEMPORARY EROSION MATTING SHALL BE PLACED ON SLOPES GREATER THEN 1:6 CREATED BY THE GUARDRAIL END TERMINAL AREA. THE QUANTITIES INCLUDED REFLECT 25 SY OF ITEM 653.20 TEMPORARY EROSION MATTING FOR EACH NEW GUARDRAIL END TERMINAL AREA. PRIOR TO THE PLACEMENT OF TEMPORARY EROSION MATTING PLACE ITEM 651.35 TOPSOIL, ITEM 651.18 FERTILIZER, ITEM 651.20 AGRICULTURAL LIMESTONE AND ITEM 651.15 SEED.
21. ALL PAVED AND GRAVEL RESIDENTIAL, COMMERCIAL, FIELD AND WOOD DRIVES SHALL RECEIVE A TWO FOOT PAVED APRON UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. ANY AND ALL REQUIRED EXCAVATION AND ASSOCIATED DRIVE GRADING IN DRIVE AREAS SHALL BE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE NEW BITUMINOUS SURFACE SHALL BE CONSTRUCTED AS DIRECTED BY THE ENGINEER AND WILL BE PAID FOR UNDER ITEM 900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES). BITUMINOUS CONCRETE MATERIAL PLACED BY MECHANICAL METHODS AT THESE LOCATION S IS EXCLUDED. ALL OTHER BITUMINOUS MATERIALS PLACED WITHIN THE PROJECT LIMITS, WITHER BY HAND OR MECHANICAL METHODS, WILL BE PAID UNDER ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT (PG 58-34) OR 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34) AS APPLICABLE.

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
PROJECT NOTES SHEET	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET 4	OF 33



**ROADWAY TYPICAL SECTION**  
 NOT TO SCALE  
 DANVILLE:  
 MM 0.000 - MM 1.916 (STA 0+00.00 - STA 101+14.00)  
 ST. JOHNSBURY  
 MM 0.000 - MM 1.543 (STA S 0+00.00 - STA S 80+99.52)

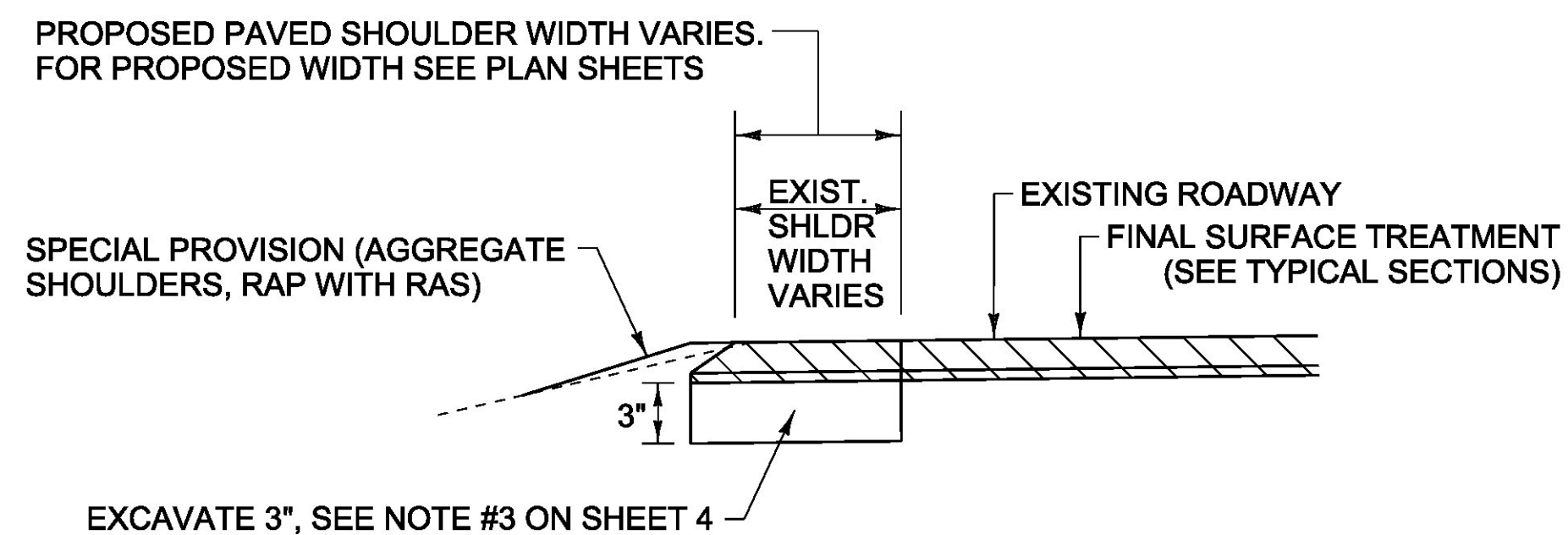
PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME: 16v148.dgn	PLOT DATE: 13-JUN-2017
PROJECT LEADER: B. KIPP	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
TYPICAL SECTIONS SHEET	SHEET 5 OF 33



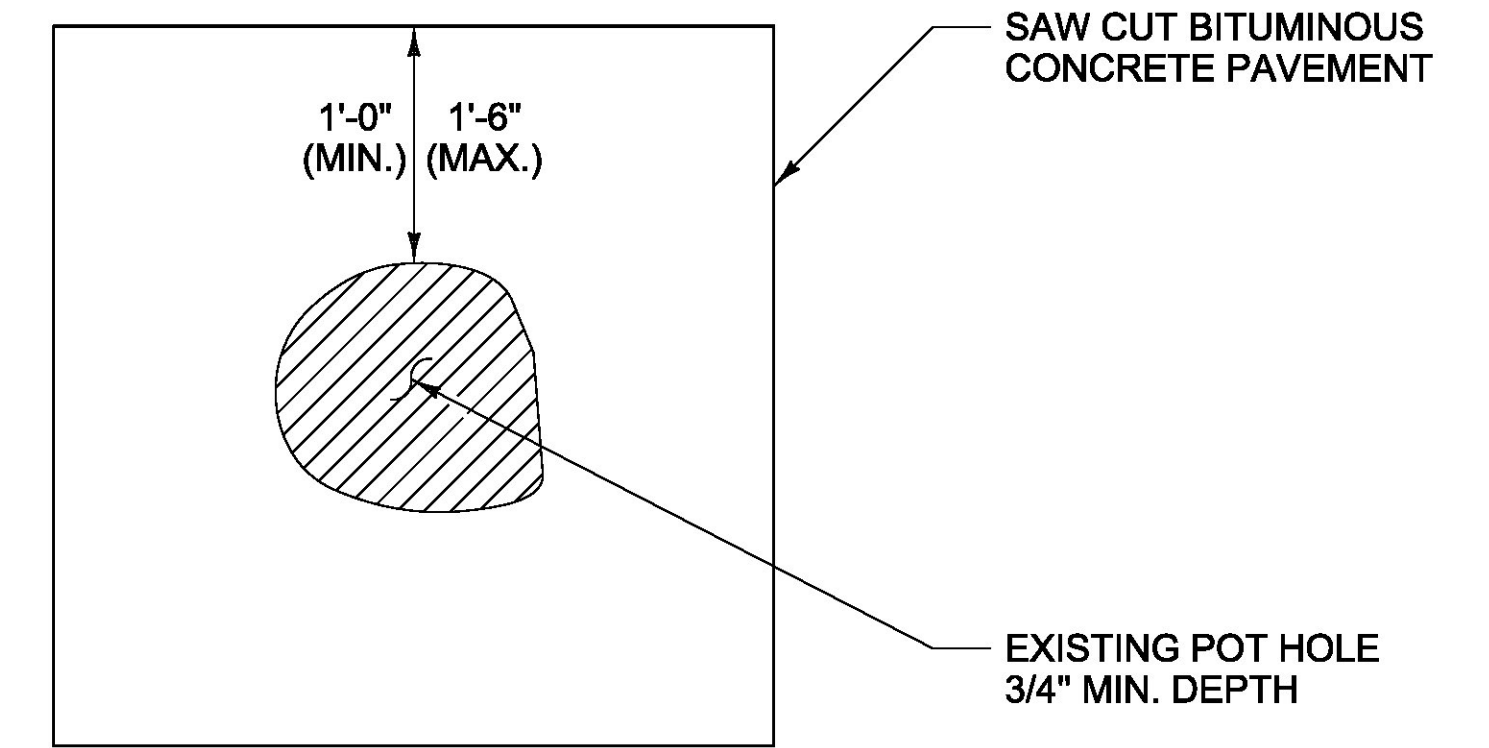
**MAINLINE APPROACH DETAIL**

DANVILLE - 0+20.00  
ST. JOHNSBURY - S 81+13.00

NOTE 1: TEMPORARY ASPHALT WEDGE SHALL BE REMOVED PRIOR TO PAVING. PAYMENT FOR ASPHALTIC WEDGE IS INCIDENTAL TO 490.30 - SUPERPAVE BITUMINOUS CONCRETE PAVEMENT OR 406.25 - BITUMINOUS CONCRETE PAVEMENT.



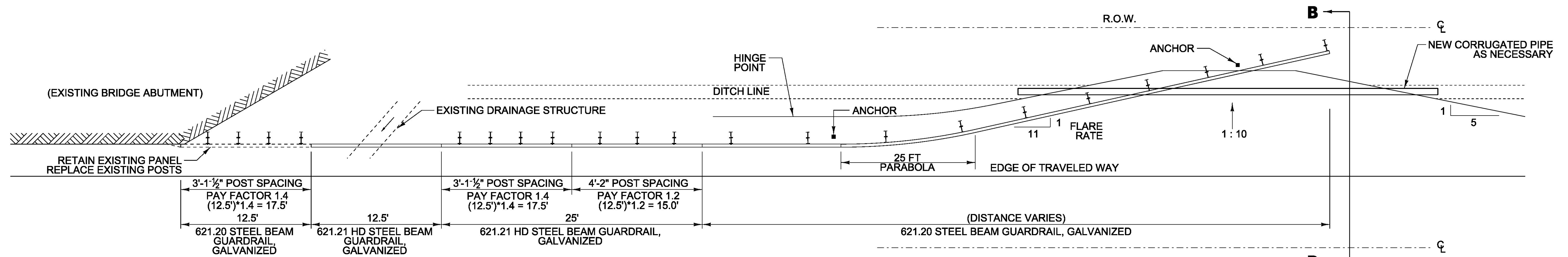
**SHOULDER RECONSTRUCTION DETAIL**



**TYPICAL - POT HOLE REPAIR**

NOTE:

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 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I)

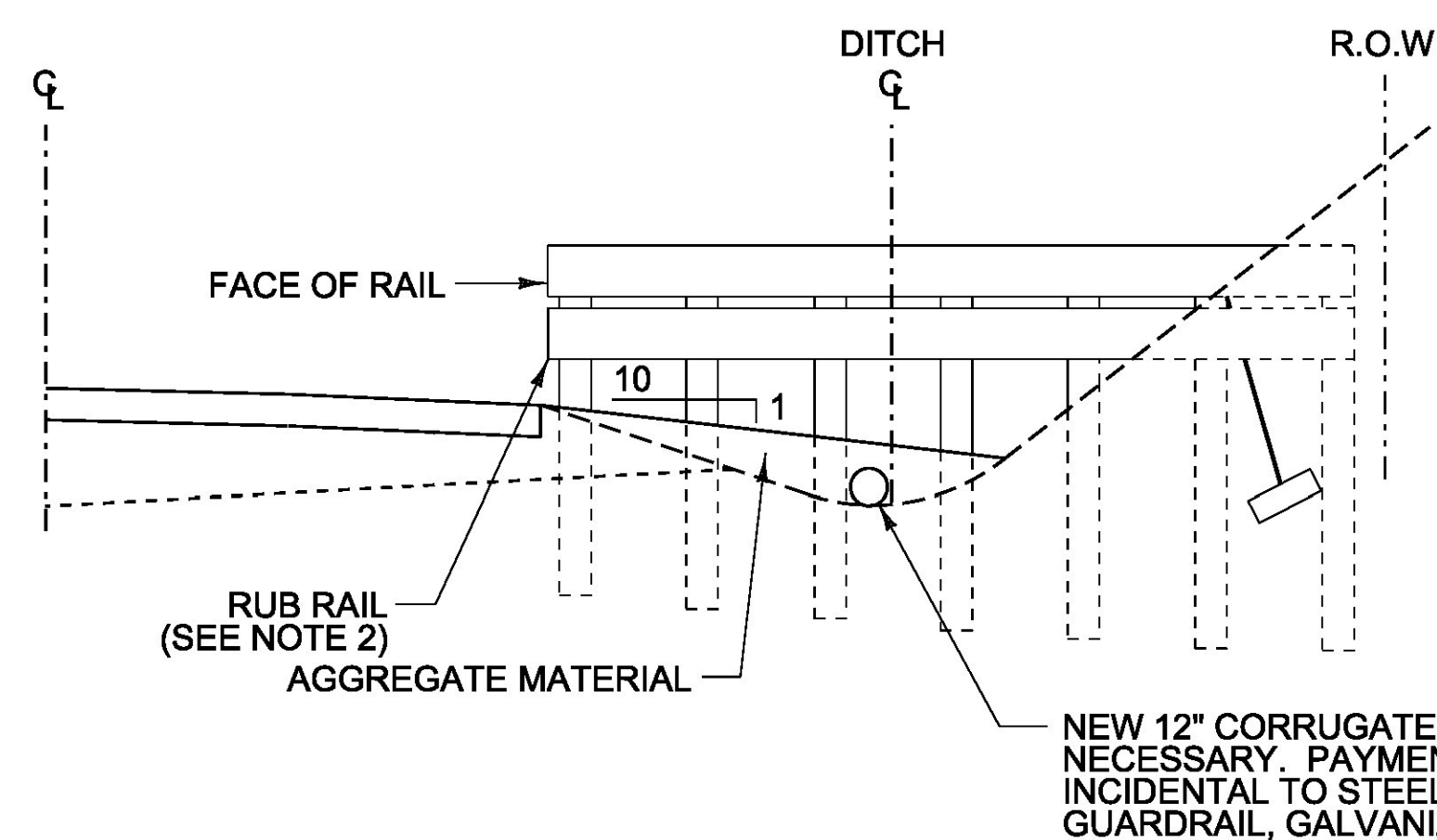


**(MODIFIED) DETAIL FOR BURIED GUARDRAIL ENDS INTO BACKSLOPES**

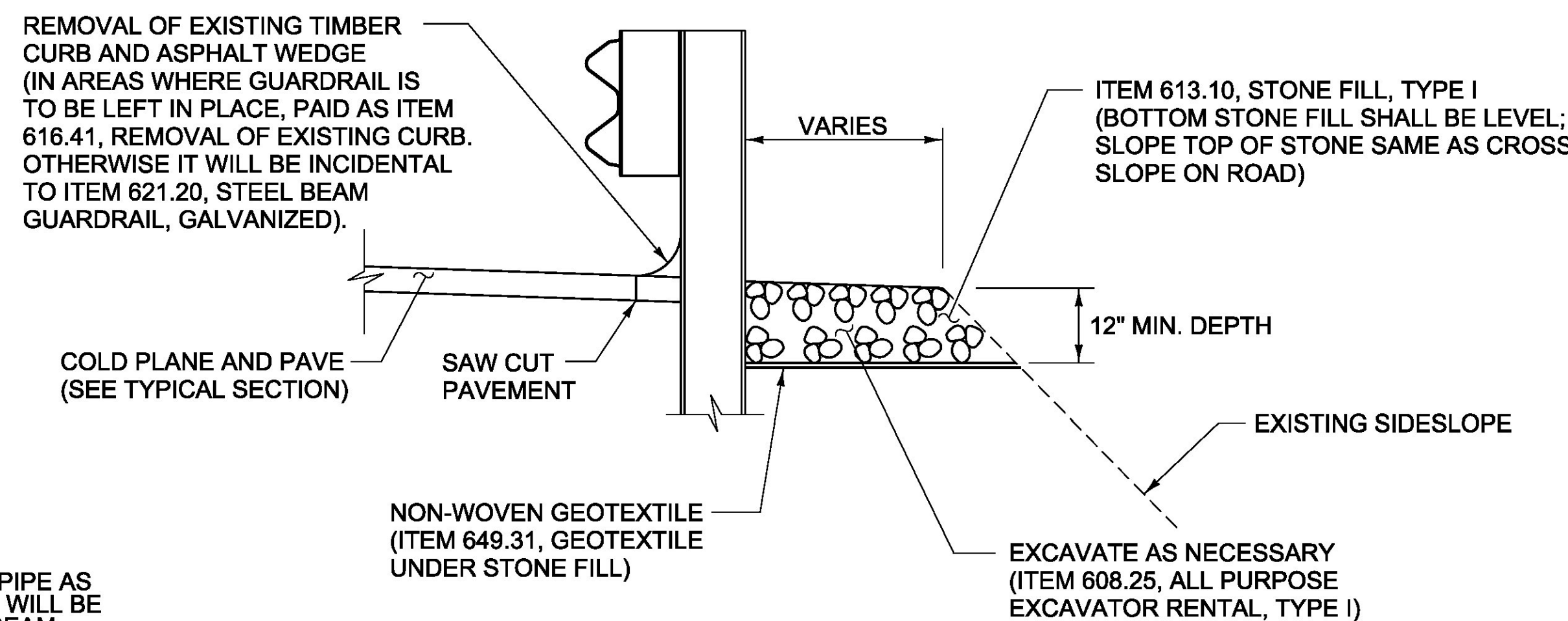
STA 46+75 LT - DANVILLE

**NOTES:**

1. PRIMARY RAIL SHALL REMAIN AT A CONSTANT HEIGHT (LEVEL) RELATIVE TO THE HEIGHT OF RAIL AT THE EDGE OF SHOULDER.
2. ADDITION OF RUB RAIL IS REQUIRED WHEN OPENING BENEATH PRIMARY RAIL EXCEEDS 18 INCHES RUB RAIL EXTENDS FROM THE EDGE OF SHOULDER TO THE BACK SLOPE.

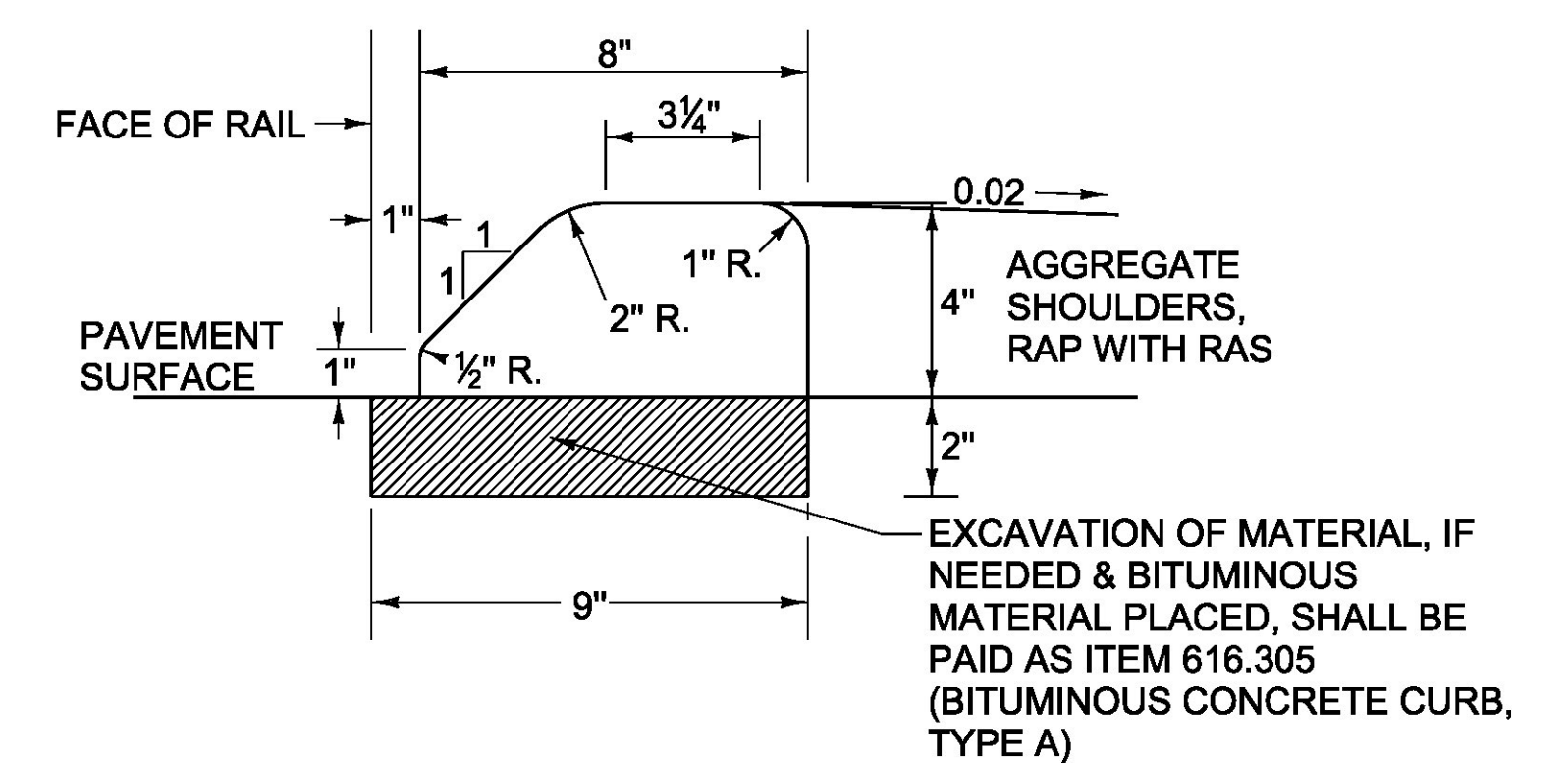


**SECTION B-B**



**SHOULDER RECONSTRUCTION DETAIL**

STA 2+00 TO 6+90 LT - DANVILLE



**USE ONLY WITH STEEL BEAM GUARDRAIL BITUMINOUS CONCRETE CURB, TYPE A**

S 75+46 TO S 80+50 LT - ST. JOHNSBURY

1. HEIGHT OF REVEAL OF CURB SHALL NOT EXCEED FOUR INCHES WHERE DESIGN OR POSTED SPEED IS EQUAL TO OR GREATER THAN 40 MPH AND WHEN INSTALLED WITH GUARDRAIL (STANDARD SHAPE TO BE BURIED TO THIS DEPTH).
2. BITUMINOUS CONCRETE AND CURB SHALL BE IN CONFORMANCE WITH SECTION 616.

PROJECT NAME:	DANVILLE-ST. JOHNSBURY	PLOT DATE:	05-JUN-2017
PROJECT NUMBER:	STP FPAV(9)	DRAWN BY:	B. KIPP
FILE NAME:	16v148.dgn	DESIGNED BY:	B. KIPP
PROJECT LEADER:	B. KIPP	CHECKED BY:	M. FOWLER
DETAIL SHEET		SHEET 6	OF 33

NOT TO SCALE

# QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
	ROADWAY (MINOR ARTERIAL)	ROADWAY (NO FEDERAL PARTICIPATIO)	BRIDGE	FULL C.E.	ROADWAY (MAJOR COLLECTOR)	ROADWAY (ALT A - MINOR ARTERIAL)	ROADWAY (ALT B - MINOR ARTERIAL)	ROADWAY (ALT A - MAJOR)	ROADWAY (ALT B - MAJOR)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
	200				125					325		CY	EARTH BORROW	203.30	EST.			<b>BITUMINOUS CONCRETE PAVEMENT (PG 58-34)</b>
	1				1					2		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-			<b>MINOR ARTERIAL</b>
	23500				30000					53500		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	279			1877 TON TYPE IV, WEARING COURSE
	150				200					350		TON	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.28	EST.			626 TON TYPE IV, LEVELING COURSE
													BEGIN OPTION AA					35 TON TOWN HIGHWAYS, TYPE IV WEARING COURSE
	234				299					533		CWT	EMULSIFIED ASPHALT	404.65	EST.			12 TON TOWN HIGHWAYS, TYPE IV LEVELING COURSE
	234				299					533		CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-1 OR CRS-1H)	900.683	EST.			21 TON SAFETY EDGE DETAIL
													END OPTION AA					158 TON BRIDGE #7
	1				1					2		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-			2729 TON SUBTOTAL
			212							212		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG (@ FINGER/VERMONT JOINT)	516.10	EST.			21 TON ROUNDING
			95							95		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	EST.			2750 TON TOTAL
			100							100		CF	RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE	580.20	EST.			<b>MAJOR COLLECTOR</b>
		1								1		EACH	CHANGING ELEVATION OF SEWER MANHOLES	604.42	-			2612 TON TYPE IV, WEARING COURSE
	15				15					30		HR	POWER GRADER RENTAL	608.15	EST.			871 TON TYPE IV, LEVELING COURSE
	15				15					30		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST.			73 TON TOWN HIGHWAYS, TYPE IV WEARING COURSE
	11				13					24		HR	POWER BROOM RENTAL, TYPE I	608.30	EST.			24 TON TOWN HIGHWAYS, TYPE IV LEVELING COURSE
	20				25					45		HR	POWER BROOM RENTAL, TYPE II	608.31	EST.			30 TON SAFETY EDGE DETAIL
	20				20					40		HR	TRUCK RENTAL	608.37	EST.			
					80					80		CY	STONE FILL, TYPE I	613.10	7			3610 TON SUBTOTAL
	500									500		LF	BITUMINOUS CONCRETE CURB, TYPE A	616.305	EST.			15 TON ROUNDING
	500									500		LF	REMOVAL OF EXISTING CURB	616.41	EST.			3625 TON TOTAL
	237				663					900		LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	25			<b>SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34)</b>
	600									600		LF	STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	621.205	EST.			<b>MINOR ARTERIAL</b>
					45					45		LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21	-			1877 TON TYPE IVS, WEARING COURSE
	8				6					14		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	-			626 TON TYPE IVS, LEVELING COURSE
	4				4					8		EACH	GUARDRAIL APPROACH SECTION, GALV HD STEEL BEAM	621.737	-			35 TON TOWN HIGHWAYS, TYPE IVS WEARING COURSE
	500									500		LF	REMOVE AND RESET GUARDRAIL	621.75	EST.			12 TON TOWN HIGHWAYS, TYPE IVS LEVELING COURSE
	60									60		EACH	REPLACE GUARDRAIL POST ASSEMBLY	621.76	EST.			21 TON SAFETY EDGE DETAIL
	30									30		EACH	REPLACE GUARDRAIL BEAM UNIT	621.77	EST.			158 TON BRIDGE #7
	870.5				859.5					1730		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	EST.			2729 TON SUBTOTAL
	225				225					450		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.			21 TON ROUNDING
	350				350					700		HR	FLAGGERS	630.15	EST.			2750 TON TOTAL
				1						1		LS	FIELD OFFICE, ENGINEERS	631.10	-			<b>MAJOR COLLECTOR</b>
				1						1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-			2612 TON TYPE IVS, WEARING COURSE
				3000						3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	-			871 TON TYPE IVS, LEVELING COURSE
					1					1		LS	MOBILIZATION/DEMOBILIZATION (MAJOR COLLECTOR)	635.11	-			73 TON TOWN HIGHWAYS, TYPE IVS WEARING COURSE
	1									1		LS	MOBILIZATION/DEMOBILIZATION (MINOR ARTERIAL)	635.11	-			24 TON TOWN HIGHWAYS, TYPE IVS LEVELING COURSE
					1					1		LS	TRAFFIC CONTROL (MAJOR COLLECTOR)	641.10	-			30 TON SAFETY EDGE DETAIL
	1									1		LS	TRAFFIC CONTROL (MINOR ARTERIAL)	641.10	-			3610 TON SUBTOTAL
	1				1					2		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	EST.			15 TON ROUNDING

PROJECT NAME: DANVILLE-ST. JOHNSBURY  
 PROJECT NUMBER: STP FPAV(9)  
 FILE NAME: 16v148.dgn PLOT DATE: 07-JUN-2017  
 PROJECT LEADER: B. KIPP DRAWN BY: B. KIPP  
 DESIGNED BY: B. KIPP CHECKED BY: B. KIPP  
 QUANTITY SHEET 1 SHEET 7 OF 33

# QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
	ROADWAY (MINOR ARTERIAL)	ROADWAY (NO FEDERAL PARTICIPATIO)	BRIDGE	FULL C.E.	ROADWAY (MAJOR COLLECTOR)	ROADWAY (ALT A - MINOR ARTERIAL)	ROADWAY (ALT B - MINOR ARTERIAL)	ROADWAY (ALT A - MAJOR)	ROADWAY (ALT B - MAJOR)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
	15100				19650					34750		LF	4 INCH WHITE LINE, WATERBORNE PAINT	646.201	54			
	15500				18800					34300		LF	4 INCH YELLOW LINE, WATERBORNE PAINT	646.2111	47			
	40				25					65		LF	24 INCH STOP BAR, WATERBORNE PAINT	646.261	EST.			
	10				13					23		EACH	LETTER OR SYMBOL, WATERBORNE PAINT	646.301	-			
	30200				39300					69500		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	54			
	31000				37600					68600		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	47			
	80				50					130		LF	TEMPORARY 24 INCH STOP BAR, PAINT	646.682	EST.			
	20				26					46		EACH	TEMPORARY LETTER OR SYMBOL, PAINT	646.692	-			
	3100				3950					7050		EACH	LINE STRIPING TARGETS	646.76	92			
	150									150		LF	PAINTED CURB	646.81	EST.			
					230					230		SY	GEOTEXTILE UNDER STONE FILL	649.31	12			
	50				50					100		LB	SEED	651.15	EST.			
	50				50					100		LB	FERTILIZER	651.18	EST.			
	0.5				0.5					1		TON	AGRICULTURAL LIMESTONE	651.20	EST.			
	40				25					65		CY	TOPSOIL	651.35	EST.			
	200				125					325		SY	TEMPORARY EROSION MATTING	653.20	EST.			
	8				6					14		EACH	DELINEATOR WITH STEEL POST	676.10	-			
	1				1					2		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-			
					2					2		EACH	SPECIAL PROVISION (DECOMMISSION CURB DROP INLET)	900.620	-			
	1				1					2		LU	SPECIAL PROVISION (RAS BLEND PAY ADJUSTMENT)(N.A.B.I.)	900.650	-			
	430				420					850		SY	SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)	900.675	13			
	248				327					575		TON	SPECIAL PROVISION (AGGREGATE SHOULDERS, RAP WITH RAS)	900.680	EST.			
	50				50					100		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I)	900.680	EST.			
													BEGIN ALTERNATE A					
						2750			3625	6375		TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25	36			
						1			1	2		LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	406.28	-			
													END ALTERNATE A					
													BEGIN ALTERNATE B					
							2750		3625	6375		TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	490.30	36			
							1		1	2		LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31	-			
													END ALTERNATE B					

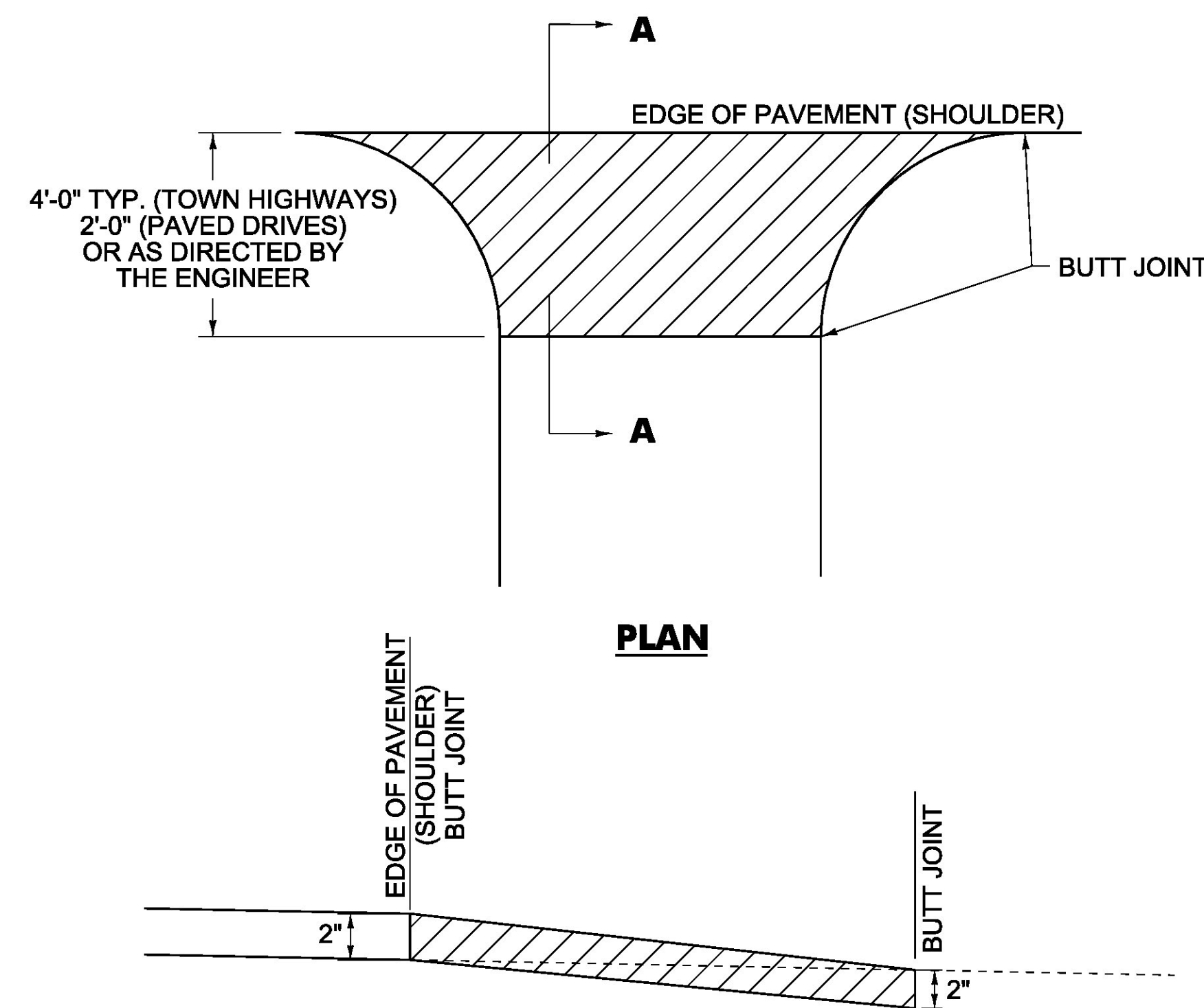
PROJECT NAME: DANVILLE-ST. JOHNSBURY  
 PROJECT NUMBER: STP FPAV(9)  
 FILE NAME: 16v148.dgn PLOT DATE: 12-JUN-2017  
 PROJECT LEADER: B. KIPP DRAWN BY: B. KIPP  
 DESIGNED BY: B. KIPP CHECKED BY: M. FOWLER  
 QUANTITY SHEET 2 SHEET 8 OF 33

LOCATION			DRAINAGE				GUARDRAIL													MISCELLANEOUS				REMARKS		
			601.0015	604.412	604.415	900.62	621.20	621.21	621.205	621.60	621.737	621.75	621.76	621.77	621.79	621.80	676.10	676.12	900.620	203.3	613.1	651.15	653.20			
STA	STA	POS	18" CSP .064 (2-2/3 X 1/2)	REHAB. DI, CB, OR MH, CLASS I	REHAB. DI, CB, OR MH, CLASS II	SPECIAL PROVISION (DECOMMISSION ON DI)	STEEL BEAM GUARDRAIL, GALV.	HD STEEL BEAM GUARDRAIL, GALVANIZED	STEEL BEAM GUARDRAIL, GALVANIZED W/8 FT POSTS	ANCHOR FOR STEEL BEAM RAIL	GUARDRAIL APPROACH SECTION, GALV HD STEEL BEAM	REMOVE AND RESET GUARDRAIL	REPLACE GUARDRAIL POST ASSEMBLY	REPLACE GUARDRAIL BEAM UNIT	ADJUST HEIGHT OF GUARDRAIL	REMOVAL AND DISPOSAL OF GUARDRAIL	DELIN. W/STEEL POST	REMOVAL OF EXIST. DELIN.	SPECIAL PROVISION (STEEL BEAM GUARDRAIL GALV.) (@ RADIUS)	EARTH BORROW	STONE FILL, TYPE I	SEED	TEMP EROSION MATTING			
			LF	EACH	EACH		LF	LF	LF	EACH	EACH	LF	EACH	EACH	LF	LF	EACH	EACH	EACH	CY	CY	LB	SY			
0+20.0	S 81+13.0	LT/RT											60	30										ESTIMATED QUANTITY TO BE USED AS DIRECTED BY THE ENGINEER		
DANVILLE																										
1+78.0	7+96.0	LT				2	525.0			1							618.0	1		25	73		25			
BRIDGE #1																										
31+88.0	32+37.0	LT															50.0									
31+98.0	32+12.0	LT					14.5			1								1		25			25			
32+12.0	32+37.0	LT											1													
32+63.0	32+88.0	LT																								
32+63.0	33+00.0	LT															37.5									
32+88.0	33+00.0	LT					14.5			1								1		25			25			
BRIDGE #1																										
31+25.0	32+37.0	RT															112.5									
31+98.0	32+12.0	RT					14.5			1								1		25			25			
32+12.0	32+37.0	RT											1													
32+63.0	32+88.0	RT																								
32+63.0	33+00.0	RT																								
32+88.0	33+00.0	RT					14.5			1								1		25			25			
46+56.0	47+44.0	LT					67.5	45.0		1														SEE MODIFIED BUREID END TERMINAL DETAIL		
ST. JOHNSBURY																										
S 14+93.5	S 20+93.5	LT							600.0	2						600.0	2			50			50			
BRIDGE #5																										
S 23+11.0	S 23+38.0	LT					27.0			1																
S 23+12.0	S 23+64.0	LT															50.0									
S 23+38.0	S 23+63.0	LT											1													
S 23+76.0	S 24+26.0	LT																								
S 23+76.0	S 24+01.0	LT																								
S 24+01.0	S 24+78.0	LT					77.0			1										25			25			
BRIDGE #5																										
S 23+00.0	S 23+38.0	RT					39.5			1										25			25			
S 23+04.0	S 23+64.0	RT																								
S 23+38.0	S 23+63.0	RT																								
S 23+76.0	S 24+01.0	RT																								
S 23+76.0	S 24+51.0	RT																								
S 24+01.0	S 24+53.0	RT					52.0			1										25			25			
S 25+85.0	S 26+07.0	RT					14.5			1										25			25			
S 30+42.0	S 30+57.0	RT					14.5			1										25			25			
S 76+46.0	S 80+50.0	LT																								
SUBTOTAL SHEET 1			0.0	0	0	2	875.0	45.0	600	14	8	500.0	60	30	0.0	1722.0	14	0	0	325	73	0	325			
TOTAL ROUNDING			0.0	0	0	0	25.0	0.0	0	0	0	0.0	0	0	0.0	8.0	0	0	0	0	7	0	0			
PROJECT TOTAL			0.0	0	0	2	900.0	45.0	600	14	8	500.0	60	30	0.0	1730.0	14	0	0	325	80	0	325			

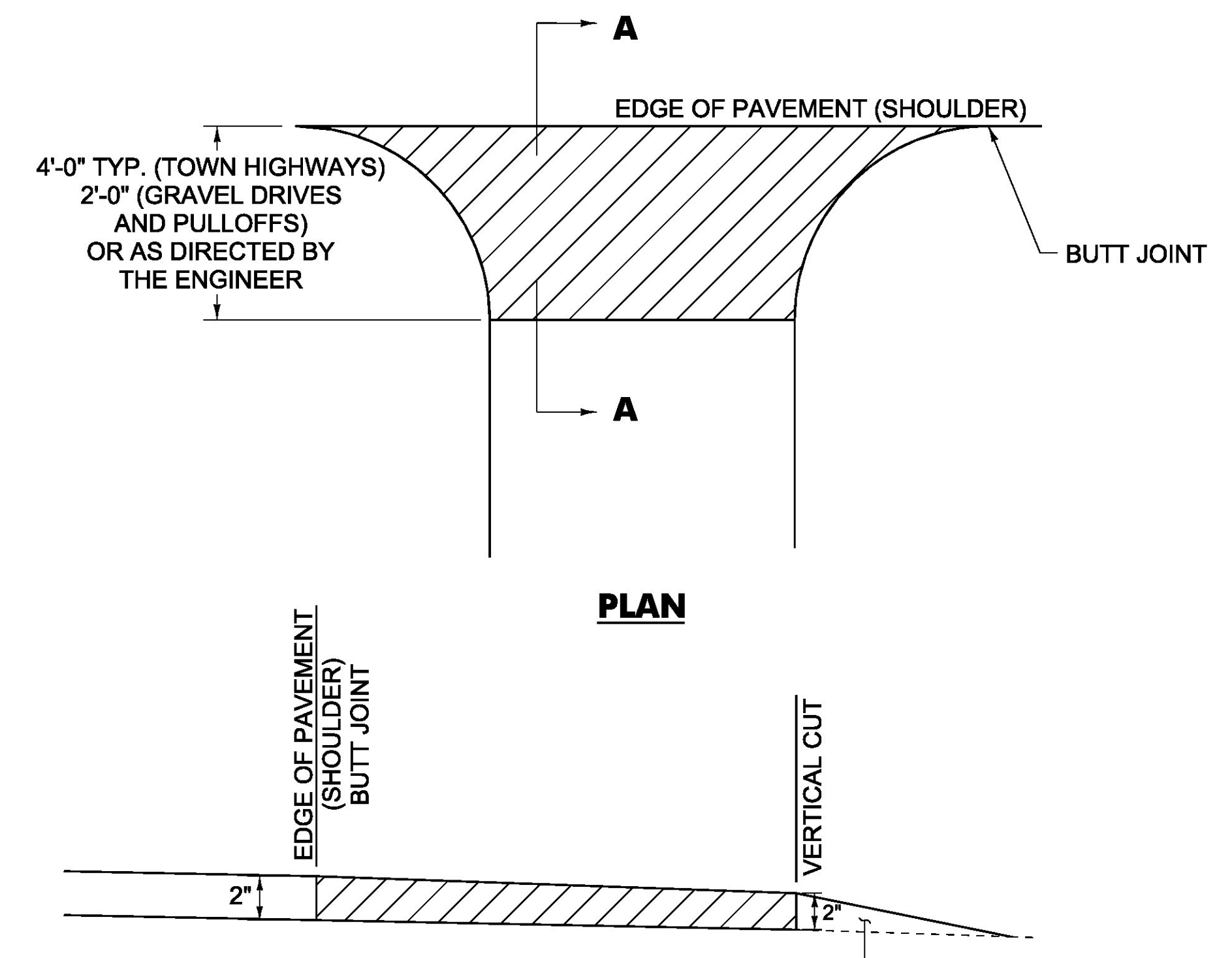
PROJECT NAME: DANVILLE-ST. JOHNSBURY  
 PROJECT NUMBER: STP FPAV(9)  
 FILE NAME: 16v148.dgn PLOT DATE: 05-JUN-2017  
 PROJECT LEADER: B. KIPP DRAWN BY: B. KIPP  
 DESIGNED BY: B. KIPP CHECKED BY: M. FOWLER  
 ITEM DETAIL SHEET SHEET 9 OF 33

### LOCATION OF DRIVES

STATION	POSITION	QUANTITY (SY)
10+00	RT	7
18+25	RT	11
19+20	LT	32
20+35	RT	28
27+00	LT	8
34+85	RT	12
44+80	LT	17
51+60	LT	16
55+50	LT	29
58+50	RT	11
59+00	LT	27
65+10	LT	11
66+20	RT	9
70+25	LT	13
72+00	LT	31
75+10	LT	11
77+75	LT	13
80+90	LT	18
82+50	LT	43
87+00	LT	9
98+00	LT	44
101+00	RT	11
TOTAL FOR MINOR ARTERIAL		413
S 6+40	RT	13
S 7+25	LT	12
S 15+20	LT	12
S 22+00	RT	42
S 25+50	RT	71
S 25+70	RT	10
S 27+10	LT	11
S 34+40	LT	9
S 36+50	LT	12
S 36+80	RT	15
S 41+10	LT	9
S 45+50	LT	11
S 47+90	LT	15
S 48+60	RT	28
S 51+25	RT	11
S 51+65	LT	11
S 52+35	RT	17
S 54+60	RT	18
S 55+60	LT	18
S 58+15	LT	9
S 60+55	RT	13
S 60+80	LT	15
S 65+60	LT	18
S 66+05	RT	18
S 66+55	LT	9
TOTAL FOR MAJOR COLLECTOR		424
ROUNDING		13
TOTAL		850



**SECTION A - A**  
**HANDWORK DETAILS FOR PAVED**  
**TOWN HIGHWAYS AND DRIVES**



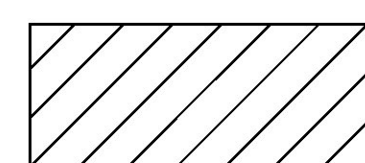
**SECTION A - A**  
**HANDWORK DETAILS FOR GRAVEL**  
**TOWN HIGHWAYS, PULLOFFS AND DRIVES**

IF ADDITIONAL MATERIAL IS REQUIRED THE CONTRACTOR SHALL USE AGGREGATE SHOULDERS OR AGGREGATE SHOULDERS, RAP PER SECTION 402. (PAYMENT WILL BE INCIDENTAL TO ITEM 900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES))

#### NOTES

- PAVING LIFT NOT TO EXCEED TWO INCHES.
- THE COST OF PLACING SUBBASE MATERIAL, CLEANING EXISTING PAVED SURFACES, INCLUDING POWER EQUIPMENT, AND FOR FILLING JOINTS, CRACKS AND HOLES AT LEAST 24 HOURS BEFORE PAVING, WILL NOT BE PAID DIRECTLY BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.675, SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES).
- EXCAVATION NEEDED TO ACHIEVE PROPER DRIVE AND PULLOFF SLOPES WILL NOT BE PAID DIRECTLY BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.675, SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES).
- EMULSIFIED ASPHALT FOR DRIVES, PULLOFFS AND TOWN HIGHWAYS WILL BE CONSIDERED INCIDENTAL TO ITEM 900.675, SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES).

#### LEGEND

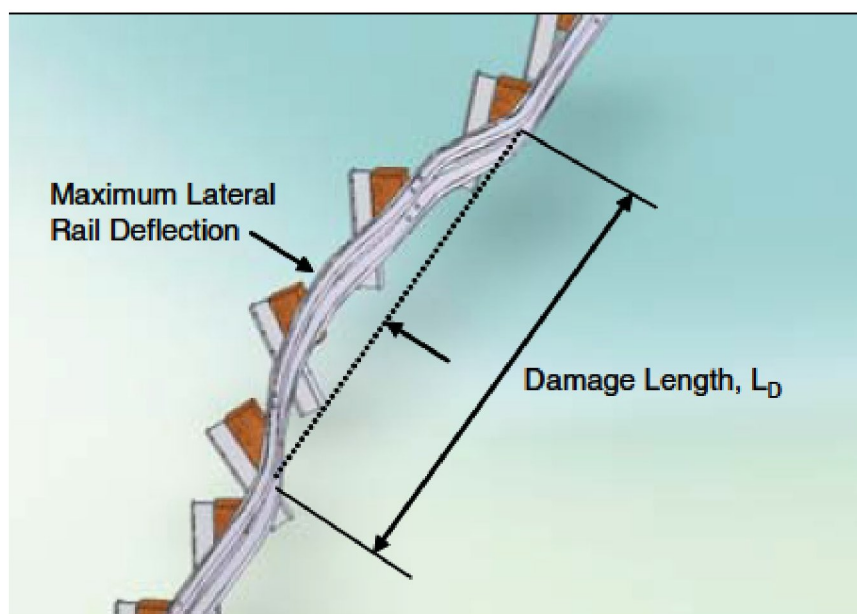
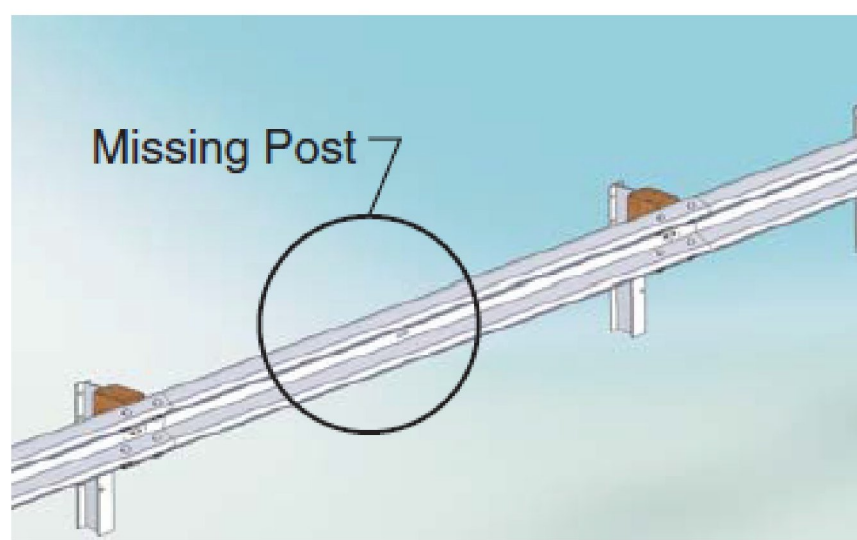
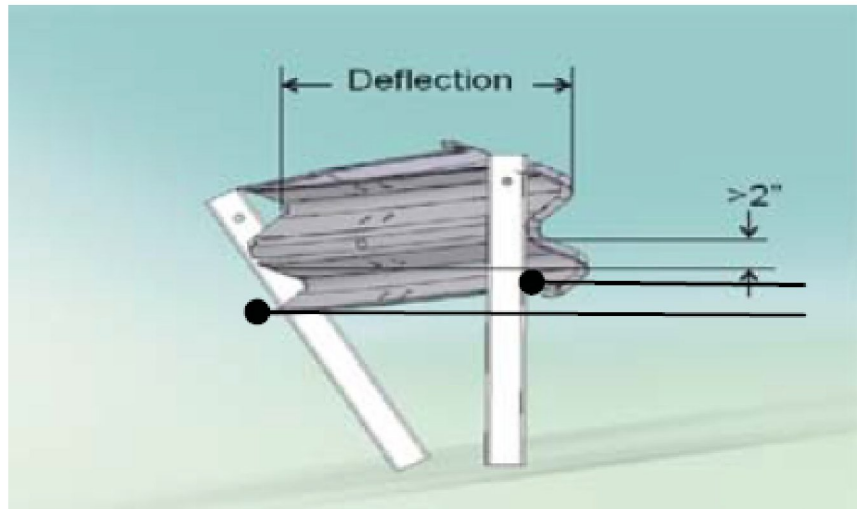
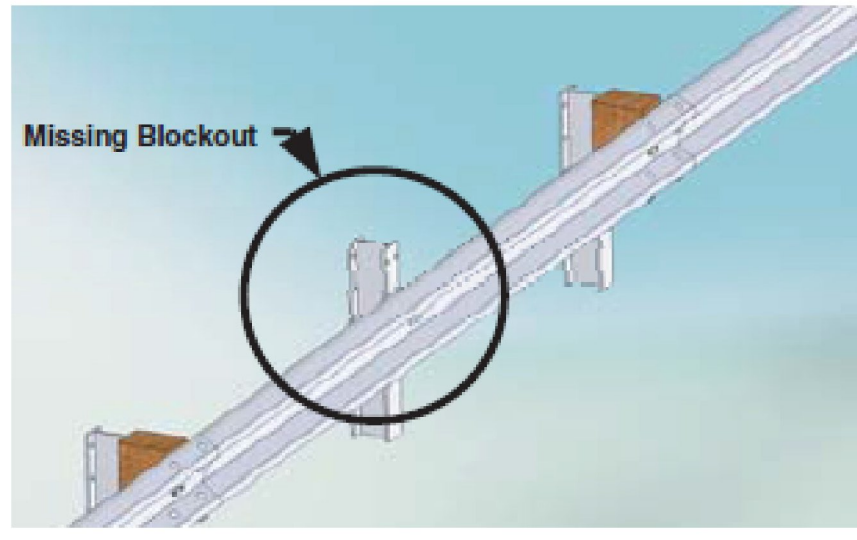
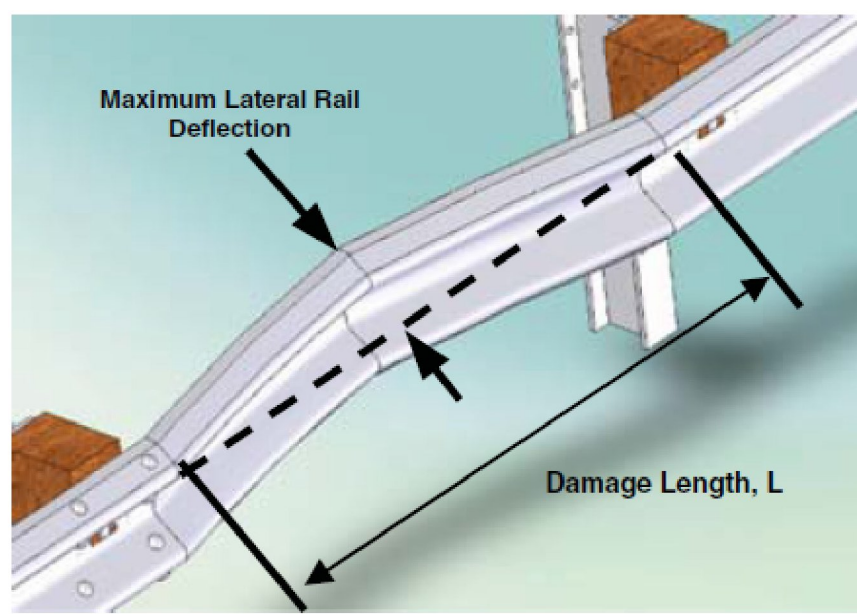
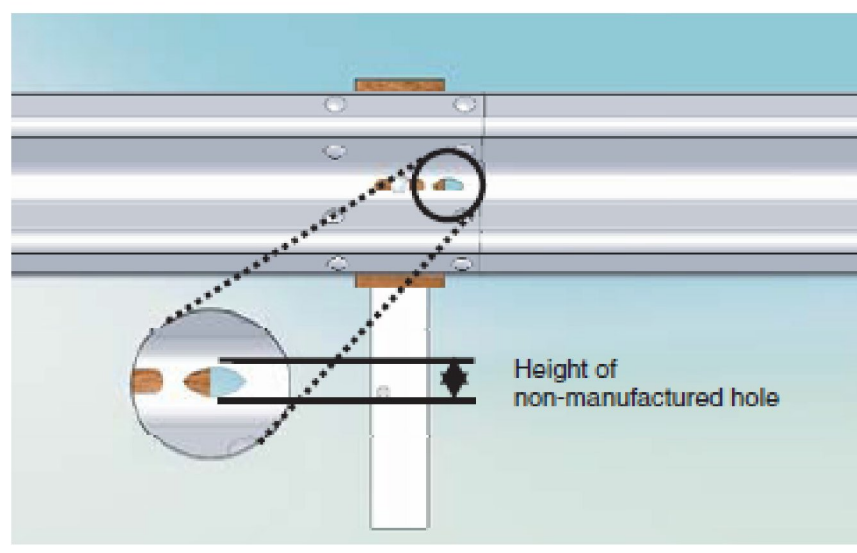
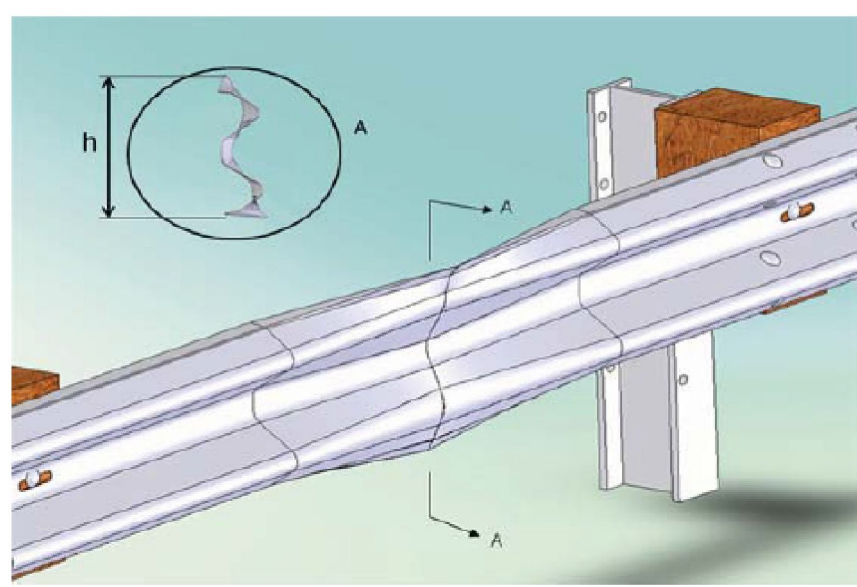

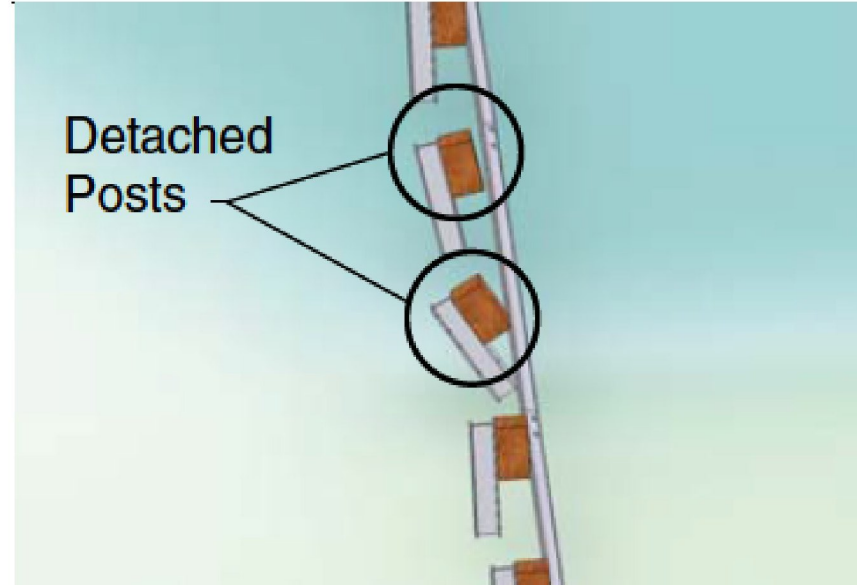


ITEM 900.675 - SPECIAL PROVISION  
(HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)

PROJECT NAME: DANVILLE-ST. JOHNSBURY  
PROJECT NUMBER: STP FPAV(9)

FILE NAME: 16v148.dgn PLOT DATE: 05-JUN-2017  
PROJECT LEADER: B. KIPP DRAWN BY: B. KIPP  
DESIGNED BY: B. KIPP CHECKED BY: M. FOWLER  
HANDWORK DETAIL SHEET SHEET 10 OF 33

**GUARDRAIL REPLACEMENT GUIDELINES**

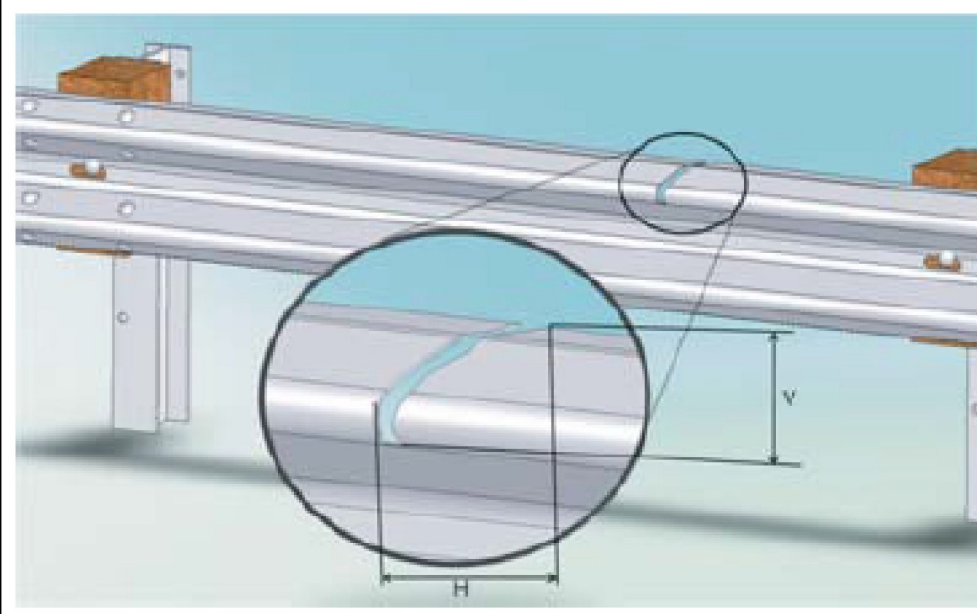
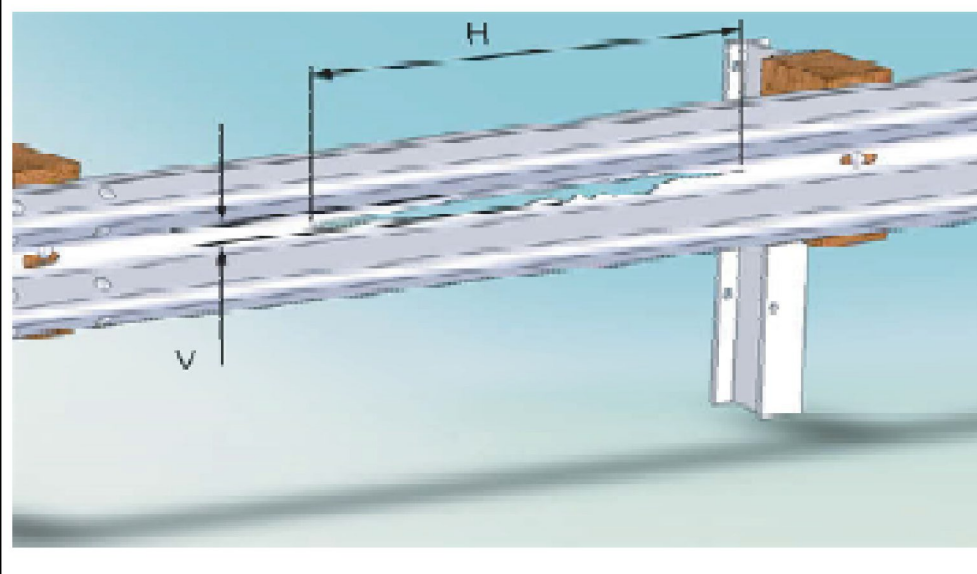
DAMAGE TYPE	REPAIR THRESHOLD	RELATIVE PRIORITY	MEASUREMENT	DAMAGE TYPE	REPAIR THRESHOLD	RELATIVE PRIORITY	MEASUREMENT	
POST AND RAIL DEFLECTION	ONE OR MORE OF THE FOLLOWING THRESHOLDS: <ul style="list-style-type: none"> <li>MORE THAN 9 IN. LATERAL DEFLECTION ANYWHERE OVER A 25 FT LENGTH OF RAILTOP OF RAIL</li> <li>HEIGHT 2 OR MORE INCHES LOWER THAN ORIGINAL TOP OF RAIL HEIGHT</li> </ul>	HIGH		POST AND RAIL DEFLECTION	ONE OR MORE POSTS <ul style="list-style-type: none"> <li>MISSING</li> <li>CRACKED ACROSS THE GRAIN</li> <li>BROKEN</li> <li>ROTTED</li> <li>WITH METAL TEARS</li> </ul>	HIGH		
	6-9 IN. LATERAL DEFLECTION ANYWHERE OVER A 25-FT LENGTH OF RAIL	MEDIUM			MISSING BLOCKOUT	ANY BLOCKOUTS <ul style="list-style-type: none"> <li>MISSING</li> <li>CRACKED ACROSS THE GRAIN</li> <li>CRACKED FROM TOP OR BOTTOM OF BLOCK OUT</li> <li>ROTTED</li> </ul>	MEDIUM	
	LESS THAN 6 IN. OF LATERAL DEFLECTION OVER A 25-FT LENGTH OF RAIL	LOW	(WEAK POST W-BEAM SHOWN ONLY FOR CLARITY. EACH MEASUREMENT TAKE AT THE RAIL'S MIDDLE FOLD)			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
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		DAMAGE AT A RAIL SPLICE	MORE THAN 1 SPLICE BOLT: <ul style="list-style-type: none"> <li>MISSING</li> <li>DAMAGED</li> <li>VISIBLY MISSING ANY UNDERLYING RAIL</li> <li>TORN THROUGH RAIL</li> </ul>	HIGH		
	LESS THAN 6 IN. OF LATERAL DEFLECTION BETWEEN ANY TWO ADJACENT POSTS	LOW			1 SPLICE BOLT: <ul style="list-style-type: none"> <li>MISSING</li> <li>DAMAGED</li> <li>VISIBLY MISSING ANY UNDERLYING RAIL</li> <li>TORN THROUGH RAIL</li> </ul>	MEDIUM		
RAIL FLATTENING	ONE OR MORE OF THE FOLLOWING THRESHOLDS: <ul style="list-style-type: none"> <li>RAIL CROSS SECTION HEIGHT MORE THAN 17 IN. (SUCH AS MAY OCCUR IF RAIL IS FLATTENED)</li> <li>RAIL CROSS SECTION HEIGHT LESS THAN 9 IN. (SUCH AS A DENT TO TOP EDGE)</li> </ul>	MEDIUM			<ul style="list-style-type: none"> <li>MORE THAN 2 HOLES LESS THAN 1 IN. HEIGHT IN A 12.5-FT LENGTH OF RAIL</li> <li>ANY HOLES GREATER THAN 1 IN. IN HEIGHT</li> <li>ANY HOLE WHICH INTERSECTS EITHER THE TOP OR BOTTOM EDGE OF THE RAIL.</li> </ul>	HIGH		
	RAIL CROSS SECTION HEIGHT BETWEEN 9 AND 17 IN.	LOW						MEDIUM
POSTS SEPARATED FROM RAIL	<ul style="list-style-type: none"> <li>2 OR MORE POSTS WITH BLOCKOUT ATTACHED WITH POST/RAIL SEPARATION LESS THAN 3 IN.</li> <li>1 OR MORE POSTS WITH POST/RAIL SEPARATION WICH EXCEEDS 3 IN.</li> </ul>	MEDIUM			<ul style="list-style-type: none"> <li>1-2 HOLES LESS TH AN 1 IN. IN HEIGHT IN A 12.5-FT LENGTH OF RAIL</li> </ul>	MEDIUM		
	<ul style="list-style-type: none"> <li>1 POST, WITH BLOCKOUT ATTACHED, WIT POST/RAIL SEPARATION LESS THAN 3 IN.</li> </ul>	LOW						

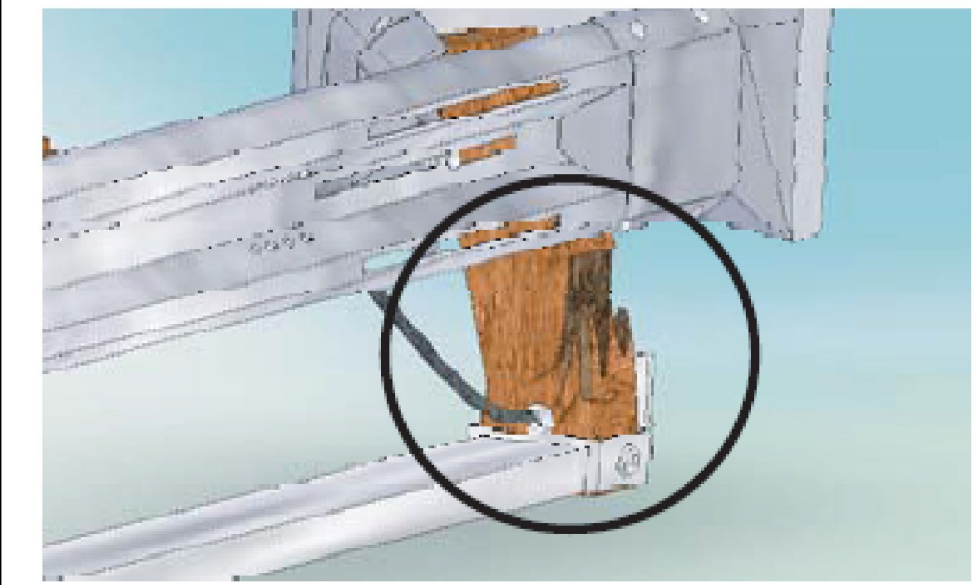
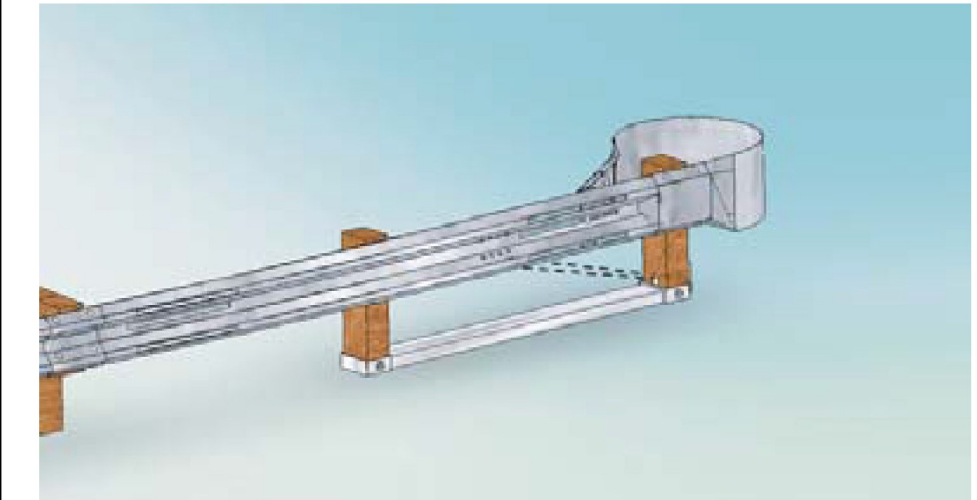
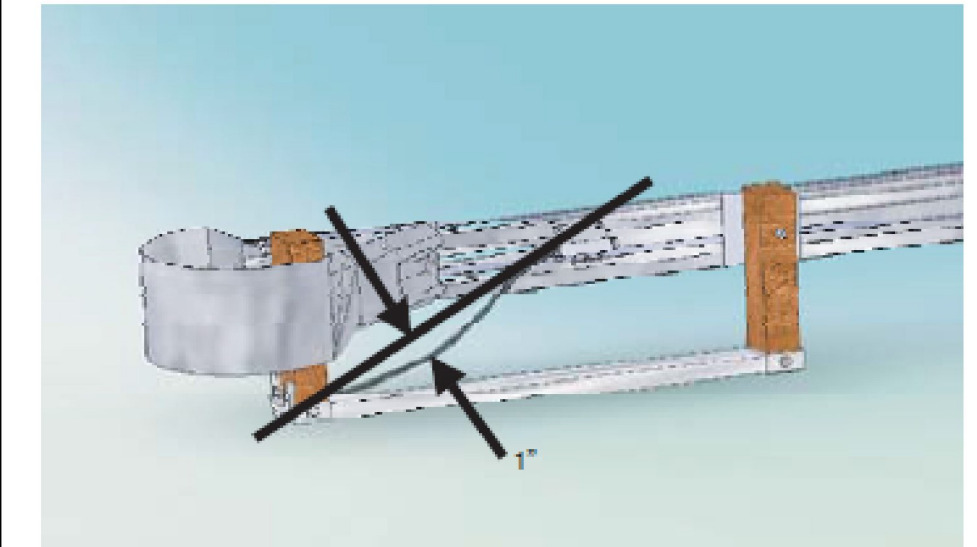
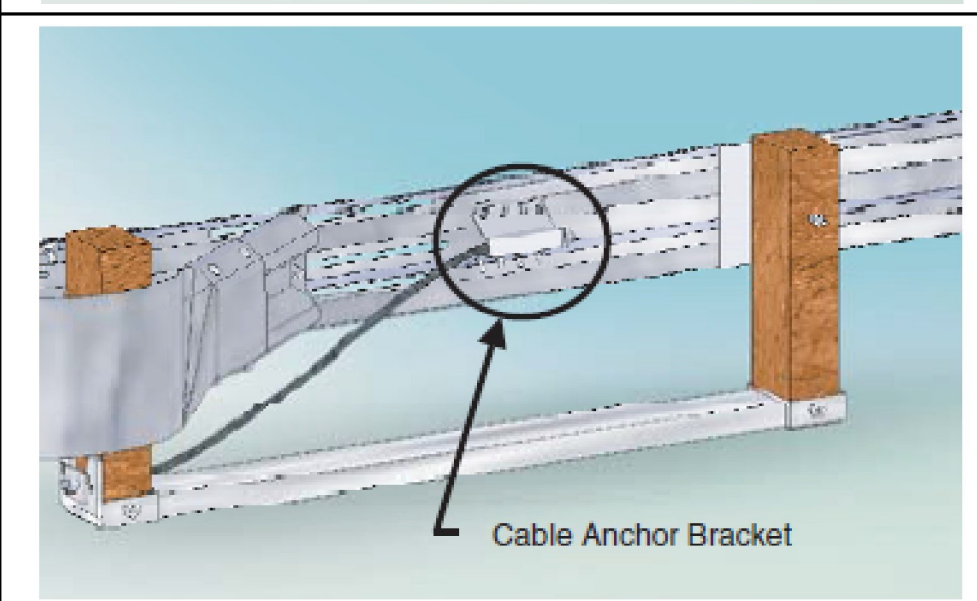
**NOTES:**

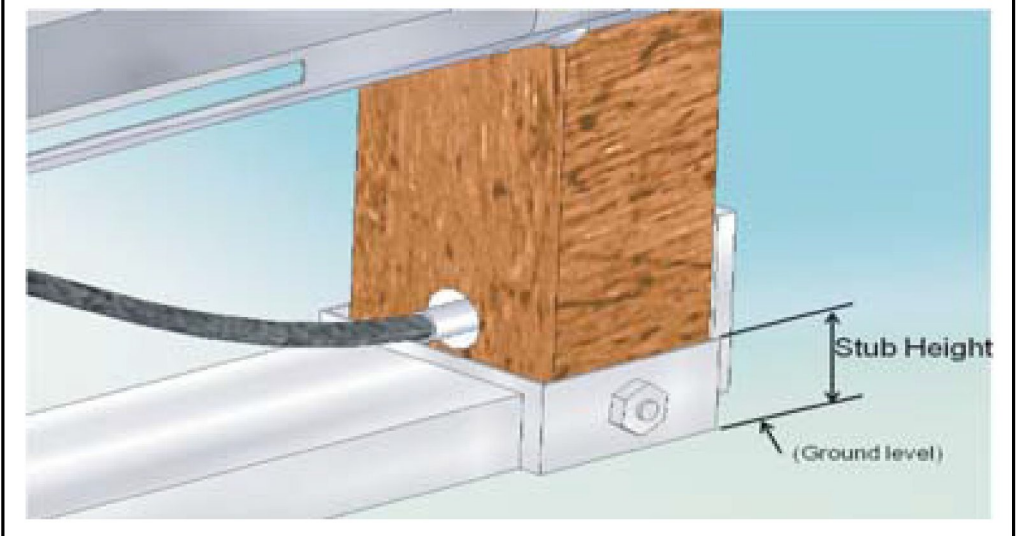
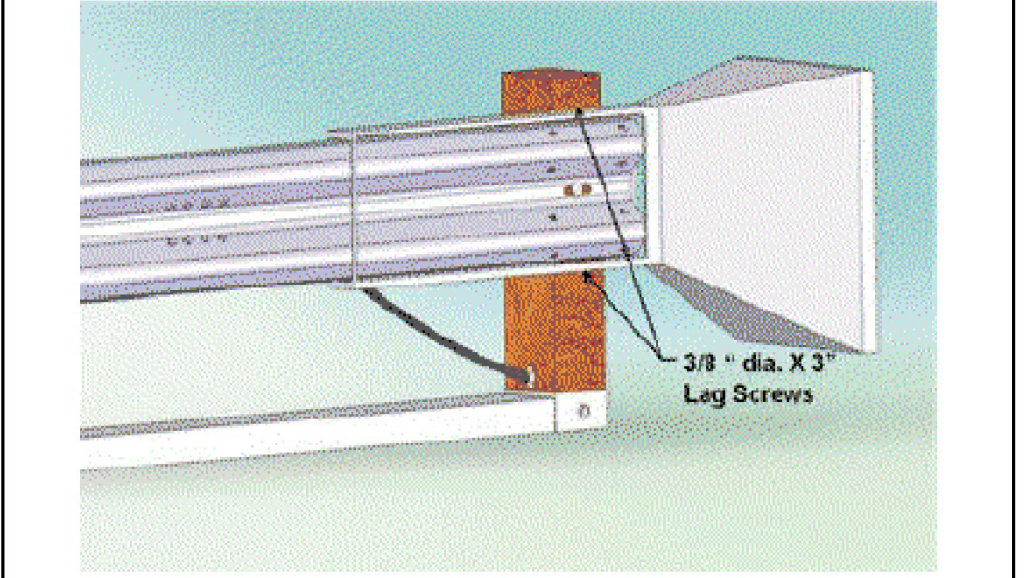
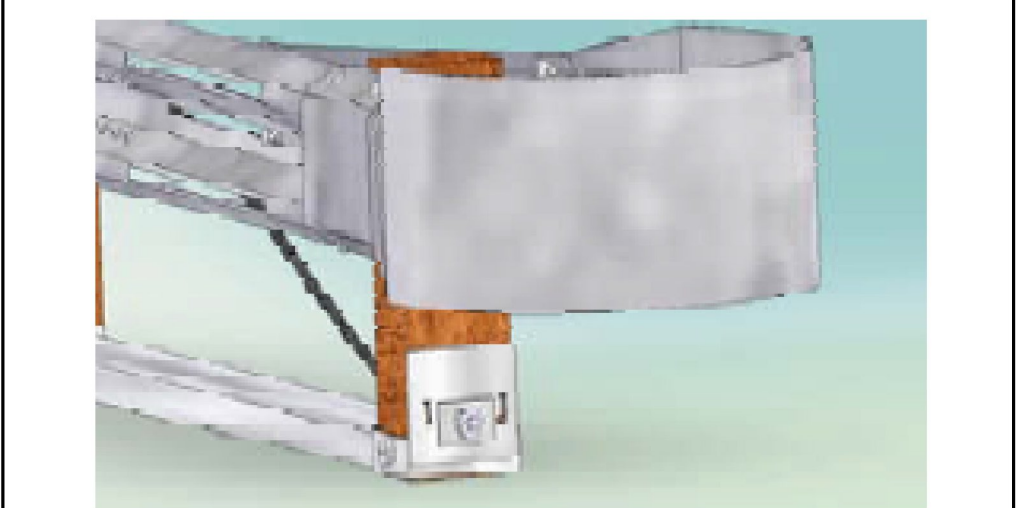
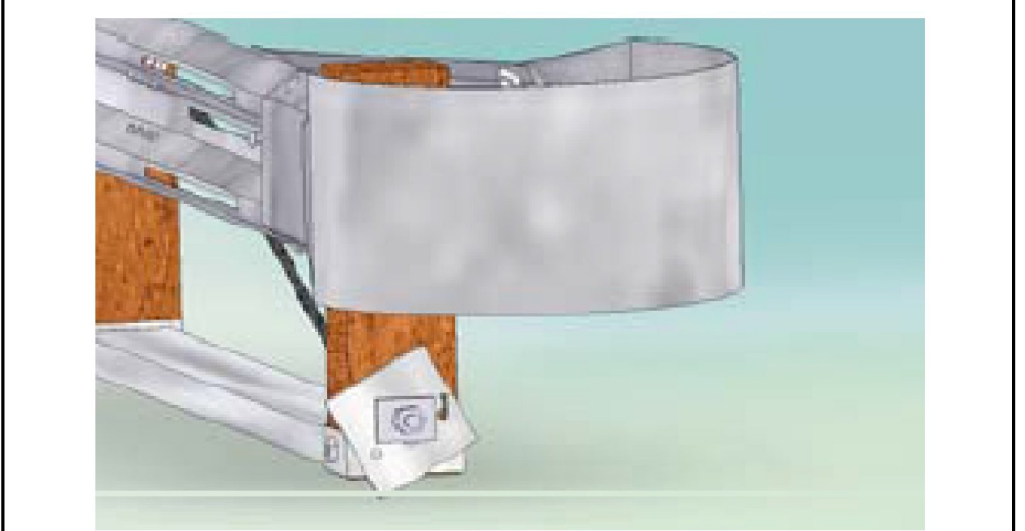
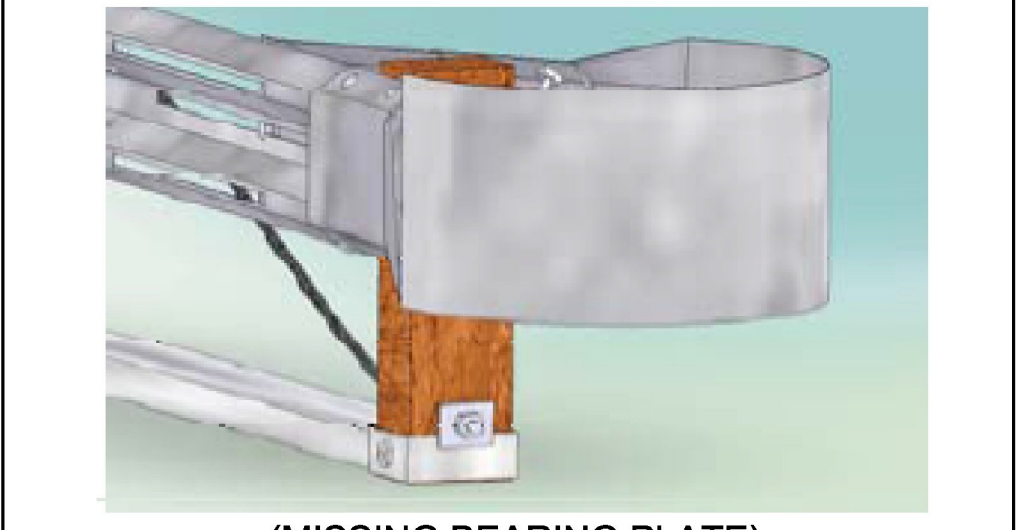
- THESE ARE GUIDELINES FOR THE EVALUATION OF EXISTING GUARDRAIL. THESE ARE GUIDELINES ONLY AND THE CONTRACTOR SHALL REPLACE GUARDRAIL AS DIRECTED BY THE ENGINEER.
- GUIDELINES ARE FROM THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 656, "CRITERIA FOR RESTORATION OF LONGITUDINAL BARRIERS", COPYRIGHT 2010.

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME: 16v148.dgn	PLOT DATE: 05-JUN-2017
PROJECT LEADER: B. KIPP	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
GUARDRAIL REPLACEMENT DETAIL SHEET 1	SHEET 11 OF 33

**GUARDRAIL REPLACEMENT GUIDELINES**

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	

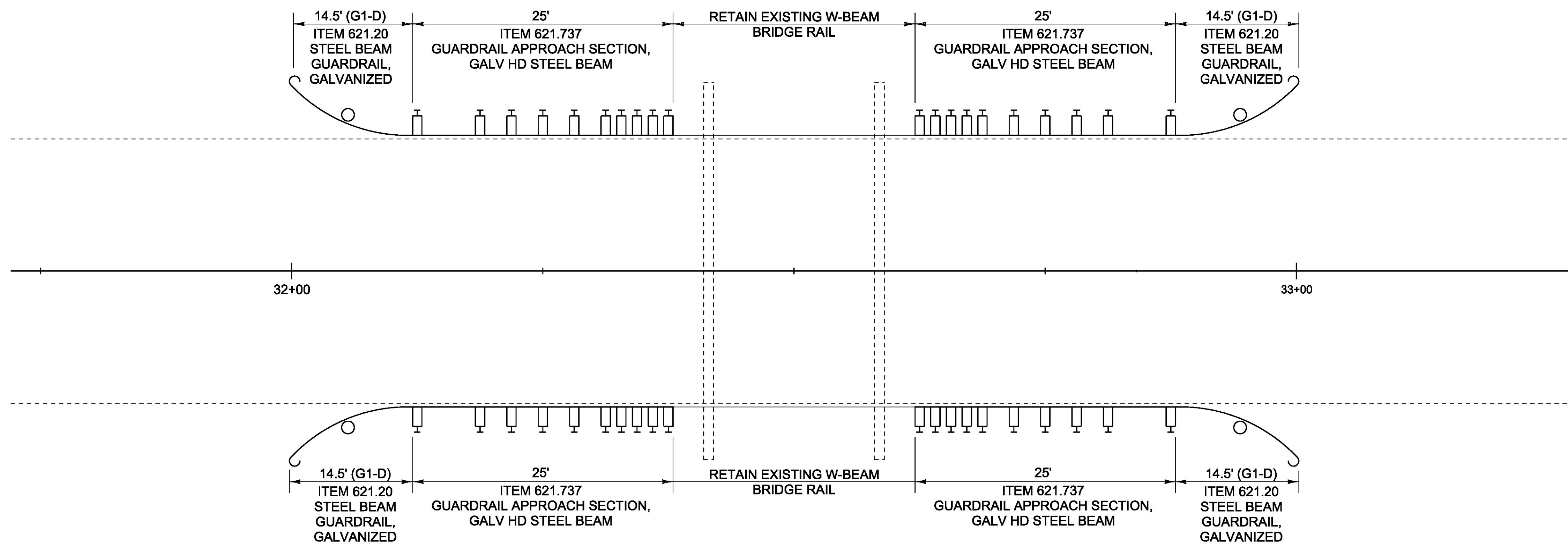
DAMAGE TYPE	REPAIR THRESHOLD	RELATIVE PRIORITY	MEASUREMENT
DAMAGED END POST	NOT FUNCTIONAL (SHEARED, ROTTED CRACKED ACROSS THE GRAIN)	HIGH	
ANCHOR CABLE	MISSING	HIGH	
ANCHOR CABLE	LOOSE - MORE THAN 1 IN. OF MOVEMENT WHEN PUSHED DOWN BY HAND	MEDIUM	
CABLE ANCHOR BRACKET	LOOSE OR NOT FIRMLY SEATED IN RAIL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

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

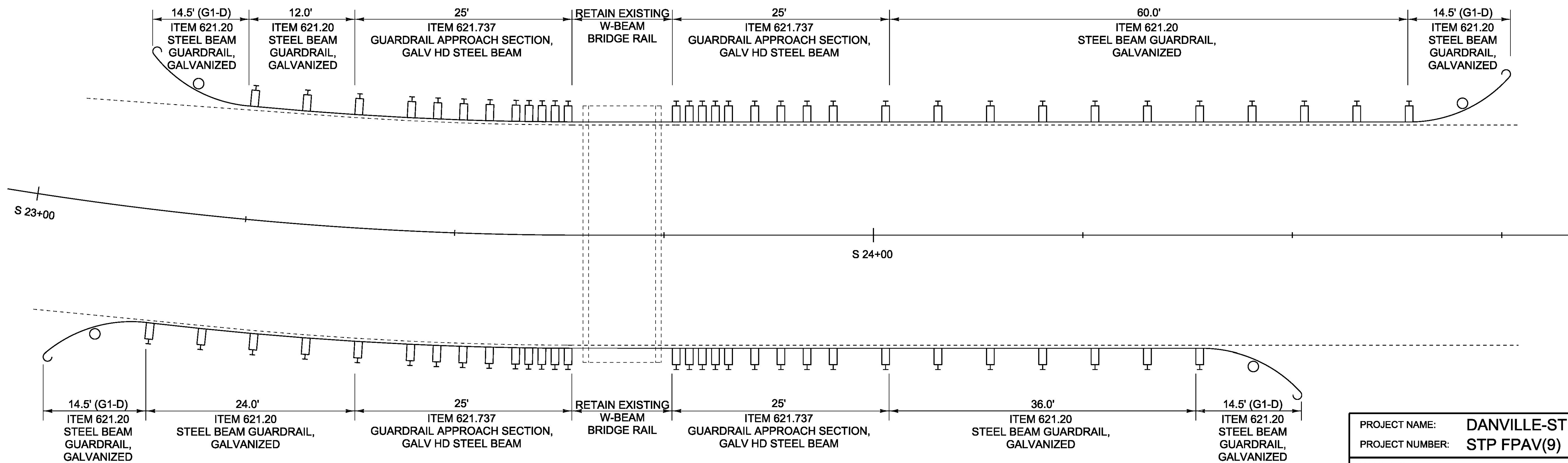
**NOTES:**

- 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 COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 656, "CRITERIA FOR RESTORATION OF LONGITUDINAL BARRIERS", COPYRIGHT 2010.

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME: 16v148.dgn	PLOT DATE: 05-JUN-2017
PROJECT LEADER: B. KIPP	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
GUARDRAIL REPLACEMENT DETAIL SHEET 2	SHEET 12 OF 33

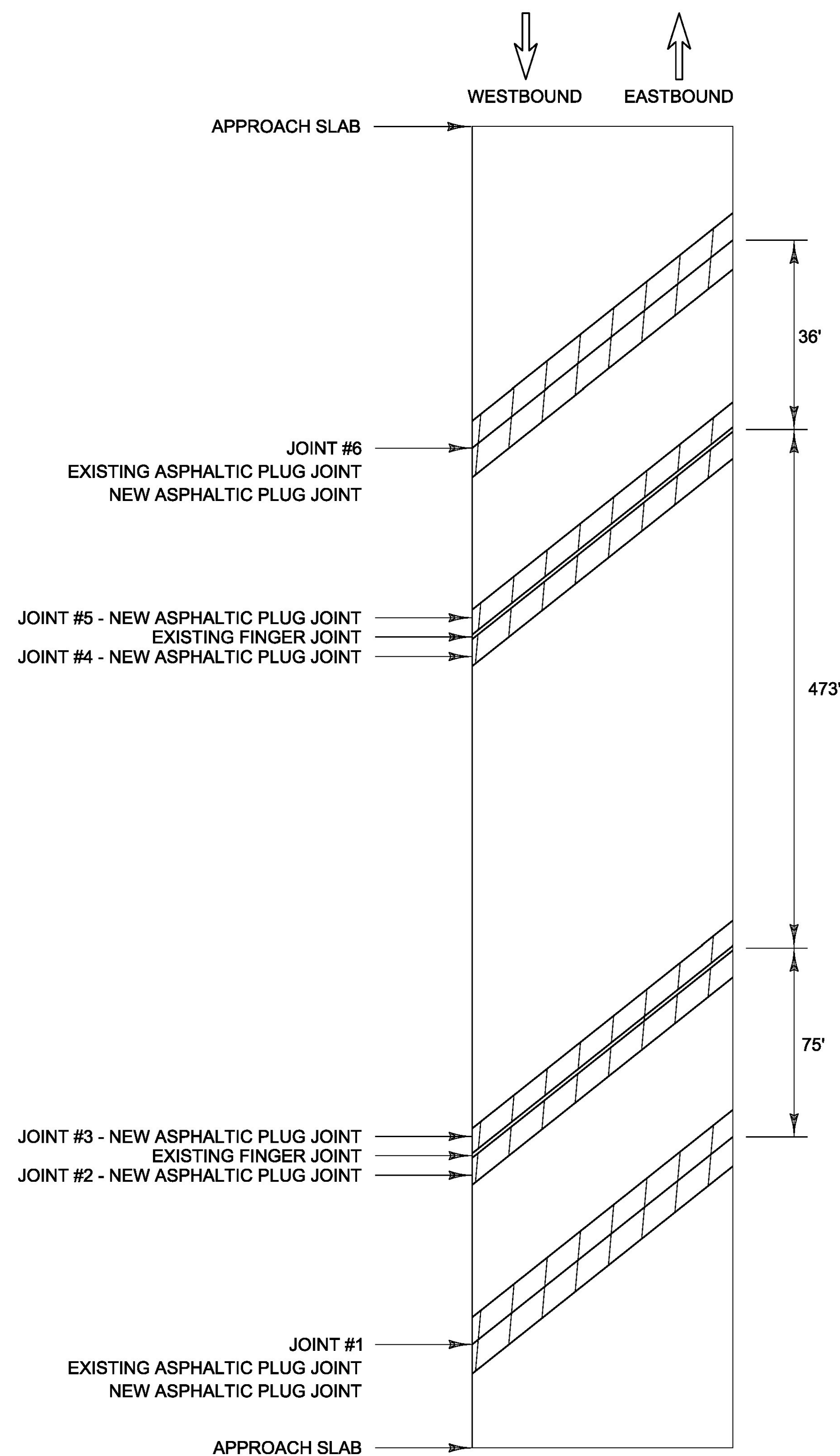


**BRIDGE #1**



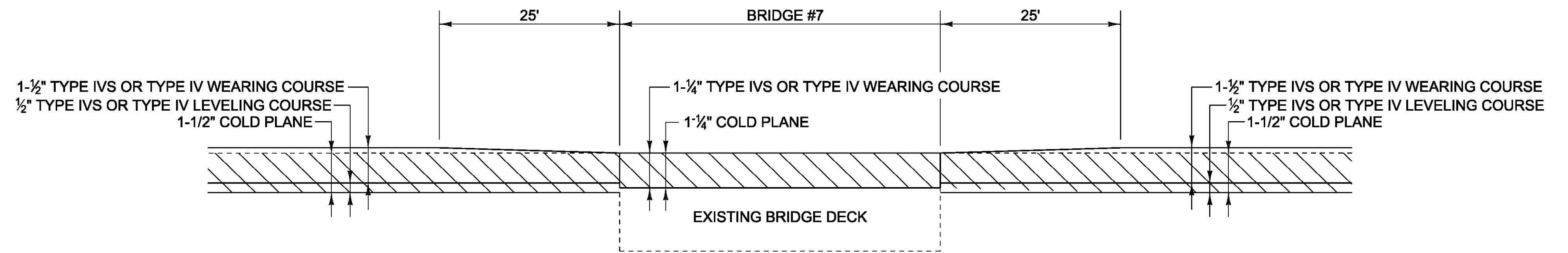
**BRIDGE #5**

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
BRIDGE RAILING DETAIL SHEET	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET	13 OF 33



**BRIDGE #7**  
MM 1.370 - ST. JOHNSBURY

LENGTH OF NEW ASPHALTIC PLUG JOINTS:  
 JOINT #1 = 53'  
 JOINT #2 = 62'  
 JOINT #3 = 62'  
 JOINT #4 = 46'  
 JOINT #5 = 46'  
 JOINT #6 = 42'  
 TOTAL = 311'

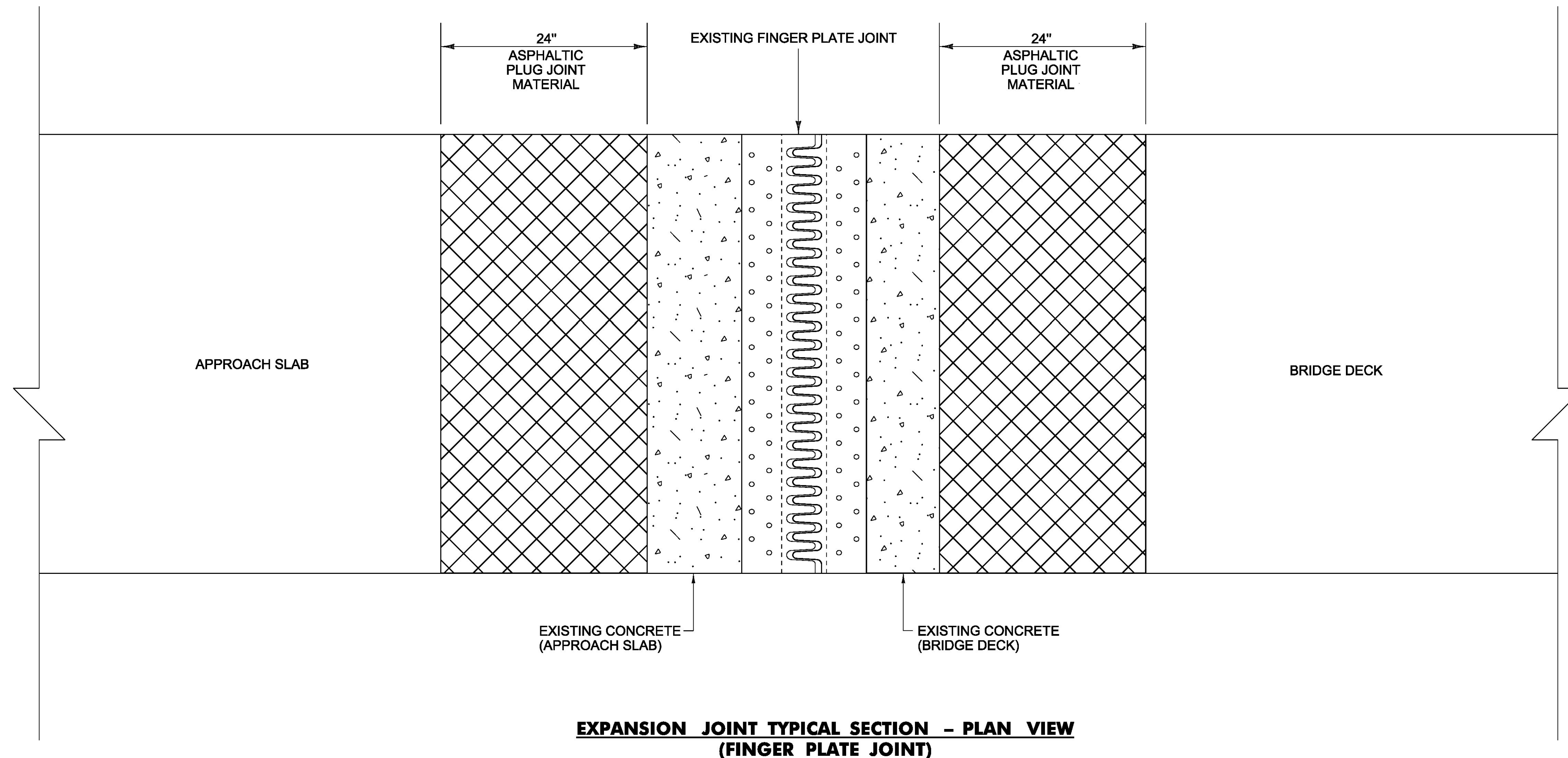


**BRIDGE APPROACH DETAIL**  
MM 1.370 - ST. JOHNSBURY

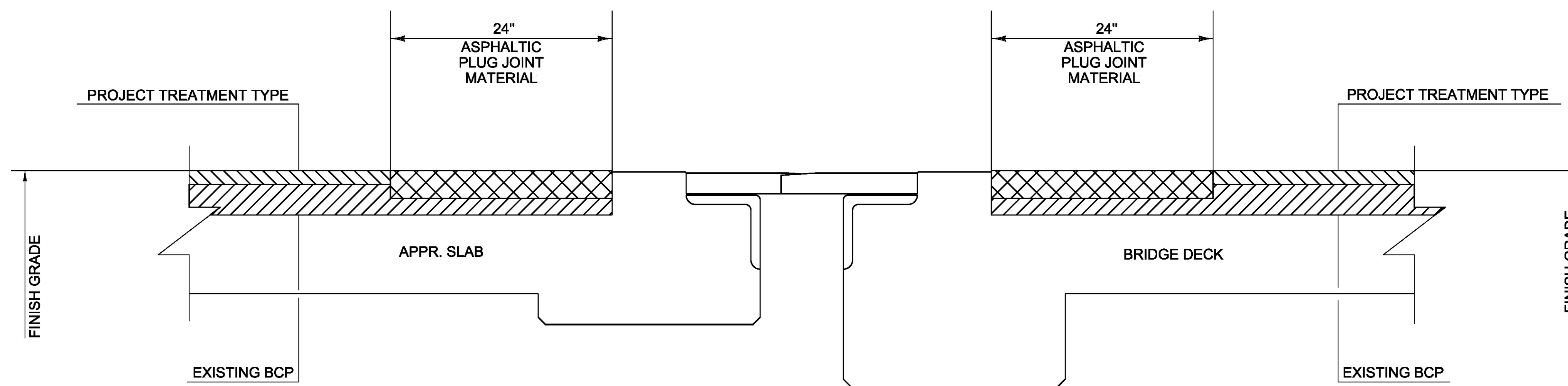
**NOTES:**

1. ALL NEW JOINTS TO BE INSTALLED PER SD-516.10 AND PAID FOR UNDER ITEM 516.10, "BRIDGE EXPANSION JOINT, ASPHALTIC PLUG." REFER TO THE FOLLOWING BRIDGE DETAIL SHEETS.
2. AN ESTIMATED QUANTITY OF ITEM 580.20, "CONCRETE REPAIR MATERIAL" IS TO BE USED AS NECESSARY THROUGHOUT THE PROJECT LIMITS.
3. BRIDGES ARE TO BE PAVED FULL WIDTH.
4. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID DAMAGING DRAINAGE STRUCTURES AND EXPANSION JOINTS. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THE SOLE EXPENSE OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID THE ACCUMULATION OF DEBRIS IN THE DRAINAGE STRUCTURES LOCATED AT CURB LINE AND IN THE EXPANSION JOINTS. THE CONTRACTOR SHALL EXAMINE THESE BRIDGE FEATURES ON A DAILY BASIS TO ENSURE THAT DEBRIS HAS NOT ACCUMULATED. ANY DEBRIS WHICH IS PRESENT SHALL BE REMOVED BY THE CONTRACTOR AT NO COST TO THE STATE.
6. THE CONTRACTOR SHALL USE CAUTION WHEN COLD PLANING AND PAVING OPERATIONS OCCUR ON BRIDGE DECKS. SHOULD ANY DAMAGE OCCUR TO THE DECK OR MEMBRANE AS A RESULT OF THESE OPERATIONS THE 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 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:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME: 16v148.dgn	PLOT DATE: 05-JUN-2017
PROJECT LEADER: B. KIPP	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
BRIDGE DETAIL SHEET	SHEET 14 OF 33



**EXPANSION JOINT TYPICAL SECTION - PLAN VIEW  
(FINGER PLATE JOINT)**



2" MINIMUM UNLESS OTHERWISE DIRECTED BY THE ENGINEER

**EXPANSION JOINT TYPICAL SECTION - CROSS SECTION  
(FINGER PLATE JOINT)**

NOT TO SCALE

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
FINGER JOINT ASPHALTIC PLUG DETAIL SHEET	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET	15 OF 33

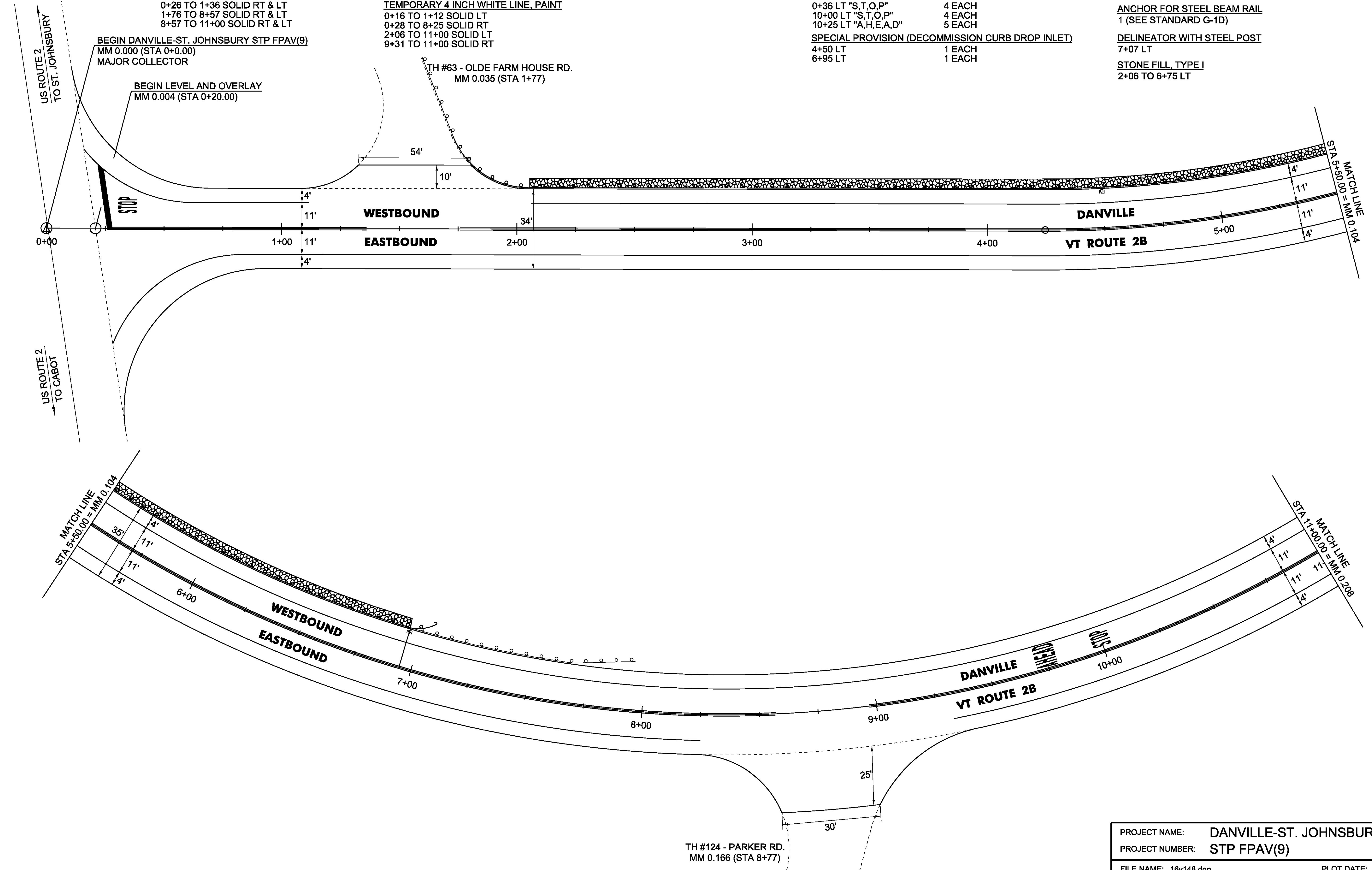
4 INCH YELLOW LINE, WATERBORNE PAINT  
 0+26 TO 1+36 SOLID RT & LT  
 1+76 TO 8+57 SOLID RT & LT  
 8+57 TO 11+00 SOLID RT & LT  
 TEMPORARY 4 INCH YELLOW LINE, PAINT  
 0+26 TO 1+36 SOLID RT & LT  
 1+76 TO 8+57 SOLID RT & LT  
 8+57 TO 11+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
 0+16 TO 1+12 SOLID LT  
 0+28 TO 8+25 SOLID RT  
 2+06 TO 11+00 SOLID LT  
 9+31 TO 11+00 SOLID RT  
 TEMPORARY 4 INCH WHITE LINE, PAINT  
 0+16 TO 1+12 SOLID LT  
 0+28 TO 8+25 SOLID RT  
 2+06 TO 11+00 SOLID LT  
 9+31 TO 11+00 SOLID RT

24 INCH STOP BAR, WATERBORNE PAINT  
 0+26 LT  
 TEMPORARY 24 INCH STOP BAR, PAINT  
 0+26 LT

DURABLE LETTER OR SYMBOL, WATERBORNE PAINT  
 0+36 LT "S,T,O,P" 4 EACH  
 10+00 LT "S,T,O,P" 4 EACH  
 10+25 LT "A,H,E,A,D" 5 EACH  
 TEMPORARY LETTER OR SYMBOL, PAINT  
 0+36 LT "S,T,O,P" 4 EACH  
 10+00 LT "S,T,O,P" 4 EACH  
 10+25 LT "A,H,E,A,D" 5 EACH  
 SPECIAL PROVISION (DECOMMISSION CURB DROP INLET)  
 4+50 LT 1 EACH  
 6+95 LT 1 EACH

STEEL BEAM GUARDRAIL, GALVANIZED  
 1+78 TO 7+07 LT  
 REMOVAL AND DISPOSAL OF GUARDRAIL  
 1+78 TO 7+96 LT  
 ANCHOR FOR STEEL BEAM RAIL  
 1 (SEE STANDARD G-1D)  
 DELINEATOR WITH STEEL POST  
 7+07 LT  
 STONE FILL, TYPE I  
 2+06 TO 6+75 LT

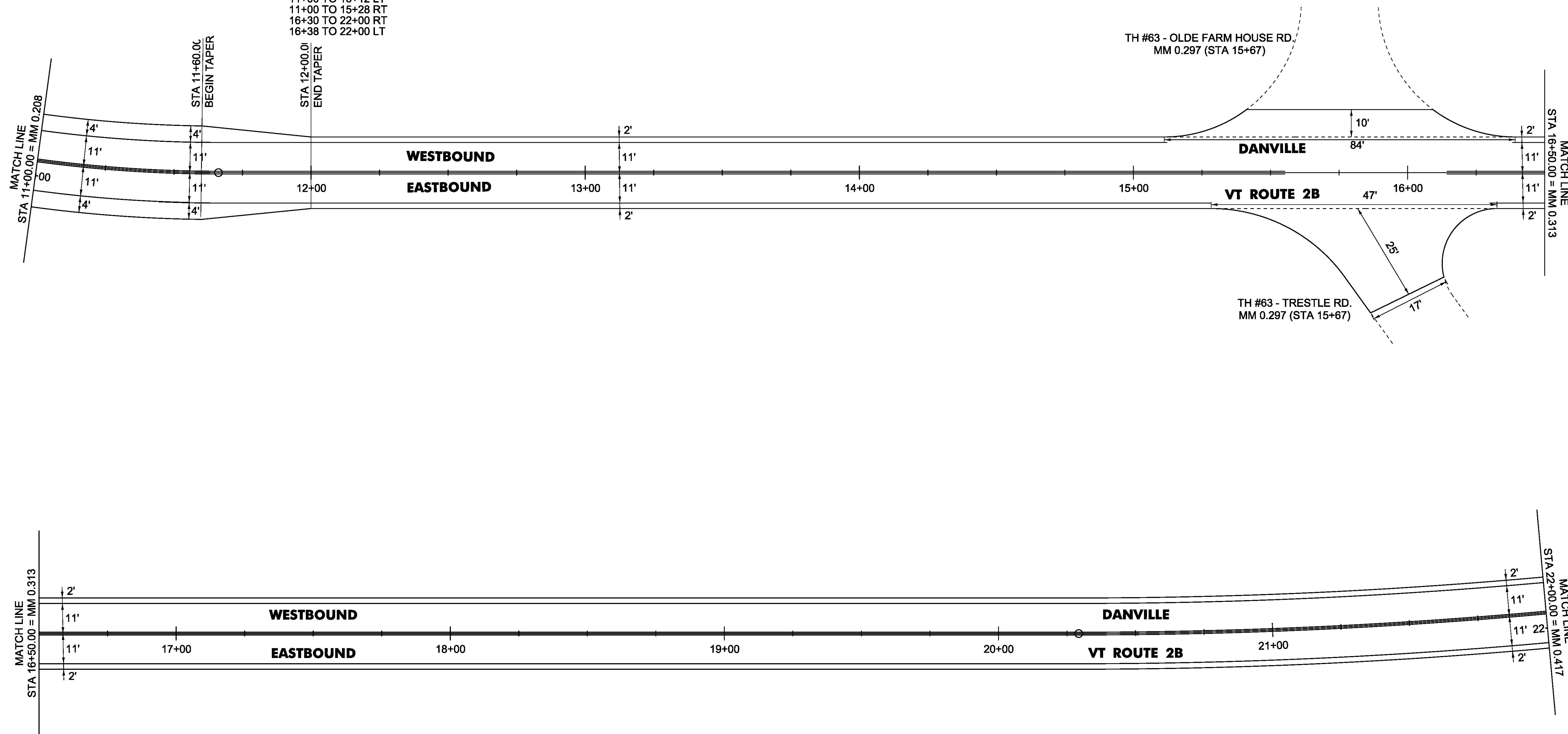


NOT TO SCALE

PROJECT NAME:	DANVILLE-ST. JOHNSBURY	PLOT DATE:	05-JUN-2017
PROJECT NUMBER:	STP FPAV(9)	DRAWN BY:	B. KIPP
FILE NAME:	16v148.dgn	CHECKED BY:	M. FOWLER
PROJECT LEADER:	B. KIPP	SHEET	16 OF 33
DESIGNED BY:	B. KIPP		
PLAN SHEET 1			

4 INCH YELLOW LINE, WATERBORNE PAINT  
 11+00 TO 15+55 SOLID RT & LT  
 16+15 TO 22+00 SOLID RT & LT  
 TEMPORARY 4 INCH YELLOW LINE, PAINT  
 11+00 TO 15+55 SOLID RT & LT  
 16+15 TO 22+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
 11+00 TO 15+12 LT  
 11+00 TO 15+28 RT  
 16+30 TO 22+00 RT  
 16+38 TO 22+00 LT  
 TEMPORARY 4 INCH WHITE LINE, PAINT  
 11+00 TO 15+12 LT  
 11+00 TO 15+28 RT  
 16+30 TO 22+00 RT  
 16+38 TO 22+00 LT



NOT TO SCALE

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
PLAN SHEET 2	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET 17	OF 33

4 INCH YELLOW LINE, WATERBORNE PAINT  
 22+00 TO 27+14 SOLID RT & LT  
 27+54 TO 33+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
 22+00 TO 33+00 SOLID LT  
 22+00 TO 27+00 SOLID RT  
 27+68 TO 33+00 SOLID RT

STEEL BEAM GUARDRAIL, GALVANIZED  
 31+98 TO 32+12 LT  
 31+98 TO 32+12 RT  
 32+88 TO 33+00 LT  
 32+88 TO 33+00 RT

ANCHOR FOR STEEL BEAM RAIL  
 4 (SEE STANDARD G-1D)

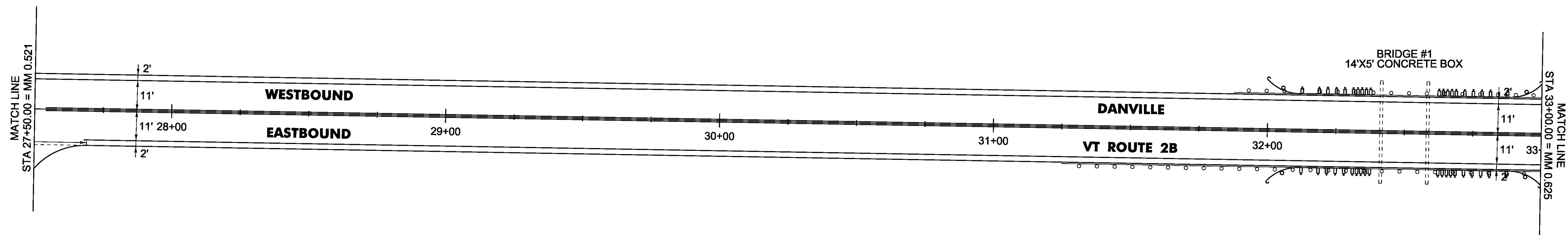
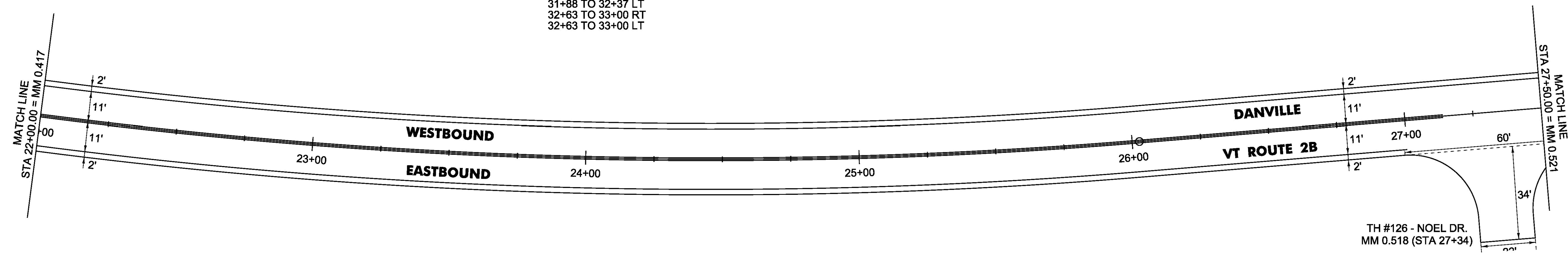
DELINEATOR WITH STEEL POST  
 31+98 RT  
 31+98 LT  
 33+00 LT  
 33+00 RT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
 22+00 TO 27+14 SOLID RT & LT  
 27+54 TO 33+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
 22+00 TO 33+00 SOLID LT  
 22+00 TO 27+00 SOLID RT  
 27+68 TO 33+00 SOLID RT

GUARDRAIL APPROACH SECTION, GALVANIZED HD STEEL BEAM  
 32+12 TO 32+37 LT  
 32+12 TO 32+37 RT  
 32+63 TO 32+88 LT  
 32+63 TO 32+88 RT

REMOVAL AND DISPOSAL OF GUARDRAIL  
 31+25 TO 32+37 RT  
 31+88 TO 32+37 LT  
 32+63 TO 33+00 RT  
 32+63 TO 33+00 LT



NOT TO SCALE

PROJECT NAME:	DANVILLE-ST. JOHNSBURY	PLOT DATE:	05-JUN-2017
PROJECT NUMBER:	STP FPAV(9)	DRAWN BY:	B. KIPP
FILE NAME:	16v148.dgn	CHECKED BY:	M. FOWLER
DESIGNED BY:	B. KIPP	SHEET	18 OF 33
PLAN SHEET 3			

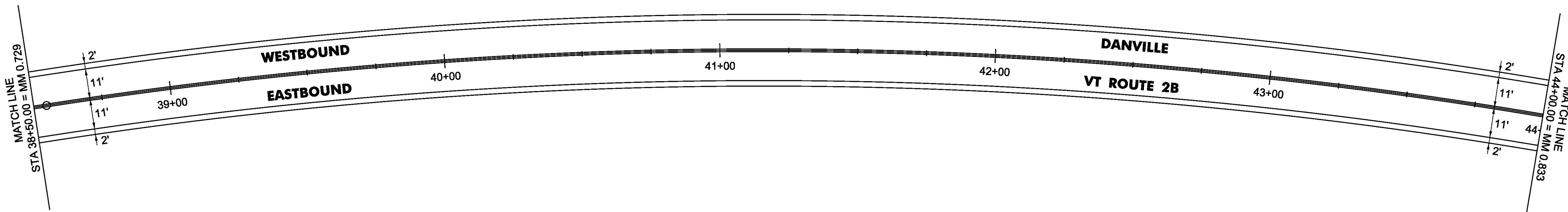
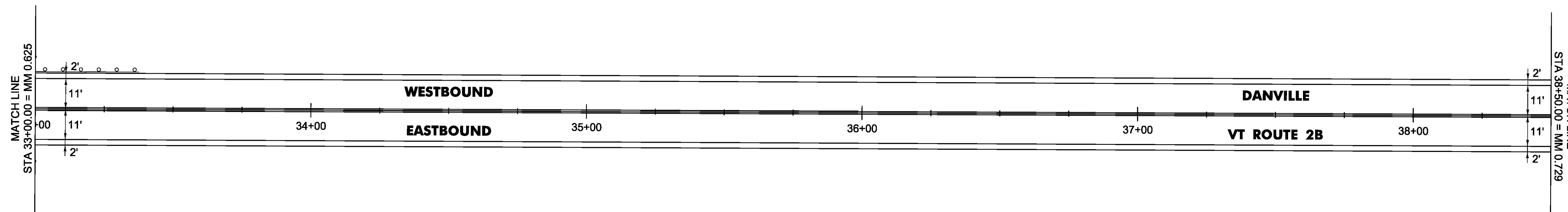
4 INCH YELLOW LINE, WATERBORNE PAINT  
33+00 TO 44+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
33+00 TO 44+00 SOLID RT & LT

REMOVAL AND DISPOSAL OF GUARDRAIL  
33+00 TO 33+38 LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
33+00 TO 44+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
33+00 TO 44+00 SOLID RT & LT



NOT TO SCALE

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
PLAN SHEET 4	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET 19	OF 33

4 INCH YELLOW LINE, WATERBORNE PAINT  
44+00 TO 55+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
44+00 TO 55+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
44+00 TO 55+00 SOLID RT & LT

STEEL BEAM GUARDRAIL, GALVANIZED  
46+56 TO 46+68 LT  
47+06 TO 47+44 LT

REMOVAL AND DISPOSAL OF GUARDRAIL  
46+68 TO 47+16 LT

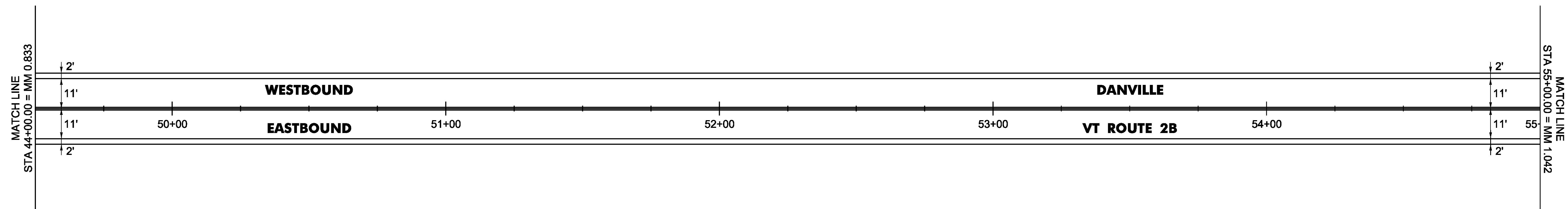
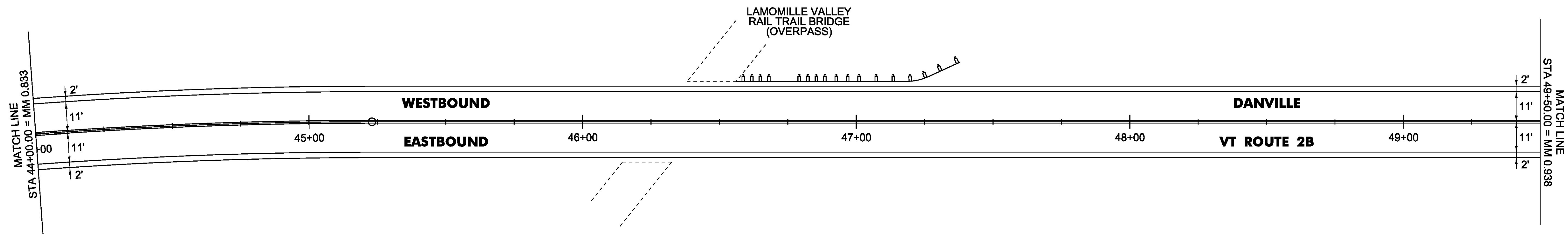
TEMPORARY 4 INCH YELLOW LINE, PAINT  
44+00 TO 55+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
44+00 TO 55+00 SOLID RT & LT

HD STEEL BEAM GUARDRAIL, GALVANIZED  
46+68 TO 47+06 LT

ANCHOR FOR STEEL BEAM RAIL  
1 (SEE STANDARD G-1D)

DELINEATOR WITH STEEL POST  
46+68 LT



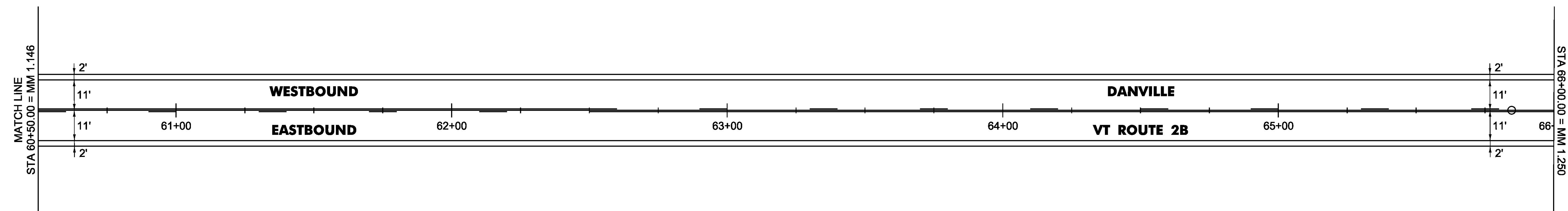
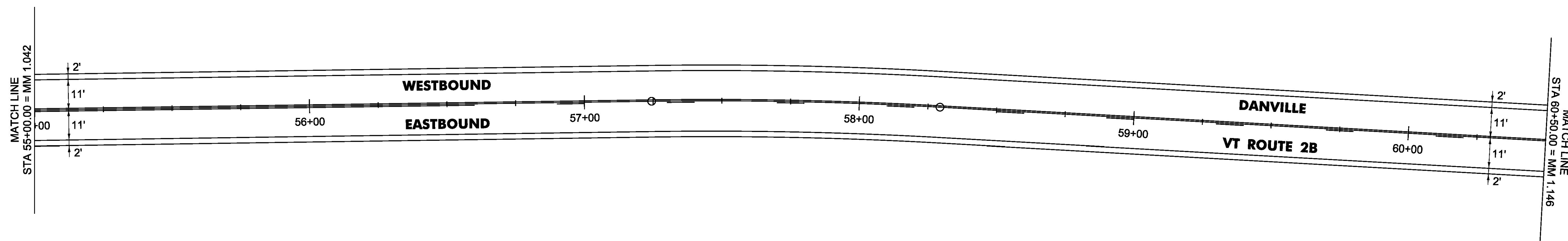
NOT TO SCALE

PROJECT NAME: DANVILLE-ST. JOHNSBURY  
PROJECT NUMBER: STP FPAV(9)

FILE NAME: 16v148.dgn PLOT DATE: 05-JUN-2017  
PROJECT LEADER: B. KIPP DRAWN BY: B. KIPP  
DESIGNED BY: B. KIPP CHECKED BY: M. FOWLER  
PLAN SHEET 5 SHEET 20 OF 33

4 INCH YELLOW LINE, WATERBORNE PAINT  
 55+00 TO 56+50 SOLID RT & LT  
 56+50 TO 62+50 DASHED RT, SOLID LT  
 62+50 TO 66+00 SOLID RT, DASHED LT  
 TEMPORARY 4 INCH YELLOW LINE, PAINT  
 55+00 TO 56+50 SOLID RT & LT  
 56+50 TO 62+50 DASHED RT, SOLID LT  
 62+50 TO 66+00 SOLID RT, DASHED LT

4 INCH WHITE LINE, WATERBORNE PAINT  
 44+00 TO 55+00 SOLID RT & LT  
 TEMPORARY 4 INCH WHITE LINE, PAINT  
 44+00 TO 55+00 SOLID RT & LT

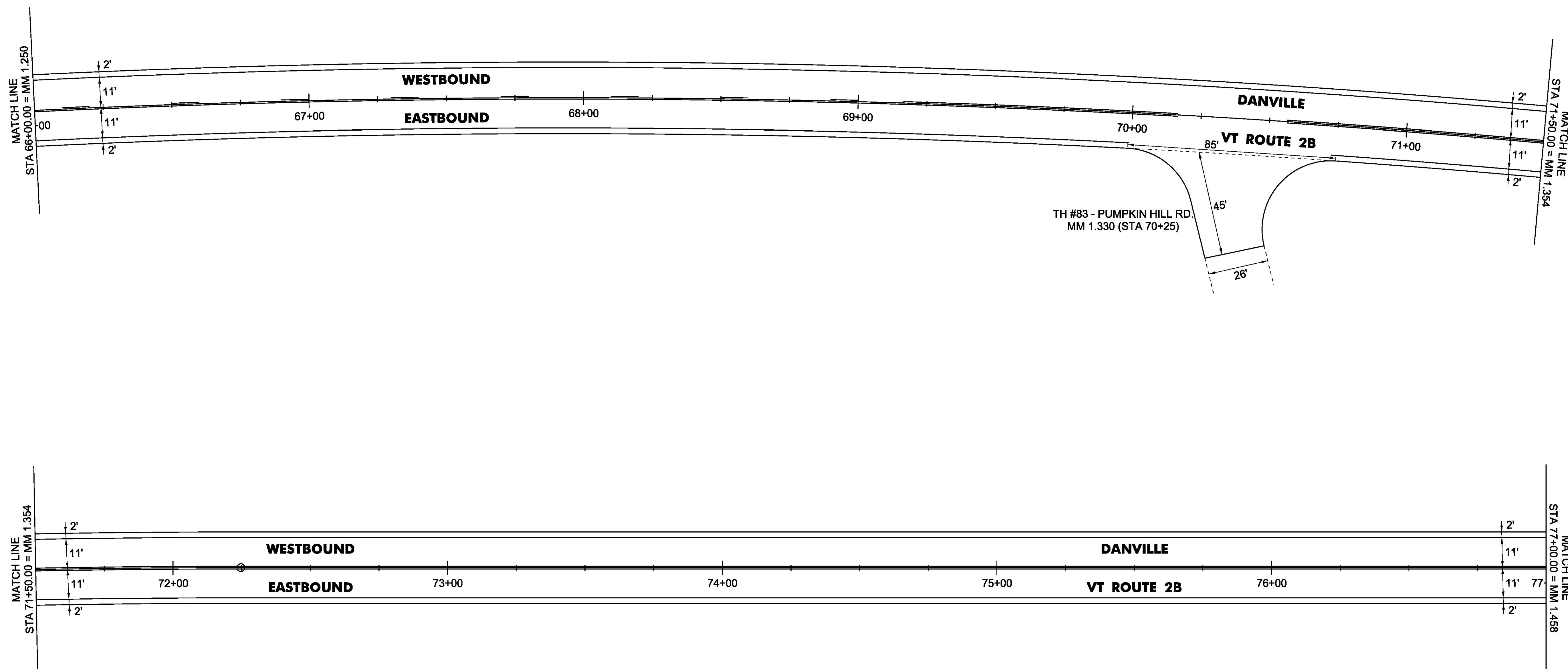


NOT TO SCALE

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
PLAN SHEET 6	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET 21	OF 33

4 INCH YELLOW LINE, WATERBORNE PAINT  
 66+00 TO 69+16 SOLID RT, DASHED LT  
 69+16 TO 70+16 SOLID RT & LT  
 70+56 TO 77+00 SOLID RT & LT  
 TEMPORARY 4 INCH YELLOW LINE, PAINT  
 66+00 TO 69+16 SOLID RT, DASHED LT  
 69+16 TO 70+16 SOLID RT & LT  
 70+56 TO 77+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
 66+00 TO 77+00 SOLID LT  
 66+00 TO 70+00 SOLID RT  
 70+73 TO 77+00 SOLID RT  
 TEMPORARY 4 INCH WHITE LINE, PAINT  
 66+00 TO 77+00 SOLID LT  
 66+00 TO 70+00 SOLID RT  
 70+73 TO 77+00 SOLID RT



NOT TO SCALE

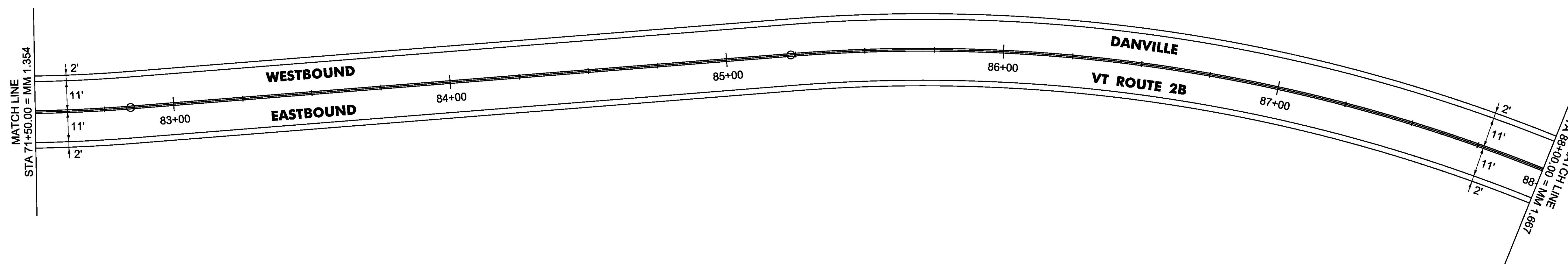
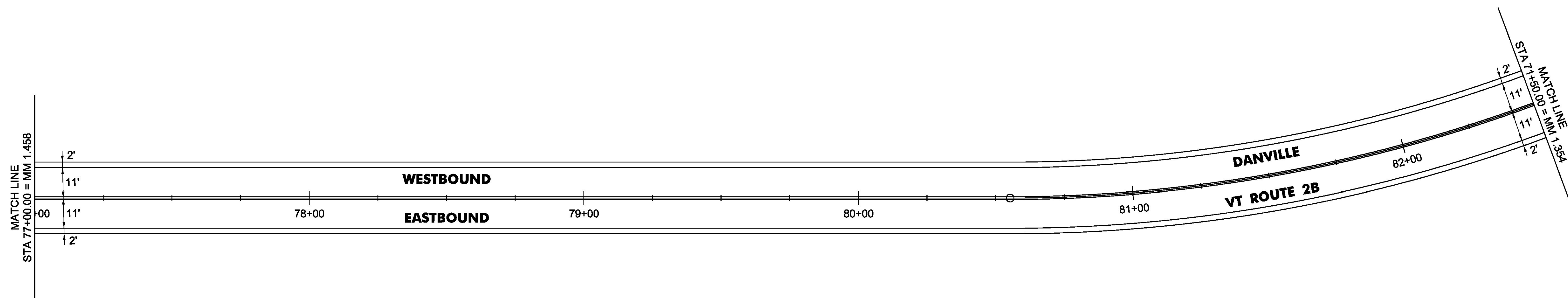
PROJECT NAME:	DANVILLE-ST. JOHNSBURY	PLOT DATE:	05-JUN-2017
PROJECT NUMBER:	STP FPAV(9)	DRAWN BY:	B. KIPP
FILE NAME:	16v148.dgn	CHECKED BY:	M. FOWLER
PROJECT LEADER:	B. KIPP	SHEET	22 OF 33
DESIGNED BY:	B. KIPP	PLAN SHEET	7

4 INCH YELLOW LINE, WATERBORNE PAINT  
77+00 TO 88+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
77+00 TO 88+00 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
77+00 TO 88+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
77+00 TO 88+00 SOLID RT & LT



NOT TO SCALE

PROJECT NAME: DANVILLE-ST. JOHNSBURY  
PROJECT NUMBER: STP FPAV(9)

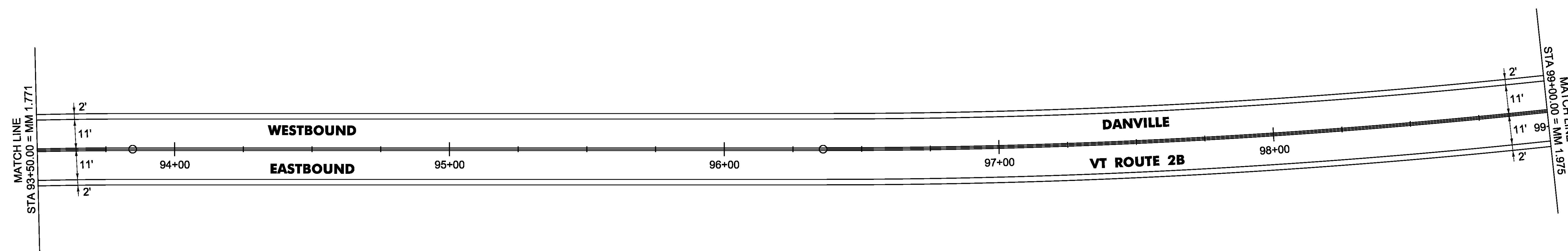
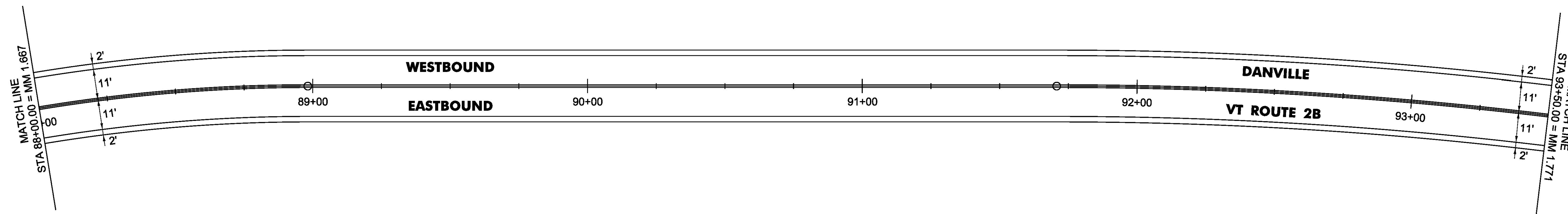
FILE NAME: 16v148.dgn	PLOT DATE: 05-JUN-2017
PROJECT LEADER: B. KIPP	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 8	SHEET 23 OF 33

4 INCH YELLOW LINE, WATERBORNE PAINT  
88+00 TO 99+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
88+00 TO 99+00 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
88+00 TO 99+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
88+00 TO 99+00 SOLID RT & LT

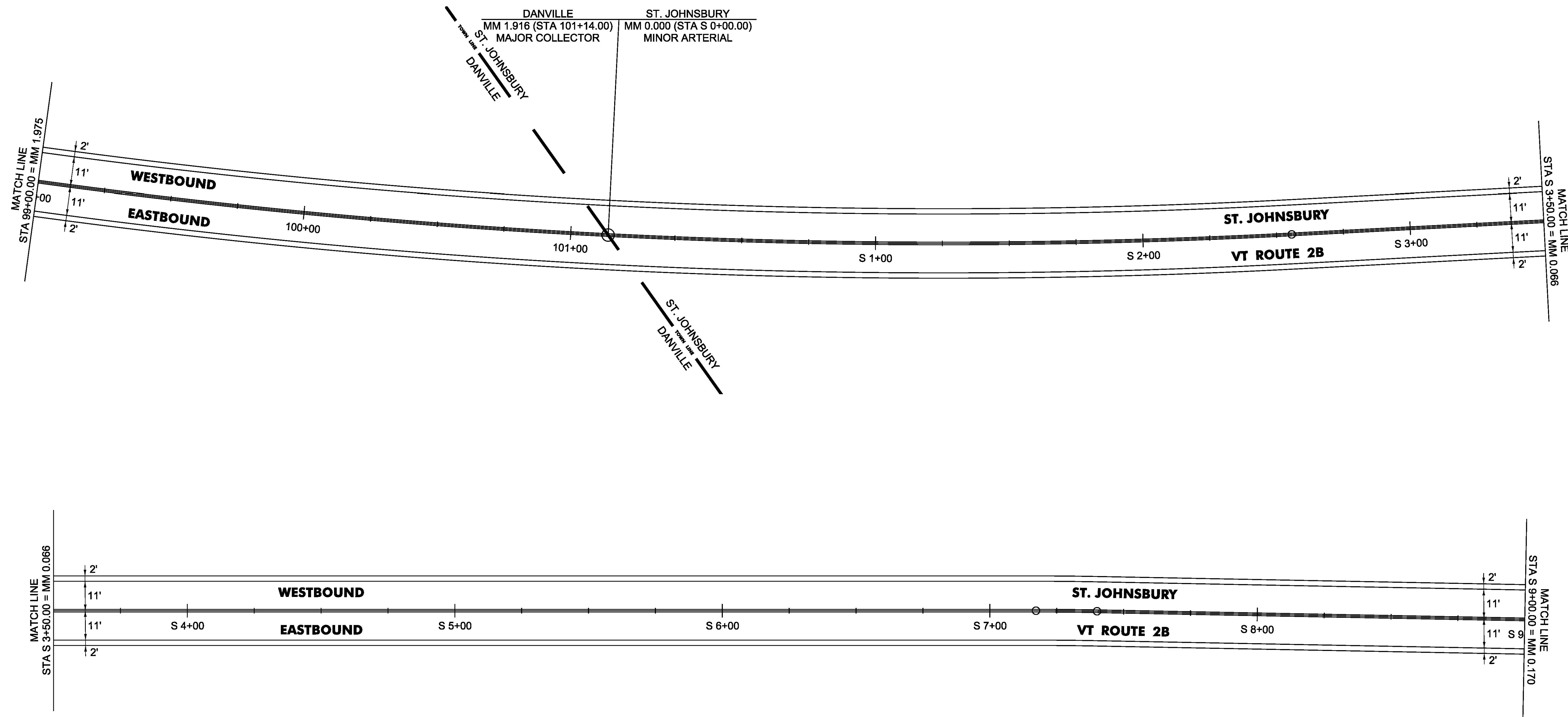


NOT TO SCALE

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
PLAN SHEET 9	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET 24	OF 33

4 INCH YELLOW LINE, WATERBORNE PAINT  
 99+00 TO 101+14 SOLID RT & LT  
 S 0+00 TO S 9+00 SOLID RT & LT  
 TEMPORARY 4 INCH YELLOW LINE, PAINT  
 99+00 TO 101+14 SOLID RT & LT  
 S 0+00 TO S 9+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
 99+00 TO 101+14 SOLID RT & LT  
 S 0+00 TO S 9+00 SOLID RT & LT  
 TEMPORARY 4 INCH WHITE LINE, PAINT  
 99+00 TO 101+14 SOLID RT & LT  
 S 0+00 TO S 9+00 SOLID RT & LT



NOT TO SCALE

PROJECT NAME:	DANVILLE-ST. JOHNSBURY	PLOT DATE:	05-JUN-2017
PROJECT NUMBER:	STP FPAV(9)	DRAWN BY:	B. KIPP
FILE NAME:	16v148.dgn	CHECKED BY:	M. FOWLER
DESIGNED BY:	B. KIPP	PLAN SHEET 10	SHEET 25 OF 33

4 INCH YELLOW LINE, WATERBORNE PAINT  
 S 9+00 TO S 9+94 SOLID RT & LT  
 S 10+34 TO S 12+18 SOLID RT & LT  
 S 12+58 TO S 14+00 SOLID RT & LT  
 S 14+40 TO S 20+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
 S 9+00 TO S 12+00 SOLID LT  
 S 9+00 TO S 9+79 SOLID RT  
 S 10+49 TO S 13+87 SOLID RT  
 S 12+61 TO S 20+00 SOLID LT  
 S 14+55 TO S 20+00 SOLID RT

TEMPORARY 4 INCH WHITE LINE, PAINT  
 S 9+00 TO S 12+00 SOLID LT  
 S 9+00 TO S 9+79 SOLID RT  
 S 10+49 TO S 13+87 SOLID RT  
 S 12+61 TO S 20+00 SOLID LT  
 S 14+55 TO S 20+00 SOLID RT

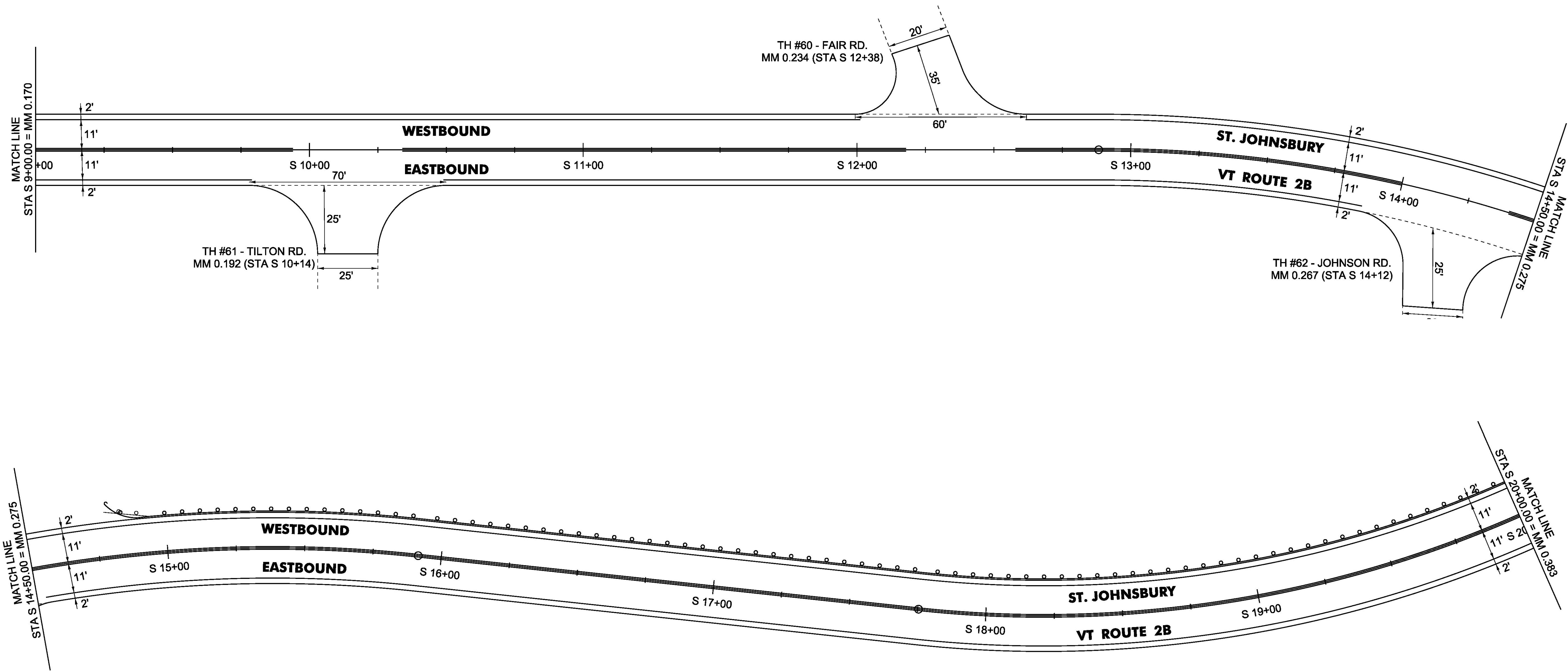
STEEL BEAM GUARDRAIL, GALVANIZED  
 S 14+79 TO S 14+94 LT

STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS  
 S 14+94 TO S 20+00 LT

REMOVAL AND DISPOSAL OF GUARDRAIL  
 S 14+79 TO S 20+00 LT

ANCHOR FOR STEEL BEAM RAIL  
 1 (SEE STANDARD G-1D)

DELINEATOR WITH STEEL POST  
 14+94 LT



NOT TO SCALE

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
PLAN SHEET 11	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET 26	OF 33

4 INCH YELLOW LINE, WATERBORNE PAINT  
S 20+00 TO S 31+00 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
S 20+00 TO S 31+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
S 20+00 TO S 31+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
S 20+00 TO S 31+00 SOLID RT & LT

STEEL BEAM GUARDRAIL, GALVANIZED

S 20+94 TO S 21+08 LT  
S 23+00 TO S 23+38 RT  
S 23+11 TO S 23+38 LT  
S 24+01 TO S 24+53 RT  
S 24+01 TO S 24+78 LT  
S 25+92 TO S 26+07 RT  
S 30+42 TO S 30+57 RT

STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS  
S 20+00 TO S 20+94 LT

GUARDRAIL APPROACH SECTION, GALVANIZED HD STEEL BEAM

S 23+38 TO S 23+63 RT (SEE SD-367B)  
S 23+38 TO S 23+63 LT (SEE SD-367B)  
S 23+76 TO S 24+01 RT (SEE SD-367B)  
S 23+76 TO S 24+01 LT (SEE SD-367B)

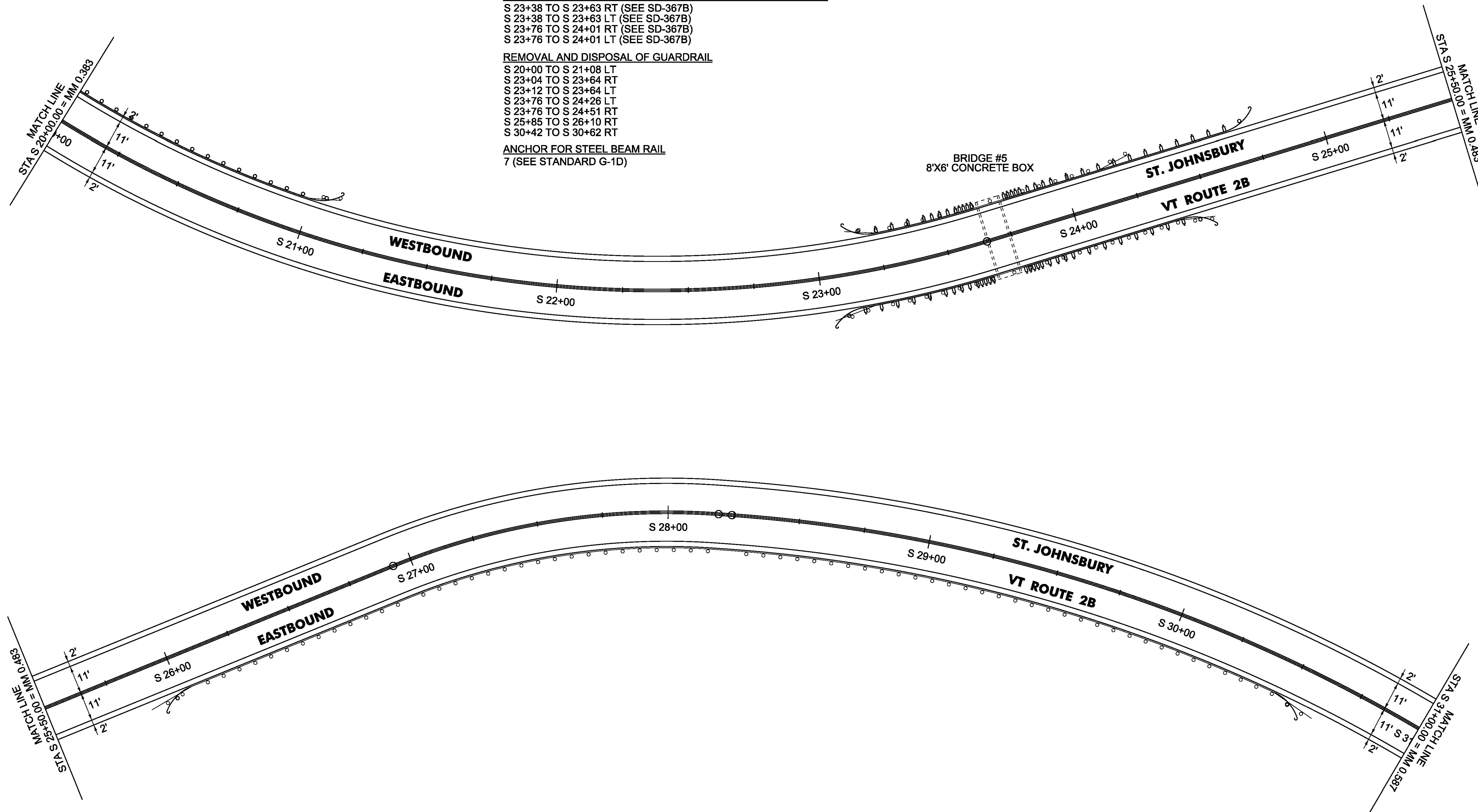
REMOVAL AND DISPOSAL OF GUARDRAIL

S 20+00 TO S 21+08 LT  
S 23+04 TO S 23+64 RT  
S 23+12 TO S 23+64 LT  
S 23+76 TO S 24+26 LT  
S 23+76 TO S 24+51 RT  
S 25+85 TO S 26+10 RT  
S 30+42 TO S 30+62 RT

ANCHOR FOR STEEL BEAM RAIL  
7 (SEE STANDARD G-1D)

DELINEATOR WITH STEEL POST

S 20+98 LT  
S 23+16 RT  
S 23+27 LT  
S 24+83 RT  
S 24+64 LT  
S 26+00 RT  
S 30+50 RT



NOT TO SCALE

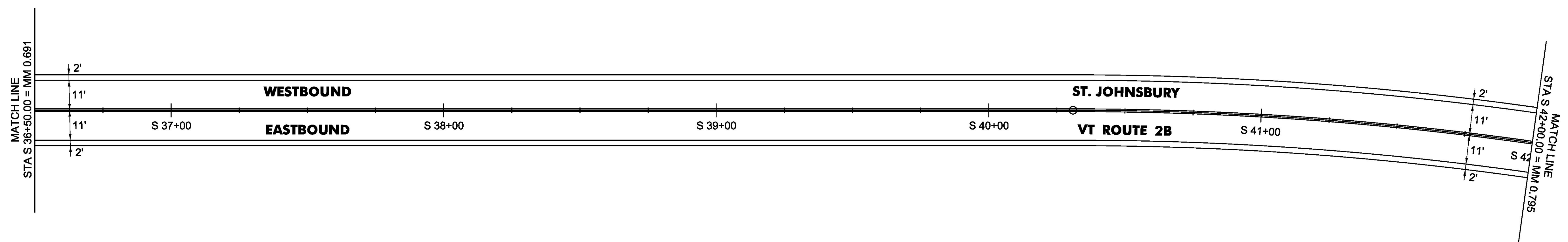
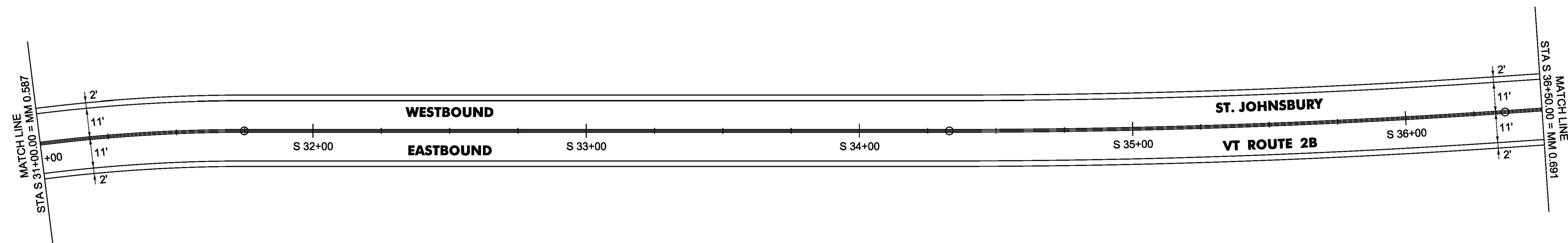
PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
PLAN SHEET 12	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET 27	OF 33

4 INCH YELLOW LINE, WATERBORNE PAINT  
S 31+00 TO S 42+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
S 31+00 TO S 42+00 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
S 31+00 TO S 42+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
S 31+00 TO S 42+00 SOLID RT & LT



NOT TO SCALE

PROJECT NAME: DANVILLE-ST. JOHNSBURY

PROJECT NUMBER: STP FPAV(9)

FILE NAME: 16v148.dgn

PLOT DATE: 05-JUN-2017

PROJECT LEADER: B. KIPP

DRAWN BY: B. KIPP

DESIGNED BY: B. KIPP

CHECKED BY: M. FOWLER

PLAN SHEET 13

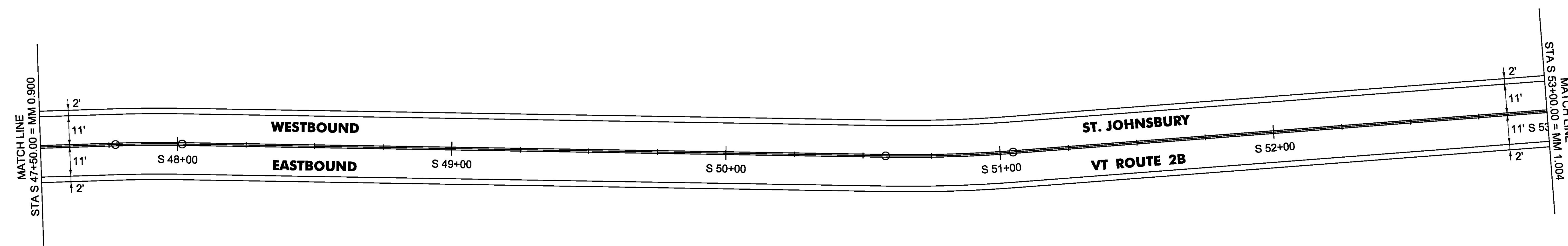
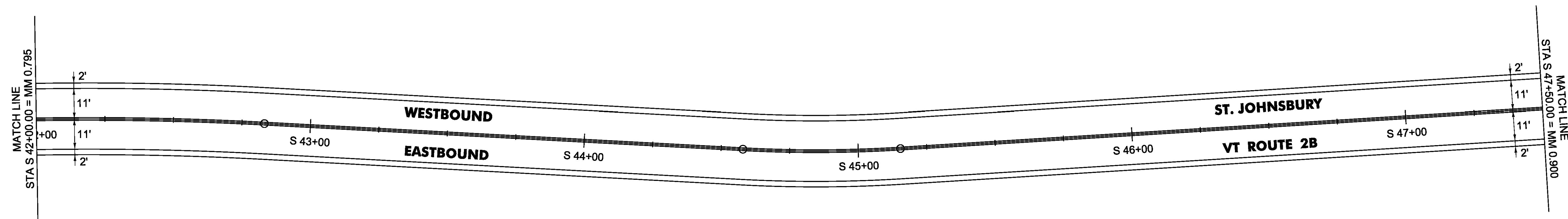
SHEET 28 OF 33

4 INCH YELLOW LINE, WATERBORNE PAINT  
S 42+00 TO S 53+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
S 42+00 TO S 53+00 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
S 42+00 TO S 53+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
S 42+00 TO S 53+00 SOLID RT & LT



NOT TO SCALE

PROJECT NAME: DANVILLE-ST. JOHNSBURY

PROJECT NUMBER: STP FPAV(9)

FILE NAME: 16v148.dgn

PLOT DATE: 05-JUN-2017

PROJECT LEADER: B. KIPP

DRAWN BY: B. KIPP

DESIGNED BY: B. KIPP

CHECKED BY: M. FOWLER

PLAN SHEET 14

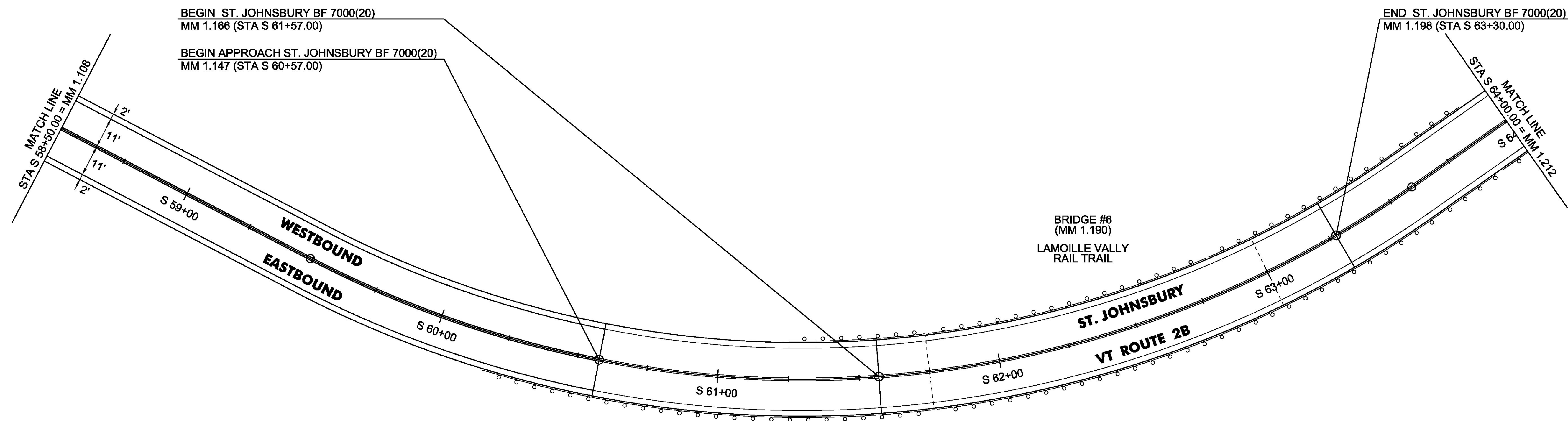
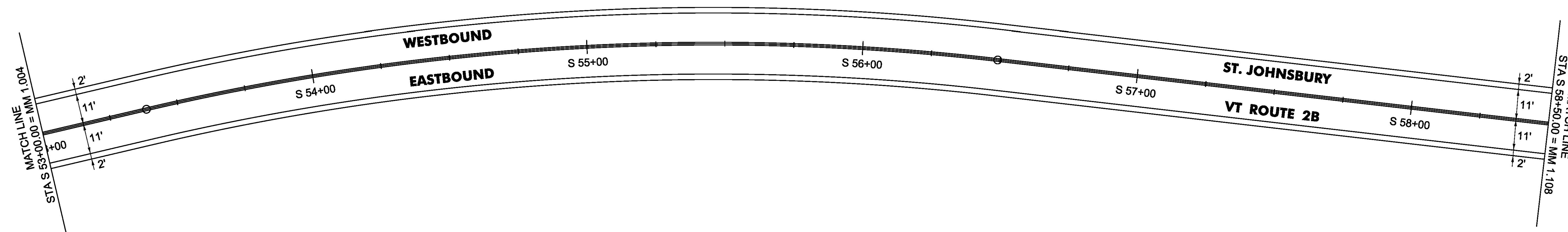
SHEET 29 OF 33

4 INCH YELLOW LINE, WATERBORNE PAINT  
S 53+00 TO S 64+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
S 53+00 TO S 64+00 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
S 53+00 TO S 64+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
S 53+00 TO S 64+00 SOLID RT & LT



NOT TO SCALE

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
PLAN SHEET 15	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET 30	OF 33

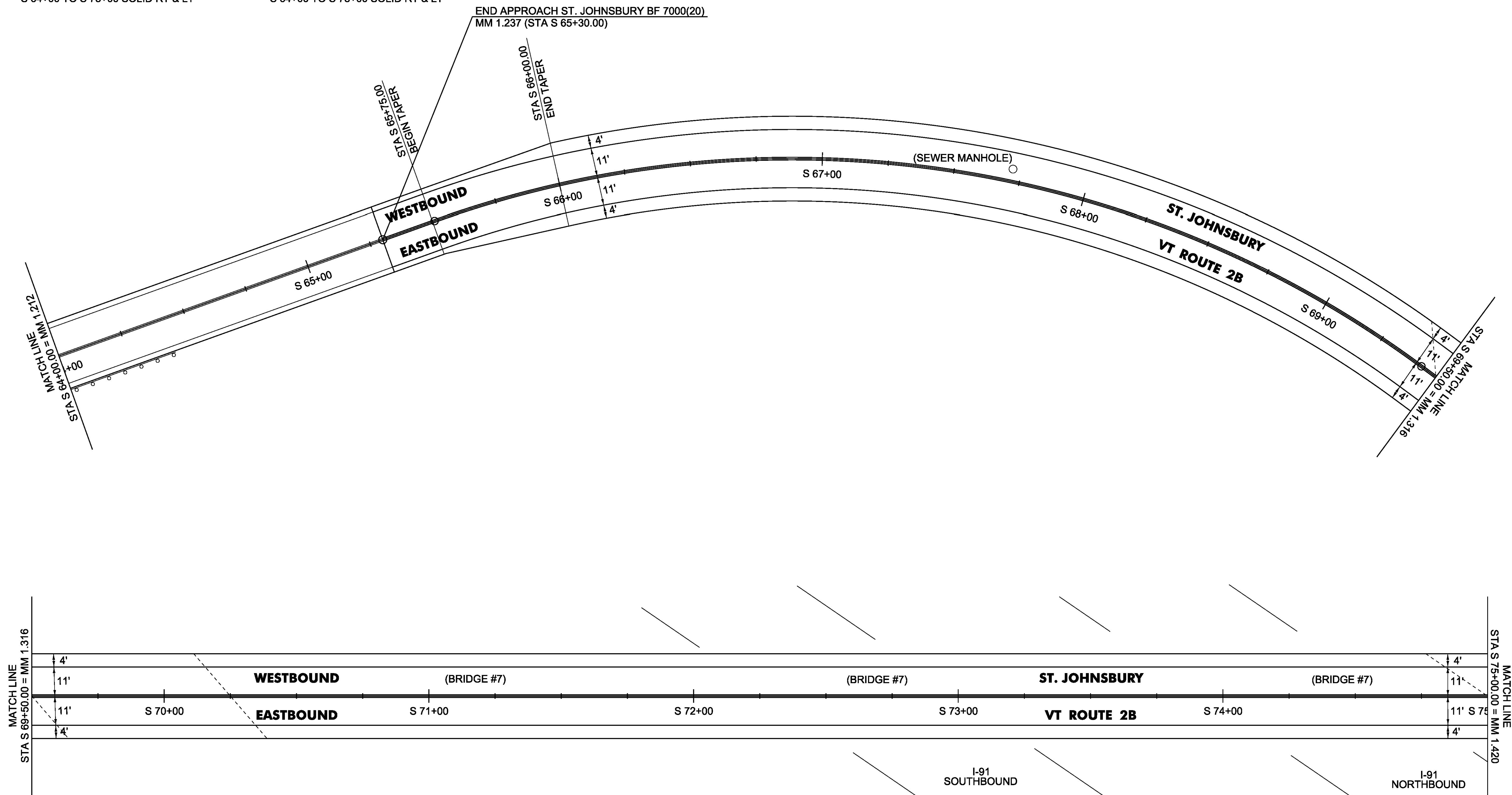
4 INCH YELLOW LINE, WATERBORNE PAINT  
S 64+00 TO S 75+00 SOLID RT & LT

4 INCH WHITE LINE, WATERBORNE PAINT  
S 64+00 TO S 75+00 SOLID RT & LT

CHANGING ELEVATION OF SEWER MANHOLE  
S 67+70 LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
S 64+00 TO S 75+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
S 64+00 TO S 75+00 SOLID RT & LT



NOT TO SCALE

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
PLAN SHEET 16	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET 31	OF 33

**4 INCH YELLOW LINE, WATERBORNE PAINT**  
 S 75+00 TO S 79+00 SOLID RT & LT  
 S 79+00 TO S 80+45 DOUBLE SOLID RT & LT  
 S 80+45 TO S 81+10 SOLID RT & LT

**TEMPORARY 4 INCH YELLOW LINE, PAINT**  
 S 75+00 TO S 79+00 SOLID RT & LT  
 S 79+00 TO S 80+45 DOUBLE SOLID RT & LT  
 S 80+45 TO S 81+10 SOLID RT & LT

**4 INCH WHITE LINE, WATERBORNE PAINT**  
 S 75+00 TO S 81+13 SOLID RT & LT  
 S 80+75 TO S 81+13 SOLID RT

**TEMPORARY 4 INCH WHITE LINE, PAINT**  
 S 75+00 TO S 81+13 SOLID RT & LT  
 S 80+75 TO S 81+13 SOLID RT

**24 INCH STOP BAR, WATERBORNE PAINT**  
 S 81+09 RT

**TEMPORARY 24 INCH STOP BAR, PAINT**  
 S 81+09 RT

**DURABLE LETTER OR SYMBOL, WATERBORNE PAINT**

S 80+85 RT ARROW	1 EACH
S 80+85 RT ARROW	1 EACH
S 81+00 RT "S,T,O,P"	4 EACH
S 81+00 RT "S,T,O,P"	4 EACH

**TEMPORARY LETTER OR SYMBOL, PAINT**

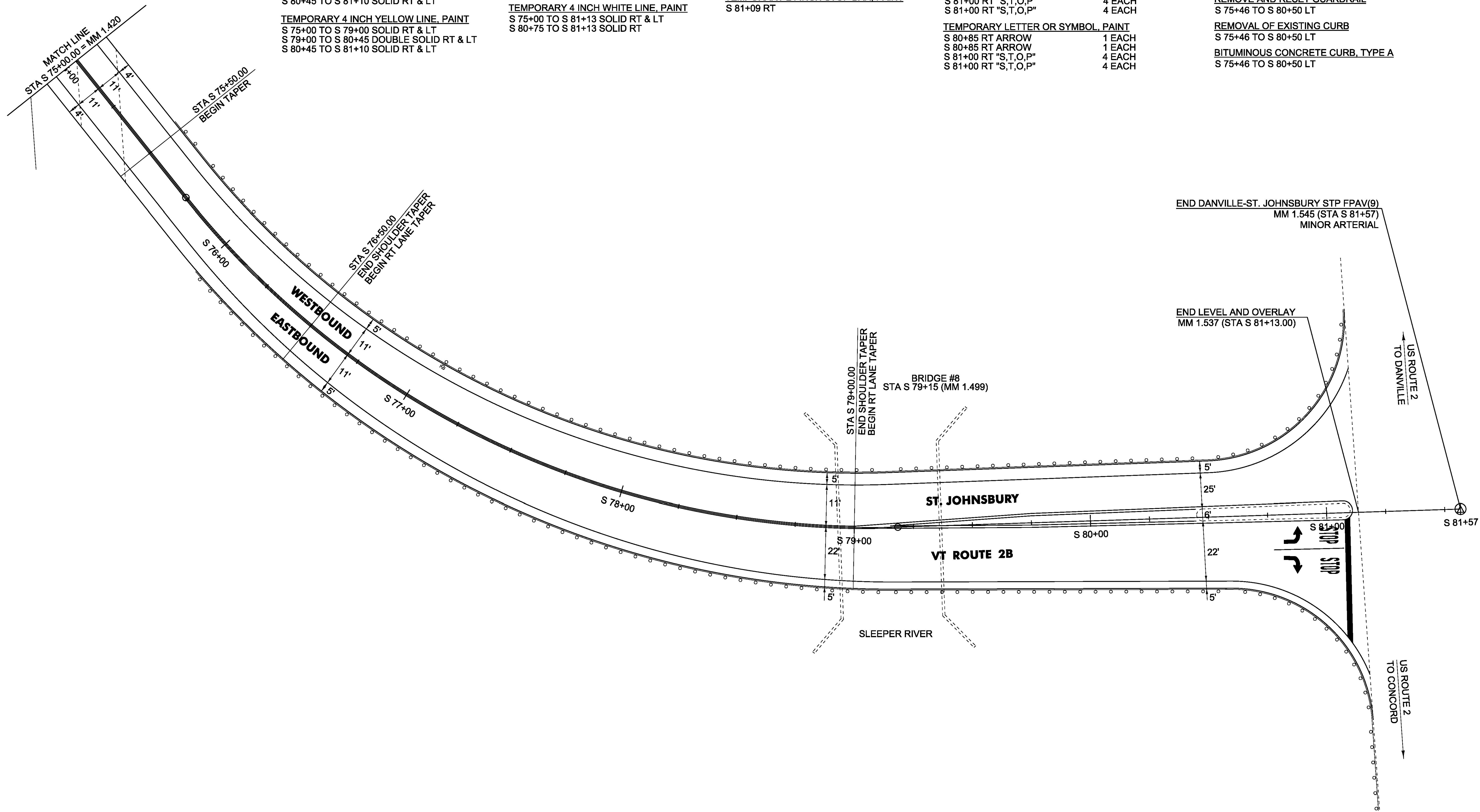
S 80+85 RT ARROW	1 EACH
S 80+85 RT ARROW	1 EACH
S 81+00 RT "S,T,O,P"	4 EACH
S 81+00 RT "S,T,O,P"	4 EACH

**PAINTED CURB**  
 S 80+45 TO S 81+10 RT & LT

**REMOVE AND RESET GUARDRAIL**  
 S 75+46 TO S 80+50 LT

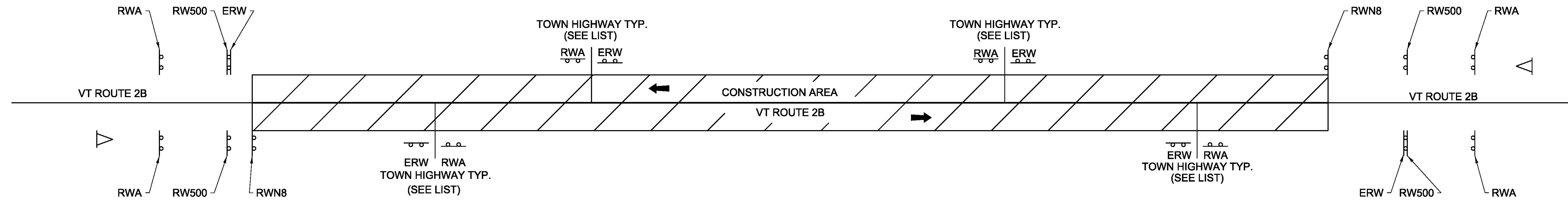
**REMOVAL OF EXISTING CURB**  
 S 75+46 TO S 80+50 LT

**BITUMINOUS CONCRETE CURB, TYPE A**  
 S 75+46 TO S 80+50 LT



**NOT TO SCALE**

PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME:	16v148.dgn
PROJECT LEADER:	B. KIPP
DESIGNED BY:	B. KIPP
PLAN SHEET 17	
PLOT DATE:	05-JUN-2017
DRAWN BY:	B. KIPP
CHECKED BY:	M. FOWLER
SHEET 32	OF 33



**TRAFFIC CONTROL NOTES**

- THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (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 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.
- CONSTRUCTION ZONE SIGN LAYOUT SHALL BE IN ACCORDANCE WITH SECTION 6 OF THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND LATEST REVISIONS AND CURRENT STATE STANDARDS.
- THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR APPROVAL BY THE PROJECT MANAGER PRIOR TO THE START OF CONSTRUCTION. 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. THE TRAFFIC CONTROL PLAN SHALL BE IN COMPLIANCE WITH VAOT STANDARDS AND THE LATEST EDITION OF THE MUTCD. WHERE CONFLICTS EXIST, THE MUTCD SHALL GOVERN.
- THE BID PRICE FOR ITEM 641.10, TRAFFIC CONTROL SHALL INCLUDE ALL OF THE FOLLOWING, AS NEEDED: APPROACH, ON AND OFF PROJECT CONSTRUCTION SIGNING, PORTABLE FLASHING ARROW BOARDS, BARRIERS, BARRELS, CONES, BARRICADES, TEMPORARY REGULATORY AND WARNING SIGNS, AND POSTS AS DETAILED IN VAOT STANDARDS. ALL ADJUSTING, RELOCATING AND REMOVING OF THESE DEVICES AS DIRECTED BY THE ENGINEER SHALL ALSO BE INCLUDED.
- PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) WILL BE PROVIDED FOR USE ALONG THIS PROJECT AND ARE TO BE USED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL POSITION PORTABLE CHANGEABLE MESSAGE SIGNS WARNING MOTORISTS OF THE EXPECTED ROADWAY CONDITIONS AHEAD. THE MESSAGE TO BE DISPLAYED SHALL BE SUBMITTED TO THE ENGINEER IN ADVANCE FOR APPROVAL. MESSAGES SHOULD BE UPDATED PERIODICALLY TO DESCRIBE THE WORK ACTIVITY OCCURRING SO THAT THE PCMS CONTINUES TO COMMAND THE ATTENTION OF MOTORISTS. THE COST OF PROVIDING THESE MESSAGE SIGNS SHALL BE PAID UNDER ITEM 641.15, PORTABLE CHANGEABLE MESSAGE SIGN.
- CONSTRUCTION SIGNS SHALL BE IN NEW OR LIKE NEW CONDITION PER VAOT STANDARDS.
- DIAMOND SHAPED SIGNS SHALL BE 48" X 48" WITH BLACK TEXT AND BORDER ON A RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND.
- RETROREFLECTIVE SHEETING SHALL BE AS NOTED ON VAOT STANDARD T-1 AND IN THE SPECIAL PROVISIONS.
- 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.
- ALL PERMANENT SIGNS THAT CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE COMPLETELY COVERED, THE PAYMENT FOR WHICH WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10 TRAFFIC CONTROL.
- ALL TEMPORARY CONSTRUCTION SIGNS SHALL BE MOUNTED ON STANDS OR POSTS THAT COMPLY WITH NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT 350 (NCHRP 350) AND/OR AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) COMPLIANT.
- WHERE TEMPORARY SIGNS ARE PLACED BEHIND GUARDRAIL, THEY SHALL BE ADJUSTED SUCH THAT THE BOTTOM OF THE SIGNS ARE ABOVE THE TOP OF GUARDRAIL.
- SEE VAOT STANDARDS T-1, T-10 AND T-17 FOR ADDITIONAL SIGN PLACEMENT DETAILS.
- A MINIMUM LANE WIDTH OF 10 FEET SHALL BE MAINTAINED AT ALL TIMES, INCLUDING SHOULDERS. THE DEPARTMENT OF MOTOR VEHICLES SHALL BE NOTIFIED FOR SUPER LOAD PERMIT ROUTING. THE APPLICANT HAS TEN (10) DAYS TO MOVE THEIR LOAD ONCE A PERMIT IS ISSUED, ADVANCE NOTICE MAY BE REQUIRED TO ENSURE ADEQUATE TIME IS PROVIDED.
- THE CONTRACTOR SHALL PROVIDE ACCESS THROUGH THE WORK ZONE FOR EMERGENCY VEHICLES AT ALL TIMES. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL COMMERCIAL AND MUNICIPAL PROPERTIES DURING BUSINESS HOURS. COORDINATE MAJOR WORK ON COMMERCIAL OR MUNICIPAL ACCESSES WITH THE OWNER AT LEAST ONE WEEK PRIOR TO STARTING THE WORK. ALL COMMERCIAL AND MUNICIPAL ACCESSES SHALL BE KEPT FREE OF WORK AND TRAFFIC CONTROLLED BY UNIFORMED TRAFFIC OFFICERS OR FLAGGERS AS REQUIRED BY THE ENGINEER. ACCESS TO ALL PROPERTIES MAY BE RESTRICTED FOR A SHORT DURATION (A FEW HOURS). THIS WORK WILL BE COORDINATED WITH THE OWNER.
- WHEN COLD PLANED BITUMINOUS PAVEMENT IS OPEN TO TRAFFIC, A "MOTORCYCLES USE CAUTION" SIGN, AS PER VAOT STANDARD T-17, SHALL BE PROVIDED.
- AS THE PAVING OPERATION MOVES, FLAGGER SIGNS SHALL BE MOVED ACCORDINGLY. AT NO TIME SHOULD THE FLAGGER SYMBOL SIGN BE MORE THAN 1000 FEET FROM THE FLAGGER STATION. FLAGGER SIGNS SHALL BE COVERED OR TURNED AWAY FROM TRAFFIC WHEN FLAGGING OPERATIONS CEASE FOR LONGER THAN 15 MINUTES.
- CONES SHALL BE USED TO CLEARLY DEFINE THE TRAVEL SPACE AND PROVIDE SEPARATION FROM THE WORK SPACE ALONG ITS ENTIRE LENGTH.
- THE CONTRACTOR SHALL LEAVE NO LONGITUDINAL DROP-OFFS DURING THE OVERNIGHT HOURS. THEREFORE, THE FULL ROADWAY WIDTH SHALL 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.

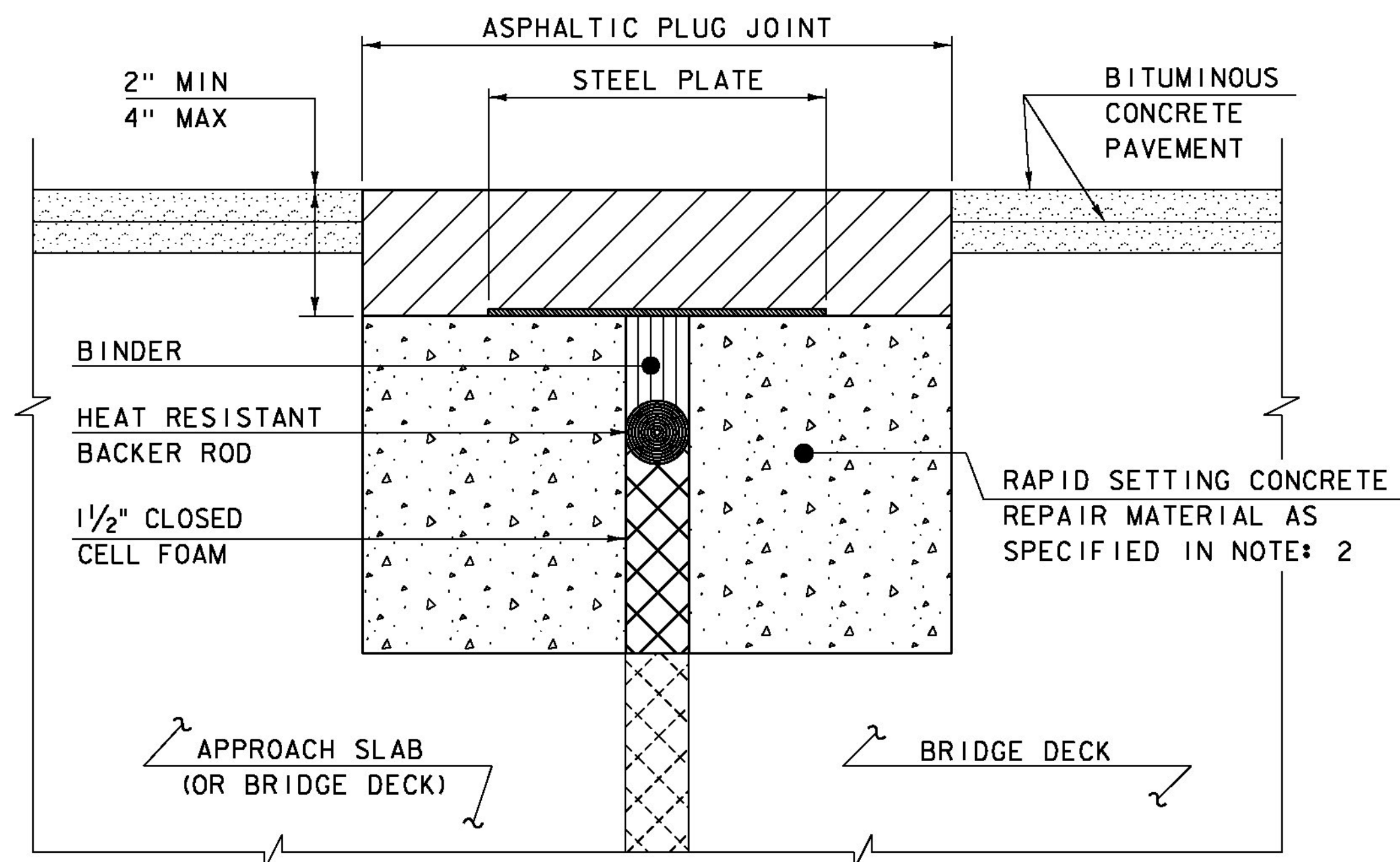
LIST OF TOWN/STATE HIGHWAYS FOR CONSTRUCTION SIGNS

TOWN/STATE HIGHWAY NAME	ROAD WORK AHEAD (RWA)	END ROAD WORK (ERW)	ROAD WORK 500' (RW500)	ROAD WORK NEXT 8 MILES (RWN8)	PCMS
VT ROUTE 2B					
BEGINNING OF PROJECT	2	1	2	1	1
TH 63	1	1			
TH 124	1	1			
TH 63	1	1			
TH 63	1	1			
TH 83	1	1			
TH 61	1	1			
TH 60	1	1			
TH 62	1	1			
END OF PROJECT	2	1	2	1	1
<b>TOTAL</b>	<b>12</b>	<b>10</b>	<b>4</b>	<b>2</b>	<b>2</b>

LEGEND

- RWA = ROAD WORK AHEAD
- RW500 = ROAD WORK IN 500 FEET
- RWN = ROAD WORK NEXT (XX MILES)
- ERW = END ROAD WORK
- △ = PORTABLE CHANGEABLE MESSAGE SIGN
- ▨ = WORK AREA
- ← = DIRECTION OF TRAFFIC FLOW

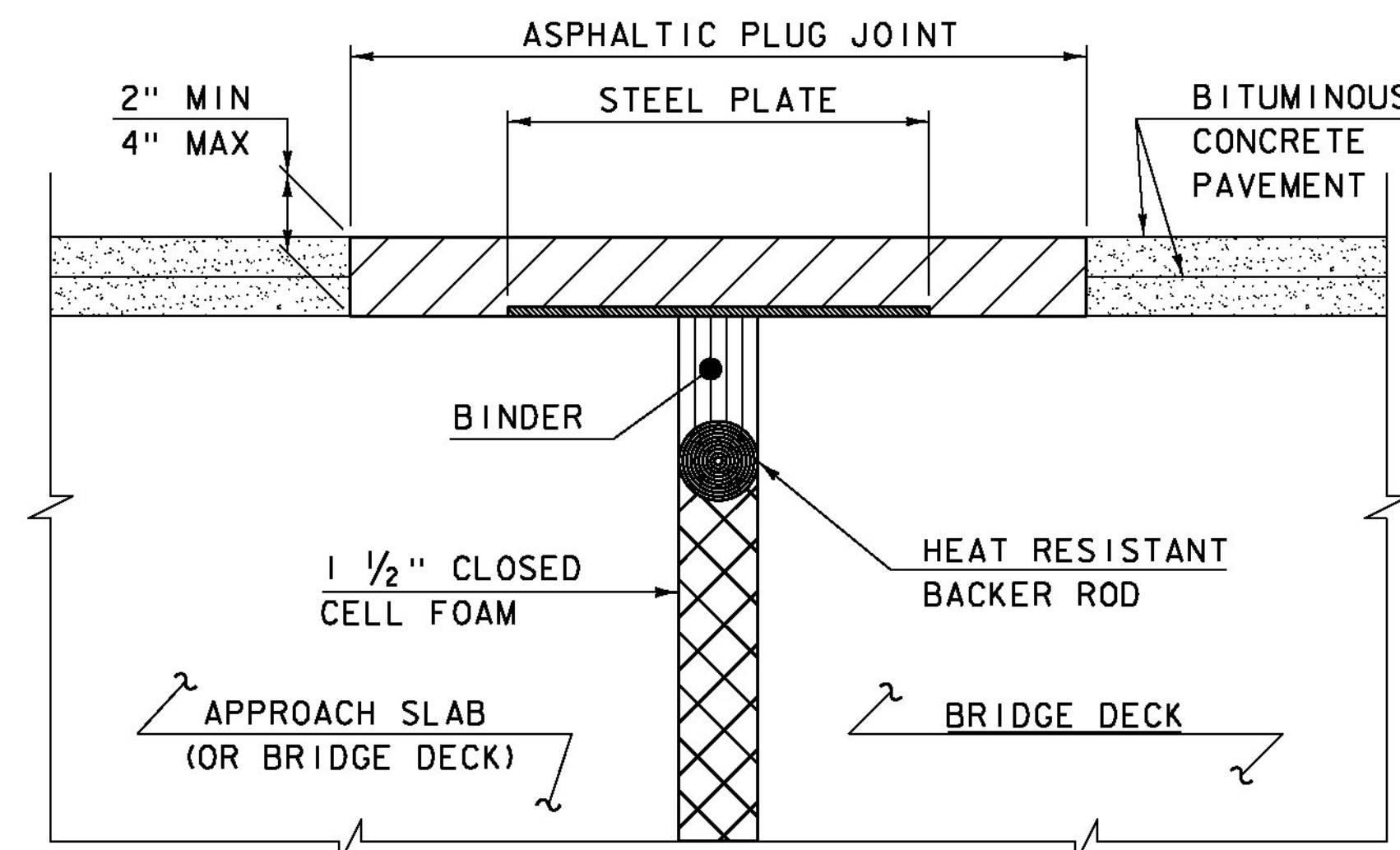
PROJECT NAME:	DANVILLE-ST. JOHNSBURY
PROJECT NUMBER:	STP FPAV(9)
FILE NAME: 16v148.dgn	PLOT DATE: 05-JUN-2017
PROJECT LEADER: B. KIPP	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
CONSTRUCTION APPROACH SIGNING SHEET	SHEET 33 OF 33



**ASPHALTIC PLUG JOINT DETAIL - REHAB**

**NOTES:**

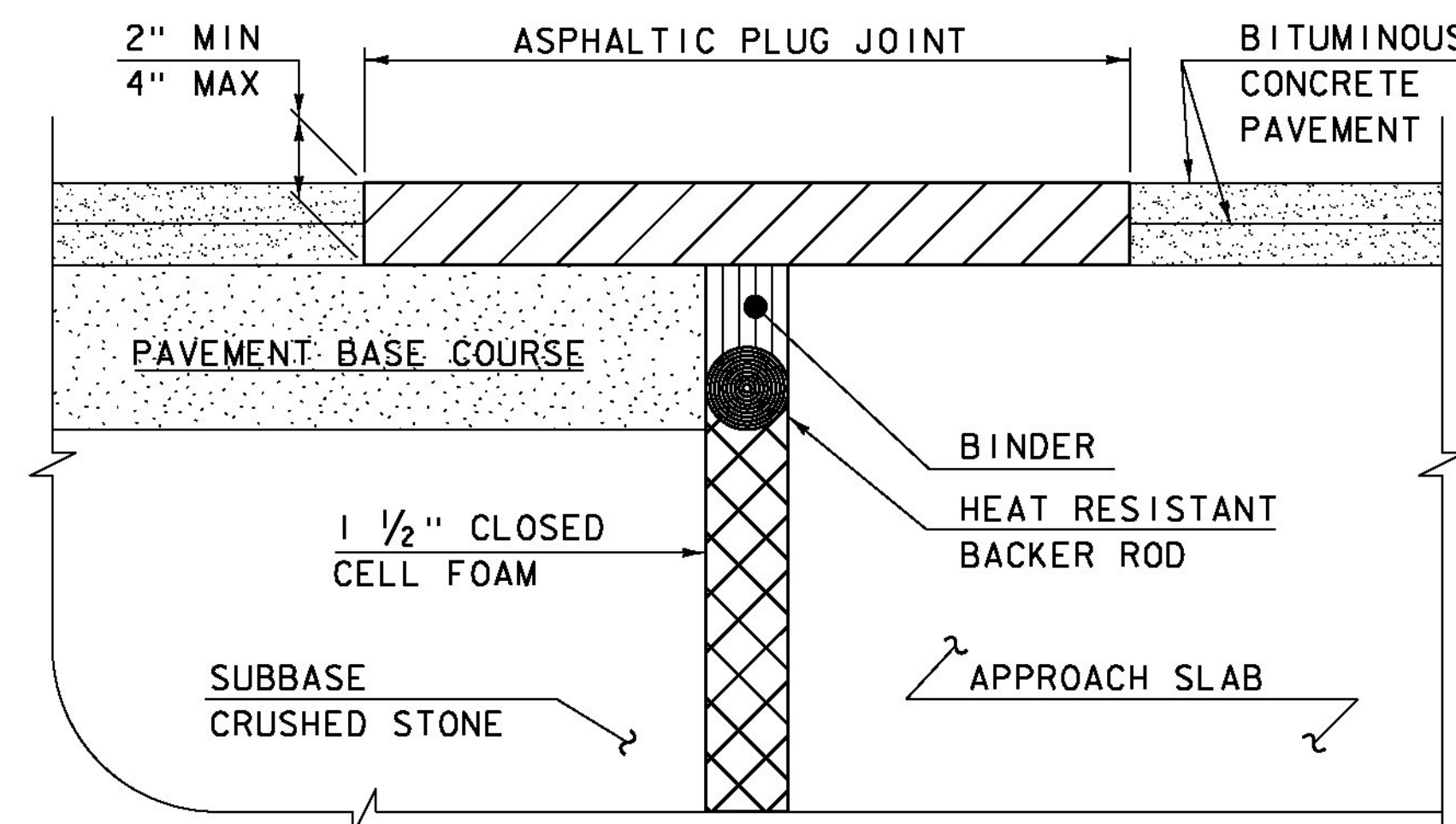
1. THE CONTRACTOR SHALL REMOVE ALL ASPHALTIC PLUG JOINT MATERIAL AND DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. REMOVAL OF THE FIRST 4 INCHES OF MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG. ANY REMOVAL OF MATERIAL GREATER THAN 4 INCHES SHALL 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**

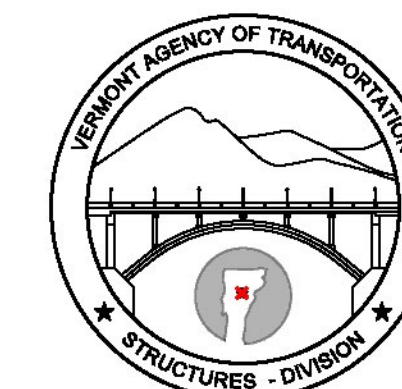
APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

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.

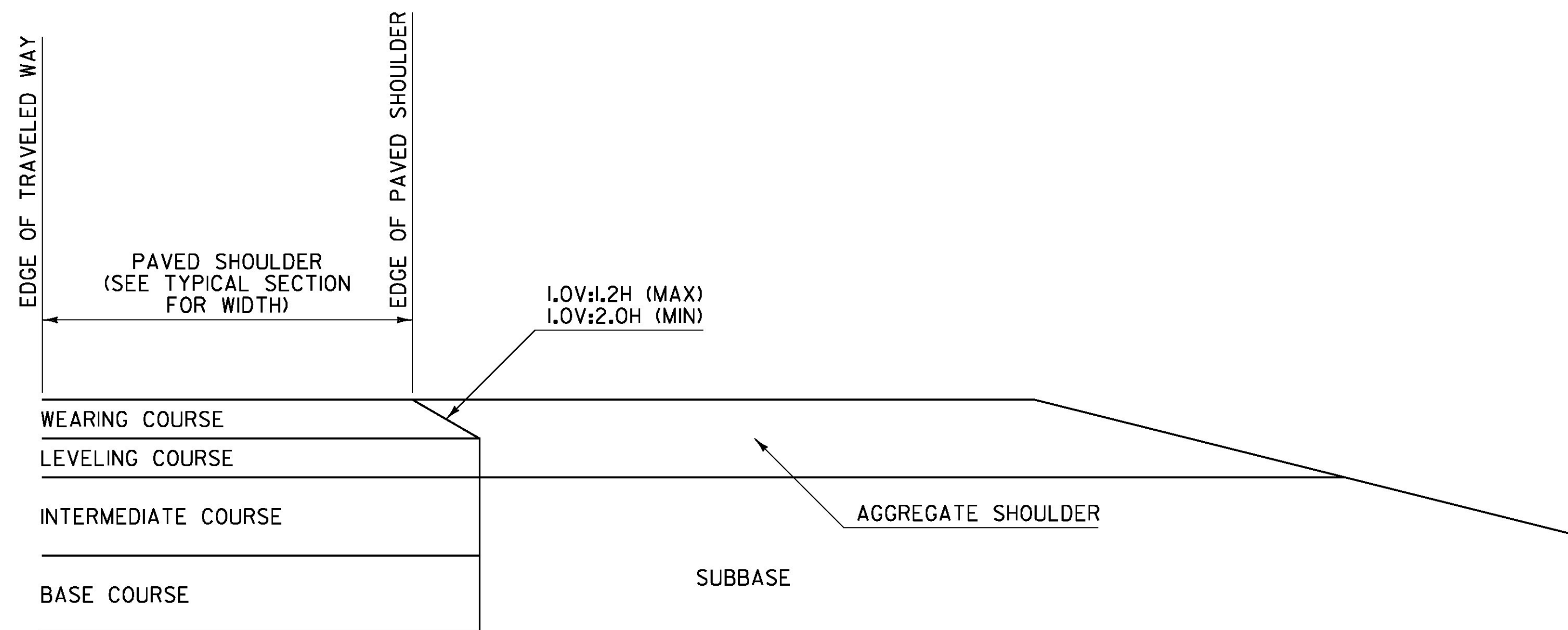
DETAILS ON THIS SHEET ARE NOT TO SCALE.

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**

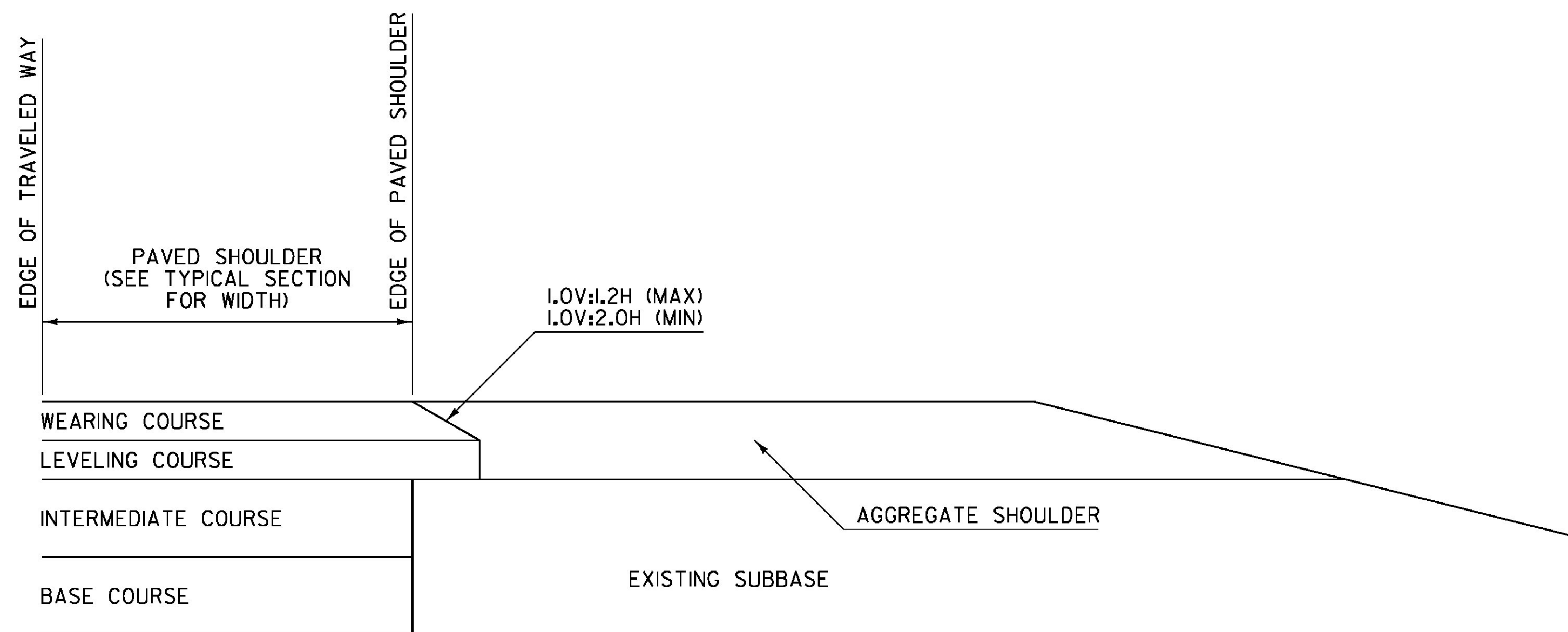


**NOTES:**

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.

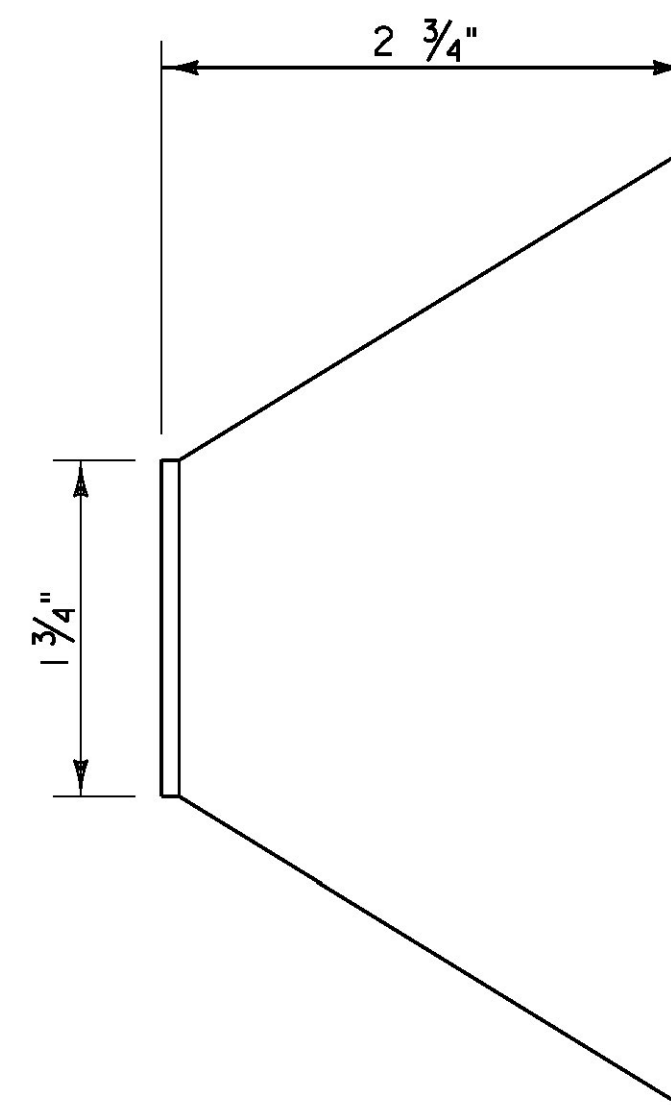
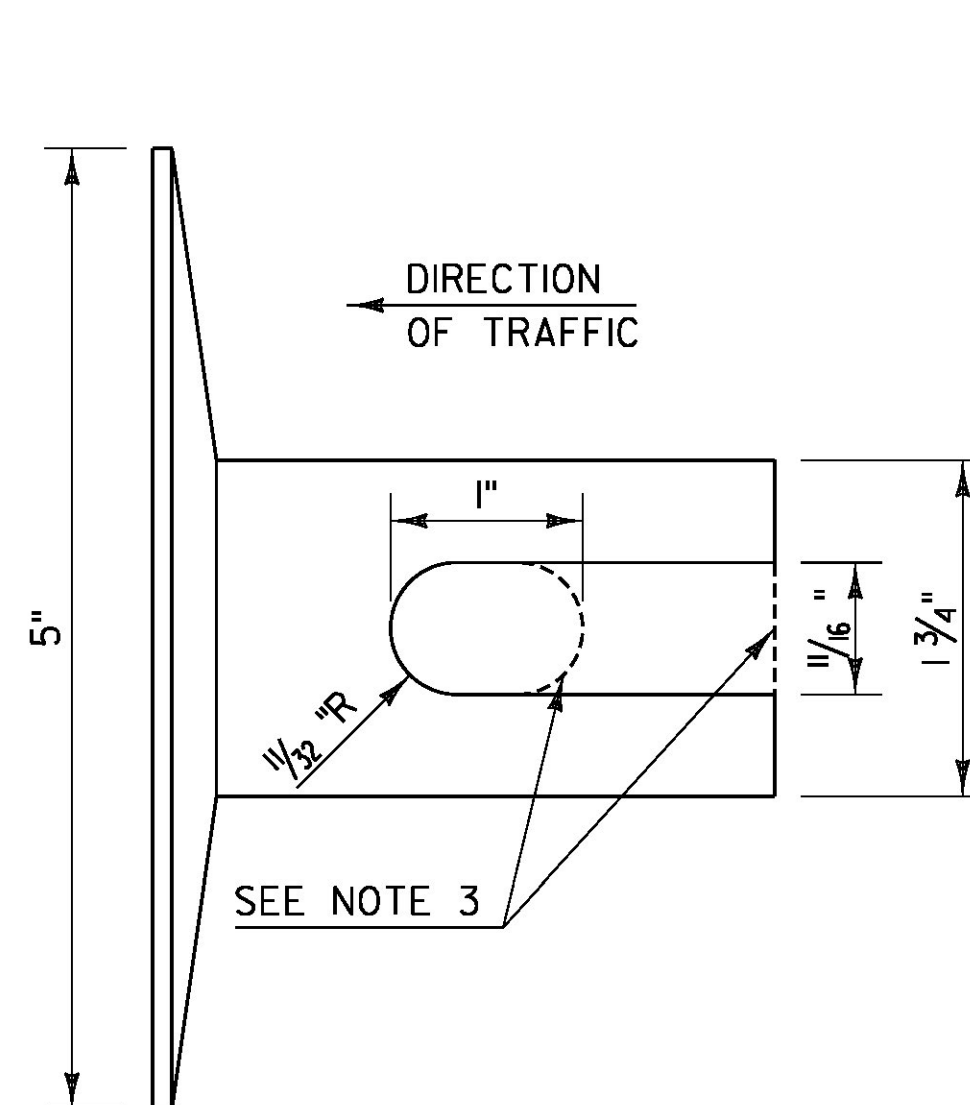
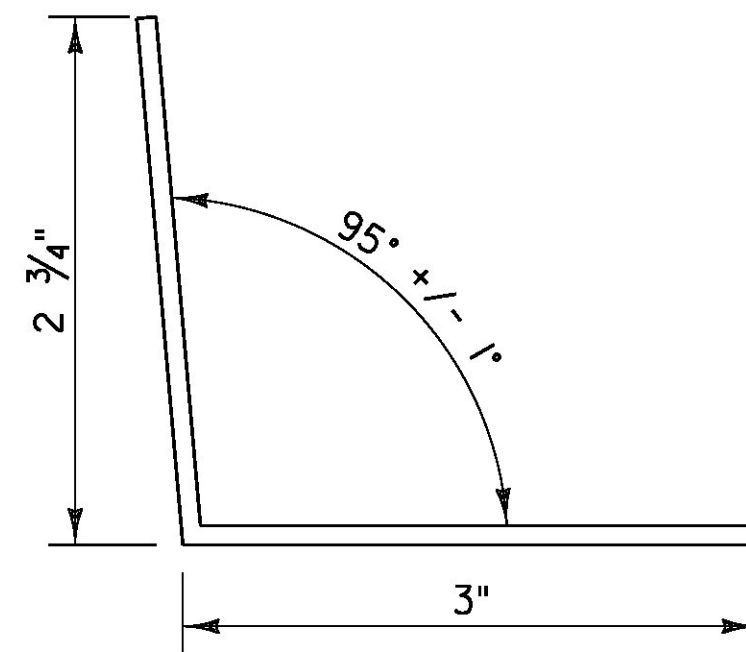
REV.	DATE	DESCRIPTION
0	MAR. 29, 2016	ORIGINAL APPROVAL
OTHER DETAILS REQUIRED: NONE		
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN		

SAFETY EDGE DETAILS



HIGHWAY SAFETY  
& DESIGN DETAIL  
HSD-400.01

**GUARDRAIL DELINEATOR DETAIL**



**GUARDRAIL TERMINAL LABEL DETAIL**



**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 INDICATE ADDITIONAL MODEL INFORMATION IF NECESSARY.
4. LINE FOUR SHALL INDICATE FLARED (FLRD) OR TANGENT (TANG).
5. LEGEND SHALL BE SIZE 3/4 INCH ARIEL FONT.
6. LEGEND SHALL BE BLACK ON A WHITE BACKGROUND, LEGEND 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.

**NOTES:**

1. GUARDRAIL DELINEATOR BASE MATERIAL SHALL BE 0.10 INCH THICK ALUMINUM IN ACCORDANCE WITH SUBSECTION 728.04 DELINEATION DEVICES.
2. GUARDRAIL DELINEATORS SHALL HAVE WHITE RETROREFLECTIVE SHEETING, EQUAL TO OR EXCEEDING TYPE III IN ACCORDANCE WITH SUBSECTION 750.08(B)(3) ON THE RIGHT SIDE OF THE TRAVELED WAY AND YELLOW RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING TYPE VII IN ACCORDANCE WITH SUBSECTION 750.08(B)(7) ON THE LEFT SIDE OF THE TRAVELED WAY IN RESPECT TO APPROACHING TRAFFIC. ON ONE DIRECTIONAL ROADWAYS RETROREFLECTIVE SHEETING MAY BE OMITTED ON FACES WHERE THERE WILL BE NO APPROACHING TRAFFIC.
3. HOLE MAY BE USED IN PLACE OF SLOT.

REV.	DATE	DESCRIPTION
0	NOV. 3, 2015	ORIGINAL APPROVAL
1	FEB. 27, 2017	UPDATED NAME, MINOR CORRECTIONS AND ADDED GUARDRAIL DELINEATOR DETAIL
OTHER DETAILS REQUIRED: NONE		
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN		

MISCELLANEOUS GUARDRAIL DETAILS



HIGHWAY SAFETY  
& DESIGN DETAIL  
HSD - 621.06