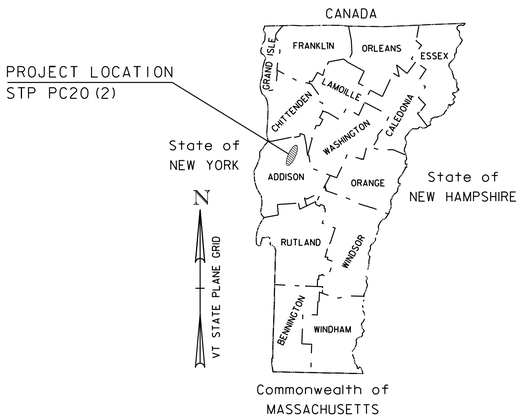
STATE OF VERMONT
AGENCY OF TRANSPORTATION

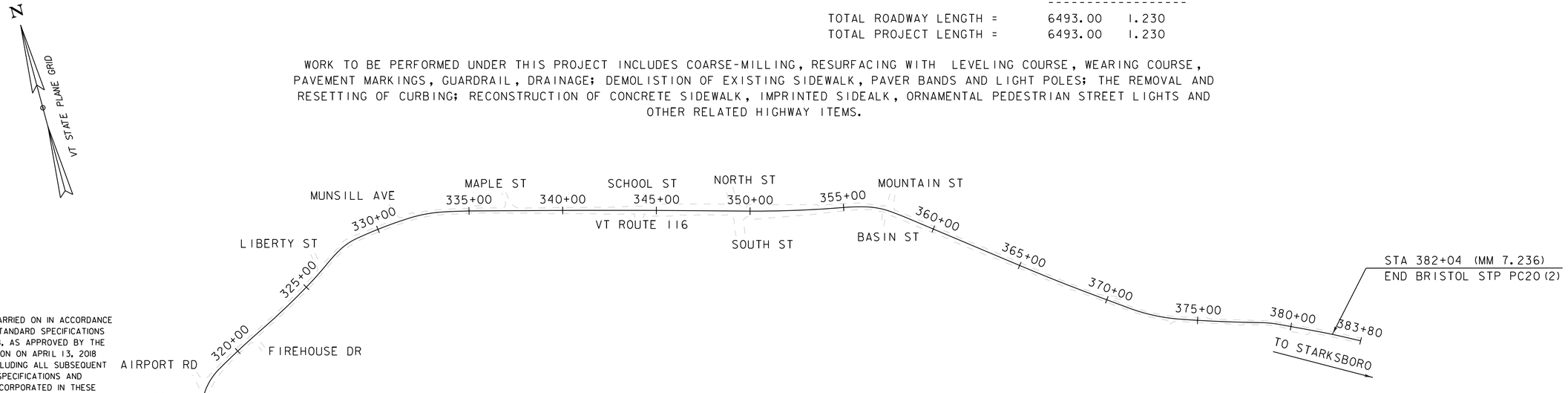


PROPOSED IMPROVEMENT
CLASS I TOWN HIGHWAY
TOWN OF BRISTOL
COUNTY OF ADDISON
VT ROUTE 116 (MINOR ARTERIAL)

BEGINNING ON VT ROUTE 116 IN THE TOWN OF BRISTOL NEAR THE INTERSECTION WITH AIRPORT RD AT MILE MARKER 6.006 = STA. 317+11 AND RUNNING NORTHERLY ALONG VT ROUTE 116 FOR A DISTANCE OF APPROXIMATLY 6493 FT (1.230 MILES) AND STOPPING IN THE TOWN OF BRISTOL AT MILE MARKER 7.236 = STA. 382+04

STATION TO STATION DATA		LENGTH (FT)	(MILES)
TOWN OF BRISTOL	STA. 317+11 TO STA. 382+04 (MM 6.006 TO MM 7.236)	6493.00	1.230
	TOTAL ROADWAY LENGTH =	6493.00	1.230
	TOTAL PROJECT LENGTH =	6493.00	1.230

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES COARSE-MILLING, RESURFACING WITH LEVELING COURSE, WEARING COURSE, PAVEMENT MARKINGS, GUARDRAIL, DRAINAGE; DEMOLISTION OF EXISTING SIDEWALK, PAVER BANDS AND LIGHT POLES; THE REMOVAL AND RESETTING OF CURBING; RECONSTRUCTION OF CONCRETE SIDEWALK, IMPRINTED SIDEALK, ORNAMENTAL PEDESTRIAN STREET LIGHTS AND OTHER RELATED HIGHWAY ITEMS.



NOT TO SCALE

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 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 : DUBOIS & KING, INC.
SURVEYED DATE : OCTOBER 2018

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (2011)

DuBois & King inc.

HIGHWAY DIVISION, CHIEF ENGINEER
APPROVED _____ DATE _____

PROJECT MANAGER : BRANDON KIPP, P.E.

PROJECT NAME : BRISTOL
PROJECT NUMBER : STP PC20(2)

SHEET 102 OF 174 SHEETS

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118	UNSUITABLE SHOULDER DETAIL SHEET
119	STRUCTURE AND VALVE INVENTORY SHEET
120	DITCH CLEANING DETAIL SHEET
121	PAVEMENT MARKINGS DETAIL SHEET
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149	CONSTRUCTION APPROACH SIGNING SHEET
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151	SOUTH SIDEWALK TYPICAL SECTIONS
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153	TIE SHEET
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159-160	LIGHTING & ELECTRICAL PLAN SHEETS 1-2
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HIGHWAY SAFETY AND DESIGN DETAIL SHEET

HSD-400.01	SAFETY EDGE DETAILS	01/05/18
HSD-621.01	POST AND BLOCKOUT DETAILS FOR STEEL BEAM GUARDRAIL, GALVANIZED	06/09/15
HSD-621.06	MISCELLANEOUS GUARDRAIL DETAILS	02/27/17

TRAFFIC DATA

VT ROUTE 116	AADT		DHV		%T		%D		ADTT		CUM. ESALS	CUM. ESALS
	2020	2040	2020	2040	2020	2040	2020	2040	2020	2040	(2020-2040)	(2020-2060)
MM 6.006 - MM 6.615	4700	5100	540	590	5.5	8.9	52	52	310	540	2,191,000	5,037,000
MM 6.615 - MM 7.236	5300	5700	610	660	6.7	10.7	54	54	410	710	2,700,000	6,187,000

POSTED SPEED

MM 6.006 - MM 7.236 = 30 MPH

SUPERPAVE BITUMINOUS CONCRETE PAVEMENT MIXTURE DESIGN CRITERIA	
DESIGN LANE/DESIGN LIFE ESALS	3,340,980
DESIGN NUMBER OF GYRATIONS	65
PERFORMANCE GRADE ASPHALT BINDER:	PG GRADE 70-28

VTRANS STANDARDS

A-76	STANDARDS FOR TOWN & DEVELOPMENT ROADS	03/03/03
C-3A	SIDEWALK RAMPS	03/23/18
C-3B	SIDEWALK RAMPS AND MEDIAN ISLANDS	03/23/18
C-10	CURBING	2/11/08
D-15	PRECAST REINFORCED CONCRETE CATCH BASIN W/ CAST IRON GRATE PRECAST REINFORCED MANHOLE W/ CAST IRON COVER CAST IRON GRATE WITH FRAME, TYPE D CAST IRON GRATE WITH FRAME, TYPE E	06/01/94
E-121	STANDARD SIGN PLACEMENT CONVENTIONAL ROAD	08/08/95
E-191	PAVEMENT MARKING DETAILS	02/01/99
E-192	PAVEMENT MARKING DETAILS	10/12/00
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 END TERMINALS ANCHOR FOR STEEL BEAM GUARDRAIL STEEL BEAM MEDIAN BARRIER	03/10/17
J-3	MAIL BOX SUPPORT DETAILS (SINGLE AND MULTIPLE SUPPORT)	08/07/95
S-366	LONGSPAN STEEL BEAM GUARDRAIL, GALVANIZED	02/10/14
T-1	TEMPORARY TRAFFIC CONTROL GENERAL NOTES	04/25/16
T-2	TRAFFIC SIGN 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 FOR MAINTENANCE PAVEMENT MARKING OPERATIONS	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
T-44	MILEMARKER DETAILS STATE AND TOWN HIGHWAY	04/09/14
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01/02/13
T-56	STANDARD SIGN PLACEMENT	10/26/15
T-70	VERMONT REGULATORY SIGN DETAILS	04/25/16
T-71	VERMONT REGULATORY SIGN DETAILS	04/25/16
T-82	VERMONT WARNING SIGN DETAILS	03/10/17

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP PC20(2)

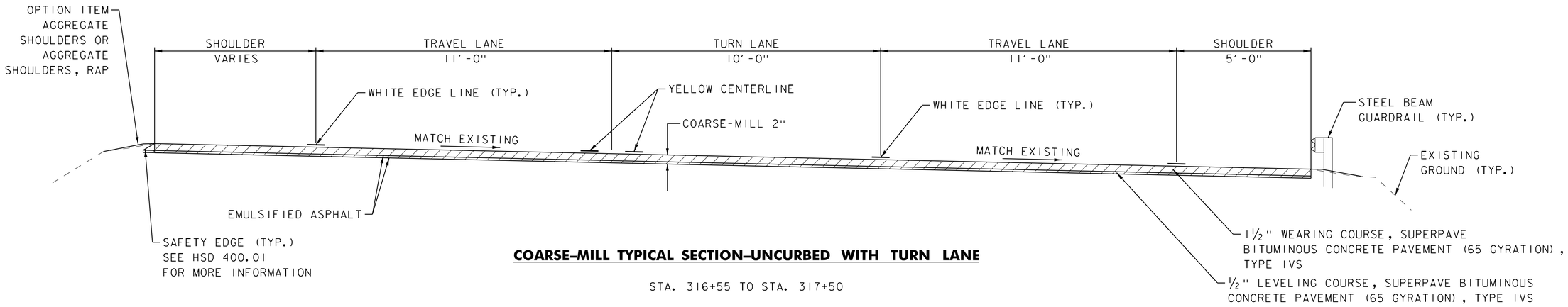
FILE NAME: z18v1871dx.dgn
PROJECT LEADER: C. LATHROP
DESIGNED BY: T. MATTHEWS
INDEX OF SHEETS

PLOT DATE: 10/4/2019
DRAWN BY: T. MATTHEWS
CHECKED BY: C. LATHROP
SHEET 103 OF 174

PROJECT PAVING LIMITS

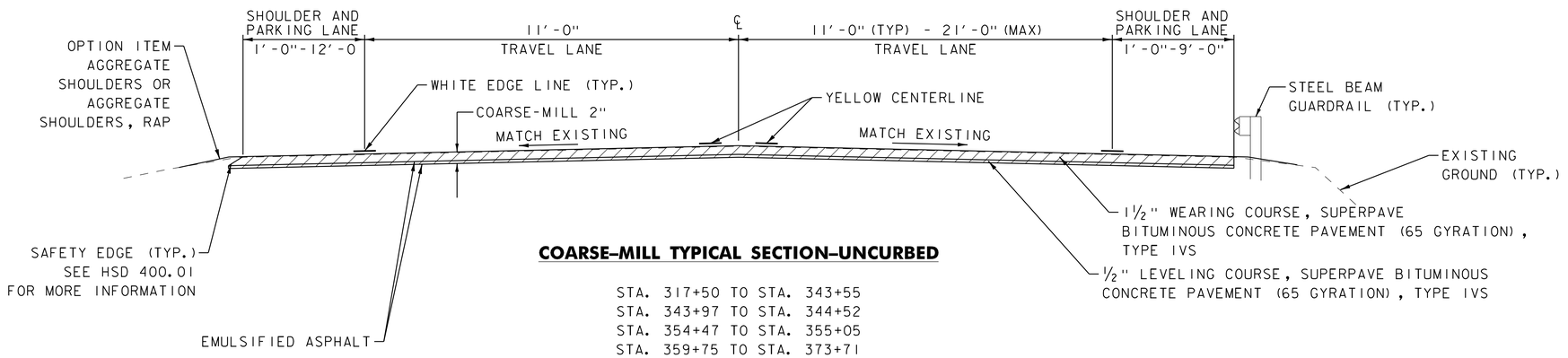
	BEGIN STATION	END STATION	LANE TYPICAL	WEARING DEPTH	LEVELING DEPTH	NOTES
VT 116						
BRISTOL						
	316+55	317+50	VARIES-11'-10'-11'-5'	1½"	½"	COURSE MILL AND OVERLAY
	317+50	319+50	VARIES-11'-(11'-21')-(3'-5')	1½"	½"	
	319+50	339+00	3'-11'-11'-3'	1½"	½"	
	339+00	339+50	(3'-4')-11'-11'-(3'-6')	1½"	½"	
	339+50	342+75	4'-11'-11'-6'	1½"	½"	
	342+75	343+75	(4'-12')-11'-11'-(6'-8')	1½"	½"	
	343+75	344+34	(11'-12')-11'-(18'-20')-18'	1½"	½"	
	344+34	349+25	17'-(18'-19')-11'-(9'-22')	1½"	½"	
	349+25	352+92	17'-(11'-17')-(11'-27')-17'	1½"	½"	
	352+92	354+62	8'-(11'-19')-(11'-18')-8'	1½"	½"	
	354+62	357+68	(3'-11')-11'-11'-(3'-9')	1½"	½"	
	357+68	366+75	3'-11'-11'-3'	1½"	½"	
	366+75	367+25	(1'-3')-11'-11'-3'	1½"	½"	
	367+25	369+25	1'-11'-11'-3'	1½"	½"	
	369+25	369+75	1'-11'-11'-(2'-3')	1½"	½"	
	369+75	375+50	1'-11'-11'-2'	1½"	½"	
	375+50	376+00	1'-11'-11'-(1'-2')	1½"	½"	
	376+00	379+00	1'-11'-11'-1'	1½"	½"	
	379+00	379+50	(1'-2')-11'-11'-(1'-2')	1½"	½"	
	379+50	382+25	2'-11'-11'-2'	1½"	½"	

PROJECT NAME:	BRISTOL
PROJECT NUMBER:	STP PC20(2)
FILE NAME: z18v187typ.dgn	PLOT DATE: 10/4/2019
PROJECT LEADER: C. LATHROP	DRAWN BY: S. SOLLA
DESIGNED BY: S. SOLLA	CHECKED BY: C. LATHROP
PROJECT TYPICAL SECTIONS SHEET 1	SHEET 104 OF 174



COARSE-MILL TYPICAL SECTION-UNCURBED WITH TURN LANE

STA. 316+55 TO STA. 317+50

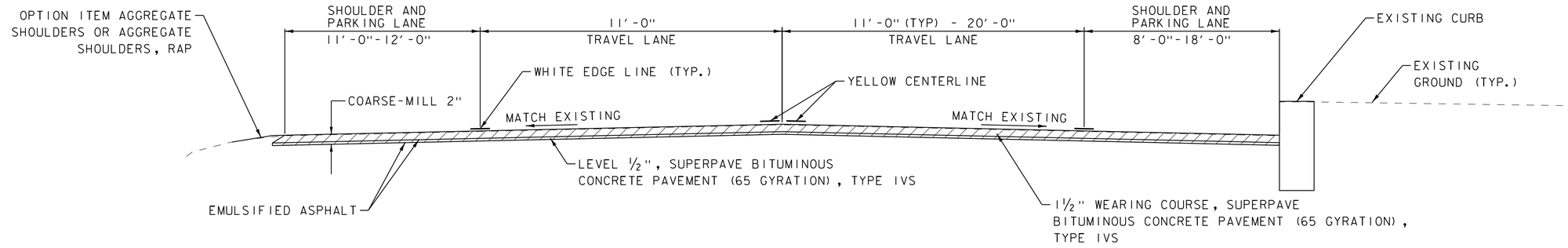


COARSE-MILL TYPICAL SECTION-UNCURBED

STA. 317+50 TO STA. 343+55
STA. 343+97 TO STA. 344+52
STA. 354+47 TO STA. 355+05
STA. 359+75 TO STA. 373+71
STA. 375+03 TO STA. 382+25

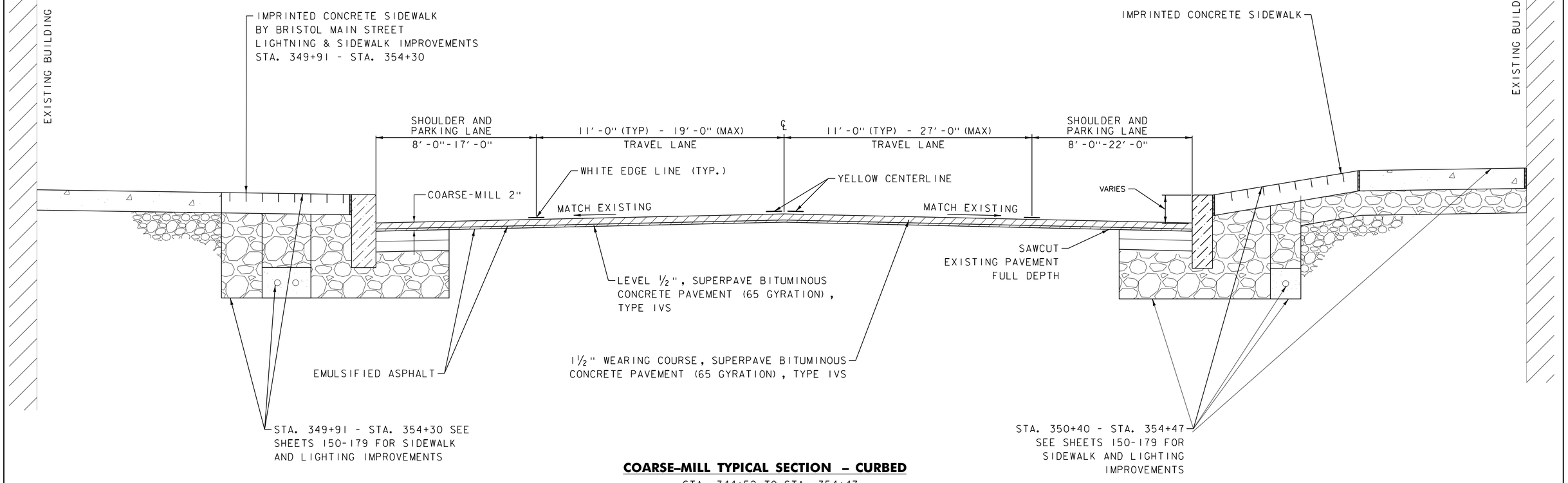
NOT TO SCALE

PROJECT NAME: BRISTOL	
PROJECT NUMBER: STP PC20(2)	
FILE NAME: z18v187typ.dgn	PLOT DATE: 10/4/2019
PROJECT LEADER: C. LATHROP	DRAWN BY: T. MATTHEWS
DESIGNED BY: T. MATTHEWS	CHECKED BY: C. LATHROP
PROJECT TYPICAL SECTIONS SHEET 2	SHEET 105 OF 174



COARSE-MILL TYPICAL SECTION - CURBED

STA. 343+55 TO STA. 343+97

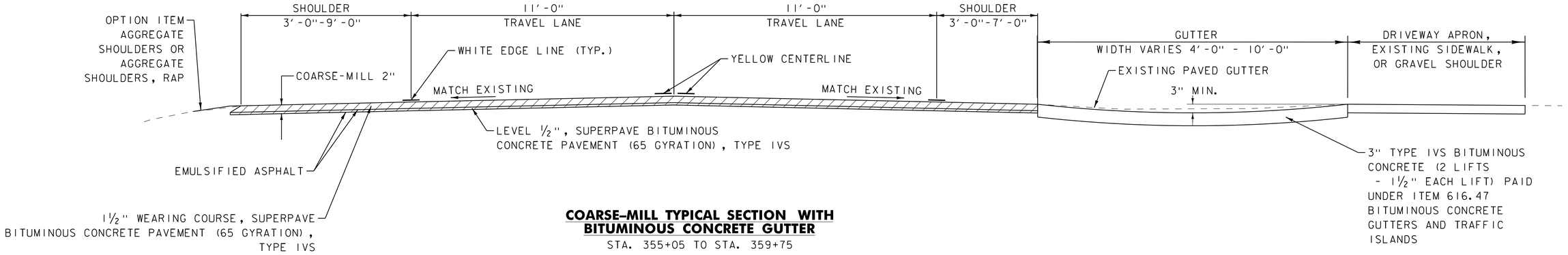


COARSE-MILL TYPICAL SECTION - CURBED

STA. 344+52 TO STA. 354+47

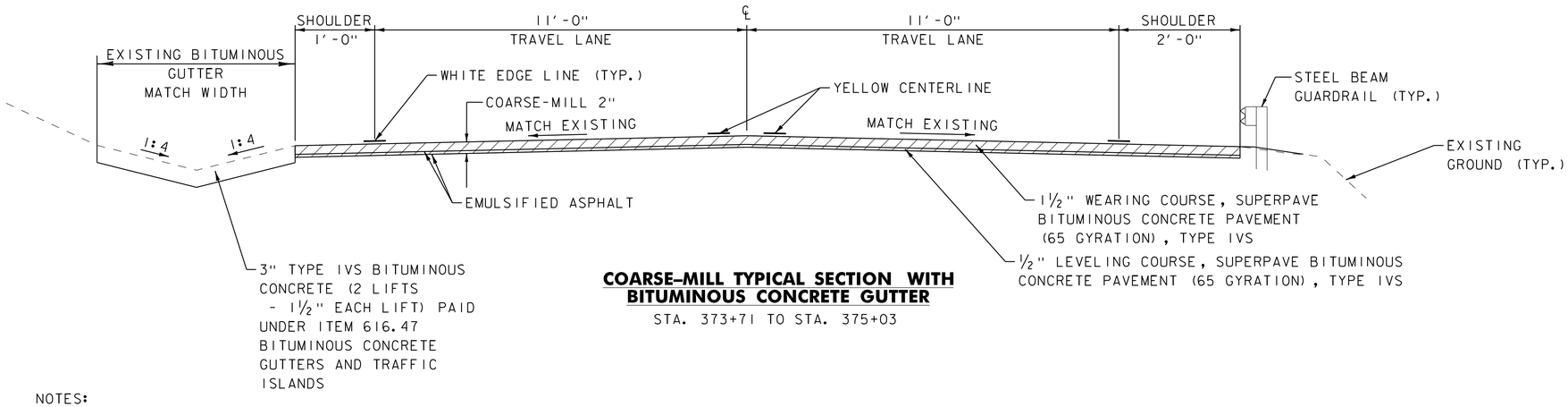
NOT TO SCALE

PROJECT NAME:	BRISTOL
PROJECT NUMBER:	STP PC20(2)
FILE NAME: z18v187typ.dgn	PLOT DATE: 10/4/2019
PROJECT LEADER: C. LATHROP	DRAWN BY: T. MATTHEWS
DESIGNED BY: T. MATTHEWS	CHECKED BY: C. LATHROP
PROJECT TYPICAL SECTIONS SHEET 3	SHEET 106 OF 174



COARSE-MILL TYPICAL SECTION WITH BITUMINOUS CONCRETE GUTTER

STA. 355+05 TO STA. 359+75



COARSE-MILL TYPICAL SECTION WITH BITUMINOUS CONCRETE GUTTER

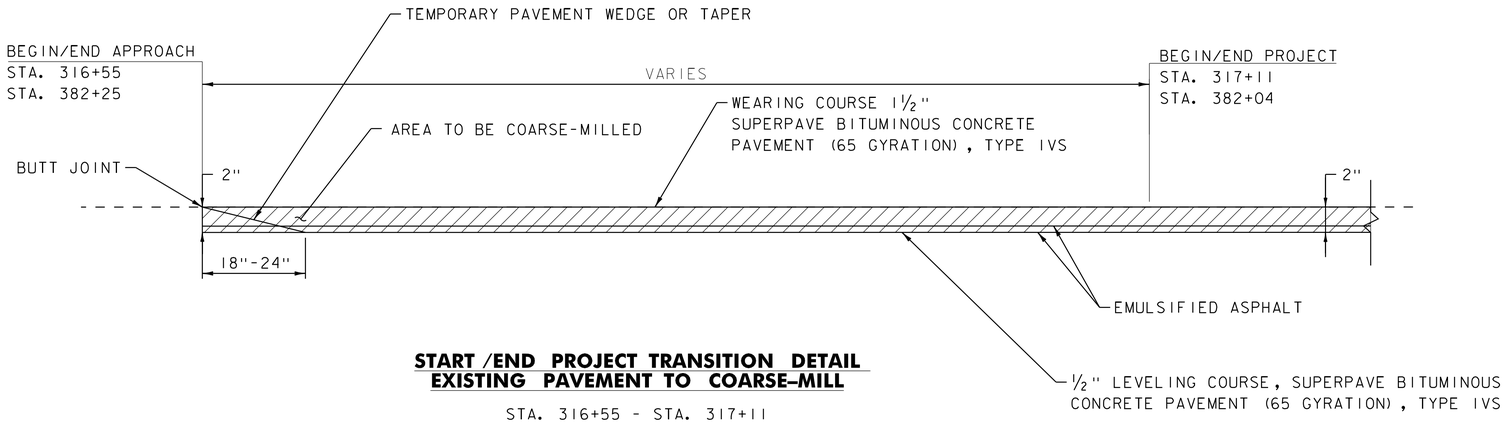
STA. 373+71 TO STA. 375+03

NOTES:

1. ALL PAVEMENT AND EXCAVATION ASSOCIATED WITH BITUMINOUS CONCRETE GUTTERS WILL BE PAID UNDER ITEM 616.47 BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS

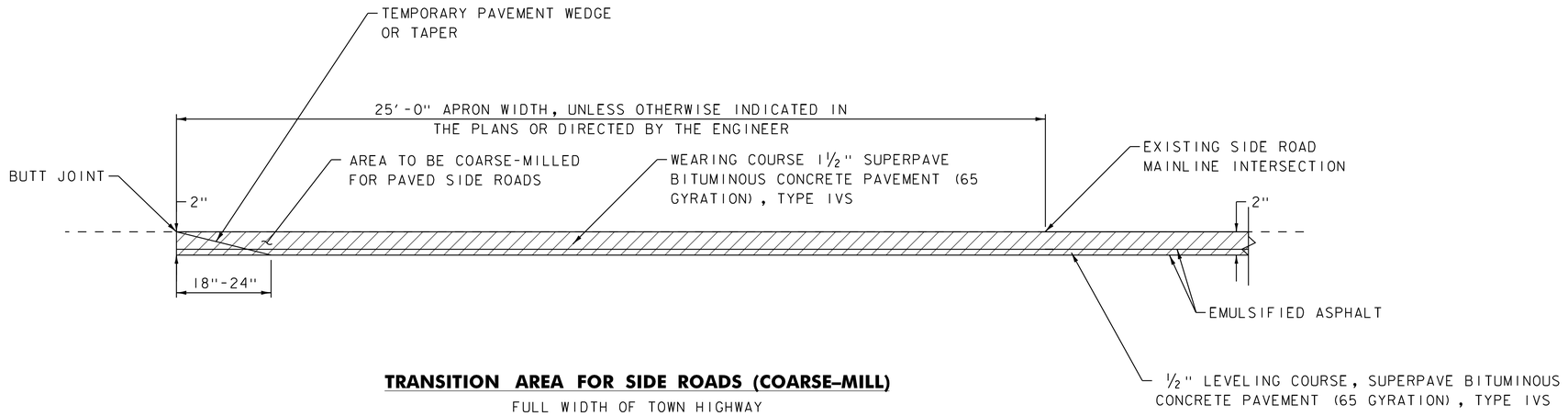
NOT TO SCALE

PROJECT NAME:	BRISTOL
PROJECT NUMBER:	STP PC20(2)
FILE NAME: z18v187typ.dgn	PLOT DATE: 10/4/2019
PROJECT LEADER: C. LATHROP	DRAWN BY: T. MATTHEWS
DESIGNED BY: T. MATTHEWS	CHECKED BY: C. LATHROP
PROJECT TYPICAL SECTIONS SHEET 4	SHEET 107 OF 174



START /END PROJECT TRANSITION DETAIL
EXISTING PAVEMENT TO COARSE-MILL

STA. 316+55 - STA. 317+11
STA. 382+04 - STA. 382+25

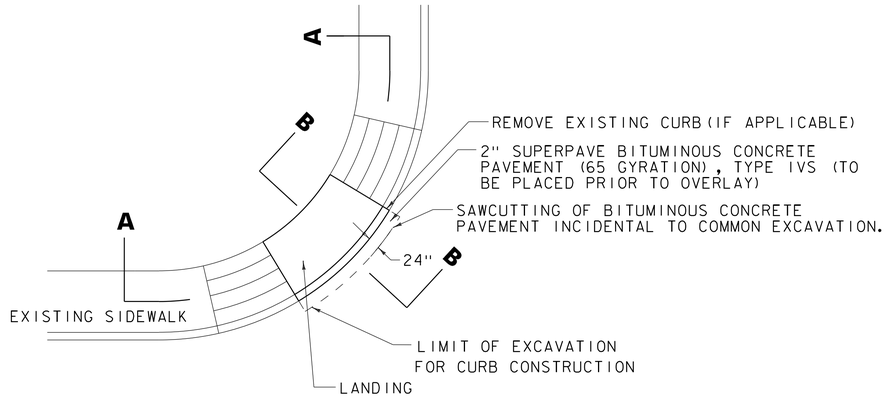


TRANSITION AREA FOR SIDE ROADS (COARSE-MILL)

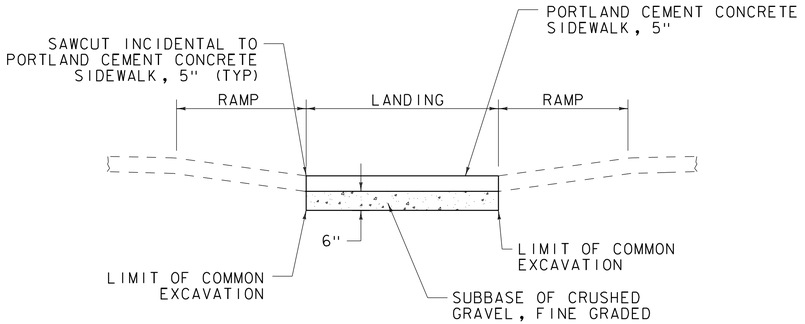
FULL WIDTH OF TOWN HIGHWAY
SEE LAYOUT SHEETS FOR LOCATIONS OF ALL SIDE ROADS

NOT TO SCALE

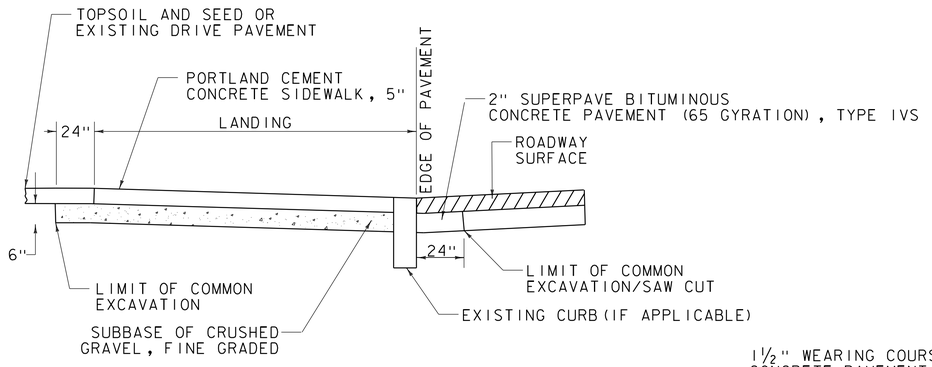
PROJECT NAME:	BRISTOL
PROJECT NUMBER:	STP PC20(2)
FILE NAME: z18v187typ.dgn	PLOT DATE: 10/4/2019
PROJECT LEADER: C. LATHROP	DRAWN BY: T. MATTHEWS
DESIGNED BY: T. MATTHEWS	CHECKED BY: C. LATHROP
PROJECT TYPICAL SECTIONS SHEET 5	SHEET 108 OF 174



PLAN



SECTION A–A

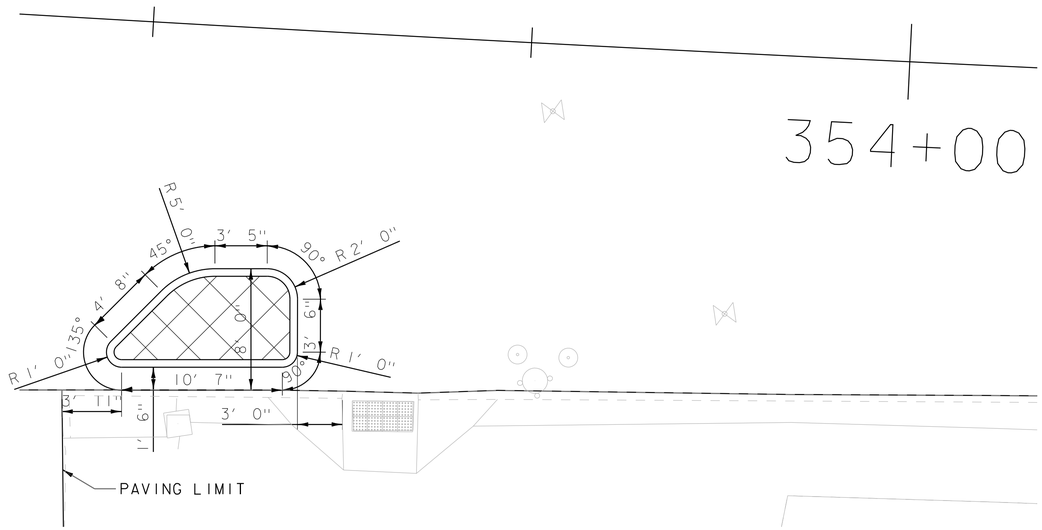


SECTION B–B

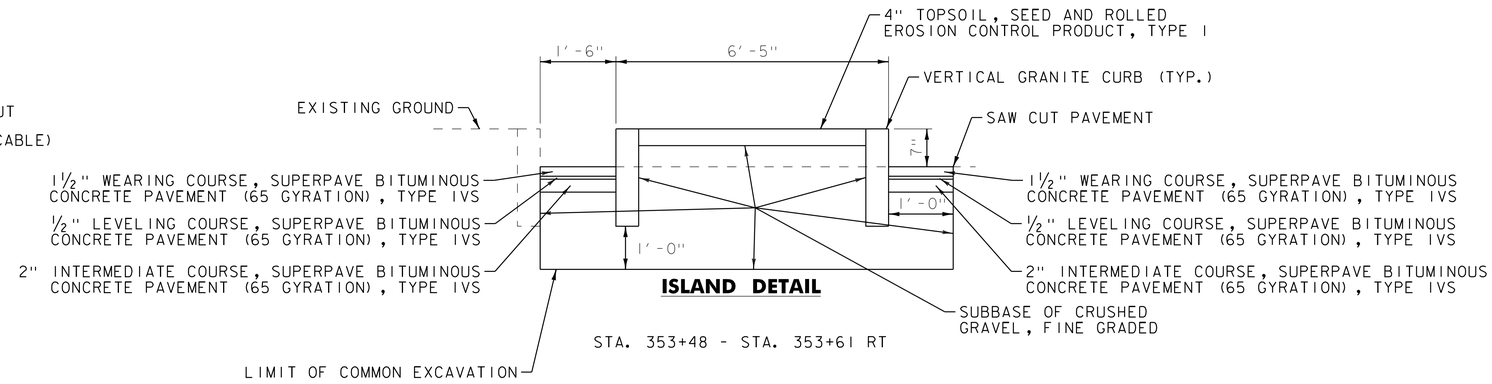
SIDEWALK RAMP PAY LIMIT DETAILS

NOTE:

1. THIS DETAIL IS FOR PAY LIMITS ONLY. FOR INDIVIDUAL RAMP CONFIGURATIONS, SLOPES, DIMENSIONS, ETC., SEE VTRANS STANDARDS C-3A/C-3B.
2. SEE PROJECT LAYOUT SHEETS FOR LOCATIONS OF RAMPS TO BE RECONSTRUCTED.
3. REMOVAL OF EXISTING SIDEWALK AND CURB TO BE PAID UNDER ITEM 203.15 COMMON EXCAVATION.
4. NEW BITUMINOUS CONCRETE PAVEMENT SHALL BE PAID UNDER ITEM 406.35 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (65 GYRATION)).



ISLAND LAYOUT DETAIL

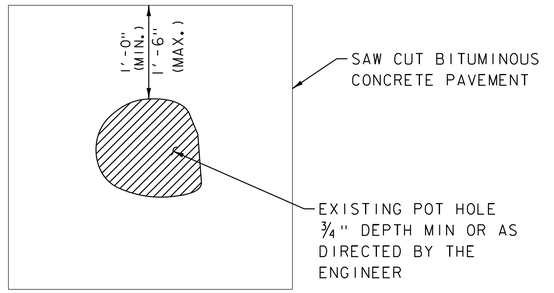


ISLAND DETAIL

STA. 353+48 - STA. 353+61 RT

NOT TO SCALE

PROJECT NAME:	BRISTOL
PROJECT NUMBER:	STP PC20(2)
FILE NAME: z18v187typ.dgn	PLOT DATE: 10/4/2019
PROJECT LEADER: C. LATHROP	DRAWN BY: S. SOLLA
DESIGNED BY: S. SOLLA	CHECKED BY: C. LATHROP
DETAIL SHEET 1	SHEET 109 OF 174

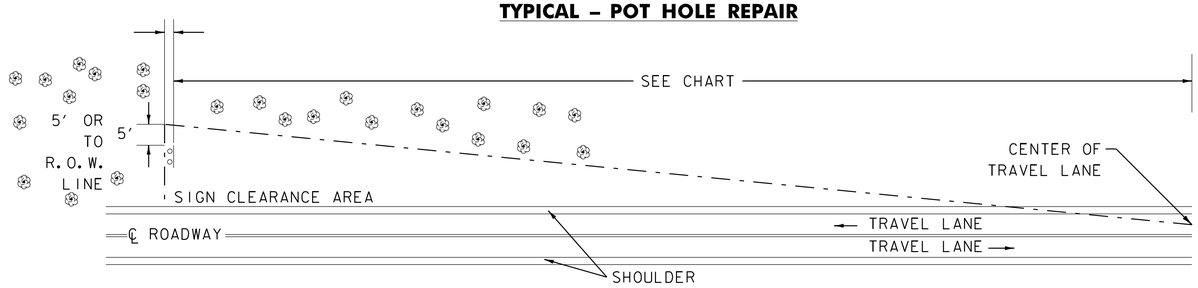


NOTE:

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 406.45 "BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION."

2. ALL WORK ASSOCIATED WITH POT HOLE REPAIR WILL BE PAID UNDER ITEM 406.45 "BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION."

TYPICAL – POT HOLE REPAIR



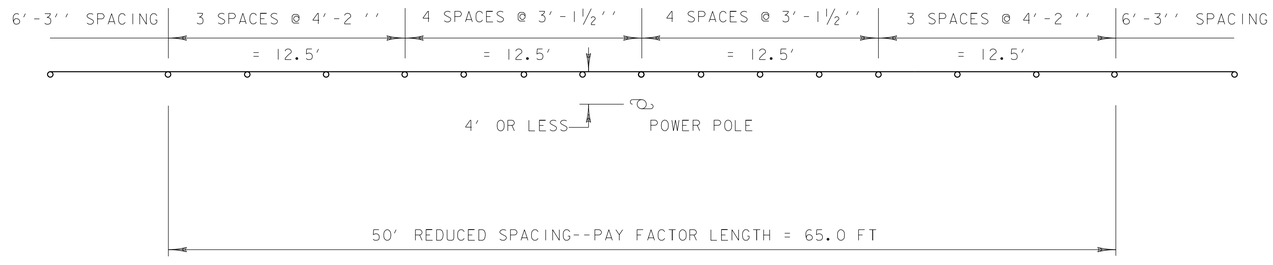
THE CONTRACTOR SHALL REMOVE ALL WOODY STEMMED GROWTH INCLUDING BRUSH, SAPLINGS AND TREE LIMBS GROWING WITHIN OR PROJECTING INTO THE CLEARANCE AREA AND DOWN TO GROUND LEVEL OR AT LEAST 10 FT BELOW THE BOTTOM OF THE SIGN. PAYMENT WILL BE UNDER ITEM 201.31 "THINNING AND TRIMMING FOR SIGNS" AND PAID FOR PER EACH. NO CHEMICALS (POISONS OR DEFOLIANTS) ALLOWED. THE ENGINEER MAY EXCLUDE REMOVAL IN SOME AREAS WHERE DEEMED NECESSARY AND APPROPRIATE OR NECESSITATED BY PERMIT REQUIREMENTS PER THE CONSTRUCTION ENVIRONMENTAL ENGINEER'S RECOMMENDATIONS.

THINNING AND TRIMMING FOR SIGNS DETAIL

STA. 317+11 RT
STA. 318+06 RT
STA. 328+58 RT
STA. 337+55 LT
STA. 343+86 LT
STA. 344+82 LT
STA. 357+05 RT
STA. 357+19 LT
STA. 367+56 LT
STA. 369+94 RT

MINIMUM SIGN SIGHT DISTANCE CHART

APPROACH SPEED (mph)	SIGHT DISTANCE (feet)
30 OR LESS	300
35	350
40	400
45	450
50	500



GUARDRAIL REDUCED SPACING DETAIL

OBJECTS WITHIN 4.0' OF GUARDRAIL

STA. 332+10 RT
STA. 333+66 RT

NOT TO SCALE

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP PC20(2)

FILE NAME: z18v187typ.dgn
PROJECT LEADER: C. LATHROP
DESIGNED BY: S. SOLLA
DETAIL SHEET 2

PLOT DATE: 10/4/2019
DRAWN BY: S. SOLLA
CHECKED BY: C. LATHROP
SHEET 110 OF 174

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	ROADWAY(NO FEDERAL/STATE	FULL C.E.
10		
40	390	
100		
	15	
	15	
1		
27000		
390	525	
415		
415		
275		
1		
3350		
2250		
50		
1		
3350		
	5	
12		
19		
2		
2		
1		
10		
30		
10		
20		
60		
10		
84		
55	160	
	830	
20	155	
80		
5		
2		
50	470	
70	45	

TOTALS

GRAND TOTAL	FINAL
10	
430	
100	
15	
15	
1	
27000	
915	
415	
415	
275	
1	
3350	
2250	
50	
1	
3350	
5	
12	
19	
2	
2	
1	
10	
30	
10	
20	
60	
10	
84	
215	
830	
175	
80	
5	
2	
520	
115	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
EACH	THINNING AND TRIMMING FOR SIGNS	201.31	-
CY	COMMON EXCAVATION	203.15	17
CY	EARTH BORROW	203.30	EST.
CY	SAND BORROW	203.31	1
CY	TRENCH EXCAVATION OF EARTH	204.20	2
CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-
SY	COARSE-MILLING, BITUMINOUS PAVEMENT	210.10	576
TON	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.28	28
	BEGIN OPTION AA		
TON	AGGREGATE SHOULDERS	402.12	7
TON	AGGREGATE SHOULDERS, RAP	402.13	7
	END OPTION AA		
CWT	EMULSIFIED ASPHALT	404.65	5
LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	406.28	-
TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (65 GYRATION)	406.35	28
SY	HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES	406.38	13
TON	BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION	406.45	EST.
LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-
TON	MATERIAL TRANSFER VEHICLE	410.10	28
CY	CONCRETE, CLASS B	541.25	0.2
EACH	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES	604.40	-
EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I	604.412	-
EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS II	604.415	-
EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS III	604.418	-
EACH	CHANGING ELEVATION OF SEWER MANHOLES	604.42	-
HR	POWER GRADER RENTAL	608.15	EST.
HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST.
HR	POWER BROOM RENTAL, TYPE I	608.30	EST.
HR	POWER BROOM RENTAL, TYPE II	608.31	EST.
HR	TRUCK RENTAL	608.37	EST.
HR	LOADER RENTAL, TYPE I	608.40	EST.
CY	STONE FILL, TYPE I	613.10	EST.
LF	VERTICAL GRANITE CURB	616.21	13
LF	REMOVING AND RESETTING CURB	616.40	46
LF	REMOVAL OF EXISTING CURB	616.41	12
TON	BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS	616.47	8
EACH	REMOVE AND RESET MAILBOX, SINGLE SUPPORT	617.10	EST.
EACH	REMOVE AND RESET MAILBOX, MULTIPLE SUPPORT	617.12	EST.
SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10	23
SF	DETECTABLE WARNING SURFACE	618.30	7

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COARSE-MILLING, BITUMINOUS PAVEMENT
24997	SY	MAINLINE
1427	SY	SIDE ROADS
26424	SY	SUBTOTAL
576	SY	ROUNDING
27000	SY	TOTAL
		SUPERPAVE BITUMINOUS CONCRETE PAVEMENT & MATERIAL TRANSFER VEHICLE
		WEARING COURSE
2159	TON	1 1/2" TYPE IVS
		LEVELING COURSE
720	TON	1/2" TYPE IVS
		PROFILE DEFICIENCIES
373	TON	TYPE IVS
		SIDE ROADS
14	TON	TYPE IVS
		SAFETY EDGE ADJUSTMENT
22	TON	TYPE IVS
		FULL DEPTH RECONSTRUCTION AT PROPOSED
34	TON	CURB (18" WIDTH)
3322	TON	SUBTOTAL
28	TON	ROUNDING
3350	TON	TOTAL
		STONE FILL, TYPE I
74	CY	DITCH CLEANING DETAIL SHEET
10	CY	ITEM DETAIL SHEET
84	CY	SUBTOTAL
EST.	CY	ROUNDING
84	CY	TOTAL

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP PC20(2)

FILE NAME: z18v187qty.dgn
PROJECT LEADER: C. LATHROP
DESIGNED BY: T. MATTHEWS
QUANTITY SHEET 1

PLOT DATE: 10/4/2019
DRAWN BY: T. MATTHEWS
CHECKED BY: C. LATHROP
SHEET III OF 174

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES		TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	ROADWAY(NO FEDERAL/STATE	FULL C.E.	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
	4		4		EACH	BOLLARDS	619.14				
4			4		EACH	YIELDING MARKER POSTS	619.17	-			
89.5			89.5		LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	-			
125			125		LF	STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	621.205	-			
87.5			87.5		LF	STEEL BEAM GUARDRAIL, GALVANIZED/NESTED W/8 FEET POSTS	621.207	-			
37			37		EACH	TRAFFIC BARRIER DELINEATOR	621.218	EST.			
4			4		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	-			
10			10		EACH	REPLACE GUARDRAIL POST ASSEMBLY	621.76	EST.			
10			10		EACH	REPLACE GUARDRAIL BEAM UNIT	621.77	EST.			
1062.5			1062.5		LF	ADJUST HEIGHT OF GUARDRAIL	621.79	-			
325			325		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	23			
52			52		EACH	ADJUST ELEVATION OF VALVE BOX	629.20	-			
250			250		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.			
4700			4700		HR	FLAGGERS	630.15	EST.			
		0.5	0.5		LS	FIELD OFFICE, ENGINEERS	631.10	-			
		0.5	0.5		LS	TESTING EQUIPMENT, CONCRETE	631.16	-			
		0.5	0.5		LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-			
		1500	1500		DL	FIELD OFFICE COMMUNICATIONS (N.A.B.I.)	631.26	-			
5			5		EACH	CPM SCHEDULE	633.10	EST.			
1			1		LS	MOBILIZATION/DEMOBILIZATION (STP PC20(2))	635.11	-			
1			1		LS	TRAFFIC CONTROL, ALL-INCLUSIVE (STP PC20(2))	641.11	-			
2			2		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-			
						BEGIN OPTION BB					
14900			14900		LF	DURABLE 4 INCH WHITE LINE, EPOXY PAINT	646.403	161			
14900			14900		LF	DURABLE 4 INCH WHITE LINE, POLYUREA	646.404	161			
						END OPTION BB					
						BEGIN OPTION CC					
13300			13300		LF	DURABLE 4 INCH YELLOW LINE, EPOXY PAINT	646.413	160			
13300			13300		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.414	160			
						END OPTION CC					
						BEGIN OPTION EE					
215			215		LF	DURABLE 24 INCH STOP BAR, EPOXY PAINT	646.483	7			
215			215		LF	DURABLE 24 INCH STOP BAR, POLYUREA	646.484	7			
						END OPTION EE					
						BEGIN OPTION FF					
32			32		EACH	DURABLE LETTER OR SYMBOL, EPOXY PAINT	646.493	-			
32			32		EACH	DURABLE LETTER OR SYMBOL, POLYUREA	646.494	-			
						END OPTION FF					

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP PC20(2)

FILE NAME: z18v187qty.dgn
PROJECT LEADER: C. LATHROP
DESIGNED BY: T. MATTHEWS
QUANTITY SHEET 2

PLOT DATE: 10/4/2019
DRAWN BY: T. MATTHEWS
CHECKED BY: C. LATHROP
SHEET 112 OF 174

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES		TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	ROADWAY(NO FEDERAL/STATE	FULL C.E.	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						BEGIN OPTION GG					
655			655		LF	DURABLE CROSSWALK MARKING, EPOXY PAINT	646.503	12			
655			655		LF	DURABLE CROSSWALK MARKING, POLYUREA	646.504	12			
						END OPTION GG					
29800			29800		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	322			
26600			26600		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	320			
430			430		LF	TEMPORARY 24 INCH STOP BAR, PAINT	646.682	10			
64			64		EACH	TEMPORARY LETTER OR SYMBOL, PAINT	646.692	-			
1310			1310		LF	TEMPORARY CROSSWALK MARKING, PAINT	646.702	24			
2500			2500		EACH	LINE STRIPING TARGETS	646.76	41			
125			125		LB	SEED	651.15	EST.			
250			250		LB	FERTILIZER	651.18	EST.			
1			1		TON	AGRICULTURAL LIMESTONE	651.20	EST.			
30			30		CY	TOPSOIL	651.35	EST.			
15			15		SY	GRUBBING MATERIAL (6")	651.40	EST.			
1			1		TON	HAY MULCH	653.10	EST.			
121			121		SY	ROLLED EROSION CONTROL PRODUCT, TYPE I	653.20	EST.			
	4		4		EACH	INLET PROTECTION DEVICE, TYPE II	653.41	-			
50			50		LF	SILT FENCE, TYPE I	653.475	EST.			
320			320		SF	TRAFFIC SIGN, TYPE A	675.20	3.46			
660			660		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	-			
77			77		EACH	REMOVING SIGNS	675.50	-			
3			3		EACH	RESETTING SIGNS	675.60	-			
6			6		EACH	DELINEATOR WITH STEEL POST	676.10	-			
6			6		EACH	REMOVAL OF EXISTING DELINEATOR AND POST	676.12	-			
	1490		1490		LF	WIRED CONDUIT (1.5 INCH CONDUIT, SCHEDULE 80 PVC, NO. 10 AWG WIRING)	678.23	59			
	2		2		EACH	PULL BOX, STANDARD	678.25	-			
	14		14		EACH	REMOVE STREET LIGHT ASSEMBLY	679.24	-			
1			1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-			
2			2		EACH	SPECIAL PROVISION (FLASHING BEACON, RAPID RECTANGULAR)	900.620	-			
	14		14		EACH	SPECIAL PROVISION (ORNAMENTAL PEDESTRIAN STREET LIGHT)	900.620	-			
	14		14		EACH	SPECIAL PROVISION (ORNAMENTAL STREET LIGHT POLE BASE)	900.620	-			
	1		1		LS	SPECIAL PROVISION (GRANITE STEP)	900.645	-			
	225		225		SY	SPECIAL PROVISION (IMPRINTED CONCRETE SIDEWALK, 5")	900.675	13			

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP PC20(2)

FILE NAME: z18v187qty.dgn
PROJECT LEADER: C. LATHROP
DESIGNED BY: T. MATTHEWS
QUANTITY SHEET 3

PLOT DATE: 10/4/2019
DRAWN BY: T. MATTHEWS
CHECKED BY: C. LATHROP
SHEET 113 OF 174

STATE OF VERMONT
AGENCY OF TRANSPORTATION

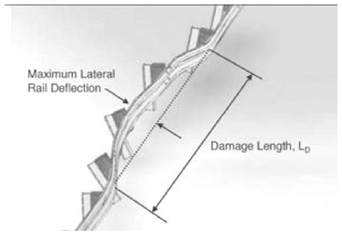
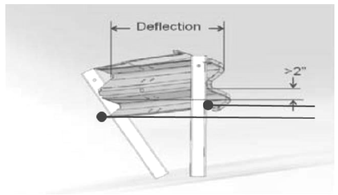
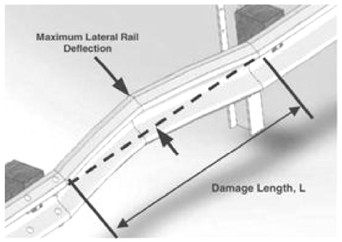
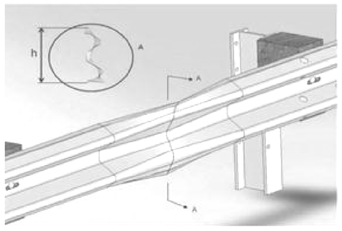
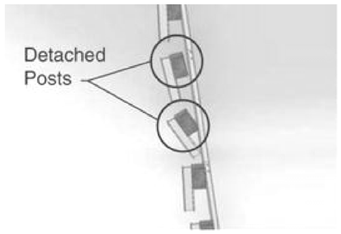
ITEM DETAIL SHEET

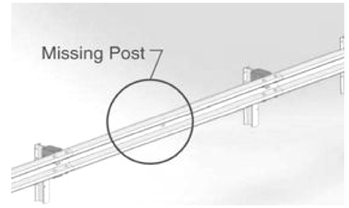
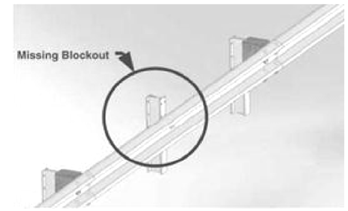
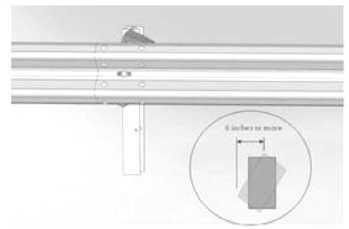
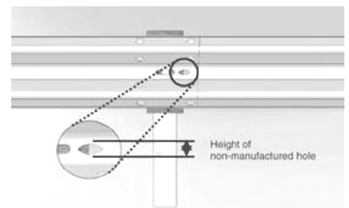
BEGIN STATION	END STATION	POS.	203.15 COMMON EX.	203.30 EARTH BORROW	402.12 OR 402.13 AGGREGATE SHOULDERS (OPTION ITEM)	604.412, 604.415, 604.418 REHAB. DI, CB OR MH CLASS I, II, III	613.10 STONE FILL, TYPE I	616.21 VERT. GRAN. CURB	616.41 REMOVAL OF EXIST. CURB	618.10 PORT. CEMENT CONC. SDWK, 5 INCH	618.30 DETEC. WARN SURF.	619.17 YIELD MARKER POSTS	621.20 STEEL BEAM G.R. GALV	621.205 STEEL BEAM G.R. GALV W/8'	621.207 S.B. G.R. GALV. NEST. W/8FT POST	621.218 TRAFFIC BARRIER DELINE.	621.60 ANCHOR FOR S.B. G.R.	621.76 REPLACE G.R. POST ASSEMBLY	621.77 REPLACE G.R. BEAM UNIT	621.79 ADJUST HEIGHT OF G.R.	621.80 REMOVE & DISP. OF G.R.	651.40 GRUBBING MATERIAL (6")	653.20 ROLLED EROSION CONTROL PRODUCT TYPE I	653.475 SILT FENCE TYPE I	676.10 DELINE. WITH STEEL POSTS	676.12 REMOVAL OF EXIST. DELINE.	REMARKS
			CY	CY	TON	EACH	CY	LF	LF	SY	SF	EACH	LF	LF	LF	EACH	EACH	EACH	EACH	LF	LF	SY	SY	LF	EACH	EACH	
BRISTOL					408	23	10					4						10	10			15	15	50			FOR USE BY THE ENGINEER
327+04	334+79	RT		25									37.5			25	1			737.5	37.5		25		2	2	SEE VTRANS STD G-ID
																											SEE DETAIL SHEET 2
337+43	337+48	LT	4							6	10																
344+69	344+75	LT	3							4	10																
349+96	350+19	RT	5					19	19	10	10																
353+48	353+61	RT	9					33															6				
357+10	357+15	RT	2							3	8																
357+15	357+26	LT	5							10	6																
357+37	357+44	RT	3							3	6																
357+53	357+59	RT	4							5	10																
357+58	357+66	LT	3							4	8																
369+86	373+44	RT		25									39.5			12	1			325	39.5		25		2	2	SEE VTRANS STD G-ID, REPLACE
																											TRAILING W BEAM ROUNDED END SECTION
373+69	375+89	RT		50									12.5	125	87.5	-	2				225		50		2	2	SEE VTRANS STD G-ID AND S-366
SUBTOTAL			38	100	408	23	10	52	19	45	68	4	89.5	125	87.5	37	4	10	10	1062.5	302	15	121	50	6	6	
ROUNDING			2	-	7	-	EST	3	1	5	2	-	-	-	-	-	-	-	-	-	23	-	-	-	-	-	
TOTAL			40	100	415	23	10	55	20	50	70	4	89.5	125	87.5	37	4	10	10	1062.5	325	15	121	50	6	6	

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP PC20(2)

FILE NAME: z18v187ids.dgn
PROJECT LEADER: C. LATHROP
DESIGNED BY: T. MATTHEWS
ITEM DETAIL SHEET

PLOT DATE: 10/4/2019
DRAWN BY: T. MATTHEWS
CHECKED BY: C. LATHROP
SHEET 114 OF 174

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 RAILTOP 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	
	LESS THAN 6 IN. OF LATERAL DEFLECTION OVER A 25-FT LENGTH OR RAIL	LOW	(WEAK POST W-BEAM SHOWN ONLY FOR CLARITY. EACH MEASUREMENT TAKEN AT THE RAIL'S MIDDLE FOLD)
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	
	• 1 POST, WITH BLOCKOUT ATTACHED, WITH POST/RAIL SEPARATION LESS THAN 3 IN.	LOW	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.

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	

NOTES:

1. THESE ARE GUIDELINES FOR THE EVALUATION OF EXISTING GUARDRAIL. THESE ARE GUIDELINES ONLY AND THE CONTRACTOR SHALL REPLACE GUARDRAIL AS DIRECTED BY THE ENGINEER.

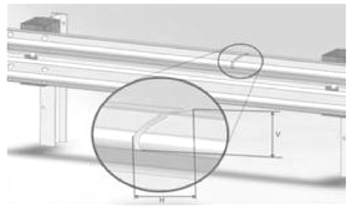
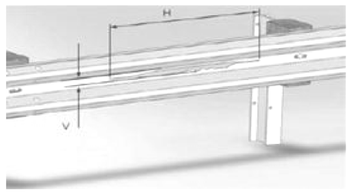
2. GUIDELINES ARE FROM THE NATIONAL HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 656, "CRITERIA FOR RESTORATION OF LONGITUDINAL BARRIERS", COPYRIGHT 2010.

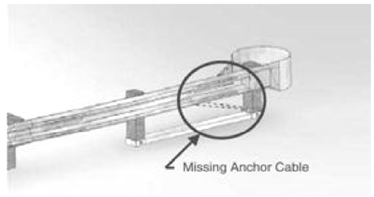
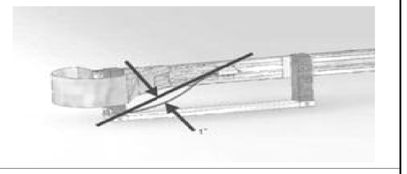
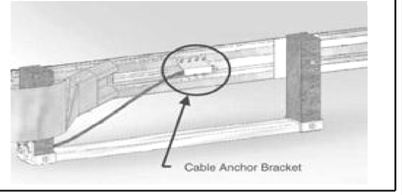
3. WHEN GUARDRAIL IS TO BE REMOVED AND RESET, PANELS WITH A RAIL CROSS SECTION HEIGHT OF 15 INCHES OR GREATER SHALL BE REPLACED

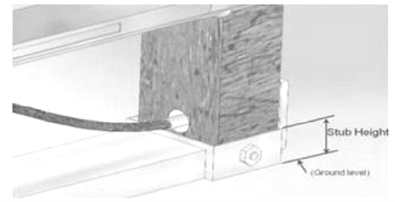
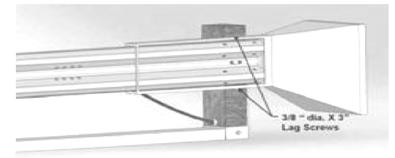
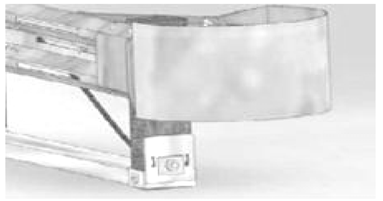
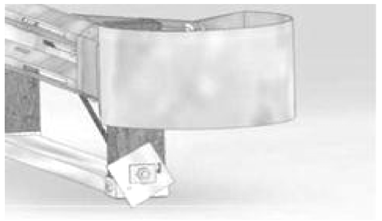
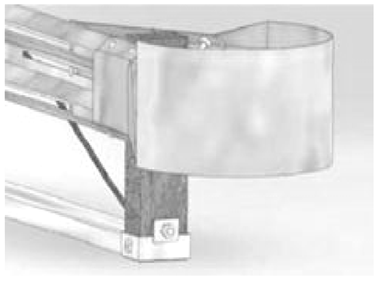
PROJECT NAME: BRISTOL
PROJECT NUMBER: STP PC20(2)

FILE NAME: z18v187det.dgn
PROJECT LEADER: C. LATHROP
DESIGNED BY: VTRANS
GUARDRAIL REPLACE. GUIDELINES SHEET 1

PLOT DATE: 10/4/2019
DRAWN BY: VTRANS
CHECKED BY: C. LATHROP
SHEET 115 OF 174

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 1IN. 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:

1. THESE ARE GUIDELINES FOR THE EVALUATION OF EXISTING GUARDRAIL. THESE ARE GUIDELINES ONLY AND THE CONTRACTOR SHALL REPLACE GUARDRAIL AS DIRECTED BY THE ENGINEER.

2. GUIDELINES ARE FROM THE NATIONAL HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 656, "CRITERIA FOR RESTORATION OF LONGITUDINAL BARRIERS", COPYRIGHT 2010.

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP PC20(2)

FILE NAME: z18v187det.dgn
PROJECT LEADER: C. LATHROP
DESIGNED BY: VTRANS
GUARDRAIL REPLACE. GUIDELINES SHEET 2

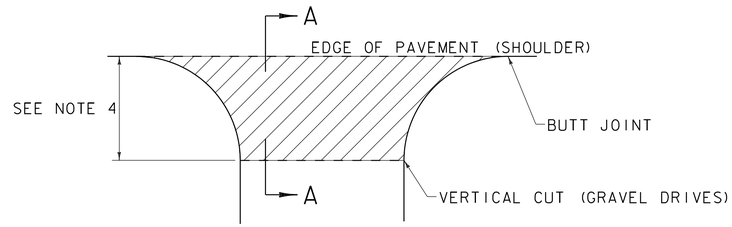
PLOT DATE: 10/4/2019
DRAWN BY: VTRANS
CHECKED BY: C. LATHROP
SHEET 116 OF 174

HAND–PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES

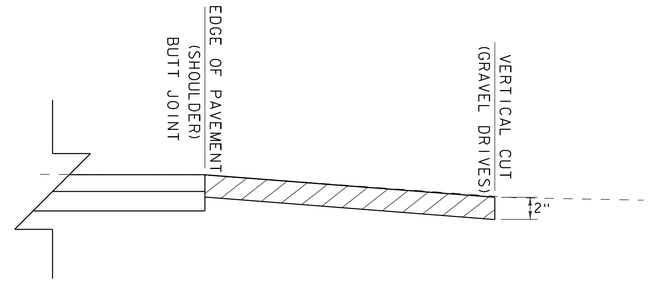
STATION	POSITION	TYPE	QUANTITY (SY)
318+89.	RT	GRAVEL	56.0
319+93.	LT	GRAVEL	26.0
320+00.	RT	PAVED	22.0
321+66.	RT	GRAVEL	11.0
322+20.	LT	GRAVEL	24.0
322+80.	RT	GRAVEL	39.0
322+98.	LT	GRAVEL	21.0
323+77.	LT	GRAVEL	21.0
324+17.	RT	GRAVEL	20.0
328+41.	LT	PAVED	120.0
331+88.	LT	PAVED	59.0
332+69.	LT	PAVED	22.0
333+39.	LT	GRAVEL	21.0
334+49.	LT	GRAVEL	17.0
335+58.	LT	PAVED	171.0
335+76.	RT	PAVED	121.0
336+80.	RT	GRAVEL	11.0
337+31.	RT	GRAVEL	11.0
338+29.	LT	PAVED	14.0
338+54.	RT	PAVED	16.0
338+59.	LT	PAVED	13.0
339+69.	RT	PAVED	9.0
339+70.	LT	PAVED	13.0
340+25.	RT	PAVED	14.0
340+47.	LT	PAVED	15.0
341+01.	RT	PAVED	13.0
341+53.	RT	PAVED	12.0
341+64.	LT	PAVED	18.0
342+38.	RT	PAVED	20.0
342+43.	LT	PAVED	13.0

STATION	POSITION	TYPE	QUANTITY (SY)
342+77.	RT	PAVED	15.0
343+26.	LT	PAVED	12.0
344+64.	RT	PAVED	35.0
345+64.	RT	PAVED	71.0
346+10.	RT	PAVED	29.0
350+39.	LT	PAVED	54.0
352+78.	RT	PAVED	36.0
353+25.	LT	PAVED	25.0
353+36.	RT	PAVED	44.0
354+49	LT	PAVED	50.0
354+76.	RT	PAVED	36.0
356+56.	LT	PAVED	15.0
358+28.	RT	PAVED	11.0
358+29.	LT	PAVED	12.0
358+55.	LT	GRAVEL	17.0
358+59.	RT	GRAVEL	12.0
359+10.	RT	PAVED	13.0
359+90.	RT	PAVED	41.0
360+22.	LT	PAVED	16.0
361+02.	LT	PAVED	15.0
361+31.	RT	PAVED	44.0
361+80.	RT	PAVED	36.0
362+53.	LT	PAVED	19.0
363+51.	LT	PAVED	15.0
364+19.	RT	PAVED	22.0
364+27.	LT	PAVED	16.0
364+56.	RT	GRAVEL	28.0
365+25.	RT	PAVED	21.0
366+05.	LT	PAVED	20.0

STATION	POSITION	TYPE	QUANTITY (SY)
367+02.	RT	PAVED	19.0
367+02.	LT	PAVED	16.0
367+71.	RT	PAVED	26.0
368+07.	RT	PAVED	18.0
368+19.	LT	PAVED	14.0
368+58.	RT	GRAVEL	18.0
369+97.	LT	PAVED	41.0
373+58.	RT	PAVED	23.0
375+30.	LT	GRAVEL	12.0
376+14.	LT	GRAVEL	40.0
377+15.	RT	GRAVEL	28.0
380+45.	RT	PAVED	239.0
		SUBTOTAL =	2237.0
		ROUNDING =	13.0
		TOTAL =	2250.0

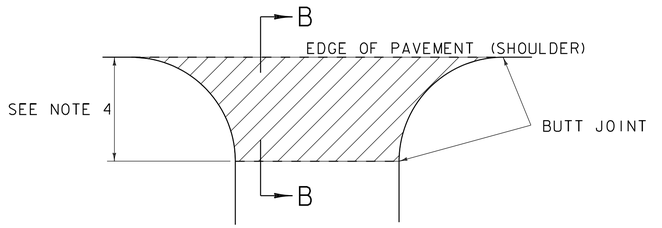


PLAN

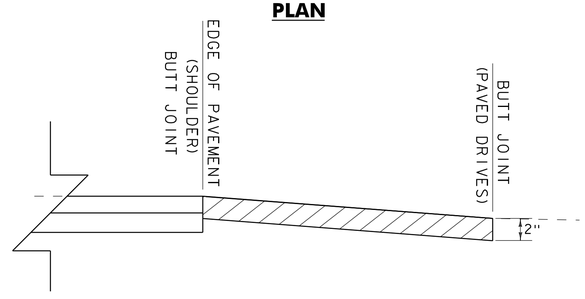


SECTION A–A

HANDWORK DETAILS FOR DRIVES – GRAVEL DRIVES



PLAN



SECTION B–B

HANDWORK DETAILS FOR DRIVES – PAVED DRIVES

NOTES:

1. PAVING SHALL BE AT LEAST TWO INCHES THICK.
2. THE COST OF PLACING SUBBASE MATERIAL, CLEANING EXISTING PAVED SURFACES, INCLUDING POWER EQUIPMENT, AND FOR FILLING JOINTS, CRACKS AND HOLES WILL NOT BE PAID DIRECTLY BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 406.38 "HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES."
3. EXCAVATION OR FILL NEEDED TO ACHIEVE PROPER DRIVE SLOPES WILL NOT BE PAID DIRECTLY BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 406.38 "HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES."
4. FIELD DRIVES 2'-0"; RESIDENTIAL AND COMMERCIAL DRIVES 4'-0"; HAVE BEEN ESTIMATED, FINAL APPROACH LIMITS SHALL BE AS DIRECTED BY THE ENGINEER.

LEGEND

ITEM 406.38 "HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES"

NOT TO SCALE

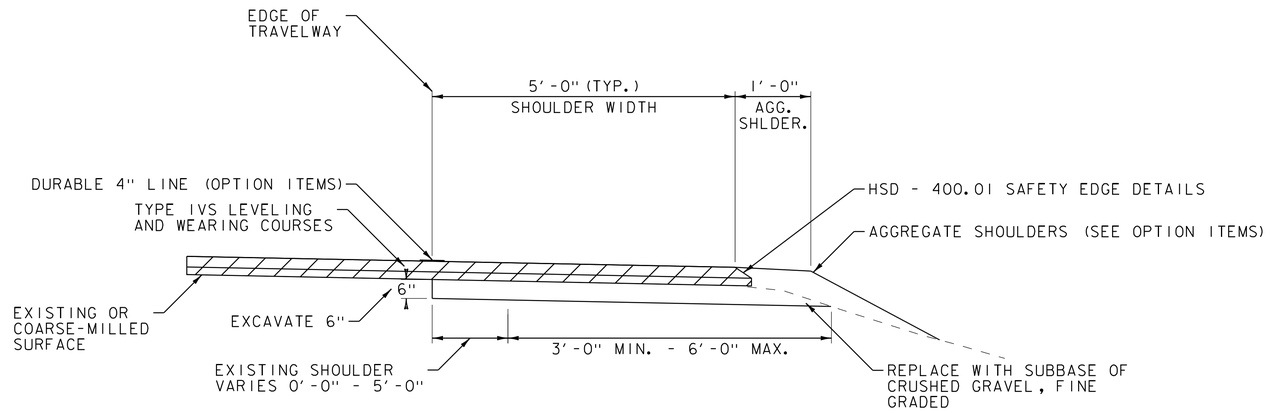
PROJECT NAME: BRISTOL
PROJECT NUMBER: STP PC20(2)

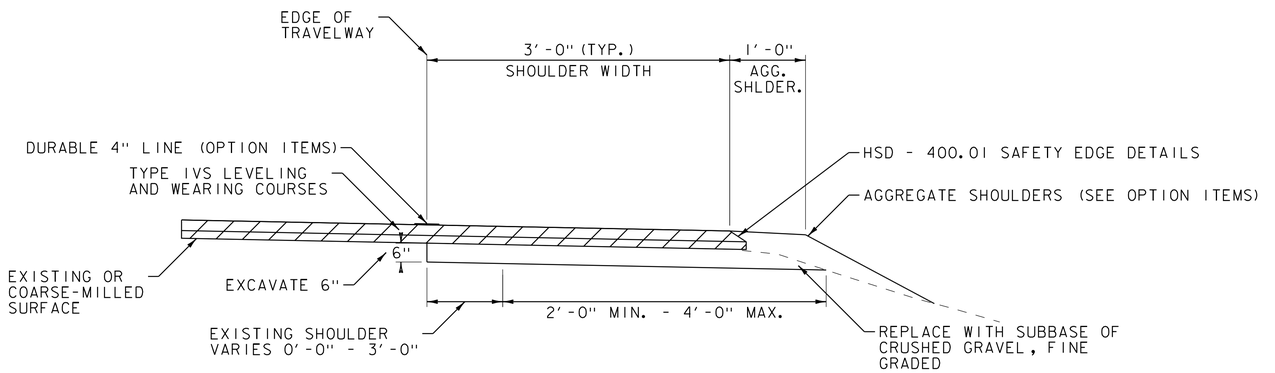
FILE NAME: z18v187det.dgn
PROJECT LEADER: C. LATHROP
DESIGNED BY: O. DALMER
HANDWORK DETAILS FOR DRIVES SHEET

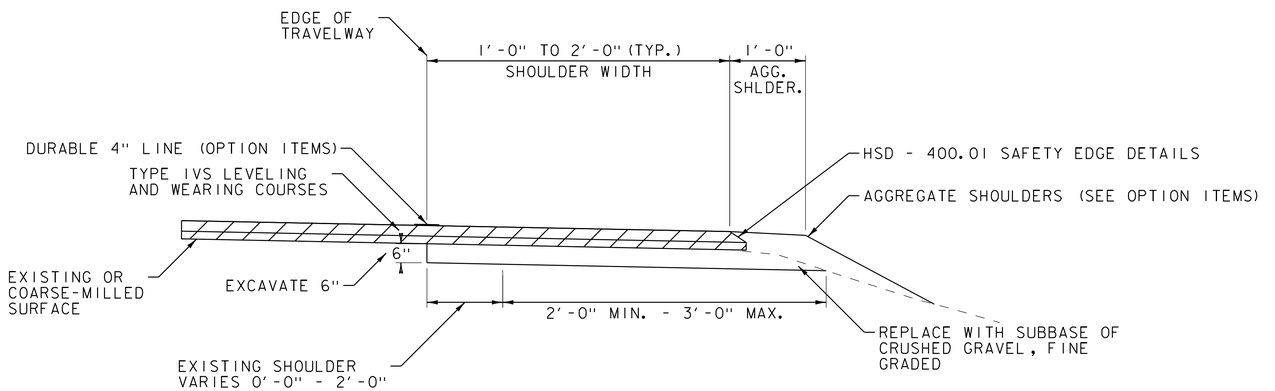
PLOT DATE: 10/4/2019
DRAWN BY: O. DALMER
CHECKED BY: C. LATHROP
SHEET 117 OF 174

UNSUITABLE SHOULDER RECONSTRUCTION AREAS

SHOULDER RECONSTRUCTION					
STATION RANGE					POS.
	316+55	-		319+75	RT
	325+75	-		327+00	RT
	338+25	-		340+00	LT
	361+00	-		362+25	LT
	367+00	-		369+50	LT
	370+20	-		372+50	LT
	378+00	-		381+50	LT
	368+75	-		370+25	RT







SHOULDER RECONSTRUCTION DETAILS

NOTES:

PRIOR TO PAVING, ANY EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE ENGINEER SHALL BE EXCAVATED TO A DEPTH OF SIX INCHES. EXCAVATION SHALL BE PAID FOR USING THE APPROPRIATE RENTAL ITEMS. THE METHOD OF REMOVAL AND THE USE OF RENTAL ITEMS SHALL BE APPPROVED 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 THE ENGINEER. THIS WORK SHALL BE COMPLETED PRIOR TO PLACEMENT OF THE WEARING COURSE. ANY SOIL SPREAD ON SIDE SLOPE SHALL HAVE TURF ESTABLISHMENT AS DIRECTED BY THE ENGINEER. THE FOLLOWING ITEMS WERE ESTIMATED FOR TURF ESTABLISHMENT: 651.15 "SEED," 651.18 "FERTILIZER," 651.20 "AGRICULTURAL LIMESTONE" AND 653.10 "HAY MULCH.". AN ESTIMATED QUANTITY OF ITEM 613.10 HAS BEEN INCLUDED TO STABILZE ANY SLOPES THAT ARE STEEPEND TO A SLOPE GREATER THAN 1:1.5 AS A RESULT OF THIS WORK.

NOT TO SCALE

PROJECT NAME: BRISTOL	
PROJECT NUMBER: STP PC20(2)	
FILE NAME: z18v187det.dgn	PLOT DATE: 10/4/2019
PROJECT LEADER: C. LATHROP	DRAWN BY: T. MATTHEWS
DESIGNED BY: T. MATTHEWS	CHECKED BY: C. LATHROP
UNSUITABLE SHOULDER DETAIL SHEET	SHEET 118 OF 174

CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES

STATION	POSITION	DESCRIPTION
319+14	LT	DI
321+12	LT	DI
322+73	LT	DI
324+35	LT	DI
325+73	LT	DI
326+62	LT	DI
331+28	LT	DI
332+51	LT	DI
334+38	LT	DI
335+03	LT	DI
336+22	LT	DI
336+72	LT	DI

REHABING DROP INLETS, CATCH BASINS, OR MANHOLES CLASS I, II, AND III

STATION	POSITION	DESCRIPTION
319+14	RT	DI
336+68	RT	DI
344+29	LT	DI
344+63	RT	DI
344+80	LT	DI
347+18	RT	DI
347+18	LT	DI
348+87	LT	DI
349+36	LT	DI
350+24	RT	DI
350+54	LT	DI
353+59	LT	DI
354+39	LT	DI
355+71	LT	DI
355+85	RT	DI
355+89	RT	DI
356+21	RT	DI
357+13	LT	DI
357+29	LT	DI
357+55	LT	DI
357+64	LT	DI
357+64	RT	DI
375+42	LT	DI

CHANGING ELEVATION OF SEWER MANHOLES

STATION	POSITION	DESCRIPTION
354+54	LT	SMH

ADJUST ELEVATION OF VALVE BOX

STATION	POSITION	DESCRIPTION
317+37	LT	GV
317+39	LT	GV
320+37	LT	GV
321+29	LT	GV
326+02	LT	GV
326+05	LT	GV
330+86	LT	GV
330+88	LT	GV
330+89	LT	GV
335+48	RT	WSO
336+97	LT	GV
337+00	LT	GV
337+01	RT	GV
344+51	LT	GV
349+04	RT	GV
349+12	RT	GV
349+19	RT	GV
349+28	RT	GV
349+83	RT	GV
350+02	RT	GV
351+01	LT	GV
351+01	LT	GV
351+19	LT	GV
351+27	LT	GV
351+51	RT	GV
351+54	RT	GV
351+61	LT	GV
351+64	LT	GV
351+79	LT	GV
351+86	LT	GV
352+22	LT	GV
352+77	RT	GV
352+84	LT	GV
352+84	LT	GV
353+19	LT	GV
353+77	RT	GV
353+89	RT	GV
354+12	RT	GV
354+92	RT	GV
355+49	LT	WSO
357+15	RT	GV
357+27	RT	GV
357+29	RT	GV
357+43	RT	GV
357+70	RT	GV
359+09	RT	GV
366+44	RT	GV
370+07	RT	GV

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP PC20(2)

FILE NAME: z18v187det.dgn
PROJECT LEADER: C. LATHROP
DESIGNED BY: T. MATTHEWS
STRUCTURE AND VALVE INVENTORY SHEET

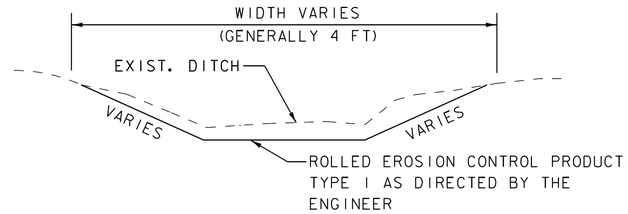
PLOT DATE: 10/4/2019
DRAWN BY: T. MATTHEWS
CHECKED BY: C. LATHROP
SHEET 119 OF 174

LOCATION				FEET OF DITCHING		MISC. ITEMS 653.20	MISC. ITEMS 613.10	REMARKS
SITE	STA.	STA.	POS.	PERCENT GRADE 0-2.5	PERCENT GRADE 2.5-10	ROLLED EROSION CONTROL PRODUCT, TYPE I SY	STONE FILL TYP. I CY	
	VT ROUTE 116							
	BRISTOL							
1	377+25	382+25	LT		X		74	
	SUBTOTAL						74	

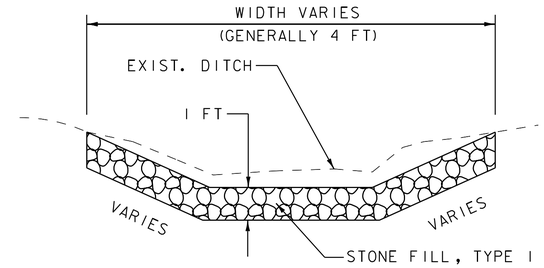
FOR TOTALS AND ROUNDING
SEE QUANTITY SHEET

LOCATION				FEET OF DITCHING		MISC. ITEMS 653.20	MISC. ITEMS 613.10	REMARKS
SITE	STA.	STA.	POS.	PERCENT GRADE 0-2.5	PERCENT GRADE 2.5-10	ROLLED EROSION CONTROL PRODUCT, TYPE I SY	STONE FILL TYP. I CY	

LOCATION				FEET OF DITCHING		MISC. ITEMS 653.20	MISC. ITEMS 613.10	REMARKS
SITE	STA.	STA.	POS.	PERCENT GRADE 0-2.5	PERCENT GRADE 2.5-10	ROLLED EROSION CONTROL PRODUCT, TYPE I SY	STONE FILL TYP. I CY	



DITCH DETAIL 0 TO <2.5 PERCENT



DITCH DETAIL
2.5 PERCENT TO 10 PERCENT

NOTES:

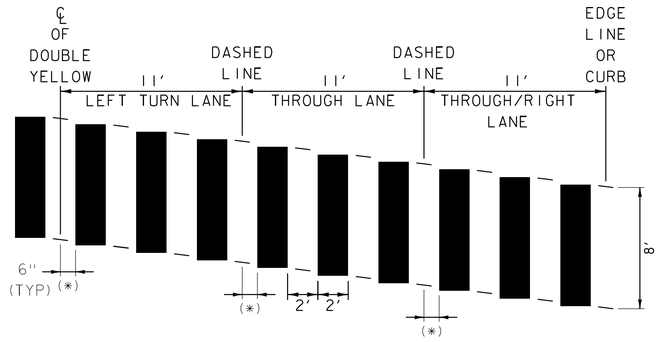
1. GRADES BETWEEN 0 AND 2.5 PERCENT SHALL USE ITEM 653.20. ROLLED EROSION CONTROL PRODUCT, TYPE I.
2. GRADES BETWEEN 2.5 PERCENT TO 10 PERCENT SHALL USE ITEM 613.10 STONE FILL, TYPE I AS DIRECTED BY THE ENGINEER.
3. ANY GRADE GREATER THAN 10 PERCENT SHALL USE ITEM 613.11. STONE FILL, TYPE II AS DIRECTED BY THE ENGINEER.
4. PIPE INLET AND OUTLET AREAS, AND DITCH CLEANING THROUGHOUT THE PROJECT, SHALL BE PERFORMED AT LOCATIONS IDENTIFIED ON THIS SHEET AND AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE UNDER THE APPLICABLE RENTAL ITEM(S).

NOT TO SCALE

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP PC20(2)

FILE NAME: z18v187det.dgn
PROJECT LEADER: C. LATHROP
DESIGNED BY: T. MATTHEWS
DITCH CLEANING DETAIL SHEET

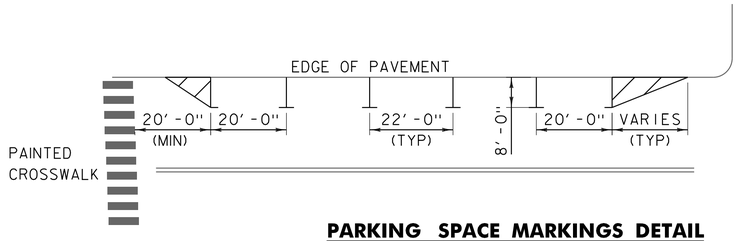
PLOT DATE: 10/4/2019
DRAWN BY: T. MATTHEWS
CHECKED BY: C. LATHROP
SHEET 120 OF 174



SKEWED CROSSWALK PATTERN DETAIL

NOTES:

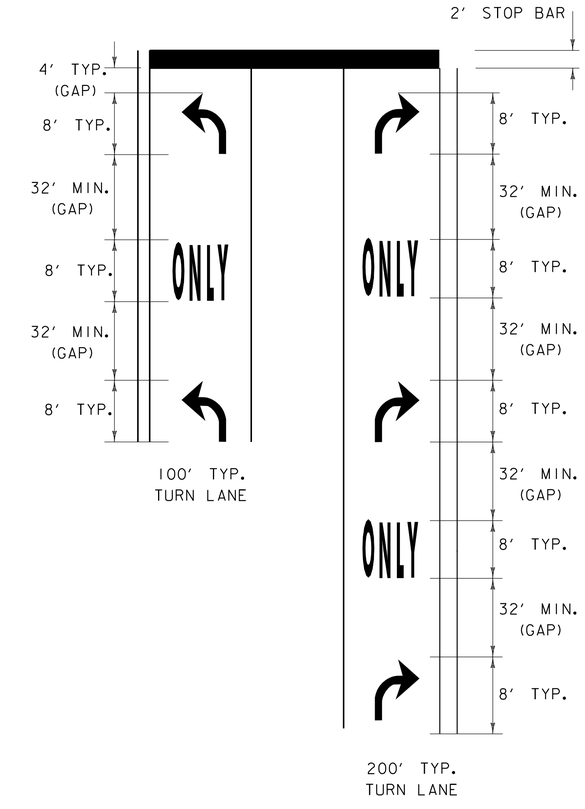
1. THIS DETAIL IS CONFIGURED FOR AN 11 FOOT LANE.
2. MARK LIGHT STRING LINE ON PAVEMENT ACROSS ROADWAY (CURB TO CURB).
3. ESTABLISH THE CENTER LINE OF THE ROADWAY (DOUBLE YELLOW LINE OR LANE LINE).
4. BLOCKS ARE PARALLEL OF THE CENTERLINE (DOUBLE YELLOW LINE OR LANE LINE). (OFFSET BLOCKS VERTICALLY TO ACHIEVE REQUIRED SKEW.)
5. ALWAYS START MEASURING FROM THE CENTERLINE OR LANE LINE RIGHT, WITH THE FLOW OF TRAFFIC.
6. PAINTED BLOCKS ARE THE 24 INCHES (TYPICAL).
(*)7. THIS DISTANCE WILL INCREASE TO 12" FOR A 12 FOOT LANE



PARKING SPACE MARKINGS DETAIL

PARKING SPACE MARKINGS NOTES:

1. PARKING SPOTS SHALL BEGIN/END A MINIMUM OF 20'-0" FROM CROSSWALKS.
2. EACH END SPOT SHALL HAVE A MINIMUM 20'-0" SPACE LENGTH (TYPICAL).
3. EACH INTERMEDIATE SPOT SHALL HAVE A MINIMUM 22'-0" SPACE LENGTH (TYPICAL).
4. PARKING SPACE WIDTHS SHALL BE A MINIMUM 8'-0" (TYPICAL).
5. FOR MORE INFORMATION, SEE PARKING SPACE MARKINGS IN THE MUTCD (SECTION 3B.19).



1. TURN ARROWS SHALL BE PLACED AT THE BEGIN AND END OF THE LEFT OR RIGHT TURN LANE.
2. IF LANE LENGTH IS LESS THAN 100', TURN ARROWS SHOULD BE PLACED AT THE BEGINNING AND END OF THE LEFT OR RIGHT TURN LANE.
3. THE "ONLY" WORD MARKINGS SHALL BE USED TO SUPPLEMENT LANE-USE ARROW MARKINGS FOR TURN LANES 100' OR LONGER.
4. MORE ARROWS AND ONLYS ARE OPTIONAL WHEN SPACE PERMITS. ARROW MARKINGS START AT THE BEGINNING OF THE SOLID LANE LINE.
5. STOP BARS ARE INSTALLED ONLY WHERE A STOP SIGN OR TRAFFIC SIGNAL IS LOCATED. STOP LETTERS ARE OPTIONAL AT STOP SIGN CONTROLLED APPROACHES. IF INSTALLED THEY SHALL BE FOUR FEET FROM THE STOP BAR. STOP LETTERS SHALL NOT BE USED AT SIGNALIZED APPROACHES.
6. THE LONGITUDINAL SPACE BETWEEN WORD OR SYMBOL MESSAGE MARKINGS, SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTERS FOR LOW SPEED ROADS, BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS UNDER ANY CONDITIONS.
7. EXCLUSIVE TURN LANES (LEFT OR RIGHT) LANE LINES SHALL BE SOLID AND EXTEND BACK FROM THE STOP LINE TO THE POINT OF FULL LANE WIDTH OF THE TURN LANE. THREE FOOT DOTS WITH A NINE FOOT SPACE SHOULD BE EXTENDED THE FULL LENGTH OF THE LANE TAPER.

TYPICAL MARKINGS FOR TURN LANES

NOT TO SCALE

PROJECT NAME:	BRISTOL
PROJECT NUMBER:	STP PC20(2)
FILE NAME: zl8v187det.dgn	PLOT DATE: 10/4/2019
PROJECT LEADER: C. LATHROP	DRAWN BY: T. MATTHEWS
DESIGNED BY: T. MATTHEWS	CHECKED BY: C. LATHROP
PAVEMENT MARKINGS DETAIL SHEET	SHEET 121 OF 174