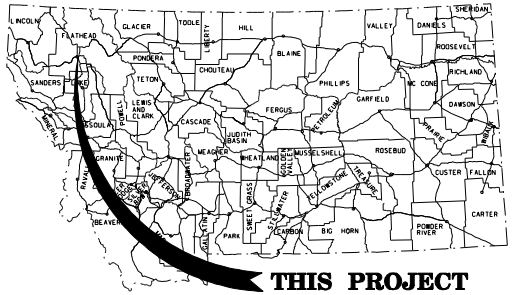


MONTANA DEPARTMENT OF TRANSPORTATION

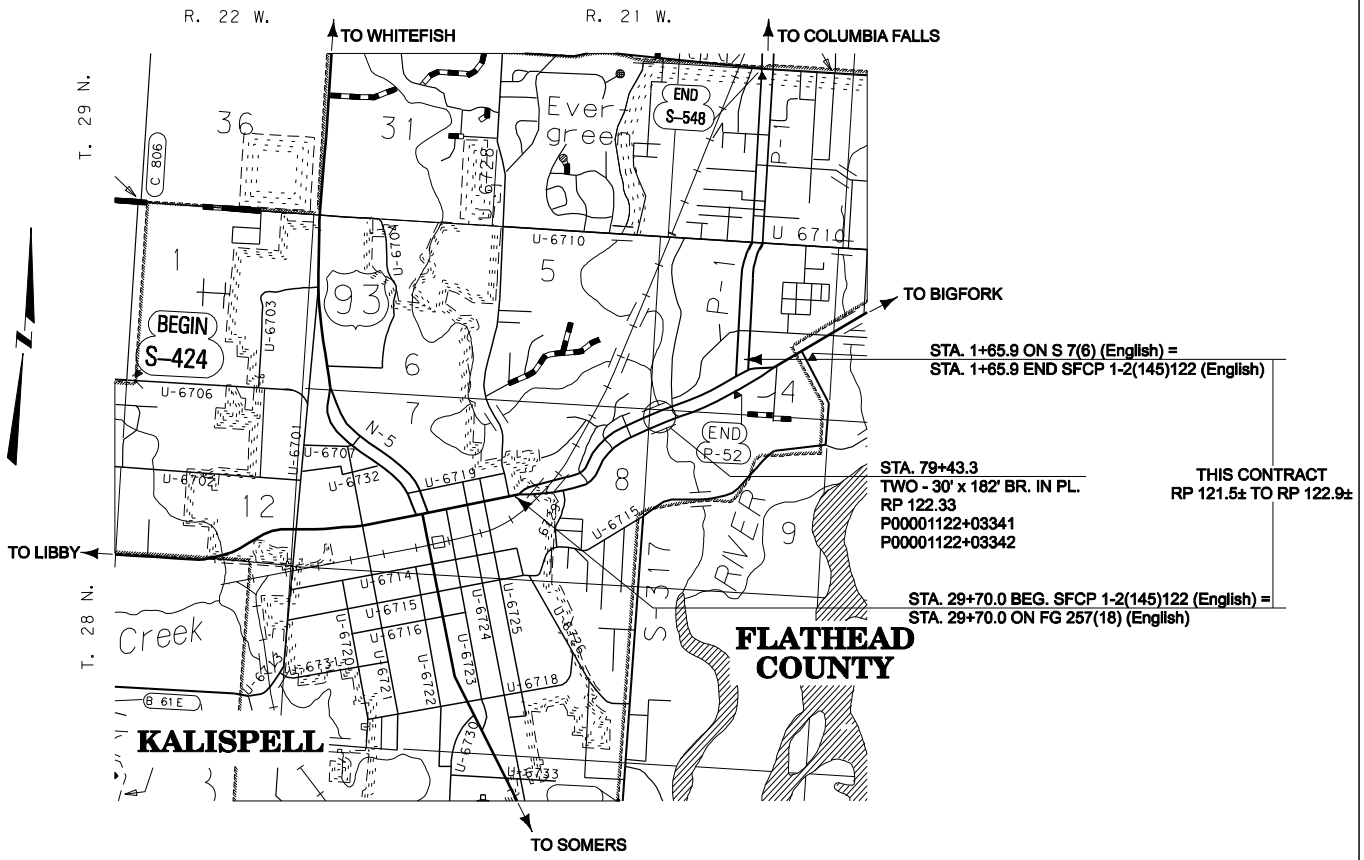
STATE AID PROJECT SFCP 1-2(145)122
PLANT MIX SURFACING OVERLAY
KALISPELL – EAST
FLATHEAD COUNTY

LETTING DATE –

SURFACING SOURCES -
CONTRACTOR FURNISHED

LENGTH 1.4 miles

NO SCALE



MDT serving you with pride — MONTANA DEPARTMENT OF TRANSPORTATION	C:\dgn\6203000RDPVP001.DGN 1/14/2009 3:24:20 PM u7713	DESIGNED BY JACQUELYN SMITH	12/5/2007	KALISPELL - EAST	SFCP 1-2(145)122
		REVIEWED BY		UPN 6203000	SHEET 1 OF 9
		CHECKED BY			

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NOTES

BASIS OF PLAN QUANTITIES

(QUANTITIES FOR ESTIMATING PURPOSES ONLY)

COMP. AGGREGATE WEIGHT = 3700 LBS per cubic YARD
COMP. WEIGHT OF PL. MIX BIT. SURF. = 3855 LBS per cubic YARD
HYDRATED LIME = 1.4% OF PL. MIX BIT. SURF.
COVER = 25 LBS per square YD.
BITUMINOUS MATERIAL = 8.50 LBS per GAL
ASPHALT CEMENT - GRADE D = 6.0% OF PL. MIX BIT. SURF.
SEAL = 0.42 GAL per square YARD

TACK (ASPHALT SURFACES) = 0.025 GAL per square YARD (UNDILUTED)
TACK (ALL OTHER SURFACES) = 0.050 GAL per square YARD (UNDILUTED)

TEMPORARY EROSION AND SEDIMENT CONTROL

IF SITUATIONS ARE OBSERVED DURING CONSTRUCTION THAT MAY POTENTIALLY IMPACT WATER QUALITY, INCLUDING WETLAND AREAS, UTILIZE BEST MANAGEMENT PRACTICES (BMP) AND/OR TEMPORARY EROSION CONTROL MEASURES AS NECESSARY TO PROTECT THE RESOURCE.
REFER TO SECTION 208 OF THE MDT DETAILED DRAWINGS FOR EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES.

INSTALL TEMPORARY EROSION CONTROL MEASURES AS DEEMED NECESSARY BY THE ENGINEER. PAYMENT TO BE DETERMINED USING THE EROSION AND SEDIMENT CONTROL RATE SCHEDULE AND PAID UNDER MISCELLANEOUS WORK.

AS-BUILTS

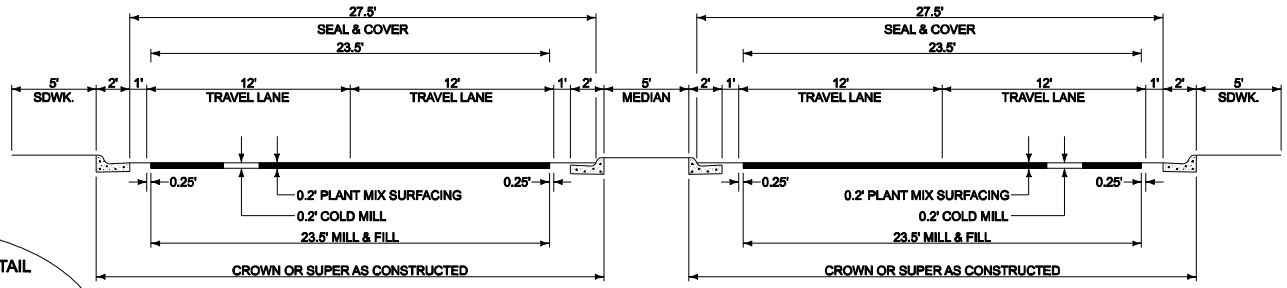
FOR HORIZONTAL ALIGNMENT AND STATIONING, REFER TO THE FOLLOWING "AS-BUILT" PROJECTS:
F-FG 257(18) (ORIGINAL CONSTRUCTION - 1967)
F 1-2(24)12) (OVERLAY - 1987)
S-7(6) (ORIGINAL CONSTRUCTION - 1962)
RTF 1-2(87)122 (OVERLAY - 1997)

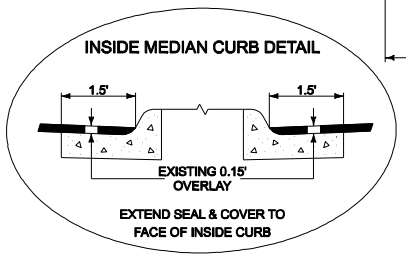
LINEAR DATA

LENGTH OF ROADWAY	4 LANE URBAN	7,628.30 FT
LENGTH OF BRIDGE	4 LANE URBAN	182.00 FT
TOTAL LENGTH OF SFCP 1–2(145)122		7,810.30 FT

TYPICAL SECTION NO. 1

29+70.0 TO 35+65.5
35+65.5
36+15.5 BK 36+15.3 AH EQUATION
TO 36+15.3 TRANS. TYP. NO. 1 TO TYP. NO. 2

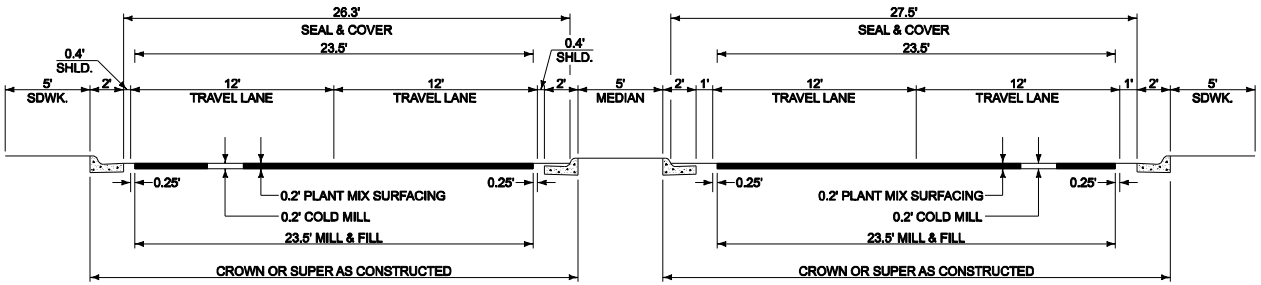




QUANTITIES								
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL			COLD MILLING
	COVER	PLANT MIX				SEAL	FOG SEAL	
AREA square feet		9.40		square yards PER STATION		611	522	522
cubic yards PER STATION		34.8		tons PER STATION		1.09		
tons PER STATION		67.1		gallons PER STATION			26	
square yards PER STATION	611							

TYPICAL SECTION NO. 2

36+15.3 TO 39+50.0
39+50.0 TO 41+89.4 TRANS. TYP. NO. 2 TO TYP. NO. 3

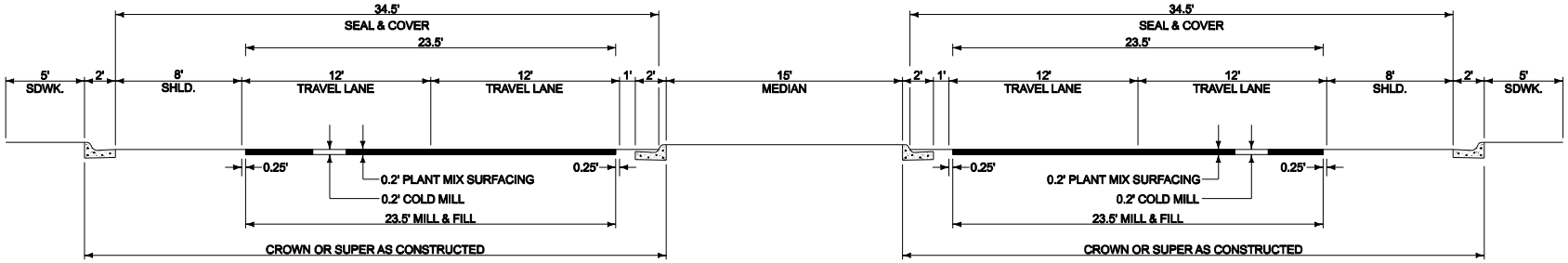


QUANTITIES								
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL			COLD MILLING
	COVER	PLANT MIX				SEAL	FOG SEAL	
AREA square feet		9.40		square yards PER STATION		598	522	522
cubic yards PER STATION		34.8		tons PER STATION		1.07		
tons PER STATION		67.1		gallons PER STATION			26	
square yards PER STATION	598							

NOTE: SEE TYPICAL SECTION NO. 1 FOR INSIDE MEDIAN CURB DETAIL.

TYPICAL SECTION NO. 3

41+89.4 TO 43+56.0
43+56.0
53+10.7 BK 52+83.8 AH EQUATION
TO 52+83.8 TRANS. TYP. NO. 3 TO TYP. NO. 4

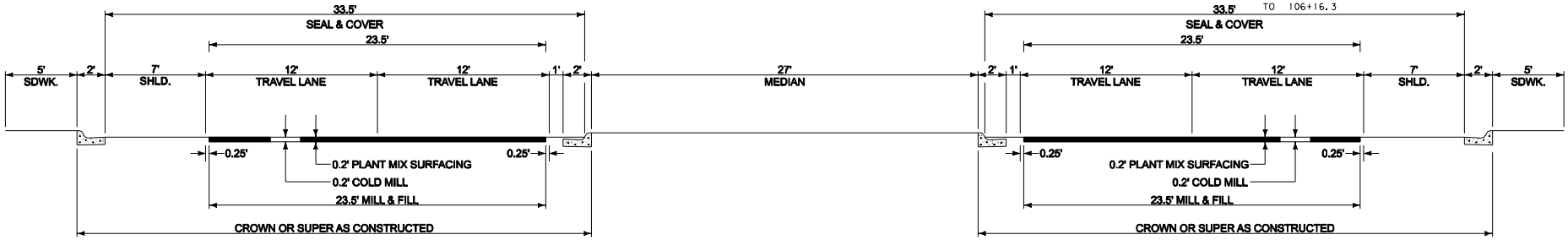


QUANTITIES								
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL			COLD MILLING
	COVER	PLANT MIX				SEAL	FOG SEAL	
AREA square feet		9.40		square yards PER STATION		767	522	522
cubic yards PER STATION		34.8		tons PER STATION		1.37		
tons PER STATION		67.1		gallons PER STATION			26	
square yards PER STATION	767							

NOTE: SEE TYPICAL SECTION NO. 1 FOR INSIDE MEDIAN CURB DETAIL.

TYPICAL SECTION NO. 4

52+83.8
64+99.9 BK 65+19.5 AH EQUATION
TO 76+20.0
76+20.0 TO 78+52.3 BE TRANS. TYP. NO. 4 TO TYP. NO. 5
82+50.0
105+55.5 BK 105+50.4 AH EQUATION
TO 106+16.3

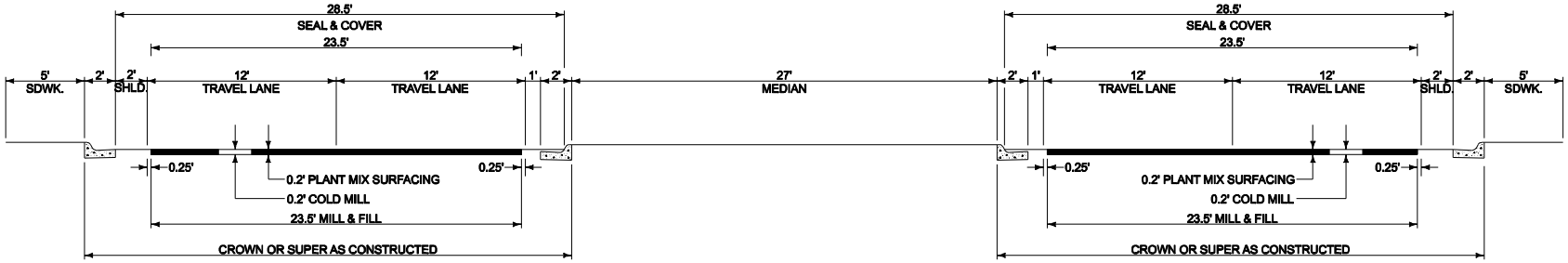


QUANTITIES								
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL			COLD MILLING
	COVER	PLANT MIX				SEAL	FOG SEAL	
AREA square feet		9.40		square yards PER STATION		744	522	522
cubic yards PER STATION		34.8		tons PER STATION		1.33		
tons PER STATION		67.1		gallons PER STATION			26	
square yards PER STATION	744							

NOTE: SEE TYPICAL SECTION NO. 1 FOR INSIDE MEDIAN CURB DETAIL.

TYPICAL SECTION NO. 5

78+52.3 BE ONLY
80+34.3 BE ONLY
80+34.3 BE TO 82+50.0 TRANS. TYP. NO. 5 TO TYP. NO. 4

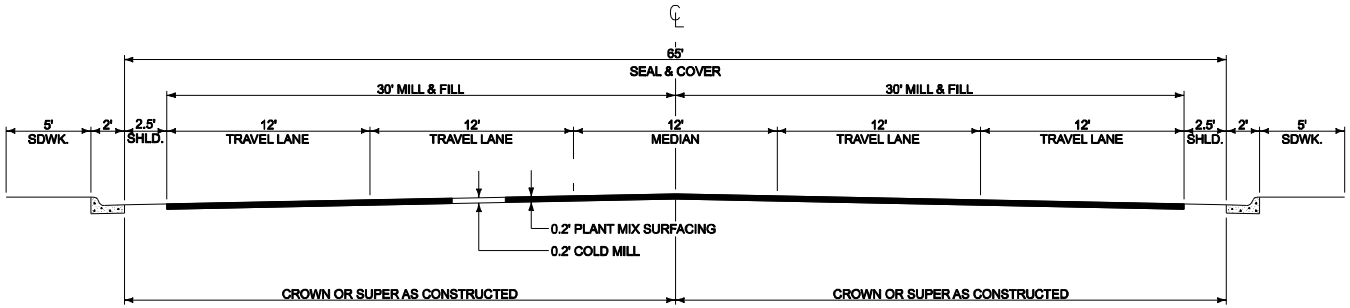


QUANTITIES								
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL			COLD MILLING
	COVER	PLANT MIX				SEAL	FOG SEAL	
AREA square feet		9.40		square yards PER STATION		633	522	522
cubic yards PER STATION		34.8		tons PER STATION		1.13		
tons PER STATION		67.1		gallons PER STATION			26	
square yards PER STATION	633							

NOTE: SEE TYPICAL SECTION NO. 1 FOR INSIDE MEDIAN CURB DETAIL.

TYPICAL SECTION NO. 6

0+14.5 TO 1+65.9
NOTE:
106+16.3 = 0+14.5



QUANTITIES								
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL			COLD MILLING
	COVER	PLANT MIX				SEAL	FOG SEAL	
AREA square feet		12.00		square yards PER STATION		722	667	667
cubic yards PER STATION		44.4		tons PER STATION		1.29		
tons PER STATION		85.6		gallons PER STATION			33	
square yards PER STATION	722							

SUMMARY

SURFACING

STATION FROM	STATION TO	linear feet GROSS	linear feet NET	linear feet +	linear feet -	FOR	AGGREGATE square yards COVER TYPE 2	AGGREGATE tons COMMERCIAL PLANT MIX PG 70-28	BITUMINOUS MATERIAL tons SEAL CRS- 2P				REMARKS
29+70.0	35+65.5	595.5	595.5				3,639	400	6.5				TYP. NO. 1
35+65.5													
36+15.5	36+15.3			0.2		EQUATION							
	36+15.3	49.8	50.0				302	34	0.5				TRANS. TYP. NO. 1 TO TYP. NO. 2
36+15.3	39+50.0	334.7	334.7				2,002	225	3.6				TYP. NO. 2
39+50.0	41+89.4	239.4	239.4				1,634	161	2.9				TRANS. TYP. NO. 2 TO TYP. NO. 3
41+89.4	43+56.0	166.6	166.6				1,278	112	2.3				TYP. NO. 3
43+56.0													
53+10.7	52+83.8			26.9		EQUATION							
	52+83.8	927.8	954.7				7,213	641	12.9				TRANS. TYP. NO. 3 TO TYP. NO. 4
52+83.8													
64+99.9	65+19.5				19.6								
	76+20.0	2,336.2	2,316.6				17,236	1,554	30.8				TYP. NO. 4
76+20.0	78+52.3	232.3	232.3				1,599	156	2.9				TRANS. TYP. NO. 4 TO TYP. NO. 5
78+52.3	80+34.3	182.0			182.0	BRIDGE							STILLWATER RIVER
80+34.3	82+50.0	215.7	215.7				1,485	145	2.7				TRANS. TYP. NO. 5 TO TYP. NO. 4
82+50.0													
105+55.5	105+50.4			5.1		EQUATION							
	106+16.3	2,366.3	2,371.4				17,643	1,591	31.5				TYP. NO. 4
106+16.3	0+14.5			~	~	EQUATION							
0+14.5	1+65.9	151.4	151.4				1,093	130	2.0				TYP. NO. 6
						ADDITIONAL SURFACING	13,307	1,712	23.8				
TOTAL		7,797.7	7,628.3	32.2	201.6		68,431	6,861	122.4				

ADDITIONAL SURFACING (INCLUDED IN SURFACING FRAME)

STATION FROM	STATION TO	linear feet GROSS	linear feet NET	linear feet +	linear feet -	FOR	AGGREGATE square yards COVER TYPE 2	AGGREGATE tons COMMERCIAL PLANT MIX PG 70-28	BITUMINOUS MATERIAL tons SEAL CRS- 2P				REMARKS
43+50.0						MEDIAN OPENING	640	82	1.1				
48+95.0						MEDIAN OPENING	494	63	0.9				
53+82.6						MEDIAN OPENING	557	72	1.0				
58+90.0						MEDIAN OPENING	829	107	1.5				INCLUDES QUANTITIES FOR RT. TURN LANE
58+90.0	69+70.0					RIGHT TURN LANE	1,323	170	2.4				
63+18.0						MEDIAN OPENING	559	72	1.0				
69+70.0						MEDIAN OPENING	1,444	187	2.5				
75+40.0						MEDIAN OPENING	1,112	143	2.0				
83+45.0						MEDIAN OPENING	579	74	1.0				
89+70.0						MEDIAN OPENING	712	92	1.3				
95+00.0						MEDIAN OPENING	1,049	135	1.9				
101+45.0						MEDIAN OPENING	1,541	198	2.8				
0+14.5						MEDIAN OPENING	2,468	317	4.4				
SUBTOTAL		~	~	~	~		13,307	1,712	23.8				

PAVEMENT MARKINGS

ITEM	UNIT	INTERIM APPLICA-TION*	FINAL APPLICA-TION	TOTAL
STRIPING WHITE PAINT	gallon	203		203
WORDS & SYMBOLS - WHITE PAINT	gallon	58		58
YELLOW PAINT	gallon	61		61
WORDS & SYMBOLS - YELLOW PAINT	gallon	7		7
WHITE EPOXY	gallon		135	135
WORDS & SYMBOLS - WHITE EPOXY	gallon		38	38
YELLOW EPOXY	gallon		40	40
WORDS & SYMBOLS - YELLOW EPOXY	gallon		5	5
CURB MARKING - YELLOW EPOXY	gallon		299	299
TEMPORARY PAVEMENT MARKINGS	mile			5.8

*INTERIM QUANTITIES BASED ON TWO APPLICATIONS.

COLD MILLING

STATION FROM	STATION TO	square yards COLD MILLING 0.2 ft	REMARKS
29+70.0	1+65.9	40,039	MAINLINE
		13,307	MEDIAN OPENINGS
TOTAL		53,346	

SUMMARY

GUARDRAIL

STATION		linear feet				each				REMARKS
		REMOVE GUARDRAIL		METAL GUARDRAIL		OPTIONAL TERMINAL SECTION		BRIDGE APPROACH SECTION TYPE 1		
FROM	TO	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	
76+61.0	77+11.0					1				MEDIAN
77+11.0	77+48.5	37.5		37.5						MEDIAN
81+38.0	81+75.5		37.5		37.5					MEDIAN
81+75.5	82+25.5						1			MEDIAN
SUBTOTAL		37.5	37.5	37.5	37.5	1	1			
TOTAL		75.0		75.0		2		~		

STATIONING APPROXIMATE

BRIDGE DECK TREATMENT

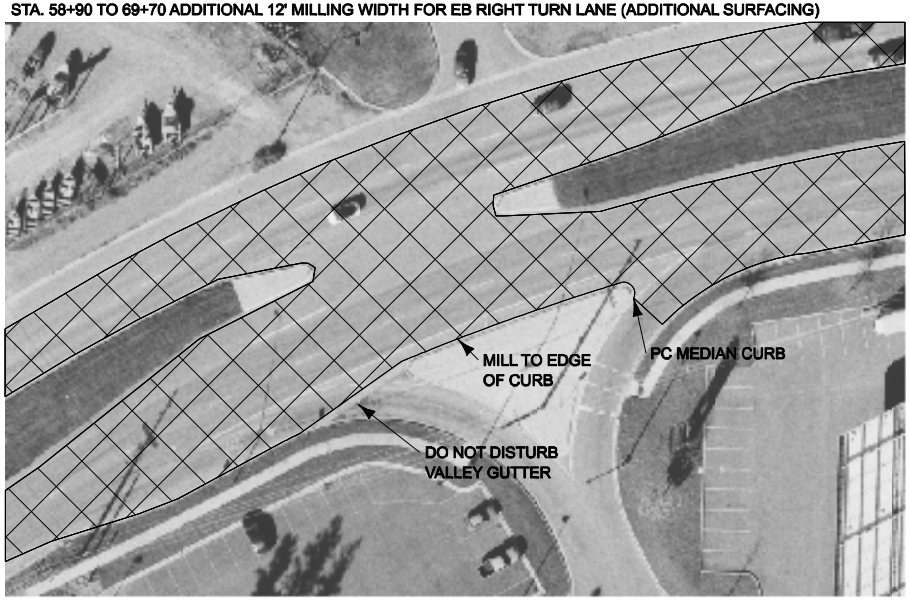
STATION		gallons	square yards	REMARKS
		FURNISH HMWM TREATMENT MATERIAL	BRIDGE DECK TREATMENT	
FROM	TO			
78+44.5	80+26.5	60.7	674.5	P00001122+03341
78+60.0	80+42.0	60.7	674.5	P00001122+03342
TOTAL		121.4	1,349.0	

STATIONING APPROXIMATE

DETAIL

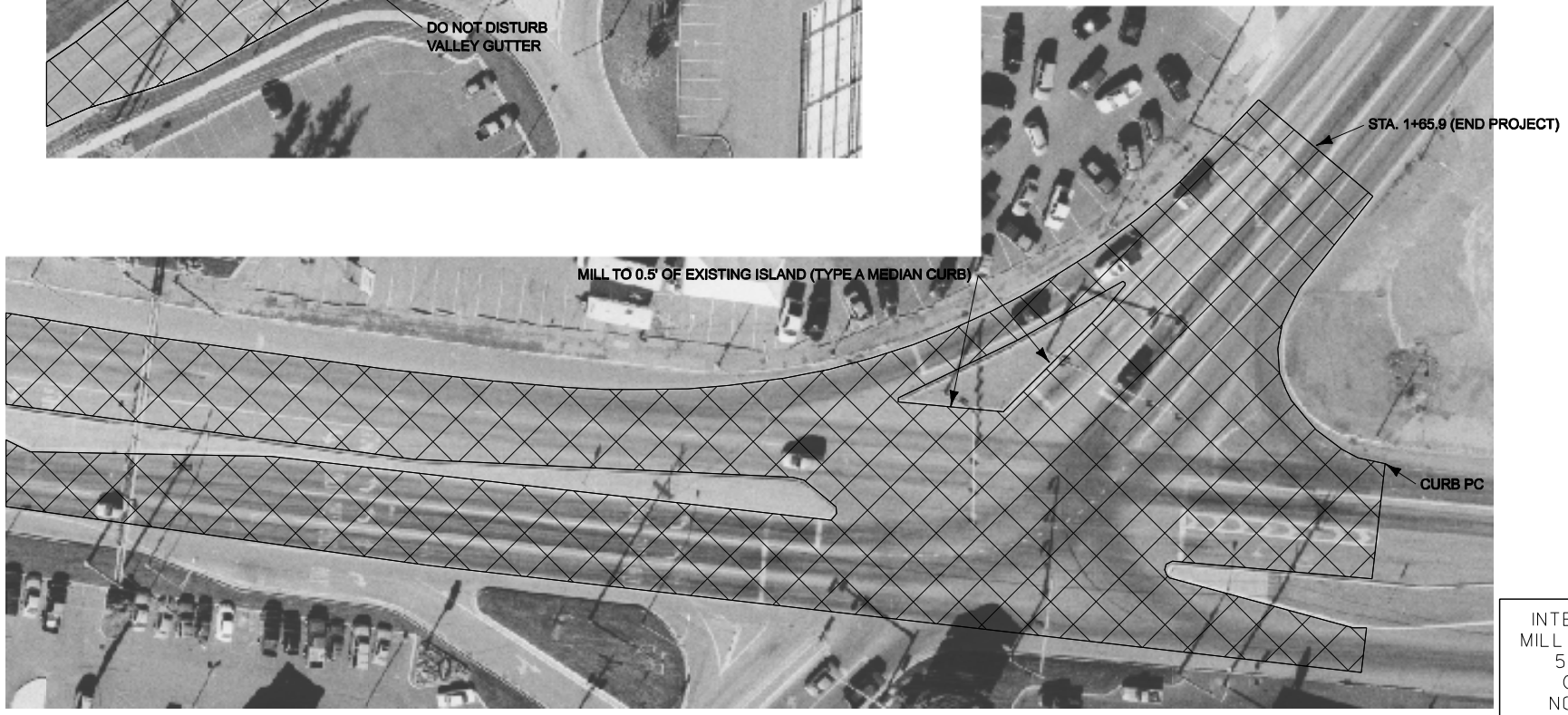
STA. 58+90.0

*NOTE:
INTERSECTION DETAIL INCLUDES MILLING FOR TYPICAL 4
STA. 58+90 TO 69+70 ADDITIONAL 12' MILLING WIDTH FOR EB RIGHT TURN LANE (ADDITIONAL SURFACING)



INTERSECTION LASALLE RD
STA. 0+14.5

*NOTE:
INTERSECTION DETAIL INCLUDES MILLING FOR TYPICALS 4 & 6
SEE ADD. SURFACING FRAME FOR QUANTITIES (EXCLUDES TYPICALS 4 & 6)



INTERSECTION
MILLING DETAIL
58+90.0
0+14.5
NO SCALE

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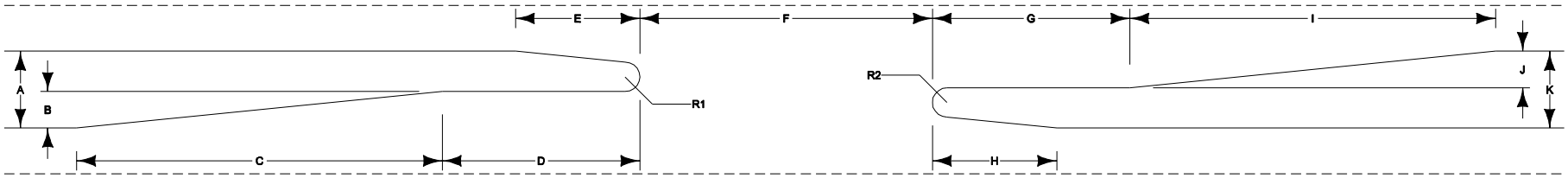
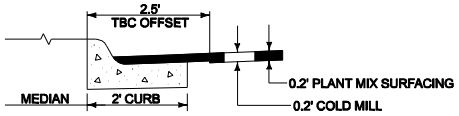
		REVIEWED BY			SFCP 1-2(145)122
		CHECKED BY			UPN 6203000
					SHEET 8 OF 9

DETAIL



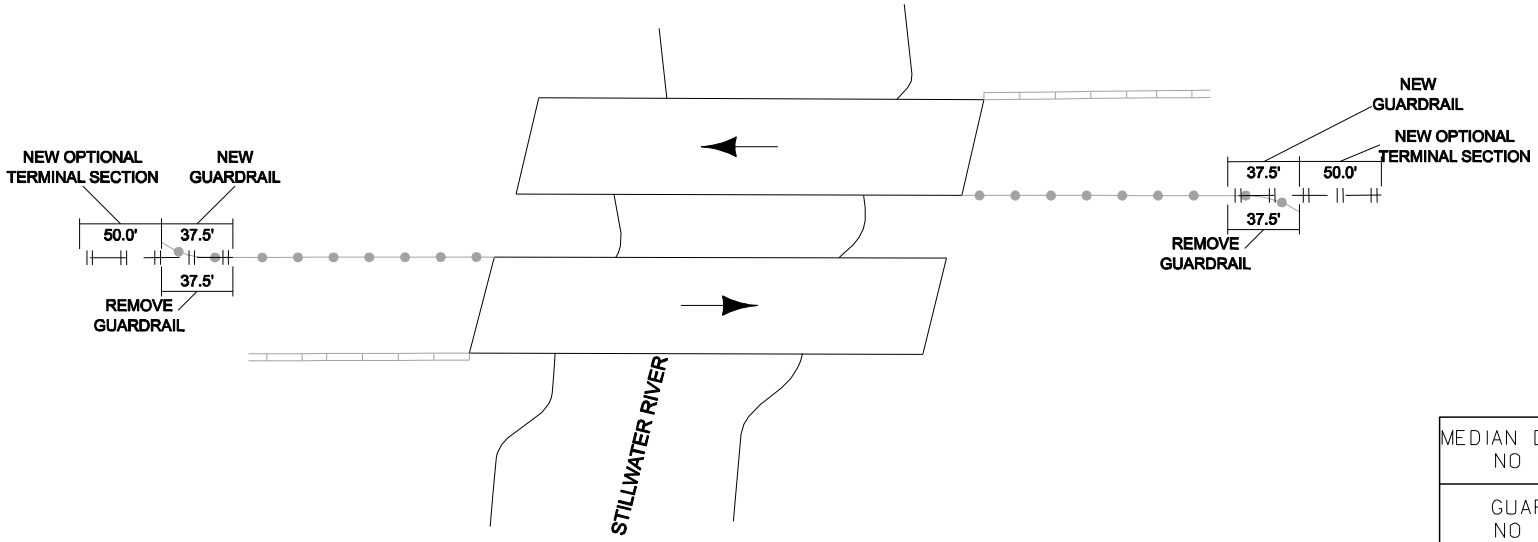
INSIDE MEDIAN CURB MILLING DETAIL
(AUXILARY LANES, TAPERS, AND RADII)



NOTE:
* DO NOT DISTURB EXISTING MEDIAN CURB
* MAINTAIN 2.5' OFFSET FROM TBC WHEN MILLING MEDIAN AUXILARY LANES,TAPERS, AND RADII

MEDIAN DIMENSIONS (ft)

CENTER STATION	A	B	C	D	E	F	G	H	I	J	K	R1	R2
43+50.0	15	10	50	50	20	80	102	0	200	15	20	4	2
48+95.0	20	10	100	50	30	80	50	30	100	12	25	4	4
53+82.6	27	10	100	50	30	80	50	30	100	12	27	4	4
58+90.0	27	12	100	50	30	80	50	30	100	12	27	4	4
63+18.0	27	12	100	50	30	80	35	30	100	12	27	4	4
69+70.0	27	24	200	50	0	100	150	0	200	24	2	2	2
75+40.0	2	24	200	50	0	65	75	0	200	24	27	2	2
83+45.0	27	12	100	50	30	80	50	30	100	12	27	4	4
89+70.0	27	12	100	50	30	80	150	30	100	12	27	4	4
95+00.0	17	24	200	50	0	100	150	30	100	12	17	2	4
101+45.0	17	24	200	200	0	80	200	30	250	12	15	2	4



MEDIAN DIMENSIONS
NO SCALE

GUARDRAIL
NO SCALE