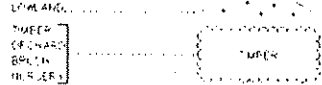
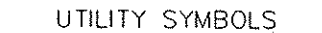
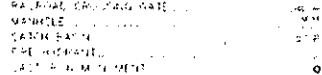
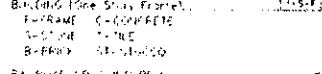
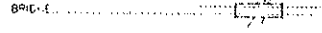
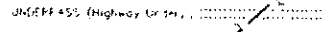
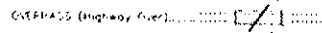


PLAN SYMBOLS

- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT OF WAY LINE
- SCOPE EASEMENT
- PRESENT RIGHT OF WAY
- PROPERTY LINE
- CORPORATE OR CITY LIMITS
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY
- RIVER OR CREEK
- DRAINAGE DITCH
- CULVERT
- DRAIN INLET
- GRASS PAVEMENT
- BARBED WIRE FENCE
- WOODEN WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- STONE WALL OR FENCE
- HEDGE



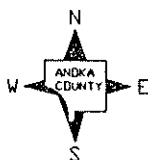
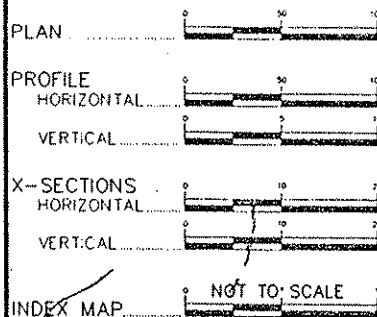
PAVEMENT



UTILITY SYMBOLS

- POWER POLE LINE
- TELEPHONE OR TELEGRAPH POLE LINE
- JOINT TELEPHONE & POWER ON TELEPHONE POLES
- ANCHOR
- STEEL TOWER
- STREET LIGHT
- PEDESTAL (Cable Terminal)
- GAS MAIN
- WATER MAIN
- TELEPHONE CABLE IN CONDUIT
- ELECTRIC CABLE IN CONDUIT
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- BURIED TELEPHONE CABLE
- BURIED ELECTRIC CABLE
- AERIAL TELEPHONE CABLE
- SEWER (Sanitary or Storm)
- SEWER MANHOLE

SCALES



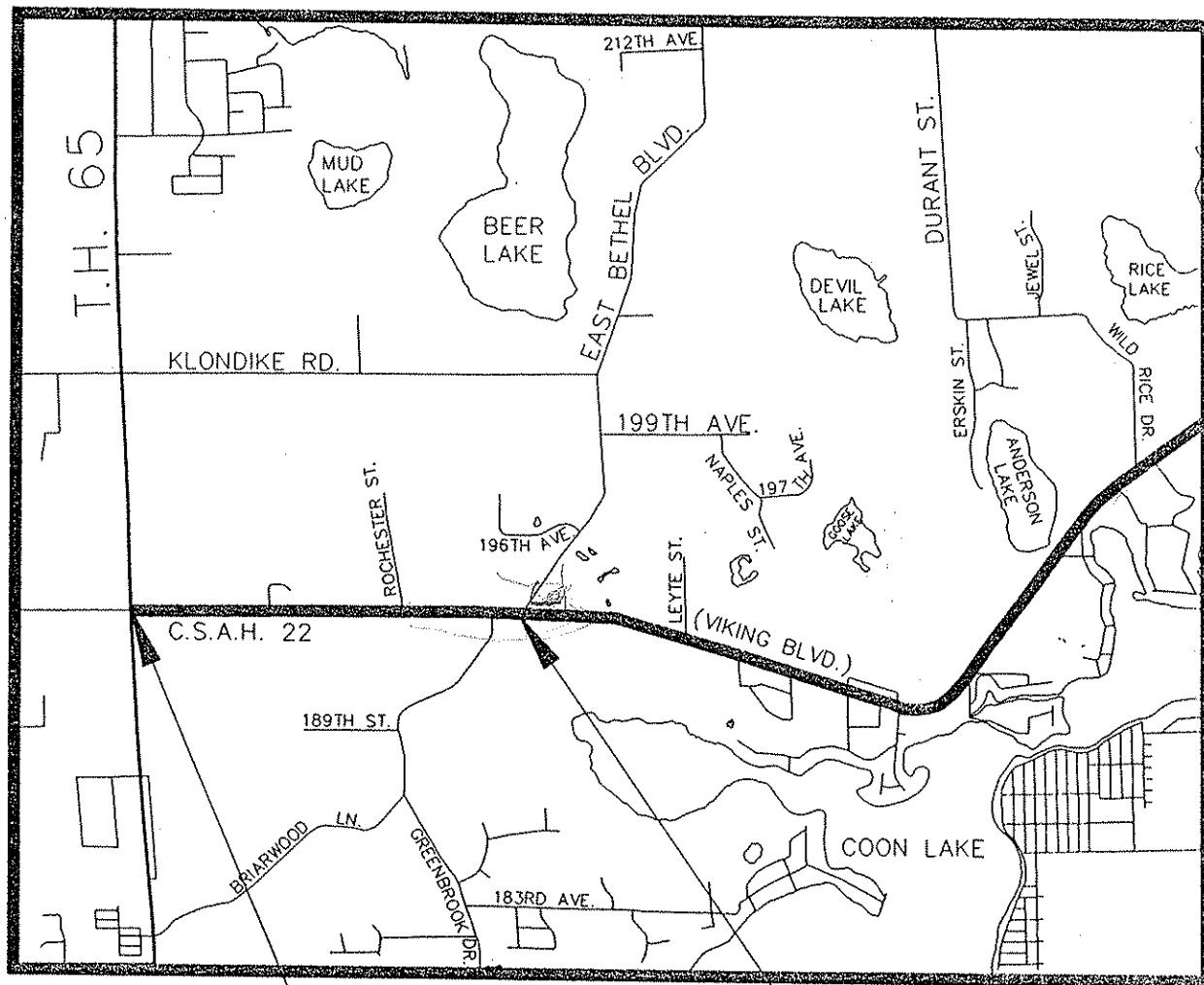
MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

CONSTRUCTION PLAN FOR BITUMINOUS OVERLAY

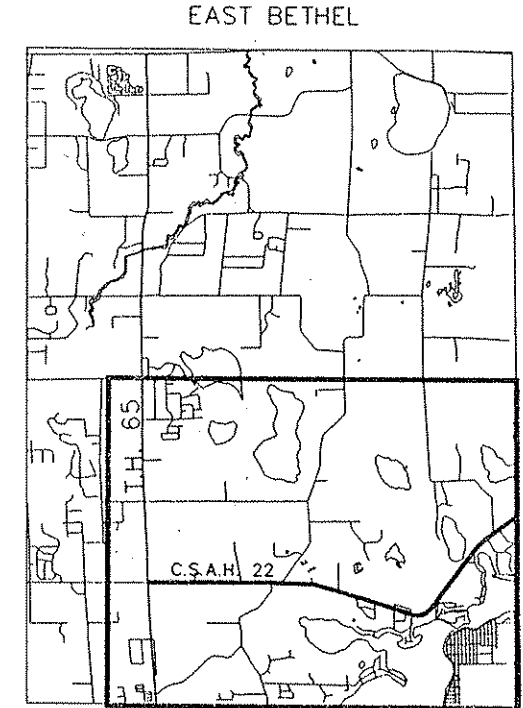
LOCATED ON C.S.A.H. 22 BETWEEN T.H. 65 AND EAST BETHEL (Geographic Description)
 STATE PROJ. NO. 02-622-24 STATE PROJ. NO. _____

MN PROJ. NO. _____ GROSS LENGTH 27,029.00 FEET 5.119 MILES BRIDGES-LENGTH _____ FEET _____ MILES EXCEPTIONS-LENGTH _____ FEET _____ MILES NET LENGTH 27,029.00 FEET 5.119 MILES	GROSS LENGTH _____ FEET _____ MILES BRIDGES-LENGTH _____ FEET _____ MILES EXCEPTIONS-LENGTH _____ FEET _____ MILES NET LENGTH _____ FEET _____ MILES
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BEGIN S.P. 02-622-24 STA. 0+00.00 EQUATION 86+25.00=0+00.00

END S.P. 02-622-24 STA. 184+04.00



MINN. PROJ. NO. _____
 MINN. PROJ. NO. STP PAVE (010) _____

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE JANUARY 2, 1991 SUPPLEMENTAL SPECIFICATIONS SHALL GOVERN.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES
3-5	TABULATED QUANTITIES
6	TYPICAL SECTIONS
7	STANDARD DETAILS
8	TRAFFIC CONTROL

THIS PLAN CONTAINS 8 SHEETS

DESIGN DESIGNATION

\$1820 N/A
 R VALUE N/A
 ADT (1993)= 4621
 Proj. ADT (2013)= 7855
 Proj. HCADT (2013)= 589
 Soil Factor 50%
 9 TON DESIGN
 Shoulder Width 8FT

Functional Classification LOW DENSITY ARTERIAL
 No. of Traffic Lanes 2 No. of Parking Lanes 0
 Design Speed 55 MPH
 Based on Stopping Sight Distance
 Height of eye 3.5 Height of object 0.5
 Design Speed not achieved at: NA
 STA. _____ TO STA. _____ MPH
 STA. _____ TO STA. _____ MPH
 STA. _____ TO STA. _____ MPH

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 8/27/93 REG. NO. 20235 ENGR. *Douglas W. Fenberg* ANOKA COUNTY DESIGN ENGINEER
 DESIGN SQUAD J. TRICK

- Recommended for Approval *Michael R. Kelly* 8/27, 1993
- Recommended for Approval *James J. Kelly* 8/27, 1993
- Recommended for Approval *James J. Kelly* 8/27, 1993
- Approved 8/30, 1993 *Paul R. Fink* ANOKA COUNTY ENGINEER
- Approved 9/10, 1993 *Mayor John H. H. H.* CITY OF EAST BETHEL
- Recommended for Approval *Mark L. Bauninger* 11/10, 1993
- Recommended for Approval *Mark L. Bauninger* 4-5, 1994
- Approved 7/5, 1994 *Julius Skellman* STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 APPROVED _____
 DIVISION ADMINISTRATOR DATE

STATEMENT OF ESTIMATED QUANTITIES

CHART ID	ITEM NO.	ITEM	UNIT	TOTALS		S.P. 02-622-24		NON-PARTICIPATING	
				ESTIMATE	FINAL	ESTIMATE	FINAL	ESTIMATE	FINAL
	0015.601	COMPUTER EQUIPMENT	LUMP SUM	0.31		0.31			
A	2104.501	REMOVE PIPE CULVERTS	LIN FT	582		582			
D	2104.501	REMOVE RETAINING WALL	LIN FT	225		225			
⑨	D	2104.505	REMOVE SLOPE PAVING	SQ YD	6		6		
	D	2104.521	SALVAGE WOOD RAIL FENCE	LIN FT	142		142		
A	2104.523	SALVAGE METAL APRON	EACH	8		8			
④	A/C	2105.523	COMMON BORROW (LV)	CU YD	1930		1930		
⑦		2232.501	MILL BITUMINOUS SURFACE	SQ YD	1609		1609		
⑧		2340.508	TYPE 41 WEARING COURSE MIXTURE	TON	5946		6099		
⑦		2340.512	TYPE 31 LEVELING COURSE MIXTURE	TON	400		400		
		2340.516	TYPE 41 SHOULDER MIXTURE	TON	3964		3964		
		2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	6105		6105		
⑥	B	0412.602	MAILBOX SUPPORT	EACH	76		76		
③	A	2501.511	15" CS PIPE CULVERT	LIN FT	1340		1340		
		2501.573	INSTALL METAL APRON	EACH	8		8		
②	A	0501.602	15" CS SAFETY APRON	EACH	158		158		
	D	0557.603	INSTALL WOOD RAIL FENCE	LIN FT	142		142		
①		0563.601	TRAFFIC CONTROL	LUMP SUM	0.31		0.31		
	E	2575.502	SEED MIXTURE 700	LB	64		64		
	E	2575.505	SODDING TYPE EROSION	SQ YD	3970		3970		
	E	2575.511	MULCH MATERIAL TYPE 1	TON	4		4		
	E	2575.521	POLYPROPYLENE PLASTIC NETTING	SQ YD	3020		3020		
	E	2575.532	COMMERCIAL FERTILIZER ANALYSIS 10-10-10	LB	1329		1329		
	E	0575.605	SEEDING	SQ YD	8899		8899		
	E	0575.605	DISK ANCHORING	SQ YD	5879		5879		
		2580.501	TEMPORARY LANE MARKING	ROAD STA	270		270		

THESE STANDARD PLATES, AS APPROVED BY THE FHWA SHALL APPLY	
STANDARD PLATES	
0005 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3040 F	CORRUGATED METAL PIPE CULVERT
3128 F	SAFETY APRON
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
8000 I	STANDARD BARRICADES
9102 D	TURF ESTABLISHMENT AREAS

INDEX OF TABULATION CHARTS		
CHART ID	SHEET NO.	DESCRIPTION
A	3	ENTRANCE APPROACH IMPROVEMENTS
B	4	MAILBOX SUPPORT
C	4	INSLOPE EMBANKMENT
D	4	MISCELLANEOUS REMOVALS
E	5	TURF ESTABLISHMENT

NOTES:

- ① ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MMUTCD, INCLUDING APPENDIX B DATED NOVEMBER 1992.
- ② PER STANDARD PLATE 3128 NO GRATE REQUIRED.
- ③ INCLUDES ALL PIPE COUPLINGS AS REQUIRED.
- ④ INCLUDES MATERIAL NEEDED FOR CULVERT EXTENSIONS AND INSLOPE CORRECTIONS.
- ⑤ MILL TOUCHDOWN AREAS (20' LONG, FULL WIDTH) AT BEGIN AND END POINTS.
- ⑥ INCLUDES SALVAGING & INSTALLING OF OLD BOX AND F & I NEW SUPPORT.
- ⑦ FOR VERTICAL CURVE CORRECTION AS DIRECTED BY THE ENGINEER.
- ⑧ INCLUDES 153 TON FOR ENTRANCES AND APPROACHES
- ⑨ LANDSCAPE ROCK

BASIS OF QUANTITIES

TYPE 41 WEARING COURSE,
 TYPE 41 SHOULDER MIXTURE,
 TYPE 31 LEVELING MIXTURE: 110 LBS/SY/INCH

BITUMINOUS MAT'L FOR TACK: 0.05 GAL/SY

SEED MIXTURE NO. 700: 35 LBS PER ACRE

MULCH MAT'L TYPE 1: 2 TONS PER ACRE

COMMERCIAL FERTILIZER, ANALYSIS 10-10-10:
 500 LBS PER ACRE

SEEDING: HORIZONTAL MEASUREMENT +10%

BITUMINOUS MIXTURE DESIGNATION:
 31 LVA 50000Y
 41 WEA 50070Y
 41 SHA 50070Y

ESTIMATED QUANTITIES

ENTRANCE APPROACH IMPROVEMENTS (A)														
STATION	LDC	ADDRESS	EXISTING CULVERT (2)		REMOVE		SALVAGE AND INSTALL APRON EACH	FURNISH AND INSTALL						
			SIZE	TYPE	LIN. FT	EACH		REPLACE LIN. FT	EXT. LT		APRONS		EMBANKMENT	
									LIN. FT	LIN. FT	LIN. FT	15'	18'	LEFT (CY)
2+29	RT	F. ENT	15'x24'	CMP	24			36					1.5	1.0
7+80	LT	F. ENT	15'x34'	CMP						4			0.5	1.0
8+39	LT	1535	15'x34'	CMP									1.0	1.0
9+03	RT	F. ENT	15'x32'	CMP				36	6	4			0.5	1.0
9+27	LT	1543	15'x36'	CMP	36			36					1.5	1.0
10+63	RT	1562	15'x34'	CMP					6	6			1.5	1.0
11+11	LT	1555	15'x34'	CMP	34			34					0.5	0.5
11+56	LT	1555	15'x37'	CMP	37			42					4.0	1.5
12+80	RT	1562	15'x39'	CMP	39			56					0.5	1.5
13+71	LT	1623	15'x30'	CMP	30			30					0.5	0.5
14+95	RT	1562	15'x37'	CMP	37			54					5.5	2.5
15+21	LT	1655	N/A											
16+28	RT	ABAND. DRIVE	15'x34'	CMP						8	10		7.0	5.0
17+57	LT	1655	15'x36'	CMP	36			36						
24+76	RT	1788	15'x51'	CMP					12	8			13.5	6.0
25+10	LT	1809	N/A											
27+68	LT	1835	15'x35'	CMP					2	8			1.0	1.5
29+00	RT	1848	N/A										1.5	0.5
29+63	LT	J. SANTI RD	15'x47'	CMP										
31+97	LT	1861	N/A											
32+44	RT	1918	15'x36'	CMP						4			0.5	1.5
32+43	LT	1911	15'x30'	CMP						6			1.5	1.5
33+15	LT	F. ENT	15'x29'	CMP										
34+79	LT	1923	15'x36'	CMP										
40+00	RT	2010	15'x34'	CMP					6	6			3.5	2.0
41+88	RT	2042	N/A										1.5	5.0
45+30	RT	2104	15'x29'	CMP					2				0.5	5.0
50+52	RT	2152	15'x48'	CMP					10	12			5.0	6.5
52+80	RT	2206	15'x29'	CMP									0.5	1.0
53+94	RT	2220	15'x30'	CMP									0.5	0.5
54+55	LT	2219	15'x30'	SMP						6			2.0	2.0
54+90	LT	2251	15'x31'	SMP							4		0.5	1.0
54+90	RT	DRIVE	15'x30'	CMP	30			30						
55+56	RT	2246	N/A											
58+95	LT	ROCHESTER S	15'x62'	SMP										
62+73	LT	2353	15'x30'	SMP						8	10		3.0	4.0
63+62	LT	2385	15'x29'	SMP					6	6			2.0	2.0
65+36	LT	2403	N/A											
67+15	LT	2419	15'x36'	CMP						4			2.0	1.0
67+94	RT	F. ENT	N/A										0.5	3.5
69+84	LT	F. ENT	15'x32'	CMP						2			0.5	1.5
74+39	RT	2522	15'x29'	CMP						8	14		4.0	12.5
74+60	LT	F. ENT	15'x34'	CMP										
78+84	RT	CTY RD 68	N/A											
84+05	LT	2665	15'x35'	CMP	35			36						
85+26	RT	2670	N/A											
85+67	RT	2736	15'x30'	CMP						4			1.0	0.5
85+98	LT	CTY RD 15	N/A											
STATION EQUATION: STA 86+25 AHEAD = STA 0+00 BEHIND														
2+70	RT	2740	15'x38'	CMP	38			38						
2+84-6+38	LT	E. B. F. D.	N/A											
6+49	RT	2810	N/A										2.5	2.5
8+11	LT	2817	15'x40'	CMP							4		0.5	1.5
8+12	RT	2980												
10+33	LT	2849	15'x30'	CMP						4	6		1.0	3.0
11+18	LT	2903	15'x31'	CMP						4	10		1.5	5.5
12+14	LT	2903	15'x30'	CMP						6	10		2.5	6.5
14+03	LT	2913	N/A											
15+63	LT	2929	15'x31'	CMP						6	8		2.5	3.0
16+60	RT	F. ENT	15'x31'	SMP										
17+00	LT	2929	15'x36'	CMP						4			2.0	0.5
17+49	LT	F. ENT	15'x36'	CMP						2	4		0.5	2.0
20+13	RT	3014	15'x34'	CMP	34			42					5.0	1.0
23+17	RT	3120	15'x30'	CMP									1.0	0.5
30+00	LT	3152	15'x37'	CMP						2	10		0.5	2.0
30+51	LT	3152	15'x35'	CMP						10	12		2.5	5.5
30+84	RT	F. ENT	N/A											1.5
32+06	RT	3158	N/A											
33+15	LT	F. ENT	15'x29'											
33+25	LT	3211	15'x31'							6	6		1.5	2.0
33+99	RT	F. ENT	N/A											
36+88	LT	LEYLE ST	15'x49'	CMP										
38+26	RT	F. ENT	N/A											
39+05	LT	ALLEN'S MKT	15'x45'	CMP						4				
41+44	LT	3301	N/A											
41+78	RT	3304	N/A											
46+20	LT	F. ENT	N/A											
46+38	RT	3356	15'x30'	CMP										
49+40	RT	NAPLES ST	N/A											
52+88	RT	3450	N/A											
55+33	RT	3502	N/A											
56+99	RT	3518	N/A											
58+54	RT	3530	N/A										1.0	2.0
58+50	LT	3551	N/A											
61+67	RT	RENDOVA ST	N/A											
63+74	RT	3608	15'x31'	CMP						4			1.5	0.5
64+77	RT	3634	15'x29'	CMP						6	8		3.0	4.0
66+20	RT	3660	15'x30'	CMP						4	6		1.5	2.0

ENTRANCE APPROACH IMPROVEMENTS (A)														
STATION	LDC	ADDRESS	EXISTING CULVERT		REMOVE		SALVAGE AND INSTALL APRON EACH	FURNISH AND INSTALL						
			SIZE	TYPE	LIN. FT	EACH		REPLACE LIN. FT	EXT. LT		APRONS		EMBANKMENT	
									LIN. FT	LIN. FT	LIN. FT	15'	18'	LEFT (CY)
69+52	RT	3700	15'x37'	CMP									2	6
70+76	LT	3719	15'x35'	CMP	35			36						
74+60	LT	F. ENT	15'x34'	CMP	34			34						
76+00	RT	VICKERS ST	N/A											
76+18	LT	VICKERS ST	N/A											2.0
83+72	RT	YALTA ST	N/A											
84+94	RT	F. ENT	N/A											
87+68	RT	BREEZY PT DR	N/A										1.5	1.5
87+84	LT	BREEZY PT DR	N/A											
88+79	RT	F. ENT	N/A										3.5	1.0
90+09	RT	F. ENT	15'x31'	CMP							6	6	2	3.0
92+82	RT	NDRO. CP RD	15'x37'	CMP							16	12	2	12.5
92+82	LT	F. ENT	15'x30'	CMP									0.5	0.5
94+67	LT	4036	15'x37'	CMP	37			54					6.0	7.0
98+55	RT	4126	15'x41'	CMP							18	12	2	22.5
105+27	LT	F. ENT	N/A											
106+23	RT	THELEN BLVD	N/A											
107+97	RT	SPORTSMAN RD	N/A											
112+35	RT	F. ENT	15'x33'	CMP							8	6	2	2.5
114+53	LT	4211	15'x30'	CMP							4	4	2	1.5
120+37	LT	4349	15'x32'	CMP	32			32						
124+00	RT	X425	15'x36'	CMP							8	6	2	8.0
128+90	LT	F. ENT	N/A											
136+30	LT	Y226	15'x36'	CMP								4		1.0
136+33	RT	F. ENT	15'x37'	CMP							10	8	2	8.0
140+28	RT	195TH AVE	15'x87'	CMP										
141+53	LT	4455	15'x37'	CMP							6	2	2	2.0
143+10	RT	4536	15'x29'	CMP							12	4	2	5.5
146+65	LT	4537	15'x31'	CMP									0.5	0.5
150+05	RT	4610	15'x30'	CMP							10	8	2	9.0
151+90	RT	THE MORKENS	15'x29'	CMP							12	18	2	6.0
153+12	LT	4621	15'x38'	CMP							12	10	2	9.5
153+14	RT	4640	N/A											10.5
158+29	LT	4631	15'x34'	CMP										7.0
159+45	LT	4643	15'x34'	CMP	34			56			6	10	2	3.5
160+38	RT	TRI-DAK CJR	15'x62'	CMP										5.0
168+12	RT	PARK ENT	15'x36'	CMP							8		2	3.5
168+26	LT	WILD RICE DR	N/A								10	10	2	6.0
169+91	RT	EJ'S BAR	N/A											8.0
171+87	RT	CTY RD 17	15'x61'	CMP							2	2	2	1.5
171+87	LT	VIDEO BUG	N/A											

STATION	LOCATION	ADDRESS	RELOCATE
9+43	11' LT	1543	
11+25	15' LT	1555	
12+65	12' LT	1562	
17+75	11' LT	1655	
24+70	10' LT	1788	
24+70	16' LT	1809	
27+45	12' LT	1815	
28+88	13' LT	1848	
29+07	12' LT	1835	
31+62	14' LT	1861	
32+58	13' LT	1911	
32+67	13' LT	1918	
35+00	13' LT	1923	
40+00	12' LT	2010	
41+76	10' LT	2042	
45+26	10' LT	2104	
50+52	11' LT	2152	
52+67	11' LT	2206/2220	2
54+19	11' LT	2219	
55+18	13' LT	2251	
55+69	15' LT	2246	
62+56	11' LT	2353	
63+45	13' LT	2385	
66+91	12' LT	2403	
68+04	13' LT	2419	
74+22	13' RT	2522	
83+92	10' RT	2665	
85+00	10' RT	2670	
85+86	11' RT	2736	
STATION EQUATION 86+25 AHEAD = 0+00 BEHIND			
2+91	10' RT	2740	
6+71	10' RT	2810	
7+89	11' RT	2817	
7+90	11' RT	2980	
10+37.5	14' RT	2849	
12+10	11' RT	2903	
13+85	12' RT	2913	
15+57	10' RT	2929	
20+36	10' RT	3014	
22+89	13' RT	3120	
30+50	11' RT	3152	
32+35	10' RT	3158	
33+31.5	11' RT	3211	
41+16	11' RT	3301	
41+54	11' RT	3304	
46+47	16' RT	3356	
53+06	11' RT	3450	
55+10	12' RT	3502	
56+74	11' RT	3518	
63+47	10' RT	3608	
64+97	10' RT	3634	
66+05	15' RT	3660	
69+24.5	11' RT	3700	
70+77	10' RT	3719	
94+37	12' RT	4036	
98+40	13' RT	4126	
114+31	13' LT	4211	
120+51	12' LT	4349	
123+87	12' RT	4425	
136+00	12' LT	4226	
140+78	15' LT	4455	
143+22	12' RT	4536	
146+28	15' LT	4537	
150+22	14' RT	4610	
152+09	11' RT	MURKENS	
152+83	13' LT	4621	
153+50	12' RT	4648/?	2
153+54.5	12' RT	4658/4720/?	3
158+54	15' LT	4631	
159+80	12' LT	4643	
170+53	7' RT	EJ'S BAR	
173+30	12' RT	TOM THUMB	
175+91	10' LT	4855	
TOTALS			76

STA. TO STA.	LOC	EXIST. SLOPE	FIN. SLOPE	EMBANKMENT (CU. YD.)
16+28 TO 17+28	RT	3.5:1	4:1	11
24+76 TO 26+76	RT	3.5:1	4:1	28
24+00 TO 25+10	LT	3.6:1	4:1	18
45+30 TO 47+90	RT	3.6:1	4:1	17
47+92 TO 50+52	RT	3.4:1	4:1	31
STATION EQUATION 86+25 AHEAD = 0+00 BEHIND				
44+00 TO 46+38	RT	3.5:1	4:1	12
51+00 TO 52+88	RT	3.6:1	4:1	16
54+10 TO 55+33	RT	3.3:1	4:1	5
56+54 TO 60+04	RT	3.6:1	4:1	7
61+50 TO 67+50	LT	2.7:1	4:1	276
66+20 TO 67+85	RT	3.2:1	4:1	21
83+72 TO 86+44	RT	3.6:1	4:1	12
88+79 TO 89+44	RT	3.4:1	4:1	10
89+44 TO 90+09	RT	3.4:1	4:1	10
112+35 TO 116+00	RT	3.5:1	4:1	51
120+37 TO 124+62	LT	3.6:1	4:1	19
154+92 TO 160+30	RT	2.7:1	4:1	123
169+06 TO 169+91	RT	3.3:1	4:1	11
173+17 TO 174+12	LT	3.6:1	4:1	10
175+12 TO 184+51	LT	3.2:1	4:1	92
183+95 TO 185+95	RT	3.5:1	4:1	23
TOTALS				803 (1)

(1) EARTHWORK SUMMARY:
COMMON BORROW (LV) = EMBANKMENT x 1.5 = 803 x 1.5 = 1204 CU YD

STATION	LOCATION	ITEM					REMARKS
		FENCE (1) (LF)	SPLICE POLE (EA)	ROCK AT CULV. (SY)	MISC WALLS (LF)	SURVEY MARKER (EA)	
25+00	15' RT		1				REMOVED BY OTHERS
25+5.5	6' LT					1	REMOVED BY OTHERS
29+85	17' LT	12					SPLIT RAIL
30+17 TO							
30+42	17' LT	49					SPLIT RAIL
30+73	17' LT	12					SPLIT RAIL
32+75 TO							
33+00	17' LT	49					SPLIT RAIL
64+64	11' RT				70		4x6 TIMBER RETAINING
64+94	11' RT				54		4x6 TIMBER RETAINING
142+93	16' RT				24		4x6 TIMBER RETAINING
143+21	15' RT	20.5					SPLIT RAIL
143+23	19' RT				24		4x6 TIMBER RETAINING
150+22	14' RT				53		8x6 RR TIE RETAINING
183+95	RT			6			
TOTALS		142.5	1	6	225	1	

(1) SALVAGE AND INSTALL

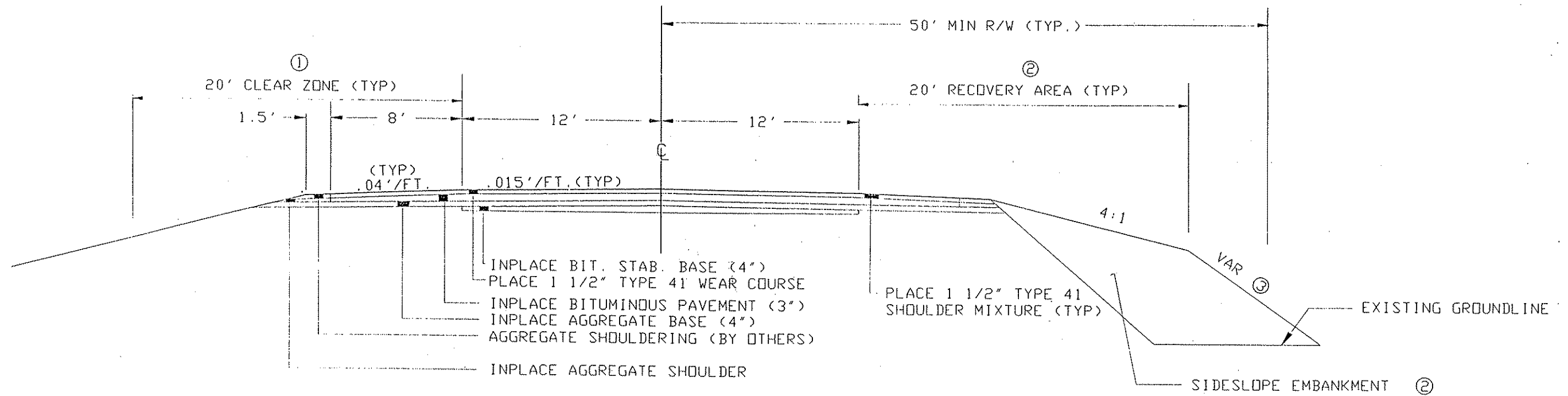
TABULATED QUANTITIES

TURF ESTABLISHMENT (E)								
LOCATION	LOC	SEEDING	SEED MIX 700	SODDING TYPE EROSION CONTROL	MULCH MATERIAL TYPE 1	DISK ANCHORING	COMMERCIAL FERTILIZER ANALYSIS 10-10-10	POLYPROPYLENE PLASTIC NETTING
		SQ YD	LB.	SQ. YD.	TON	SQ YD	LB.	SQ. YD.
2+29	RT	53	0.4		.02		5.5	53
7+80	LT	44	0.3		.02		4.5	44
8+39	LT			68			7.0	
9+03	RT	58	0.4		.02		6.0	58
9+27	LT			40			4.1	
10+63	RT			54			5.6	
11+11	LT			36			3.7	
11+56	LT			40			4.1	
12+80	RT			76			7.9	
13+71	LT			62			6.4	
14+95	RT			83			8.6	
16+28	RT			129			13.3	
16+28 TO 17+28	RT	136	1.0		.06	136	14.0	
17+57	LT			56			5.8	
24+00 TO 25+10	LT	189	1.4		.08	189	19.5	
24+76	RT			159			16.4	
24+76 TO 26+76	RT	295	2.1		.12	295	30.5	
27+68	LT			44			4.5	
29+00	RT			58			6.0	
29+63	LT			59			6.1	
32+44	RT			66			6.8	
32+43	LT			51			5.3	
40+00	RT			88			9.1	
41+88	RT	87	0.6		.04		9.0	87
45+30	RT			49			5.1	
45+30 TO 47+90	RT	296	2.1		.12	296	29.5	
47+92 TO 50+52	RT	319	2.3		.13	319	33.0	
50+52	RT			88			9.1	
52+80	RT			73			7.5	
53+94	RT			71			7.3	
54+55	LT			66			6.8	
54+90	LT			52			5.4	
54+90	RT			65			6.7	
62+73	LT			76			7.9	
63+62	LT			64			6.6	
67+15	LT			63			6.5	
67+94	RT	77	0.6		.03		8.0	77
69+84	LT	82	0.6		.03		8.5	82
74+39	RT	116	0.8		.05		12.0	116
84+05	LT	63	0.5		.03		6.5	63
85+67	RT	53	0.4		.02		5.5	53
STA. EQUATION = STA 86+25 AHEAD = STA 0+00 BEHIND								
2+70	RT	63	0.5		.03		6.5	63
6+49	RT			93			9.6	
8+11	LT			72			7.4	
10+33	LT	73	0.5		.03		7.5	73
11+18	LT			85			8.8	
12+14	LT			86			8.9	
15+63	LT			69			7.1	
17+00	LT			84			8.7	
17+49	LT	82	0.6		.03		8.5	82
20+13	RT	97	0.7		.04		10.0	97
23+17	RT	34	0.2		.01		3.5	34
30+00	LT	68	0.5		.03		7.0	68
30+51	LT			77			8.0	
30+84	RT	58	0.4		.02		6.0	58
33+25	LT			57			5.9	
39+05	LT	53	0.4		.02		5.5	53
44+00 TO 46+38	RT	203	1.5		.08	203	21.0	
51+00 TO 52+88	RT	227	1.6		.09	227	23.5	
54+10 TO 55+33	RT	77	0.6		.03	77	8.0	
58+54	RT	63	0.5		.03		6.5	63
58+54 TO 60+04	RT	145	1.1		.06	145	15.0	
61+50 TO 67+50	LT	736	5.3		.30	736	76.0	
63+74	RT			66			6.8	
64+77	RT			92			9.5	
66+20	RT			71			7.3	
66+20 TO 67+85	RT	160	1.2		.07	160	16.5	
70+76	LT	73	0.5		.03		7.5	73
74+60	LT	44	0.3		.02		4.5	44
76+18	LT	87	0.6		.04		9.0	87
93+72 TO 86+44	RT	266	1.9		.11	266	27.5	
84+94	RT	39	0.3		.02		4.0	39
88+79	RT	73	0.5		.03		7.5	73
88+79 TO 89+44	RT	87	0.6		.04	87	9.0	
89+44 TO 90+09	RT	87	0.6		.04	87	9.0	
90+09	RT	87	0.6		.04		9.0	87
92+82	RT			165			17.0	
92+82	LT	58	0.4		.02		6.0	58
94+67	RT			149			15.4	
98+55	RT	358	2.6		.15		37.0	358

TURF ESTABLISHMENT (E)								
LOCATION	LOC	SEEDING	SEED MIX 700	SODDING TYPE EROSION CONTROL	MULCH MATERIAL TYPE 1	DISK ANCHORING	COMMERCIAL FERTILIZER ANALYSIS 10-10-10	POLYPROPYLENE PLASTIC NETTING
		SQ YD	LB.	SQ. YD.	TON	SQ YD	LB.	SQ. YD.
112+35		73	0.5		.03		7.5	73
112+35 TO 116+00	RT	537	3.9		.22	537	55.5	
114+53	LT	73	0.5		.03		7.5	73
120+37	LT	53	0.4		.02		5.5	53
120+37 TO 124+62	LT	416	3.0		.17	416	43.0	
124+00	RT			132			13.6	
136+30	LT			65			6.7	
136+33	RT	106	0.8		.04		11.0	106
141+53	LT			60			6.2	
143+10	RT			79			8.2	
146+65	LT			59			6.1	
150+05	RT	145	1.0		.06		15.0	145
151+90	RT	116	0.8		.05		12.0	116
154+92 TO 160+30	RT	460	3.3		.19	460	47.5	
153+12	LT			158			16.3	
158+29	LT			139			14.4	
159+45	LT			100			10.3	
160+38	RT	111	0.8		.05		11.5	111
168+12	RT	121	0.9		.05		12.5	121
169+06 TO 169+91	RT	92	0.7		.04	92	9.5	
171+87	RT	97	0.7		.04		10.0	97
173+17 TO 174+12	LT	140	1.0		.06	140	14.5	
173+83	RT			104			10.7	
175+12	LT	82	0.6		.03		8.5	82
175+12 TO 184+51	LT	1021	7.4		.42	1021	105.5	
176+21	LT			72			7.4	
TOTALS		8899	64.3	3970	3.68	5879	1329.4	3020

TABULATED QUANTITIES

TYPICAL SECTION
STATION 0+00 TO STATION 184+04



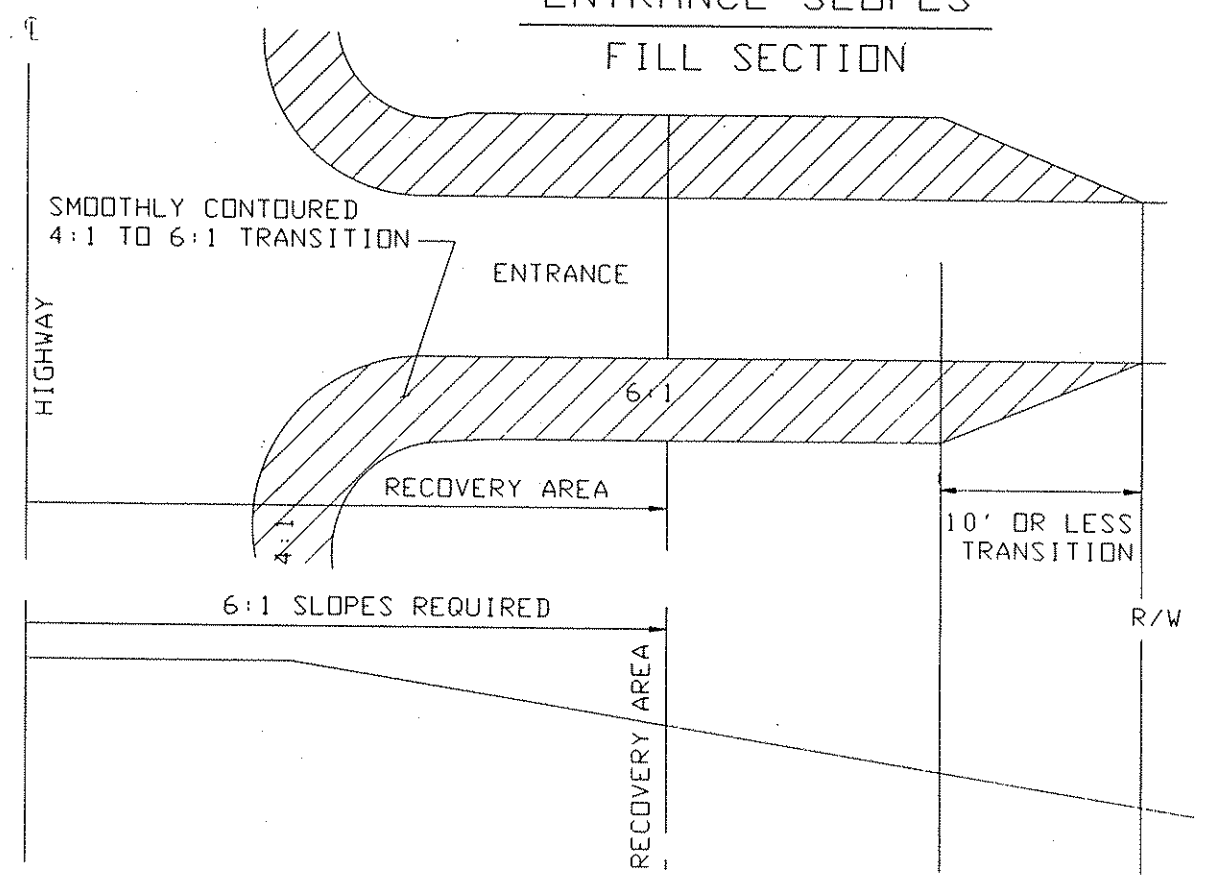
NOTES:

- ① PROVIDE OBSTACLE-FREE AREA WITHIN THIS ZONE. SEE CHART D FOR MISCELLANEOUS REMOVALS.
- ② PROVIDE A 4:1 SHOULDER INSLOPE WITHIN RECOVERY AREA. SEE CHART C FOR EMBANKMENT REQUIREMENTS.
- ③ 3:1 MAXIMUM

REVISIONS			
DATE	BY	DATE	BY

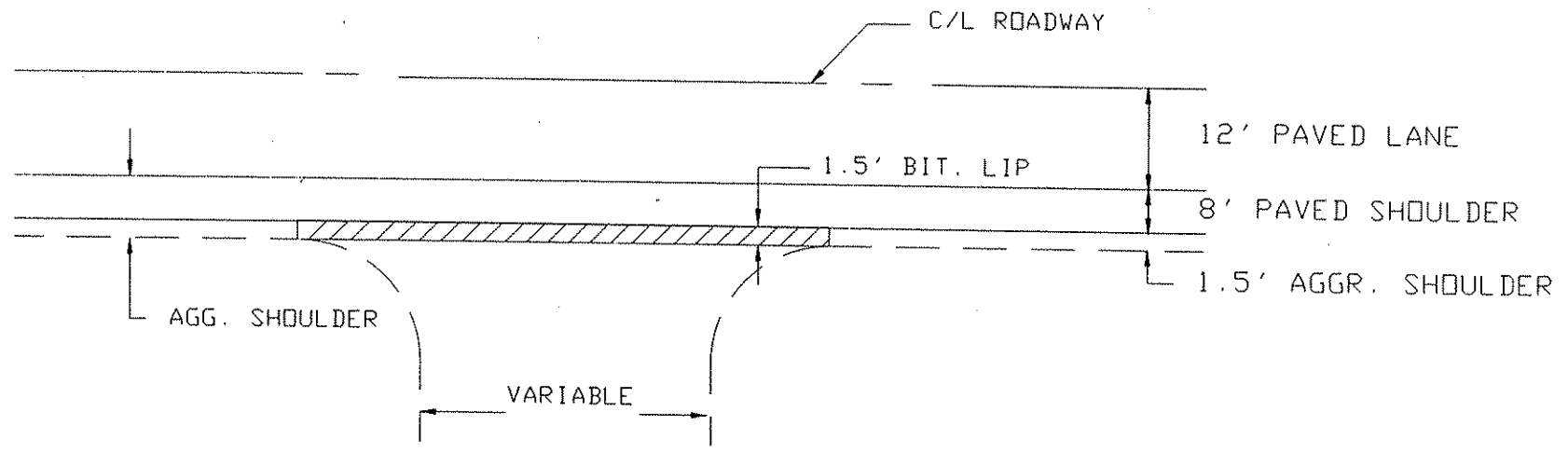
TYPICAL SECTION

ENTRANCE SLOPES
FILL SECTION



TYPICAL ENTRANCES

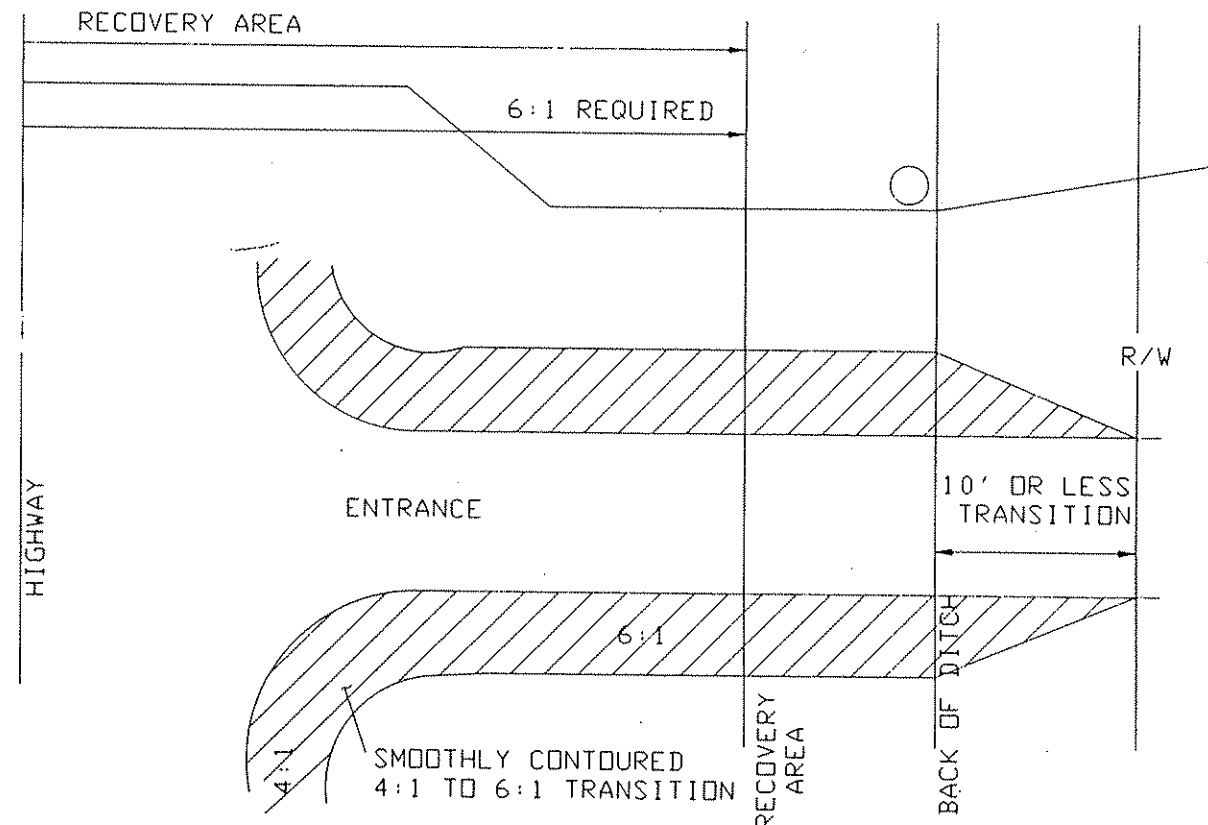
PAVED AND UNPAVED STREETS AND ENTRANCES



NOTE:
ON PAVED ENTRANCES
TACK PAVEMENT &
FEATHER BIT. TO
BLEND WITH EXISTING
DRIVEWAY.

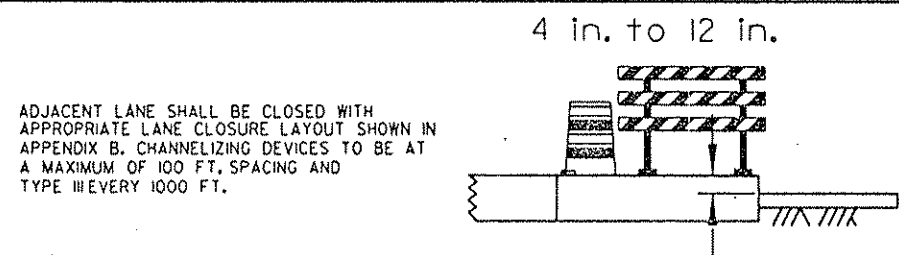
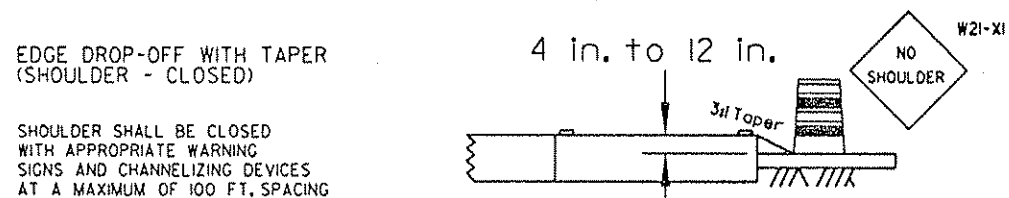
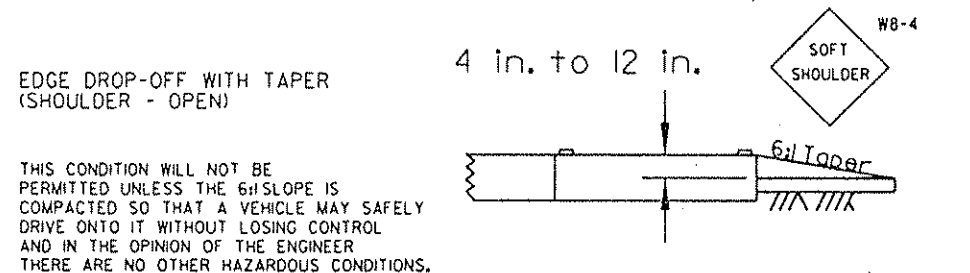
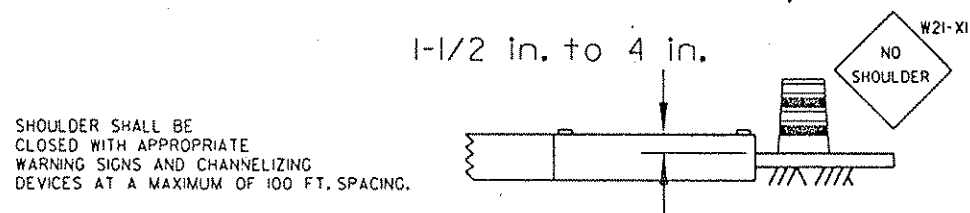
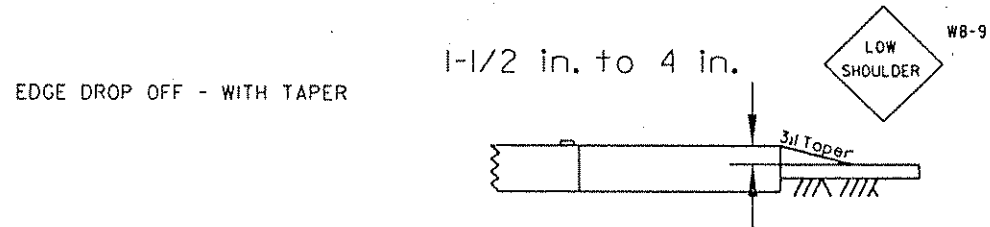
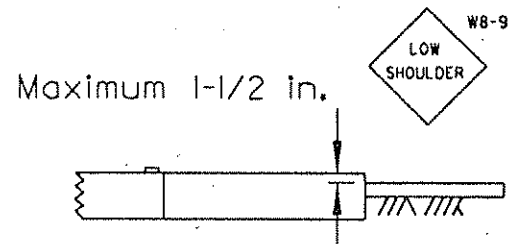
NOTE: NOT TO SCALE

DITCH SECTION



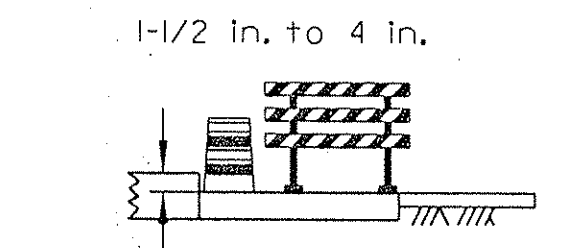
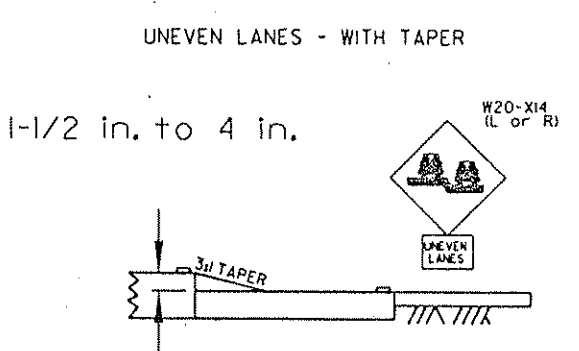
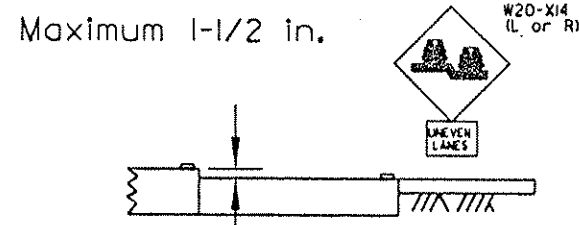
STANDARD DETAILS

EDGE DROP OFF



NOTE: SIGNS ARE REQUIRED ONLY ON THE SIDE OF THE ROAD THAT IS AFFECTED BY CONSTRUCTION (EXCEPT SIGNS THAT ARE FOR A LANE CLOSURE ON DIVIDED HIGHWAYS).

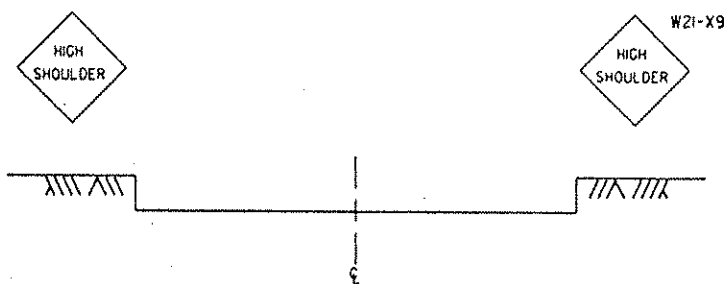
UNEVEN LANES



LANE SHALL BE CLOSED WITH APPROPRIATE LANE CLOSURE FROM APPENDIX B. CHANNELIZING DEVICES AT A MAXIMUM OF 100 FT. SPACING AND A TYPE III BARRICADE EVERY 1000 FT.

NOTE: FOR DIVIDED HIGHWAYS, USE SIGNS ON RIGHT AND LEFT SIDE. SIGN SEQUENCE SHOWN FOR ONE DIRECTION ONLY; OTHER DIRECTION SHALL BE IDENTICAL.

MILLED EDGE



NOTE: MILLED EDGES SHOULD BE TREATED WITH TAPERS, CHANNELIZERS, AND SIGNING AS SHOWN ON EDGE DROP-OFF DETAILS.

NOTE: ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MMUTCD, INCLUDING APPENDIX B, DATED NOVEMBER 1992.

GUIDELINES

THESE GUIDELINES ARE INTENDED TO INCREASE TRAFFIC SAFETY USING TRAFFIC CONTROL DEVICES, SAFETY RELATED APPURTENANCES, AND CONSTRUCTION TECHNIQUES FOR UNEVEN LANES, MILLED EDGES, AND EDGE DROP-OFFS THAT OCCUR IN HIGHWAY WORK ZONES. THE BEST WAY TO INCREASE TRAFFIC SAFETY IS TO MAKE EVERY ATTEMPT TO MINIMIZE EXPOSURE TO UNEVEN LANES, MILLED EDGES, AND EDGE DROP-OFFS; HOWEVER, IT IS REALIZED THAT THIS IS OFTEN NOT POSSIBLE OR FEASIBLE. ONLY WHEN UNEVEN LANES, MILLED EDGES, OR EDGE DROP-OFFS ARE DEEMED NECESSARY, SHALL THE APPROPRIATE PORTION(S) OF THESE GUIDELINES BE APPLIED TO ENHANCE TRAFFIC SAFETY.

APPROPRIATE UNEVEN LANE WARNING SIGNS OR SHOULDER WARNING SIGNS SHALL BE REPEATED AFTER EACH INTERSECTION.

MAXIMUM WARNING SIGN SPACING SHALL BE:

- A - 1 MILE WHEN THE SPEED LIMIT IS GREATER THAN 30 MPH AND
- B - 1/4 MILE WHEN THE SPEED LIMIT IS 30 MPH OR LESS.

WHEN SPACE PERMITS, MINIMUM WARNING SIGN SIZE SHALL BE:

- A - 48 INCHES x 48 INCHES WHEN THE SPEED LIMIT IS GREATER THEN 30 MPH AND
- B - 36 INCHES x 36 INCHES WHEN THE SPEED LIMIT IS 30 MPH OR LESS.

1. FOR DROP-OFFS OF 1-1/2 INCHES OR LESS, APPROPRIATE WARNING SIGNS SHALL BE PROVIDED.
2. FOR DROP-OFFS GREATER THAN 1-1/2 INCHES UP TO 4 INCHES:
 - A - THE EDGE SHALL BE TAPERED AND COMPACTED AT A RATE OF 3:1 AND APPROPRIATE WARNING SIGNS SHALL BE PROVIDED; OR
 - B - IF THE TAPER IS NOT PROVIDED, TRAFFIC SHALL NOT BE PERMITTED TO CROSS THE DROP-OFF AND THAT PORTION OF THE ROADWAY SHALL BE CLOSED TO TRAFFIC WITH THE APPROPRIATE WARNING SIGNS AND DEVICES.
3. FOR DROP-OFFS GREATER THAN 4 INCHES UP TO 12 INCHES:
 - A - THE EDGE SHALL BE TAPERED AND COMPACTED AT A RATE OF 6:1 AND APPROPRIATE WARNING SIGNS SHALL BE PROVIDED, (6:1 TAPER SHALL NOT BE USED AS A TRAFFIC CARRYING LANE);
 - B - THE EDGE SHALL BE TAPERED AND COMPACTED AT A RATE OF 3:1, TRAFFIC SHALL NOT BE ALLOWED TO CROSS THE DROP-OFF, AND THAT PORTION OF THE ROADWAY SHALL BE CLOSED TO TRAFFIC WITH APPROPRIATE WARNING SIGNS AND CHANNELIZING DEVICES; OR
 - C - IF A TAPER IS NOT PROVIDED, THE TRAFFIC OR AUXILIARY LANE ADJACENT TO THE DROP-OFF SHALL BE CLOSED TO TRAFFIC WITH THE APPROPRIATE WARNING SIGNS AND CHANNELIZING DEVICES OR A POSITIVE BARRIER, SUCH AS A PORTABLE PRECAST CONCRETE BARRIER, SHALL BE PROVIDED TO PREVENT TRAFFIC FROM CROSSING THE DROP-OFF.
4. FOR SHOULDER EDGE DROP-OFFS:
 - A - 0-2 FOOT SHOULDER WIDTH AND A 0-12 INCH DROP-OFF; USE GUIDELINES AS SHOWN
 - B - 2-8 FOOT SHOULDER WIDTH AND A 0-4 INCH DROP-OFF; INSTALL EDGELINE OR USE GUIDELINES AS SHOWN
 - C - 8 FOOT OR GREATER SHOULDER WIDTH AND A 0-4 INCH DROP-OFF; NO TRAFFIC CONTROL REQUIRED
 - D - GREATER THAN 2 FOOT SHOULDER WIDTH AND A 4-12 INCH DROP-OFF; USE GUIDELINES AS SHOWN
5. DROP-OFFS GREATER THAN 4 INCHES ADJACENT TO TRAFFIC CARRYING LANES ARE PERMITTED WITHOUT TAPERS OR POSITIVE BARRIERS FOR:
 - A - PROJECTS WITHIN URBAN AREA WHEN THE SPEED LIMIT IS 30 MPH OR LESS; OR
 - B - SHORT TERM (7 CALENDAR DAYS OR LESS) CONCRETE OR UTILITY REPAIR, LESS THAN 50 FEET IN LENGTH WHEN THE SPEED LIMIT IS GREATER THAN 30 MPH.
6. AT NO TIME SHALL THERE BE MORE THAN ONE UNEVEN LANE CONDITION BETWEEN THE TRAFFIC CARRYING LANES WHICH INCLUDE AUXILIARY LANES, TURN LANES, AND RAMP ACCESS OR EGRESS AREAS. WEATHER PERMITTING, ALL EXPOSED UNEVEN LANES CONDITIONS WITHIN THE TRAFFIC CARRYING LANES SHALL BE 'MATCHED' WITHIN 24 HOURS.
7. MILLING OPERATIONS SHALL BE REQUIRED TO COMPLETE THE FULL WIDTH OF THE SECTION UNDER CONSTRUCTION AT THE END OF EACH WORK PERIOD.

Traffic Control Treatment of
Longitudinal Joints and
Edge Drop-offs in Work Zones