MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR AGG. BASE, BITUMINOUS SURFACING, CURB AND GUTTER & PAVEMENT EDGE DRAINS

0.1 MI. NORTH JCT.

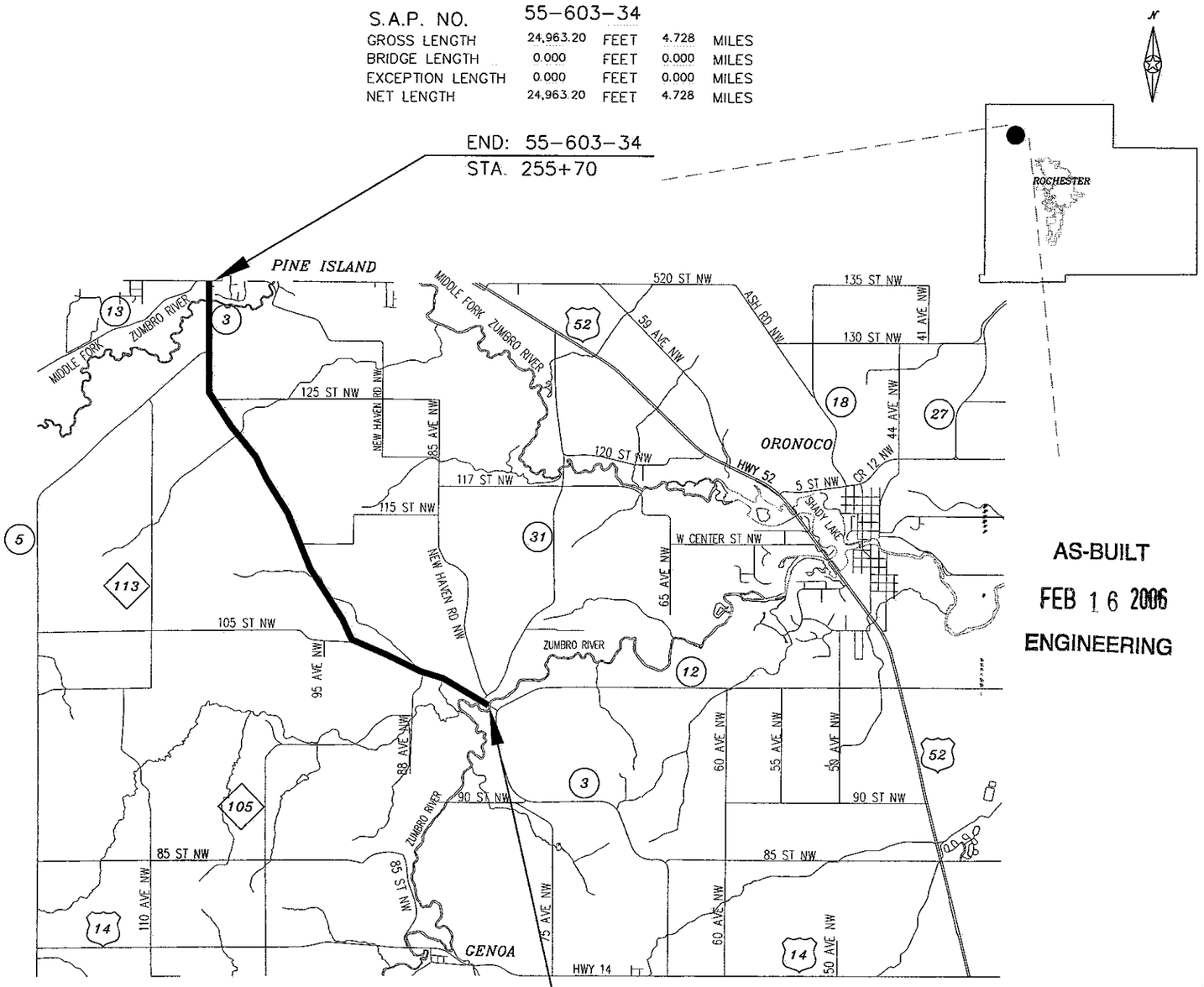
LOCATED ON C.S.A.H. 3 BETWEEN C.S.A.H. 3 & C.S.A.H. 12 AND C.S.A.H. 13 (GEOGRAPHIC DESCRIPTION)

FROM 852 FT. SOUTHWEST OF 1/4 COR SECTION 22 – 23 108N–R15W TO NORTH 1/4 CORNER SECTION 5 T108N–R15W (LEGAL DESCRIPTION)

S.A.P. NO. 55–603–34

GROSS LENGTH	24,963.20	FEET	4.728	MILES
BRIDGE LENGTH	0.000	FEET	0.000	MILES
EXCEPTION LENGTH	0.000	FEET	0.000	MILES
NET LENGTH	24,963.20	FEET	4.728	MILES

END: 55–603–34
STA. 255+70



BEGIN: 55–603–34
STA. 6+06.80

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ENGINEERING

PLAN SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT RIGHT-OF-WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER
SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN
FIRE HYDRANT
CATTLE GUARD
OVERPASS (HIGHWAY OVER)
UNDERPASS (HIGHWAY UNDER)
BRIDGE
BUILDING (ONE STORY FRAME)
F – FRAME C – CONCRETE
S – STONE T – TILE
B – BRICK ST – STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY
SLOPE EASEMENT

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLE
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRICAL CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRICAL MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRICAL CABLE
AERIAL TELEPHONE CABLE
SEWER (SANITARY OR SEWER)
SEWER MANHOLE

EROSION CONTROL SYMBOLS

TEMPORARY SILT FENCE
RIP RAP DITCH CHECKS

SCALES

PLAN 0 50'
PROFILE 0 50' HORIZ 0 10' VERT
CROSS SECTIONS 0 10'
INDEX MAP 0 2640'

MINN. PROJ. NO.

GOVERNING SPECIFICATIONS

THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN

INDEX

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	ESTIMATE OF QUANTITIES
SHEET NO. 3	TYPICAL SECTIONS
SHEET NO. 4	EDGE DRAIN DETAILS
SHEET NO. 5	ENTRANCE DETAILS
SHEET NO. 6–7	TRAFFIC CONTROL

THIS PLAN CONTAINS 7 SHEETS.

DESIGN DESIGNATION: S.A.P. 55–603–34

ADT (Current Year) = 2311(2004) Design Speed 55 MPH
ADT (Future Year) = 3698(2024) Based on STOPPING Sight Distance
DHV (Design Hr. Vol.) = Height of eye 3.5 FT. Height of object 0.5 FT
D (Directional Distr.) = Design Speed not achieved at: STA. TO STA. MPH
T (Heavy Commercial) = STA. TO STA. MPH
SUBGRADE = K=150
LANE WIDTH 12 FT
SHOULDER WIDTH 6 FT
R VALUE = 70
20 YEAR DESIGN LANE ESALS = 356,000
SOIL FACTOR =
TON DESIGN 10
FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR

LOCAL APPROVALS:

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

DATE 11/5/04 REG. NUMBER 19917

PRINTED NAME: KAYE M. BIENIEK

SIGNED NAME: Kaye M Bieniek
COUNTY DESIGN ENGINEER

DESIGNED BY: Holmes

DATE 11/5/04 REG. NUMBER 10397

APPROVED: OLMSTED COUNTY ENGINEER

STATE AID APPROVALS:

DATE: 11-10-04
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE-AID RULES/POLICY

DATE: 11-10-04
APPROVED FOR STATE AID FUNDING:
STATE AID ENGINEER

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	NON PARTICIPATING RURAL	PARTICIPATING RURAL	TOTAL ESTIMATED QUANTITIES
①	2104.513	SAW BITUMINOUS PAVEMENT (FULL DEPTH)	LIN. FT.		95	95
①	2105.525	TOPSOIL BORROW (LV)	CU. YD.		5,056	5,056
①②	2105.604	GEOTEXTILE FABRIC TYPE V	SQ. YD.		13,000	13,000
	2112.501	SUBGRADE PREPARATION	RD. STA.		198 (P)	198 (P)
③	2112.603	SHOULDER PREPARATION	LIN. FT.		1869	1869
①④	2123.503	MOTOR GRADER	HOUR		10	10
①⑤	2130.501	WATER	M-GAL.		104	104
⑥	2211.501	AGGREGATE BASE CLASS 5 MOD.	TON		27,521	27,521
⑦	2221.501	AGGREGATE SHOULDERING CLASS 2	TON		6,258	6,258
⑧	2331.604	BITUMINOUS PAVEMENT RECLAMATION	SQ. YD.		8,946	8,946
⑨	2350.501	TYPE MV4 WEARING COURSE MIXTURE (MVWE45035C)	TON		8,076	8,076
⑩	2350.502	TYPE MV3 NON WEARING COURSE MIXTURE (MVNW35035C)	TON		10,703	10,703
⑪	2350.502	TYPE MV2 NON WEARING COURSE MIXTURE (MVNW25035B)	TON		8,724	8,724
	2502.501	4" PRECAST CONCRETE HEADWALL	EACH		92	92
	2502.521	4" TP PIPE DRAIN	LIN. FT.		1380	1380
	2502.541	4" PERF PE PIPE DRAIN	LIN. FT.		42,226	42,226
⑫	2531.501	CONCRETE CURB & GUTTER B424	LIN. FT.		580	580
	2563.601	TRAFFIC CONTROL	LUMP SUM		1	1
	2564.603	4" SOLID LINE WHITE - EPOXY	LIN. FT.		50,776	50,776
	2564.603	4" SOLID LINE YELLOW - EPOXY	LIN. FT.		5,343	5,343
	2564.603	4" DOUBLE SOLID LINE YELLOW - EPOXY	LIN. FT.		1,100	1,100
	2564.603	4" BROKEN LINE YELLOW - EPOXY	LIN. FT.		4,783	4,783
	2575.501	SEEDING	ACRE		9 (P)	9 (P)
	2575.502	SEED MIXTURE 50B	POUND		450	450
	2575.502	SEED MIXTURE 110B	POUND		720	720
①	2575.505	SODDING TYPE EROSION	SQ. YD.		580	580
	2575.511	MULCH MATERIAL TYPE 1	TON		18	18
	2575.519	DISC ANCHORING	ACRE		9 (P)	9 (P)
	2575.532	COMMERCIAL FERTILIZER ANALYSIS 12-12-12	POUND		1,800	1,800
	2580.603	INTERIM PAVEMENT MARKINGS	LIN. FT.		5,544	5,544

BASIS OF PLANNED QUANTITIES

AGGREGATE BASE CLASS 5 MODIFIED - 140LBS./CU.FT. COMPACTED
AGGREGATE SHOULDERING CLASS 2 - 140LBS./CU.FT. COMPACTED
BITUMINOUS MIXTURE - 110 LBS/SQ. YD./1 INCH DEPTH
SEED MIXTURE 50B - 50 LBS/ACRE
SEED MIXTURE 110B - 80 LBS/ACRE
MULCH MATERIAL - 2 TONS/ACRE
DISK ANCHORING - ALL SEEDING AREAS EXCEPT 1:2 SLOPES
COMMERCIAL FERTILIZER - 200 LBS/ACRE

(P) PLAN QUANTITY

QUANTITY NOTES

① SPEC. NO 1903 DOES NOT APPLY

② GEOTEXTILE MATERIAL TO BE USED AS STABILIZATION BETWEEN AGGREGATE LAYERS AND PLACED IN THE FIELD AS DIRECTED BY THE ENGINEER.

③ INCLUDES REMOVAL AND DISPOSAL OF 4 BITUMINOUS FIELD DRIVE APPROACHES (APPROX. 1 1/2' x 80') AND 2 TRAIL APPROACHES (APPROX. 9' x 8')

④ SHALL BE USED TO DIGOUT ANY UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER IN THE FIELD.

⑤ WATER TO BE USED AS A DUST PREVENTATIVE AS DIRECTED BY THE ENGINEER.

⑥ MAINLINE 25,740 TON
ENTRANCES 1,781 TON

⑦ MAINLINE 4,848 TON
ENTRANCES 1,410 TON

⑧ STA. 222+60 TO STA. 255+70 - EXCLUDING BRIDGE DECK (128')
ALSO INCLUDED ARE TURN LANES AND RADII

⑨ MAINLINE (INCLUDING A 30' BIT. TAPER ON CSAH 5) 7,639 TON
ENTRANCES & TURN LANES 437 TON

⑩ MAINLINE 10,161 TON
ENTRANCES & TURN LANES 542 TON

⑪ MAINLINE 8,423 TON
TURN LANES 301 TON

⑫ INSTALL CURB & GUTTER STA. 191+~~80~~ 84 - 195+~~30~~ 13 RT AND STA. 192+~~80~~ 85 - 195+~~10~~ 04 LT

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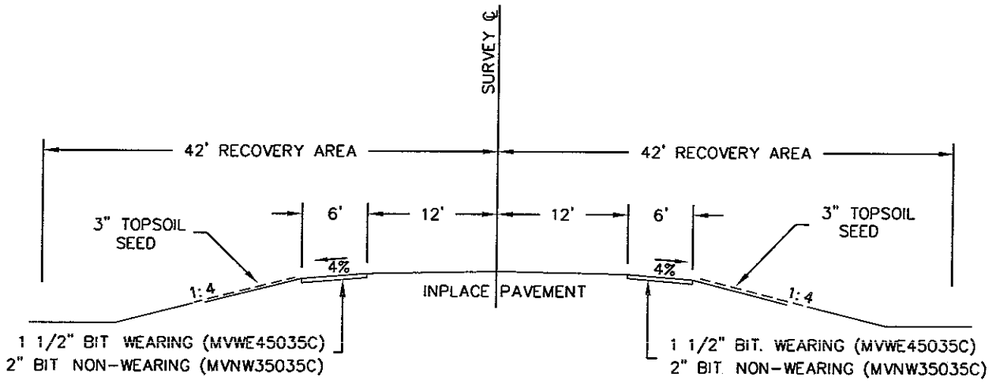
ENGINEERING

STANDARD PLATES

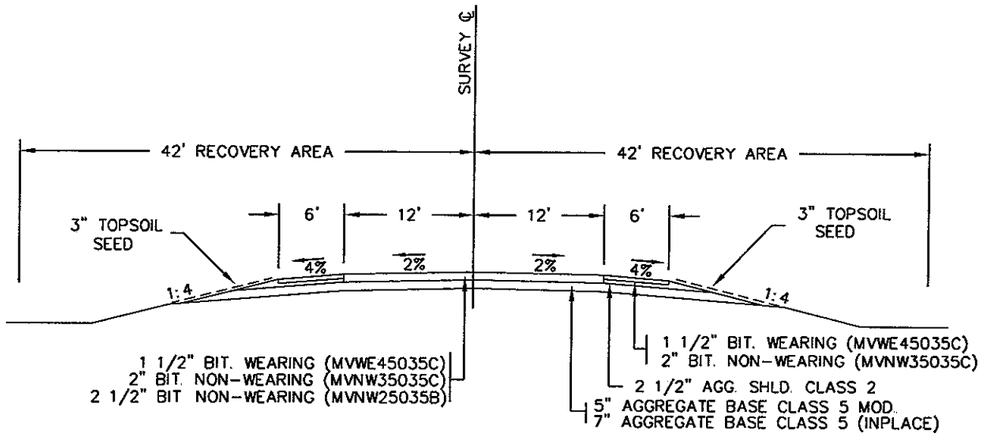
THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
	NUMERICAL INDEX OF STANDARD PLATES
3131C	PRECAST CONCRETE HEADWALL FOR SUBSURFACE DRAINS
8000I	STANDARD BARRICADES
9000D	APPROACHES AND ENTRANCES

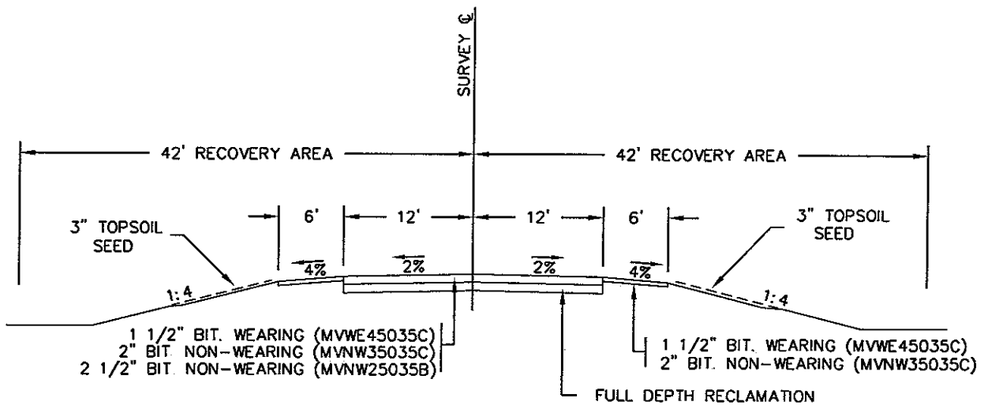
CERTIFIED BY Kay M Pierick LICENSED PROFESSIONAL ENGINEER REG. NO. 19917 11/5 2004



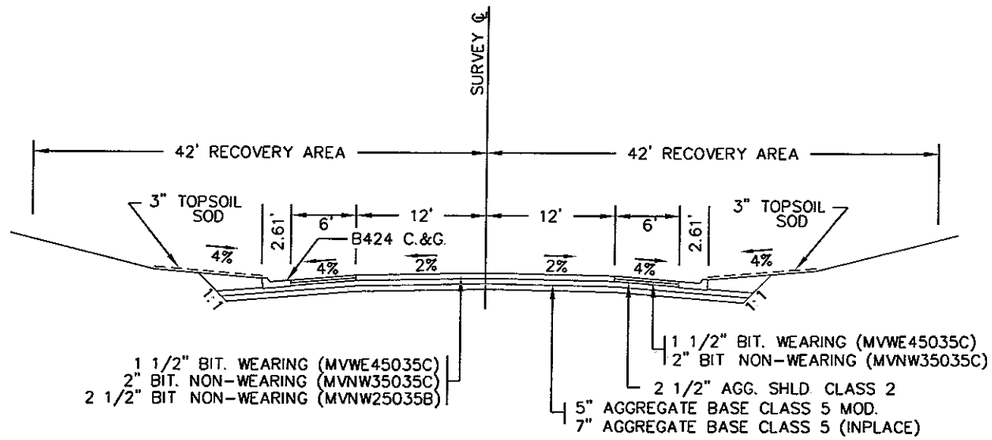
STA: 6+06.80 TO 24+75.22



STA: 24+75.22 TO 191+80
STA: 195+10 TO 222+60



STA: 222+60 TO 255+70

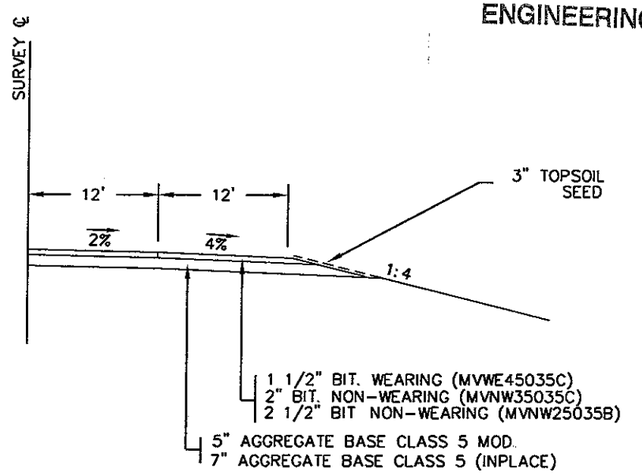


STA: 191+80 TO 195+10

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RIGHT TURN LANE TYPICAL
STA: 39+00 TO 42+40
STA: 73+20 TO 78+00
STA: 223+50 TO 227+00

TYPICAL SECTIONS

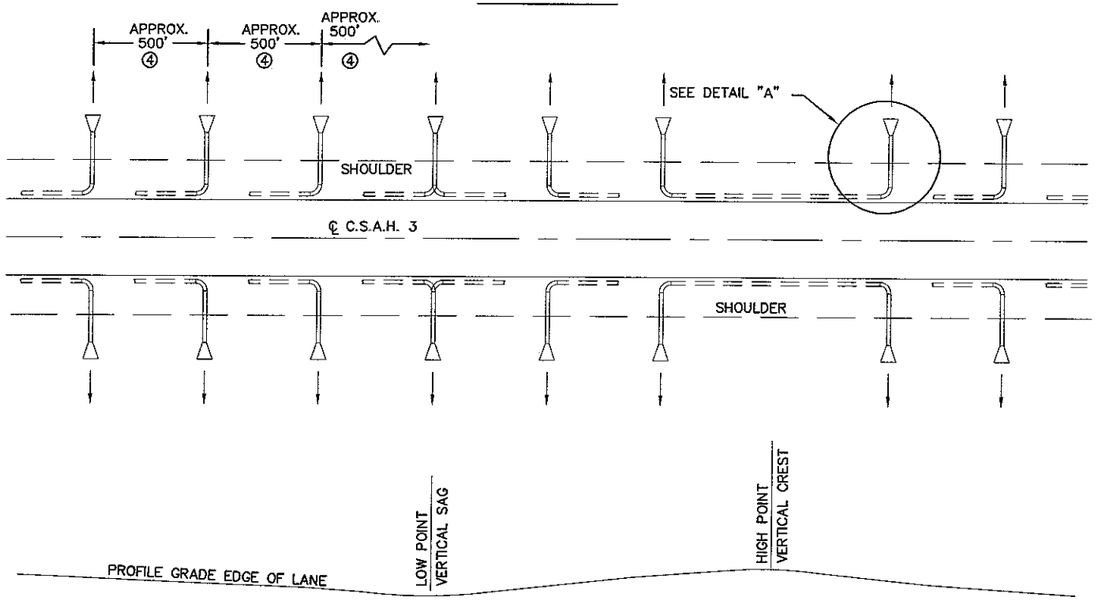
CERTIFIED BY Kaye M Peterich REG. NO. 19917 11/1 2004
LICENSED PROFESSIONAL ENGINEER

S.A.P. 55-603-34 CSAH 3

SHEET 3 OF 7 SHEETS

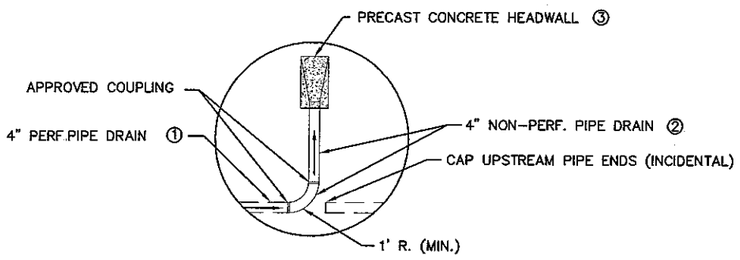
EDGE DRAIN DETAILS AND CONSTRUCTION NOTES

PLAN VIEW



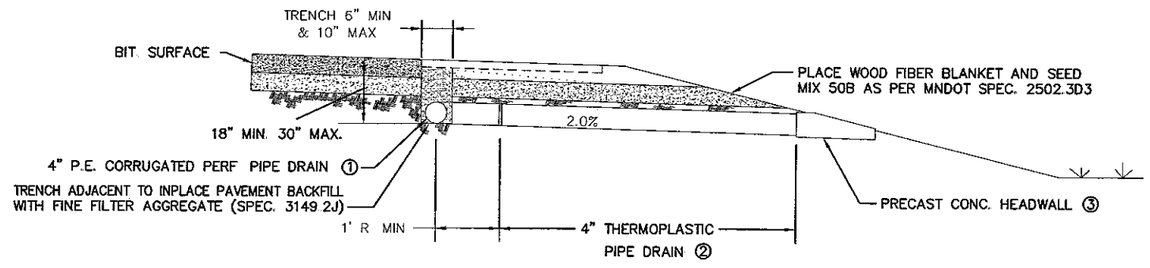
LEGEND

- 4" PERFORATED PIPE DRAIN
- 4" NON-PERFORATED PIPE DRAIN
- PRECAST CONCRETE HEADWALL



DETAIL "A"

X-SECTION VIEW



EDGE DRAINS

STATIONING	LOCATION	PERF. TP PIPE DRAIN 4" DIA. (LIN FT)	NON-PERF. TP PIPE DRAIN 4" DIA. (LIN FT)	CONCRETE HEADWALL (EACH)	HEADWALL STATIONS
6+06 – 8+82	LT	276	15	1	8+82
8+82 – 17+31	RT & LT	1698	30	2	11+58(LOW PT)
17+31 – 26+28	LT	897	30	2	17+31,21+79
26+28 – 65+68	RT & LT	7880	240	16	26+28,31+00,36+00,41+00, 46+00,51+00,56+00,61+00
65+68 – 78+13	RT	1245	45	3	65+68,70+00,74+00
78+13 – 111+65	RT & LT	6704	210	14	78+13,83+00,88+00,93+00, 98+00,103+00,108+00
111+65 – 119+64	RT	799	30	2	111+65,115+00
119+64 –134+36	RT & LT	2944	120	8	119+64,124+50,129+00,134+36 HIGH PT (133+56)
134+36 – 142+52	LT	816	30	2	141+00,142+52
142+52 – 147+32	RT & LT	960	30	2	147+32
147+32 – 153+04	RT	572	15	1	153+04
153+04 – 167+12	RT & LT	2816	90	6	158+00,163+00,167+12
167+12 – 173+94	LT	682	30	2	170+00,173+94
173+94 – 184+91	RT & LT	2194	60	4	178+00,181+06(LOW PT)
184+91 – 190+96	RT	605	30	2	184+91,188+00
190+96 – 198+54	RT & LT	1516	60	4	190+96,198+54 HIGH PT (193+94)
198+54 – 210+64	RT	1210	45	3	202+50,206+50,210+64
210+64 – 222+60	RT & LT	2392	90	6	214+50,218+50,222+60
222+60 – 245+00	RT & LT	4480	120	8	227+20,231+80,236+40, 241+00(LOW PT)
248+00 – 255+70	RT & LT	1540	60	4	248+00,251+80
TOTALS		42,226	1380	92	

SEE SHEET 4A

CONSTRUCTION NOTES

① PAYMENT FOR 4" PERFORATED PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, FABRIC WRAPPED P.E. PIPE, INSTALLATION, FILTER AGGREGATE BACKFILL AND COMPACTION, BITUMINOUS OR AGGREGATE CAP, AND ALL OTHER ASSOCIATED WORK.

② PAYMENT FOR 4" NON-PERFORATED PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, FURNISHING AND PLACING PIPE AND CONNECTIONS, BACKFILL AND COMPACTION, AND ALL OTHER ASSOCIATED WORK.

③ PAYMENT FOR PRECAST CONCRETE HEADWALLS SHALL BE FULL COMPENSATION FOR PLACING HEADWALL, WOOD FIBER BLANKET AND SEED, AND ALL OTHER ASSOCIATED WORK.

④ IF AN OUTLET HAPPENS TO FALL WITHIN A CROSS-OVER OR DITCH-BLOCK INCREASE THE LENGTH OF THE PERFORATED PIPE TO A POINT WHERE AN OUTLET CAN BE SATISFACTORLY CONSTRUCTED AS DIRECTED BY THE ENGINEER.

⑤ EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH MN/DOT SPEC. 2104.3C3.

⑥ NO EDGE DRAINS WILL BE PLACED ON ELEVATED SUPER SIDE AS DIRECTED BY ENGINEER.

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PAVEMENT EDGE DRAINS

EDGE DRAIN TABULATIONS

English Stations	Location	Perf. Pipe (feet)	TP Pipe (feet)	Headwalls (each)	Headwall Stations
6+10 - 8+85	LT	275			
8+85 - 14+40	RT & LT	1,110			
14+40 - 19+93	LT	553			
20+95 - 26+32	LT	537			
26+32 - 65+70	RT & LT	7,876			
65+70 - 78+00	RT	1,230			
78+00 - 111+70	RT & LT	6,740			
111+70 - 119+77	RT	807			
119+77 - 134+25	RT & LT	2,896			
134+25 - 142+50	LT	825			
142+50 - 147+30	RT & LT	960			
147+30 - 153+03	RT	573			
153+03 - 167+10	RT & LT	2,814			
167+10 - 173+94	LT	684			
173+94 - 184+90	RT & LT	2,192			
184+90 - 190+96	RT	606			
190+96 - 198+54	RT & LT	1,516			
198+54 - 210+64	RT	1,210			
210+64 - 221+48	RT & LT	2,168			
221+48 - 223+58	RT	210			
223+58 - 244+66	RT & LT	4,216			
249+00 - 255+25	RT & LT	1,250			
	TOTAL	41,248			
	RT & LT		26.7	2	11+10
	LT		16.2	1	15+53
	LT		14.5	1	20+95
	RT & LT		36.6	2	26+32
	RT & LT		30.2	2	31+00
	RT & LT		30.0	2	36+50
	RT & LT		33.3	2	41+70
	RT & LT		30.0	2	46+00
	RT & LT		28.5	2	51+00
	RT & LT		29.3	2	56+00
	RT & LT		29.0	2	61+00
	RT		13.5	1	65+70
	RT		14.2	1	69+55
	RT		16.7	1	74+00
	RT & LT		32.6	2	78+00
	RT & LT		32.3	2	83+00
	RT & LT		27.5	2	88+00

EDGE DRAIN TABULATIONS

English Stations	Location	Perf. Pipe (feet)	TP Pipe (feet)	Headwalls (each)	Headwall Stations
	RT & LT		30.2	2	93+25
	RT & LT		30.7	2	98+00
	RT & LT		27.3	2	103+00
	RT & LT		28.5	2	108+75
	RT		14.7	1	111+70
	RT		14.1	1	115+00
	RT & LT		27.0	2	119+77
	RT & LT		30.5	2	124+70
	RT & LT		29.5	2	129+10
	RT & LT		28.0	2	134+25
	LT		13.0	1	139+40
	LT		13.3	1	142+50
	RT & LT		28.0	2	147+30
	RT		13.4	1	153+00
	RT & LT		28.6	2	157+70
	RT & LT		28.5	2	162+35
	RT & LT		27.2	2	167+10
	LT		11.7	1	170+00
	LT		14.0	1	173+94
	RT & LT		26.4	2	177+70
	RT & LT		27.9	2	181+05
	RT		14.1	1	185+00
	RT		14.8	1	187+75
	LT		15.0	1	190+96
	RT		15.6	1	191+00
	LT		12.7	1	198+54
	RT		16.8	1	198+60
	RT		16.3	1	202+60
	RT		14.4	1	206+50
	RT		12.4	1	210+65
	RT & LT		26.8	2	214+50
	RT & LT		26.0	2	218+60
	RT & LT		26.5	2	221+50
	RT & LT		21.2	2	227+40
	RT & LT		21.3	2	231+80
	RT & LT		19.0	2	236+75
	RT & LT		22.6	2	240+95
	RT & LT		21.5	2	249+00
		TOTAL	1251	89	

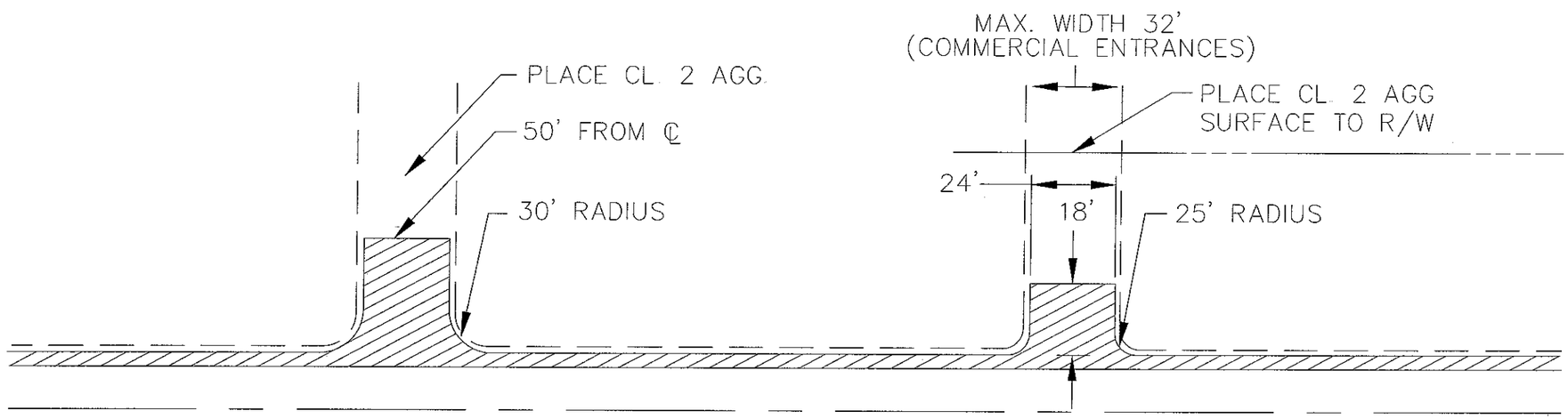
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ENGINEERING

ROAD APPROACHES

COMMERCIAL ENTRANCES
FARM OR RESIDENTIAL ENTRANCES



PLACE 3-1/2" THICK WEARING COURSE

ROAD APPROACHES	FARM OR RESIDENTIAL ENTRANCES
4	35

C.R. 105, 105TH ST., 115TH ST. & 125TH ST.

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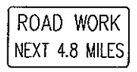
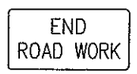
ENTRANCE DETAILS

CERTIFIED BY Kaye M Bierwirth REG. NO. 19917 11/1 2004
LICENSED PROFESSIONAL ENGINEER

S.A.P. 55-603-34 CSAH 3

SHEET 5 OF 7 SHEETS

ESTIMATE OF TRAFFIC CONTROL DEVICES

DEVICE	NUMBER	SIZE (INCHES)	COLOR	QUANTITY	DEVICE	NUMBER	SIZE (INCHES)	COLOR	QUANTITY
	R4-1	24 x 30	BLK/WH	6		G20-1	60 x 24	BLK/OR	2
	R4-2	24 X 30	BLK/WH	6		G20-2A	48 x 24	BLK/OR	2
	W8-12	48 x 48	BLK/OR	10					
	W20-1	48 x 48	BLK/OR	9					

TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL FOR THIS PROJECT.
2. THE LOCATION OF SIGNS AND DEVICES WILL BE STAKED BY THE ENGINEER IN THE FIELD.
3. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS FIELD MANUAL DATED JANUARY 2004.
4. CONSTRUCTION ZONE SIGNING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WILL INCLUDE, BUT NOT BE LIMITED TO SIGNS FOR LANE CLOSURES, BUMP, DIP, LOOSE GRAVEL, ETC. THE NUMBER AND LOCATION WILL BE DETERMINED BY THE CONTRACTORS OPERATION.

AS-BUILT

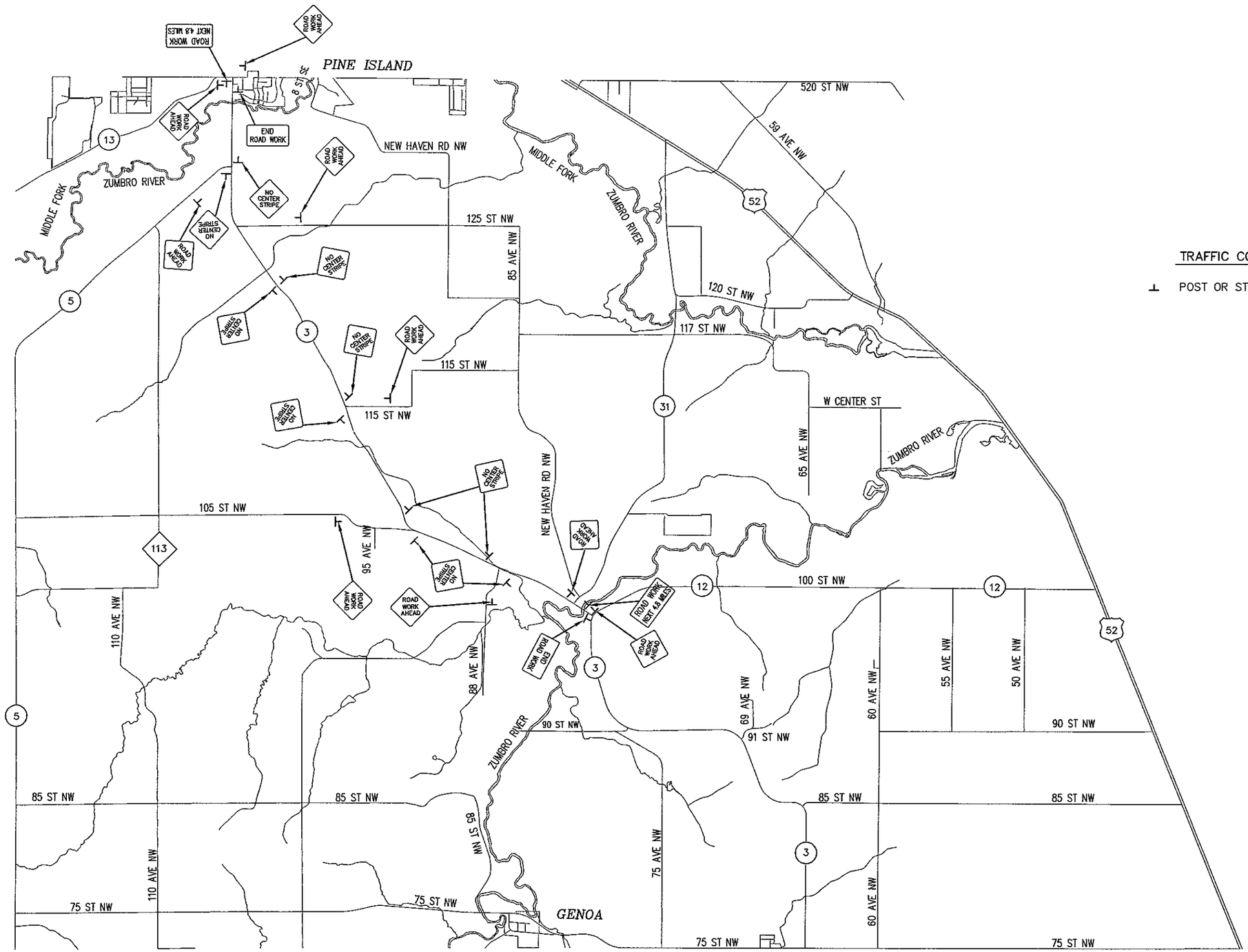
FEB 16 2006

ENGINEERING

TRAFFIC CONTROL

CERTIFIED BY Kevin M Kiernich LICENSED PROFESSIONAL ENGINEER REG. NO. 19917 11/1 2004

S.A.P. 55-603-34 C.S.A.H. 3



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TRAFFIC CONTROL LEGEND

⊥ POST OR STAND MOUNTED SIGN

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TRAFFIC CONTROL

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SHEET 7 OF 7 SHEETS