

PLAN SYMBOLS

- COUNTY LINE _____
- TOWNSHIP OR RANGE LINE _____
- SECTION LINE _____
- QUARTER LINE _____
- SIXTEENTH LINE _____
- RIGHT OF WAY LINE _____
- SLOPE EASEMENT _____
- EXISTING RIGHT OF WAY _____
- PROPERTY LINE _____
- CORPORATE OR CITY LIMITS _____
- RETAINING WALL _____
- RAILROAD _____
- RAILROAD RIGHT OF WAY _____
- RIVER OR CREEK _____
- DRAINAGE DITCH _____
- CULVERT _____
- DROP INLET _____
- GUARD RAIL _____
- BARBED WIRE FENCE _____
- WOVEN WIRE FENCE _____
- CHAIN LINK FENCE _____
- WOOD FENCE _____
- STONE WALL OR FENCE _____
- HEDGE _____

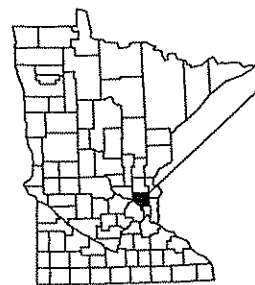
- LOWLAND
- TIMBER
 - ORCHARD
 - BRUSH
 - NURSERY
 - CATTLE GUARD
 - OVERPASS (Highway Over)
 - UNDERPASS (Highway Under)
 - BRIDGE
 - BUILDING (One Story Frame)
 - F-FRAME C-CONCRETE
 - S-STONE T-TILE
 - B-BRICK ST-STUCCO
 - RAILROAD CROSSING BELL
 - RAILROAD CROSSING GATE
 - MANHOLE
 - CATCH BASIN
 - FIRE HYDRANT
 - CAST IRON MONUMENT
 - IRON PIN
 - GRAVEL PIT
 - SAND PIT
 - BORROW PIT
 - ROCK QUARRY

UTILITY SYMBOLS

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

SCALES

- PLAN
- PROFILE
- HORIZONTAL
- VERTICAL
- X-SECTIONS
- HORIZONTAL
- VERTICAL



PROJECT LOCATION

CITY OF ANOKA
 ANOKA COUNTY
 MN/DOT TRANSPORTATION DISTRICT - METRO
 SECTION 7
 TOWNSHIP 31 NORTH
 RANGE 24 WEST

MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

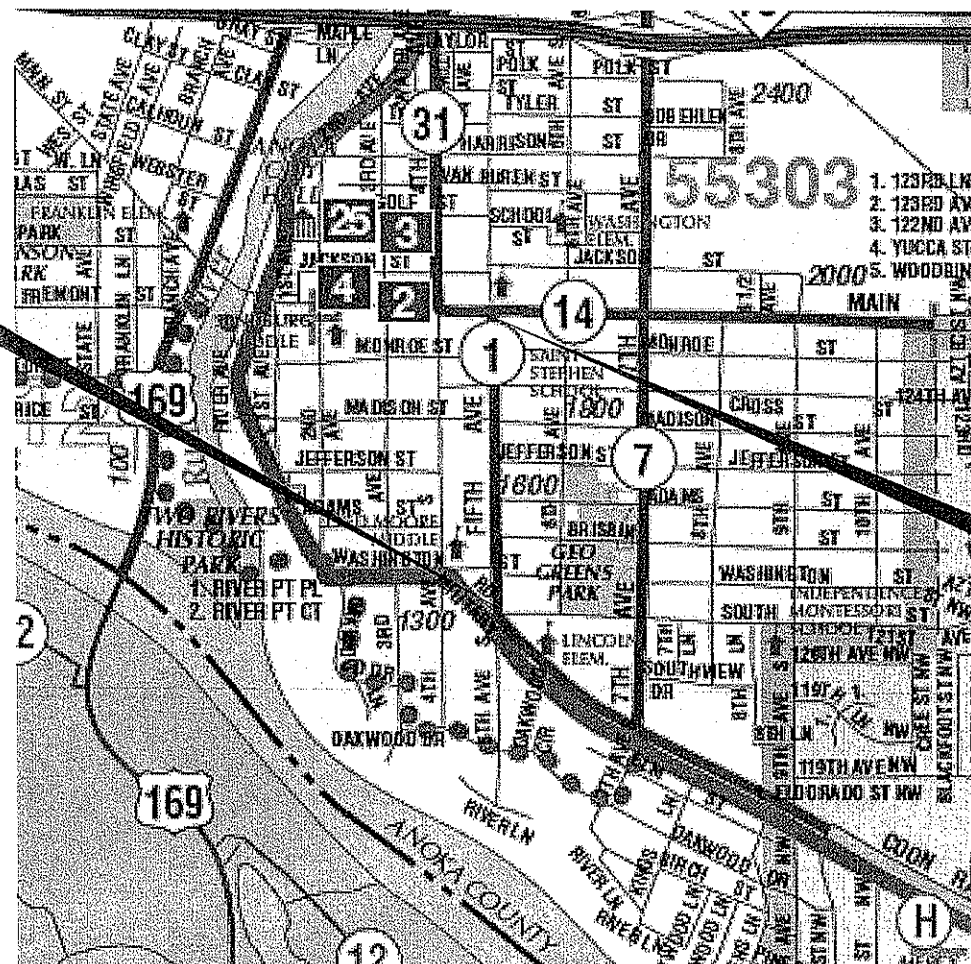
CONSTRUCTION PLAN FOR _____ MILL BITUMINOUS SURFACE, BITUMINOUS SURFACING, DRAINAGE AND CURB AND GUTTER

LOCATED ON C.S.A.H. 1 BETWEEN CSAH 14 AND SOUTH ST.

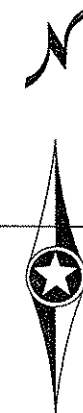
COUNTY PROJ. NO. C.P. 11-26-01

C.S.A.H. 1

GROSS LENGTH	<u>2574 FEET</u>	<u>0.488 MILES</u>
BRIDGES LENGTH	<u>0.00 FEET</u>	<u>0.000 MILES</u>
EXCEPTIONS-LENGTH	<u>0.00 FEET</u>	<u>0.000 MILES</u>
NET LENGTH	<u>2574 FEET</u>	<u>0.488 MILES</u>



CITY OF ANOKA



BEGIN C.P. 11-26-01
 C.S.A.H. 54 STA. 10+25

END C.P. 11-26-01
 C.S.A.H. 54 STA. 35+99

THIS PLAN CONTAINS 13 SHEETS
 DESIGN DESIGNATION

ESAL 20	<u>753300</u>
R VALUE	<u>50</u>
ADT (2009) =	<u>6750</u>
Proj. ADT (2029) =	<u>10125</u>
Proj. HCADT (2029) =	<u>NA</u>
Soil Factor	<u>NA</u>
<u>9</u> TON DESIGN	

Functional Classification A MINOR RELIEVER
 No. of Traffic Lanes 4 No. of Parking Lanes 0
 Design Speed 30 MPH N/A
 Based on Stopping Sight Distance
 Height of eye 3.5' Height of object 2.0'
 Design Speed not achieved at:
 STA. _____ TO STA. _____ MPH _____

Approved 4/7/20
 ANOKA COUNTY ENGINEER

NO	DATE	BY	CKD	APPR	REVISION
NAME: P111-01-00CSAH 1 (CSAH14-SouthStreet)Plan01.dgn					
7:06:58 AM					

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.

PRINT NAME: CHARLES CADENHEAD
 SIGNATURE:
 DATE: 4/7/20 LICENSE NO. 40416

DRAWN BY: KPR DATE: 2/25/11
 DESIGN BY: KPR DATE: 2/25/11
 CHECKED BY: JO DATE: _____

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 CITY PROJECT NO. _____
 COUNTY PROJECT NO. 11-26-01

TITLE SHEET

Sheet 1 of 13 Sheets

CSAH 1		STATEMENT OF ESTIMATED QUANTITIES		
ITEM NO.	ITEM	NOTES	UNIT	TOTAL EST. QUANT.
2021.501	MOBILIZATION		LUMP SUM	1
2104.501	REMOVE CURB AND GUTTER	1	LIN FT	342
2104.503	REMOVE CONCRETE WALK	1	SQ FT	558
2104.505	REMOVE BITUMINOUS PAVEMENT	1	SQ YD	137
2104.509	REMOVE MANHOLES OR CATCH BASINS		EACH	3
2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	1	LIN FT	216
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	1	LIN FT	650
2232.501	MILL BITUMINOUS SURFACE (2.0")	11	SQ YD	12644
2232.604	MILL BITUMINOUS PAVEMENT (SPECIAL)	13	SQ YD	17
2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GAL	632
2360.501	TYPE SP 12.5 WEARING COURSE MIXTURE(4,E)		TON	1454
2360.501	TYPE SP 12.5 WEARING COURSE MIXTURE(4,E)	2	TON	10
2360.502	TYPE SP 12.5 NON-WEARING COURSE MIXTURE(4,B)	3	TON	32
2504.602	ADJUST GATE VALVE		EACH	4
2506.501	CONST DRAINAGE STRUCTURE G	10,12	LIN FT	6
2506.501	CONST DRAINAGE STRUCTURE H	10, 12	LIN FT	2.5
2506.503	RECONSTRUCT DRAINAGE STRUCTURE	4,10,12	LIN FT	8.5
2506.516	CASTING ASSEMBLY		EACH	18
2506.602	GROUT CATCH BASIN OR MANHOLE		EACH	2
2521.501	6" CONCRETE WALK	5	SQ FT	558
2531.501	CONCRETE CURB & GUTTER DESIGN B624		LIN FT	342
2531.618	TRUNCATED DOMES		SQ FT	48
2563.601	TRAFFIC CONTROL	8	LUMP SUM	1
2565.602	NMC LOOP DETECTOR 6'X6'		EACH	11
2573.530	STORM DRAINAGE INLET PROTECTION		EACH	17
2575.523	EROSION CONTROL BLANKET CATEGORY 3	6	SQ YD	92
2581.501	REMOVABLE PREFORMED PLASTIC MARKING	7	LIN FT	824
2582.502	24" STOP LINE WHITE-PAINT	9,14	LIN FT	92
2582.502	4" SOLID LINE WHITE-EPOXY	9	LIN FT	4728
2582.502	4" BROKEN WHITE LINE-EPOXY	9	LIN FT	980
2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY	9	LIN FT	2260
2582.503	CROSSWALK MARKING-PAINT	9,14	SQ FT	594
2582.602	PAVT MSSG (THRU/LT ARROW) PREF THERMOPLASTIC	9	EACH	2
2582.602	PAVT MSSG (LT ARROW) PREF THERMOPLASTIC	9	EACH	2
2582.603	24" WHITE PREF THERMOPLASTIC	9	LIN FT	73
2582.618	3 X 6 ZEBRA CROSSWALK - PREFORMED THERMOPLASTIC	9	SQ FT	414

NOTES:

- REFERENCE STRUCTURE REPAIR TAB.
- ITEM FOR PAVING STREET APPROACHES.
- ITEM FOR PATCHING AROUND M.H., C.B., INFRONT OF NEW CURB, AND DRIVEWAY TIE-IN TO NEW CURB.
- ITEM INCLUDES STORM AND SANITARY M.H.
- ITEM USED FOR PED RAMPS AND SIDEWALK.
- ITEM INCLUDES BLANKET, FERTILIZER, SEED, AND TOPSOIL.
- CENTERLINE YELLOW SKIPS AND LANE MARKING WHITE SKIPS MUST BE APPLIED BEFORE CONTRACTOR LEAVES FOR THE DAY.
- DO NOT PASS, PASS WITH CARE, NO CENTER STRIPE, AND BUMP / BUMP AHEAD SIGNS TO BE INPLACE DURING MILL / OVERLAY OPERATIONS.
- MARKINGS SHALL BE IN PLACE WITH IN 72 HOURS OF FINAL MAINLINE PAVING.
- AGGREGATE BASE CLASS 5 IS INCIDENTAL FOR COMPACTING AROUND CB'S AND MH'S.
- MAINLINE MILLING INCLUDES DETAIL MILLING AROUND MANHOLES, GATE VALVES, AND ALL STRUCTURES IN BIT. PAVEMENT AREA TO BE MILLED.
- ALL MANHOLES MUST BE LOCATED AND PROTECTED AT ALL TIMES DURING MILLING AND PAVING OPERATIONS. CONTRACTORS RESPONSIBILITY.
- ITEM USED FOR MILLING 2' JOINTS ON STREET APPROACHES.
- PAINT SHALL BE LATEX
- FURNISH AND INSTALL

BASIS OF PLANNED QUANTITIES

BITUMINOUS MATERIAL FOR TACK COAT	.05 GAL / SQ YD
TYPE SP 12.5 WEARING COURSE MIXTURE (4, E)	115 LBS / SQ YD / INCH THICKNESS
TYPE SP 12.5 NON-WEARING COURSE MIXTURE (4, B)	115 LBS / SQ YD / INCH THICKNESS
REMOVABLE PREFORMED PLASTIC MARKING	2' AT 50' INTERVALS FOR SKIPS

NO	DATE	BY	CHKD	APPR	REVISION
NAME: P:\11-01-00\CSAH_1 (CSAH14-SouthStreet)\Plan\seq.dgn					
04/08/2011 7:34:24 AM					

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.

PRINT NAME: CHARLES CADENHEAD

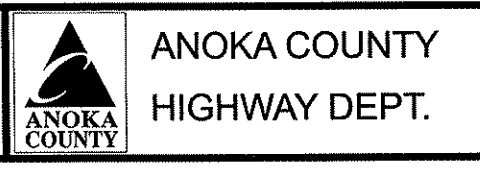
SIGNATURE: *[Signature]*

DATE: 4/7/11 LICENSE NO. 40416

DRAWN BY: KPR DATE: 2/25/11

DESIGN BY: KPR DATE: 2/25/11

CHECKED BY: JO DATE:



STATE PROJECT NO. _____

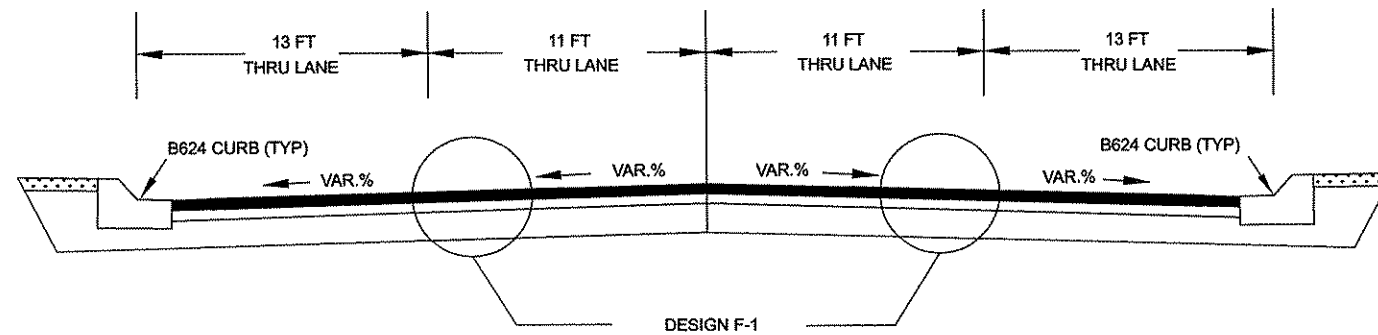
STATE AID PROJECT NO. _____

CITY PROJECT NO. _____

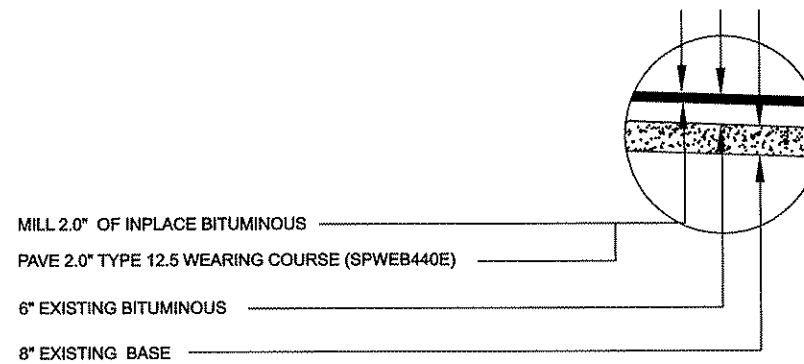
COUNTY PROJECT NO. 11-26-01

TYPICAL SECTION

STA. 10+25 - STA. 35+99



DESIGN F-1



MILL 2.0" OF INPLACE BITUMINOUS
 PAVE 2.0" TYPE 12.5 WEARING COURSE (SPWEB440E)
 6" EXISTING BITUMINOUS
 8" EXISTING BASE

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_1_(CSAH14-SouthStreet)\PlanTyp.dgn 03/18/2011 8:12:51 AM

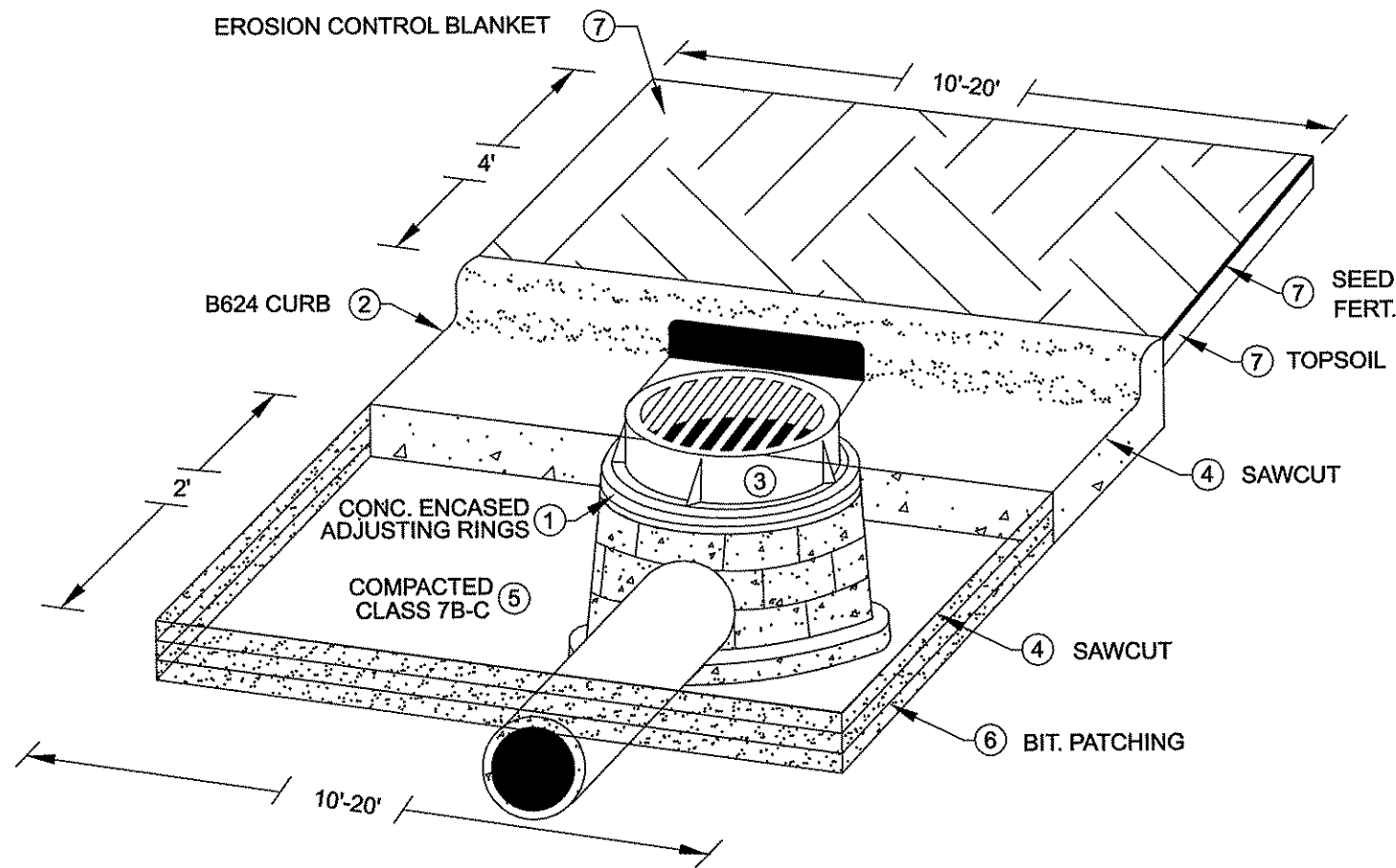
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 PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *[Signature]*
 DATE: 1/7/11 LICENSE NO. 40416

DRAWN BY: KPR DATE: 2/25/11
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 CHECKED BY: JO DATE:



STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 CITY PROJECT NO. _____
 COUNTY PROJECT NO. 11-26-01

C.B. REPAIR DETAIL



NOTES.. FOR TRAFFIC CONTROL AT CATCH BASIN REPAIRS REFER TO THE MINNESOTA MANUAL ON TEMPORARY TRAFFIC CONTROL LAYOUTS FIELD MANUAL. REFER TO MINNESOTA STANDARD PLATES MANUAL FOR THE FOLLOWING...

- ① CONCRETE ENCASED CONCRETE ADJUSTING RINGS STANDARD PLATE 4026A
- ② CONCRETE CURB AND GUTTER DESIGN B STANDARD PLATE 7100G
- ③ INSTALLATION OF CATCH BASIN CASTINGS STANDARD PLATE 7111J
- ④ SAWCUT BIT./CONCRETE BUS PADS/CONCRETE CURB FULL DEPTH.
- ⑤ ADD AND COMPACT CL-5 AROUND REPAIRED STRUCTURE.
- ⑥ REMOVE VAR. DEPTH BITUMINOUS 3"-7" / PATCH 2-LIFTS OF BITUMINOUS.
- ⑦ REPLACE DISPLACED TOPSOIL- SEED, FERT. AND COVER WITH EROS. BLANKET. SEED, FERT. AND TOPSOIL INNCCIDENTAL TO BLANKET.

A.		STRUCTURE REPAIRS																			
STRUCTURE	STATION	LOC.		REMOVE C&G	REMOVE CONCRETE WALK	REMOVE BIT. PAVEMENT	REMOVE DRAINAGE STRUCTURE	SAW CONC.	SAW BIT. PAVEMENT OR BIT. CURB	REPLACE BIT. PAVEMENT	CONSTRUCT DRAIN STR H	CONSTRUCT DRAIN STR G	RECONSTRUCT DRAINAGE STR. (RING HT)	GROUT	FURNISH & INSTALL CASTING	6" CONCRETE WALK	CURB AND GUTTER B624	INLET PROTECTION	EROSION CONT. BLANKET		
				LF	SF	SY	EA	LF	LF	TON	FT	FT	FT	FT	EA	SF	LF	EA	SY		
100	15+93	23	RT	25	130	5.6	1	18	29	1.3		3.5			1	130	25	1			
101	16+07	36	RT																1		
102	16+39	36	RT																1		
103	17+85	23	LT	8	16	1.8	1	18	12	0.5		2.5			1	16	8	1			
104	17+95	23	RT	15	60	3.3		18	19	0.8			0.5		1	60	15	1			
105	18+38	23	LT	30	50	6.7	1	18	34	1.5	2.5				1	50	30	1			
106	19+37	37	RT																1		
107	19+69	37	RT																1		
108	19+83	23	RT	30				6	34	1.5			0.2		1		30	1	20		
109	22+67	42	RT			6.7													1		
110	22+76	21	RT											1					1		
111	23+02	40	RT																1		
112	25+83	23	RT	12		2.7		6	16	0.6			0.2		1		12	1	24		
113	26+46	23	RT	12		2.7		6	16	0.6			0.8		1		12	1	24		
114	28+47	23	LT	13		2.9		18	17	0.7			0.6		1		13	1	24		
115	35+57	23	RT	11	66	2.4		18	15	0.6			0.6		1	66	11	1			
116	35+59	23	LT	14	84	3.1		18	18	0.7			0.2		1	84	14	1			
200	13+45	23	RT																		
201	16+25	24	RT																		
202	19+55	24	RT																		
203	23+58	CL	LT			7.1			32	1.6			0.8		1						
204	26+18	CL	LT			7.1			32	1.6			0.8		1						
205	29+48	CL	LT			7.1			32	1.6			0.4		1						
206	31+92	CL	LT			7.1			32	1.6			1.0		1						
207	32+76	CL	LT			7.1			32	1.6			0.4		1						
1	16+37	19	RT		80	11.1		18	40	2.5			1.2		1	80					
2	16+47	21	LT		72			18								72					
3	17+87	18	RT			7.1			32	1.6			0.6		1						
4	19+46	19	RT			7.1			32	1.6			0.2		1						
5	19+52	20	LT																		
6	35+96	33	LT											1							
TOTALS				170	558	99	3	180	474	23	2.5	6.0	8.5	2	18	558	170	17	92		

B.		SCHEDULE OF CASTING				
ASSEMBLY	FRAME	COVER	CURB BOX	PLATE	QTY.	REMARKS
A-7	700-7			4101	8	USE NEENAH R-1733
		716		4110		
	806			4125		
B-17		816		4154	10	USE NEENAH R-3250 DVSPCB
			825	4134		

- NOTES:
- 1 R-1733, R-3250 DVSPCB DENOTE NEENAH CASTING ASSEMBLIES OR APPROVED EQUALS.
 - 2 ALL CASTING TYPES AND CASTING HIEGHTS ARE TO BE VERIFIED AND DETERMINED IN THE FIELD.
 - 3 ALL MANHOLE CASTINGS NEED TO HAVE "SANITARY SEWER" OR "STORM" STAMPED ON THEM.
 - 4 CONCRETE ENCASED CONCRETE ADJUSTING RINGS STANDARD PLATE 4026A.

NOTE: NOT TO SCALE

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_1 (CSAH14-SouthStreet)\Plan\dm.dgn 04/06/2011 7:29:04 AM

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.
 PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *[Signature]*
 DATE: 4/7/11 LICENSE NO. 46116

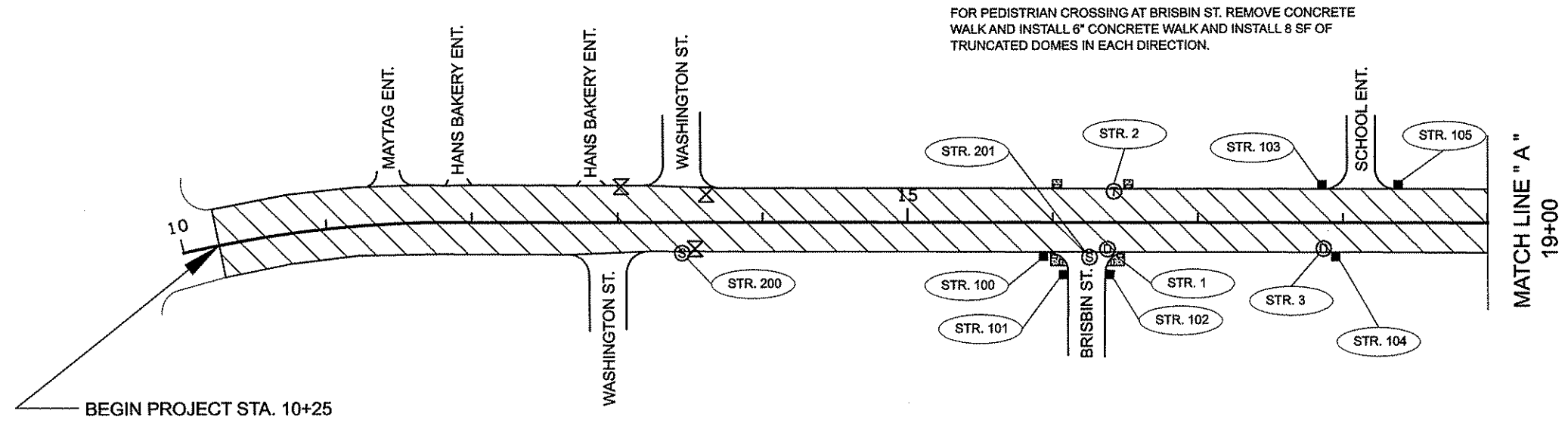
DRAWN BY: KPR DATE: 2/25/11
 DESIGN BY: KPR DATE: 2/25/11
 CHECKED BY: JO DATE: _____





ANOKA COUNTY
HIGHWAY DEPT.


STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 CITY PROJECT NO. _____
 COUNTY PROJECT NO. 11-26-01


DETAILS
 Sheet 4 of 13 Sheets





RECLAIM AREA 


DRIVEWAYS AND APPROACHES 


BITUMINOUS REMOVAL FOR CURB REPLACEMENT 


MILL JOINT LOCATION 

STORM SEWER MANHOLE 

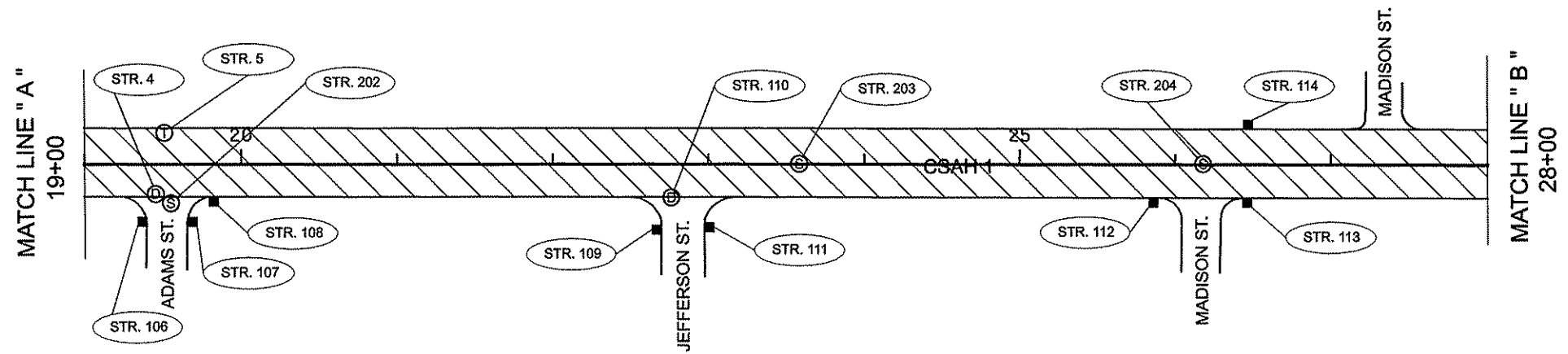
SANITARY SEWER MANHOLE 

TELEPHONE MANHOLE 

GATE VALVE 

CATCH BASIN 

*NOTE: ALL MILL JOINT LOCATIONS AND MILL AREAS, ARE TO BE FIELD VERIFIED BY ON SITE INSPECTOR



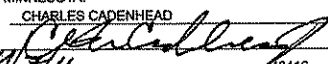
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NO	DATE	BY	CKD	APPR	REVISION

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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.

PRINT NAME: CHARLES CADENHEAD

SIGNATURE: 

DATE: 2/25/11 LICENSE NO. 40416

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ANOKA COUNTY
HIGHWAY DEPT.



STATE PROJECT NO. _____

STATE AID PROJECT NO. _____

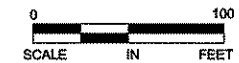
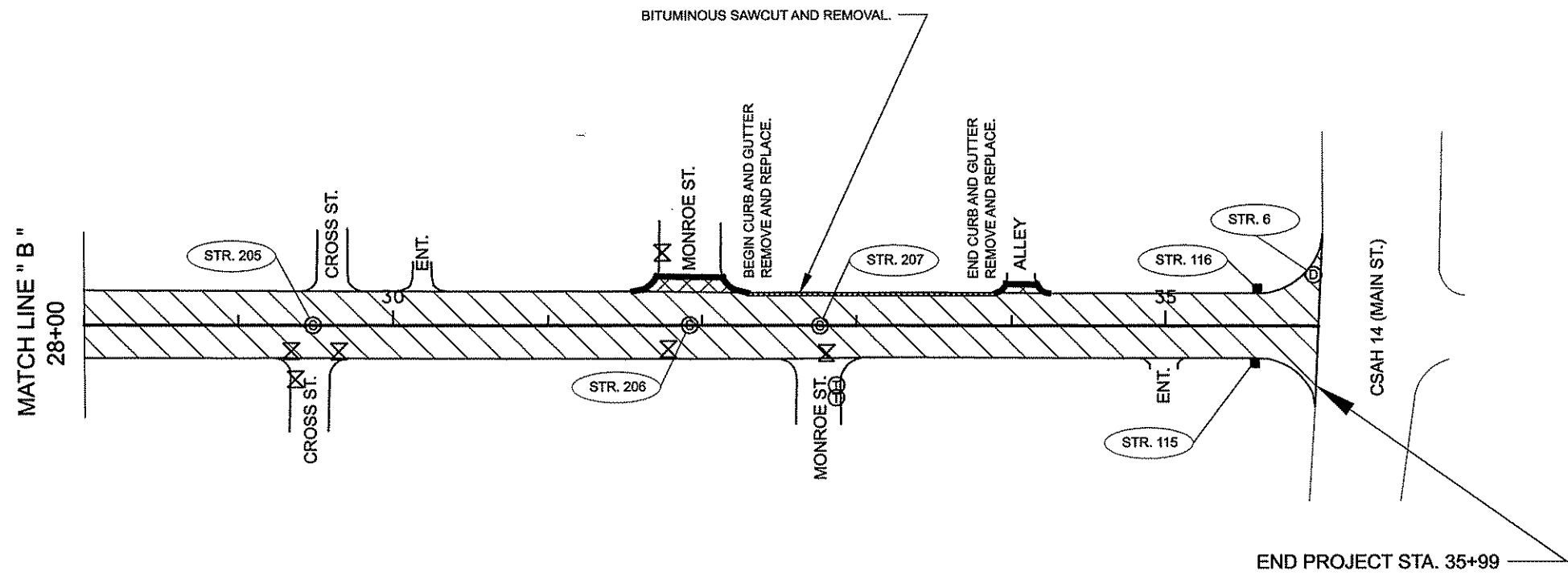
CITY PROJECT NO. _____

COUNTY PROJECT NO. 11-26-01

CONSTRUCTION PLAN

STA 10+25 TO 28+00

Sheet 5 of 13 Sheets



RECLAIM AREA	
DRIVEWAYS AND APPROACHES	
BITUMINOUS REMOVAL FOR CURB REPLACEMENT	
MILL JOINT LOCATION	
STORM SEWER MANHOLE	
SANITARY SEWER MANHOLE	
TELEPHONE MANHOLE	
GATE VALVE	
CATCH BASIN	

*NOTE: ALL MILL JOINT LOCATIONS AND MILL AREAS, ARE TO BE FIELD VERIFIED BY ON SITE INSPECTOR

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:111-01-00\CSAH_1_(CSAH14-SouthStreet)\Plan\plan.dgn 03/18/2011 8:16:59 AM

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.

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DATE: 4/7/11 LICENSE NO. 40416

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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

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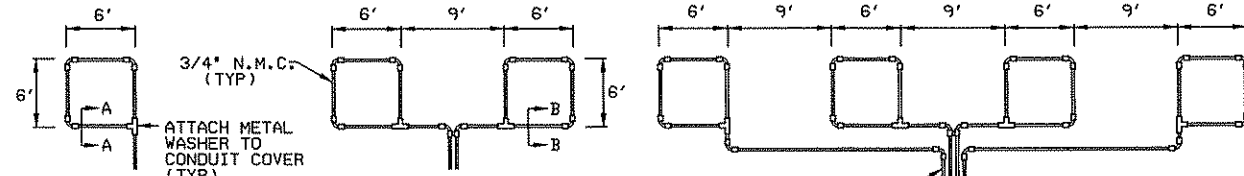
COUNTY PROJECT NO. 11-26-01

CONSTRUCTION PLAN

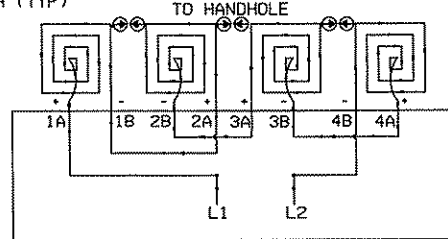
STA 28+00 TO 35+99

Sheet 6 of 13 Sheets

ANOKA COUNTY SIGNAL LOOP DETAIL



LOOP RETURN CONDUITS
MAY BE PLACED IN COMMON
TRENCH (TYP)



**LOOP DETECTOR
DETAIL 'A'**
(LOOP PHASING FOR
SINGLE CONNECTION)

LOOP CONNECTIONS SHALL BE
LABELED AND SPLICED IN THE
HANDHOLE AS FOLLOWS:

L1 TO 1A
1B TO 2A
2B TO L2

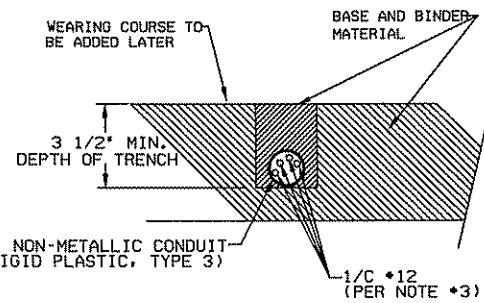
**LOOP DETECTOR
DETAIL 'B'**
(LOOP PHASING FOR
SERIES CONNECTION)

LOOP CONNECTIONS SHALL BE LABELED AND SPLICED
IN THE HANDHOLE AS FOLLOWS:

L1 TO 1A 3B TO 4A
1B TO 2A 4B TO L2
2B TO 3A

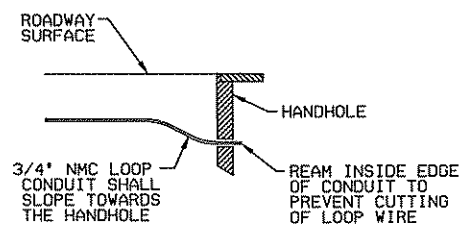
SPLICE CONTROL CABLE TO L1 & L2 IN HANDHOLE.
ALL CONDUCTORS SHALL BE TAGGED IN HANDHOLE
(1A, 1B, ECT)

**LOOP DETECTOR
DETAIL 'C'**
(LOOP PHASING FOR
SERIES CONNECTION)

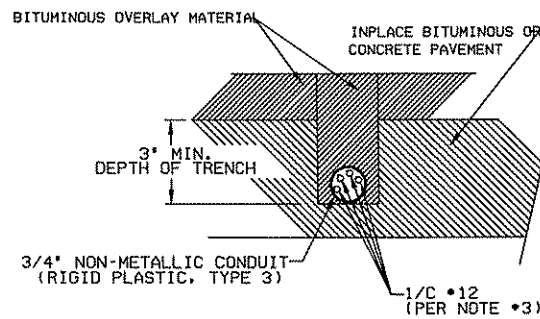


SECTION A-A

DETAIL FOR LOOP INSTALLATION
IN NEW ROADWAY



DRAINAGE DETAIL



SECTION B-B

DETAIL FOR LOOP INSTALLATION
IN EXISTING ROADWAY

LOOP DETECTOR WIRING

- 1) ALL CORNERS SHALL BE 90° CONDUIT BENDS.
- 2) CONNECT WIRES IN HANDHOLES USING SPLICE KIT METHOD DESCRIBED IN THE SPECIAL PROVISIONS.
- 3) LOOP DETECTOR WIRES SHALL BE #12 AWG CROSSED LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.
- 4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER FOOT THROUGH THE CONDUIT TO THE HANDHOLE.
- 5) NMC DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
- 6) LOOPS 6' X 6' THRU 6' X 14' SHALL HAVE (4) TURNS.
- 7) LOOPS 6' X 15' AND LARGER SHALL HAVE (2) TURNS.

ABBREVIATIONS

3-1(EG)	SIGNAL HEAD PHASE '3' - NO. '1'	P2-1(EG)	PED INDICATION PHASE '2' - NO. '1'
BR, GR.	BARE GROUND	P3	PUSH BUTTON
CH. SW.	CHECK SWITCH	P2-1(EG)	PUSH BUTTON PHASE '2' - NO. '1'
CLR	CLEAR	PEC	PHOTOELECTRIC CELL
P2-1(EG)	DETECTOR PHASE '2' - NO. '1'	PED	PEDESTRIAN
DWK	DON'T WALK	R	RED
EQG	EQUIPMENT GROUND	R&S	REMOVE AND SALVAGE
EVP	EMERGENCY VEHICLE PRE-EMPTION	RLTA	RED LEFT TURN ARROW
F&I	FURNISH AND INSTALL	RRTA	RED RIGHT TURN ARROW
FL	FLASH/FLASHING	RSC	RIGID STEEL CONDUIT
G	GREEN	SOP	SOURCE OF POWER
GLTA	GREEN LEFT TURN ARROW	SPR	SPARE
GRN	GREEN	ST. LHT	STREET LIGHT
GR. R	GROUND ROD	STA	STATION
GRTA	GREEN RIGHT TURN ARROW	SW	SWITCH
GTHA	GREEN THRU ARROW	SWD	SWITCHED
HH	HANDHOLE	S&R	SALVAGE AND REINSTALL
HPS	HIGH PRESSURE SODIUM	T&W	TELEPHONE DROP WIRE
JB	JUNCTION BOX	VEL	WALK
LUM	LUMINAIRE	YEL	YELLOW
NEU	NEUTRAL	YLTA	YELLOW LEFT TURN ARROW
NMC	NONMETALLIC CONDUIT	YRTA	YELLOW RIGHT TURN ARROW
		YTHA	YELLOW THRU ARROW

LEGEND OF SYMBOLS

CONTROLLER AND SERVICE EQUIP. NO'S	⊗
SIGNAL BASE NO.	⊙
SIGNAL FACE NO.	⊚
LUMINAIRE NO.	⊛
CONTROLLER AND CABINET	⊜
CONTROLLER AND CABINET - IN PLACE	⊝
HANDHOLE	⊞
HANDHOLE - IN PLACE	⊟
RIGID STEEL CONDUIT (RSC)	⊠
RIGID STEEL CONDUIT (RSC) - IN PLACE	⊡
SIGNAL FACE WITH BACKGROUND SHIELD	⊢
SIGNAL FACE W/O BACKGROUND SHIELD	⊣
SIGNAL FACE - IN PLACE	⊤
PEDESTRIAN INDICATORS	⊥
PEDESTRIAN INDICATORS - IN PLACE	⊦
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	⊧
PEDESTRIAN PUSH BUTTON STATION	⊨
TRAFFIC SIGNAL PEDESTAL	⊩
TRAFFIC SIGNAL PEDESTAL - INPLACE	⊪
TRAFFIC SIGNAL POLE AND MAST ARM	⊫
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	⊬
STREET LIGHT POLE AND LUMINAIRE	⊭
STREET LIGHT POLE AND LUMINAIRE - IN PLACE	⊮
MAST ARM AND LUMINAIRE	⊯
MAST ARM AND LUMINAIRE - INPLACE	⊰
WOOD POLE	⊱
WOOD POLE - IN PLACE	⊲
SOURCE OF POWER	⊳
RAILROAD SIGNAL - IN PLACE	⊴
RIGHT OF WAY LINE	⊵
CENTERLINE	⊶
EDGE OF ROADWAY	⊷
SHOULDERLINE	⊸
CURB LINE	⊹
STOP BAR	⊺
EMERGENCY VEHICLE PREEMPTION DETECTOR	⊻

STANDARD PLATES

THESE STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:

PLATE NO.	DESCRIPTION
7035 L	CONCRETE WALK AND CURB RETURNS AT ENTRANCES
7036 E	PEDESTRIAN CURB RAMP
7100 G	CONCRETE CURB AND GUTTER (DESIGN B)
8110 D	TRAFFIC SIGNAL BRACKETING - POLE MOUNTED
8111 C	TRAFFIC SIGNAL BRACKETING - PEDESTAL MOUNTED
8112 C	PEDESTAL FOUNDATION
8114 A	PVC HANDHOLE/PULLBOX
8115 D	PEDESTRIAN PUSH BUTTON INSTALLATION
8118 C	SERVICE EQUIPMENT AND POLE-TRAFFIC CONTROL SIGNALS
8119 C	GROUND MOUNTED CABINET FOUNDATION
8120 K	P&S POLE FOUNDATION
8121 D	TRANSFORMER BASE AND POLE BASE PLATE
8122 C	PEDESTAL AND PEDESTAL BASE
8123 E	POLE AND MAST ARM
8124 E	MAST ARM SIGNAL HEAD MOUNTS
8126 F	PA90 AND PA100 POLE FOUNDATION

CONDUCTOR COLOR CODE

R	RED
O	ORANGE
BL	BLUE
WH	WHITE
R/BLK	RED WITH BLACK TRACER
O/BLK	ORANGE WITH BLACK TRACER
BL/BLK	BLUE WITH BLACK TRACER
WH/BLK	WHITE WITH BLACK TRACER
BLK	BLACK
BLK/WH	BLACK WITH WHITE TRACER
G/BLK	GREEN WITH BLACK TRACER
G	GREEN

NOTE: NOT TO SCALE

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\11-01-00\CSAH_1_(CSAH14-SouthStreet)\Plan\loopdet.dgn					
03/18/2011 8:15:02 AM					

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.
 PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *[Signature]*
 DATE: 4/27/11 LICENSE NO. 40416

DRAWN BY: KPR DATE: 2/25/11
 DESIGN BY: KPR DATE: 2/25/11
 CHECKED BY: JO DATE:

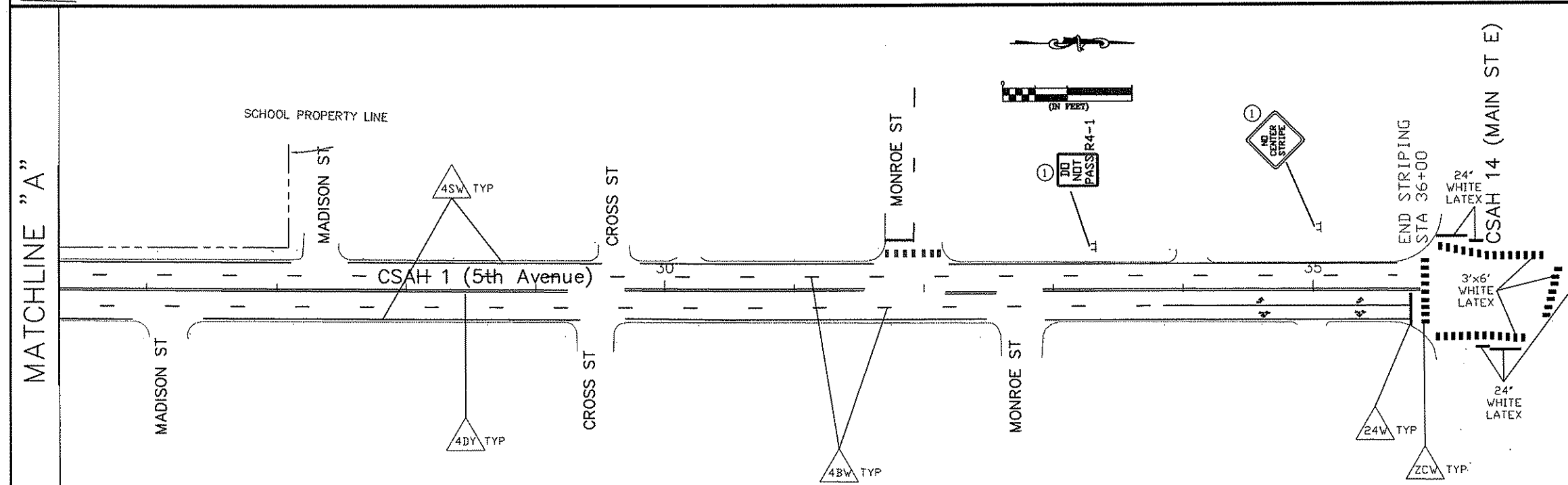
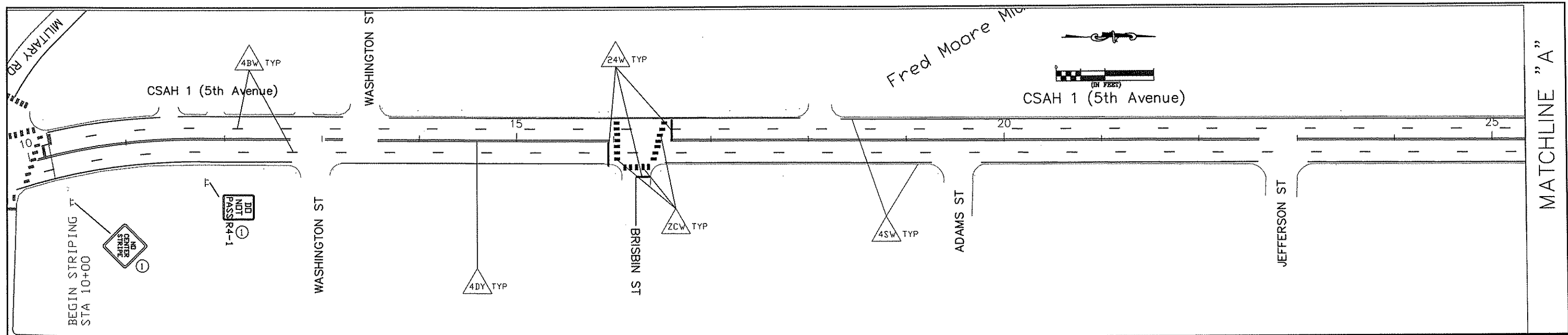


**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 CITY PROJECT NO. _____
 COUNTY PROJECT NO. 11-26-01

SIGNAL LOOP DETAIL

Sheet 7 of 13 Sheets



TEMPORARY TRAFFIC CONTROL SIGNS						
M. U. T. C. D. CODE	SIZE	PANEL AREA FT. ²	INSERT	QUANTITY	No. POST	MOUNTING HEIGHT (TO CENTER OF PANEL) FT.
WB-12	48" x 48"	16.00		2	2	7.0'
R4-1	24" x 30"	5.00		2	1	7.0'
R4-2	24" x 30"	5.00		0	1	7.0'
WB-1A	48" x 48"	16.00		AS NEEDED		
WB-1A	48" x 48"	16.00		AS NEEDED		
WB-8	48" x 48"	16.00		AS NEEDED		
WB-11	48" x 48"	16.00		AS NEEDED		

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.

Item	Quantity	Units
4" Double Yellow Striping	2260	Lin Ft
4" Solid Yellow Striping	0	Lin Ft
4" Broken Yellow Striping	0	Lin Ft
4" Solid White Striping	4728	Lin Ft
4" Broken White Striping	980	Lin Ft
24" Yellow Thermoplastic	0	Lin Ft
24" White Thermoplastic	73	Lin Ft
3'x6' Zebra Crosswalk Thermoplastic	414	SQ FT
Right Turn Arrow Thermoplastic	0	Each
Left Turn Arrow Thermoplastic	2	Each
Thru/Right Turn Arrow Thermoplastic	2	Each
Thru Arrow Thermoplastic	0	Each

	4" SOLID LINE DOUBLE YELLOW PAINT		PAVEMENT MESSAGE RIGHT
	4" SOLID LINE YELLOW PAINT		PAVEMENT MESSAGE LEFT
	4" BROKEN LINE YELLOW PAINT		PAVEMENT MESSAGE THRU/RIGHT
	4" SOLID LINE WHITE PAINT		PAVEMENT MESSAGE THRU
	4" BROKEN LINE WHITE PAINT	<u>SEE SPECIAL PROVISIONS</u>	
	24" YELLOW PERMANENT PAVEMENT MESSAGE		TEMPORARY TRAFFIC CONTROL SIGN
	24" WHITE PERMANENT PAVEMENT MESSAGE		F & I PERMANENT SIGN
	3' x 6' ZEBRA CROSSWALK		SALVAGE PERMANENT SIGN
			RE-INSTALL PERMANENT SIGN

NO	DATE	BY	CKD	APPR	REVISION

NAME: H:\Traffic\2006\CSAH 1\11-26-01.dwg

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.

PRINT NAME: CHARLES CADENHEAD
 SIGNATURE:
 DATE: 2/8/11 LICENSE NO.: 40416

DRAWN BY: MTH DATE: 2/01/11
 DESIGN BY: MTH DATE: 2/01/11
 CHECKED BY: JR DATE: 3/01/11

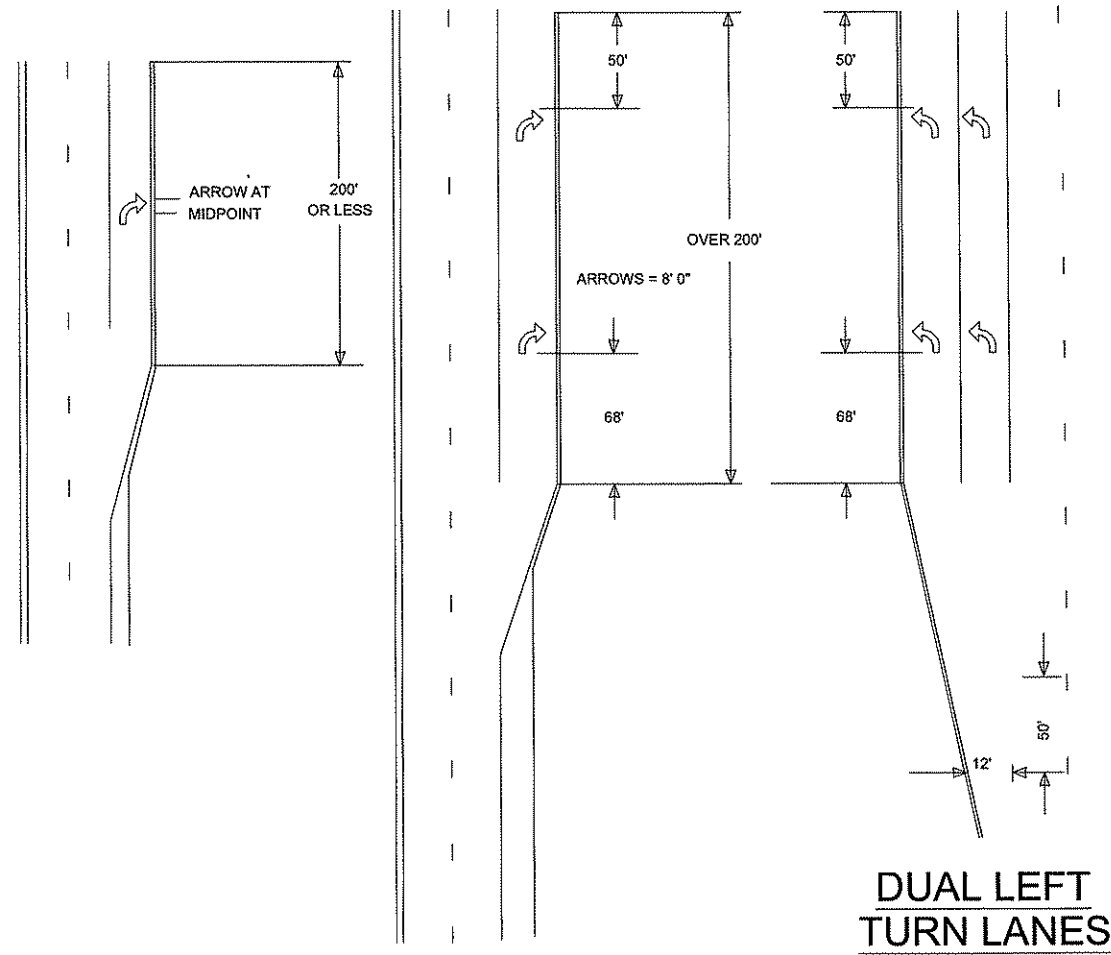
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 CITY PROJECT NO. _____
 COUNTY PROJECT NO. 11-26-01

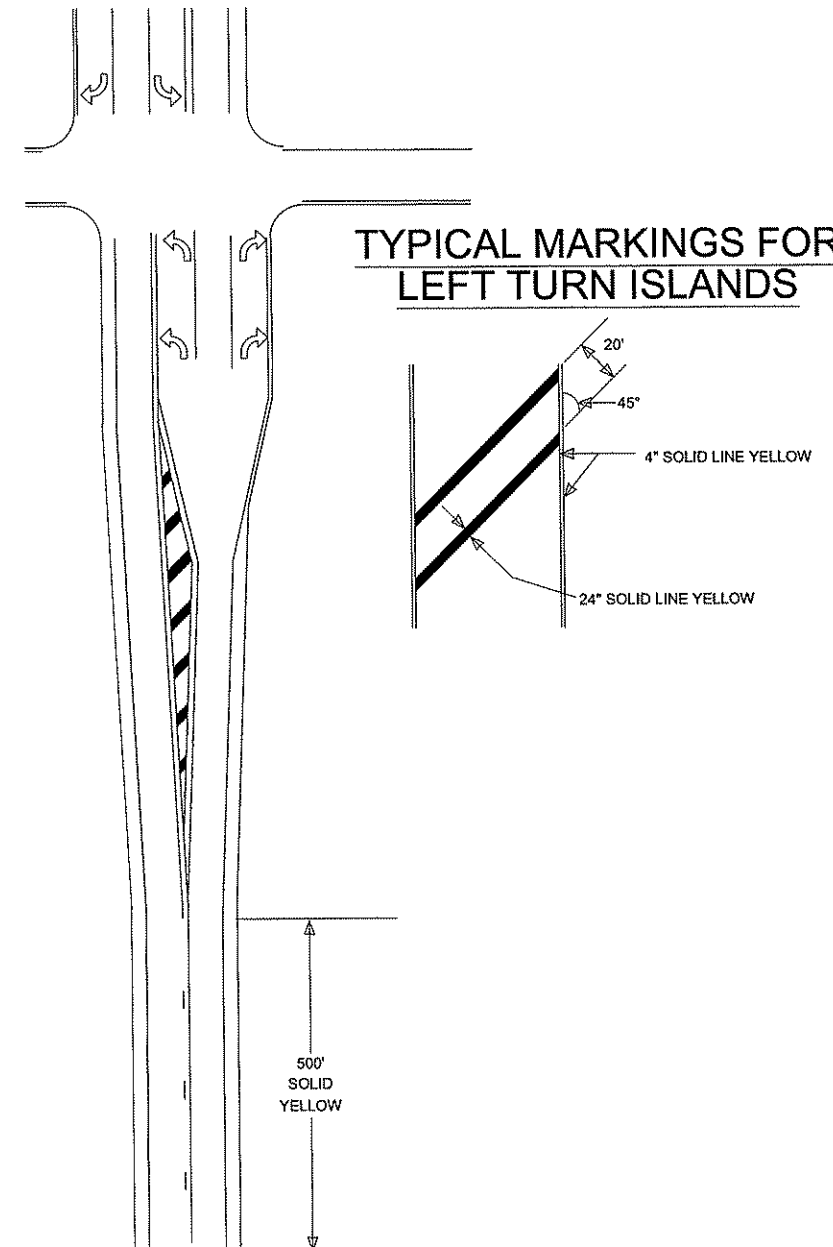
CSAH 1 (5th Avenue)
 TEMPORARY SIGNING
 PERMANENT STRIPING
 AND PAVEMENT MESSAGES

Sheet 8 of 13 Sheets

**TYPICAL MESSAGE PLACEMENT
FOR TURN LANES**



**TYPICAL MARKINGS FOR
LEFT TURN ISLANDS**



NO	DATE	BY	CHKD	APPR	REVISION

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.

PRINT NAME: CHARLES CADENHEAD

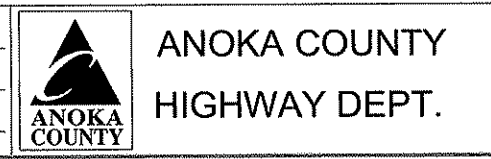
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DATE: 1/21/11 LICENSE NO. 40416

DRAWN BY: MTH DATE: 1-21-11

DESIGN BY: #ZZB DATE: 8-13-08

CHECKED BY: JR DATE: 1-21-11



STATE PROJECT NO. _____

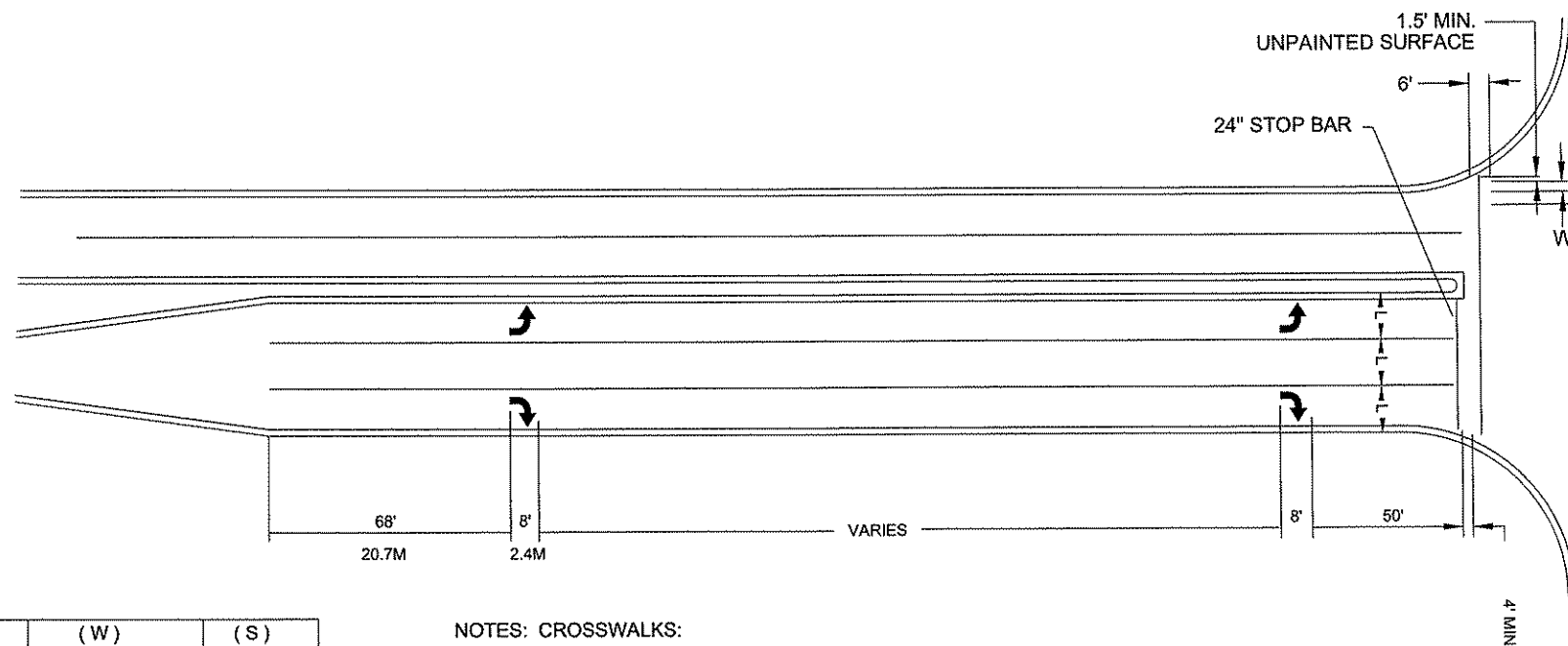
STATE PROJECT NO. _____

STATE PROJECT NO. _____

COUNTY PROJECT NO. 11-26-01

NAME: T:\Traffic\Dwg\CSAH 1\Sign&Stripe_Details.dwg

MARKINGS FOR PEDESTRIAN CROSSWALKS



(L)	(W)	(S)
WIDTH OF INSIDE LANE	WIDTH OF PAINTED AREAS	WIDTH OF SPACE
9'	2.0'	2.5'
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13'	3.0'	3.5'

NOTES: CROSSWALKS:

- 1.) PAINTED AREAS ARE TO BE CENTERED ON CENTER AND LANE LINES, EVEN IF INTERSECTION IS NOT ALIGNED.
- 2.) LOCATION OF ZEBRA CROSSWALKS AND STOP BARS, SIGNAL LOOPS AND PED RAMPS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE DETERMINED AND FIELD VERIFIED DURING CONSTRUCTION BY THE FIELD ENGR.
- 3.) ZEBRA CROSSWALKS ARE TO BE PARALLEL TO THE DRIVING LANE OR LANES, EVEN IF THE STREET IS ON AN ANGLE TO THE INTERSECTION.
- 4.) A MIN. OF 1.5' (450mm) CLEAR DISTANCE MUST BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS AREA, IT MUST BE OMITTED.
- 5.) ON TWO LANE STREETS, USE SPACING SHOWN FOR AN 11' (3.3m) NSIDE LANE.

NOTES & GUIDELINES

GENERAL INFORMATION:

THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. THE CONTRACTOR WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING AND TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS. LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.

EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.

A TOLERANCE OF 1/4 INCH UNDER OR 1/4 INCH OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO ONE-HALF FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS. ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.

EPOXY:

THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. NEW PORTLAND CEMENT CONCRETE SURFACES SHALL BE SANDBLAST CLEANED TO REMOVE ANY SURFACE TREATMENTS AND/OR LAITANCE. ON LOW SPEED (SPEED LIMIT 35 OR LESS) URBAN PORTLAND CEMENT CONCRETE ROADWAYS, SANDBLAST CLEANING SHALL BE USED FOR ALL EPOXY PAVEMENT MARKINGS.

THE EPOXY MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE EPOXY RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

AN EPOXY RESIN LINE 4" WIDE AND 15 MILL THICKNESS (WET), REQUIRES AN APPLICATION RATE OF ONE (1) GALLON OF COMPONENTS FOR 320 FEET OF LINE. GLASS BEADS SHALL BE APPLIED AT A POUND PER GALLON RATE SUFFICIENT TO ACHIEVE AN ACCEPTABLE NO-TRACK SYSTEM.

OPERATIONS SHALL BE CONDUCTED ONLY WHEN THE ROAD PAVEMENT SURFACE TEMPERATURES ARE 50 DEGREES F° OR GREATER.

PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.

PAINT:

AT THE TIME OF APPLYING THE MARKING MATERIAL, THE APPLICATION AREA SHALL BE FREE OF CONTAMINATION. THE CONTRACTOR SHALL CLEAN THE ROADWAY SURFACE PRIOR TO THE LINE APPLICATION IN A MANNER AND TO THE EXTENT REQUIRED BY THE ENGINEER.

GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE PAINT LINE.

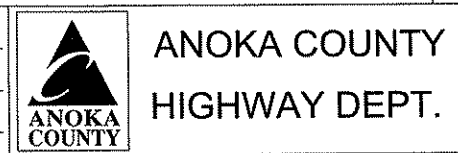
EXCEPT WHEN USED AS A TEMPORARY MARKING, PAVEMENT MARKINGS SHALL ONLY BE APPLIED IN SEASONABLE WEATHER WHEN AIR TEMPERATURE IS 50°F OR HIGHER AND SHALL NOT BE APPLIED WHEN THE WIND OR OTHER CONDITIONS CAUSE A FILM OF DUST TO BE DEPOSITED ON THE PAVEMENT SURFACE AFTER CLEANING AND BEFORE THE MARKING MATERIAL CAN BE APPLIED.

THE FILLING OF TANKS, POURING OF MATERIALS OR CLEANING OF EQUIPMENT SHALL NOT BE PERFORMED ON UNPROTECTED PAVEMENT SURFACES UNLESS ADEQUATE PROVISIONS ARE MADE TO PREVENT SPILLAGE OF MATERIAL.

NO	DATE	BY	CHKD	APPR	REVISION

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 DESIGN BY #ZZB DATE 8-13-08
 CHECKED BY JR DATE 1-21-11



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 STATE PROJECT NO. _____
 COUNTY PROJECT NO. 11-26-01

SIGNING & STRIPING DETAILS
 Sheet 10 of 13 Sheets

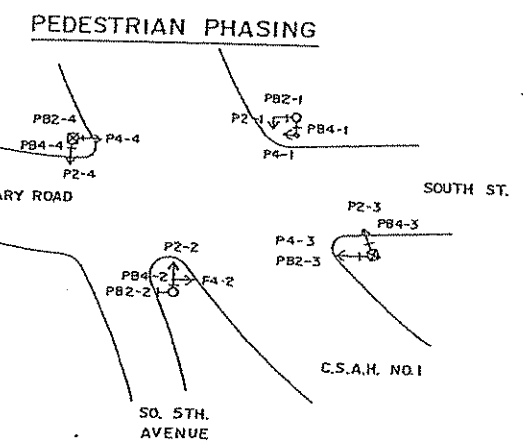
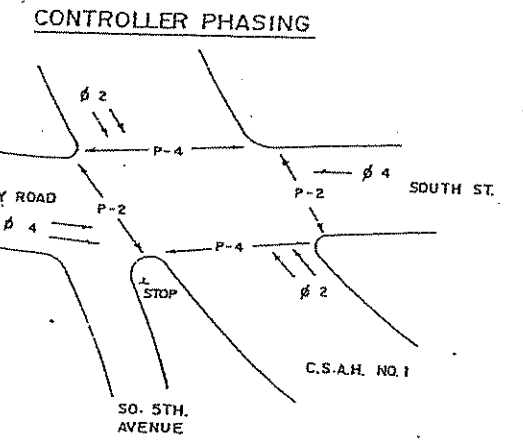
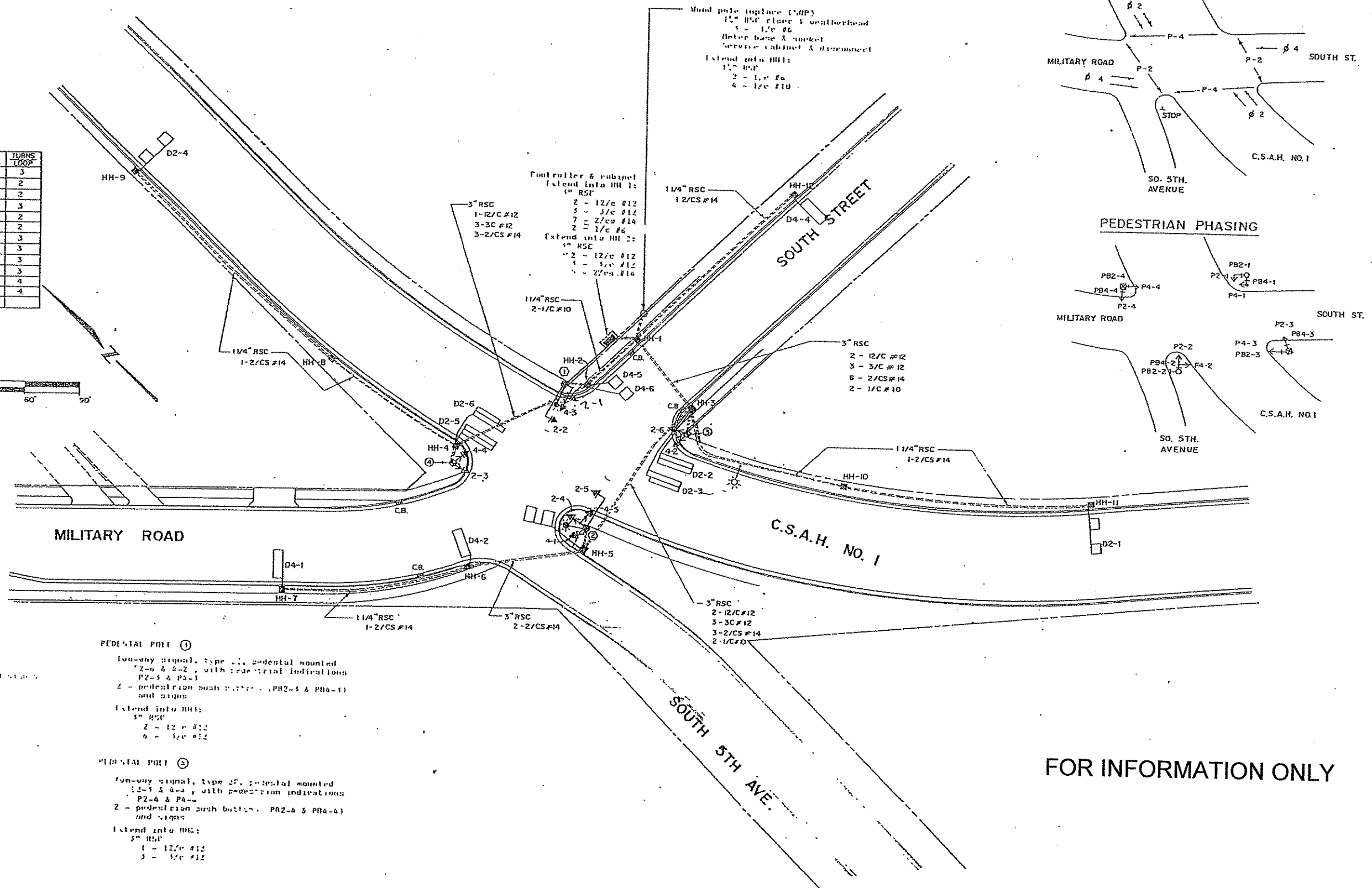
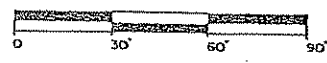
SIGNAL INDICATIONS

FACE	PHASE	FLASH	INDICATION				SIZE	
			R	Y	G	W	DW	
Z-1	Z	R	12	12	12			
Z-2	Z	R	12	12	12			
Z-3	Z	A	12	12	12			
Z-4	Z	A	12	12	12			
Z-5	Z	R	12	12	12			
Z-6	Z	R	12	12	12			
4-1	4	R	12	12	12			
4-2	4	R	12	12	12			
4-3	4	R	12	12	12			
4-4	4	R	12	12	12			
4-5	4	R	12	12	12			
P2-1	2	OFF				12	12	
P2-2	2	OFF				12	12	
P2-3	2	OFF				12	12	
P2-4	2	OFF				12	12	
P4-1	4	OFF				12	12	
P4-2	4	OFF				12	12	
P4-3	4	OFF				12	12	
P4-4	4	OFF				12	12	

LOOP DETECTORS

NUMBER	SIZE	FUNCTION	DIST. FROM STOPLINE	LOOP DETAIL	TURNS LOOP
D2-1	2-6x6	CALL & EXTEND	250	B	3
D2-2	6x20	CALL ONLY	-0-	C	2
D2-3	6x20	CALL ONLY	5	D	2
D2-4	2-6x6	CALL & EXTEND	250	B	3
D2-5	6x20	CALL ONLY	-0-	C	2
D2-6	6x20	CALL ONLY	5	D	2
D4-1	16x6	CALL & EXTEND	150	A	3
D4-2	16x6	DELAY CALL	40	A	3
D4-3	2-6x6	DELAY CALL	-0-	B	3
D4-4	16x6	CALL & EXTEND	150	A	3
D4-5	6x6	DELAY CALL	5	A	4
D4-6	6x6	CALL	-0-	A	4

1 MEASURED FROM FRONT EDGE OF DETECTOR
2 DELAY DETECTOR



FOR INFORMATION ONLY

TYPE ABB POLE (1)
Type A-20-D10-1L
One-way signal, overhead - 20' (2-2)
Z - one-way signal, type 10-B, pole mounted
& 270° with pedestrian indications (P2-1 & P4-1)
Z - pedestrian push buttons (PB 2-1 & PB 4-1) and signs
250' high - 10' diameter - 10' diameter
mounted - 350'

Extend into HH 1:
1 - 12/c #12
2 - 3/c #12
3 - 1/c #10

TYPE ABB POLE (2)
Type A-20-D10-1L
One-way signal, overhead - 20' (2-2)
Z - one-way signal, type 10-B, pole mounted
& 270° with pedestrian indications (P2-2 & P4-2)
Z - pedestrian push buttons (PB 2-2 & PB 4-2) and signs
250' high - 10' diameter - 10' diameter
mounted - 350'

Extend into HH 2:
1 - 12/c #12
2 - 3/c #12
3 - 1/c #10

PEDESTAL POLE (1)
One-way signal, type 10-B, pedestal mounted
(2-2 & 4-2) with pedestrian indications
(P2-2 & P4-2)
Z - pedestrian push buttons (PB2-2 & PB4-2)
and signs
Extend into HH 1:
1 - 12/c #12
2 - 3/c #12
3 - 1/c #10

PEDESTAL POLE (2)
One-way signal, type 10-B, pedestal mounted
(2-3 & 4-3) with pedestrian indications
(P2-3 & P4-3)
Z - pedestrian push buttons (PB2-3 & PB4-3)
and signs
Extend into HH 2:
1 - 12/c #12
2 - 3/c #12
3 - 1/c #10

7024

Fed. Project No. 7024

NOTES:

- 1) LOCATION OF CONTROLLER CABINET, SERVICE CABINET, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD, EXCEPT FOR SIGNAL FACE (B-2).
- 3) EACH PEDESTRIAN INDICATION SHALL BE 12"x12".
- 4) EACH SIGNAL FACE SHALL BE 12"-3 SECTION R-Y-G.
- 5) SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- 6) SEE SPECIAL PROVISIONS AND DETAILS FOR ANOKA COUNTY SERVICE CABINET INFORMATION.
- 7) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
- 8) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 1" N.M.C. SEE SPECIAL PROVISIONS AND DETAILS.
- 9) EACH HANDHOLE SHALL BE CONCRETE HANDHOLE WITH A TYPE "LD" COVER, EXCEPT THAT HANDHOLES 7, 8 AND 11 SHALL HAVE TYPE "C" COVER, PER Mn/DOT STANDARD PLATE NO. B117F.

4) TYPE P80-A-20
P80 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 20B-POLE MOUNTED 270"
1-PEDESTRIAN PUSH BUTTON
TYPE "D" SIGN PANEL (78"x18")-OVERHEAD
EXTEND INTO H.H.2
3"R.S.C.
2-12/c#12
1-3/c#12

1) TYPE 1C
10' PEDESTAL POLE AND BASE
PEDESTAL FOUNDATION
1-PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H.1:
2"R.S.C.
1-12/c#12
1-3/c#12

- 10) SEE SPECIAL PROVISIONS AND DETAILS REGARDING TYPE "D" SIGN PANELS TO BE FURNISHED AND INSTALLED BY CONTRACTOR (INCIDENTAL TO ITEM NO. 2565.511)
- 11) SEE SPECIAL PROVISIONS REGARDING ITEMS OF INPLACE PEDESTRIAN FLASHER SYSTEM TO BE REMOVED AND SALVAGED BY CONTRACTOR (INCIDENTAL TO ITEM NO. 2565.511).

A) INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)
CABINET FOUNDATION
EXTEND INTO H.H.11:
METERED SIGNAL SERVICE
1 1/4"R.S.C.
3-1/c#6
EXTEND INTO H.H.1:
4"R.S.C.
3-12/c#12
3-3/c#12
2-2/c#14
EXTEND INTO H.H.1:
4"R.S.C.
3-12/c#12
2-3/c#12
1-2/c#14
STUB OUT 3"R.S.C. AND 'CAP (FOR FUTURE USE)

B) SERVICE CABINET
CABINET FOUNDATION
EXTEND INTO H.H.12:
2"R.S.C.
3-1/c#6 SOLID COPPER CABLE
EXTEND INTO H.H.11:
METERED SIGNAL SERVICE
1 1/4"R.S.C.
3-1/c#6
EXTEND INTO H.H.1:
UNMETERED STREET LIGHT SERVICE
1 1/4"R.S.C.
2-1/c#10
BETWEEN H.H.12 AND INPLACE WOOD POLE:
2"R.S.C. RISER AND WEATHERHEAD
3-1/c#6 SOLID COPPER CABLE

- FUNCTIONS:
- 1) CALL AND EXTEND
 - 2) CALL ONLY
 - 3) EXTEND ONLY
 - 4) CALL ONLY DENSITY
 - 5) DELAYED CALL ONLY
 - 6) DELAYED CALL ONLY DENSITY
 - 7) DELAYED CALL-IMMEDIATE EXTEND
 - 8) CARRY OVER (STRETCH)
 - 9) ADVISORY DETECTOR
 - 10) SAMPLING DETECTOR
 - 11) SPECIAL DETECTOR

LOOP DETECTORS			
NUMBER	SIZE (FT.)	LOCATION	FUNCTION
D2-1	2-6x6	250'	1
D6-1	2-6x6	250'	1
DB-1	2-6x6	5'	7

NOTE: LOCATION = DISTANCE FROM STOP BAR TO LOOP DETECTOR.

NO.	BY	DATE	REVISIONS
1	JMG	11/92	REVISED CONTROLLER/SERVICE CABINET LOCATION

"ELECTRICAL ENGINEER CERTIFICATION"
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.
Robert R. Ellis
Date: 9/18/92 Reg. No. 5859

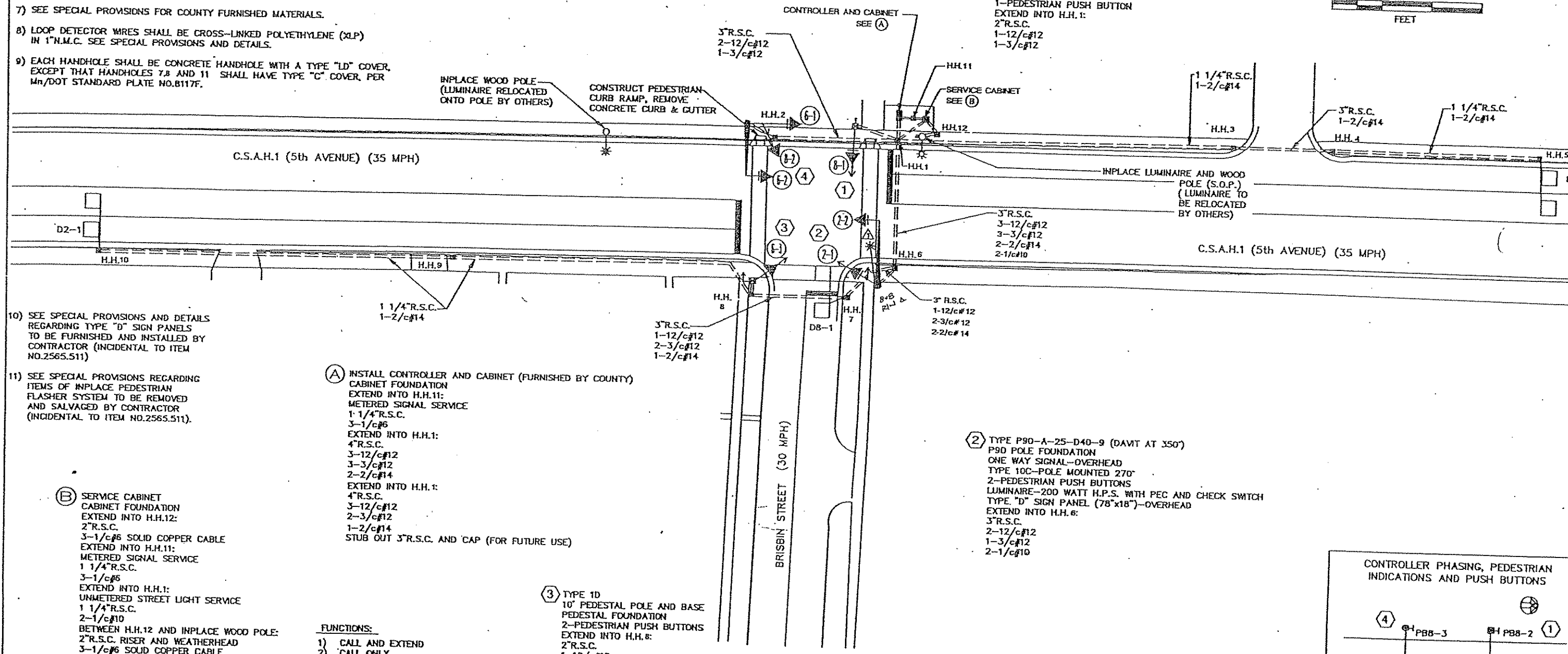
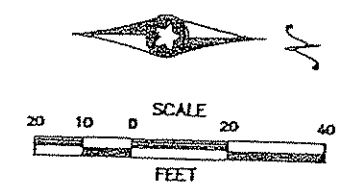
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.
Thomas A. Schwartz
Date: 8/18/92 Reg. No. 20943



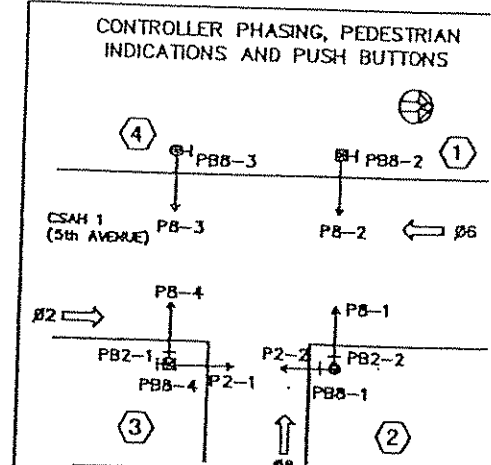
ANOKA COUNTY, MINNESOTA
CITY OF ANOKA

TRAFFIC SIGNAL
INTERSECTION
C.S.A.H.1 (5th AVENUE)

MISCELLANEOUS SIGNAL SHEETS
Sheet 12 of 13 Sheets



FOR INFORMATION ONLY

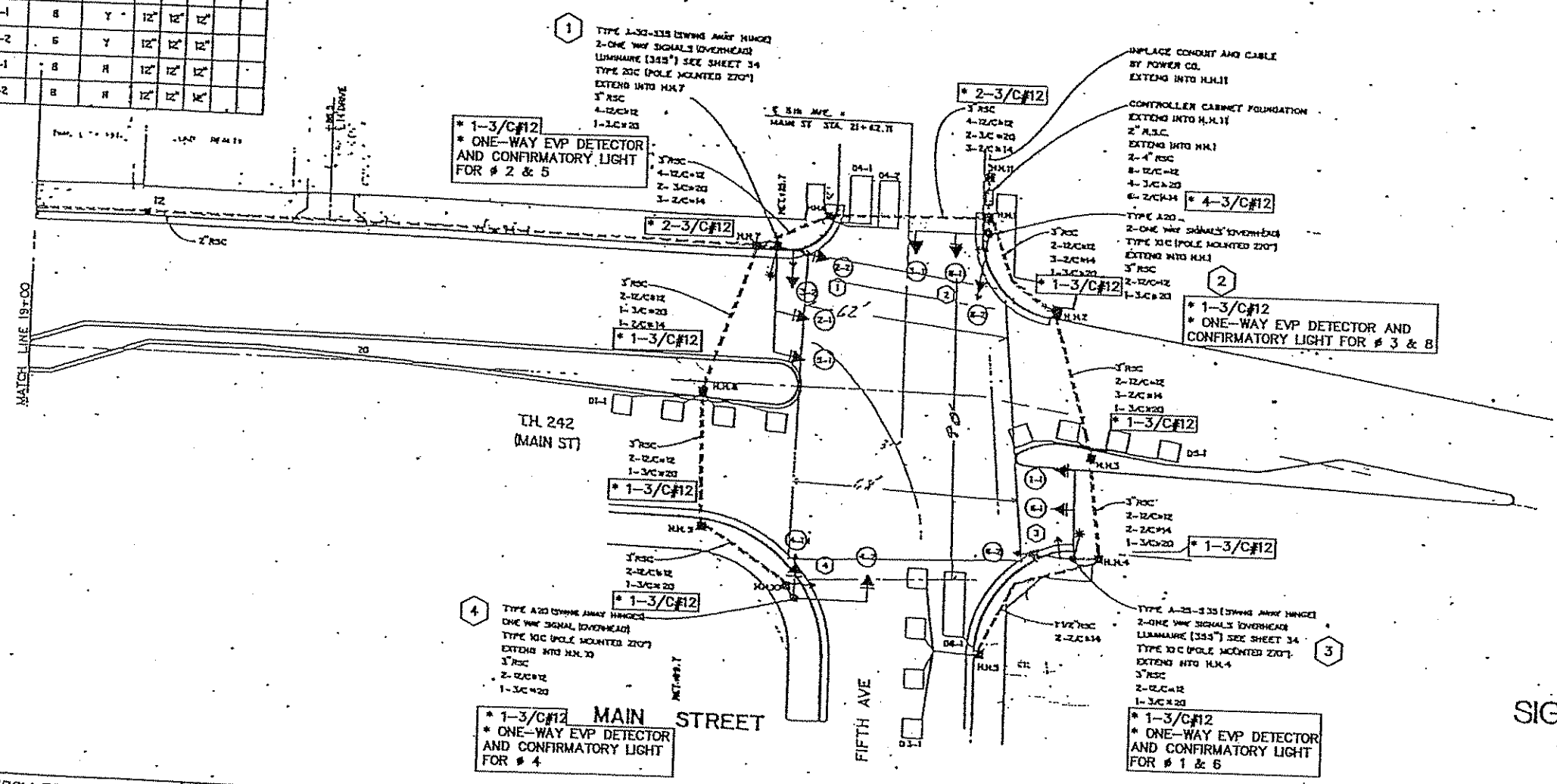


7025

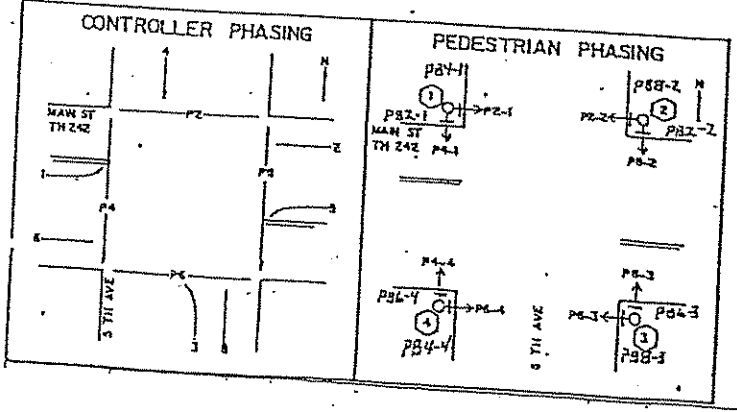
FACE	PHASE	FLASH	INDICATION SIZE				
			R	Y	G	Y	G
1-1	1,6	Y	12"	12"	12"	12"	12"
2-1	2	Y	12"	12"	12"	12"	12"
2-2	2	Y	12"	12"	12"	12"	12"
3-1	3,6	R	12"	12"	12"	12"	12"
3-2	3,6	R	12"	12"	12"	12"	12"
4-1	4	R	12"	12"	12"	12"	12"
4-2	4	R	12"	12"	12"	12"	12"
5-1	2,5	Y	12"	12"	12"	12"	12"
6-1	6	Y	12"	12"	12"	12"	12"
6-2	6	Y	12"	12"	12"	12"	12"
8-1	8	R	12"	12"	12"	12"	12"
8-2	8	R	12"	12"	12"	12"	12"

LOOP DETECTORS	
NUMBER	SIZE
01-1	MULTIPLE
03-1	MULTIPLE
04-1	6'x15'
04-2	6'x15'
05-1	MULTIPLE
08-1	6' x 20'

SIGNAL HEAD PHASING			
HEADS	1-1	1-1 3-2	5-1
(R)	06	08	02
(Y)			
(G)			
(R)	01	03	05



SIGNAL SYSTEM "A"



- * CONSTRUCTION NOTES:
- 1) REVISION DATE: 1/31/03. ALL ITEMS OF THIS SIGNAL SYSTEM ARE IN PLACE AND SHALL REMAIN INPLACE AND FUNCTIONAL UNLESS OTHERWISE NOTED WITH AN * (* REPRESENTS WORK TO BE DONE)
 - 2) THE CONTRACTOR SHALL FURNISH AND INSTALL A ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT ON EACH TRAFFIC SIGNAL MAST ARM.
 - 3) THE CONTRACTOR SHALL FURNISH AND INSTALL TWO TWO-CHANNEL EVP PHASE SELECTOR CARDS IN THE SIGNAL CABINET.
 - 4) THE CONTRACTOR SHALL FURNISH AND THE COUNTY SHALL INSTALL A D-CONNECTOR ASSEMBLY (ECONOLITE ASC-8000) IN THE EXISTING CONTROLLER CABINET.
 - 5) A KBR 3/4" PIPE THREAD HUB, 3/4" PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE INSTALLED SIX FEET FROM THE END OF THE MAST ARM ON POLES 1, 2, 3, AND 4 FOR EMERGENCY VEHICLE PREEMPTION EQUIPMENT.
 - 6) THE CONTRACTOR SHALL PULL NEW 3/C#12 CABLE FROM THE CONTROLLER CABINET TO EACH OF THE EVP CONFIRMATORY LIGHTS.
 - 7) THE 3/C#20 EVP DETECTOR CABLE ALREADY EXISTS BETWEEN THE CONTROLLER CABINET AND EACH CORNER. THE CONTRACTOR SHALL PULL THE EVP DETECTOR CABLE TO THE DETECTOR AND PROVIDE ALL CONNECTIONS.

FOR INFORMATION ONLY

No.	Date	Revisions
4	4/7/03	ADDENDUM NO. 1

MISCELLANEOUS SIGNAL SHEETS

7025

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UN. LIC. NO. 20238
DATE: 4/7/03

CITY OF ANOKA
EVP IMPROVEMENTS
CITY PROJECT 03-03

SYSTEM "A"
INTERSECTION
LAYOUT

No. Date Revisions
4 4/7/03 ADDENDUM NO. 1

JANUARY 2003
CL No. 160300001.3.001