

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 \_\_\_\_\_
- WATER MAIN \_\_\_\_\_
- 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 \_\_\_\_\_
- INDEX MAP \_\_\_\_\_

# MINNESOTA DEPARTMENT OF TRANSPORTATION

## ANOKA COUNTY

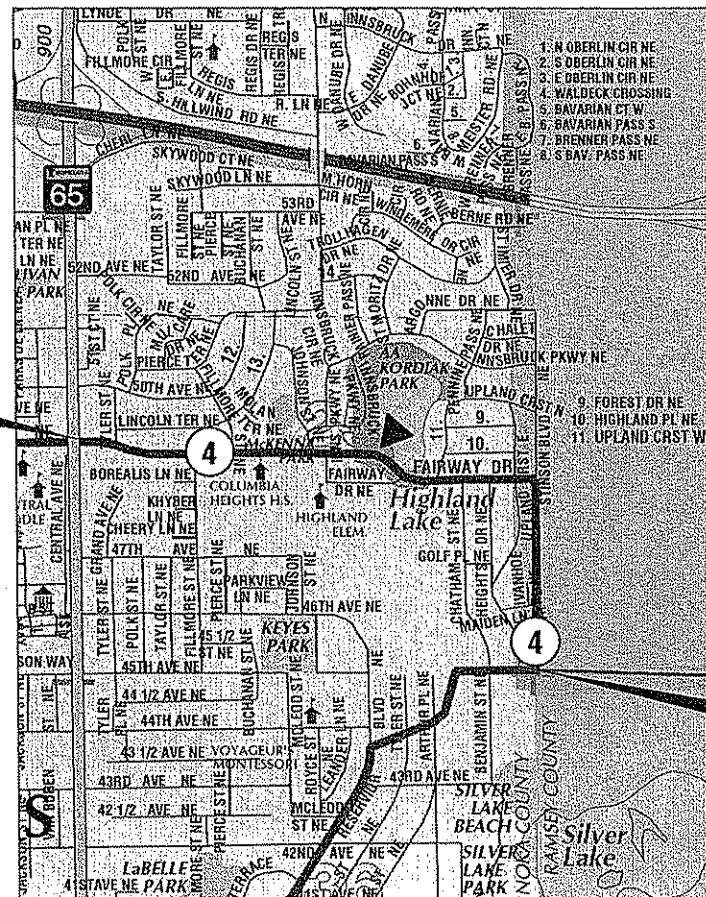
CONSTRUCTION PLAN FOR 2" MILL SURFACE & OVERLAY, REMOVAL BITUMINOUS AND BIT CURB, INSTALL B618 CURB AND GUTTER

LOCATED ON C.S.A.H. 4 BETWEEN T.H. 65 AND C.S.A.H. 2

COUNTY PROJ. NO. 11-10-04

C.S.A.H. 4

GROSS LENGTH	7490 FEET	1.419 MILES
BRIDGES-LENGTH	0.00 FEET	0.000 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	7490 FEET	1.419 MILES



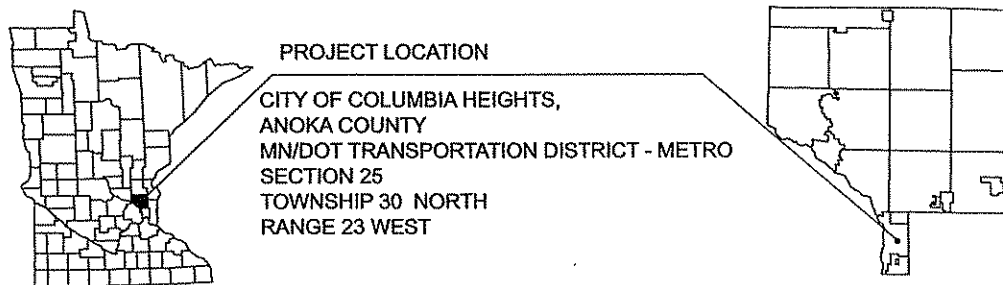
CITY OF COLUMBIA HEIGHTS

BEGIN C.P. 11-10-04

C.S.A.H. 4 STA. 9+90

END C.P. 11-10-04

C.S.A.H. 4 STA. 84+80



PROJECT LOCATION

CITY OF COLUMBIA HEIGHTS,  
ANOKA COUNTY  
MN/DOT TRANSPORTATION DISTRICT - METRO  
SECTION 25  
TOWNSHIP 30 NORTH  
RANGE 23 WEST

GOVERNING SPECIFICATIONS

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES & STORM TAB
3	TYPICAL SECTIONS
4	MISCELLANEOUS DETAILS
5-7	CONSTRUCTION PLAN
8-12	SIGNING & STRIPING PLAN, TAB, & DETAILS
13-14	MISCELLANEOUS SIGNAL DETAILS

THIS PLAN CONTAINS 14 SHEETS

DESIGN DESIGNATION

ESAL 20	_____
R VALUE	_____
ADT (2006) =	3250
Proj. ADT (2026) =	4550
Proj. HCADT (2026) =	4550
Soil Factor	NA
_____	10 TON DESIGN

Functional Classification	B MINOR ARTERIAL
No. of Traffic Lanes	<u>2</u>
No. of Parking Lanes	<u>2</u>
Design Speed	<u>30</u> MPH N/A
Based on Stopping Sight Distance	N/A
Height of eye	<u>3.5'</u>
Height of object	<u>2.0'</u>
Design Speed not achieved at:	_____
STA. _____ TO STA. _____	MPH _____

Approved: 4/7/11  
ANOKA COUNTY ENGINEER

NO	DATE	BY	CKD	APPR	REVISION

DATE: 04/05/2011 3:02:08 PM

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: 4/7/11 LICENSE NO. 40416

DRAWN BY: CSO DATE: 1/14/2011  
DESIGN BY: CSO DATE: 1/14/2011  
CHECKED BY: JO DATE: \_\_\_\_\_

ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
STATE AID PROJECT NO. \_\_\_\_\_  
CITY PROJECT NO. \_\_\_\_\_  
COUNTY PROJECT NO. 11-10-04

TITLE SHEET

Sheet 1 of 14 Sheets

CSAH 4		STATEMENT OF ESTIMATED QUANTITIES		
ITEM NO.	ITEM	NOTES	UNIT	TOTAL EST. QUANT.
2021.501	MOBILIZATION		LUMP SUM	1
2104.501	REMOVE CURB AND GUTTER		LIN FT	110
2104.503	REMOVE CONCRETE DRIVEWAY PAVEMENT	4	SQ FT	2274
2104.503	REMOVE PAVEMENT	2	SQ FT	5229
2104.503	REMOVE BITUMINOUS DRIVEWAY PAVEMENT		SQ FT	1530
2104.505	REMOVE BITUMINOUS PAVEMENT	1	SQ YD	3005
2104.509	REMOVE MANHOLES OR CATCH BASINS		EACH	5
2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)		LIN FT	5
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	14	LIN FT	7753
2104.523	SALVAGE CASTING		EACH	25
2104.523	SALVAGE SIGN TYPE C		EACH	6
2105.525	TOPSOIL BORROW (LV)	15	CU YD	32
2232.501	MILL BITUMINOUS SURFACE (2.0")	17	SQ YD	31966
2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GAL	1673
2360.501	TYPE SP 9.5 WEARING COURSE MIX (2,B)	12	TON	20
2360.501	TYPE SP 12.5 WEARING COURSE MIXTURE(4,E)		TON	3849
2360.502	TYPE SP 12.5 NON-WEARING COURSE MIXTURE(4,B)	3	TON	183
2504.602	ADJUST GATE VALVE	11	EACH	2
2506.501	CONST DRAINAGE STRUCTURE DESIGN G	11	LIN FT	5
2506.501	CONST DRAINAGE STRUCTURE DES 48-4020	11	LIN FT	21
2506.503	RECONSTRUCT DRAINAGE STRUCTURE	11	LIN FT	44
2506.516	CASTING ASSEMBLY	20	EACH	30
2506.521	INSTALL CASTING		EACH	25
2506.602	GROUT CATCH BASIN OR MANHOLE		EACH	4
2521.501	6" CONCRETE WALK	4	SQ FT	492
2531.501	CONCRETE CURB & GUTTER DESIGN B618		LIN FT	6618
2531.501	CONCRETE CURB & GUTTER DESIGN B618 (SPECIAL)	19	LIN FT	456
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	19	SQ YD	198
2531.618	TRUNCATED DOMES	11	SQ FT	48
2540.602	INSTALL MAIL BOX SUPPORTS	6, 20	EACH	102
2563.601	TRAFFIC CONTROL	9	LUMP SUM	1
2563.610	POLICE OFFICER	18	hour	8
2565.602	NMC LOOP DETECTORS 6" X 6"	8	EACH	4
2573.530	STORM DRAINAGE INLET PROTECTION	16	EACH	30
2575.505	SODDING TYPE SALT RESISTANT	13	SQ YD	1603
2581.501	REMOVABLE PREFORMED PLASTIC MARKING	10	LIN FT	1198
2582.502	4" SOLID LINE WHITE-EPOXY	7	LIN FT	14085
2582.502	4" SOLID LINE YELLOW - EPOXY	7	LIN FT	2055
2582.502	4" BROKEN YELLOW LINE-EPOXY	7	LIN FT	530
2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY	7	LIN FT	4200
2582.602	PAVT MSSG (RT ARROW) PREF THERMOPLASTIC	7	EACH	1
2582.602	PAVT MSSG (LT ARROW) PREF THERMOPLASTIC	7	EACH	1
2582.603	24" WHITE PREF THERMOPLASTIC	7	LIN FT	156
2582.618	3 X 6 ZEBRA CROSSWALK - PREFORMED THERMOPLASTIC	7	SQ FT	504

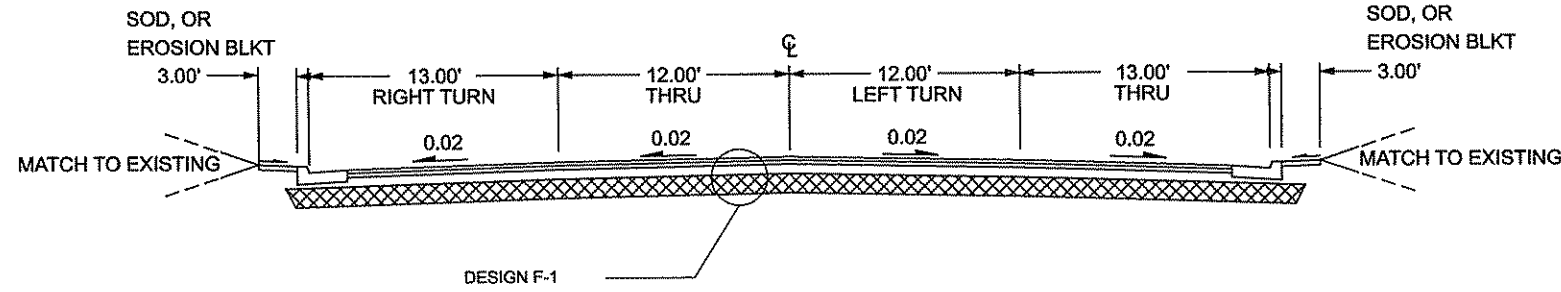
- NOTES:
- ITEM INCLUDES THE REMOVAL OF BITUMINOUS CURB
  - ITEM FOR REMOVAL OF BIT BLVD FROM STATION 32+60 TO 51+25 RT & LT
  - ITEM FOR PATCHING AROUND M.H., C.B., IN FRONT OF NEW CURB
  - ITEM FOR PED RAMPS
  - DO NOT PASS, PASS WITH CARE, NO CENTER STRIPE AND BUMP/BUMP AHEAD SIGNS TO BE INPLACE DURING MILLING / PAVING OPERATIONS.
  - MAILBOXES TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION. MAILBOX REMOVAL /INSTALLATION, INCIDENTAL TO ITEM.
  - MARKINGS SHALL BE IN PLACE WITH IN 72 HOURS OF FINAL MAINLINE PAVING
  - ONLY NEED TO REPLACE IF HIT DURING MILLING OPERATION
  - ALL TRAFFIC CONTROL DEVICES AND METHODS SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL
  - SKIPS WILL BE PLACED AS SOON AS POSSIBLE AFTER MILLING AND PAVING OPERATIONS
  - REFERENCE CONSTRUCTION PLAN FOR LOCATION
  - ITEM USED TO PAVE DRIVEWAYS AND BITUMINOUS TRAIL BEHIND CURB AT COLUMBIA HEIGHTS HIGH SCHOOL
  - ITEM TO BE INSTALLED BEHIND ALL NEW CURB AND GUTTER EXCEPT WHERE BIT. TRAIL TIES IN CURB
  - SAW 2' FROM PROPOSED LIP OF CONCRETE CURB AND GUTTER
  - ITEM USED AT LOCATION FOR SOD AREAS
  - ALL DRAINAGE STRUCTURES ON THIS ROAD SEGMENT MUST HAVE INLET PROTECTION
  - DETAIL MILLING AROUND MANHOLE AND CATCH BASINS IS INCIDENTAL TO THIS ITEM
  - TO BE USED AT INTERSECTION OF CSAH 4 AND HWY 65 DURING MILLING AND PAVING OPERATIONS
  - HIGH EARLY CONCRETE TO BE USED FOR THIS ITEM (CONCRETE CURB AT CONCRETE DRIVEWAY TIE-IN)
  - ITEM INCLUDES FURNISH AND INSTALL

BASIS OF PLANNED QUANTITIES	
ITEM NO.	
2357.502	BITUMINOUS MATERIAL FOR TACK COAT .05 GAL / SQ YD
2360.501	TYPE SP 9.5 WEARING COURSE MIX (2,B) 115/SQ.YD./IN THICKNESS
2361.501	TYPE SP 12.5 WEARING COURSE MIX (4, E) 115/SQ.YD./IN THICKNESS
2362.502	TYPE SP 12.5 NON-WEARING COURSE MIX (4, B) 115/SQ.YD./IN THICKNESS
2581.501	REMOVABLE PREFORMED PLASTIC MARKING 2' AT 50' INTERVALS FOR SKIPS

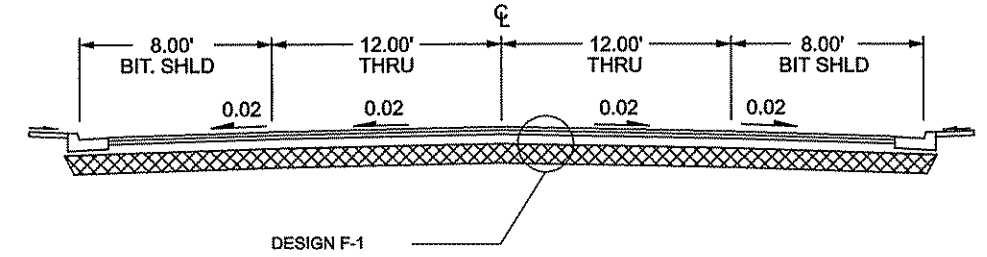
A.		STRUCTURE REPAIRS															ACTION
STRUCTURE	STATION	LOC.	SAW BITUMINOUS PAVEMENT OR BIT CURB	REMOVE BIT. PAVEMENT	REPLACE BIT. PAVEMENT	SAW CONC. PAVEMENT OR CONC. CURB & GUTTER	SOD TYPE SALT RESISTANT	REMOVE C&G	REPLACE B618 C&G	FURNISH AND INSTALL CASTING	INSTALL CASTING	SALVAGE CASTING	GROUT	RECONSTRUCT DRAINAGE STR. (RING HT)	CONSTRUCT DRAIN STR 48-4020	CONSTRUCT DRAIN STR G	
100	10+00	24' LT	16.0	1.8	0.2												RE-RING
101	10+00	22' RT															NONE
102	10+20	34' LT	14.0	2.2	0.3	5.0	4.4	10	10	1							RE-RING
103	10+15	22' RT															NONE
104	11+80	CL	16.0	1.8	0.2						1	1					RE-RING
105	11+90	14' RT															NONE
106	13+55	1' LT	16.0	1.8	0.2						1	1					RE-RING
107	13+77	16' RT															NONE
108	13+77	22' RT															NONE
109	13+77	22' LT	9.0	1.1						1							RE-RING
110	15+30	5' RT															NONE
111	16+20	2' RT											1				GROUT
112	16+60	22' RT	9.0	1.1						1							RE-RING
113	16+60	22' LT	9.0	1.1						1							RE-RING
114	18+75	14' RT	16.0	1.8	0.2						1	1					RE-RING
115	18+90	1' RT	16.0	1.8	0.2						1	1					RE-RING
116	21+50	CL	16.0	1.8	0.2						1	1					RE-RING
117	22+60	22' RT	16.0	1.8	0.2						1	1					RE-RING
118	22+75	CL	16.0	1.8	0.2						1	1					RE-RING
119	23+20	22' RT	9.0	1.1						1							RE-RING
120	23+20	22' LT	9.0	1.1						1							RE-RING
121	24+40	CL	16.0	1.8	0.2						1	1					RE-RING
122	26+95	22' RT	16.0	1.8	0.2						1	1					RE-RING
123	27+07	CL	16.0	1.8	0.2						1	1					RE-RING
124	27+45	22' LT	9.0	1.1						1						5.0	RE-BUILD
125	30+02	CL	16.0	1.8	0.2						1	1					RE-RING
126	30+82	22' RT	16.0	1.8	0.2						1	1					RE-RING
126A	30+70	22' RT	9.0	1.1							1	1					RE-RING
127	30+82	22' LT	9.0	1.1							1	1					RE-RING
128	31+80	CL	16.0	1.8	0.2						1	1					RE-RING
129	32+80	CL	16.0	1.8	0.2						1	1					RE-RING
130	33+90	22' RT	9.0	1.1							1	1					RE-RING
131	34+78	22' LT	9.0	1.1							1	1					RE-RING
132	34+78	22' RT	9.0	1.1							1	1					RE-RING
133	35+80	CL	16.0	1.8	0.2						1	1					RE-RING
134	38+50	2' RT	16.0	1.8	0.2						1	1					RE-RING
135	40+98	2' RT	16.0	1.8	0.2						1	1					RE-RING
136	42+95	CL															NONE
137	45+00	CL															NONE
138	46+97	2' RT	16.0	1.8	0.2						1	1					RE-RING
139	48+50	22' RT	9.0	1.1												6.7	EST. 4' X 3' BLOCK, RECONST PAID FOR UNDER CONST.DRN STR. 48-4020
140	48+50	22' LT															NONE
141	49+00	2' RT	16.0	1.8	0.2						1	1					RE-RING
142	50+15	15' RT	16.0	1.8	0.2						1	1					RE-RING
143	50+97	2' RT	16.0	1.8	0.2												NONE
144	51+39	1' RT	16.0	1.8	0.2												NONE
145	51+62	12' LT	16.0	1.8	0.2						1	1					RE-RING
146	51+87	21' LT	14.0	2.2	0.3	4.5	1.1	10	10	1							RE-RING
147	54+52	13' LT															NONE
147A	54+20	CL															NONE
148	54+50	21' LT	14.0	2.2	0.3	4.5	1.1	10	10	1							RE-RING
149	54+58	21' RT	14.0	2.2	0.3	4.5	1.1	10	10	1							RE-RING
150	57+25	1' RT	16.0	1.8	0.2						1	1					RE-RING
151	57+35	22' RT	16.0	1.8	0.2						1	1					RE-RING
152	57+60	21' RT	14.0	2.2	0.3	4.5	1.1	10	10	1							RE-RING
153	57+47	21' LT	14.0	2.2	0.3	4.5	1.1	10	10	1							RE-RING
154	57+53	13' LT	16.0	1.8	0.2						1	1				6.0	RE-BUILD
155	60+55	21' LT											1				GROUT
155A	60+38	12' LT															NONE
155B	60+15	CL															RE-RING
156	60+40	22' RT	16.0	1.8	0.2						1	1				4.0	RE-BUILD
157	60+60	21' RT	14.0	2.2	0.3	4.5	1.1	10	10	1							RE-RING
158	63+10	12' LT	16.0	1.8	0.2							1	1				RE-RING
159	63+40	2' LT															NONE
160	63+65	5' RT	16.0	1.8	0.2							1	1				RE-RING
161	63+80	21' RT	14.0	2.2	0.3	4.5	1.1	10	10	1							RE-RING
162	63+80	21' LT	14.0	2.2	0.3	4.5	1.1	10	10	1							RE-RING
163	77+60	21' LT															NONE
164	77+60	12' RT	16.0	1.8	0.2						1	1					RE-RING
165	77+60	21' RT															NONE
166	84+67	21' RT	14.0	2.2	0.3	4.5	1.1	10	10	1							RE-RING
167	84+75	14' RT	16.0	1.8	0.2						1	1				4.3	RE-BUILD
168	84+82	25' LT	16.0	1.8	0.2						1	1					RE-RING
169	84+67	21' LT	14.0	2.2	0.3	4.5	1.1	10	10	1							RE-RING
<b>TOTALS</b>			<b>790.0</b>	<b>96.8</b>	<b>9.9</b>	<b>50.0</b>	<b>15.4</b>	<b>110</b>	<b>110</b>	<b>30</b>	<b>25</b>	<b>25</b>	<b>4</b>	<b>44.0</b>	<b>21.0</b>	<b>5.0</b>	

NO	DATE	BY	CKD
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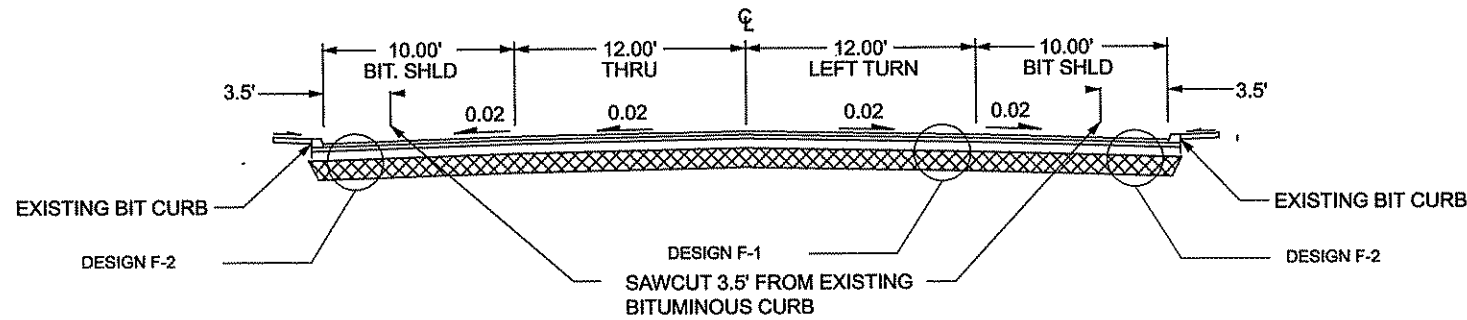
**C.S.A.H. 4**  
**TURN LANES AT HWY 65**  
 STA. 9+90 - STA. 11+80 LT, (10+15 RT)



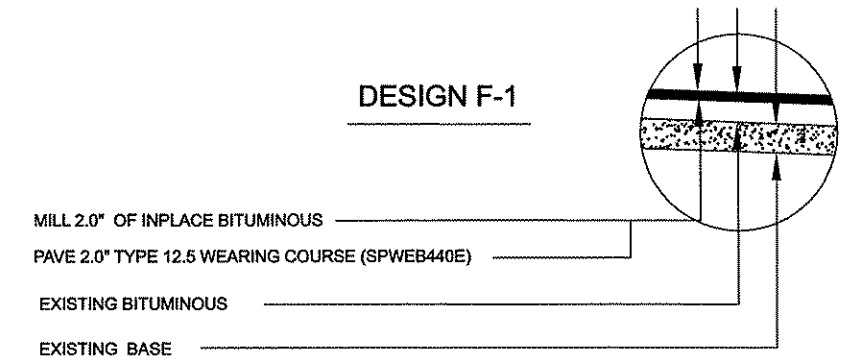
**C.S.A.H. 4**  
**EXISTING CURB SECTION**  
 STA. 51+25 - STA. 84+80



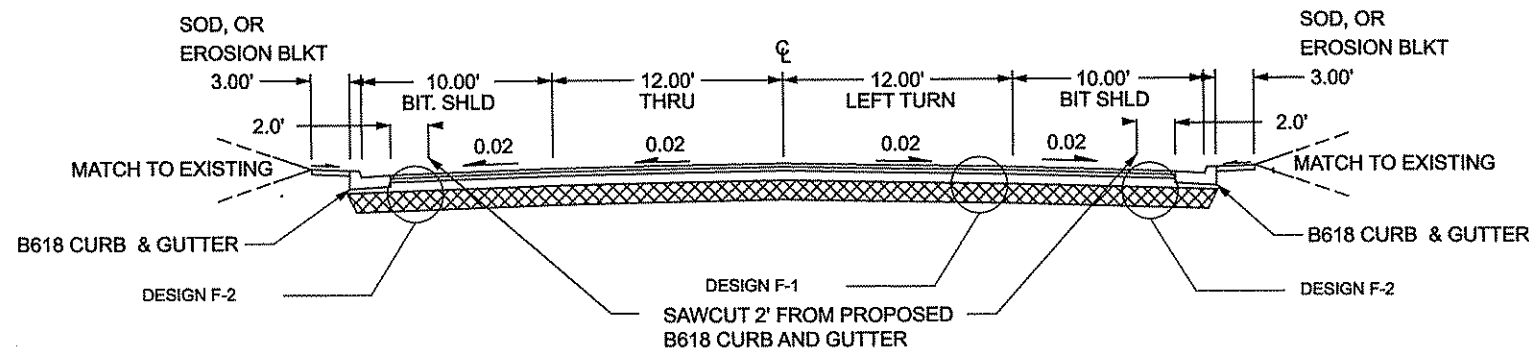
**C.S.A.H. 4**  
**EXISTING ROAD WITH BIT CURB**  
 STA. 11+80 LT - STA. 51+25 LT  
 STA. 10+15 RT - STA. 50+45 RT



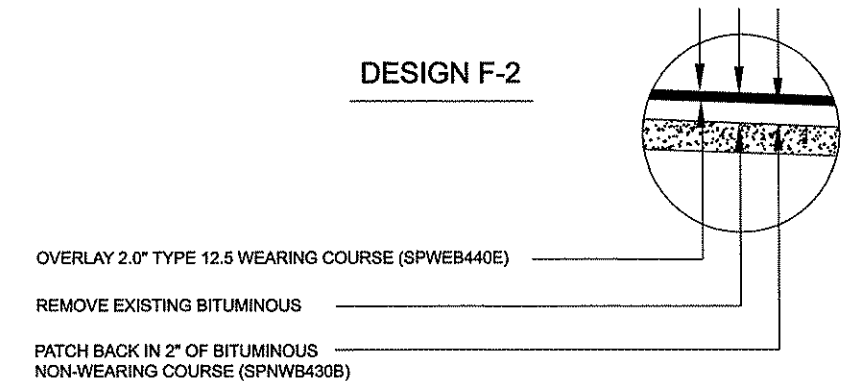
**DESIGN F-1**



**C.S.A.H. 4**  
**PROPOSED ROAD WITH B618 CURB AND GUTTER**  
 STA. 11+80 LT - STA. 51+25 LT  
 STA. 10+15 RT - STA. 50+45 RT



**DESIGN F-2**



**GENERAL NOTES:**

- ALL CROSS SLOPES ARE APPROXIMATE
- UNLESS OTHERWISE SPECIFIED, THE CLASS 5 CROSS SLOPES SHALL BE THE SAME AS THE FINISHED SURFACE OF THE MAINLINE.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\11-01-00\CSAH\_4 (TH65-45th)\Plan\TS.dgn 04/05/2011 3:13:14 PM

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.

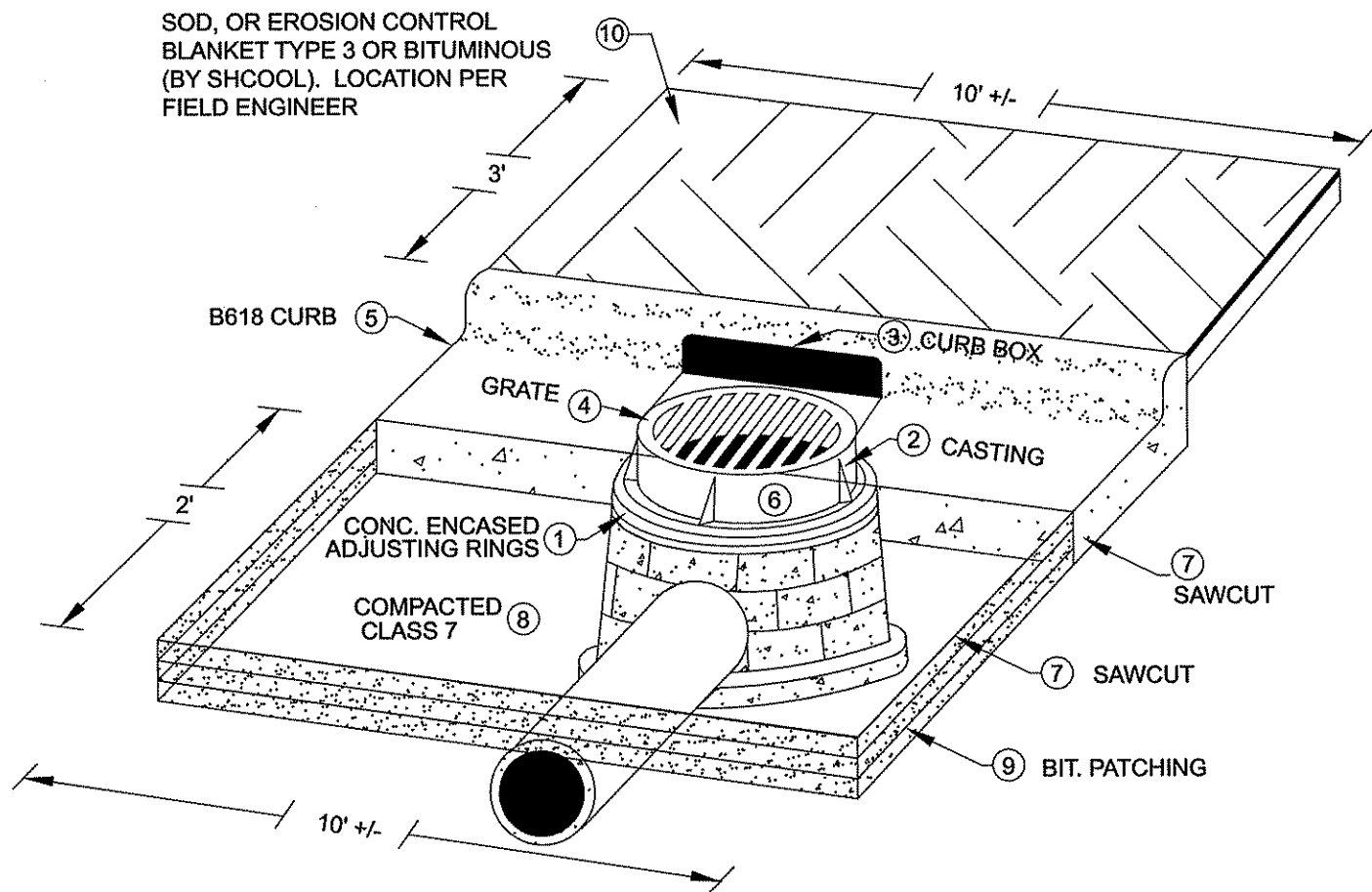
PRINT NAME: CHARLES CADENHEIM  
 SIGNATURE: *[Signature]*  
 DATE: 4/5/11 LICENSE NO. 40416

DRAWN BY: CSO DATE: 1/14/2011  
 DESIGN BY: CSO DATE: 1/14/2011  
 CHECKED BY: JO DATE: \_\_\_\_\_

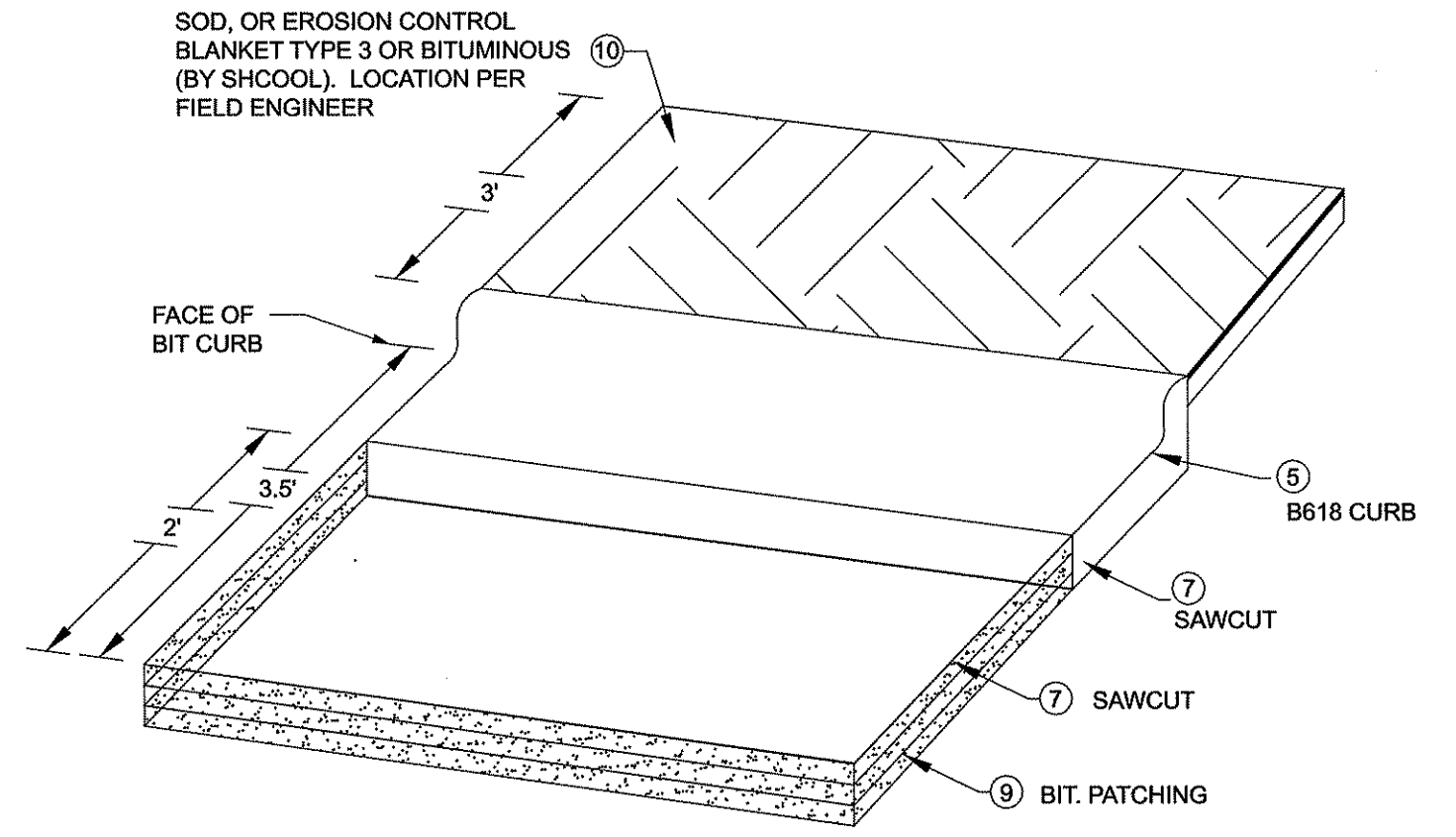
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-10-04

**C.B. REPAIR DETAIL**



**REPLACE BIT CURB WITH B618 CURB AND GUTTER**



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 RING AND FRAME CASTING. REFERENCE CHART B FOR CASTING TYPE
- ③ CURB BOX MATCHES CASTING REFERENCE CHART B FOR CASTING TYPE
- ④ GRATE CASTING. REFERENCE CHART B FOR CASTING TYPE
- ⑤ CONCRETE CURB AND GUTTER DESIGN B STANDARD PLATE 7100G
- ⑥ INSTALLATION OF CATCH BASIN CASTINGS REFERENCE STANDARD PLATE PER TYPE OF CASTING
- ⑦ SAWCUT BIT PAVEMENT / CONCRETE CURB FULL DEPTH.
- ⑧ ADD AND COMPACT CL-7 AROUND REPAIRED STRUCTURE. ITEM INCIDENTAL TO C.B. REPAIR
- ⑨ REMOVE VAR. DEPTH BITUMINOUS, PATCH WITH 2" LIFTS OF BITUMINOUS.
- ⑩ REPLACE DISTURBED AREA BEHIND CATCH BASIN WITH EITHER SOD (RESIDENTIAL AREAS), ERSION CONTROL BLANKET, OR BITUMINOUS

**B.**

ASSEMBLY	RING OR FRAME CASTING	COVER OR GRATE CASTING	CURB BOX	STANDARD PLAT NO.	QUANTITY
B-17	806	816	825	4125, 4154, 4134	16
R-3246	NEENAH				9
A-7D	700-7	715		4101, 4110	5

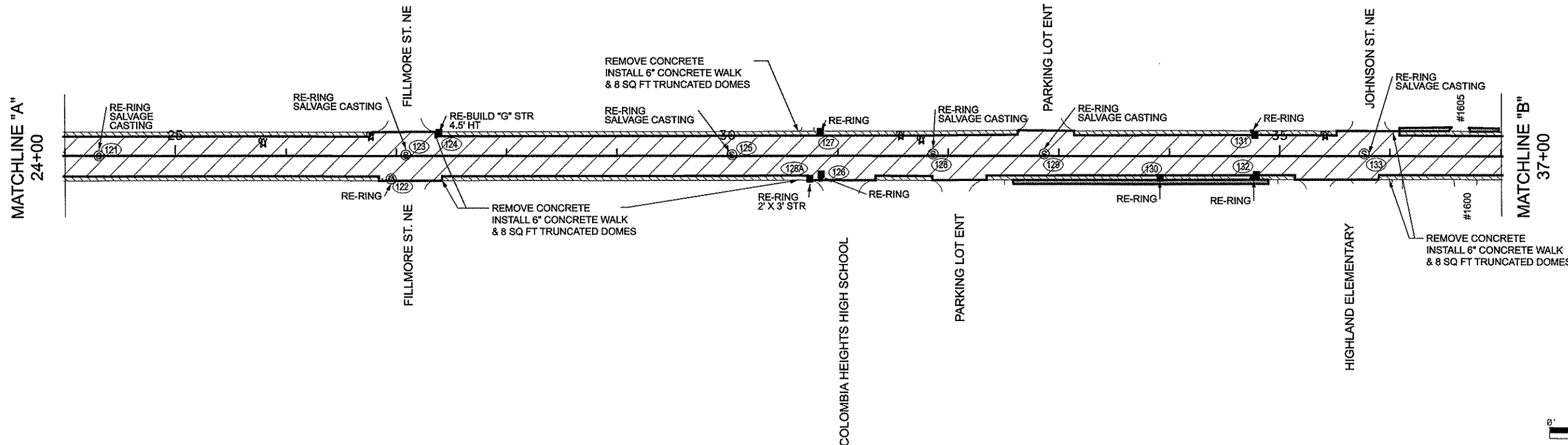
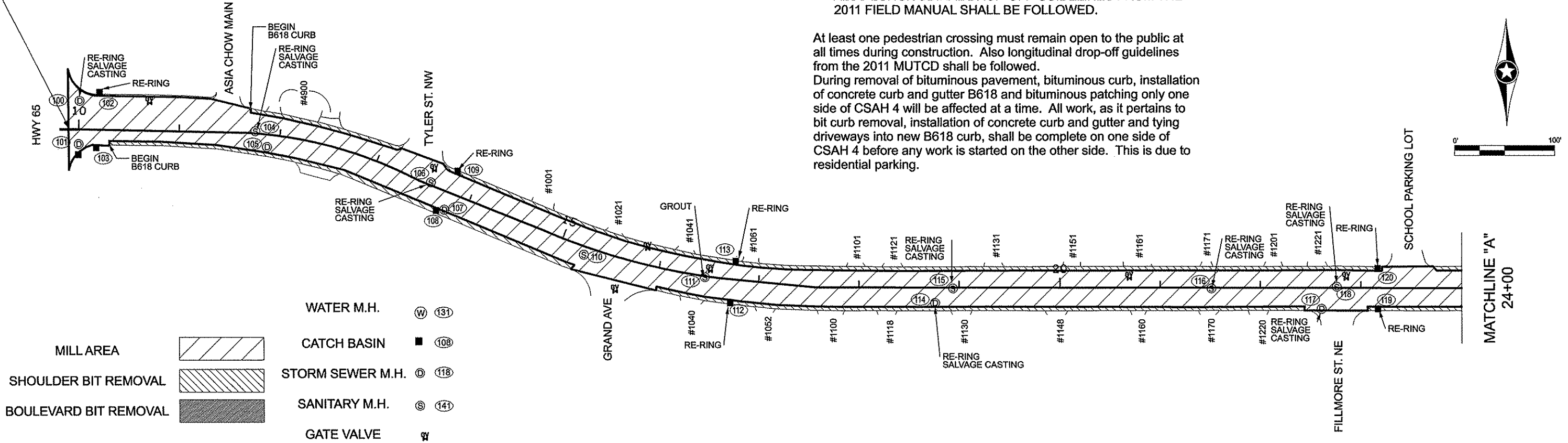
- NOTES.. FOR TRAFFIC CONTROL AT MANHOLES REFER TO MINNESOTA TEMPORARY CONTROL ZONE LAYOUTS FIELD MANUAL.
- 1 ALL CASTING HIEGHTS ARE TO BE DETERMINED IN THE FIELD.
  - 2 ALL MANHOLE CASTINGS NEED TO HAVE "SANITARY SEWER" OR "WATER" STAMPED ON THEM.
  - 3 CONCRETE ENCASED CONCRETE ADJUSTING RINGS STANDARD PLATE 4026A

NOTE: NOT TO SCALE

BEGIN COUNTY PROJECT 11-10-04  
STATION 9+90

NOTE: AT LEAST ONE PED CROSSING MUST REMAIN OPEN TO THE PUBLIC AT ALL TIMES DURING CONSTRUCTION ALSO LONGITUDINAL DROP-OFF GUIDELINES FROM THE 2011 FIELD MANUAL SHALL BE FOLLOWED.

At least one pedestrian crossing must remain open to the public at all times during construction. Also longitudinal drop-off guidelines from the 2011 MUTCD shall be followed. During removal of bituminous pavement, bituminous curb, installation of concrete curb and gutter B618 and bituminous patching only one side of CSAH 4 will be affected at a time. All work, as it pertains to bit curb removal, installation of concrete curb and gutter and tying driveways into new B618 curb, shall be complete on one side of CSAH 4 before any work is started on the other side. This is due to residential parking.



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH\_4\_(TH&S-46th)\Plan\PLAN.dgn      03/18/2011      10:50:04 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: 4/8/11      LICENSE NO. 40416

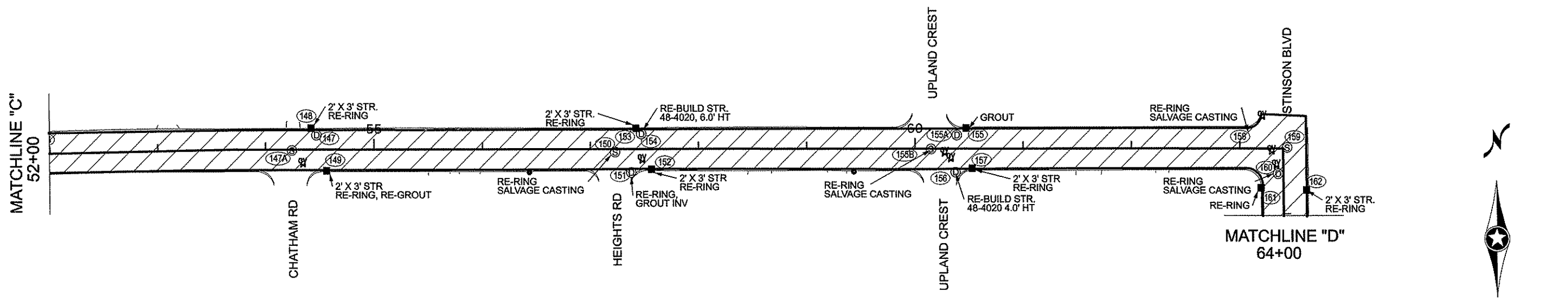
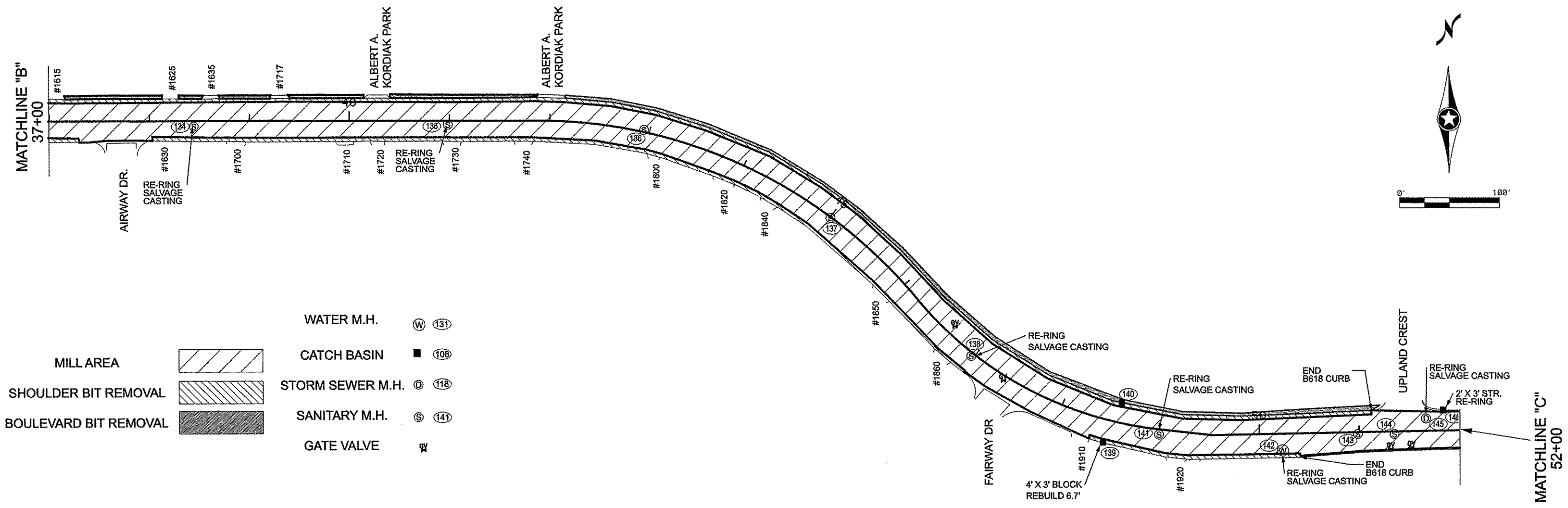
DRAWN BY CSO      DATE 1/14/2011  
 DESIGN BY CSO      DATE 1/14/2011  
 CHECKED BY JO      DATE



STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-10-04

CONSTRUCTION PLAN  
 STA 9+90 TO 37+00  
 Sheet 5 of 14 Sheets





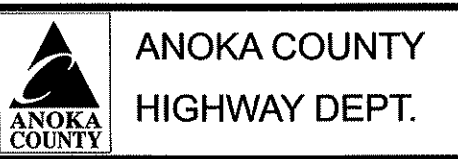
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CHARLES CADENHEAD  
 SIGNATURE: *[Signature]*  
 DATE: 4/8/11 LICENSE NO. 40416

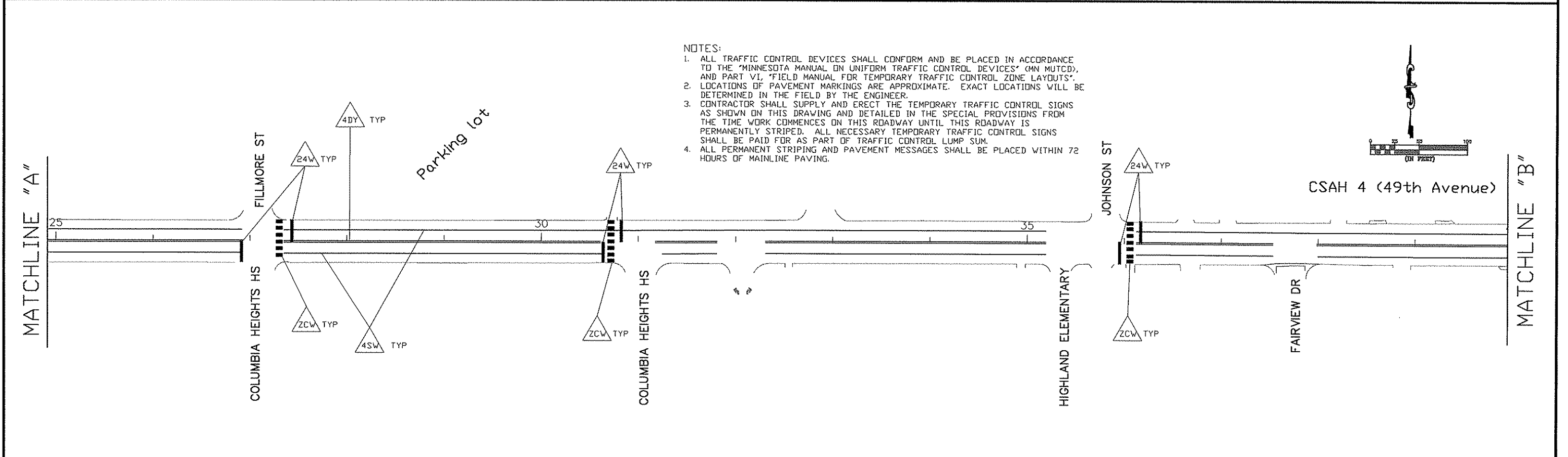
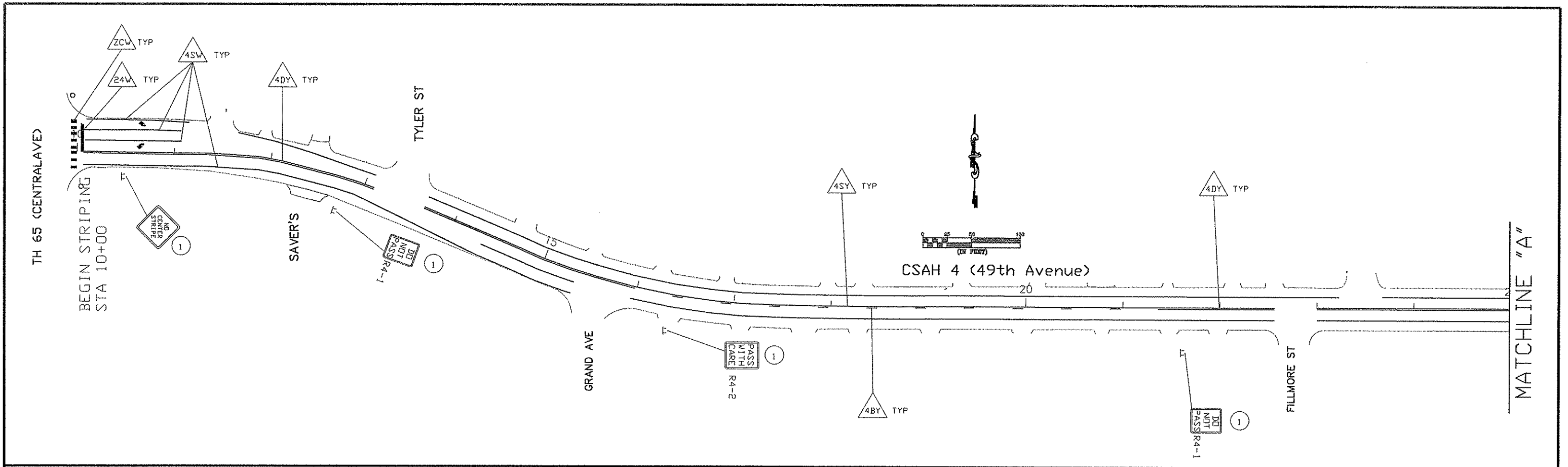
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 DESIGN BY: CSO DATE: 1/14/2011  
 CHECKED BY: JO DATE:  



STATE PROJECT NO.    
 STATE AID PROJECT NO.    
 CITY PROJECT NO.    
 COUNTY PROJECT NO. 11-10-04

CONSTRUCTION PLAN  
 STA 37+00 TO 64+00  
 Sheet 6 of 14 Sheets





- NOTES:
1. 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".
  2. LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
  3. 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.
  4. ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.

NO	DATE	BY	CKD	APPR	REVISION

NAME: T:\Traffic\dwg\CSAH 4\from CSAH 2 to TH 47.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: *[Signature]*

DATE: 3/11 LICENSE NO. 40416

DRAWN BY: MTH DATE: 3/02/11

DESIGN BY: MTH DATE: 3/02/11

CHECKED BY: JR DATE: 3/01/11

**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_

STATE AID PROJECT NO. \_\_\_\_\_

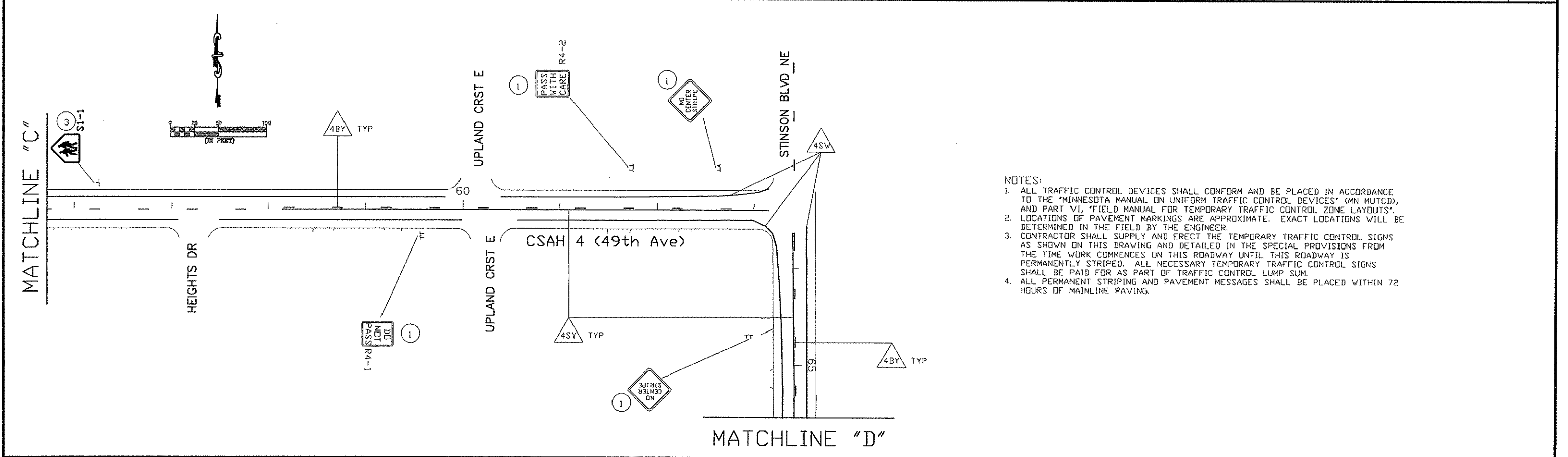
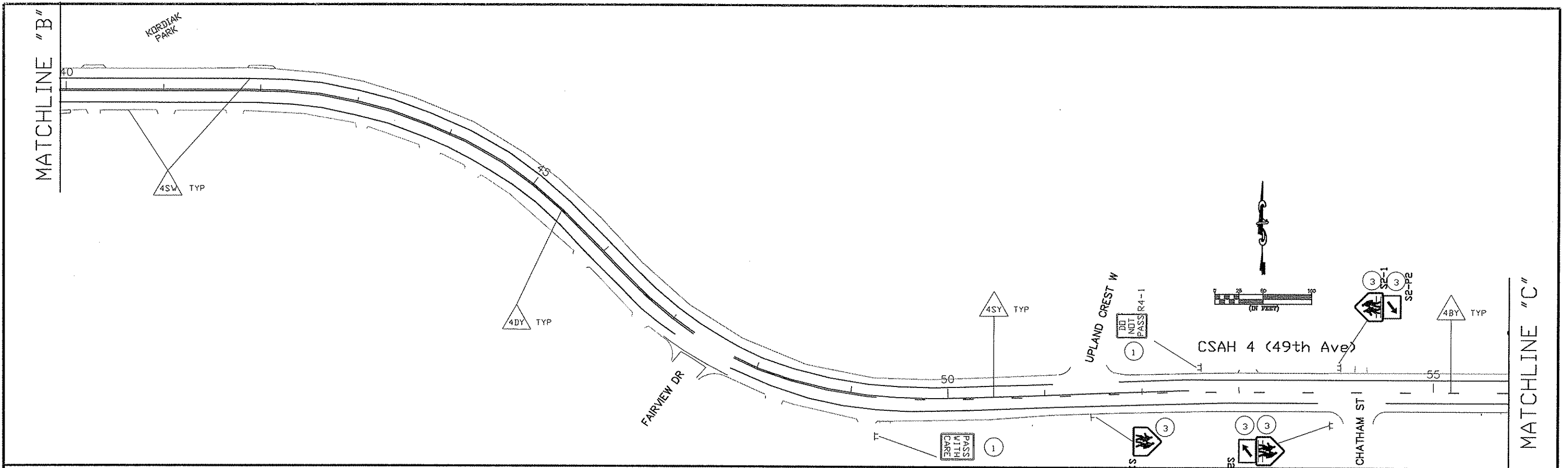
CITY PROJECT NO. \_\_\_\_\_

COUNTY PROJECT NO. 11-10-04

CSAH 4  
 TEMPORARY SIGNING  
 PERMANENT STRIPING  
 AND PAVEMENT MESSAGES

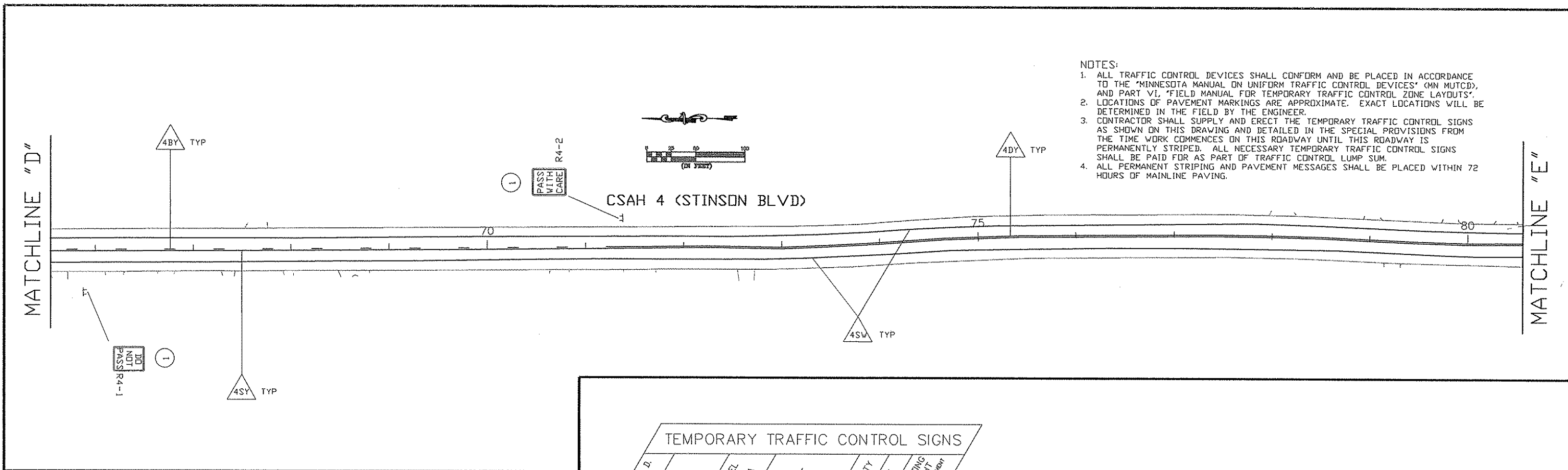
Sheet 8 of 14 Sheets



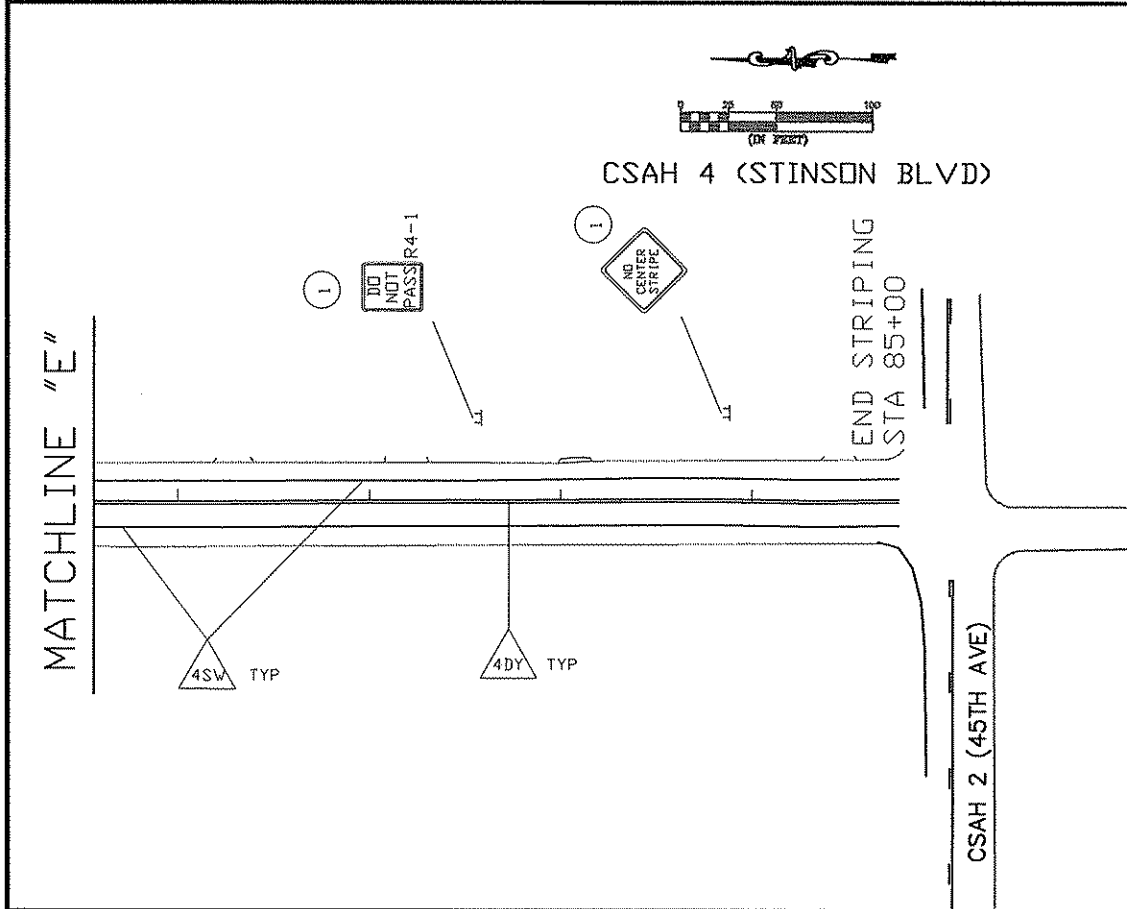


- NOTES:
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: CHARLES GADENHEAD SIGNATURE: <i>[Signature]</i> DATE: 4/8/11 LICENSE NO. 40416					DRAWN BY: MTH DATE: 3/02/11 DESIGN BY: MTH DATE: 3/02/11 CHECKED BY: JR DATE: 3/01/11		<b>ANOKA COUNTY</b> <b>HIGHWAY DEPT.</b>		STATE PROJECT NO. _____ STATE AID PROJECT NO. _____ CITY PROJECT NO. _____ COUNTY PROJECT NO. 11-10-04		CSAH 4 TEMPORARY SIGNING PERMANENT STRIPING AND PAVEMENT MESSAGES Sheet 9 of 14 Sheets	
NO	DATE	BY	CKD	APPR	REVISION							
NAME: T:\Traffic\dwg\CSAH 4\from CSAH 2 to TH 47.dwg												

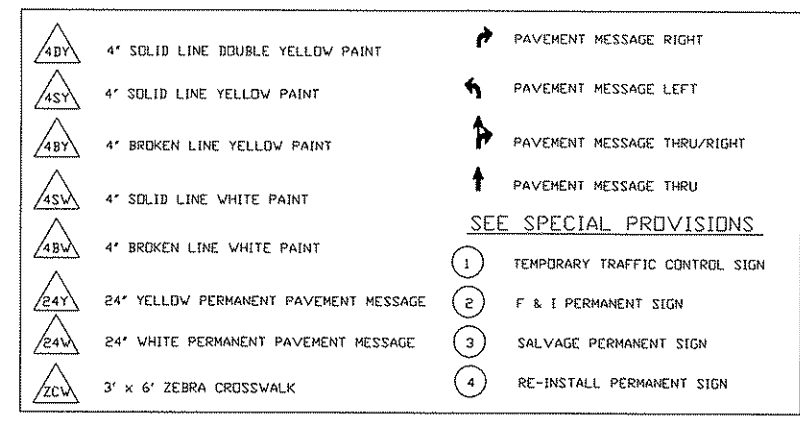


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TEMPORARY TRAFFIC CONTROL SIGNS						
M. U. T. C. D. CODE	SIZE	P. PANEL AREA FT. <sup>2</sup>	INSERT	QUANTITY	No. POST	MOUNTING HEIGHT (To Panel Top) FT.
WB-12	48" x 48"	16.00		4	2	7.0'
R4-1	24" x 30"	5.00		6	1	7.0'
R4-2	24" x 30"	5.00		4	1	7.0'
WB-1A	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		

Item	Quantity	Units
4" Double Yellow Paint	4200	Lin Ft
4" Solid Yellow Paint	2055	Lin Ft
4" Broken Yellow Paint	530	Lin Ft
4" Solid White Paint	14085	Lin Ft
4" Broken White Paint	0	Lin Ft
24" yellow thermoplastic	0	Lin Ft
24" white thermoplastic	156	Lin Ft
3'x6' thermoplastic Zebra Crosswalk	504	SQ FT
Right Turn Arrow	1	Each
Left Turn Arrow	1	Each
Thru/Right Turn Arrow	0	Each
Thru Arrow	0	Each



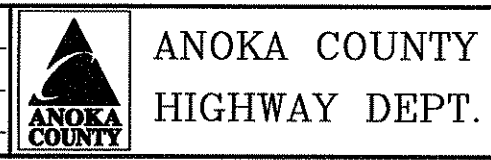
NO	DATE	BY	CKD	APPR	REVISION

NAME: T:\Traffic\dwg\CSAH 4\from CSAH 2 to TH 47.dwg

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PRINT NAME: CHARLES CADENHEAD  
 SIGNATURE: *Charles Cadenhead*  
 DATE: 01/8/11 LICENSE NO. 40416

DRAWN BY: MTH DATE: 3/02/11  
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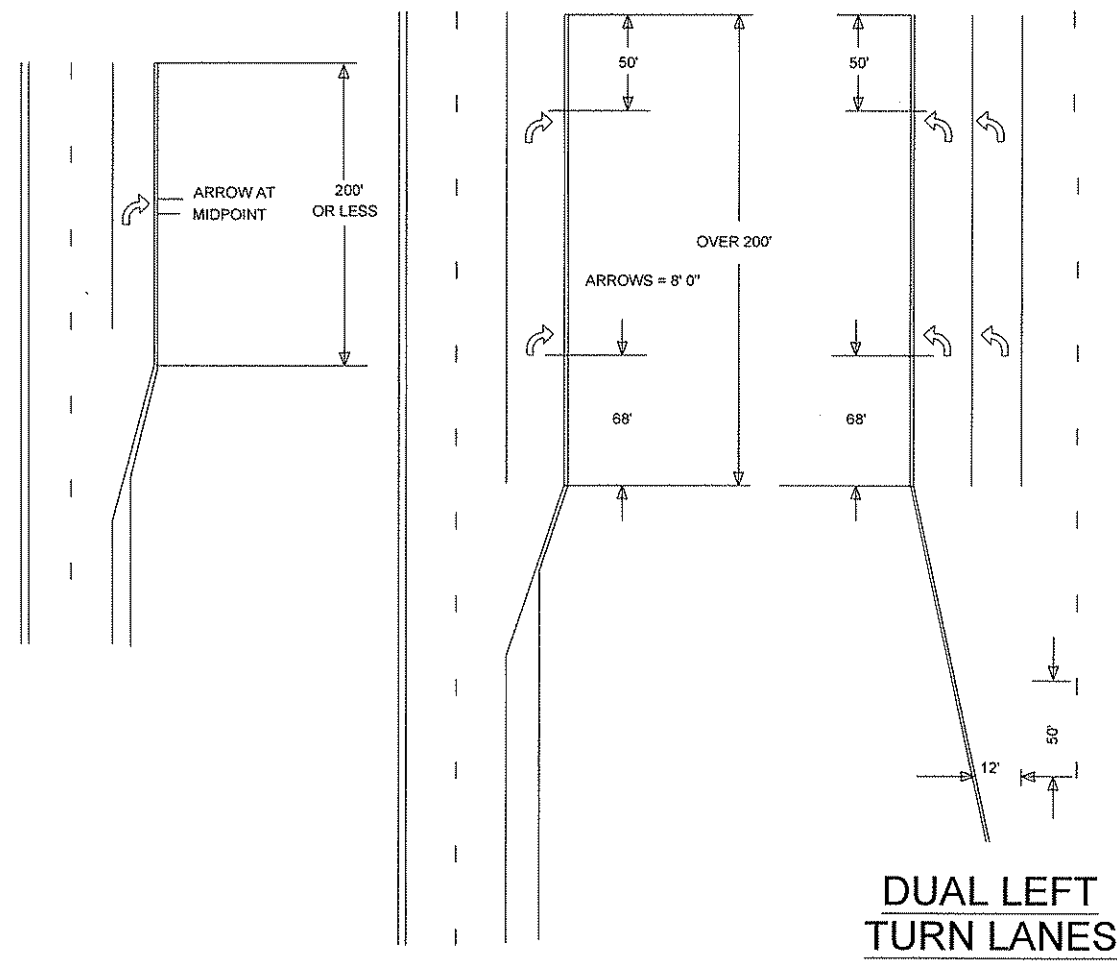


STATE PROJECT NO. \_\_\_\_\_  
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 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-10-04

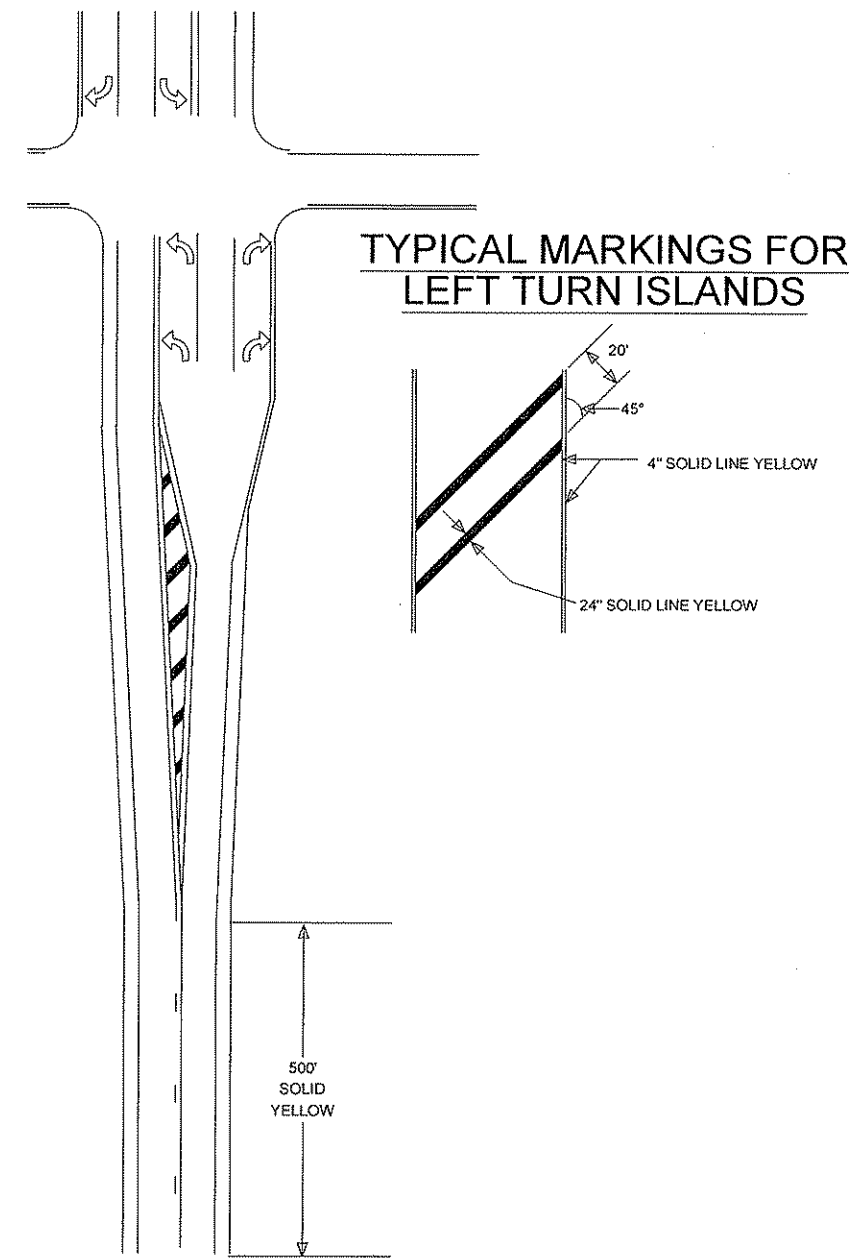
CSAH 4  
 TEMPORARY SIGNING  
 PERMANENT STRIPING  
 AND PAVEMENT MESSAGES

Sheet 10 of 14 Sheets

**TYPICAL MESSAGE PLACEMENT  
FOR TURN LANES**



**TYPICAL MARKINGS FOR  
LEFT TURN ISLANDS**



NO	DATE	BY	CKD	APPR	REVISION

NAME: T:\Traffic\Dwg\CSAH 4 (49th Ave)\Sign&Stripe\_Details.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 CADENHEB

SIGNATURE: *Charles Cadeneb*

DATE: 4/8/11 LICENSE NO. 40416

DRAWN BY MTH DATE 3-02-11

DESIGN BY MTH DATE 3-02-11

CHECKED BY JR DATE 3-02-11



**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_

STATE PROJECT NO. \_\_\_\_\_

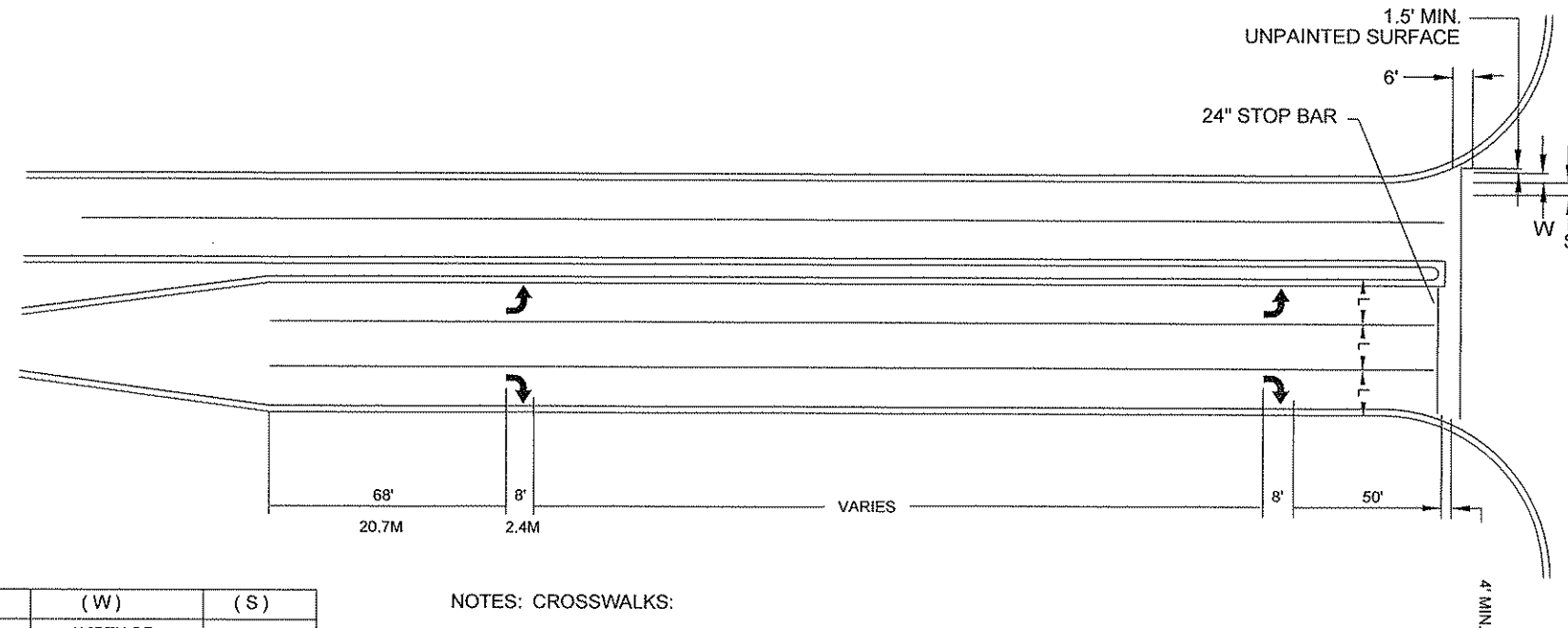
STATE PROJECT NO. \_\_\_\_\_

COUNTY PROJECT NO. 11-10-04

SIGNING & STRIPING DETAILS

Sheet 11 of 14 Sheets

## 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 RAMP 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' (3.3mm) 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	CKD	APPR	REVISION

NAME: I:\Traffic\Dwg\CSAH 4 (49th Ave)\Sign&Stripe\_Details.dwg

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PRINT NAME: CHARLES CADENHEAD  
 SIGNATURE: *Charles Cadenhead*  
 DATE: 4/8/11 LICENSE NO. 40416

DRAWN BY MTH DATE 3-02-11

DESIGN BY MTH DATE 3-02-11

CHECKED BY JR DATE 3-02-11

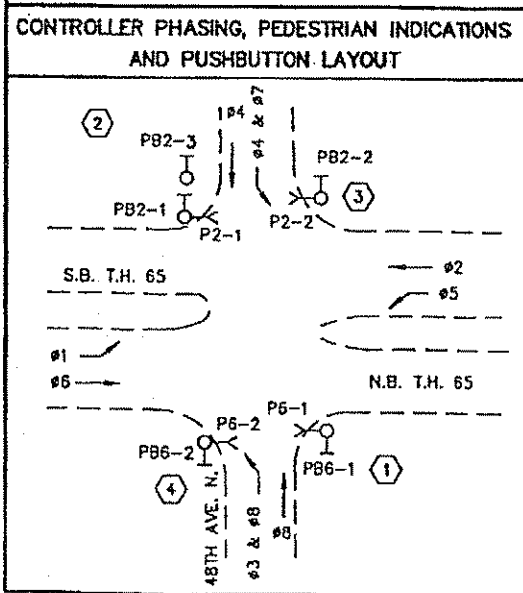
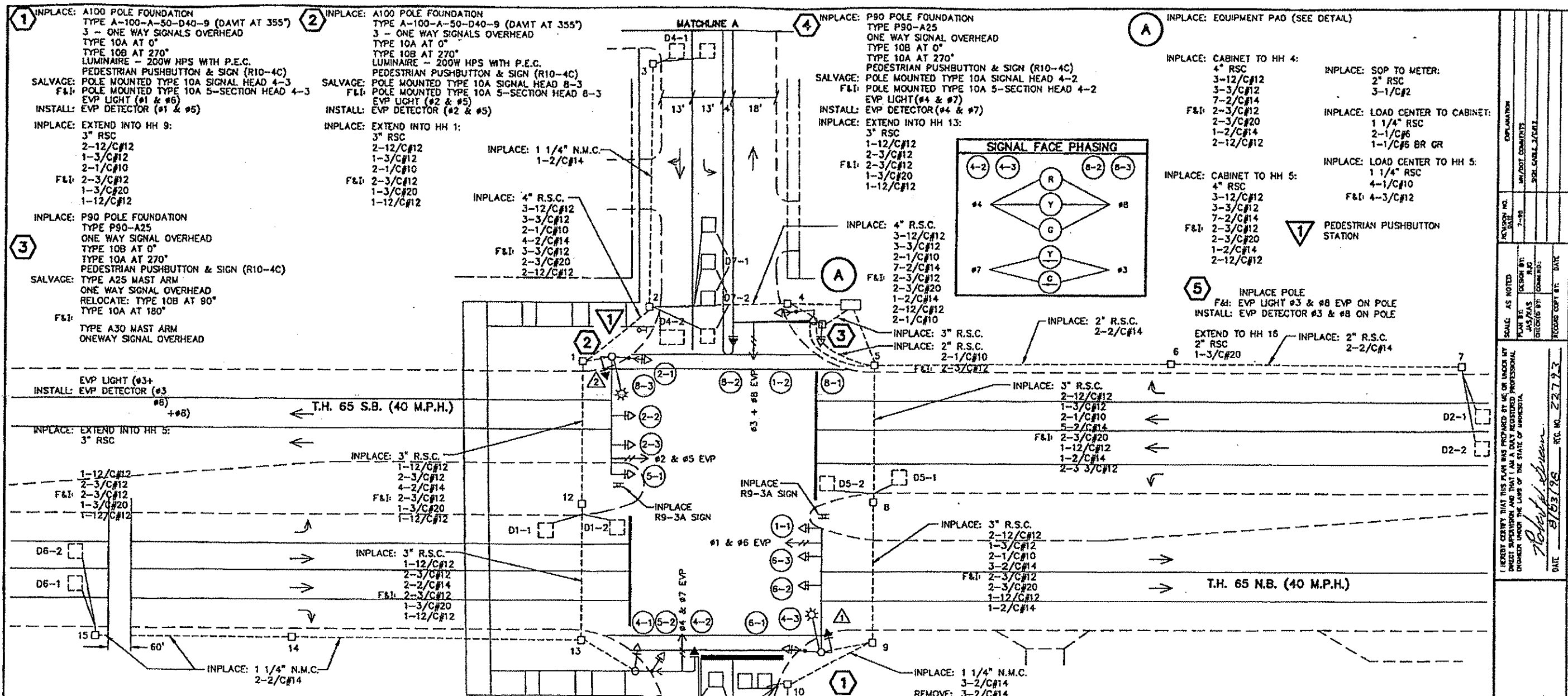


**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE PROJECT NO. \_\_\_\_\_  
 STATE PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-10-04

SIGNING & STRIPING DETAILS

Sheet 12 of 14 Sheets



LOOP DETECTORS		
NUMBER	SIZE (FT)	LOCATION**
D1-1, D1-2	6 X 6	5 & 35
D2-1, D2-2	6 X 6	280
D4-1	2-6 X 6	120
D4-2	6 X 10	5
D5-1, D5-2	6 X 6	5 & 35
D6-1, D6-2	6 X 6	280
D8-1	6 X 6	125
D8-2	6 X 10	5 & 15
D8-3	6 X 6	5 & 15
D3-1	2-6 X 6	50
D7-1	2-6 X 6	20 & 50
D3-2	2-6 X 6	5 & 35
D7-2	6 X 6	35
(INPLACE)	6 X 6	5

\* DENOTES NEW LOOP DETECTOR  
 \*\* LOCATION = DISTANCE IN FEET FROM CROSSWALK OR STOP BAR TO FRONT OF LOOP DETECTOR.

**SIGNAL SYSTEM OPERATION**  
 THE SIGNAL SYSTEM FLASH MODE IS ALL RED.  
 PHASES 1 & 5 ARE PROTECTED LEFT TURNS.  
 PHASES 2 & 6 ARE ON VEHICLE & PEDESTRIAN RECALL.  
 PHASES 3 & 7 ARE PROTECTED/PERMISSIVE LEFT TURNS.

SYSTEM ID: 21153  
 METER ADDRESS:  
 S.E. QUADRANT OF  
 T.H. 65 AND 49TH AVE.

SIGNAL FACES					
ALL INDICATIONS SHALL BE 12"					
SIGNAL FACE	LED	R	Y	G	LED
1-1					← ← ←
2-1, 2-2, 2-3	●	○	○		
4-1					← ← ←
5-1, 5-2					← ← ←
6-1, 6-2, 6-3	●	○	○		
4-2, 4-3					← ← ←
8-2, 8-3	●	○	○		
8-1					← ← ←
1-2					← ← ←

- NOTES:**
- 1.) REVISION DATE: 5/98.
  - 2.) ALL PEDESTRIAN INDICATIONS SHALL BE ONE-SECTION HAND/WALKING PERSON INDICATION. THE SYMBOL SHALL BE ILLUMINATED WITH PORTLAND ORANGE LED'S. (SEE SPECIAL PROVISIONS).
  - 3.) ALL YELLOW AND GREEN VEHICLE SIGNAL FACES SHALL HAVE GLASS LENSES.
  - 4.) ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS.
  - 5.) SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS.
  - 6.) EXACT LOCATION OF HANDHOLES, POLES, LOOP DETECTORS AND CABINET SHALL BE DETERMINED BY MnDOT TRAFFIC OFFICE PERSONNEL.
  - 7.) A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE AND CONDUIT OUTLET BODY FOR EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE INSTALLED 4' FROM THE END OF POLES 1, 2, 3 & 4.
  - 8.) CONTRACTOR SHALL COORDINATE CABLE INSTALLATION AND CABINET HOOKUP WITH MnDOT.
  - 9.) INSTALL CITY FURNISHED EVP DETECTORS ON ALL 4 ARMS. MAKE NECESSARY CONNECTIONS.
  - 10.) FOR VEHICLE INDICATIONS THAT WILL REMAIN INPLACE, REPLACE RED BALL OR ARROW WITH CITY FURNISHED RED LED'S.
  - 11.) REMOVE WOOD POLE LUMINAIRE IN NE QUADRANT.
  - 12.) CONTRACTOR SHALL PAINT SIGNAL POLES, MAST ARMS & SIGNAL PEDESTALS THAT ARE TO REMAIN INPLACE. SEE SPECIAL PROVISIONS.
  - 13.) REMOVE AND REPLACE EXISTING CHAIN LINK FENCE IN MEDIAN (APPROXIMATELY 600 FT.)

**ANOKA COUNTY  
HIGHWAY DEPT.**

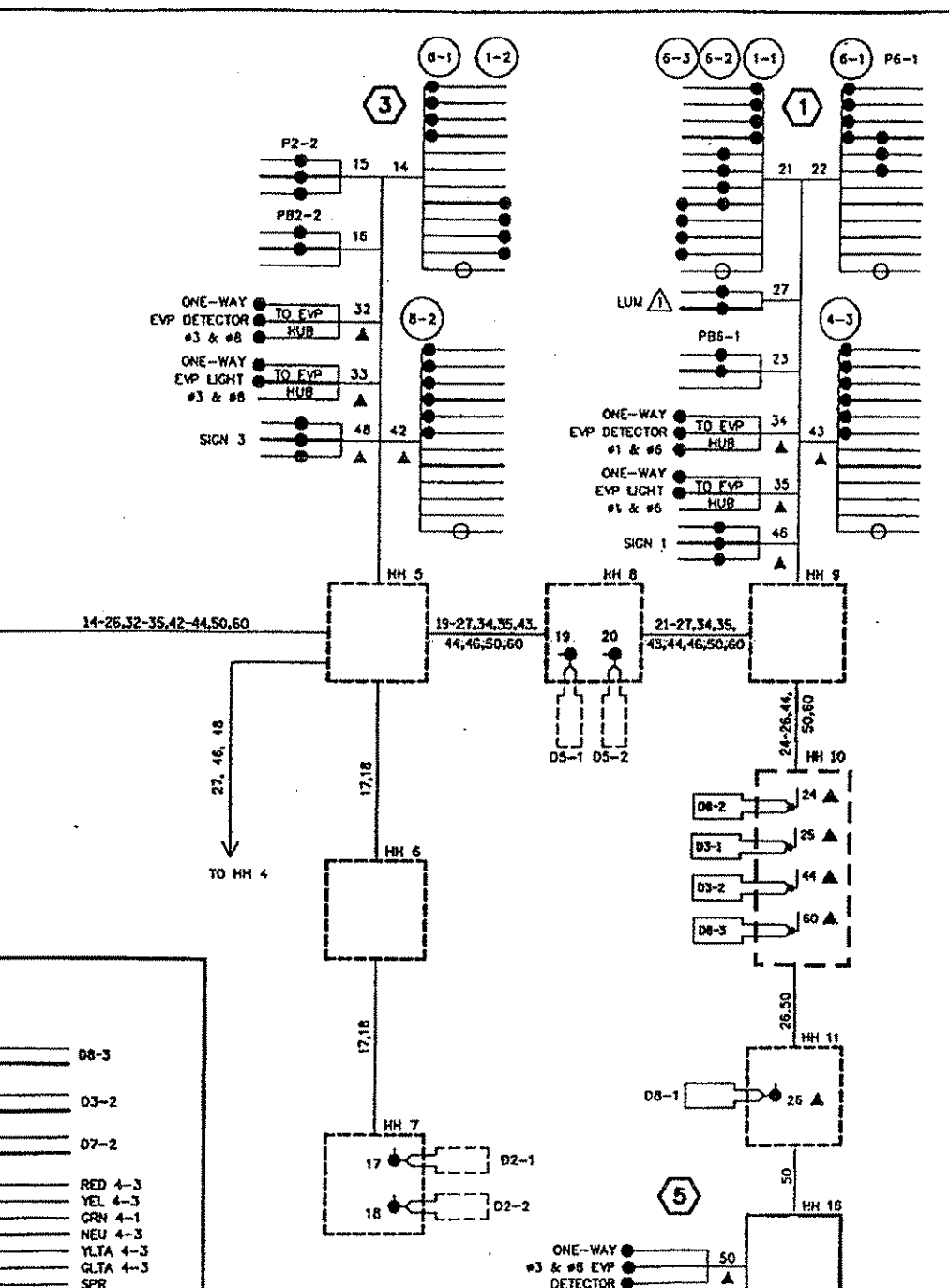
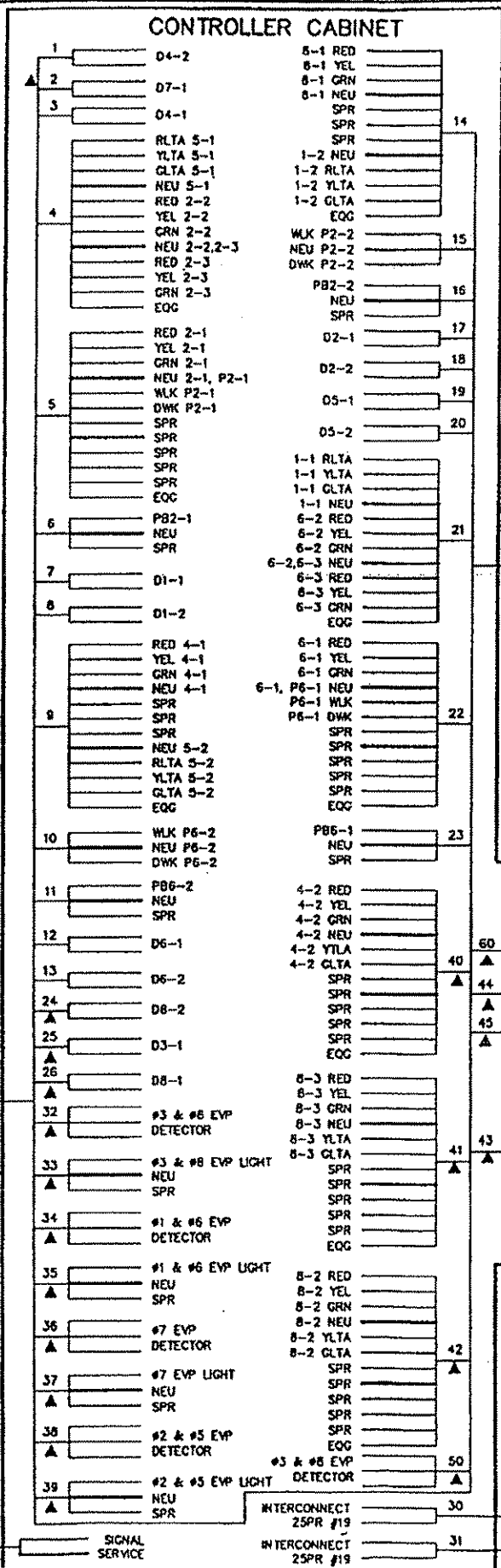
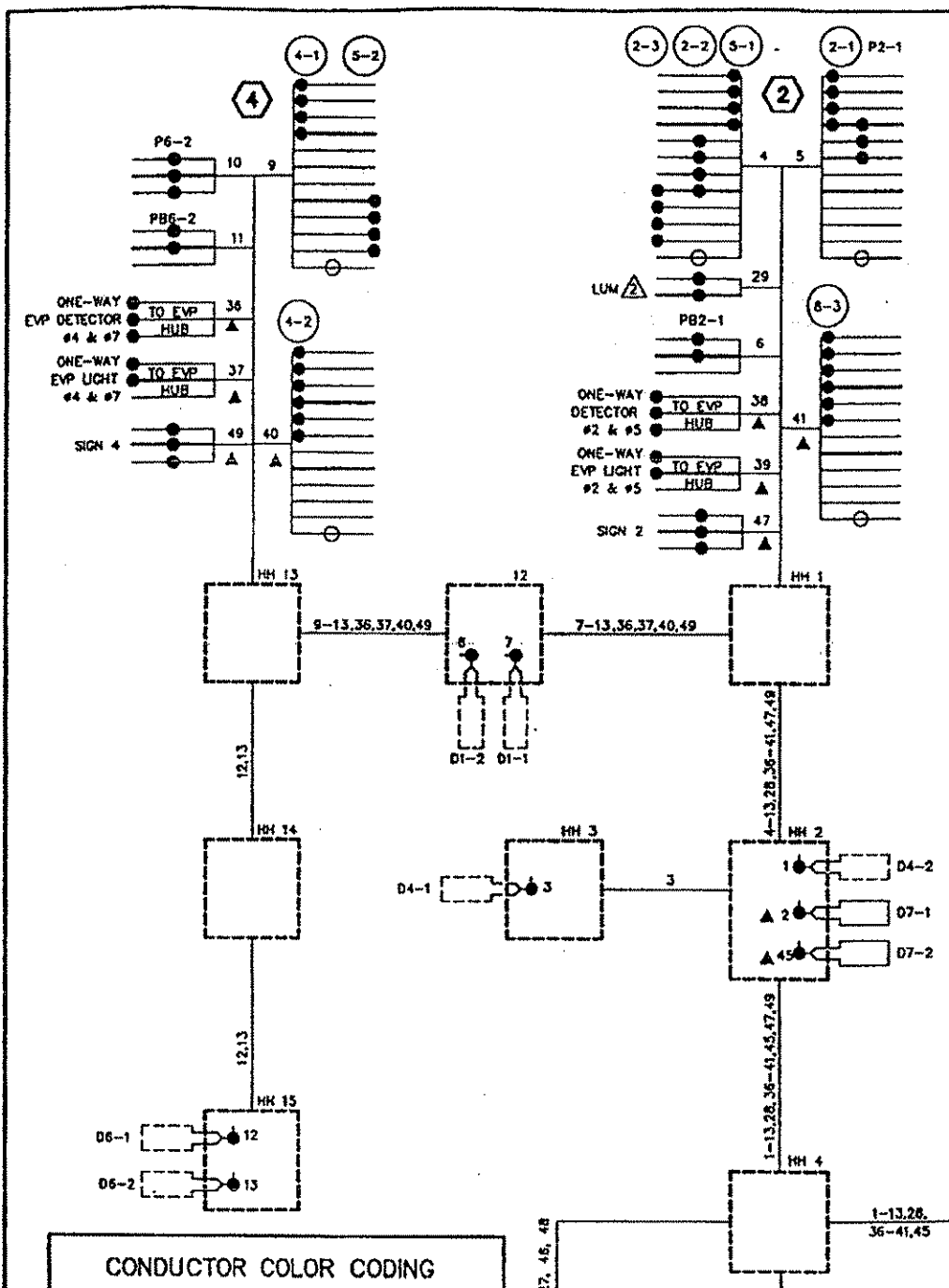
STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-10-04

MISCELLANEOUS SIGNAL  
DETAILS

Sheet 13 of 14 Sheets

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: 8/13/26 REG. NO. 22793  
 BRW  
 A DAMES & MOORE GROUP COMPANY

DRAWING NAME: STSK-BUILDING PLOT DATE: 7-2-98



### CONDUCTOR COLOR CODING

R	OR	O
BL	WH OR YEL	BLK OR BL
WH	BLK	R
R/BLK	2/C #14	BLK
O/BLK	2/C #14	CLR
BL/BLK	2-1/C #6	BLK
WH/BLK	2-1/C #6	WH
BLK	2-1/C #10	R
BLK/WH	2-1/C #10	WH
G/BLK		
G		

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED

### LOAD CENTER

46	LHT	NEU	SIGN 1
47	LHT	NEU	SIGN 2
48	LHT	NEU	SIGN 3
49	LHT	NEU	SIGN 4
27	LUM		
28	LUM		

**NOTE:**  
 1) ▲ = NEW CABLE, ALL OTHERS ARE INPLACE.  
 2) REVISION DATE: 5/98.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-10-04

MISCELLANEOUS SIGNAL DETAILS  
 Sheet 14 of 14 Sheets

DATE: 7/2/98  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 PROJECT NO. 11-10-04  
 SHEET NO. 19 OF 50

