

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 _____
- INDEX MAP _____

MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

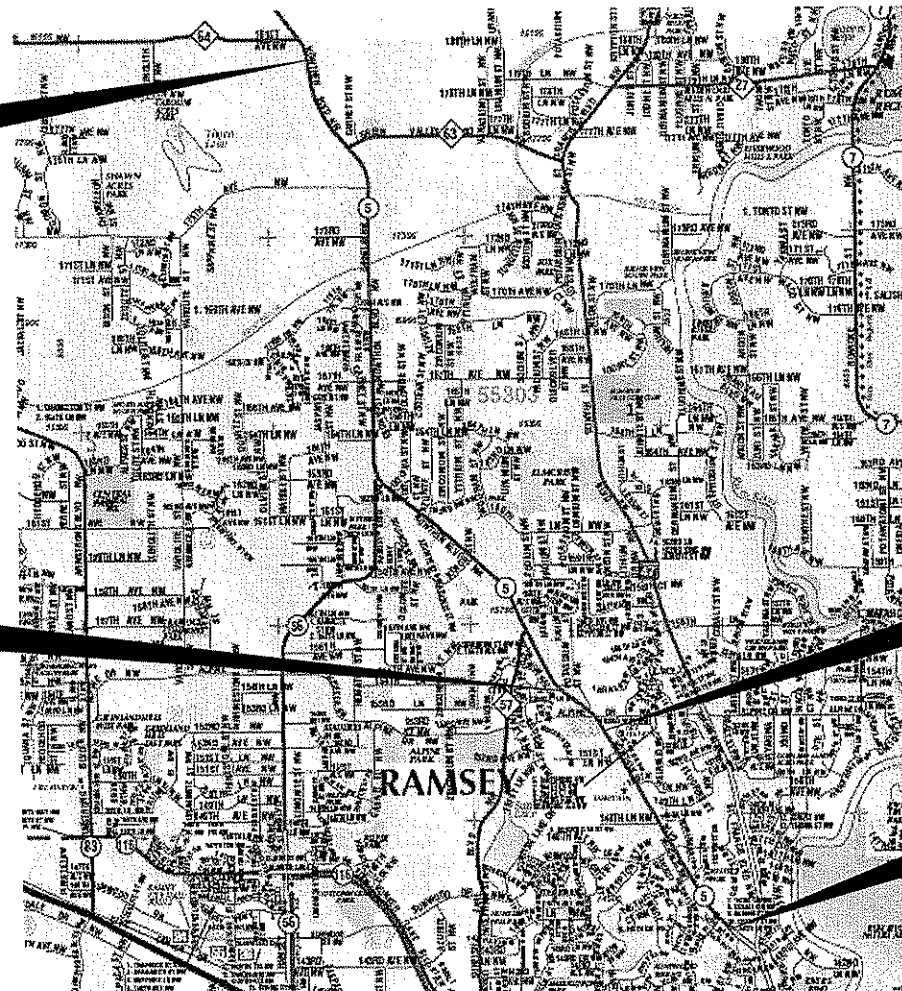
CONSTRUCTION PLAN FOR _____ RECLAIM AND OVERLAY, 2' WIDENING FOR RTL / BYPASSES, AND ADA IMPROVEMENTS

LOCATED ON CSAH 5 FROM 100' SOUTH OF IODINE ST NW TO 350' SOUTH OF CR 64

SP 002-605-019

GROSS LENGTH 27700 FEET 5.246 MILES
 BRIDGES-LENGTH 0.00 FEET 0.000 MILES
 EXCEPTIONS-LENGTH 2435 FEET 0.461 MILES
 NET LENGTH 25265 FEET 4.785 MILES

CITY OF RAMSEY

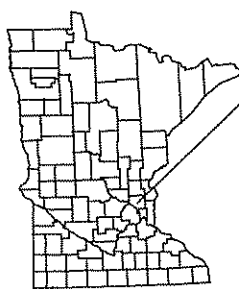


END CONSTRUCTION SP 002-605-019
CSAH 5 NB STA. 287+00

END EXCEPTION
CSAH 5 NB STA. 88+75

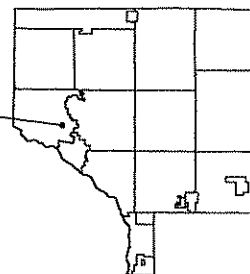
BEGIN EXCEPTION
CSAH 5 NB STA. 64+40

BEGIN CONSTRUCTION SP 002-605-019
CSAH 5 NB STA 10+00



PROJECT LOCATION

CITY OF RAMSEY
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
RAMSEY SECTIONS 3, 10, 14, 15, 23, 25, 26
RAMSEY TOWNSHIP T32 NORTH
RAMSEY RANGE R25 WEST



MINN. PROJ. NO. _____

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
3	CALCULATIONS FOR RIGHT TURN & BYPASS LANES
4 - 6	CONSTRUCTION TABS
7 - 8	TYPICAL SECTIONS
9 - 12	DETAILS
13 - 22	CONSTRUCTION PLAN
23 - 36	SIGNING AND STRIPING PLAN
37 - 38	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

THIS PLAN CONTAINS 38 SHEETS

DESIGN DESIGNATION

ESAL 20	890,830
R VALUE	50
ADT (2009) =	6445
Proj. ADT (2029) =	9667
Proj. HCADT (2029) =	608
Soil Factor	NA
10 TON DESIGN	

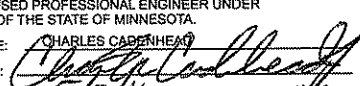
Functional Classification	A-MINOR ARTERIAL
No. of Traffic Lanes	2
No. of Parking Lanes	0
Design Speed	55 MPH
Based on Stopping Sight Distance	
Height of eye	3.5'
Height of object	2.0'
Design Speed not achieved at:	
STA. --- TO STA. ---	MPH ---

Approved  5/3/2011
ANOKA COUNTY ENGINEER

REVIEWED FOR COMPLIANCE WITH STATE AND FEDERAL AID RULES/POLICY  5/4/2011
DISTRICT STATE AID ENGINEER

APPROVED FOR STATE AND FEDERAL AID FUNDING  5/4/2011
STATE AID ENGINEER

NO	DATE	BY	CKD	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
 SIGNATURE: 
 DATE: 5/3/11 LICENSE NO. 40116

DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: 5/2/2011



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

TITLE SHEET
 Sheet 1 of 38 Sheets

STATEMENT OF ESTIMATED QUANTITIES						
ITEM NO.	ITEM	TAB	NOTE NO.	UNIT	TOTAL EST. QUANT.	PARTICIPATING
2021.501	MOBILIZATION			LUMP SUM	1	1
2104.503	REMOVE CONCRETE DRIVEWAY PAVEMENT	A	1	SQ YD	185	185
2104.505	REMOVE BITUMINOUS PAVEMENT	B	1, 21	SQ YD	105	105
2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	C	1	LIN FT	126	126
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	D	1, 22	LIN FT	56	56
2105.602	CONSTRUCT TURN LANE		12	EACH	15	15
2105.602	CONSTRUCT BY-PASS LANE		12	EACH	9	9
2105.609	TOPSOIL BORROW	E	23	TONS	28	28
2123.503	MOTOR GRADER		2	HOUR	96	96
2123.521	PNEUMATIC TIRED ROLLER		2	HOUR	96	96
2130.501	WATER			M-GAL	335	335
2211.501	AGGREGATE BASE CLASS 5	F	3	TON	4321	4321
2221.501	AGGREGATE SHOULDERING CLASS 5	G	4	TON	962	962
2232.501	MILL BITUMINOUS SURFACE (2")	H	1	SQ YD	751	751
2331.604	BITUMINOUS PAVEMENT RECLAMATION			SQ YD	126203	126203
2357.502	BITUMINOUS MATERIAL FOR TACK COAT			GALLON	5155	5155
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4, F)	I	17	TON	14837	14837
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4, B)	J	18	TON	10922	10922
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4, B)	K	13	TON	738	738
2521.501	4" CONCRETE WALK	L	15	SQ FT	1050	1050
2521.501	6" CONCRETE WALK	M	16	SQ FT	1666	1666
2531.501	CONCRETE CURB AND GUTTER DESIGN B418	N	19	LIN FT	126	126
2531.618	TRUNCATED DOMES	O	20	SQ FT	112	112
2540.602	INSTALL MAIL BOX SUPPORT		8	EACH	79	79
2563.601	TRAFFIC CONTROL		5,6,7,9	LUMP SUM	1	1
2564.531	FURNISH AND INSTALL SIGN PANEL TYPE C		11	SQ FT	71.13	71.13
2573.550	EROSION CONTROL SUPERVISER		14	LUMP SUM	1	1
2573.602	CULVERT END PROTECTION		1,10	EACH	55	55
2575.501	SEEDING	P	23	ACRE	0.35	0.35
2575.502	SEED MIXTURE 250	Q	23	LBS	24.50	24.50
2575.531	FERTILIZER TYP 3	R	23	ACRE	122.50	122.50
2581.501	REMOVABLE PREFORMED PLASTIC MARKING		5	LIN FT	2021	2021
2582.602	PAVT MSSG (LT ARROW) PREF THERMOPLASTIC		7	EACH	2	2
2582.502	24" WHITE PREF THERMOPLASTIC		7	LIN FT	48	48
2582.502	24" YELLOW PREF THERMOPLASTIC		7	LIN FT	800	800
2582.502	4" SOLID LINE WHITE - EPOXY		7	LIN FT	54536	54536
2582.502	4" BROKEN LINE WHITE-EPOXY		7	LIN FT	440	440
2582.502	4" SOLID LINE YELLOW - EPOXY		7	LIN FT	10067	10067
2582.502	4" BROKEN LINE YELLOW-EPOXY		7	LIN FT	2520	2520
2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY		7	LIN FT	13666	13666
2582.503	3 X 6 ZEBRA CROSSWALK PREF PLASTIC		7	SQ FT	288	288
2582.602	PAVT MSSG (LT ARROW) PREF THERMOPLASTIC		7	EACH	2	2

INDEX OF TABULATION CHARTS		
TAB.	DESCRIPTION	SHEET NO.
A	REMOVE CONCRETE DRIVEWAY PAVEMENT	4
B	REMOVE BITUMINOUS PAVEMENT	4
C	SAW CONCRETE PAVEMENT (FULL DEPTH)	4
D	SAW BITUMINOUS PAVEMENT (FULL DEPTH)	4
E	TOPSOIL BORROW	4
F	AGGREGATE BASE CLASS 5	4
G	AGGREGATE SHOULDERING CLASS 5	4
H	MILL BITUMINOUS SURFACE 2" (JOINTS)	5
I	TYPE SP 12.5 WEARING COURSE MIX (4, F)	5
J	TYPE SP 12.5 WEARING COURSE MIX (4, B)	5
K	TYPE SP 12.5 WEARING COURSE MIX (4, B)	6
L	4" CONCRETE PAVEMENT	6
M	6" CONCRETE PAVEMENT	6
N	CURB AND GUTTER DESIGN B418	6
O	TRUNCATED DOMES	6
P	SEEDING	6
Q	SEED MIXTURE 250	6
R	FERTILIZER TYPE 3	6

THE FOLLOWING STANDARD PLATE APPROVED BY THE DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

STANDARD PLATES	
NO.	DESCRIPTION
7036 G	PEDESTRIAN CURB RAMP
7038 A	TRUNCATED DOMES
7100 H	CURB AND GUTTER DESIGN B418
8000 I	STANDARD BARRICADES

NOTES	
1	LOCATION TO BE DETERMINED BY ENGINEER.
2	INCLUDES TIME TO REMOVE EXCESS RECLAIMED MATERIAL AT BEG. AND END OF RECLAIM AREAS FOR A SMOOTH TRANSITION TO EXISTING BITUMINOUS.
3	LEVELING 10' SHOULDERS UP TO MAINLINE BASE COURSE , PRIOR TO WEAR.
4	SHOULDERING CLASS 5 FOR FINISHED 1.5' GRVL. SHLDR. AND GRAVEL ENTRANCES.
5	CL YLW SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON EACH LIFT (MUST BE APPLIED BEFORE CONTRACTOR LEAVES FOR THE DAY).
6	DO NOT PASS, PASS WITH CARE, NO CENTER STRIPE AND BUMP/BUMP AHEAD SIGNS - TO BE INPLACE DURING RECLAIM / PAVING OPERATIONS.
7	PERMANENT MARKINGS TO BE IN PLACE WITHIN 72 HOURS OF FINAL MAINLINE PAVING.
8	MAILBOXES TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION. MAILBOX MATERIALS INCIDENTAL TO INSTALLATION.
9	ALL TRAFFIC CONTROL METHODS SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
10	INSTALL 1 PER CULVERT INSIDE RTL / BYPASS WIDENING AREAS - AT THE HIGH INVERT.
11	FURNISH AND INSTALL SIGN PANEL TYPE C , MOUNTING POSTS ARE INCIDENTAL TO ITEM.
12	INCLUDES TIME AND MATERIALS TO CONSTRUCT. - COMMON EX., SELECT GRANULAR, AGG. BASE CL-5, TOPSOIL, MOTOR GRADER HRS, DOZER HRS , PNEUMATIC TIRED ROLLER HRS, SILT FENCE, EROSION CONTROL BLANKET TYPE 3, SEEDING, SEED TYPE 250 AND FERT. TYPE 3. EST. CALCS AND QTYS FOR THIS ITEM CAN BE FOUND ON PAGE 3, CALCULATIONS FOR RIGHT TURN & BYPASS LANES. NOTE - BITUMINOUS BASE AND WEAR FOR RTL / BYPASS IS INCLUDED IN MAIN SEQ.
13	STREET APPROACH AND DRIVEWAY WEAR. (4, B)
14	THE CONTRACTOR SHALL PROVIDE A CERTIFIED EROSION CONTROL SUPERVISER TO DIRECT CONTRACTOR AND SUBCONTRACTOR - EROSION/SEDIMENT CONTROL OPERATIONS, AND ENSURE COMPLIANCE WITH APPLICABLE PERMITS AND REGULATIONS.
15	4" CONCRETE FOR CONCRETE WALK SURROUNDING TRUNCATED DOMES, SEE TABS.
16	6" CONCRETE FOR DRIVEWAYS, SEE TABS.
17	MAINLINE WEAR COURSE (2" 4, F) TOP WEARING SURFACE.
18	MAINLINE WEAR COURSE (2" 4, B) PLACED ON RECLAIMED SURFACE.
19	CONCRETE CURB AND GUTTER TO BE INSTALLED IN CONJUNCTION WITH TRUNCATED DOME INSTALLATION, SEE DETAIL SHEET 11.
20	TRUNCATED DOMES TO BE INSTALLED IN CONJUNCTION WITH CONCRETE CURB DESIGN B418, SEE DETAIL SHEET 11.
21	BITUMINOUS REMOVAL AT TRUNCATED DOME LOCATIONS , SEE TABS.
22	SAWCUT BITUMINOUS PATH FULL DEPTH AT TRUNCATED DOME LOCATIONS, SEE TABS.
23	RE-ESTABLISH DISTURBED AREA ADJACENT TO TRUNCATED DOME CONSTRUCTION.

BASIS OF PLANNED QUANTITIES		
2105.602	CONSTRUCT TURN LANE	SEE PLAN DETAILS PAGE 3 FOR CALCS
2105.602	CONSTRUCT BY-PASS LANE	SEE PLAN DETAILS PAGE 3 FOR CALCS
2105.609	TOPSOIL BORROW	CU YDS * 1.8 = TONS
2123.503	MOTOR GRADER	20HR +/- PER MI. OF JOB & 2HR PER RTL / BYPASS
2123.521	PNEUMATIC TIRED ROLLER	20HR +/- PER MI. OF JOB & 2HR PER RTL / BYPASS
2130.501	WATER	70M-GAL/MILE
2211.501	AGGREGATE BASE CLASS 5	CU YDS * 1.8 = TONS
2221.501	AGGREGATE SHOULDERING CLASS 5	CU YDS * 1.8 = TONS
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	.05 GAL / SQ YD
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4, F)	115 LBS/SQYD/IN THICKNESS
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4, B)	115 LBS/SQYD/IN THICKNESS
2575.502	SEED MIXTURE 250	70 LBS / ACRE
2575.531	FERTILIZER TYP 3	350 LBS / ACRE
2581.501	REMOVABLE PREFORMED PLASTIC MARKING	2' AT 50' INTERVALS

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5 (TH47-CR64)\Plan2 Seq.dgn 05/02/2011 8:12:19 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 CADEMHEAD
 SIGNATURE: *[Signature]*
 DATE: 5/3/11 LICENSE NO. 49416

DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: 5/2/2011



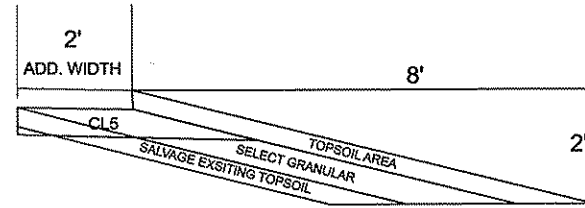
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

STATEMENT OF ESTIMATED QUANTITIES
 Sheet 2 of 38 Sheets

**NEW RTL / BYPASS WIDENING
2' WIDENING CALC.**

END AREA SQ FT



* NOTE CALC. BASED ON A EST. AVERAGE FINISHED DITCH DEPTH OF 2'

COMMON EX 6.22 SQ FT
SELECT GRANULAR 3.77 SQ FT
BASE CLASS 5 1.48 SQ FT
SHORT TOPSOIL 0.41 SQ FT

CU YDS PER 100'

COMMON EX 6.22 SQ FT X 100' = 622 CU FT / 27 = 23.03 CU YDS
SELECT GRANULAR 3.77 SQ FT X 100' = 377 CU FT / 27 = 13.96 CU YDS
BASE CLASS 5 1.48 SQ FT X 100' = 148 CU FT / 27 = 5.48 CU YDS
SHORT TOPSOIL 0.41 SQ FT X 100' = 41 CU FT / 27 = 1.52 CU YDS

**SUMMARY
PER 480' RTL LOC**

COMMON EX
23.03 CU YDS (PER 100') X 4.8 RTL = 110.57 CU YDS PER RTL

BASE CLASS 5
5.48 CU YDS (PER 100') X 4.8 RTL = 26.30 CU YDS X 1.8 = 47.34 TONS (CV)

SELECT GRANULAR
13.96 CU YDS (PER 100') X 4.8 RTL = 67.00 CU YDS X 1.8 = 120.61 TONS (CV)

SHORT TOPSOIL
1.52 CU YDS (PER 100') X 4.8 RTL = 7.30 CU YDS X 1.8 = 13.13 TONS (CV)

**SUMMARY
PER 620' BYPASS LOC**

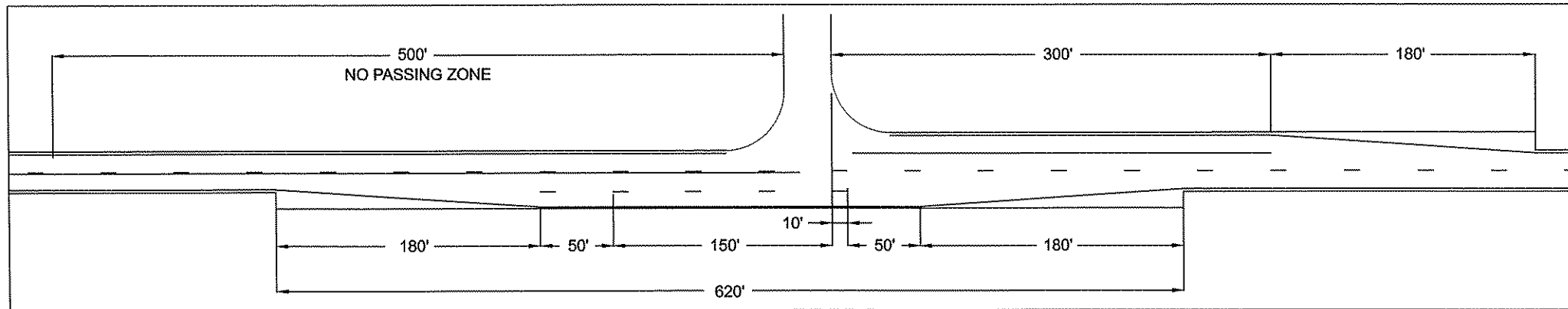
COMMON EX
23.03 CU YDS (PER 100') X 6.2 BYPASS = 142.78 CU YDS

BASE CLASS 5
5.48 CU YDS (PER 100') X 6.2 BYPASS = 33.97 CU YDS X 1.8 = 61.15 TONS (CV)

SELECT GRANULAR
13.96 CU YDS (PER 100') X 6.2 BYPASS = 86.55 CU YDS X 1.8 = 155.79 TONS (CV)

SHORT TOPSOIL
1.52 CU YDS (PER 100') X 6.2 BYPASS = 9.42 CU YDS X 1.8 = 16.96 TONS (CV)

RTL / BYPASS LAYOUT



RTL / BYPASS LOCATIONS

STREET	DIR.	BYPASS / RTL / LN. DROP	ADD. WIDTH NEEDED	LENGTH	COM EX CU YDS	SELECT GRANULAR TONS	CLASS 5 TONS	TOPSOIL TONS	GRADER HRS	DOZER HRS	ROLLER HRS	SILT FENCE LIN FT	SEEDING ACRE	SEED TYPE 350 LBS	BLANKET TYPE 3 SQ YDS	FERT. TYPE 3 LBS	
IODINE	SB	RTL	NONE														
146 TH	NB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
146TH	SB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
SUNWOOD	NB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
SUNWOOD	SB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
148 TH	NB	BYPASS	2.0	620.0	142.8	155.8	61.2	25.3	2.0	2.0	2.0	620.0	0.1	7.7	551.1	38.5	
148 TH	SB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
150 TH	NB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
SCHOOL ENT	SB	RTL	NONE														
CR 57	NB	BYPASS	2.0	620.0	142.8	155.8	61.2	25.3	2.0	2.0	2.0	620.0	0.1	7.7	551.1	38.5	
CR 57	SB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
XENON	NB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
XENON	SB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
AZURITE	NB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
AZURITE	SB	BYPASS	2.0	620.0	142.8	155.8	61.2	25.3	2.0	2.0	2.0	620.0	0.1	7.7	551.1	38.5	
COQUINA	NB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
COQUINA	SB	BYPASS	2.0	620.0	142.8	155.8	61.2	25.3	2.0	2.0	2.0	620.0	0.1	7.7	551.1	38.5	
CR 56	NB	BYPASS	2.0	620.0	142.8	155.8	61.2	25.3	2.0	2.0	2.0	620.0	0.1	7.7	551.1	38.5	
CR 56	SB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
164 TH	NB	BYPASS	2.0	620.0	142.8	155.8	61.2	25.3	2.0	2.0	2.0	620.0	0.1	7.7	551.1	38.5	
164 TH	SB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
165 TH	NB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
165 TH	SB	BYPASS	2.0	620.0	142.8	155.8	61.2	25.3	2.0	2.0	2.0	620.0	0.1	7.7	551.1	38.5	
167 TH	NB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
167 TH	SB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
170 TH	SB	RTL	NONE														
173 RD	NB	BYPASS	2.0	620.0	142.8	155.8	61.2	25.3	2.0	2.0	2.0	620.0	0.1	7.7	551.1	38.5	
173 RD	SB	RTL	2.0	480.0	110.6	120.6	47.3	19.6	2.0	2.0	2.0	480.0	0.1	6.3	426.7	31.5	
175 TH	NB	BYPASS	NONE														
175 TH	SB	RTL	NONE														
CR 63	NB	RTL	NONE														
CR 63	SB	BYPASS	2.0	620.0	142.8	155.8	61.2	25.3	2.0	2.0	2.0	620.0	0.1	7.7	551.1	38.5	
					EST. TOTALS	3164.7	3452.5	1355.1	561.5	52.0	52.0	52.0	13740.0	2.5	176.4	12213.2	862.0

ITEM	TURN LANE ITEMS INCLUDED IN ESTIMATE BY THE EACH	EST QTY	UNIT
2105.501/00010	COMMON EX	110.57	CU YDS
2105.522/00030	SELECT GRANULAR	120.61	TONS
2211.501/00050	AGG BASE CLASS 5	47.34	TONS
2105.609/00100	TOPSOIL	13.13	TONS
2123.503/00010	MOTOR GRADER	2.00	HRS
2123.509/00010	DOZER	2.00	HRS
2123.521/00010	PNEUMATIC-TIRED ROLLER	2.00	HRS
2573.502/00040	SILT FENCE MACHINE SLICED	480.00	LIN FT
2575.501/00010	SEEDING	0.09	ACRE
2575.502/00350	SEED MIXTURE 250 (RATE - 70 LBS PER ACRE)	6.30	POUND
2575.523/00013	EROSION CONTROL BLANKET CAT 3.	426.66	SQ YDS
2575.531/00030	FERTILIZER TYPE 3 (RATE - 350 LBS PER ACRE)	31.50	POUND
ITEM	BYPASS ITEMS INCLUDED IN ESTIMATE BY THE EACH	EST QTY	UNIT
2105.501/00010	COMMON EX	142.78	CU YDS
2105.522/00030	SELECT GRANULAR	155.79	TONS
2211.501/00050	AGG BASE CLASS 5	61.15	TONS
2105.609/00100	TOPSOIL	16.96	TONS
2123.503/00010	MOTOR GRADER	2.00	HRS
2123.509/00010	DOZER	2.00	HRS
2123.521/00010	PNEUMATIC-TIRED ROLLER	2.00	HRS
2573.502/00040	SILT FENCE MACHINE SLICED	620.00	LIN FT
2575.501/00010	SEEDING	0.11	ACRE
2575.502/00350	SEED MIXTURE 250 (RATE - 70 LBS PER ACRE)	7.70	POUND
2575.523/00013	EROSION CONTROL BLANKET CAT 3.	551.11	SQ YDS
2575.531/00030	FERTILIZER TYPE 3 (RATE - 350 LBS PER ACRE)	38.50	POUND

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5_(TH47-CR64)\Plan3 CALCULATIONS FOR RIGHT TURN & BYPASS LANES.dgn 7:47:27 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: 4/14/11 LICENSE NO. 40416

DRAWN BY: JF DATE: 3/1/2011
DESIGN BY: JF DATE: 3/1/2011
CHECKED BY: JO DATE: XXXX



STATE PROJECT NO. SP 002-605-019
PREVIOUSLY CONST. UNDER 02-605-01 (1972)
1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

CALCULATIONS FOR
RIGHT TURN & BYPASS LANES
Sheet 3 of 38 Sheets

A REMOVE CONCRETE DRIVEWAY PAVEMENT	
LOCATION	SQ YDS
15800 LT	19.8
16090 LT	40.3
16138 LT	23.2
16360 LT	17.6
16425 RT	23.5
17059 RT	18.1
17725 RT	30.2
17860 LT	14.8
TOTAL SQ YDS	185.4

B REMOVE BITUMINOUS PAVEMENT	
LOCATION	SQ YDS
SE QUAD SUNWOOD DR	15
NW QUAD SUNWOOD DR	15
NE QUAD SUNWOOD DR	15
SW QUAD 148 TH AVE	15
NW QUAD 148TH AVE	15
SCHOOL X-ING W.	15
SCHOOL X-ING E.	15
TOTAL SQ YDS	105

C SAW CONCRETE PAVEMENT (FULL DEPTH)	
LOCATION	LIN FT
15800 LT	16.02
16090 LT	18.95
16138 LT	15.33
16360 LT	11.38
16425 RT	11.55
17059 RT	11.52
17725 RT	22.73
17860 LT	18.05
TOTAL LIN FT	125.53

D SAW BITUMINOUS PAVEMENT FULL DEPTH	
LOCATION	LIN FT
SE QUAD SUNWOOD DR	8
NW QUAD SUNWOOD DR	16
NE QUAD SUNWOOD DR	8
SW QUAD 148 TH AVE	8
NW QUAD 148TH AVE	8
SCHOOL X-ING W.	8
SCHOOL X-ING E.	8
TOTAL SQ YDS	64

E TOPSOIL BORROW	
LOCATION	TONS
SE QUAD SUNWOOD DR	4
NW QUAD SUNWOOD DR	4
NE QUAD SUNWOOD DR	4
SW QUAD 148 TH AVE	4
NW QUAD 148TH AVE	4
SCHOOL X-ING W.	4
SCHOOL X-ING E.	4
TOTAL TONS	28

F AGGREGATE BASE CLASS 5								
MAINLINE	STATION	STATION	LENGTH	WIDTH	2" DEPTH	CU YDS	TONS	
LNB	10+00	64+40	5440.0	11.5	0.17	393.9	709.01	
LNB	88+75	287+00	19825.0	11.5	0.17	1435.5	2583.86	
LSB	10+00	64+40	5440.0	11.5	0.17	393.9	709.01	
LSB	88+75	287+00	19825.0	11.5	0.17	1435.5	2583.86	
SUB TOTAL							6585.74	
SUBTRACT RTL/BYPASS	LOCATION		LENGTH	WIDTH	2" DEPTH	CU YDS	TONS	
LANE DROP	NB		450.0	11.5	0.17	32.6	58.65	
IODINE ST	SB RTL		480.0	11.5	0.17	34.8	62.56	
146TH AVE NWE	SB RTL		480.0	11.5	0.17	34.8	62.56	
146TH AVE NWW	NB RTL		480.0	11.5	0.17	34.8	62.56	
SUNWOOD DR E	SB RTL		480.0	11.5	0.17	34.8	62.56	
SUNWOOD DR W	NB RTL		480.0	11.5	0.17	34.8	62.56	
148TH LN NW	NB BYPASS		620.0	11.5	0.17	44.9	80.81	
148TH LN NW	SB RTL		480.0	11.5	0.17	34.8	62.56	
150TH LN	NB RTL		480.0	11.5	0.17	34.8	62.56	
SCHOOL ENT	SB RTL		507.0	11.5	0.17	36.7	66.08	
SUNFISH BLVD CR 57	NB BYPASS		763.3	11.5	0.17	55.3	99.48	
SUNFISH BLVD CR 57	SB RTL		480.0	11.5	0.17	34.8	62.56	
XEON ST NWE	NB RTL		480.0	11.5	0.17	34.8	62.56	
XEON ST NWW	SB RTL		480.0	11.5	0.17	34.8	62.56	
AZURITE ST NW	NB RTL		480.0	11.5	0.17	34.8	62.56	
AZURITE ST NW	SB BYPASS		620.0	11.5	0.17	44.9	80.81	
COQUINA ST NW	NB RTL		480.0	11.5	0.17	34.8	62.56	
COQUINA ST NW	SB BYPASS		620.0	11.5	0.17	44.9	80.81	
RAMSEY BLVD CR 56	NB BYPASS		620.0	11.5	0.17	44.9	80.81	
RAMSEY BLVD CR 56	SB RTL		480.0	11.5	0.17	34.8	62.56	
164TH LN NW	NB BYPASS		620.0	11.5	0.17	44.9	80.81	
164TH LN NW	SB RTL		480.0	11.5	0.17	34.8	62.56	
165TH LN NW	NB RTL		480.0	11.5	0.17	34.8	62.56	
165TH LN NW	SB BYPASS		620.0	11.5	0.17	44.9	80.81	
167TH NWE	NB RTL		480.0	11.5	0.17	34.8	62.56	
167TH NWW	SB RTL		480.0	11.5	0.17	34.8	62.56	
170TH AVE	SB RTL		480.0	11.5	0.17	34.8	62.56	
173RD AVE NW	NB BYPASS		620.0	11.5	0.17	44.9	80.81	
173RD AVE NW	SB RTL		480.0	11.5	0.17	34.8	62.56	
175TH AVE NW	NB BYPASS		620.0	11.5	0.17	44.9	80.81	
175TH AVE NW	SB RTL		480.0	11.5	0.17	34.8	62.56	
GRN VALLEY RD CR 63	NB RTL		480.0	11.5	0.17	34.8	62.56	
GRN VALLEY RD CR 63	SB BYPASS		620.0	11.5	0.17	44.9	80.81	
SUBTOTAL							6585.74	
SUBTRACT RTL / BYPASS							2265.23	
TOTAL TONS							4320.51	

G AGGREGATE SHOULDERING CLASS 5 (INC GRVL ENT.)							
MAINLINE	STATION	STATION	LENGTH	WIDTH	2" DEPTH	CU YDS	
LNB	10+00	64+40	5440.0	1.5	0.17	51.4	
LNB	88+75	287+00	19825.0	1.5	0.17	187.2	
LSB	10+00	64+40	5440.0	1.5	0.17	51.4	
LSB	88+75	287+00	19825.0	1.5	0.17	187.2	
SUB TOTAL CU YDS						477.2	
SUB. ST. OPENINGS			OPENING	SHLDR W.	2" DEPTH	CU YDS	
IODINE ST			100.0	1.5	0.17	0.9	
146TH AVE NWE			100.0	1.5	0.17	0.9	
146TH AVE NWW			100.0	1.5	0.17	0.9	
SUNWOOD DR E			100.0	1.5	0.17	0.9	
SUNWOOD DR W			100.0	1.5	0.17	0.9	
148TH LN NW			100.0	1.5	0.17	0.9	
150TH LN			100.0	1.5	0.17	0.9	
SUNFISH BLVD CR 57			100.0	1.5	0.17	0.9	
157TH LN NW			100.0	1.5	0.17	0.9	
XEON ST NWE			100.0	1.5	0.17	0.9	
XEON ST NWW			100.0	1.5	0.17	0.9	
AZURITE ST NW			100.0	1.5	0.17	0.9	
COQUINA ST NW			100.0	1.5	0.17	0.9	
RAMSEY BLVD CR 56			100.0	1.5	0.17	0.9	
164TH LN NW			100.0	1.5	0.17	0.9	
165TH LN NW			100.0	1.5	0.17	0.9	
167TH NWE			100.0	1.5	0.17	0.9	
167TH NWW			100.0	1.5	0.17	0.9	
170TH AVE			100.0	1.5	0.17	0.9	
173RD AVE NW			100.0	1.5	0.17	0.9	
175TH AVE NW			100.0	1.5	0.17	0.9	
GRN VALLEY RD CR 63			100.0	1.5	0.17	0.9	
ST OPENINGS						20.8	
SHLDR CU YDS						477.2	
SUBTRACT ST.OPENINGS						20.8	
CU YDS						456.5	
GRVL FACT.						X	1.8
SUB TONS						821.6	
GRAVEL ENT.	LOC						
14520	LT					7.0	
14544	LT					7.0	
14600	LT					7.0	
5177	RT					7.0	
5177	RT					7.0	
15720	LT					7.0	
15953	RT					7.0	
15952	RT					7.0	
16250	LT					7.0	
16355	RT					7.0	
16459	RT					7.0	
16521	RT					7.0	
17220	LT					7.0	
17325	RT					7.0	
17405	RT					7.0	
17455	RT					7.0	
17640	LT					7.0	
CONX. SUB	RT					7.0	
17680	LT					7.0	
17745	RT					7.0	
TOTAL TONS						961.6	

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5_(TH47-CR64)\Plan4 TABS.dgn 04/04/2011 7:48:21 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: 4/14/11 LICENSE NO. 40416

DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JD DATE: X



STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

CONSTRUCTION TABS
 Sheet 4 of 38 Sheets

H MILL BITUMINOUS SURFACE 2" (JOINTS)										
CSAH 5	STA	LENGTH	WIDTH	SQ YDS	BIT ENT. CONT.	LENGTH	WIDTH	SQ YDS		
MAINLINE	10+00	49.84	4.0	22.2	15860	18.25	2.0	4.1		
MAINLINE	64+40	41.23	4.0	18.3	15933	26.74	2.0	5.9		
MAINLINE	88+75	43.78	4.0	19.5	16001	23.64	2.0	5.3		
MAINLINE	287+00	43.52	4.0	19.3	16011	16.41	2.0	3.6		
BIT STREETS				LENGTH	WIDTH	SQ YDS				
IODINE ST				41.84	4.0	18.6	16000	21.53	2.0	4.8
146TH AVE NWE				28.36	4.0	12.6	16010	20.32	2.0	4.5
146TH AVE NWW				30.65	4.0	13.6	16017	20.46	2.0	4.5
SUNWOOD DR E				46.71	4.0	20.8	16022 S	12.93	2.0	2.9
SUNWOOD DR W				45.57	4.0	20.3	16022 N	24.50	2.0	5.4
148TH LN NW				25.13	4.0	11.2	16027	14.40	2.0	3.2
150TH LN				28.79	4.0	12.8	16120	16.22	2.0	3.6
SUNFISH BLVD CR 57				35.32	4.0	15.7	16130	12.12	2.0	2.7
157TH LN NW				24.50	4.0	10.9	16125	20.20	2.0	4.5
XEON ST NWE				24.46	4.0	10.9	16148	25.24	2.0	5.6
XEON ST NWW				25.82	4.0	11.5	16137	20.68	2.0	4.6
AZURITE ST NW				25.69	4.0	11.4	16158	12.21	2.0	2.7
COQUINA ST NW				37.81	4.0	16.8	16201	14.09	2.0	3.1
RAMSEY BLVD CR 56				59.33	4.0	26.4	16210	17.99	2.0	4.0
164TH LN NW				23.42	4.0	10.4	16220	10.61	2.0	2.4
165TH LN NW				31.20	4.0	13.9	16245	19.60	2.0	4.4
167TH NWE				41.15	4.0	18.3	16311 / 16339	20.63	2.0	4.6
167TH NWW				28.86	4.0	12.8	16330	27.98	2.0	6.2
170TH AVE				70.48	4.0	31.3	16340	31.00	2.0	6.9
173RD AVE NW				19.54	4.0	8.7	16361	19.00	2.0	4.2
175TH AVE NW				36.99	4.0	16.4	16411	19.07	2.0	4.2
GRN VALLEY RD CR 63				38.60	4.0	17.2	16441	17.25	2.0	3.8
16450				28.17	2.0	6.3	16450	28.17	2.0	6.3
16735				22.96	2.0	5.1	16735	22.96	2.0	5.1
16921				18.16	2.0	4.0	16921	18.16	2.0	4.0
17105 S				25.89	2.0	5.8	17105 S	25.89	2.0	5.8
17105 N				19.65	2.0	4.4	17105 N	19.65	2.0	4.4
S 17301				25.97	2.0	5.8	S 17301	25.97	2.0	5.8
N 17301				25.12	2.0	5.6	N 17301	25.12	2.0	5.6
17325				21.74	2.0	4.8	17325	21.74	2.0	4.8
17455 N				26.68	2.0	5.9	17455 N	26.68	2.0	5.9
6845				16.84	2.0	3.7	6845	16.84	2.0	3.7
17525				22.01	2.0	4.9	17525	22.01	2.0	4.9
17530				18.98	2.0	4.2	17530	18.98	2.0	4.2
17591				12.28	2.0	2.7	17591	12.28	2.0	2.7
17540				11.71	2.0	2.6	17540	11.71	2.0	2.6
17620				18.14	2.0	4.0	17620	18.14	2.0	4.0
17630				24.16	2.0	5.4	17630	24.16	2.0	5.4
17705				15.07	2.0	3.3	17705	15.07	2.0	3.3
17745 S				17.35	2.0	3.9	17745 S	17.35	2.0	3.9
17841				22.52	2.0	5.0	17841	22.52	2.0	5.0
17950				34.72	2.0	7.7	17950	34.72	2.0	7.7
TOTAL SQ YDS								750.6		

I TYPE SP 12.5 WEARING COURSE MIX (4 , F)				
MAINLINE (TOP LIFT)		LENGTH	WIDTH	SQ YDS
		25275	24	67400.0
10' SHOULDERS				
SB		25275	10	28083.3
NB		25275	10	28083.3
ADD WIDTH RTL/BYPASS (TOP LIFT)				
LANE DROP		NB	450.0	100.0
IODINE ST		SB RTL	480.0	106.7
146TH AVE NWE		SB RTL	480.0	106.7
146TH AVE NWW		NB RTL	480.0	106.7
SUNWOOD DR E		SB RTL	480.0	106.7
SUNWOOD DR W		NB RTL	480.0	106.7
148TH LN NW		NB BYPASS	620.0	137.8
148TH LN NW		SB RTL	480.0	106.7
150TH LN		NB RTL	480.0	106.7
SCHOOL ENT		SB RTL	507.0	112.7
SUNFISH BLVD CR 57		NB BYPASS	763.3	169.6
SUNFISH BLVD CR 57		SB RTL	480.0	106.7
XEON ST NWE		NB RTL	480.0	106.7
XEON ST NWW		SB RTL	480.0	106.7
AZURITE ST NW		NB RTL	480.0	106.7
AZURITE ST NW		SB BYPASS	620.0	137.8
COQUINA ST NW		NB RTL	480.0	106.7
COQUINA ST NW		SB BYPASS	620.0	137.8
RAMSEY BLVD CR 56		NB BYPASS	620.0	137.8
RAMSEY BLVD CR 56		SB RTL	480.0	106.7
164TH LN NW		NB BYPASS	620.0	137.8
164TH LN NW		SB RTL	480.0	106.7
165TH LN NW		NB RTL	480.0	106.7
165TH LN NW		SB BYPASS	620.0	137.8
167TH NWE		NB RTL	480.0	106.7
167TH NWW		SB RTL	480.0	106.7
170TH AVE		SB RTL	480.0	106.7
170TH BUBBLE LTL		MICRO	CENTER OF RD	1591.9
173RD AVE NW		NB BYPASS	620.0	137.8
173RD AVE NW		SB RTL	480.0	106.7
175TH AVE NW		NB BYPASS	620.0	137.8
175TH AVE NW		SB RTL	480.0	106.7
GRN VALLEY RD CR 63		NB RTL	480.0	106.7
GRN VALLEY RD CR 63		SB BYPASS	620.0	137.8
SQ YDS				129020.9
TOTAL TONS				14837.4

J TYPE SP12.5 WEARING COURSE MIX (4 , B)				
MAINLINE (BOTTOM LIFT)		LENGTH	WIDTH	SQ YDS
		25275.0	25.0	70208.3
RTL/BYPASS (BOTTOM LIFT)				
LANE DROP AREA		NB	450.0	600.0
IODINE ST		SB RTL	480.0	640.0
146TH AVE NWE		SB RTL	480.0	640.0
146TH AVE NWW		NB RTL	480.0	640.0
SUNWOOD DR E		SB RTL	480.0	640.0
SUNWOOD DR W		NB RTL	480.0	640.0
148TH LN NW		NB BYPASS	620.0	826.7
148TH LN NW		SB RTL	480.0	640.0
150TH LN		NB RTL	480.0	640.0
SCHOOL ENT		SB RTL	507.0	676.0
SUNFISH BLVD CR 57		NB BYPASS	763.3	1017.7
SUNFISH BLVD CR 57		SB RTL	480.0	640.0
XEON ST NWE		NB RTL	480.0	640.0
XEON ST NWW		SB RTL	480.0	640.0
AZURITE ST NW		NB RTL	480.0	640.0
AZURITE ST NW		SB BYPASS	620.0	826.7
COQUINA ST NW		NB RTL	480.0	640.0
COQUINA ST NW		SB BYPASS	620.0	826.7
RAMSEY BLVD CR 56		NB BYPASS	620.0	826.7
RAMSEY BLVD CR 56		SB RTL	480.0	640.0
164TH LN NW		NB BYPASS	620.0	826.7
164TH LN NW		SB RTL	480.0	640.0
165TH LN NW		NB RTL	480.0	640.0
165TH LN NW		SB BYPASS	620.0	826.7
167TH NWE		NB RTL	480.0	640.0
167TH NWW		SB RTL	480.0	640.0
170TH AVE		SB RTL	480.0	640.0
170TH BUBBLE LTL		MICRO		1591.9
173RD AVE NW		NB BYPASS	620.0	826.7
173RD AVE NW		SB RTL	480.0	640.0
175TH AVE NW		NB BYPASS	620.0	826.7
175TH AVE NW		SB RTL	480.0	640.0
GRN VALLEY RD CR 63		NB RTL	480.0	640.0
GRN VALLEY RD CR 63		SB BYPASS	620.0	826.7
SQ YDS				94974.0
TOTAL TONS				10922.0

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5_(TH47-CR64)\Plan4 TABS.dgn 04/04/2011 7:48:33 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 CADEWHEAD
SIGNATURE: *[Signature]*
DATE: 4/14/11 LICENSE NO. 40416

DRAWN BY: JF DATE: 3/1/2011
DESIGN BY: JF DATE: 3/1/2011
CHECKED BY: JO DATE: X



STATE PROJECT NO. SP 002-605-019
PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

CONSTRUCTION TABS
Sheet 5 of 38 Sheets

K TYPE SP 12.5 WEARING COURSE MIX (4 , B)			
STREETS	SQ.YDS.	BIT ENTRANCE CONT.	SQ.YDS.
IODINE ST	166.12	16011	28.82
146TH AVE NWE	127.78	16000	28.15
146TH AVE NW W	146.29	16010	42.26
SUNWOOD DR E	210.71	16017	37.27
SUNWOOD DR W	212.17	16022 S	28.40
148TH LN NW	191.05	16022 N	44.72
150TH LN	160.17	16027	33.81
SUNFISH BLVD CR 57	169.22	16120	23.35
157th	101.19	16130	17.79
XEON ST NWE	209.09	16125	28.76
XEON ST NWW	125.28	16148	47.50
AZURITE ST NW	206.19	16137	37.60
COQUINA ST NW	105.33	16158	21.34
RAMSEY BLVD CR 56	232.72	16201	21.34
164TH LN NW	153.00	16210	24.67
165TH LN NW	102.02	16220	17.80
167TH NWE	243.29	16245	26.85
167TH NWW	242.89	16300	26.89
170TH AVE	453.22	16311 / 16339	25.30
173RD AVE NW	107.65	16330	39.00
175TH AVE NW	177.32	16340	43.65
GRN VALLEY RD CR 63	210.00	16361	36.96
		16411	25.79
BIT ENTRANCES	SQ.YDS.	16441	24.73
LORD OF LIFE CH. S.	44.36	16450	31.61
LORD OF LIFE CH. N.	63.13	16735	29.20
14810	40.69	16921	31.99
14830	37.21	17105	50.93
14941	33.43	17105	35.24
14963	25.79	T.B. CH. S 17301	33.80
RAMSEY ELEM 1	54.50	T.B. CH. N 17301	43.01
RAMSEY ELEM 2	66.55	17325	42.91
15051	32.65	17455 N	37.58
RAMSEY ELEM 3	53.96	6845	25.31
RAMSEY ELEM 4	46.12	17525	31.88
15113	43.10	17530	23.18
15123	47.71	17591	27.30
15133	42.87	17540	22.25
LB CHURCH 15650	42.91	17620	30.76
15720	46.71	17630	34.81
15813	46.04	17705	38.32
15823	45.23	17745 S	24.25
15810	39.75	17841	32.35
15860	26.64	17950	43.42
15933	41.60		
16001	38.02		
		SQ YDS	6414.5
		TOTAL TONS	737.7

L 4" CONCRETE PAVEMENT	
LOCATION	SQ FT
SW QUAD SUNWOOD DR	150.0
NW QUAD SUNWOOD DR	150.0
NE QUAD SUNWOOD DR	150.0
SW QUAD 148 TH AVE	150.0
NW QUAD 148TH AVE	150.0
SCHOOL X-ING W.	150.0
SCHOOL X-ING E.	150.0
TOTAL SQ FT	1050.0

M 6" CONCRETE PAVEMENT	
LOCATION	SQ FT
15800 LT	178.0
16090 LT	362.0
16138 LT	208.0
16360 LT	158.0
16425 RT	211.0
17059 RT	144.0
17725 RT	271.0
17860 LT	133.0
TOTAL SQ FT	1665.0

N CURB AND GUTTER DESIGN B418	
LOCATION	LIN FT
SW QUAD SUNWOOD DR	18
NW QUAD SUNWOOD DR	18
NE QUAD SUNWOOD DR	18
SW QUAD 148 TH AVE	18
NW QUAD 148TH AVE	18
SCHOOL X-ING W.	18
SCHOOL X-ING E.	18
TOTAL LIN FT	126

O TRUNCATED DOMES	
LOCATION	SQ FT
SE QUAD SUNWOOD DR	16
NW QUAD SUNWOOD DR	16
NE QUAD SUNWOOD DR	16
SW QUAD 148 TH AVE	16
NW QUAD 148TH AVE	16
SCHOOL X-ING W.	16
SCHOOL X-ING E.	16
TOTAL SQ FT	112

P SEEDING	
LOCATION	ACRE
SE QUAD SUNWOOD DR	0.05
NW QUAD SUNWOOD DR	0.05
NE QUAD SUNWOOD DR	0.05
SW QUAD 148 TH AVE	0.05
NW QUAD 148TH AVE	0.05
SCHOOL X-ING W.	0.05
SCHOOL X-ING E.	0.05
TOTAL ACRES	0.35

Q SEED MIX 250	
LOCATION	LBS
SE QUAD SUNWOOD DR	3.5
NW QUAD SUNWOOD DR	3.5
NE QUAD SUNWOOD DR	3.5
SW QUAD 148 TH AVE	3.5
NW QUAD 148TH AVE	3.5
SCHOOL X-ING W.	3.5
SCHOOL X-ING E.	3.5
TOTAL LBS	24.5

R FERTILIZER TYP 3	
LOCATION	LBS
SE QUAD SUNWOOD DR	17.5
NW QUAD SUNWOOD DR	17.5
NE QUAD SUNWOOD DR	17.5
SW QUAD 148 TH AVE	17.5
NW QUAD 148TH AVE	17.5
SCHOOL X-ING W.	17.5
SCHOOL X-ING E.	17.5
TOTAL LBS	122.5

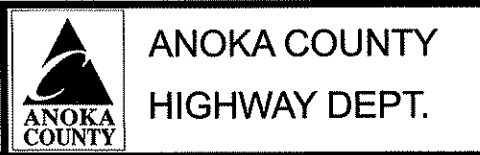
NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5_(TH47-CR64)\Plan4 TABS.dgn 04/04/2011 7:46:47 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.

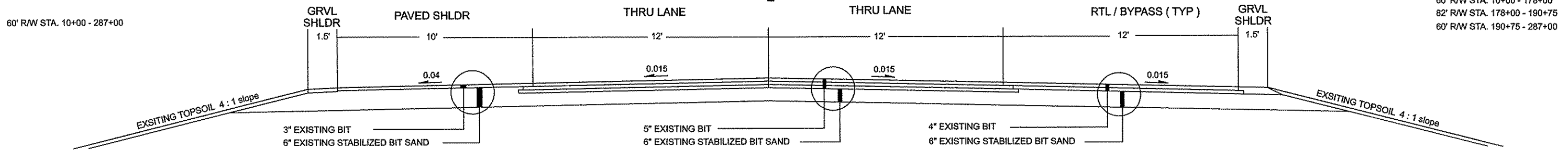
PRINT NAME: C. BLESICADENHEAD
SIGNATURE: *[Signature]*
DATE: 4/19/11 LICENSE NO. 40416

DRAWN BY: JF DATE: 3/1/2011
DESIGN BY: JF DATE: 3/1/2011
CHECKED BY: JO DATE: X

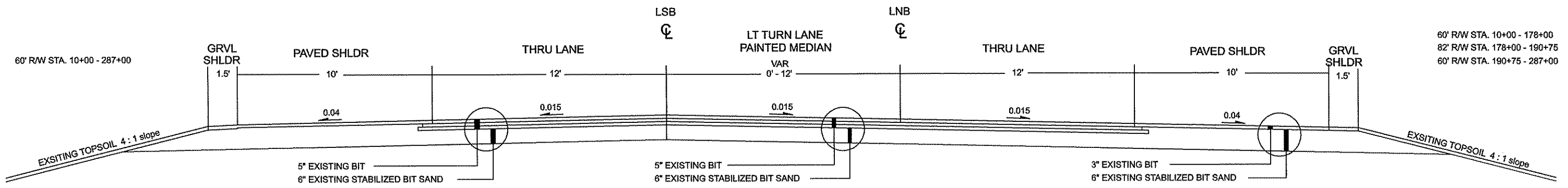


STATE PROJECT NO. SP 002-605-019
PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

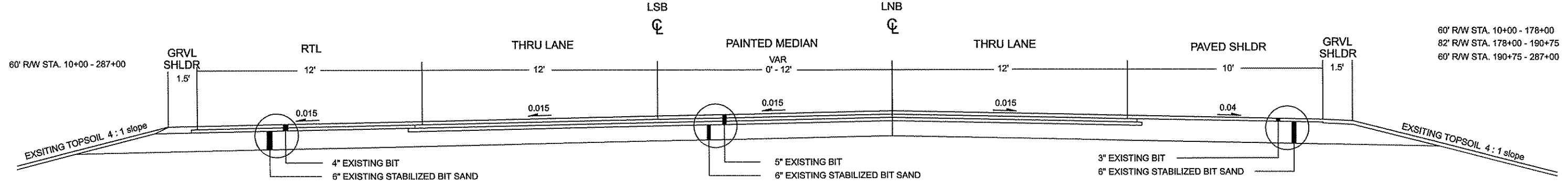
EXISTING TYPICAL
 10+00 - 64+50
 64+50 - 88+75 (EXCEPTION AREA, NO CONSTRUCTION.)
 88+75 - 200+00
 218+00 - 287+00



EXISTING TYPICAL
 200+00 - 211+50



EXISTING TYPICAL
 211+50 - 218+00

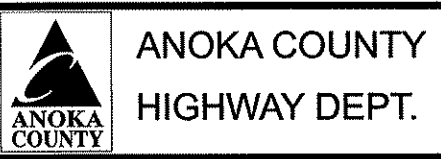


GENERAL NOTES:
 - ALL CROSS SLOPES ARE APPROXIMATE
 - UNLESS OTHERWISE SPECIFIED, THE CLASS 5 CROSS SLOPES SHALL BE THE SAME AS THE FINISHED SURFACE OF THE MAINLINE.

NO	DATE	BY	CHKD	APPR	REVISION

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: 4/14/11 LICENSE NO. 46416

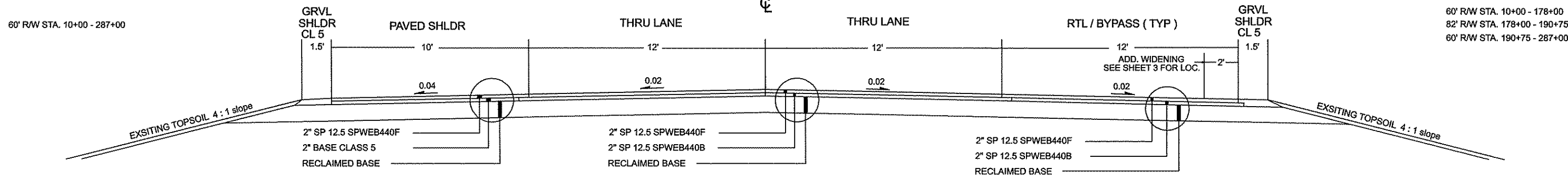
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 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: XXXX



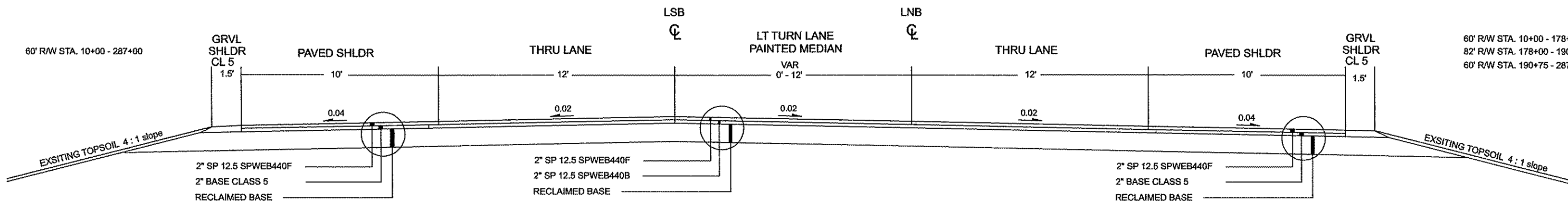
STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

TYPICAL SECTIONS
 Sheet 7 of 38 Sheets

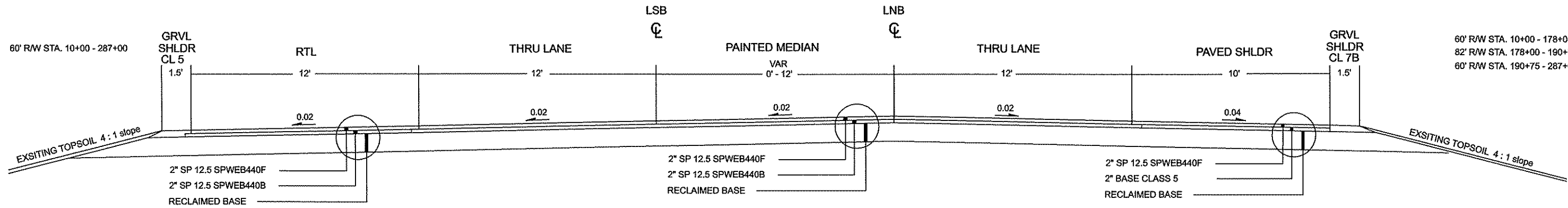
PROPOSED TYPICAL
 10+00 - 64+50
 64+50 - 88+75 (EXCEPTION AREA, NO CONSTRUCTION.)
 88+75 - 200+00
 220+00 - 287+00



PROPOSED TYPICAL
 200+00 - 211+50



PROPOSED TYPICAL
 211+50 - 220+00



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:\111-01-00\CSAH_5_(TH47-CR64)\Plan\4 typicals.dgn 05/02/2011 8:17:26 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: 5/3/11 LICENSE NO. 40416

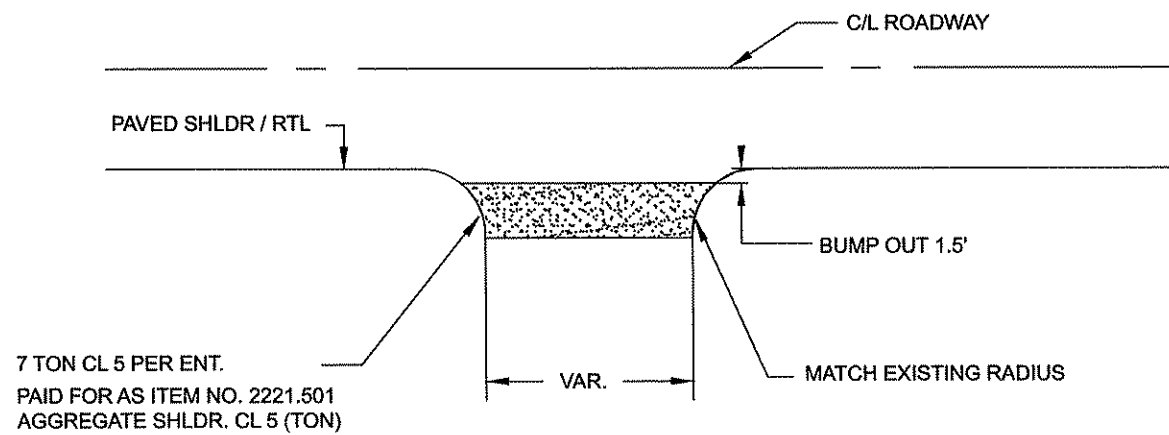
DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: 5/2/2011



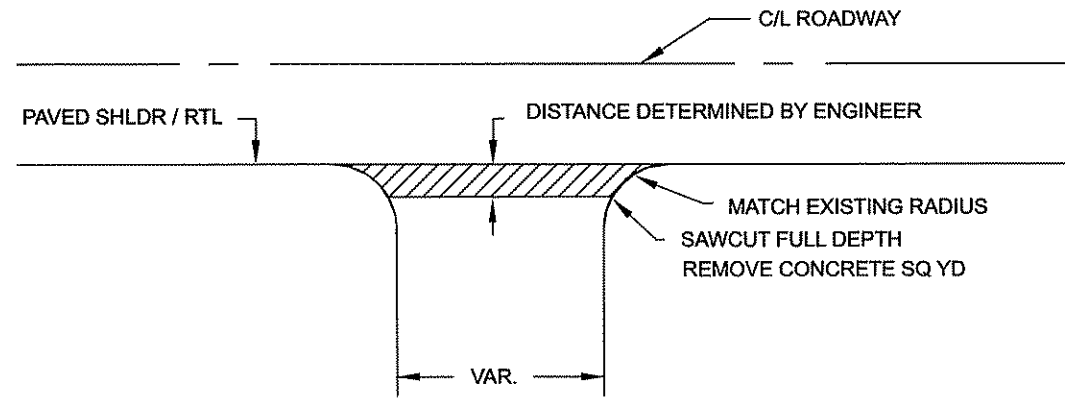
STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

TYPICAL SECTIONS
 Sheet 8 of 38 Sheets

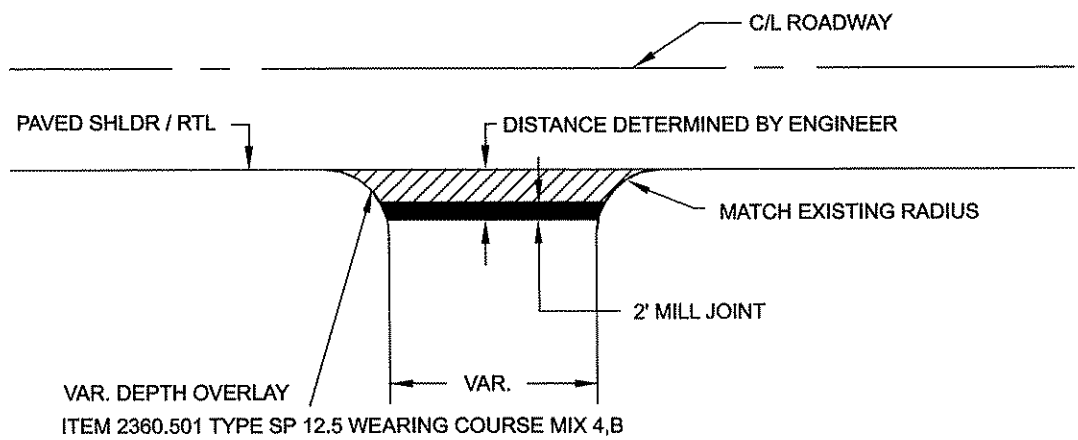
GRAVEL DR. WAYS AND FEILD ENT.



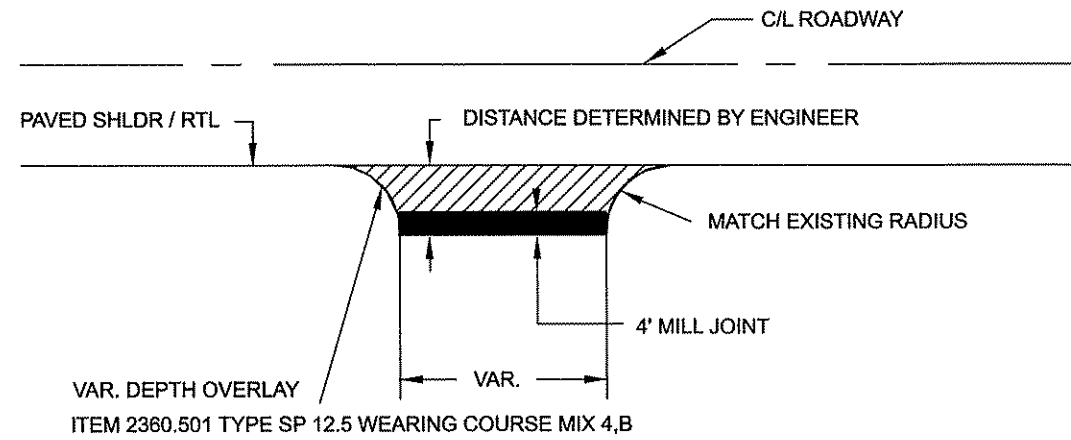
CONCRETE DR. WAYS



PAVED DR. WAYS



PAVED STREET APPROACHES



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5 (TH47-CR64)\Plan5 Details.dgn 04/04/2011 7:50:28 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: *[Date]* LICENSE NO. 40416

DRAWN BY JF DATE 3/1/2011
 DESIGN BY JF DATE 3/1/2011
 CHECKED BY JO DATE XXXX



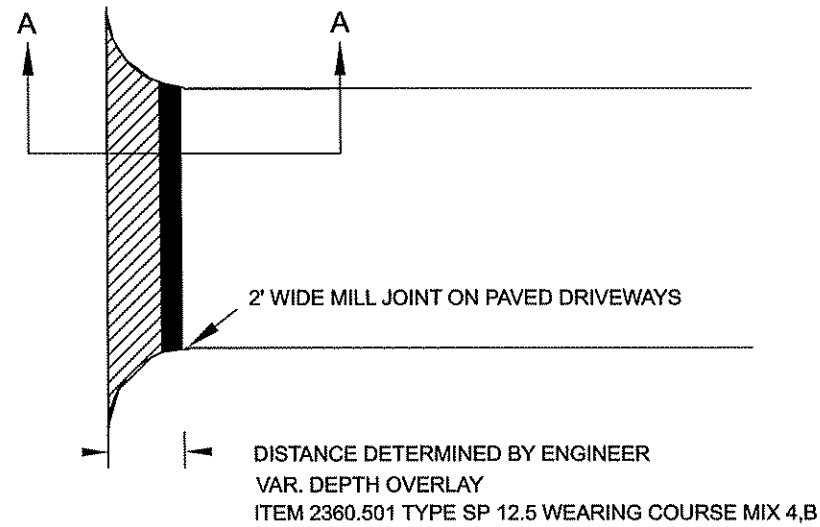
ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

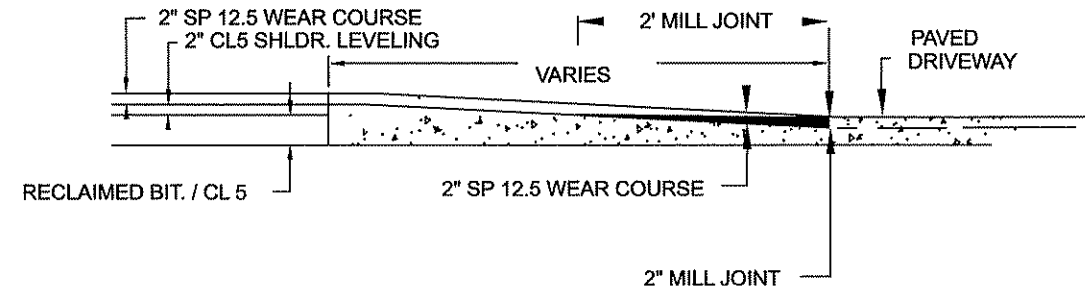
DETAILS
 Sheet 9 of 38 Sheets

PAVED DRIVEWAYS

JOINT DETAILS

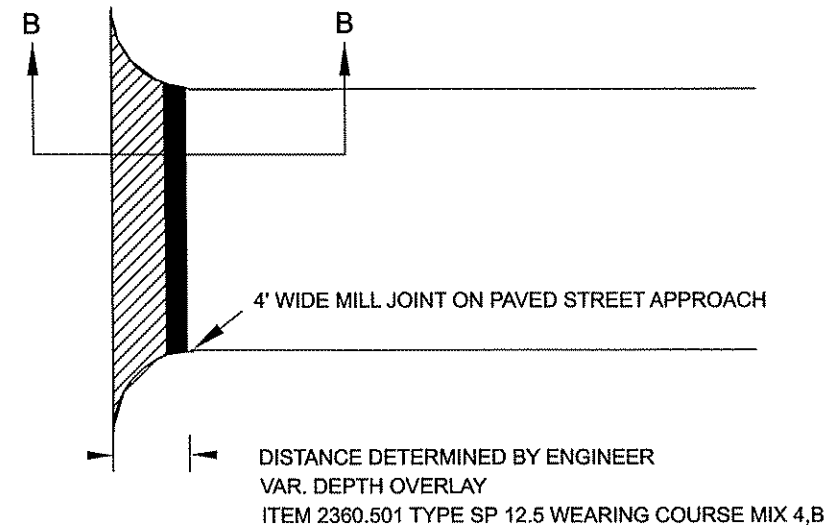


DRIVEWAY JOINT DETAILS A - A

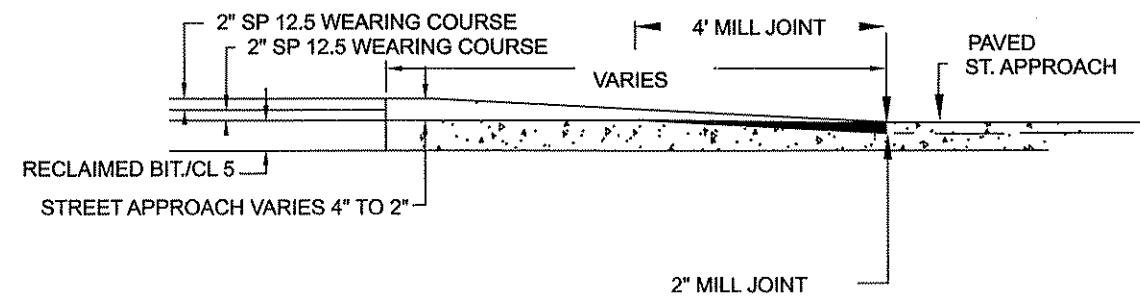


PAVED STREETS

JOINT DETAILS



STREET APPROACH JOINT DETAILS B - B



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\11-01-00\CSAH_5_(TH47-CR64)\Plan5 Details.dgn					
04/04/2011 7:50:43 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: 4/14/11 LICENSE NO. 40416

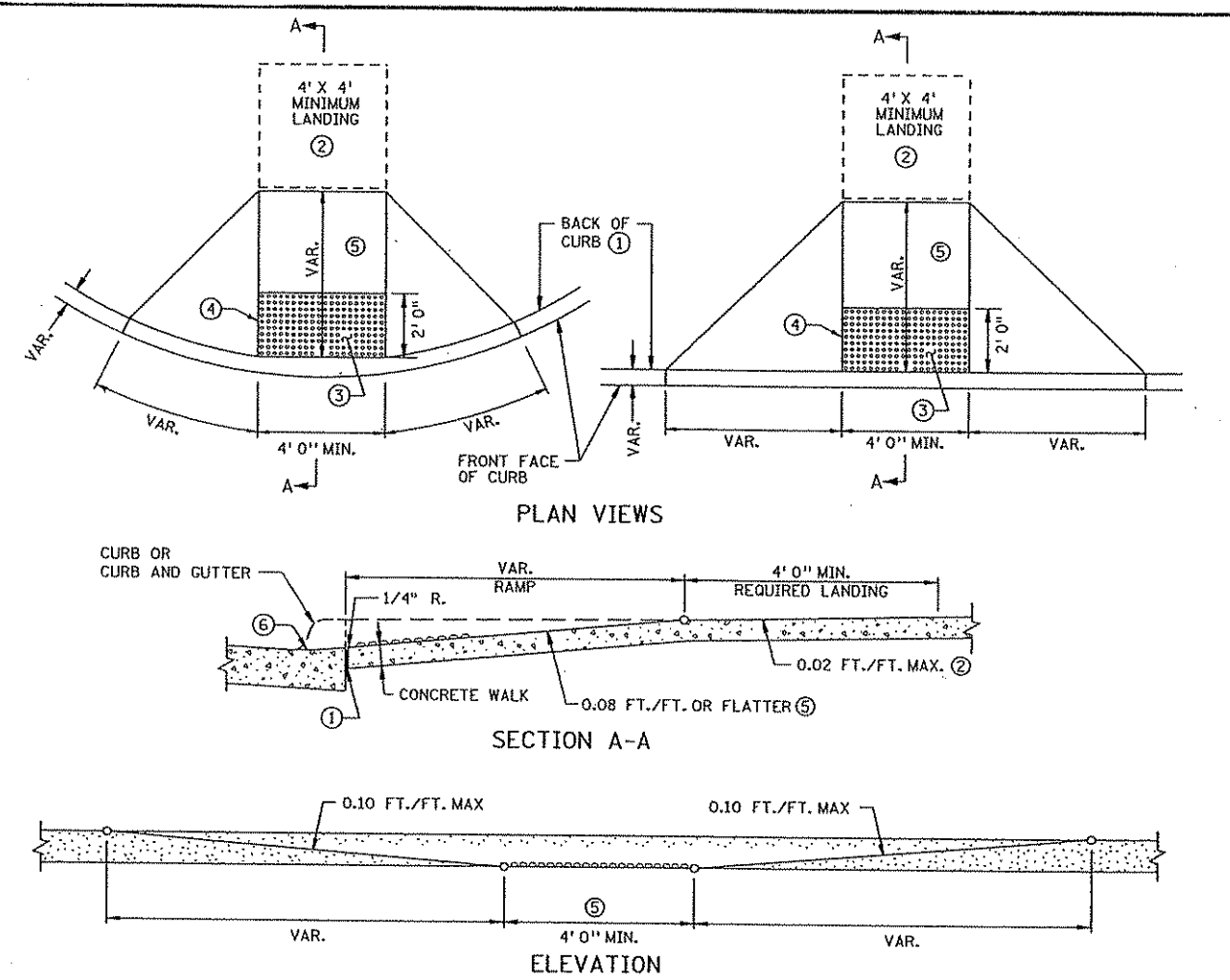
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 CHECKED BY: JO DATE: XXXX



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

DETAILS
 Sheet 10 of 38 Sheets



NOTES:

TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA), ALL STATE AGENCIES ARE REQUIRED TO UTILIZE THIS STANDARD PLATE. MODIFICATIONS ARE ALLOWED PROVIDED THEY MEET PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG). LOCAL AGENCIES ARE REQUIRED TO ADOPT SIMILAR DESIGNS.

SHARED-USE PATHS SHALL HAVE DETECTABLE WARNINGS ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD. DETECTABLE WARNINGS ARE NOT TO BE USED ON SIDEWALKS OR PATHS WHEN CROSSING ALLEYS OR RESIDENTIAL DRIVEWAYS. DETECTABLE WARNINGS SHOULD BE USED WHERE PEDESTRIAN ACCESS ROUTES CROSS COMMERCIAL DRIVEWAYS THAT ARE PROVIDED WITH TRAFFIC CONTROL DEVICES OR OTHERWISE PERMITTED TO OPERATE LIKE A PUBLIC ROADWAY.

SLOPES ARE DEFINED AS ABSOLUTE ELEVATION DIFFERENCE PER LENGTH OF RUN. (AS OPPOSED TO A RELATIVE SLOPE WITH RESPECT TO A CURB LINE OR CURB HEIGHT.)

NO SIGNAL POLES, SIGN POSTS, CABINETS, OR OTHER OBSTRUCTIONS ARE ALLOWED IN THE RAMP OR PATH OF TRAVEL.

① 1/2-INCH EXPANSION JOINT. 1/2-INCH PREFORMED JOINT FILLER MATERIAL, AASHTO M 213.

② PROVIDE A 4' X 4' MINIMUM LANDING. SEE PLANS FOR PROPOSED RUNNING SLOPE AND CROSS SLOPE, NEITHER OF WHICH MAY EXCEED 0.02 FT./FT. AS CONSTRUCTED.

③ PLACE THE DETECTABLE WARNINGS AT THE BACK OF CURB. WHEN THE DETECTABLE WARNING SYSTEM IS A PREFORMED RECTANGLE PLACED AT THE BACK OF A RADIAL CURB LINE, HAND FORM THE CURB TO FILL THE GAP. DETECTABLE WARNING AREA SHALL BE 2' 0" MIN. IN THE DIRECTION PERPENDICULAR TO THE GRADE BREAK AND SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP.

④ WHERE RADIAL WARNING SURFACES ARE USED OR IN OTHER CIRCUMSTANCES WHERE THE EDGE OF THE WARNING SURFACE IS NOT PARALLEL TO THE EDGE OF THE CURB RAMP PATH OF TRAVEL, THE EDGE OF THE DETECTABLE WARNING SURFACE SHOULD NEVER BE MORE THAN 3 INCHES FROM THE EDGE OF THE RAMP. DETECTABLE WARNING AREA SHALL CONTRAST VISUALLY WITH THE ADJACENT GUTTER, ROADWAY, OR WALKWAY, EITHER LIGHT ON DARK OR DARK ON LIGHT. CONTRAST MAY BE PROVIDED ON THE FULL RAMP SURFACE, EXCLUDING THE FLARED SIDES.

⑤ CROSS SLOPE OF THE RAMP MAY NOT EXCEED 0.02 FT./FT. AS CONSTRUCTED.

⑥ ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE MAY NOT BE GREATER THAN 1/4 INCH.

APPROVED MARCH 23, 2011	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE 2521 2531	STANDARD PLATE NO. 7036G
<i>Michael R. Henn</i> STATE DESIGN ENGINEER	PEDESTRIAN CURB RAMP PERPENDICULAR DESIGN		

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5 (TH47-CR64)\Plan5 Details.dgn 8:18:36 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: *Charles Cadenhead*

DATE: **5/3/11** LICENSE NO. **4046**

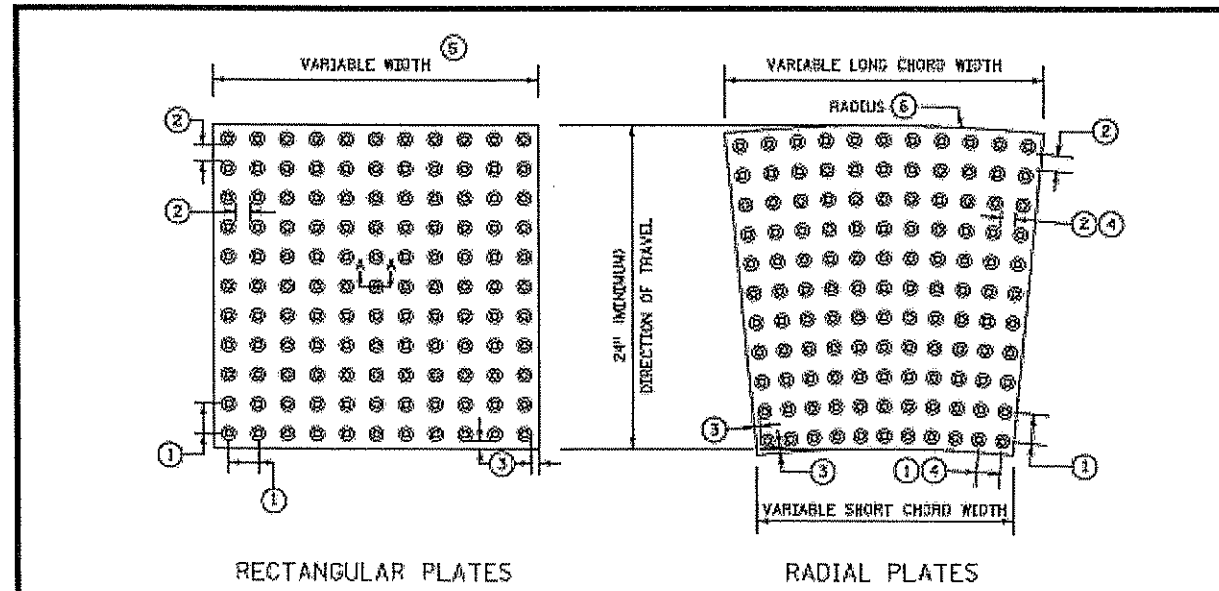
DRAWN BY **JF** DATE **3/1/2011**

DESIGN BY **JF** DATE **3/1/2011**

CHECKED BY **JO** DATE **5/2/2011**

ANOKA COUNTY
HIGHWAY DEPT.

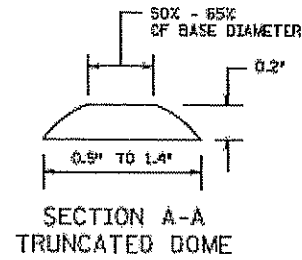
STATE PROJECT NO. **SP 002-605-019**
PREVIOUSLY CONST. UNDER **SP 02-605-01 (1972)**
1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)



RECTANGULAR PLATES

RADIAL PLATES

TYPICAL RADIAL TRUNCATED DOME PLATES			
RADIUS (FEET)	LONG CHORD WIDTH (INCHES)	SQ. FT. PER PLATE	PLATES REQUIRED FOR 90 DEGREE TURN
10	23-1/2	3.53	8
15	18-13/16	2.93	15
15	23-1/2	3.67	12
20	18-13/16	3.00	20
20	18-7/8	2.98	20
25	20-1/2	3.28	23
25	23-9/16	3.77	20
30	22-5/8	3.65	25
35	22	3.56	30

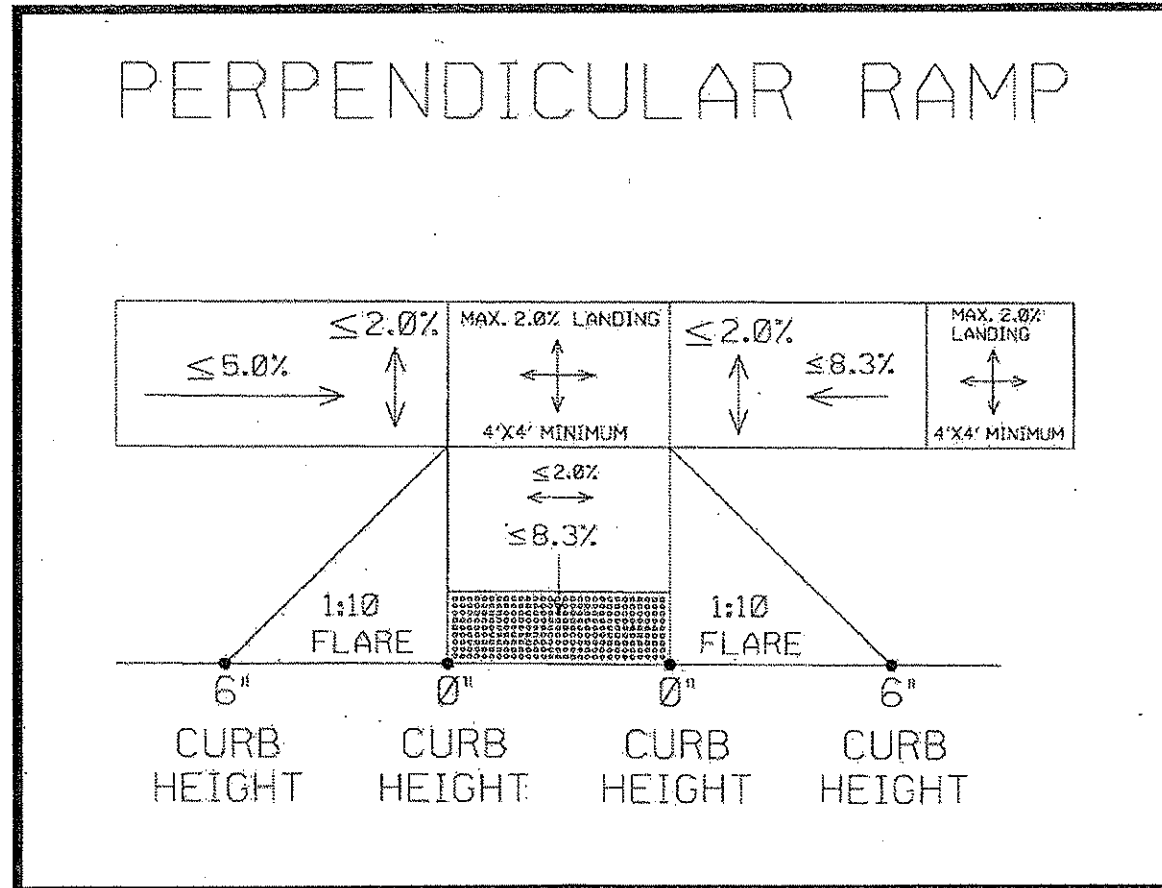
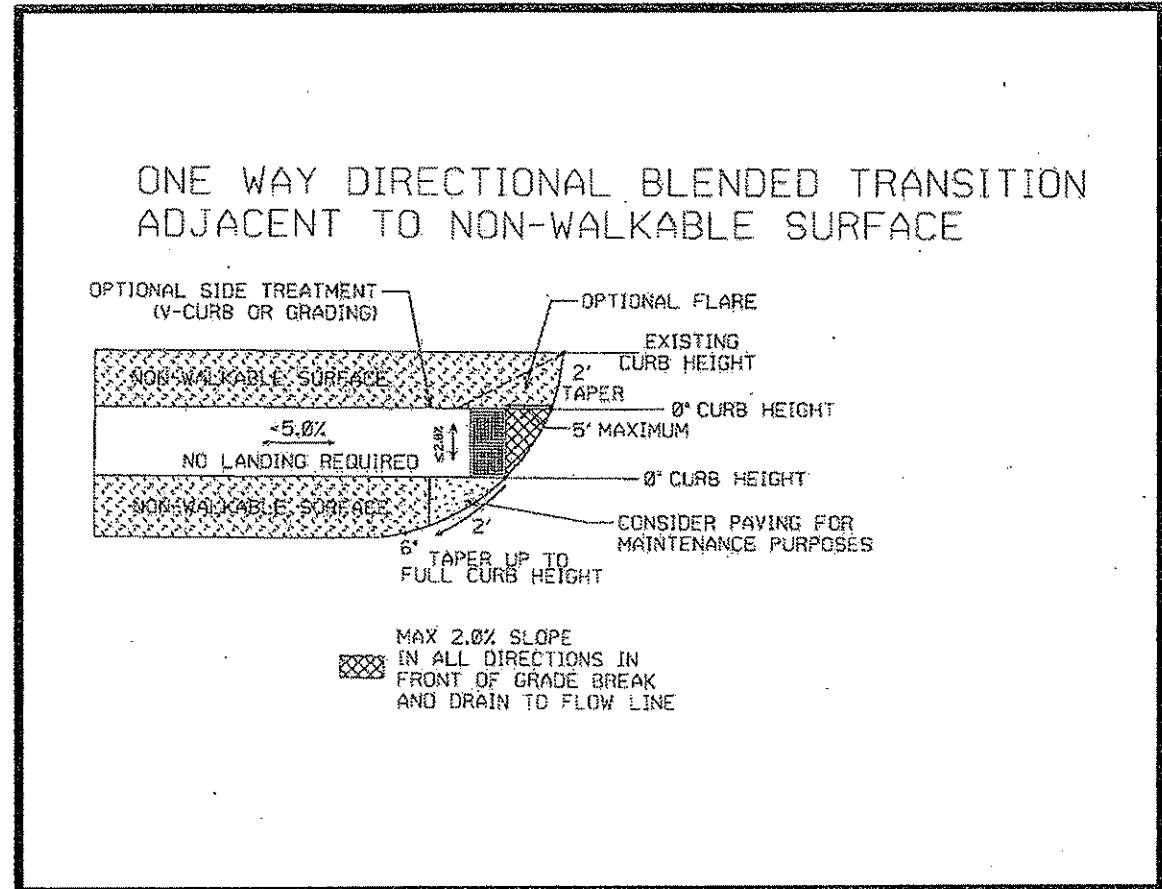


NOTES:

DETECTABLE WARNING SURFACES SHALL FOLLOW THE PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG).
 DETECTABLE WARNINGS CONSIST OF TRUNCATED DOMES ALIGNED IN A SQUARE OR RADIAL GRID PATTERN.
 DETECTABLE WARNINGS ARE REQUIRED:
 -WHERE RAMP, LANDINGS, OR BLENDED TRANSITIONS PROVIDE A FLUSH PEDESTRIAN CONNECTION TO THE ROADWAY.
 -WHERE PEDESTRIAN ACCESS ROUTES CROSS COMMERCIAL DRIVEWAYS THAT ARE PROVIDED WITH TRAFFIC CONTROL DEVICES OR OTHERWISE PERMITTED TO OPERATE LIKE A PUBLIC ROADWAY.
 -AT PEDESTRIAN RAILWAY CROSSINGS.
 -ON RAIL PLATFORMS WHERE BOARDING EDGES ARE NOT PROTECTED.
 DETECTABLE WARNINGS SHALL EXTEND:
 -A MINIMUM OF 24" IN THE DIRECTION OF TRAVEL.
 -THE FULL WIDTH OF THE RAMP, LANDING, OR BLENDED TRANSITION, WITHIN 3" OF FULL WIDTH ON EITHER END.
 -THE FULL LENGTH OF THE PUBLIC USE AREA OF A RAIL PLATFORM.
 DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT BUTTER, ROADWAY, OR WALKWAY, EITHER A LIGHT-ON-DARK OR DARK-ON-LIGHT. CONTRAST MAY BE PROVIDED ON THE FULL RAMP SURFACE, EXCLUDING THE FLARED SIDES.

FOR MN/DOT PROJECTS, SEE MN/DOT'S APPROVED/QUALIFIED PRODUCT LISTS.
 DETECTABLE WARNING SURFACE SHALL BE PAID FOR AS TRUNCATED DOMES BY THE SQUARE FOOT.
 ALL TRUNCATED DOME SYSTEMS SHALL BE PLACED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.
 ① CENTER TO CENTER DOME SPACING: 1.6" MINIMUM, 2.4" MAXIMUM.
 ② BASE TO BASE DOME SPACING: 0.65" MINIMUM.
 ③ DOME BASE TO PLATE EDGE SPACING: 0.35" MINIMUM, 0.75" MAXIMUM.
 ④ SPACING VARIES ON RADIAL PLATES.
 ⑤ TYPICAL WIDTHS AVAILABLE: 12", 18", 24", 30", 36". CHECK WITH MANUFACTURERS FOR AVAILABLE WIDTHS.
 ⑥ ON RADIAL PLATE, RADIUS DEFINED AT BACK OF CURB.
 ⑦ TYPICAL RADIUS. CHECK WITH MANUFACTURERS FOR AVAILABLE RADIUS.

APPROVED AUGUST 23, 2010 	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE 2531	STANDARD PLATE NO. 7038A
DETECTABLE WARNING SURFACE TRUNCATED DOMES			



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5 (TH47-CR64)\Plan15 Details.dgn
 DATE: 04/04/2011 7:51:24 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:
 DATE: LICENSE NO. 40416

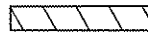

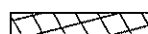



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 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: XXXX

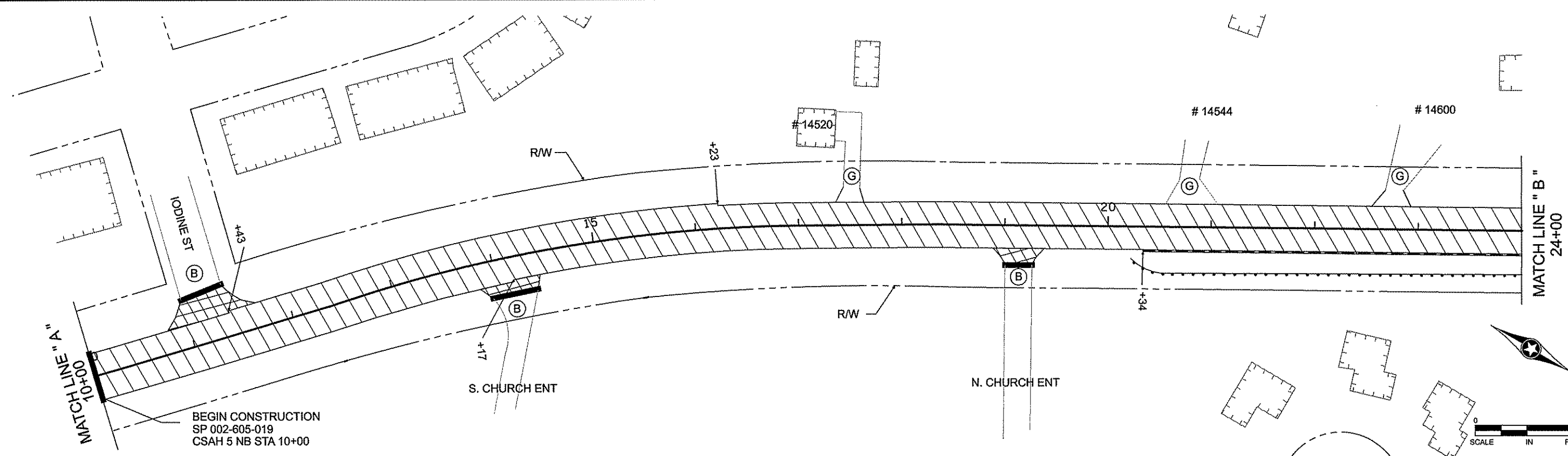
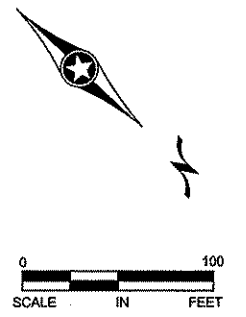
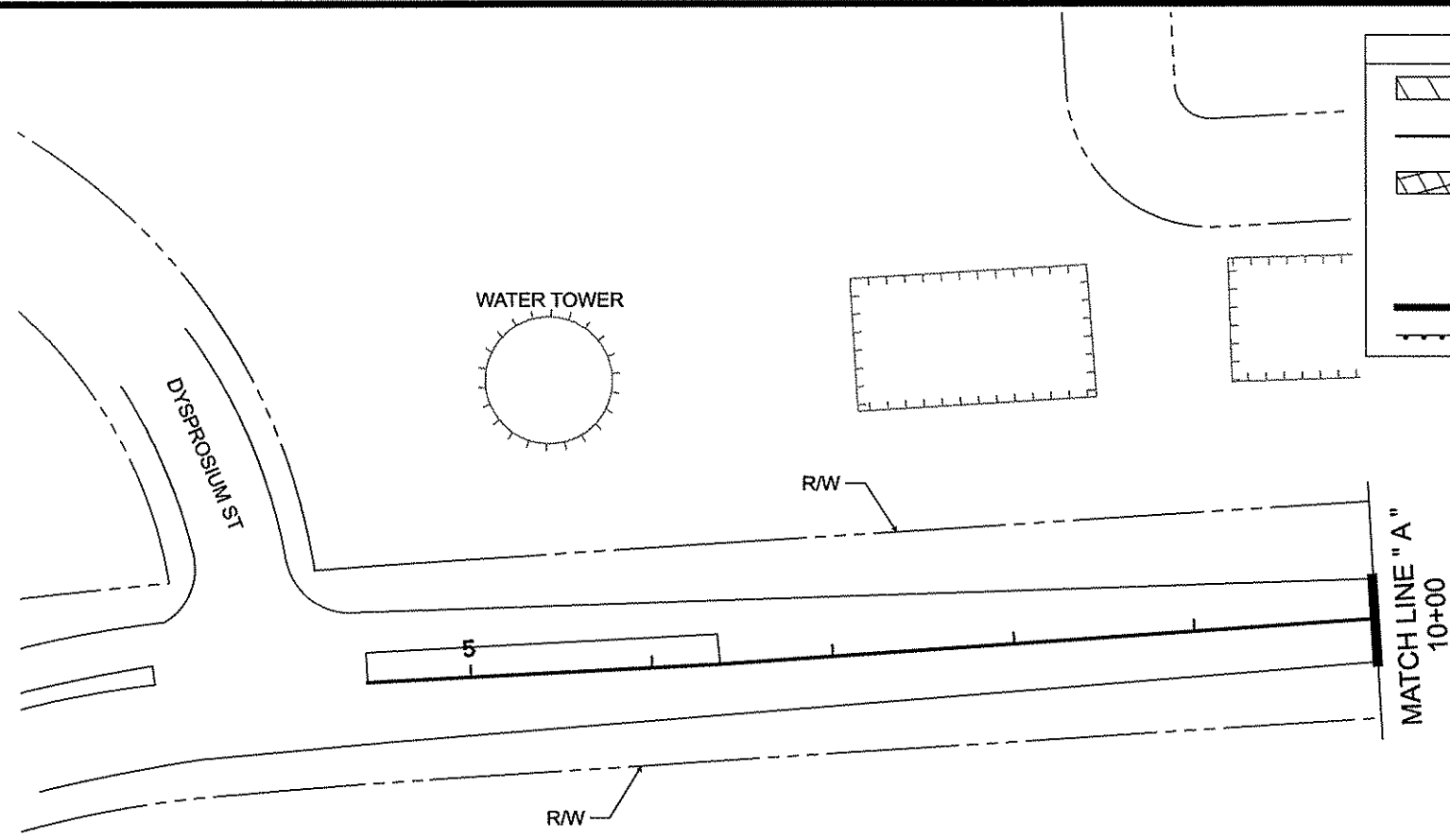


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

DETAILS
 Sheet 12 of 38 Sheets

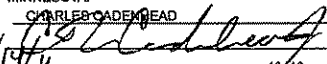
CONSTRUCTION NOTES	
	RECLAIM AND OVERLAY
	2' NEW PAVEMENT FOR BYPASS / RIGHT TURN LANE ADD. WIDTH REQUIRED FOR BYPASS TURN LANES. SEE CHART
	OVERLAY BIT STREET APPROACH / DR WAY
B	BITUMINOUS
C	CONCRETE
G	GRAVEL
	MILL JOINT
	SILT FENCE
	INSTALL TRUNCATED DOME, CONCRETE CURB DESIGN B418, AND 4" CONCRETE WALK AS DIRECTED BY ENGINEER.



BEGIN CONSTRUCTION
SP 002-605-019
CSAH 5 NB STA 10+00

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5 (TH47-CR64)\Plan\6 plan.dgn
04/04/2011 7:52:33 AM

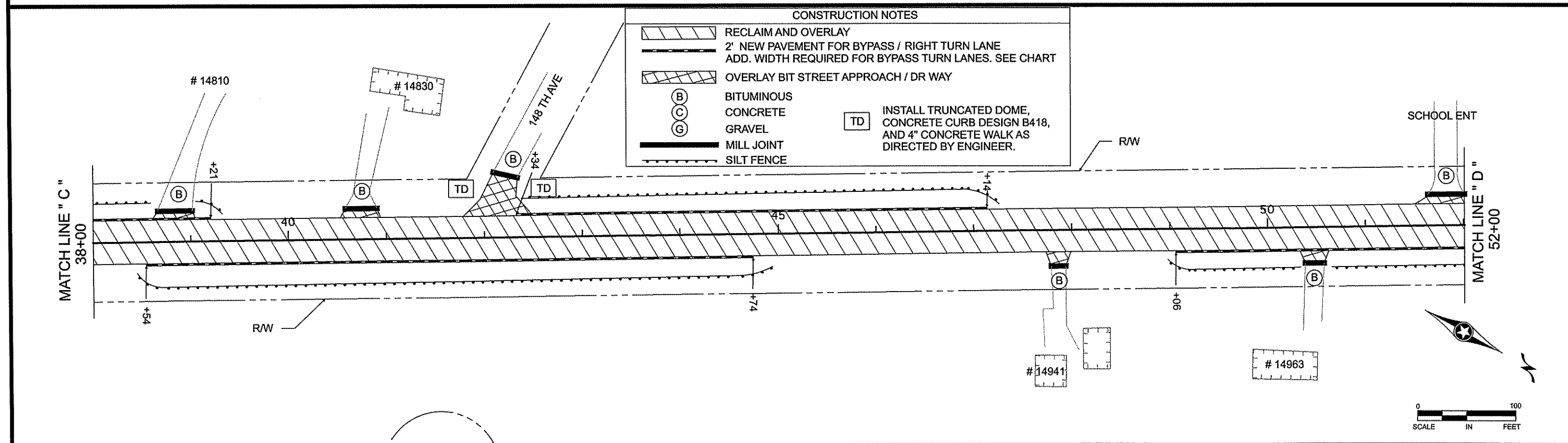
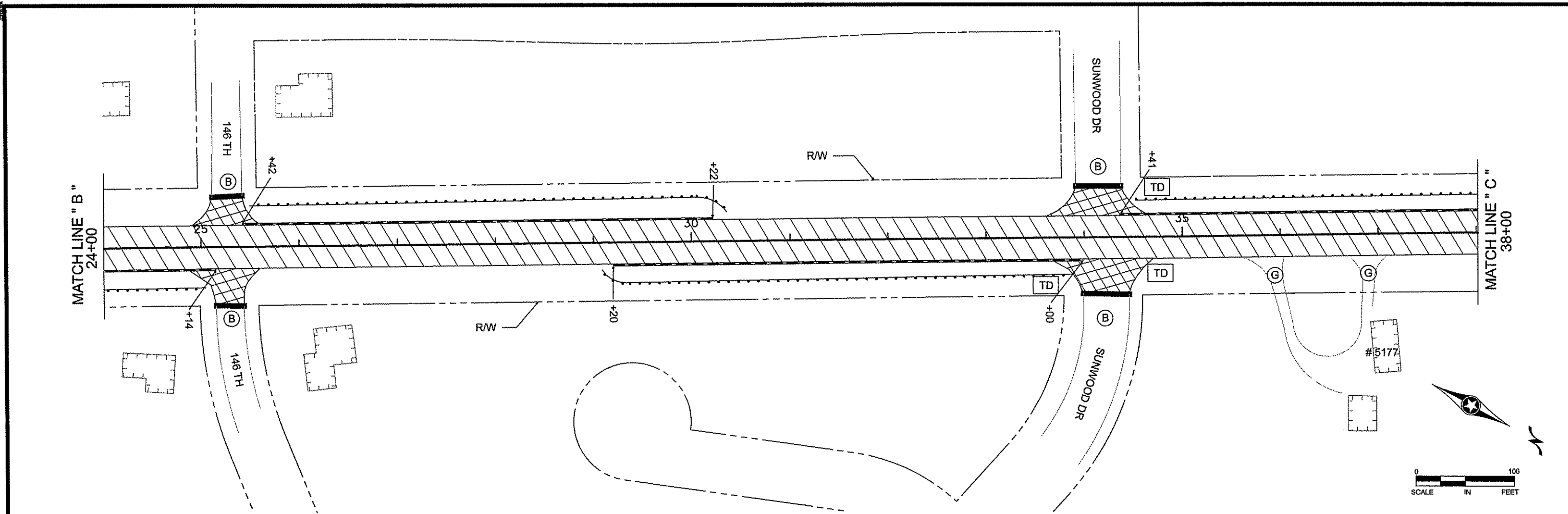
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: CHARLES CADEMEAD
SIGNATURE: 
DATE: 4/1/11 LICENSE NO. 40416

DRAWN BY: JF DATE: 3/1/2011
DESIGN BY: JF DATE: 3/1/2011
CHECKED BY: JO DATE: XXXX



STATE PROJECT NO. SP 002-605-019
PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

CONSTRUCTION PLAN
STA 4+42 TO 24+00
Sheet 13 of 38 Sheets



CONSTRUCTION NOTES

	RECLAIM AND OVERLAY
	2' NEW PAVEMENT FOR BYPASS / RIGHT TURN LANE ADD. WIDTH REQUIRED FOR BYPASS TURN LANES. SEE CHART
	OVERLAY BIT STREET APPROACH / DR WAY
	BITUMINOUS
	CONCRETE
	GRAVEL
	MILL JOINT
	SILT FENCE
	INSTALL TRUNCATED DOME, CONCRETE CURB DESIGN B418, AND 4" CONCRETE WALK AS DIRECTED BY ENGINEER.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5 (TH47-CR64)\Plan6 plan.dgn 04/04/2011 7:52:48 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: 4/14/11 LICENSE NO. 40416

DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: XXXX



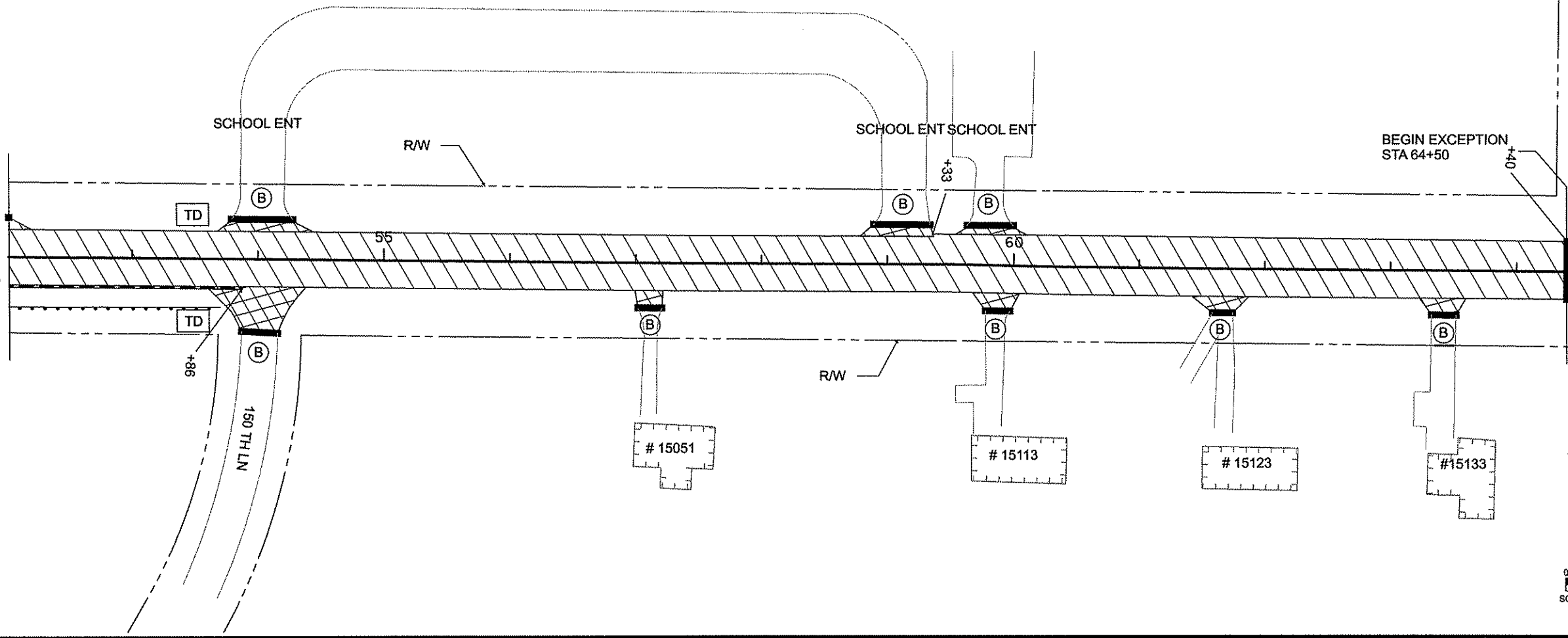
STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

CONSTRUCTION PLAN

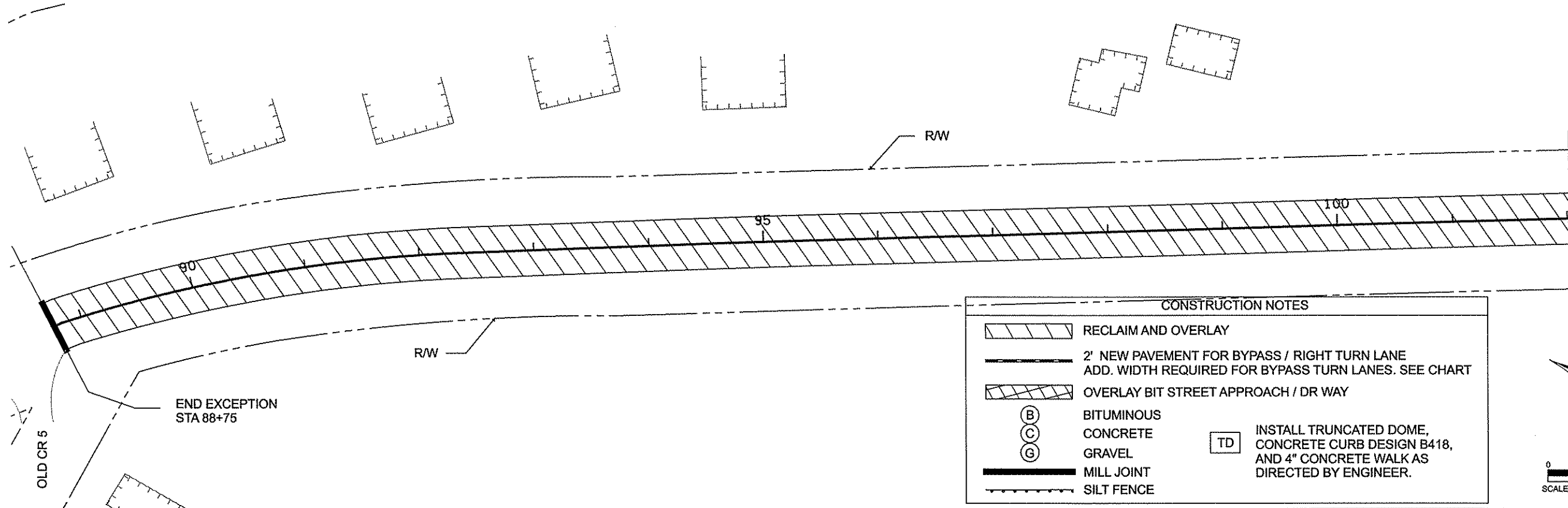
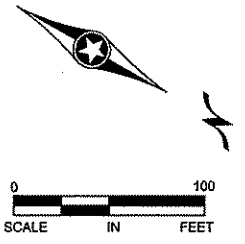
STA 24+00 TO 52+00

Sheet 14 of 38 Sheets

MATCH LINE "D"
52+00

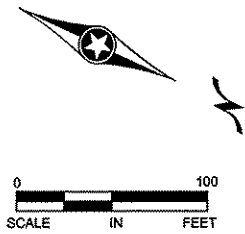


BEGIN EXCEPTION
STA 64+50



END EXCEPTION
STA 88+75

MATCH LINE "E"
102+00



CONSTRUCTION NOTES	
	RECLAIM AND OVERLAY
	2' NEW PAVEMENT FOR BYPASS / RIGHT TURN LANE ADD. WIDTH REQUIRED FOR BYPASS TURN LANES. SEE CHART
	OVERLAY BIT STREET APPROACH / DR WAY
	BITUMINOUS
	CONCRETE
	GRAVEL
	MILL JOINT
	SILT FENCE
	INSTALL TRUNCATED DOME, CONCRETE CURB DESIGN B418, AND 4" CONCRETE WALK AS DIRECTED BY ENGINEER.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5_(TH47-CR64)\Plan16 plan.dgn 04/04/2011 7:53:02 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.

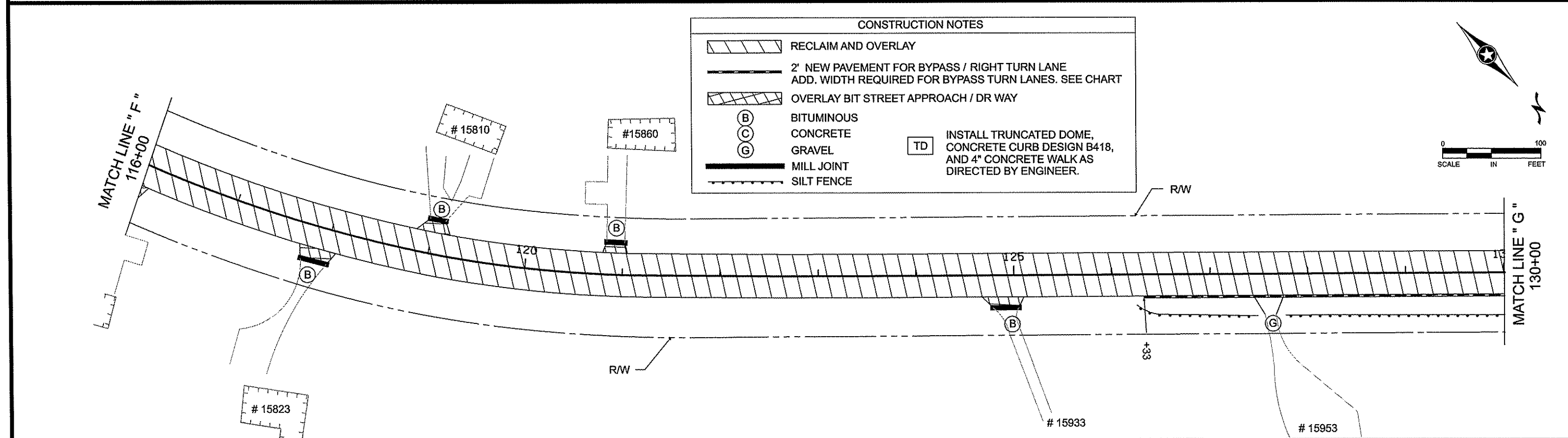
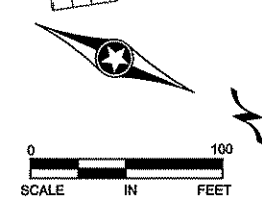
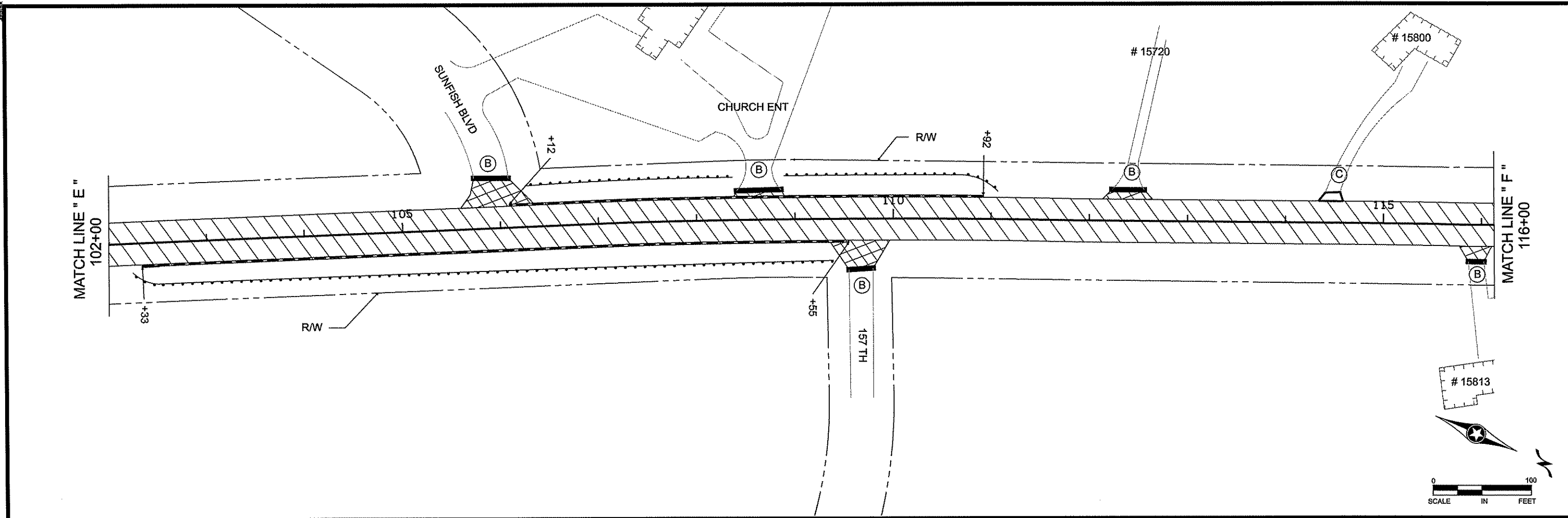
PRINT NAME: CHARLES CADENHEAD
 SIGNATURE:
 DATE: 4/19/11 LICENSE NO. 40416

DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: XXXXX



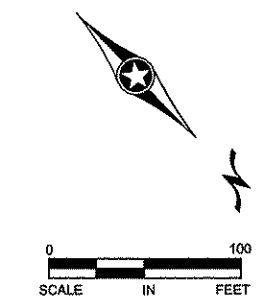
STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

CONSTRUCTION PLAN
 STA 52+00 TO 102+00
 Sheet 15 of 38 Sheets



CONSTRUCTION NOTES

	RECLAIM AND OVERLAY	
	2' NEW PAVEMENT FOR BYPASS / RIGHT TURN LANE ADD. WIDTH REQUIRED FOR BYPASS TURN LANES. SEE CHART	
	OVERLAY BIT STREET APPROACH / DR WAY	
(B)	BITUMINOUS	
(C)	CONCRETE	
(G)	GRAVEL	
	MILL JOINT	
	SILT FENCE	
(TD)	INSTALL TRUNCATED DOME, CONCRETE CURB DESIGN B418, AND 4" CONCRETE WALK AS DIRECTED BY ENGINEER.	



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5_(TH47-CR64)\Plan\6 plan.dgn 04/04/2011 7:53:13 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.

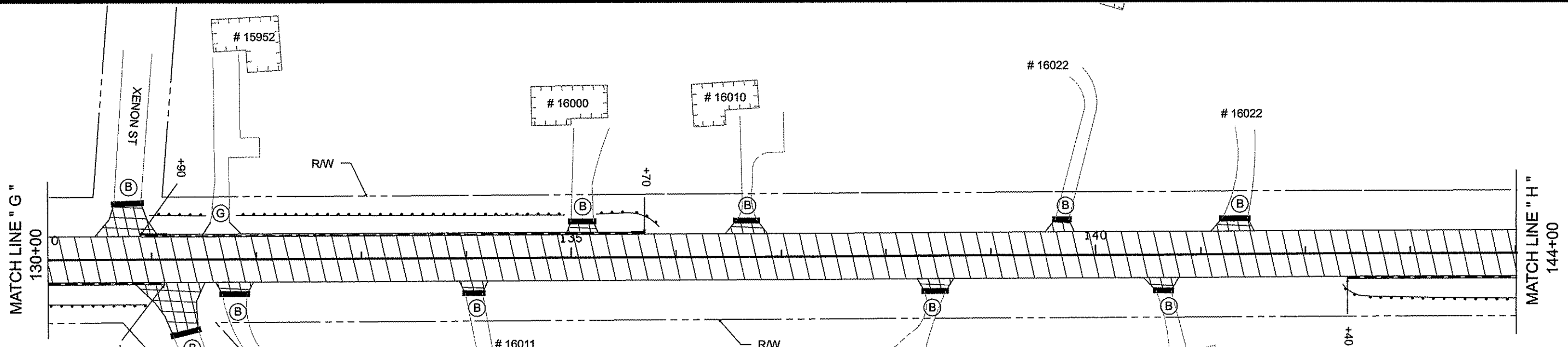
PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *[Signature]*
 DATE: 4/19/11 LICENSE NO. 9416

DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: XXXXX

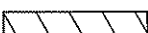

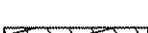








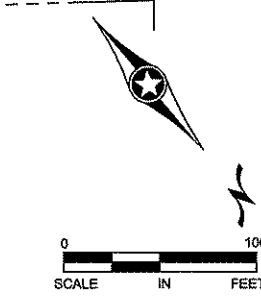
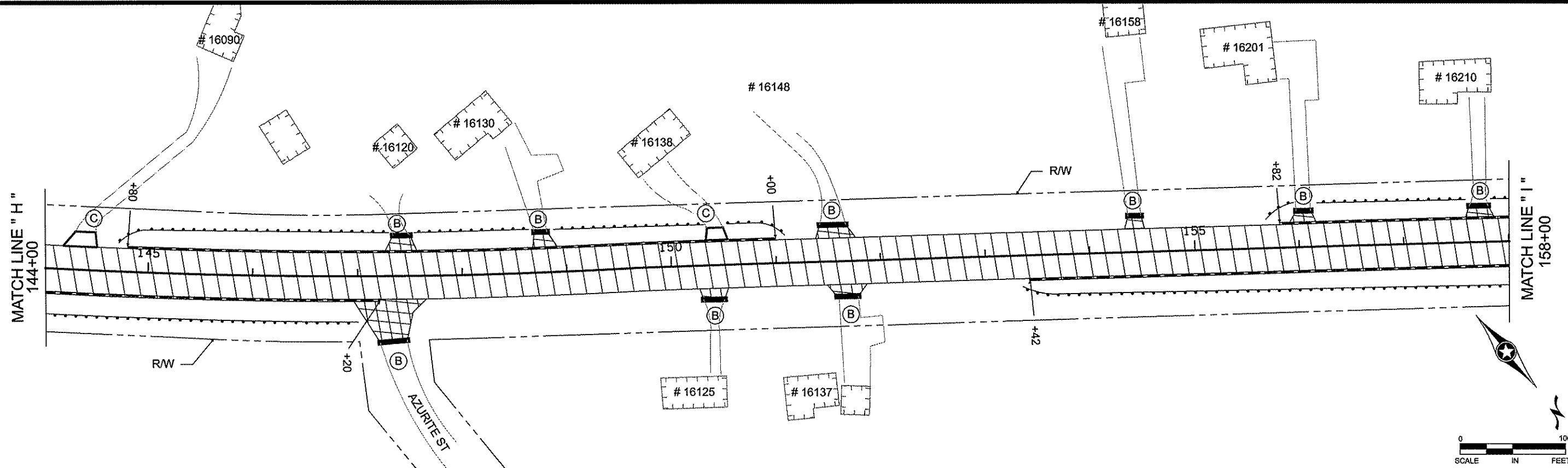
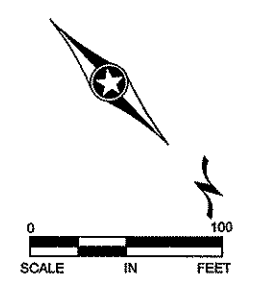
STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

CONSTRUCTION PLAN
 STA 102+00 TO 130+00
 Sheet 16 of 38 Sheets



CONSTRUCTION NOTES

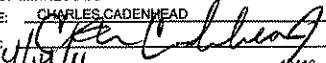
	RECLAIM AND OVERLAY		
	2' NEW PAVEMENT FOR BYPASS / RIGHT TURN LANE ADD. WIDTH REQUIRED FOR BYPASS TURN LANES. SEE CHART		
	OVERLAY BIT STREET APPROACH / DR WAY		
	BITUMINOUS		INSTALL TRUNCATED DOME, CONCRETE CURB DESIGN B418, AND 4" CONCRETE WALK AS DIRECTED BY ENGINEER.
	CONCRETE		
	GRAVEL		
	MILL JOINT		
	SILT FENCE		



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5_(TH47-CR64)\Plan\6 plan.dgn 04/04/2011 7:53:24 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: 
 DATE: 4/14/11 LICENSE NO. 40416

DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: XXXXXX

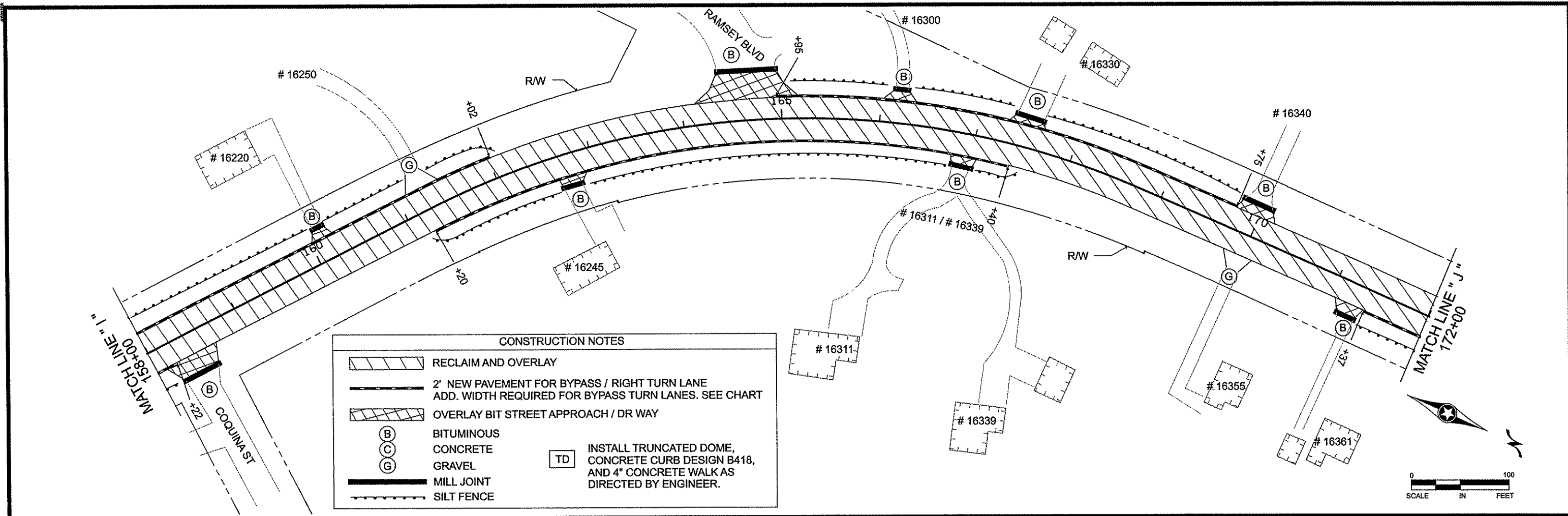


STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

CONSTRUCTION PLAN

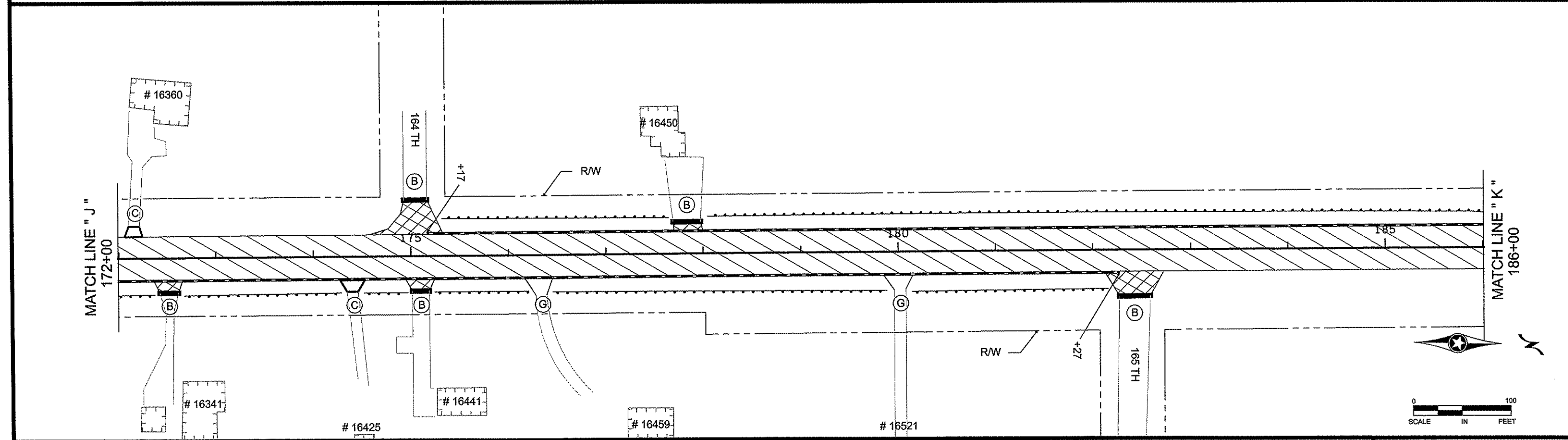
STA 130+00 TO 158+00

Sheet 17 of 38 Sheets



CONSTRUCTION NOTES

	RECLAIM AND OVERLAY	
	2' NEW PAVEMENT FOR BYPASS / RIGHT TURN LANE ADD. WIDTH REQUIRED FOR BYPASS TURN LANES. SEE CHART	
	OVERLAY BIT STREET APPROACH / DR WAY	
(B)	BITUMINOUS	TD INSTALL TRUNCATED DOME, CONCRETE CURB DESIGN B418, AND 4" CONCRETE WALK AS DIRECTED BY ENGINEER.
(C)	CONCRETE	
(G)	GRAVEL	
	MILL JOINT	
	SILT FENCE	



NO	DATE	BY	CHKD	APPR	REVISION	

NAME: P:\11-01-00\CSAH_5_(TH47-CR64)\Plan16 plan.dgn
04/04/2011 7:53:38 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.

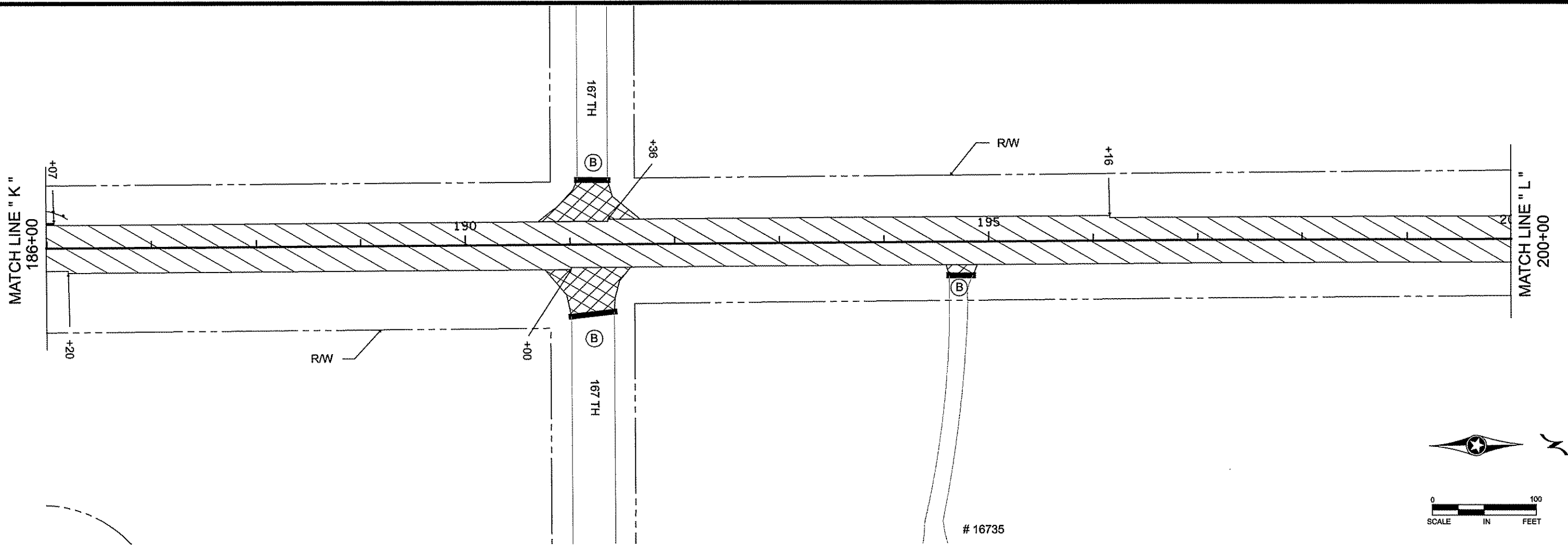
PRINT NAME: CHARLES CADENHEAD
SIGNATURE: *[Signature]*
DATE: 4/12/11 LICENSE NO. 40416

DRAWN BY: JF DATE: 3/1/2011
DESIGN BY: JF DATE: 3/1/2011
CHECKED BY: JO DATE: XXXXX



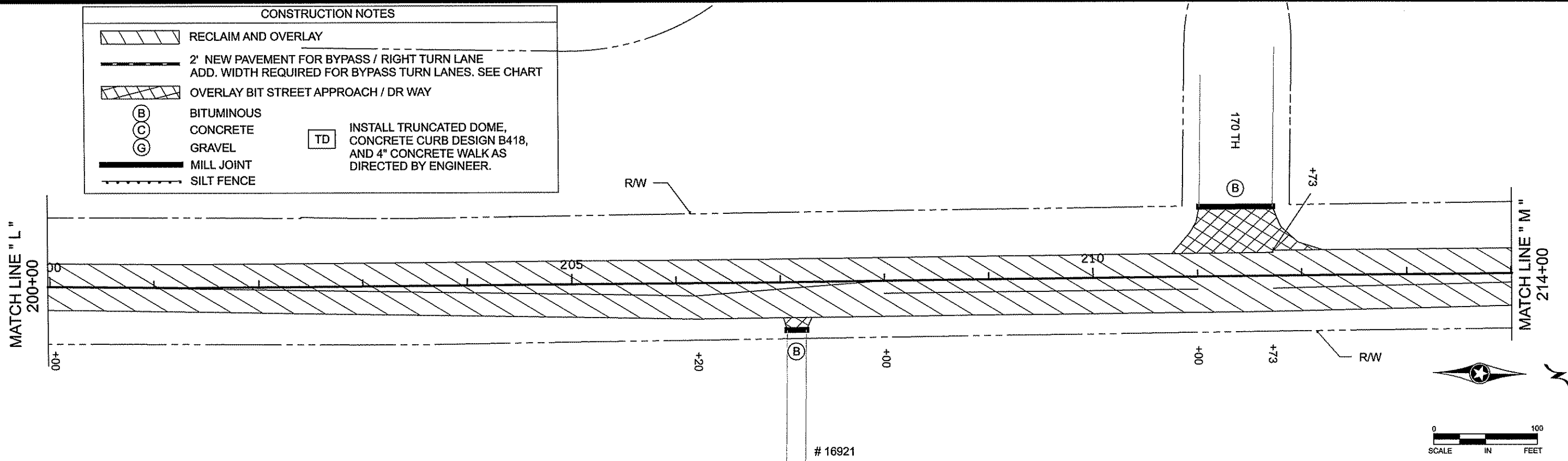
STATE PROJECT NO. SP 002-605-019
PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

CONSTRUCTION PLAN
STA 158+00 TO 186+00
Sheet 18 of 38 Sheets



CONSTRUCTION NOTES

	RECLAIM AND OVERLAY
	2' NEW PAVEMENT FOR BYPASS / RIGHT TURN LANE ADD. WIDTH REQUIRED FOR BYPASS TURN LANES. SEE CHART
	OVERLAY BIT STREET APPROACH / DR WAY
(B)	BITUMINOUS
(C)	CONCRETE
(G)	GRAVEL
	MILL JOINT
	SILT FENCE
(TD)	INSTALL TRUNCATED DOME, CONCRETE CURB DESIGN B418, AND 4" CONCRETE WALK AS DIRECTED BY ENGINEER.



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5 (TH47-CR64)\Plan\6 plan.dgn 04/04/2011 7:53:49 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: 4/14/11 LICENSE NO. 40418

DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: XXXX

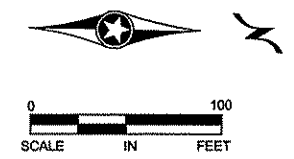
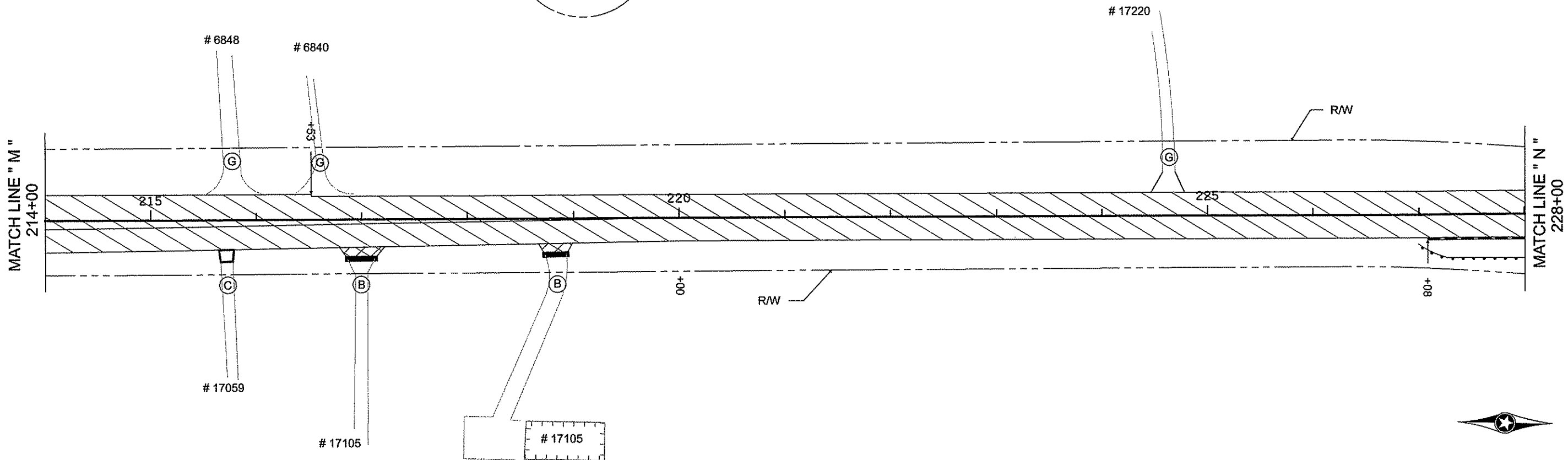


STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

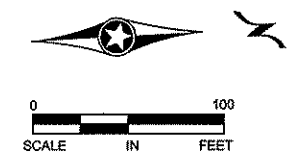
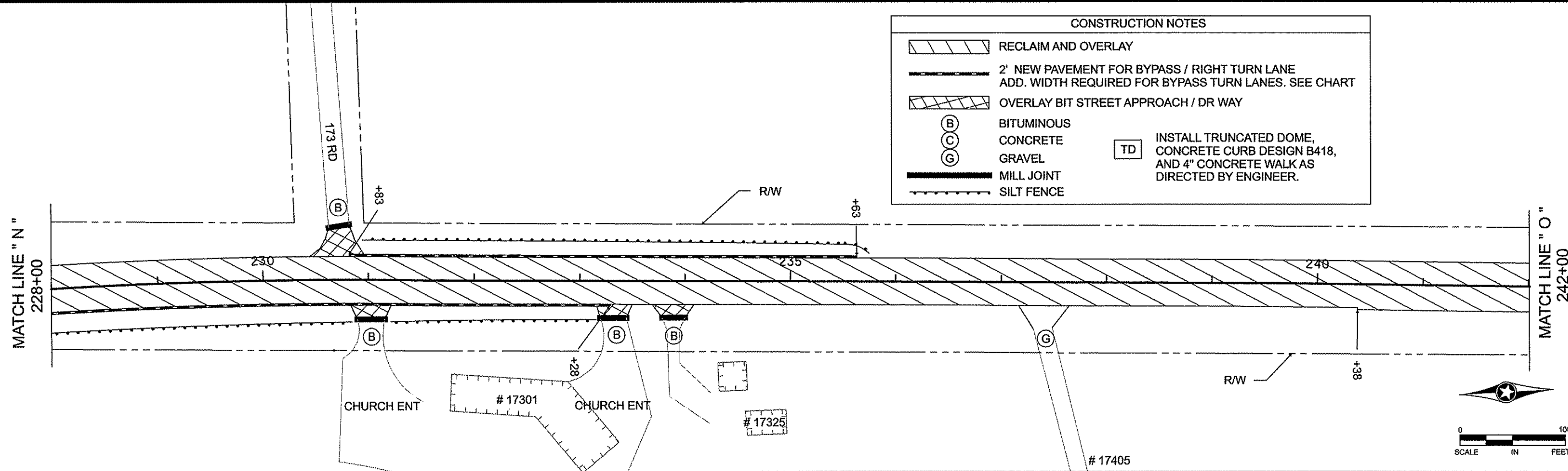
CONSTRUCTION PLAN

STA 186+00 TO 214+00

Sheet 19 of 38 Sheets



CONSTRUCTION NOTES	
	RECLAIM AND OVERLAY
	2' NEW PAVEMENT FOR BYPASS / RIGHT TURN LANE ADD. WIDTH REQUIRED FOR BYPASS TURN LANES. SEE CHART
	OVERLAY BIT STREET APPROACH / DR WAY
	BITUMINOUS
	CONCRETE
	GRAVEL
	MILL JOINT
	SILT FENCE
	INSTALL TRUNCATED DOME, CONCRETE CURB DESIGN B418, AND 4" CONCRETE WALK AS DIRECTED BY ENGINEER.



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5_(TH47-CR54)\Plan6 plan.dgn 04/04/2011 7:54:01 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: 4/19/11 LICENSE NO. 40416



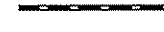
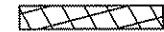





DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: XXXXX

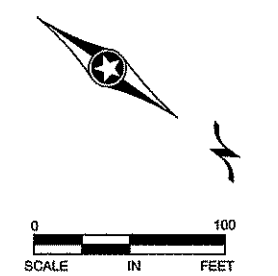
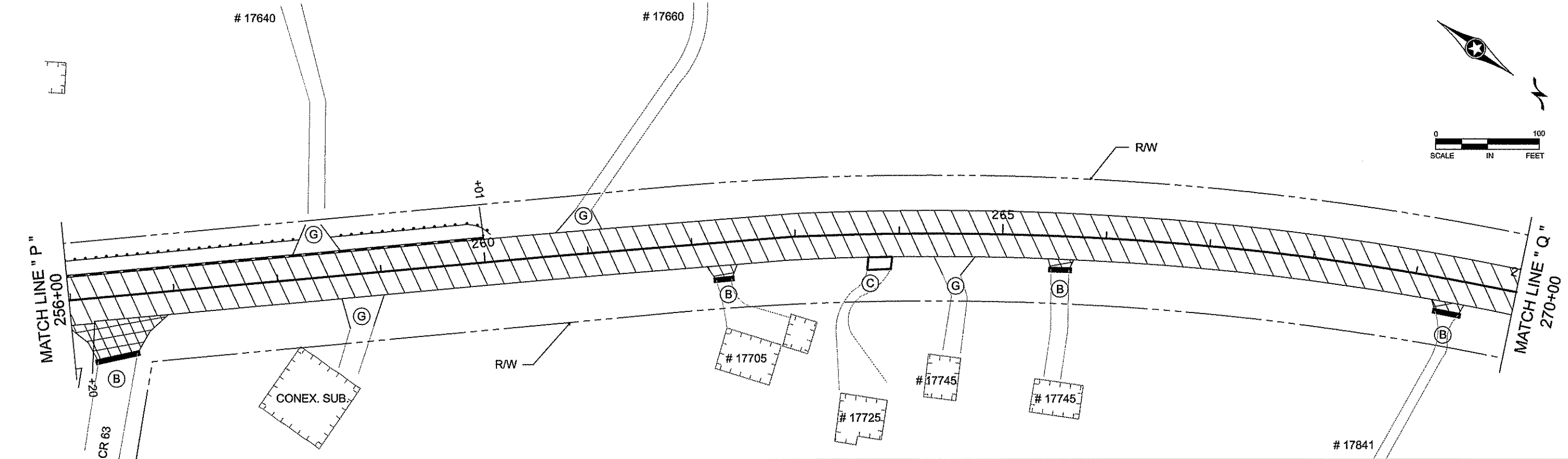
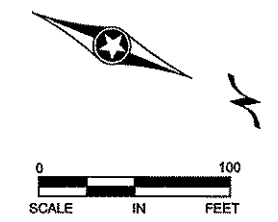
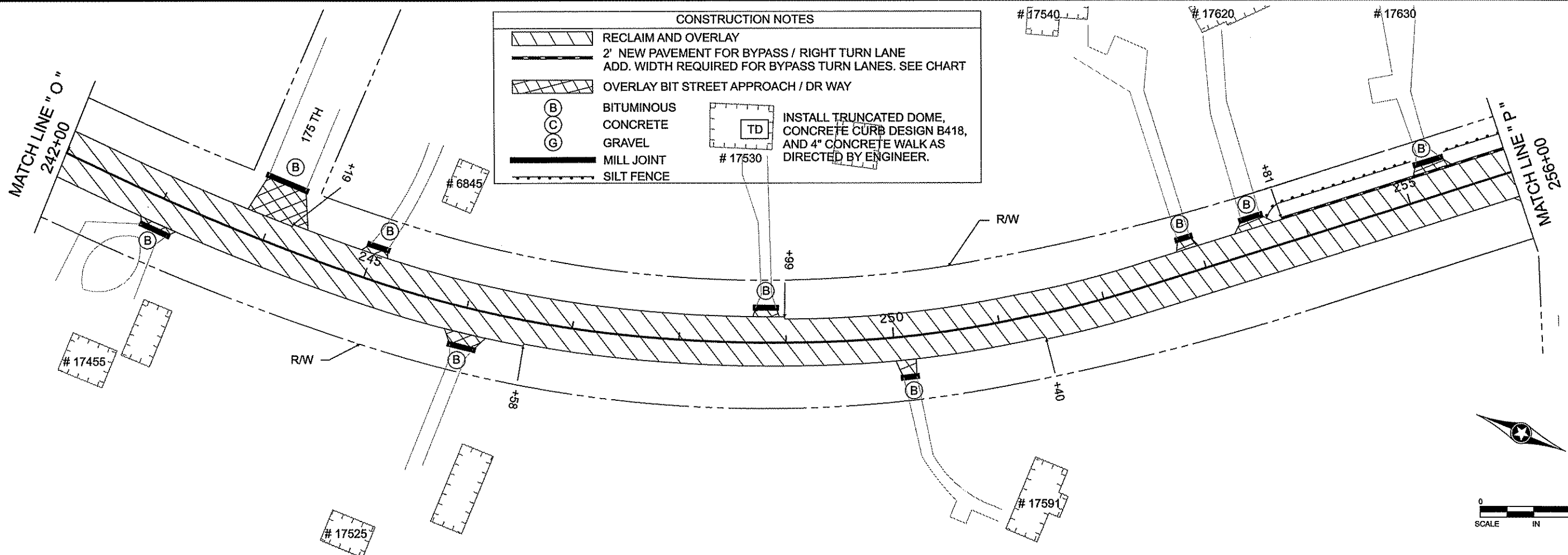


STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

CONSTRUCTION PLAN
 STA 214+00 TO 242+00
 Sheet 20 of 38 Sheets

CONSTRUCTION NOTES

	RECLAIM AND OVERLAY		INSTALL TRUNCATED DOME, CONCRETE CURB DESIGN B418, AND 4" CONCRETE WALK AS DIRECTED BY ENGINEER.
	2' NEW PAVEMENT FOR BYPASS / RIGHT TURN LANE ADD. WIDTH REQUIRED FOR BYPASS TURN LANES. SEE CHART		
	OVERLAY BIT STREET APPROACH / DR WAY		
	BITUMINOUS		
	CONCRETE		
	GRAVEL		
	MILL JOINT		
	SILT FENCE		



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5_(TH47-CR64)\Plan\6 plan.dgn 04/04/2011 7:54:12 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: 4/14/11 LICENSE NO. 40416

DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: XXXXX

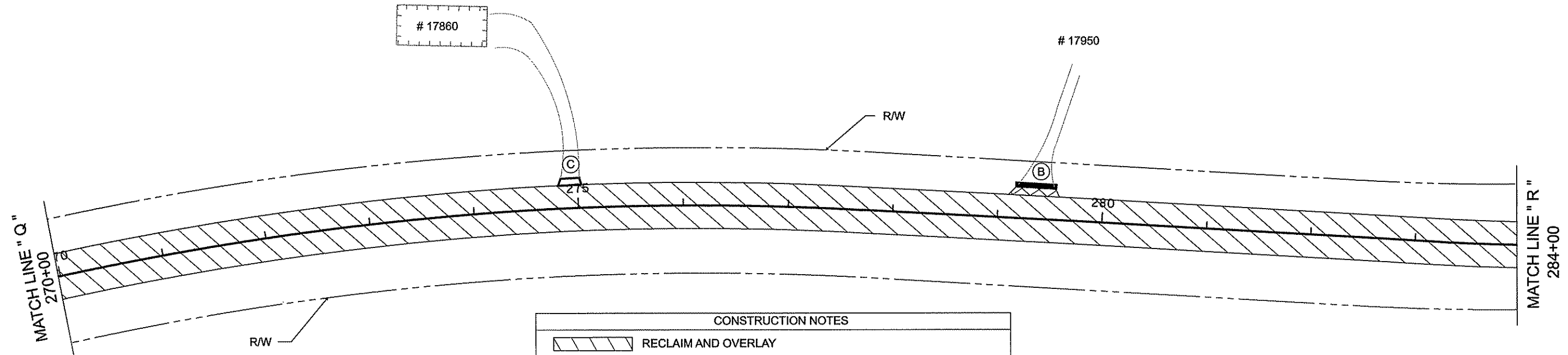


STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

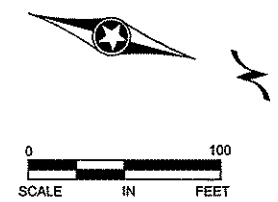
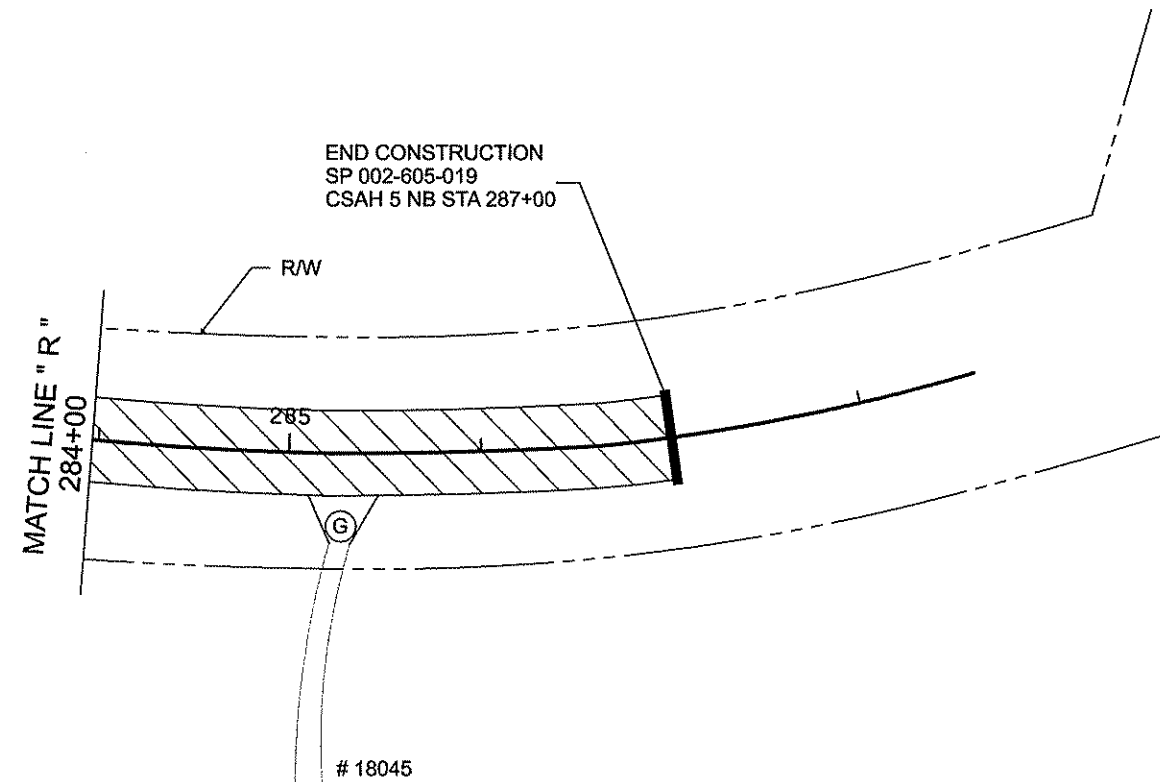
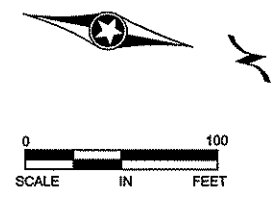
CONSTRUCTION PLAN

STA 242+00 TO 270+00

Sheet 21 of 38 Sheets



CONSTRUCTION NOTES	
	RECLAIM AND OVERLAY
	2' NEW PAVEMENT FOR BYPASS / RIGHT TURN LANE ADD. WIDTH REQUIRED FOR BYPASS TURN LANES. SEE CHART
	OVERLAY BIT STREET APPROACH / DR WAY
	BITUMINOUS
	CONCRETE
	GRAVEL
	MILL JOINT
	SILT FENCE
	INSTALL TRUNCATED DOME, CONCRETE CURB DESIGN B418, AND 4" CONCRETE WALK AS DIRECTED BY ENGINEER.



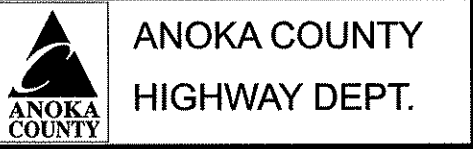
NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\11-01-00\CSAH_5_(TH47-CR64)\Plan6 plan.dgn 04/04/2011 7:54:23 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.

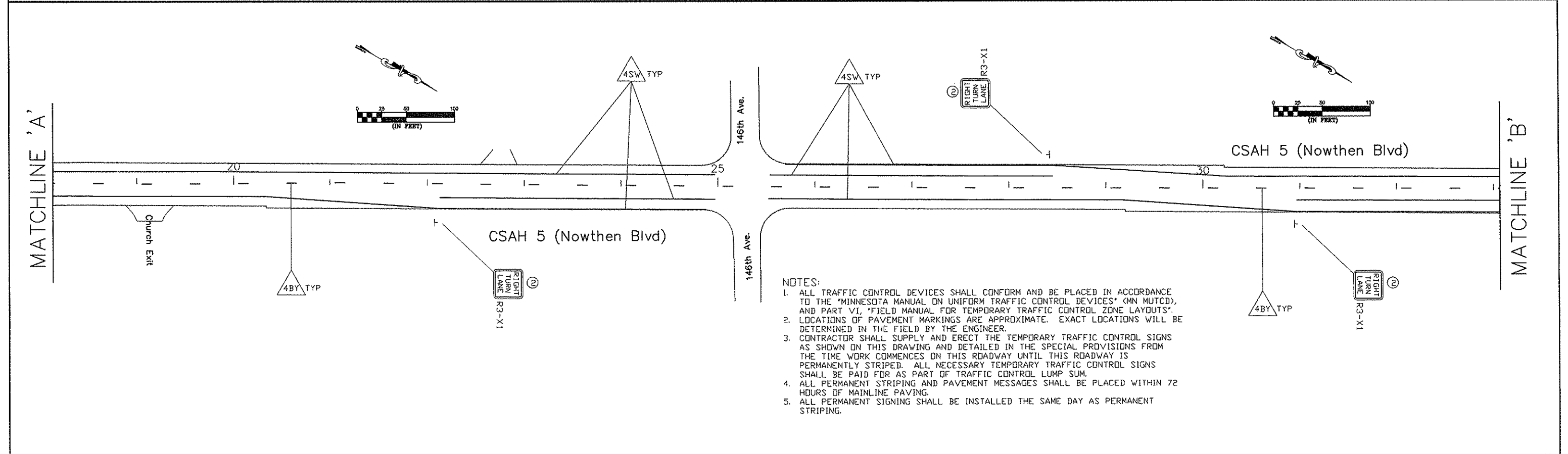
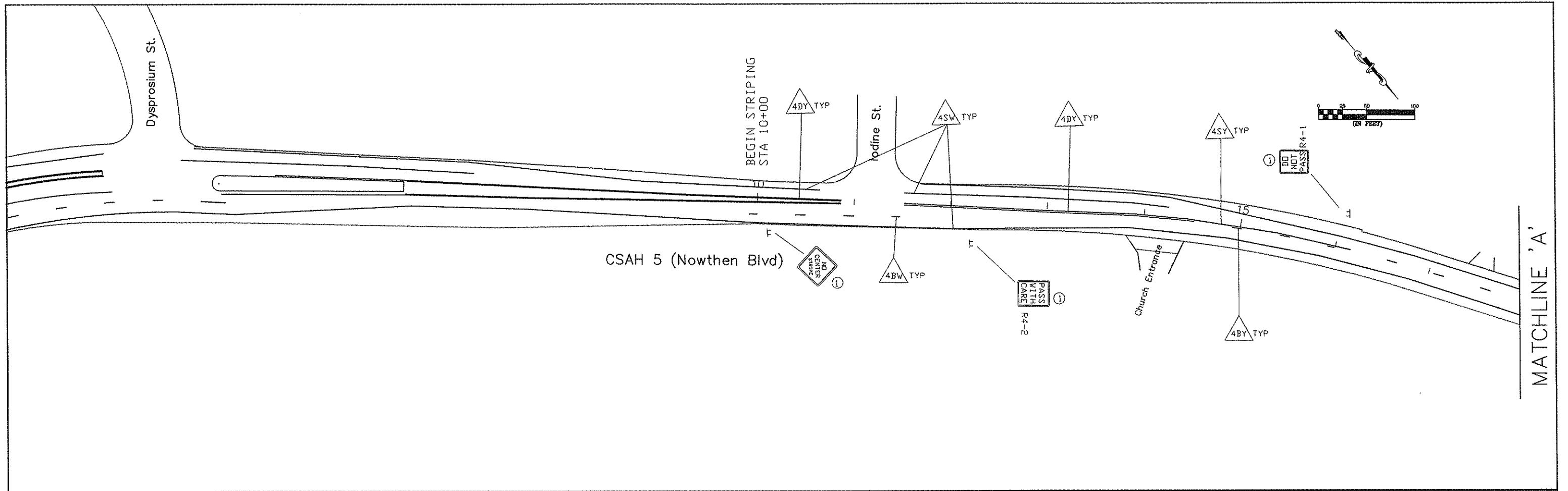
PRINT NAME: CHARLES CADEMEHEAD
 SIGNATURE: *[Signature]*
 DATE: 4/14/11 LICENSE NO. 40516

DRAWN BY: JF DATE: 3/1/2011
 DESIGN BY: JF DATE: 3/1/2011
 CHECKED BY: JO DATE: XXXXX




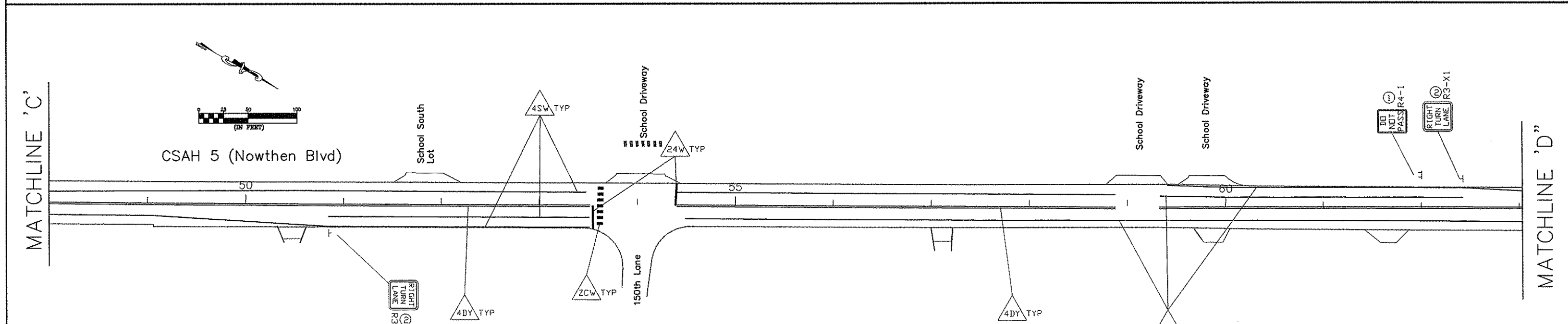
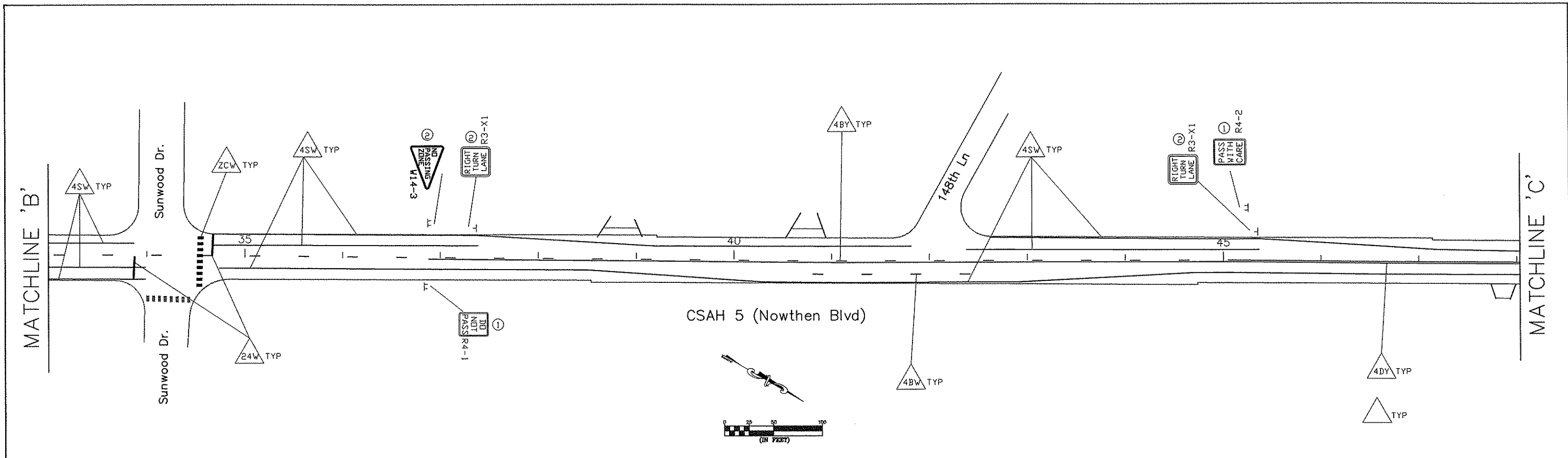
STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY / ADDED 10' BIT SHLDRS (1985)

CONSTRUCTION PLAN
 STA 270+00 TO 287+00
 Sheet 22 of 38 Sheets



- NOTES:
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (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.
 5. ALL PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.

VERIFIED AND REVISED Jan 3, 2011 ELH					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.		DRAWN BY MTH DATE 1/07/11		 ANOKA COUNTY HIGHWAY DEPT.	STATE PROJECT NO. SP 002-605-019		CSAH 5 (Nowthen Blvd)	
NO DATE BY CKD APPR REVISION					PRINT NAME: CHARLES CADENHEAD SIGNATURE: <i>Charles Cadenhead</i> DATE: 4/14/11 REG. NO. 40416		DESIGN BY MTH DATE 1/07/11			PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)		TEMPORARY SIGNING PERMANENT SIGNING, STRIPING AND PAVEMENT MESSAGES	
NAME: T:\Traffic\dwg\CSAH 5 (Nowthen Blvd)\02-605-19.dwg							CHECKED BY JR DATE 3/01/11		1.5" OVERLAY/ADDED 10' BIT SHLDRS (1985)		Sheet 23 of 38 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.
 5. ALL PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.

1	5-17-2011	MTH	RB	Adjusted Stop Bar lengths	
NO	DATE	BY	CKD	APPR	REVISION
NAME: T:\Traffic\dwg\CSAH 5 (Nowthen Blvd)\02-605-19.dwg					

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.

PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *Charles Cadenhead*
 DATE: 5/25/11 REG. NO. 40416

DRAWN BY: MTH DATE: 1/07/11
 DESIGN BY: MTH DATE: 1/07/11
 CHECKED BY: JR DATE: 3/01/11

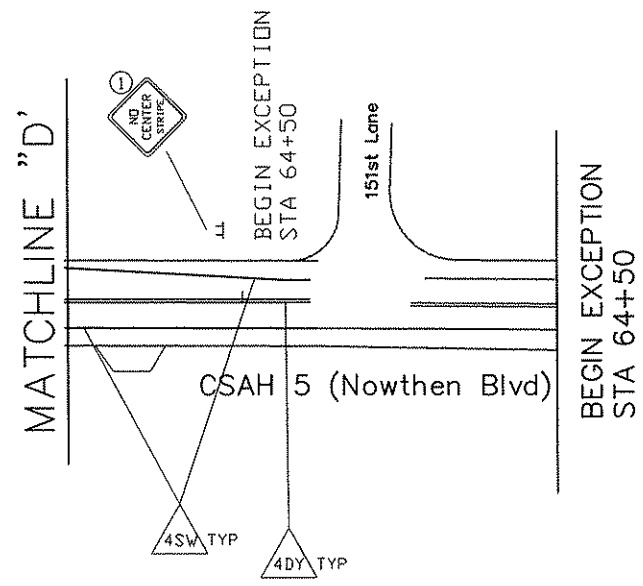


ANOKA COUNTY
 HIGHWAY DEPT.

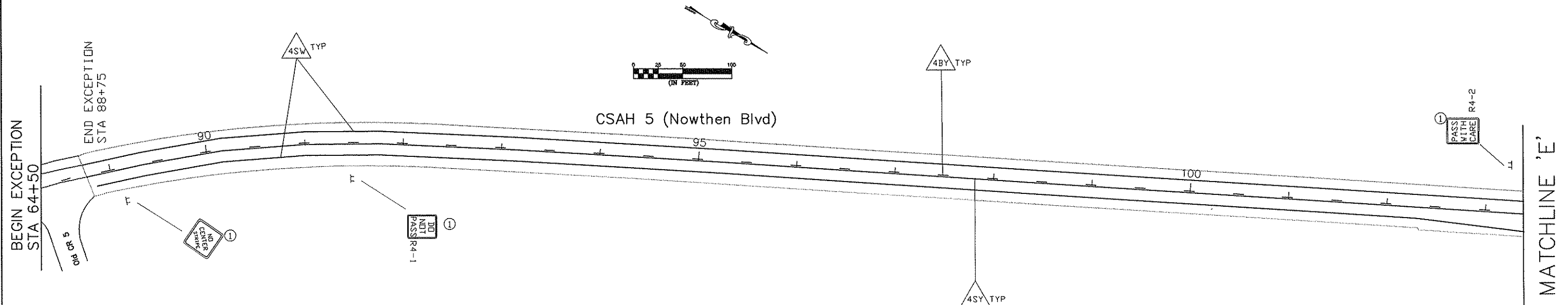
STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY/ADDED 10' BIT SHLDRS (1985)

CSAH 5 (Nowthen Blvd)
 TEMPORARY SIGNING
 PERMANENT SIGNING, STRIPING
 AND PAVEMENT MESSAGES

Sheet 24 of 38 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".
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 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.
 5. ALL PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.

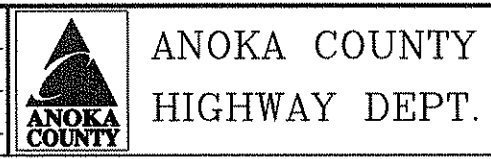


VERIFIED AND REVISED Jan 3, 2011 ELH					
NO	DATE	BY	CKD	APPR	REVISION
NAME: T:\Traffic\dwg\CSAH 5 (Nowthen Blvd)\02-605-19.dwg					

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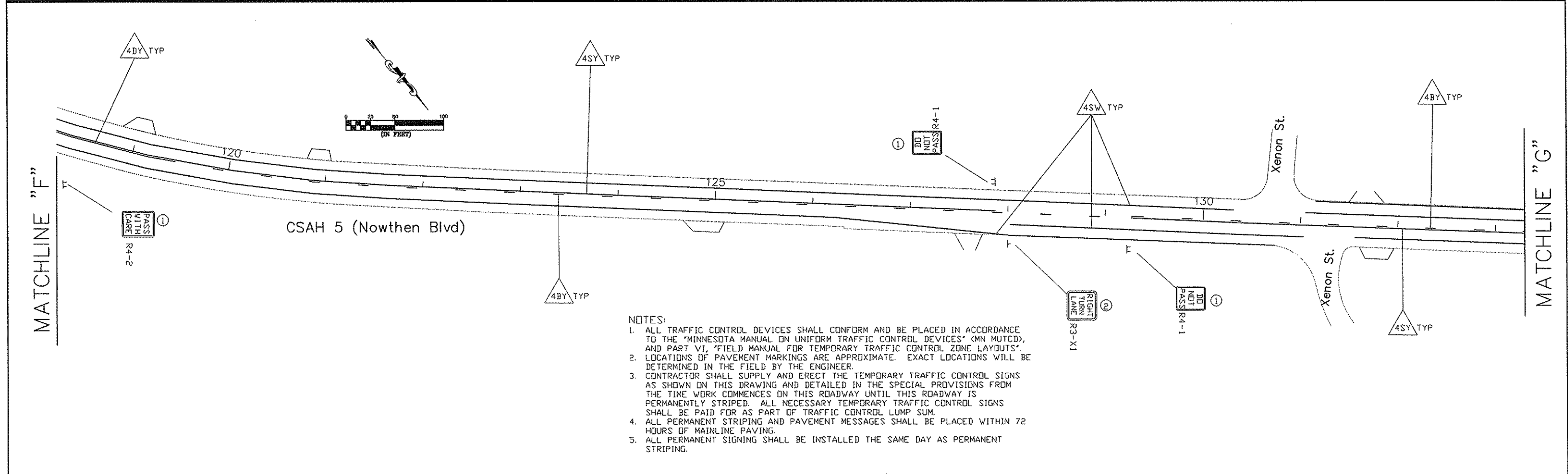
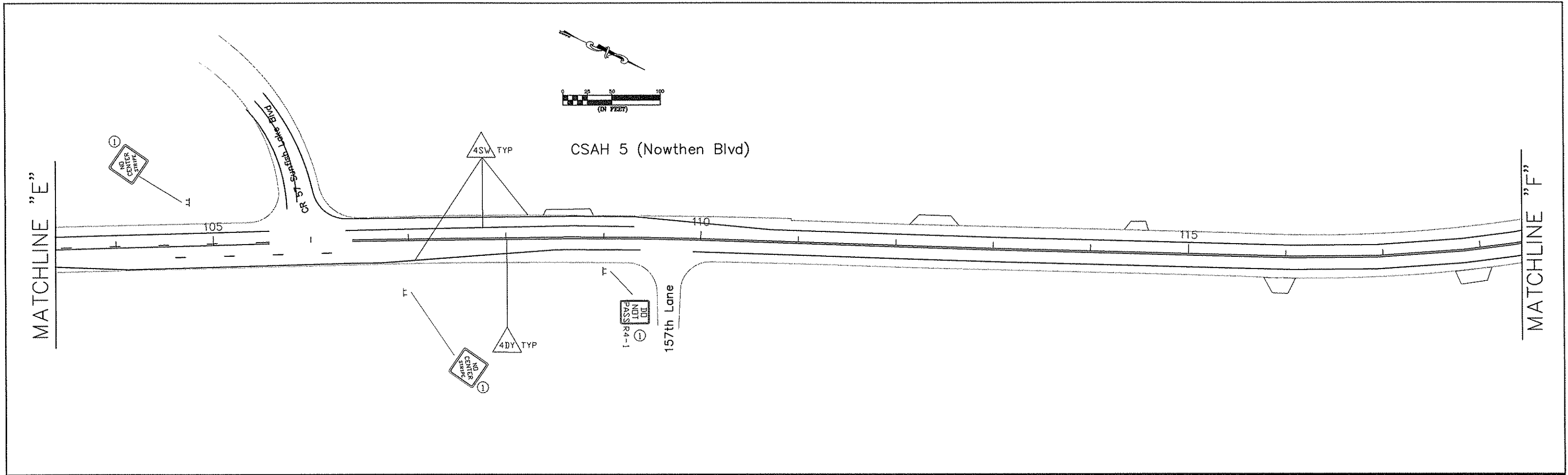
PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *[Signature]*
 DATE: 2/14/11 REG. NO. 48416

DRAWN BY: MTH DATE: 1/07/11
 DESIGN BY: MTH DATE: 1/07/11
 CHECKED BY: JR DATE: 3/01/11



STATE PROJECT NO. SP 002-605-019
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CSAH 5 (Nowthen Blvd)
 TEMPORARY SIGNING
 PERMANENT SIGNING, STRIPING
 AND PAVEMENT MESSAGES
 Sheet 25 of 38 Sheets



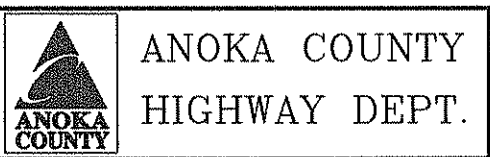
- NOTES:
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1	5-17-2011	MTH	RB	Adjusted Text Location
NO	DATE	BY	CHKD	APPR

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.

PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *Charles Cadenhead*
 DATE: 5/25/11 REG. NO. 40416

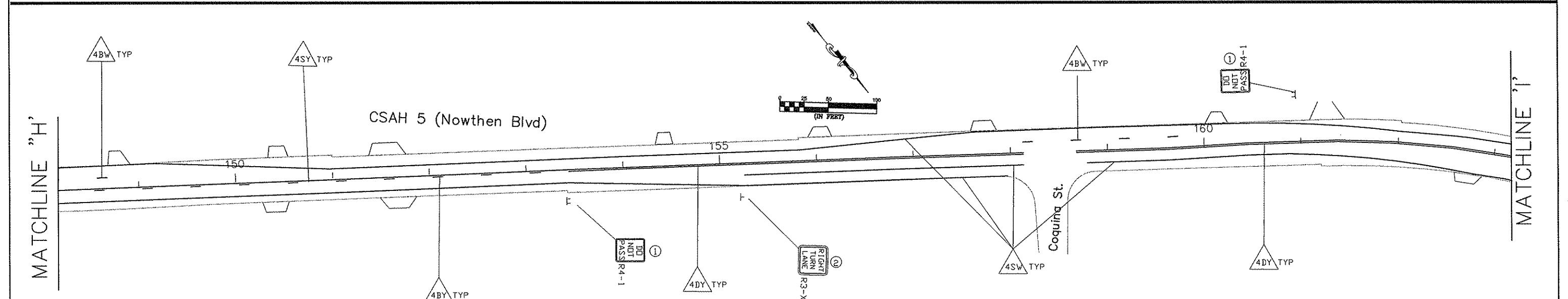
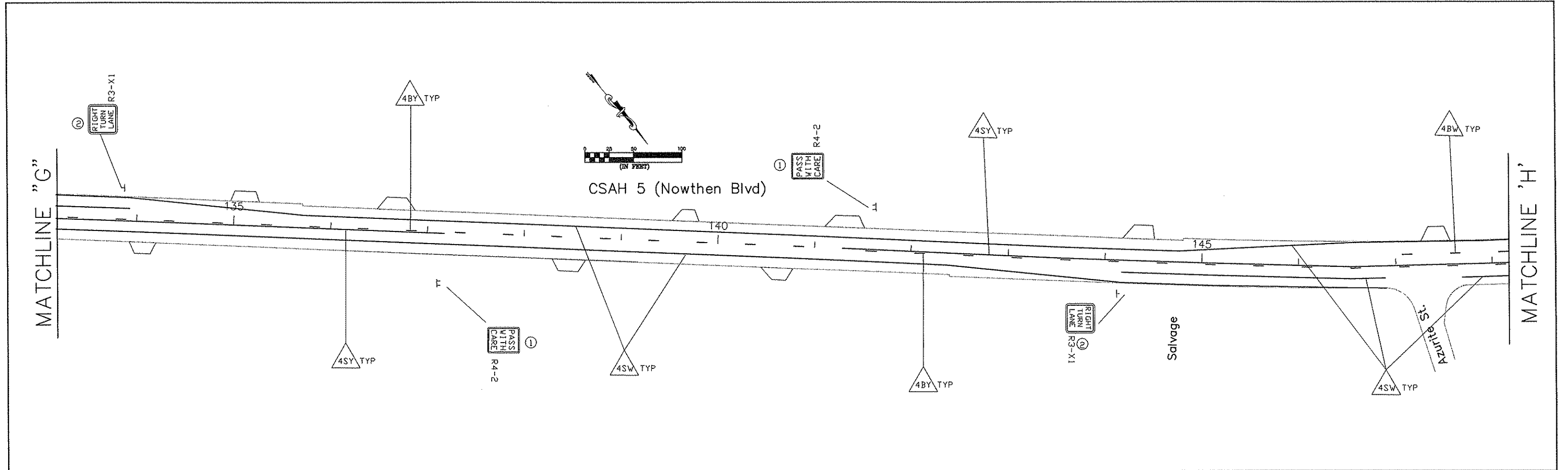
DRAWN BY: MTH DATE: 1/07/11
 DESIGN BY: MTH DATE: 1/07/11
 CHECKED BY: JR DATE: 3/01/11



STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY/ADDED 10' BIT SHLDRS (1985)

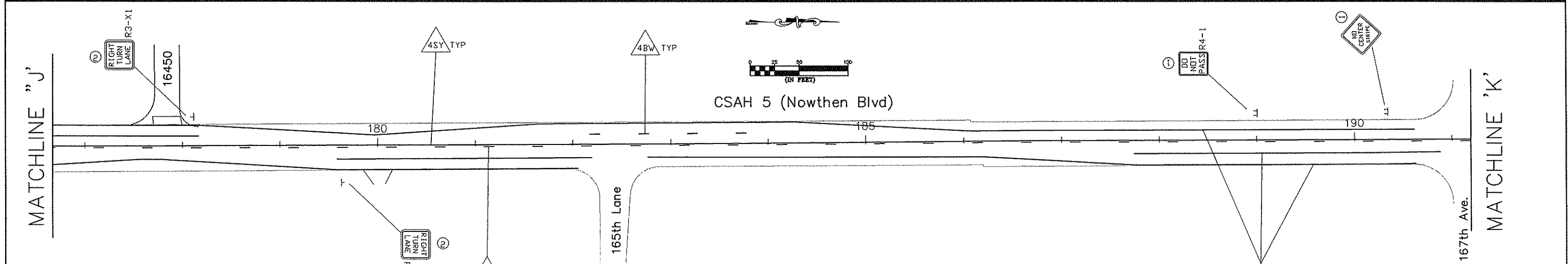
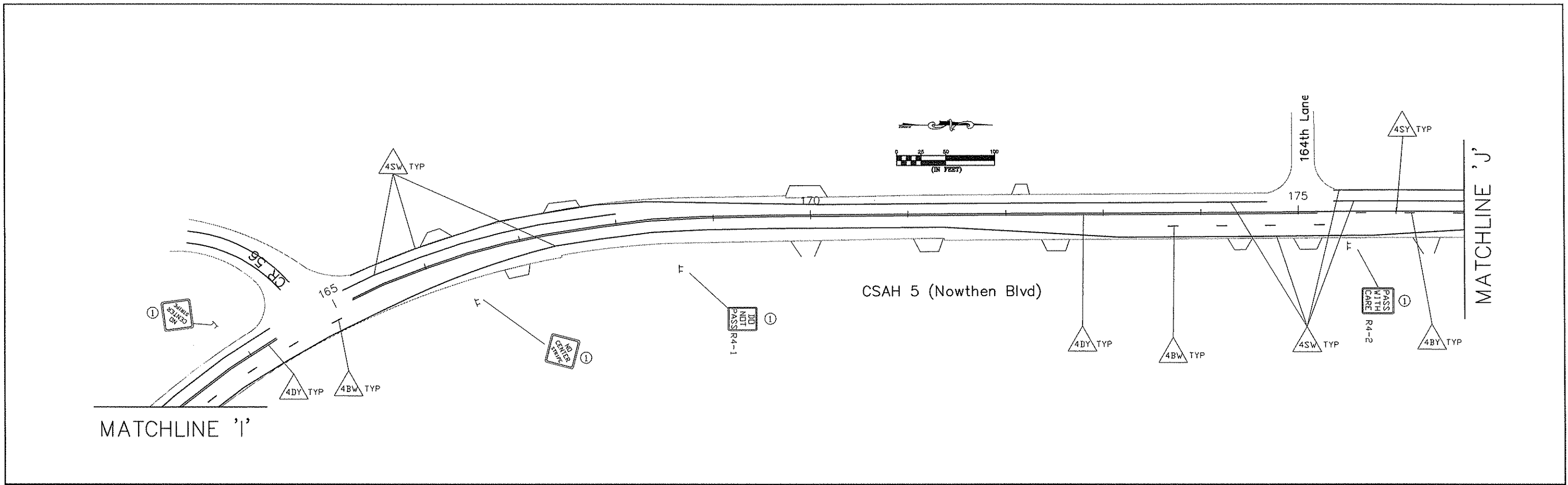
CSAH 5 (Nowthen Blvd)
 TEMPORARY SIGNING
 PERMANENT SIGNING, STRIPING
 AND PAVEMENT MESSAGES

Sheet 26 of 38 Sheets



- NOTES:
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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VERIFIED AND REVISED Jan 3, 2011 ELH					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.		DRAWN BY: MTH DATE: 1/07/11			STATE PROJECT NO. SP 002-605-019		CSAH 5 (Nowthen Blvd)		
					PRINT NAME: CHARLES CADZINHEAD		DESIGN BY: MTH DATE: 1/07/11			PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)		TEMPORARY SIGNING		
NO DATE BY CKD APPR REVISION					SIGNATURE: <i>[Signature]</i>		CHECKED BY: JR DATE: 3/01/11		ANOKA COUNTY HIGHWAY DEPT.		1.5" OVERLAY/ADDED 10' BIT SHLDRS (1985)		AND PAVEMENT MESSAGES	
NAME: F:\Traffic\dwg\CSAH 5 (Nowthen Blvd)\02-605-19.dwg					DATE: <i>[Signature]</i> REG. NO. 40416								Sheet 27 of 38 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".
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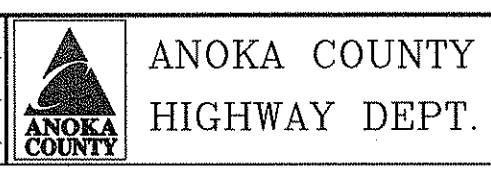
1	5-17-2011	MTH	RB	Adjusted Text Location
NO	DATE	BY	CKD	APPR
				REVISION

NAME: T:\Traffic\dwg\CSAH 5 (Nowthen Blvd)\02-605-19.dwg

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PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *Charles Cadenhead*
 DATE: 5/25/11 REG. NO. 40416

DRAWN BY: MTH DATE: 1/07/11
 DESIGN BY: MTH DATE: 1/07/11
 CHECKED BY: JR DATE: 3/01/11



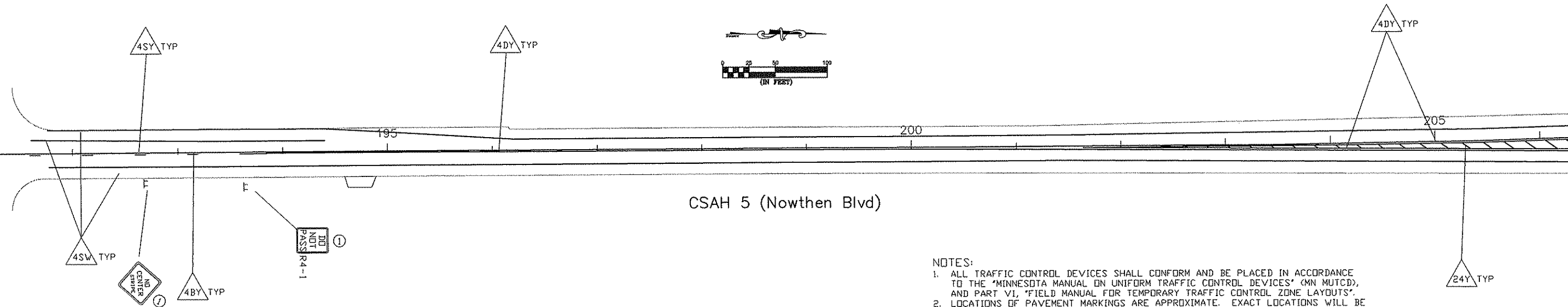
STATE PROJECT NO. SP 002-605-019
 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
 1.5" OVERLAY/ADDED 10' BIT SHLDRS (1985)

CSAH 5 (Nowthen Blvd)
 TEMPORARY SIGNING
 PERMANENT SIGNING, STRIPING
 AND PAVEMENT MESSAGES

Sheet 28 of 38 Sheets

MATCHLINE 'K'

167th Ave.



CSAH 5 (Nowthen Blvd)

MATCHLINE 'L'

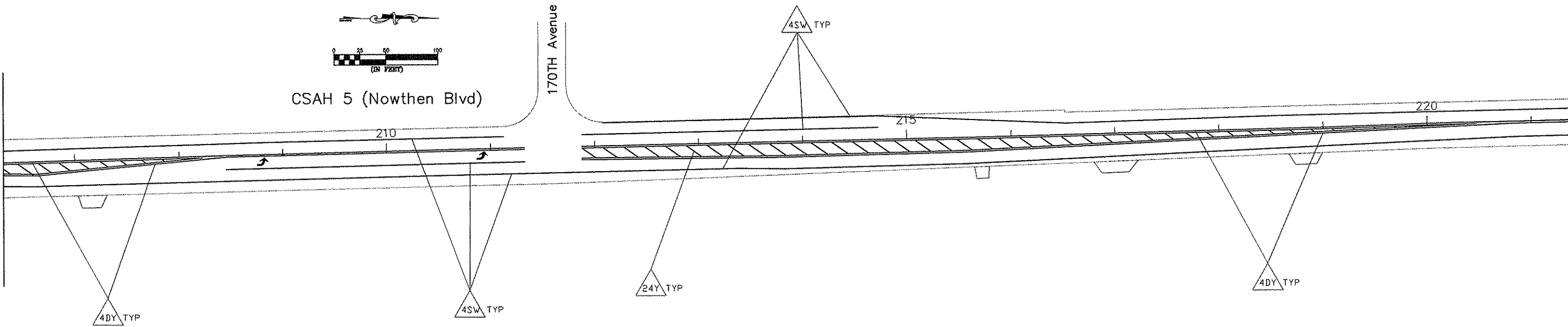
NOTES:

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MATCHLINE 'L'

CSAH 5 (Nowthen Blvd)

170TH Avenue



MATCHLINE 'M'

VERIFIED AND REVISED Jan 3, 2011 ELH

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PRINT NAME: CHARLES CADENHEAD
SIGNATURE: *[Signature]*
DATE: 4/14/11 REG. NO. 40418

DRAWN BY: MTH DATE: 1/07/11
DESIGN BY: MTH DATE: 1/07/11
CHECKED BY: JR DATE: 3/01/11

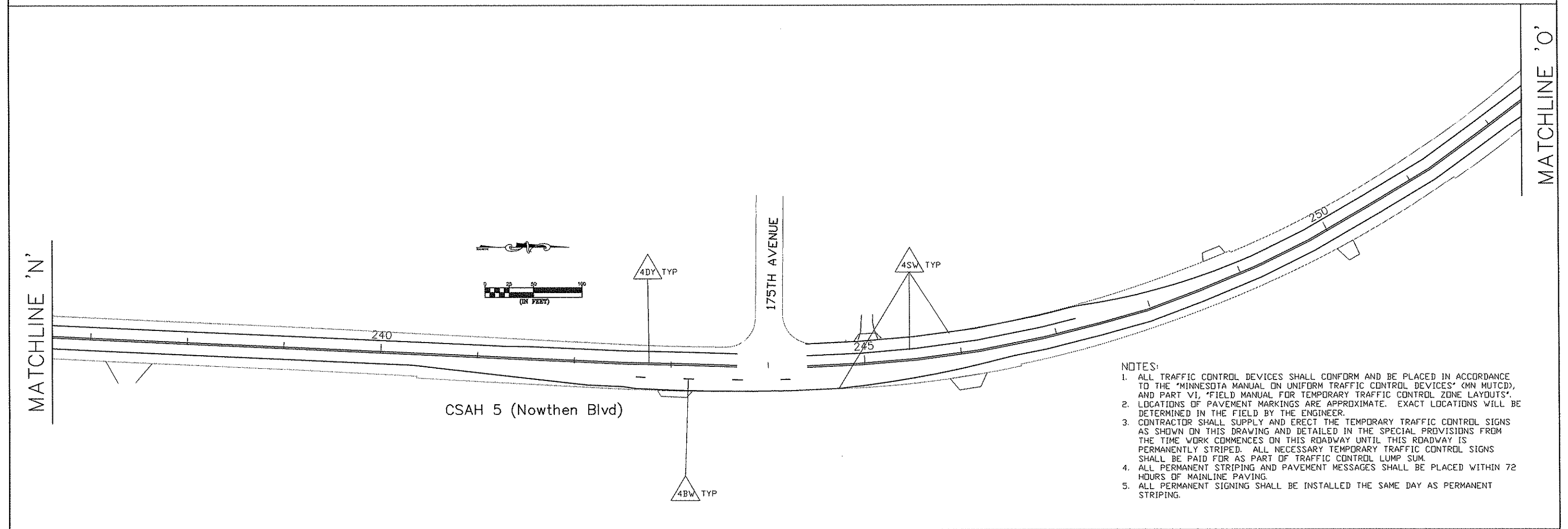
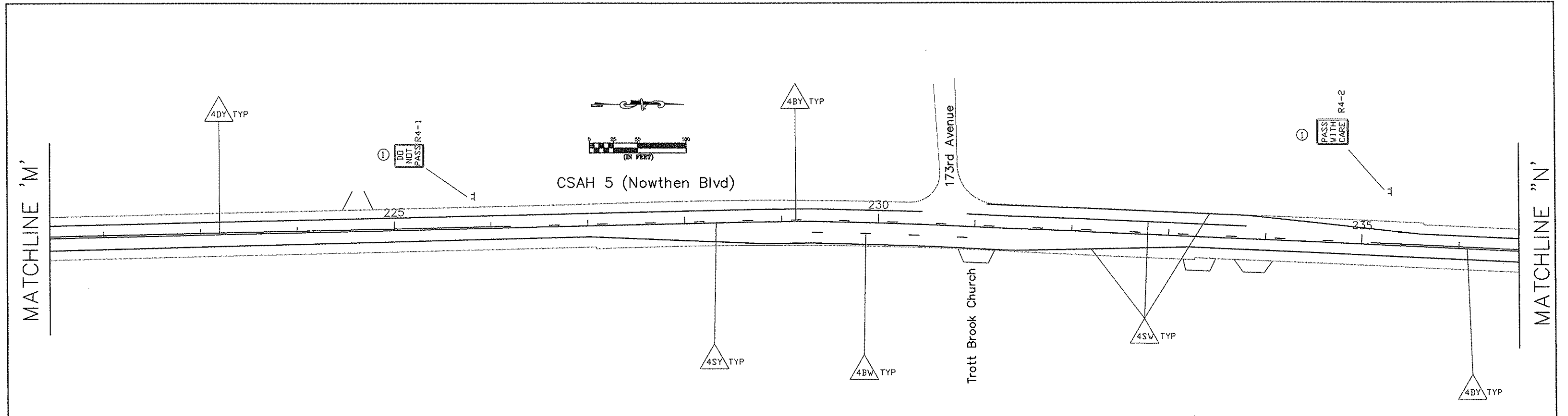


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. SP 002-605-019
PREVIOUSLY CONST. UNDER SP 02-605-01 (1972)
1.5" OVERLAY/ADDED 10' BIT SHLDRS (1985)

CSAH 5 (Nowthen Blvd)
TEMPORARY SIGNING
PERMANENT SIGNING, STRIPING
AND PAVEMENT MESSAGES

NO DATE BY CKD APPR REVISION
NAME: T:\Traffic\dwg\CSAH 5 (Nowthen Blvd)\02-605-19.dwg



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VERIFIED AND REVISED Jan 3, 2011 ELH					
NO	DATE	BY	CKD	APPR	REVISION
NAME: F:\Traffic\dwg\CSAH 5 (Nowthen Blvd)\02-605-19.dwg					

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PRINT NAME: CHARLES CAPENHEAD
 SIGNATURE: *[Signature]*
 DATE: *[Signature]* REG. NO. 40416

DRAWN BY: MTH DATE: 1/07/11
 DESIGN BY: MTH DATE: 1/07/11
 CHECKED BY: JR DATE: 3/01/11

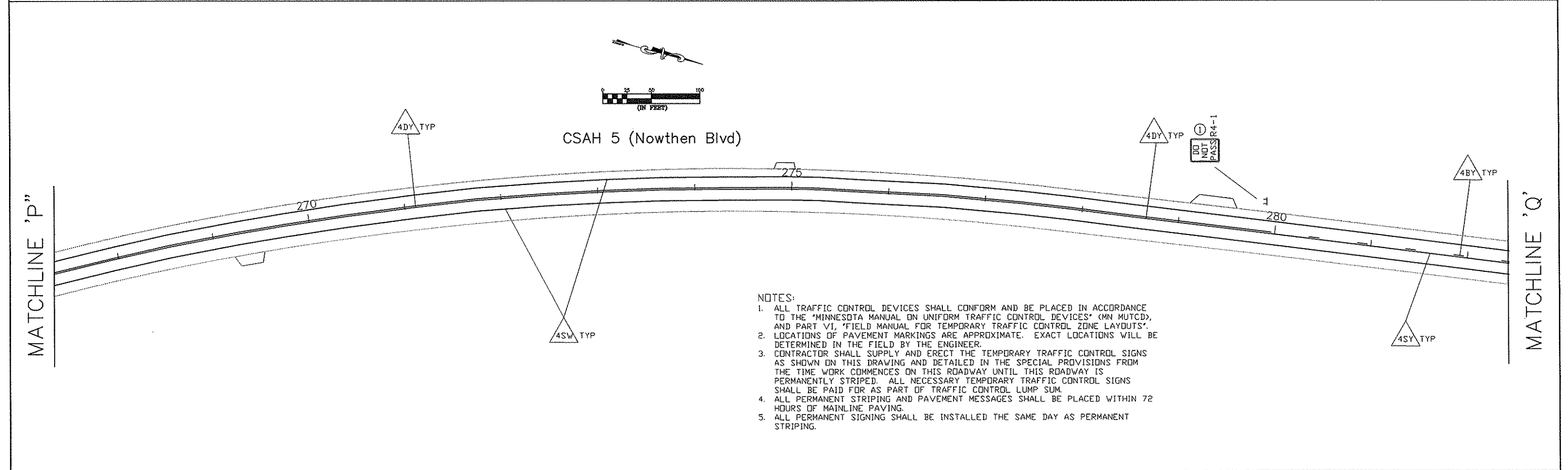
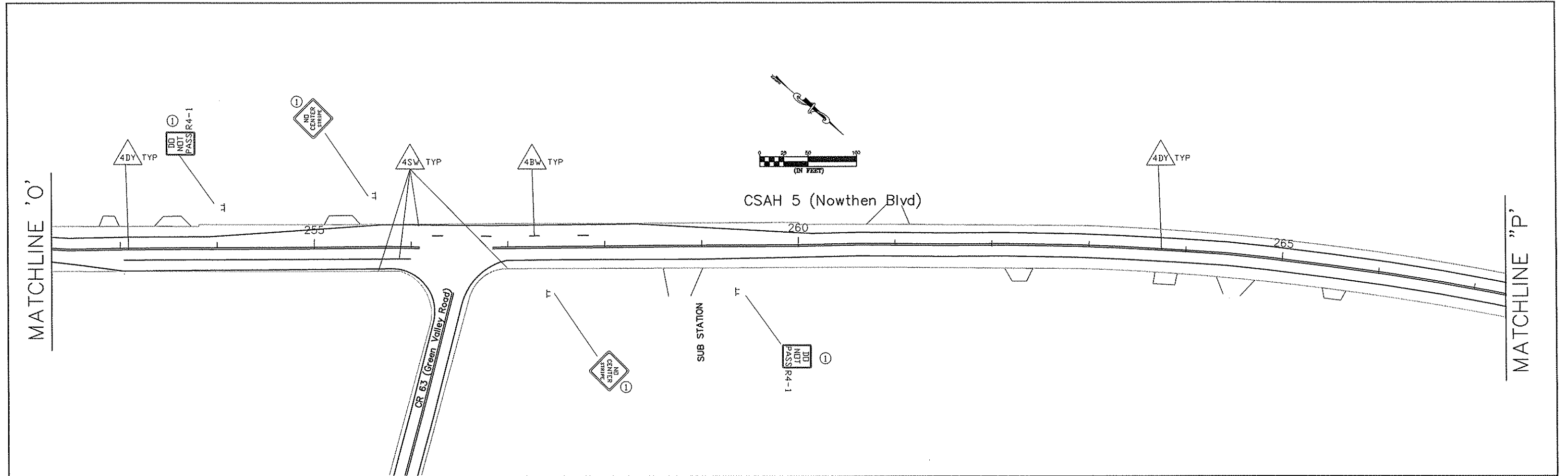
ANOKA COUNTY
HIGHWAY DEPT.



STATE PROJECT NO. SP 002-605-019
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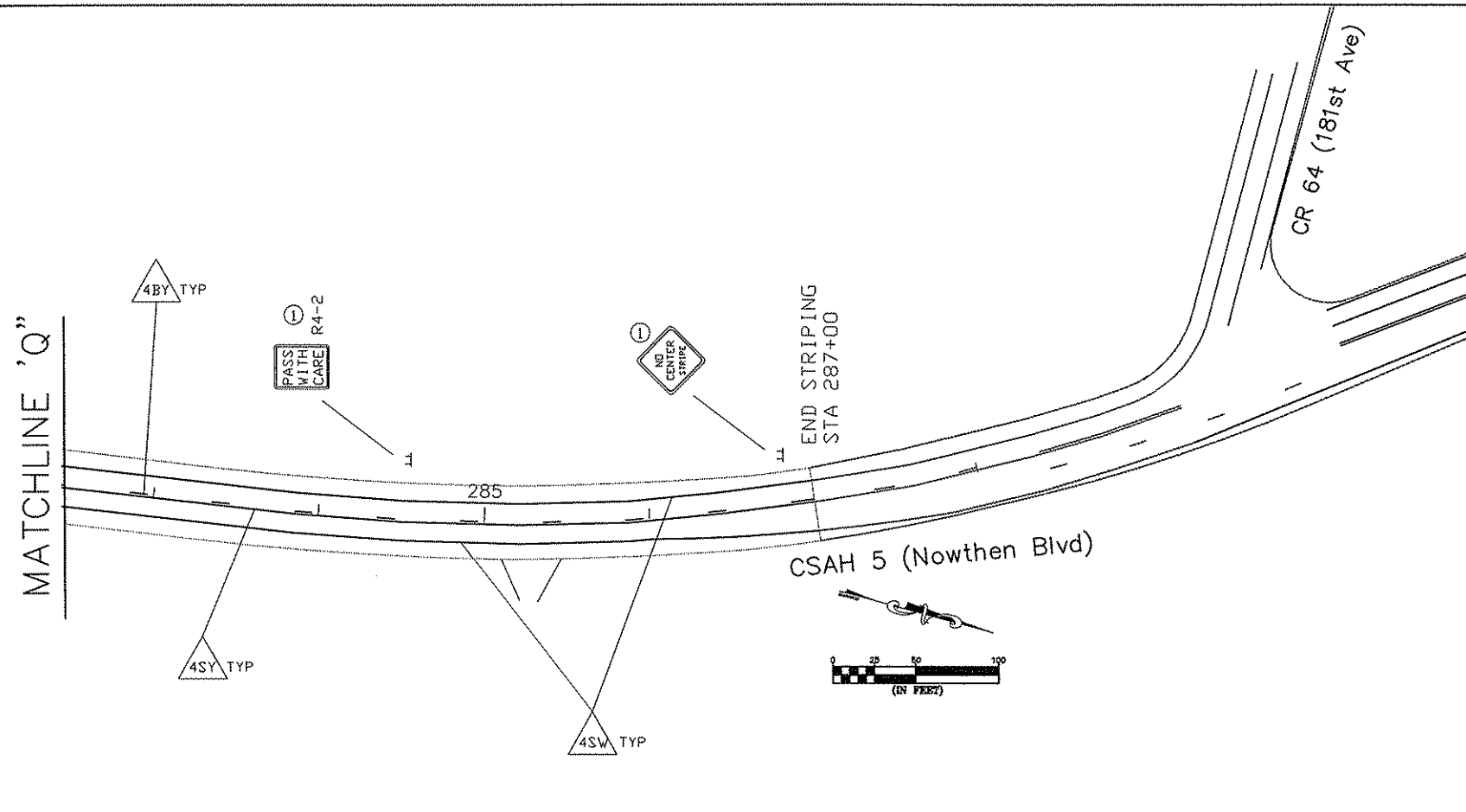
CSAH 5 (Nowthen Blvd)
 TEMPORARY SIGNING
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Sheet 30 of 38 Sheets



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NO	DATE	BY	CKD	APPR	REVISION	PRINT NAME: CHARLES CADENHEAD	DESIGN BY: MTH DATE: 1/07/11	ANOKA COUNTY			
NAME: T:\Traffic\dwg\CSAH 5 (Nowthen Blvd)\02-605-19.dwg						SIGNATURE: <i>[Signature]</i>	CHECKED BY: JR DATE: 3/01/11	REG. NO. 40416	Sheet 31 of 38 Sheets		



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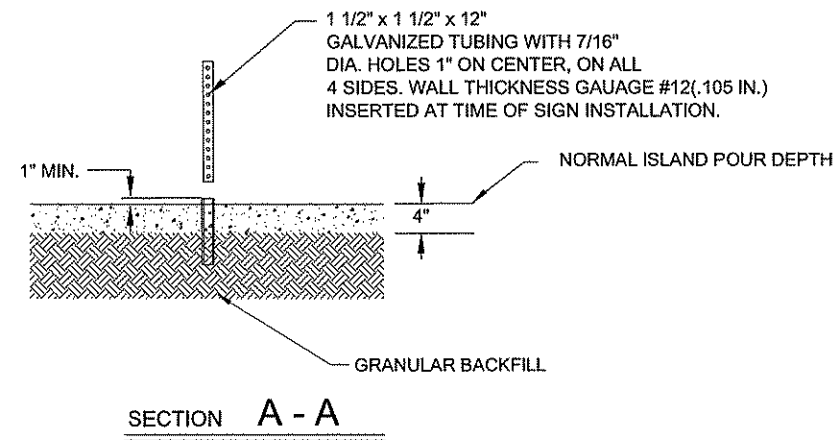
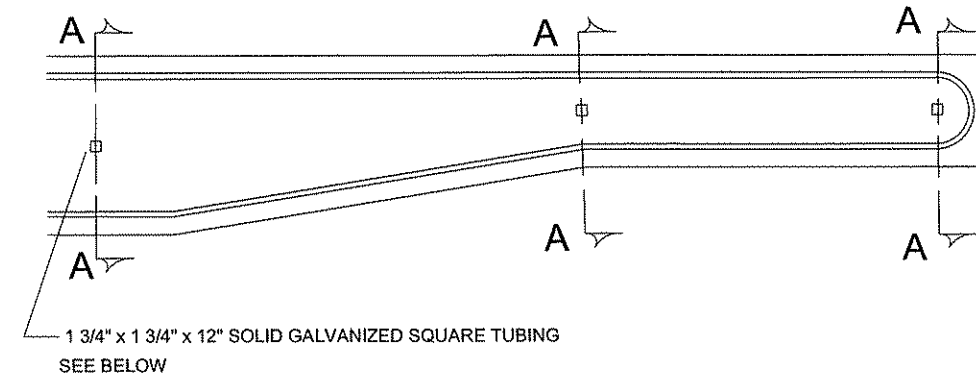
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4" Solid Yellow Striping	10067	Lin Ft
4" Broken Yellow Striping	2520	Lin Ft
4" Solid White Striping	54536	Lin Ft
4" Broken White Striping	440	Lin Ft
24" Yellow Thermoplastic	800	Lin Ft
24" White Thermoplastic	92.6	Lin Ft
3'x6' Zebra Crosswalk Thermoplastic	288	SQ. FT
Right Turn Arrow Thermoplastic	0	Each
Left Turn Arrow Thermoplastic	2	Each
Thru/Right Turn Arrow Thermoplastic	0	Each
Thru Arrow Thermoplastic	0	Each

PERMANENT SIGNS						
M. U. T. C. D. CODE	SIZE	PANEL AREA FT. ²	INSERT	QUANTITY	No. POST	MOUNTING HEIGHT (To Pavement Edge) FT.
R3-X1	24" x 30"	5.00	R3-X1	13	1	7.0'
W14-3	36" x 48"	11.125	W14-3	1	2	7.0'
TOTAL	PANEL AREA	76.0				

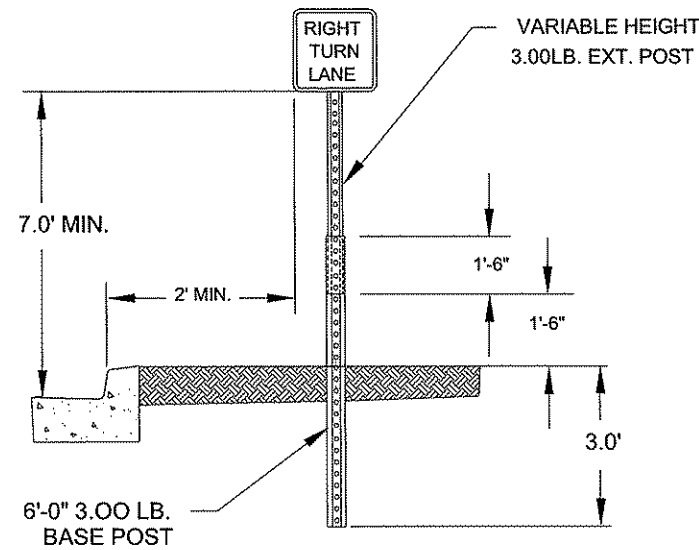
TEMPORARY TRAFFIC CONTROL SIGNS						
M. U. T. C. D. CODE	SIZE	PANEL AREA FT. ²	INSERT	QUANTITY	No. POST	MOUNTING HEIGHT (To Pavement Edge) FT.
W8-12	48" x 48"	16.00	W8-12	10	2	7.0'
R4-1	24" x 30"	5.00	R4-1	16	1	7.0'
R4-2	24" x 30"	5.00	R4-2	10	1	7.0'
W8-1A	48" x 48"	16.00	W8-1A	AS NEEDED		
W8-1A	48" x 48"	16.00	W8-1A	AS NEEDED		
W8-8	48" x 48"	16.00	W8-8	AS NEEDED		
W8-11	48" x 48"	16.00	W8-11	AS NEEDED		

	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	SEE SPECIAL PROVISIONS	
	24" YELLOW PERMANENT PAVEMENT MESSAGE	1	TEMPORARY TRAFFIC CONTROL SIGN
	24" WHITE PERMANENT PAVEMENT MESSAGE	2	F & I PERMANENT SIGN
	3' x 6' ZEBRA CROSSWALK	3	SALVAGE PERMANENT SIGN
		4	RE-INSTALL PERMANENT SIGN

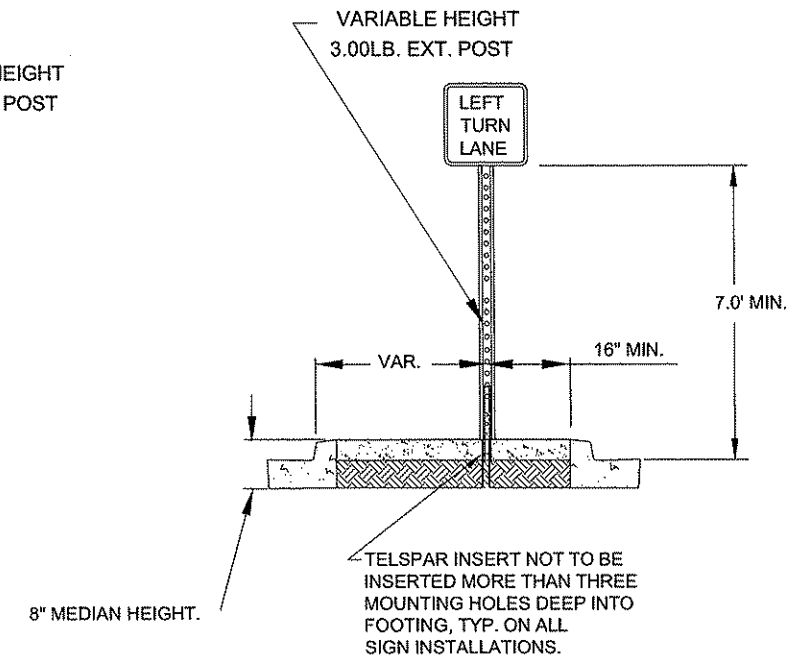
1	5-17-2011	MTH	RB	24" White Thermoplastic Quantity Adjustment	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: CHARLES CADENHEAD SIGNATURE: <i>Charles Cadenhead</i> DATE: 5/25/11 REG. NO. 40418	DRAWN BY: MTH DATE: 1/07/11 DESIGN BY: MTH DATE: 1/07/11 CHECKED BY: JR DATE: 3/01/11	ANOKA COUNTY HIGHWAY DEPT.	STATE PROJECT NO. SP 002-605-019 PREVIOUSLY CONST. UNDER SP 02-605-01 (1972) 1.5" OVERLAY/ADDED 10' BIT SHLDRS (1985)	CSAH 5 (Nowthen Blvd) TEMPORARY SIGNING PERMANENT SIGNING, STRIPING AND PAVEMENT MESSAGES
NO	DATE	BY	CKD	APPR		REVISION			
NAME: T:\Traffic\dwg\CSAH 5 (Nowthen Blvd)\02-605-19.dwg									



GROUND POST MOUNT SIGN
INSTALLATION TYPICAL



ISLAND MOUNT BREAK-AWAY SIGN
INSTALLATION TYPICAL



NO	DATE	BY	CHKD	APPR	REVISION

NAME: T:\Traffic\Dwg\CSAH 5)\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 CADENHEAD

SIGNATURE: *[Signature]*

DATE: 4/14/11 LICENSE NO. 60416

DRAWN BY MTH DATE 1-21-11

DESIGN BY MTH DATE 1-21-11

CHECKED BY JR DATE 1-21-11



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. SP 002-605-019

STATE PROJECT NO. _____

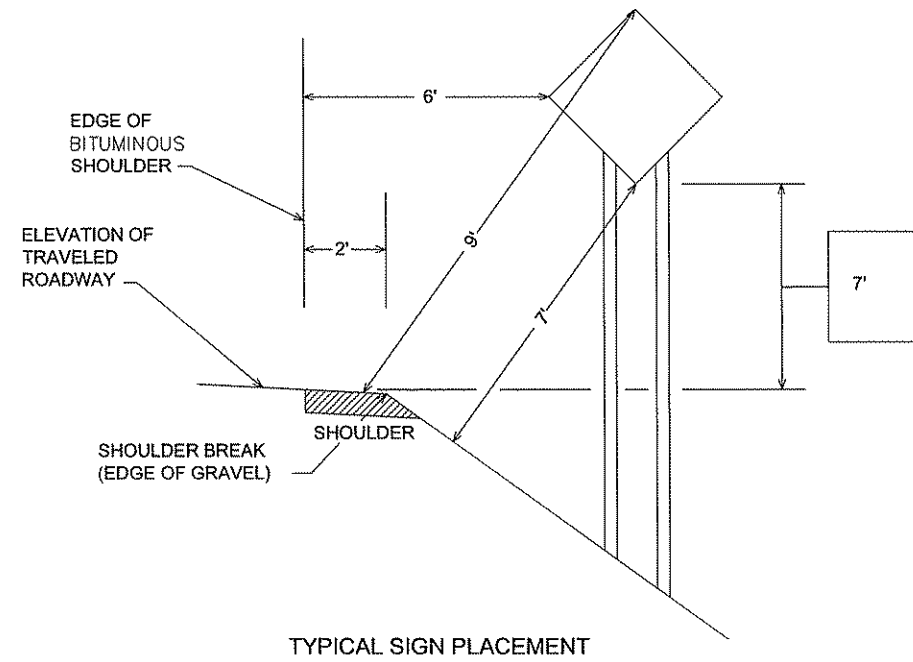
STATE PROJECT NO. _____

COUNTY PROJECT NO. _____

SIGNING & STRIPING DETAILS

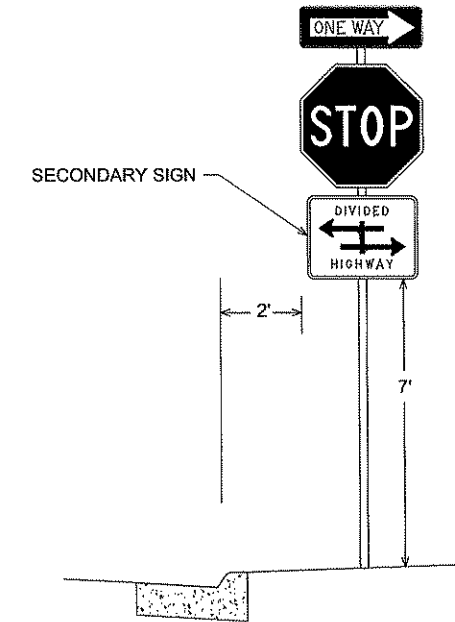
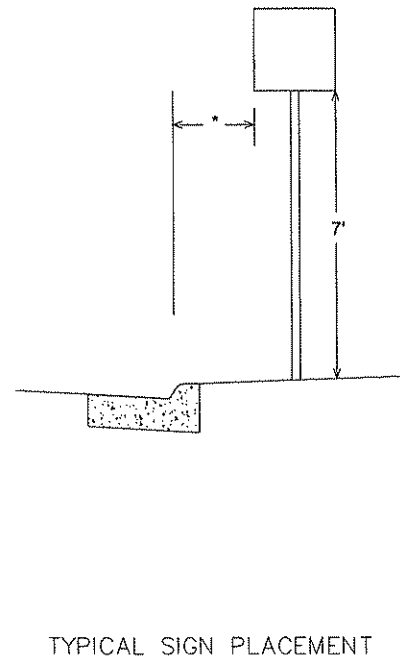
Sheet 33 of 38 Sheets

RURAL



URBAN

• 2' - NARROW BOULEVARD (< 8' WIDE)
6' - WIDE BOULEVARD



NOTE:

- ALL DIMENSIONS ARE MINIMUMS
- MAINTAIN 2' CLEAR FROM SIGNS TO BITUMINOUS TRAIL

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
 SIGNATURE: *Charles Cadenhead*
 DATE: 2/14/11 LICENSE NO. 40426

DRAWN BY MTH DATE 1-21-11
 DESIGN BY MTH DATE 1-21-11
 CHECKED BY JR DATE 1-21-11

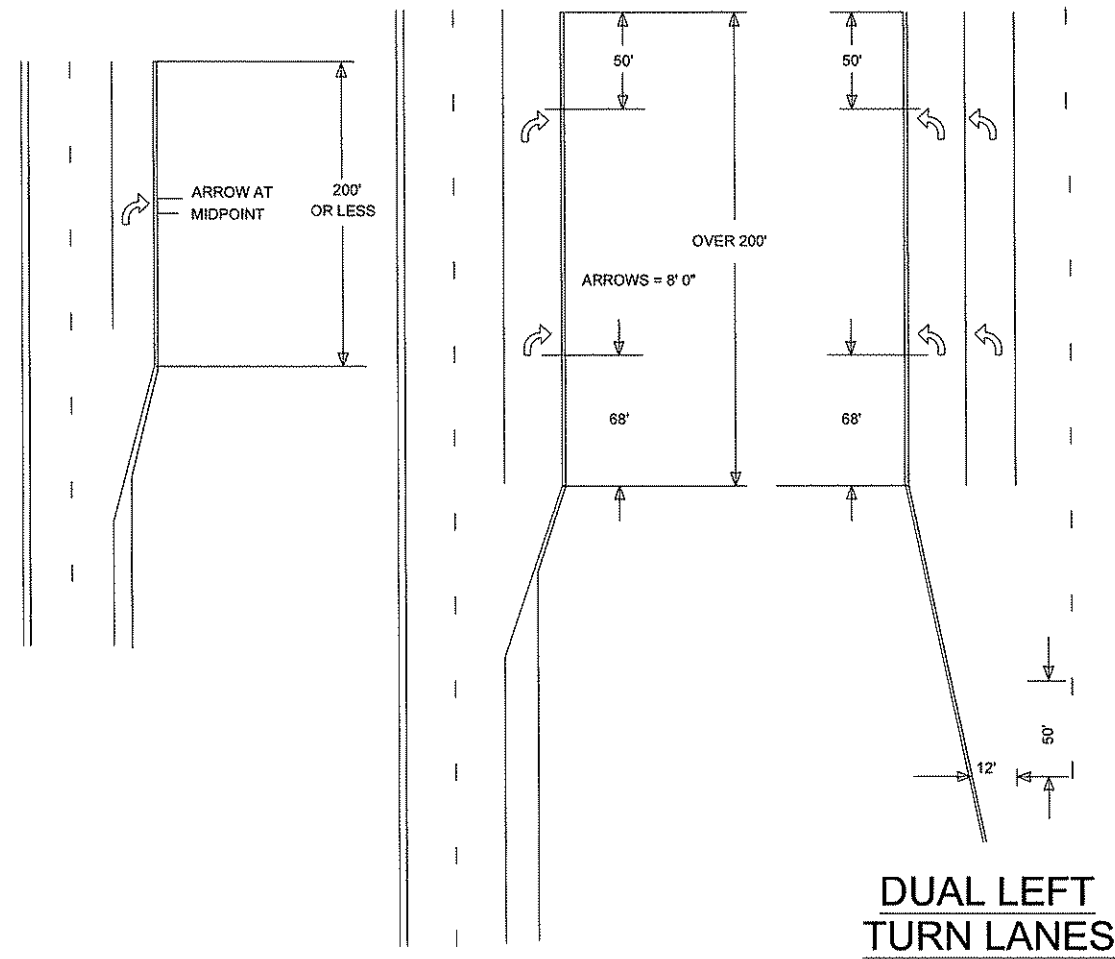


ANOKA COUNTY
 HIGHWAY DEPT.

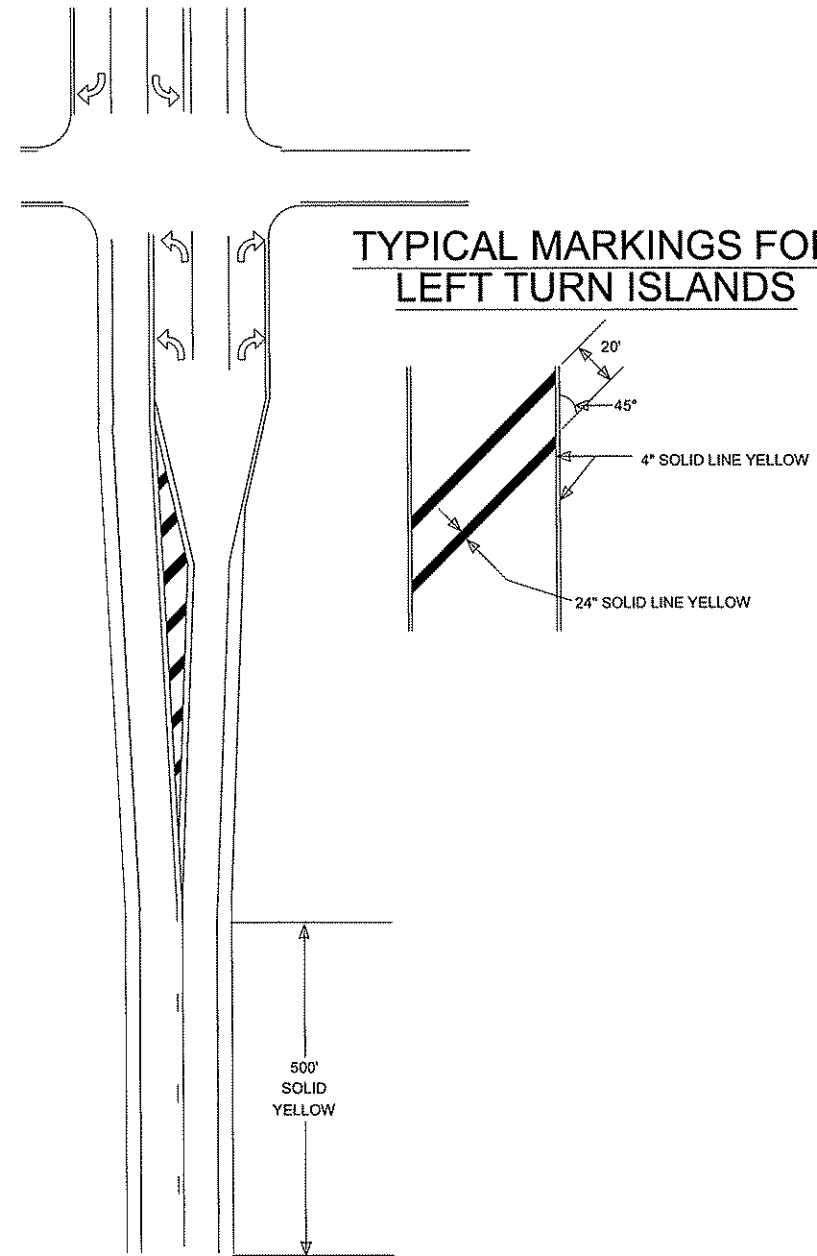
STATE PROJECT NO. SP 002-605-019
 STATE PROJECT NO. _____
 STATE PROJECT NO. _____
 COUNTY PROJECT NO. _____

SIGNING & STRIPING DETAILS
 Sheet 34 of 38 Sheets

**TYPICAL MESSAGE PLACEMENT
FOR TURN LANES**



**TYPICAL MARKINGS FOR
LEFT TURN ISLANDS**



NO	DATE	BY	CHKD	APPR	REVISION

NAME: T:\Traffic\Dwg\CSAH 5\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 CADENHEAD

SIGNATURE: *Charles Cadenahead*

DATE: 4/14/11 LICENSE NO. 40416

DRAWN BY MTH DATE 1-21-11

DESIGN BY MTH DATE 1-21-11

CHECKED BY JR DATE 1-21-11



**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. SP 002-605-019

STATE PROJECT NO. _____

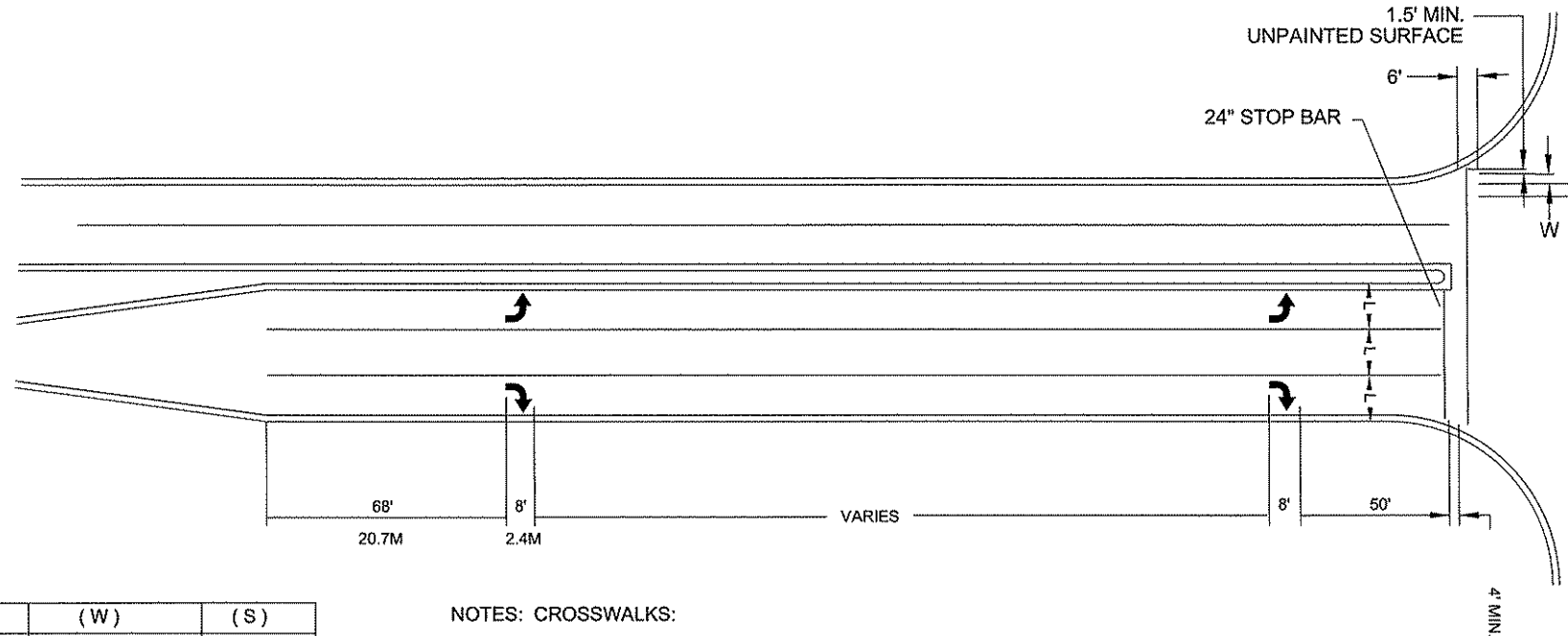
STATE PROJECT NO. _____

COUNTY PROJECT NO. _____

SIGNING & STRIPING DETAILS

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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' (3.3mm) 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

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 CAPENHEAD
 SIGNATURE: *[Signature]*
 DATE: 1/21/11 LICENSE NO. 49416

DRAWN BY: MTH DATE: 1-21-11
 DESIGN BY: MTH DATE: 1-21-11
 CHECKED BY: JR DATE: 1-21-11



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. SP 002-605-019
 STATE PROJECT NO. _____
 STATE PROJECT NO. _____
 COUNTY PROJECT NO. _____

SIGNING & STRIPING DETAILS
 Sheet 36 of 38 Sheets

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Project Contacts

The Project Engineer and the Contractor are responsible for implementation of the SWPPP and the installation, inspection, and maintenance of the erosion prevention and sediment control BMP's before and during construction. Anoka County and the city of Ramsey are responsible for long term operation and maintenance of the permanent storm water management system.

Anoka County Project Manager;
 Douglas W. Fischer, PE
 Anoka County Engineer
 1440 Bunker Lake Boulevard NW
 Andover, MN 55304
 (763) 862-4200

MPCA 24-HOUR EMERGENCY NOTIFICATION : 651-649-5451 / 800-422-0798

Project Description

SP 02-605-19 consists of reclaiming and bituminous overlay of the existing roadway , 2' widening construction for additional right turn lane / by-pass lanes in the city of Ramsey. Construction activities include excavation and grading for widening of CSAH 5. The receiving waters for storm water from this project include the ditches and Trott Brook. The Rum River is the ultimate receiving body for runoff, however it is not directly impacted due to the construction.

Site Maps

No site plan Required

Environmentally Sensitive Areas

Wetlands are impacted within the project limits, however none has been identified as Impaired or Special Waters, thus no wetlands have been identified as Environmentally Sensitive.

Outstanding Resource Value Waters

There are no outstanding resource value waters within the project limits.

Calcareous Fens

There are no calcareous fens within the project limits.

TMDL Implementation Plans Containing Storm Water Requirements

No TMDL Implementation Plans currently exist for the receiving waters on this project.

Land Feature Changes

Total Project Existing Area Of Impervious Surface: 26.07 Acres
 Total Post Project Area Of Impervious Surface: 26.70 Acres
 Total increase in Impervious Surface: 0.63 Acres
 Total Project Area Disturbed: 3.15 Acres
 This Road Project Has Less Than 1 Acre Of Increase Impervious surface area.

Timing of BMP Installation

The erosion prevention and sediment control BMP's shall be installed as necessary to minimize erosion from disturbed surfaces and capture sediment on site, and shall meet the NPDES Permit Part IV Construction Activity Requirements. All silt fence used for contamination shall be installed prior to grading operations.

Hazardous Materials

Hazardous materials such as oil, gasoline, and paint must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MPCA Regulations.

Construction Notes

Construction shall be governed by MN/DOT Standard Specifications for Construction, 2005 edition and the Special Provisions. The Contractor shall keep the inspection and maintenance log.

Description	Plan Sheet Title	Location
Erosion Control Items	Statement Of Estimated Quantities / Tabs	Sheet No. 2 & 6
Erosion Control Notes	Statement Of Estimated Quantities	Sheet No. 2
Erosion Control Details	Calculations For Right Turn Lane By-pass lanes	Sheet No. 3
Erosion Control Layout	Construction Plan	Sheet No. 13 thru 22

RECEIVING SURFACE WATERS, DISCHARGE TO IMPAIRED WATERS & SPECIAL WATERS

THE FOLLOWING TABLE BELOW IDENTIFIES ALL SURFACE WATERS WITHIN 1 MILE OF THE DISTURBED SOIL PROJECT BOUNDARIES, WHICH WILL RECEIVE STORMWATER RUNOFF FROM THE CONSTRUCTION SITE, DURING OR AFTER CONSTRUCTION.

STORMWATER FROM A DISCHARGE POINT ON THE PROJECT THAT FLOWS TO A SURFACE WATER IDENTIFIED AS IMPAIRED AND/OR SPECIAL MUST INCLUDE THE FOLLOWING ADDITIONAL BMP REQUIREMENTS:

- 1) ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THEN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
- 2) TEMPORARY SEDIMENT BASINS MUST BE USED FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME. THIS PROJECT AS DESIGNED DOES NOT HAVE FIVE (5) DISTURBED ACRES DRAINING TO A COMMON LOCATION AND TEMPORARY SEDIMENT BASINS WILL NOT BE REQUIRED.

RECEIVING SURFACE WATERS		
NAME OF WATER BODY	SPECIAL WATER	IMPAIRED WATER
ANOKA COUNTY		
RUM RIVER	YES	YES
TROTT BROOK	NO	NO
SUNFISH LAKE	NO	NO

LOCATION OF SWPPP REQUIREMENTS		
REQUIREMENT	MN/DOT SPECIFICATION	SPECIAL PROVISION
NPDES PERMIT COMPLIANCE	1701, 1702, & 1717	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
CERTIFIED PERSONNEL IN EROSION AND SEDIMENT CONTROL SITE MANAGEMENT	1506, 1717, & 2573	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
CHAIN OF RESPONSIBILITY	1506, 1717, & 2573	
PROJECT SCHEDULE / WEEKLY EROSION & SEDIMENT CONTROL SCHEDULE / COMPLETING INSPECTION / MAINTENANCE LOG	1717 & 2573	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
SITE MAP / RECEIVING WATERS / DIRECTION OF FLOW	1717	
PROJECT SPECIFIC CONSTRUCTION STAGING	1717	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT) 1806 (DETERMINATION AND EXTENSION OF CONTRACT TIME)
TEMPORARY EROSION AND SEDIMENT CONTROL BMP LOCATIONS, INSTALLATION, TIMING OF INSTALLATION AND TYPE OF BMP	2573 & 2525	2575 (RAPID STABILIZATION SPECIFICATION)
ADDITIONAL TEMPORARY AND OR PERMANENT EROSION AND SEDIMENT CONTROL BMP'S NOT PROVIDED OR SHOWN IN THE PLAN	1717, 2573, & 2575	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT) 2575 (RAPID STABILIZATION SPECIFICATION)
MAINTENANCE OF EROSION AND SEDIMENT CONTROL DEVICES, REMOVAL OF TRACKED SEDIMENT, REMOVAL OF DEVICES	1717 & 2573	1514 (MAINTENANCE DURING CONSTRUCTION) 1717 (LAND AIR & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
DEWATERING	2105.3B, & 2451.3C	DEWATERING MAY ALSO REQUIRE DNR PERMIT. NO DEWATERING IS ANTICIPATED FOR THIS PROJECT
FINAL STABILIZATION	1717, 2573, & 2575	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
TEMPORARY EROSION AND SEDIMENT CONTROL DETAILS	2575	2575 (RAPID STABILIZATION SPECIFICATION)
PERMANENT EROSION CONTROL DETAILS	2575	2575 (CONTROLLING EROSION AND ESTABLISHING VEGETATION)

