

MINNESOTA DEPARTMENT OF TRANSPORTATION

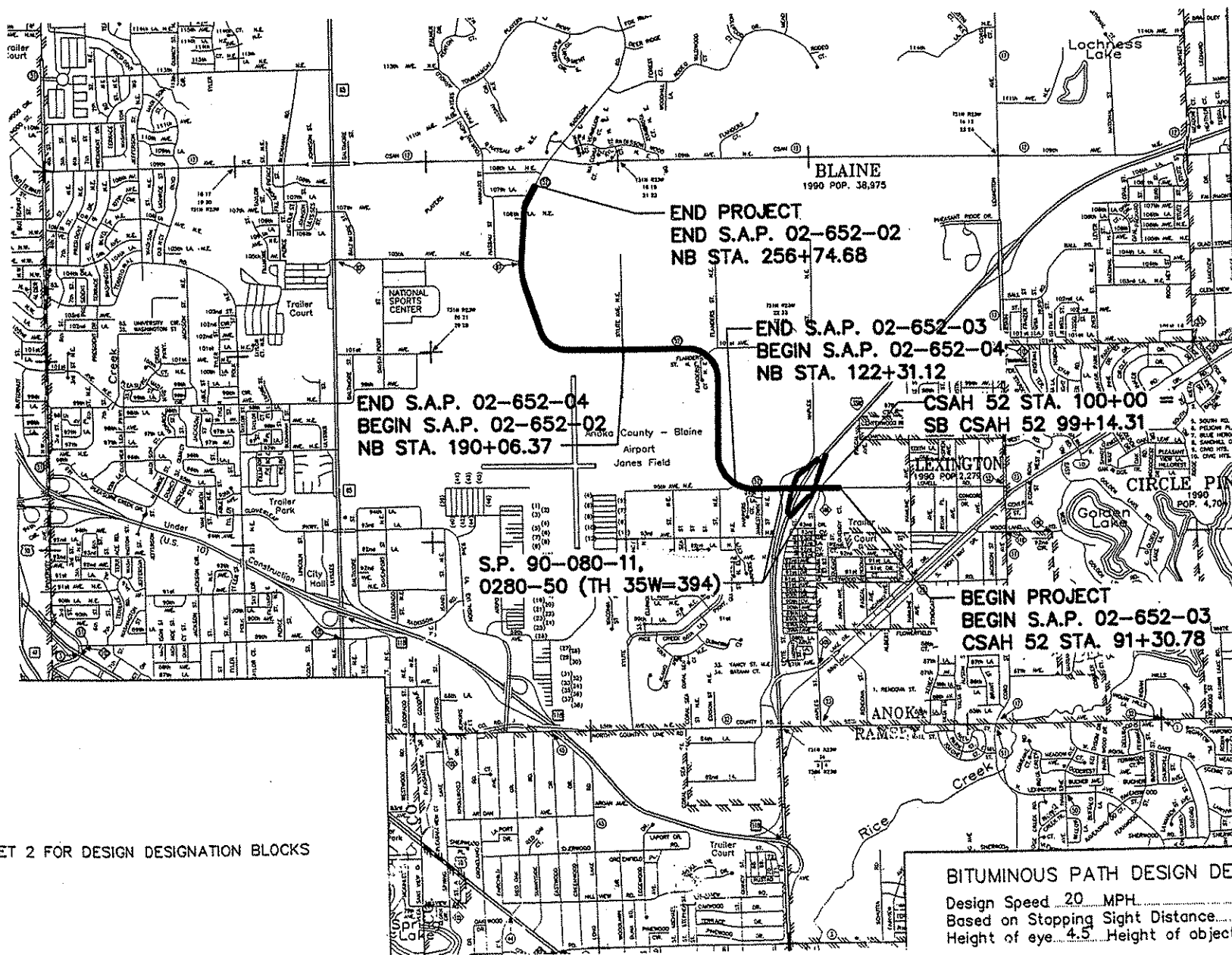
ANOKA COUNTY

CONSTRUCTION PLAN FOR GRADING, CONCRETE AND BITUMINOUS SURFACE, BIT. TRAIL, SIGNAL SYSTEM, LIGHTING, TMS, PARK & RIDE LOT, BRIDGE NO. 02566 & 02J15

LOCATED ON C.S.A.H. 52 BETWEEN 1670 FT E. OF I-35W AND 1200 FT S. OF C.S.A.H. 12 (Geographic Description)
FROM _____ TO _____ (Legal Description)

STATE PROJ. NO. S.P. 90-080-11, 0280-50 (TH 35W=394), 02-652-02, 02-652-03, 02-652-04, 106-020-021, 106-020-022

GROSS LENGTH	16543.90 FEET	3.133 MILES
BRIDGES-LENGTH	231.34 FEET	0.044 MILES
EXCEPTIONS-LENGTH	_____ FEET	_____ MILES
NET LENGTH	16312.56 FEET	3.089 MILES



BITUMINOUS PATH DESIGN DESIGNATION
Design Speed 20 MPH
Based on Stopping Sight Distance
Height of eye 4.5 Height of object 0.0'

MINN. PROJ. NO. CMA 0202(24)
MINN. PROJ. NO. _____

GOVERNING SPECIFICATIONS

THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MN MUTCD, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, DATED JANUARY 2001.

SHEET NO.	INDEX	DESCRIPTION
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THIS PLAN CONTAINS 630 SHEETS
SHEET 73 NOT USED

TKDA
ENGINEERS-ARCHITECTS-PLANNERS
TOLT, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

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

DATE 1-11-02 REG. NO. 22405 ENGR. Joseph Weaver
Recommended for Approval. Delbert Heide 4/1/02
Recommended for Approval. Mark Johnson 2/8/02
Recommended for Approval. Kevin S. Fink 3/8/02
Recommended for Approval. Paul Hays 2/5/02
Recommended for Approval. Bob Eick 2/8/02
Recommended for Approval. John S. Swann 3/29/02
Office of Land Management. John S. Swann 4/1/02
Approval. John S. Swann
Recommended for Approval. John S. Swann 2/11/02
Approved. 1/29/02
Approved. 1/29/02
Reviewed for Compliance with State Aid Rules/Policy. Patt J. Roken 2/8/02
Approved for State and Federal Aid Funding. John S. Swann 2/2/02

STATE AID PROJ. NO. S.P. 90-080-11, 0280-50 (TH 35W=394), 02-652-02, 02-652-03, 02-652-04, 106-020-021, 106-020-022 SHEET NO. 1 OF 559 SHEETS

PLAN SYMBOLS

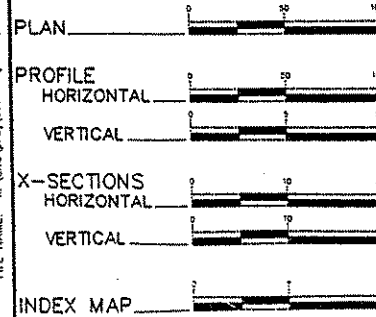
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT OF WAY LINE
- SLOPE EASEMENT
- PRESENT RIGHT OF WAY
- PROPERTY LINE
- CORPORATE OR CITY LIMITS
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY
- RIVER OR CREEK
- DRAINAGE DITCH
- CULVERT
- DROP INLET
- GAUDD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

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

UTILITY SYMBOLS

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

SCALES



SEE SHEET 2 FOR DESIGN DESIGNATION BLOCKS

FILE NAME: k:\j\j\proj\11749\part\1\drawings\1\drawing\1\title.dwg

S.P. 0280-50 (TH 35W=394)

S.A.P. 02-652-04

≤N18₂₀ _____
R VALUE 71
ADT (2001)= _____
Proj. ADT (2021)= _____
Proj. HCADT (2021)= _____
Soil Factor _____
10 TON DESIGN
Shoulder Width 8'

Functional Classification "A" MINOR ARTERIAL
No. of Traffic Lanes 4 No. of Parking Lanes 0
Design Speed 4 MPH
Based on Stopping Sight Distance
Height of eye 3.5' Height of object 0.5'
Design Speed not achieved at:
STA. _____ TO STA. _____ MPH
STA. _____ TO STA. _____ MPH

≤N18₂₀ _____
R VALUE 71
ADT (2001)= 17655
Proj. ADT (2021)= 28247
Proj. HCADT (2021)= 1554
Soil Factor _____
10 TON DESIGN
Shoulder Width 8'

Functional Classification "A" MINOR ARTERIAL
No. of Traffic Lanes 4 No. of Parking Lanes 0
Design Speed 55 MPH
Based on Stopping Sight Distance
Height of eye 3.5' Height of object 0.5'
Design Speed not achieved at:
STA. NB 151+73.14 TO STA. NB 166+87.68 MPH 50
STA. _____ TO STA. _____ MPH

① 54891 ADT (2001) I-35W
2506 ADT (2001) NE RAMP
7243 ADT (2001) NE LOOP
2575 ADT (2001) NW RAMP
6575 ADT (2001) SW RAMP

② 91717 ADT (2021) I-35W
4010 ADT (2021) NE RAMP
11590 ADT (2021) NE LOOP
4120 ADT (2021) NW RAMP
10520 ADT (2021) SW RAMP

③ 5044HCADT (2021) I-35W
221 HCADT (2021) NE RAMP
638 HCADT (2021) NE LOOP
227 HCADT (2021) NW RAMP
579 HCADT (2021) SW RAMP

④ 70 MPH DESIGN SPEED, I-35W
40 MPH DESIGN SPEED, NE RAMP, NW RAMP, SW RAMP
25 MPH DESIGN SPEED, NE LOOP

S.A.P. 02-652-02

S.A.P. 106-020-021, 106-020-022

≤N18₂₀ _____
R VALUE 71
ADT (2001)= 15910
Proj. ADT (2021)= 25456
Proj. HCADT (2021)= 1400
Soil Factor _____
10 TON DESIGN
Shoulder Width 8'

Functional Classification "A" MINOR ARTERIAL
No. of Traffic Lanes 4 No. of Parking Lanes 0
Design Speed 55 MPH
Based on Stopping Sight Distance
Height of eye 3.5' Height of object 0.5'
Design Speed not achieved at:
STA. _____ TO STA. _____ MPH
STA. _____ TO STA. _____ MPH

≤N18₂₀ _____
R VALUE 71
ADT (2001)= _____
Proj. ADT (2021)= _____
Proj. HCADT (2021)= _____
Soil Factor _____
TON DESIGN
Shoulder Width _____

Functional Classification "A" MINOR ARTERIAL
No. of Traffic Lanes _____ No. of Parking Lanes _____
Design Speed _____ MPH
Based on Stopping Sight Distance
Height of eye 3.5' Height of object 0.5'
Design Speed not achieved at:
STA. _____ TO STA. _____ MPH
STA. _____ TO STA. _____ MPH

S.A.P. 02-652-03

S.P. 90-080-11

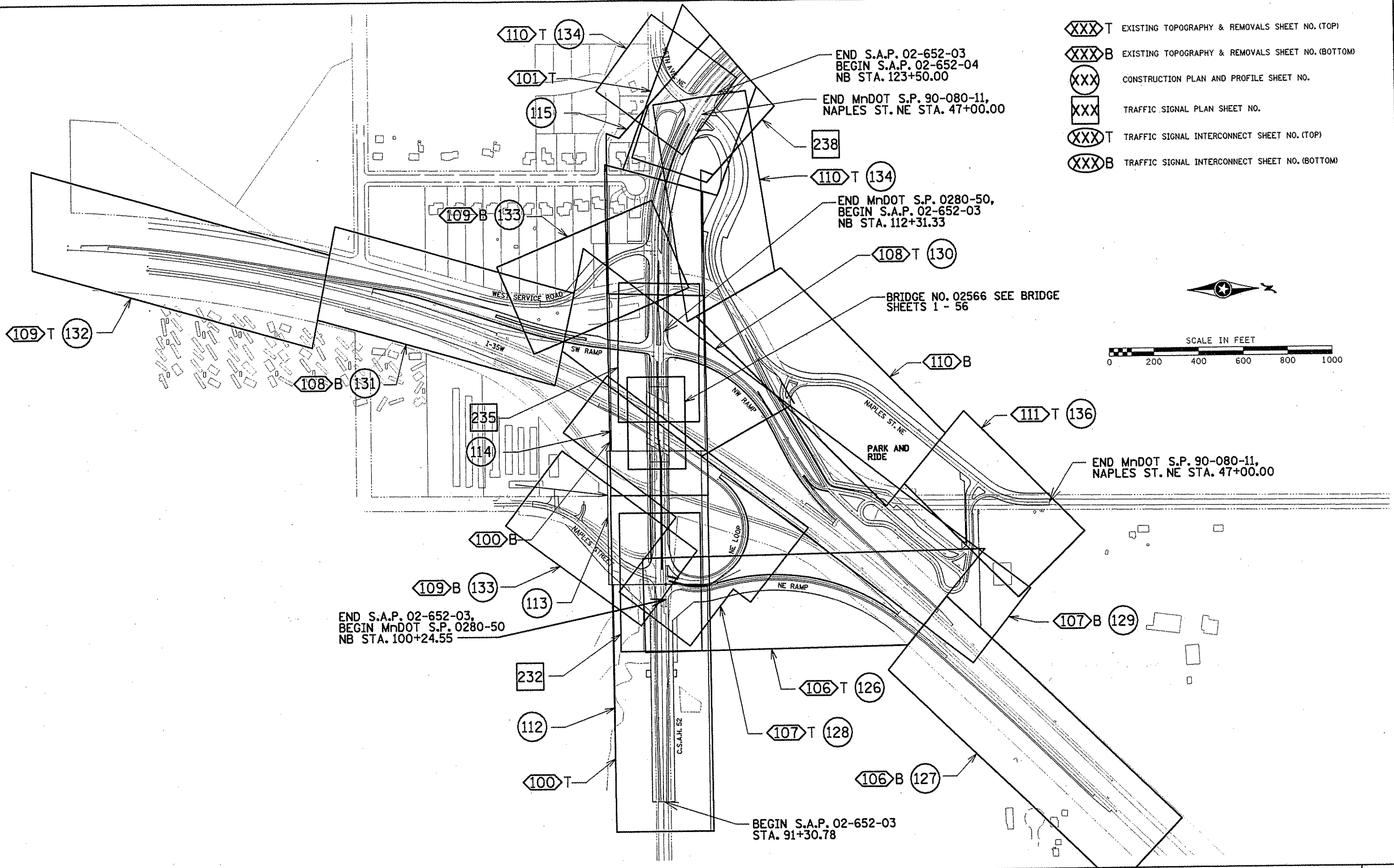
≤N18₂₀ _____
R VALUE 71
ADT (2001)= 5478
Proj. ADT (2021)= 8765
Proj. HCADT (2021)= 483
Soil Factor _____
10 TON DESIGN
Shoulder Width 8'

Functional Classification "A" MINOR ARTERIAL
No. of Traffic Lanes 4 No. of Parking Lanes 0
Design Speed 55 MPH
Based on Stopping Sight Distance
Height of eye 3.5' Height of object 0.5'
Design Speed not achieved at:
STA. NB 102+64.32 TO STA. NB 99+61.57 MPH 45
STA. _____ TO STA. _____ MPH

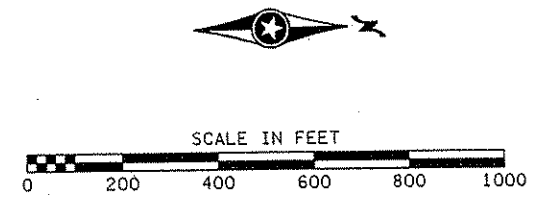
* DESIGNED TO MEET EXISTING POSTED 45 MPH SPEED LIMIT

≤N18₂₀ 2,182,000
R VALUE 71
ADT (2000)= 2000
Proj. ADT (2001)= 3200
Proj. HCADT (2021)= 176
Soil Factor _____
10 TON DESIGN
Shoulder Width 8'

Functional Classification "A" MINOR ARTERIAL
No. of Traffic Lanes 4 No. of Parking Lanes 0
Design Speed 30 MPH
Based on Stopping Sight Distance
Height of eye 3.5' Height of object 0.5'
Design Speed not achieved at:
STA. _____ TO STA. _____ MPH
STA. _____ TO STA. _____ MPH
STA. _____ TO STA. _____ MPH



- XXX T EXISTING TOPOGRAPHY & REMOVALS SHEET NO. (TOP)
- XXX B EXISTING TOPOGRAPHY & REMOVALS SHEET NO. (BOTTOM)
- XXX CONSTRUCTION PLAN AND PROFILE SHEET NO.
- XXX TRAFFIC SIGNAL PLAN SHEET NO.
- XXX T TRAFFIC SIGNAL INTERCONNECT SHEET NO. (TOP)
- XXX B TRAFFIC SIGNAL INTERCONNECT SHEET NO. (BOTTOM)



END S.A.P. 02-652-03,
 BEGIN MnDOT S.P. 0280-50
 NB STA. 100+24.55

BEGIN S.A.P. 02-652-03
 STA. 91+30.78

END S.A.P. 02-652-03
 BEGIN S.A.P. 02-652-04
 NB STA. 123+50.00

END MnDOT S.P. 90-080-11,
 NAPLES ST. NE STA. 47+00.00

END MnDOT S.P. 0280-50,
 BEGIN S.A.P. 02-652-03
 NB STA. 112+31.33

BRIDGE NO. 02566 SEE BRIDGE
 SHEETS 1 - 56

END MnDOT S.P. 90-080-11,
 NAPLES ST. NE STA. 47+00.00

NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\site\proj\c11749\par\4\roadway3\drawings\genlay01.dgn 19 NOV 2001

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.

Joseph W. ...
 DATE 11-20-01 LIC. NO. 22405

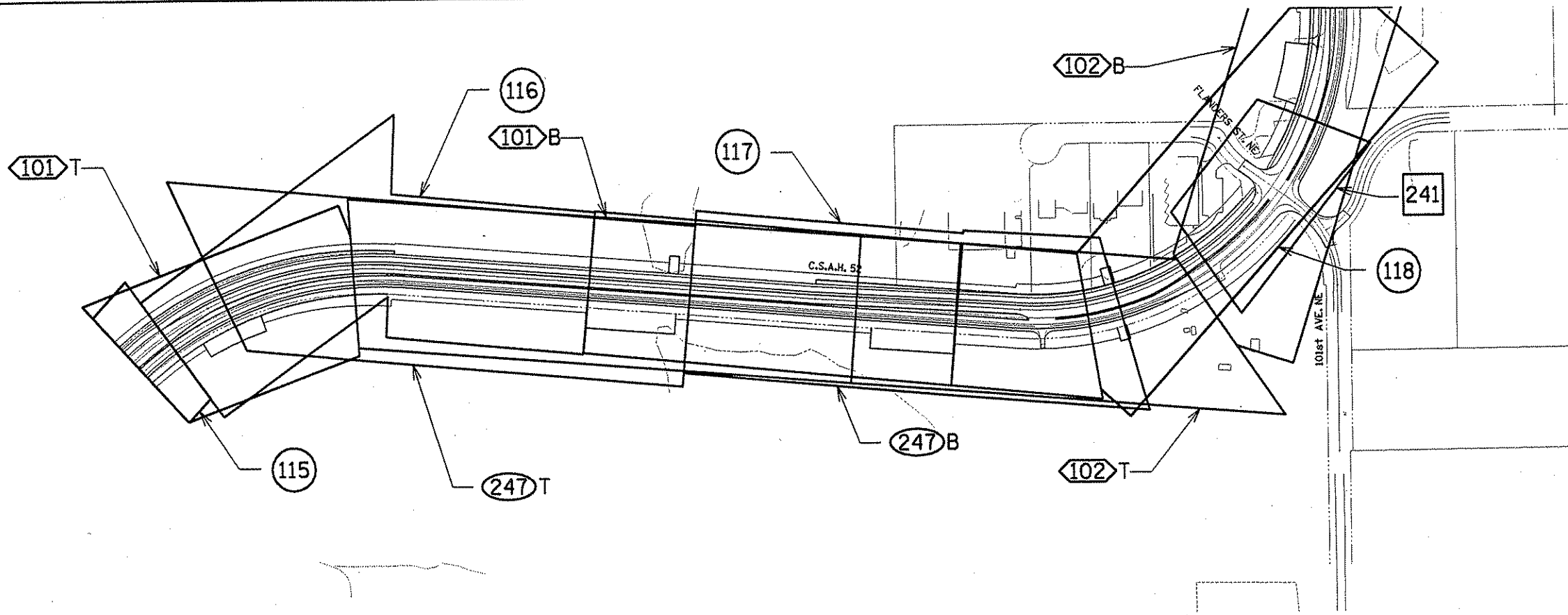
DESIGNED BY RRC DATE 09-26-01
 DESIGN BY JMW DATE 09-26-01
 CHECKED BY KRC DATE 09-26-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

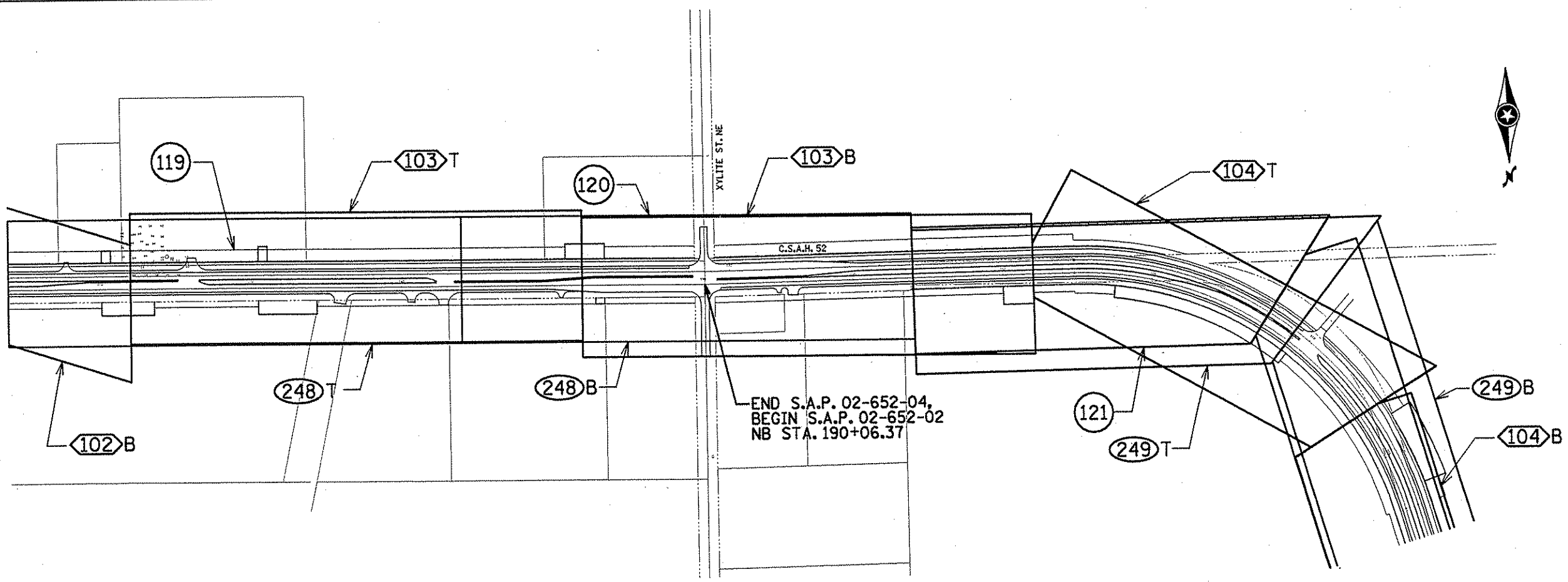
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GENERAL LAYOUT
 C.S.A.H. 52 RECONSTRUCTION
 STA. 90+00 TO STA. 125+00

SHEET
 3
 OF
 559



- XXX T EXISTING TOPOGRAPHY & REMOVALS SHEET NO. (TOP)
- XXX B EXISTING TOPOGRAPHY & REMOVALS SHEET NO. (BOTTOM)
- XXX CONSTRUCTION PLAN AND PROFILE SHEET NO.
- XXX TRAFFIC SIGNAL PLAN SHEET NO.
- XXX T TRAFFIC SIGNAL INTERCONNECT SHEET NO. (TOP)
- XXX B TRAFFIC SIGNAL INTERCONNECT SHEET NO. (BOTTOM)



END S.A.P. 02-652-04,
 BEGIN S.A.P. 02-652-02
 NB STA. 190+06.37

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.

Joseph Weeman
 DATE 11-26-01 LIC. NO. 22405

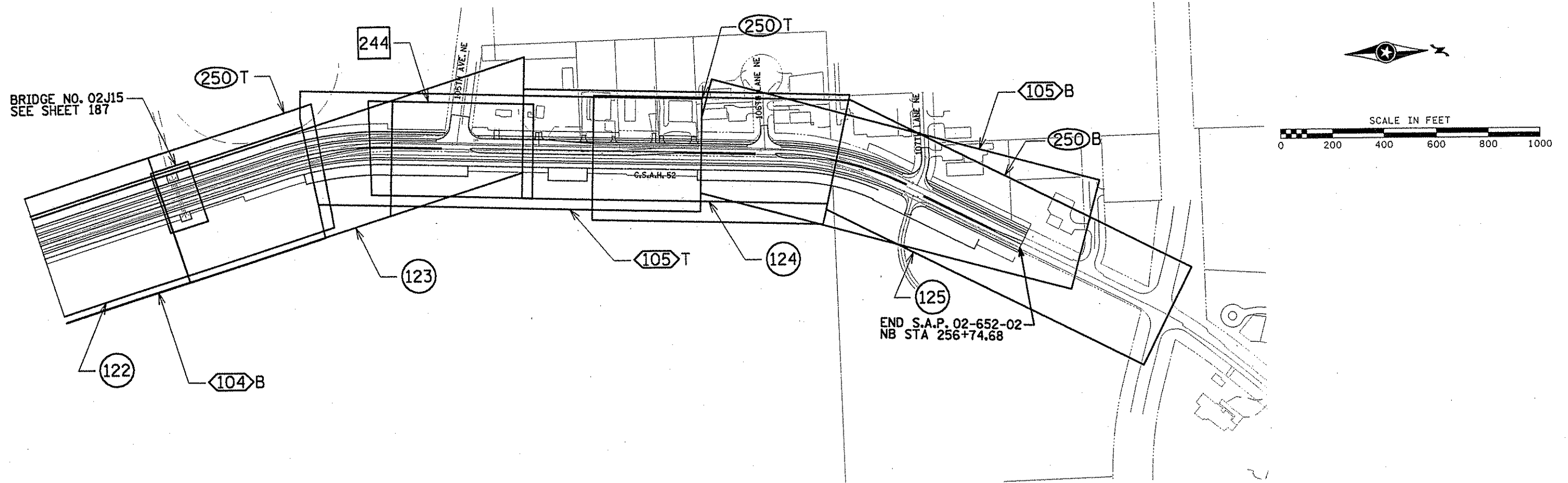
DRAWN BY RRC DATE 09-26-01 S.P. 0280-50 (TH 35W)
 S.A.P. 90-080-11
 DESIGN BY JMW DATE 09-26-01 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 CHECKED BY KRC DATE 09-26-01 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUYALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GENERAL LAYOUT
 C.S.A.H. 52 RECONSTRUCTION
 STA. 125+00 TO STA. 218+00

SHEET
 4
 OF
 559

- XXX T EXISTING TOPOGRAPHY & REMOVALS SHEET NO. (TOP)
- XXX B EXISTING TOPOGRAPHY & REMOVALS SHEET NO. (BOTTOM)
- XXX CONSTRUCTION PLAN AND PROFILE SHEET NO.
- XXX TRAFFIC SIGNAL PLAN SHEET NO.
- XXX T TRAFFIC SIGNAL INTERCONNECT SHEET NO. (TOP)
- XXX B TRAFFIC SIGNAL INTERCONNECT SHEET NO. (BOTTOM)



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\genlay01.dgn 19 NOV 2001

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.

Joseph Weaver
 DATE 11-20-01 L.T.C. NO. 22405

DRAWN BY RRC DATE 09-26-01
 DESIGN BY JMW DATE 09-26-01
 CHECKED BY KRC DATE 09-26-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GENERAL LAYOUT
 C.S.A.H. 52 RECONSTRUCTION
 STA. 218+00 TO STA. 256+74.68

SHEET
 5
 OF
 559

ESTIMATED QUANTITIES

TAB.	ITEM NO.	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	NON-PARTICIPATING						MnDOT S.P. 90-080-11 (MTC MATCH)		MnDOT S.P. 90-080-11 (MnDOT MATCH)			
						ANOKA COUNTY S.A.P. 02-652-03		ANOKA COUNTY S.A.P. 02-652-02, -04		BLAINE, S.A.P. 106-020-21, -22	MnDOT S.P. 0280-50		ROADWAY	DRAINAGE	ROADWAY	DRAINAGE	
						ROADWAY	DRAINAGE	ROADWAY	DRAINAGE	ROADWAY	ROADWAY	DRAINAGE					
K	2501.525	44" SPAN RC PIPE-ARCH APRON		EACH	2	2											
L	2501.525	58" SPAN RC PIPE-ARCH APRON		EACH	1												
K	2501.561	12" RC PIPE CULVERT DES 3006		LIN FT	9			9									
K	2501.561	18" RC PIPE CULVERT DES 3006		LIN FT	89	43					46						
K	2501.561	18" RC PIPE CULVERT DES 3006 CL IV		LIN FT	120						120						
K	2501.561	24" RC PIPE CULVERT DES 3006		LIN FT	1087			697			241		149				
K	2501.561	24" RC PIPE CULVERT DES 3006 CL V		LIN FT	238	238											
K	2501.569	12" CS SAFETY APRON		EACH	6				6								
K	2501.569	18" CS SAFETY APRON		EACH	2				2								
L	2501.569	12" RC SAFETY APRON		EACH	1												
L	2501.569	15" RC SAFETY APRON		EACH	3												
L	2501.569	18" RC SAFETY APRON		EACH	3												
L	2501.569	21" RC SAFETY APRON		EACH	5												
K	2501.569	24" RC SAFETY APRON		EACH	6				6								
K	2501.602	SAFETY GRATE FOR 44" SPAN RCP-A APRON		EACH	2	2											
N	2502.521	4" TP PIPE DRAIN		LIN FT	348	12		324			12						
N	2502.541	4" PERF PE PIPE DRAIN		LIN FT	14749	800		13377			572						
N	2502.541	6" PERF PE PIPE DRAIN		LIN FT	184			184									
L	2503.511	6" PVC PIPE SEWER		LIN FT	123												123
L	2503.521	36" SPAN RC PIPE-ARCH SEWER CL IIA		LIN FT	448												448
L	2503.521	44" SPAN RC PIPE-ARCH SEWER CL IIA		LIN FT	151												151
L	2503.521	58" SPAN RC PIPE-ARCH SEWER CL IIA		LIN FT	595												595
L	2503.541	12" RC PIPE SEWER DES 3006		LIN FT	4861	543		2460			660						1198
L	2503.541	15" RC PIPE SEWER DES 3006		LIN FT	3650	890		1799			517						444
L	2503.541	18" RC PIPE SEWER DES 3006		LIN FT	1191	19		836			95						241
L	2503.541	21" RC PIPE SEWER DES 3006		LIN FT	1030	24		880									326
L	2503.541	24" RC PIPE SEWER DES 3006		LIN FT	1113			36			508						569
L	2503.541	33" RC PIPE SEWER DES 3006 CL III		LIN FT	15						15						
AA	2504.601	IRRIGATION SYSTEM		LUMP SUM	1				1								
GG	2504.602	ADJUST GATE VALVE		EACH	3			3									
GG	2504.602	ADJUST HYDRANT AND GATE VALVE		EACH	2			1					1				
GG	2504.602	RELOCATE HYDRANT		EACH	2			2									
GG	2504.602	RELOCATE HYDRANT AND VALVE		EACH	8			8									
	2504.603	18" STEEL CASING PIPE		LIN FT	161			161									
W	2506.501	CONST DRAINAGE STRUCTURE DESIGN F		LIN FT	115.4	20.3		28.8			40.6						25.7
W	2506.501	CONST DRAINAGE STRUCTURE DESIGN G		LIN FT	290.9	31.5		132.7			25.8						100.9
W	2506.501	CONST DRAINAGE STRUCTURE DESIGN H		LIN FT	165.7	19.0		94.1			12.0						40.6
W	2506.501	CONST DRAINAGE STRUCTURE DESIGN SD		LIN FT	21.2			21.2									
W	2506.501	CONST DRAINAGE STRUCTURE DES 48-4020		LIN FT	30.0			30.0									5.2
W	2506.501	CONST DRAINAGE STRUCTURE DES 54-4020		LIN FT	30.2			25.0									14.8
W	2506.501	CONST DRAINAGE STRUCTURE DES 60-4020		LIN FT	26.2						11.4						

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.

Judge Weems
DATE 2-01-02 LIC. NO. 22465

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 ESTIMATED QUANTITIES
 C.S.A.H. 52 RECONSTRUCTION

SHEET
8
 OF
559

ESTIMATED QUANTITIES

TAB.	ITEM NO.	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	NON-PARTICIPATING				MnDOT S.P. 90-080-11 (MTC MATCH)		MnDOT S.P. 90-080-11 (MnDOT MATCH)				
						ANOKA COUNTY S.A.P. 02-652-03		ANOKA COUNTY S.A.P. 02-652-02, -04		BLAINE, S.A.P. 106-020-21, -22	MnDOT S.P. 0280-50		ROADWAY	DRAINAGE	ROADWAY	DRAINAGE
						ROADWAY	DRAINAGE	ROADWAY	DRAINAGE	ROADWAY	ROADWAY	DRAINAGE				
W	2506.501	CONST DRAINAGE STRUCTURE DES 66-4020		LIN FT	8.6							8.6				
W	2506.501	CONST DRAINAGE STRUCTURE DES 72-4020		LIN FT	5.5								5.5			
W	2506.501	CONST DRAINAGE STRUCTURE DES 96-4020		LIN FT	14.8								14.8			
W	2506.501	CONST DRAINAGE STRUCTURE DES 120-4020		LIN FT	6.3								6.3			
W	2506.502	CONST DRAINAGE STRUCTURE DES SPEC		EACH	4							17	4			
M	2506.516	CASTING ASSEMBLY		EACH	175		18		90				2			
HH	2506.522	ADJUST FRAME AND RING CASTING		EACH	6			4					9.7			
HH	2506.603	RECONSTRUCT SANITARY MANHOLES		LIN FT	39.8	3.7		26.4								
K.L	2511.501	RANDOM RIPRAP CLASS III		CU YD	279.4	42.7		138.5			62.8		35.4			
H/AA	2521.501	4" CONCRETE WALK		SQ FT	81624	3819		43763			5263		27390	1389		
AA	2521.501	4" CONCRETE WALK SPECIAL		SQ FT	14932				14932							
H	2531.501	CONCRETE CURB & GUTTER DESIGN B412		LIN FT	33822	3159		25068			1409		4186			
H	2531.501	CONCRETE CURB & GUTTER DESIGN B418	(12)	LIN FT	5985	909		1306		2215	1422		49	84		
H	2531.501	CONCRETE CURB & GUTTER DESIGN B424		LIN FT	1590						1098		75	417		
H	2531.501	CONCRETE CURB & GUTTER DESIGN D412		LIN FT	5346								5346			
JJ	2533.504	CONCRETE MEDIAN BARRIER DESIGN 8337		LIN FT	18775						18775					
JJ	2533.603	RELOCATE CONCRETE MEDIAN BARRIER		LIN FT	1744			1744								
	2540.601	BUS SHELTERS		LUMP SUM	1								1			
E	2540.602	RELOCATE MAIL BOX SUPPORT		EACH	10			10								
	2545.501	ELECTRIC LIGHT SYSTEM		LUMP SUM	1						16					
BB	2545.511	LIGHTING UNIT TYPE VM-45		EACH	16						1					
BB	2545.511	LIGHTING UNIT TYPE VMD-45		EACH	1						1					
BB	2545.514	UNDERPASS LIGHTING FIXTURE TYPE L		EACH	1						17					
BB	2545.515	LIGHT BASE DESIGN H		EACH	17						35					
BB	2545.521	1" RIGID STEEL CONDUIT		LIN FT	35						70					
BB	2545.521	2" RIGID STEEL CONDUIT		LIN FT	70						320					
BB	2545.521	3" RIGID STEEL CONDUIT		LIN FT	320						235					
BB	2545.531	UNDERGROUND WIRE 1 CONDUCTOR NO. 2		LIN FT	235						145					
BB	2545.531	UNDERGROUND WIRE 1 CONDUCTOR NO. 10		LIN FT	145						6570					
BB	2545.533	ARMORED CABLE 3 CONDUCTOR NO. 4		LIN FT	6570						1					
BB	2545.541	SERVICE CABINET SECONDARY TYPE L1		EACH	1						1					
BB	2545.545	EQUIPMENT PAD B		EACH	1						1					
BB	2545.551	JUNCTION BOX		EACH	1						1					
BB	2545.553	PULL BOX		EACH	1						2					
FF	2550.511	PEDESTAL FOUNDATION		EACH	2						1					
FF	2550.511	CABINET FOUNDATION		EACH	1						1					
FF	2550.511	CCTV FOUNDATION		EACH	1						14					
FF	2550.512	HANDHOLE TYPE- PVC METAL COVER		EACH	14						4					
FF	2550.514	FIBEROPTIC SPLICE VAULT		EACH	4						2					
FF	2550.515	OUTDOOR FIBER SPLICE ENCLOSURE		EACH	2						20					
FF	2550.516	BURIED CABLE SIGN		EACH	20						20					
FF	2550.521	2" RIGID STEEL CONDUIT		LIN FT	20											

NOTES:

(12) CITY RESPONSIBLE FOR 50% OF THE COUNTY'S QUANTITY OF B418 C&G.

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.					DRAWN BY <u>RRC</u> DATE <u>9-21-01</u> DESIGN BY <u>RRC</u> DATE <u>9-20-01</u> CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY ESTIMATED QUANTITIES C.S.A.H. 52 RECONSTRUCTION		SHEET 9 OF 559
NO	DATE	BY	CKD	APPR	REVISION		DATE		LIC. NO.				
							2-01-02		22465				

ESTIMATED QUANTITIES

TAB.	ITEM NO.	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	NON-PARTICIPATING						MnDOT S.P. 90-080-11 (MTC MATCH)		MnDOT S.P. 90-080-11 (MnDOT MATCH)		
						ANOKA COUNTY S.A.P. 02-652-03		ANOKA COUNTY S.A.P. 02-652-02, -04		BLAINE, S.A.P. 106-020-21, -22	MnDOT S.P. 0280-50		ROADWAY	DRAINAGE	ROADWAY	DRAINAGE
						ROADWAY	DRAINAGE	ROADWAY	DRAINAGE	ROADWAY	ROADWAY	DRAINAGE				
FF	2550.523	2" NON-METALIC CONDUIT		LIN FT	7950						7950					
FF	2550.523	3" NON-METALIC CONDUIT		LIN FT	750						750					
FF	2550.531	TELEPHONE CABLE 12 PR NO 19		LIN FT	9000						9000					
FF	2550.532	POWER CABLE 3 CONDUCTOR NO 8		LIN FT	300						300					
FF	2550.532	SIGNAL CONTROL CABLE 5 COND NO 12		LIN FT	3000						3000					
FF	2550.532	CONTROL CABLE 15 COND NO 18		LIN FT	300						300					
FF	2550.532	LEAD-IN CABLE 2 CONDUCTOR NO 14		LIN FT	7250						7250					
FF	2550.533	VIDEO CABLE RG-11		LIN FT	300						300					
FF	2550.534	FIBEROPTIC TRUNK CABLE (12MM-18SM)		LIN FT	6000						6000					
FF	2550.542	LOOP DETECTOR SPLICE		EACH	4						4					
FF	2550.551	RAMP CONTROL SIGNAL DESIGN ONE-WAY		EACH	1						1					
FF	2550.571	SPLICE CABINET (BD-4)		EACH	2						2					
FF	2550.572	SERVICE EQUIPMENT TYPE B		EACH	1						1					
FF	2550.601	FIBER OPTIC CABLE TESTING		LUMP SUM	1						1					
FF	2550.602	FIBER OPTIC PIGTAIL TERMINATION		EACH	1						1					
FF	2550.602	FIBER OPTIC CABLE SPLICING		EACH	2						2					
FF	2550.602	INSTALL CABINET		EACH	1						1					
FF	2550.602	INSTALL RAMP CONTROL SIGNAL		EACH	2						2					
FF	2550.602	INSTALL CCTV ASSEMBLY		EACH	1						1					
FF	2550.602	LOOP DETECTOR DESIGN PREFORMED		EACH	6						6					
FF	2550.603	RELOCATE FIBER OPTIC CABLE		LIN FT	150						150					
FF	2550.603	ARMORED FIBER OPTIC PIGTAIL 6MM, 6SM		LIN FT	2875						2875					
FF	2550.603	2" BORED CONDUIT		LIN FT	550						550					
FF	2550.603	REROUTE CABLE		LIN FT	40						40					
G	2554.501	TRAFFIC BARRIER DESIGN SPECIAL		LIN FT	75						75					
G	2554.501	TRAFFIC BARRIER DESIGN B8307		LIN FT	1225.0						1225.0					
K,L	2554.509	GUIDE POST TYPE B		EACH	82	10		50			13		9			
G	2554.521	ANCHORAGE ASSEMBLY - PLATE BEAM		EACH	3						3					
G	2554.523	END TREATMENT-ECCENTRIC LOADER BCT		EACH	2						2					
JJ	2554.602	IMPACT ATTENUATOR BARRELS		EACH	126						126					
JJ	2554.602	RELOCATE IMPACT ATTENUATOR BARRELS		EACH	54			54			3					
G	2554.615	IMPACT ATTENUATOR	(8)	ASSEMBLY	3											
P	2557.501	WIRE FENCE DESIGN 60-9322		LIN FT	1714	962					752					
P	2557.522	METAL BRACE ASSEMBLY		EACH	2			2								
P	2557.523	METAL BRACE ASSEMBLY (CH LINK FE)		EACH	92	6		38			48					
P	2557.527	ELECTRICAL GROUND		EACH	26	4		12			10					
P	2557.603	FENCE DESIGN SPECIAL	(18) (22)	LIN FT	29			29								
P	2557.603	TEMPORARY FENCE DESIGN SPECIAL	(18) (22)	LIN FT	3654			3654			3999					
P	2557.603	INSTALL CHAIN LINK FENCE		LIN FT	4401	385		17								
P	2557.603	INSTALL WOVEN WIRE FENCE		LIN FT	12			12								
P	2557.603	INSTALL BARB WIRE FENCE		LIN FT	9			9								
P	2557.603	INSTALL FENCE		LIN FT	4961						4961					
	2563.601	DETOUR SIGNING		LUMP SUM	1						1					

NOTES:

- (8) CRASH CUSHION ATTENUATING TERMINAL (CAT)
- (18) MAC SECURITY FENCE.
- (22) SEE SPECIAL PROVISIONS FOR CONSTRUCTION.

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.

Joseph Weary
DATE 2-01-02 LIC. NO. 22465

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, QUALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 ESTIMATED QUANTITIES
 C.S.A.H. 52 RECONSTRUCTION

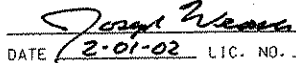

SHEET
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 OF
 559

ESTIMATED QUANTITIES

TAB.	ITEM NO.	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	NON-PARTICIPATING				MnDOT S.P. 90-080-11 (MTC MATCH)		MnDOT S.P. 90-080-11 (MnDOT MATCH)				
						ANOKA COUNTY S.A.P. 02-652-03		ANOKA COUNTY S.A.P. 02-652-02, -04		BLAINE, S.A.P. 106-020-21, -22	MnDOT S.P. 0280-50		ROADWAY	DRAINAGE	ROADWAY	DRAINAGE
						ROADWAY	DRAINAGE	ROADWAY	DRAINAGE	ROADWAY	ROADWAY	DRAINAGE				
	2563.601	TRAFFIC CONTROL STAGE A1		LUMP SUM	1					0.5		0.5				
	2563.601	TRAFFIC CONTROL STAGE A2		LUMP SUM	1					0.5		0.5				
	2563.601	TRAFFIC CONTROL STAGE B1		LUMP SUM	1	1.0										
	2563.601	TRAFFIC CONTROL STAGE B2		LUMP SUM	1	1.0										
	2563.601	TRAFFIC CONTROL STAGE B3		LUMP SUM	1	1.0										
	2563.601	TRAFFIC CONTROL STAGE B4		LUMP SUM	1	1.0										
JJ	2563.602	RAISED PAVEMENT MARKER TEMPORARY		EACH	361	18		322		21						
S	2584.522	STRUCT STEEL-POSTS FOR TYPE A SIGNS		POUND	3556					3566						
J / GG	2564.531	SIGN PANELS TYPE C		SQ FT	1612.2	258.5		815.7		329.3		178.7	30.0			
U	2564.531	SIGN PANELS TYPE D		SQ FT	260					250		10				
CC	2564.531	SIGN PANELS TYPE OVERLAY		SQ FT	34					34						
	2564.537	INSTALL SIGN TYPE C	(17)	EACH	4			2		1		1				
S	2584.536	INSTALL SIGN PANEL TYPE A		EACH	2					2						
	2564.537	INSTALL SIGN TYPE SPECIAL	(15)	EACH	7			5								
J	2584.550	DELINEATOR TYPE CYLINDER STYLE		EACH	26	1		22				3				
DD	2564.550	DELINEATOR TYPE X4-6		EACH	15					15						
DD	2564.552	HAZARD MARKER X4-2		EACH	32	3		20		4			1			
DD	2564.553	CLEARANCE MARKER X4-4		EACH	8			6		1		1				
DD	2564.554	SNOW PLOW MARKER X4-5		EACH	6	3				3			4			
I	2564.602	PAVEMENT MESSAGE (HOV DIAMOND) PAINT	(16)	EACH	4					10						
I	2564.602	PAVEMENT MESSAGE (LEFT ARROW) PAINT	(16)	EACH	34	12		12		2						
I	2564.602	PVMT MESSAGE (LEFT THRU ARROW) PAINT	(16)	EACH	2											
I	2564.602	PAVEMENT MESSAGE (THRU ARROW) PAINT	(16)	EACH	4	4				4						
I	2564.602	PVMT MESSAGE (RIGHT THRU ARROW) PAINT	(16)	EACH	4					4						
I	2564.602	PAVEMENT MESSAGE (RIGHT ARROW) PAINT	(16)	EACH	28	16		8		4			4			
I	2564.602	PAVEMENT MESSAGE (HOV DIAMOND) EPOXY	(16)	EACH	4					10						
I	2564.602	PAVEMENT MESSAGE (LEFT ARROW) EPOXY	(16)	EACH	34	12		12		2						
I	2564.602	PVMT MESSAGE (LEFT THRU ARROW) EPOXY	(16)	EACH	2											
I	2564.602	PAVEMENT MESSAGE (THRU ARROW) EPOXY	(16)	EACH	4	4				4						
I	2564.602	PVMT MESSAGE (RIGHT THRU ARROW) EPOXY	(16)	EACH	4					4						
I	2564.602	PAVEMENT MESSAGE (RIGHT ARROW) EPOXY	(16)	EACH	28	16		8		4						
I	2564.603	4" SOLID LINE WHITE-PAINT	(16)	LIN FT	173492	17596		63132		27288		62940	2536			
I	2564.603	4" BROKEN LINE WHITE-PAINT	(16)	LIN FT	11380	860		10000		520		68	242			
I	2564.603	8" SOLID LINE WHITE-PAINT	(16)	LIN FT	4998					4688						
I	2564.603	8" DOTTED LINE WHITE-PAINT	(16)	LIN FT	1210					1210						
I	2564.603	24" SOLID LINE WHITE-PAINT	(16)	LIN FT	1554	274		630		516		134				
I	2564.603	4" SOLID LINE YELLOW-PAINT	(16)	LIN FT	67682	3966		50588		11882			1246			
I	2564.603	4" DOUBLE SOLID LINE YELLOW-PAINT	(16)	LIN FT	17560	6764		1224		300		8972	300			
I	2564.603	24" SOLID LINE YELLOW-PAINT	(16)	LIN FT	1614	784				364		466				
I	2564.603	4" SOLID LINE WHITE-EPOXY	(16)	LIN FT	173492	17596		63132		27288		62940	2536			
I	2564.603	4" BROKEN LINE WHITE-EPOXY	(16)	LIN FT	11380	860		10000		520		68	242			
I	2564.603	8" SOLID LINE WHITE-EPOXY	(16)	LIN FT	4998					4688						
I	2564.603	8" DOTTED LINE WHITE-EPOXY	(16)	LIN FT	1210					1210						
I	2564.603	24" SOLID LINE WHITE-EPOXY	(16)	LIN FT	1554	274		630		516		134				
I	2564.603	4" SOLID LINE YELLOW-EPOXY	(16)	LIN FT	67682	3966		50588		11882			1246			
I	2564.603	4" DOUBLE SOLID LINE YELLOW-EPOXY	(16)	LIN FT	17560	6764		1224		300		8972	300			

NOTES:

- (15) STREET NAME SIGNS AT CROSSROADS.
- (16) PERMANENT PAVEMENT MARKING CONSISTS OF PAINT APPLICATION BEFORE PLACEMENT OF WEAR COURSE AND EPOXY APPLICATION AFTER.
- (17) 2 SIGNS FOR NATIONAL SPORTS CENTER AND 2 HAZARDOUS WASTE FACILITY SIGNS.

	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  DATE <u>2-01-02</u> LIC. NO. <u>22705</u>	DRAWN BY <u>RRC</u> DATE <u>9-21-01</u> DESIGN BY <u>RRC</u> DATE <u>9-20-01</u> CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY ESTIMATED QUANTITIES C.S.A.H. 52 RECONSTRUCTION	SHEET 11 OF 559
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ESTIMATED QUANTITIES

TAB.	ITEM NO.	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	NON-PARTICIPATING						MnDOT S.P. 90-080-11 (MTC MATCH)		MnDOT S.P. 90-080-11 (MnDOT MATCH)		
						ANOKA COUNTY S.A.P. 02-652-03		ANOKA COUNTY S.A.P. 02-652-02, -04		BLAINE, S.A.P. 106-020-21, -22	MnDOT S.P. 0280-50		ROADWAY	DRAINAGE	ROADWAY	DRAINAGE
						ROADWAY	DRAINAGE	ROADWAY	DRAINAGE	ROADWAY	ROADWAY	DRAINAGE				
I	2564.603	24" SOLID LINE YELLOW-EPOXY	(16)	LIN FT	1614	784					364		466			
I	2564.618	ZEBRA CROSSWALK WHITE-PAINT	(16)	SQ FT	2304	720		936			648					
I	2564.618	ZEBRA CROSSWALK WHITE-EPOXY	(16)	SQ FT	2304	720		936			648					
	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM A	(1)	SIG SYS	1			0.25		0.50	0.25					
	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM B	(2)	SIG SYS	1			0.25		0.25	0.25		0.25			
	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM C	(3)	SIG SYS	1			0.25		0.50			0.25			
	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM D	(4)	SIG SYS	1			0.25		0.75						
	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM E	(5)	SIG SYS	1			0.50		0.50						
	2565.601	EMERGENCY VEHICLE PREEMPTION SYS A	(1)	LUMP SUM	1					0.75	0.25					
	2565.601	EMERGENCY VEHICLE PREEMPTION SYS B	(2)	LUMP SUM	1					0.50	0.50					
	2565.601	EMERGENCY VEHICLE PREEMPTION SYS C	(3)	LUMP SUM	1					1.00						
	2565.601	EMERGENCY VEHICLE PREEMPTION SYS D	(4)	LUMP SUM	1					1.00						
	2565.601	EMERGENCY VEHICLE PREEMPTION SYS E	(5)	LUMP SUM	1					1.00						
	2565.601	TRAFFIC CONTROL INTERCONNECTION	(7)	LUMP SUM	1	0.868					0.132					
AA	2571.505	DECIDUOUS SHRUB 18" HT CONT		SHRB	756					756						
AA	2571.507	PERENNIAL 4" CONT		PLT	912					912						
	2572.501	TEMPORARY FENCE	(28)	LIN FT	1200						850		350			
O	2573.502	SILT FENCE TYPE MACHINE SLICED		LIN FT	43785	8046		21996			10906		2837			
	2573.502	SILT FENCE, TYPE HEAVY DUTY	(21)	LIN FT	100	100					14		54			
	2573.530	INLET PROTECTION TYPE A		EACH	176	18		90			4		1			
	2573.530	INLET PROTECTION TYPE D	(26)	EACH	14	1		8								
O / AA	2575.501	SEEDING	(P)	ACRE	46.5	7.2		20.0			16.4		2.9			
O	2575.502	SEED MIXTURE 28B		POUND	284	38		121			125		284			
O	2575.502	SEED MIXTURE 60B		POUND	3711	602		1598			1227					
AA	2575.502	SEED MIXTURE SPECIAL		POUND	37				37							
O	2575.505	SODDING TYPE SALT RESISTANT		SQ YD	1903	940		639			324					
O	2575.505	SODDING TYPE LAWN		SQ YD	1441			1441					5.8			
O / AA	2575.511	MULCH MATERIAL TYPE 1		TON	93.0	14.4		40.0			32.8					
AA	2575.513	MULCH MATERIAL TYPE 6		CU YD	114				114							
O / AA	2575.519	DISK ANCHORING	(P)	ACRE	46.5	7.2		20.0			16.4		2.9			
O	2575.523	EROSION CONTROL BLANKET CATEGORY 4		SQ YD	21773	1095		14482					6196			
O / AA	2575.531	COMMERCIAL FERT ANALYSIS 22-5-10	(9)	TON	5.9	1.0		2.5			1.9		0.5			
	2575.602	SEDIMENTATION CONTROL STRUCTURE		EACH	3			3								
Q	2580.603	INTERIM PAVEMENT MARKING		LIN FT	92345			92345								
Q	2581.501	REMOVABLE PREFORMED PLASTIC MARKING		LIN FT	45601	6492		14200			24909					

NOTES:

- (P) DENOTES PLAN QUANTITY.
- (1) SIGNAL SYSTEM AT THE INTERSECTION OF C.S.A.H. 52 AND NE RAMP/NE LOOP/NAPLES STREET.
- (2) SIGNAL SYSTEM AT THE INTERSECTION OF C.S.A.H. 52 AND NW RAMP/SW RAMP.
- (3) SIGNAL SYSTEM AT THE INTERSECTION OF C.S.A.H. 52 AND 95TH AVE. NE/NAPLES STREET NE.
- (4) SIGNAL SYSTEM AT THE INTERSECTION OF C.S.A.H. 52 AND 101ST AVE. NE/FLANDERS COURT.
- (5) SIGNAL SYSTEM AT THE INTERSECTION OF C.S.A.H. 52 AND 105TH AVE. NE.
- (7) 13.2% MnDOT, 86.8% ANOKA COUNTY
- (9) SLOW RELEASE
- (16) PERMANENT PAVEMENT MARKING CONSISTS OF PAINT APPLICATION BEFORE PLACEMENT OF WEAR COURSE AND EPOXY APPLICATION AFTER.
- (21) TO BE PLACED AT NB CSAH 52 STA 119+00 (50' RT) AND AT LOCATIONS DESIGNATED BY ENGINEER.
- (26) TYPE D INLET PROTECTION AT CULVERT ENDS.
- (28) SEE SPECIAL PROVISIONS FOR LOCATIONS.

	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. <i>Joseph Neam</i> DATE <u>2-12-02</u> LIC. NO. <u>22405</u>	DRAWN BY <u>RRC</u> DATE <u>9-21-01</u> DESIGN BY <u>RRC</u> DATE <u>9-20-01</u> CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY ESTIMATED QUANTITIES C.S.A.H. 52 RECONSTRUCTION	SHEET 11A OF 559
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STANDARD PLATES

PLATE NO.	DESCRIPTION
1070L	REINFORCED PANEL OVER CULVERTS
1103J	TYPICAL DOWEL BAR ASSEMBLY
1141D	PAVEMENT KEYWAY FOR KEYED JOINT CONSTRUCTION
1150Q	CONSTRUCTION OF HEADER JOINTS
3000L	REINFORCED CONCRETE PIPE
3006G	GASKET JOINT FOR R.C. PIPE
3007C	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3014J	REINFORCED CONCRETE PIPE ARCH
3022C	PRECAST CONCRETE SAFETY APRON
3040F	CORRUGATED METAL PIPE CULVERT
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3110G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE - ARCH
3123J	METAL APRON FOR CS PIPE
3124B	METAL APRON CONNECTION
3128H	METAL SAFETY APRON AND GRATE
3133C	RIPRAP AT RCP OUTLETS
3145E	CONCRETE PIPE TIES
4000J	MANHOLE OR CATCH BASIN (DESIGN A)
4002F	MANHOLE OR CATCH BASIN (DESIGN C)
4005L	MANHOLE OR CATCH BASIN (DESIGN F)
4006L	MANHOLE OR CATCH BASIN (DESIGN G & H)
4010H	CONCRETE SHORT CONE AND ADJUSTING RING
4011E	PRECAST CONCRETE BASE
4020I	MANHOLE OR CATCH BASIN COVER
4024A	48" DIA. PRECAST SHALLOW DEPTH CATCH BASIN
4101D	RING CASTING FOR MANHOLE OR CATCH BASIN
4110F	COVER CASTING FOR MANHOLE
4126F	CATCH BASIN FRAME CASTING
4132F	CATCH BASIN FRAME CASTING
4143E	STOOL GRATE AND CONCRETE FRAME
4149C	GRATE CASTING FOR CATCH BASIN
4153A	CATCH BASIN CASTING
4154B	CATCH BASIN GRATE CASTING
4161F	CURB BOX CASTING FOR CATCH BASIN
4180J	MANHOLE OR CATCH BASIN STEP
7100G	CONCRETE CURB AND GUTTER (DESIGN B & V)
7102I	CONCRETE CURB AND GUTTER (DESIGN BR, D & S)
7111J	INSTALLATION OF CATCH BASIN CASTINGS
7113A	CONCRETE APPROACH NOSE DETAIL
8000I	STANDARD BARRICADES
8106B	EQUIPMENT PAD B
8110D	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8112C	PEDESTAL FOUNDATION-TRAFFIC CONTROL SIGNALS
8114A	P.V.C. HANDHOLE/PULLBOX
8115D	PEDESTRIAN PUSH BUTTON INSTALLATION
8118C	SERVICE EQUIPMENT AND POLE-TRAFFIC CONTROL SIGNALS
8119C	GROUND MOUNTED CABINET FOUNDATION
8120K	POLE FOUNDATION (PA85)
8121D	TRANSFORMER BASE AND POLE BASE PLATE
8122C	PEDESTAL AND PEDESTAL BASE ASSEMBLY
8123E	POLE AND MAST ARM
8124E	MAST ARM SIGNAL HEAD MOUNTS
8126F	POLE FOUNDATION (PA90 AND PA100)
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8140B	ROADWAY LIGHTING SERVICE CABINET
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8307Q	STEEL PLATE BEAM GUARDRAIL
8318C	GUARDRAIL ANCHORAGE PLATE FOR BRIDGES AND BCTS
8329G	ECCENTRIC LOADER BREAKAWAY CABLE TERMINAL (ELT)
8337A	TEMPORARY PORTABLE PRECAST CONCRETE BARRIER (TYPE F)
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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.

Joseph W. Wren
DATE 1-11-02 LIC. NO. 22405

DRAWN BY SFH DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STANDARD PLATES, INDEX OF TABULATIONS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
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EARTHWORK VOLUMES BY STATIONS										
STATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	GRANULAR	SELECT GRANULAR	SEL. GRAN. MODIFIED
95th (S.A.P. 02-652-03)										
	0	0	0	0	0	0	0	0	0	0
40+50.00	35	42	94	0	0	11	4	94	0	0
41+00.00	12	23	91	0	0	10	5	92	0	0
41+50.00	11	21	89	0	0	8	3	92	0	0
42+00.00	12	16	86	0	0	8	3	92	0	0
42+50.00										
SUBTOTALS	70	102	360	0	0	37	15	370	0	0
TOTAL S.A.P. 02-652-03	4115	1558	2646	0	0	3285	54564	7251	0	835
SW RAMP (S.P. 90-080-11 Mn/DOT MATCH)										
	0	0	0	0	0	0	0	0	0	0
12+00.00	84	0	0	0	0	72	1331	55	0	0
12+50.00	82	0	0	0	0	68	1376	60	0	0
13+00.00	79	0	0	0	0	65	1355	60	0	0
13+50.00	74	0	0	0	0	61	1321	60	0	0
14+00.00	70	0	0	0	0	55	1254	60	0	0
14+50.00	66	0	0	0	0	50	1151	60	0	0
15+00.00	59	0	0	0	0	44	1050	60	0	0
15+50.00	53	0	0	0	0	37	971	60	0	0
16+00.00	48	0	0	0	0	32	902	60	0	0
16+50.00	47	0	0	0	0	31	825	55	0	0
17+00.00	49	0	0	0	0	28	732	55	0	0
17+50.00										
SUBTOTALS	711	0	0	0	0	543	12268	645	0	0
GRADING AREAS (S.P. 90-080-11 Mn/DOT MATCH)										
SW RAMP POND	1705	10291	0	0	0	1364	863	0	0	0
SUBTOTALS	1705	10291	0	0	0	1364	863	0	0	0
TOTAL S.P. 90-080-11 Mn/DOT MATCH	2416	10291	0	0	0	1907	13131	645	0	0

NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\part4\roadway3\drawings\earth02.dgn 20 NOV 2001					

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.

Joseph Whelan
 DATE 11-20-01 LIC. NO. 22405

DRAWN BY RRC DATE 09-26-01
 DESIGN BY JMW DATE 09-26-01
 CHECKED BY KRC DATE 09-26-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EARTHWORK TABULATIONS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 14
 OF
 559

EARTHWORK BALANCE

EXCAVATION (C.Y.)

(1) (4) (6) COMMON	238,966 (EV)	} 277,372 (EV)	TOPSOIL	43,362 (EV) / 1.2 =	36,135 (CV)	} 567,592 (CV)
(6) (7) 3' SUBCUT	15,776 (EV)		COMMON	53,408 (EV) / 1.2 =	44,507 (CV)	
(6) (8) MUCK	22,630 (EV)		GRANULAR	105,540 (EV) / 1.2 =	87,950 (CV)	
		MUCK DISP.	22,630 (EV) / 1.4 =	16,164 (CV)		
(3) EXCESS TOPSOIL				52,432 (EV)		
(9) BORROW		(6) COMMON	503,119 (LV) / 1.4 =	359,371 (CV)		
		(6) SEL. GRAN.	31,682 (LV) / 1.4 =	22,630 (CV)		
		(6) SEL. GRAN. MOD.	1,169 (LV) / 1.4 =	835 (CV)		

EMBANKMENT (C.Y.)

TOPSOIL	36,135 (CV)	} (5) (8)
COMMON	420,042 (CV)	
GRANULAR	87,950 (CV)	
SEL. GRAN.	22,630 (CV)	
SEL. GRAN. MOD.	835 (CV)	

- (1) INCLUDES 28,919 C.Y. (EV) OF SUBGRADE TREATMENT AND 95,794 C.Y. (EV) OF TOPSOIL EXCAVATION. REMAINING 114,253 C.Y. (EV) IS AVAILABLE FOR USE AS GRANULAR EMBANKMENT.
- (3) TO BE DISPOSED OF BY THE CONTRACTOR AT LOCATIONS WITHIN THE PROJECT SPECIFIED BY THE ENGINEER.
- (4) INCLUDES APPROXIMATELY 714 C.Y. (EV) FOR STAGE B1 WIDENING.
- (5) INCLUDES APPROXIMATELY 6,183 C.Y. (CV) FOR STAGE B1 WIDENING.

- (6) PAY ITEM
- (7) MATERIAL GENERATED FROM 3' SUBCUT IS AVAILABLE FOR USE AS COMMON EMBANKMENT.
- (8) MATERIAL GENERATED FROM MUCK EXCAVATION SHALL BE DISPOSED OF OUTSIDE A 1:1 SLOPE EXTENDED FROM THE GRADING P.I..
- (9) SEE LANDSCAPE TABULATION FOR SELECT TOPSOIL BORROW QUANTITY.

CONSTRUCTION/SOILS NOTES

1. SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF SLOPE DRESSING, DEBRIS, ORGANIC MATERIAL, MUCK AND OTHER UNSUITABLE MATERIAL.
2. ITEMS REFERRED TO AS INCIDENTAL ON THIS PROJECT SHALL BE CONSIDERED INCIDENTAL WITH NO DIRECT COMPENSATION MADE THEREFORE.
3. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B2.
4. GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B1.
5. BITUMINOUS AND CONCRETE ITEMS REMOVED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL EITHER BE RECYCLED OR DISPOSED OF OFF THE PROJECT, IN ACCORDANCE WITH THE PROVISIONS OF SPEC. 2104.3C3 WITH NO DIRECT COMPENSATION MADE THEREFORE.
6. UNSUITABLE MATERIALS SHALL BE PLACED IN EMBANKMENTS AT THE LOCATIONS SHOWN ON THE TYPICAL SECTIONS. DISPOSITION OF EXCESS EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF 2105.3D WITH NO DIRECT COMPENSATION THEREFORE.
7. COMPACTION OF THE GRADING ITEMS OF THIS PROJECT, BOTH PERMANENT AND TEMPORARY, SHALL BE BY THE 'SPECIFIED DENSITY METHOD', EXCEPT WHEN WITHIN 3 FEET OF THE WATER TABLE, THEN BY THE 'QUALITY COMPACTION METHOD'.
8. COMPACTION OF THE AGGREGATE BASE ITEMS OF THIS PROJECT, BOTH PERMANENT AND TEMPORARY, SHALL BE BY THE 'SPECIFIED DENSITY METHOD' EXCEPT WHEN THE CONTRACTOR ELECTS TO USE RECYCLED MATERIALS FOR THE AGGREGATE BASE ITEMS, THEN THE 'QUALITY COMPACTION METHOD' SHALL BE UTILIZED.
9. WHERE WIDENING ADJACENT TO EXISTING PAVEMENT, CUT VERTICALLY TO THE BOTTOM OF THE CLASS 5 AGGREGATE BASE AND THEN AT A 1V:1/2H SLOPE TO THE BOTTOM OF THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION (AS SHOWN ON THE TYPICAL SECTIONS AND THE CROSS SECTIONS). BACKFILL PROMPTLY TO AVOID UNDERMINING THE EXISTING PAVEMENT.
10. PROVIDE 1:20 LONGITUDINAL TAPERS BETWEEN CHANGES IN SUBGRADE AND SUBCUT DEPTHS.
11. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES AND WHERE CONCRETE CURBING ABUTS BITUMINOUS MIXTURES. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.05 GAL./SQ. YD. BETWEEN BITUMINOUS LAYERS. APPLICATION RATES ARE APPLICABLE FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY). ASPHALT EMULSIONS MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPEC. 2357.
12. STRIP AND REUSE AS SLOPE DRESSING ALL EXISTING TOPSOIL, WHERE PRESENT, IN AREAS TO BE DISTURBED BY CONSTRUCTION. TOPSOIL STRIPPING IS CONSIDERED TO BE COMMON EXCAVATION. APPROXIMATE DIMENSIONS ENCOUNTERED ARE 0 INCHES MINIMUM TO 36 INCHES MAXIMUM, AND AVERAGE IS 6.5 INCHES.
13. PLACE A MINIMUM OF 6 INCHES OF SLOPE DRESSING ON ALL AREAS SCHEDULED FOR PERMANENT TURF ESTABLISHMENT. ALL EXCESS TOPSOIL SHALL BE CONSIDERED UNSUITABLE MATERIAL AND PLACED AT LOCATIONS SHOWN ON THE TYPICAL SECTIONS.
14. DITCH GRADE ELEVATIONS ON THE PROFILE DRAWINGS ARE AT THE BOTTOM OF THE TOPSOIL. ON ALL DRAWINGS WITH CONTOURS, THE ELEVATIONS ARE AT THE TOP OF TOPSOIL.
15. DITCH BOTTOMS, TOE OF FILL, CUT RUNOUTS, AND THE TOP EDGE OF THE BACKSLOPES SHALL BE ROUNDED REGARDLESS OF THE SECTION USED ON THE CROSS SECTION SHEETS.
16. BITUMINOUS QUANTITIES ARE BASED ON: 110*/SQ. YD.-IN. THE BOTTOM LAYER OF BITUMINOUS IS INCREASED IN THICKNESS BY 1/4 INCH FOR QUANTITY DETERMINATION. AGGREGATE QUANTITIES ARE BASED ON: 105*/SQ. YD.-IN.
17. SOIL BORINGS ALONG THE PROJECT INDICATE THE EXISTING CSAH 52 BITUMINOUS PAVEMENT AVERAGES 6 INCHES THICK SOUTH OF STA. 253+00 AND LESS THAN SIX INCHES THICK NORTH OF STA. 253+00. THE CONTRACTOR SHALL INVESTIGATE AND MAKE OWN DETERMINATION OF ACTUAL PAVEMENT DEPTHS.
18. GRADING GRADE ON THIS PROJECT SHALL BE DEFINED AS THE BOTTOM OF THE AGGREGATE BASE AS SHOWN ON THE TYPICAL SECTIONS.
19. SLOPES DELINEATED IN THIS PROJECT AS 'X:Y' MEANS 'X' VERTICALLY TO 'Y' HORIZONTALLY.
20. ALL SILT FENCING AS SHOWN IN THE PLANS SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF GRADING OPERATIONS.

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.				DRAWN BY <u>TJV</u> DATE <u>9-26-01</u> DESIGN BY <u>JMW</u> DATE <u>9-26-01</u> CHECKED BY <u>KRC</u> DATE <u>9-27-01</u>		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY EARTHWORK SUMMARY / CONSTRUCTION NOTES C.S.A.H. 52 RECONSTRUCTION		SHEET 23 OF 559
NO	DATE	BY	CKD	APPR	REVISION	NAME: \\MrFreeze\Projects\g-f\Anoka\ty\1174901\hwy-brdg\part4\roadw\01\08\12\02\g\01\h\h\h\dgn						

CLEARING AND GRUBBING A							
STATION	OFFSET	COST PARTICIP.	CLEARING		GRUBBING		4" DIA. OR LESS
			TREE	ACRE	TREE	ACRE	
243+20	4' RT	(B)	1		1		
243+55	2' RT	(B)	1		1		
244+26	6' RT	(B)	1		1		
244+73	7' RT	(B)	1		1		
244+96	15' RT	(B)	1		1		
244+98	6' RT	(B)	1		1		
245+15	8' RT	(B)	1		1		
245+20	6' RT	(B)	1		1		
246+90	6' LT	(B)	1		1		
247+27	2' LT	(B)	1		1		
247+49	2' LT	(B)	1		1		
247+54	3' LT	(B)	1		1		
247+66	2' RT	(B)	1		1		
248+02	23' RT	(B)	1		1		
NE RAMP							
10+45 TO 16+60	57' RT TO 245' LT	(C)		1.49		1.49	
16+86	10' LT	(C)	1		1		
NE LOOP							
10+21	67' RT	(C)	1		1		
10+37	38' RT	(C)	1		1		
10+44	64' RT	(C)	1		1		
10+57	24' RT	(C)	1		1		
10+59	48' RT	(C)	1		1		
10+82	48' RT	(C)	1		1		
10+84	12' RT	(C)	1		1		
11+01	4' RT	(C)	1		1		
11+01	23' RT	(C)	1		1		
11+23	21' RT	(C)	1		1		
11+38	8' RT	(C)	1		1		
11+55	5' LT	(C)	1		1		
12+60 TO 18+11	101' TO 171' RT	(C)		0.16		0.16	
NAPLES STREET							
33+74 TO 34+72	19' TO 48' LT	(A)		0.04		0.04	
SW RAMP							
12+29	93' RT	(C)	1		1		
12+44	95' RT	(C)	1		1		
12+48	169' RT	(C)	1		1		
12+56	90' RT	(C)	1		1		
12+73	162' RT	(C)	1		1		
12+76	84' RT	(C)	1		1		
12+98	156' RT	(C)	1		1		
13+26	153' RT	(C)	1		1		
13+48	150' RT	(C)	1		1		
15+30	19' RT	(C)	1		1		
15+33	60' RT	(C)	1		1		
WEST SERVICE ROAD							
30+97 TO 31+78	5' TO 54' RT	(A)		0.05		0.05	
32+34 TO 33+36	32' LT TO 47' RT	(A)		0.15		0.15	
33+25	47' LT	(A)	1		1		
NAPLES ST. NE							
34+81 TO 38+80	16' TO 279' RT	(D)		0.91		0.91	
38+18	4' LT	(D)	1		1		
39+24	140' RT	(D)	1		1		
39+24	140' RT	(D)	1		1		
39+30	149' RT	(D)	1		1		
39+40	171' RT	(D)	1		1		
39+90 TO 44+97	47' LT TO 227' RT	(D)		1.29		1.29	
40+59 TO 44+62	188' TO 457' RT	(D)		1.28		1.28	
43+93	141' RT	(D)	1		1		
44+02	130' RT	(D)	1		1		
44+15	117' RT	(D)	1		1		

CLEARING AND GRUBBING A							
STATION	OFFSET	COST PARTICIP.	CLEARING		GRUBBING		4" DIA. OR LESS
			TREE	ACRE	TREE	ACRE	
44+17	213' RT	(D)	1		1		
44+17	146' RT	(D)	1		1		
44+20	168' RT	(D)	1		1		
44+30	185' RT	(D)	1		1		
44+34	229' RT	(D)	1		1		
44+52	313' RT	(D)	1		1		
44+57	300' RT	(D)	1		1		
SUBTOTALS			(A)	61	0.41	61	0.41
SUBTOTALS			(B)	121	1.34	131	1.34
SUBTOTALS			(C)	58	1.65	58	1.65
SUBTOTALS			(D)	15	3.48	15	3.48
TOTALS				255	6.88	265	6.88

- (A) ANOKA COUNTY S.A.P. 02-652-03
- (B) ANOKA COUNTY S.A.P. 02-652-02, S.A.P. 02-652-04
- (C) Mn/DOT S.P. 0208-50
- (D) Mn/DOT S.P. 90-080-11 (MTC MATCH)
- (E) Mn/DOT S.P. 90-080-11 (Mn/DOT MATCH)
- (F) BLAINE S.A.P. 106-020-021, S.A.P. 106-020-022

NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\stan\micrstation\edg\tabs.dgn					

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.

Joseph W. W...
DATE: 11-21-01 LIC. NO. 22405

DRAWN BY: RRC DATE: 09-26-01
 DESIGN BY: JMW DATE: 09-26-01
 CHECKED BY: KRC DATE: 09-26-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

TURF ESTABLISHMENT AND EROSION CONTROL O

LOCATION	COST PART.	SILT FENCE	SEEDING	SEED MIXTURE 28B	SEED MIXTURE 60B	SODDING TYPE SALT RES.	SODDING TYPE LAWN	MULCH MATERIAL TYPE 1	DISK ANCHORING	COMM. FERT. ANALYSIS 22-5-10	EROSION CONTROL BLANKET
		LF	ACRE	LB	LB	SY	SY	TON	ACRE	TON	SY
NB C.S.A.H. 52											
123+50 TO 125+00	(B)	286	0.3		29	203		0.6	0.3		440
125+00 TO 132+00	(B)	1185	1.1	8	90			2.2	1.1	0.1	1110
132+00 TO 147+00	(B)	3298	2.3	5	213			4.6	2.3	0.3	
147+00 TO 158+00	(B)	2087	1.8	5	161			3.6	1.8	0.2	947
158+00 TO 172+00	(B)	3008	2.2	7	197			4.4	2.2	0.3	86
172+00 TO 187+00	(B)	2364	2.2	4	208			4.4	2.2	0.3	2207
187+00 TO 202+00	(B)	1757	1.9	5	175			3.8	1.9	0.3	2743
202+00 TO 214+00	(B)	1649	2.3	18	166			4.6	2.3	0.3	2003
214+00 TO 229+00	(B)	2638	2.6	8	233			5.2	2.6	0.4	2090
229+00 TO 244+00	(B)	1619	1.8	25	94	172	556	3.6	1.8	0.2	2411
244+00 TO 256+74.68	(B)	2105	1.5	36	32	264	885	3.0	1.5	0.1	465
INTERCHANGE - NE QUADRANT											
WITHIN NE LOOP	(C)	1236	3.1	51	144			6.2	3.1	0.2	
NORTH OF NE LOOP	(C)	1241	1.2		125			2.4	1.2	0.2	
EAST OF NE RAMP	(A)	3160	1.6		157			3.2	1.6	0.2	
INTERCHANGE - NW QUADRANT											
WITHIN NW RAMP	(C)	1697	1.6		158			3.2	1.6	0.2	
BETWEEN NAPLES ST NE AND NW RAMP	(C)	2758	5.1	74	262			10.2	5.1	0.4	
WEST OF NAPLES ST NE	(D)	762	1.3		128			2.6	1.3	0.2	6196
WITHIN BUS LOOP	(D)		0.4		36			0.8	0.4	0.1	
TRIANGLE SOUTH OF BUS LOOP	(D)		0.1		8			0.2	0.1		
BETWEEN BUS LOOP AND SB I-35W	(D)	2075	1.1		112			2.2	1.1	0.2	
INTERCHANGE - SE QUADRANT											
EAST OF NAPLES STREET	(A)	974	1.0		104			2.0	1.0	0.2	
BETWEEN NAPLES STREET AND NS I-35W	(C)	3133	3.7		370	217		7.4	3.7	0.6	
INTERCHANGE - SW QUADRANT											
WITHIN SW RAMP	(C)	841	1.7		168	107		3.4	1.7	0.3	
95TH ST. TO W SERVICE ROAD	(A)	2531	0.5		55	436		1.0	0.5	0.1	
W. SERVICE ROAD TO SW RAMP	(A)	1381	4.1	38	286	504		8.2	4.1	0.5	1095
SUBTOTALS	(A)	8046	7.2	38	602	940		14.4	7.2	1.0	1095
SUBTOTALS	(B)	21996	20.0	121	1598	639	1441	40.0	20.0	2.5	14482
SUBTOTALS	(C)	10908	16.4	125	1227	324		32.8	16.4	1.9	
SUBTOTALS	(D)	2837	2.9		284			5.8	2.9	0.5	6196
TOTALS		43785	46.5	284	3711	1903	1441	93.0	46.5	5.9	21773

TAB NOTES:

- (1) APPLIED AT THE RATE OF 30 POUNDS PER ACRE.
- (2) APPLIED AT THE RATE OF 100 POUNDS PER ACRE.
- (3) SEE GRADING PLANS FOR LOCATIONS.
- (4) APPLIED AT THE RATE OF 2 TONS PER ACRE.
- (5) APPLIED AT THE RATE OF 40 POUNDS PER ACRE FOR SEED MIX 28B.
300 POUNDS PER ACRE FOR SEED MIX 60B.

- (A) ANOKA COUNTY S.A.P. 02-652-03
- (B) ANOKA COUNTY S.A.P. 02-652-02, S.A.P. 02-652-04
- (C) Mn/DOT S.P. 0208-50
- (D) Mn/DOT S.P. 90-080-11 (MTC MATCH)
- (E) Mn/DOT S.P. 90-080-11 (Mn/DOT MATCH)
- (F) BLAINE S.A.P. 106-020-021, S.A.P. 106-020-022

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.

DATE 1/11/02 LIC. NO. 22405

DRAWN BY RRC DATE 09-26-01
 DESIGN BY JMW DATE 09-26-01
 CHECKED BY KRC DATE 09-26-01

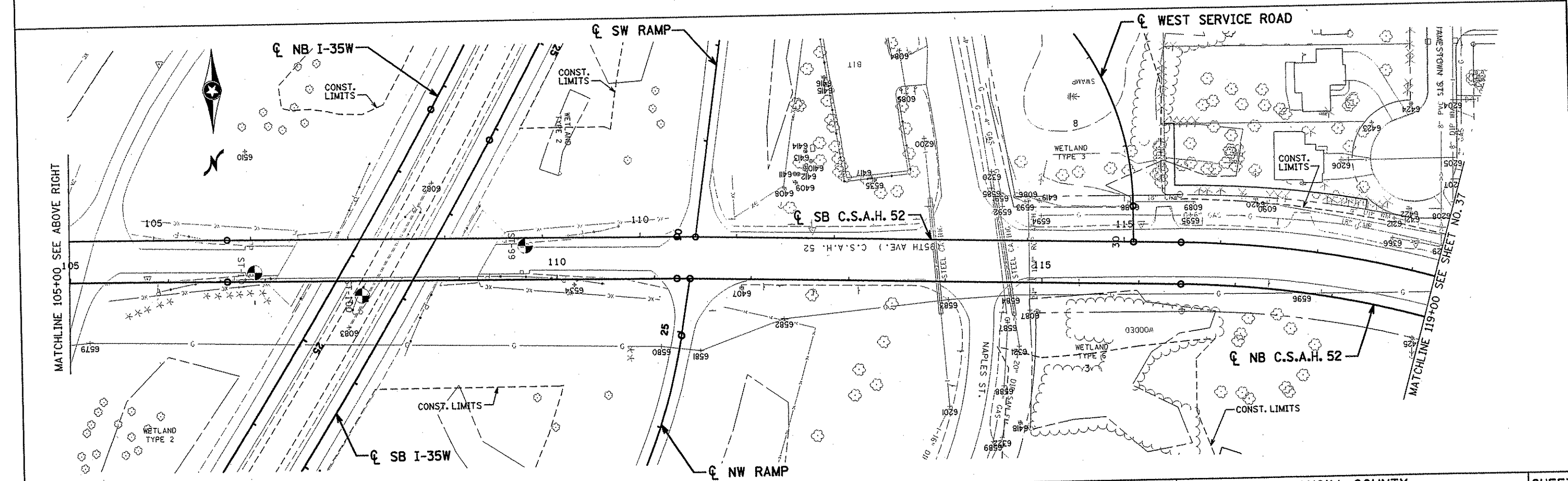
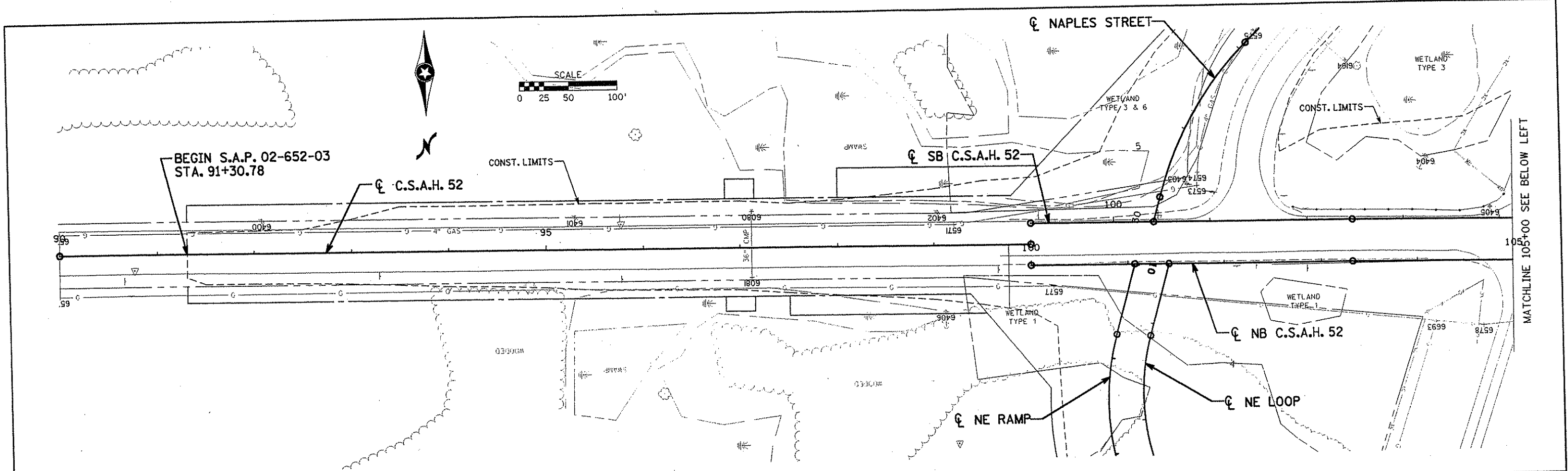
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 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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AND ASSOCIATES, INCORPORATED

ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

NAME: K:\a-f\AnokaCty\1174901\hwy-brdg\part4\roadway3\drawings\tabs.dwg#08/2002



NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\11749\part4\roadway3\drawings\exut1101.dgn					

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.

Joseph Wisner
 DATE 11-20-01 LIC. NO. 22405

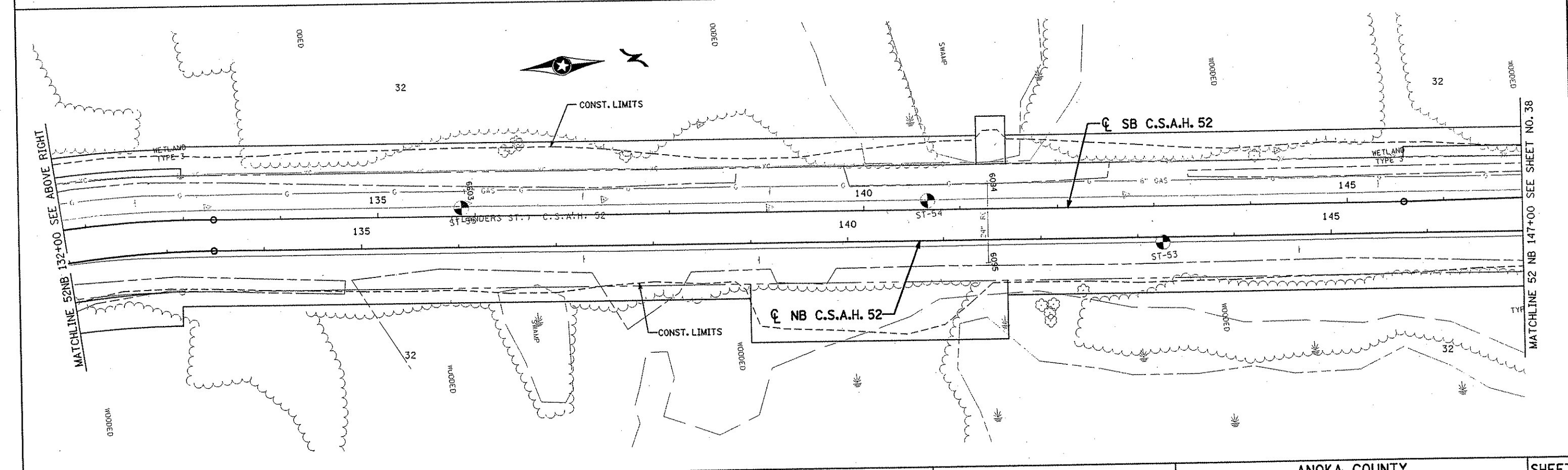
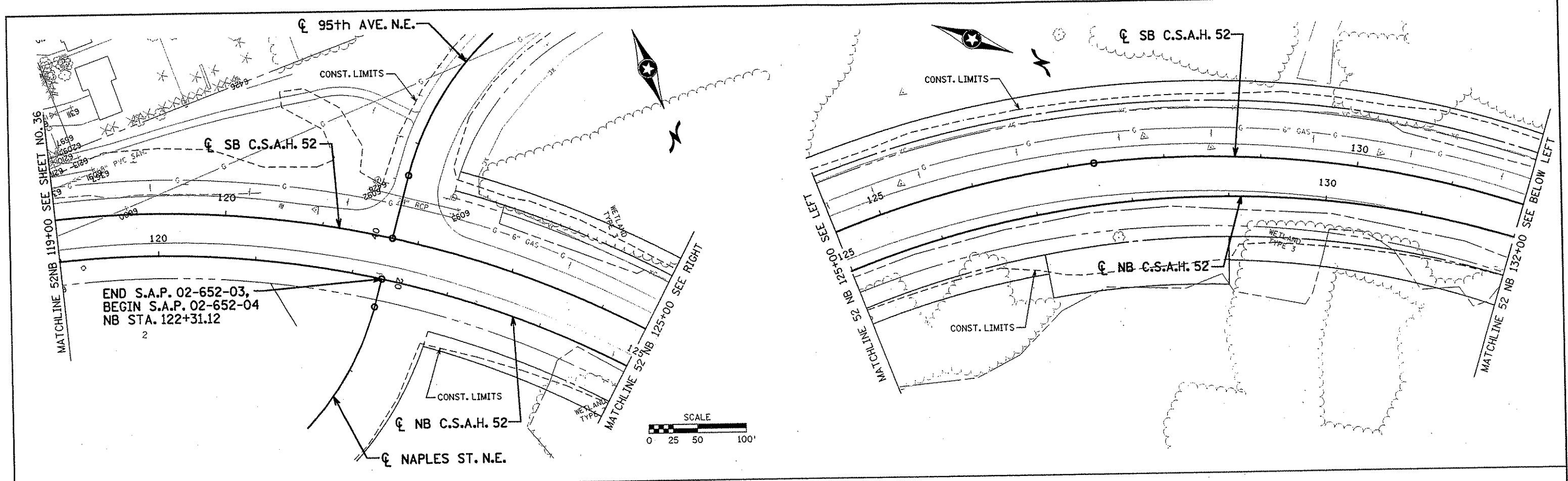
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 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 INPLACE UTILITY PLAN
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 STA. 90+00 TO 119+00

SHEET
 36
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part14\roadway3\drawings\ext1102.dgn
 11/19/01

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Joseph Weaver
 DATE 11-26-01 LIC. NO. 22405

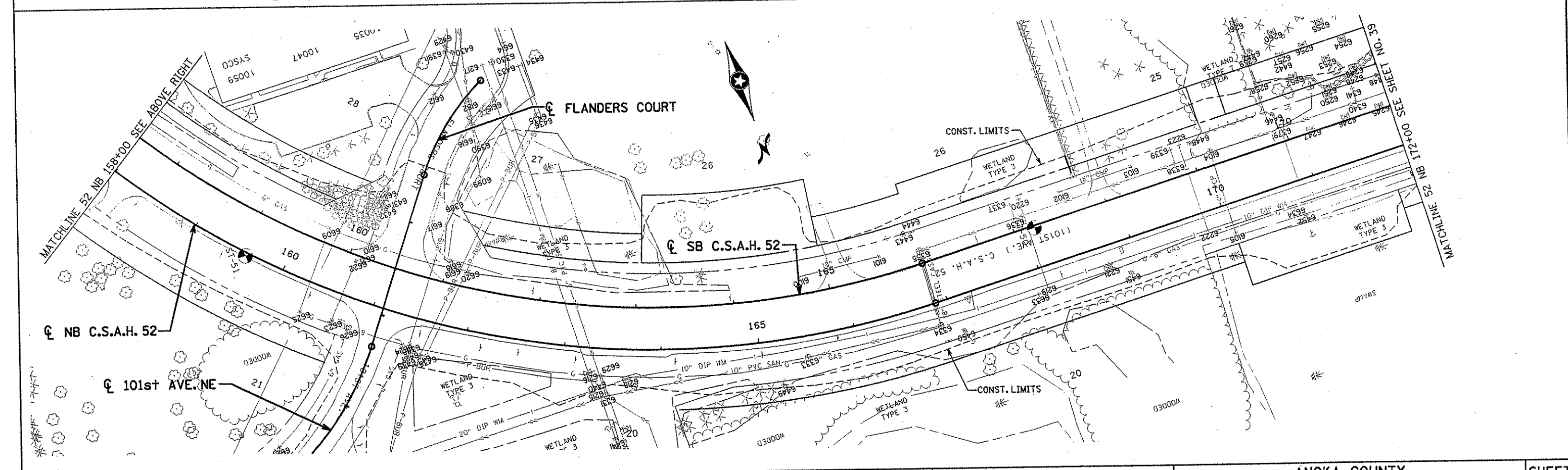
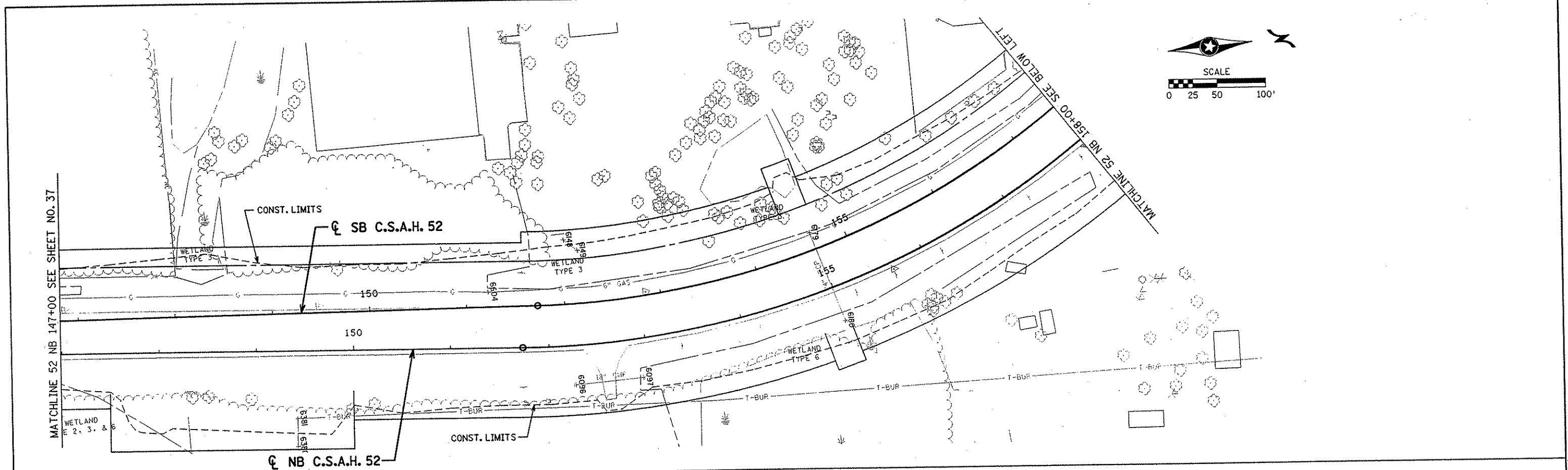
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DESIGN BY	RRC	DATE	9-20-01
CHECKED BY	JMW	DATE	9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 INPLACE UTILITY PLAN
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 119+00 TO 147+00

SHEET
 37
 OF
 559



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\c11749\par\4\roadway3\drawings\exut1103.dgn 11/19/01

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.

Joseph W. W...
 DATE 11-20-01 LIC. NO. 22405

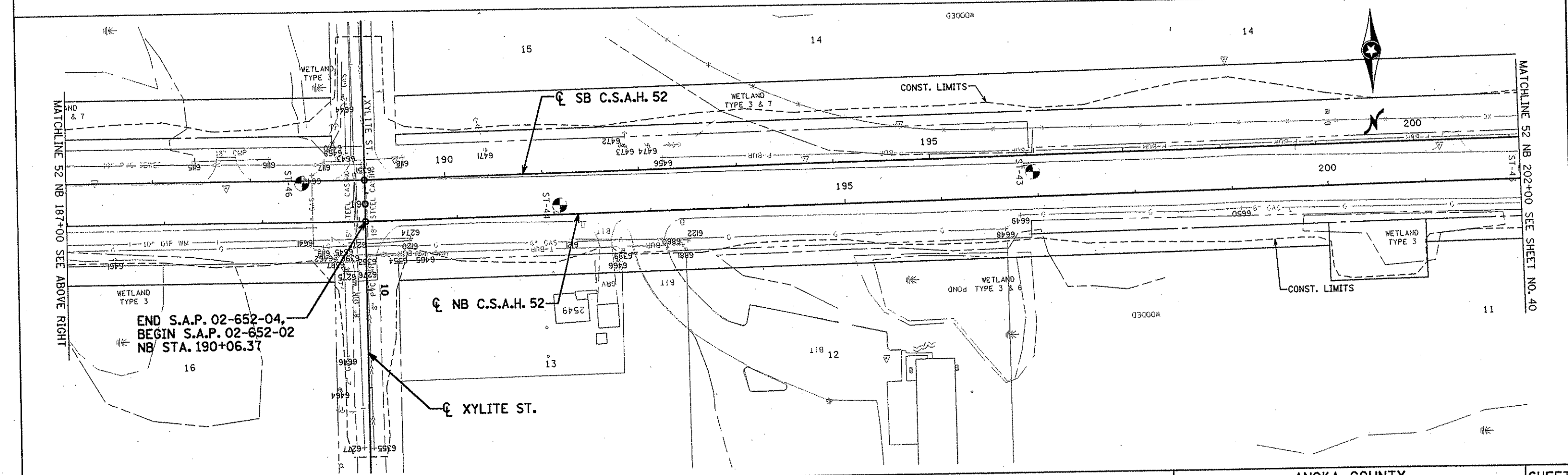
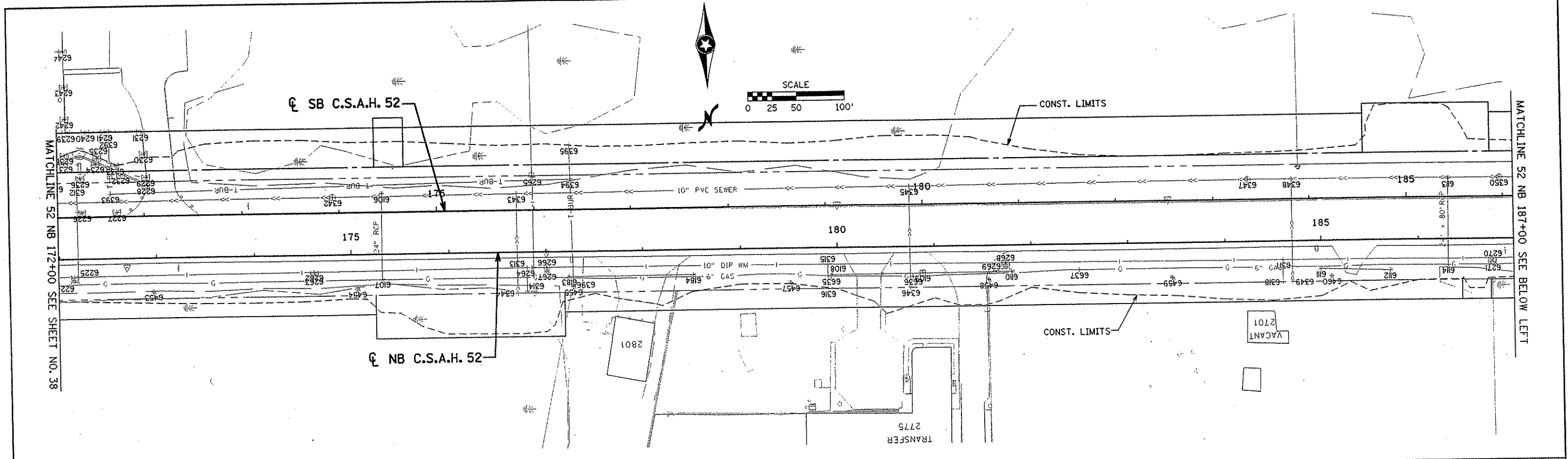
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S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 INPLACE UTILITY PLAN
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 147+00 TO 172+00

SHEET
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 OF
559



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Joseph W. Womack
 DATE 11/20/01 LIC. NO. 22405

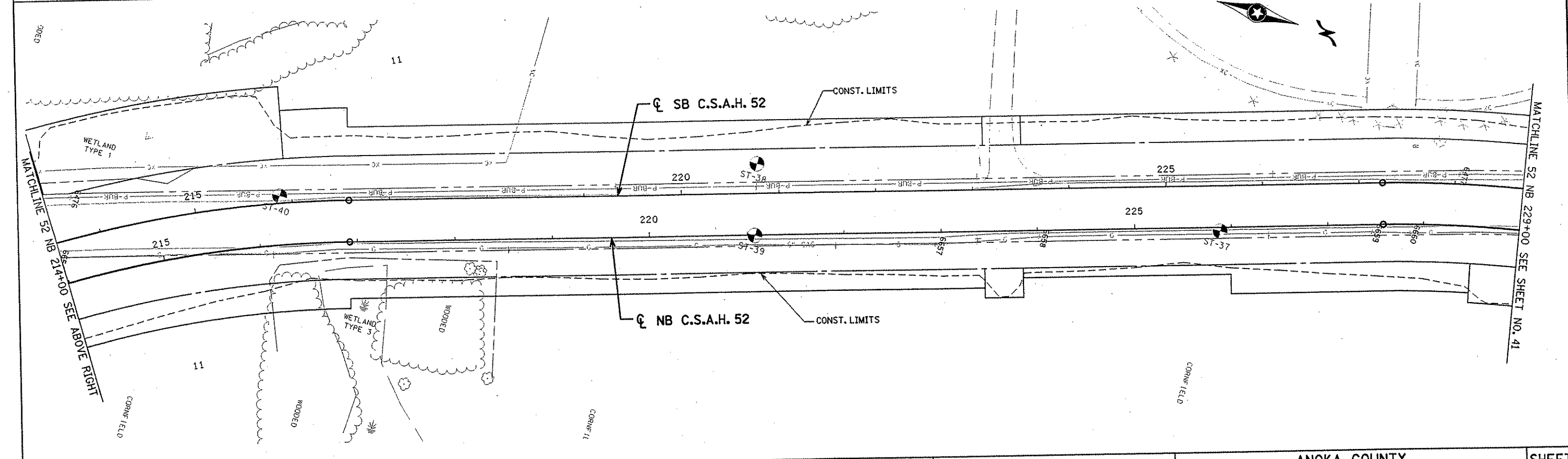
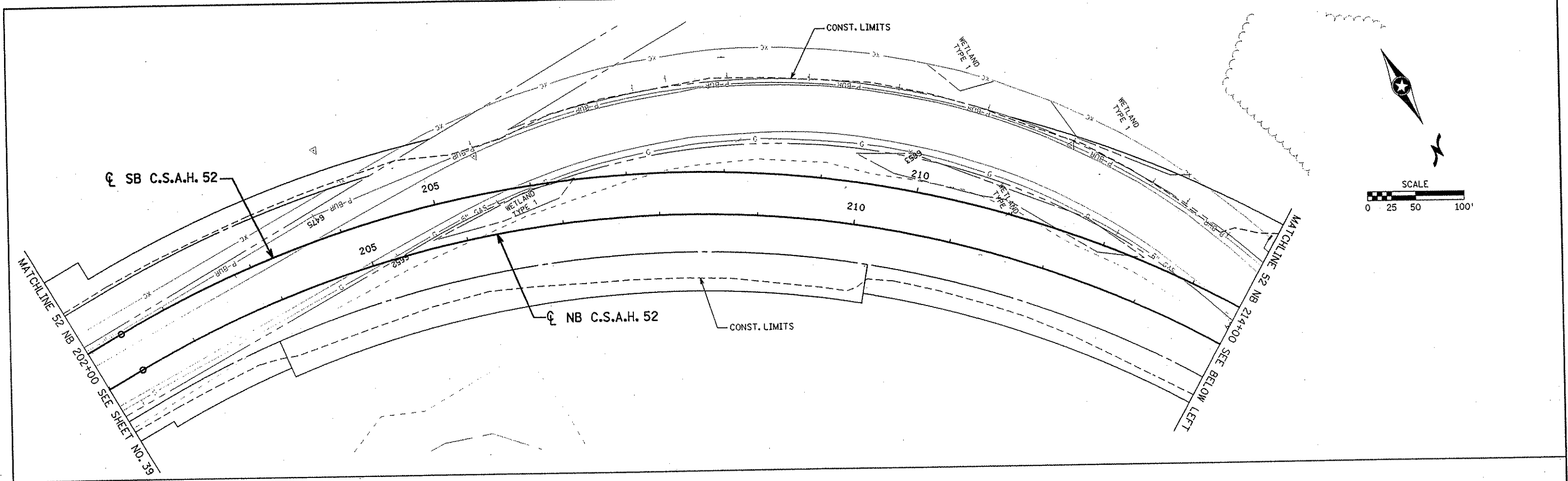
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 CHECKED BY JMW DATE 9-24-01

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 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 INPLACE UTILITY PLAN
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 172+00 TO 202+00

SHEET
 39
 OF
 559



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Joseph W. W...
 DATE 11-26-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
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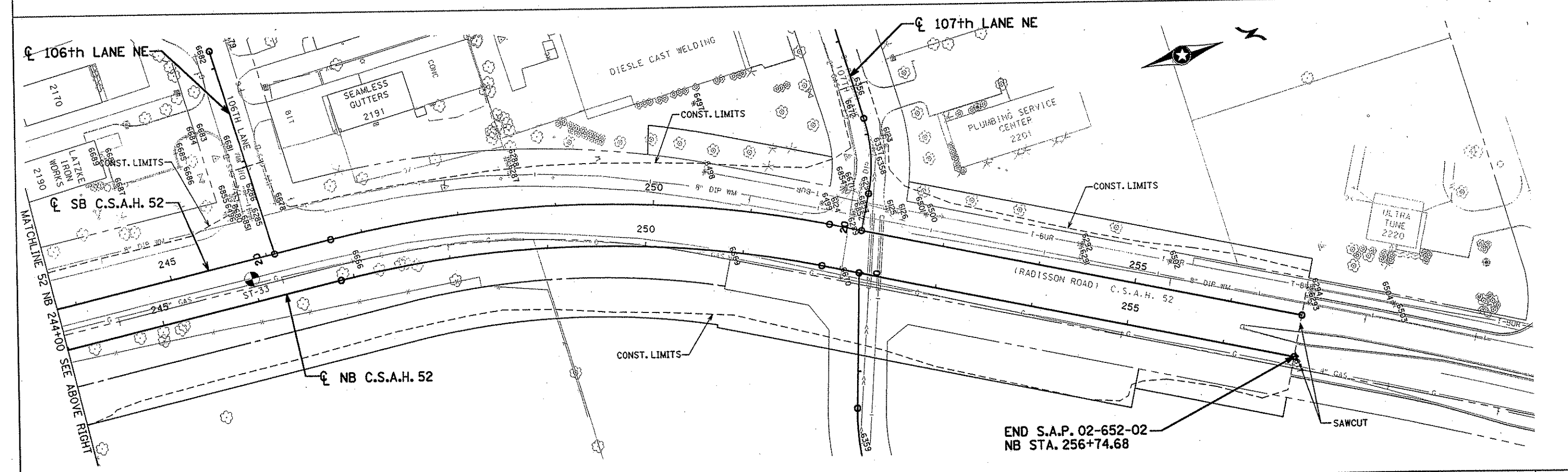
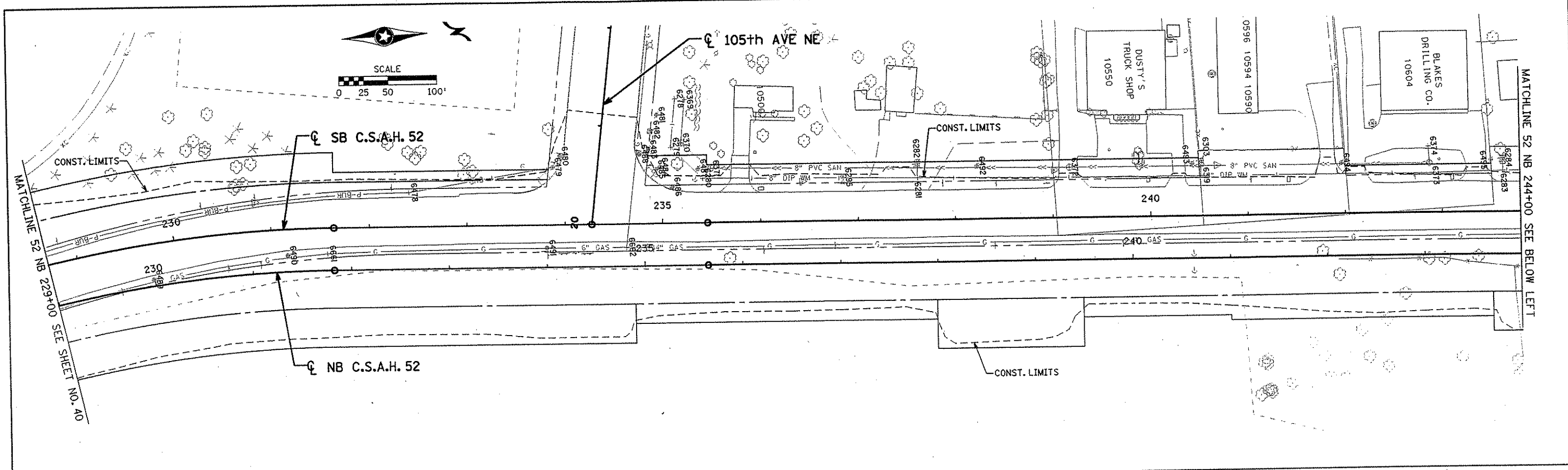
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 S.A.P. 02-652-04
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ANOKA COUNTY
 INPLACE UTILITY PLAN
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 202+00 TO 229+00

SHEET
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 OF
559

NAME: k:\site\proj\c11749\par\4\roadway3\drawings\exut\105.dgn 11/19/01



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\sfe\proj\11749\part4\roadway3\drawings\axut1106.dgn 11/19/01

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Joseph Weanu
DATE 11-20-01 LIC. NO. 22405

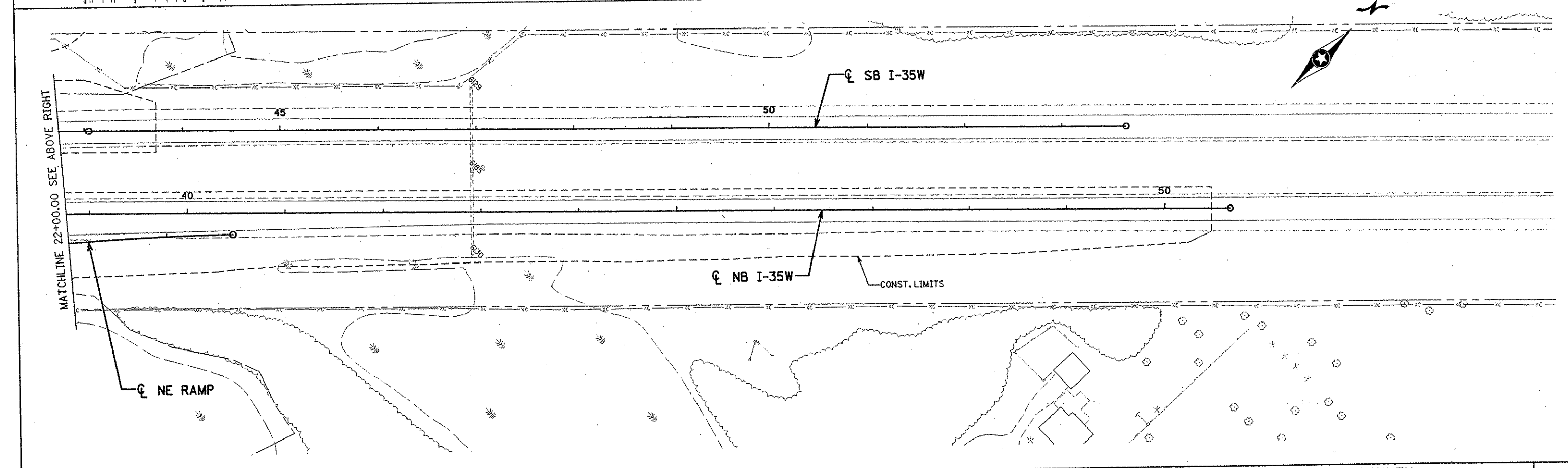
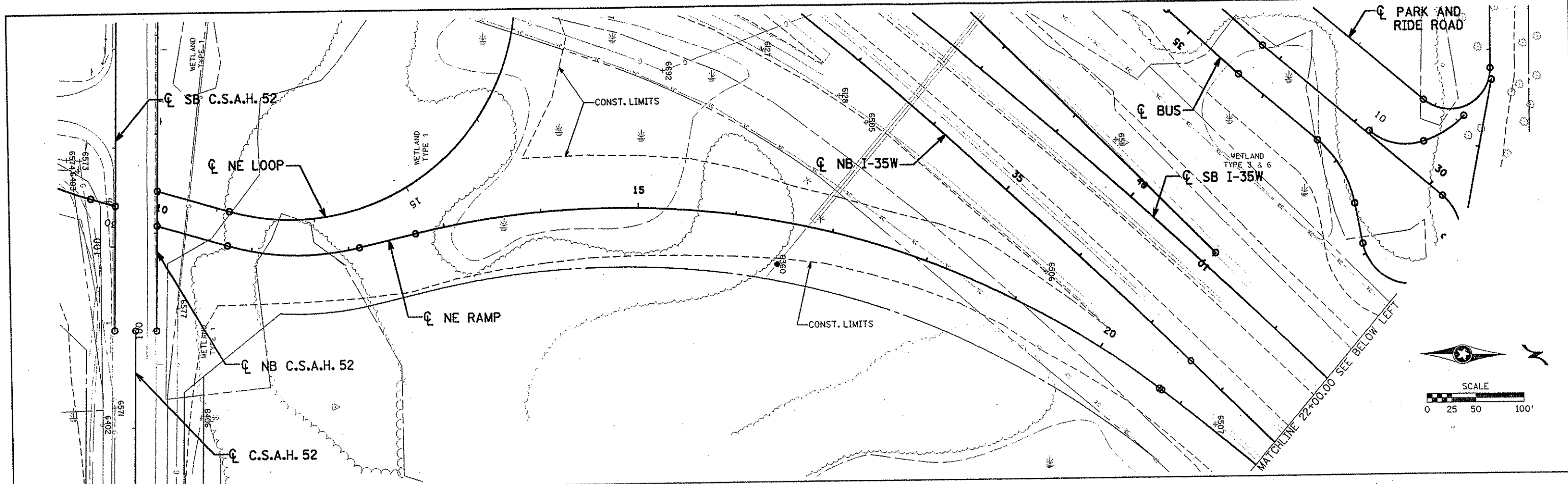
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DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

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S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
INPLACE UTILITY PLAN
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 NB STA. 229+00 TO 256+74.68

SHEET
41
OF
559



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NAME: k:\site\proj\c11749\part4\roadway3\drawings\exut1107.dgn 11/19/01

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Joseph Weems
 DATE 11-20-01 LIC. NO. 22405

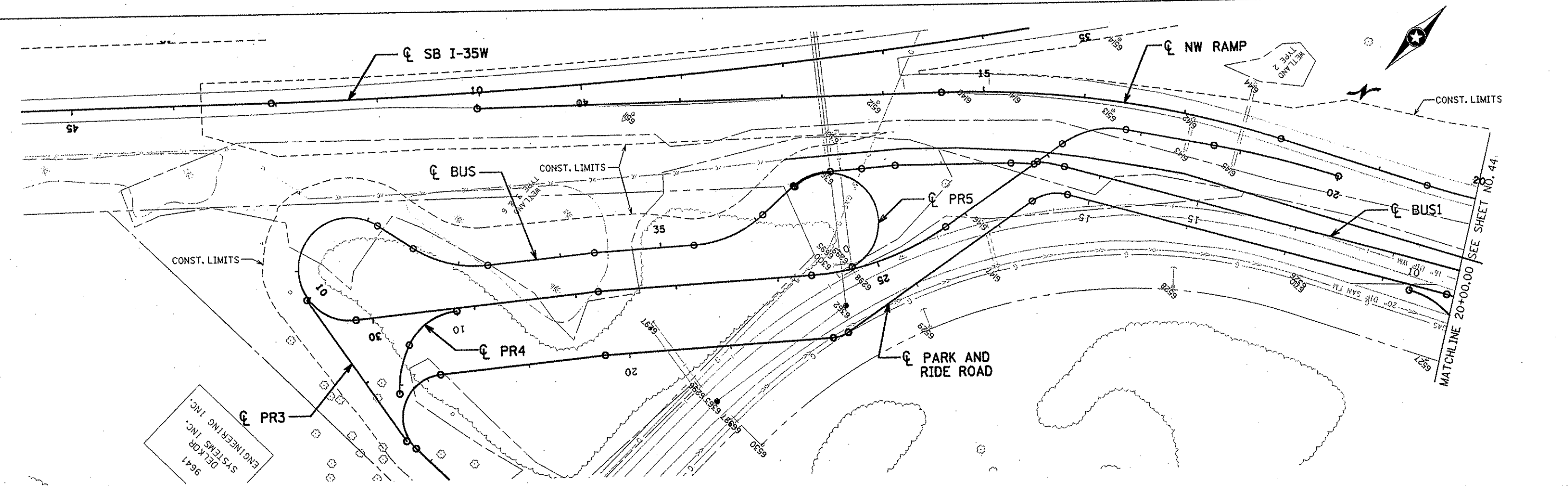
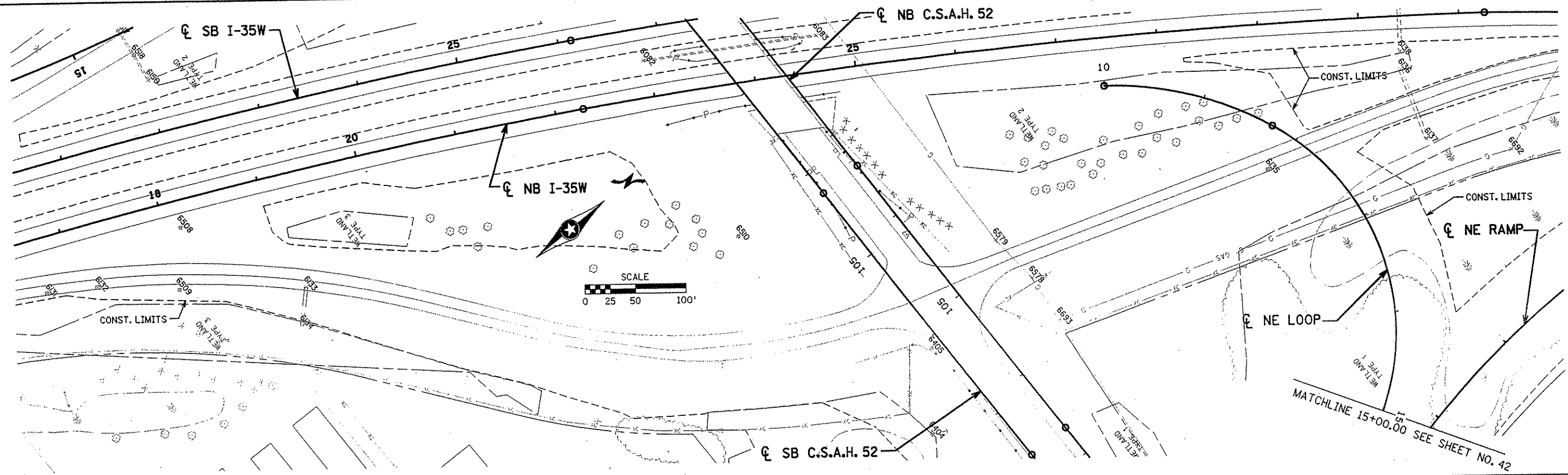
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

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 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 INPLACE UTILITY PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 10+00 TO 22+00

SHEET
 42
 OF
 559



9641
 DELKOR
 SYSTEMS INC.
 ENGINEERING INC.

NO	DATE	BY	CRD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\exut1108.dgn 11/19/01

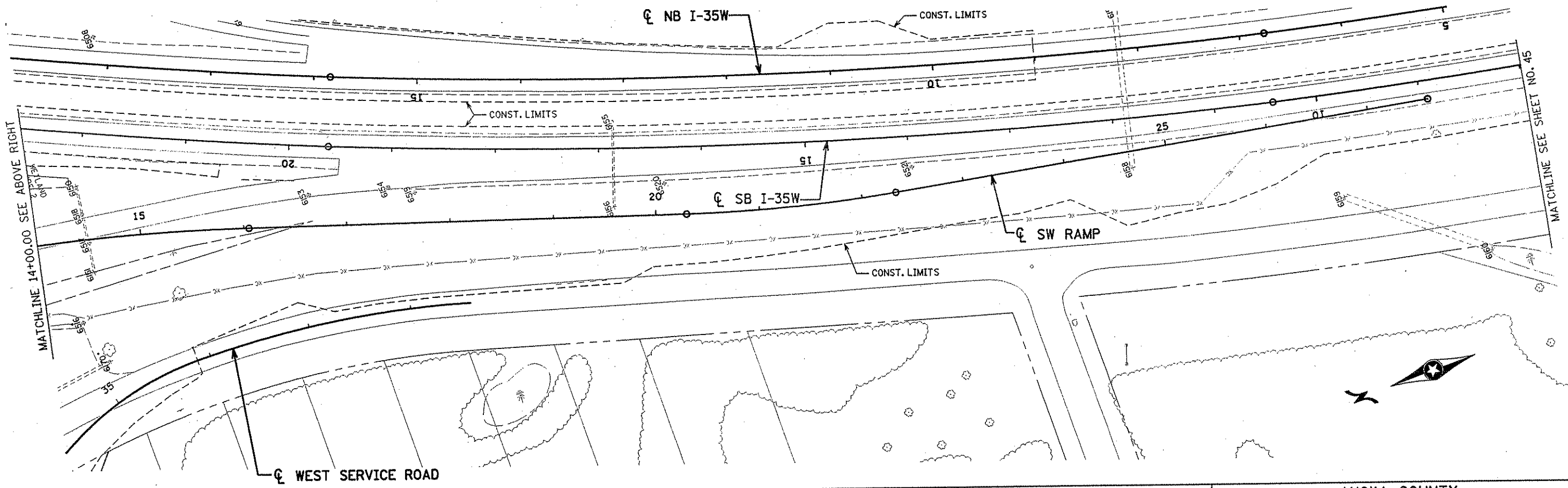
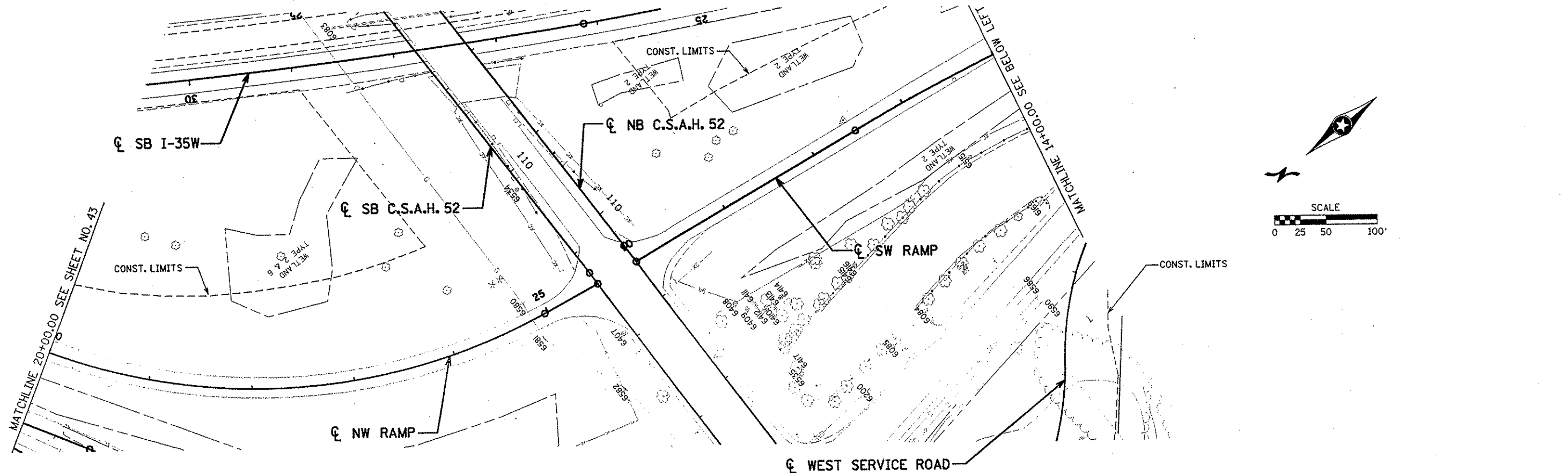
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Joseph Weaver
 DATE 11-20-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
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 S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 INPLACE UTILITY PLAN
 C.S.A.H. 52 RECONSTRUCTION
 NW RAMP STA. 10+00 TO 20+00

SHEET
 43
 OF
 559



NO	DATE	BY	CRD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\exut1109.dgn 11/19/01

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James Weaver
 DATE 11-26-01 LIC. NO. 22405

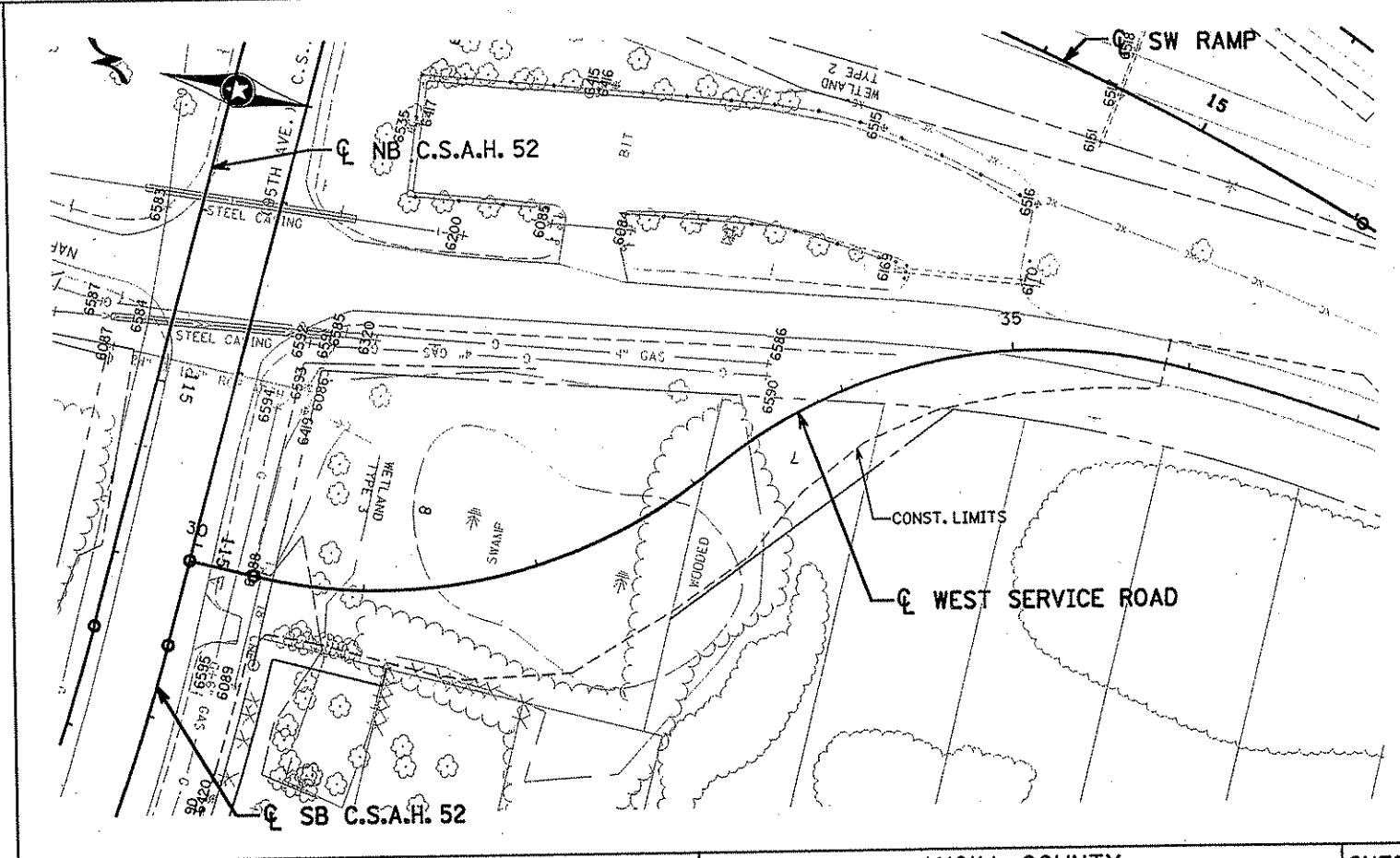
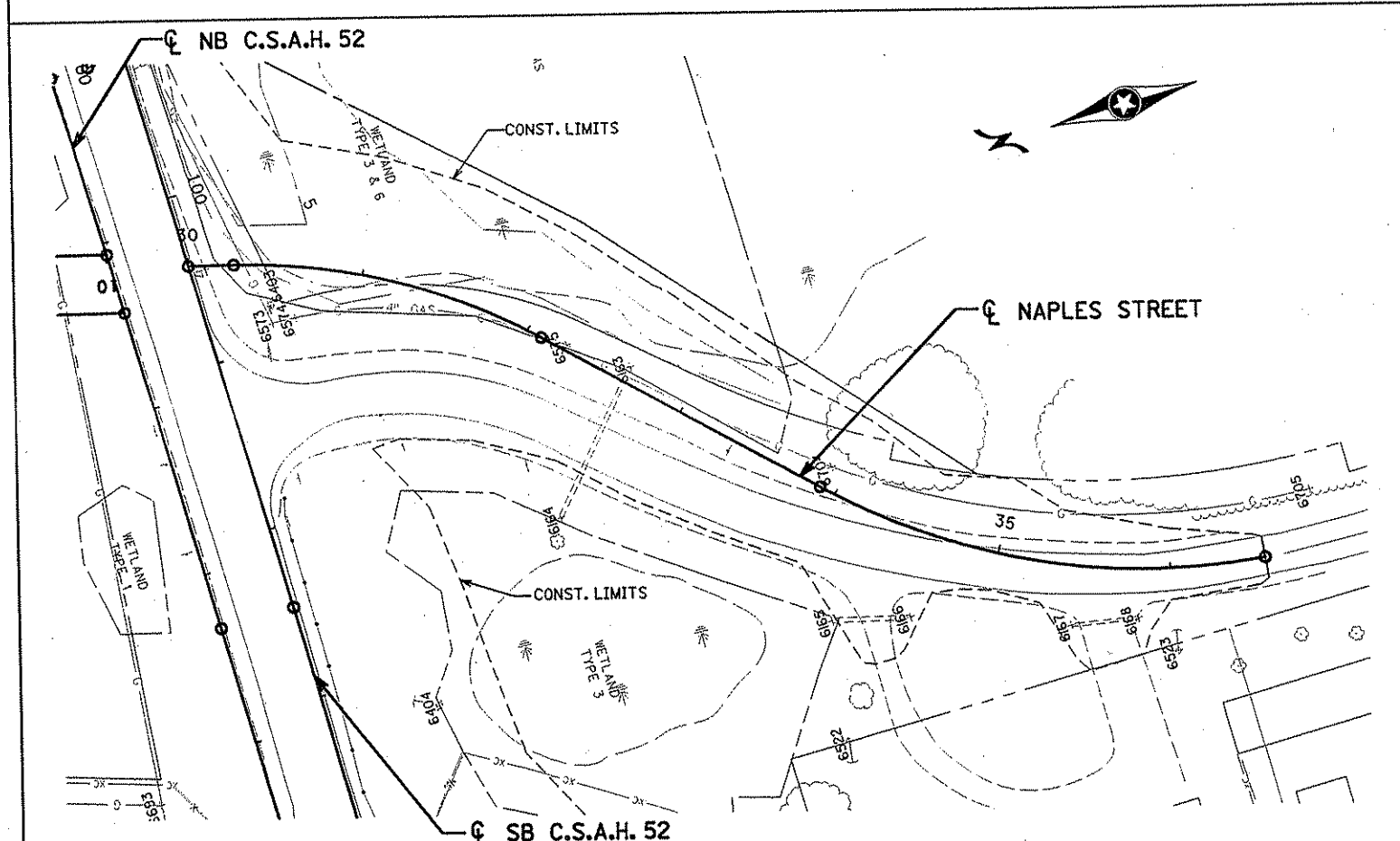
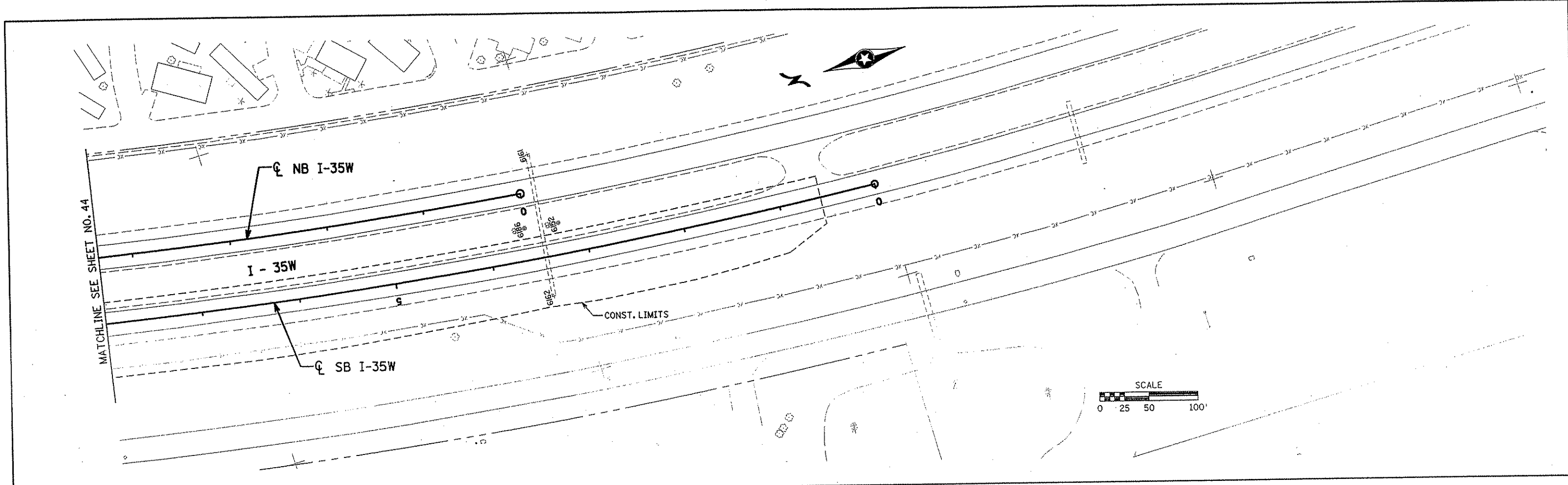
DRAWN BY RRC DATE 9-21-01
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S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
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 S.A.P. 106-020-021, 106-020-022

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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 INPLACE UTILITY PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 16+00 TO 21+73.68

SHEET
 44
 OF
 559



NO	DATE	BY	CRD	APPR	REVISION

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Joseph Weaver

DATE 11-20-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01

DESIGN BY RRC DATE 9-20-01

CHECKED BY JMW DATE 9-24-01

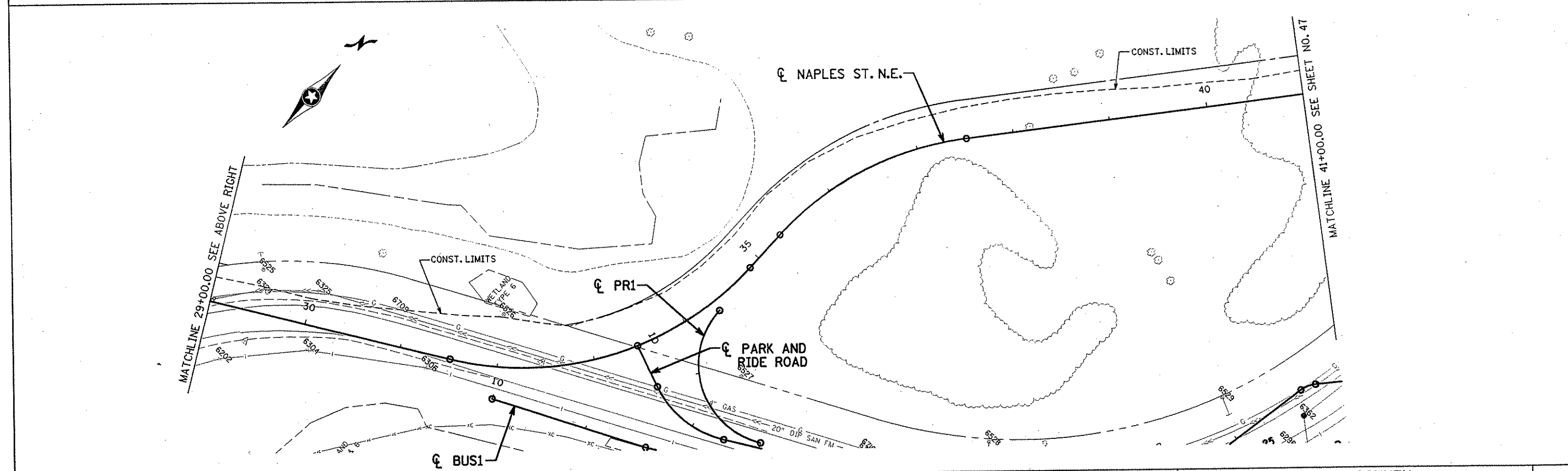
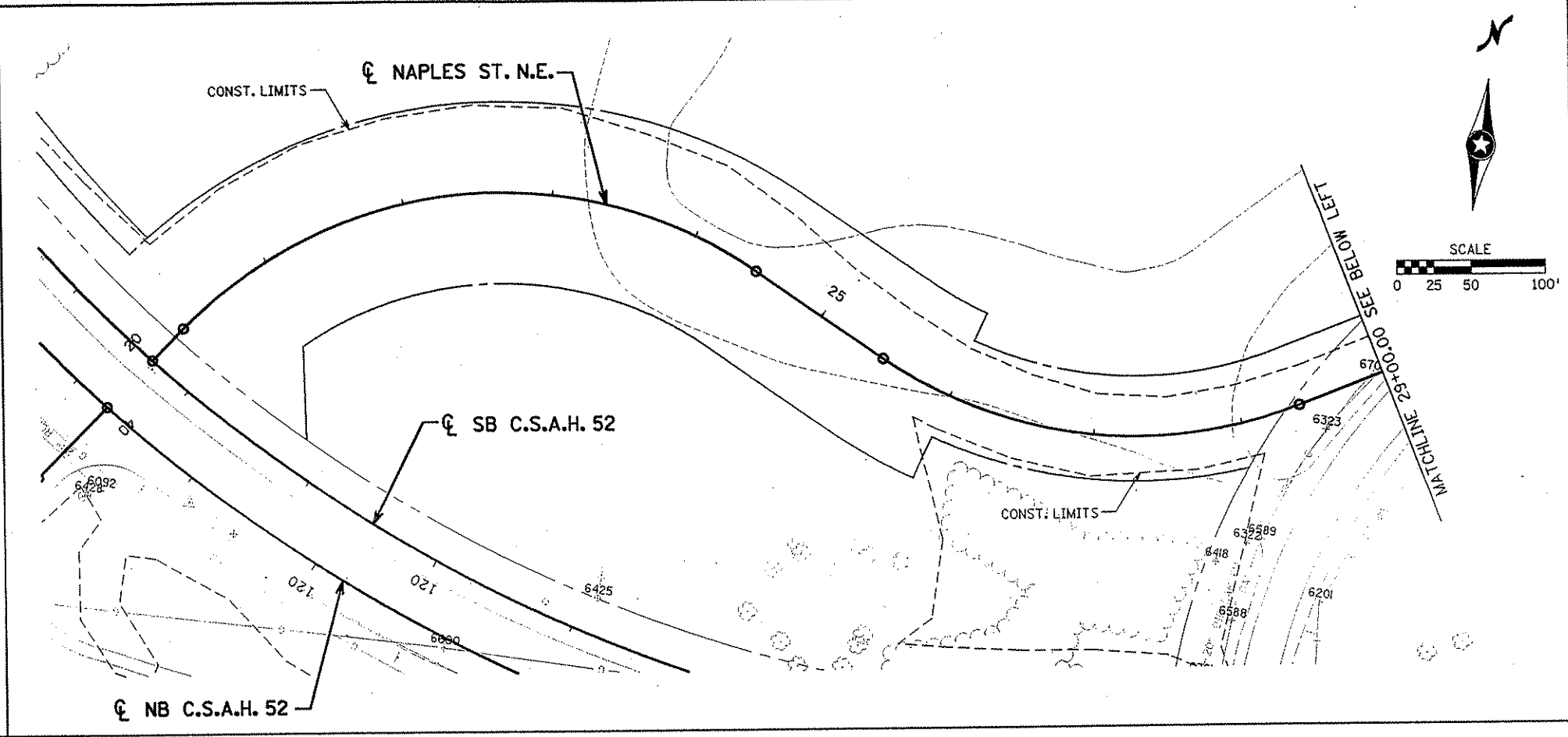
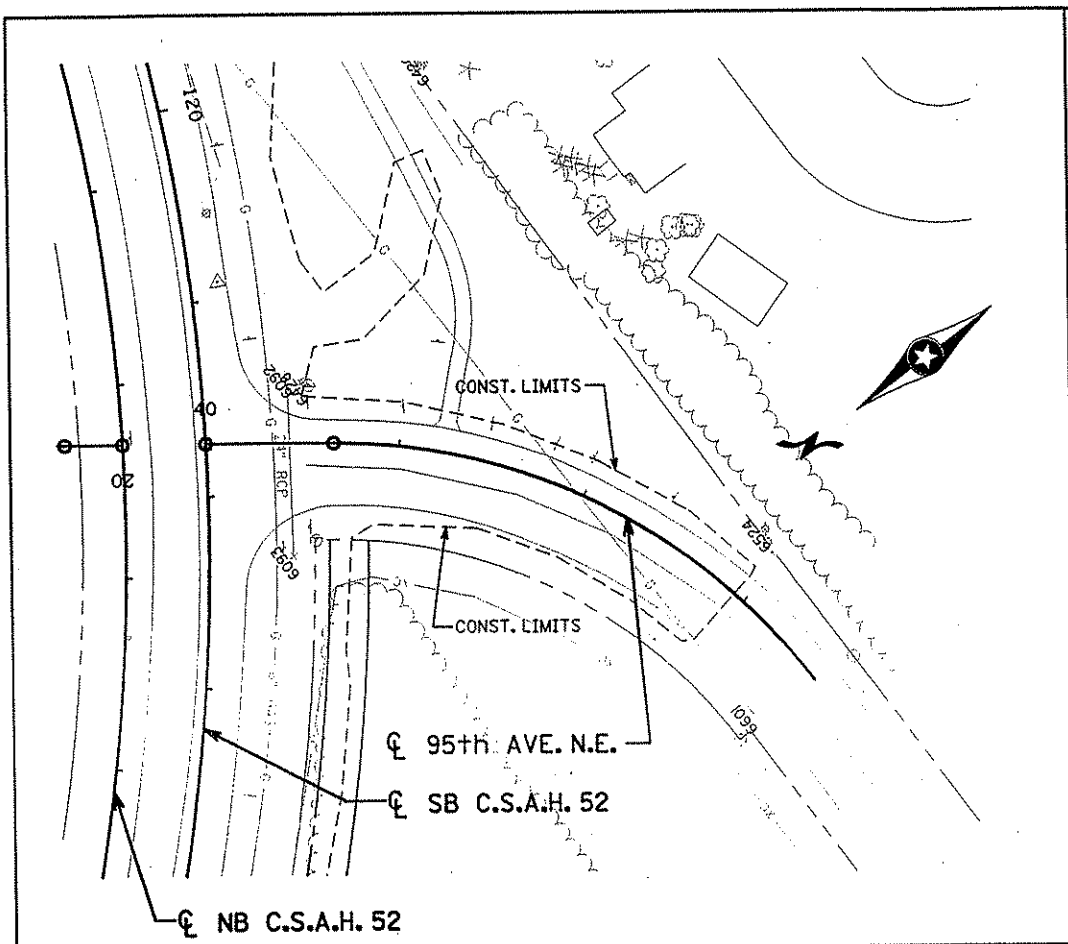
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S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
ENGINEERS-ARCHITECTS-PLANNERS

TOLTZ, KING, QUALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
INPLACE UTILITY PLAN
C.S.A.H. 52 RECONSTRUCTION
SW RAMP, NAPLES STREET & WEST SERVICE ROAD

SHEET 45 OF 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part14\roadway3\drawings\exut111.dgn 11/19/01

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.

Joseph Weaver
DATE 11-20-01 LIC. NO. 22405

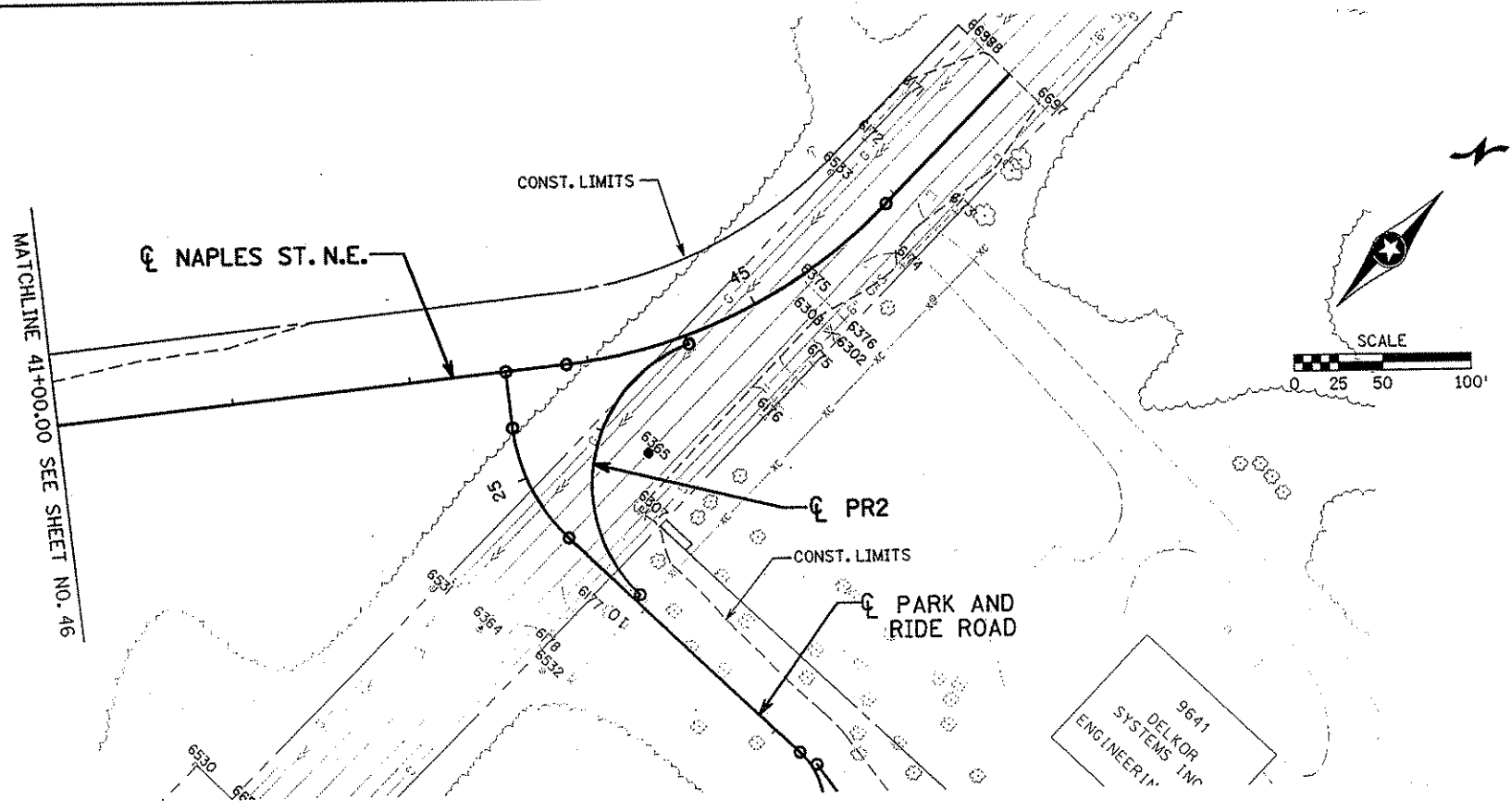
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
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S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 ENGINEERS-ARCHITECTS-PLANNERS
 FOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 INPLACE UTILITY PLAN
 C.S.A.H. 52 RECONSTRUCTION
 95th AVE. N.E. AND NAPLES ST. N.E.

SHEET 46 OF 559



					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. <i>Joseph Weary</i> DATE <u>11-20-01</u> LIC. NO. <u>22405</u>		DRAWN BY <u>RRC</u> DATE <u>9-21-01</u> DESIGN BY <u>RRC</u> DATE <u>9-20-01</u> CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY INPLACE UTILITY PLAN C.S.A.H. 52 RECONSTRUCTION NAPLES ST. N.E.		SHEET 47 OF 559
NO	DATE	BY	CKD	APPR	REVISION										
NAME: k:\site\proj\c11749\part4\roadway3\drawings\exut112.dgn															

INPLACE UTILITY TABULATION - POWER

POINT	RUNS TO POINT	ALIGNMENT NAME	STATION	OFFSET	INPLACE ITEM	REMARKS	OWNER
6510		I-35W NB	23+60	148' RT	POWER POLE	RELOCATE BY OTHERS	XCEL ENERGY
6514		I-35W NB	30+72	94' LT	LIGHT POLE	RELOCATE BY OTHERS	XCEL ENERGY
6513		I-35W NB	30+90	162' LT	LIGHT POLE	RELOCATE BY OTHERS	XCEL ENERGY
6512		I-35W NB	33+12	123' LT	LIGHT POLE	RELOCATE BY OTHERS	XCEL ENERGY
6505		I-35W NB	33+46	44' RT	LIGHT POLE	RELOCATE BY OTHERS	XCEL ENERGY
6511		I-35W NB	35+49	112' LT	LIGHT POLE	RELOCATE BY OTHERS	XCEL ENERGY
6506		I-35W NB	35+86	35' RT	LIGHT POLE	RELOCATE BY OTHERS	XCEL ENERGY
6507		I-35W NB	38+20	30' RT	LIGHT POLE	RELOCATE BY OTHERS	XCEL ENERGY
6522		NAPLES STREET	34+54	127' RT	POWER POLE	LEAVE AS IS	XCEL ENERGY
6523		NAPLES STREET	36+02	47' RT	POWER POLE	LEAVE AS IS	XCEL ENERGY
6524		95TH AVE N.E.	42+85	38' LT	POWER POLE	LEAVE AS IS	XCEL ENERGY
6525		NAPLES ST. N.E.	29+46	44' LT	POWER POLE	LEAVE AS IS	XCEL ENERGY
6534		NAPLES ST. N.E.	30+77	429' RT	POWER POLE	RELOCATE BY OTHERS	XCEL ENERGY
6526		NAPLES ST. N.E.	32+03	54' LT	POWER POLE	LEAVE AS IS	XCEL ENERGY
6527		NAPLES ST. N.E.	34+16	78' RT	POWER POLE	RELOCATE BY OTHERS	XCEL ENERGY
6528		NAPLES ST. N.E.	35+21	299' RT	POWER POLE	RELOCATE BY OTHERS	XCEL ENERGY
6529		NAPLES ST. N.E.	39+76	296' RT	POWER POLE	RELOCATE BY OTHERS	XCEL ENERGY
6530		NAPLES ST. N.E.	41+54	199' RT	POWER POLE	RELOCATE BY OTHERS	XCEL ENERGY
6531		NAPLES ST. N.E.	42+98	118' RT	POWER POLE	RELOCATE BY OTHERS	XCEL ENERGY
6532		NAPLES ST. N.E.	43+63	169' RT	POWER POLE	RELOCATE BY OTHERS	XCEL ENERGY
6533		NAPLES ST. N.E.	45+83	34' LT	POWER POLE	RELOCATE BY OTHERS	XCEL ENERGY

INPLACE UTILITY TABULATION - TELEPHONE

POINT	RUNS TO POINT	ALIGNMENT NAME	STATION	OFFSET	INPLACE ITEM	REMARKS	OWNER
6380	6381	C.S.A.H 52 NB	149+41	99' RT	T-BUR	LEAVE AS IS	QWEST
6381	6382	C.S.A.H 52 NB	149+41	70' RT	T-BUR	RELOCATE BY OTHERS	QWEST
6382	6383	C.S.A.H 52 NB	159+35	451' RT	T-BUR	LEAVE AS IS	QWEST
6391	XXXX	C.S.A.H 52 NB	160+85	273' LT	PEDESTAL	LEAVE AS IS	QWEST
6383	6384	C.S.A.H 52 NB	161+43	209' RT	T-BUR	LEAVE AS IS	QWEST
6388	6389	C.S.A.H 52 NB	161+46	28' RT	T-BUR	LEAVE AS IS	QWEST
6389	6390	C.S.A.H 52 NB	161+52	126' LT	T-BUR	LEAVE AS IS	QWEST
6384	6385	C.S.A.H 52 NB	161+58	211' RT	PEDESTAL	LEAVE AS IS	QWEST
6385	6386	C.S.A.H 52 NB	161+61	212' RT	PEDESTAL	LEAVE AS IS	QWEST
6390	6391	C.S.A.H 52 NB	161+65	192' LT	T-BUR	LEAVE AS IS	QWEST
6386	XXXX	C.S.A.H 52 NB	163+57	101' RT	PEDESTAL	LEAVE AS IS	QWEST
6392	6393	C.S.A.H 52 NB	172+53	122' LT	T-BUR	RELOCATE BY OTHERS	QWEST
6393	6394	C.S.A.H 52 NB	172+54	66' LT	T-BUR	RELOCATE BY OTHERS	QWEST
6395	6394	C.S.A.H 52 NB	177+26	108' LT	T-BUR	RELOCATE BY OTHERS	QWEST
6394	6396	C.S.A.H 52 NB	177+26	74' LT	T-BUR	RELOCATE BY OTHERS	QWEST
6396	XXXX	C.S.A.H 52 NB	177+28	36' RT	PEDESTAL	RELOCATE BY OTHERS	QWEST
6397	6398	C.S.A.H 52 NB	189+74	38' RT	PEDESTAL	RELOCATE BY OTHERS	QWEST
6398	6399	C.S.A.H 52 NB	189+80	35' RT	T-BUR	RELOCATE BY OTHERS	QWEST
6399	6880	C.S.A.H 52 NB	192+70	39' RT	PEDESTAL	RELOCATE BY OTHERS	QWEST
6880	6881	C.S.A.H 52 NB	193+30	36' RT	T-BUR	RELOCATE BY OTHERS	QWEST
6881	XXXX	C.S.A.H 52 NB	193+34	41' RT	PEDESTAL	RELOCATE BY OTHERS	QWEST

BLAINE - CITY OF BLAINE	QWEST - QWEST COMMUNICATIONS
COUNTY - ANOKA COUNTY	WALTERS - PRIVATE COMPANY
MNDOT - MINNESOTA DEPARTMENT OF TRANSPORTATION	ENRON - NORTHERN NATURAL GAS
XCEL ENERGY - XCEL ENERGY	RELIANT - RELIANT ENERGY

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\a-f\Anoka\ty\1174901\hwy-brdg\par+4\roadway3\drawings\tab2.dwg 10/2002

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.

Joseph Warner
DATE: 1-11-02 LIC. NO. 22405

DRAWN BY RRC DATE 09-26-01
 DESIGN BY JMW DATE 09-26-01
 CHECKED BY KRC DATE 09-26-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 INPLACE UTILITY TABULATION
 C.S.A.H. 52 RECONSTRUCTION
 POWER AND TELEPHONE

SHEET
 50
 OF
 559

INPLACE UTILITY TABULATION - WATER MAIN

GG

Table with columns: POINT, RUNS TO POINT, ALIGNMENT NAME, STATION, OFFSET, COST PARTICIPATION, INPLACE ITEM, REMARKS, OWNER, ADJUST VALVE (1) (EACH), ADJUST HYDRANT AND GATE VALVE (1) (EACH), RELOCATE HYDRANT (1) (EACH), RELOCATE HYDRANT AND VALVE (1) (EACH). Rows 6200-6228.

(1) WORK TO BE PERFORMED BY CONTRACTOR

- (A) ANOKA COUNTY S.A.P. 02-652-03
(B) ANOKA COUNTY S.A.P. 02-652-02, S.A.P. 02-652-04
(C) Mn/DOT S.P. 0208-50
(D) Mn/DOT S.P. 90-080-11 (MTC MATCH)
(E) Mn/DOT S.P. 90-080-11 (Mn/DOT MATCH)
(F) BLAINE S.A.P. 108-020-021, S.A.P. 108-020-022

BLAINE - CITY OF BLAINE
COUNTY - ANOKA COUNTY
MNDOT - MINNESOTA DEPARTMENT OF TRANSPORTATION
XCEL ENERGY - XCEL ENERGY
QWEST - QWEST COMMUNICATIONS
WALTERS - PRIVATE COMPANY
ENRON - NORTHERN NATURAL GAS
RELIANT - RELIANT ENERGY

Table with columns: NO, DATE, BY, CKD, APPR, REVISION. Includes project name and date.

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.
Signature: Joseph Wozniak
DATE: 1-11-02 LIC. NO. 22405

S.P. RRC 09-26-01 90-080-11
S.P. 09-26-01 02-652-02
S.A. P.M. 09-26-01 02-652-03
S.A. P. 09-26-01 02-652-04
S.A. P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
INPLACE UTILITY TABULATION
C.S.A.H. 52 RECONSTRUCTION
WATERMAIN

INPLACE UTILITY TABULATION - GAS

Table with 8 columns: POINT, RUNS TO POINT, ALIGNMENT NAME, STATION, OFFSET, INPLACE ITEM, REMARKS, OWNER. Contains 66 data rows for gas utility tabulation.

INPLACE UTILITY TABULATION - GAS

Table with 8 columns: POINT, RUNS TO POINT, ALIGNMENT NAME, STATION, OFFSET, INPLACE ITEM, REMARKS, OWNER. Contains 66 data rows for gas utility tabulation.

BLAINE - CITY OF BLAINE QWEST - QWEST COMMUNICATIONS
COUNTY - ANOKA COUNTY WALTERS - PRIVATE COMPANY
MNDOT - MINNESOTA DEPARTMENT OF TRANSPORTATION ENRON - NORTHERN NATURAL GAS
XCEL ENERGY - XCEL ENERGY RELIANT - RELIANT ENERGY

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.
Joseph Williams
DATE 1/11/02 LIC. NO. 22405

DRAWN BY RRC DATE 09-26-01
DESIGN BY JMW DATE 09-26-01
CHECKED BY KRC DATE 09-26-01

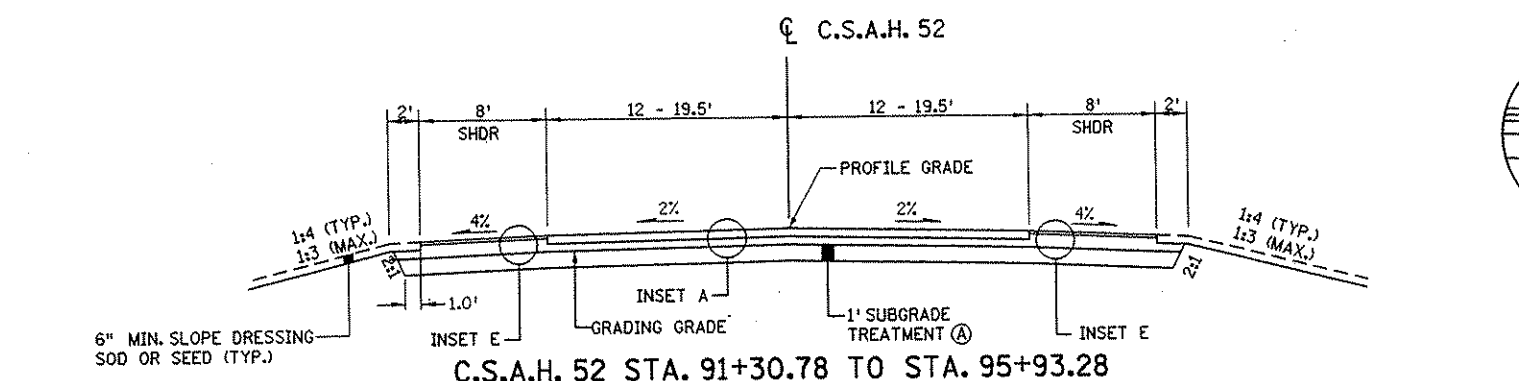
S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022



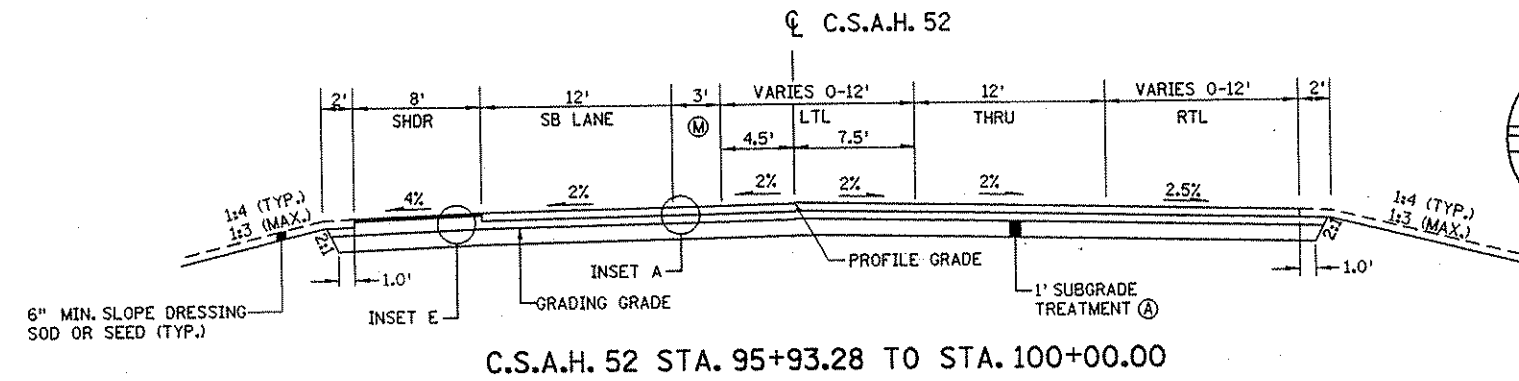
TKDA TOLTZ, KING, OLIVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS - ARCHITECTS - PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
INPLACE UTILITY TABULATION
C.S.A.H. 52 RECONSTRUCTION
GAS

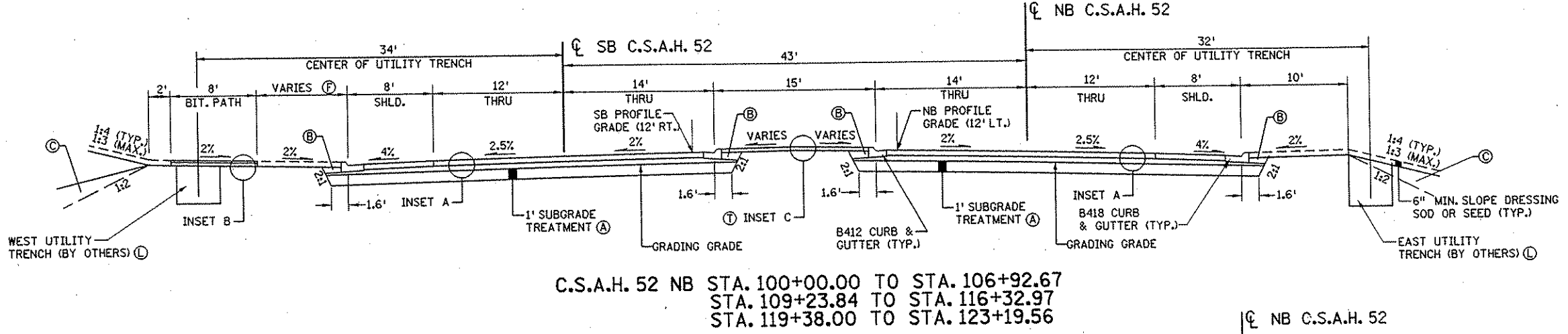
SHEET 53 OF 559



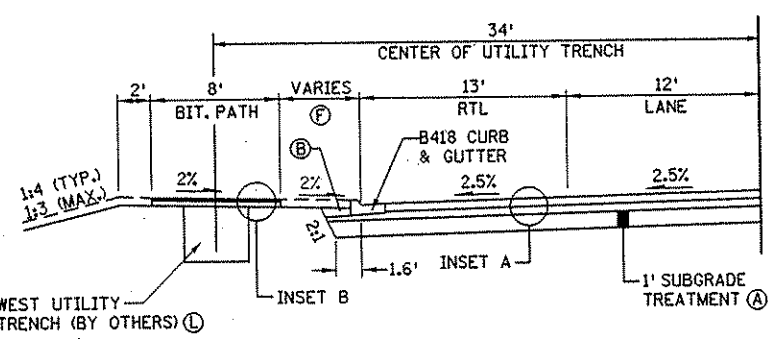
C.S.A.H. 52 STA. 91+30.78 TO STA. 95+93.28



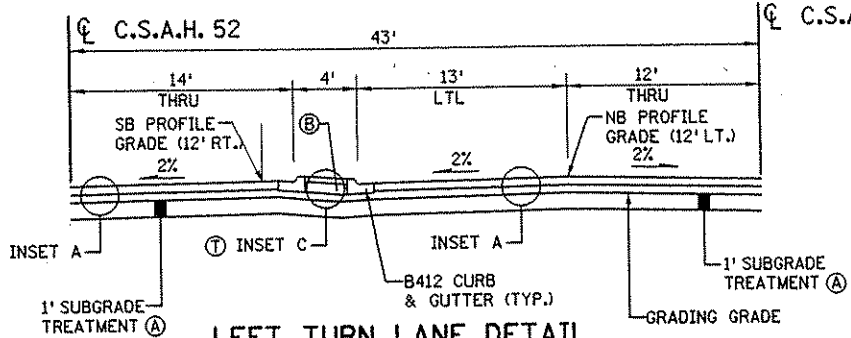
C.S.A.H. 52 STA. 95+93.28 TO STA. 100+00.00



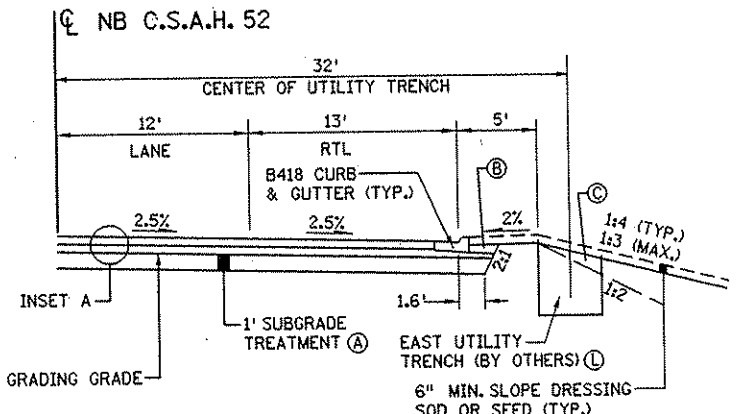
C.S.A.H. 52 NB STA. 100+00.00 TO STA. 106+92.67
STA. 109+23.84 TO STA. 116+32.97
STA. 119+38.00 TO STA. 123+19.56



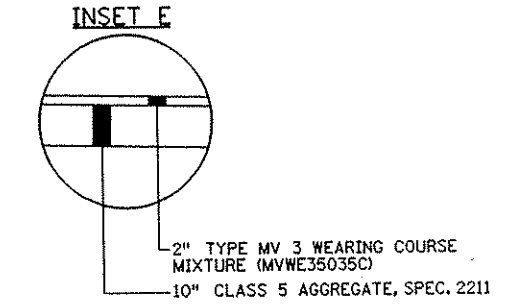
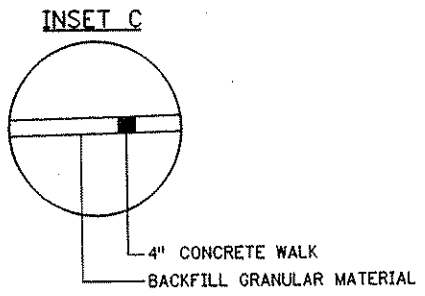
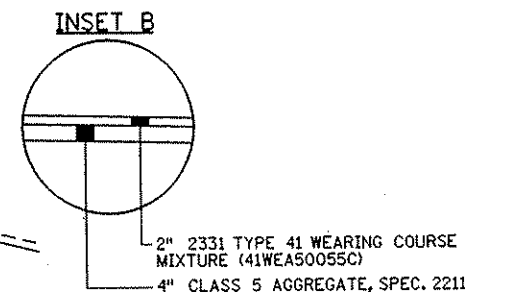
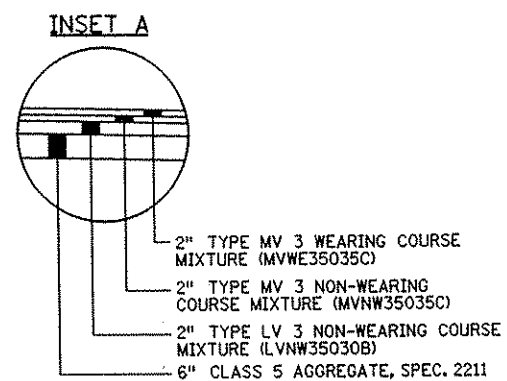
SB URBAN RIGHT TURN LANE DETAIL
SEE CONSTRUCTION PLAN FOR LOCATIONS



LEFT TURN LANE DETAIL
SEE CONSTRUCTION PLAN FOR LOCATIONS



NB URBAN RIGHT TURN LANE DETAIL
SEE CONSTRUCTION PLAN FOR LOCATIONS



NOTES:

- ALL STATIONING REFERS TO NB C.S.A.H. 52 STATIONS UNLESS OTHERWISE INDICATED.
- SEE SUPERELEVATION PLANS FOR ADDITIONAL CROSS SLOPE INFORMATION.
- (A) SUBGRADE TREATMENT SHALL CONSIST OF MIXING THE UPPER 1' OF THE SUBGRADE, AND SHALL BE PAID FOR AS COMMON EXCAVATION.
- (B) BACKFILL WITH SUITABLE GRADING MATERIAL.
- (C) BACKFILL WITH MUCK EXCAVATED MATERIAL.
- (D) AT THE LOCATIONS LISTED BELOW, REPLACE 1' SUBGRADE TREATMENT WITH CONSTRUCTION OF A 3' SUBCUT BACKFILLED WITH GRANULAR MATERIAL.
- 170+50 TO 202+00
- (E) INSTALL EDGE DRAIN IN CUT AREAS. SEE DETAIL FOR DIMENSIONS. SEE SUBSURFACE DRAINAGE TABULATION FOR LOCATIONS.
- (F) WIDTH OF BOULEVARD VARIES. SEE CONSTRUCTION PLAN FOR LOCATIONS.
- (G) BITUMINOUS PAVEMENT ON PATH EXTENDS TO BACK OF CURB FROM STA. 235+22.35 TO STA. 237+79.58.
- (H) BOULEVARD WIDTH REDUCED TO 12' AT STA. 161+87.66 TO STA. 163+88.71.
- (J) SEE CROSS SECTIONS FOR MUCK EXCAVATION NB STA. 170+50 TO 174+50 TO ELEV. 897.50, AND NB STA. 178+00 TO 191+00 TO ELEV. 902.00
- (K) SEE CROSS SECTIONS AND SPECIAL DITCH PROFILES FOR MODIFICATIONS TO THE STANDARD DITCH DEPTH.
- (L) MATERIAL GENERATED FROM MUCK EXCAVATION SHALL NOT BE USED WITHIN UTILITY TRENCH.
- (M) PAINTED MEDIAN
- (N) SEE CROSS SECTIONS FOR BERM WIDTH.
- (P) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):
NAPLES ST. NE
STA. 23+43.75 TO 27+03.75 13'-37' LT/13'-25' RT
STA. 27+03.75 TO 46+92.93 13' LT/13' RT
- (Q) NO BERM OR TIE SLOPE MATCHES PARK AND RIDE GRADING PLAN STA. 34+36 TO STA. 44+58.
- (R) PAVEMENT EDGE WIDTHS FOR XYLITE ST. NE ARE:
SOUTH OF C.S.A.H. 52 10.7' LT/13.5' RT
NORTH OF C.S.A.H. 52 14' LT/14' RT
- (S) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB)
FLANDERS COURT NE 17.9' LT/ 18.3' RT
105th AVE. NE 34.6' LT/33.5' RT
106th LANE NE 12.9' LT/13.3' RT
107th LANE NE 13.7' LT/ 13.0' RT
- (T) SEE LANDSCAPE PLAN FOR LOCATIONS WHERE INSET C IS REPLACED WITH CONCRETE WALK SPECIAL OR LANDSCAPING.

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.

Joseph W. ...
DATE: 1-11-02 LIC. NO. 22465

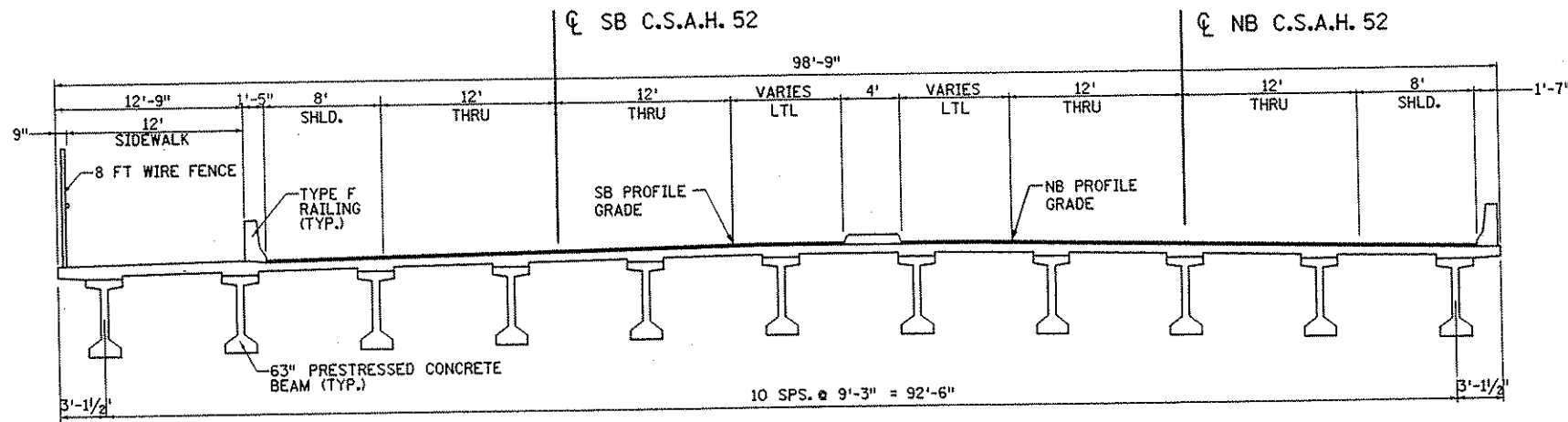
DRAWN BY: RRC DATE: 09-26-01
DESIGN BY: JMW DATE: 09-26-01
CHECKED BY: KRC DATE: 09-26-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

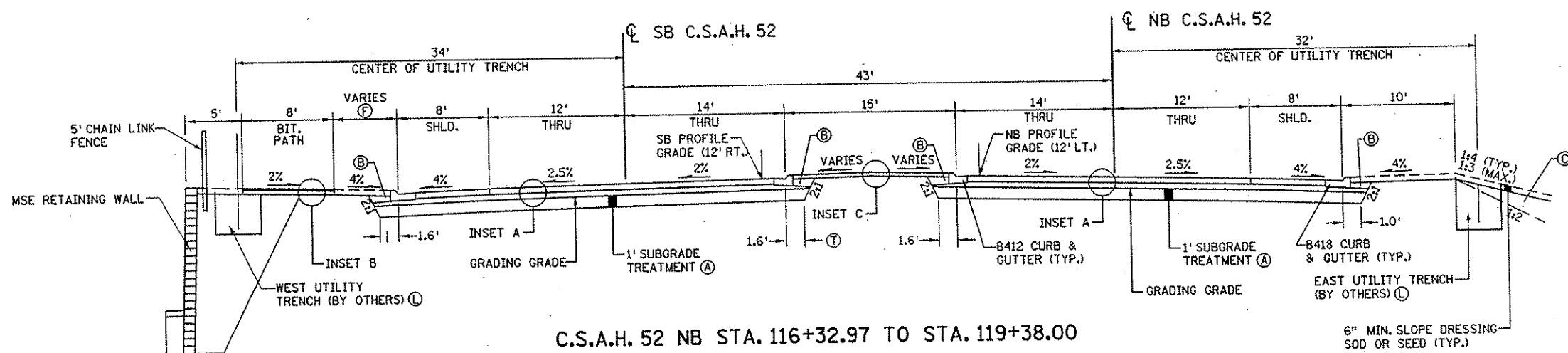
TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
TYPICAL SECTIONS
C.S.A.H. 52 RECONSTRUCTION

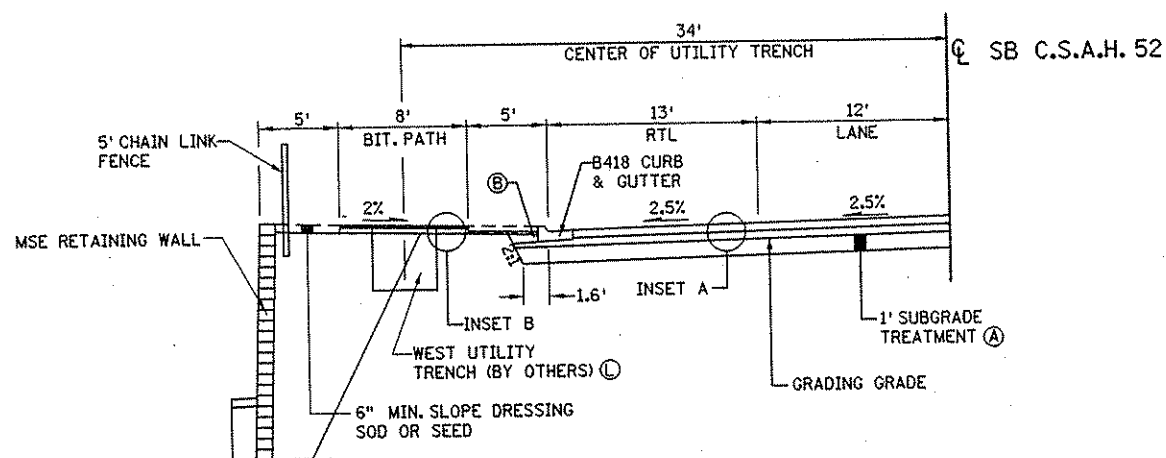
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OF
559



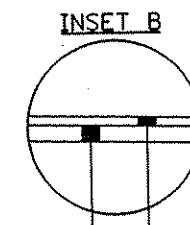
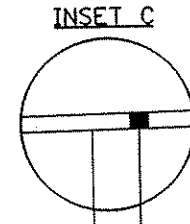
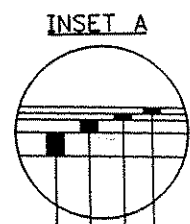
TYPICAL SECTION AT BRIDGE
C.S.A.H. 52 NB STA. 106+92.67 TO STA. 109+23.84



C.S.A.H. 52 NB STA. 116+32.97 TO STA. 119+38.00



SB URBAN RIGHT TURN LANE
WITH RETAINING WALL DETAIL
SEE CONSTRUCTION PLAN FOR LOCATIONS



- NOTES:
- ALL STATIONING REFERS TO NB C.S.A.H. 52 STATIONS UNLESS OTHERWISE INDICATED.
 - SEE SUPERELEVATION PLANS FOR ADDITIONAL CROSS SLOPE INFORMATION.
 - (A) SUBGRADE TREATMENT SHALL CONSIST OF MIXING THE UPPER 1' OF THE SUBGRADE, AND SHALL BE PAID FOR AS COMMON EXCAVATION.
 - (B) BACKFILL WITH SUITABLE GRADING MATERIAL.
 - (C) BACKFILL WITH MUCK EXCAVATED MATERIAL.
 - (D) AT THE LOCATIONS LISTED BELOW, REPLACE 1' SUBGRADE TREATMENT WITH CONSTRUCTION OF A 3' SUBCUT BACKFILLED WITH GRANULAR MATERIAL.
170+50 TO 202+00
 - (E) INSTALL EDGE DRAIN IN CUT AREAS. SEE DETAIL FOR DIMENSIONS. SEE SUBSURFACE DRAINAGE TABULATION FOR LOCATIONS.
 - (F) WIDTH OF BOULEVARD VARIES. SEE CONSTRUCTION PLAN FOR LOCATIONS.
 - (G) BITUMINOUS PAVEMENT ON PATH EXTENDS TO BACK OF CURB FROM STA. 235+22.35 TO STA. 237+79.58.
 - (H) BOULEVARD WIDTH REDUCED TO 12' AT STA. 161+87.66 TO STA. 163+88.71.
 - (J) SEE CROSS SECTIONS FOR MUCK EXCAVATION NB STA. 170+50 TO 174+50 TO ELEV. 897.50, AND NB STA. 178+00 TO 191+00 TO ELEV. 902.00
 - (K) SEE CROSS SECTIONS AND SPECIAL DITCH PROFILES FOR MODIFICATIONS TO THE STANDARD DITCH DEPTH.
 - (L) MATERIAL GENERATED FROM MUCK EXCAVATION SHALL NOT BE USED WITHIN UTILITY TRENCH.
 - (M) PAINTED MEDIAN
 - (N) SEE CROSS SECTIONS FOR BERM WIDTH.
 - (P) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):
NAPLES ST. NE
STA. 23+43.75 TO 27+03.75 13'-37' LT/13'-25' RT
STA. 27+03.75 TO 46+92.93 13' LT/13' RT
 - (Q) NO BERM OR TIE SLOPE MATCHES PARK AND RIDE GRADING PLAN STA. 34+36 TO STA. 44+58.
 - (R) PAVEMENT EDGE WIDTHS FOR XYLITE ST. NE ARE:
SOUTH OF C.S.A.H. 52 10.7' LT/13.5' RT
NORTH OF C.S.A.H. 52 14' LT/14' RT
 - (S) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB)
FLANDERS COURT NE 17.9' LT/ 18.3' RT
105th AVE. NE 34.6' LT/33.5' RT
106th LANE NE 12.9' LT/13.3' RT
107th LANE NE 13.7' LT/ 13.0' RT
 - (T) SEE LANDSCAPE PLAN FOR LOCATIONS WHERE INSET C IS REPLACED WITH CONCRETE WALK SPECIAL OR LANDSCAPING.

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.

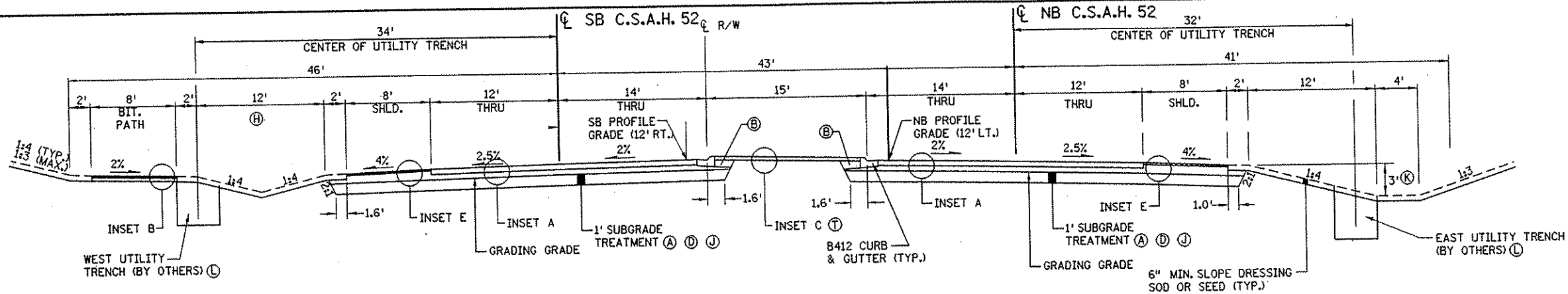
Joseph Weaver
DATE 1-11-02 LIC. NO. 22405

DRAWN BY RRC DATE 09-26-01
DESIGN BY JMW DATE 09-26-01
CHECKED BY KRC DATE 09-26-01

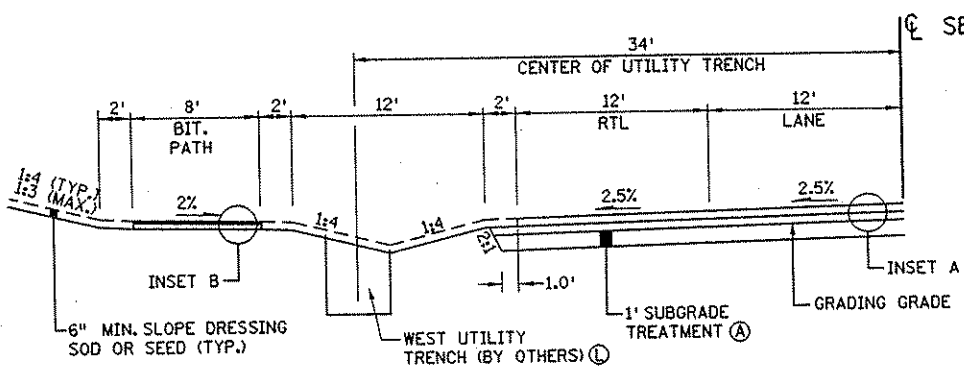
S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

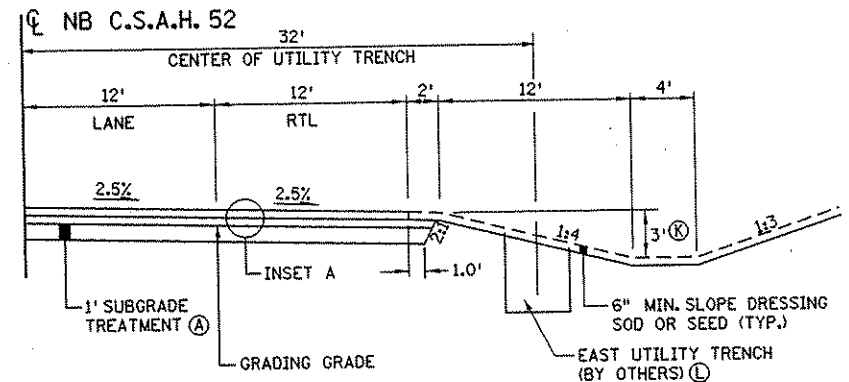
ANOKA COUNTY
TYPICAL SECTIONS
C.S.A.H. 52 RECONSTRUCTION



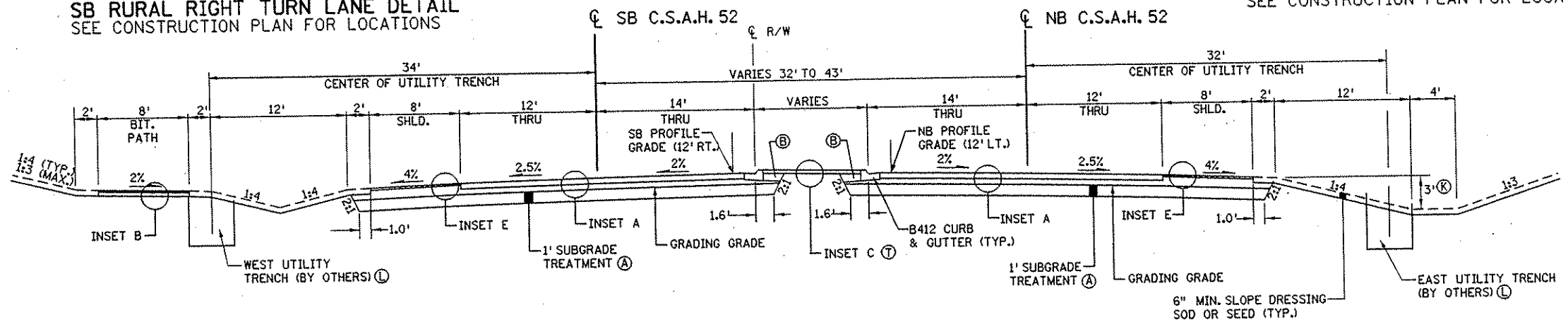
C.S.A.H. 52 NB STA. 123+19.56 TO STA. 127+65.20
NB STA. 151+89.82 TO STA. 234+46.51



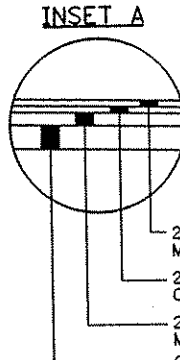
SB RURAL RIGHT TURN LANE DETAIL
SEE CONSTRUCTION PLAN FOR LOCATIONS



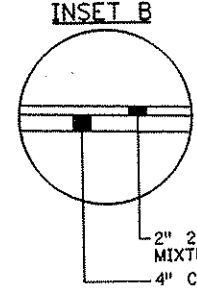
NB RURAL RIGHT TURN LANE DETAIL
SEE CONSTRUCTION PLAN FOR LOCATIONS



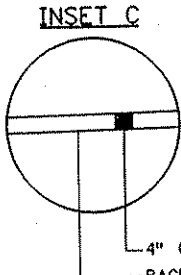
C.S.A.H. 52 NB STA. 127+65.20 TO STA. 133+48.78
NB STA. 145+76.09 TO STA. 151+89.82



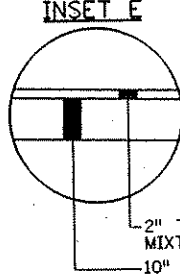
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2" TYPE MV 3 NON-WEARING COURSE MIXTURE (MVNW35035C)
2" TYPE LV 3 NON-WEARING COURSE MIXTURE (LVNW35030B)
6" CLASS 5 AGGREGATE, SPEC. 2211



2" 2331 TYPE 41 WEARING COURSE MIXTURE (41WEA50055C)
4" CLASS 5 AGGREGATE, SPEC. 2211



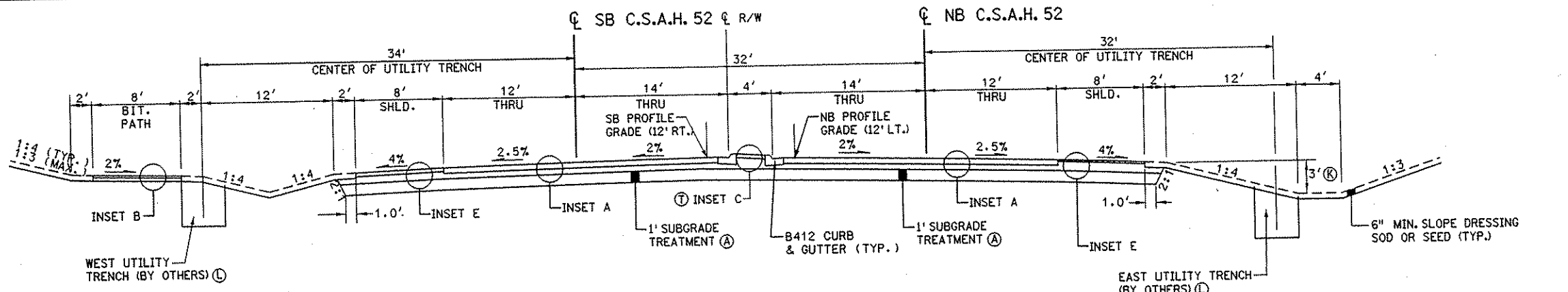
4" CONCRETE WALK
BACKFILL GRANULAR MATERIAL



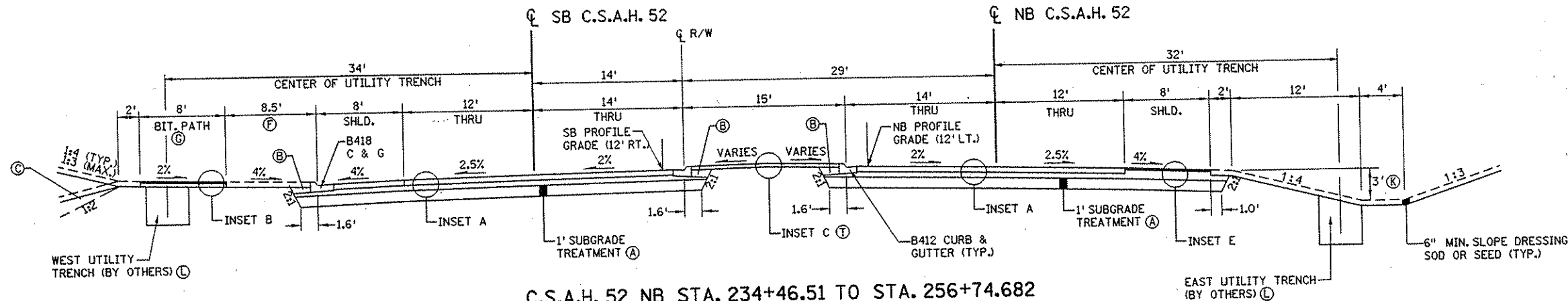
2" TYPE MV 3 WEARING COURSE MIXTURE (MVWE35035C)
10" CLASS 5 AGGREGATE, SPEC. 2211

- NOTES:**
- ALL STATIONING REFERS TO NB C.S.A.H. 52 STATIONS UNLESS OTHERWISE INDICATED.
 - SEE SUPERELEVATION PLANS FOR ADDITIONAL CROSS SLOPE INFORMATION.
 - (A) SUBGRADE TREATMENT SHALL CONSIST OF MIXING THE UPPER 1' OF THE SUBGRADE, AND SHALL BE PAID FOR AS COMMON EXCAVATION.
 - (B) BACKFILL WITH SUITABLE GRADING MATERIAL.
 - (C) BACKFILL WITH MUCK EXCAVATED MATERIAL.
 - (D) AT THE LOCATIONS LISTED BELOW, REPLACE 1' SUBGRADE TREATMENT WITH CONSTRUCTION OF A 3' SUBCUT BACKFILLED WITH GRANULAR MATERIAL.
170+50 TO 202+00
 - (E) INSTALL EDGE DRAIN IN CUT AREAS. SEE DETAIL FOR DIMENSIONS. SEE SUBSURFACE DRAINAGE TABULATION FOR LOCATIONS.
 - (F) WIDTH OF BOULEVARD VARIES. SEE CONSTRUCTION PLAN FOR LOCATIONS.
 - (G) BITUMINOUS PAVEMENT ON PATH EXTENDS TO BACK OF CURB FROM STA. 235+22.35 TO STA. 237+79.58.
 - (H) BOULEVARD WIDTH REDUCED TO 12' AT STA. 161+87.66 TO STA. 163+88.71.
 - (J) SEE CROSS SECTIONS FOR MUCK EXCAVATION NB STA. 170+50 TO 174+50 TO ELEV. 897.50, AND NB STA. 178+00 TO 191+00 TO ELEV. 902.00
 - (K) SEE CROSS SECTIONS AND SPECIAL DITCH PROFILES FOR MODIFICATIONS TO THE STANDARD DITCH DEPTH.
 - (L) MATERIAL GENERATED FROM MUCK EXCAVATION SHALL NOT BE USED WITHIN UTILITY TRENCH.
 - (M) PAINTED MEDIAN
 - (N) SEE CROSS SECTIONS FOR BERM WIDTH.
 - (P) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):
NAPLES ST. NE
STA. 23+43.75 TO 27+03.75 13'-37" LT./13'-25" RT
STA. 27+03.75 TO 46+92.93 13' LT./13' RT
 - (Q) NO BERM OR TIE SLOPE MATCHES PARK AND RIDE GRADING PLAN STA. 34+36 TO STA. 44+58.
 - (R) PAVEMENT EDGE WIDTHS FOR XYLITE ST. NE ARE:
SOUTH OF C.S.A.H. 52 10.7' LT./13.5' RT
NORTH OF C.S.A.H. 52 14' LT./14' RT
 - (S) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB)
FLANDERS COURT NE 17.9' LT./ 18.3' RT
105th AVE. NE 34.6' LT./33.5' RT
106th LANE NE 12.9' LT./13.3' RT
107th LANE NE 13.7' LT/ 13.0' RT
 - (T) SEE LANDSCAPE PLAN FOR LOCATIONS WHERE INSET C IS REPLACED WITH CONCRETE WALK SPECIAL OR LANDSCAPING.

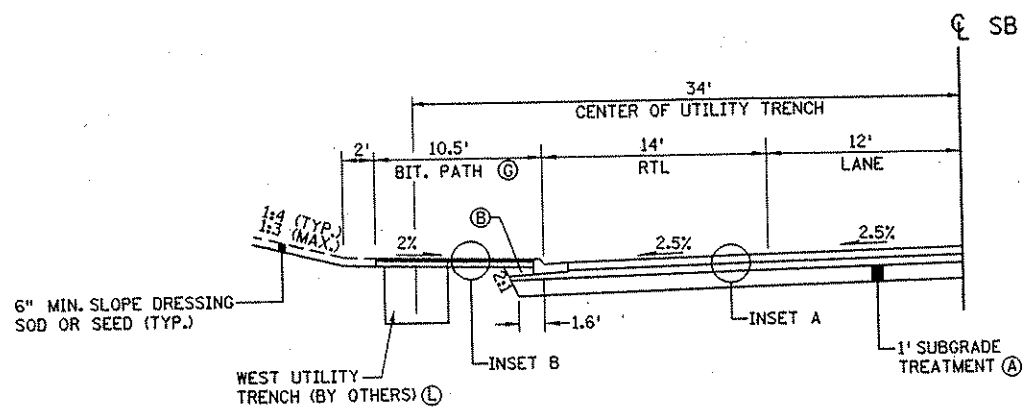
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Joseph Weismann</i> DATE 1-11-02 LIC. NO. 22405				DRAWN BY RRC DATE 09-26-01 DESIGN BY JMW DATE 09-26-01 CHECKED BY KRC DATE 09-26-01	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY TYPICAL SECTIONS C.S.A.H. 52 RECONSTRUCTION	SHEET 56 OF 559
NO	DATE	BY	CKD	APPR	REVISION			



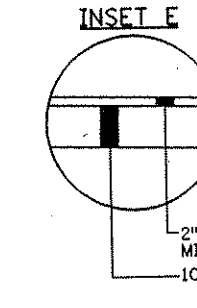
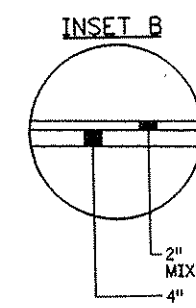
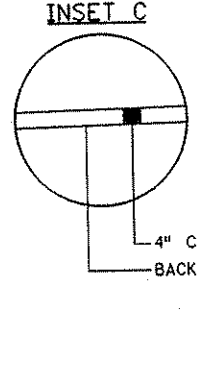
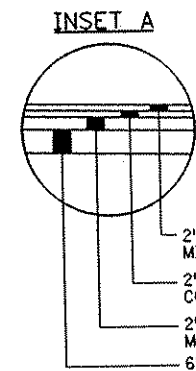
C.S.A.H. 52 NB STA. 133+48.78 TO STA. 145+76.09



C.S.A.H. 52 NB STA. 234+46.51 TO STA. 256+74.682



RIGHT TURN LANE SB C.S.A.H. 52
SB STA. 235+22.35 TO STA. 237+79.58

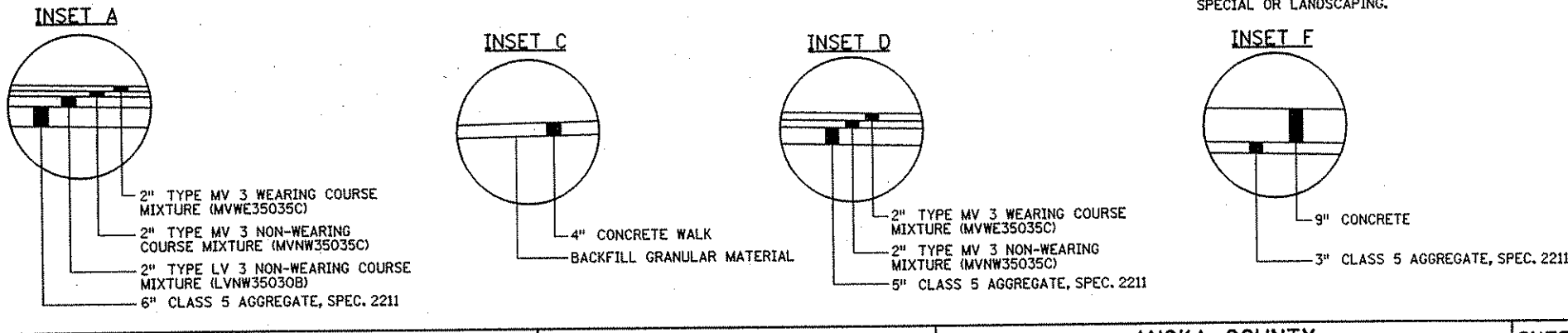
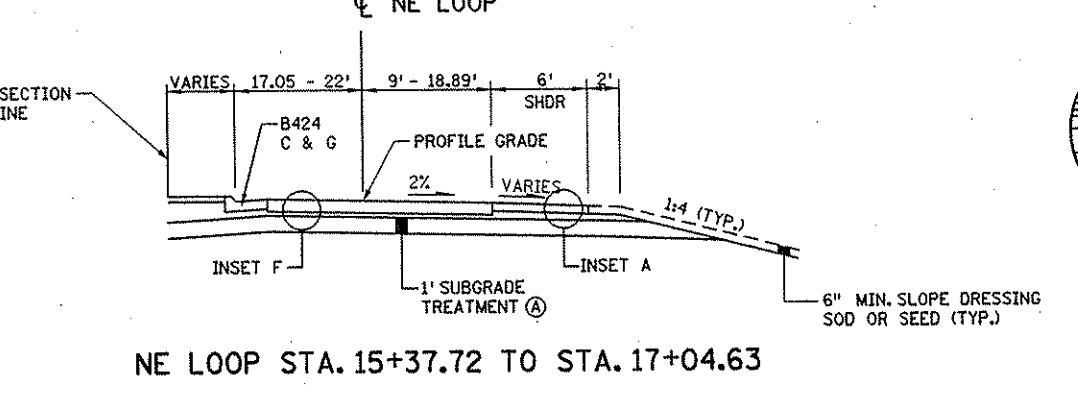
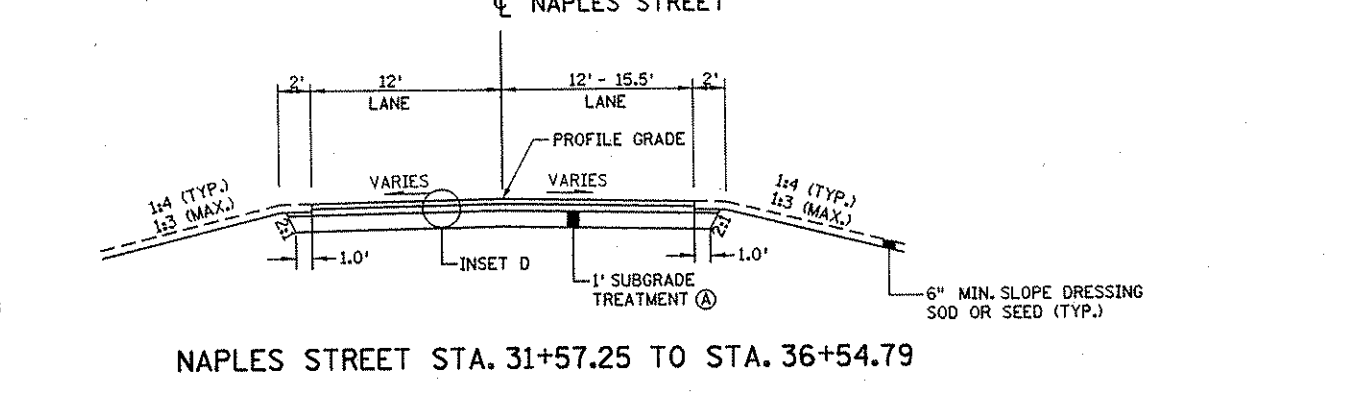
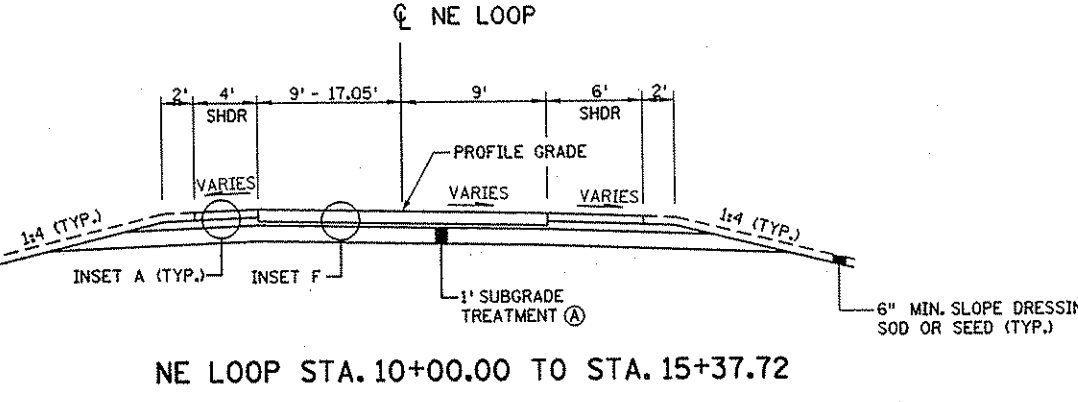
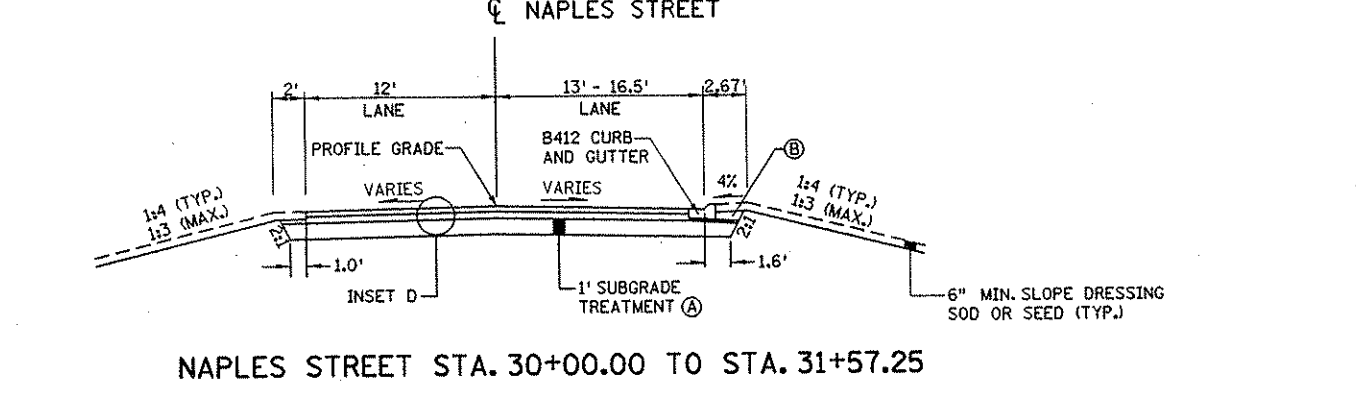
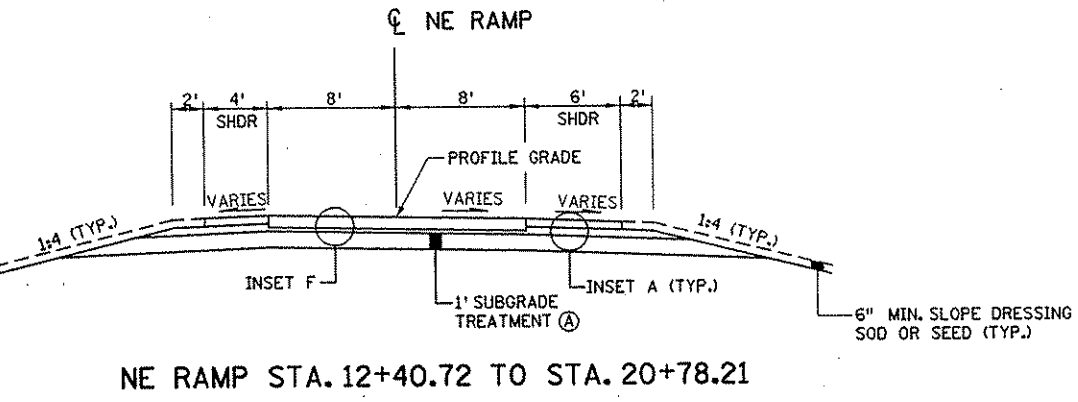
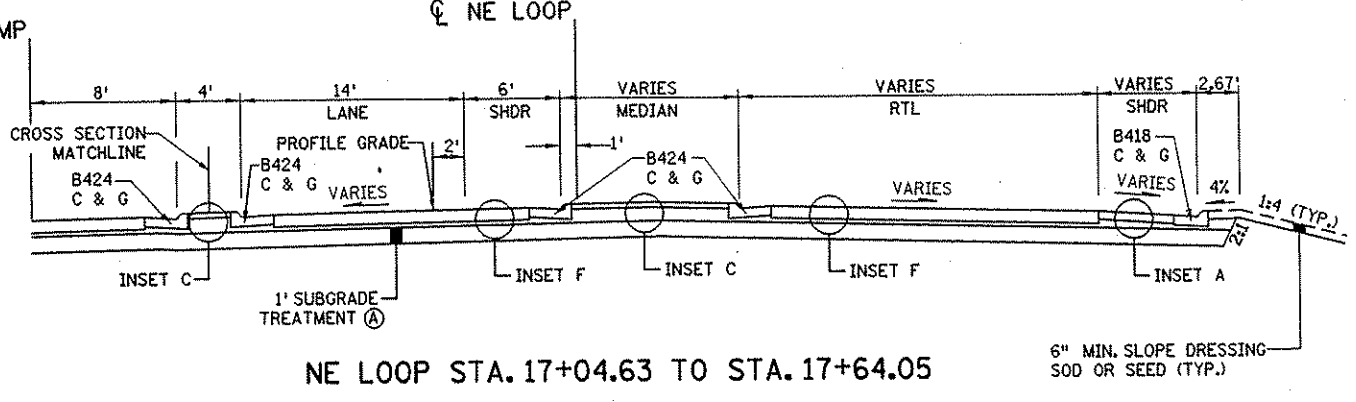
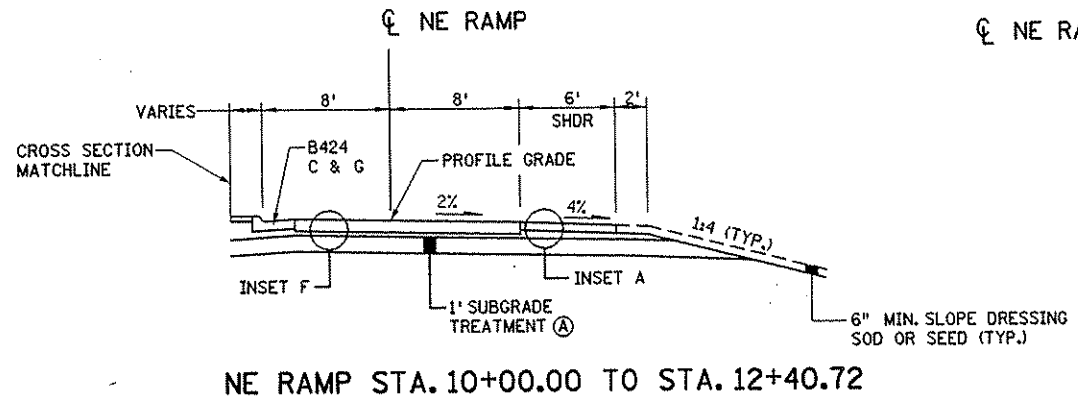


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 - (B) BACKFILL WITH SUITABLE GRADING MATERIAL.
 - (C) BACKFILL WITH MUCK EXCAVATED MATERIAL.
 - (D) AT THE LOCATIONS LISTED BELOW, REPLACE 1' SUBGRADE TREATMENT WITH CONSTRUCTION OF A 3' SUBCUT BACKFILLED WITH GRANULAR MATERIAL.
 - 170+50 TO 202+00
 - (E) INSTALL EDGE DRAIN IN CUT AREAS. SEE DETAIL FOR DIMENSIONS. SEE SUBSURFACE DRAINAGE TABULATION FOR LOCATIONS.
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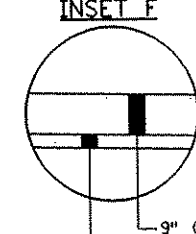
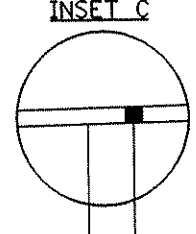
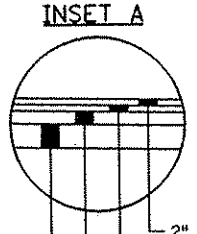
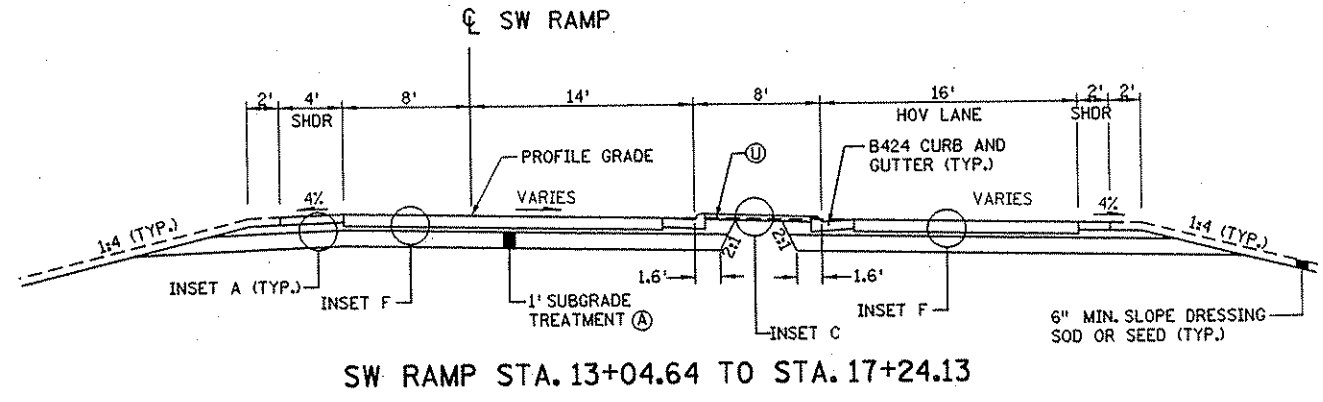
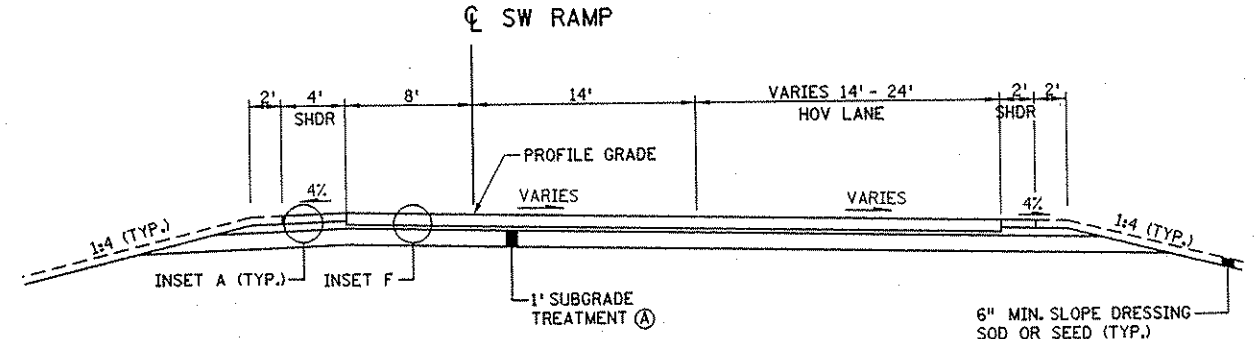
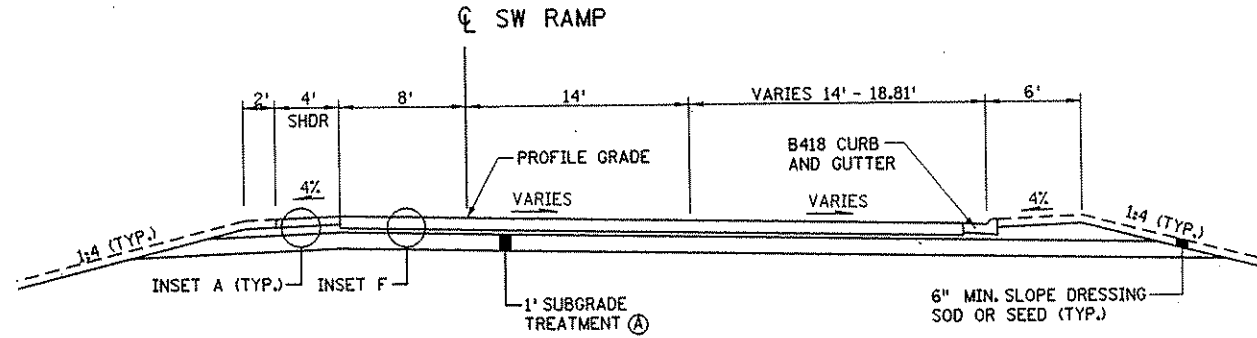
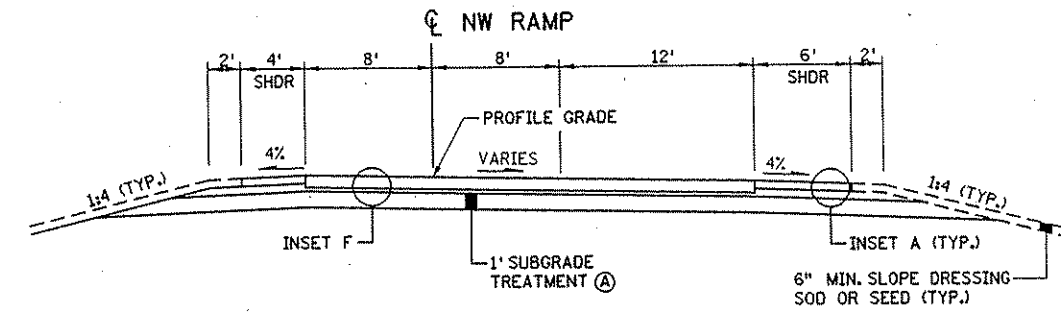
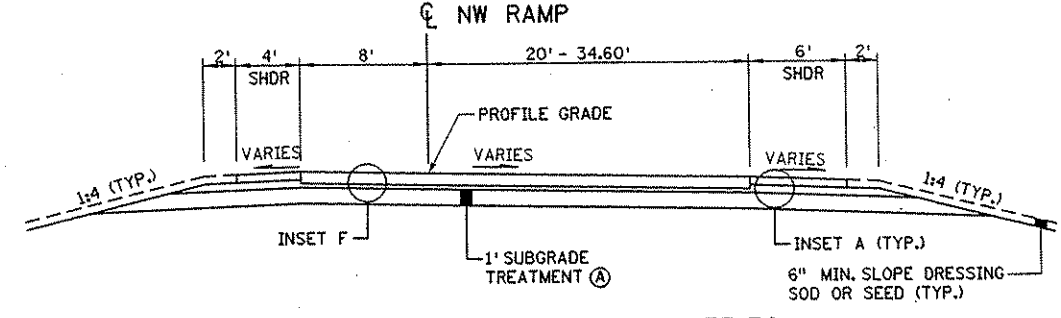
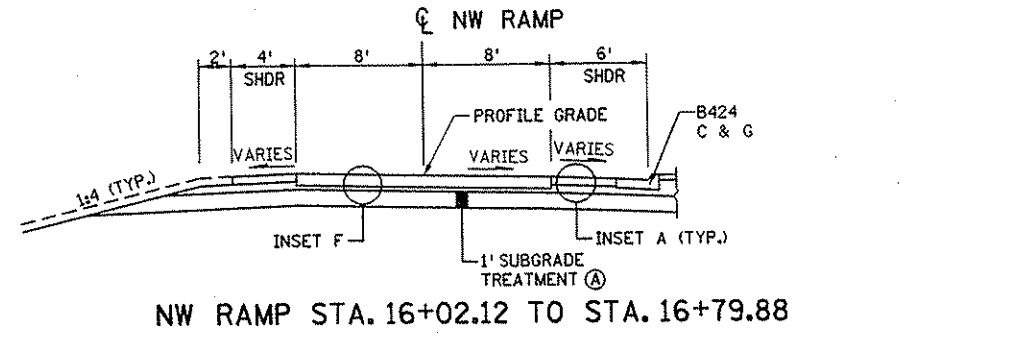
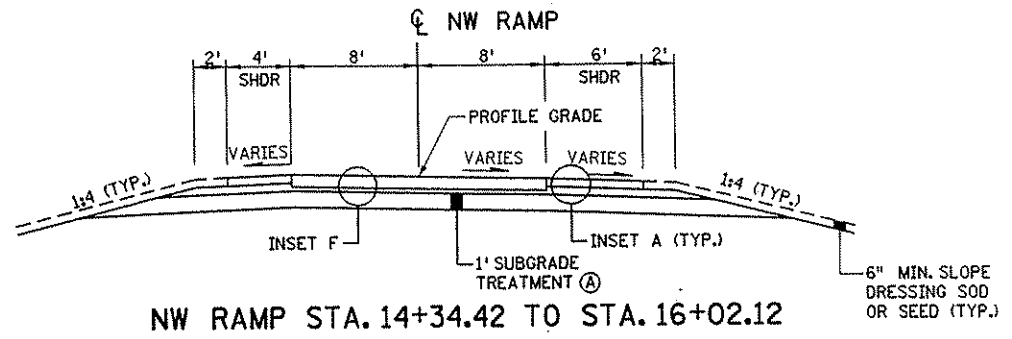
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NO	DATE	BY	CKD	APPR	REVISION				
						NAME: \\MrFreeze\Projects\A-f\AnokaCity\1174901\hwy-brdg\part4\roadway\09#200\02s\Typ52.dgn			

NOTES:

- ALL STATIONING REFERS TO NB C.S.A.H. 52 STATIONS UNLESS OTHERWISE INDICATED.
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 STA. 27+03.75 TO 46+92.93 13' LT/13' RT
 - (Q) NO BERM OR TIE SLOPE MATCHES PARK AND RIDE GRADING PLAN STA. 34+36 TO STA. 44+58.
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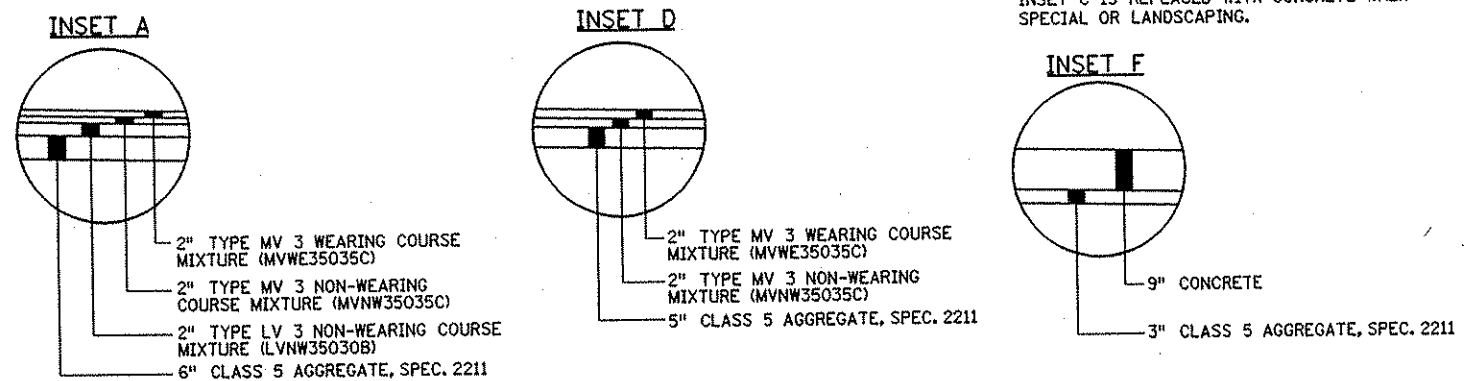
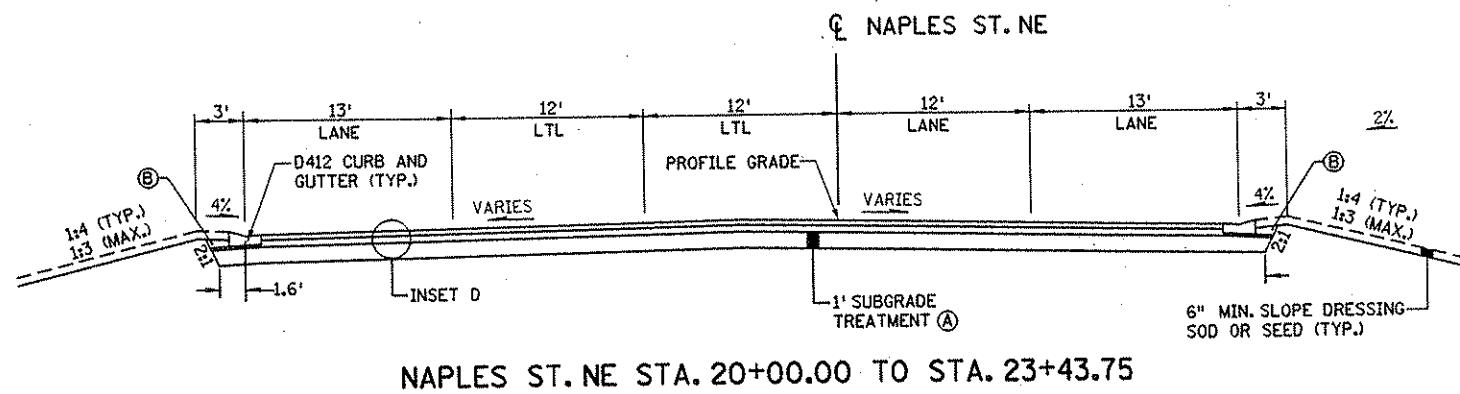
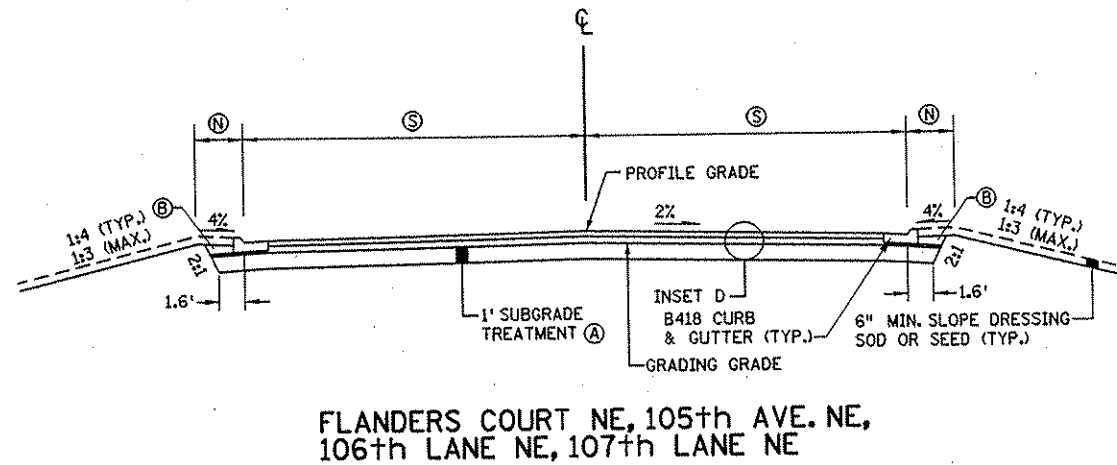
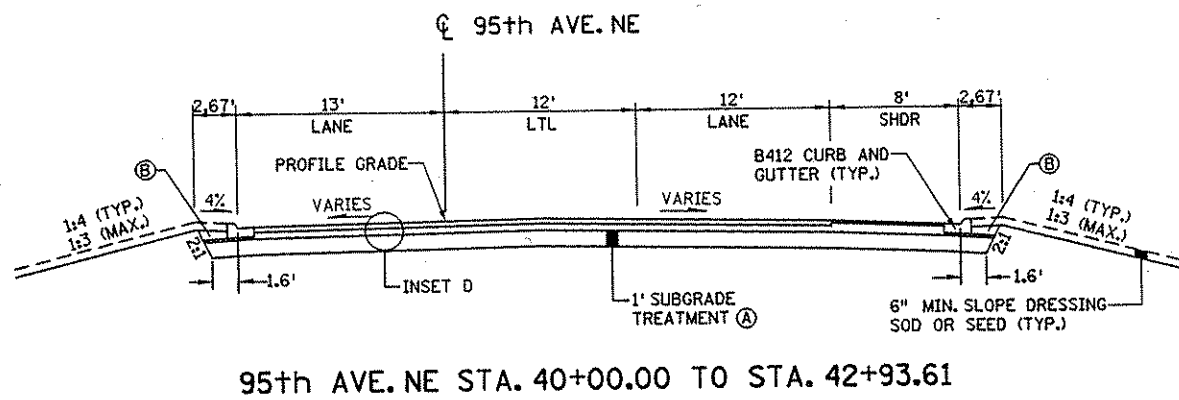
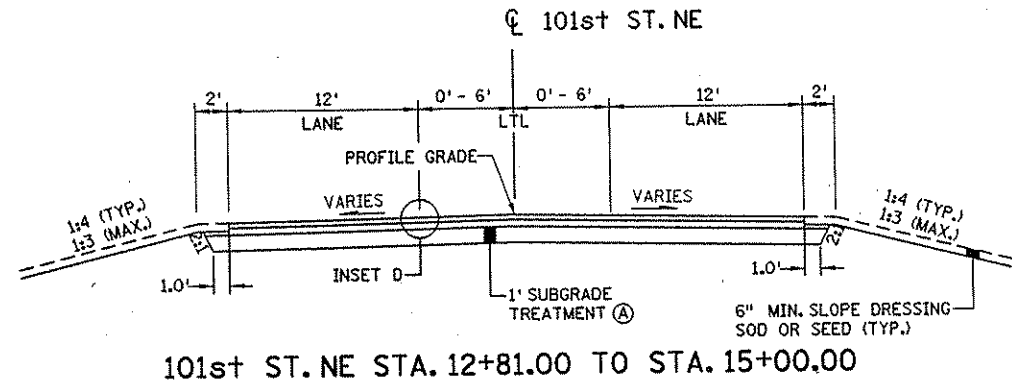
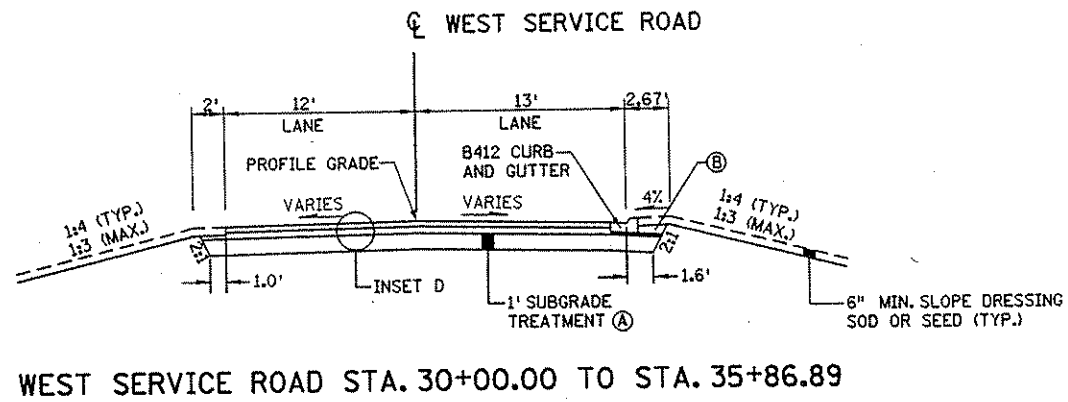
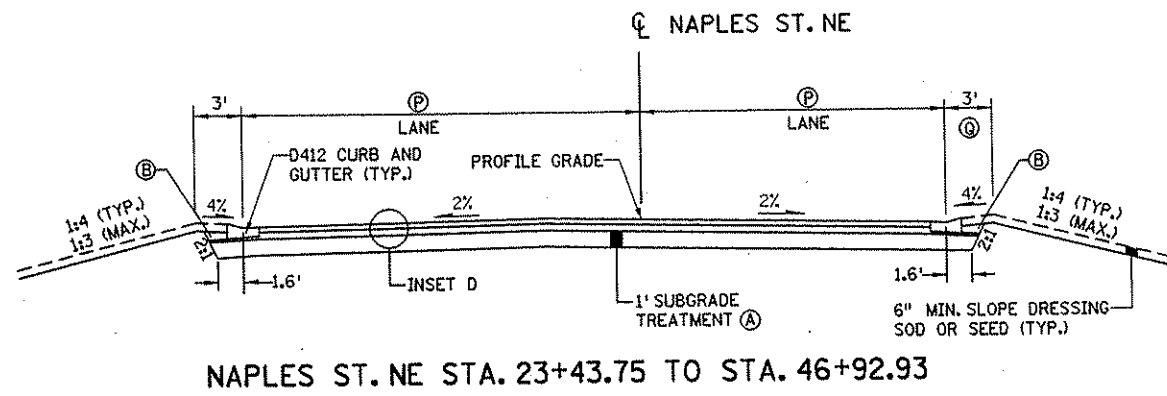
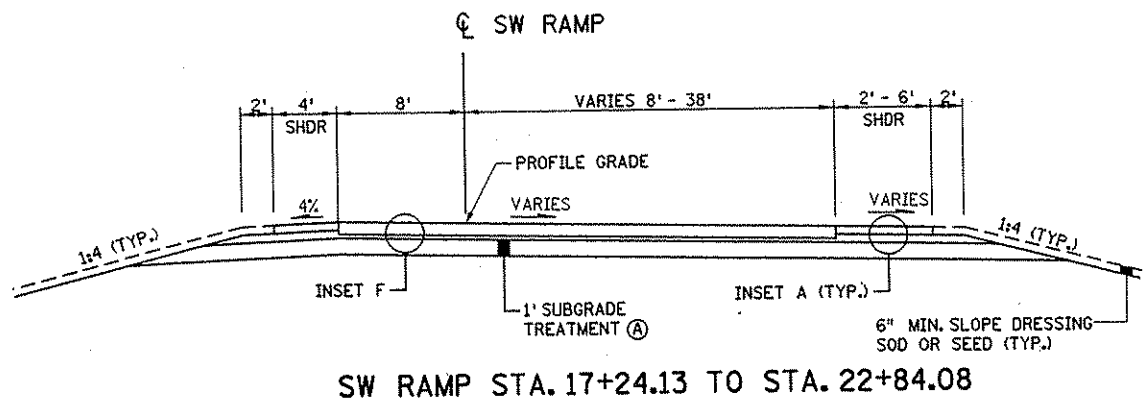
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NO	DATE	BY	CKD	APPR	REVISION								
NAME: K:\a-f\AnokaCty\1174901\hwy-brdg\part4\roadway3\drawings\typ5201d\03/2002													



- 2" TYPE MV 3 WEARING COURSE MIXTURE (MVMW35035C)
- 2" TYPE MV 3 NON-WEARING COURSE MIXTURE (MVNW35035C)
- 2" TYPE LV 3 NON-WEARING COURSE MIXTURE (LVNW35030B)
- 6" CLASS 5 AGGREGATE, SPEC. 2211
- 4" CONCRETE WALK BACKFILL GRANULAR MATERIAL
- 9" CONCRETE
- 3" CLASS 5 AGGREGATE, SPEC. 2211

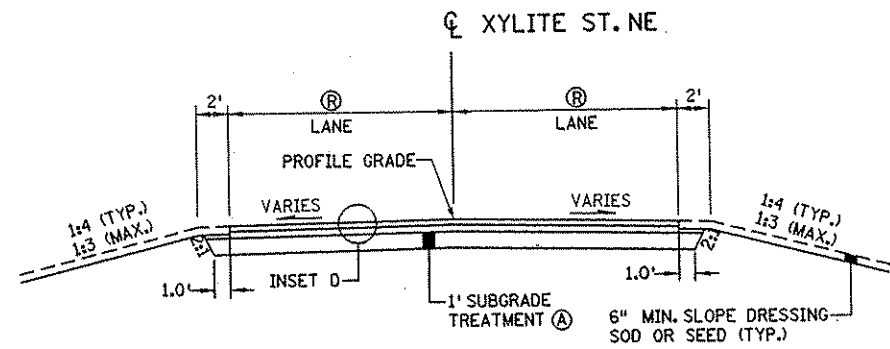
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170+50 TO 202+00
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107TH LANE NE 13.7' LT / 13.0' RT
 - (T) SEE LANDSCAPE PLAN FOR LOCATIONS WHERE INSET C IS REPLACED WITH CONCRETE WALK SPECIAL OR LANDSCAPING.
 - (U) CROSS SLOPE BETWEEN THE RIGHT EDGE OF SW RAMP AND LEFT EDGE OF HOV LANE SHALL BE THE SAME AS SW RAMP CROSS SLOPE.

				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.				DRAWN BY <u>RRC</u> DATE <u>09-26-01</u>				S.P. 0280-50 (TH 35W)				ANOKA COUNTY TYPICAL SECTIONS C.S.A.H. 52 RECONSTRUCTION				SHEET 59 OF 559	
				DESIGN BY <u>JMW</u> DATE <u>09-26-01</u>				CHECKED BY <u>KRC</u> DATE <u>09-26-01</u>				S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022									
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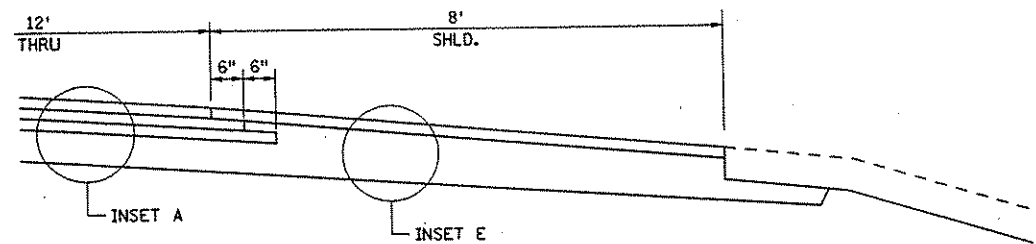


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 - (B) BACKFILL WITH SUITABLE GRADING MATERIAL.
 - (C) BACKFILL WITH MUCK EXCAVATED MATERIAL.
 - (D) AT THE LOCATIONS LISTED BELOW, REPLACE 1' SUBGRADE TREATMENT WITH CONSTRUCTION OF A 3' SUBCUT BACKFILLED WITH GRANULAR MATERIAL.
 - 170+50 TO 202+00
 - (E) INSTALL EDGE DRAIN IN CUT AREAS. SEE DETAIL FOR DIMENSIONS. SEE SUBSURFACE DRAINAGE TABULATION FOR LOCATIONS.
 - (F) WIDTH OF BOULEVARD VARIES. SEE CONSTRUCTION PLAN FOR LOCATIONS.
 - (G) BITUMINOUS PAVEMENT ON PATH EXTENDS TO BACK OF CURB FROM STA. 235+22.35 TO STA. 237+79.58.
 - (H) BOULEVARD WIDTH REDUCED TO 12' AT STA. 161+87.66 TO STA. 163+88.71.
 - (J) SEE CROSS SECTIONS FOR MUCK EXCAVATION NB STA. 170+50 TO 174+50 TO ELEV. 897.50, AND NB STA. 178+00 TO 191+00 TO ELEV. 902.00
 - (K) SEE CROSS SECTIONS AND SPECIAL DITCH PROFILES FOR MODIFICATIONS TO THE STANDARD DITCH DEPTH.
 - (L) MATERIAL GENERATED FROM MUCK EXCAVATION SHALL NOT BE USED WITHIN UTILITY TRENCH.
 - (M) PAINTED MEDIAN
 - (N) SEE CROSS SECTIONS FOR BERM WIDTH.
 - (P) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):
 NAPLES ST. NE
 STA. 23+43.75 TO 27+03.75 13'-37' LT/13'-25' RT
 STA. 27+03.75 TO 46+92.93 13' LT/13' RT
 - (Q) NO BERM OR TIE SLOPE MATCHES PARK AND RIDE GRADING PLAN STA. 34+36 TO STA. 44+58.
 - (R) PAVEMENT EDGE WIDTHS FOR XYLITE ST. NE ARE:
 SOUTH OF C.S.A.H. 52 10.7' LT/13.5' RT
 NORTH OF C.S.A.H. 52 14' LT/14' RT
 - (S) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB)
 FLANDERS COURT NE 17.9' LT/ 18.3' RT
 105th AVE. NE 34.6' LT/33.5' RT
 106th LANE NE 12.9' LT/13.3' RT
 107th LANE NE 13.7' LT/ 13.0' RT
 - (T) SEE LANDSCAPE PLAN FOR LOCATIONS WHERE INSET C IS REPLACED WITH CONCRETE WALK SPECIAL OR LANDSCAPING.

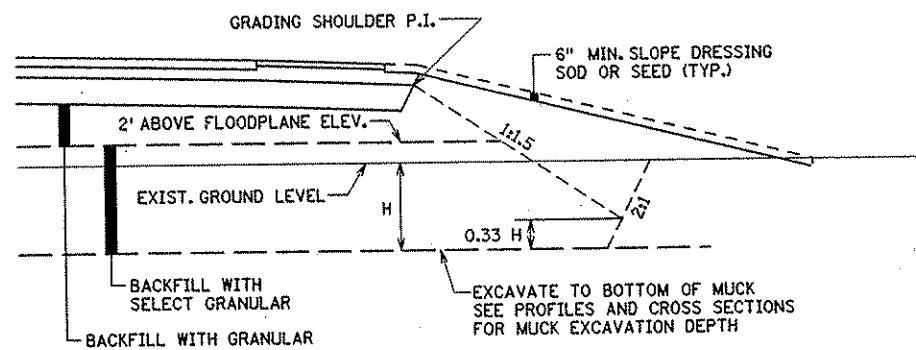
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Joseph Weaver</i> DATE 1-23-02 LIC. NO. 22465					DRAWN BY <u>RRC</u> DATE 09-26-01 DESIGN BY <u>JMW</u> DATE 09-26-01 CHECKED BY <u>RRC</u> DATE 09-26-01		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY TYPICAL SECTIONS C.S.A.H. 52 RECONSTRUCTION		SHEET 60 OF 559
NO	DATE	BY	CKD	APPR	REVISION								
NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\par14\roadway3\drawings\typ5201g03/2002													



XYLITE ST. NE STA. 7+37.44 TO STA. 11+70.91

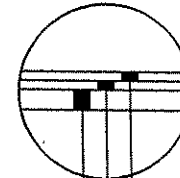


BITUMINOUS EDGE DETAIL



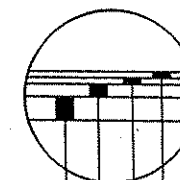
TYPICAL MUCK EXCAVATION DETAIL

INSET D



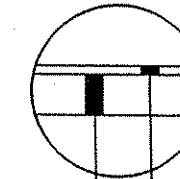
2" TYPE MV 3 WEARING COURSE MIXTURE (MVWE35035C)
 2" TYPE MV 3 NON-WEARING MIXTURE (MVNW35035C)
 5" CLASS 5 AGGREGATE, SPEC. 2211

INSET A



2" TYPE MV 3 WEARING COURSE MIXTURE (MVWE35035C)
 2" TYPE MV 3 NON-WEARING COURSE MIXTURE (MVNW35035C)
 2" TYPE LV 3 NON-WEARING COURSE MIXTURE (LVNW35030B)
 6" CLASS 5 AGGREGATE, SPEC. 2211

INSET E



2" TYPE MV 3 WEARING COURSE MIXTURE (MVWE35035C)
 10" CLASS 5 AGGREGATE, SPEC. 2211

NOTES:

- ALL STATIONING REFERS TO NB C.S.A.H. 52 STATIONS UNLESS OTHERWISE INDICATED.
- SEE SUPERELEVATION PLANS FOR ADDITIONAL CROSS SLOPE INFORMATION.
- (A) SUBGRADE TREATMENT SHALL CONSIST OF MIXING THE UPPER 1' OF THE SUBGRADE, AND SHALL BE PAID FOR AS COMMON EXCAVATION.
- (B) BACKFILL WITH SUITABLE GRADING MATERIAL.
- (C) BACKFILL WITH MUCK EXCAVATED MATERIAL.
- (D) AT THE LOCATIONS LISTED BELOW, REPLACE 1' SUBGRADE TREATMENT WITH CONSTRUCTION OF A 3' SUBCUT BACKFILLED WITH GRANULAR MATERIAL.
 170+50 TO 202+00
- (E) INSTALL EDGE DRAIN IN CUT AREAS. SEE DETAIL FOR DIMENSIONS. SEE SUBSURFACE DRAINAGE TABULATION FOR LOCATIONS.
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NO	DATE	BY	CKD	APPR	REVISION

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Joseph Weas
 DATE 1-23-02 LIC. NO. 22705

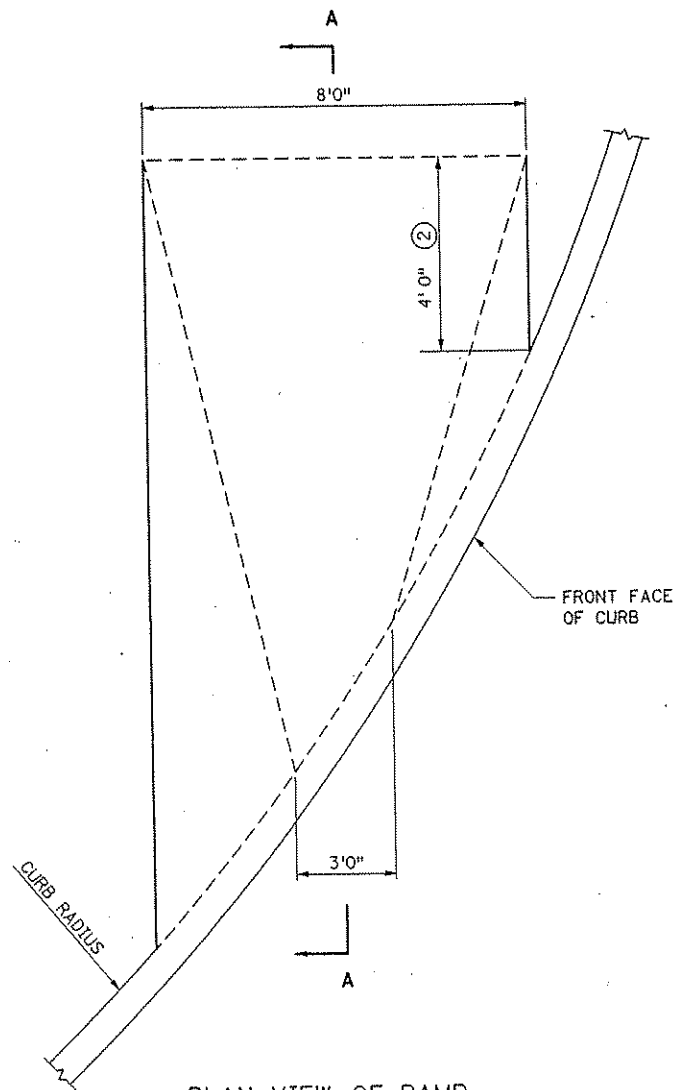
DRAWN BY RRC DATE 09-26-01
 DESIGN BY JMW DATE 09-26-01
 CHECKED BY KRC DATE 09-26-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

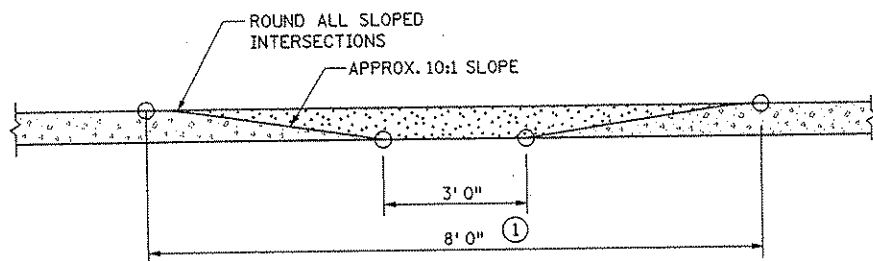
TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TYPICAL SECTIONS
 C.S.A.H. 52 RECONSTRUCTION

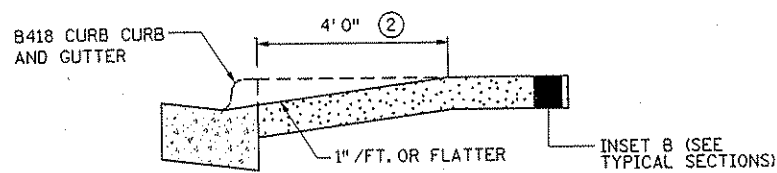
SHEET
 61
 OF
 559



PLAN VIEW OF RAMP



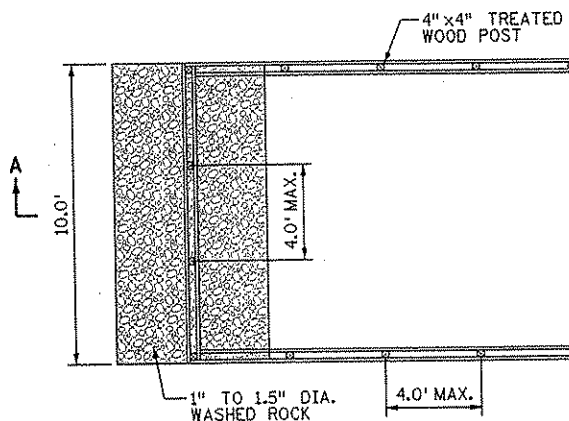
ELEVATION OF RAMP



SECTION A - A

NOTES:

- ① REGARDLESS OF CURB HEIGHT, CURB AND GUTTER ADJACENT TO PEDESTRIAN RAMPS WILL BE PAID FOR AS LINEAR FOOT OF CONCRETE CURB AND GUTTER. THE RAMP AREA WILL BE INCLUDED IN THE QUANTITIES FOR BITUMINOUS PATH.
- ② MINIMUM DISTANCE TO BACK OF CURB.

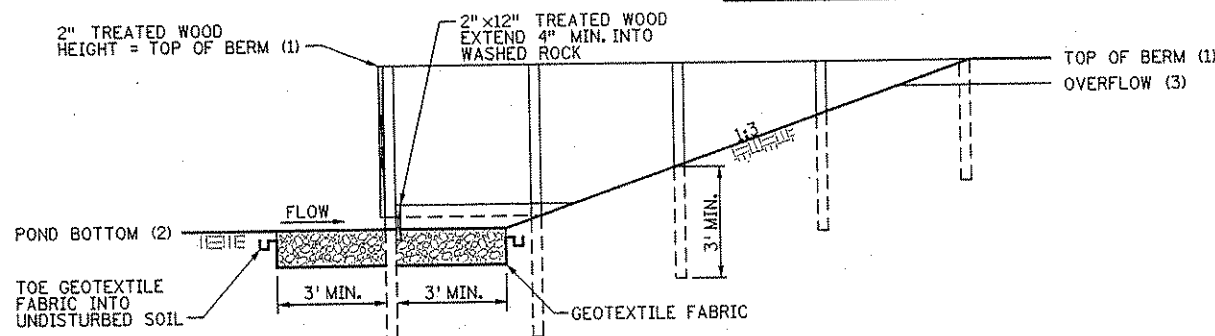


BAFFELED WEIR PLAN

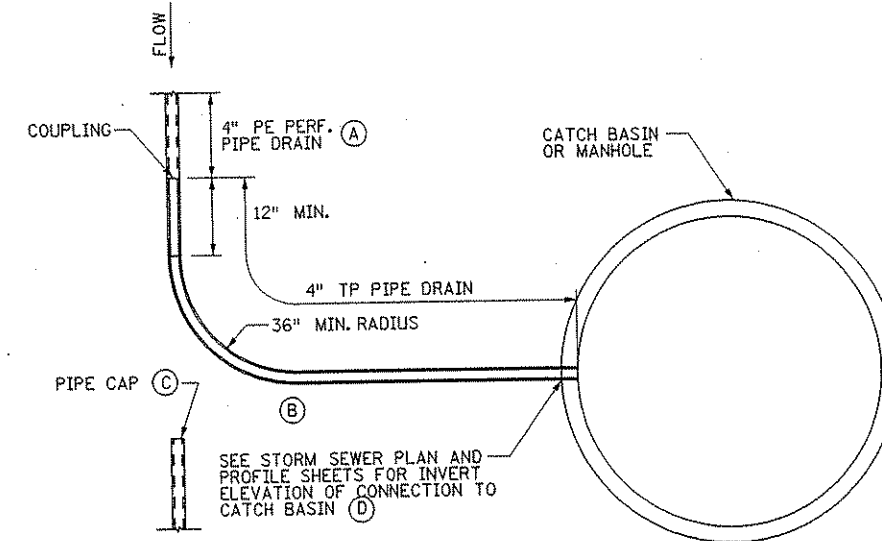
NOTE:

- ① PAID FOR AS SEDIMENT CONTROL WEIR. PAY ITEM CONSISTS OF 4"X4" TREATED WOOD POSTS, 2"X(4" TO 12") TREATED WOOD, 1" TO 1.5" WASHED ROCK, GEOTEXTILE FABRIC, AND ALL HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.

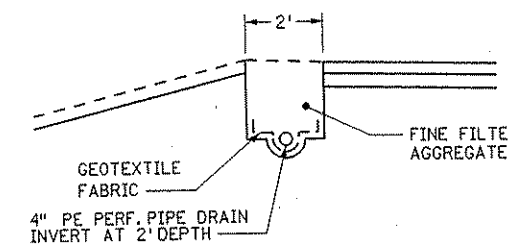
POND ELEVATIONS			
	POND 8	POND 10	POND 12
TOP OF BERM (1)	905.9	905.5	906.5
BOTTOM OF POND (2)	900.7	903.0	902.0
OVERFLOW (3)	905.4	905.0	906.0



BAFFELED WEIR SECTION A-A



EDGE DRAIN CONNECTION TO CATCH BASIN



EDGE DRAIN DETAIL

NOTES:

- (A) PAYMENT FOR 4" PE PERF. PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, GEOTEXTILE FABRIC, PE PIPE AND INSTALLATION, AND ALL OTHER ASSOCIATED WORK.
- (B) PAYMENT FOR 4" TP PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, FURNISHING AND PLACING PIPE, CONNECTING TO DRAINAGE STRUCTURES, BACKFILL AND COMPACTION, AND ALL OTHER ASSOCIATED WORK.
- (C) CAPS ON ALL UPSTREAM PIPE ENDS SHALL BE INCIDENTAL TO 4" PE PERF. PIPE DRAIN.
- (D) ALL 4" PE PIPE CONNECTIONS INTO CATCH BASINS SHALL BE MADE BY BREAKING INTO SAID STRUCTURE AND GROUTING AROUND PE PIPE.

SEE SPECIAL PROVISIONS FOR INSTALLATION AND MATERIAL DETAILS.
THE BOTTOM OF THE TRENCH SHALL BE SHAPED TO CRADLE THE LOWER 1/3 OF THE PIPE.

NO	DATE	BY	CHKD	APPR	REVISION

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Joseph Weimer
DATE: 1-11-02 LIC. NO. 22405

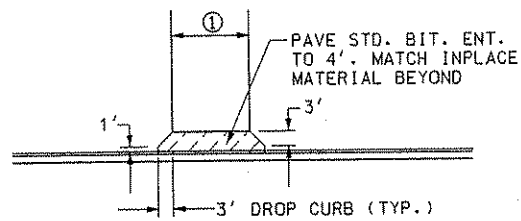
DRAWN BY: RRC DATE: 11-8-00
DESIGN BY: JMW DATE: 11-8-00
CHECKED BY: GAR DATE: 11-8-00

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

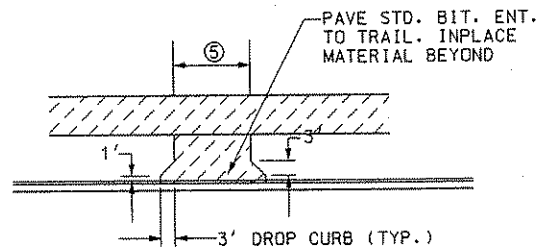
TKDA
TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
MISC. DETAILS
C.S.A.H. 52 RECONSTRUCTION

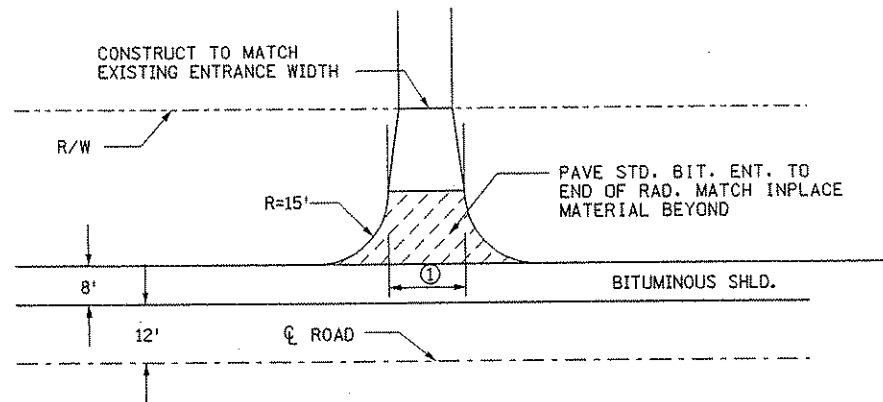
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OF
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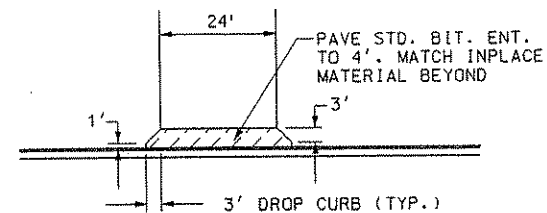
URBAN RESIDENTIAL ENTRANCE WITHOUT BITUMINOUS PATH



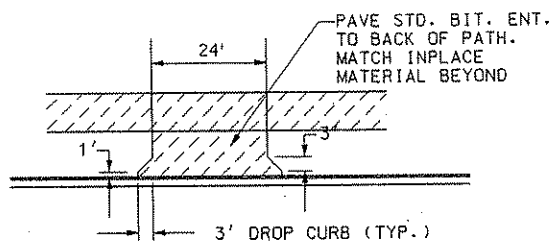
URBAN RESIDENTIAL ENTRANCE WITH BITUMINOUS PATH



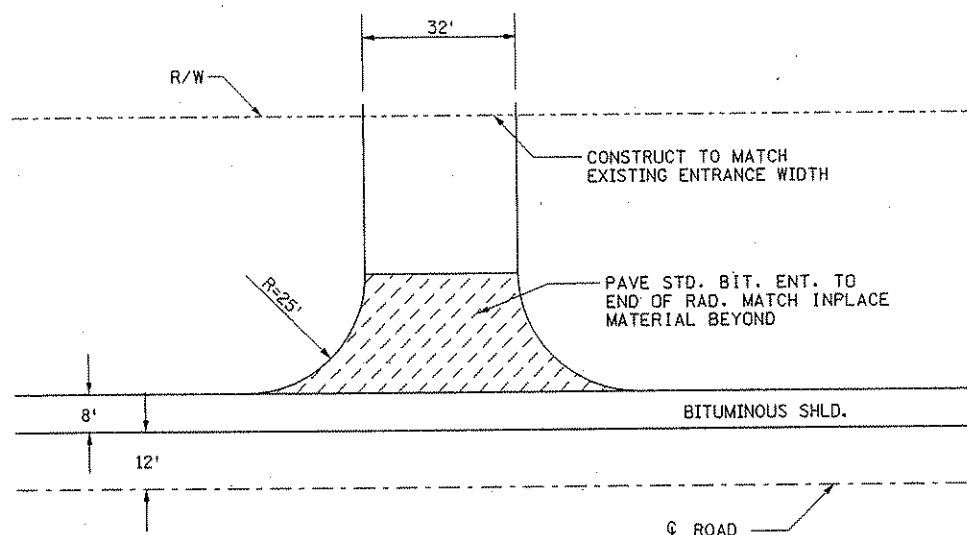
RURAL RESIDENTIAL ENTRANCE



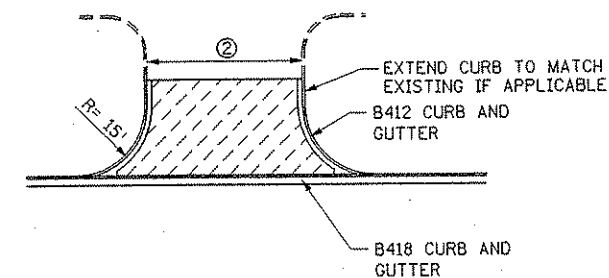
URBAN FIELD ENTRANCE WITHOUT BITUMINOUS PATH



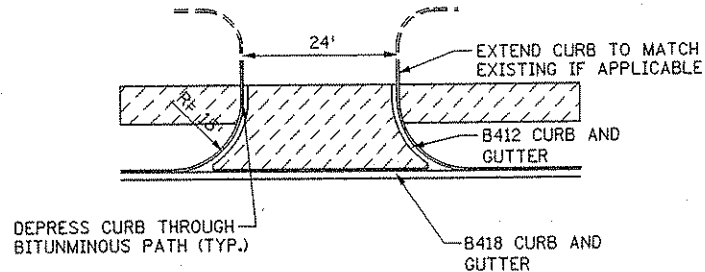
URBAN FIELD ENTRANCE WITH BITUMINOUS PATH



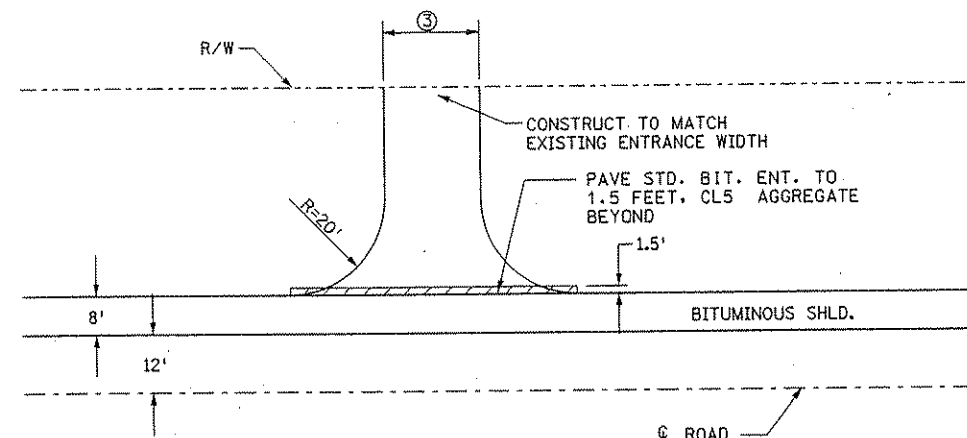
RURAL COMMERCIAL ENTRANCE



URBAN COMMERCIAL ENTRANCE WITHOUT BITUMINOUS PATH



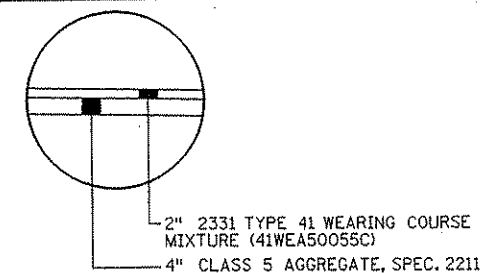
URBAN COMMERCIAL ENTRANCE WITH BITUMINOUS PATH



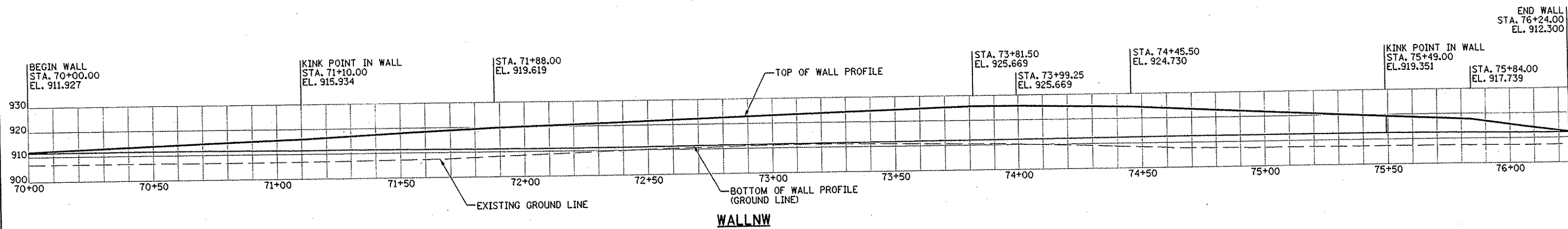
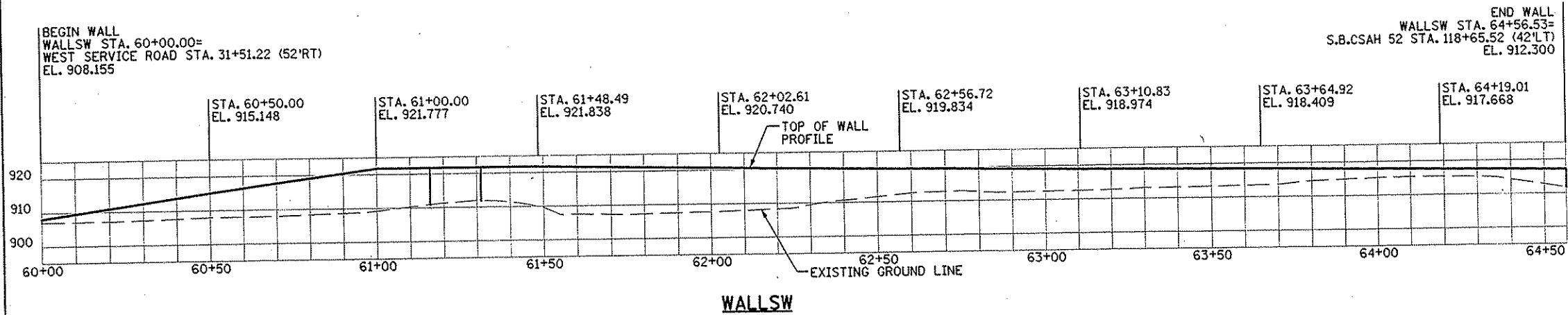
RURAL FIELD ENTRANCE

- ① EXISTING WIDTH (16' MIN. / 24' MAX.) TO R/W LINE.
- ② EXISTING WIDTH (32' MIN. / 50' MAX.) TO END OF RADIUS.
- ③ EXISTING WIDTH (20' MIN. / 32' MAX.)
- ④ FOR EXISTING CONCRETE DRIVEWAYS AND ENTRANCES, REPLACE IN KIND USING BITUMINOUS DRIVEWAY DIMENSIONS. FOR EXISTING CONCRETE APRONS, REPLACE IN KIND USING STANDARD PLATE 7035.
- ⑤ EXISTING WIDTH (16' MIN. / 24' MAX.) TO BACK OF PATH.

INSET B - STANDARD BIT. ENTR. CONST.



NO. DATE BY CKD APPR REVISION NAME: \\Mr freeze\Projects\A-f\AnokaCity\1174901\hwy-brdg\part4\roadway\09\2007\01\11-02					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. <i>Joseph Weavers</i> DATE: 1-11-02 LIC. NO. 22405		DRAWN BY TJV DATE 11-8-00 DESIGN BY TJV DATE 11-8-00 CHECKED BY JMM DATE 11-8-00		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY DRIVEWAY DETAILS C.S.A.H. 52 RECONSTRUCTION		SHEET 63 OF 559
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NO	DATE	BY	CKD	APPR	REVISION

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Joseph W. W...
DATE 1-11-02 LIC. NO. 22405

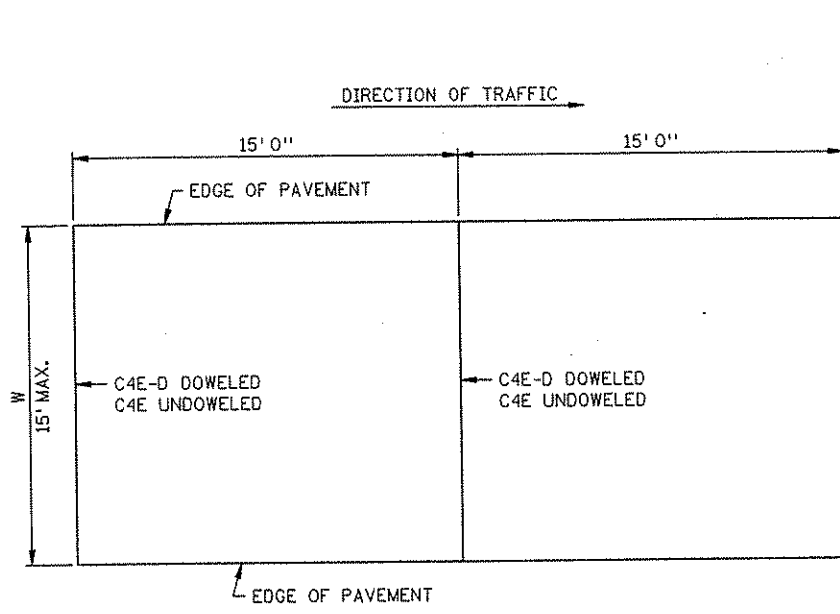
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DESIGN BY PCM DATE 9-20-01
CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

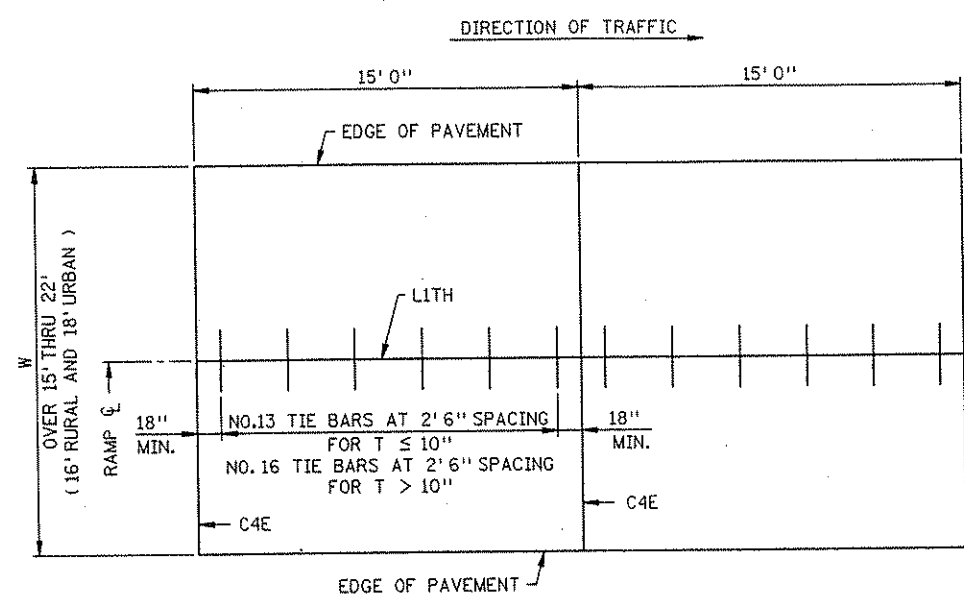
TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
RETAINING WALL PROFILES
C.S.A.H. 52 RECONSTRUCTION

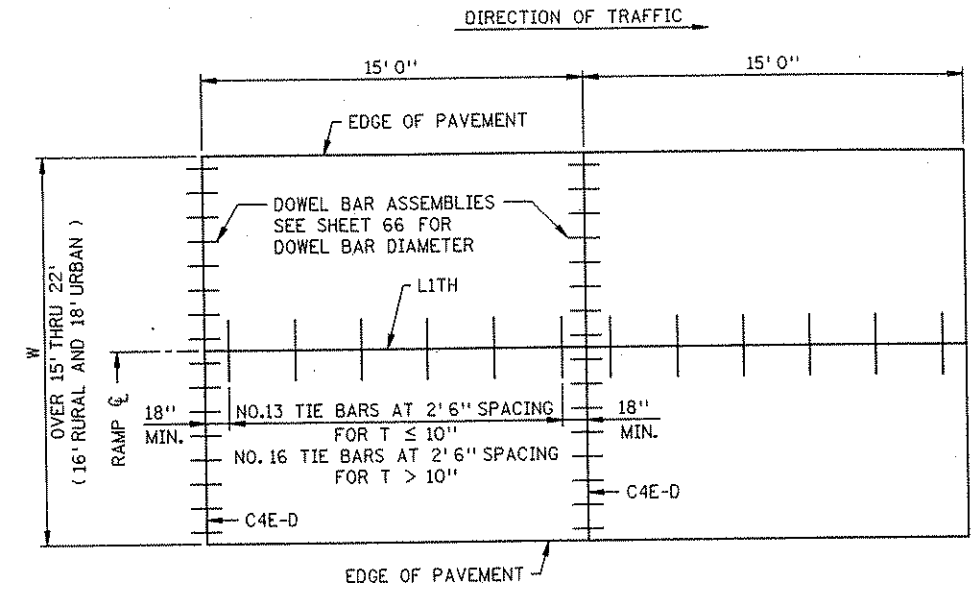
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64
OF
559



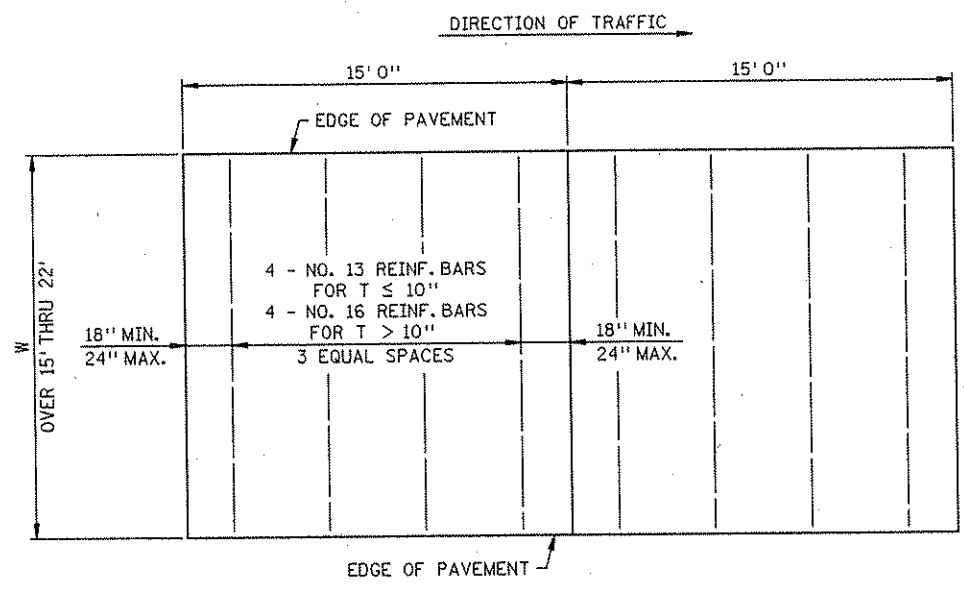
PAVEMENT 1 FT. THRU 15 FT. WIDTH



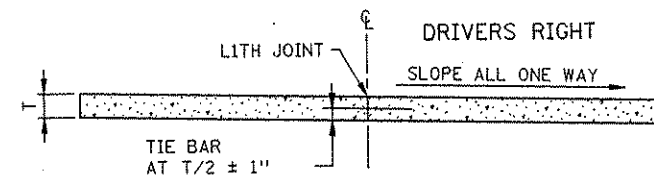
PAVEMENT OVER 15 FT. THRU 22 FT. WIDTH
UNDOWELED



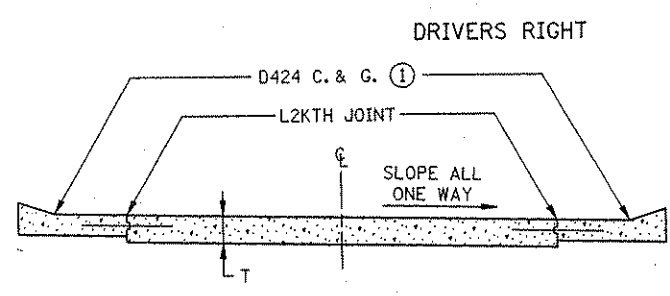
PAVEMENT OVER 15 FT. THRU 22 FT. WIDTH
DOWELED



SUPPLEMENTAL PANEL REINFORCEMENT
PANELS OVER 15 FT. THRU 22 FT. WIDTHS
IT IS PREFERRED TO ADD A LONGITUDINAL JOINT
RATHER THAN PAVE GREATER THAN 15 FT. IN WIDTH



RURAL DESIGN RAMP
SECTION A-A



URBAN DESIGN RAMP
CROSS SECTION

GENERAL NOTES:

- ALL REBARS ARE IN METRIC DESIGNATIONS
- WHEN RIGID PAVEMENT ADJOINS FLEXIBLE PAVEMENT, BRIDGE APPROACHES, R. R. CROSSINGS OR OTHER TYPES OF FREE ENDS, THE FOLLOWING MODIFICATIONS SHALL BE MADE: THE FIRST OR LAST 10 JOINTS SHALL BE DOWELED CONTRACTION JOINTS, C4E-D.
- DOWEL BAR ASSEMBLIES, WHEN REQUIRED, SHALL BE SIMILAR TO THOSE SHOWN ON STANDARD PLATE 1103.
- SEE TYPICAL SECTIONS AND PLAN SHEETS FOR CROSS SLOPES AND PAVEMENT THICKNESS, T.
- ALL REINFORCING BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301 AND SHALL MEET THE REQUIREMENTS OF GRADE 60 FOR AASHTO M-31M OR M-53. FOR ADDITIONAL REINFORCEMENT OVER CULVERTS, SEE STANDARD PLATE 1070.
- TIE BARS:
USE NO. 13 BARS 2' 6" LONG, AT 2' 6" SPACING, FOR T ≤ 10". USE NO. 16 BARS 3' 0" LONG, AT 2' 6" SPACING FOR T > 10".

- SUPPLEMENTAL PANEL REINFORCEMENT:
PLACE IN PANELS WHERE PAVEMENT WIDTHS EXCEED 15 FT. WITHOUT A LONGITUDINAL JOINT. USE NO. 13 BARS FOR PAVEMENT THICKNESSES 10" OR LESS. USE NO. 16 BARS FOR THICKNESSES OVER 10". PLACEMENT DEPTH SHALL BE PLANNED T/2 ± 1".

SPECIFIC NOTES:

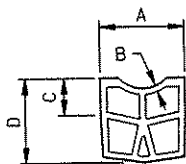
- ① THE CONTRACTOR SHALL HAVE THE OPTION TO CONSTRUCT INTEGRANT CURBS WITH ONE LIT JOINT, LOCATED AT THE RAMP & C IN PLACE OF D424 CURB AND GUTTERS WITH L2KTH JOINTS. IN EITHER OPTION, DOWEL BAR ASSEMBLIES WILL NOT BE REQUIRED IN THE CURB AND GUTTER AREA. PAYMENT WILL BE BASED ON THE D424 CURB AND GUTTER OPTION, REGARDLESS OF THE METHOD OF CONSTRUCTION USED.

FILE NAME S219J98.SPN

STANDARD SHEET NO. 5-297.219	TITLE: CONCRETE RAMP PAVEMENT 15 FT. PANEL LENGTH
STANDARD APPROVED: OCTOBER 1, 1998	
REVISION DATE 1-21-2000	STATE PROJ. NO. 02-652-02
	SHEET NO. 65 OF 559 SHEETS

REQUIRED DIMENSIONS

JOINT TYPE	TRANSVERSE NOMINAL SEALER SIZE
A	0.80" +0.14" -0.05"
B	0.08" ± 0.02"
C	0.60" MIN.
D	0.80" MIN.
WEB AND WALL THICKNESS, UNLESS NOTED	0.03" MIN.



TYPICAL SHAPE FOR SATISFACTORY INSTALLATION IN JOINT (5 CELL MIN.)

CONTRACTION JOINT SEALER
PREFORMED ELASTIC TYPE

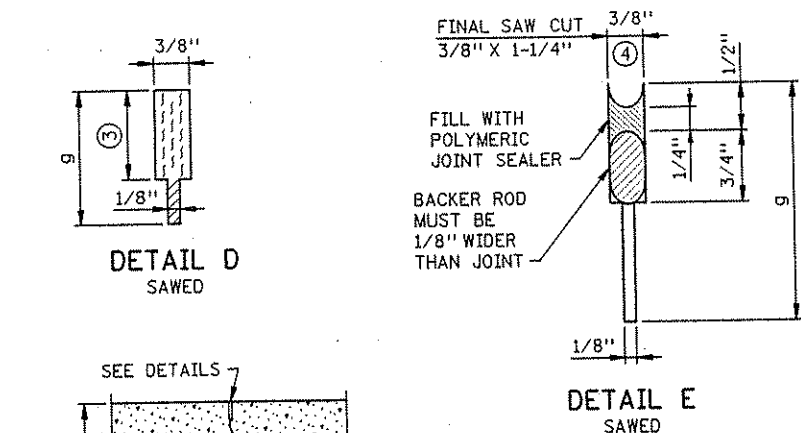
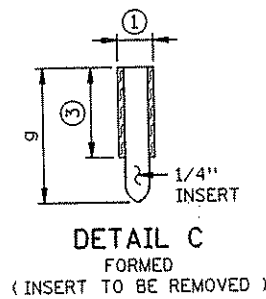
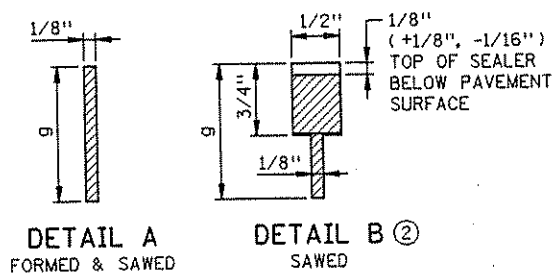
NOTES:
"A" DIMENSION SHALL APPLY AT ANY POINT THROUGHOUT "C" DEPTH. IN ITS FINAL POSITION, THE TOP CORNERS OF THE PREFORMED JOINT SEALER SHALL BE PLACED NOT LESS THAN 1/8 IN., NOR MORE THAN 5/16 IN. BELOW THE PAVEMENT SURFACE.
SHARP INTERNAL CORNERS WILL NOT BE PERMITTED. ALL CORNERS SHALL BE PROVIDED WITH SUITABLE FILLET. CURRENTLY APPROVED CONFIGURATIONS ARE ON FILE IN THE MATERIALS ENGINEERING SECTION, MINNESOTA DEPARTMENT OF TRANSPORTATION.

CONTRACTION JOINT CLASS DESIGNATION, DETAIL & SEALER SPEC. TABLE

CLASS DESIGNATION		JOINT DETAIL	JOINT SEALER SPEC.
WITHOUT DOWELS	WITH DOWELS		
C1A	C1A-D	A	UNSEALED
C2B	C2B-D	B	3725
C2X	C2X-D	B OR C	3725
C3D	C3D-D	D	3721
C3X	C3X-D	C OR D	3721
C4E	C4E-D	E	POLYMERIC

CONTRACTION JOINT DEPTH & DOWEL BAR TABLE

PAVEMENT THICKNESS T	CONCRETE BASE JOINT DEPTH g	DOWEL BAR DIAMETER
6"- 6-1/4"	1-1/4"	1"
6-1/2"-10-1/4"	2"	1-1/4"
10-1/2"-12-1/2"	—	1-1/2"
13"-14"	—	1-3/4"



LEGEND
C = CONTRACTION JOINT
NO. = SEALANT TYPE
1 = UNSEALED
2 = 3725
3 = 3721
4 = MOISTURE CURED POLYMERIC
LETTER = DETAIL
X = MORE THAN 1 DETAIL
-D = DOWEL BARS

EXAMPLE
C2B-D

CONTRACTION JOINT NOTES:

IN CONCRETE BASE CONSTRUCTION THE CONTRACTION JOINTS SHALL BE SPACED AT 30 FT. INTERVALS AND AT RIGHT ANGLES TO THE LONGITUDINAL JOINTS, EXCEPT AS NOTED BELOW. WHERE THE CONCRETE BASE IS CONSTRUCTED ADJACENT TO EXISTING PAVEMENT OR BASE, THE CONTRACTION JOINTS IN THE NEW BASE SHALL MATCH THOSE IN THE EXISTING PAVEMENT OR BASE, EXCEPT THAT THE SPACING SHALL NOT BE LESS THAN 15 FT., NOR MORE THAN 30 FT.

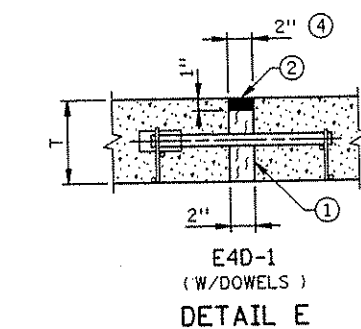
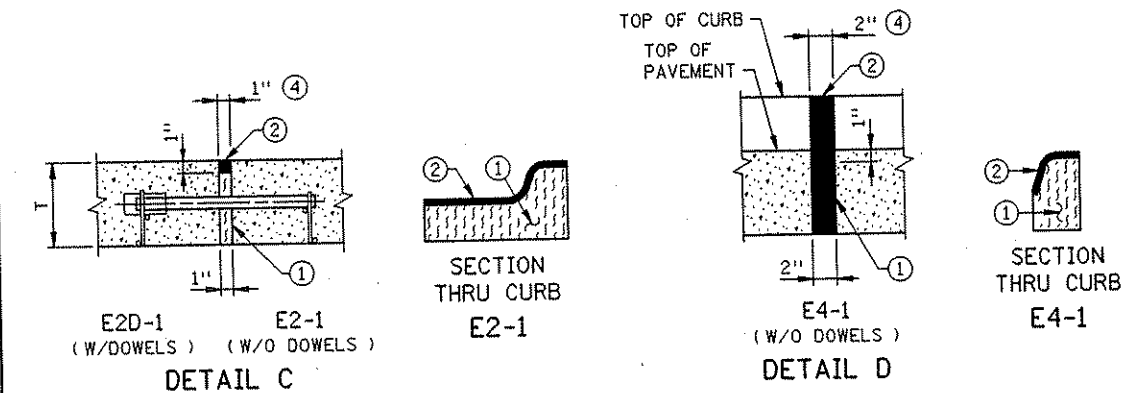
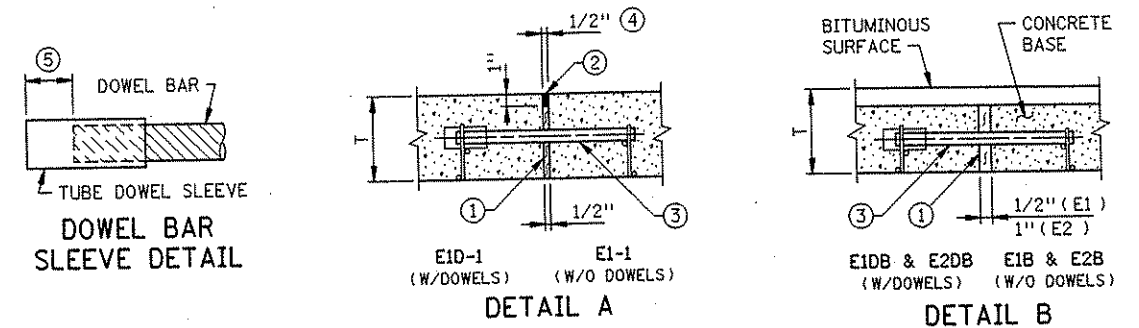
JOINT WIDTH TOLERANCES: + 1/16 IN. AND - 1/32 IN.

GENERAL NOTES:

SEE THE FOLLOWING STANDARD PLATES AND STANDARD PLAN SHEET FOR ADDITIONAL DETAILS: DOWEL BAR ASSEMBLY, 1103; CONSTRUCTION OF HEADER JOINTS, 1150; AND CONCRETE MAINLINE/RAMP PAVEMENT, 5-297.217 & .219.

SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATION TO BE USED AND SPECIAL REINFORCEMENT REQUIRED.

CONTRACTION JOINTS
DESIGN C



EXPANSION JOINTS

CLASS DESIGNATION		JOINT DETAIL	JOINT SEALER SPEC.
WITH DOWELS	WITHOUT DOWELS		
E1D-1	E1-1	A	②
E1DB	E1B	B	UNSEALED
E2D-1	E2-1	C	②
E2DB	E2B	B	UNSEALED
	E4-1	D	②
E4D-1		E	②

LEGEND
E = EXPANSION JOINT
NO. = JOINT REFERENCE
-1 = HOT POURED SEAL
D = DOWEL BARS
B = CONCRETE BASE
S = CONCRETE SILL

EXAMPLE
E1D-1
HOT POURED SEAL ②
DOWEL BARS
JOINT REFERENCE
EXPANSION JOINT

NOTES:
① PREFORMED JOINT FILLER MATERIAL. SPEC. 3702.
② JOINT SEALER SPEC. 3723. TOP OF SEALER, FLUSH TO 1/8 IN. BELOW TOP OF PAVEMENT SURFACE. MAKE TOP OF SEALER FOR CURB SECTION E JOINTS FLUSH WITH SURFACE ± 1/8 IN.
③ DOWEL BAR ASSEMBLY, SEE STANDARD PLATE 1103.
④ JOINT WIDTH IS EQUAL TO HALF OF THE JOINT NUMBER IN 1/2 IN. INTERVALS (i.e. E1 = 1/2 IN., E2 = 1 IN., E3 = 1-1/2 IN., E4 = 2 IN., E8 = 4 IN.).
⑤ SPACE FROM END OF DOWEL BAR TO END OF SLEEVE TO BE EQUAL TO EXPANSION JOINT WIDTH.

EXPANSION JOINTS
DESIGN E

STANDARD SHEET NO. 5-297.221 (1 OF 2)
STANDARD APPROVED: JANUARY 25, 1993

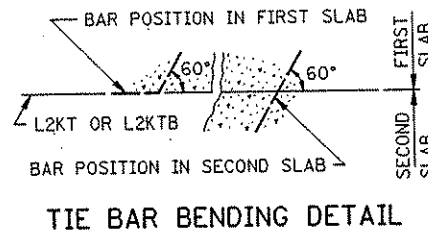
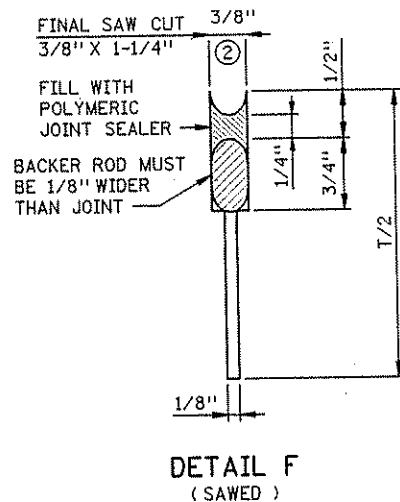
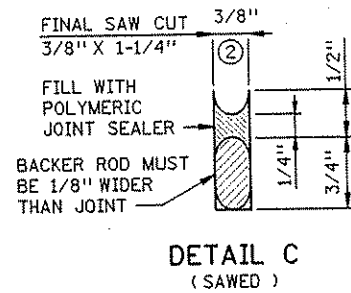
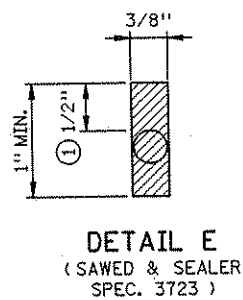
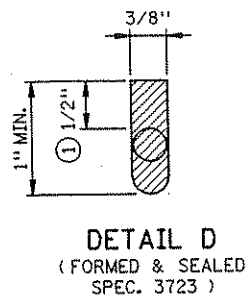
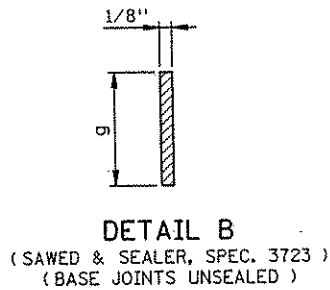
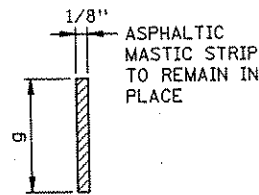
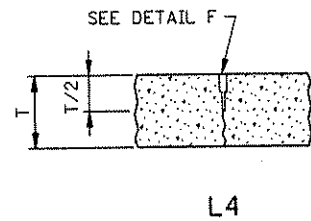
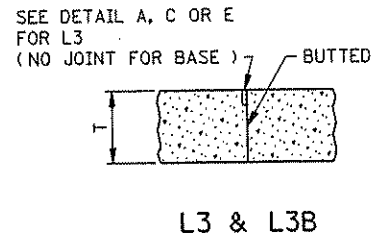
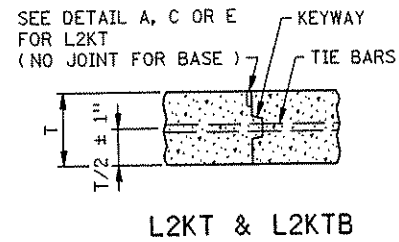
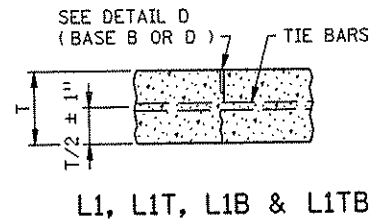
TITLE: PAVEMENT JOINTS
CONTRACTION (DESIGN C) AND EXPANSION (DESIGN E)

STATE PROJ. NO. 02-652-02

SHEET NO. 66 OF 559 SHEETS

REVISION DATE 12-21-99

FILE NAME S2211A93.SPN



LONGITUDINAL JOINT CLASS DESIGNATION,
DETAIL & SEALER SPECIFICATION TABLE

CLASS DESIGNATION				JOINT DETAIL	JOINT SEALER SPECIFICATION
WITHOUT TIE BARS	WITH TIE BARS	WITH KEYWAY & TIE BARS	BUTTED		
L1H	L1TH	L2KTH L2KTS	L3H L3S	B	3723
L1BU	L1TBU			A OR B	UNSEALED
				D OR E	3723
				C	POLYMERIC
				D OR E	3723
				C	POLYMERIC
L4S				F	POLYMERIC

LEGEND
 L = LONGITUDINAL JOINT
 NO. = JOINT REFERENCE
 K = KEYWAY
 T = TIE BARS
 B = CONCRETE BASE
 U = UNSEALED
 H = HOT POUR
 S = MOISTURE CURED
 POLYMERIC

JOINT REFERENCE NUMBERS
 1 = SAWED TO A DEPTH OF $T/3$
 2 = KEYED CONSTRUCTION JOINT
 3 = BUTTED CONSTRUCTION JOINT
 4 = SAWED TO A DEPTH OF $T/2$

LONGITUDINAL JOINT
DEPTH TABLE ③

PAVEMENT THICKNESS T	CONCRETE BASE JOINT DEPTH g
6"-6-1/2"	2"
7"-7-1/2"	2-1/4"
8"-8-1/2"	2-1/2"
9"-9-1/2"	3"

LONGITUDINAL JOINT NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

TIE BARS FOR L1TB JOINTS SHALL BE THE SAME SIZE AND SPACING AS SHOWN ON STANDARD PLAN SHEETS 5-297.217 & .219.

EXCEPT WHEN NOTED OTHERWISE IN THE PLANS, THE TIE BAR SPACING FOR ALL L2KT AND L2KTb JOINTS SHALL BE 2'6" C. TO C. AND BENT 60° AS SHOWN.

TIE BARS IN THE L2KT AND L2KTb JOINTS SHALL BE THE SAME SIZE AND LENGTH AS USED FOR THE L1T OR L1TB JOINTS, WHEN TYING PAVEMENT TO PAVEMENT OR BASE TO BASE. TIE BARS IN THE L2KT OR L2KTb JOINTS SHALL BE NO. 13 X 2'6", WHEN TYING CURB & GUTTER TO PAVEMENT OR BASE.

ALL TIE BARS SHALL MEET THE REQUIREMENTS OF GRADE 60 FOR AASHTO M-31 OR M-53.

NORMALLY, TIED PAVEMENT WIDTHS SHALL NOT EXCEED 4 LANES, EXCEPT BRIDGE APPROACH PANELS AND PAVEMENT TAPERS.

JOINT WIDTH TOLERANCE IS + 1/16 IN. TO - 1/32 IN.
 SPEC. 3723 SEALER - TOP OF SEALER FLUSH TO - 3/16 IN. BELOW TOP OF PAVEMENT SURFACE.

- THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. PRIOR TO SEALING THE JOINT, A CLOSED CELL BACKER ROD CAPABLE OF WITHSTANDING SEALANT TEMPERATURES OF 400 DEGREES F, WITH A DIAMETER 1/8 IN. LARGER THAN THE JOINT OPENING, MAY BE PLACED 1/2 IN. BELOW THE TOP OF THE PAVEMENT.
- THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. PRIOR TO SEALING THE JOINT, A 1/2 IN. DIAMETER CLOSED CELL BACKER ROD SHALL BE PLACED SUCH THAT THE TOP OF THE BACKER ROD IS 1/2 IN. BELOW THE SURFACE OF THE PAVEMENT. POLYMERIC SHALL BE TOOLED INTO THE JOINT MAINTAINING A SEALANT BEAD THICKNESS OF 1/4 IN.
- FOR CONCRETE PAVEMENT THE JOINT DEPTH "g" SHALL BE T/3 INCHES.

GENERAL NOTES:

SEE THE FOLLOWING STANDARD PLATES AND STANDARD PLAN SHEETS FOR ADDITIONAL DETAILS: DOWEL BAR ASSEMBLY 1103, PAVEMENT KEYWAY 1141 AND CONCRETE MAINLINE/RAMP PAVEMENT 5-297.217 & .219.

SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATIONS TO BE USED & SPECIAL REINFORCEMENT REQUIRED.

STANDARD SHEET NO.
5-297.221 (2 OF 2)
STANDARD APPROVED:
JANUARY 25, 1993

TITLE:

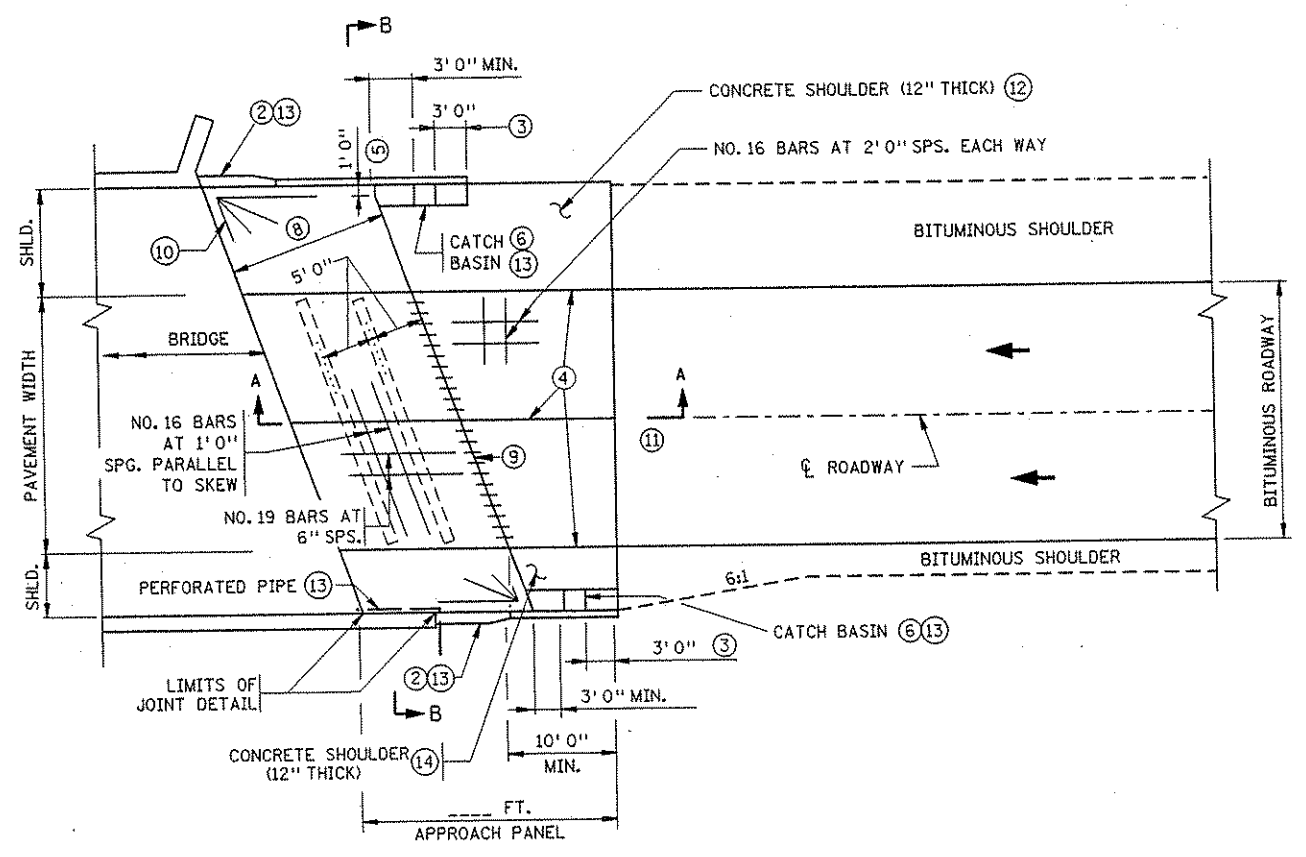
PAVEMENT JOINTS
LONGITUDINAL (DESIGN L)

REVISION DATE
4-3-2000

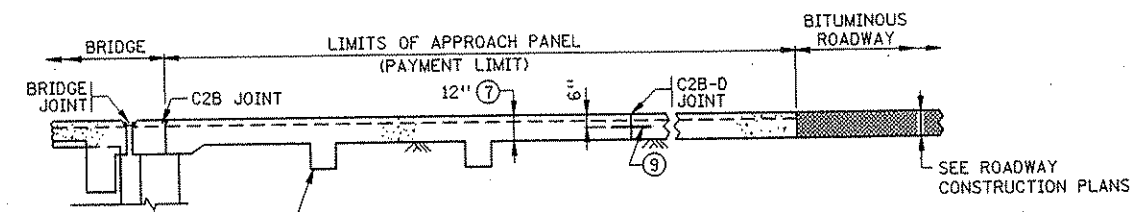
STATE PROJ. NO. 02-652-02

SHEET NO. 66A OF 559 SHEETS

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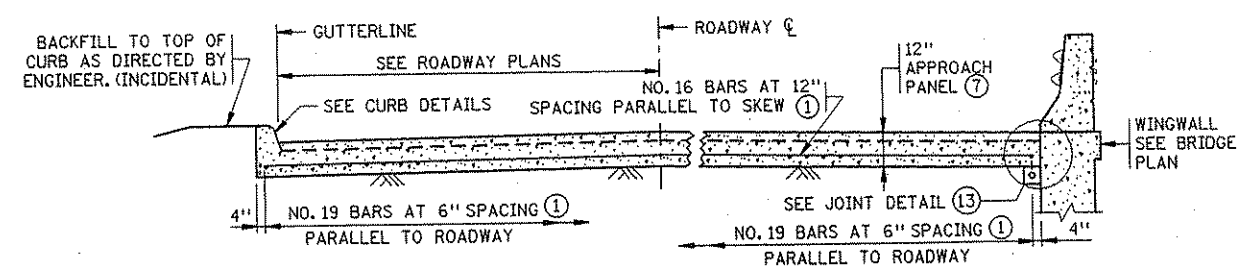


DIVIDED-URBAN ROADWAY PLAN
PARALLEL & NONPARALLEL WINGWALLS



12" X 12" MIN. KEY. CONCRETE SHALL BE PLACED DIRECTLY AGAINST COMPACTED BASE MATERIAL OR FORMS AND PARALLEL TO SKEW IF ANY. END KEY 6" FROM EDGE OF ROADWAY.

SECTION A-A
(REINFORCEMENT NOT SHOWN)



SECTION B-B
(SEE ROADWAY PLAN VIEW)

NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

- ① ALL REINFORCEMENT IN APPROACH PANEL AND CURB SHALL BE GRADE 60 AND EPOXY COATED AS PER SPEC. 3301.
- ② TRANSITION FACE OF 4" CURB INTO PROFILE OF BRIDGE RAILING. SEE CURB TRANSITION DETAILS.
- ③ TRANSITION APPROACH PANEL CURB HEIGHT 4" TO 0" WHERE THERE IS NO ROADWAY CURB.
- ④ L2KT OR L1T LONGITUDINAL JOINT IS REQUIRED BEFORE AND AFTER CONCRETE OVERLAY IS APPLIED. SEE STANDARD PAVEMENT JOINT SHEET FOR DETAILS.
- ⑤ EDGE OF PANEL PERPENDICULAR TO GUTTER FOR SKEWS OVER 45°.
- ⑥ LOCATION MAY BE ON OR OFF THE APPROACH PANEL AS DETERMINED BY THE DESIGNER. SEE ROAD DESIGN MANUAL CHAPTER 7 FOR CATCH BASIN INFORMATION.
- ⑦ APPROACH SLAB THICKNESS SHOWN INCLUDES ANY CONCRETE OVERLAY THAT MAY BE REQUIRED. SEE BRIDGE PLANS FOR REQUIREMENTS. CONCRETE OVERLAYS TO BE INCLUDED IN BRIDGE QUANTITIES AND DONE AT THE SAME TIME BY BRIDGE CONTRACTOR.
- ⑧ 20 FEET TO 40° SKEWS, 15 FEET OVER 40° SKEWS.
- ⑨ CONTRACTION JOINT C2B-D WITH 1-1/2" DIA. X 1'6" LG. EPOXY COATED DOWEL BARS AT 12" SPACING PARALLEL TO ϵ OF ROADWAY. CAGES NOT REQUIRED.
- ⑩ FAN 4 - NO. 16 BARS 8'0" LONG AS SHOWN FOR SKEWS OVER 45°.
- ⑪ SEE PLAN SHEETS 142 AND 143 FOR BRIDGE APPROACH ROADWAY INFORMATION.
- ⑫ CONCRETE SHOULDERS INCLUDED IN PAYMENT FOR APPROACH PANEL QUANTITY.

REBAR REQUIREMENTS FOR BRIDGE APPROACH PANELS	
BRIDGE TO CONTRACTION JOINT	36.4 LB./SQ. YD. PLUS 3 EXTRA #5 FOR EXPANSION JOINT (IF NEEDED)
CONTRACTION JOINT TO END OF APPROACH PANEL	9.4 LB./SQ. YD.
KEYWAY	3.2 LB./LIN./FT.
7.0' CURB TRANSITION	20.1 LB./EACH
SILL (IF REQUIRED)	13.6 LB./LIN./FT.

ANY DOWEL BARS REQUIRED ARE NOT INCLUDED IN THE TAB ABOVE.

MODIFIED
STANDARD SHEET NO. 5-297.230
REVISION DATE 4-26-2000
STANDARD APPROVED: NOVEMBER 9, 1999

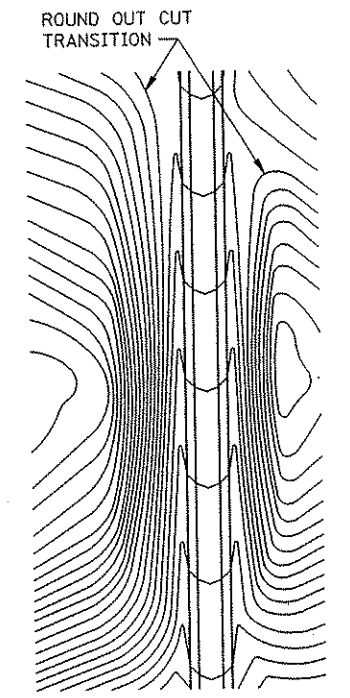
TITLE
BRIDGE APPROACH PANEL
 BITUMINOUS MAINLINE - JOINT AT ABUTMENT
 OVER 10° - 60° SKEWS

CERTIFIED BY *Joseph Weems* LIC. NO. 22465 1-11-2002
 LICENSED PROFESSIONAL ENGINEER

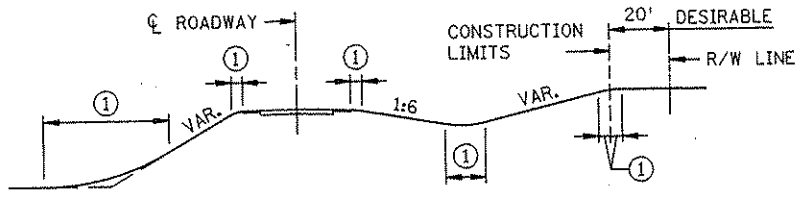
STATE PROJ. NO. 02-652-02

SHEET NO. 67 OF 559 SHEETS

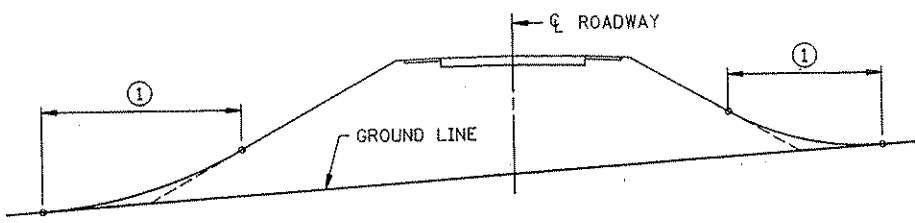
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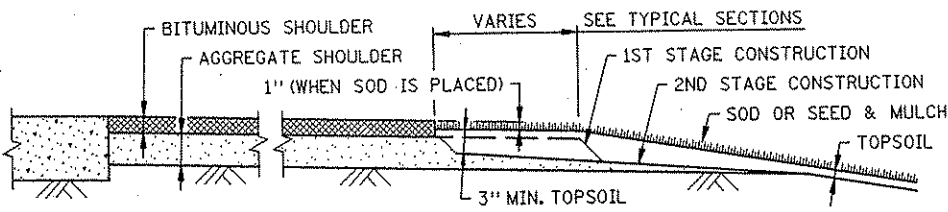
CONTOURING ROAD CUTS



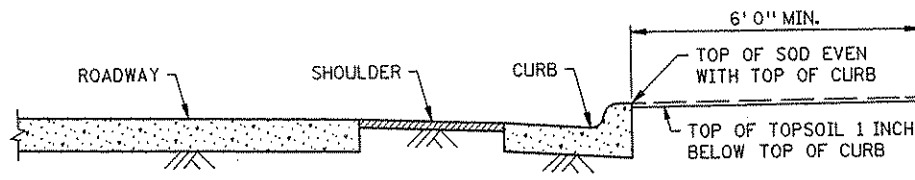
ROUNDING SHOULDERS AND BACKSLOPES



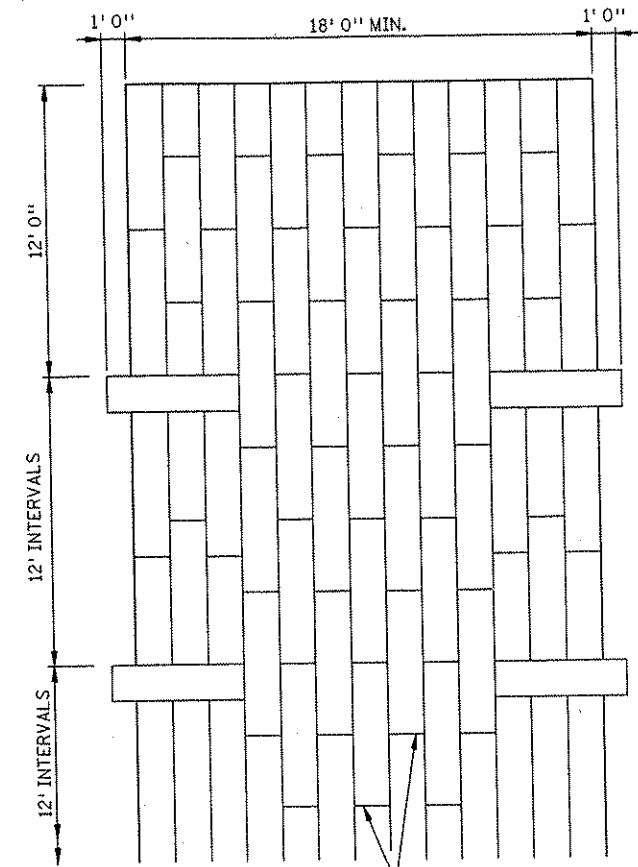
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



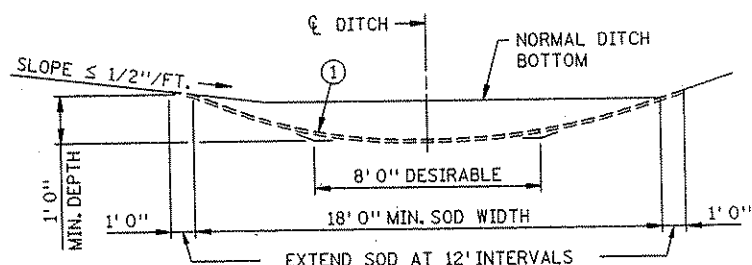
SHAPING AND TOPSOILING INSLOPES



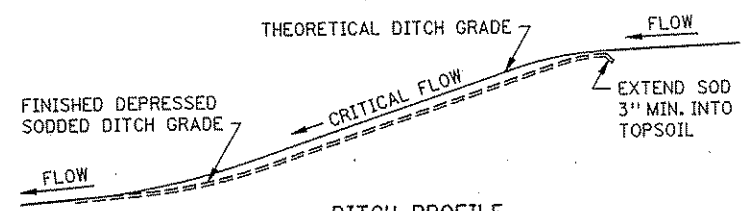
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



PLAN VIEW

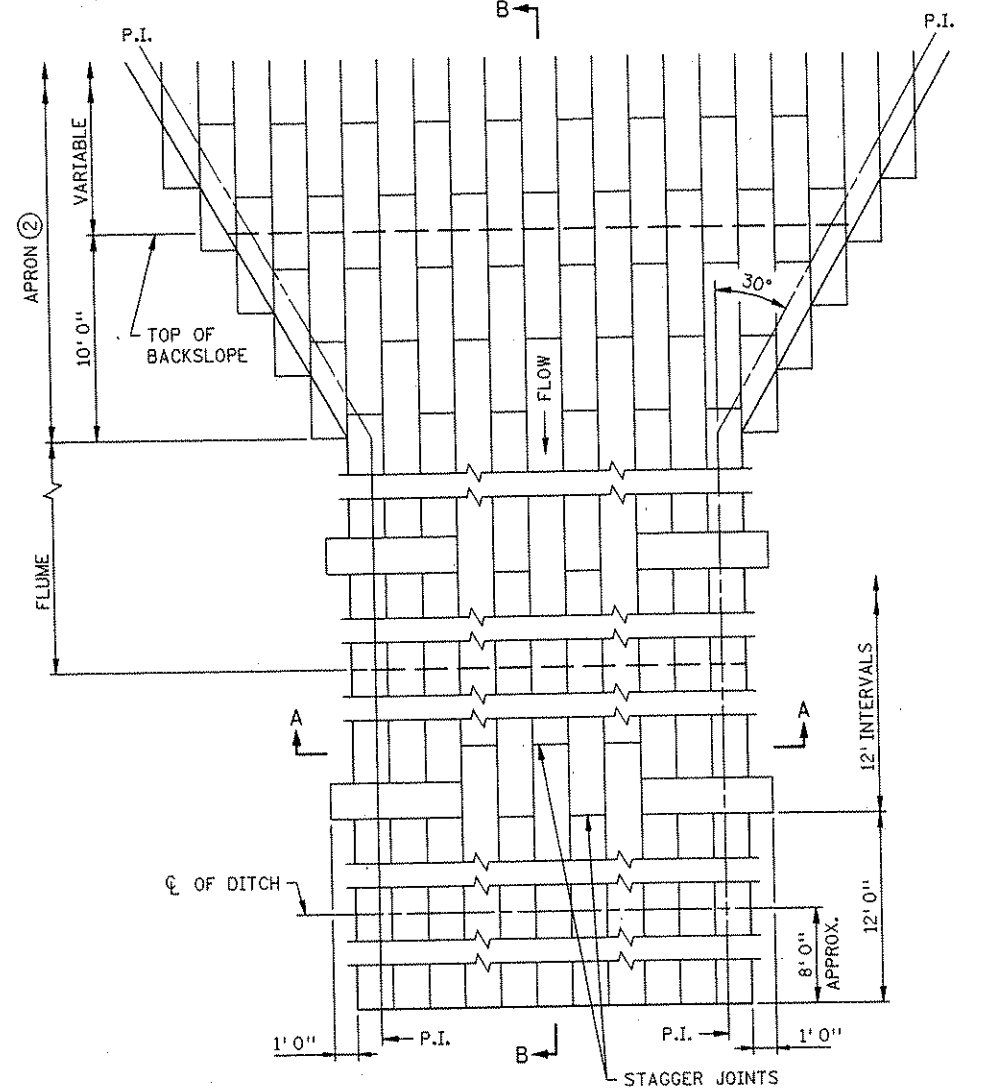


SODDED DITCH CROSS SECTION
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.), FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.

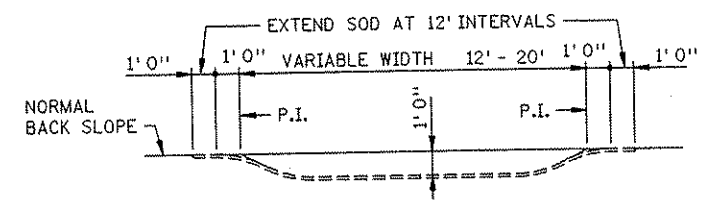


DITCH PROFILE

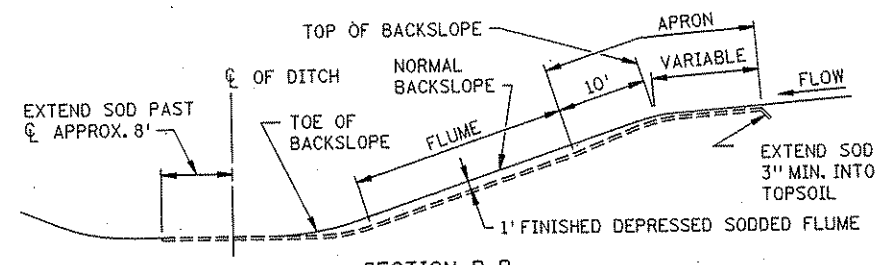
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



SECTION B-B

SODDED FLUME DETAILS

- NOTES:**
 SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.
 ① FOR ROUNDING, SEE ROAD DESIGN MANUAL.
 ② CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

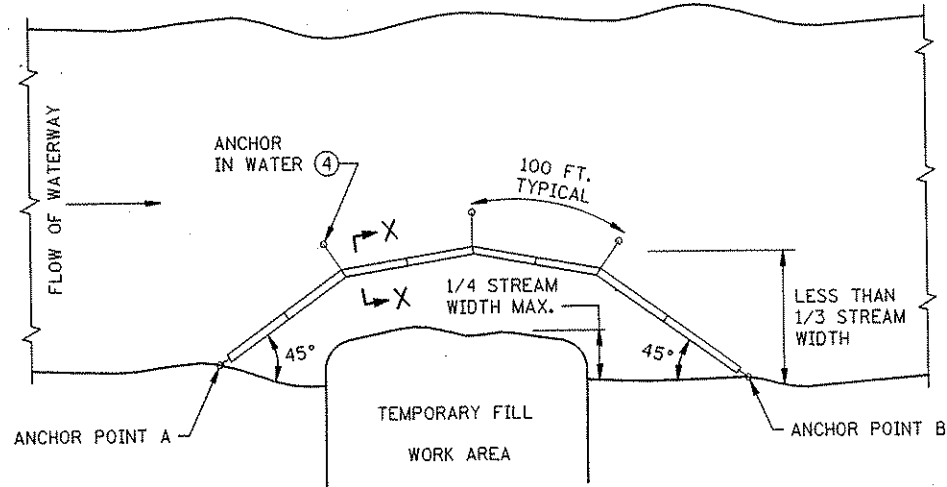
REVISION DATE
10-26-2000

STANDARD SHEET NO. 5-297.404	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS, DITCHES AND FLUMES
STANDARD APPROVED: DECEMBER 19, 1990	

STATE PROJ. NO. 02-652-02

SHEET NO. 69 OF 559 SHEETS

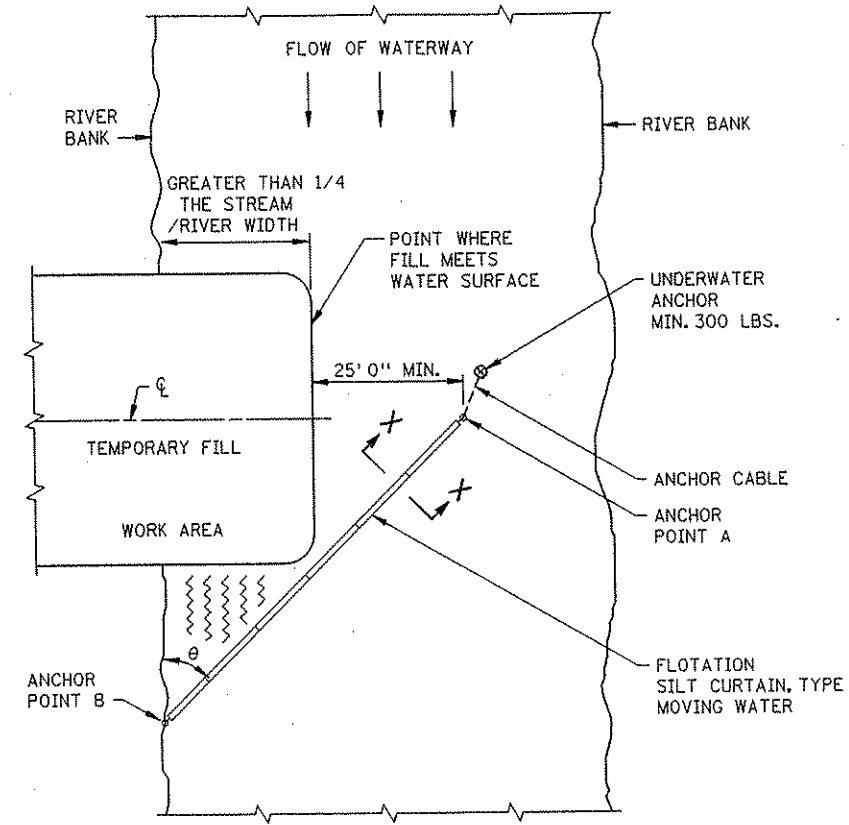
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PLAN VIEW
FLOTATION SILT CURTAIN - TYPE WORK AREA
 (SPEC. 3887)

FOR CONTAINING OVERFLOWS FROM WEIRS, STANDPIPES, SETTLING PONDS

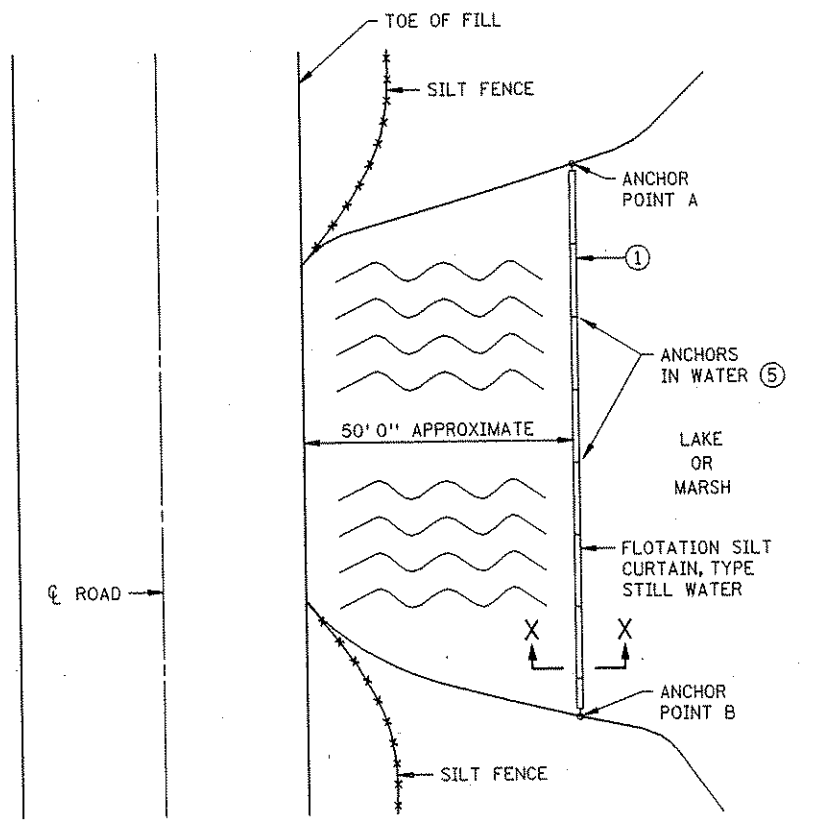
DESIGN GUIDELINES:
 WHEN TEMPORARY FILL ENCLOSES LESS THAN 1/4 OF THE WIDTH OF STREAM.
 MAXIMUM WATER VELOCITY: 5 FT./SEC.
 MAXIMUM WATER DEPTH: 11 FT.



$\angle \theta$	RIVER VELOCITY
45°	SLOW, LESS THAN 3 FT./SEC.
35°	MODERATE, 3 - 5 FT./SEC.

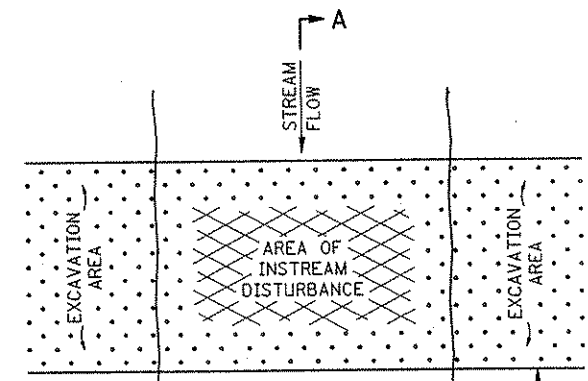
PLAN VIEW
FLOTATION SILT CURTAIN - TYPE MOVING WATER
 (SPEC. 3887)

DESIGN GUIDELINES:
 WHEN TEMPORARY FILL ENCLOSES MORE THAN 1/4 BUT LESS THAN 1/3 WIDTH OF THE STREAM.
 MAXIMUM WATER DEPTH: 11 FT. ①
 MINIMUM WATER DEPTH: 3 FT.
 MAXIMUM WATER VELOCITY: 5 FT./SEC.



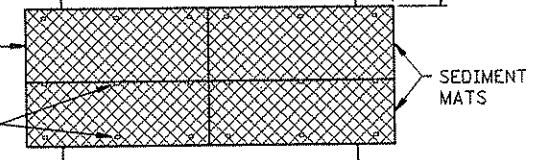
PLAN VIEW
FLOTATION SILT CURTAIN - TYPE STILL WATER
 (SPEC. 3887)

DESIGN GUIDELINES:
 MAXIMUM WATER DEPTH: 11 FT. ①
 MINIMUM WATER DEPTH: 3 FT.



4 FT. MIN. DOWNSTREAM COVERAGE OF SEDIMENT MATS FOR EACH FT./SEC. OF WATER VELOCITY

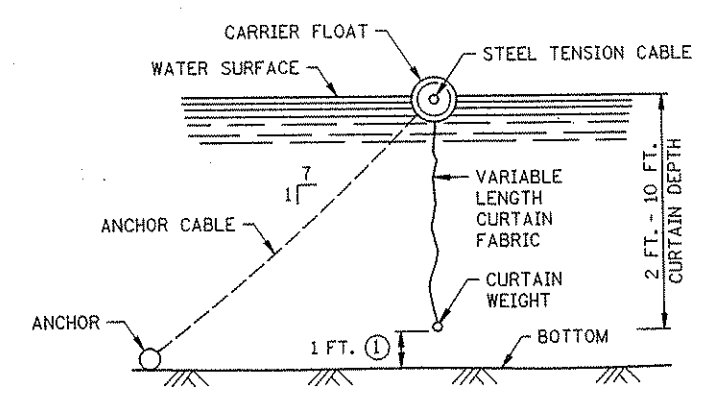
STAKE AT 4 FT. INTERVALS



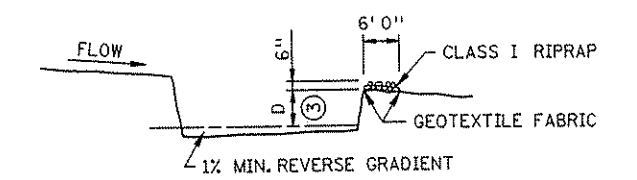
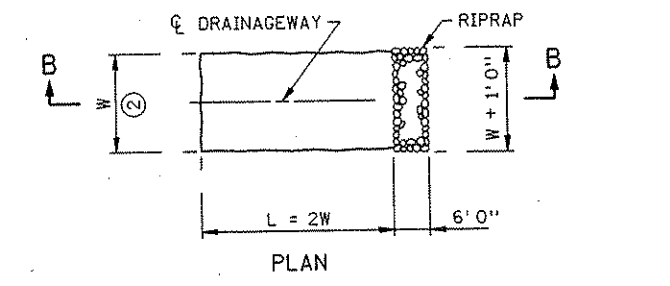
PLAN VIEW

SECTION A-A
SEDIMENT MAT
 (SPEC. 3894)

TYPICAL STREAMBED INSTALLATION
DESIGN GUIDELINES:
 MAXIMUM FLOW VELOCITY: 5 FT./SEC.
 MAXIMUM FLOW DEPTH: 2 FT.



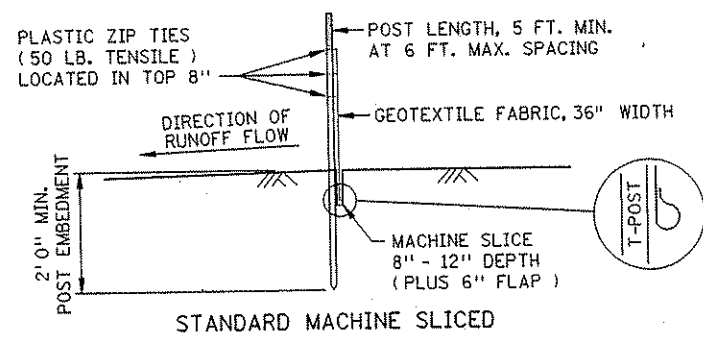
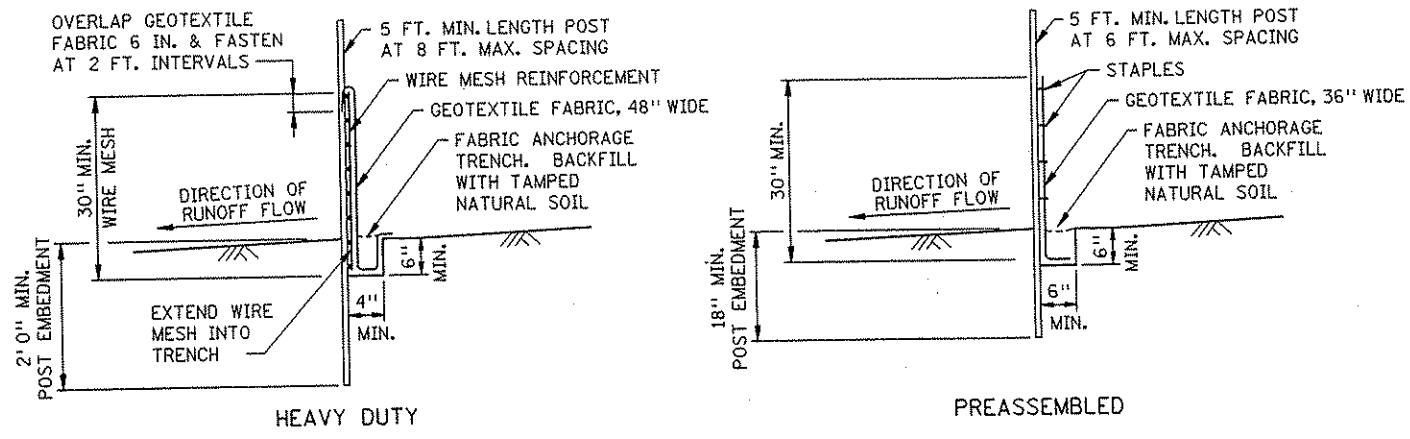
SECTION X-X
FLOTATION SILT CURTAINS
 (SPEC. 3887)



SECTION B-B
SEDIMENT TRAP DETAIL
 (SPEC. 2573)

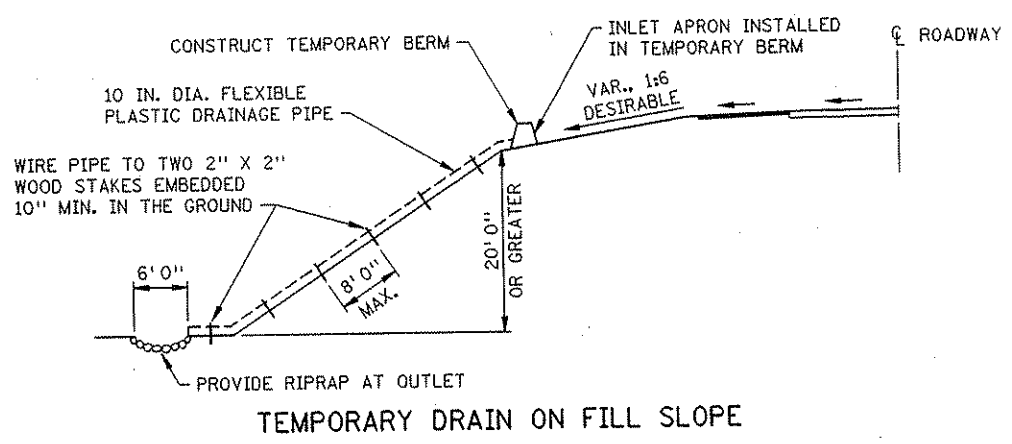
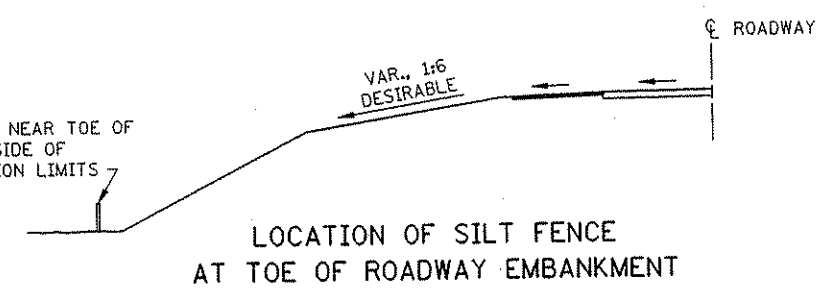
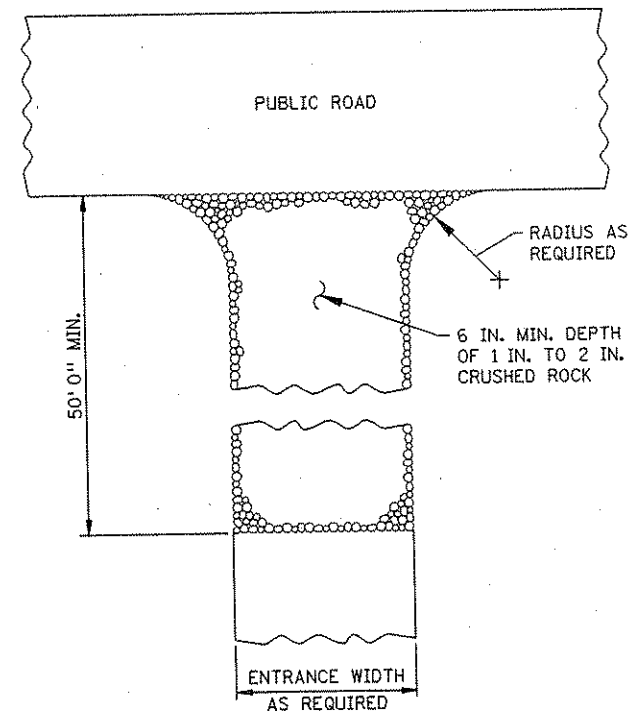
- NOTES:**
 SEE SPECS. 2573, 3887 & 3894.
- ① CURTAIN 1 FT. FROM BOTTOM
 - ② W = 10 FT. MIN., 20 FT. MAX.
 - ③ D = 2 FT.
 - ④ 100 FT. MAX. SPACING BETWEEN ANCHORS, MIN. 40 LBS.
 - ⑤ USE ENOUGH ANCHORS TO HOLD SILT CURTAIN IN PLACE.

PLOTTED/REVISED: 11/11/01
 FILE NAME: S4052G01.SPN
 PATH & FILE NAME: \\S:\PATH\FILENAME.SPN

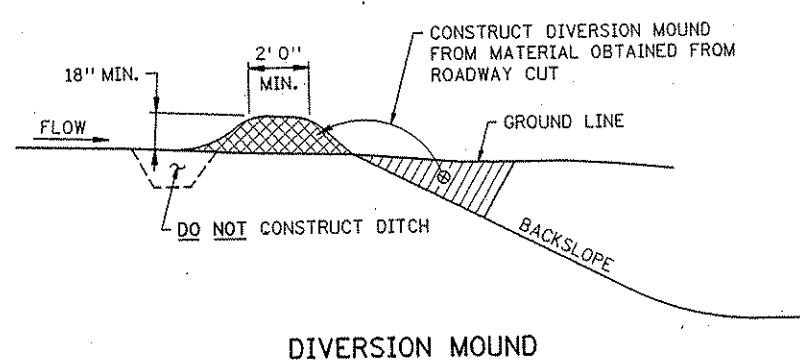


DESIGN GUIDELINES:
 MAXIMUM CONTRIBUTING AREA: 3 ACRES

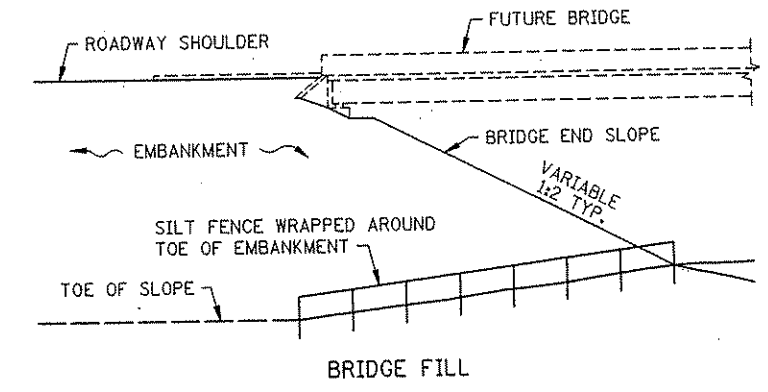
SILT FENCE DETAILS
 TO PROTECT AREAS FROM SHEET FLOW
 (SEE SPEC. 3886)



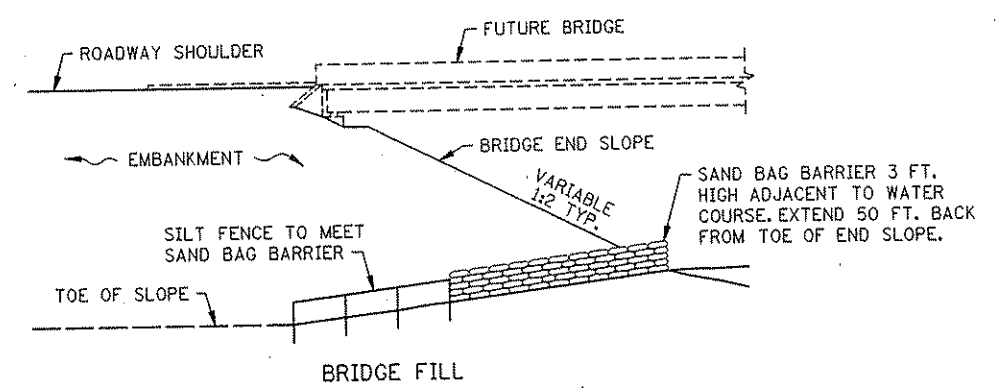
DESIGN GUIDELINES:
 STORM FREQUENCY: 2 YEAR - 24 HOUR
 MAXIMUM DRAINAGE AREA: 3 ACRES



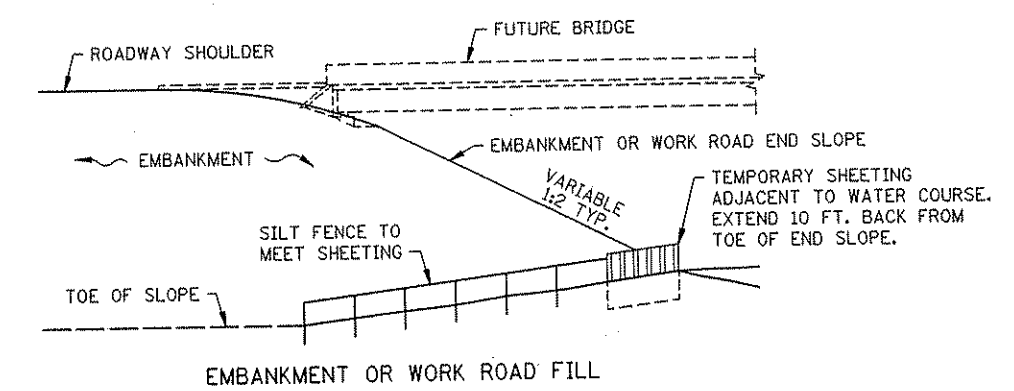
DESIGN GUIDELINES:
 STORM FREQUENCY: 10 YEAR - 24 HOUR
 MAXIMUM DRAINAGE AREA: 5 ACRES
 MAXIMUM DIVERSION: GRADE 5%



DESIGN GUIDELINES:
 WATER COURSE FLOW VELOCITY: STAGNANT
 CONTRIBUTING SLOPE AREA: 1/2 ACRE



DESIGN GUIDELINES:
 MAX. WATER COURSE FLOW VELOCITY: 7 FT./SEC.
 CONTRIBUTING SLOPE AREA: 1 ACRE

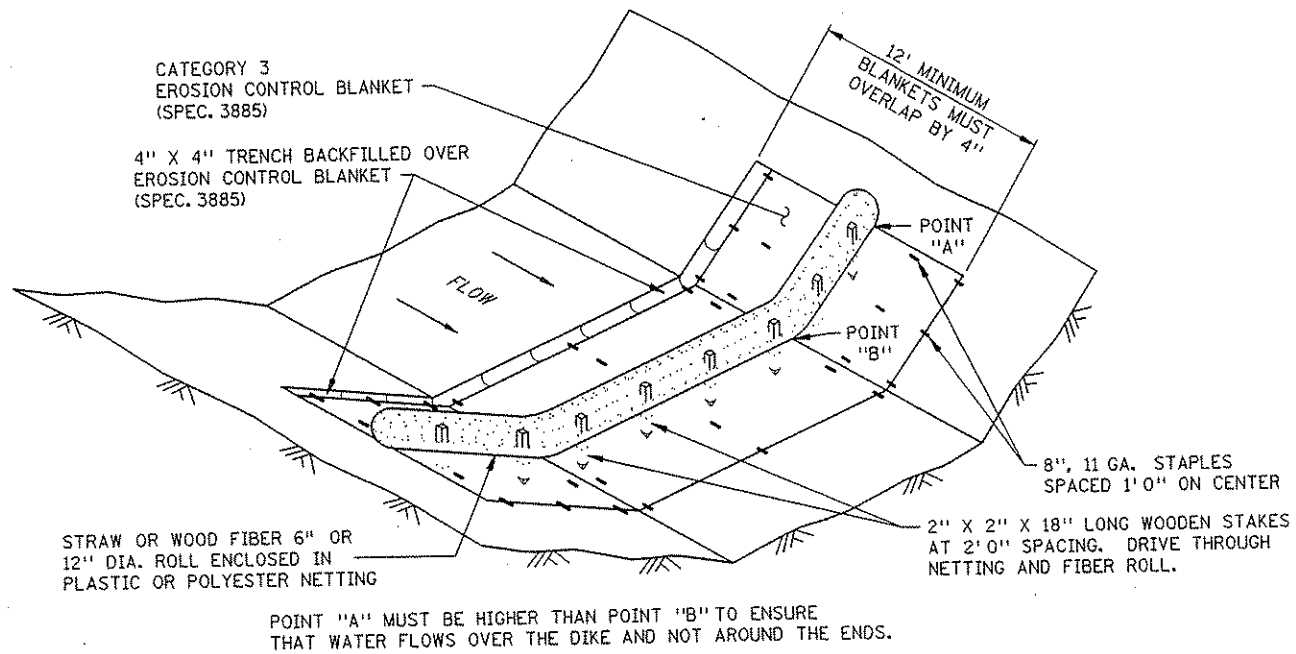


DESIGN GUIDELINES:
 MAX. WATER COURSE FLOW VELOCITY: 15 FT./SEC.
 CONTRIBUTING SLOPE AREA: 3 ACRES

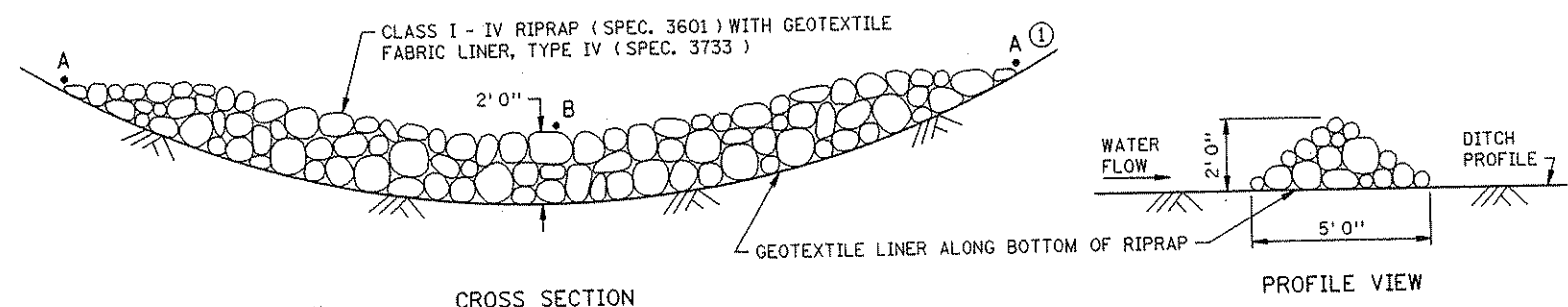
NOTES:
 SEE SPECS. 2573 & 3886.
 ① ROCKS AT ENTRANCE CLEAN WORKSITE MUD OFF OF TRUCK TIRES BEFORE DRIVING ON MAIN ROAD. THIS WILL PREVENT AUTO DAMAGE. WE NEED TO KEEP CONSTRUCTION SEDIMENT OUT OF DRAINAGE SYSTEMS AND WETLANDS.

STANDARD SHEET NO. 5-297.405 (2 OF 4)	TITLE: TEMPORARY EROSION CONTROL
STANDARD APPROVED: JULY 30, 2001	
STATE PROJ. NO. 02-652-02	SHEET NO. 70A OF 559 SHEETS

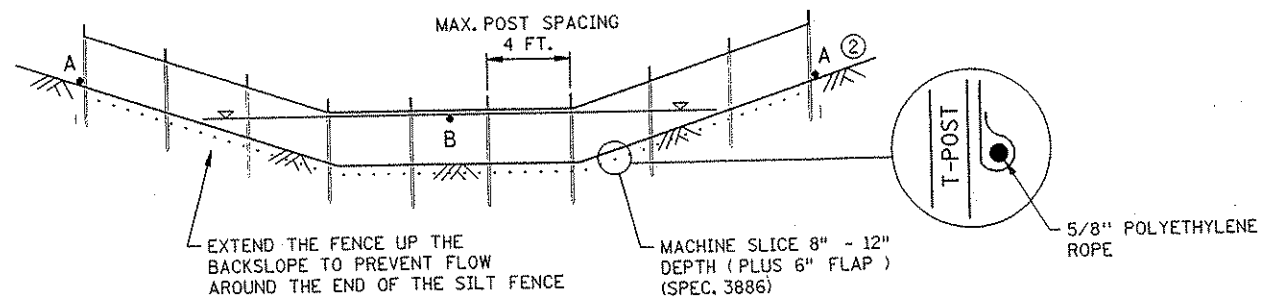
PLOTTED - REVISED:
 \$\$\$PATHFILENAME\$\$\$
 FILE NAME: S4053G01.SPN



BIOROLL BLANKET SYSTEM
(TYPE 3 SPEC. 3889)



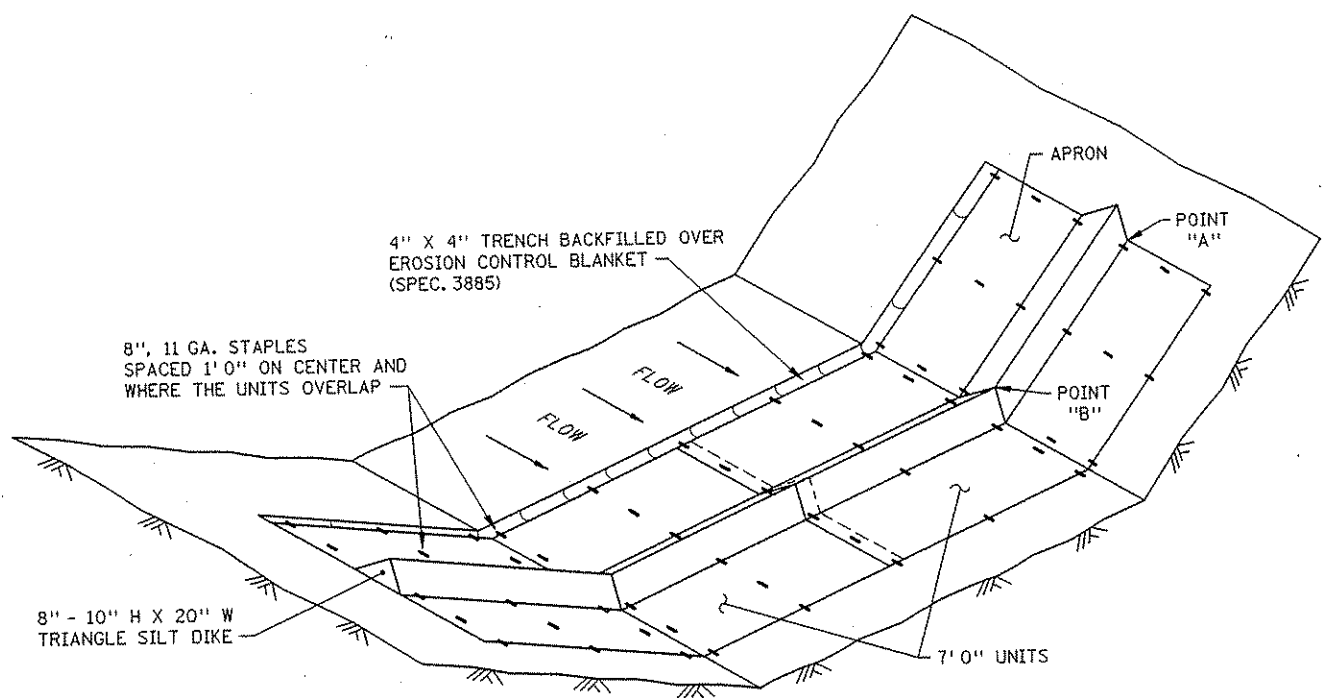
ROCK CHECK
(TYPE 7 SPEC. 3889)



DESIGN GUIDELINES	
STORM FREQUENCY	2 YR. - 24 HR.
MAX. DITCH GRADE	5%
MAX. DRAINAGE AREA	1 ACRE

NOTE:
WHEN SEDIMENT BUILD UP REACHES 1.5 FT.,
THE SILT SHOULD BE REMOVED OR A SECOND
SILT FENCE BUILT UPSTREAM FROM THE
EXISTING ONE AT A SUITABLE DISTANCE.

MACHINE SLICED
(TYPE 1 SPEC. 3889)



GEOTEXTILE TRIANGULAR DIKE
(TYPE 6 SPEC. 3889)

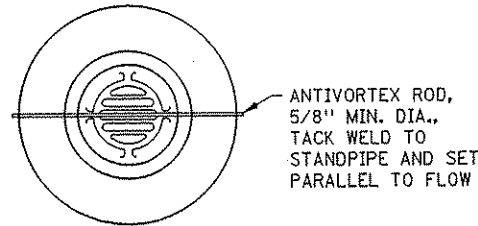
NOTES:
SEE SPECS. 2573, 3885, 3886 & 3889.
SPACING OF DITCH CHECKS IS DEPENDENT ON DRAINAGE AREA AND
GRADES. SEE DISTRICT HYDRAULICS ENGINEER FOR RECOMMENDATIONS.
① POINT A MUST BE 2'6\"/>

STANDARD SHEET NO. 5-297.405 (3 OF 4)	TITLE: TEMPORARY EROSION CONTROL DITCH CHECKS
STANDARD APPROVED: JULY 30, 2001	
STATE PROJ. NO. 02-652-02	SHEET NO. 70B OF 559 SHEETS

PLOTTED/REVISED: 44444444444444444444

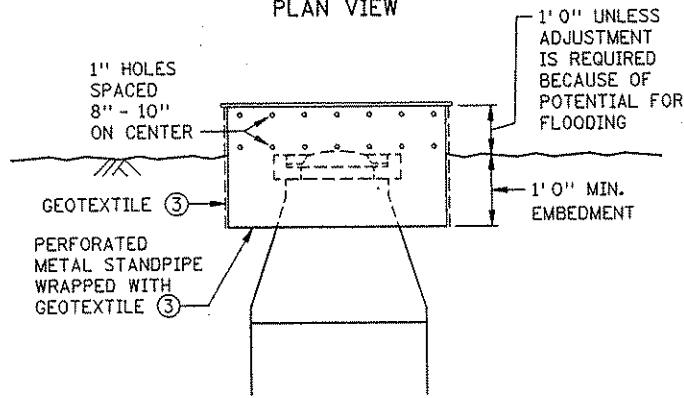
44444444444444444444

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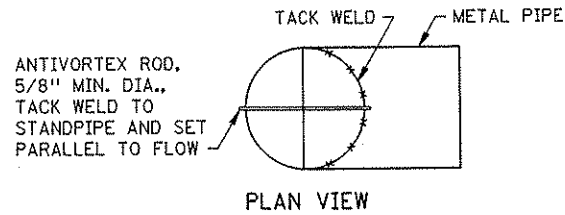
ANTIVORTEX ROD,
5/8" MIN. DIA.,
TACK WELD TO
STANDPIPE AND SET
PARALLEL TO FLOW

PLAN VIEW

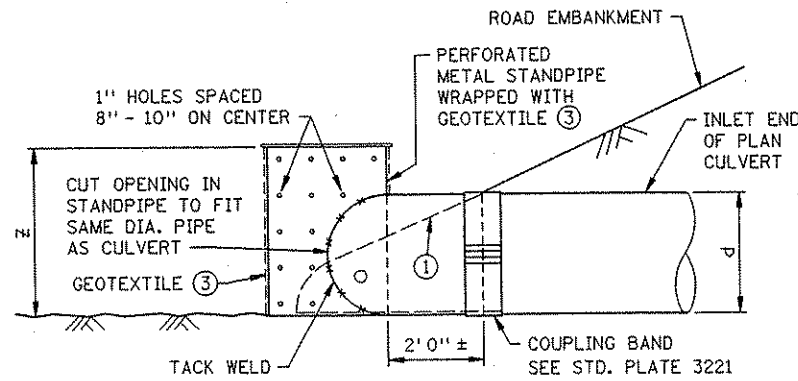


ELEVATION
 RISER STANDPIPE
 TO PROTECT DROP INLET
 (TYPE A SPEC. 3891)

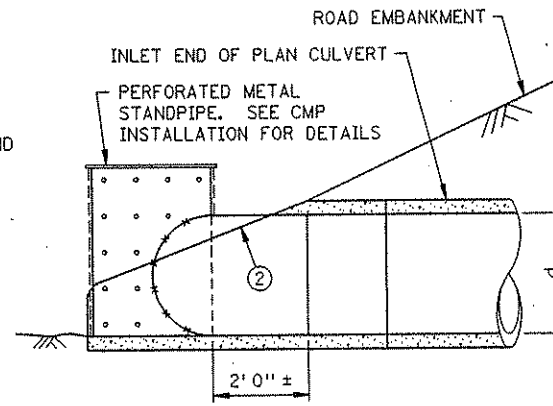
DESIGN GUIDELINES:
 STORM FREQUENCY: 10 YEAR - 24 HOUR.



PLAN VIEW



ELEVATION OF CMP INSTALLATION



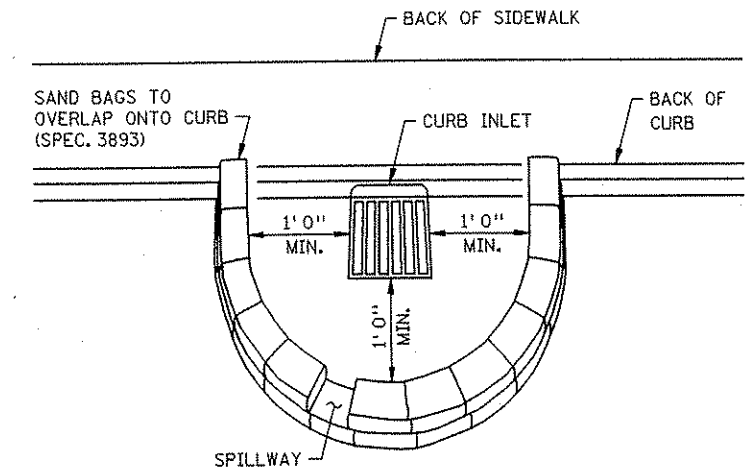
ELEVATION OF RCP INSTALLATION

RISER STANDPIPE

FOR SEDIMENT CONTROL ON CULVERT INLET
 (TYPE D SPEC. 3891)

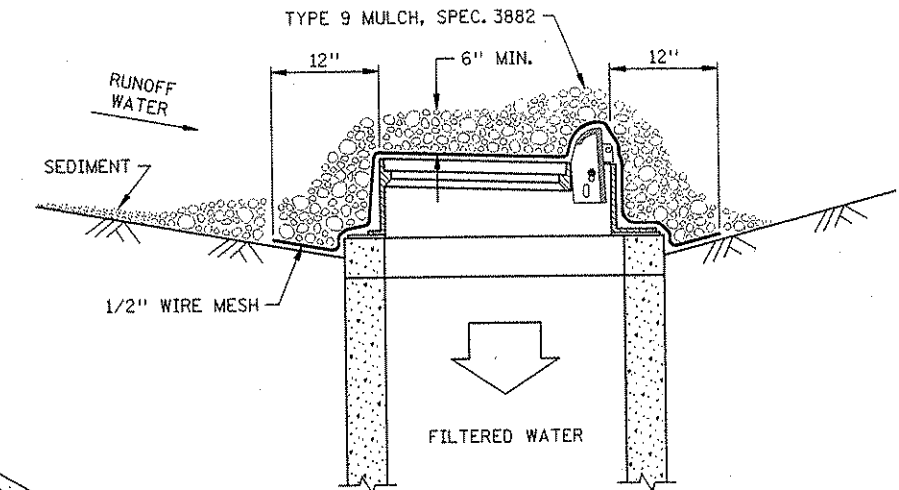
d = DIA. OF STANDPIPE EQUAL TO DIA. OF PLAN CULVERT
 z = LENGTH OF PERFORATED STANDPIPE ($d + 12"$)

DESIGN GUIDELINES:
 CULVERT SIZE: 12" - 36"
 STORM FREQUENCY: 10 YR. - 24 HR.



CURB INLET SAND BAG BARRIER

THIS INLET PROTECTION IS USED DURING ROUGH GRADING
 ONLY. USE BEFORE ROAD IS OPEN TO TRAFFIC OR IS PAVED.
 (TYPE B OR C SPEC. 3891)

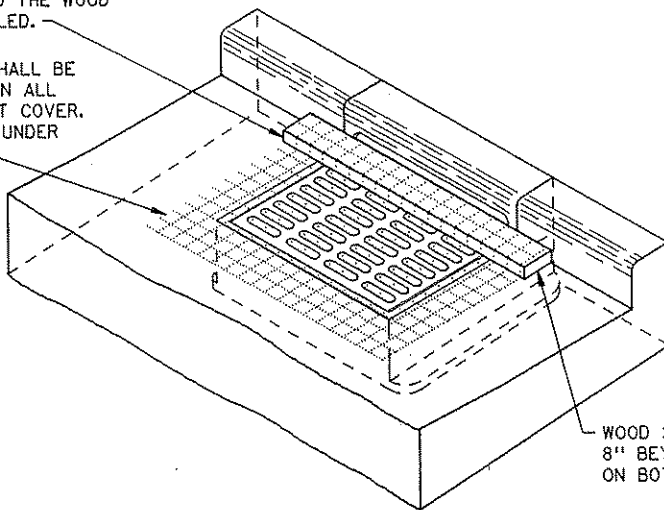


AGGREGATE FILTER AT CURB INLET

(TYPE B OR C SPEC. 3891)

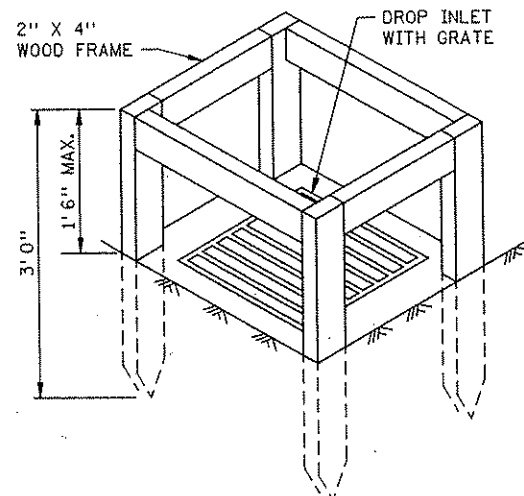
AN ADDITIONAL 18" OF GEOTEXTILE
 IS WRAPPED AROUND THE WOOD
 2" X 4" AND STAPLED.

GEOTEXTILE SIZE SHALL BE
 8" MIN. GREATER ON ALL
 SIDES OF THE INLET COVER.
 PLACE GEOTEXTILE UNDER
 INLET COVER. ③



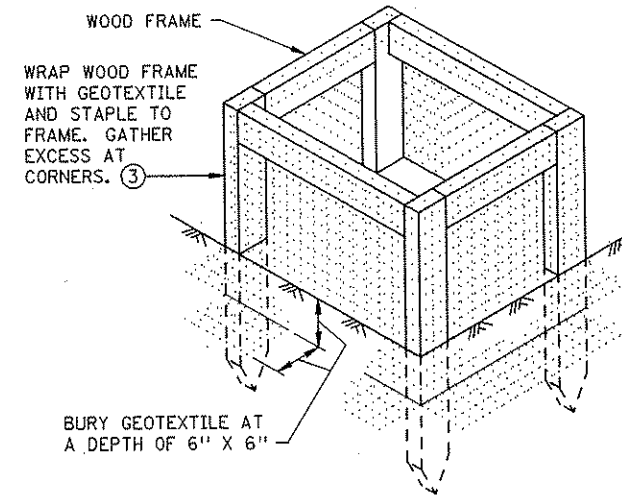
SILT FENCE BOX TO PROTECT DROP INLETS

(TYPE A SPEC. 3891)



SILT FENCE BOX TO PROTECT DROP INLETS

USE WHERE INLET DRAINS AN AREA WITH SLOPES AT 1:3 OR LESS
 (TYPE A SPEC. 3891)



BURY GEOTEXTILE AT
 A DEPTH OF 6" X 6"

NOTES:

- SEE SPECS. 2573, 3891 & 3893.
- MANUFACTURED ALTERNATIVES LISTED ON Mn/DOT'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED.
- ① FOR CMP, REMOVE TEMPORARY STANDPIPE AND INSTALL CULVERT APRON AFTER VEGETATION IS ESTABLISHED.
- ② FOR RCP, INSTALL CULVERT APRON AND SLIDE TEMPORARY STANDPIPE INTO RCP. AFTER VEGETATION IS ESTABLISHED REMOVE TEMPORARY STANDPIPE.
- ③ ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONO/MONO, MEETING SPEC. 3886 FOR MACHINE SLICED.

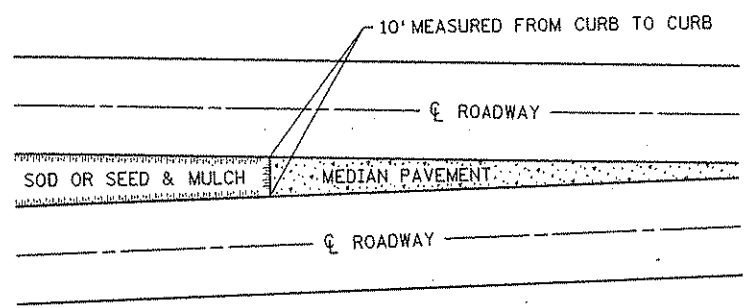
STANDARD SHEET NO.
 5-297.405 (4 OF 4)
 STANDARD APPROVED:
 JULY 30, 2001

TITLE:
TEMPORARY EROSION CONTROL
TEMPORARY INLET PROTECTION

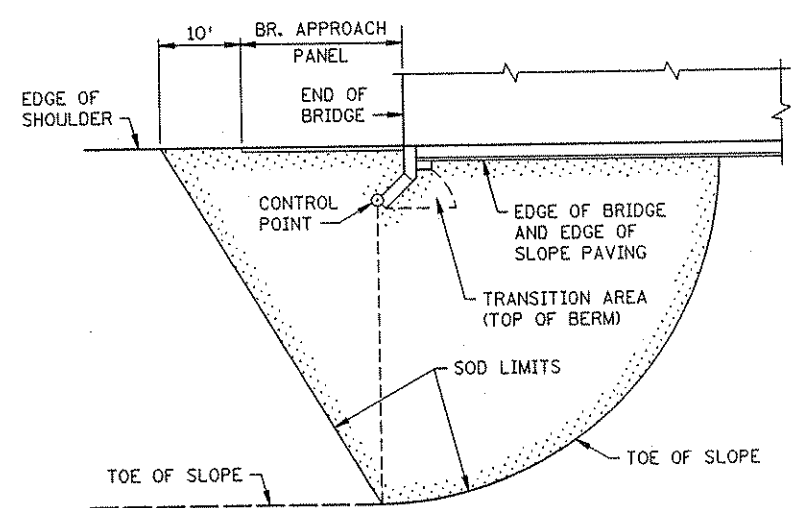
STATE PROJ. NO. 02-652-02

SHEET NO. 70C OF 559 SHEETS

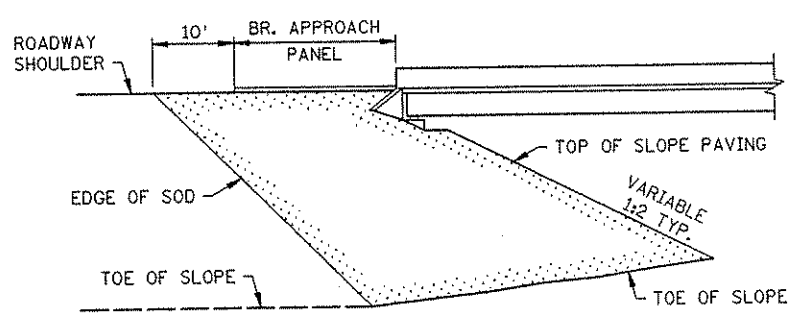
PLOTTED REVISED: 11/10/85
 PLOT NAME: 440...JTNAM004
 FILE NAME: S406A85.SPN
 PLOT NAME: 440...JTNAM004
 FILE NAME: S406A85.SPN



SODDING LIMITS AT GORE AREA

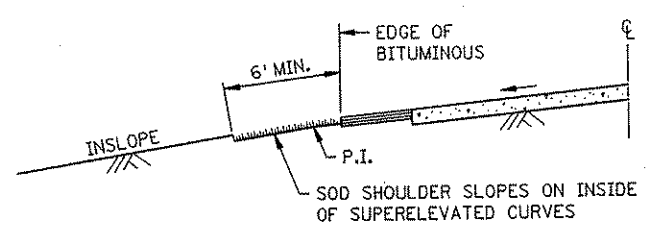


PLAN

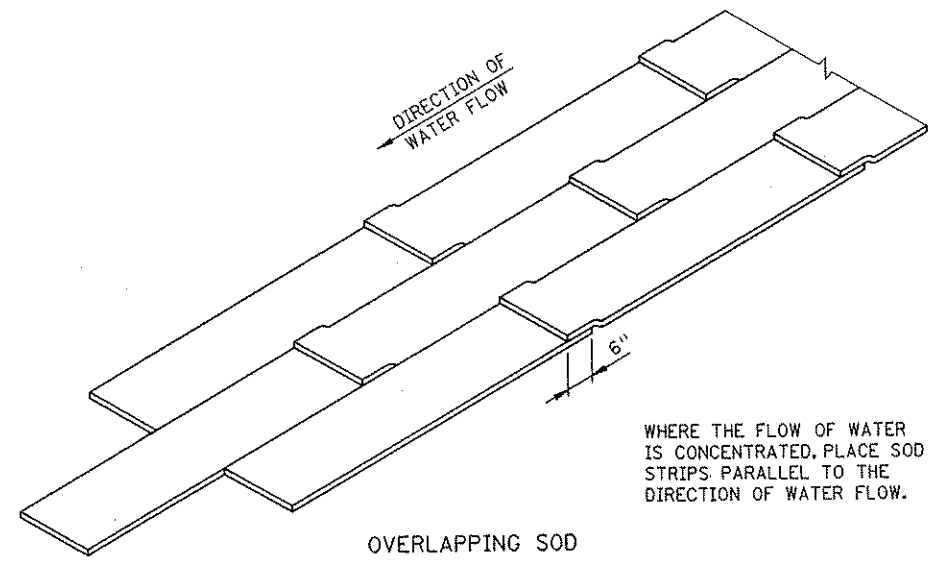


ELEVATION

SODDING LIMITS AT BRIDGE APPROACH FILLS

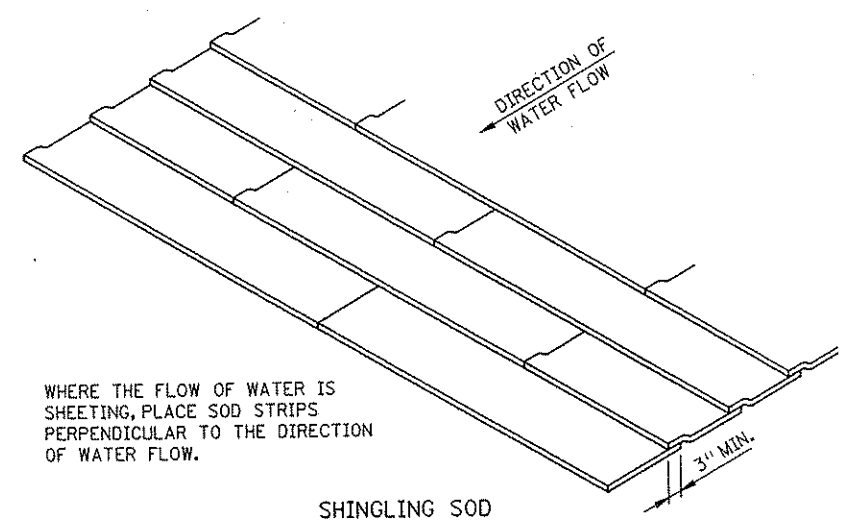


SODDING INSLOPES OF SUPERELEVATED CURVES



OVERLAPPING SOD

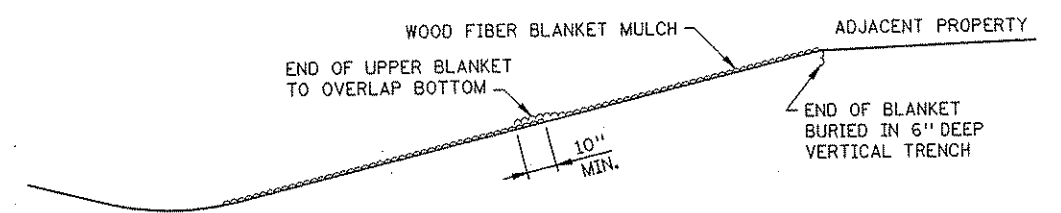
WHERE THE FLOW OF WATER IS CONCENTRATED, PLACE SOD STRIPS PARALLEL TO THE DIRECTION OF WATER FLOW.



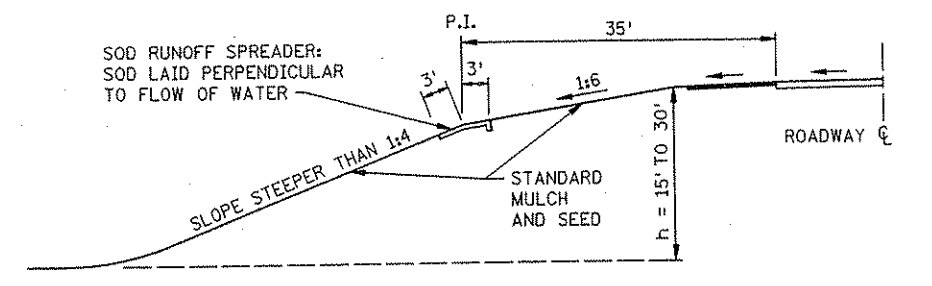
SHINGLING SOD

WHERE THE FLOW OF WATER IS SHEETING, PLACE SOD STRIPS PERPENDICULAR TO THE DIRECTION OF WATER FLOW.

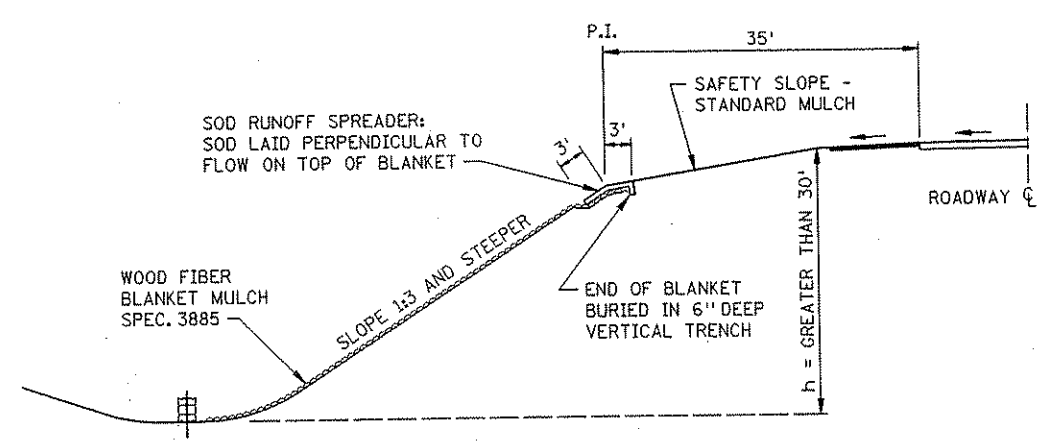
SPECIAL SOD PLACEMENT TECHNIQUES



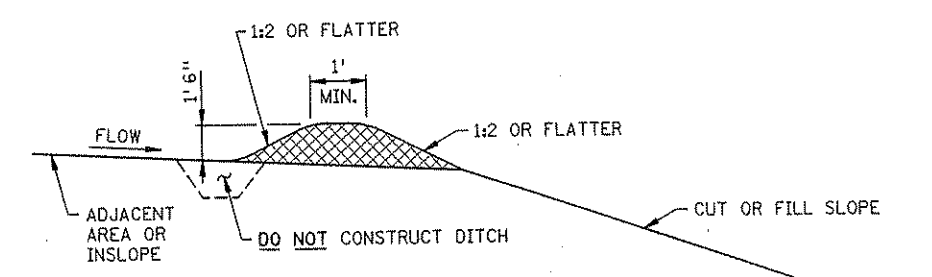
WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE



BROKEN-BACK SAFETY FILL SLOPE



WOOD FIBER BLANKET INSTALLATION ON AN INSLOPE (WHEN REQUIRED)



PERMANENT SLOPE PROTECTION DIKE

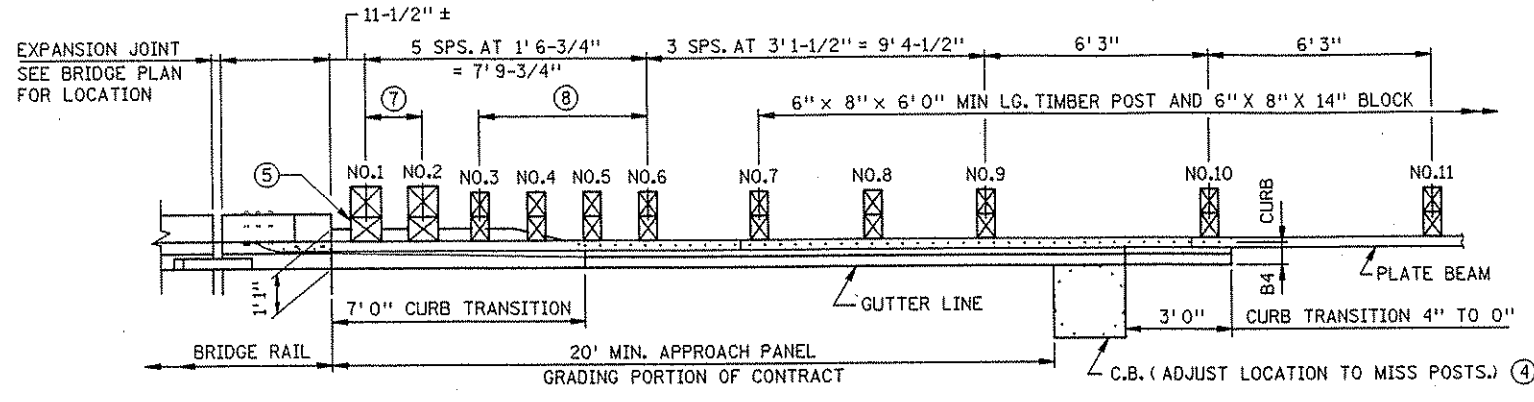
STANDARD SHEET NO. 5-297.406	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS AND AT GORE AREAS & BRIDGE APPROACH FILLS
STANDARD APPROVED: JANUARY 31, 1985	
STATE PROJ. NO. 02-652-02	SHEET NO. 71 OF 559 SHEETS

REVISION DATE
10-26-2000

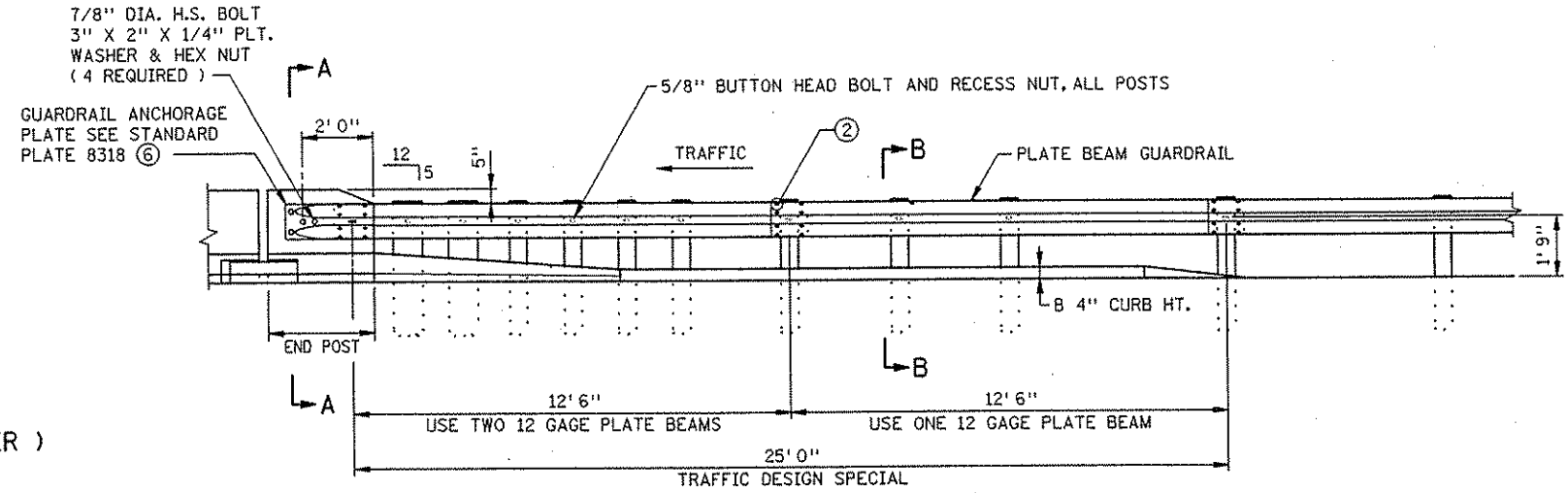
PLOTTED/REVISED: \$\$\$DATE\$\$\$

\$\$\$PATHFILENAME\$\$\$

PLOT NAME: \$\$\$JTNAME\$\$\$ PATH & FILE NAME: FILE NAME: S605D01.SPN

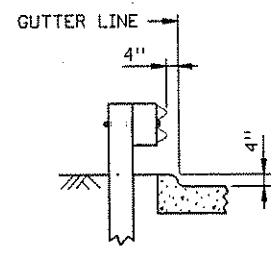


PLAN

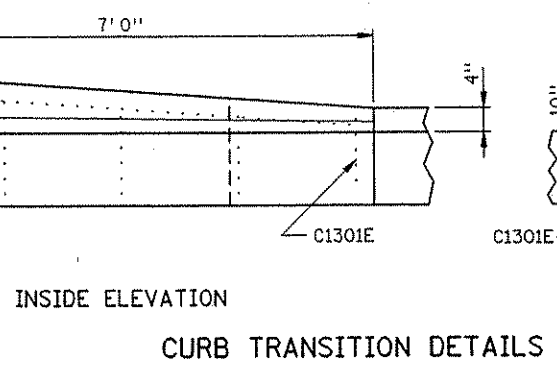
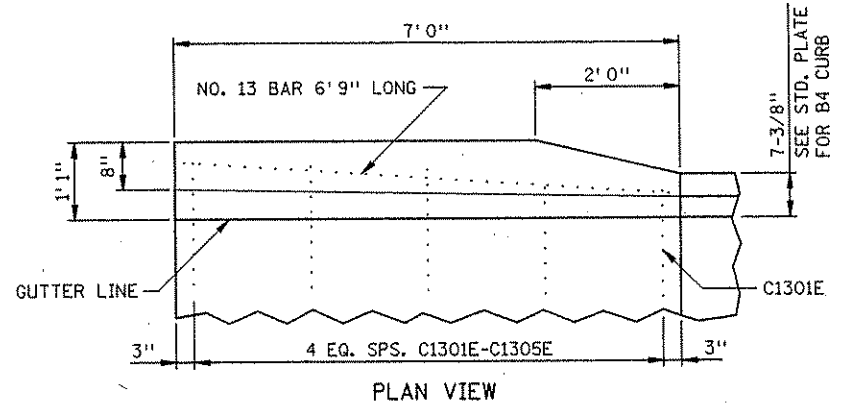


ELEVATION

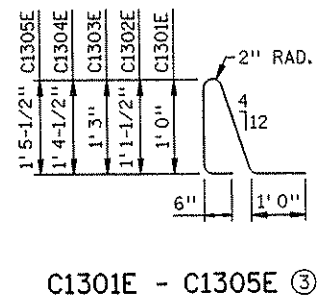
SECTION A - A
F SHAPE RAIL (F BARRIER)
(PARALLEL WINGWALL SHOWN)



SECTION B-B



CURB TRANSITION DETAILS



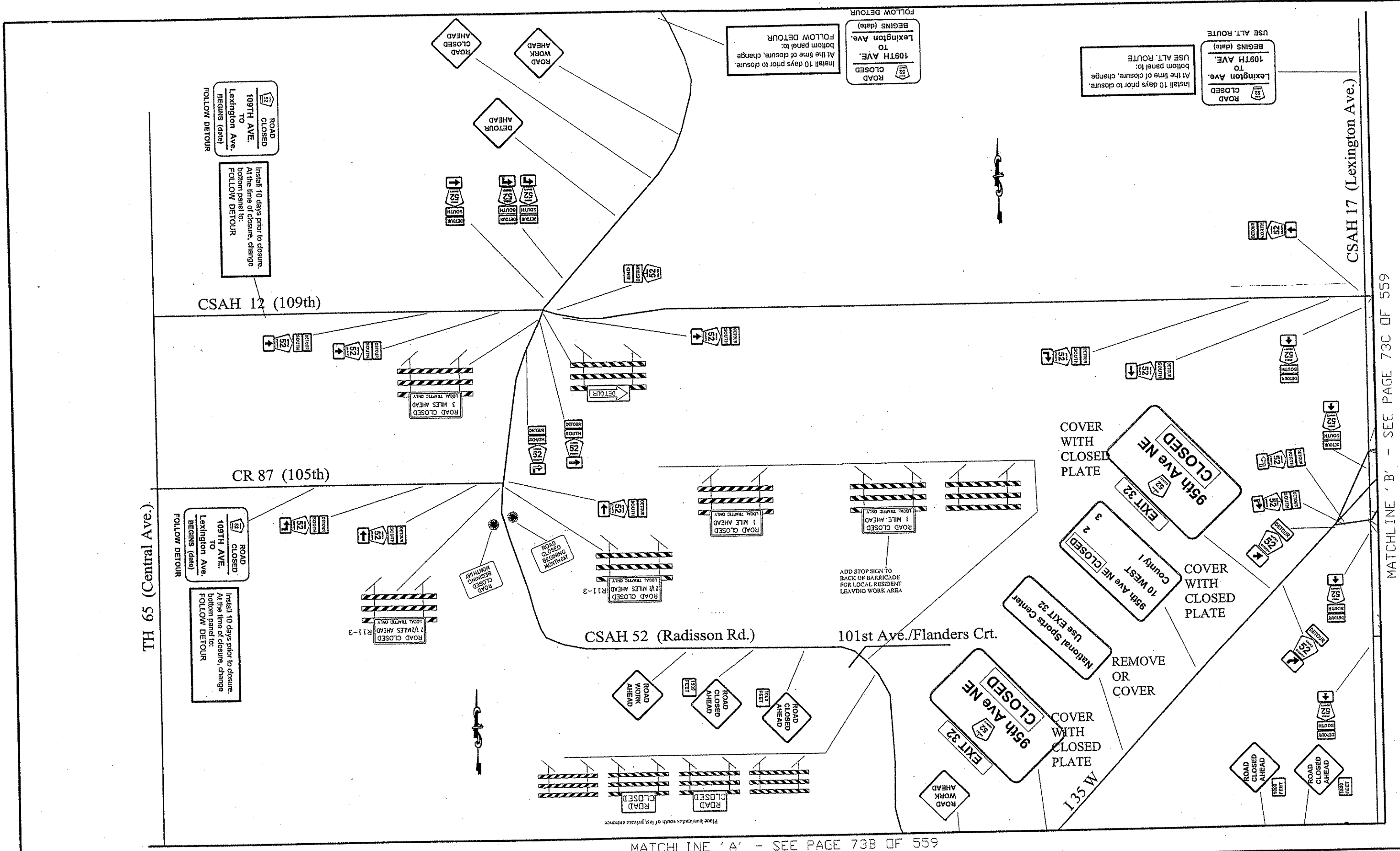
NOTES:

ALL REBARS ARE IN METRIC DESIGNATIONS

- ① END OF TRANSITION TO MATCH BRIDGE RAIL SURFACE.
- ② 5/8" DIA. X 1-1/4" LONG BUTTON HEAD BOLTS AND NUTS TYPICAL AT SPLICES.
- ③ REINFORCEMENT TO BE EPOXY COATED AS PER SPEC. 3301.
- ④ SEE ROAD PLANS TO VERIFY ACTUAL DIMENSION AND LOCATION.
- ⑤ ADDITIONAL BLOCKING MAY BE REQUIRED TO CLEAR BRIDGE STRUCTURE. VERIFY IN FIELD.
- ⑥ SANDWICH ANCHOR PLATE BETWEEN RAIL BEAMS.
- ⑦ POSTS 1 AND 2 TO BE 10" X 10" X 8' 0" MINIMUM LONG TIMBER POST AND 10" X 8" X 14" BLOCK.
- ⑧ POSTS 3, 4, 5, AND 6 TO BE 6" X 8" X 7' 0" MINIMUM LONG TIMBER POST AND 6" X 8" X 14" BLOCK.

TRAFFIC BARRIER DESIGN SPECIAL

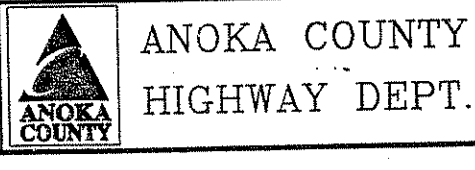
STANDARD SHEET NO. 5-297.605	TITLE: W-BEAM TRANSITION TO CONCRETE F-SHAPE SAFETY RAIL WITH APPROACH CURB (WOOD POST)
STANDARD APPROVED: APRIL 19, 2001	
STATE PROJ. NO. 02-652-02	SHEET NO. 72 OF 559 SHEETS



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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: LYNDON ROBERTSON
 SIGNATURE: [Signature]
 DATE: 12/26/01 REG. NO. 25066

DRAWN BY: SRT DATE 11/30/01
 DESIGN BY: RDR DATE 11/09/01
 CHECKED BY: JRP DATE 12/04/01

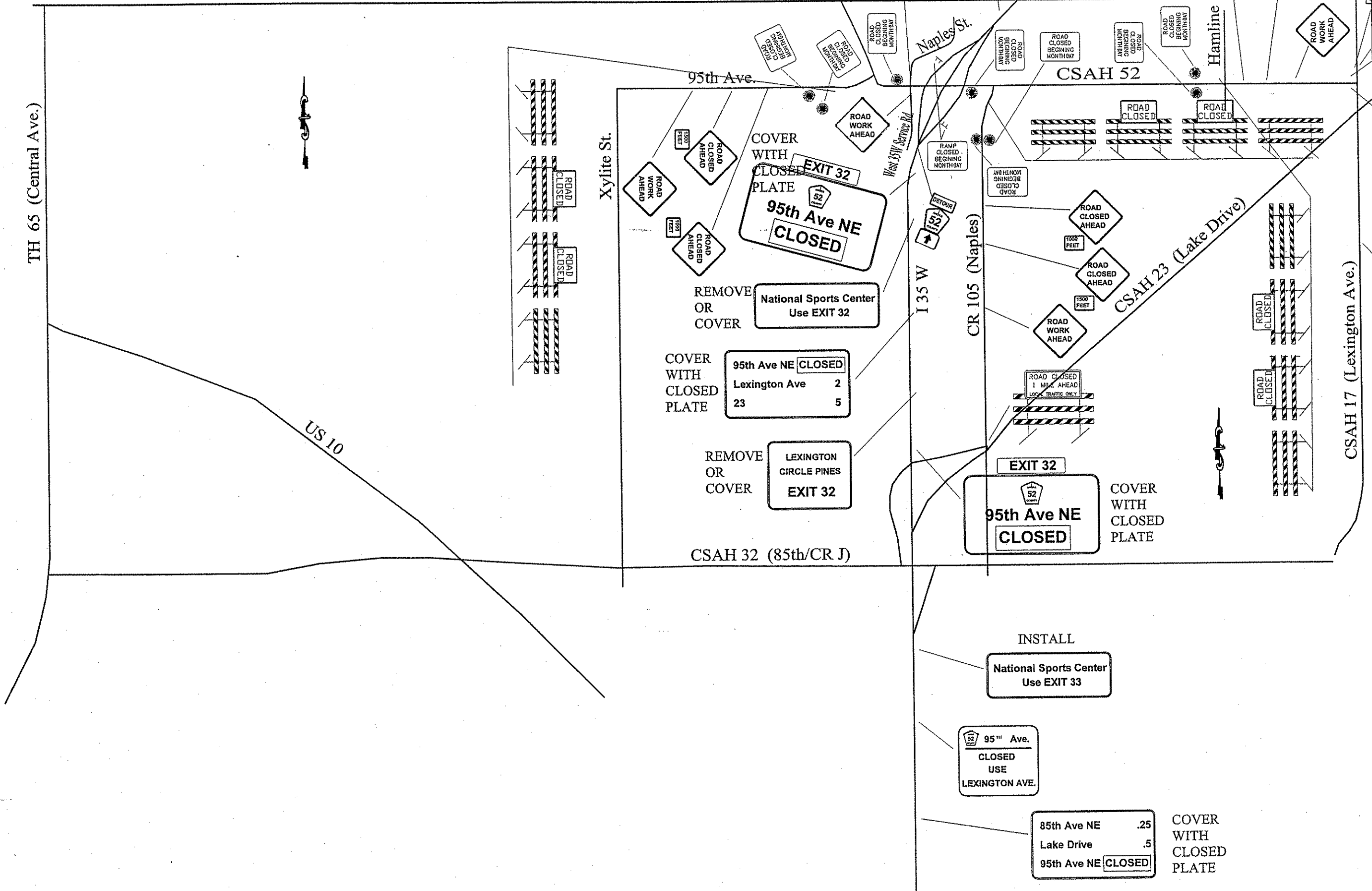


STATE PROJECT NO. _____
 STATE AID PROJECT NO. 02-652-02
 STATE AID PROJECT NO. 02-652-03
 STATE AID PROJECT NO. 02-652-04

DETOUR PLAN
 C.S.A.H. 52 RECONSTRUCTION
 Sheet 73A of 559 Sheets

MATCHLINE 'B' - SEE PAGE 73C OF 559

MATCHLINE 'A' - SEE PAGE 73B OF 559



TH 65 (Central Ave.)

US 10

Xylite St.

95th Ave.

Naples St.

CSAH 52

Hamline

COVER WITH CLOSED PLATE
EXIT 32
95th Ave NE
CLOSED

REMOVE OR COVER
National Sports Center
Use EXIT 32

COVER WITH CLOSED PLATE
95th Ave NE CLOSED
Lexington Ave 2
23 5

REMOVE OR COVER
LEXINGTON CIRCLE PINES
EXIT 32

CSAH 32 (85th/CR J)

I 35 W

CR 105 (Naples)

CSAH 23 (Lake Drive)

CSAH 17 (Lexington Ave.)

EXIT 32
95th Ave NE
CLOSED
COVER WITH CLOSED PLATE

INSTALL
National Sports Center
Use EXIT 33

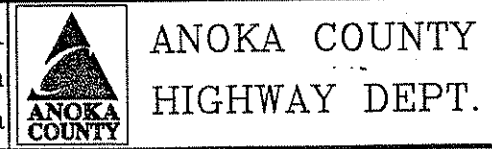
95th Ave.
CLOSED USE
LEXINGTON AVE.

85th Ave NE .25
Lake Drive .5
95th Ave NE CLOSED
COVER WITH CLOSED PLATE

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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: LINDA ROBERT
 SIGNATURE: [Signature]
 DATE: 12/12/01 REG. NO. 25066

DRAWN BY SRT DATE 11/30/01
 DESIGN BY RDR DATE 11/09/01
 CHECKED BY JKP DATE 12/04/01



STATE PROJECT NO. _____
 STATE AID PROJECT NO. 02-652-02
 STATE AID PROJECT NO. 02-652-03
 STATE AID PROJECT NO. 02-652-04

DETOUR PLAN
 C.S.A.H. 52 RECONSTRUCTION
 Sheet 73B of 559 Sheets

MATCHLINE 'C' - SEE PAGE 73B OF 559

MATCHLINE 'B' - SEE PAGE 73A OF 559

CSAH 17 (Lexington Ave.)

CSAH 17 (Lexington Ave.)

ROAD CLOSED
Lexington Ave.
TO
109TH AVE.
BEGINS (date)
FOLLOW DETOUR

Install 10 days prior to closure.
At the time of closure, change
bottom panel to:
FOLLOW DETOUR

ROAD CLOSED
1/2 MILES AHEAD
LOCAL TRAFFIC ONLY

ROAD CLOSED
Lexington Ave.
TO
109TH AVE.
BEGINS (date)
FOLLOW DETOUR

Install 10 days prior to closure.
At the time of closure, change
bottom panel to:
FOLLOW DETOUR

ROAD CLOSED
Lexington Ave.
TO
109TH AVE.
BEGINS (date)
FOLLOW DETOUR

Install 10 days prior to closure.
At the time of closure, change
bottom panel to:
FOLLOW DETOUR

INSTALL
National Sports Center
Use EXIT 33

95th Ave.
CLOSED
USE
LEXINGTON AVE.

COVER
WITH
CLOSED
PLATE
Lexington Ave 1.5
95th Ave NE CLOSED

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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: LYNDA ROBIENT

SIGNATURE: [Signature]

DATE: 12/26/01 REG. NO. 25066

DRAWN BY: SRT DATE: 11/30/01

DESIGN BY: RDR DATE: 11/09/01

CHECKED BY: KP DATE: 12/04/01



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-652-02

STATE AID PROJECT NO. 02-652-03

STATE AID PROJECT NO. 02-652-04

DETOUR PLAN
C.S.A.H. 52 RECONSTRUCTION

Sheet 73C of 559 Sheets

M. U. T. C. D. CODE	SIZE	INSERT	QUANTITY	M. U. T. C. D. CODE	SIZE	INSERT	QUANTITY	M. U. T. C. D. CODE	SIZE	INSERT	QUANTITY
W20-1	48' x 48'		5	R11-3	60' x 30'		SEE NOTE	M4-8	24' x 12'		3
W20-2	48' x 48'		1	TYPE III	8 FOOT		3	M3-3A	24' x 12'		3
W20-3	48' x 48'		9	R11-3	60' x 30'		SEE NOTE	M1-6	24' x 24'		7
W20-100P	24' x 18'		4	TYPE III	8 FOOT		1		21' x 15'		4
M4-10L	48' x 18'		SEE NOTE	TYPE III L	8 FOOT		SEE NOTE				4
TYPE III	8 FOOT		1				4	M4-8	24' x 12'		2
M4-10R	48' x 18'		SEE NOTE	TYPE III R	8 FOOT		SEE NOTE	M3-1A	24' x 12'		2
TYPE III	8 FOOT		1				5	M1-6	24' x 24'		2
R11-2	48' x 30'		SEE NOTE				SEE NOTE		21' x 15'		2
TYPE III	8 FOOT		8	G20-MDD	168' x 132'		2				5
R11-3	60' x 30'		SEE NOTE				4	M4-6A	24' x 12'		
TYPE III	8 FOOT		1	G20-X2	132' x 108'		3	M4-8	24' x 12'		2
R11-3	60' x 30'		SEE NOTE	G20-X2	132' x 108'		3	M1-6	36' x 36'		2
TYPE III	8 FOOT		2	G20-X1	60' x 48'		2		30' x 24'		2
							2				1
							10	E-SERIES	220' x 48'		2
								PLATE	VARIABLE		8

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL.
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M. U. T. C. D.

* SIGNS TO BE INSTALLED A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL CLOSING DATE OF ROAD CLOSURE AND IMPLEMENTATION OF DETOUR SIGNING. SIGNS TO BE REMOVED AT TIME OF DETOUR INSTALLATION.

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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: LYNDON ROBERT
 SIGNATURE: [Signature]
 DATE: 12/16/01 REG. NO. 25066

DRAWN BY: SRT DATE: 11/30/01
 DESIGN BY: ROB DATE: 11/09/01
 CHECKED BY: KP DATE: 12/04/01



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. 02-652-02
 STATE AID PROJECT NO. 02-652-03
 STATE AID PROJECT NO. 02-652-04

DETOUR PLAN
 C.S.A.H. 52 RECONSTRUCTION
 Sheet 73D of 559 Sheets

GENERAL CONSTRUCTION STAGING AND TRAFFIC CONTROL NOTES

1. THE CONSTRUCTION STAGING AND TRAFFIC CONTROL SHOWN FOR THIS PROJECT ARE THE SUGGESTED METHODS OF CONSTRUCTION UNDER TRAFFIC. HOWEVER, THE CONTRACTOR HAS THE OPTION OF PRESENTING ALTERNATIVE CONSTRUCTION STAGING AND TRAFFIC CONTROL PLANS TO THE ENGINEER FOR APPROVAL.
2. ACCESS TO ALL ADJACENT PROPERTIES SHALL BE MAINTAINED TO THE SATISFACTION OF THE ENGINEER THROUGHOUT THE CONSTRUCTION.
3. ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MMUTCD, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" DATED JANUARY, 2001, AND THE MINNESOTA STANDARD SIGNS MANUAL.
4. STOP SIGNS SHALL BE RELOCATED TO MAINTAIN TRAFFIC CONTROL AS DIRECTED BY THE ENGINEER.
5. ALL TRAFFIC LANES SHALL BE A MINIMUM OF 12' IN WIDTH UNLESS NOTED OTHERWISE.
6. PORTABLE CONCRETE BARRIER PLACEMENT AND END TREATMENTS SHALL CONFORM TO FIGURES VI-12G AND VI-12B OF THE MMUTCD.
7. REMOVE CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
8. ALL ROADWAYS SHALL BE PROPERLY STRIPED BEFORE OPENED TO TRAFFIC. M1-1
9. DRAINAGE SHALL BE MAINTAINED DURING CONSTRUCTION STAGES AS DIRECTED THE ENGINEER. TEMPORARY BLOCKING OF STRUCTURES AND PIPE WILL BE CONSIDERED INCIDENTAL WORK.
10. TURF ESTABLISHMENT AND EROSION CONTROL MEASURES WILL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF THE SPECIFICATIONS 2573 AND 2575.
11. SIGNAL WORK WILL BE PERFORMED AS DIRECTED BY THE ENGINEER.
12. ALL SIGN POSTS USED TO POST DETOUR ROUTES SHALL BE REMOVED AND THE SURROUNDING GROUND RETURNED TO ITS ORIGINAL CONDITION WHEN DETOUR IS TAKEN OFF THAT STREET.
13. ALL SIGNS AND BARRICADES PROVIDED BY THE CONTRACTOR FOR TRAFFIC CONTROL DURING CONSTRUCTION SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE JOB SITE WHEN THEY ARE NO LONGER NEEDED.
14. FOR LONGITUDINAL DROP-OFFS TREATMENT, SEE PAGES 6K-111 AND 6K-112 OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
15. ALL TRAFFIC CONTROL DEVICES SHALL HAVE RETRO-REFLECTIVE SHEETING.
16. BARRICADES SHALL BE TYPE III AND SHALL BE CONSTRUCTED OF LIGHT MATERIAL (SEE STANDARD PLATE 8000I FOR RECOMMENDED SUPPORT).
17. THE ACTUAL NUMBER OF BARRICADES AT EACH LOCATION REQUIRED MAY VARY DEPENDING UPON THE SIZE OF BARRICADES USED, THE WIDTH OF THE ROAD CLOSURE, AND THE MOVEMENT OF LOCAL AND CONSTRUCTION TRAFFIC.
18. THESE TRAFFIC CONTROL LAYOUTS DO NOT SHOW ALL INPLACE SIGNING. CONTRACTOR SHALL RELOCATE ALL APPROPRIATE INPLACE SIGNING TO MAINTAIN PROPER SIGN VISIBILITY DURING CONSTRUCTION AS DEEMED NECESSARY BY THE ENGINEER.
19. CENTERLINE CULVERTS SHALL BE CONSTRUCTED UNDER LOCAL TRAFFIC. TRAFFIC CONTROL SHALL BE PROVIDED PER TYPICAL ROAD CLOSURE DETAIL AND INCLUDED IN THE LUMP SUM COST OF 2563.601 TRAFFIC CONTROL STAGE A1.
20. TRAFFIC CONTROL SHALL BE PAID FOR AS A LUMP SUM PER STAGE ITEM. QUANTITIES SHOWN IN THE TEMPORARY TRAFFIC CONTROL DEVICES TABULATION ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT TO BE USED FOR PAY QUANTITIES. QUANTITIES SHOWN IN THIS TABULATION REFLECT THE MAXIMUM QUANTITY REQUIRED DURING ANY CONSTRUCTION STAGE.
21. THE LOCATIONS AND QUANTITIES OF TRAFFIC CONTROL DEVICES SHOWN ON THESE PLANS ARE APPROXIMATE AND ARE SUBJECT TO REVISION BY THE ENGINEER.
22. THE CONTRACTOR SHALL PROVIDE CHANNELIZING DEVICES (AND SIGNING IF NECESSARY) AT ALL PRIVATE ENTRANCE LOCATIONS WHERE NEEDED TO SAFELY GUIDE TRAFFIC TO AND FROM THE TRAVEL CORRIDOR TO THE SATISFACTION OF THE ENGINEER.
23. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, AS APPROPRIATE, ALL SIGNS, PAVEMENT MARKINGS AND DEVICES SHOWN ON THESE PLANS TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL INSTALL SALVAGED AND NEW PERMANENT SIGNING NECESSARY TO MAINTAIN TRAFFIC CONTROL AT TIMES AND LOCATION SPECIFIED BY THE ENGINEER.

TEMPORARY TRAFFIC CONTROL DEVICES (FOR INFORMATION ONLY)				
ITEM	SIGN NO. OR TYPE OF DEVICE	SIZE	COLOR	QUANTITY
	G20-2A	48" x 24"	BLACK ON ORANGE	8
	G20-X1	72" x 60"	BLACK ON ORANGE	7
	G20-X1	72" x 60"	BLACK ON ORANGE	4
	G20-X1	72" x 60"	BLACK ON ORANGE	2
	M2-1A	21" x 15"	WHITE ON BLUE	2
	M3-1A	24" x 12"	WHITE ON BLUE	3
	M3-3A	24" x 12"	WHITE ON BLUE	3
	M1-1	24" x 24"	WHITE ON RED AND BLUE	7
	M6-1A L	21" x 15"	WHITE ON BLUE	2
	M6-1A R	21" x 15"	WHITE ON BLUE	2
	M6-3A	21" x 15"	WHITE ON BLUE	2
	R1-1	36" x 36"	WHITE ON RED	13
	R1-4	18" x 6"	WHITE ON RED	3
	R3-7	30" x 30"	BLACK ON WHITE	1
	R4-7	24" x 30"	BLACK ON WHITE	3
	R11-2	48" x 30"	BLACK ON WHITE	14
	R11-4	60" x 30"	BLACK ON WHITE	1

TEMPORARY TRAFFIC CONTROL DEVICES (FOR INFORMATION ONLY)				
ITEM	SIGN NO. OR TYPE OF DEVICE	SIZE	COLOR	QUANTITY
	W1-4L	48" x 48"	BLACK ON ORANGE	2
	W1-4R	48" x 48"	BLACK ON ORANGE	1
	W1-4BL	48" x 48"	BLACK ON ORANGE	4
	W1-6	48" x 24"	BLACK ON ORANGE	10
	W1-7	48" x 24"	BLACK ON ORANGE	3
	W3-1g	48" x 48"	BLACK & RED ON ORANGE	2
	W4-2L	36" x 36"	BLACK ON ORANGE	2
	W6-3	30" x 30"	BLACK ON ORANGE	9
	W13-1	18" x 18"	BLACK ON ORANGE	3
	W14-X2	48" x 48"	BLACK ON ORANGE	4
	W20-1	48" x 48"	BLACK ON ORANGE	17
	W20-100P	24" x 18"	BLACK ON ORANGE	6
	W20-3	48" x 48"	BLACK ON ORANGE	3

TEMPORARY TRAFFIC CONTROL DEVICES (FOR INFORMATION ONLY)				
ITEM	SIGN NO. OR TYPE OF DEVICE	SIZE	COLOR	QUANTITY
	W20-X3R	48" x 48"	BLACK ON ORANGE	2
	W20-X3L	48" x 48"	BLACK ON ORANGE	1
	W20-X6	48" x 48"	BLACK ON ORANGE	2
	W20-X1L	48" x 48"	BLACK ON ORANGE	8
	W20-X1R	48" x 48"	BLACK ON ORANGE	2
	W21-X1	48" x 48"	BLACK ON ORANGE	4
	X4-4	18" x 36"	YELLOW ON BLACK	4
	TYPE III BARRICADE	8' (MIN.)	ORANGE ON WHITE	46
	RETRO REFLECTIVE DRUM			248
	ARROW BOARD			2
	MEDIAN BARRIER DELINEATOR		WHITE REFLECTOR	179
	MEDIAN BARRIER DELINEATOR		YELLOW REFLECTOR	199

TEMPORARY PAVEMENT MARKING								Q
ITEM	STAGE A1 L.F.	STAGE A2 L.F.	STAGE B1 L.F.	STAGE B2 L.F.	STAGE B3 L.F.	STAGE B4 L.F.	TOTAL L.F.	
4" DOUBLE SOLID LINE YELLOW PAINT - INTERIM	(1) 0	0	0	9040	8950	9000	26990	
4" SOLID LINE WHITE PAINT - INTERIM	(1) 0	0	0	19110	19390	20745	59245	
4" SOLID LINE YELLOW PAINT - INTERIM	(1) 0	0	0	2605	1215	1890	5710	
8" DOTTED LINE WHITE PAINT - INTERIM	(1) 0	0	0	0	200	200	400	
REMOVABLE 4" BROKEN LINE WHITE	(2) 2020	0	0	0	0	0	2020	
REMOVABLE 4" SOLID LINE WHITE	(2) 9926	14033	1900	0	0	0	25859	
REMOVABLE 4" SOLID LINE YELLOW	(2) 9921	995	180	0	0	0	11096	
REMOVABLE 4" DOUBLE LINE YELLOW	(2) 0	6206	420	0	0	0	6626	

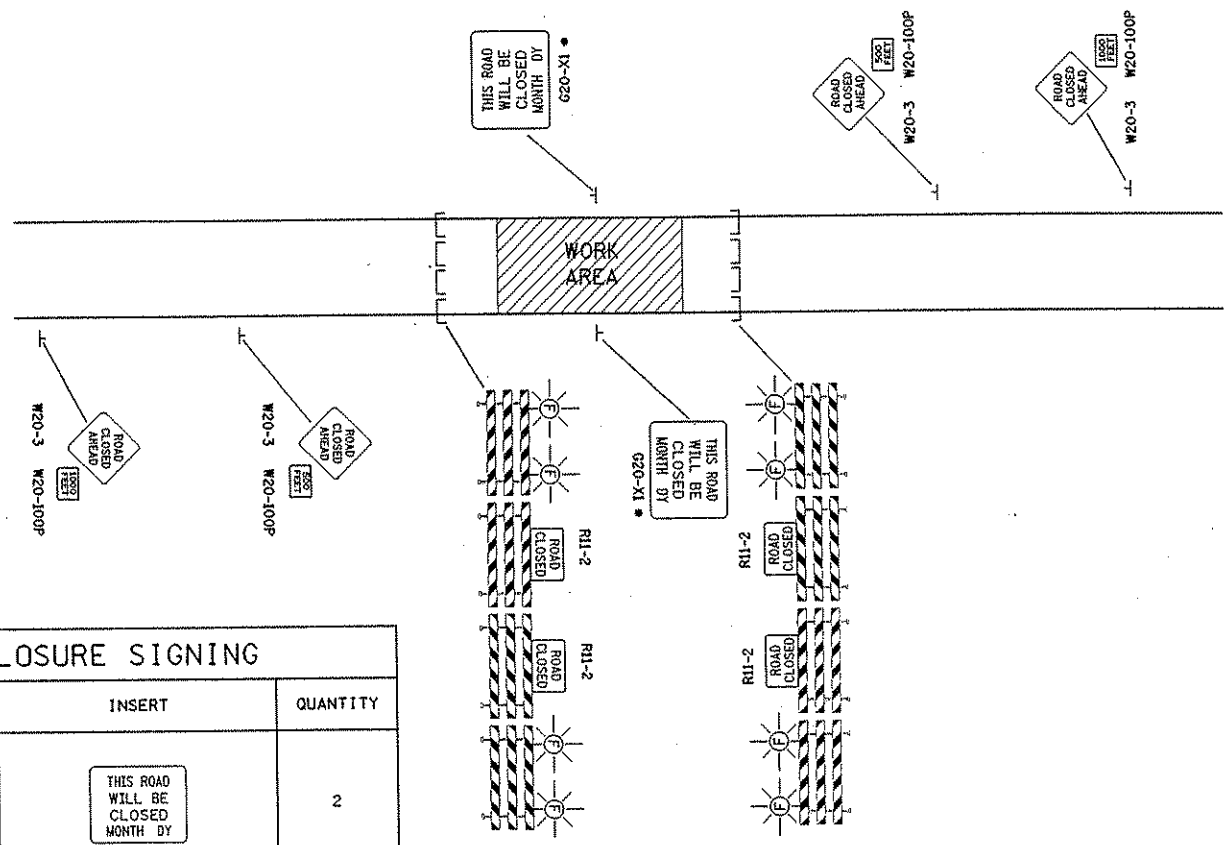
(1) PAID FOR AS 2580 INTERIM PAVEMENT MARKING.
 (2) PAID FOR AS 2581 REMOVABLE PREFORMED PLASTIC MARKING.

NO. DATE BY CKD APPR REVISION DATE 1-11-02 LIC. NO. 22465	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. [Signature]	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY TRAFFIC CONTROL TABULATION C.S.A.H. 52 RECONSTRUCTION		SHEET 74 OF 559
		DRAWN BY RRC DATE 9-21-01 DESIGN BY RRC DATE 9-20-01 CHECKED BY JMW DATE 9-24-01				

TRAFFIC CONTROL PAY ITEMS							JJ	
LOCATION	COST PART.	RAISED PVMT. MARKER TEMP.	IMPACT ATTEN. BARRELS	RELOC. IMPACT ATTEN. BARRELS	CONC. MEDIAN BARRIER DESIGN 8337	RELOC. CONC. MEDIAN BARRIER DESIGN 8337		
		EACH	EACH	EACH	LIN FT	LIN FT		
STAGE A1								
	(A)							
	(B)							
	(C)		126			18775		
	(D)							
	(E)							
STAGE A2								
	(A)	18						
	(B)	45						
	(C)	21						
	(D)							
STAGE B1								
	(B)	45						
STAGE B2								
	(B)	65		54			1744	
STAGE B3								
	(B)	93						
STAGE B4								
	(B)	74						
SUBTOTALS		(A)	18					
SUBTOTALS		(B)	322		54		1744	
SUBTOTALS		(C)	21	126		18775		
SUBTOTALS		(D)						
SUBTOTALS		(E)						
TOTALS			361	126	54	18775	1744	

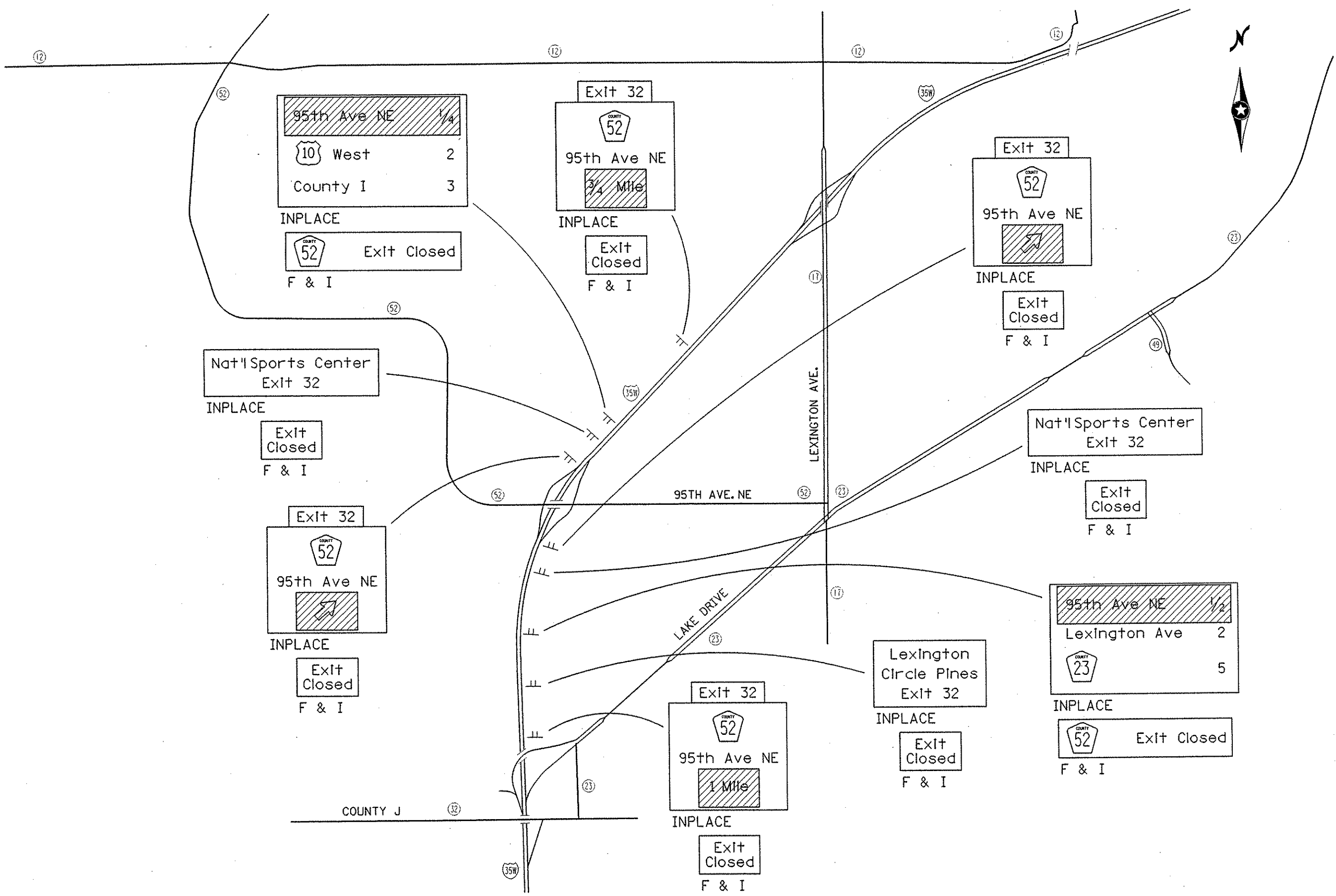
NOTES:
 (1) INCLUDES 202 WHITE REFLECTORS AND 159 YELLOW REFLECTORS.
 (2) TO REMAIN THE PROPERTY OF THE CONTRACTOR.

TYPICAL ROAD CLOSURE



ROAD CLOSURE SIGNING			
M. U. T. C. D. CODE	SIZE	INSERT	QUANTITY
G20-X1	72" x 60"		2
R11-2	48" x 30"		2
TYPE III	8 FOOT		2
R11-2	48" x 30"		2
TYPE III	8 FOOT		4
W20-3	48" x 48"		2
W20-100P	24" x 18"		2

* SIGNS TO BE INSTALLED A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL CLOSING DATE OF ROAD CLOSURE AND IMPLEMENTATION OF DETOUR SIGN. SIGNS TO BE REMOVED AT TIME OF DETOUR INSTALLATION.



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.

Joseph Waaran
 DATE 1-11-02 LIC. NO. 22465

DRAWN BY SJS DATE 09-26-01
 DESIGN BY BDP DATE 09-26-01
 CHECKED BY JMW DATE 09-26-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

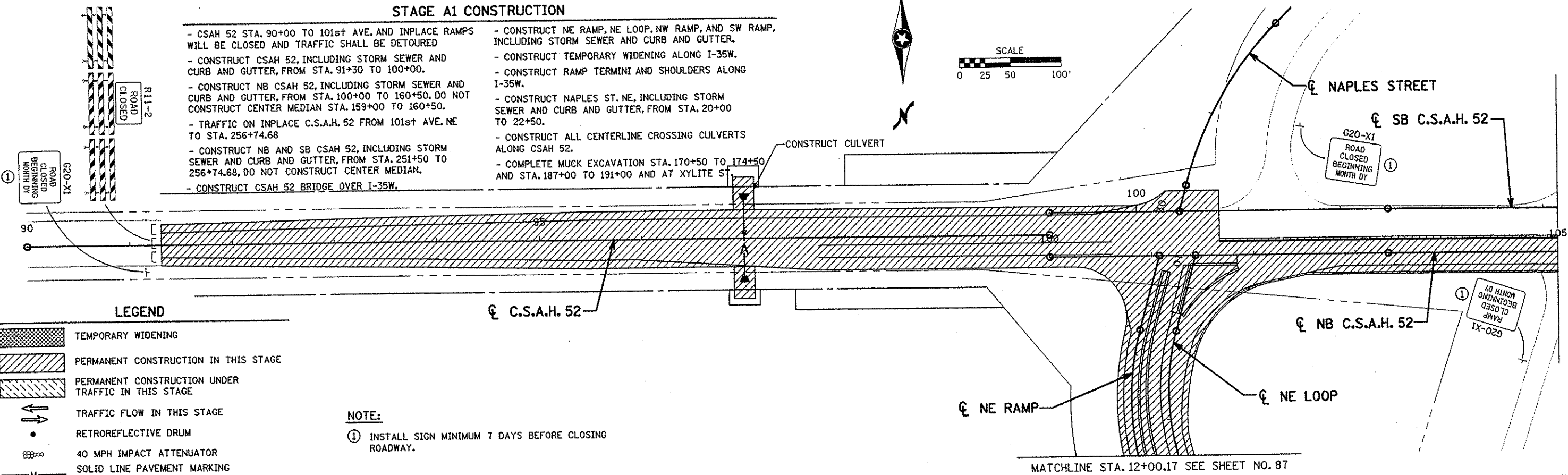
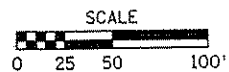
ANOKA COUNTY
 I-35W INPLACE SIGN CHANGES
 C.S.A.H. 52 RECONSTRUCTION

SHEET 75A OF 559

STAGE A1 CONSTRUCTION

- CSAH 52 STA. 90+00 TO 101st AVE. AND INPLACE RAMPS WILL BE CLOSED AND TRAFFIC SHALL BE DETOURED
- CONSTRUCT CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 91+30 TO 100+00.
- CONSTRUCT NB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 100+00 TO 160+50. DO NOT CONSTRUCT CENTER MEDIAN STA. 159+00 TO 160+50.
- TRAFFIC ON INPLACE C.S.A.H. 52 FROM 101st AVE. NE TO STA. 256+74.68
- CONSTRUCT NB AND SB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 251+50 TO 256+74.68, DO NOT CONSTRUCT CENTER MEDIAN.
- CONSTRUCT CSAH 52 BRIDGE OVER I-35W.
- CONSTRUCT NE RAMP, NE LOOP, NW RAMP, AND SW RAMP, INCLUDING STORM SEWER AND CURB AND GUTTER.
- CONSTRUCT TEMPORARY WIDENING ALONG I-35W.
- CONSTRUCT RAMP TERMINI AND SHOULDERS ALONG I-35W.
- CONSTRUCT NAPLES ST. NE, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 20+00 TO 22+50.
- CONSTRUCT ALL CENTERLINE CROSSING CULVERTS ALONG CSAH 52.
- COMPLETE MUCK EXCAVATION STA. 170+50 TO 174+50 AND STA. 187+00 TO 191+00 AND AT XYLITE ST.

CONSTRUCT CULVERT



LEGEND

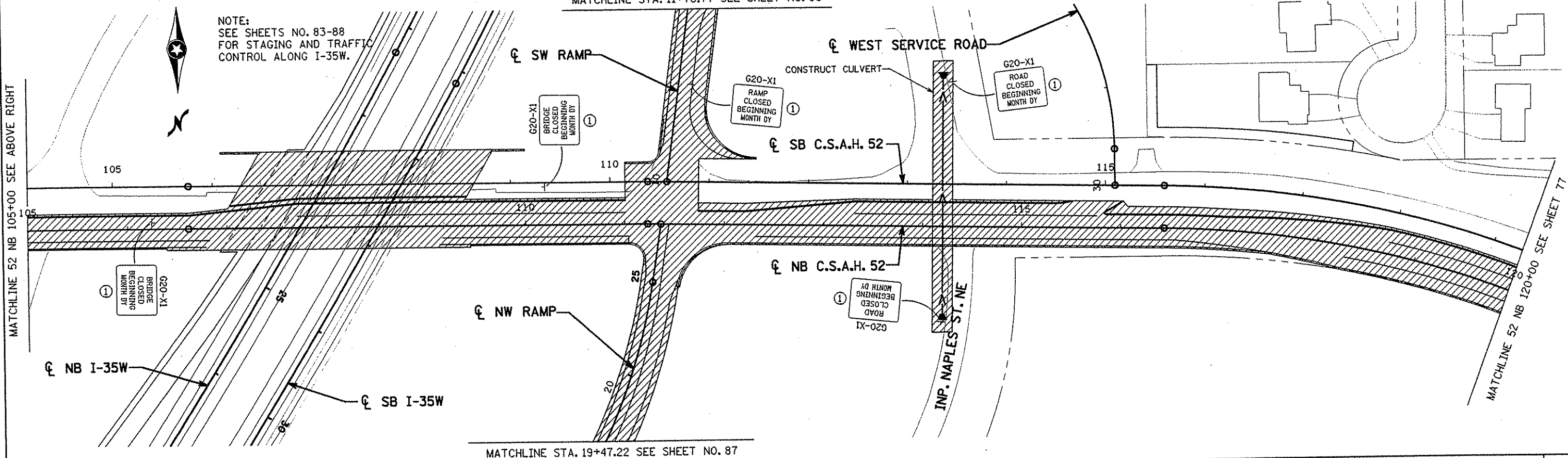
- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMS

NOTE:

- ① INSTALL SIGN MINIMUM 7 DAYS BEFORE CLOSING ROADWAY.

MATCHLINE STA. 11+76.77 SEE SHEET NO. 86

NOTE:
SEE SHEETS NO. 83-88
FOR STAGING AND TRAFFIC
CONTROL ALONG I-35W.



MATCHLINE STA. 19+47.22 SEE SHEET NO. 87

NO	DATE	BY	CRD	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.

Joseph W. Wimmer
DATE 2-11-02 LIC. NO. 22465

DRAWN BY	RRC	DATE	9-21-01
DESIGN BY	RRC	DATE	9-20-01
CHECKED BY	JMW	DATE	9-24-01



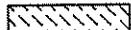




S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

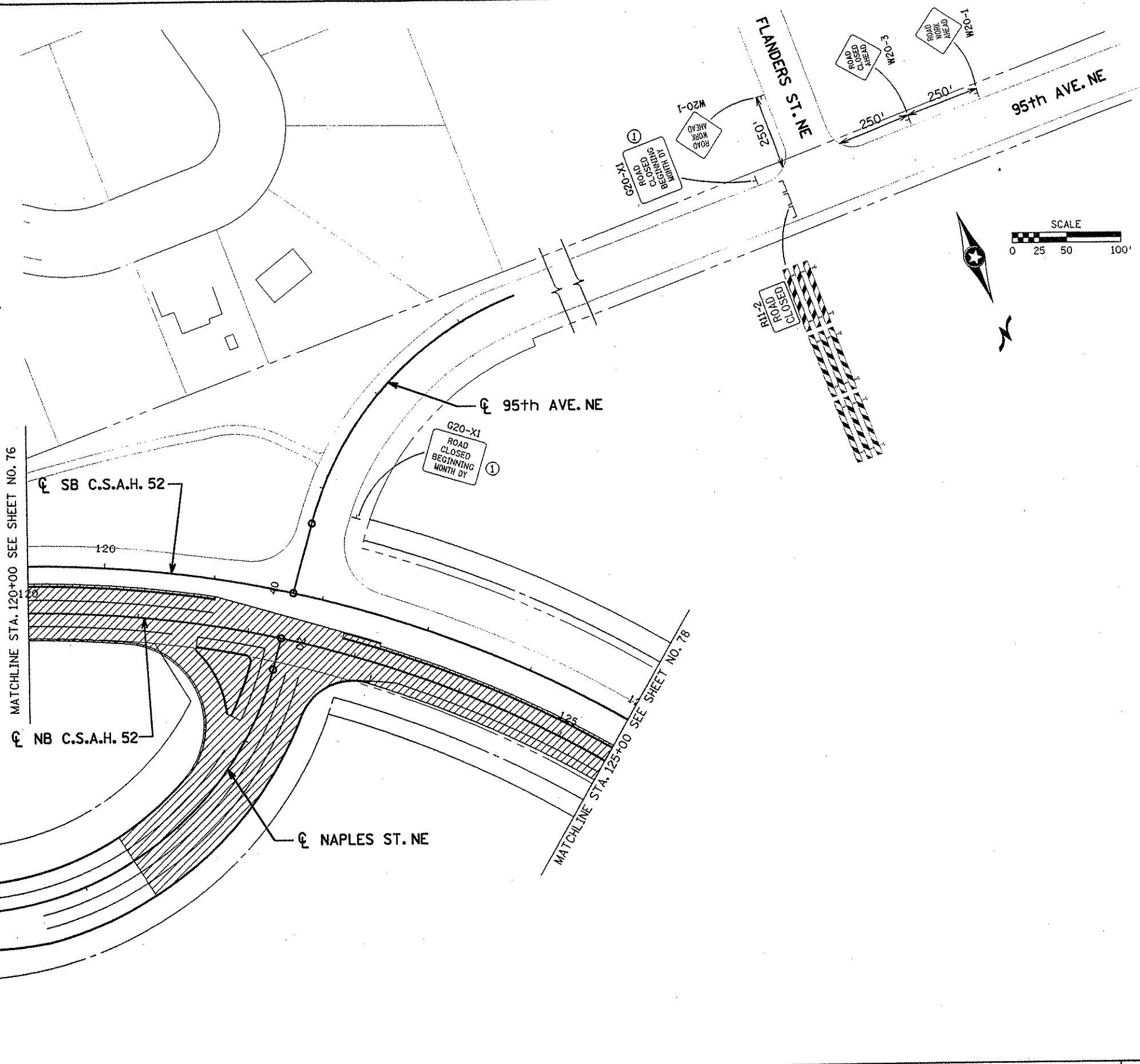
TKDA
TOLTZ, KING, OUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
STAGE A1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 NB STA. 90+00 TO 120+00

SHEET
76
OF
559

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs



INP. NAPLES ST. NE
 MATCHLINE STA. 28+50
 SEE SHEET NO. 76

MATCHLINE STA. 120+00 SEE SHEET NO. 76

MATCHLINE STA. 125+00 SEE SHEET NO. 78

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.
Joseph Wilson
 DATE 2-11-02 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

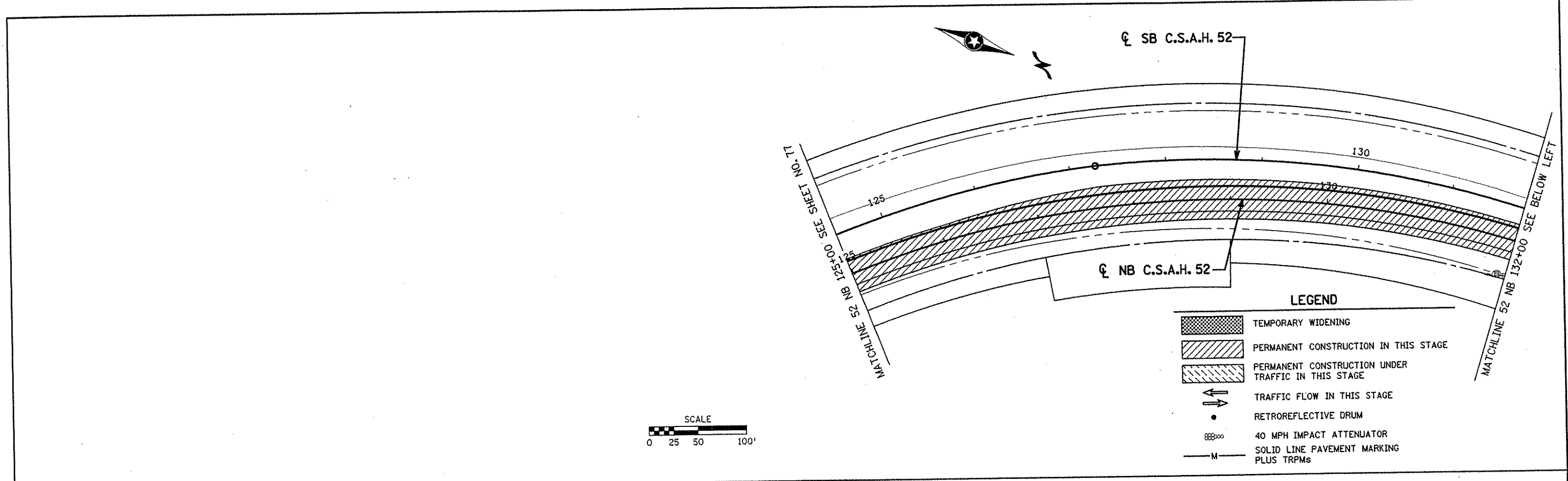
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022



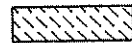




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 TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

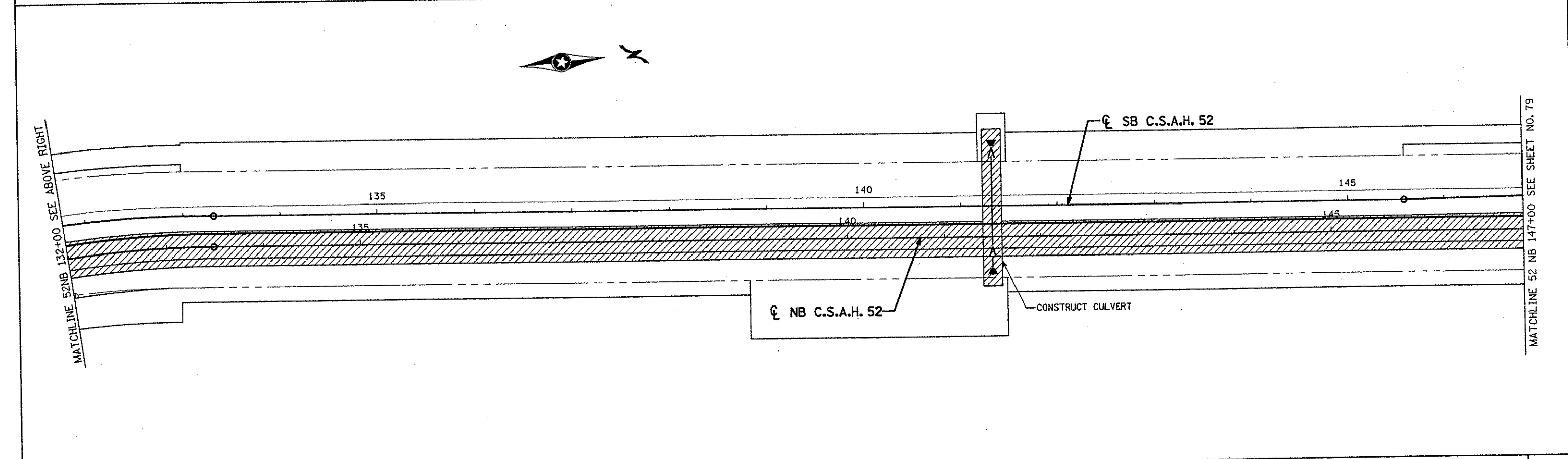
ANOKA COUNTY
 STAGE A1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 120+00 TO 125+00

SHEET
 77
 OF
 559

NAME: k:\a-f\anokoc\1174901\hwy-brdg\part4\roadway\staging\stgal-022.dwg/2002



- LEGEND**
-  TEMPORARY WIDENING
 -  PERMANENT CONSTRUCTION IN THIS STAGE
 -  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
 -  TRAFFIC FLOW IN THIS STAGE
 -  RETROREFLECTIVE DRUM
 -  40 MPH IMPACT ATTENUATOR
 -  SOLID LINE PAVEMENT MARKING PLUS TRPMs



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.

Joseph W. ...
 DATE 11.30.01 LIC. NO. 22465

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

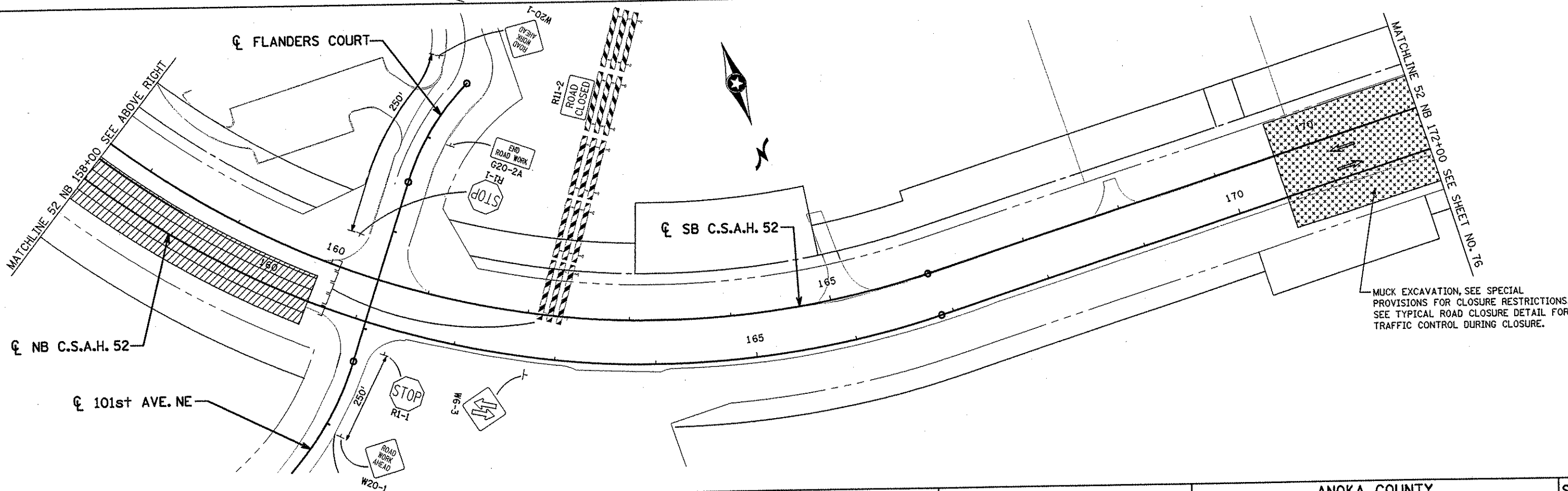
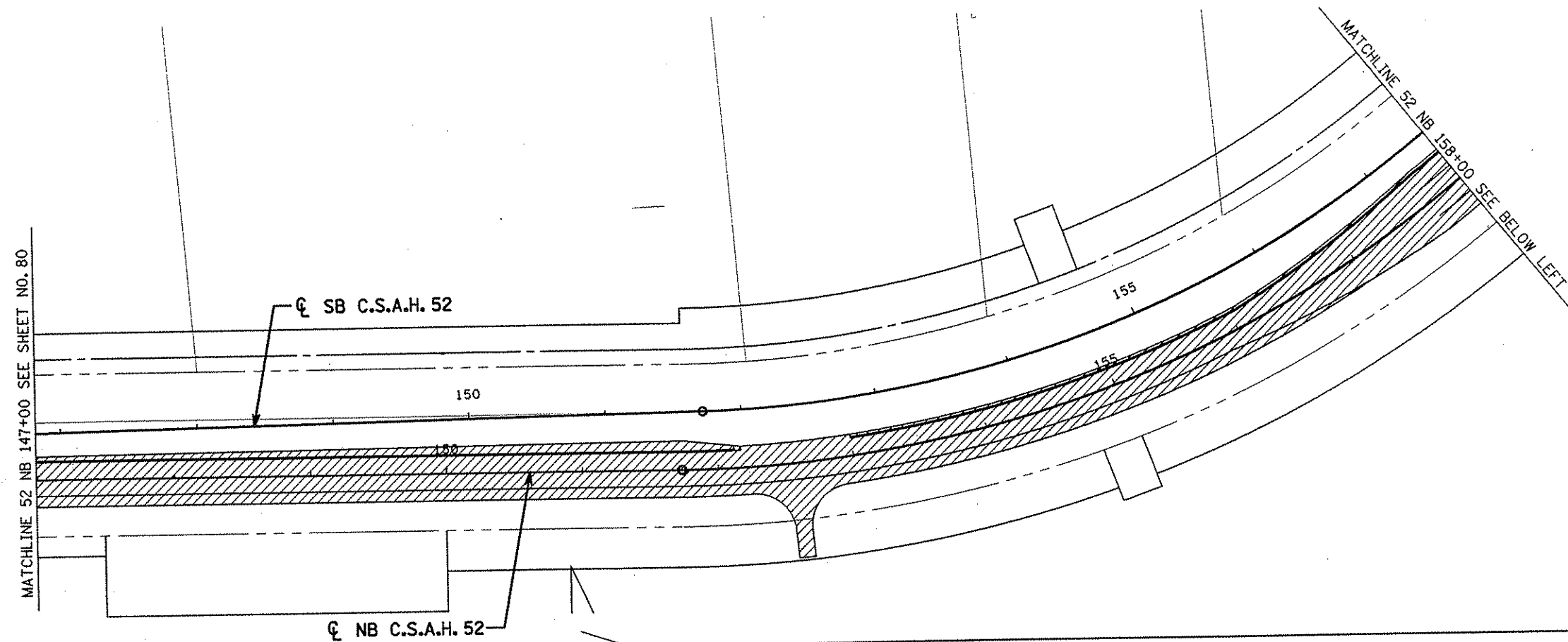
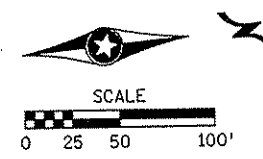
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE A1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 125+00 TO 147+00

SHEET
78
OF
559

NAME: k:\site\pro\c11749\part4\roadway3\staging\stgal-03.dgn 11/30/01



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.

Joseph Weiser
 DATE 11-30-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

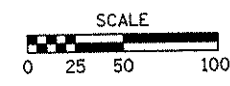
ANOKA COUNTY
 STAGE A1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 147+00 TO 172+00

SHEET
 79
 OF
 559

MATCHLINE 52 NB 172+00 SEE SHEET NO. 79

MUCK EXCAVATION, SEE SPECIAL PROVISIONS FOR CLOSURE RESTRICTIONS. SEE TYPICAL ROAD CLOSURE DETAIL FOR TRAFFIC CONTROL DURING CLOSURE.

CONSTRUCT CULVERT. SEE SPECIAL PROVISIONS FOR CLOSURE RESTRICTIONS. SEE TYPICAL ROAD CLOSURE DETAIL FOR TRAFFIC CONTROL DURING CLOSURE.



CONSTRUCT CULVERT. SEE SPECIAL PROVISIONS FOR CLOSURE RESTRICTIONS. SEE TYPICAL ROAD CLOSURE DETAIL FOR TRAFFIC CONTROL DURING CLOSURE.

MATCHLINE 52 NB 187+00 SEE BELOW LEFT

MATCHLINE 52 NB 187+00 SEE ABOVE RIGHT

MUCK EXCAVATION, SEE SPECIAL PROVISIONS FOR CLOSURE RESTRICTIONS. SEE TYPICAL ROAD CLOSURE DETAIL FOR TRAFFIC CONTROL DURING CLOSURE.



MATCHLINE 52 NB 202+00 SEE SHEET NO. 81

LEGEND

- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- MUCK EXCAVATION
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMs

NO	DATE	BY	CRD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\staging\stgal-05.dgn 11/30/01

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.

Joseph W. ...
DATE 11-30-01 LIC. NO. 22405

DRAWN BY	RRC	DATE	9-21-01
DESIGN BY	RRC	DATE	9-20-01
CHECKED BY	JMW	DATE	9-24-01

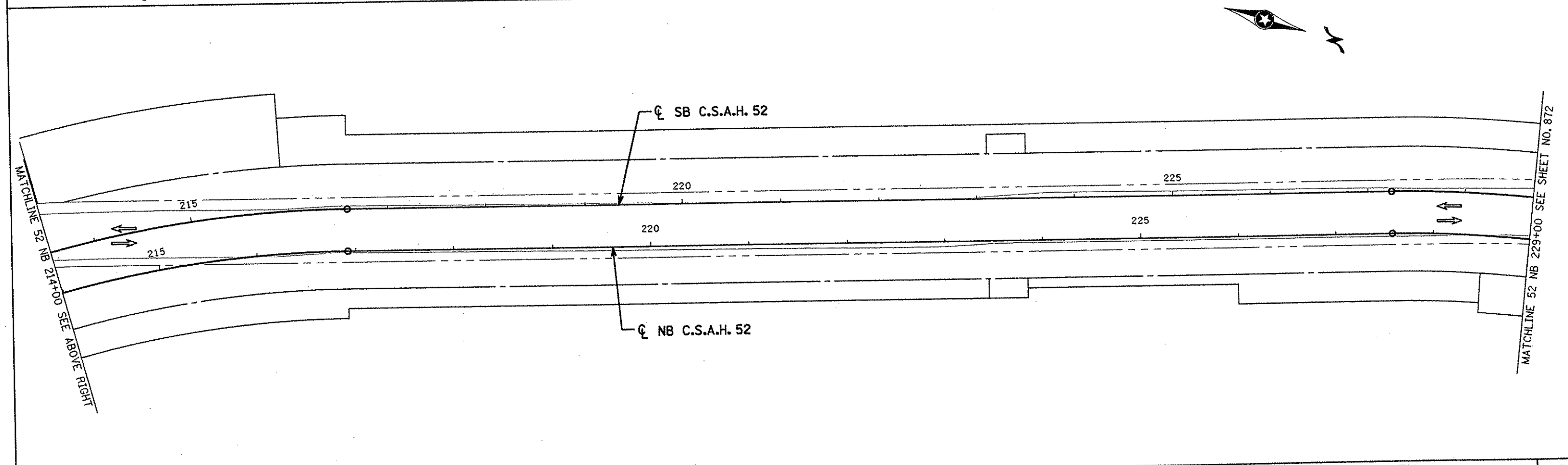
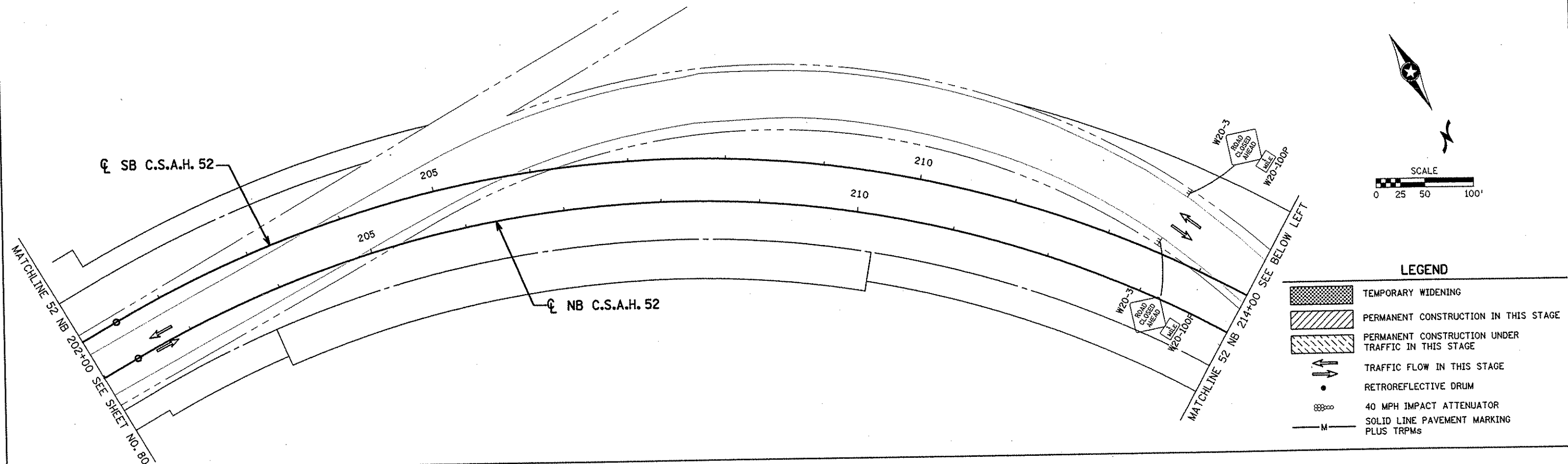
S.P.	0280-50 (TH 35W)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

TKDA
ENGINEERS-ARCHITECTS-PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
STAGE A1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 NB STA. 172+00 TO 202+00

SHEET
80
OF
559



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.

Joseph Weaver
 DATE 11-30-01 LIC. NO. 22405

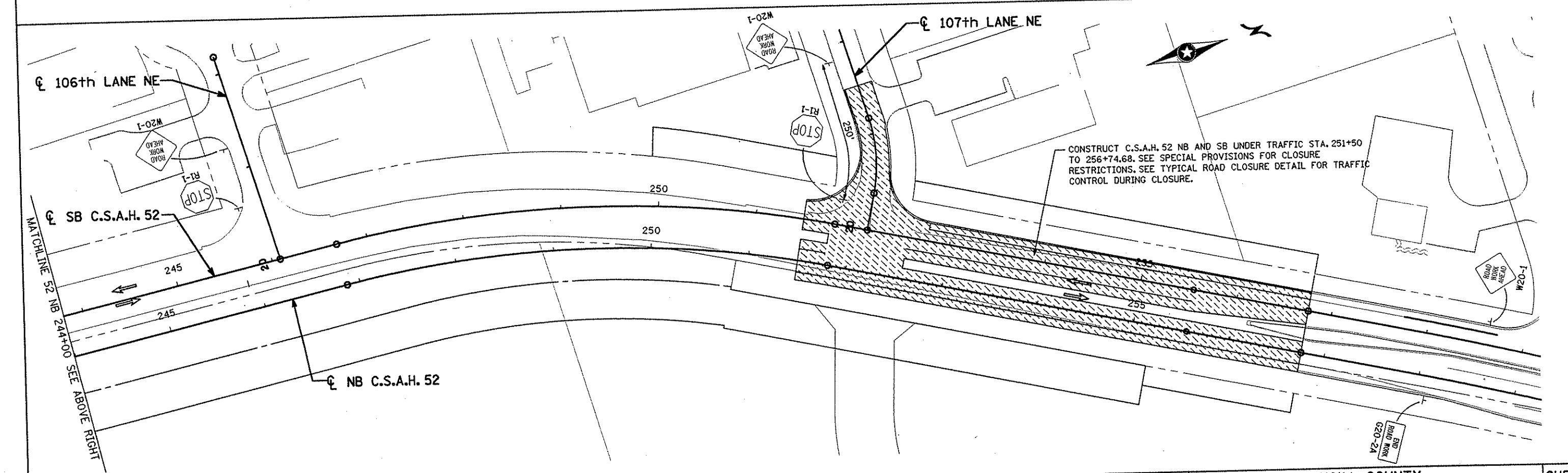
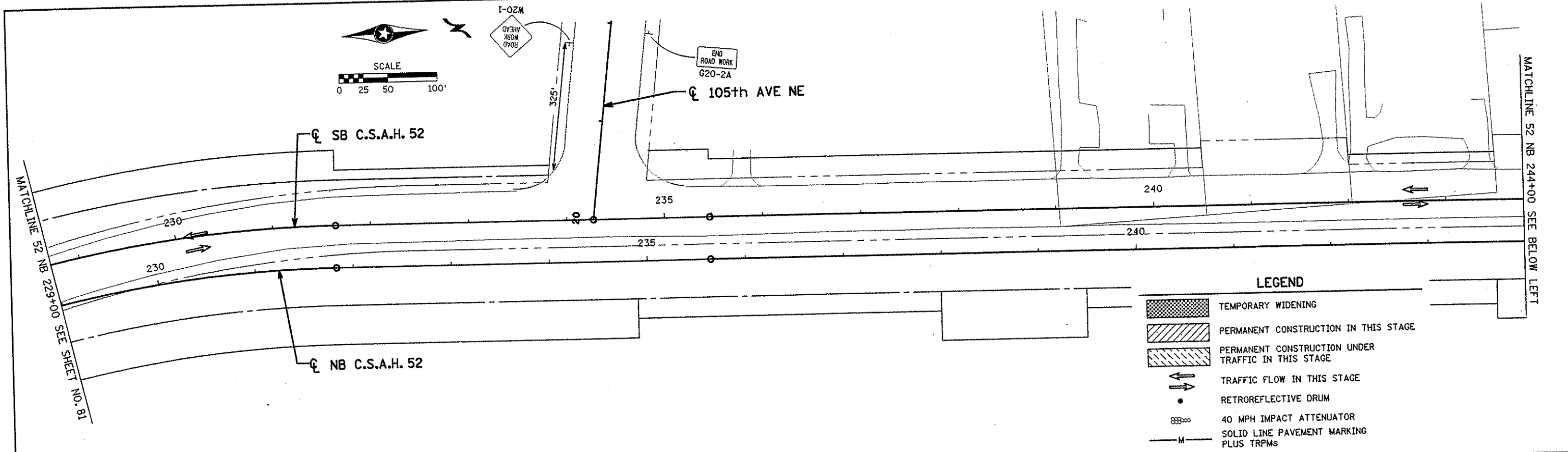
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE A1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 202+00 TO 229+00

SHEET
 81
 OF
 559



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.

Joseph W. ...
 DATE 11-30-01 LIC. NO. 22405


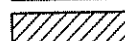
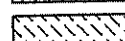
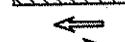

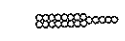
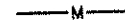
DRAWN BY RRC DATE 9-21-01 S.P. 0280-50 (TH 35W) 90-080-11
 S.A.P. 02-652-02
 DESIGN BY RRC DATE 9-20-01 S.A.P. 02-652-03
 S.A.P. 02-652-04
 CHECKED BY JMW DATE 9-24-01 S.A.P. 106-020-021, 106-020-022

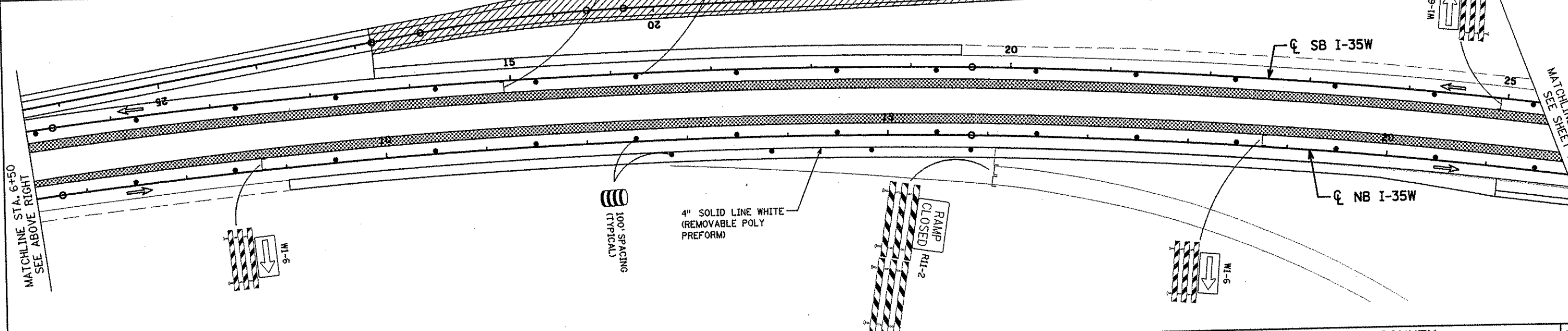
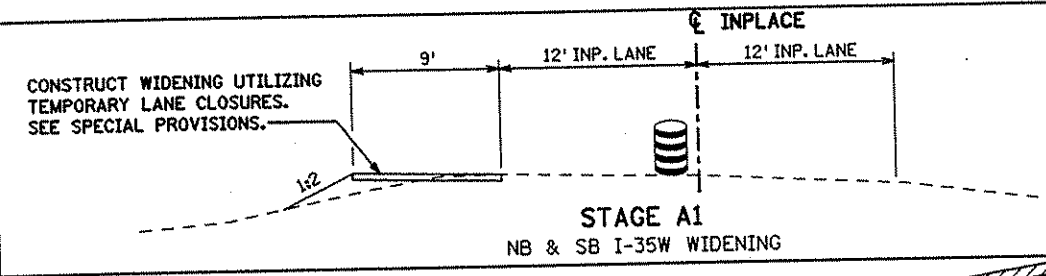
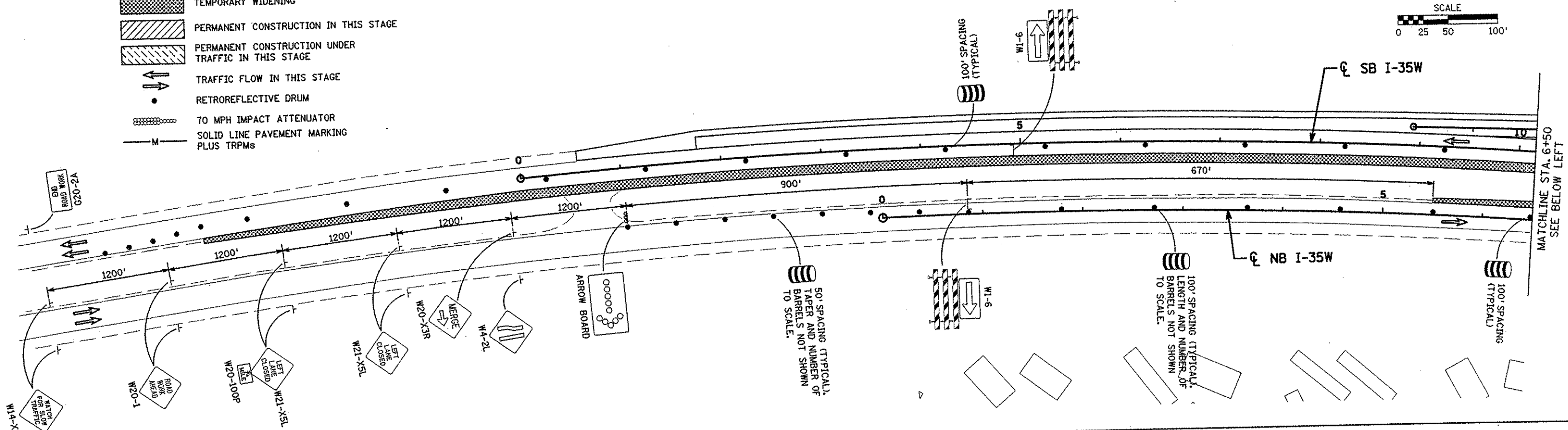
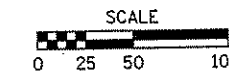
TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE A1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 229+00 TO 256+74.68

SHEET 82 OF 559

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  70 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs



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.

Joseph Weaner
 DATE 1-11-02 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01


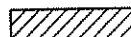





S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

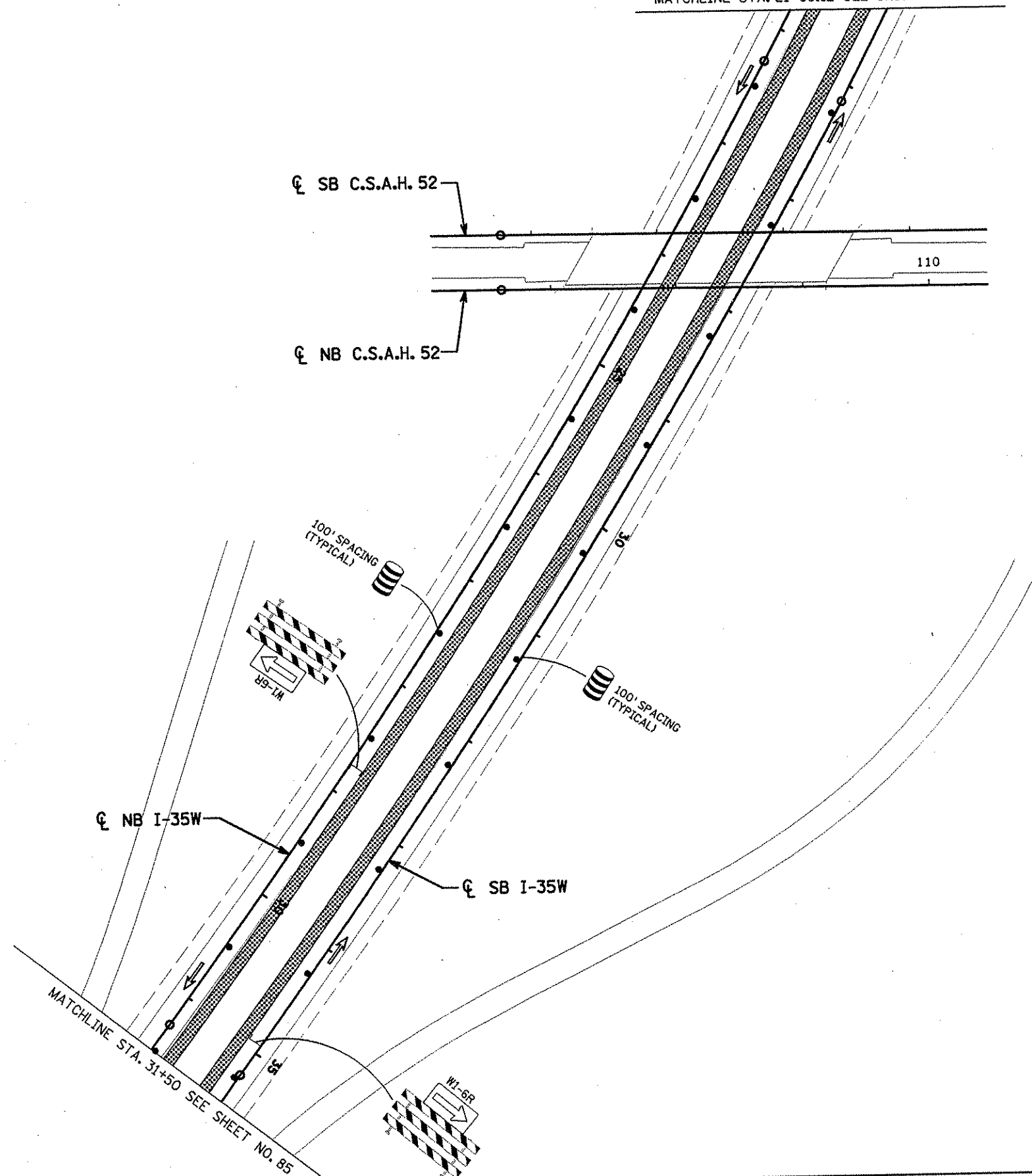
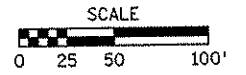
ANOKA COUNTY
 STAGE A1 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W SOUTH LIMITS TO STA. 21+83.12

SHEET
 83
 OF
 559

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  70 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs

MATCHLINE STA. 21+83.12 SEE SHEET NO. 83



☉ SB C.S.A.H. 52

☉ NB C.S.A.H. 52

☉ NB I-35W

☉ SB I-35W

MATCHLINE STA. 31+50 SEE SHEET NO. 85

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.

Joseph Weaver
DATE 1-11-02 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

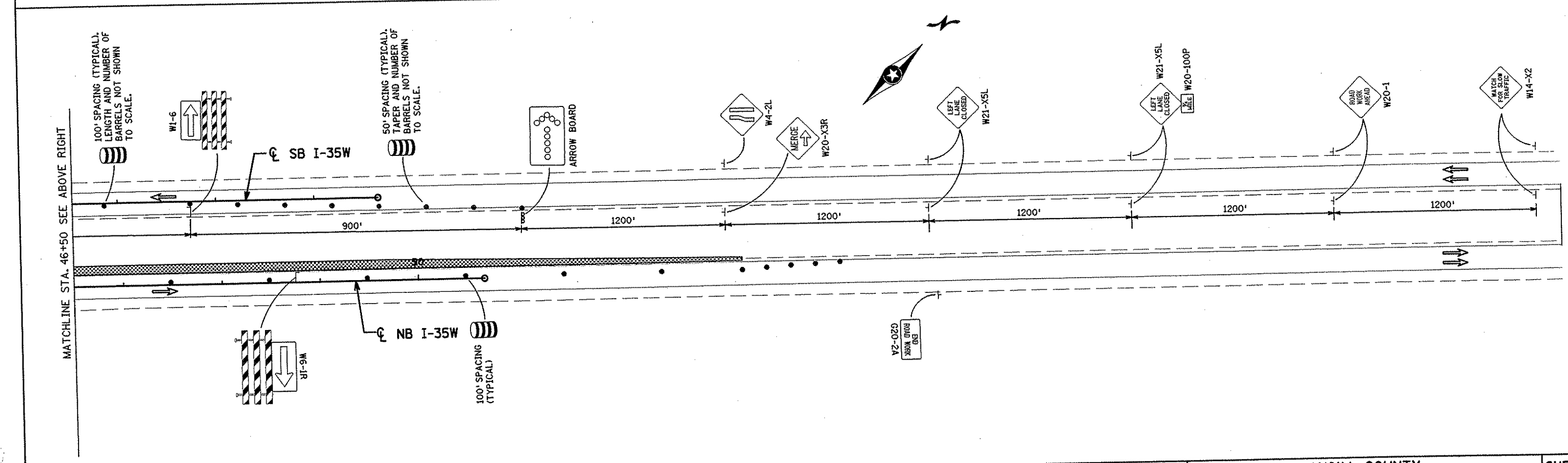
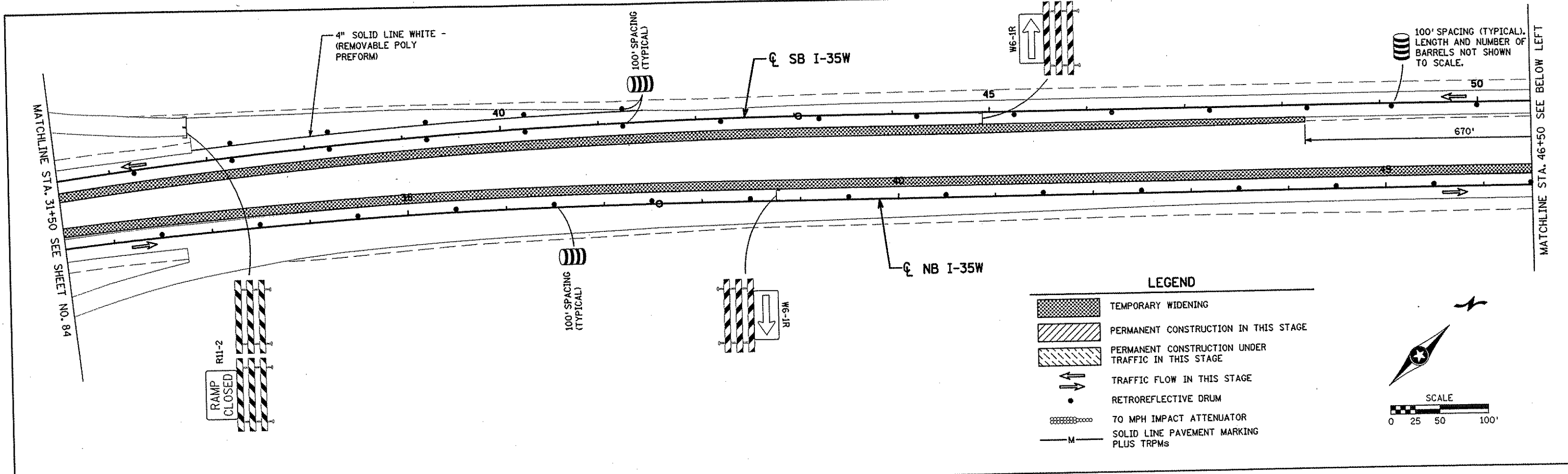
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE A1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 21+83.12 TO 31+50

SHEET
84
OF
559

NAME: k:\a-f\anokacnty\1174901\hwy-brdg\part4\roadway3\staging\stg01-02.dwg 2/2001



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\a-f\anokacty\1174901\hwy-brdg\part4\roadway3\staging\stgal-102488\2001

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.

Joseph W. Wason
DATE 1-11-02 LIC. NO. 22408

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01



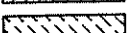




S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

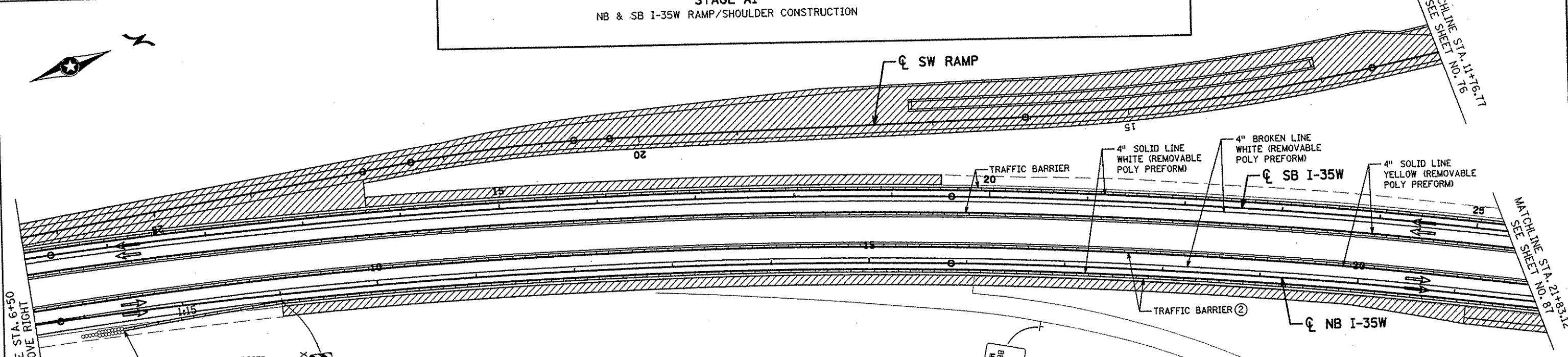
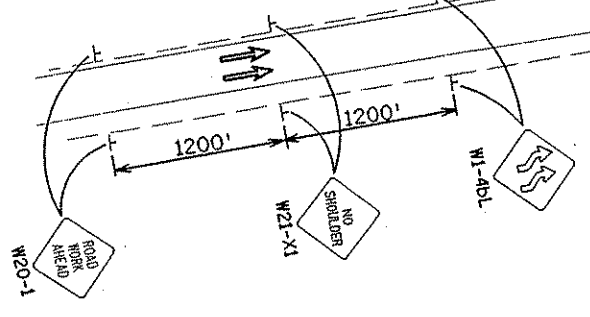
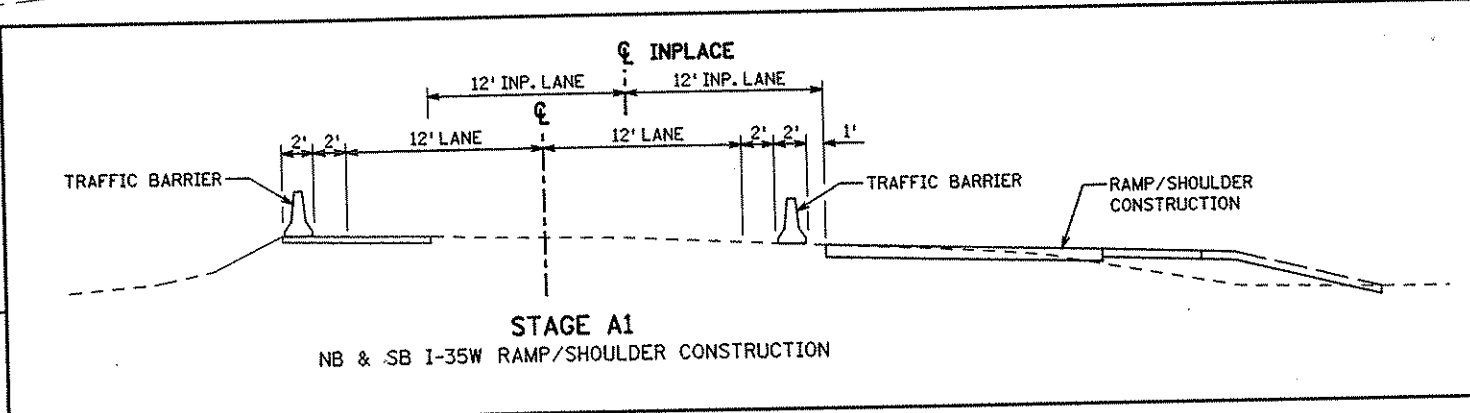
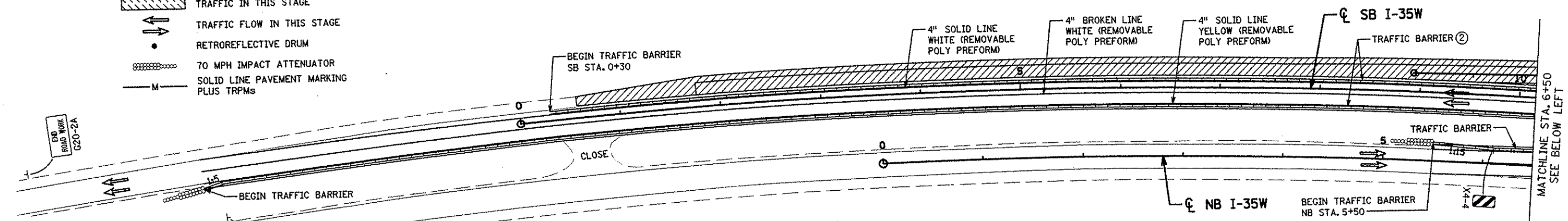
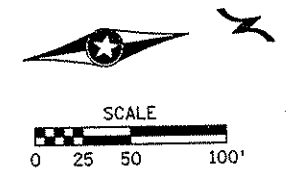
TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE A1 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 31+50 TO NORTH LIMITS

SHEET 85 OF 559

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  70 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs



NOTES:

- ① INSTALL SIGN MINIMUM 7 DAYS BEFORE CLOSING ROADWAY.
- ② MEDIAN BARRIER DELINEATORS WILL HAVE A MINIMUM OF 6 SQ. INCHES OF REFLECTIVE SURFACE AREA AND BE PLACED AT 50' SPACES AT TOP OF BARRIER OR AS DIRECTED BY THE 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.

Joseph Warner
DATE 1-11-02 LIC. NO. 22705

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01


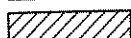
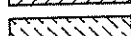



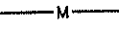
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 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

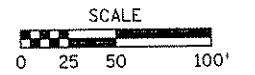
ANOKA COUNTY
 STAGE A1 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W SOUTH LIMITS TO STA. 21+83.12

SHEET 86 OF 559

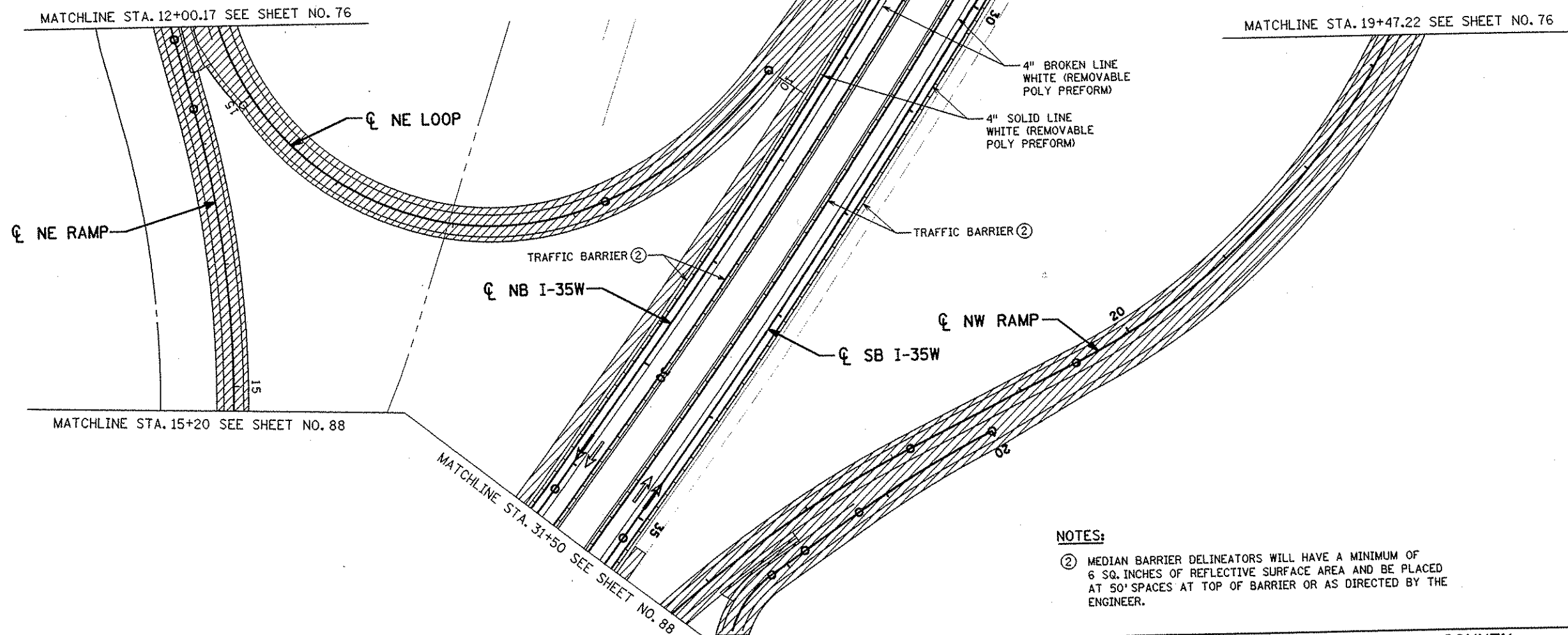
LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  70 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs

MATCHLINE STA. 21+83.12 SEE SHEET NO. 86



MATCHLINE STA. 12+00.17 SEE SHEET NO. 76



NOTE:
SEE SHEET NO. 76 FOR
STAGING AND TRAFFIC
CONTROL ALONG CSAH 52.

4" SOLID LINE
YELLOW (REMOVABLE
POLY PREFORM)

4" BROKEN LINE
WHITE (REMOVABLE
POLY PREFORM)

4" SOLID LINE
WHITE (REMOVABLE
POLY PREFORM)

TRAFFIC BARRIER ②

TRAFFIC BARRIER ②

NOTES:

② MEDIAN BARRIER DELINEATORS WILL HAVE A MINIMUM OF 6 SQ. INCHES OF REFLECTIVE SURFACE AREA AND BE PLACED AT 50' SPACES AT TOP OF BARRIER OR AS DIRECTED BY THE ENGINEER.

MATCHLINE STA. 15+20 SEE SHEET NO. 88

MATCHLINE STA. 31+50 SEE SHEET NO. 88

MATCHLINE STA. 19+47.22 SEE SHEET NO. 76

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.

Joseph Weems
DATE 1-11-02 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
DESIGN BY RRC DATE 9-20-01
CHECKED BY JMW DATE 9-24-01

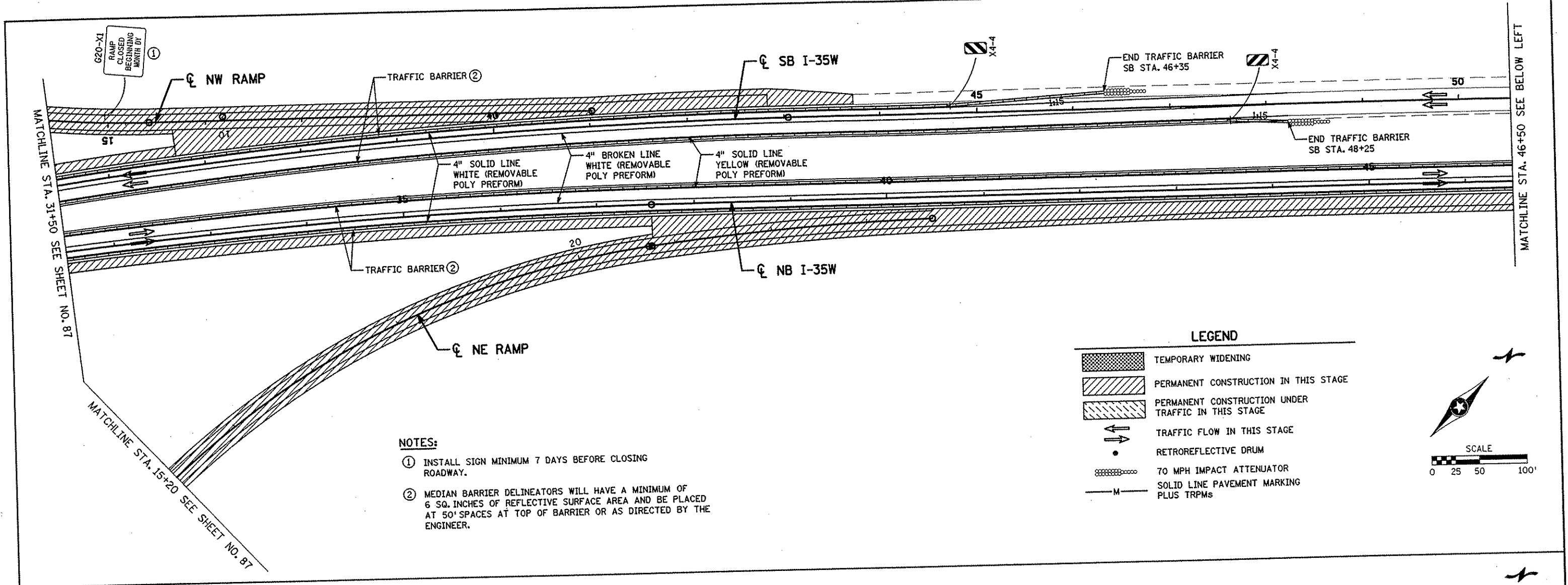
S.P. 0280-50 (TH 35W)
S.A.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA

TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
STAGE A1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
NB I-35W STA. 21+83.12 TO 31+50

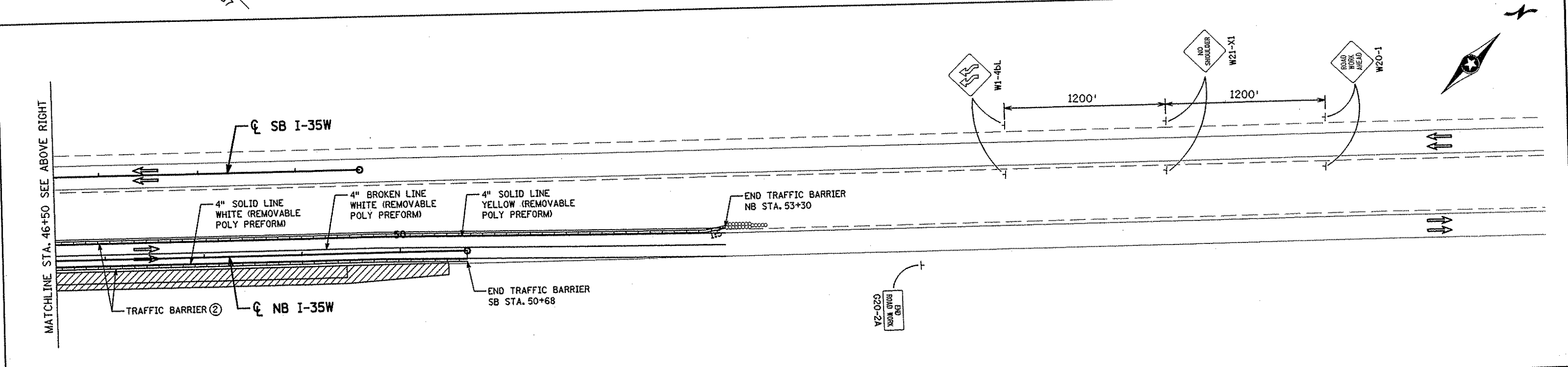
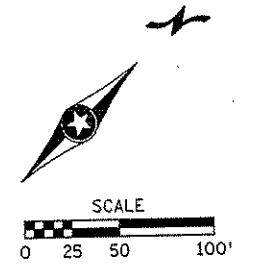
SHEET
87
OF
559



- NOTES:**
- ① INSTALL SIGN MINIMUM 7 DAYS BEFORE CLOSING ROADWAY.
 - ② MEDIAN BARRIER DELINEATORS WILL HAVE A MINIMUM OF 6 SQ. INCHES OF REFLECTIVE SURFACE AREA AND BE PLACED AT 50' SPACES AT TOP OF BARRIER OR AS DIRECTED BY THE ENGINEER.

LEGEND

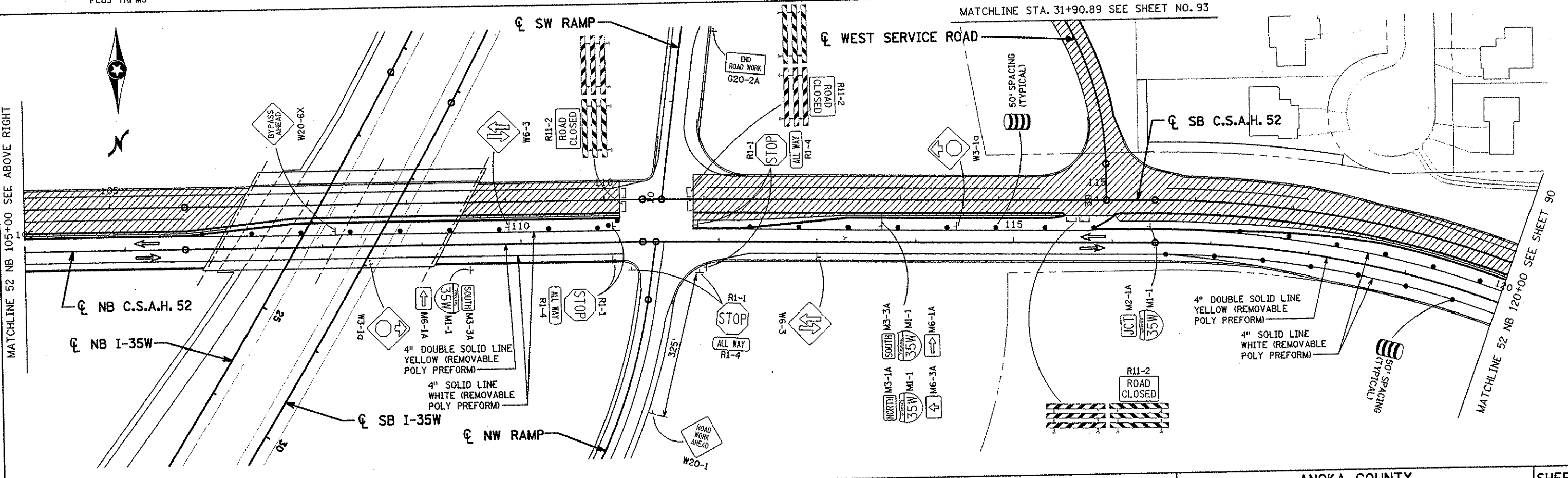
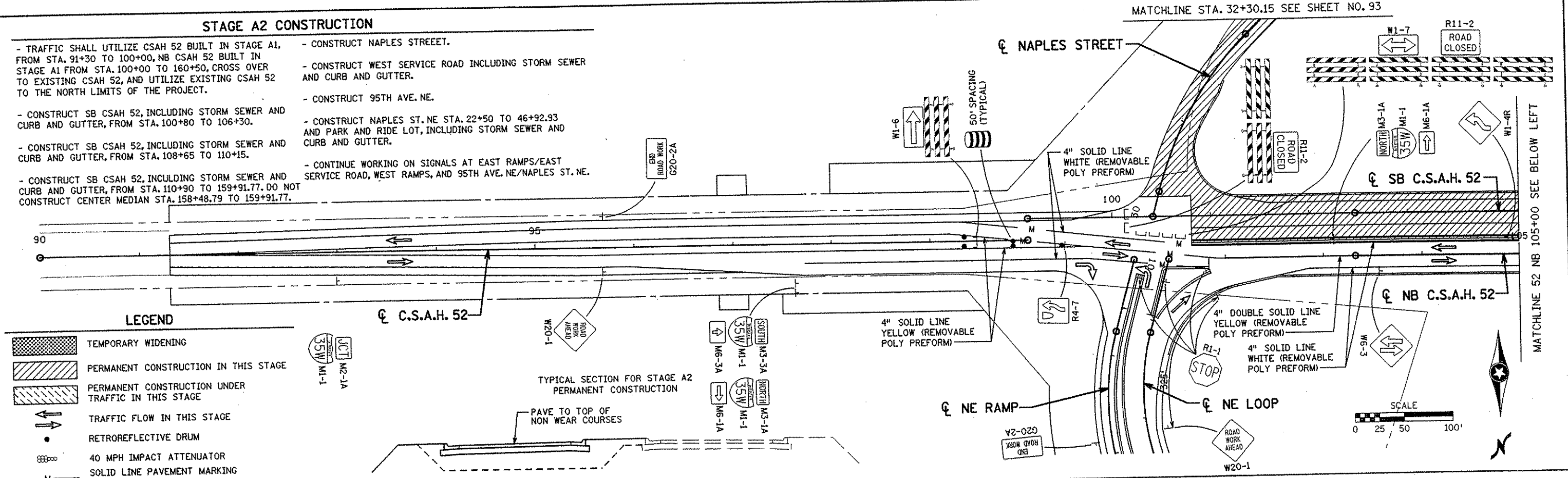
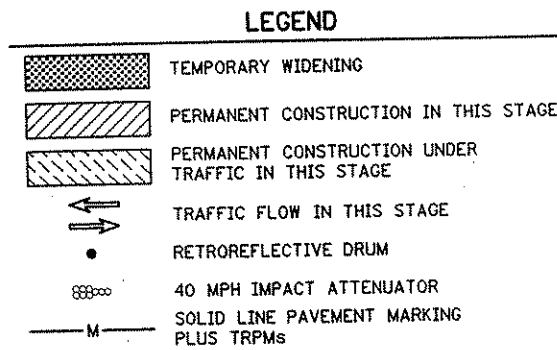
- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 70 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMs



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. <i>Joseph W. Wenzel</i> DATE 1-11-02 LIC. NO. 22405					DRAWN BY RRC DATE 9-21-01 DESIGN BY RRC DATE 9-20-01 CHECKED BY JMW DATE 9-24-01	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY STAGE A1 CONSTRUCTION C.S.A.H. 52 RECONSTRUCTION NB I-35W STA. 31+50 TO NORTH LIMITS	SHEET 88 OF 559	
NO	DATE	BY	CHKD	APPR	REVISION	NAME: K:\a-f\anoka\cty\11174901\hwy-brdg\part4\roadway3\staging\stgal-13248/2001				

STAGE A2 CONSTRUCTION

- TRAFFIC SHALL UTILIZE CSAH 52 BUILT IN STAGE A1, FROM STA. 91+30 TO 100+00, NB CSAH 52 BUILT IN STAGE A1 FROM STA. 100+00 TO 160+50, CROSS OVER TO EXISTING CSAH 52, AND UTILIZE EXISTING CSAH 52 TO THE NORTH LIMITS OF THE PROJECT.
- CONSTRUCT SB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 100+80 TO 106+30.
- CONSTRUCT SB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 108+65 TO 110+15.
- CONSTRUCT SB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 110+90 TO 159+91.77. DO NOT CONSTRUCT CENTER MEDIAN STA. 158+48.79 TO 159+91.77.
- CONSTRUCT NAPLES STREET.
- CONSTRUCT WEST SERVICE ROAD INCLUDING STORM SEWER AND CURB AND GUTTER.
- CONSTRUCT 95TH AVE. NE.
- CONSTRUCT NAPLES ST. NE STA. 22+50 TO 46+92.93 AND PARK AND RIDE LOT, INCLUDING STORM SEWER AND CURB AND GUTTER.
- CONTINUE WORKING ON SIGNALS AT EAST RAMP/EAST SERVICE ROAD, WEST RAMP, AND 95TH AVE. NE/NAPLES ST. NE.



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\a-f\anokacty\1174901\hwy-brdg\part4\roadway3\staging\stg02-02.dwg 2002

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.

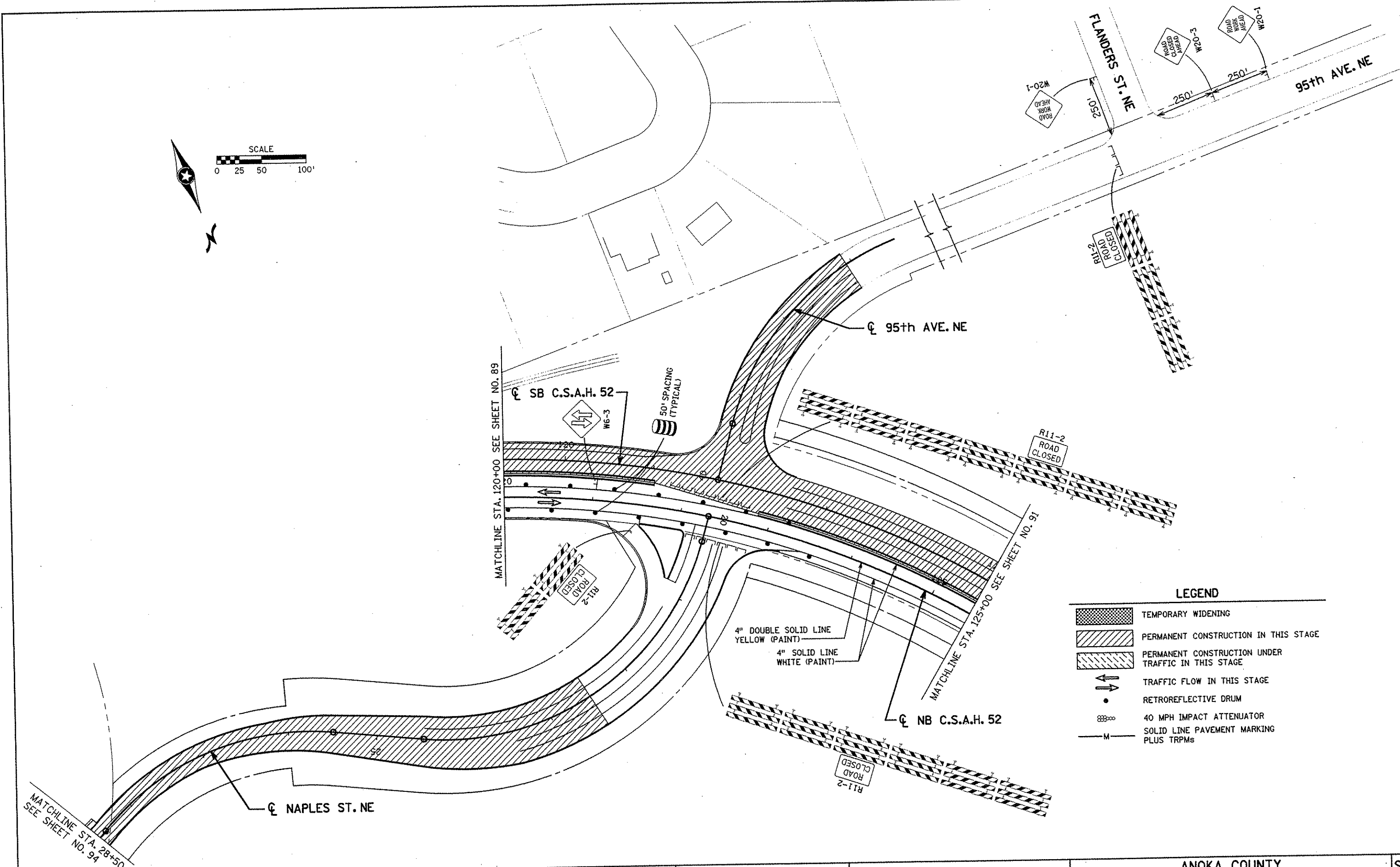
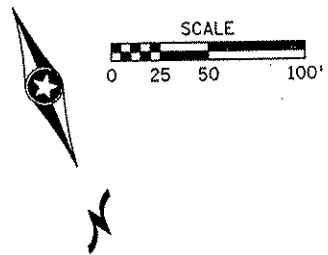
Jared Woerner
DATE 2-11-02 LIC. NO. 22465

DRAWN BY RRC DATE 9-21-01
DESIGN BY RRC DATE 9-20-01
CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
STAGE A2 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 NB STA. 90+00 TO 120+00



LEGEND

	TEMPORARY WIDENING
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	40 MPH IMPACT ATTENUATOR
	SOLID LINE PAVEMENT MARKING PLUS TRPMs

NO	DATE	BY	CKD	APPR	REVISION
NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\staging\stg2-02.dwg/2002					

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.

Joseph W. Womack
 DATE: 2-11-02 LIC. NO. 22405

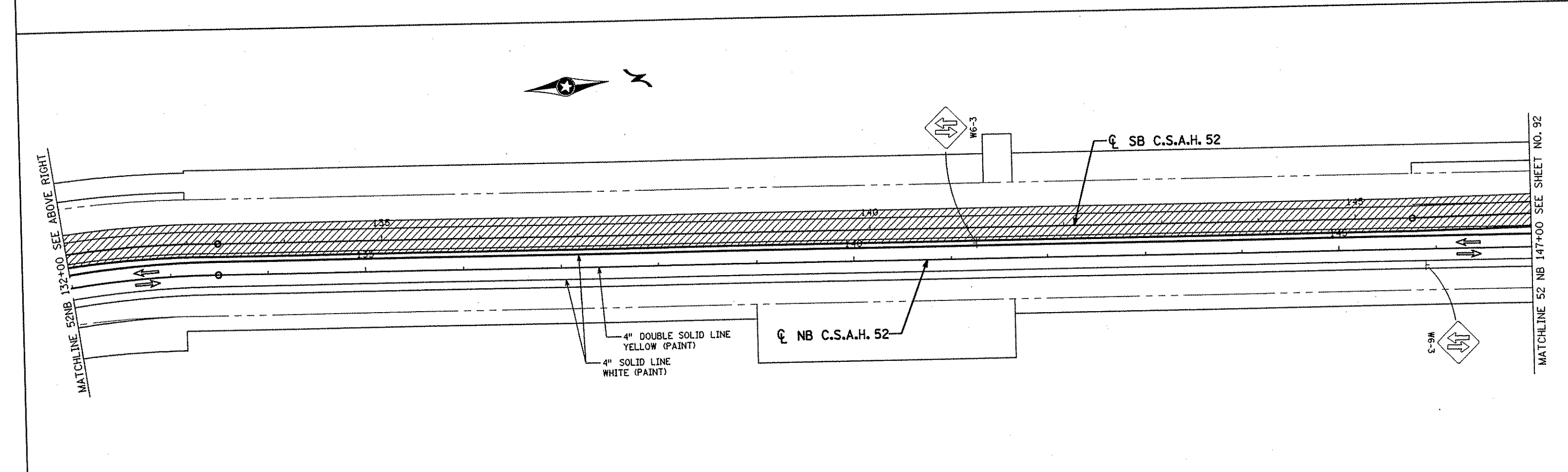
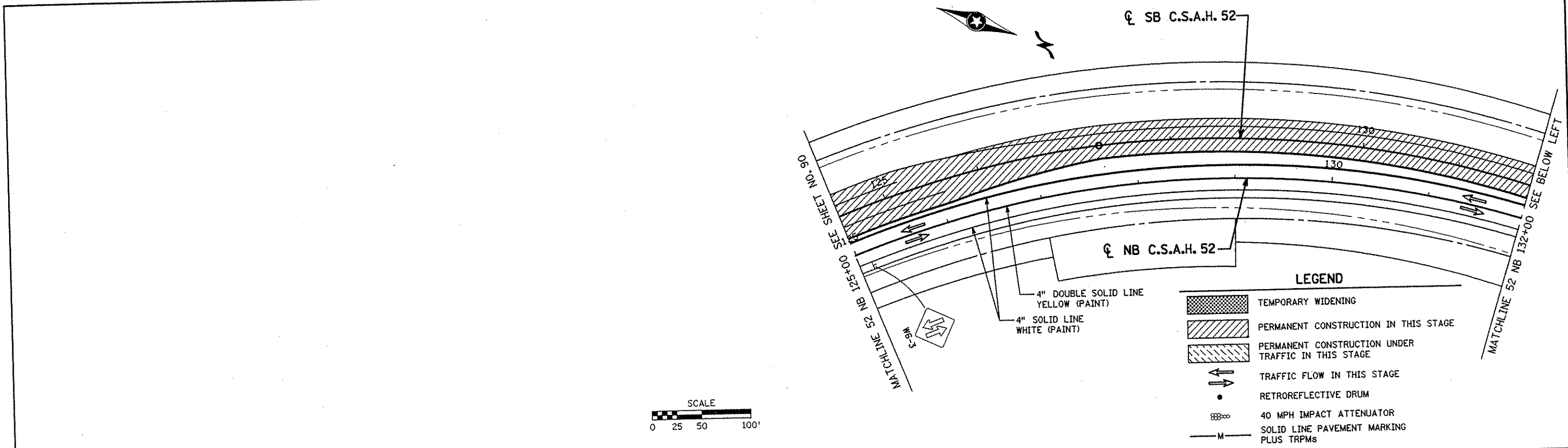
DRAWN BY: RRC DATE: 9-21-01
 DESIGN BY: RRC DATE: 9-20-01
 CHECKED BY: JMW DATE: 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

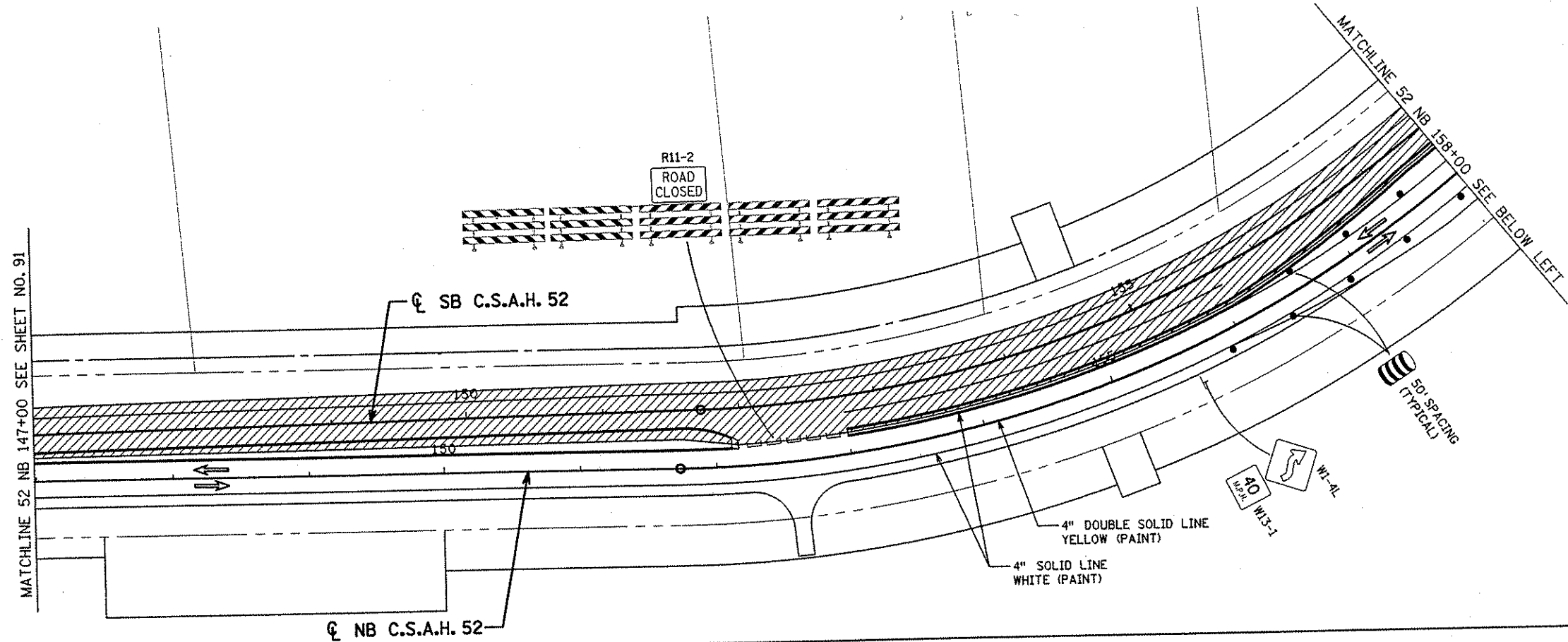
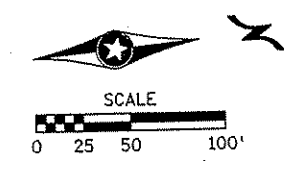
TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE A2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 120+00 TO 125+00

SHEET 90 OF 559

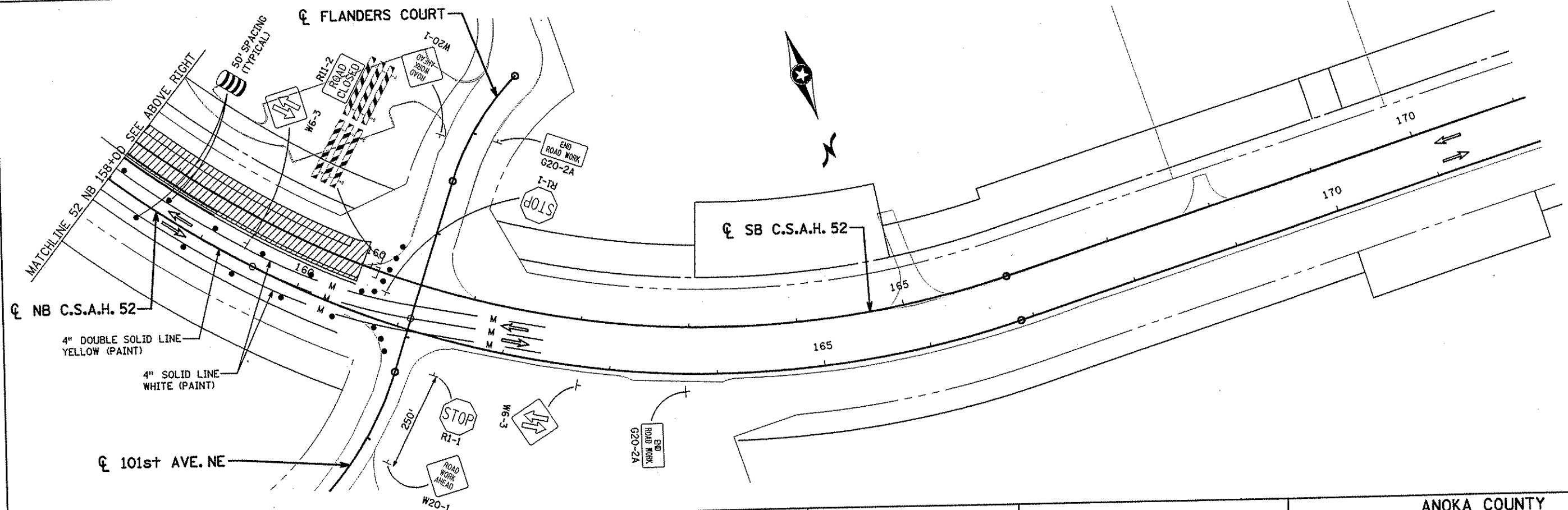


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Joseph W. Wain</i> DATE <u>11-30-01</u> LIC. NO. <u>22405</u>					DRAWN BY <u>RRC</u> DATE <u>9-21-01</u> DESIGN BY <u>RRC</u> DATE <u>9-20-01</u> CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY STAGE A2 CONSTRUCTION C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 125+00 TO 147+00	SHEET 91 OF 559	
NO	DATE	BY	CKD	APPR	REVISION					
						NAME: k:\site\p0a\c11749\par14\roadway3\staging\stga2-03.dgn 11/30/01				



LEGEND

	TEMPORARY WIDENING
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	40 MPH IMPACT ATTENUATOR
	SOLID LINE PAVEMENT MARKING PLUS TRPMs



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par14\roadway3\staging\stga2-04.dgn 11/30/01

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.

Joseph W. ...
 DATE 11-30-01 LIC. NO. 22405

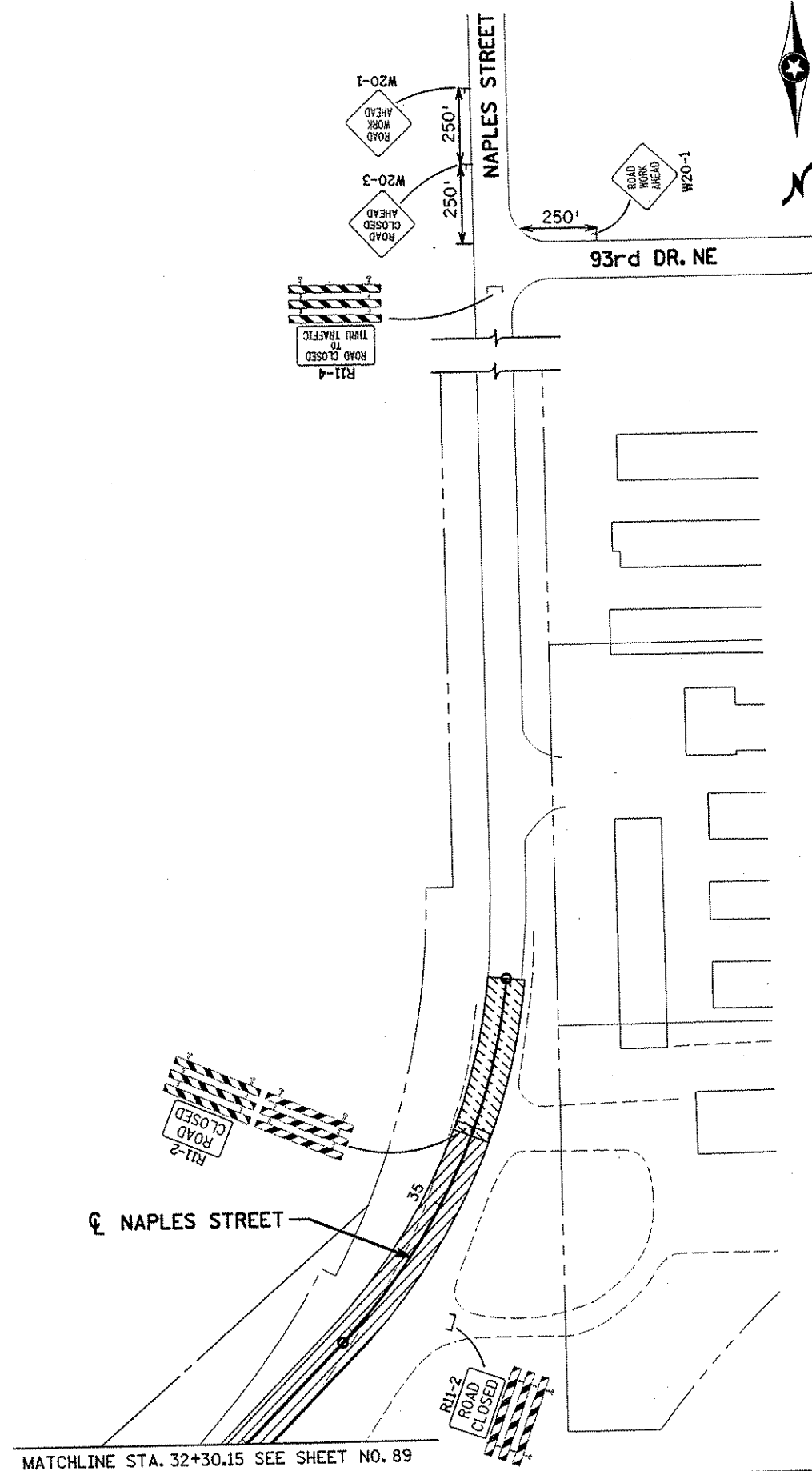
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMM DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

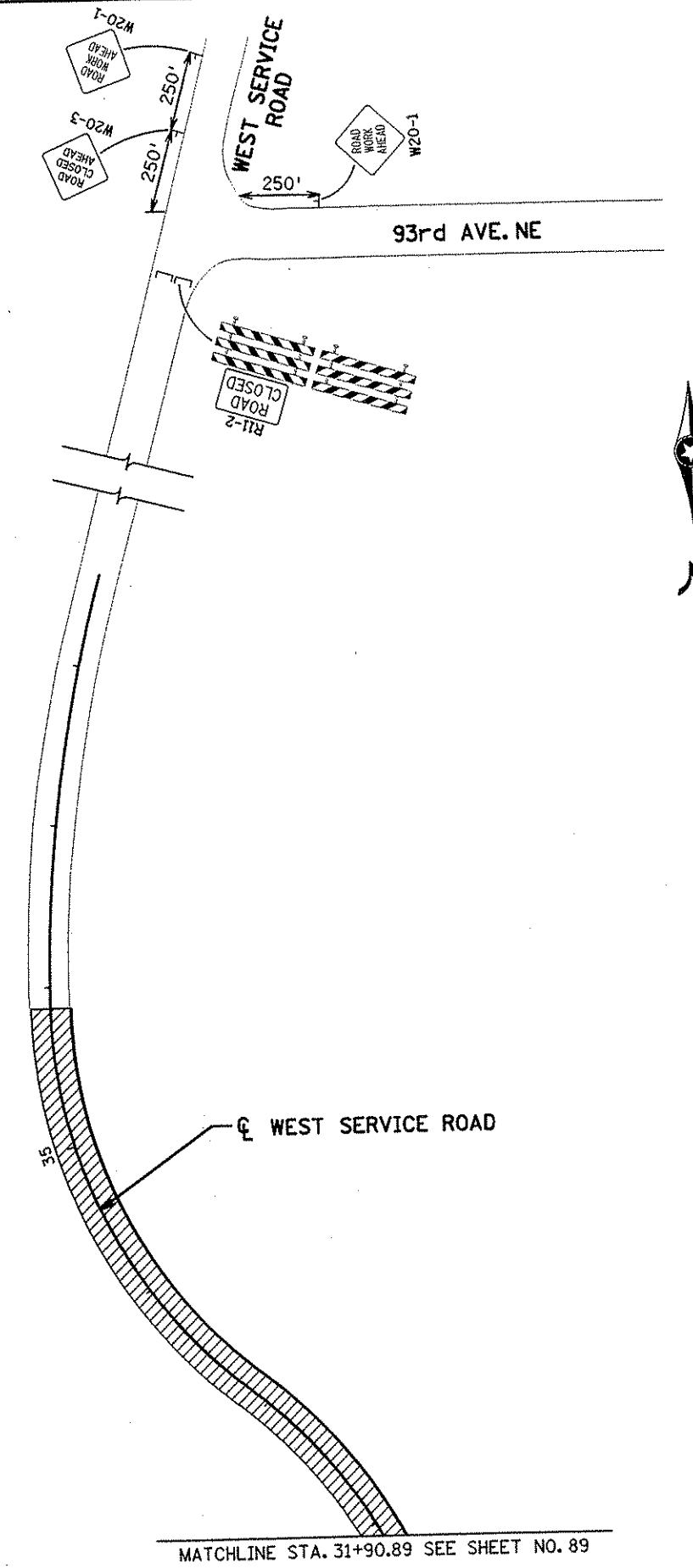
TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE A2 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 147+00 TO 172+00

SHEET
 92
 OF
 559



- LEGEND**
- TEMPORARY WIDENING
 - PERMANENT CONSTRUCTION IN THIS STAGE
 - PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
 - TRAFFIC FLOW IN THIS STAGE
 - RETROREFLECTIVE DRUM
 - 40 MPH IMPACT ATTENUATOR
 - SOLID LINE PAVEMENT MARKING PLUS TRPMs



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\elife\proj\11749\part4\roadway3\staging\stga2-05.dgn 11/30/01

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.

Joseph Weidner
 DATE 11-30-01 LIC. NO. 22405

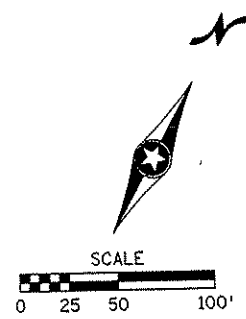
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

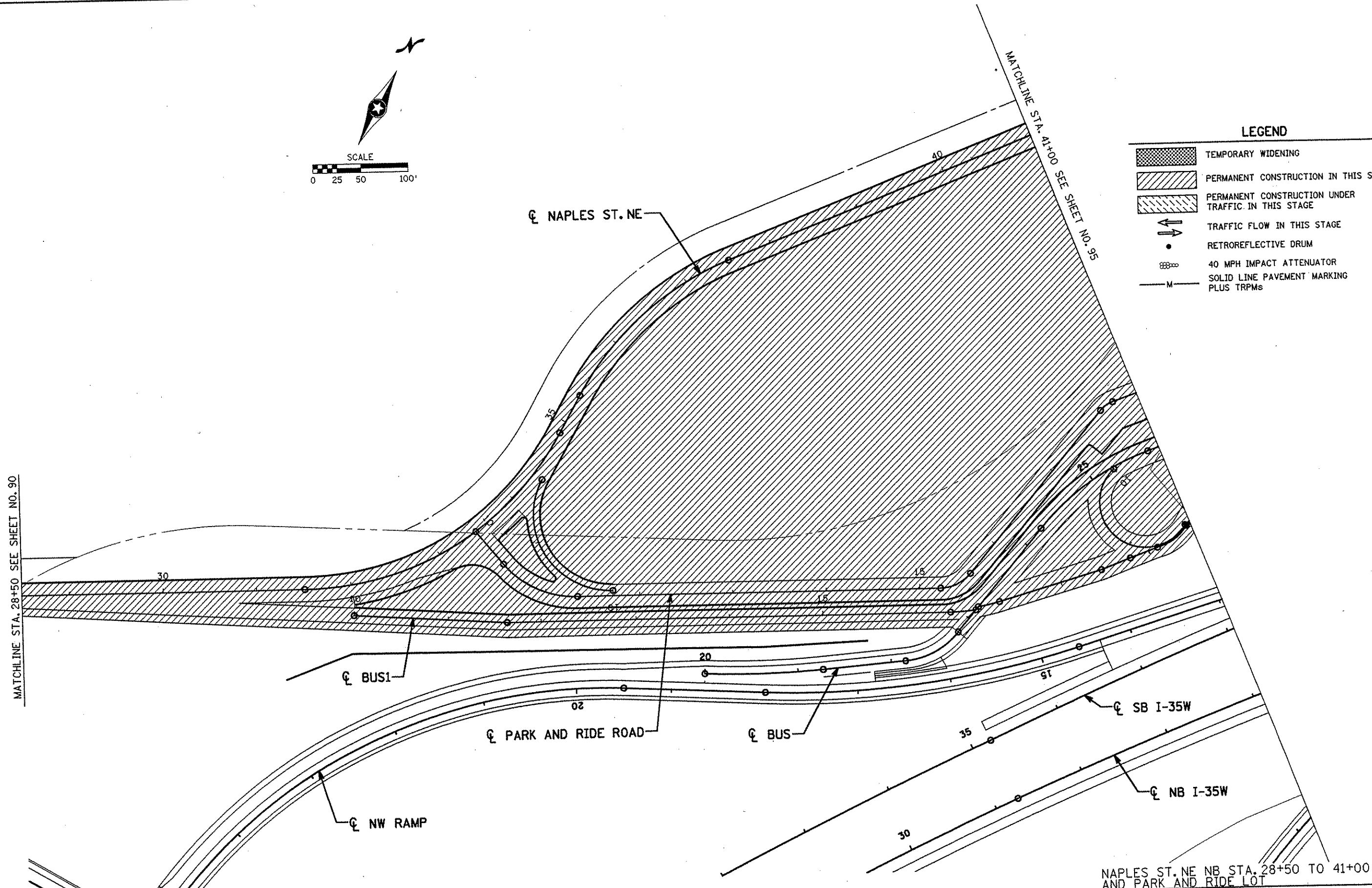
TKDA TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE A2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 EAST SERVICE ROAD, WEST SERVICE ROAD

SHEET 93 OF 559



LEGEND	
	TEMPORARY WIDENING
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	40 MPH IMPACT ATTENUATOR
	SOLID LINE PAVEMENT MARKING PLUS TRPMs



NAPLES ST. NE NB STA. 28+50 TO 41+00 AND PARK AND RIDE LOT

ANOKA COUNTY

STAGE A2 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION

SHEET
94
OF
559

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.

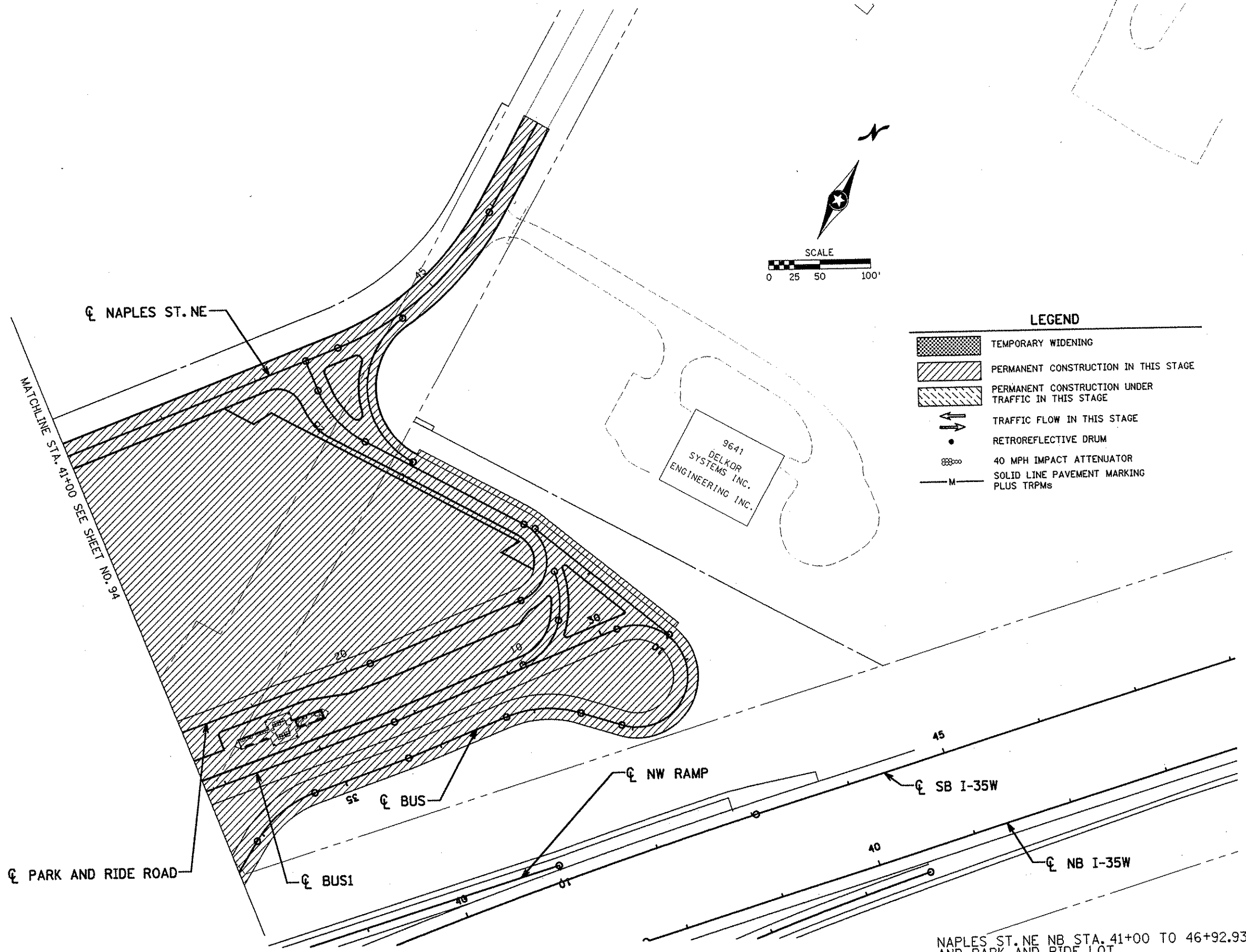
Joseph Weaver
DATE 11-30-01 LIC. NO. 22405

DRAWN BY	RRC	DATE	9-21-01	S.P.	0280-50 (TH 35W)
DESIGN BY	RRC	DATE	9-20-01	S.P.	90-080-11
CHECKED BY	JMW	DATE	9-24-01	S.A.P.	02-652-02
				S.A.P.	02-652-03
				S.A.P.	02-652-04
				S.A.P.	106-020-021, 106-020-022

TKDA
TOLTZ, KING, OUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part14\roadway3\staging\stga2-06.dgn 11/30/01



LEGEND

	TEMPORARY WIDENING
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	40 MPH IMPACT ATTENUATOR
	SOLID LINE PAVEMENT MARKING PLUS TRPMS

NAPLES ST. NE NB STA. 41+00 TO 46+92.93
AND PARK AND RIDE LOT

ANOKA COUNTY

STAGE A2 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION

SHEET
95
OF
559

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.

Joseph Wilson
DATE 11-30-01 LIC. NO. 22405


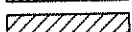
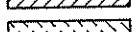




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DESIGN BY	RRC	DATE	9-20-01	S.P.	90-080-11
CHECKED BY	JMW	DATE	9-24-01	S.A.P.	02-652-02
				S.A.P.	02-652-03
				S.A.P.	02-652-04
				S.A.P.	106-020-021, 106-020-022

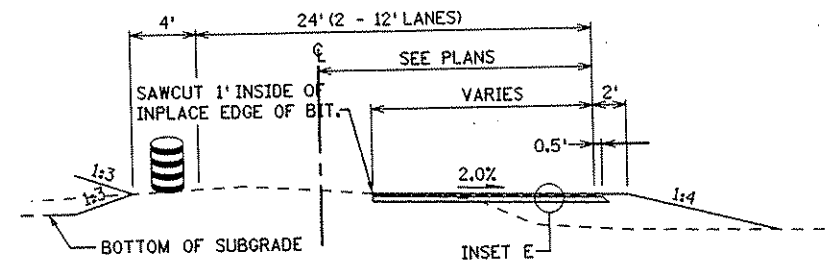
TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

NO	DATE	BY	CKD	APPR	REVISION

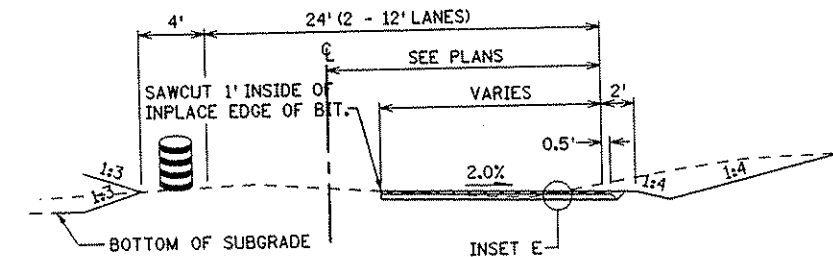
NAME: k:\site\proj\c11749\part4\roadway3\staging\stga2-07.dgn 11/30/01

LEGEND

	TEMPORARY WIDENING
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	40 MPH IMPACT ATTENUATOR
	SOLID LINE PAVEMENT MARKING PLUS TRPMs

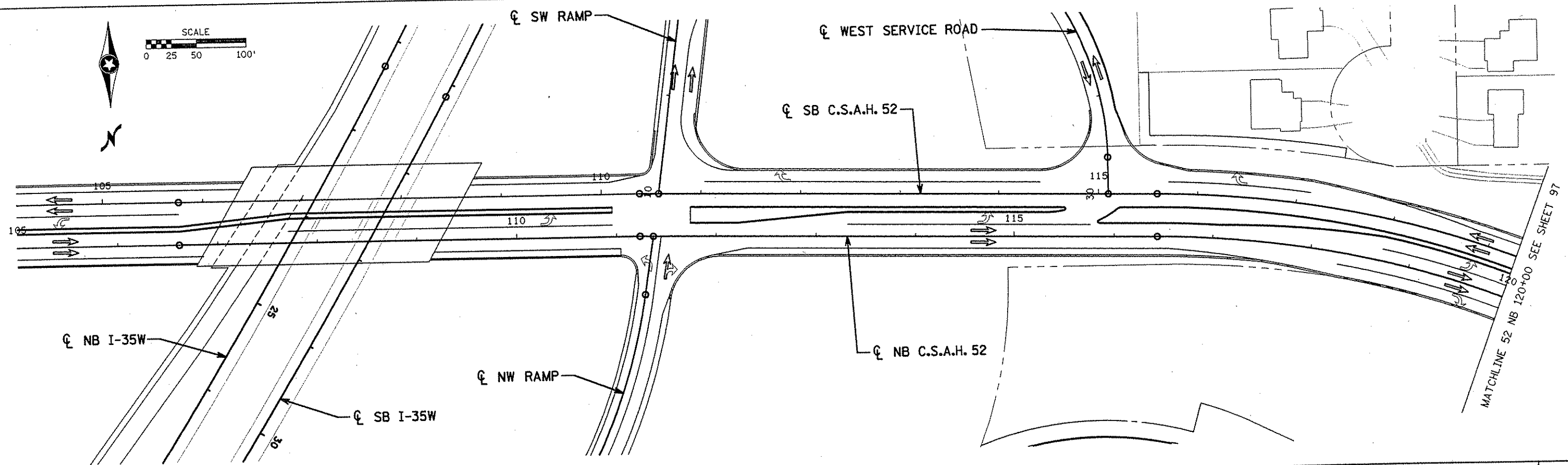


TEMPORARY WIDENING DETAIL (FILL)
SEE STAGING PLAN FOR LOCATIONS



TEMPORARY WIDENING DETAIL (CUT)
SEE STAGING PLAN FOR LOCATIONS

- STAGE B1 CONSTRUCTION**
- TRAFFIC SHALL UTILIZE THE PORTIONS OF CSAH 52, NB CSAH 52, AND SB CSAH 52 BUILT IN PREVIOUS STAGES, UTILIZE EXISTING CSAH 52, NB STA. 160+50 TO THE NORTH LIMITS OF THE PROJECT.
 - CONSTRUCT TEMPORARY WIDENING ON THE EAST SIDE OF CSAH 52 FROM STA. 160+50 TO 198+00.
 - CONSTRUCT TEMPORARY WIDENING ON THE WEST SIDE OF CSAH 52 FROM STA. 203+00 TO 233+00.
 - CONSTRUCT TEMPORARY WIDENING ON THE WEST SIDE OF CSAH 52 FROM STA. 248+00 TO 251+50.



NO	DATE	BY	CRD	APPR	REVISION

NAME: K:\a-f\anokacty\1174901\hwy-brdg\part4\roadway3\staging\stgb1-012498/2001

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.

Joseph W. Wenzel
DATE: 7-11-02 LIC. NO. 22465

DRAWN BY	RRC	DATE	9-21-01
DESIGN BY	RRC	DATE	9-20-01
CHECKED BY	JMW	DATE	9-24-01

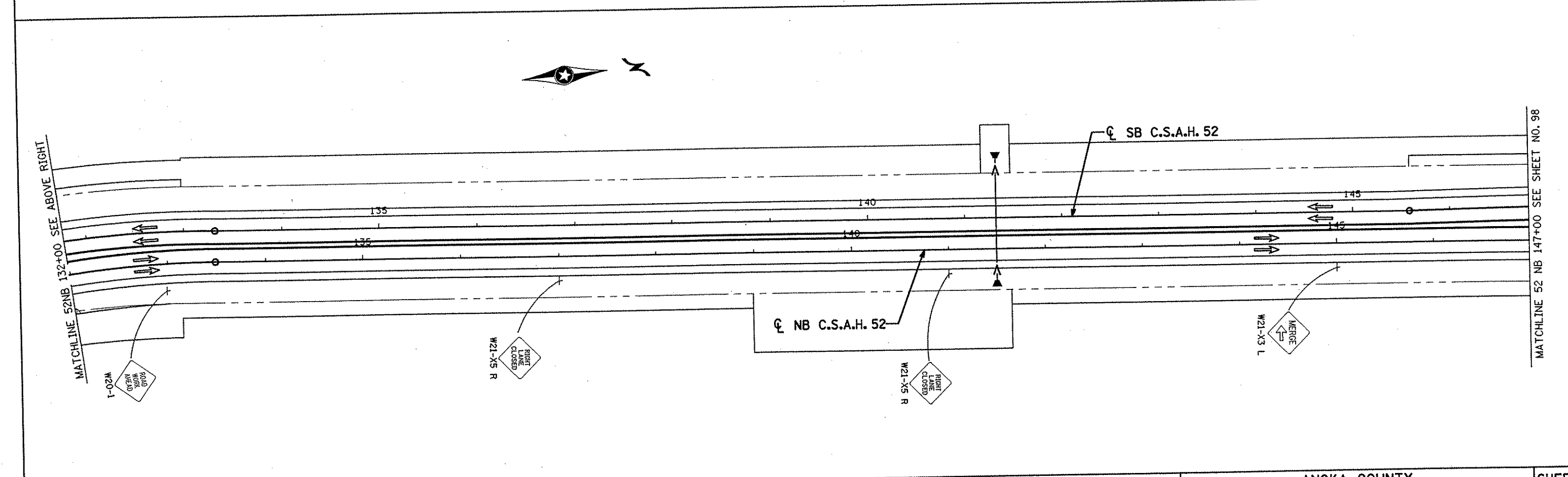
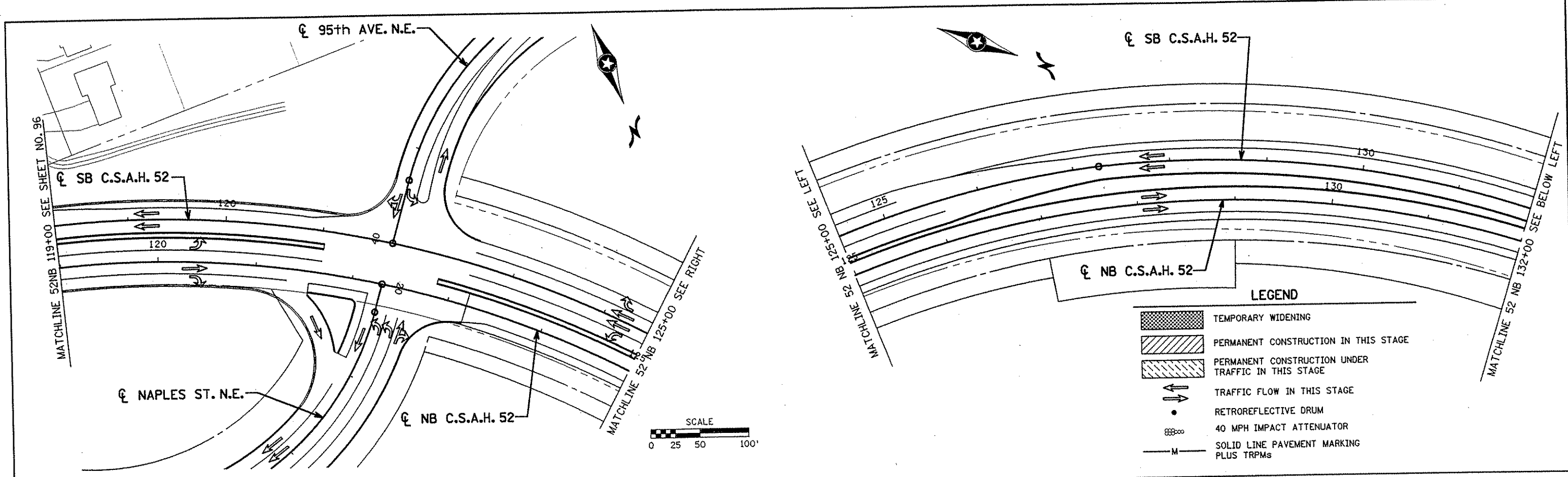
S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

STAGE B1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 NB STA. 105+00 TO 120+00

SHEET
96
OF
559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\staging\stgbl-02.dgn 11/30/01

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.

Joseph Weaver
 DATE 11-30-01 LIC. NO. 22405

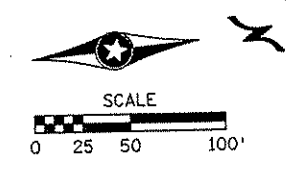
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

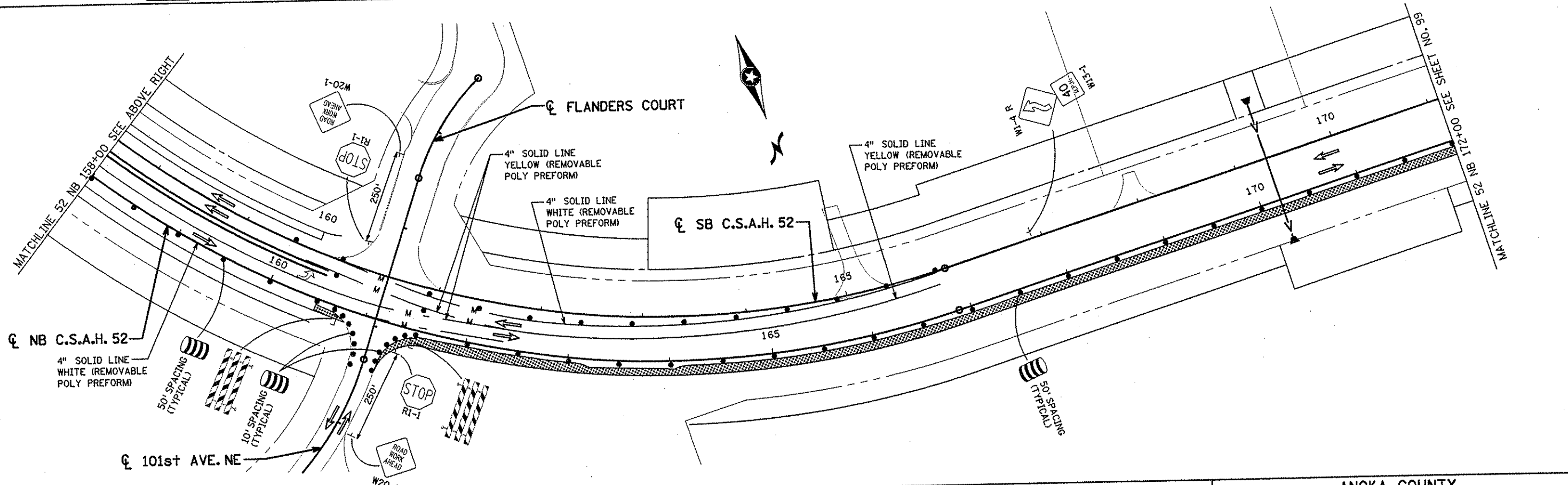
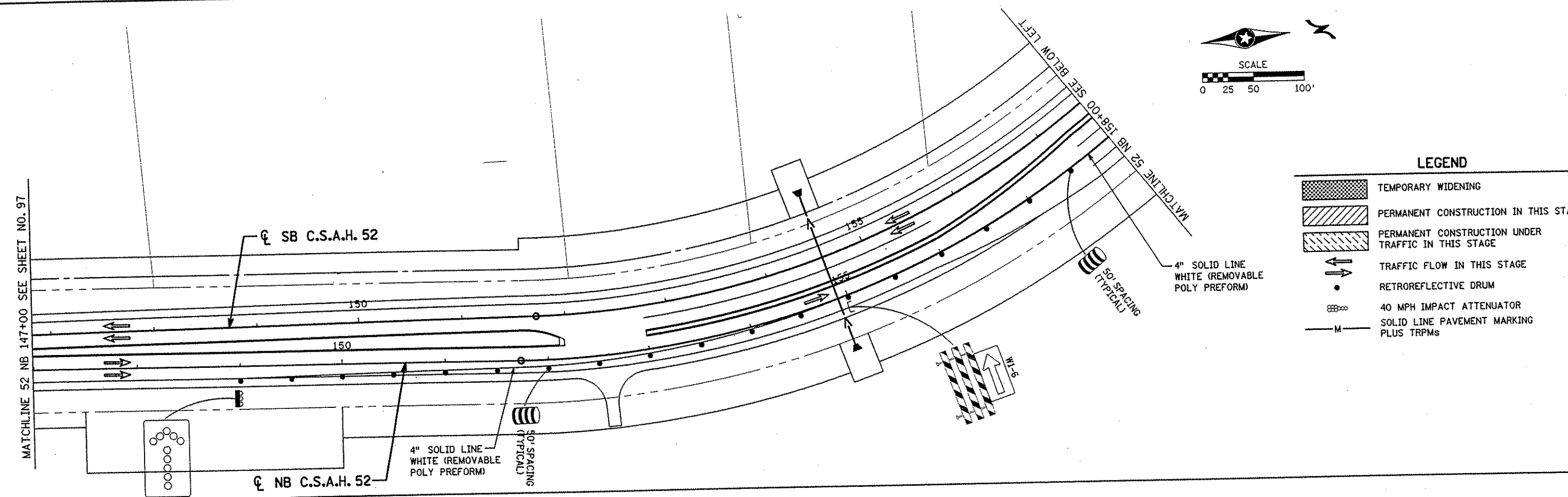
ANOKA COUNTY
 STAGE B1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 119+00 TO 147+00

SHEET
 97
 OF
 559



LEGEND

- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMS



NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\11749\part4\roadway3\staging\stgbl-03.dgn					

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.

Joseph W. ...
 DATE: 11-30-01 LIC. NO. 22405

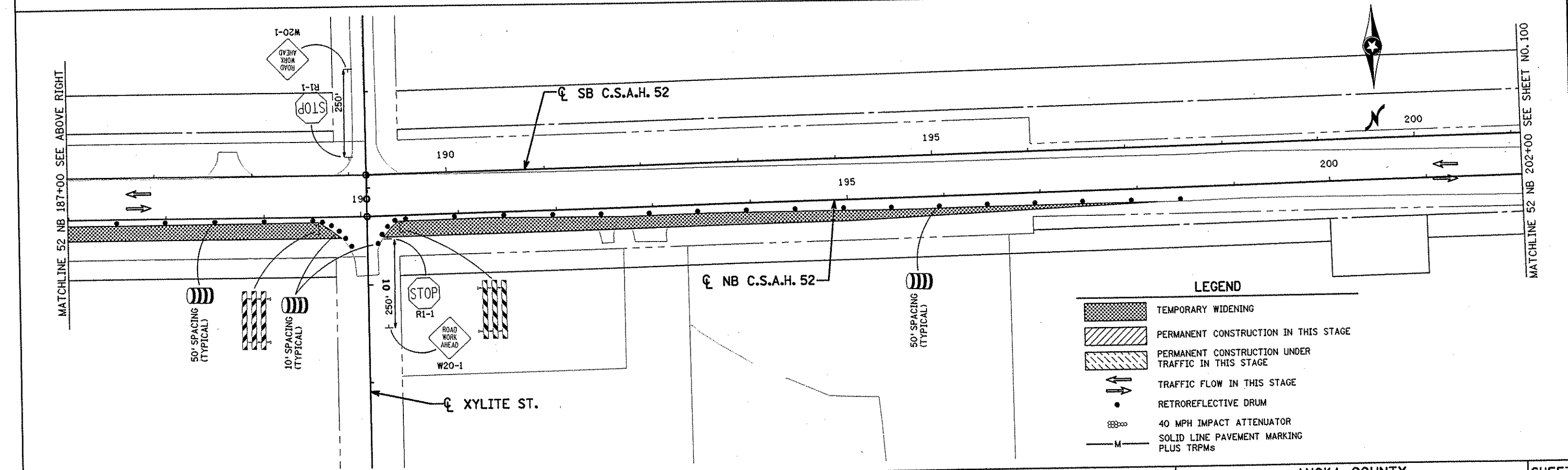
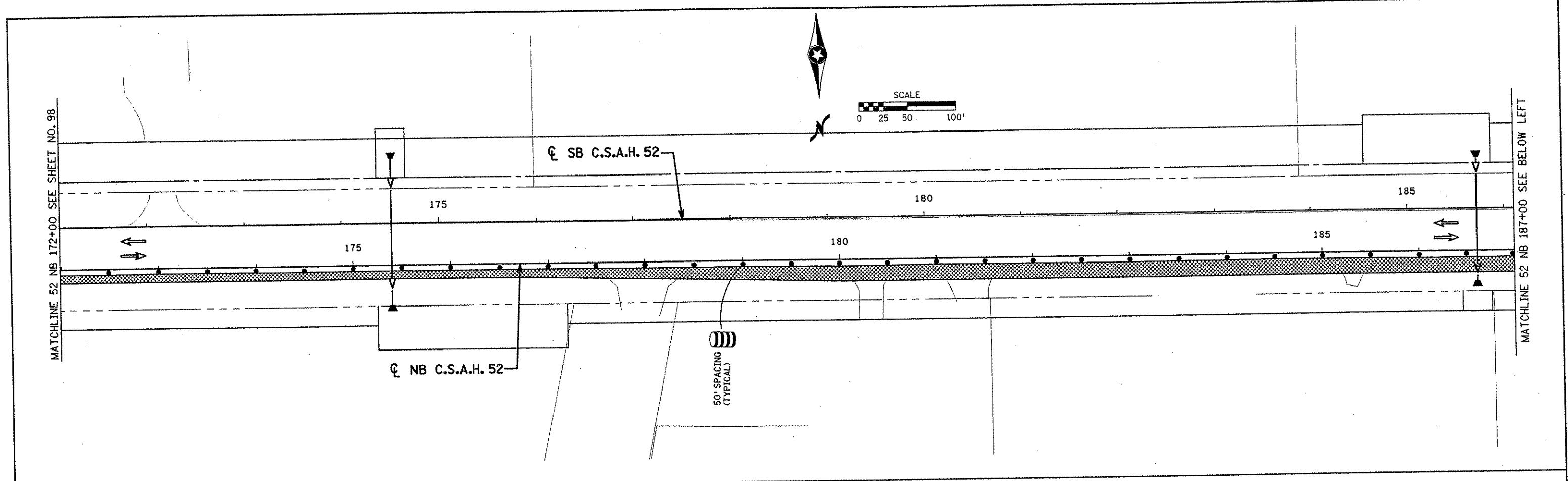
DRAWN BY: RRC DATE: 9-21-01
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 CHECKED BY: JMW DATE: 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE B1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 147+00 TO 172+00

SHEET
 98
 OF
 559



LEGEND

- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMs

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\pro\c11749\par\4\roadway3\staging\stg1-04.dgn 11/30/01

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.

Joseph W. Worn
 DATE: 11.30.01 LIC. NO. 22465

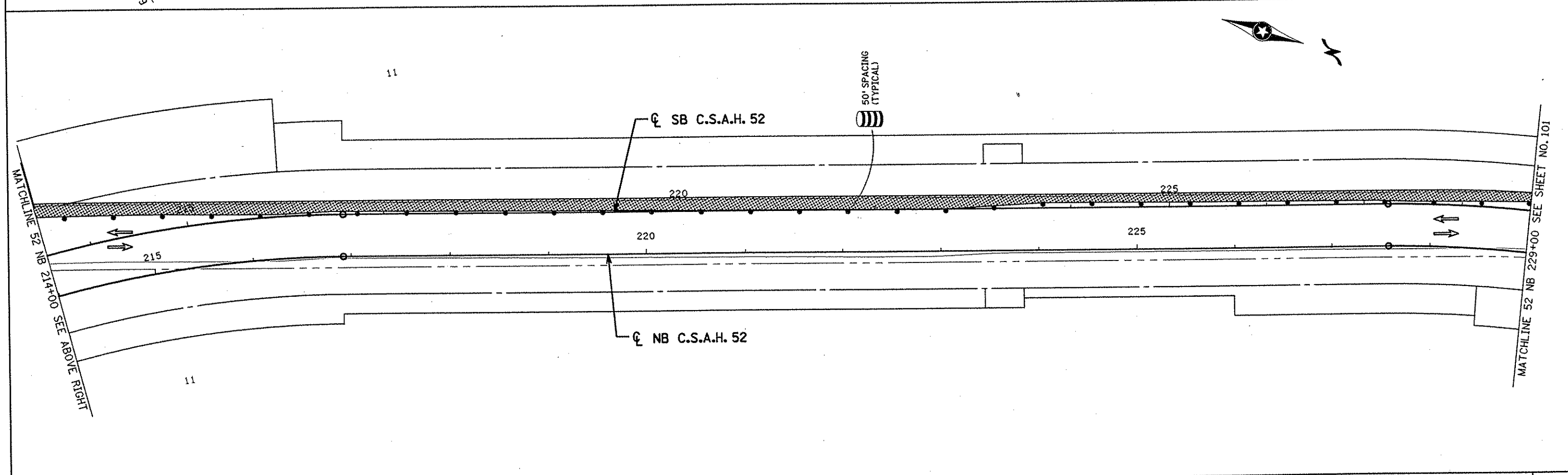
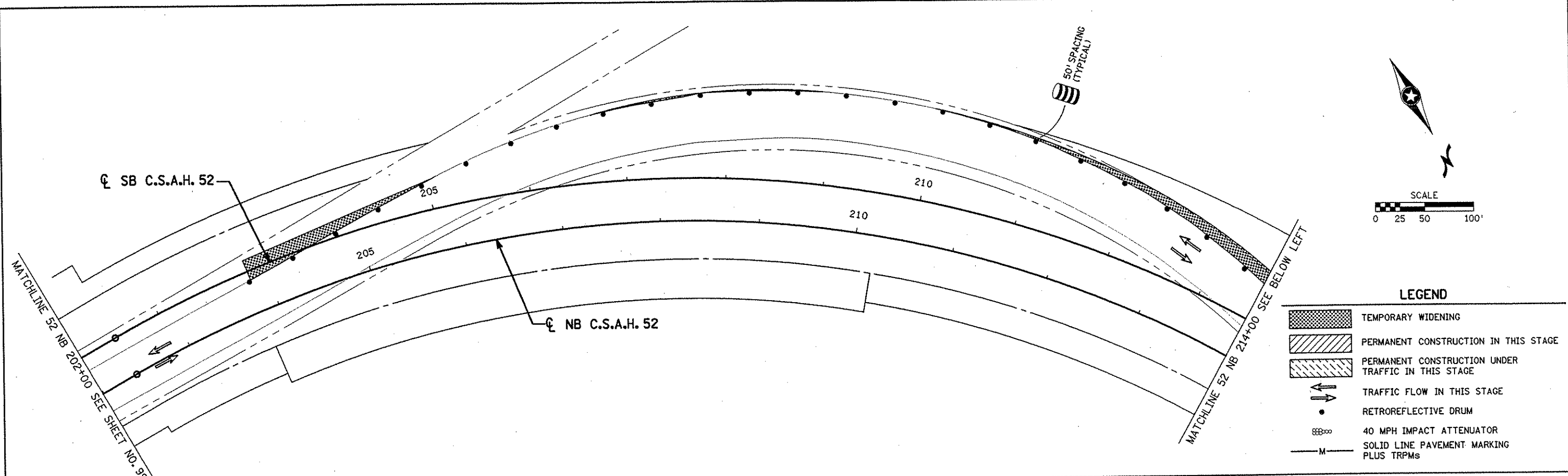
DRAWN BY RRC DATE 9-21-01
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S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

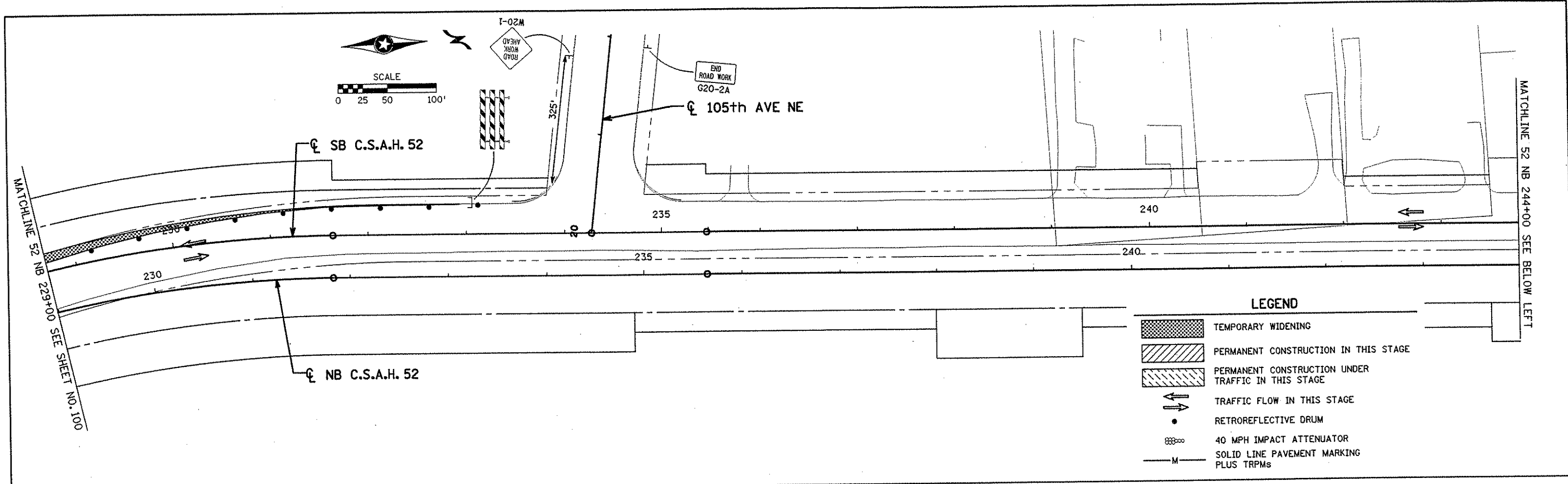
TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE B1 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 172+00 TO 202+00

SHEET
 99
 OF
 559

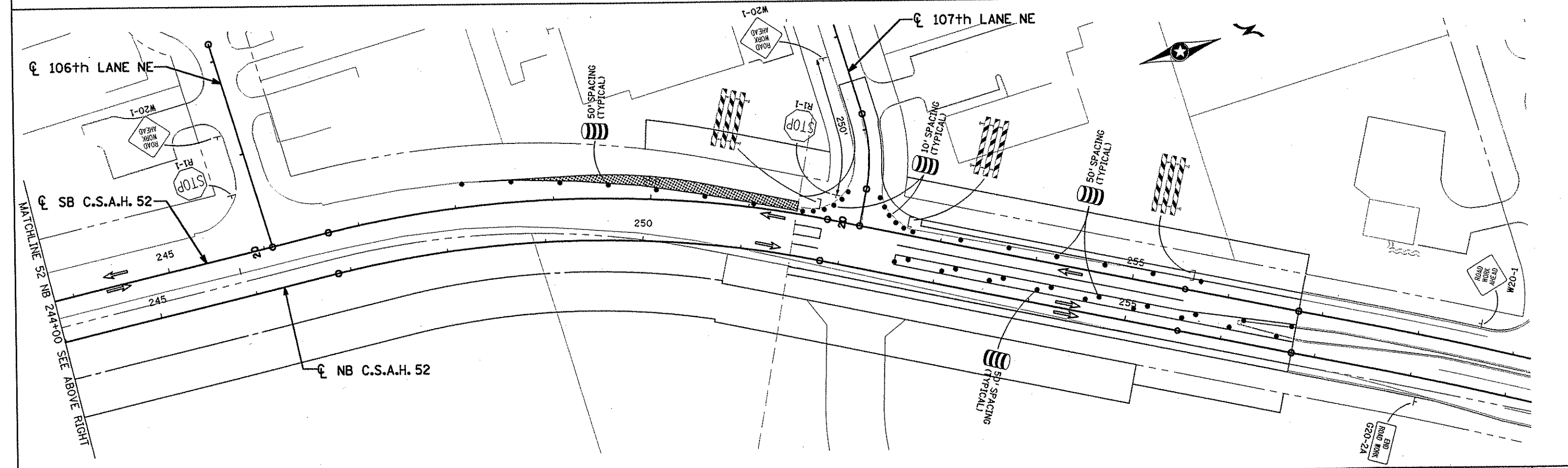


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Joseph Weaver</i> DATE <u>11-30-01</u> LIC. NO. <u>22405</u>					DRAWN BY <u>RRC</u> DATE <u>9-21-01</u> DESIGN BY <u>RRC</u> DATE <u>9-20-01</u> CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY STAGE B1 CONSTRUCTION C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 202+00 TO 229+00		SHEET 100 OF 559
NO	DATE	BY	CKD	APPR	REVISION	NAME: k:\site\proj\11749\part4\roadway3\staging\stgbl-05.dgn 11/30/01							



LEGEND

- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMs



NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\11749\par14\roadway3\staging\stgbl-08.dgn 11/30/01					

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.

Joseph Weaver
DATE 11-30-01 L.I.C. NO. 22405


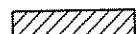
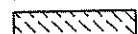




DESIGNED BY RRC DATE 9-21-01
 CHECKED BY JMW DATE 9-24-01
 S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

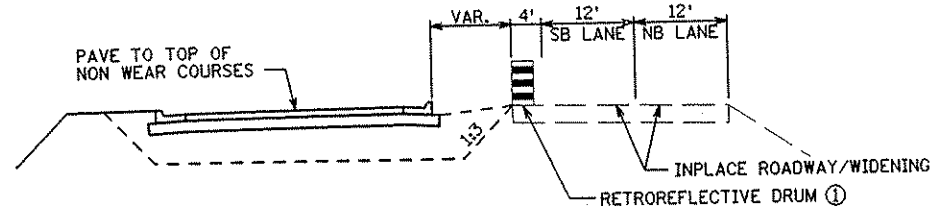
ANOKA COUNTY
 STAGE B1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 229+00 TO 256+74.68

SHEET
 101
 OF
 559

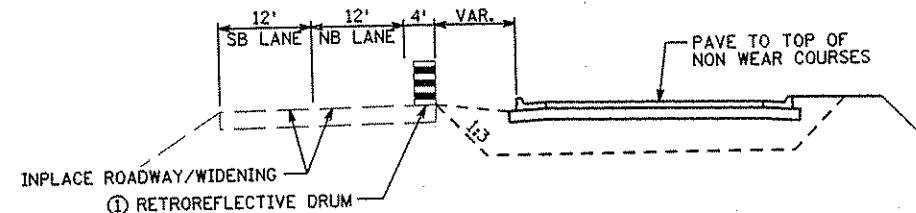
LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs

TYPICAL SECTION FOR STAGE 4
SB CSAH 52 PERMANENT CONSTRUCTION



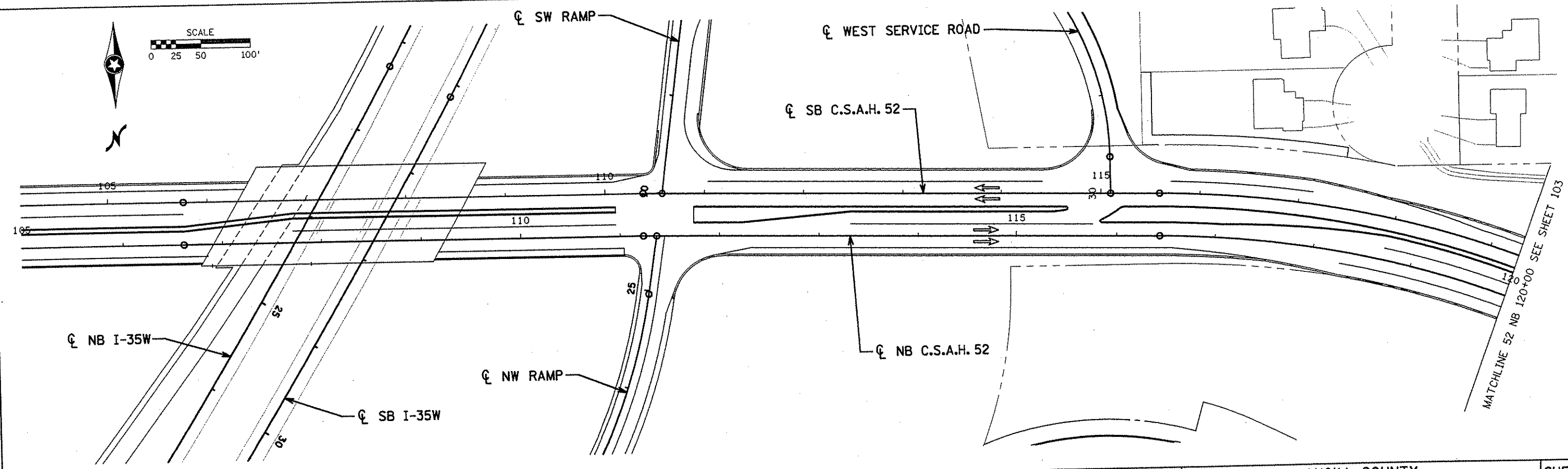
TYPICAL SECTION FOR STAGE 4
NB CSAH 52 PERMANENT CONSTRUCTION



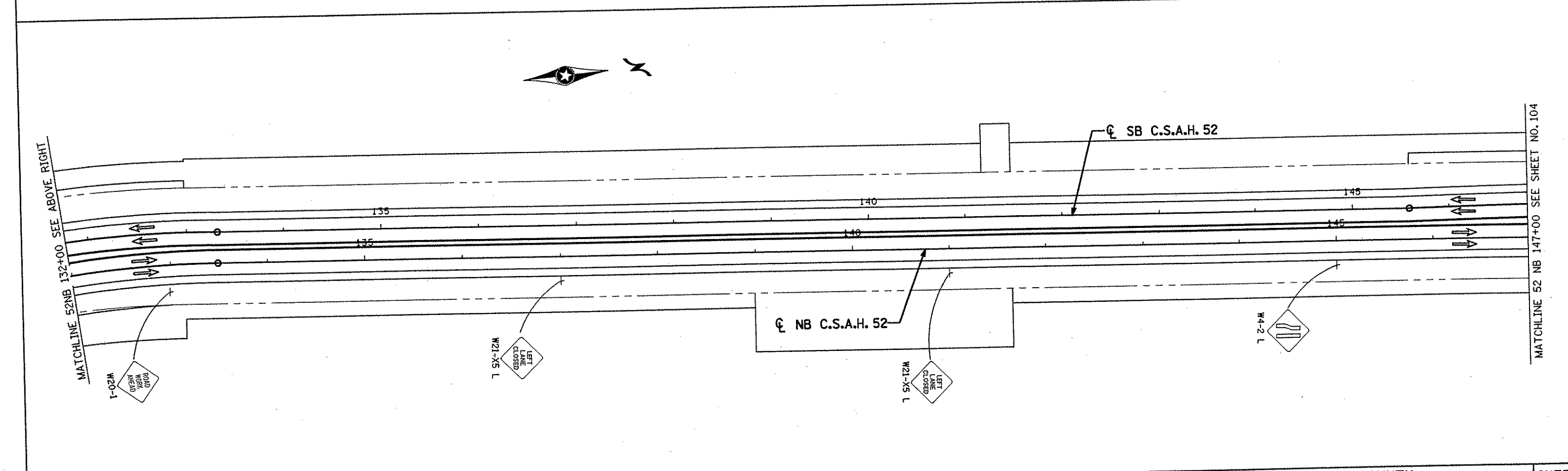
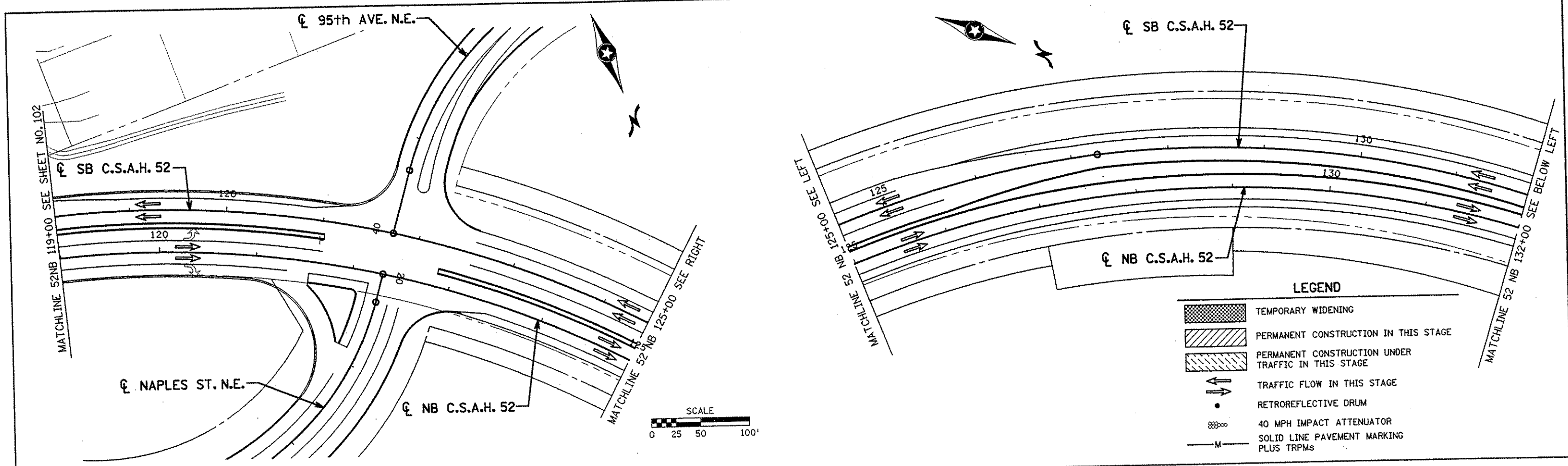
① SEE PLAN FOR LOCATIONS WHERE DRUMS AND 1:3 SLOPES ARE REPLACED WITH TRAFFIC BARRIER AND 1:1 SLOPES.

STAGE B2 CONSTRUCTION

- TRAFFIC SHALL UTILIZE THE PORTIONS OF CSAH 52, NB CSAH 52, AND SB CSAH 52 BUILT IN STAGES A1 & A2, CROSS OVER TO EXISTING CSAH 52, AND UTILIZE EXISTING CSAH 52 AND WIDENING BUILT IN STAGE B1 TO THE NORTH LIMITS OF THE PROJECT.
- CONSTRUCT SB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 159+91.77 TO 203+00. DO NOT CONSTRUCT CENTER MEDIAN STA. 159+91.77 TO 160+11.26.
- CONSTRUCT NB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 207+00 TO 251+50.



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. <i>Joseph Weira</i> DATE 1-11-02 LIC. NO. 22405					DRAWN BY RRC DATE 9-21-01 DESIGN BY RRC DATE 9-20-01 CHECKED BY JMW DATE 9-24-01	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY STAGE B2 CONSTRUCTION C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 105+00 TO 120+00	SHEET 102 OF 559	
NO	DATE	BY	CKD	APPR	REVISION	NAME: k:\a-f\anokaacty\1174901\hwy-brdg\par+4\roadway3\staging\stg2-02dqt\2001				



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.

Joseph Weiland
 DATE 11-30-01 LIC. NO. 22465

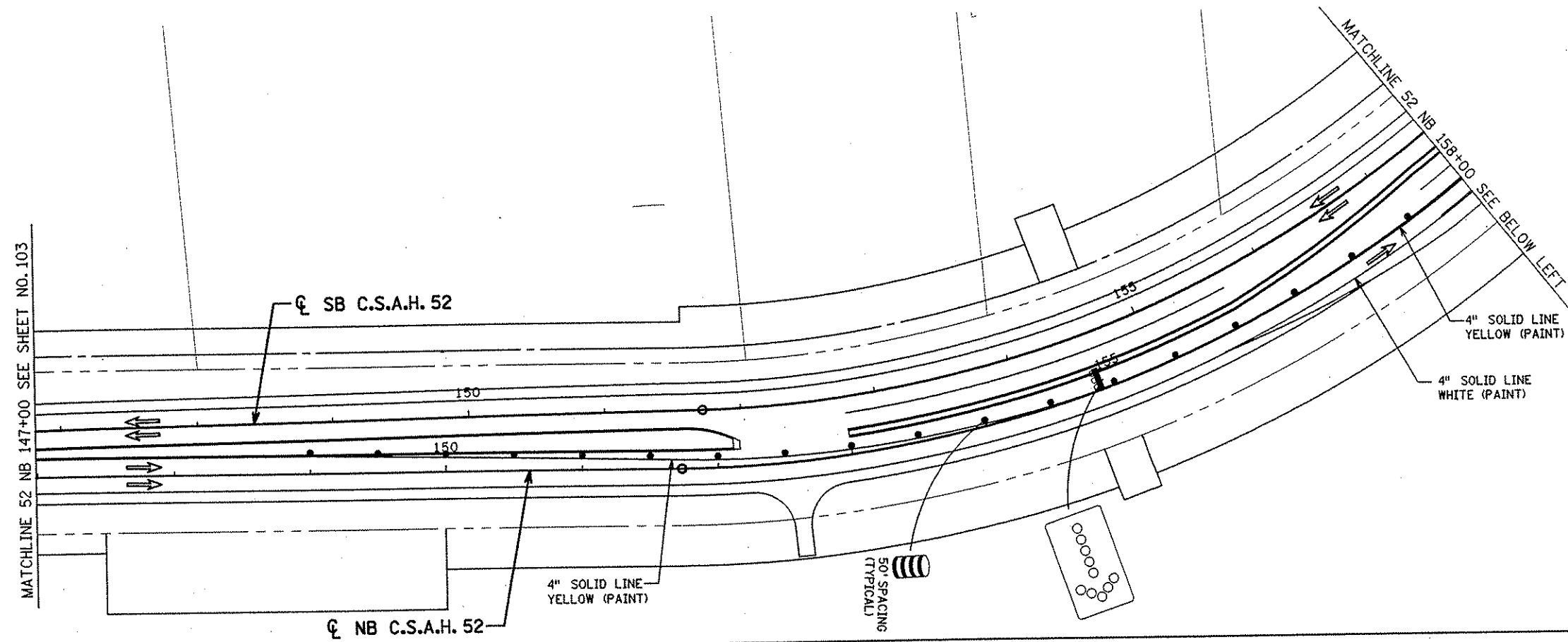
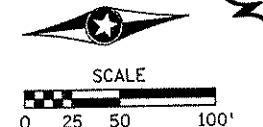
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

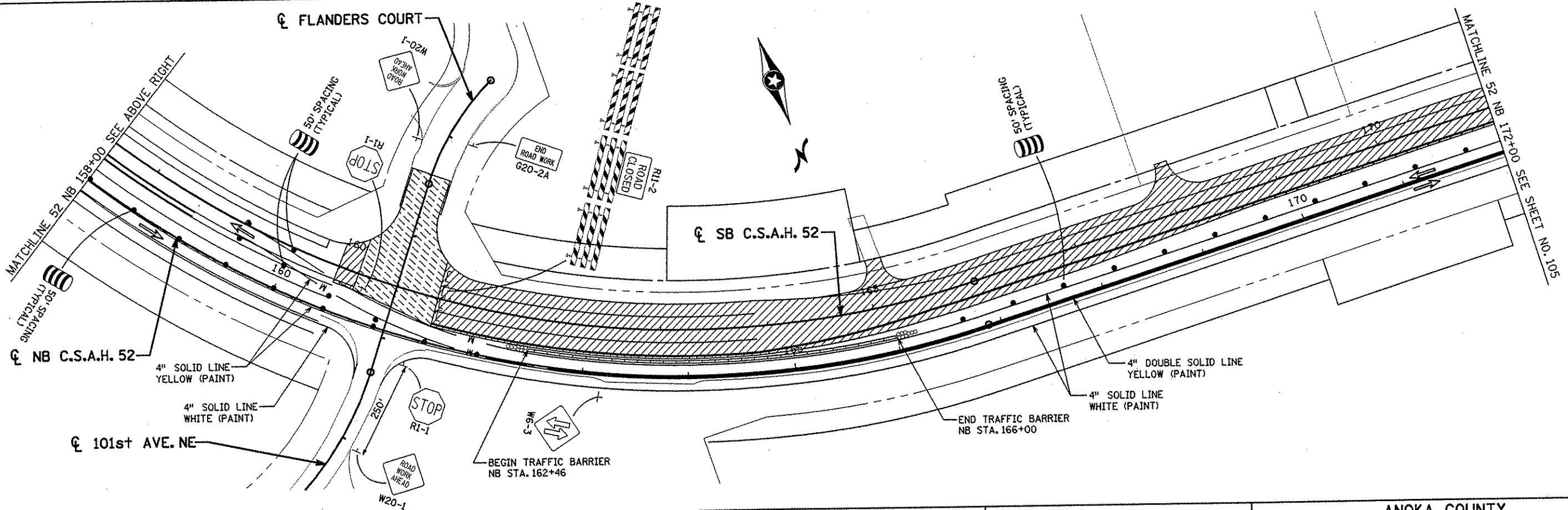
ANOKA COUNTY
 STAGE B2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 119+00 TO 147+00

SHEET 103 OF 559



LEGEND

	TEMPORARY WIDENING
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	40 MPH IMPACT ATTENUATOR
	SOLID LINE PAVEMENT MARKING PLUS TRPMs



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\staging\stg2-03.dgn 11/30/01

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.

Joseph Weisman
DATE: 11-30-01 LIC. NO. 22458

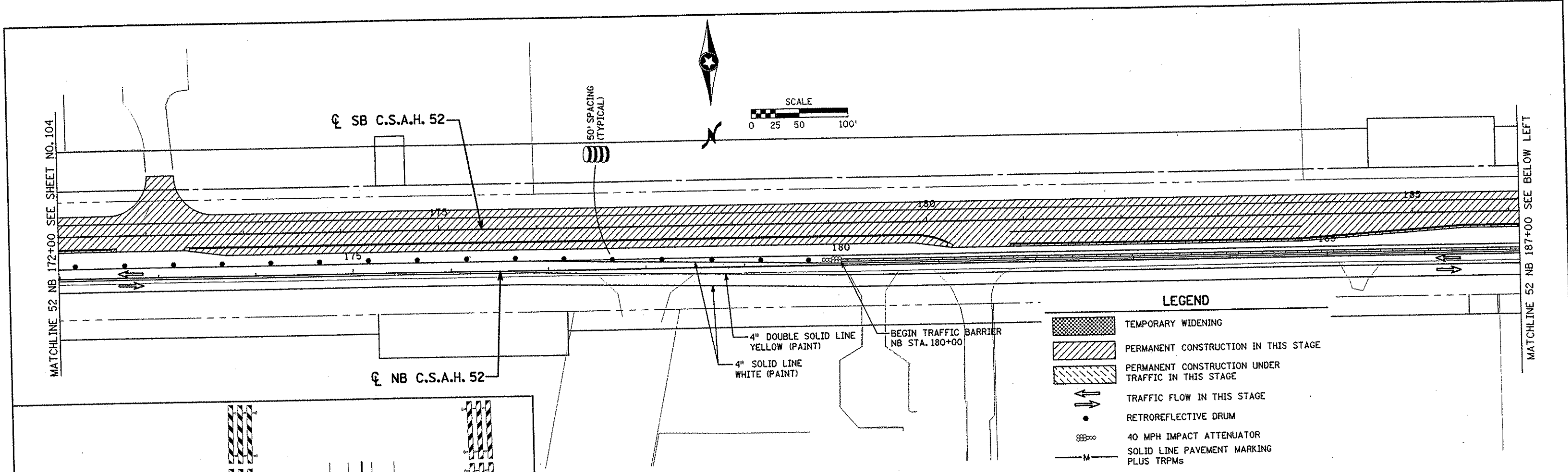
DRAWN BY: RRC DATE: 9-21-01
 DESIGN BY: RRC DATE: 9-20-01
 CHECKED BY: JMW DATE: 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

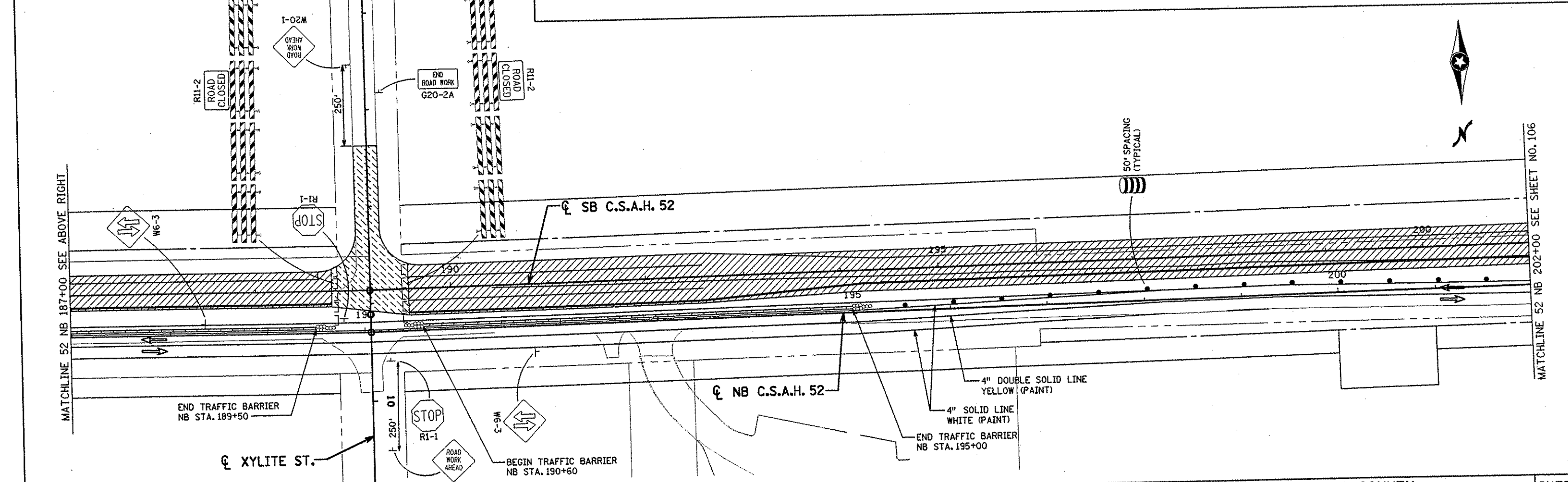
ANOKA COUNTY
 STAGE B2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 147+00 TO 172+00

SHEET 104 OF 559



LEGEND

	TEMPORARY WIDENING
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	40 MPH IMPACT ATTENUATOR
	SOLID LINE PAVEMENT MARKING PLUS TRPMs



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\pro9\c11749\part4\roadway3\staging\stg2-04.dgn 11/30/01

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.

Joseph Williams
 DATE 11-30-01 LIC. NO. 22405

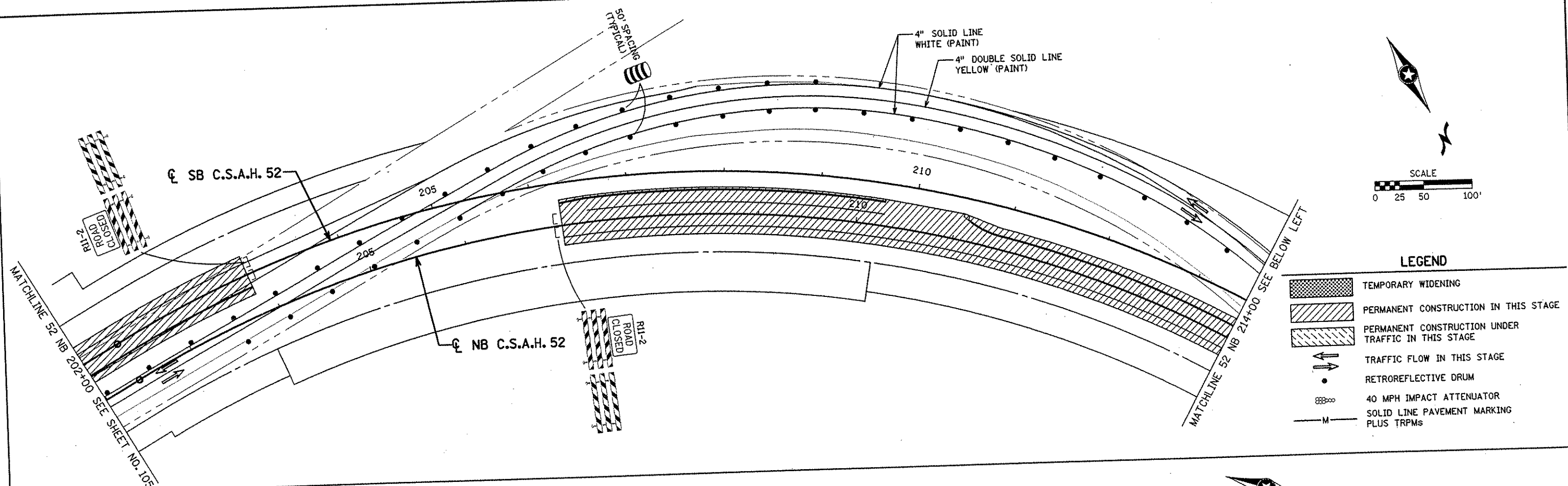
DRAWN BY	RRC	DATE	9-21-01
DESIGN BY	RRC	DATE	9-20-01
CHECKED BY	JMW	DATE	9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

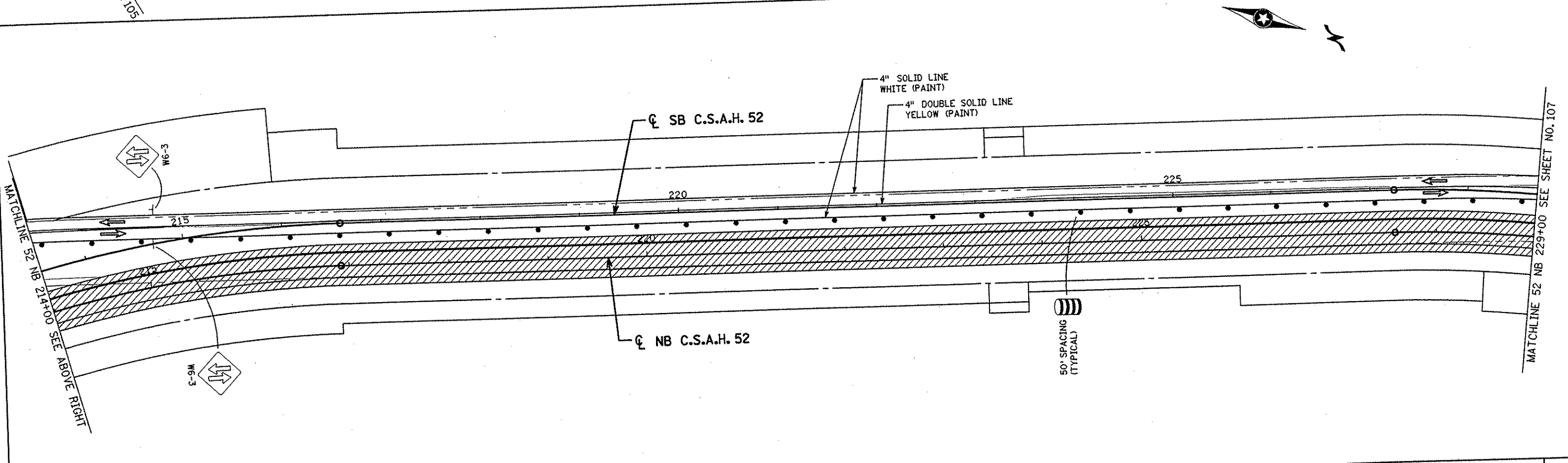
ANOKA COUNTY
 STAGE B2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 172+00 TO 202+00

SHEET 105 OF 559

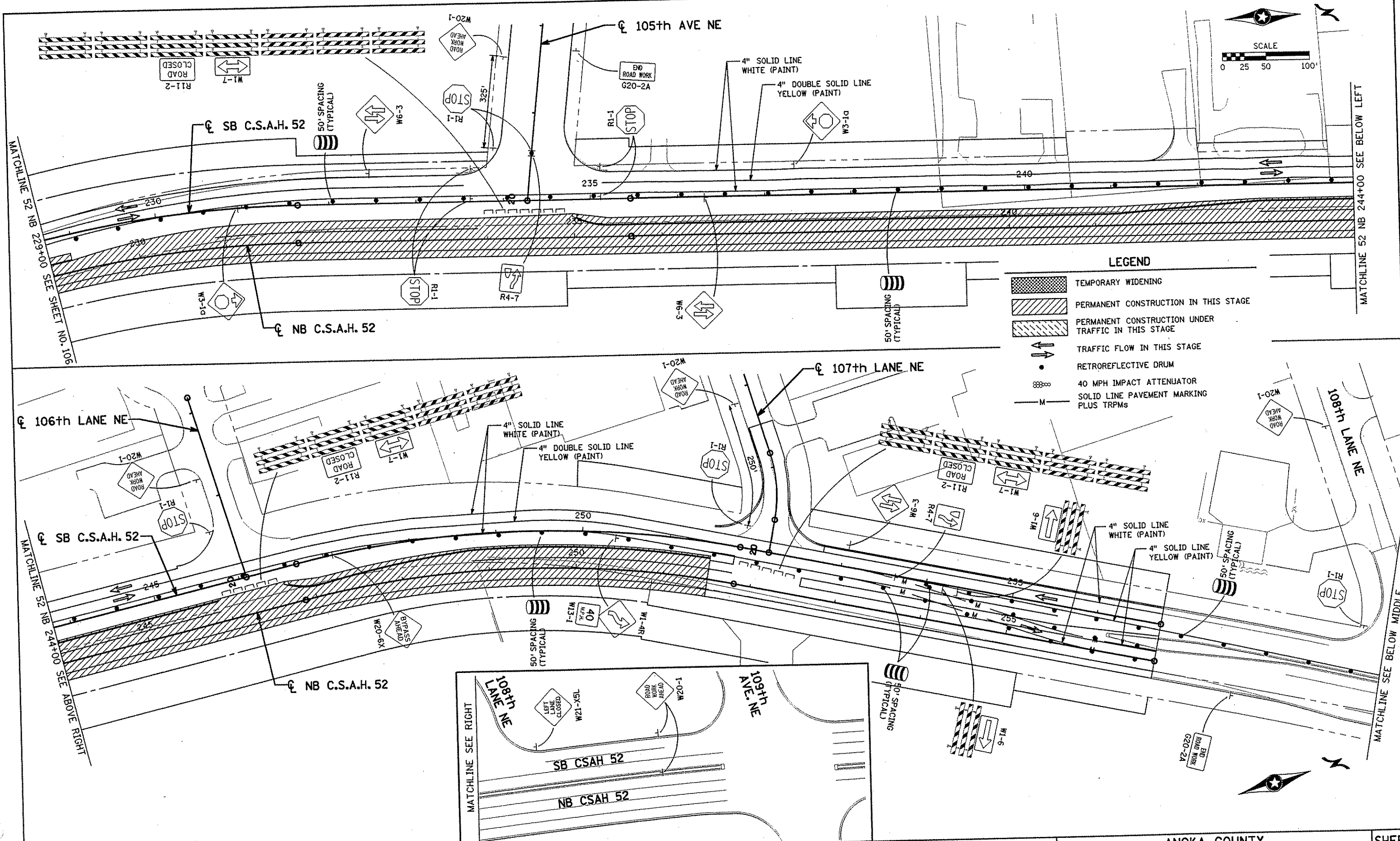


LEGEND

	TEMPORARY WIDENING
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	40 MPH IMPACT ATTENUATOR
	SOLID LINE PAVEMENT MARKING PLUS TRPMs

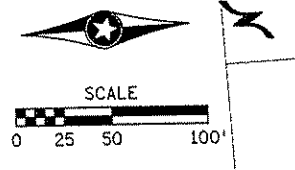


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Joseph W. W...</i> DATE <u>11-30-01</u> L.I.C. NO. <u>23405</u>					S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY STAGE B2 CONSTRUCTION C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 202+00 TO 229+00		SHEET 106 OF 559
NO	DATE	BY	CKD	APPR	REVISION	NAME: k:\site\proj\11749\par14\roadway3\staging\stgb2-05.dgn 11/30/01					



LEGEND

	TEMPORARY WIDENING
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	40 MPH IMPACT ATTENUATOR
	SOLID LINE PAVEMENT MARKING PLUS TRPMs



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\par\4\roadway3\staging\stgb2-06.dgn 11/30/01

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.

Joseph W. W...
 DATE: 11-30-01 LIC. NO. 22465

DRAWN BY: RRC DATE: 9-21-01
 DESIGN BY: RRC DATE: 9-20-01
 CHECKED BY: JMW DATE: 9-24-01


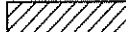
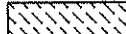



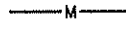
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE B2 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 229+00 TO 256+74.68

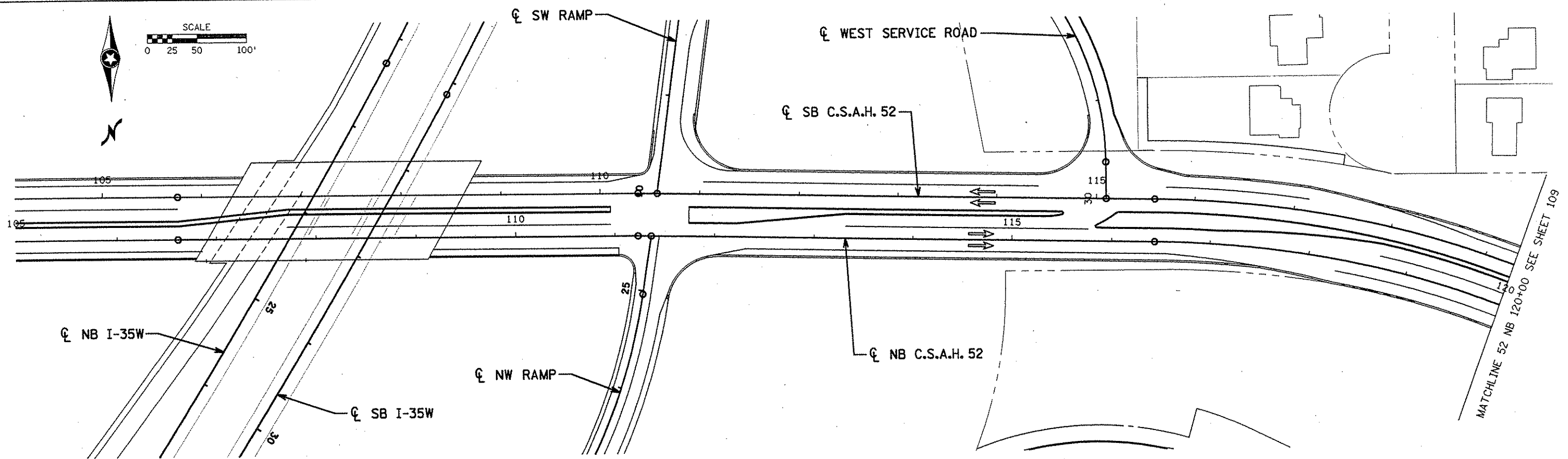
SHEET
 107
 OF
 559

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs

STAGE B3 CONSTRUCTION

- TRAFFIC SHALL UTILIZE THE PORTIONS OF CSAH 52, NB CSAH 52, AND SB CSAH 52 BUILT IN STAGES A1 & A2, CROSS OVER TO EXISTING CSAH 52, UTILIZE EXISTING CSAH 52 AND WIDENING BUILT IN STAGE B1, UTILIZE SB CSAH 52 BUILT IN STAGE B2 STA. 159+91.77 TO 203+00, AND CROSS OVER TO NB CSAH 52 TO 256+74.68
- CONSTRUCT NB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 160+50 TO 207+00.
- CONSTRUCT SB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 235+00 TO 251+50.



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\a-f\anokacty\1174901\hwy-brdg\par f4\roadway3\staging\stg3-QB.dwg 2001

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.

Joseph Weman
 DATE: 1-11-02 L.I.C. NO. 22405

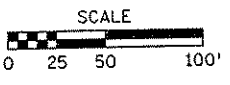
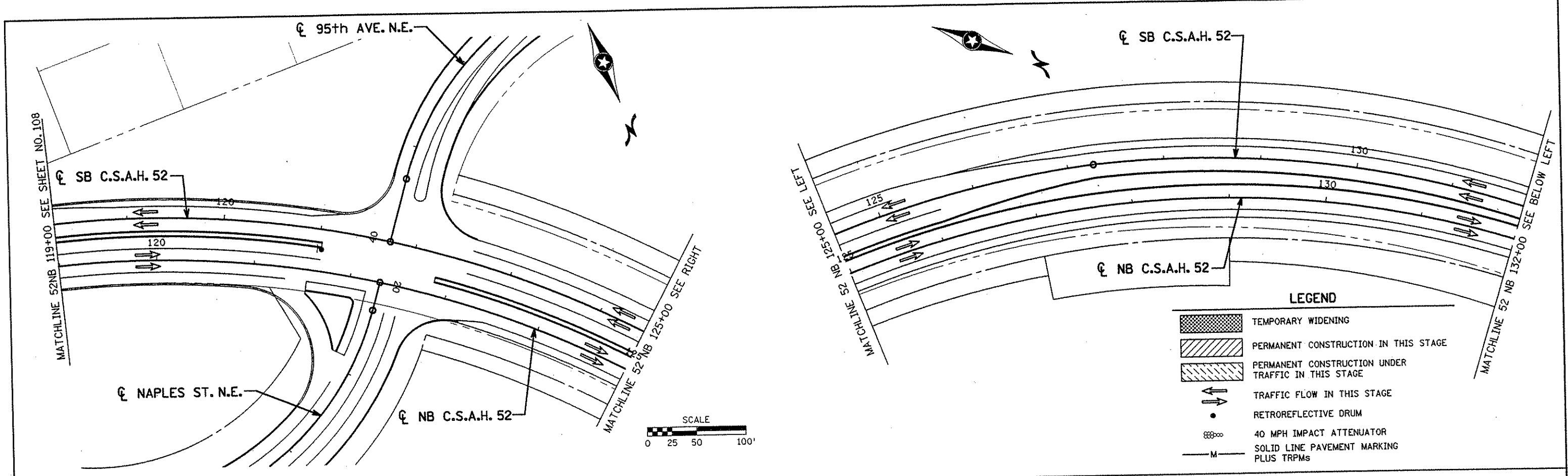
DRAWN BY	RRC	DATE	9-21-01
DESIGN BY	RRC	DATE	9-20-01
CHECKED BY	JMW	DATE	9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

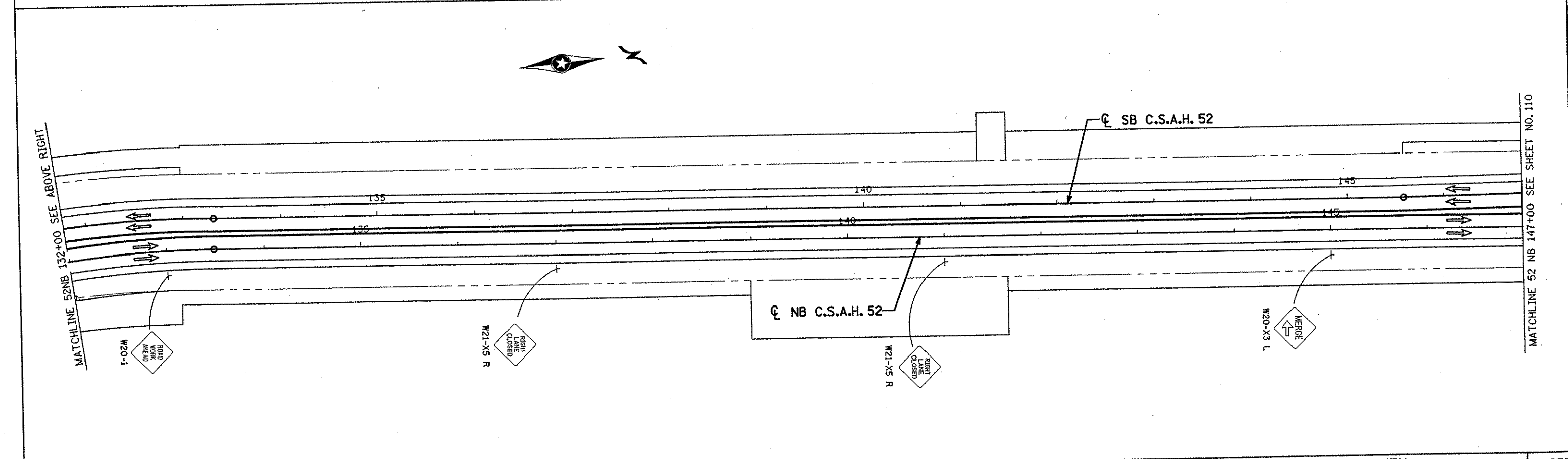
TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE B3 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 105+00 TO 120+00

SHEET
 108
 OF
 559



- LEGEND**
- TEMPORARY WIDENING
 - PERMANENT CONSTRUCTION IN THIS STAGE
 - PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
 - TRAFFIC FLOW IN THIS STAGE
 - RETROREFLECTIVE DRUM
 - 40 MPH IMPACT ATTENUATOR
 - SOLID LINE PAVEMENT MARKING PLUS TRPMs



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.

Joseph W. ...
 DATE 11-26-01 LIC. NO. 22405

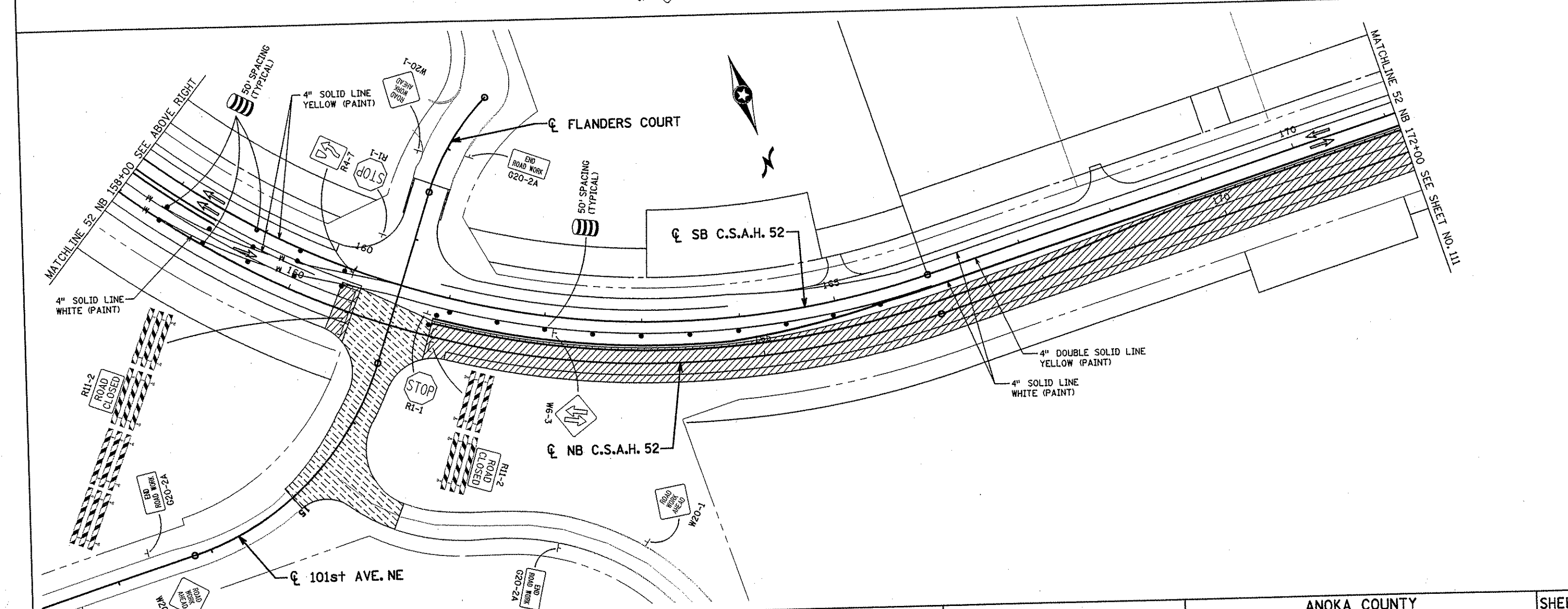
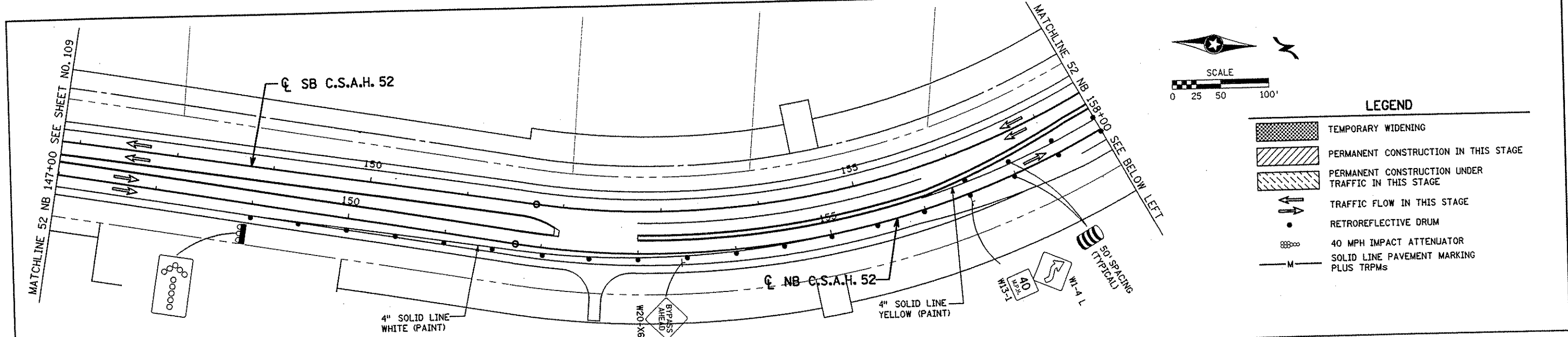
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE B3 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 119+00 TO 147+00

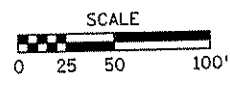
SHEET 109 OF 559



NO. DATE BY CKD APPR REVISION NAME: k:\site\proj\c11749\par\4\roadway3\staging\stgb3-03.dgn 11/30/01				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. <i>Joseph W. W...</i> DATE 11-30-01 LIC. NO. 22405		DRAWN BY RRC DATE 9-21-01 DESIGN BY RRC DATE 9-20-01 CHECKED BY JMW DATE 9-24-01		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY STAGE B3 CONSTRUCTION C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 147+00 TO 172+00		SHEET 110 OF 559
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MATCHLINE 52 NB 172+00 SEE SHEET NO. 110

SB C.S.A.H. 52



NB C.S.A.H. 52

50' SPACING (TYPICAL)

4" SOLID LINE WHITE (PAINT)

4" DOUBLE SOLID LINE YELLOW (PAINT)

MATCHLINE 52 NB 187+00 SEE BELOW LEFT

MATCHLINE 52 NB 187+00 SEE ABOVE RIGHT

SB C.S.A.H. 52

4" SOLID LINE WHITE (PAINT)

4" DOUBLE SOLID LINE YELLOW (PAINT)

MATCHLINE 52 NB 202+00 SEE SHEET NO. 112

NB C.S.A.H. 52

XYLITE ST.

LEGEND

- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMs



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\staging\stgb3-04.dgn 11/30/01

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.

Joseph W. ...
DATE: 11-30-01 LIC. NO. 22465

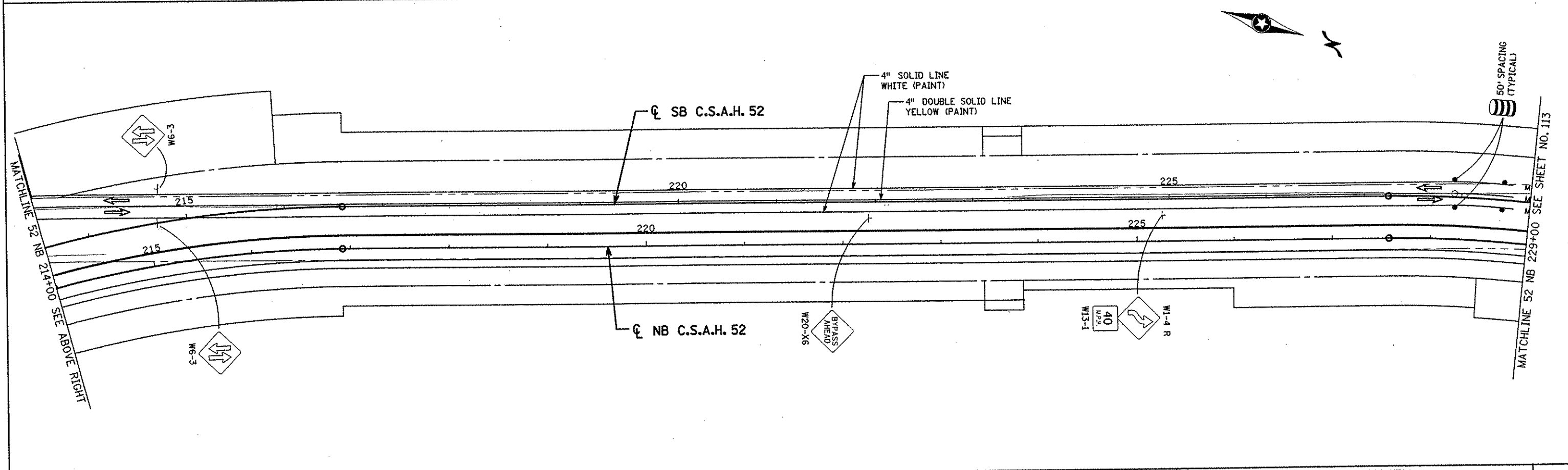
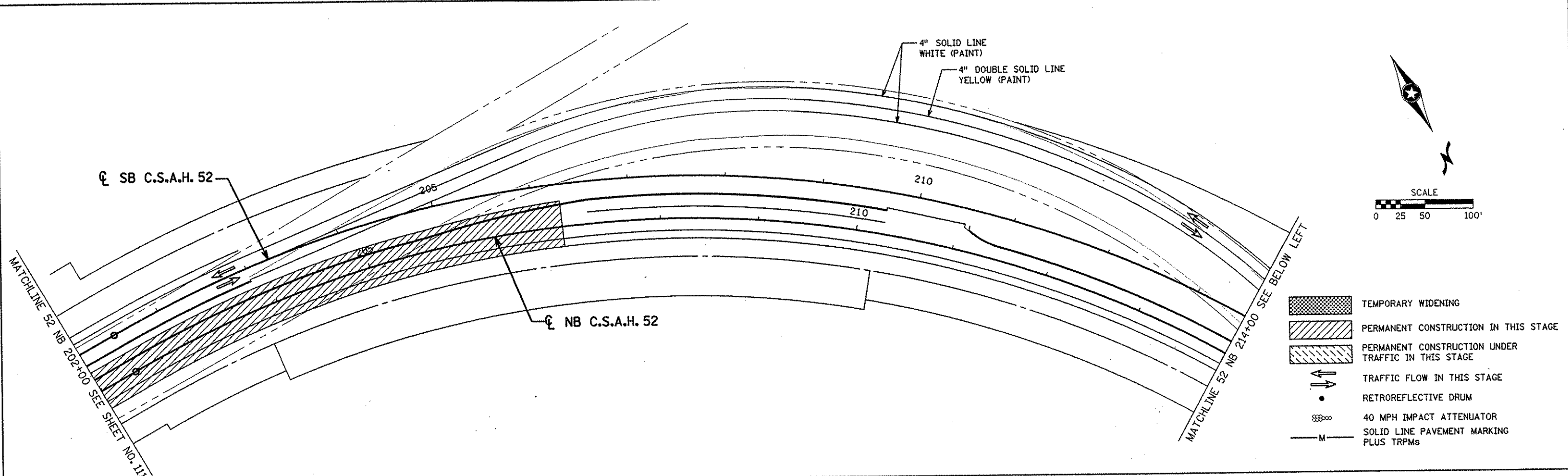
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 DESIGN BY: RRC DATE: 9-20-01
 CHECKED BY: JMW DATE: 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE B3 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 172+00 TO 202+00

SHEET
 111
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\11749\part4\roadway3\staging\stgb3-05.dgn 11/30/01					

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.

Joseph Whelan
 DATE: 11-30-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

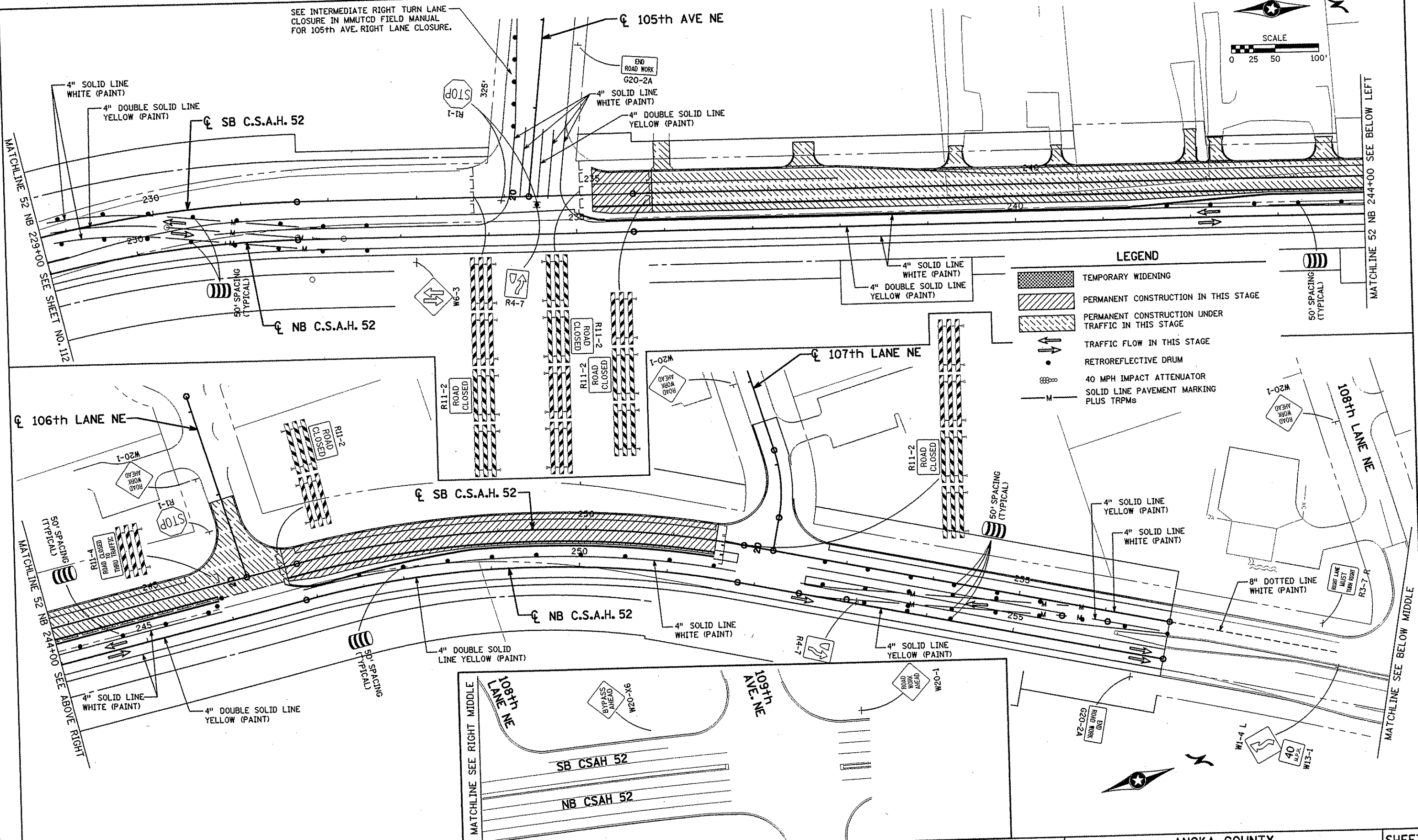
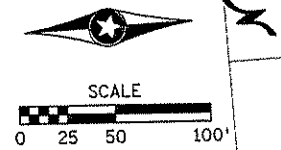
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 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE B3 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 202+00 TO 229+00

SHEET
 112
 OF
 559

SEE INTERMEDIATE RIGHT TURN LANE CLOSURE IN MMUTCD FIELD MANUAL FOR 105th AVE. RIGHT LANE CLOSURE.



LEGEND

- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMs

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.

Joseph Wagner
DATE 1-11-02 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.A.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022


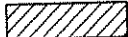
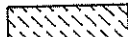




TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE B3 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 229+00 TO 256+74.68

SHEET 113 OF 559

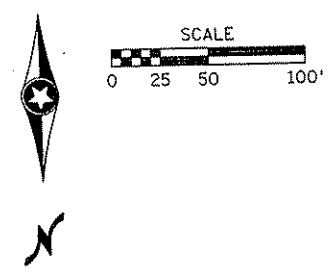
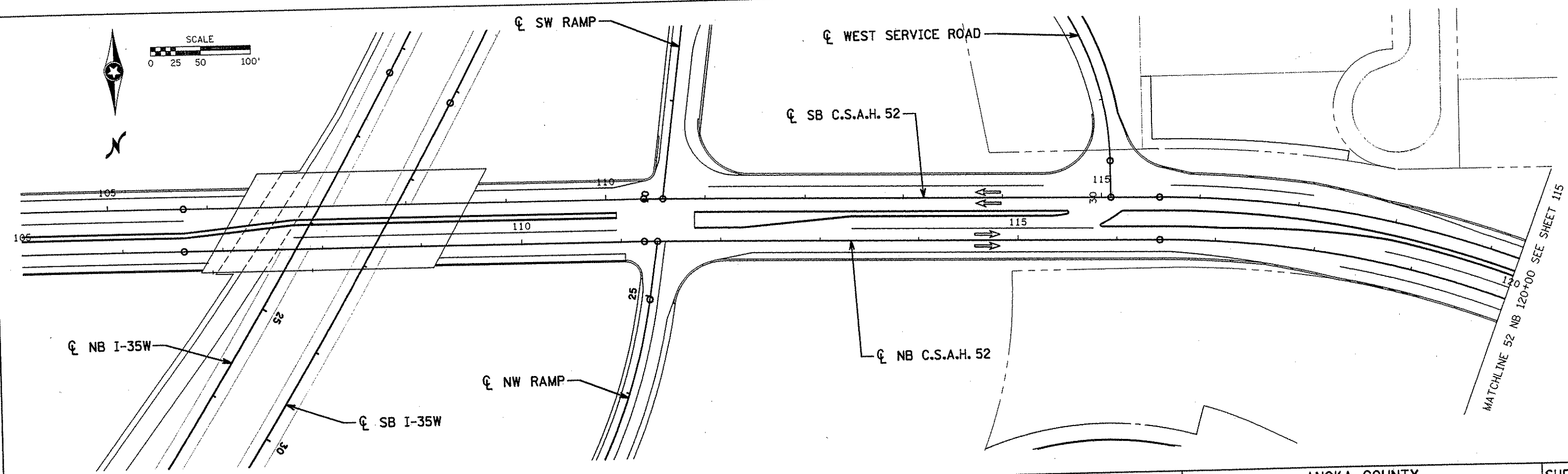
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LEGEND

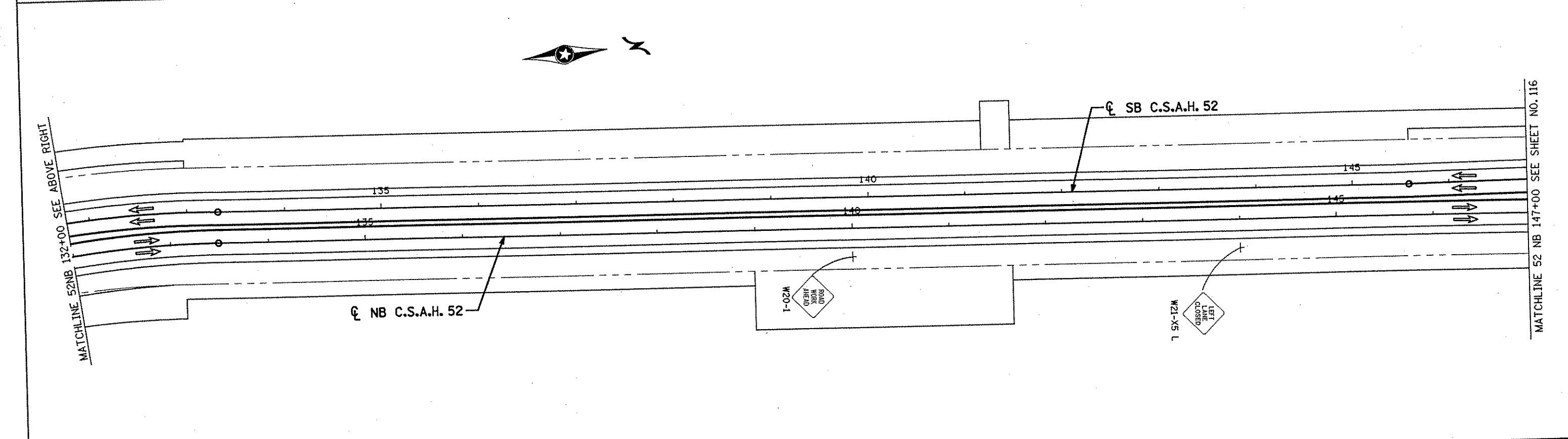
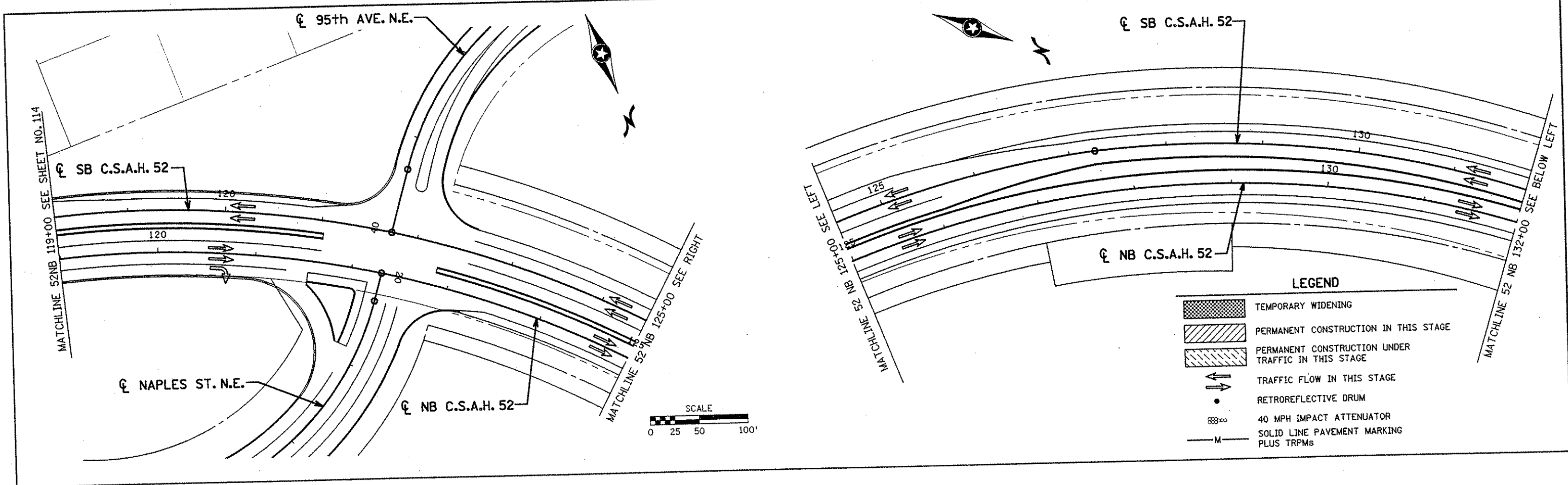
-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs

STAGE B4 CONSTRUCTION

- TRAFFIC SHALL UTILIZE THE PORTIONS OF CSAH 52, NB CSAH 52, AND SB CSAH 52 BUILT IN STAGES A1 & A2, AND UTILIZE NB CSAH 52 BUILT IN STAGES B1 - B3 NORTH TO 256+74.68
- CONSTRUCT SB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 203+00 TO 235+00.



ANOKA COUNTY					SHEET 114 OF 559
STAGE B4 CONSTRUCTION C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 105+00 TO 120+00					
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.			DRAWN BY <u>RRC</u> DATE <u>9-21-01</u>	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA
DATE <u>1-11-02</u> LIC. NO. <u>22405</u>			DESIGN BY <u>RRC</u> DATE <u>9-20-01</u>		
NO. DATE BY CKD APPR REVISION			CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>		
NAME: k:\a-f\anokacty\1174901\hwy-brdg\part4\roadway3\staging\stgb4-02.dgn 2001					



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.

Joseph W. ...
 DATE 11-30-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

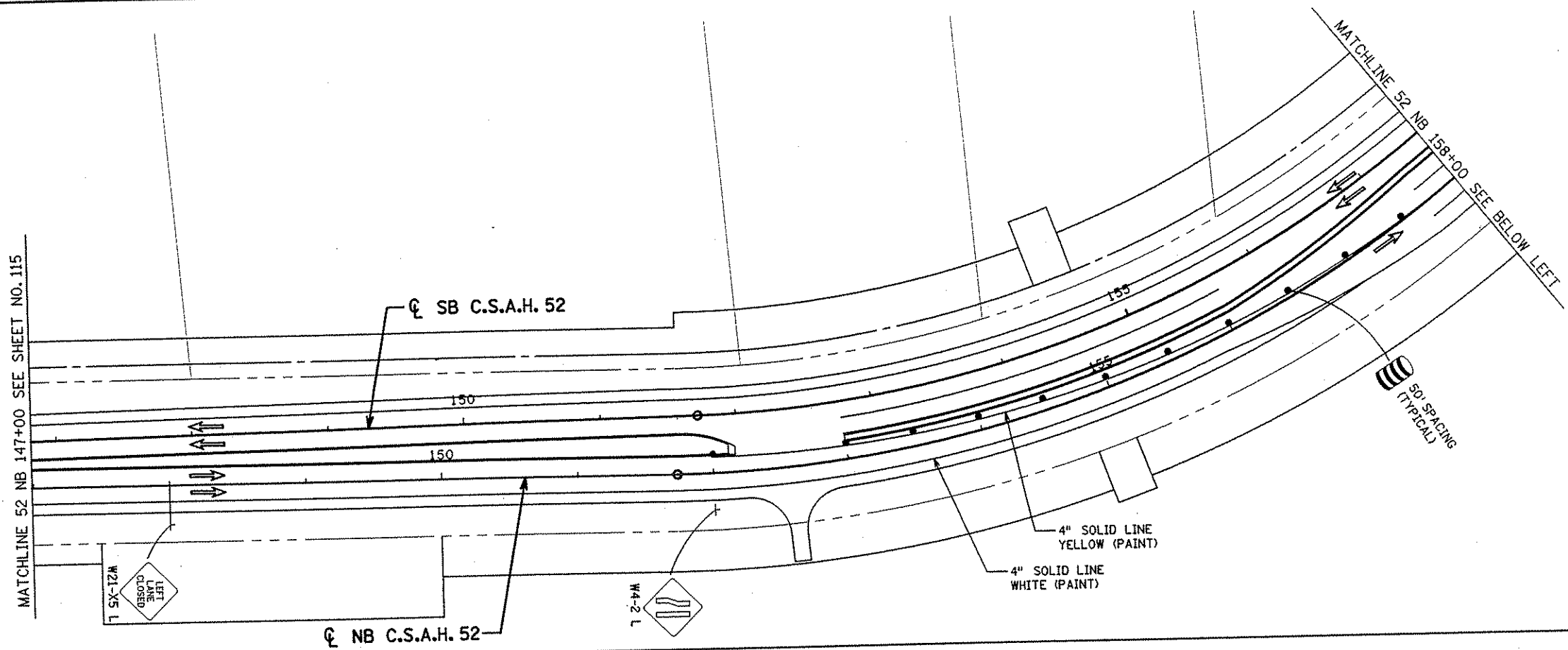
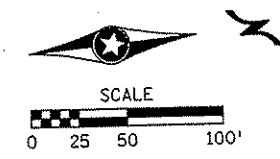
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE B4 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 119+00 TO 147+00

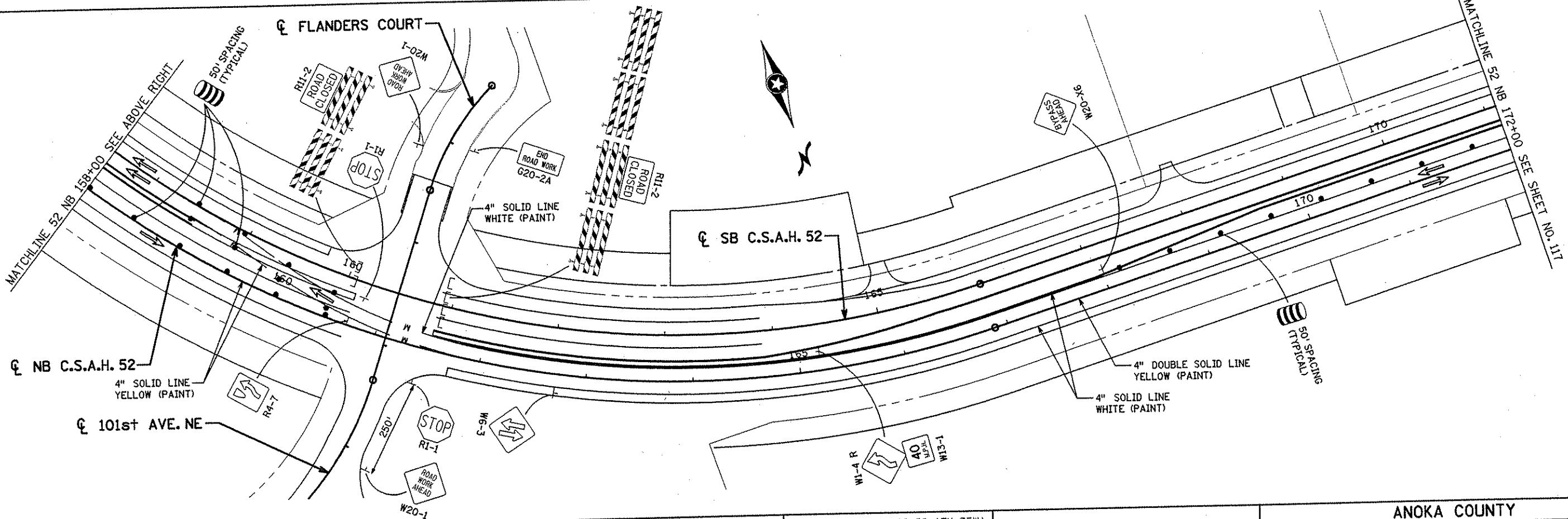
SHEET
 115
 OF
 559

NAME: k:\site\proj\c11749\part4\roadway3\staging\stgb4-02.dgn 11/30/01



LEGEND

	TEMPORARY WIDENING
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	40 MPH IMPACT ATTENUATOR
	SOLID LINE PAVEMENT MARKING PLUS TRPMS



NO	DATE	BY	CHKD	APPR	REVISION

NAME: ka:\site\proj\11749\part4\roadway3\staging\stgb4-03.dgn 11/30/01

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.

Joseph Weas
DATE 11-30-01 LIC. NO. 22405

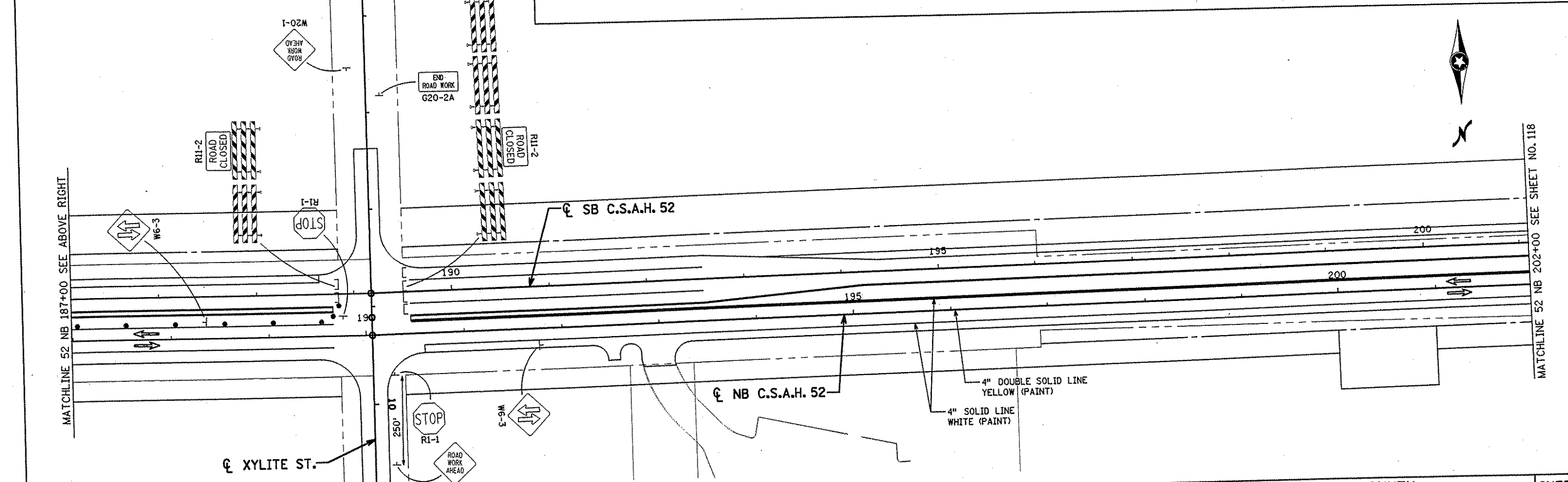
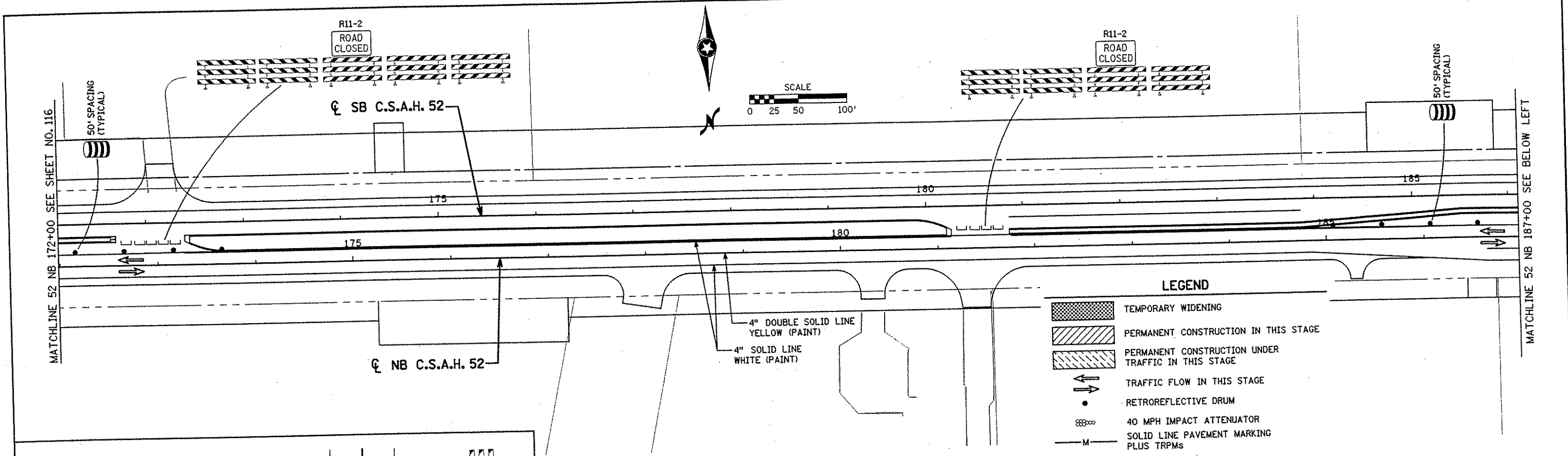
DRAWN BY	RRC	DATE	9-21-01
DESIGN BY	RRC	DATE	9-20-01
CHECKED BY	JMW	DATE	9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE B4 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 147+00 TO 172+00

SHEET
 116
 OF
 559



NO	DATE	BY	CRD	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.

Joseph W. W...
 DATE 11-30-01 LIC. NO. 22405

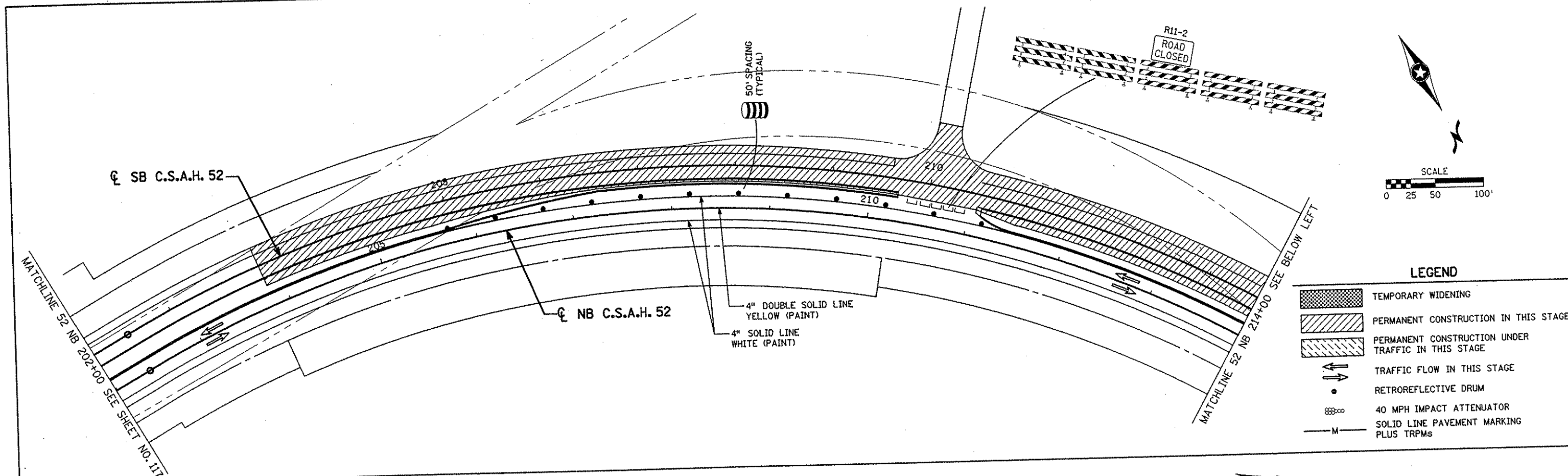
DRAWN BY RRC DATE 9-21-01
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 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

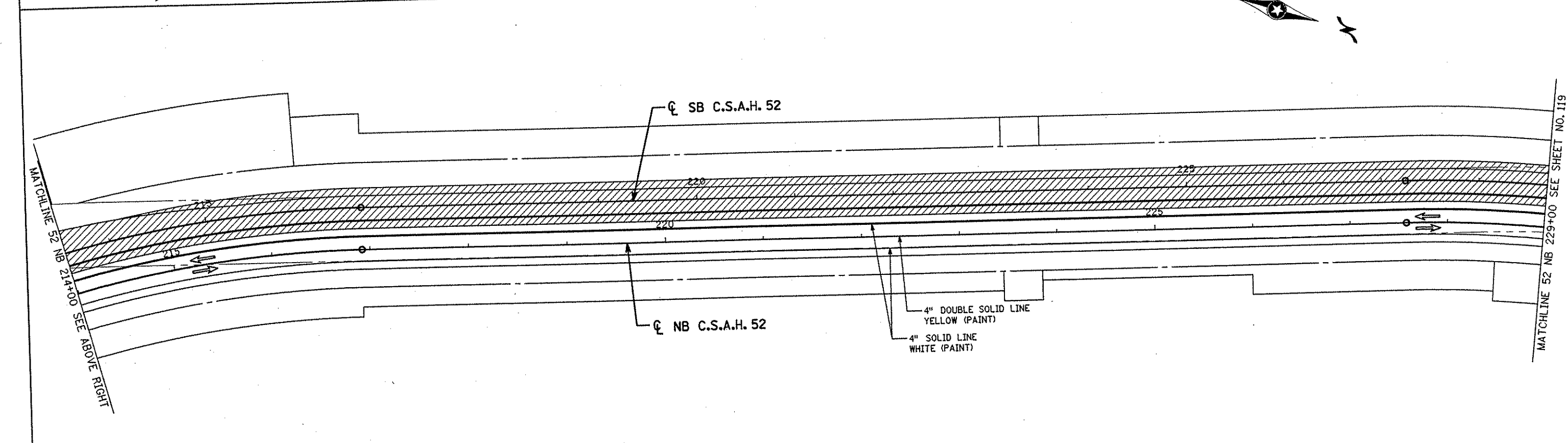
ANOKA COUNTY
 STAGE B4 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 172+00 TO 202+00

SHEET 117 OF 559



LEGEND

- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMs



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\staging\stgb4-05.dgn 11/30/01

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.

Joseph W. Weisman
 DATE 11-30-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

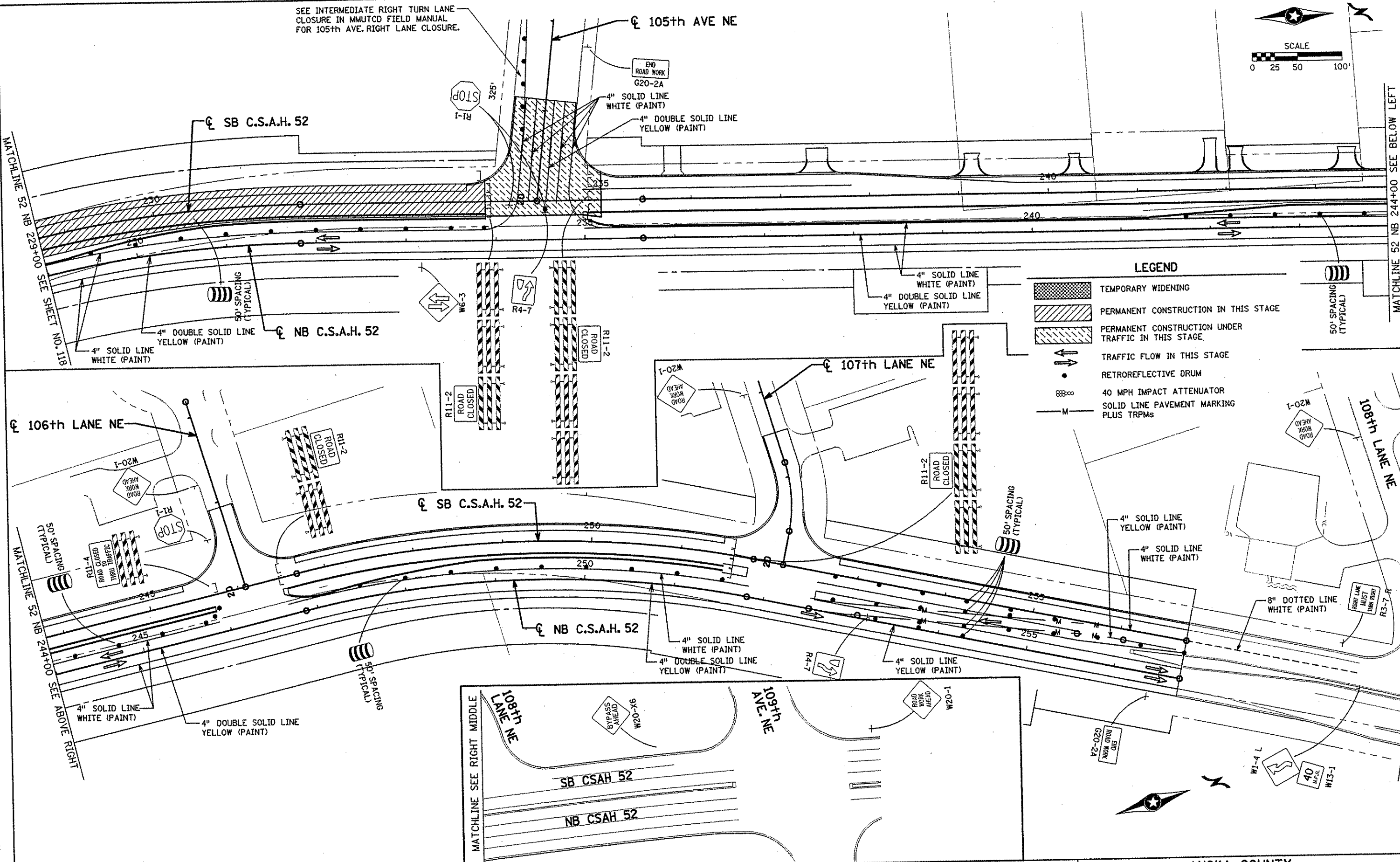
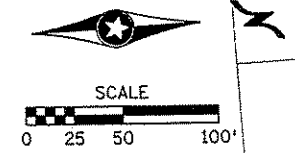
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE B4 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 202+00 TO 229+00

SHEET 118 OF 559

SEE INTERMEDIATE RIGHT TURN LANE CLOSURE IN MMUTCD FIELD MANUAL FOR 105th AVE. RIGHT LANE CLOSURE.



LEGEND

- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMs

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.

Joseph Weanu
DATE 1-11-02 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

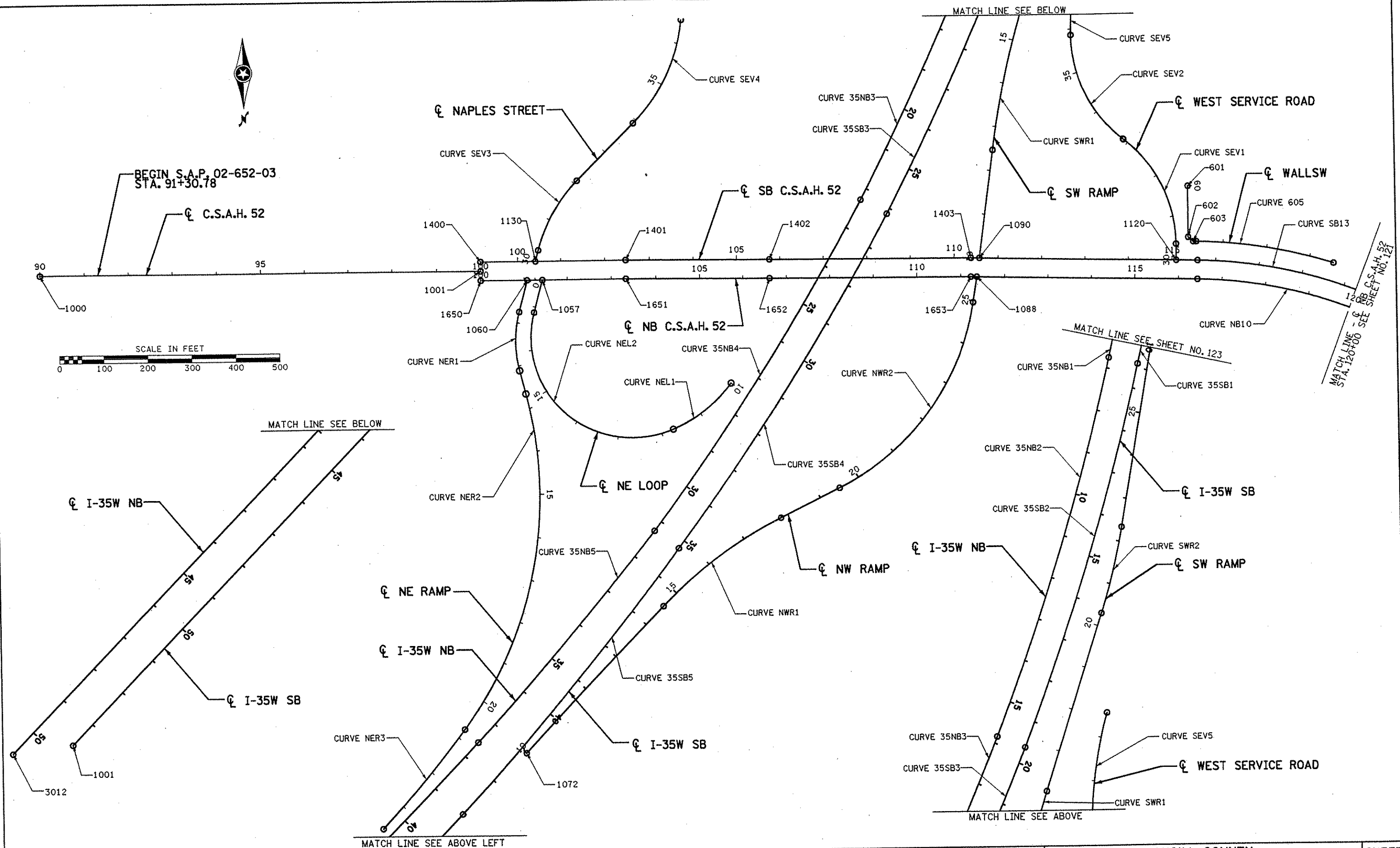
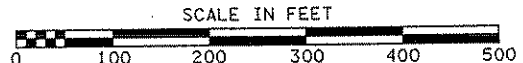
ANOKA COUNTY
 STAGE B4 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 229+00 TO 256+74.68

SHEET 119 OF 559



BEGIN S.A.P. 02-652-03
STA. 91+30.78

☉ C.S.A.H. 52



MATCH LINE SEE SHEET NO. 121
☉ NB C.S.A.H. 52
STA. 120+00 SEE SHEET NO. 121

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\allgn01.dgn 11/20/01

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.

Joseph Wood
DATE: 11-20-01 LIC. NO. 22405

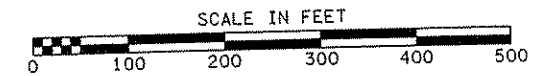
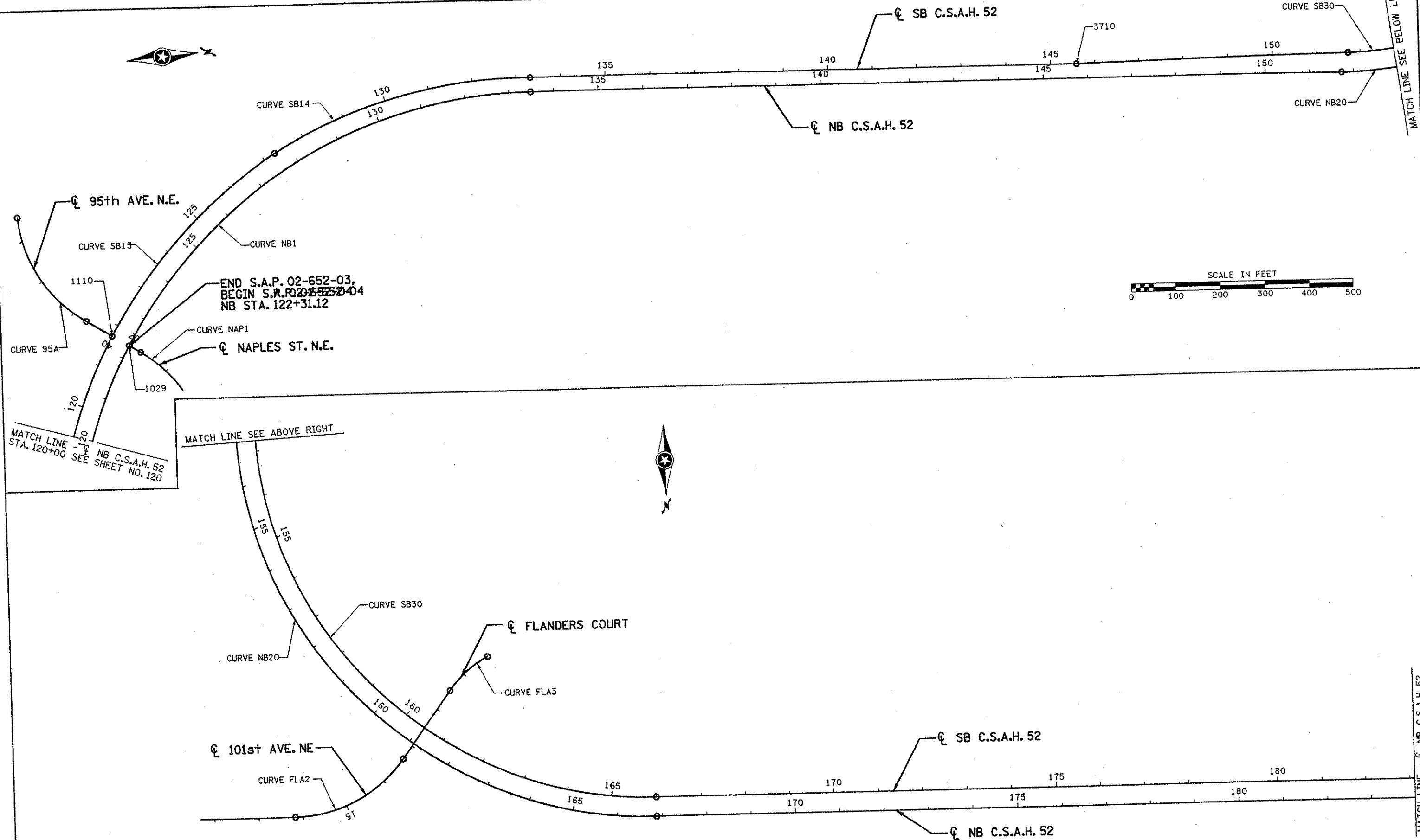
DRAWN BY: RRC DATE: 9-21-01
 DESIGN BY: RRC DATE: 9-20-01
 CHECKED BY: JMW DATE: 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 ALIGNMENT PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 90+00 TO 120+00

SHEET
 120
 OF
 559



MATCH LINE - NB C.S.A.H. 52
STA. 120+00 SEE SHEET NO. 120

MATCH LINE SEE ABOVE RIGHT

MATCH LINE - NB C.S.A.H. 52
STA. 184+00 SEE SHEET NO. 122

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.

Joseph Weale
DATE 11-25-01 LIC. NO. 22405

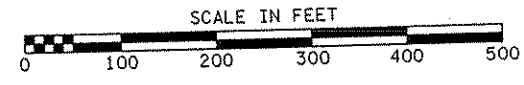
DRAWN BY RRC DATE 9-21-01
DESIGN BY RRC DATE 9-20-01
CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
ALIGNMENT PLAN
C.S.A.H. 52 RECONSTRUCTION
STA. 120+00 TO 184+00

SHEET
121
OF
559



MATCH LINE - C NB C.S.A.H. 52
STA. 184+00 SEE SHEET NO. 121

END S.P. 02-652-04
BEGIN S.P. 02-652-02
NB STA. 190+06.37



☉ XYLITE ST. NE

☉ SB C.S.A.H. 52

☉ NB C.S.A.H. 52

CURVE SB4

CURVE NB3

MATCH LINE SEE BELOW LEFT



MATCH LINE SEE ABOVE RIGHT

MATCH LINE - C NB C.S.A.H. 52
STA. 243+00 SEE SHEET NO. 125

☉ SB C.S.A.H. 52

☉ NB C.S.A.H. 52

☉ 105th AVE. NE

CURVE SB5

CURVE NB4

CURVE SB4

CURVE NB3

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\align03.dgn 11/20/01

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.

Joseph W. ...
DATE 11-20-01 LIC. NO. 22405

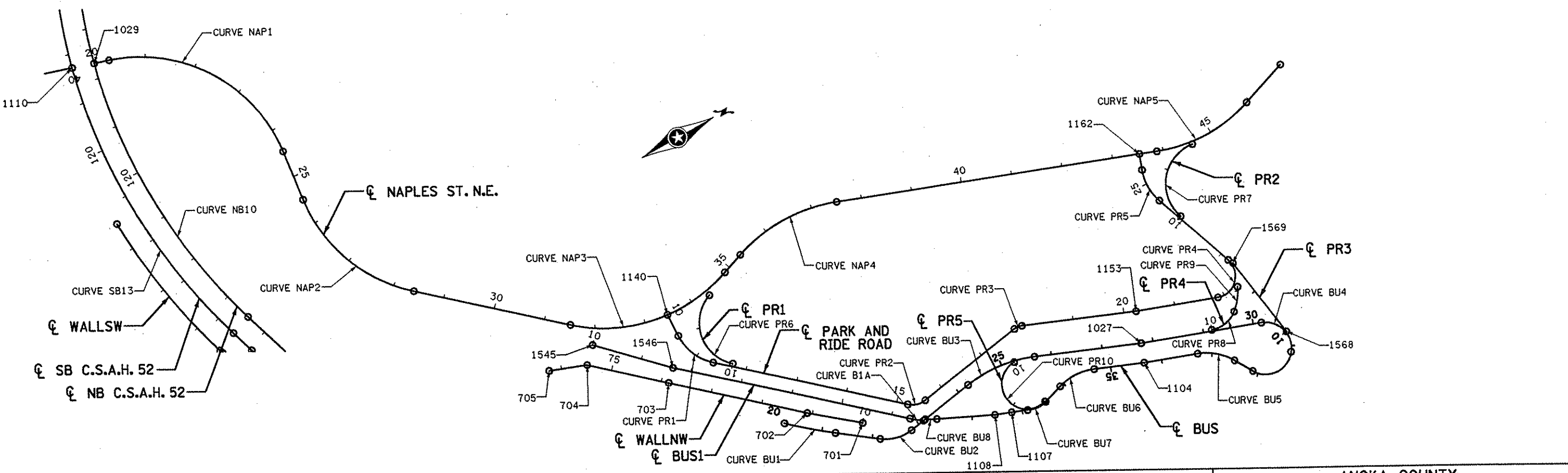
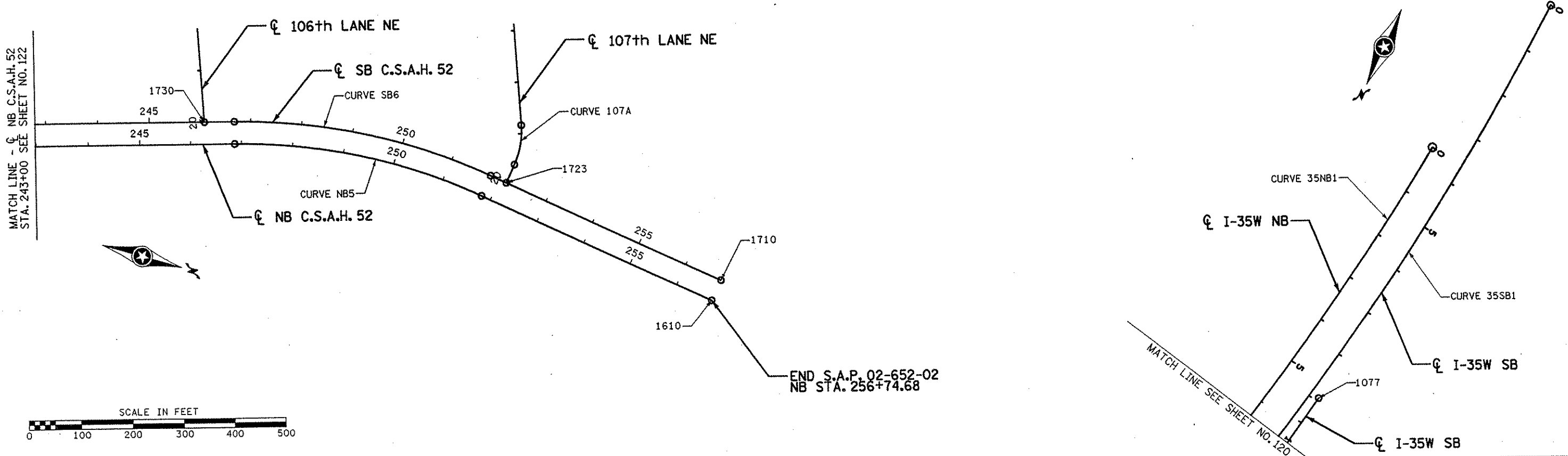
DRAWN BY RRC DATE 9-21-01
DESIGN BY RRC DATE 9-20-01
CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, QUALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
ALIGNMENT PLAN
C.S.A.H. 52 RECONSTRUCTION
STA. 184+00 TO 243+00

SHEET
122
OF
559



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.

George Weann
 DATE 11-26-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, GUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 ALIGNMENT PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 243+00 TO 256+74.68

SHEET
 123
 OF
 559

ALIGNMENT TABULATION											
CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y		
Q WALLNW											
701	POT	70+00.00						521,143.221	139,774.807	238° 49' 12.17"	
702	POT	71+10.17						521,048.964	139,717.768	241° 18' 56.36"	
703	POT	73+85.09						520,807.785	139,585.812	241° 18' 56.33"	
704	POT	75+49.33						520,663.702	139,506.980	220° 16' 39.33"	
705	POT	76+24.32						520,615.222	139,449.769		
Q WALLSW											
601	POT	60+00.00						520,122.454	138,931.554		
602	POT	61+15.87						520,123.857	139,047.414		
603	POT	61+31.27						520,112.169	139,057.441		
605	PC	61+37.92						520,105.524	139,057.639	271° 42' 33.15"	
	PI	62+98.29	16° 11' 53.64" RT	5° 05' 02.11"	1,127.000'	160.378'	318.617'	519,945.217	139,062.423	PI	
	CC							520,139.139	140,184.138		
	PT	64+56.53						519,792.608	139,111.736	287° 54' 26.80"	
Q PR1											
PR6	PC	10+00.00	A PT. 5.50' LT. OF 12+28.07 Q PARK AND RIDE ROAD						520,877.730	139,695.436	240° 59' 10.50"
	PI	11+38.40	119° 00' 49.50" RT	70° 18' 05.65"	81.500'	138.398'	169.290'	520,756.701	139,628.311	PI	
	CC							520,838.201	139,766.709		
	PT	11+69.29	A PT. 10.87' RT. OF 34+35.07 Q NAPLES ST. NE						520,756.701	139,766.709	0° 00' 00.00"
Q PR2											
PR7	PC	10+00.00	A PT. 4.00' RT. OF 24+07.59 Q PARK AND RIDE ROAD						521,350.908	140,488.910	269° 43' 07.55"
	PI	11+36.91	116° 56' 12.07" RT	68° 12' 33.34"	84.000'	136.906'	171.438'	521,214.004	140,488.238	PI	
	CC							521,350.496	140,572.909		
	PT	11+71.44	A PT. 5.00' RT. OF 44+57.52 Q NAPLES ST. NE						521,275.423	140,610.593	26° 39' 19.62"
Q PR3											
1568	POT	10+00.00	A PT. 1.81' LT. OF 30+70.52 Q BUS						521,655.124	140,455.698	280° 38' 00.83"
1569	POT	11+69.31	A PT. 2.90' RT. OF 22+71.41 Q PARK AND RIDE ROAD						521,488.723	140,486.940	

ALIGNMENT TABULATION											
CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y		
Q PR4											
PR8	PC	10+00.00	A PT. 2.81' LT. OF 29+17.31 Q BUS						521,541.509	140,361.015	39° 18' 55.53"
	PI	10+32.54	57° 45' 11.37" LT	97° 06' 41.37"	59.000'	32.538'	59.471'	521,562.125	140,386.189	PI	
	CC							521,495.863	140,398.397		
	PT	10+59.47						521,551.834	140,417.057	341° 33' 44.16"	
PR9	PC	10+59.47						521,551.834	140,417.057	341° 33' 43.81"	
	PI	10+84.62	28° 14' 09.63" LT	57° 17' 44.81"	100.000'	25.152'	49.281'	521,543.879	140,440.918	PI	
	CC							521,456.967	140,385.430		
	PT	11+08.75	A PT. 8.51' RT. OF 22+27.65 Q PARK AND RIDE ROAD						521,525.582	140,458.176	313° 19' 34.18"
Q PR5											
PR10	PC	10+00.00	A PT. 2.08' RT. OF 25+25.64 Q BUS						521,291.395	140,060.230	198° 49' 02.71"
	PI	13+45.13	196° 09' 39.76" LT	116° 55' 50.17"	49.000'	345.132'	167.759'	521,402.718	140,386.915	PI	
	CC							521,337.776	140,044.425		
	PT	11+67.76	A PT. 1.66' RT. OF 36+50.11 Q BUS						521,386.723	140,042.154	2° 39' 22.95"

NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\11749\par+4\roadway3\drawings\dlgn09.dgn 19 NOV 2001					

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.

Joseph Weaver
DATE 11-20-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

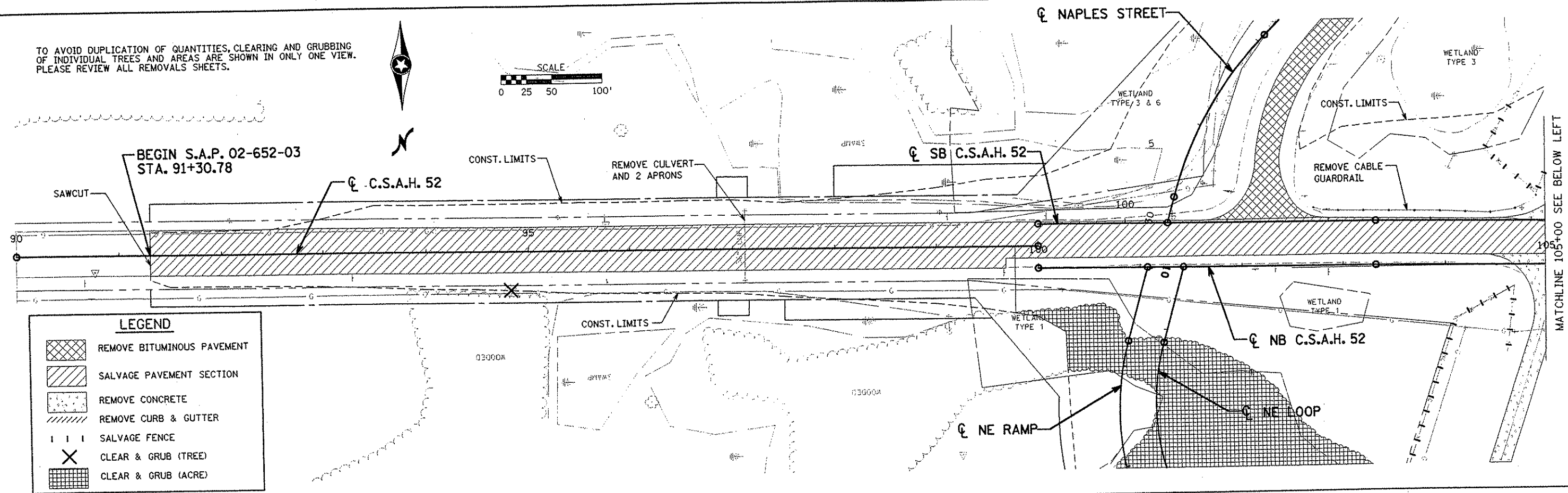
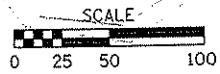
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 ALIGNMENT TABULATIONS
 C.S.A.H. 52 RECONSTRUCTION

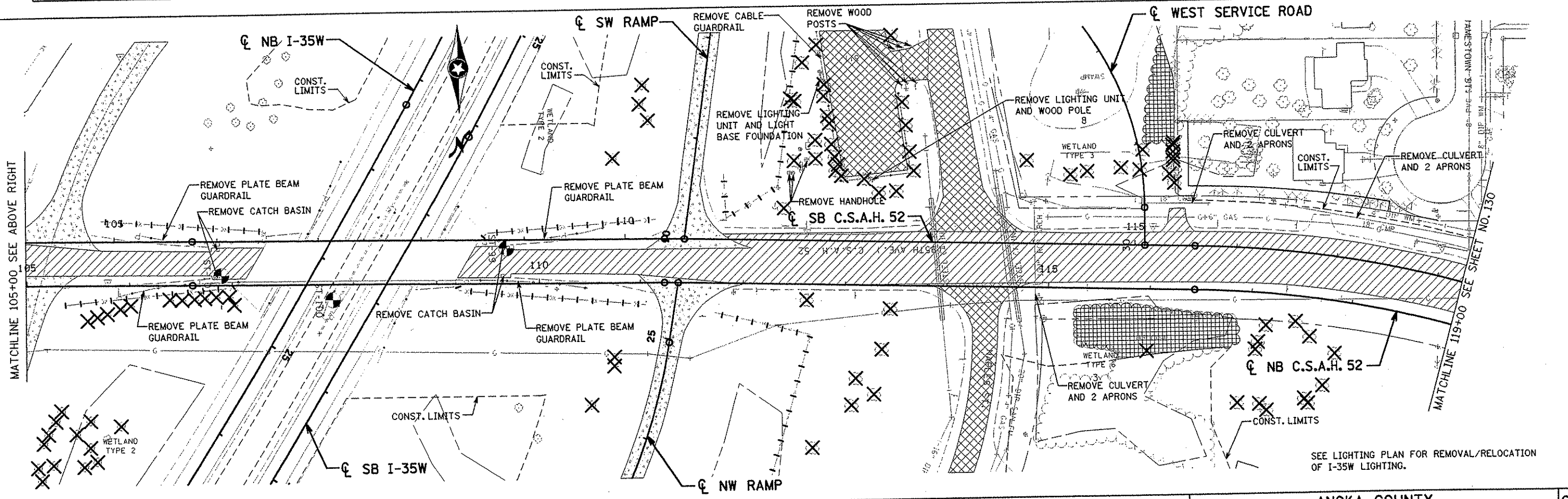
SHEET
 128
 OF
 559

TO AVOID DUPLICATION OF QUANTITIES, CLEARING AND GRUBBING OF INDIVIDUAL TREES AND AREAS ARE SHOWN IN ONLY ONE VIEW. PLEASE REVIEW ALL REMOVALS SHEETS.



LEGEND

	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	SALVAGE FENCE
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)



SEE LIGHTING PLAN FOR REMOVAL/RELOCATION OF I-35W LIGHTING.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\a-f\anokacnty\1174901\hwy-brdg\part4\roadway3\drawings\topo012198/2001

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.

Joseph Weems
DATE 1-11-02 LIC. NO. 22405

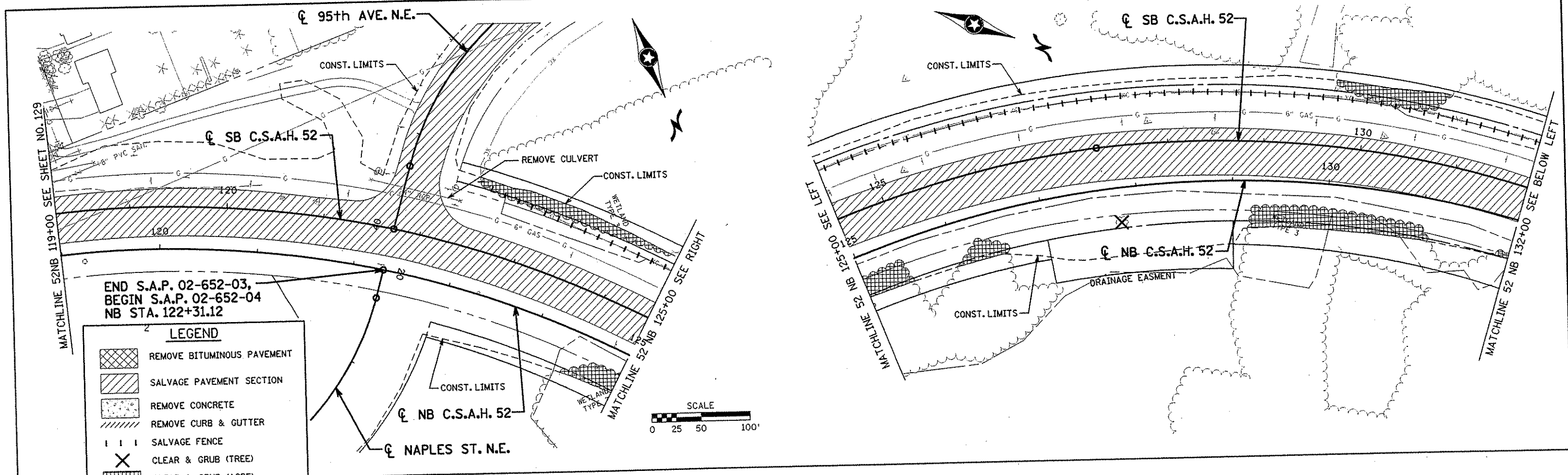
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

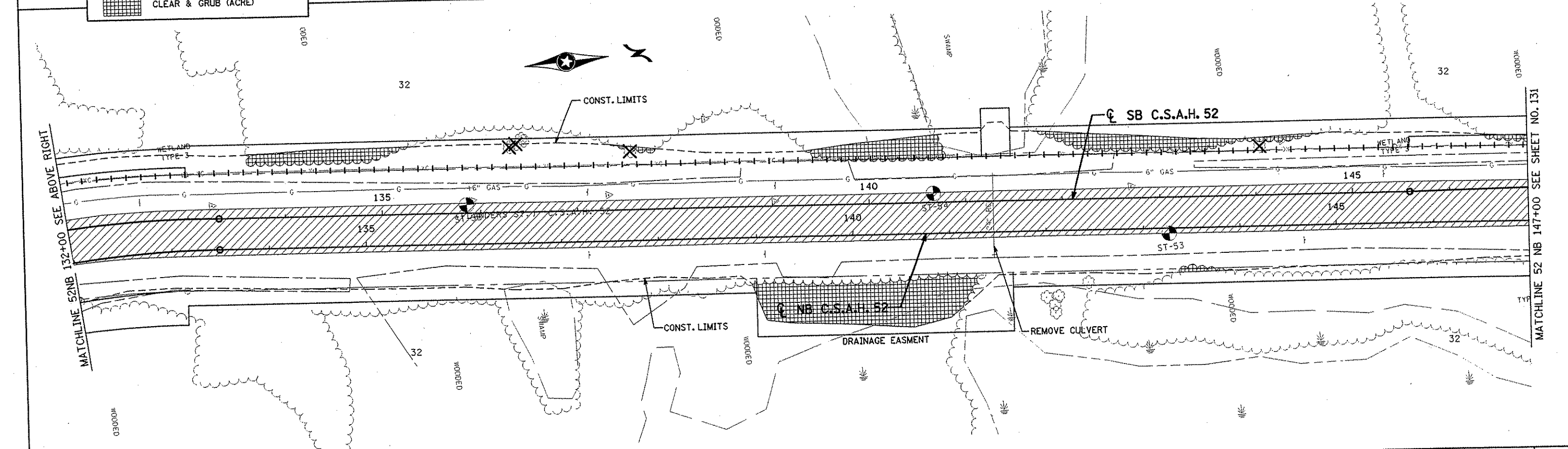
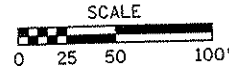
ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 STA. 90+00 TO 119+00

SHEET 129 OF 559



END S.A.P. 02-652-03,
 BEGIN S.A.P. 02-652-04
 NB STA. 122+31.12

LEGEND	
	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	SALVAGE FENCE
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\s\lfe\proj\c11749\par14\roadway3\drawings\topo02.dgn 11/20/01

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.

Joseph W. W...
 DATE 11-26-01 LIC. NO. 22405

DRAWN BY	RRC	DATE	9-21-01
DESIGN BY	RRC	DATE	9-20-01
CHECKED BY	JMW	DATE	9-24-01

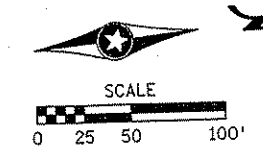
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 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

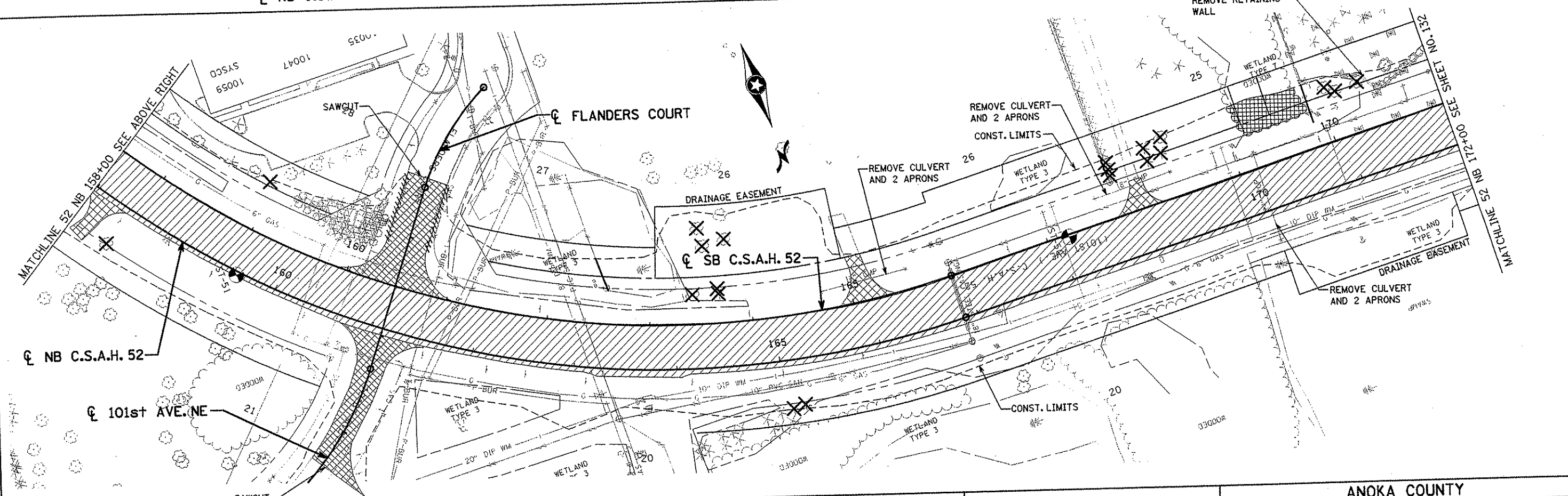
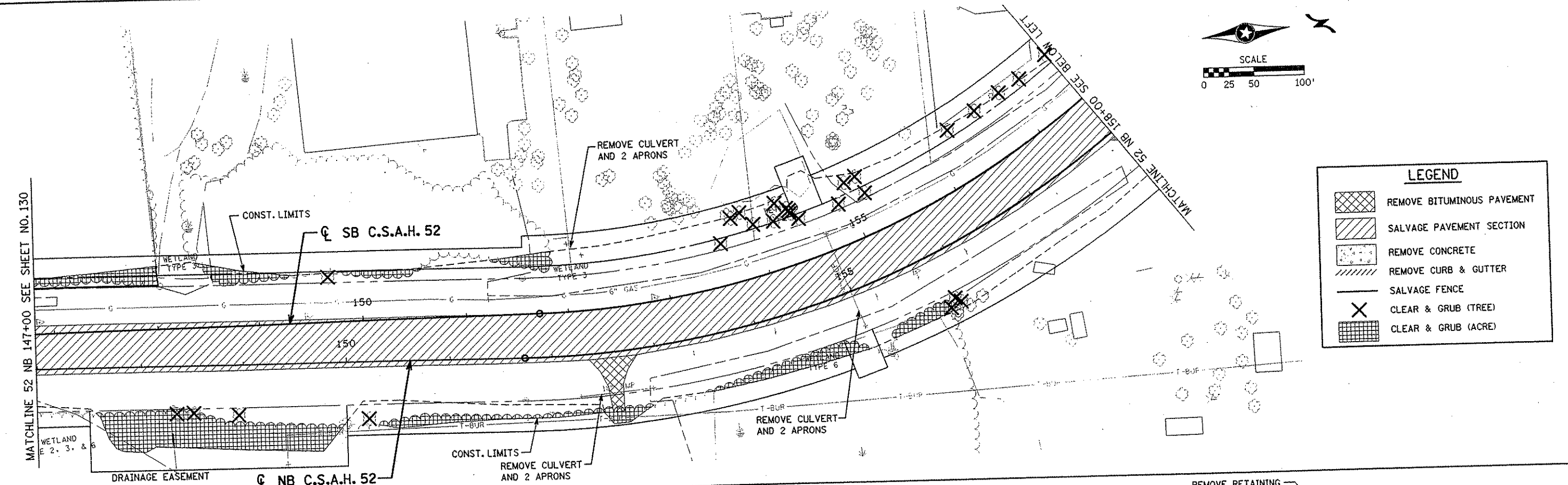
ANOKA COUNTY

EXISTING CONDITIONS AND REMOVALS
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 119+00 TO 147+00

SHEET
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 OF
559



LEGEND	
	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	SALVAGE FENCE
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)



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.

Joseph Wilson
 DATE 2-01-02 LIC. NO. 22405

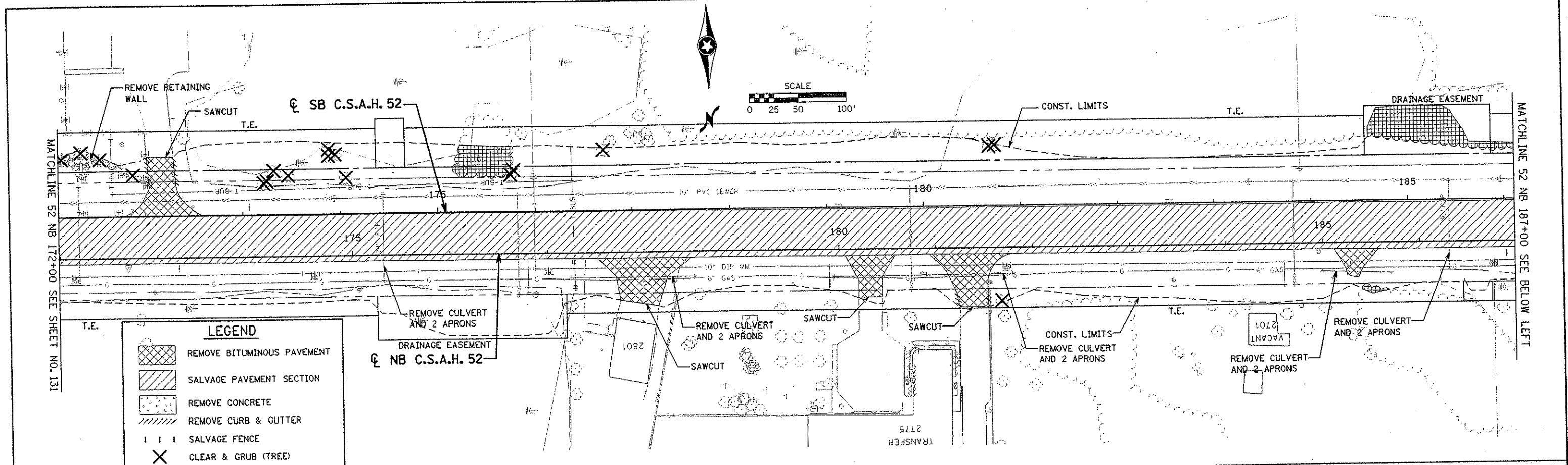
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

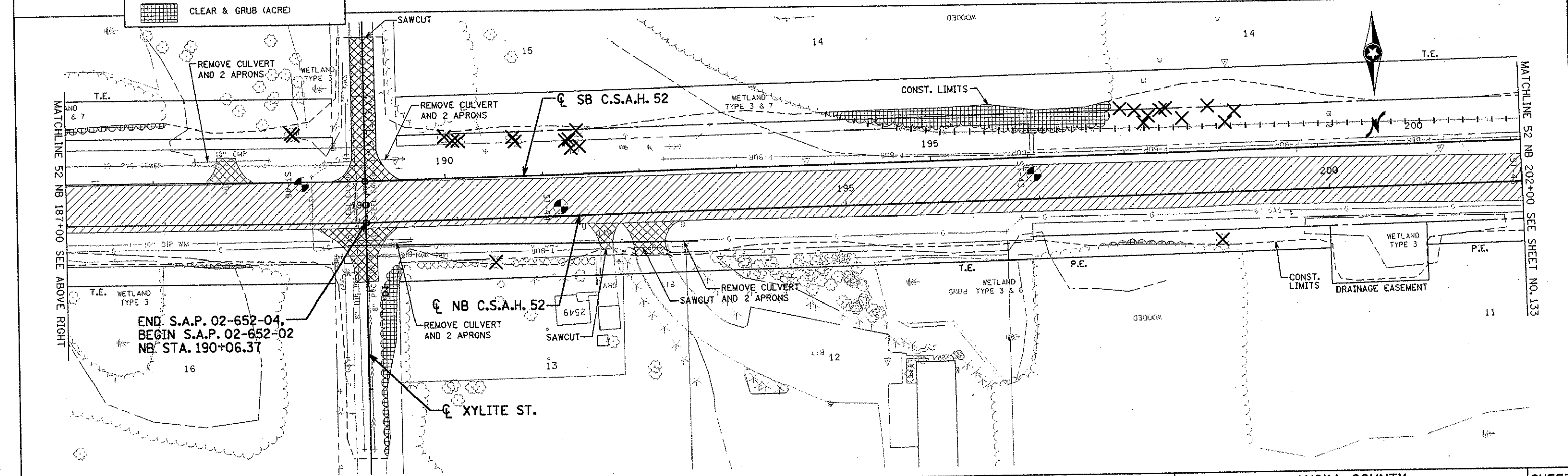
ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 147+00 TO 172+00

SHEET
 131
 OF
 559



LEGEND

	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	SALVAGE FENCE
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)



END S.A.P. 02-652-04,
 BEGIN S.A.P. 02-652-02
 NB STA. 190+06.37

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\a-f\anokacty\1174901\hwy-brdg\part4\roadway3\drawings\topo\02-652-02

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.

Joey Weaner
 DATE: 2-14-02 LIC. NO. 22405

DRAWN BY	RRC	DATE	9-21-01
DESIGN BY	RRC	DATE	9-20-01
CHECKED BY	JMW	DATE	9-24-01

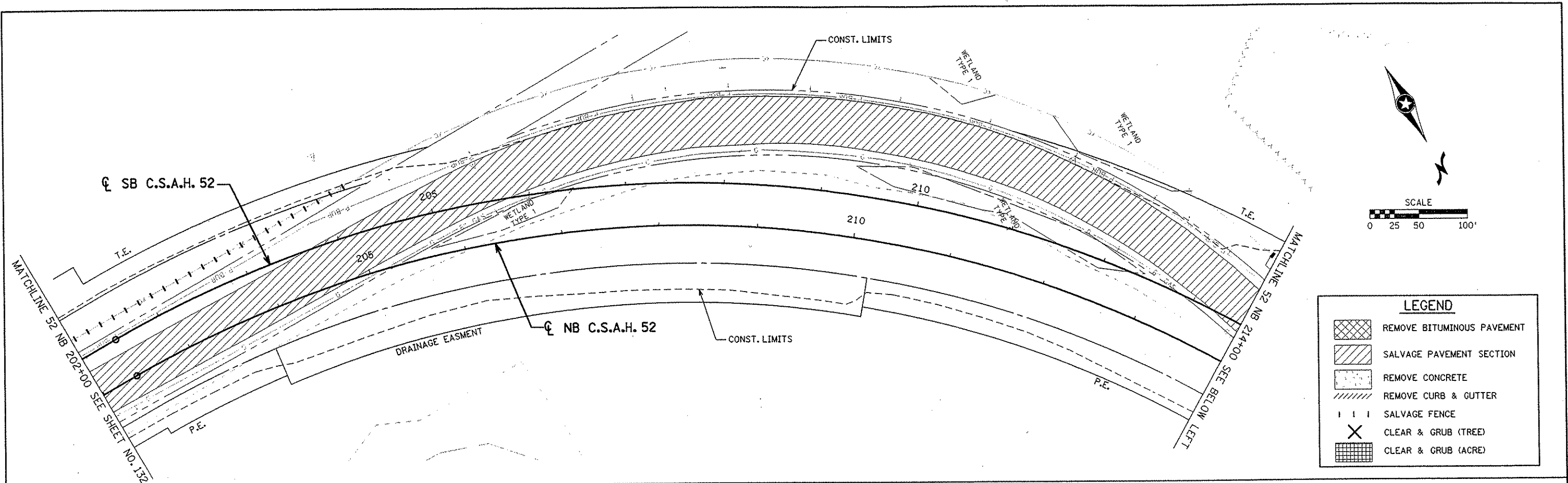
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 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

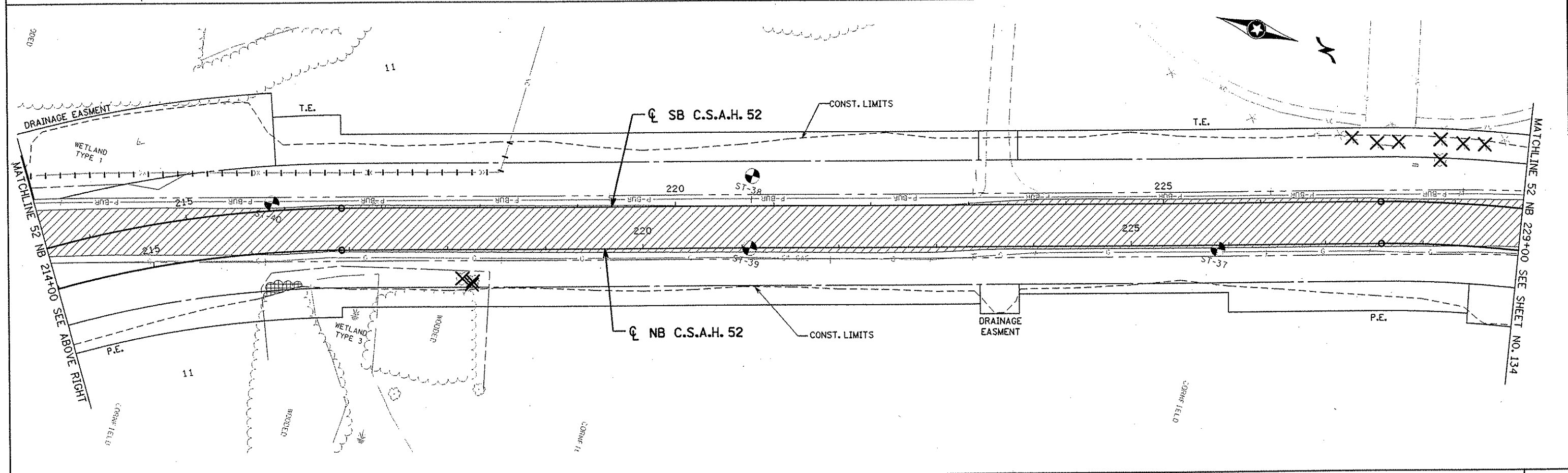
EXISTING CONDITIONS AND REMOVALS
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 172+00 TO 202+00

SHEET
 132
 OF
 559



LEGEND

	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	SALVAGE FENCE
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\a-f\anokacty\1174901\hwy-brdg\part4\roadway3\drawings\topo\0246\2002

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.

Joseph Wearn
DATE 2-14-02 LIC. NO. 22405

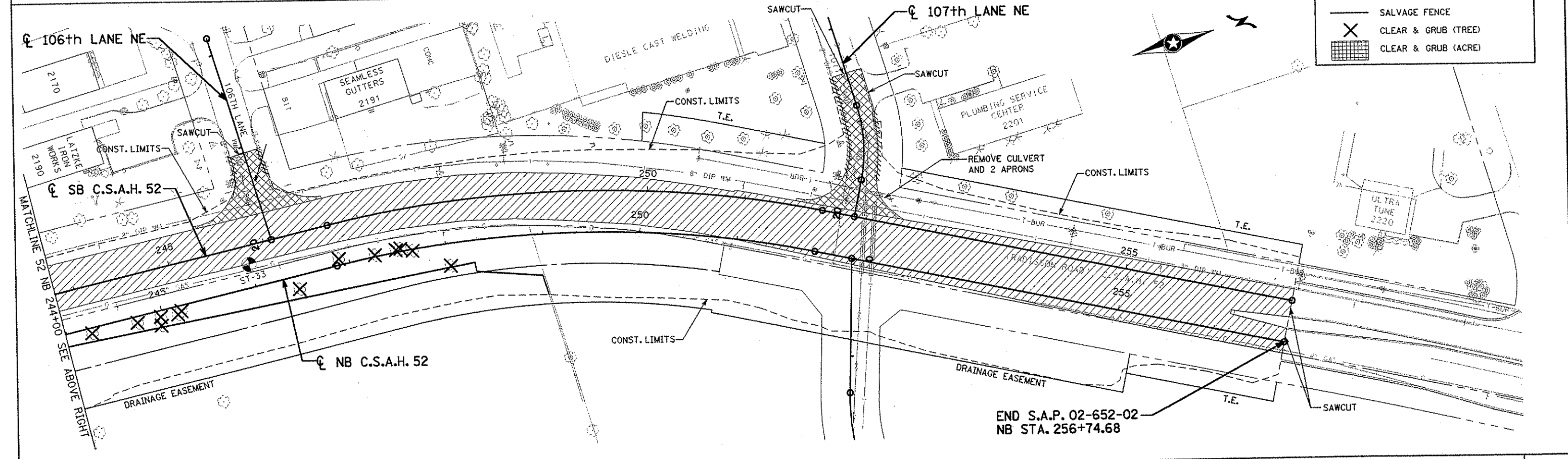
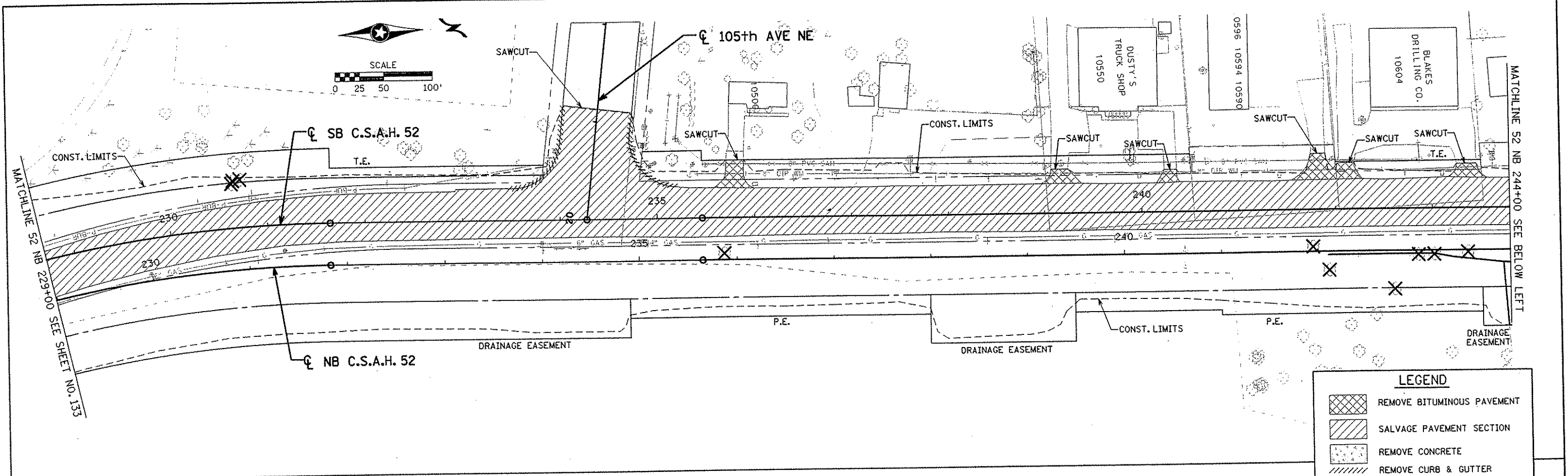
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 202+00 TO 229+00

SHEET
133
OF
559



LEGEND

- REMOVE BITUMINOUS PAVEMENT
- SALVAGE PAVEMENT SECTION
- REMOVE CONCRETE
- REMOVE CURB & GUTTER
- SALVAGE FENCE
- CLEAR & GRUB (TREE)
- CLEAR & GRUB (ACRE)

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\a-f\anokacty\1174901\hwy-brdg\pdr\4\roadway3\drawings\topo\224b1\2002

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.

Joseph W. Wagon
 DATE: 2-14-02 LIC. NO. 22465

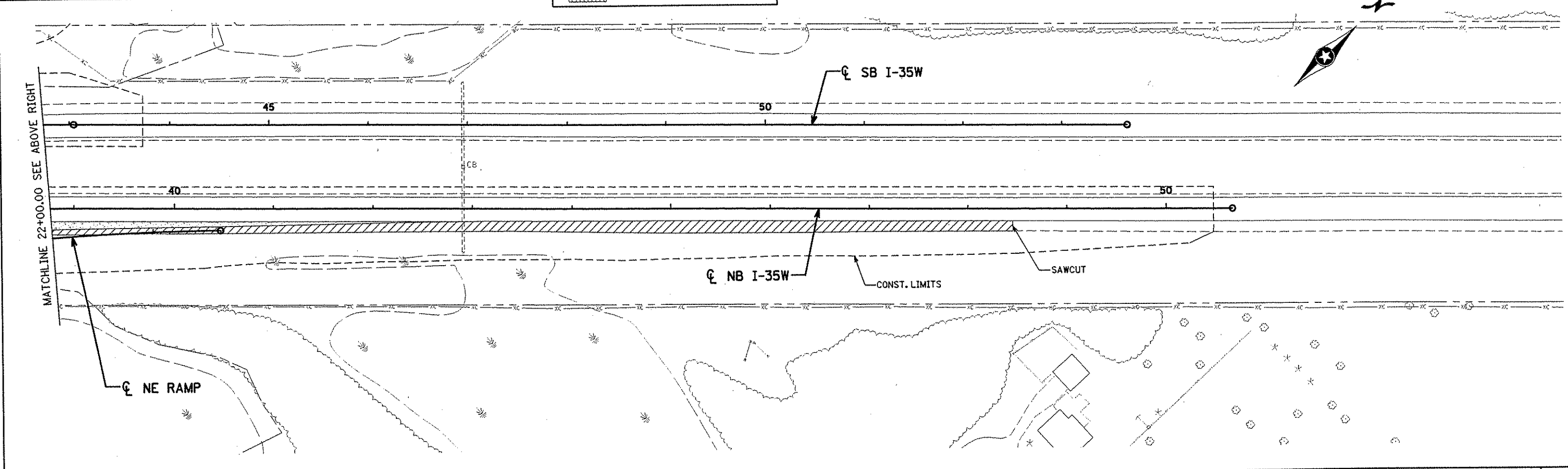
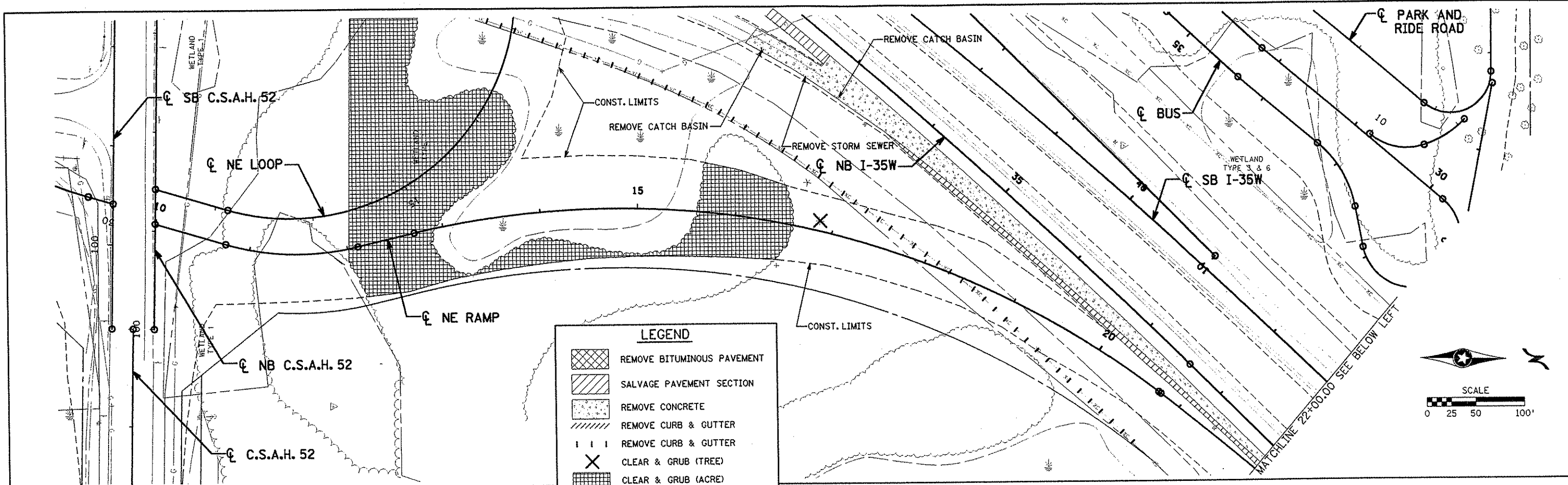
DRAWN BY _____ DATE _____
 DESIGN BY _____ DATE _____
 CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 229+00 TO 256+74.68

SHEET 134 OF 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\topo07.dgn 11/20/01

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.

Joseph Weaver
DATE: 11-20-01 LIC. NO. 22405

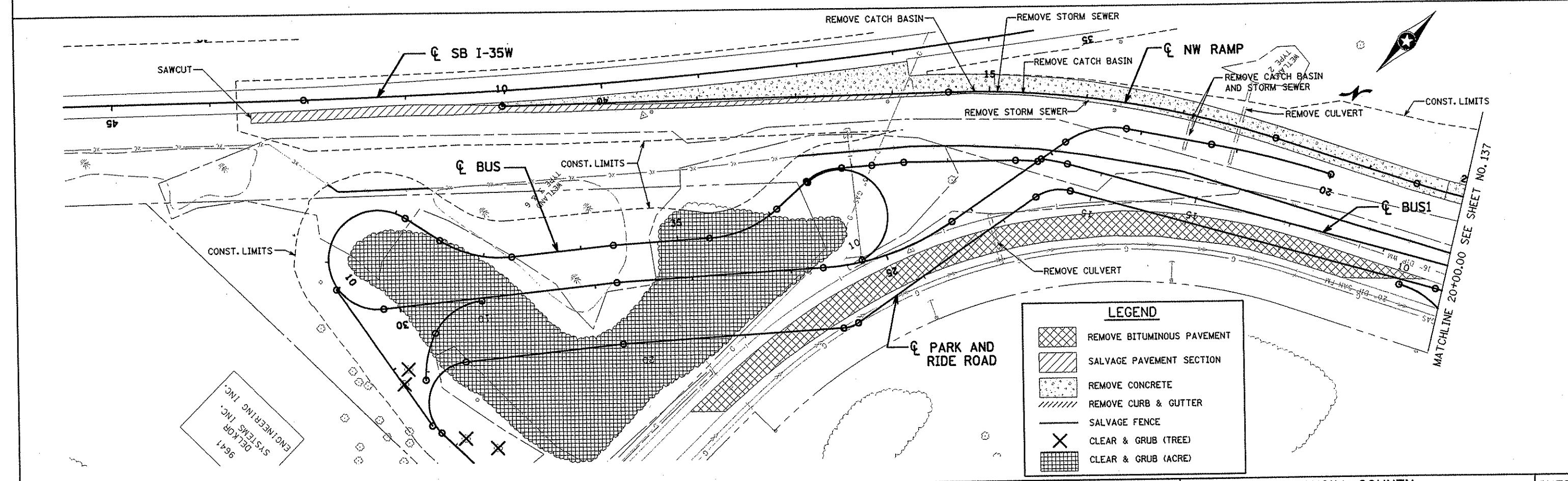
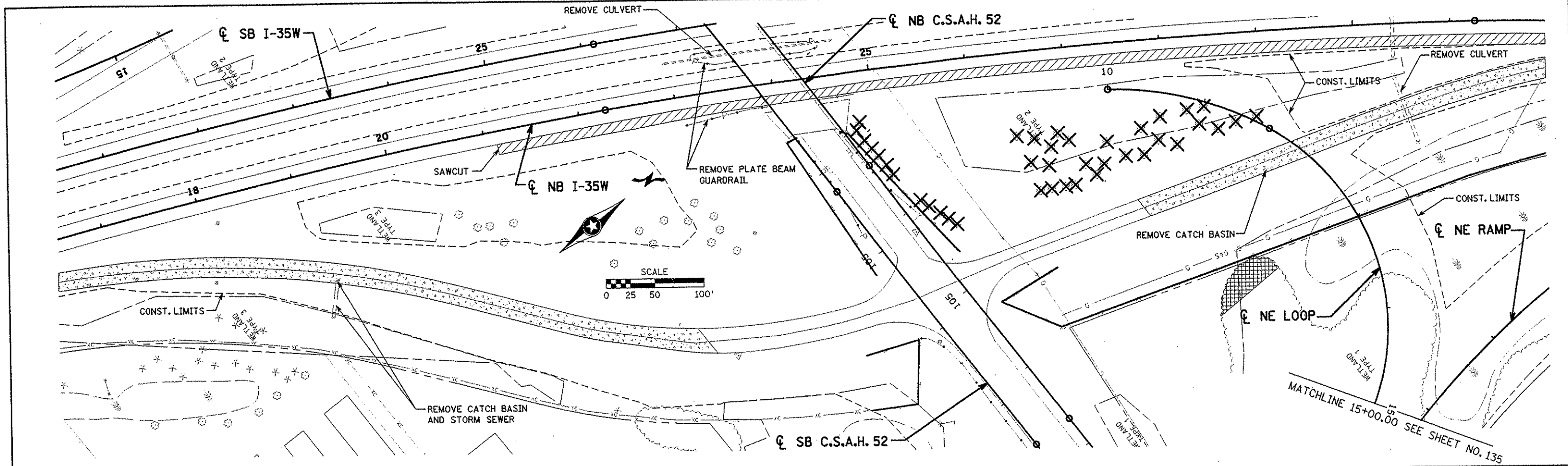
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
C.S.A.H. 52 RECONSTRUCTION
 STA. 10+00 TO 22+00

SHEET 135 OF 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\cl11749\part4\roadway3\drawings\topo08.dgn 11/20/01

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.

Joseph Warren
DATE: 11-20-01 LIC. NO. 22405

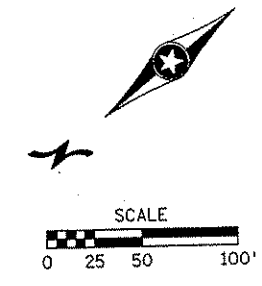
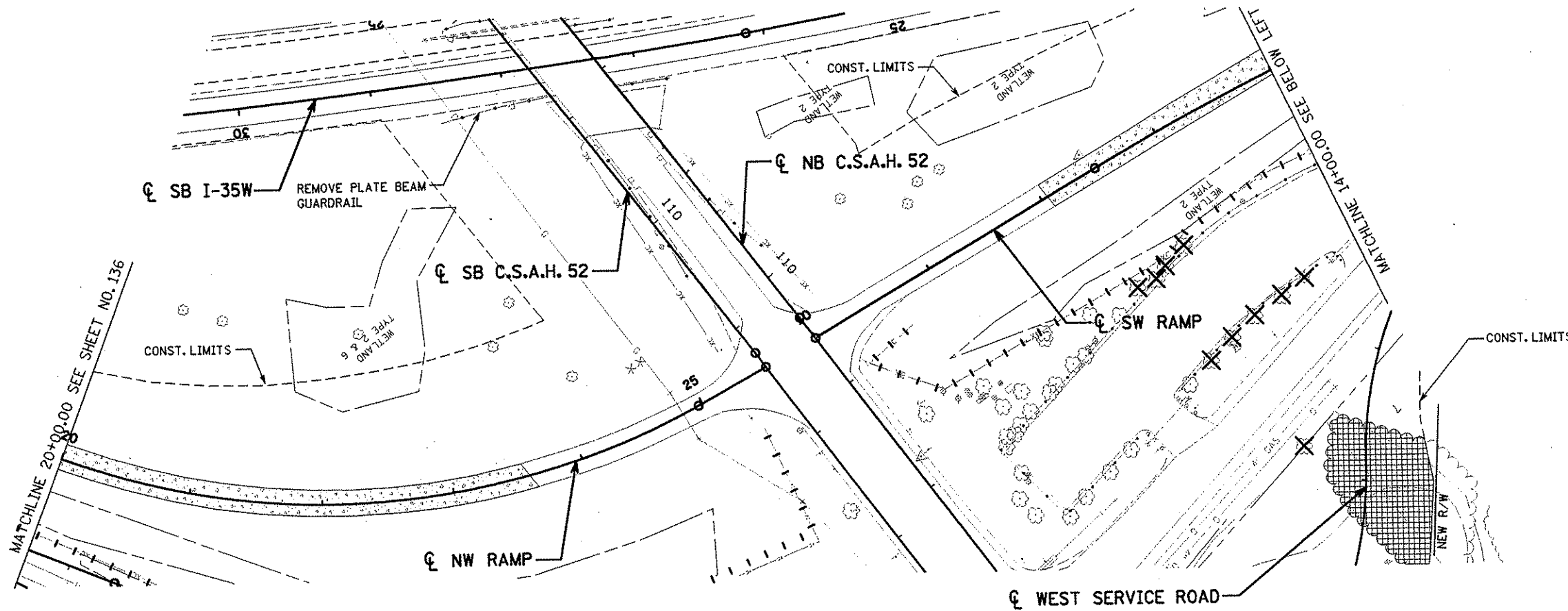
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 DESIGN BY: RRC DATE: 9-20-01
 CHECKED BY: JMW DATE: 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

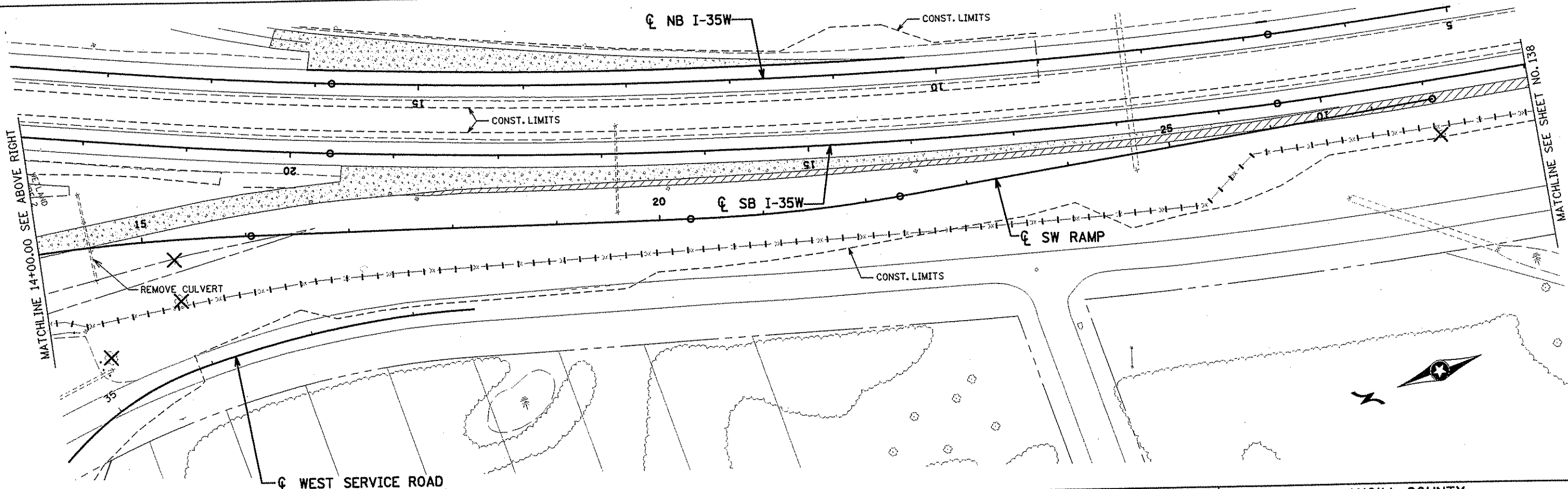
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 NW RAMP STA. 10+00 TO 20+00

SHEET
 136
 OF
 559



LEGEND	
	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	SALVAGE FENCE
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)



NO	DATE	BY	CHKD	APPR	REVISION
NAME: k:\site\proj\11749\part4\roadway3\drawings\topo09.dgn					

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.

Joseph Weary
 DATE 11-20-01 LIC. NO. 22405

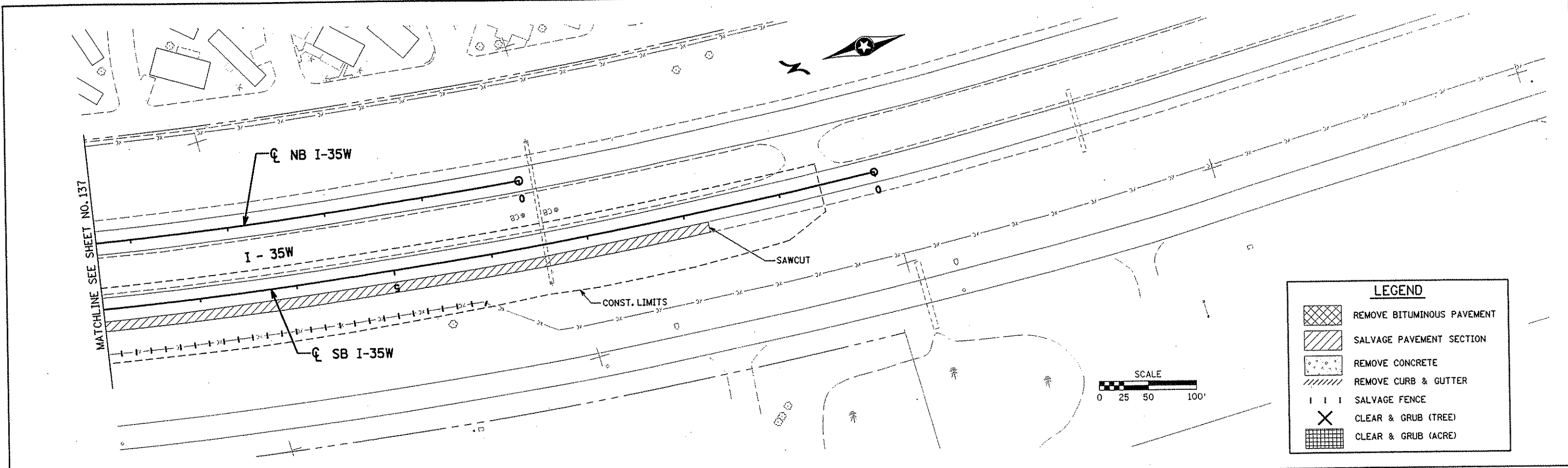
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
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 S.A.P. 106-020-021, 106-020-022

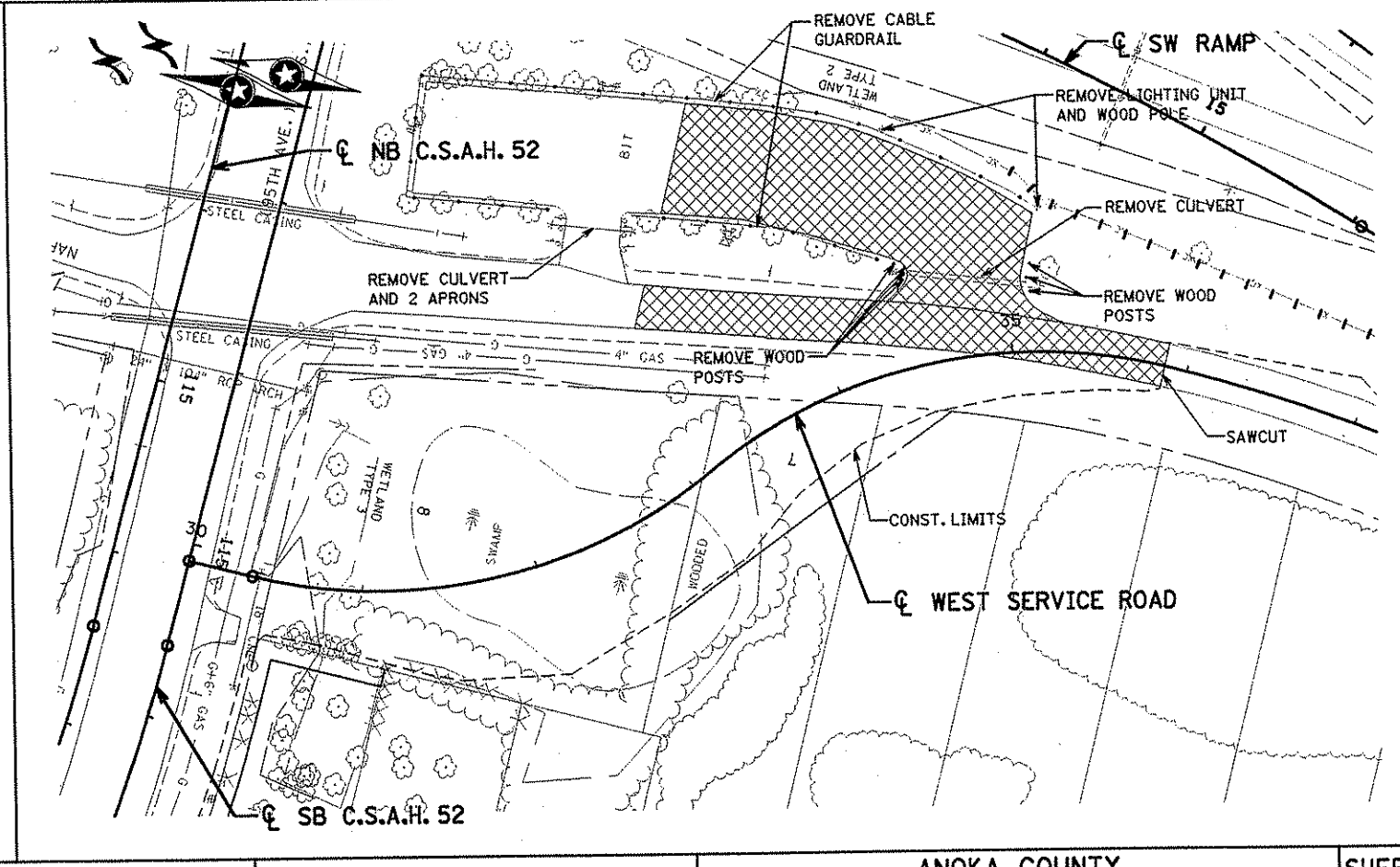
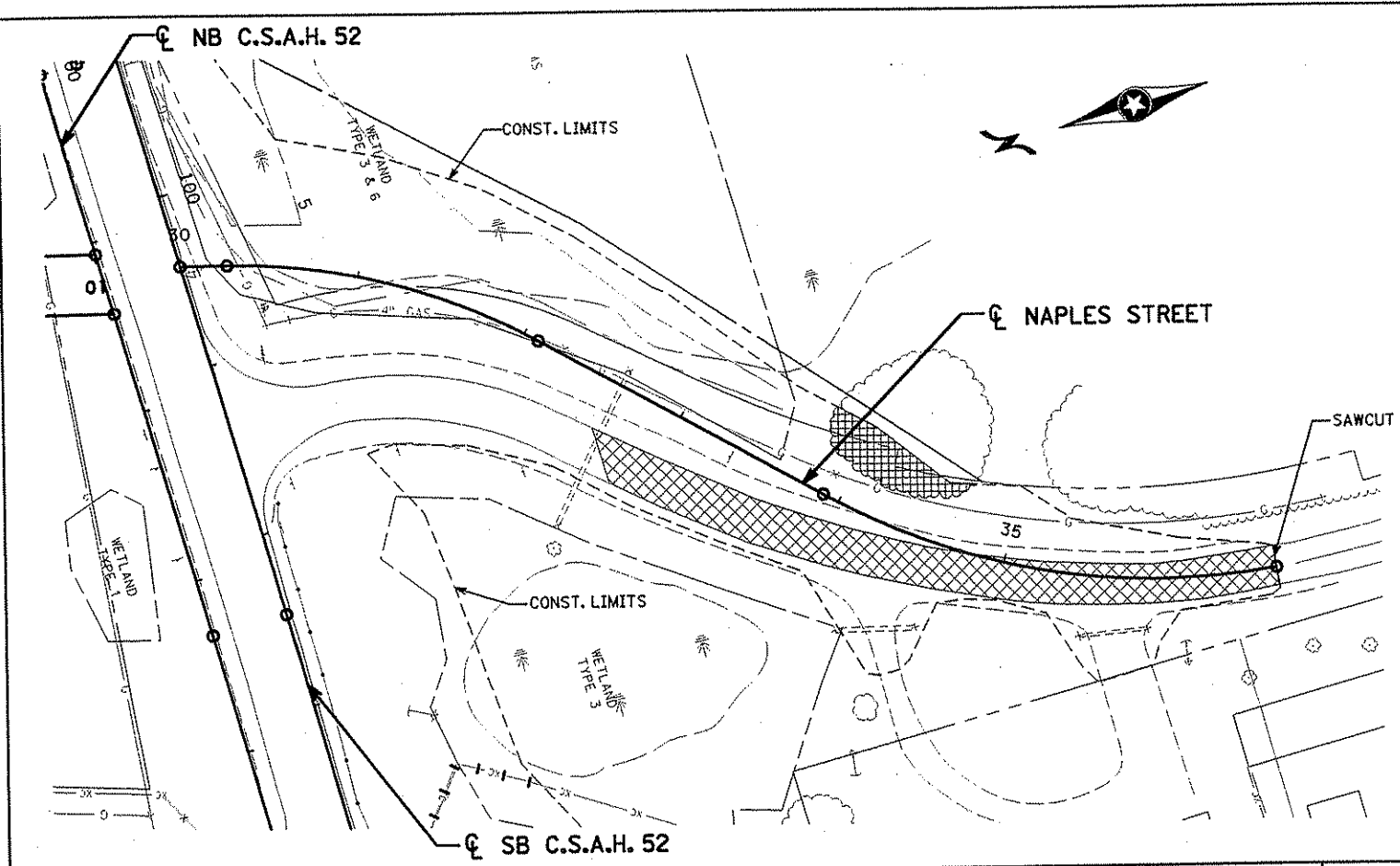
TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 16+00 TO 21+73.68

SHEET 137 OF 559



LEGEND	
	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	SALVAGE FENCE
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\topo1.dgn 11/20/01

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.

Joseph Weaver
DATE: 11-20-01 LIC. NO. 22405

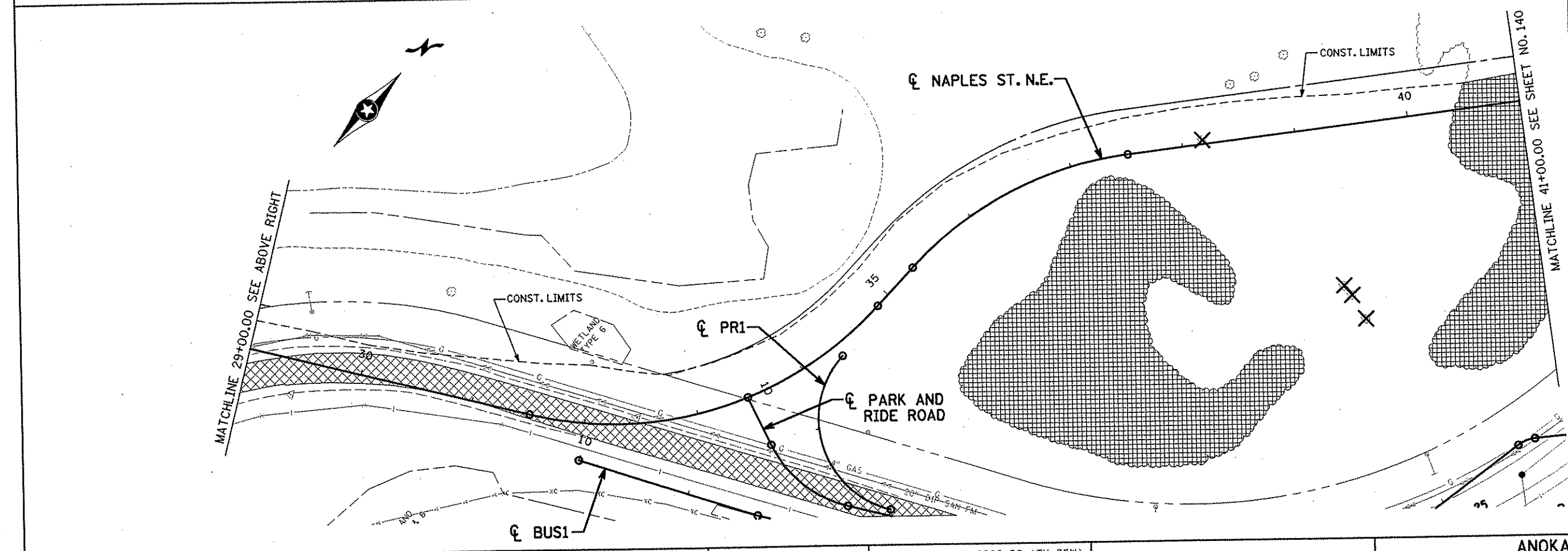
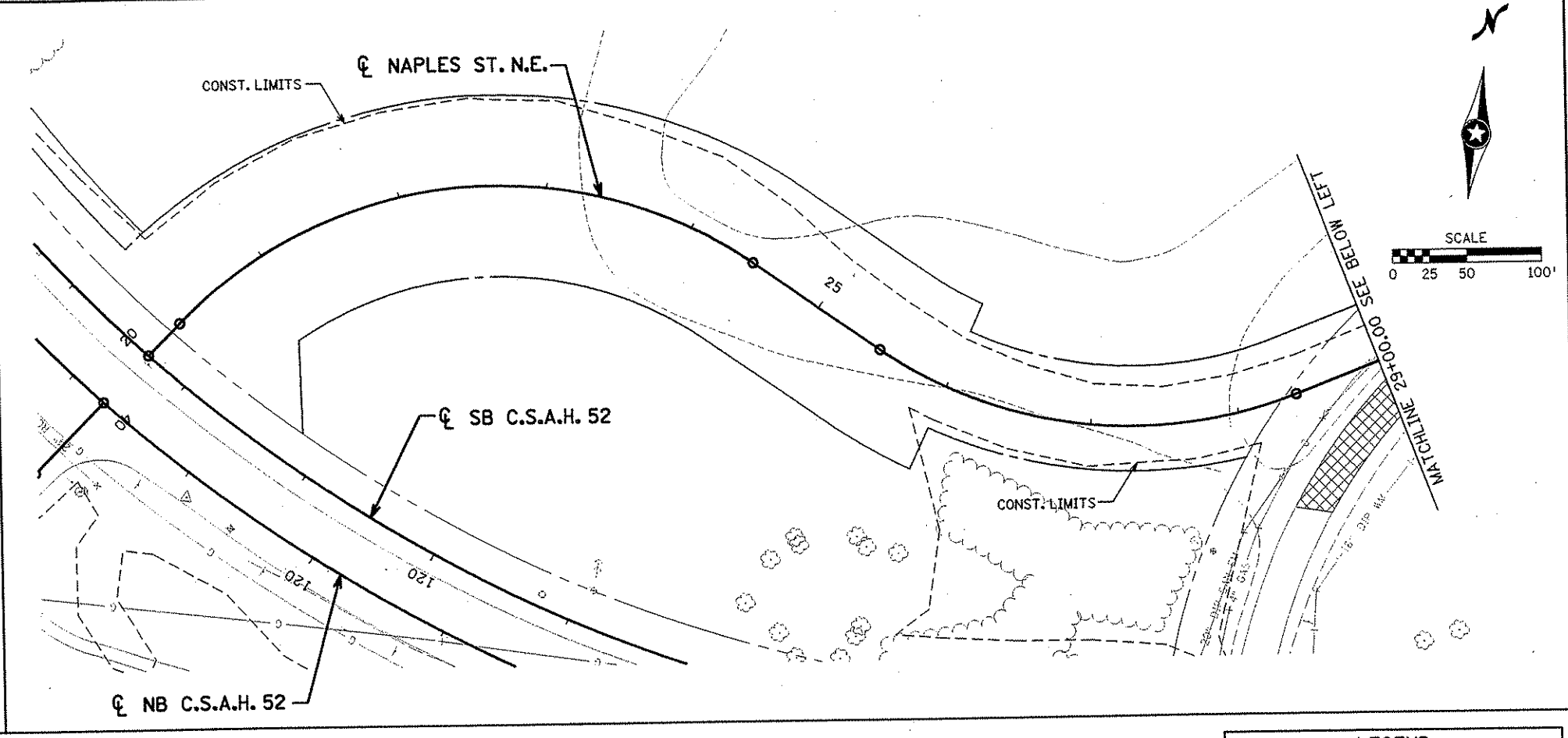
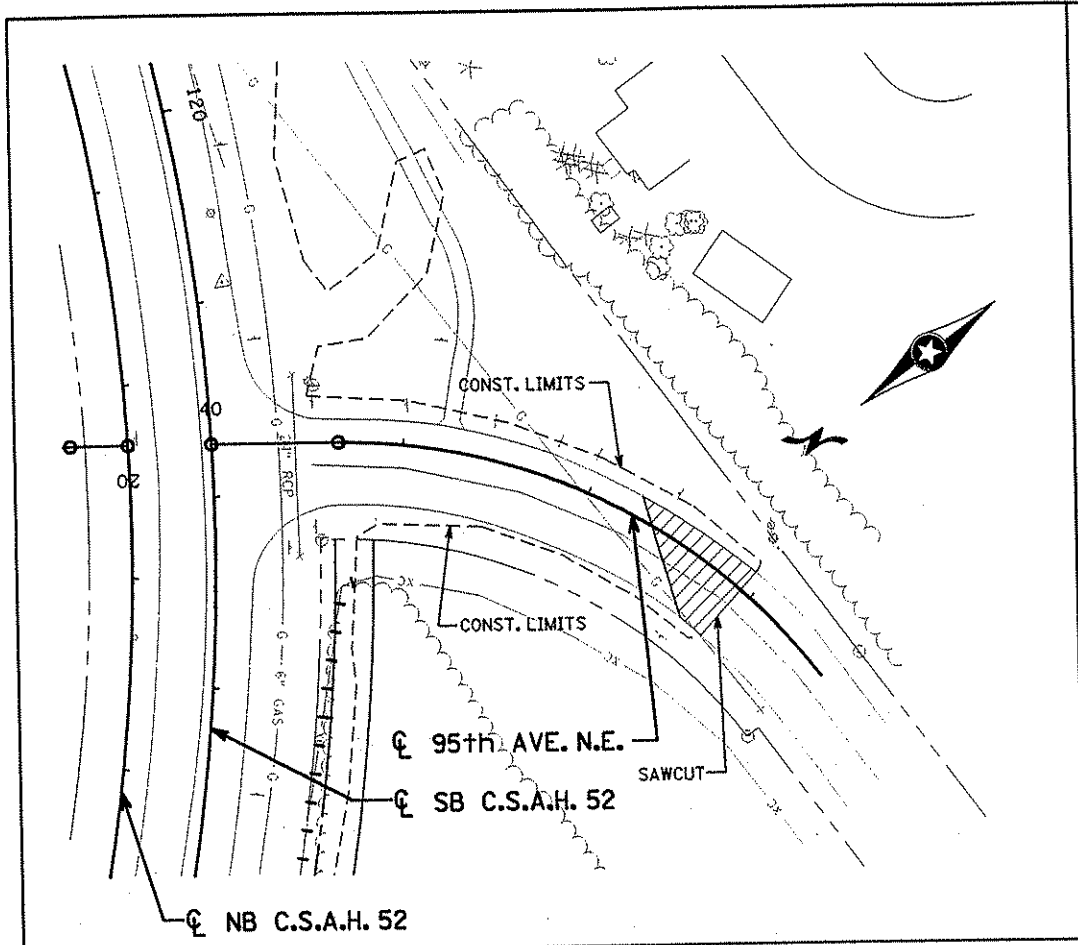
DRAWN BY: RRC DATE: 9-21-01
 DESIGN BY: RRC DATE: 9-20-01
 CHECKED BY: JMW DATE: 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP, NAPLES STREET & WEST SERVICE ROAD

SHEET 138 OF 559



LEGEND

	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	SALVAGE FENCE
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par+4\roadway\drawings\topo1.dgn 11/20/01

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.

George Weaver
 DATE 11-22-01 LIC. NO. 22405

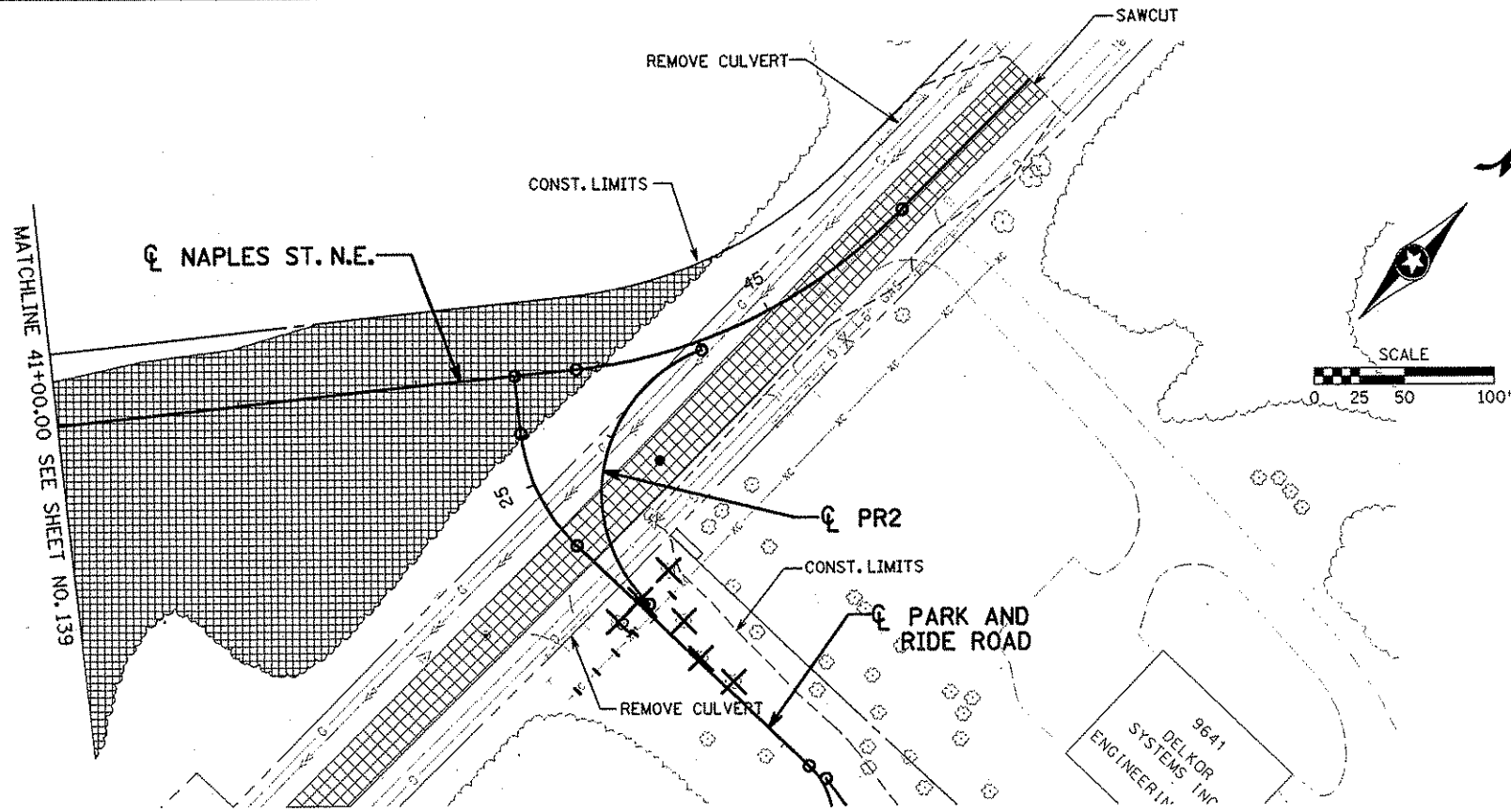
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 95th AVE. N.E. AND NAPLES ST. N.E.

SHEET 139 OF 559



LEGEND

	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	SALVAGE FENCE
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)

9641
DELKOR
SYSTEMS INC
ENGINEERING

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawngs\topo12.dgn 11/20/01

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.

Joseph Weava
DATE 11-20-01 LIC. NO. 22405

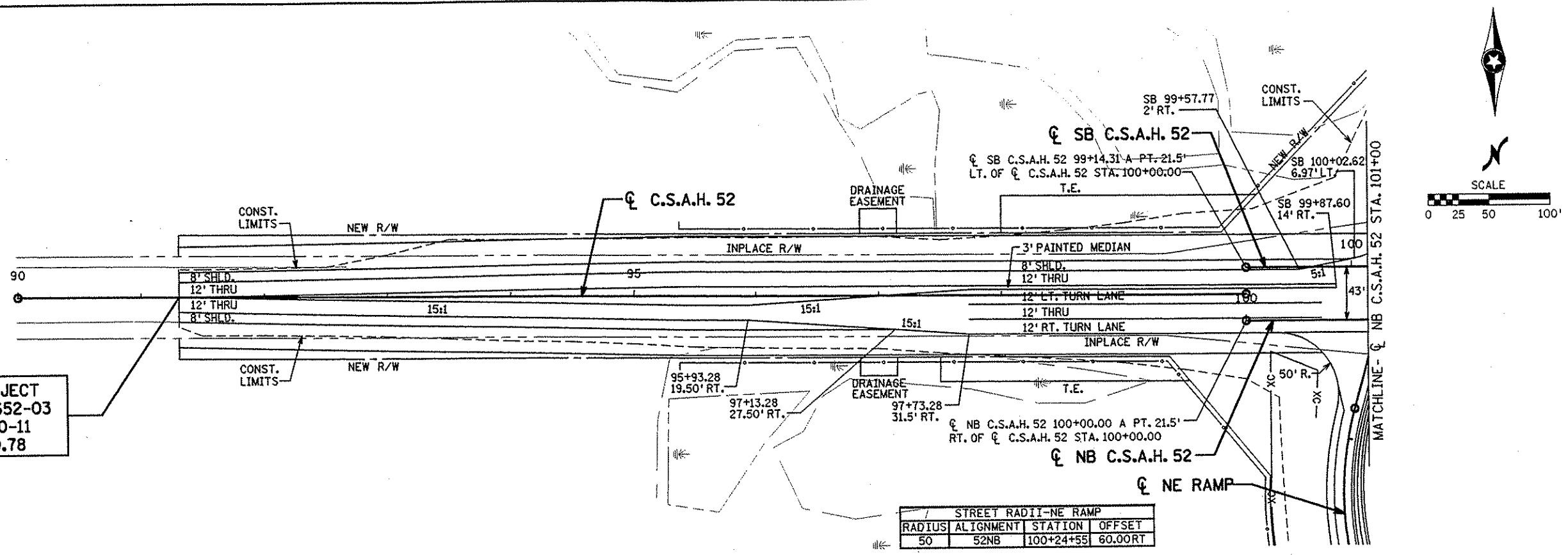
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

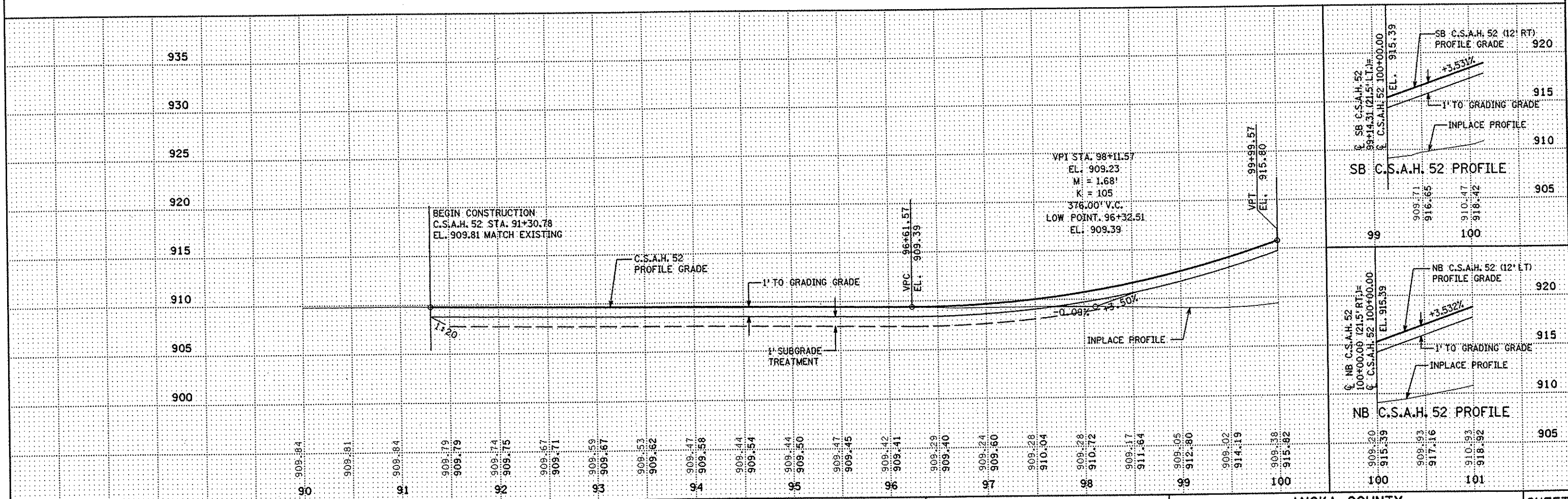
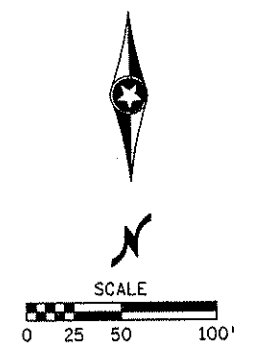
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E.

SHEET
 140
 OF
 559



BEGIN PROJECT
S.A.P. 02-652-03
S.P. 90-080-11
STA. 91+30.78



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\sl\te\proj\11749\par74\roadway\3\drawings\plan01.dgn 19 NOV 2001

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.

Jason Weisman
DATE 11-20-01 LIC. NO. 22405

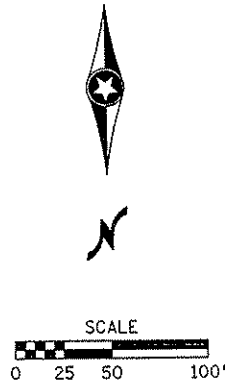
DRAWN BY RRC DATE 9-21-01
DESIGN BY RRC DATE 9-20-01
CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
S.A.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, BUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

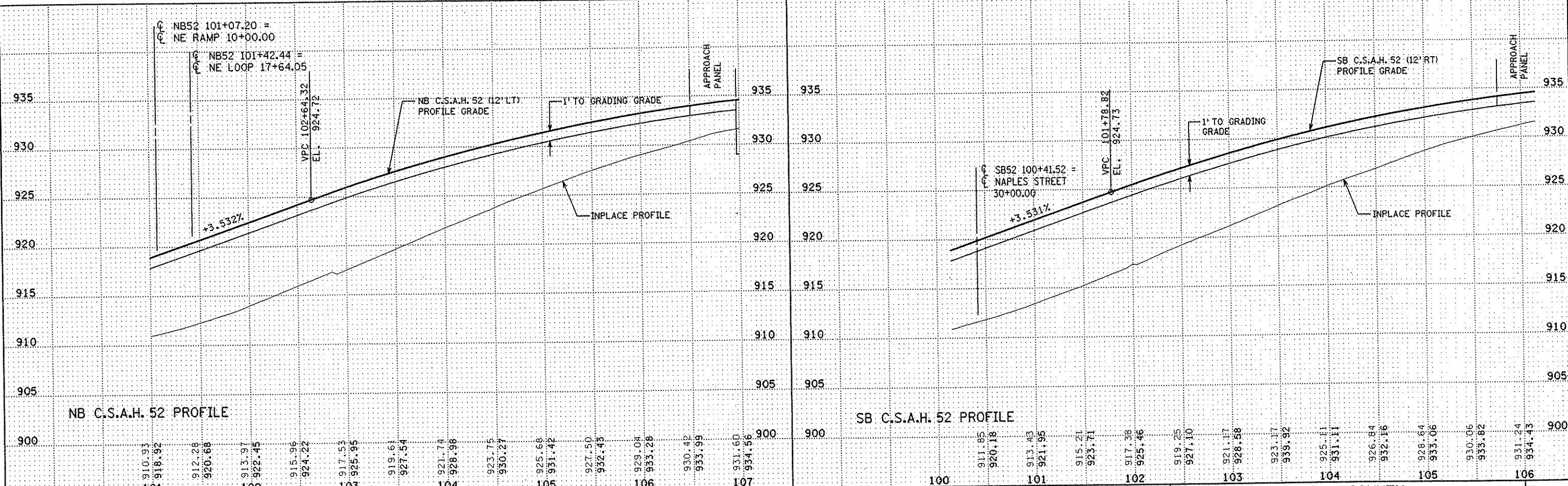
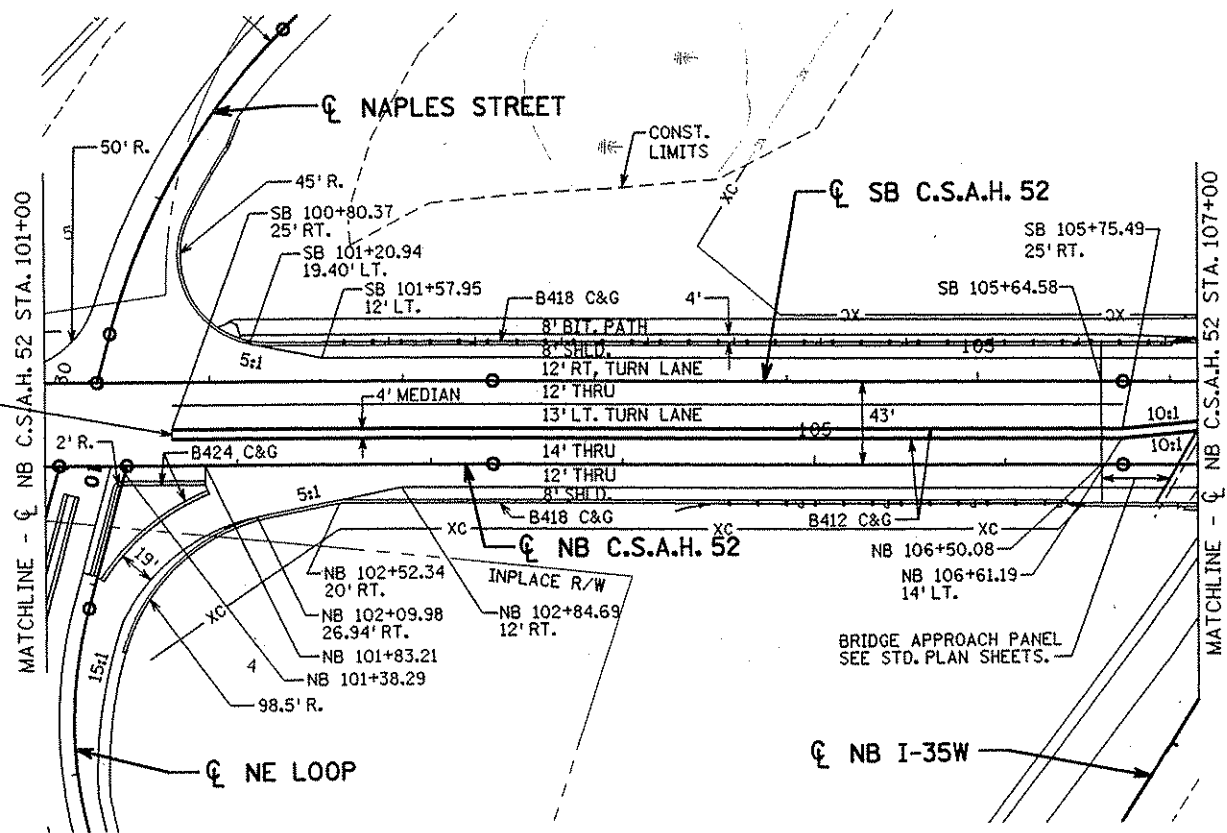
ANOKA COUNTY
CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 90+00 TO 101+00

SHEET 141 OF 559

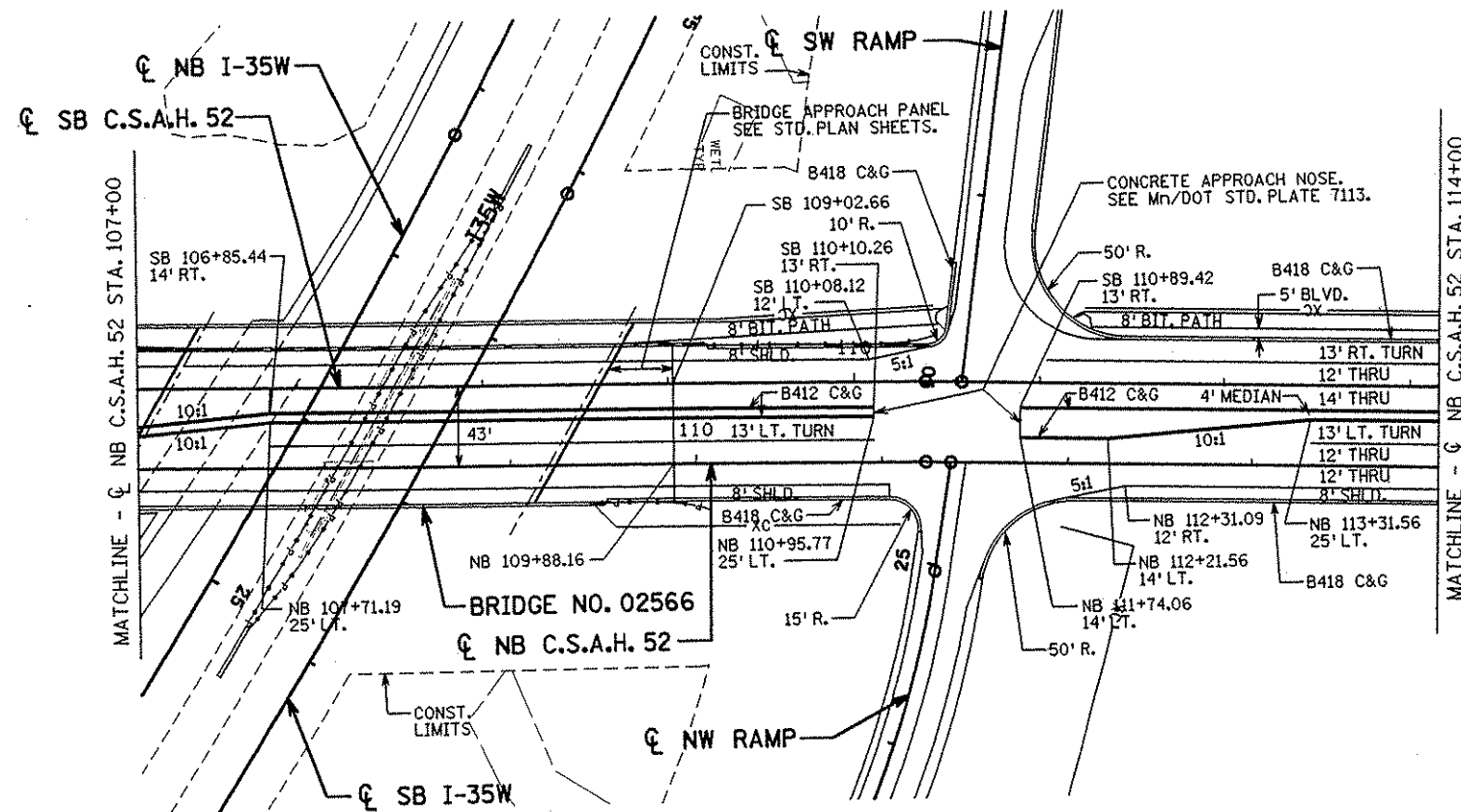
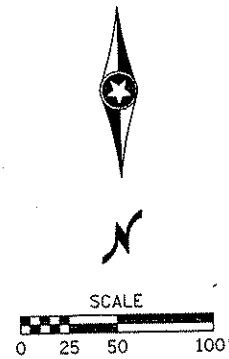


CONCRETE APPROACH NOSE.
SEE Mn/DOT STD. PLATE 7113.

STREET RADII-NAPLES			
RADIUS	ALIGNMENT	STATION	OFFSET
50	52SB	99+92.82	56.00LT
45	52SB	101+30.06	65.00LT
STREET RADII-NE LOOP			
RADIUS	ALIGNMENT	STATION	OFFSET
98.5	52NB	102+35.93	123.73RT

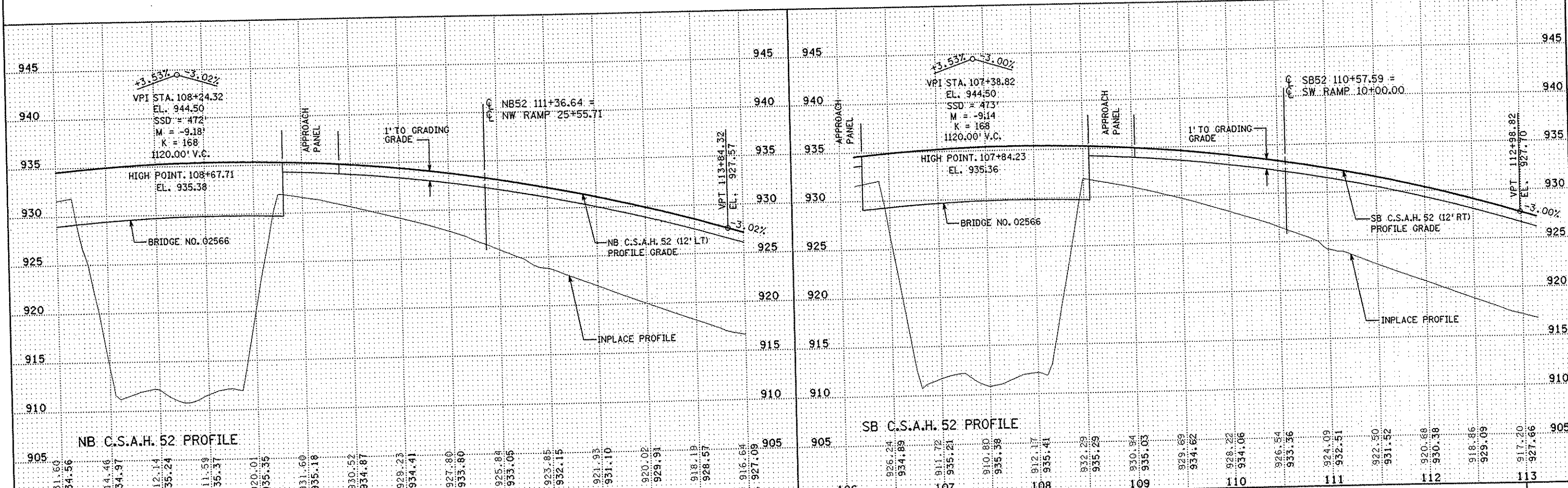


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Joseph W. ...</i> DATE: 1-10-02 LIC. NO. 22405				DRAWN BY: RRC DATE: 9-21-01 DESIGN BY: RRC DATE: 9-20-01 CHECKED BY: JMW DATE: 9-24-01		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY CONSTRUCTION PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NB C.S.A.H. 52 STA. 101+00 TO 107+00		SHEET 142 OF 559
NO	DATE	BY	CKD	APPR	REVISION							
NAME: \\Mrfrazee\Projects\A-F\AnokaCity\1174901\hwy-brdg\pwr4\roadway\08\2202\21\plan02.dgn												

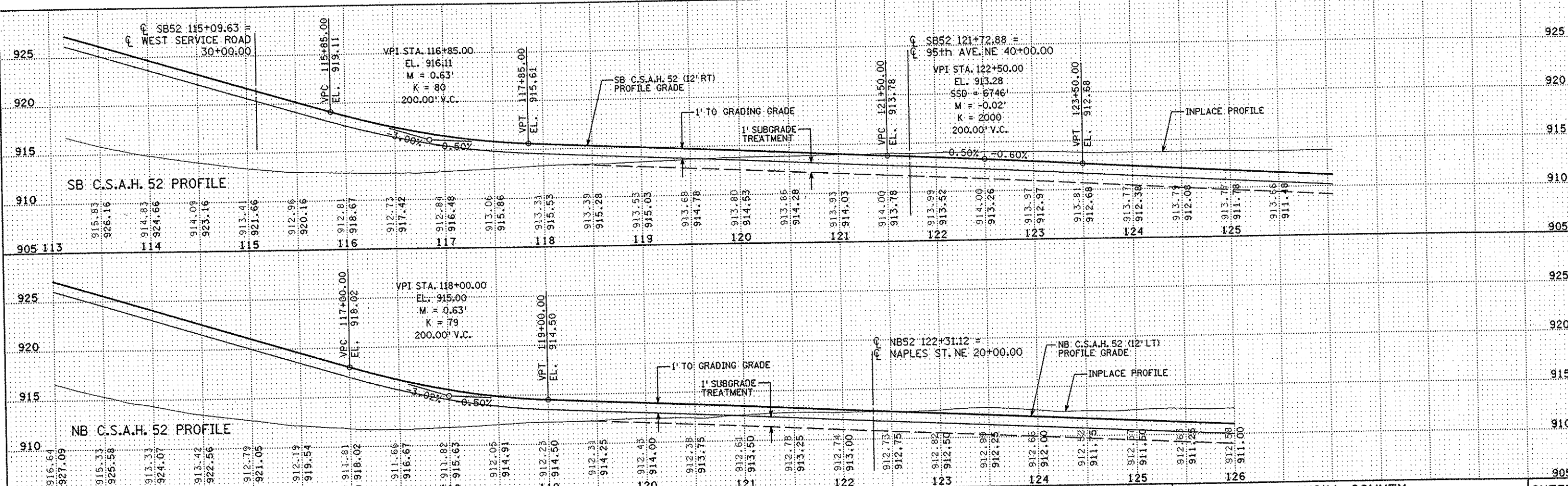
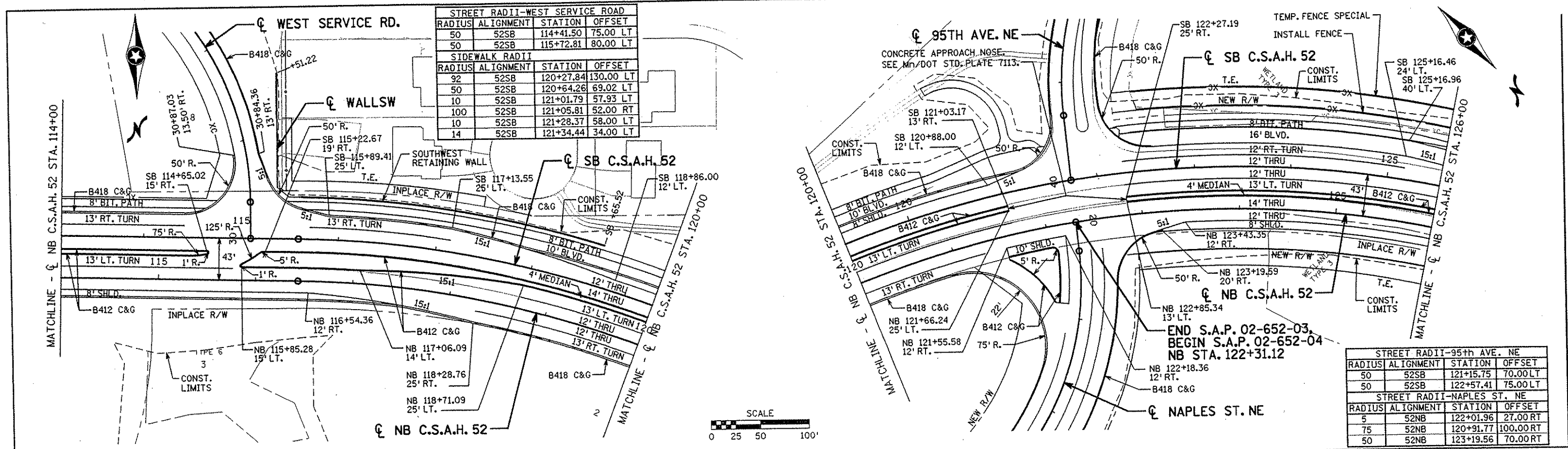


STREET RADII-SW RAMP			
RADIUS	ALIGNMENT	STATION	OFFSET
10	52SB	110+38.88	30.00LT
50	52SB	111+46.68	75.00LT

STREET RADII-NW RAMP			
RADIUS	ALIGNMENT	STATION	OFFSET
15	52NB	111+03.79	35.00RT
50	52NB	112+03.69	70.00RT



<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO	DATE	BY	CHKD	APPR	REVISION							<p>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.</p> <p><i>Joseph W. ...</i> DATE: 1-11-02 LIC. NO. 22465</p>	<p>DRAWN BY: RRC DATE: 9-21-01</p> <p>DESIGN BY: RRC DATE: 9-20-01</p> <p>CHECKED BY: JMW DATE: 9-24-01</p>	<p>S.P. 0280-50 (TH 35W)</p> <p>S.P. 90-080-11</p> <p>S.A.P. 02-652-02</p> <p>S.A.P. 02-652-03</p> <p>S.A.P. 02-652-04</p> <p>S.A.P. 106-020-021, 106-020-022</p>	<p>TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</p>	<p>ANOKA COUNTY</p> <p>CONSTRUCTION PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NB C.S.A.H. 52 STA. 107+00 TO 114+00</p>	<p>SHEET 143 OF 559</p>
NO	DATE	BY	CHKD	APPR	REVISION													

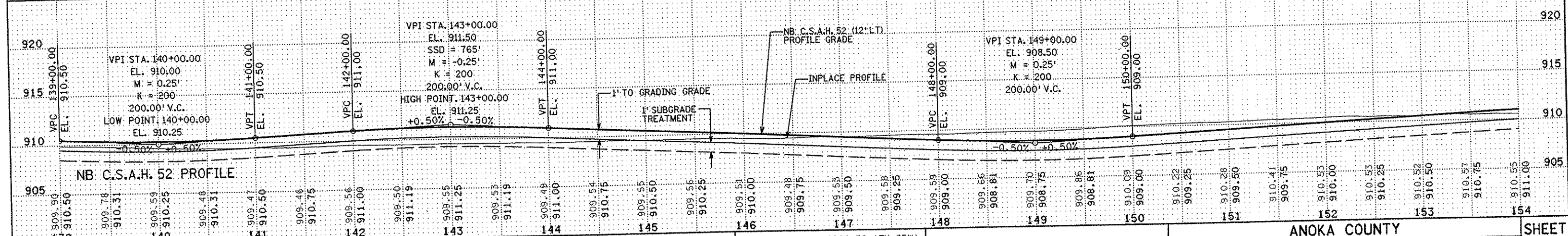
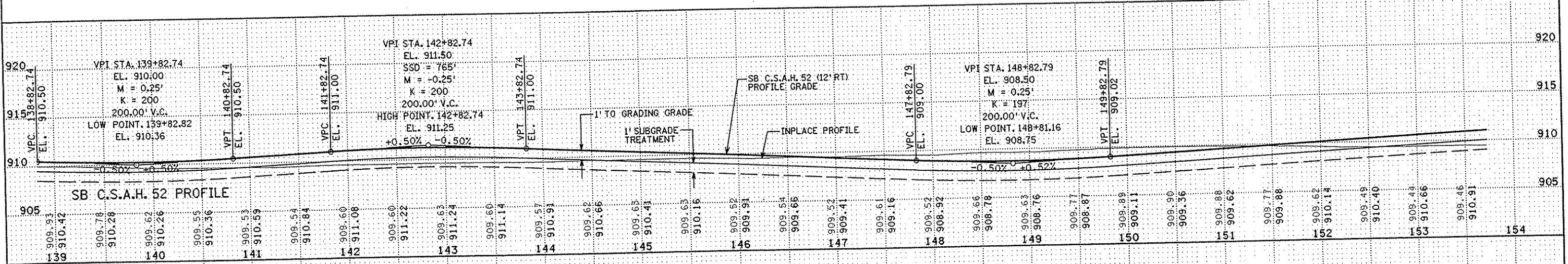
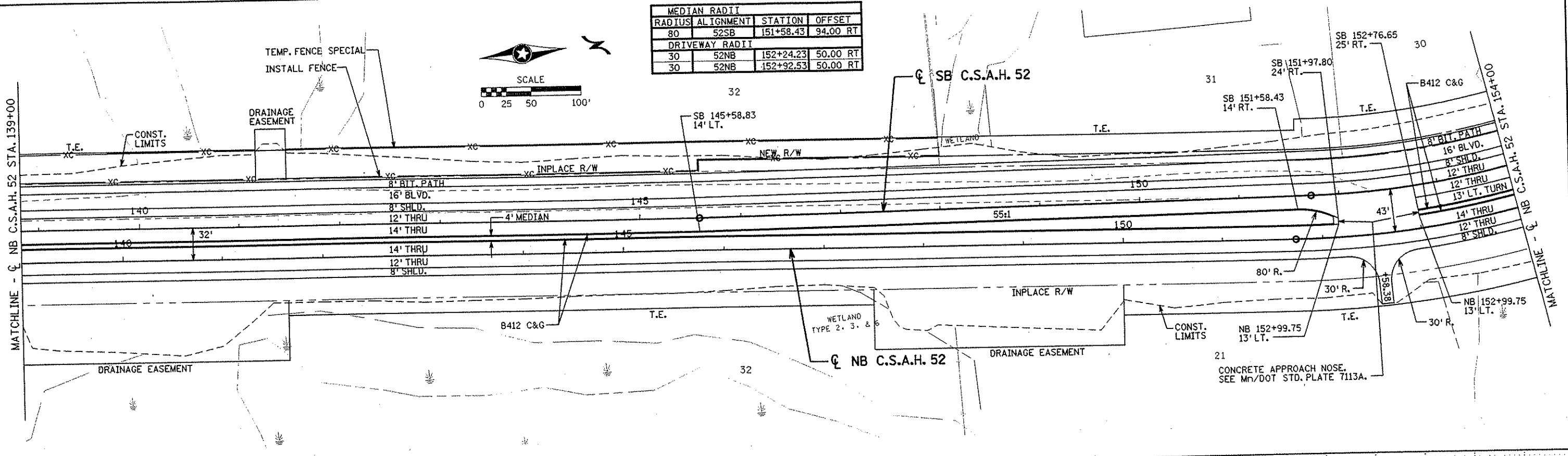
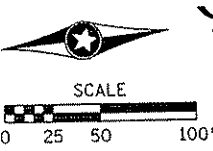


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		DRAWN BY RRC DATE 9-21-01 DESIGN BY RRC DATE 9-20-01 CHECKED BY JMW DATE 9-24-01	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, DUYALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY CONSTRUCTION PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NB C.S.A.H. 52 STA. 114+00 TO 126+00	SHEET 144 OF 559
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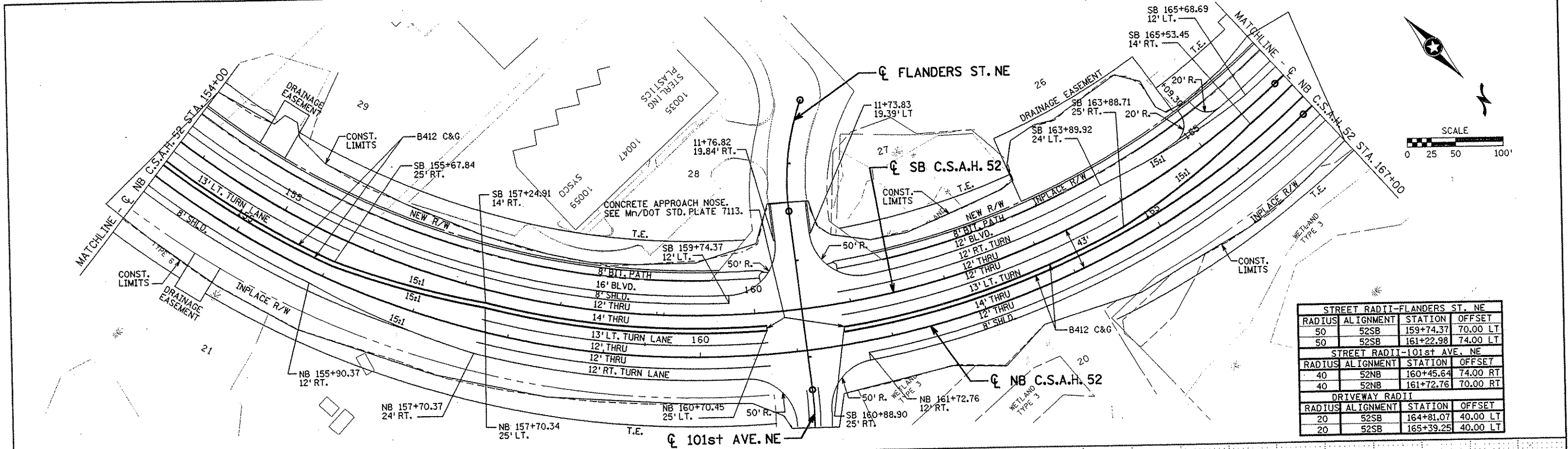
NO DATE BY CKD APPR REVISION

NAME: \\MrFreeze\Projects\g-f\AnokaCo\1174901\hwy-brdg\part4\roadway\02-652-04.dwg

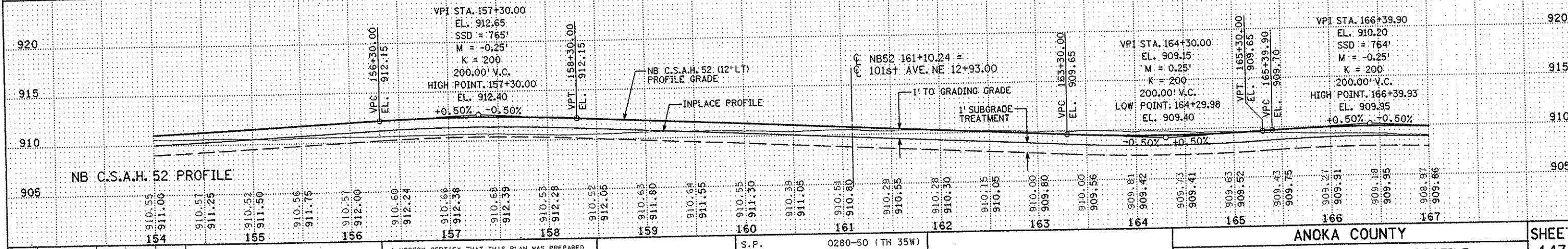
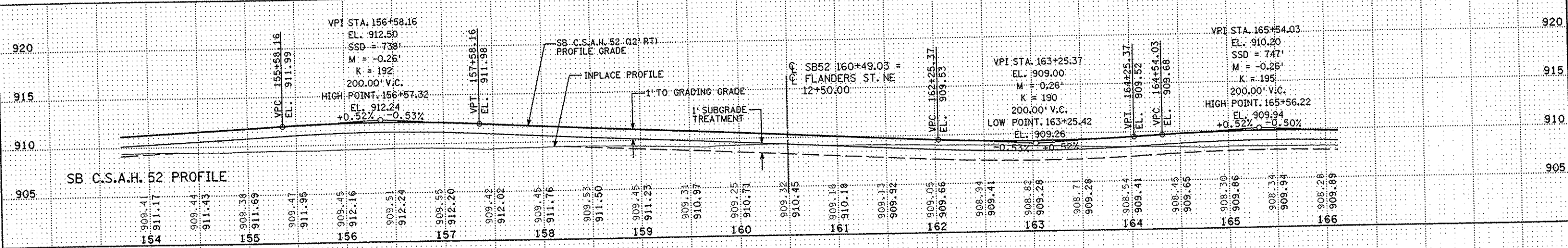
MEDIAN RADII			
RADIUS	ALIGNMENT	STATION	OFFSET
80	52SB	151+58.43	94.00 RT
DRIVEWAY RADII			
30	52NB	152+24.23	50.00 RT
30	52NB	152+92.53	50.00 RT



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. <i>Joseph Wilson</i> DATE: 1-11-02 LIC. NO. 22405		DRAWN BY: RRC DATE: 9-21-01 DESIGN BY: RRC DATE: 9-20-01 CHECKED BY: JMW DATE: 9-24-01	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY CONSTRUCTION PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NB C.S.A.H. 52 STA. 139+00 TO 154+00	SHEET 146 OF 559
NO. DATE BY CKD APPR REVISION						



STREET RADII-FLANDERS ST. NE			
RADIUS	ALIGNMENT	STATION	OFFSET
50	52SB	159+74.37	70.00 LT
50	52SB	161+22.98	74.00 LT
STREET RADII-101st AVE. NE			
RADIUS	ALIGNMENT	STATION	OFFSET
40	52NB	160+45.64	74.00 RT
40	52NB	161+72.76	70.00 RT
DRIVEWAY RADII			
RADIUS	ALIGNMENT	STATION	OFFSET
20	52SB	164+81.07	40.00 LT
20	52SB	165+39.25	40.00 LT



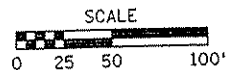
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Juan Wilson</i> DATE 1-11-02 LIC. NO. 22465		DRAWN BY RRC DATE 9-21-01 DESIGN BY RRC DATE 9-20-01 CHECKED BY JMW DATE 9-24-01	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY CONSTRUCTION PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NB C.S.A.H. 52 STA. 154+00 TO 167+00	SHEET 147 OF 559
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NAME: \\mrfreeze\Projects\g-f\Anoka\1174901\hwy-brdg\part4\roadway\DR1202.dwg

DRIVEWAY RADI			
RADIUS	ALIGNMENT	STATION	OFFSET
30	52SB	167+64.53	50.00 LT
30	52SB	168+36.53	50.00 LT
40	52SB	171+63.42	60.00 LT
40	52SB	172+69.34	60.00 LT
20	52NB	177+56.41	40.00 RT
30	52NB	178+45.72	50.00 RT

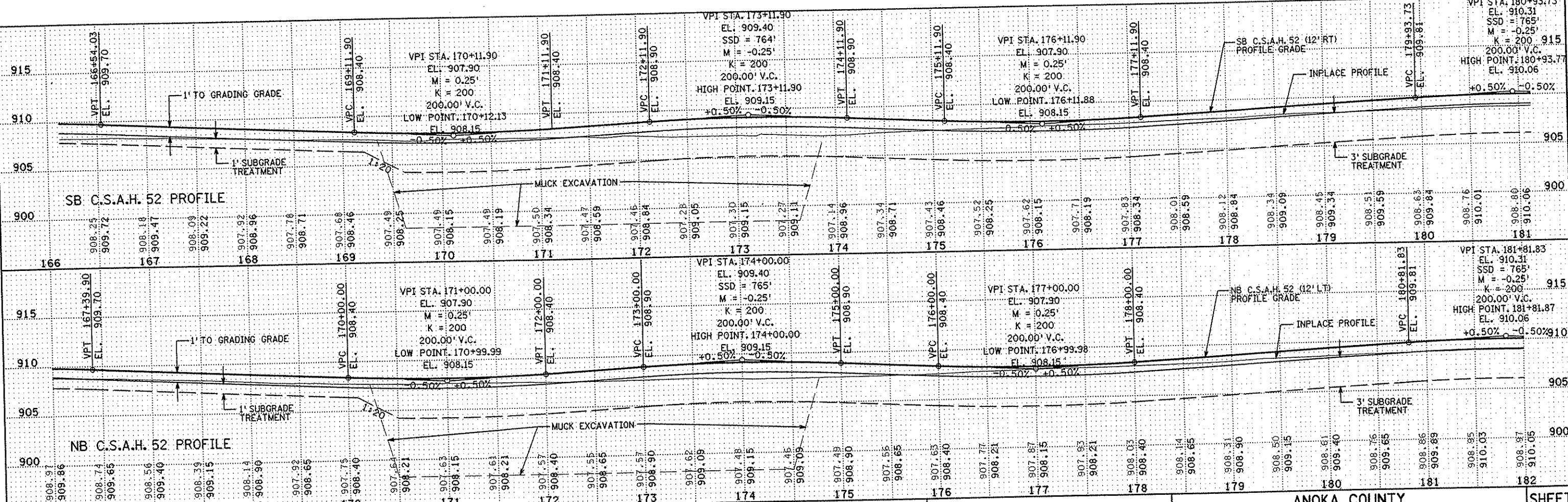
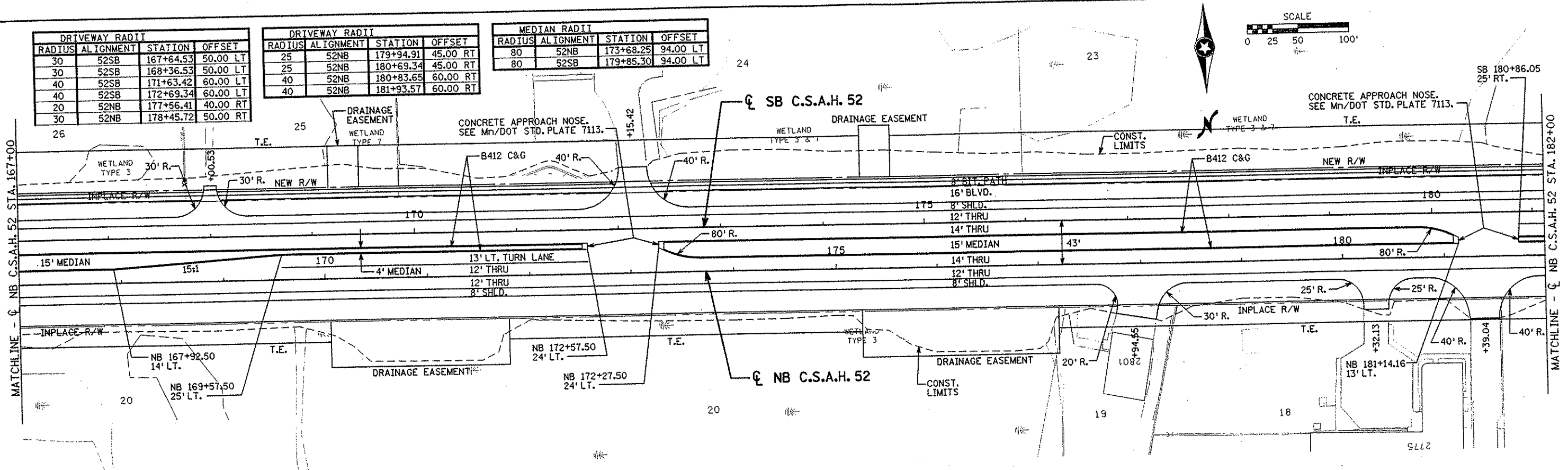
DRIVEWAY RADI			
RADIUS	ALIGNMENT	STATION	OFFSET
25	52NB	179+94.91	45.00 RT
25	52NB	180+69.34	45.00 RT
40	52NB	180+83.65	60.00 RT
40	52NB	181+93.57	60.00 RT

MEDIAN RADI			
RADIUS	ALIGNMENT	STATION	OFFSET
80	52NB	173+68.25	94.00 LT
80	52SB	179+85.30	94.00 LT

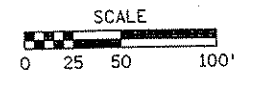


MATCHLINE - C NB C.S.A.H. 52 STA. 167+00

MATCHLINE - C NB C.S.A.H. 52 STA. 182+00



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. <i>Joseph W. Wiersma</i> DATE 2-01-02 LIC. NO. 22465		DRAWN BY RRC DATE 9-21-01 DESIGN BY RRC DATE 9-20-01 CHECKED BY JMW DATE 9-24-01	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY CONSTRUCTION PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NB C.S.A.H. 52 STA. 167+00 TO 182+00	SHEET 148 OF 559
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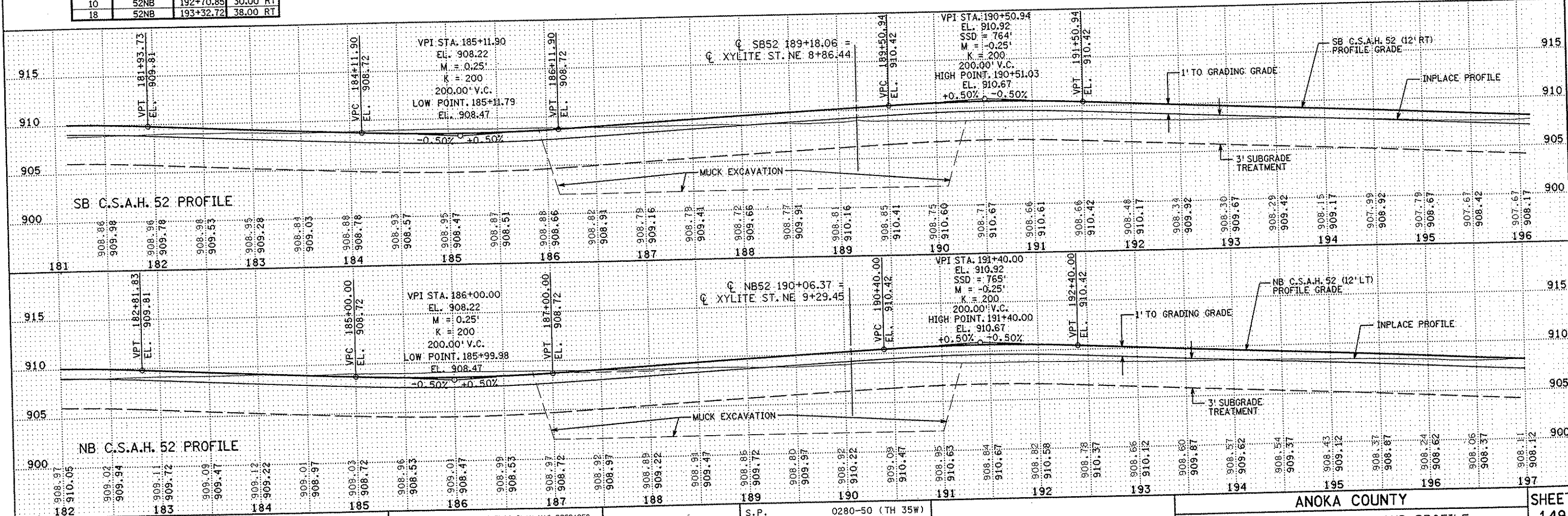


STREET RADII - XYLITE ST. NE			
RADIUS	ALIGNMENT	STATION	OFFSET
40	S2SB	188+64.22	60.00LT
40	S2SB	189+69.83	64.00LT
40	S2NB	189+52.60	64.00RT
40	S2NB	190+59.26	60.00RT

MATCHLINE - C NB C.S.A.H. 52 STA. 182+00

MATCHLINE - C NB C.S.A.H. 52 STA. 197+00

DRIVEWAY RADII			
RADIUS	ALIGNMENT	STATION	OFFSET
20	S2NB	185+04.56	40.00 RT
20	S2NB	185+56.56	40.00 RT
15	S2NB	192+31.54	35.00 RT
10	S2NB	192+68.71	30.00 RT
10	S2NB	192+70.85	30.00 RT
18	S2NB	193+32.72	38.00 RT



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.

John Neumann
DATE 2-14-02 LIC. NO. 22405

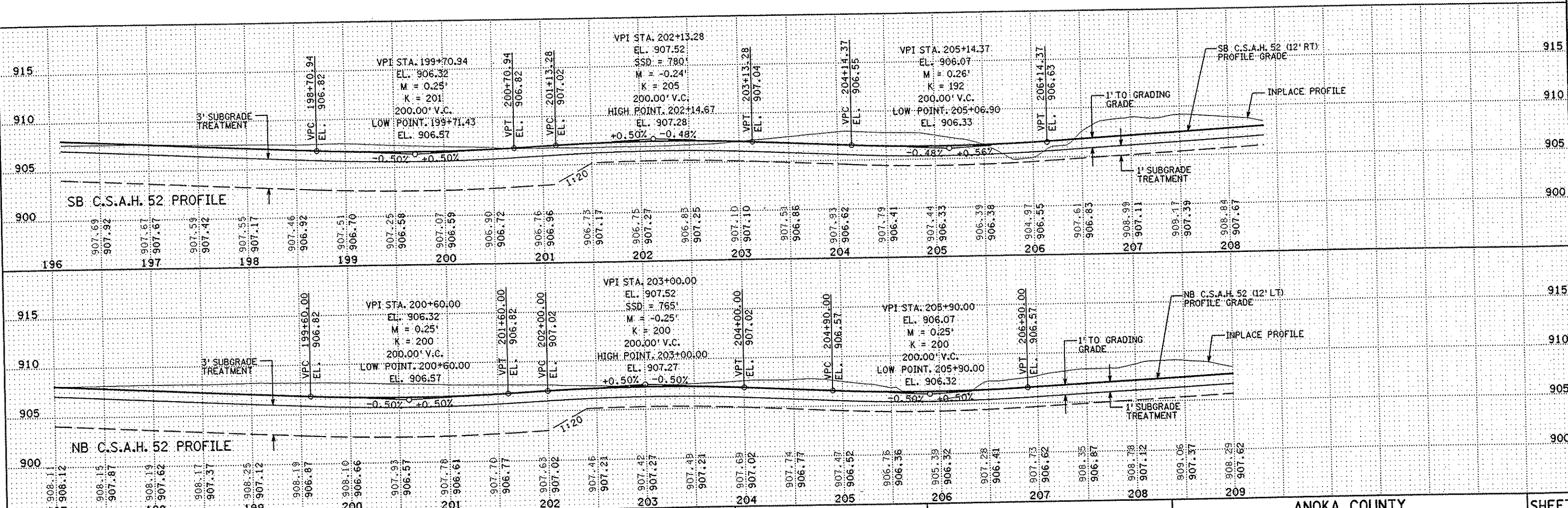
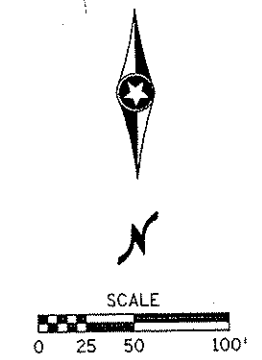
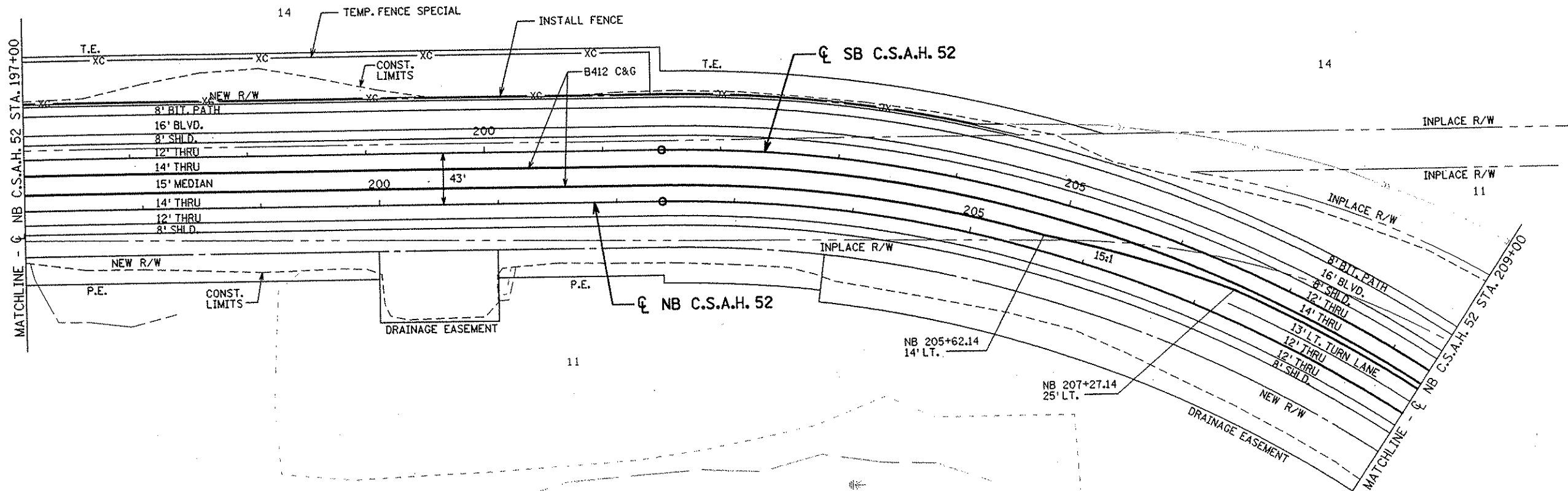
DRAWN BY RRC DATE 9-21-01
DESIGN BY RRC DATE 9-20-01
CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TGLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 182+00 TO 197+00

SHEET 149 OF 559



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.

John Weism
 DATE 2-14-02 LIC. NO. 22405

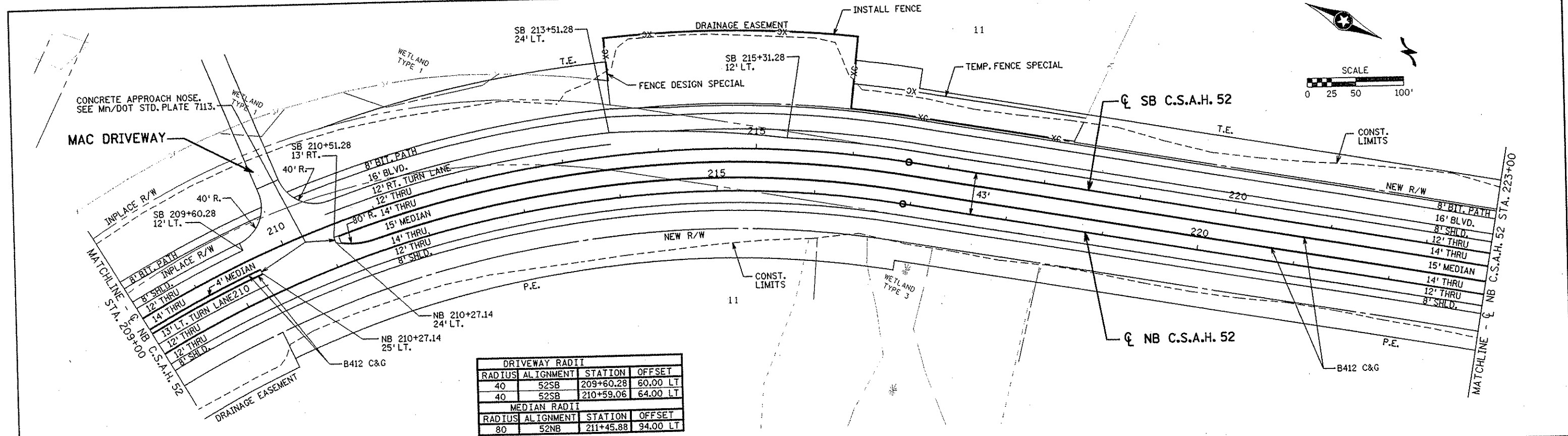
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

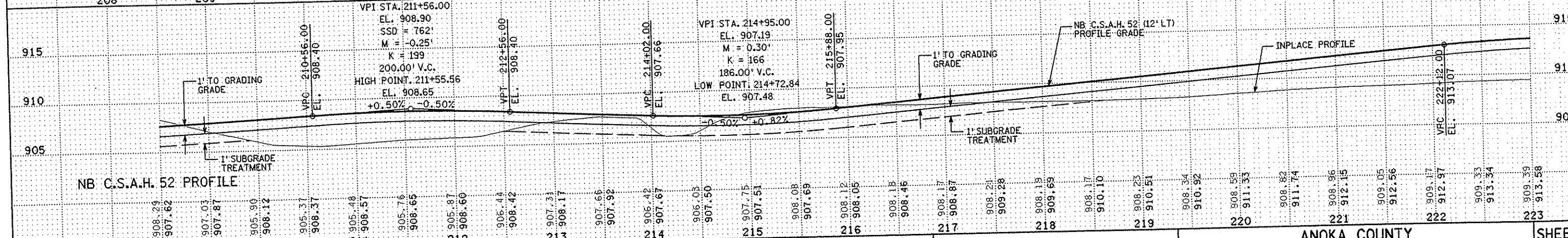
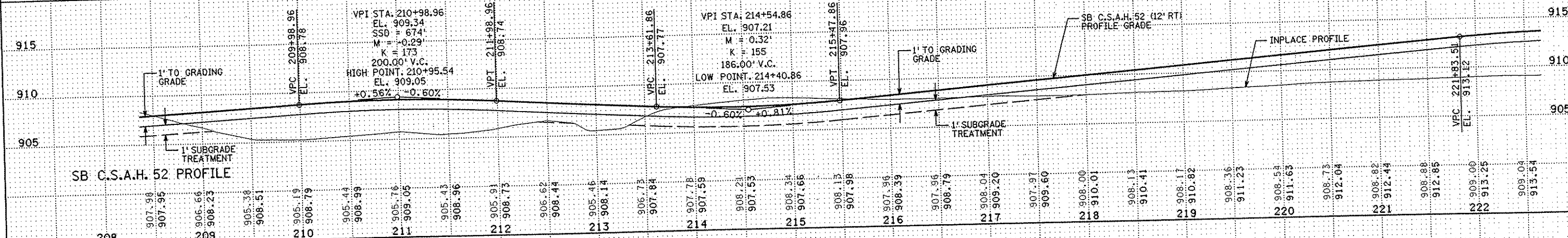
TKDA
 ENGINEERS-ARCHITECTS-PLANNERS
 TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 NB C.S.A.H. 52 STA. 197+00 TO 209+00

SHEET 150 OF 559



DRIVEWAY RADII			
RADIUS	ALIGNMENT	STATION	OFFSET
40	52SB	209+60.28	60.00 LT
40	52SB	210+59.06	64.00 LT
MEDIAN RADII			
RADIUS	ALIGNMENT	STATION	OFFSET
80	52NB	211+45.88	94.00 LT

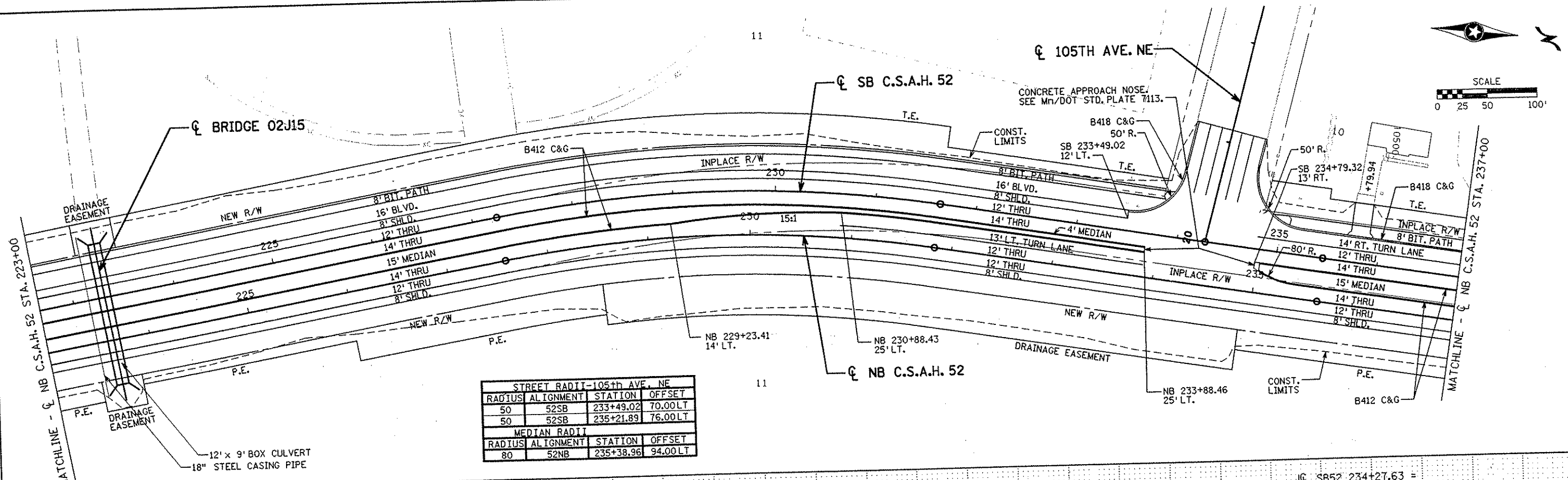
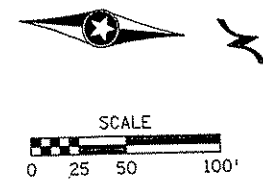


NO		DATE	BY	CKD	APPR	REVISION
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.						
DRAWN BY		RRC	DATE	9-21-01	S.P. 0280-50 (TH 35W) 90-080-11	
DESIGN BY		RRC	DATE	9-20-01	S.A.P. 02-652-02	
CHECKED BY		JMW	DATE	9-24-01	S.A.P. 02-652-03	
					S.A.P. 02-652-04	
					S.A.P. 106-020-021, 106-020-022	
DATE				2-14-02	LIC. NO.	22465

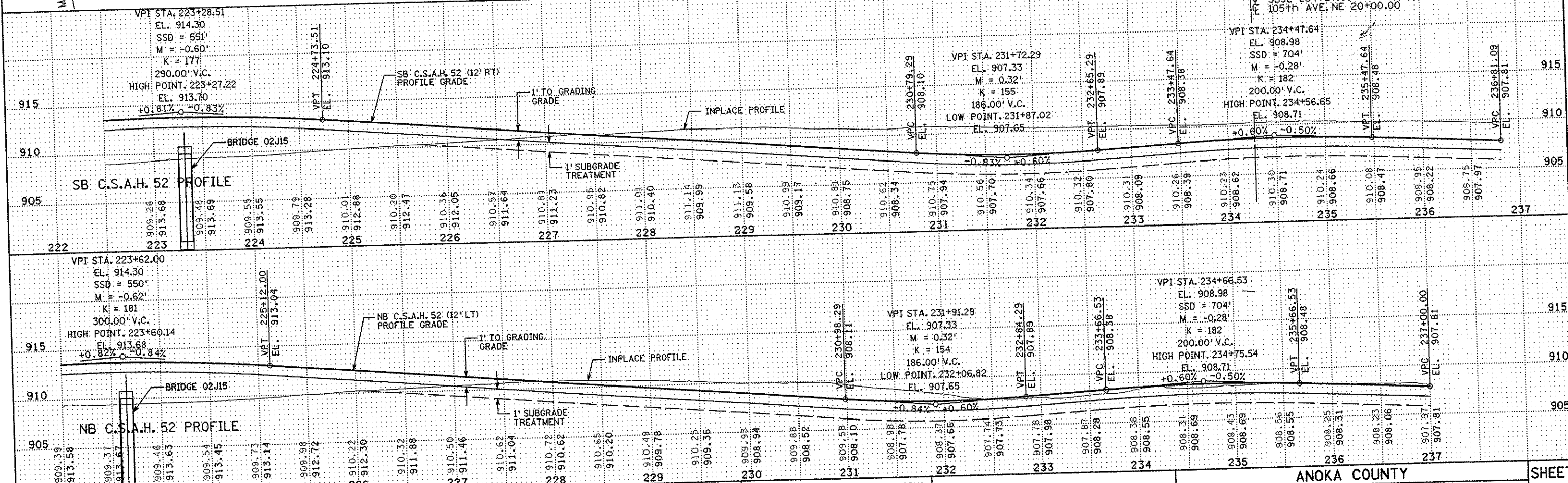
ANOKA COUNTY
CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 209+00 TO 223+00

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

SHEET 151 OF 559

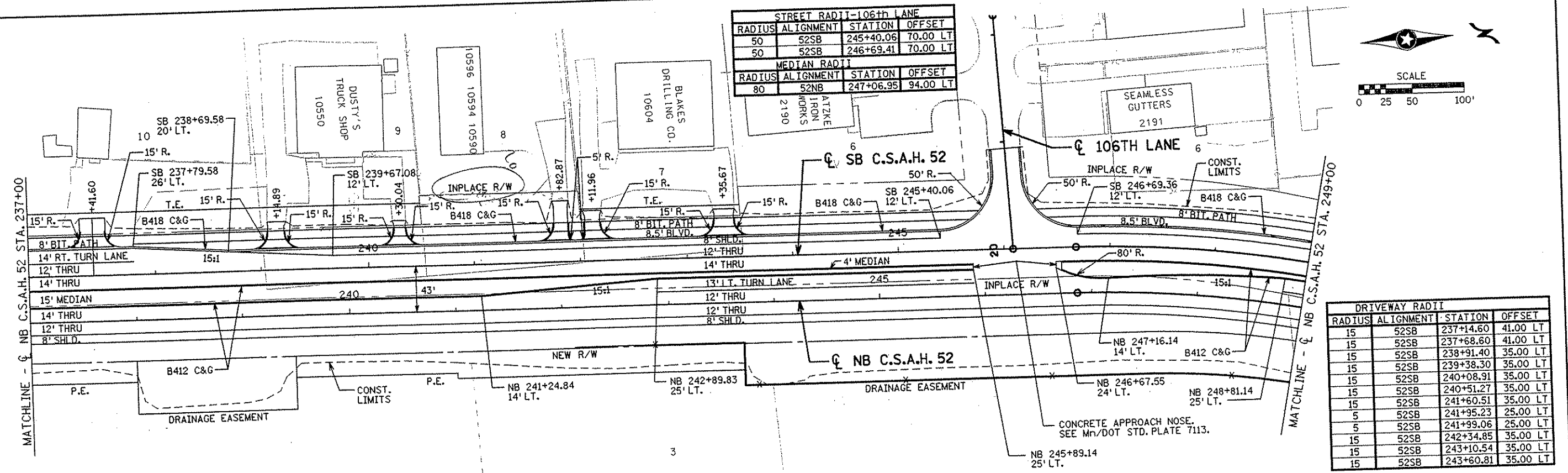


STREET RADII-105th AVE. NE			
RADIUS	ALIGNMENT	STATION	OFFSET
50	52SB	233+49.02	70.00LT
50	52SB	235+21.89	76.00LT
MEDIAN RADII			
RADIUS	ALIGNMENT	STATION	OFFSET
80	52NB	235+38.96	94.00LT



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. <i>Joseph Zwarg</i> DATE 2-14-02 LIC. NO. 22405		DRAWN BY <u>RRC</u> DATE <u>9-21-01</u> DESIGN BY <u>RRC</u> DATE <u>9-20-01</u> CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA ENGINEERS-ARCHITECTS-PLANNERS TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED SAINT PAUL, MINNESOTA	ANOKA COUNTY CONSTRUCTION PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NB C.S.A.H. 52 STA. 223+00 TO 237+00	SHEET 152 OF 559
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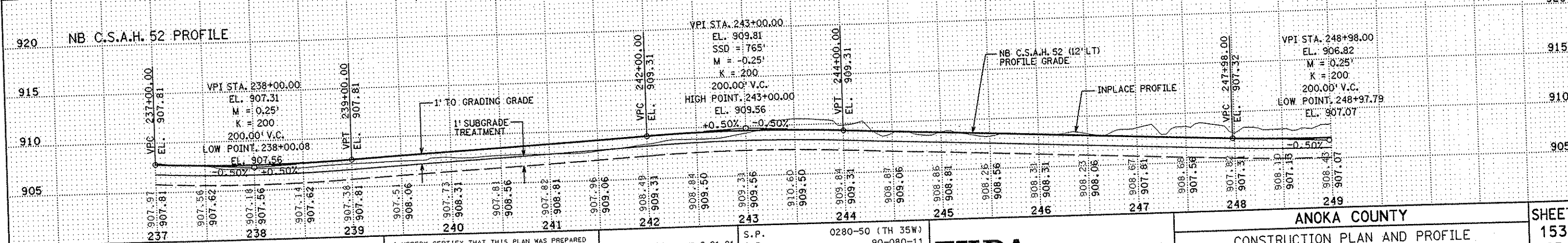
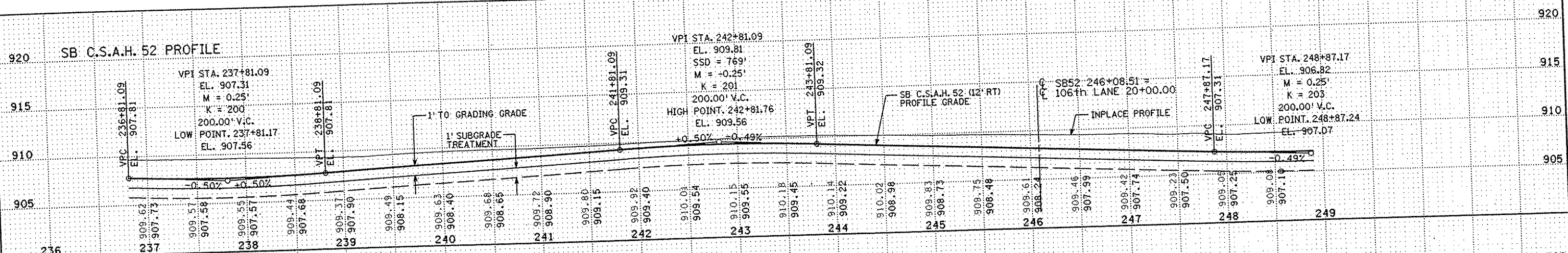
NAME: k:\a-f\anokacnty\1174901\hwy-brdg\part4\roadway\drawings\plan12d4d4\2002



STREET RADIUS-106th LANE			
RADIUS	ALIGNMENT	STATION	OFFSET
50	52SB	245+40.06	70.00 LT
50	52SB	246+69.41	70.00 LT

MEDIAN RADIUS			
RADIUS	ALIGNMENT	STATION	OFFSET
80	52NB	247+06.95	94.00 LT

DRIVEWAY RADIUS			
RADIUS	ALIGNMENT	STATION	OFFSET
15	52SB	237+14.60	41.00 LT
15	52SB	237+68.60	41.00 LT
15	52SB	238+91.40	35.00 LT
15	52SB	239+38.30	35.00 LT
15	52SB	240+08.91	35.00 LT
15	52SB	240+51.27	35.00 LT
15	52SB	241+60.51	35.00 LT
5	52SB	241+95.23	25.00 LT
5	52SB	241+99.06	25.00 LT
15	52SB	242+34.85	35.00 LT
15	52SB	243+10.54	35.00 LT
15	52SB	243+60.81	35.00 LT



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.

Joseph Wilson
DATE 2-14-02 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
DESIGN BY RRC DATE 9-20-01
CHECKED BY JMW DATE 9-24-01

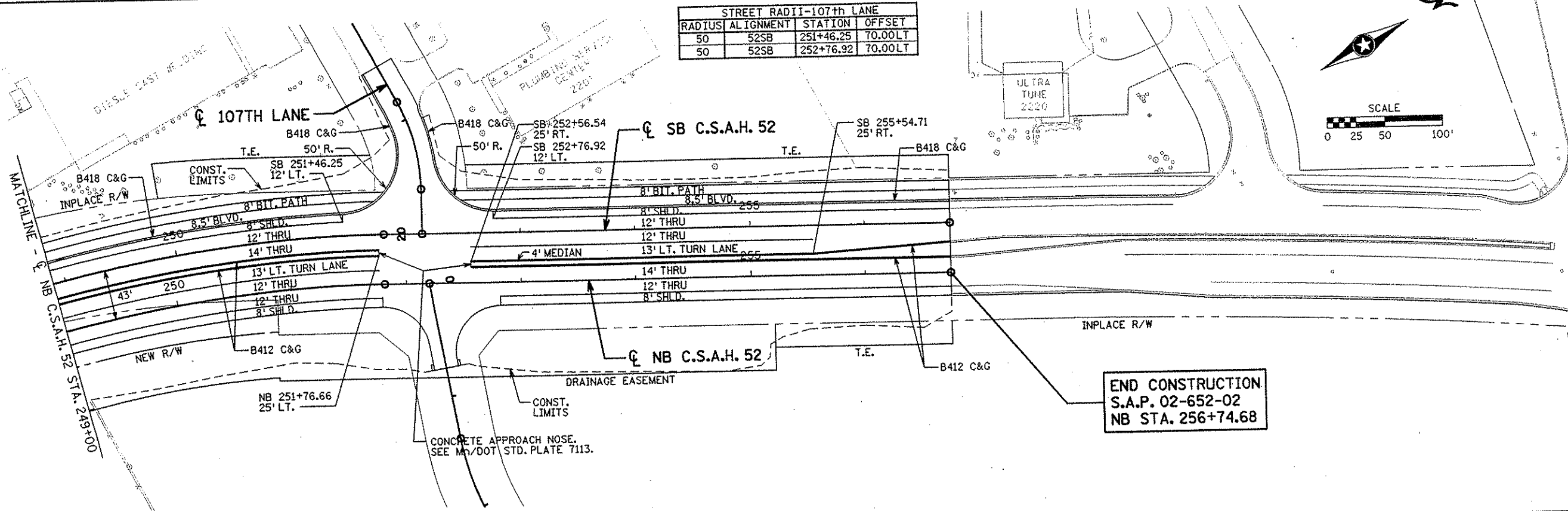
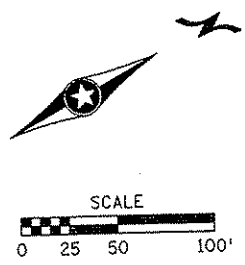
0280-50 (TH 35W)
90-080-11
02-652-02
02-652-03
02-652-04
106-020-021, 106-020-022

TKDA
ENGINEERS-ARCHITECTS-PLANNERS
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

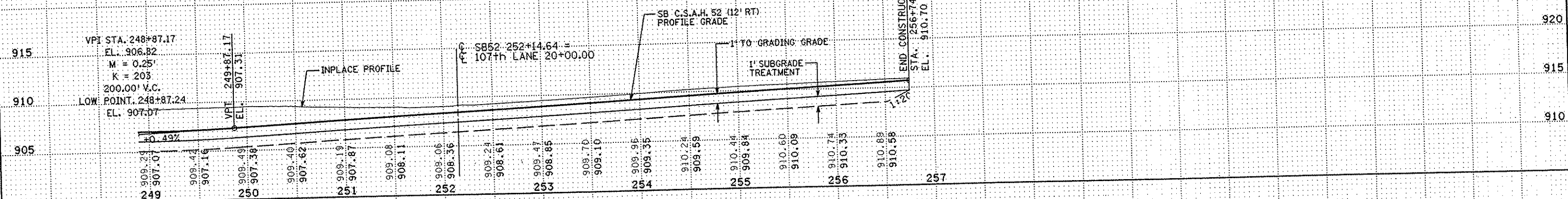
ANOKA COUNTY
CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 237+00 TO 249+00

SHEET 153 OF 559

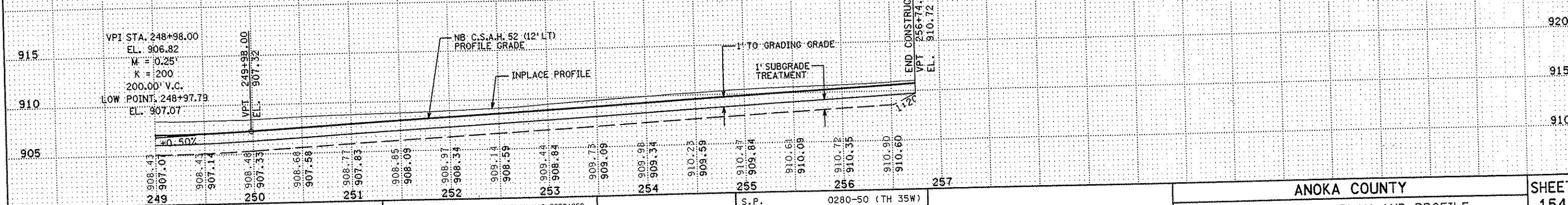
STREET RADII-107th LANE			
RADIUS	ALIGNMENT	STATION	OFFSET
50	52SB	251+46.25	70.00LT
50	52SB	252+76.92	70.00LT



SB C.S.A.H. 52 PROFILE



NB C.S.A.H. 52 PROFILE



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.

Joan Weavers
1-11-02 L.I.C. NO. 22405

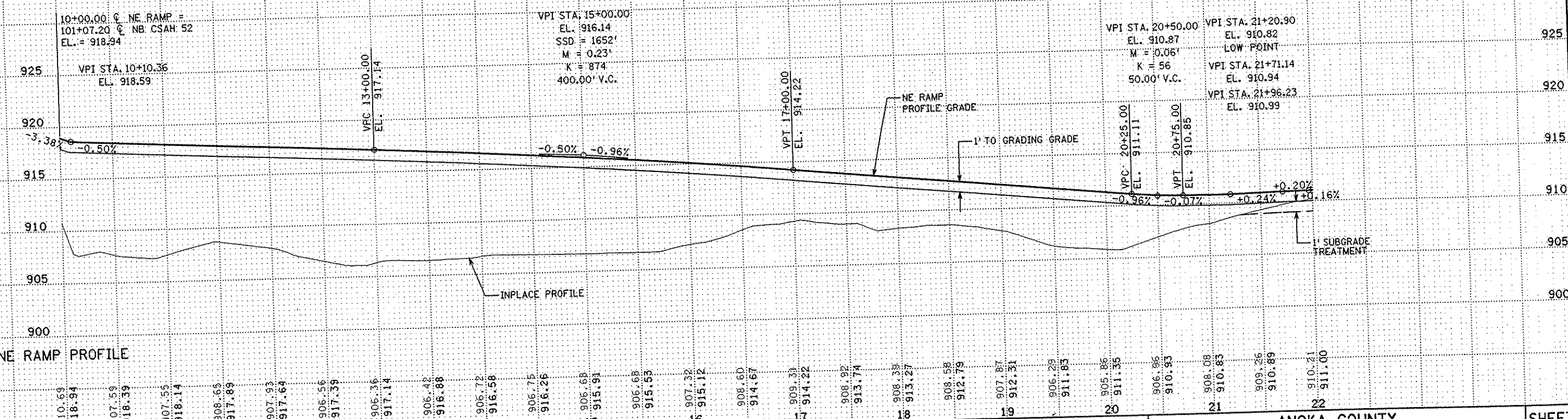
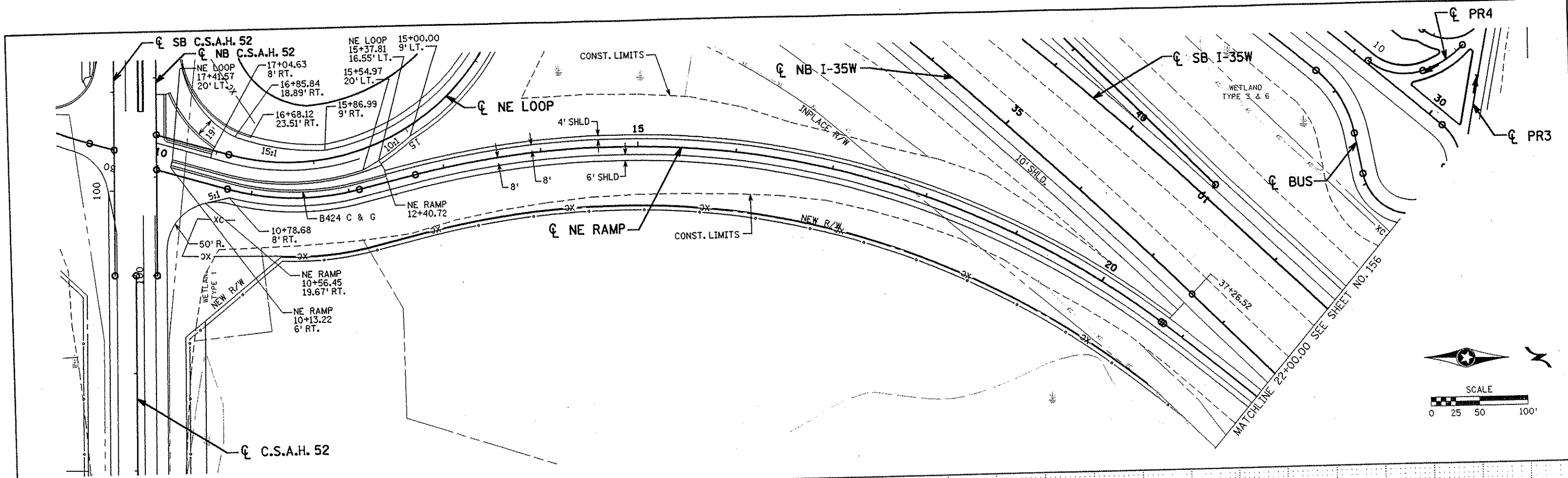
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 NB C.S.A.H. 52 STA. 249+00 TO 256+74.68

SHEET
 154
 OF
 559



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.

Joseph Weaver
 DATE 1-11-02 LIC. NO. 22705

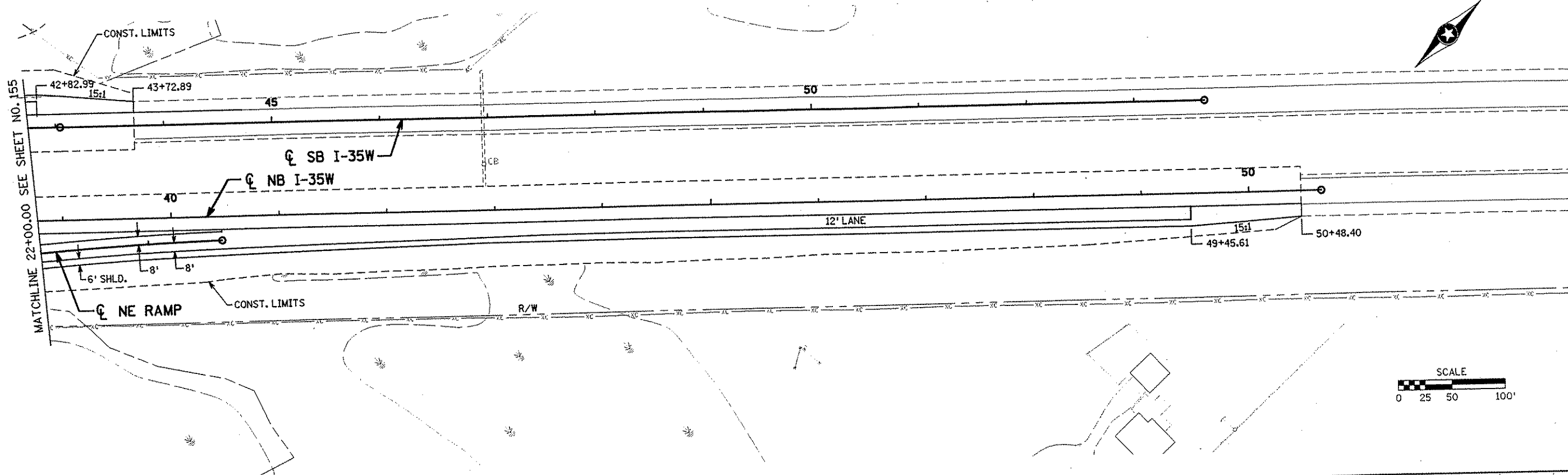
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 NE RAMP STA. 10+00 TO 22+00

SHEET 155 OF 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\plan16.dgn 20 NOV 2001

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.

Joseph Weana

DATE 11-20-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01

DESIGN BY RRC DATE 9-20-01

CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)

S.P. 90-080-11

S.A.P. 02-652-02

S.A.P. 02-652-03

S.A.P. 02-652-04

S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED

ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

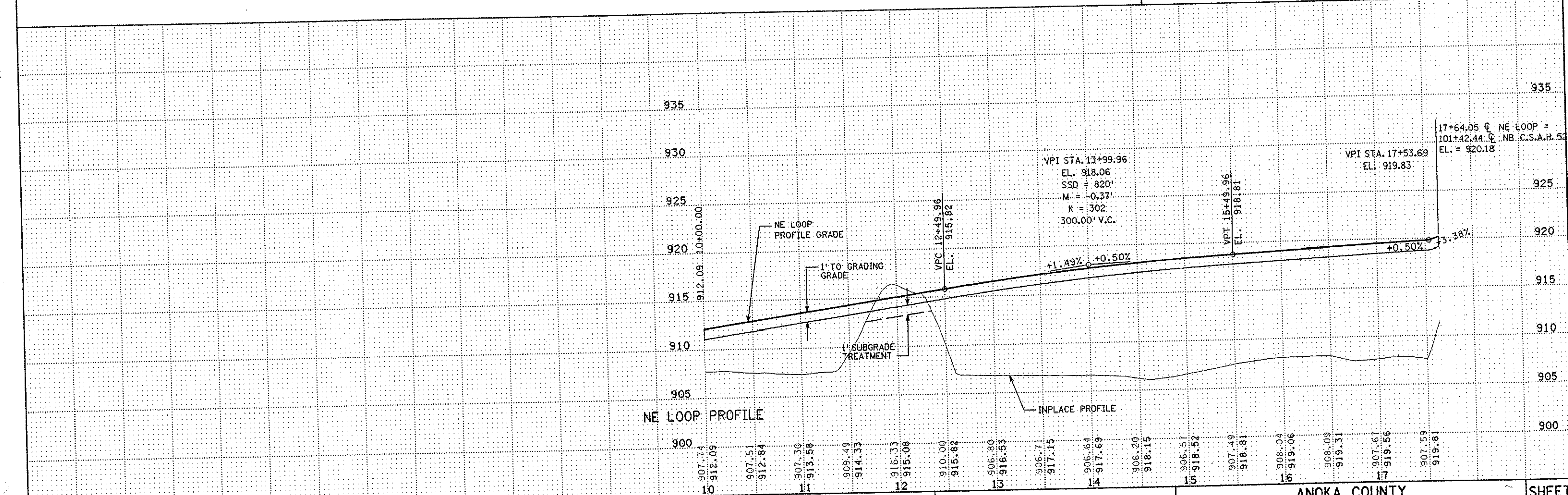
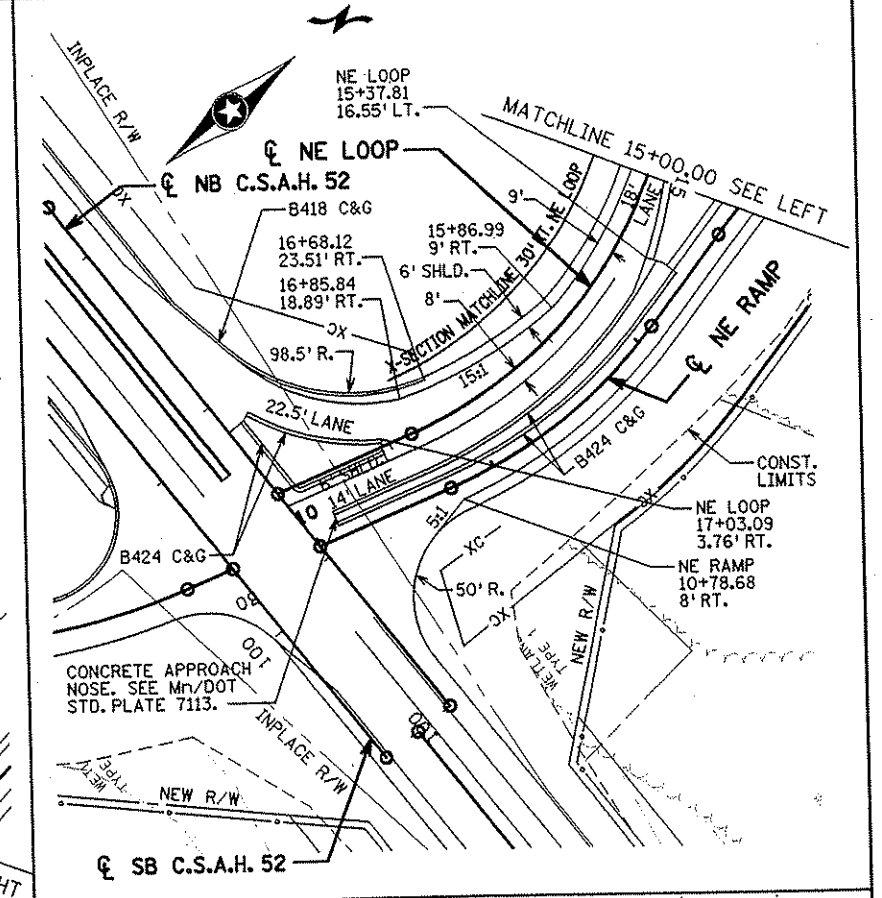
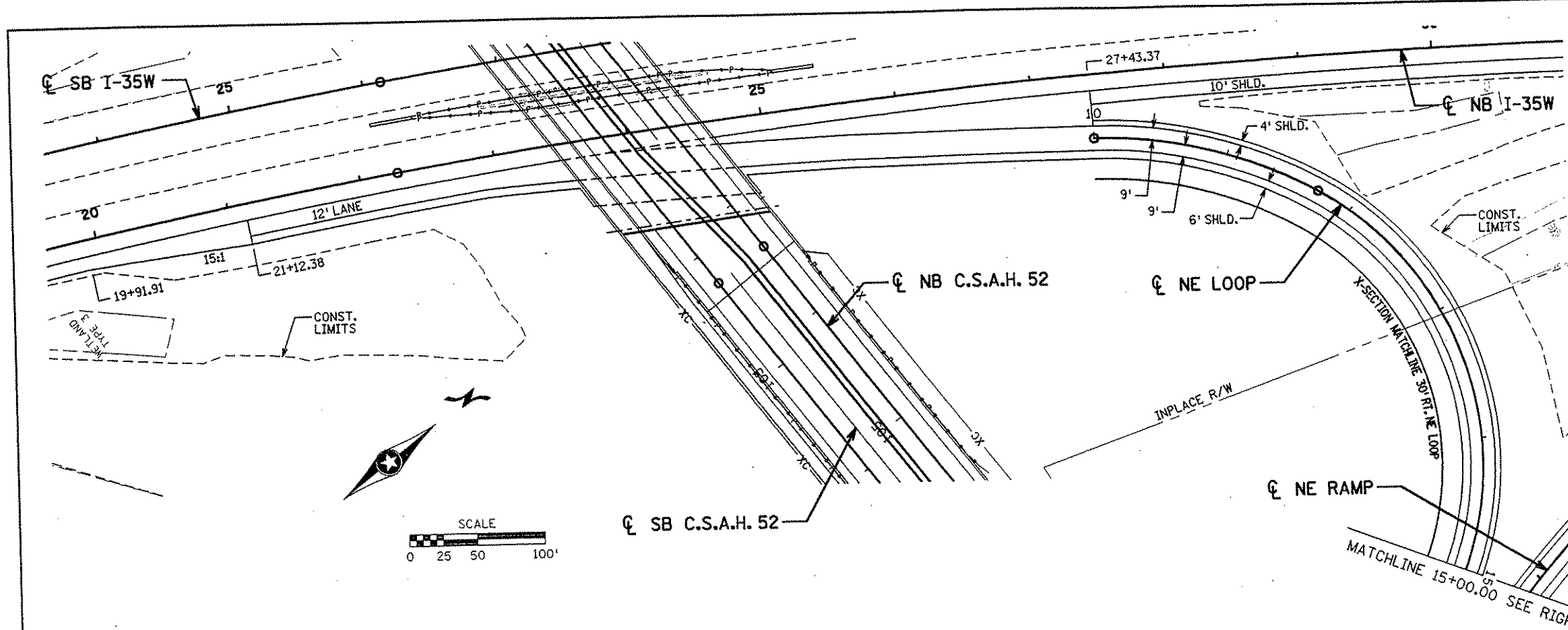
ANOKA COUNTY

CONSTRUCTION PLAN AND PROFILE

C.S.A.H. 52 RECONSTRUCTION

NE RAMP STA. 22+00 TO 23+69.26

SHEET 156 OF 559



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.

Joseph Weaver
 DATE 1-11-02 LIC. NO. 22405

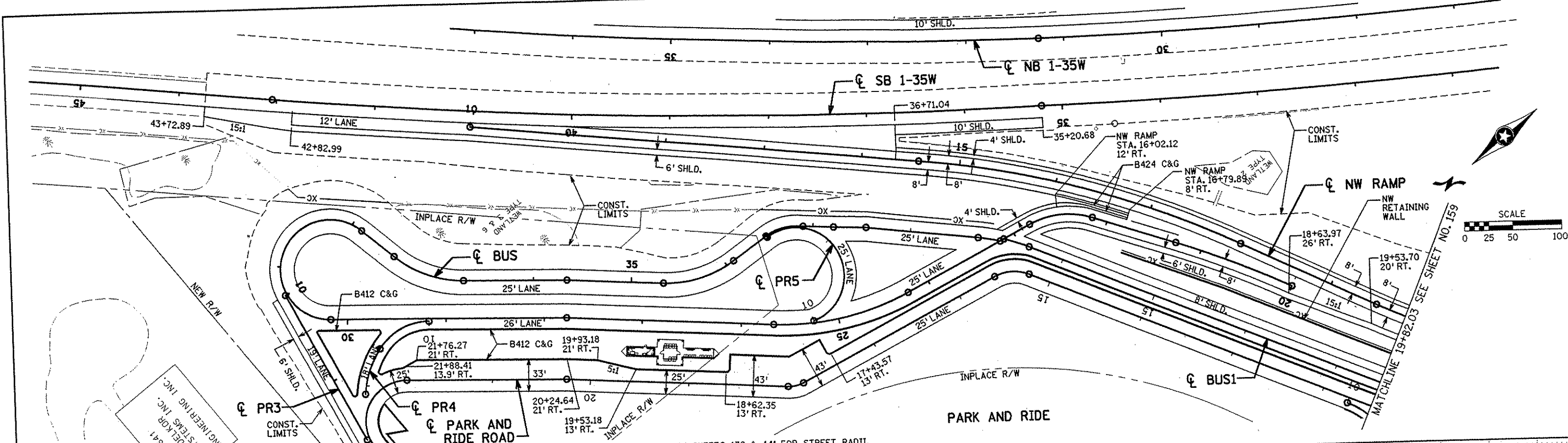
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DESIGN BY	RRC	DATE	3-20-01
CHECKED BY	JMW	DATE	3-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

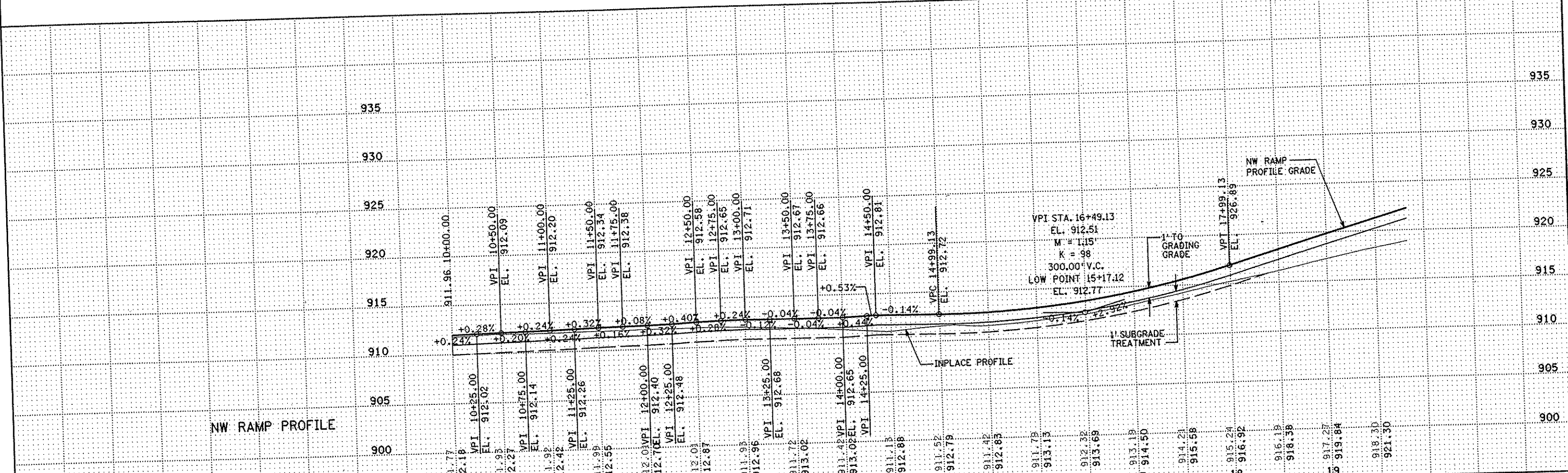
ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 NE LOOP STA. 10+00 TO 17+64.05

SHEET 157 OF 559

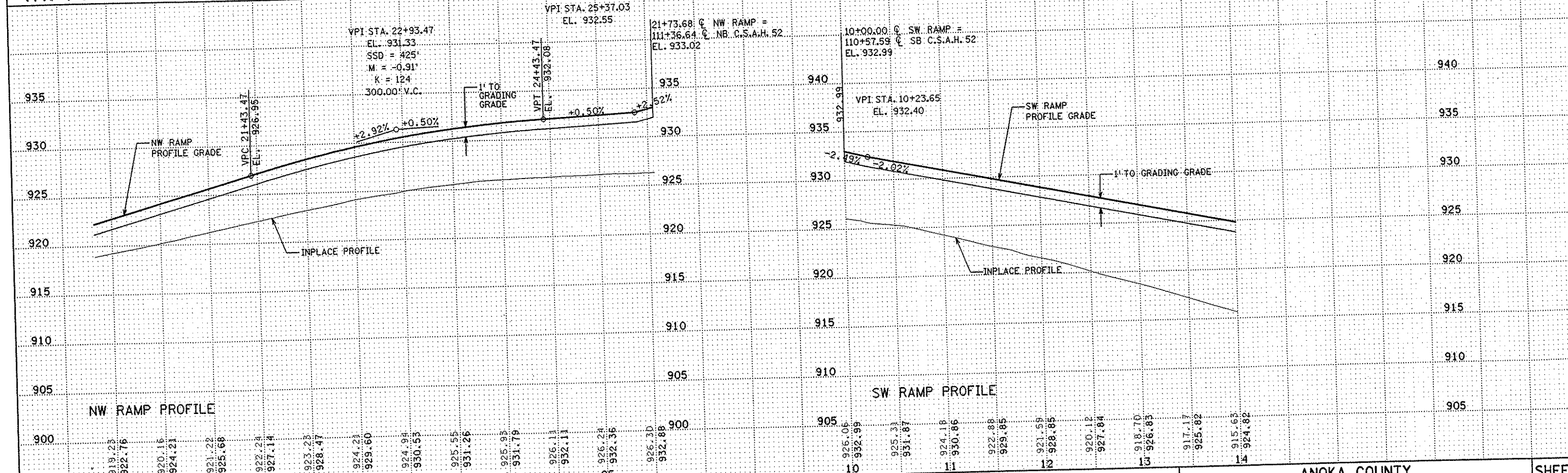
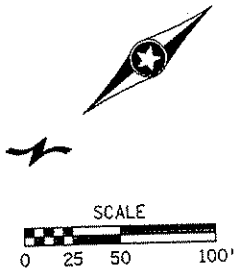
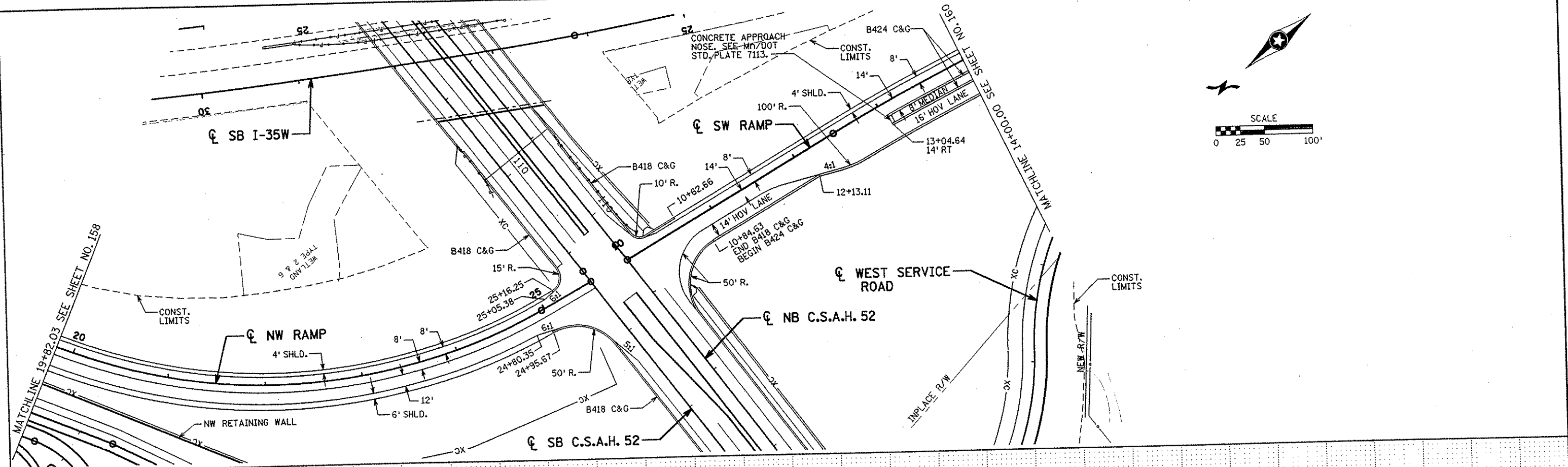


SEE SHEETS 139 & 141 FOR STREET RADII.

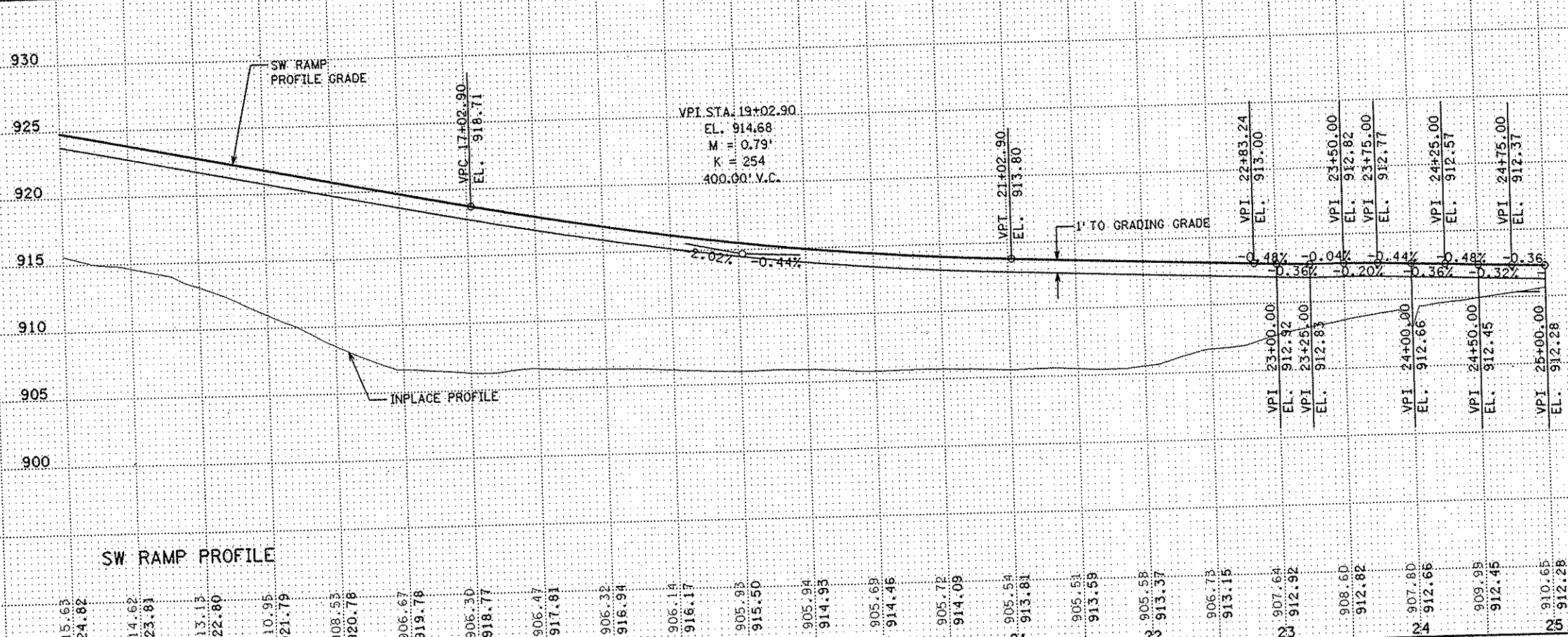
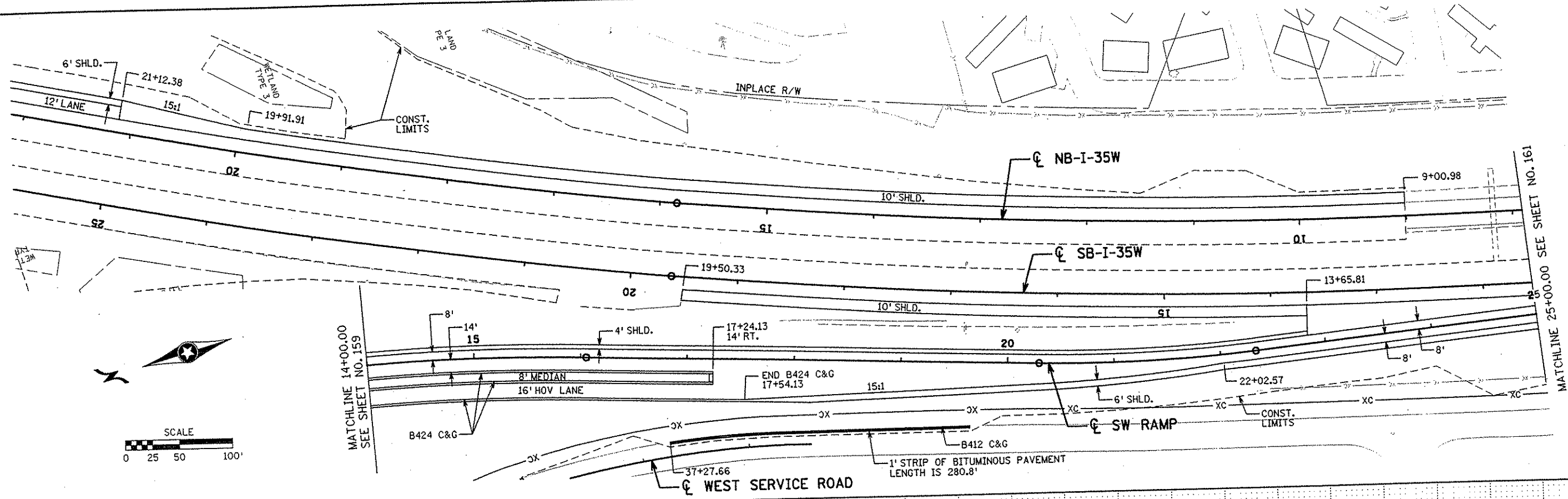
9641
ENGINEERING INC.
DEL KOP INC.



															ANOKA COUNTY CONSTRUCTION PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NW RAMP STA. 10+00 TO 16+00	SHEET 158 OF 559
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.			DRAWN BY <u>RRC</u> DATE <u>9-21-01</u> DESIGN BY <u>RRC</u> DATE <u>9-20-01</u> CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>			S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022						NO. DATE BY CKD APPR REVISION NAME: k:\site\proj\11749\par\4\roadway3\drawings\plan18.dgn 20 NOV 2001				
DATE <u>11-20-01</u> LIC. NO. <u>22405</u>			DATE			DATE			DATE			DATE				
NO. DATE BY CKD APPR REVISION			NO. DATE BY CKD APPR REVISION			NO. DATE BY CKD APPR REVISION			NO. DATE BY CKD APPR REVISION			NO. DATE BY CKD APPR REVISION				



NW RAMP PROFILE 20 21 22 23 24 25				SW RAMP PROFILE 10 11 12 13 14				ANOKA COUNTY		SHEET 159 OF 559	
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.						S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA <small>TOLTZ, KING, OUYALL, ANDERSON AND ASSOCIATES, INCORPORATED</small> <small>ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>		CONSTRUCTION PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NW RAMP STA. 16+00 TO 21+73.68 SW RAMP STA. 10+00 TO 14+00	
DRAWN BY <u>RRC</u> DATE <u>9-21-01</u>		DESIGN BY <u>RRC</u> DATE <u>9-20-01</u>		CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>		DATE <u>1-11-02</u> L.C. NO. <u>22465</u>		NAME: \\mf\Freeze\projects\c-a\anoka\city\1174901\hwy-brdg\part4\roadway\902200\902200.dgn			



SW RAMP PROFILE

14	915.63 924.62	15	913.13 922.80	16	910.35 921.79	17	906.30 918.77	18	906.32 916.94	19	905.95 915.50	20	905.94 914.95	21	905.54 913.81	22	905.58 913.37	23	907.64 912.92	24	908.60 912.82	25	909.95 912.45
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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.

Joseph W. Neumann
1-11-02 LIC. NO. 22405

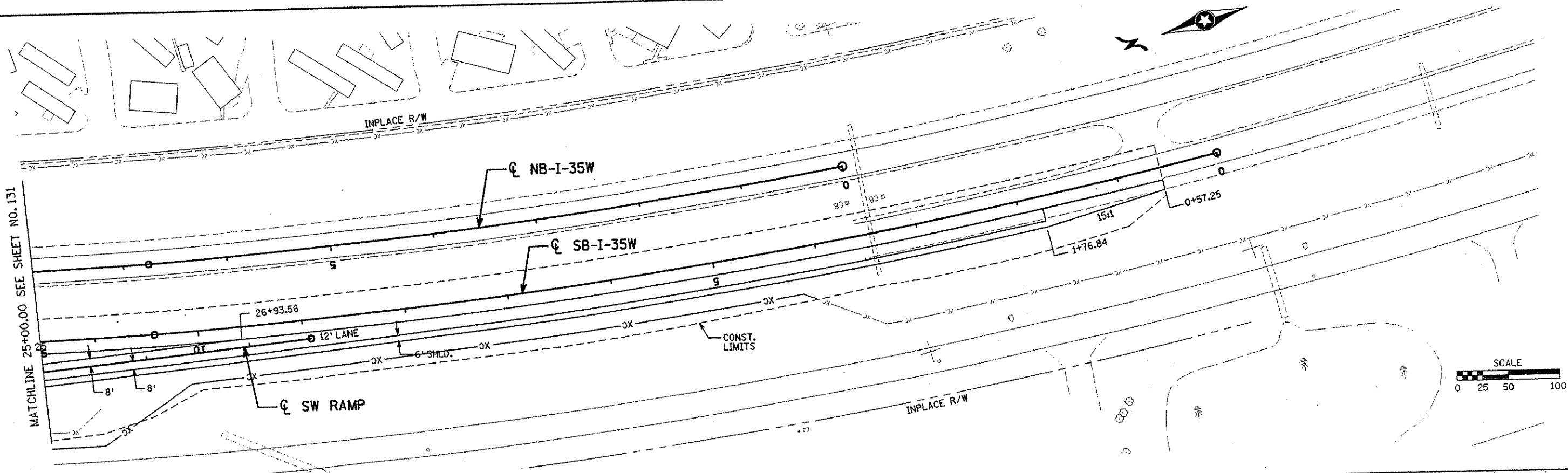
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 14+00 TO 25+00

SHEET
 160
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\pro\nc11749\par f4\roadway3\drawings\plan21.dgn 20 NOV 2001

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.

Joseph W. Warner
 DATE: 11-20-01 LIC. NO. 22405

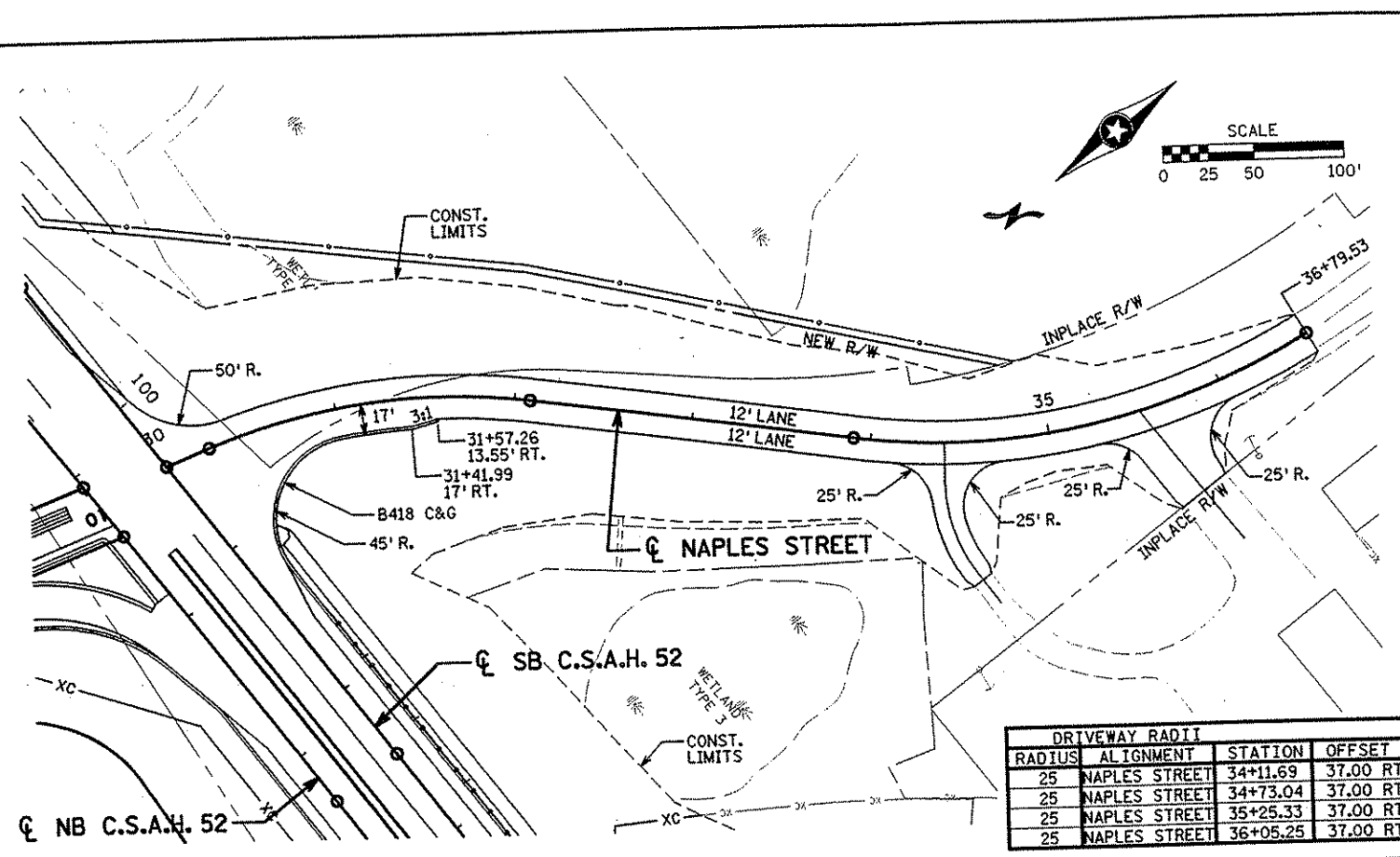
DRAWN BY: RRC DATE: 9-21-01
 DESIGN BY: RRC DATE: 9-20-01
 CHECKED BY: JMW DATE: 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

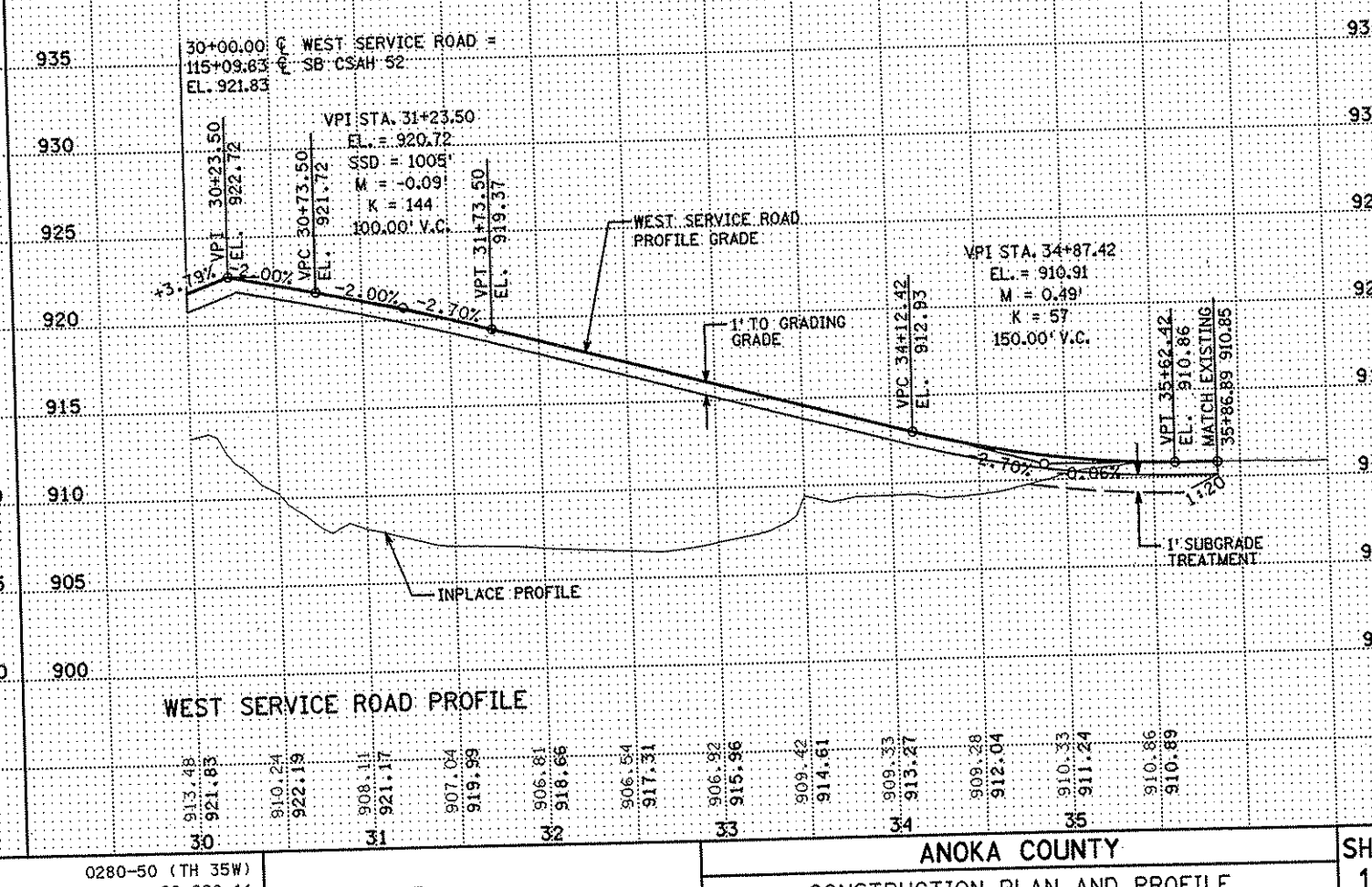
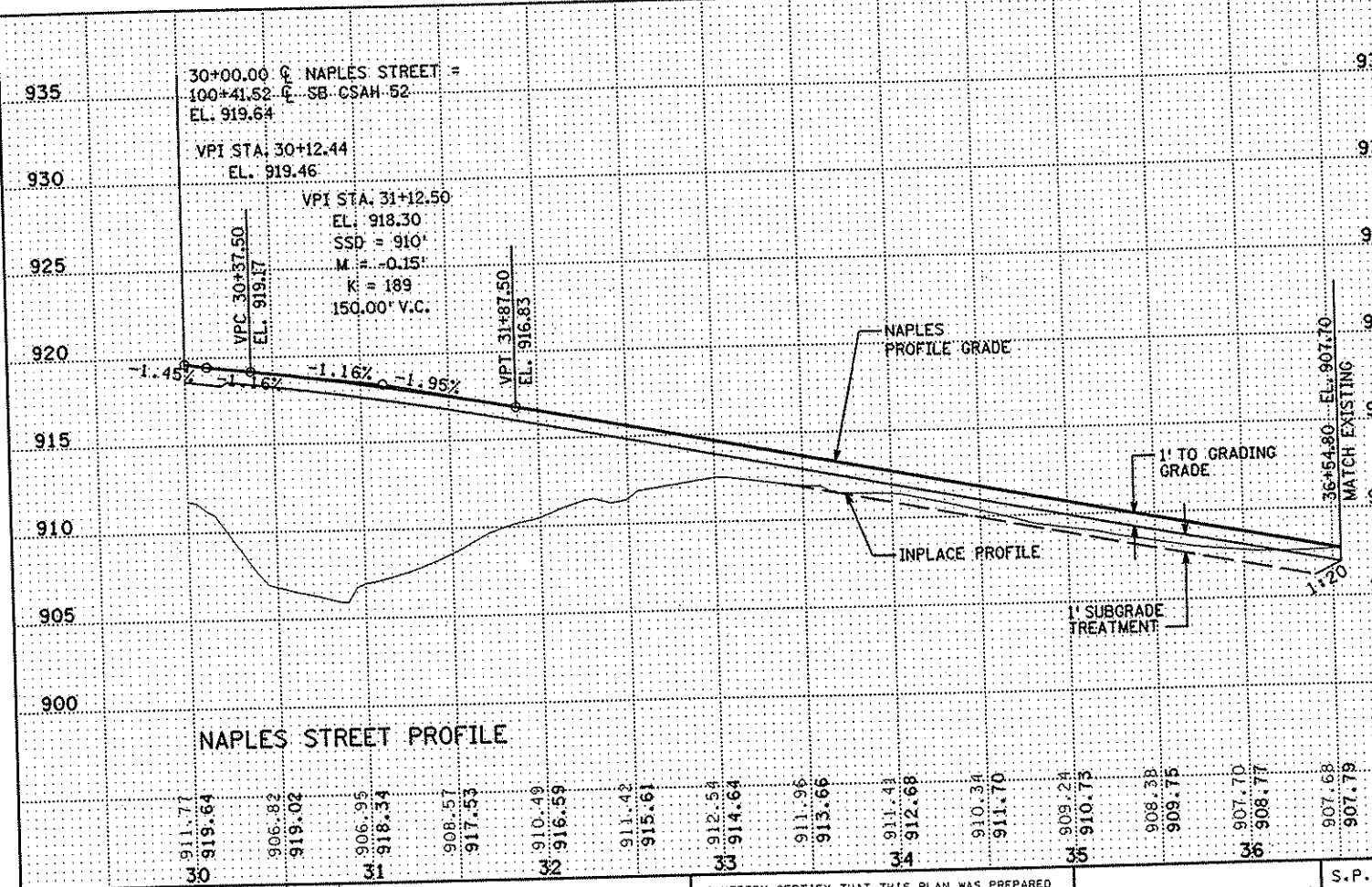
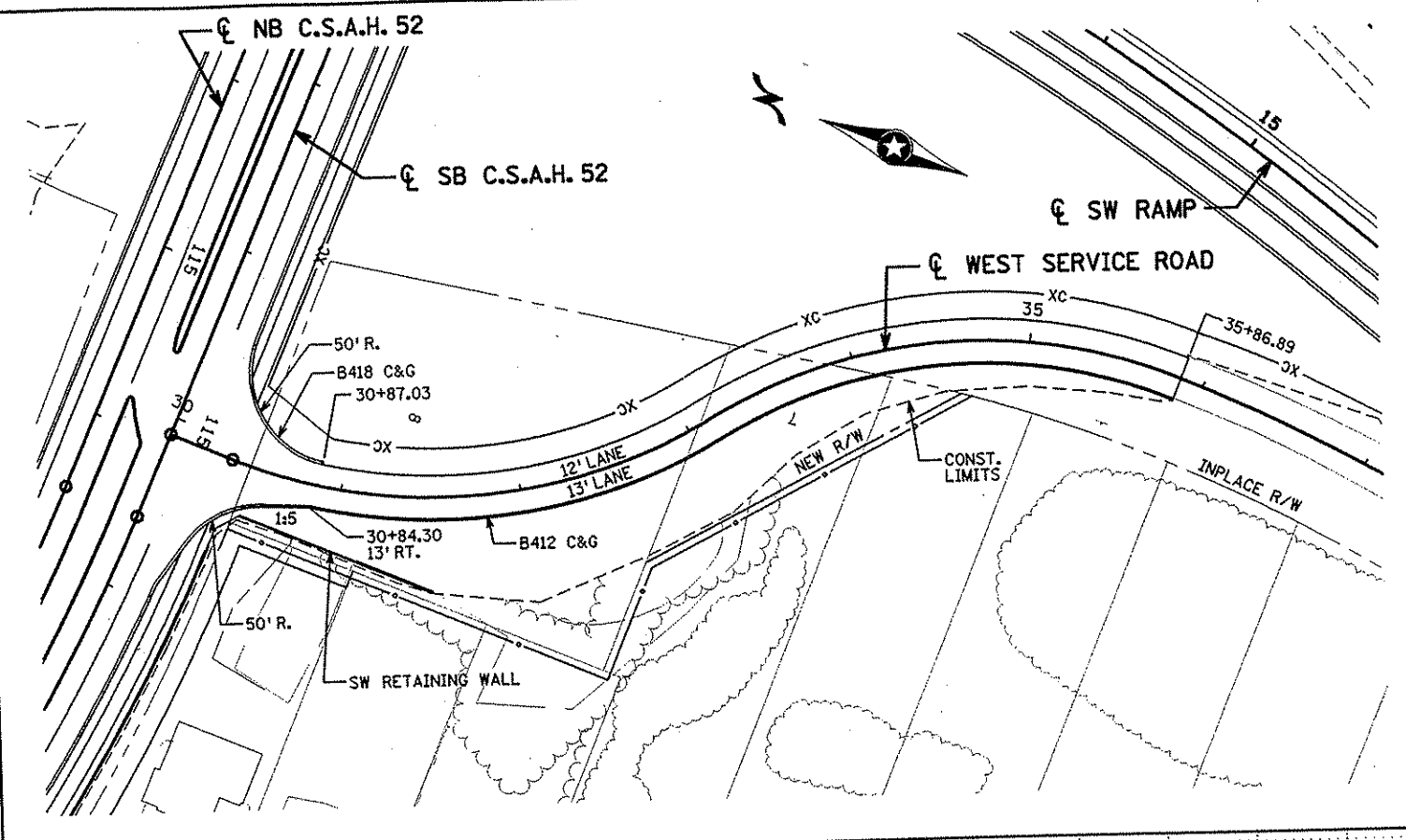
TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 25+00 TO 26+18.74

SHEET 161 OF 559



DRIVEWAY RADII			
RADIUS	ALIGNMENT	STATION	OFFSET
25	NAPLES STREET	34+11.69	37.00 RT
25	NAPLES STREET	34+73.04	37.00 RT
25	NAPLES STREET	35+25.33	37.00 RT
25	NAPLES STREET	36+05.25	37.00 RT



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\sft\proj\11749\par\4\roadway3\drawings\plan22.dgn 19 NOV 2001

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.

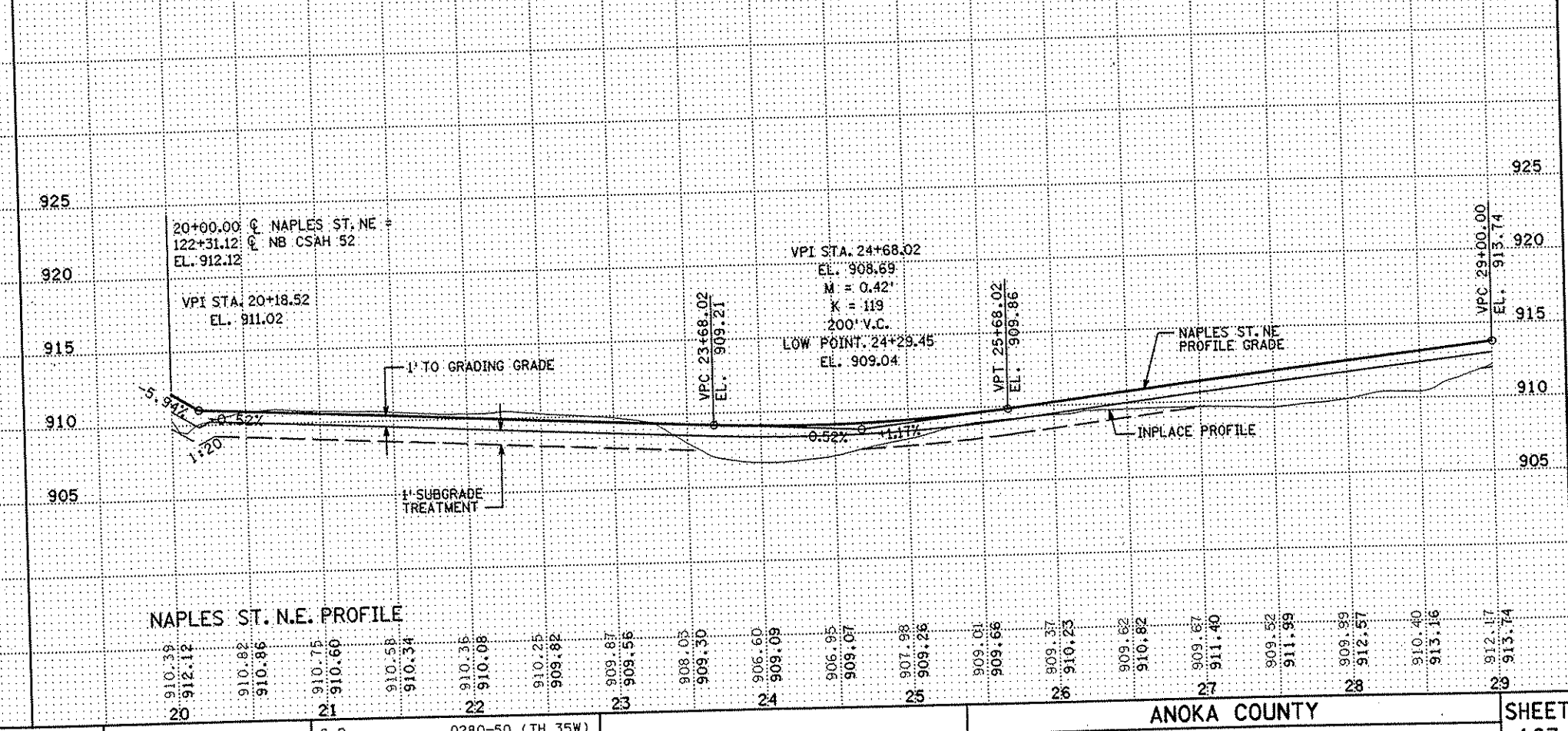
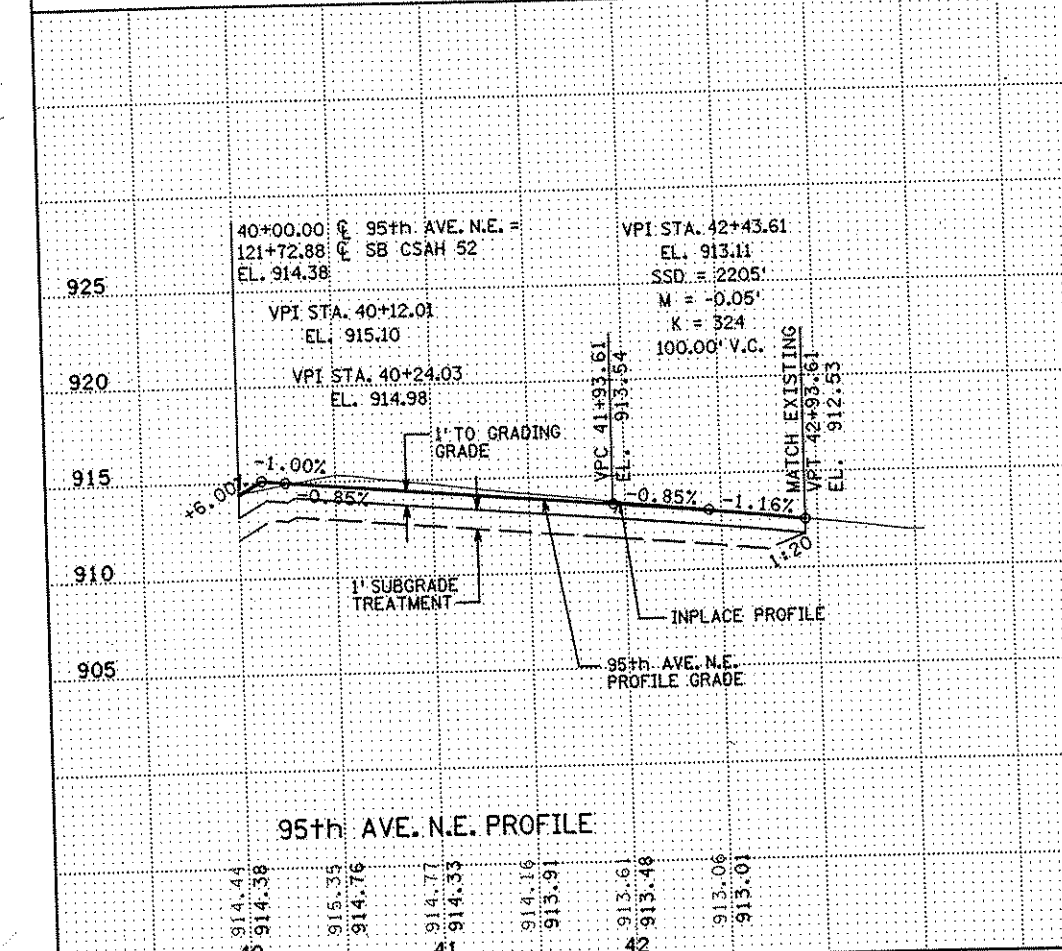
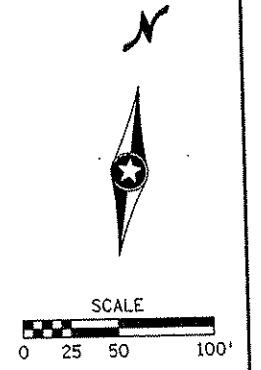
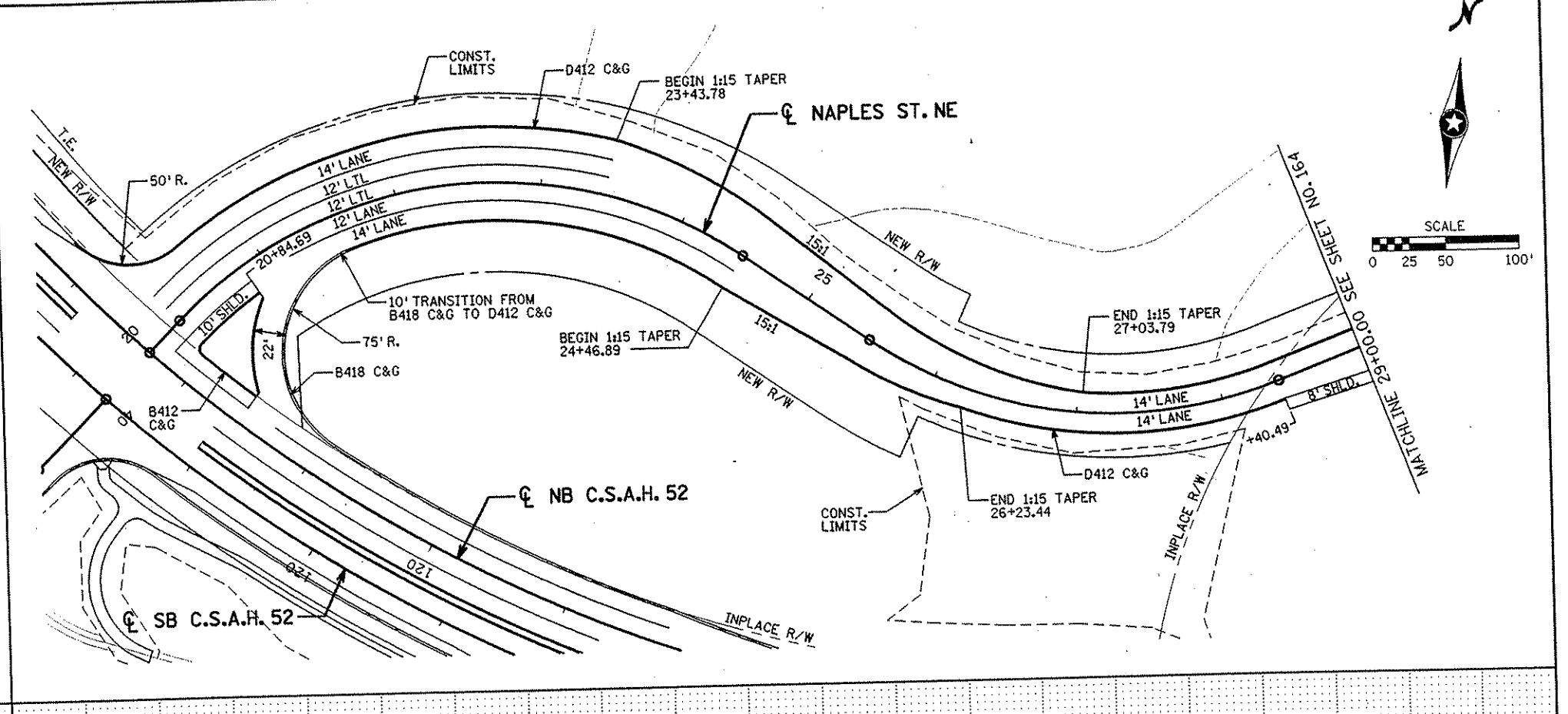
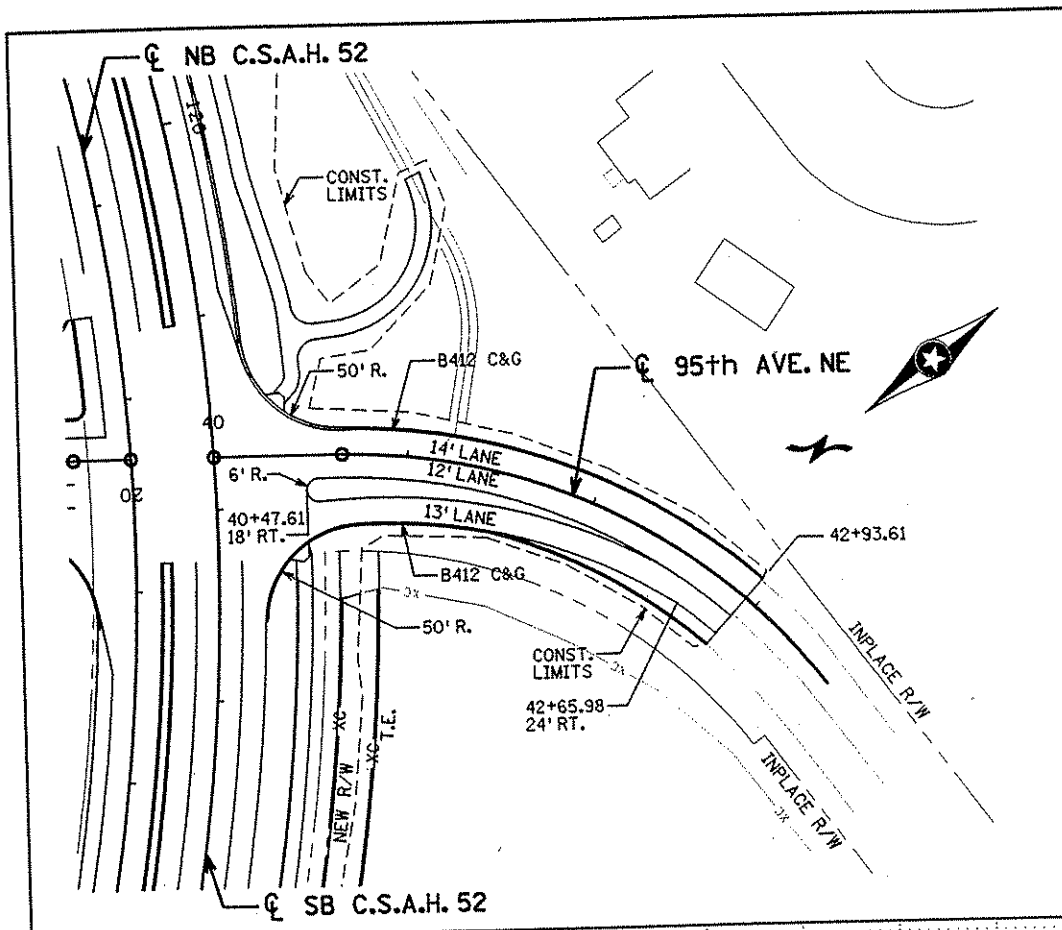
Joseph Weimer
DATE: 11-20-01 L.I.C. NO. 22405

DRAWN BY: RRC DATE: 9-21-01
 DESIGN BY: RRC DATE: 9-20-01
 CHECKED BY: JMW DATE: 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
 NAPLES STREET, STA. 30+00 TO 36+79.53
 WEST SERVICE ROAD, STA. 30+00 TO 35+86.89



NO	DATE	BY	CKD	APPR	REVISION
40					
41					
42					

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.

Joseph W. ...
 DATE 11-20-01 L.I.C. NO. 22405

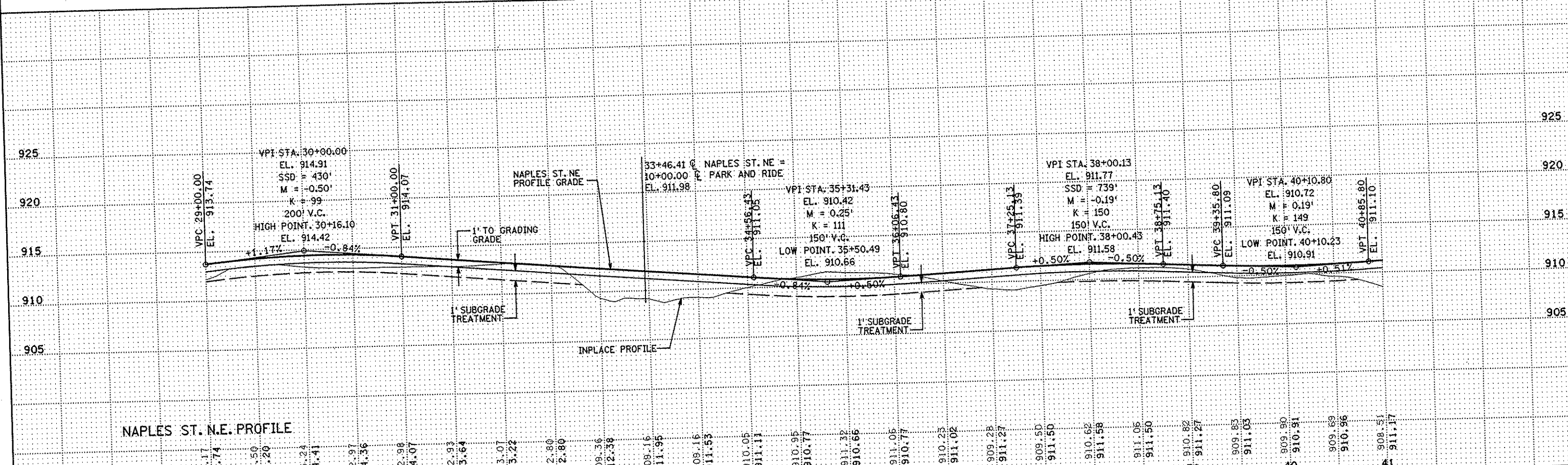
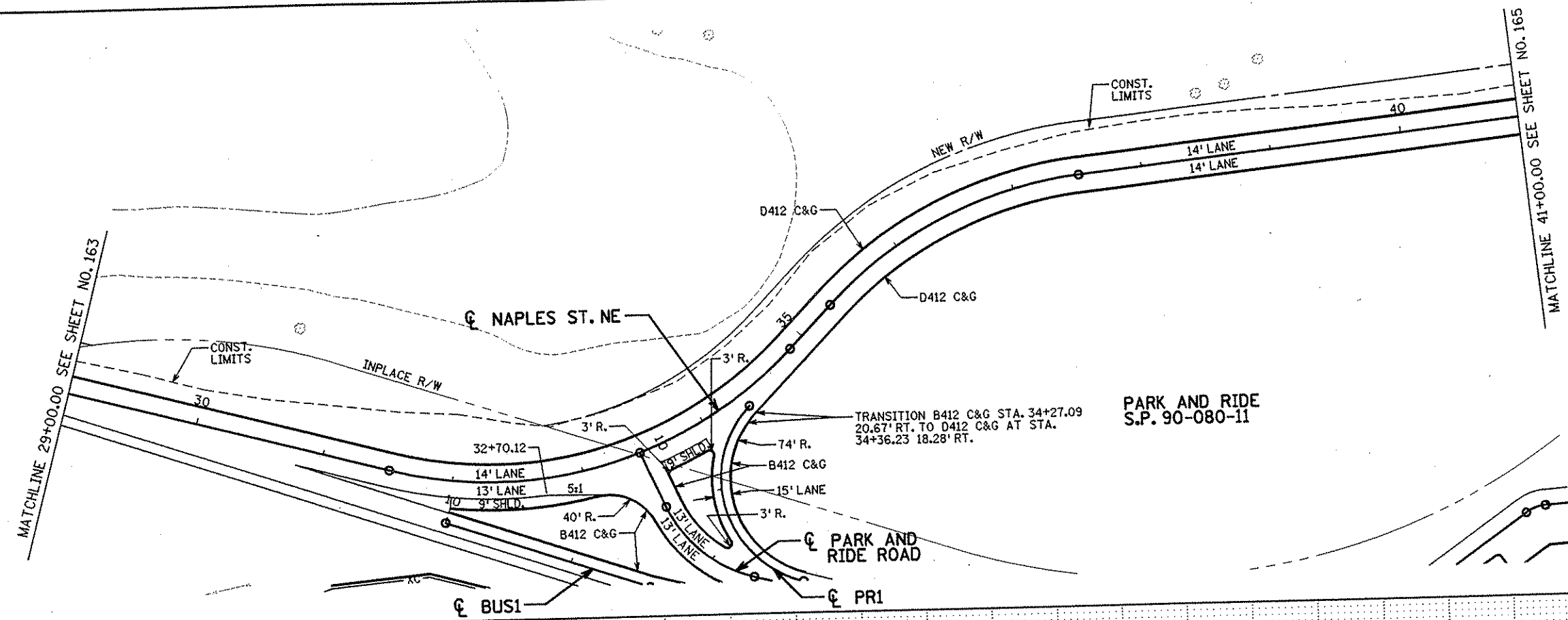
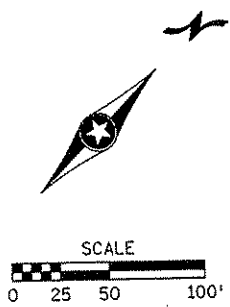
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLZ, K. INC., OLIVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

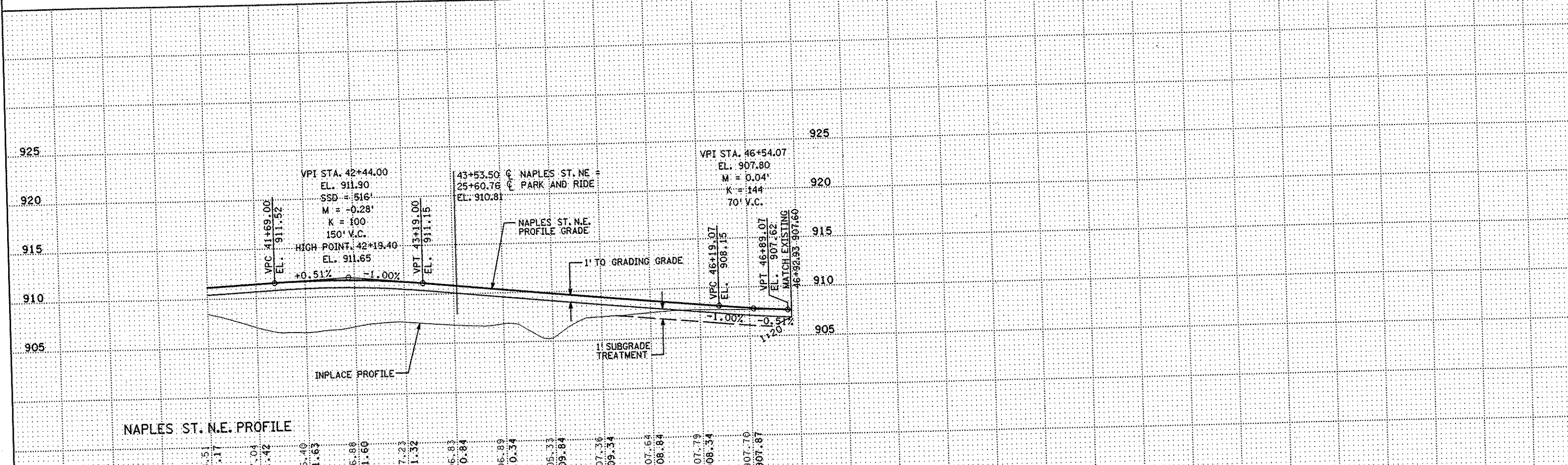
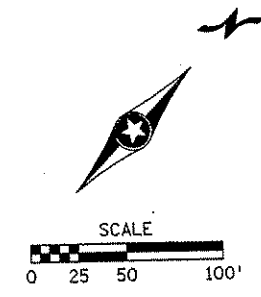
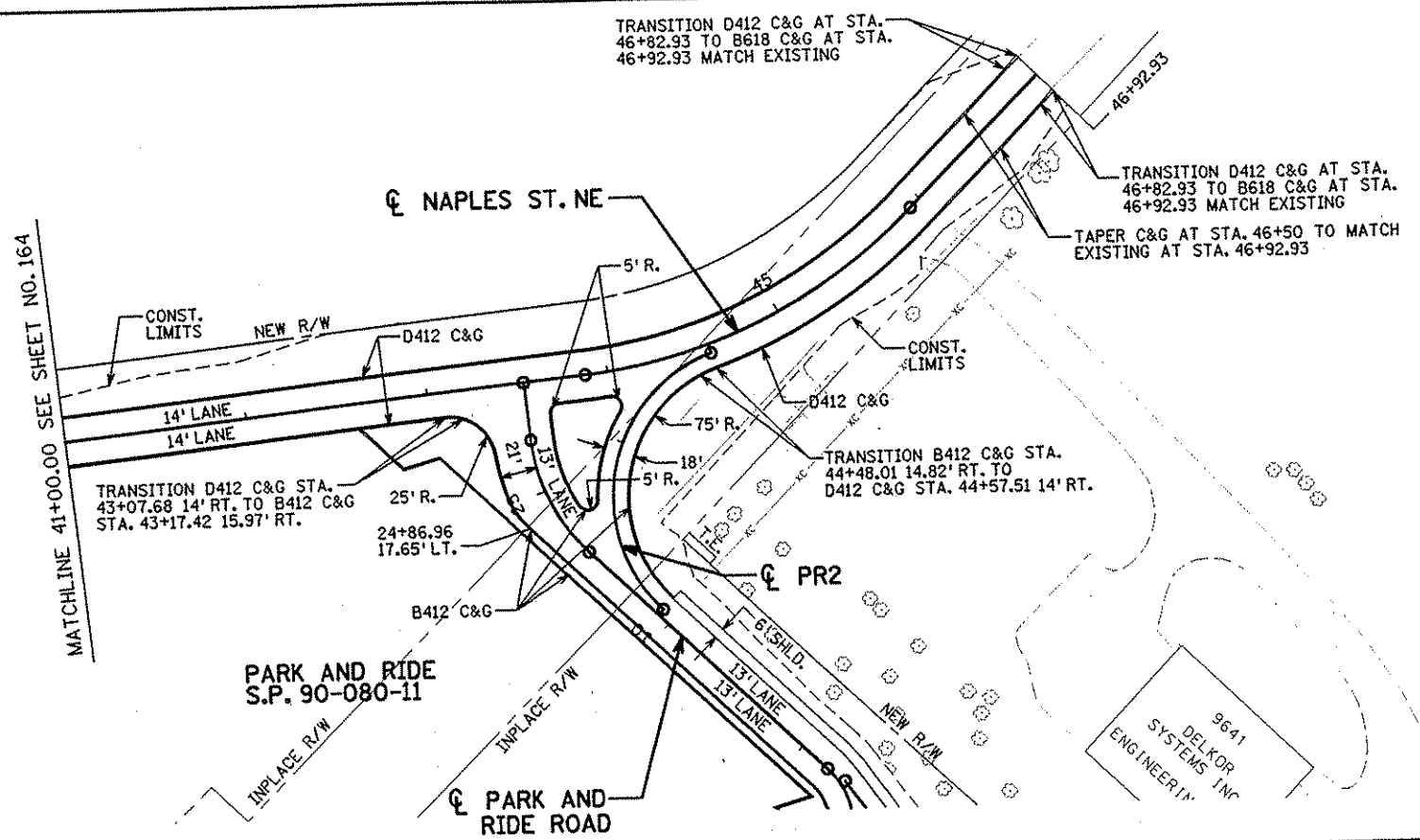
ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
 95th AVE. N.E. STA. 40+00 TO 42+93.61
 NAPLES ST. N.E. STA. 20+00 TO 29+00

SHEET 163 OF 559



NAPLES ST. N.E. PROFILE

NO		DATE	BY	CKD	APPR	REVISION	DATE	LIC. NO.	22405
							11-20-01		
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.									
DRAWN BY RRC DATE 9-21-01					S.P. 0280-50 (TH 35W)				
DESIGN BY RRC DATE 9-20-01					S.P. 90-080-11				
CHECKED BY JMW DATE 9-24-01					S.A.P. 02-652-02				
					S.A.P. 02-652-03				
					S.A.P. 02-652-04				
					S.A.P. 106-020-021, 106-020-022				
					TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA				
					ANOKA COUNTY CONSTRUCTION PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NAPLES ST. N.E. STA. 29+00 TO 41+00				
					SHEET 164 OF 559				



NAPLES ST. N.E. PROFILE

908.51	907.04	906.40	906.88	907.23	906.83	906.89	905.33	907.36	907.64	907.79	907.70
911.17	911.42	911.63	911.60	911.32	910.84	910.34	909.84	909.34	908.84	908.34	907.87
41		42		43		44		45		46	

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.

Joseph W. [Signature]
DATE 28-20-01 LIC. NO. 22405

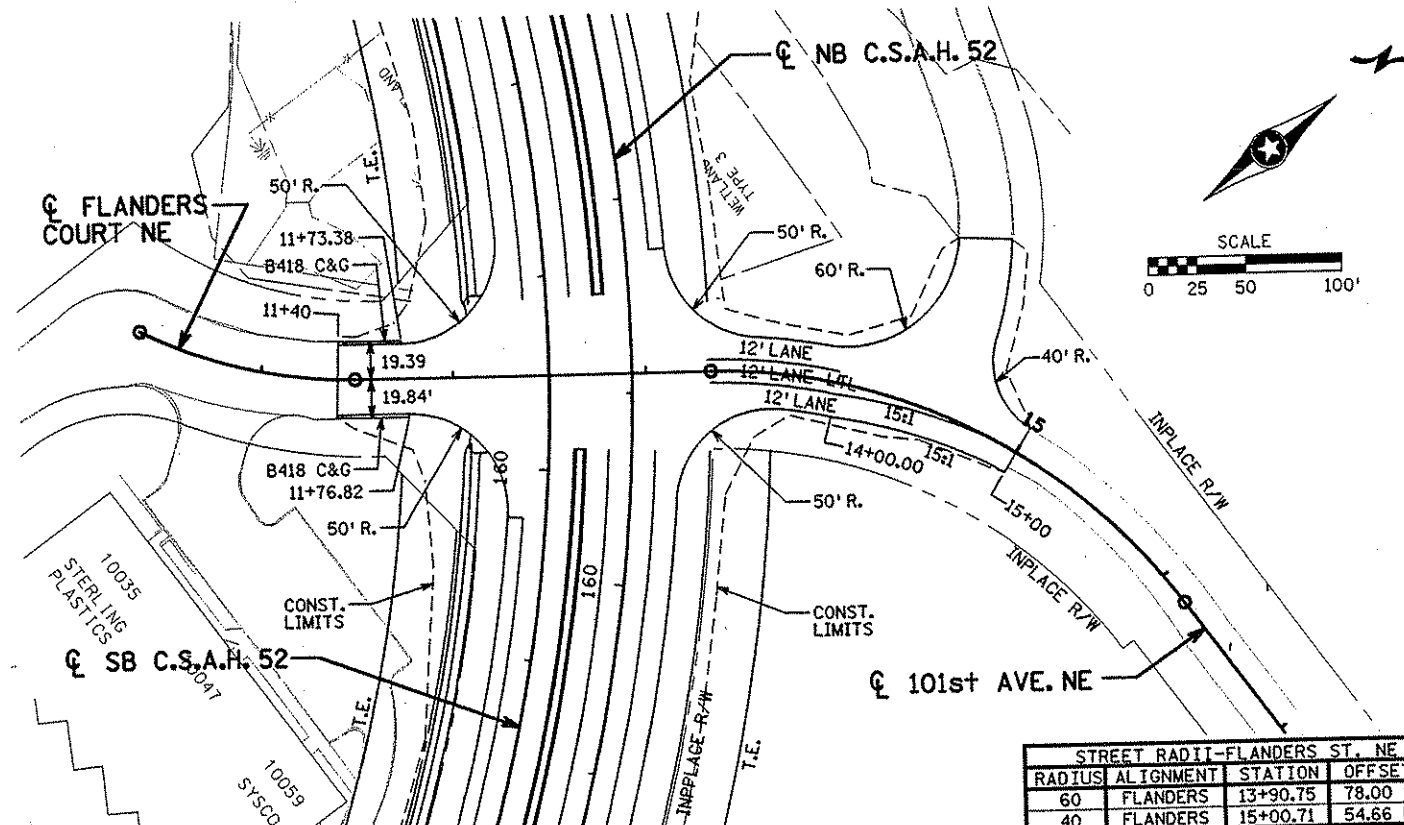
DRAWN BY RRC DATE 9-21-01
DESIGN BY RRC DATE 9-20-01
CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

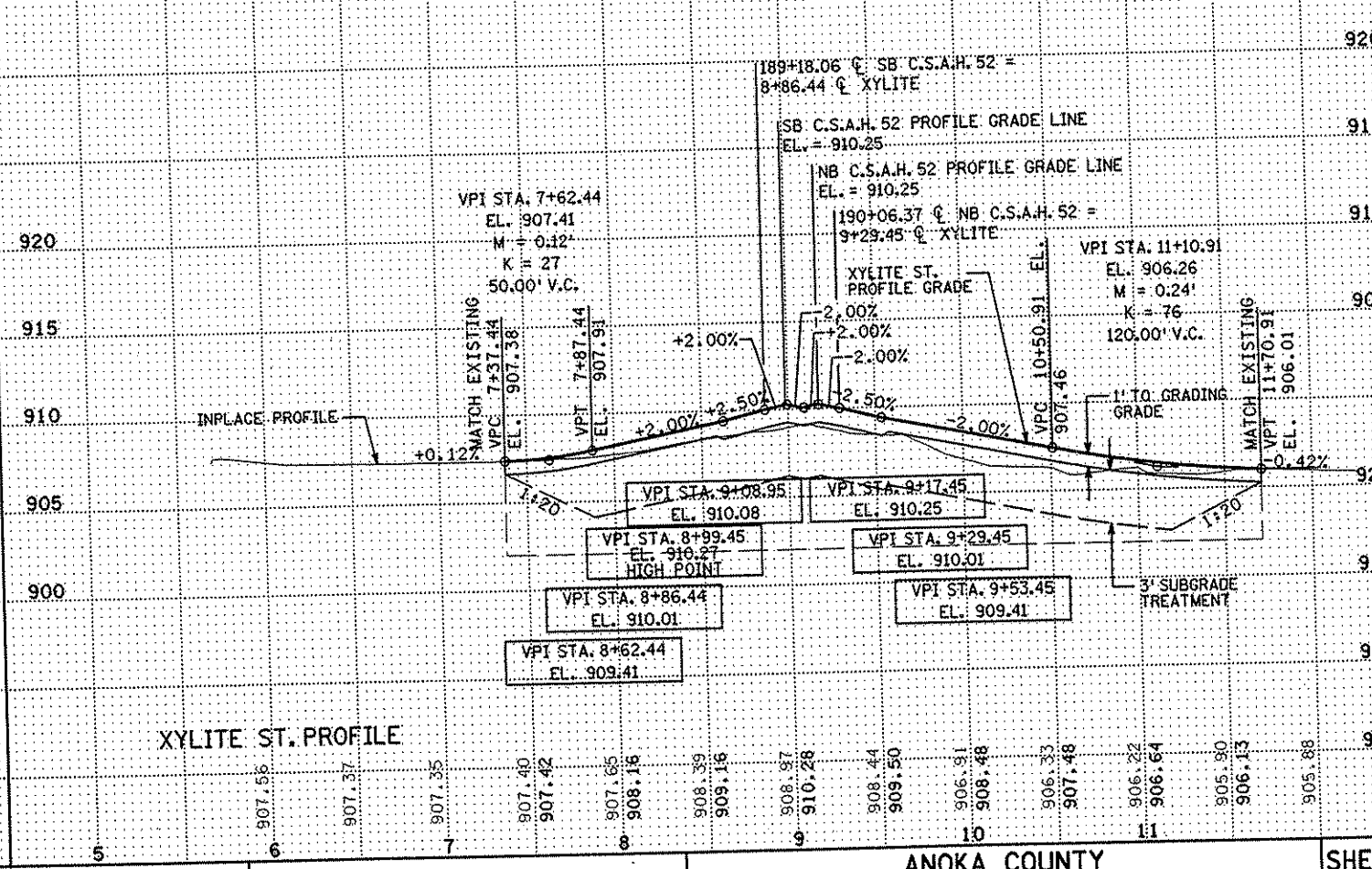
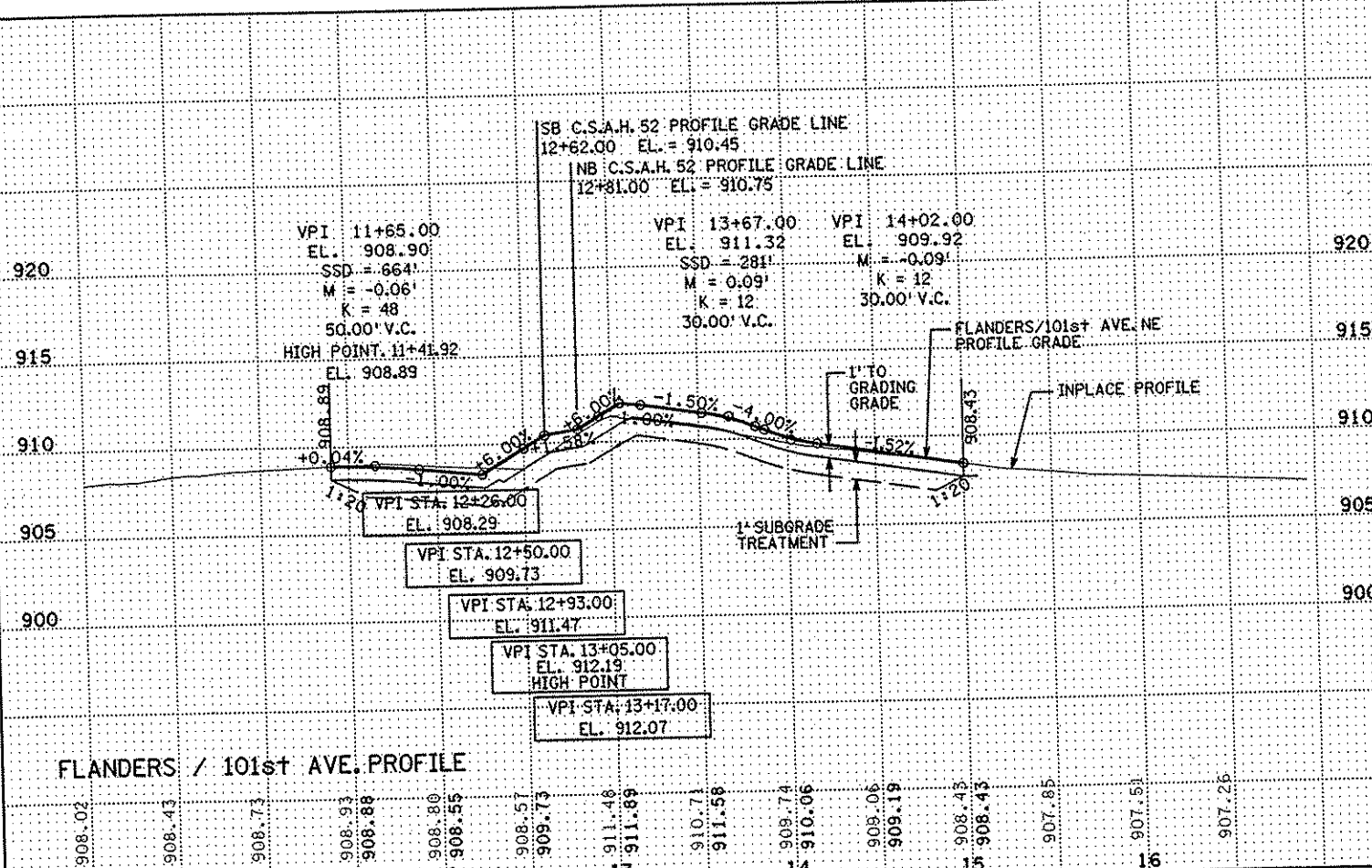
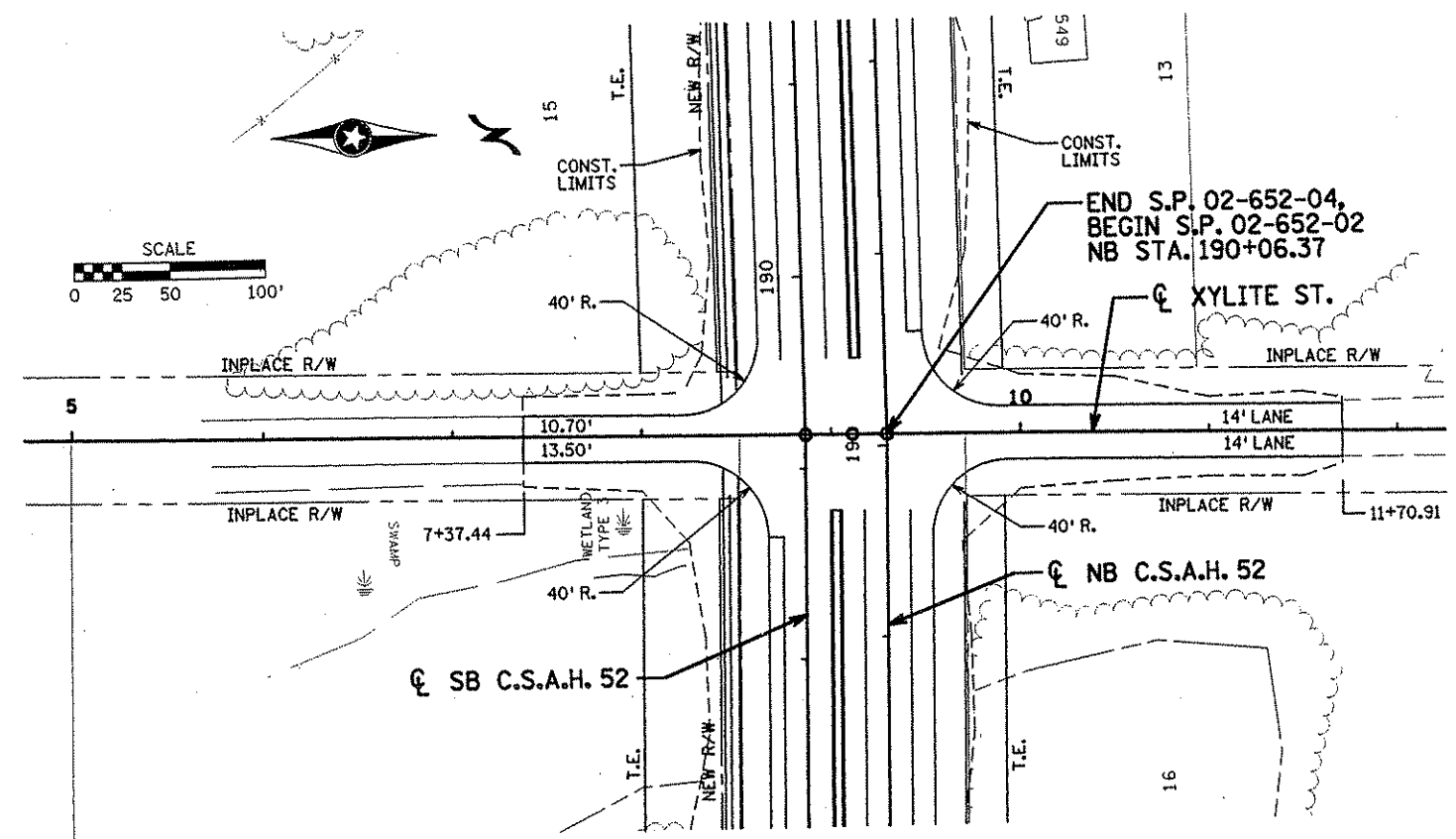
TKDA
TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NAPLES ST. N.E.

SHEET 165 OF 559



STREET RADII-FLANDERS ST. NE			
RADIUS	ALIGNMENT	STATION	OFFSET
60	FLANDERS	13+90.75	78.00 LT
40	FLANDERS	15+00.71	54.66 LT



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.

James W. ...
11-20-01 LIC. NO. 22405

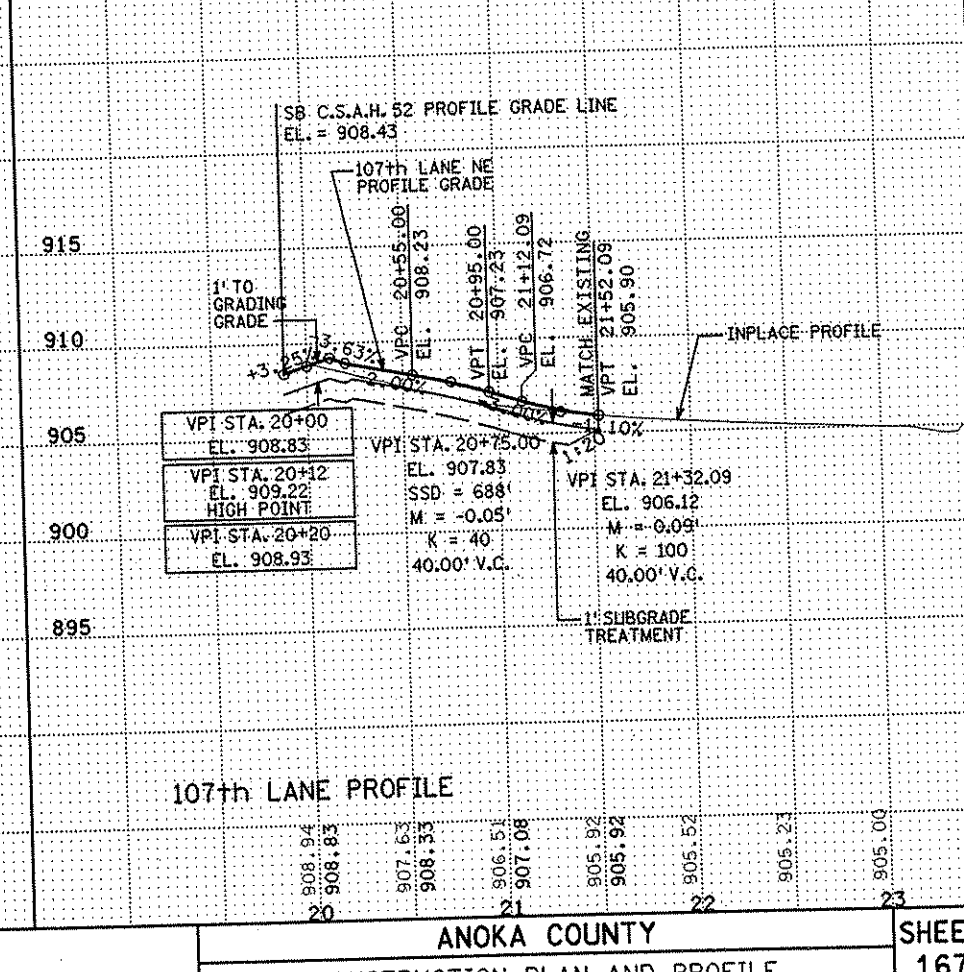
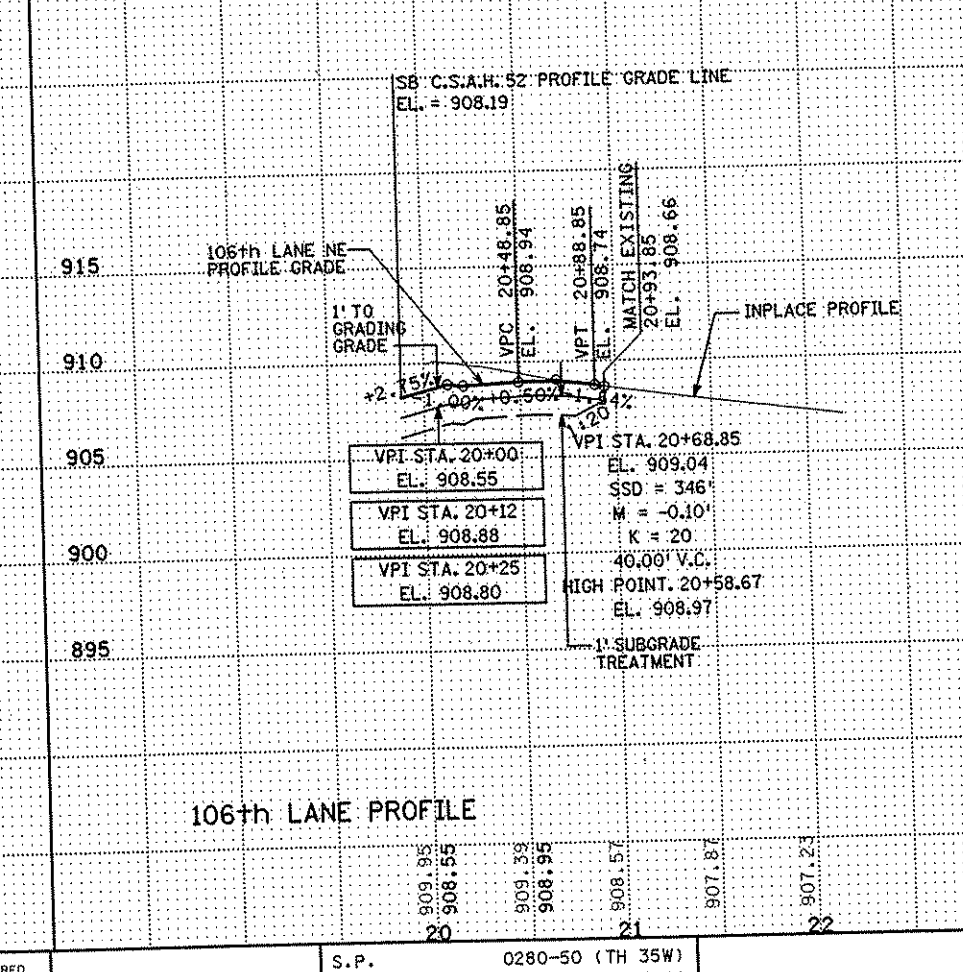
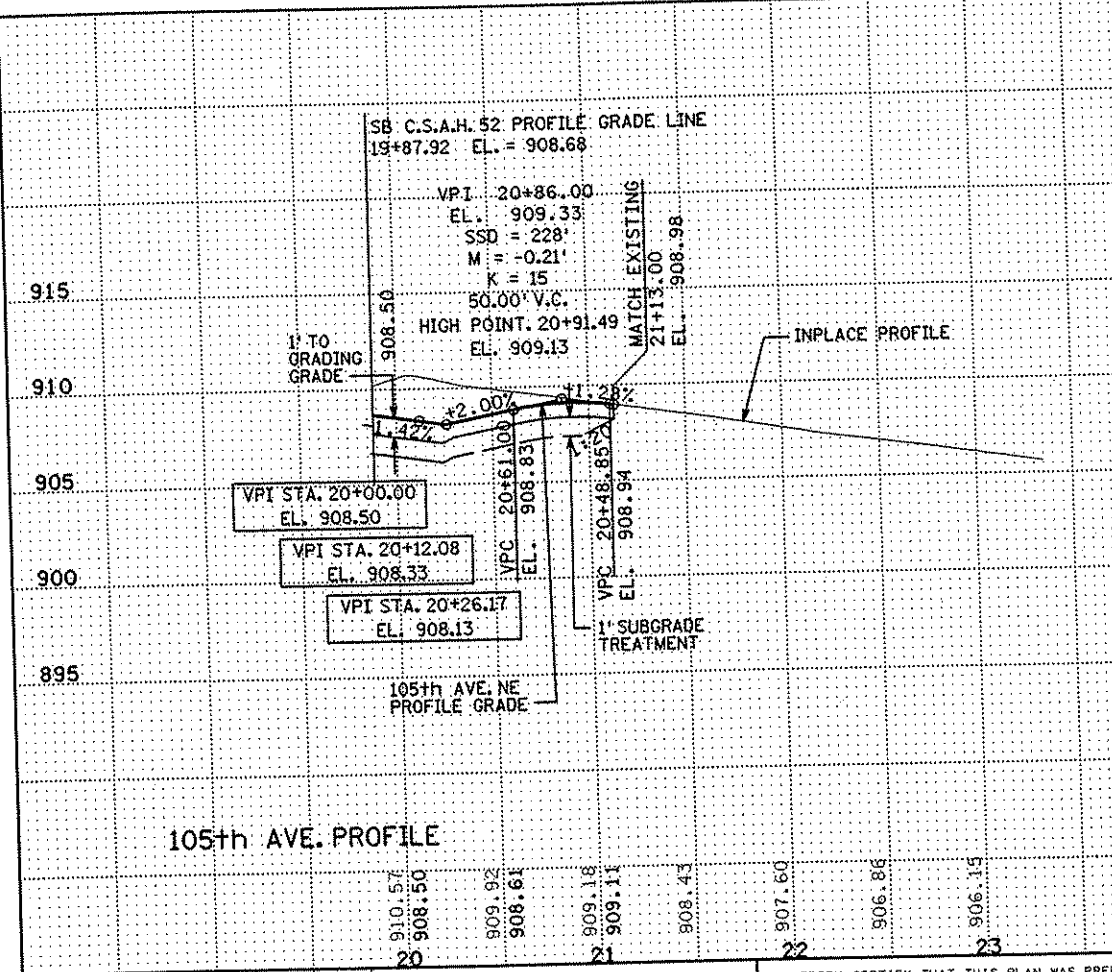
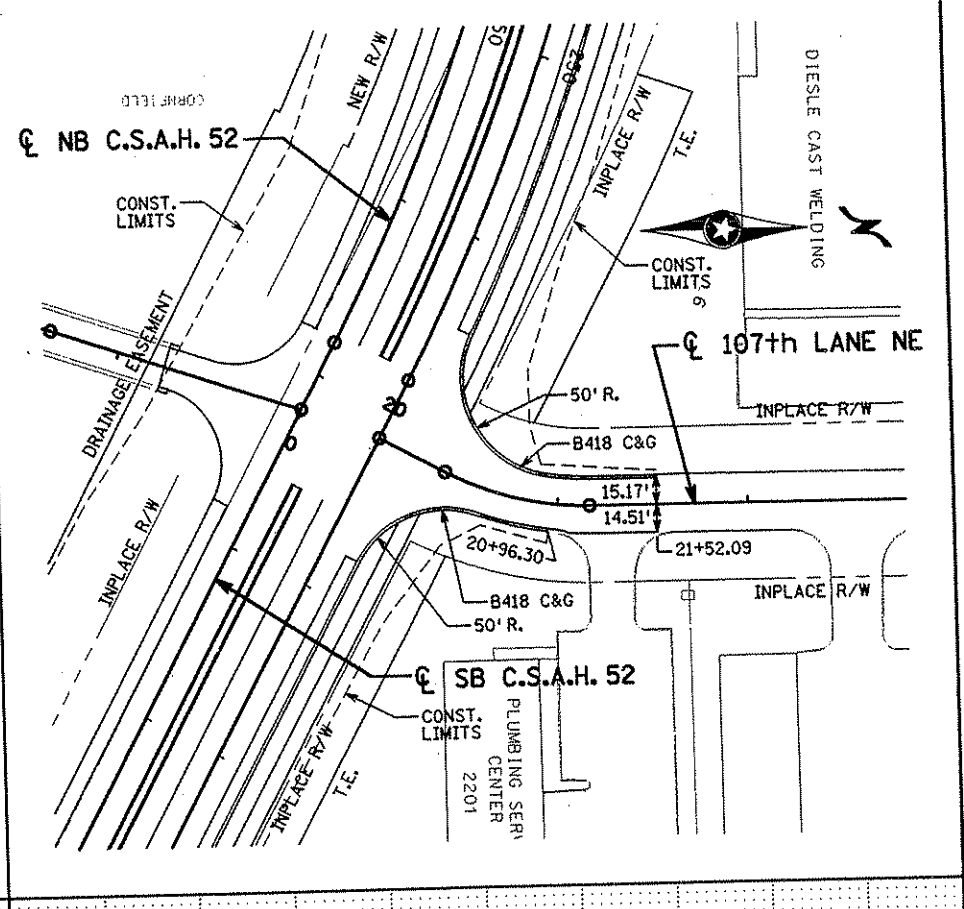
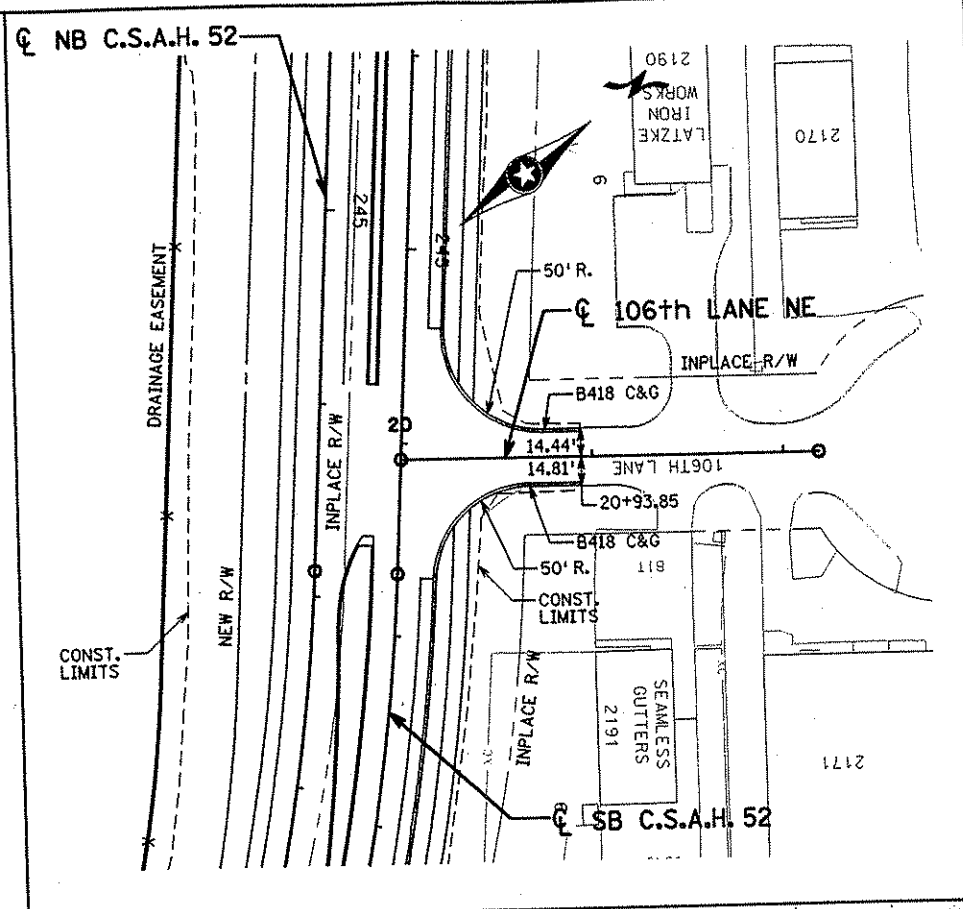
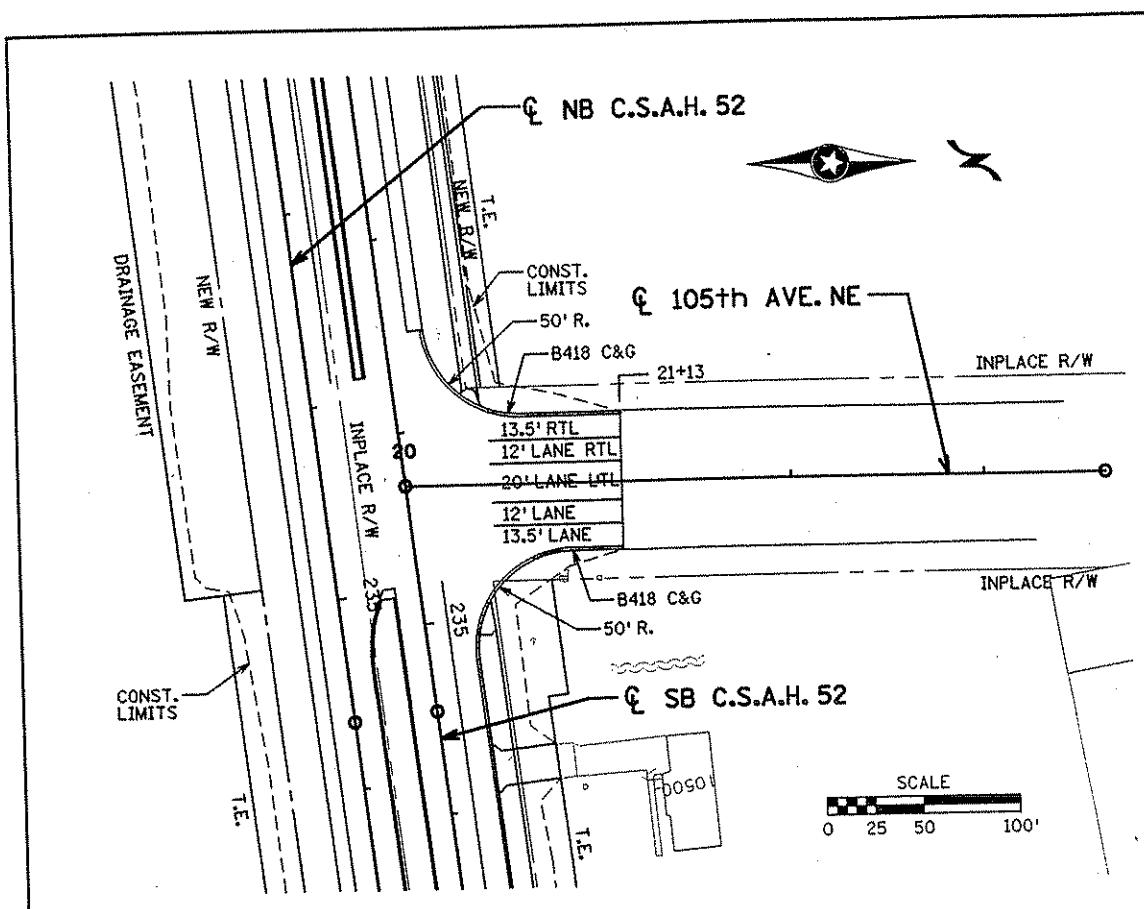
DRAWN BY RRC DATE 9-21-01
DESIGN BY RRC DATE 9-20-01
CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
ENGINEERS-ARCHITECTS-PLANNERS
TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
FLANDERS/101st AVE. AND XYLITE ST.

SHEET 166 OF 559



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.

Joseph Neary
DATE 11-20-01 L.I.C. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.A.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

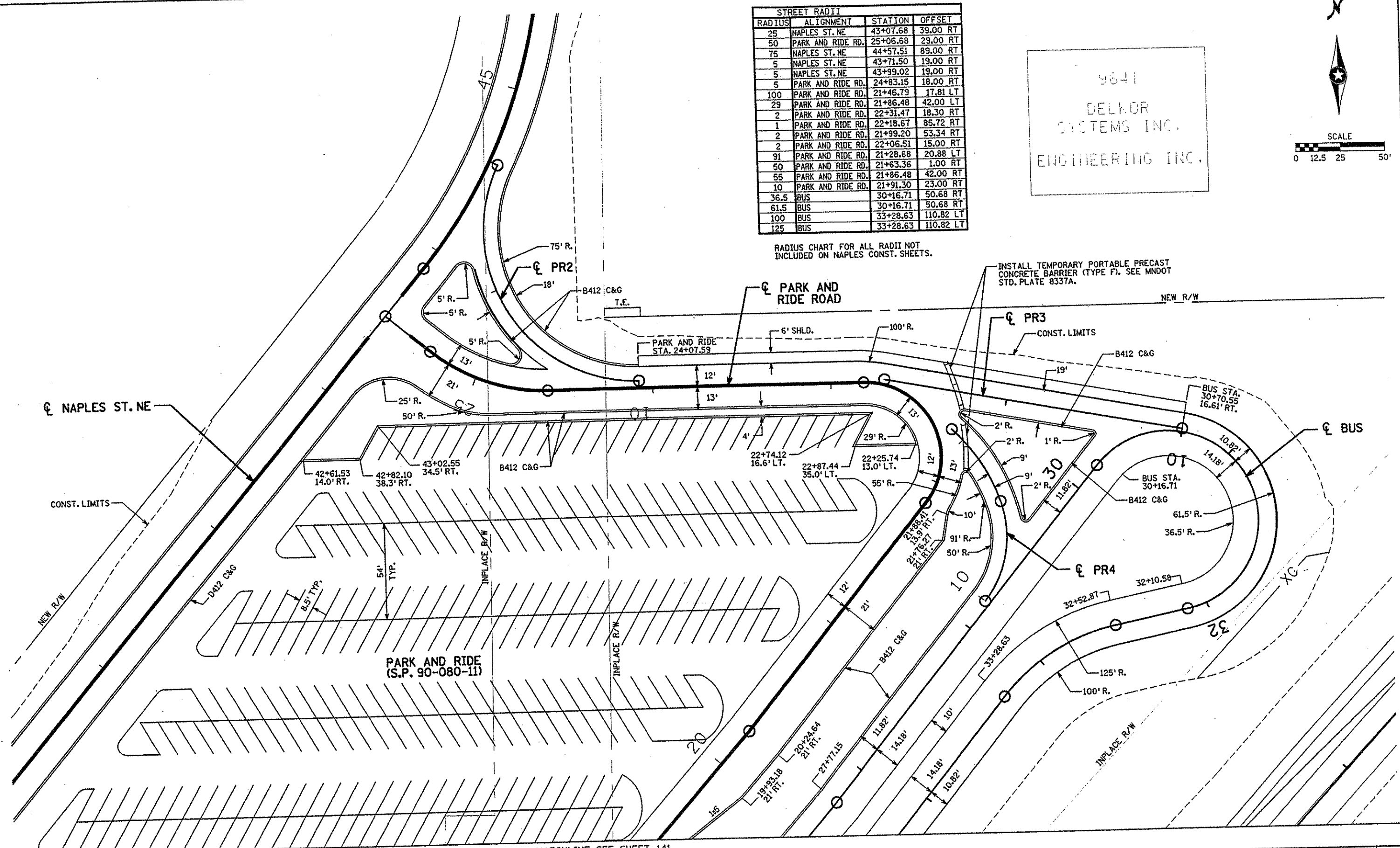
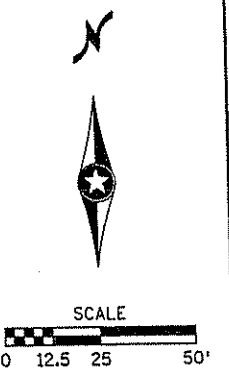
ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 105th AVE., 106th LANE AND 107th LANE

SHEET
 167
 OF
 559

RADIUS	ALIGNMENT	STATION	OFFSET
25	NAPLES ST. NE	43+07.68	39.00 RT
50	PARK AND RIDE RD.	25+06.68	29.00 RT
75	NAPLES ST. NE	44+57.51	89.00 RT
5	NAPLES ST. NE	43+71.50	19.00 RT
5	NAPLES ST. NE	43+99.02	19.00 RT
5	PARK AND RIDE RD.	24+83.15	18.00 RT
100	PARK AND RIDE RD.	21+46.79	17.81 LT
29	PARK AND RIDE RD.	21+86.48	42.00 LT
2	PARK AND RIDE RD.	22+31.47	18.30 RT
1	PARK AND RIDE RD.	22+18.67	85.72 RT
2	PARK AND RIDE RD.	21+99.20	53.34 RT
2	PARK AND RIDE RD.	22+06.51	15.00 RT
91	PARK AND RIDE RD.	21+28.68	20.88 LT
50	PARK AND RIDE RD.	21+63.36	1.00 RT
55	PARK AND RIDE RD.	21+86.48	42.00 RT
10	PARK AND RIDE RD.	21+91.30	23.00 RT
36.5	BUS	30+16.71	50.68 RT
61.5	BUS	30+16.71	50.68 RT
100	BUS	33+28.63	110.82 LT
125	BUS	33+28.63	110.82 LT

RADIUS CHART FOR ALL RADII NOT INCLUDED ON NAPLES CONST. SHEETS.

9841
DELMOR
SYSTEMS INC.
ENGINEERING INC.



MATCHLINE - GRADING PLAN 2

MATCHLINE SEE SHEET 141

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.

Joseph Weaver
DATE: 11-20-01 LIC. NO. 22405

DRAWN BY: RRC DATE: 9-21-01
DESIGN BY: RRC DATE: 9-20-01
CHECKED BY: JMW DATE: 9-24-01

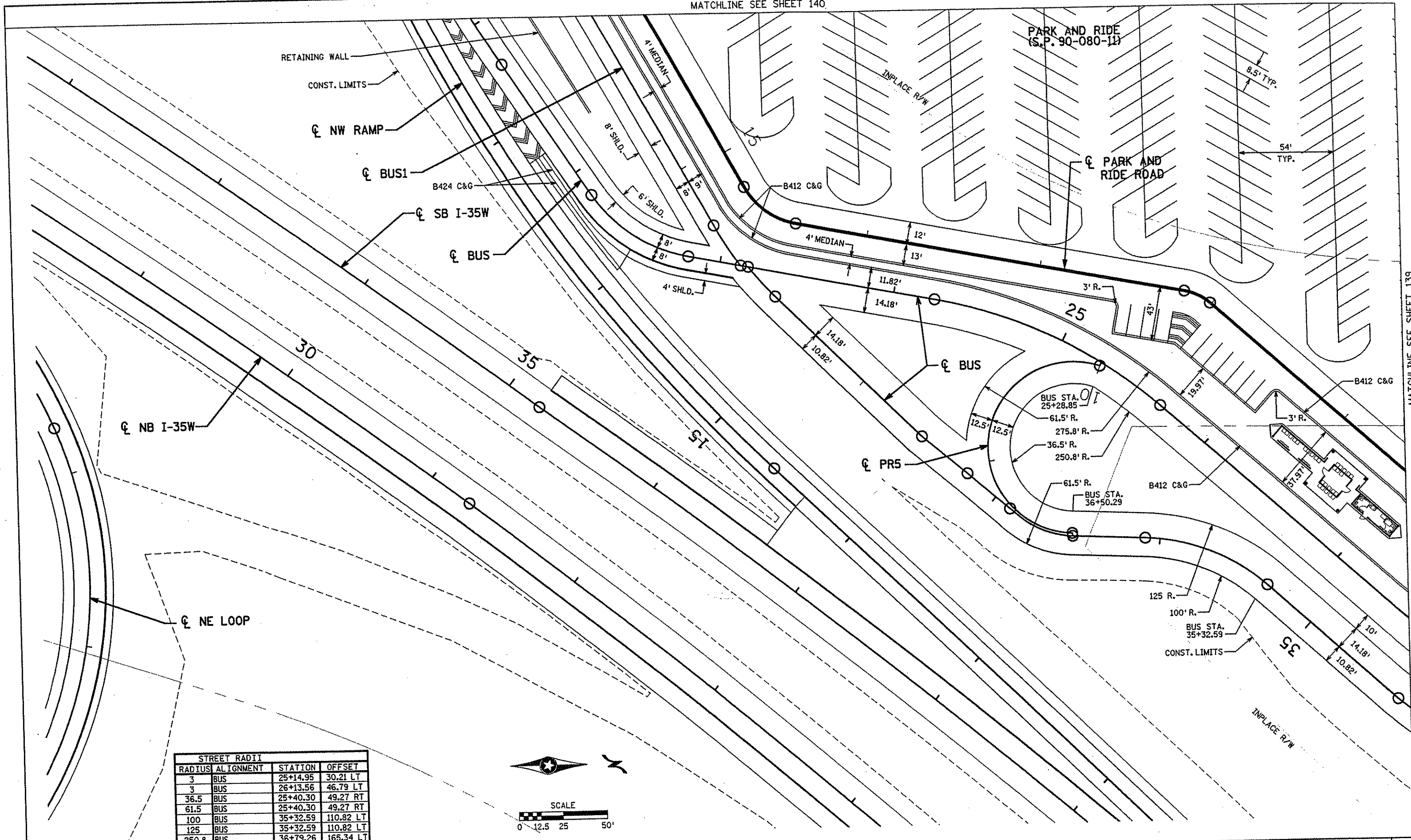
S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
ENGINEERS-ARCHITECTS-PLANNERS
TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

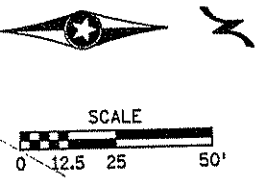
ANOKA COUNTY
PARK AND RIDE CONSTRUCTION PLAN
C.S.A.H. 52 RECONSTRUCTION
1 OF 3

SHEET 168 OF 559

MATCHLINE SEE SHEET 140



STREET RADII			
RADIUS	ALIGNMENT	STATION	OFFSET
3	BUS	25+14.95	30.21 LT
3	BUS	26+13.56	46.79 LT
36.5	BUS	25+40.30	49.27 RT
61.5	BUS	25+40.30	49.27 RT
100	BUS	35+32.59	110.82 LT
125	BUS	35+32.59	110.82 LT
250.8	BUS	36+79.26	165.34 LT
275.8	BUS	36+79.26	165.34 LT



NO	DATE	BY	CHKD	APPR	REVISION

DATE: 11-20-01 L.I.C. NO. 22405

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.

Jerome Weira
DATE: 11-20-01 L.I.C. NO. 22405

DRAWN BY: RRC DATE: 9-21-01
 DESIGN BY: RRC DATE: 9-20-01
 CHECKED BY: JMW DATE: 9-24-01

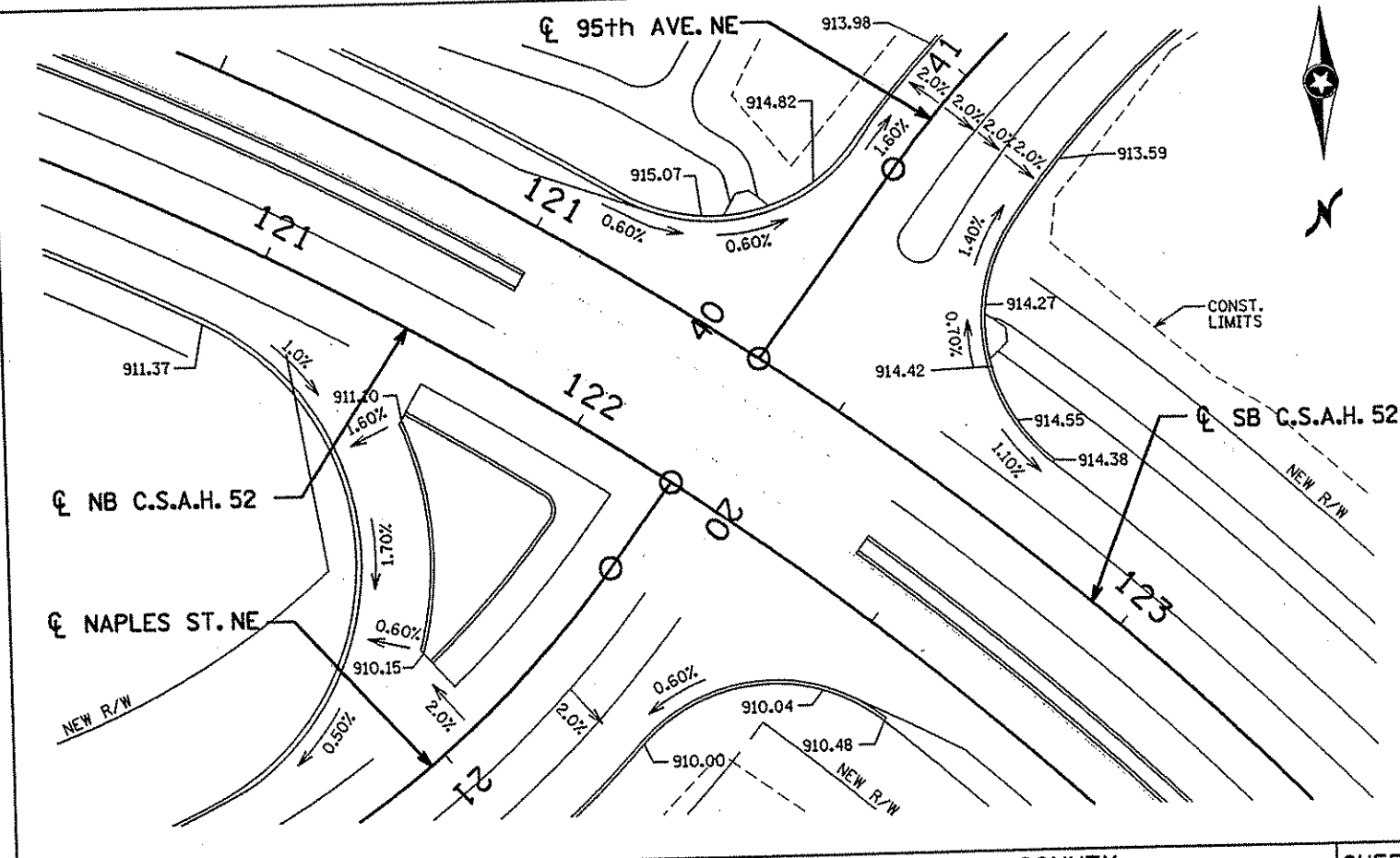
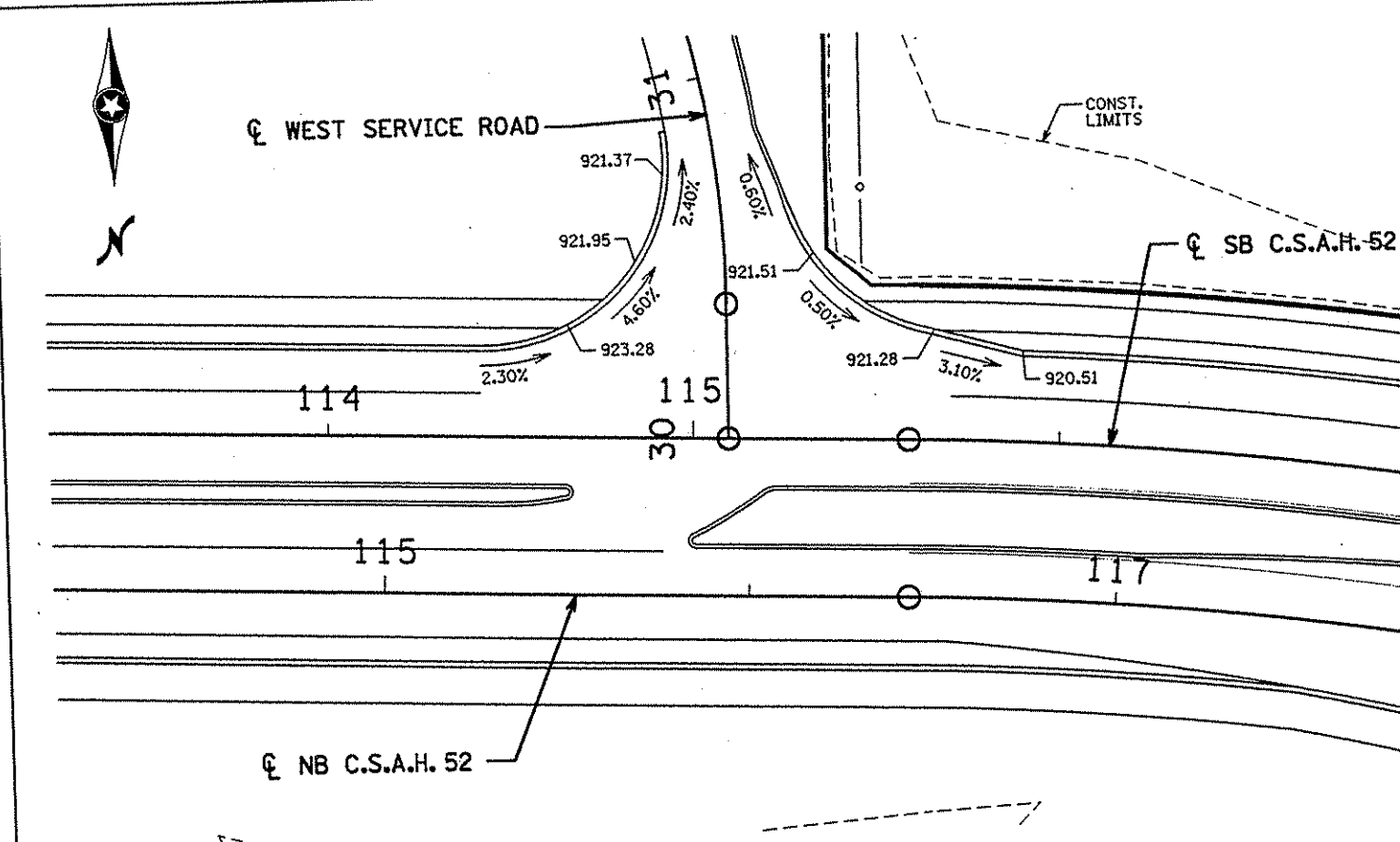
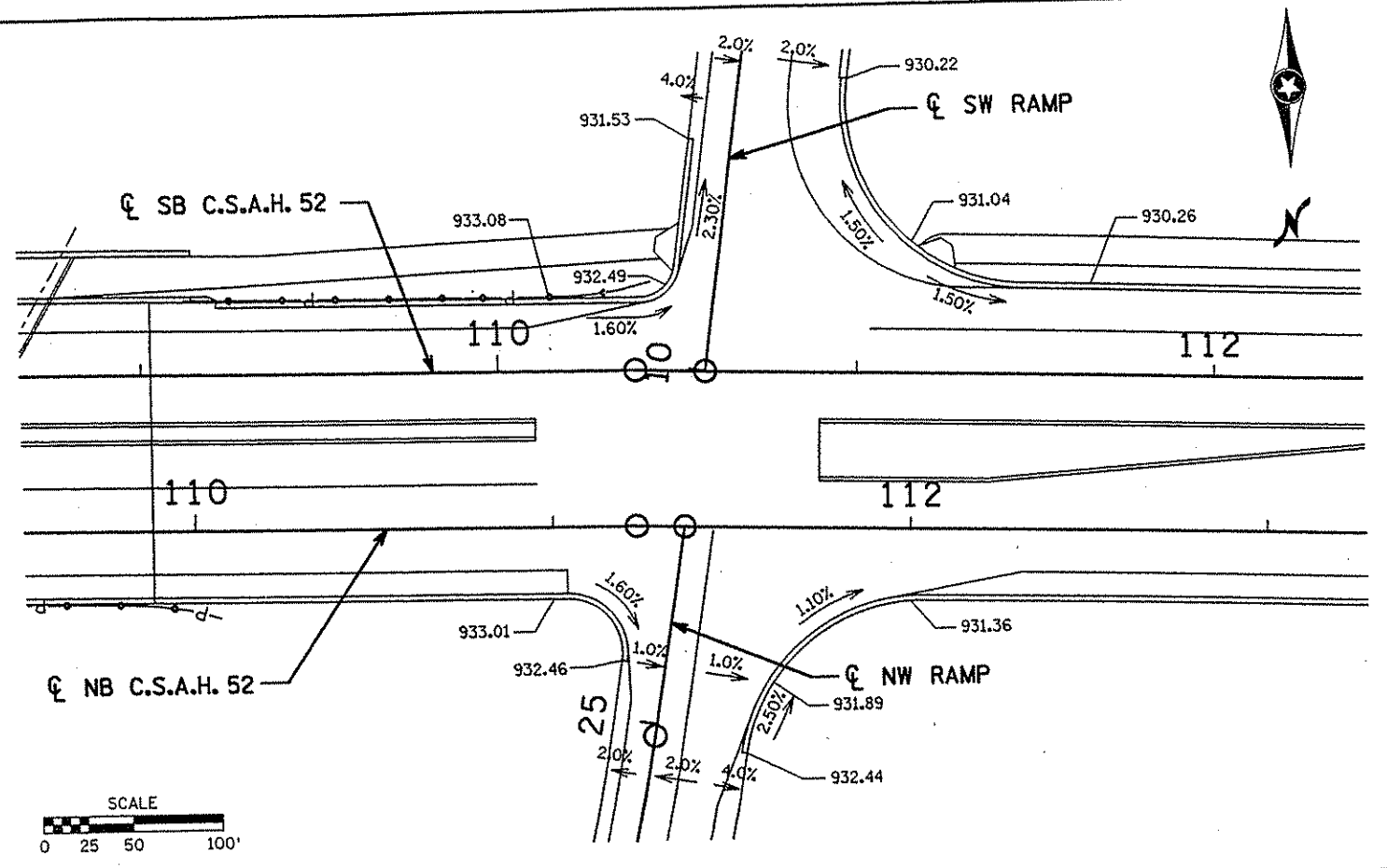
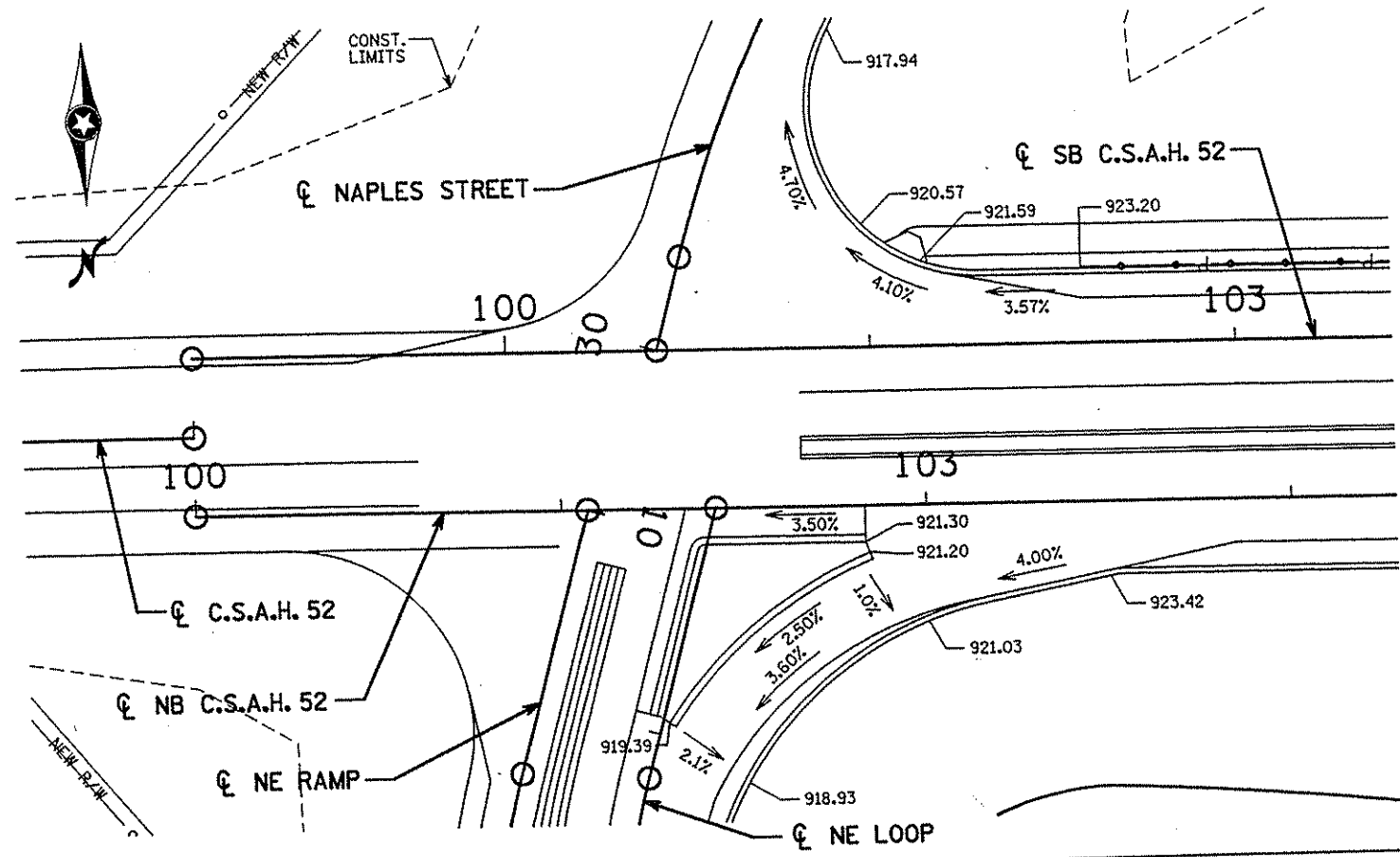
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 PARK AND RIDE CONSTRUCTION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 3 OF 3

SHEET 170 OF 559

MATCHLINE SEE SHEET 139



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.

Joseph Weaver
 DATE 1-11-02 LIC. NO. 22405

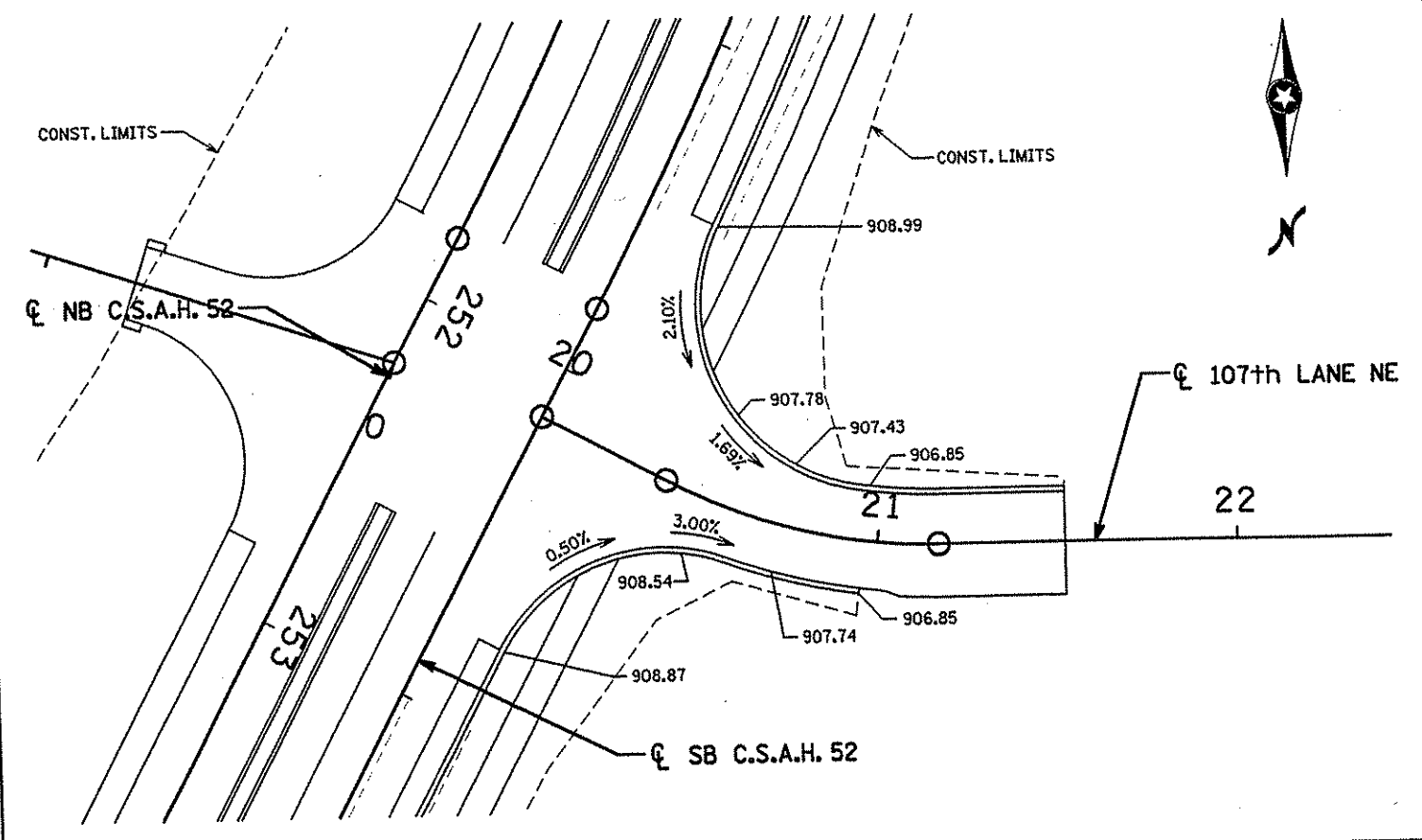
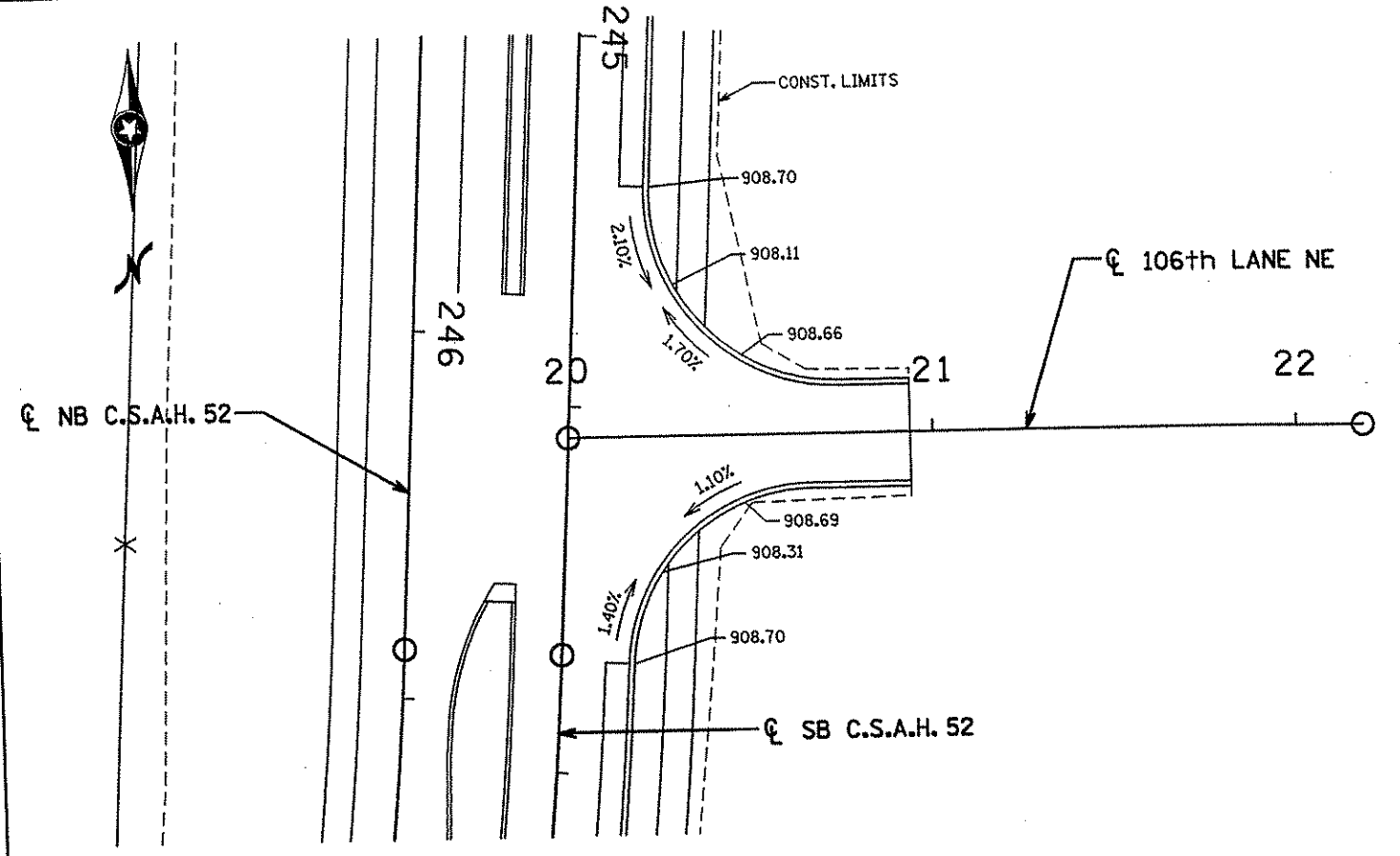
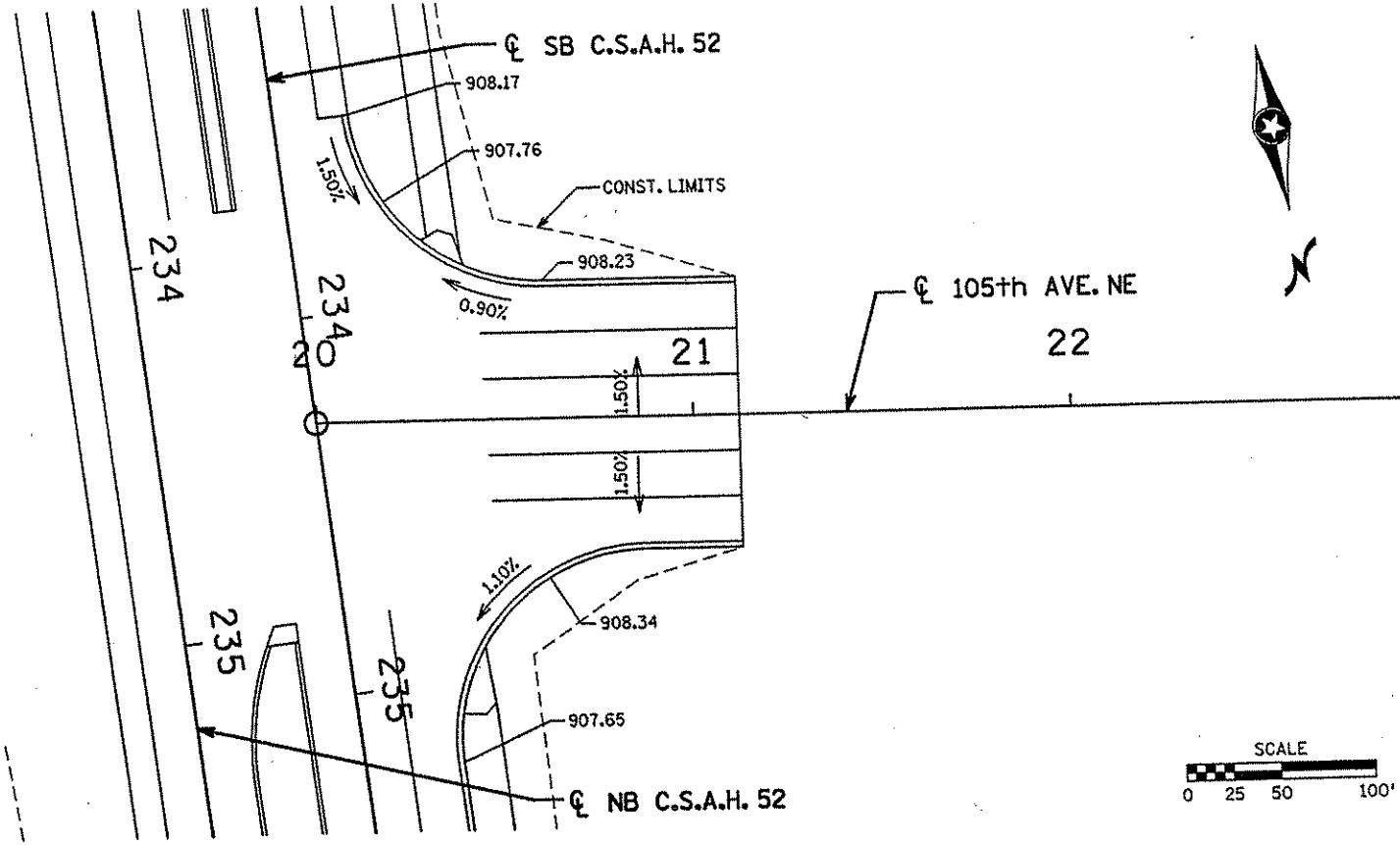
DRAWN BY SH DATE 9-21-01
 DESIGN BY JMW DATE 9-20-01
 CHECKED BY KRC DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUWALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 INTERSECTION DETAILS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 171
 OF
 559



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.

Joseph Weary
 DATE 11-28-01 LIC. NO. 22405

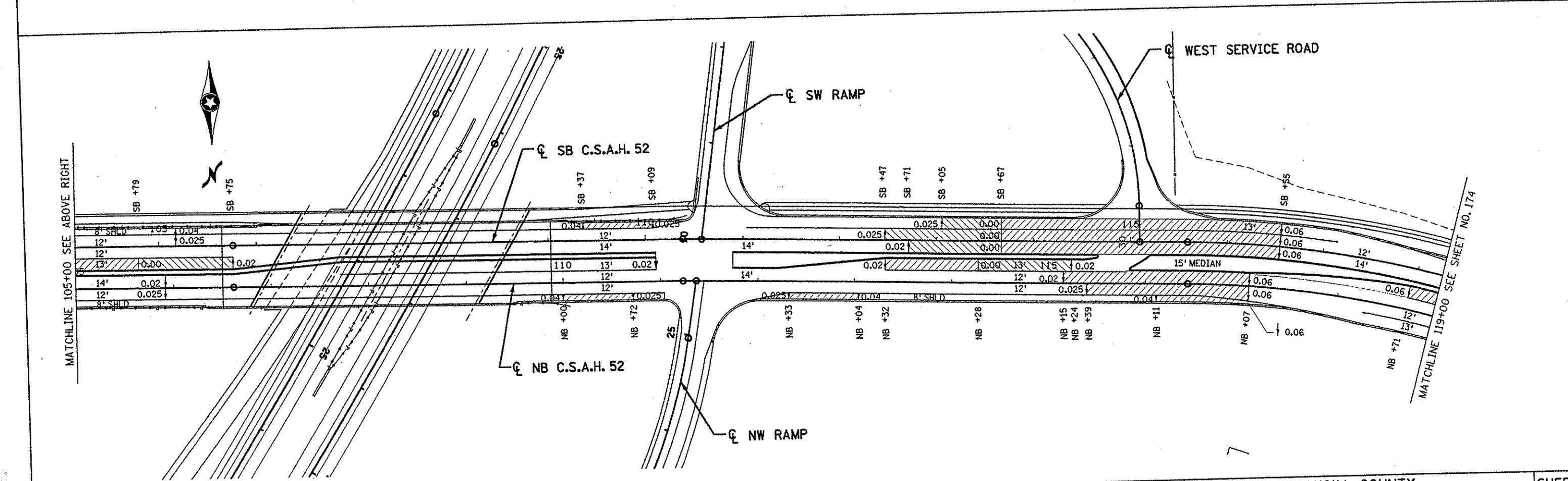
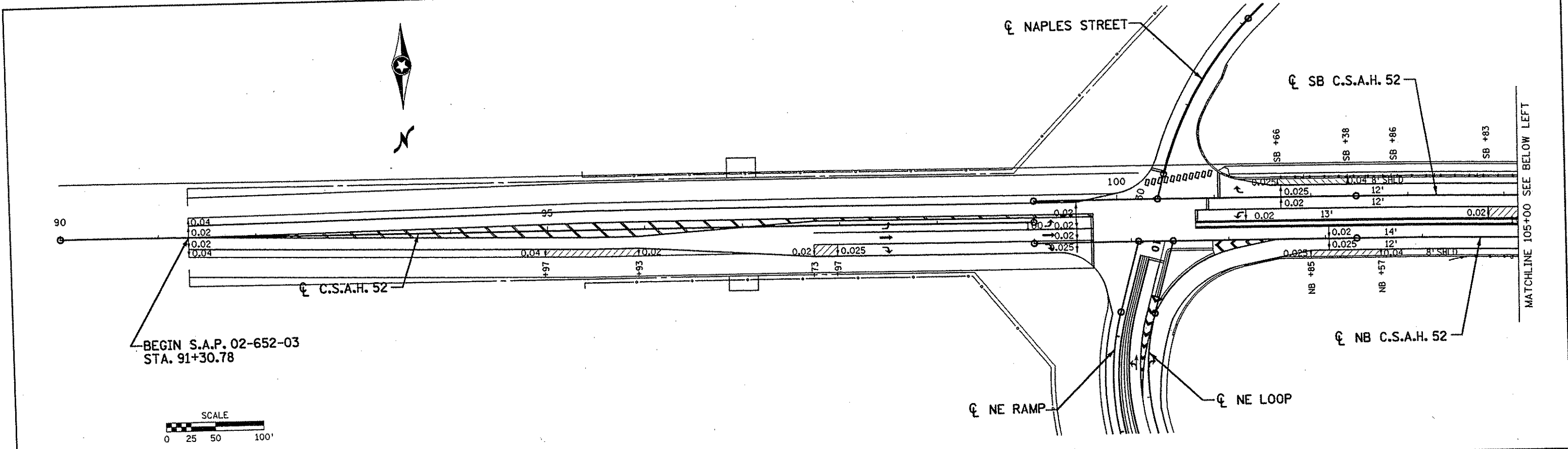
DRAWN BY SH DATE 9-21-01
 DESIGN BY JMW DATE 9-20-01
 CHECKED BY KRC DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

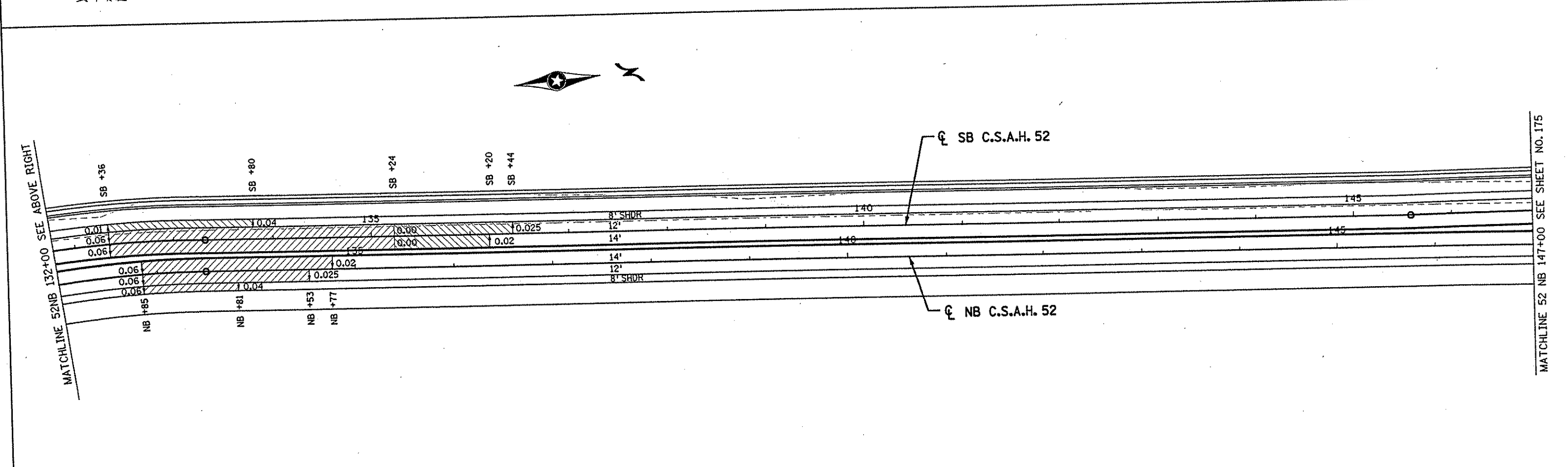
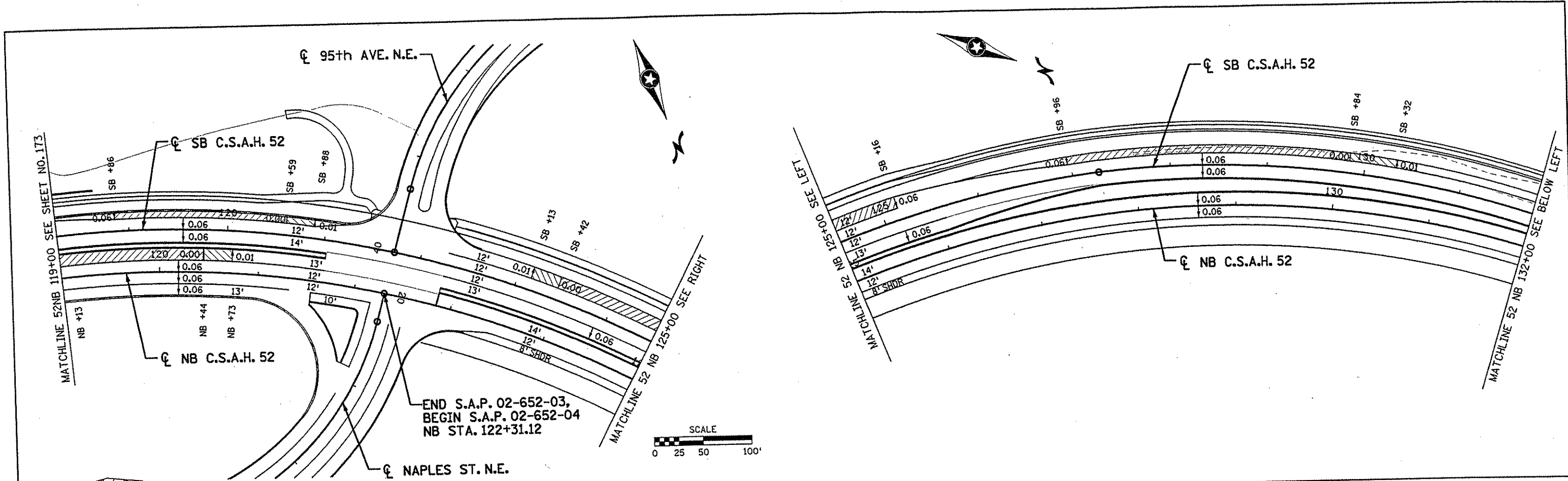
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 INTERSECTION DETAILS
 C.S.A.H. 52 RECONSTRUCTION
 105th AVE. NE, 106th LANE NE, 107th LANE NE

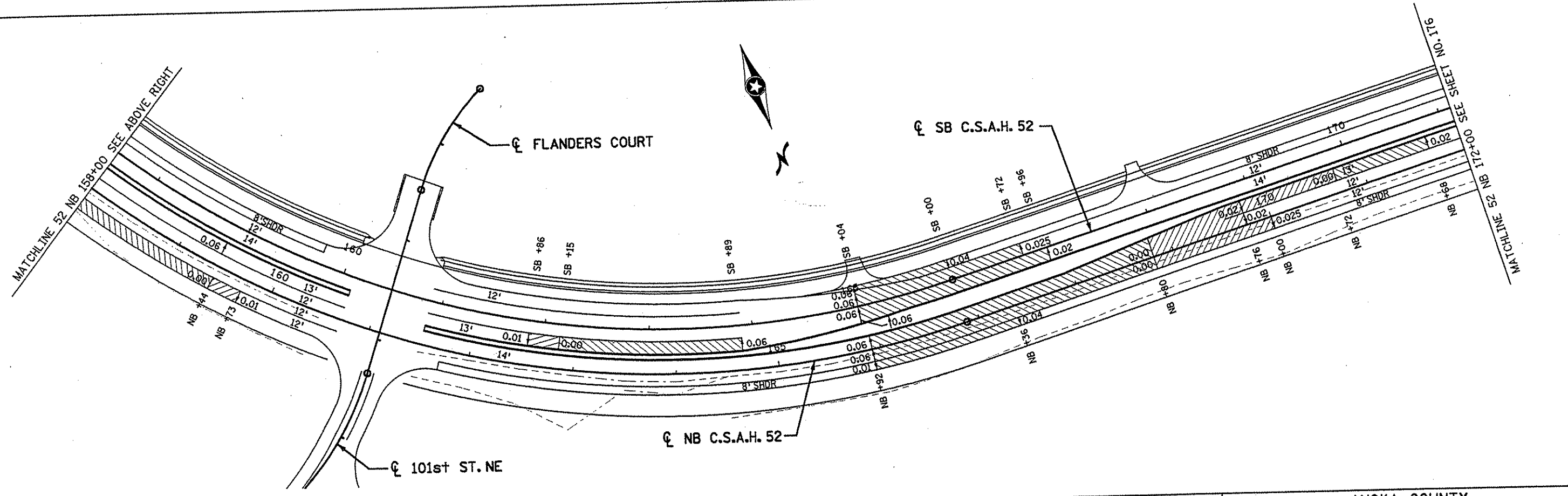
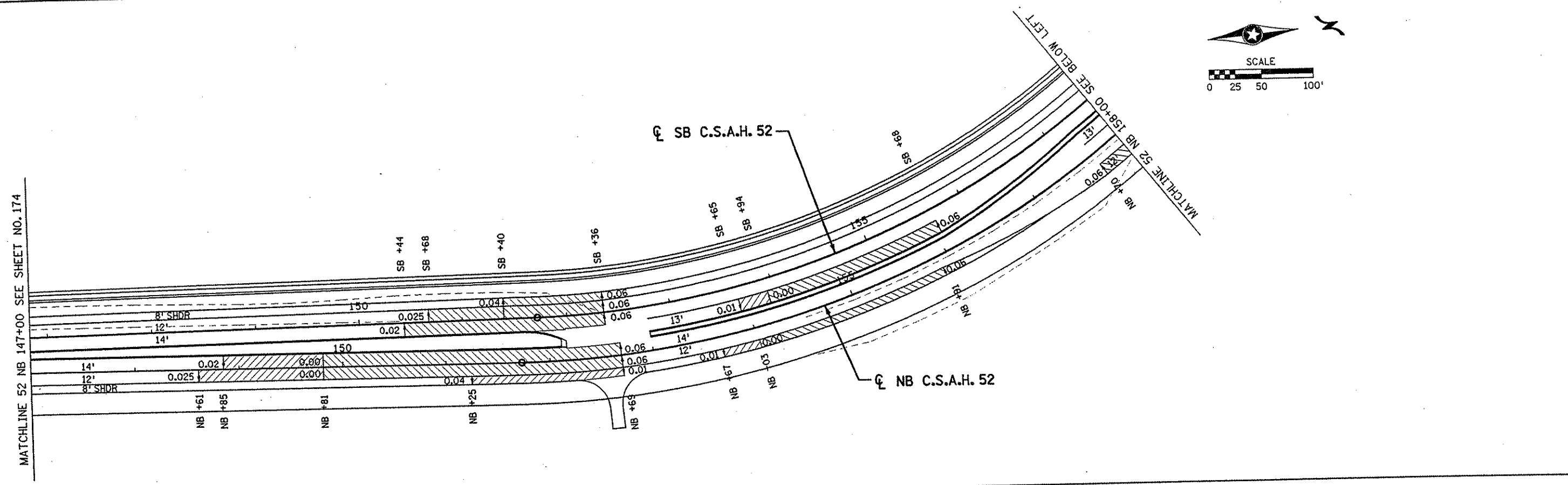
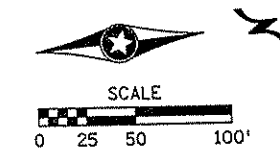
SHEET
 172
 OF
 559



NO. DATE BY CKD APPR REVISION NAME: K:\a-f\anokacty\1174901\hwy-brdg\part4\roadway3\drawings\super02.dwg 2001				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. <i>Joseph Weems</i> DATE 1-11-02 LIC. NO. 22465				DRAWN BY RRC DATE 9-21-01 DESIGN BY RRC DATE 9-20-01 CHECKED BY JMW DATE 9-24-01				S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022				TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA				ANOKA COUNTY SUPERELEVATION PLAN C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 STA. 90+00 TO 119+00				SHEET 173 OF 559	
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NO DATE BY CKD APPR REVISION NAME: k:\site\proj\11749\par+4\roadway3\drawings\super02.dgn 19 NOV 2001				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. <i>Joseph Weanu</i> DATE 11-26-01 LIC. NO. 22405		DRAWN BY RRC DATE 9-21-01 DESIGN BY RRC DATE 9-20-01 CHECKED BY JMW DATE 9-24-01		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY SUPERELEVATION PLAN C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 119+00 TO 147+00		SHEET 174 OF 559
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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\dr+4\roadway\drawings\super03.dgn 19 NOV 2001

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.

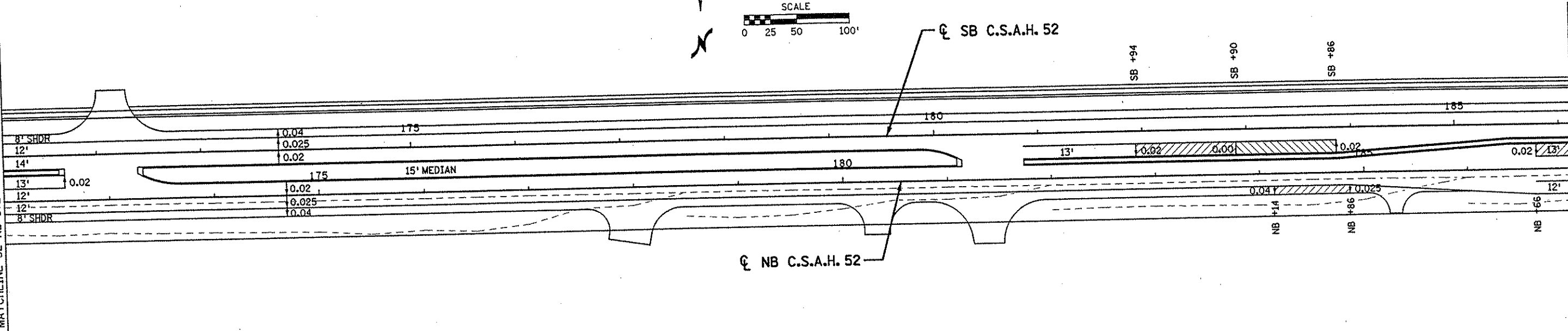
Joseph Weary
 DATE 11-28-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

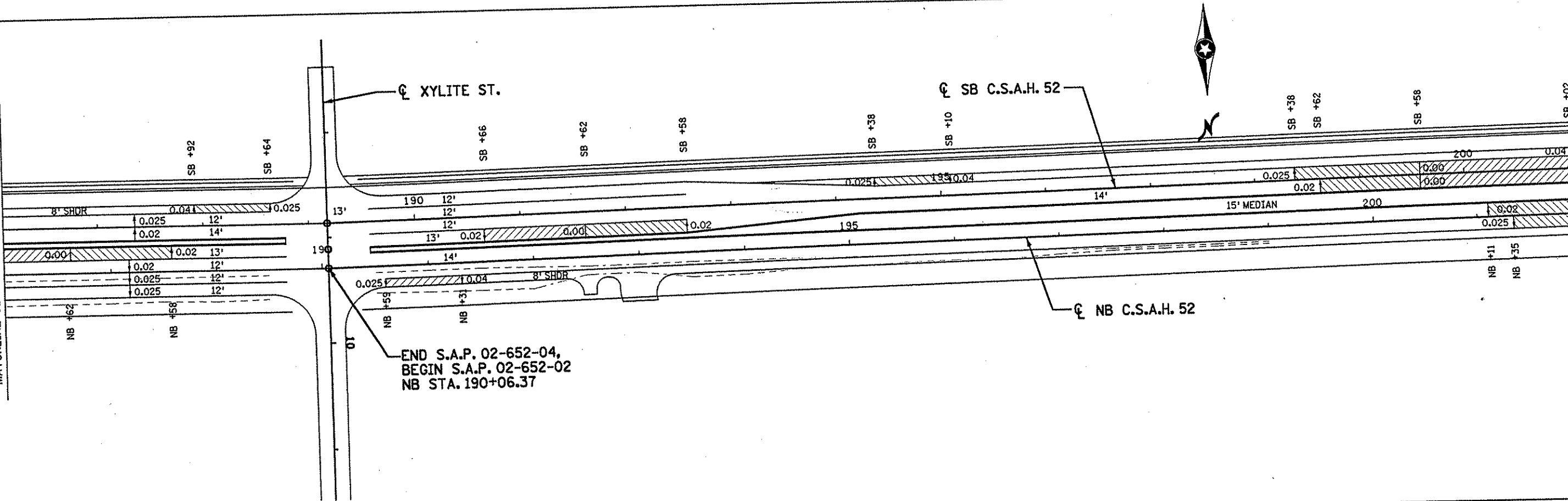
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

MATCHLINE 52 NB 172+00 SEE SHEET NO. 175



MATCHLINE 52 NB 187+00 SEE BELOW LEFT

MATCHLINE 52 NB 187+00 SEE ABOVE RIGHT



MATCHLINE 52 NB 202+00 SEE SHEET NO. 177

END S.A.P. 02-652-04,
BEGIN S.A.P. 02-652-02
NB STA. 190+06.37

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\super04.dgn 19 NOV 2001

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.

Joseph W. ...
DATE 11-20-01 L.I.C. NO. 22405

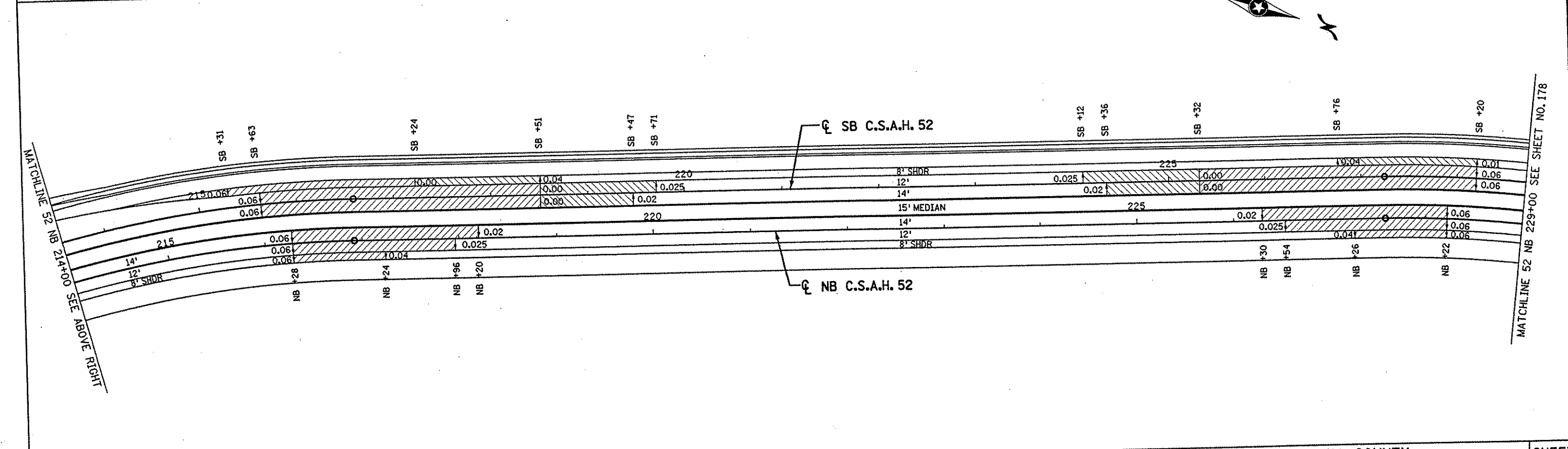
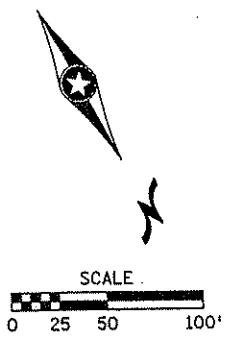
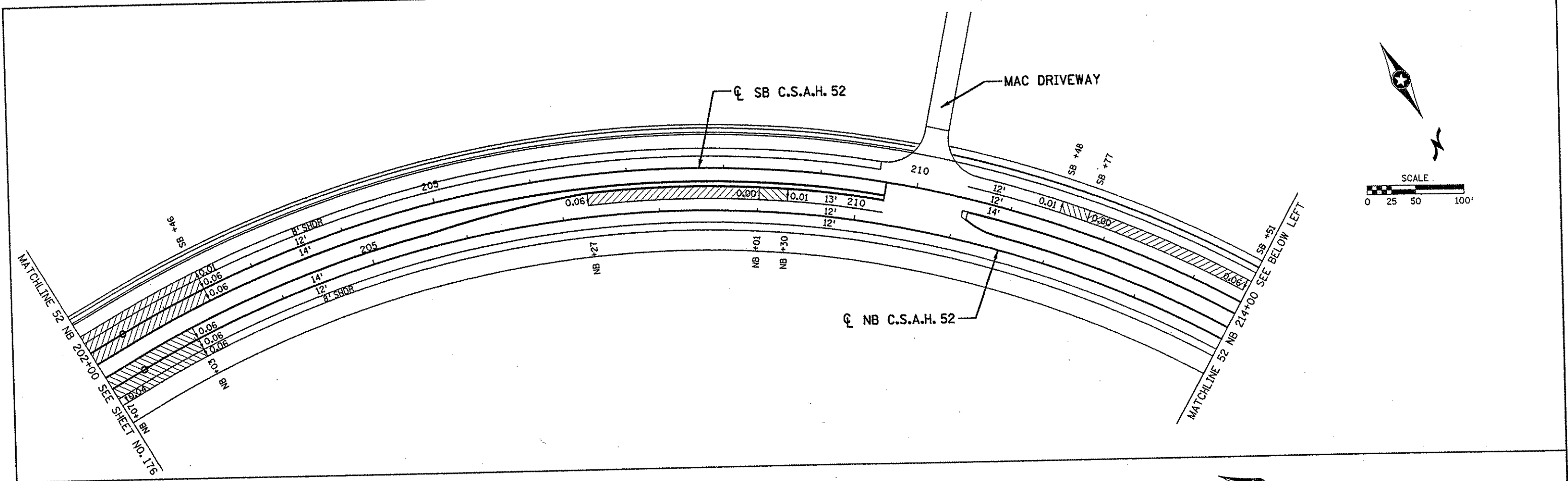
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 ENGINEERS-ARCHITECTS-PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 172+00 TO 202+00

SHEET
 176
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\pro\11749\car+4\roadway\drawings\super05.dgn 19 NOV 2001

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.

Joseph Weaver
 DATE: 11-30-01 LIC. NO. 22405

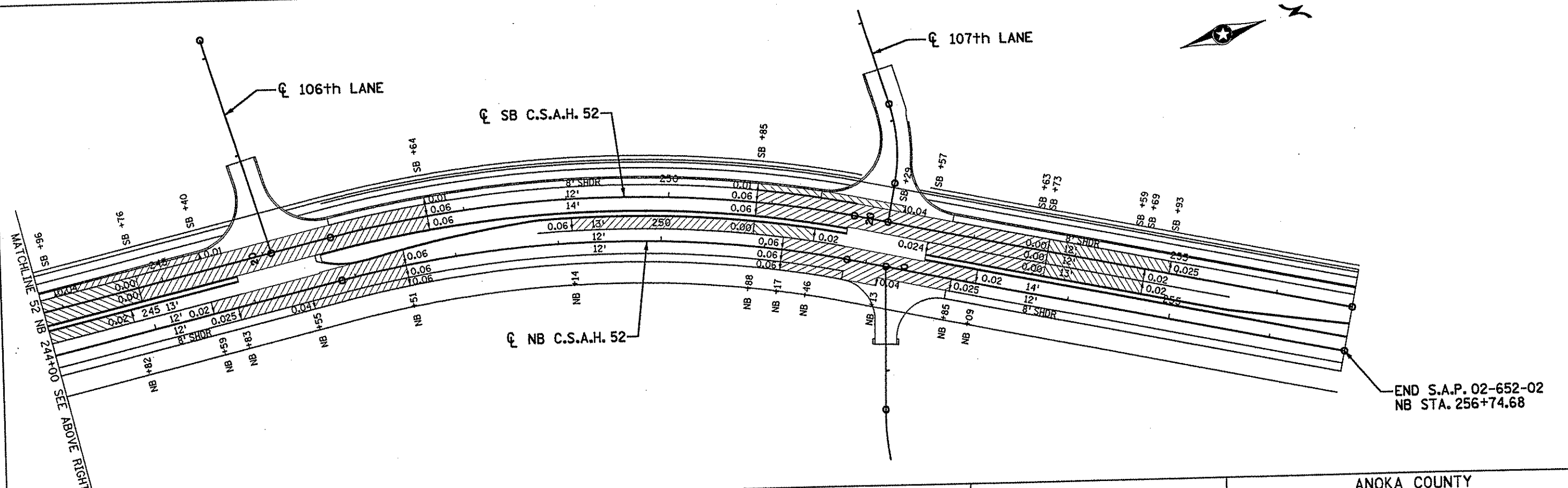
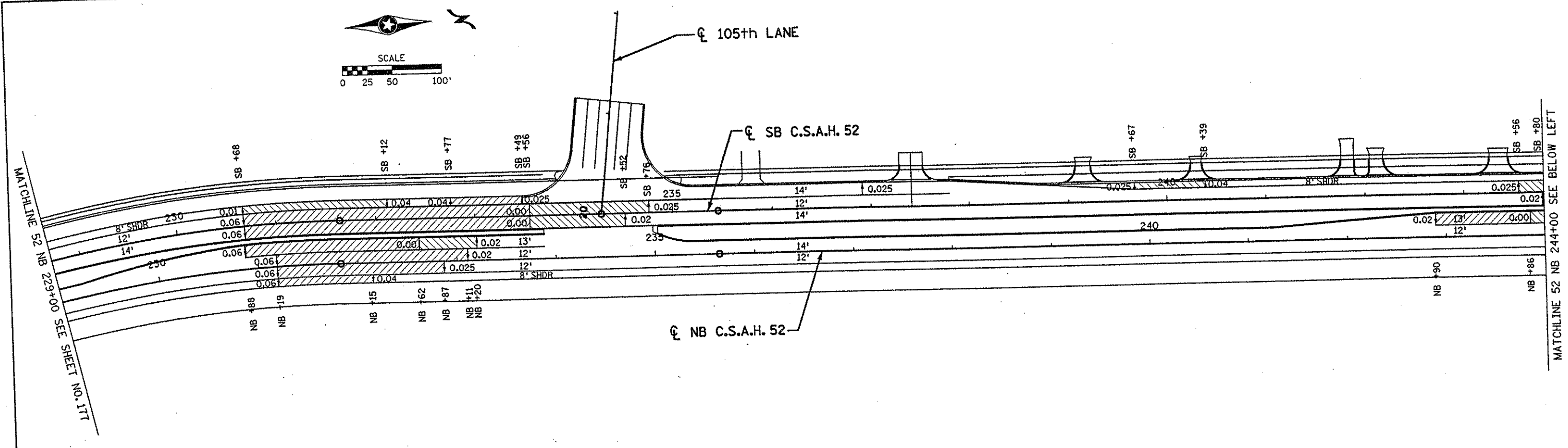
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 DESIGN BY: RRC DATE: 9-20-01
 CHECKED BY: JMW DATE: 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 202+00 TO 229+00

SHEET 177 OF 559



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.

Josiah Widom
 DATE 11-26-01 LIC. NO. 22405

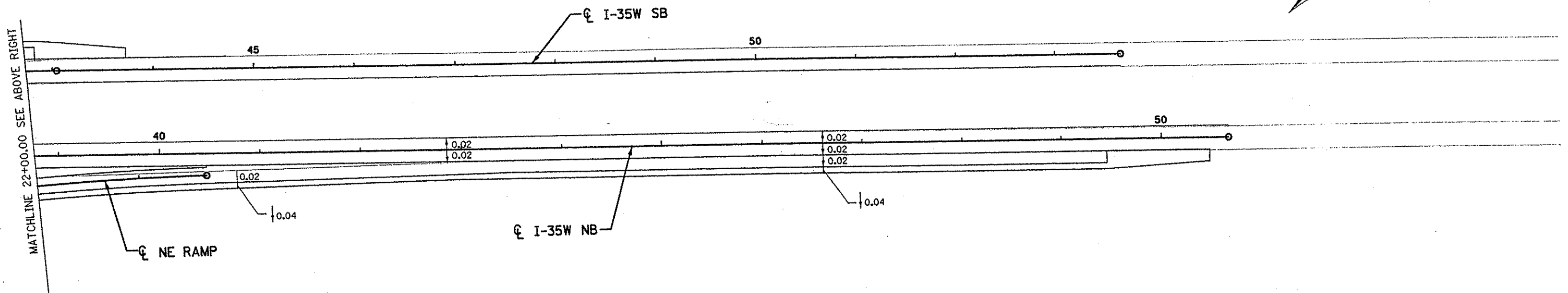
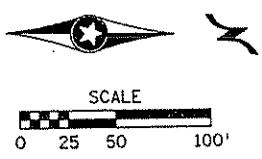
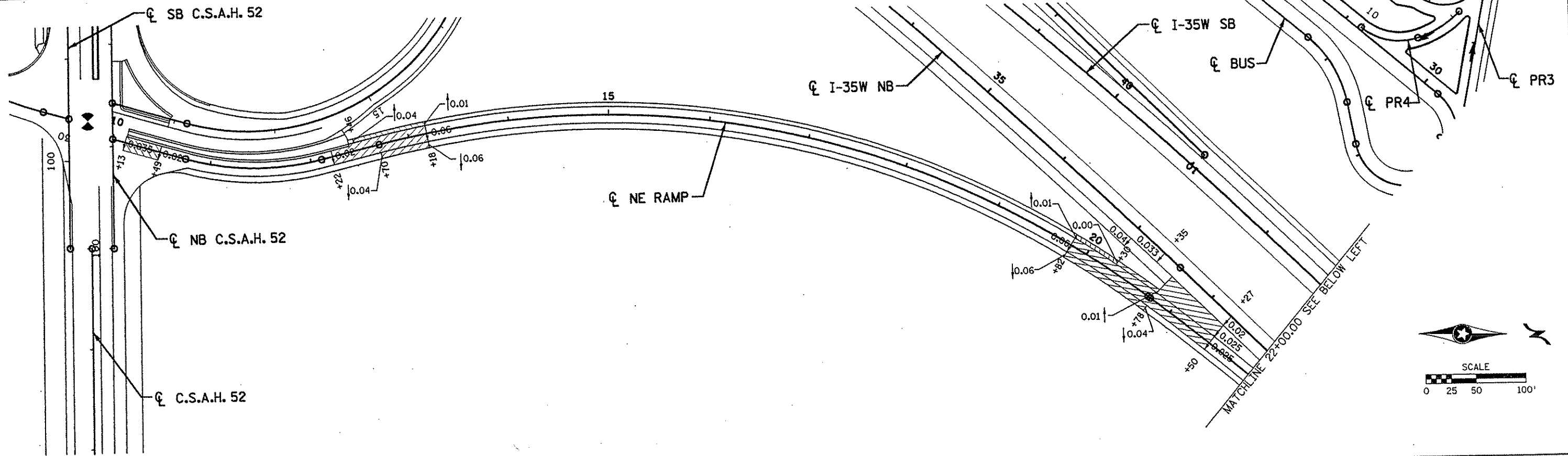
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 229+00 TO 256+74.68

SHEET
 178
 OF
 559



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.

Joseph W. W...
 DATE 1-11-02 LIC. NO. 22405

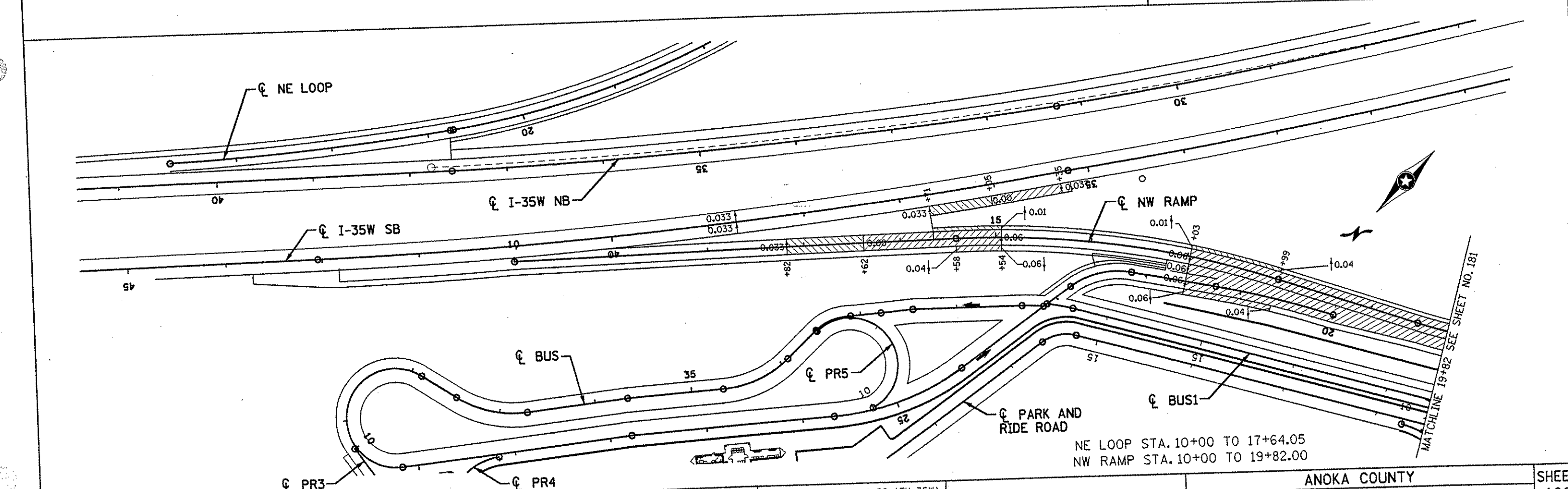
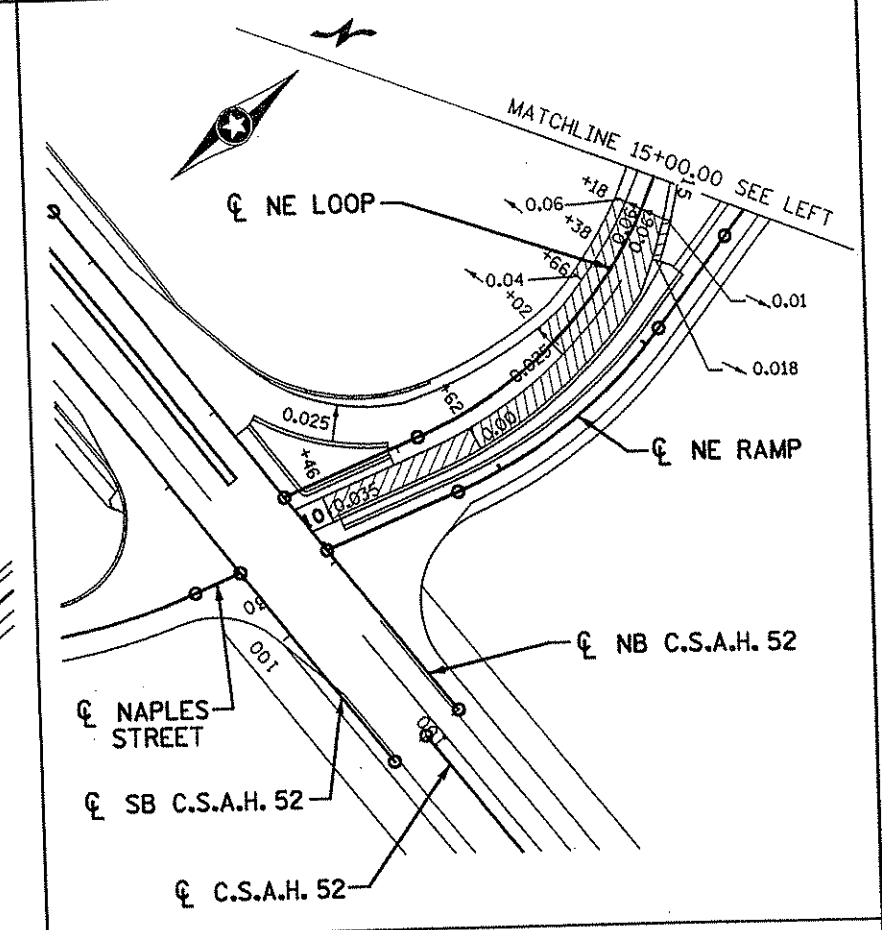
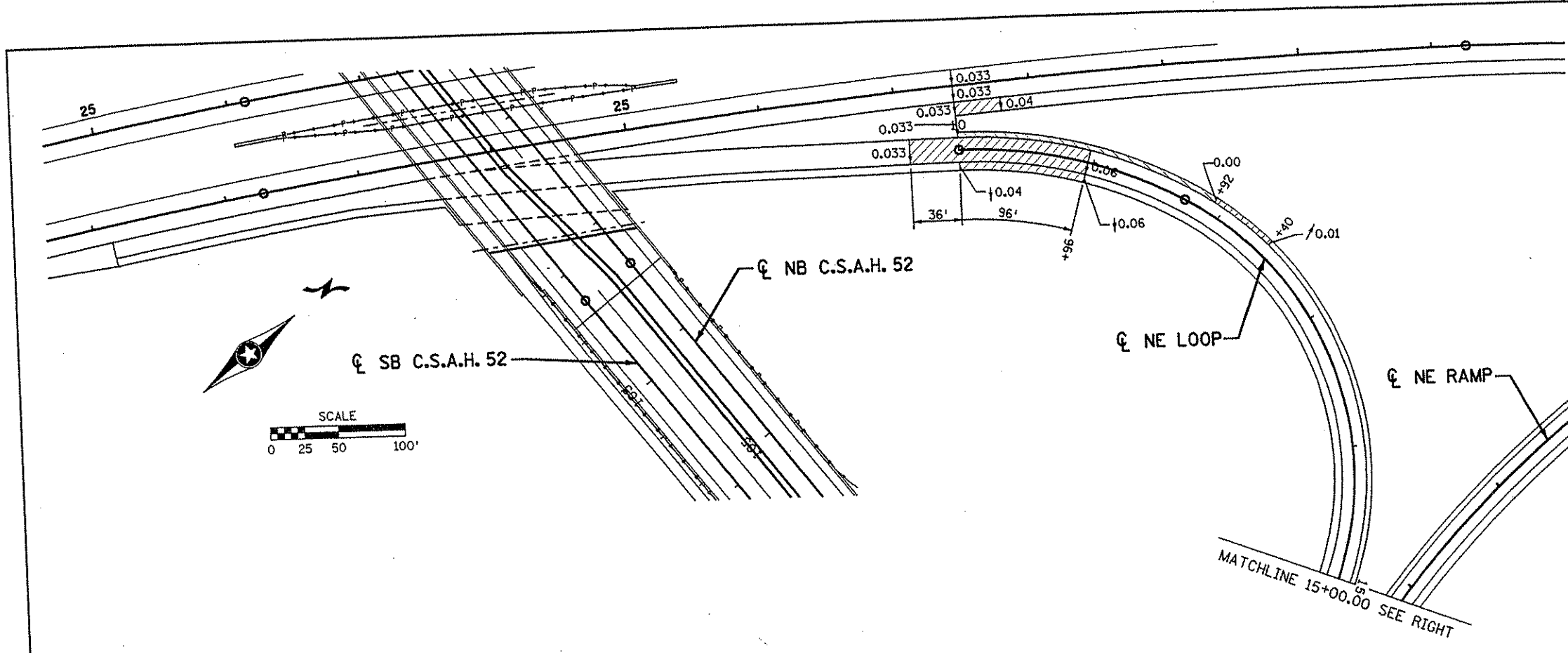
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 NE RAMP STA. 10+00 TO 23+69.26

SHEET
 179
 OF
 559



NE LOOP STA. 10+00 TO 17+64.05
 NW RAMP STA. 10+00 TO 19+82.00

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.

Joseph Whann
 DATE 1-11-02 LIC. NO. 22465

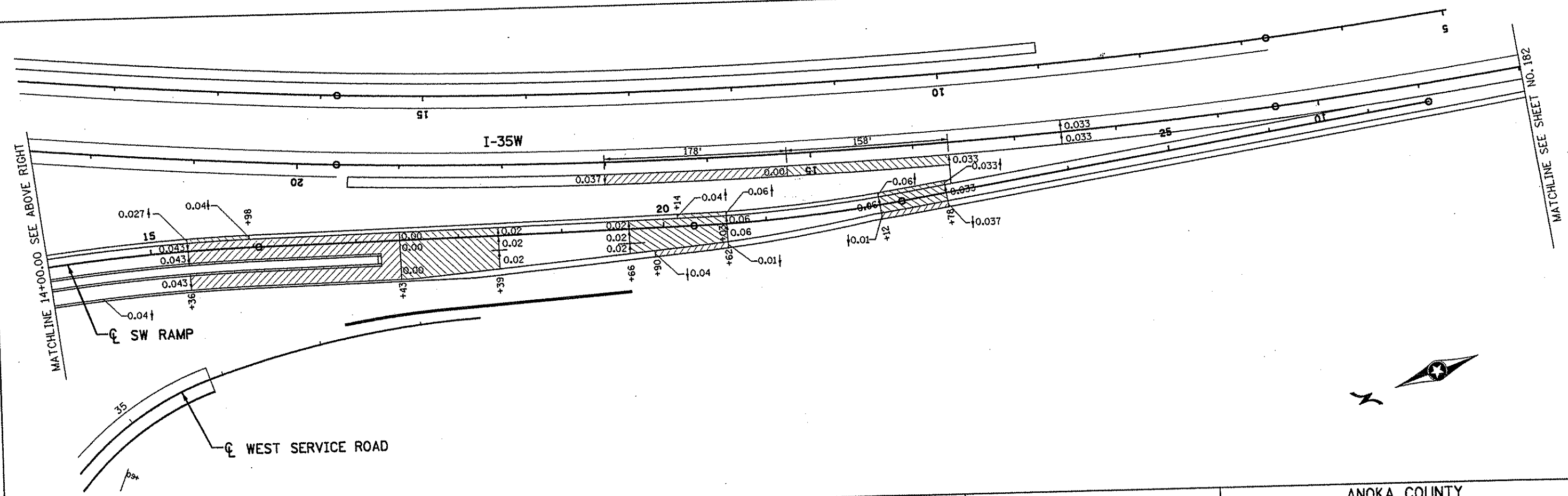
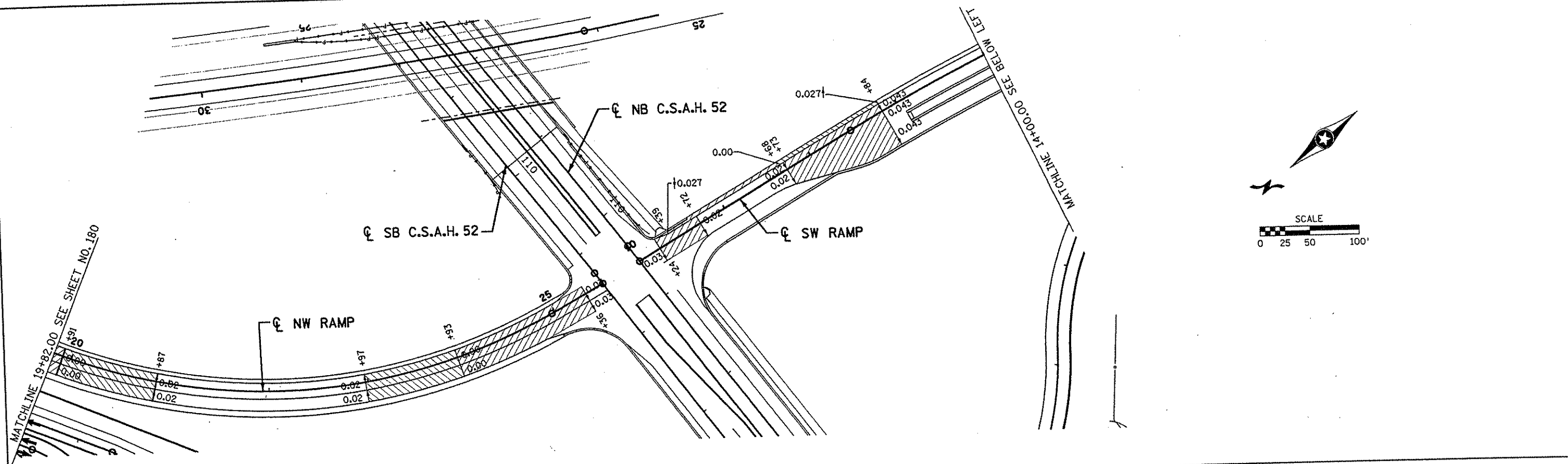
0280-50 (TH 35W)
 90-080-11
 02-652-02
 02-652-03
 02-652-04
 106-020-021, 106-020-022

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

TKDA
 ENGINEERS-ARCHITECTS-PLANNERS
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 NE LOOP & NW RAMP

SHEET
 180
 OF
 559



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.

Joseph Wilson
 DATE 1-11-02 LIC. NO. 22405

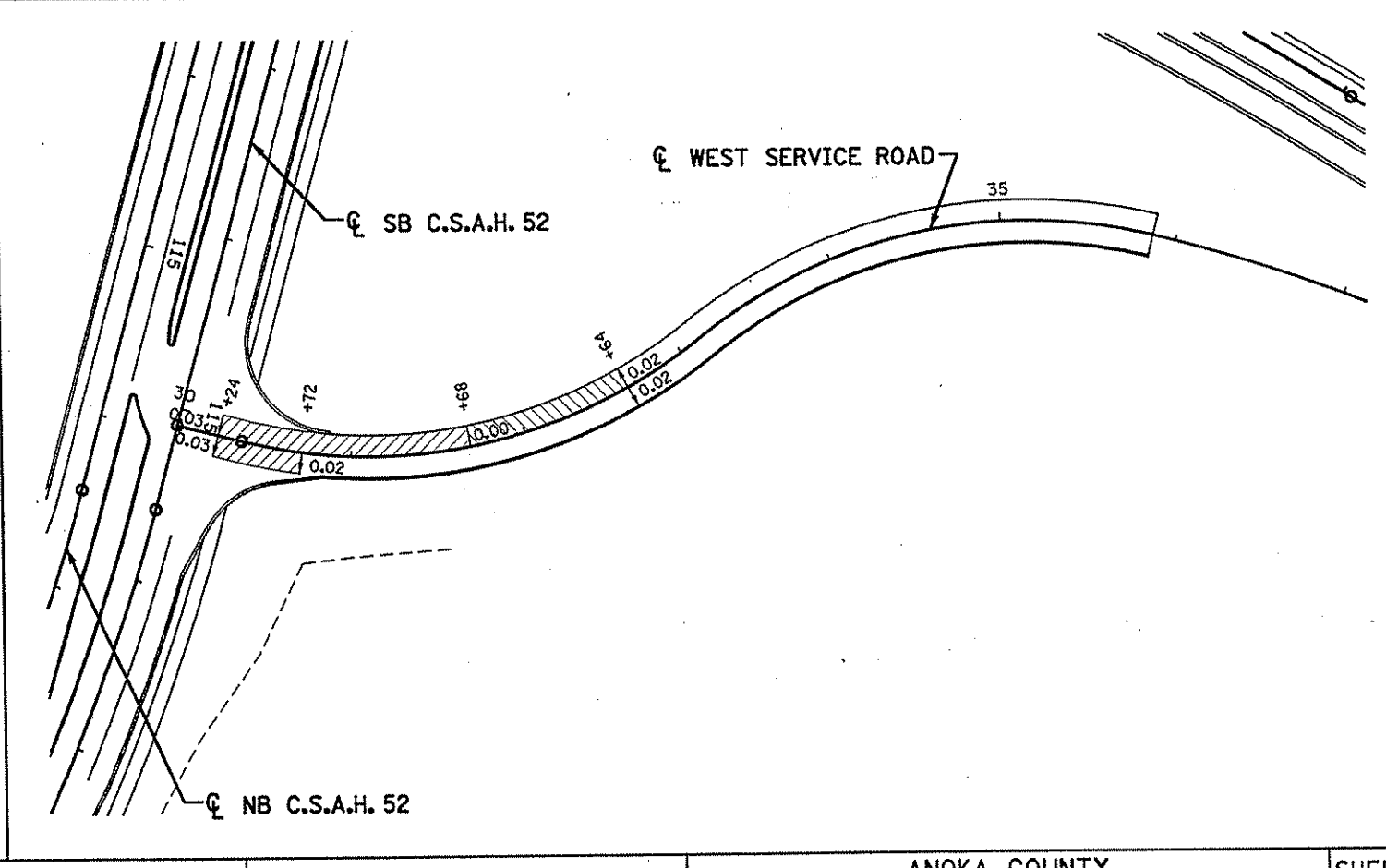
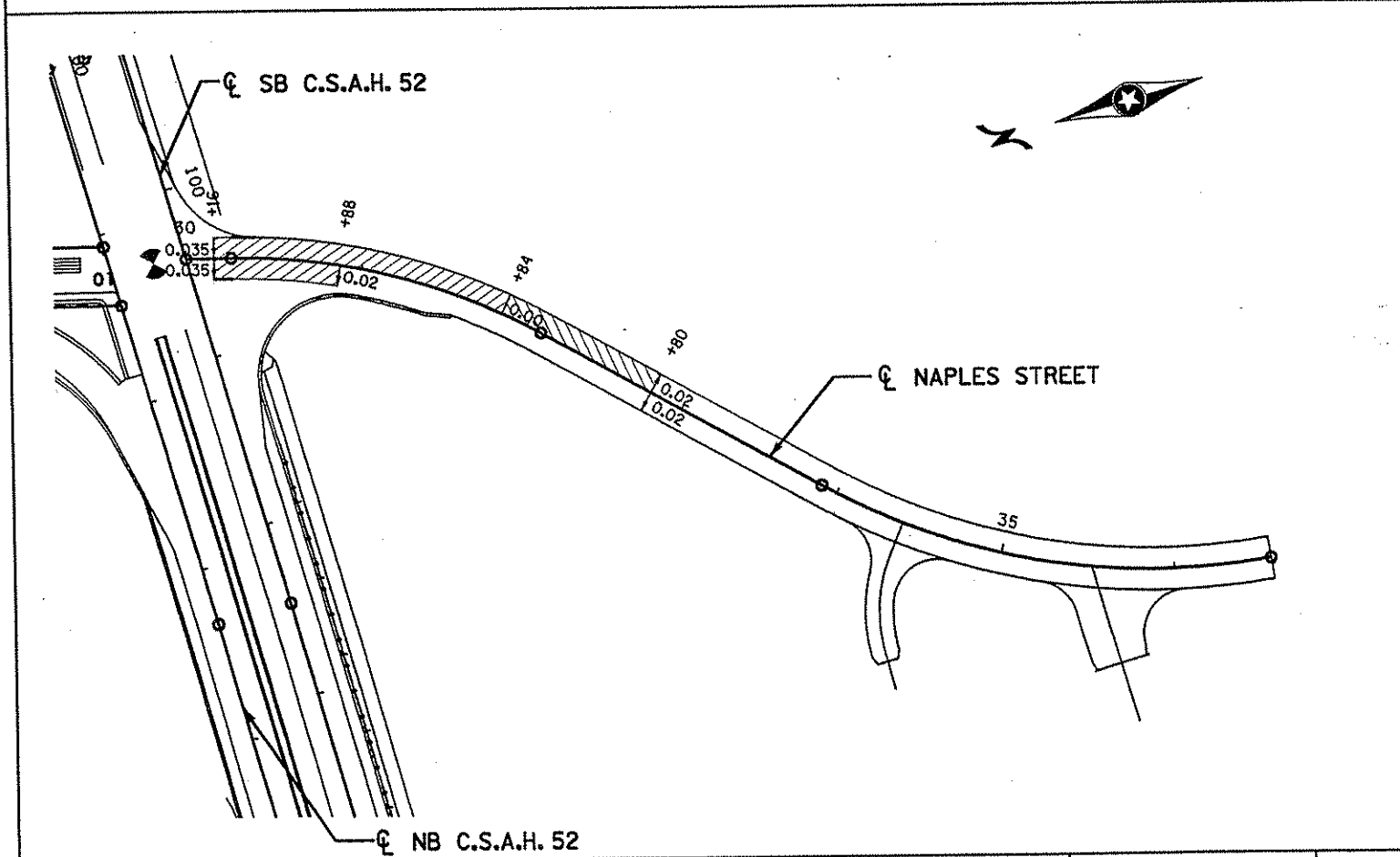
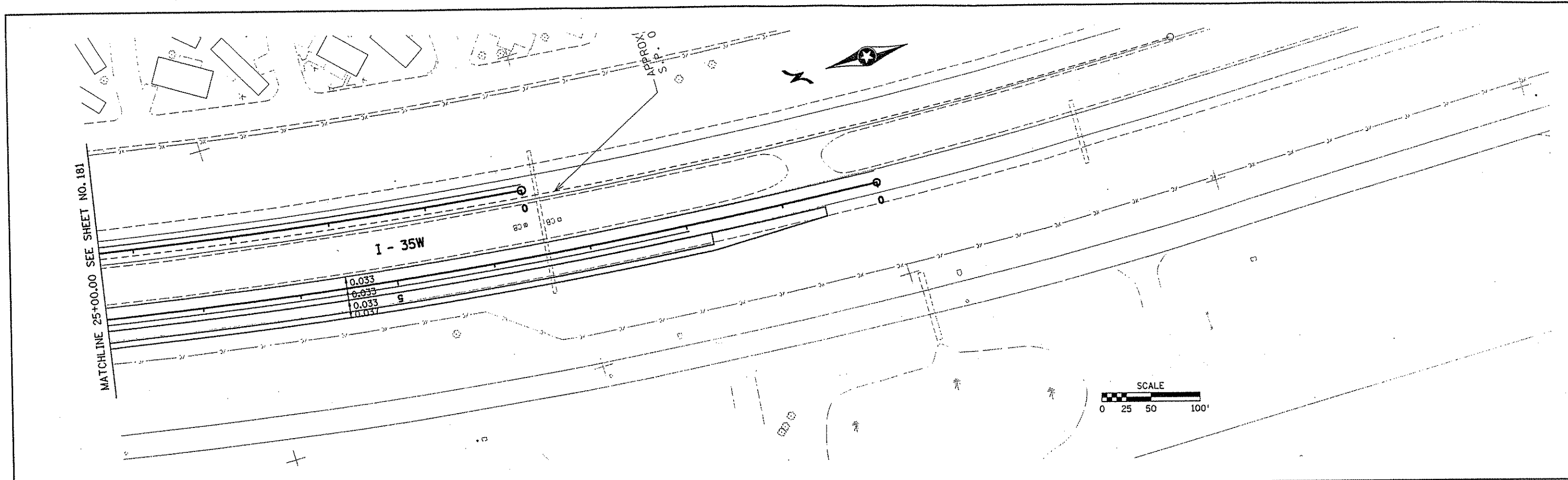
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 NW RAMP & SW RAMP

SHEET
 181
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\s\10\proj\011749\par\4\roadway3\drawings\super10.dgn 19 NOV 2001

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.

Jorge Wevera

DATE 11-20-01 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01

DESIGN BY RRC DATE 9-20-01

CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)

S.P. 90-080-11

S.A.P. 02-652-02

S.A.P. 02-652-03

S.A.P. 02-652-04

S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

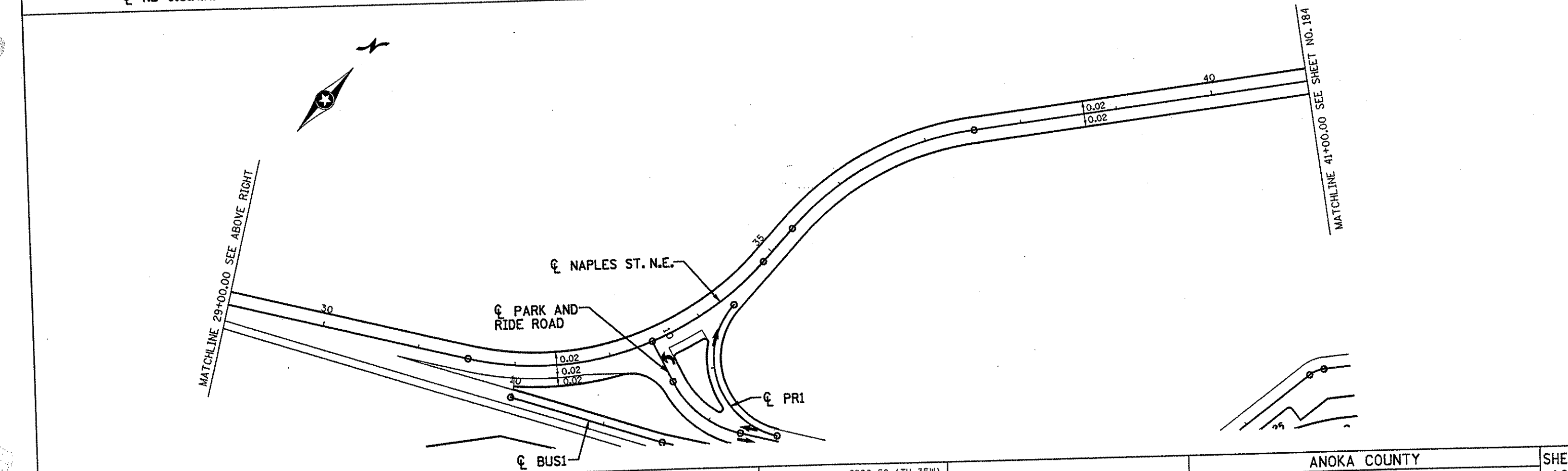
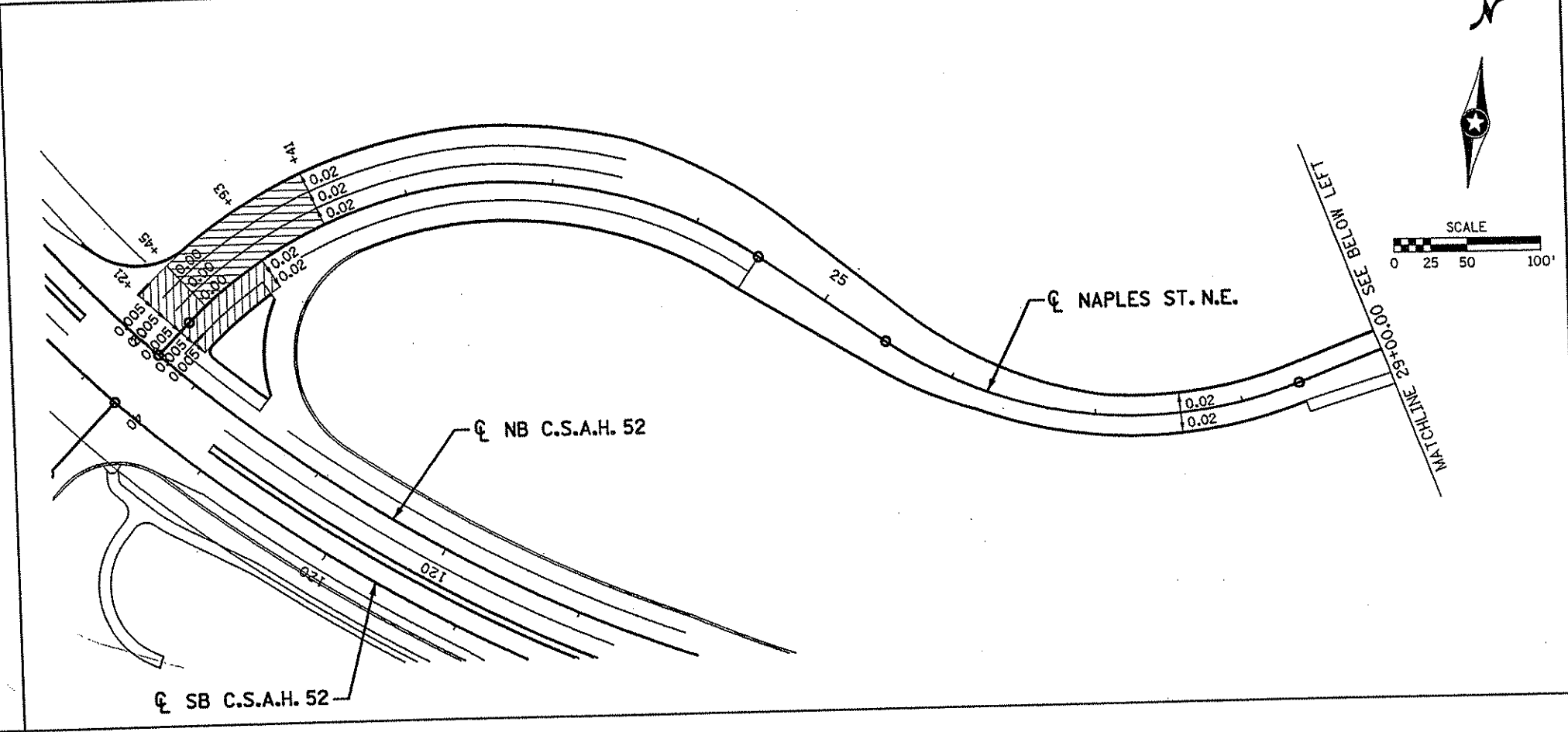
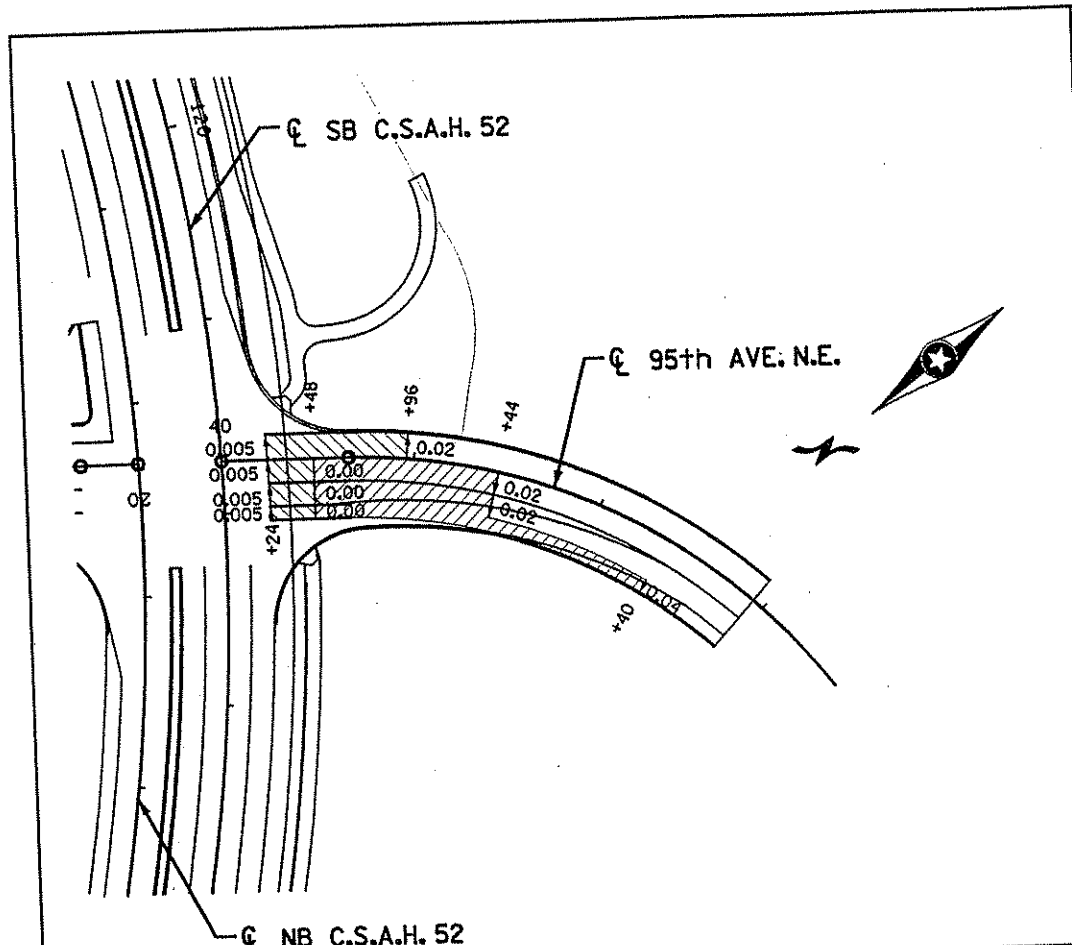
ANOKA COUNTY

SUPERELEVATION PLAN

C.S.A.H. 52 RECONSTRUCTION

SW RAMP, NAPLES STREET & WEST SERVICE ROAD

SHEET 182 OF 559



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.

Joseph Woods
 DATE 11-25-01 LIC. NO. 22405

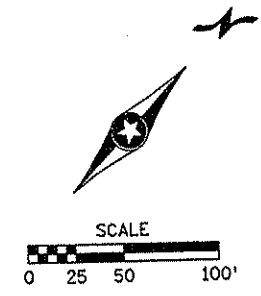
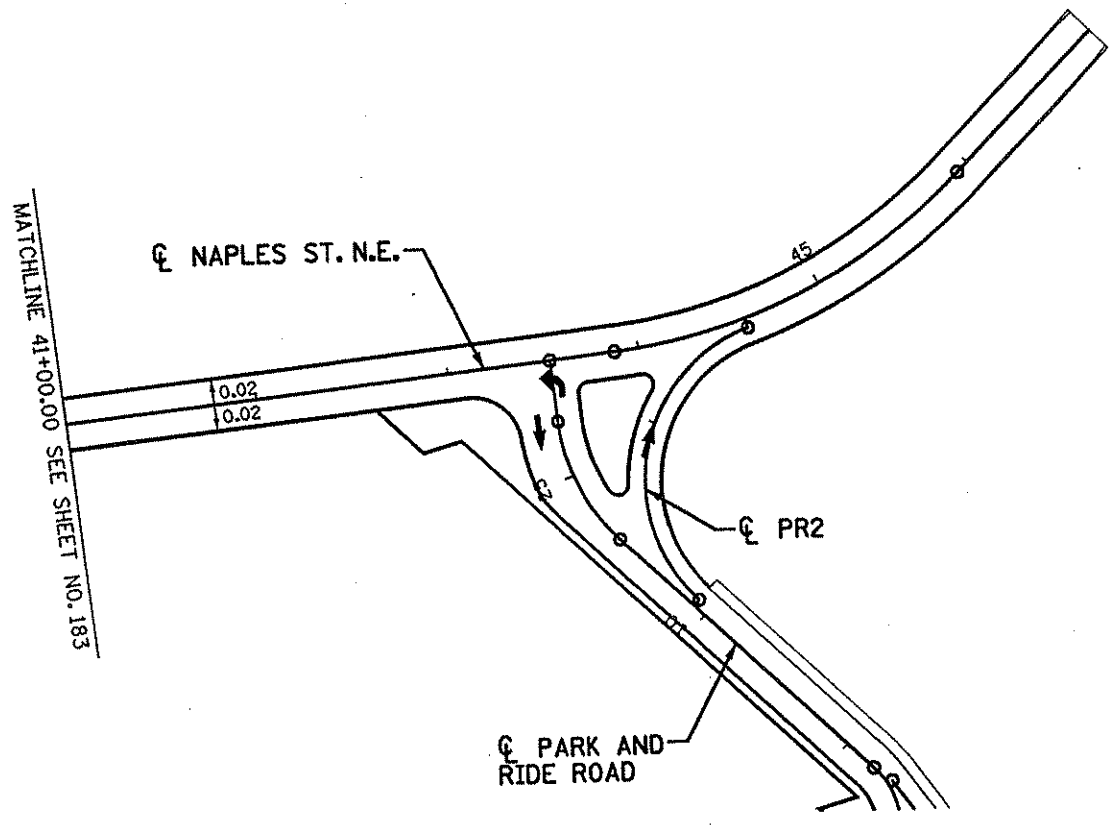
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 ENGINEERS-ARCHITECTS-PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 95th AVE. N.E. AND NAPLES ST. N.E.

SHEET
 183
 OF
 559



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.

Joseph Weaver
 DATE 11-20-01 LIC. NO. 22405

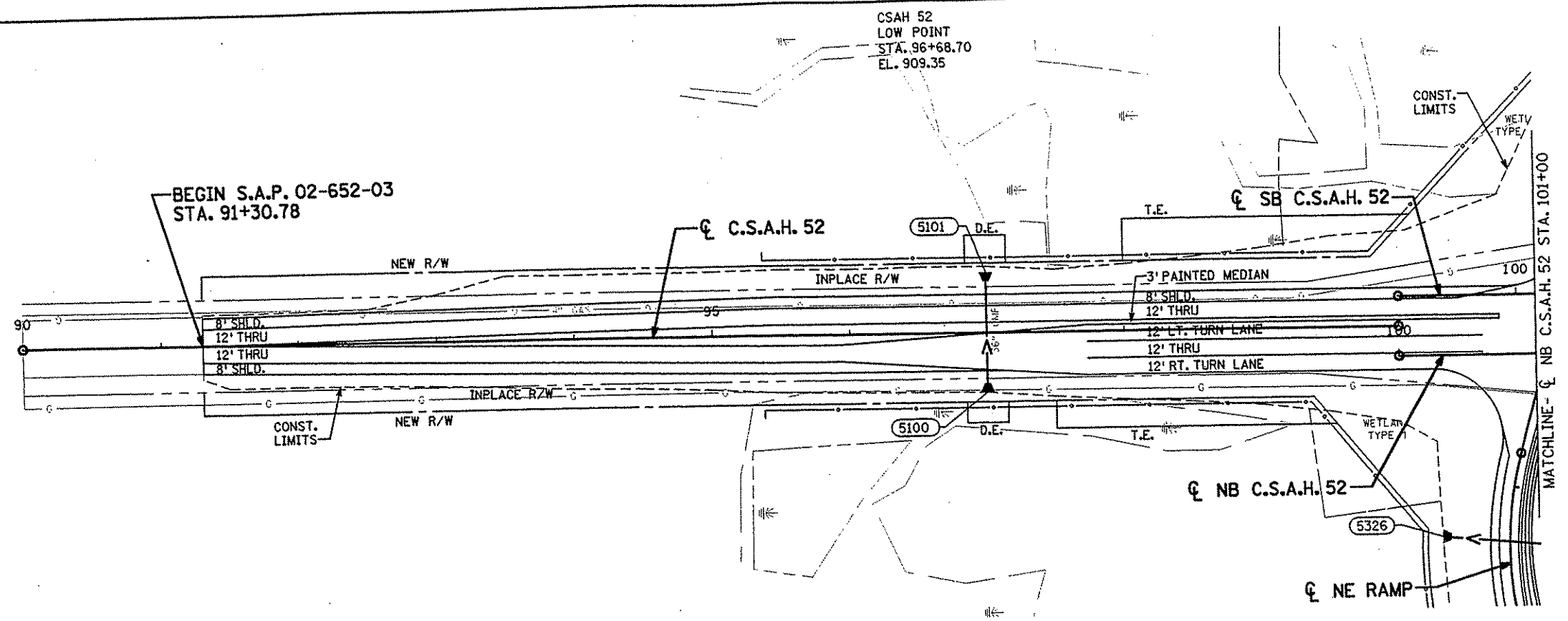
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

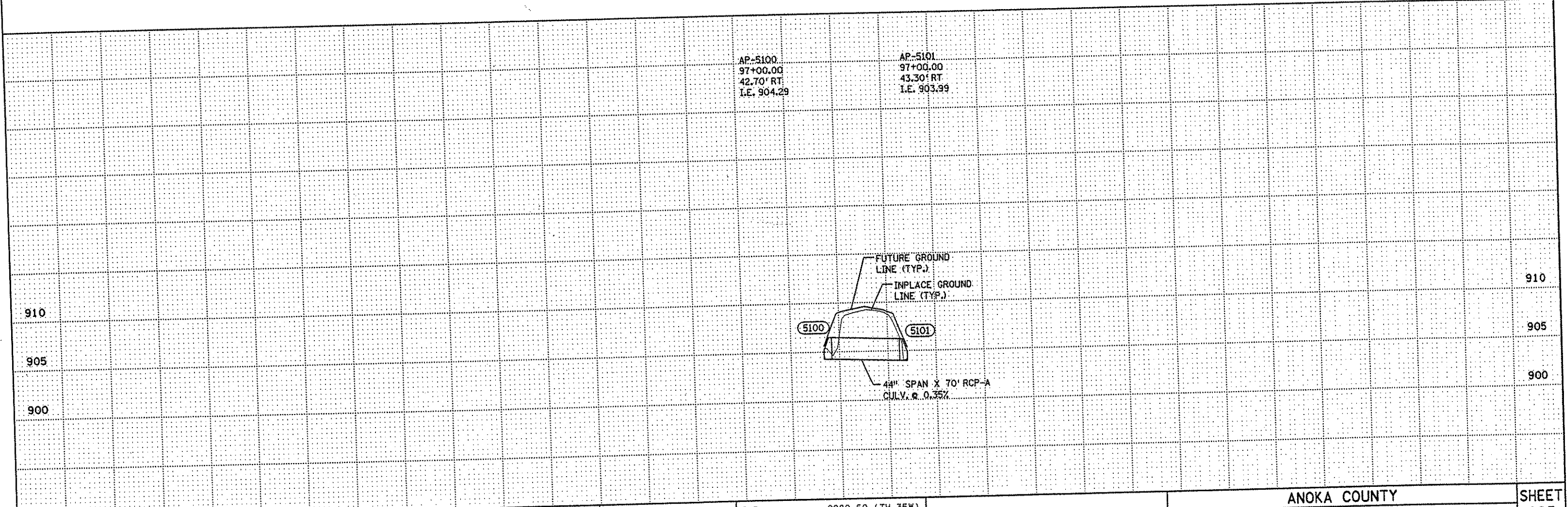
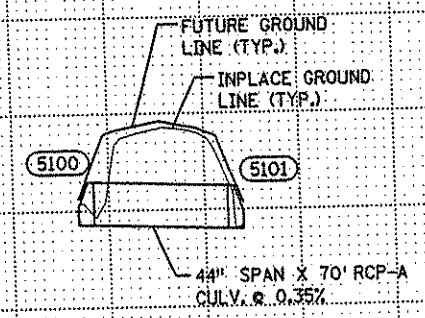
ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E.

SHEET
 184
 OF
 559



AP-5100
97+00.00
42.70' RT
I.E. 904.29

AP-5101
97+00.00
43.30' RT
I.E. 903.99



NO	DATE	BY	CHKD	APPR	REVISION

NAME: K:\site\proj\11749\proj4\roadway\drawings\drain01.dgn 11/20/01

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.

Matthew A. Wannan
DATE 11-20-01 LIC. NO. 26883

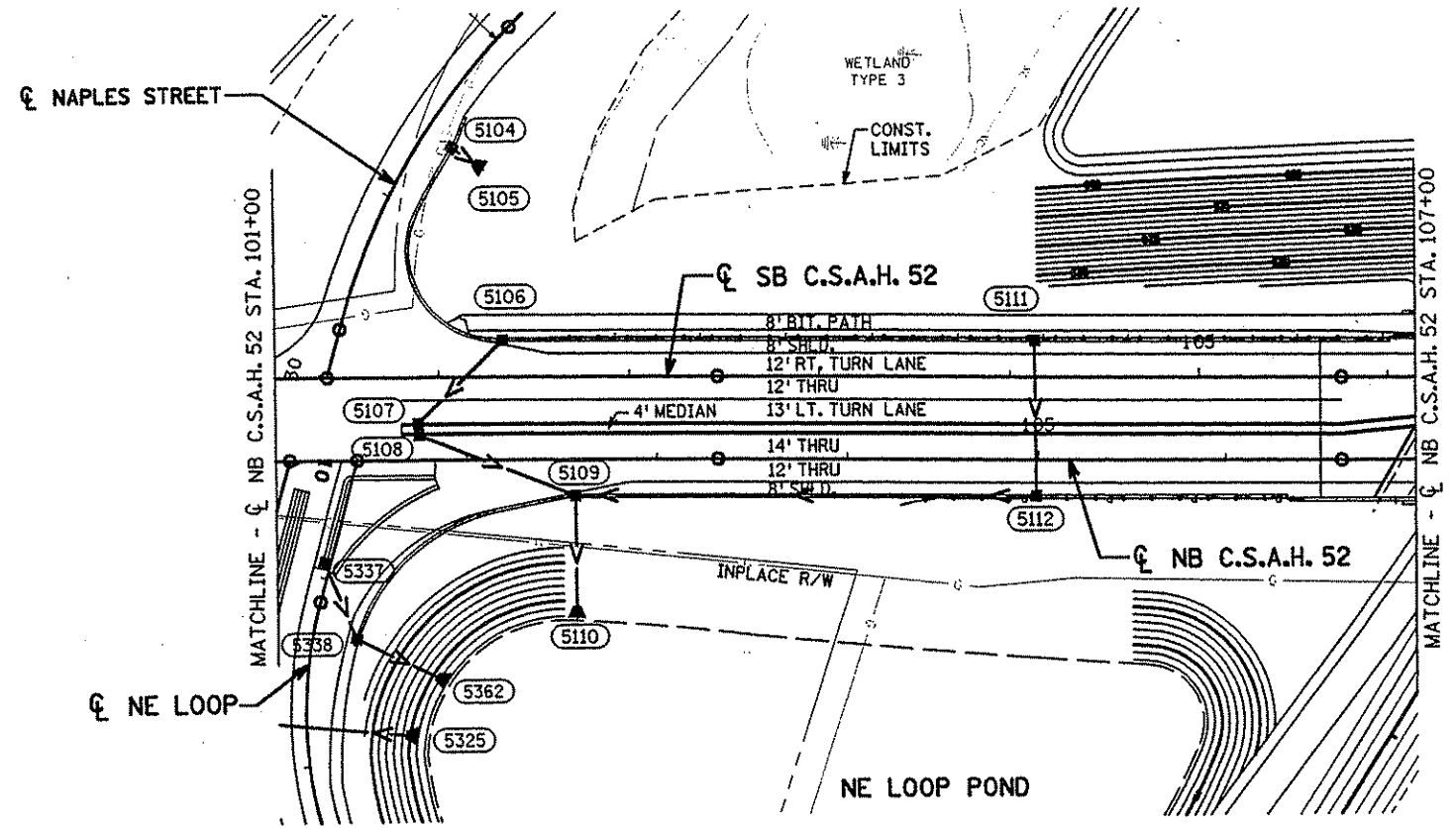
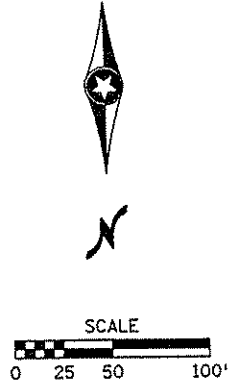
DRAWN BY MAW DATE 9-24-01
DESIGN BY MAW DATE 9-24-01
CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

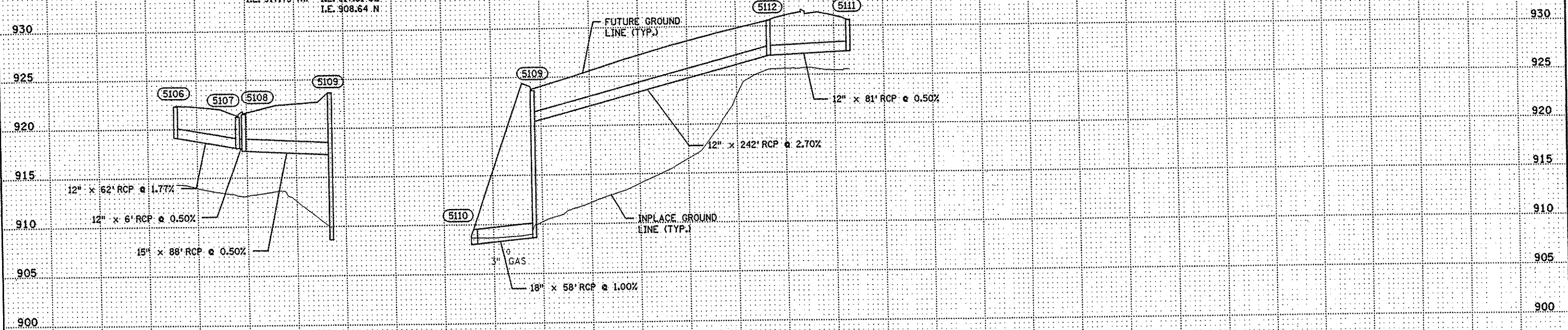
TKDA
TOLTZ, KING, OUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 91+30.78 TO 101+00

SHEET 185 OF 559



CB-5106 101+34.00 SB 18.87' LT. T.C. 922.32 I.E. 919.12	CB-5107 100+89.00 SB 23.87' RT. T.C. 921.23 I.E. 918.03 SW&N	CB-5108 101+75.00 NB 12.87' LT. T.C. 921.50 I.E. 918.00 S I.E. 917.75 NW	CB-5109 102+57.00 NB 18.87' RT. T.C. 923.64 I.E. 920.44 W I.E. 917.31 SE I.E. 908.64 N	APRON-5110 102+57.00 NB 83.00' RT. I.E. 908.00	CB-5112 104+99.00 NB 18.87' RT. T.C. 930.59 I.E. 926.98 S&E	CB-5111 104+13.00 SB 18.87' LT. T.C. 930.58 I.E. 927.38
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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\drain02.dgn 11/20/01

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.

Matthew A. Warrma

DATE **11-20-01** LIC. NO. **26883**

DRAWN BY **MAW** DATE **9-24-01**

DESIGN BY **MAW** DATE **9-24-01**

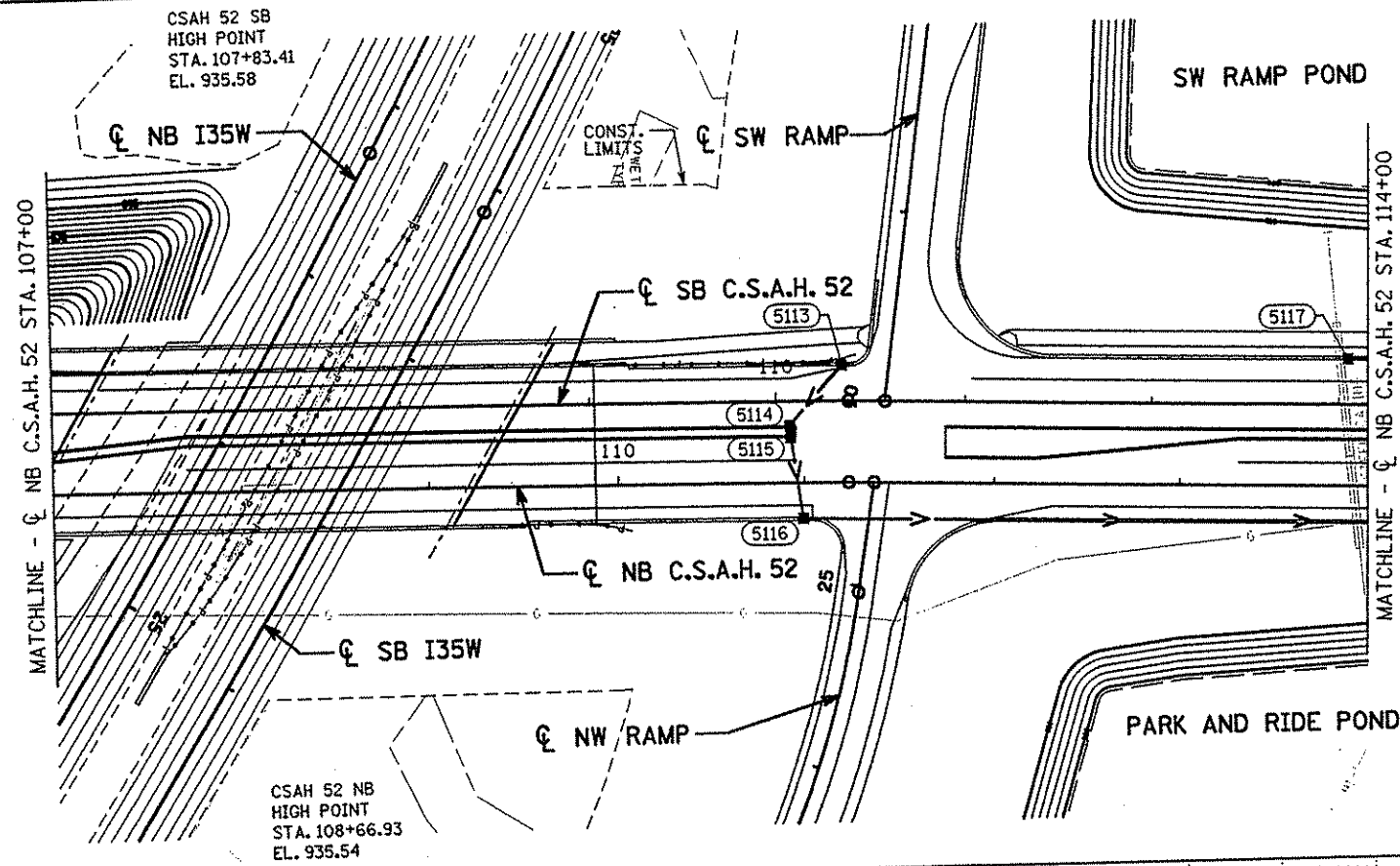
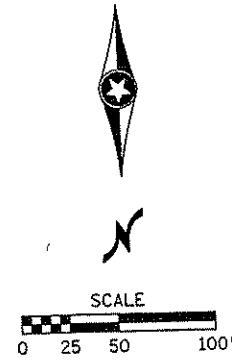
CHECKED BY **JMW** DATE **9-25-01**

S.P. 0280-50 (TH 35W)
S.A.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

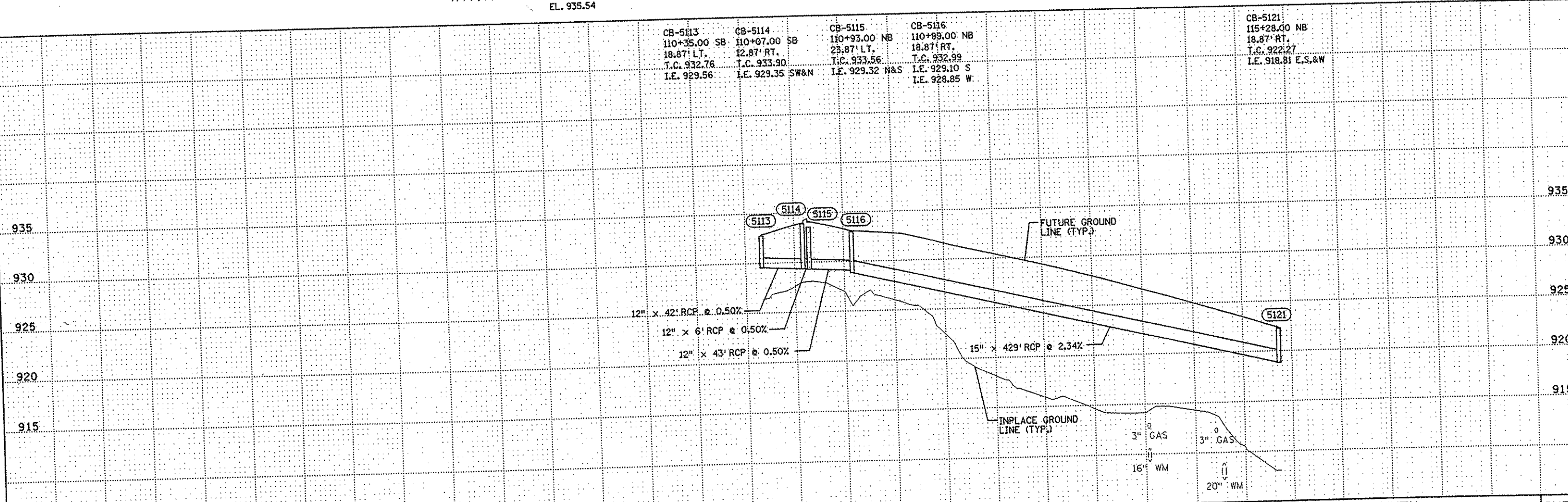
TKDA TOLTZ, KING, GUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 101+00 TO 107+00

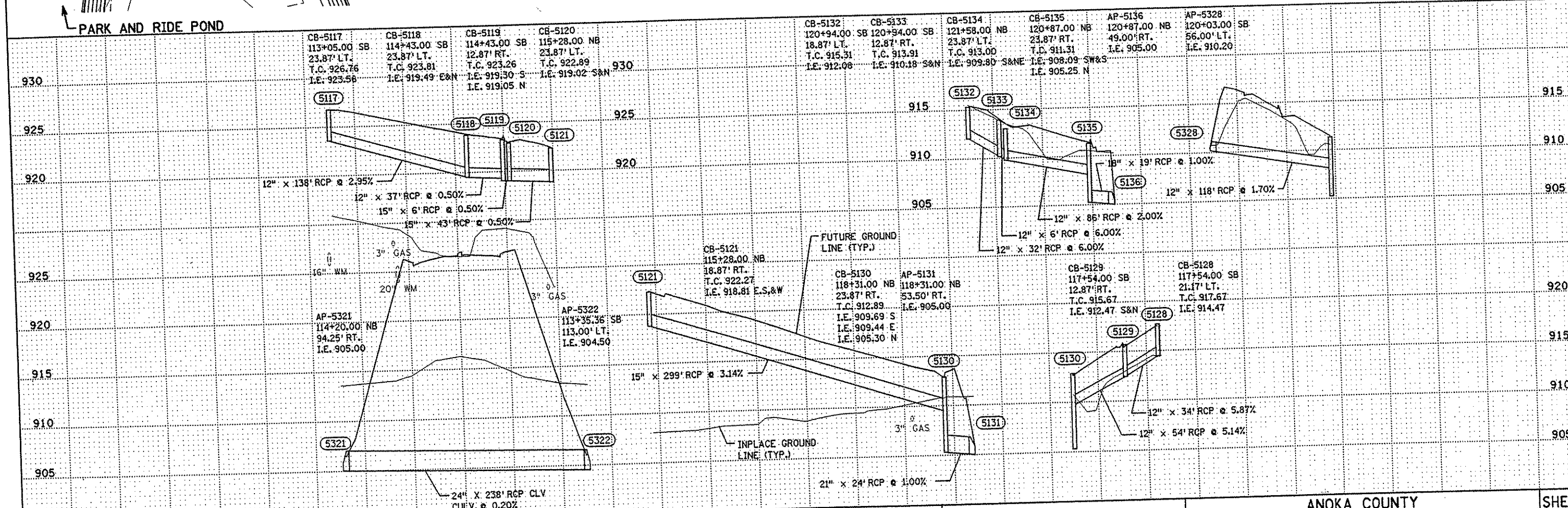
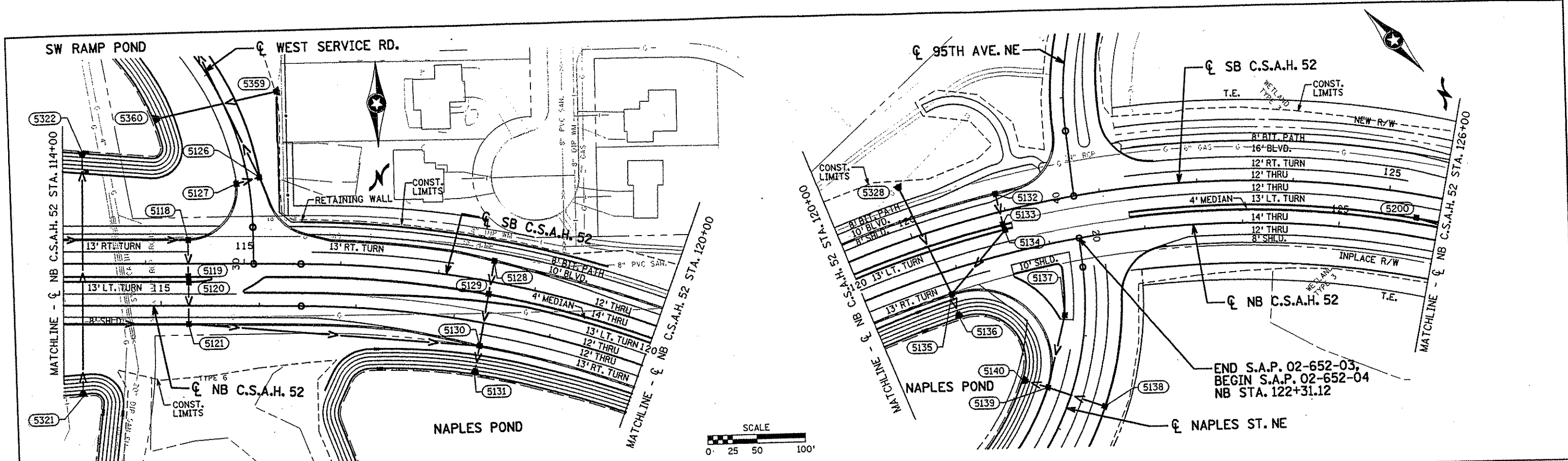
SHEET **186**
OF **559**



CB-5113 110+35.00 SB 18.87' LT. T.C. 932.76 I.E. 929.56	CB-5114 110+07.00 SB 12.87' RT. T.C. 933.90 I.E. 929.35 SW&N	CB-5115 110+93.00 NB 23.87' LT. T.C. 933.56 I.E. 929.32 N&S	CB-5116 110+99.00 NB 18.87' RT. T.C. 932.99 I.E. 929.10 S I.E. 928.85 W	CB-5121 115+28.00 NB 18.87' RT. T.C. 922.27 I.E. 918.81 E,S,&W
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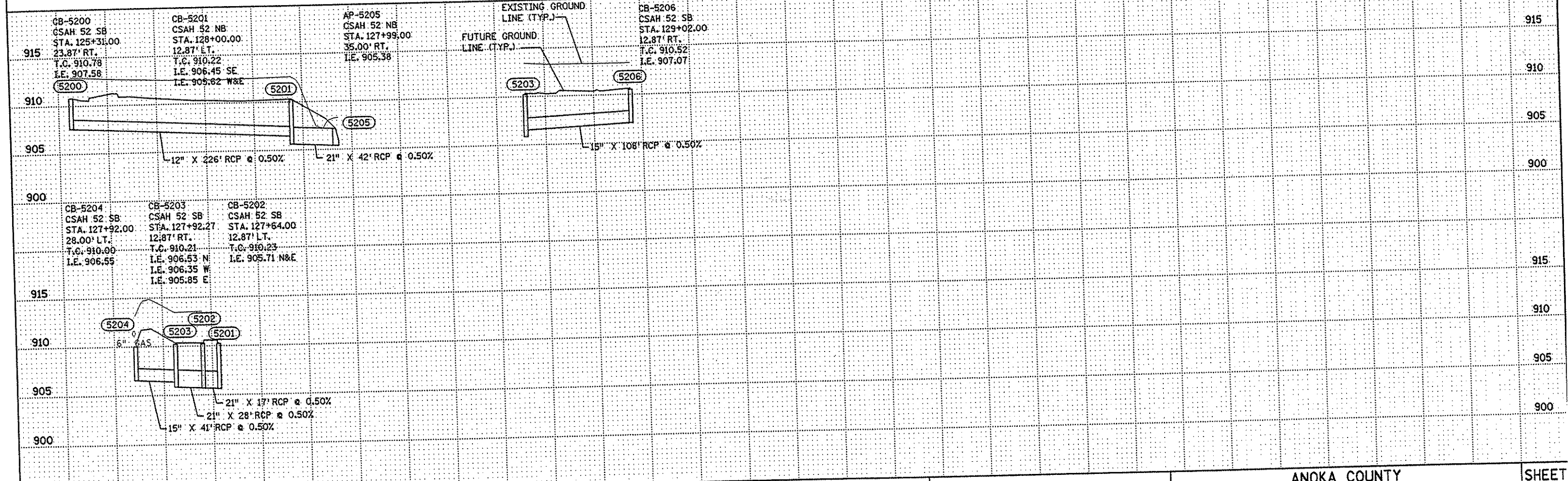
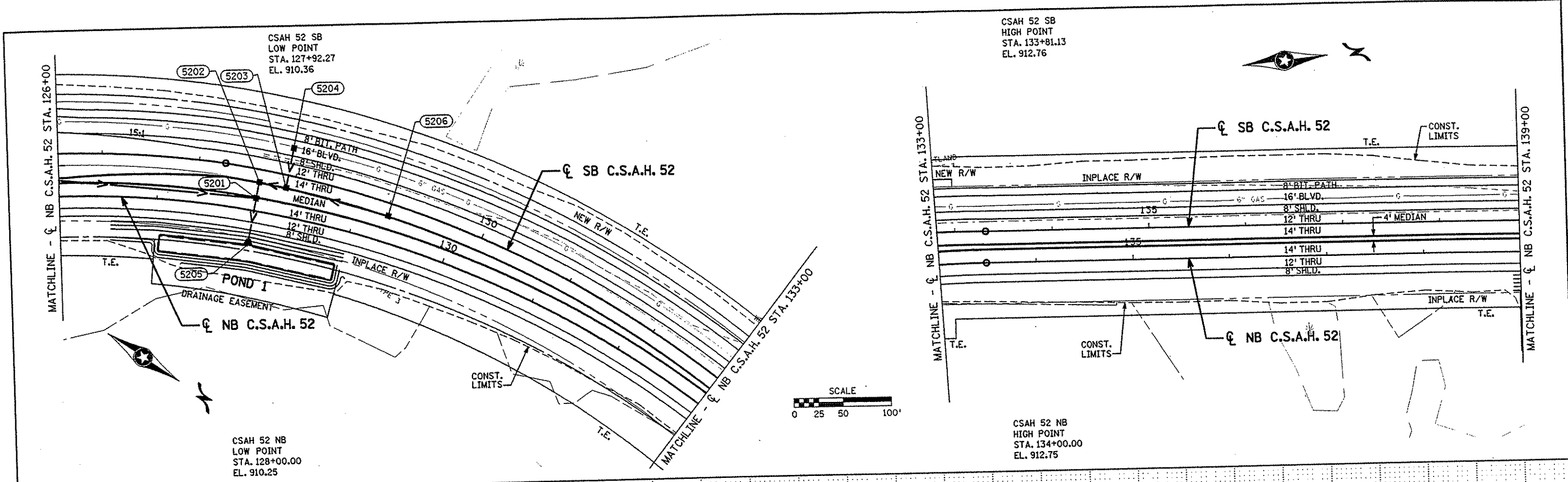


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Matthew D. Wanner</i> DATE <u>1-15-02</u> LIC. NO. <u>26883</u>		DRAWN BY <u>MAW</u> DATE <u>9-24-01</u> DESIGN BY <u>MAW</u> DATE <u>9-24-01</u> CHECKED BY <u>JMW</u> DATE <u>9-25-01</u>	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA <small>TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY DRAINAGE PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NB C.S.A.H. 52 STA. 107+00 TO 114+00	SHEET 187 OF 559
NO. DATE BY CKD APPR REVISION NAME: k:\a-f\anokacty\1174901\hwy-brdg\part4\roadway3\drawings\drain\2001						



CB-5117 113+05.00 SB 23.87' LT. T.C. 926.76 I.E. 923.56	CB-5118 114+43.00 SB 23.87' LT. T.C. 923.81 I.E. 919.49 E&N	CB-5119 114+43.00 SB 12.87' RT. T.C. 923.26 I.E. 919.30 S	CB-5120 115+28.00 NB 23.87' LT. T.C. 922.89 I.E. 919.02 S&N	930
---	---	---	---	-----

CB-5132 120+94.00 SB 18.87' LT. T.C. 915.31 I.E. 912.06	CB-5133 120+94.00 SB 12.87' RT. T.C. 913.91 I.E. 910.18 S&N	CB-5134 121+58.00 NB 23.87' LT. T.C. 913.00 I.E. 909.80 S&N	CB-5135 120+87.00 NB 23.87' RT. T.C. 911.31 I.E. 908.09 SW&S	AP-5136 120+87.00 NB 49.00' RT. I.E. 905.00	AP-5328 120+03.00 SB 56.00' LT. I.E. 910.20
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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\p03\11749\par14\roadway3\drawings\drain05.dgn 11/20/01

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.

Matthew A. Warren

DATE 11-20-01 LIC. NO. 26883

0280-50 (TH 35W)

S.P. 90-080-11

S.A.P. 02-652-02

S.A.P. 02-652-03

S.A.P. 02-652-04

S.A.P. 106-020-021, 106-020-022

DRAWN BY MAW DATE 9-24-01

DESIGN BY MAW DATE 9-24-01

CHECKED BY JMW DATE 9-25-01

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED

ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

DRAINAGE PLAN AND PROFILE

C.S.A.H. 52 RECONSTRUCTION

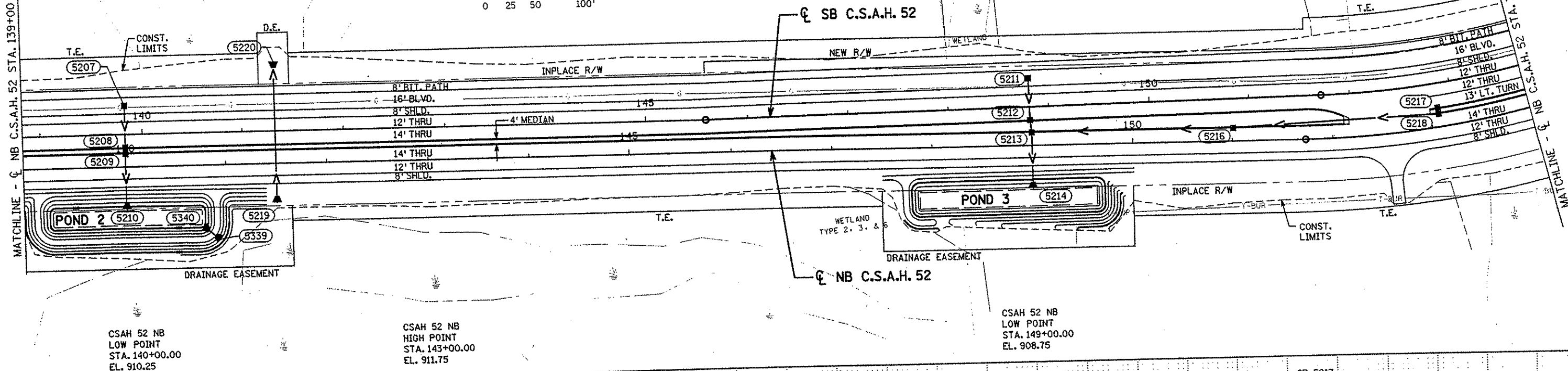
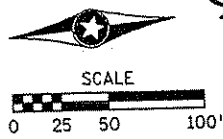
NB C.S.A.H. 52 STA. 126+00 TO 139+00

SHEET 189 OF 559

CSAH 52 SB
LOW POINT
STA. 139+82.82
EL. 910.25

CSAH 52 SB
HIGH POINT
STA. 142+82.74
EL. 911.25

CSAH 52 SB
LOW POINT
STA. 148+81.16
EL. 908.75



CSAH 52 NB
LOW POINT
STA. 140+00.00
EL. 910.25

CSAH 52 NB
HIGH POINT
STA. 143+00.00
EL. 911.75

CSAH 52 NB
LOW POINT
STA. 149+00.00
EL. 908.75

CB-5207 CSAH 52 SB STA. 139+83.00 28.00' LT. T.C. 907.80 I.E. 904.80	CB-5208 CSAH 52 SB STA. 139+82.82 12.87' RT. T.C. 910.18 I.E. 904.60 W&E	CB-5209 CSAH 52 NB STA. 140+00.00 12.87' LT. T.C. 910.18 I.E. 904.56 W&E	AP-5210 CSAH 52 NB STA. 140+00.00 42.00' RT. I.E. 904.29
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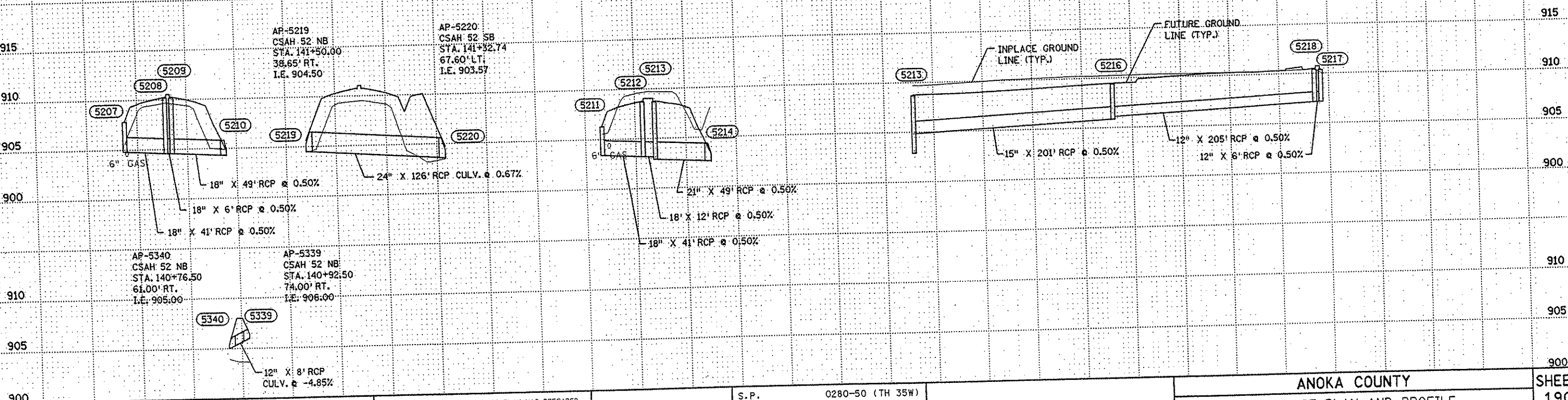
CB-5211 CSAH 52 SB STA. 148+81.00 28.00' LT. T.C. 906.30 I.E. 903.40	CB-5212 CSAH 52 SB STA. 148+81.16 12.87' RT. T.C. 908.68 I.E. 903.20 W&E	AP-5214 CSAH 52 NB STA. 148+99.00 42.00' RT. I.E. 902.61
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CB-5213 CSAH 52 NB STA. 149+00.00 12.87' LT. T.C. 908.68 I.E. 904.85 N I.E. 903.14 W I.E. 902.89 E

CB-5216 CSAH 52 NB STA. 151+01.00 12.87' LT. T.C. 909.39 I.E. 906.11 N I.E. 905.88 S
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CB-5218 CSAH 52 NB STA. 153+08.00 12.87' LT. T.C. 910.39 I.E. 907.13 W&S

CB-5217 CSAH 52 SB STA. 152+84.50 23.87' RT. T.C. 910.36 I.E. 907.16



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.

Matthew Warman
DATE 1-31-02 LIC. NO. 26883

DRAWN BY MAW DATE 9-24-01
DESIGN BY MAW DATE 9-24-01
CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUWALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 139+00 TO 154+00

SHEET
190
OF
559

CSAH 52 SB
HIGH POINT
STA. 156+57.32
EL. 912.24

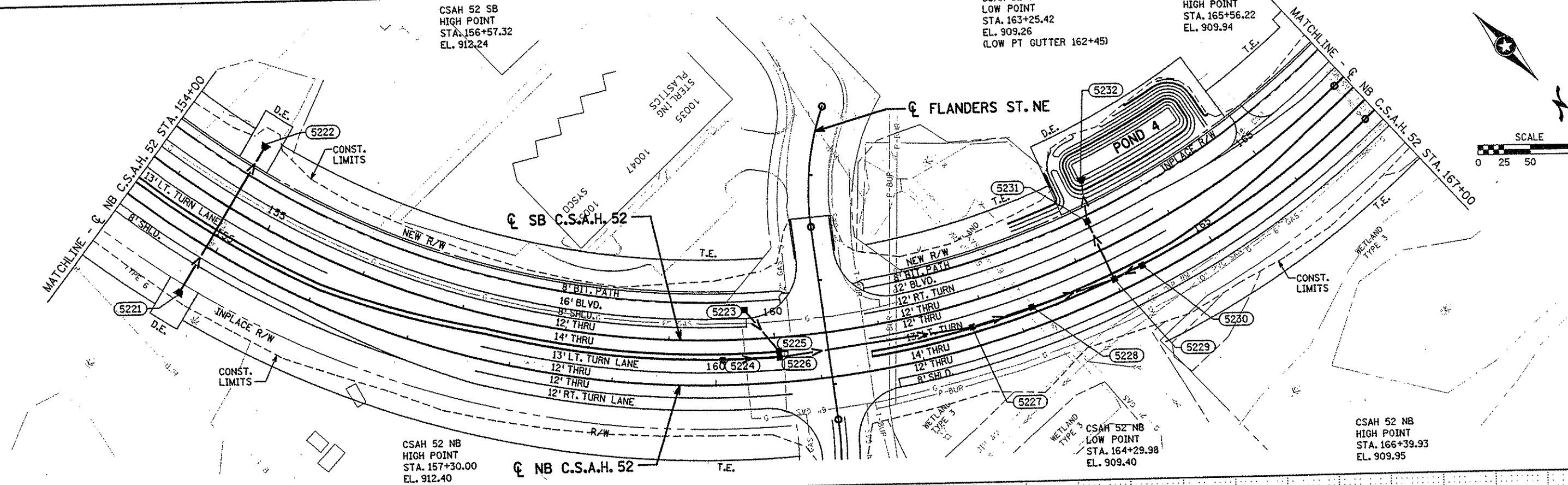
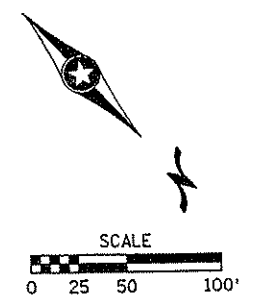
CSAH 52 SB
LOW POINT
STA. 163+25.42
EL. 909.26
(LOW PT GUTTER 162+45)

CSAH 52 SB
HIGH POINT
STA. 165+56.22
EL. 909.94

CSAH 52 NB
HIGH POINT
STA. 157+30.00
EL. 912.40

CSAH 52 NB
LOW POINT
STA. 164+29.98
EL. 909.40

CSAH 52 NB
HIGH POINT
STA. 166+39.93
EL. 909.95



AP-5221
CSAH 52 NB
STA. 154+90.00
53.94' RT.
I.E. 903.72

AP-5222
CSAH 52 SB
STA. 154+58.00
69.30' LT.
I.E. 902.74

CB-5223
CSAH 52 SB
STA. 159+73.00
26.00' LT.
T.C. 907.00
I.E. 904.75

CB-5225
CSAH 52 SB
STA. 160+03.00
12.87' RT.
T.C. 910.66
I.E. 904.57 S&N

CB-5224
CSAH 52 NB
STA. 160+07.00
23.87' LT.
T.C. 910.45
I.E. 907.25

CB-5226
CSAH 52 NB
STA. 160+62.00
23.87' LT.
T.C. 910.18
I.E. 906.98 SE
I.E. 904.54 S
I.E. 904.29 NW

CB-5227
CSAH 52 SB
STA. 161+86.00
23.87' RT.
T.C. 909.52
I.E. 903.64 E&W

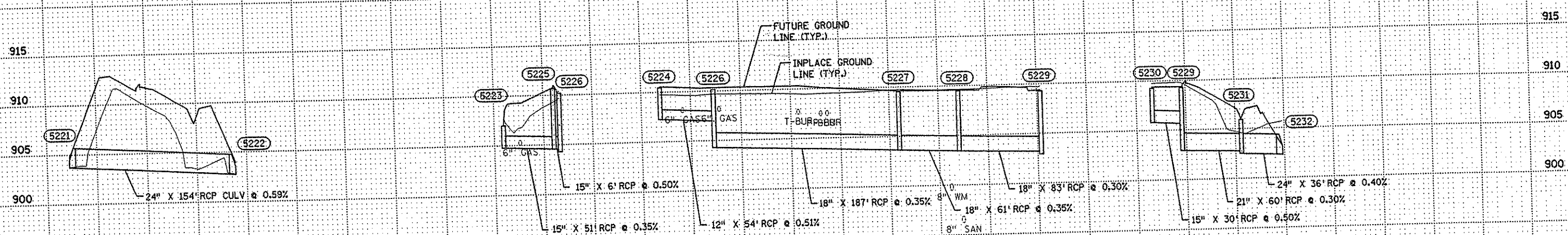
CB-5228
CSAH 52 SB
STA. 162+45.00
23.87' RT.
T.C. 909.46
I.E. 903.43 E&W

CB-5230
CSAH 52 NB
STA. 164+29.98
12.87' LT.
T.C. 909.25
I.E. 905.80

CB-5229
CSAH 52 NB
STA. 164+00.00
12.87' LT.
T.C. 909.27
I.E. 995.65 E
I.E. 903.18 W
I.E. 902.93 S

CB-5231
CSAH 52 SB
STA. 163+26.00
30.00' LT.
T.C. 905.90
I.E. 902.75 N
I.E. 902.50 S

AP-5232
CSAH 52 SB
STA. 163+40.00
70.00' LT.
I.E. 902.33



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.

Matthew Wanner
DATE 11-20-01 LIC. NO. 26883

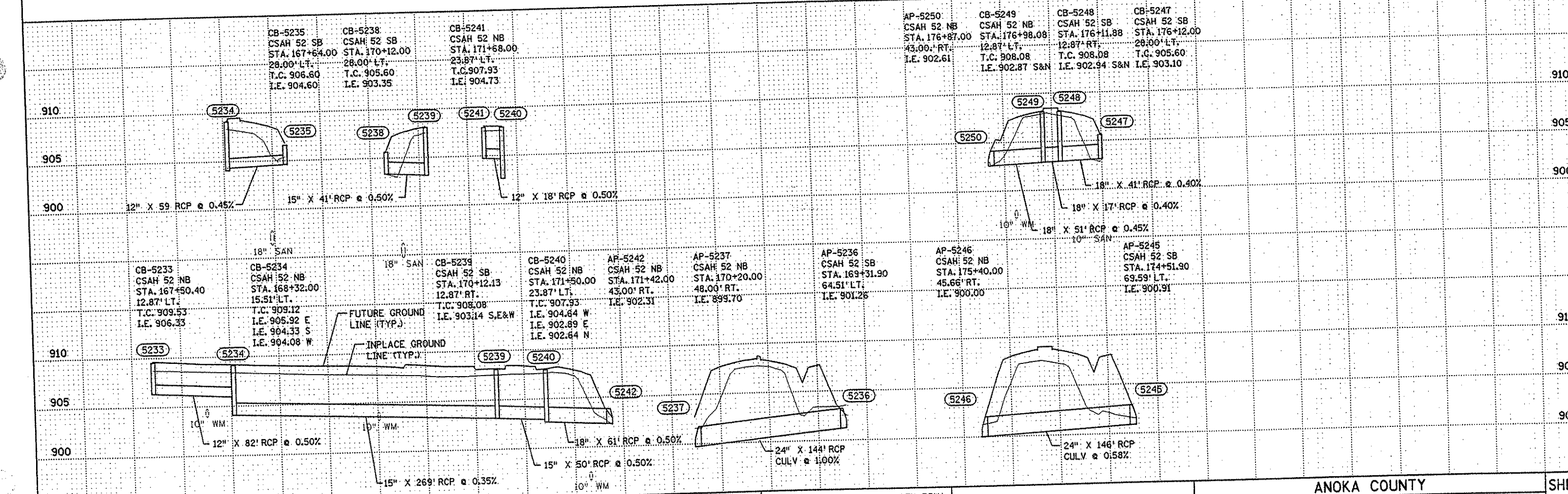
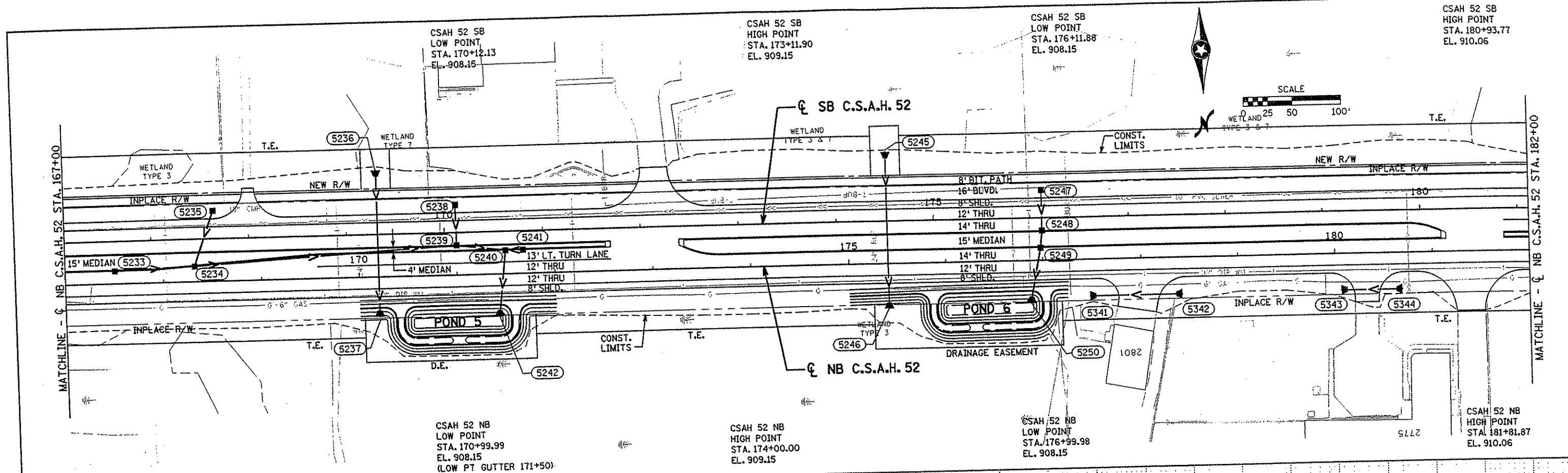
DRAWN BY MAW DATE 9-24-01
DESIGN BY MAW DATE 9-24-01
CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
ENGINEERS-ARCHITECTS-PLANNERS
TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 154+00 TO 167+00

SHEET
191
OF
559



CB-5235 CSAH 52 SB STA. 167+64.00 28.00' LT. T.C. 906.60 I.E. 904.60	CB-5238 CSAH 52 SB STA. 170+12.00 28.00' LT. T.C. 905.60 I.E. 903.35	CB-5241 CSAH 52 NB STA. 171+68.00 23.87' LT. T.C. 907.93 I.E. 904.73
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AP-5250 CSAH 52 NB STA. 176+87.00 43.00' RT. I.E. 902.61	CB-5249 CSAH 52 NB STA. 176+98.08 12.87' LT. T.C. 908.08 I.E. 902.87 S&N	CB-5248 CSAH 52 SB STA. 176+11.88 12.87' RT. T.C. 908.08 I.E. 902.94 S&N	CB-5247 CSAH 52 SB STA. 176+12.00 28.00' LT. T.C. 905.60 I.E. 903.10
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CB-5233 CSAH 52 NB STA. 167+50.40 12.87' LT. T.C. 909.53 I.E. 906.33	CB-5234 CSAH 52 NB STA. 168+32.00 15.51' LT. T.C. 909.12 I.E. 905.92 E I.E. 904.33 S I.E. 904.08 W
---	---

CB-5239 CSAH 52 SB STA. 170+12.13 12.87' RT. T.C. 908.08 I.E. 903.14 S,E&W	CB-5240 CSAH 52 NB STA. 171+50.00 23.87' LT. T.C. 907.93 I.E. 904.64 W I.E. 902.89 E I.E. 902.64 N
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AP-5242 CSAH 52 NB STA. 171+42.00 43.00' RT. I.E. 902.31	AP-5237 CSAH 52 NB STA. 170+20.00 48.00' RT. I.E. 899.70
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AP-5236 CSAH 52 SB STA. 169+31.90 64.51' LT. I.E. 901.26	AP-5246 CSAH 52 NB STA. 175+40.00 45.66' RT. I.E. 900.00
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AP-5245 CSAH 52 SB STA. 174+51.90 69.59' LT. I.E. 900.91
--

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.

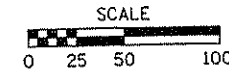
Matthew D. Wernica
DATE 2-1-02 LIC. NO. 26883

DRAWN BY	MAW	DATE	9-24-01
DESIGN BY	MAW	DATE	9-24-01
CHECKED BY	JMW	DATE	9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

CSAH 52 SB
HIGH POINT
STA. 190+51.03
EL. 910.67



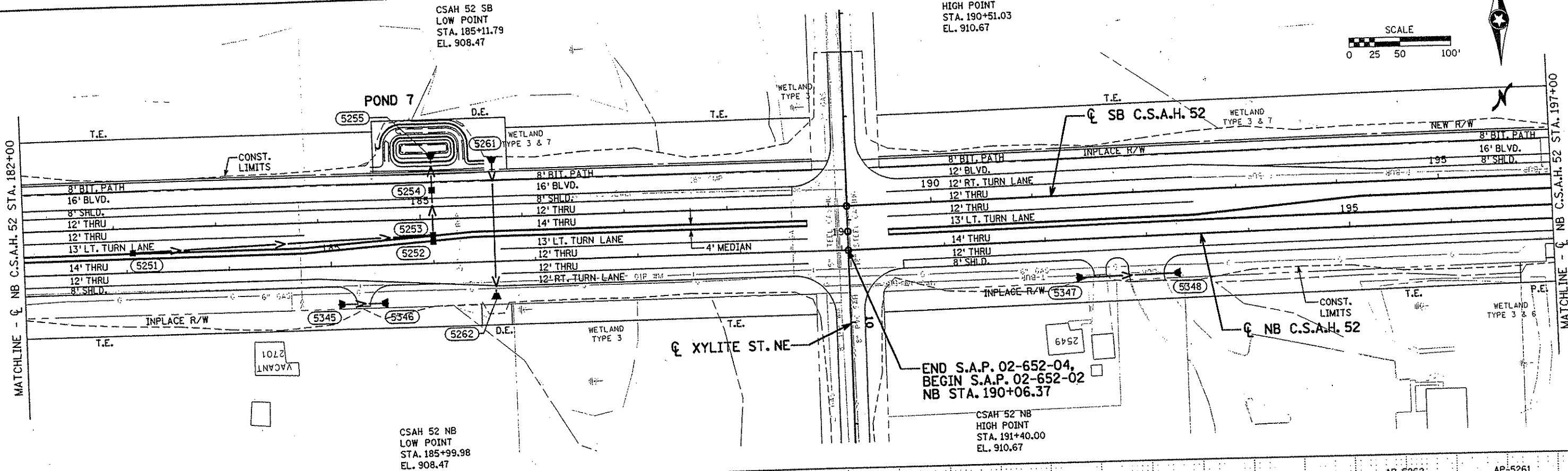
CSAH 52 SB
LOW POINT
STA. 185+11.79
EL. 908.47

CSAH 52 NB
LOW POINT
STA. 185+99.98
EL. 908.47

CSAH 52 NB
HIGH POINT
STA. 191+40.00
EL. 910.67

MATCHLINE - C NB C.S.A.H. 52 STA. 182+00

MATCHLINE - C NB C.S.A.H. 52 STA. 197+00



CB-5251
CSAH 52 SB
STA. 182+18.00
23.87° RT.
T.C. 909.42
I.E. 906.22

CB-5252
CSAH 52 NB
STA. 185+99.98
21.25° LT.
T.C. 908.57
I.E. 905.37

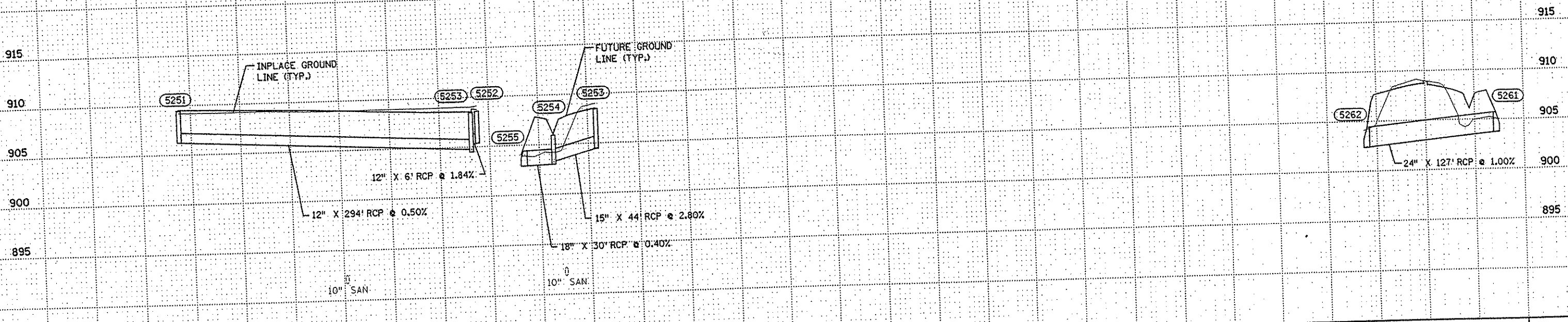
AP-5255
CSAH 52 SB
STA. 185+12.00
64.00° LT.
I.E. 902.89

CB-5254
CSAH 52 SB
STA. 185+12.00
29.00° LT.
T.C. 905.93
I.E. 903.28 N
I.E. 903.03 S

CB-5253
CSAH 52 SB
STA. 185+11.79
15.55° RT.
T.C. 908.45
I.E. 905.25 N
I.E. 904.75 E
I.E. 904.50 S

AP-5262
CSAH 52 NB
STA. 186+60.00
37.00° RT.
I.E. 902.38

AP-5261
CSAH 52 NB
STA. 186+60.00
101.50° LT.
I.E. 903.76



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.

Joseph W. Wynn
DATE: 2-14-02 LIC. NO. 22405

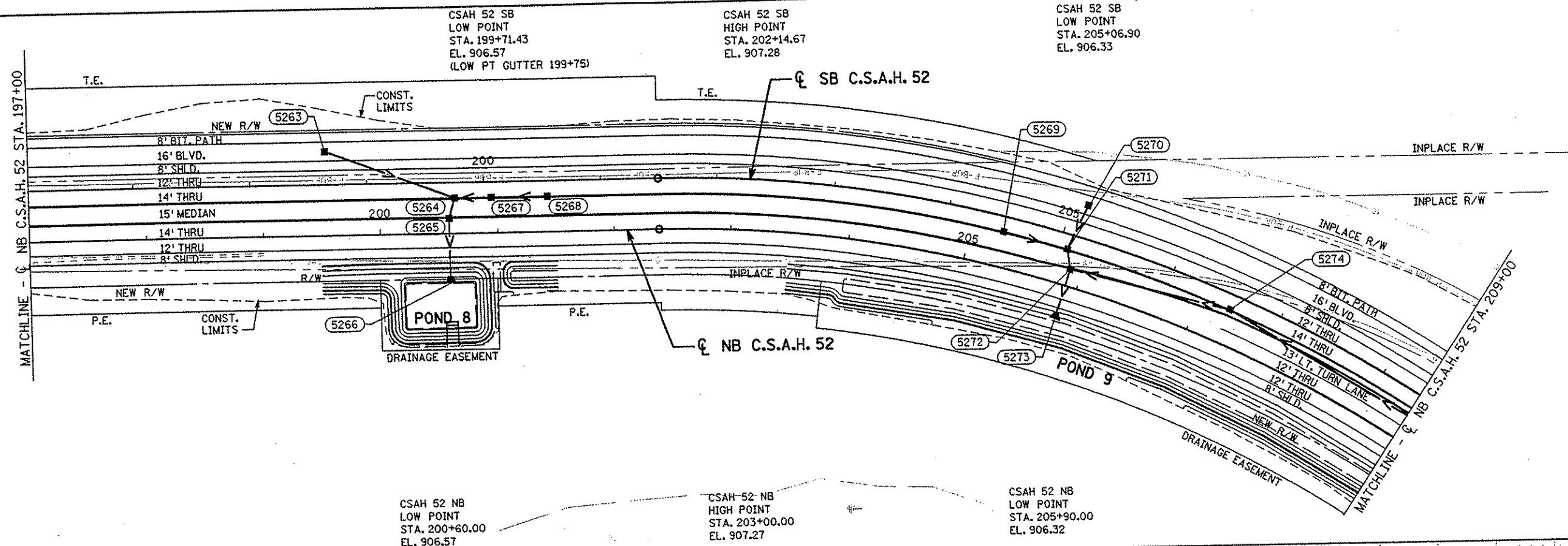
DRAWN BY: MAW DATE: 9-24-01
DESIGN BY: MAW DATE: 9-24-01
CHECKED BY: JMW DATE: 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

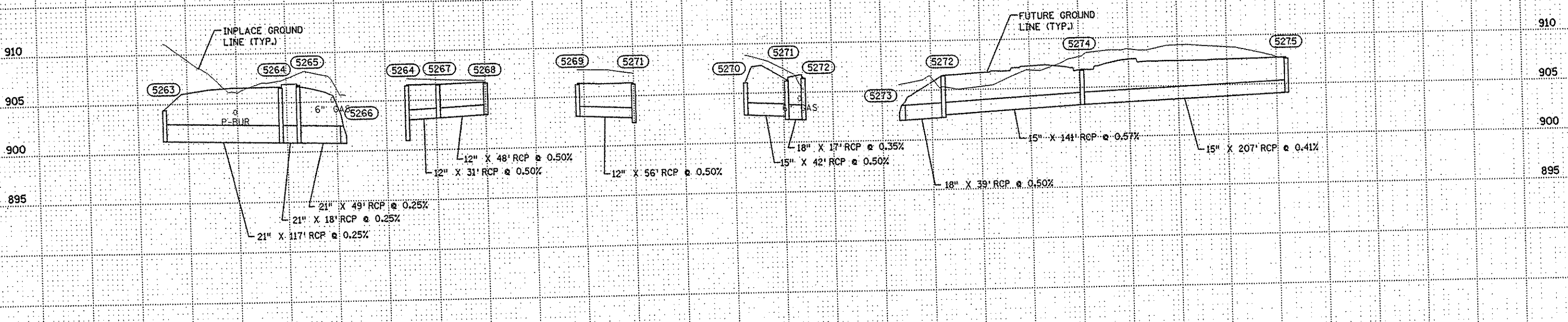
ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 182+00 TO 197+00

SHEET 193 OF 559



CSAH 52 NB LOW POINT STA. 200+60.00 EL. 906.57
 CSAH 52 NB HIGH POINT STA. 203+00.00 EL. 907.27
 CSAH 52 SB LOW POINT STA. 199+71.43 EL. 906.57 (LOW PT GUTTER 199+75)
 CSAH 52 SB HIGH POINT STA. 202+14.67 EL. 907.28
 CSAH 52 SB LOW POINT STA. 205+06.90 EL. 906.33
 CSAH 52 NB LOW POINT STA. 205+90.00 EL. 906.32

CB-5263 CSAH 52 SB STA. 198+65.00 28.00' LT. T.C. 904.40 I.E. 901.25	CB-5264 CSAH 52 SB STA. 199+75.00 12.87' RT. T.C. 906.47 I.E. 903.03 W I.E. 900.96 SE&N	CB-5265 CSAH 52 NB STA. 200+59.00 12.87' LT. T.C. 906.72 I.E. 900.91 S&N	AP-5266 CSAH 52 NB STA. 200+59.00 42.00' RT. I.E. 900.77	CB-5267 CSAH 52 SB STA. 200+06.00 12.87' RT. T.C. 906.50 I.E. 903.19 W&E	CB-5268 CSAH 52 SB STA. 200+54.00 12.87' RT. T.C. 906.63 I.E. 903.43	CB-5269 CSAH 52 SB STA. 204+50.00 12.87' RT. T.C. 906.26 I.E. 903.06	CB-5270 CSAH 52 SB STA. 205+14.00 28.00' LT. T.C. 906.05 I.E. 902.80	CB-5271 CSAH 52 SB STA. 205+06.90 12.87' RT. T.C. 906.38 I.E. 902.78 E I.E. 902.59 S I.E. 902.28 N	AP-5273 CSAH 52 NB STA. 205+89.00 30.00' RT. I.E. 902.00	CB-5272 CSAH 52 NB STA. 205+90.00 14.73' LT. T.C. 906.40 I.E. 902.47 W I.E. 902.22 S&N	CB-5274 CSAH 52 SB STA. 206+57.00 12.87' RT. T.C. 906.72 I.E. 903.27 W&E	CB-5275 CSAH 52 NB STA. 209+30.00 23.87' LT. T.C. 907.56 I.E. 904.11 NW&SE
---	---	---	--	---	---	---	---	---	--	--	---	---



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.

Joseph Weaver
 DATE 2-14-02 LIC. NO. 22405

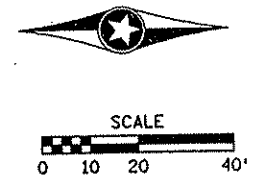
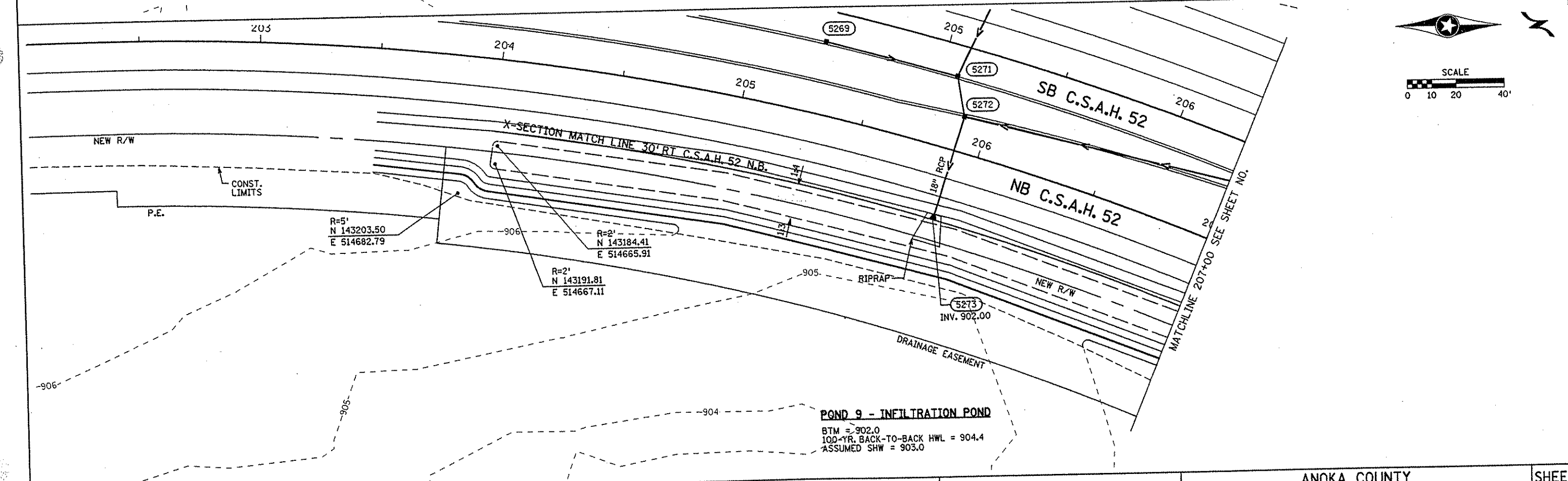
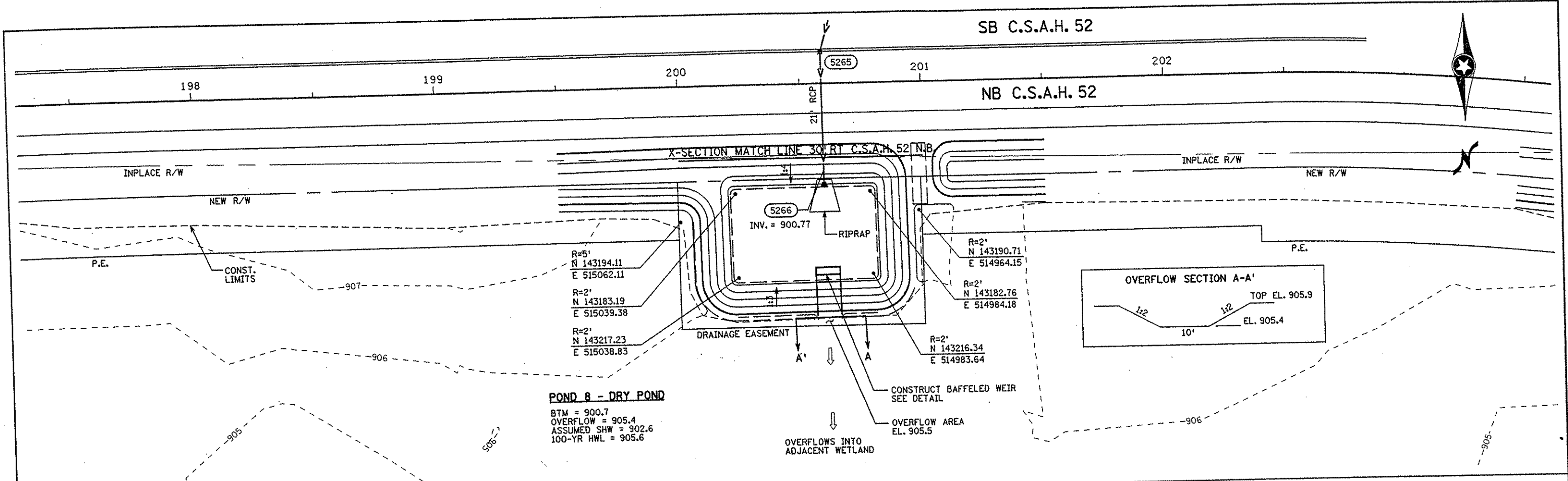
DRAWN BY MAW DATE 9-24-01
 DESIGN BY MAW DATE 9-24-01
 CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DRAINAGE PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 NB C.S.A.H. 52 STA. 197+00 TO 209+00

SHEET 194 OF 559



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.

Joseph Wilson
 DATE 2-14-02 LIC. NO. 22405

DRAWN BY MAW DATE 9-24-01
 DESIGN BY MAW DATE 9-24-01
 CHECKED BY JMW DATE 9-25-01

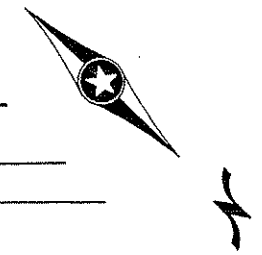
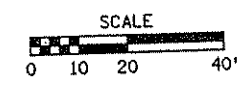
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 POND 8 AND POND 9

SHEET 363 OF 559

NAME: x:\a-f\anokacty\1174901\hwy-brdg\part4\roadway3\drawings\pond02.dwg 2002



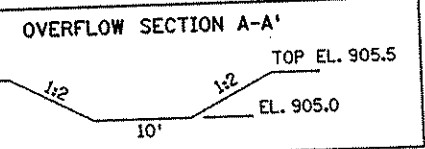
MATCHLINE 20+00 SEE SHEET NO.

INPLACE R/W
207
208
209
210
SB C.S.A.H. 52
NB C.S.A.H. 52

X-SECTION MATCH LINE 30' RT. C.S.A.H. 52 N.B.

R=5'
N 143433.82
E 514138.86
R=2'
N 143411.48
E 514145.33
R=2'
N 143417.47
E 514149.85

POND 9 - INFILTRATION POND
BTM = 902.0
100-YR. BACK-TO-BACK HWL = 904.4
ASSUMED SHW = 903.0



OVERFLOW AREA
EL. 905.0
CONSTRUCT BAFFLED WEIR
SEE DETAIL

OVERFLOWS INTO
ADJACENT WETLAND

POND 10 - DRY POND
BTM = 903.0
OVERFLOW = 905.0
100-YR HWL = 905.4
TOP = 905.5
ASSUMED SHW = 903.0

R=2.8'
N 143636.25
E 513705.76
R=2'
N 143639.80
E 513721.03

R=2.8'
N 143653.01
E 513697.70

R=2'
N 143808.66
E 513645.54
R=2'
N 143812.94
E 513655.67

R=5'
N 143839.83
E 513655.09

R=2'
N 143644.56
E 513730.94

DRAINAGE EASEMENT

6' WIDTH EL. 905.5

RIPRAP
5282
INV. 903.0

X-SECTION MATCH LINE 50' LT. C.S.A.H. 52 S.B.

SB C.S.A.H. 52

213

214

215

216

217

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.
Joseph Weaver
DATE 2-14-02 LIC. NO. 22405

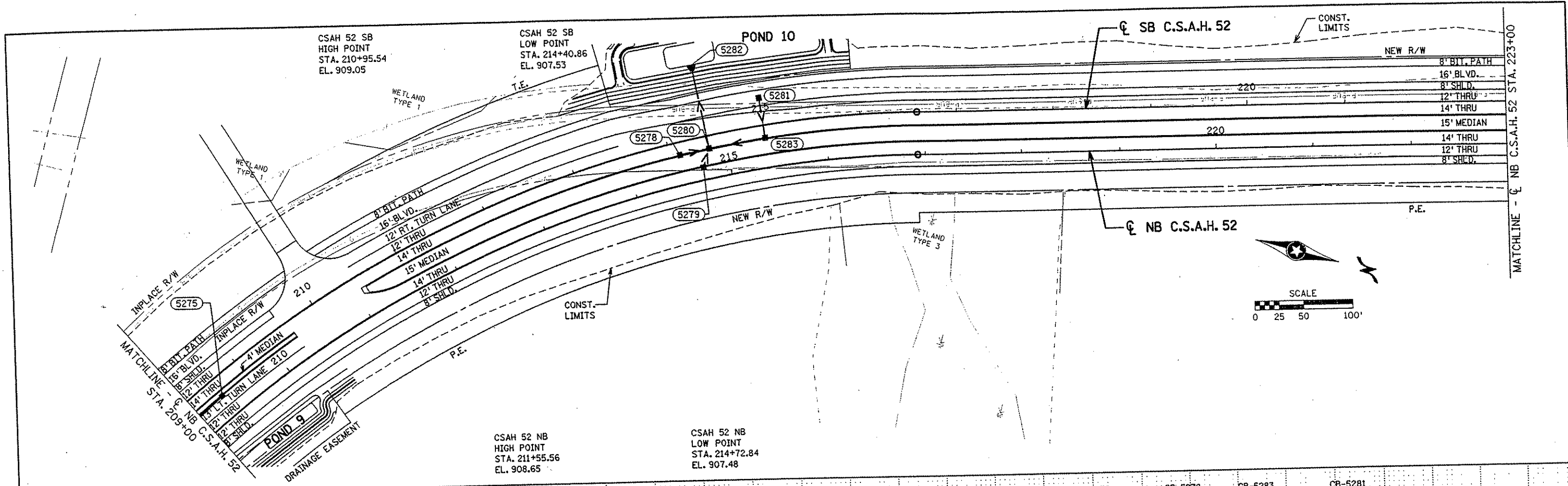
DRAWN BY MAW DATE 9-24-01
DESIGN BY MAW DATE 9-24-01
CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

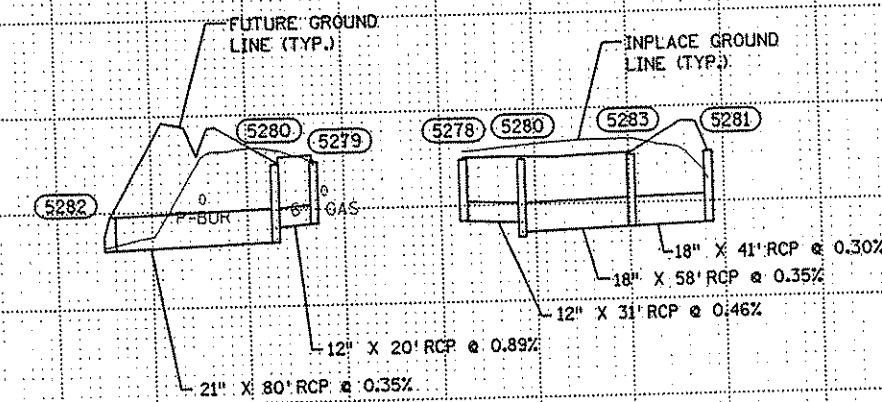
TKDA
TOLTZ, KING, DUWALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
GRADING PLAN
C.S.A.H. 52 RECONSTRUCTION
POND 9 AND POND 10

SHEET
364
OF
559



AP-5282 CSAH 52 SB STA. 214+40.86 75.00' LT. I.E. 903.02	CB-5280 CSAH 52 SB STA. 214+40.86 12.87' RT. T.C. 907.38 I.E. 904.07 E&SE I.E. 903.57 NW I.E. 903.32 SW	CB-5279 CSAH 52 NB STA. 214+72.84 12.87' LT. T.C. 907.45 I.E. 904.25	CB-5278 CSAH 52 SB STA. 214+10.00 12.87' RT. T.C. 907.41 I.E. 904.21	CB-5283 CSAH 52 SB STA. 215+00.00 12.67' RT. T.C. 907.51 I.E. 903.78 SW&SE	CB-5281 CSAH 52 SB STA. 215+00.00 28.00' LT. T.C. 907.60 I.E. 903.90
--	--	---	---	---	---



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.

Joseph Zeman
DATE: 2-17-02 LIC. NO. 22405

DRAWN BY: MAW DATE: 9-24-01
 DESIGN BY: MAW DATE: 9-24-01
 CHECKED BY: JMW DATE: 9-25-01

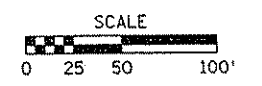
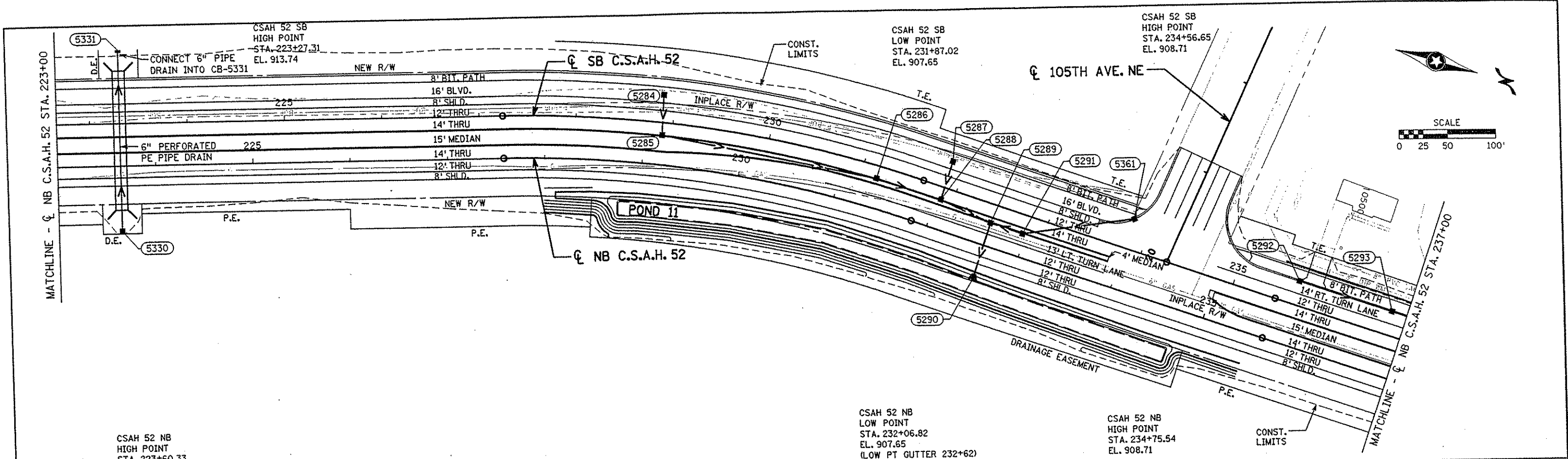
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
 NB C.S.A.H. 52 STA. 209+00 TO 223+00

SHEET
195
OF
559



CSAH 52 NB
HIGH POINT
STA. 223+60.33
EL. 913.74

CSAH 52 NB
LOW POINT
STA. 232+06.82
EL. 907.65
(LOW PT GUTTER 232+62)

CSAH 52 NB
HIGH POINT
STA. 234+75.54
EL. 908.71

CB-5331
CSAH 52 SB
STA. 223+31.02
75.00' LT.
T.C. 900.88
I.E. 898.40

CB-5330
CSAH 52 NB
STA. 223+64.51
66.00' RT.
T.C. 900.90
I.E. 899.00

CB-5284
CSAH 52 SB
STA. 228+88.00
28.00' LT.
T.C. 909.40
I.E. 906.20

CB-5285
CSAH 52 SB
STA. 228+90.00
12.87' RT.
T.C. 909.51
I.E. 906.00 S/W
I.E. 905.75 N

CB-5286
CSAH 52 SB
STA. 231+16.00
12.87' RT.
T.C. 907.70
I.E. 904.25 S&N

CB-5288
CSAH 52 SB
STA. 231+87.02
12.87' RT.
T.C. 907.52
I.E. 904.10 W
I.E. 903.85 S
I.E. 903.35 N

CB-5289
CSAH 52 NB
STA. 232+62.00
23.87' LT.
T.C. 907.68
I.E. 903.85 N
I.E. 903.06 S&E

AP-5290
CSAH 52 NB
STA. 232+62.00
37.00' RT.
I.E. 902.82

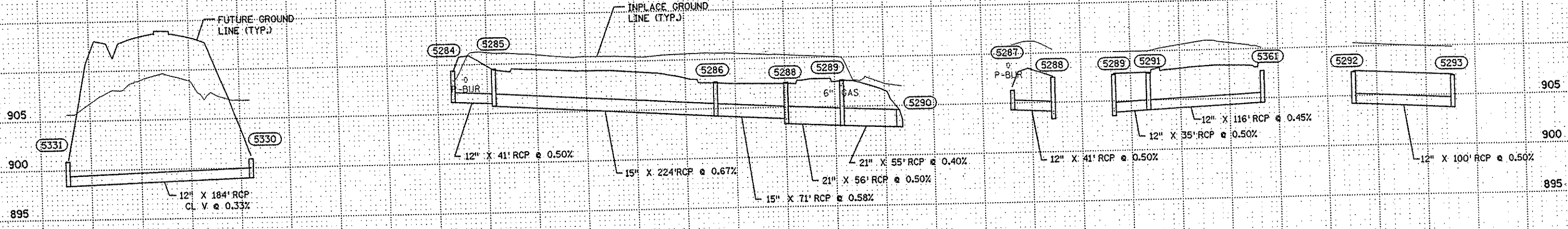
CB-5287
CSAH 52 SB
STA. 231+87.00
28.00' LT.
T.C. 906.30
I.E. 904.30

CB-5291
CSAH 52 NB
STA. 232+97.00
23.87' LT.
T.C. 907.73
I.E. 904.03 NW&S

CB-5361
CSAH 52 SB
STA. 233+82.68
31.51' LT.
T.C. 907.75
I.E. 904.55

CB-5292
CSAH 52 SB
STA. 235+65.00
24.87' LT.
T.C. 907.42
I.E. 904.22

CB-5293
CSAH 52 SB
STA. 236+65.00
24.87' LT.
T.C. 906.92
I.E. 903.72 S&N



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.

Joseph M. Williams
DATE: 2-14-02 LIC. NO. 22405

DRAWN BY: MAW DATE: 9-24-01
DESIGN BY: MAW DATE: 9-24-01
CHECKED BY: JMW DATE: 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLIZ, KING, GIVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

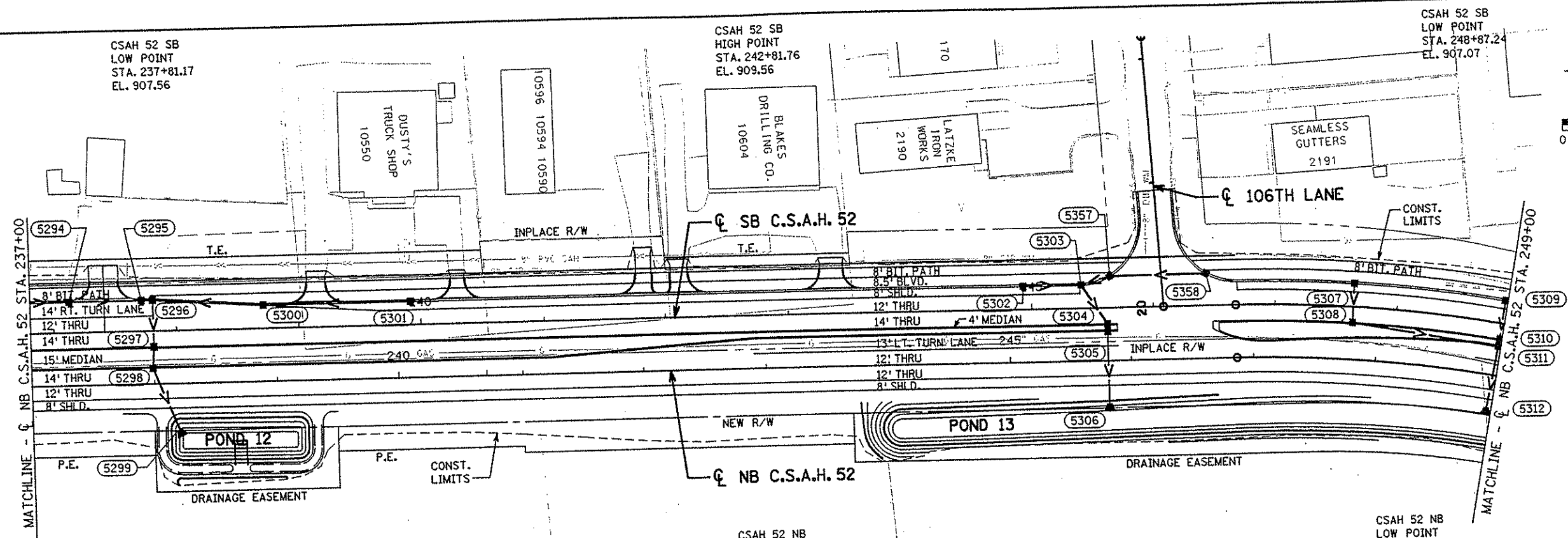
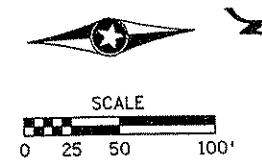
ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 223+00 TO 237+00

SHEET
196
OF
559

CSAH 52 SB
LOW POINT
STA. 237+81.17
EL. 907.56

CSAH 52 SB
HIGH POINT
STA. 242+81.76
EL. 909.56

CSAH 52 SB
LOW POINT
STA. 248+87.24
EL. 907.07

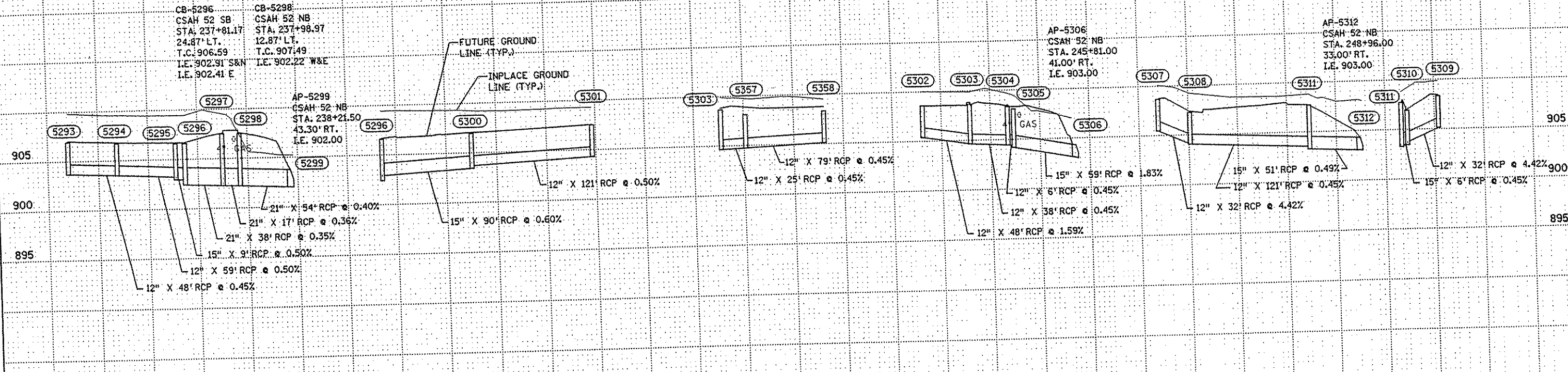


CSAH 52 NB
LOW POINT
STA. 238+00.08
EL. 907.56

CSAH 52 NB
HIGH POINT
STA. 243+00.00
EL. 909.56

CSAH 52 NB
LOW POINT
STA. 248+97.79
EL. 907.07

CB-5293 CSAH 52 SB STA. 236+65.00 24.87' LT. T.C. 906.92 I.E. 903.72 S&N	CB-5294 CSAH 52 SB STA. 237+13.00 24.87' LT. T.C. 906.70 I.E. 903.50 S&N	CB-5295 CSAH 52 SB STA. 237+72.00 24.87' LT. T.C. 906.59 I.E. 903.21 S I.E. 902.96 N	CB-5297 CSAH 52 SB STA. 237+81.17 12.87' RT. T.C. 907.49 I.E. 902.28 W&E	CB-5298 CSAH 52 NB STA. 237+98.97 24.87' LT. T.C. 906.59 I.E. 902.91 S&N I.E. 902.41 E	CB-5299 CSAH 52 NB STA. 238+21.50 43.30' RT. I.E. 902.00	CB-5300 CSAH 52 SB STA. 238+71.00 18.87' LT. T.C. 906.94 I.E. 903.70 N I.E. 903.45 S	CB-5301 CSAH 52 SB STA. 239+92.00 18.87' LT. T.C. 907.51 I.E. 904.31	CB-5357 CSAH 52 SB STA. 245+65.00 25.37' LT. T.C. 908.10 I.E. 904.75 N&S	CB-5358 CSAH 52 SB STA. 246+43.80 25.80' LT. T.C. 908.30 I.E. 905.10	CB-5302 CSAH 52 SB STA. 244+93.00 18.87' LT. T.C. 908.60 I.E. 905.40	CB-5303 CSAH 52 SB STA. 245+41.00 18.87' LT. T.C. 908.66 I.E. 904.63 S&E	CB-5304 CSAH 52 SB STA. 245+62.00 12.87' RT. T.C. 908.32 I.E. 904.46 SW&E	CB-5305 CSAH 52 NB STA. 245+81.00 23.87' LT. T.C. 908.07 I.E. 904.43 W I.E. 904.18 E	CB-5307 CSAH 52 SB STA. 247+64.00 18.87' LT. T.C. 908.68 I.E. 905.48	CB-5308 CSAH 52 SB STA. 247+64.00 12.87' RT. T.C. 907.28 I.E. 904.08 W&N	CB-5311 CSAH 52 NB STA. 248+97.79 23.87' LT. T.C. 907.70 I.E. 903.53 S I.E. 903.44 W I.E. 903.28 E	CB-5310 CSAH 52 SB STA. 248+87.24 12.87' RT. T.C. 906.92 I.E. 903.72 W I.E. 903.47 E	CB-5309 CSAH 52 SB STA. 248+87.24 18.87' LT. T.C. 908.32 I.E. 905.12
---	---	--	---	--	--	--	---	---	---	---	---	--	--	---	---	---	--	---



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.

Joseph P. Weaver
DATE: 2-14-02 LIC. NO. 22465

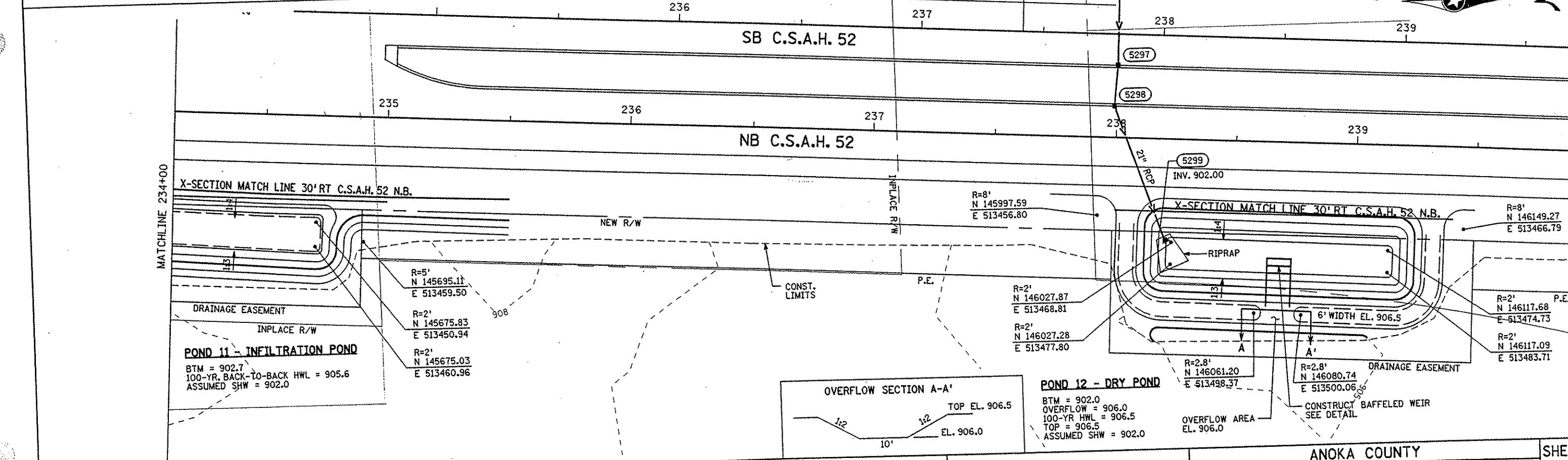
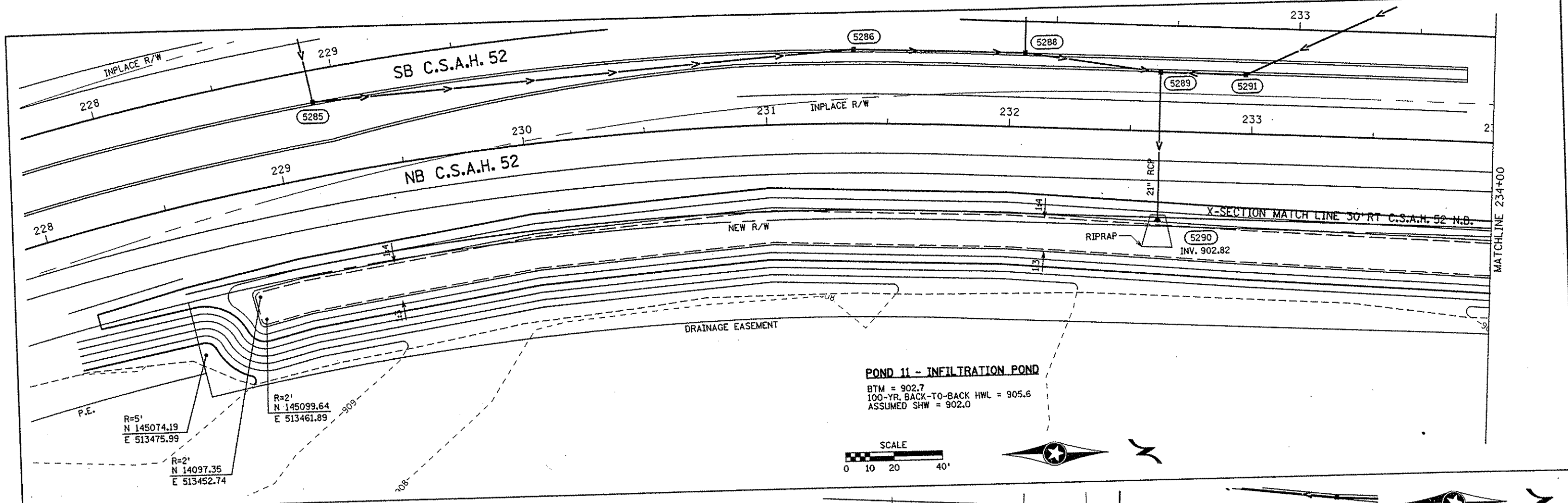
DRAWN BY: MAW DATE: 9-24-01
DESIGN BY: MAW DATE: 9-24-01
CHECKED BY: JMW DATE: 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

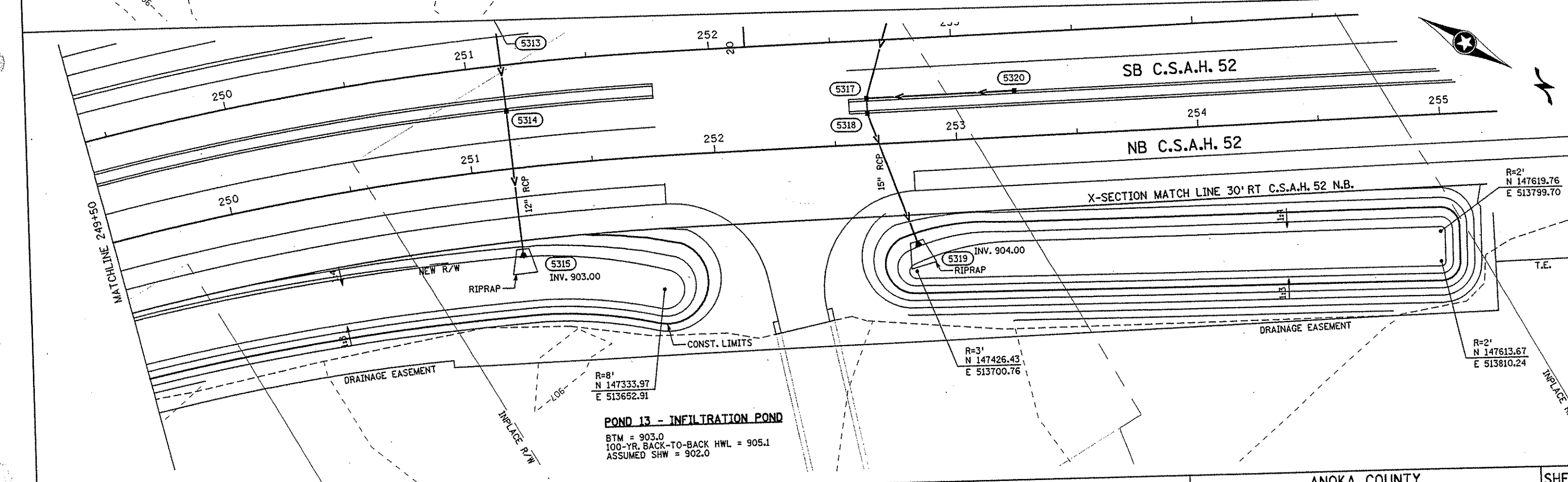
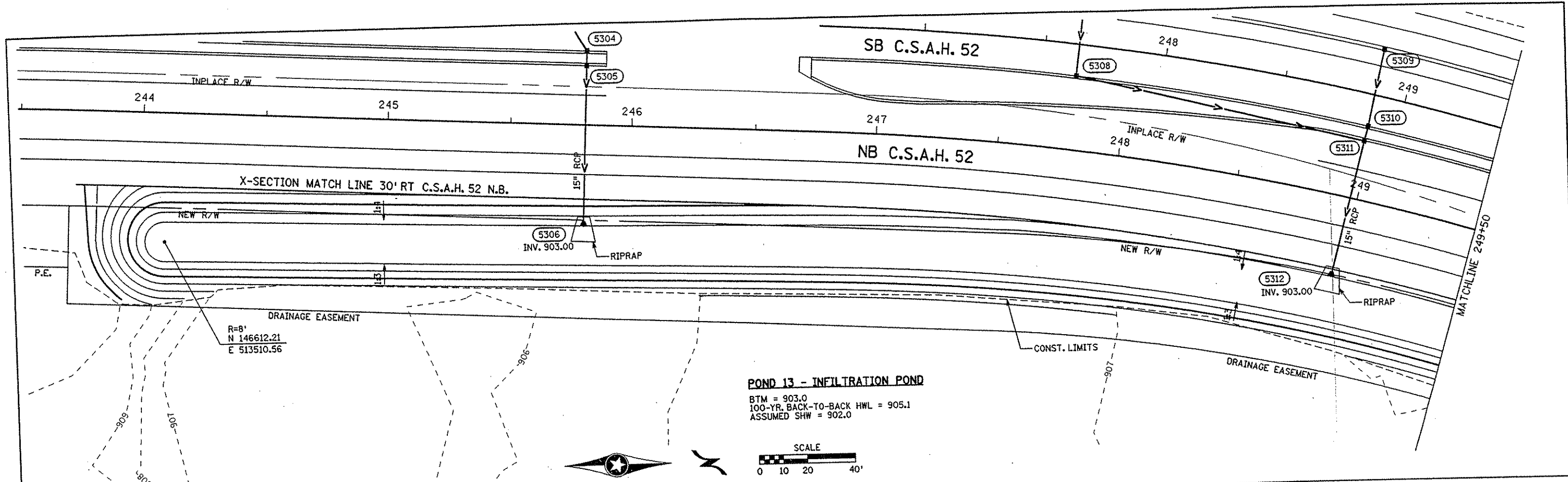
TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 237+00 TO 249+00

SHEET
197
OF
559



NO		DATE	BY	CKD	APPR	REVISION
NAME: R:\a-f\anokac\y\1174901\hwy-brdg\part4\roadway3\drawings\pond02.dwg 2002						
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.						
DATE		LIC. NO.				
2-14-02		22405				
DRAWN BY		DATE		S.P.		
MAW		9-24-01		0280-50 (TH 35W)		
DESIGN BY		DATE		S.P.		
MAW		9-24-01		90-080-11		
CHECKED BY		DATE		S.A.P.		
JMM		9-25-01		02-652-02		
				S.A.P.		
				02-652-03		
				S.A.P.		
				02-652-04		
				S.A.P.		
				106-020-021, 106-020-022		
				TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		
ANOKA COUNTY GRADING PLAN C.S.A.H. 52 RECONSTRUCTION POND 11 AND POND 12						SHEET 365 OF 559



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.

Joseph Weary
 DATE 2-14-02 LIC. NO. 22405

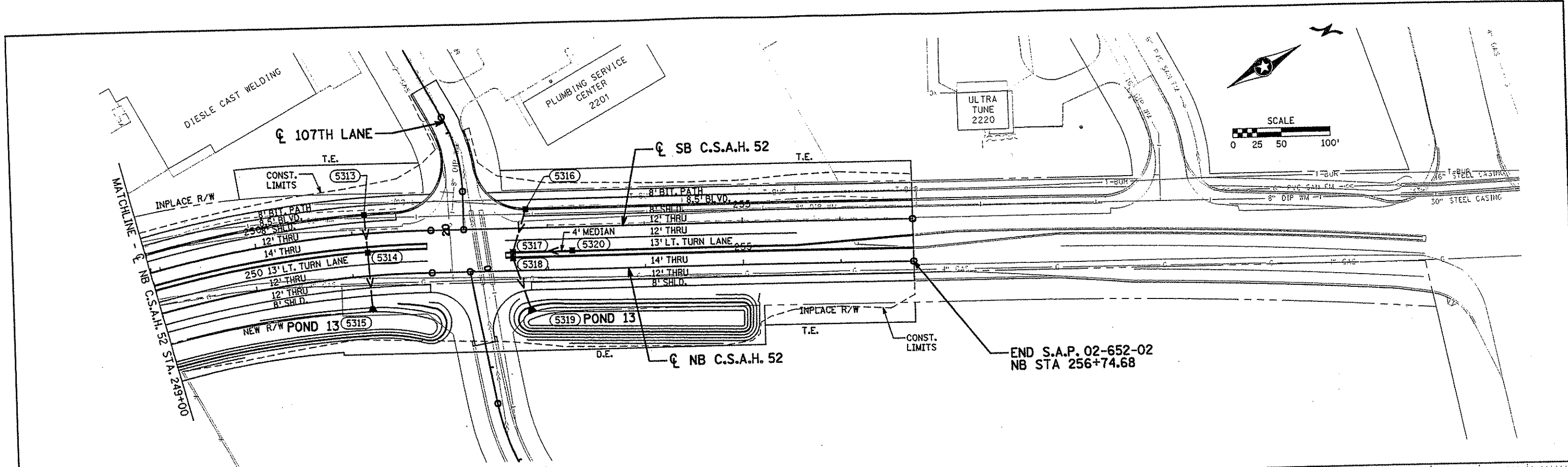
DRAWN BY MAW DATE 9-24-01
 DESIGN BY MAW DATE 9-24-01
 CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

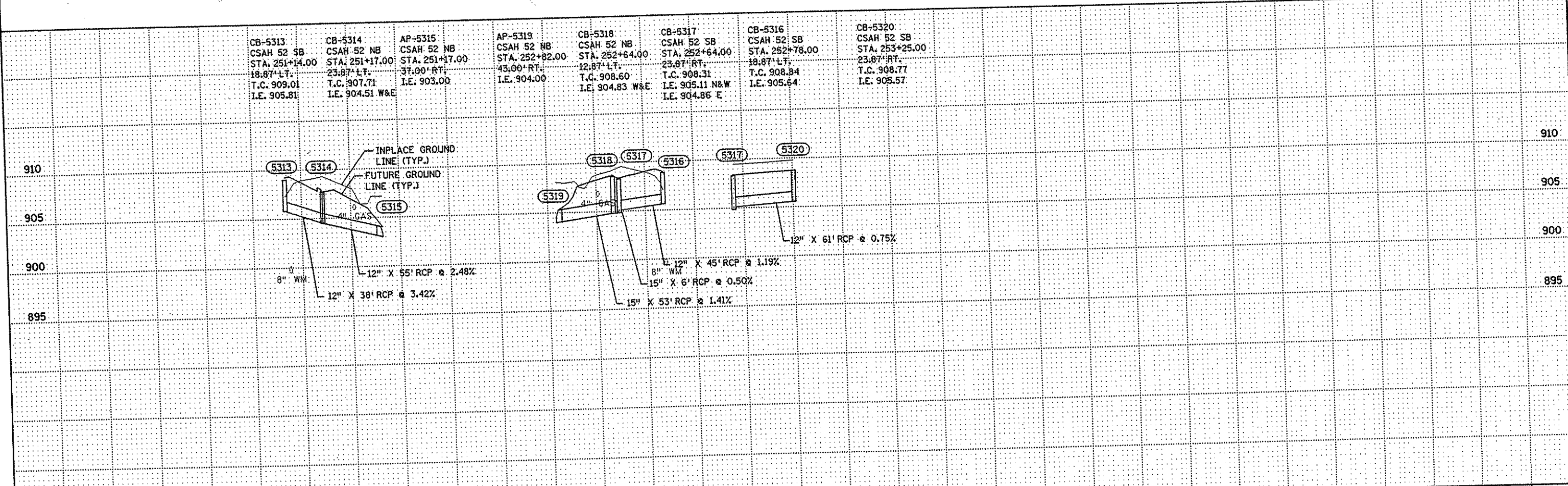
TKDA
 TOLIZ, KING, OLIVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 POND 13

SHEET
 366
 OF
 559



CB-5313 CSAH 52 SB STA. 251+14.00 18.87' LT. T.C. 909.01 I.E. 905.81	CB-5314 CSAH 52 NB STA. 251+17.00 23.87' LT. T.C. 907.71 I.E. 904.51 W&E	AP-5315 CSAH 52 NB STA. 251+17.00 37.00' RT. T.C. 903.00 I.E. 903.00	AP-5319 CSAH 52 NB STA. 252+82.00 43.00' RT. T.C. 904.00 I.E. 904.00	CB-5318 CSAH 52 NB STA. 252+64.00 12.87' LT. T.C. 908.60 I.E. 904.83 W&E	CB-5317 CSAH 52 SB STA. 252+64.00 23.87' RT. T.C. 908.31 I.E. 905.11 N&W I.E. 904.86 E	CB-5316 CSAH 52 SB STA. 252+78.00 18.87' LT. T.C. 908.84 I.E. 905.64	CB-5320 CSAH 52 SB STA. 253+25.00 23.87' RT. T.C. 908.77 I.E. 905.57
---	---	---	---	---	--	---	---



NO	DATE	BY	CRD	APPR	REVISION

NAME: K:\site\proj\11749\bar+4\roadway\drawings\drain14.dgn 11/20/01

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

Matthew A. Warren
DATE 11-20-01 LIC. NO. 26883

DRAWN BY	MAW	DATE	9-24-01
DESIGN BY	MAW	DATE	9-24-01
CHECKED BY	JMW	DATE	9-25-01

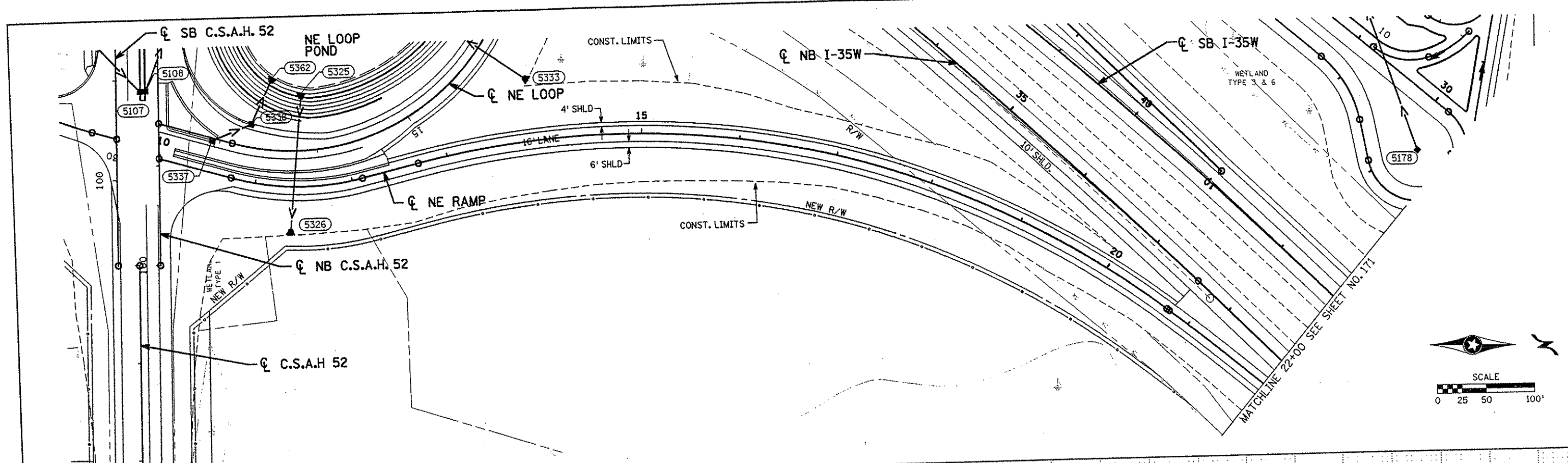
S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NB C.S.A.H. 52 STA. 249+00 TO 256+74.68

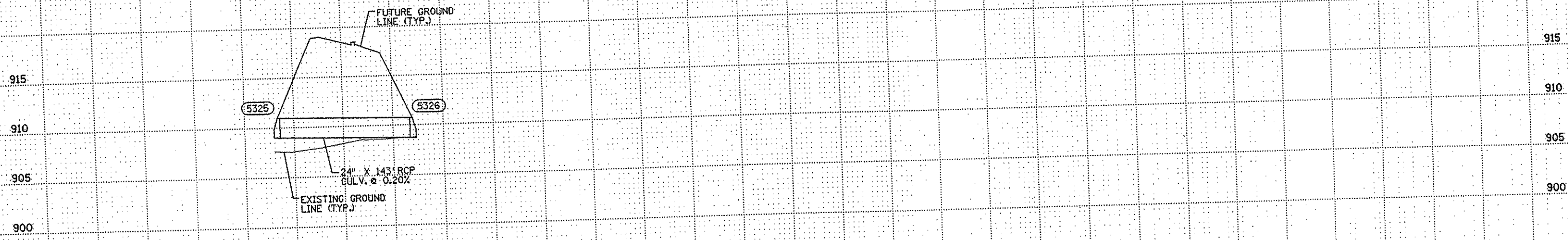
SHEET 198 OF 559



NE RAMP

AP-5325
NE RAMP
STA. 11+50.00
94.00' LT
I.E. 909.00

AP-5326
NE RAMP
STA. 11+37.00
49.00' RT
I.E. 908.71



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\a-4\ankant\1174901\hwy-proj\part4\roadway\drawings\drain\2001

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.

Matthew A. Wamman
DATE 1-15-02 LIC. NO. 26883

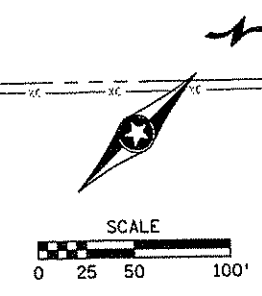
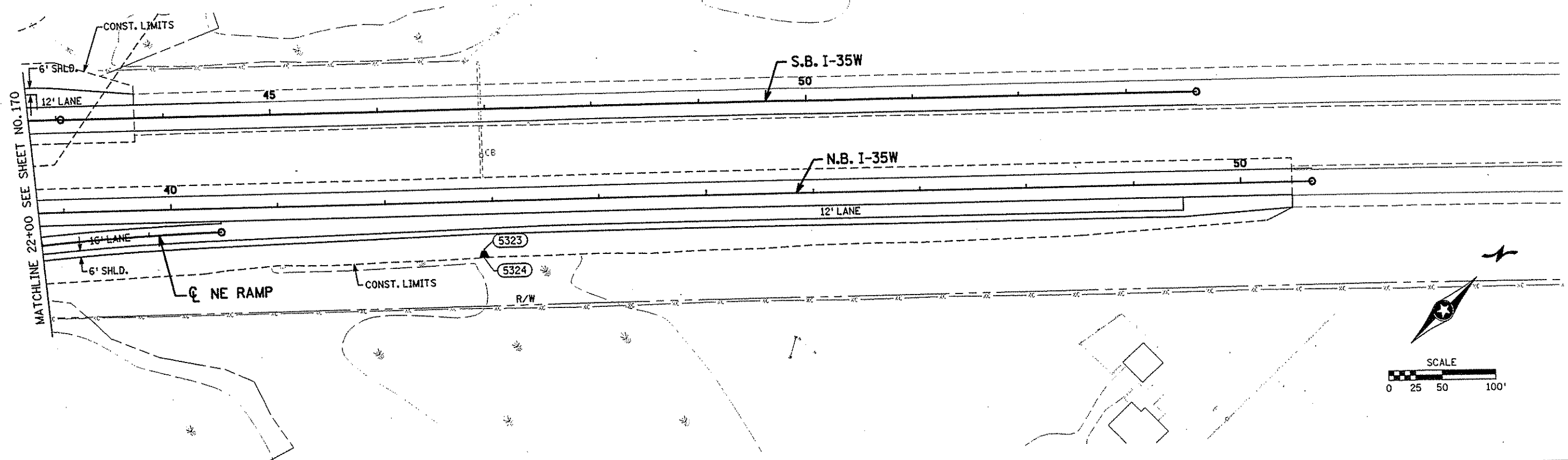
DRAWN BY MAW DATE 9-24-01
DESIGN BY MAW DATE 9-24-01
CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NE RAMP STA. 10+00 TO 22+00

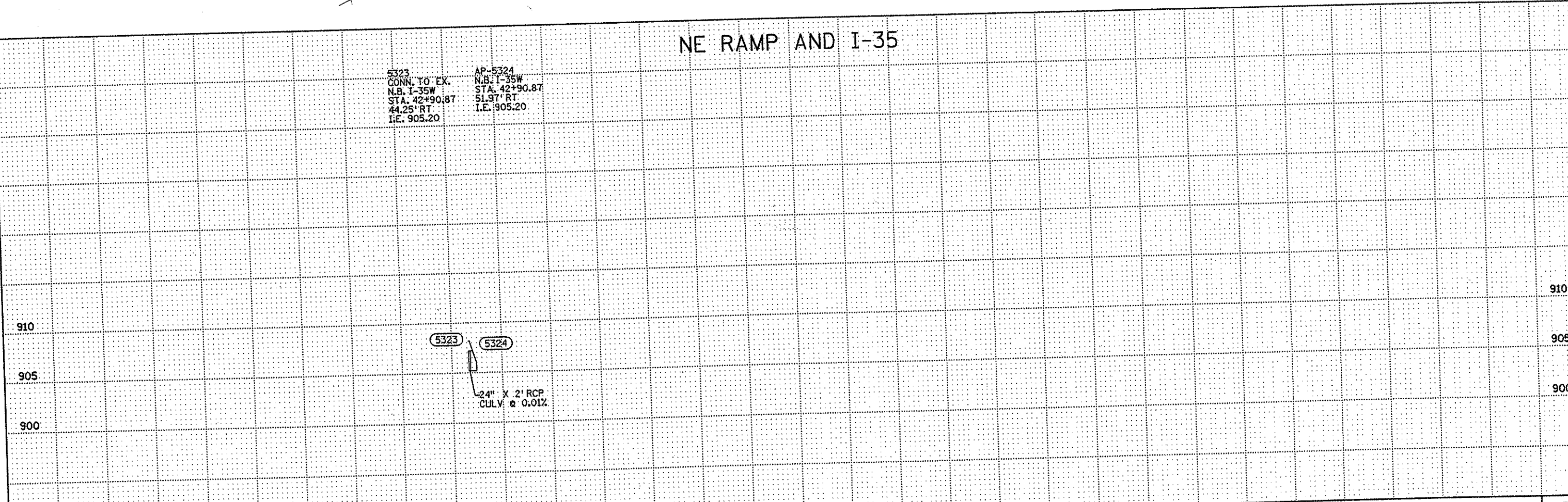
SHEET
199
OF
559



NE RAMP AND I-35

5323
CONN. TO EX.
N.B. I-35W
STA. 42+90.87
44.23' RT.
I.E. 905.20

AP-5324
N.B. I-35W
STA. 42+90.87
51.97' RT.
I.E. 905.20



NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\site\proj\11749\part4\roadway3\drawings\drain16.dgn 11/20/01

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.

Matthew W. Wynn

DATE **11-20-01** LIC. NO. **26883**

DRAWN BY MAW DATE 9-24-01

DESIGN BY MAW DATE 9-24-01

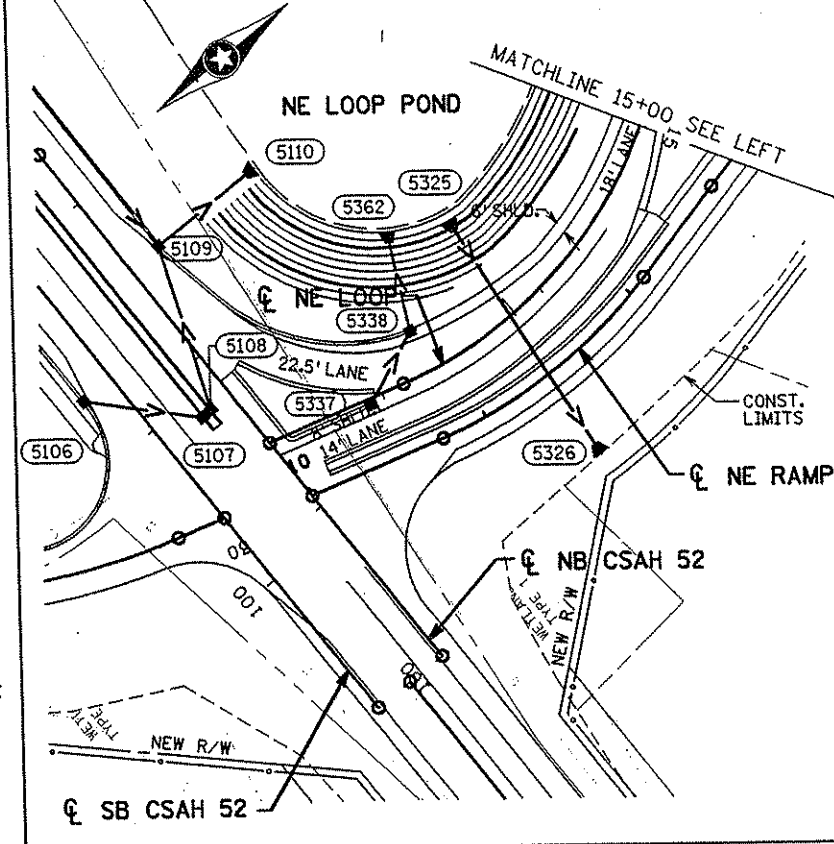
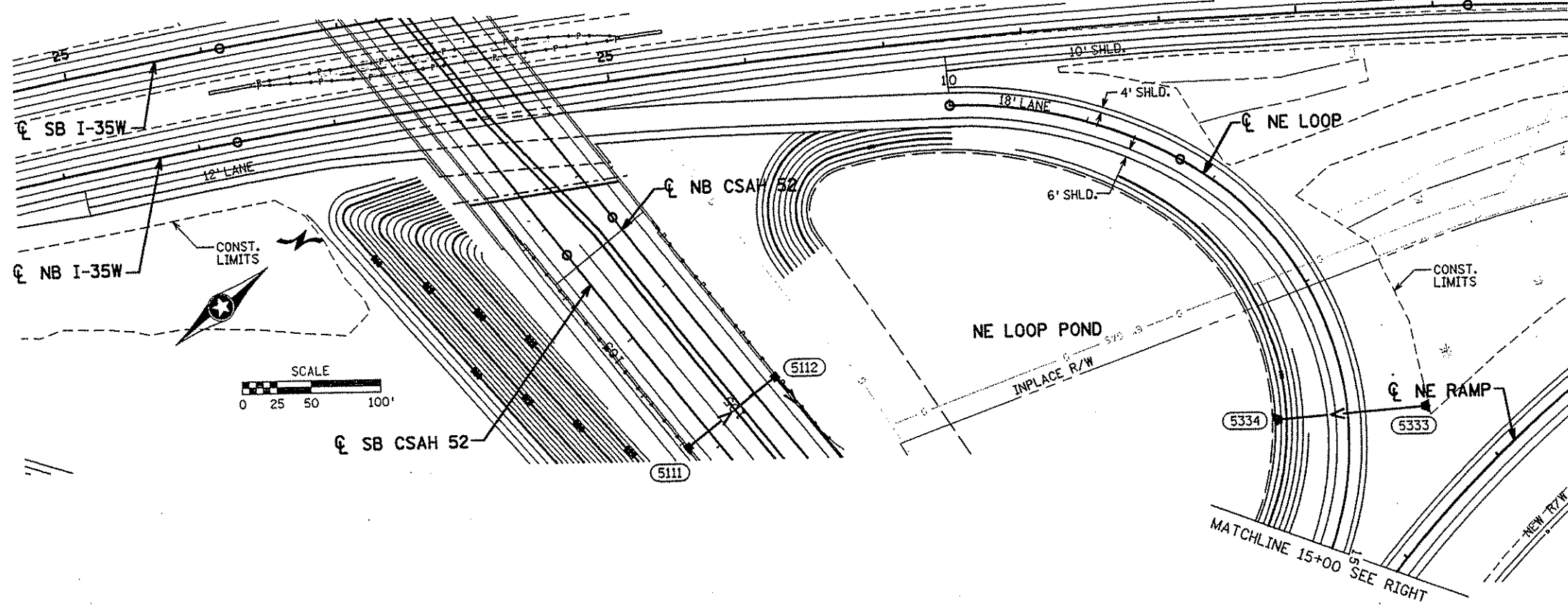
CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, QUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

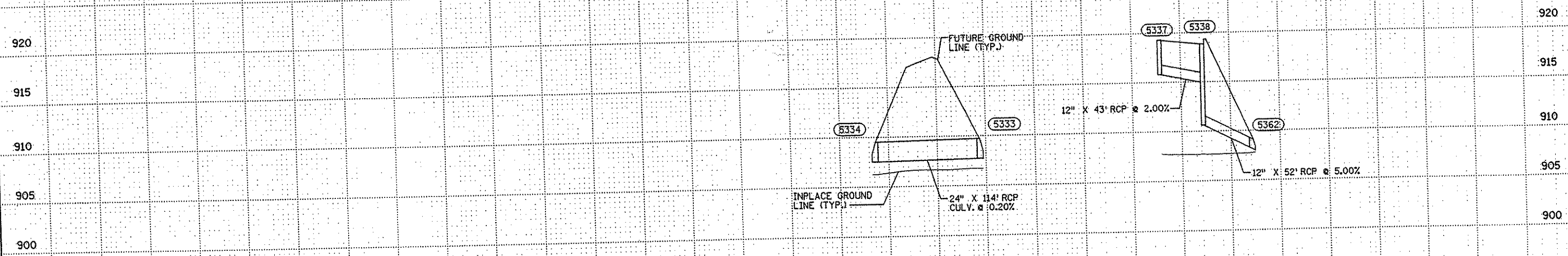
ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NE RAMP STA. 22+00 TO 23+69.26

SHEET
200
OF
559



NE LOOP

AP-5334 NE LOOP STA. 14+00.00 54.28' RT I.E. 907.73	AP-5333 NE LOOP STA. 14+00.00 60.00' LT I.E. 907.50	CB-5337 NE LOOP STA. 17+08.00 3.13' LT T.C. 919.30 I.E. 915.80	CB-5338 NE LOOP STA. 16+72.00 22.75' RT T.C. 918.85 I.E. 914.93 SE I.E. 910.62 NW	AP-5362 NE LOOP STA. 16+53.00 73.00' RT I.E. 908.00
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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.

Matthew A. Wanner
DATE 1-15-02 LIC. NO. 26893

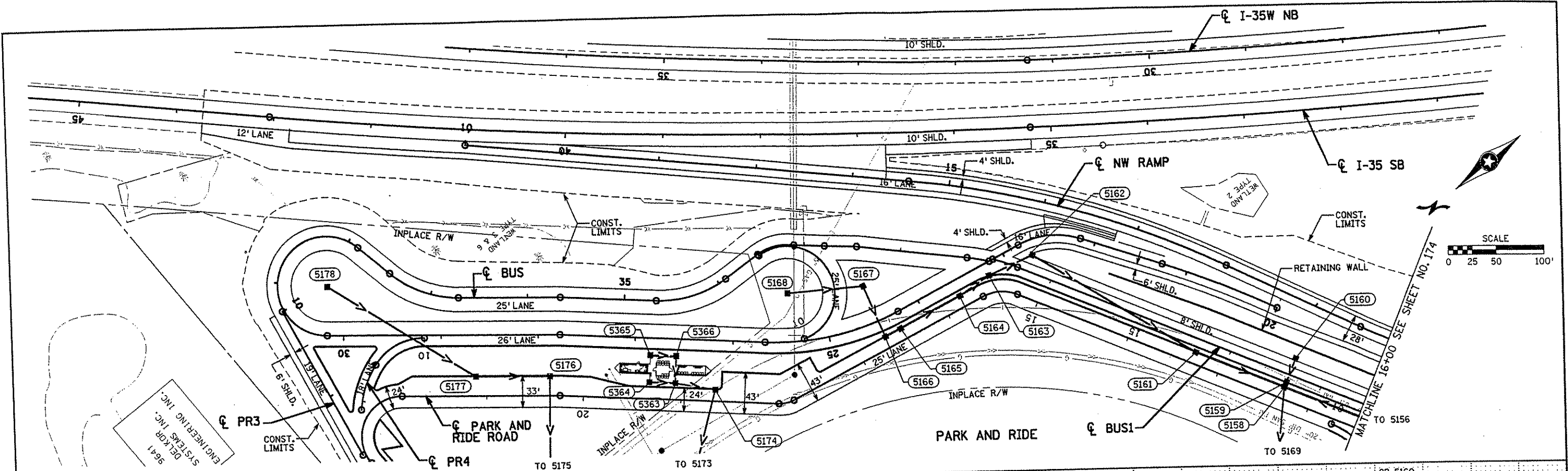
DRAWN BY	MAW	DATE	9-24-01
DESIGN BY	MAW	DATE	9-24-01
CHECKED BY	JMW	DATE	9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

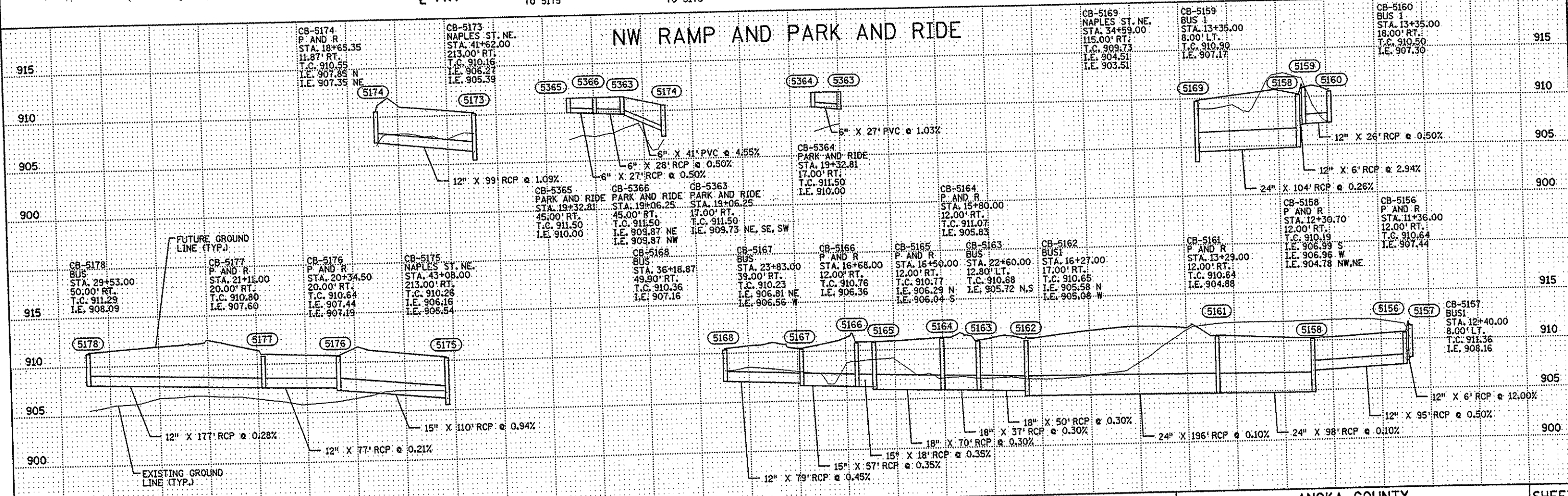
TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NE LOOP STA. 10+00 TO 17+64.05

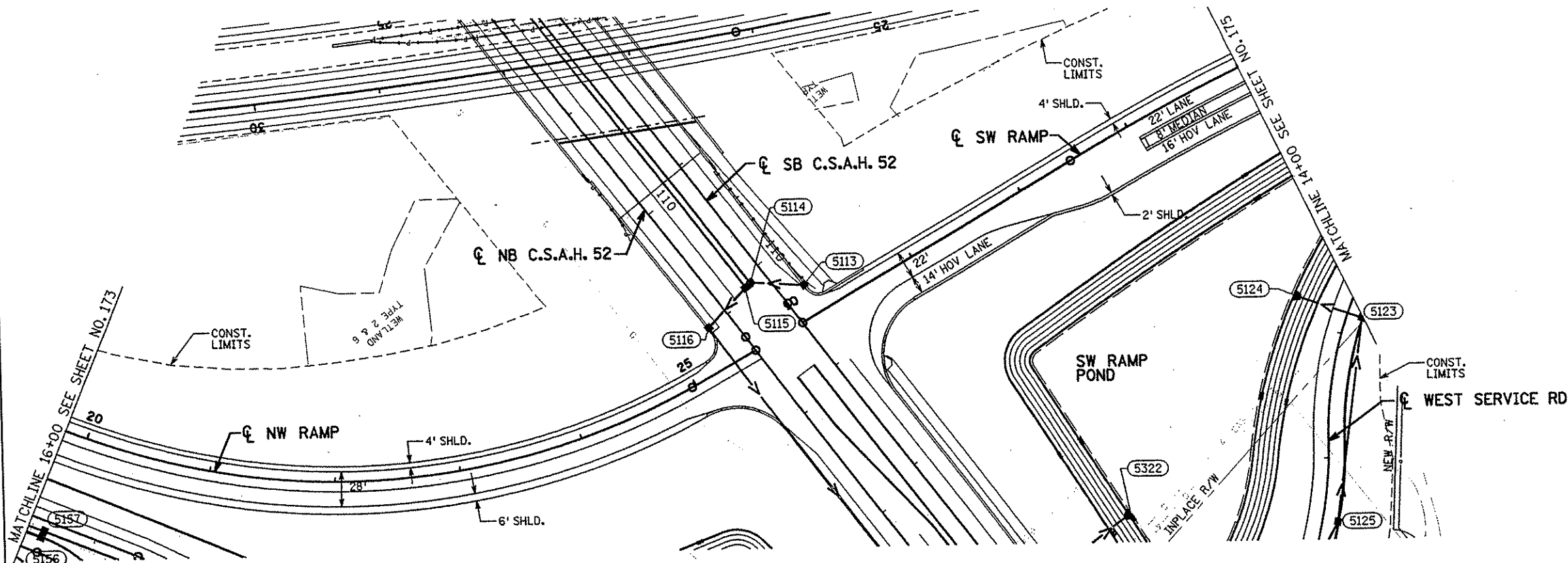
SHEET 201 OF 559



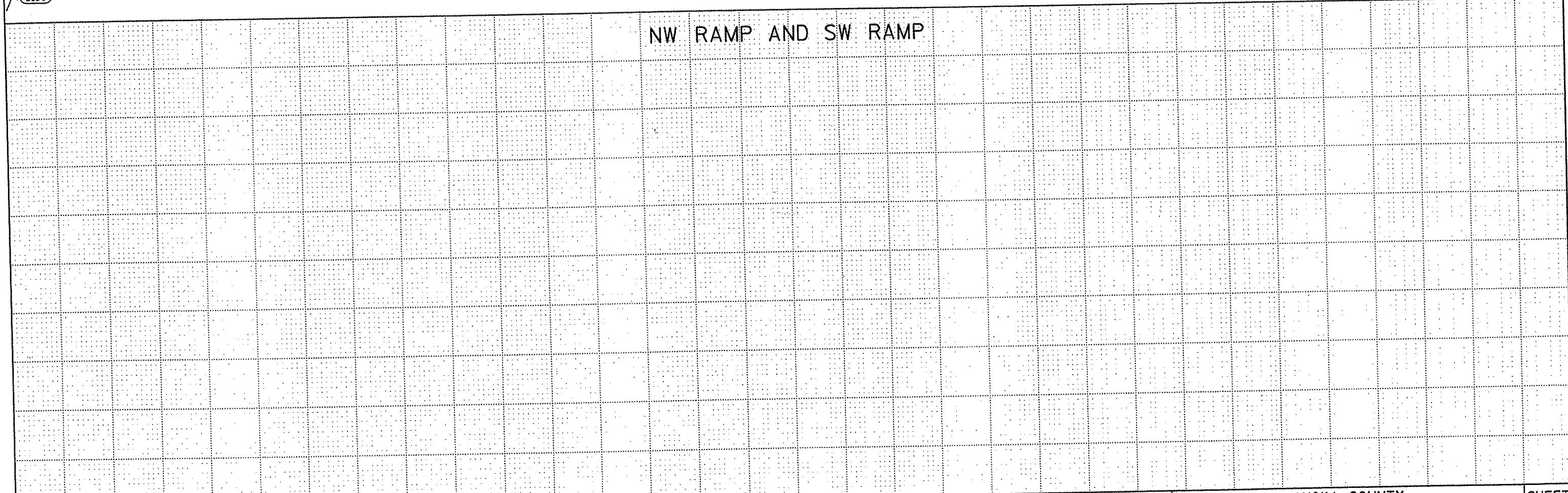
NW RAMP AND PARK AND RIDE



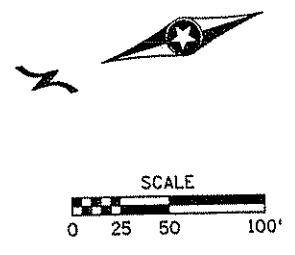
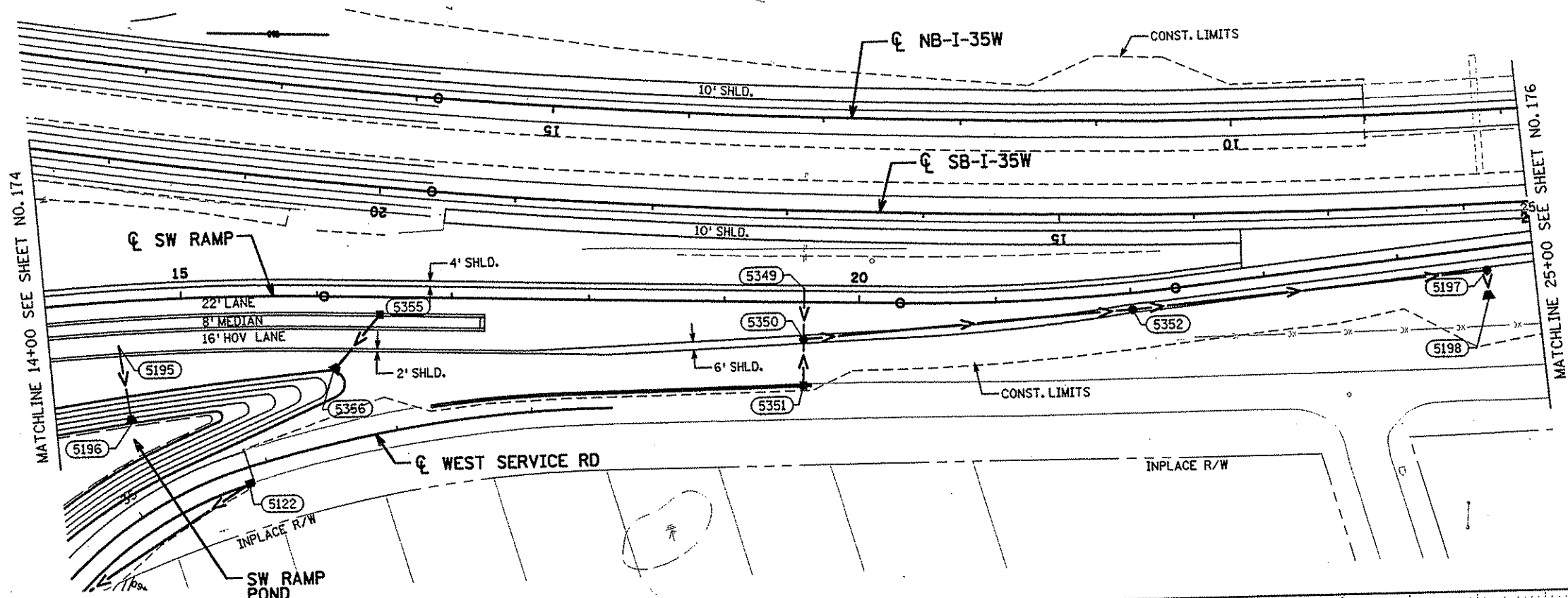
NO. DATE BY CRD APPR REVISION NAME: k:\sifta\proj\c11749\p01\4\roadway\drawings\drain18.dgn 11/20/01		I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Matthew Johnson</i> DATE 11-20-01 LIC. NO. 26883		DRAWN BY MAW DATE 9-24-01 DESIGN BY MAW DATE 9-24-01 CHECKED BY JMW DATE 9-25-01		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY DRAINAGE PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NW RAMP STA. 10+00 TO 16+00		SHEET 202 OF 559
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NW RAMP AND SW RAMP

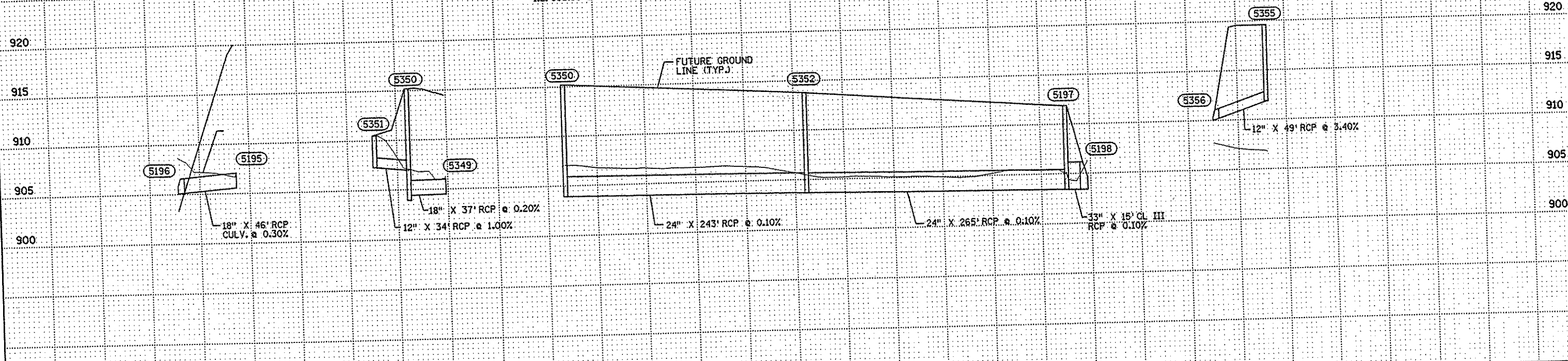


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Matthew D. Warriner</i> DATE <u>1-15-02</u> LIC. NO. <u>26883</u>					DRAWN BY <u>MAW</u> DATE <u>9-24-01</u> DESIGN BY <u>MAW</u> DATE <u>9-24-01</u> CHECKED BY <u>JMW</u> DATE <u>9-25-01</u>		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY DRAINAGE PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION NW RAMP STA. 16+00 TO SW RAMP STA. 14+00		SHEET 203 OF 559
NO	DATE	BY	CKD	APPR	REVISION	<small>NAME: C:\p2\anoka\1174901\hwy-brda\part4\roadway\drawings\drain\203.dwg 2001</small>							



SW RAMP AND I-35W

AP-5196 S.W. RAMP STA. 14+57.37 84.17' RT I.E. 905.07	5195 CONN. TO EX. S.W. RAMP STA. 14+52.04 32.46' RT I.E. 905.57	CB-5351 S.W. RAMP STA. 19+59.00 61.19' RT T.C. 910.50 I.E. 907.30	5349 CONN. TO EX. S.W. RAMP STA. 19+59.50 9.50' LT I.E. 904.50	MA-5350 S.W. RAMP STA. 19+59.00 27.40' RT T.C. 915.20 I.E. 906.96 W I.E. 904.43 E I.E. 903.93 S	MH-5352 S.W. RAMP STA. 22+00.00 11.00' RT T.C. 913.79 I.E. 903.68 N&S	MH-5197 S.W. RAMP STA. 24+64.22 18.07' RT T.C. 911.86 I.E. 903.42 N.E.&W	AP-5198 S.W. RAMP STA. 24+62.64 39.28' RT I.E. 903.40	AP-5356 S.W. RAMP STA. 16+12.00 55.00' RT I.E. 910.00	CB-5355 S.W. RAMP STA. 16+46.70 12.87' RT T.C. 919.56 I.E. 911.86
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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\p\o\11749\p\14\roadway\drawings\arin20.dgn 11/20/01

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.

Matthew D. Warriner
DATE 11-20-01 LIC. NO. 26883

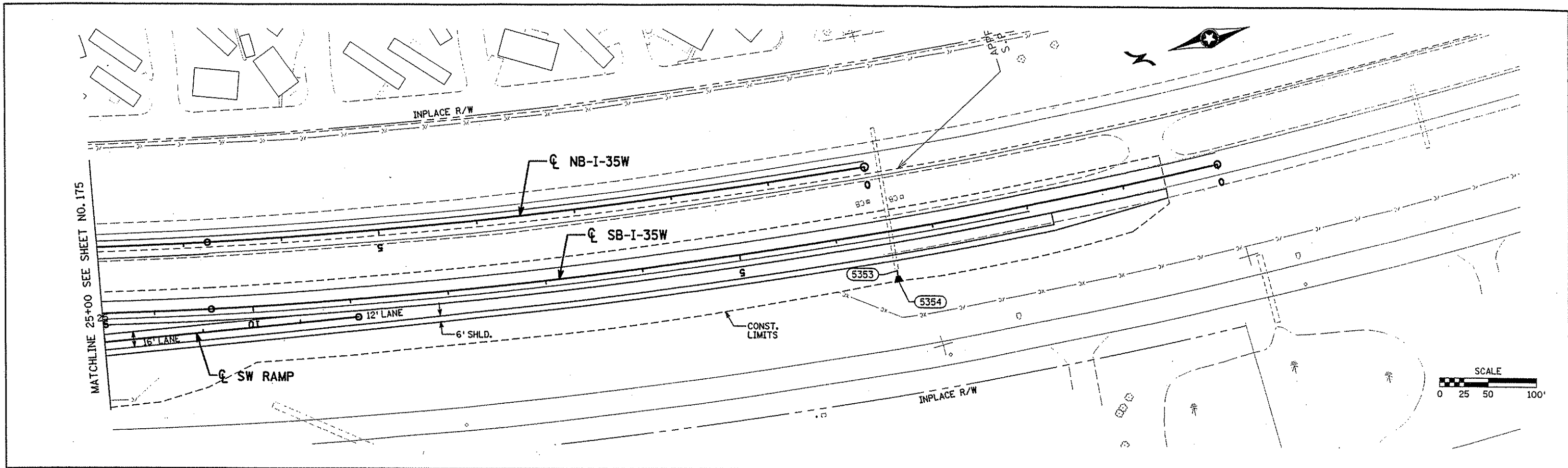
DRAWN BY MAW DATE 9-24-01
DESIGN BY MAW DATE 9-24-01
CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
SW RAMP STA. 14+00 TO 25+00

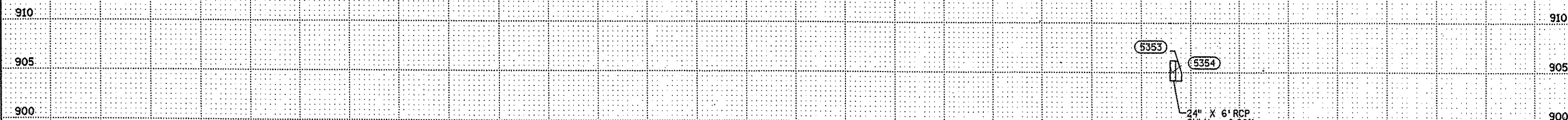
SHEET 204 OF 559



SW RAMP AND I-35W

5353
CONN. TO EX.
SB I-35W
STA. 3+44.00
40.30' LT
I.E. 904.20

AP-5354
SB I-35W
STA. 3+44.00
52.00' LT
I.E. 904.18



NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\part4\roadway3\drawings\drain21.dgn 11/20/01					

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

Matthew N. Wammy

DATE 11-20-01 LIC. NO. 26883

DRAWN BY MAW DATE 9-24-01

DESIGN BY MAW DATE 9-24-01

CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)

S.A.P. 90-080-11

S.A.P. 02-652-02

S.A.P. 02-652-03

S.A.P. 02-652-04

S.A.P. 106-020-021, 106-020-022

TKDA

TOLTZ, KING, OUYALL, ANDERSON AND ASSOCIATES, INCORPORATED

ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

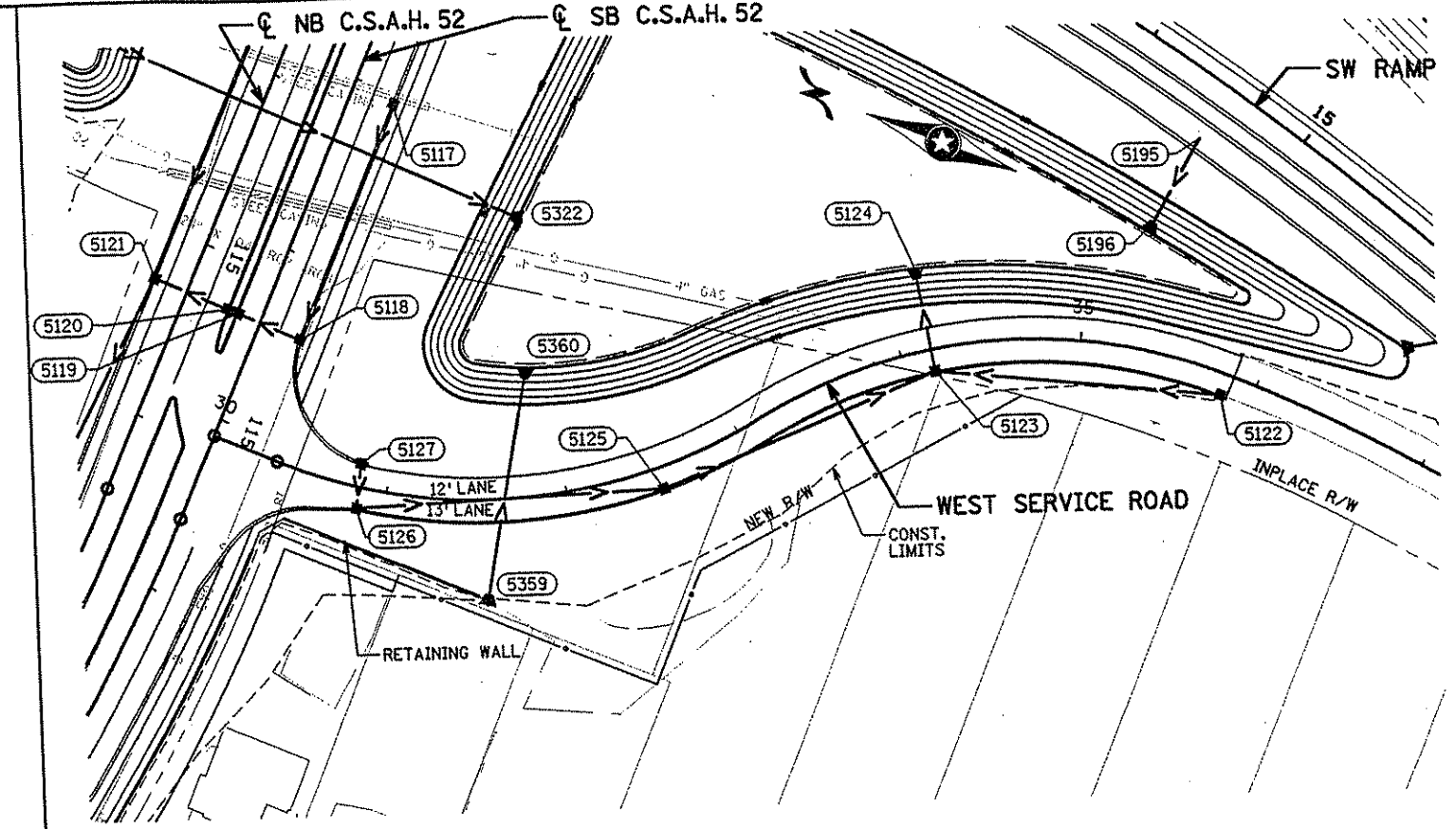
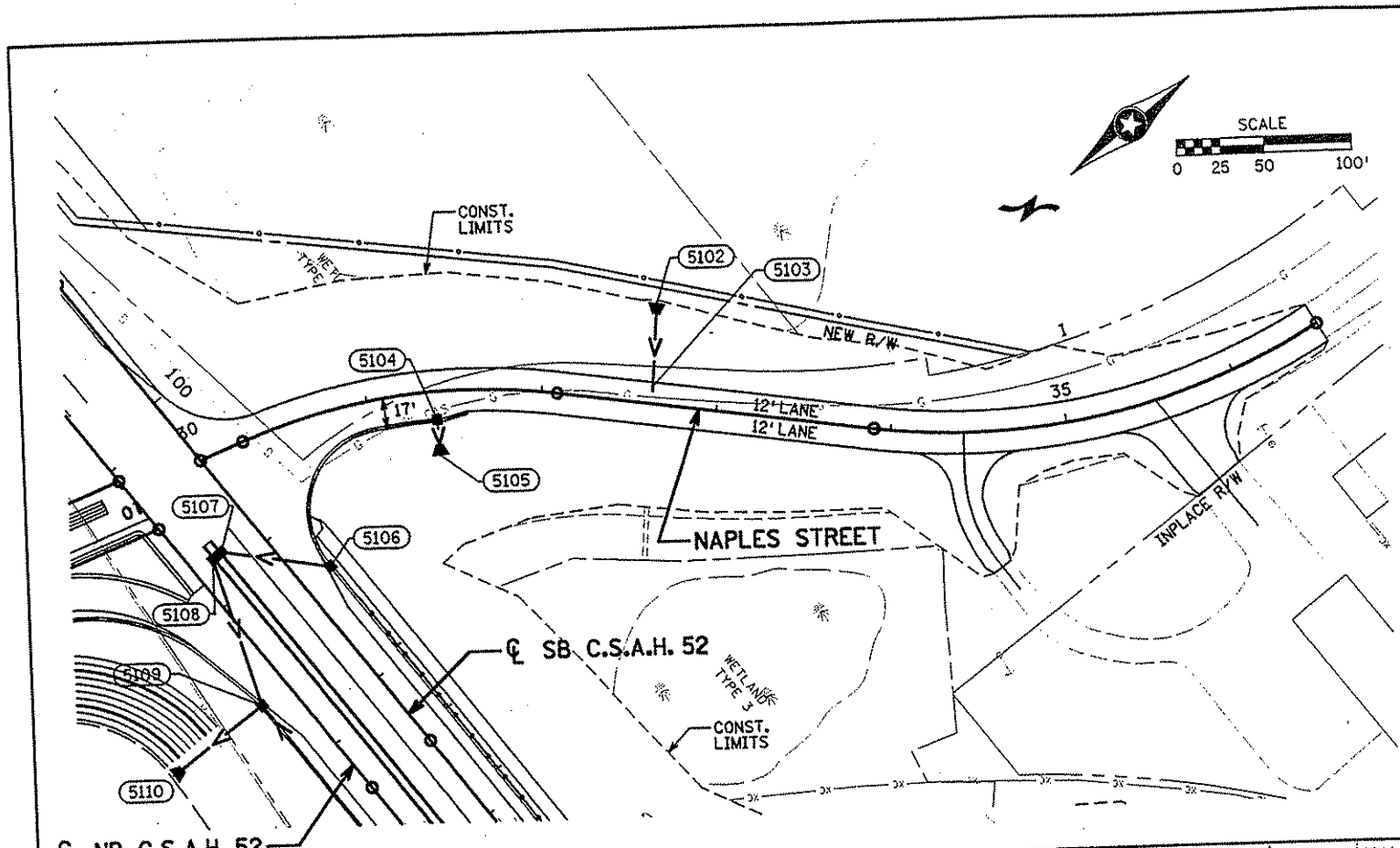
ANOKA COUNTY

DRAINAGE PLAN AND PROFILE

C.S.A.H. 52 RECONSTRUCTION

SW RAMP STA. 25+00 TO 26+18.74

SHEET 205 OF 559



NAPLES STREET

Station	AP-5102 NAPLES STREET STA. 32+60.17 56.40' LT. I.E. 905.25	5103 CONN. TO EXIST. NAPLES STREET STA. 32+62.86 7.09' LT. I.E. 905.09	CB-5104 NAPLES STREET STA. 31+39.00 15.87' RT. T.C. 917.29 I.E. 913.50	AP-5105 NAPLES STREET STA. 31+39.00 36.00' RT. I.E. 913.30	925
925					
920					
915					
910					
905					
900					

WEST SERVICE ROAD

Station	CB-5127 W. SERV. RD. STA. 30+83.00 12.58' LT. T.C. 920.52 I.E. 917.32	CB-5126 W. SERV. RD. STA. 30+85.50 11.87' RT. T.C. 920.53 I.E. 917.20 - E I.E. 916.95 S	CB-5125 W. SERV. RD. STA. 32+51.00 11.87' RT. T.C. 916.84 I.E. 913.39N&S	CB-5123 W. SERV. RD. STA. 34+17.00 11.87' RT. T.C. 912.45 I.E. 909.00 N I.E. 906.28 S I.E. 905.28 E	AP-5124 W. SERV. RD. STA. 34+17.00 45.00' LT. T.C. 910.52 I.E. 907.07	CB-5122 W. SERV. RD. STA. 35+83.00 11.87' RT. T.C. 910.52 I.E. 907.07	925
925							
920							
915							
910							
905							
900							

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\car14\roadway3\drawings\drain22.dgn 11/20/01

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.

Matthew A. Warm
DATE **11-20-01** LIC. NO. **26883**

0280-50 (TH 35W)
90-080-11
02-652-02
02-652-03
02-652-04
106-020-021, 106-020-022

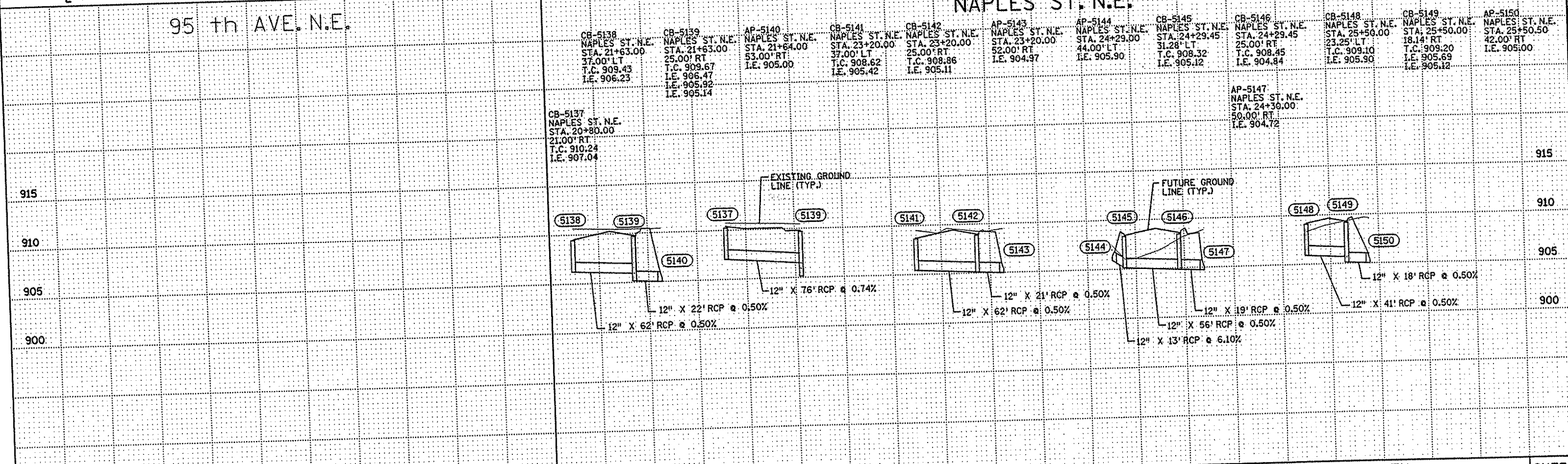
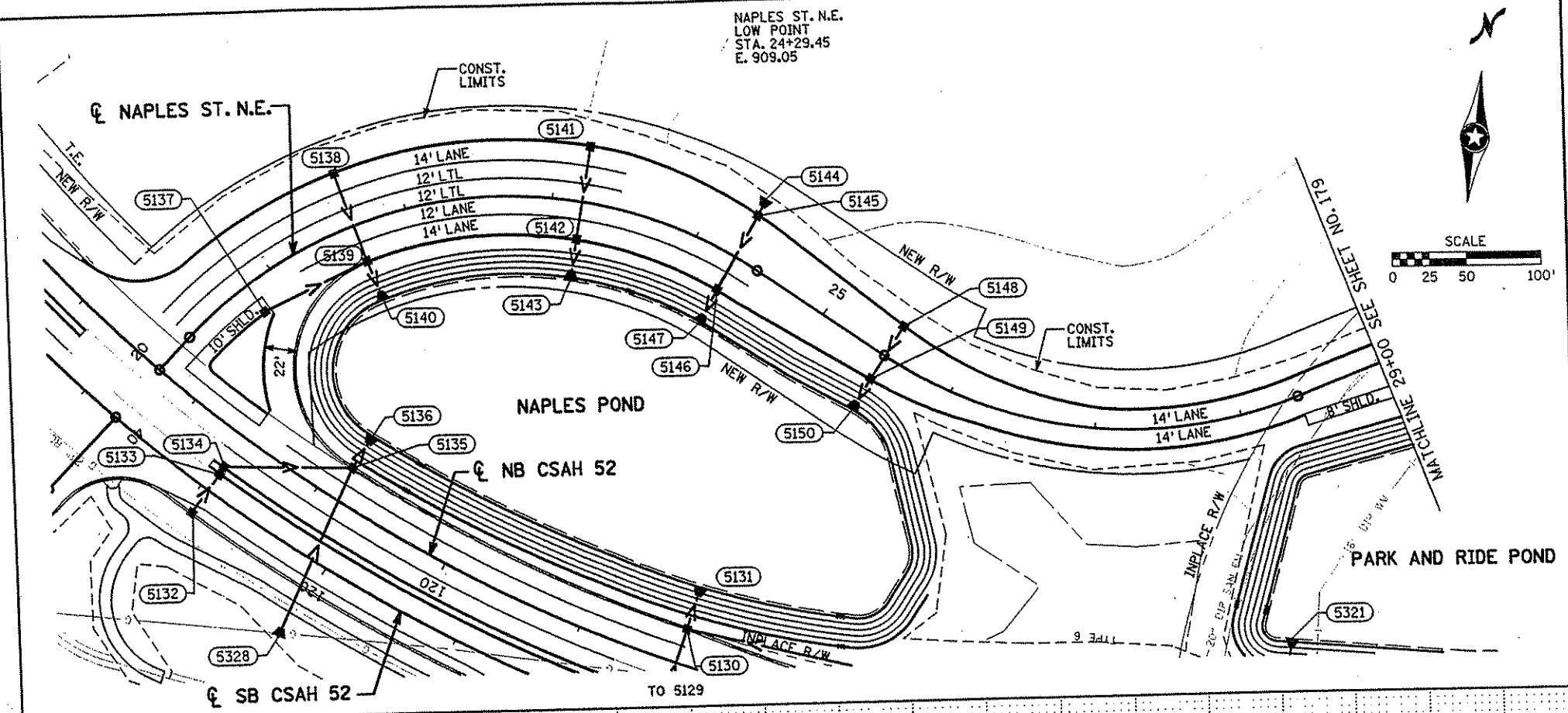
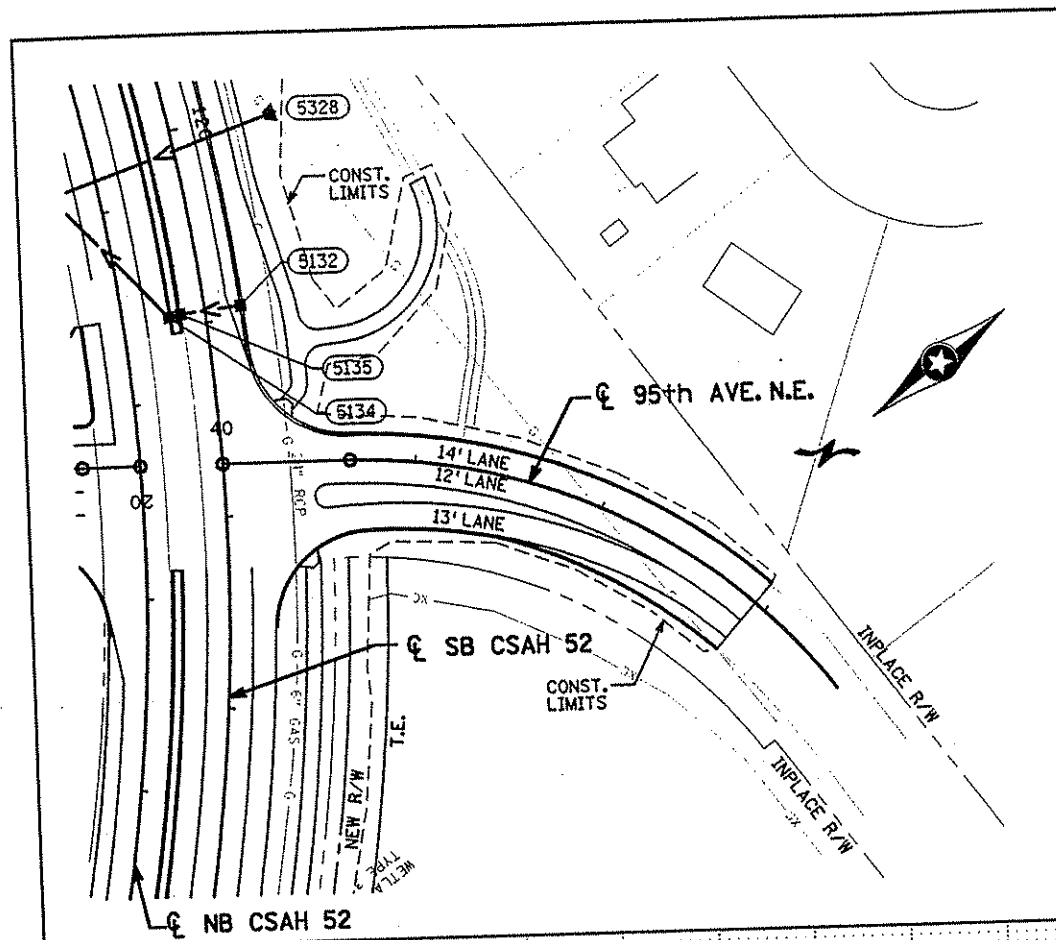
DRAWN BY **MAW** DATE **9-24-01**
DESIGN BY **MAW** DATE **9-24-01**
CHECKED BY **JMW** DATE **9-25-01**

TKDA
ENGINEERS-ARCHITECTS-PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NAPLES STREET AND WEST SERVICE ROAD

SHEET
206
OF
559



CB-5138 NAPLES ST. N.E. STA. 21+63.00 37.00' LT T.C. 909.43 I.E. 906.23	CB-5139 NAPLES ST. N.E. STA. 21+63.00 25.00' RT T.C. 909.67 I.E. 906.47 I.E. 905.92 I.E. 905.14	AP-5140 NAPLES ST. N.E. STA. 21+64.00 53.00' RT T.C. 908.62 I.E. 905.00	CB-5141 NAPLES ST. N.E. STA. 23+20.00 37.00' LT T.C. 908.62 I.E. 905.42	CB-5142 NAPLES ST. N.E. STA. 23+20.00 25.00' RT T.C. 908.86 I.E. 905.11	AP-5143 NAPLES ST. N.E. STA. 23+20.00 52.00' RT I.E. 904.97	AP-5144 NAPLES ST. N.E. STA. 24+29.00 44.00' LT I.E. 905.90	CB-5145 NAPLES ST. N.E. STA. 24+29.45 31.28' LT T.C. 908.32 I.E. 905.12	CB-5146 NAPLES ST. N.E. STA. 24+29.45 25.00' RT T.C. 908.45 I.E. 904.84	CB-5148 NAPLES ST. N.E. STA. 25+50.00 23.25' LT T.C. 909.10 I.E. 905.90	CB-5149 NAPLES ST. N.E. STA. 25+50.00 18.14' RT T.C. 909.20 I.E. 905.69 I.E. 905.12	AP-5150 NAPLES ST. N.E. STA. 25+50.50 42.00' RT I.E. 905.00
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CB-5137 NAPLES ST. N.E. STA. 20+80.00 21.00' RT T.C. 910.24 I.E. 907.04	AP-5147 NAPLES ST. N.E. STA. 24+30.00 50.00' RT I.E. 904.72
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NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway\drawings\drain23.dgn 11/20/01

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.

Matthew L. Warner
DATE **11-20-01** LIC. NO. **26883**

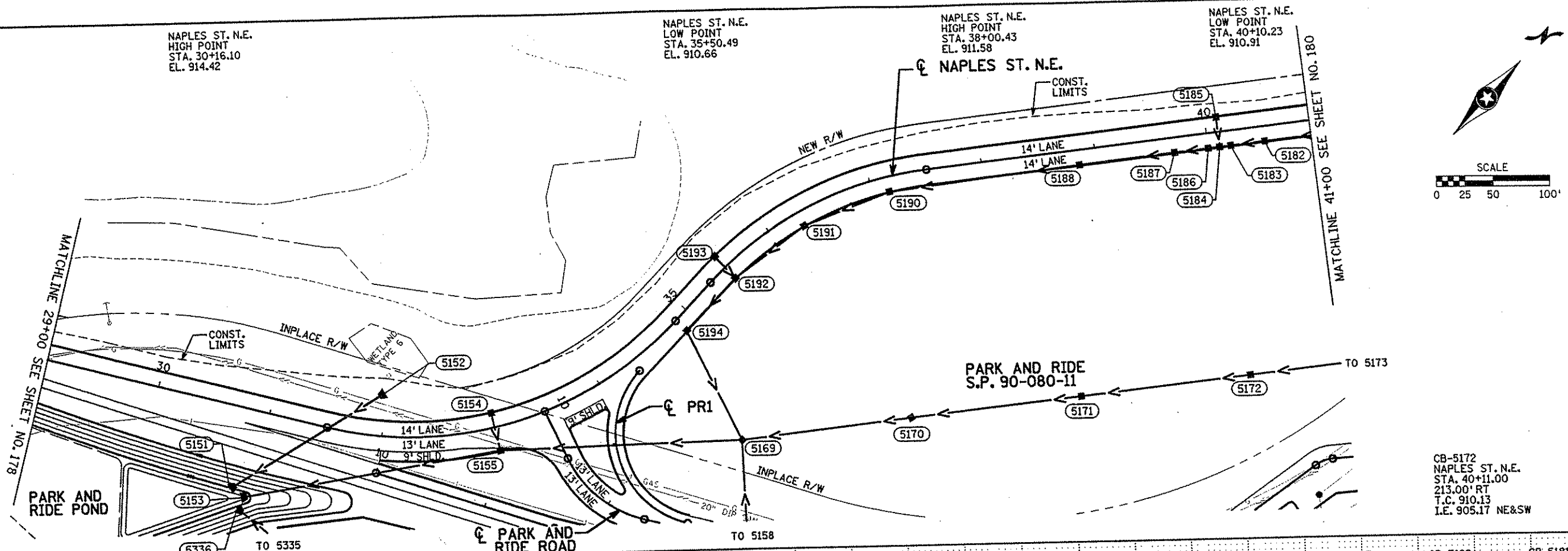
DRAWN BY MAW DATE 9-24-01
DESIGN BY MAW DATE 9-24-01
CHECKED BY JMW DATE 9-25-01

S.P.	0280-50 (TH 35W)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

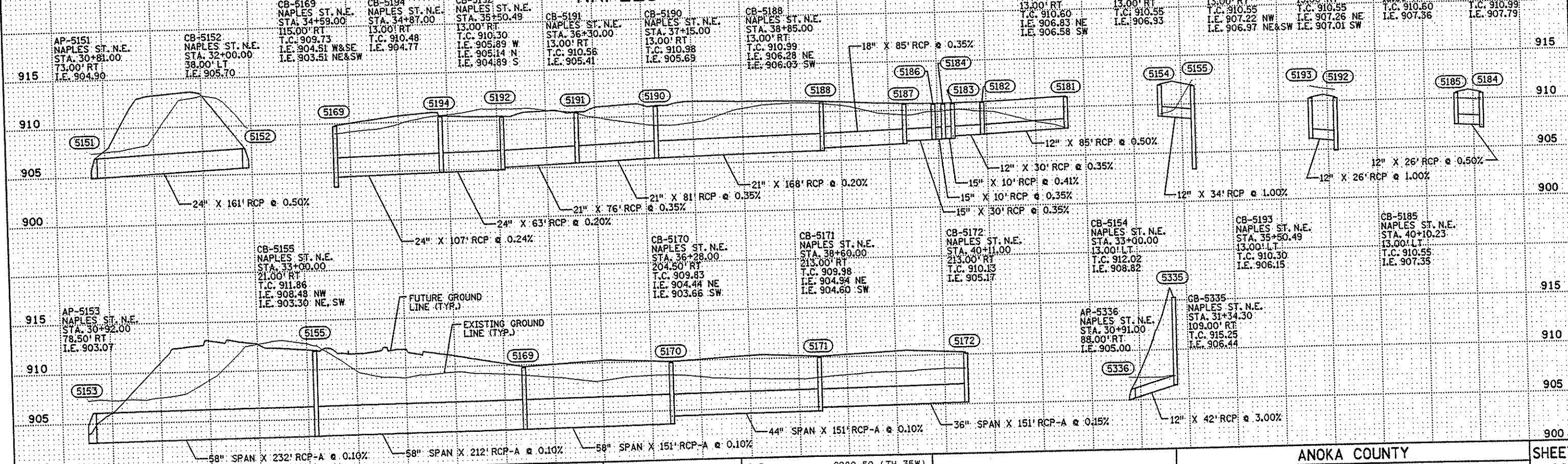
TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
95th AVE. N.E. AND NAPLES ST. N.E.

SHEET
207
OF
559



NAPLES ST. N.E. AND PARK AND RIDE



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 LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Matthew D. Wurm

DATE 11-20-01 LIC. NO. 26883

DRAWN BY MAW DATE 9-24-01

DESIGN BY MAW DATE 9-24-01

CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
ENGINEERS-ARCHITECTS-PLANNERS

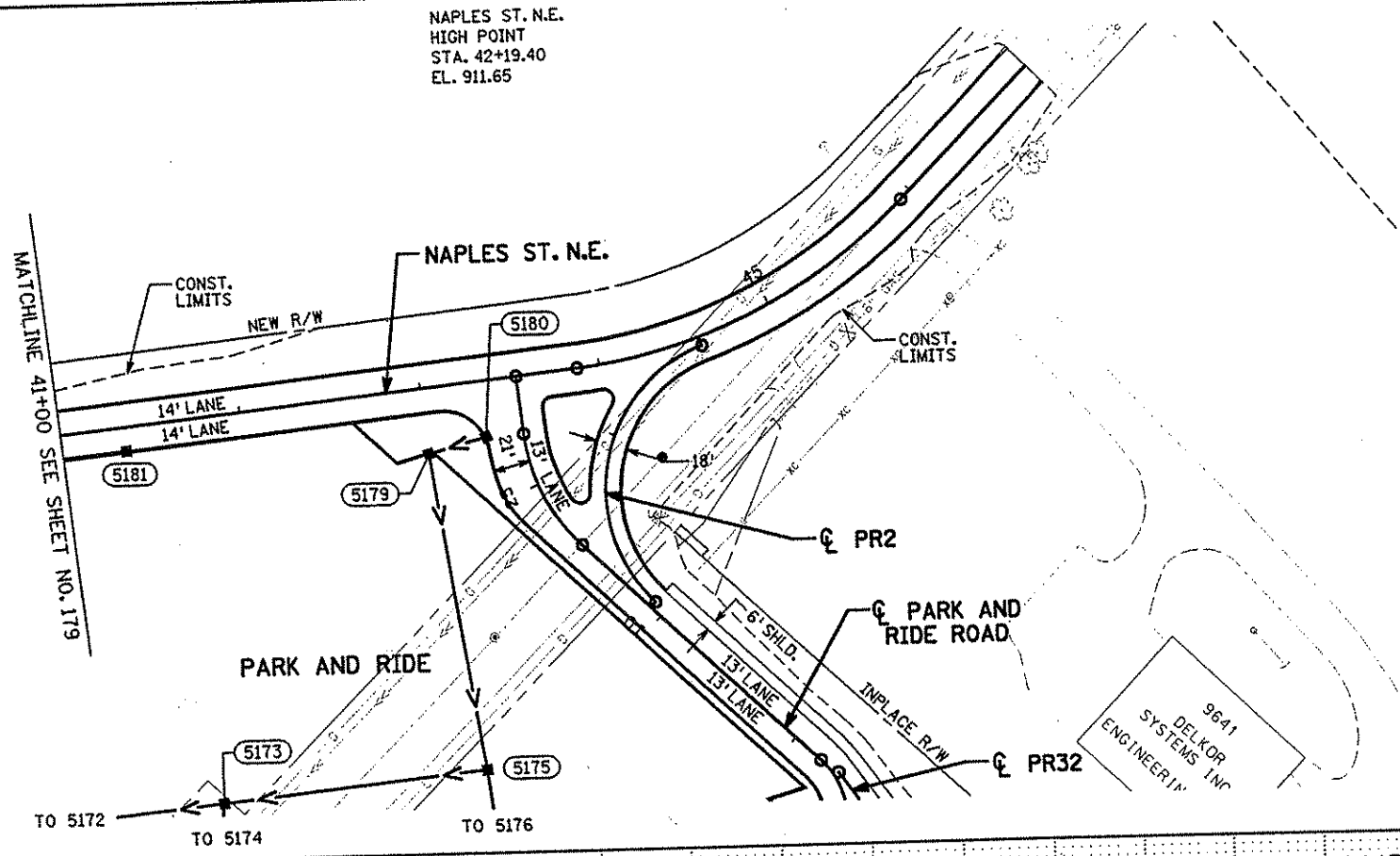
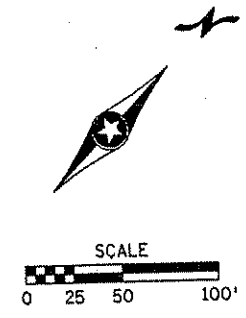
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY

DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NAPLES ST. N.E. AND PARK AND RIDE

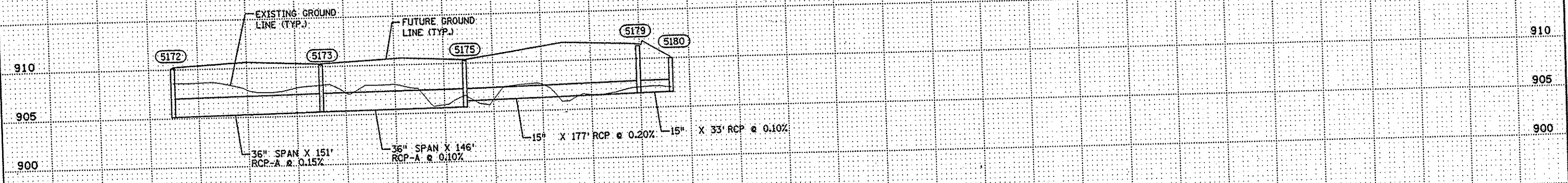
SHEET 208 OF 559

NAPLES ST. N.E.
HIGH POINT
STA. 42+19.40
EL. 911.65



NAPLES ST. N.E. AND PARK AND RIDE

<p>CB-5172 NAPLES ST. N.E. STA. 40+11.00 213.00' RT T.C. 910.13 I.E. 905.17 NE&SW</p>	<p>CB-5173 NAPLES ST. N.E. STA. 41+62.00 213.00' RT T.C. 910.16 I.E. 906.27 SE I.E. 905.39' NE&SW</p>	<p>CB-5175 NAPLES ST. N.E. STA. 43+08.00 213.00' RT T.C. 910.26 I.E. 906.16 NW&SE I.E. 905.54' SW</p>	<p>CB-5179 NAPLES ST. N.E. STA. 43+00.00 36.00' RT T.C. 911.33 I.E. 906.52 NE&SE</p>	<p>CB-5180 PANDR. STA. 25+30.00 21.10' LT T.C. 910.00 I.E. 906.55</p>
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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\drain25.dgn 11/20/01

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.

Matthew A. Wynn
DATE 11-20-01 LIC. NO. 26883

DRAWN BY	MAW	DATE	9-24-01
DESIGN BY	MAW	DATE	9-24-01
CHECKED BY	JMW	DATE	9-25-01

0280-50 (TH 35W)
90-080-11
02-652-02
02-652-03
02-652-04
S.A.P. 106-020-021, 106-020-022

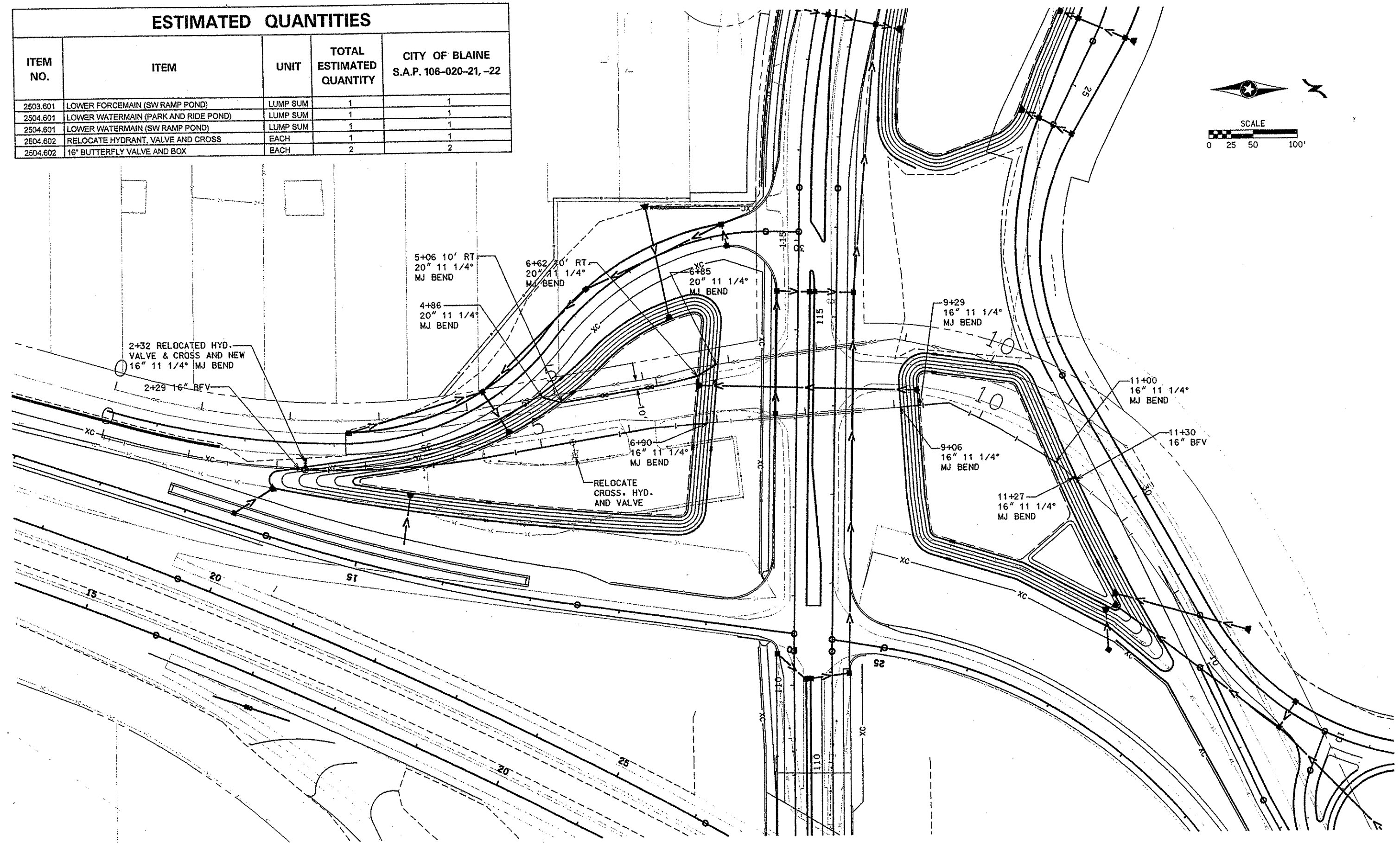
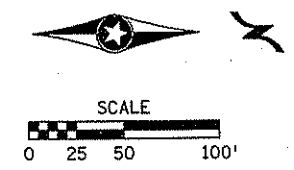
TKDA
TOLIZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
NAPLES ST. N.E.

SHEET
209
OF
559

ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	CITY OF BLAINE S.A.P. 106-020-21, -22
2503.601	LOWER FORCEMAIN (SW RAMP POND)	LUMP SUM	1	1
2504.601	LOWER WATERMAIN (PARK AND RIDE POND)	LUMP SUM	1	1
2504.601	LOWER WATERMAIN (SW RAMP POND)	LUMP SUM	1	1
2504.602	RELOCATE HYDRANT, VALVE AND CROSS	EACH	1	1
2504.602	16" BUTTERFLY VALVE AND BOX	EACH	2	2



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\a-f\Blaine\1251801\hwy-brdg\dwgs\hwy\plan\sanwat.dgn 04/15/2002

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.

Harry D. Bohre
DATE 4-15-82 LIC. NO. 12120

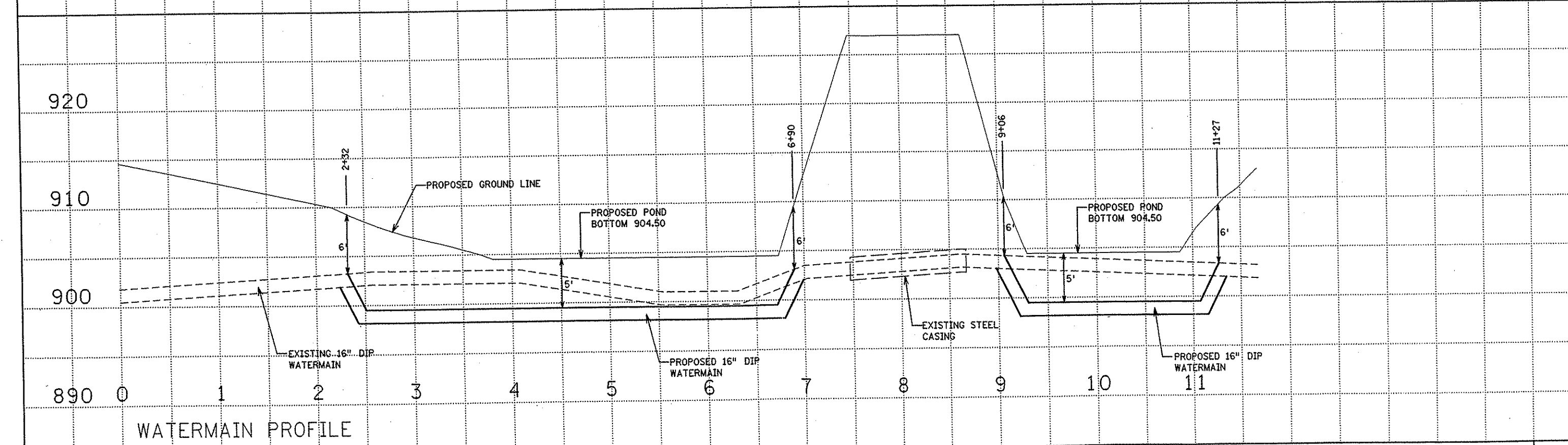
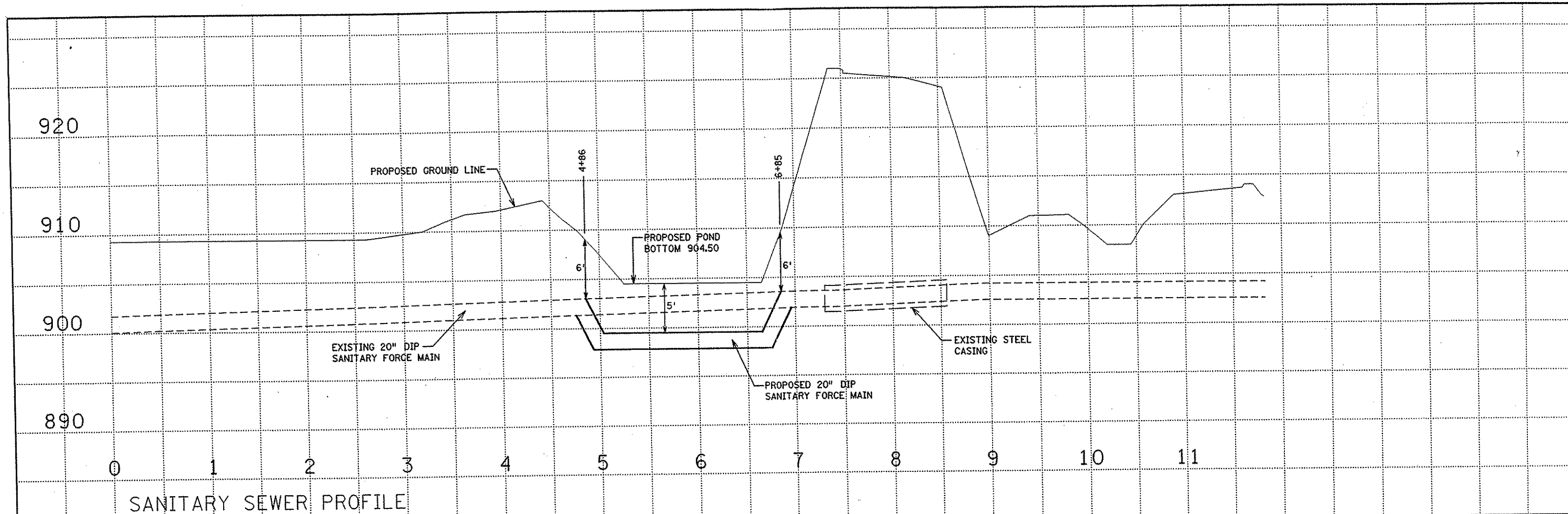
DRAWN BY **RRC** DATE 4-4-02
 DESIGN BY **LDB** DATE 4-4-02
 CHECKED BY **LDB** DATE 4-4-02

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SANITARY SEWER AND WATERMAIN REVISIONS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 209A
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\a-f\blaine\1251801\hwy-brdg\dwgs\hwy\plan\shdprof.dgn 04/15/2002

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.

Larry S. Boden
 DATE 4-15-2002 LIC. NO. 12120

DRAWN BY RRC DATE 4-4-02
 DESIGN BY LDB DATE 4-4-02
 CHECKED BY LDB DATE 4-4-02

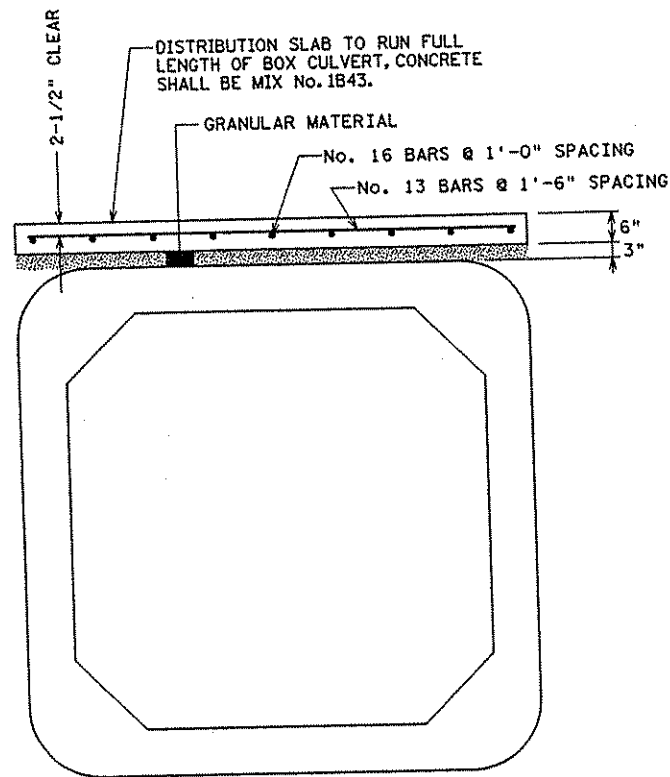
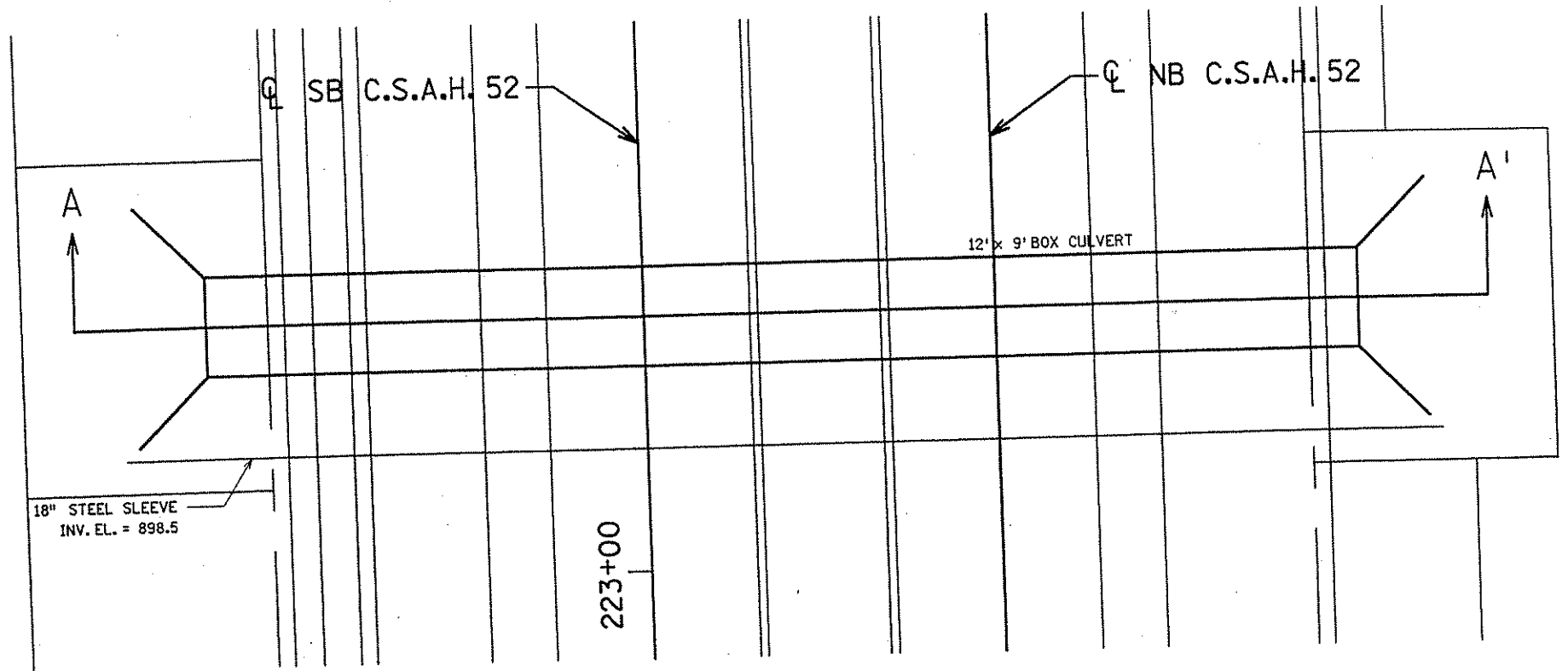
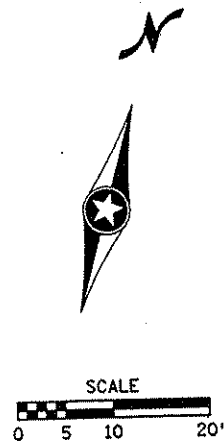
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

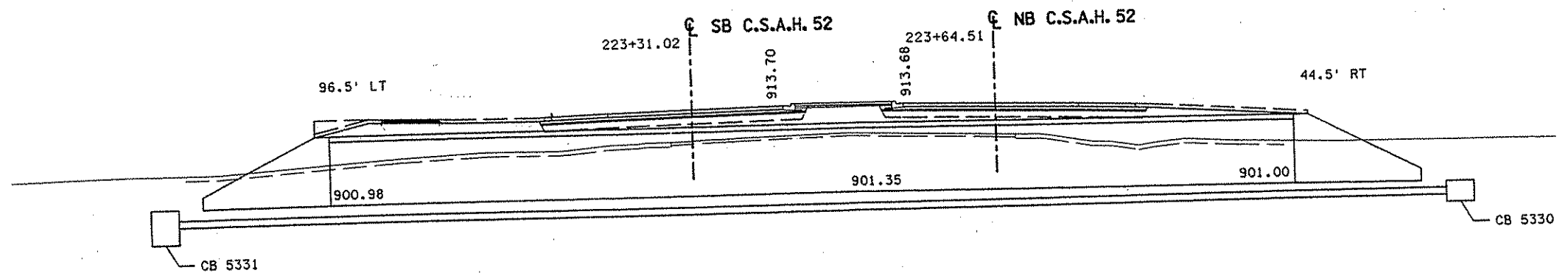
ANOCA COUNTY

SANITARY SEWER AND WATERMAIN PROFILES
 C.S.A.H. 52 RECONSTRUCTION

SHEET 209B OF 559



DISTRIBUTION SLAB DETAIL



SECTION A - A'

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.

Adam E. Sanders
 DATE 1-9-02 LIC. NO. 22505

DRAWN BY RRC DATE 9-21-01
 DESIGN BY JMW DATE 9-20-01
 CHECKED BY KRC DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 BOX CULVERT DETAIL
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 216
 OF
 559

CONSTRUCTION NOTES

CULVERTS TO BE CONSTRUCTED AS PER Mn/DOT SPEC. 2412 EXCEPT AS NOTED.

FILL HEIGHTS OF LESS THAN 2'-0" REQUIRE A DISTRIBUTION SLAB. SEE BOX CULVERT DETAIL SHEET FOR ADDITIONAL INFORMATION.

IF THE DISTANCE BETWEEN DOUBLE BARRELS IS LESS THAN 2'-0" USE EITHER PEA ROCK OR LEAN MIX BACKFILL (Mn/DOT SPEC. 2520) BETWEEN THE CULVERTS AS APPROVED BY THE ENGINEER. (ALSO, PROVIDE APPROVED GROUT SEEPAGE CORE, MINIMUM 12" THICK, BETWEEN THE CULVERT'S TWO ENDS.) MINIMUM DISTANCE REQUIRED IS 6".

THE STEEL FABRIC, SHEAR REINFORCEMENT AND REINFORCEMENT BARS SHALL CONFORM TO APPLICABLE REQUIREMENTS OF AASHTO M259.

1/2" MIN. AND 2" MAX. CONCRETE COVER ON ALL REINFORCEMENT, INCLUDING SHEAR REINFORCEMENT, EXCEPT FOR TONGUE AND GROOVE DETAIL.

ANY OF THE FOLLOWING COMBINATIONS OF STEEL REINFORCEMENT MAY BE USED:
 (a) 1 OR 2 LAYERS OF MESH OR
 (b) 1 LAYER OF MESH AND 1 LAYER OF REINFORCEMENT BARS OR
 (c) 1 LAYER OF REINFORCEMENT BARS.

THE REINFORCEMENT SHALL BE DEVELOPED IN ACCORDANCE WITH AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES". IF BAR REINFORCEMENT IS SUBSTITUTED FOR WIRE MESH, THE AREAS OF REINFORCEMENT SHALL BE INCREASED BY 8%.

THE MAXIMUM SIZE OF REINFORCEMENT BARS SHALL BE NO. 19. THE MAXIMUM MESH SIZE SHALL BE 1/2" DIA. PER LAYER (MAXIMUM OF 2 LAYERS).

THE SPACING CENTER TO CENTER OF THE TRANSVERSE WIRES SHALL NOT BE LESS THAN 2" NOR MORE THAN 4". THE SPACING CENTER TO CENTER OF THE LONGITUDINAL WIRES SHALL NOT BE MORE THAN 8".

WELDING WILL NOT BE ALLOWED ON REINFORCEMENT BARS OR STEEL FABRIC, EXCEPT THAT THE ORIGINAL WELDING REQUIRED TO MANUFACTURE WIRE FABRIC IS ACCEPTABLE.

WHEN REINFORCEMENT IS CUT, ADDITIONAL REINFORCEMENT SHALL BE ADDED ON BOTH SIDES OF THE CUT MEMBER TO REPLACE OR EXCEED THE CUT STEEL.

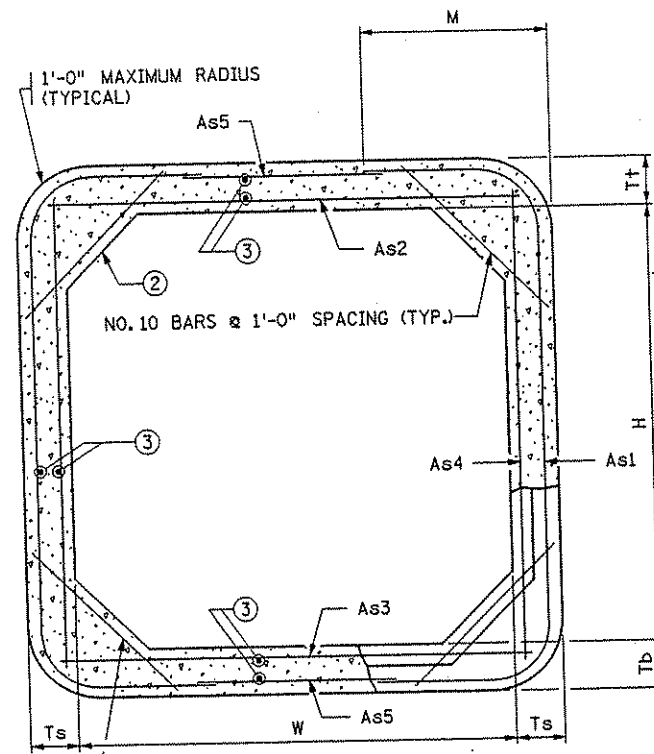
CONCRETE SHALL BE MIX NO. 3W36 WITH NO CALCIUM CHLORIDE ALLOWED.

SHOP DRAWING APPROVAL PER Mn/DOT SPEC. 3238.2A IS NOT REQUIRED UNLESS OPENINGS OR ATTACHMENTS ARE PLACED ON A BARREL SEGMENT.

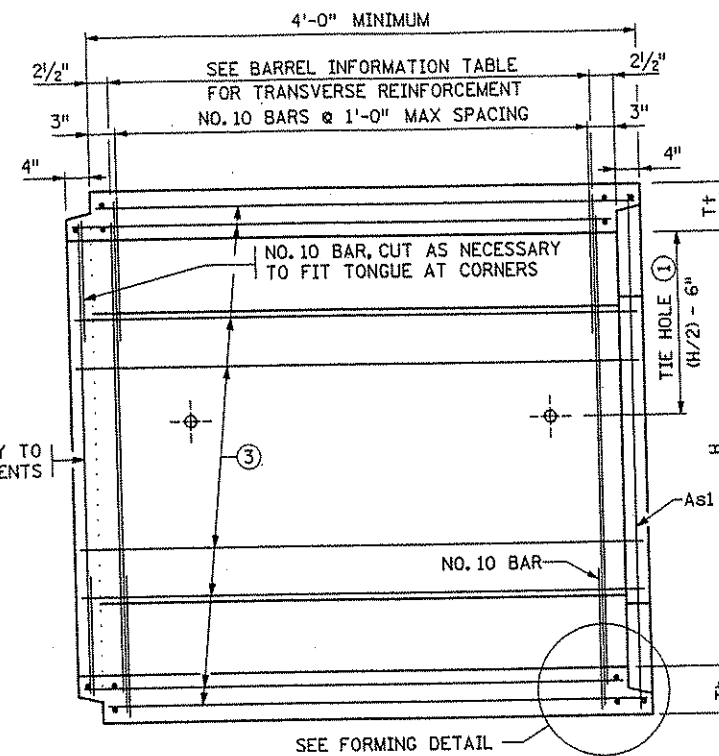
① CULVERT TIES ARE TO BE 1" DIAMETER RODS. SEE STANDARD PLATE NO. 3145 FOR CONNECTION DETAILS.

② HAUNCH SIZE AS FOLLOWS:
 6'-0" AND 8'-0" WIDTHS - 6" TO 12"
 10'-0" WIDTH - 10" TO 12"
 12'-0" AND 14'-0" WIDTHS - 12"

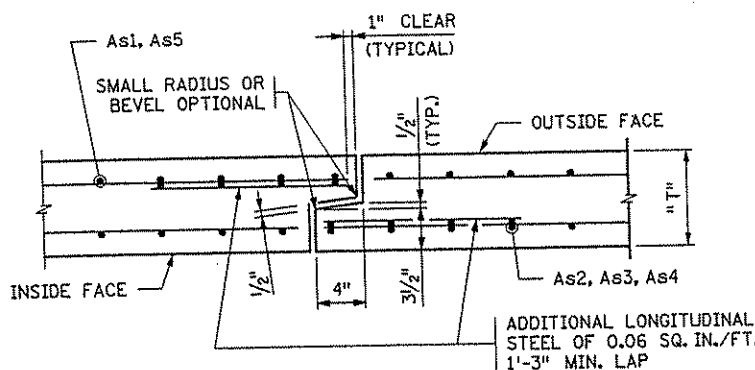
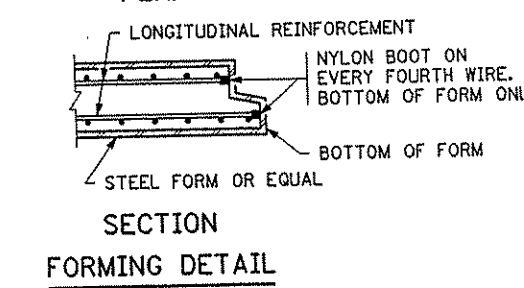
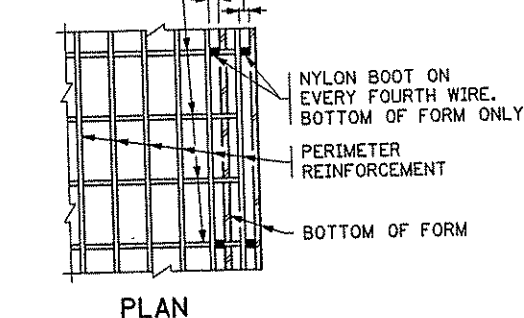
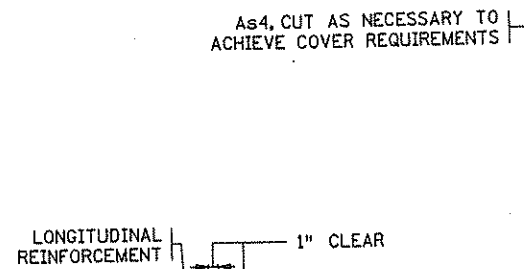
③ MINIMUM LONGITUDINAL STEEL SHALL BE 0.06 SQ. IN./FT.



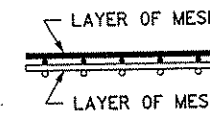
TRANSVERSE BARREL SECTION
 BAR REINFORCEMENT OPTION SHOWN



LONGITUDINAL BARREL SECTION
 BAR REINFORCEMENT OPTION SHOWN



TONGUE AND GROOVE JOINT DETAIL



FABRIC LAYER DETAIL

WHEN MORE THAN ONE LAYER OF STEEL FABRIC IS USED TO OBTAIN THE REQUIRED REINFORCEMENT AREAS, THE WIRES OF THE STEEL FABRIC SHALL BE PLACED AS SHOWN

BARREL INFORMATION

LOCATION	SIZE	CLASS	f'c (P.S.I.)	FILL HEIGHT RANGE (FT.)	DIMENSIONS					WEIGHT (LBS./FT.)	STEEL FABRIC REINFORCEMENT										
											As1		As2		As3		As4		As5		
					W (FT.)	H (FT.)	T+ (IN.)	Tb (IN.)	Ts (IN.)		AREA (IN. ² /FT.)	LENGTH (FT.)	AREA (IN. ² /FT.)	LENGTH (FT.)	AREA (IN. ² /FT.)	LENGTH (FT.)	AREA (IN. ² /FT.)	LENGTH (FT.)	AREA (IN. ² /FT.)	LENGTH (FT.)	
ALL	12x9	1	5000	< 2	12	9	9	10	8	5185	0.74	17'-7"	4'-2"	1.31	12.50	1.06	12.50	0.20	9.50	0.22	7.00

REVISION:
 APPROVED: DECEMBER 11, 2000
 Donald J. Manning
 STATE BRIDGE ENGINEER

STATE PROJ. NO 02-652-02 (T.H.) STA. 223+64.51
 CERTIFIED BY *Adam S. Sanders* PROFESSIONAL ENGINEER
 LIC. NO. 22505 11-20 2001
 BRIDGE NO. 02J15
 SHEET NO. 217 OF 559 SHEETS

FIG. 5-395.101(A)

BARREL DETAILS

CONSTRUCTION NOTES

SEE FIG. 5-395.101(A) AND FIG. 5-395.101(B) FOR ADDITIONAL DIMENSIONS AND CONSTRUCTION NOTES.

ON ALL END SECTIONS USE DROP WALLS ON INLET AND OUTLET ENDS.

LONGITUDINAL REINFORCEMENT PARALLEL TO THE AXIS OF THE CULVERT SHALL HAVE A MINIMUM OF 0.06 SQUARE INCHES PER PERIPHERAL FOOT ON ALL FACES OF THE BARREL, EXCEPT IN THE TONGUE AND GROOVE AREA.

FINISH ALL EXPOSED EDGES OF CONCRETE WITH 1/2" OR 3/4" CHAMFER OR RADIUS UNLESS OTHERWISE NOTED.

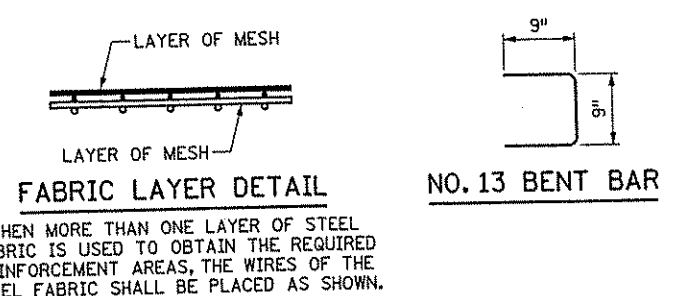
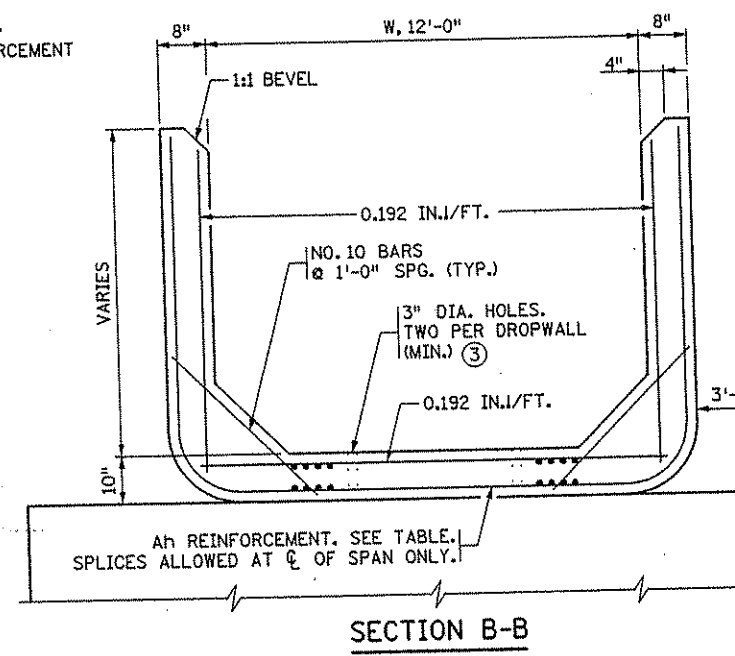
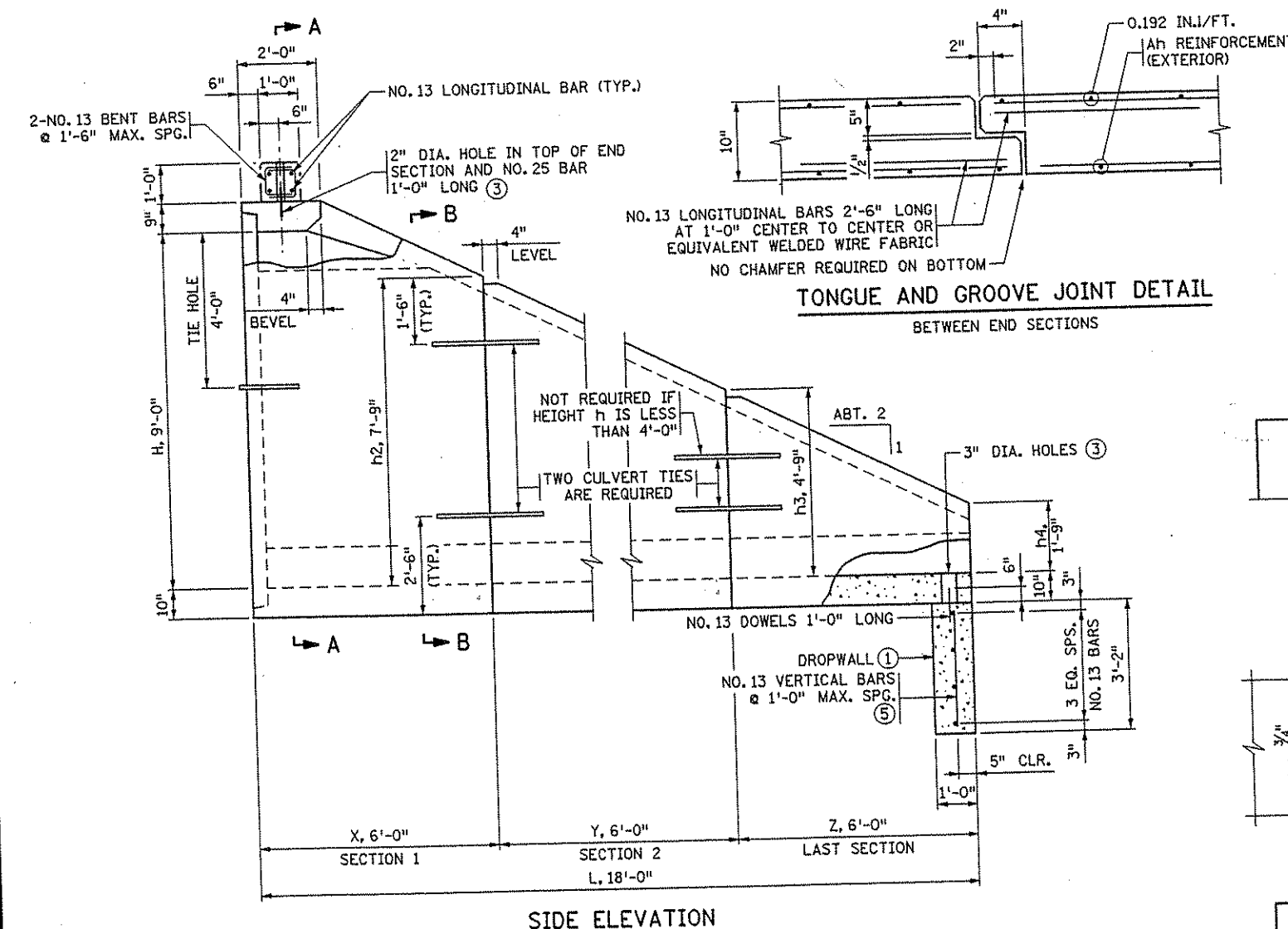
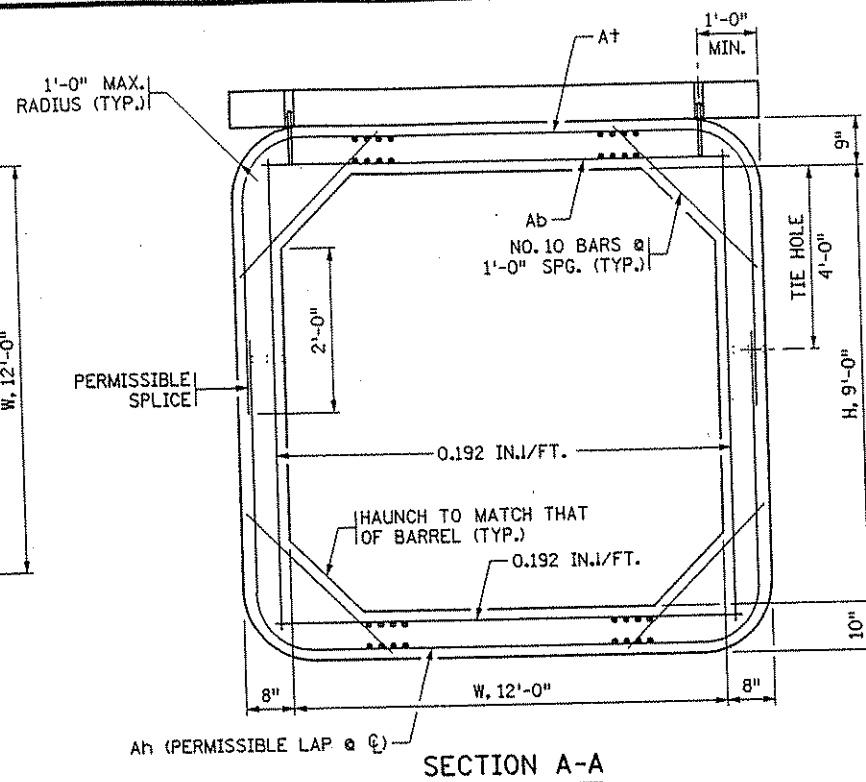
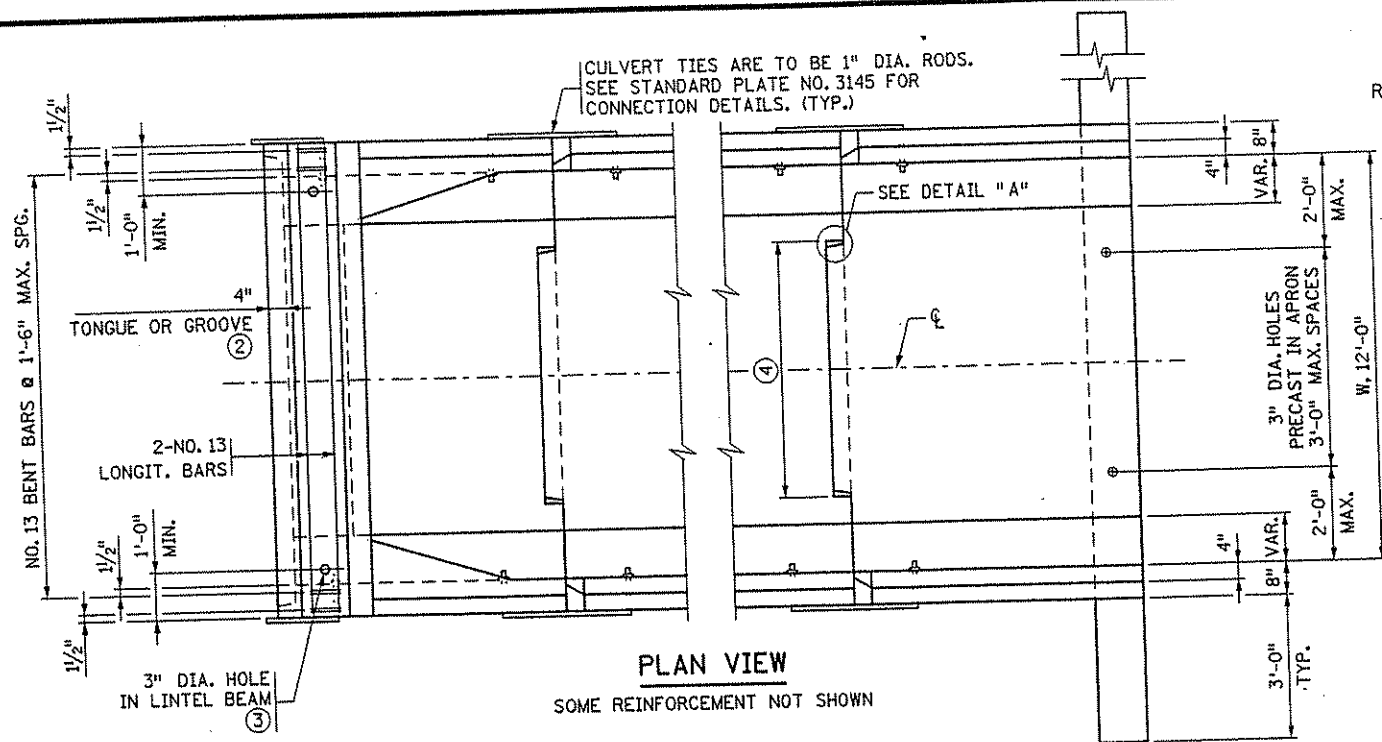
① WITH DOUBLE BOXES LOCATE DROPWALL JOINTS BETWEEN END SECTIONS. SEE FIG. 5-395.111 FOR ALTERNATE DROPWALLS. LIMITS OF EXCAVATION FOR DROPWALL TO BE APPROXIMATELY THE SAME AS DROPWALL DIMENSIONS. DROPWALL TO BE CONCRETE MIX NO. 1A43 OR MIX NO. 3Y43. FURNISHING AND INSTALLATION OF DROPWALL TO BE INCLUDED IN PRICE BID FOR END SECTIONS. DROPWALL NOT REQUIRED FOR NON-WATERWAY USE.

② CHECK LOCATION TO DETERMINE WHETHER A TONGUE OR A GROOVE IS USED.

③ FILL HOLE WITH GROUT. GROUT SHALL CONSIST OF 1 PART CEMENT AND 2 PARTS SAND. USE TYPE 1A AIR ENTRAINED PORTLAND CEMENT. GROUT MIX SHALL HAVE A MAXIMUM SLUMP OF 4".

④ 5'-0" TONGUE AND 5'-1" GROOVE FOR CULVERTS OVER 6'-0" WIDE. CENTER TONGUE AND GROOVE ON ϕ OF EACH APRON JOINT.

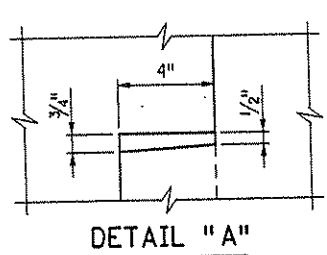
⑤ AS AN ALTERNATE TO THE ONE LAYER MESH, PROVIDE TWO LAYERS OF REBAR OR WIRE MESH WITH THE STEEL AREA EQUAL TO HALF OF THE TEMPERATURE STEEL PER CODE REQUIREMENTS IN EACH FACE OF THE DROPWALL.



A _t , A _b REINFORCEMENT		
WIDTH (FT.)	A _t (IN ² /FT.)	A _b (IN ² /FT.)
12	.88	1.06

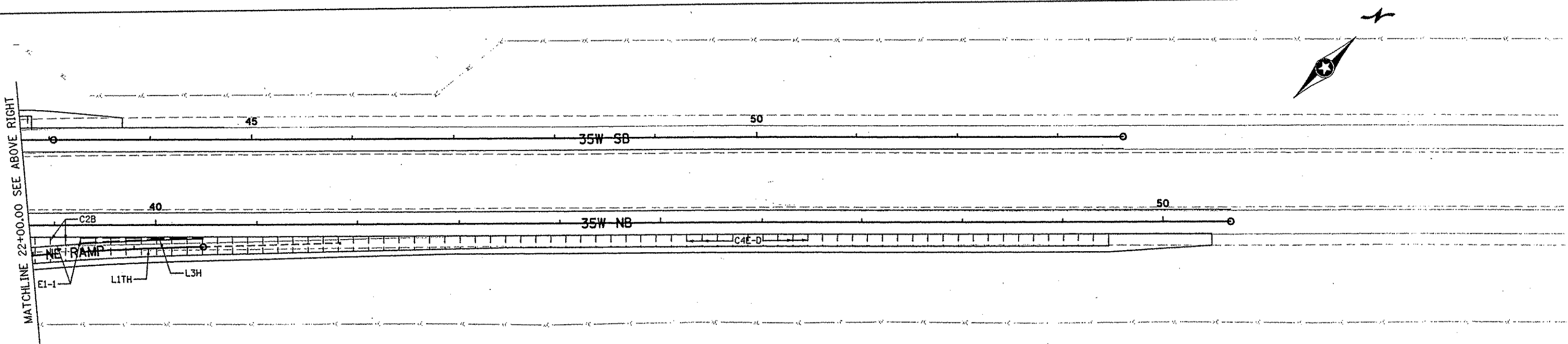
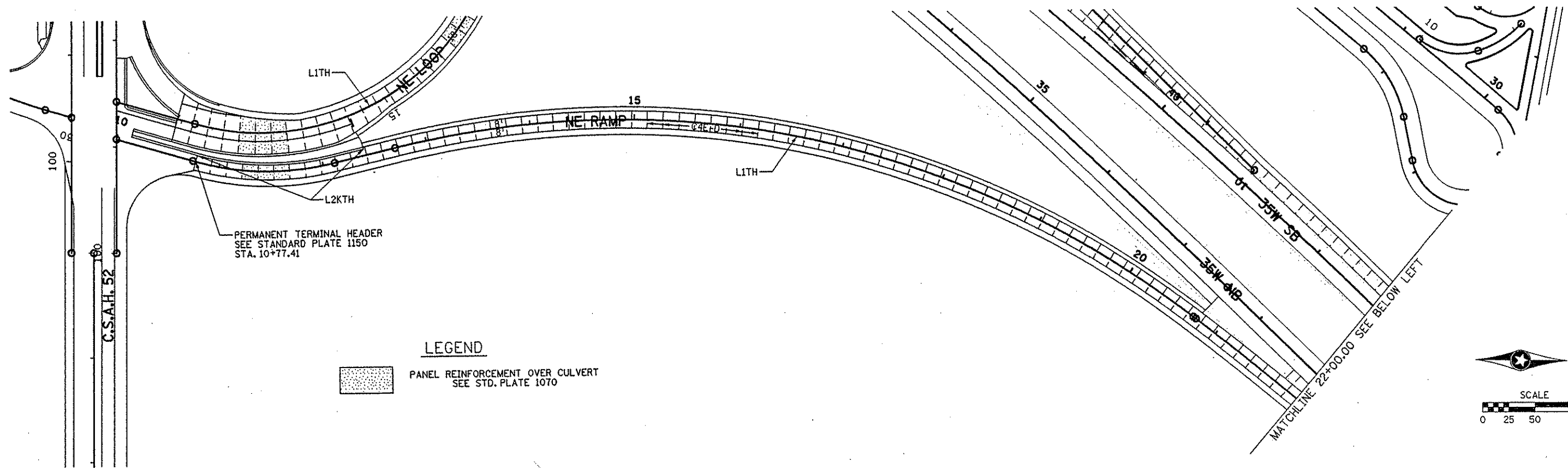
APRON DIMENSIONS & A _h REINFORCEMENT											
H	L	SECTION 1		SECTION 2		SECTION 3		SECTION 4		SECTION 5	
FT.	FT.	X	A _h	h ₂	Y	A _h	h ₃	Z	A _h	h ₄	h ₅
9	18	6'	0.29	7'-9"	6'	0.20	4'-9"	6'	0.192	1'-9"	

NOTE: A_h IS AREA OF REINFORCEMENT PER FOOT OF LENGTH (IN²/FT.)



REVISION:
APPROVED: DECEMBER 11, 2000
D. Donald J. Manning
STATE BRIDGE ENGINEER

STATE PROJ. NO 02-652-02 (T.H.) STA. 223+64.51
 CERTIFIED BY *Adam S. Dandekar* PROFESSIONAL ENGINEER
 LIC. NO. 22505 11-20 2001
 PRECAST CONCRETE END SECTION
 TYPE I - SINGLE OR DOUBLE BARREL
 FOR SKEWS UP TO 7 1/2'
 FIG. 5-395.102
 DES: DR: APPROVED:
 CHK: CHK:
 SHEET NO. 218 OF 559 SHEETS
 BRIDGE NO. 02J15



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.

James Weaver
 DATE 1-11-02 LIC. NO. 22405

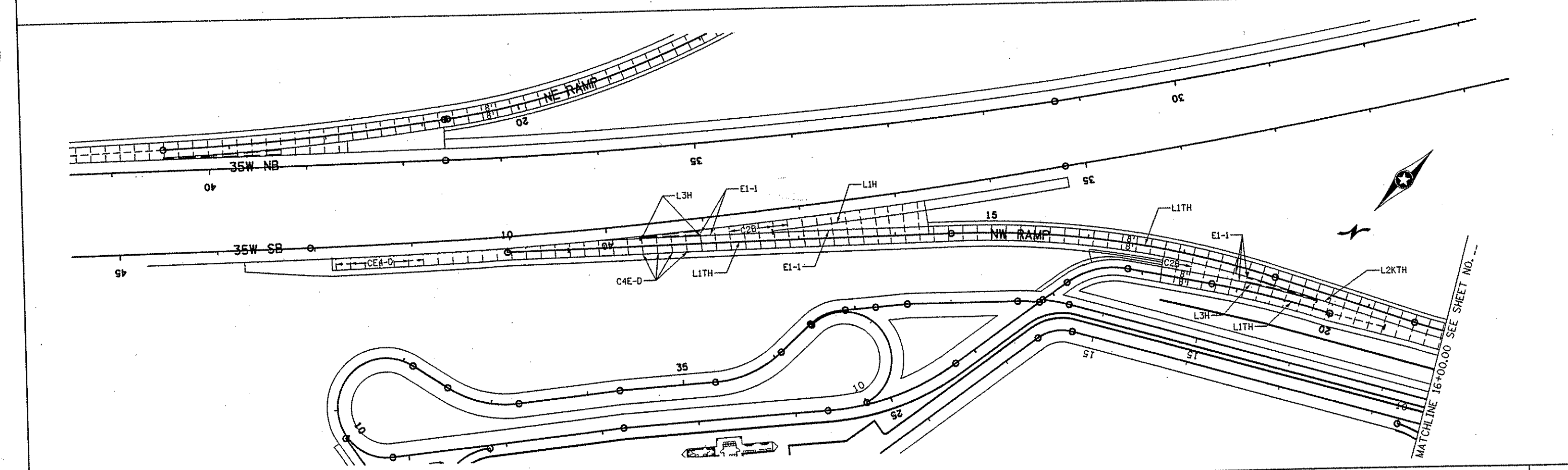
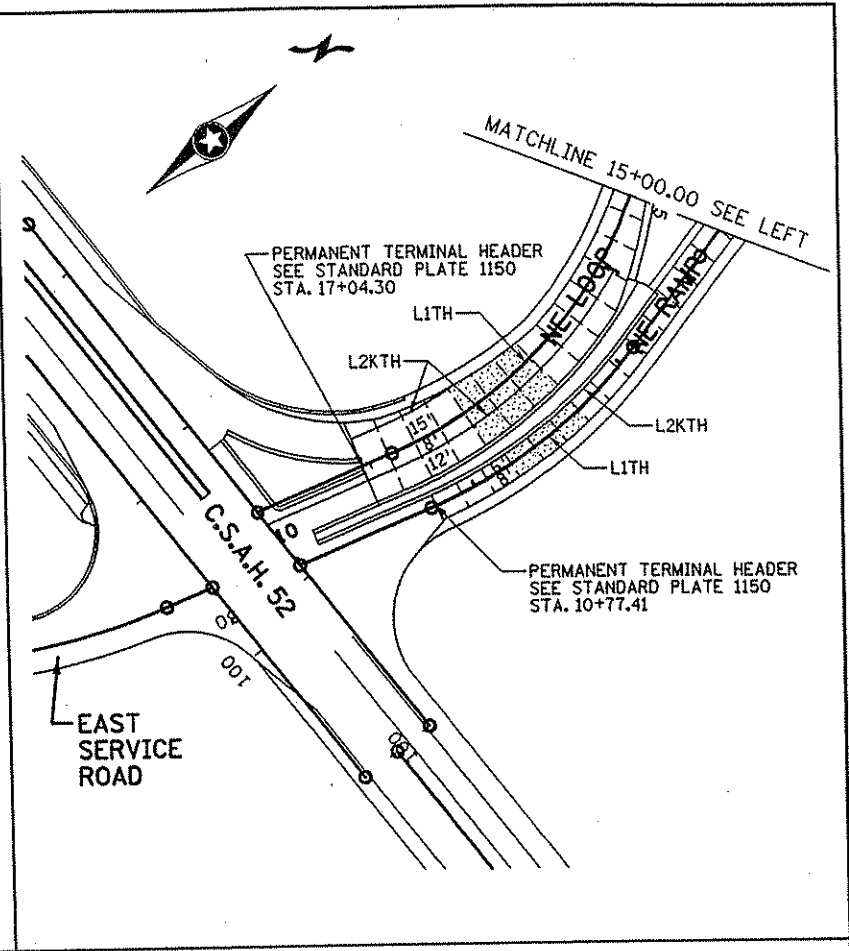
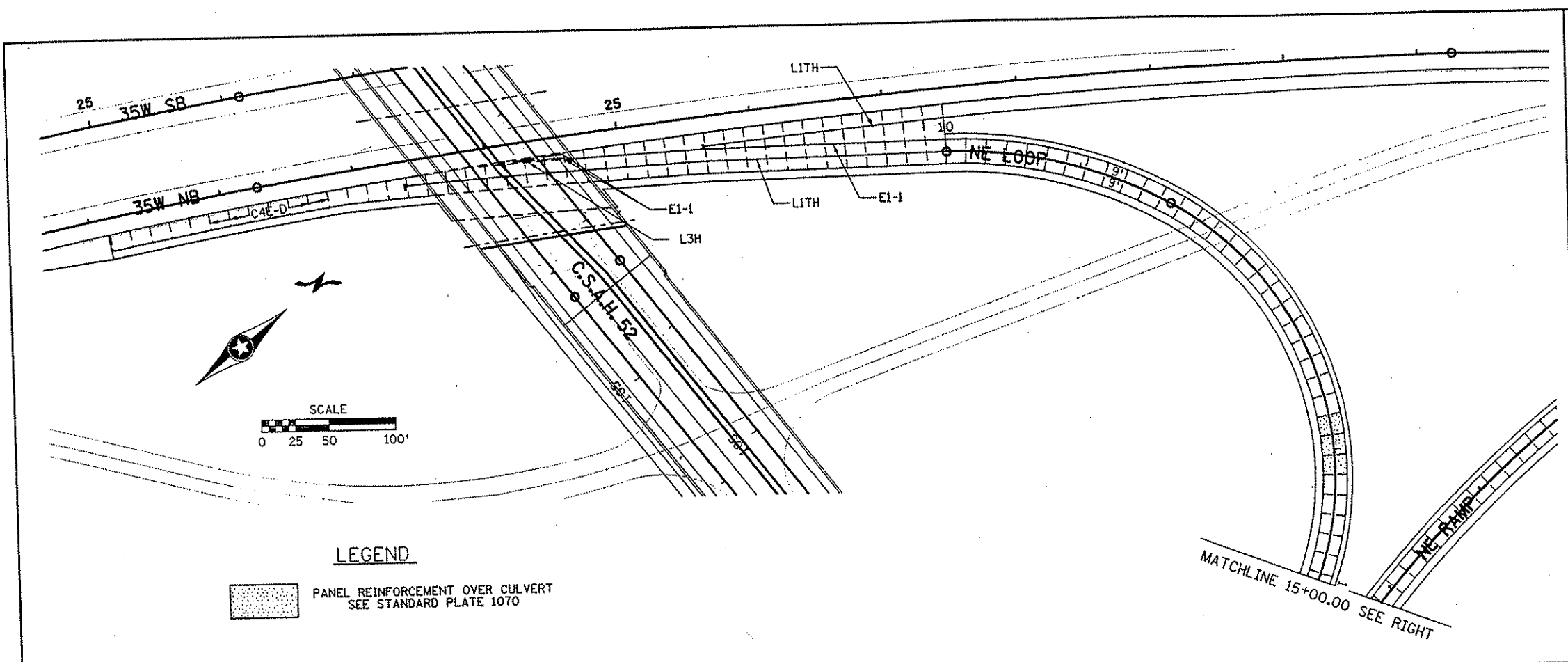
DRAWN BY JJB DATE 9-24-01
 DESIGN BY JJB DATE 9-24-01
 CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONCRETE PAVING PLANS
 C.S.A.H. 52 RECONSTRUCTION
 NE RAMP STA. 10+00 TO 23+69.26

SHEET 219 OF 559



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.

John Weaner
 DATE 1-11-02 LIC. NO. 22405

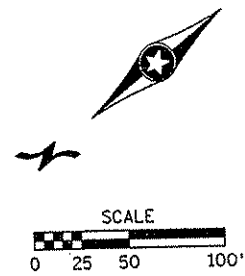
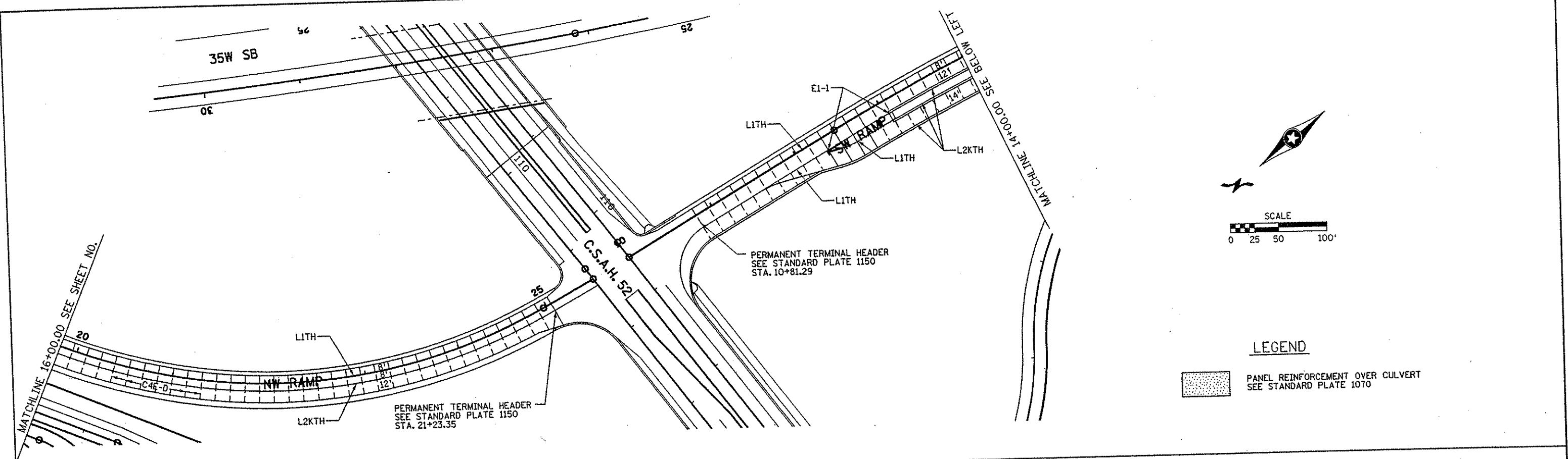
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 S.P. 90-080-11
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022


TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

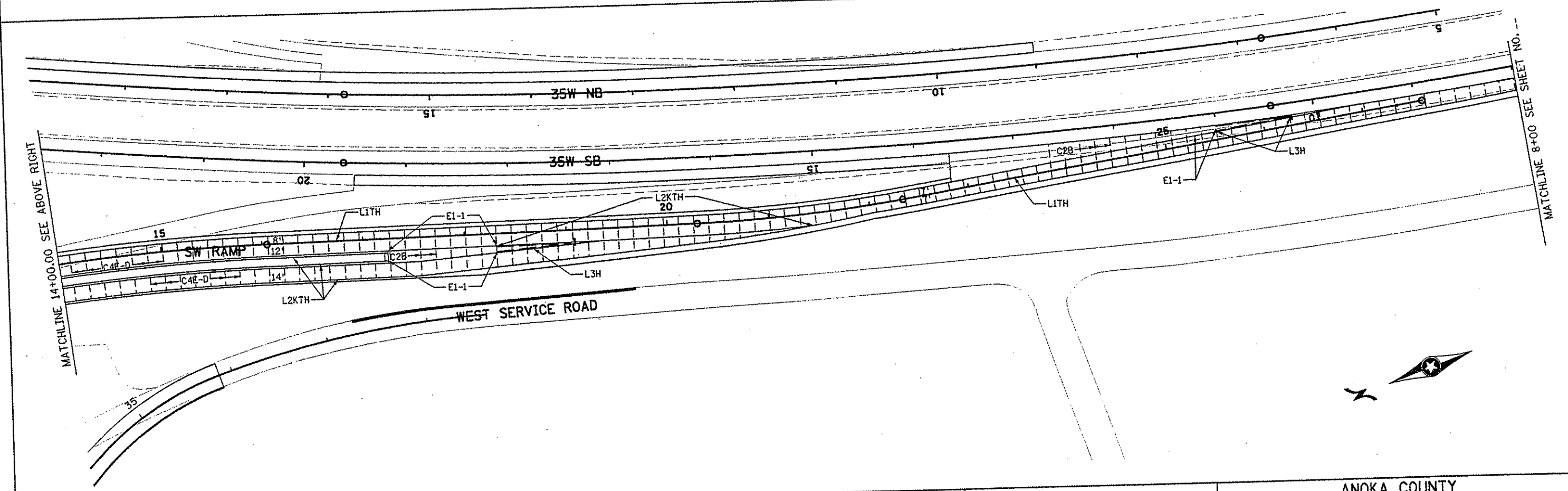
ANOKA COUNTY
 CONCRETE PAVING PLANS
 C.S.A.H. 52 RECONSTRUCTION
 NE LOOP / NW RAMP 10+00 TO 16+00

SHEET 220 OF 559



LEGEND

 PANEL REINFORCEMENT OVER CULVERT
SEE STANDARD PLATE 1070



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.

Joseph Weaver
DATE: 1-11-02 LIC. NO. 22465

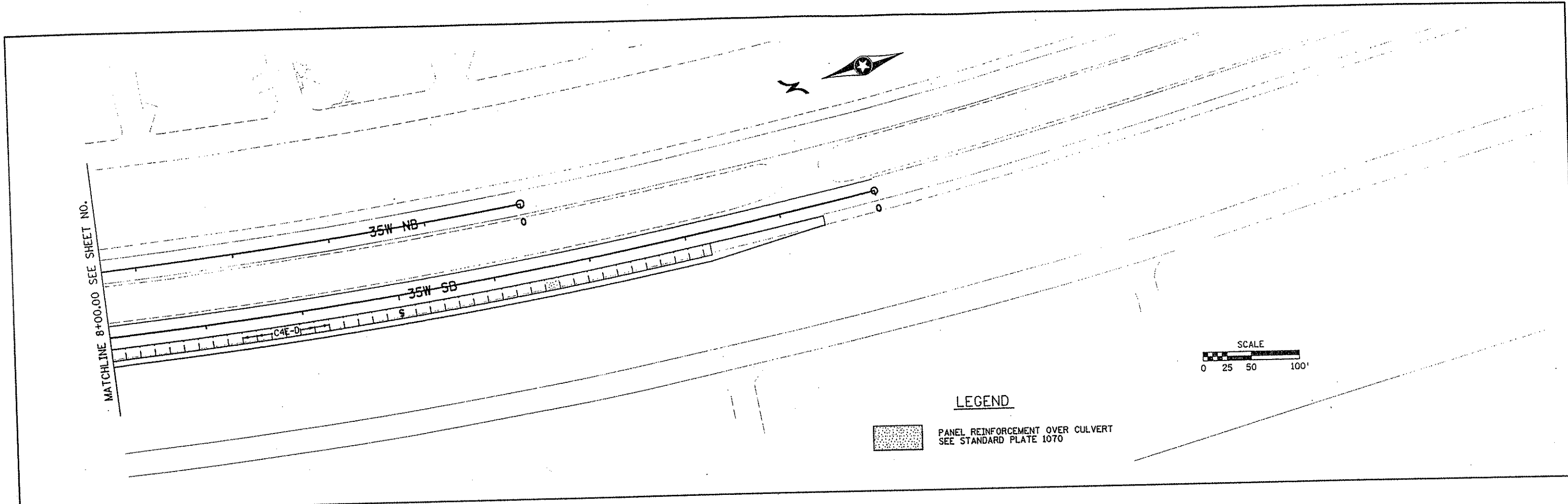
DRAWN BY JJB DATE 9-24-01
DESIGN BY JJB DATE 9-24-01
CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

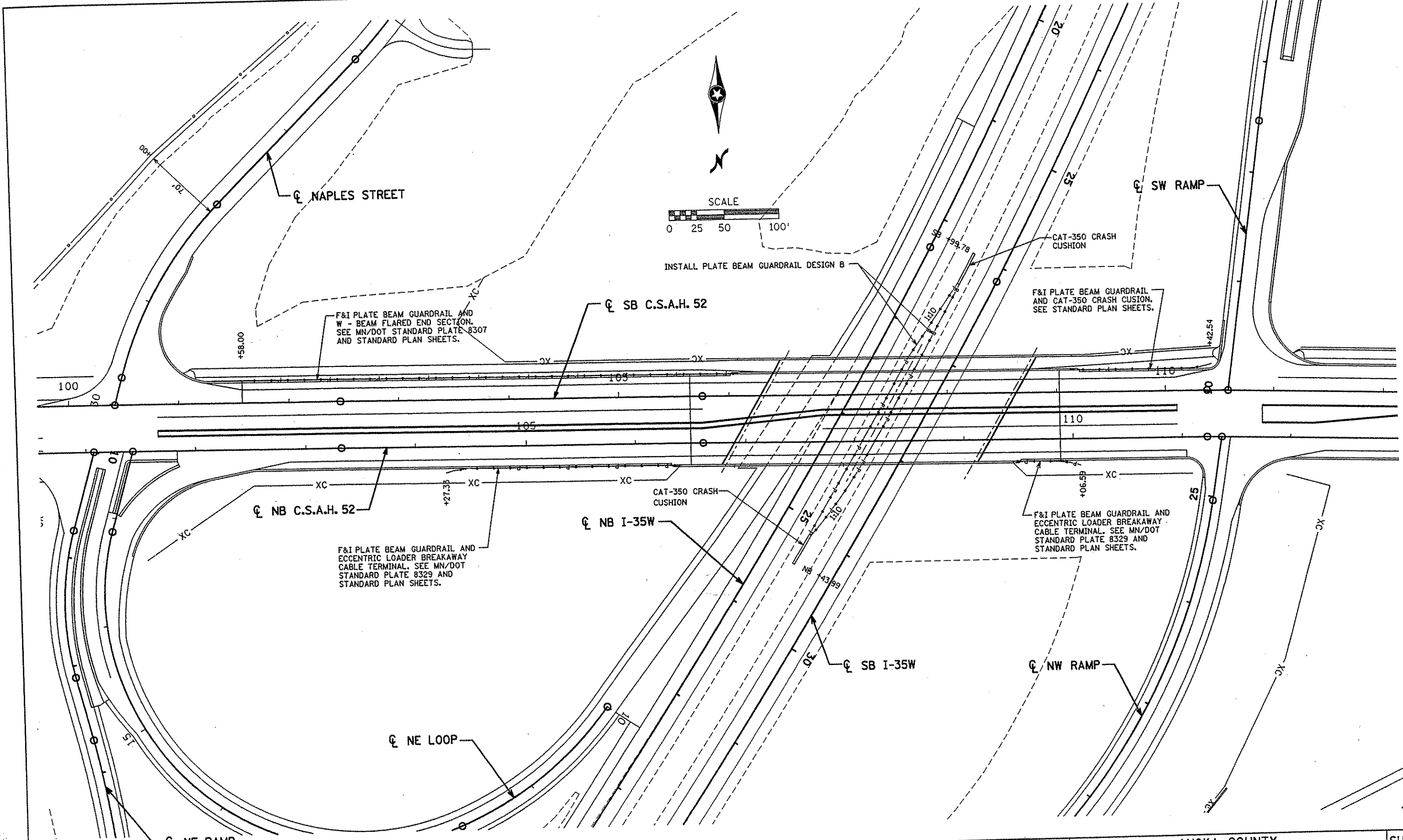
TKDA
TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CONCRETE PAVING PLANS
C.S.A.H. 52 RECONSTRUCTION
NW RAMP 16+00 TO 21+73.68 / SW RAMP

SHEET 221 OF 559



					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. <i>J. J. W.</i> DATE <u>11-20-01</u> LIC. NO. 22405		DRAWN BY <u>JJB</u> DATE <u>9-24-01</u> DESIGN BY <u>JJB</u> DATE <u>9-24-01</u> CHECKED BY <u>JMW</u> DATE <u>9-25-01</u>		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA <small>TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED</small> <small>ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>		ANOKA COUNTY CONCRETE PAVING PLANS C.S.A.H. 52 RECONSTRUCTION SW RAMP		SHEET 222 OF 559
NO	DATE	BY	CKD	APPR	REVISION										
						NAME: k:\site\pro\c11749\part4\roadway3\drawings\joint04.dgn 11/19/01									



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.

Joseph Weaver
 DATE 11-11-02 LIC. NO. 22405

DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

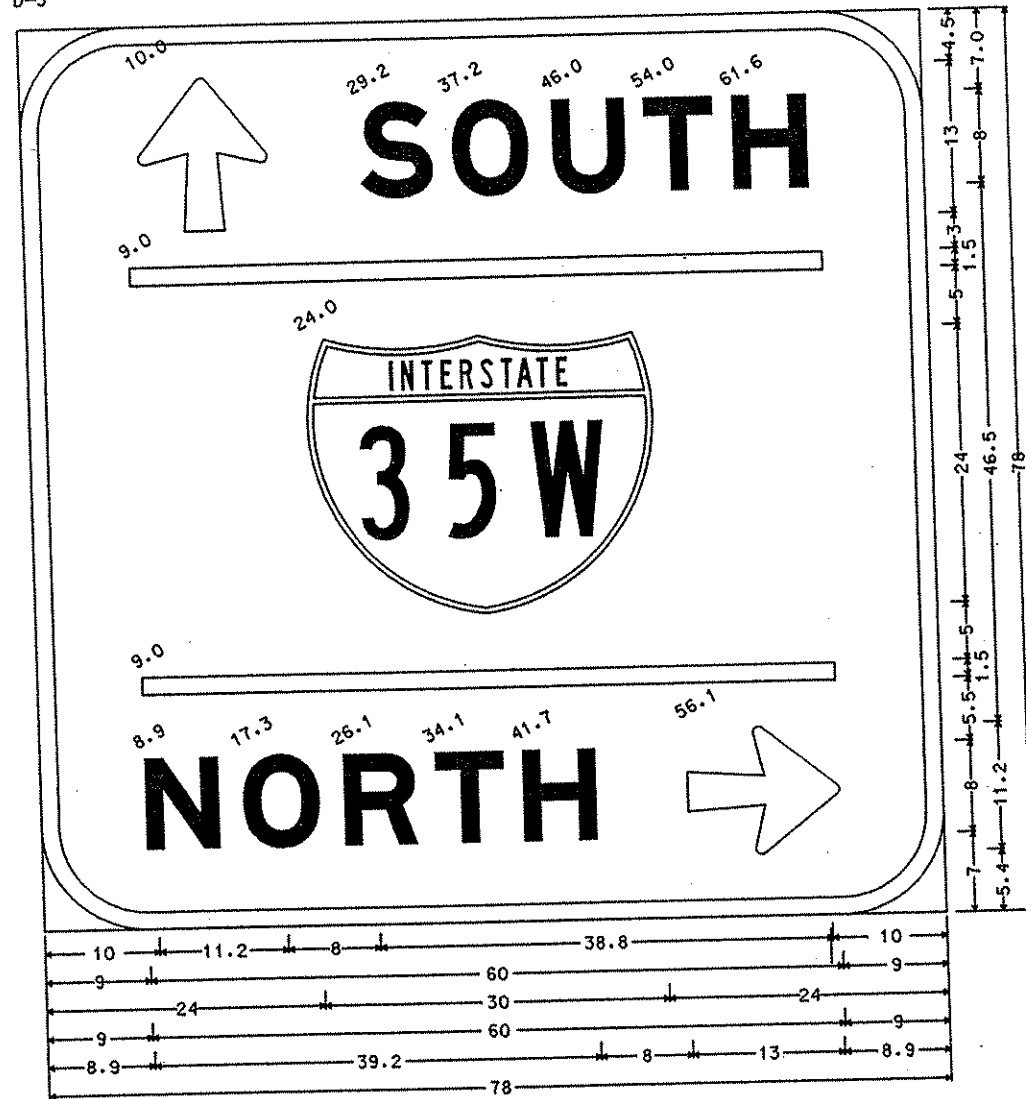
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, QUALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GUARDRAIL PLAN
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 223
 OF
 559

D-3



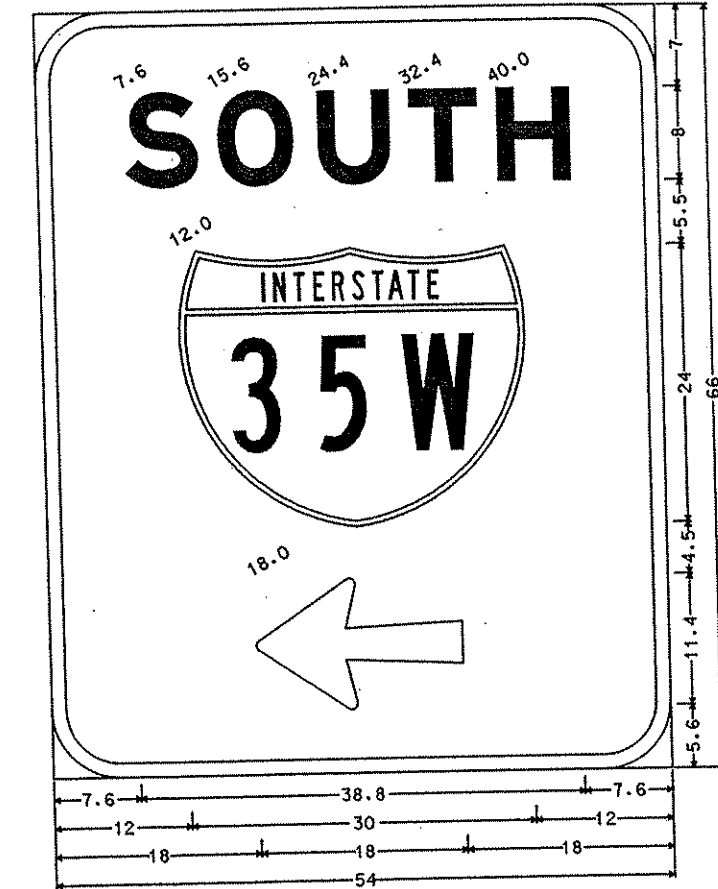
9.0" Radius, 1.5" Border, White on Green:
 Arrow 5 - 13.0" 90 [SOUTH] E Mod: [NORTH] E Mod:
 Arrow 5 - 13.0" 0

D-4



6.0" Radius, 1.3" Border, White on Green:
 [NORTH] E Mod: Arrow 14 - 18.0" 180

D-5



6.0" Radius, 1.3" Border, White on Green:
 [SOUTH] E Mod: Arrow 14 - 18.0" 180

NOTE:

1. CORNERS OF THE SIGN PANELS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
2. SEE STANDARD SIGNS MANUAL FOR ARROW, FRACTION, AND OVERLAY DETAILS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\site\proj\11749\part4\roadway3\drawings\detsign.dgn 20 NOV 2001

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.

Brent J. Paulsen
 DATE 11-21-01 LIC. NO. 26882

DRAWN BY SFH DATE 11-8-00
 DESIGN BY BDP DATE 11-8-00
 CHECKED BY TAC DATE 11-8-00

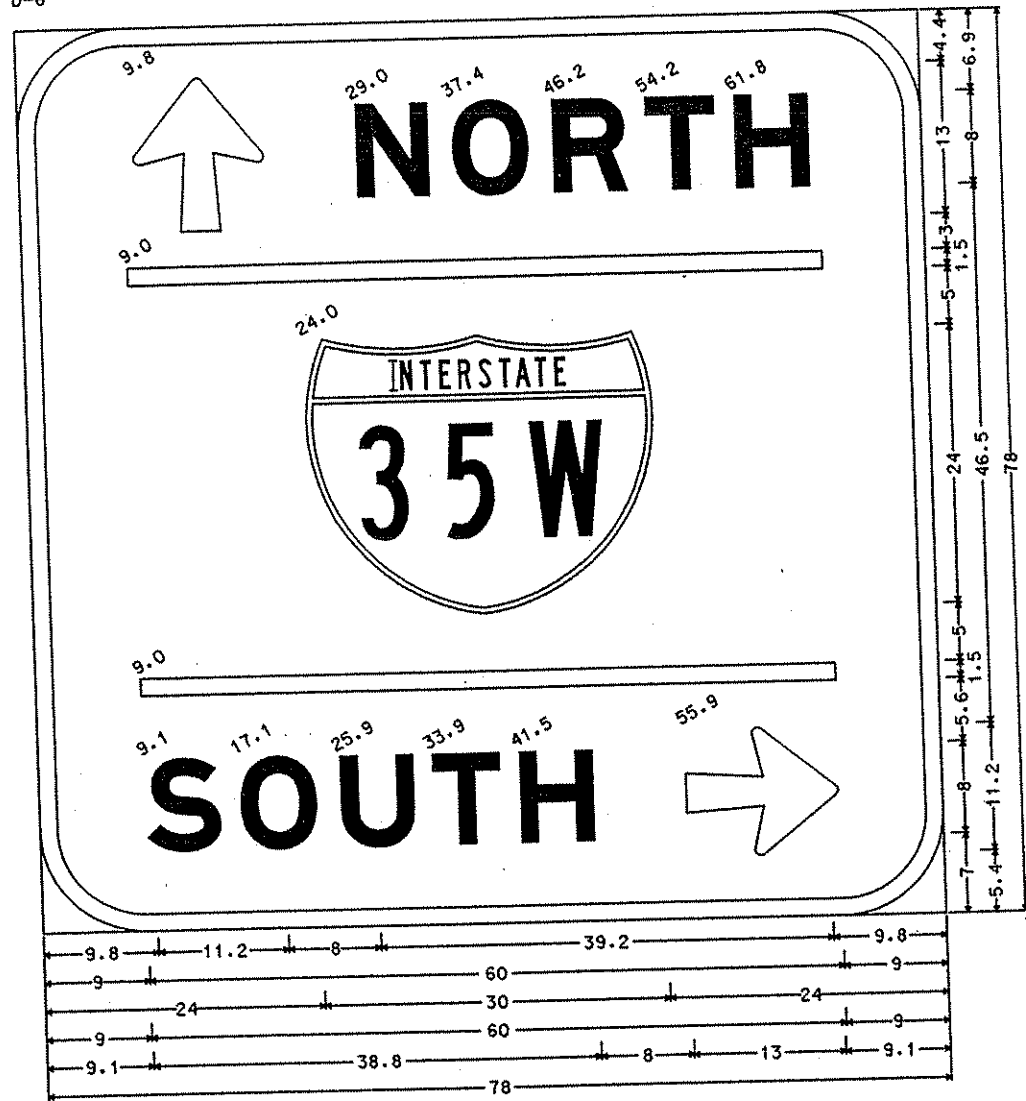
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TYPE "D" SIGN DETAILS
 C.S.A.H. 52 RECONSTRUCTION

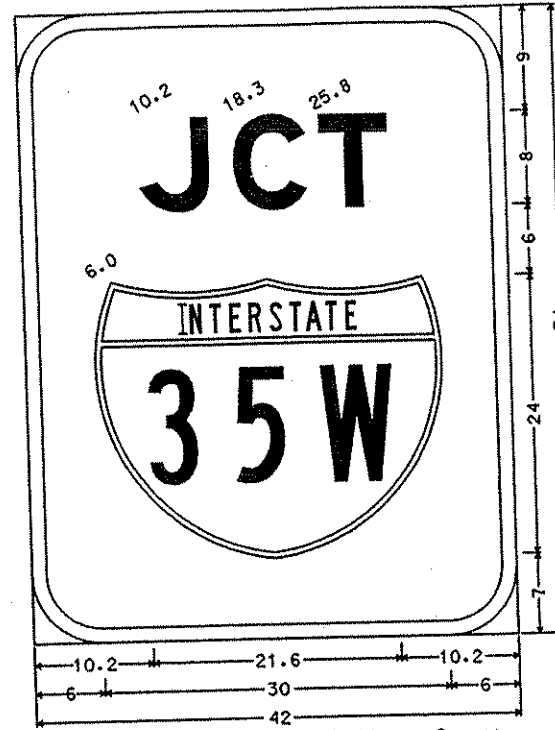
SHEET 225 OF 559

D-6



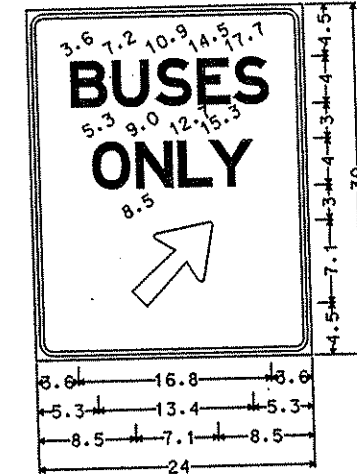
9.0" Radius, 1.5" Border, White on Green;
 Arrow 5 - 13.0" 90 [NORTH] E Mod; [SOUTH] E Mod; Arrow 5 - 13.0" 0

D-7



6.0" Radius, 1.3" Border, White on Green;
 [JCT] E Mod;

D-8

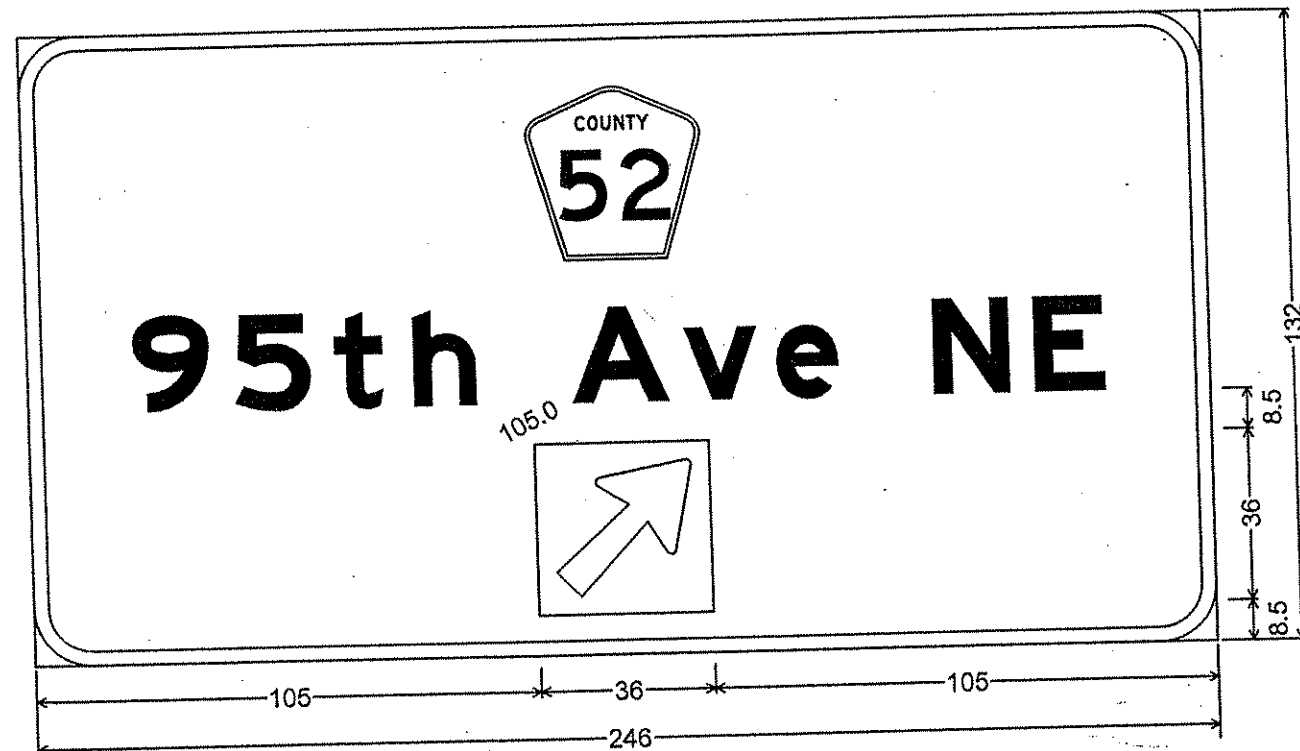


1.5" Radius, 0.4" Border, 0.4" Indent, Black on White;
 [BUSES] D; [ONLY] D;
 Arrow 11 - 9.0" 45

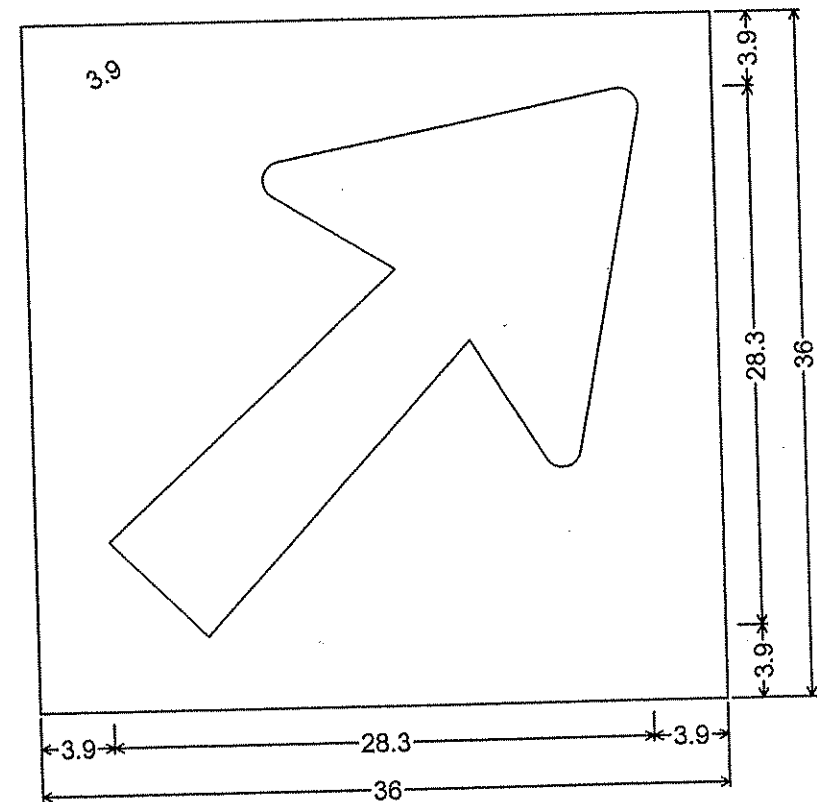
NOTE:

1. CORNERS OF THE SIGN PANELS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
2. SEE STANDARD SIGNS MANUAL FOR ARROW, FRACTION, AND OVERLAY DETAILS.

					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.		DRAWN BY <u>SFH</u> DATE <u>11-8-00</u>		S.P. 0280-50 (TH 35W)		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY TYPE "D" SIGN DETAILS C.S.A.H. 52 RECONSTRUCTION		SHEET 226 OF 559
					Checked by <u>TAC</u> DATE <u>11-8-00</u> DATE <u>11-21-01</u> LIC. NO. <u>26580</u>		DESIGN BY <u>BDP</u> DATE <u>11-8-00</u> S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022								
NO	DATE	BY	CKD	APPR	REVISION	NAME: k:\st+a\proj\c11749\ar+4\roadway3\drawings\de+sign.dgn 20 NOV 2001									



A-1; 12.0" Radius, 3.0" Border, White on Green;
 [95th Ave NE] E Mod; Rectangle Green;



OVERLAY; No border, White on Green;
 Arrow 17 - 36.0" 45°;

CERTIFIED BY *Michael B. Weiss* REG. NO. 10502
PROFESSIONAL ENGINEER

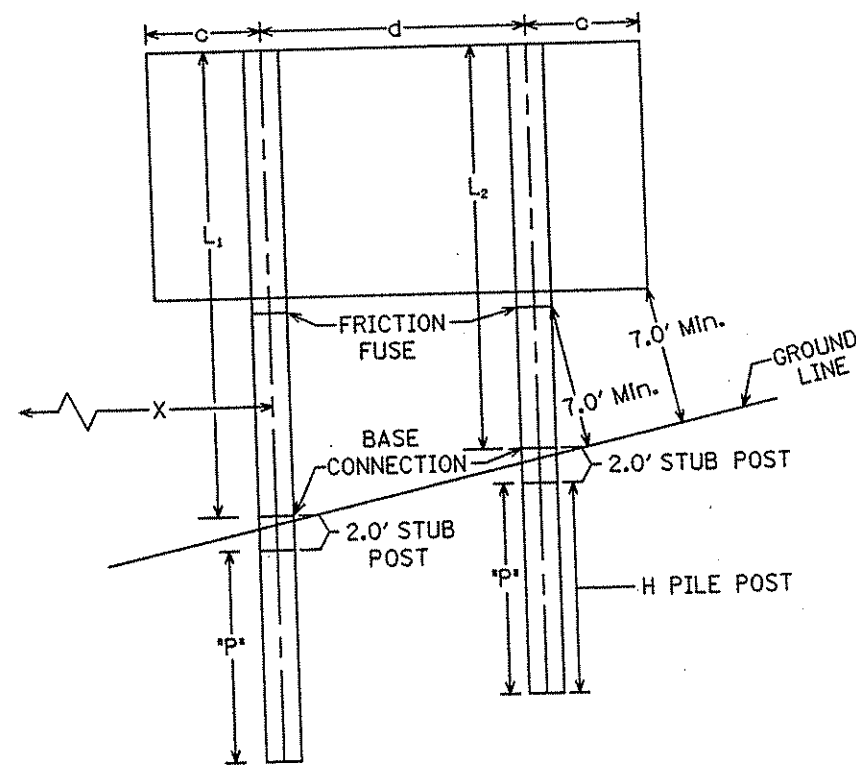
S.P.	0280-50 (T.H. 35)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-019

TYPE OVERLAY

F. & I. SIGN TYPE A (H PILE FOOTINGS)															S	
SIGN NO.	LOCATION	PANEL				POST							TOTAL WEIGHT STRUCTURAL STEEL (LBS.)	"X" (FT.)	"H" (FT.)	
		SIZE (IN.)	SIZE	QUANT.	L1 (FT.)	L2 (FT.)	ADDITIONAL STEEL PER POST (LBS.)	WEIGHT (LBS.)	c (IN.)	d (IN.)	"P" (FT.)	WEIGHT (LBS.)				
A-1	19+00 NB	246 x 132	W 8 X 24	2	20.0	20.0	118	1196.00	51	144	12	576.00	1772.00	30	5	
A-2	46+50 SB	246 x 132	W 8 X 24	2	20.5	20.0	118	1208.00	51	144	12	576.00	1784.00	30	5	
TOTAL													3556.00			

REMOVE SIGN TYPE A								T	
SIGN NO.	LOCATION	PANEL SIZE (IN.)		POSTS					
		EXTRUDED TYPE	FLAT SHEET	SIZE		L1 (FT.)	L2 (FT.)		
				BREAK-AWAY	NONBREAK-AWAY				
(2) A-101	9+25 NB	246 x 132		W8X31		22.9	20.6		
(3) A-102	43+25 SB	246 x 132		W8X31		23.5	23.4		

POST QUANTITIES			
POST SIZE	QUANTITY (1)	POST SIZE	QUANTITY (1)
W4X13	59+13 LBS/FT	W8X28	143+28 LBS/FT
W5X16	67+16 LBS/FT	W8X31	173+31 LBS/FT
W6X20	104+20 LBS/FT	W10X39	195+39 LBS/FT
W8X24	118+24 LBS/FT		



BREAKAWAY POSTS-H-PILE FOOTING
(L₁ IS POST NEAREST ROADWAY)

TYPE A SIGNS

SPECIFIC NOTE:

- (1) Constant includes stub post weight
- (2) Salvage sign panel and install on A-1
- (3) Salvage sign panel and install on A-2

GENERAL NOTES:

1. Pile shall be the same size as the sign post and is to be driven to a 8 to 10 ton bearing capacity.
2. See sheets 236 and 237 for Structural Details, Type A Signs (Breakaway).
3. Post lengths are approximate.
4. "X" is the distance from the edge of the thru lane to the first post.
5. "H" is the height above the pavement edge to the bottom edge of panel.
6. P is the length of H-pile post.
7. See sheets 240 and 241 for cross sections.

\\sfile\pro\coll1749\par14\roadway3\drawings\data-rec\sunstron\data.dgn

MART.BD1 42 5-17-93

CERTIFIED BY *Michael B. Weiss* LIC. NO. 10502
REGISTERED PROFESSIONAL ENGINEER

S.P. 0280-50 (T.H. 35)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

A SIGN DATA SHEET
H-PILE FOOTING

Sheet No. 228 of 559 Sheets

SIGN PANELS TYPE D SEE SHEET 225-226 FOR SIGN PANELS										U
SIGN NO.	QUANT.	POSTS				MTG HT. (FT.) (1)	PANEL			PANEL LEGEND
		NO. & TYPE	KNEE BRACES QUANT.	LEN. (FT.)	SPACING (IN.)		SIZE (IN.)	AREA (SQ. FT.)	TOTAL AREA (SQ. FT.)	
(2) D-1	1	2-U	2	18	42	7	72 x 84	42.00	42.00	EXIT 32 ↗ _{45°}
(2) D-2	1	2-U	2	18	42	7	72 x 84	42.00	42.00	EXIT 32 ↗ _{60°}
D-3	1	2-U	2	18	54	7	78 x 78	42.25	42.25	↑ SOUTH 35W NORTH ⇨
D-4	1	2-U	1	18	42	7	54 x 66	24.75	24.75	NORTH 35W ←
D-5	1	2-U	1	18	42	7	54 x 66	24.75	24.75	SOUTH 35W ←
D-6	1	2-U	2	18	54	7	78 x 78	42.25	42.25	↑ NORTH 35W SOUTH ⇨
D-7	2	2-U	1	18	30	7	42 x 54	15.75	31.50	JCT 35W
D-8	2	2-U	-	13	18	7	24 x 30	5.00	10.00	BUSES ONLY ↗
TOTAL									259.50	

REMOVE SIGN TYPE D						V
SIGN NO.	QUANT.	POSTS		PANEL SIZE (IN.)	PANEL LEGEND	
		NO. & TYPE	KNEE BRACES QUANT.			
D-101	1	2-U		72 x 60	EXIT 32 ↗	
D-102	1	2-U	2	72 x 60	EXIT 32 ↗	
TOTAL		2				

SIGN PANELS TYPE OVERLAY					CC
CODE NO.	QUANT.	SIZE	AREA	TOTAL	LEGEND
		IN.	SF	SF	
M1-1	5	30X24	5	25	INTERSTATE 35W
(1)	1	36X36	9	9	ARROW
TOTALS				34	

NOTES:
(1) SEE SHEET 227 FOR PANEL.

DELINEATORS AND MARKERS			DD
TYPE	QUANT.	LOCATION	
(3) WHITE (X4-6)	6	EXIT NOSE	
(3) YELLOW (X4-6)	9	EXIT NOSE	
(4) (X4-2)	1	MOUNTED ON R3-X3	
(4) (X4-2)	25	MOUNTED ON R4-7	
(4) (5) (X4-2)	2	GROUND MOUNTED	
(4) (5) (X4-2)	1	MEDIAN MOUNTED	
(4) (X4-2)	2	MOUNTED ON W12-1	
(4) (X4-2)	1	MOUNTED ON D-8	
(X4-4R)	2	MEDIAN MOUNTED	
(X4-4L)	6	MEDIAN MOUNTED	
(X4-5)	6	GROUND MOUNTED	
(6) DELINEATOR 4' DIA. X 15'	26	MOUNTED ON R1-1	
TOTAL		87	

SPECIFIC NOTES:

- (1) Mounting height is minimum, see sheet 238 for Typical Mounting.
- (2) See Standard Sign Manual (E5-1a).
- (3) See Standard Signs Manual for Guide Marker (X4-6).
- (4) See Standard Signs Manual for Hazard Marker (X4-2).
- (5) Install on 3 lb/ft post (Mn/DOT 3401).
- (6) Paid for as delineator type cylinder style.

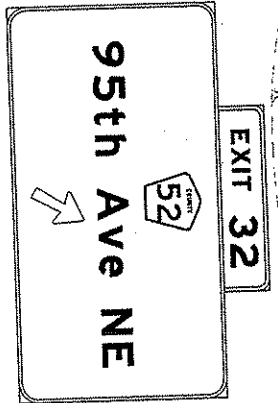
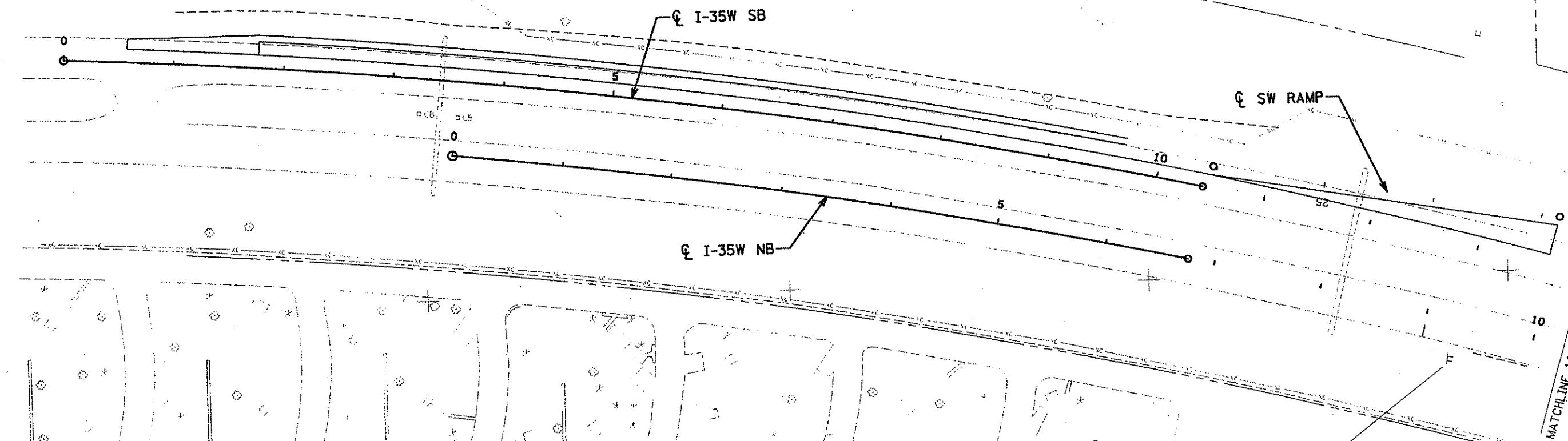
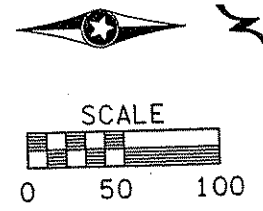
GENERAL NOTES:

1. Post lengths are approximate and include embedment, but do not include additional length required for splice.
2. See sheets 238 and 239 for structural details.
3. See Standard Signs Manual for Type "D" stringer and panel-joint details.
4. See roadway layouts for delineator and marker locations.
5. For delineator and marker placement detail, see sheet 235.

D SIGN & DELINEATOR DATA SHEET

S.P. 0280-50 (T.H. 35)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

CERTIFIED BY Michael B. Weiss LIC. NO. 10502
LICENSED PROFESSIONAL ENGINEER



- NOTES:
- ② Inplace
 - ④ Remove

MATCHLINE 14+00 SB SEE SHEET No. 231

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.

Brent O. Paulson
 DATE 3/1/02 LIC. NO. 26880

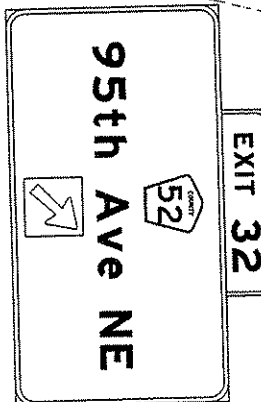
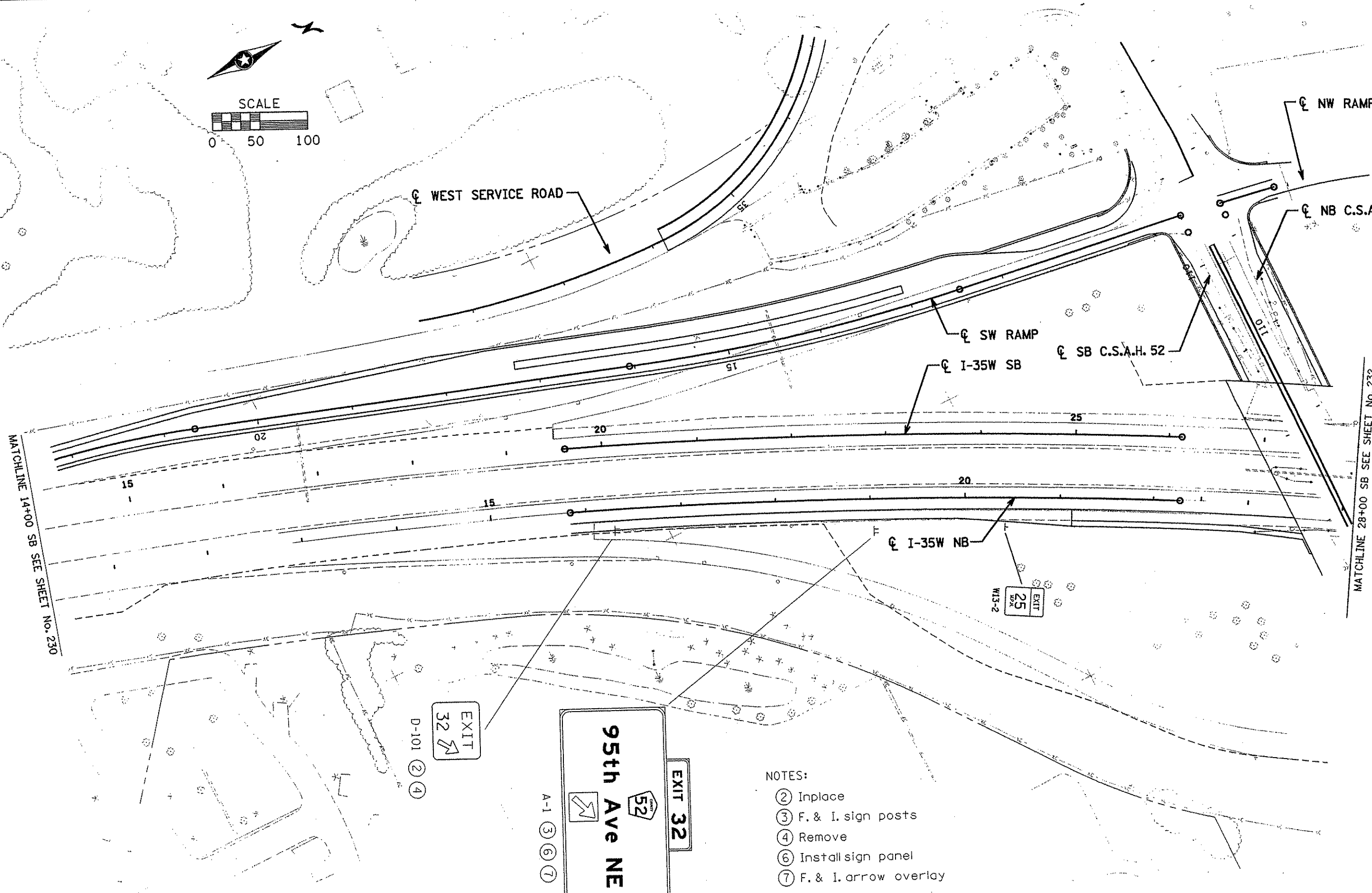
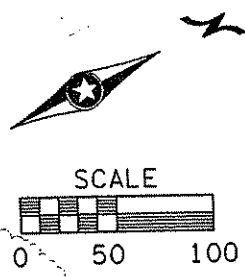
DRAWN BY _____ DATE _____
 DESIGN BY _____ DATE _____
 CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 I-35W SB STA. 0+00 TO 14+00

SHEET
 230
 OF
 559



- NOTES:
- ② Inplace
 - ③ F. & I. sign posts
 - ④ Remove
 - ⑥ Install sign panel
 - ⑦ F. & I. arrow overlay

ANOKA COUNTY				SHEET 231 OF 559	
SIGNING PLAN					
C.S.A.H. 52 RECONSTRUCTION I-35W SB STA. 14+00 TO 28+00					
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.		DRAWN BY _____ DATE _____ DESIGN BY _____ DATE _____ CHECKED BY _____ DATE _____	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA <small>TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED</small> <small>ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>	
NO	DATE	BY	CKD	APPR	REVISION

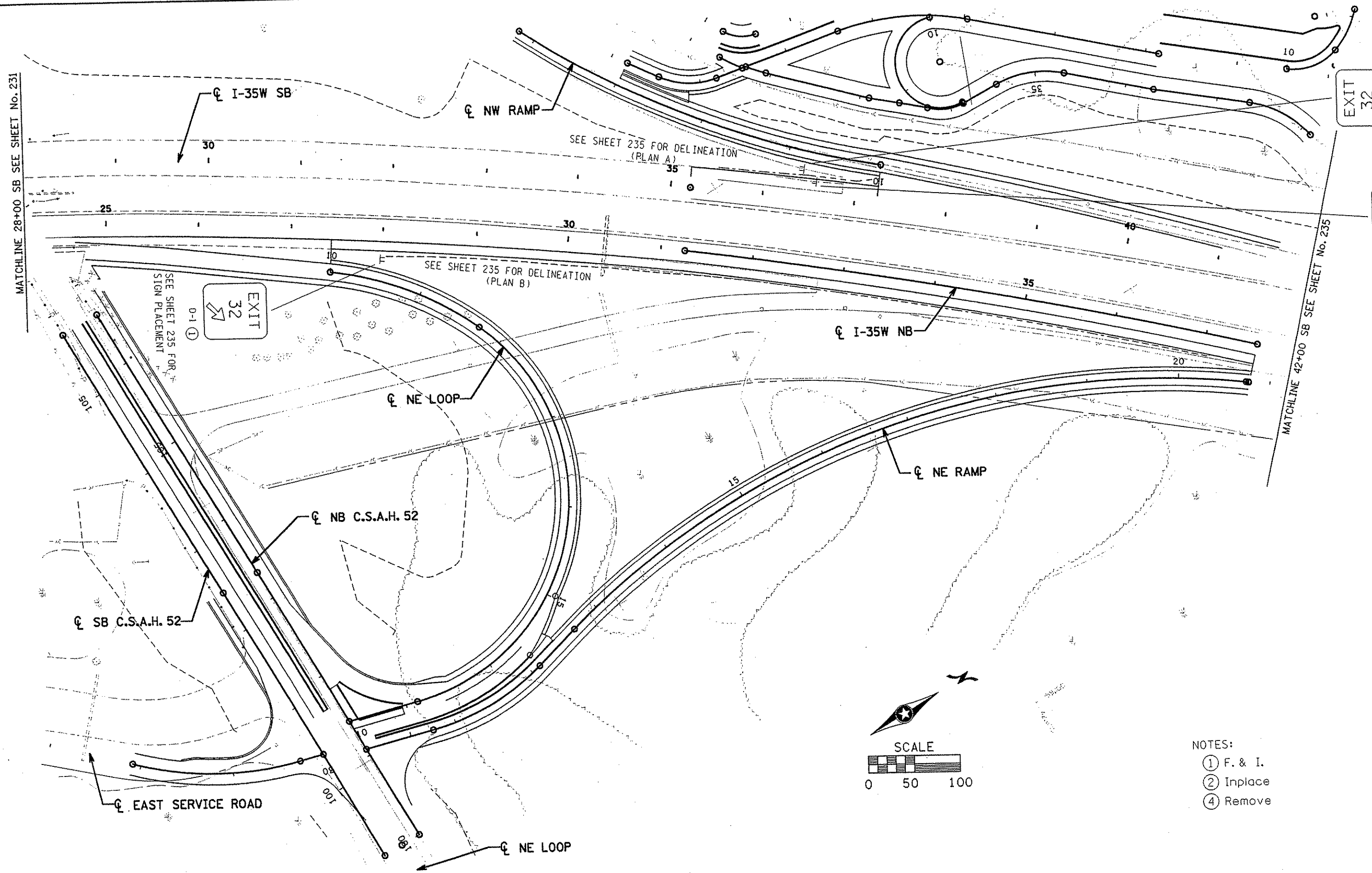
MATCHLINE 28+00 SB SEE SHEET No. 231

MATCHLINE 42+00 SB SEE SHEET No. 235

SEE SHEET 235 FOR SIGN PLACEMENT

D-102 (2) (4)

D-2 (1)



EXIT 32

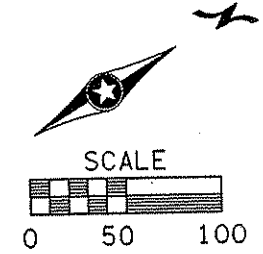
EXIT 32

EXIT 32

SEE SHEET 235 FOR SIGN PLACEMENT

SEE SHEET 235 FOR DELINEATION (PLAN B)

SEE SHEET 235 FOR DELINEATION (PLAN A)



- NOTES:
- ① F. & I.
 - ② Inplace
 - ④ Remove

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.

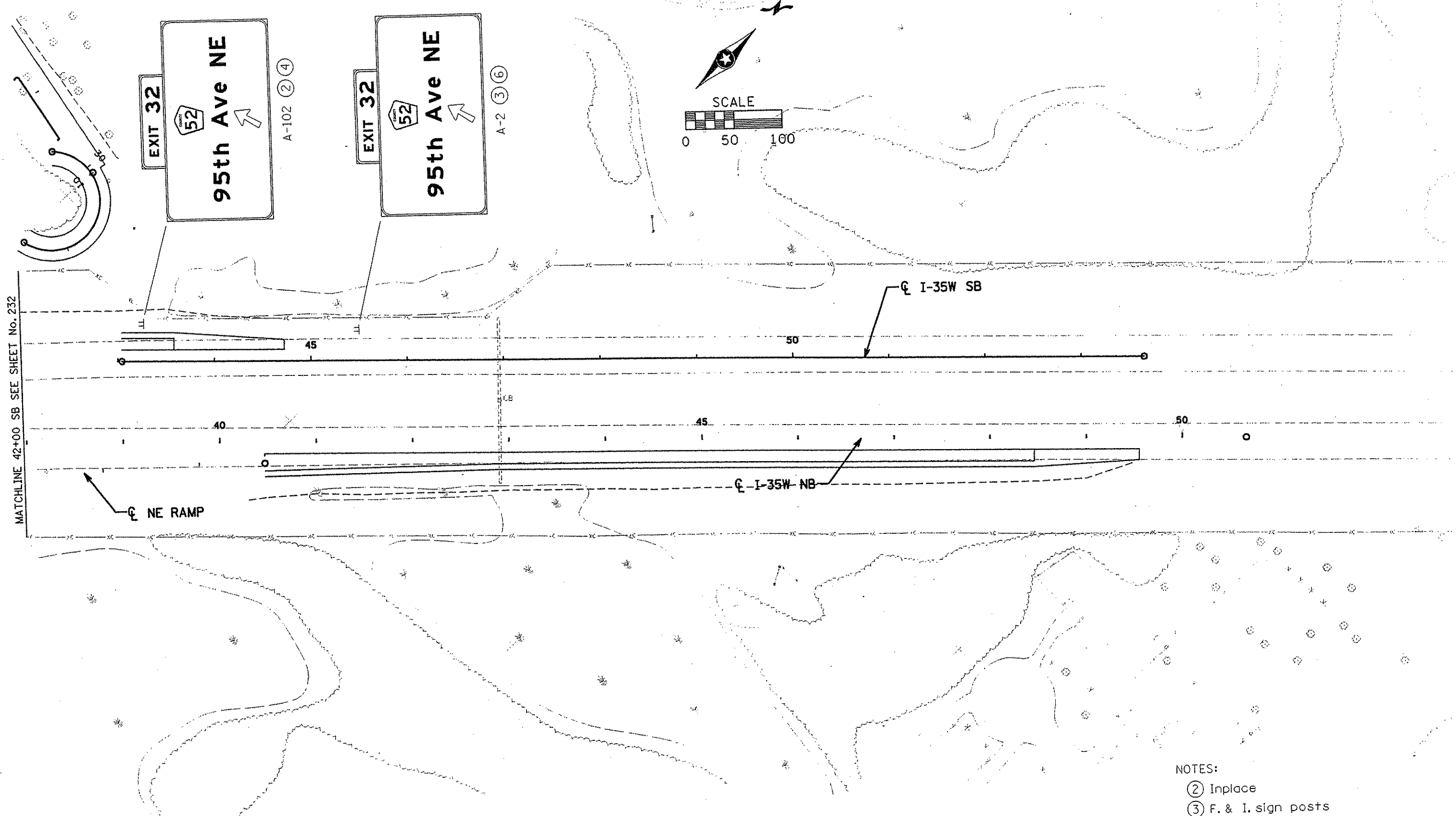
Joseph Weaver
 DATE: 1-11-02 LIC. NO. 22405

DRAWN BY	DATE	S.P.	0280-50 (TH 35W)
DESIGN BY	DATE	S.P.	90-080-11
CHECKED BY	DATE	S.A.P.	02-652-02
		S.A.P.	02-652-03
		S.A.P.	02-652-04
		S.A.P.	106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 I-35W SB STA. 28+00 TO 42+00

SHEET 232 OF 559



- NOTES:
- ② Inplace
 - ③ F. & I. sign posts
 - ④ Remove
 - ⑥ Install sign panel

NO	DATE	BY	CRD	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.

Scott O. Paulsen
 DATE 2/1/02 LIC. NO. 26880

DRAWN BY _____ DATE _____
 DESIGN BY _____ DATE _____
 CHECKED BY _____ DATE _____

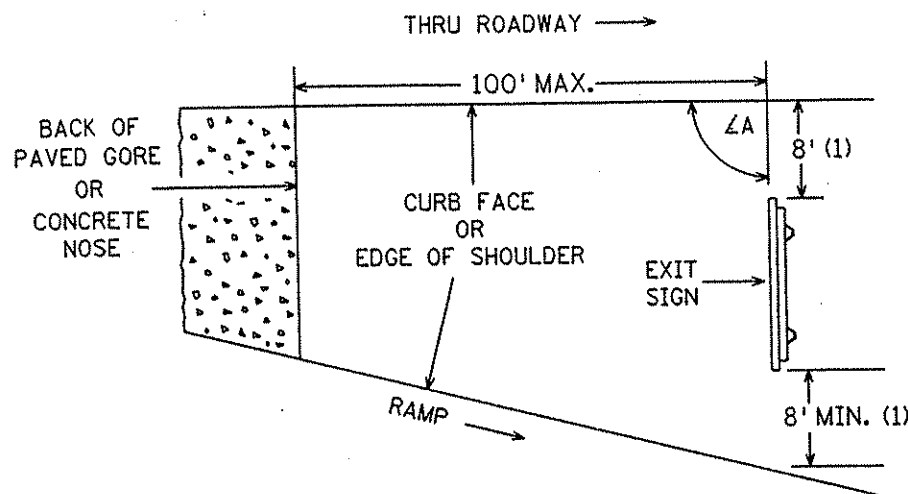
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

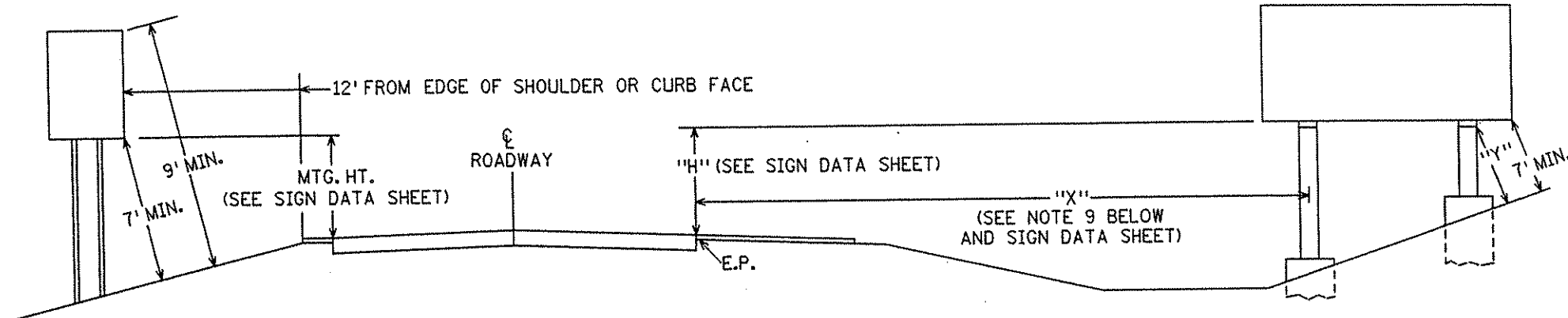
ANOKA COUNTY
 SIGNING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 I-35W SB STA. 28+00 TO 42+00

SHEET
 233
 OF
 559

GORE PLACEMENT

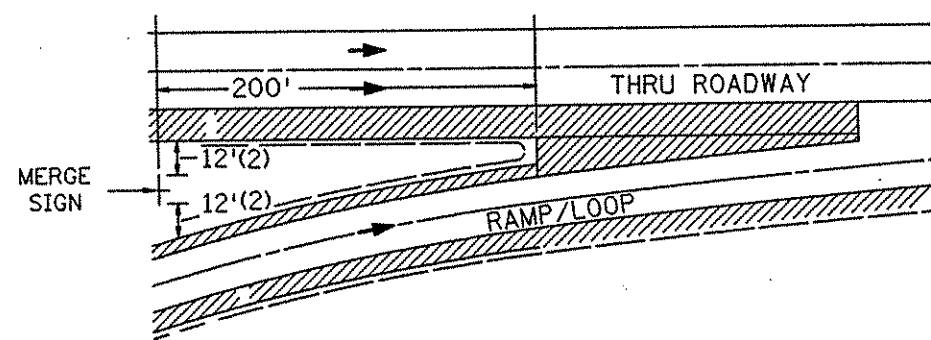


ROADSIDE PLACEMENT



MAJOR GUIDE SIGN - TYPE A

ROUTE MARKER, REGULATORY & WARNING SIGNS - TYPE C
MINOR GUIDE SIGNS - TYPE D



SPECIFIC NOTES:

- (1) EXIT SIGNS
IF THESE OFFSETS CANNOT BE ATTAINED WITHIN 100 FEET OF THE PAVED GORE, A 4 FOOT OFFSET IS ACCEPTABLE. IF THE 4 FOOT OFFSETS CANNOT BE ATTAINED WITHIN 100 FEET OF THE PAVED GORE, CONTACT THE OTE SIGNING UNIT.

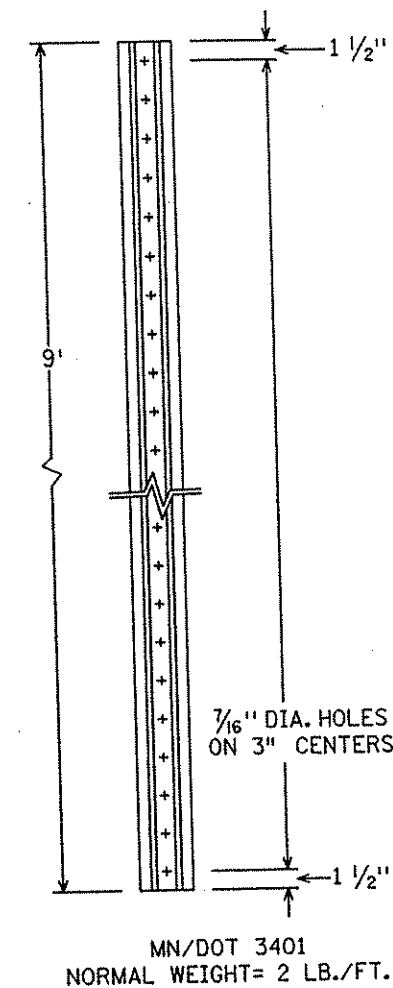
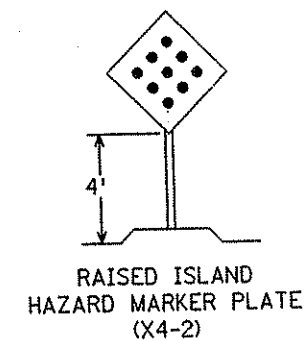
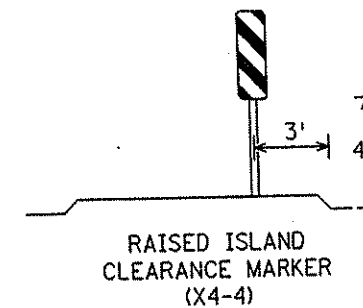
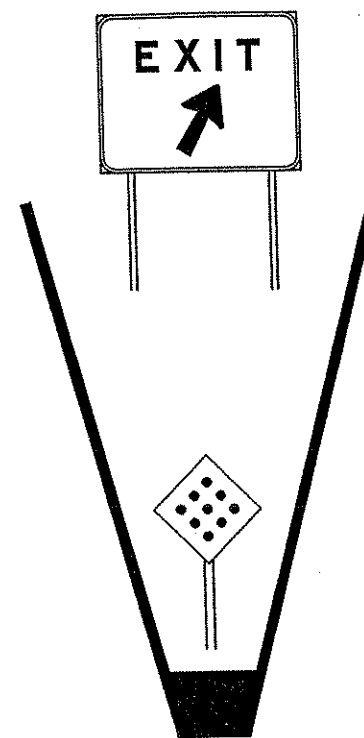
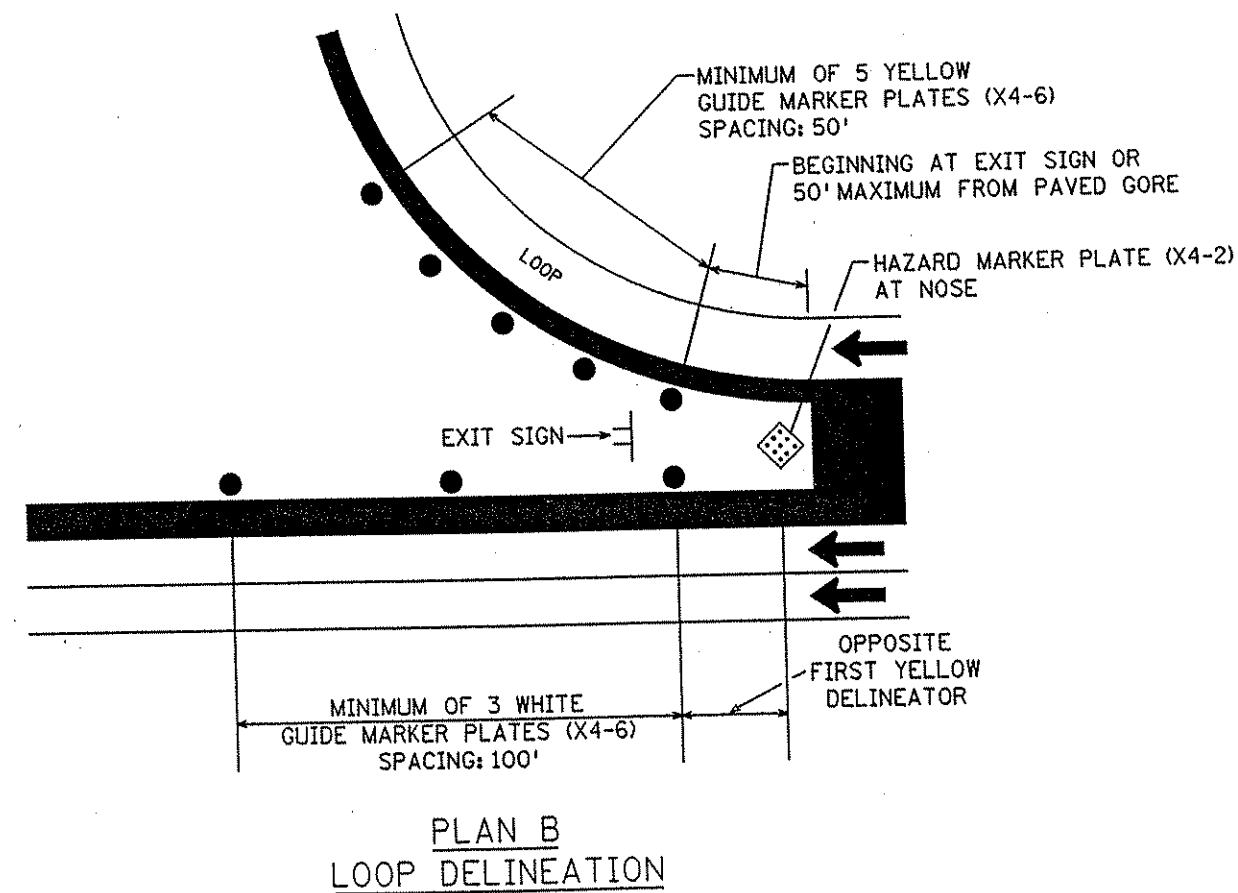
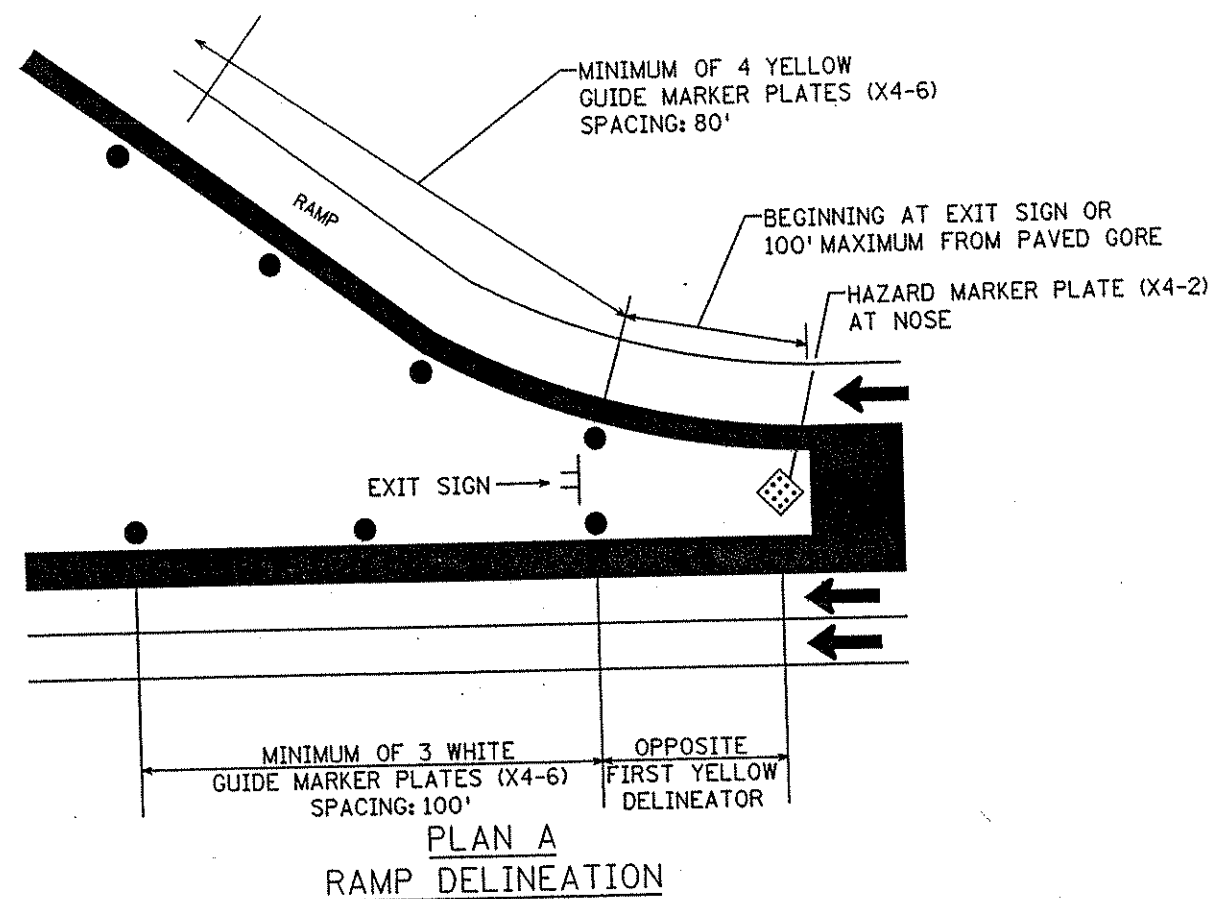
IF THE GORE NEEDS TO BE DELINEATED, INSTALL A HAZARD MARKER PLATE X4-2 JUST BEYOND THE PAVED GORE. IN ADDITION, INSTALL RAMP DELINEATORS ON SEPARATE POSTS TO MAINTAIN THEIR PROPER LOCATIONS AND SPACINGS.
- (2) MERGE SIGNS
IF THESE OFFSETS CANNOT BE ATTAINED WITHIN 200 FEET OF THE PAVED GORE, A 4 FOOT OFFSET IS ACCEPTABLE, UNLESS THE SIGN IS TO BE MOUNTED ON A LIGHT POLE STANDARD (MINIMUM 2 FOOT OFFSET) LOCATED WITHIN 200 FEET OF THE PAVED GORE. IF THE 4 FOOT OFFSETS CANNOT BE ATTAINED WITHIN 200 FEET OF THE PAVED GORE, CONTACT THE OTE SIGNING UNIT.

NOTES:

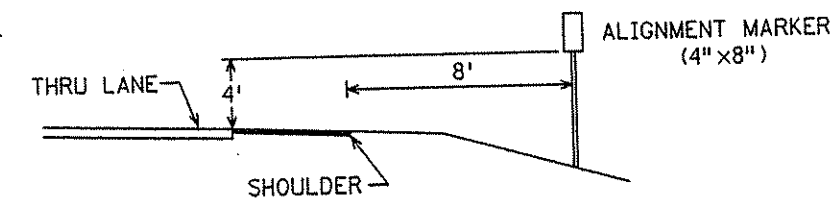
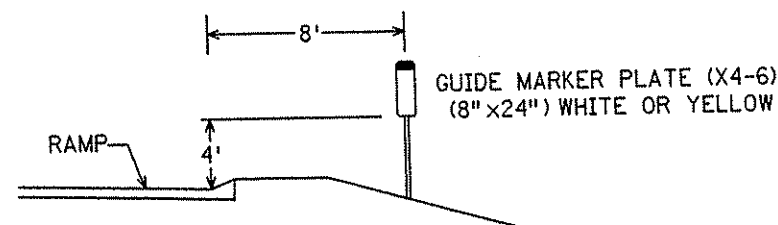
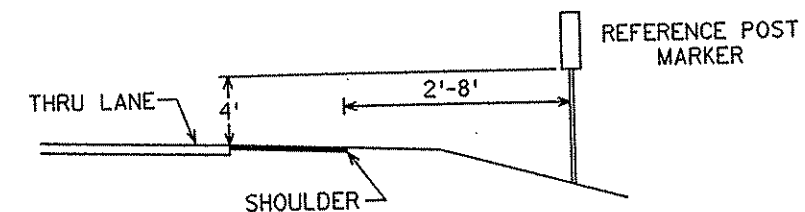
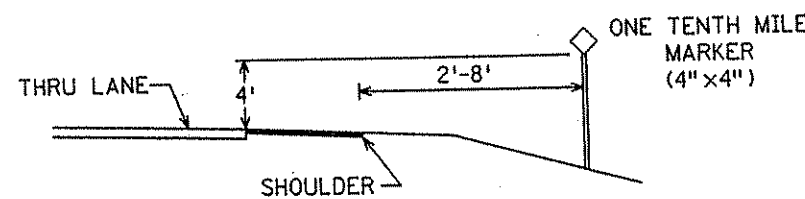
1. IF A SECONDARY SIGN IS MOUNTED BELOW A MAJOR SIGN, THE MAJOR SIGN SHALL BE AT LEAST 8' ABOVE THE PAVEMENT EDGE AND THE SECONDARY SIGN AT LEAST 5'.
2. ALL ROUTE MARKERS, WARNING AND REGULATORY SIGNS SHALL BE AT LEAST 6' ABOVE PAVEMENT EDGE EXCEPT WHERE HEAVY PEDESTRIAN TRAFFIC IS ENCOUNTERED THEY SHALL BE 7'.
3. SIGN FACES SHALL BE VERTICAL.
4. OVERHEAD SIGNS SHALL BE POSITIONED AT RIGHT ANGLES TO THE THRU ROADWAY UNLESS OTHERWISE NOTED.
5. TO AVOID SPECULAR GLARE, $\angle A$ SHALL BE APPROXIMATELY 93° FOR SIGNS LOCATED LESS THAN 30' FROM THE EDGE OF PAVEMENT AND APPROXIMATELY 92° FOR SIGNS LOCATED 30' OR MORE FROM EDGE OF PAVEMENT. THIS APPLIES TO SIGNS TYPE A, C, & D AND INCLUDES SIGNS IN THE GORE.
6. "Y" IS THE PERPENDICULAR DISTANCE FROM THE GROUND LINE TO THE FRICTION FUSE ON THE POST. THIS DISTANCE SHALL BE AT LEAST 7'.
7. WHERE "X" IS LESS THAN 30', "H" SHALL BE $7' \pm 6"$. WHERE "X" IS 30' OR GREATER, MINIMUM AND PREFERRED "H" IS 5'.
8. LATERAL CLEARANCES GIVEN APPLY TO RIGHT AND OR LEFT SIDE INSTALLATION.
9. WHEN A TYPE A SIGN IS INSTALLED DIRECTLY BEHIND TRAFFIC BARRIER, THE LEFT EDGE OF THE SIGN PANEL SHALL BE LOCATED A MINIMUM OF 4 FEET BEHIND THE FACE OF THE TRAFFIC BARRIER.

S.P.	0280-50 (T.H. 35)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-019

SIGN PLACEMENT



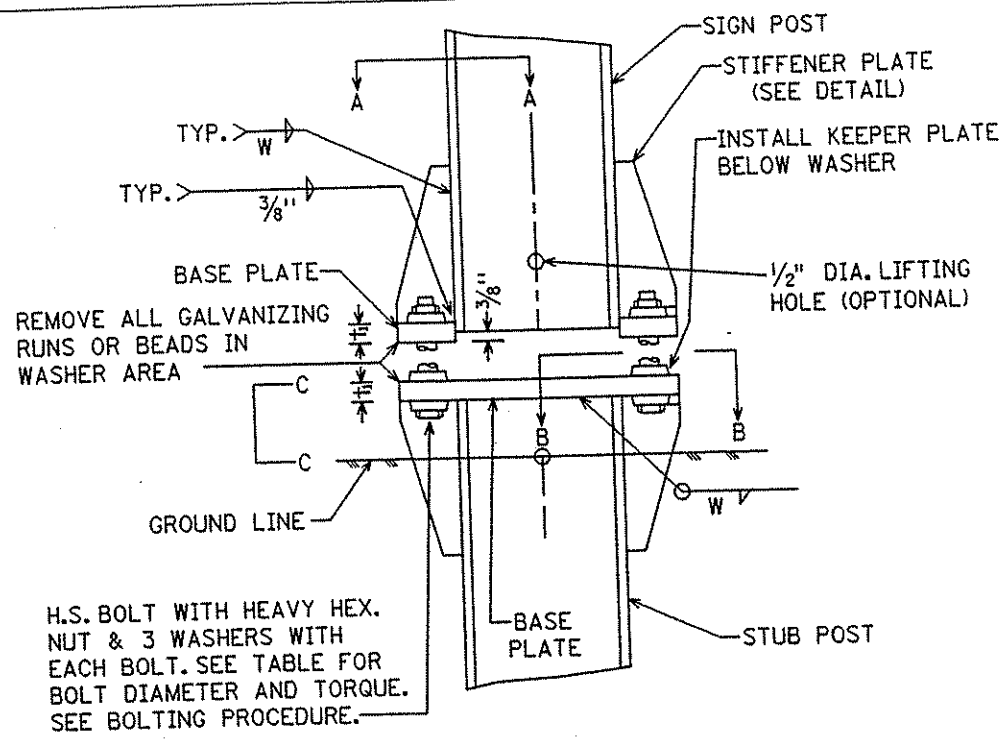
DELINEATOR POST



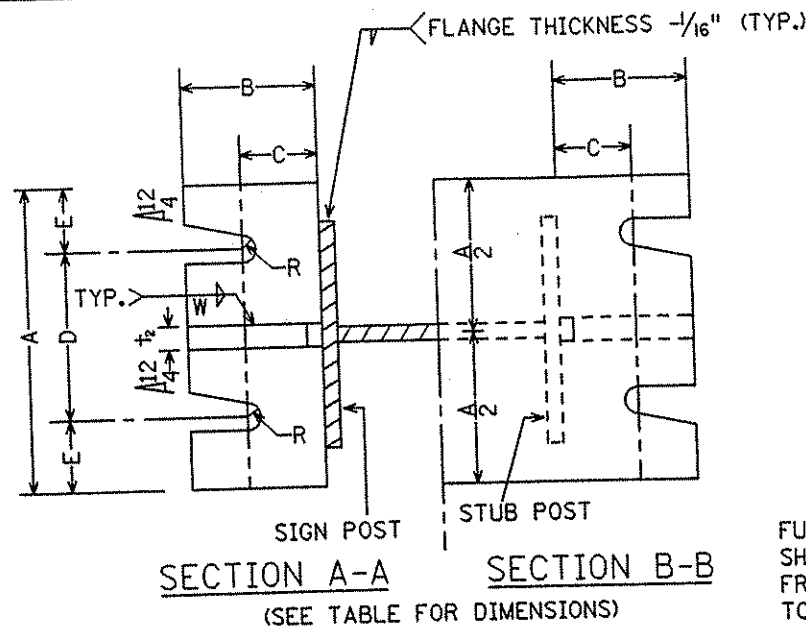
TYPICAL PLACEMENT

S.P.	0280-50 (T.H. 35)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-019

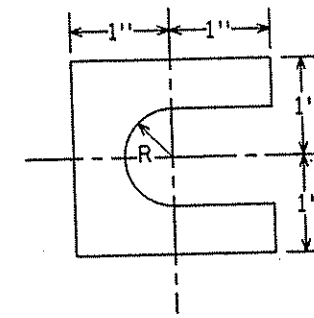
DELINEATORS AND MARKERS



SIGN POST AND STUB POST ELEVATION



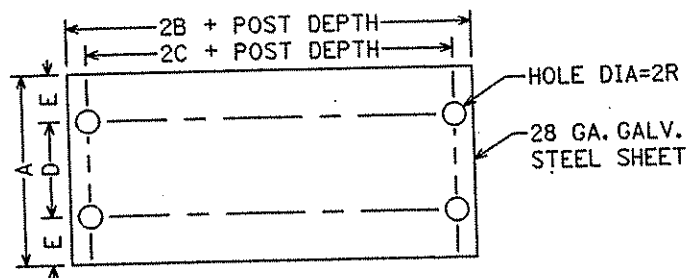
SECTIONS SHOWN ARE FOR INSTALLATIONS ON RIGHT SHOULDER AND IN GORE. PLATE SLOT BEVELS ARE OPPOSITE HAND FROM THAT SHOWN FOR INSTALLATIONS ON LEFT SHOULDER.



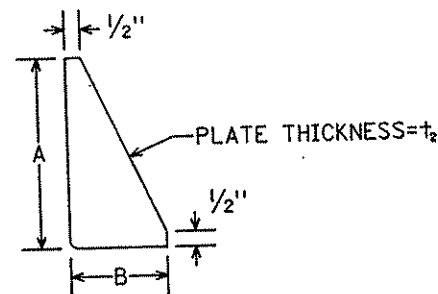
FURNISH TWO-.012\"/>

SHIM DETAIL

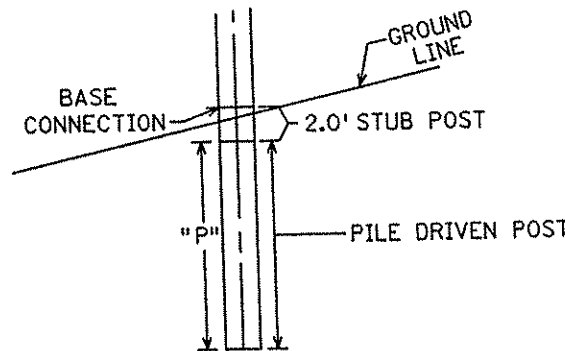
H.S. BOLT WITH HEAVY HEX. NUT & 3 WASHERS WITH EACH BOLT. SEE TABLE FOR BOLT DIAMETER AND TORQUE. SEE BOLTING PROCEDURE.



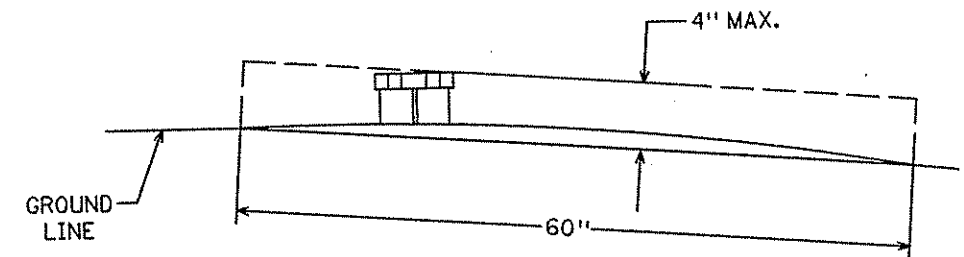
KEEPER PLATE



STIFFENER PLATE DETAIL (SEE TABLE FOR DIMENSIONS)



H-PILE FOOTING



VIEW C-C

MAXIMUM PROJECTION OF STUB POST SHALL NOT EXTEND BEYOND A LINE, ABOVE AND 4\"/>

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND WITH ONE OF THE FLAT WASHERS ON EACH BOLT BETWEEN PLATES.
2. SHIM AS REQUIRED TO PLUMB POST.
3. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12\"/>

4. BURR TREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

SPECIFIC NOTES:

- ① SAME THICKNESS AS SIGN POST
- ② MEASURED FROM TOP OF BASE PLATE
- ③ OLD BEAM DEPTH = 10\"/>

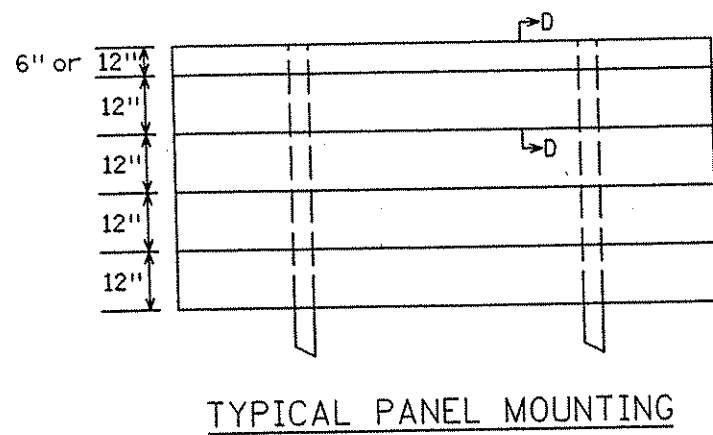
TYPE A SIGN STRUCTURAL DETAILS

H-PILE FOOTING SHEET 1 OF 2

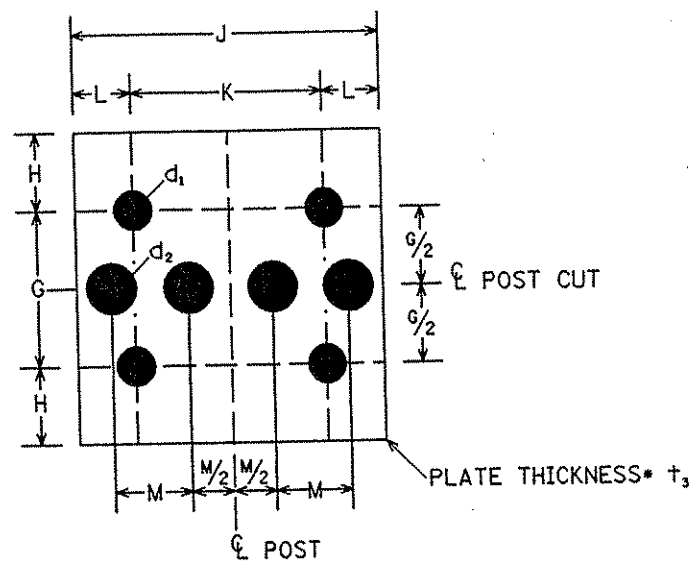
Sheet No. 236 of 559 Sheets

S.P.	0280-50 (T.H. 35)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-019

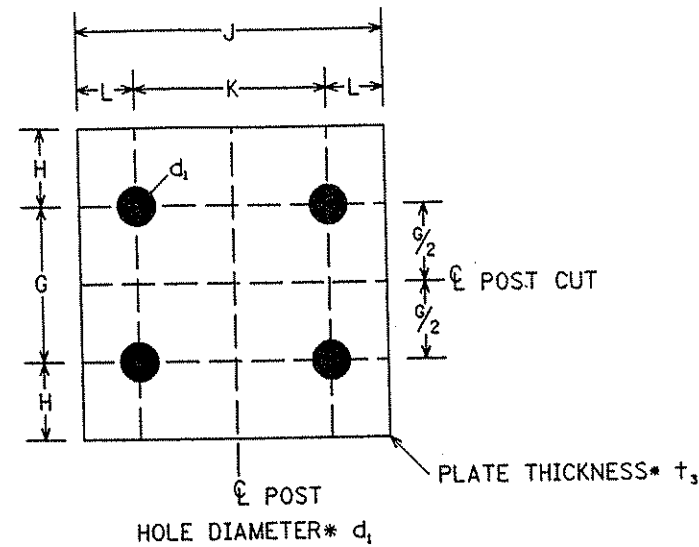
DIMENSION	BASE CONNECTION DATA										FUSE AND HINGE PLATE DATA							FOOTING DATA				
	BOLT SIZE AND TORQUE	A	B	C	D	E	t ₁	t ₂	W	R	G	H	J	K	L	M	d ₁	d ₂	t ₃	BOLT DIA.	STUB POST LENGTH ②	H PILE POST "P" (MIN. LENGTH)
W4X13	3/4" DIA. x 3-1/2" TORQUE=600"*	6"	2 1/2"	1 1/2"	3 1/2"	1 1/4"	1"	1/2"	1/4"	13/32"	2"	1 1/4"	4"	2 1/4"	7/8"	1"	1 1/16"	3/4"	3/8"	5/8"	2'	12'
W5X16											2 1/2"	1 1/4"	5"	2 3/4"	1 1/8"	1 1/8"	13/16"	7/8"	3/8"	3/4"	2'	12'
W6X20	7/8" DIA. x 4-1/4" TORQUE=800"*	8"	3"	1 3/4"	4"	2"	1 1/4"	1/2"	1/4"	15/32"	2 1/2"	1 1/4"	6"	3 1/2"	1 1/4"	1 3/8"	13/16"	1 1/8"	3/8"	3/4"	2'	12'
W8X24											2 1/2"	1 1/2"	6 1/2"	3 1/2"	1 1/2"	1 1/2"	1 5/16"	1 1/4"	1/2"	7/8"	2'	12'
W8X28	1" DIA. x 5" TORQUE=1000"*	8"	3"	2"	4"	2"	1 1/2"	3/4"	5/16"	17/32"	2 1/2"	1 1/2"	6 1/2"	3 1/2"	1 1/2"	1 5/8"	1 1/16"	1 1/8"	1/2"	1"	2'	12'
W8X31											3"	1 3/4"	8"	5 1/2"	1 1/4"	2"	1 1/16"	1 1/2"	1/2"	1"	2'	12'
W10X39	1-1/8" DIA. x 5" TORQUE=1200"*	9"	3 1/2"	2"	5"	2"	1 1/2"	3/4"	5/16"	19/32"	3"	1 3/4"	8"	5 1/2"	1 1/4"	1 7/8"	1 3/16"	1 3/8"	1/2"	1 1/8"	2'	12'



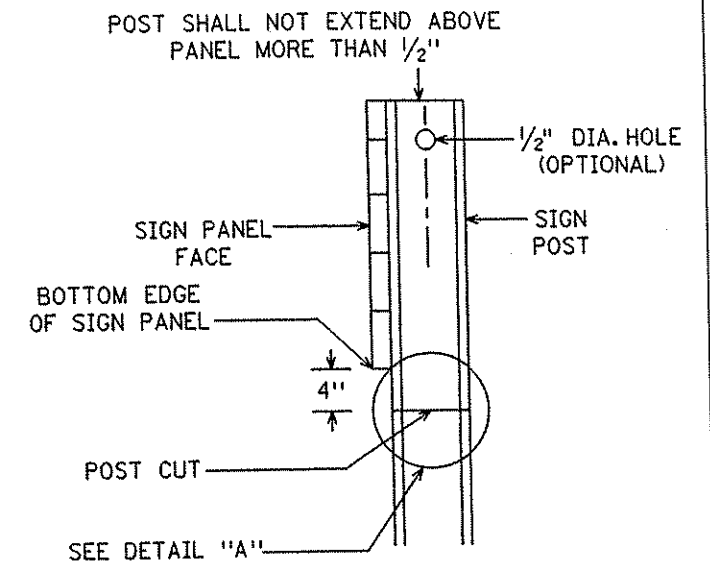
TYPICAL PANEL MOUNTING



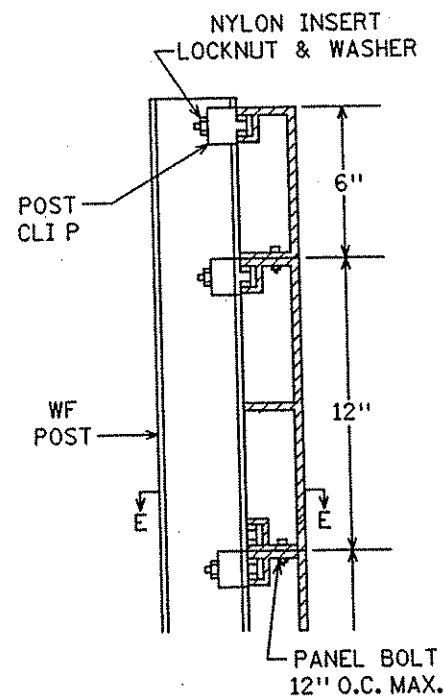
FRICION FUSE PLATE DETAIL
(SEE TABLE ON SHEET 1 OF 2 FOR DIMENSIONS)



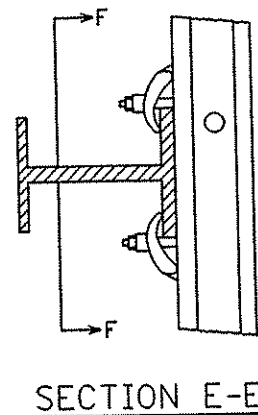
HINGE PLATE DETAIL
(SEE TABLE ON SHEET 1 OF 2 FOR DIMENSIONS)



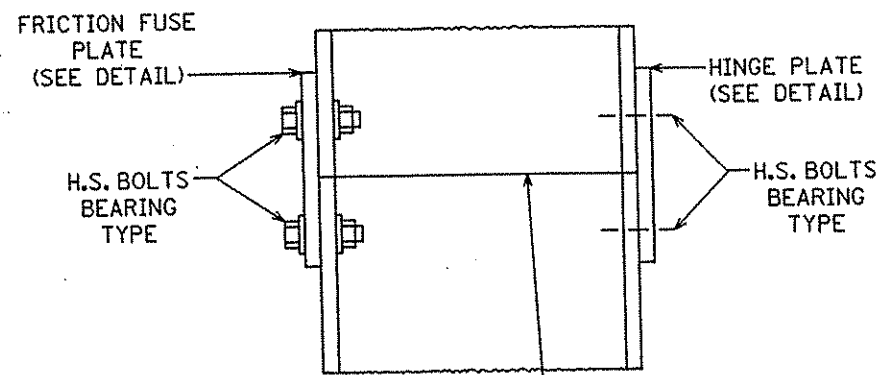
FRICION FUSE
SIDE VIEW



SECTION D-D



SECTION E-E



POST SHALL BE SAW CUT BEFORE GALVANIZING. USE H.S. BOLTS WITH HEX. HD., HEX. NUT, AND TWO FLAT WASHERS.

DETAIL "A" FRICION FUSE

CONTRACTOR NOTE: ALL FRICION FUSE BOLTS SHALL BE TORQUE WRENCH TIGHTENED IN THE FIELD IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE. NUTS SHALL HAVE BEEN RETAPPED AND BOLT THREADS SHALL HAVE BEEN CLEANED WITH A 1/64" OVERSIZED RETHREADING DIE AFTER GALVANIZING. BEFORE TIGHTENING MAY BEGIN, THE TORQUE WRENCH SHALL BE CALIBRATED WITH A BOLT-TENSION-CALIBRATOR USING TYPICAL BOLT-NUT-WASHER ASSEMBLIES OF EACH SIZE AND LOT TO BE USED SO AS TO SHOW THE TORQUE NECESSARY TO OBTAIN THE FOLLOWING MINIMUM RESIDUAL TENSION IN EACH BOLT.

BOLT SIZE	MIN. RESIDUAL, BOLT TENSION
1/2" DIA.	12,050*
5/8" DIA.	19,200*
3/4" DIA.	28,400*
7/8" DIA.	39,250*
1" DIA.	51,500*
1-1/8" DIA.	56,450*

GENERAL NOTES:

- STRUCTURAL STEEL SHALL CONFORM TO MN/DOT 3308. REINFORCING BARS SHALL CONFORM TO MN/DOT 3301. SPIRALS SHALL CONFORM TO MN/DOT 3305-NO SPLICES. HIGH STRENGTH BOLTS SHALL CONFORM TO A.S.T.M.-A325.
- FORMS WILL BE REQUIRED FOR THE EXPOSED VERTICAL SURFACES OF THE FOOTINGS.
- REFER TO "SIGN DATA" SHEET FOR SPECIFIC DATA ON EACH INDIVIDUAL SIGN INSTALLATION.
- FRICION FUSE PLATE SHALL BE INSTALLED ON SIDE OF POST FACING TRAFFIC.
- ALL POST CUTS SHALL BE SAW CUTS. PLATES MAY BE SHEARED OR FLAME CUT USING A MECHANICALLY GUIDED CUTTING TORCH. EDGE PREPARATION SHALL BE IN ACCORDANCE WITH MN/DOT 2471.3C4 AND MN/DOT 2471.3d4.

NOTE: POST CLIPS SHALL BE INSTALLED ON BOTH SIDES OF EACH POST AT EACH PANEL JOINT AS INDICATED.

SECTION F-F

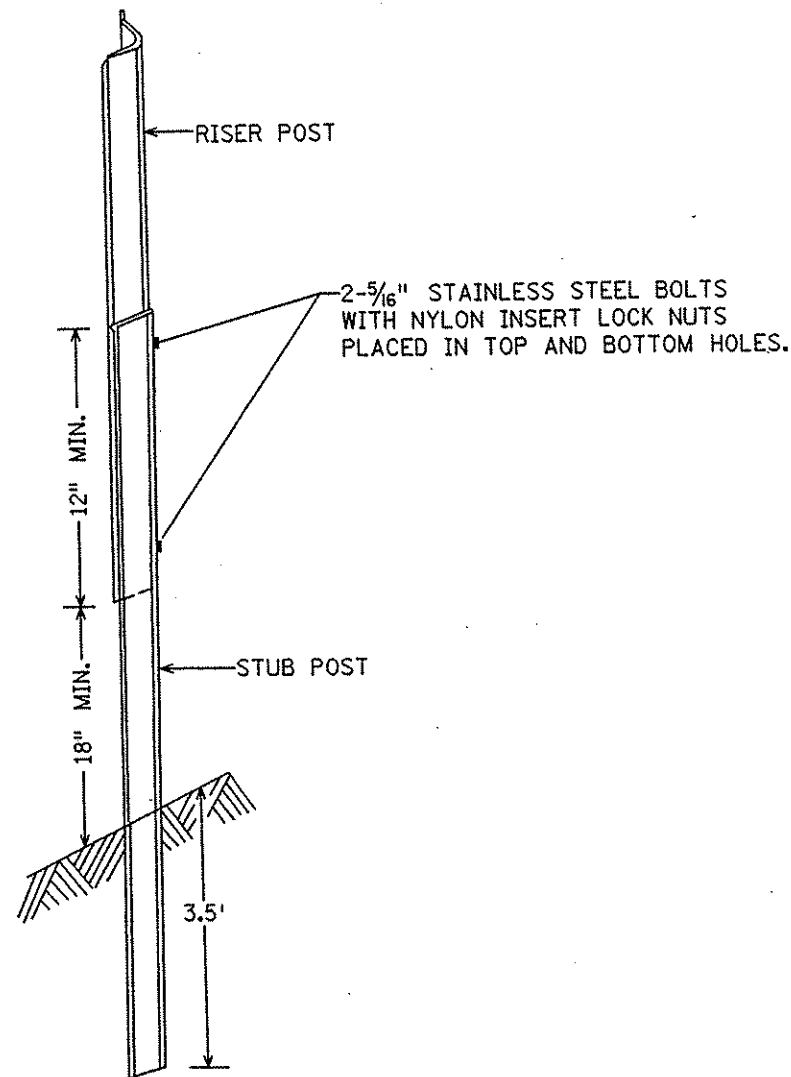
TYPE A SIGN STRUCTURAL DETAILS

SHEET 2 OF 2

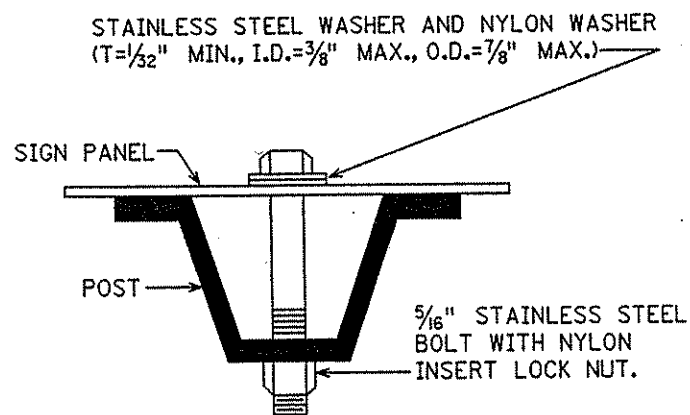
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S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-019

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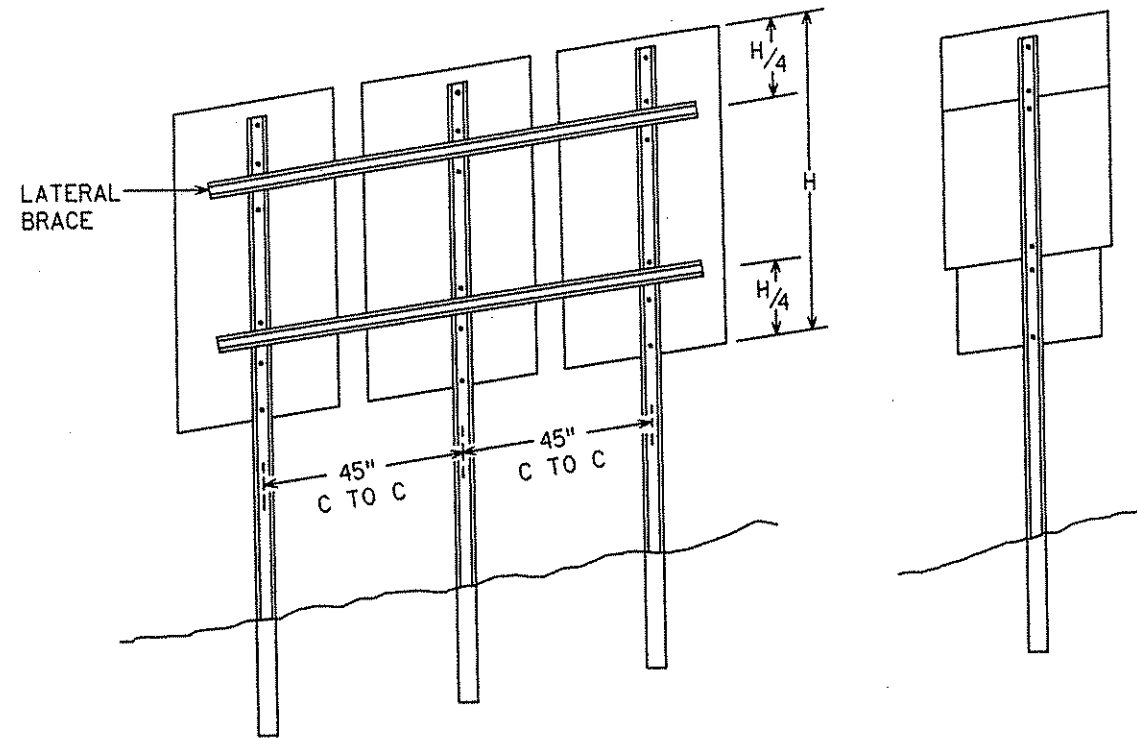
TYPE "C" & "D" POST



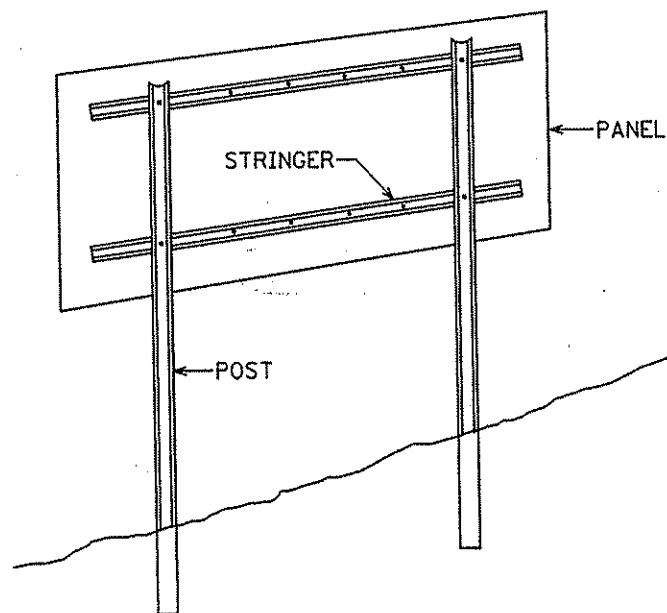
"U POST" SPLICE



"U POST" MOUNTING
TYPE "C" SIGNS



TYPICAL TYPE "C" INSTALLATIONS



TYPICAL TYPE "D" INSTALLATION

NOTES:

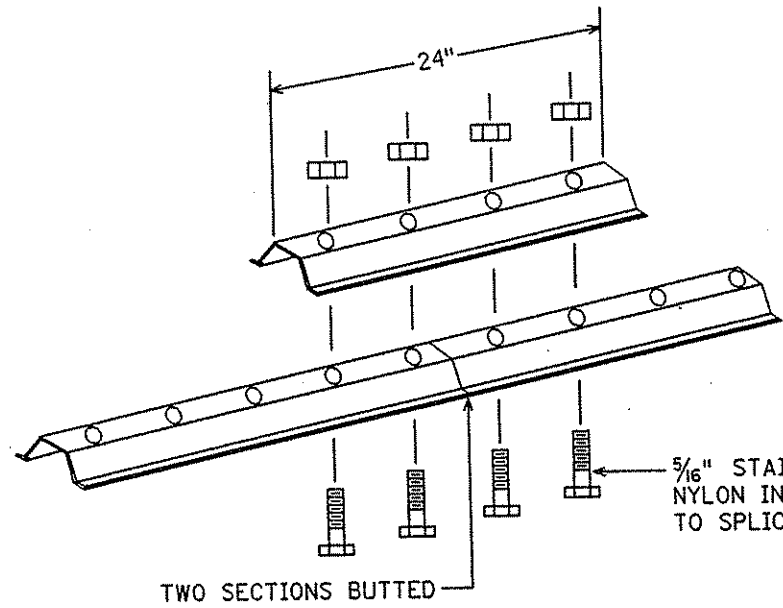
1. USE 3# STUB POSTS, RISER POSTS, STRINGERS, KNEE BRACES, LATERAL BRACES AND KNEE BRACE STUB POSTS. ALL SHALL CONFORM TO MN/DOT 3401.
2. FOR TYPE "D" SIGN POSTS LENGTHS AND SPACINGS, SEE SIGN DATA SHEET.
3. TYPE "D" SIGN PANELS SHALL BE BOLTED TO STRINGERS AT 24" MAXIMUM INTERVALS IN ACCORDANCE WITH TYPE "D" STRINGER AND PANEL-JOINT DETAIL (SEE STANDARD SIGNS MANUAL).
4. MOUNTING (PUNCHING CODE) FOR TYPE "C" SIGN PANELS SHALL BE AS INDICATED IN THE STANDARD SIGNS MANUAL UNLESS OTHERWISE SPECIFIED.
5. ALL RISER (VERTICAL) "U POSTS" SHALL BE SPLICED. DRIVEN STUB POSTS SHALL BE AT LEAST 7' LONG.
6. USE STAINLESS STEEL 5/16" BOLTS, WASHERS, AND NYLON INSERT LOCK NUTS AS SHOWN FOR ALL GROUND MOUNTED AND OVERHEAD MOUNTED SIGNS.
7. STAINLESS STEEL WASHER WITH SAME DIMENSIONS SHALL BE PROVIDED BETWEEN ALL NYLON WASHERS AND BOLT HEADS.
8. BRACING STUBS SHALL BE NO MORE THAN 4" ABOVE GROUND AND EMBEDDED AT LEAST 3 1/2'.
9. A-FRAME BRACKET SHALL BE STEEL CONFORMING TO MN/DOT 3306 AND GALVANIZED IN ACCORDANCE WITH MN/DOT 3394.
10. COLLARS SHALL BE USED TO SHIM OVERLAYS AND DEMOUNTABLE LEGEND AWAY FROM PANEL WHERE INTERFERENCE WITH BOLT HEADS IS ENCOUNTERED. MN/DOT 3352.2A5.
11. 2 AND 3 POST TYPE "C" SIGNS SHALL BE REINFORCED WITH AT LEAST ONE LATERAL BRACE. INSTALLATIONS WHERE THE TOTAL PANEL HEIGHT IS 60" OR MORE SHALL HAVE TWO LATERAL BRACES LOCATED APPROXIMATELY AT THE QUARTER POINTS.
12. WHERE 2 OR MORE SINGLE POST SIGNS (TYPE "C") ARE MOUNTED SIDE BY SIDE, THEY SHALL BE REINFORCED Laterally BY AT LEAST 2 POST SECTIONS, BOLTED AT EACH POST AND LOCATED APPROXIMATELY AT THE QUARTER POINTS AS SHOWN IN SKETCH.

TYPE C & D SIGN
STRUCTURAL DETAILS

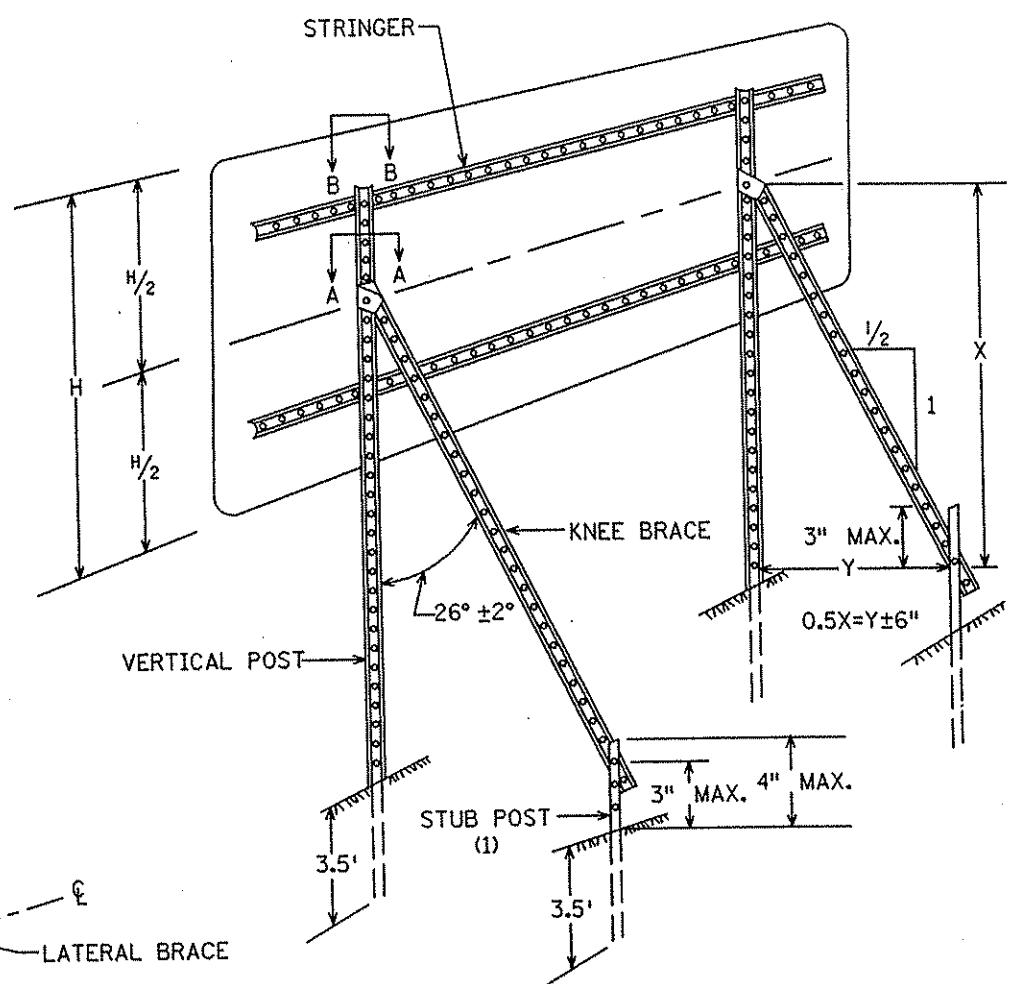
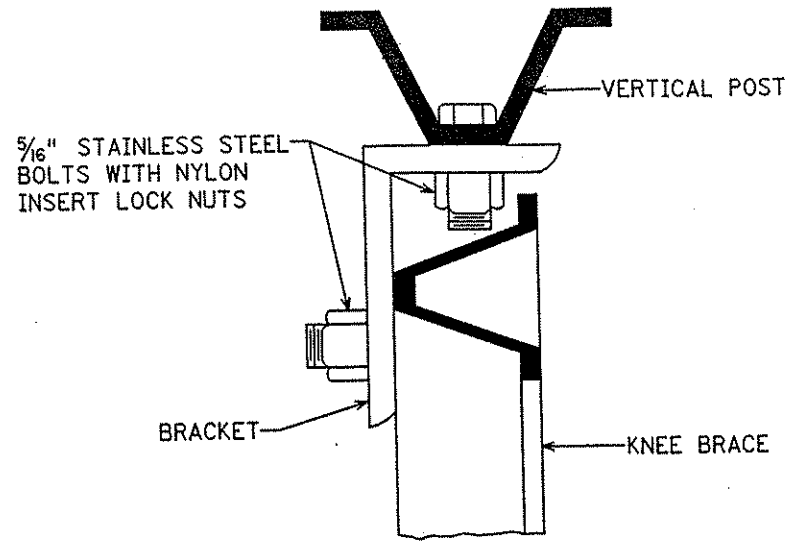
Sheet 1 of 2

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S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-019

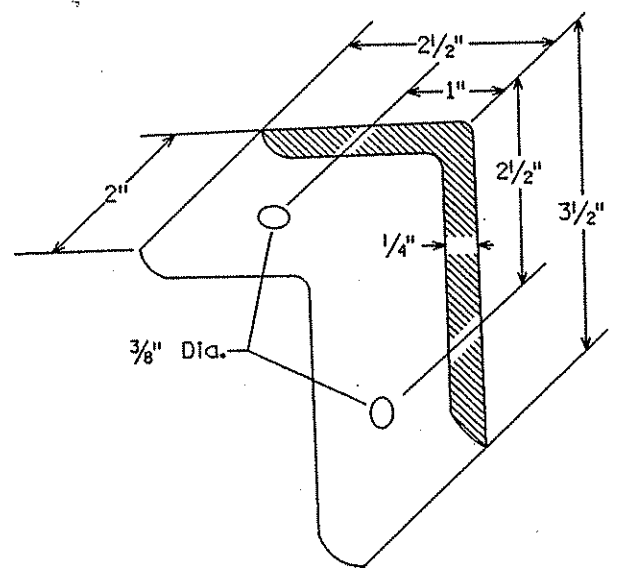
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LATERAL BRACE OR STRINGER SPLICE DETAIL (EXPLODED VIEW)

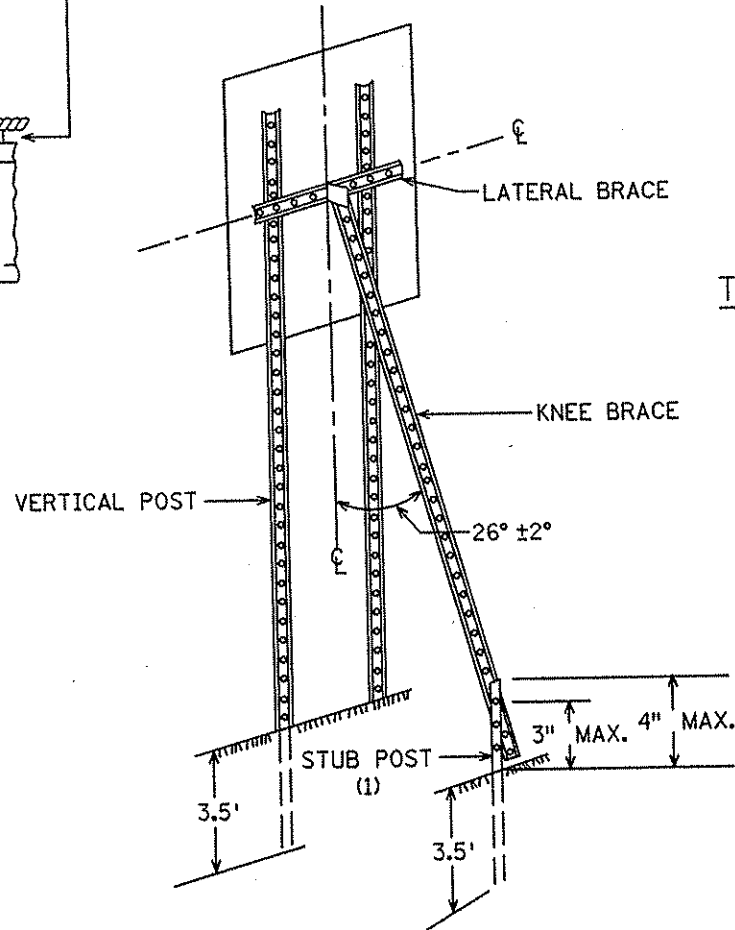
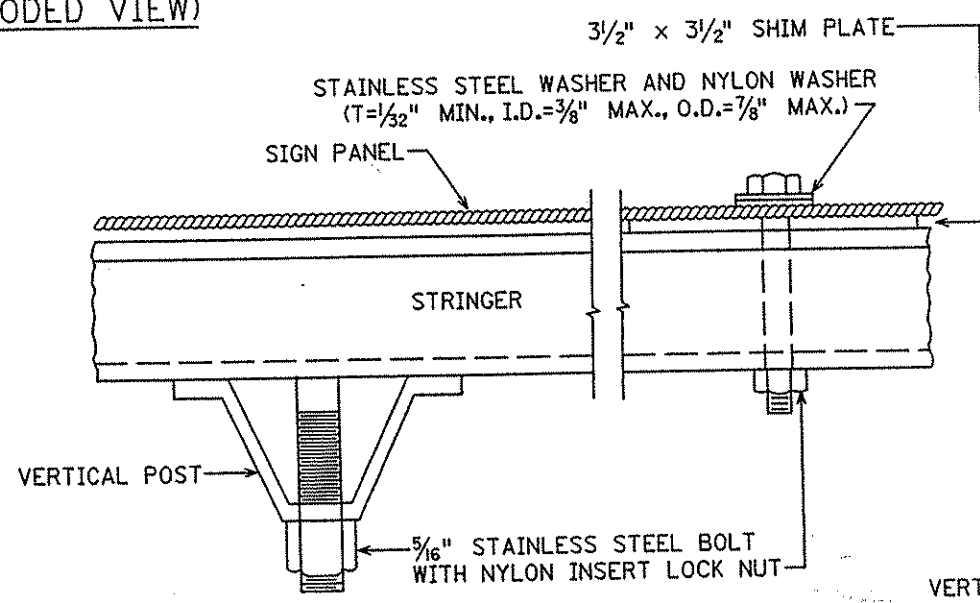


TYPICAL "A-FRAME" INSTALLATION TYPE "D" SIGNS

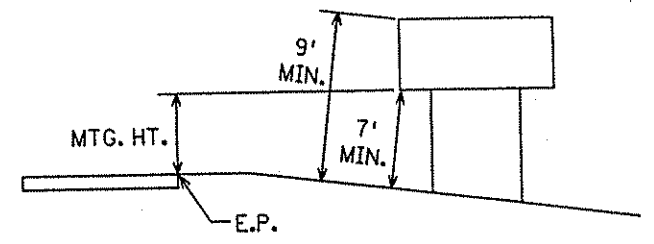


A-FRAME BRACKET

(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)

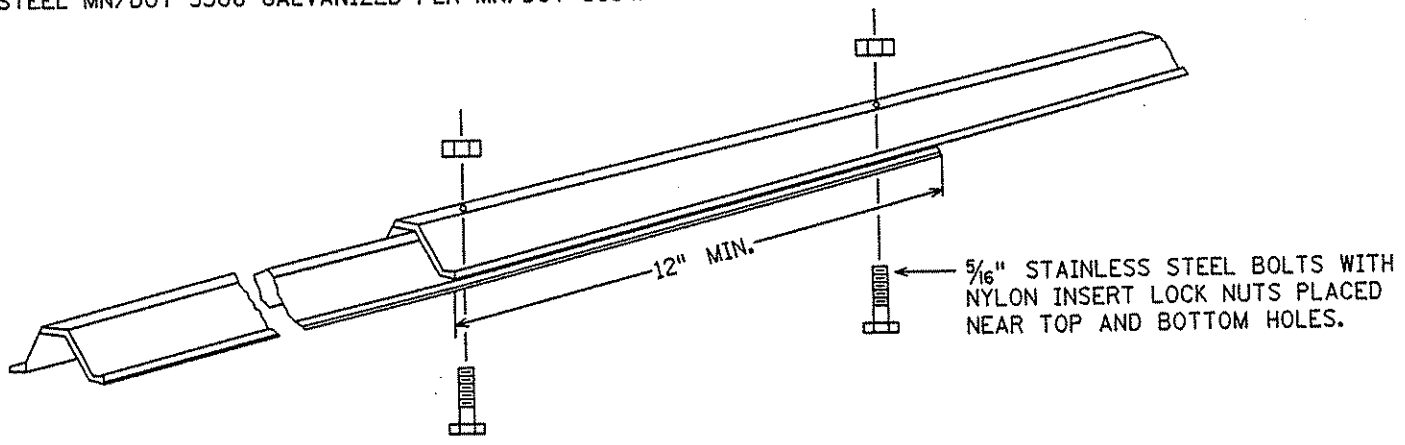


TYPICAL "A-FRAME" INSTALLATION TYPE "C" SIGNS



TYPICAL MOUNTING

(1) OFFSET STUB POST 1' TOWARD ROADWAY RELATIVE TO VERTICAL POST.



KNEE BRACE SPLICE

TYPE C & D SIGN STRUCTURAL DETAILS

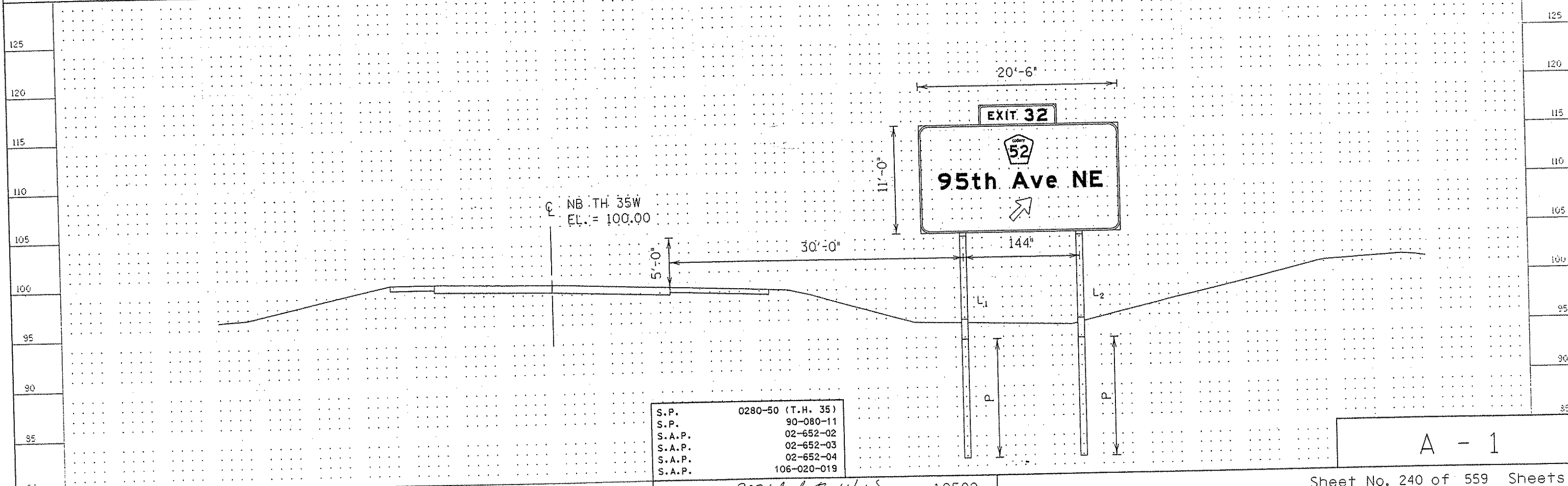
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S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-019

SIGN A-1

NB TH 35W
STA. 19+00

POST TYPE		W8x24
POST LENGTH L ₁		20.0 FT.
POST LENGTH L ₂		20.0 FT.
PILE FOOTING P		12.0 FT.



S.P.	0280-50 (T.H. 35)
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S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
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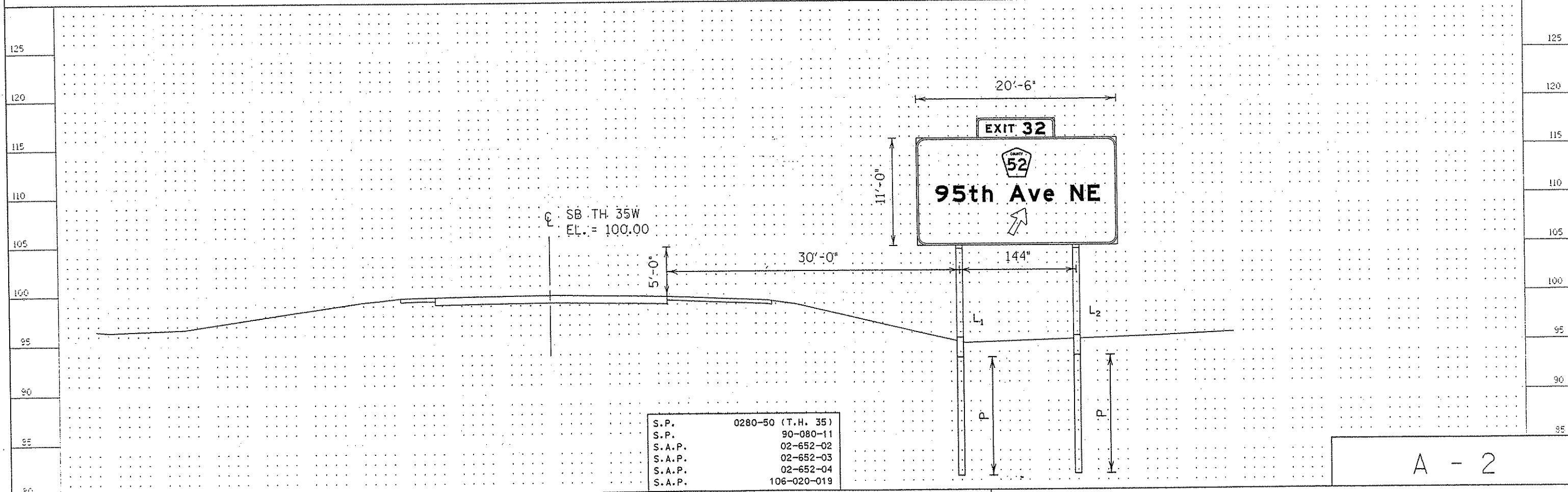
CERTIFIED BY *Michael B. Weiss* LIC. NO. 10502
LICENSED PROFESSIONAL ENGINEER

A - 1

SIGN A-2

SB TH 35W
STA. 45+50

POST TYPE		W8x24
POST LENGTH L ₁		20.5 FT.
POST LENGTH L ₂		20.0 FT.
PILE FOOTING P		12.0 FT.

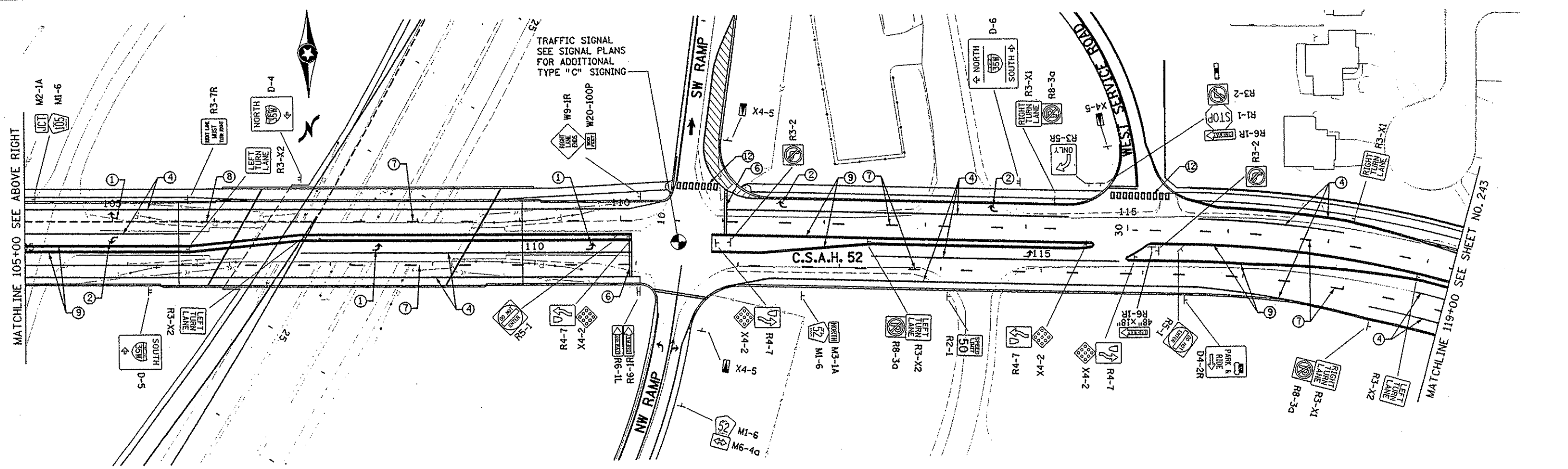
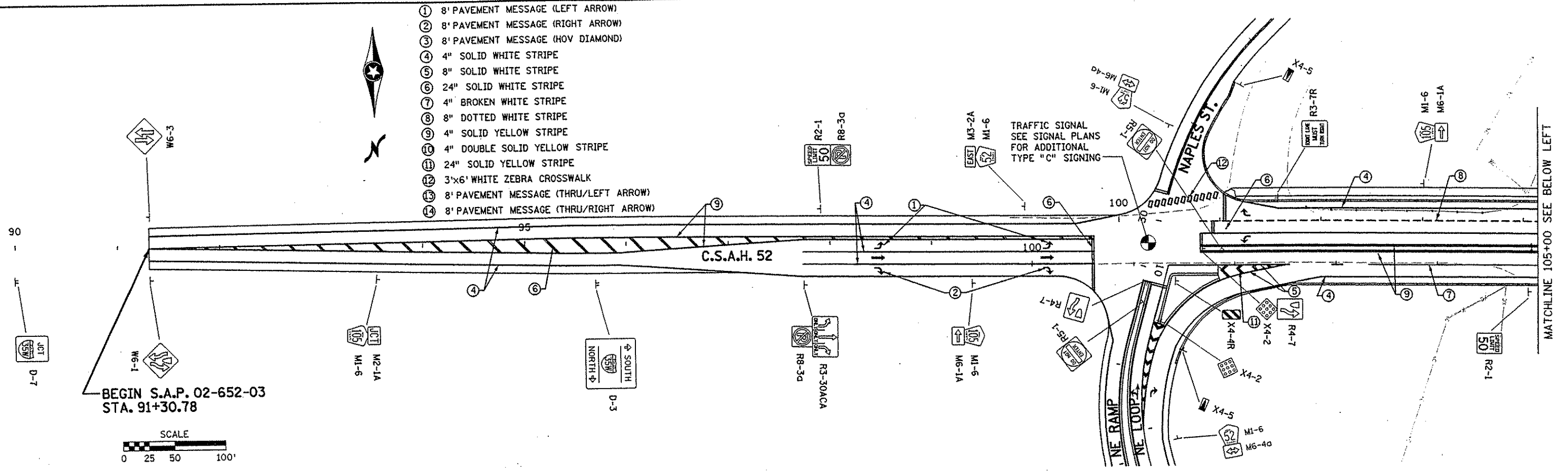


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S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-019

CERTIFIED BY *Michael B. Weis* LIC. NO. 10502
LICENSED PROFESSIONAL ENGINEER

A - 2

- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
- ② 8' PAVEMENT MESSAGE (RIGHT ARROW)
- ③ 8' PAVEMENT MESSAGE (HOV DIAMOND)
- ④ 4" SOLID WHITE STRIPE
- ⑤ 8" SOLID WHITE STRIPE
- ⑥ 24" SOLID WHITE STRIPE
- ⑦ 4" BROKEN WHITE STRIPE
- ⑧ 8" DOTTED WHITE STRIPE
- ⑨ 4" SOLID YELLOW STRIPE
- ⑩ 4" DOUBLE SOLID YELLOW STRIPE
- ⑪ 24" SOLID YELLOW STRIPE
- ⑫ 3'x6' WHITE ZEBRA CROSSWALK
- ⑬ 8' PAVEMENT MESSAGE (THRU/LEFT ARROW)
- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)



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.

John Weener
 DATE 1-11-02 LIC. NO. 22405

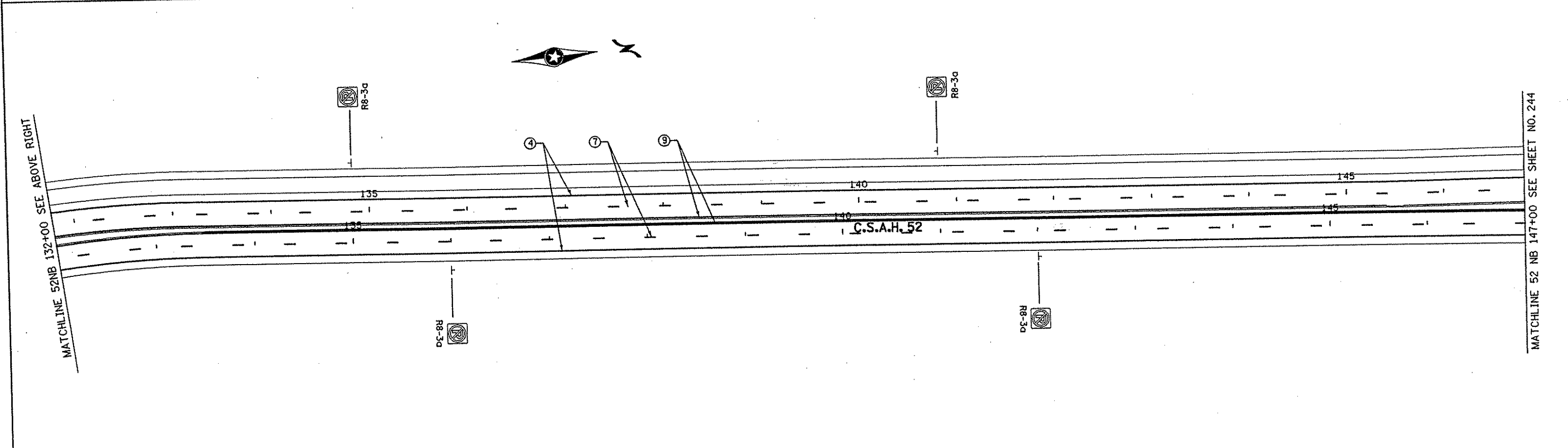
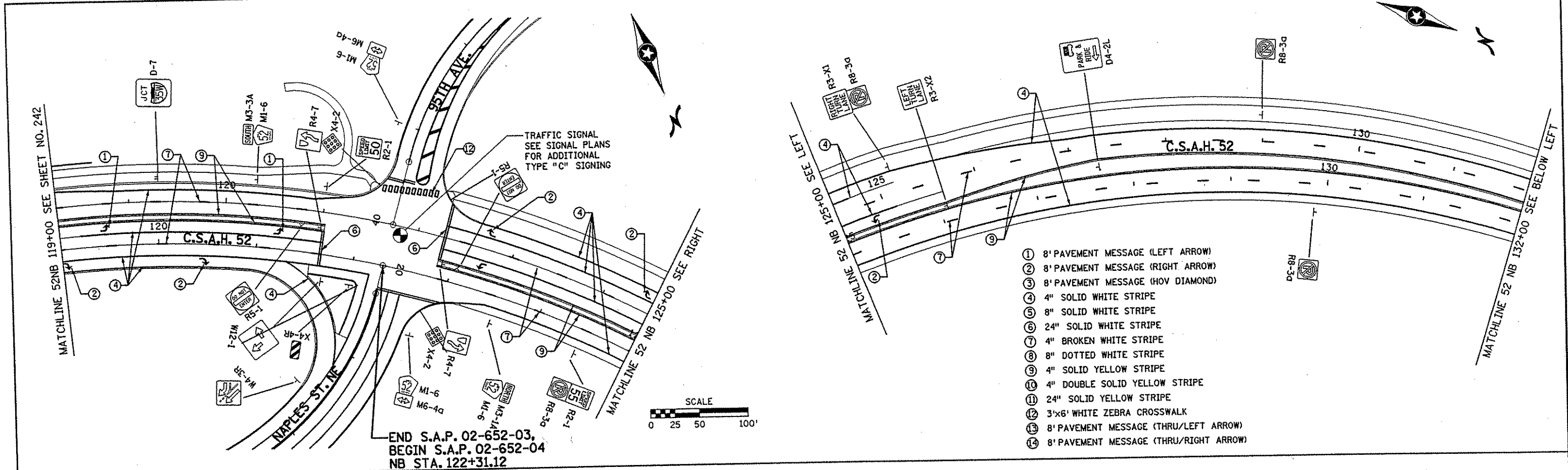
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 CHECKED BY _____ DATE _____

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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

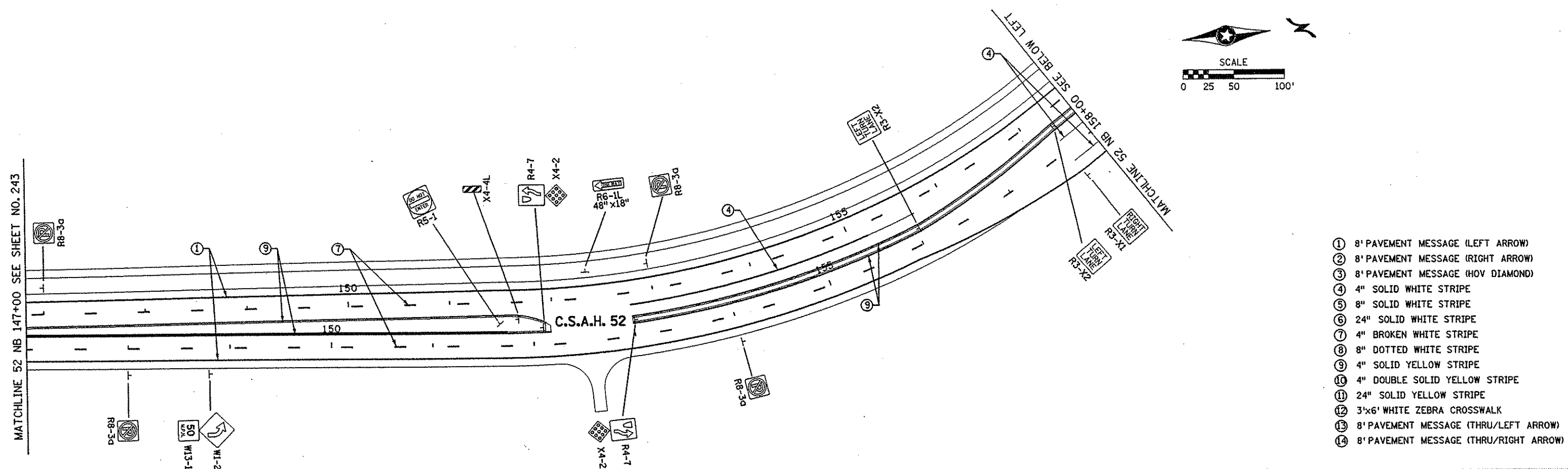
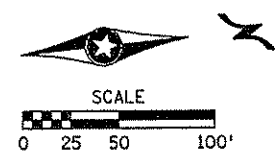
TKDA
 ENGINEERS-ARCHITECTS-PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 STA. 90+00 TO 119+00

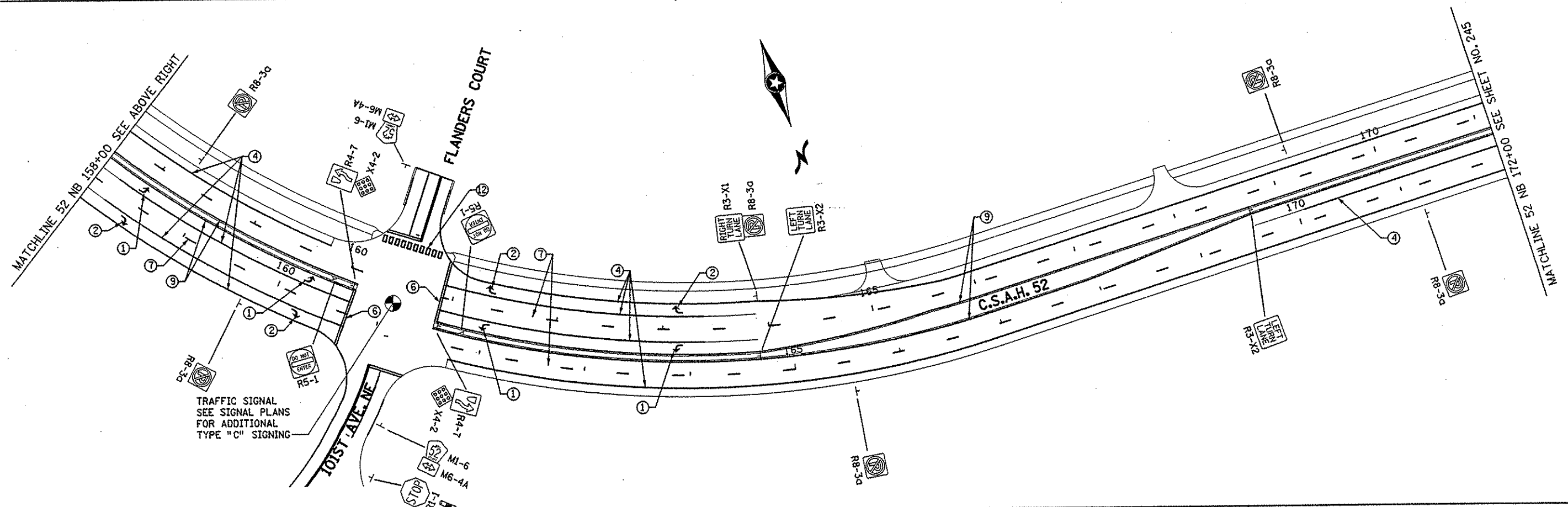
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 242
 OF
 559



NO. DATE BY CKD APPR REVISION NAME: k:\site\proj\11749\part4\roadway3\drawings\stripe02.dgn 20 NOV 2001					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. <i>Scott O. Paulson</i> DATE 11-21-01 LIC. NO. 26880					DRAWN BY _____ DATE _____ DESIGN BY _____ DATE _____ CHECKED BY _____ DATE _____					S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022					TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA					ANOKA COUNTY SIGNING AND STRIPING PLAN C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 119+00 TO 147+00					SHEET 243 OF 559	
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- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
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- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\stripe03.dgn 20 NOV 2001

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Grant O. Aulon
 DATE 11-21-01 LIC. NO. 26880

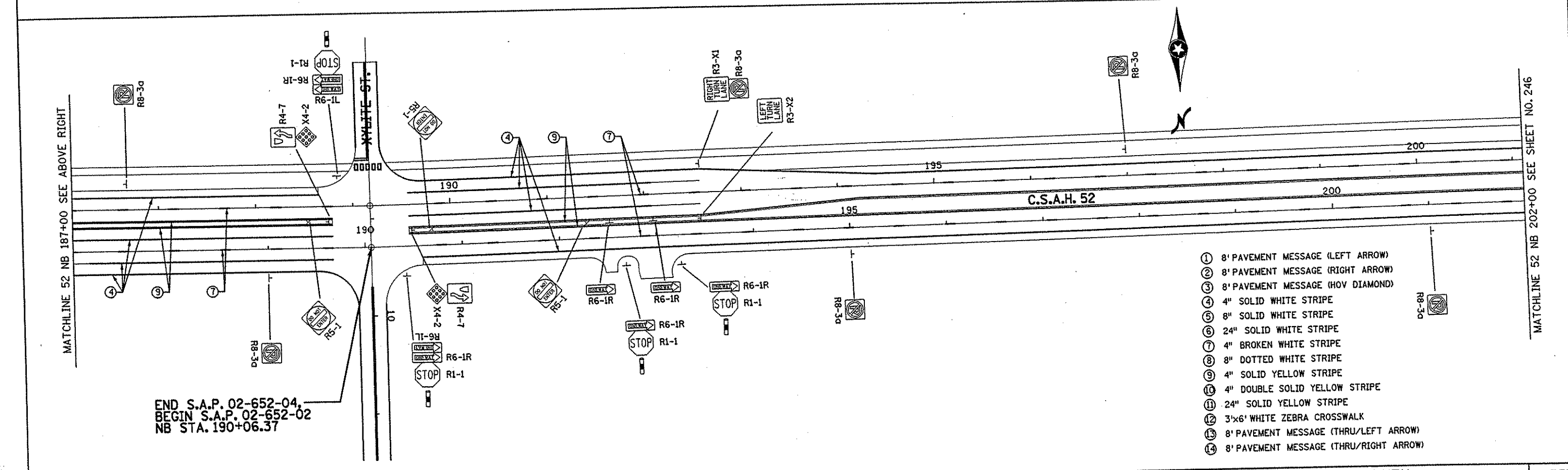
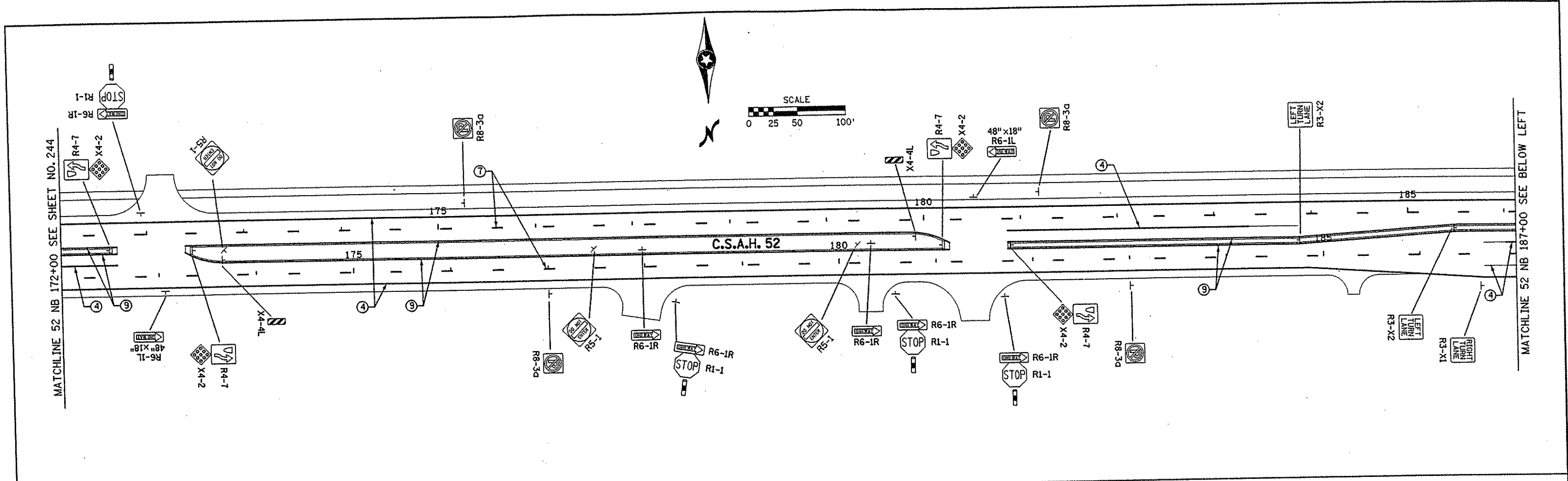
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 147+00 TO 172+00

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 OF
 559



END S.A.P. 02-652-04
 BEGIN S.A.P. 02-652-02
 NB STA. 190+06.37

- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
- ② 8' PAVEMENT MESSAGE (RIGHT ARROW)
- ③ 8' PAVEMENT MESSAGE (HOV DIAMOND)
- ④ 4" SOLID WHITE STRIPE
- ⑤ 8" SOLID WHITE STRIPE
- ⑥ 24" SOLID WHITE STRIPE
- ⑦ 4" BROKEN WHITE STRIPE
- ⑧ 8" DOTTED WHITE STRIPE
- ⑨ 4" SOLID YELLOW STRIPE
- ⑩ 4" DOUBLE SOLID YELLOW STRIPE
- ⑪ 24" SOLID YELLOW STRIPE
- ⑫ 3'x6' WHITE ZEBRA CROSSWALK
- ⑬ 8' PAVEMENT MESSAGE (THRU/LEFT ARROW)
- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\strip04.dgn 20 NOV 2001

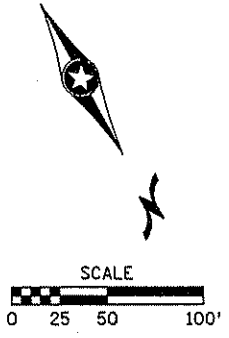
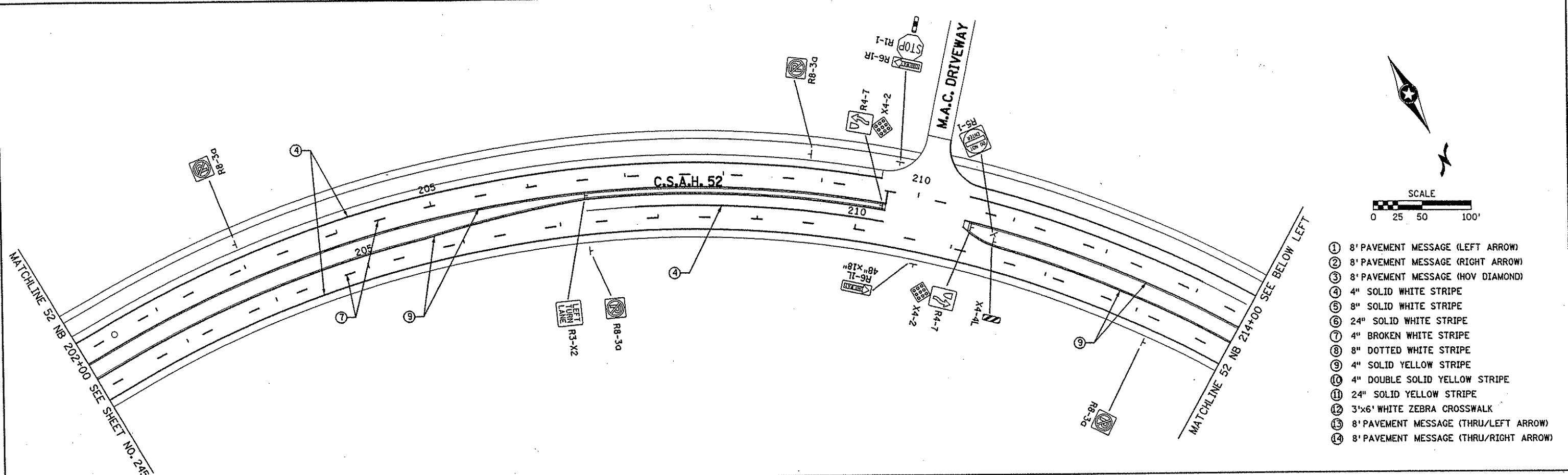
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Grant O. Paulson
 DATE 11-21-01 L.I.C. NO. 26880

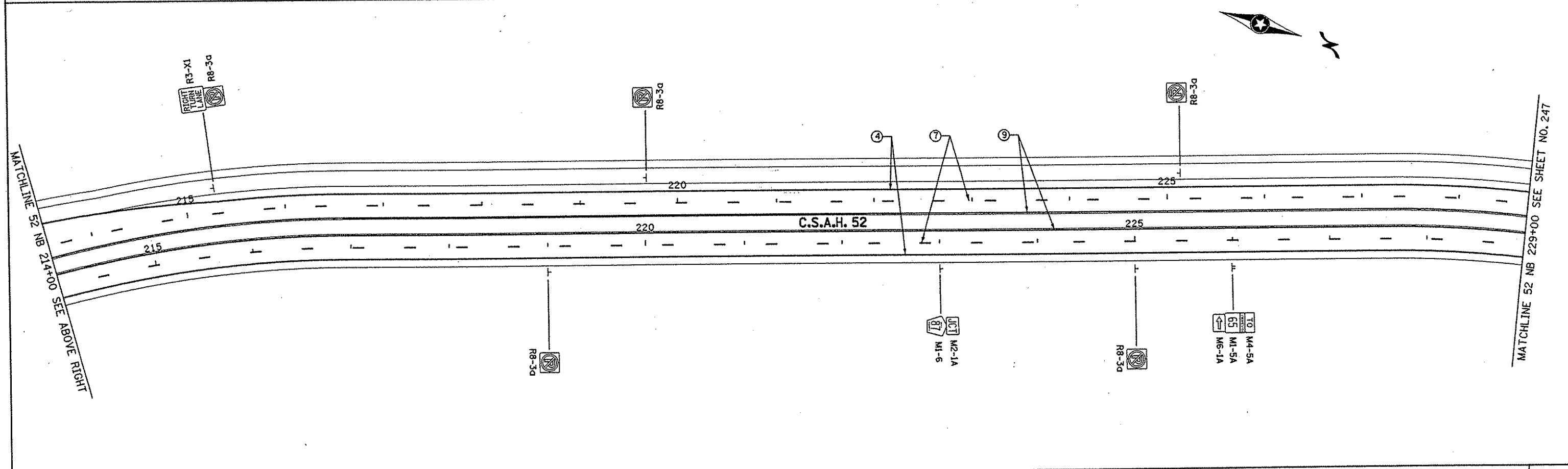
DRAWN BY _____	DATE _____	S.P. 0280-50 (TH 35W)
DESIGN BY _____	DATE _____	S.P. 90-080-11
CHECKED BY _____	DATE _____	S.A.P. 02-652-02
		S.A.P. 02-652-03
		S.A.P. 02-652-04
		S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY		SHEET 245 OF 559
SIGNING AND STRIPING PLAN		
C.S.A.H. 52 RECONSTRUCTION		
C.S.A.H. 52 NB STA. 172+00 TO 202+00		



- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
- ② 8' PAVEMENT MESSAGE (RIGHT ARROW)
- ③ 8' PAVEMENT MESSAGE (HOV DIAMOND)
- ④ 4" SOLID WHITE STRIPE
- ⑤ 8" SOLID WHITE STRIPE
- ⑥ 24" SOLID WHITE STRIPE
- ⑦ 4" BROKEN WHITE STRIPE
- ⑧ 8" DOTTED WHITE STRIPE
- ⑨ 4" SOLID YELLOW STRIPE
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- ⑪ 24" SOLID YELLOW STRIPE
- ⑫ 3'x6' WHITE ZEBRA CROSSWALK
- ⑬ 8' PAVEMENT MESSAGE (THRU/LEFT ARROW)
- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par+4\roadway3\drawings\strip05.dgn 21 NOV 2001

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.

Barrett D. Paulsen
 DATE 11-21-01 LIC. NO. 26820

DRAWN BY _____ DATE _____
 DESIGN BY _____ DATE _____
 CHECKED BY _____ DATE _____

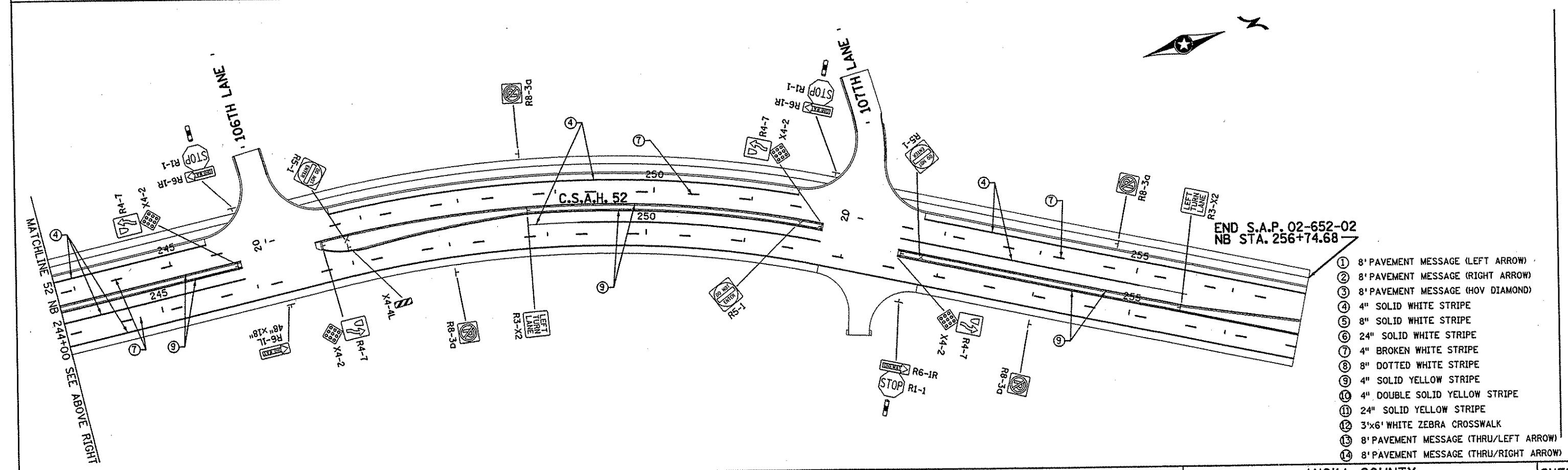
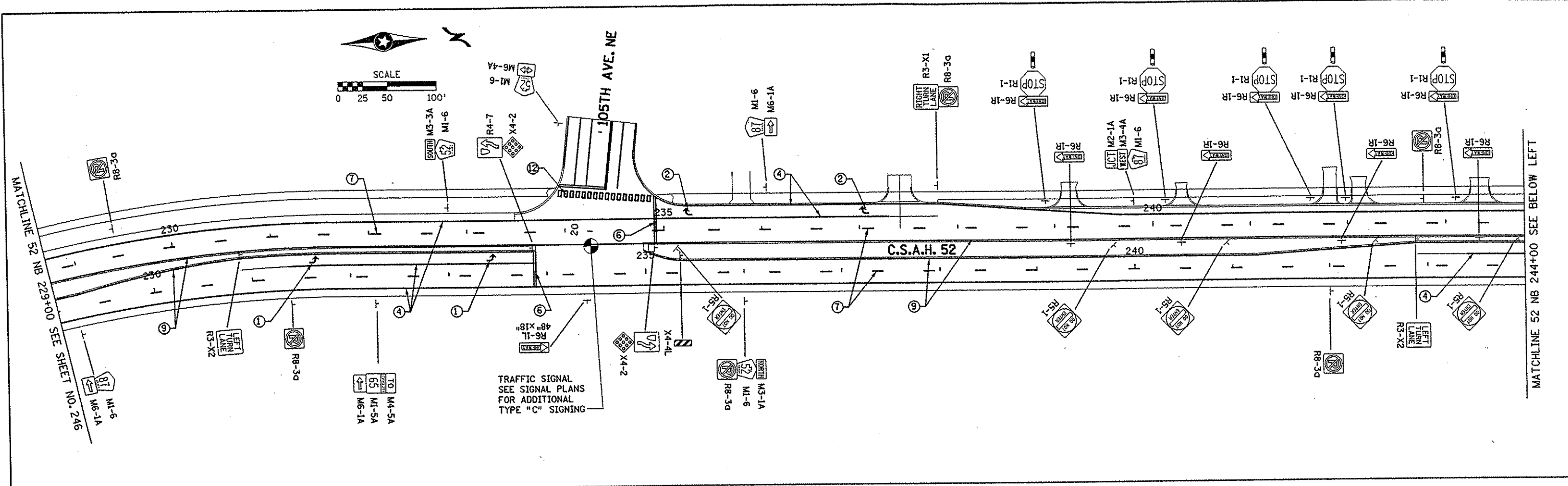
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 ENGINEERS-ARCHITECTS-PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 202+00 TO 229+00

SHEET
 246
 OF
 559



- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
- ② 8' PAVEMENT MESSAGE (RIGHT ARROW)
- ③ 8' PAVEMENT MESSAGE (HOV DIAMOND)
- ④ 4" SOLID WHITE STRIPE
- ⑤ 8" SOLID WHITE STRIPE
- ⑥ 24" SOLID WHITE STRIPE
- ⑦ 4" BROKEN WHITE STRIPE
- ⑧ 8" DOTTED WHITE STRIPE
- ⑨ 4" SOLID YELLOW STRIPE
- ⑩ 4" DOUBLE SOLID YELLOW STRIPE
- ⑪ 24" SOLID YELLOW STRIPE
- ⑫ 3'x6' WHITE ZEBRA CROSSWALK
- ⑬ 8' PAVEMENT MESSAGE (THRU/LEFT ARROW)
- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\11749\par+4\roadway3\drawings\stripe06.dgn 21 NOV 2001

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.

Brent O. Paulsen
 DATE 11-21-01 LIC. NO. 26820

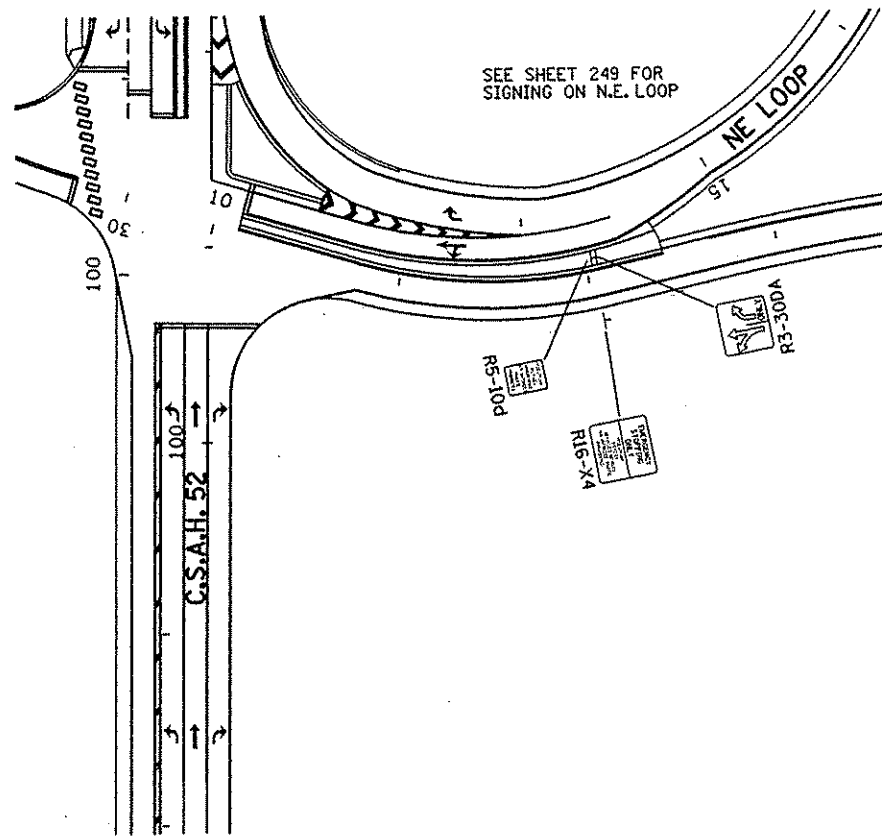
DRAWN BY _____ DATE _____
 DESIGN BY _____ DATE _____
 CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

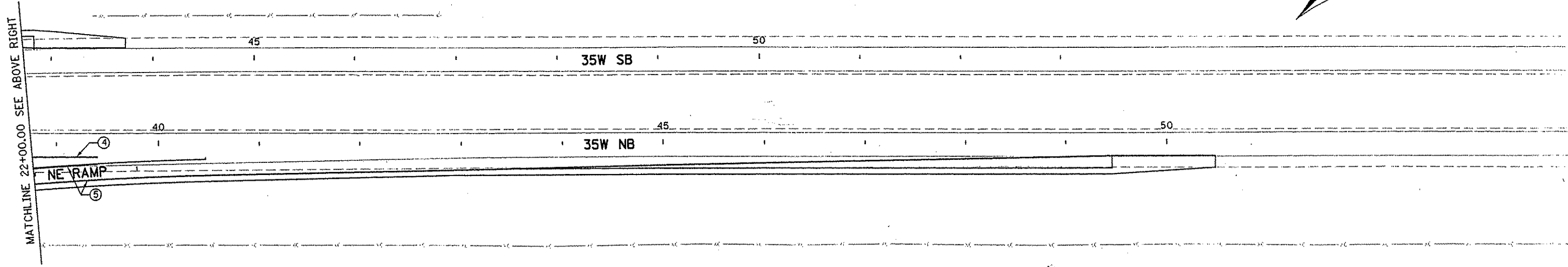
TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 229+00 TO 256+74.68

SHEET
 247
 OF
 559



- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
- ② 8' PAVEMENT MESSAGE (RIGHT ARROW)
- ③ 8' PAVEMENT MESSAGE (HOV DIAMOND)
- ④ 4" SOLID WHITE STRIPE
- ⑤ 8" SOLID WHITE STRIPE
- ⑥ 24" SOLID WHITE STRIPE
- ⑦ 4" BROKEN WHITE STRIPE
- ⑧ 8" DOTTED WHITE STRIPE
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- ⑩ 4" DOUBLE SOLID YELLOW STRIPE
- ⑪ 24" SOLID YELLOW STRIPE
- ⑫ 3'x6' WHITE ZEBRA CROSSWALK
- ⑬ 8' PAVEMENT MESSAGE (THRU/LEFT ARROW)
- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\a-f\anoka\city\1174901\hwy-brdg\part4\roadway3\drawings\stripe0728r2001

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.

Joseph W. ...
 DATE: 1-11-02 LIC. NO. 22405

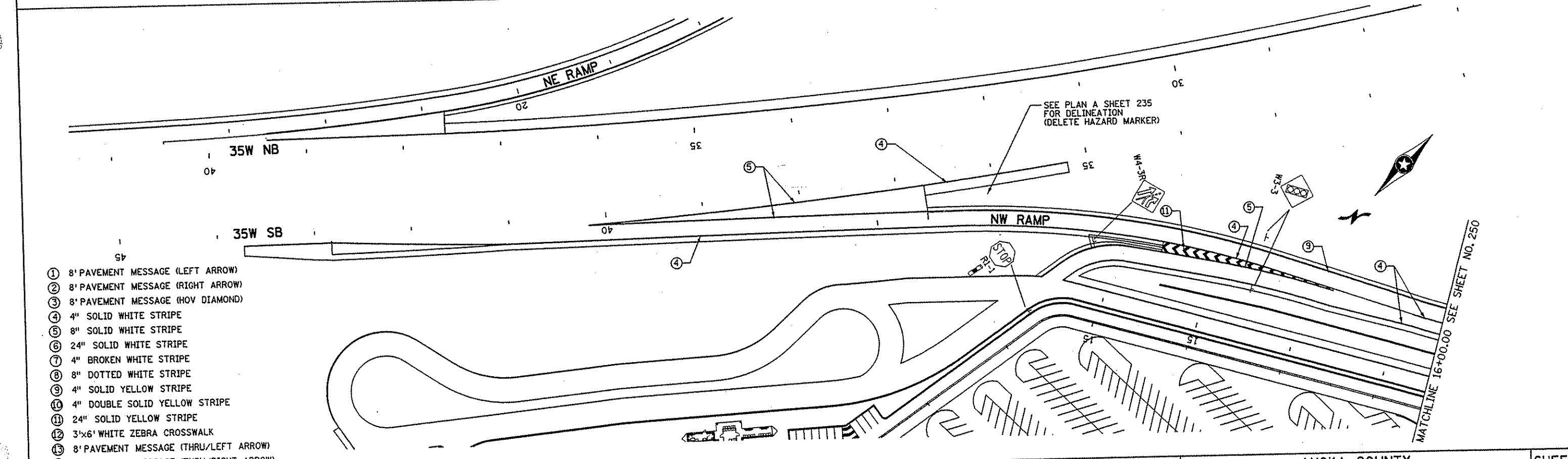
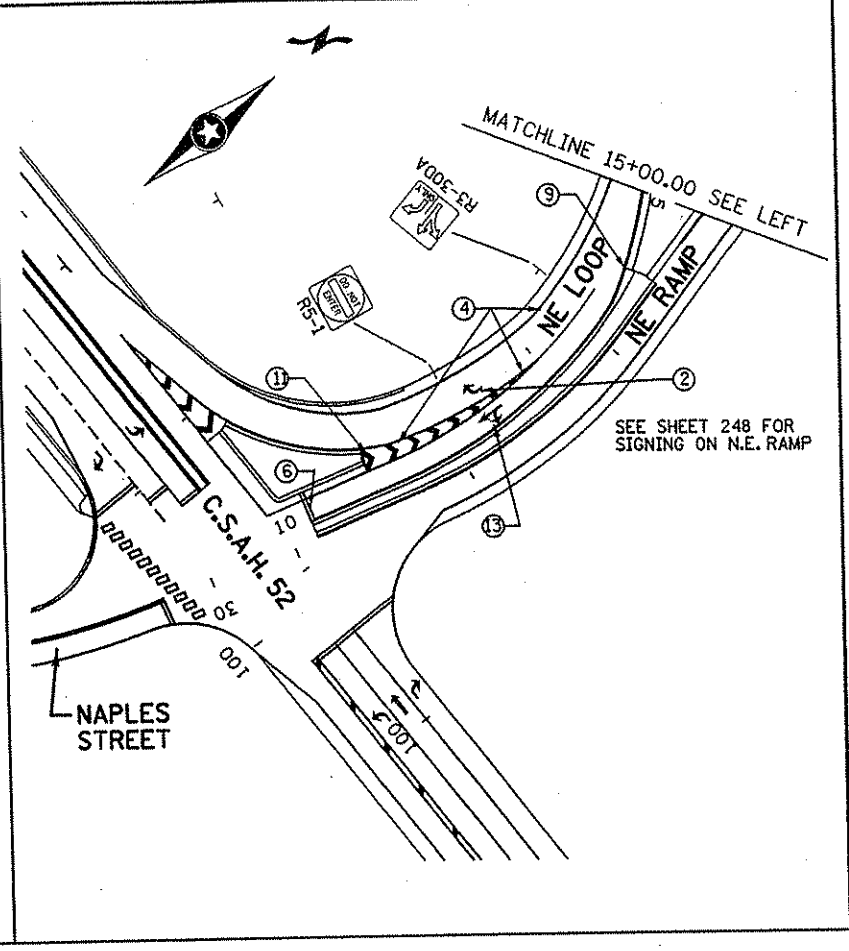
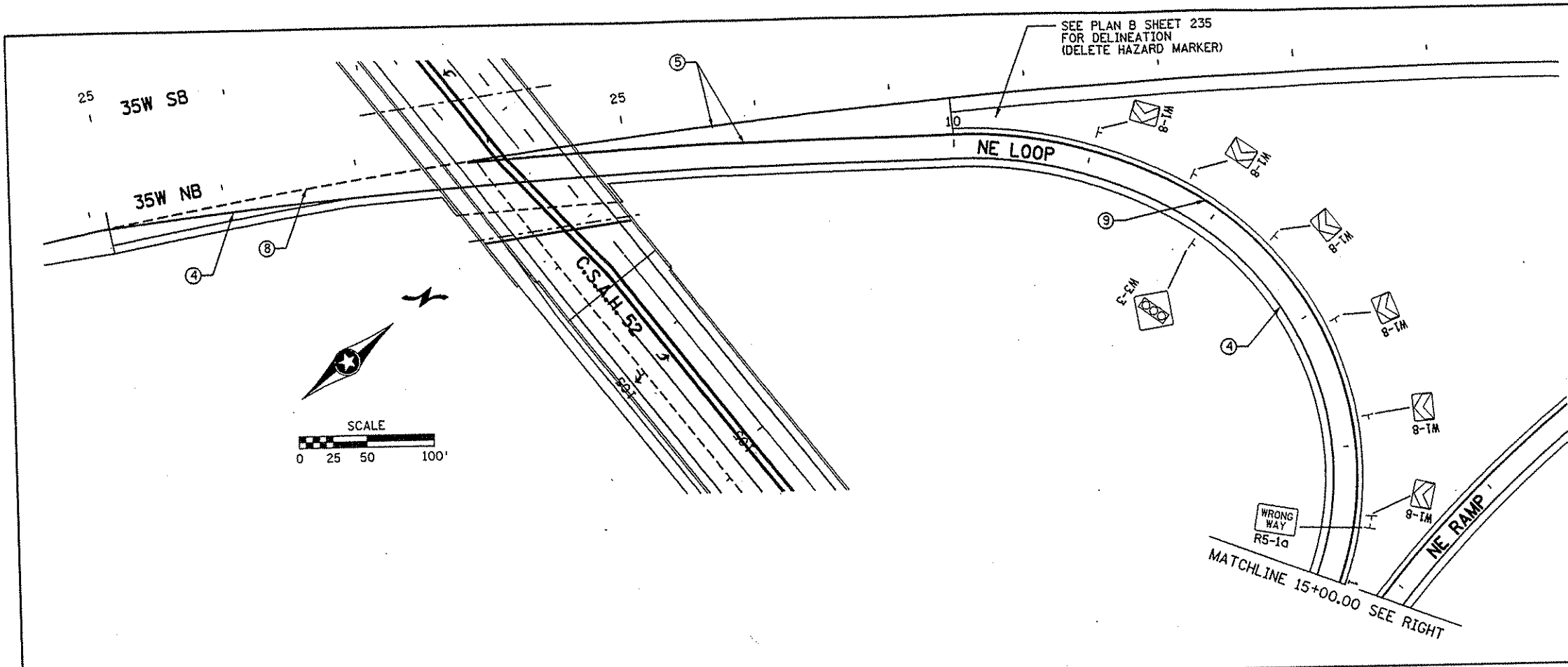
DRAWN BY _____ DATE _____
 DESIGN BY _____ DATE _____
 CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 NE RAMP STA. 10+00 TO 23+69.26

SHEET
 248
 OF
 559



- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
- ② 8' PAVEMENT MESSAGE (RIGHT ARROW)
- ③ 8' PAVEMENT MESSAGE (HOV DIAMOND)
- ④ 4" SOLID WHITE STRIPE
- ⑤ 8" SOLID WHITE STRIPE
- ⑥ 24" SOLID WHITE STRIPE
- ⑦ 4" BROKEN WHITE STRIPE
- ⑧ 8" DOTTED WHITE STRIPE
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- ⑫ 3'x6' WHITE ZEBRA CROSSWALK
- ⑬ 8' PAVEMENT MESSAGE (THRU/LEFT ARROW)
- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)

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.

Grant J. Parker
 DATE 2/1/03 LIC. NO. 26830

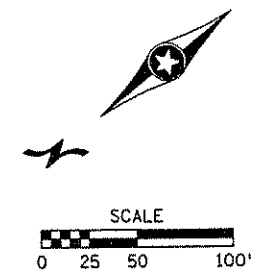
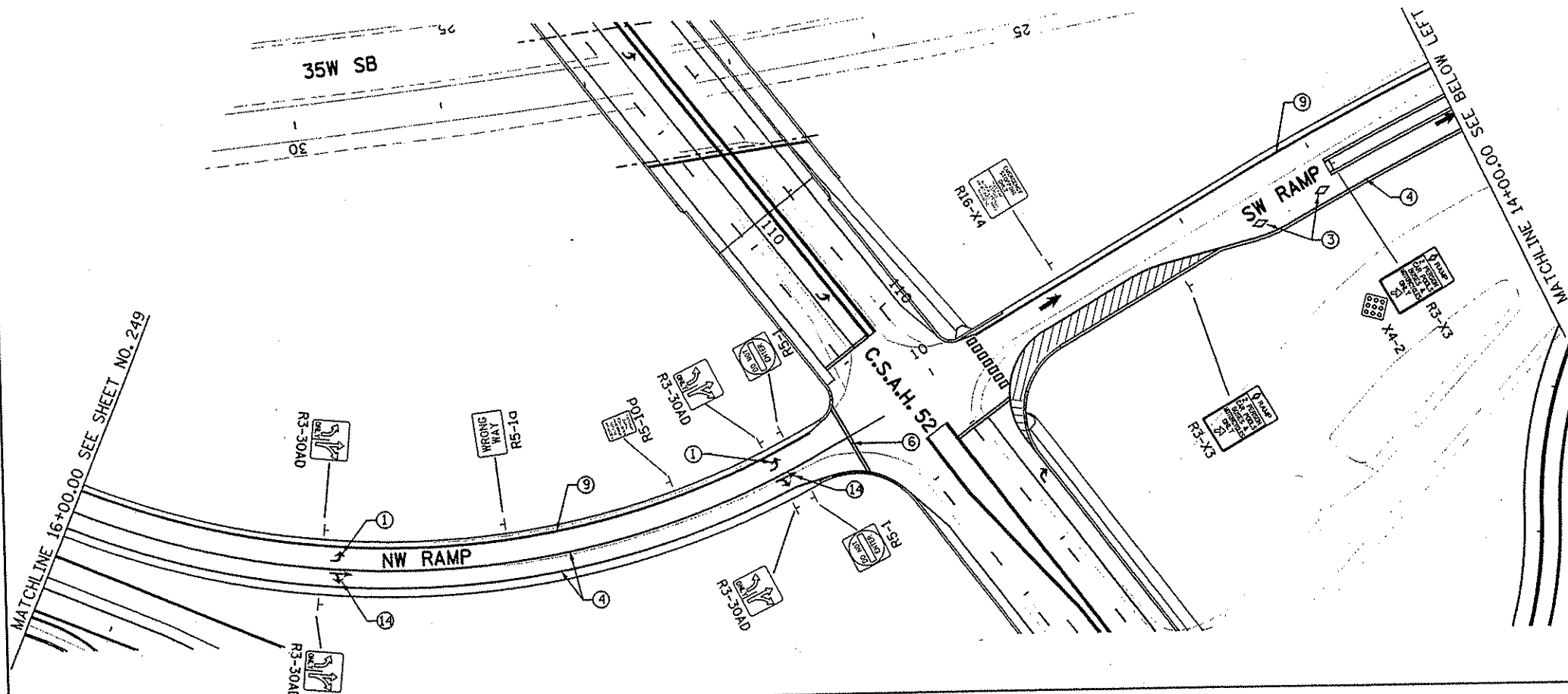
DRAWN BY _____ DATE _____
 DESIGN BY _____ DATE _____
 CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

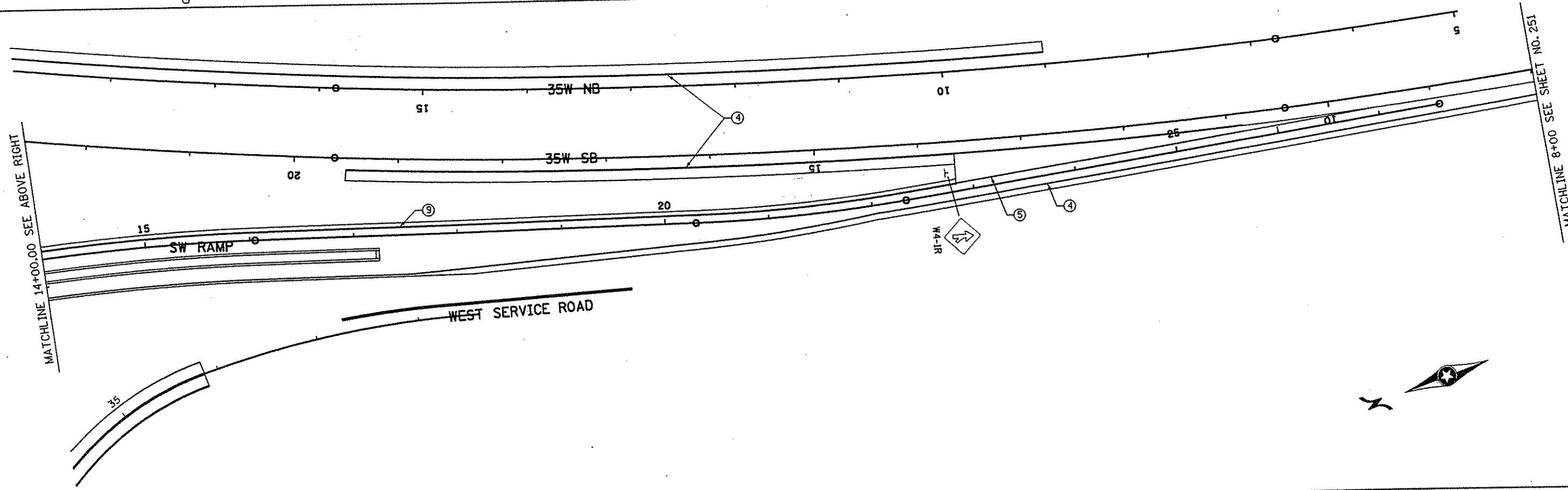
TKDA
 TOLTZ, KING, DUYALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION

SHEET 249 OF 559



- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
- ② 8' PAVEMENT MESSAGE (RIGHT ARROW)
- ③ 8' PAVEMENT MESSAGE (HOV DIAMOND)
- ④ 4" SOLID WHITE STRIPE
- ⑤ 8" SOLID WHITE STRIPE
- ⑥ 24" SOLID WHITE STRIPE
- ⑦ 4" BROKEN WHITE STRIPE
- ⑧ 8" DOTTED WHITE STRIPE
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- ⑪ 24" SOLID YELLOW STRIPE
- ⑫ 3'x6' WHITE ZEBRA CROSSWALK
- ⑬ 8' PAVEMENT MESSAGE (THRU/LEFT ARROW)
- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\a-f\anokacty\117490\hwy-brdg\part4\roadway3\drawings\stripel29.r2001

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.

Joseph Whorner
 DATE: 1-11-02 L.I.C. NO. 22405

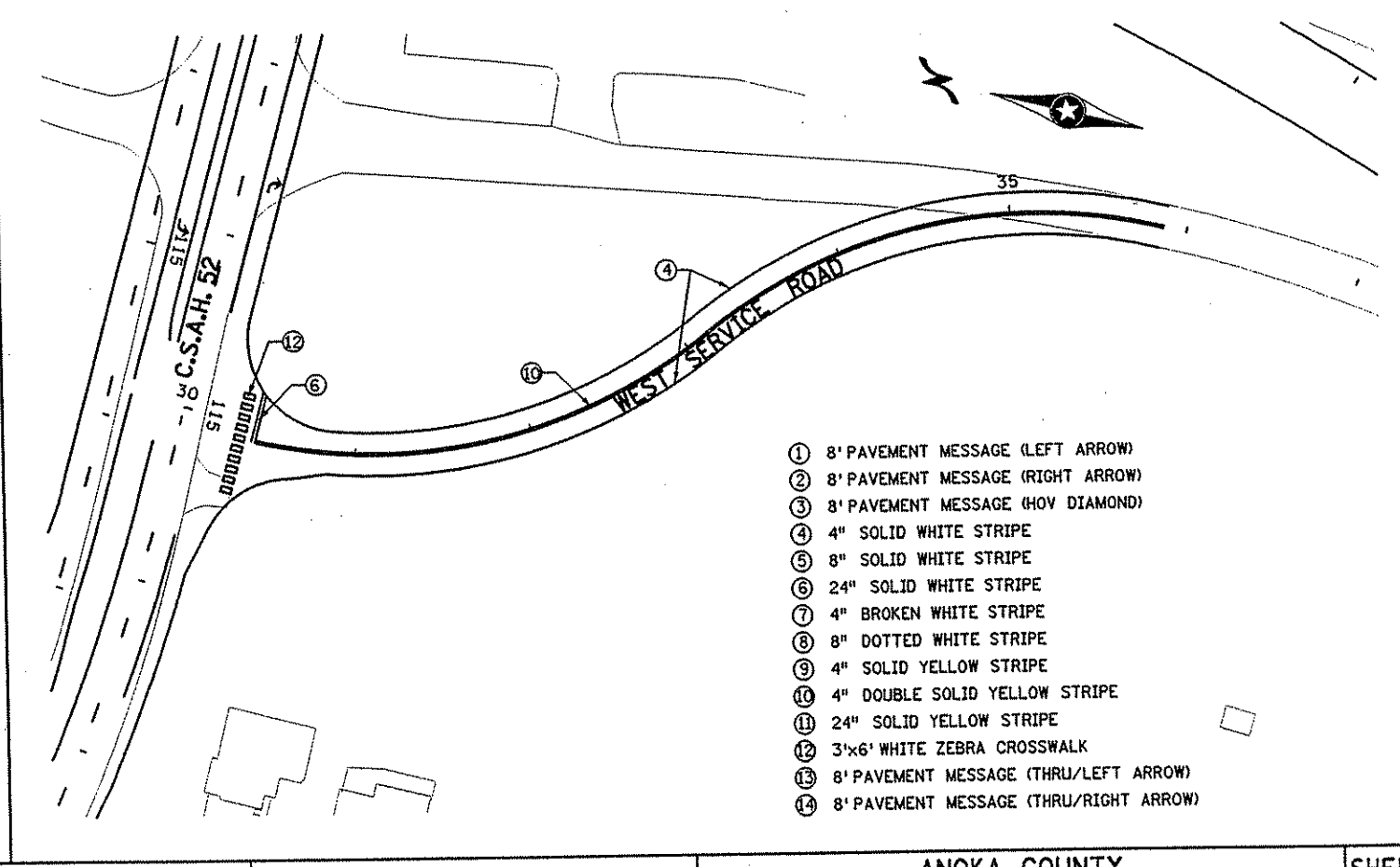
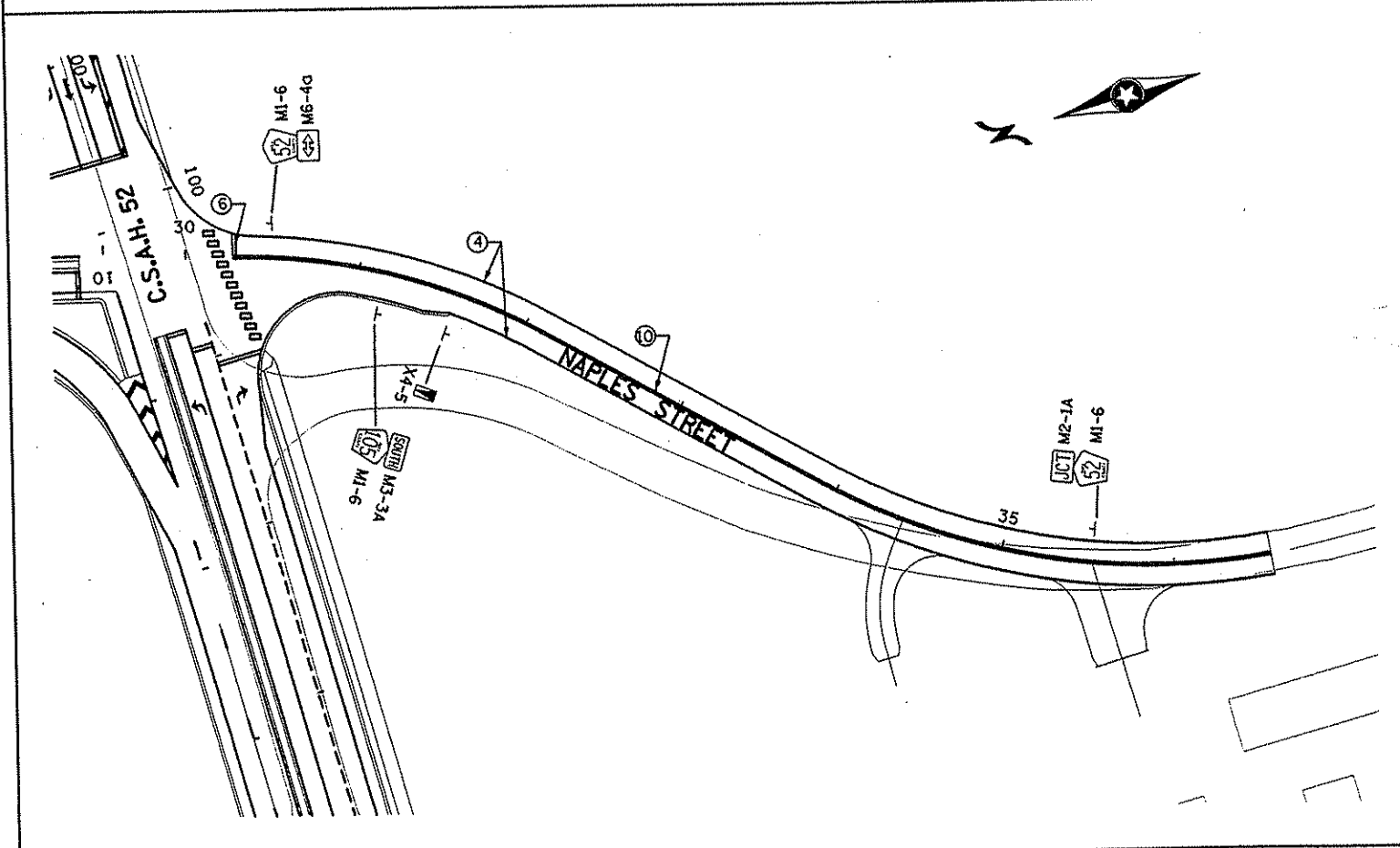
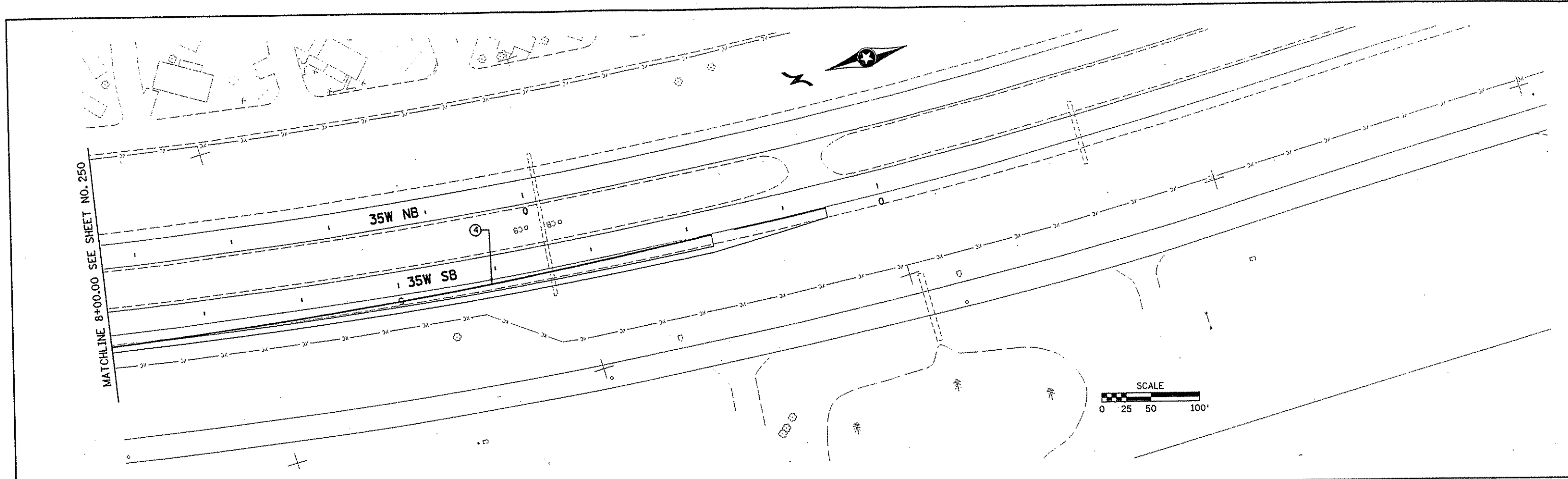
DRAWN BY _____ DATE _____
 DESIGN BY _____ DATE _____
 CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 16+00 TO 21+73.68

SHEET 250 OF 559



- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
- ② 8' PAVEMENT MESSAGE (RIGHT ARROW)
- ③ 8' PAVEMENT MESSAGE (HOV DIAMOND)
- ④ 4" SOLID WHITE STRIPE
- ⑤ 8" SOLID WHITE STRIPE
- ⑥ 24" SOLID WHITE STRIPE
- ⑦ 4" BROKEN WHITE STRIPE
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- ⑪ 24" SOLID YELLOW STRIPE
- ⑫ 3'x6' WHITE ZEBRA CROSSWALK
- ⑬ 8' PAVEMENT MESSAGE (THRU/LEFT ARROW)
- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\str\pe10.dgn 20 NOV 2001

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.

Grant J. Paulsen

DATE 11-21-01 LIC. NO. 26880

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)

S.P. 90-080-11

S.A.P. 02-652-02

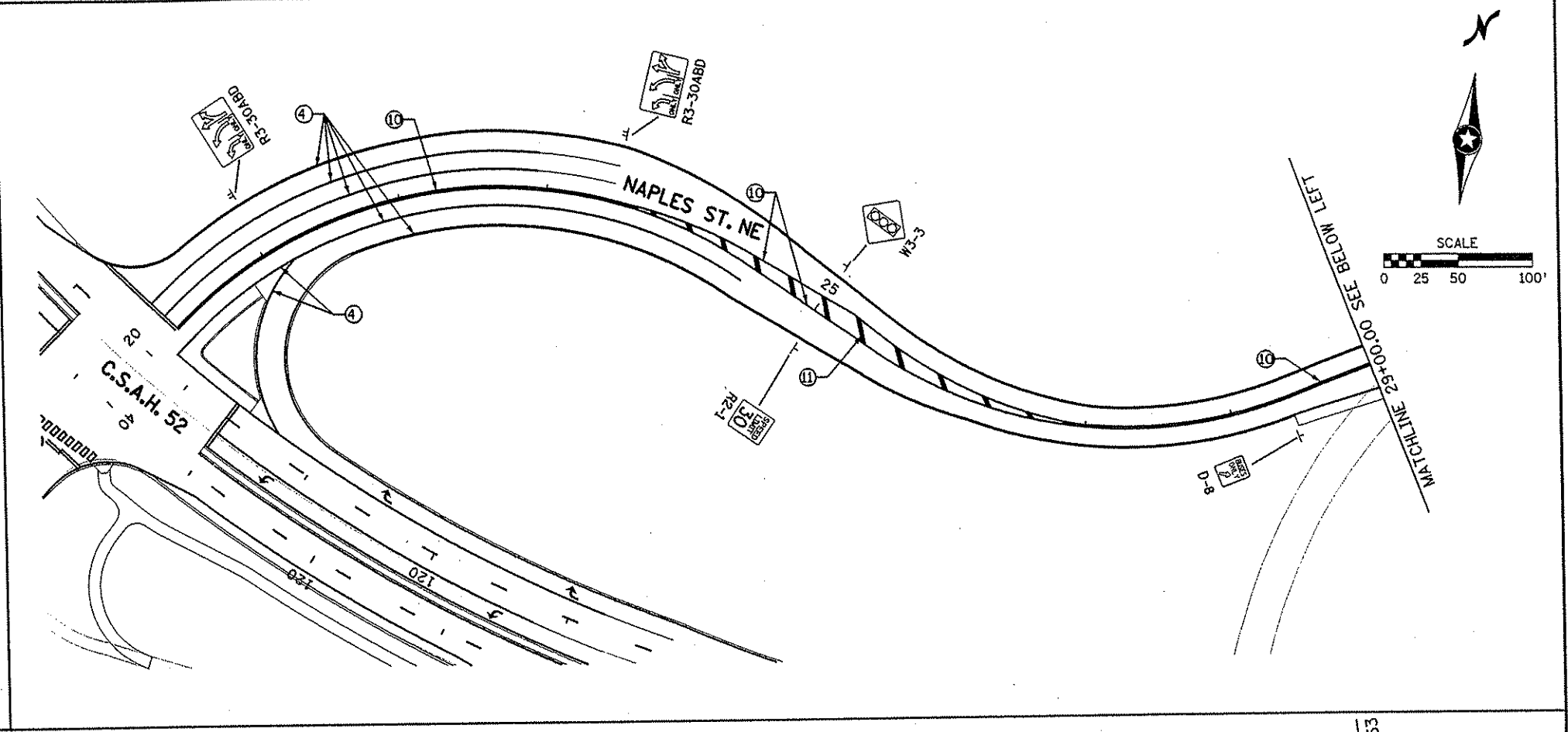
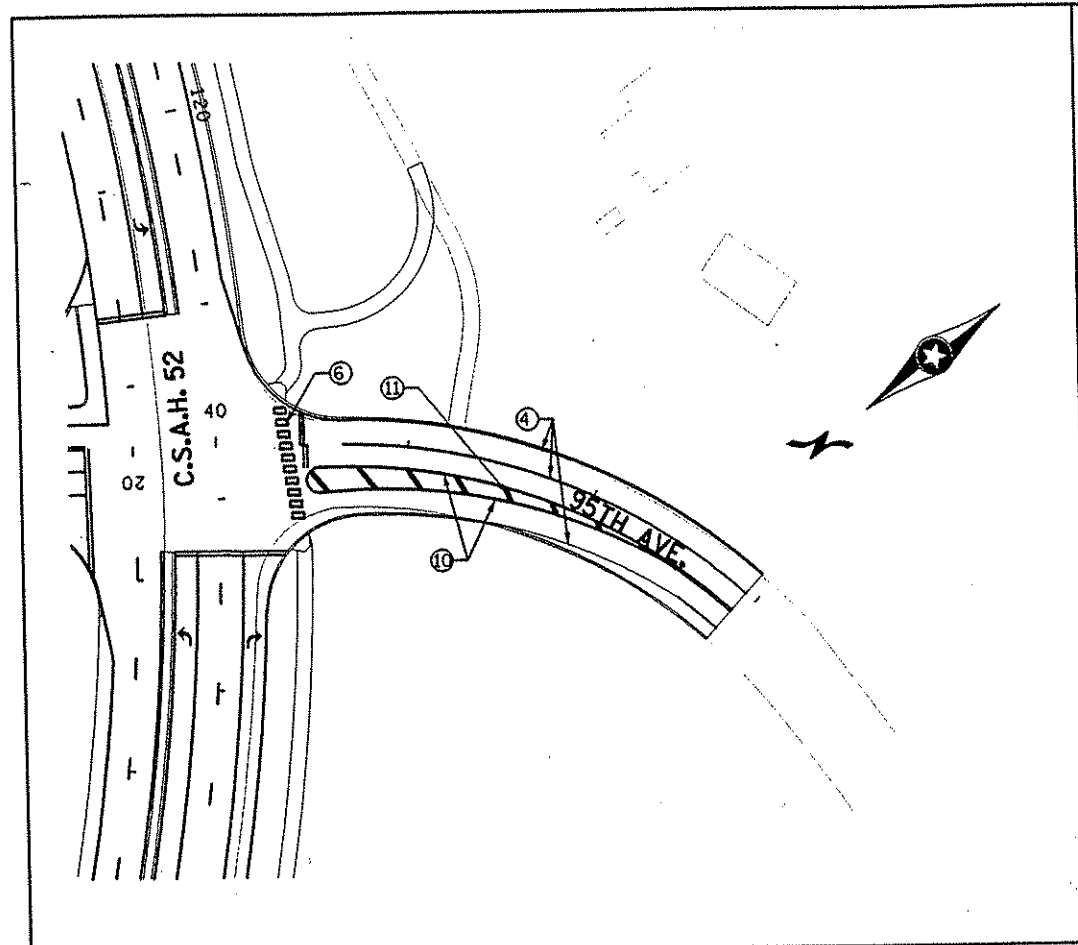
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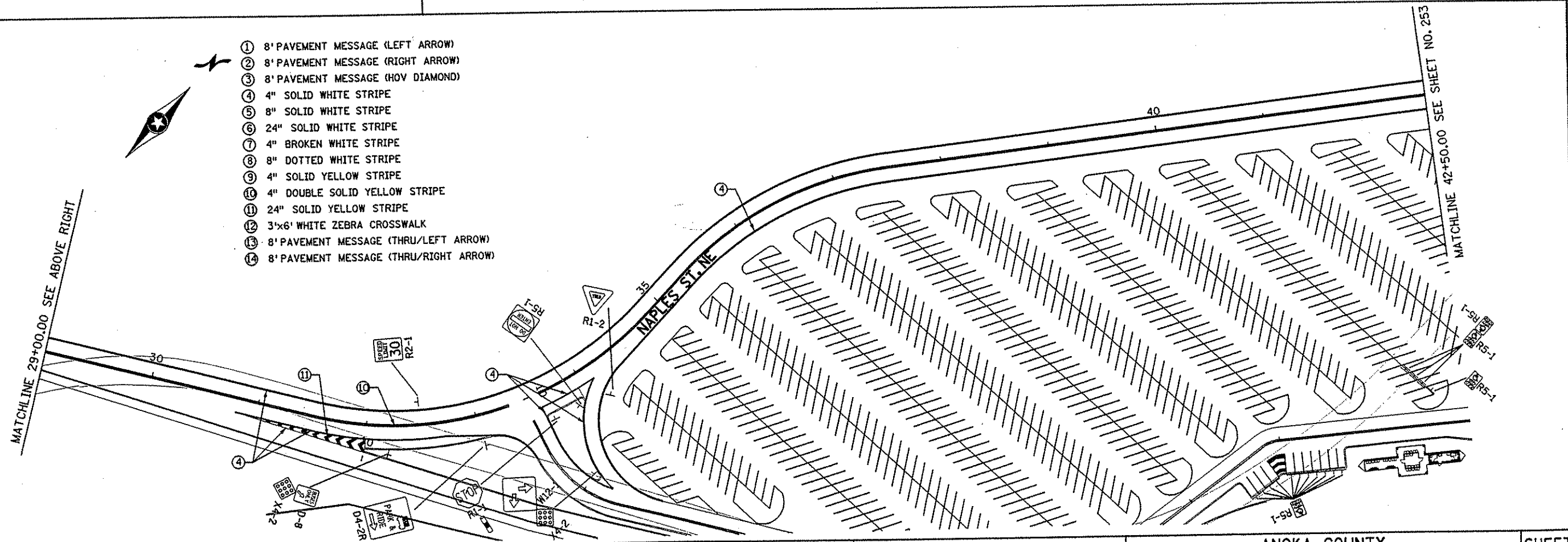
S.A.P. 106-020-021, 106-020-022

TKDA
ENGINEERS-ARCHITECTS-PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA



- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
- ② 8' PAVEMENT MESSAGE (RIGHT ARROW)
- ③ 8' PAVEMENT MESSAGE (HOV DIAMOND)
- ④ 4" SOLID WHITE STRIPE
- ⑤ 8" SOLID WHITE STRIPE
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- ⑪ 24" SOLID YELLOW STRIPE
- ⑫ 3'x6' WHITE ZEBRA CROSSWALK
- ⑬ 8' PAVEMENT MESSAGE (THRU/LEFT ARROW)
- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\broj\11749\part4\roadway3\drawings\stripell.dgn 20 NOV 2001

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.

Brent J. Penner
 DATE 11-21-01 LIC. NO. 26880

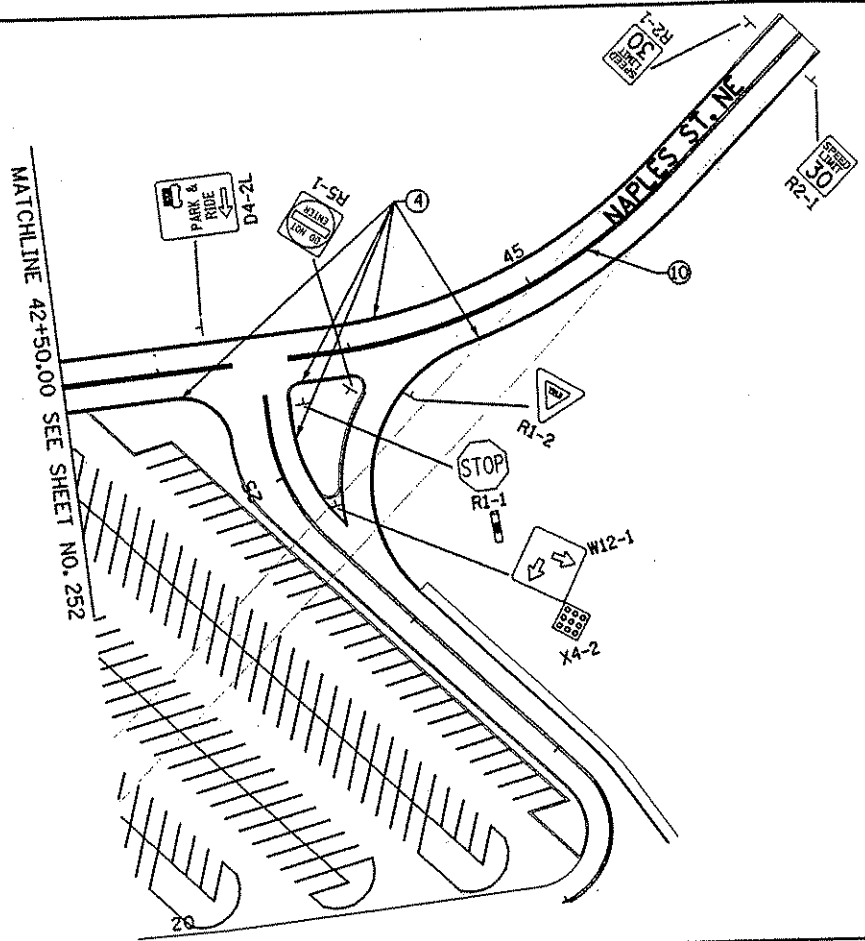
DRAWN BY _____ DATE _____
 DESIGN BY _____ DATE _____
 CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 95th AVE. N.E. AND NAPLES ST. N.E.

SHEET 252 OF 559



- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
- ② 8' PAVEMENT MESSAGE (RIGHT ARROW)
- ③ 8' PAVEMENT MESSAGE (HOV DIAMOND)
- ④ 4" SOLID WHITE STRIPE
- ⑤ 8" SOLID WHITE STRIPE
- ⑥ 24" SOLID WHITE STRIPE
- ⑦ 4" BROKEN WHITE STRIPE
- ⑧ 8" DOTTED WHITE STRIPE
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- ⑬ 8' PAVEMENT MESSAGE (THRU/LEFT ARROW)
- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)

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.

Grant O. Paulsen
 DATE 11-21-01 LIC. NO. 26880

DRAWN BY _____ DATE _____
 DESIGN BY _____ DATE _____
 CHECKED BY _____ DATE _____

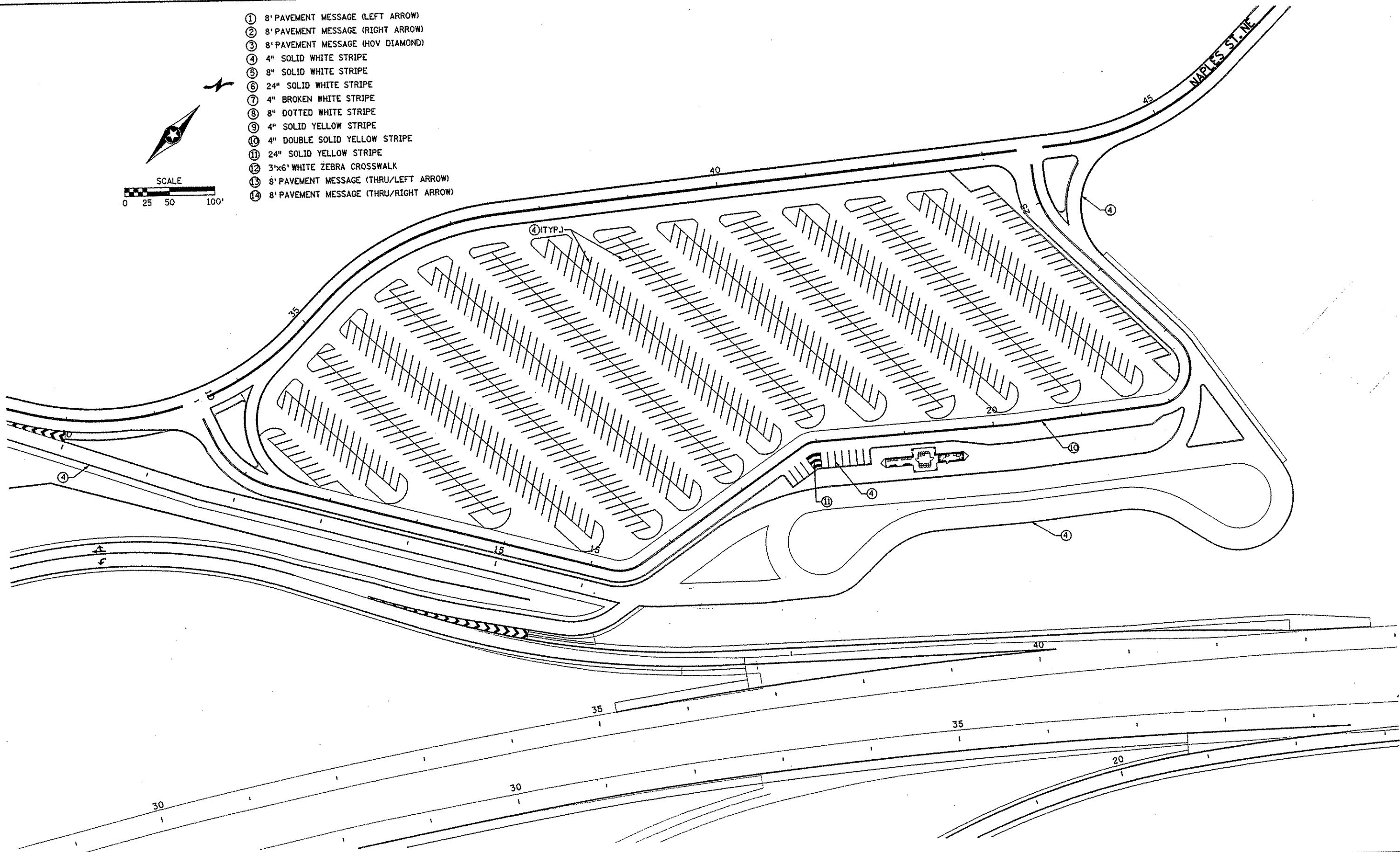
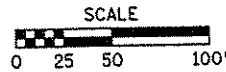
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 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E.

SHEET
 253
 OF
 559

- ① 8' PAVEMENT MESSAGE (LEFT ARROW)
- ② 8' PAVEMENT MESSAGE (RIGHT ARROW)
- ③ 8' PAVEMENT MESSAGE (HOV DIAMOND)
- ④ 4" SOLID WHITE STRIPE
- ⑤ 8" SOLID WHITE STRIPE
- ⑥ 24" SOLID WHITE STRIPE
- ⑦ 4" BROKEN WHITE STRIPE
- ⑧ 8" DOTTED WHITE STRIPE
- ⑨ 4" SOLID YELLOW STRIPE
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- ⑫ 3'x6' WHITE ZEBRA CROSSWALK
- ⑬ 8' PAVEMENT MESSAGE (THRU/LEFT ARROW)
- ⑭ 8' PAVEMENT MESSAGE (THRU/RIGHT ARROW)



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\str\l013.dgn 20 NOV 2001

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.

Grant J. Paulson
 DATE 11-21-01 LIC. NO. 26880

DRAWN BY _____ DATE _____ S.P. 0280-50 (TH 35W)
 DESIGN BY _____ DATE _____ S.P. 90-080-11
 CHECKED BY _____ DATE _____ S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

STRIPING I

LOCATION	COST PARTICIP.	LEFT ARROW	RIGHT ARROW	THRU LEFT ARROW	THRU ARROW	THRU RIGHT ARROW	HOV WHITE PVMT. MARKER	4" SOLID WHITE	8" SOLID WHITE	4" BROKEN WHITE	8" DOTTED WHITE	24" SOLID WHITE	4" SOLID YELLOW	4" DOUBLE SOLID YELLOW	24" SOLID YELLOW	ZEBRA CROSS WALK
		EACH	EACH	EACH	EACH	EACH	EACH	LF	LF	LF	LF	LF	LF	LF	LF	SF
C.S.A.H. 52																
C.S.A.H. 52 91+30.78 TO 100+00	(A)	1	1			1		2094						1740		308
NB C.S.A.H. 52 100+00 TO 100+24	(A)	1	1			1		72					24			5
NB C.S.A.H. 52 100+24 TO 112+31	(C)	2						1367	134	180		88	1029			46
NB C.S.A.H. 52 112+31 TO 119+00	(A)							870		130			639			
SB C.S.A.H. 52 99+14.31 TO 99+38	(A)							24					24			
SB C.S.A.H. 52 99+38 TO 111+46	(C)	1	1					1402		80	605	95	1030			324
SB C.S.A.H. 52 111+46 TO 118+25.95	(A)		2					1024		130			619			180
NB C.S.A.H. 52 119+00 TO 123+50	(A)	2	2					1103		100		36	337			
NB C.S.A.H. 52 123+50 TO 147+00	(B)							2338		450			2362			
SB C.S.A.H. 52 118+25.95 TO 122+95	(A)	2	2					544		70		59	340			180
SB C.S.A.H. 52 122+95 TO 146+82.76	(B)							2792		450			2373			
NB C.S.A.H. 52 147+00 TO 172+00	(B)	2	2					2684		460		58	2313			
SB C.S.A.H. 52 146+82.76 TO 171+11.90	(B)	2	2					3032		460		60	2298			180
NB C.S.A.H. 52 172+00 TO 202+00	(B)							3484		560			2794			
SB C.S.A.H. 52 171+11.90 TO 201+10.94	(B)							3377		560			2794			
NB C.S.A.H. 52 202+00 TO 229+00	(B)							2938		520			2643			
SB C.S.A.H. 52 201+10.94 TO 228+71.40	(B)							2997		520			2662			
NB C.S.A.H. 52 229+00 TO 256+74.68	(B)	2						3515		530		36	2528			
SB C.S.A.H. 52 228+71.40 TO 256+74.68	(B)							2923		490		48	2529			288
I-35W																
I-35W NB	(C)							1010	545							
I-35W SB	(C)							790	618							
CROSS STREETS																
NAPLES STREET	(A)							1244				13		655		
WEST SERVICE ROAD	(A)							1087						549		
NAPLES ST. NE	(D)							5495	34			67		2980	192	
PARK AND RIDE LOT	(D)							25975						1526	41	
95TH AVE. NE	(A)							736				29		438	79	
101ST AVE. NE	(B)							267				33		167		
FLANDERS COURT	(B)							156				34		65		
XYLITE ST.	(B)							597						311		
105TH AVE. NE	(B)							325				48		69		
108TH LANE NE	(B)							49								
107TH LANE NE	(B)							92								
RAMPS																
NE RAMP	(C)							2241	184					1067		
NE LOOP	(C)		1	1				2823	381			20	776			32
NW RAMP	(C)	2				2		2743	381			55	1416			104
SW RAMP (MAINLINE)	(C)							1268	121				623	150		
SW RAMP (HOV)	(E)						2	1268	121				623	150		
SUBTOTALS (A)		6	8		2			8798	430			137	1983	3382	392	360
SUBTOTALS (B)		6	4					31566	5000			315	25294	812		468
SUBTOTALS (C)		5	2	1		2		13644	2344	280	605	258	5941	150	182	324
SUBTOTALS (D)								31470	34			67		4486	233	
SUBTOTALS (E)						2		1268	121				623	150		
TOTALS		17	14	1	2	2	2	86746	2499	5690	605	777	33841	8780	807	1152

* QUANTITY REFLECTS ACTUAL PAINT, NOT TOTAL LENGTH W/ GAPS

THE QUANTITIES ABOVE REFLECT A SINGLE APPLICATION OF PERMANENT STRIPING. TWO APPLICATIONS ARE NEEDED IN THE STATEMENT OF ESTIMATED QUANTITIES TO ACCOUNT FOR STRIPING PRIOR TO PLACEMENT OF BITUMINOUS WEARING COURSE.

PAINTED AREAS ARE TO BE CENTERED ON CENTER AND LANE LINES, EVEN IF INTERSECTION IS NOT ALIGNED.

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 ENGINEER.

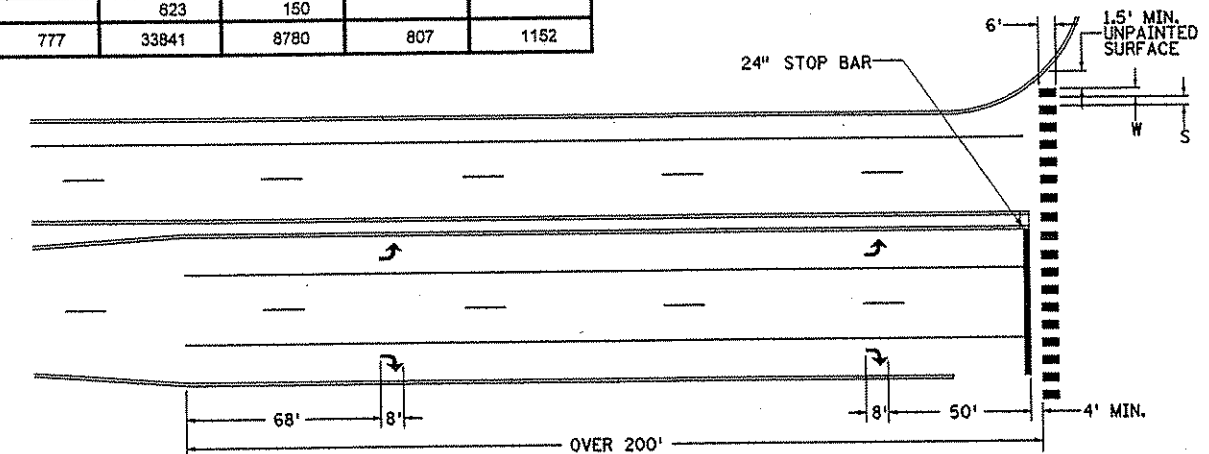
ZEBRA CROSSWALKS ARE TO BE PARALLEL TO THE DRIVING LANE OR LANES, EVEN IF THE STREET IS ON AN ANGLE TO THE INTERSECTION.

A MIN. OF 1'-6" CLEAR DISTANCE MUST BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS AREA, IT MUST BE OMITTED.

(L) WIDTH OF INSIDE LANE	(W) WIDTH OF TAPED AREA	(S) 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:

- 1.) TAPED AREAS TO BE CENTERED ON CENTER LINE AND LANE LINES.
- 2.) ZEBRA CROSSWALKS REQUIRE REFLECTORIZED WHITE POLYMER PREFORMED TAPE.
- 3.) A MINIMUM OF 1.5 FT. CLEAR DISTANCE MUST BE LEFT ADJACENT TO CURB. IF LAST TAPED AREA FALLS INTO THIS DISTANCE IT MUST BE OMITTED.
- 4.) SOLID WHITE POLYMER PREFORMED STOPLINES 24" WIDE.



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.

Joseph W. ...
DATE 11-20-01 LIC. NO. 22405

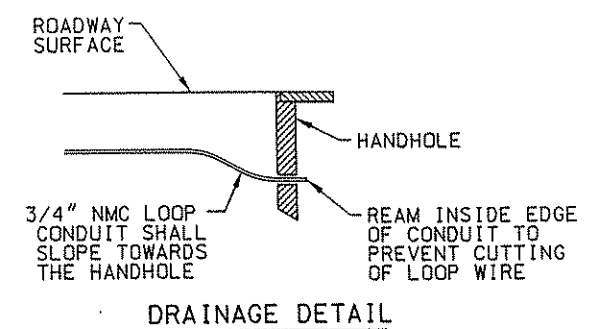
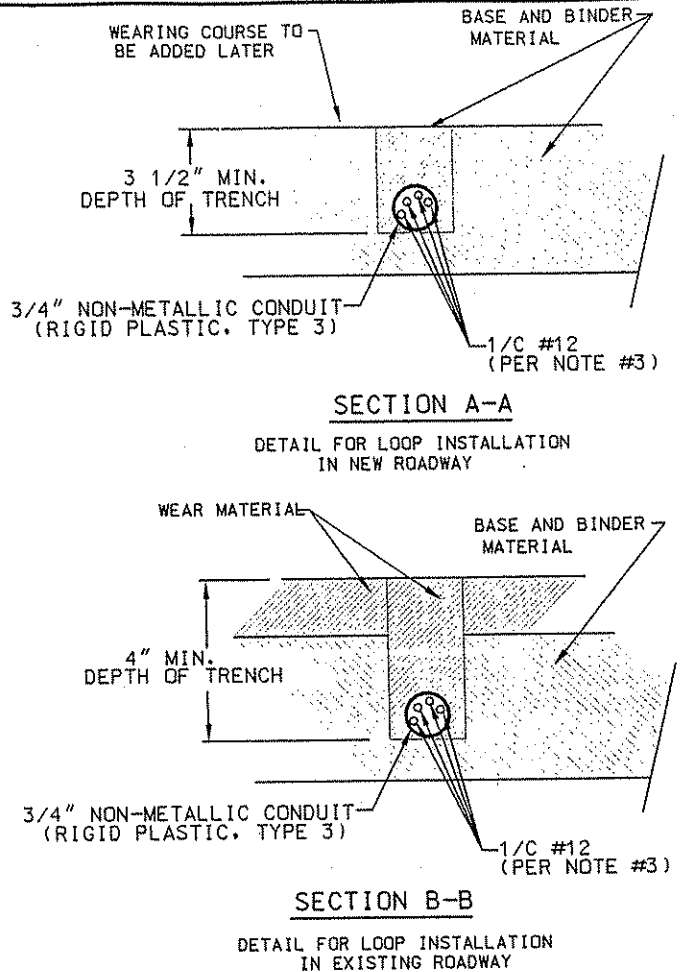
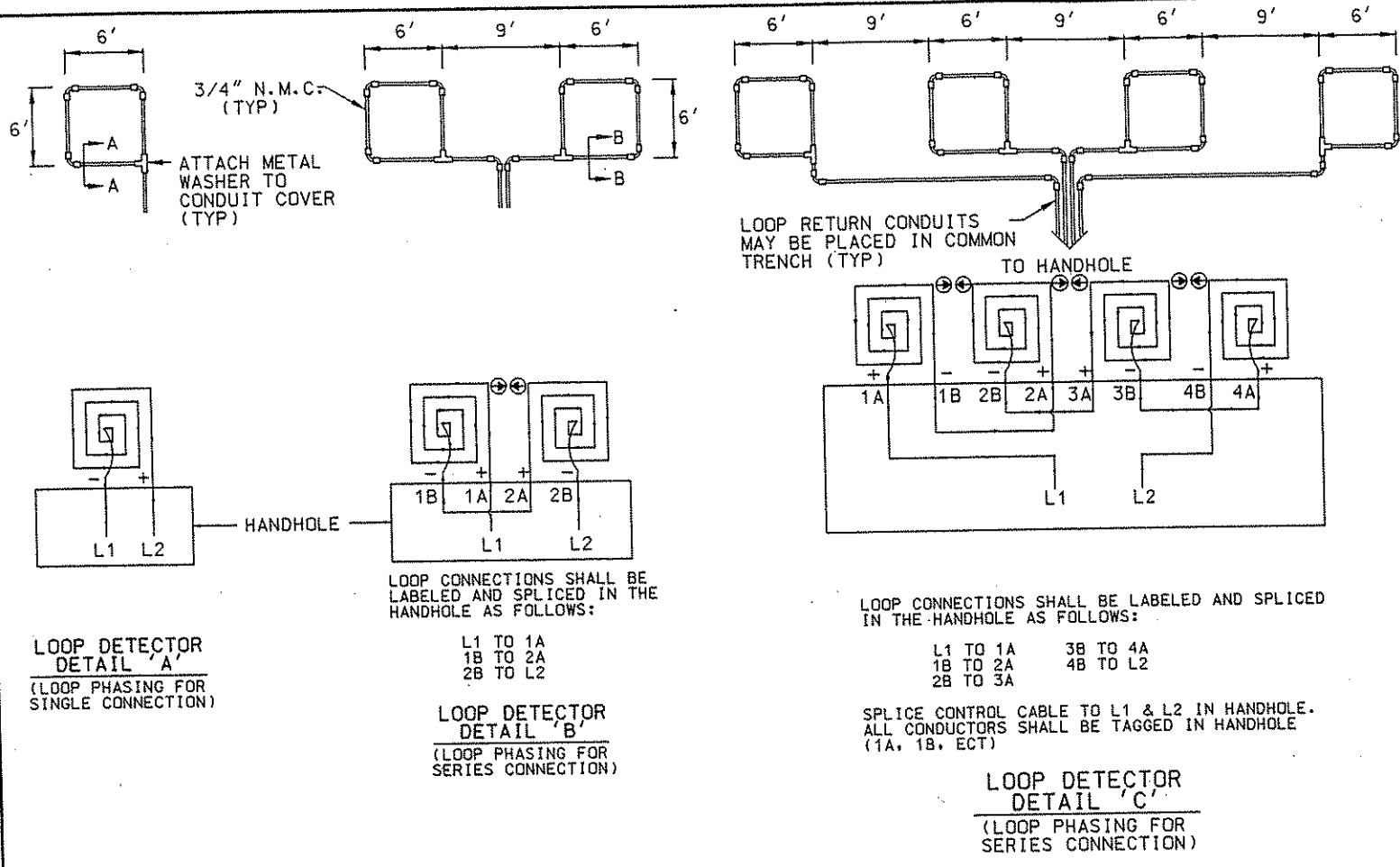
DRAWN BY RRC DATE 09-26-01
 DESIGN BY JMW DATE 09-26-01
 CHECKED BY KRC DATE 09-26-01

S.P. 0280-50 (TH 35W)
 S.A.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STRIPING DETAILS AND TABULATION
 C.S.A.H. 52 RECONSTRUCTION

SHEET
255
OF
559



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

LEGEND OF SYMBOLS

CONTROLLER AND SERVICE EQUIP. NO's	Ⓐ
SIGNAL BASE NO.	Ⓛ
SIGNAL FACE NO.	Ⓜ
LUMINAIRE NO.	Ⓝ
CONTROLLER AND CABINET	□
CONTROLLER AND CABINET - IN PLACE	□
HANDHOLE	□
HANDHOLE - IN PLACE	□
RIGID STEEL CONDUIT (RSC)	—
RIGID STEEL CONDUIT (RSC) - IN PLACE	—
SIGNAL FACE WITH BACKGROUND SHIELD	→
SIGNAL FACE W/O BACKGROUND SHIELD	→
SIGNAL FACE - IN PLACE	→
PEDESTRIAN INDICATORS	→
PEDESTRIAN INDICATORS - IN PLACE	→
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	⊕
PEDESTRIAN PUSH BUTTON STATION	⊕
TRAFFIC SIGNAL PEDESTAL	⊕
TRAFFIC SIGNAL PEDESTAL - INPLACE	⊕
TRAFFIC SIGNAL POLE AND MAST ARM	—
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	—
STREET LIGHT POLE AND LUMINAIRE	—
STREET LIGHT POLE AND LUMINAIRE - IN PLACE	—
MAST ARM AND LUMINAIRE	—
MAST ARM AND LUMINAIRE - INPLACE	—
WOOD POLE	•
WOOD POLE - IN PLACE	•
SOURCE OF POWER	⊕
EMERGENCY VEHICLE PREEMPTION DETECTOR	⊕
RAILROAD SIGNAL - IN PLACE	⊕
RIGHT OF WAY LINE	—
CENTERLINE	—
EDGE OF ROADWAY	—
SHOULDERLINE	—
CURB LINE	—
STOP BAR	—

ABBREVIATIONS

3-1(EG) SIGNAL HEAD PHASE "3" - NO "1"	P2-1(EG) PEDESTRIAN INDICATION PHASE "2" - NO. "1"
BR. GR. BARE GROUND	PB PUSH BUTTON
CH. SW. CHECK SWITCH	PB2-1(EG) PUSH BUTTON PHASE "2" - NO. "1"
CLR CLEAR	PEC PHOTOELECTRIC CELL
D2-1(EG) DETECTOR PHASE "2" - NO. "1"	PED PEDESTRIAN
DWK DON'T WALK	R RED
EGG EQUIPMENT GROUND	R&S REMOVE AND SALVAGE
EVP EMERGENCY VEHICLE PRE-EMPTION	RLTA RED LEFT TURN ARROW
F&I FURNISH AND INSTALL	RRTA RED RIGHT TURN ARROW
FL FLASH/FLASHING	RSC RIGID STEEL CONDUIT
G GREEN	SOP SOURCE OF POWER
GLTA GREEN LEFT TURN ARROW	SPR SPARE
GRN GREEN	ST. LHT STREET LIGHT
GR. R GROUND ROD	STA STATION
GRTA GREEN RIGHT TURN ARROW	SW SWITCH
GTHA GREEN THRU ARROW	SWD SWITCHED
HH HANDHOLE	S&R SALVAGE AND REINSTALL
HPS HIGH PRESSURE SODIUM	TDW TELEPHONE DROP WIRE
JB JUNCTION BOX	WLK WALK
LUM LUMINAIRE	YEL YELLOW
NEU NEUTRAL	YLTA YELLOW LEFT TURN ARROW
NMC NONMETALLIC CONDUIT	YRTA YELLOW RIGHT TURN ARROW
	YTHA YELLOW THRU ARROW

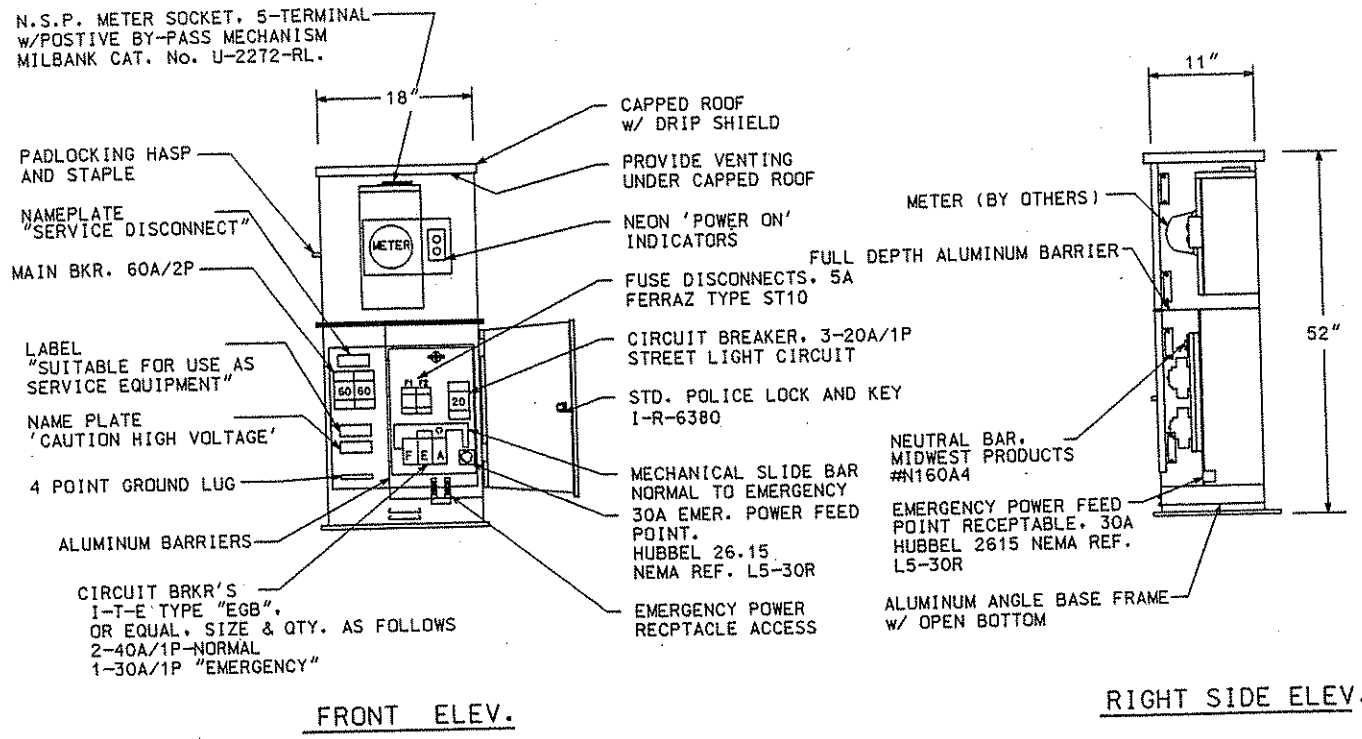
CONDUCTOR COLOR CODE

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

STANDARD PLATES

PLATE NO.	DESCRIPTION
8110D	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8114A	P.V.C. HANDHOLE/PULLBOX
8115D	PEDESTRIAN PUSH BUTTON INSTALLATION
8118C	SERVICE EQUIPMENT AND POLE-TRAFFIC CONTROL SIGNALS
8119C	GROUND MOUNTED CABINET FOUNDATION
8121D	TRANSFORMER BASE AND POLE BASE PLATE
8122C	PEDESTAL AND PEDESTAL BASE
8123D	POLE AND MAST ARM
8124E	MAST ARM SIGNAL HEAD MOUNTS
8126F	POLE FOUNDATION (PA90 AND PA100)

SIGNAL SERVICE CABINET



- N.S.P. METER SOCKET, 5-TERMINAL w/POSTIVE BY-PASS MECHANISM MILBANK CAT. NO. U-2272-RL.
- PADLOCKING HASP AND STAPLE
- NAMEPLATE "SERVICE DISCONNECT"
- MAIN BKR. 60A/2P
- LABEL "SUITABLE FOR USE AS SERVICE EQUIPMENT"
- NAME PLATE "CAUTION HIGH VOLTAGE"
- 4 POINT GROUND LUG
- ALUMINUM BARRIERS
- CIRCUIT BRKR'S 1-T-E TYPE "EGB", OR EQUAL, SIZE & QTY. AS FOLLOWS 2-40A/1P-NORMAL 1-30A/1P "EMERGENCY"

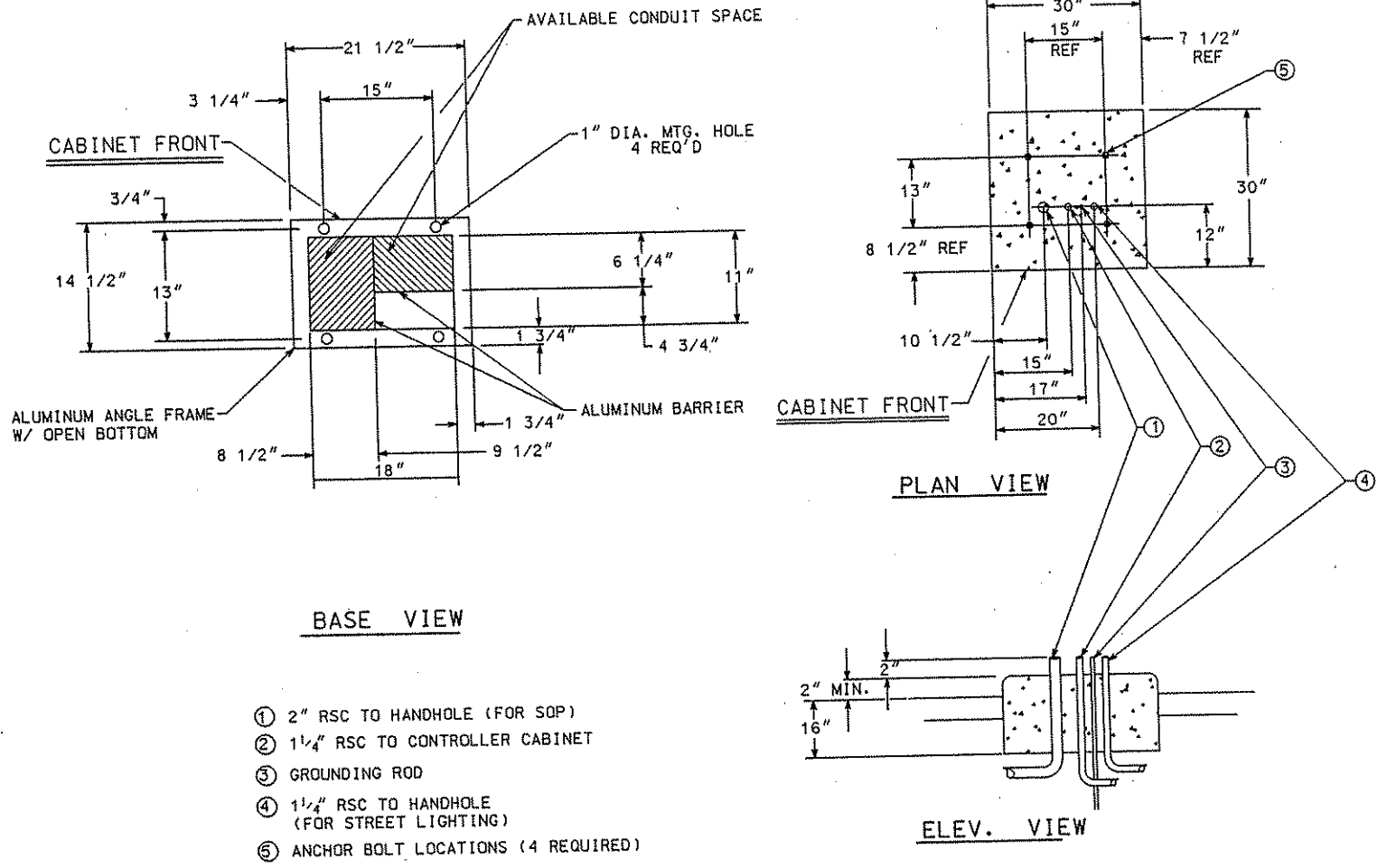
- CAPPED ROOF w/ DRIP SHIELD
- PROVIDE VENTING UNDER CAPPED ROOF
- NEON 'POWER ON' INDICATORS
- FUSE DISCONNECTS, 5A FERRAZ TYPE ST10
- CIRCUIT BREAKER, 3-20A/1P STREET LIGHT CIRCUIT
- STD. POLICE LOCK AND KEY I-R-6380
- MECHANICAL SLIDE BAR NORMAL TO EMERGENCY 30A EMER. POWER FEED POINT, HUBBEL 26.15 NEMA REF. L5-30R
- EMERGENCY POWER RECPTACLE ACCESS
- METER (BY OTHERS)
- FULL DEPTH ALUMINUM BARRIER
- NEUTRAL BAR, MIDWEST PRODUCTS #N160A4
- EMERGENCY POWER FEED POINT RECEPTACLE, 30A HUBBEL 2615 NEMA REF. L5-30R
- ALUMINUM ANGLE BASE FRAME w/ OPEN BOTTOM

CONSTRUCTION NOTES

ENCLOSURE SHALL BE FABRICATED FROM 1/8" TYPE 5052 H32 ALUMINUM FOR OUTDOOR WEATHER PROOF SERVICES. DOORS AND BASE TO BE GASKETED. ALL HINGES, PINS AND LOCKS TO BE OF NON CORRODING CONSTRUCTION. CABINET TO BE ANNOZIZED CLEAR.

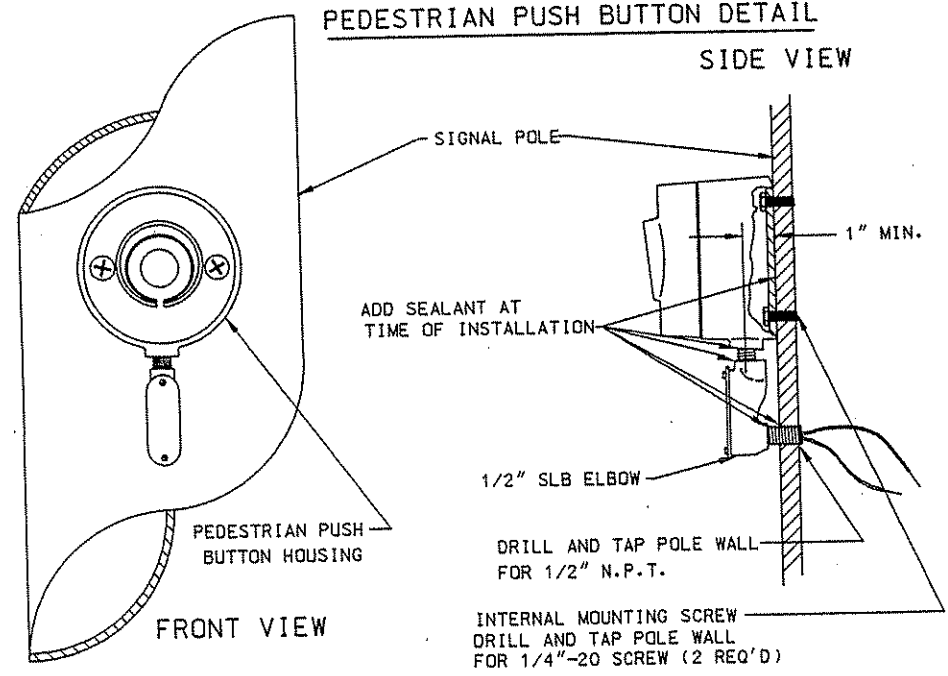
ENCLOSURE SHALL BE 'UL' APPROVED

SERVICE CABINET FOUNDATION



- ① 2" RSC TO HANDHOLE (FOR SOP)
- ② 1 1/4" RSC TO CONTROLLER CABINET
- ③ GROUNDING ROD
- ④ 1 1/4" RSC TO HANDHOLE (FOR STREET LIGHTING)
- ⑤ ANCHOR BOLT LOCATIONS (4 REQUIRED)

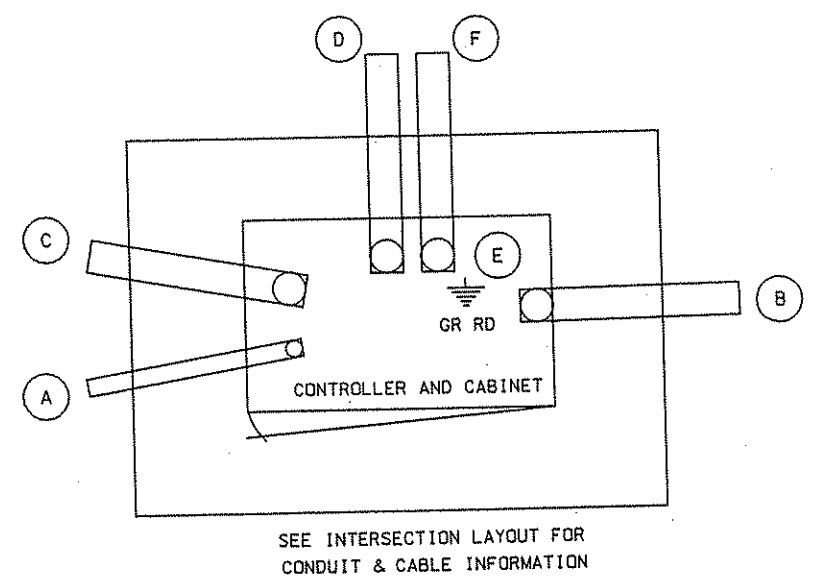
MAST ARM POLE PEDESTRIAN PUSH BUTTON DETAIL



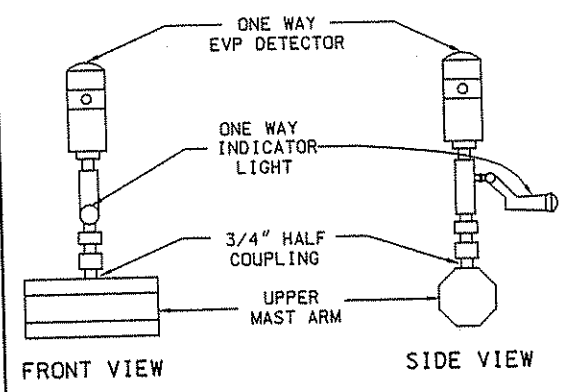
- Ⓐ 1 1/4" R.S.C. FOR SERVICE CONNECTION (VIA HH)
- Ⓑ 4" R.S.C. TO HH
- Ⓒ 4" R.S.C. TO HH
- Ⓓ 3" R.S.C. STUBOUT, THREAD & CAP BOTH ENDS (FOR FUTURE USE).
- Ⓔ 5/8" DIA X 15' GROUND ROD
- Ⓕ 3" R.S.C. STUBOUT, THREAD & CAP BOTH ENDS (FOR FUTURE USE).

CONCRETE FOUNDATION
SEE MN/DOT STANDARD PLATE NO. 8119C FOR DIMENSIONS.

TYPICAL CONTROLLER CABINET PAD LAYOUT
NO SCALE



EVP DETECTOR AND LIGHT MOUNTING DETAIL ON MAST ARM



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\signals\detcab.dgn 20 NOV 2001

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.

Robert D. Paulsen
DATE 11-20-01 LIC. NO. 26880

DRAWN BY SFH DATE 11-8-00
DESIGN BY BOP DATE 11-8-00
CHECKED BY TAC DATE 11-8-00

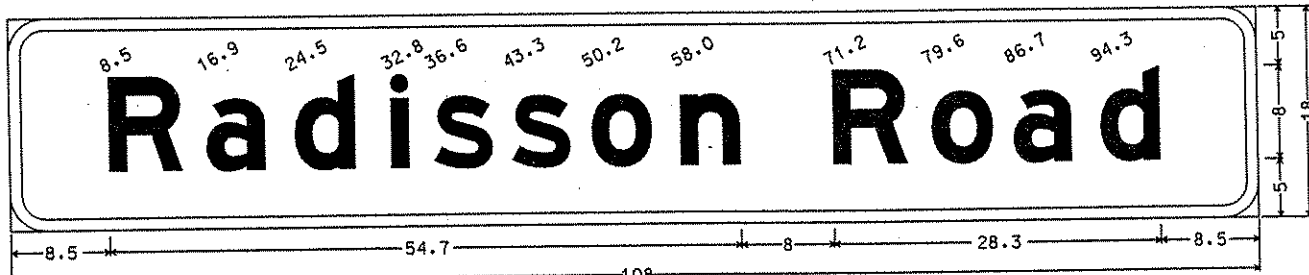
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S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
ENGINEERS-ARCHITECTS-PLANNERS
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
TRAFFIC SIGNAL SYSTEMS "A - E"
C.S.A.H. 52 RECONSTRUCTION
SIGNAL DETAILS

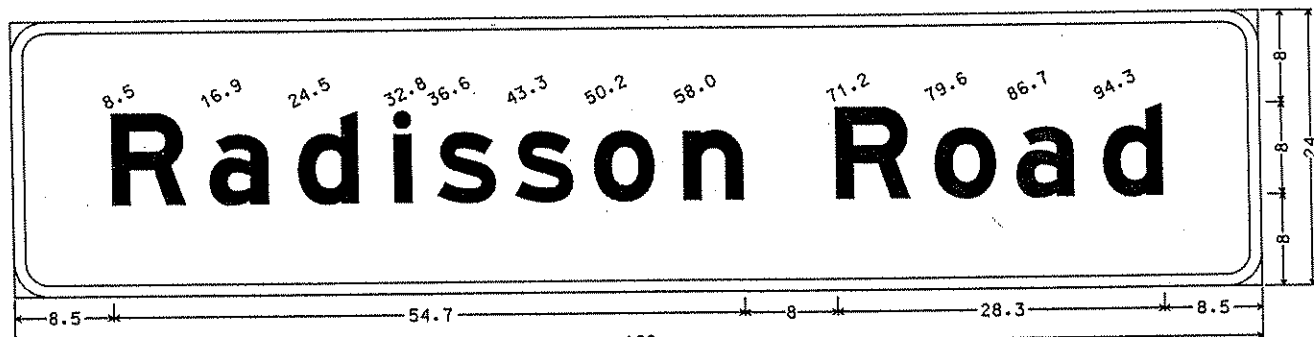
SHEET 257 OF 559

D-1, D-2, D-3, D-5, D-9, D-11



3.0" Radius, 1.0" Border, White on Green;
[Radisson Road] E Mod;

D-7, D-13



3.0" Radius, 1.0" Border, White on Green;
[Radisson Road] E Mod;

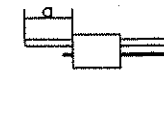
TYPE "D" SIGNS - F & I								
SIGNAL SYSTEM	SIGN PANEL	SIZE (Inches)	NO. REQ.	NO. POSTS PER SIGN	POST SPACING (Inches)	AREA (sq. ft.) PER SIGN	POLE NO.	a
A	D-1	108x18	1	3	45"	13.50	1	8'
A	D-2	108x18	1	3	45"	13.50	3	8'
A	D-15	96x24	1	2	54"	16.00	2	15'
A	D-16	96x24	1	2	54"	16.00	4	20'
A	D-17	54x66	1	2	30"	24.75	4	15'
A	D-18	54x66	1	2	30"	24.75	2	23'
A	D-19	54x66	1	2	30"	24.75	2	28'
A	D-20	54x66	1	2	30"	24.75	3	19'
A	D-21	54x66	1	2	30"	24.75	3	24'
B	D-3	108x18	1	3	45"	13.5	2	10'
B	D-20	54x66	1	2	30"	24.75	3	13'
B	D-21	54x66	1	2	30"	24.75	1	13'
B	D-22	54x66	1	2	30"	24.75	1	18'
C	D-4	114x36	1	3	45"	28.50	1	28'
C	D-5	108x18	1	3	45"	13.50	2	16'
C	D-6	114x36	1	3	45"	28.50	3	28'
C	D-7	108x24	1	3	45"	18.00	4	19'
D	D-8	114x36	1	3	45"	28.50	1	28'
D	D-9	108x18	1	3	45"	13.50	2	8'
D	D-10	114x36	1	3	45"	28.50	3	28'
D	D-11	108x18	1	3	45"	13.50	4	8'
E	D-12	102x24	1	3	45"	17.00	2	25'
E	D-13	108x24	1	3	45"	18.00	3	15'
E	D-14	102x24	1	3	45"	17.00	4	18'

TYPE "C" SIGNS - F & I								
SIGNAL SYSTEM	SIGN PANEL	SIZE (Inches)	NO. REQ.	NO. POSTS PER SIGN	POST SPACING (Inches)	AREA (sq. ft.) PER SIGN	POLE NO.	a
A	R6-1L	36x12	4	①	-	3.00	1,2,3,4	-
A	R6-1R	36x12	2	①	-	3.00	2,4	-
A	R9-3a	18x18	6	①	-	2.25	1,2,3,4	-
B	R6-1L	36x12	3	①	-	3.00	1,2,3	-
B	R6-1R	36x12	3	①	-	3.00	1,2,3	-
B	R9-3a	18x18	2	①	-	2.25	2,3	-
C	R6-1L	36x12	4	①	-	3.00	1,2,3,4	-
C	R6-1R	36x12	2	①	-	3.00	1,3	-
C	R9-3a	18x18	3	①	-	2.25	1,3	-
D	R6-1L	36x12	4	①	-	3.00	1,2,3,4	-
D	R6-1R	36x12	2	①	-	3.00	1,3	-
D	R9-3a	18x18	6	①	-	2.25	1,2,3,4	-
E	R6-1L	36x12	2	①	-	3.00	2,3	-
E	R6-1R	36x12	1	①	-	3.00	4	-
E	R9-3a	18x18	4	①	-	2.25	1,2,3,4	-

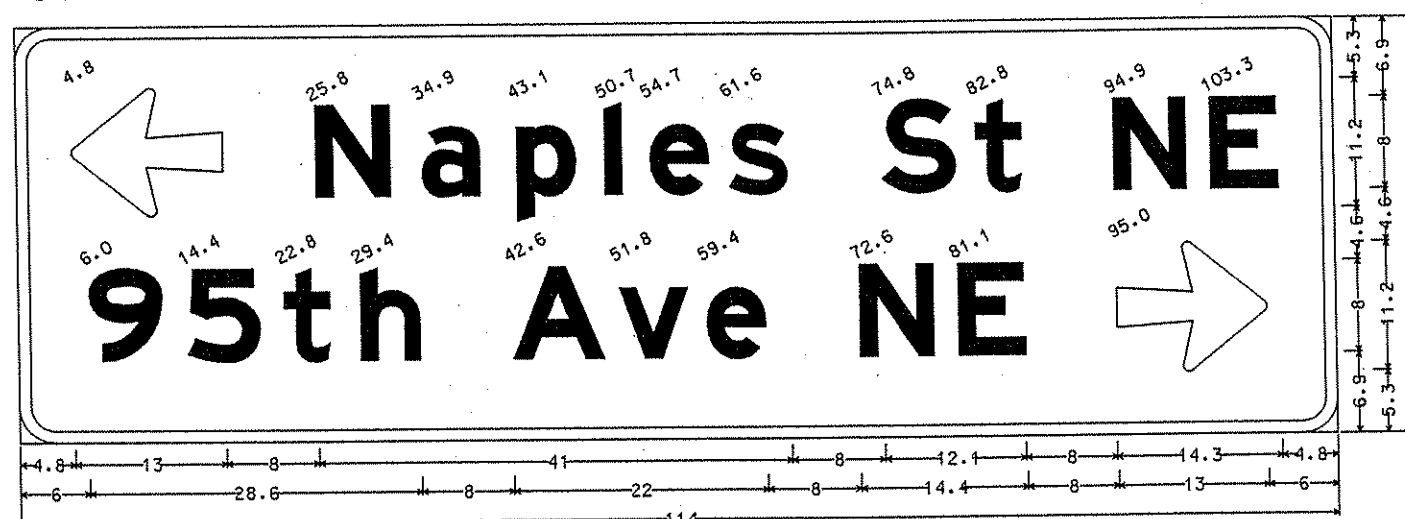
NOTES:

- 1) TYPE "D" SIGN COLOR-WHITE LEGEND AND BORDER ON GREEN BACKGROUND, FULLY REFLECTORIZED.
- 2) CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
- 3) FOR STRUCTURAL DETAILS, TYPE "C" AND "D" SIGNS, SEE DETAILS AND STANDARD SIGNS MANUAL.
- 4) FOR TYPE "D" STRINGER AND PANEL-JOINT DETAIL, SEE DETAILS AND STANDARD SIGNS MANUAL.
- 5) TYPE "C" AND "D" SIGN PANELS SHALL BE FURNISHED AND INSTALLED BY SIGNAL CONTRACTOR INCIDENTAL TO ITEM NO. 2565.511 FOR SIGNAL SYSTEM.
- 6) ① = MOUNT SIGN PANEL ON TRAFFIC SIGNAL MAST ARM POLE.

MAST ARM MOUNTED SIGNING

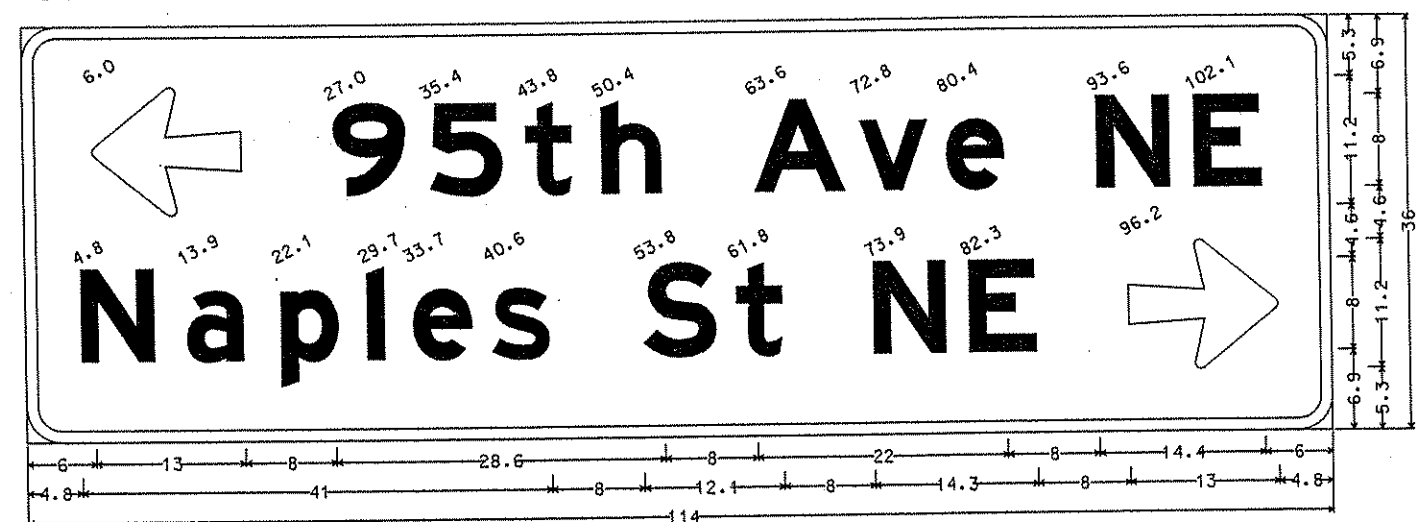


D-4



3.0" Radius, 1.0" Border, White on Green;
Arrow 5 - 13.0" 180°; [Naples St NE] E Mod; [95th Ave NE] E Mod; Arrow 5 - 13.0" 0°;

D-6



3.0" Radius, 1.0" Border, White on Green;
Arrow 5 - 13.0" 180°; [95th Ave NE] E Mod; [Naples St NE] E Mod; Arrow 5 - 13.0" 0°;

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.
Grant O. Paulson
DATE 11-20-01 LIC. NO. 26880

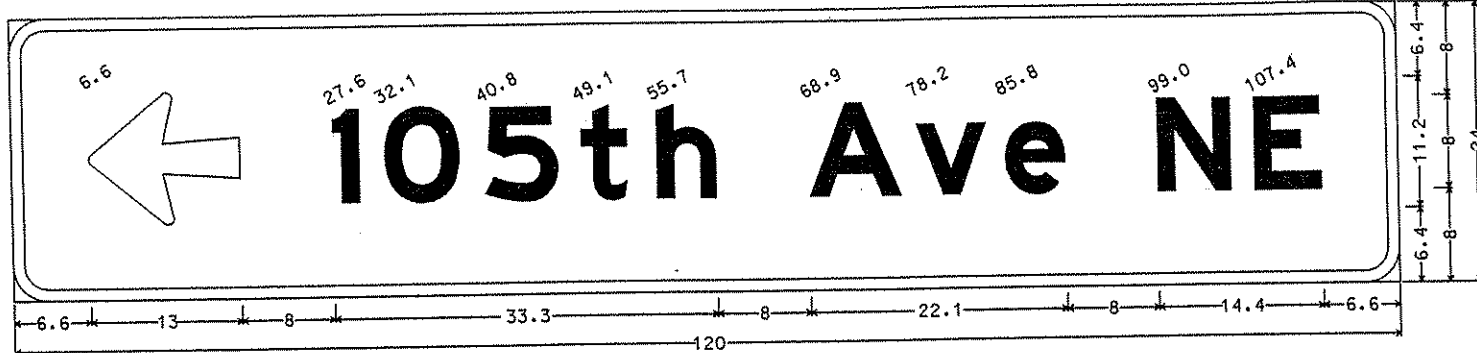
DRAWN BY SFH DATE 11-8-00
DESIGN BY BDP DATE 11-8-00
CHECKED BY TAC DATE 11-8-00
S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
TRAFFIC SIGNAL SYSTEM "A - E"
C.S.A.H. 52 RECONSTRUCTION
TRAFFIC SIGNAL SIGNING DETAILS

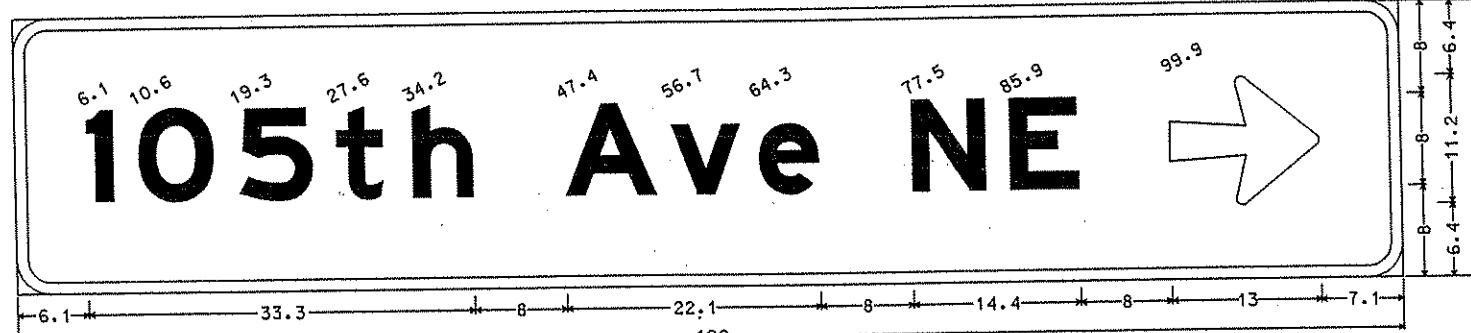
SHEET
258
OF
559

D-12



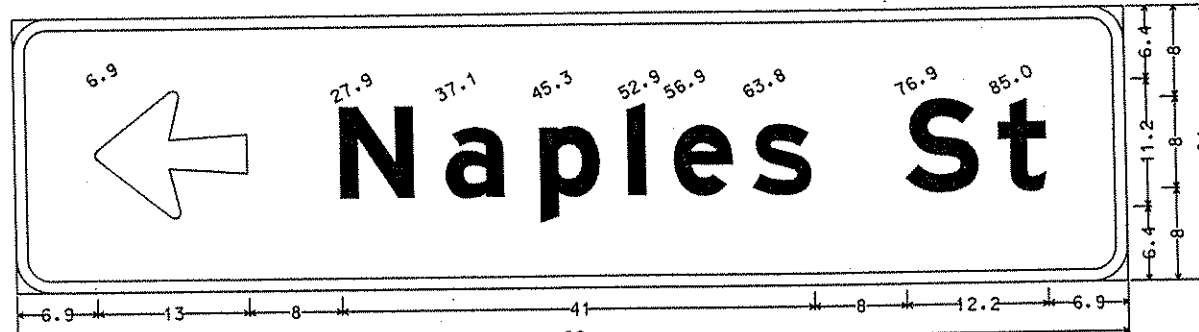
3.0" Radius, 1.0" Border, White on Green;
 Arrow 5 - 13.0" 180°; [105th Ave NE] E Mod;

D-14



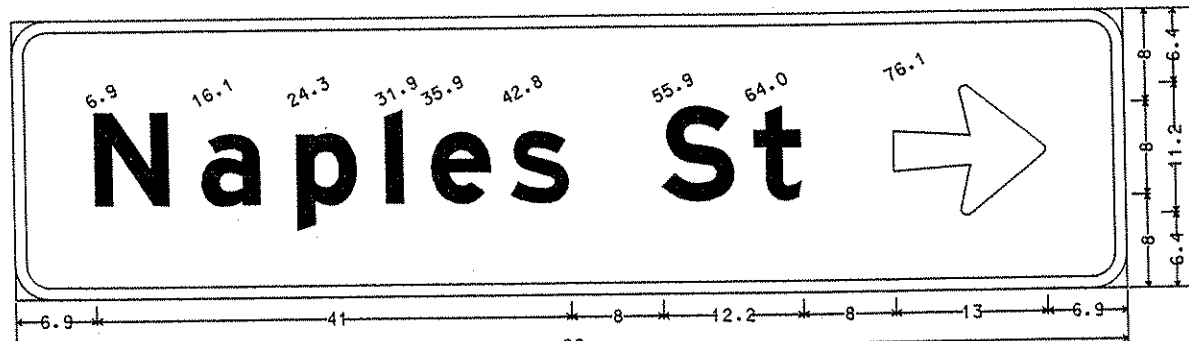
3.0" Radius, 1.0" Border, White on Green;
 [105th Ave NE] E Mod; Arrow 5 - 13.0" 0°;

D-15



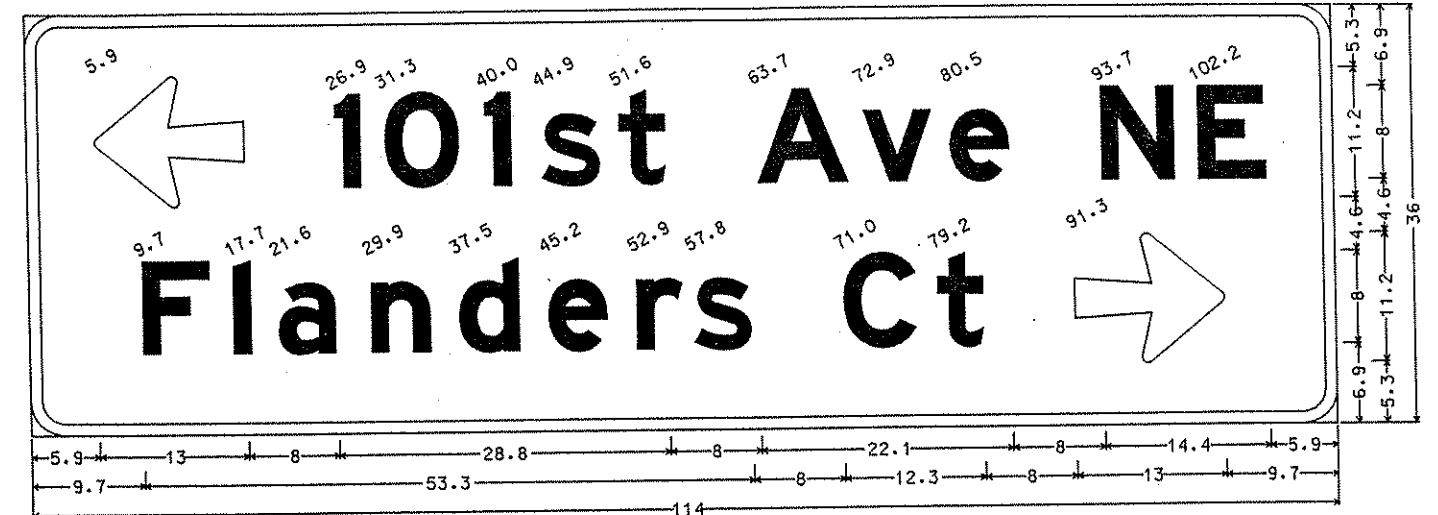
3.0" Radius, 1.0" Border, White on Green;
 Arrow 5 - 13.0" 180°; [Naples St] E Mod;

D-16



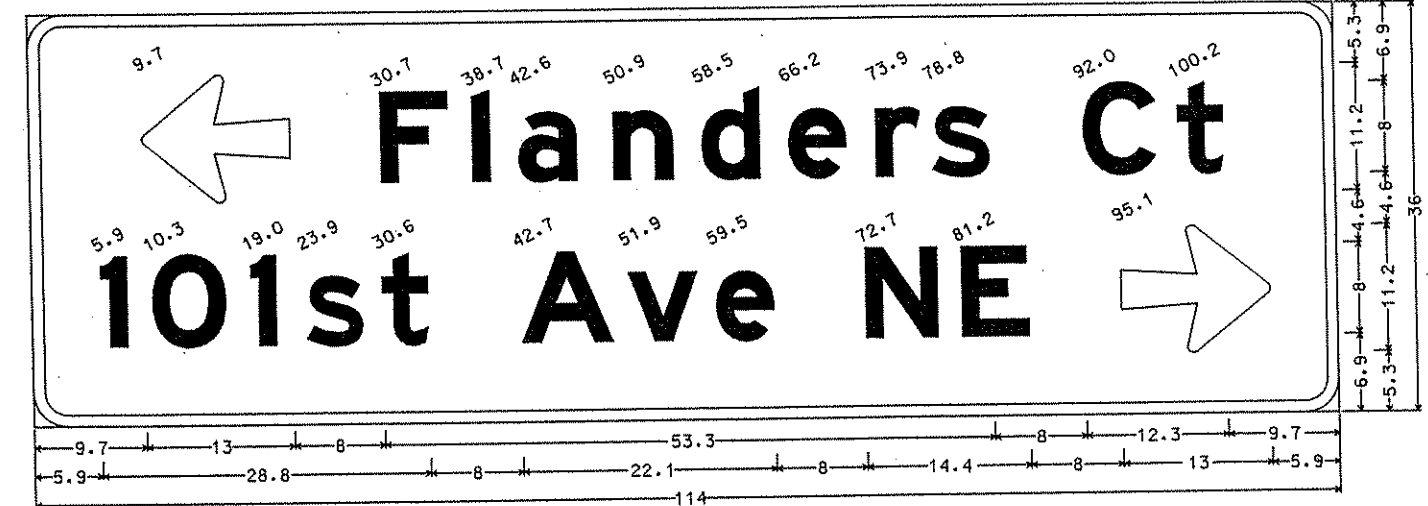
3.0" Radius, 1.0" Border, White on Green;
 [Naples St] E Mod; Arrow 5 - 13.0" 0°;

D-8



3.0" Radius, 1.0" Border, White on Green;
 Arrow 5 - 13.0" 180°; [101st Ave NE] E Mod; [Flanders Ct] E Mod; Arrow 5 - 13.0" 0°;

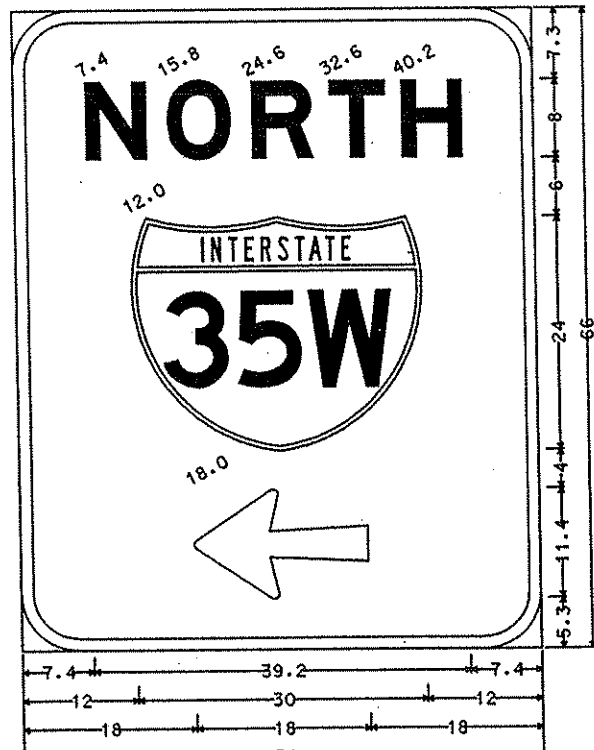
D-10



3.0" Radius, 1.0" Border, White on Green;
 Arrow 5 - 13.0" 180°; [Flanders Ct] E Mod; [101st Ave NE] E Mod; Arrow 5 - 13.0" 0°;

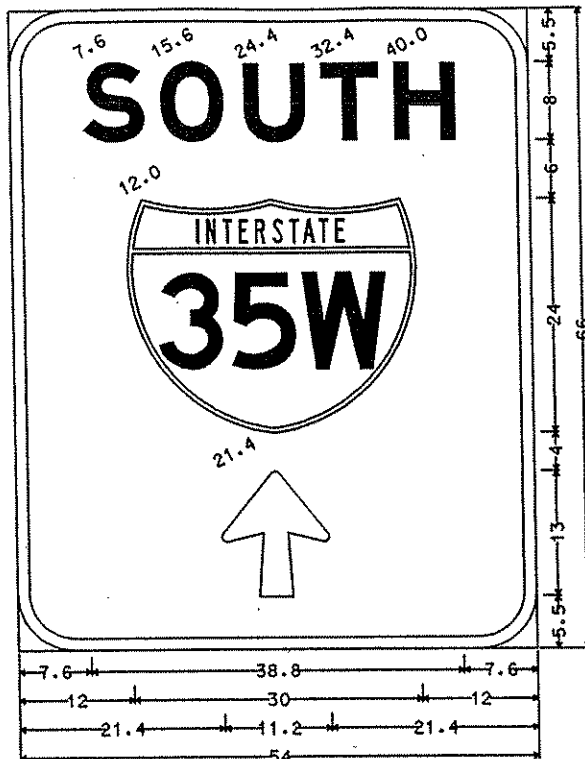
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Brent D. Paulson</i> DATE <u>11-20-09</u> LIC. NO. <u>26820</u>					DRAWN BY <u>SFH</u> DATE <u>11-8-00</u> DESIGN BY <u>BOP</u> DATE <u>11-8-00</u> CHECKED BY <u>TAC</u> DATE <u>11-8-00</u>	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA <small>TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED</small> <small>ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY TRAFFIC SIGNAL SYSTEM "A - E" C.S.A.H. 52 RECONSTRUCTION TRAFFIC SIGNAL SIGNING DETAILS	SHEET 259 OF 559	
NO	DATE	BY	CKD	APPR	REVISION					

D-17



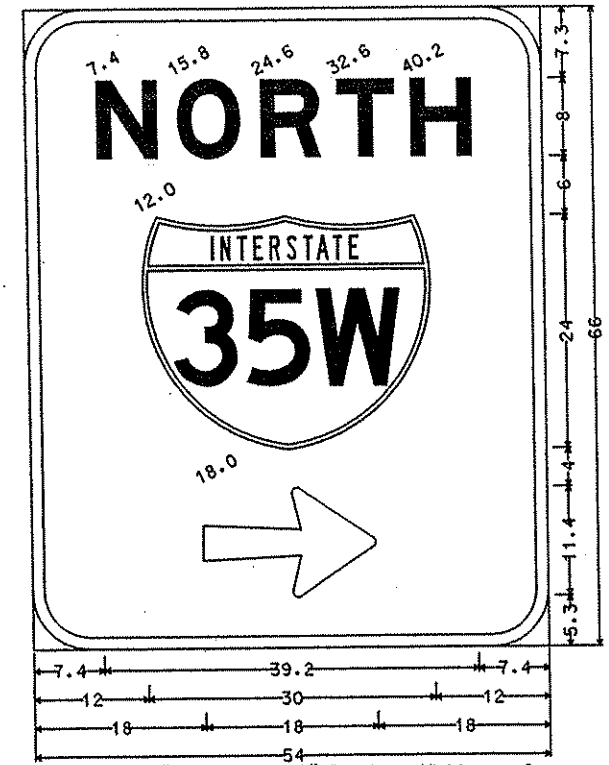
MAST.1: 6.0" Radius, 1.3" Border, White on Green; [NORTH] E Mod; Arrow 14 - 18.0" 180°;

D-18



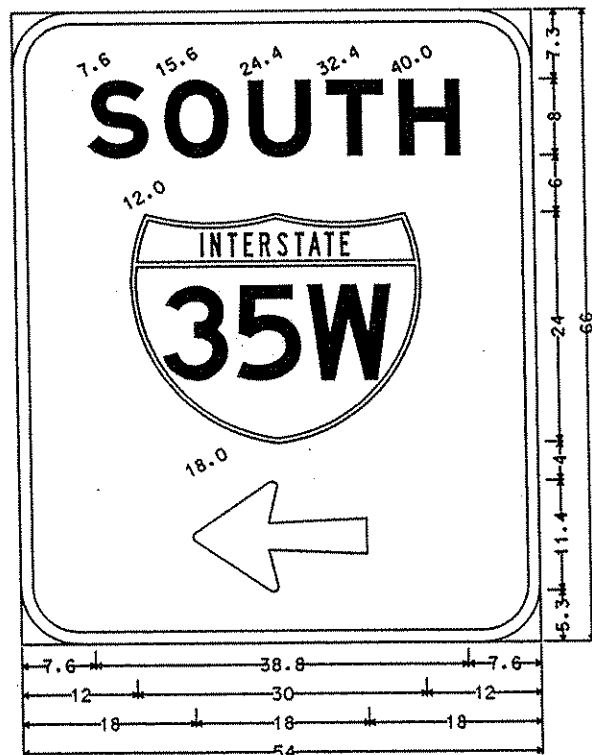
MAST.1: 6.0" Radius, 1.3" Border, White on Green; [SOUTH] E Mod; Arrow 5 - 13.0" 90°;

D-19



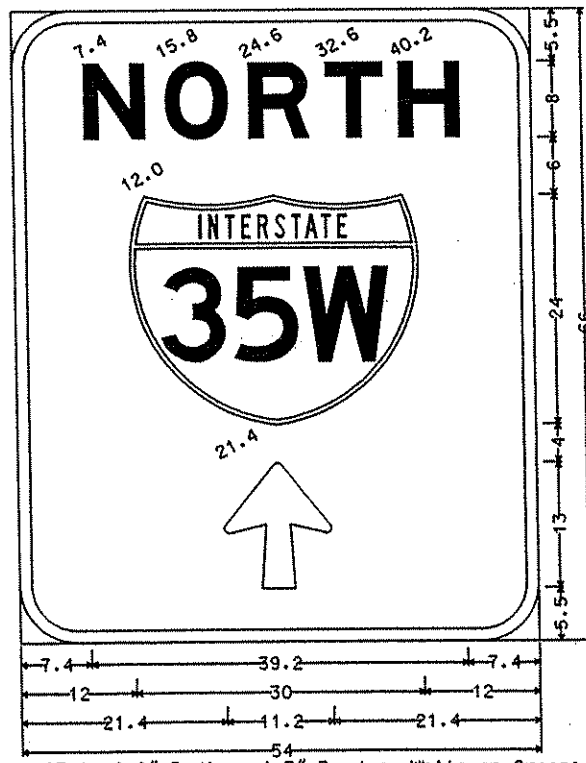
MAST.1: 6.0" Radius, 1.3" Border, White on Green; [NORTH] E Mod; Arrow 14 - 18.0" 0°;

D-20



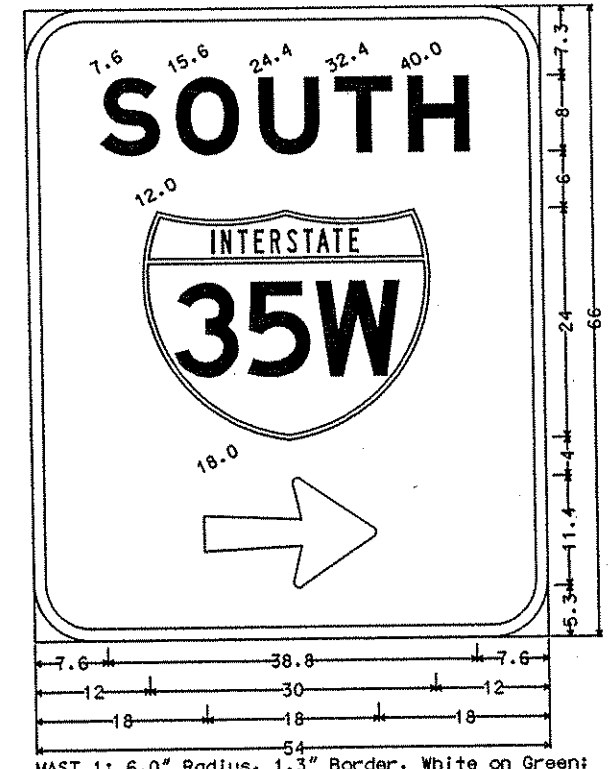
MAST.1: 6.0" Radius, 1.3" Border, White on Green; [SOUTH] E Mod; Arrow 14 - 18.0" 180°;

D-21



MAST.1: 6.0" Radius, 1.3" Border, White on Green; [NORTH] E Mod; Arrow 5 - 13.0" 90°;

D-22



MAST.1: 6.0" Radius, 1.3" Border, White on Green; [SOUTH] E Mod; Arrow 14 - 18.0" 0°;

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\signals\det\sign2.dgn 20 NOV 2001

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.

Scott J. Paulsen
DATE 11-27-01 L.I.C. NO. 20880

DRAWN BY SFH DATE 9-17-01
 DESIGN BY BDP DATE 9-17-01
 CHECKED BY TAC DATE 9-17-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TQLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TRAFFIC SIGNAL SYSTEM "A - E"
 C.S.A.H. 52 RECONSTRUCTION
 TRAFFIC SIGNAL SIGNING DETAILS

SHEET 260 OF 559

LOOP DETECTORS			
NUMBER	SIZE (FEET)	FUNCTION	LOCATION
D1-1	2-6 x 6	1	10' & 40'
D2-1	6 x 6	1	400'
D4-1	6 x 6	3,8	180'
D4-2	2-6 x 6	1	0' & 9'
D5-1	2-6 x 6	1	10' & 40'
D6-1	6 x 6	1	400'
D8-1	6 x 6	3,8	250'
D8-2	6 x 6, 6 x 10	1	0' & 9'

LOOP DETECTORS FUNCTIONS

- 1) CALL AND EXTEND
- 3) EXTEND ONLY
- 8) CARRY OVER (STRETCH)

NOTE:
LOCATION = DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR

② PA90 POLE FOUNDATION
TYPE PA90-A-35-D40-9 (DAVIT @ 350")
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
2-ONE WAY SIGNALS-OVERHEAD (0' AND 11' FROM LEFT END OF MAST ARM)
3-TYPE "D" SIGN PANELS OVERHEAD (D-15, D-18, D-19)
2-TYPE 10A-POLE MOUNTED 90° AND 180°
2-R6-1 SIGN PANELS (36"x12")-POLE MOUNTED 0° AND 180°
2-R9-3a SIGN (NO PED) FACING POLES 1 AND 3
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø6,1)
EXTEND INTO H.H. 5:
3" R.S.C.
2-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20

③ PA100 POLE FOUNDATION
TYPE PA100-A-45
1-ONE WAY SIGNAL-OVERHEAD (0' FROM LEFT END OF MAST ARM)
2-TYPE 10A-POLE MOUNTED 90° AND 180°
3-TYPE "D" SIGN PANELS OVERHEAD (D-2, D-20, D-21)
R6-1 SIGN PANELS (36"x12")-POLE MOUNTED 270°
2-R9-3a SIGN (NO PED) FACING POLES 2 AND 4
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø8)
EXTEND INTO H.H. 8:
3" R.S.C.
1-12/C #12
1-3/C #12
1-3/C #20

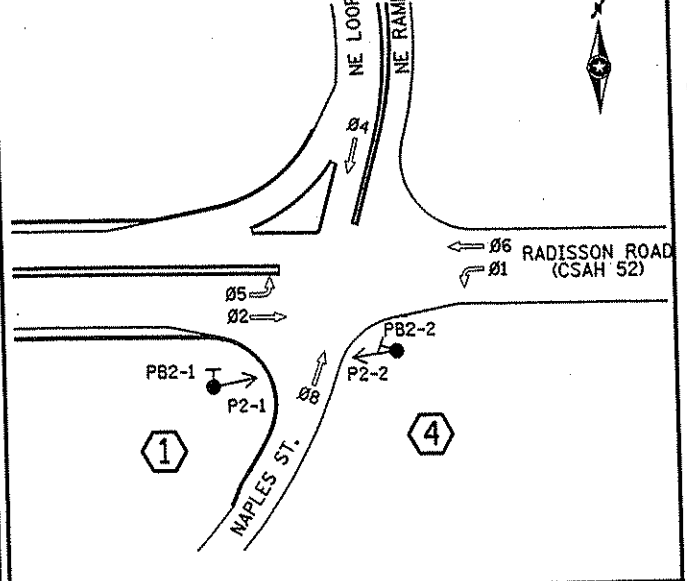
① PA100 POLE FOUNDATION
TYPE PA100-A-45
1-ONE WAY SIGNAL-OVERHEAD (0' FROM LEFT END OF MAST ARM)
1-TYPE 10B-POLE MOUNTED 90°
1-TYPE 10A-POLE MOUNTED 180°
1-PEDESTRIAN PUSH BUTTON
TYPE "D" SIGN PANEL OVERHEAD (D-1)
R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 270°
R9-3a SIGN (NO PED) FACING POLE 2
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø4)
EXTEND INTO H.H. 16:
3" R.S.C.
1-12/C #12
3-3/C #12
1-3/C #20

④ PA90 POLE FOUNDATION
TYPE PA90-A-35-D40-9 (DAVIT @ 350")
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
2-ONE WAY SIGNALS-OVERHEAD (0' AND 11' FROM LEFT END OF MAST ARM)
1-TYPE 10A-POLE MOUNTED 90°
1-TYPE 10B-POLE MOUNTED 180°
1-PEDESTRIAN PUSH BUTTON
TYPE "D" SIGN PANELS OVERHEAD (D-16, D-17)
2-TYPE "D" SIGN PANELS OVERHEAD (D-16, D-17)
2-R6-1 SIGN PANELS (36"x12")-POLE MOUNTED 0° AND 180°
R9-3a SIGN (NO PED) FACING POLE 3
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø2,5)
ONE WAY EVP DETECTOR-POLE MOUNTED (Ø8)
EXTEND INTO H.H. 13:
3" R.S.C.
2-12/C #12
2-3/C #12
1-3/C #12 (LUM)
2-3/C #20

① INSTALL MASTER CONTROLLER, CONTROLLER AND CABINET (FURNISHED BY COUNTY) CABINET AND FOUNDATION EXTEND INTO H.H.17; METERED SIGNAL SERVICE 1/4" R.S.C. 3-1/C #6 EXTEND INTO H.H.1 4" R.S.C. 3-12/C #12 2-3/C #12 2-3/C #20 4-2/C #14 1-6 Pr.#19 (INTERCONNECT) EXTEND INTO H.H.16 4" R.S.C. 3-12/C #12 5-3/C #12 3-3/C #20 4-2/C #14 STUB OUT 2-3" R.S.C. (THREAD AND CAP BOTH ENDS-FOR FUTURE USE)

② SERVICE CABINET CABINET FOUNDATION EXTEND INTO H.H.1 1/4" R.S.C. 2-3/C #12 (LUM) METERED SIGNAL SERVICE 1/4" R.S.C. 3-1/C #6 STUB OUT 2" R.S.C. (FOR SERVICE BY CONNEXUS)

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTON



SIGNAL SYSTEM OPERATION
- THE SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

SIGNAL INDICATIONS
ALL INDICATIONS SHALL BE 12" LED

FACE	R	Y	G	RLTA	YLTA	GLTA
1-1, 1-2				←	←	←
2-1, 2-2	●	●	●			
4-1, 4-2, 4-3	●	●	●			
5-1, 5-2				←	←	←
6-1, 6-2	●	●	●			
8-1, 8-2, 8-3	●	●	●			

SIGNAL SYSTEM I.D.: 22496

NO	DATE	BY	CHKD	APPR	REVISION

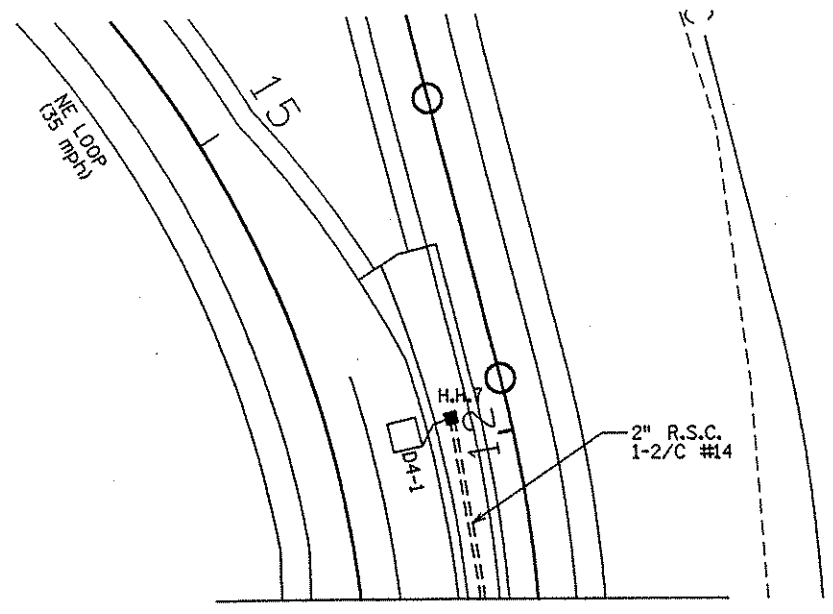
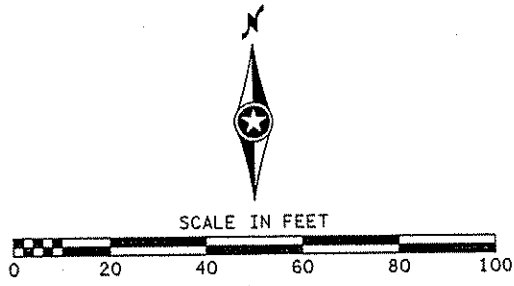
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Scott O. Paulsen
DATE 11-20-01 LIC. NO. 26990

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____
S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

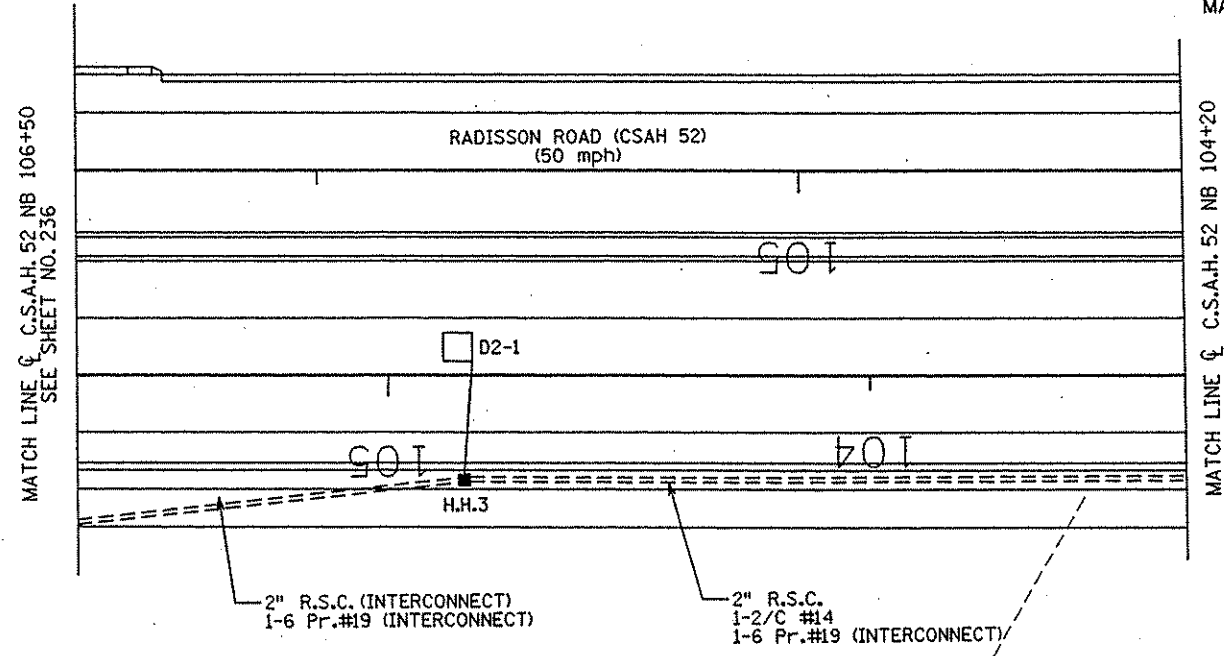
TKDA
TOLTZ, KING, QUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
INTERSECTION LAYOUT - SYSTEM "A"
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 AT T.H. 35W NE RAMP/NE LOOP/NAPLES STREET

SHEET 261 OF 559

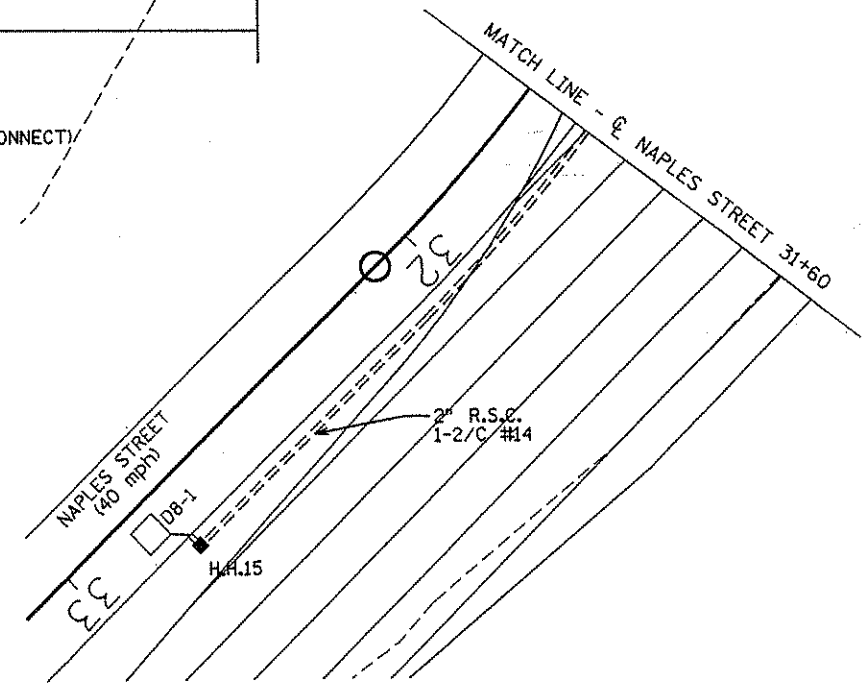
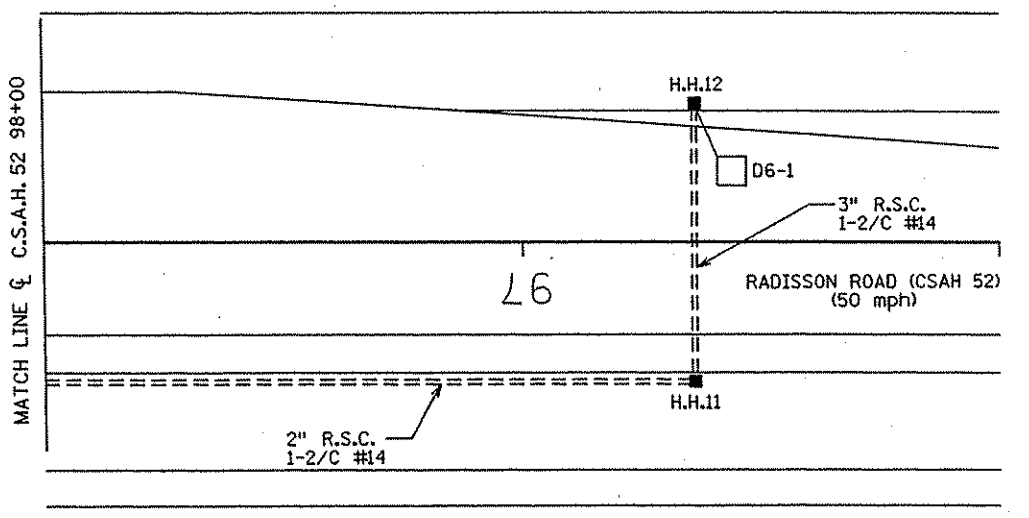


MATCH LINE - ϕ NE RAMP 11+65



MATCH LINE ϕ C.S.A.H. 52 NB 106+50 SEE SHEET NO. 236

MATCH LINE ϕ C.S.A.H. 52 NB 104+20



NOTE: (INTERCONNECT) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY FROM ITEM 2565.511.

SIGNAL SYSTEM I.D.: 22496

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.

Joseph Weavers

DATE: 1-11-02 LIC. NO. 22405

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)

S.A.P. 90-080-11

S.A.P. 02-652-02

S.A.P. 02-652-03

S.A.P. 02-652-04

S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED

ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

MATCH LINES - SYSTEM "A"

C.S.A.H. 52 RECONSTRUCTION

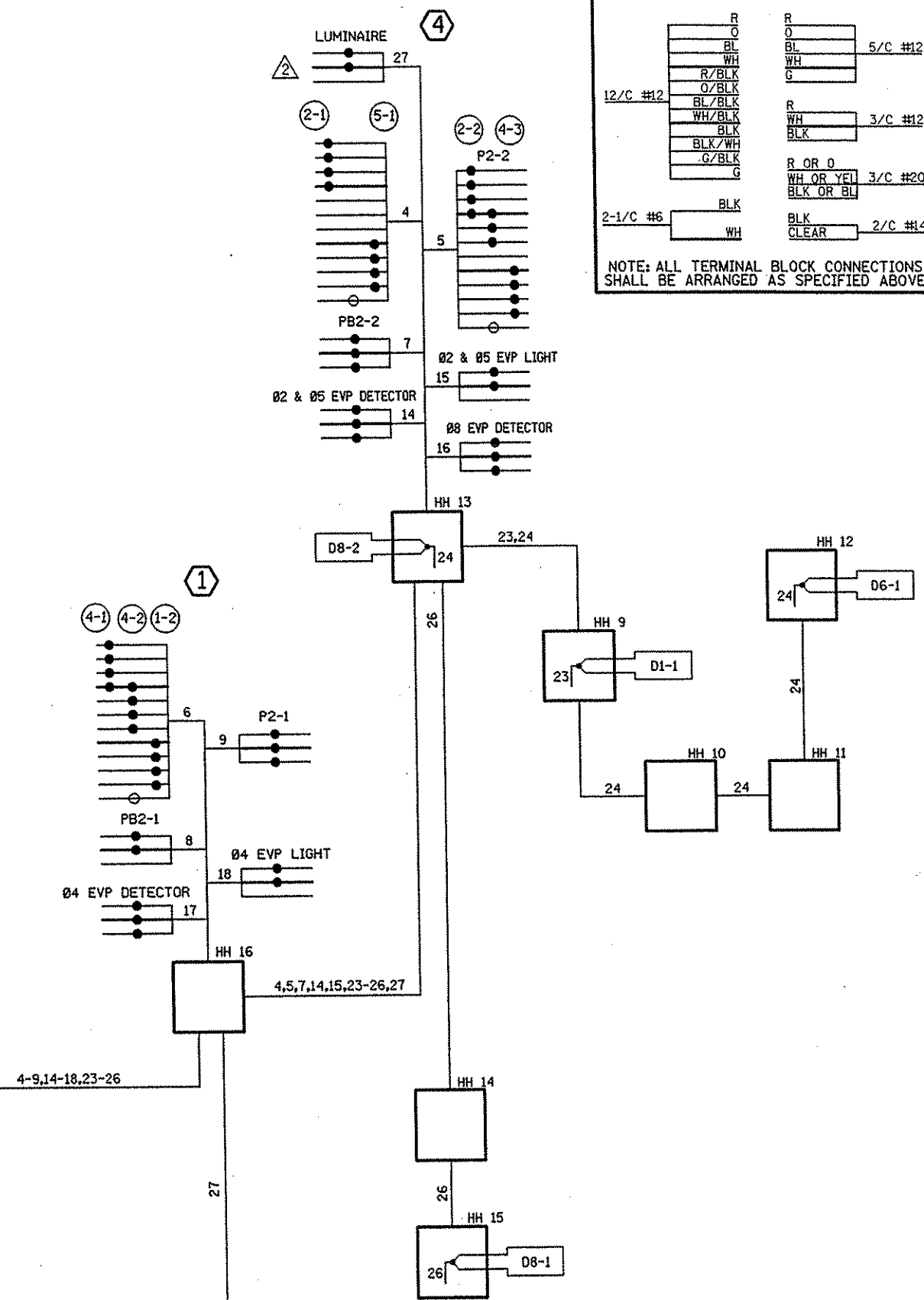
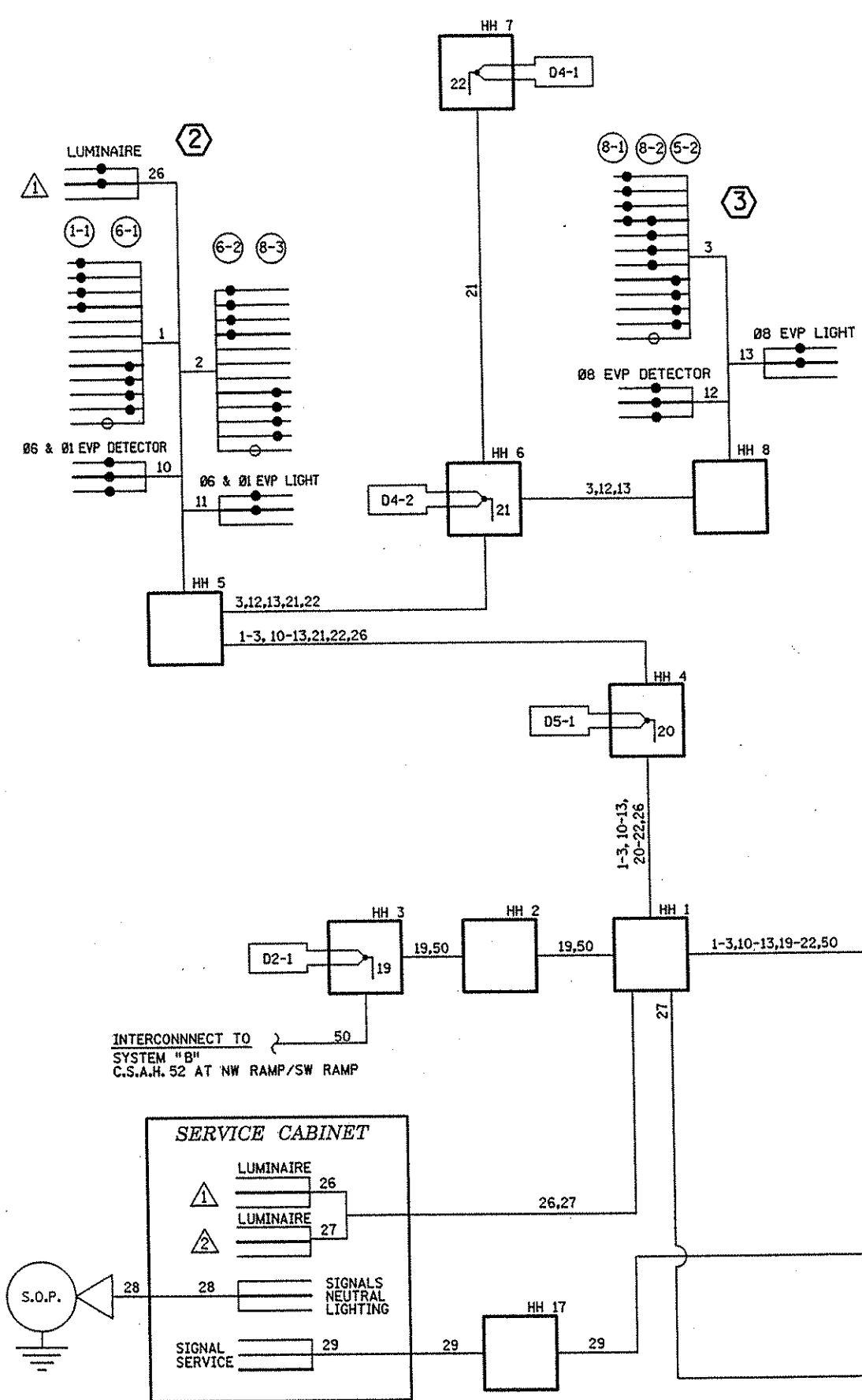
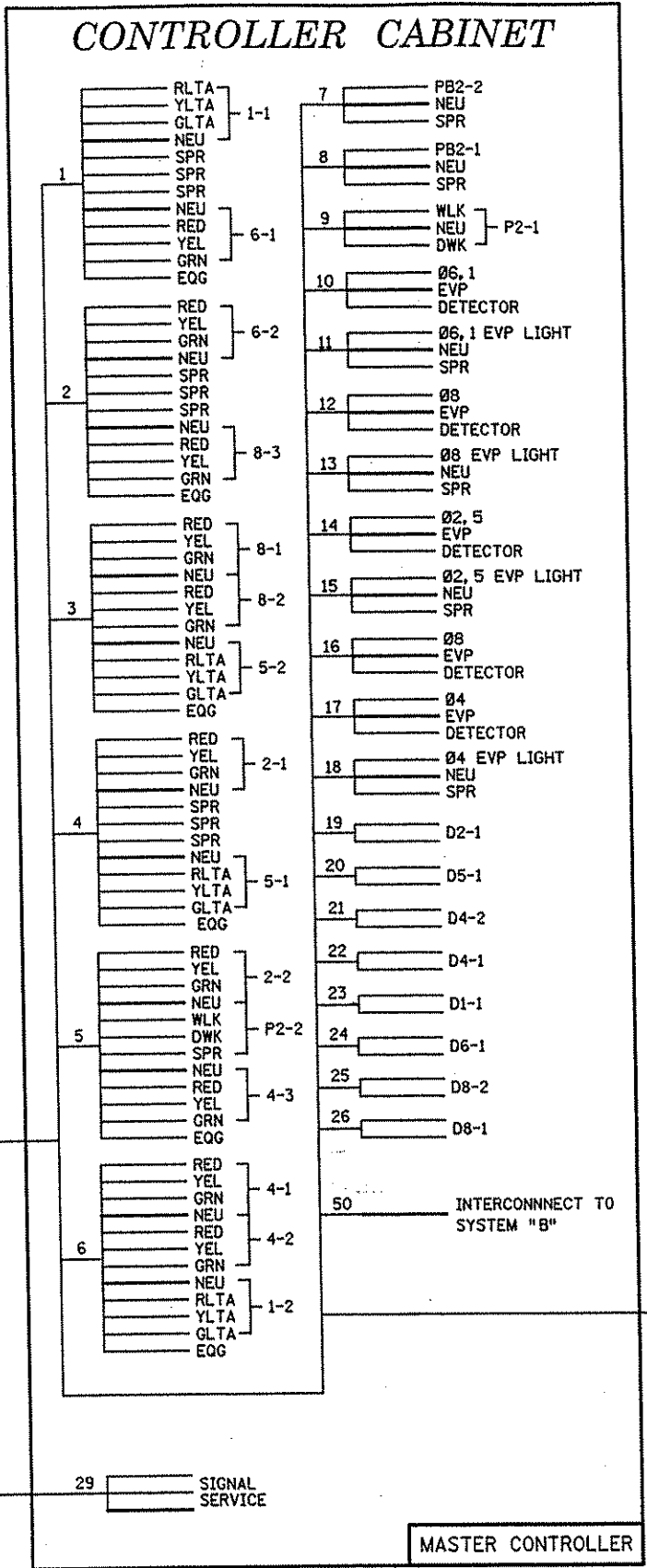
C.S.A.H. 52 AT T.H. 35W NE RAMP/NE LOOP/NAPLES STREET

SHEET 262 OF 559

CONDUCTOR COLOR CODING

R	R
O	O
BL	BL
WH	WH
R/BLK	5/C #12
O/BLK	
BL/BLK	
WH/BLK	
BLK	R
BLK/WH	WH
G/BLK	3/C #12
G	BLK
	R OR O
	WH OR YEL
	3/C #20
	BLK OR BL
	2-1/C #6
	BLK
	2/C #14
	WH
	CLEAR

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\11749\proj74\roadway3\drawings\signals\neramp\wir\2001

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.

Grant O. Paulsen
DATE 11-20-01 LIC. NO. 26580

DRAWN BY SFH DATE 11-8-00
 DESIGN BY BDP DATE 11-8-00
 CHECKED BY TAC DATE 11-8-00

S.P. 0280-50 (TH 35W)
 S.A.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 WIRING DIAGRAM - SYSTEM "A"
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 AT T.H. 35W NE RAMP/NE LOOP/NAPLES STREET

SHEET
 263
 OF
 559

SIGNAL SYSTEM I.D. 22496

LOOP DETECTORS			
NUMBER	SIZE (FEET)	FUNCTION	LOCATION
D1-1	2-6 x 6	1	10' & 40'
D2-1	6 x 6	1	350'
D2-2	6 x 6	1	350'
D4-1	6 x 6	3,8	180'
D4-2	6 x 6	3,8	180'
D4-3	2-6 x 6	1	10' & 40'
D4-4	6 x 6, 6 x 10	1	AS SHOWN
D6-1	6 x 6	1	415'
D6-2	6 x 6	1	415'

LOOP DETECTORS FUNCTIONS

- 1) CALL AND EXTEND
- 3) EXTEND ONLY
- 8) CARRY OVER (STRETCH)

NOTE:
LOCATION = DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR

③ PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT AT 350")
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
3-ONE WAY SIGNALS-OVERHEAD (0, 11' AND
23' FROM LEFT END OF MAST ARM)
1-TYPE 10A-POLE MOUNTED 180"
R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 0" AND 180"
TYPE "D" SIGN PANEL OVERHEAD (D-20)
1-R9-3a SIGN (NO PED) FACING POLE 2
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø6,1)
EXTEND INTO H.H.6:
3" R.S.C.
2-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20

4" R.S.C.
2-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20
1-2/C #14

4" R.S.C.
2-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20
4-2/C #14

4" R.S.C.
2-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20
4-2/C #14

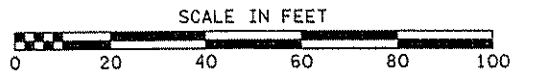
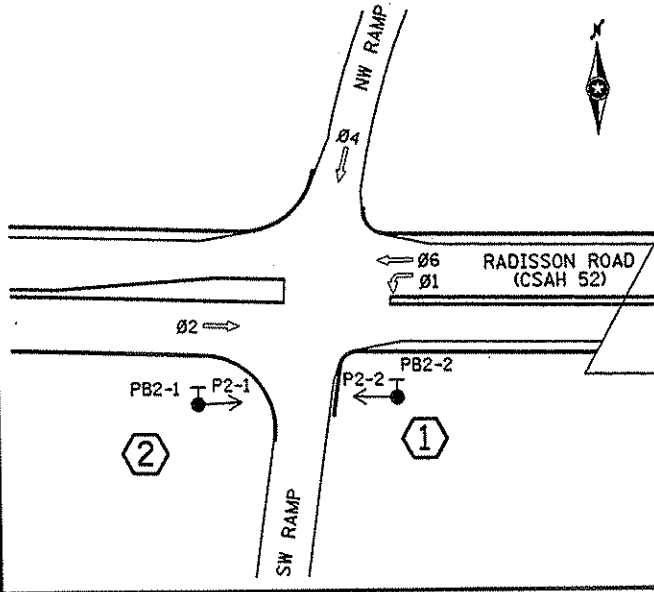
① INSTALL CONTROLLER AND CABINET
(FURNISHED BY COUNTY)
CABINET AND FOUNDATION
EXTEND INTO H.H.15
METERED SIGNAL SERVICE
1 1/4" R.S.C.
3-1/C #6
EXTEND INTO H.H.1
4" R.S.C.
3-12/C #12
5-3/C #12
2-3/C #20
2-2/C #14
1-6 Pr.#19 (INTERCONNECT)
EXTEND INTO H.H.14
4" R.S.C.
2-12/C #12
1-3/C #12
1-3/C #20
7-2/C #14
1-6 Pr.#19 (INTERCONNECT)
STUB OUT 2-3" R.S.C.
(THREAD AND CAP
BOTH ENDS-FOR FUTURE USE)

② SERVICE CABINET
CABINET FOUNDATION
EXTEND INTO H.H.14
UNMETERED STREET LIGHT SERVICE
1 1/4" R.S.C.
2-3/C #12 (LUM)
EXTEND INTO H.H.15
METERED SIGNAL SERVICE
1 1/4" R.S.C.
3-1/C #6
STUB OUT 2" R.S.C. (FOR
SERVICE BY CONNEXUS)

① PA100 POLE FOUNDATION
TYPE PA100-A-45-D40-9 (DAVIT AT 350")
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
2-ONE WAY SIGNALS-OVERHEAD (0, AND 11'
FROM LEFT END OF MAST ARM)
1-TYPE 10A-POLE MOUNTED 90"
1-TYPE 10B-POLE MOUNTED 180"
1-PEDESTRIAN PUSH BUTTON
2-R6-1 SIGN PANELS (36"x12")-POLE MOUNTED 0" AND 270"
2-TYPE "D" SIGN PANELS OVERHEAD (D-21, D-22)
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø2)
EXTEND INTO H.H.11:
3" R.S.C.
2-12/C #12
2-3/C #12
1-3/C #12 (LUM)
1-3/C #20

② PA100 POLE FOUNDATION
TYPE PA100-A-50
1-ONE WAY SIGNAL-OVERHEAD (0' FROM
LEFT END OF MAST ARM)
1-TYPE 10B-POLE MOUNTED 90"
1-TYPE 10A-POLE MOUNTED 180"
1-PEDESTRIAN PUSH BUTTON
R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 180" AND 270"
TYPE "D" SIGN PANEL OVERHEAD (D-3)
1-R9-3a SIGN (NO PED) FACING POLE 3
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø4)
EXTEND INTO H.H.2:
3" R.S.C.
1-12/C #12
3-3/C #12
1-3/C #20

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



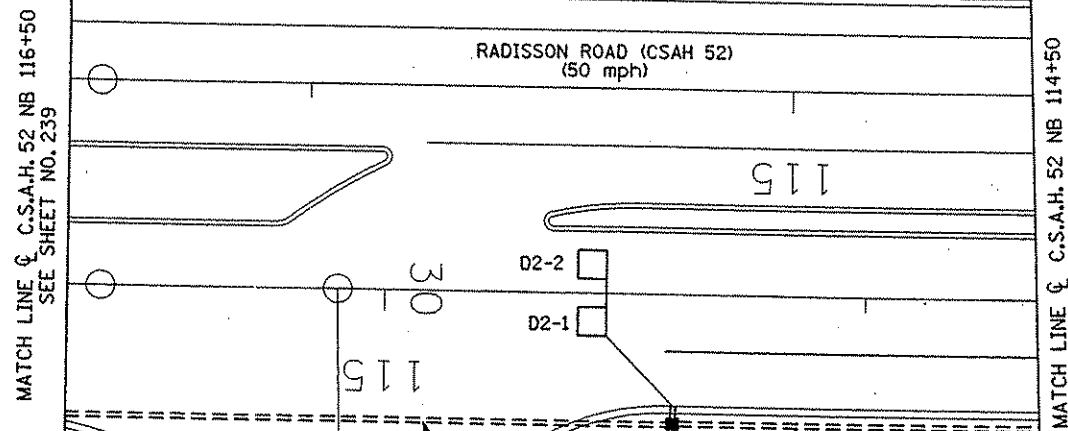
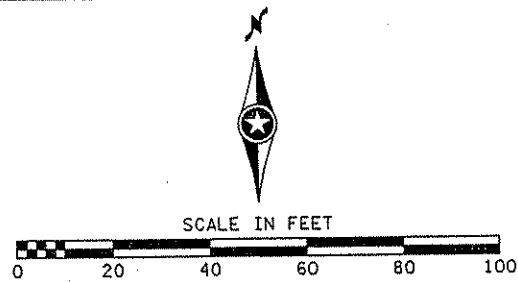
- NOTES:
- 1) LOCATION OF POLES, FOUNDATIONS, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 2) EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - 3) ALL VEHICLE INDICATIONS AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
 - 4) FOR SERVICE CABINET DETAILS SEE SHEET NO. 228.
 - 5) FOR NMC LOOP DETAILS SEE SHEET NO. 227.
 - 6) FOR SIGN DETAILS SEE SHEET NOS. 229-231.
 - 7) (INTERCONNECT) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY FROM ITEM 2565.511.

SIGNAL INDICATIONS
ALL INDICATIONS SHALL BE 12" LED

FACE	R	Y	G	RLTA	YLTA	GLTA
1-1, 1-2				←	←	←
2-1, 2-2, 2-3	●	●	●			
4-1, 4-2, 4-3	●	●	●			
6-1, 6-2, 6-3	●	●	●			

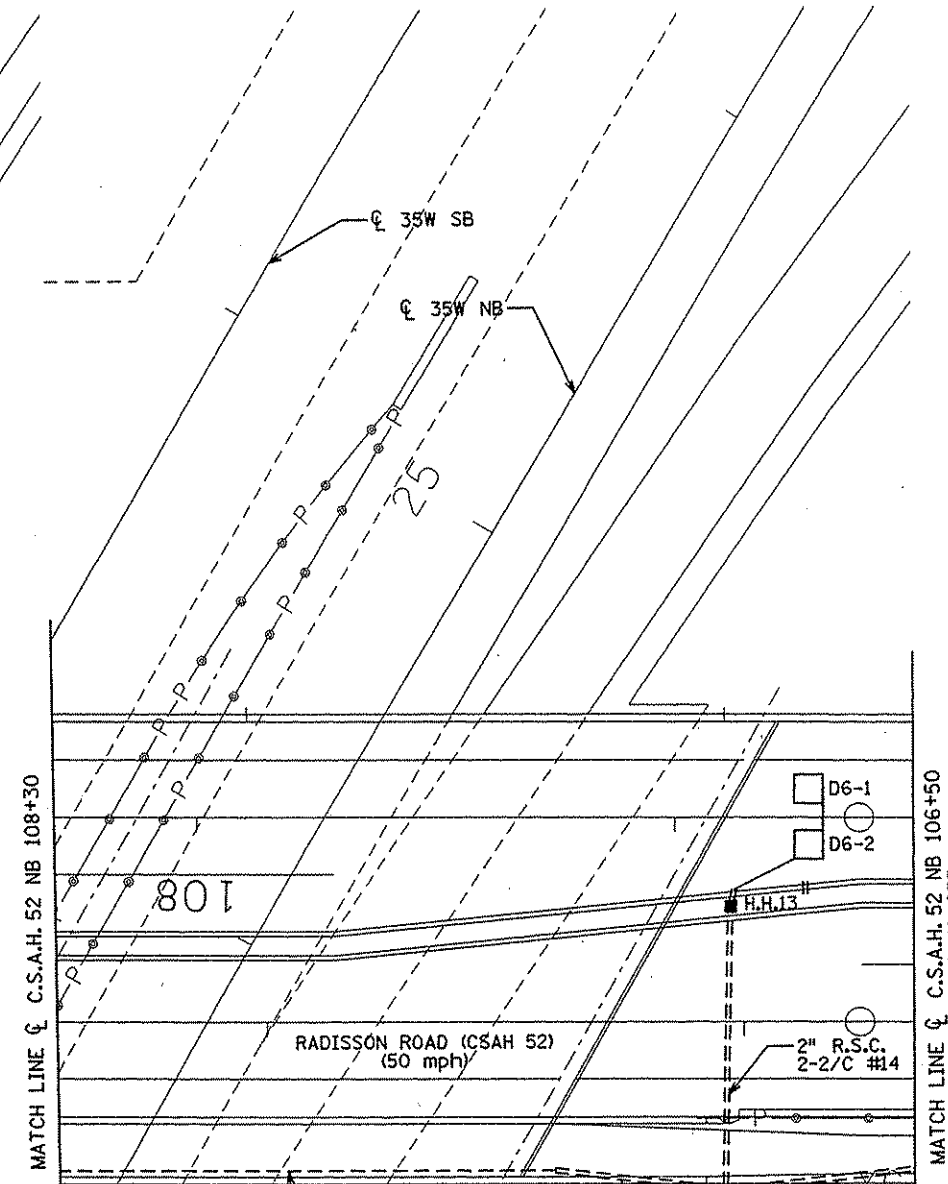
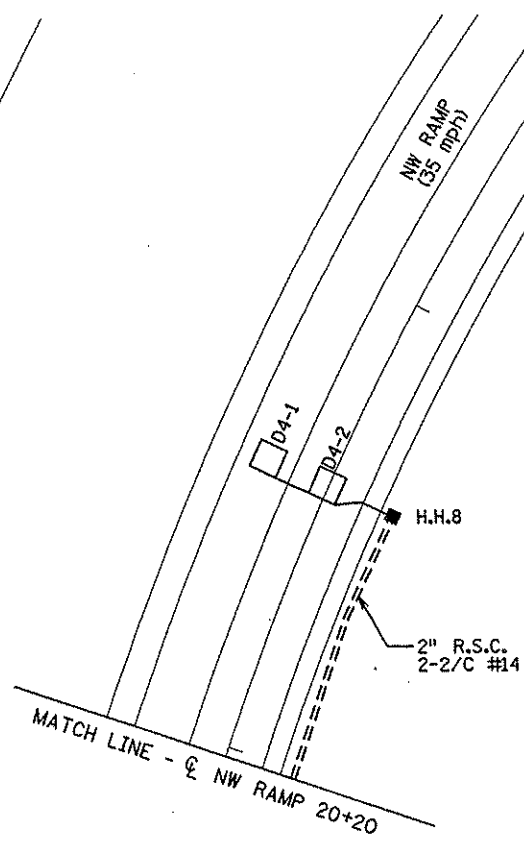
SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 4 PHASE, WITH PHASE 1 BEING A PROTECTED LEFT TURN PHASE.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.



2" R.S.C. (INTERCONNECT)
1-6 Pr.#19 (INTERCONNECT)

2" R.S.C.
2-2/C #14
1-6 Pr.#19 (INTERCONNECT)



2" R.S.C. (BY OTHERS)
2-2/C #14
1-6 Pr.#19 (INTERCONNECT)

2" R.S.C.
2-2/C #14
1-6 Pr.#19 (INTERCONNECT)

2" R.S.C. (INTERCONNECT)
1-6 Pr.#19 (INTERCONNECT)

NOTE:
(INTERCONNECT) DENOTES ITEMS TO BE MEASURED
AND PAID FOR SEPARATELY FROM ITEM 2565.511.

SIGNAL SYSTEM I.D.: 22497

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.

Grant D. Paulsen
DATE 1/15/02 LIC. NO. 26820

DRAWN BY	DATE	S.P.	0280-50 (TH 35W)
DESIGN BY	DATE	S.P.	90-080-11
CHECKED BY	DATE	S.A.P.	02-652-02
		S.A.P.	02-652-03
		S.A.P.	02-652-04
		S.A.P.	106-020-021, 106-020-022

TKDA TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
MATCH LINES - SYSTEM "B"
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 AT T.H. 35W NW RAMP/SW RAMP

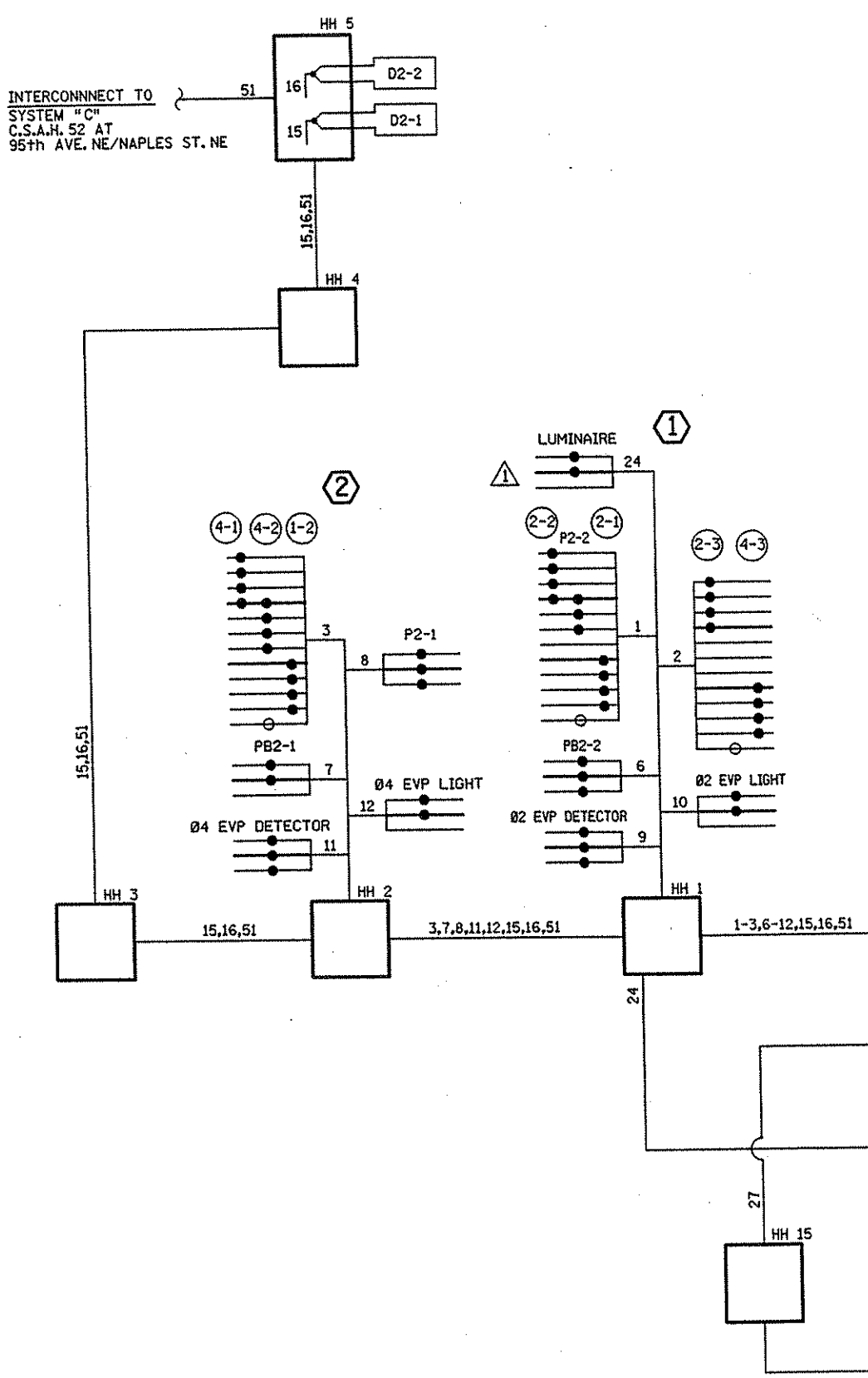
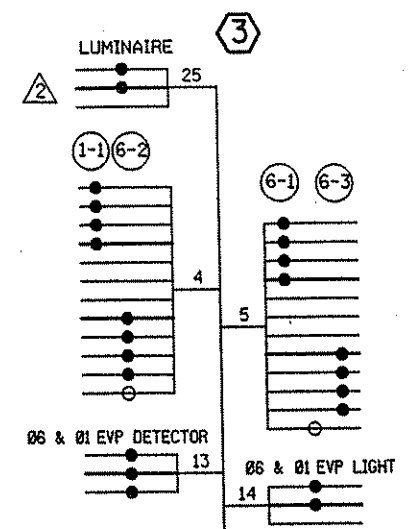
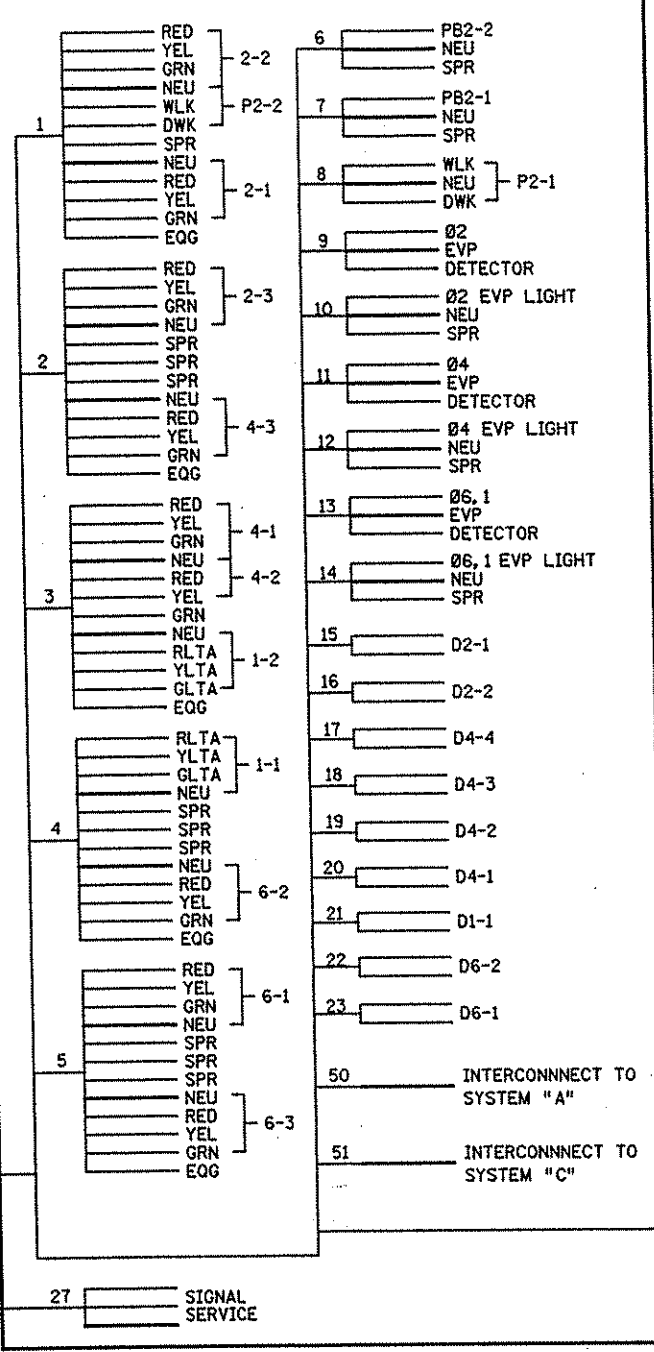
SHEET
265
OF
559

CONDUCTOR COLOR CODING

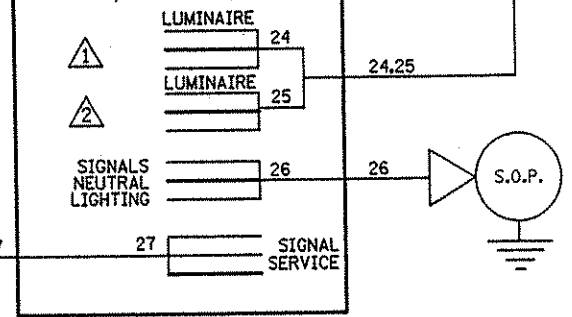
R	R
O	O
BL	BL
WH	WH
R/BLK	5/C #12
O/BLK	
BL/BLK	
WH/BLK	R
BLK	WH
G/BLK	3/C #12
G	BLK
	R OR O
	WH OR YEL
	3/C #20
	BLK OR BL
	BLK
	2/C #14
	WH
	CLEAR

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

CONTROLLER CABINET



SERVICE CABINET



INTERCONNECT TO SYSTEM "A" C.S.A.H. 52 AT NE RAMP/ NE LOOP/NAPLES STREET

SIGNAL SYSTEM I.D. 22497

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.

Grant O. Paulson
DATE 11-20-01 LIC. NO. 26580

DRAWN BY SFH DATE 11-8-00
DESIGN BY BDP DATE 11-8-00
CHECKED BY TAC DATE 11-8-00

S.P. 0280-50 (TH 35W)
S.A.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
WIRING DIAGRAM - SYSTEM "B"
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 AT T.H. 35W NW RAMP/SW RAMP

SHEET 266 OF 559

LOOP DETECTORS			
NUMBER	SIZE (FEET)	FUNCTION	LOCATION
D1-1	2-6 x 6	1	10' & 40'
D2-1	6 x 6	1	475'
D2-2	6 x 6	1	475'
D3-1	2-6 x 6	1	10' & 40'
D4-1	6 x 6	3,8	120'
D4-2	6 x 6, 6 x 10	1	AS SHOWN
D5-1	2-6 x 6	1	10' & 40'
D6-1	6 x 6	1	400'
D6-2	6 x 6	1	400'
D7-1	2-6 x 6	1	10' & 40'
D7-2	2-6 x 6	1	10' & 40'
D8-1	6 x 6	3,8	400'
D8-2	6 x 6, 6 x 10	1	AS SHOWN

LOOP DETECTORS FUNCTIONS

- 1) CALL AND EXTEND
 - 3) EXTEND ONLY
 - 7) DELAY CALL - IMMEDIATE EXTEND
 - 8) CARRY OVER (STRETCH)
- NOTE:
LOCATION = DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR

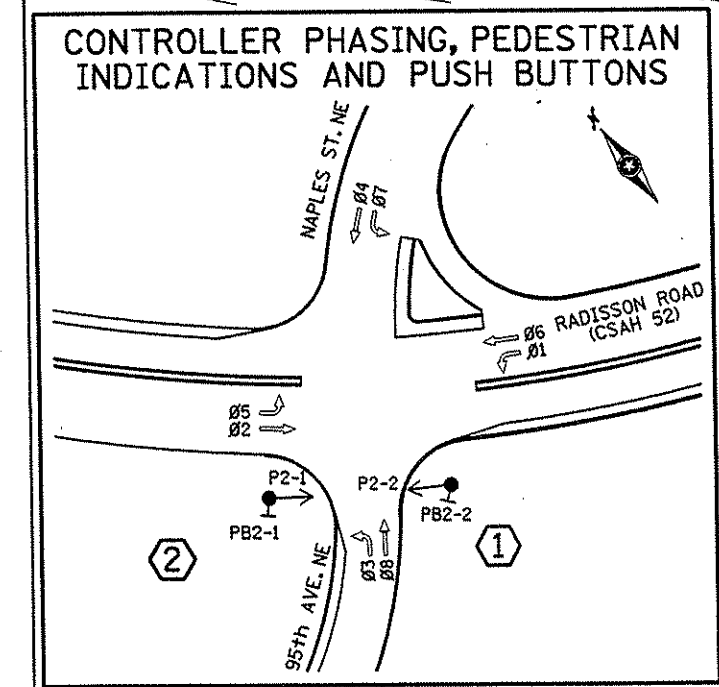
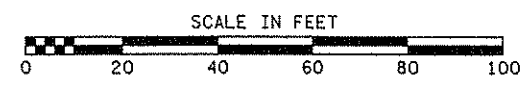
③ PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT AT 350°)
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
3-ONE WAY SIGNALS-OVERHEAD (0, 11' AND 23' FROM LEFT END OF MAST ARM)
2-TYPE 10A-POLE MOUNTED 90° AND 180°
TYPE "D" SIGN PANEL OVERHEAD (0-6)
2-R6-1 SIGN PANELS (36"x12")-POLE MOUNTED 0° AND 180°
2-R9-3a SIGNS (NO PED) FACING POLES 2 AND 4
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø6,1)
EXTEND INTO H.H.9:
3" R.S.C.
2-12/C #12
1-3/C #12
1-3/C #12 (LUM)
1-3/C #20

④ PA90 POLE FOUNDATION
TYPE PA90-A-35
2-ONE WAY SIGNALS-OVERHEAD (0, AND 11' FROM LEFT END OF MAST ARM)
2-TYPE 10A-POLE MOUNTED 90° AND 180°
TYPE "D" SIGN PANEL OVERHEAD (0-7)
R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 270°
2-R9-3a SIGN (NO PED) FACING POLE 1 AND 3
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø8,3)
EXTEND INTO H.H.11:
3" R.S.C.
2-12/C #12
1-3/C #12
1-3/C #20

② PA100 POLE FOUNDATION
TYPE PA100-A-50
2-ONE WAY SIGNALS-OVERHEAD (0, AND 12' FROM LEFT END OF MAST ARM)
1-TYPE 10B-POLE MOUNTED 90°
1-TYPE 10A-POLE MOUNTED 180°
1-PEDESTRIAN PUSH BUTTON
TYPE "D" SIGN PANEL OVERHEAD (0-5)
R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 270°
1-R9-3a SIGN (NO PED) FACING POLE 3
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø4,7)
EXTEND INTO H.H.4:
3" R.S.C.
2-12/C #12
2-3/C #12
1-3/C #20

① INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)
EXTEND INTO H.H.19
METERED SIGNAL SERVICE
1/4" R.S.C.
3-1/C #6
EXTEND INTO H.H.1
4" R.S.C.
4-12/C #12
4-3/C #12
2-3/C #20
6-2/C #14
1-6 Pr.#19 (INTERCONNECT)
EXTEND INTO H.H.18
4" R.S.C.
4-12/C #12
2-3/C #12
2-3/C #20
7-2/C #14
1-6 Pr.#19 (INTERCONNECT)
STUB OUT 2-3" R.S.C. (THREAD AND CAP BOTH ENDS-FOR FUTURE USE)

⑤ SERVICE CABINET
CABINET FOUNDATION
EXTEND INTO H.H.18
UNMETERED STREET LIGHT SERVICE
1/4" R.S.C.
2-3/C #12 (LUM)
EXTEND INTO H.H.19
METERED SIGNAL SERVICE
1/4" R.S.C.
3-1/C #6
STUB OUT 2" R.S.C. (FOR SERVICE BY CONNEXUS)



SIGNAL SYSTEM OPERATION	
- THE SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.	
- NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1, 3, 5 AND 7 BEING PROTECTED LEFT TURN PHASES.	
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.	

- NOTES:**
- 1) LOCATION OF POLES, FOUNDATIONS, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 2) EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - 3) ALL VEHICLE INDICATIONS AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
 - 4) FOR SERVICE CABINET DETAILS SEE SHEET NO. 228
 - 5) FOR NMC LOOP DETAILS SEE SHEET NO. 227.
 - 6) FOR SIGN DETAILS SEE SHEET NOS. 229-231.
 - 7) (INTERCONNECT) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY FROM ITEM 2565.511.

SIGNAL INDICATIONS						
ALL INDICATIONS SHALL BE 12" LED						
FACE	R	Y	G	RLTA	YLTA	GLTA
1-1, 1-2				←	←	←
2-1, 2-2, 2-3	●	●	●			
3-1, 3-2				←	←	←
4-1, 4-2	●	●	●			
5-1, 5-2				←	←	←
6-1, 6-2, 6-3	●	●	●			
7-1, 7-2				←	←	←
8-1, 8-2	●	●	●			

NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\site\proj\11749\part4\roadway\signals\95th\int03.dwg NOV 2001

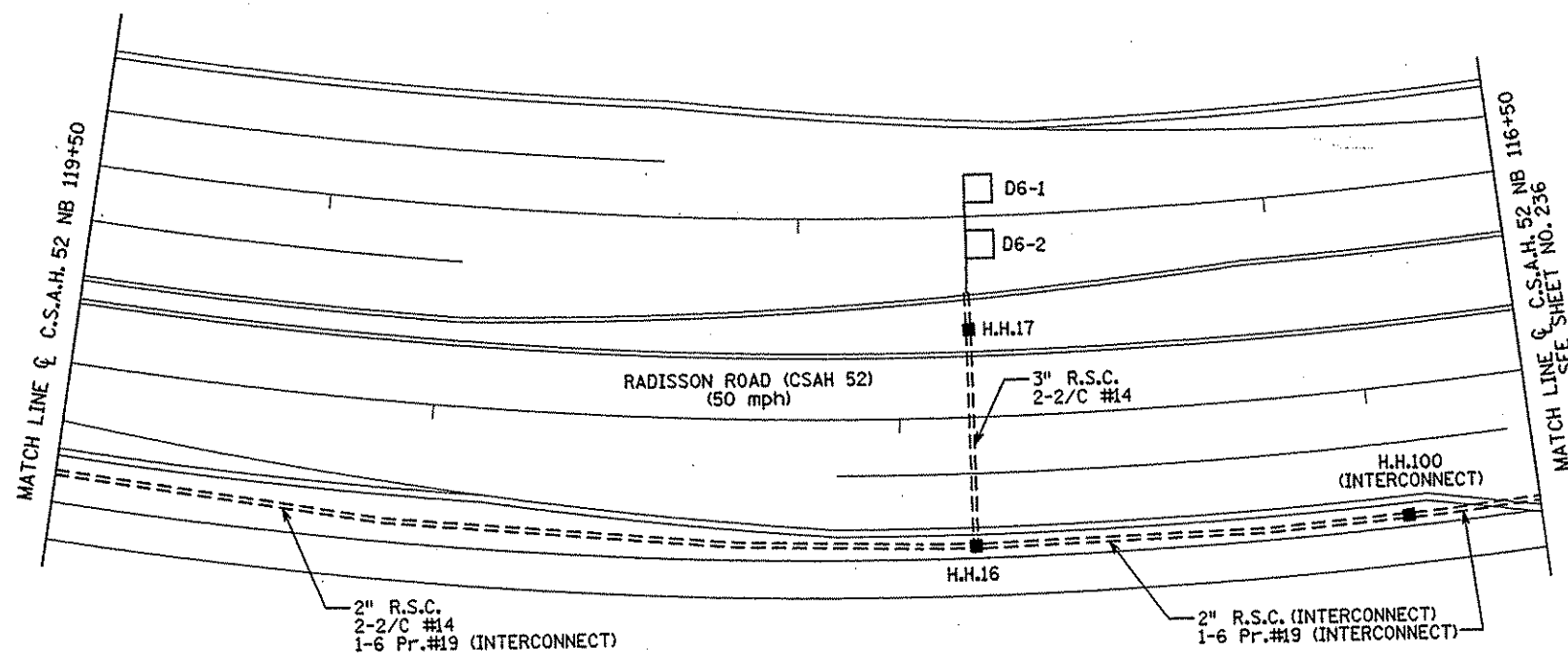
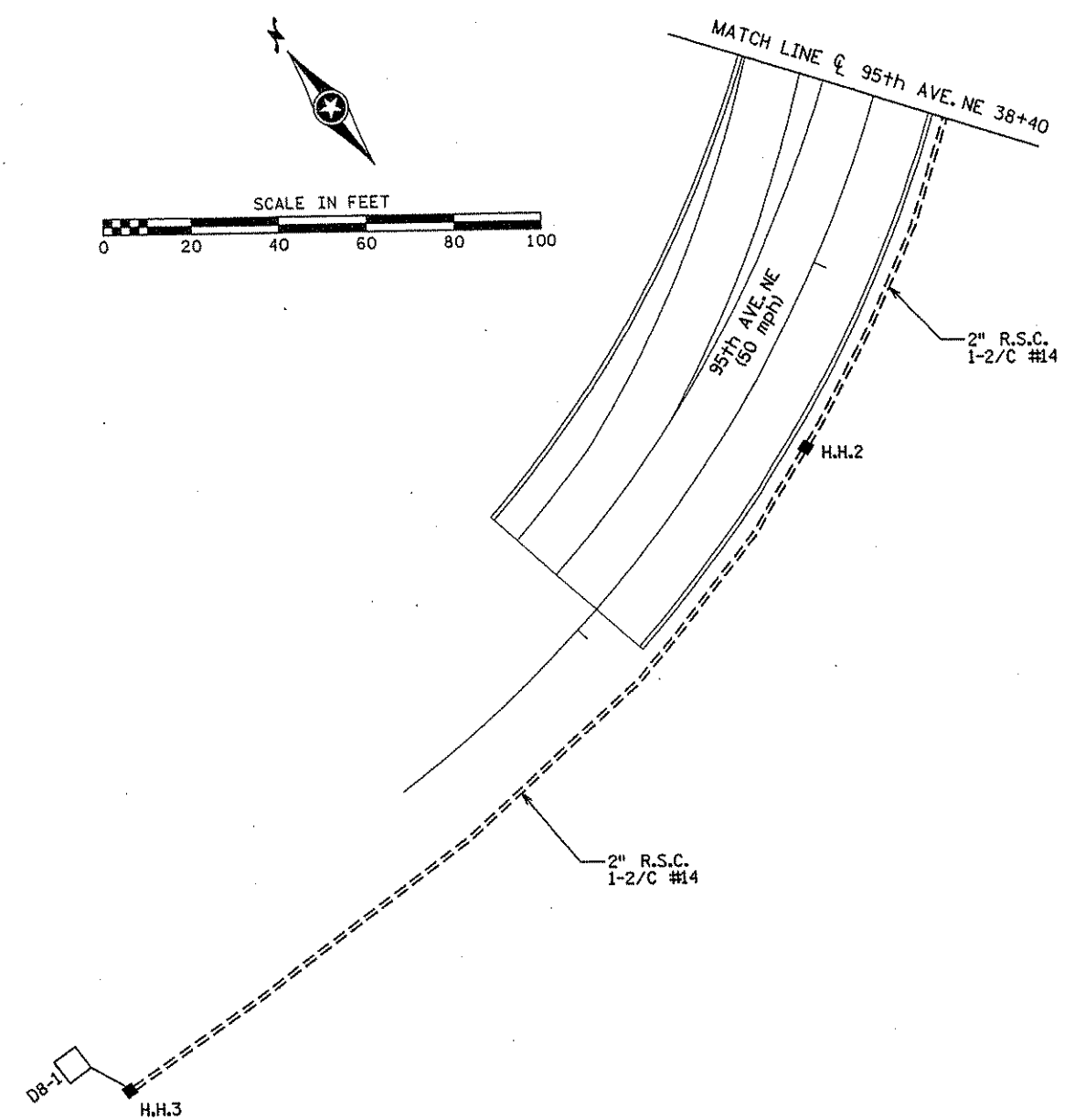
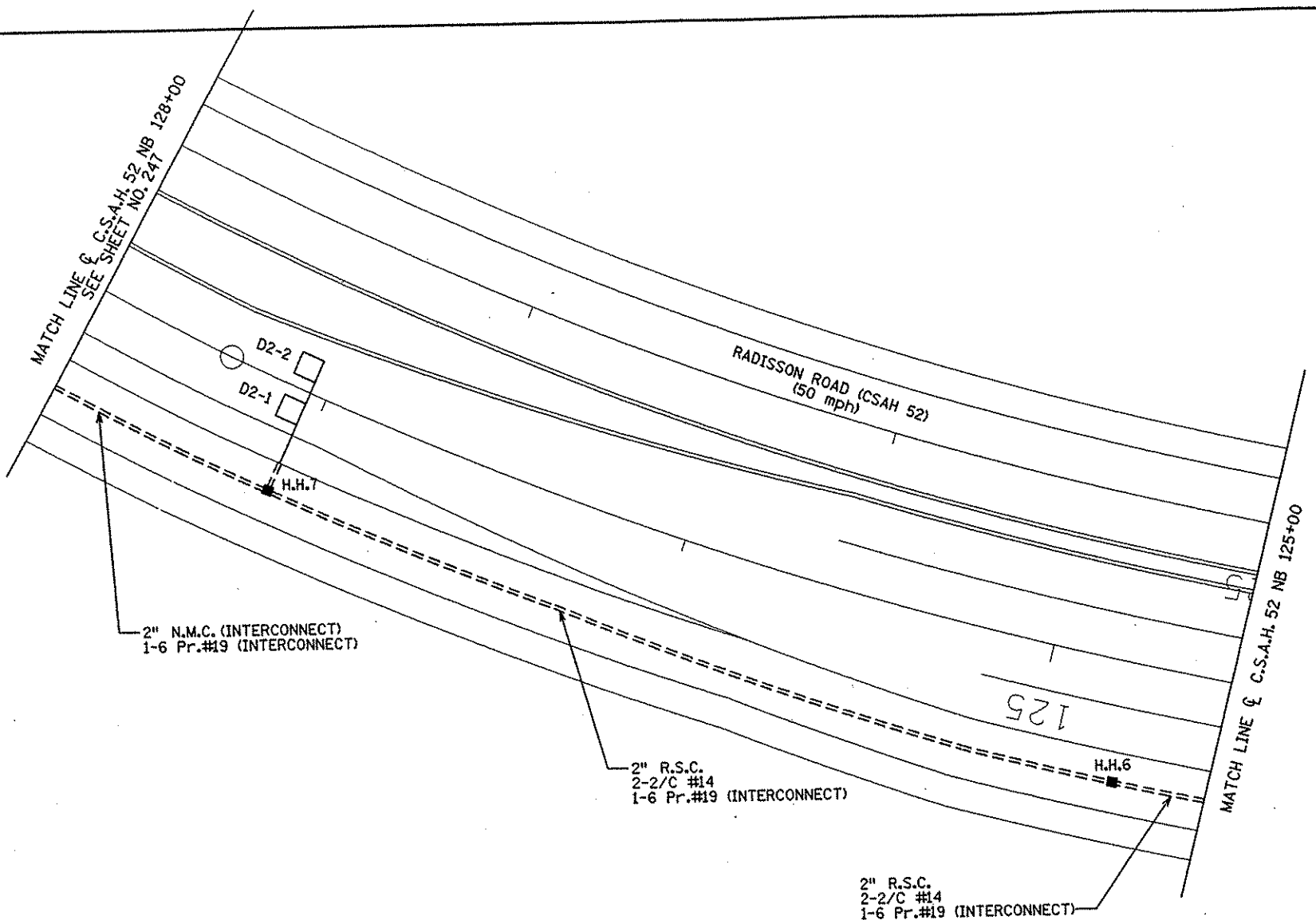
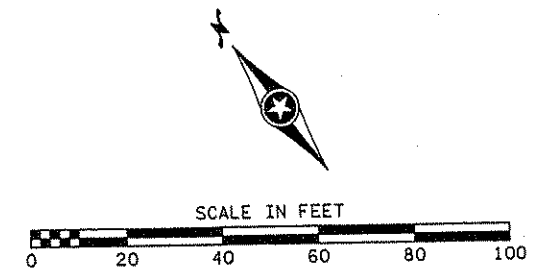
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Brent O. Parker
DATE 11-20-01 L.I.C. NO. 24880

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA



NOTE:
(INTERCONNECT) DENOTES ITEMS TO BE MEASURED
AND PAID FOR SEPARATELY FROM ITEM 2565.511.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway\drawings\signals\95th\int03a.dwg NOV 2001

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.

Scott O. Paulsen
DATE 11-30-01 LIC. NO. 26890

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

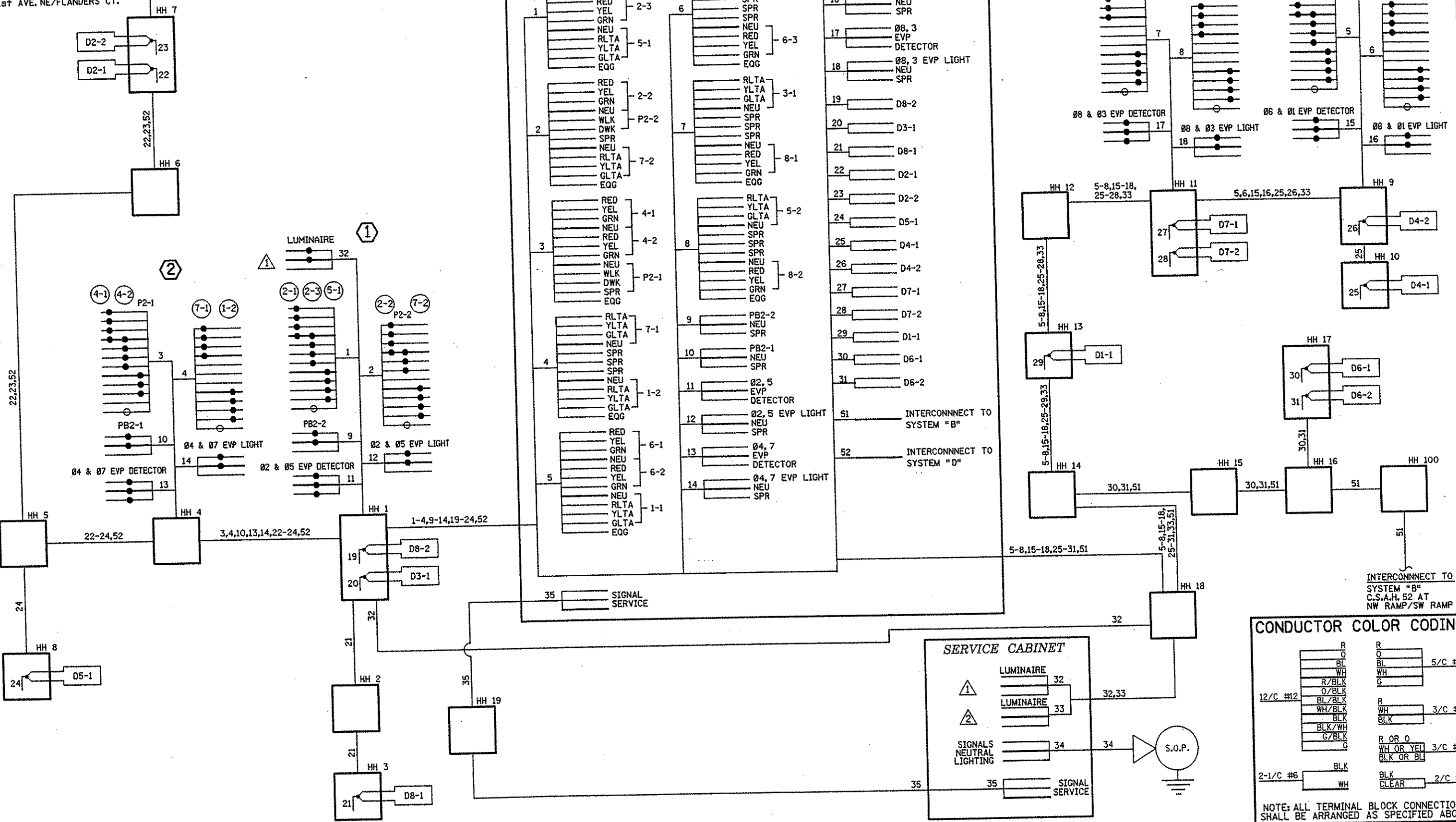
S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY		SHEET 268 OF 559
MATCH LINES - SYSTEM "C"		
C.S.A.H. 52 RECONSTRUCTION		
C.S.A.H. 52 AT 95th AVE. NE/NAPLES ST. NE		

INTERCONNECT TO SYSTEM "D" C.S.A.H. 52 AT 101st AVE. NE/FLANDERS CT.

CONTROLLER CABINET



CONDUCTOR COLOR CODING

R	5/C #12
O	
BL	
WH	
R/BLK	
O/BLK	
BL/BLK	
WH/BLK	3/C #12
BLK	
BLK/WH	
G/BLK	
G	
R OR O	3/C #20
WH OR YEL	
BLK OR BL	
BLK	2/C #14
WH	
CLEAR	2/C #14

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\sfr\proj\11749\part4\roadway3\drawings\signals\95th\wiring\2001

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.

Robert D. Paulsen
 DATE 11-20-01 LIC. NO. 26830

DRAWN BY SFH DATE 11-8-00
 DESIGN BY BDP DATE 11-8-00
 CHECKED BY TAC DATE 11-8-00

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

LOOP DETECTORS

NUMBER	SIZE (FEET)	FUNCTION	LOCATION
D1-1	2-6 x 6	1	10' & 40'
D2-1	6 x 6	1	475'
D2-2	6 x 6	1	475'
D4-1	6 x 6	3,8	95'
D4-2	2-6 x 6	1	10' & 40'
D4-3	6 x 10, 6 x 6	7	AS SHOWN
D5-1	2-6 x 6	1	10' & 40'
D6-1	6 x 6	1	475'
D6-2	6 x 6	1	475'
D8-1	6 x 6	3,8	95'
D8-2	2-6 x 6	1	10' & 40'
D8-3	6 x 10, 6 x 6	7	AS SHOWN

LOOP DETECTORS FUNCTIONS

- 1) CALL AND EXTEND
 - 3) EXTEND ONLY
 - 7) DELAY CALL - IMMEDIATE EXTEND
 - 8) CARRY OVER (STRETCH)
- NOTE:
LOCATION = DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR

3 PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT @ 350')
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
3-ONE WAY SIGNALS-OVERHEAD (0', 11' AND 23'
FROM LEFT END OF MAST ARM)
2-TYPE 10A-POLE MOUNTED 90° AND 180°
TYPE "D" SIGN PANEL OVERHEAD (D-10)
2-R6-1 SIGN PANELS (36"x12")-POLE MOUNTED 0° AND 180°
2-R9-3a SIGN (NO PED) FACING POLES 2 AND 4
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø6,1)
EXTEND INTO H.H.8:
3" R.S.C.
2-12/C #12
1-3/C #12
1-3/C #20
1-3/C #20

4 PA90 POLE FOUNDATION
TYPE PA90-A-35
ONE WAY SIGNAL-OVERHEAD
2-TYPE 10A-POLE MOUNTED 90° AND 180°
TYPE "D" SIGN PANEL OVERHEAD (D-11)
R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 270°
2-R9-3a SIGN (NO PED) FACING POLES 1 AND 3
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø8)
EXTEND INTO H.H.11:
3" R.S.C.
1-12/C #12
1-3/C #12
1-3/C #20

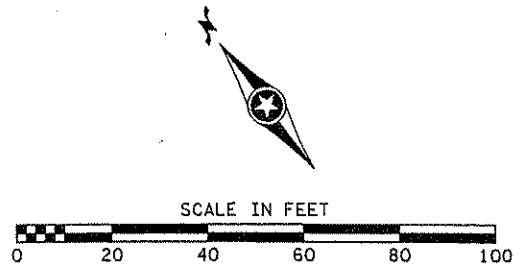
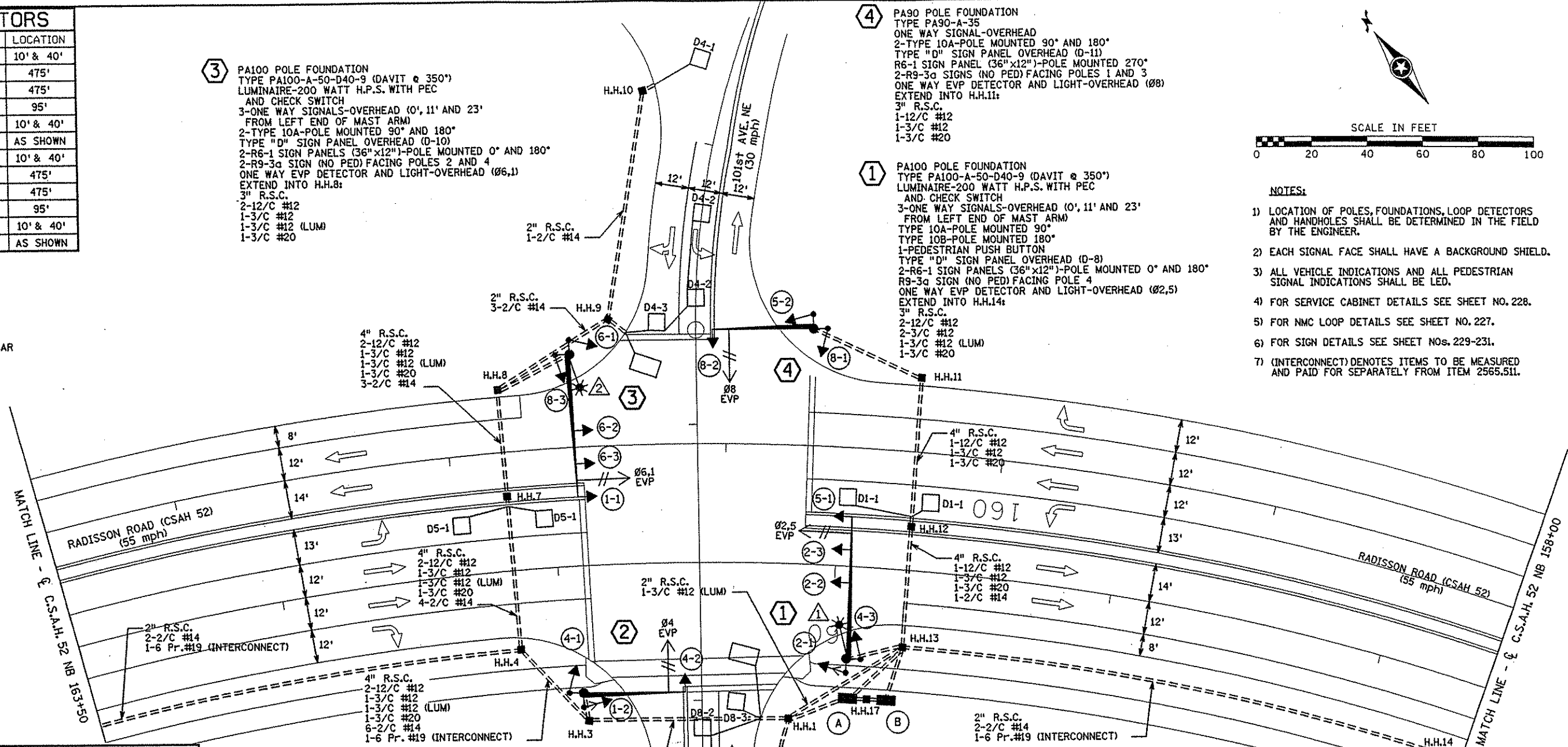
1 PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT @ 350')
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
3-ONE WAY SIGNALS-OVERHEAD (0', 11' AND 23'
FROM LEFT END OF MAST ARM)
TYPE 10A-POLE MOUNTED 90°
TYPE 10B-POLE MOUNTED 180°
1-PEDESTRIAN PUSH BUTTON
TYPE "D" SIGN PANEL OVERHEAD (D-8)
2-R6-1 SIGN PANELS (36"x12")-POLE MOUNTED 0° AND 180°
R9-3a SIGN (NO PED) FACING POLE 4
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø2,5)
EXTEND INTO H.H.14:
3" R.S.C.
2-12/C #12
2-3/C #12
1-3/C #12 (LUM)
1-3/C #20

2 PA90 POLE FOUNDATION
TYPE PA90-A-35
ONE WAY SIGNAL-OVERHEAD
TYPE 10B-POLE MOUNTED 90°
TYPE 10A-POLE MOUNTED 180°
1-PEDESTRIAN PUSH BUTTON
TYPE "D" SIGN PANEL OVERHEAD (D-9)
R6-1 SIGN PANELS (36"x12")-POLE MOUNTED 270°
R9-3a SIGN (NO PED) FACING POLE 3
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø4)
EXTEND INTO H.H.3:
3" R.S.C.
1-12/C #12
3-3/C #12
1-3/C #20
4" R.S.C.
3-12/C #12
4-3/C #12
1-3/C #12 (LUM)
2-3/C #20
6-2/C #14
1-6 Pr. #19 (INTERCONNECT)

A INSTALL CONTROLLER AND CABINET
(FURNISHED BY COUNTY)
CABINET AND FOUNDATION
EXTEND INTO H.H.17
METERED SIGNAL SERVICE
1 1/4" R.S.C.
3-1/C #6
EXTEND INTO H.H.1
4" R.S.C.
3-12/C #12
4-3/C #12
2-3/C #20
9-2/C #14
1-6 Pr. #19 (INTERCONNECT)

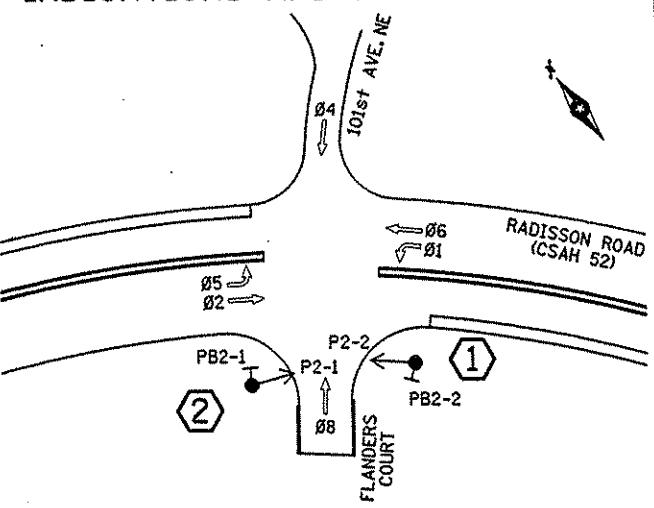
EXTEND INTO H.H.13
4" R.S.C.
3-12/C #12
3-3/C #12
2-3/C #20
3-2/C #14
1-6 Pr. #19 (INTERCONNECT)
STUB OUT 2-3" R.S.C.
(THREAD AND CAP BOTH
ENDS-FOR FUTURE USE)

B SERVICE CABINET
CABINET FOUNDATION
EXTEND INTO H.H.13
UNMETERED STREET LIGHT SERVICE
1 1/4" R.S.C.
2-3/C #12 (LUM)
EXTEND INTO H.H.17
METERED SIGNAL SERVICE
1 1/4" R.S.C.
3-1/C #6
STUB OUT 2" R.S.C. (FOR
SERVICE BY CONNEXUS)



- NOTES:**
- 1) LOCATION OF POLES, FOUNDATIONS, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 2) EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - 3) ALL VEHICLE INDICATIONS AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED.
 - 4) FOR SERVICE CABINET DETAILS SEE SHEET NO. 228.
 - 5) FOR NMC LOOP DETAILS SEE SHEET NO. 227.
 - 6) FOR SIGN DETAILS SEE SHEET NOS. 229-231.
 - 7) (INTERCONNECT) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY FROM ITEM 2565.511.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATION	
- THE SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.	
- NORMAL OPERATION SHALL BE 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES.	
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.	

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

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\signals\101st\int04.dwg 2001

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.

Grant J. Paulsen
DATE 11-20-01 L.I.C. NO. 36880

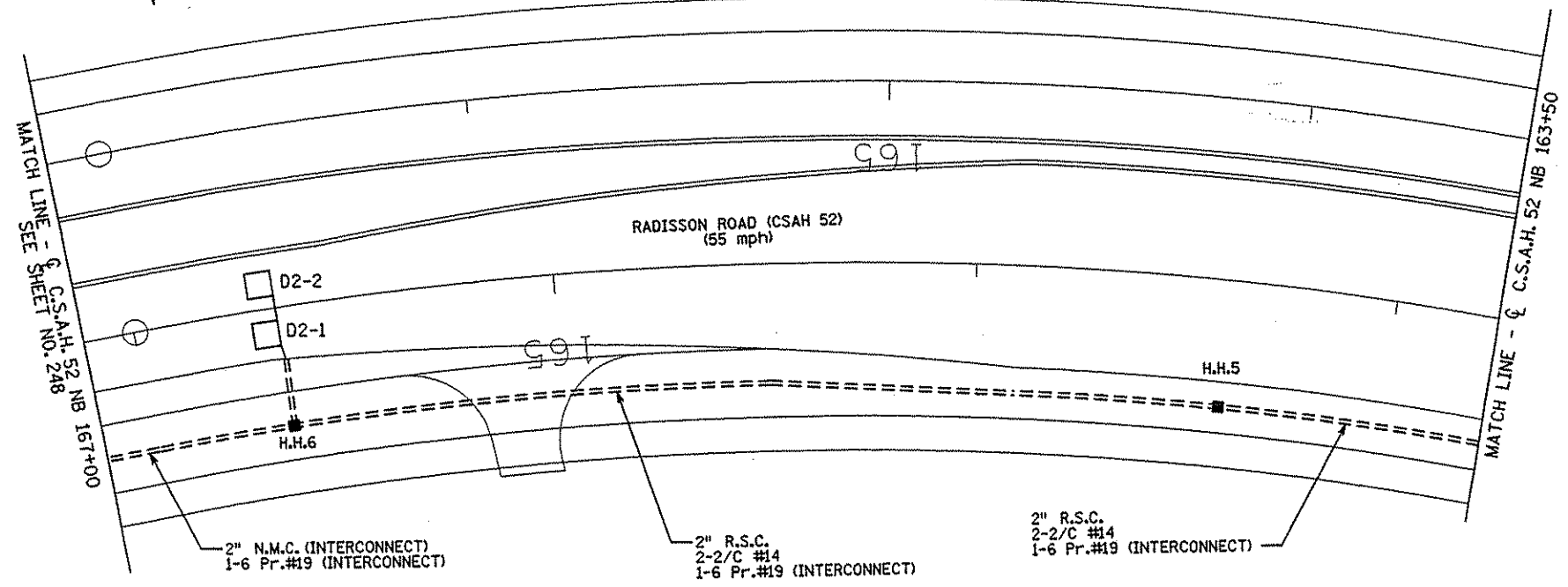
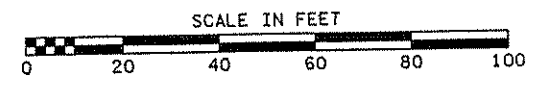
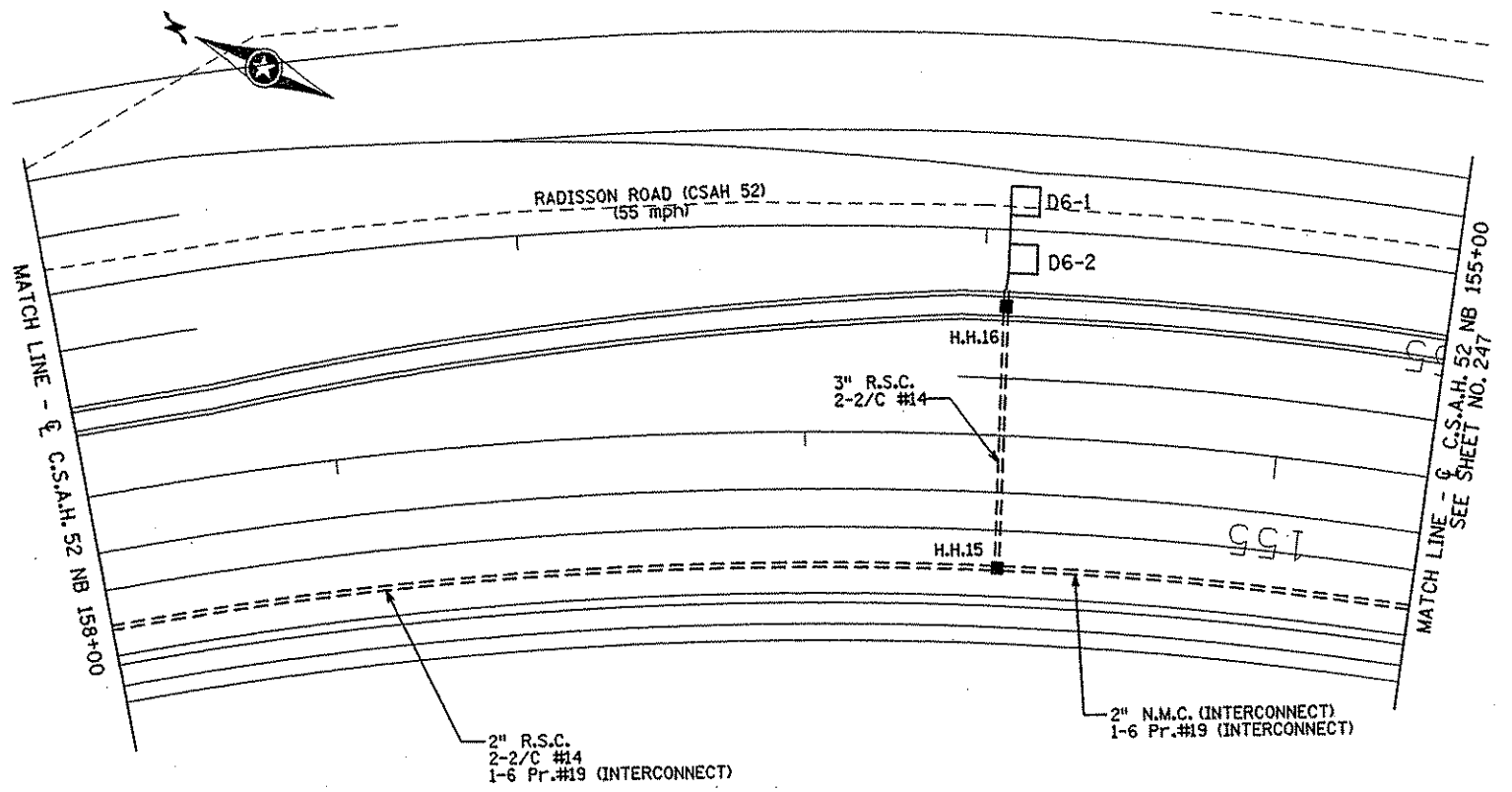
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DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
INTERSECTION LAYOUT - SYSTEM "D"
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 AT 101ST AVE. NE/FLANDERS COURT

SHEET 270 OF 559



NOTE:
(INTERCONNECT) DENOTES ITEMS TO BE MEASURED
AND PAID FOR SEPARATELY FROM ITEM 2565.511.

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\signals\101st\1n704d8c\NOV 2001

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.

Grant J. Paulsen
DATE 11-20-01 LIC. NO. 26880

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

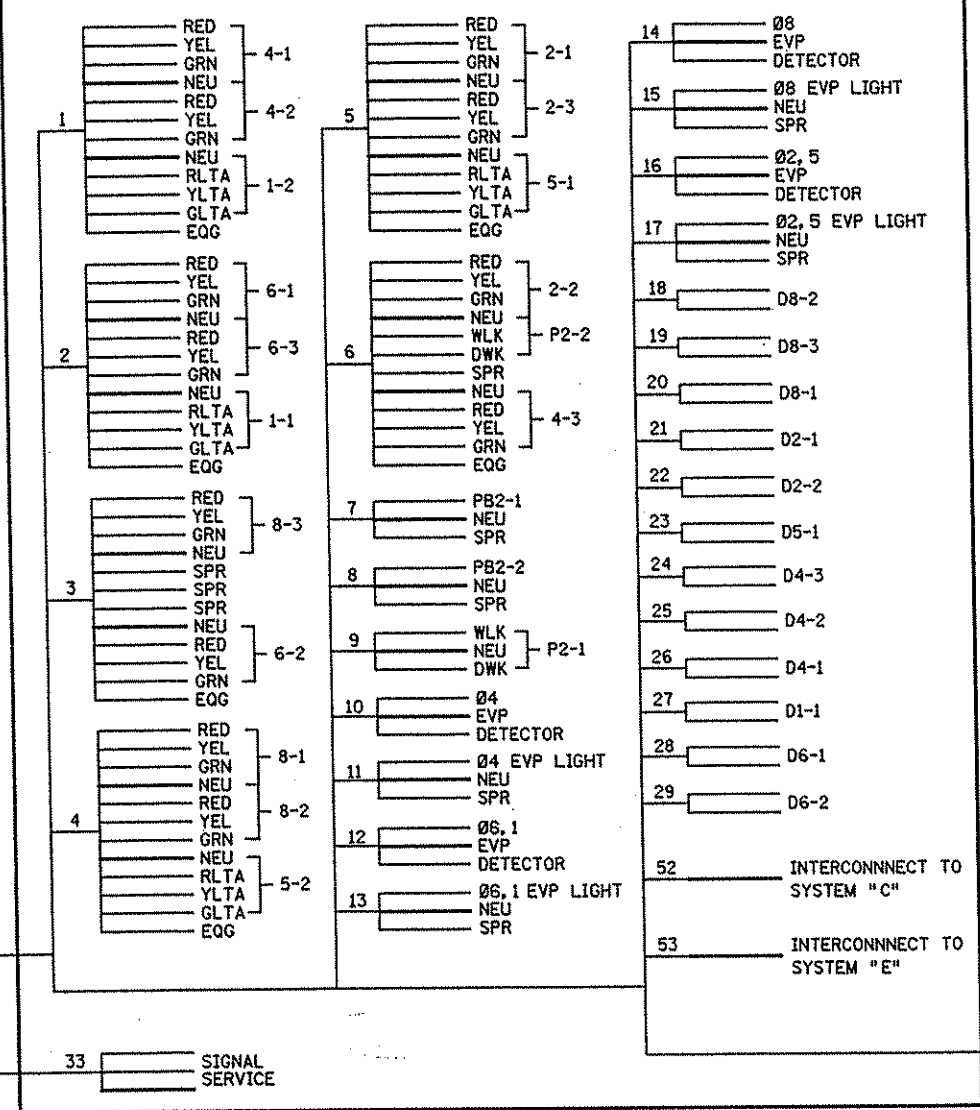
ANOKA COUNTY		SHEET 271 OF 559
MATCH LINES - SYSTEM "D"		
C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 AT 101st ST. NE		

CONDUCTOR COLOR CODING

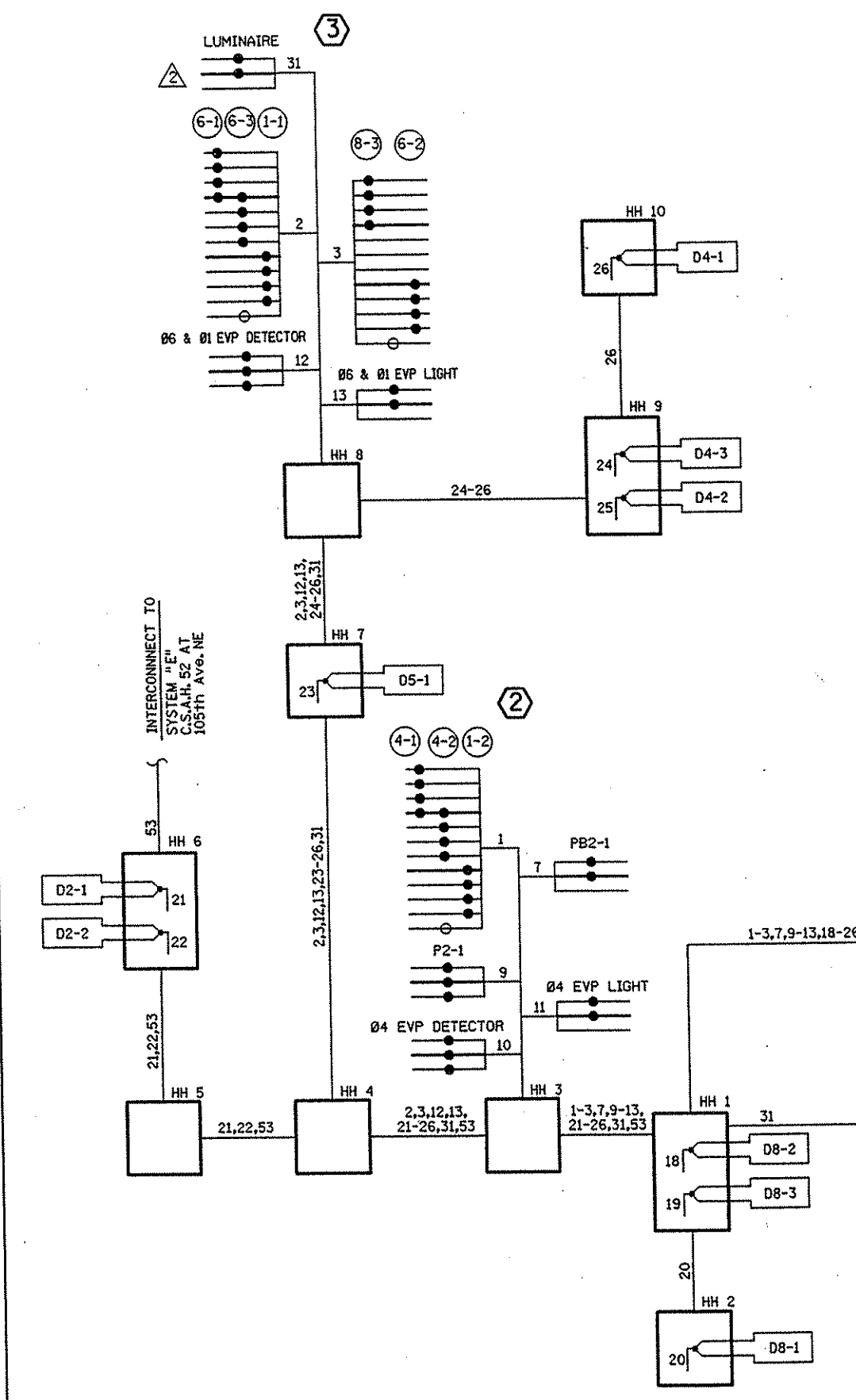
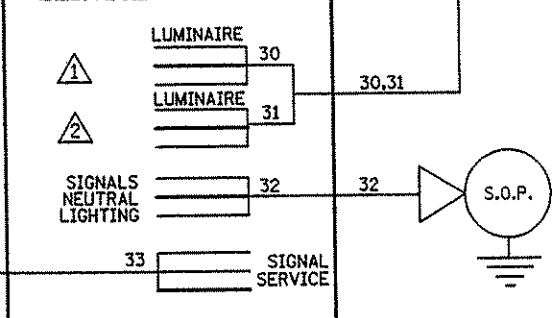
R	R	
O	BL	5/C #12
BL	WH	
WH	S	
R/BLK	R	
O/BLK	WH	3/C #12
BL/BLK	BLK	
WH/BLK	R OR O	WH OR YEL 3/C #20
BLK	BLK OR BL	
BLK/WH	BLK	
G/BLK	WH	2/C #14
G		

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

CONTROLLER CABINET



SERVICE CABINET



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\signals\101st\wiring00d90V 2001

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.

Robert J. Paulsen
DATE 11-30-01 LIC. NO. 26920

DRAWN BY SFH DATE 11-8-00
DESIGN BY BDP DATE 11-8-00
CHECKED BY TAC DATE 11-8-00

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
WIRING DIAGRAM - SYSTEM "D"
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 AT 101st AVE. NE/FLANDERS COURT

SHEET
272
OF
559

LOOP DETECTORS

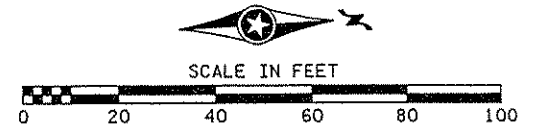
NUMBER	SIZE (FEET)	FUNCTION	LOCATION	ACTION
D2-1	6 x 6	1	475'	2
D2-2	6 x 6	1	475'	2
D4-1	2-6 x 6	3,8	EXISTING	1
D4-2	14 x 6	3,8	EXISTING	1
D4-3	2-6 x 6	7	AS SHOWN	2
D4-4	2-6 x 6	7	AS SHOWN	2
D4-5	2-14 x 6	1	10' & 40'	2
D5-1	2-6 x 6	1	10' & 40'	2
D6-1	6 x 6	1	475'	2
D6-2	6 x 6	1	475'	2

LOOP DETECTORS FUNCTIONS LOOP DETECTORS ACTION

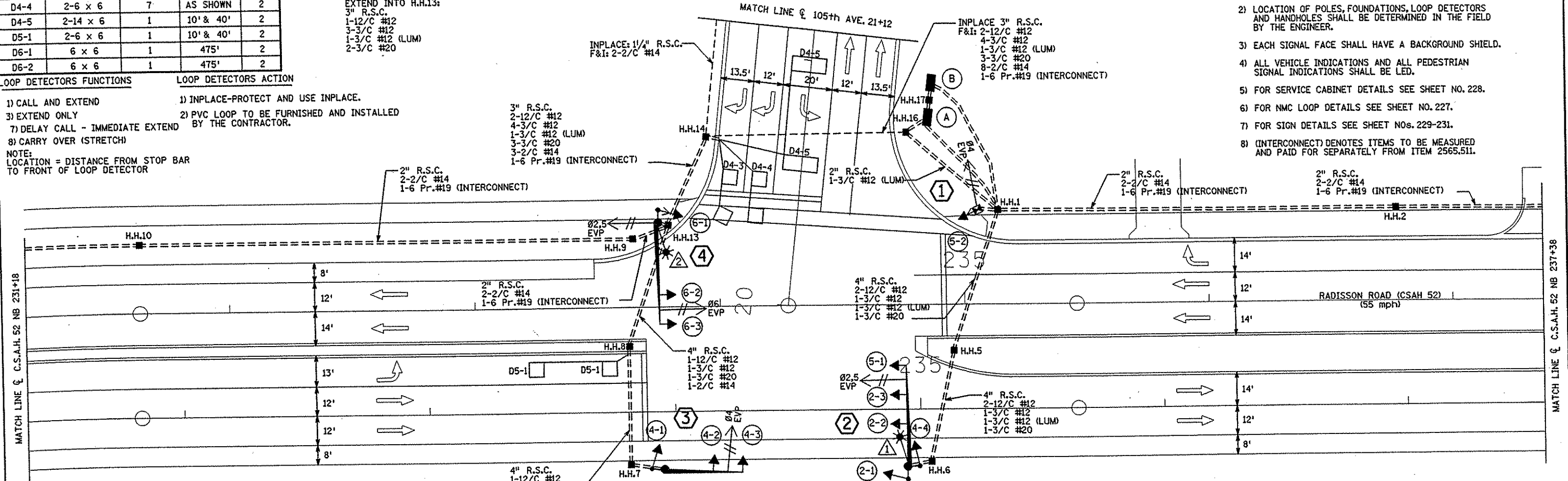
- 1) CALL AND EXTEND
 3) EXTEND ONLY
 7) DELAY CALL - IMMEDIATE EXTEND
 8) CARRY OVER (STRETCH)
- 1) INPLACE-PROTECT AND USE INPLACE.
 2) PVC LOOP TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- NOTE:
 LOCATION = DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR

4 PA100 POLE FOUNDATION
 TYPE PA100-A-40-D40-9 (DAVIT AT 350')
 LUMINAIRE-200 WATT H.P.S. WITH PEC AND CHECK SWITCH
 2-ONE WAY SIGNALS-OVERHEAD (0, AND 11' FROM LEFT END OF MAST ARM)
 TYPE 10B-POLE MOUNTED AT 180°
 PEDESTRIAN PUSH BUTTON
 TYPE "D" SIGN PANEL (102" x 24")-OVERHEAD (D-14)
 R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 180°
 R9-3A SIGN (NO PED) FACING POLE 3
 (S&R) ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø6)
 (S&R) ONE WAY EVP DETECTOR-POLE MOUNTED (Ø2,5)
 EXTEND INTO H.H.13:
 3" R.S.C.
 1-12/C #12
 3-3/C #12
 1-3/C #12 (LUM)
 2-3/C #20

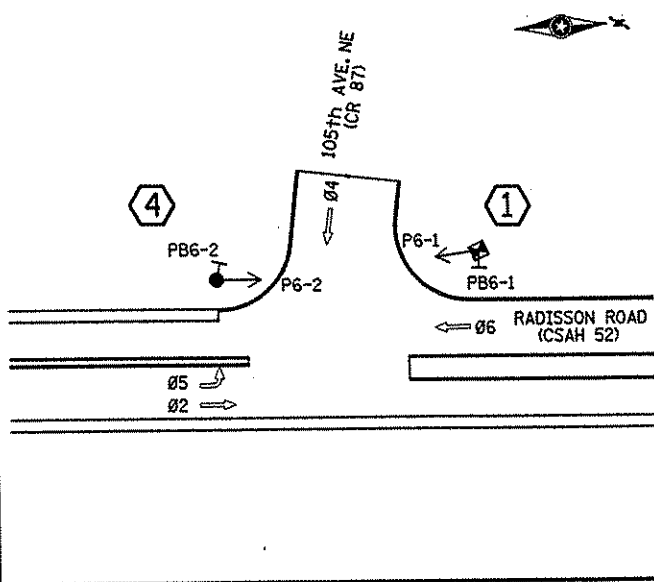
1 PEDESTAL FOUNDATION
 10' PEDESTAL POLE AND BASE (TYPE 1C)
 PEDESTRIAN PUSH BUTTON
 R9-3A SIGN (NO PED) FACING POLE 2
 (S&R) ONE WAY EVP DETECTOR-PEDESTAL MOUNTED (Ø4)
 EXTEND INTO H.H.1:
 3" R.S.C.
 1-12/C #12
 1-3/C #12
 1-3/C #20



- NOTES:**
- ITEMS INDICATED WITH (S&R) SHALL BE SALVAGED AND REINSTALLED. SEE SPECIAL PROVISIONS FOR ALL OTHER INPLACE ITEMS.
 - LOCATION OF POLES, FOUNDATIONS, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - ALL VEHICLE INDICATIONS AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED.
 - FOR SERVICE CABINET DETAILS SEE SHEET NO. 228.
 - FOR NMC LOOP DETAILS SEE SHEET NO. 227.
 - FOR SIGN DETAILS SEE SHEET NOS. 229-231.
 - (INTERCONNECT) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY FROM ITEM 2565.511.



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



3 PA90 POLE FOUNDATION
 TYPE PA90-A-30
 2-ONE WAY SIGNALS-OVERHEAD (0, AND 11' FROM LEFT END OF MAST ARM)
 TYPE 10A-POLE MOUNTED AT 270°
 TYPE "D" SIGN PANEL (108" x 24")-OVERHEAD (D-13)
 R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 270°
 R9-3A SIGN (NO PED) FACING POLE 4
 (S&R) ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø4)
 EXTEND INTO H.H.7:
 3" R.S.C.
 1-12/C #12
 1-3/C #12
 1-3/C #20

2 PA100 POLE FOUNDATION
 TYPE PA100-A-40-D40-9 (DAVIT AT 350')
 LUMINAIRE-200 WATT H.P.S. WITH PEC AND CHECK SWITCH
 3-ONE WAY SIGNALS-OVERHEAD (0, 11' AND 23' FROM LEFT END OF MAST ARM)
 2-TYPE 10A-POLE MOUNTED AT 90° AND 180°
 TYPE "D" SIGN PANEL (102" x 24")-OVERHEAD (D-12)
 R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 0°
 R9-3A SIGN (NO PED) FACING POLE 1
 (S&R) ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø2,5)
 EXTEND INTO H.H.6:
 3" R.S.C.
 2-12/C #12
 1-3/C #12
 1-3/C #12 (LUM)
 1-3/C #20

A INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)
 CABINET AND FOUNDATION EXTEND INTO H.H.17
 METERED SIGNAL SERVICE
 1 1/4" R.S.C.
 3-1/C #6
 EXTEND INTO H.H.1:
 4" R.S.C.
 3-12/C #12
 2-3/C #12
 2-3/C #20
 2-2/C #14
 1-6 Pr.#19 (INTERCONNECT)
 EXTEND INTO H.H.16:
 4" R.S.C.
 2-12/C #12
 4-3/C #12
 3-3/C #20
 8-2/C #14
 1-6 Pr.#19 (INTERCONNECT)
 STUB OUT 2-3" R.S.C. (THREAD AND CAP BOTH ENDS-FOR FUTURE USE)

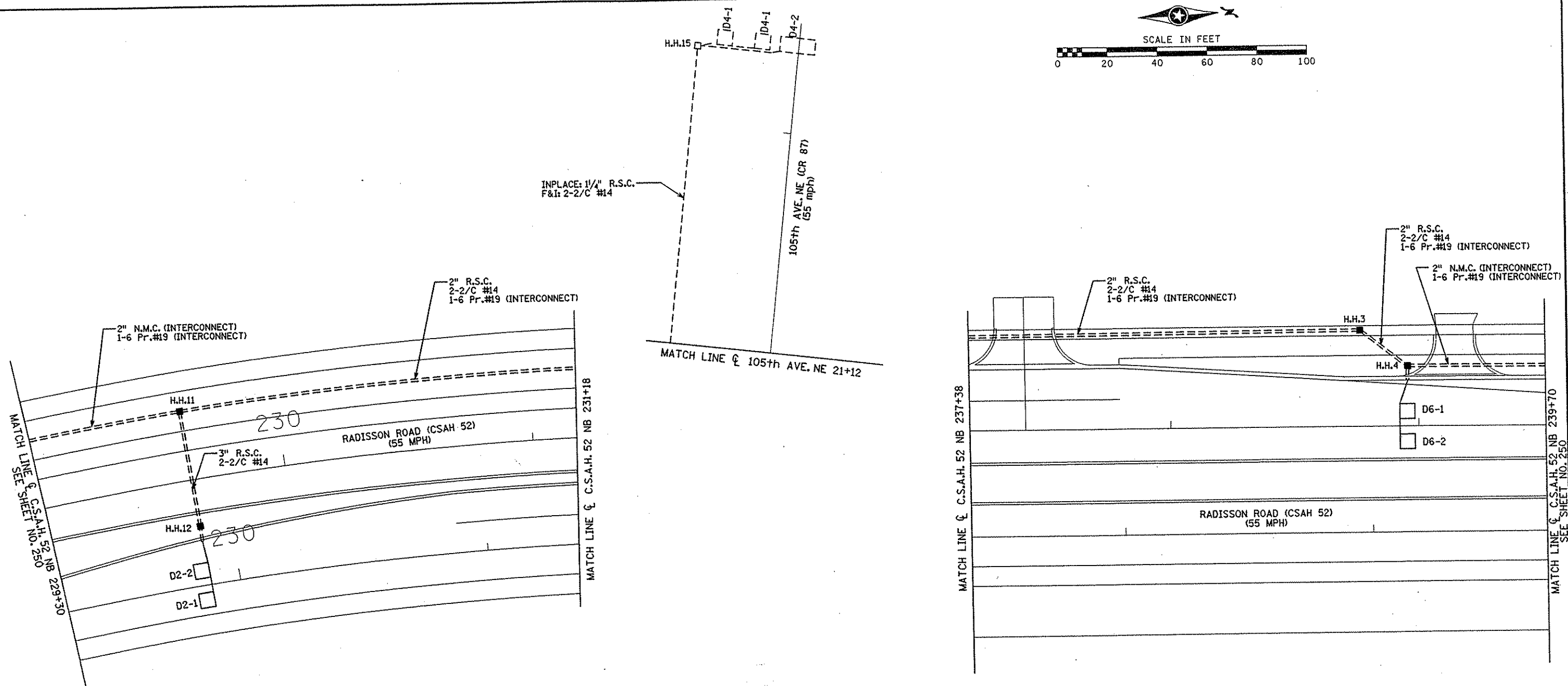
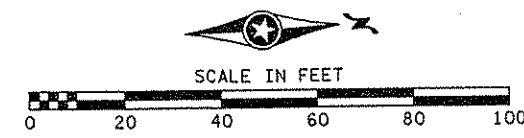
B SERVICE CABINET CABINET FOUNDATION EXTEND INTO H.H.1:
 1 1/4" R.S.C.
 2-3/C #12 (LUM)
 EXTEND INTO H.H.17:
 METERED SIGNAL SERVICE
 1 1/4" R.S.C.
 3-1/C #6
 STUB OUT 2" R.S.C. (FOR SERVICE BY CONNEXUS)

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 4 PHASE, WITH PHASE 5 BEING A PROTECTED LEFT TURN PHASE.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

SIGNAL INDICATIONS
 ALL INDICATIONS SHALL BE 12" LED

FACE	R	Y	G	RLTA	YLTA	GLTA
2-1, 2-2, 2-3	●	●	●			
4-1, 4-2, 4-3, 4-4	●	●	●			
5-1, 5-2				←	←	←
6-1, 6-2, 6-3	●	●	●			



NOTE:
 (INTERCONNECT) DENOTES ITEMS TO BE MEASURED
 AND PAID FOR SEPARATELY FROM ITEM 2565.511.

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.

Brent O. Paulson
 DATE 11-20-01 LIC. NO. 26880

DRAWN BY _____ DATE _____ S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 DESIGN BY _____ DATE _____ S.A.P. 02-652-02
 S.A.P. 02-652-03
 CHECKED BY _____ DATE _____ S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 MATCH LINES - SYSTEM "E"
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 AT 105th AVE. NE

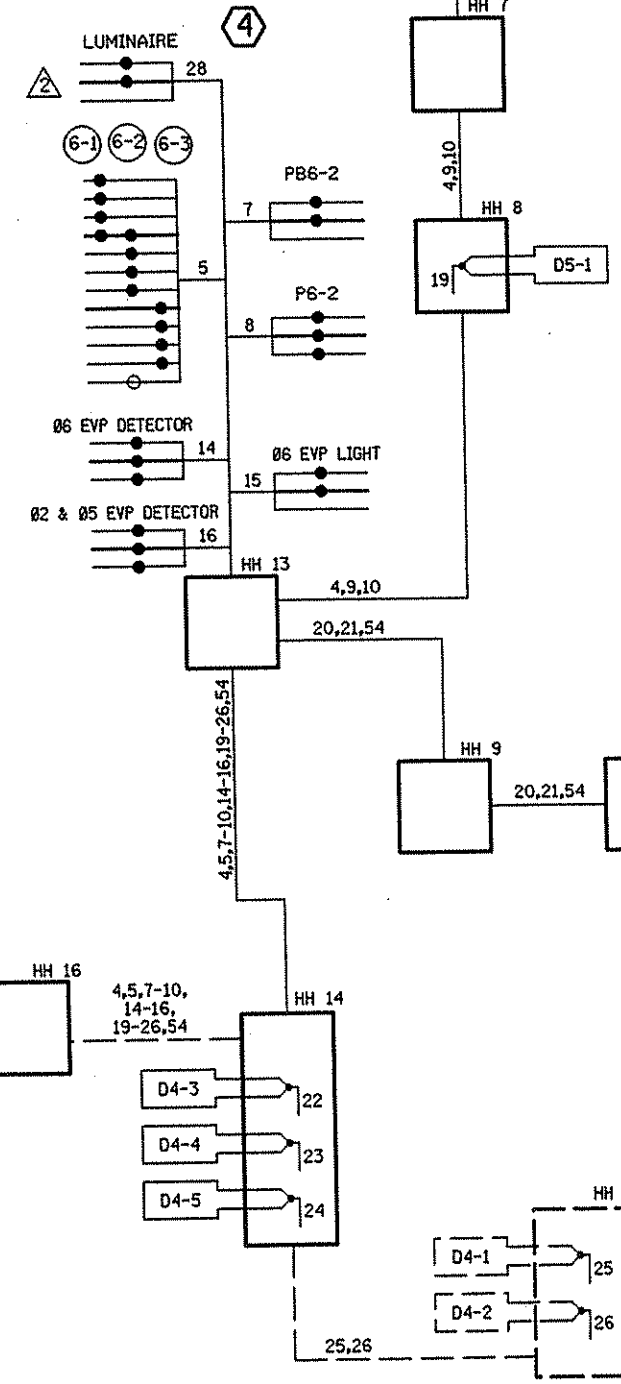
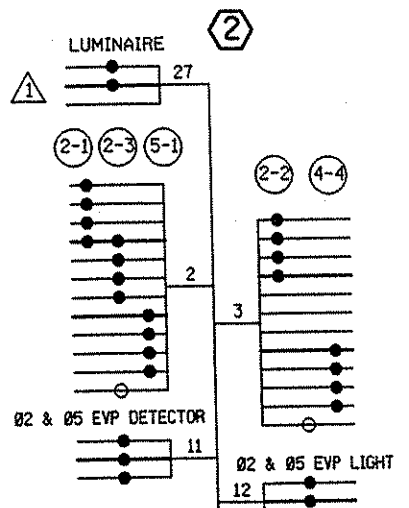
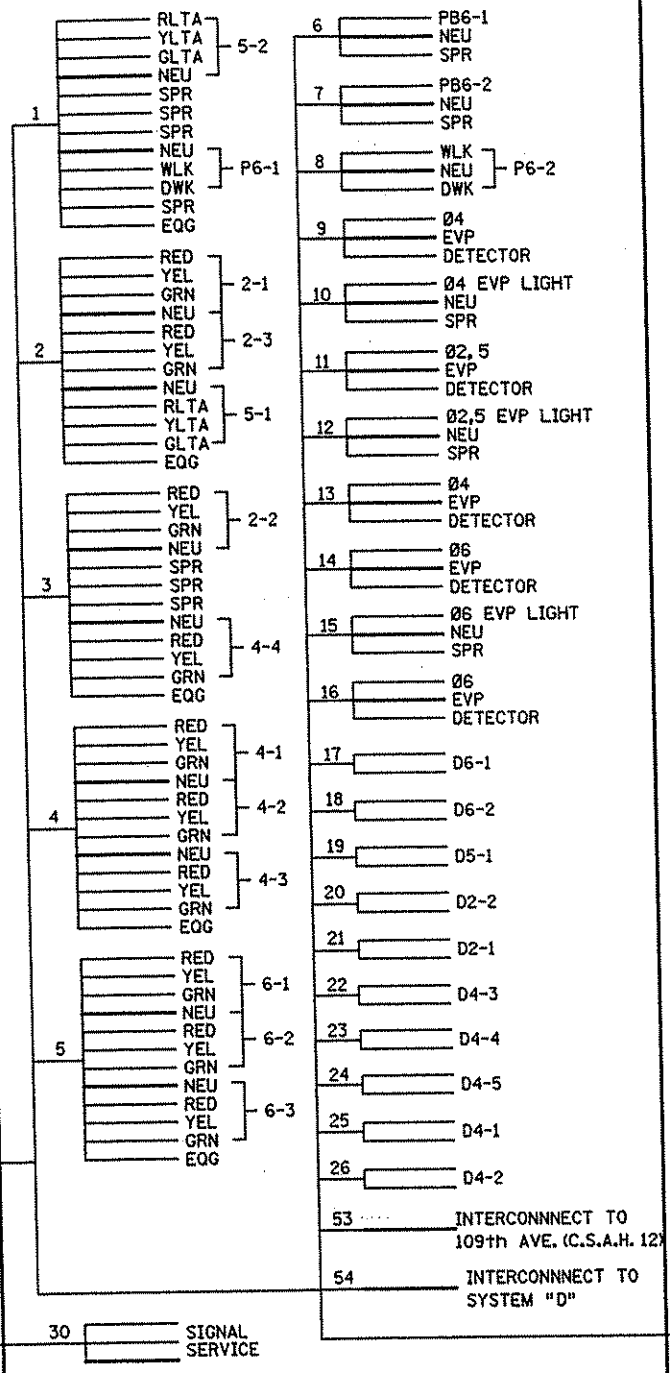
SHEET
 274
 OF
 559

CONDUCTOR COLOR CODING

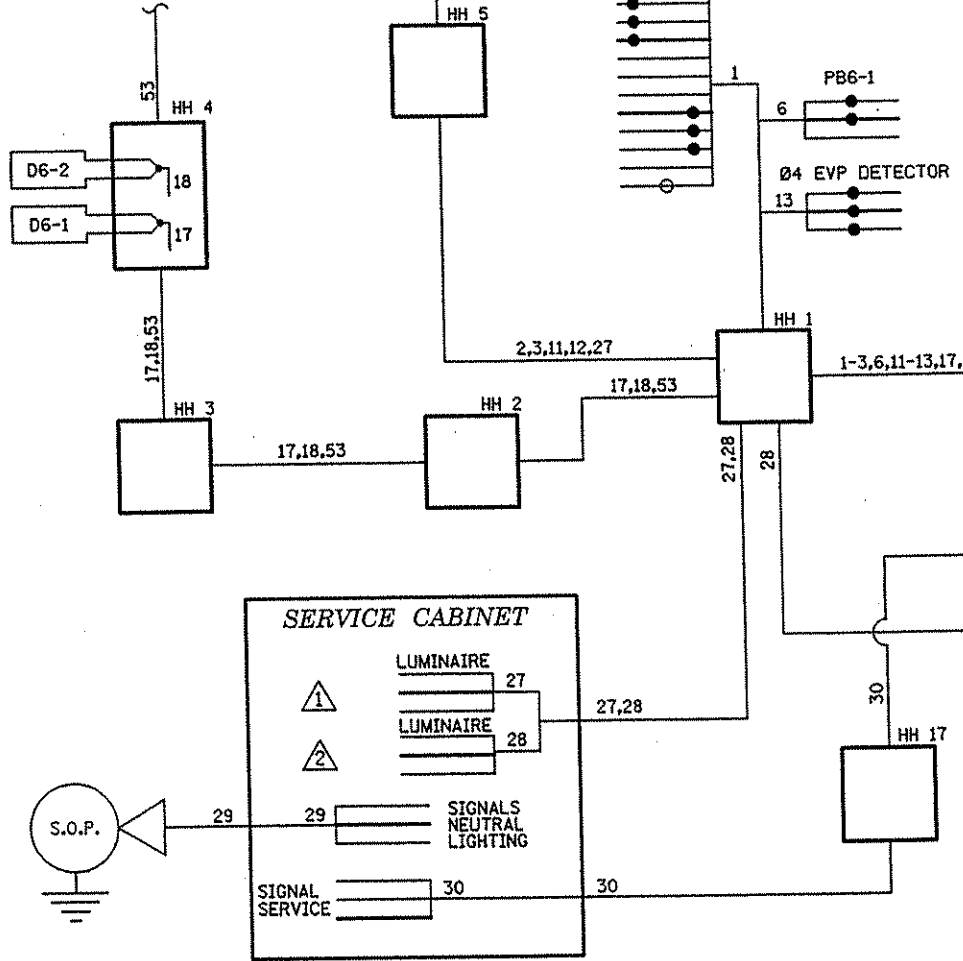
R	R	
O	O	
BL	BL	5/C #12
WH	WH	
R/BLK	G	
O/BLK		
BL/BLK	R	3/C #12
WH/BLK	WH	
BLK	BLK	
BLK/WH	R OR O	3/C #20
G/BLK	WH OR YEL	BLK OR BL
G	BLK	2/C #14
	WH	

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

CONTROLLER CABINET



INTERCONNECT TO C.S.A.H. 52 AT 109th AVE. (C.S.A.H. 12)



INTERCONNECT TO SYSTEM "D" C.S.A.H. 52 AT 101st AVE. NE/FLANDERS CT.

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\signals\105th\wiring\DD09V 2001

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.

Grant O. Paulson
DATE 11-20-01 LIC. NO. 26880

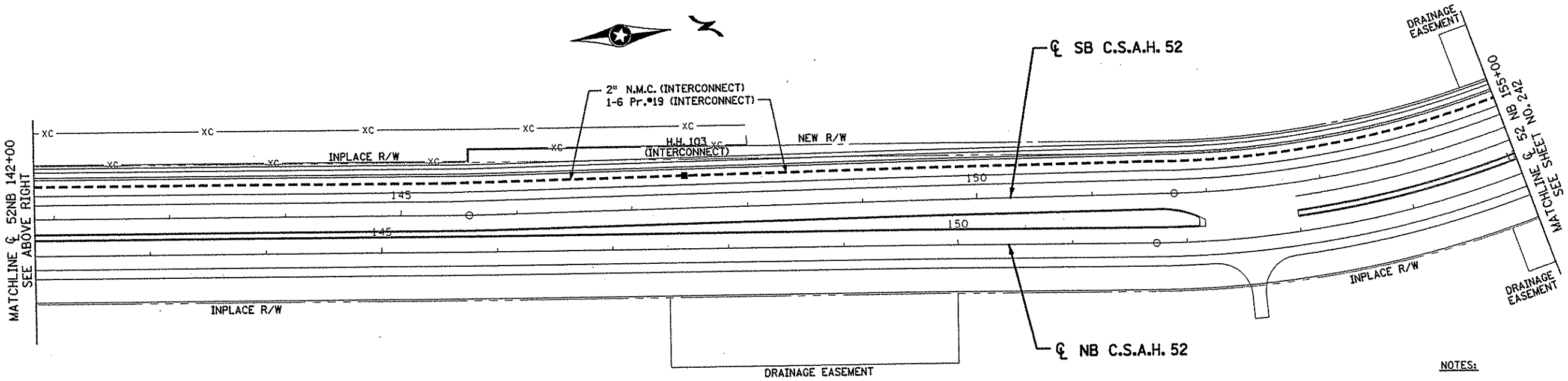
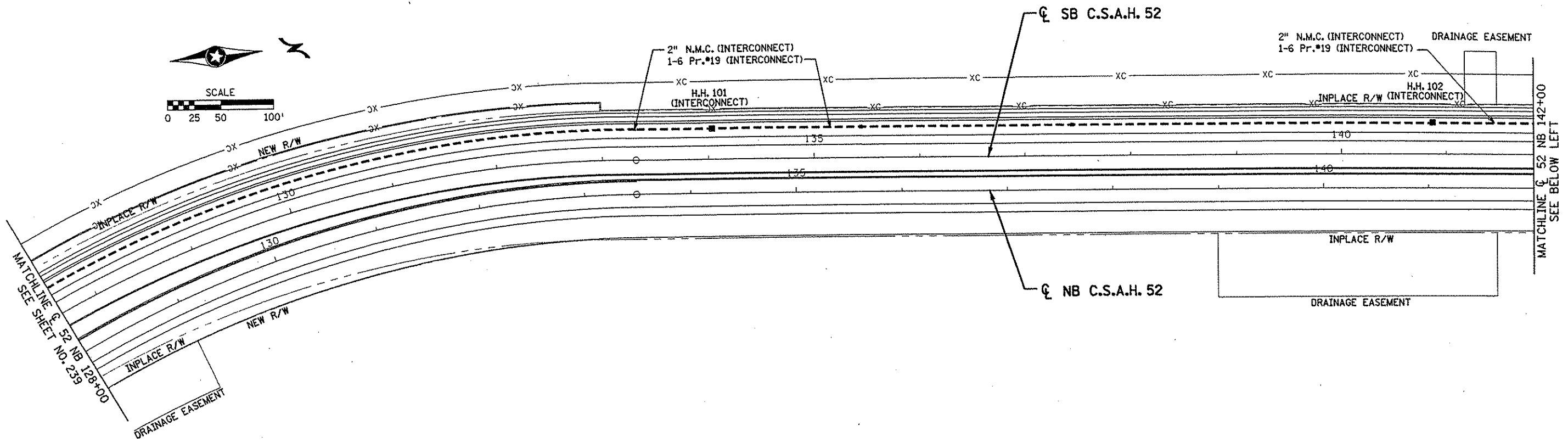
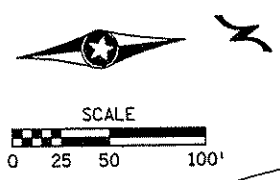
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DESIGN BY BDP DATE 11-8-00
CHECKED BY TAC DATE 11-8-00

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
WIRING DIAGRAM - SYSTEM "E"
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 AT 105th AVE. NE

SHEET 275 OF 559



- NOTES:**
- 1) SEE SPECIAL PROVISIONS FOR 2" N.M.C.
 - 2) SEE SPECIAL PROVISIONS FOR INTERCONNECT HANDHOLES.

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\proj4\roadway\drawings\signals\int-conn1.dwg 2001

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.

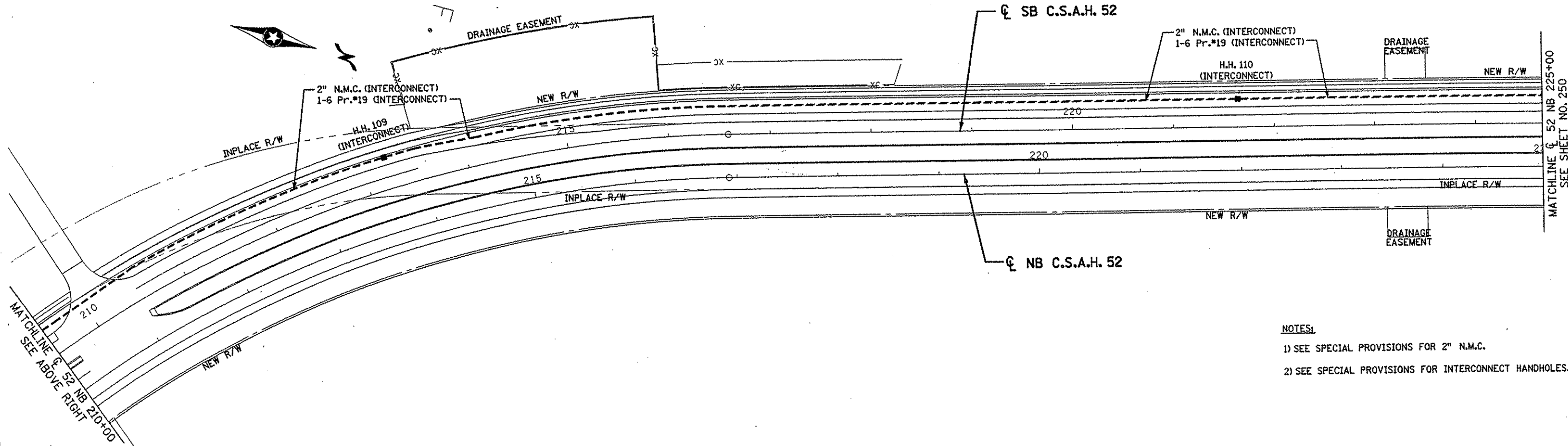
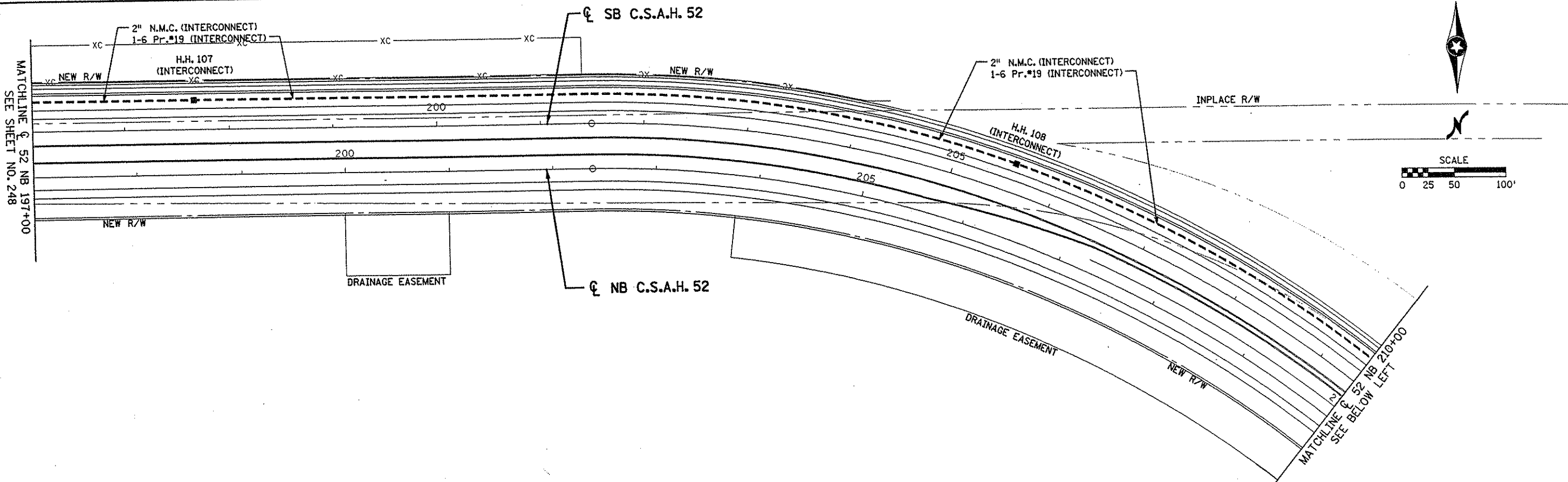
Grant O. Paulsen
 DATE 11-20-01 LIC. NO. 26880

DRAWN BY	DATE	S.P.	0280-50 (TH 35W)
DESIGN BY	DATE	S.P.	90-080-11
CHECKED BY	DATE	S.A.P.	02-652-02
		S.A.P.	02-652-03
		S.A.P.	02-652-04
		S.A.P.	106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

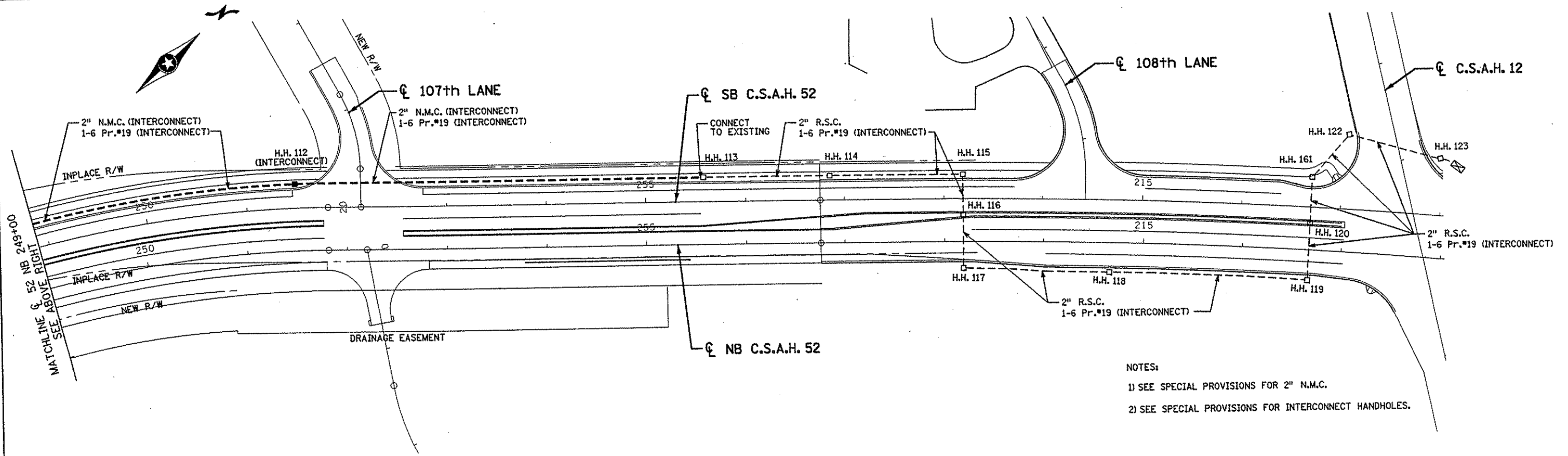
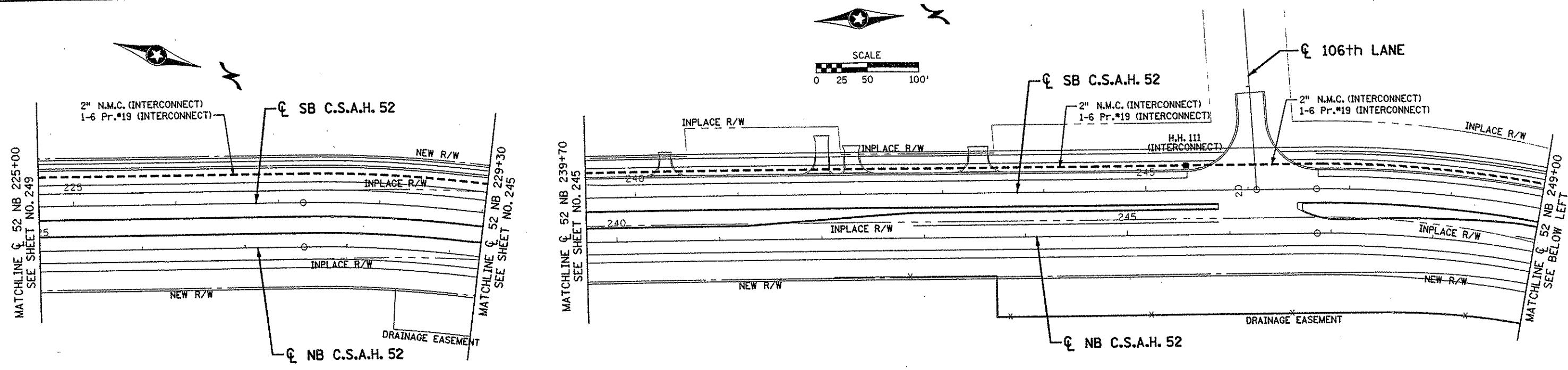
ANOKA COUNTY
 TRAFFIC SIGNAL INTERCONNECT
 C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 128+00 TO 155+00

SHEET
 276
 OF
 559



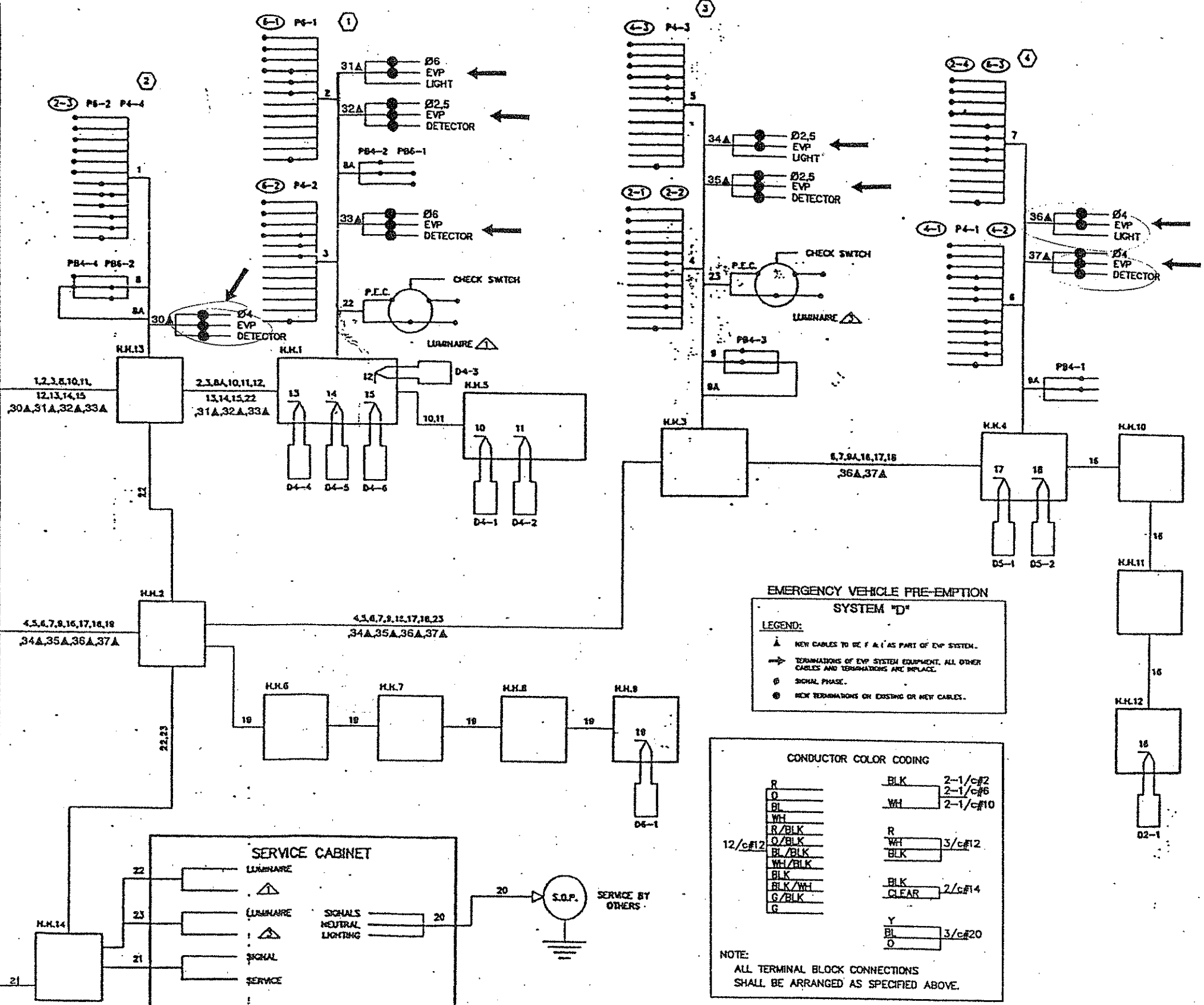
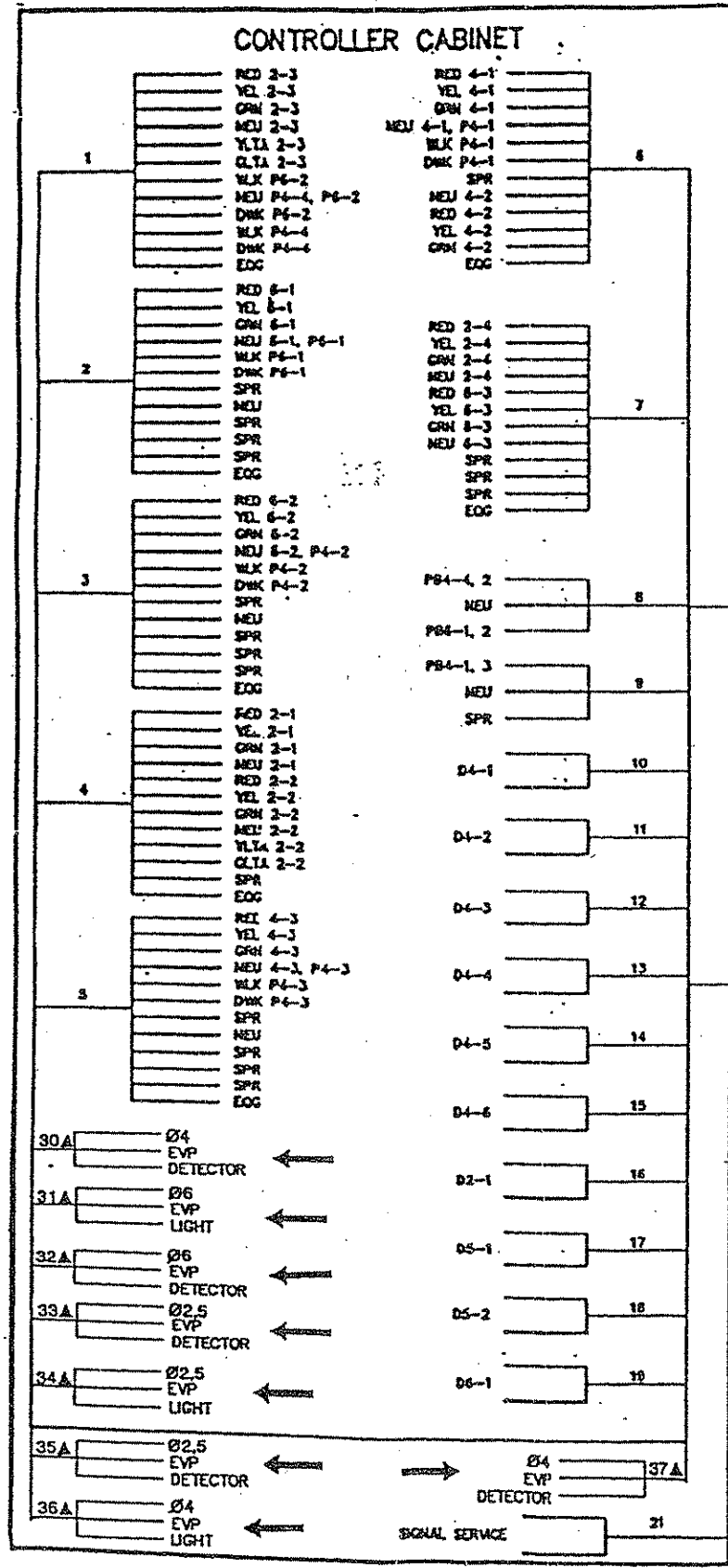
NOTES:
 1) SEE SPECIAL PROVISIONS FOR 2" N.M.C.
 2) SEE SPECIAL PROVISIONS FOR INTERCONNECT HANDHOLES.

NO. DATE BY CKD APPR REVISION NAME: k:\site\proj\11749\par\4\roadway3\arawings\stgnis\int-conn3.dwg NOV 2001					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. <i>Barrett J. Penharr</i> DATE 11-30-01 LIC. NO. 26880					DRAWN BY _____ DATE _____ DESIGN BY _____ DATE _____ CHECKED BY _____ DATE _____					S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022					TKDA TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA					ANOKA COUNTY TRAFFIC SIGNAL INTERCONNECT C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 197+00 TO 225+00					SHEET 278 OF 559				
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	------------------	--	--	--	--



NOTES:
 1) SEE SPECIAL PROVISIONS FOR 2" N.M.C.
 2) SEE SPECIAL PROVISIONS FOR INTERCONNECT HANDHOLES.

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. <i>Scott O. Paulsen</i> DATE <u>11-20-01</u> LIC. NO. <u>26820</u>					S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA <small>TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED</small> <small>ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY TRAFFIC SIGNAL INTERCONNECT C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 225+00 TO 256+74.68	SHEET 279 OF 559	
NO	DATE	BY	CKD	APPR	REVISION	NAME: k:\site\proj\11749\part4\roadway3\drawings\signals\int-cann4.dwg NOV 2001			



EMERGENCY VEHICLE PRE-EMPTION SYSTEM "D"

LEGEND:

- ▲ NEW CABLES TO BE F & C AS PART OF EVP SYSTEM.
- TERMINATIONS OF EVP SYSTEM EQUIPMENT. ALL OTHER CABLES AND TERMINATIONS ARE IN PLACE.
- ⊙ SIGNAL PHASE.
- ⊙ NEW TERMINATIONS ON EXISTING OR NEW CABLES.

CONDUCTOR COLOR CODING

R	BLK	2-1/c#2
O	WH	2-1/c#6
BL	WH	2-1/c#10
WH	R	3/c#12
R/BLK	WH	3/c#12
O/BLK	BLK	3/c#12
BL/BLK	BLK	2/c#14
WH/BLK	CLEAR	2/c#14
BLK	BLK	2/c#14
BLK/WH	CLEAR	2/c#14
G/BLK	Y	3/c#20
G	BL	3/c#20
	O	3/c#20

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

FOR INFORMATION ONLY

NO.	BY	DATE	REVISIONS	ITEM	DESIGN	CHECKED

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.

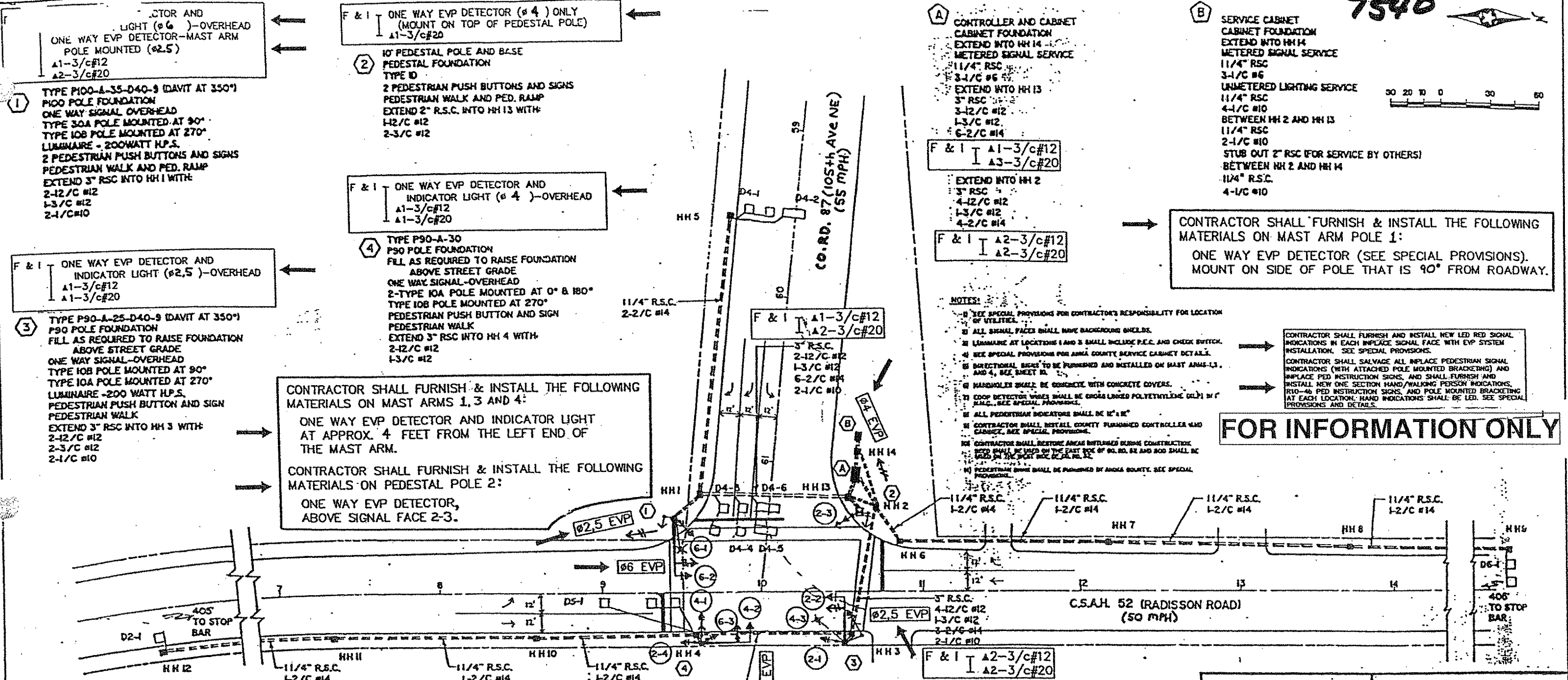
Date: 7/16/98 Reg. No. 22457



BLAINE, MINNESOTA
 ANOKA COUNTY
 S.A.P. 106-020-13
 BLAINE CITY PROJECT NO. 98-10

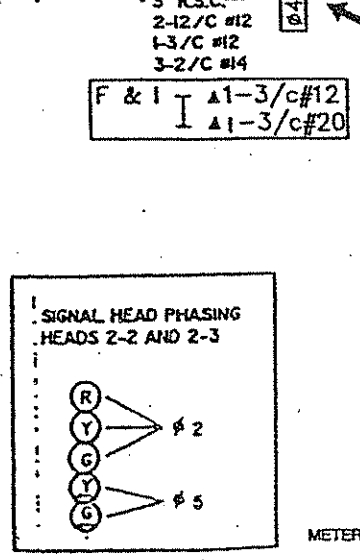
EVP SYSTEM "D"
 FIELD WIRING DIAGRAM
 CSAH 52 (RADISSON ROAD) AT
 COUNTY ROAD 87 (105TH AVE NE)

FILE NO. BLAIN9802 281
 DATE 6/19/98 559



LOOP DETECTORS			
NUMBER	SIZE	LOCATION	FUNCTION
D2-1	6'x6'	405'	1
D4-1	2-6'x6'	185'	3,8
D4-2	14'x6'	185'	3,8
D4-3	2-6'x6'	185'	7
D4-4	2-6'x6'	-	1
D4-5	14'x6'	-	7
D4-6	14'x6'	-	7
D5-1	3-6'x6'	-	7
D6-1	2-6'x6'	405'	1

SIGNAL FACES							
SIGNAL INDICATIONS ARE 12"							
SIGNAL FACE	LED	R	Y	G	LED	Y	G
2-1, 2-4	o	o	o				
2-2, 2-3	o	o	o		←	←	
4-1, 4-2, 4-3	o	o	o				
6-1, 6-2, 6-3	o	o	o				



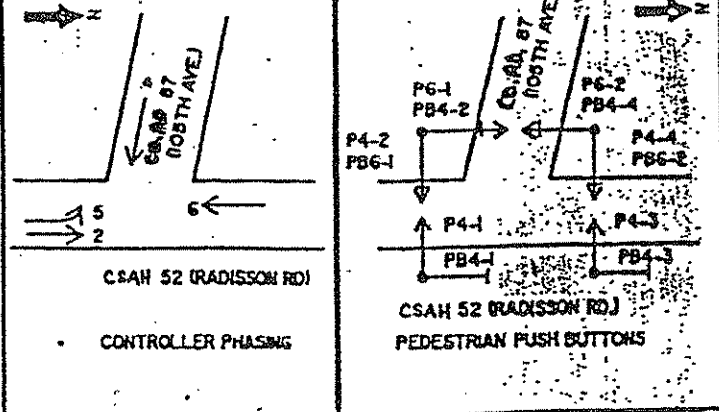
EMERGENCY VEHICLE PRE-EMPTION SYSTEM "D"

NOTE: ALL COMPONENTS OF SIGNAL SYSTEM, EXCEPT EVP EQUIPMENT TO BE FURNISHED AND INSTALLED AS INDICATED IN THE PLANS, ARE IN PLACE AND SHALL REMAIN IN PLACE AS PART OF THE REVISED SIGNAL SYSTEM. SEE SPECIAL PROVISIONS FOR REQUIRED EVP EQUIPMENT IN CONTROLLER CABINET AND ADDITIONAL INFORMATION.

LEGEND:

- ▲ NEW CABLES TO BE F & I AS PART OF EVP SYSTEM
- EVP DETECTOR UNIT (ONE WAY)
- ↔ EVP DETECTOR UNIT (TWO WAY)
- ⊕ SIGNAL PHASE

ALL MATERIALS TO BE F & I AS PART OF EVP SYSTEM ARE EITHER LABELED F & I AND BOXED IN, OR BOXED IN AND DESIGNATED BY →.



ANTICIPATED COUNTY WORK AT SYSTEM (AT NO COST TO THE CONTRACTOR), TO ACCOMMODATE EVP: MODIFICATIONS TO INPLACE CABINET.

CONTRACTOR SHALL FURNISH & INSTALL THE FOLLOWING MATERIALS ON MAST ARMS 1, 3 AND 4:

ONE WAY EVP DETECTOR AND INDICATOR LIGHT AT APPROX. 4 FEET FROM THE LEFT END OF THE MAST ARM.

CONTRACTOR SHALL FURNISH & INSTALL THE FOLLOWING MATERIALS ON PEDESTAL POLE 2:

ONE WAY EVP DETECTOR, ABOVE SIGNAL FACE 2-3.

- NOTES:**
- SEE SPECIAL PROVISIONS FOR CONTRACTOR'S RESPONSIBILITY FOR LOCATION OF UTILITIES.
 - ALL SIGNAL FACES SHALL HAVE BACKGROUND SHEETS.
 - LUMINAIRE AT LOCATIONS 1 AND 3 SHALL INCLUDE P.E.C. AND CHECK SWITCH.
 - SEE SPECIAL PROVISIONS FOR ANOKA COUNTY SERVICE CABINET DETAILS.
 - DIRECTIONAL BEAMS TO BE FURNISHED AND INSTALLED ON MAST ARMS 1, 3 AND 4. SEE SHEET B.
 - MANHOLES SHALL BE CONCRETE WITH CONCRETE COVERS.
 - LOOP DETECTOR WIRES SHALL BE CROSS LINKED POLYETHYLENE (CLP) W/ P.E.C. SEE SPECIAL PROVISIONS.
 - ALL PEDESTRIAN INDICATORS SHALL BE 12" X 6"
 - CONTRACTOR SHALL INSTALL COUNTY FURNISHED CONTROLLER AND CABINET. SEE SPECIAL PROVISIONS.
 - CONTRACTOR SHALL RESTORE AREAS DISTURBED DURING CONSTRUCTION. THIS SHALL BE DONE ON THE EAST SIDE OF CO. RD. 87 AND 800 SHALL BE DONE ON THE WEST SIDE OF CO. RD. 87.
 - PEDESTRIAN SIGNS SHALL BE FURNISHED BY ANOKA COUNTY. SEE SPECIAL PROVISIONS.

FOR INFORMATION ONLY

CONTRACTOR SHALL FURNISH & INSTALL THE FOLLOWING MATERIALS ON MAST ARM POLE 1:

ONE WAY EVP DETECTOR (SEE SPECIAL PROVISIONS). MOUNT ON SIDE OF POLE THAT IS 90° FROM ROADWAY.

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.

Chris M. Jones



BLAINE, MINNESOTA
ANOKA COUNTY
S.A.P. 106-070-13

EVP SYSTEM "D"
INTERSECTION LAYOUT
C.S.A.H. 52 (RADISSON ROAD) AT

FILE NO. 280
BLAIN9802
DATE
559

LEGEND OF SYMBOLS	
	CABLE TRAY
	CONDUIT - F&I
	CONDUIT - INPLACE
	DETECTOR (SPECIFY) - (SPECIFY)
	DIRECT BURIED COMMUNICATION CABLE - F&I
	DIRECT BURIED COMMUNICATION CABLE - INPLACE
	DIRECT BURIED POWER CABLE - F&I
	DIRECT BURIED POWER CABLE - INPLACE
	FLASHER - F&I
	FLASHER - INPLACE
	FLASHING BEACON - F&I
	FOUNDATION F&I, GATE ARM - F&I
	FOUNDATION INPLACE, GATE ARM - F&I
	GATE ARM - INPLACE
	GUARDRAIL END TREATMENT (SPECIFY) - (SPECIFY)
	GUARDRAIL (PLATE BEAM) - (SPECIFY)
	HANDHOLE - F&I
	HANDHOLE - INPLACE
	JUNCTION BOX OR CONDULET - F&I
	JUNCTION BOX OR CONDULET - INPLACE
	LANE ARROW
	OVERHEAD SIGN - F&I
	OVERHEAD SIGN - INPLACE
	PAD (SPECIFY) - F&I
	PAD (SPECIFY) - INPLACE
	PEDESTAL - F&I
	PEDESTAL - INPLACE
	RAMP CONTROL SIGNAL (DESIGN ONE-WAY) - F&I
	RAMP CONTROL SIGNAL (DESIGN TWO-WAY) - F&I
	RAMP CONTROL SIGNAL (DESIGN ONE-WAY) - INPLACE
	RAMP CONTROL SIGNAL (DESIGN TWO-WAY) - INPLACE
	SHELTER (TMS) - F&I
	SHELTER (TMS) - INPLACE
	SIGN (TYPE A OR D) - (SPECIFY)
	SIGN (TYPE C) - (SPECIFY)

LEGEND OF SYMBOLS	
	SIGN (TYPE CMS) - (SPECIFY)
	SIGNAL FACE - F&I
	SIGNAL FACE - INPLACE
	SPLICE CABINET (SPECIFY) - (SPECIFY)
	SPLICE VAULT (FIBER OPTIC) - (SPECIFY)
	TELEVISION CAMERA (CCTV) - (SPECIFY)
	WOOD POLE - F&I
	WOOD POLE - INPLACE
	WOOD POLE F&I, SERVICE INSTALLATION - F&I
	WOOD POLE INPLACE, SERVICE INSTALLATION - F&I
	WOOD POLE INPLACE, SERVICE INSTALLATION - INPLACE
	FIBER PATCHING SHELTER - F&I
	OUTDOOR FIBER SPLICE ENCLOSURE - F&I



TMS TABULATION OF ESTIMATED QUANTITIES			
ITEM	NOTES	UNIT	ESTIMATED QUANTITY
REMOVE CABLES		LUMP SUM	1
REMOVE FOUNDATION		EACH	5
SALVAGE RAMP CONTROL SIGNAL		EACH	2
SALVAGE CABINET		EACH	2
SALVAGE CCTV ASSEMBLY		EACH	1
HAUL SALVAGE MATERIAL		LUMP SUM	1
PEDESTAL FOUNDATION		EACH	2
CABINET FOUNDATION		EACH	1
CCTV FOUNDATION		EACH	1
HANDHOLE TYPE-PVC METAL COVER		EACH	14
FIBEROPTIC SPLICE VAULT		EACH	4
OUTDOOR FIBER SPLICE ENCLOSURE		EACH	2
BURIED CABLE SIGN		EACH	20
2" RIGID STEEL CONDUIT		LIN FT	20
2" NON-METALLIC CONDUIT		LIN FT	7950
3" NON-METALLIC CONDUIT		LIN FT	750
TELEPHONE CABLE 12 PR NO 19		LIN FT	9000
POWER CABLE 3 CONDUCTOR NO 8		LIN FT	300
SIGNAL CONTROL CABLE 5 COND NO 12		LIN FT	3000
CONTROL CABLE 15 CONDUCTOR NO 18		LIN FT	300
LEAD-IN CABLE 2 CONDUCTOR NO 14		LIN FT	7250
VIDEO CABLE RG-11		LIN FT	300
FIBEROPTIC TRUNK CABLE (12MM-18SM)		LIN FT	6000
LOOP DETECTOR SPLICE		EACH	4
SPLICE CABINET (BD-4)		EACH	2
SERVICE EQUIPMENT TYPE B		EACH	1
FIBER OPTIC CABLE TESTING		LUMP SUM	1
FIBER OPTIC PIGTAIL TERMINATION		EACH	1
FIBER OPTIC CABLE SPLICING		EACH	2
INSTALL CABINET		EACH	1
INSTALL RAMP CONTROL SIGNAL		EACH	2
INSTALL CCTV ASSEMBLY		EACH	1
LOOP DETECTOR DESIGN PREFORMED		EACH	6
RELOCATE FIBER OPTIC CABLE		LIN FT	150
ARMORED FIBER OPTIC PIGTAIL 6MM, 6SM		LIN FT	2875
2" BORED CONDUIT		LIN FT	550
REROUTE CABLE		LIN FT	40

STANDARD PLATES	
THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT	
PLATE NO.	DESCRIPTION
8111 D	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED)
8112 C	PEDESTAL FOUNDATION
8119 C	GROUND MOUNTED CABINET FOUNDATION
8120 K	PA-85M POLE FOUNDATION
8122 C	PEDESTAL AND PEDESTAL BASE

I HEREBY CERTIFY THAT SHEETS 282 THROUGH 305 OF THIS PLAN WERE 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.

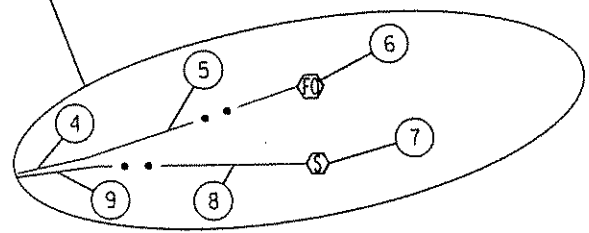
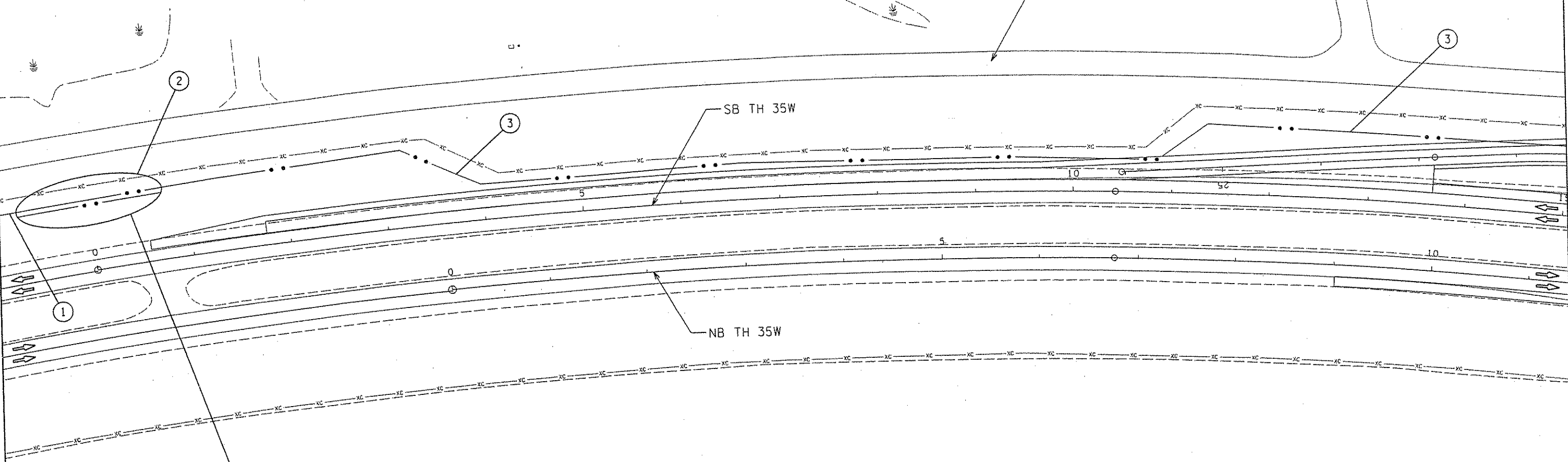
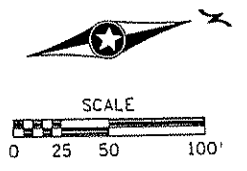
Leonard E. Palek Jr.
 LEONARD E. PALEK JR.
 DATE NOV 26, 2001 LIC. NO. 41525
 DESIGNER LES BJERKETVEDT

STATE PROJ. NO. 0280-50 ET AL (TH 35W) SHEET NO. 282 OF 559 SHEETS

REV. NO.	DATE	/ /
REV. NO.	DATE	/ /

B:\eriles\MWENTWFO031 TRAFFIC MAIL\MENT SYSTEM
11/27/01 11:01:08 A.
S:\tmc\mn\prj\80-50\028050e.tml

- ① INPLACE 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
- ② INPLACE 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
HAND DIG 75' OF 1-FO CABLE (12MM, 18SM) & INSTALL 60'
IN PROPOSED FO VAULT. SEE SHEET 287 FOR LOCATION OF
PROPOSED FO VAULT.
HAND DIG 20' OF 1-12/PR NO. 19 & REROUTE AS NEEDED
FOR PROPOSED BD4 CABINET. SEE SHEET 287 FOR
LOCATION OF PROPOSED BD4 CABINET.
- ③ INPLACE 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
ABANDON 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19



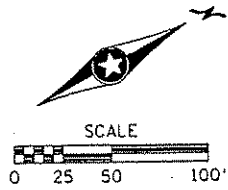
- ④ INPLACE 1-FO CABLE (12MM, 18SM)
- ⑤ REROUTED 1-FO CABLE (12MM, 18SM)
- ⑥ PROPOSED 1-FO VAULT & 60' COIL OF INPLACE
FO CABLE (12MM, 18SM). SEE SHEET 287
- ⑦ PROPOSED BD4 CABINET & FOUNDATION
- ⑧ REROUTED 1-12/PR NO. 19
- ⑨ INPLACE 1-12/PR NO. 19

EXISTING TMS CONSTRUCTION PLAN
TH 35W SOUTH OF CSAH 52

CERTIFIED BY Leonard E. Palak LIC. NO. 41525 NOV 26 2001 STATE PROJ. NO. 0280-50 ET AL (TH 35W) SHEET NO. 283 OF 559 SHEETS

REV. NO.	DATE: / /
REV. NO.	DATE: / /

- ① INPLACE SAWCUT LOOP DETECTOR
ABANDON SAWCUT LOOP DETECTOR
- ② INPLACE HANDHOLE
ABANDON HANDHOLE
- ③ INPLACE 2" NMC & 1-2/C NO. 14
REMOVE 1-2/C NO.14 & ABANDON 2" NMC
- ④ INPLACE HANDHOLE
- ⑤ INPLACE SAWCUT LOOP DETECTOR
SEVER SPLICE (SEE NOTE 9 ON SHEET 288)
- ⑥ INPLACE 2" RSC & 2-2/C NO.14
REMOVE 2-2/C NO.14
- ⑦ INPLACE 2" NMC & 3-2/C NO.14
REMOVE 3-2/C NO.14
- ⑧ INPLACE 2" RSC & 4-2/C NO.14
REMOVE 4-2/C NO.14



35W SERVICE DRIVE NE

SB TH 35W

NB TH 35W

CSAH 52

MATCHLINE: SEE SHEET 256

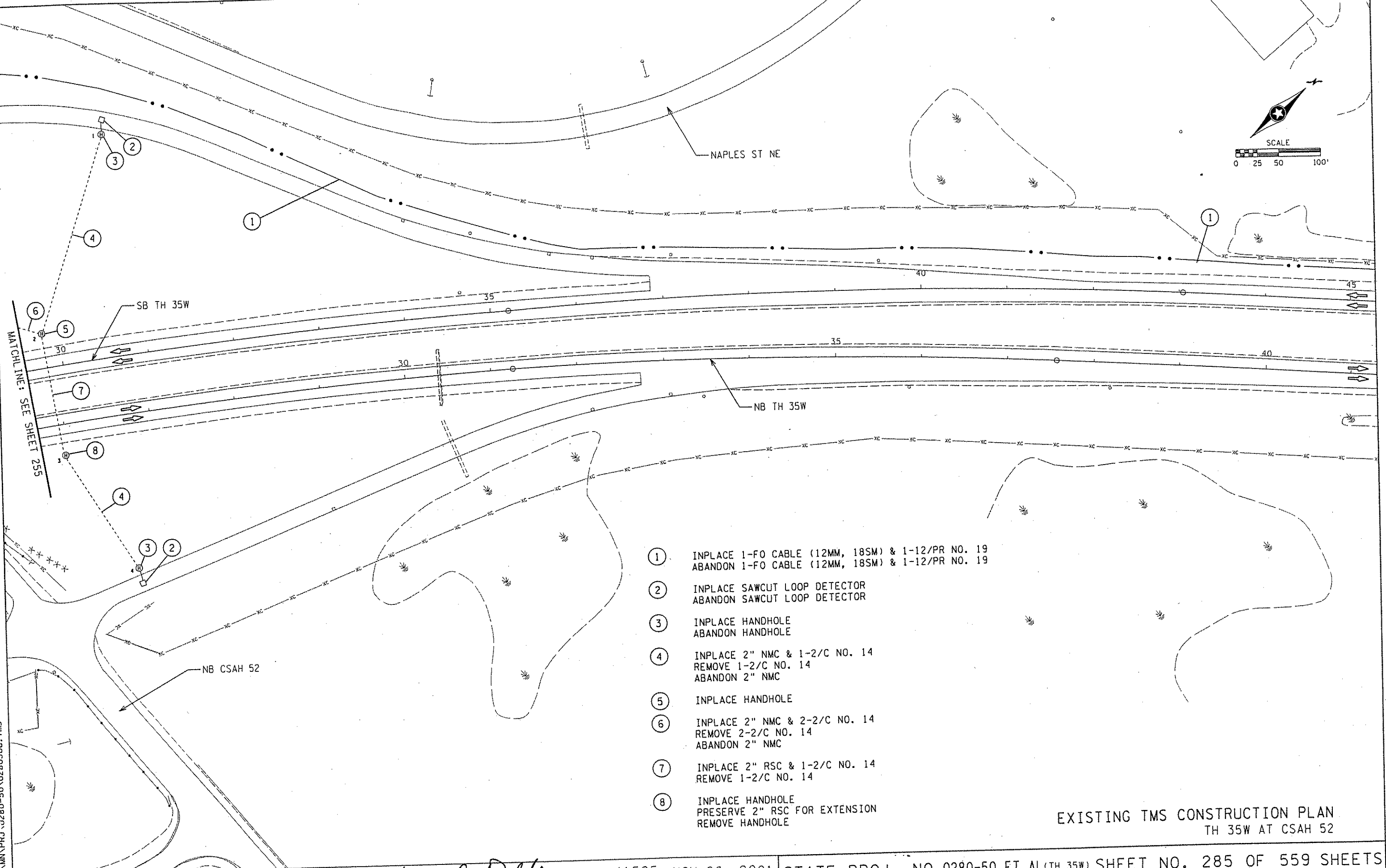
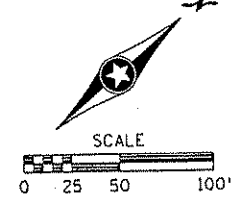
- ⑨ INPLACE 2" NMC & 5-2/C NO. 14
REMOVE 5-2/C NO. 14
ABANDON 2" NMC
- ⑩ INPLACE 2" RSC, 1-5/C NO. 12 & 6-2/C NO. 14
REMOVE 1-5/C NO. 12 & 6-2/C NO. 14
ABANDON 2" RSC
- ⑪ INPLACE 1-RCS & FOUNDATION
SALVAGE 1-RCS
REMOVE FOUNDATION
- ⑫ INPLACE 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
ABANDON 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
- ⑬ INPLACE 2" RSC, 2-5/C NO. 12 & 6-2/C NO. 14
REMOVE 2-5/C NO. 12 & 6-2/C NO. 14
ABANDON 2" RSC
- ⑭ INPLACE 3" RSC, 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
REMOVE 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
ABANDON 3" RSC
- ⑮ INPLACE 2" RSC, 1-RG11, 1-27/C NO. 18, 3-1/C NO. 10 & 2-2/C NO. 14
REMOVE 1-RG11, 1-27/C NO. 18, 3-1/C NO. 12 & 2-2/C NO. 14
ABANDON 2" RSC
- ⑯ INPLACE 2" NMC, 1-RG11, 1-27/C NO. 18, 3-1/C NO. 10 & 2-2/C NO. 14
REMOVE 1-RG11, 1-27/C NO. 18, 3-1/C NO. 12 & 2-2/C NO. 14
ABANDON 2" NMC
- ⑰ INPLACE 2" RSC, 1-RG11, 1-27/C NO. 18, & 3-1/C NO. 10
REMOVE 1-RG11, 1-27/C NO. 18, & 3-1/C NO. 12
ABANDON 2" RSC
- ⑱ INPLACE CCTV ASSEMBLY & FOUNDATION, CAMERA NO. (643)
SALVAGE CCTV ASSEMBLY
REMOVE FOUNDATION

- ⑲ INPLACE 2" NMC & 2-2/C NO. 14
REMOVE 2-2/C NO. 14
ABANDON 2" NMC
- ⑳ INPLACE 2" RSC, 2-5/C NO. 12, & 6-2/C NO. 14
REMOVE 2-5/C NO. 12 & 6-2/C NO. 14
ABANDON 2" RSC
- ㉑ INPLACE 2" NMC & 1-6/PR NO. 19
REMOVE 1-6/PR NO. 19
ABANDON 2" NMC
- ㉒ INPLACE 1-BD4 CABINET AND FOUNDATION
SALVAGE 1-BD4 CABINET
REMOVE FOUNDATION
- ㉓ INPLACE 1-12/PR NO. 19
ABANDON 1-12/PR NO. 19

- ㉔ INPLACE 1-FO CABLE (12MM, 18SM)
ABANDON 1-FO CABLE (12MM, 18SM)
- ㉕ INPLACE 1-FO SPLICE VAULT & OUTDOOR FIBER
SPLICE ENCLOSURE
ABANDON 1-FO SPLICE VAULT & OUTDOOR FIBER
SPLICE ENCLOSURE
- ㉖ INPLACE 2" NMC & 1-FO PIGTAIL
ABANDON 2" NMC & 1-FO PIGTAIL
- ㉗ INPLACE 3" RSC, 1-6/PR NO. 19, 1-FO PIGTAIL, 1-RG11,
1-27/C NO. 18, 3-1/C NO. 10, & 2-2/C NO. 14
REMOVE 1-6/PR NO. 19, 1-FO PIGTAIL, 1-RG11,
1-27/C NO. 18, 3-1/C NO. 10 & 2-2/C NO. 14
ABANDON 3" RSC
- ㉘ INPLACE 334Z CABINET AND FOUNDATION
SALVAGE 334Z CABINET, CAB NO. (35W-31.9)
REMOVE FOUNDATION
- ㉙ INPLACE 1.5" RSC & 3-1/C NO. 6
REMOVE 3-1/C NO. 6
ABANDON 1.5" RSC
- ㉚ INPLACE SOP; WOOD POLE, 120/240 VAC
ADDRESS (3300 95TH AVE NE)
REMOVAL OF METER & POWER CONNECTION BY CONNEXUS ENERGY
ABANDON SOP

EXISTING TMS CONSTRUCTION PLAN
TH 35W AT CSAH 52

REV. NO.	DATE: / /
REV. NO.	DATE: / /

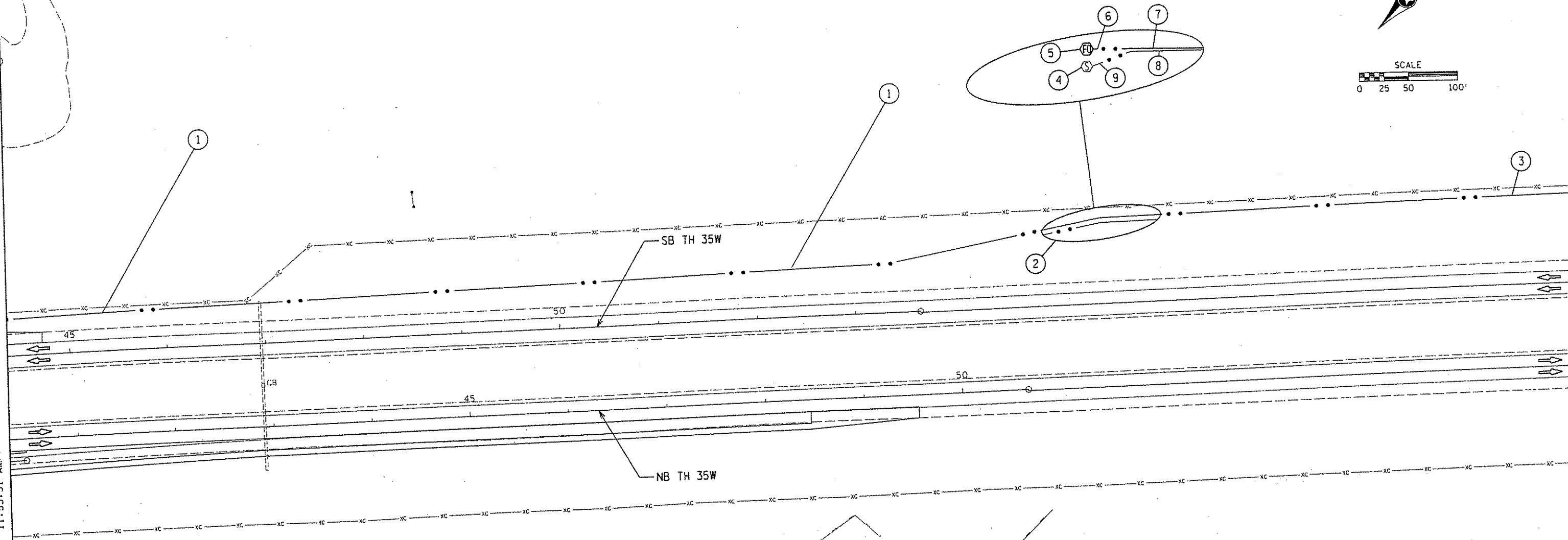
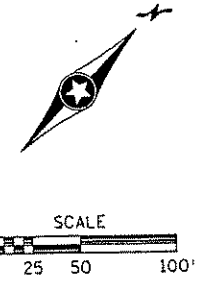


- ① INPLACE 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
ABANDON 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
- ② INPLACE SAWCUT LOOP DETECTOR
ABANDON SAWCUT LOOP DETECTOR
- ③ INPLACE HANDHOLE
ABANDON HANDHOLE
- ④ INPLACE 2" NMC & 1-2/C NO. 14
REMOVE 1-2/C NO. 14
ABANDON 2" NMC
- ⑤ INPLACE HANDHOLE
- ⑥ INPLACE 2" NMC & 2-2/C NO. 14
REMOVE 2-2/C NO. 14
ABANDON 2" NMC
- ⑦ INPLACE 2" RSC & 1-2/C NO. 14
REMOVE 1-2/C NO. 14
- ⑧ INPLACE HANDHOLE
PRESERVE 2" RSC FOR EXTENSION
REMOVE HANDHOLE

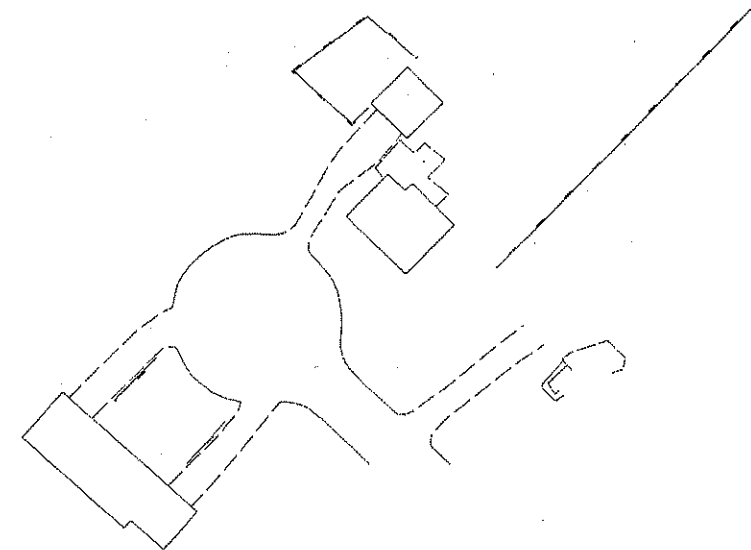
EXISTING TMS CONSTRUCTION PLAN
TH 35W AT CSAH 52

CERTIFIED BY Leonard Pahl LIC. NO. 41525 NOV 26 2001 STATE PROJ. NO. 0280-50 ET AL (TH 35W) SHEET NO. 285 OF 559 SHEETS

REV. NO.	DATE: / /
REV. NO.	DATE: / /



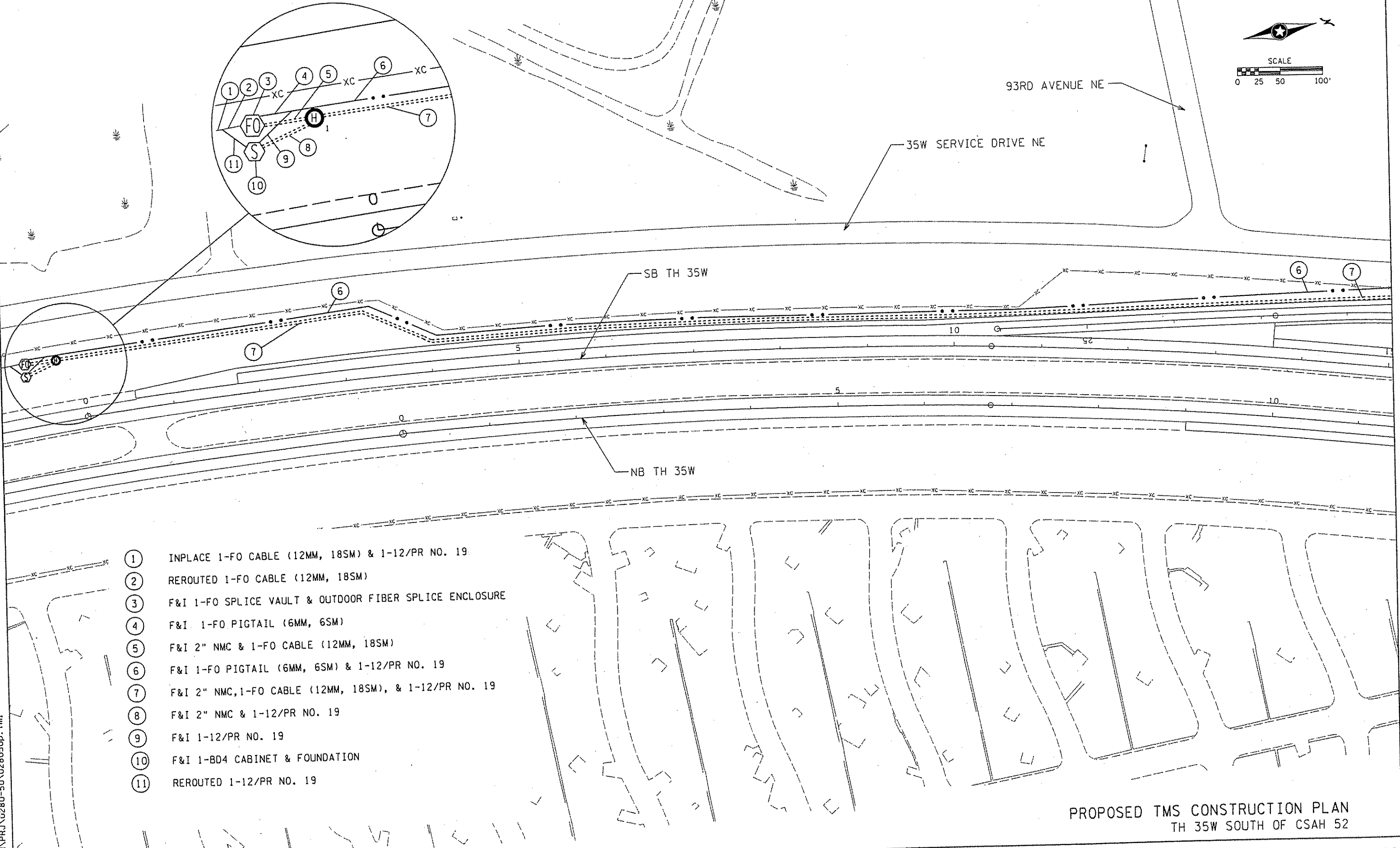
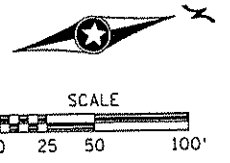
- ① INPLACE 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
ABANDON 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
- ② INPLACE 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
HAND DIG 75' OF 1-FO CABLE (12MM, 18SM) & INSTALL 60'
OF FO CABLE IN PROPOSED VAULT. SEE SHEET 290 FOR
LOCATION OF PROPOSED FO VAULT.
HAND DIG 20' OF 1-12/PR NO. 19 CABLE & REROUTE AS
NEEDED FOR PROPOSED BD4 CABINET. SEE SHEET 290
FOR LOCATION OF PROPOSED BD4 CABINET.
- ③ INPLACE 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
- ④ PROPOSED BD4 CABINET & FOUNDATION
- ⑤ PROPOSED FO VAULT & 60' COIL OF INPLACE
FO CABLE (12MM, 18SM). SEE SHEET 290 FOR
FURTHER DETAILS.
- ⑥ REROUTED 1-FO CABLE (12MM, 18SM)
- ⑦ INPLACE 1-FO CABLE (12MM, 18SM)
- ⑧ INPLACE 1-12/PR NO. 19
- ⑨ REROUTED 1-12/PR NO. 19



EXISTING TMS CONSTRUCTION PLAN
TH35W NORTH OF CSAH 52

REV. NO.	DATE: / /
REV. NO.	DATE: / /

CERTIFIED BY Lemuel Pahl LIC. NO. 41525 NOV 26 2001
LICENSED PROFESSIONAL ENGINEER

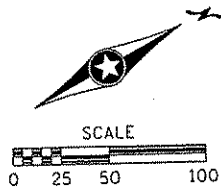
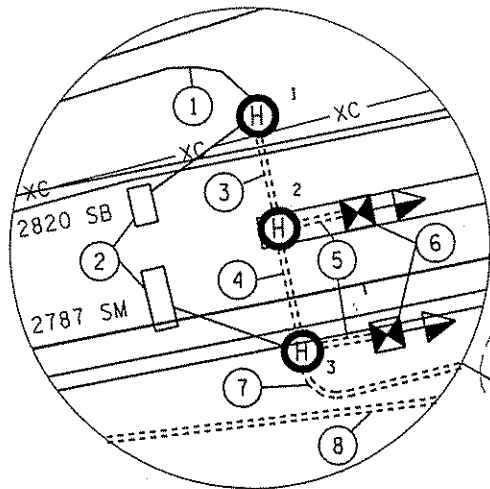


- ① INPLACE 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
- ② REROUTED 1-FO CABLE (12MM, 18SM)
- ③ F&I 1-FO SPLICE VAULT & OUTDOOR FIBER SPLICE ENCLOSURE
- ④ F&I 1-FO PIGTAIL (6MM, 6SM)
- ⑤ F&I 2" NMC & 1-FO CABLE (12MM, 18SM)
- ⑥ F&I 1-FO PIGTAIL (6MM, 6SM) & 1-12/PR NO. 19
- ⑦ F&I 2" NMC, 1-FO CABLE (12MM, 18SM), & 1-12/PR NO. 19
- ⑧ F&I 2" NMC & 1-12/PR NO. 19
- ⑨ F&I 1-12/PR NO. 19
- ⑩ F&I 1-BD4 CABINET & FOUNDATION
- ⑪ REROUTED 1-12/PR NO. 19

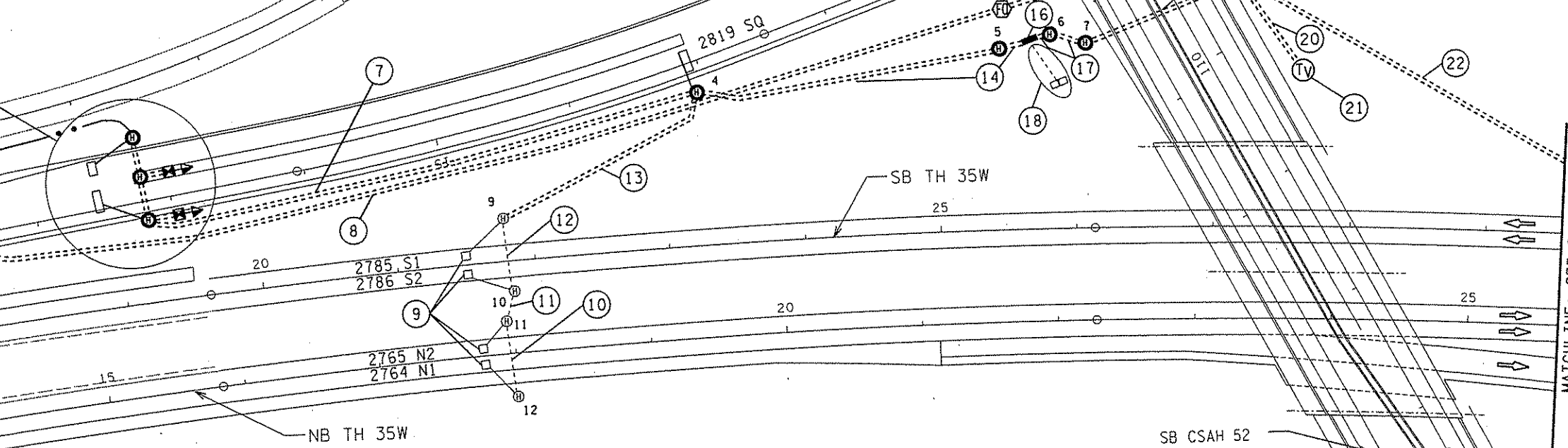
PROPOSED TMS CONSTRUCTION PLAN
TH 35W SOUTH OF CSAH 52

REV. NO.	DATE: / /
REV. NO.	DATE: / /

CERTIFIED BY *Leonard E. Palik* LIC. NO. 41525 NOV 26 2001
LICENSED PROFESSIONAL ENGINEER



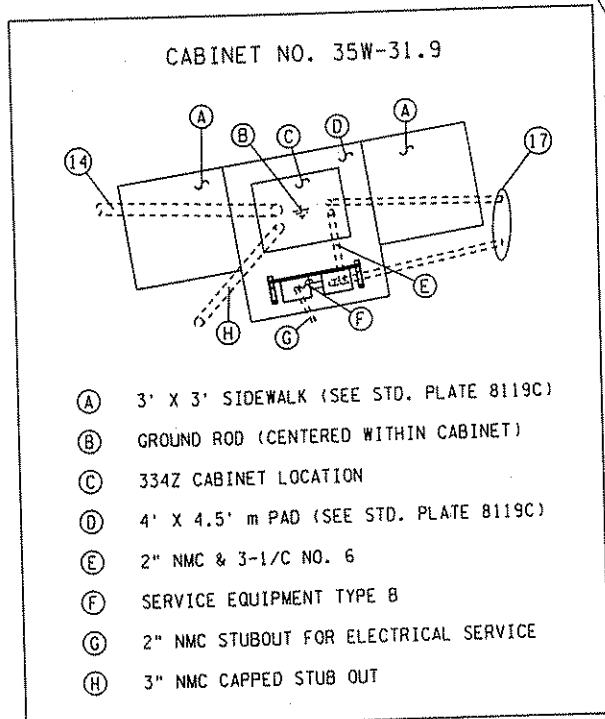
35W SERVICE DRIVE NE



MATCHLINE: SEE SHEET 260

- ① F&I 1-FO PIGTAIL (6MM, 6SM) & 1-12/PR NO. 19
- ② F&I PREFORMED LOOP DETECTOR (ENCAPSULATE ENDS WITHIN HANDHOLE) (SEE ROADWAY CONSTRUCTION STAGING PLANS)
- ③ F&I 3" NMC, 1-FO PIGTAIL (6MM, 6SM), 1-12/PR NO. 19, & 1-2/C NO. 14
- ④ F&I 3" NMC, 1-FO PIGTAIL (6MM, 6SM), 1-12/PR NO. 19, 1-2/C NO. 14, & 1-5/C NO. 12
- ⑤ F&I 2" NMC & 2-5/C NO. 12
- ⑥ F&I RAMP CONTROL SIGNAL FOUNDATION & INSTALL SALVAGED RAMP CONTROL SIGNAL
- ⑦ F&I 3" NMC, 1-FO PIGTAIL (6MM, 6SM), 1-12/PR NO. 19, 2-2/C NO. 14, & 2-5/C NO. 12
- ⑧ F&I 2" NMC, 1-FO CABLE (12MM, 18SM), & 1-12/PR NO. 19
- ⑨ INPLACE SAWCUT LOOP DETECTOR F&I LOOP DETECTOR SPLICE
- ⑩ INPLACE 2" RSC F&I 1-2/C NO.14
- ⑪ INPLACE 2" NMC F&I 2-2/C NO.14

- ⑫ INPLACE 2" RSC F&I 3-2/C NO. 14
- ⑬ F&I 2" NMC & 4-2/C NO. 14
- ⑭ F&I 4" NMC, 1-FO PIGTAIL (6MM, 6SM), 1-12/PR NO. 19, 7-2/C NO. 14, & 2-5/C NO. 12
- ⑮ F&I 1-FO VAULT (FOR PULLING ONLY)
- ⑯ F&I 334Z CABINET FOUNDATION & SERVICE EQUIPMENT TYPE B WITH 15 AMP BREAKER FOR CCTV INSTALL SALVAGED 334Z CABINET, CAB NO. (35W-31.9)
- ⑰ F&I 2" NMC, 1-RG11, 1-15/C NO. 18, 3-1/C NO. 8, & 3-2/C NO. 14
- ⑱ SOP BY OTHERS, ADDRESS (3302 95TH AVE NE) SERVICE PROVIDED BY CONNEXUS ENERGY (SEE SPECIAL PROVISIONS)
- ⑲ F&I 2" NMC, 1-RG11, 1-15/C NO. 18, 1-3/C NO. 8, & 3-2/C NO. 14
- ⑳ F&I 2" NMC, 1-RG11, 1-15/C NO. 18, & 1-3/C NO. 8
- ㉑ F&I CCTV FOUNDATION INSTALL SALVAGED CCTV ASSEMBLY, CAM NO. (643)
- ㉒ F&I 2" NMC & 3-2/C NO. 14
- ㉓ F&I 2" NMC, 1-FO CABLE (12MM, 18SM), & 1-12/PR NO. 19 PLACEMENT OF CONDUIT IN THIS AREA MUST BE AT LEAST 2' BELOW PROPOSED STORM WATER CULVERT



PROPOSED TMS CONSTRUCTION PLAN TH 35W AT CSAH 52

CERTIFIED BY *Leonard C. Paluch* NO. 41525 NOV 26 2001 LICENSED PROFESSIONAL ENGINEER

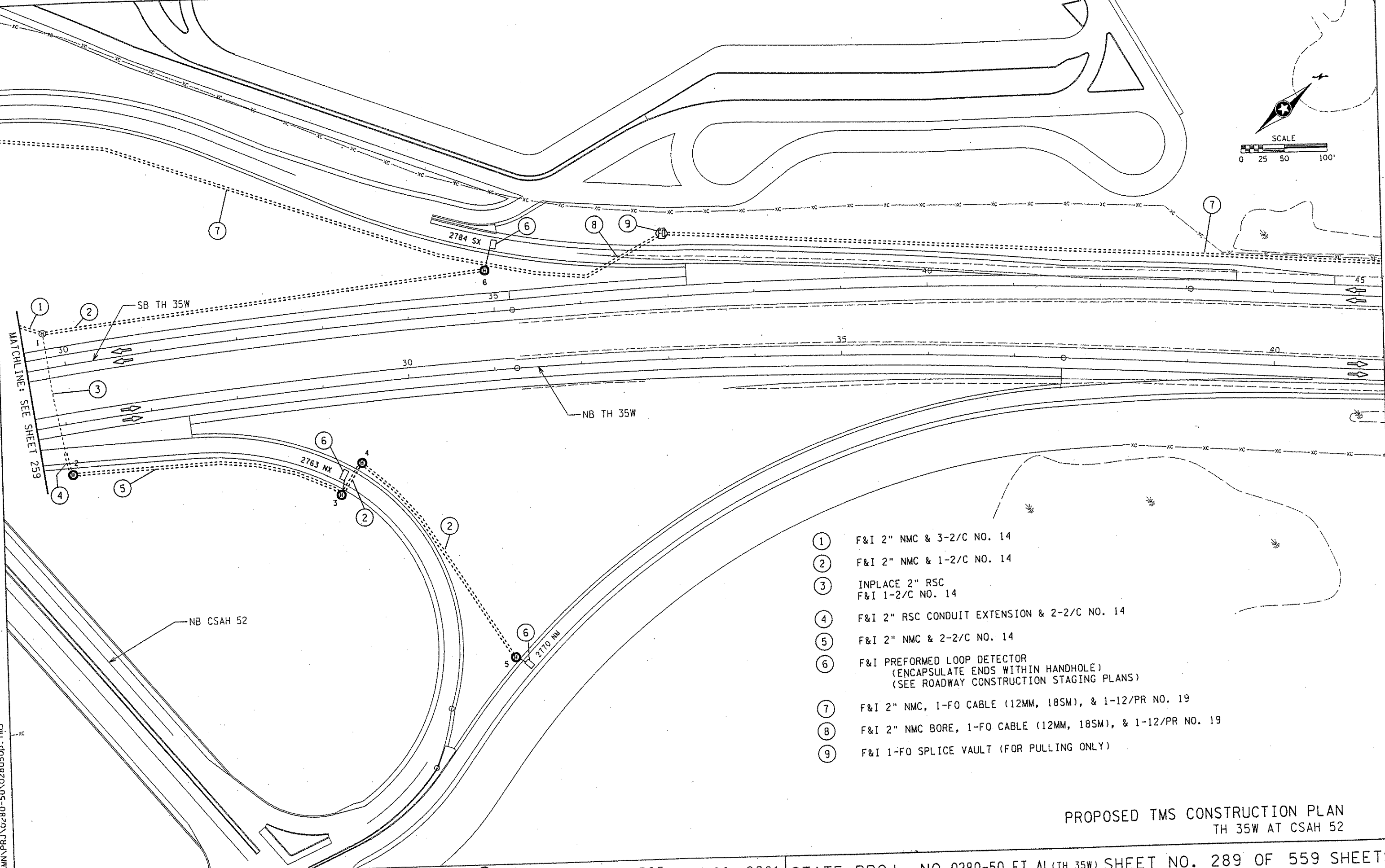
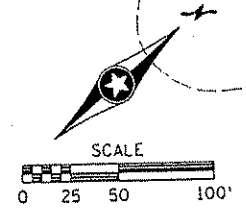
STATE PROJ. NO.0280-50 ET AL (TH 35W) SHEET NO. 288 OF 559 SHEETS

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- ① F&I 2" NMC & 3-2/C NO. 14
- ② F&I 2" NMC & 1-2/C NO. 14
- ③ INPLACE 2" RSC
F&I 1-2/C NO. 14
- ④ F&I 2" RSC CONDUIT EXTENSION & 2-2/C NO. 14
- ⑤ F&I 2" NMC & 2-2/C NO. 14
- ⑥ F&I PREFORMED LOOP DETECTOR
(ENCAPSULATE ENDS WITHIN HANDHOLE)
(SEE ROADWAY CONSTRUCTION STAGING PLANS)
- ⑦ F&I 2" NMC, 1-FO CABLE (12MM, 18SM), & 1-12/PR NO. 19
- ⑧ F&I 2" NMC BORE, 1-FO CABLE (12MM, 18SM), & 1-12/PR NO. 19
- ⑨ F&I 1-FO SPLICE VAULT (FOR PULLING ONLY)

PROPOSED TMS CONSTRUCTION PLAN
TH 35W AT CSAH 52

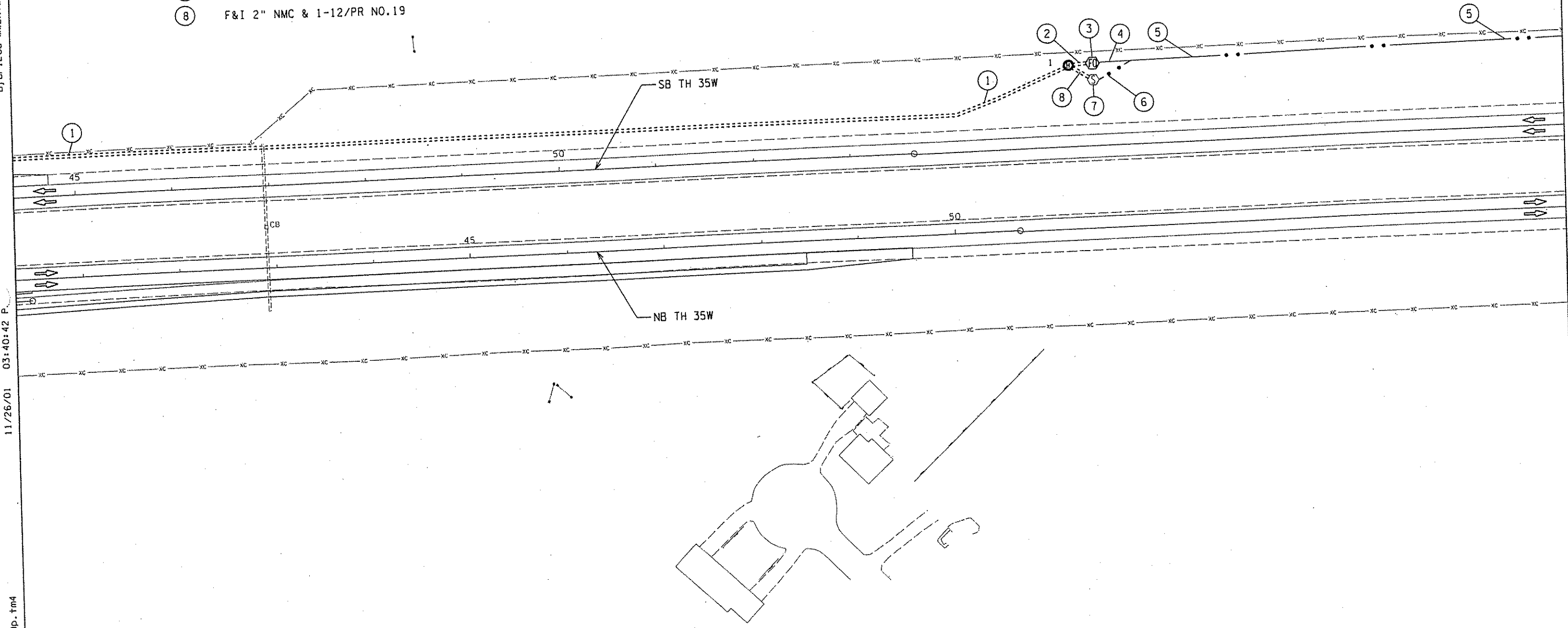
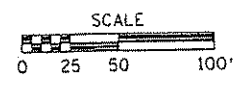
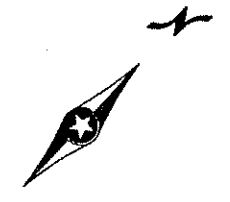
CERTIFIED BY *Leonard Pahlke* LIC. NO. 41525 NOV 26 2001
LICENSED PROFESSIONAL ENGINEER

STATE PROJ. NO. 0280-50 ET AL (TH 35W) SHEET NO. 289 OF 559 SHEETS

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- ① F&I 2" NMC, 1-FO CABLE (12MM, 18MM), & 1-12/PR NO. 19
- ② F&I 2" NMC, 1-FO CABLE (12MM, 18MM)
- ③ F&I 1-FO SPLICE VAULT & OUTDOOR FIBER SPLICE ENCLOSURE
- ④ REROUTED 1-FO CABLE (12MM, 18SM)
- ⑤ INPLACE 1-FO CABLE (12MM, 18SM) & 1-12/PR NO. 19
- ⑥ REROUTED 1-12/PR NO. 19
- ⑦ F&I 1-BD4 CABINET AND FOUNDATION
- ⑧ F&I 2" NMC & 1-12/PR NO.19



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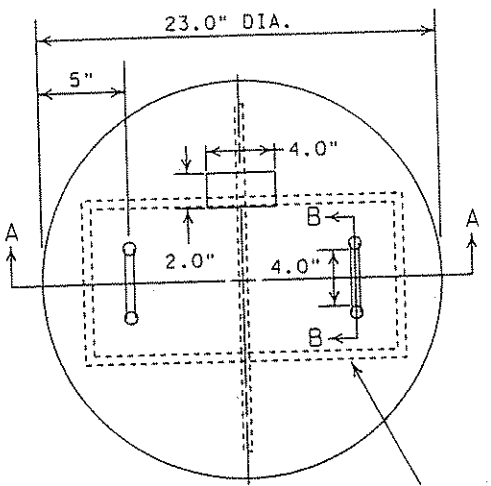
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PROPOSED TMS CONSTRUCTION PLAN
TH35W NORTH OF CSAH 52

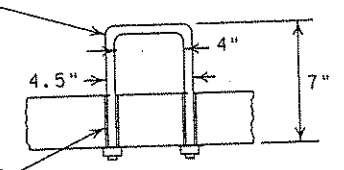
CERTIFIED BY Leonardo Pahlke LIC. NO. 41525 NOV 26 2001 STATE PROJ. NO. 0280-50 ET AL (TH 35W) SHEET NO. 290 OF 559 SHEETS

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LIFT HANDLE 1/2" DIA GALVANIZED "U-BOLT" WITH NUTS AND WASHERS

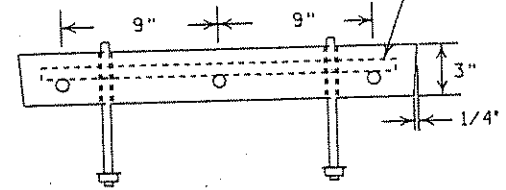


3/4" DIA. HOLES

SECTION B-B

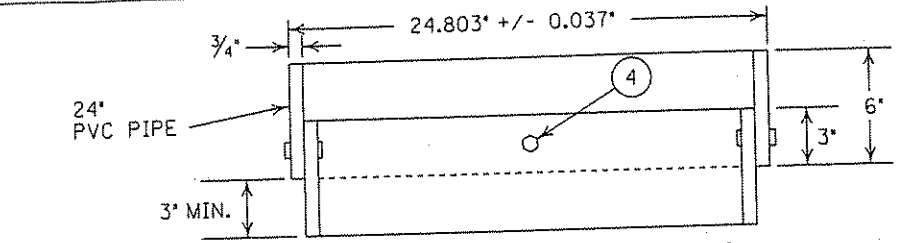
NOTES:

1. INSTALL NUMBER 10 STEEL REINFORCEMENT BARS IN 9 INCH RECTANGLES, COAT THE BARS WITH EPOXY AS PER MN/DOT 3301
2. COAT THE ENTIRE COVER WITH EPOXY PER MN/DOT CONCRETE MANUAL 5-694.184E AND AS RECOMMENDED BY THE EPOXY MANUFACTURER.
3. USE 3U32 CONCRETE AS PER MN/DOT 2461.
4. EMBOSS THE CONCRETE COVER WITH "TMS" IN 2" LETTERS 1/4" DEEP.



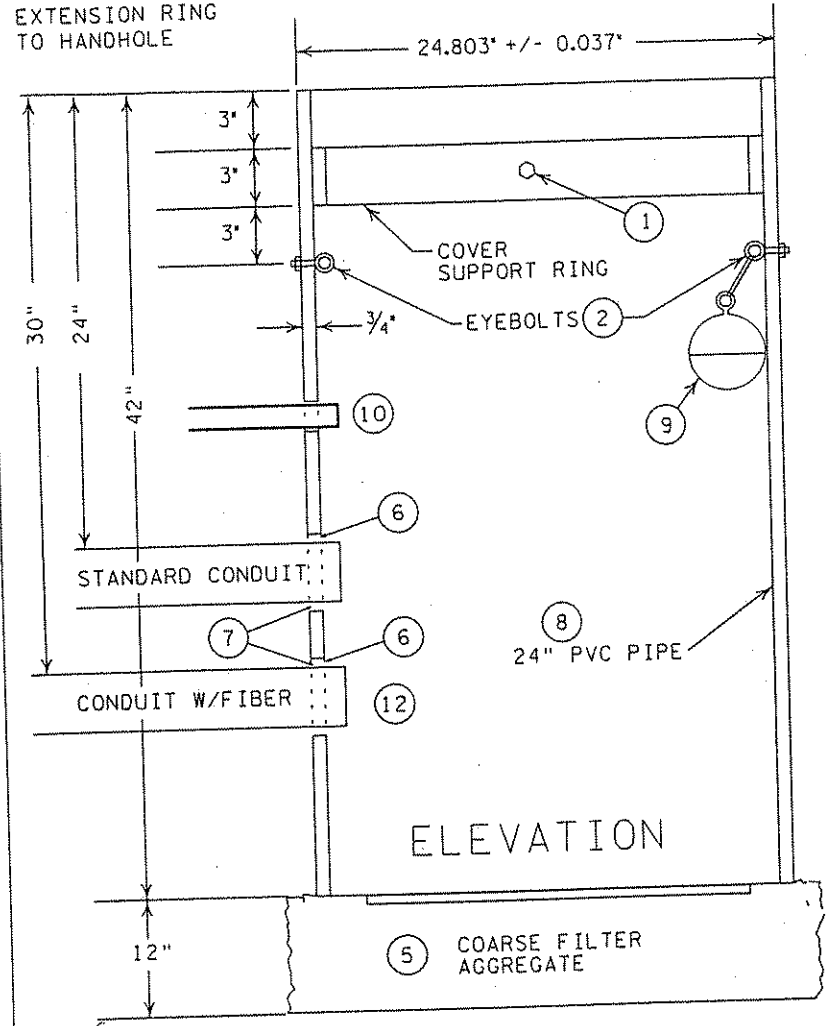
SECTION A-A

CONCRETE COVER



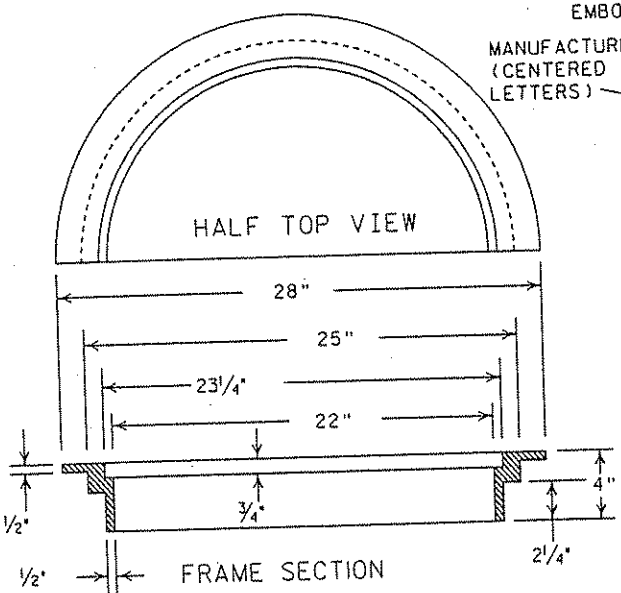
EXTENSION RING (AS REQUIRED)

USE APPROVED P.V.C. CEMENT TO ATTACH EXTENSION RING TO HANDHOLE



ELEVATION

- NOTES:
- ① ATTACH SPLIT 24" DIA. P.V.C. COVER SUPPORT RING WITH FOUR 3/8" DIA. X 2" LONG BOLTS AND NUTS AT 90° APART.
 - ② TWO TYPE 2 SHOULDER EYEBOLTS, 3/8" DIA. X 1 1/4" SHANK LENGTH, WITH HEX. NUTS AT 180° APART (FOR LIFTING HANDHOLES AND SUPPORTING ELECTRICAL CABLES).
 - ③ FOUR 1/4" X 1 1/4" LONG GALVANIZED LAG SCREWS.
 - ④ ATTACH SPLIT 24" DIA. PVC EXTENSION RING WITH FOUR 3/8" DIA. X 2" LONG BOLTS AT 90° APART. THE BOLTS & NUTS COMPLY WITH MN/DOT 3391.2E, THE OTHER HARDWARE WITH 3392.
 - ⑤ COMPACT COARSE FILTER AGGREGATE COMPLYING WITH MN/DOT 3149.2H TO A 12" DEPTH.
 - ⑥ CONDUIT ENTRANCES IN THE BARREL ARE SIZED 1.0" LARGER THAN THE CONDUIT USED.
 - ⑦ PLUG HANDHOLE AT CONDUIT INSTALLATION, PROVIDING A WATER TIGHT SEAL.
 - ⑧ THE PVC PIPE COMPLIES WITH ASTM F 9T-1.
 - ⑨ INSTALL ORANGE LOCATER BALL WITH TIE WRAP TO EYE BOLT
 - ⑩ MINIMUM CONDUIT DEPTH FOR LOOP LEAD-IN WIRES SHALL BE 1.5'.
 - ⑪ INSTALL CONDUITS NO SHARPER THAN 135 DEG. FOR INSTALLATIONS OF CONDUIT WHERE FIBER WILL PASS THRU.
 - ⑫ INSTALL CONDUITS WITH FIBER PASSING THRU AT 30" DEPTH THRU HANDHOLES. TRANSITION TO/FROM STANDARD 36" FIBER DEPTH OR PUSH DEPTH OUTSIDE HANDHOLES. NOTE: PROVIDE 36" CONDUIT STUB OUT FOR DIRECT BURIED FIBER PASSING THRU HANDHOLE.

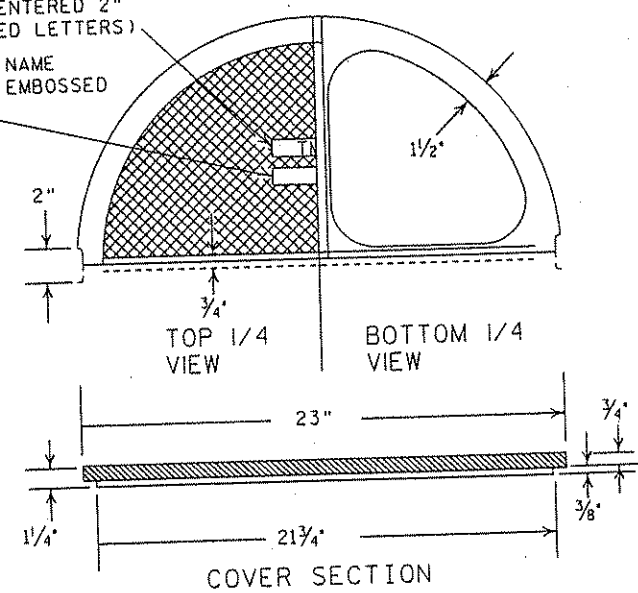


HALF TOP VIEW

FRAME SECTION

FRAME AND COVER CASTING

LIGHT DUTY METAL COVER

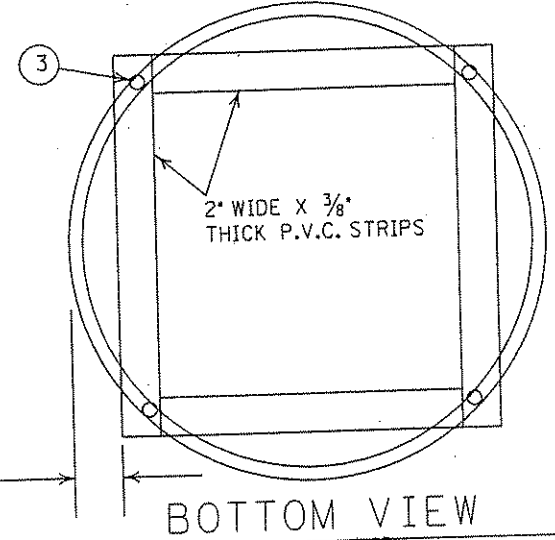


TOP 1/4 VIEW

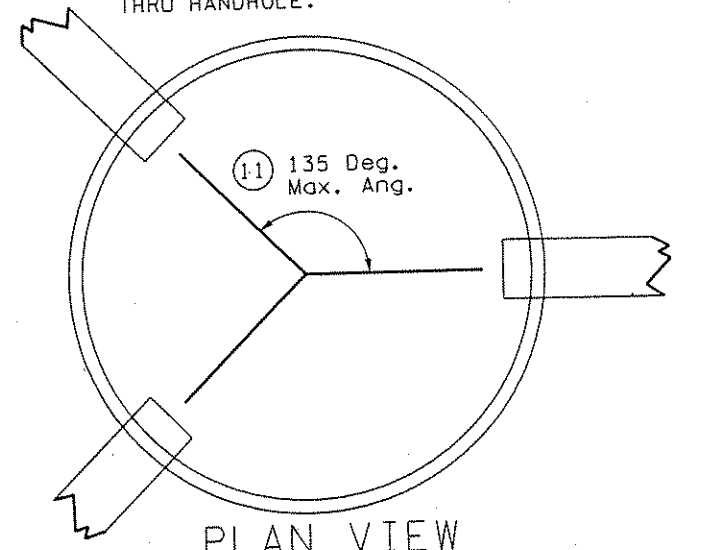
BOTTOM 1/4 VIEW

COVER SECTION

NOTE: ALL CASTINGS ARE GRAY IRON PER MN/DOT SPEC. 3321 CLASS 35B



BOTTOM VIEW



PLAN VIEW

HANDHOLE DETAIL

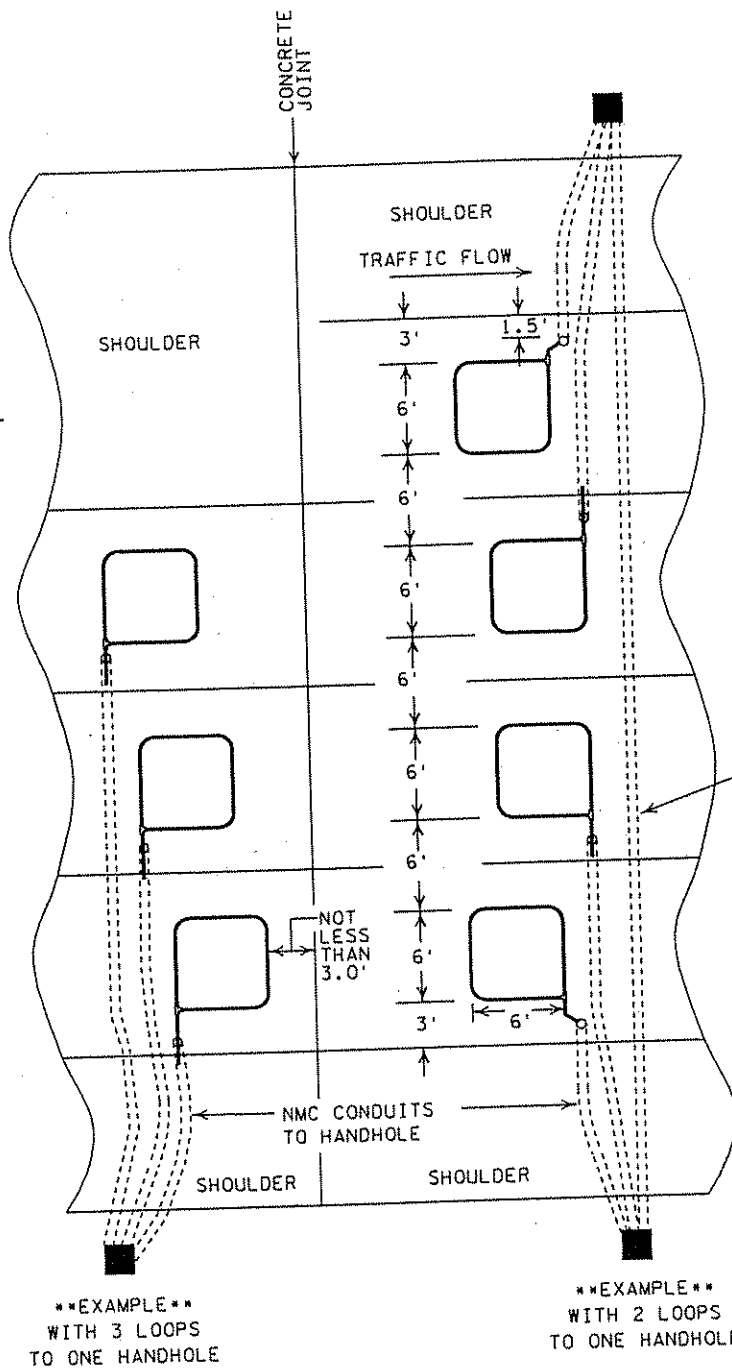
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GENERAL NOTES:

1. SEE SPECIAL PROVISIONS FOR REQUIRED LOOP DETECTOR CONDUCTORS AND SPLICE KIT.
2. THE LOOP DETECTOR HEAD SHALL BE 5/8" O.D. POLYPROPOLYENE CONDUIT AND SHALL BE INJECTED WITH HOT RUBBERIZED ASPHALT AFTER CONDUCTOR PLACEMENT TO ENCAPSULATE THE WIRE AND PROVIDE A MOISTURE BARRIER
3. PREFORMED LOOP DETECTORS ARE VARIABLE SIZED DEPENDING ON ROADWAY LOCATION AND SHALL BE INSTALLED IN THE CENTER OF THE LANE.
4. THE LOOP DETECTOR CONDUCTOR IS 1/C NO. 16 XHHW OR XLP STRANDED COPPER.
5. THE PROTECTED LEAD PORTION OF LOOP SHALL EXTEND FROM THE TEE CONNECTOR, ENDING A MIN. OF 1.0' INSIDE THE NMC CONDUIT
6. THE LOOP DETECTOR CONDUCTORS SHALL BE TWISTED THREE TURNS PER FOOT FROM THE NMC TEE CONNECTOR TO THE HANDHOLE.
7. EACH LOOP DETECTOR CONDUIT TO THE HANDHOLE SHALL BE SLOPED TOWARDS THE HANDHOLE.
8. THE LOOP DETECTOR CONDUCTORS SHALL END IN THE HANDHOLE.
9. NO SPLICES ALLOWED IN LOOP CONDUCTOR EXCEPT AT HANDHOLE
10. SEE SPECIAL PROVISIONS FOR TESTING REQUIREMENTS OF LOOP DETECTORS
11. THE LOOP DETECTOR CONDUCTORS AND THE LOOP DETECTOR LEAD-IN CABLE CONDUCTORS SHALL BE PROPERLY PREPARED AND CLEANED BEFORE SPLICING. SOLDER THE LOOP CONDUCTOR TO LEAD-IN CONDUCTORS, INSTALL THE SPLICE IN WIRE NUT, THEN PLACE IT INTO THE SPLICE ENCAPSULATOR
12. INSTALL THE SPLICE IN A PLASTIC TUBE WITH END CAPS THAT FUNCTION AS SPOUTS, AND A TWO PART PLASTIC ENVELOPE CONTAINING RESINS THAT TURN BLACK WHEN MIXED AND BECOME HARD WHEN CURED. INSTALL BOTH LOOP CONDUCTORS AND LEAD-IN INTO THE SAME END OF THE TUBE AND ENCAPSULATE THE SPLICE.
13. THE LOOP INSULATION RESISTANCE READING MUST BE GREATER THAN 100 MEG OHM.
14. "NEVER FAIL LOOP SYSTEMS" DETECTORS-MODEL A WITH THE MODIFICATIONS NOTED HAVE MET THESE REQUIREMENTS

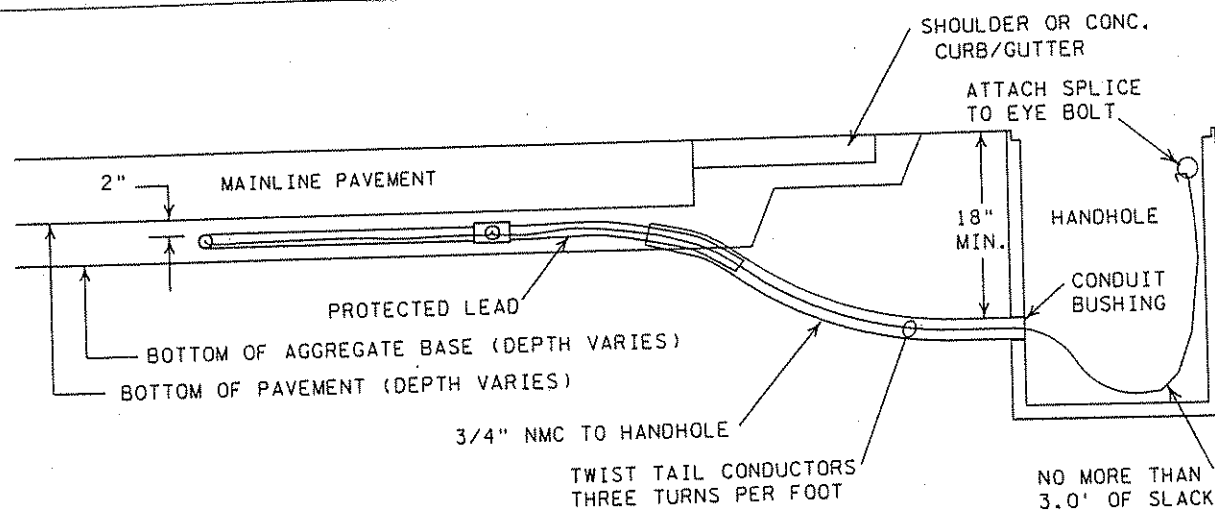
CONTRACTOR SHALL SPECIFY XHHW OR XLP TYPE WIRE, LOOP DETECTOR TAIL LENGTH AND 5 TURNS OF WIRE WHEN ORDERING PREFORMED LOOP DETECTORS



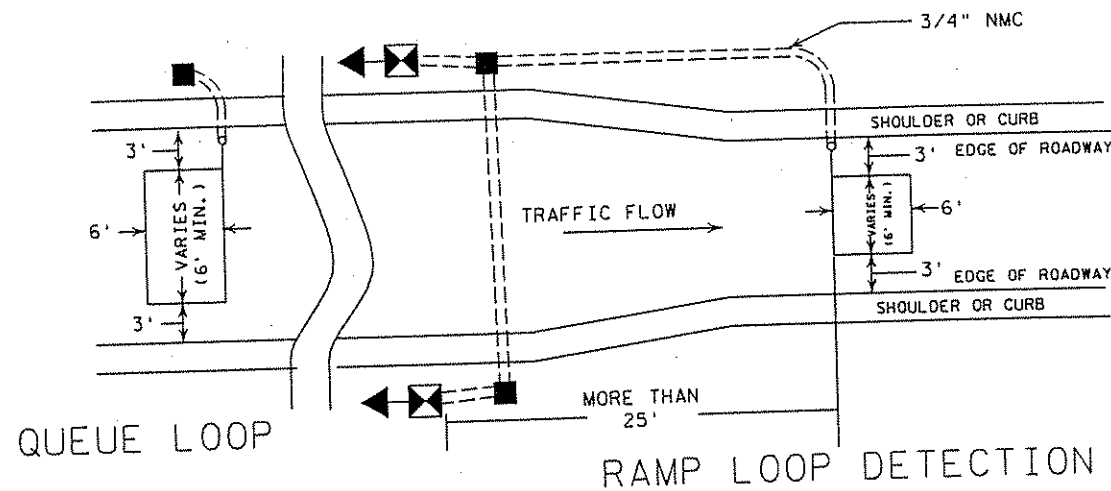
MAINLINE DETECTORS

EXAMPLE WITH 3 LOOPS TO ONE HANDHOLE

EXAMPLE WITH 2 LOOPS TO ONE HANDHOLE



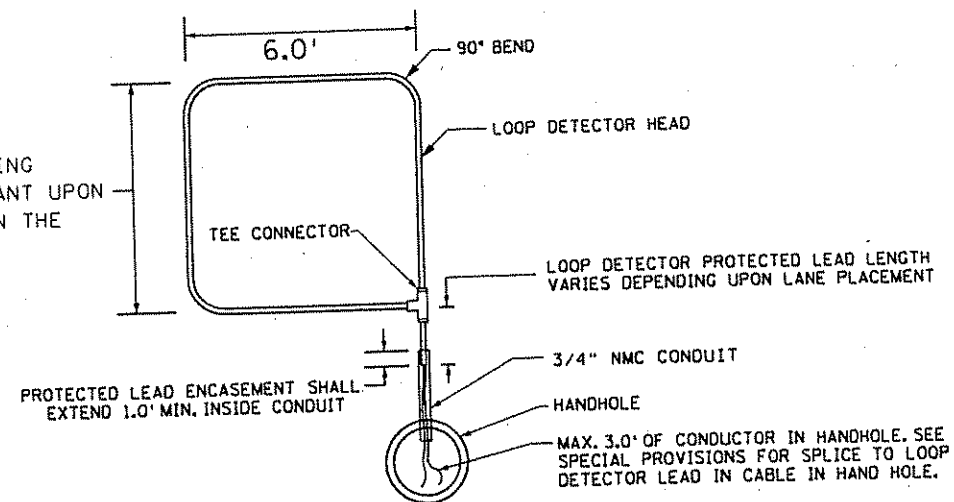
CONDUIT/HANDHOLE INSTALLATION



QUEUE LOOP

RAMP LOOP DETECTION

THIS DIMENSION VARIES ACCORDING TO DETECTOR SIZE & IS DEPENDANT UPON THE DETECTORS LOCATION WITHIN THE ROADWAY, RAMP, OR LOOP

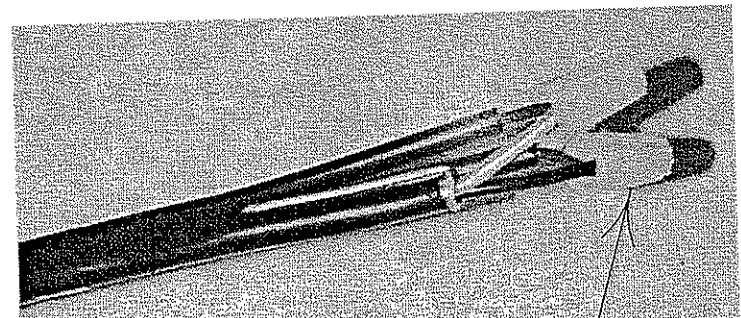


TYPICAL PREFORMED LOOP DETECTOR DETAIL

TMS "PREFORMED" LOOP DETECTOR-PART ONE

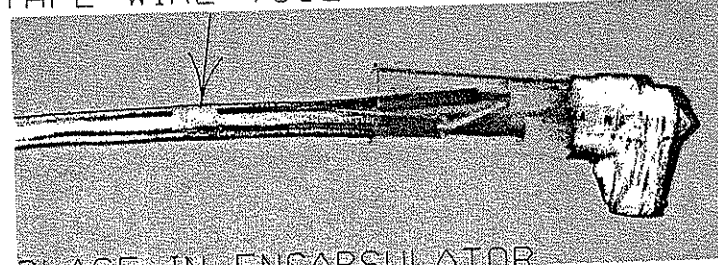
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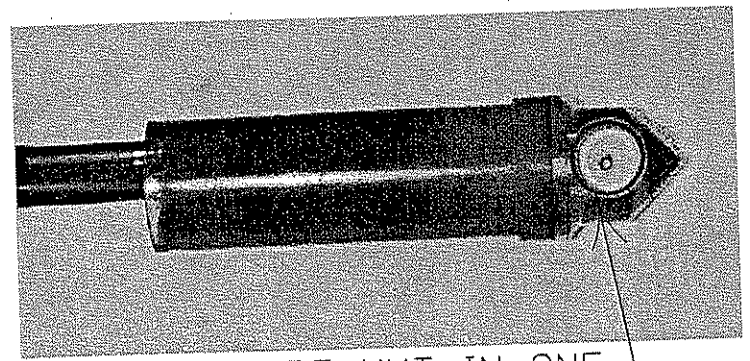


SOLDERED BUTT SPLICE IN WIRE NUT

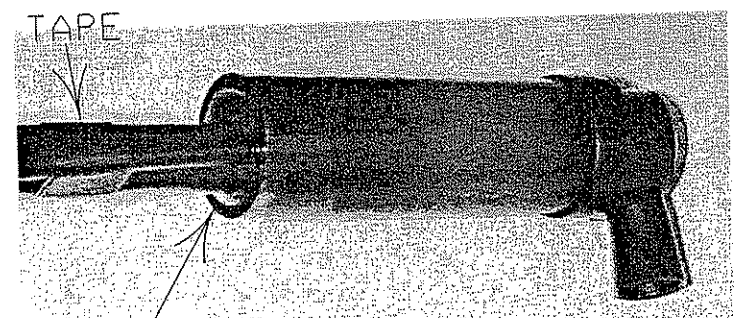
TAPE WIRE TOGETHER BEFORE SPLICE



PLACE IN ENCAPSULATOR

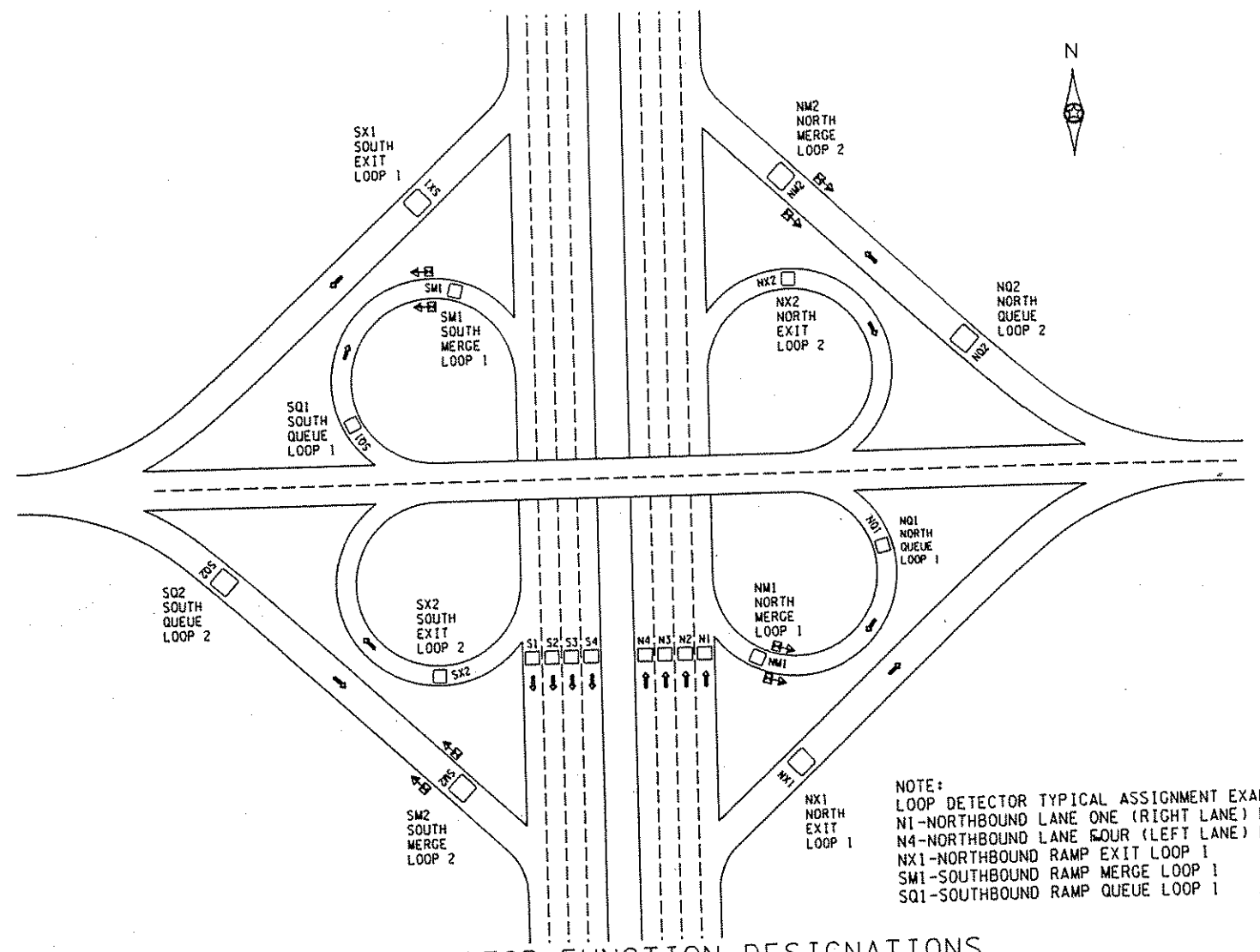


PLACE WIRE NUT IN ONE END TO BLOCK OPENING



FILL ENCAPSULATOR COMPLETELY-ALLOW FINISHED SPLICE TO CURE SO EPOXY DOES NOT RUN OUT

LOOP DETECTOR SPLICE FOR SAWCUT AND NMC LOOPS

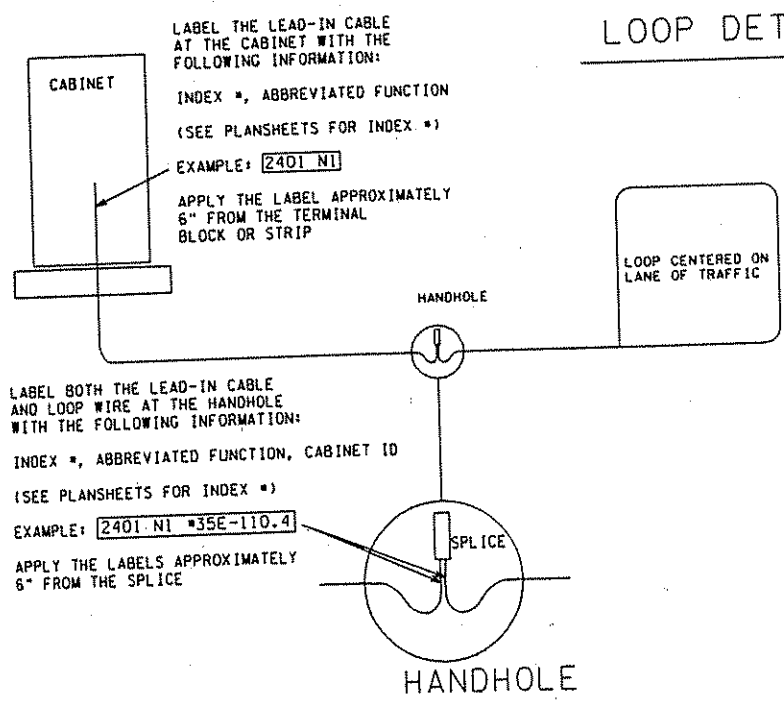


NOTE:
 LOOP DETECTOR TYPICAL ASSIGNMENT EXAMPLES
 N1-NORTHBOUND LANE ONE (RIGHT LANE) POSITION
 N4-NORTHBOUND LANE FOUR (LEFT LANE) POSITION
 NX1-NORTHBOUND RAMP EXIT LOOP 1
 SM1-SOUTHBOUND RAMP MERGE LOOP 1
 SQ1-SOUTHBOUND RAMP QUEUE LOOP 1

LOOP DETECTOR FUNCTION DESIGNATIONS

TABULATION OF LOOP DETECTORS						
LOOP ID. NO.	FUNCTION	CABINET DESTINATION	LOOP HEAD SIZE	TYPE	PROTECTED LEAD LENGTH	UNPROTECTED LEAD LENGTH
2763	35W /95THNX	35W -31.9	6'X12'	PREFORMED	5'	50'
2764	35W /95THN1	35W -31.9	6'X6'	SAWCUT		
2765	35W /95THN2	35W -31.9	6'X6'	SAWCUT		
2770	35W /95THNM	35W -31.9	6'X10'	PREFORMED	5'	50'
2784	35W /95THSX	35W -31.9	6'X10'	PREFORMED	5'	50'
2785	35W /95THS1	35W -31.9	6'X6'	SAWCUT		
2786	35W /95THS2	35W -31.9	6'X6'	SAWCUT		
2787	35W /95THSM	35W -31.9	6'X16'	PREFORMED	5'	65'
2819	35W /95THSQ	35W -31.9	6'X16'	PREFORMED	5'	50'
2820	35W /95THSB	35W -31.9	6'X10'	PREFORMED	5'	65'

- NOTE:
1. LOOP DETECTORS SHALL BE PLACED A MIN. OF 3 FT FROM DOWEL BASKETS WITHIN CONCRETE PAVING.
 2. HANDHOLE PLACEMENT SHALL BE CHECKED TO VERIFY THAT THE UNPROTECTED TAIL LOOP LENGTH SHALL REACH HANDHOLE. EXCESS UNPROTECTED TAIL LENGTH SHALL BE CUT AT TIME OF SPLICING
 3. THE CONDUIT ENCASE THE UNPROTECTED PORTION OF THE LOOP TAIL SHALL REACH TO A POINT WHERE A MIN. OF 300 mm OF THE PROTECTED PORTION OF THE LOOP TAIL SHALL BE INSIDE THE CONDUIT.

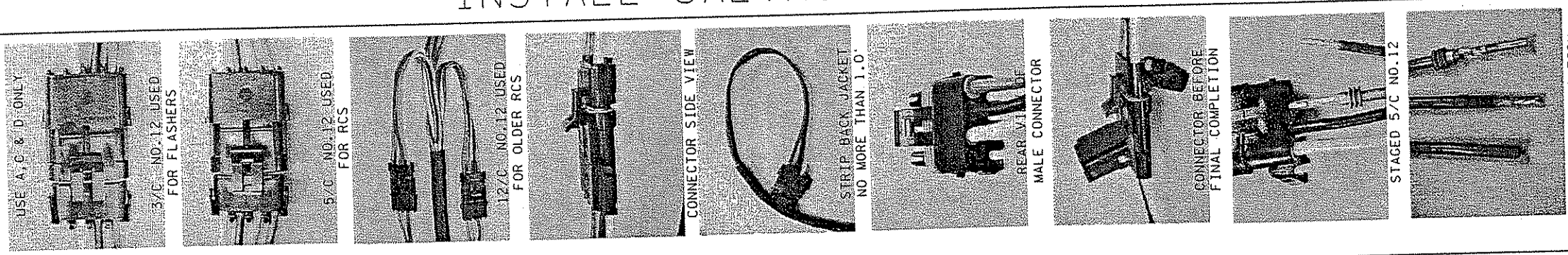


LOOP DETECTOR CABLE LABELING

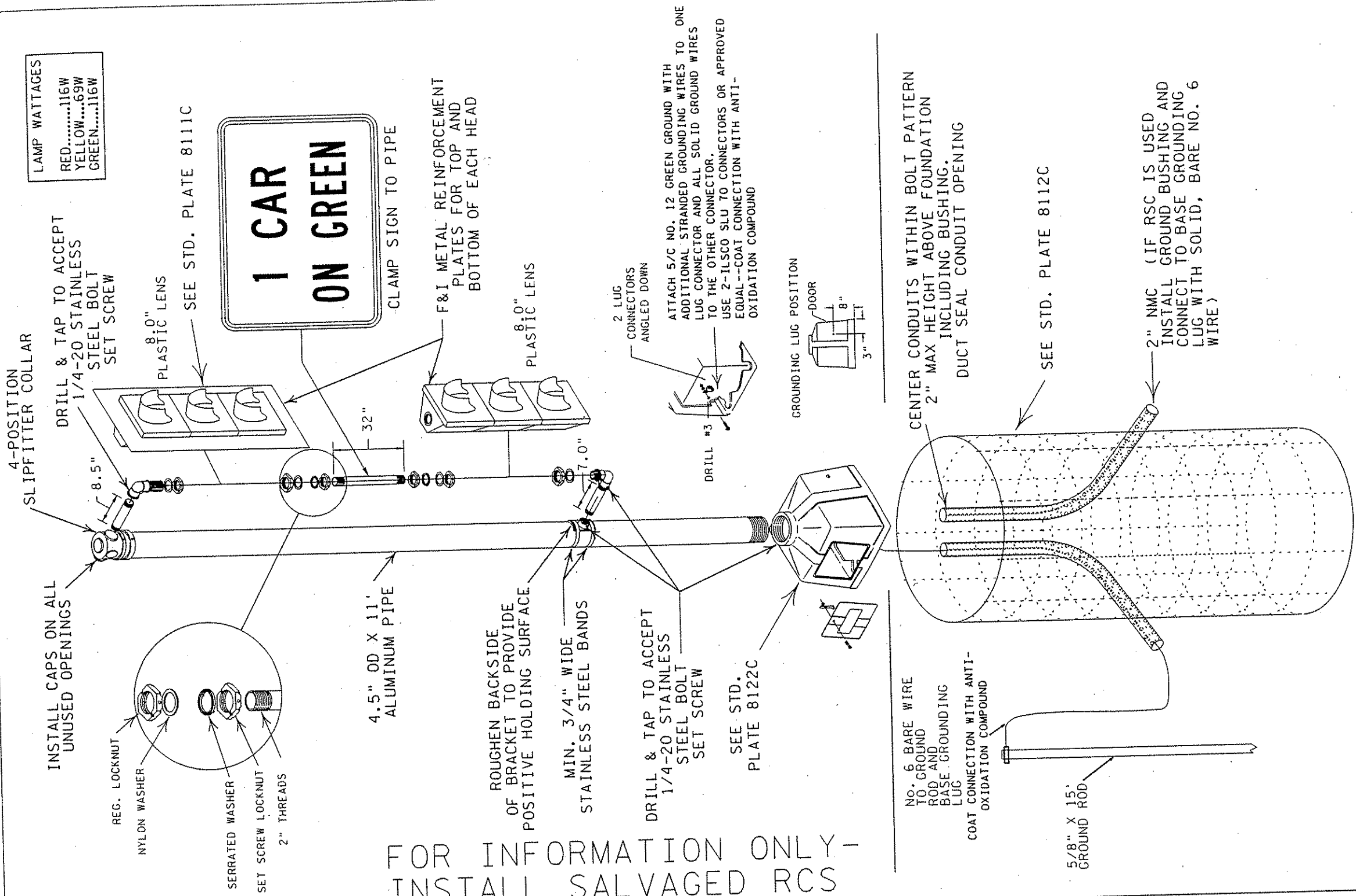
TMS LOOP DETECTOR TYPICAL-PART TWO

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ONE-WAY RAMP CONTROL SIGNAL DETAIL



FOR INFORMATION ONLY -
INSTALL SALVAGED RCS

- DELPHI PACKARD WEATHER PACK NO. 38046 SHROUD WITH PIN 32038 (MALE PIN) AND NO. 38047 TOWER WITH PIN 32039 (FEMALE SOCKET) ALONG WITH NO. 39002 WIRE SEAL IS AN APPROVED SEALED CONNECTOR
- SIGNAL HARNESS FROM INDICATIONS SHALL BE TERMINATED WITH A SHROUD CONNECTOR
- SIGNAL WIRING FROM CABINET SHALL BE TERMINATED WITH A TOWER CONNECTOR
- IF SIGNAL HAS 1-5/C NO.12 FROM CABINET TO PEDESTAL BASE SIGNAL HEADS SHALL BE CONNECTED BY WIRING IN PARALLEL (DAISY CHAINING) BETWEEN SIGNAL HEAD TERMINALS AND RUNNING A SINGLE WIRE HARNESS TO THE PEDESTAL BASE.
- IF SIGNAL HAS 2-5/C NO.12 OR 1-12/C NO.12 FROM CABINET TO THE PEDESTAL BASE TWO WIRE HARNESSES SHALL BE RUN FROM THE SIGNAL HEADS TO THE BASE AND EACH HARNESS CONNECTED TO THE INDIVIDUAL WIRES USING THE ABOVE CONNECTORS

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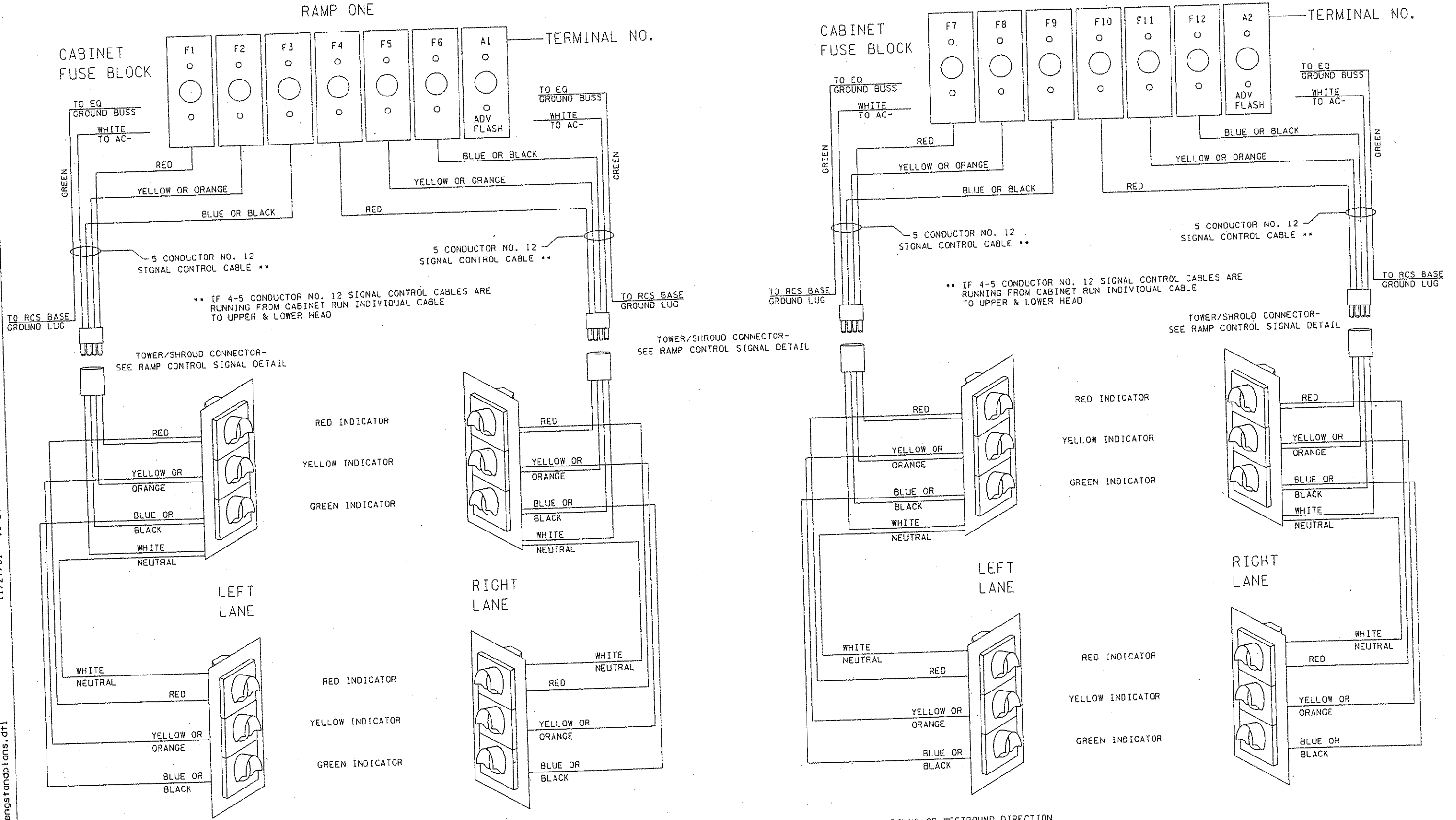
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NOTE: WIRING SHOWN APPLIES TO 334Z,
334Z-94 & 334Z-99 STYLE CABINETS ONLY

RAMP ONE

RAMP TWO



CONNECTION NOTES:

RAMPS/LOOPS TO A SOUTHBOUND OR EASTBOUND DIRECTION OF TRAVEL SHALL BE CONNECTED AS RAMP ONE.-IF BOTH A SOUTHBOUND AND EASTBOUND RAMP & LOOP, OR A RAMP AND LOOP TO THE SAME DIRECTION OF TRAVEL CONNECT TO THE SAME CABINET, THE LOOP SHALL BE CONNECTED AS RAMP ONE

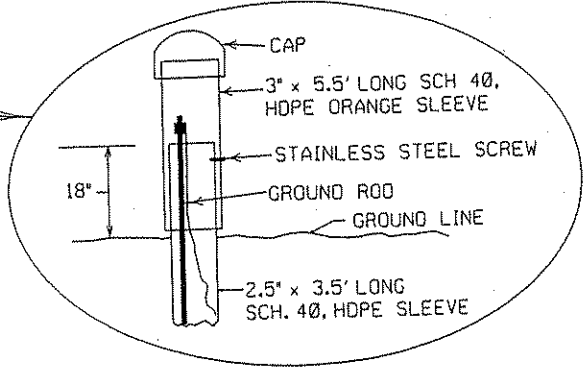
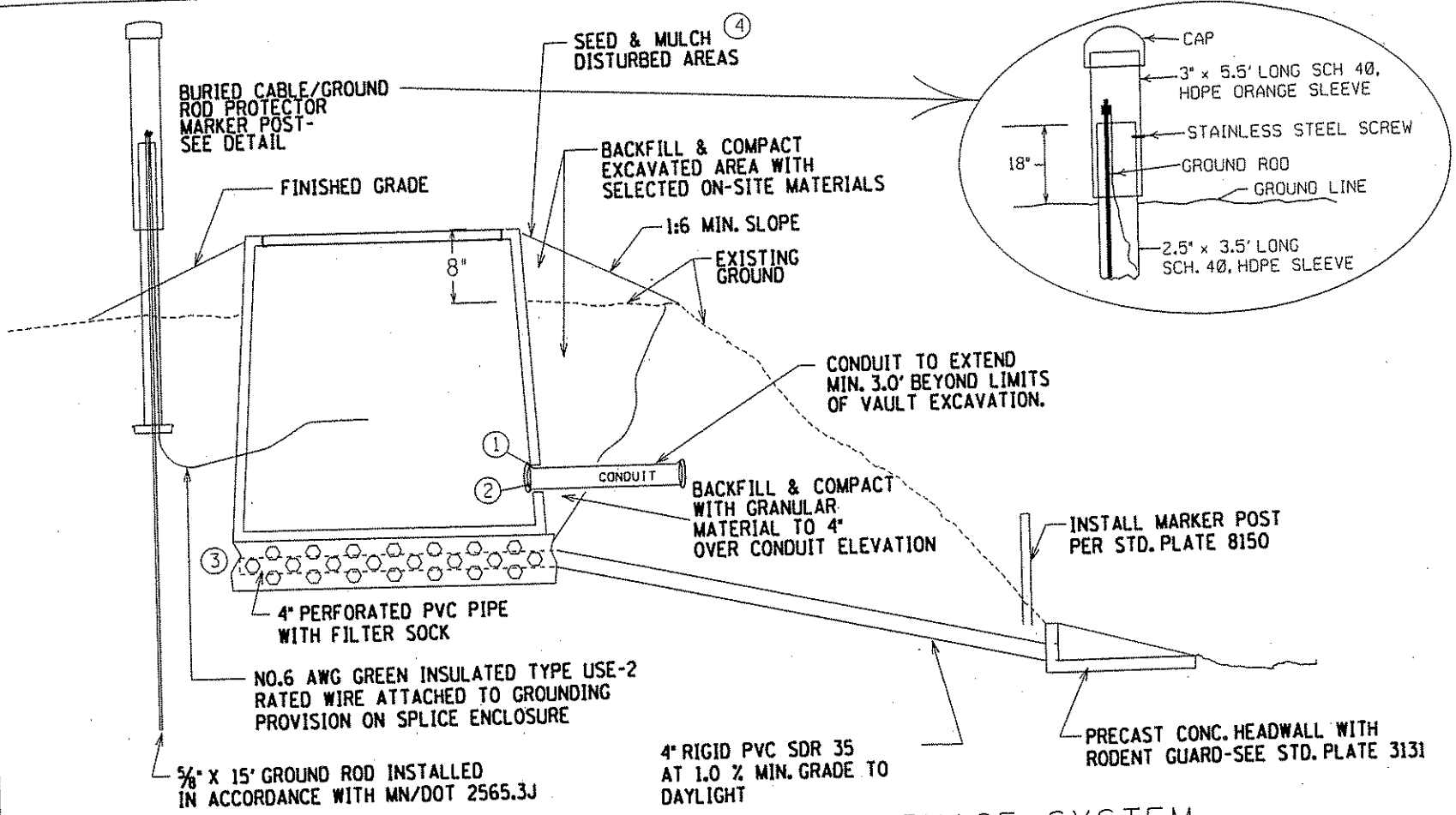
RAMPS/LOOPS TO A NORTHBOUND OR WESTBOUND DIRECTION OF TRAVEL SHALL BE CONNECTED AS RAMP TWO.-IF BOTH A NORTHBOUND AND WESTBOUND RAMP & LOOP, OR A RAMP AND LOOP TO THE SAME DIRECTION OF TRAVEL CONNECT TO THE SAME CABINET, THE LOOP SHALL BE CONNECTED AS RAMP ONE

RAMP CONTROL SIGNAL CONTROL CABLE TERMINATION GUIDE

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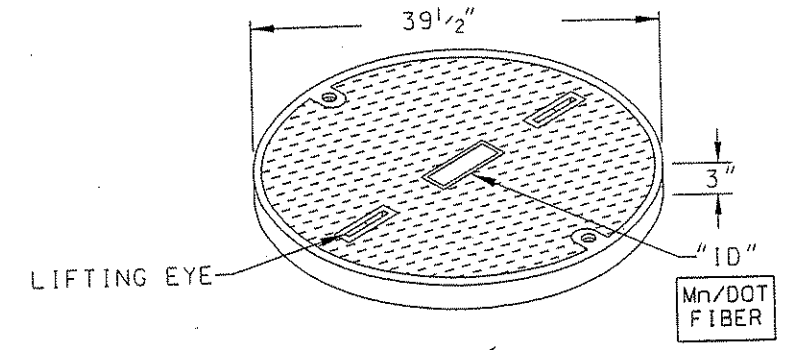
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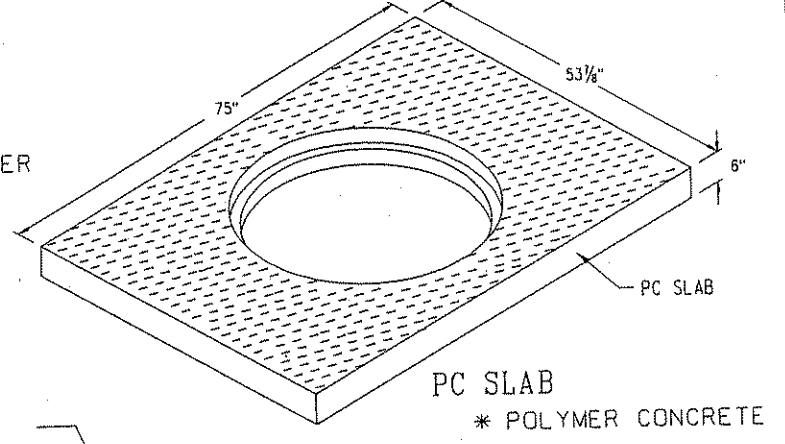
COVER FEATURES

- * 10 TON WHEEL LOADING
- * APPROX. WT. = 180 LBS.
- * (2) 3/8" - 16 X 3 1/2" LONG SS HH BOLTS
- * POLYMER CONCRETE FRP CONSTRUCTION
- * NON-SKID SURFACE
- * IDENTIFICATION LOGO: Mn/DOT FIBER



FRP VAULT FEATURES

- * FIBERGLASS REINFORCED POLYMER (FRP) CONSTRUCTION
- * POLYMER CONCRETE RING



STAINLESS STEEL COILING BRACKETS WITH SS TAPERED SPRING, SIZED FOR 4" PIPE & 8 3/8" IN HEIGHT (6 EACH). PLACE 12" BELOW TOP OF PC RING. FASTEN WITH SS HH BOLTS 5/8" X 4 1/2" LONG AND SS "NYLOCK" STYLE LOCKNUT

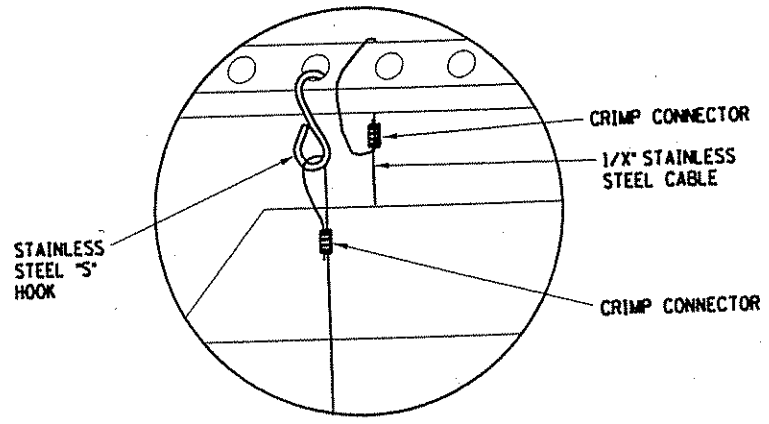
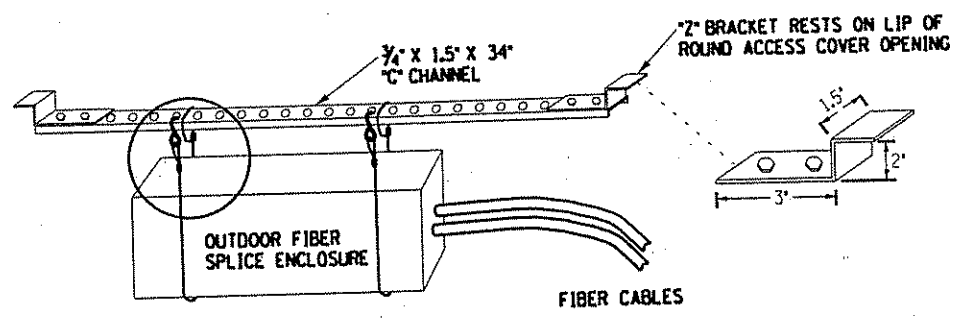
VAULT INSTALLATION & DRAINAGE SYSTEM

SPECIFIC NOTES

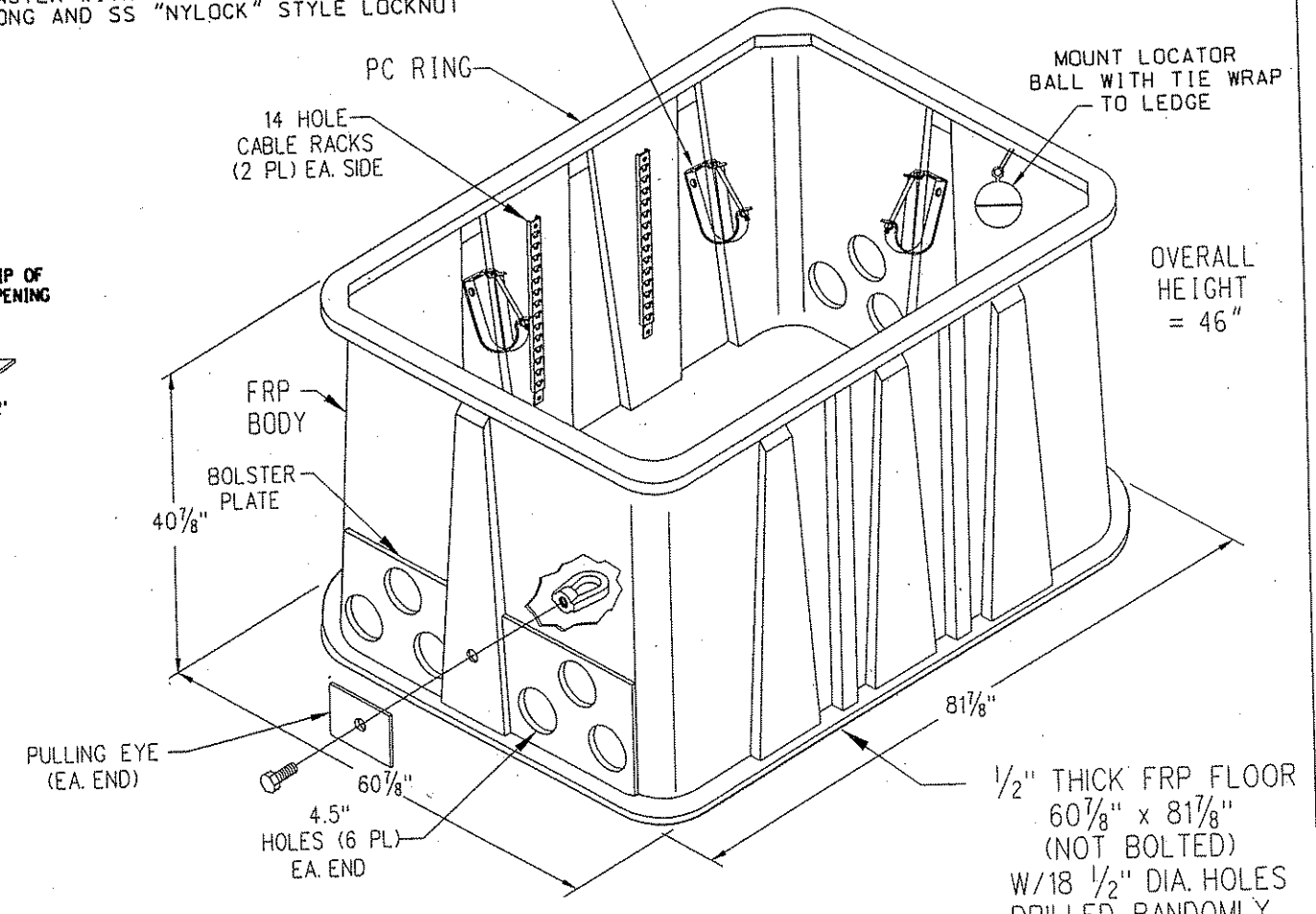
- OPENINGS FOR CONDUIT SHALL BE SEALED WITH MATERIAL COMPATIBLE SEALANT.
- PLUG CONDUIT OPENING WITH A DRAINABLE COMPOUND
- INSTALL 1.0' COARSE FILTER AGGREGATE UNDER BASE COMPLYING WITH MN/DOT 3149.2H. INSTALL 4" PERFORATED PVC PIPE WITH FILTER SOCK TO PROVIDE DRAINAGE.
- RESTORE DISTURBED AREAS WITH SEED MIXTURE 60A AND TYPE I MULCH PER MNDOT 2575.3

GENERAL NOTES

- GROUND CONNECTIONS SHALL BE COATED WITH OXIDATION PROHIBITING COMPOUND.
- CABLE SHALL ENTER BELOW THE SUPPORT BRACKETS WITH 50' OF EXTRA CABLE FOR EACH CABLE COILED AROUND INSIDE OF SUPPORT BRACKETS. CABLES SHALL BE CUT TO THE SAME LENGTH
- ALL HARDWARE SHALL BE STAINLESS STEEL
- THE FRAME AND LID OF THE VAULT SHALL BE IN ACCORDANCE WITH AASHTO LOAD RATING H-10
- PROVIDE THREADED MOUNTING ROD STOCK FOR ATTACHING OUTDOOR FIBER SPLICE ENCLOSURE TO TOP RIM. SECURE WITH PLASTIC LOCK NUT



OUTDOOR FIBER SPLICE ENCLOSURE HANGER BRACKETING



4872/46 VAULT W/PC SLAB & COVER (1/4/99)

DRAWING NOT TO SCALE * ALL BOLTS STAINLESS STEEL

FIBER OPTIC VAULT

REV. NO. 01	DATE: 11/28/00
REV. NO.	DATE: / /

CERTIFIED BY *Leonard Pahl* REG. NO. 41525 NOV 26 2001
 LICENSED PROFESSIONAL ENGINEER

CAUTION

**BURIED
FIBER OPTIC
CABLE**

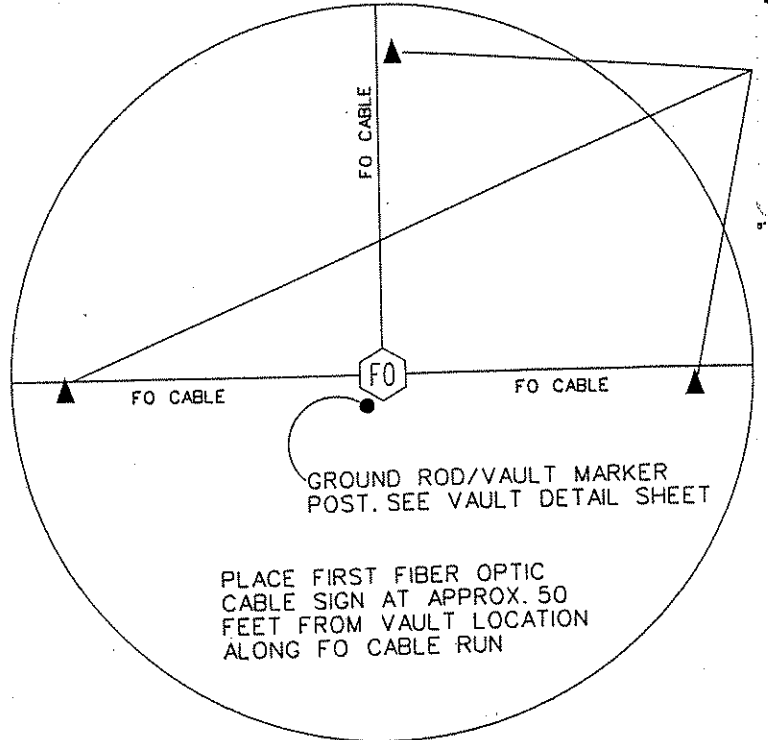
**BEFORE DIGGING
CALL**

**GOPHER STATE ONE CALL
(651)454-0002**

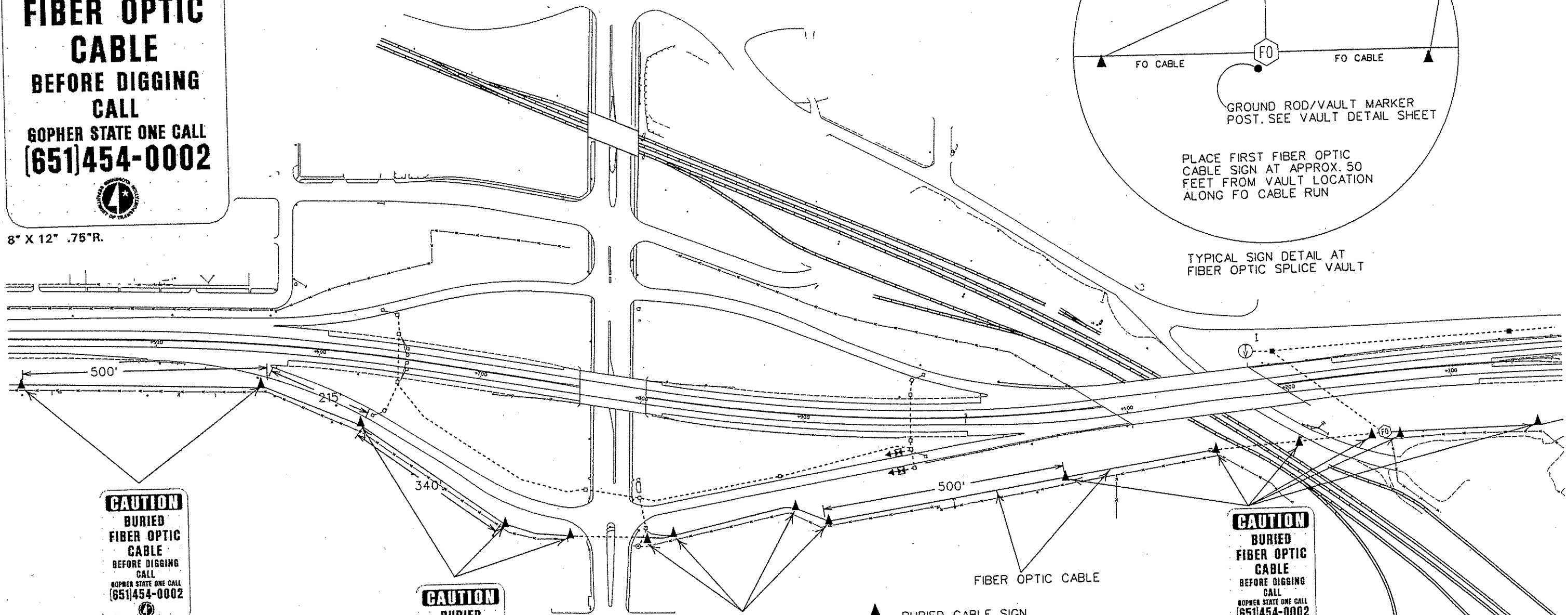


8" X 12" .75"R.

CAUTION
**BURIED
FIBER OPTIC
CABLE**
**BEFORE DIGGING
CALL**
**GOPHER STATE ONE CALL
(651)454-0002**



TYPICAL SIGN DETAIL AT FIBER OPTIC SPLICE VAULT



FIBER OPTIC CABLE

▲ - BURIED CABLE SIGN

INSTALL BURIED CABLE SIGN A MAXIMUM OF 500 FEET APART.
INSTALL ONE SIGN AT CHANGE IN CABLE DIRECTION TO INDICATE CHANGE POINT AND NEW DIRECTION.
INSTALL BURIED CABLE SIGNS 16 FEET BEHIND CURB OR EDGE OF ROADWAY AT ROADWAY CROSSINGS.
INSTALL BURIED CABLE SIGNS 25 FEET FROM RAILROAD OR AS DIRECTED IN CROSSING PERMIT.
AT VAULT LOCATIONS MARKER POST IS PER VAULT DETAIL.
INSTALL ADDITION BURIED CABLE SIGN IF UNABLE TO SEE FROM SIGN TO SIGN (THIS INCLUDES CHANGES IN ELEVATION).

BURIED CABLE SIGN PLACEMENT TYPICAL

CAUTION
**BURIED
FIBER OPTIC
CABLE**
**BEFORE DIGGING
CALL**
**GOPHER STATE ONE CALL
(651)454-0002**

CAUTION
**BURIED
FIBER OPTIC
CABLE**
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CABLE**
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CALL**
**GOPHER STATE ONE CALL
(651)454-0002**

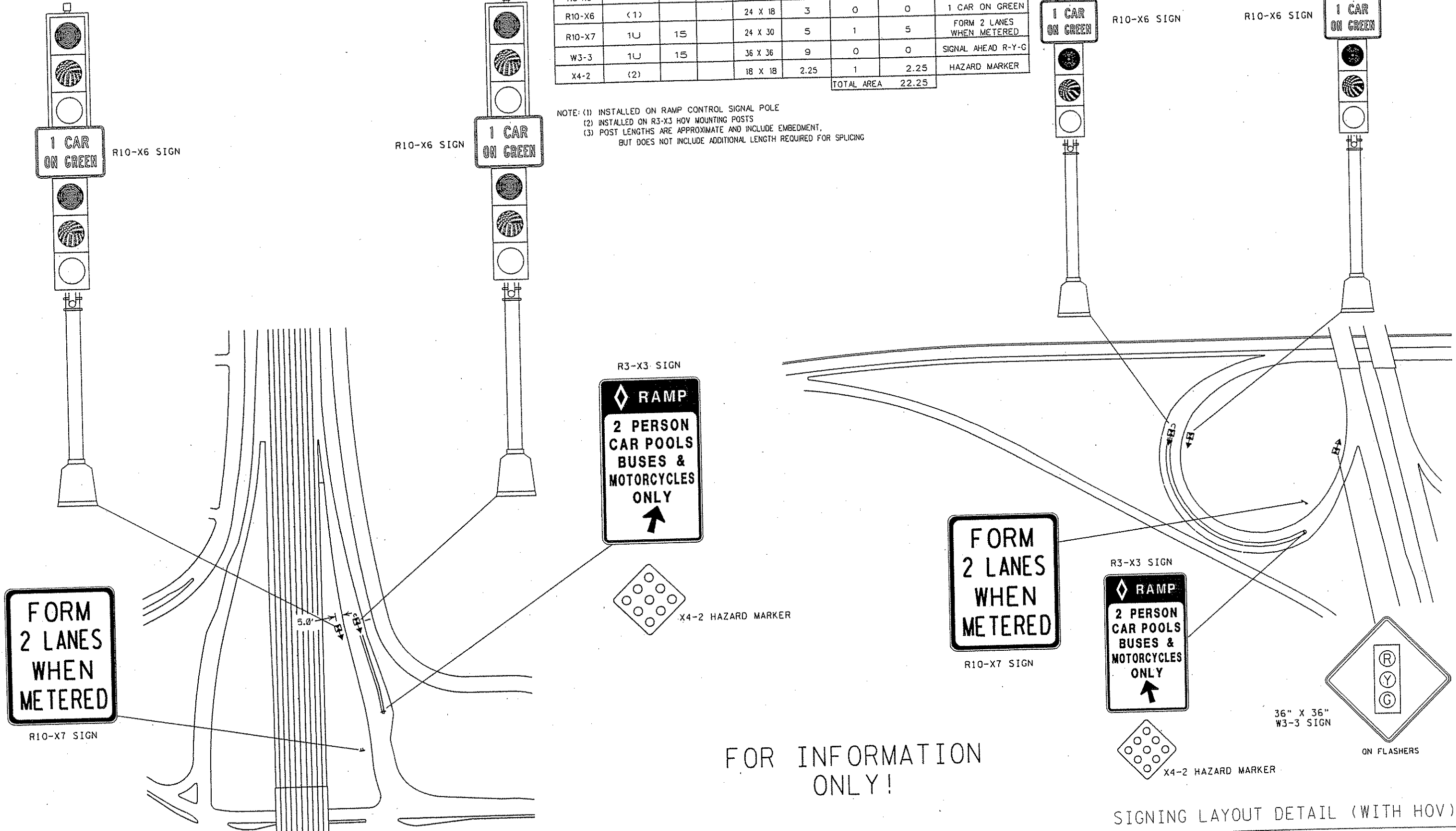
CAUTION
**BURIED
FIBER OPTIC
CABLE**
**BEFORE DIGGING
CALL**
**GOPHER STATE ONE CALL
(651)454-0002**

REV. NO. 1	DATE: 06/07/00
REV. NO.	DATE: / /

GG

SIGN	POSTS		MOUNT HT. (FT)	PANEL				PANEL LEGEND
	NO. & TYPE	LEN. (FT)		SIZE (INCHES)	AREA (SQ FT)	PROJECT QUANTITY	TOTAL AREA (SQ FT)	
R3-X3	2U	15.5	36 X 60	15	1	15	HOV RAMP	
R10-X6	(1)		24 X 18	3	0	0	1 CAR ON GREEN	
R10-X7	1U	15	24 X 30	5	1	5	FORM 2 LANES WHEN METERED	
W3-3	1U	15	36 X 36	9	0	0	SIGNAL AHEAD R-Y-G	
X4-2	(2)		18 X 18	2.25	1	2.25	HAZARD MARKER	
TOTAL AREA							22.25	

NOTE: (1) INSTALLED ON RAMP CONTROL SIGNAL POLE
 (2) INSTALLED ON R3-X3 HOV MOUNTING POSTS
 (3) POST LENGTHS ARE APPROXIMATE AND INCLUDE EMBEDMENT, BUT DOES NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICING

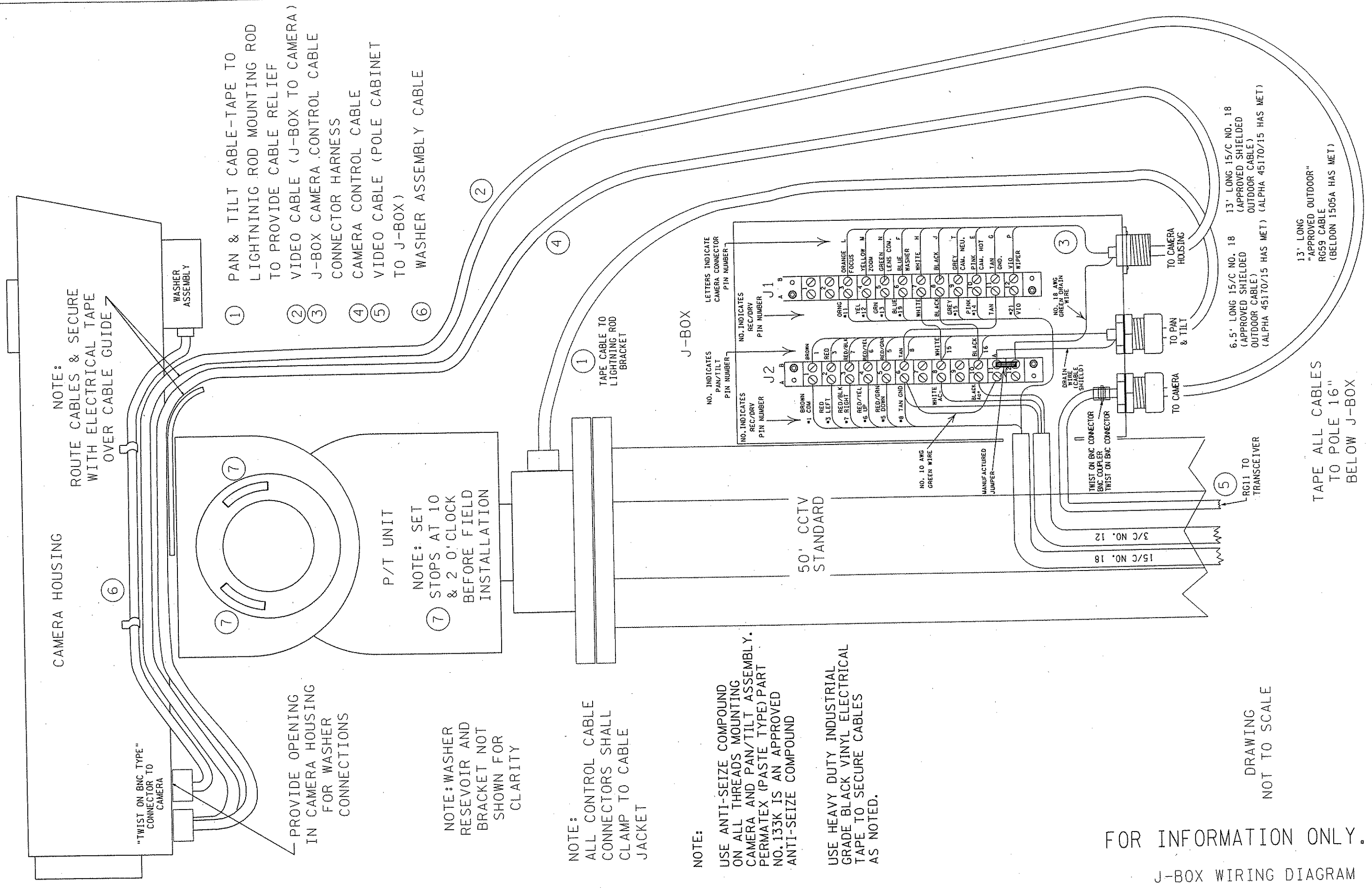


FOR INFORMATION ONLY!

SIGNING LAYOUT DETAIL (WITH HOV)

CERTIFIED BY *Lenaude Pahl* REG. NO. 41525 NOV 26 2001 STATE PROJ. NO. 0280-50 ET AL (TH 35W) SHEET NO. 298 OF 559 SHEETS

REV. NO.	DATE: / /
REV. NO.	DATE: / /



NOTE:
ROUTE CABLES & SECURE
WITH ELECTRICAL TAPE
OVER CABLE GUIDE

- ① PAN & TILT CABLE-TAPE TO LIGHTNING ROD MOUNTING ROD TO PROVIDE CABLE RELIEF
- ② VIDEO CABLE (J-BOX TO CAMERA)
- ③ J-BOX CAMERA CONTROL CABLE CONNECTOR HARNESS
- ④ CAMERA CONTROL CABLE
- ⑤ VIDEO CABLE (POLE CABINET TO J-BOX)
- ⑥ WASHER ASSEMBLY CABLE

"TWIST ON BNC TYPE"
CONNECTOR TO
CAMERA

PROVIDE OPENING
IN CAMERA HOUSING
FOR WASHER
CONNECTIONS

NOTE: SET
7 STOPS AT 10
& 2 O'CLOCK
BEFORE FIELD
INSTALLATION

NOTE: WASHER
RESEVOIR AND
BRACKET NOT
SHOWN FOR
CLARITY

NOTE:
ALL CONTROL CABLE
CONNECTORS SHALL
CLAMP TO CABLE
JACKET

NOTE:
USE ANTI-SEIZE COMPOUND
ON ALL THREADS MOUNTING
CAMERA AND PAN/TILT ASSEMBLY.
PERMATEX (PASTE TYPE) PART
NO. 133K IS AN APPROVED
ANTI-SEIZE COMPOUND

NOTE:
USE HEAVY DUTY INDUSTRIAL
GRADE BLACK VINYL ELECTRICAL
TAPE TO SECURE CABLES
AS NOTED.

FOR INFORMATION ONLY.

J-BOX WIRING DIAGRAM

DRAWING
NOT TO SCALE

TAPE ALL CABLES
TO POLE 16"
BELOW J-BOX

6.5' LONG 15/C NO. 18
(APPROVED SHIELDED
OUTDOOR CABLE)
(ALPHA 45170/15 HAS MET)

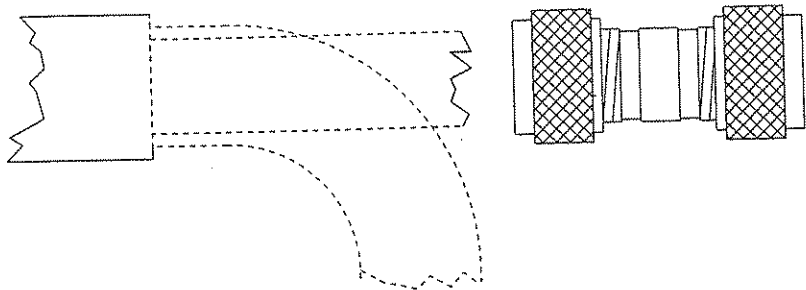
13' LONG 15/C NO. 18
(APPROVED SHIELDED
OUTDOOR CABLE)
(ALPHA 45170/15 HAS MET)

13' LONG
"APPROVED OUTDOOR"
RG59 CABLE
(BELDON 1505A HAS MET)

REV. NO. 02	DATE: 04/24/00
REV. NO. 03	DATE: 05/31/00

APPROVED RG-11/U TRIAXIAL CABLE
"BELDEN 8233 HAS MET"

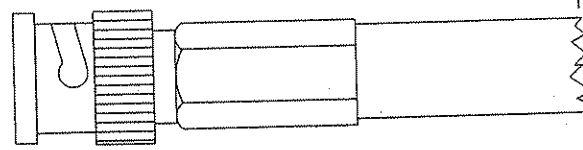
RG11/U



SEE NOTE #1

TWIST ON RG-59/U BNC CONN.

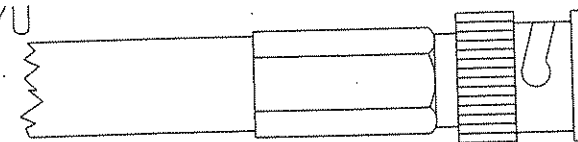
RG59/U



AT CAMERA

TWIST ON RG-59/U BNC CONN.

RG59/U



AT CAMERA

APPROVED RG59/U
"BELDEN 1505A HAS MET"

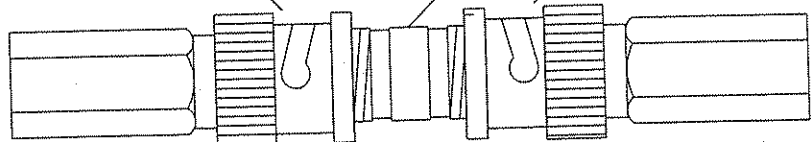
IN HOUSING

IN CABINET/SHELTER

RG-11/U UHF CONN.

BNC BARREL

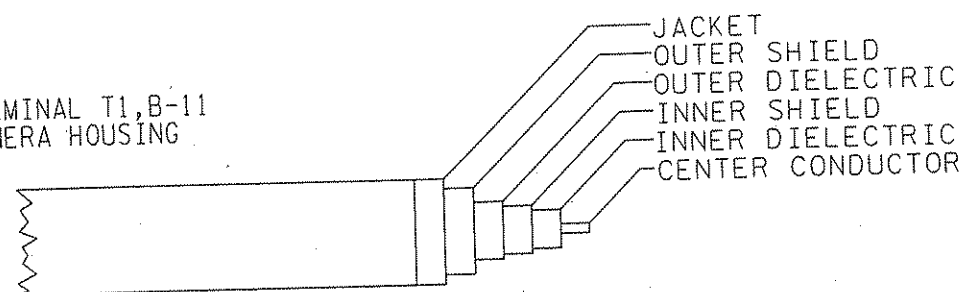
RG-59 UHF CONN.



IN J-BOX

TO TERMINAL T1, B-11
OF CAMERA HOUSING

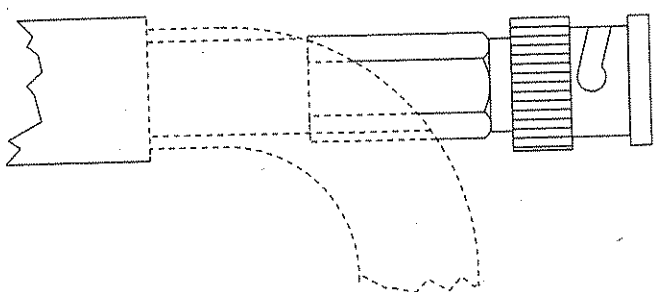
CRIMPED & SOLDERED
RING TERMINAL WITH A
6 mm COPPER STRAP TO
SINGLE POINT GROUND



APPROVED RG-11/U TRIAXIAL CABLE
"BELDEN 8233 HAS MET"

APPROVED RG-11/U TRIAXIAL CABLE
"BELDEN 8233 HAS MET"

RG11/U

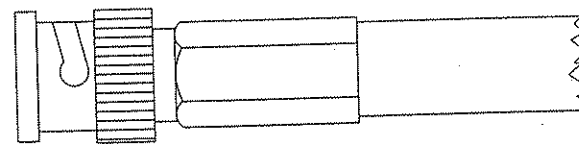


RG11 OUTER
SHIELD TO
SINGLE POINT
GROUND

APPROVED RG59/U
"BELDEN 1505A HAS MET"

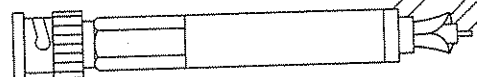
APPROVED VIDEO CABLE
SURGE PROTECTION
POLYPHASER IS-75BB/1.5
HAS MET

APPROVED RG59/U DUAL SHIELD CABLE
"BELDEN 1505A HAS MET"



JACKET
OUTER SHIELD/TINNED COPPER BRAID

INNER SHIELD/FOIL
DIELECTRIC
CENTER CONDUCTOR



NOTES:

- 1.) SOLDER INNER AND OUTER SHIELDS TO UHF CONNECTORS IN J-BOX SOLDER & WIRE NUT PIGTAILED SHIELDS TO GROUND TO 10 AWG GREEN WIRE
- 2.) GROUND ONLY OUTER SHIELD OF RG11 IN CABINETS & SHELTERS
- 3.) AFTER INSPECTION TAPE CONNECTIONS ONLY IN J-BOX

FOR INFORMATION ONLY.
CCTV VIDEO CABLE GROUNDING & CONNECTOR DETAIL

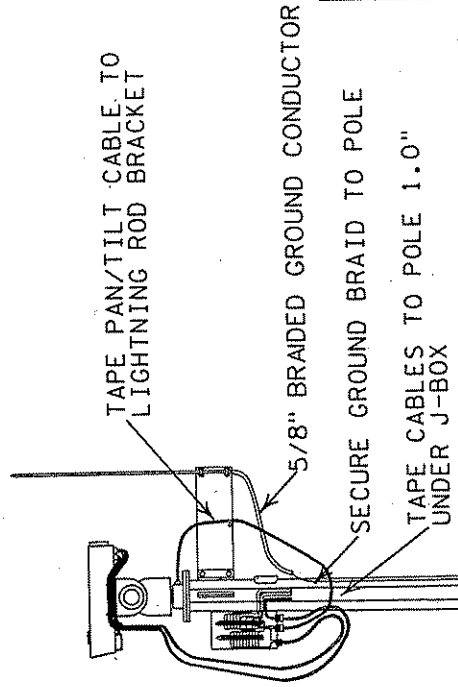
REV. NO.	DATE: / /
REV. NO.	DATE: / /

NOTE: SET TILT STOPS AT 10 & 2 O'CLOCK BEFORE FIELD INSTALLATION

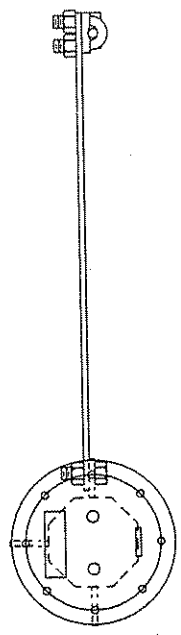
SET PAN STOPS FOR FULL ROTATION. INSTALL PAN/TILT SO THE STATIONARY LIMIT STOP IS LOCATED OVER THE LIGHTNING ROD BRACKET.

NOTE: TIE-WRAP CABLES WITHIN POLE AT J-BOX TO STRAIN RELIEF HOOKS

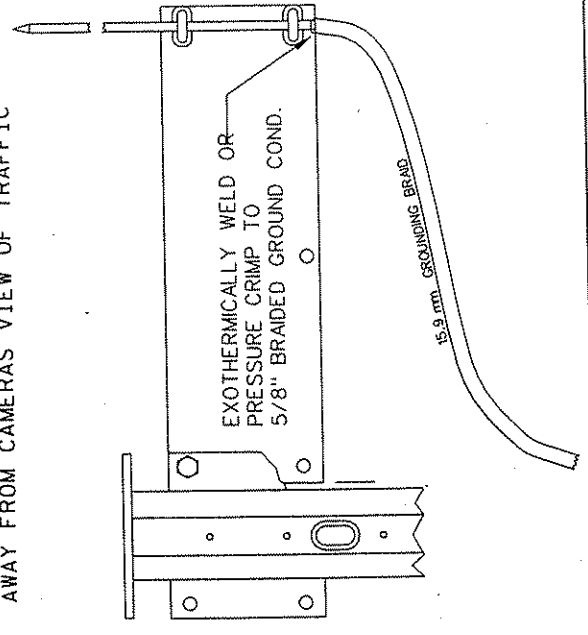
USE ANTI-SEIZE COMPOUND ON ALL THREADS PERMATEX (PASTE TYPE) PART NO. 133K IS AN APPROVED ANTI-SEIZE COMPOUND



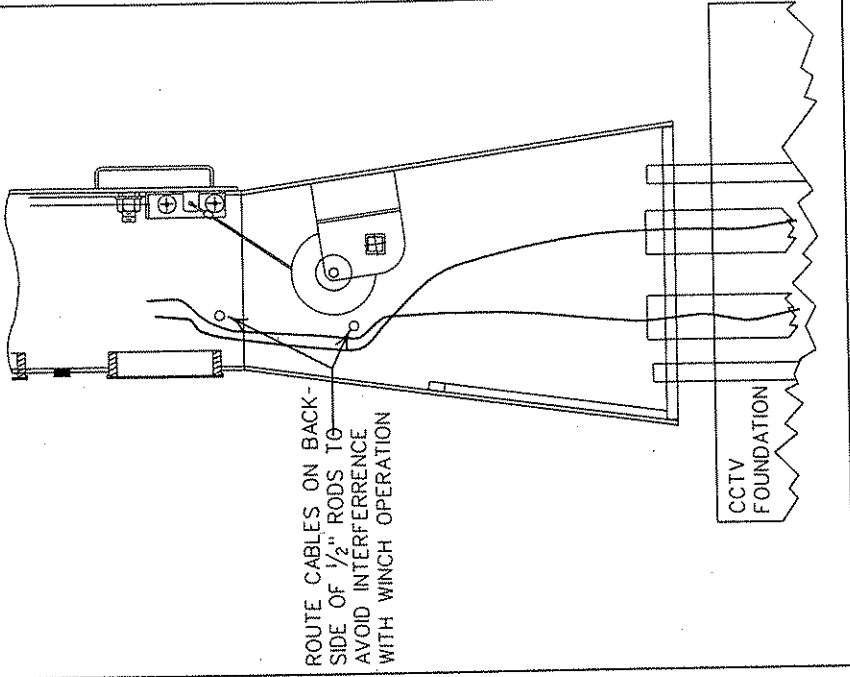
LIGHTNING ROD DETAIL



POSITION LIGHTNING ROD ASSEMBLY 90 DEGREES AWAY FROM HIGHWAY CENTERLINE, AWAY FROM CAMERAS VIEW OF TRAFFIC



CABLE ROUTING DETAIL



SECURE GROUND BRAID TO POLE

SECURE GROUND BRAID TO POLE

SECURE GROUND BRAID TO POLE

GREASE HINGE

MOUNT POLE CABINET TO POLE. CAULK POLE BOX OPENING AT POLE TO ELIMINATE WATER INTRUSION

EXOTHERMICALLY WELD OR PRESSURE CRIMP NO.6 AWG WIRE FROM POLE MOUNTED CAB. GROUND BUSS AND 5/8\"/>

KEEP EXCESS CONDUCTOR TO A MINIMUM USING SHORTEST ROUTE TO GROUND ROD

INSTALL 3.0' X 3.0' X 4\"/>

INSTALL 3.0' X 3.0' X 4\"/>

ONE-PIECE 15' GROUND ROD

TOP OF GRADE

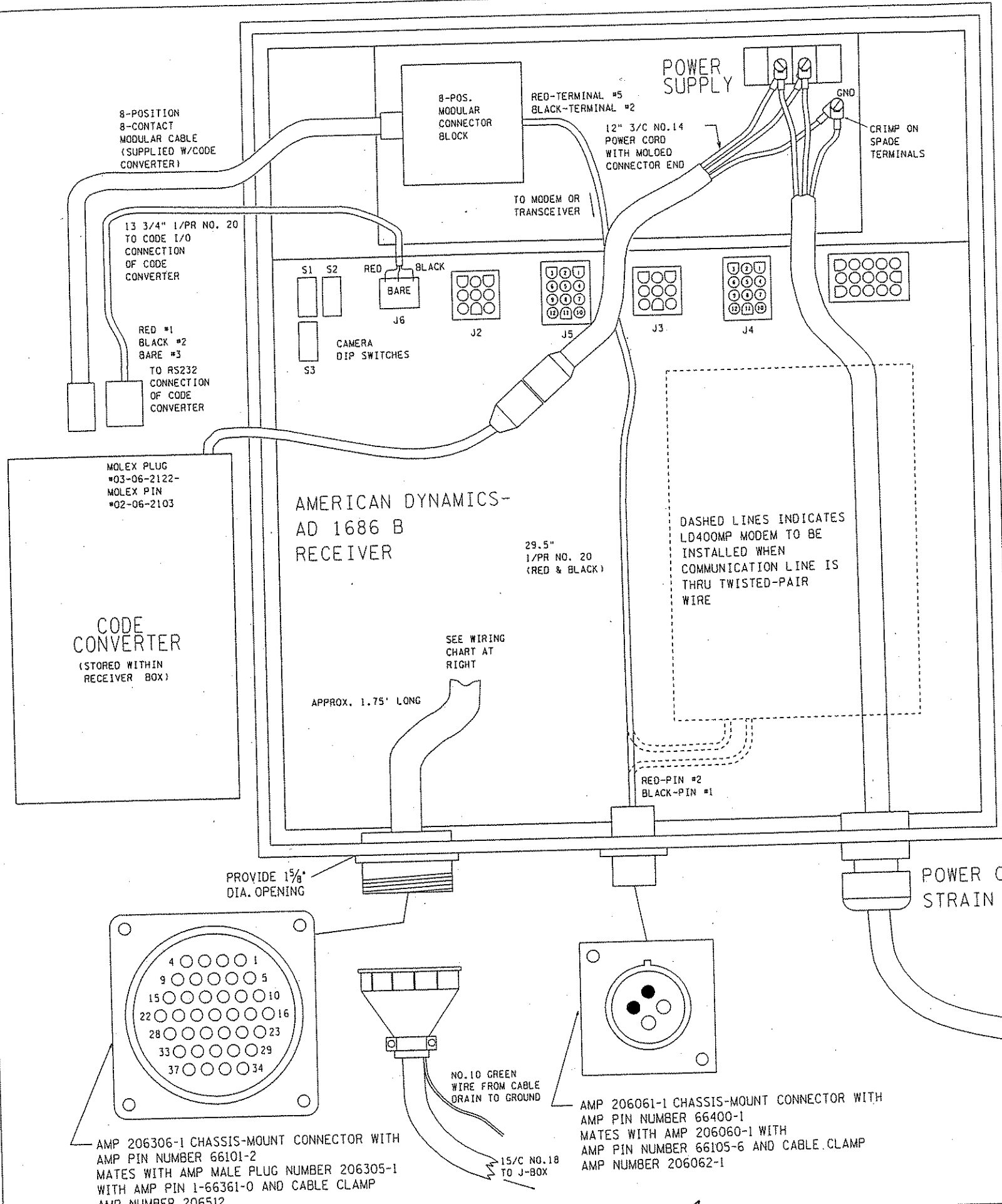
POSITION SIDEWALKS LEVEL WITH TOP OF CCTV FOUNDATION. BACK FILL AS NEEDED TO CREATE A SMOOTH TRANSITION FROM INPLACE GRADE TO SIDEWALKS

FOR INFORMATION ONLY.

CCTV INSTALLATION DETAIL

REV. NO.	DATE:	/ /
REV. NO.	DATE:	/ /

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WIRING CHART

RECEIVER CONNECTOR PIN NO.	COLOR	CONNECTS TO (RECEIVER SIDE)	CONNECTS TO (J-BOX SIDE)	FUNCTION
1	BROWN	J5-3	#1 (P/T)	P/T COMMON
2	NC	NC	NC	NC
3	RED	J5-6	#3 (P/T)	P/T LEFT
4	NC	NC	NC	NC
5	RED/GREEN	J5-2	#5 (P/T)	P/T DOWN
6	RED/YELLOW	J5-1	#6 (P/T)	UP
7	RED/BLACK	J5-4	#7 (P/T)	P/T RIGHT
8	TAN	J5-9	G	GROUND
9	NC	NC	NC	NC
10	BLACK	J5-10	SPARE	CAM. IRIS (NOT USED)
11	ORANGE	J5-11	L	FOCUS
12	YELLOW	J5-12	M	ZOOM
13	GREEN	J5-7	N	LENS COMMON
14	PINK	J4-1	E	CAMERA HOT
15	GREY	J4-3	T	CAMERA NEUTRAL
16	NC	NC	NC	NC
17	WHITE	J4-5	SPARE	CAM. COMMON (NOT USED)
18	NC	NC	NC	NC
19	BLUE	J4-6	F	WASHER
20	NC	NC	NC	NC
21	VIOLET	J4-4	P	WIPER

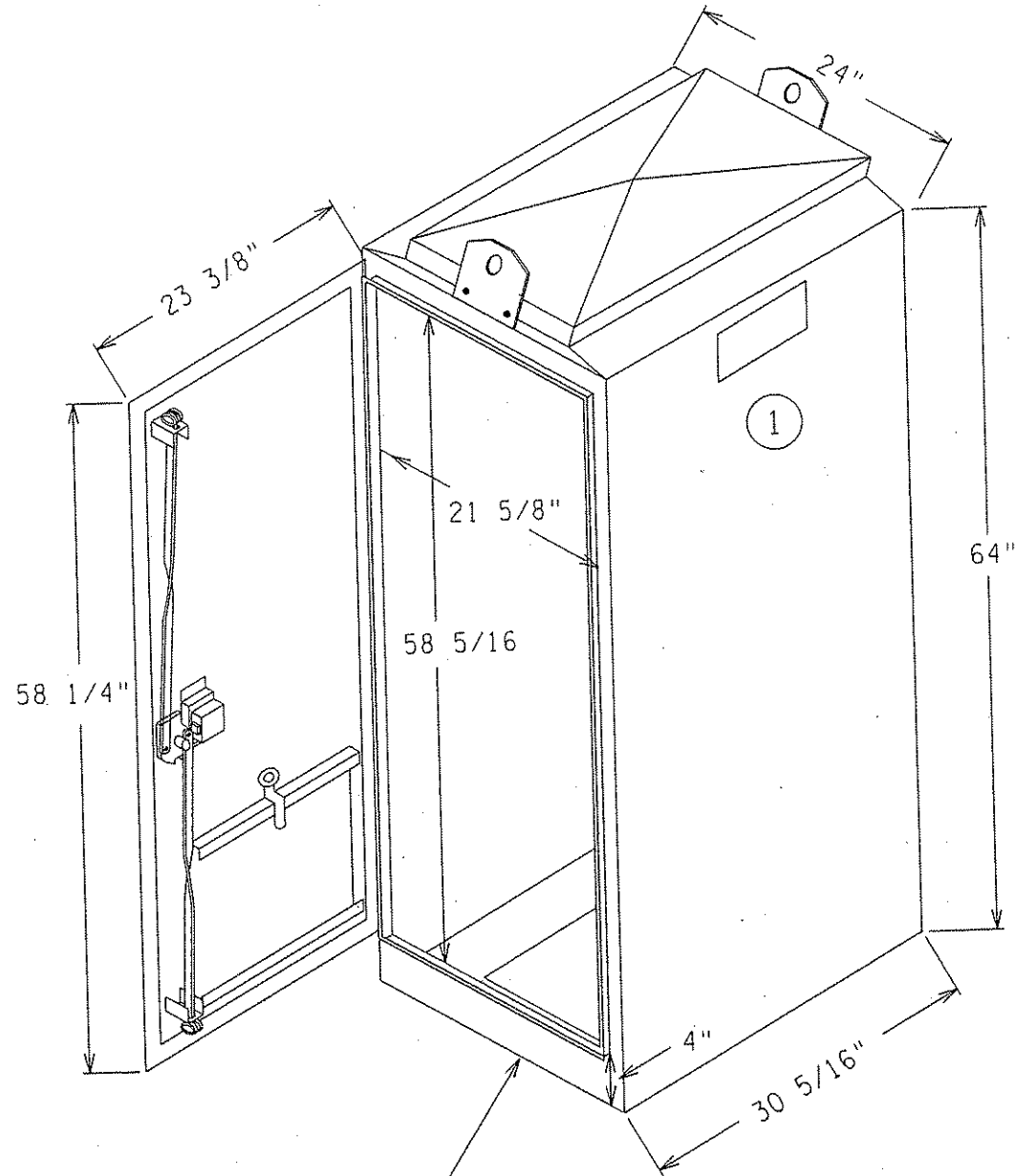
NOTE: CONNECT BLUE JUMPER WIRE BETWEEN J4-2 AND J4-4

FOR INFORMATION ONLY.
CCTV RECEIVER/DRIVER WIRING DETAIL

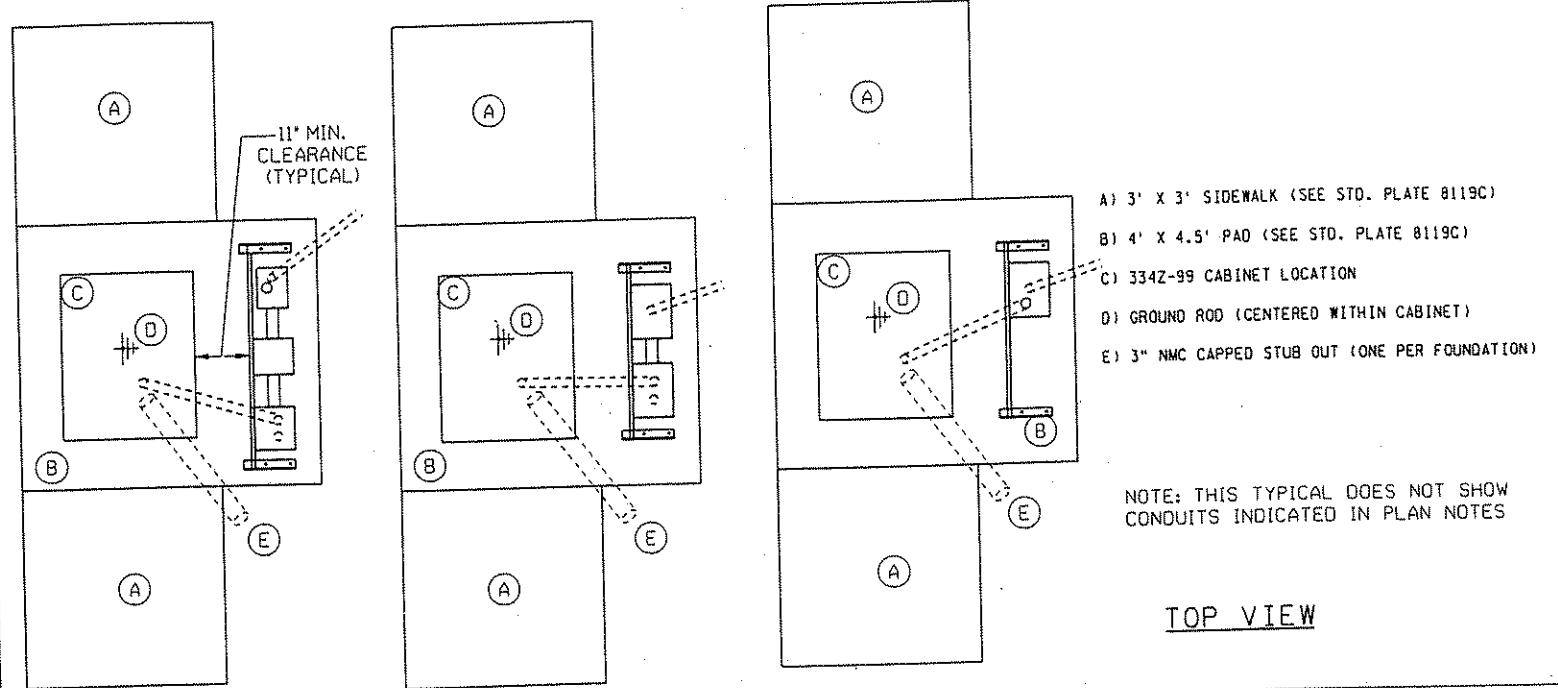
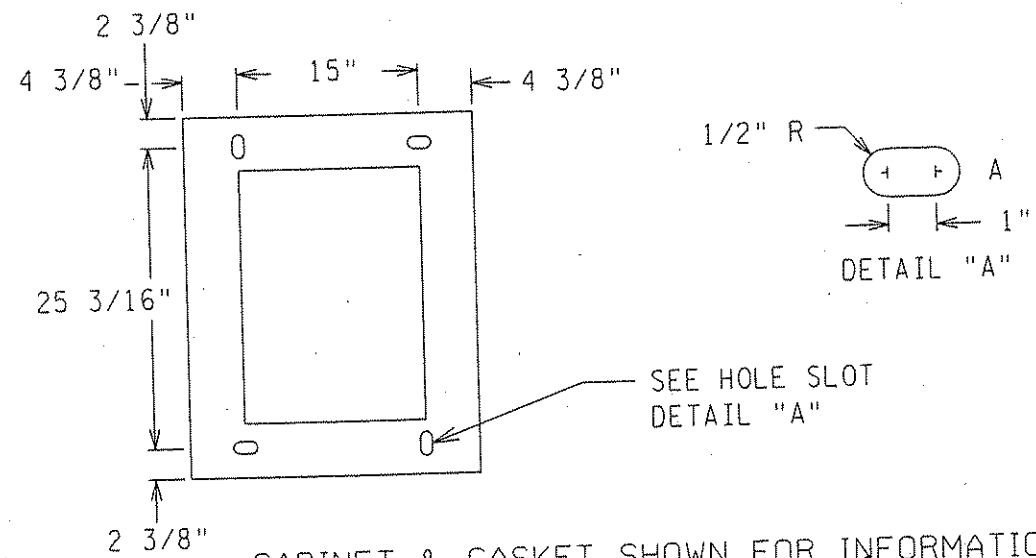
REV. NO. 01 DATE: 05/31/00
REV. NO. DATE: / /

CERTIFIED BY Leonard P. Hall REG. NO. 41525 NOV 26 2001
LICENSED PROFESSIONAL ENGINEER

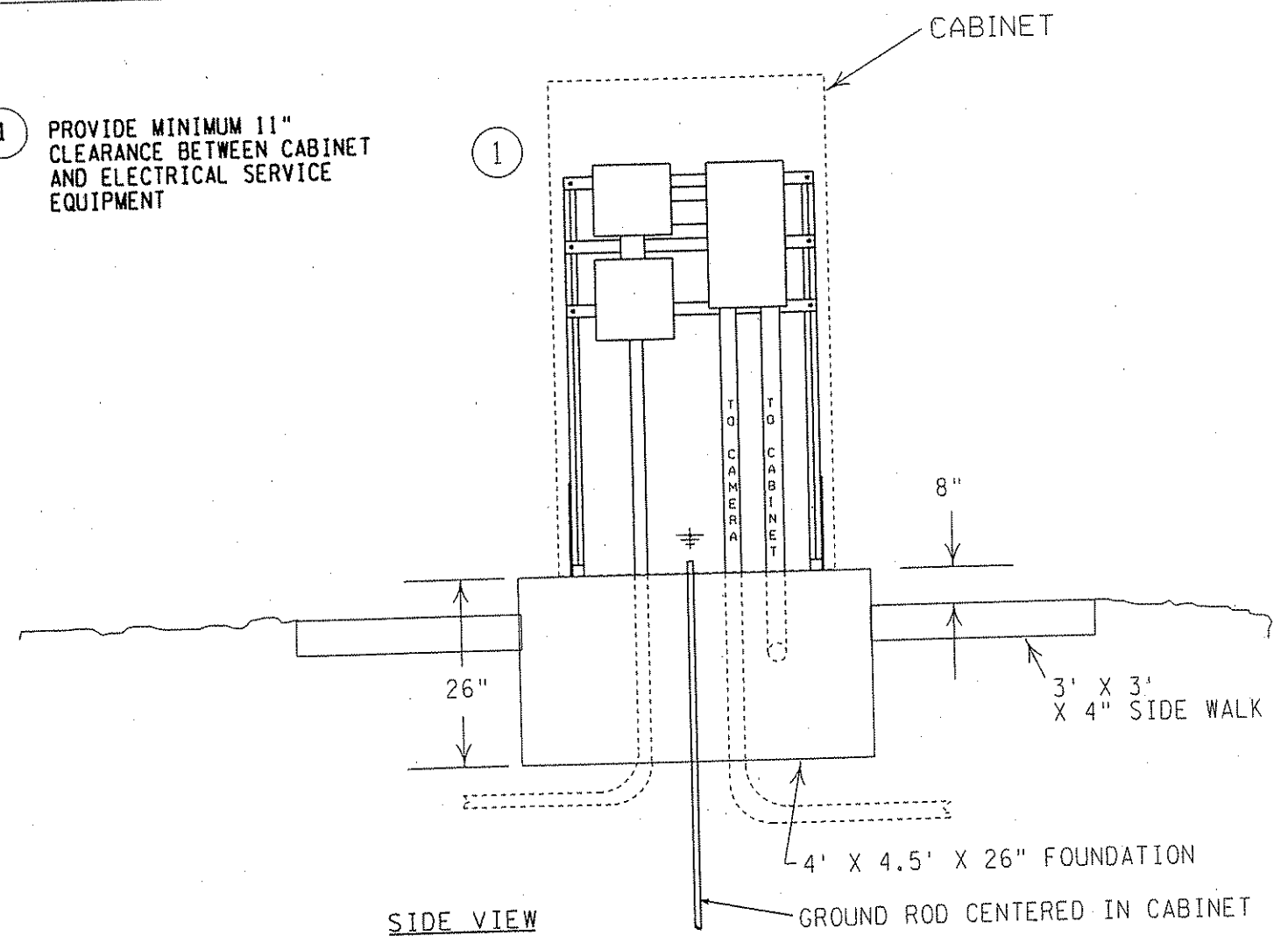
STATE PROJ. NO. 0280-50 ET AL (TH 35W) SHEET NO. 300 OF 559 SHEETS



ONE-PIECE DENSE NEOPRENE GASKET



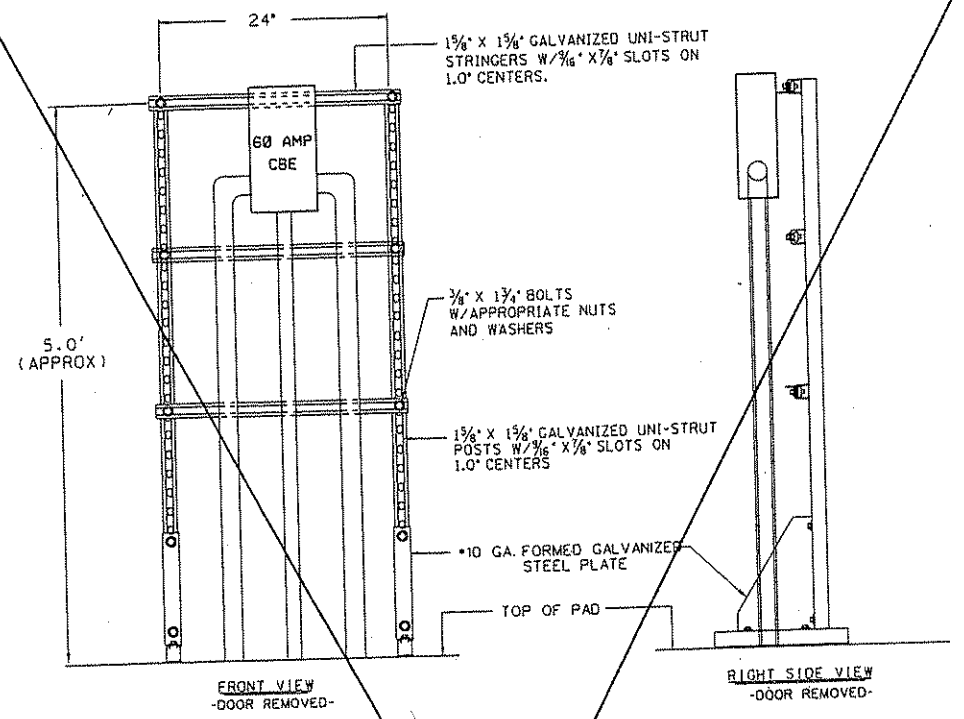
1 PROVIDE MINIMUM 11" CLEARANCE BETWEEN CABINET AND ELECTRICAL SERVICE EQUIPMENT



334 CABINET FOUNDATION TYPICAL

REV. NO.	DATE:	/ /
REV. NO.	DATE:	/ /

CERTIFIED BY *Leonard P. Pahl* REG. NO. 41525 NOV 26 2001



THE CIRCUIT BREAKER ENCLOSURE INCLUDES 1-30 AMP. CB AND ANY ADDITIONAL BREAKERS INDICATED IN THE PLANS

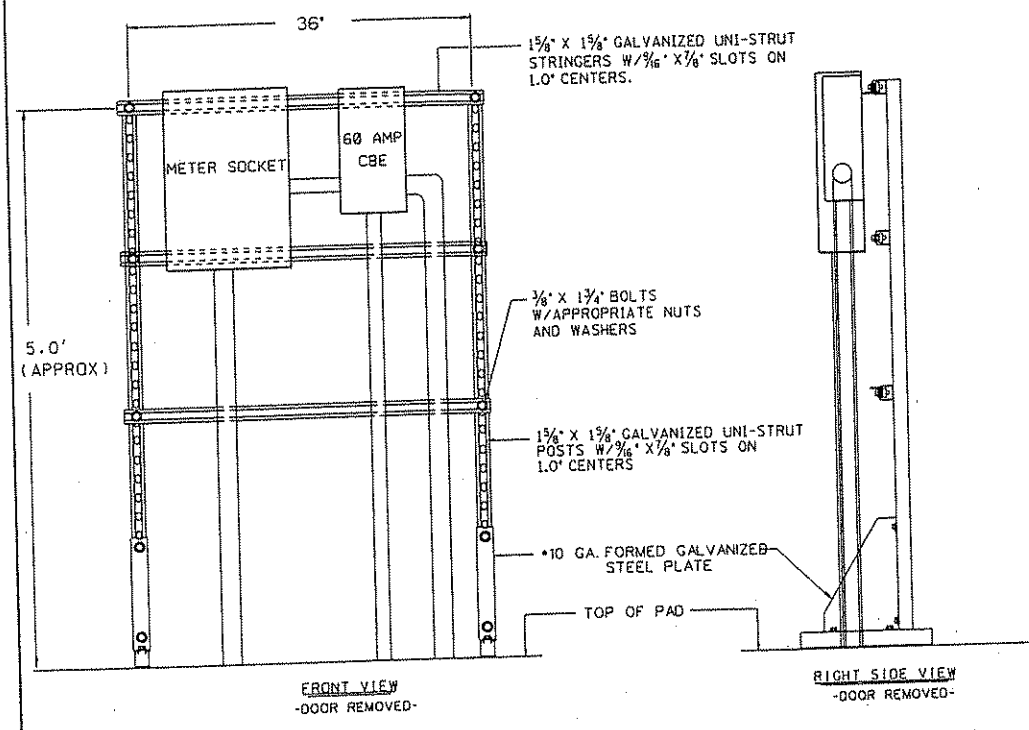
ALL ENCLOSURES, DISCONNECTS AND TRANSFORMERS SHALL BE MADE FROM STAINLESS STEEL OR ALUMINUM, EXCLUDING THE METER SOCKET WHICH SHALL BE A 200 AMP RINGLESS TYPE WITH LEVER BYPASS

WHEN SERVICE EQUIPMENT IS MOUNTED ON A CABINET FOUNDATION, USE GROUND ROD LOCATED WITHIN CABINET AS GROUNDING ROD FOR SERVICE EQUIPMENT. WHEN MOUNTING ON A SERVICE FOUNDATION, USE ONE-PIECE 15.0' GROUND ROD LOCATED WITHIN SERVICE FOUNDATION FOR GROUNDING SERVICE EQUIPMENT

PLACEMENT OF DEVICES SHOWN IS APPROXIMATE AND IS DEPENDANT ON INDIVIDUAL MANUFACTURER DIMENSIONS

NOTE: LABEL SOP WITH CABINET ID NUMBER AND/OR CCTV BOX NUMBER

SERVICE EQUIPMENT TYPE A



THE CIRCUIT BREAKER ENCLOSURE INCLUDES 1-60 AMP MAIN CB, 1-30 AMP CB AND ANY ADDITIONAL BREAKERS INDICATED IN THE PLANS

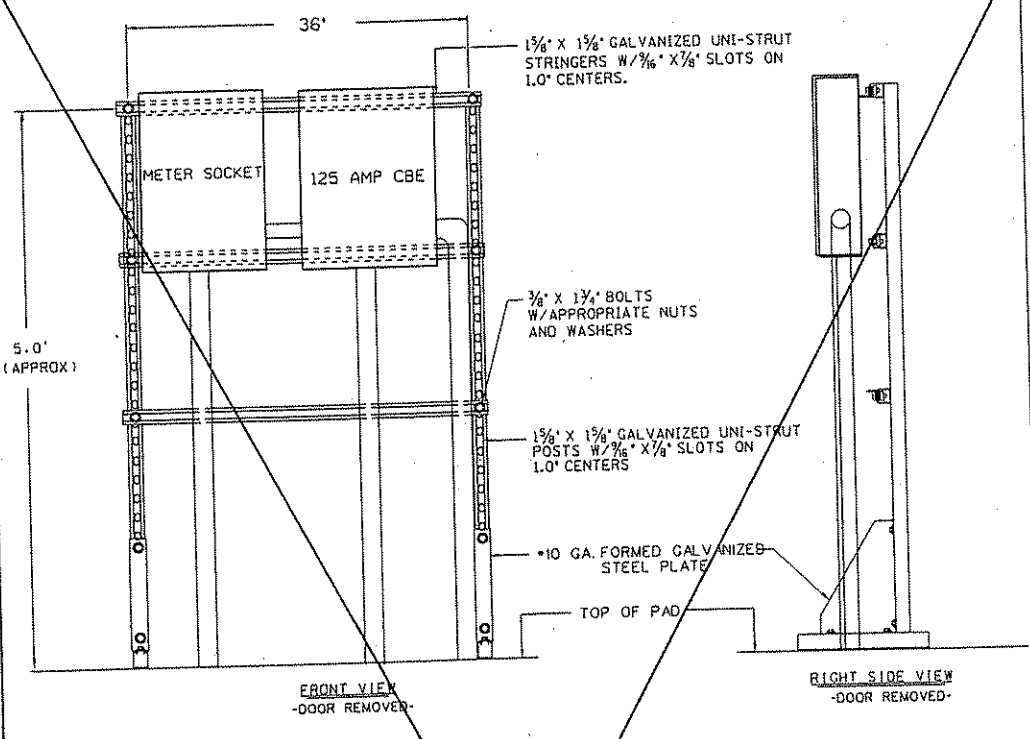
ALL ENCLOSURES, DISCONNECTS AND TRANSFORMERS SHALL BE MADE FROM STAINLESS STEEL OR ALUMINUM, EXCLUDING THE METER SOCKET WHICH SHALL BE A 200 AMP RINGLESS TYPE WITH LEVER BYPASS

WHEN SERVICE EQUIPMENT IS MOUNTED ON A CABINET FOUNDATION, USE GROUND ROD LOCATED WITHIN CABINET AS GROUNDING ROD FOR SERVICE EQUIPMENT. WHEN MOUNTING ON A SERVICE FOUNDATION, USE ONE-PIECE 15.0' GROUND ROD LOCATED WITHIN SERVICE FOUNDATION FOR GROUNDING SERVICE EQUIPMENT

PLACEMENT OF DEVICES SHOWN IS APPROXIMATE AND IS DEPENDANT ON INDIVIDUAL MANUFACTURER DIMENSIONS

NOTE: LABEL SOP WITH CABINET ID NUMBER AND/OR CCTV BOX NUMBER

SERVICE EQUIPMENT TYPE B



THE CIRCUIT BREAKER ENCLOSURE INCLUDES 1-100 AMP MAIN CB, 1-60 AMP CB, 1-30 AMP. CB AND ANY ADDITIONAL BREAKERS INDICATED IN THE PLANS

ALL ENCLOSURES, DISCONNECTS AND TRANSFORMERS SHALL BE MADE FROM STAINLESS STEEL OR ALUMINUM, EXCLUDING THE METER SOCKET WHICH SHALL BE A 200 AMP RINGLESS TYPE WITH LEVER BYPASS

WHEN SERVICE EQUIPMENT IS MOUNTED ON A CABINET FOUNDATION, USE GROUND ROD LOCATED WITHIN CABINET AS GROUNDING ROD FOR SERVICE EQUIPMENT. WHEN MOUNTING ON A SERVICE FOUNDATION, USE ONE-PIECE 15.0' GROUND ROD LOCATED WITHIN SERVICE FOUNDATION FOR GROUNDING SERVICE EQUIPMENT

PLACEMENT OF DEVICES SHOWN IS APPROXIMATE AND IS DEPENDANT ON INDIVIDUAL MANUFACTURER DIMENSIONS

NOTE: LABEL SOP WITH CABINET ID NUMBER AND/OR CCTV BOX NUMBER

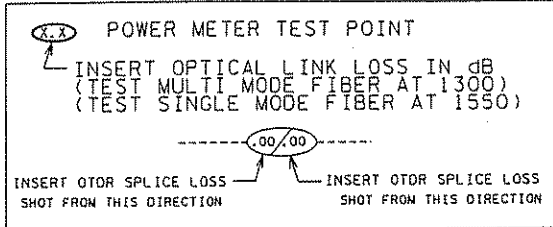
SERVICE EQUIPMENT TYPE C

SERVICE EQUIPMENT

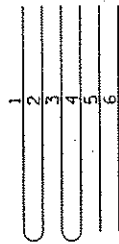
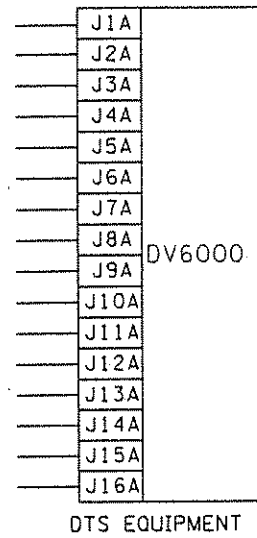
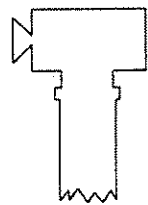
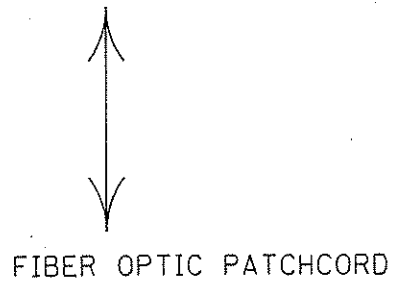
REV. NO.	DATE: / /
REV. NO.	DATE: / /

COMMUNICATIONS PLAN

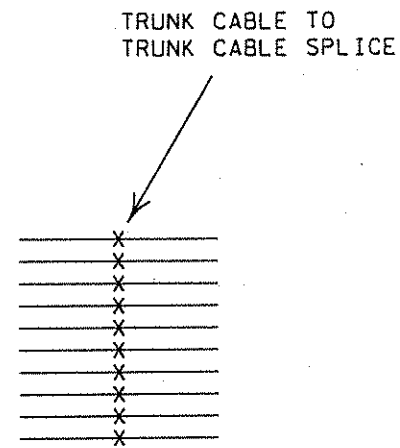
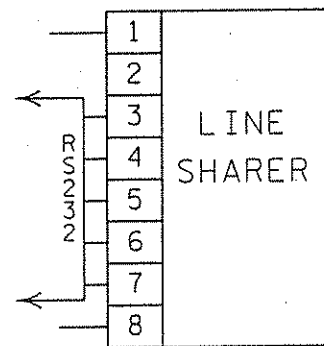
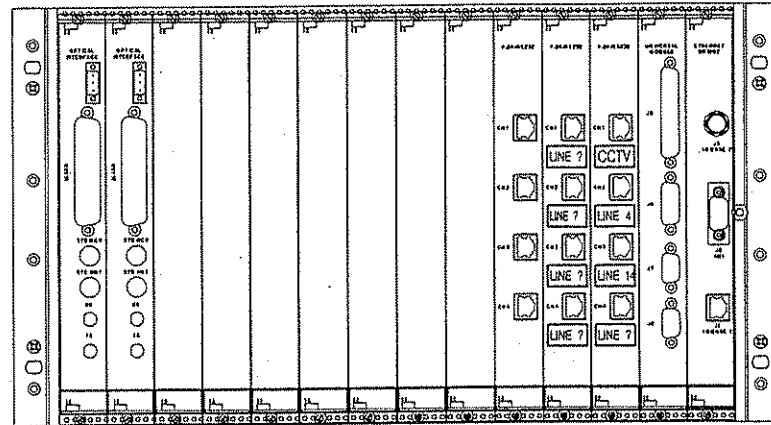
DUE TO ONGOING FIBER USAGE CHANGES, NEW SHEETS WILL BE PROVIDED SHOWING MODIFICATIONS WHEN THEY OCCUR



⊗ = POWER METER READINGS
 ○ = OTDR SPLICE READING

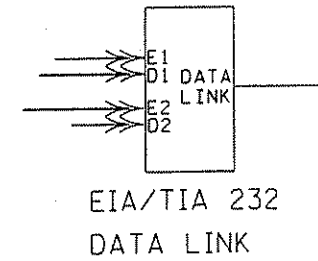
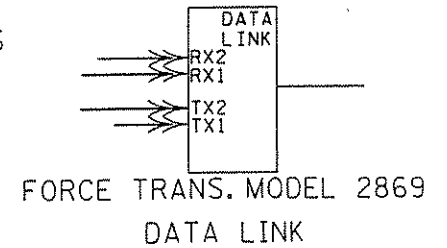


SONET EQUIPMENT - REAR VIEW



DTS 12
 DIGITAL TRANSPORT SYSTEM (NODE NUMBER)
 (DIGITAL DATA CHANNEL NUMBER)

DTS12J?A
 DTS=DIGITAL TRANSPORT SYSTEM
 J?A = ATTACHMENT POINT ON DTS
 ?=1-15



VIDEO/DATA TRANSCEIVER
 VIDEO & DATA TRANSCEIVER TRANSMITTER

CMS
 CHANGEABLE MESSAGE SIGN

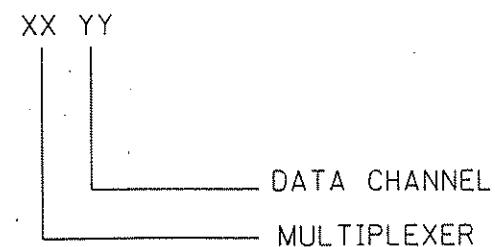
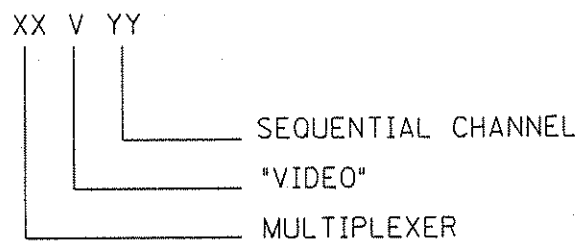
FLS
 FLASHER

RCS
 RAMP CONTROL SIGNAL

LDS
 LOOP DETECTOR STATION

LD
 LOOP DETECTOR'S

DATA LINK DESIGNATORS



170
 170 CONTROLLER

LEGEND FOR COMMUNICATION SCHEMATICS

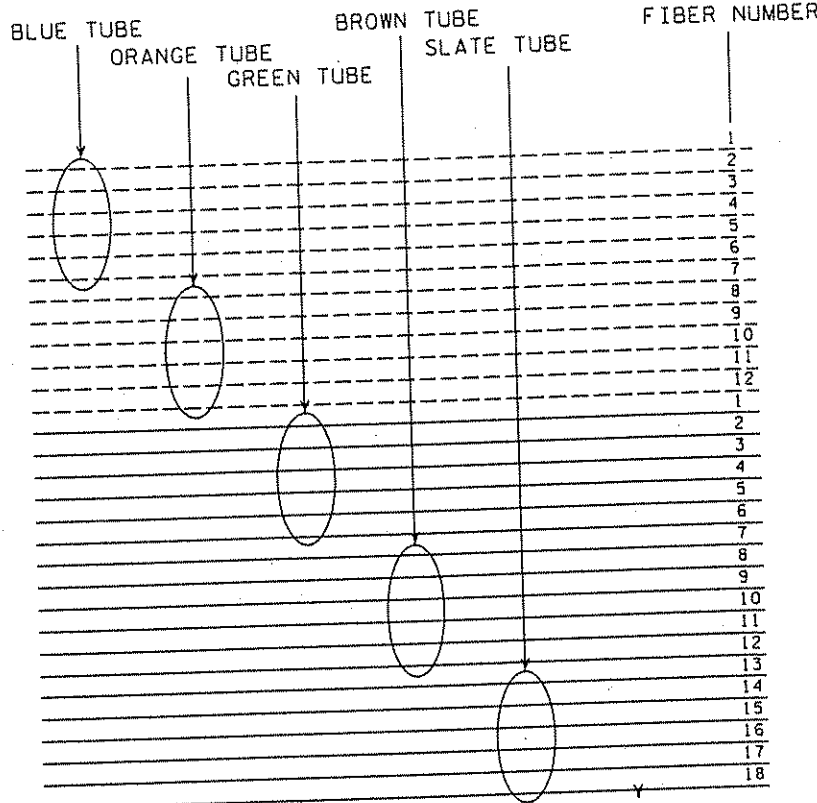
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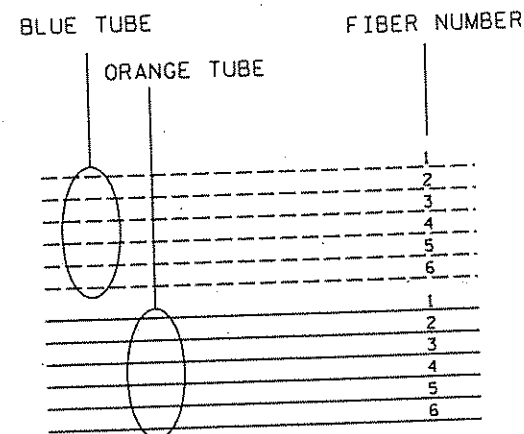
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REV. NO.	AUG. 15: / /
REV. NO.	AUG. 15: / /

FO CABLE (12 MM, 18 SM)



FO PIGTAIL (6 MM, 6 SM)

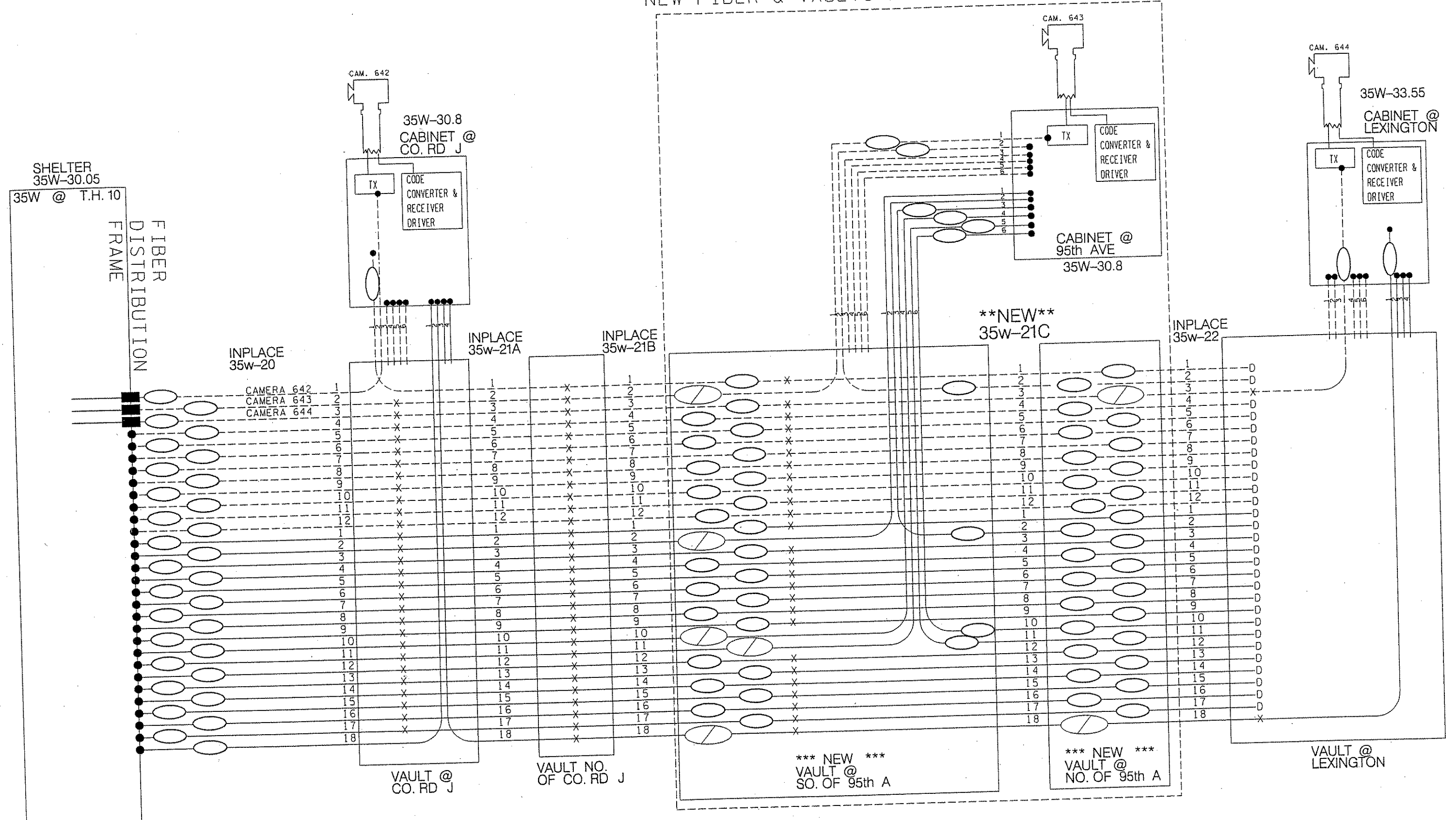


LEGEND FOR COMMUNICATION SCHEMATICS

CERTIFIED BY *Leonard Palko* LIC. NO. 41525 NOV 26 2001 STATE PROJ. NO. 0280-50 ET AL (TH 35W) SHEET NO. 304 OF 559 SHEETS

REV. NO.	AUG. 15: / /
REV. NO.	AUG. 15: / /

NEW FIBER & VAULTS ADDED UNDER SP 0280-50










FIBER OPTIC SCHEMATICS FOR TMS ON TH 35W FROM TH 10 TO LEXINGTON AVE

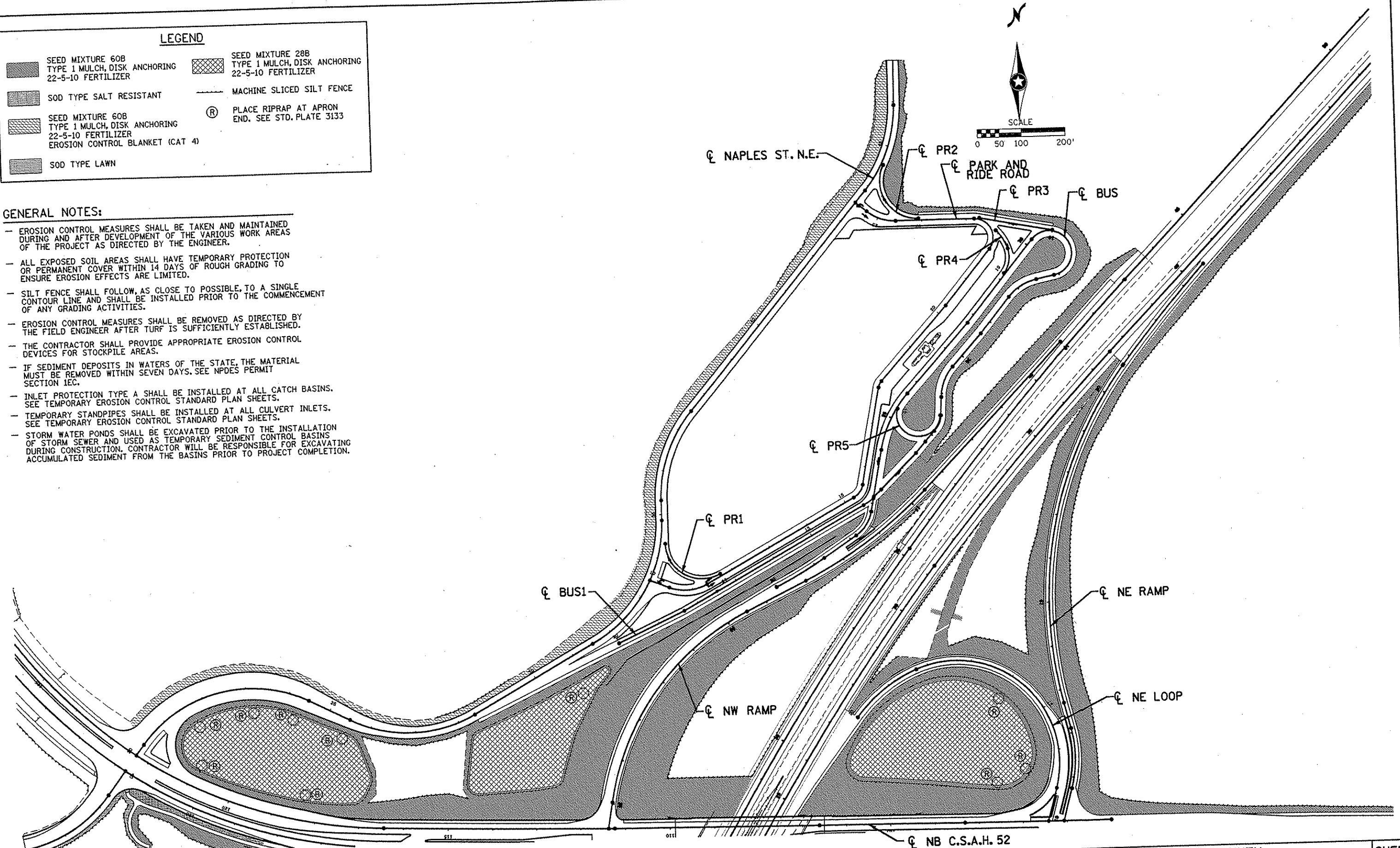
CERTIFIED BY *Leonard C. Pahl* REG. NO. 41525 NOV 26 2001 STATE PROJ. NO. 0280-50 ET AL (TH 35W) SHEET NO. 305 OF 559 SHEETS

REV. NO.	AUG. 15 / /
REV. NO.	AUG. 15 / /

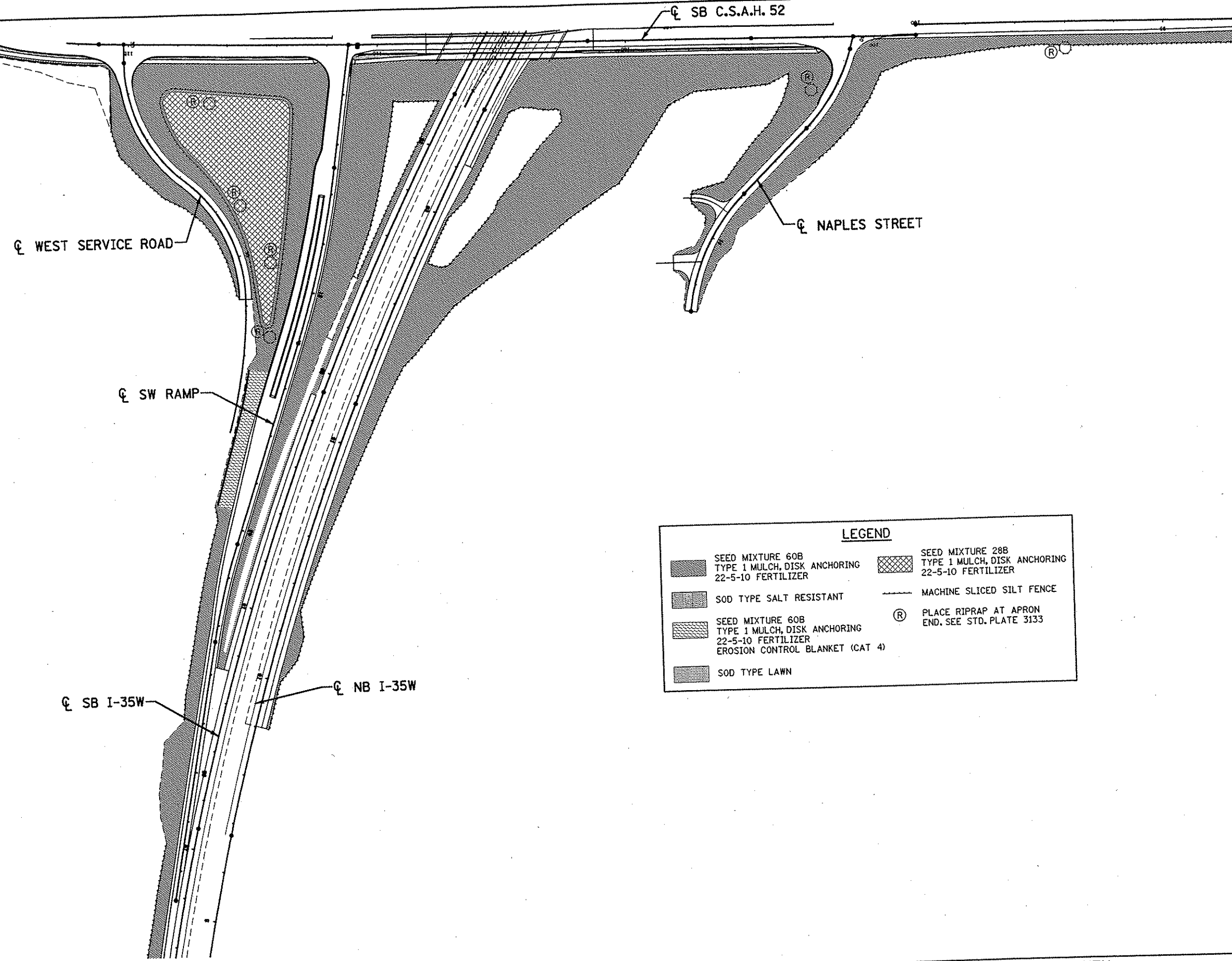
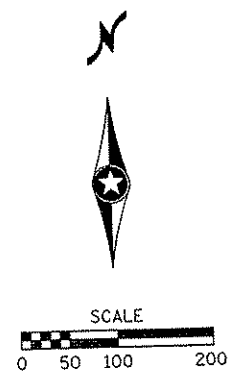
LEGEND

	SEED MIXTURE 60B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER		SEED MIXTURE 28B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
	SOD TYPE SALT RESISTANT		MACHINE SLICED SILT FENCE
	SEED MIXTURE 60B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER		PLACE RIPRAP AT APRON END. SEE STD. PLATE 3133
	SOD TYPE LAWN		

- GENERAL NOTES:**
- EROSION CONTROL MEASURES SHALL BE TAKEN AND MAINTAINED DURING AND AFTER DEVELOPMENT OF THE VARIOUS WORK AREAS OF THE PROJECT AS DIRECTED BY THE ENGINEER.
 - ALL EXPOSED SOIL AREAS SHALL HAVE TEMPORARY PROTECTION OR PERMANENT COVER WITHIN 14 DAYS OF ROUGH GRADING TO ENSURE EROSION EFFECTS ARE LIMITED.
 - SILT FENCE SHALL FOLLOW, AS CLOSE TO POSSIBLE, TO A SINGLE CONTOUR LINE AND SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY GRADING ACTIVITIES.
 - EROSION CONTROL MEASURES SHALL BE REMOVED AS DIRECTED BY THE FIELD ENGINEER AFTER TURF IS SUFFICIENTLY ESTABLISHED.
 - THE CONTRACTOR SHALL PROVIDE APPROPRIATE EROSION CONTROL DEVICES FOR STOCKPILE AREAS.
 - IF SEDIMENT DEPOSITS IN WATERS OF THE STATE, THE MATERIAL MUST BE REMOVED WITHIN SEVEN DAYS. SEE NPDES PERMIT SECTION 1EC.
 - INLET PROTECTION TYPE A SHALL BE INSTALLED AT ALL CATCH BASINS. SEE TEMPORARY EROSION CONTROL STANDARD PLAN SHEETS.
 - TEMPORARY STANDPIPES SHALL BE INSTALLED AT ALL CULVERT INLETS. SEE TEMPORARY EROSION CONTROL STANDARD PLAN SHEETS.
 - STORM WATER PONDS SHALL BE EXCAVATED PRIOR TO THE INSTALLATION OF STORM SEWER AND USED AS TEMPORARY SEDIMENT CONTROL BASINS DURING CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR EXCAVATING ACCUMULATED SEDIMENT FROM THE BASINS PRIOR TO PROJECT COMPLETION.

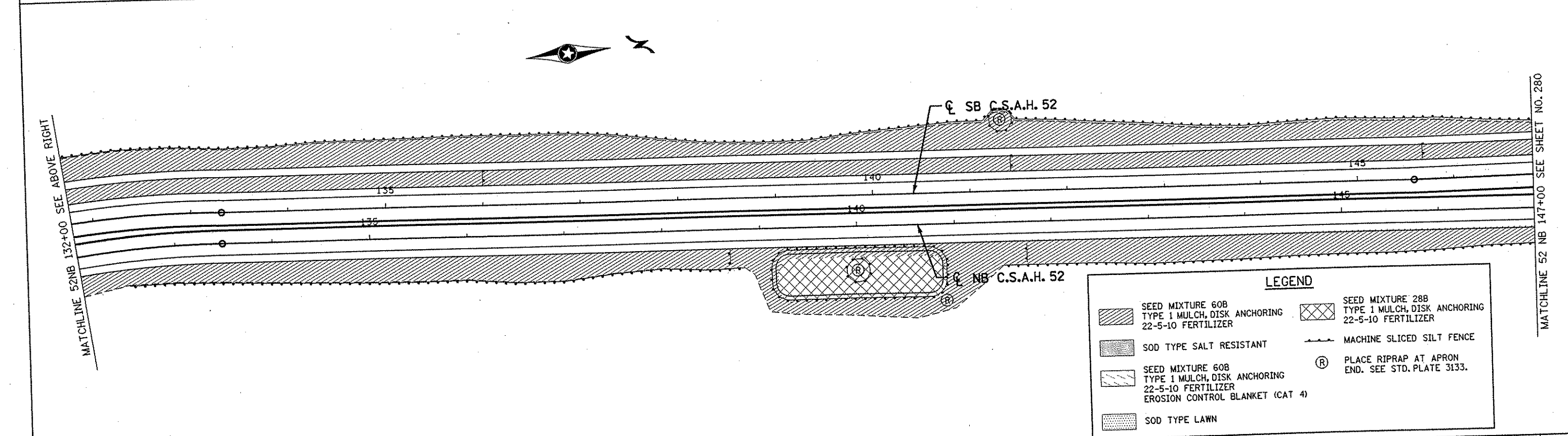
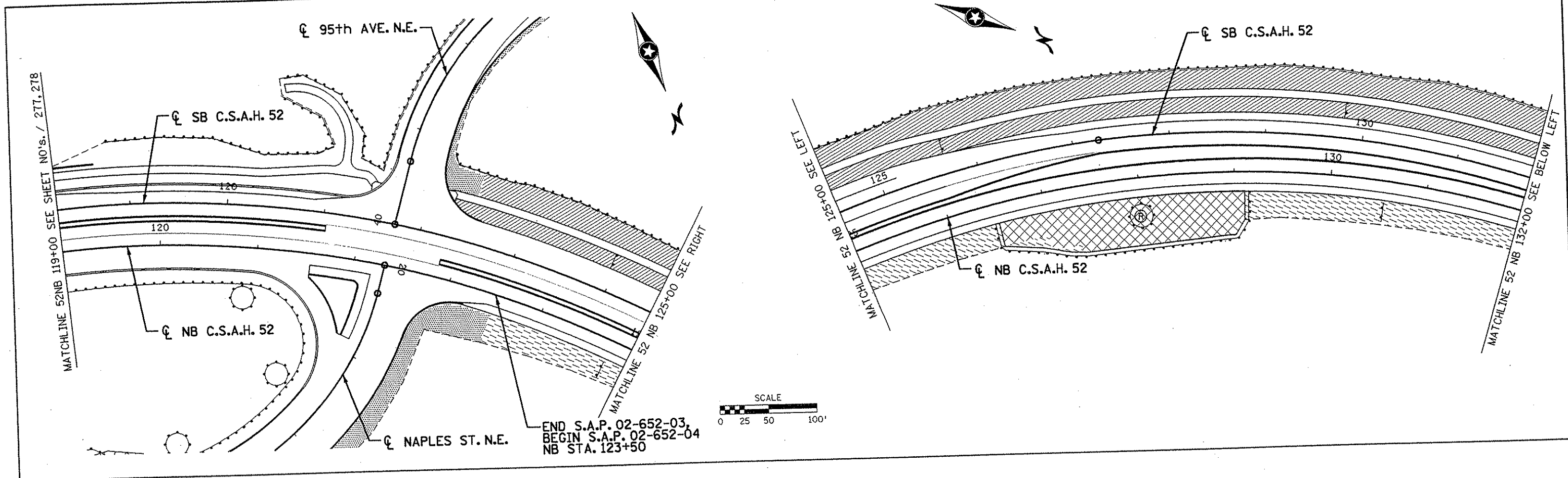


				I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Joseph Weaver</i> DATE 1-11-02 LIC. NO. 22405		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY TURF ESTABLISHMENT AND EROSION CONTROL C.S.A.H. 52 RECONSTRUCTION NORTH INTERCHANGE		SHEET 306 OF 559
NO	DATE	BY	CKD	APPR	REVISION	NAME: K:\a-f\anoka\cty\1174901\hwy-brdg\part4\roadway3\drawings\turf\08-08-02\2002						

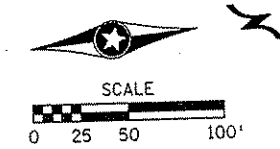


LEGEND	
	SEED MIXTURE 60B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
	SOD TYPE SALT RESISTANT
	SEED MIXTURE 60B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER EROSION CONTROL BLANKET (CAT 4)
	SOD TYPE LAWN
	SEED MIXTURE 28B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
	MACHINE SLICED SILT FENCE
	PLACE RIPRAP AT APRON END. SEE STD. PLATE 3133

				ANOKA COUNTY		SHEET 307 OF 559
				TURF ESTABLISHMENT AND EROSION CONTROL C.S.A.H. 52 RECONSTRUCTION SOUTH INTERCHANGE		
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.		DRAWN BY <u>MTH</u> DATE <u>09-26-01</u> DESIGN BY <u>JMW</u> DATE <u>09-26-01</u> CHECKED BY <u>KRC</u> DATE <u>09-26-01</u>	S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA TOLTZ, KING, OUYALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		
NO	DATE	BY	CKD	APPR	REVISION	
NAME: k:\a-f\anokacty\1174901\hwy-brdg\part4\roadway3\drawings\turf\02.dwg/2002						

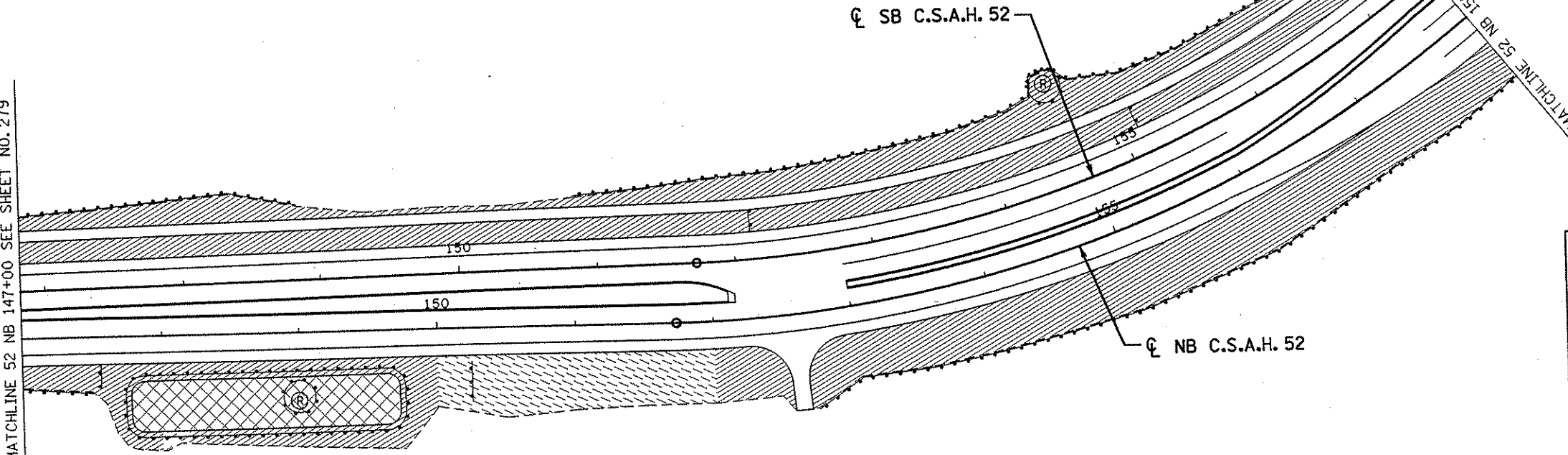


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Joseph Weaver</i> DATE 1-11-02 LIC. NO. 22405					DRAWN BY MTH DATE 09-26-01 DESIGN BY JMW DATE 09-26-01 CHECKED BY KRC DATE 09-26-01		S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY TURF ESTABLISHMENT AND EROSION CONTROL C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 119+00 TO 147+00		SHEET 308 OF 559
NO	DATE	BY	CKD	APPR	REVISION	NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\turf\031d98/2002							



MATCHLINE 52 NB 147+00 SEE SHEET NO. 279

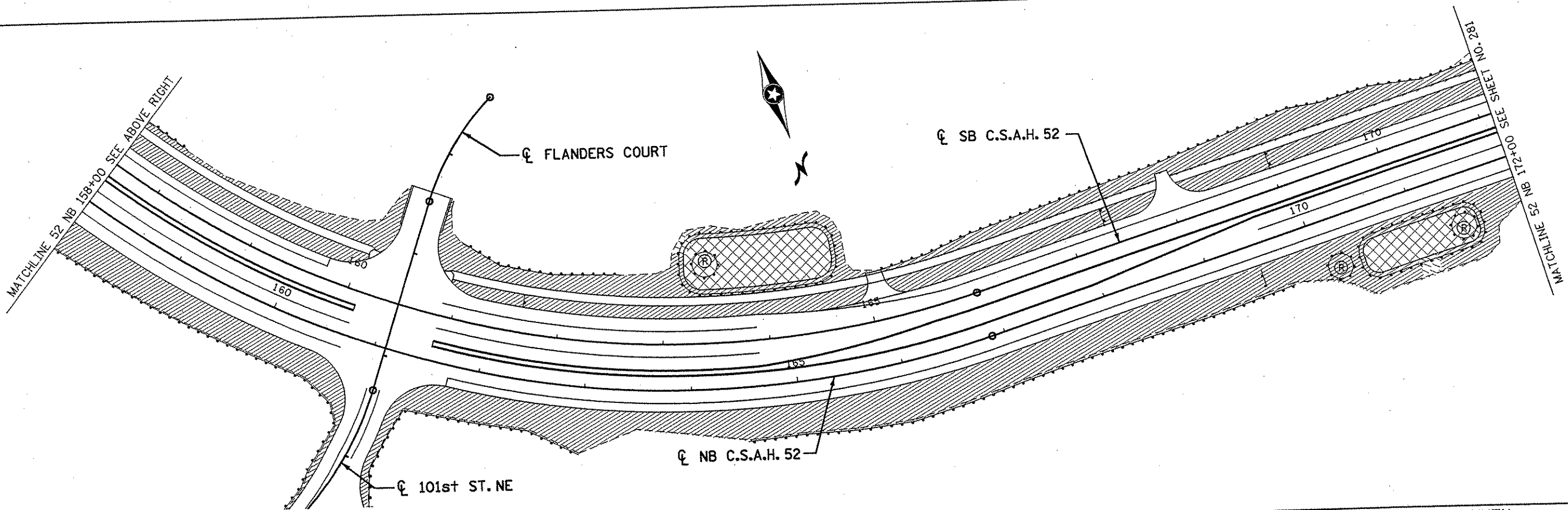
MATCHLINE 52 NB 158+00 SEE BELOW LEFT



LEGEND	
	SEED MIXTURE 60B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
	SEED MIXTURE 28B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
	SOD TYPE SALT RESISTANT
	MACHINE SLICED SILT FENCE
	SEED MIXTURE 60B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER EROSION CONTROL BLANKET (CAT 4)
	PLACE RIPRAP AT APRON END. SEE STD. PLATE 3133.
	SOD TYPE LAWN

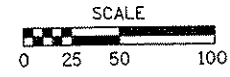
MATCHLINE 52 NB 158+00 SEE ABOVE RIGHT

MATCHLINE 52 NB 172+00 SEE SHEET NO. 281



ANOKA COUNTY				TURF ESTABLISHMENT AND EROSION CONTROL C.S.A.H. 52 RECONSTRUCTION C.S.A.H. 52 NB STA. 147+00 TO 172+00	SHEET 309 OF 559
TKDA ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA <small>TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED</small>					
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. <i>Joseph W. ...</i> DATE <u>1-11-02</u> LIC. NO. <u>22405</u>					
NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\a-f\anoka\1174901\hwy-brdg\par t4\roadway\drawings\turf\02.dwg					

MATCHLINE 52 NB 172+00 SEE SHEET NO. 280



☉ SB C.S.A.H. 52

☉ NB C.S.A.H. 52

MATCHLINE 52 NB 187+00 SEE BELOW LEFT

MATCHLINE 52 NB 187+00 SEE ABOVE RIGHT



☉ XYLITE ST.

☉ SB C.S.A.H. 52

☉ NB C.S.A.H. 52

MATCHLINE 52 NB 202+00 SEE SHEET NO. 282

END S.A.P. 02-652-04,
BEGIN S.A.P. 02-652-02
NB STA. 190+06.37

LEGEND

- SEED MIXTURE 60B
TYPE 1 MULCH, DISK ANCHORING
22-5-10 FERTILIZER
- SEED MIXTURE 28B
TYPE 1 MULCH, DISK ANCHORING
22-5-10 FERTILIZER
- SOD TYPE SALT RESISTANT
- MACHINE SLICED SILT FENCE
- SEED MIXTURE 60B
TYPE 1 MULCH, DISK ANCHORING
22-5-10 FERTILIZER
EROSION CONTROL BLANKET (CAT 4)
- PLACE RIPRAP AT APRON
END. SEE STD. PLATE 3133.
- SOD TYPE LAWN

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.

Joseph Neenan
DATE 1-11-02 LIC. NO. 22405

DRAWN BY MTH DATE 09-26-01
 DESIGN BY JMW DATE 09-26-01
 CHECKED BY KRC DATE 09-26-01

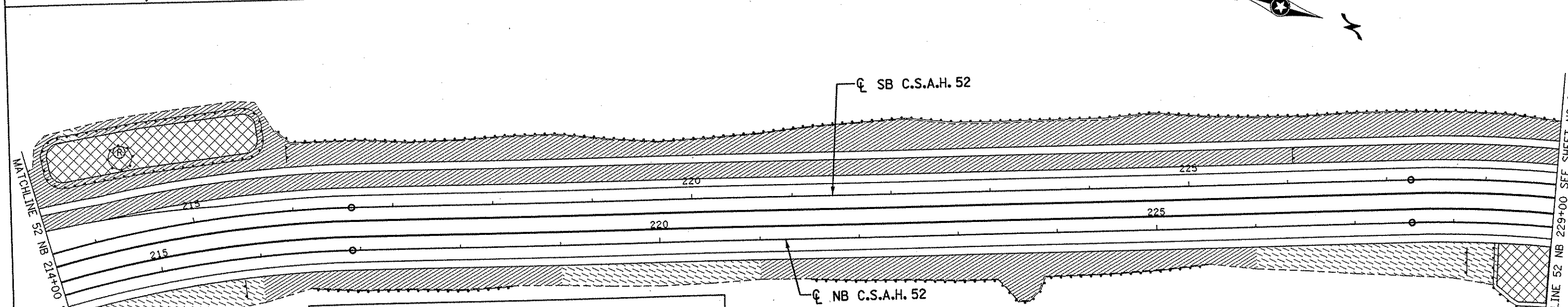
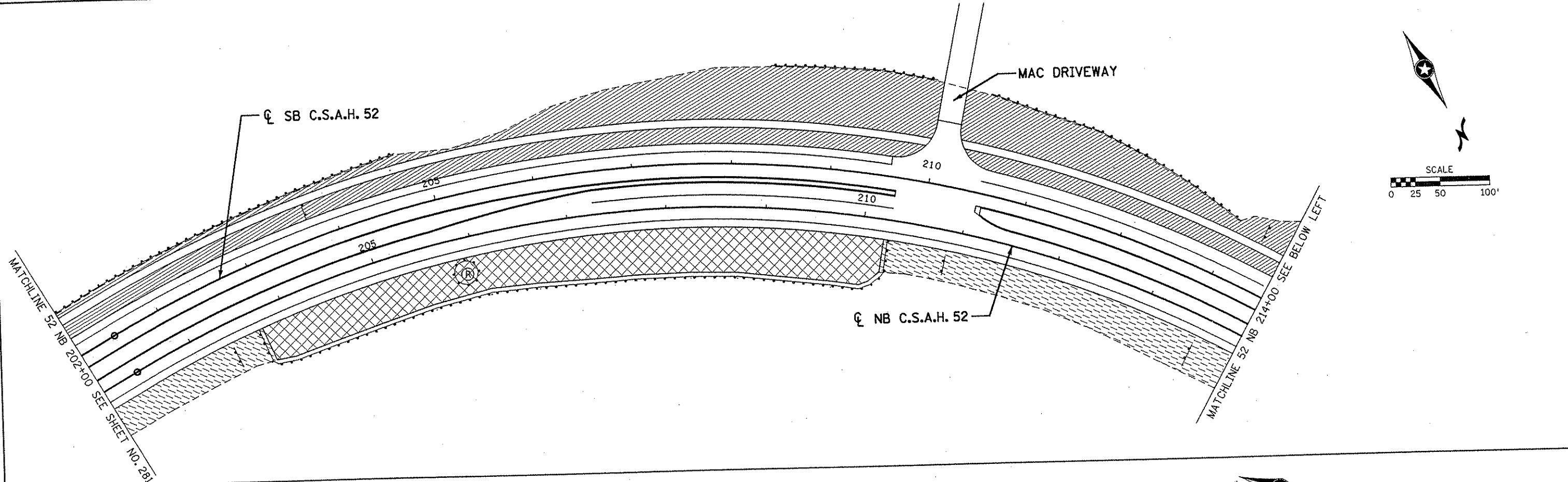
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUYALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TURF ESTABLISHMENT AND EROSION CONTROL
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 172+00 TO 202+00

SHEET
 310
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\turf\031d08\2002



LEGEND

	SEED MIXTURE 60B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER		SEED MIXTURE 28B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
	SOD TYPE SALT RESISTANT		MACHINE SLICED SILT FENCE
	SEED MIXTURE 60B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER EROSION CONTROL BLANKET (CAT 4)		PLACE RIPRAP AT APRON END. SEE STD. PLATE 3133.
	SOD TYPE LAWN		

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\a-f\anokacty\1174901\hwy-brdg\part4\roadway3\drawings\turf\09-26-01

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.

Joseph W. ...
DATE: 1-11-02 LIC. NO. 22405

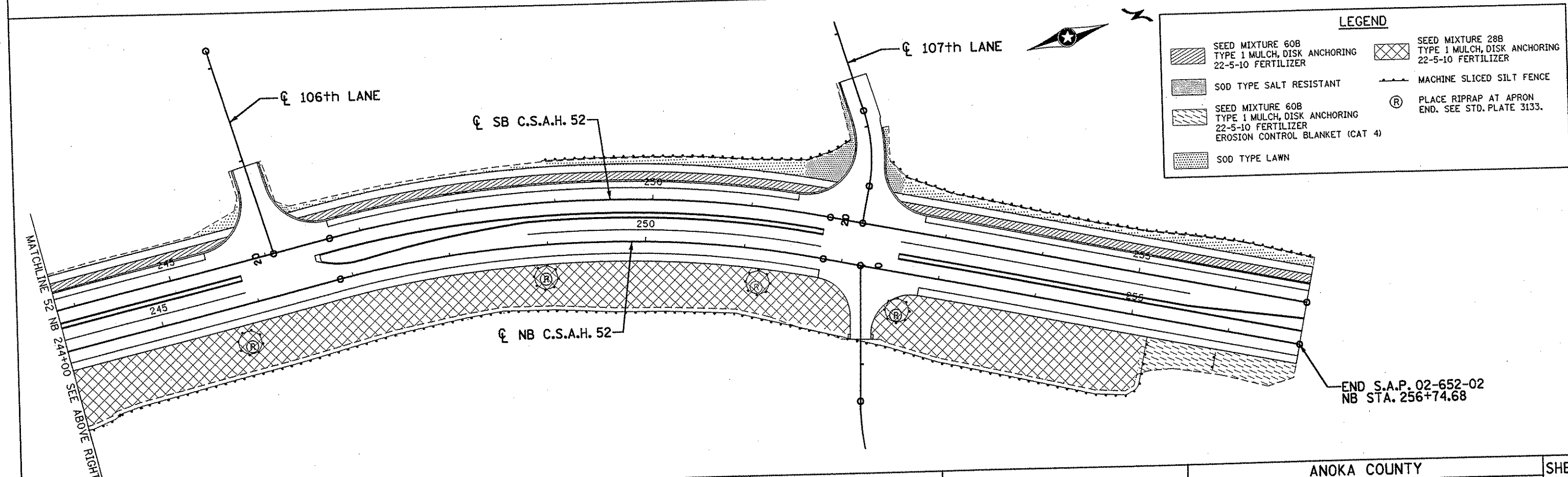
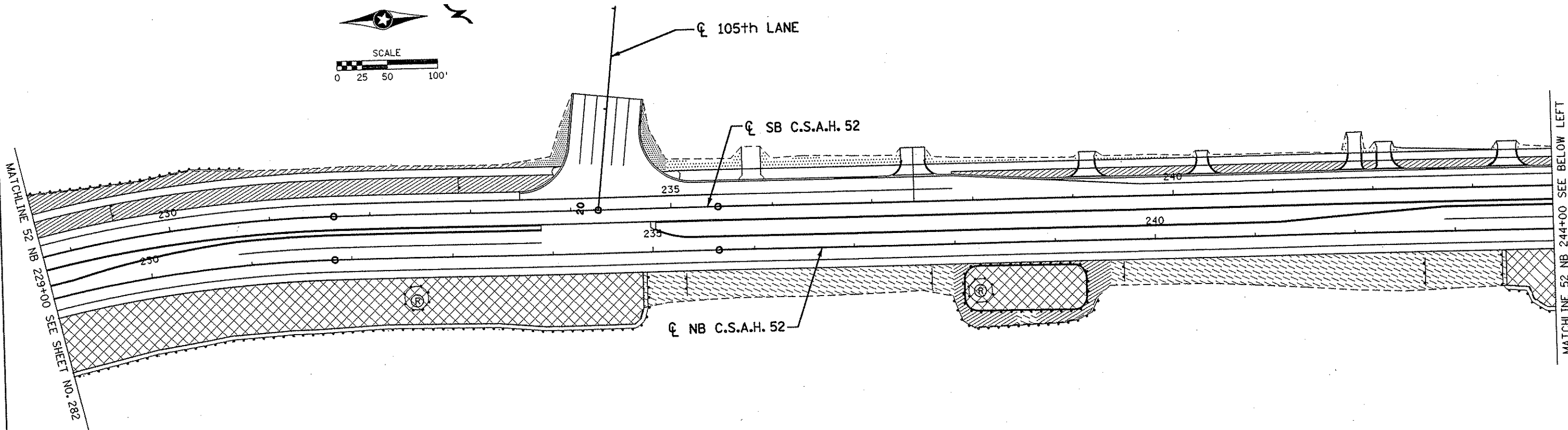
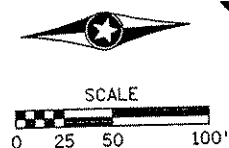
DRAWN BY MTH DATE 09-26-01
 DESIGN BY JMW DATE 09-26-01
 CHECKED BY KRC DATE 09-26-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TURF ESTABLISHMENT AND EROSION CONTROL
C.S.A.H. 52 RECONSTRUCTION
 C.S.A.H. 52 NB STA. 202+00 TO 229+00

SHEET
311
 OF
559



LEGEND	
	SEED MIXTURE 60B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
	SEED MIXTURE 28B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
	SOD TYPE SALT RESISTANT
	SEED MIXTURE 60B TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER EROSION CONTROL BLANKET (CAT 4)
	SOD TYPE LAWN
	MACHINE SLICED SILT FENCE
	PLACE RIPRAP AT APRON END. SEE STD. PLATE 3133.

END S.A.P. 02-652-02
NB STA. 256+74.68

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.

Joseph Weaver
DATE 1-11-02 LIC. NO. 22405

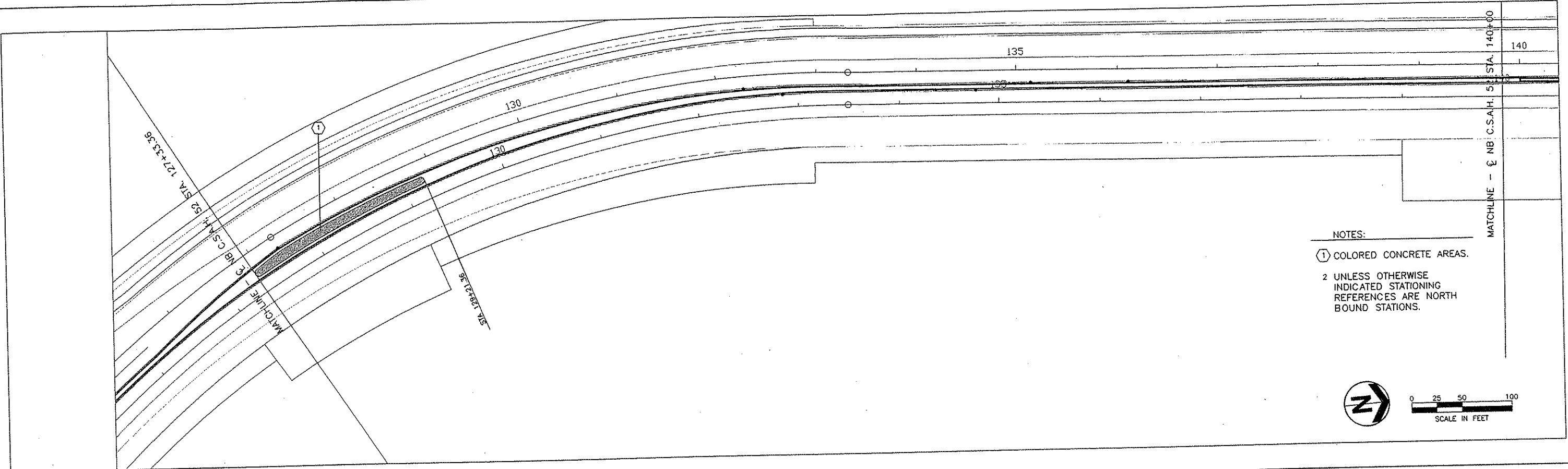
DRAWN BY MTH DATE 09-26-01
DESIGN BY JMW DATE 09-26-01
CHECKED BY KRC DATE 09-26-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

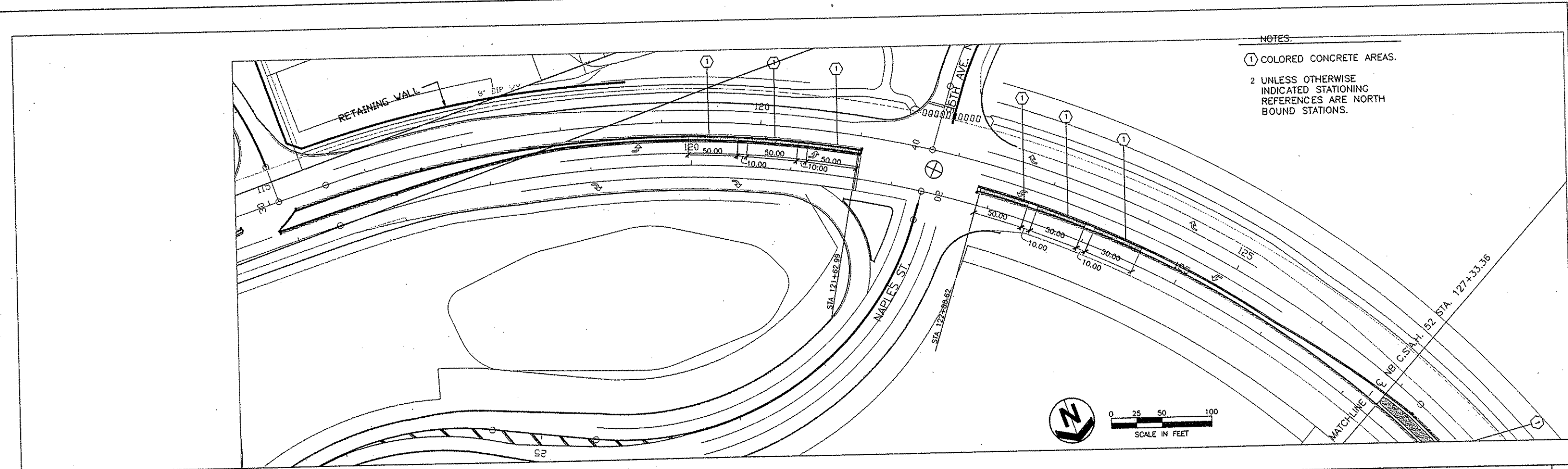
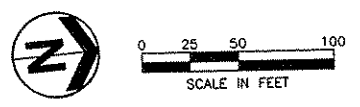
TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
TURF ESTABLISHMENT AND EROSION CONTROL
C.S.A.H. 52 RECONSTRUCTION
C.S.A.H. 52 NB STA. 229+00 TO 256+74.68

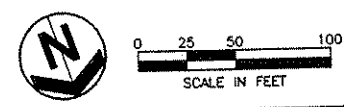
SHEET
312
OF
559



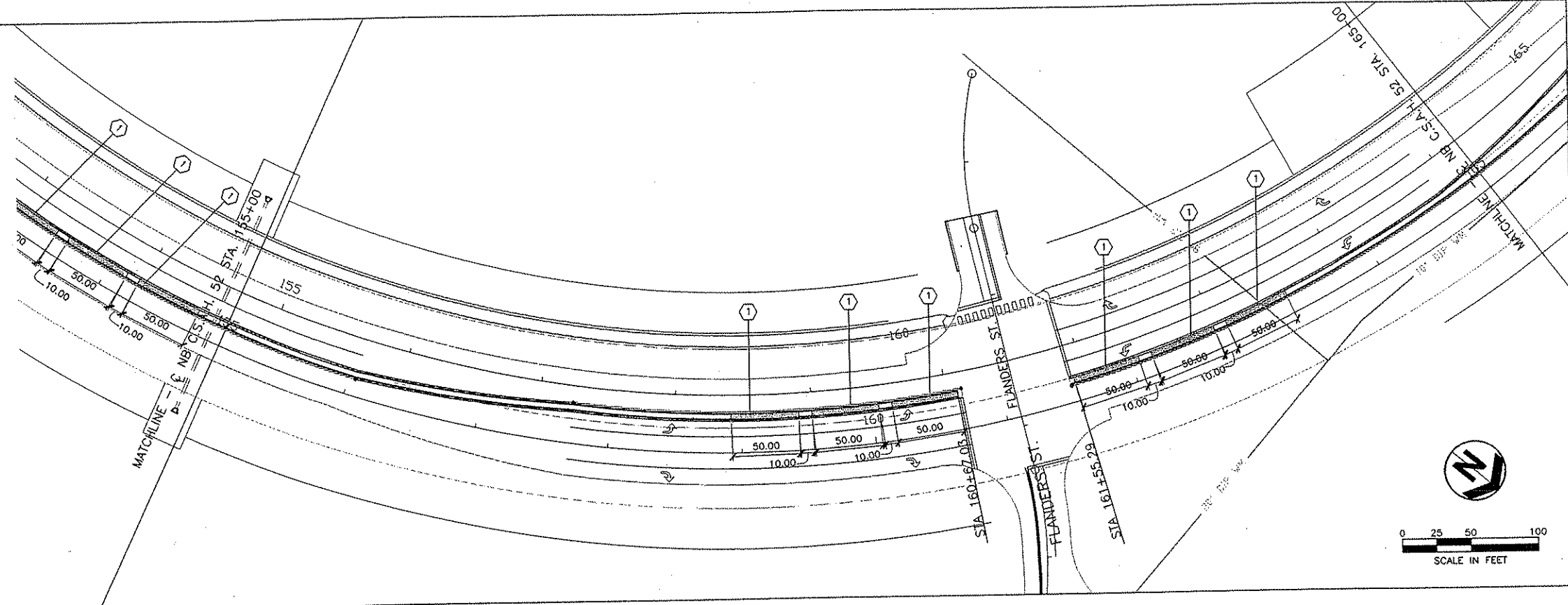
- NOTES:
- ① COLORED CONCRETE AREAS.
 - 2 UNLESS OTHERWISE INDICATED STATIONING REFERENCES ARE NORTH BOUND STATIONS.



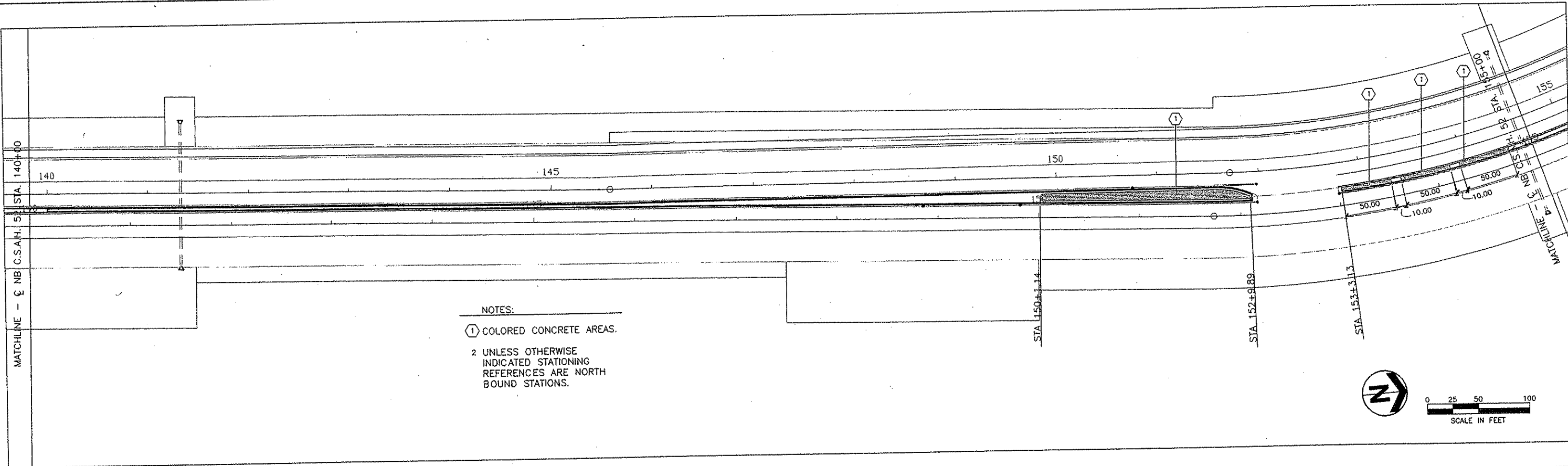
- NOTES:
- ① COLORED CONCRETE AREAS.
 - 2 UNLESS OTHERWISE INDICATED STATIONING REFERENCES ARE NORTH BOUND STATIONS.



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.					DRAWN BY <u>DMM</u> DATE <u>9/25/01</u> DESIGN BY <u>DMM</u> DATE <u>9/25/01</u> CHECKED BY <u>RLG</u> DATE <u>9/25/01</u>	S.P. 0280-50 (T.H. 35) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA <small>TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED</small> <small>ENGINEERS ARCHITECTS PLANNERS</small> <small>SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY LANDSCAPE PLAN C.S.A.H. 52 RECONSTRUCTION STA. 115+00 TO 140+00	SHEET 313 OF 559	
NO.	DATE	BY	CKD	APPR	REVISION	DATE	UC. NO.			
NAME: \$FILES							DATE <u>11/19/01</u> UC. NO. <u>26346</u>			



- NOTES:
- ① COLORED CONCRETE AREAS.
 - 2 UNLESS OTHERWISE INDICATED STATIONING REFERENCES ARE NORTH BOUND STATIONS.



- NOTES:
- ① COLORED CONCRETE AREAS.
 - 2 UNLESS OTHERWISE INDICATED STATIONING REFERENCES ARE NORTH BOUND STATIONS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$

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

[Signature]

DATE 11/19/01 LIC. NO. 16646

DRAWN BY DMM DATE 9/25/01
 DESIGN BY DMM DATE 9/25/01
 CHECKED BY RLG DATE 9/25/01

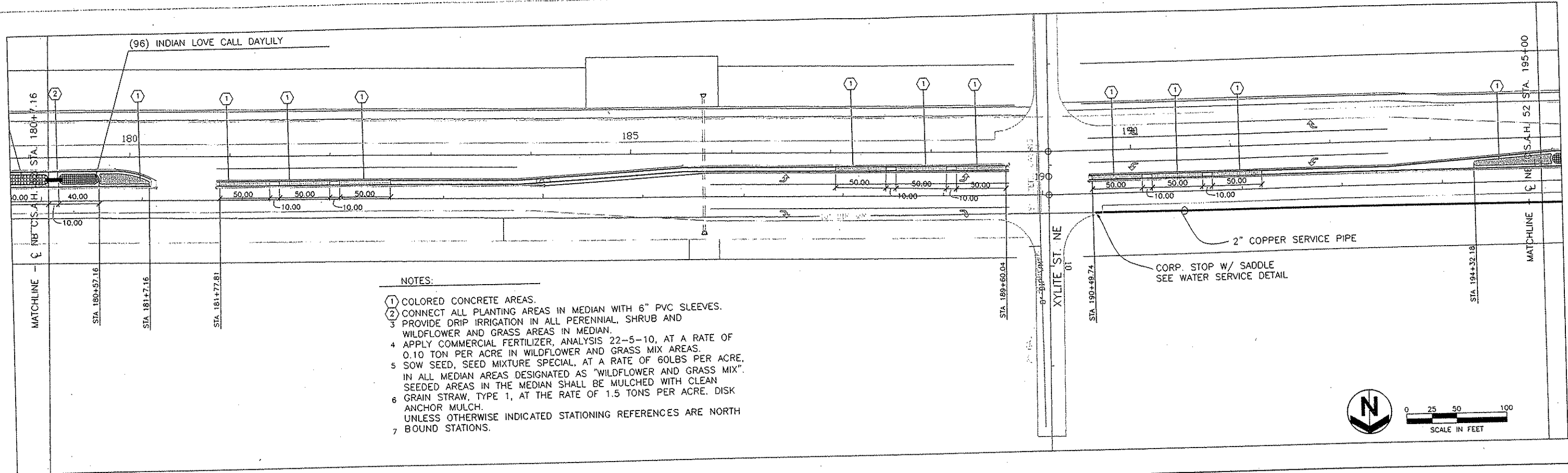
S.P. 0280-50 (T.H. 35)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 ENGINEERS ARCHITECTS PLANNERS

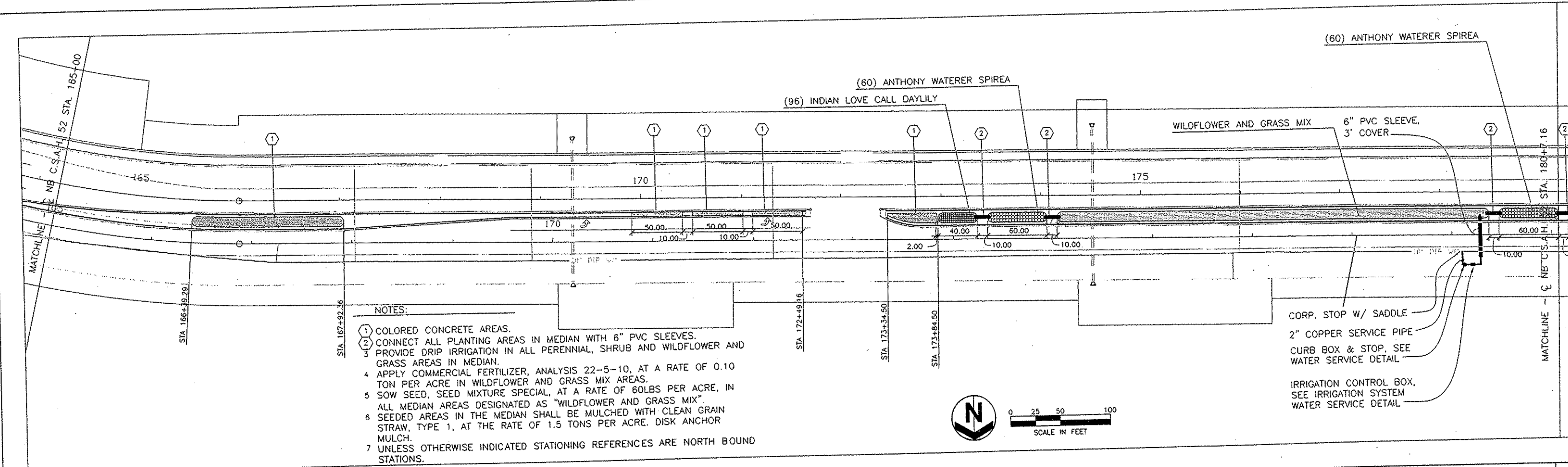
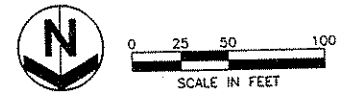
TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 LANDSCAPE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 140+00 TO 165+00

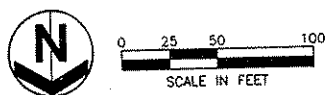
SHEET
 314
 OF
 559



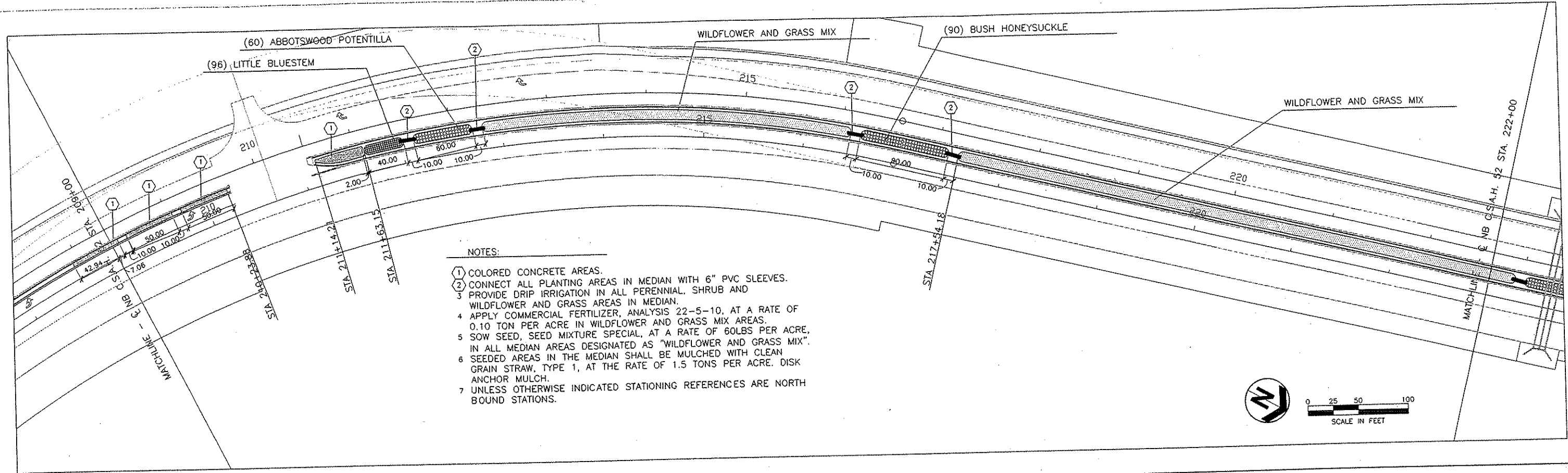
- NOTES:
- 1 COLORED CONCRETE AREAS.
 - 2 CONNECT ALL PLANTING AREAS IN MEDIAN WITH 6" PVC SLEEVES.
 - 3 PROVIDE DRIP IRRIGATION IN ALL PERENNIAL, SHRUB AND WILDFLOWER AND GRASS AREAS IN MEDIAN.
 - 4 APPLY COMMERCIAL FERTILIZER, ANALYSIS 22-5-10, AT A RATE OF 0.10 TON PER ACRE IN WILDFLOWER AND GRASS MIX AREAS.
 - 5 SOW SEED, SEED MIXTURE SPECIAL, AT A RATE OF 60LBS PER ACRE, IN ALL MEDIAN AREAS DESIGNATED AS "WILDFLOWER AND GRASS MIX". SEEDED AREAS IN THE MEDIAN SHALL BE MULCHED WITH CLEAN GRAIN STRAW, TYPE 1, AT THE RATE OF 1.5 TONS PER ACRE. DISK ANCHOR MULCH.
 - 6 UNLESS OTHERWISE INDICATED STATIONING REFERENCES ARE NORTH BOUND STATIONS.



- NOTES:
- 1 COLORED CONCRETE AREAS.
 - 2 CONNECT ALL PLANTING AREAS IN MEDIAN WITH 6" PVC SLEEVES.
 - 3 PROVIDE DRIP IRRIGATION IN ALL PERENNIAL, SHRUB AND WILDFLOWER AND GRASS AREAS IN MEDIAN.
 - 4 APPLY COMMERCIAL FERTILIZER, ANALYSIS 22-5-10, AT A RATE OF 0.10 TON PER ACRE IN WILDFLOWER AND GRASS MIX AREAS.
 - 5 SOW SEED, SEED MIXTURE SPECIAL, AT A RATE OF 60LBS PER ACRE, IN ALL MEDIAN AREAS DESIGNATED AS "WILDFLOWER AND GRASS MIX". SEEDED AREAS IN THE MEDIAN SHALL BE MULCHED WITH CLEAN GRAIN STRAW, TYPE 1, AT THE RATE OF 1.5 TONS PER ACRE. DISK ANCHOR MULCH.
 - 6 UNLESS OTHERWISE INDICATED STATIONING REFERENCES ARE NORTH BOUND STATIONS.

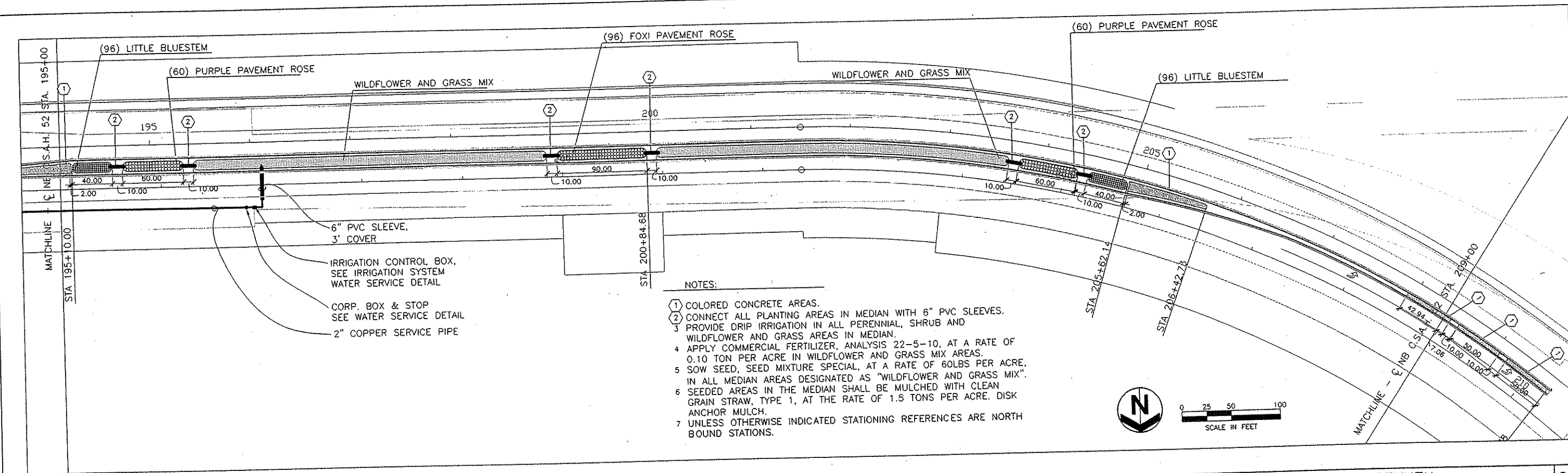
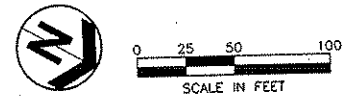


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA. 					DATE 01/14/02 LIC. NO. 19346	DRAWN BY DMM DATE 9/25/01 DESIGN BY DMM DATE 9/25/01 CHECKED BY BLG DATE 9/25/01	S.P. 0280-50 (T.H. 35) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA <small>TOLTZ, KING, QUALL, ANDERSON AND ASSOCIATES, INCORPORATED</small> <small>ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY LANDSCAPE PLAN C.S.A.H. 52 RECONSTRUCTION STA. 165+00 TO 195+00	SHEET 315 OF 559	
NO	DATE	BY	CKD	APPR	REVISION	\$DATE\$					
NAME: \$FILES\$											



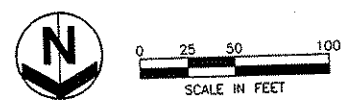
NOTES:

- 1 COLORED CONCRETE AREAS.
- 2 CONNECT ALL PLANTING AREAS IN MEDIAN WITH 6" PVC SLEEVES.
- 3 PROVIDE DRIP IRRIGATION IN ALL PERENNIAL, SHRUB AND WILDFLOWER AND GRASS AREAS IN MEDIAN.
- 4 APPLY COMMERCIAL FERTILIZER, ANALYSIS 22-5-10, AT A RATE OF 0.10 TON PER ACRE IN WILDFLOWER AND GRASS MIX AREAS.
- 5 SOW SEED, SEED MIXTURE SPECIAL, AT A RATE OF 60LBS PER ACRE, IN ALL MEDIAN AREAS DESIGNATED AS "WILDFLOWER AND GRASS MIX".
- 6 SEEDED AREAS IN THE MEDIAN SHALL BE MULCHED WITH CLEAN GRAIN STRAW, TYPE 1, AT THE RATE OF 1.5 TONS PER ACRE. DISK ANCHOR MULCH.
- 7 UNLESS OTHERWISE INDICATED STATIONING REFERENCES ARE NORTH BOUND STATIONS.



NOTES:

- 1 COLORED CONCRETE AREAS.
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NO	DATE	BY	CKD	APPR	REVISION	\$DATE\$

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[Signature]

DATE 01/14/02 NC NO. 16346

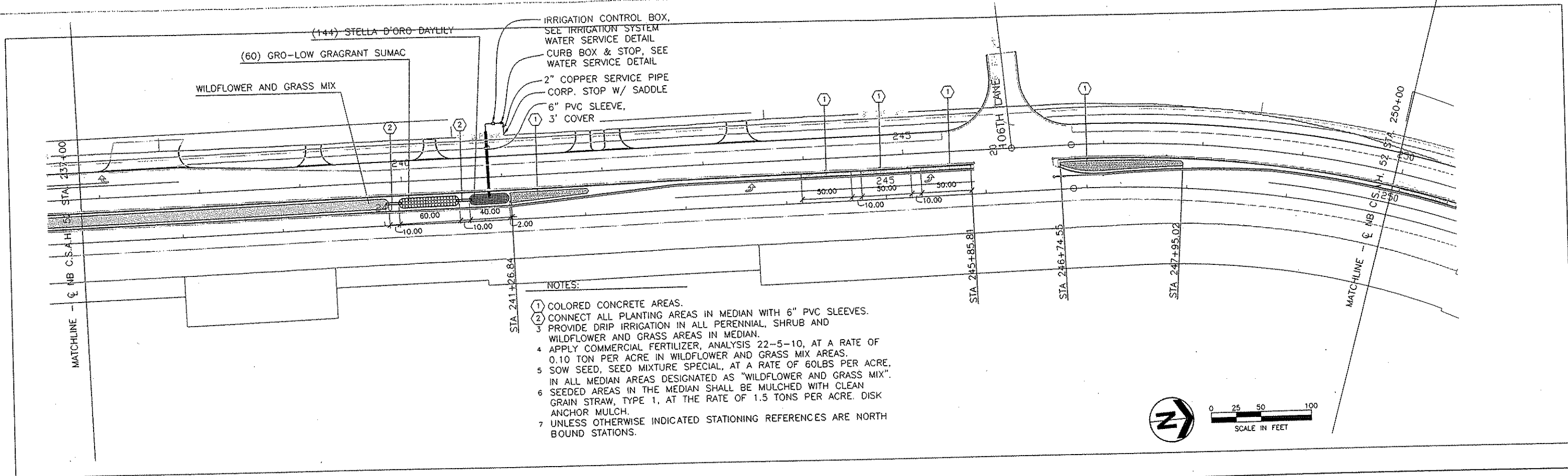
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 DESIGN BY DMM DATE 9/25/01
 CHECKED BY RLJ DATE 9/25/01

S.P. 0280-50 (T.H. 35)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

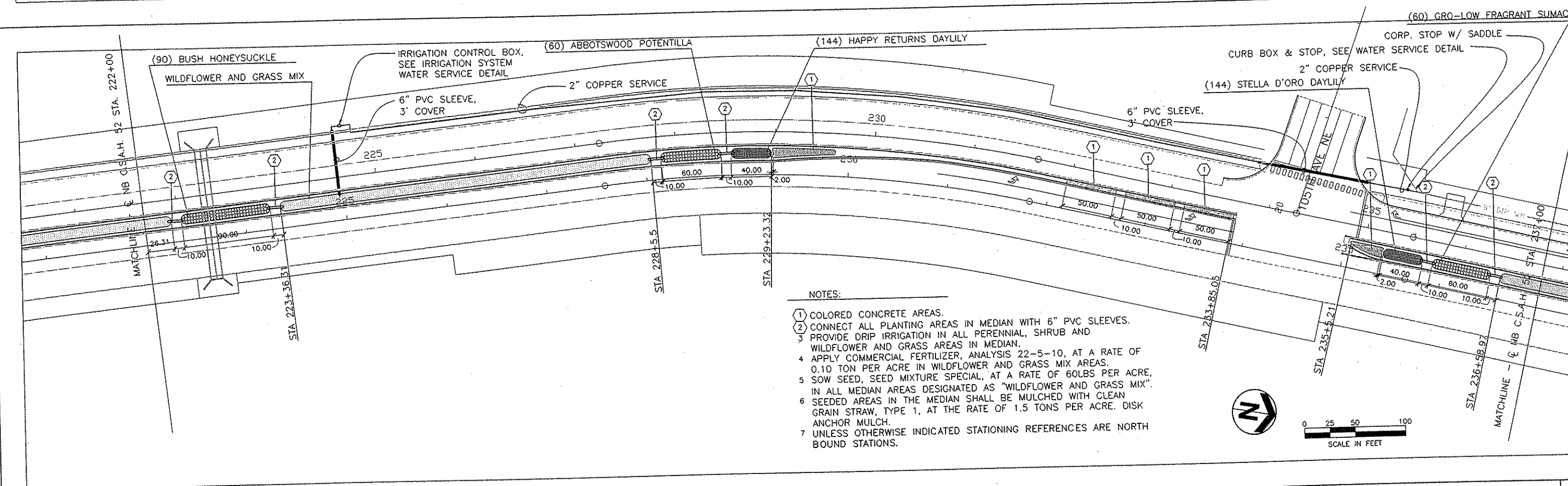
TKDA TOLTZ, KING, OLMALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 LANDSCAPE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 195+00 TO 222+00

SHEET 316 OF 559

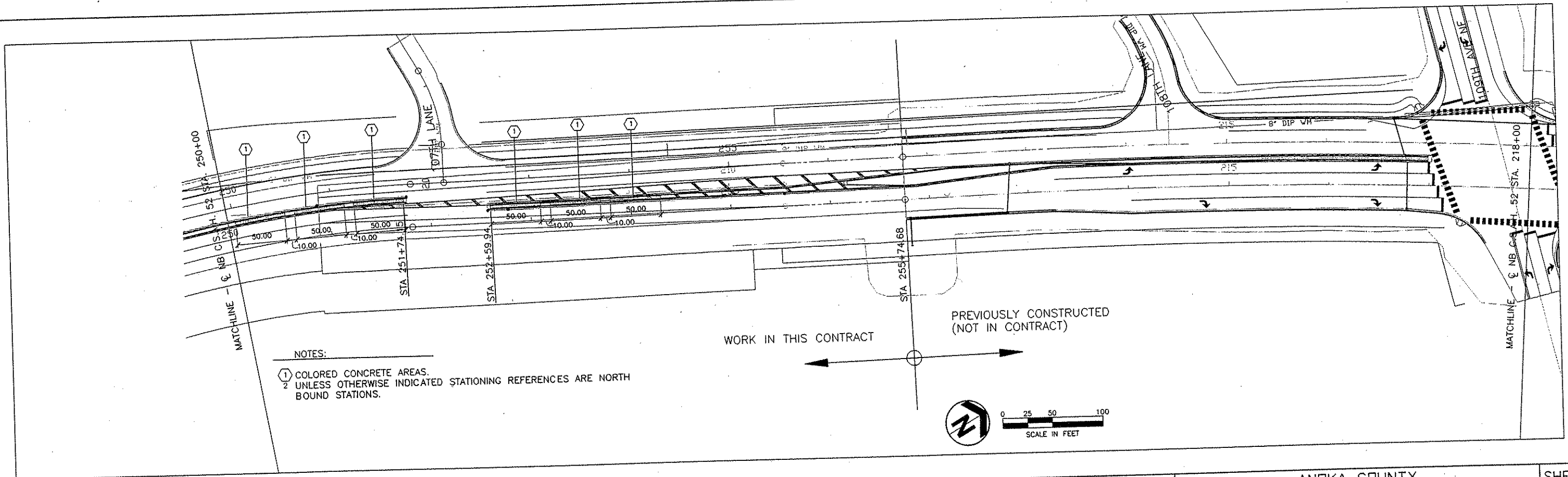
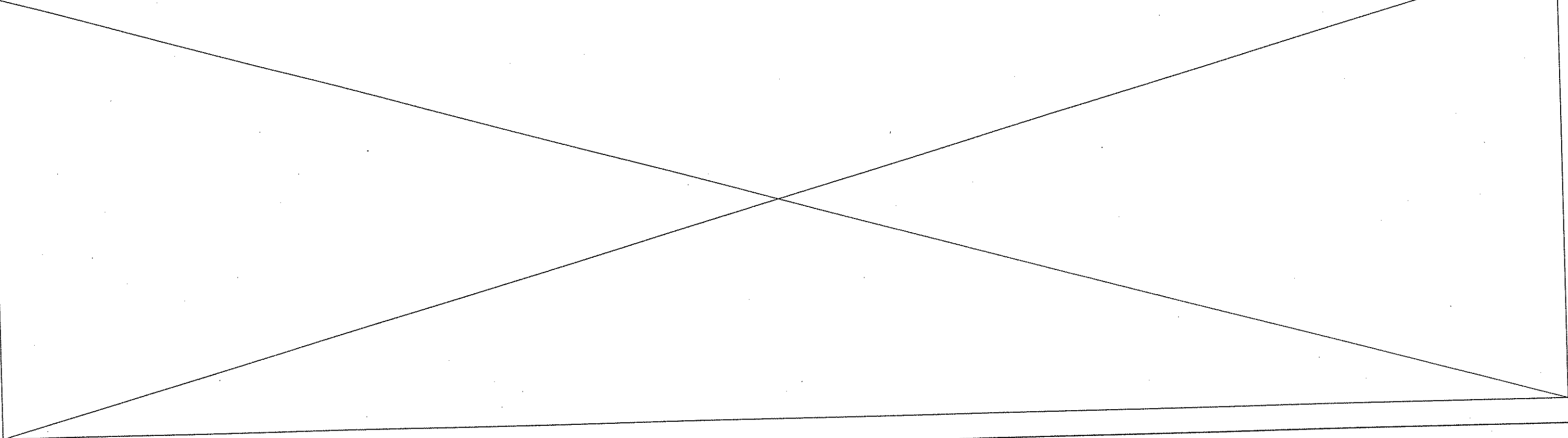


- NOTES:
- 1 COLORED CONCRETE AREAS.
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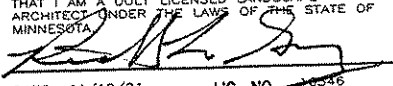


- NOTES:
- 1 COLORED CONCRETE AREAS.
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA. 					DATE 01/14/02 LIC. NO. 6346		DRAWN BY DMM DATE 9/25/01 DESIGN BY DMM DATE 9/25/01 CHECKED BY RLC DATE 9/25/01		S.P. 0280-50 (T.H. 35) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY LANDSCAPE PLAN C.S.A.H. 52 RECONSTRUCTION STA. 222+00 TO 250+00		SHEET 317 OF 559
NO	DATE	BY	CKD	APPR	REVISION	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	
NAME: sfiles															



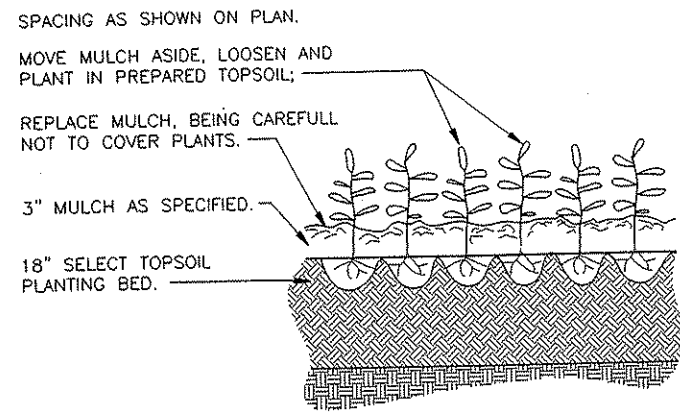
NO	DATE	BY	CKD	APPR	REVISION	#DATE#

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

 DATE 11/19/01 UC. NO. 16546

DRAWN BY DMM DATE 9/25/01
 DESIGN BY DMM DATE 9/25/01
 CHECKED BY RLG DATE 9/25/01
 S.P. 0280-50 (T.H. 35)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

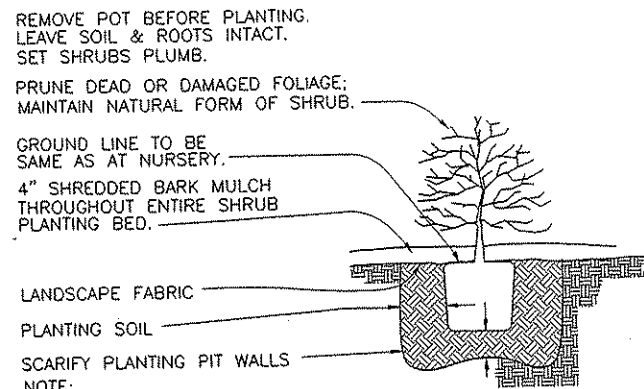
TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUNN, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 LANDSCAPE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 250+00 TO 255+74.68
 SHEET 318 OF 559



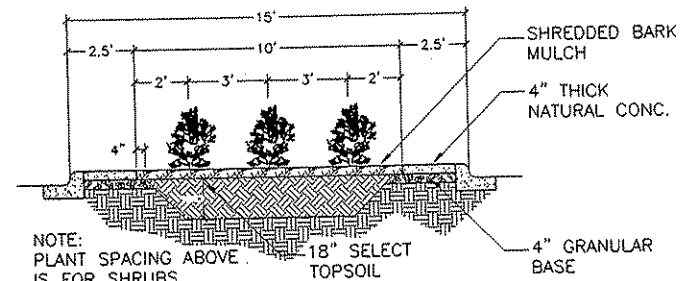
PERENNIAL PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

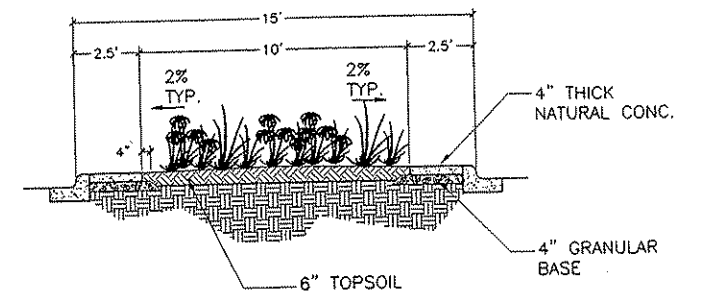
NOT TO SCALE



NOTE:
PLANT SPACING ABOVE IS FOR SHRUBS.
PERENNIAL PLANTINGS WILL VARY.

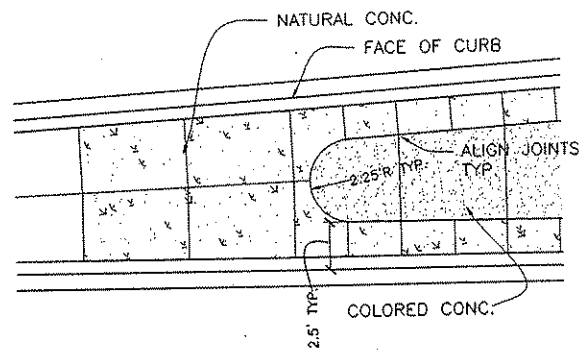
SHRUB & PERENNIAL MEDIAN PLANTING AREA

NOT TO SCALE



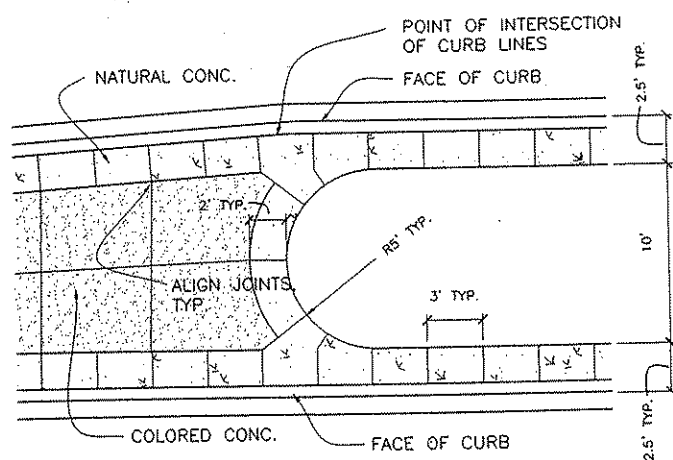
WILDFLOWER & GRASS MIX MEDIAN PLANTING AREA

NOT TO SCALE



COLORED CONCRETE TAPER AREA-- NARROW END TYP. DETAIL

NOT TO SCALE



COLORED CONCRETE TAPER AREA--WIDE END TYP. DETAIL

NOT TO SCALE

PLANT SCHEDULE			
QUANT.	COMMON NAME	SCIENTIFIC NAME	SIZE
180	BUSH HONEYSUCKLE	DIERVILLA LONICERA	POT 18"
120	ABBOTSWOOD POTENTILLA	POTENTILLA FRUTICOSA 'ABBOTSWOOD'	POT 18"
120	GRO-LOW FRAGRANT SUMAC	RHUS AROMATICA 'GRO-LOW'	POT 18"
96	FOXI PAVEMENT ROSE	ROSA RUGOSA 'FOXI PAVEMENT'	POT 18"
120	PURPLE PAVEMENT ROSE	ROSA RUGOSA 'PURPLE PAVEMENT'	POT 18"
120	ANTHONY WATERER SPIREA	SPIREA X BUMALDA 'ANTHONY WATERER'	POT 18"
288	LITTLE BLUESTEM	ANDROPOGON SCOPARIUS	POT 4"
144	HAPPY RETURNS DAYLILY	HEMEROCALLIS 'HAPPY RETURNS'	POT 4"
192	INDIAN LOVE DAYLILY	HEMEROCALLIS 'INDIAN LOVE'	POT 4"
288	STELLA D'ORO DAYLILY	HEMEROCALLIS 'STELLA D'ORO'	POT 4"

NO	DATE	BY	CKD	APPR	REVISION	DATE

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

Robert H. Gray

DATE 1/4/02 LIC. NO. 16346

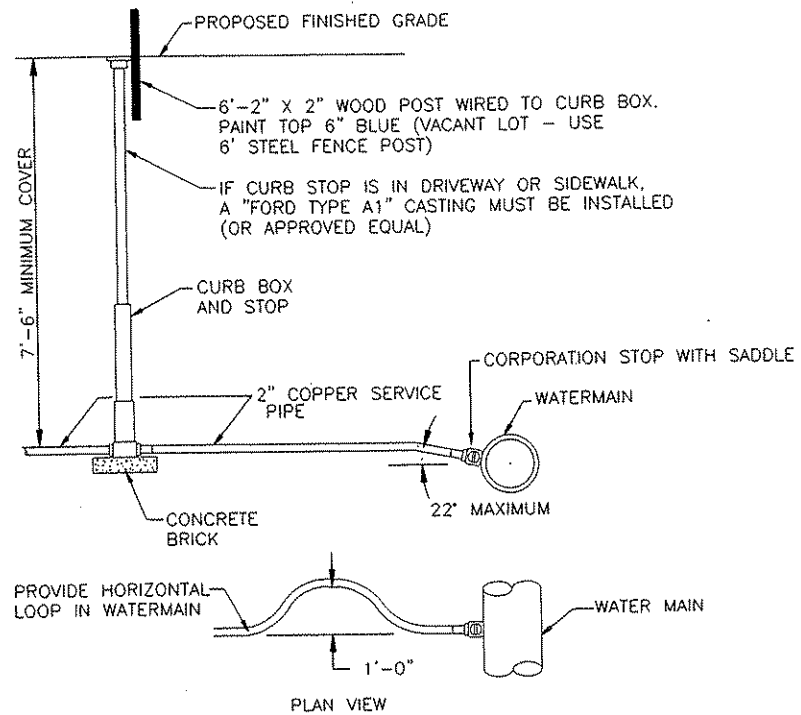
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 DESIGN BY DMM DATE 9/25/01
 CHECKED BY RLG DATE 9/25/01

S.P. 0280-50 (T.H. 35)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

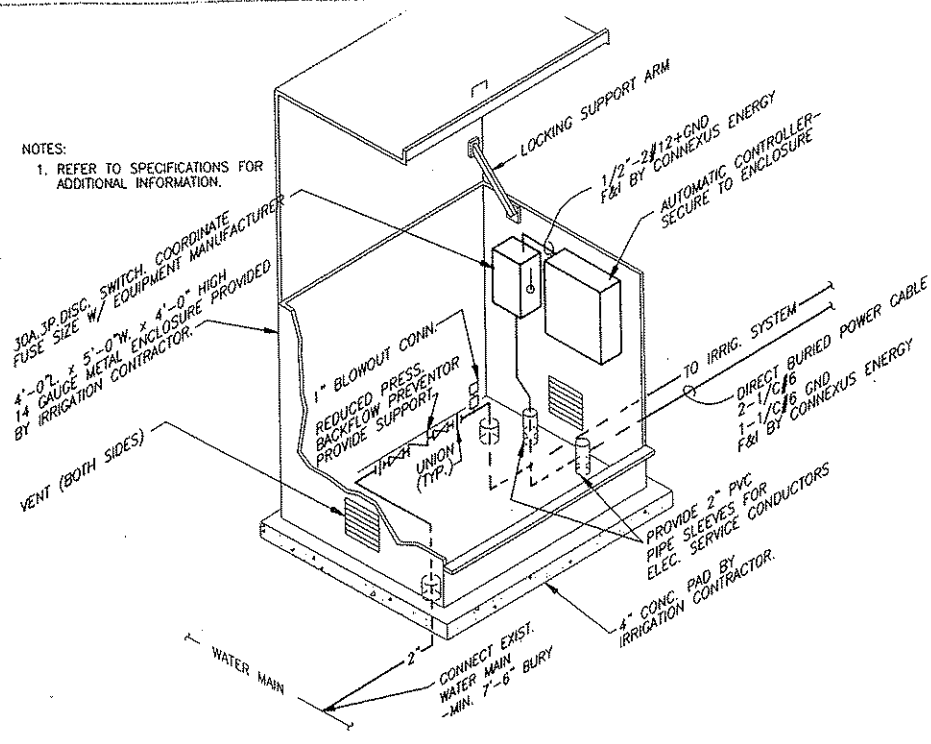
TKDA TOLTZ, KING, DUNALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 LANDSCAPE DETAILS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 319
 OF
 559



WATER SERVICE CONNECTION DETAIL
NOT TO SCALE



IRRIGATION SYSTEM WATER SERVICE DETAIL
NOT TO SCALE

LANDSCAPE TABULATION

AA

LOCATION	COST PARTICIP	TOPSOIL (LV)	SELECT TOPSOIL (LV)	CONC. WALK, 4" PLAIN	CONC. WALK, 4" SPECIAL (2)	SHRUB, DECIDUOUS	PERENNIAL	SEEDING	SEED, SEED MIXTURE SPECIAL, (60 LBS/AC)	MULCH, TYPE 1(1.5 TON/AC)	MULCH, TYPE 6	DISK ANCHOR	FERTILIZER, 22-5-10 (0.10 TON/AC) (3)	IRR. SYSTEM
		CY	CY	SF	SF	EA	EA	AC	LB	TON	CY	AC	TON	LS
C.S.A.H. 52				6036	831									
NB C.S.A.H. 52 115+00 TO 127+00	(B)			7095	1593									
NB C.S.A.H. 52 127+00 TO 140+00	(B)			7118	2066									
NB C.S.A.H. 52 140+00 TO 155+00	(B)			2774	831									
NB C.S.A.H. 52 155+00 TO 165+00	(B)			8515	2268	120	96	0.09	5.40	0.15	17.25	0.09	0.009	(1)
NB C.S.A.H. 52 165+00 TO 180+7.16	(B)	77.9	83.40	1728	2090		96				3.42			(1)
NB C.S.A.H. 52 180+7.16 TO 195+00	(B)		20.50	7952	777	216	192	0.15	9.00	0.23	31.40	0.15	0.015	(1)
NB C.S.A.H. 52 195+00 TO 209+00	(B)	127.19	151.70	5276	699	150	96	0.20	12.30	0.17	20.82	0.20	0.020	(1)
NB C.S.A.H. 52 209+00 TO 222+00	(B)	165.33	99.70	7092	1079	210	288	0.10	5.82	0.15	31.17	0.10	0.010	(1)
NB C.S.A.H. 52 222+00 TO 237+00	(B)	78.37	151.70	5924	1867	60	144	0.07	4.20	0.11	10.35	0.07	0.007	(1)
NB C.S.A.H. 52 237+00 TO 250+00	(B)	56.8	52.00	2044	831									
NB C.S.A.H. 52 250+00 TO 255+74.68	(B)			61554	14932	756	912	0.61	36.72	0.81	114.41	0.61	0.061	(1)
SUBTOTALS	(B)	505.59	559.00											
TOTALS		505.59	559	61554	14932	756	912	0.61	36.72	0.81	114.41	0.61	0.061	(1)

- (1) PAYMENT FOR IRRIGATION SYSTEM WILL BE BY ONE LUMP SUM FOR THE ENTIRE PROJECT & WILL INCLUDE COMPLETE FURNISHING AND INSTALLATION OF FOUR (4) COMPLETE IRRIGATION SYSTEMS TO IRRIGATE MEDIAN AREAS. THIS WILL INCLUDE, BUT NOT BE LIMITED TO, ELECTRICAL POWER, WATER SERVICE AND CONNECTIONS TO EXISTING WATERMAINS, CORPORATION STOPS, CURB BOXES & STOPS, IRRIGATION CONTROLLERS & BOXES, SLEEVES, AND ALL IRRIGATION PIPING, VALVES AND FITTINGS.
- (2) COLORED CONCRETE
- (3) SLOW RELEASE
- (B) ANOKA COUNTY S.A.P. 02-652-02, S.A.P. 02-652-04

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.
[Signature]
DATE 1/14/02 LIC. NO. 8943

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.
[Signature]
DATE 1/14/02 LIC. NO. 17843

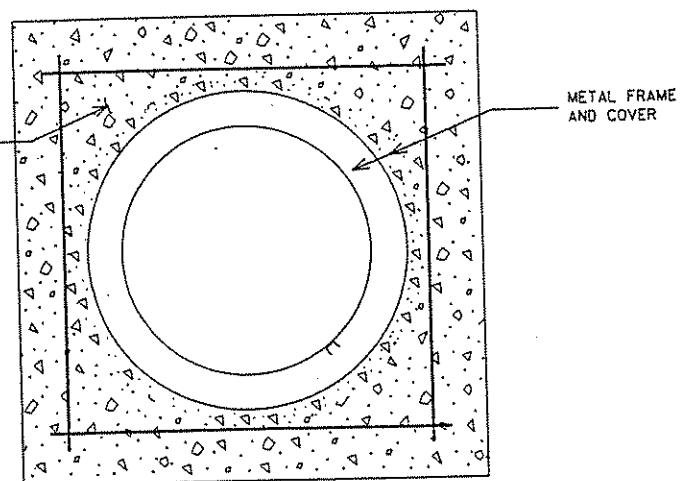
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.
[Signature]
DATE 1/14/02 LIC. NO. 10895

DRAWN BY DMM DATE 9/25/01
DESIGN BY DMM DATE 9/25/01
CHECKED BY RLC DATE 9/25/01
S.P. 0280-50 (T.H. 35)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS ARCHITECTS PLANNERS
SAINT PAUL, MINNESOTA

ANOKA COUNTY
LANDSCAPE DETAILS
C.S.A.H. 52 RECONSTRUCTION
SHEET 320 OF 559

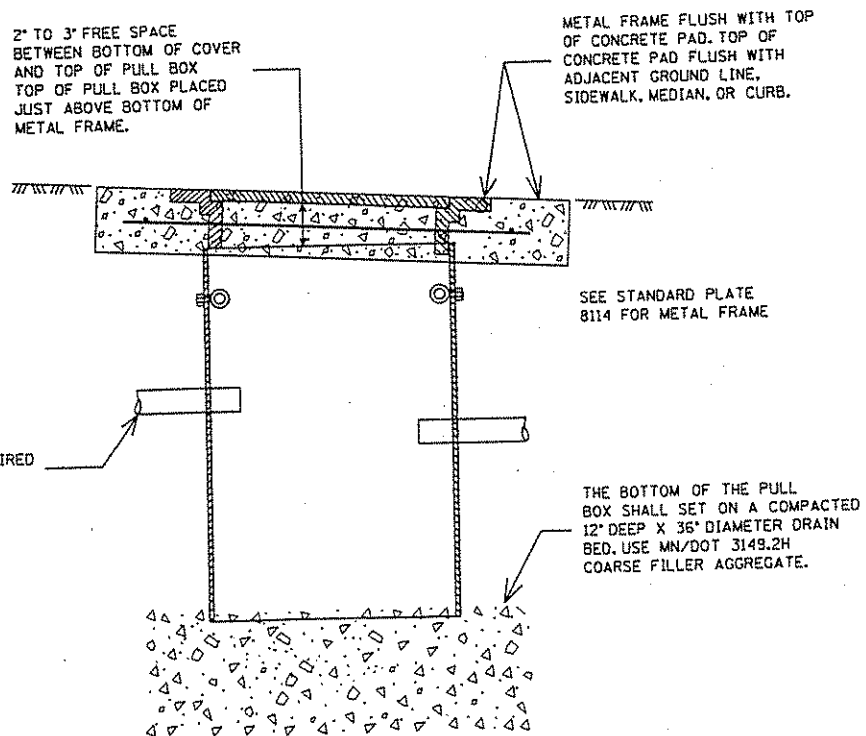
CONSTRUCT 4'-0" X 4'-0" X 4" DEEP CONCRETE PAD. CONCRETE MIX 3A32. PLACE NO. 4 REBARS AS SHOWN.



METAL FRAME AND COVER

THE FOLLOWING STANDARD PLATES APPROVED BY THE DEPT. OF TRANSPORTATION AND THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

STANDARD PLATES	
PLATE NO.	DESCRIPTION
8106B	EQUIPMENT PAD B
8114A	PVC HANDHOLE/PULL BOX
8128B	LIGHT BASE DESIGN H
8140B	ROADWAY LIGHTING SERVICE CABINET



CONDUITS AS REQUIRED SEE PLANS

METAL FRAME FLUSH WITH TOP OF CONCRETE PAD. TOP OF CONCRETE PAD FLUSH WITH ADJACENT GROUND LINE, SIDEWALK, MEDIAN, OR CURB.

SEE STANDARD PLATE 8114 FOR METAL FRAME

THE BOTTOM OF THE PULL BOX SHALL SET ON A COMPACTED 12" DEEP X 36" DIAMETER DRAIN BED. USE MN/DOT 3149.2H COARSE FILLER AGGREGATE.

TABULATION OF LIGHTING QUANTITIES

BB

ITEM	UNIT	S.P. 0280-50
		ESTIMATED QUANTITIES
REMOVE LIGHT STANDARD BASE	EACH	17
REMOVE LIGHTING UNIT	EACH	17
SALVAGE SERVICE CABINET	EACH	1
LIGHTING UNIT TYPE VM-45	EACH	16
LIGHTING UNIT TYPE VMD-45	EACH	1
UNDERPASS LIGHTING FIXTURE TYPE L	EACH	1
LIGHT BASE DESIGN H	EACH	17
1" RIGID STEEL CONDUIT	LIN. FT.	35
2" RIGID STEEL CONDUIT	LIN. FT.	70
3" RIGID STEEL CONDUIT	LIN. FT.	320
UNDERGROUND WIRE 1 CONDUCTOR NO. 2	LIN. FT.	235
UNDERGROUND WIRE 1 CONDUCTOR NO. 10	LIN. FT.	145
ARMORED CABLE 3 CONDUCTOR NO. 4	LIN. FT.	6570
SERVICE CABINET SECONDARY TYPE L1	EACH	1
EQUIPMENT PAD B	EACH	1
JUNCTION BOX	EACH	1
PULL BOX	EACH	1

PULL BOX WITH CONCRETE SURROUND
SEE STANDARD PLATE 8114 FOR
PULL BOX CONSTRUCTION DETAILS

I hereby certify that sheets 321 through 327 of this plan were prepared by me Sean Delmore
Sean Delmore Lic. No. 40945, Date 11/21/01

S.P. 0280-50 (T.H. 35)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-019

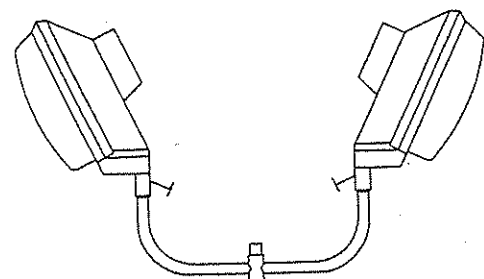
LIGHTING DETAILS

CERTIFIED BY Sean Delmore LICENSED PROFESSIONAL ENGINEER

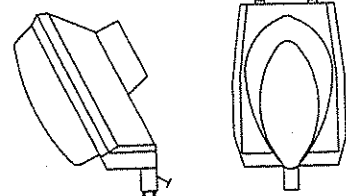
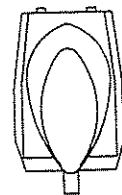
Lic. No. 40945

State Proj. No.

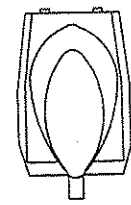
Sheet No. 321 of 559 Sheets



250 WATT HIGH PRESSURE SODIUM LUMINAIRE



250 WATT HIGH PRESSURE SODIUM LUMINAIRE



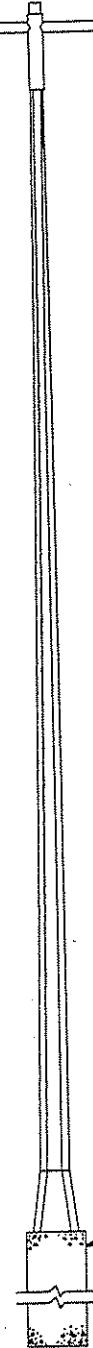
VERTICAL MOUNT LUMINAIRES

G.E. TURNPIKE REGULATED BALLAST FOR 240 VOLTS, CAT. NO. RPF525SOA1GLN3GRS

AMERICAN ELECTRIC INTERSTATE II, REGULATED BALLAST FOR 240 VOLTS, CAT. NO. 7760H132N000

LAMPS SHALL BE 250 WATT HIGH PRESSURE SODIUM

LUMINAIRES SHALL HAVE A TYPE III SEMI-CUTOFF DISTRIBUTION



STAINLESS STEEL HIGH BASE
ALUMINUM TRANSFORMER BASE

LIGHT BASE DESIGN H STANDARD PLATE 8128

LIGHTING UNIT TYPE VMD-45 (BREAKAWAY)



STAINLESS STEEL HIGH BASE
ALUMINUM TRANSFORMER BASE

LIGHT BASE DESIGN H STANDARD PLATE 8128

LIGHTING UNIT TYPE VM-45 (BREAKAWAY)

S.P.	0280-50 (T.H. 35)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-019

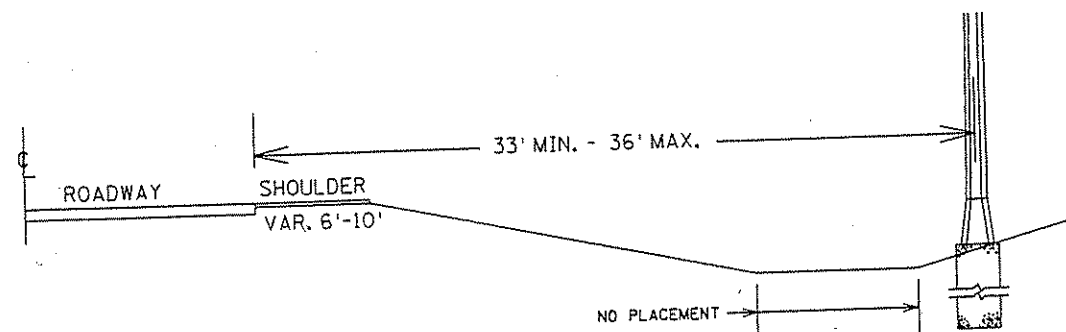
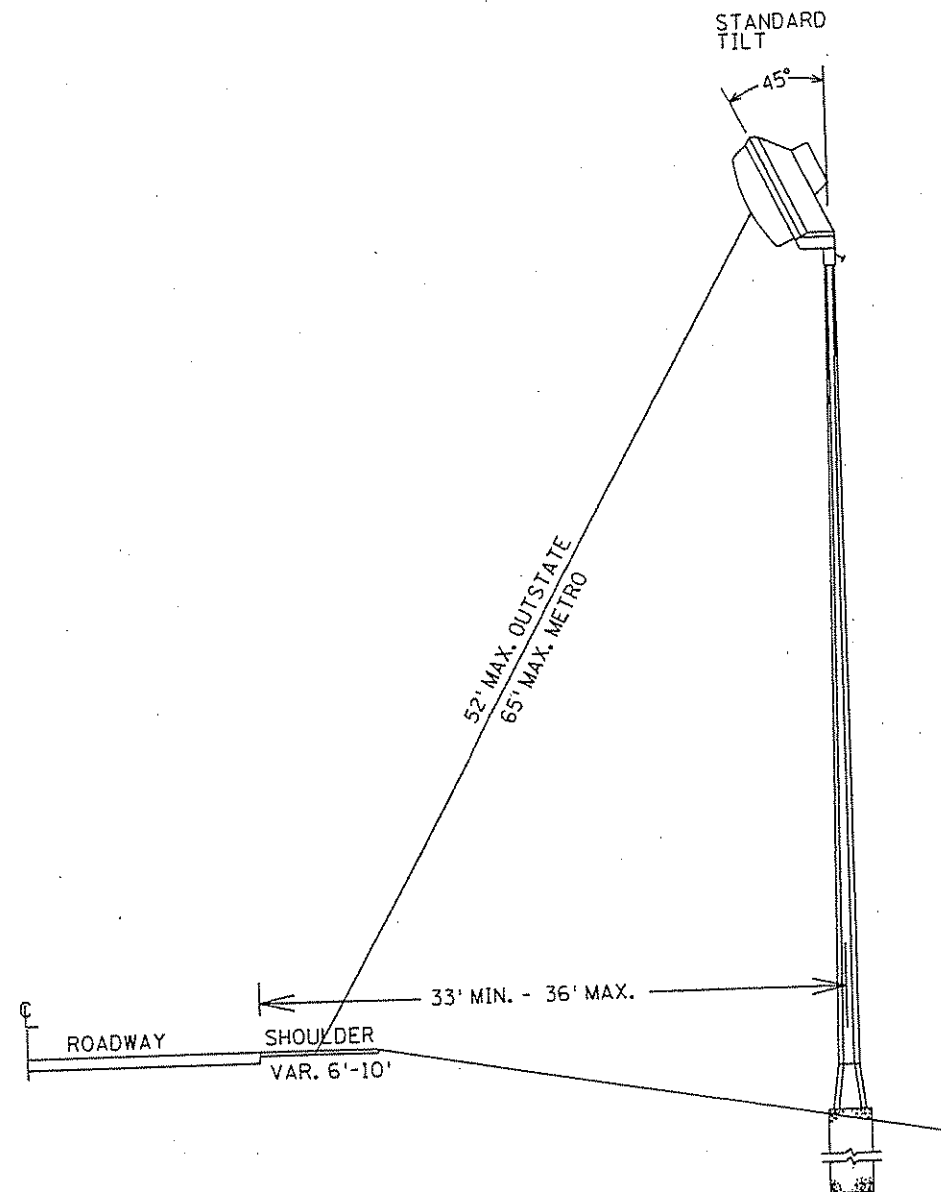
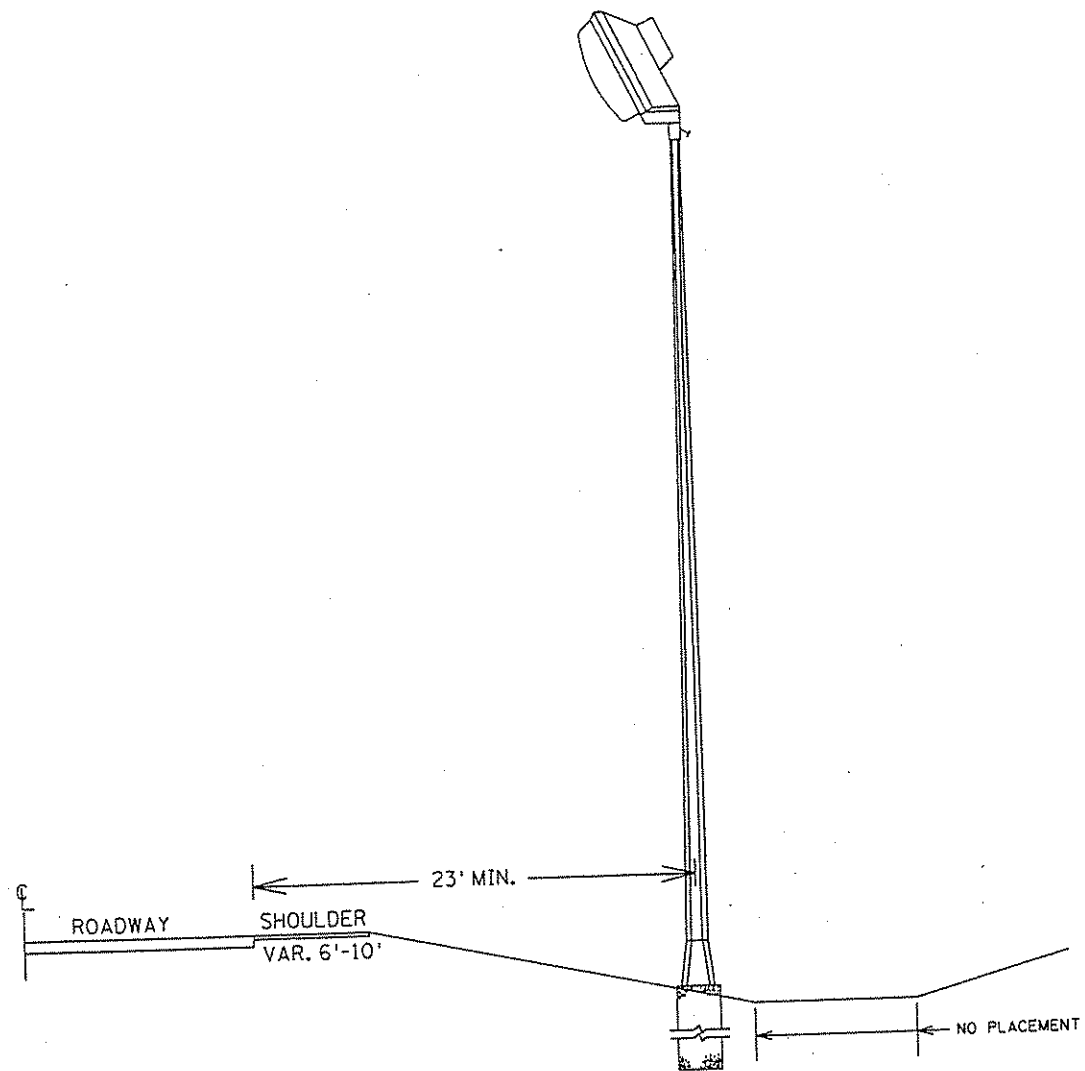
LIGHTING DETAILS

CERTIFIED BY *Sam Johnson*
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 40945

State Proj. No.

Sheet No. 322 of 559 Sheets



USE THE MAXIMUM DISTANCE WHENEVER POSSIBLE,
 IF THE MINIMUM DISTANCE CANNOT BE OBTAINED
 CONTACT THE DISTRICT/DIVISION TRAFFIC ENGINEER
 LIGHT BASES SHALL BE INSTALLED IN ACCORDANCE
 WITH 2545.3F2.
 DISTANCES SHALL BE MEASURED FROM THE
 EDGE OF DRIVING LANE OR TURN LANE.
 WORKING LIMITS OF BUCKET TRUCK

CERTIFIED BY *Sean Dehner*
 LICENSED PROFESSIONAL ENGINEER

LIC. NO. 40945

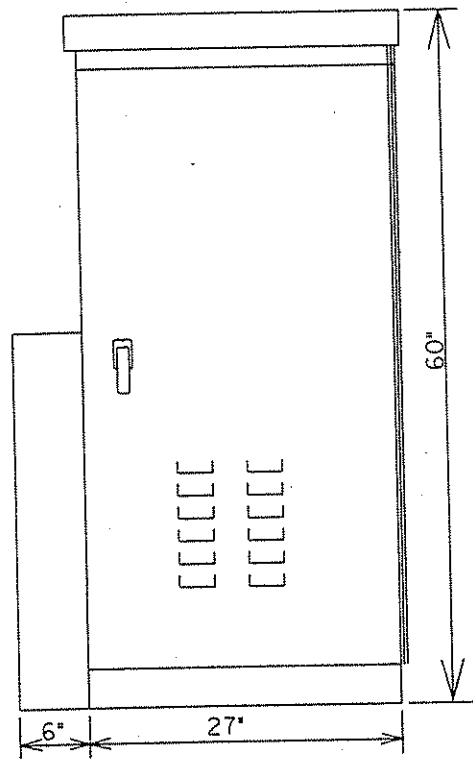
State Proj. No.

S.P. 0280-50 (T.H. 35)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-019

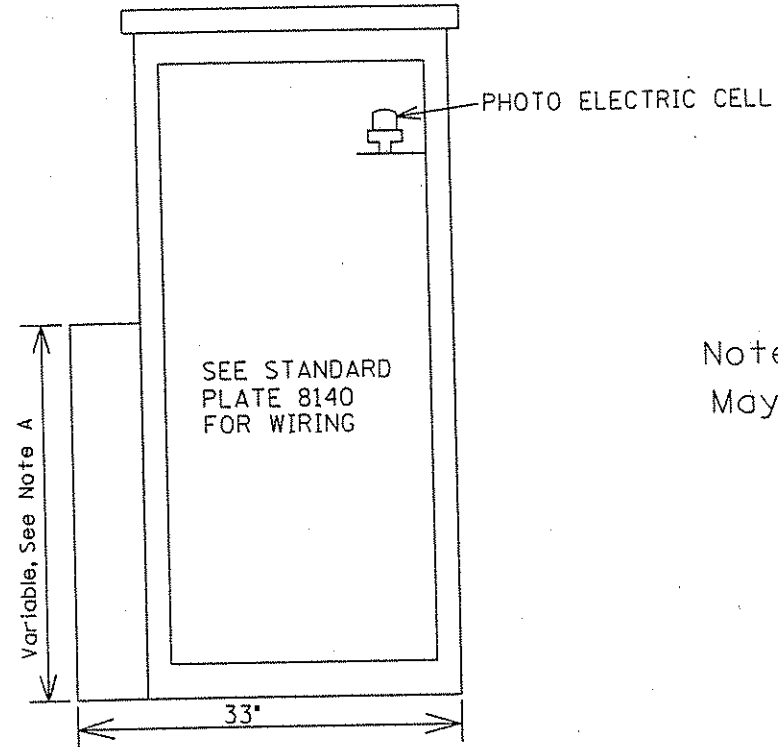
PLACEMENT OF LIGHTING
 UNITS TYPE VM

Sheet No. 323 of 559 Sheets

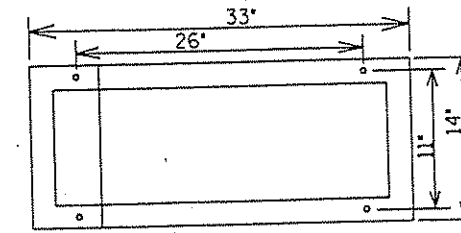
EXTERNAL



INTERNAL



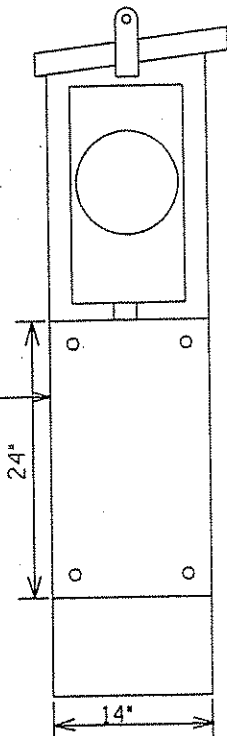
PAD MOUNTING PATTERN



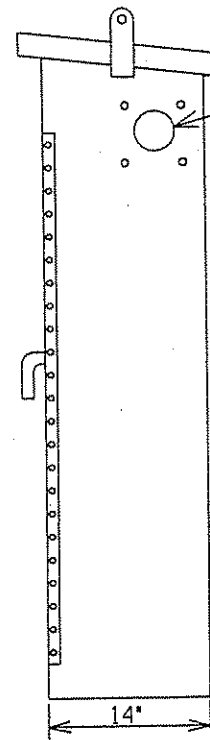
Note A: Height of compartment is approximately 33". May vary depending upon size of meter socket.

SIDE VIEWS

LEFT

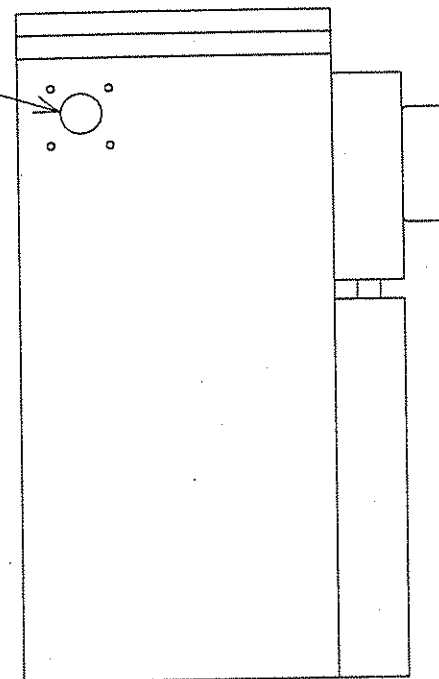


RIGHT



P.E.C. WINDOW 3 1/2" DIAMETER

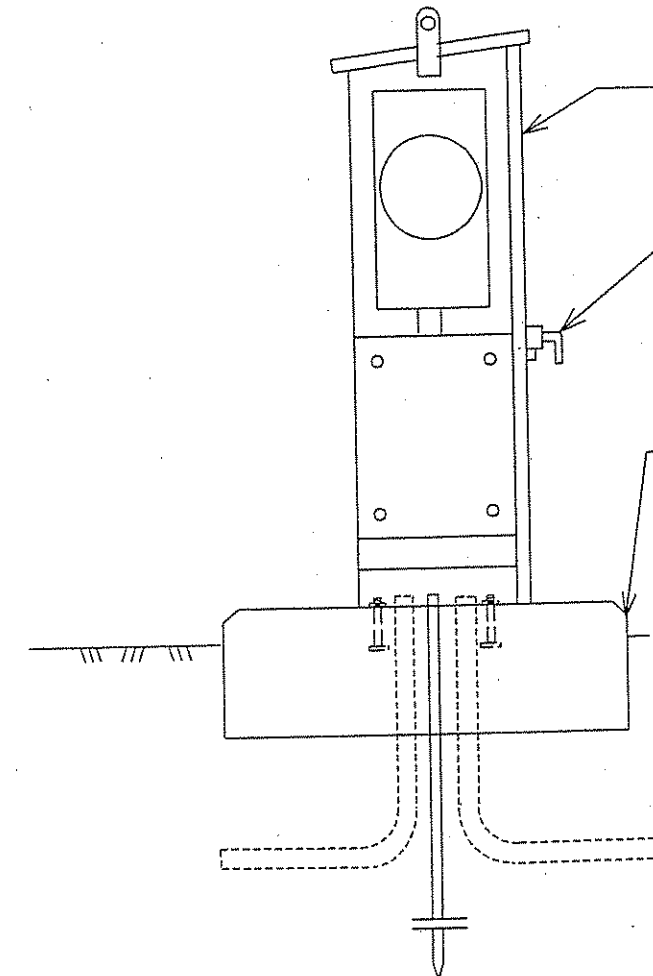
BACK VIEW



SERVICE CABINET SECONDARY TYPE L1. SEE STANDARD PLATE 8140 FOR WIRING.

LOCK SHALL BE STANDARD POLICE LOCK AND KEY. DOOR SHALL HAVE 3 POINT LATCHING AND LOCKING.

EQUIPMENT PAD B STANDARD PLATE 8106



LIGHTING SERVICE CABINET
SERVICE CABINET SECONDARY TYPE L1

LIGHTING DETAILS

CERTIFIED BY

Sam Dehner
LICENSED PROFESSIONAL ENGINEER

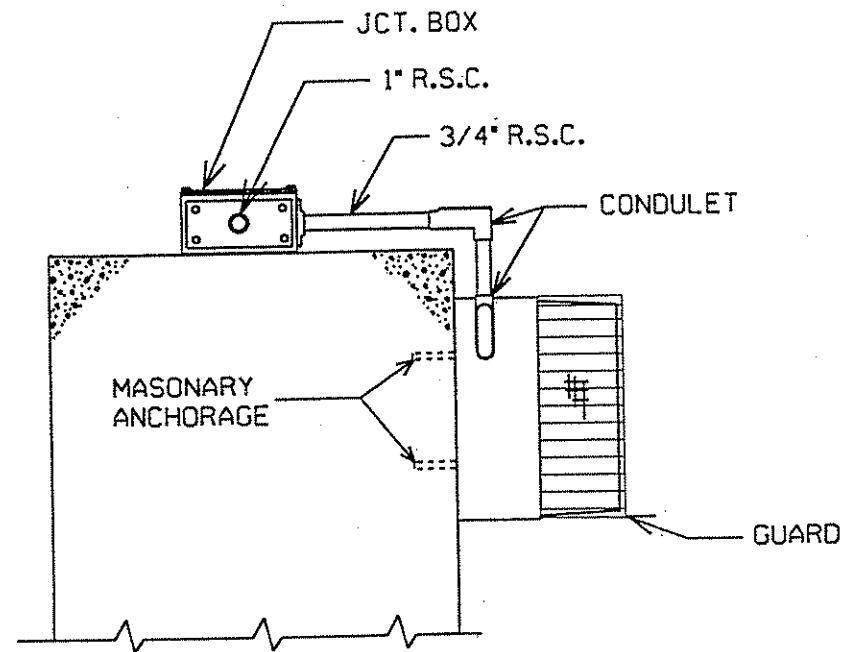
LIC. NO.

40945

State Proj. No.

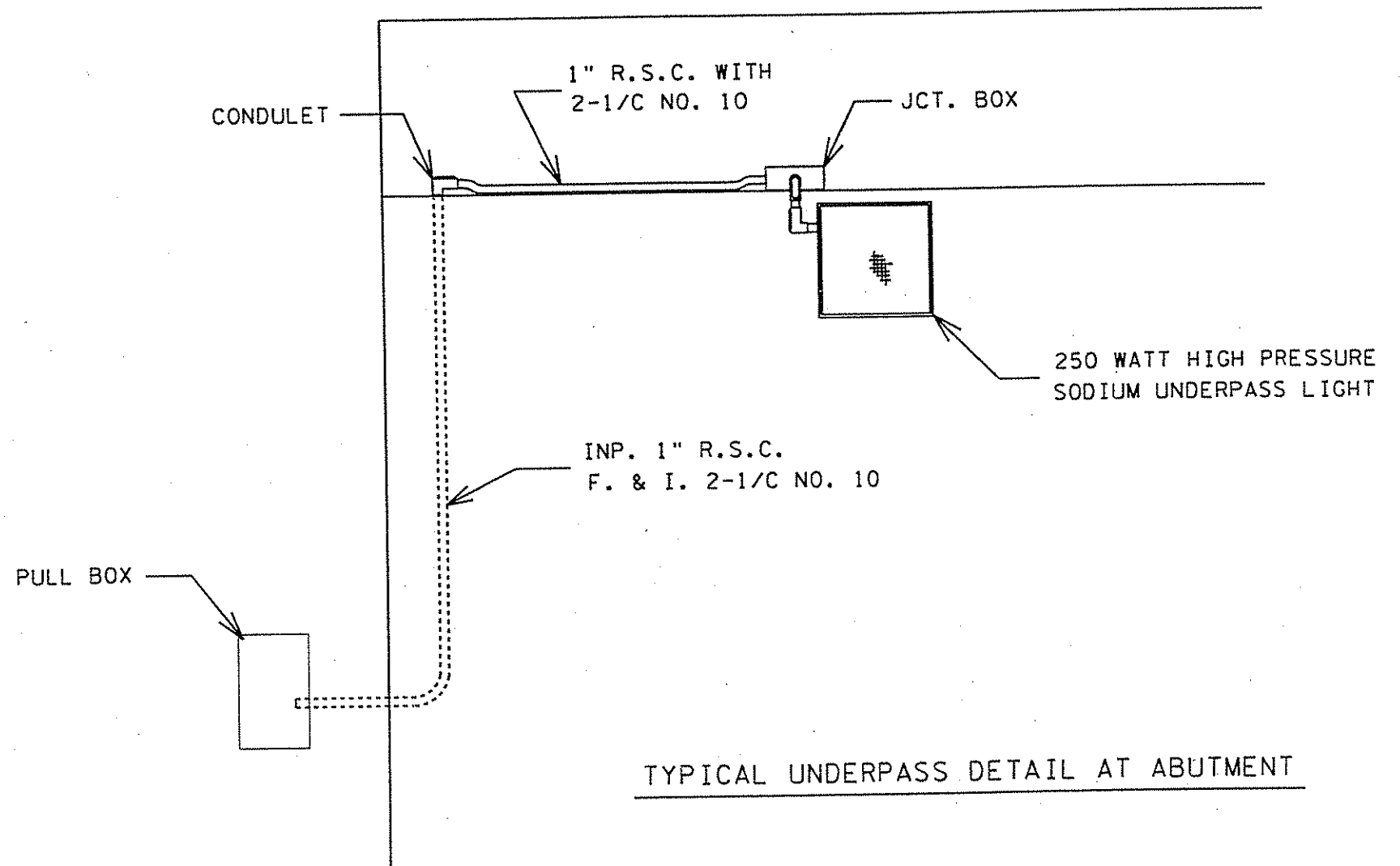
S.P.	0280-50 (T.H. 35)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-019

Sheet No. 324 of 559 Sheets



UNDERPASS LIGHTING UNIT TYPE L
250 WATT HIGH PRESSURE SODIUM

1. THE JUNCTION BOXES SHALL BE 8-1/2"L. X 8-1/2"W. X 4"D. WITH REMOVABLE HUB PLATES AND MOUNTING LUGS.
2. FASTEN RIGID STEEL CONDUIT WITH CABLE CLAMPS ABOUT 5'-0" ON CENTER.
3. FASTEN CLAMPS AND JUNCTION BOXES TO CONCRETE WITH MASONRY ANCHORAGES OR POWER ACTIVATED STUDS.



TYPICAL UNDERPASS DETAIL AT ABUTMENT

S.P. 0280-50 (T.H. 35)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-019

LIGHTING DETAILS

CERTIFIED BY

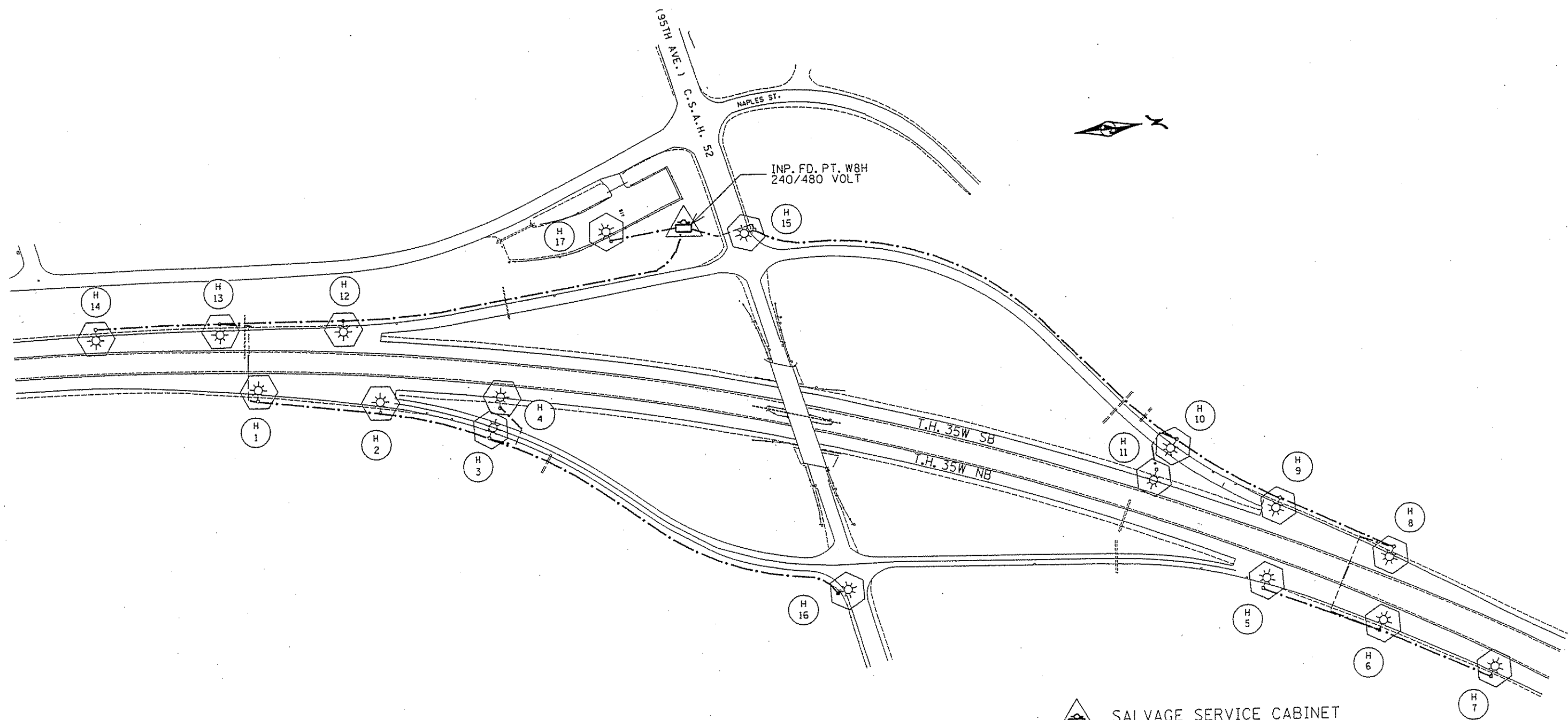
Sam Dehner
LICENSED PROFESSIONAL ENGINEER

LIC. NO.


40945


State Proj. No.

Sheet No. 325 of 559 Sheets



INP. FD. PT. W8H
240/480 VOLT

 SALVAGE SERVICE CABINET

 REMOVE LIGHTING UNIT
REMOVE LIGHT STANDARD BASE

S.P. 0280-50 (T.H. 35)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-019

SALVAGE & REMOVAL

CERTIFIED BY *Susan J. Ladd* LIC. NO. 21180
LICENSED PROFESSIONAL ENGINEER

State Proj. No. _____ Sheet No. 326 of 559 Sheets

LEGEND

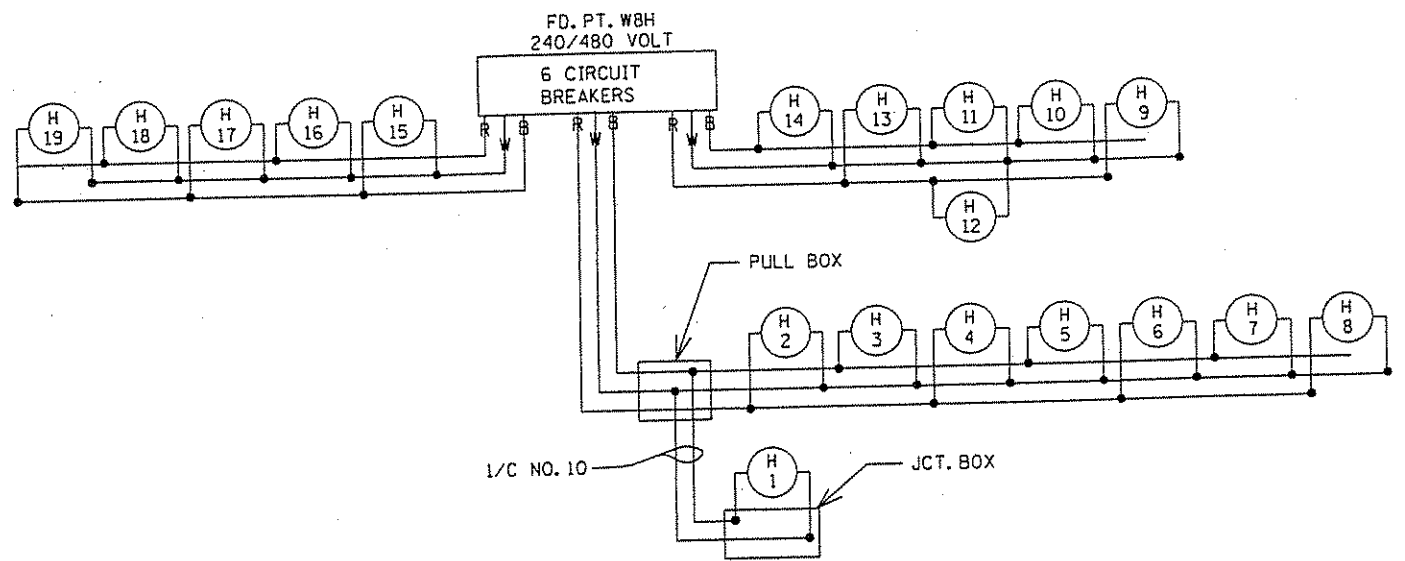
- PAD MOUNTED SOURCE OF POWER(240/480V)
- ⚡ 250 WATT HIGH PRESSURE SODIUM LIGHTING UNIT
- ⚡⚡ 250 WATT HIGH PRESSURE SODIUM TWIN LIGHTING UNIT
- ⚡ 250 WATT HIGH PRESSURE SODIUM UNDERPASS LIGHTING FIXTURE
- DIRECT BURIED POWER CABLE 3 CONDUCTOR NO. 4 AWG ARMORED CABLE SPEC NO. 3815
- 3' R.S.C. EXCEPT AS NOTED OTHERWISE
- ⚡ PERMANENT GROUND ROD (25 OHMS OR LESS)
- PULL BOX

PAD MOUNTED SOURCE OF POWER
SERVICE CABINET SECONDARY TYPE L1
FD. PT. W8H, 240/480 VOLT (UNMETERED).
F. & I. 2" R.S.C. & 3-1/2" NO. 2 TO
CONNEXUS ENERGY TRANSFORMER.

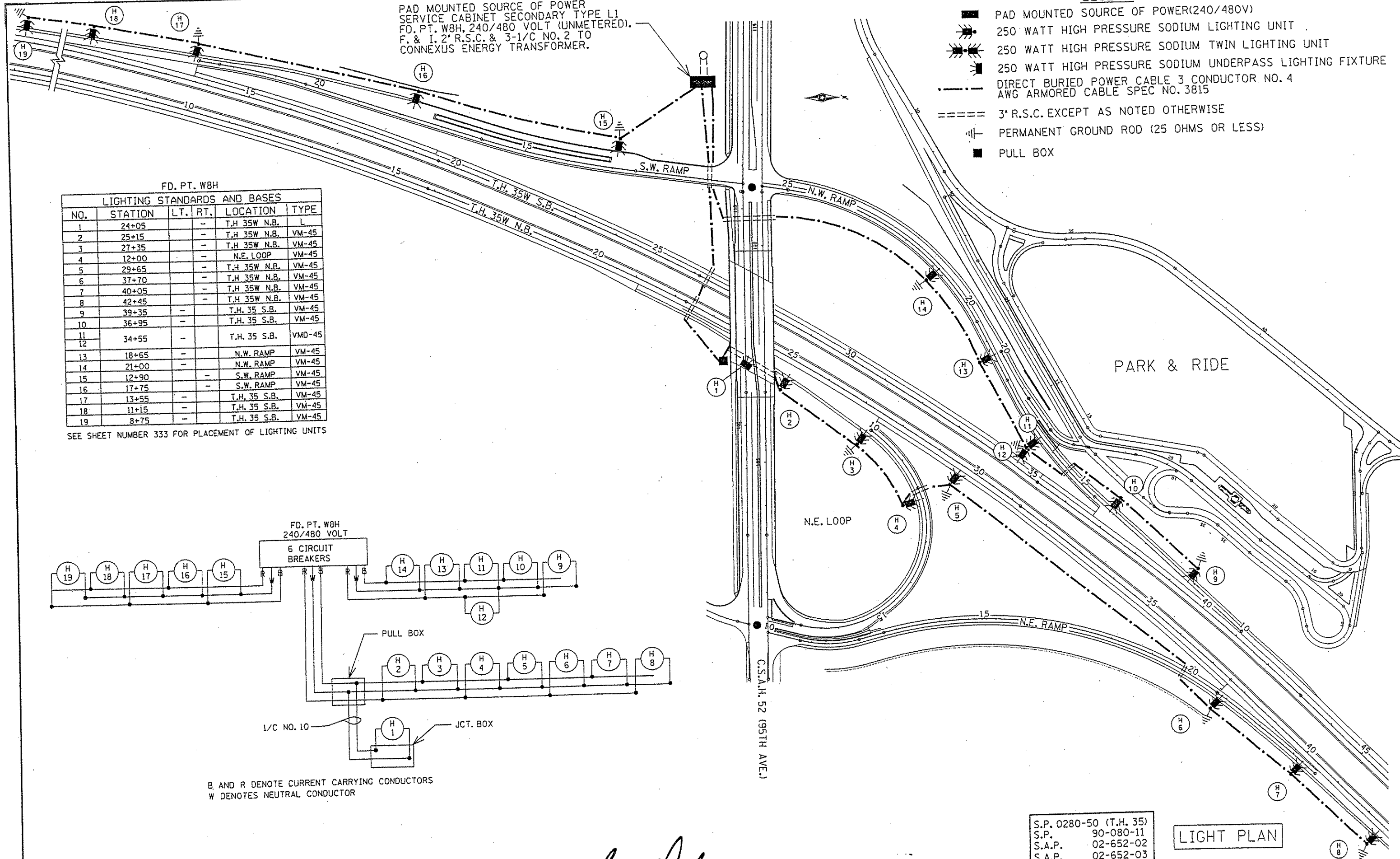
FD. PT. W8H

LIGHTING STANDARDS AND BASES				
NO.	STATION	LT. RT.	LOCATION	TYPE
1	24+05	-	T.H. 35W N.B.	L
2	25+15	-	T.H. 35W N.B.	VM-45
3	27+35	-	T.H. 35W N.B.	VM-45
4	12+00	-	N.E. LOOP	VM-45
5	29+65	-	T.H. 35W N.B.	VM-45
6	37+70	-	T.H. 35W N.B.	VM-45
7	40+05	-	T.H. 35W N.B.	VM-45
8	42+45	-	T.H. 35W N.B.	VM-45
9	39+35	-	T.H. 35 S.B.	VM-45
10	36+95	-	T.H. 35 S.B.	VM-45
11	34+55	-	T.H. 35 S.B.	VMD-45
12	18+65	-	N.W. RAMP	VM-45
13	21+00	-	N.W. RAMP	VM-45
14	12+90	-	S.W. RAMP	VM-45
15	17+75	-	S.W. RAMP	VM-45
16	13+55	-	T.H. 35 S.B.	VM-45
17	11+15	-	T.H. 35 S.B.	VM-45
18	8+75	-	T.H. 35 S.B.	VM-45
19				

SEE SHEET NUMBER 333 FOR PLACEMENT OF LIGHTING UNITS



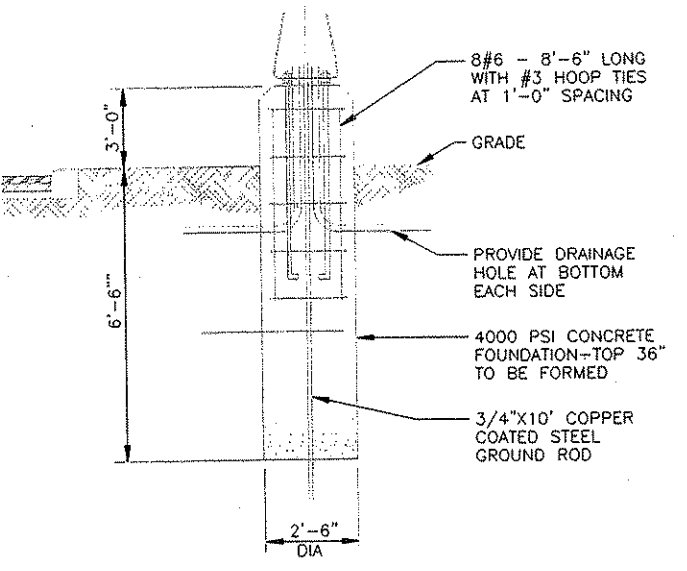
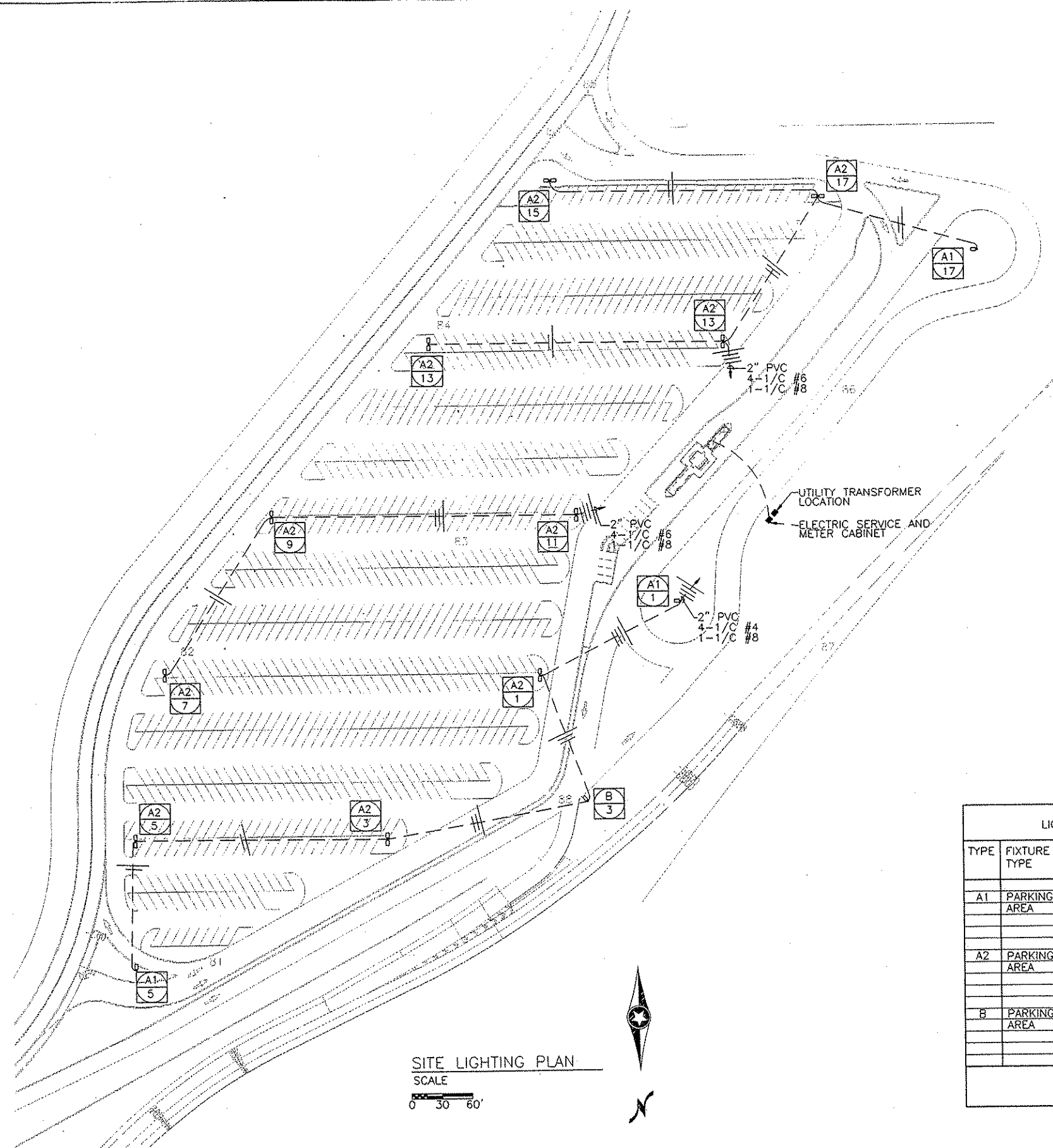
B AND R DENOTE CURRENT CARRYING CONDUCTORS
W DENOTES NEUTRAL CONDUCTOR



S.P.	0280-50 (T.H. 35)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-019

LIGHT PLAN

LEGEND	
	PARKING LOT LIGHT IDENTIFIER FIXTURE CIRCUIT NUMBER



LIGHTING STANDARD FOUNDATION
NO SCALE

LIGHTING FIXTURE SCHEDULE - FOR INFORMATION ONLY (1)									
TYPE	FIXTURE TYPE	INC.	FLUOR.	H.I.D.	MOUNTING	(QUANTITY) LAMPS	DIFFUSER	DESCRIPTION	REMARKS
A1	PARKING AREA			X	CONCRETE FOUNDATION	(1) 1000W MH	POLYCARBONATE	SPAULDING #PFIIXL-PM-M1000-SVS-MT-DBZ 40' POLE - SINGLE-DBZ	SINGLE
A2	PARKING AREA			X	CONCRETE FOUNDATION	(2) 1000W MH	POLYCARBONATE	SPAULDING #PFIIXL-PM-M1000-SVS-MT-DBZ 40' POLE - DOUBLE-DBZ	TWIN
B	PARKING AREA			X	CONCRETE FOUNDATION	(1) 1000W MH	POLYCARBONATE	SPAULDING #PFIIXL-PM-M1000-III-MT-DBZ 40' POLE - SINGLE-DBZ	SINGLE

(1) PARK AND RIDE LIGHTING WILL BE PAID FOR UNDER THE LUMP SUM ITEM ELECTRICAL LIGHTING SYSTEM

SITE LIGHTING PLAN
SCALE
0 30 60'



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILES\$ DATE: 9-25-01 LIC. NO. 8943

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.

M. Buller

DATE: 9-25-01 LIC. NO. 8943

DRAWN BY: RCS DATE: 9-25-01
 DESIGN BY: RCS DATE: 9-25-01
 CHECKED BY: JEB DATE: 9-25-01

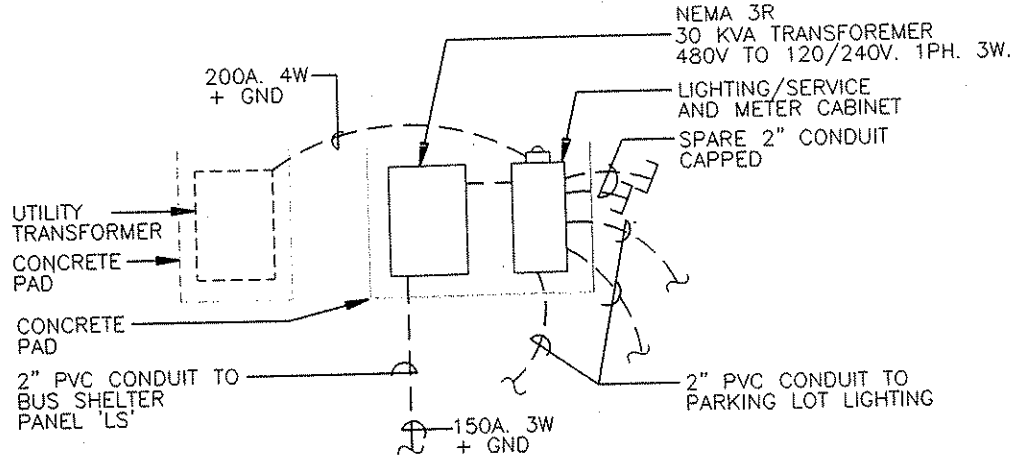
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DWALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS ARCHITECTS PLANNERS
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 LIGHTING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 PARK AND RIDE

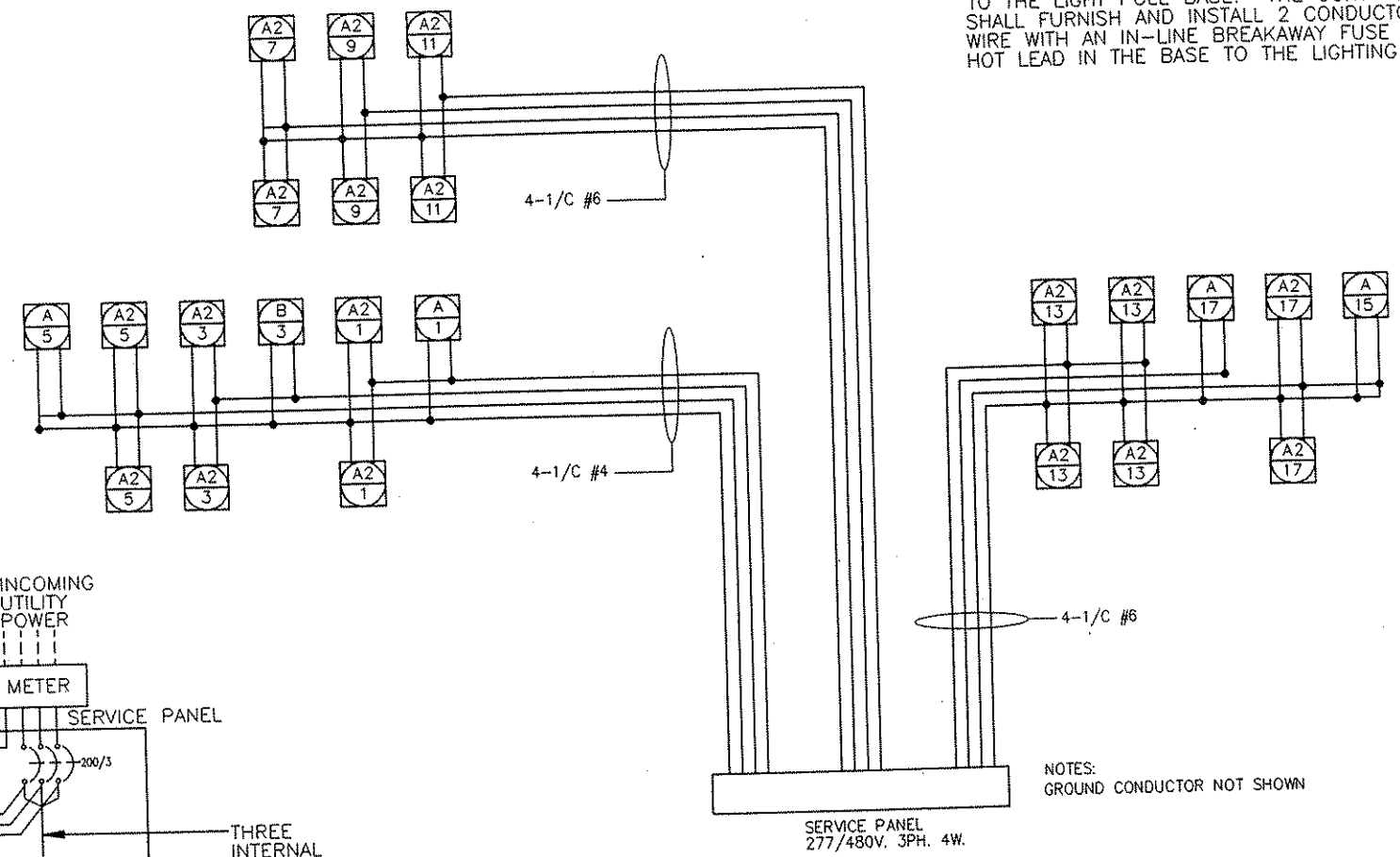
SHEET 328 OF 559

NOTES: THE CONTRACTOR SHALL FURNISH AND INSTALL WIRE FROM THE SOURCE OF POWER TO THE LIGHT POLE BASE. THE CONTRACTOR SHALL FURNISH AND INSTALL 2 CONDUCTOR #12 WIRE WITH AN IN-LINE BREAKAWAY FUSE ON THE HOT LEAD IN THE BASE TO THE LIGHTING FIXTURE.

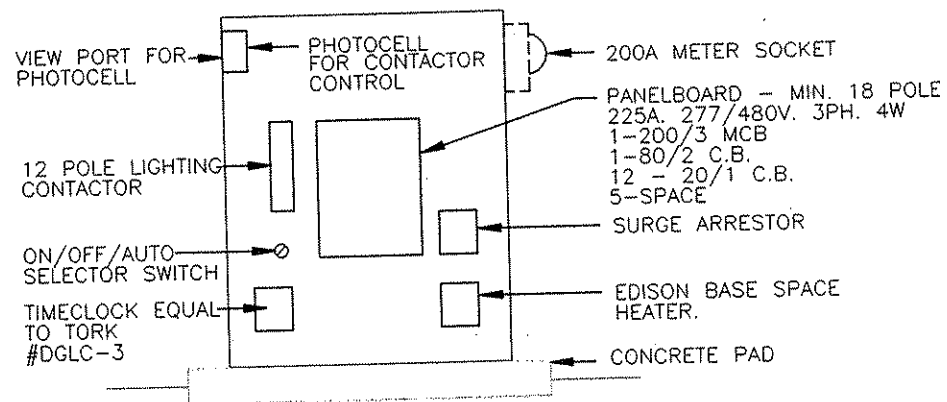


NOTES:
SEE CONSTRUCTION PLAN AND PROFILE SHEETS FOR BOLLARD LOCATIONS.

ELECTRIC SERVICE PLAN
NO SCALE

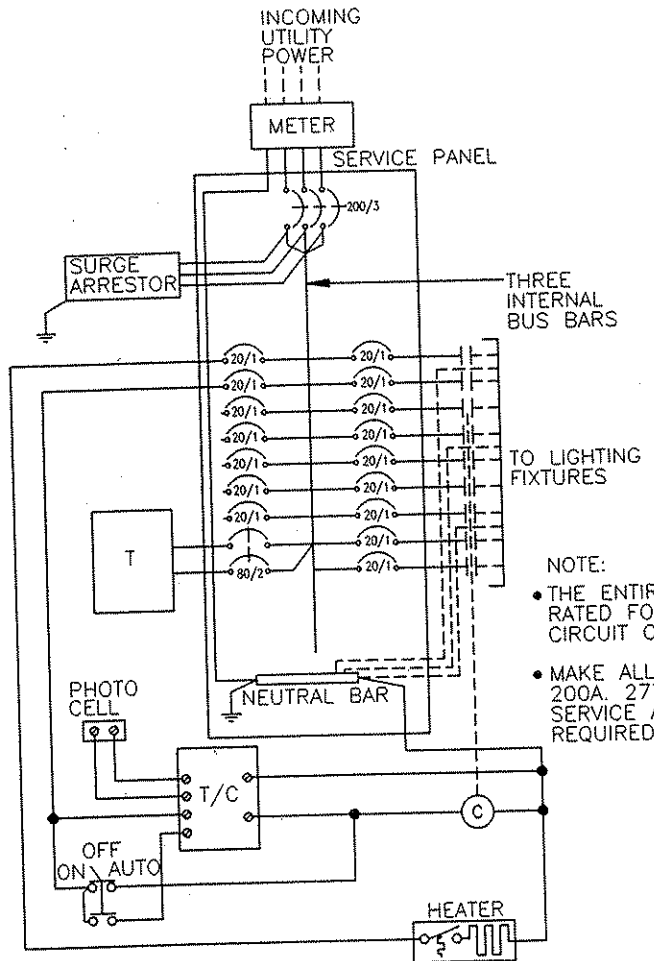


FEED POINT WIRING DIAGRAM



NOTES:
• CABINET TO BE FABRICATED FROM .125 THICK ALUMINUM.
• CABINET TO BE PAINTED WITH OVEN BAKED ENAMEL.
• CABINET TO BE TYPE 3R CONSTRUCTION.
• ALL EXTERIOR HARDWARE TO BE STAINLESS STEEL.
• FINAL ASSEMBLY TO BE UL LISTED.

ELECTRIC SERVICE CABINET ELEVATION
NO SCALE



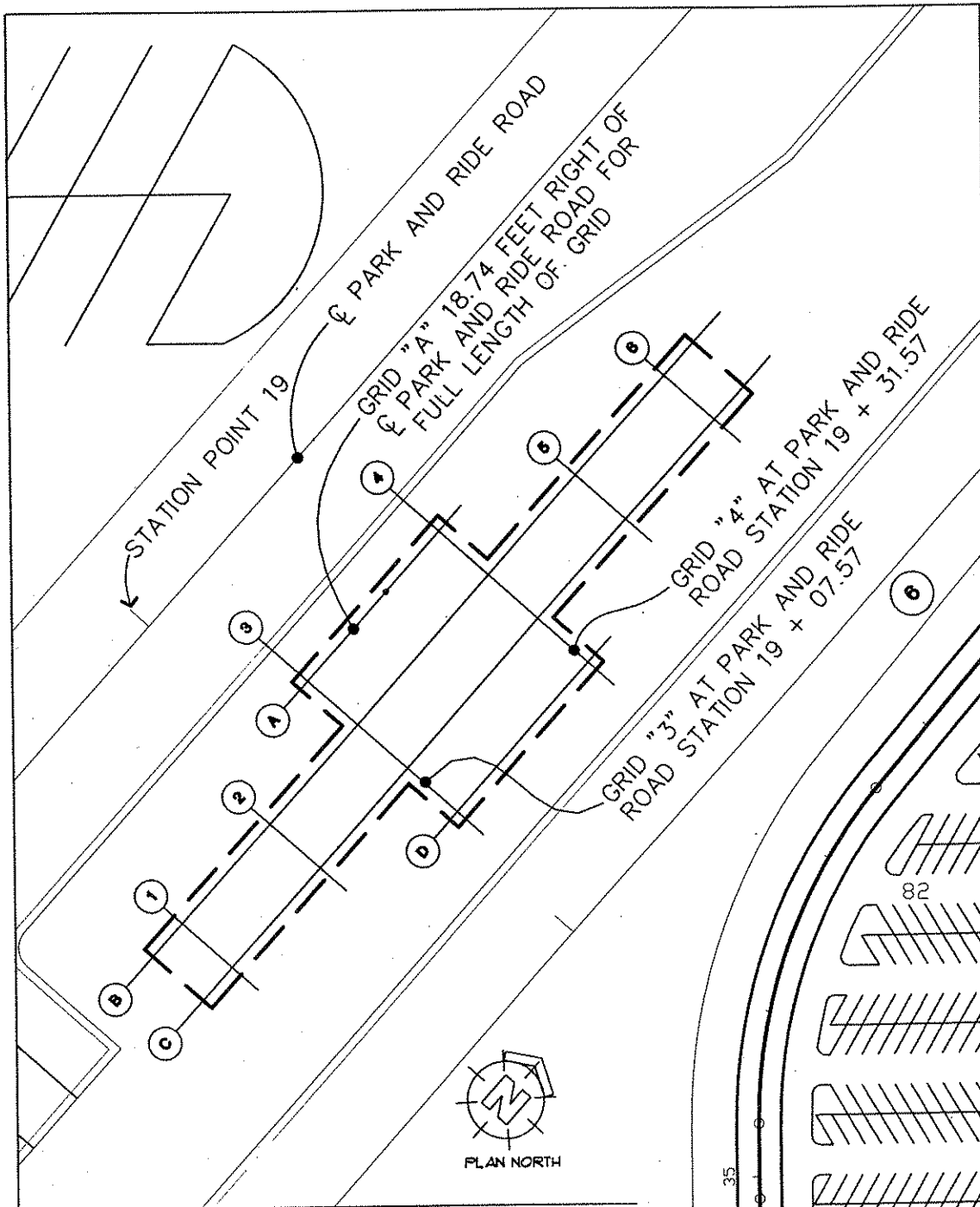
NOTE:
• THE ENTIRE SYSTEM IS TO BE SERIES RATED FOR 22,000 AVAILABLE SHORT CIRCUIT CURRENT AT PANEL LINE LUGS.
• MAKE ALL PROVISIONS FOR 200A. 277/480V. 3PH. 4W. SERVICE AND METERING AS REQUIRED BY THE UTILITY.

ELECTRIC SERVICE CABINET WIRING DIAGRAM
NO SCALE

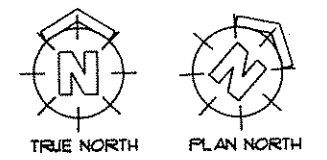
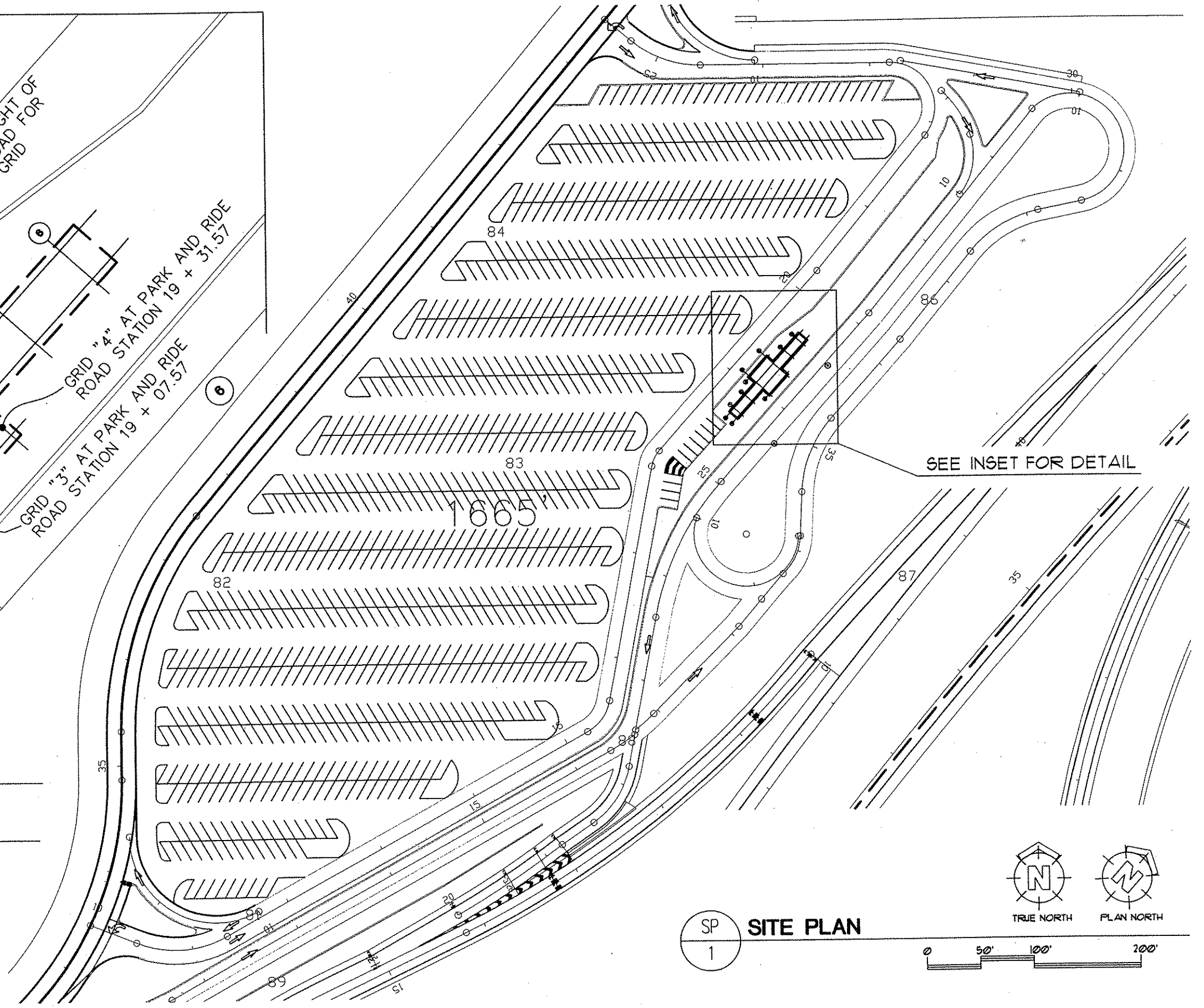
LIGHTING TABULATION - FOR INFORMATION ONLY (1)

ITEM	UNIT	QUANTITIES
SERVICE CABINET	EACH	1
POLE FOUNDATION	EACH	14
COMMON TRENCING	CU. YARD	2800
40' POLE SINGLE HEAD	EACH	10
40' POLE DOUBLE HEAD	EACH	4
POLE LIGHTING UNIT TYPE 'A1'	EACH	3
POLE LIGHTING UNIT TYPE 'A2'	EACH	20
POLE LIGHTING UNIT TYPE 'B'	EACH	1
#6 WIRE	LIN. FT.	6000
#4 WIRE	LIN. FT.	3000
#8 WIRE GROUND	LIN. FT.	2800
2" PVC CONDUIT	LIN. FT.	2800
EQUIPMENT PAD	EACH	2
30 KVA TRANSFORMER	EACH	1

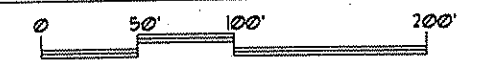
(1) PARK AND RIDE LIGHTING WILL BE PAID FOR UNDER THE LUMP SUM ITEM ELECTRICAL LIGHTING SYSTEM.



**SITE PLAN -
DETAIL OF INSET**



SITE PLAN



NO	DATE	BY	CHKD	APPR	REVISION

NAME: A0001.dwg

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

John Baeth
DATE 1-8-02 REG. NO. 18711

DRAWN BY RP DATE _____
 DESIGN BY AB/RP DATE _____
 CHECKED BY AB DATE _____

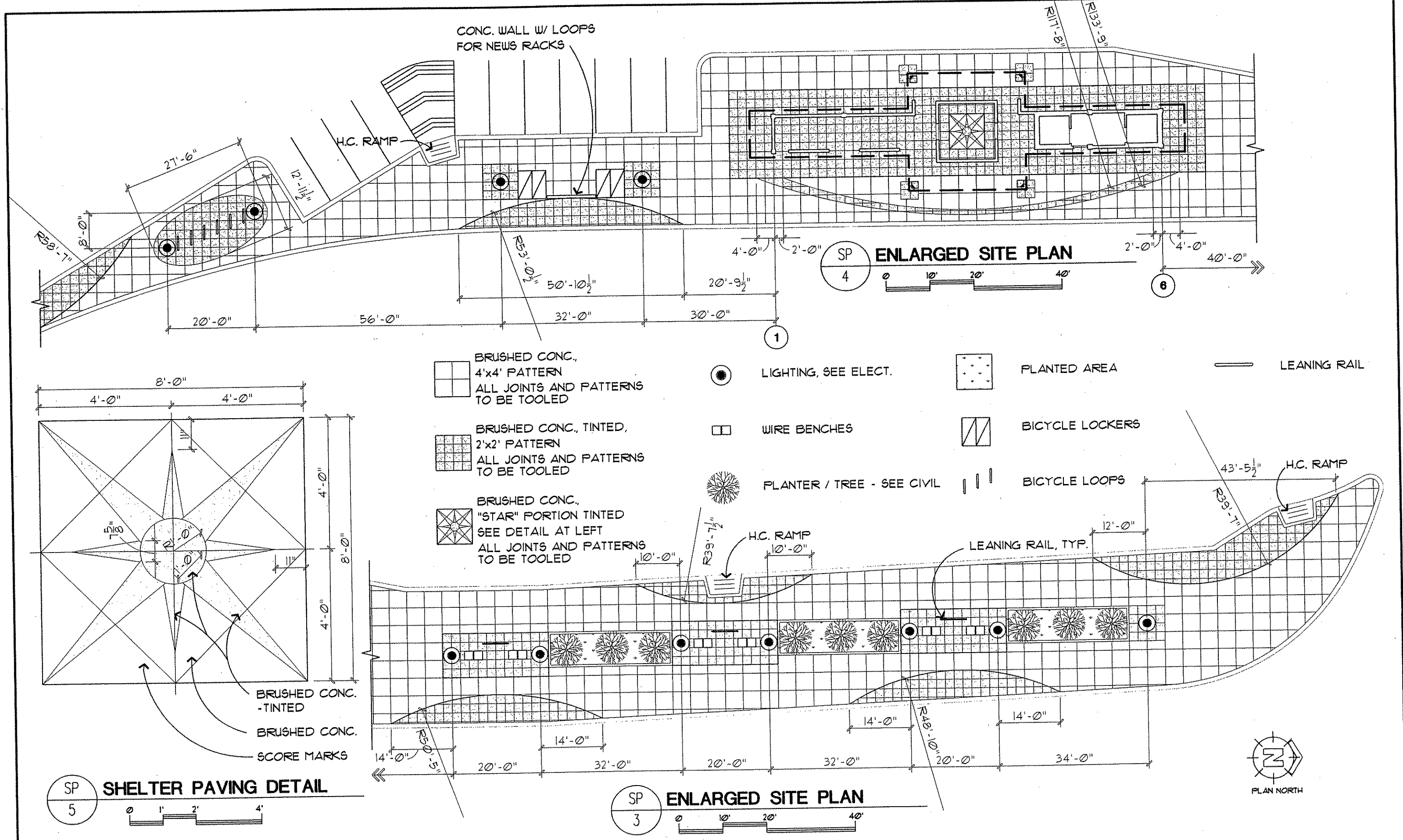
S.P. 0280-50 (T.H. 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
ENGINEERS ARCHITECTS PLANNERS
TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

ESG
ELNESS SWENSON GRAHAM ARCHITECTS INC.

ANOKA COUNTY
 BUS SHELTER
 C.S.A.H. 52 RECONSTRUCTION
 SITE PLAN

SHEET 330 OF 559



CONC. WALL W/ LOOPS
FOR NEWS RACKS

H.C. RAMP

ENLARGED SITE PLAN

SP 4

BRUSHED CONC.,
4'x4' PATTERN
ALL JOINTS AND PATTERNS
TO BE TOOLED

LIGHTING, SEE ELECT.

PLANTED AREA

LEANING RAIL

BRUSHED CONC., TINTED,
2'x2' PATTERN
ALL JOINTS AND PATTERNS
TO BE TOOLED

WIRE BENCHES

BICYCLE LOCKERS

PLANTER / TREE - SEE CIVIL

BICYCLE LOOPS

BRUSHED CONC.,
"STAR" PORTION TINTED
SEE DETAIL AT LEFT
ALL JOINTS AND PATTERNS
TO BE TOOLED

H.C. RAMP

LEANING RAIL, TYP.

H.C. RAMP

BRUSHED CONC.
-TINTED

BRUSHED CONC.

SCORE MARKS

SHELTER PAVING DETAIL

SP 5

ENLARGED SITE PLAN

SP 3



NO	DATE	BY	CKD	APPR	REVISION

NAME: A0002.dwg

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

Curt Bartels

DATE 1-8-02 REG. NO. 18711

DRAWN BY RP DATE _____
DESIGN BY AB/RP DATE _____
CHECKED BY AB DATE _____

S.P. 0280-50 (T.H. 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

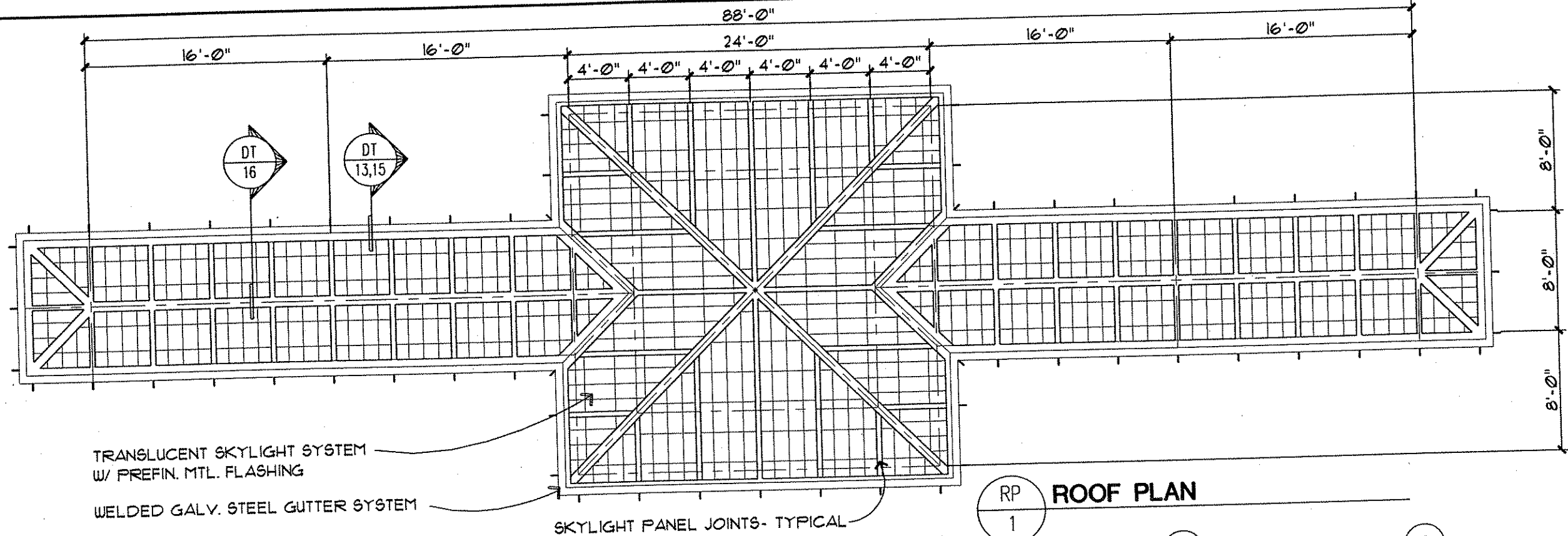
TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

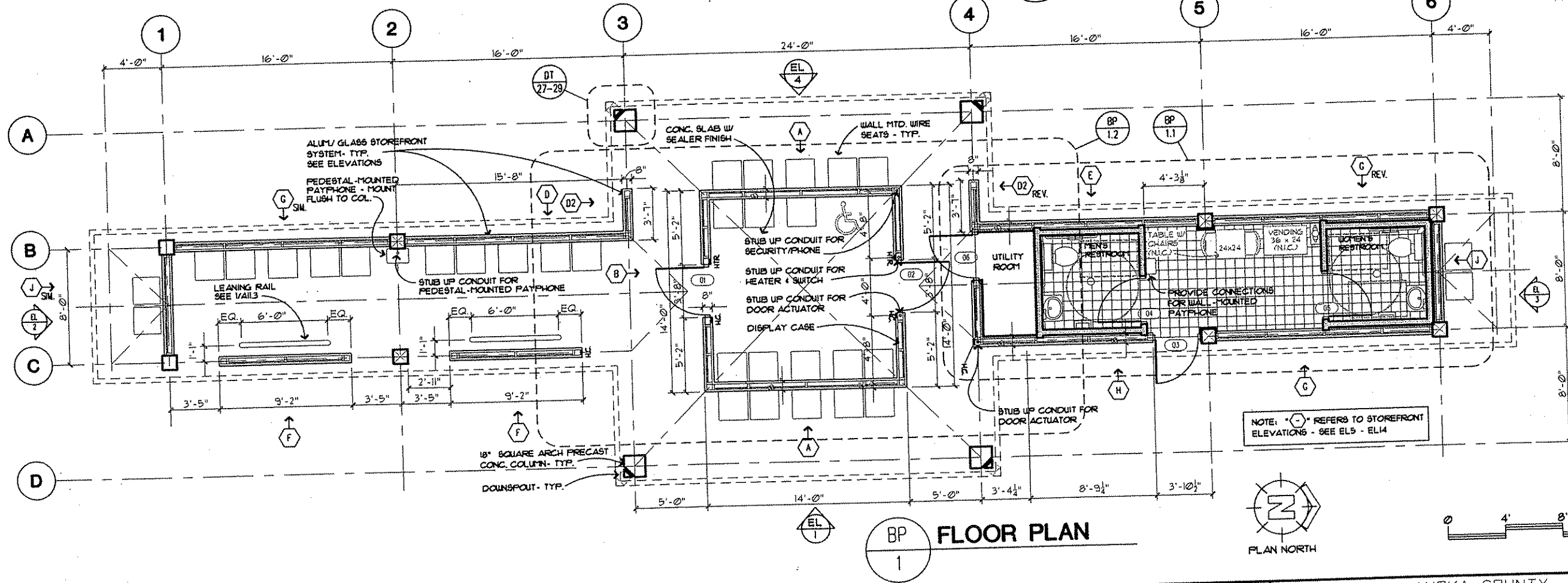
ESG
ELNESS SWENSON GRAHAM ARCHITECTS INC.

ANOKA COUNTY
BUS SHELTER
C.S.A.H. 52 RECONSTRUCTION
ENLARGED SITE PLAN

SHEET 330A OF 559



RP 1
ROOF PLAN

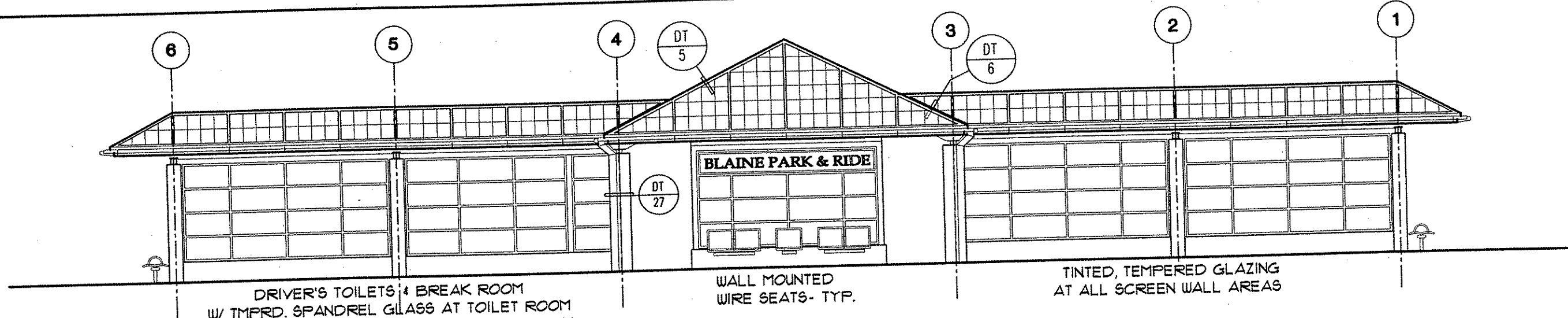


BP 1
FLOOR PLAN

NOTE: (E) REFERS TO STOREFRONT ELEVATIONS - SEE EL5 - EL14



NO. DATE BY CKD APPR REVISION NAME: A0101.dwg					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Curt Baitels</i> DATE 1-8-02 REG. NO. 18711					DRAWN BY RP DATE DESIGN BY AB/RP DATE CHECKED BY AB DATE					S.P. 0280-50 (T.H. 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022					TKDA ENGINEERS ARCHITECTS PLANNERS EISIG ELNNESS SWENSON GRAHAM ARCHITECTS INC.					ANOKA COUNTY BUS SHELTER C.S.A.H. 52 RECONSTRUCTION FLOOR AND ROOF PLAN					SHEET 331 OF 559	
--	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	------------------	--

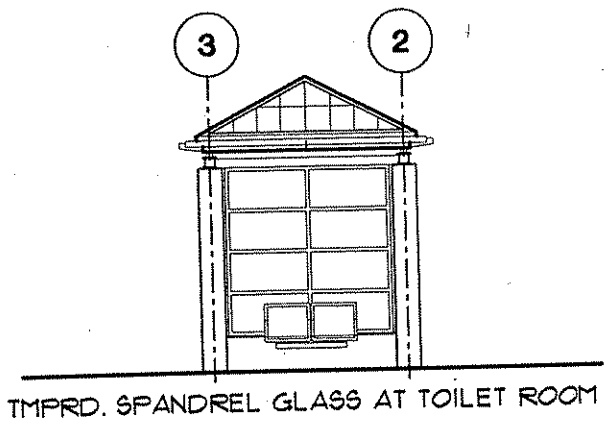


DRIVER'S TOILETS & BREAK ROOM
 W/ TMPRD. SPANDREL GLASS AT TOILET ROOM
 & TINTED INSUL. TMPRD. GLASS @ BREAK ROOM
 -SEE EL/9 - EL/14

WALL MOUNTED
 WIRE SEATS- TYP.

TINTED, TEMPERED GLAZING
 AT ALL SCREEN WALL AREAS

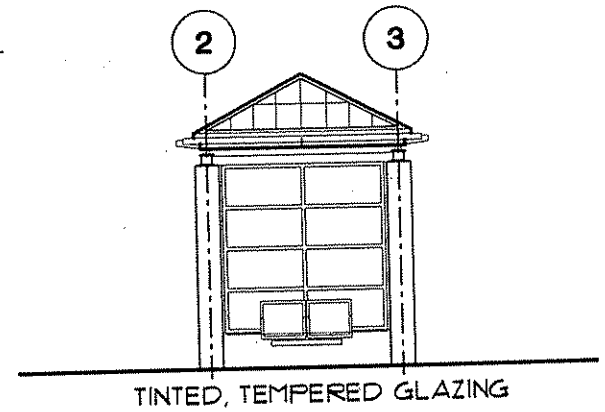
EL 4 ELEVATION - PLAN WEST



TMPRD. SPANDREL GLASS AT TOILET ROOM

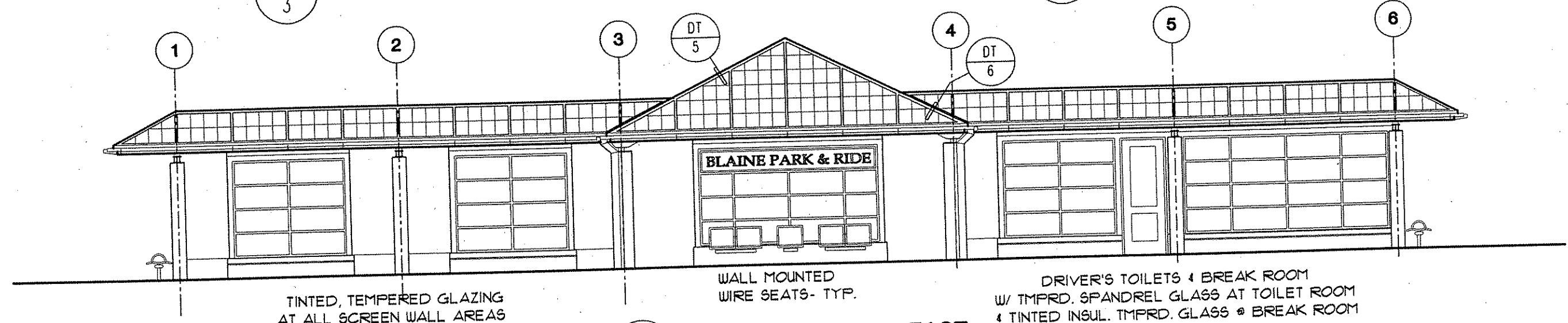
EL 3 END ELEVATION

NOTE: TEMPERED GLASS
 AT ALL LOCATIONS



TINTED, TEMPERED GLAZING

EL 2 END ELEVATION

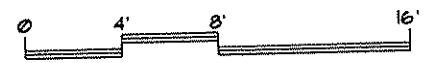


TINTED, TEMPERED GLAZING
 AT ALL SCREEN WALL AREAS

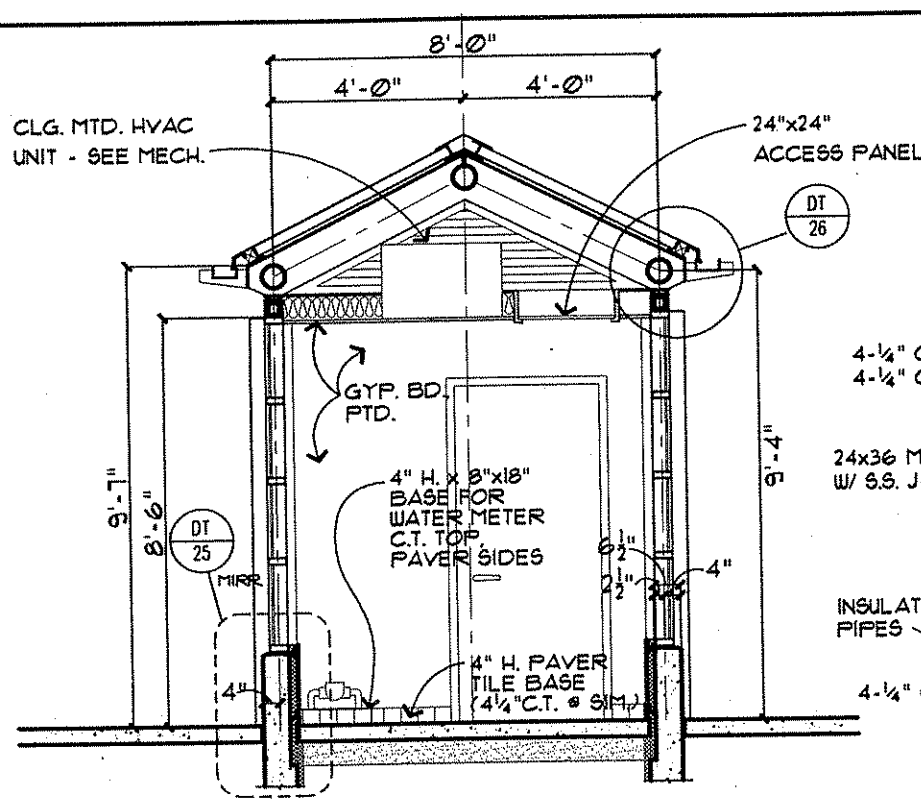
WALL MOUNTED
 WIRE SEATS- TYP.

DRIVER'S TOILETS & BREAK ROOM
 W/ TMPRD. SPANDREL GLASS AT TOILET ROOM
 & TINTED INSUL. TMPRD. GLASS @ BREAK ROOM
 -SEE EL/9 - EL/14

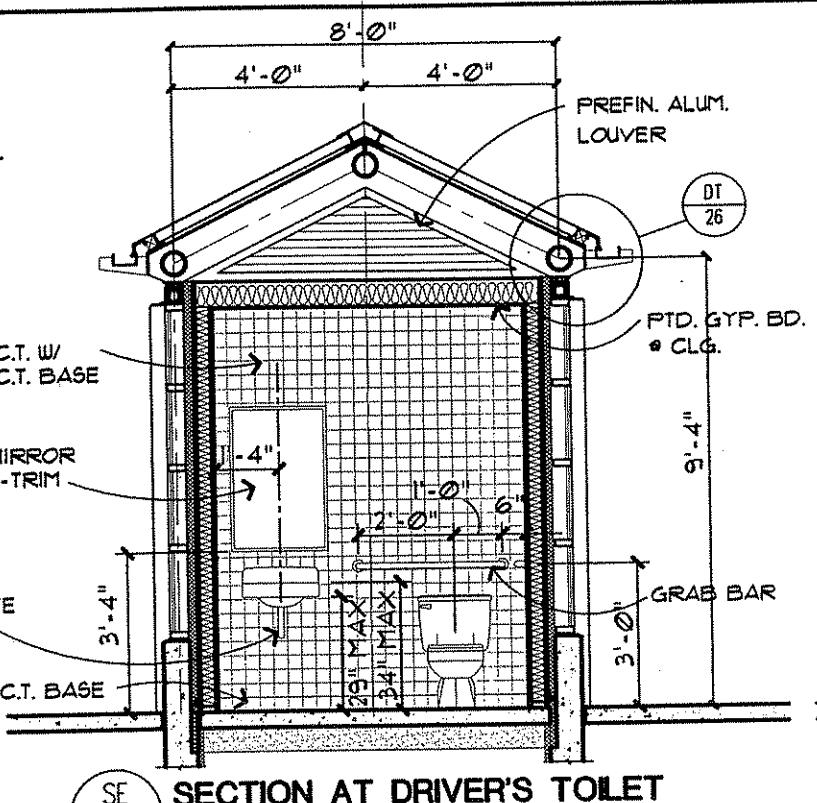
EL 1 ELEVATION - PLAN EAST



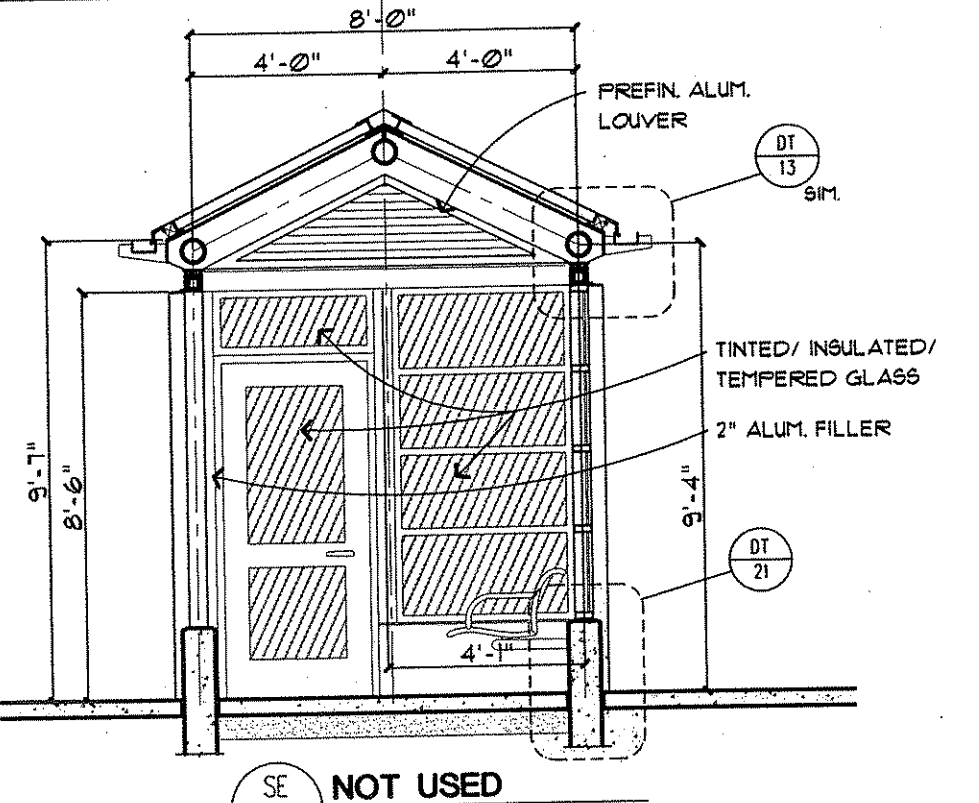
NO. DATE BY CKD APPR REVISION NAME: A0301.dwg					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Curt Baetzel</i> DATE 7-8-02 REG. NO. 18711					DRAWN BY RP DATE DESIGN BY AB/RP DATE CHECKED BY AB DATE					S.P. 0280-50 (T.H. 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022					TKDA ENGINEERS ARCHITECTS PLANNERS EISIG ELNESS SWENSON GRAHAM ARCHITECTS INC.					ANOKA COUNTY BUS SHELTER C.S.A.H. 52 RECONSTRUCTION ELEVATIONS					SHEET 332 OF 559				
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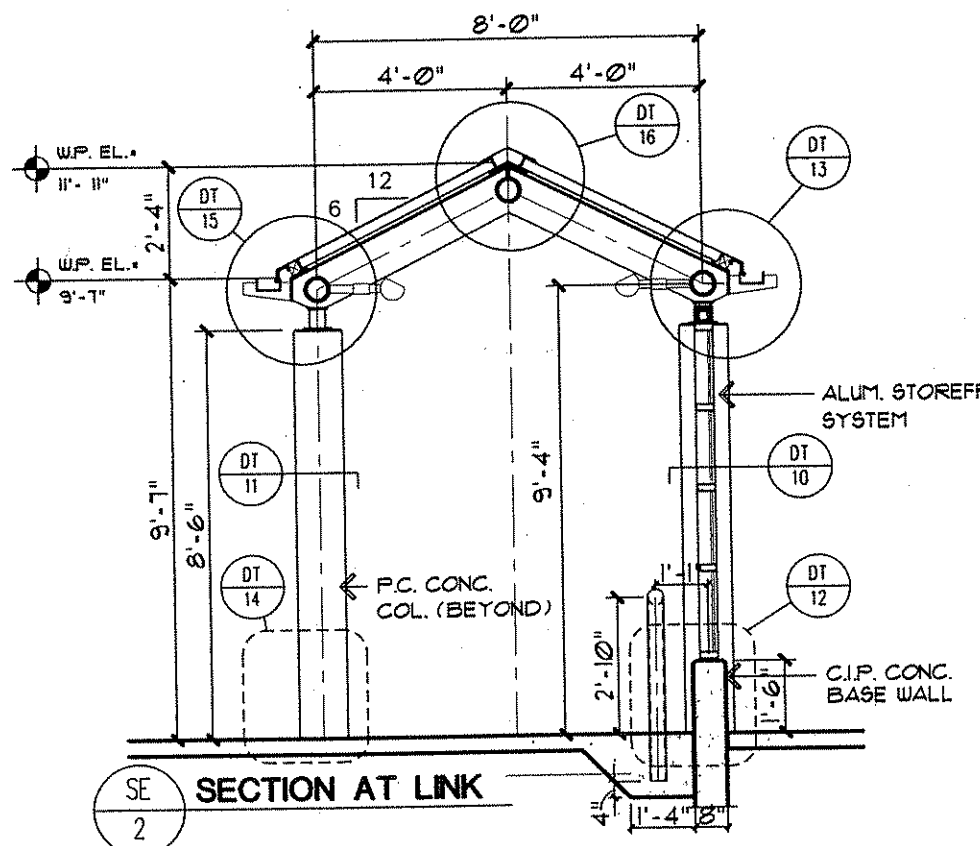
SE 5 SECTION AT DRIVER'S BREAK ROOM



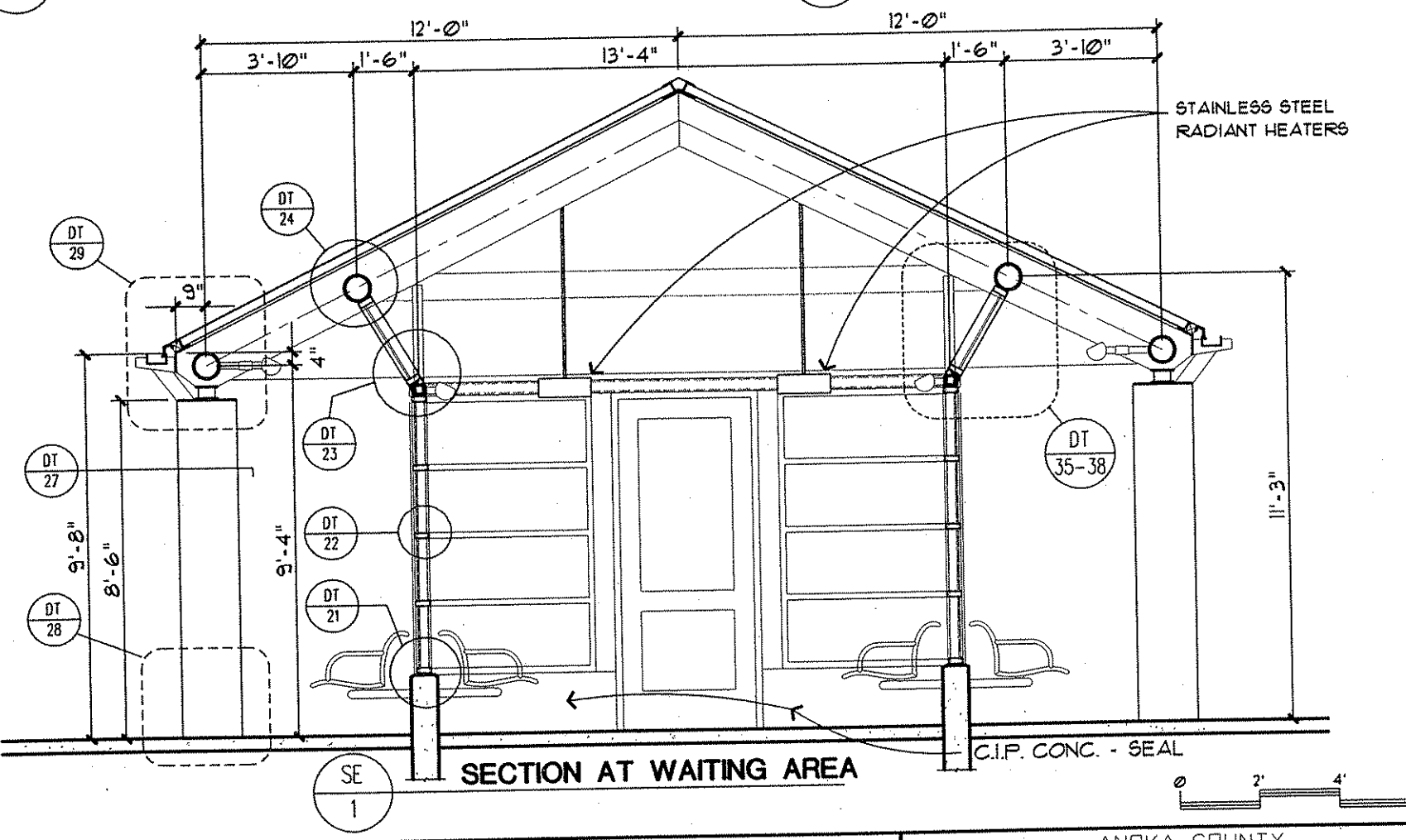
SE 4 SECTION AT DRIVER'S TOILET



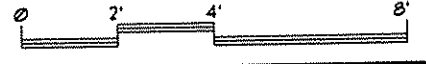
SE 3 SECTION NOT USED



SE 2 SECTION AT LINK



SE 1 SECTION AT WAITING AREA



NO	DATE	BY	CHKD	APPR	REVISION

NAME: A0401.dwg 9.21.2001

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

Carl Baetzel
 DATE 1-8-02 REG. NO. 18711

DRAWN BY RP DATE _____
 DESIGN BY AB/RP DATE _____
 CHECKED BY AB DATE _____

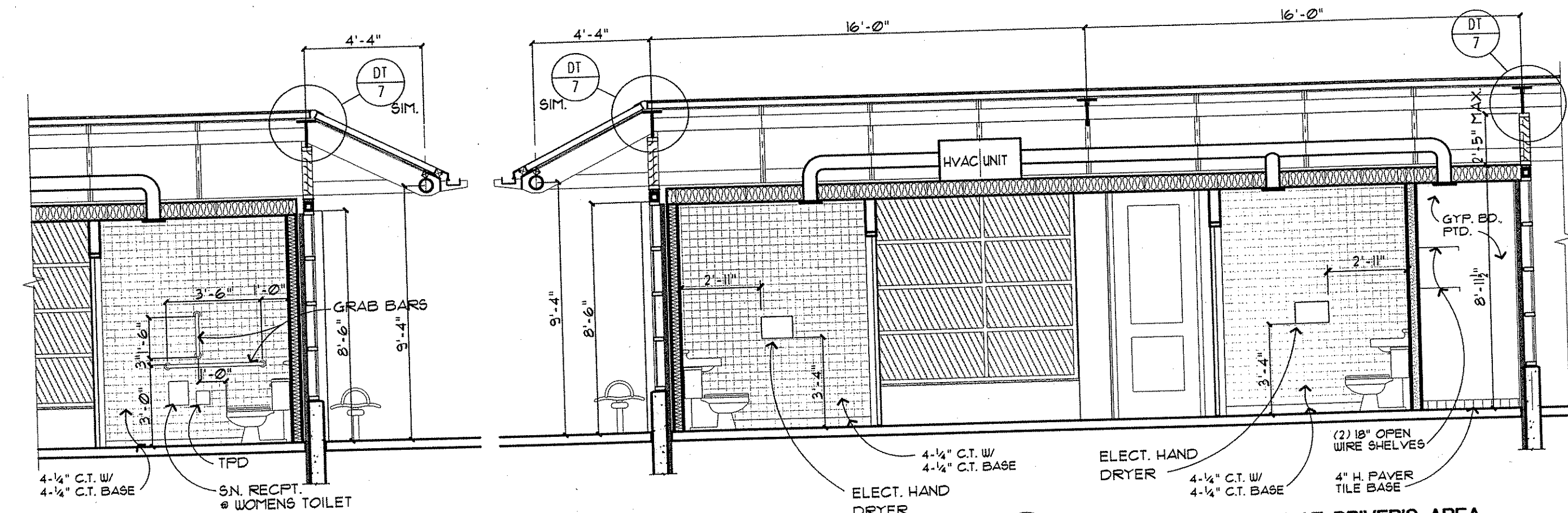
S.P. 0280-50 (T.H. 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 1012, KING, DUNN, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

ESG
 ELLNESS SWENSON GRAHAM ARCHITECTS INC.

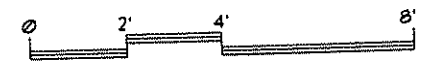
ANOKA COUNTY
 BUS SHELTER
 C.S.A.H. 52 RECONSTRUCTION SECTIONS

SHEET 333 OF 559



SE 7 LONGITUDINAL SECTION AT DRIVER'S AREA

SE 6 LONGITUDINAL SECTION AT DRIVER'S AREA



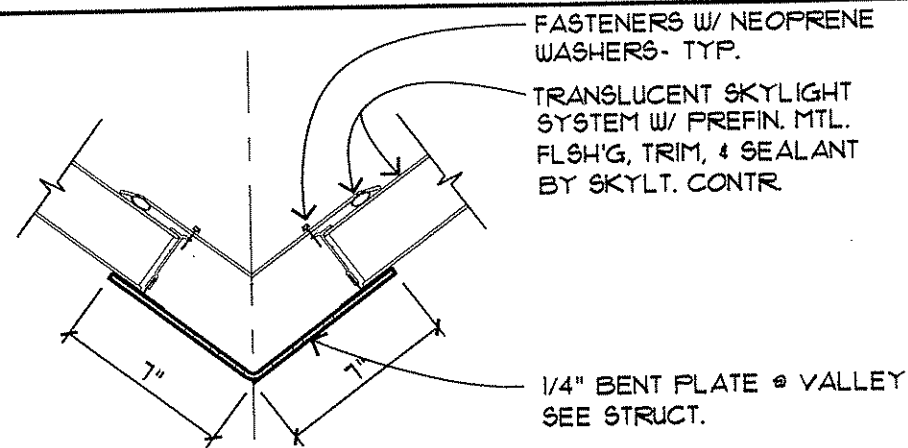
NO. DATE BY CKD APPR REVISION NAME: A0402.dwg					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>W. Bartels</i> DATE 1-8-02 REG. NO. 18711					DRAWN BY RP DATE _____ DESIGN BY AB/RP DATE _____ CHECKED BY AB DATE _____					S.P. 0280-50 (T.H. 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022					TKDA ENGINEERS ARCHITECTS PLANNERS ESIG ELNESS SWENSON GRAHAM ARCHITECTS INC.					ANOKA COUNTY BUS SHELTER C.S.A.H. 52 RECONSTRUCTION SECTIONS					SHEET 334 OF 559				
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NOTES

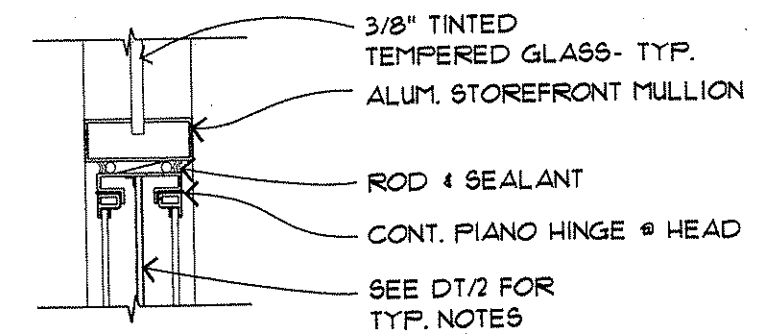
NOTE: ALL CONDUIT TO BE RUN WITHIN STRUCTURAL TUBING OR EXTRUDED METAL ENCLOSURES PROVIDED. NO CONDUIT IS TO BE SURFACE-APPLIED.

EMBED PLATE FOR T93x3 COLS. SHOULD NOT EXCEED WIDTH OF ALUM. STOREFRONT SYSTEM.

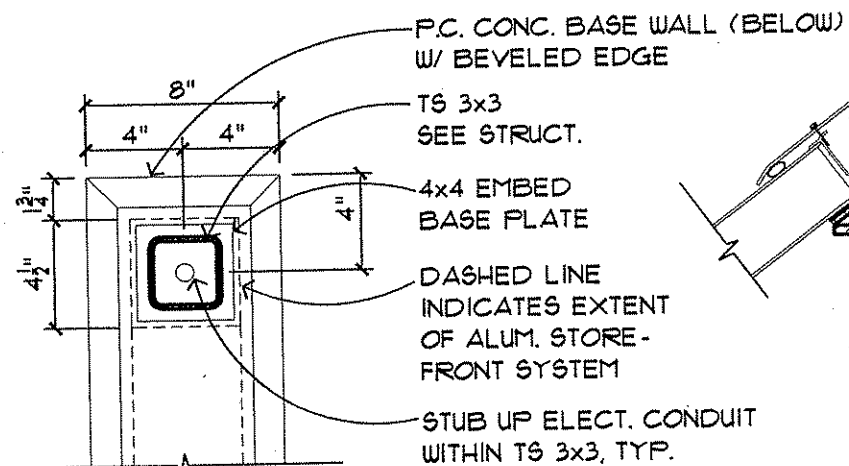
STUB UP CONDUITS WITHIN T6 COLS.



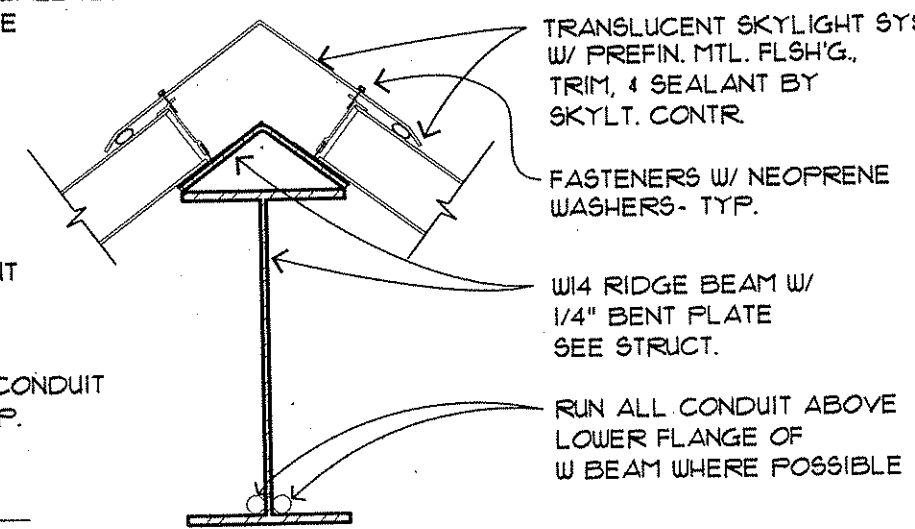
DT 6 TYP. SHELTER / LINK VALLEY DETAIL



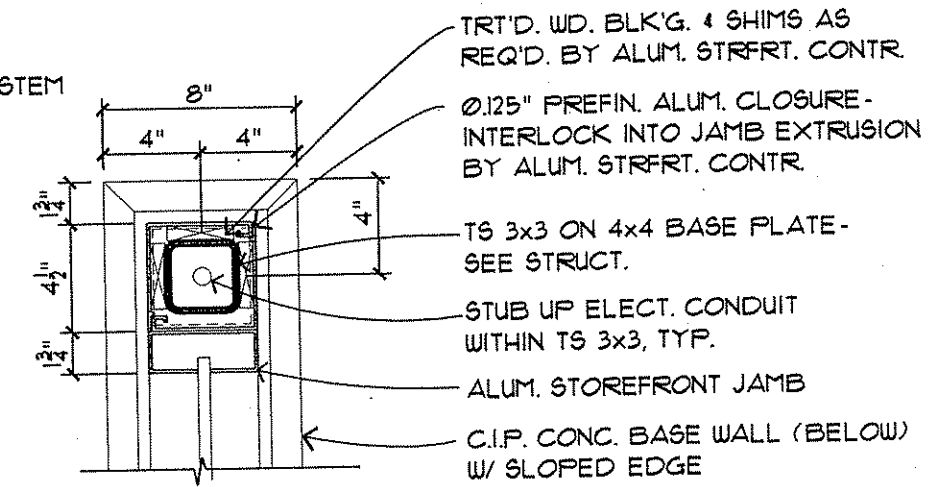
DT 3 DISPLAY CASE HEAD DETAIL (SILL SIMILAR)



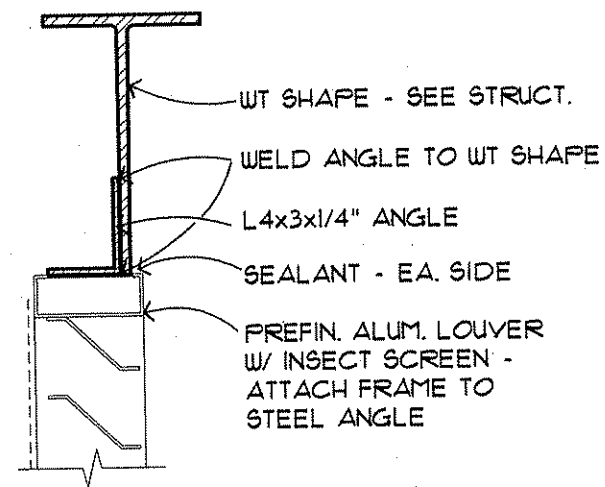
DT 8 TYP. BASE PLATE / TS 3x3 DETAIL



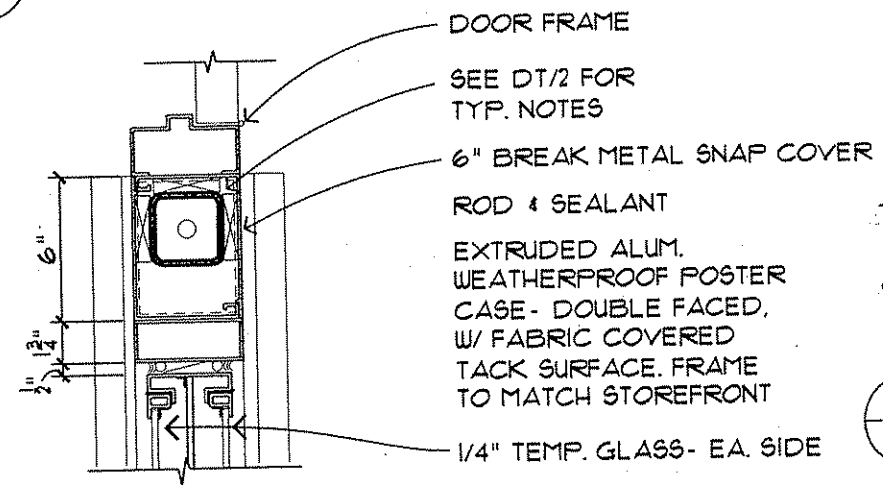
DT 5 TYP. SHELTER RIDGE DETAIL



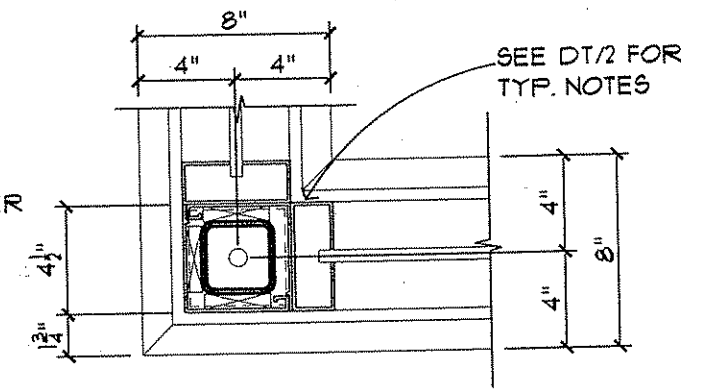
DT 2 TYP. ALUM. END JAMB DETAIL



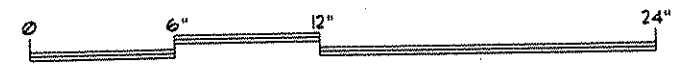
DT 7 LOUVER DTL. @ WT SHAPE



DT 4 END JAMB / DISPLAY CASE DETAIL

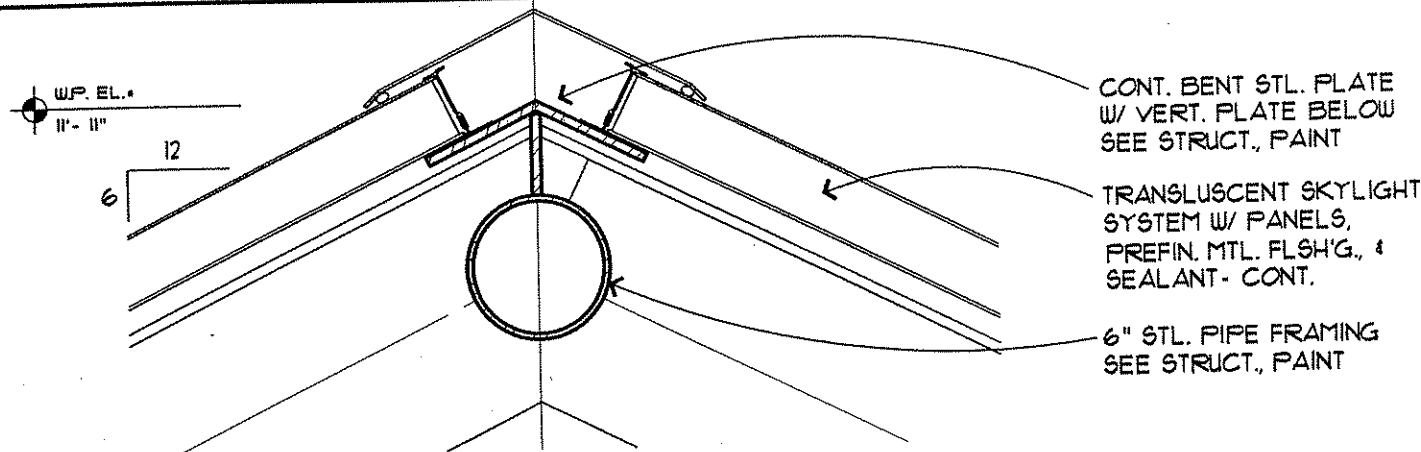


DT 1 TYP. ALUM. CORNER JAMB DETAIL



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA <i>Carl Baetzel</i> DATE 1-8-02 REG. NO. 18711					DRAWN BY RP DATE _____ DESIGN BY AB/RP DATE _____ CHECKED BY AB DATE _____					S.P. 0280-50 (T.H. 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022					TKDA ENGINEERS ARCHITECTS PLANNERS FOLTZ, KING, DEWALL, ANDERSON AND ASSOCIATES, INCORPORATED SAINT PAUL, MINNESOTA ESG ELLNESS SWENSON GRAHAM ARCHITECTS INC.					ANOKA COUNTY BUS SHELTER C.S.A.H. 52 RECONSTRUCTION DETAILS					SHEET 335 OF 559	
NO	DATE	BY	CHKD	APPR	REVISION	NAME: A0601.dwg																				

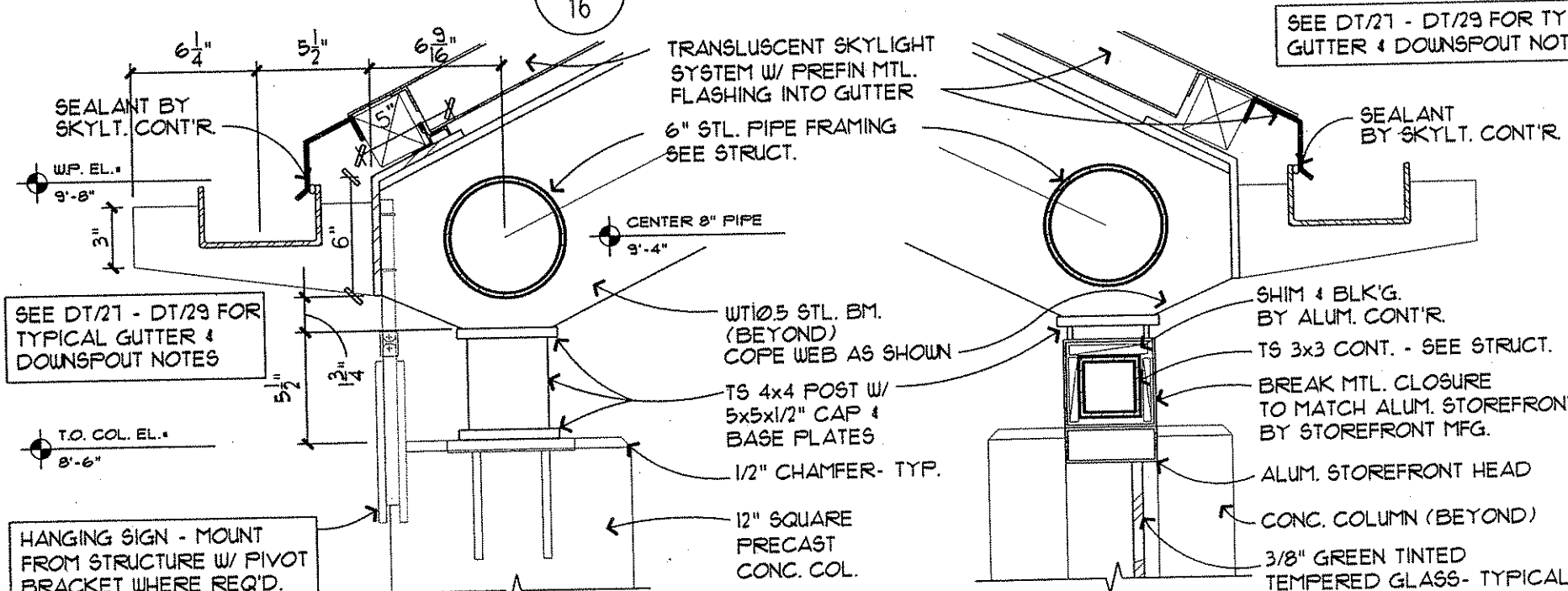
NOTE: ALL CONDUIT TO BE RUN WITHIN STRUCTURAL TUBING OR EXTRUDED METAL ENCLOSURES PROVIDED. NO CONDUIT IS TO BE SURFACE-APPLIED.



NOTE: PROVIDE HAND HOLES FOR ELECT. WIRE ROUTING - COORD. LOC'NS W/ ELECT. CONTRACTOR AND STRUCT. STEEL SUPPLIER - 12 THUS.

NOTE: POSITION CONCRETE FORMS SO THAT SEAMS WILL BE CONCEALED BY STOREFRONT WHERE POSSIBLE, TYP.

DT 16 LINK RIDGE DETAIL



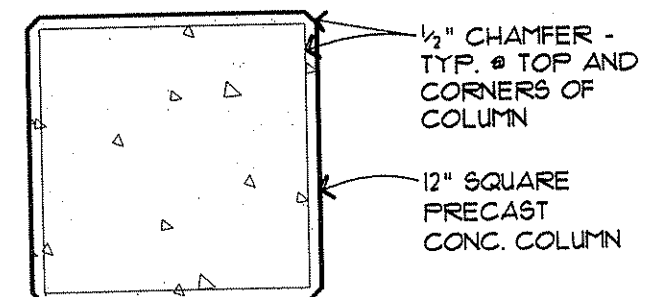
SEE DT/21 - DT/29 FOR TYPICAL GUTTER & DOWNSPOUT NOTES

SEE DT/21 - DT/29 FOR TYPICAL GUTTER & DOWNSPOUT NOTES

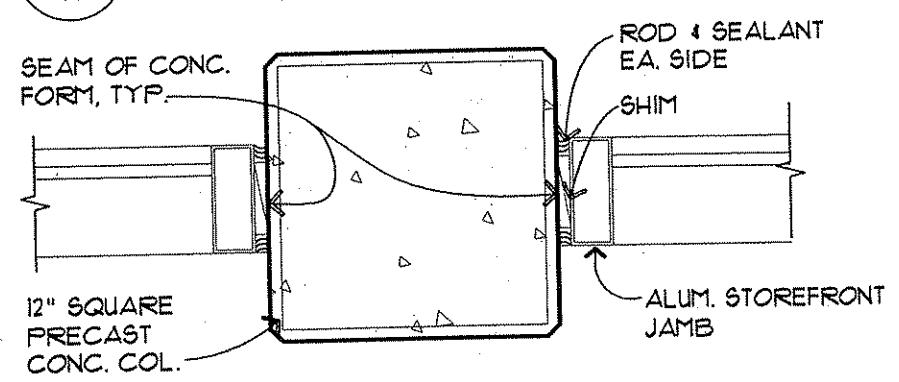
HANGING SIGN - MOUNT FROM STRUCTURE W/ PIVOT BRACKET WHERE REQ'D. -(N.I.C.)

DT 15 LINK EAVE DETAIL

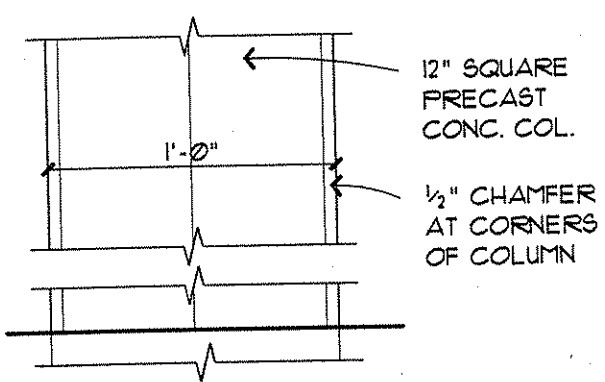
DT 13 HEAD DETAIL AT LINK



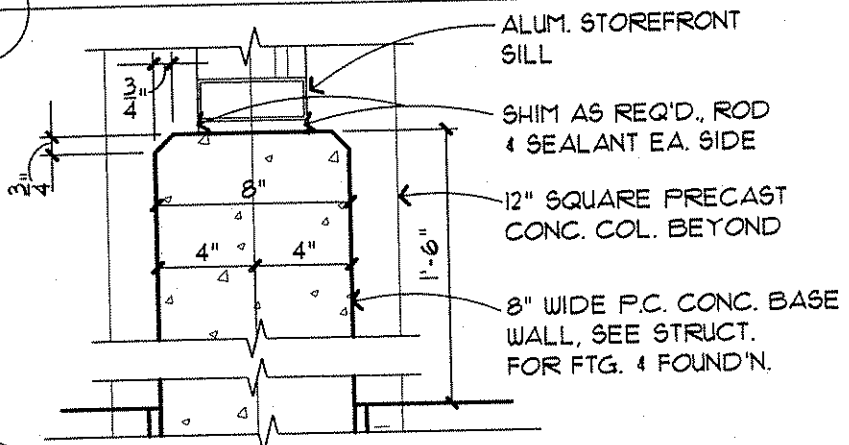
DT 11 LINK COLUMN PLAN DETAIL



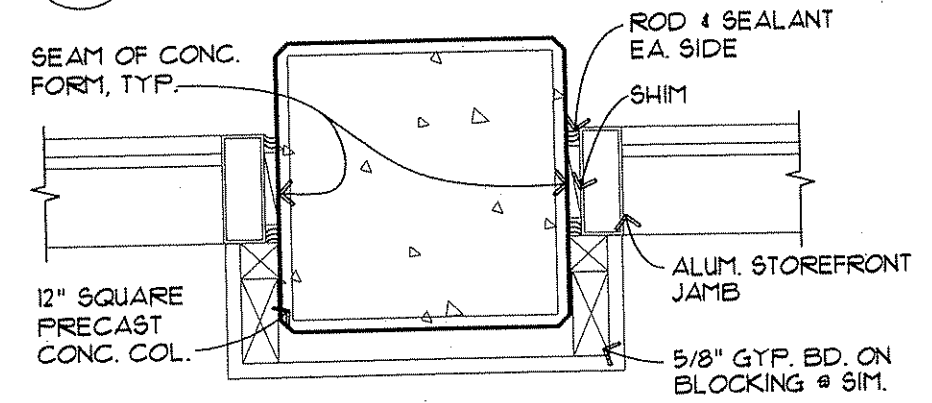
DT 10 JAMB DETAIL AT OPEN COLUMN



DT 14 LINK COL. BASE DETAIL

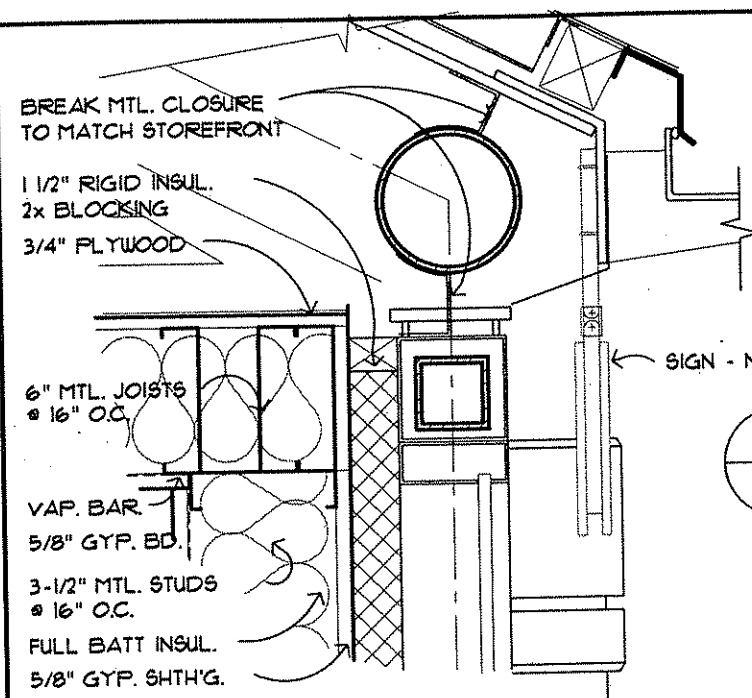


DT 12 SILL/BASE WALL DETAIL

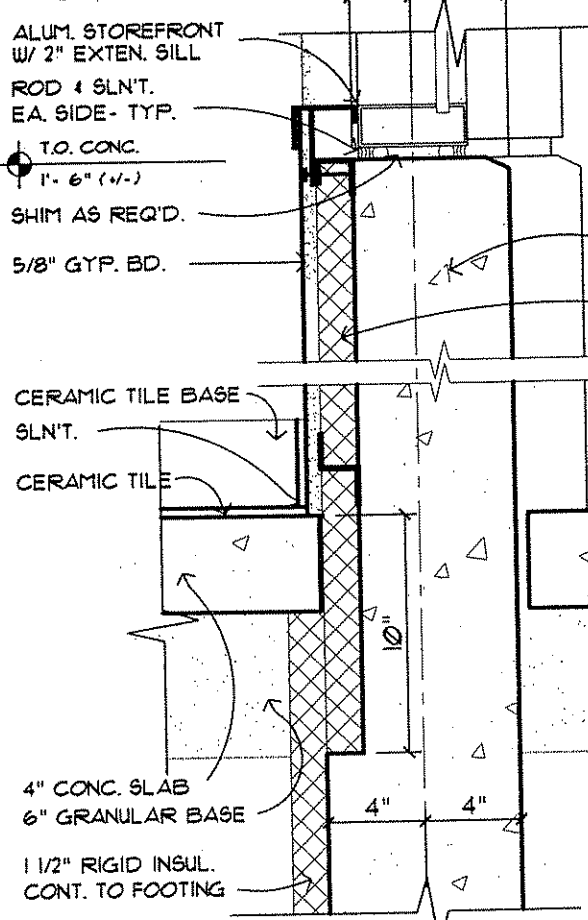


DT 9 JAMB DETAIL AT ENCASED COLUMN

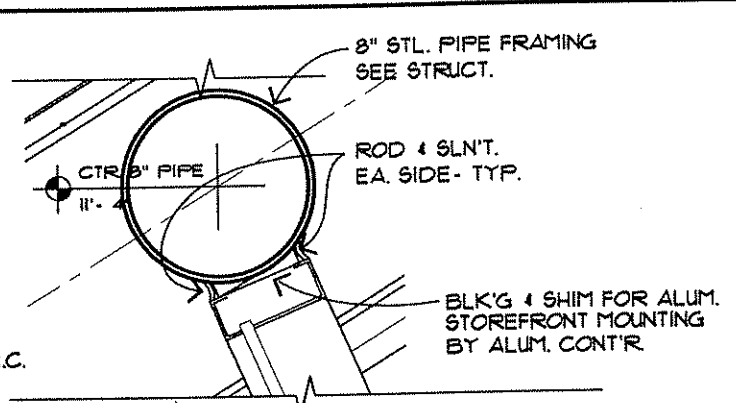
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Curt Baertels</i> DATE <u>1-8-02</u> REG. NO. <u>18711</u>			DRAWN BY <u>RP</u> DATE _____ DESIGN BY <u>AB/RP</u> DATE _____ CHECKED BY <u>AB</u> DATE _____			S.P. 0280-50 (T.H. 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022			TKDA <small>ENGINEERS ARCHITECTS PLANNERS</small> E S G <small>BLNESS SWENSON GRAHAM ARCHITECTS INC.</small>			ANOKA COUNTY BUS SHELTER C.S.A.H. 52 RECONSTRUCTION DETAILS			SHEET 336 OF 559
NO	DATE	BY	CHKD	APPR	REVISION										
					9.21.2001										



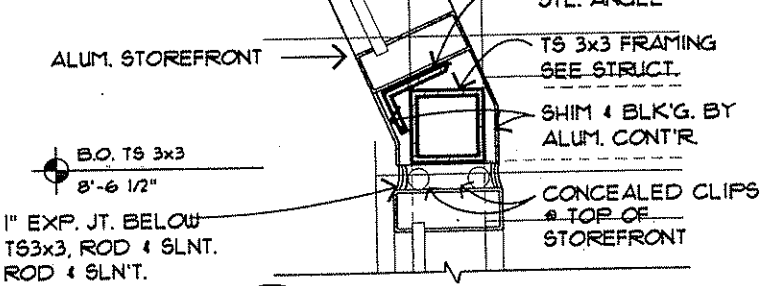
DT HEAD/EAVE/CLG. DTL.
26



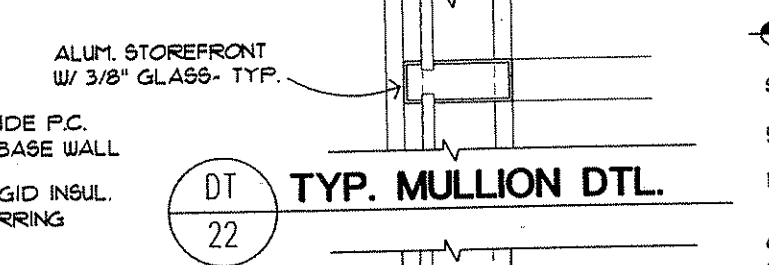
DT SILL / BASE @ BREAKROOM
25



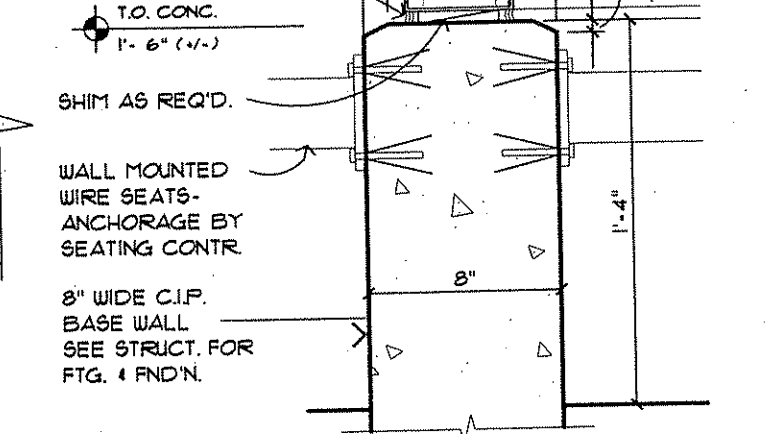
DT HEAD DTL.
24



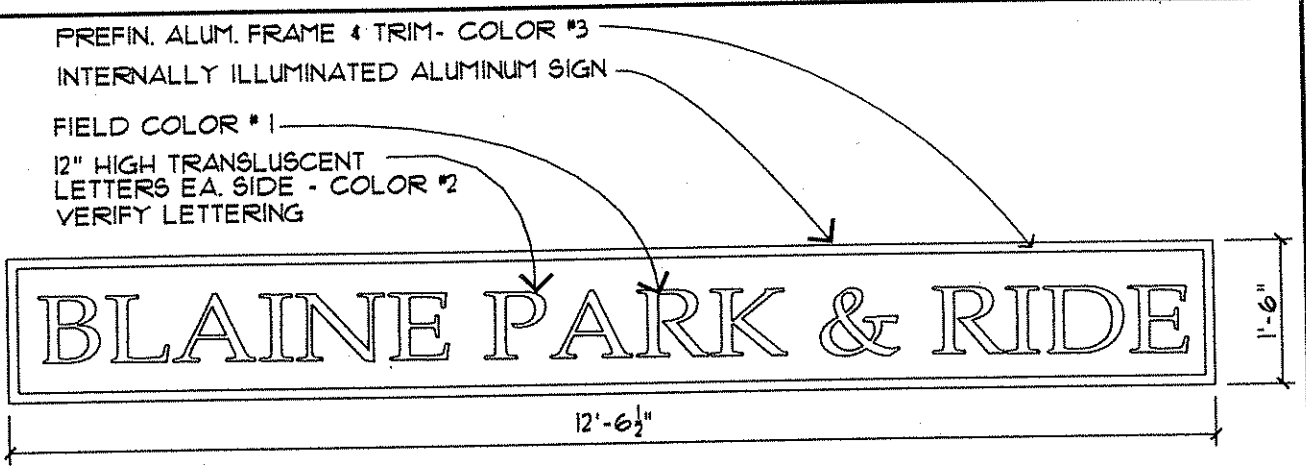
DT MULLION / T.S. DTL.
23



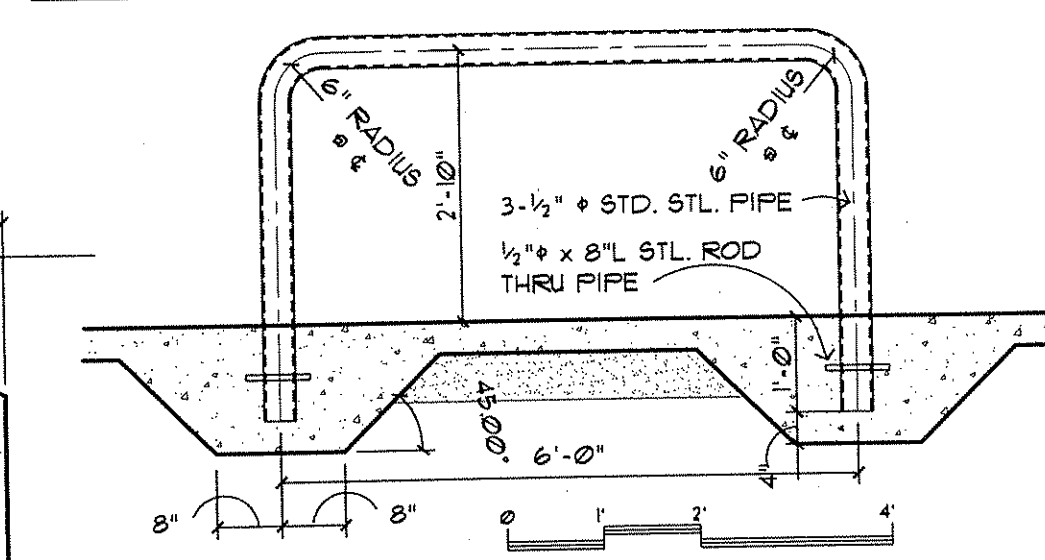
DT TYP. MULLION DTL.
22



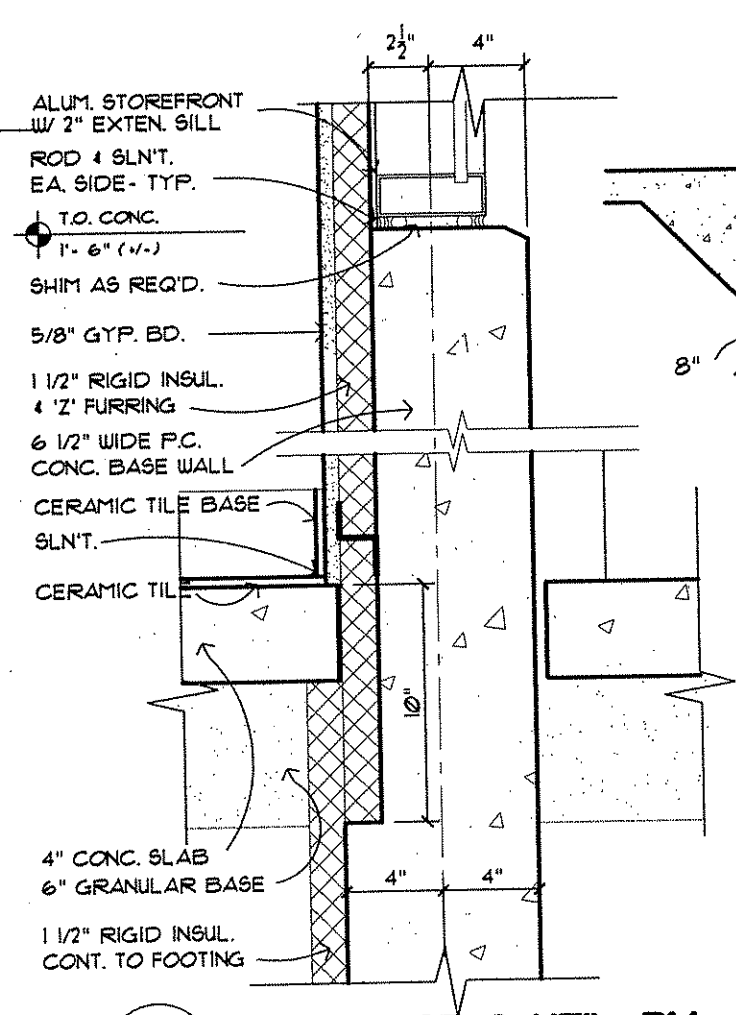
DT SILL / BASE WALL DETAIL
21



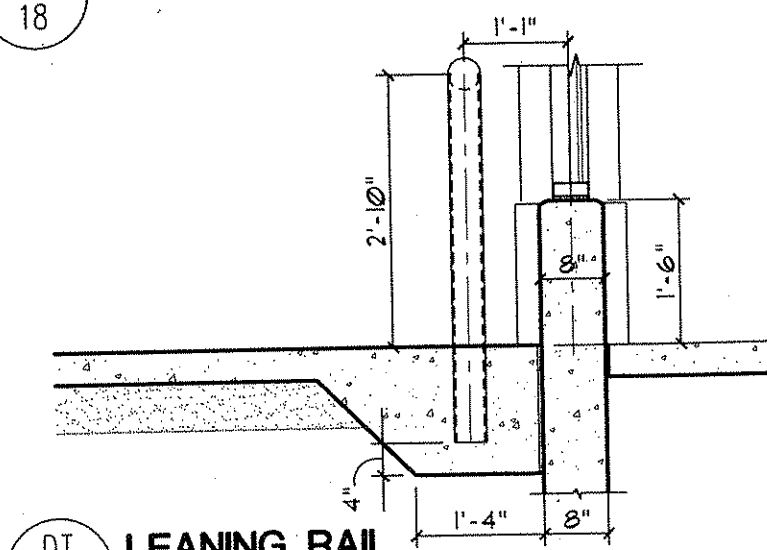
DT ILLUMINATED SIGN
19



DT LEANING RAIL
18



DT SILL / BASE @ UTIL. RM.
20



DT LEANING RAIL
17

NO	DATE	BY	CHKD	APPR	REVISION

NAME: A0603.dwg

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

Carl Bartels
DATE: 1-8-02 REG. NO. 18711

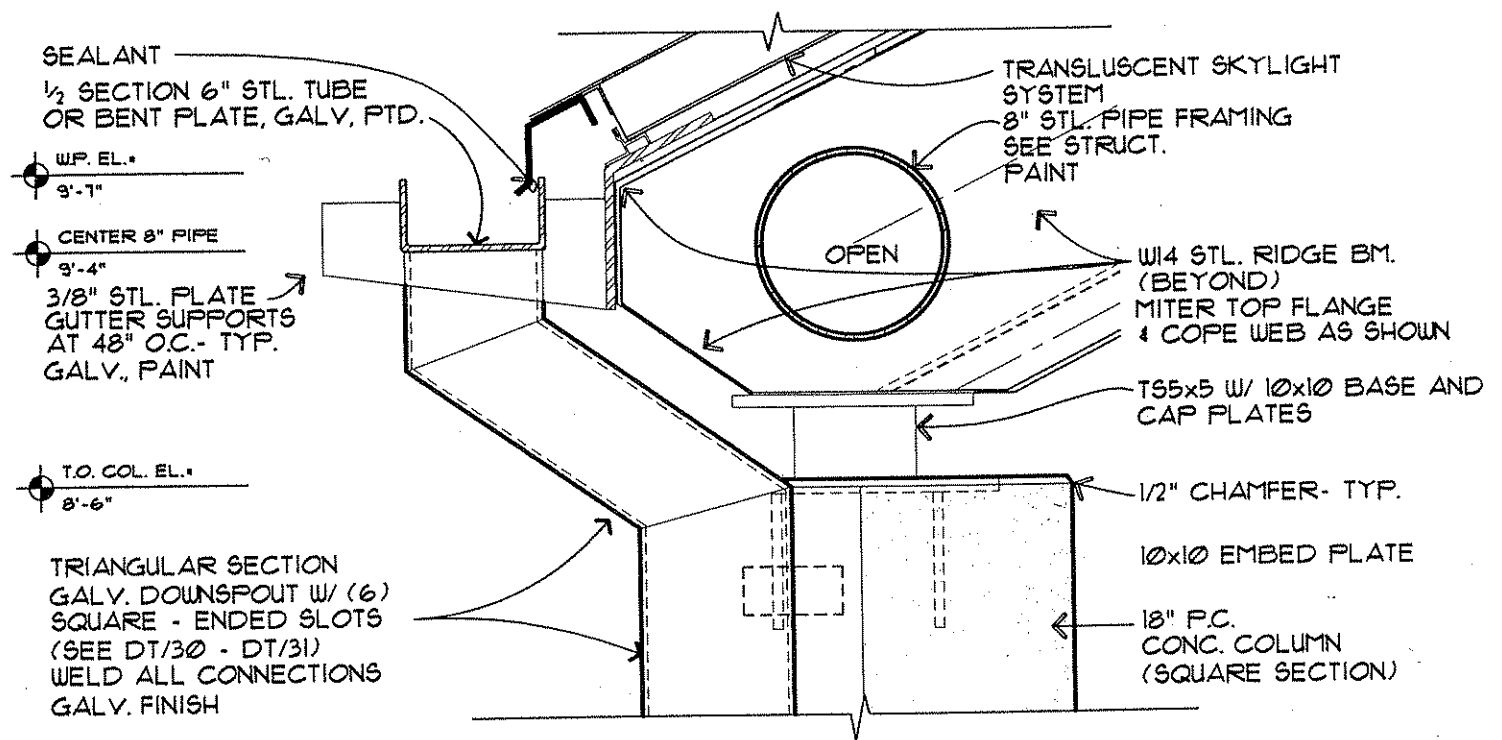
DRAWN BY	RP	DATE	
DESIGN BY	AB/RP	DATE	
CHECKED BY	AB	DATE	

S.P. 0280-50 (T.H. 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

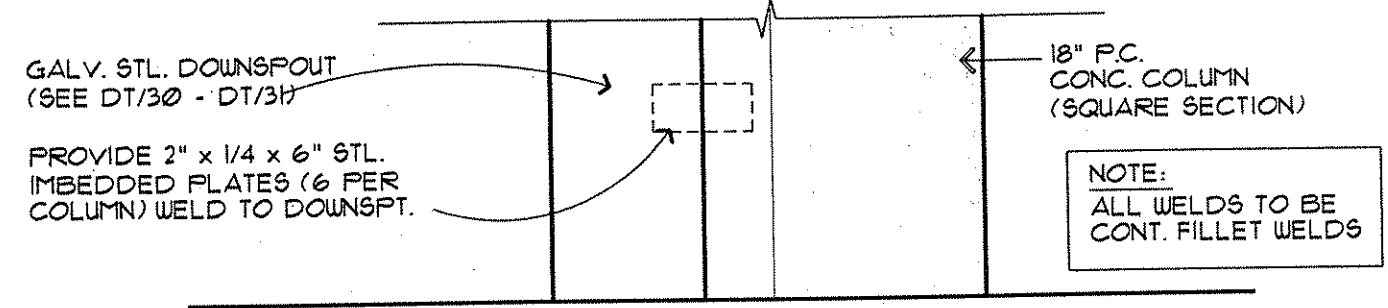
TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

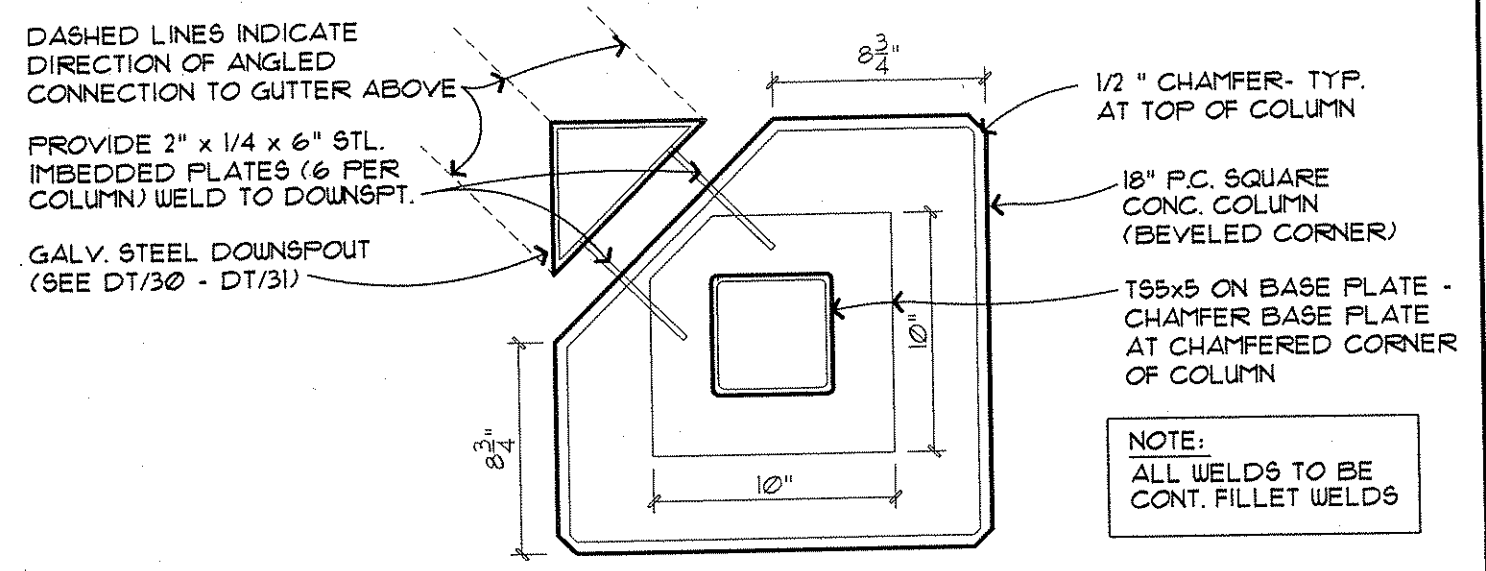
ESIG
ELNESS SWENSON GRAHAM ARCHITECTS INC.



DT
29
SHELTER EAVE DETAIL



DT
28
SHELTER COLUMN BASE DETAIL



DT
27
SHELTER COLUMN DETAIL

NO	DATE	BY	CHKD	APPR	REVISION

NAME: A0604.dwg

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

Carl Baute

DATE 1-8-02 REG. NO. 18711

DRAWN BY RP DATE _____

DESIGN BY AB/RP DATE _____

CHECKED BY AB DATE _____

S.P. 0280-50 (T.H. 35W)

S.P. 90-080-11

S.A.P. 02-652-02

S.A.P. 02-652-03

S.A.P. 02-652-04

S.A.P. 106-020-021, 106-020-022

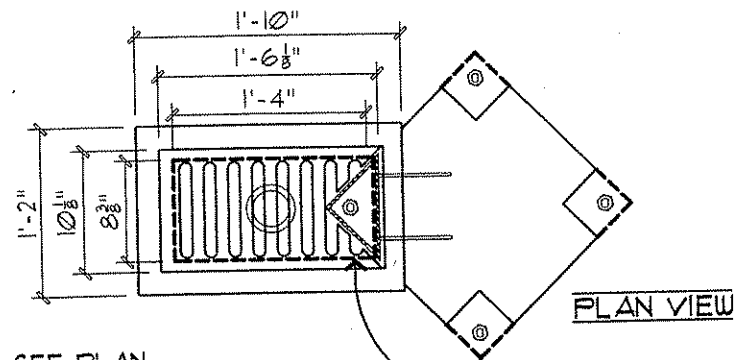
TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLIZ, KING, DUWALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

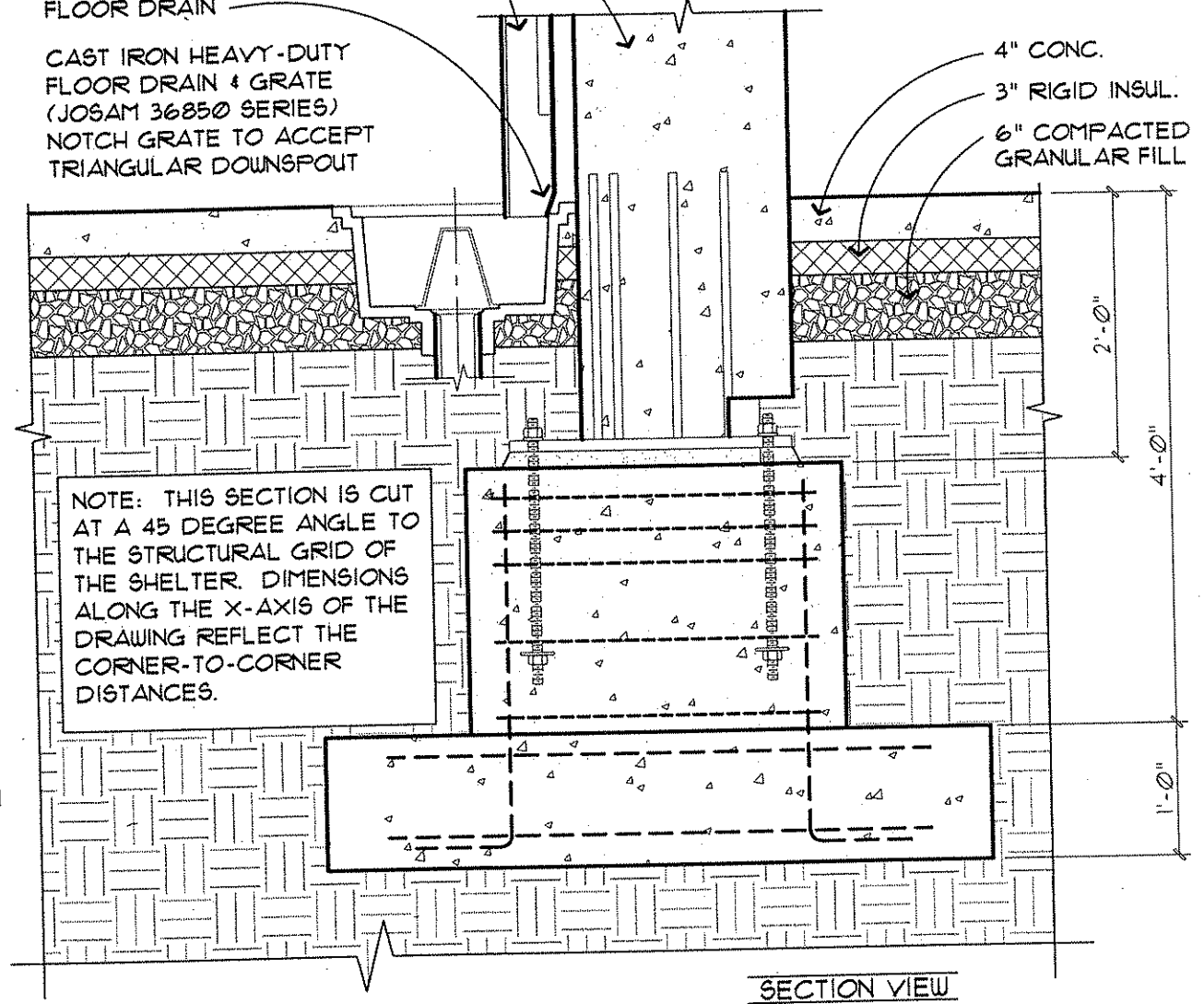
ESG
ELNESS SWENSON GRAHAM ARCHITECTS INC.

ANOKA COUNTY
BUS SHELTER
C.S.A.H. 52 RECONSTRUCTION
COLUMN DETAILS

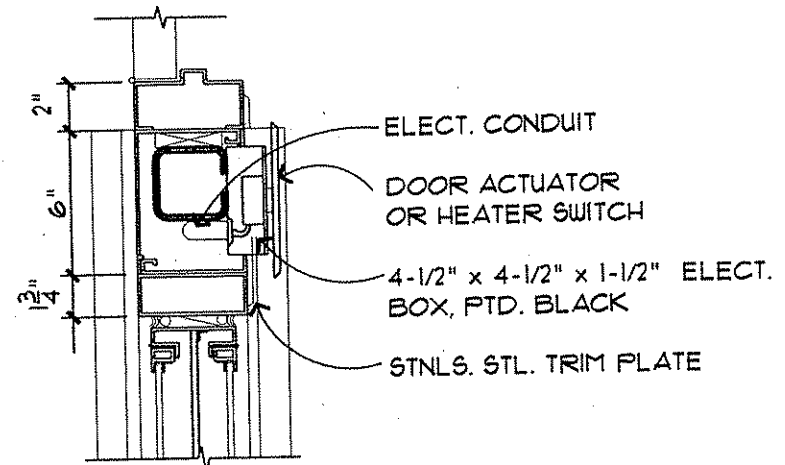
SHEET
338
OF
559



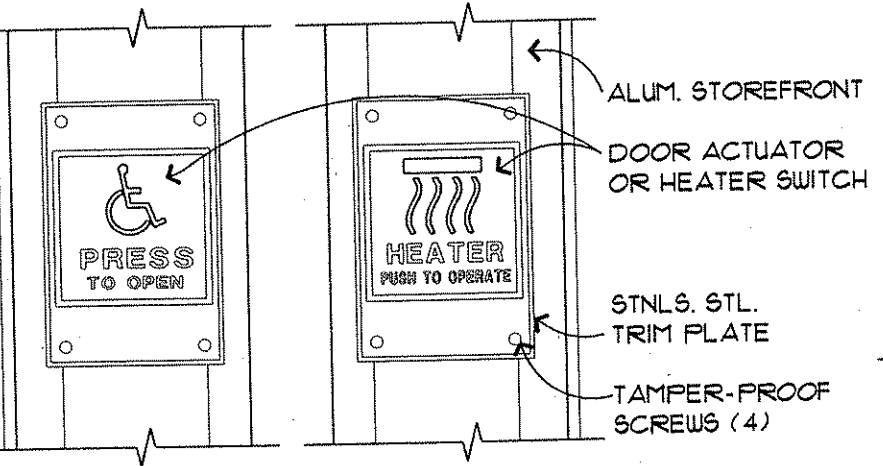
P.C. COLUMN, SEE PLAN
 GALV. STL. DRAIN PIPE
 ANGLE BACK OF DRAIN PIPE TO CLEAR INSIDE LIP OF FLOOR DRAIN
 CAST IRON HEAVY-DUTY FLOOR DRAIN & GRATE (JOSAM 36850 SERIES)
 NOTCH GRATE TO ACCEPT TRIANGULAR DOWNSPOUT



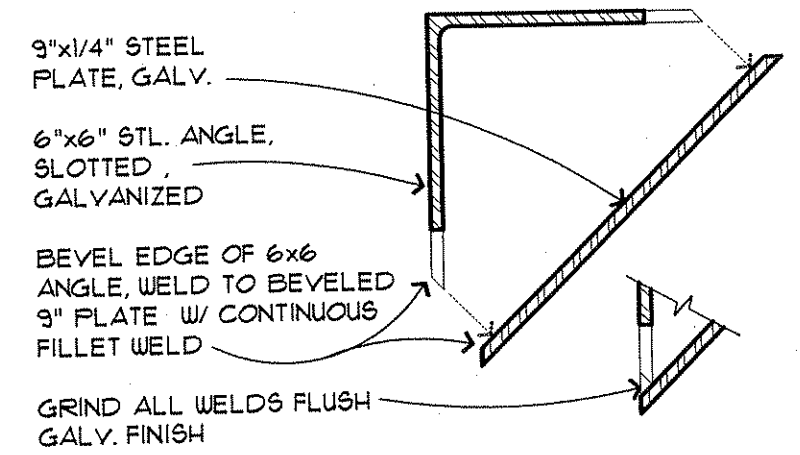
DT 32 SHELTER COLUMN BASE & DRAIN DETAIL



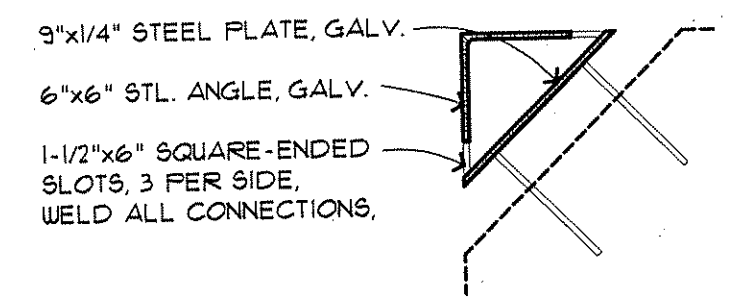
DT 34 END JAMB / SWITCH DETAILS



DT 33 END JAMB / SWITCH DETAILS

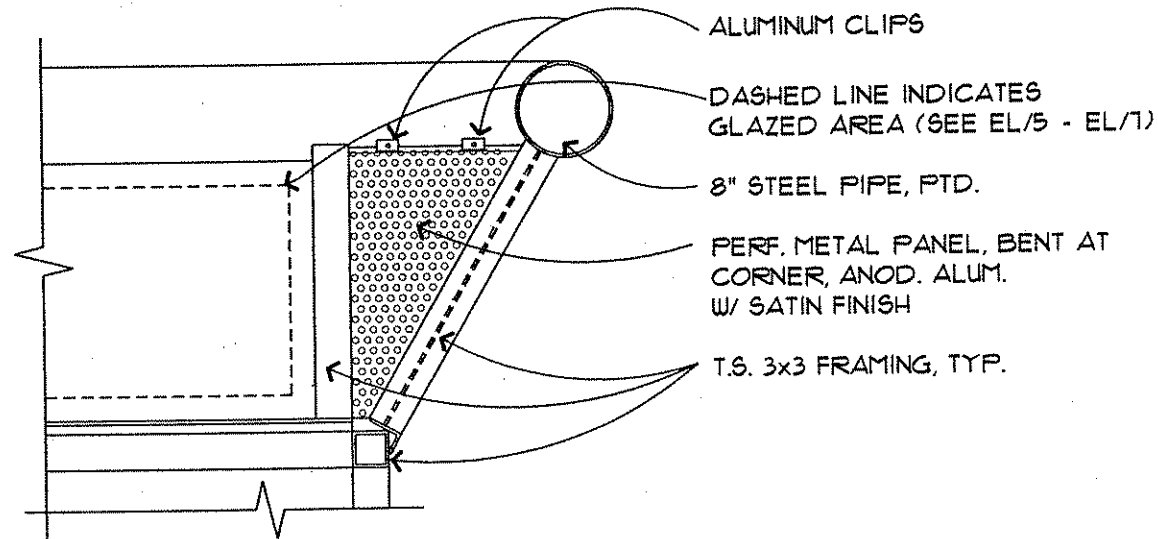


DT 31 SHELTER COLUMN DETAIL



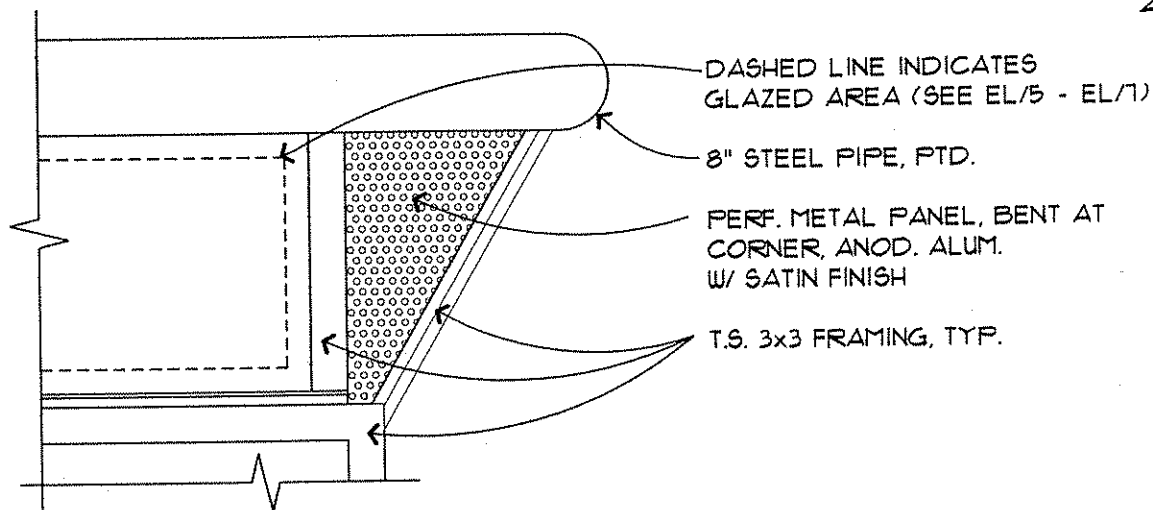
DT 30 SHELTER COLUMN DETAIL

NO. DATE BY CKD APPR REVISION NAME: A0605.dwg					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Art Butch</i> DATE 1-8-02 REG. NO. 18711					DRAWN BY RP DATE DESIGN BY AB/RP DATE CHECKED BY AB DATE					S.P. 0280-50 (T.H. 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022					TKDA ENGINEERS ARCHITECTS PLANNERS EISG ELNESS SWENSON GRAHAM ARCHITECTS INC. TOLIZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED SAINT PAUL, MINNESOTA					ANOKA COUNTY BUS SHELTER C.S.A.H. 52 RECONSTRUCTION DETAILS					SHEET 339 OF 559				
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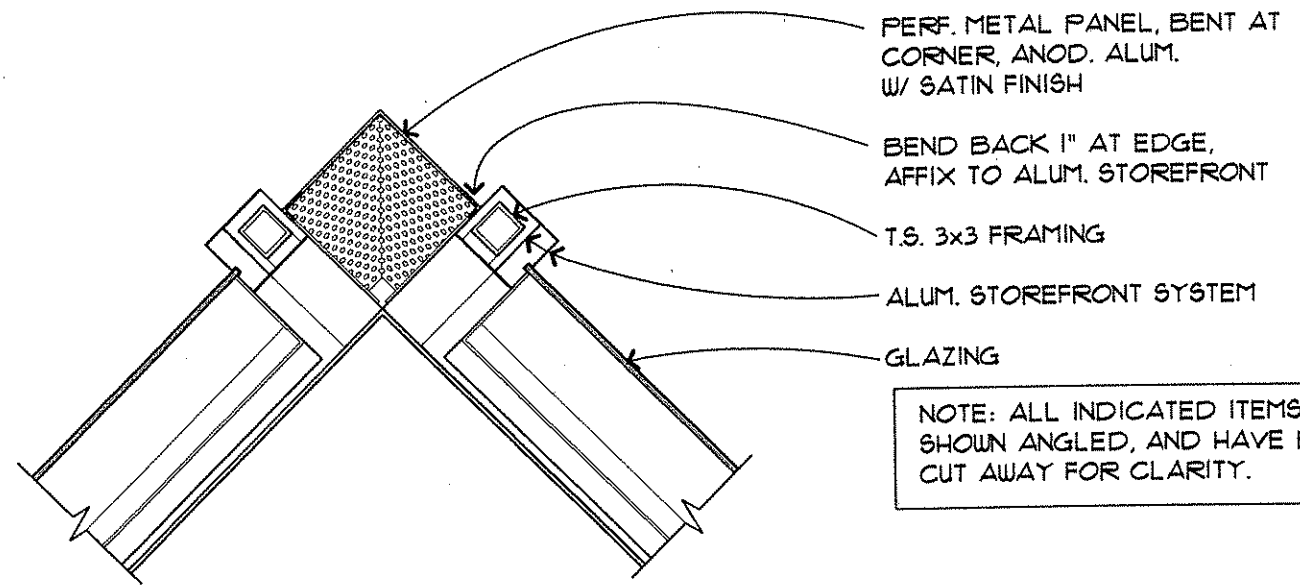
UPPER CORNER AT ENCLOSED AREA
SECTION CUT

DT
38



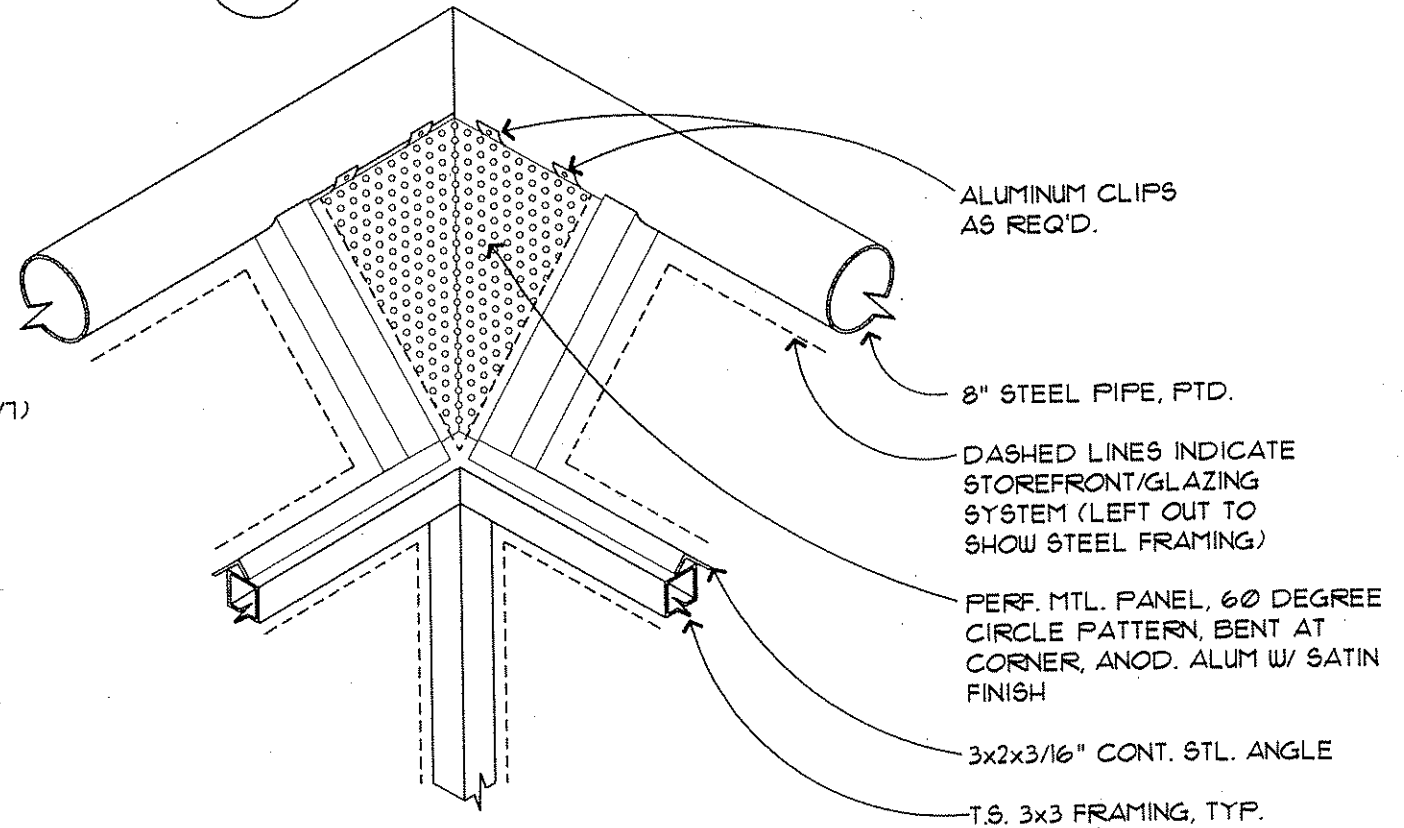
UPPER CORNER AT ENCLOSED AREA
END ELEVATION

DT
37



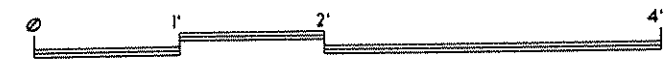
UPPER CORNER AT ENCLOSED AREA
PLAN DRAWING

DT
36



UPPER CORNER AT ENCLOSED AREA
ISOMETRIC DRAWING

DT
35



NO	DATE	BY	CKD	APPR	REVISION

NAME: A0606.dwg

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

Carl Bartels
DATE: 1-8-02 REG. NO. 18711

DRAWN BY: RP DATE: _____
DESIGN BY: AB/RP DATE: _____
CHECKED BY: AB DATE: _____

S.P. 0280-50 (T.H. 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
ENGINEERS ARCHITECTS PLANNERS
FOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

ESG
ELNESS SWENSON GRAHAM ARCHITECTS INC.

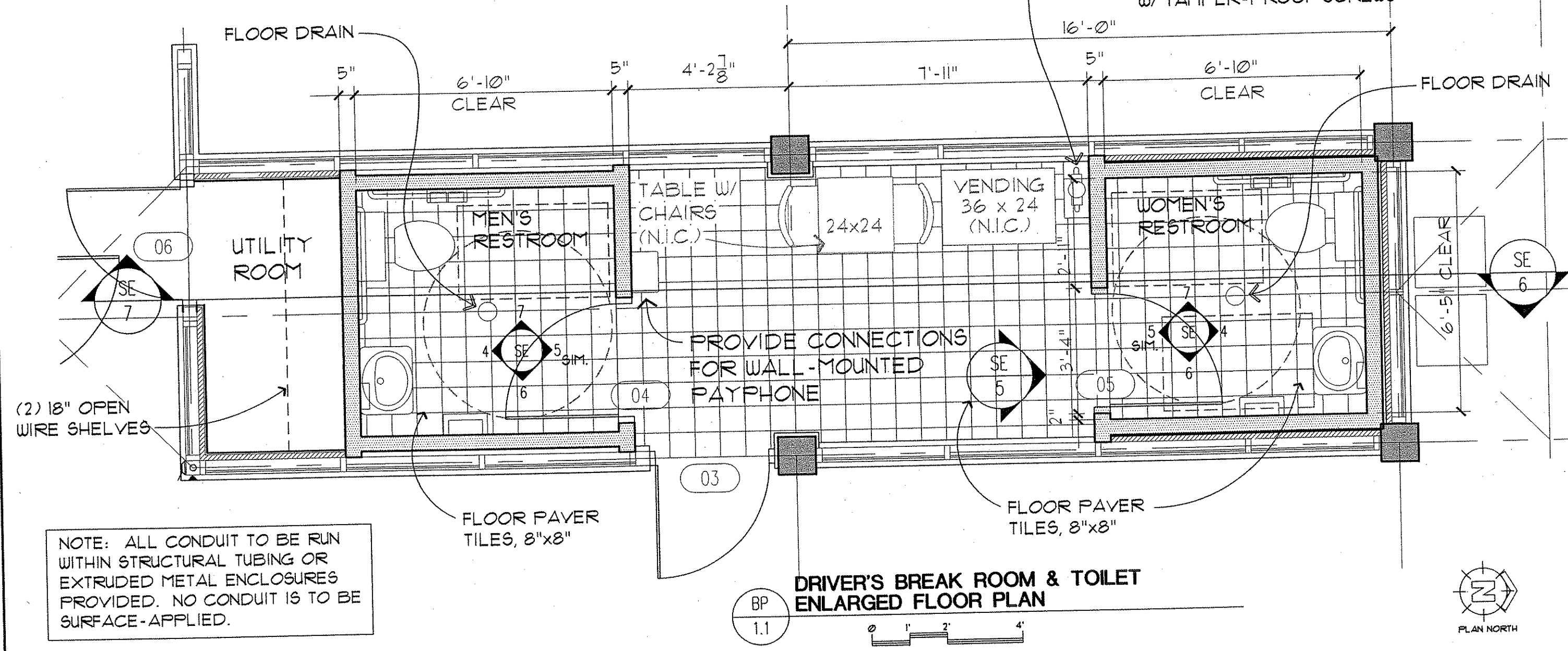
ANOKA COUNTY
BUS SHELTER
C.S.A.H. 52 RECONSTRUCTION
CORNER DETAILS

SHEET
340
OF
559

OPENING NUMBER	ROOM DESCRIPTION	DOOR TYPE	DOOR SIZE			DOOR AND FRAME LABEL	FRAME TYPE	NOTES
			W	H	TH			
01	SHELTER	ALUM	3-4	8-4	1-3/4	NONE	ALUM.	TEMPERED GLASS
02	SHELTER	ALUM.	3-4	8-4	1-3/4	NONE	ALUM.	TEMPERED GLASS
03	BREAK ROOM	ALUM.	3-0	7-0	1-3/4	NONE	ALUM.	INSUL/TEMPERED GLASS
04	TOILET ROOM	H.M.	3-0	7-0	1-3/4	NONE	H.M.	FLUSH DOOR
05	TOILET ROOM	H.M.	3-0	7-0	1-3/4	NONE	H.M.	FLUSH DOOR
06	UTILITY ROOM	H.M.	3-0	7-0	1-3/4	NONE	H.M.	FLUSH DOOR

DS
1
DOOR SCHEDULE

WATER METER LOC'N.- METER TO BE SET ON 4"H x 8"x18" CONC. BASE, C.T. TOP, PAVER TILE SIDES, AND ENCLOSED W/ 8"x18"x20" HIGH P.LAM. ENCLOSURE W/ TAMPER-PROOF SCREWS



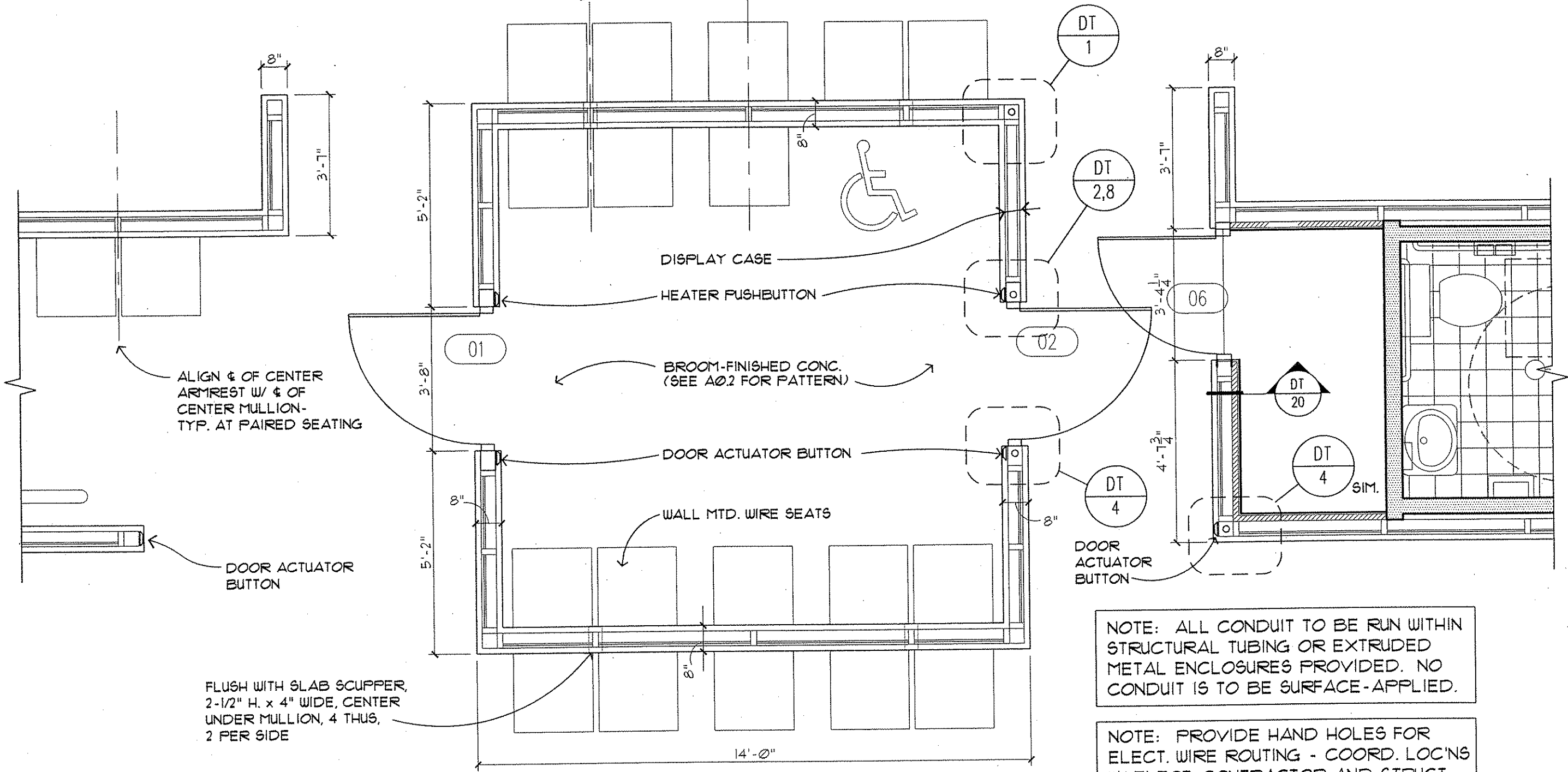
NOTE: ALL CONDUIT TO BE RUN WITHIN STRUCTURAL TUBING OR EXTRUDED METAL ENCLOSURES PROVIDED. NO CONDUIT IS TO BE SURFACE-APPLIED.

BP
1.1
DRIVER'S BREAK ROOM & TOILET ENLARGED FLOOR PLAN

NO		DATE	BY	CKD	APPR	REVISION	9.21.2001	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Art Bauteils</i> DATE 1-8-02 REG. NO. 18711	DRAWN BY RP DATE DESIGN BY AB/RP DATE CHECKED BY AB DATE	S.P. 0280-50 (T.H. 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022	TKDA ENGINEERS ARCHITECTS PLANNERS ESG ELNESS SWENSON GRAHAM ARCHITECTS INC.	TOLZ, KING, DUNN, ANDERSON AND ASSOCIATES, INCORPORATED SAINT PAUL, MINNESOTA	ANOKA COUNTY BUS SHELTER C.S.A.H. 52 RECONSTRUCTION ENLARGED FLOOR PLAN / DOOR SCHED.	SHEET 341 OF 559
NAME: A0801.dwg														

ALIGN ϕ OF CENTER ARMREST
W/ ϕ OF CENTER MULLION-
TYP. AT PAIRED SEATING

ALIGN ϕ OF SEAT
W/ ϕ OF CENTER MULLION-
TYP. AT SINGLE SEATING



ALIGN ϕ OF CENTER
ARMREST W/ ϕ OF
CENTER MULLION-
TYP. AT PAIRED SEATING

BROOM-FINISHED CONC.
(SEE A02 FOR PATTERN)

DOOR ACTUATOR BUTTON

WALL MTD. WIRE SEATS

DOOR ACTUATOR
BUTTON

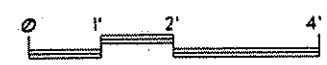
FLUSH WITH SLAB SCUPPER,
2-1/2" H. x 4" WIDE, CENTER
UNDER MULLION, 4 THUS,
2 PER SIDE

NOTE: ALL CONDUIT TO BE RUN WITHIN
STRUCTURAL TUBING OR EXTRUDED
METAL ENCLOSURES PROVIDED. NO
CONDUIT IS TO BE SURFACE-APPLIED.

NOTE: PROVIDE HAND HOLES FOR
ELECT. WIRE ROUTING - COORD. LOC'NS
W/ ELECT. CONTRACTOR AND STRUCT.
STEEL SUPPLIER - 12 THUS.

BP
1.2

**ENCLOSED AREA
ENLARGED FLOOR PLAN**



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 REGISTERED PROFESSIONAL
ARCHITECT UNDER THE LAWS OF THE STATE OF
MINNESOTA.
Curt Bauteis
DATE 1-8-02 REG. NO. 18711

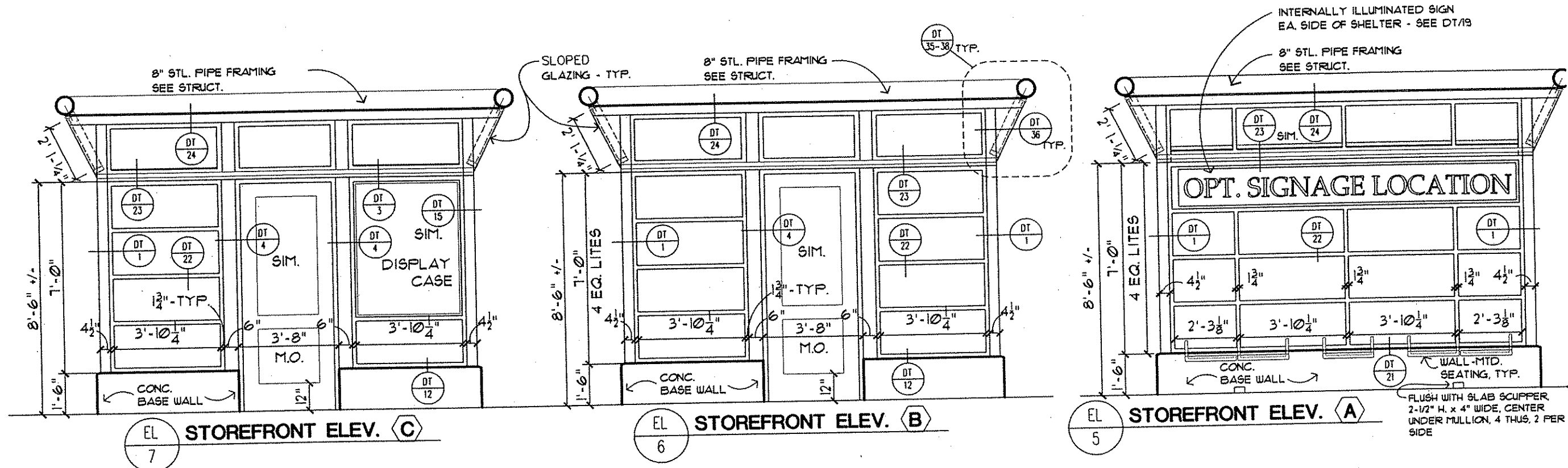
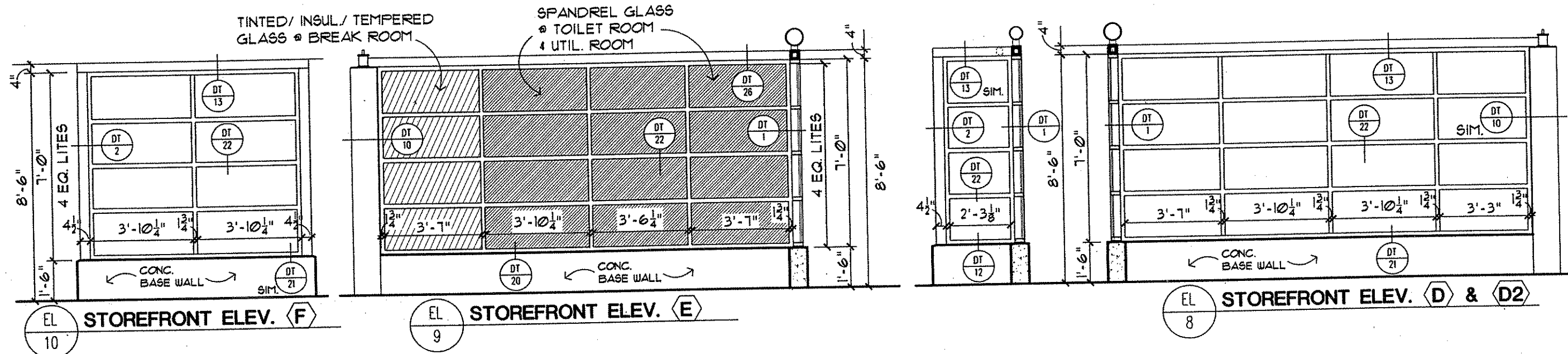
DRAWN BY RP DATE _____
DESIGN BY AB/RP DATE _____
CHECKED BY AB DATE _____

S.P. 0280-50 (T.H. 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

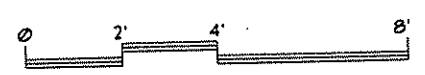
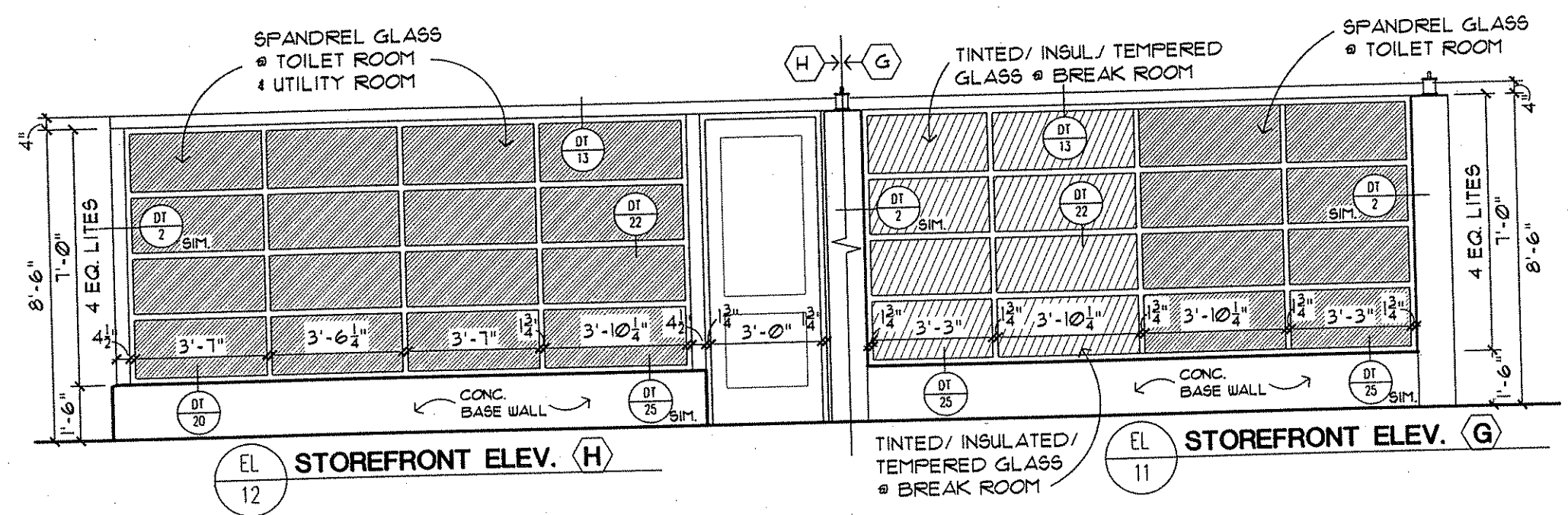
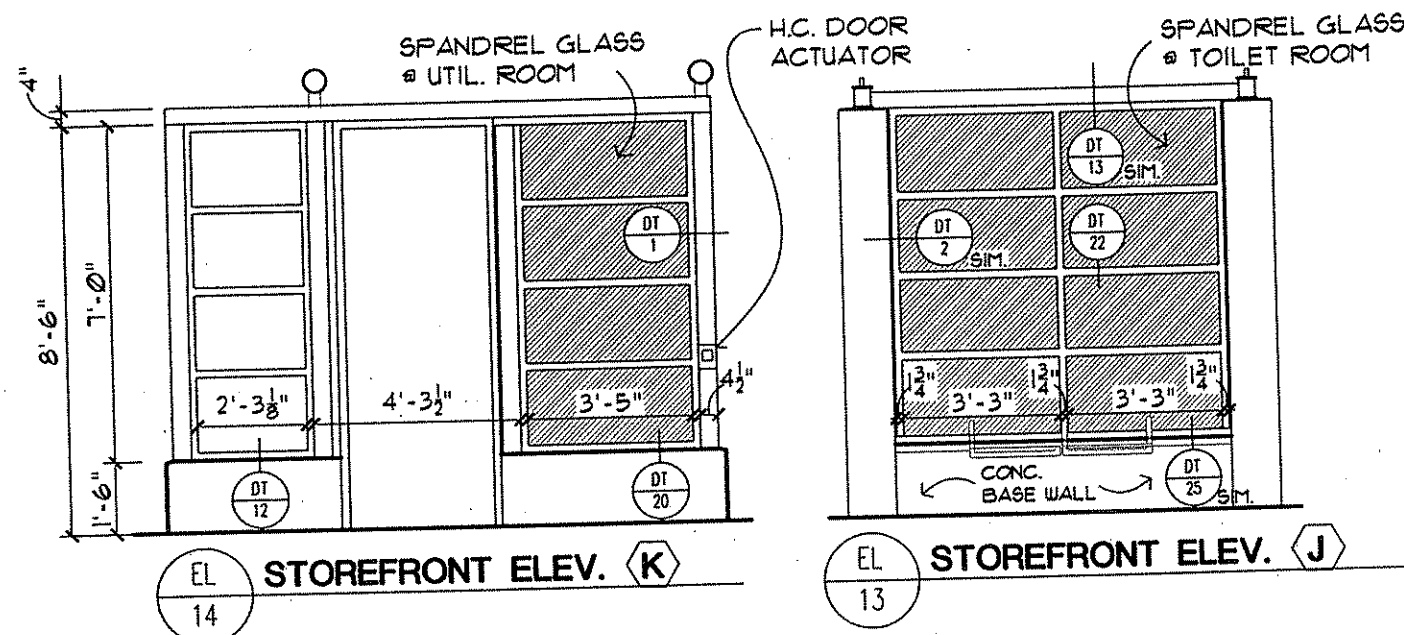
TKDA
ENGINEERS ARCHITECTS PLANNERS
EISIG ELNESS SWENSON GRAHAM
ARCHITECTS INC.

ANDOKA COUNTY
BUS SHELTER
C.S.A.H. 52 RECONSTRUCTION
ENLARGED FLOOR PLAN

SHEET
342
OF
559

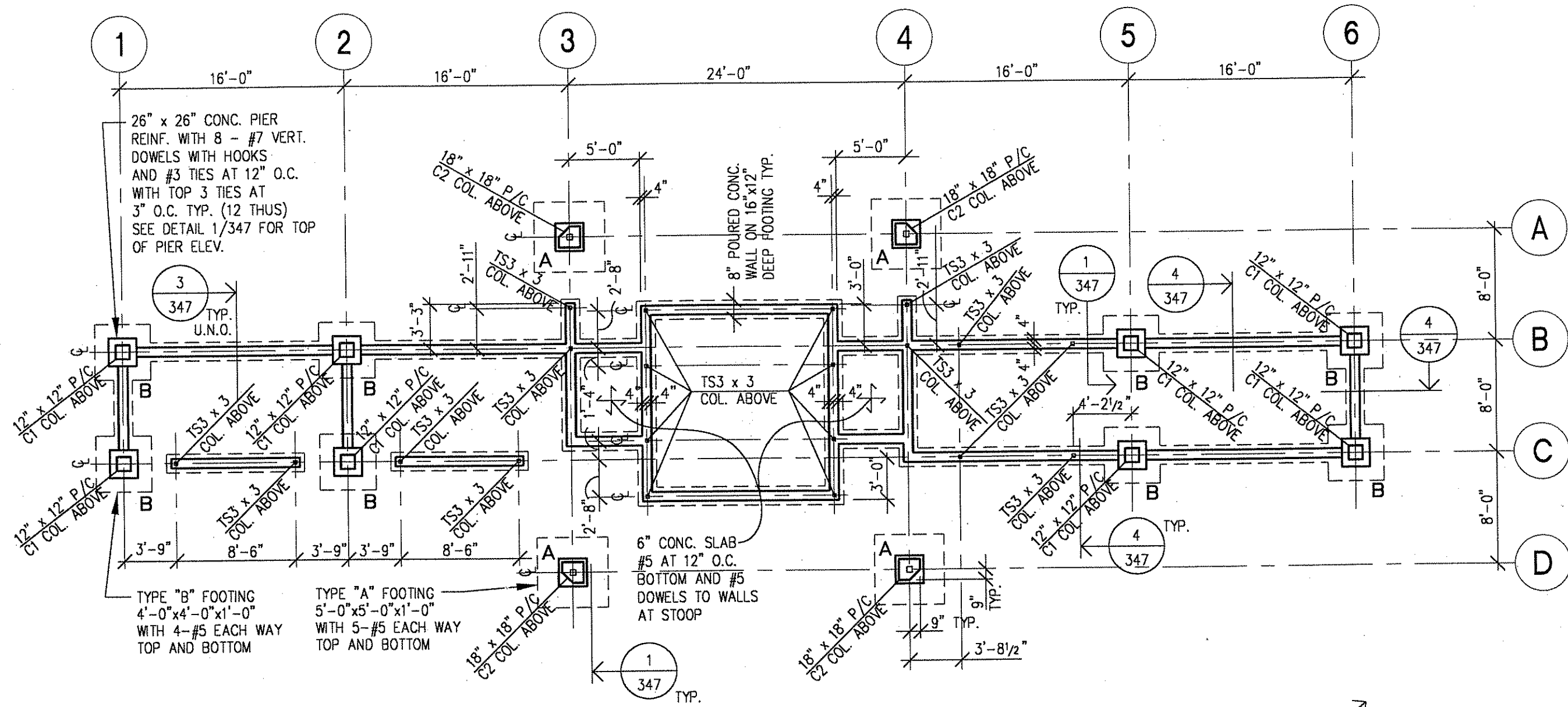


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NO	DATE	BY	CKD	APPR	REVISION	NAME: A1101.dwg							



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.					DRAWN BY <u>RP</u> DATE _____ DESIGN BY <u>AB/RP</u> DATE _____ CHECKED BY <u>AB</u> DATE _____		S.P. 0280-50 (T.H. 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA ENGINEERS ARCHITECTS PLANNERS TOLZ, KING, DUWALL, ANDERSON AND ASSOCIATES, INCORPORATED SAINT PAUL, MINNESOTA		ANOKA COUNTY BUS SHELTER C.S.A.H. 52 RECONSTRUCTION STOREFRONT ELEVATIONS		SHEET 344 OF 559
NO	DATE	BY	CKD	APPR	REVISION	DATE	REG. NO.	ESG ELNESS SWENSON GRAHAM ARCHITECTS INC.					
					9.21.2001		18711						

NAME: A1102.dwg

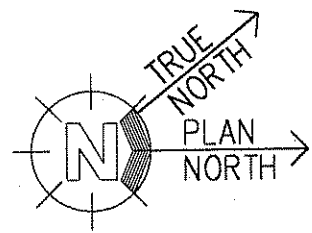


FOUNDATION PLAN



TYPICAL FOUNDATION NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR BUILDING SITE LOCATION, ORIENTATION AND FINISHED GRADE ELEVATION.
2. TOP OF FOOTING ELEVATION SHALL BE 4'-0" MINIMUM BELOW TOP OF ADJACENT FINISHED SLAB ON GRADE ELEVATION. VERIFY WITH ARCH. AND CIVIL DRAWINGS
3. SEE GENERAL STRUCTURAL NOTES ON SHEET 350 FOR ADDITIONAL INFORMATION.



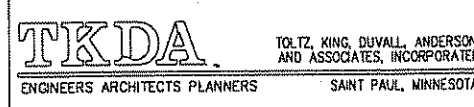
NO	DATE	BY	CKO	APPR	REVISION

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DATE 9/20/01 LIC. NO. 13373

MBJ COMM. NO. 01-339
 DRAWN BY SCM, KHE DATE 9/20/01
 DESIGN BY JPS DATE 9/20/01
 CHECKED BY DEM DATE 9/20/01

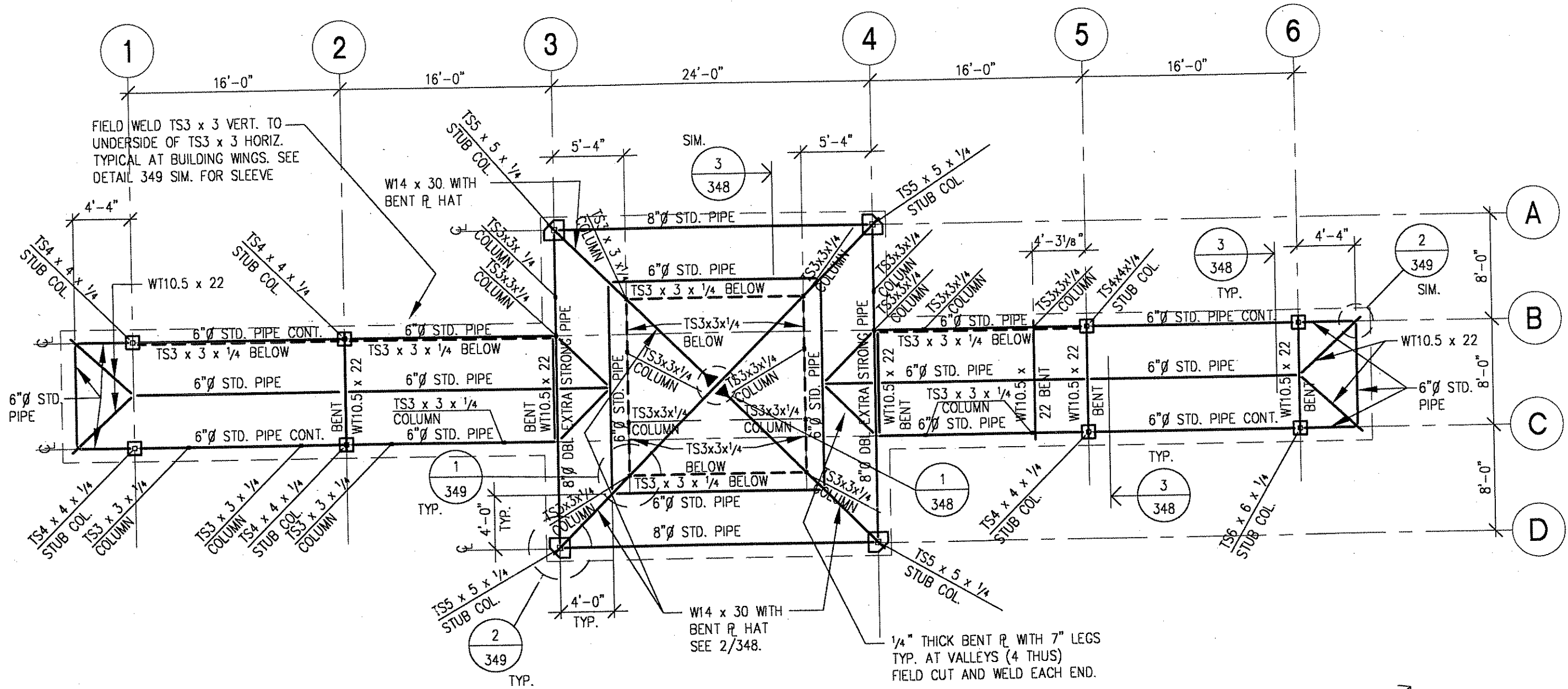
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022



ANOKA COUNTY
 BUS SHELTER
 C.S.A.H. 52 RECONSTRUCTION
 FOUNDATION PLAN

SHEET
 345
 OF
 559

MBJ
 MEYER, BORGMAN AND JOHNSON, INC.
 CONSULTING STRUCTURAL ENGINEERS
 12 SOUTH SIXTH STREET SUITE 810
 MINNEAPOLIS, MINNESOTA 55402
 (612) 338-0713 FAX (612) 337-5325
 MBJ 01.339.0

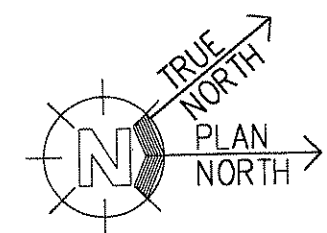


ROOF FRAMING PLAN



TYPICAL ROOF FRAMING PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR BUILDING WORKING POINT ELEVATIONS.
2. FOR SKYLIGHT PANELS AND PERIMETER CUTTER DESIGN AND ATTACHMENT TO STEEL STRUCTURE - SEE ARCH.
3. SEE GENERAL STRUCTURAL NOTES ON SHEET 350 FOR ADDITIONAL INFORMATION.
4. ON PLAN INDICATES FULL PENETRATION MOMENT RESISTING CONNECTION. SEE 1/348.



1
346

NO	DATE	BY	CKD	APPR	REVISION

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MBJ COMM. NO. 01-339
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 CHECKED BY DEM DATE 9/20/01

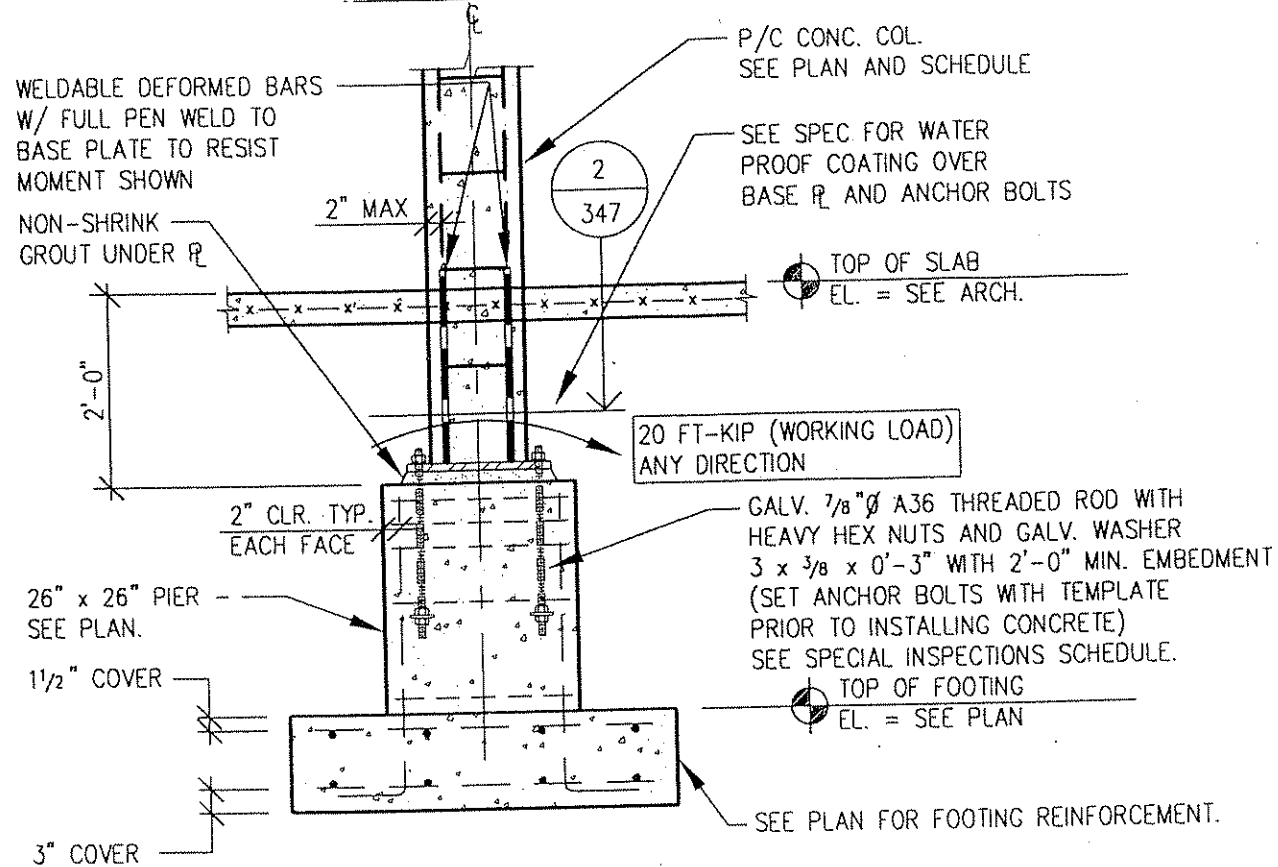
S.P. 0280-50 (T.H. 35W)
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS ARCHITECTS PLANNERS
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 BUS SHELTER
 C.S.A.H. 52 RECONSTRUCTION
 ROOF FRAMING PLAN

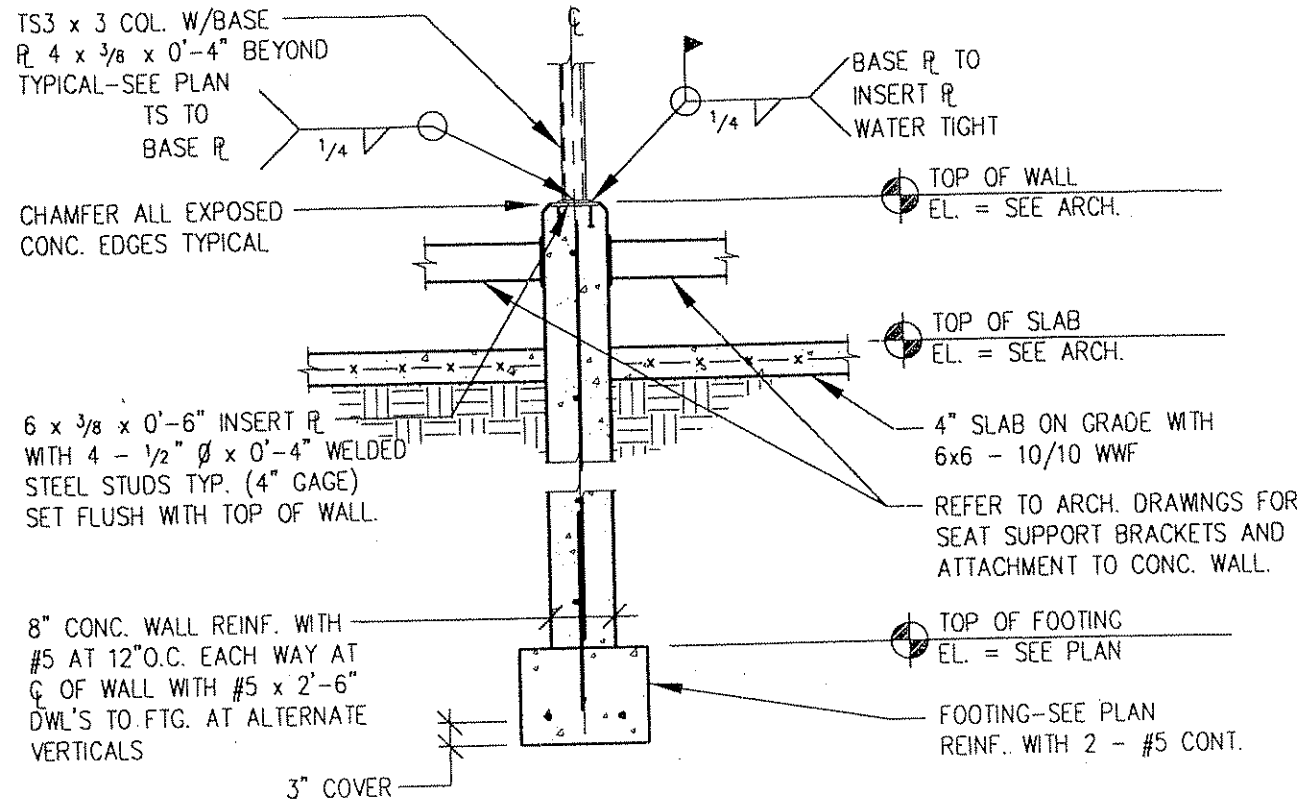
SHEET
 346
 OF
 559

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 (612) 338-0713 FAX (612) 337-5325
 MBJ-01-339.0



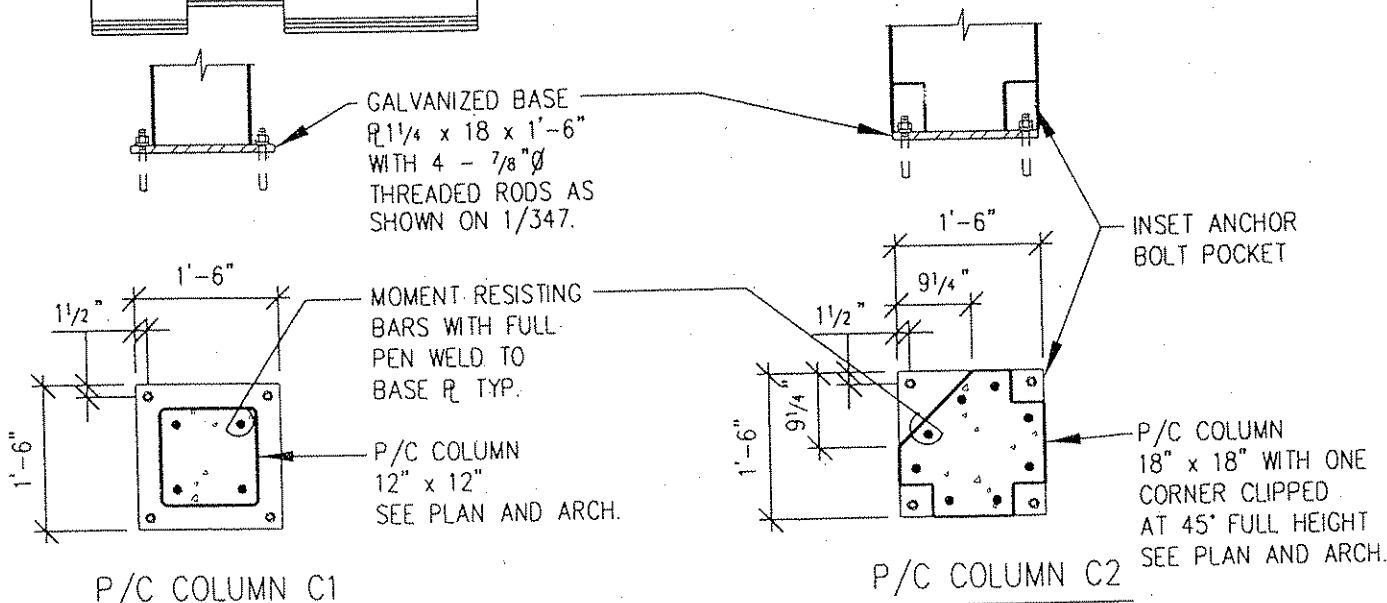
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1
347



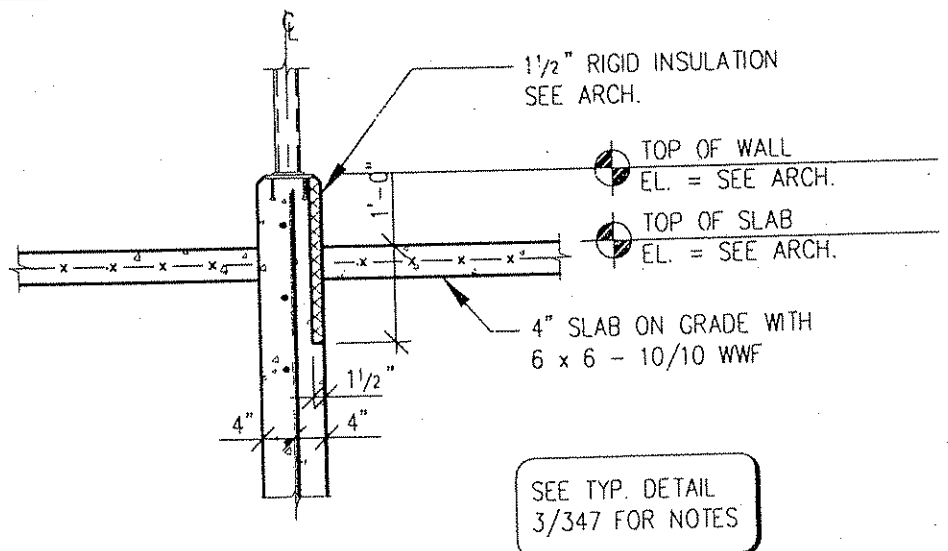
TYPICAL SECTION

3
347



DETAIL AT COLUMNS C1 AND C2

2
347



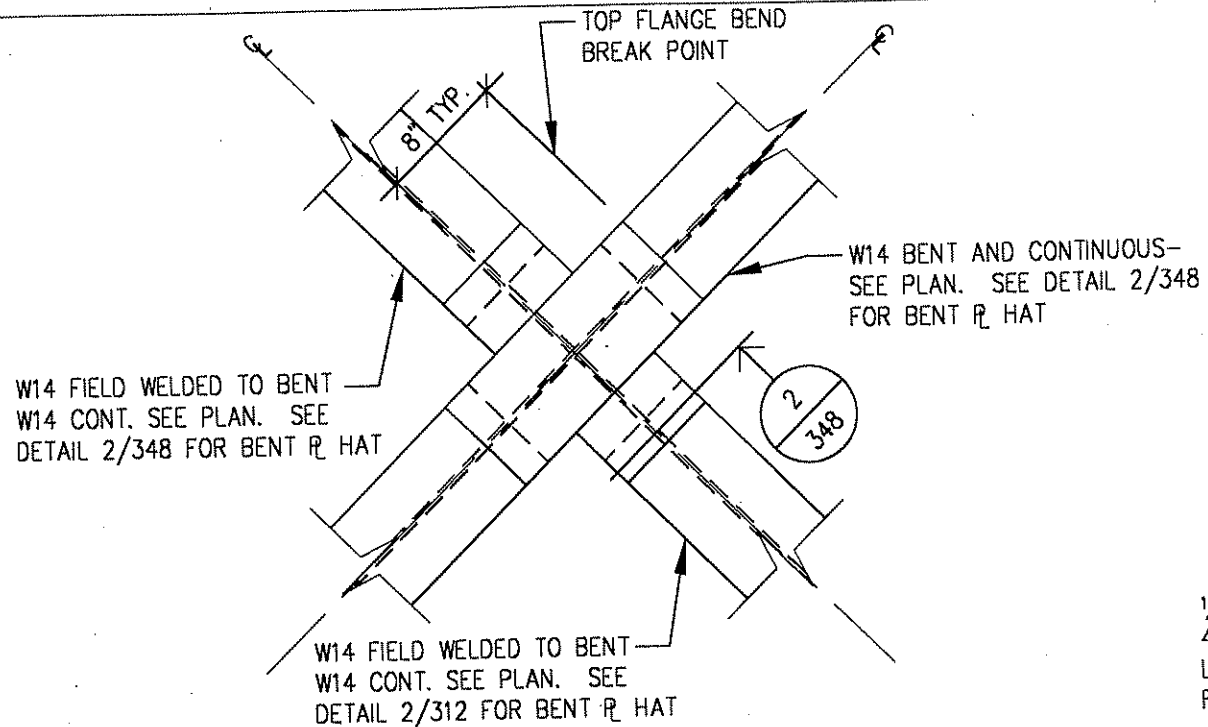
SECTION

4
347

NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR SPECIAL EMBED CONNECTION REQUIREMENTS, CORNER CHAMFERS AND FINISH.

MBJ
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(612) 338-0713 FAX (612) 337-5325
MBJ:01.339.0

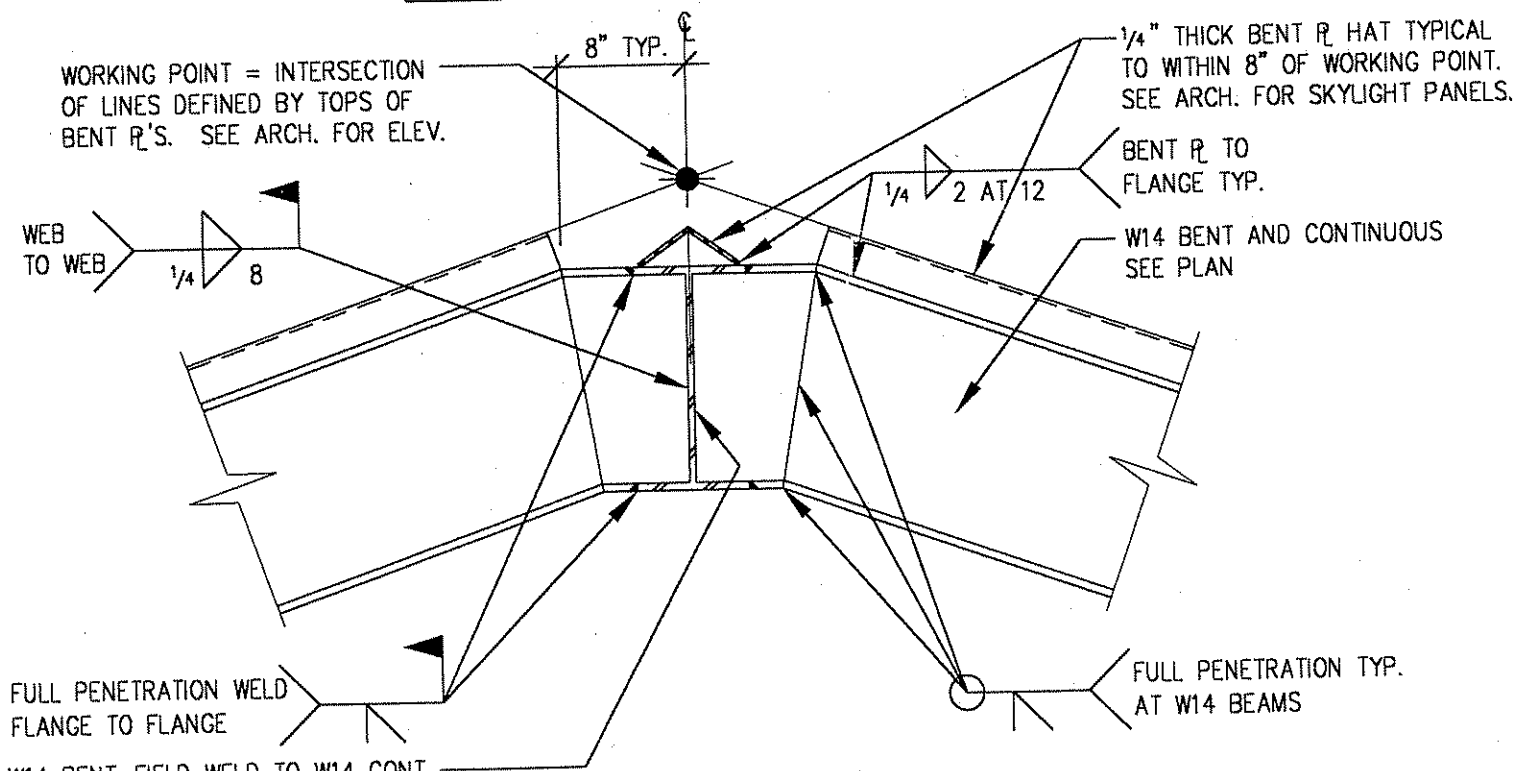
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DATE 9/20/01 LIC. NO. 13373					MBJ COMM. NO. 01-339 DRAWN BY SCM,KHE DATE 9/20/01 DESIGN BY JPS DATE 9/20/01 CHECKED BY DEM DATE 9/20/01	S.P. 0280-50 (T.H. 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 105-020-021, 106-020-022	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY BUS SHELTER C.S.A.H. 52 RECONSTRUCTION SECTIONS AND DETAILS	SHEET 347 OF 559
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PLAN DETAIL



1
348



SECTION



2
348

W14 BENT-FIELD WELD TO W14 CONT. AS INDICATED. SEE PLAN. COPE AS REQUIRED TO MAKE CONNECTION.

FULL PENETRATION WELD FLANGE TO FLANGE

FULL PENETRATION TYP. AT W14 BEAMS

NO	DATE	BY	CKD	APPR	REVISION

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DATE 9/20/01 LIC. NO. 13373

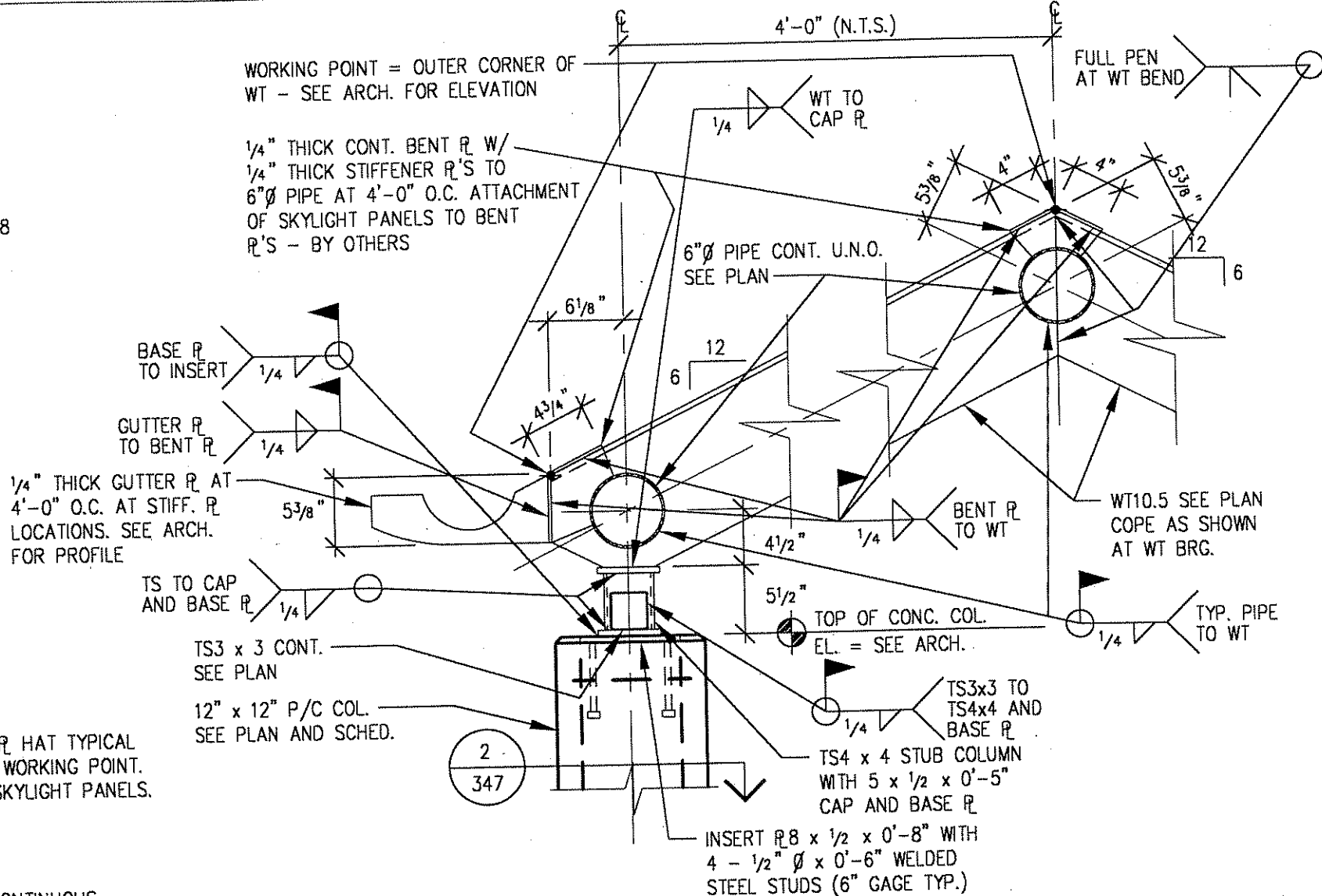
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 S.A.P. 02-652-03
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TKDA
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 ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 BUS SHELTER
 C.S.A.H. 52 RECONSTRUCTION
 SECTIONS AND DETAILS

SHEET
 348
 OF
 559

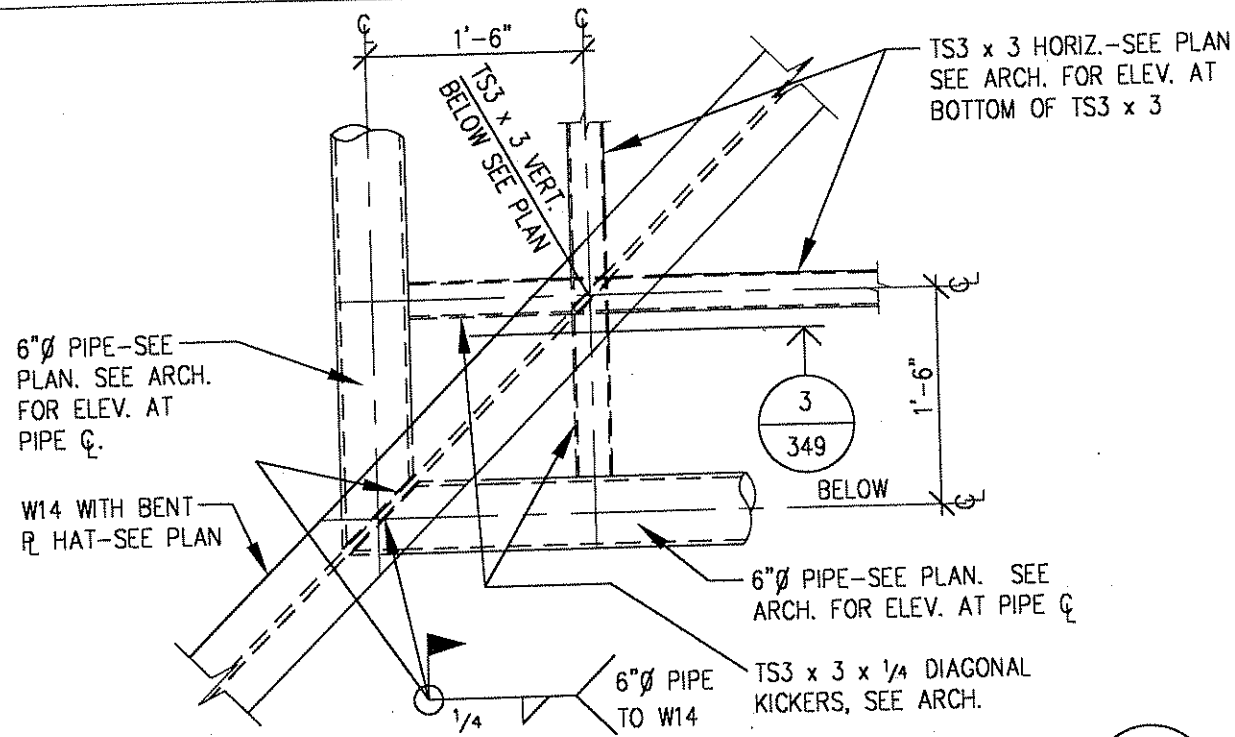


SECTION

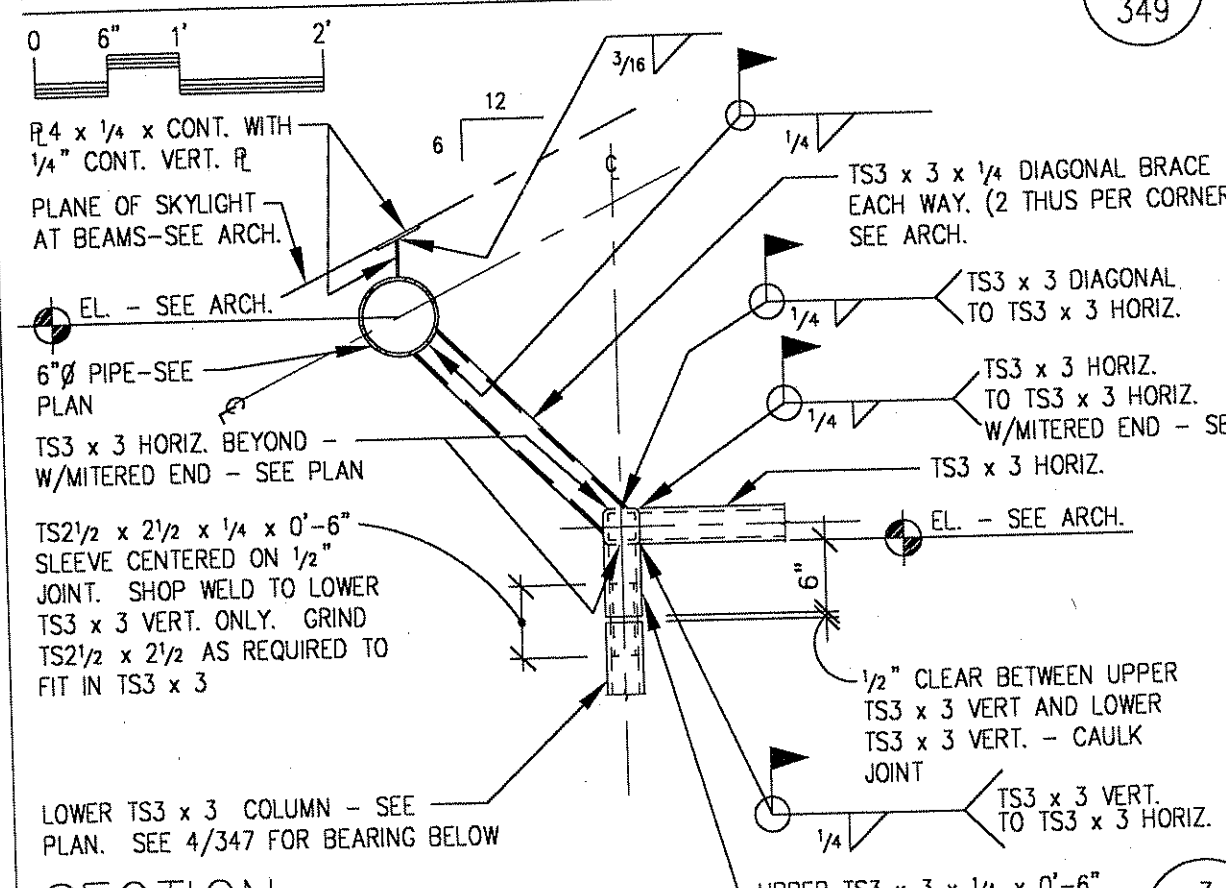


3
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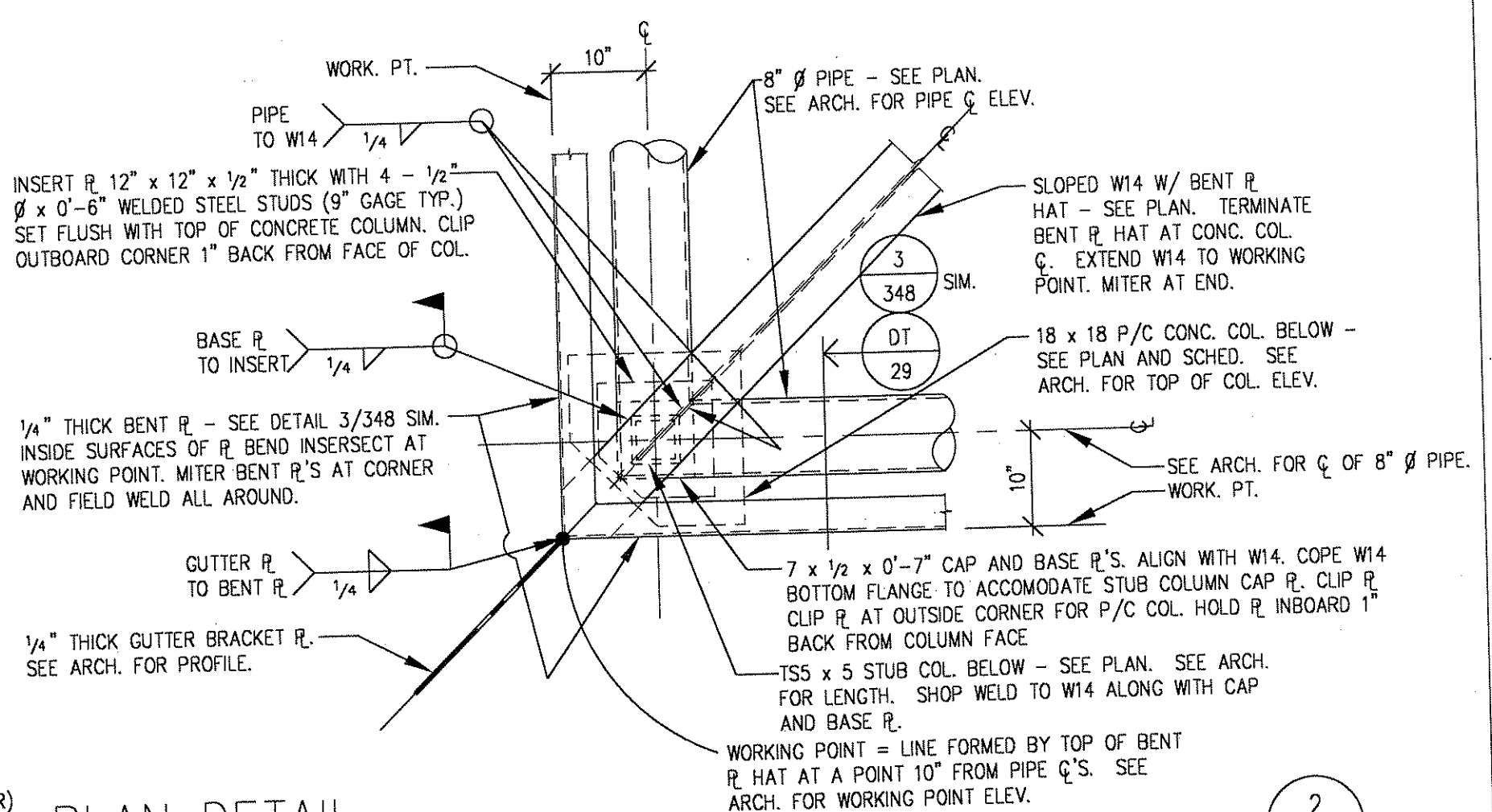
MBJ
 MEYER, BORGMAN AND JOHNSON, INC.
 CONSULTING STRUCTURAL ENGINEERS
 12 SOUTH SIXTH STREET SUITE 810
 MINNEAPOLIS, MINNESOTA 55402
 (612) 338-0713 FAX (612) 337-5325
 MBJ-01.339.0



PLAN DETAIL



SECTION



PLAN DETAIL

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12 SOUTH SIXTH STREET SUITE 810
MINNEAPOLIS, MINNESOTA 55402
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MBJ:01.339.0

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DATE 9/28/01 LIC. NO. 13373

MBJ COMM. NO. 01-339

DRAWN BY SCM, MHE DATE 9/20/01

DESIGN BY JPS DATE 9/20/01

CHECKED BY DEM DATE 9/20/01

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S.P. 90-080-11

S.A.P. 02-652-02

S.A.P. 02-652-03

S.A.P. 02-652-04

S.A.P. 106-020-021, 106-020-022

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SAINT PAUL, MINNESOTA

ANOKA COUNTY
BUS SHELTER
C.S.A.H. 52 RECONSTRUCTION
SECTIONS AND DETAILS

SHEET
349
OF
559

GENERAL STRUCTURAL NOTES

DESIGN UNIT STRESSES

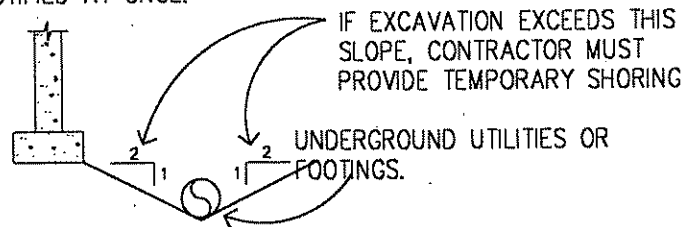
- STRUCTURAL STEEL - ASTM A36 (CONNECTION MATERIAL AND ALL OTHER SHAPES) AND ASTM A572 GRADE 50 (WIDE FLANGE BEAMS)
- STRUCTURAL PIPE - ASTM A53, TYPE E, GRADE B.
- STRUCTURAL TUBING - ASTM A500, GRADE B.
- REINFORCING STEEL - ASTM A615 - GRADE 60.
- WELDED WIRE FABRIC - ASTM A185.
- CONCRETE - $f'_c = 3,000$ PSI AT 28 DAYS (FOOTINGS)
 - $f'_c = 4,000$ PSI AT 28 DAYS (WALLS, SLABS ON GRADE, COLUMNS, 6% ± 1% AIR-ENTRAINMENT)
 - $f'_c = 5,000$ PSI AT 28 DAYS (PRECAST CONCRETE COLUMNS) 6% ± 1% AIR-ENTRAINMENT

DESIGN LIVE LOADS

- ROOF - 40 P.S.F.
- WIND - EXPOSURE B, 80MPH BASIC WIND SPEED.

FOOTINGS

- FOOTINGS WERE DESIGNED FOR A MAXIMUM SOIL BEARING PRESSURE OF 2,500 PSF IN ACCORDANCE WITH A GEOTECHNICAL REPORT PREPARED BY BRAUN INTERTEC, DATED AUGUST 15, 2001. SOIL AT THE BOTTOM OF FOOTING ELEVATION SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
- IF SOIL AT BOTTOM OF FOOTING ELEVATION SHOWN IS OF QUESTIONABLE BEARING VALUE, THE ARCHITECT'S OFFICE SHALL BE NOTIFIED AT ONCE.
- ADJACENT UNDERGROUND UTILITIES OR FOOTINGS



BUILDING CODE

- MINNESOTA STATE BUILDING CODE - CURRENT EDITION.

REINFORCED CONCRETE

- CODE FOR REINFORCED CONCRETE DESIGN AND CONSTRUCTION-ACI-318-99.
- WHERE REINFORCING BARS ARE SHOWN CONTINUOUS, LAP BARS 24 DIAMETERS AT SPLICE.
- PROVIDE SUITABLE WIRE SPACERS, CHAIRS, ETC. FOR SUPPORTING REINFORCING STEEL IN PROPER POSITION WHILE PLACING CONCRETE. ALL BARS SHALL BE TIED TO PREVENT DISPLACEMENT DURING CONCRETING.
- ALUMINUM CONDUIT NOT PERMITTED IN CONCRETE.
- CALCIUM CHLORIDE NOT PERMITTED AS A CONCRETE ADDITIVE.

SLABS ON GRADE

- DISTANCE BETWEEN CONTROL JOINTS SHALL NOT EXCEED FIFTEEN FEET.
- EXCEPT WHERE OTHERWISE SHOWN, SLABS ON GROUND SHALL BE 4" THICK AND SHALL BE REINFORCED WITH 6 x 6-10/10 WELDED WIRE FABRIC.

EXPANSION BOLTS

- ALL EXPANSION BOLTS SHALL BE "KWIK-BOLT", OR EQUAL AND SHALL BE APPROVED BY ENGINEER AND SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.
- PROVIDE 3/4" DIAMETER BOLTS WITH A MINIMUM OF 3 1/2" EMBEDMENT UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL

- CODE FOR STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION-AISC-NINTH-EDITION.
- WELD ELECTRODES - E70 TYPICAL.
- PIPE AND TUBE STEEL SHALL BE SEAL WELDED FOR WATER TIGHTNESS TO PROTECT FROM WEATHER (EXCEPT AT CAULKED SLEEVE JOINTS) TYPICAL.
- FIELD WELDING SHALL BE TOUCHED UP WITH PRIMER AND PAINTED PER SPECIFICATIONS.

CONTRACTOR NOTE

- STRUCTURAL MEMBERS DESIGNED FOR "IN PLACE" LOADS. CONTRACTOR IS RESPONSIBLE FOR BRACING, WITHOUT OVERSTRESSING, ALL STRUCTURAL ELEMENTS (AS REQUIRED AT ANY STAGE OF CONSTRUCTION) UNTIL COMPLETION OF THIS PROJECT.

PRECAST CONCRETE


- COMPLY WITH CURRENT EDITION OF MNL-116 AND MNL-117 OF THE PRESTRESSED CONCRETE INSTITUTE AND ACI 318.
- PRECAST CONCRETE MEMBERS SHALL BE DESIGNED FOR IN-PLACE LOADS. CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING UNTIL PROJECT IS COMPLETE.
- REFER TO SPECIFICATION AND ARCHITECTURAL DRAWINGS FOR SPECIAL FINISH REQUIREMENTS.
- WELDABLE REINFORCING STEEL SHALL COMPLY WITH ASTM A706.
- THE PRECAST MANUFACTURER SHALL SUBMIT SHOP DRAWINGS WITH COMPLETED DESIGN CALCULATIONS PREPARED BY A QUALIFIED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MINNESOTA.


SPECIAL INSPECTIONS REQUIRED OF STRUCTURAL ELEMENTS IN ACCORDANCE WITH 1997 UBC SECTION 1701

	REQ'D	NOT REQ'D	SEE ARCH.
1. CONCRETE.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. BOLTS INSTALLED IN CONCRETE.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. SPECIAL MOMENT-RESISTING CONCRETE FRAME.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. REINFORCING STEEL & PRESTRESSING STEEL TENDONS.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. STRUCTURAL WELDING.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. HIGH-STRENGTH BOLTING.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. STRUCTURAL MASONRY.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. REINFORCED GYPSUM CONCRETE.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. INSULATING CONCRETE FILL.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. SPRAY-APPLIED FIREPROOFING.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. PILING, DRILLED PIERS AND CAISSONS.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. SHOTCRETE.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13. SPECIAL GRADING, EXCAVATION AND FILLING.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. SMOKE-CONTROL SYSTEM.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15. SPECIAL CASES.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTRACTOR NOTE

- STRUCTURAL MEMBERS INCLUDING JOISTS, SLABS, BEAMS, TRUSSES AND COLUMNS ARE DESIGNED FOR "IN PLACE" LOADS. CONTRACTOR IS RESPONSIBLE FOR BRACING, WITHOUT OVERSTRESSING, ALL STRUCTURAL ELEMENTS (AS REQUIRED AT ANY STAGE OF CONSTRUCTION) UNTIL COMPLETION OF THIS PROJECT.

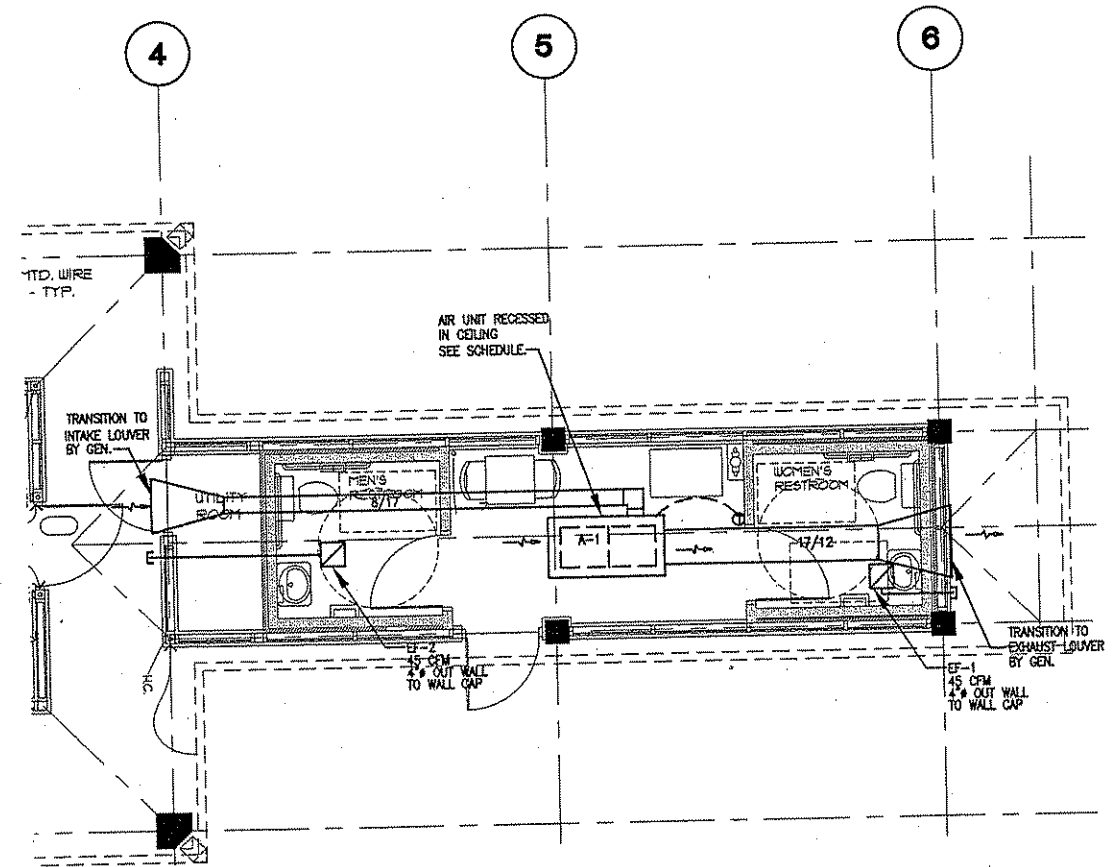

MEYER, BORGMAN AND JOHNSON, INC.
 CONSULTING STRUCTURAL ENGINEERS
 12 SOUTH SIXTH STREET SUITE 810
 MINNEAPOLIS, MINNESOTA 55402
 (612) 338-0713 FAX (612) 337-5325
 MB& 01.339.0

					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DATE <u>9/20/01</u> LIC. NO. <u>13373</u>		MBI COMM. NO. <u>01-339</u> DRAWN BY <u>SCM,KHE</u> DATE <u>9/20/01</u> DESIGN BY <u>JPS</u> DATE <u>9/20/01</u> CHECKED BY <u>DEM</u> DATE <u>9/20/01</u>		S.P. <u>0280-50 (T.H. 35W)</u> S.P. <u>90-080-11</u> S.A.P. <u>02-652-02</u> S.A.P. <u>02-652-03</u> S.A.P. <u>02-652-04</u> S.A.P. <u>106-020-021, 106-020-022</u>		 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY BUS SHELTER C.S.A.H. 52 RECONSTRUCTION GENERAL STRUCTURAL NOTES		SHEET 350 OF 559
NO	DATE	BY	CKD	APPR	REVISION										
NAME:															

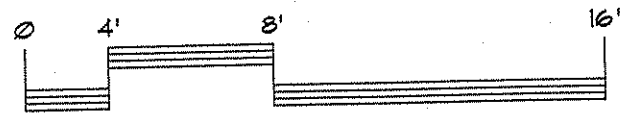
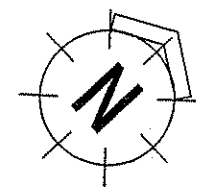
AIR HANDLING UNIT SCHEDULE															
NO.	SERVES	MANUF	MODEL	SYSTEM TYPE	FAN SECTION			TYPE	SIZE	FPM	BHP	HP	VOLTS/PH	NOTES	
					O.A.	TOT	ESP/TSP								
A-1	BREAK	LIEBERT	MMD12A	CONTAINED	---	600	.3	---	DIRECT	---	232	---	.2	230V/1R	1.2.

1. COOLING CAPACITY 12000 BTU.
2. HEATING CAPACITY 4 KW.

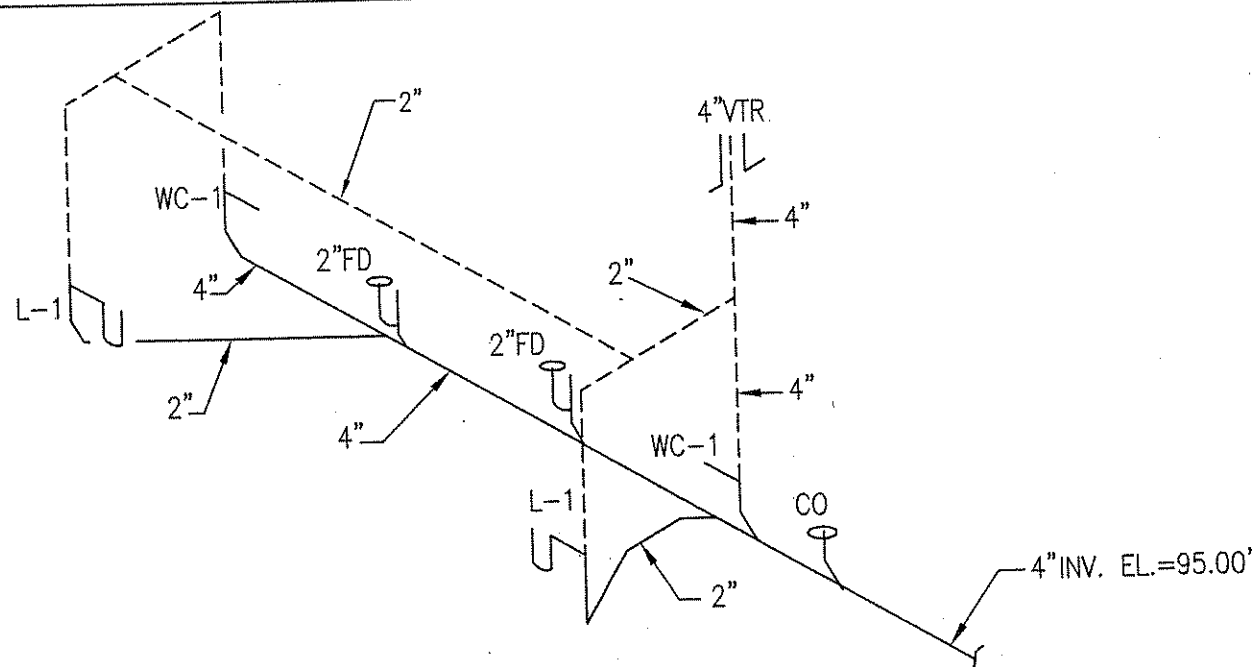
FAN SCHEDULE													
NO.	SERVES	MFR.	MODEL	CFM	S.P.	RPM	TIP SPEED	DRIVE	BHP/WATTS		AMPS	DAMPER TYPE	NOTES
									---	---			
EF-1&2	BATHROOM	GREENHECK	SP-5	45	.125	1880	---	DIRECT	---	46	.80	BACKDRAFT	---



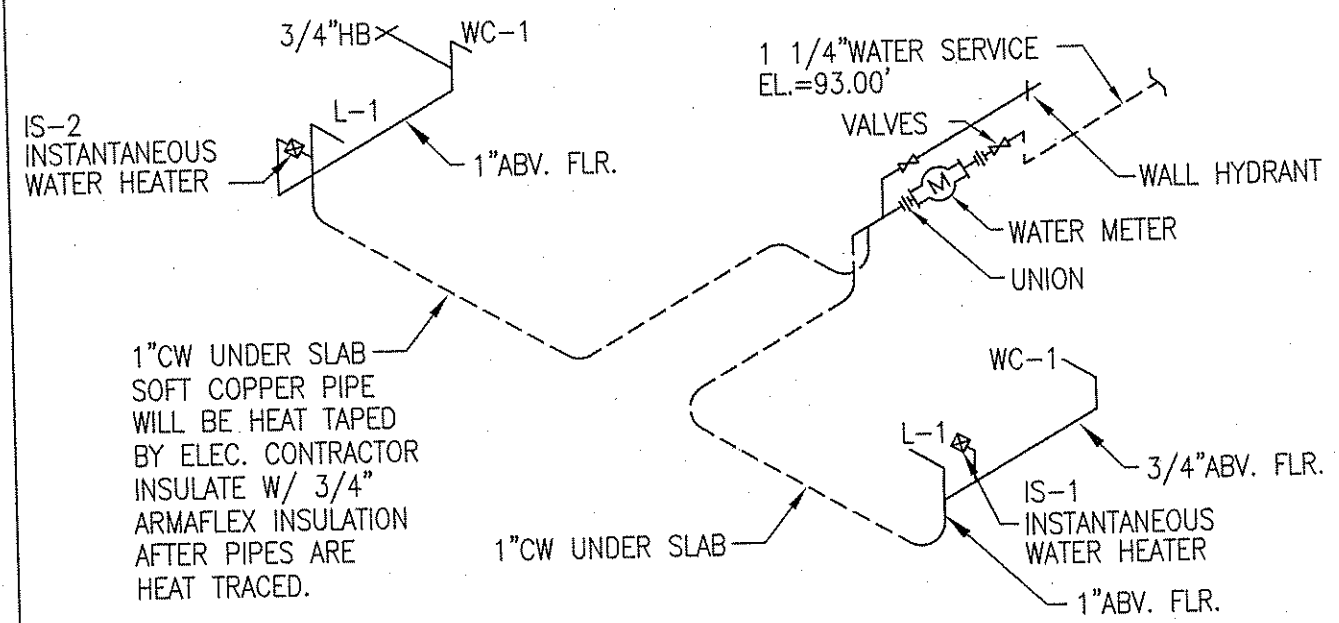
1 HVAC PLAN
SCALE: 1/8" = 1'-0"



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. <i>William M. Ouse</i> William M. Ouse DATE 9-20-01 REG. NO. 18220					S.P. 0280-50 (T.H. 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA CARY OUSE ASSOCIATES CONSULTING ENGINEERS BIRCH LAKE PROFESSIONAL BUILDING 1370 EAST HWY 55, SUITE #110 WHITE BEAR LAKE, MINNESOTA 55110 (612) 251-2222 FAX: (612) 251-2222		ANOKA COUNTY BUS SHELTERS C.S.A.H. 52 RECONSTRUCTION MECHANICAL PLAN		SHEET 351 OF 559
NO	DATE	BY	CKD	APPR	REVISION	NAME: \$FILES\$ SEPTEMBER 20, 2001					



2 WASTE & VENT RISER
SCALE: NONE
BP-01.DWG

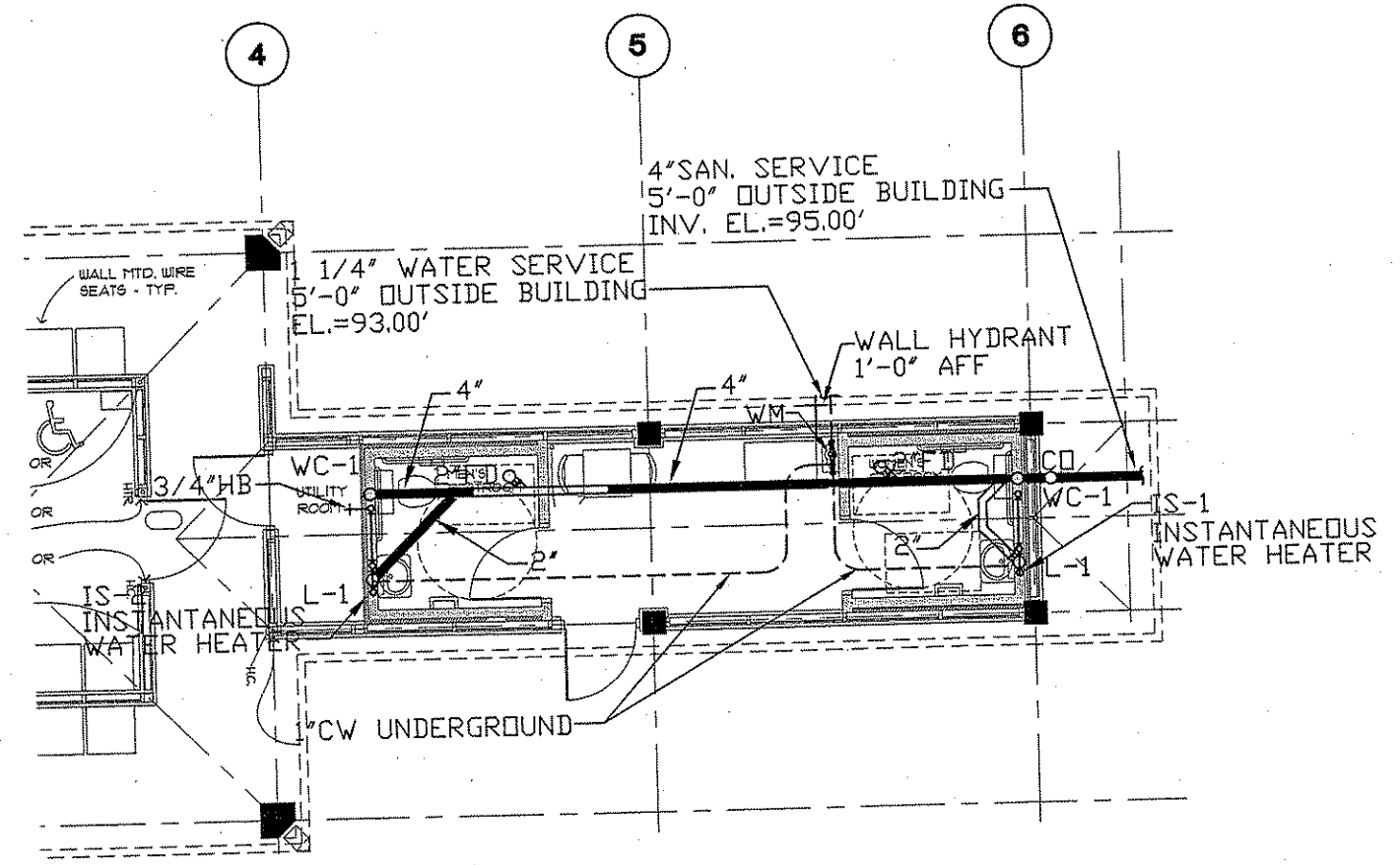


3 WATER RISER
SCALE: NONE
BP-01.DWG

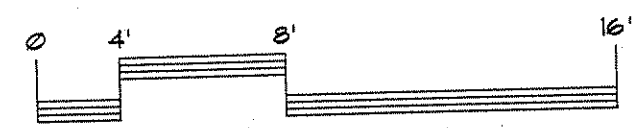
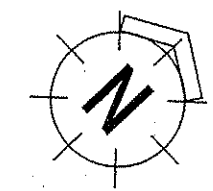
NOTE:
ALL PLUMBING FIXTURES SHALL HAVE SHUT-OFF VALVES IN A ACCESSIBLE LOCATION.

ITEM	DESCRIPTION	CW	HW	WASTE	VENT	NOTES
WC-1	WATER CLOSET FLUSH TANK	3/4"	---	4"	2"	---
L-1	LAVATORY (WALL HUNG)	1/2"	1/2"	1 1/2"	1 1/4"	---

UNIT NO	MODEL NO.	MFG.	LOCATION	ΔT 3 GPM	RISE AT .5 GPM	WATTS	VOLT	NOTES
IS-1	S-30L	CHROMIUMITE	BATHROOM	68° F	40° F	3000	220V	---
IS-2	S-30L	CHROMIUMITE	BATHROOM	68° F	40° F	3000	220V	---



1 PLUMBING PLAN
SCALE: 1/8" = 1'-0"
BP-01.DWG



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$
SEPTEMBER 20, 2001

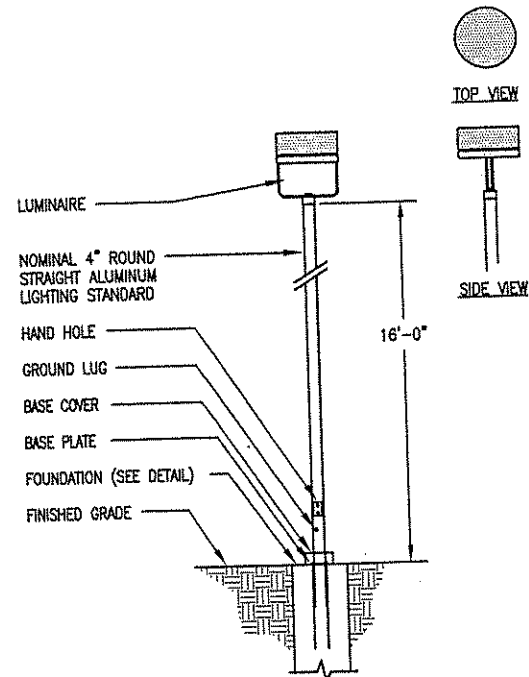
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

William M. Ouse
DATE 9-20-01 REG. NO. 16229

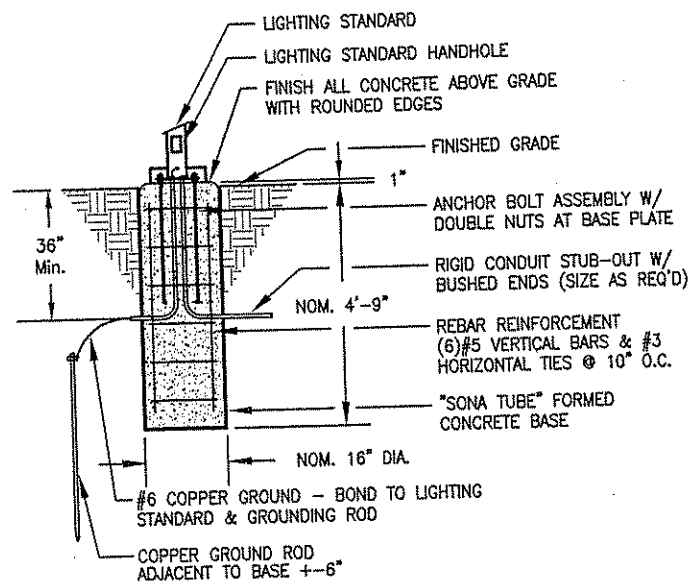
DRAWN BY GRE DATE 9-20-01
DESIGN BY GRE DATE 9-20-01
CHECKED BY WMO DATE 9-20-01

S.P. 0280-50 (T.H. 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA
CAIN OUSE ASSOCIATES
CONSULTING ENGINEERS
BIRCH LAKE PROFESSIONAL BUILDING
1210 EAST HWY 55, SUITE #110
WHITE BEAR LAKE, MINNESOTA 55110
(651) 252-2222 FAX: (651) 252-2222



**2 DECORATIVE LIGHTING STANDARD
DETAIL - TYPE SD**
NOT TO SCALE



**3 DECORATIVE LIGHTING STANDARD
CONCRETE FOUNDATION DETAIL**
NOT TO SCALE

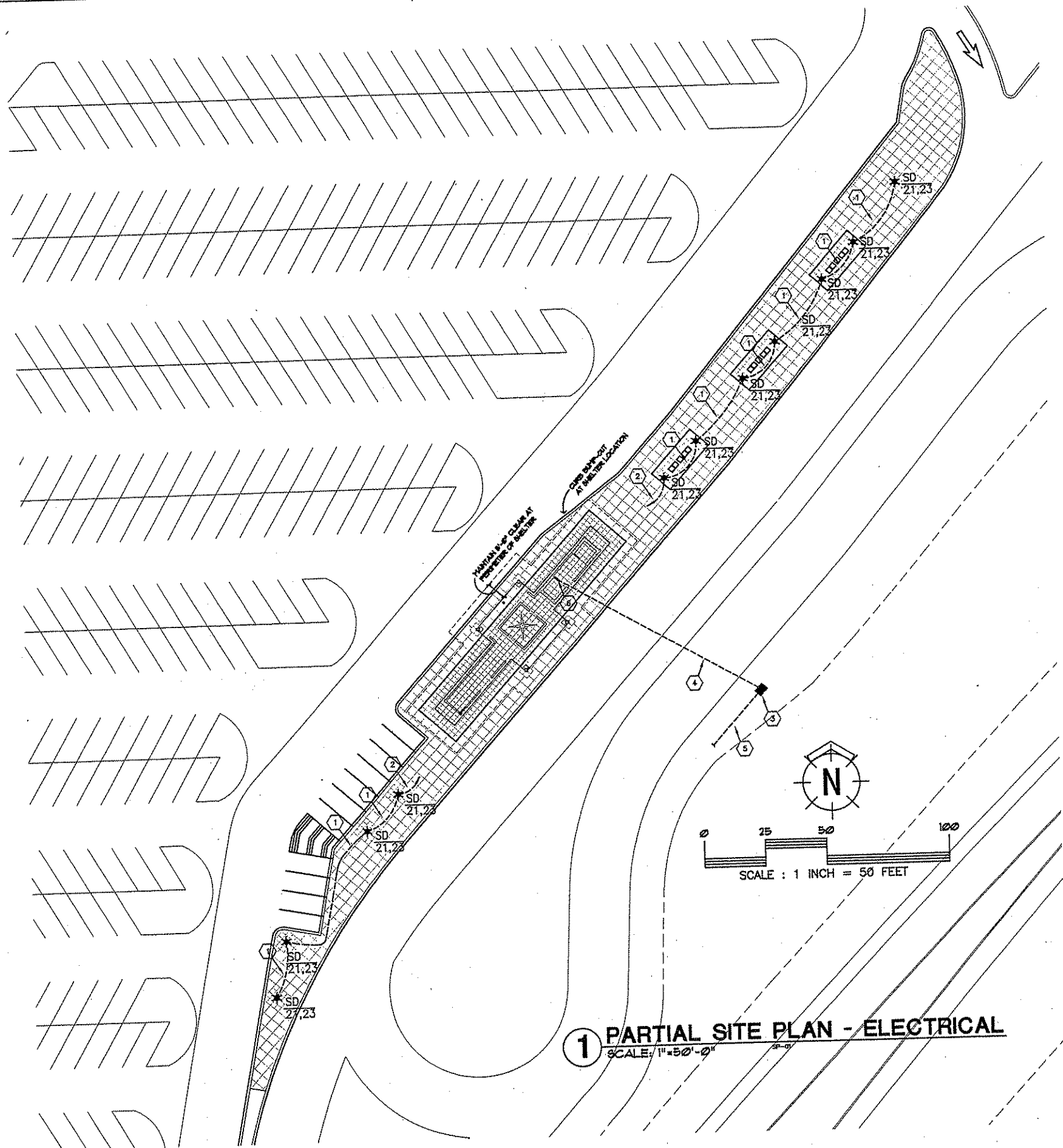
GENERAL PLAN NOTES

A. ALL SITE LIGHTING INDICATED BY THIS DRAWING, SHALL BE CONTROLLED FROM THE SHELTER LIGHTING CONTROL SYSTEM TIMECLOCK (LOCATED ADJACENT TO THE BUILDING ELECTRICAL PANEL), PROVIDE CONTACTORS, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION. (LIGHTING SHALL BE CONTROLLED FOR OPERATION FROM DUSK TO DAWN.)

B. LIGHTING BRANCH CIRCUITS SHALL BE INSTALLED IN CONDUIT AS INDICATED AND SHALL BE AT A MINIMUM OF 36" BELOW GRADE.

ELECTRICAL PLAN NOTES

- 1 3/4" C - (2)#10's, PLUS (1)#10 GROUND.
- 2 3/4" C - (2)#10's, PLUS (1)#10 GROUND HOMERUN TO PANEL LS. CIRCUIT AS INDICATED (20A/2P) VIA SHELTER LIGHTING CONTROL SYSTEM.
- 3 APPROXIMATE LOCATION OF NEW UTILITY COMPANY PAD MOUNTED TRANSFORMER (VERIFY WITH UTILITY), AND 480V SITE/PARKING ELECTRICAL SERVICE.
- 4 NEW 240V UNDERGROUND SECONDARY ELECTRIC SERVICE TO THE ELECTRICAL PANEL IN BUILDING BY THE SITE/PARKING ELECTRICAL CONTRACTOR. THIS ELECTRICAL CONTRACTOR SHALL COORDINATE INSTALLATION AND SCHEDULING REQUIREMENTS WITH THE SITE/PARKING ELECTRICAL CONTRACTOR.
- 5 NEW UNDERGROUND PRIMARY ELECTRICAL SERVICE BY THE UTILITY COMPANY (VERIFY EXACT LOCATION AND ROUTING WITH UTILITY COMPANY).
- 6 BUILDING ELECTRICAL PANEL (APPROXIMATE LOCATION - VERIFY EXACT LOCATION WITH THE SHELTER POWER AND COMMUNICATIONS DRAWING).



1 PARTIAL SITE PLAN - ELECTRICAL
SCALE: 1" = 50'-0"

NO	DATE	BY	CKD	APPR	REVISION
REVISION					
SEPTEMBER 20, 2001					

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.

JAY J. SAN, PE
DATE 9/20/2001 REG. NO. 12637

DRAWN BY: CAS DATE: 9/20/2001
DESIGN BY: CAS DATE: 9/20/2001
CHECKED BY: JJC DATE: 9/20/2001

S.P. 0280-50 (T.H. 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-21, 106-020-0221

TKDA
TOLTZ, KING, DUNWALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS ARCHITECTS PLANNERS
SAINT PAUL, MINNESOTA

CAYN OUSE ASSOCIATES
CONSULTING ENGINEERS
BIRCH LAKE PROFESSIONAL BUILDING
1310 EAST HWY 52, SUITE #110
WHITE BEAR LAKE, MINNESOTA 55110
(612) 251-1000 FAX: (612) 251-1004

ANOKA COUNTY
BUS SHELTER
C.S.A.H. 52 RECONSTRUCTION
ELECTRICAL SITE PLAN

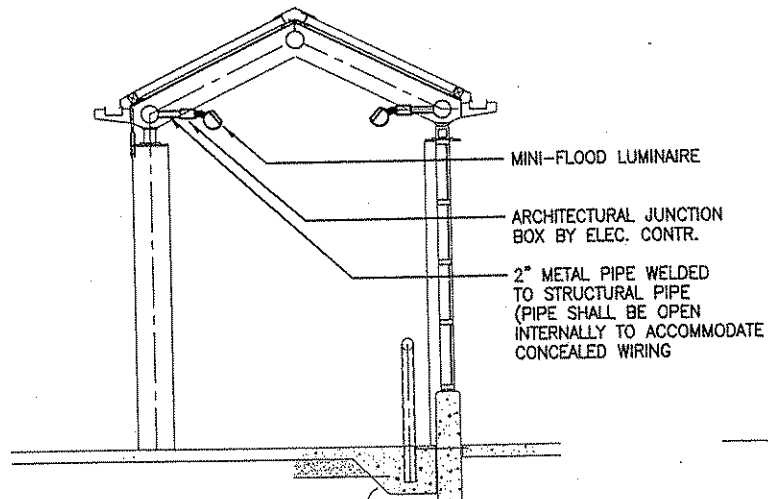
SHEET
353
OF
559

ELECTRICAL PLAN NOTES

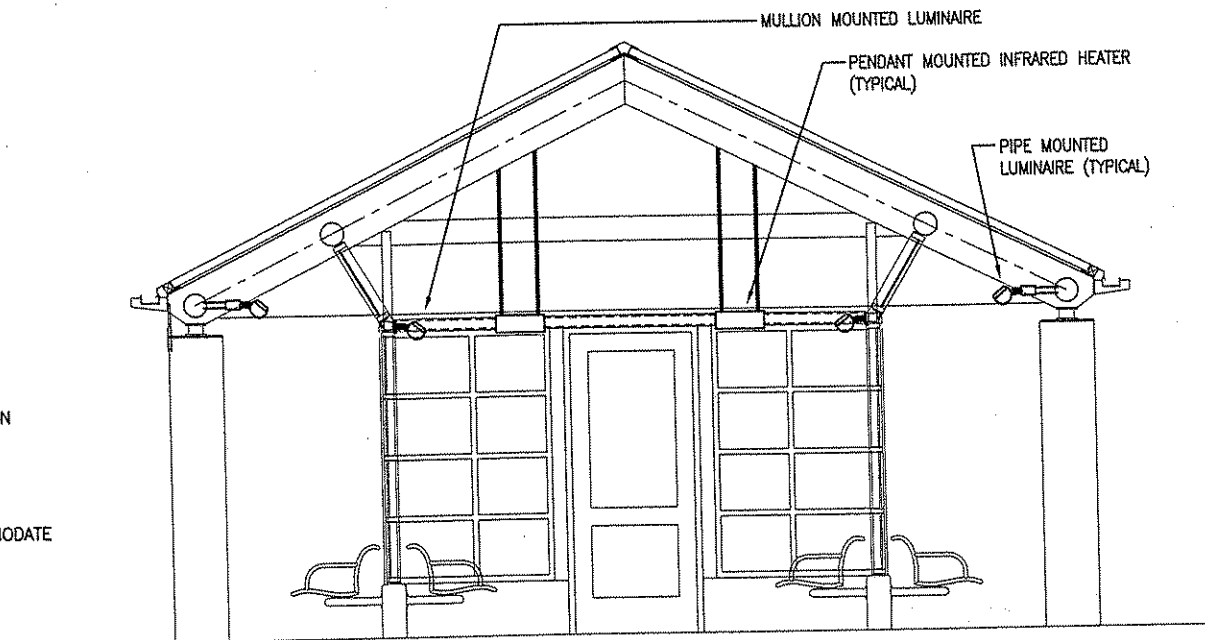
- ① POWER CONNECTION TO BUILDING CUSTOM SIGNAGE (SIGNAGE PROVIDED BY OTHERS). REFER TO ARCHITECTURAL DRAWINGS FOR INSTALLATION DETAILS.
- ② 150A, 120/240V-1Ø ELECTRICAL PANEL SERVING BUS SHELTER ELECTRICAL SYSTEMS. FLUSH MOUNTED PANELBOARD ENCLOSURES HOUSING LIGHTING AND OTHER CONTROLS (ABOVE). (REFER TO THE SHELTER POWER DISTRIBUTION RISER DIAGRAM FOR ADDITIONAL INFORMATION).
- ③ WALL MOUNTED MOTION SENSOR CONTROL FOR CONTROL OF ROOM LIGHTING AND EXHAUST FAN. WATTMISER #WA-100 OR APPROVED EQUAL.

GENERAL PLAN NOTES

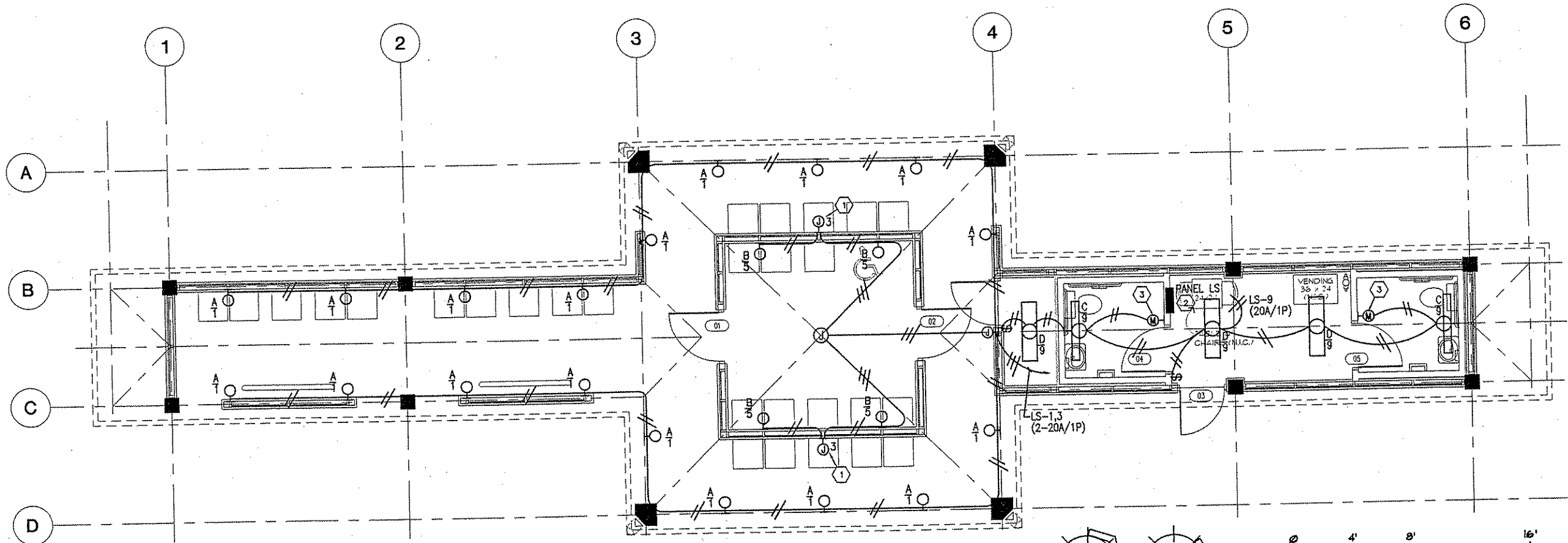
- A. ALL LIGHTING BRANCH CIRCUITS SERVING THE BUS SHELTER SHALL ORIGINATE AT PANEL LS, LOCATED IN THE DRIVER'S BREAK ROOM, UNLESS INDICATED OTHERWISE BY THE DRAWINGS.
- B. ALL WIRING BELOW 8' IN THE SHELTER AREA, AND ALL WIRING WITHIN THE DRIVER'S BREAK ROOM AND TOILET AREA SHALL BE CONCEALED. WIRING MAY BE RUN IN WINDOW MULLIONS OR ABOVE STRUCTURAL MEMBERS. WIRING FOR INFRA RED HEATER ONLY ABOVE 8' IN THE SHELTER AREA MAY BE RUN IN EXPOSED EMT CONDUIT, PAINTED TO MATCH THE SHELTER FINISHES AS DIRECTED BY THE ARCHITECT. SEE ARCHITECTURAL DETAILS FOR GUIDELINES FOR EXPOSED CONDUIT ROUTING.



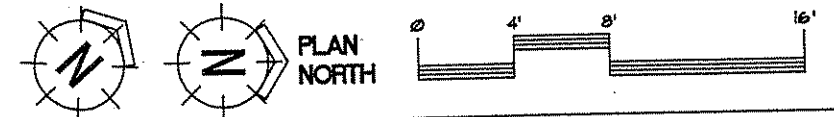
3 SHELTER SECTION AT SEATING AREA
SCALE: 3/16" = 1'-0"



2 SHELTER SECTION AT WAITING AREA
SCALE: 3/16" = 1'-0"



1 TRANSIT SHELTER - LIGHTING PLAN
SCALE: 1/8" = 1'-0"



NO	DATE	BY	CHKD	APPR	REVISION

NAME: \$FILE\$

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.

Jay J. Park
JAY J. PARK PE
DATE: 9/20/2001 REG. NO. 12837

DRAWN BY: CAS DATE: 9/20/2001
DESIGN BY: CAS DATE: 9/20/2001
CHECKED BY: JJC DATE: 9/20/2001

S.P. 0280-50 (T.H. 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLIZ, KING, DUNALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA

CASH OUSE ASSOCIATES
CONSULTING ENGINEERS
BIRCH LAKE PROFESSIONAL BUILDING
1210 EAST HWY 59, SUITE 8118
WHITE BEAR LAKE, MINNESOTA 55110
(612) 228-2828 FAX (612) 228-2828

ANOKA COUNTY
BUS SHELTERS
C.S.A.H. 52 RECONSTRUCTION
LIGHTING PLAN

SHEET
354
OF
559

ELECTRICAL PLAN NOTES

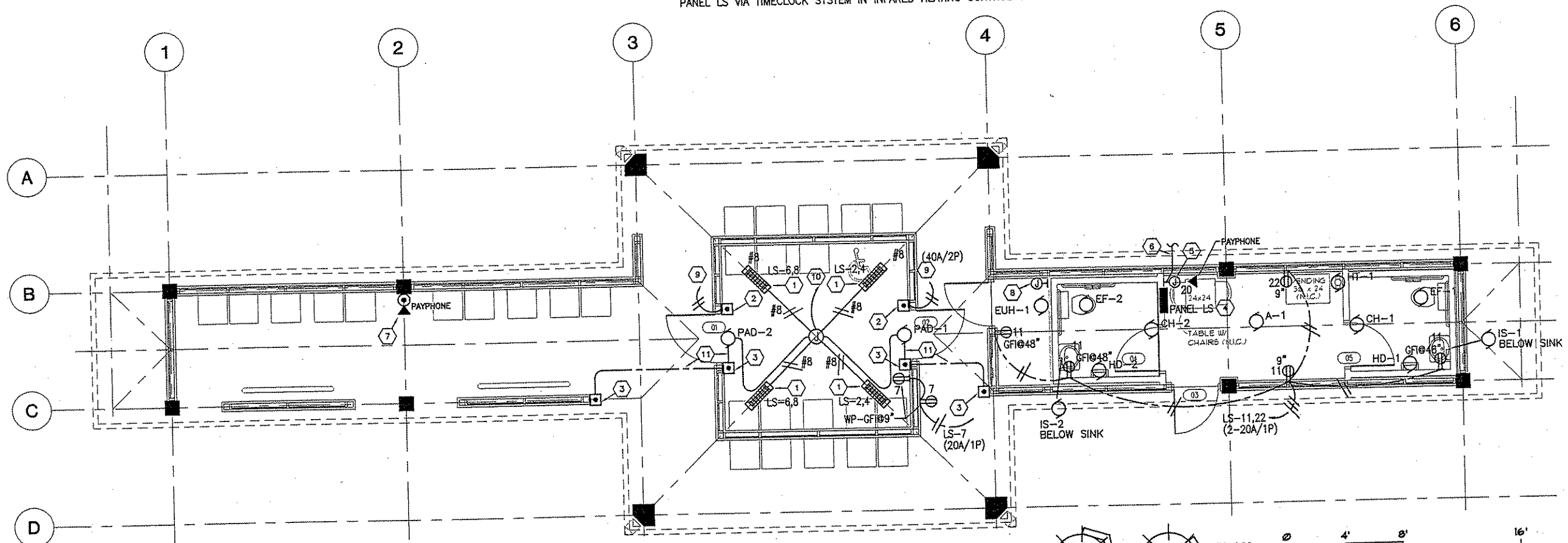
- ① 3.2 kW, 240V-1 ϕ INFRARED HEATER WITH WIRE GUARD (SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION). HEATER ENCLOSURE SHALL BE STAINLESS STEEL. MOUNT HEATER TO ROOF/CEILING STRUCTURE TO 10'-0" ABOVE THE FINISHED FLOOR.
- ② FLUSH MOUNTED MOMENTARY CONTACT SWITCH MOUNTED AT 40" ABOVE THE FINISHED FLOOR. (SEE ARCHITECTURAL DETAILS FOR PUSHBUTTON DETAILING). SWITCH ASSEMBLY SHALL BE PROVIDED WITH A STEEL COVERPLATE (MINIMUM 10 GAUGE), FASTENED IN PLACE WITH STAINLESS STEEL TAMPERPROOF SCREWS. FINISH TO MATCH BUILDING STRUCTURE FINISHES AS DIRECTED BY THE ARCHITECT.
- ③ FLUSH MOUNTED HANDICAPPED DOOR OPERATOR SWITCH MOUNTED AT 40" ABOVE THE FINISHED FLOOR. (SEE ARCHITECTURAL DETAILS FOR PUSHBUTTON DETAILING). ELECTRICAL CONTRACTOR SHALL PROVIDE ROUGH-IN FOR CONTROLS PROVIDED AND INSTALLED BY THE DOOR OPERATOR SUPPLIER/INSTALLER.
- ④ 150A, 120/240V-1 ϕ ELECTRICAL PANEL SERVING BUS SHELTER ELECTRICAL SYSTEMS. FLUSH MOUNTED PANELBOARD ENCLOSURES (2) HOUSING INFRARED HEATER CONTROLS AND LIGHTING CONTROLS MOUNTED ABOVE.
- ⑤ TELEPHONE/SECURITY TERMINAL CABINET AND OUTLET BOX FOR FUTURE TELEPHONE (SEE DETAIL 1/E1.3). PROVIDE 3/4" CONDUIT (EMPTY) TO PANEL LS FOR FUTURE POWER INSIDE CABINET FOR FUTURE CONTROLS.
- ⑥ NOMINAL 2" EMT CONDUIT (EMPTY) STUBBED OUT TO PROPERTY LINE FOR TELEPHONE SERVICE ENTRANCE CABLING.
- ⑦ PROVIDE 3/4" CONDUIT (EMPTY) STUBUP INTO BASE OF PEDESTAL TYPE PAY TELEPHONE ASSEMBLY FROM TELEPHONE/SECURITY CABINET. (VERIFY EXACT LOCATION AND DETAILS WITH THE ARCHITECT, PRIOR TO ROUGH-IN.
- ⑧ APPROXIMATE LOCATION (IN SHELTER CEILING SPACE) OF IN-LINE THERMOSTATS SERVING SHELTER HEATER SYSTEM. MOUNTED AS HIGH AS POSSIBLE ON STRUCTURE IN A DISCRETE FASHION. COORDINATE EXACT LOCATION WITH THE ARCHITECT.
- ⑨ UNDERGROUND CONTROL WIRING TO INFRARED HEATING CONTROL CABINET.
- ⑩ ROUTE INFRARED HEATING HOMERUNS (2-40A/2P) AND DOOR OPERATOR HOMERUNS TO PANEL LS VIA TIMECLOCK SYSTEM IN INFRARED HEATING CONTROL CABINET.

ELECTRICAL PLAN NOTES (CON'T)

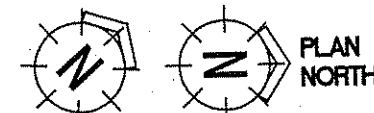
- ⑩ ROUTE INFRARED HEATING HOMERUNS (2-40A/2P) AND DOOR OPERATOR HOMERUNS TO PANEL LS VIA TIMECLOCK SYSTEM IN INFRARED HEATING CONTROL CABINET.
- ⑪ 3/4" CONDUIT (EMPTY) FOR CONTROL WIRING. CONTROL WIRING INSTALLED BY DOOR OPERATOR SUPPLIER/INSTALLER.

GENERAL PLAN NOTES

- A. ALL POWER BRANCH CIRCUITS SERVING THE BUS SHELTER SHALL ORIGINATE AT PANEL LS, LOCATED IN THE DRIVER'S BREAK ROOM, UNLESS INDICATED OTHERWISE BY THE DRAWINGS.
- B. ALL WIRING BELOW 8' IN THE SHELTER AREA, AND ALL WIRING WITHIN THE DRIVER'S BREAK ROOM AND TOILET AREA SHALL BE CONCEALED. WIRING MAY BE RUN IN WINDOW MULLIONS OR ABOVE STRUCTURAL MEMBERS. ALL WIRING ABOVE 8' IN THE SHELTER AREA MAY BE RUN IN EXPOSED EMT CONDUIT, PAINTED TO MATCH THE SHELTER FINISHES AS DIRECTED BY THE ARCHITECT. SEE ARCHITECTURAL DETAILS FOR EXPOSED CONDUIT ROUTING.
- C. SHELTER HEATER UNITS SHALL BE SUSPENDED UTILIZING A CONDUIT PENDANT AND SWIVEL ASSEMBLY (NOMINAL 3/4" CONDUIT WITH BALL TYPE SWIVEL HANGER EQUAL TO APPLETON #8436R OR EQUAL).



1 TRANSIT SHELTER - POWER & COMMUNICATIONS PLAN
SCALE: 1/8"=1'-0"



NO	DATE	BY	CKD	APPR	REVISION

NAME: SFF/E

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.

[Signature]

JAY J. CARLSON
DATE: 9/20/2001 REG. NO. 12637

DRAWN BY: CAS DATE: 9/20/2001
DESIGN BY: CAS DATE: 9/20/2001
CHECKED BY: JJC DATE: 9/20/2001

S.P. 0280-50 (T.H. 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TULIZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA

CARY OUSE ASSOCIATES
CONSULTING ENGINEERS
BIRCH LAKE PROFESSIONAL BUILDING
1310 EAST HWY 16, SUITE #110
WHITE BEAR LAKE, MINNESOTA 55110
(763) 424-8844 FAX: (763) 424-8044

ANOKA COUNTY
BUS SHELTERS
C.S.A.H. 52 RECONSTRUCTION
POWER & COMMUNICATIONS PLAN

SHEET 355 OF 559

MOTOR AND EQUIPMENT SCHEDULE									
NO.	LOCATION	DESCRIPTION	LOAD	VOLTAGE PHASE	PANEL	CIRCUIT SIZE	CONDUIT SIZE	WIRE SIZE	NOTES
A-1	Break Rm Ceiling	Air Handling Unit A-1	27.5 FLA	240/1	LS-14,16	35A/2P	3/4"	2#8	
CH-1	Toilet	Electric Cove Heater CH-1	900 Watts	120/1	LS-13	20A/1F	1/2"	2#12	2
CH-2	Toilet	Electric Cove Heater CH-2	900 Watts	120/1	LS-13	20A/1F	1/2"	2#12	2
EF-1	Toilet Ceiling	Exhaust Fan EF-1 (2 Thus)	46 Watts	120/1	LS-9	20A/1F	1/2"	2#12	1
EF-2	Toilet Ceiling	Exhaust Fan EF-2 (2 Thus)	46 Watts	120/1	LS-9	20A/1F	1/2"	2#12	1
EUH-1	Utility	Electric Unit Heater EUH-1	3 kW	240/1	LS-25,27	20A/2F	1/2"	2#12	4
HD-1	Toilet	Electric Hand Dryer HD-1	20 Amps	120/1	LS-26	20A/1F	1/2"	2#12	6
HD-2	Toilet	Electric Hand Dryer HD-2	20 Amps	120/1	LS-28	20A/1F	1/2"	2#12	6
HT-1	Break Rm Water Meter	Electric Heat Tracing System	20 Amps	120/1	LS-15	20A/1F	1/2"	2#12	5
IS-1	Toilet Under Sink	Instantaneous Water Heater IS-1	3000 Watts	240/1	LS-10,12	20A/2F	1/2"	2#12	
IS-2	Toilet Under Sink	Instantaneous Water Heater IS-2	3000 Watts	240/1	LS-18,20	20A/2F	1/2"	2#12	
PAD-1	Door 01	Power Assisted Door PAD-1	20 Amps	120/1	LS-17	20A/1F	1/2"	2#12	3
PAD-2	Door 02	Power Assisted Door PAD-2	20 Amps	120/1	LS-19	20A/1F	1/2"	2#12	3

MOTOR AND EQUIPMENT SCHEDULE NOTES
 1. Connect to room lighting branch circuit, and control with room lighting.
 2. Install Cove Heater with Integral Thermostat above room entry door. Berko #CHC-9012/CHC-T, or approved equal.
 3. E.C. shall install conduit and boxes for push pad operators. Operators and control wiring shall be provided by Others.
 4. Install remote thermostat near door entry. Unit heater hung from ceiling. Berko #HUHAA-324, or approved equal.
 5. E.C. shall install heat tracing for underground water piping between water meter and toilet lavs. Verify exact piping lengths and requirements with the Division 15 drawings and Contractor.
 6. E.C. to furnish and install surface mounted automatic hand dryer. World #XA5, or approved equal. Refer to Architectural elevations and manufacturer's recommendations for mounting height(s). Provide manufacturer's standard color as selected by the Architect.

INFRARED HEATER POWER & CONTROL WIRING GENERAL PLAN NOTES

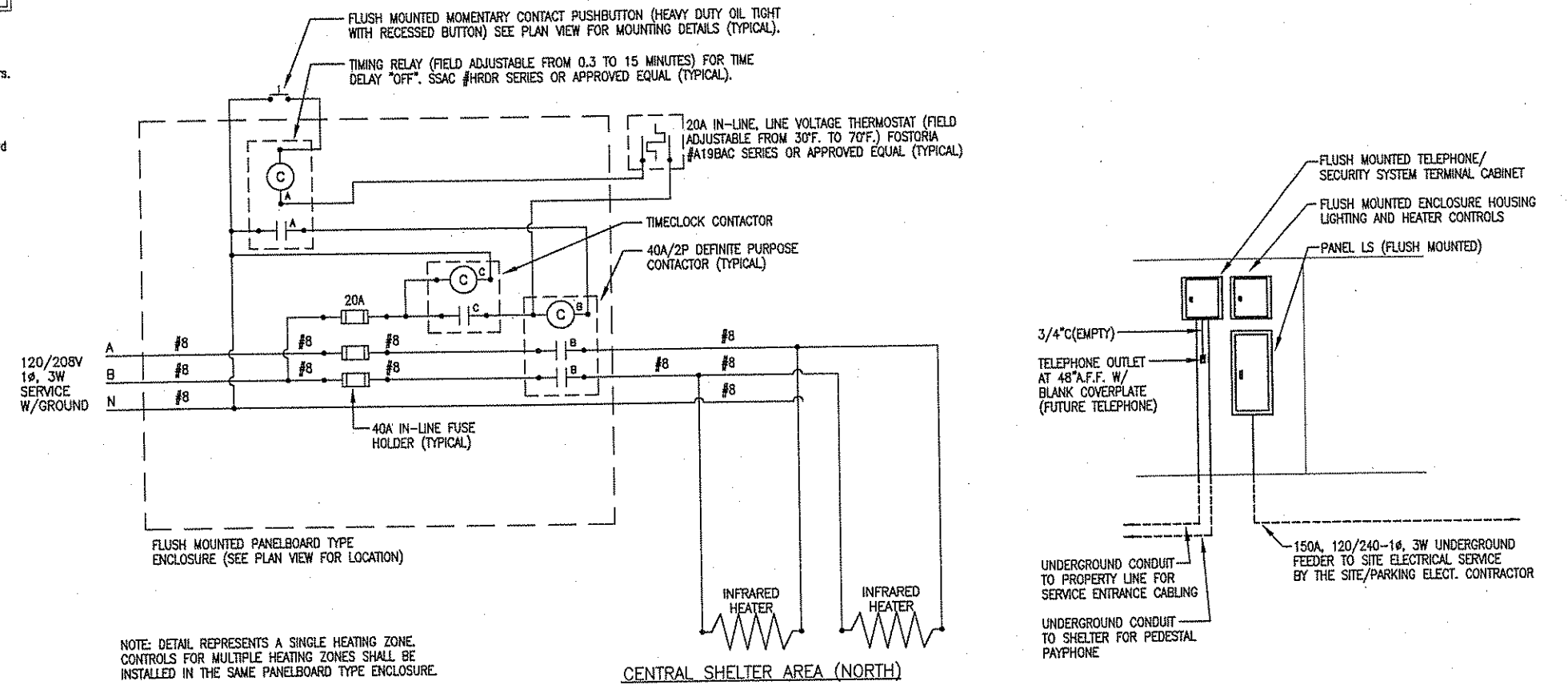
A. ALL CONDUCTORS SHALL BE #12 CU, UNLESS NOTED OTHERWISE BY THIS WIRING DIAGRAM AND THE SHELTER FLOOR PLANS.

B. ONE CONTACTOR/PUSHBUTTON SYSTEM SHALL BE PROVIDED FOR EACH SHELTER HEATER SYSTEM. CONTROL SYSTEM SHALL BE COMPLETE WITH ALL CONTACTOR(S)/THERMOSTAT(S), AND LOCATED IN THE PANELBOARD ENCLOSURE. ALL EQUIPMENT SHALL BE MOUNTED TO A SINGLE REMOVABLE EQUIPMENT MOUNTING PANEL.

C. ROUTE BRANCH CIRCUIT THROUGH ELECTRONIC TIMECLOCK FOR "OFF" CONTROL BETWEEN THE HOURS OF 12:00 MIDNIGHT TO 4:00AM (PARAGON "SUNTRACKER" SERIES, OR APPROVED EQUAL.)

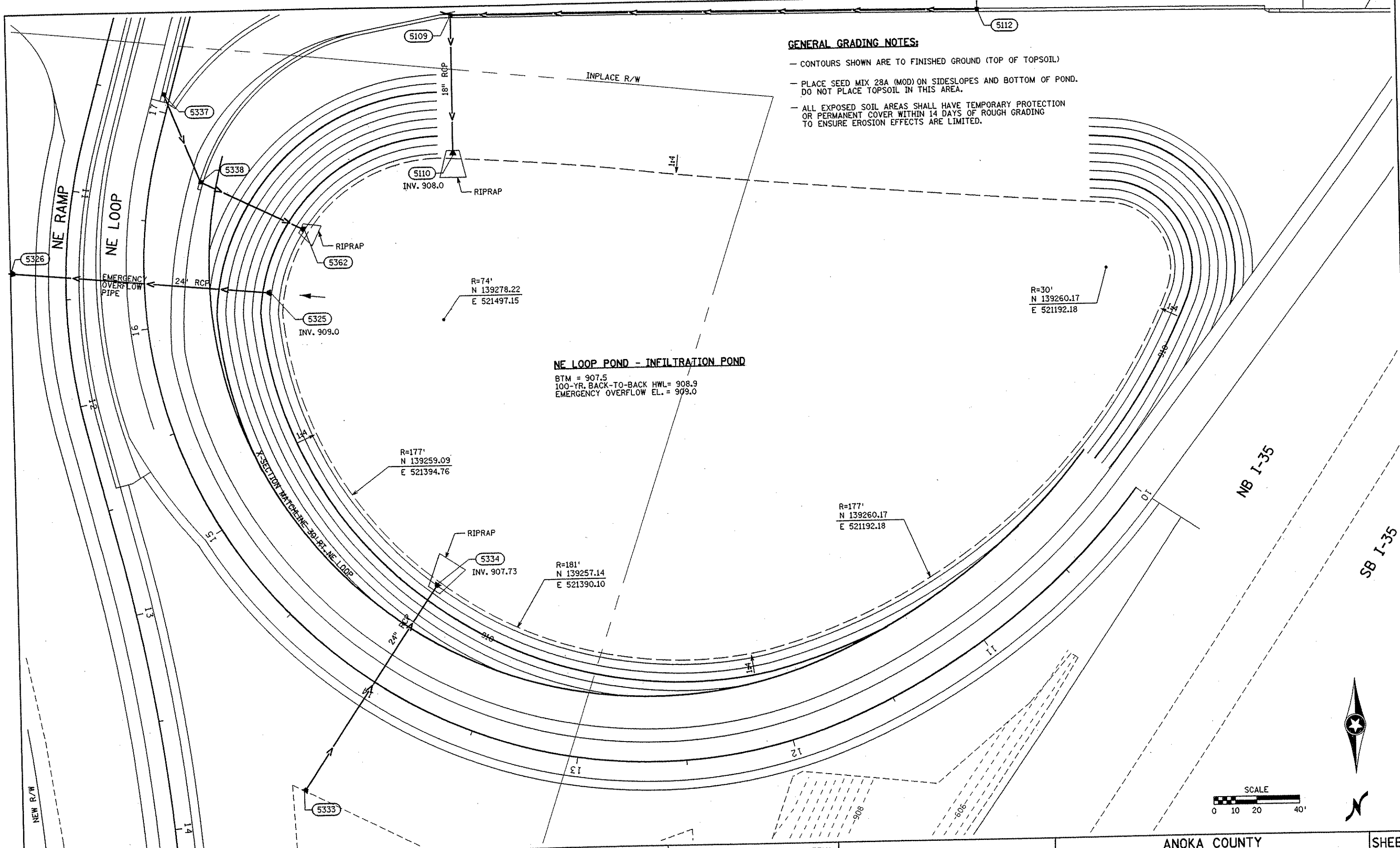
LIGHTING FIXTURE SCHEDULE				
TYPE	DESCRIPTION	LAMPS	MANUFACTURER'S CATALOG NUMBER	
A	Structure mounted H.I.D. luminaire with die cast aluminum housing, die cast swivel, alzak reflector and flat glass lens. Damp label. Finish as selected by the Architect. See Drawing Sections and Details for mounting requirements.	(1) 70W Metal Halide	Kim #CLF1/70MH120/XX-JB-1/XX Or Approved Equal	
B	Structure mounted H.I.D. luminaire with die cast aluminum housing, die cast swivel, alzak reflector and flat glass lens. Damp label. Finish as selected by the Architect. See Drawing Sections and Details for mounting requirements.	(1) 70W Metal Halide	Kim #CLF1/70MH120-J Or Approved Equal	
C	Surface wall mounted fluorescent wall bracket with clear prismatic acrylic wraparound lens.	(2) F32T8	Lithonia #WC232-120-GEB Or Approved Equal	
D	Surface mounted fluorescent luminaire with flat bottom acrylic prismatic lens.	(2) F32T8	Lithonia #AW232-120-GEB Or Approved Equal	
SD	Decorative post top mounted H.I.D. luminaire with clear tempered glass lens and nominal 16"-0" round straight aluminum standard w/ base covers. Standard manuf's White Color.	(1) 175W Metal Halide	Garco #CP-17-1-Q-175MH-240-RAL9002 Or Approved Equal	

PANELBOARD NO. LS												
22,000 A.I.C.					LOCATION Break Rm	VOLTAGE 120/240V						
					MAINS 150A M.C.B.	PHASE 1φ						
					MOUNTING Flush	WIRE 3W						
CIRCUIT DESCRIPTION	LOAD IN KW				C.B. NO.	C.B. SIZE	LOAD IN KW				CIRCUIT DESCRIPTION	
	MTR/MISC	POWER	LIGHTING				LIGHTING	POWER	MTR/MISC			
Shelter Lighting			1.3	20/1	1	2	40/2			3.2	Infrared Heaters (North)	
Illum Signage			1.9	20/1	3	4	40/2			3.2	Infrared Heaters (South)	
Shelter Lighting			0.6	20/1	5	6	40/2			3.2	Infrared Heaters (South)	
Shelter Recept			0.4	20/1	7	8	20/2			3.2	IS-1	
Break Rm Ltg	0.1		0.3	20/1	9	10	20/2			1.5	Water Heater	
Break Rm Recept			0.8	20/1	11	12	20/2			1.5	IS-1	
Cove Htr CH-1/2	1.8			20/1	13	14	35/2			3.3	Air Handler A-1	
Heat Trace HT-1	1.8			20/1	15	16	20/1			3.3	A-1	
Door PAD-1	1.5			20/1	17	18	20/1			1.5	Water Heater	
Door PAD-2	1.5			20/1	19	20	20/1			1.5	IS-2	
Dec Site Ltg			1.6	20/2	21	22	20/1			1.6	Vending	
Elec Htr EFH-1	1.5			20/2	25	26	20/1			2.3	Hand Dryer HD-1	
				20/1	27	28	20/1			2.3	Hand Dryer HD-2	
Spare				20/1	29	30	20/1				Spare	
Spare				20/1	31	32	20/1				Spare	
TOTALS					4.9	4.8	0.0	1.2	3.8	3.5	TOTALS	



2 INFRARED HEATER POWER AND CONTROL WIRING DIAGRAM
NOT TO SCALE

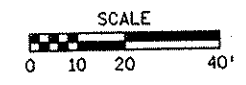
1 POWER & COMMUNICATIONS DISTRIBUTION RISER DIAGRAM
NOT TO SCALE



GENERAL GRADING NOTES:

- CONTOURS SHOWN ARE TO FINISHED GROUND (TOP OF TOPSOIL)
- PLACE SEED MIX 28A (MOD) ON SIDESLOPES AND BOTTOM OF POND. DO NOT PLACE TOPSOIL IN THIS AREA.
- ALL EXPOSED SOIL AREAS SHALL HAVE TEMPORARY PROTECTION OR PERMANENT COVER WITHIN 14 DAYS OF ROUGH GRADING TO ENSURE EROSION EFFECTS ARE LIMITED.

NE LOOP POND - INFILTRATION POND
 BTM = 907.5
 100-YR. BACK-TO-BACK HWL = 908.9
 EMERGENCY OVERFLOW EL. = 909.0



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.

Joseph Weira
 DATE 1-11-02 LIC. NO. 22405

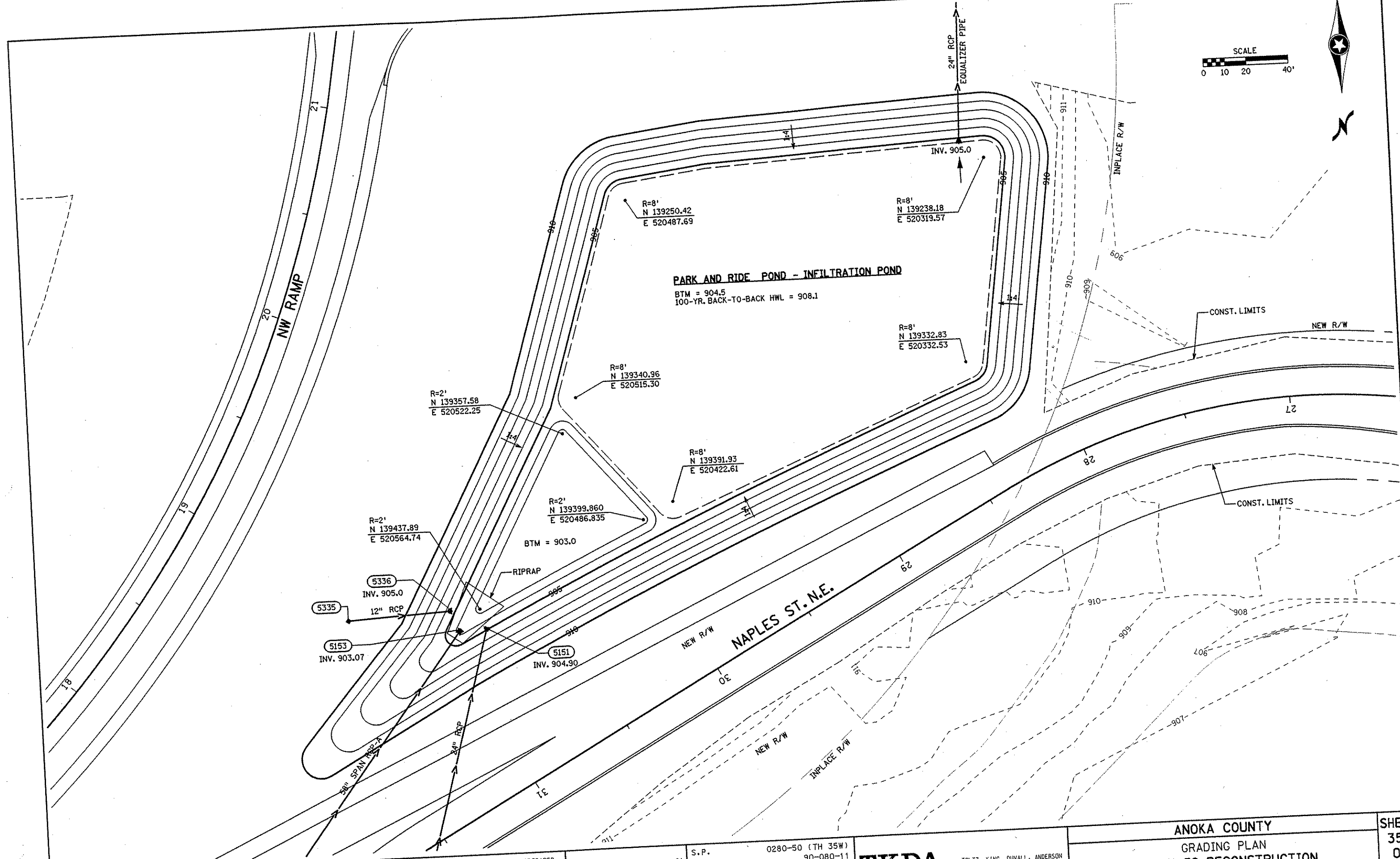
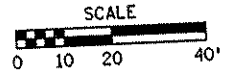
DRAWN BY MAW DATE 9-24-01
 DESIGN BY MAW DATE 9-24-01
 CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY	SHEET 357 OF 559
GRADING PLAN	
C.S.A.H. 52 RECONSTRUCTION NE LOOP POND	

NAME: k:\a-f\anoka\city\1174901\hwy-brdg\par t4\roadway\drawings\pond012\01/2001



PARK AND RIDE POND - INFILTRATION POND

BTM = 904.5
100-YR. BACK-TO-BACK HWL = 908.1

ANOKA COUNTY
GRADING PLAN
C.S.A.H. 52 RECONSTRUCTION
PARK AND RIDE POND

SHEET
358
OF
559

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.

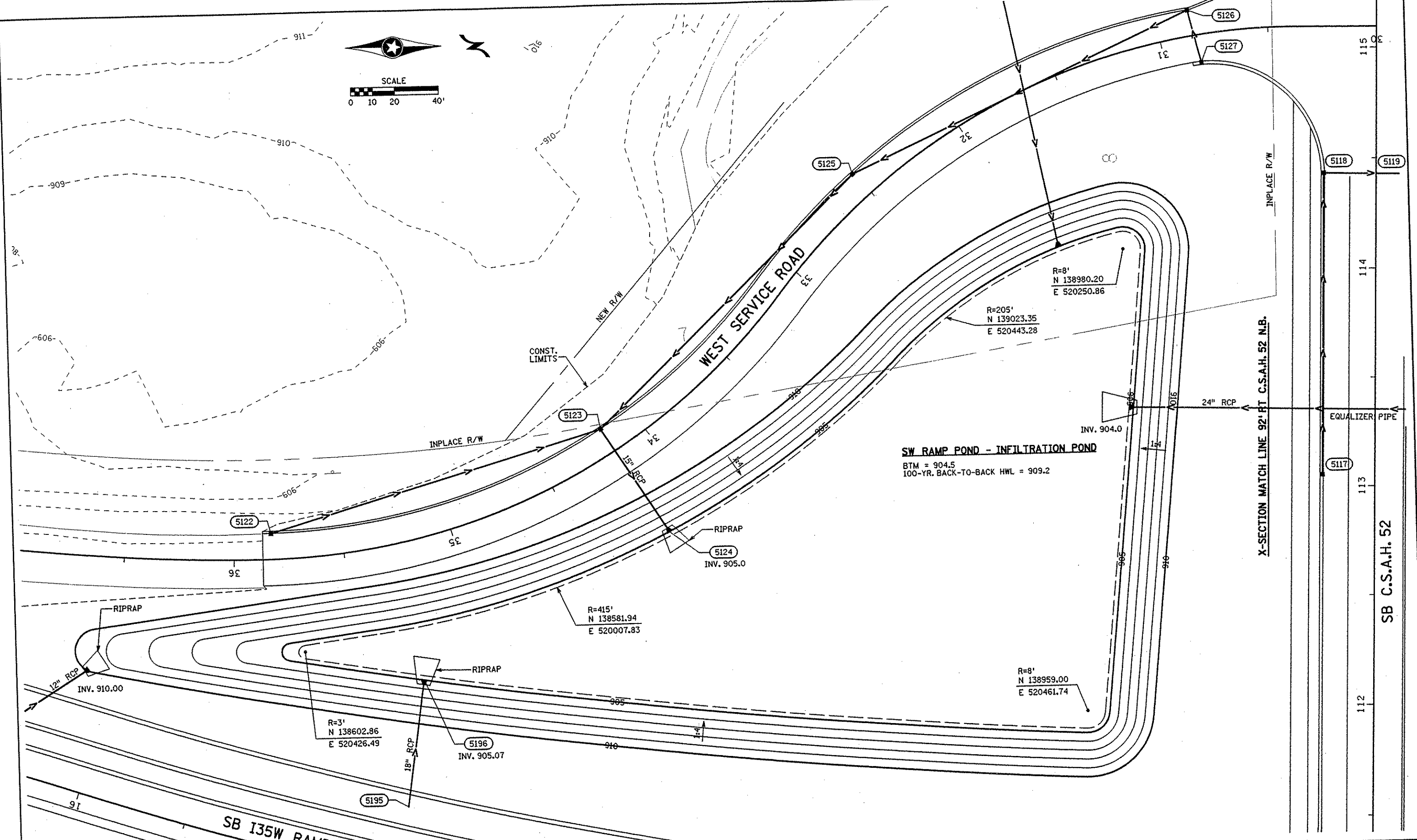
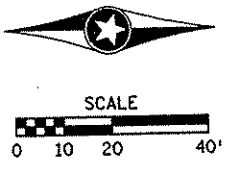
Joseph W. ...
DATE 11-20-01 LIC. NO. 22405

DRAWN BY MAW DATE 9-24-01
DESIGN BY MAW DATE 9-24-01
CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, OUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

NO	DATE	BY	CHKD	APPR	REVISION



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\port4\roadway3\drawings\pond03.dgn

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.

Joseph Warner
 DATE 11-20-01 L.I.C. NO. 22405

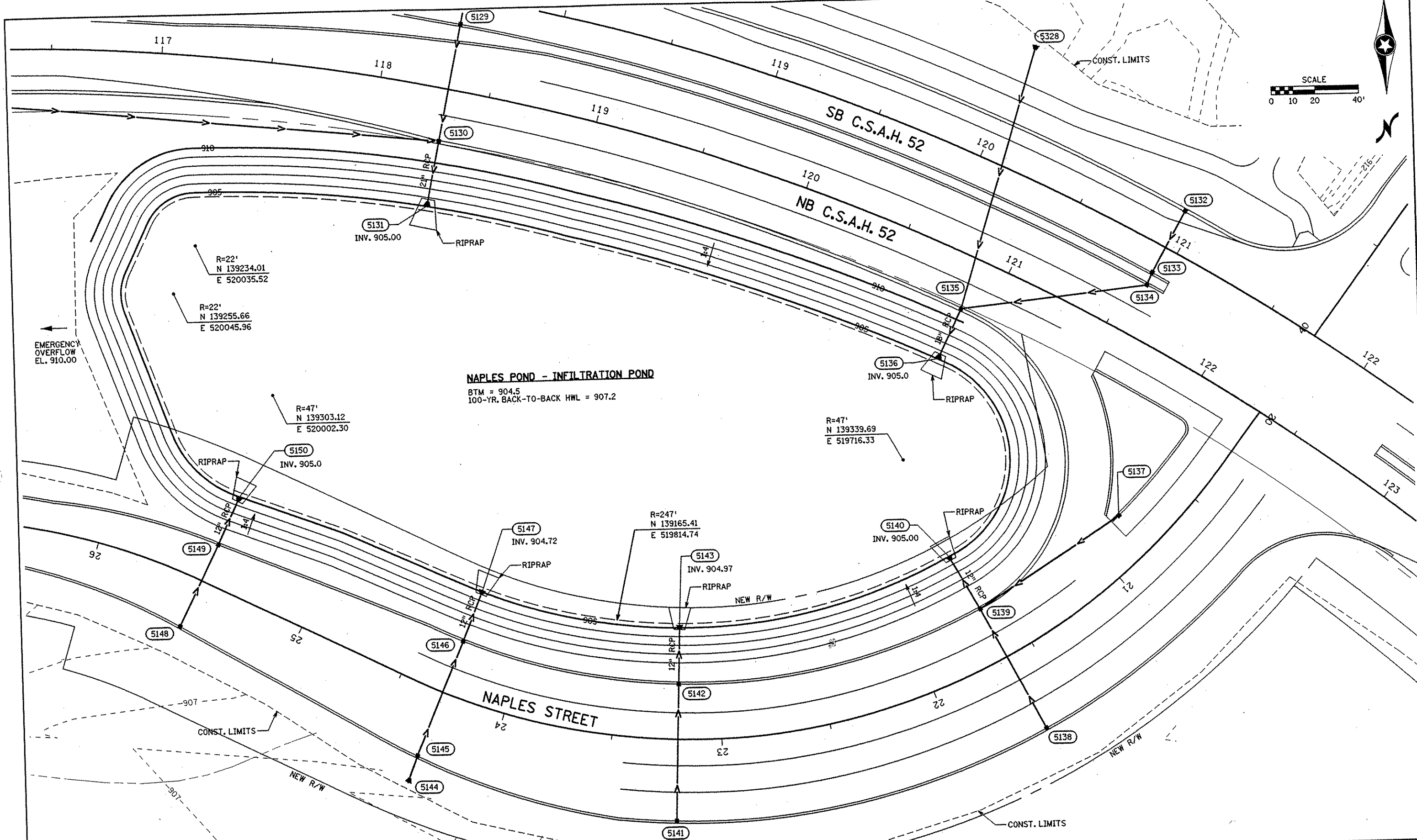
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 DESIGN BY MAW DATE 9-24-01
 CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
C.S.A.H. 52 RECONSTRUCTION
 SW RAMP POND

SHEET 359 OF 559



NAPLES POND - INFILTRATION POND
 BTM = 904.5
 100-YR. BACK-TO-BACK HWL = 907.2

EMERGENCY
 OVERFLOW
 EL. 910.00

SCALE
 0 10 20 40'

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.

Joseph Weavers
 DATE 11-25-01 LIC. NO. 22405

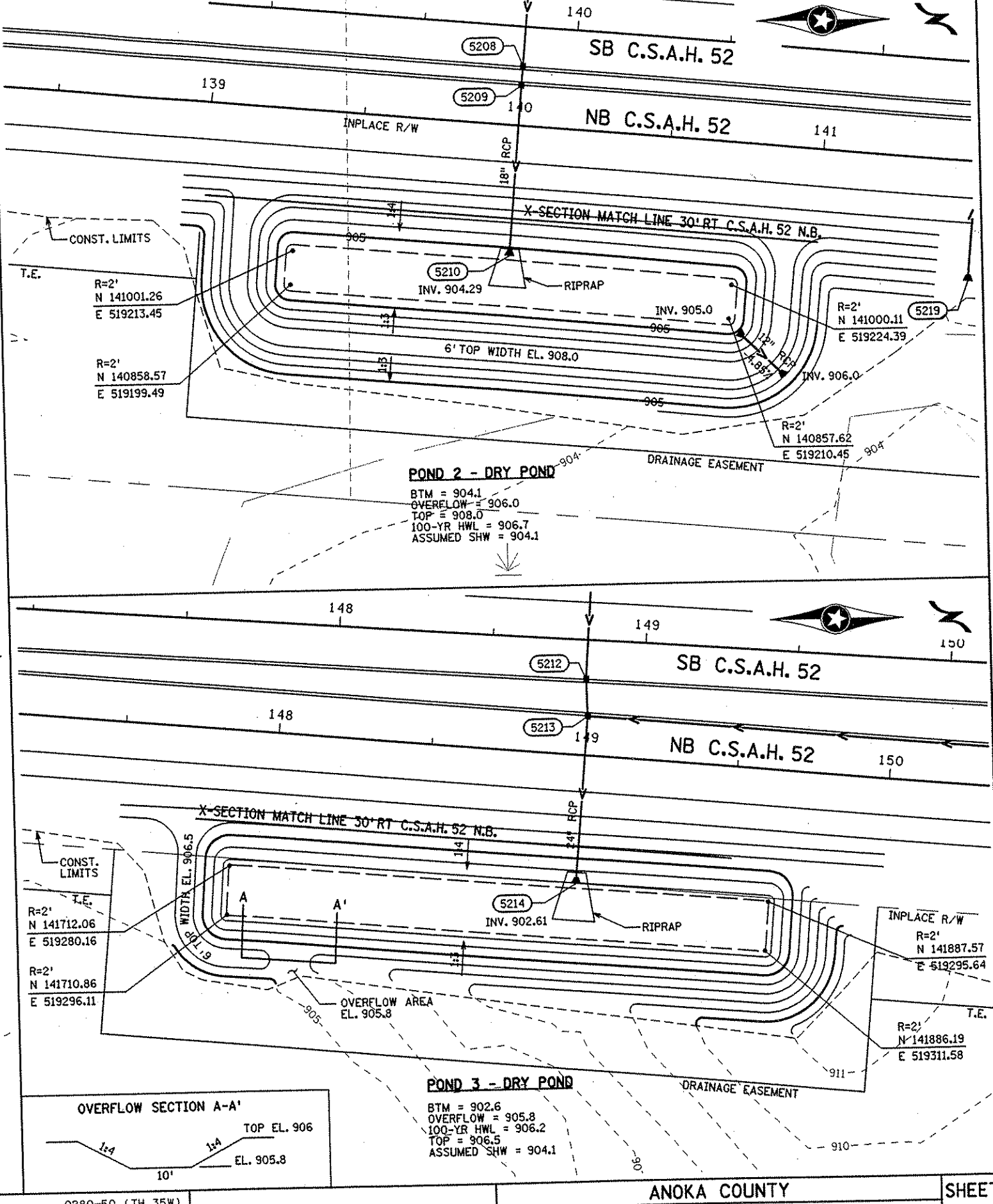
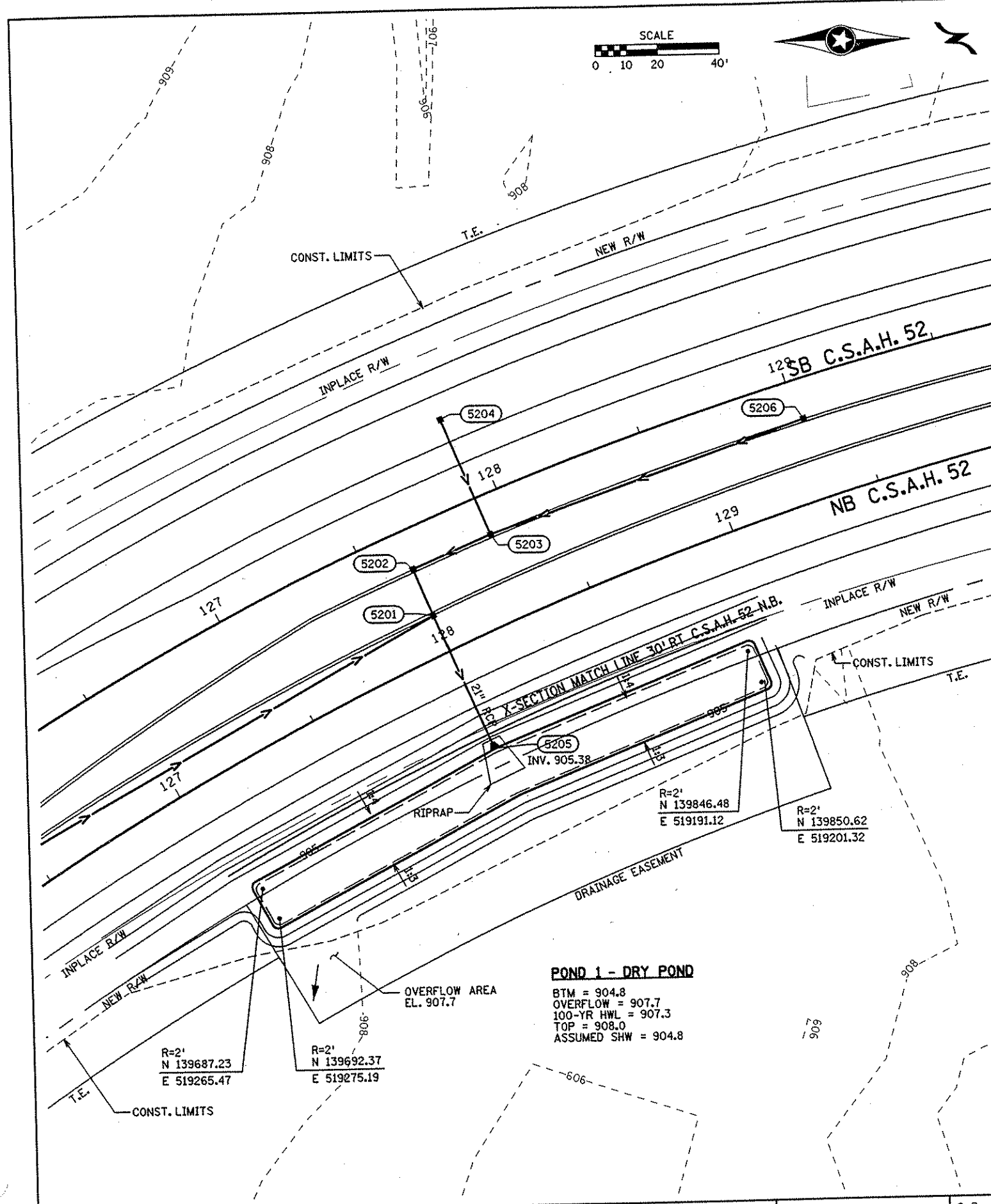
DRAWN BY MAW DATE 9-24-01
 DESIGN BY MAW DATE 9-24-01
 CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OLIVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES POND

SHEET 360 OF 559



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.

Joseph W. Mann
 DATE 11-20-01 LIC. NO. 22405

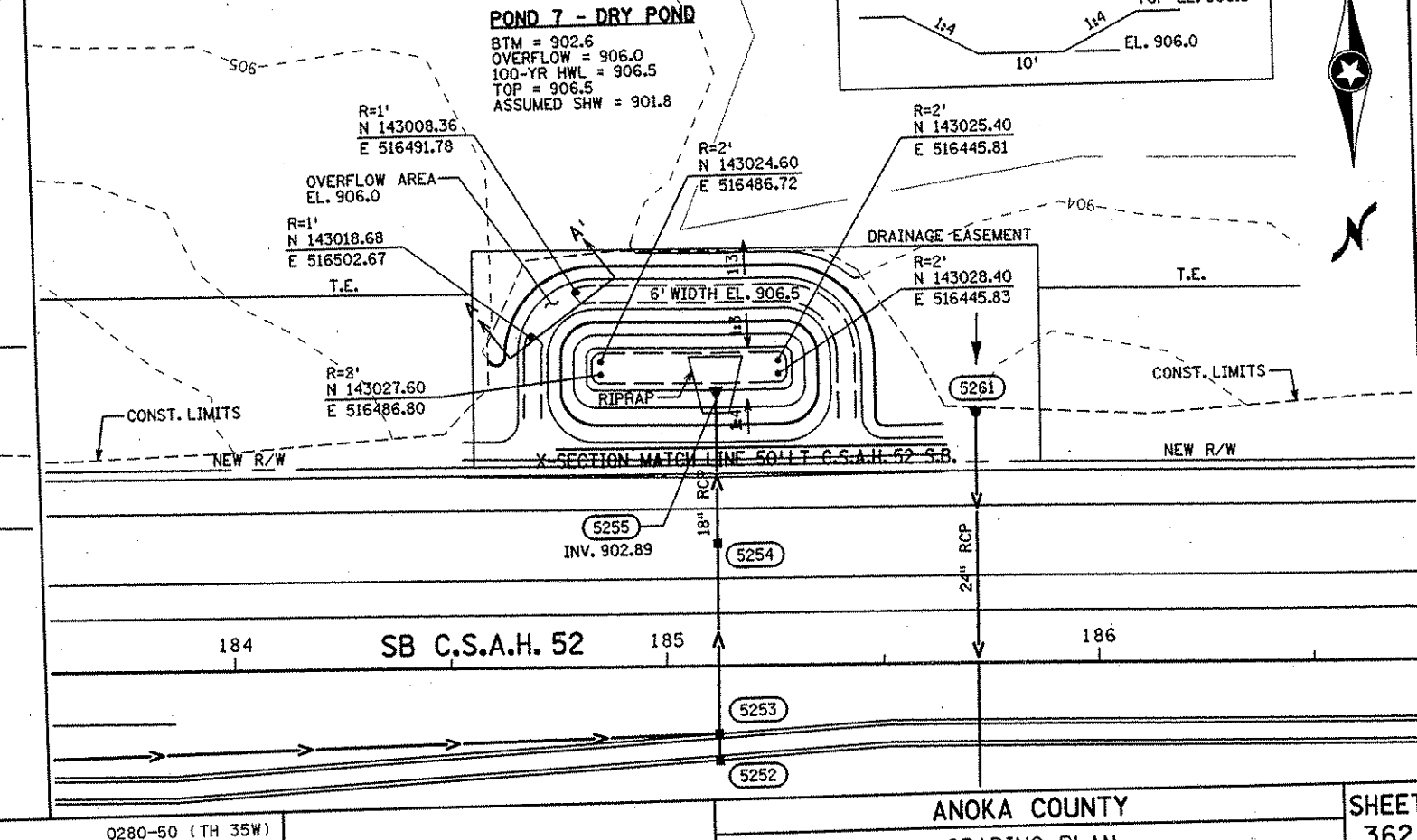
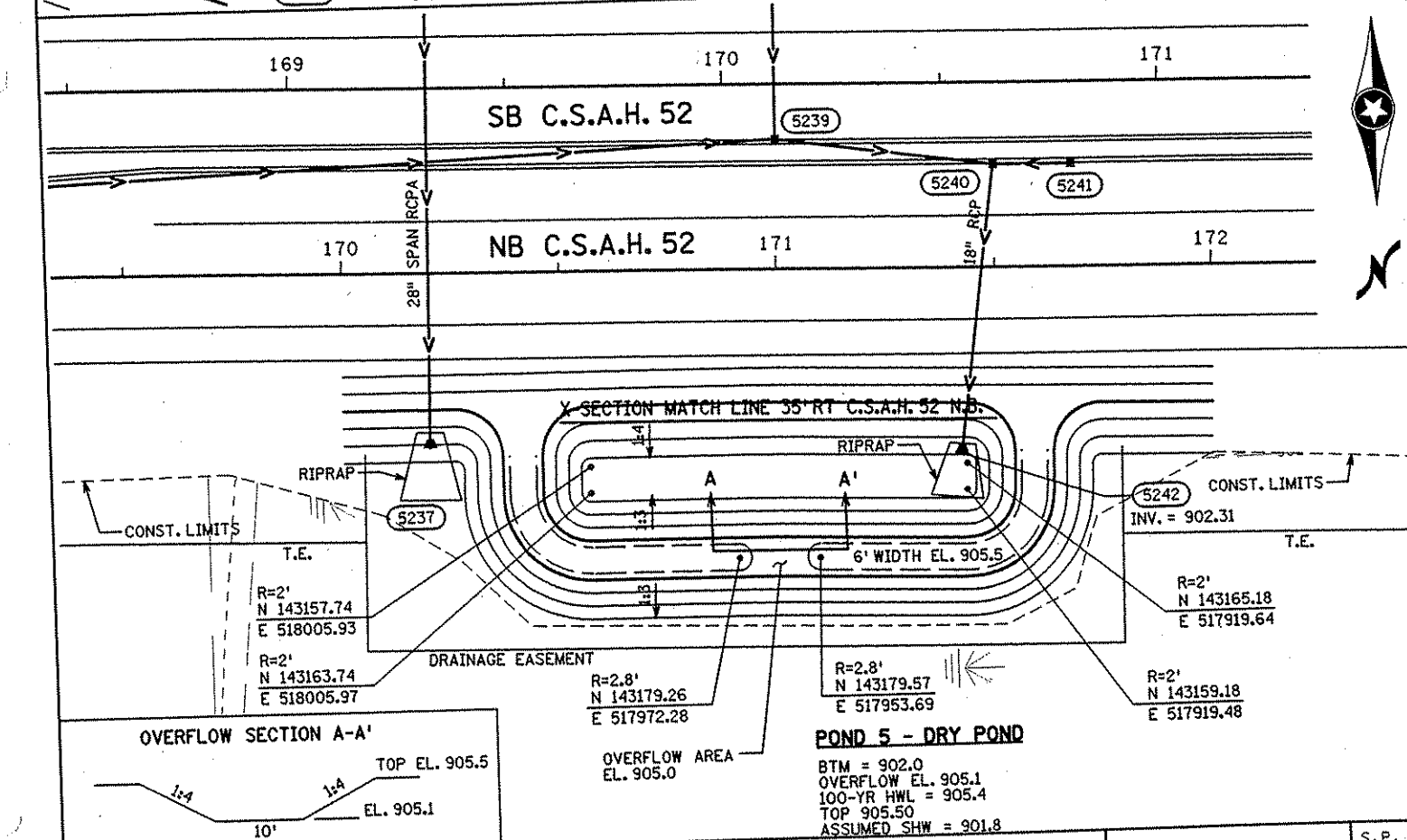
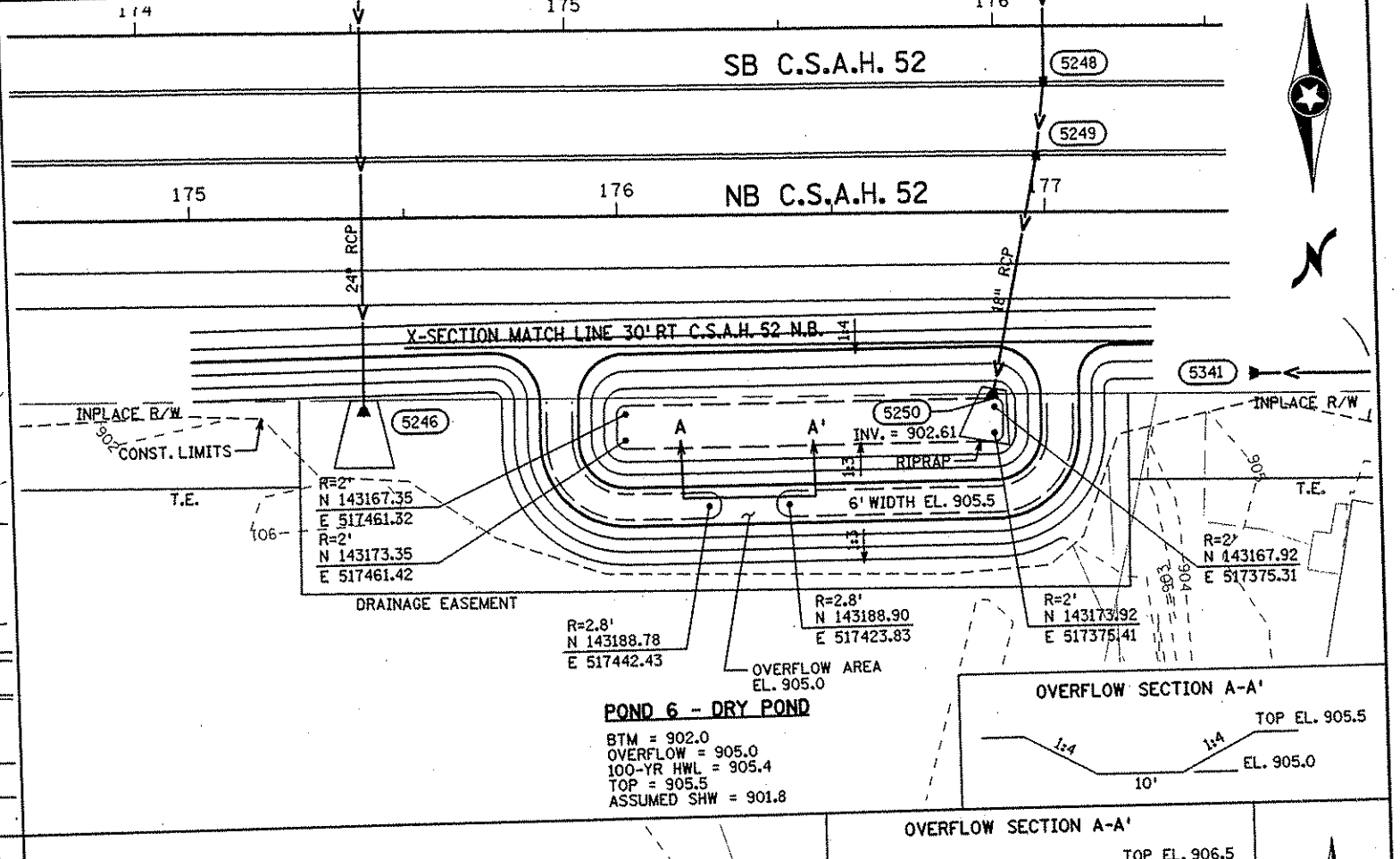
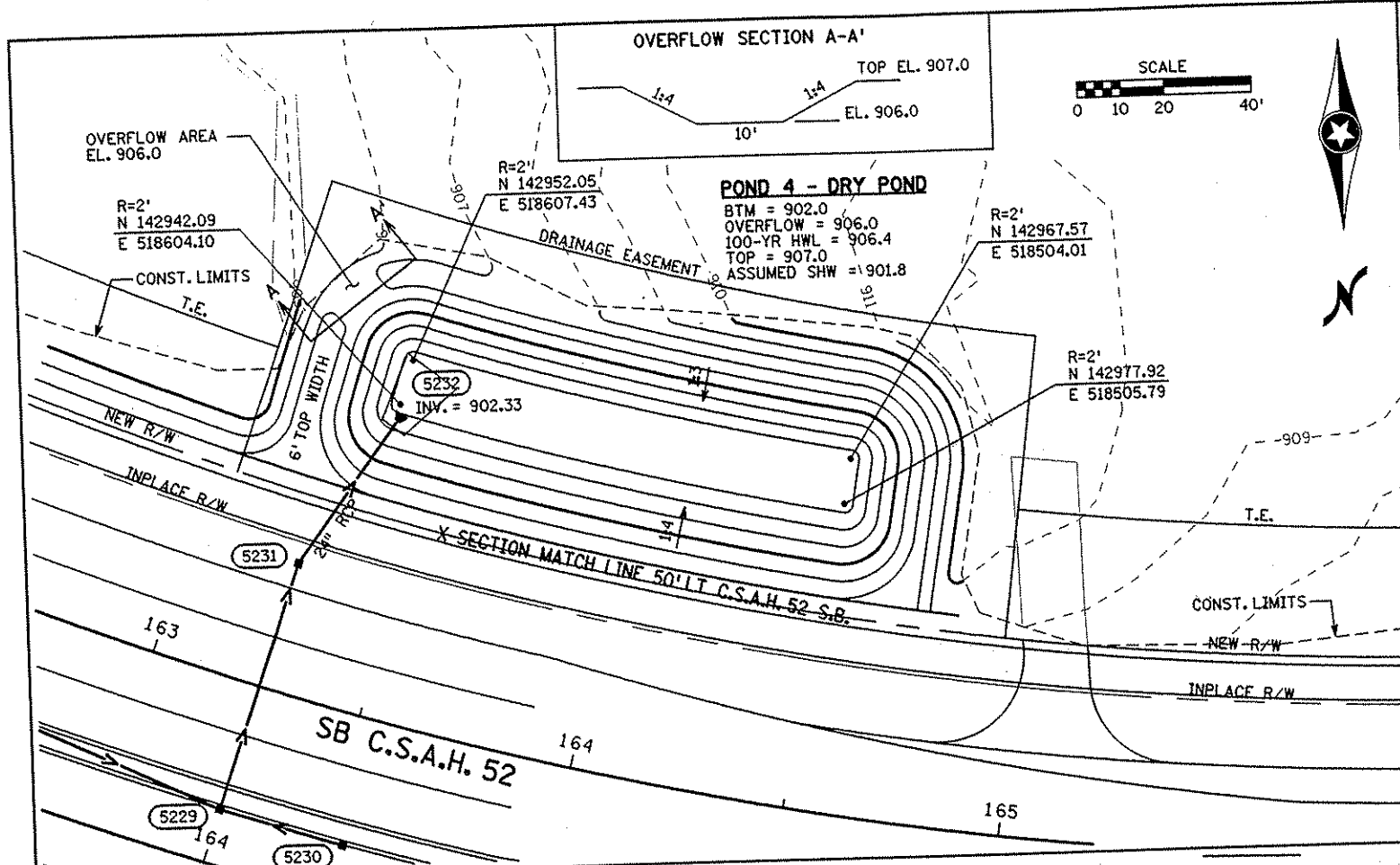
DRAWN BY MAW DATE 9-24-01
 DESIGN BY MAW DATE 9-24-01
 CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 POND 1, POND 2, AND POND 3

SHEET 361 OF 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\pro\11749\par\4\roadway3\drawings\pond06.dgn 11/19/01

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.

Joseph Weaver
DATE: 11-20-01 LIC. NO. 22405

DRAWN BY: MAW DATE: 9-24-01
DESIGN BY: MAW DATE: 9-24-01
CHECKED BY: JMW DATE: 9-25-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
ENGINEERS-ARCHITECTS-PLANNERS
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
GRADING PLAN
C.S.A.H. 52 RECONSTRUCTION
POND 4, POND 5, POND 6, AND POND 7

SHEET 362 OF 559

SB C.S.A.H. 52

NB C.S.A.H. 52



INPLACE R/W

NEW R/W

INPLACE R/W

NEW R/W

X-SECTION MATCH LINE 30' RT. C.S.A.H. 52 N.B.

5266
INV. = 900.77

RIPRAP

R=2'
N 143190.71
E 514964.15

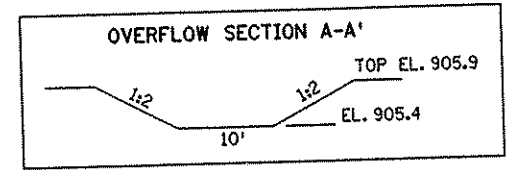
R=2'
N 143182.76
E 514984.18

R=2'
N 143216.34
E 514983.64

R=5'
N 143194.11
E 515062.11

R=2'
N 143183.19
E 515039.38

R=2'
N 143217.23
E 515038.83



POND 8 - DRY POND

BTM = 900.7
OVERFLOW = 905.4
ASSUMED SHW = 902.6
100-YR HWL = 905.6

CONSTRUCT BAFFLED WEIR
SEE DETAIL
OVERFLOW AREA
EL. 905.5
OVERFLOWS INTO
ADJACENT WETLAND

205

204

205

5271

5272

SB C.S.A.H. 52

206

NB C.S.A.H. 52

NEW R/W

CONST. LIMITS

T.E.

R=5'
N 143203.50
E 514682.79

R=2'
N 143184.41
E 514665.91

R=2'
N 143191.81
E 514667.11

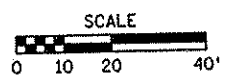
5273
INV. 902.00

RIPRAP
DRAINAGE EASEMENT

POND 9 - INFILTRATION POND

BTM = 902.0
100-YR. BACK-TO-BACK HWL = 904.4
ASSUMED SHW = 903.0

MATCHLINE 207+00 SEE SHEET NO.



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.

Joseph W. ...
DATE 11/20/01 LIC. NO. 22405

0280-50 (TH 35W)
90-080-11
02-652-02
02-652-03
02-652-04
106-020-021, 106-020-022

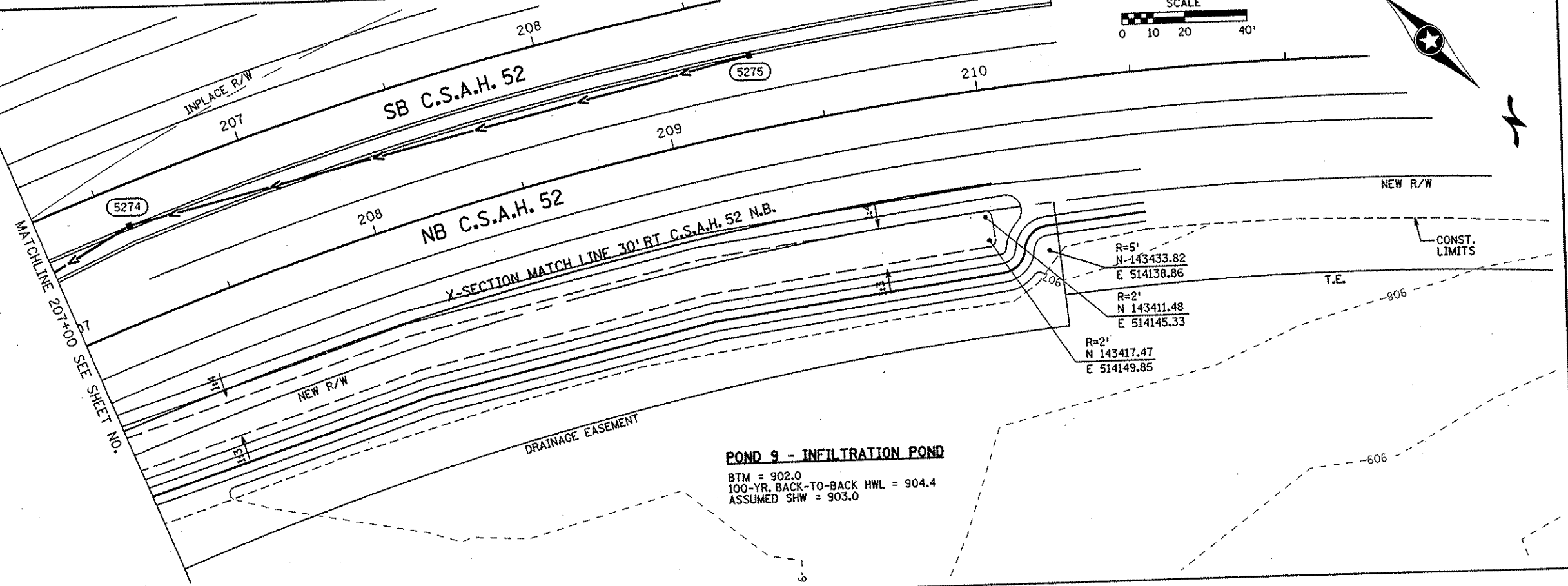
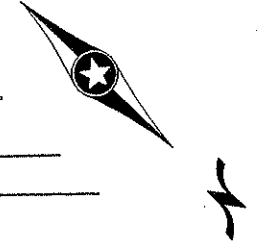
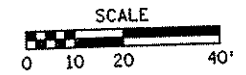
S.P.
S.P.
S.A.P.
S.A.P.
S.A.P.
S.A.P.

DRAWN BY MAW DATE 9-24-01
DESIGN BY MAW DATE 9-24-01
CHECKED BY JMM DATE 9-25-01

TKDA
ENGINEERS-ARCHITECTS-PLANNERS
TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
SAINT PAUL, MINNESOTA

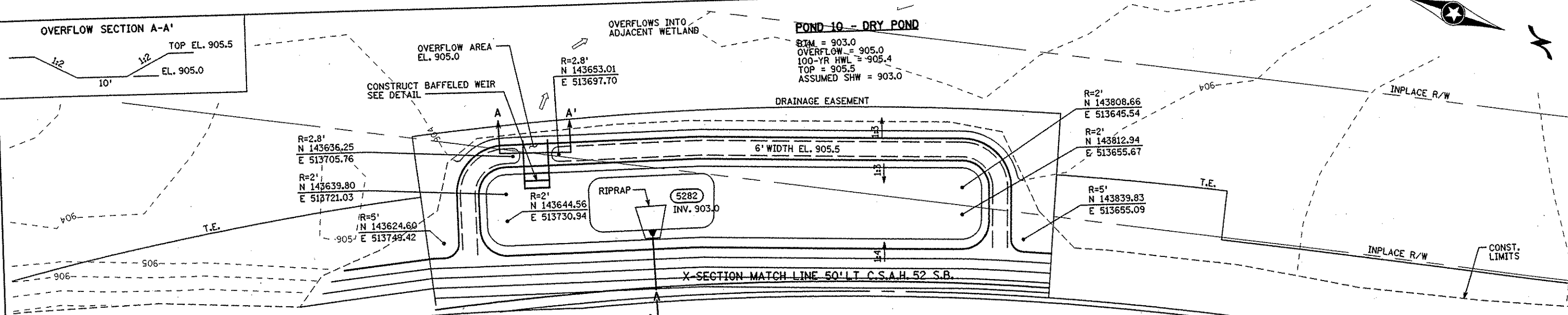
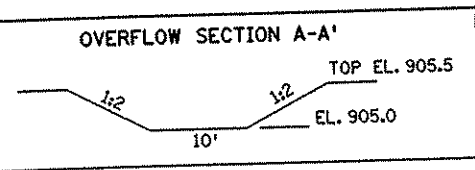
ANOKA COUNTY
GRADING PLAN
C.S.A.H. 52 RECONSTRUCTION
POND 8 AND POND 9

SHEET
363
OF
559



POND 9 - INFILTRATION POND
 BTM = 902.0
 100-YR. BACK-TO-BACK HWL = 904.4
 ASSUMED SHW = 903.0

R=5'
 N 143433.82
 E 514138.86
 R=2'
 N 143411.48
 E 514145.33
 R=2'
 N 143417.47
 E 514149.85



POND 10 - DRY POND
 BTM = 903.0
 OVERFLOW = 905.0
 100-YR HWL = 905.4
 TOP = 905.5
 ASSUMED SHW = 903.0

R=2.8'
 N 143636.25
 E 513705.76
 R=2'
 N 143639.80
 E 513721.03

R=5'
 N 143624.60
 E 513749.42

R=2'
 N 143644.56
 E 513730.94

R=2'
 N 143808.66
 E 513645.54
 R=2'
 N 143812.94
 E 513655.67

R=5'
 N 143839.83
 E 513655.09

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\s\p\proj\11749\part4\roadway3\drawings\pond08.dgn 11/19/01

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.

Joseph W. ...
 DATE 11-20-01 LIC. NO. 22405

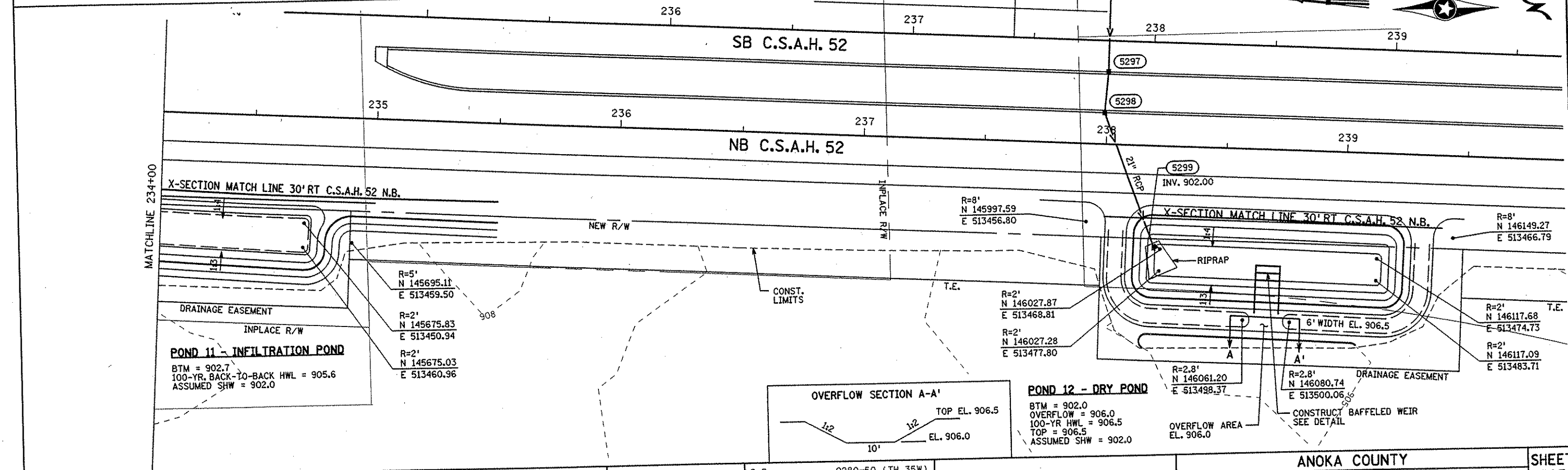
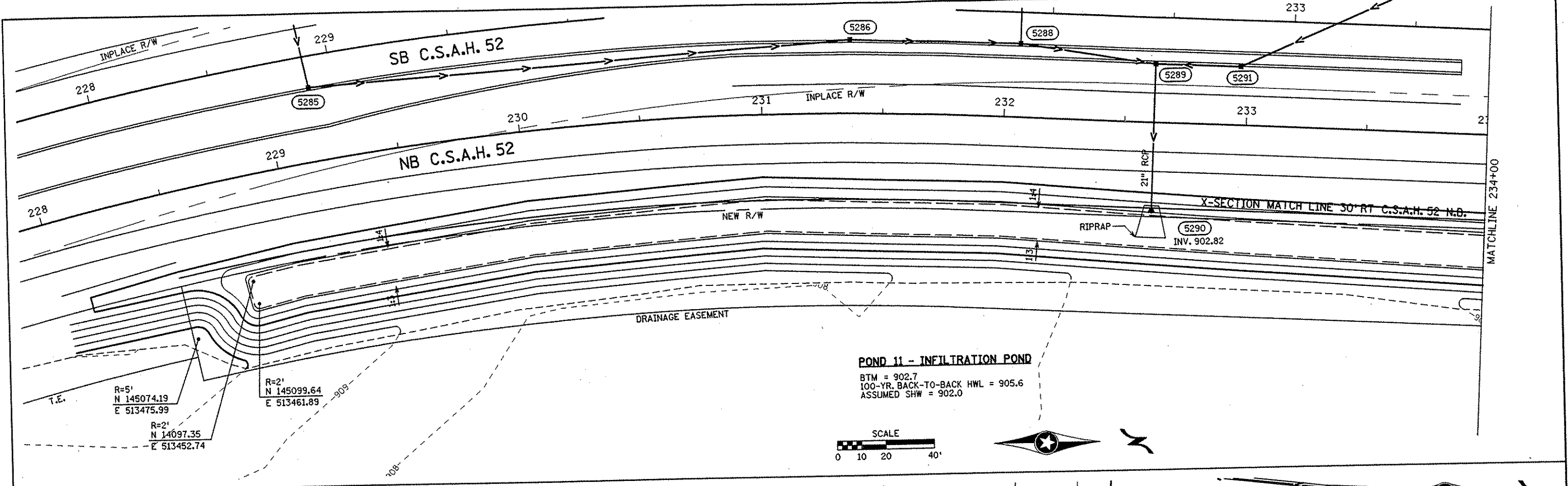
DRAWN BY MAW DATE 9-24-01
 DESIGN BY MAW DATE 9-24-01
 CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 POND 9 AND POND 10

SHEET
 364
 OF
 559



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.

Joseph W. ...
 DATE 11-20-01 LIC. NO. 22405

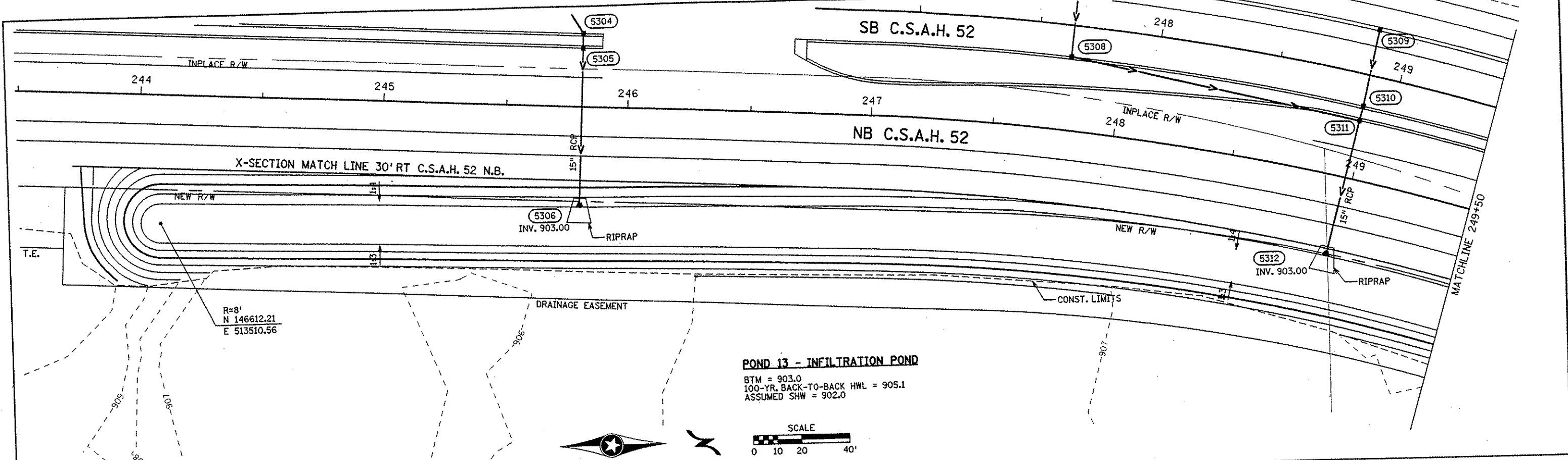
DRAWN BY MAW DATE 9-24-01
 DESIGN BY MAW DATE 9-24-01
 CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

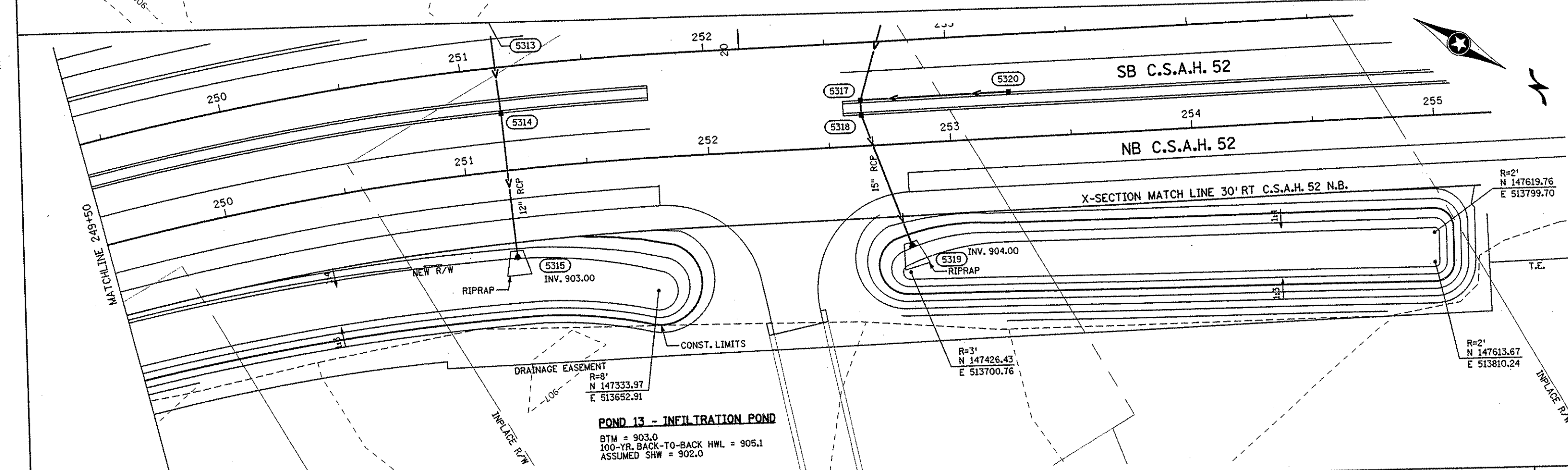
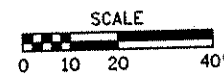
ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 POND 11 AND POND 12

SHEET 365 OF 559



POND 13 - INFILTRATION POND

BTM = 903.0
 100-YR. BACK-TO-BACK HWL = 905.1
 ASSUMED SHW = 902.0



POND 13 - INFILTRATION POND

BTM = 903.0
 100-YR. BACK-TO-BACK HWL = 905.1
 ASSUMED SHW = 902.0

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.

Joseph Weems
 DATE 11-20-01 LIC. NO. 22405

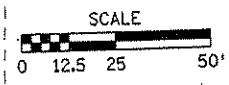
DRAWN BY MAW DATE 9-24-01
 DESIGN BY MAW DATE 9-24-01
 CHECKED BY JMW DATE 9-25-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

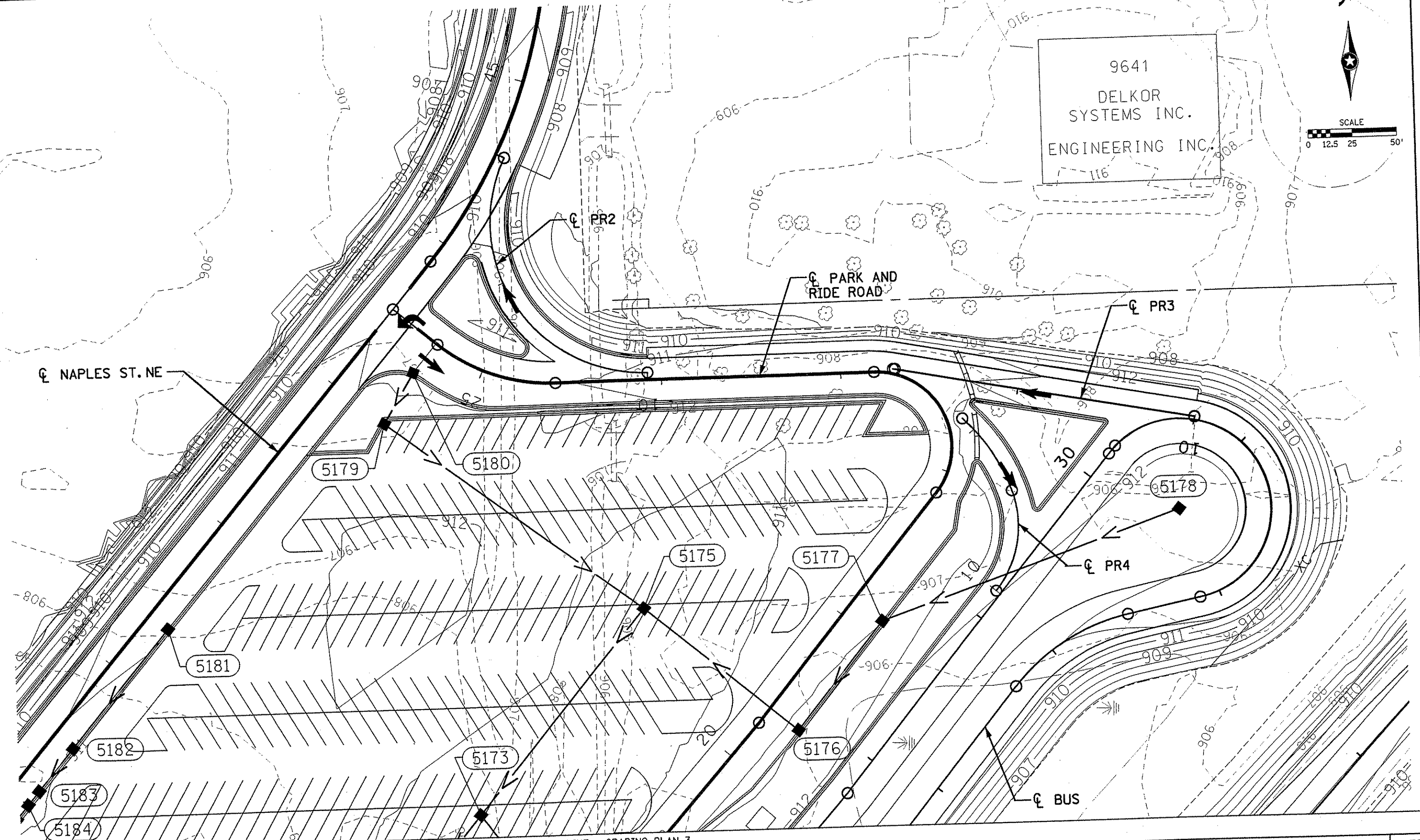
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 ENGINEERS-ARCHITECTS-PLANNERS
 TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 POND 13

SHEET 366 OF 559

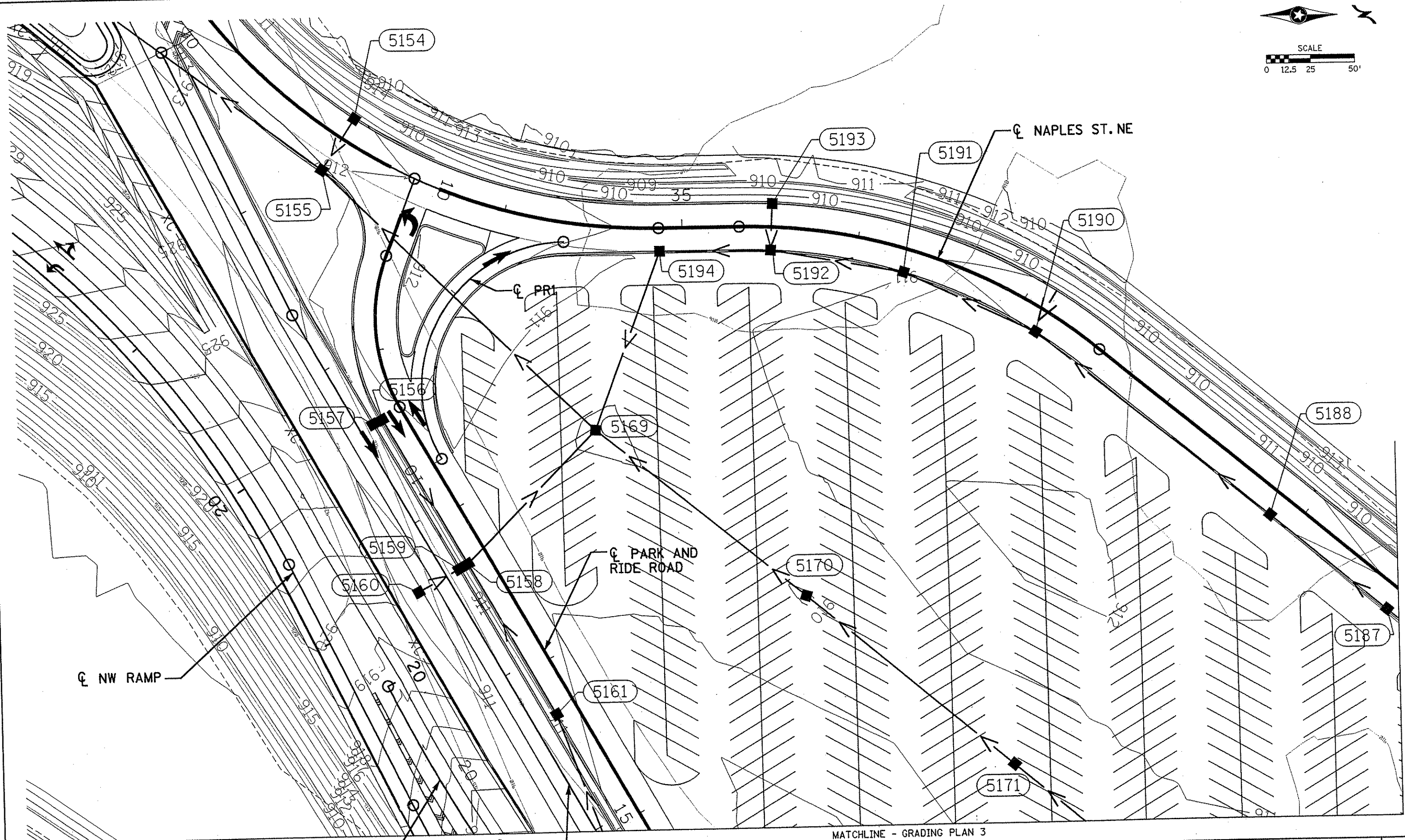
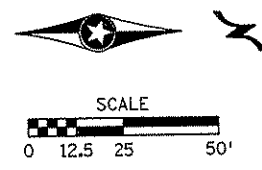


9641
DELKOR
SYSTEMS INC.
ENGINEERING INC.
116



MATCHLINE - GRADING PLAN 2					MATCHLINE - GRADING PLAN 3					ANOKA COUNTY PARK AND RIDE GRADING PLAN C.S.A.H. 52 RECONSTRUCTION 1 OF 3					SHEET 367 OF 559						
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.										DRAWN BY <u>RRC</u> DATE <u>9-21-01</u> DESIGN BY <u>RRC</u> DATE <u>9-20-01</u> CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>					S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022					TKDA TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	
NO	DATE	BY	CKD	APPR	REVISION	DATE	LIC. NO.														
						11-20-01	22405														

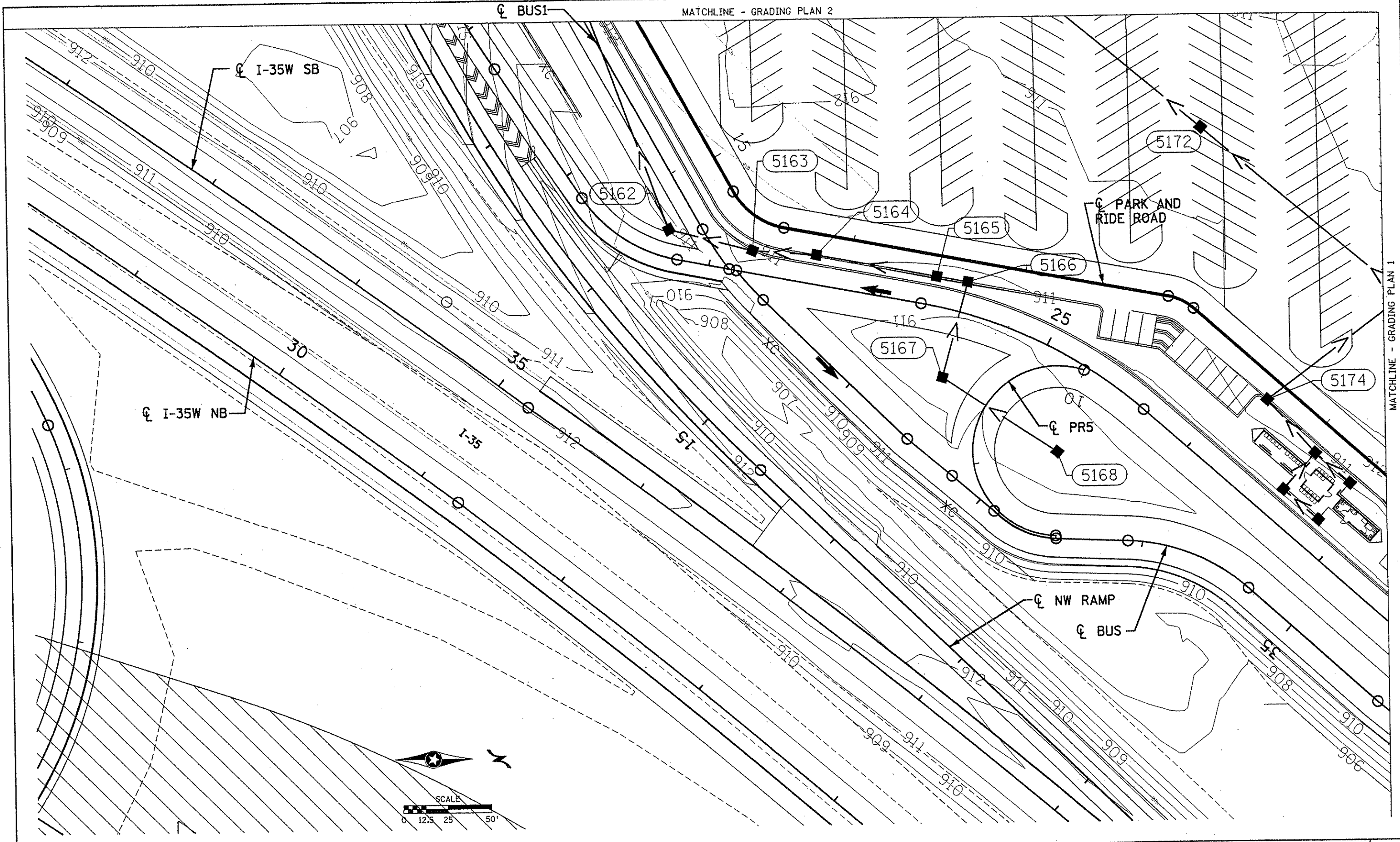
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MATCHLINE - GRADING PLAN 1

MATCHLINE - GRADING PLAN 3

				ANOKA COUNTY PARK AND RIDE GRADING PLAN C.S.A.H. 52 RECONSTRUCTION 2 OF 3		SHEET 368 OF 559	
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. <i>Joseph W. ...</i> DATE <u>11-20-01</u> LIC. NO. <u>22405</u>				S.P. 0280-50 (TH 35W) S.P. 90-080-11 S.A.P. 02-652-02 S.A.P. 02-652-03 S.A.P. 02-652-04 S.A.P. 106-020-021, 106-020-022		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	
NO. DATE BY CKD APPR REVISION NAME: k:\site\proj\c11749\part4\roadway3\drawings\grade02.dgn 11/19/01				DRAWN BY <u>RRC</u> DATE <u>9-21-01</u> DESIGN BY <u>RRC</u> DATE <u>9-20-01</u> CHECKED BY <u>JMW</u> DATE <u>9-24-01</u>			



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.

Joseph W. ...
 DATE 11-20-01 LIC. NO. 22405

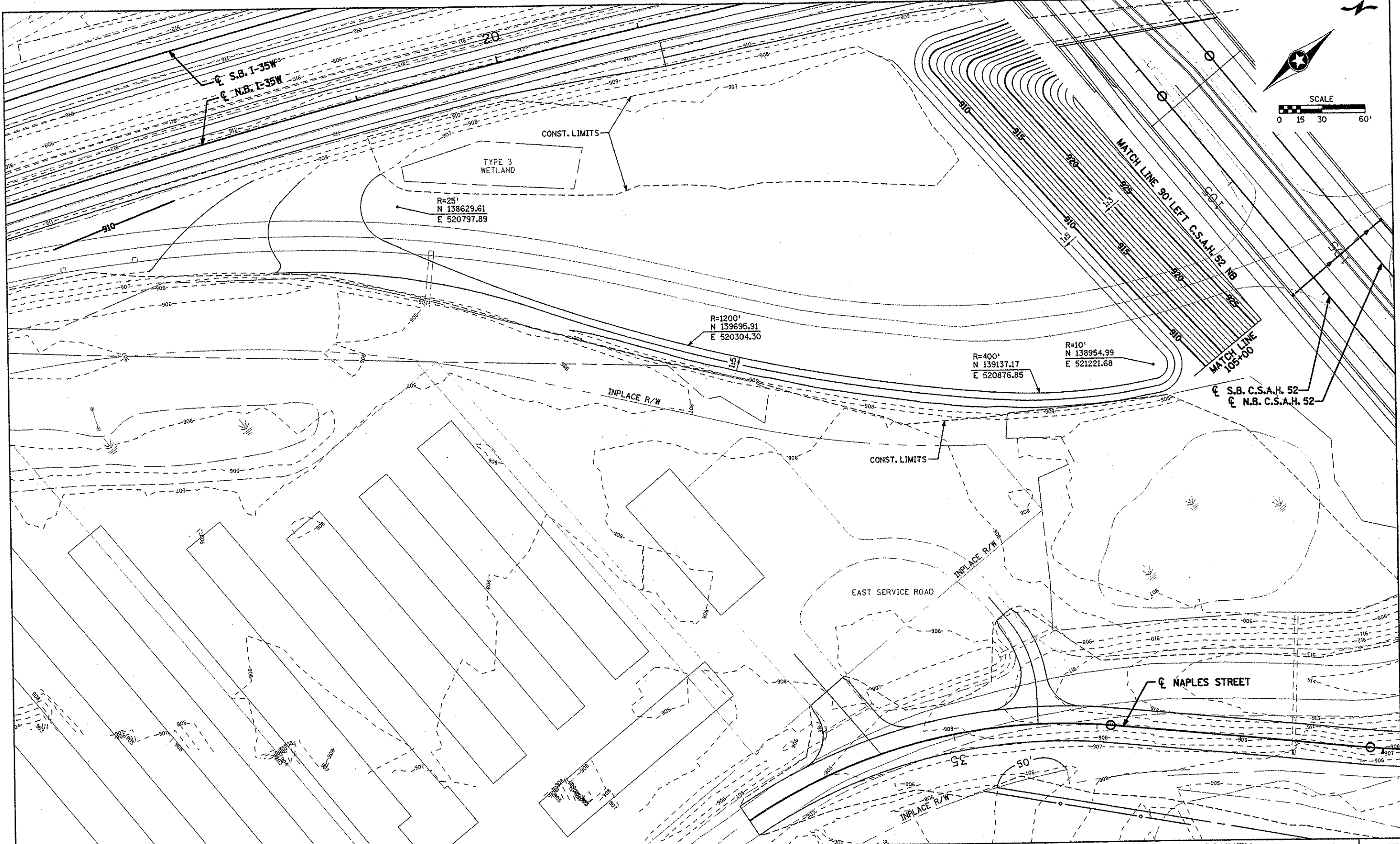
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 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 PARK AND RIDE GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 3 OF 3

SHEET
 369
 OF
 559



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\pond1.dgn 11/19/01

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.

Joseph W. [Signature]
 DATE: 11-20-01 LIC. NO. 22405

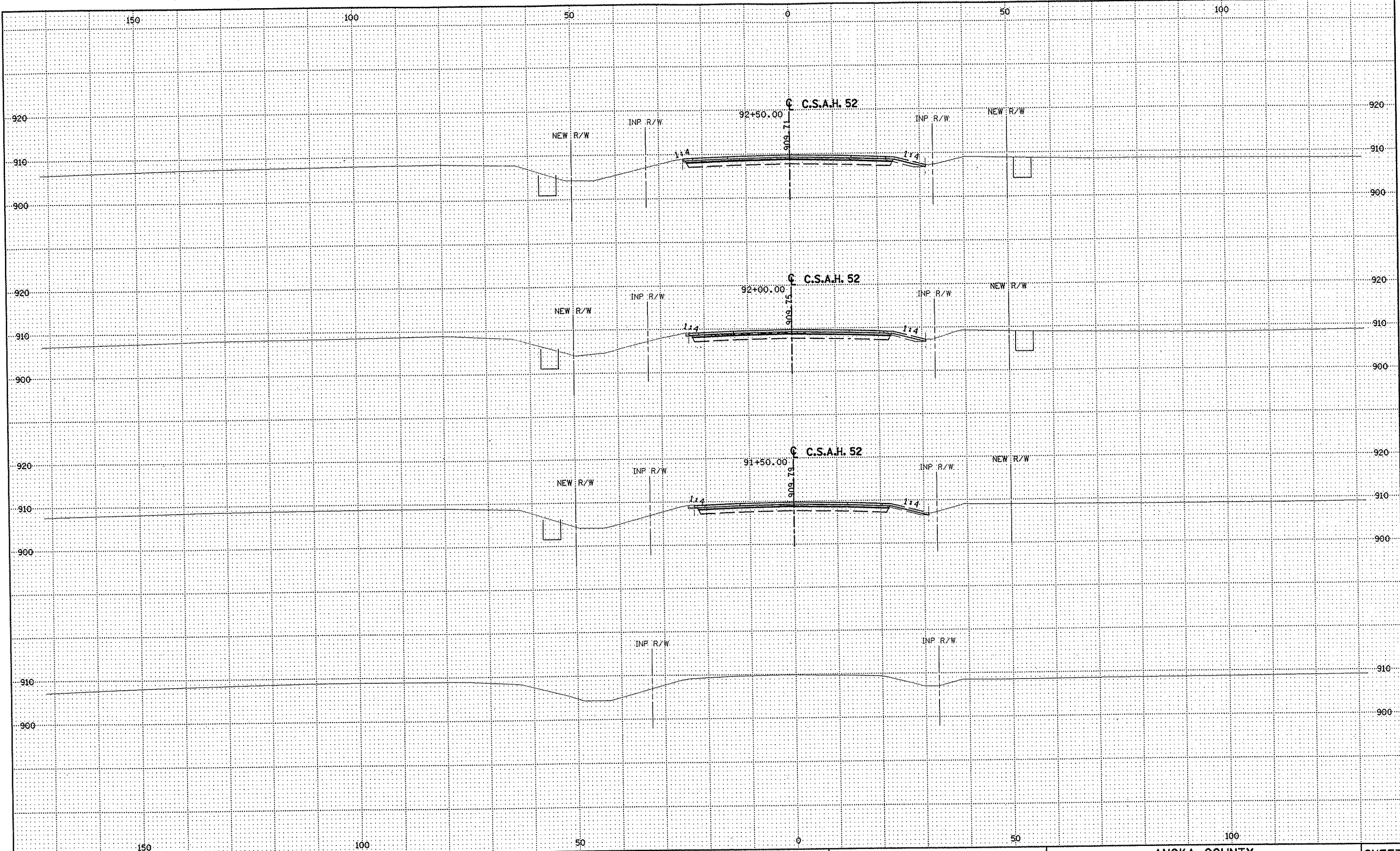
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 S.E. QUADRANT GRADING PLAN

SHEET 370 OF 559



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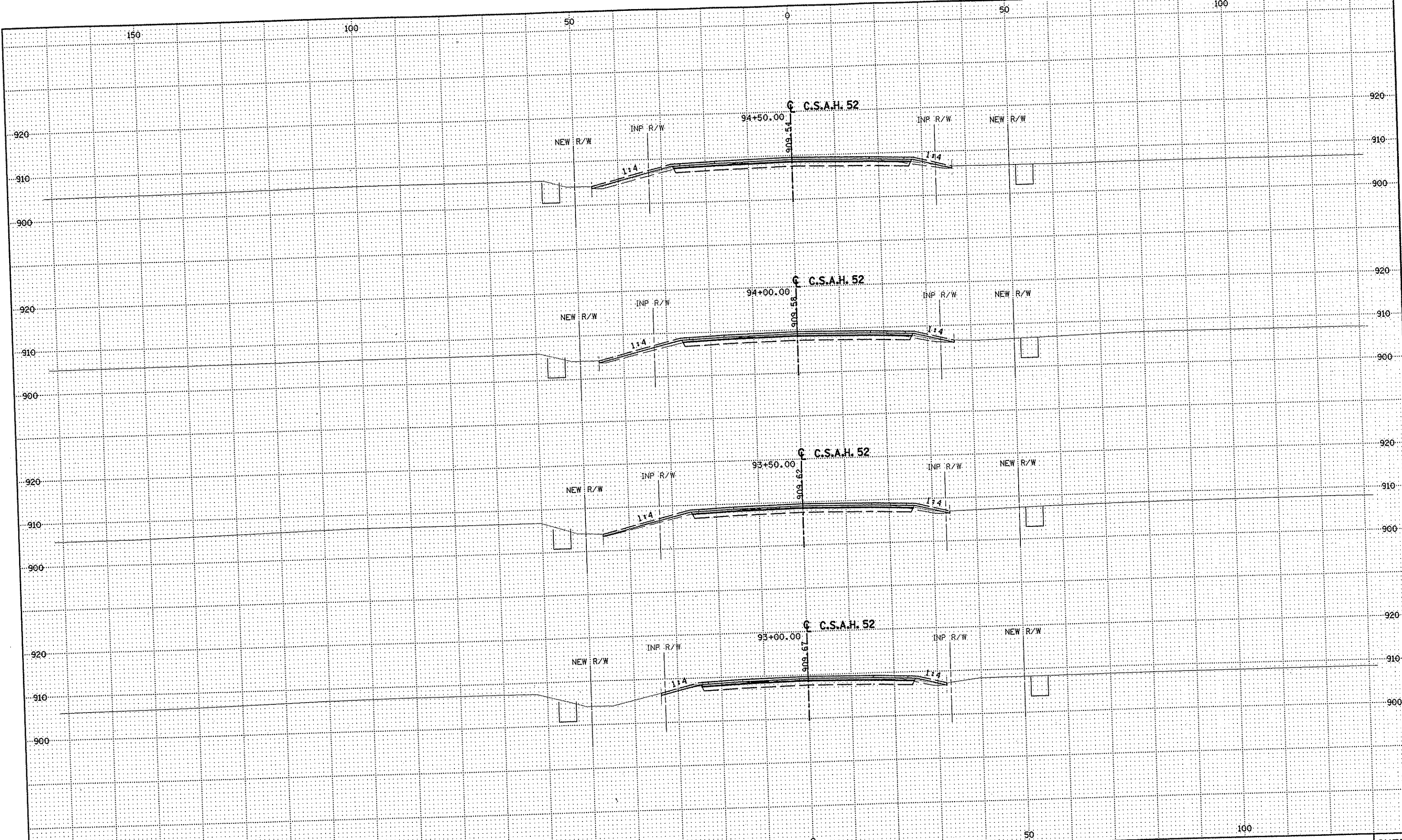
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 S.A.P. 02-652-02
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 91+50 TO STA. 92+50

SHEET
 371
 OF
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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\sec\spi52.dgn 11/19/01

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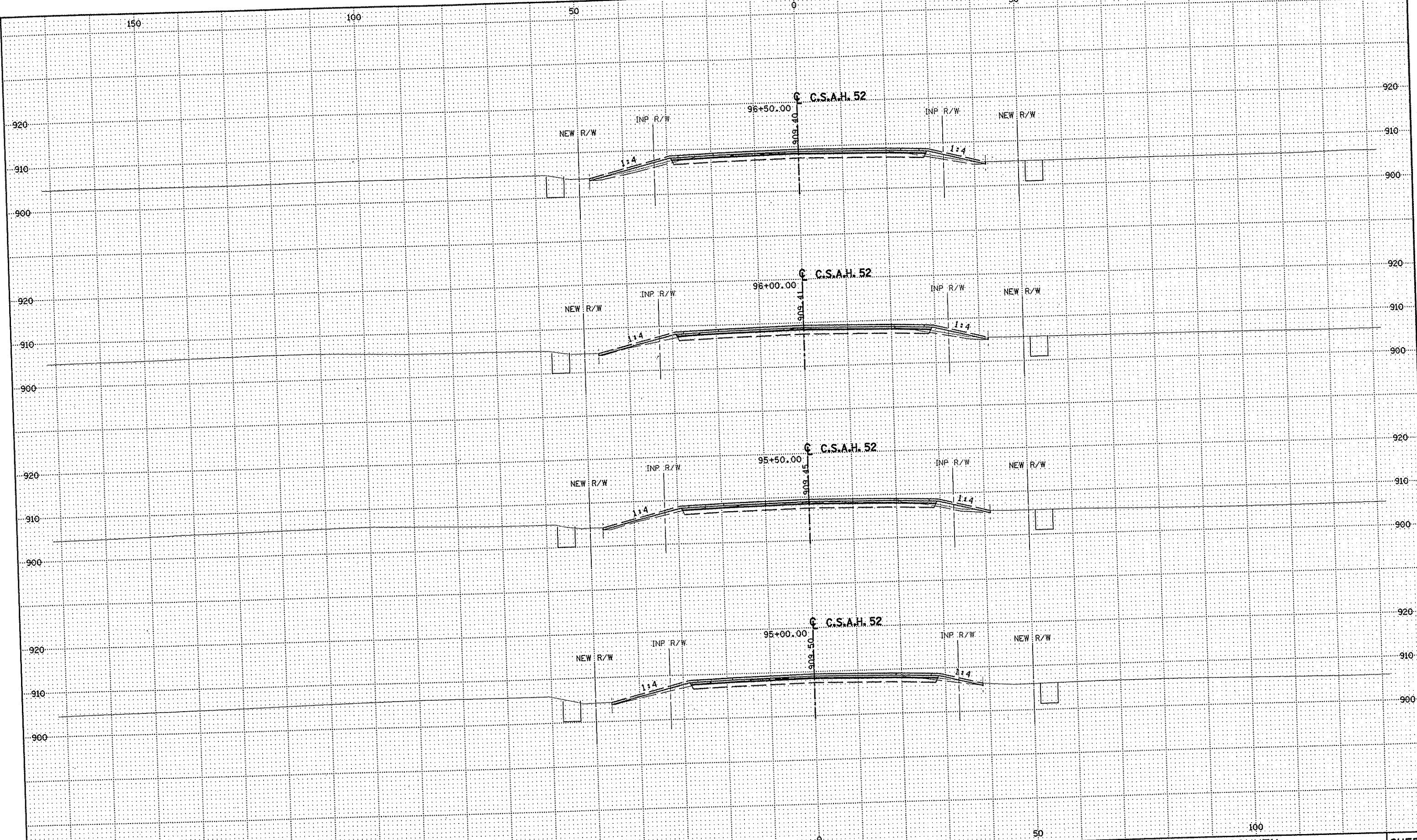
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 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 93+00 TO STA. 94+50

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 OF
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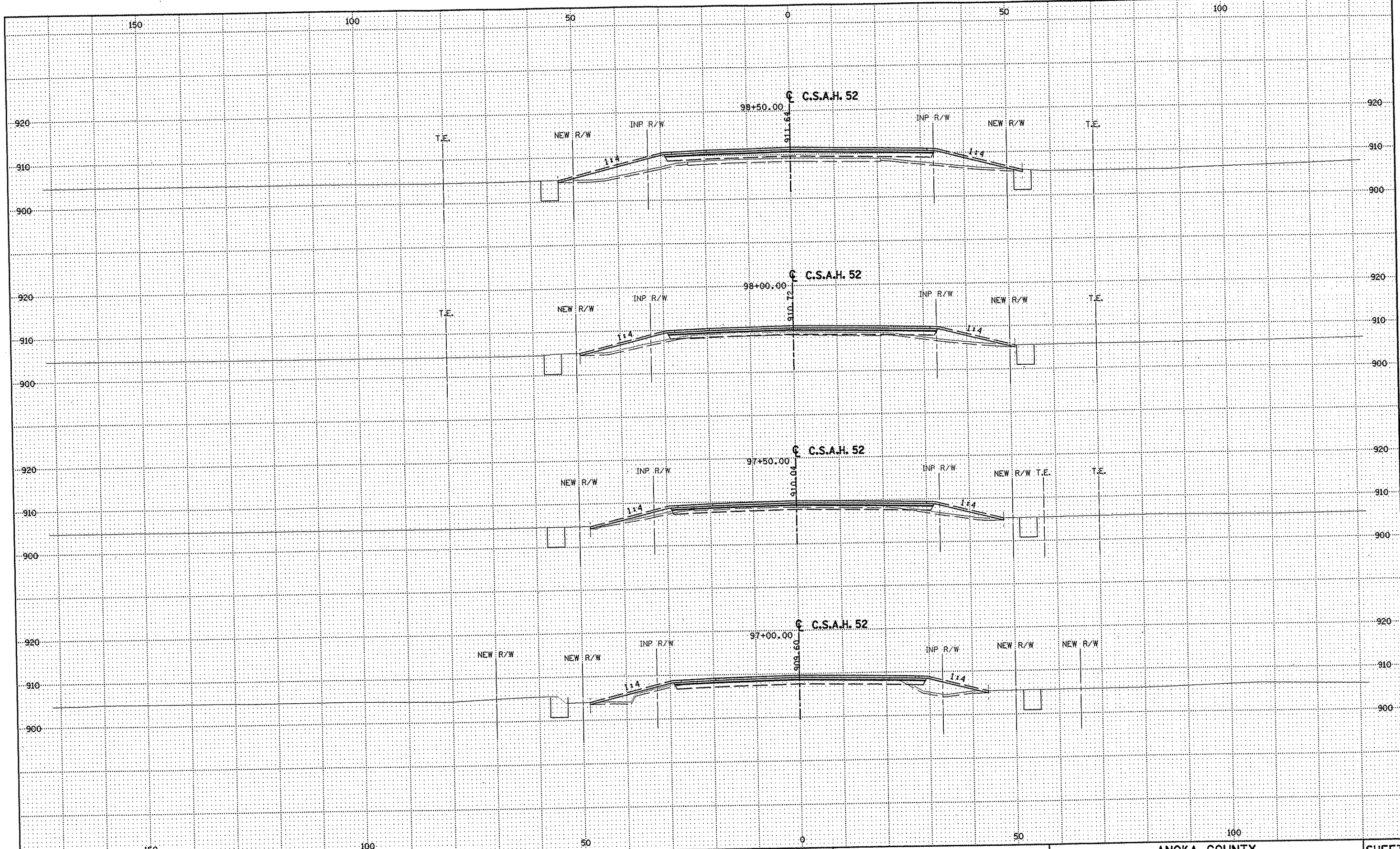
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 DESIGN BY **RRC** DATE **9-20-01**
 CHECKED BY **JMW** DATE **9-24-01**

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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 95+00 TO STA. 96+50

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OF
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NO	DATE	BY	CKD	APPR	REVISION

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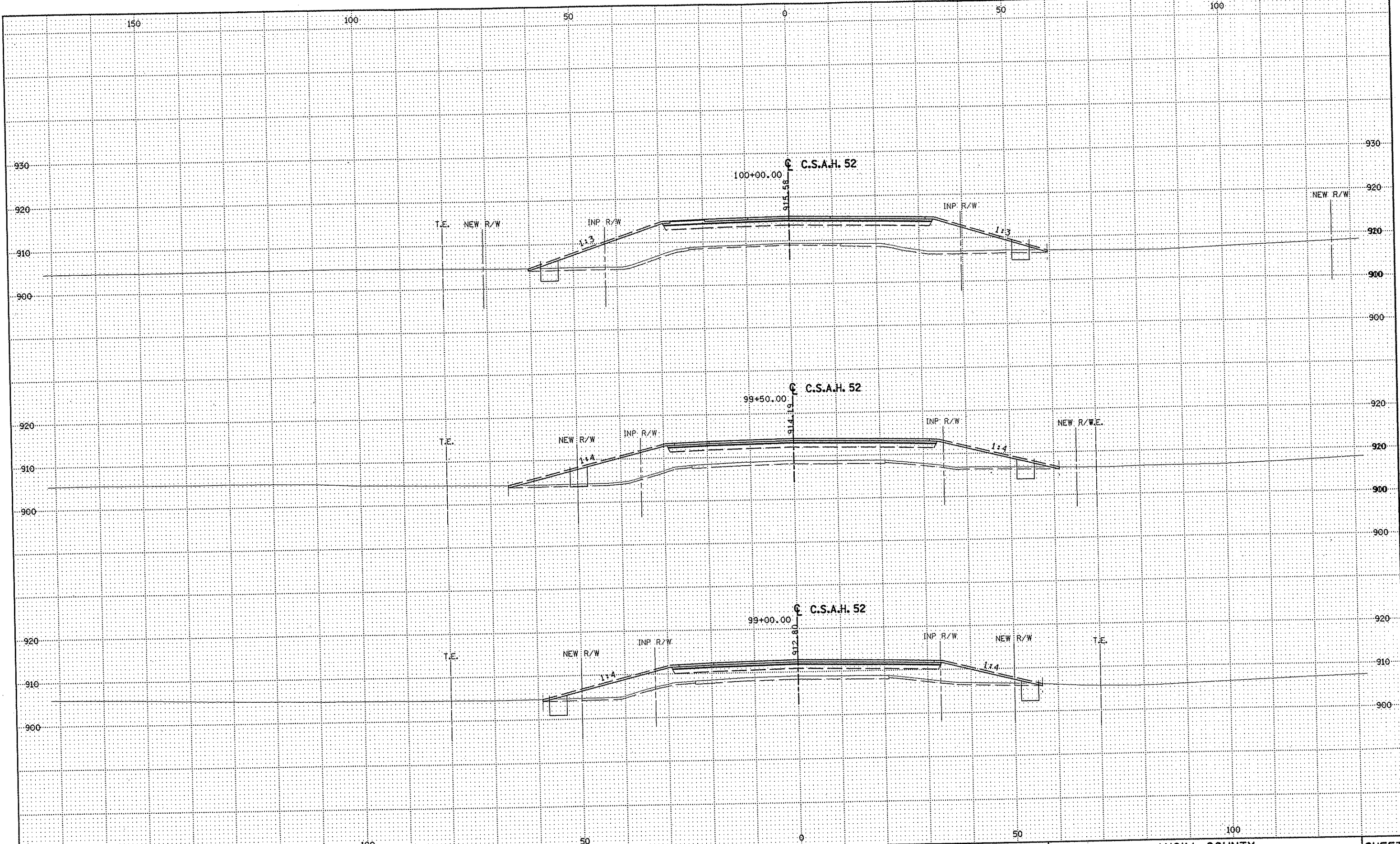
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DESIGN BY	RRC	DATE	9-20-01
CHECKED BY	JMW	DATE	9-24-01

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S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

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 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 97+00 TO STA. 98+50

SHEET
 374
 OF
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NO	DATE	BY	CKD	APPR	REVISION

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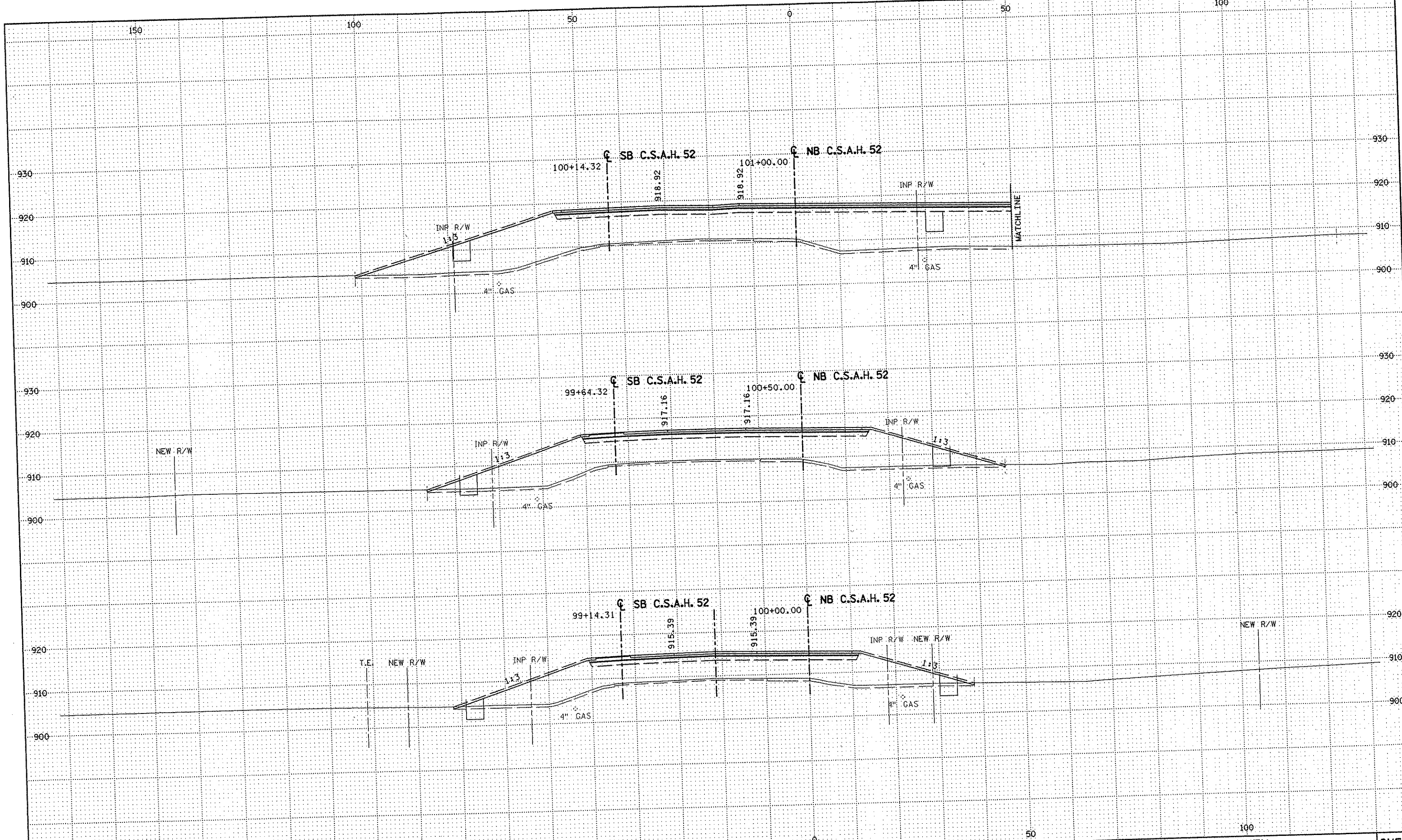
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 99+00 TO STA. 100+00

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 375
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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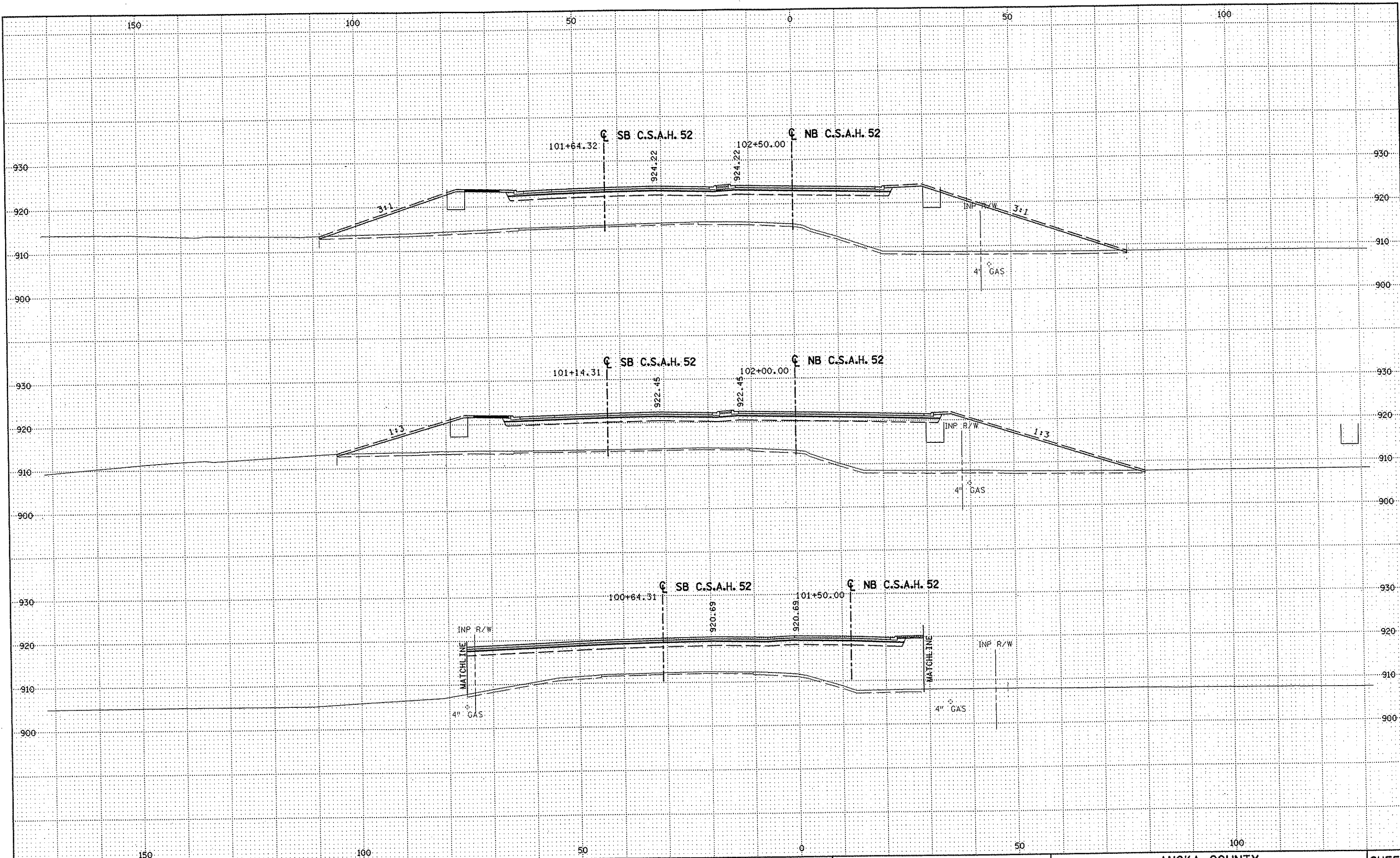
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 100+00 TO STA. 101+00
 SHEET
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 OF
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NO	DATE	BY	CKD	APPR	REVISION

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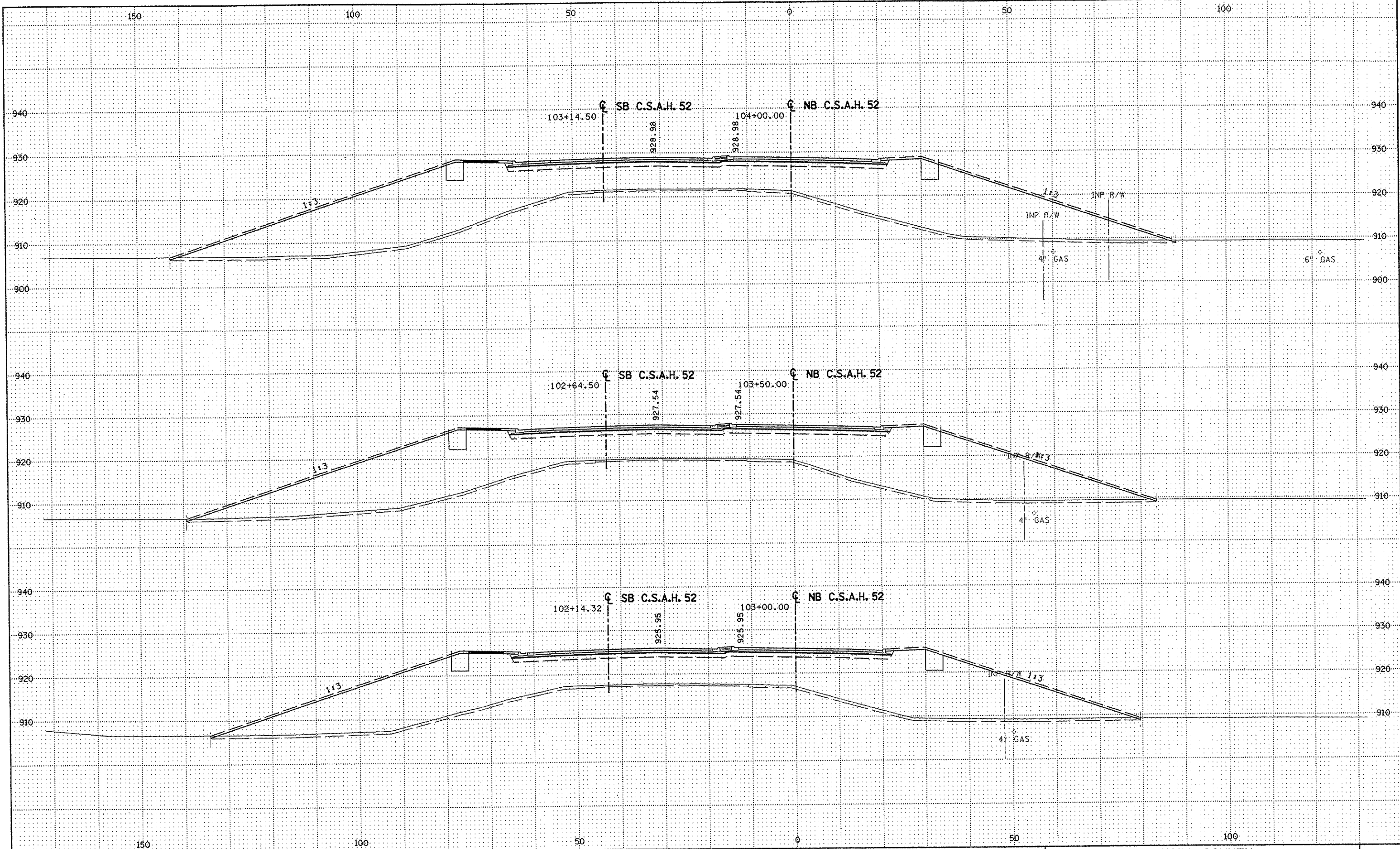
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 101+50 TO STA. 102+50

SHEET
 377
 OF
 559



NO	DATE	BY	CRD	APPR	REVISION

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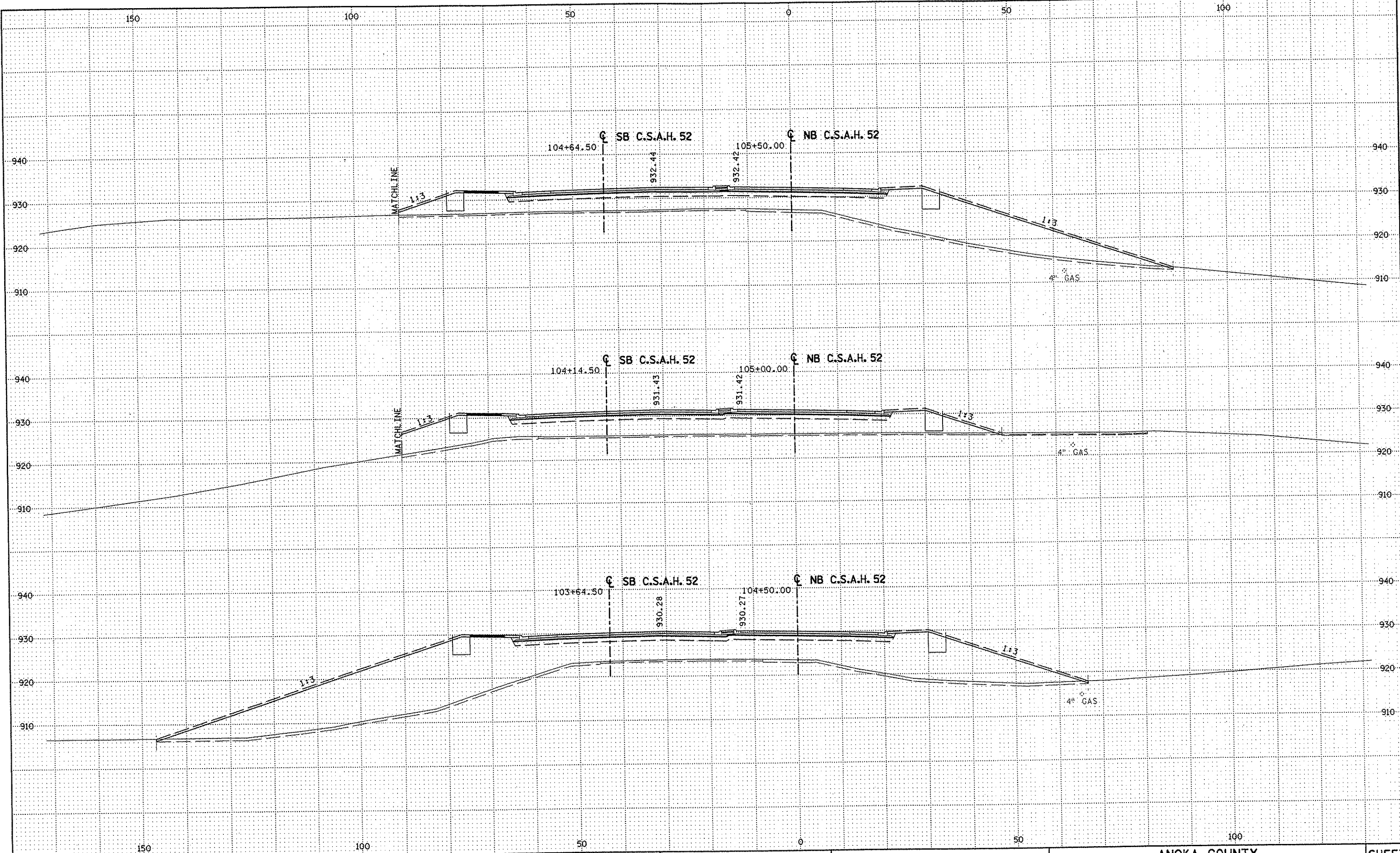
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
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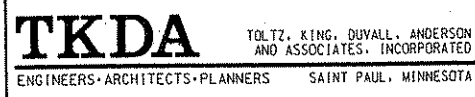
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 OF
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NO	DATE	BY	CKD	APPR	REVISION

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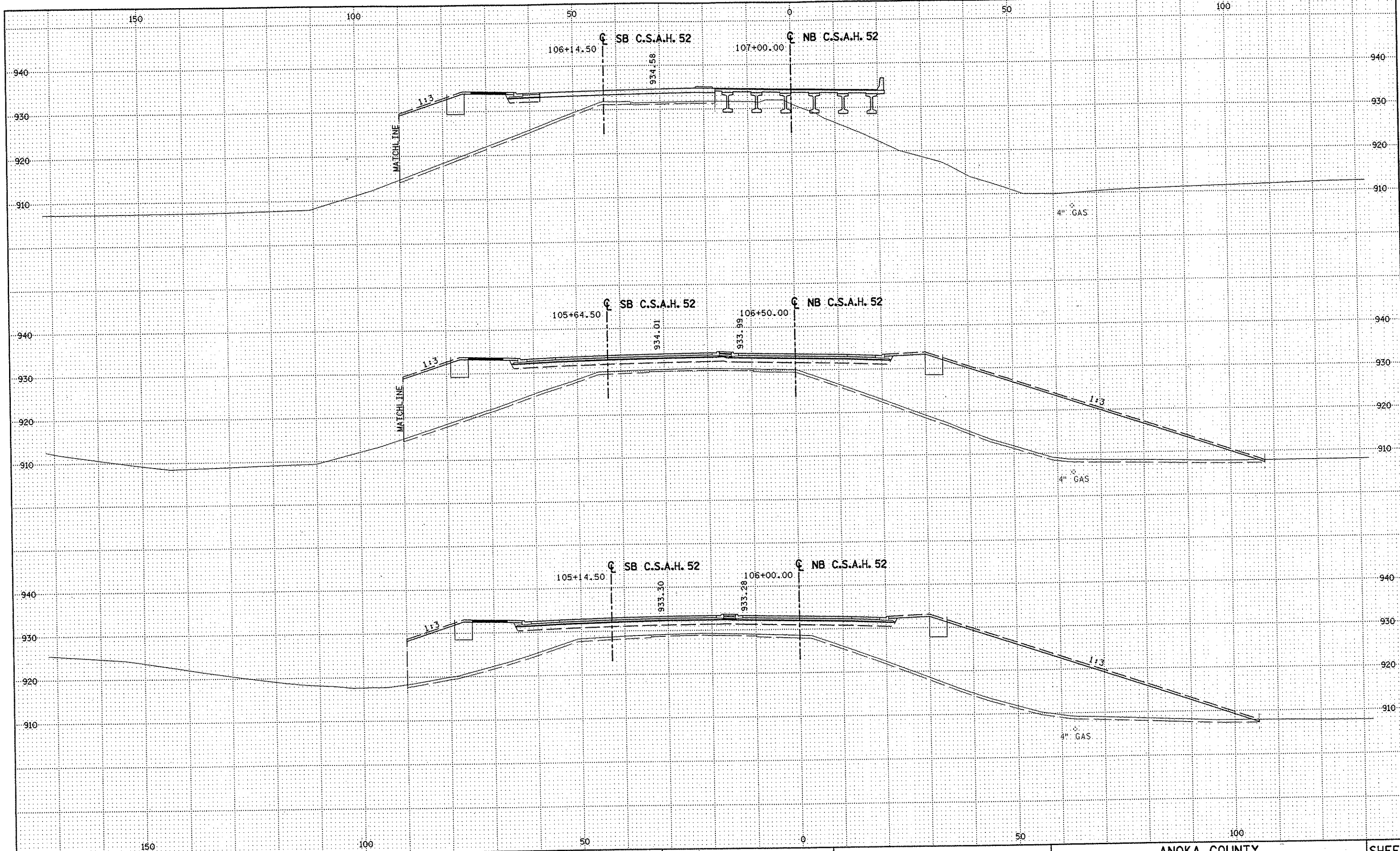
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 S.A.P. 106-020-021, 106-020-022



ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 104+50 TO STA. 105+50

SHEET
379
OF
559

NAME: K:\a-f\AnokaCty\1174901\hwy-brdg\part4\roadway3\drawings\sec\03\104800.dwg



NO	DATE	BY	CKD	APPR	REVISION

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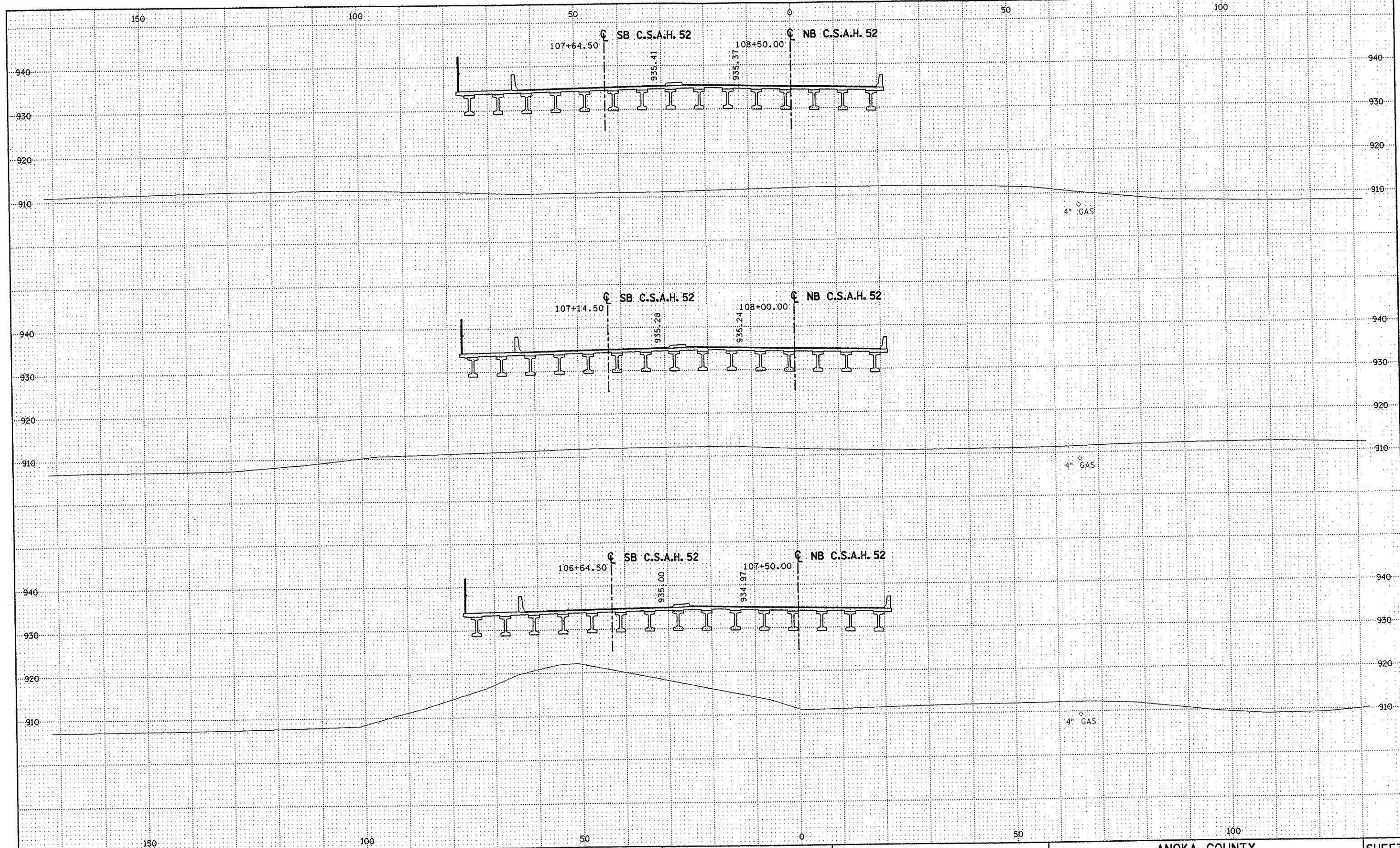
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TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 106+00 TO STA. 107+00

SHEET
 380
 OF
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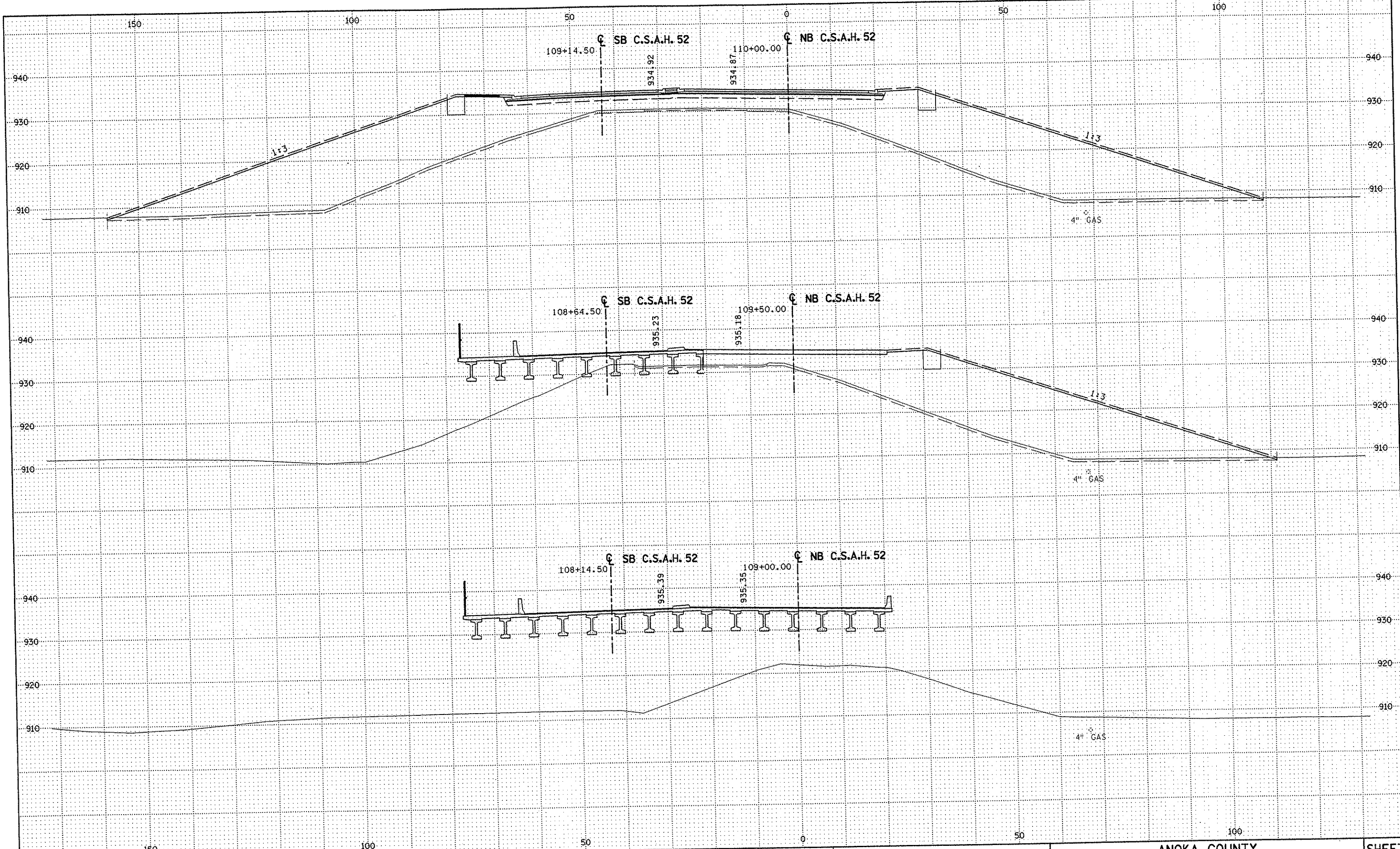
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S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 107+50 TO STA. 108+50

SHEET
 381
OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\par+4\roadway3\drawings\sec\02\1148002.dwg



NO	DATE	BY	CKD	APPR	REVISION

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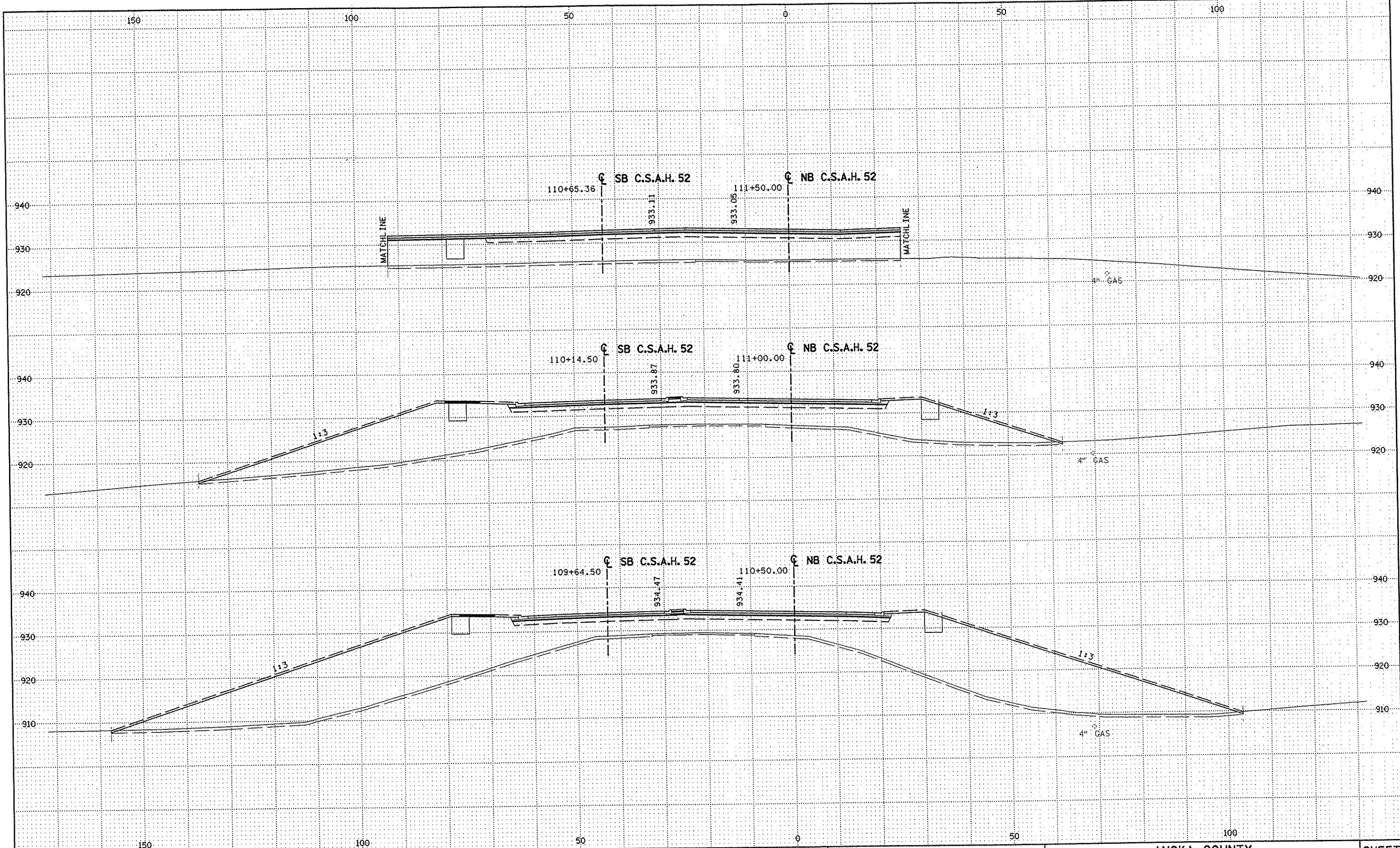
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 109+00 TO STA. 110+00

SHEET
 382
 OF
 559

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NO	DATE	BY	CKD	APPR	REVISION

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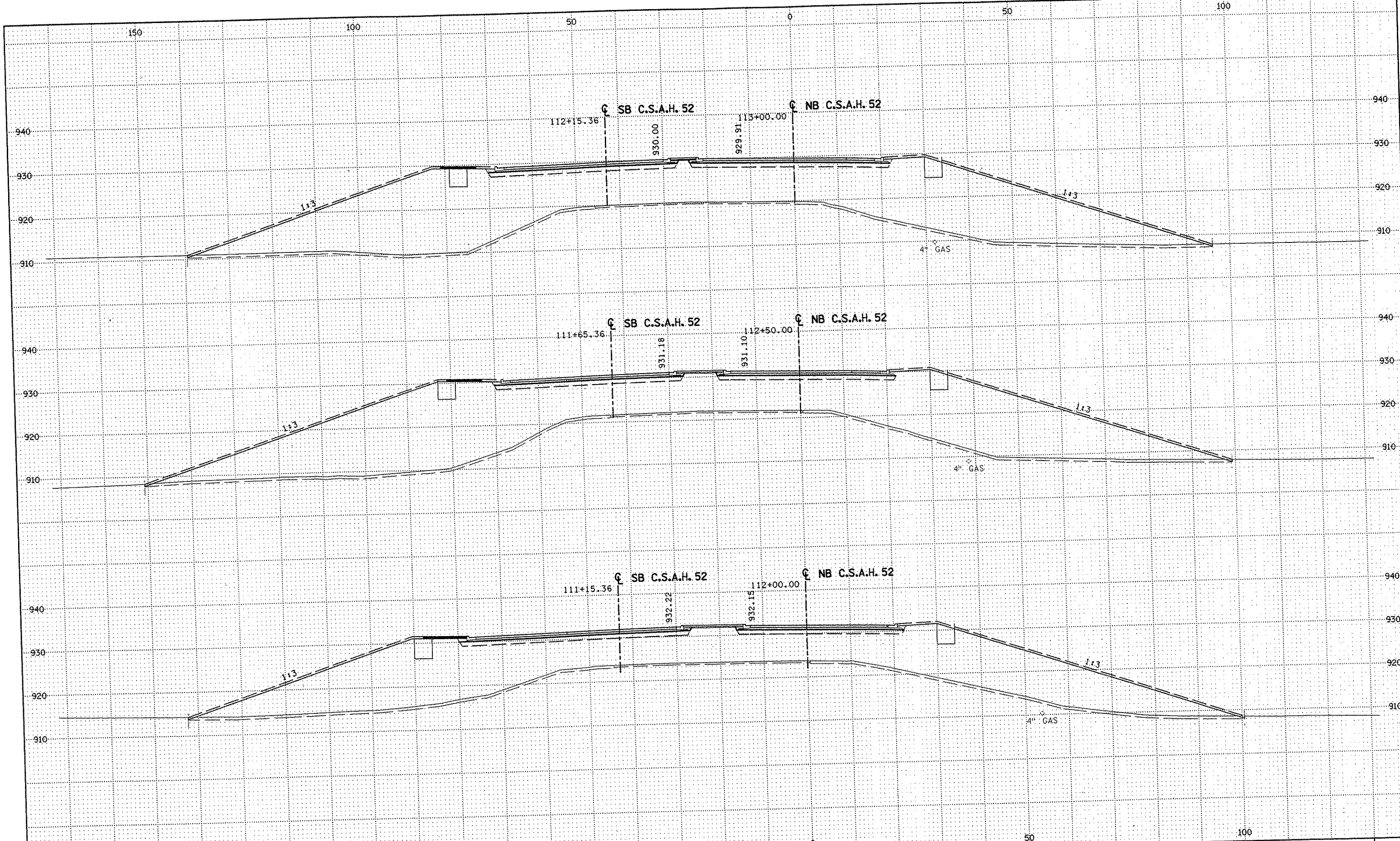
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUWALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 110+50 TO STA. 111+50

SHEET
 383
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
 DESIGN BY RRC DATE 11-12-01
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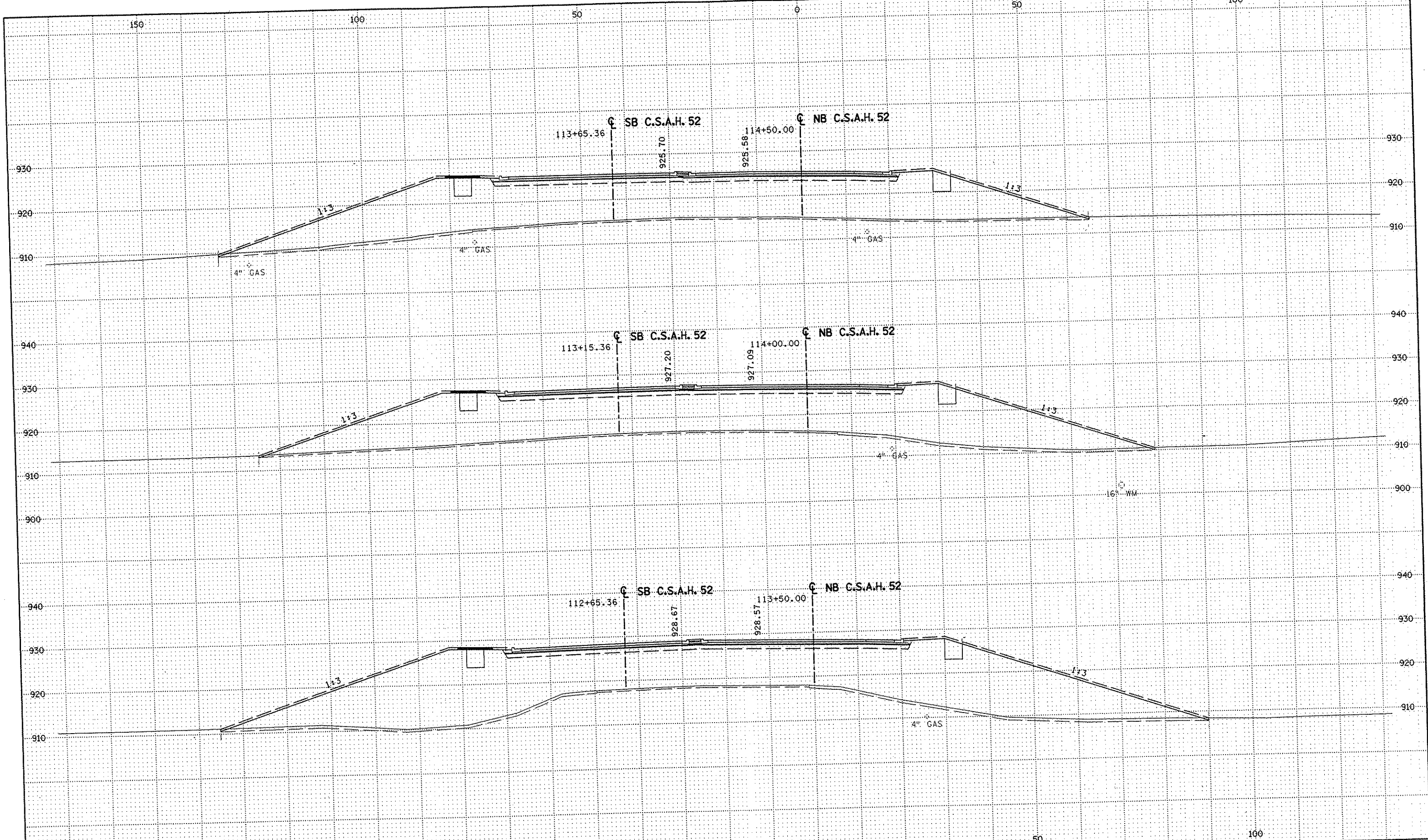
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 112+00 TO STA. 113+00

SHEET
 384
OF
 559

NAME: K:\a-f\Anoka\ty\1174901\hwy-brdg\part4\roadway3\drawings\csec\csec112+15.36.dwg



NO	DATE	BY	CKD	APPR	REVISION

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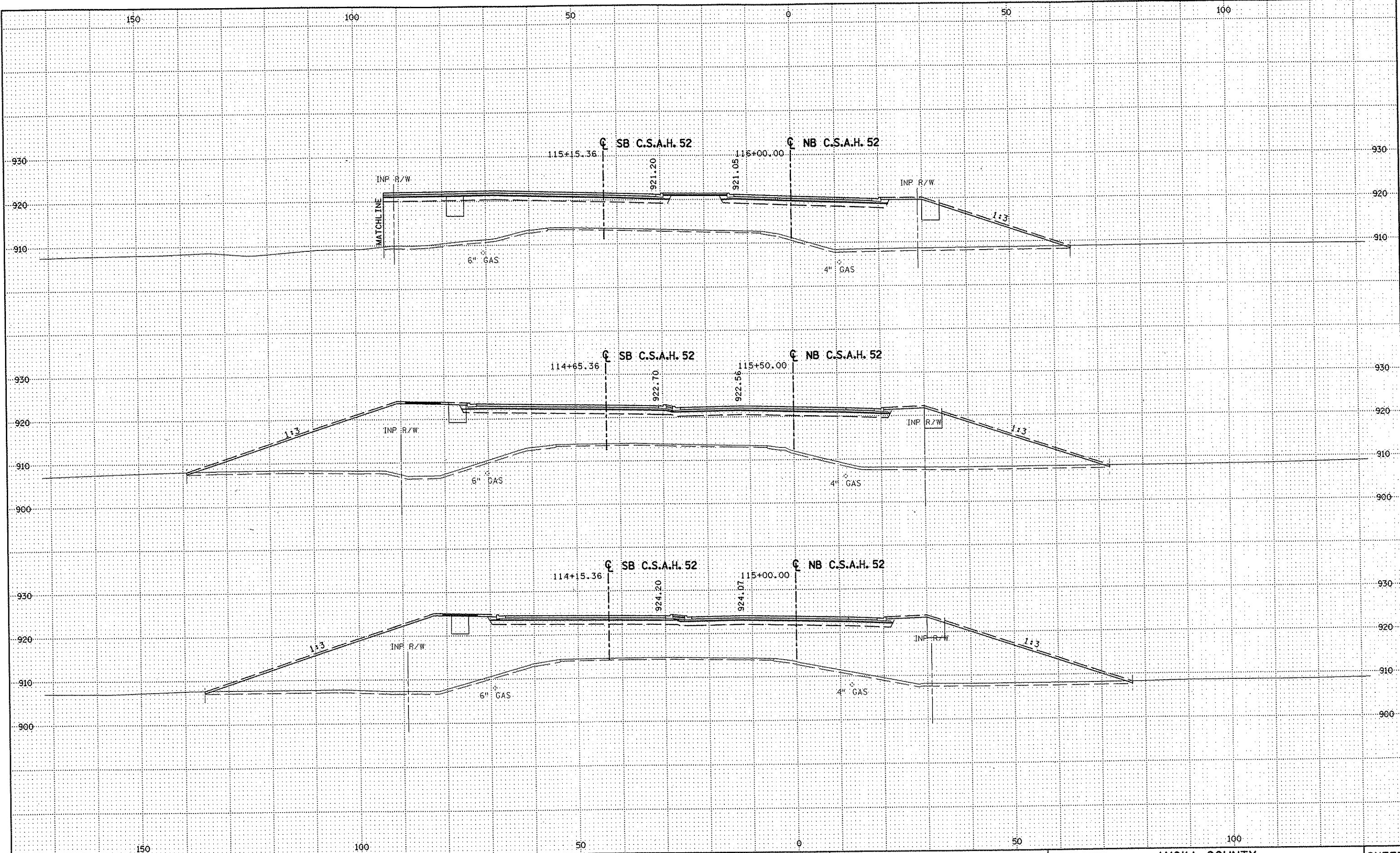
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 113+50 TO STA. 114+50

SHEET 385 OF 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\sec\88\148000.dwg

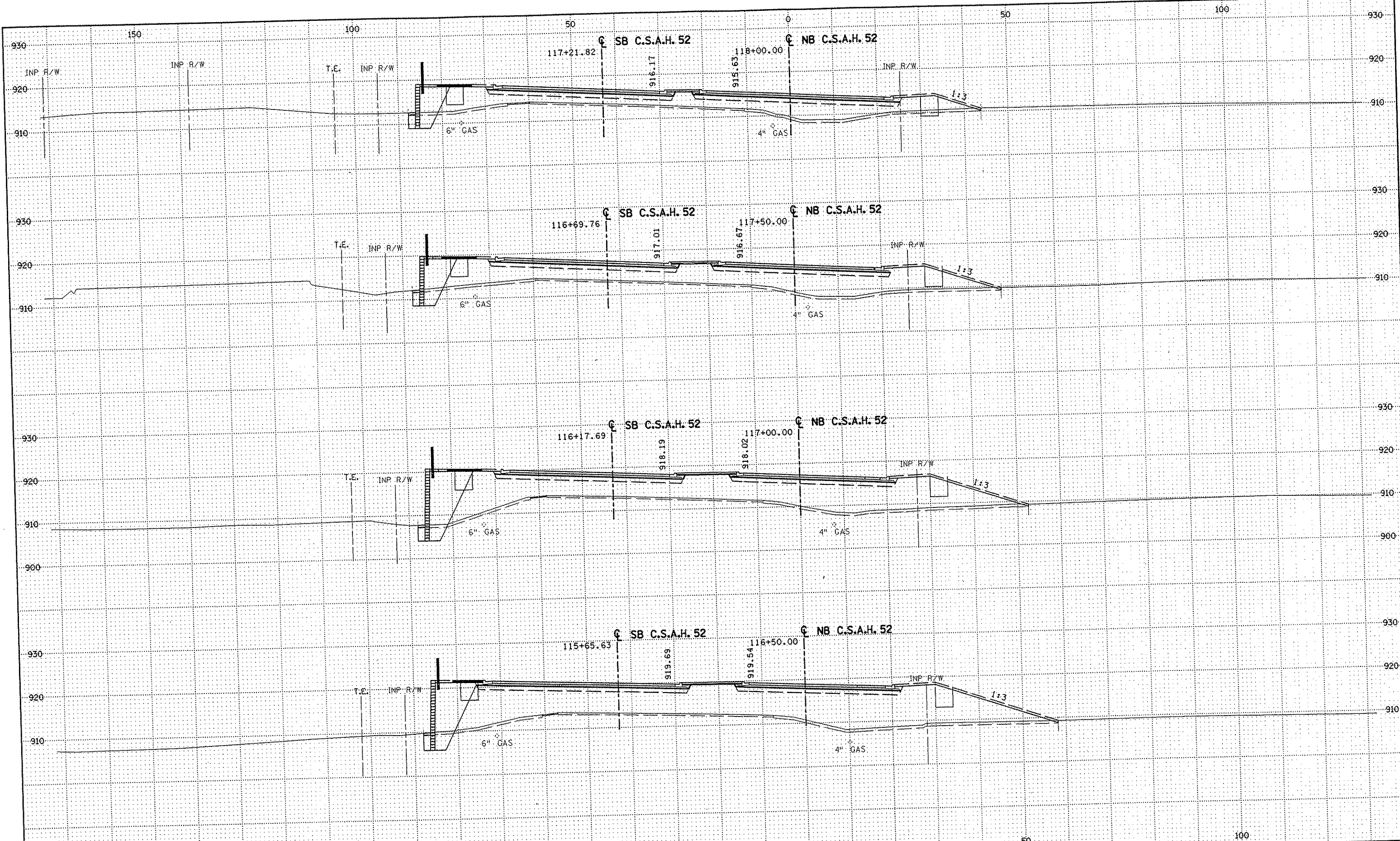
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 DESIGN BY RRC DATE 11-12-01
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 115+00 TO STA. 116+00

SHEET
 386
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: R:\a-f\AnokaCty\1174901\hwy-brdg\part4\roadway3\drawings\sec\-11800.dwg

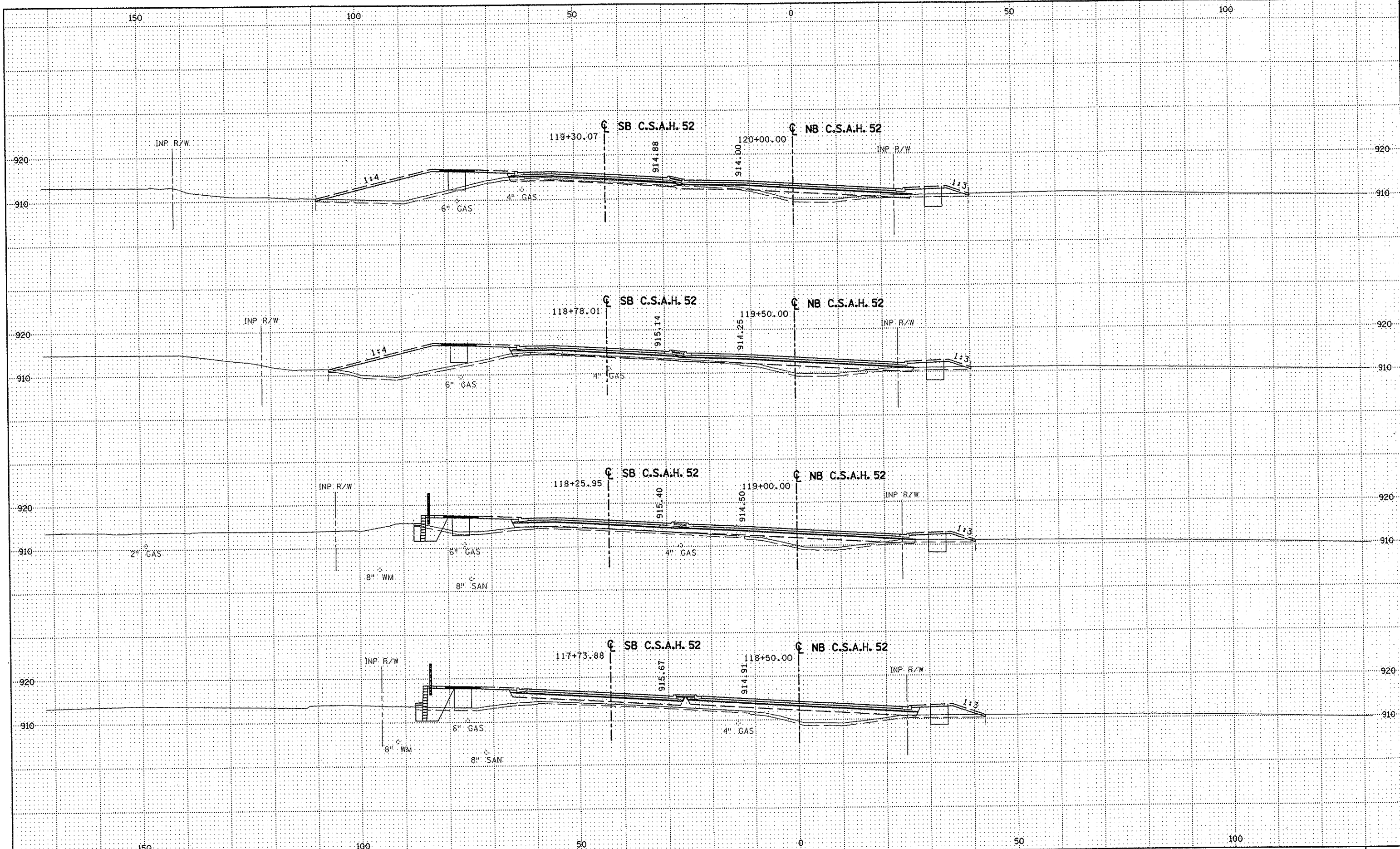
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DESIGN BY	RRG	DATE	11-12-01
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S.P.	0280-50 (TH 35W)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 116+50 TO STA. 118+00

SHEET
 387
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\a-f\Anoka Cty\1174901\hwy-brdg\part4\roadway3\drawings\sec\1174901.dwg

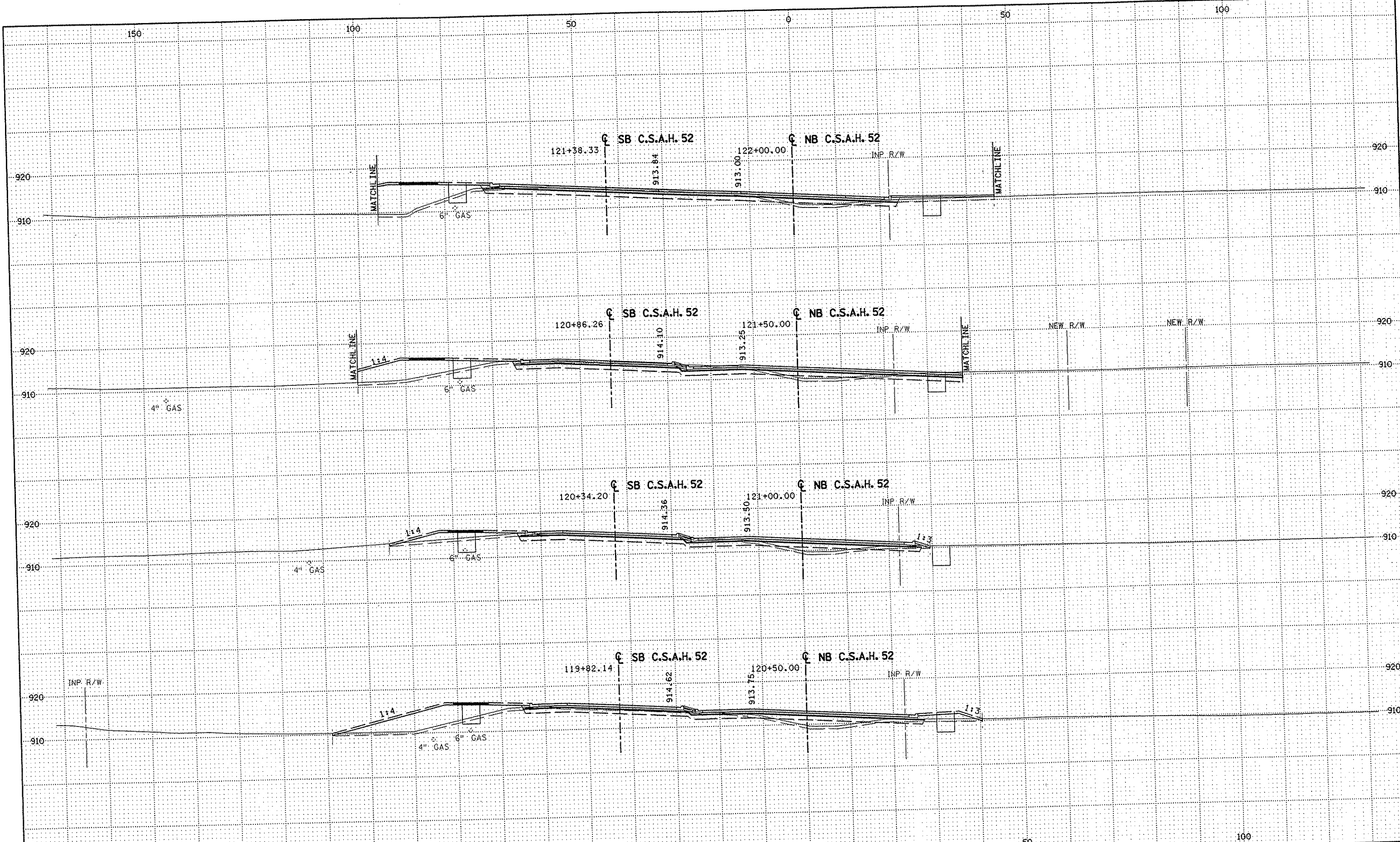
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 118+50 TO STA. 120+00

SHEET
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 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\xsec\0280-50.dwg

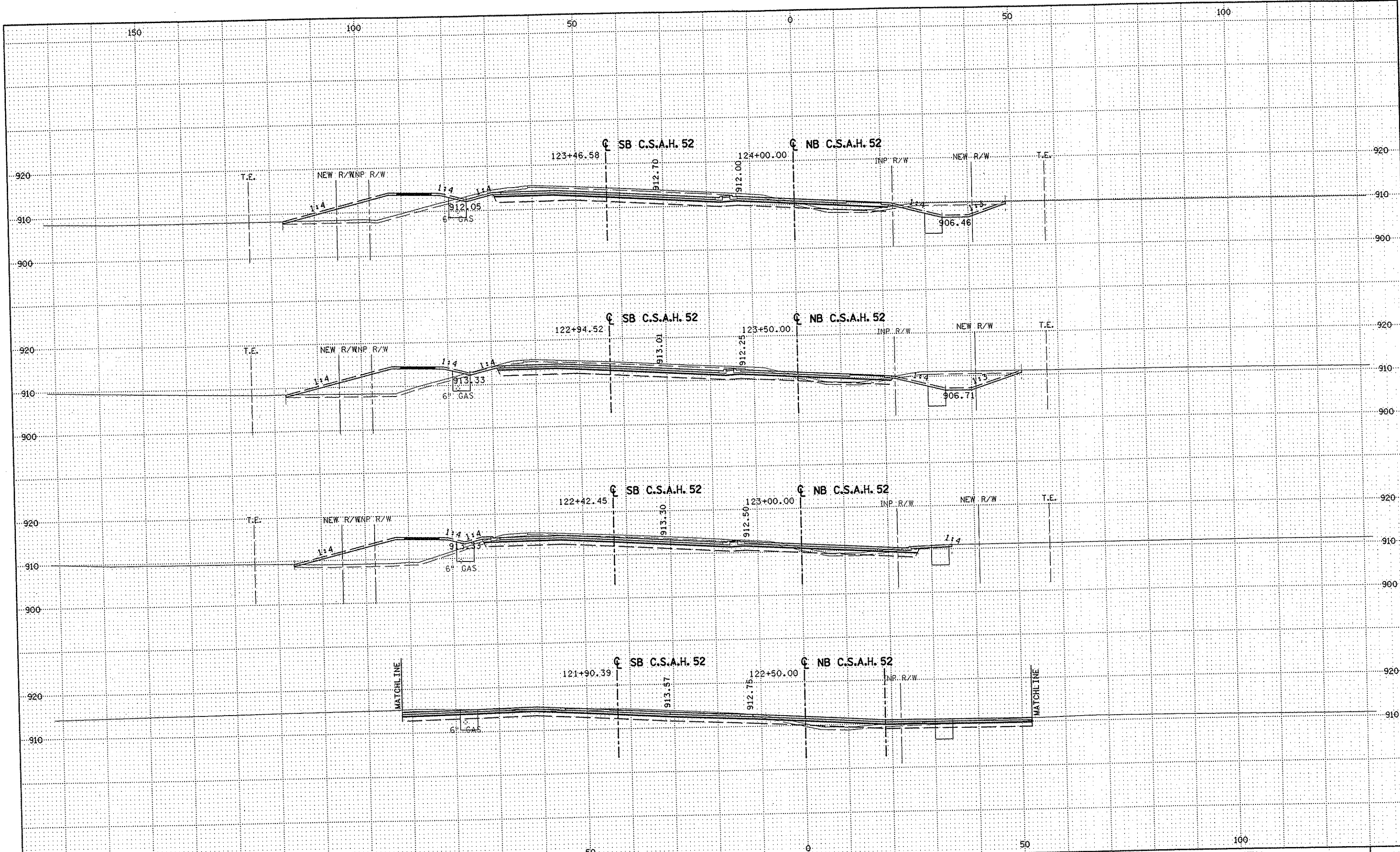
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DESIGN BY	RRC	DATE	11-12-01
CHECKED BY	JMW	DATE	11-12-01

S.P.	0280-50 (TH 35W)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUYALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 120+50 TO STA. 122+00

SHEET
 389
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\a-f\Anoka Cty\1174901\hwy-brdg\par t4\roadway3\drawings\sec\02\1174901.dwg

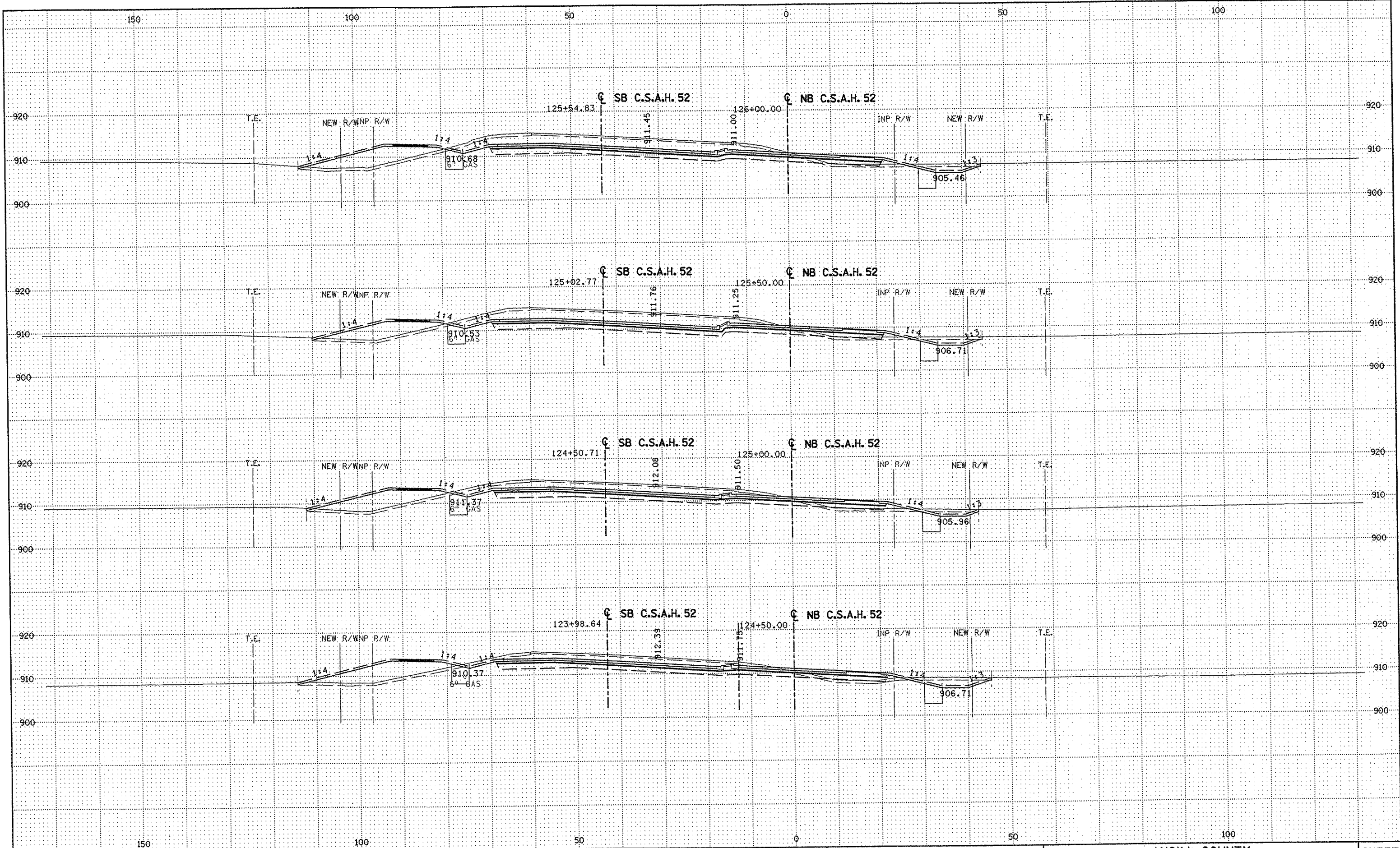
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 122+50 TO STA. 124+00

SHEET
 390
 OF
 559



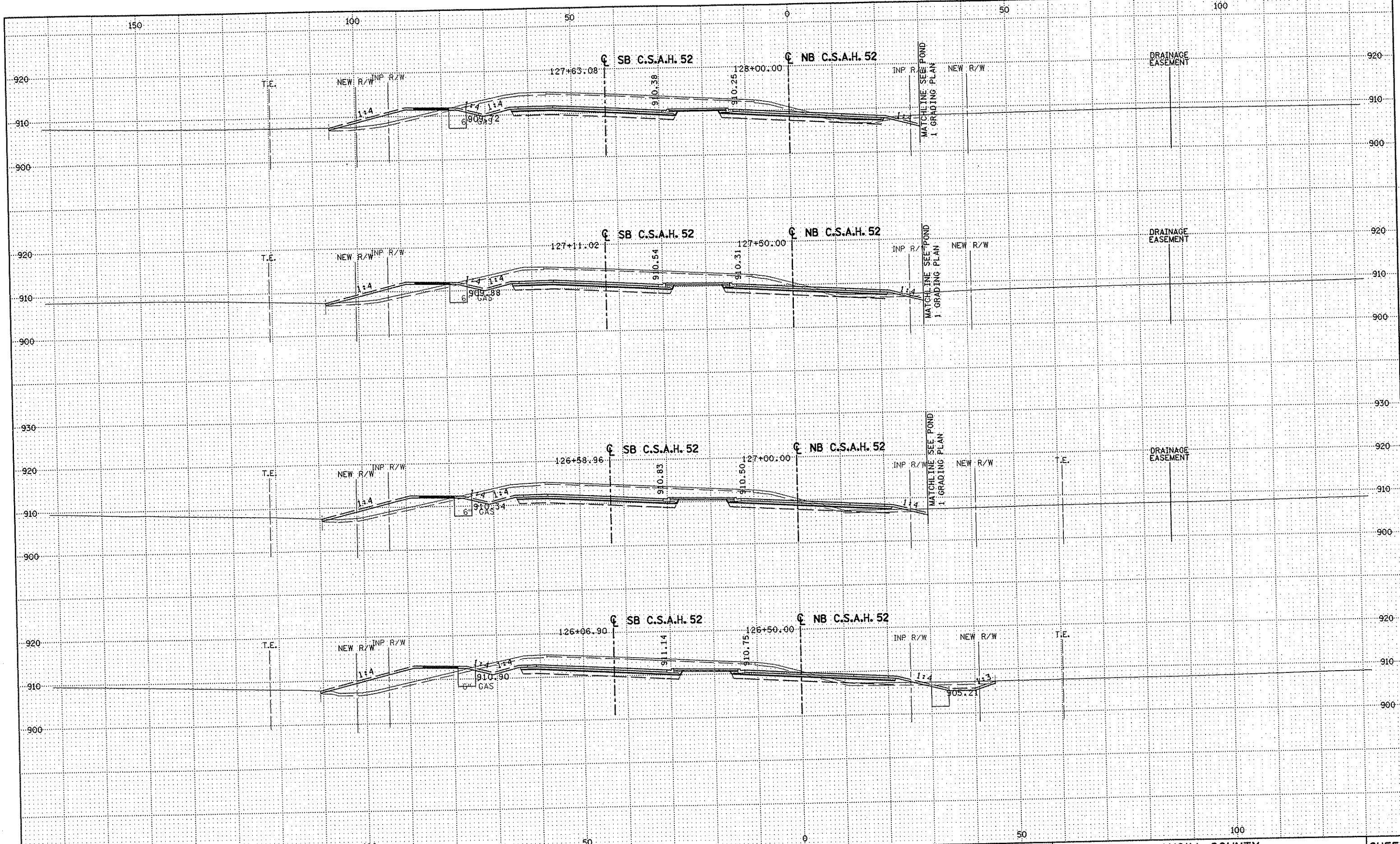
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 S.P. 90-080-11
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 124+50 TO STA. 126+00
SHEET 391 OF 559

NAME: k:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\asec\24p14\2002.dwg



NO	DATE	BY	CKD	APPR	REVISION

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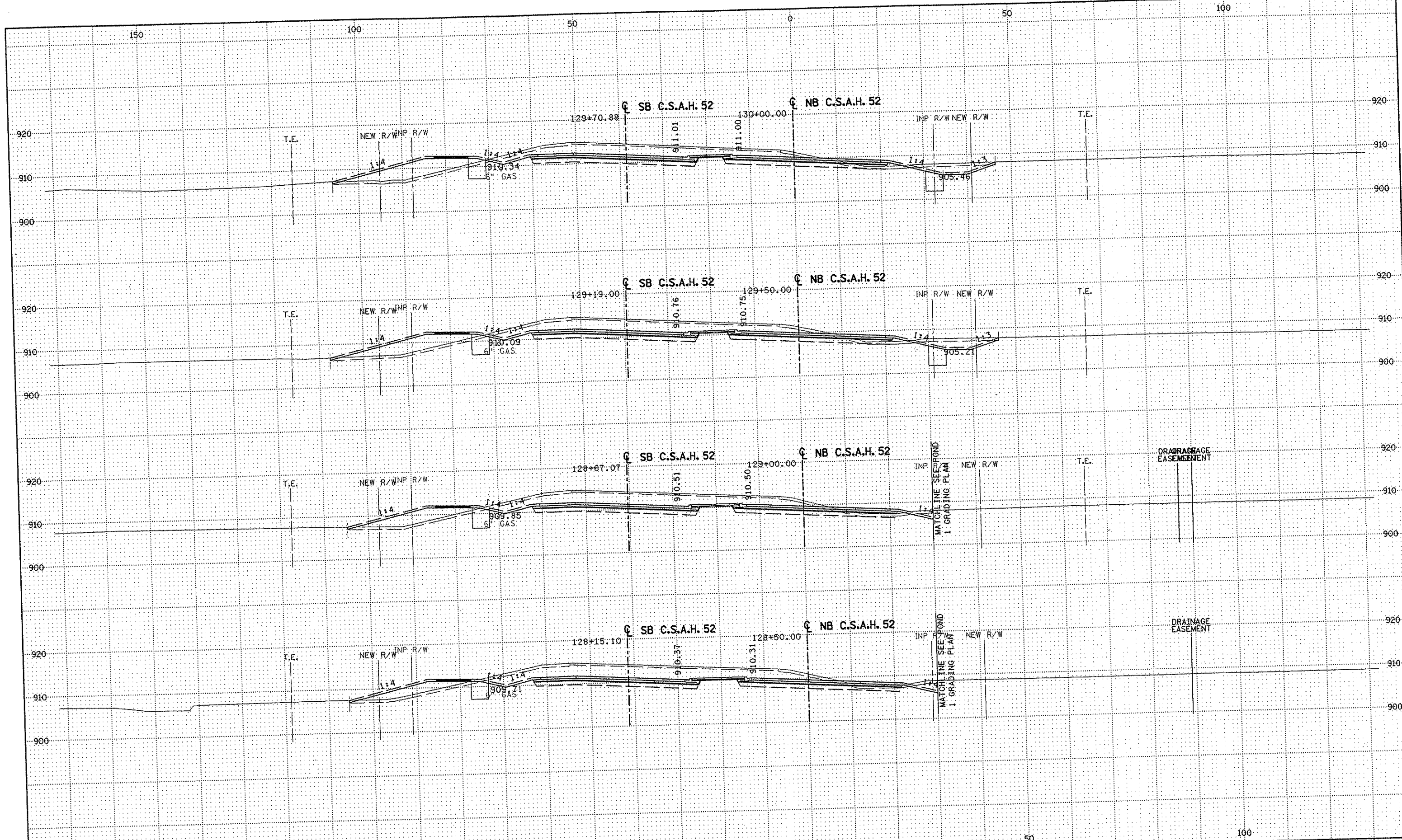
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 126+50 TO STA. 128+00

SHEET
 392
 OF
 559



NO	DATE	BY	CHKD	APPR	REVISION

NAME: K:\a-f\AnokaCty\1174901\hwy-brdg\part4\roadway3\drawings\sec\sp14\80.dwg

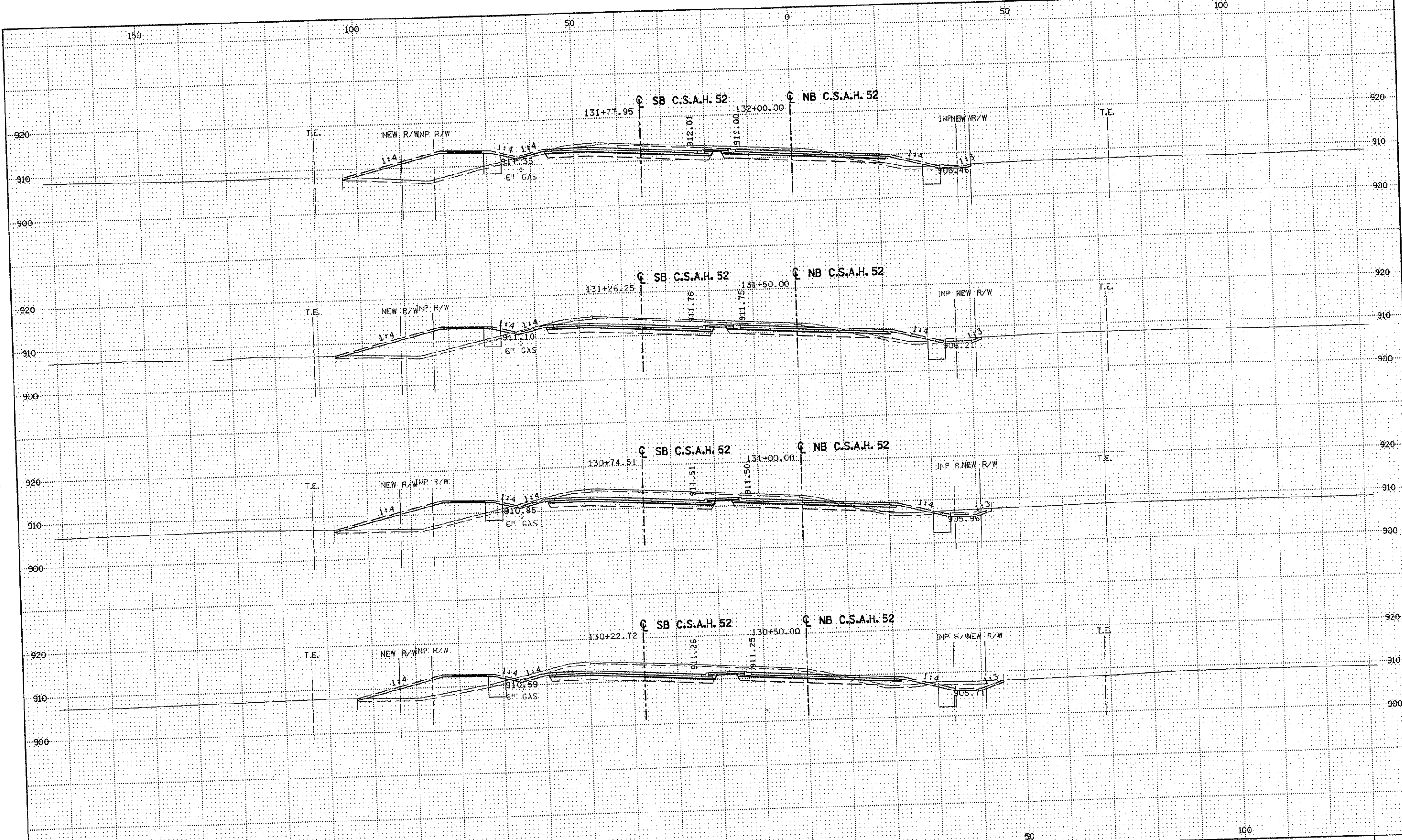
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TGLTZ, KING, OLIVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 128+50 TO STA. 130+00

SHEET
 393
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\a-f\Anoka\ty\1174901\hwy-brdg\part4\roadway3\drawings\sec\24\1d4800.dwg

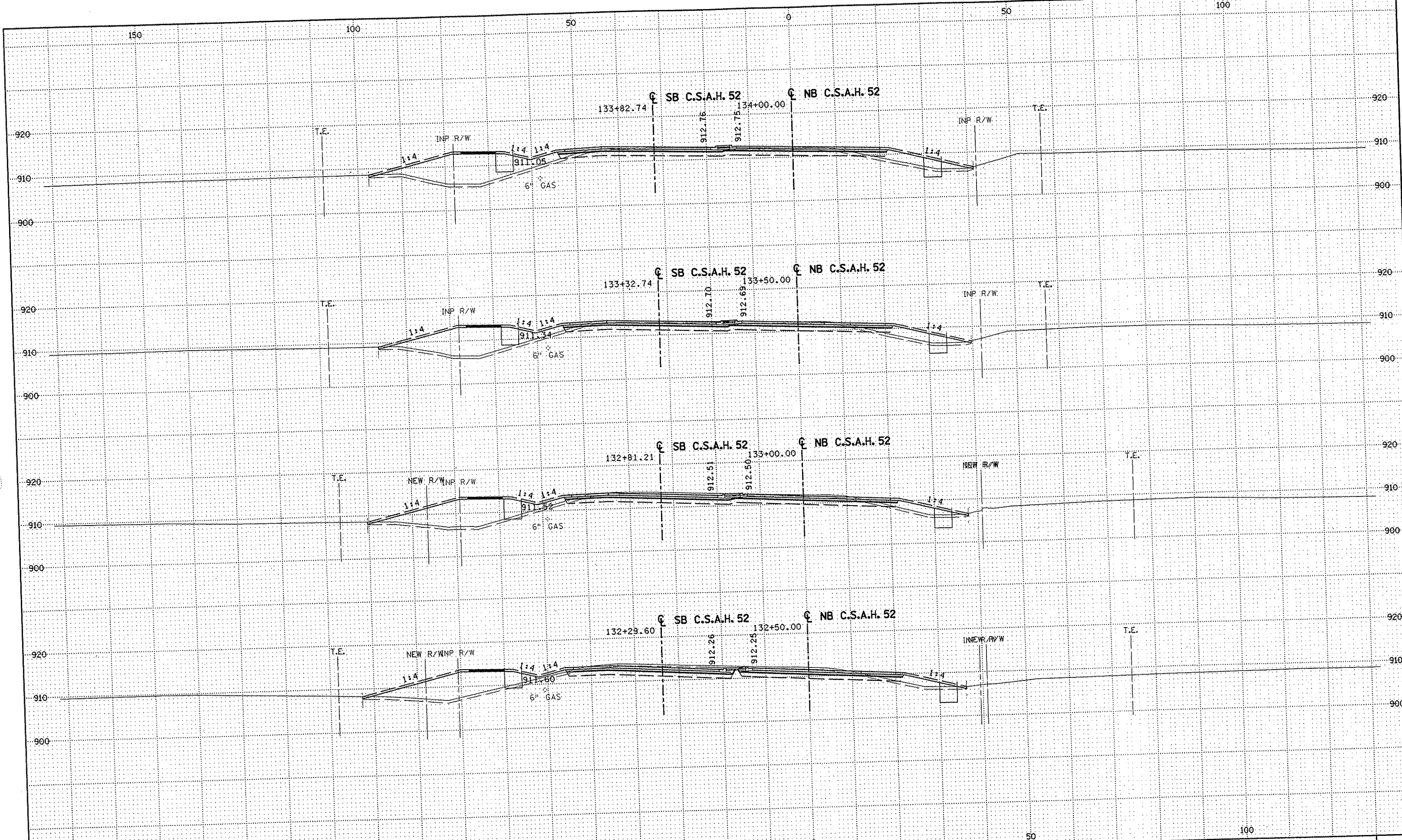
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUYALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 130+50 TO STA. 132+00

SHEET
 394
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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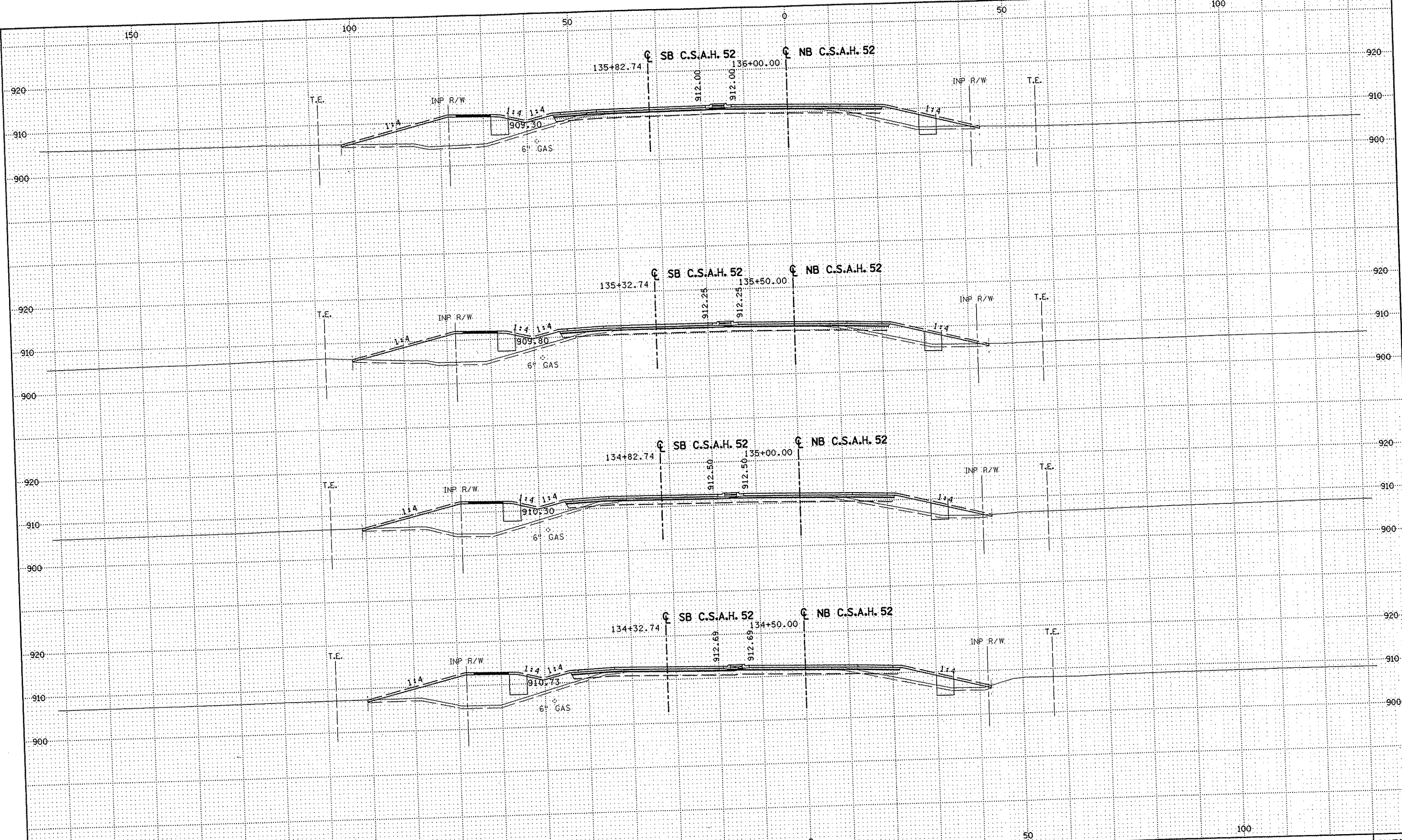
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 132+50 TO STA. 134+00

SHEET
 395
 OF
 559

NAME: K:\a-f\Anoka\1174901\hwy-brdg\part4\roadway3\drawings\xsec\08\104000.dwg



NO	DATE	BY	CKD	APPR	REVISION

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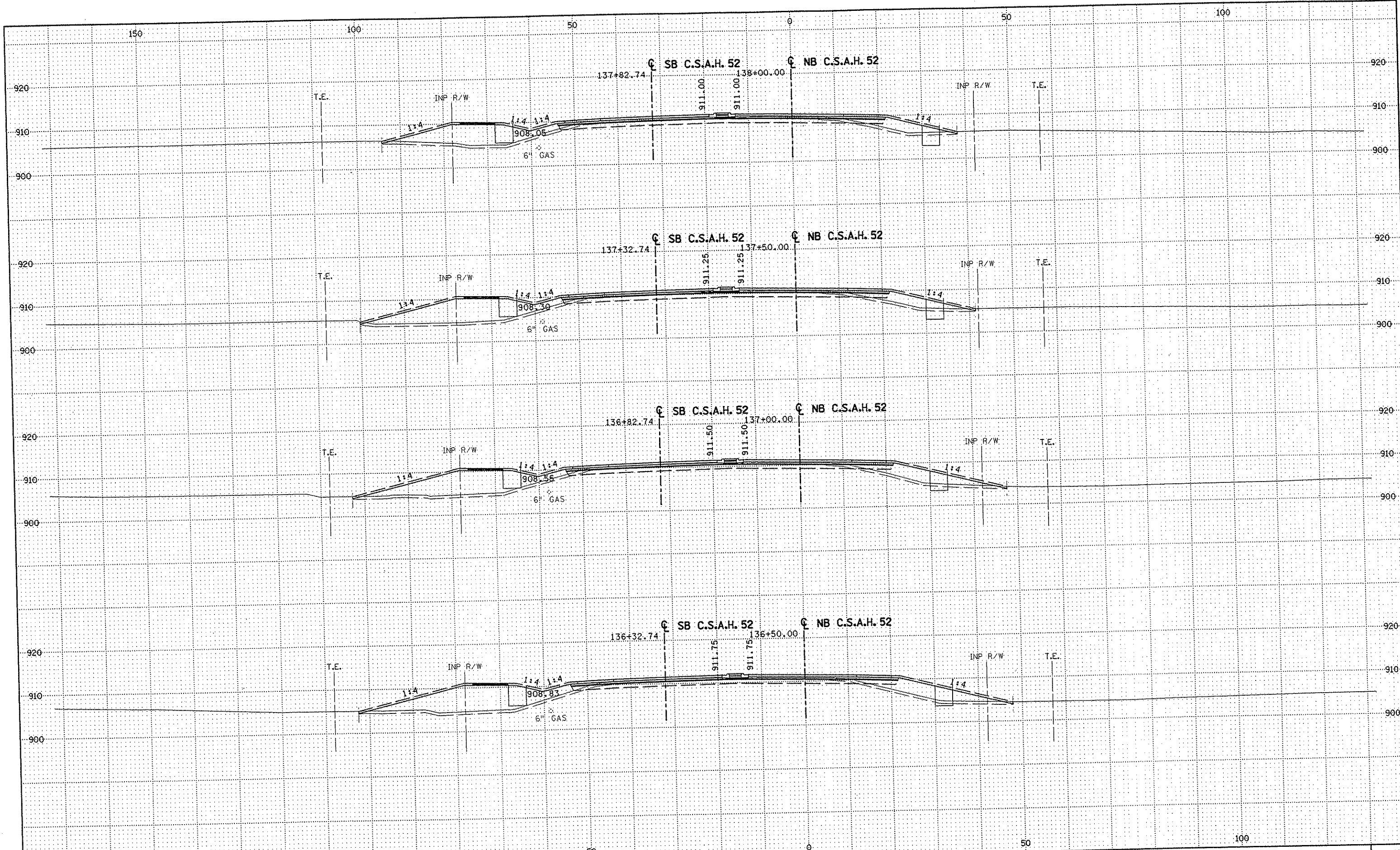
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 134+50 TO STA. 136+00

SHEET
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 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY	RRC	DATE	11-12-01
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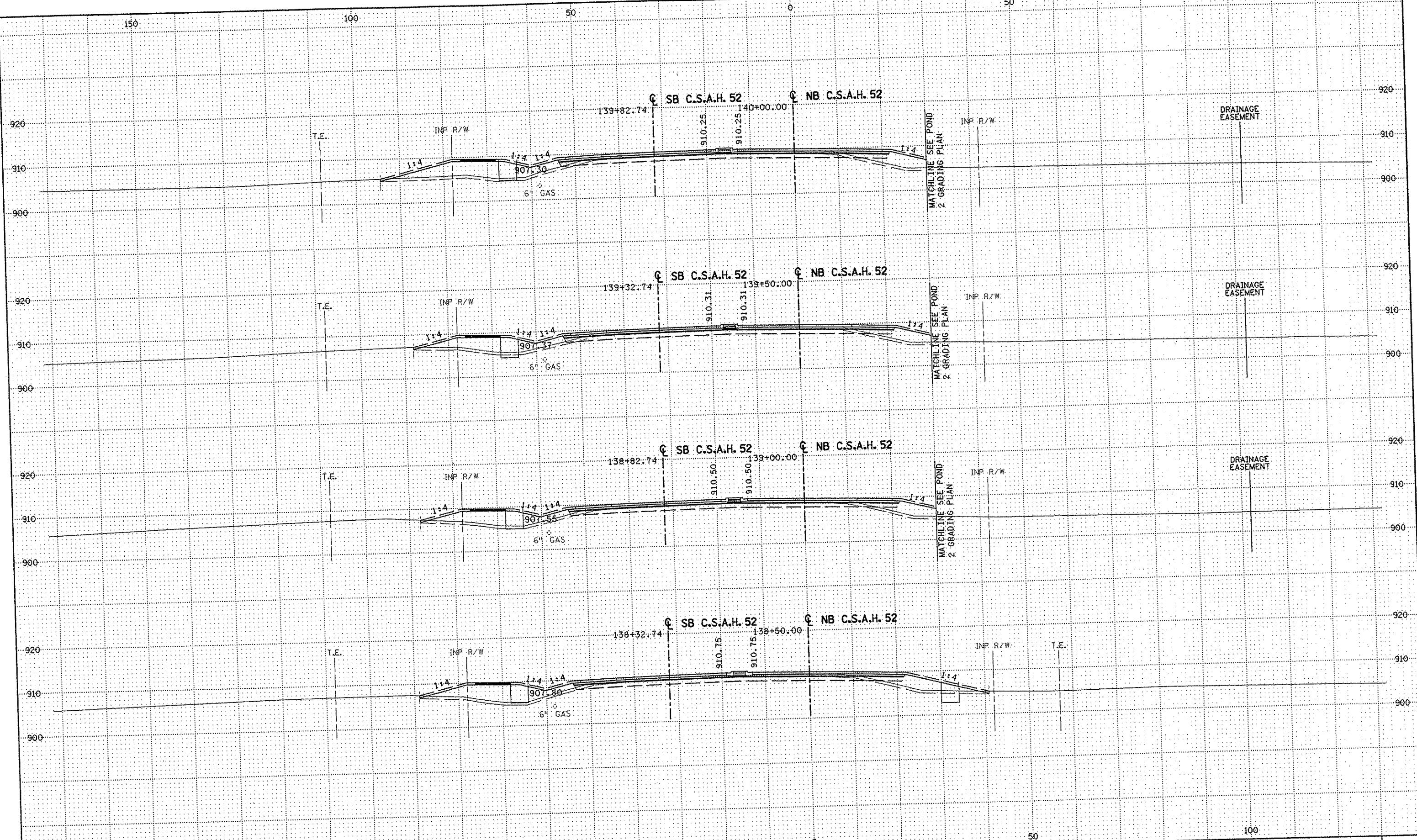
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S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 136+50 TO STA. 138+00

SHEET
 397
 OF
 559

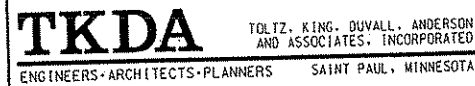
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NO	DATE	BY	CKD	APPR	REVISION

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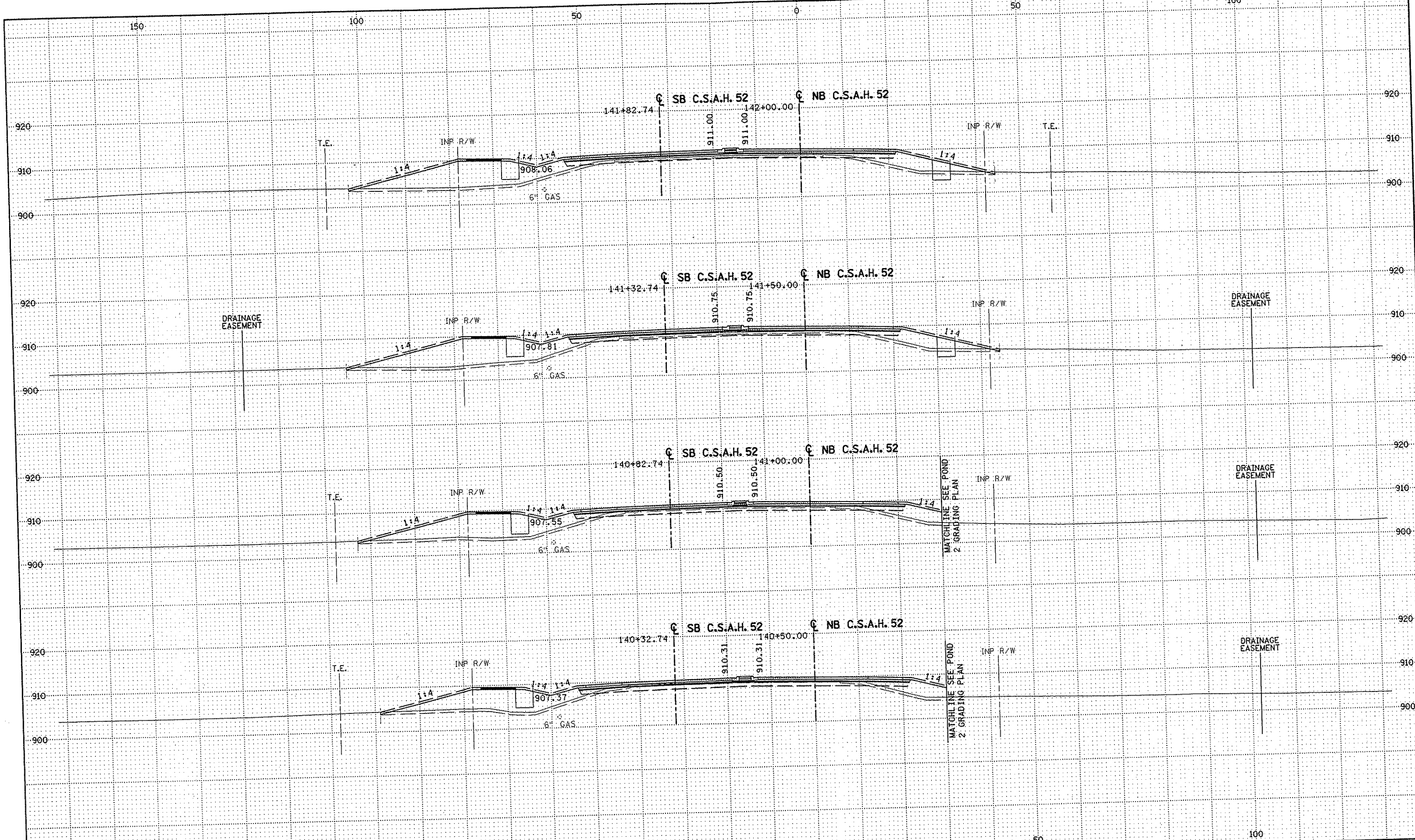
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 S.A.P. 106-020-021, 106-020-022



ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 138+50 TO STA. 140+00

SHEET
398
OF
559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\sec\028050.dwg



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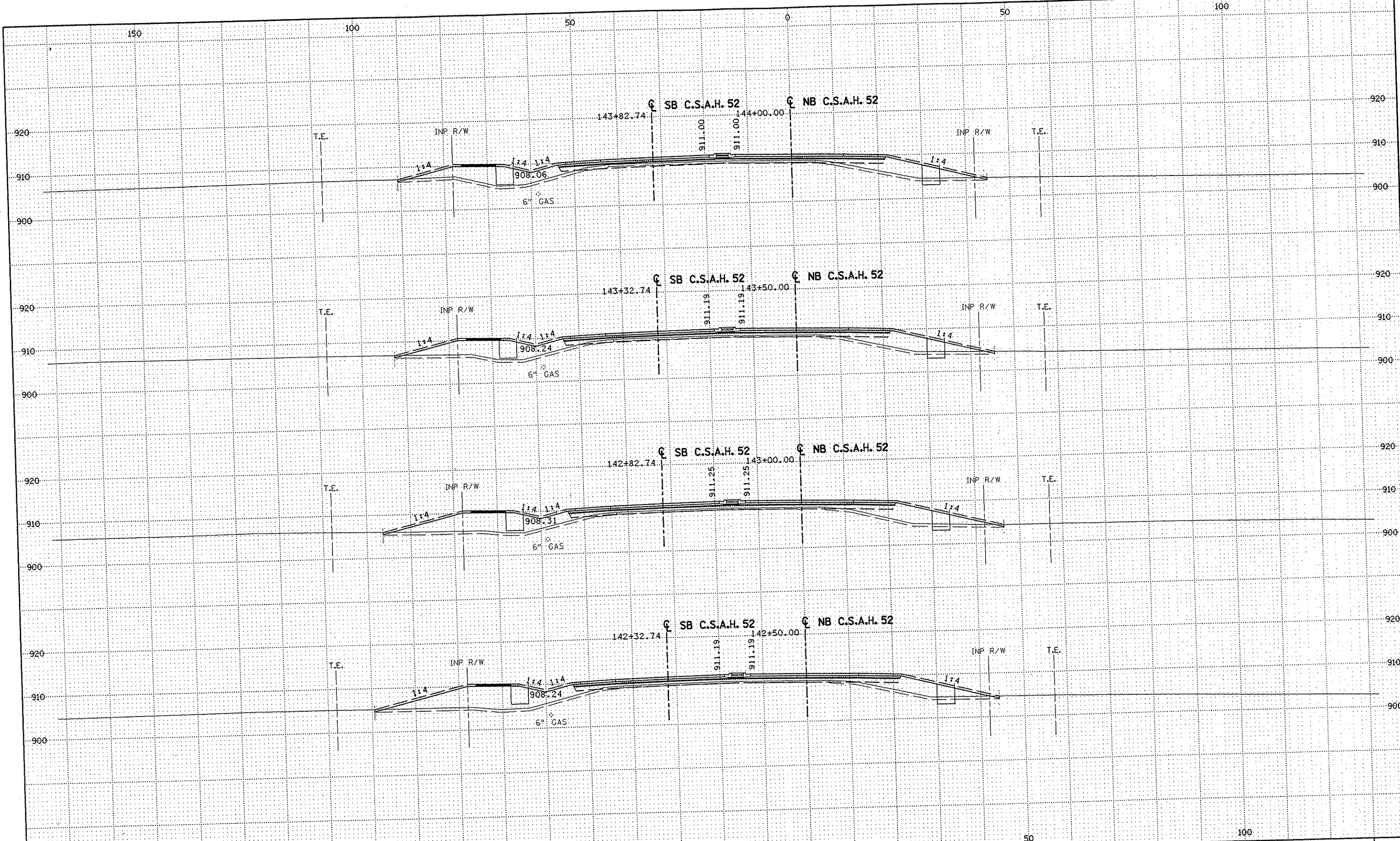
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 140+50 TO STA. 142+00

SHEET
 399
 OF
 559

NAME: K:\a-f\AnokaCty\1174901\hwy-br dg\par+4\roadway3\drawings\sec\84610480.dwg



NO	DATE	BY	CKD	APPR	REVISION

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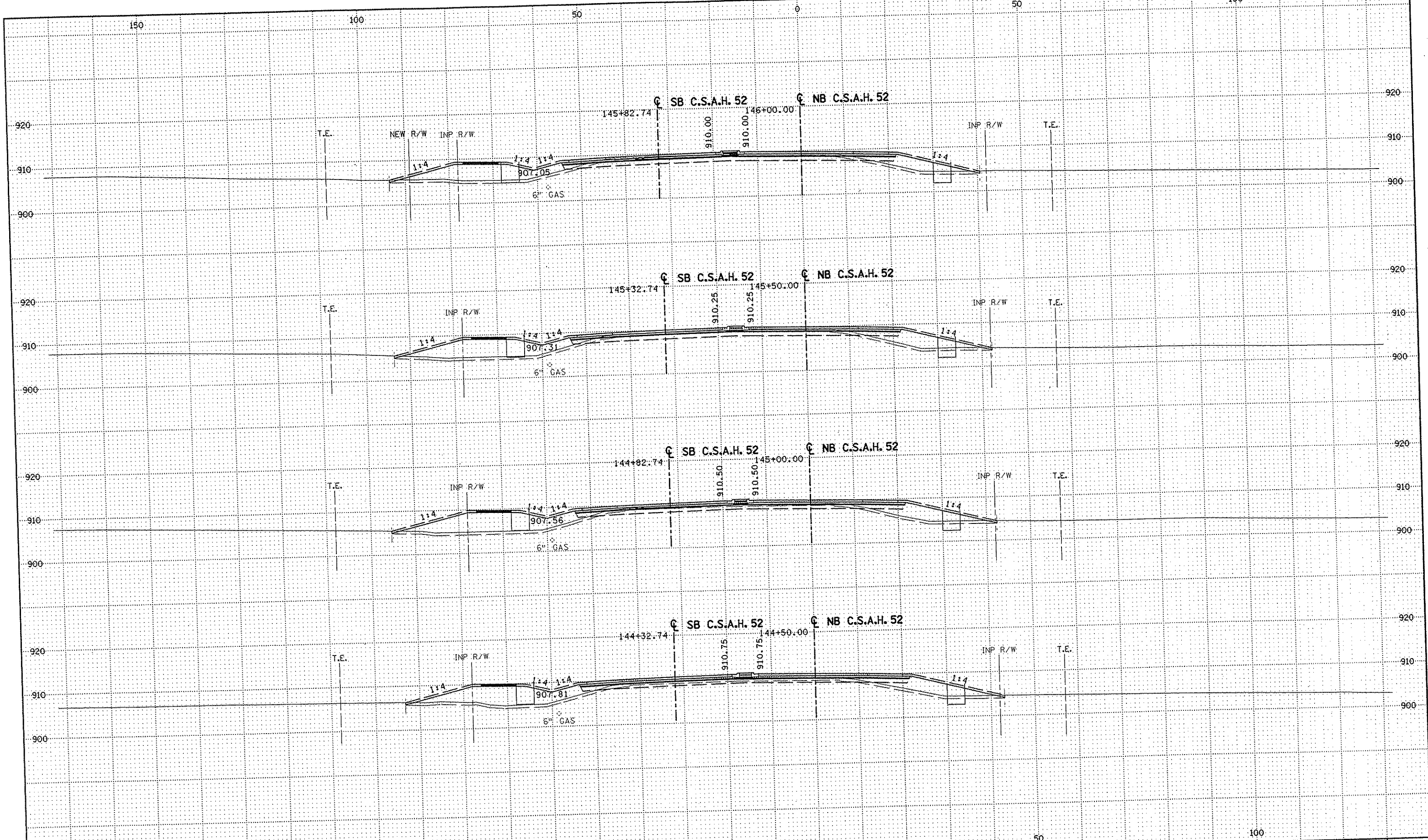
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 142+50 TO STA. 144+00
 SHEET
 400
 OF
 559

NAME: K:\a-f\Anoka\1174901\hwy-brdg\part4\roadway3\drawings\sec\ssid4800.dwg



NO	DATE	BY	CKD	APPR	REVISION

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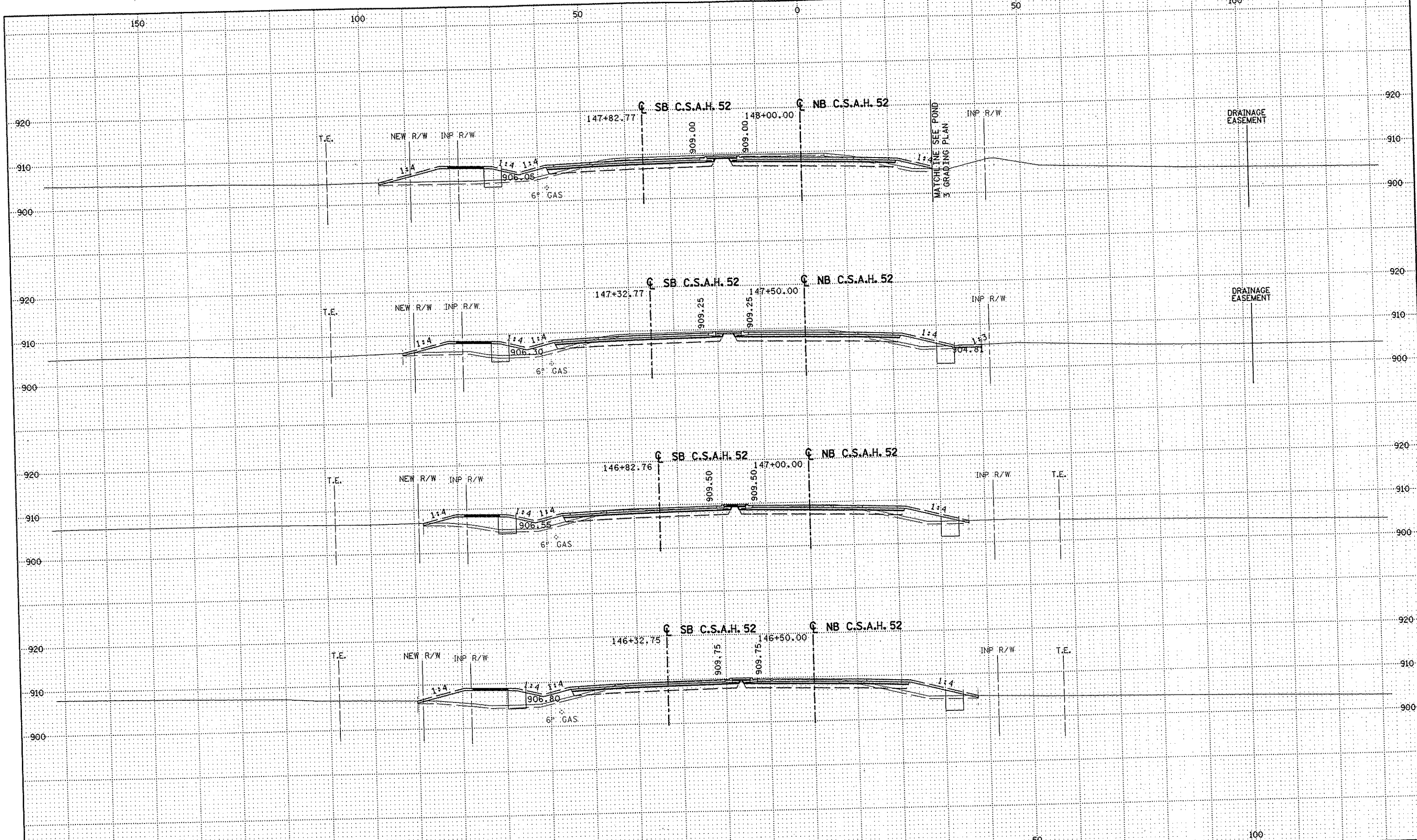
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022



ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 144+50 TO STA. 146+00

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 OF
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NO	DATE	BY	CKD	APPR	REVISION

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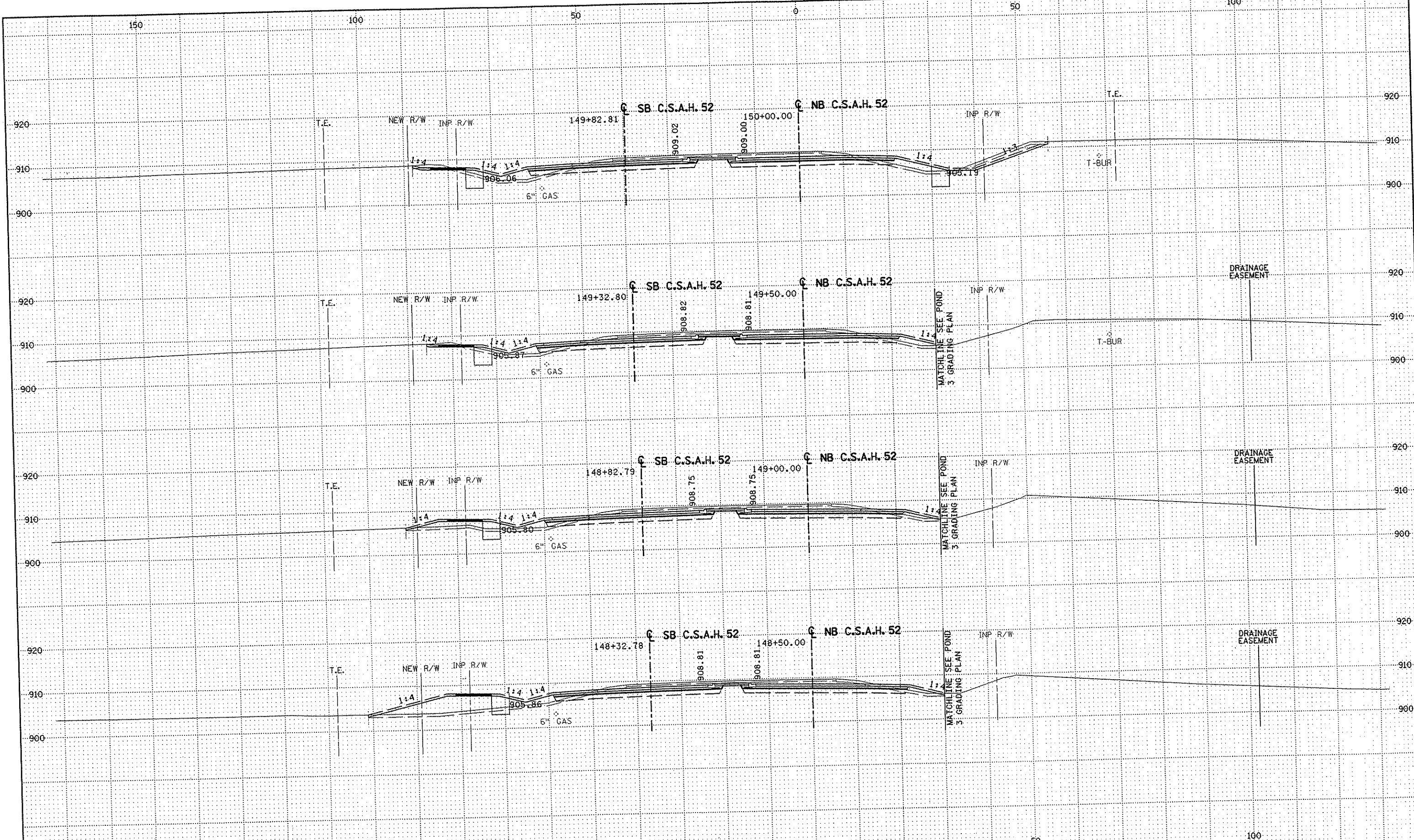
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, BUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 146+50 TO STA. 148+00

SHEET
 402
 OF
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NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\a-f\Anoka Cty\1174901\hwy-brdg\part4\roadway3\drawings\sect\23\14802.dwg

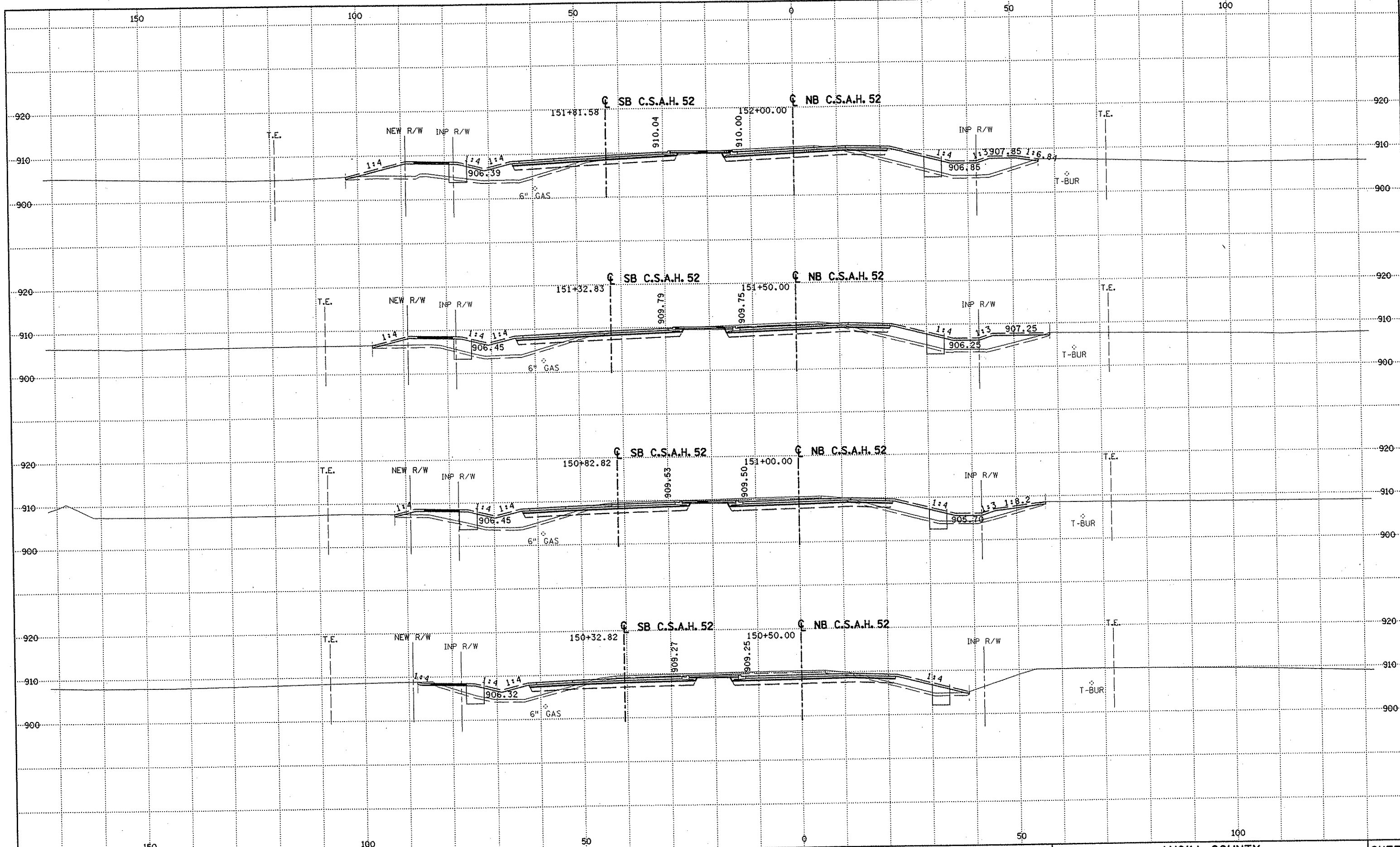
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUWALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 148+50 TO STA. 150+00

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 559



NO	DATE	BY	CKD	APPR	REVISION

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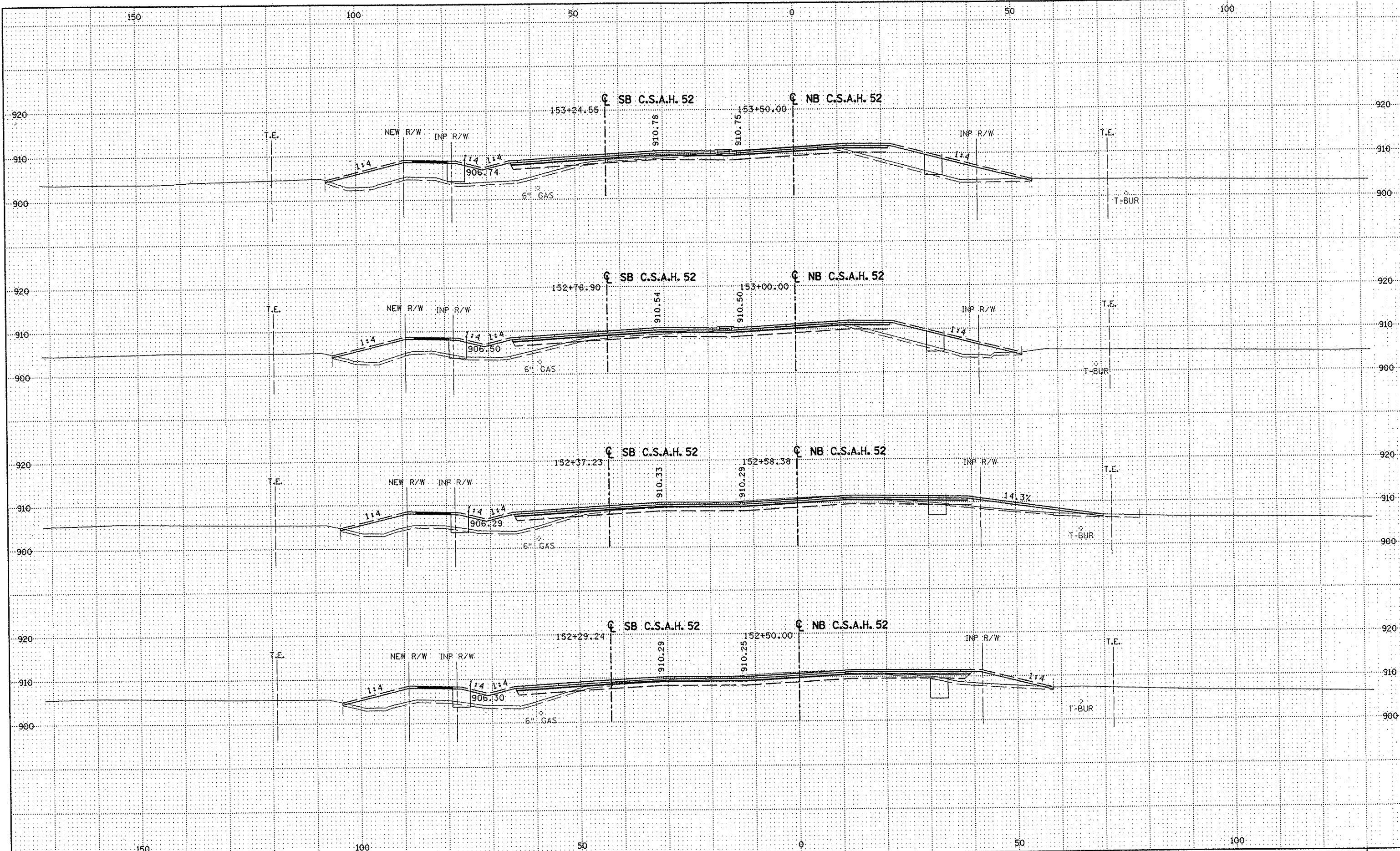
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S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUYALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 150+50 TO STA. 152+00

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NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
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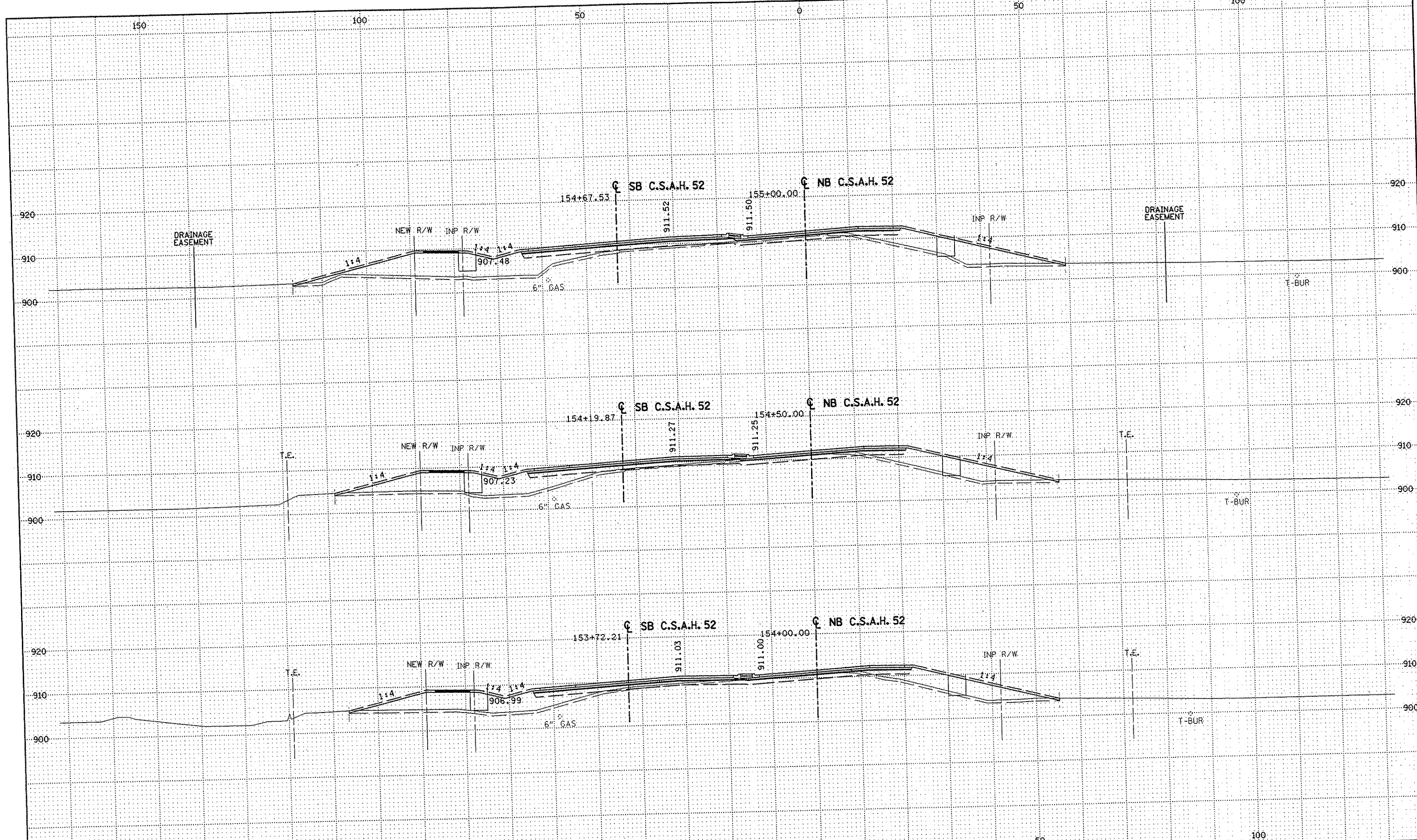
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 152+50 TO STA. 153+50

SHEET
 405
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\xsec\851d480.dgn



NO	DATE	BY	CKD	APPR	REVISION

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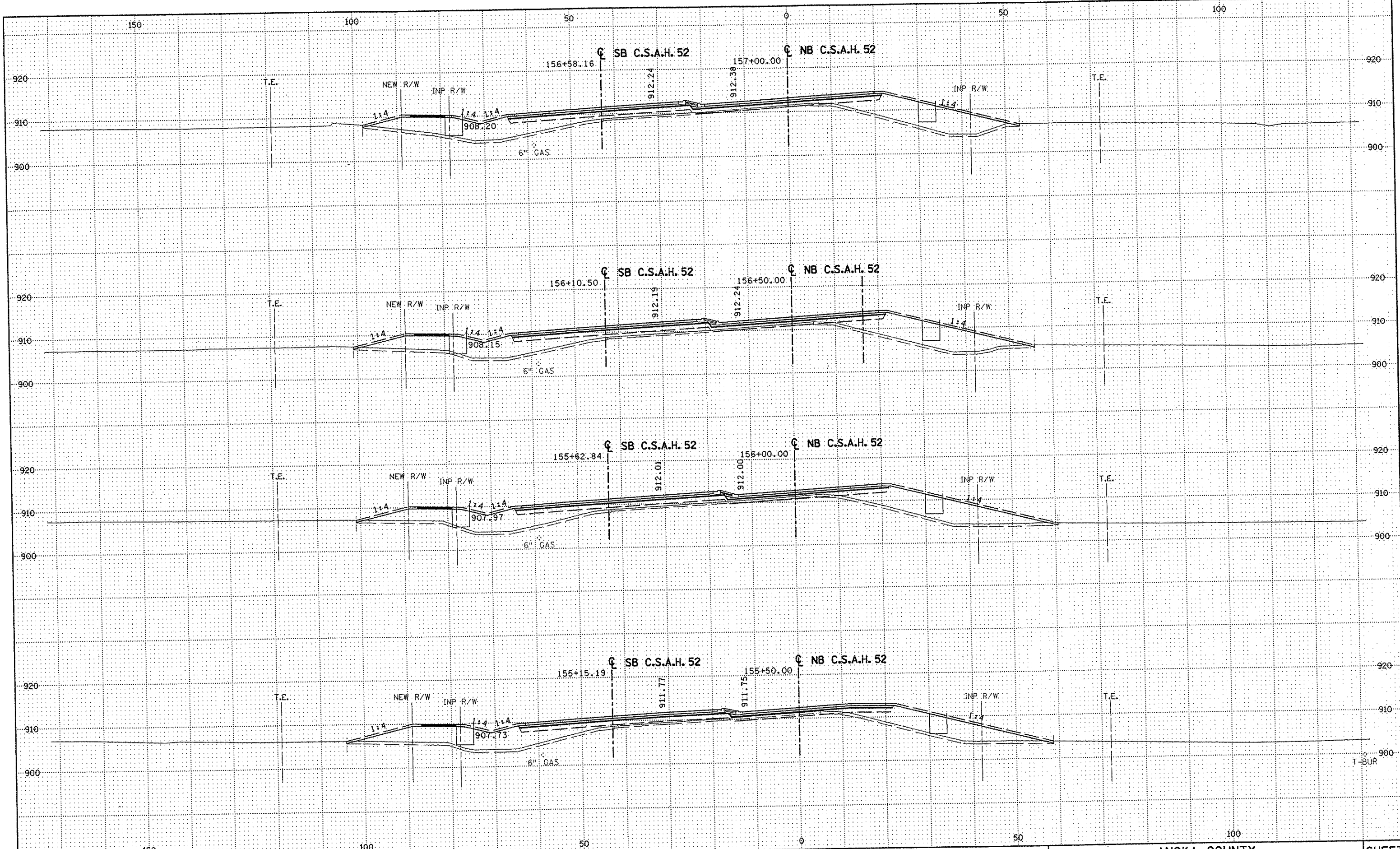
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 154+00 TO STA. 155+00

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NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
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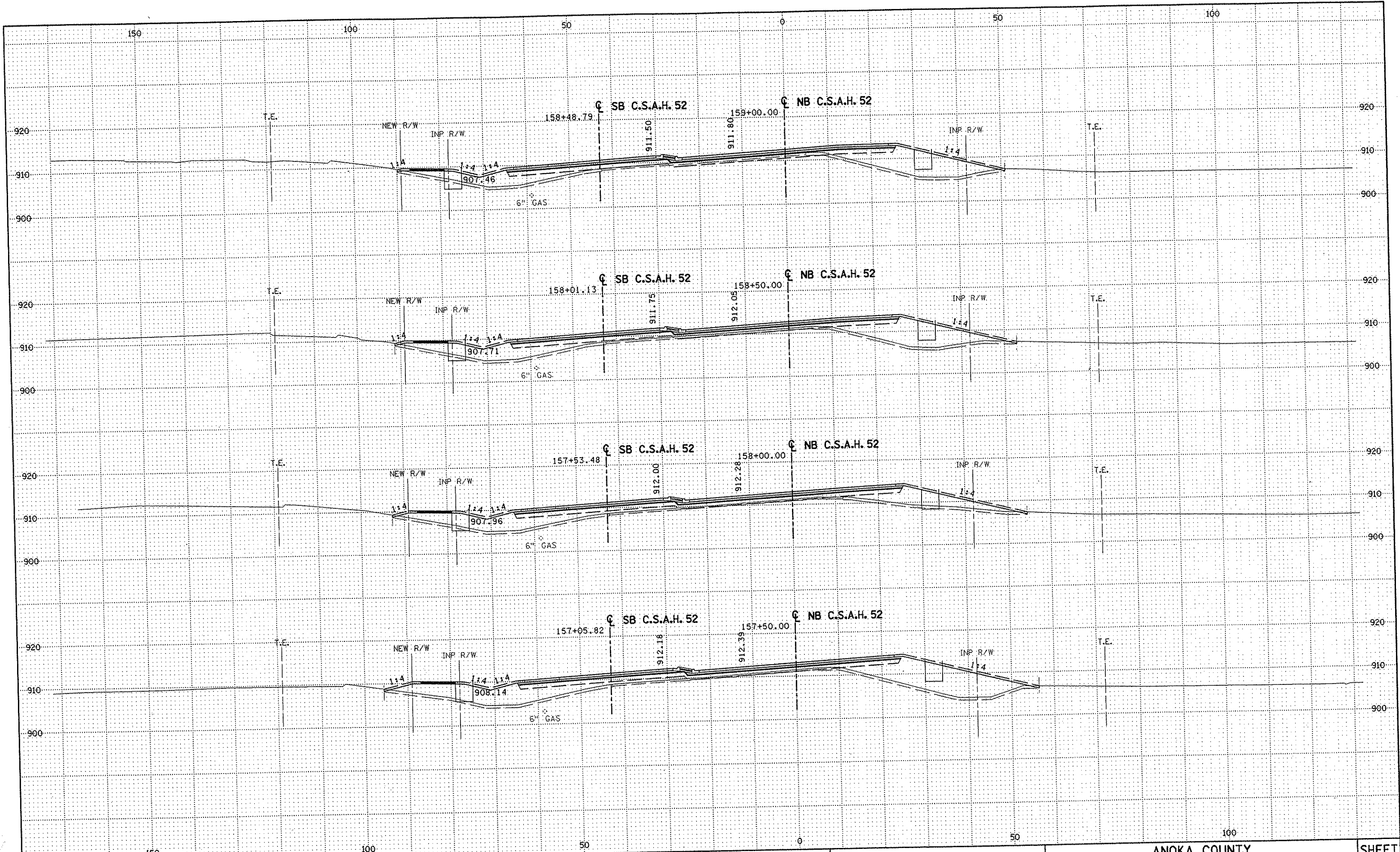
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 155+50 TO STA. 157+00

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 OF
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NO	DATE	BY	CKD	APPR	REVISION

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 DESIGN BY RRC DATE 11-12-01
 CHECKED BY JMW DATE 11-12-01

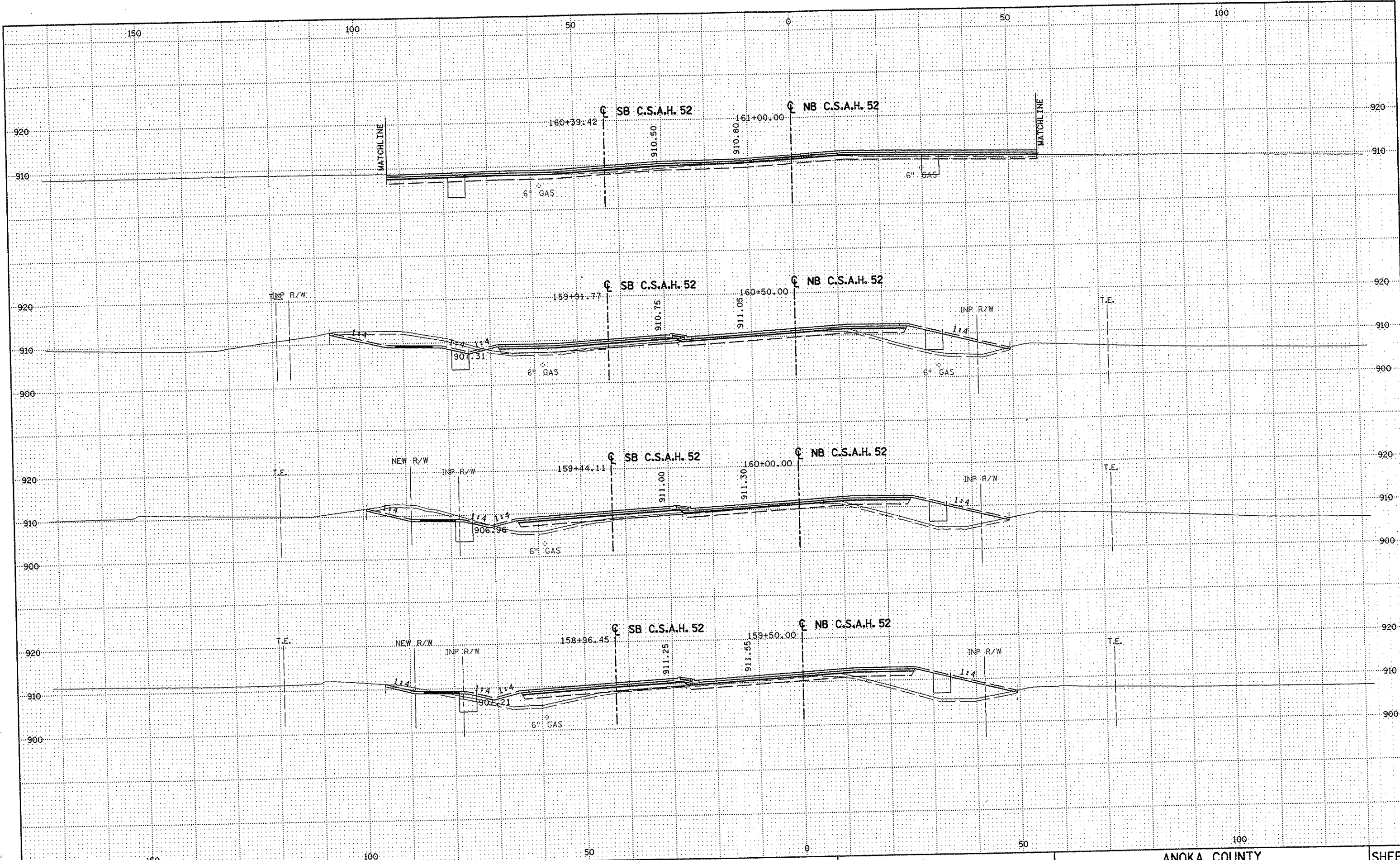
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 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA.157+50 TO STA.159+00

SHEET
 408
 OF
 559

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NO	DATE	BY	CKD	APPR	REVISION

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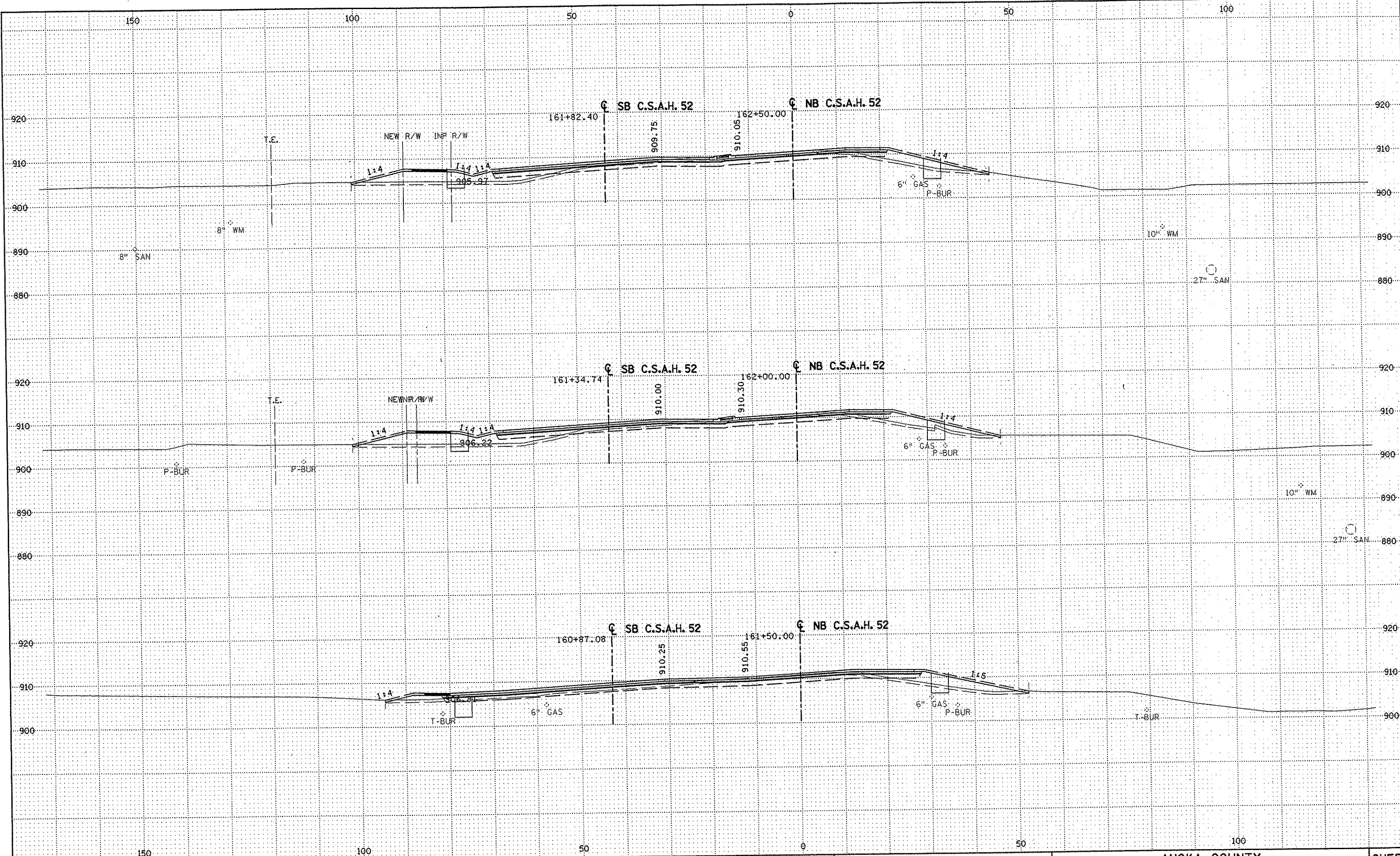
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S.P.	0280-50 (TH 35W)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 159+50 TO STA. 161+00

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NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
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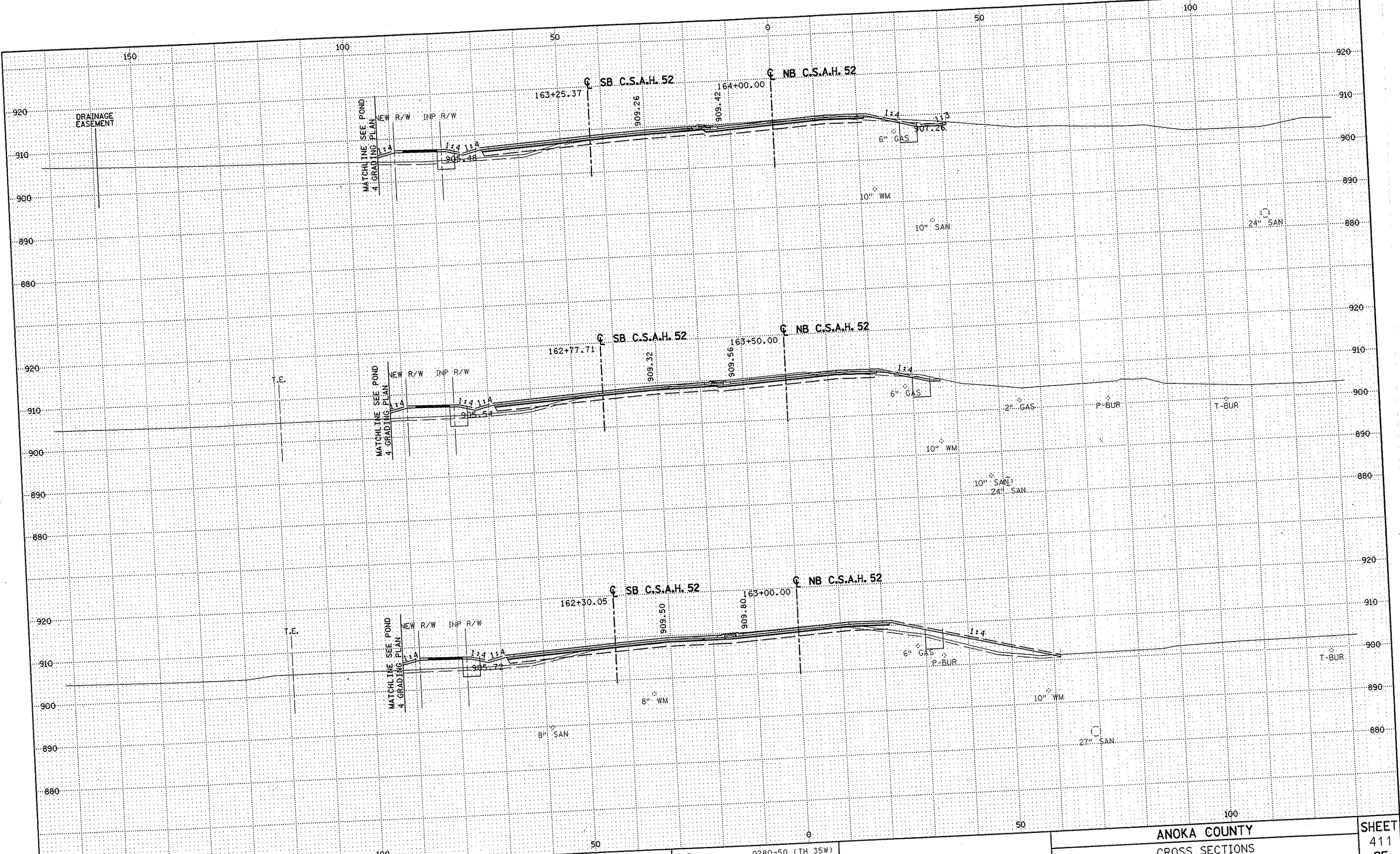
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TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 161+50 TO STA. 162+50

SHEET
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 OF
 559

NAME: K:\g-f\AnokaCity\1174901\hwy-brdg\par+4\roadway3\drawings\csec\28610480.dwg



NO	DATE	BY	CHKD	APPR	REVISION

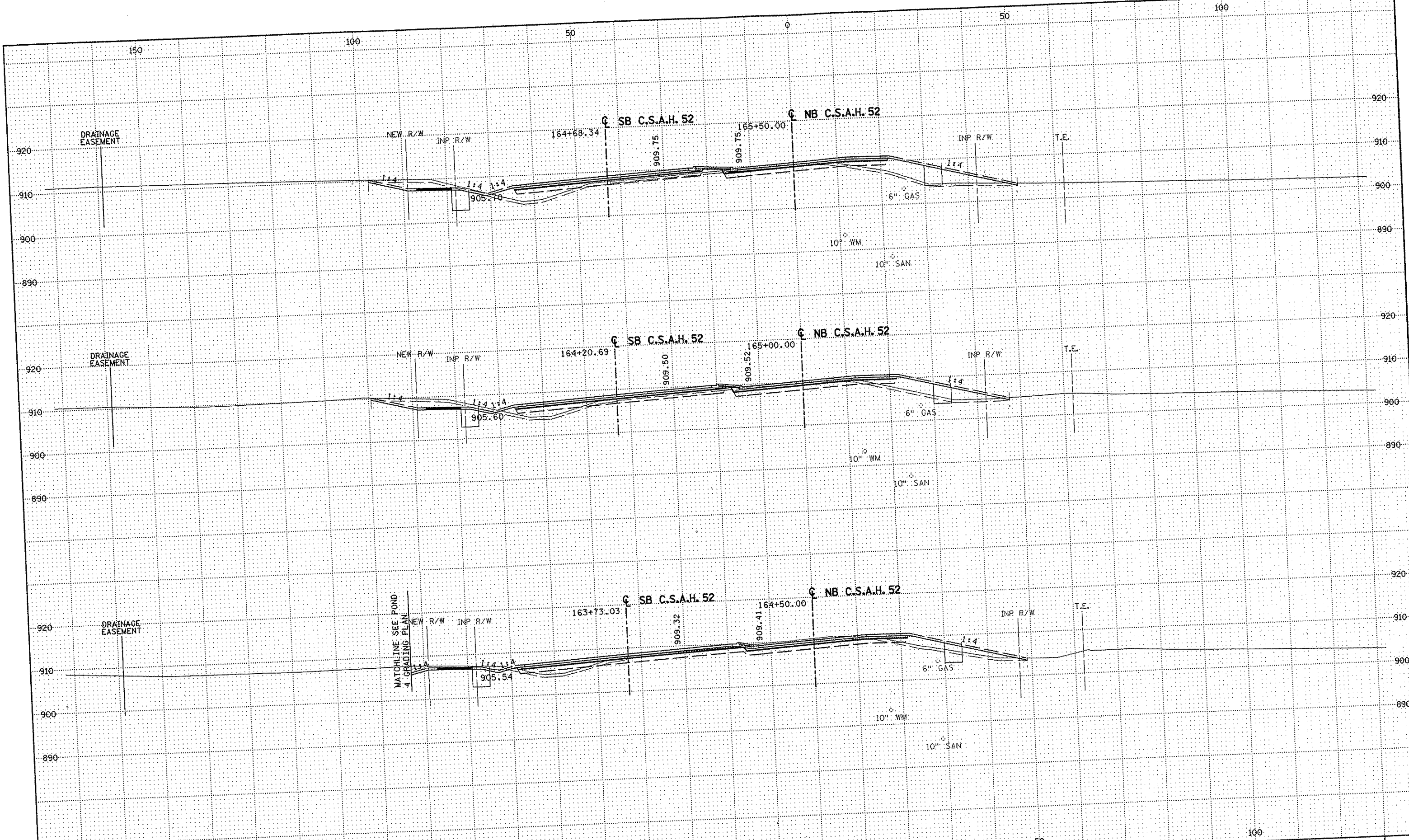
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 163+00 TO STA. 164+00

SHEET
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 OF
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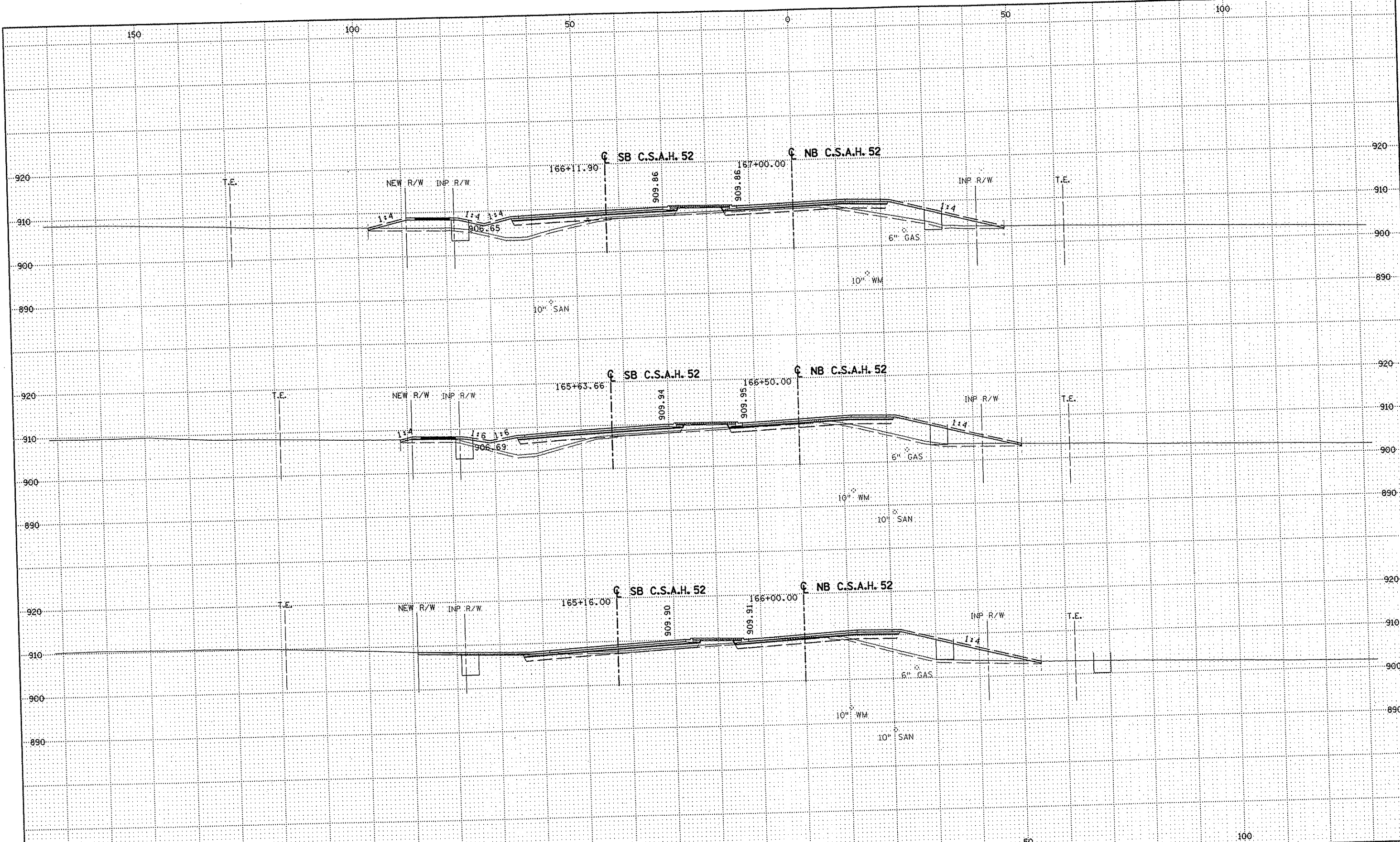
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 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 164+50 TO STA. 165+50
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 OF
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NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
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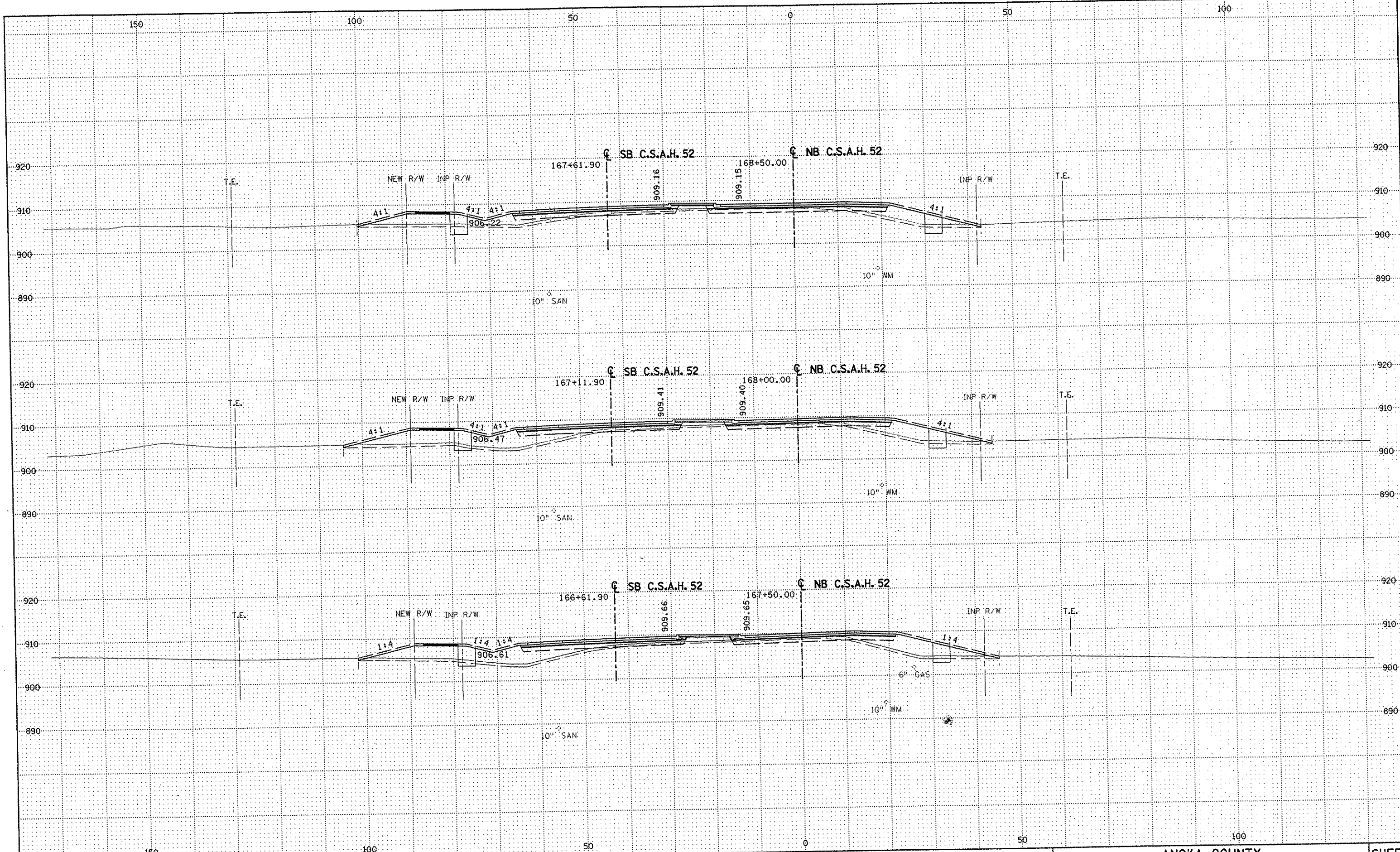
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 S.A.P. 106-020-021, 106-020-022

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 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 166+00 TO STA. 167+00

SHEET
 413
 OF
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NO	DATE	BY	CKD	APPR	REVISION

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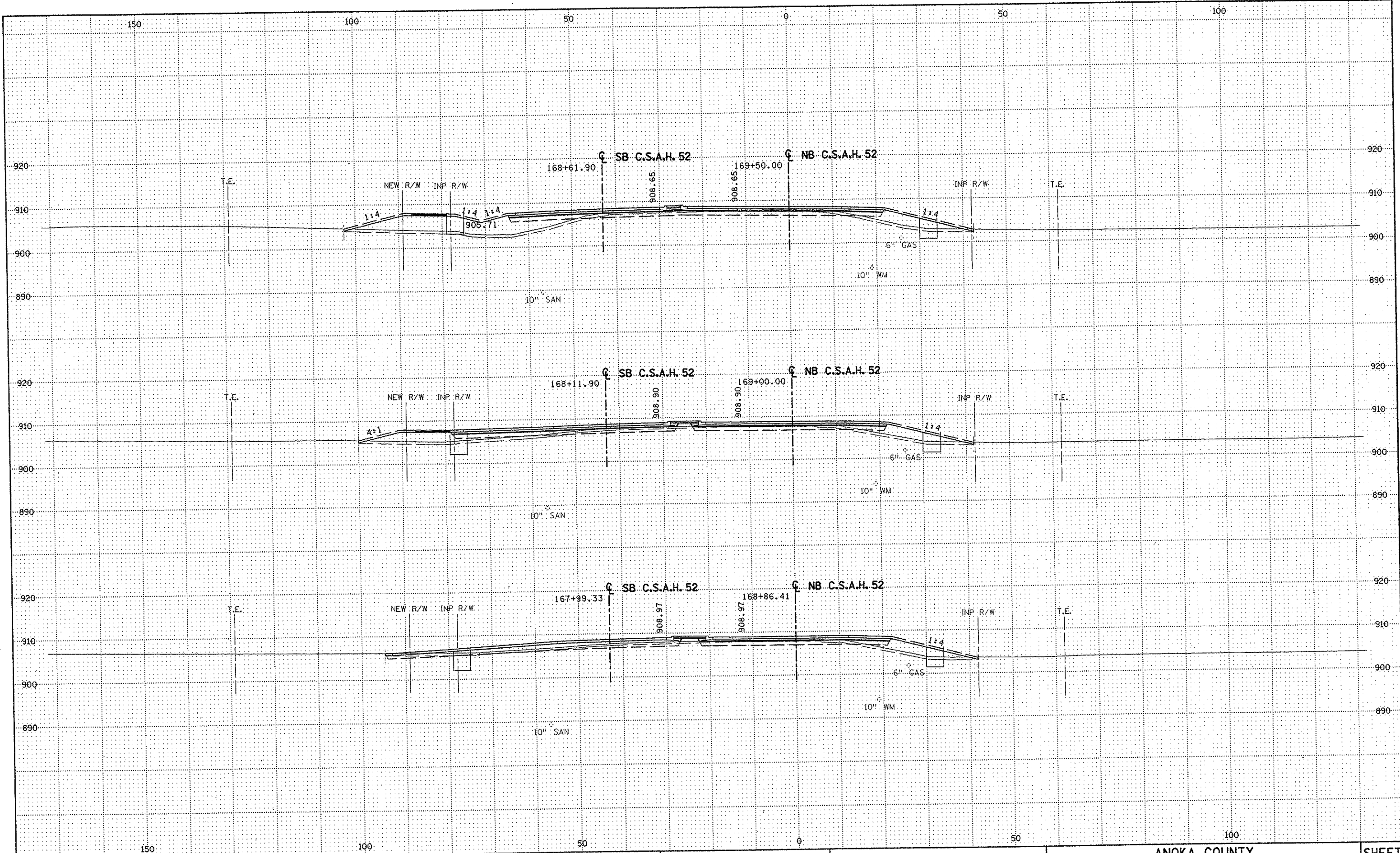
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 167+50 TO STA. 168+50

SHEET
 414
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\sec\02p14800.dwg



NO	DATE	BY	CKD	APPR	REVISION

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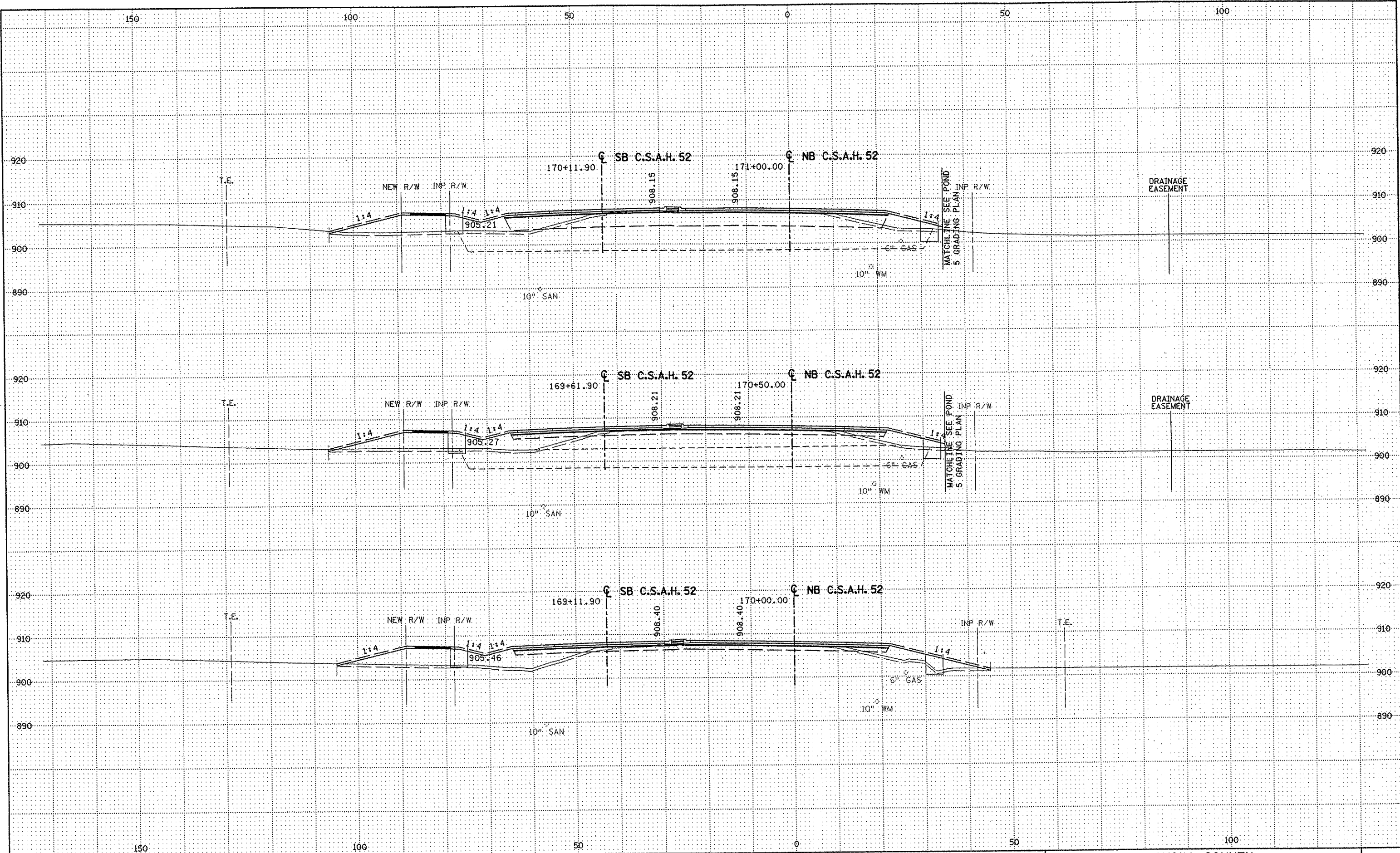
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TKDA
 TOLTZ, KING, DUVALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 168+86.41 TO STA. 169+50

SHEET
 415
 OF
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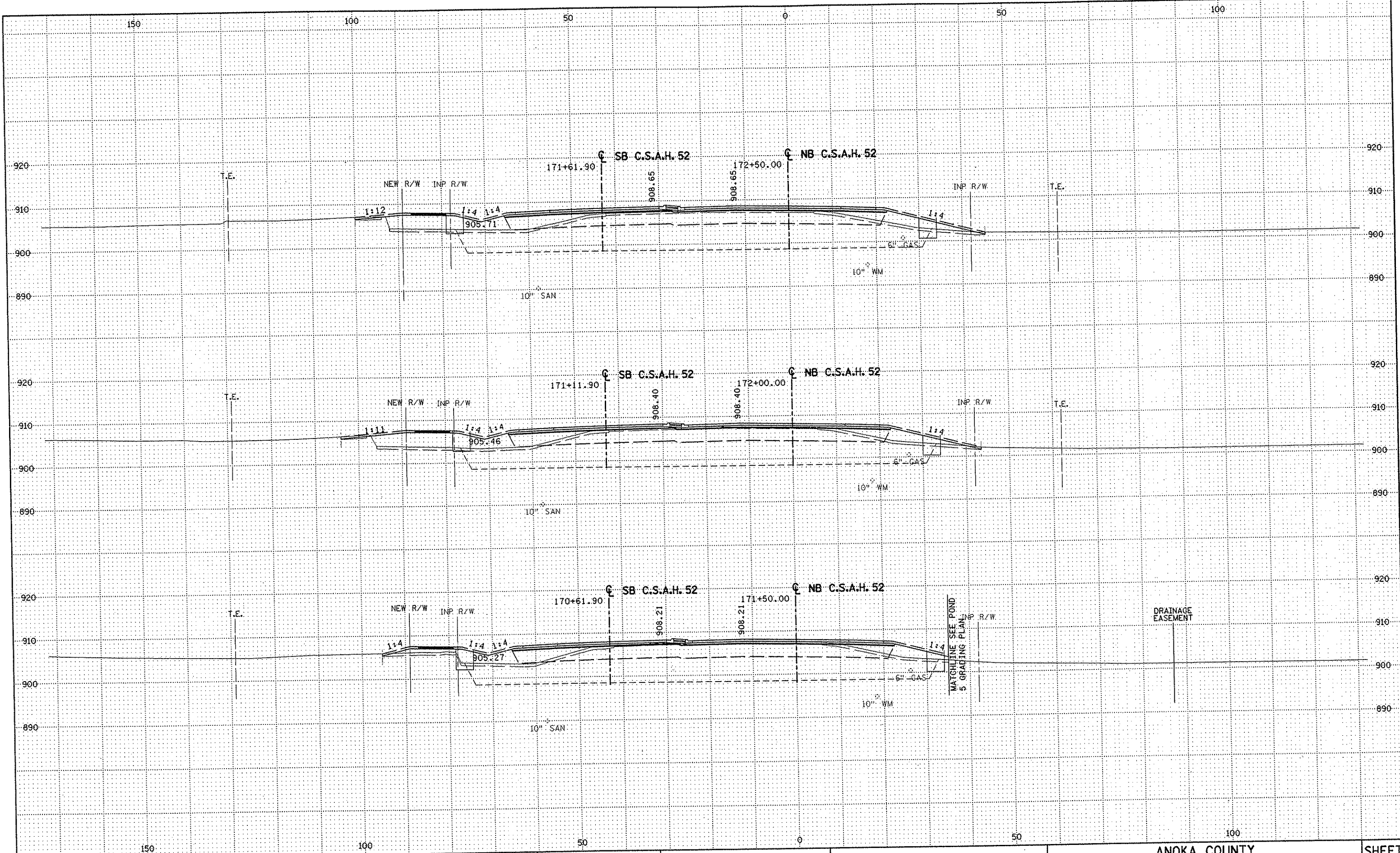
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 S.A.P. 02-652-02
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 170+00 TO STA. 171+00

SHEET
 416
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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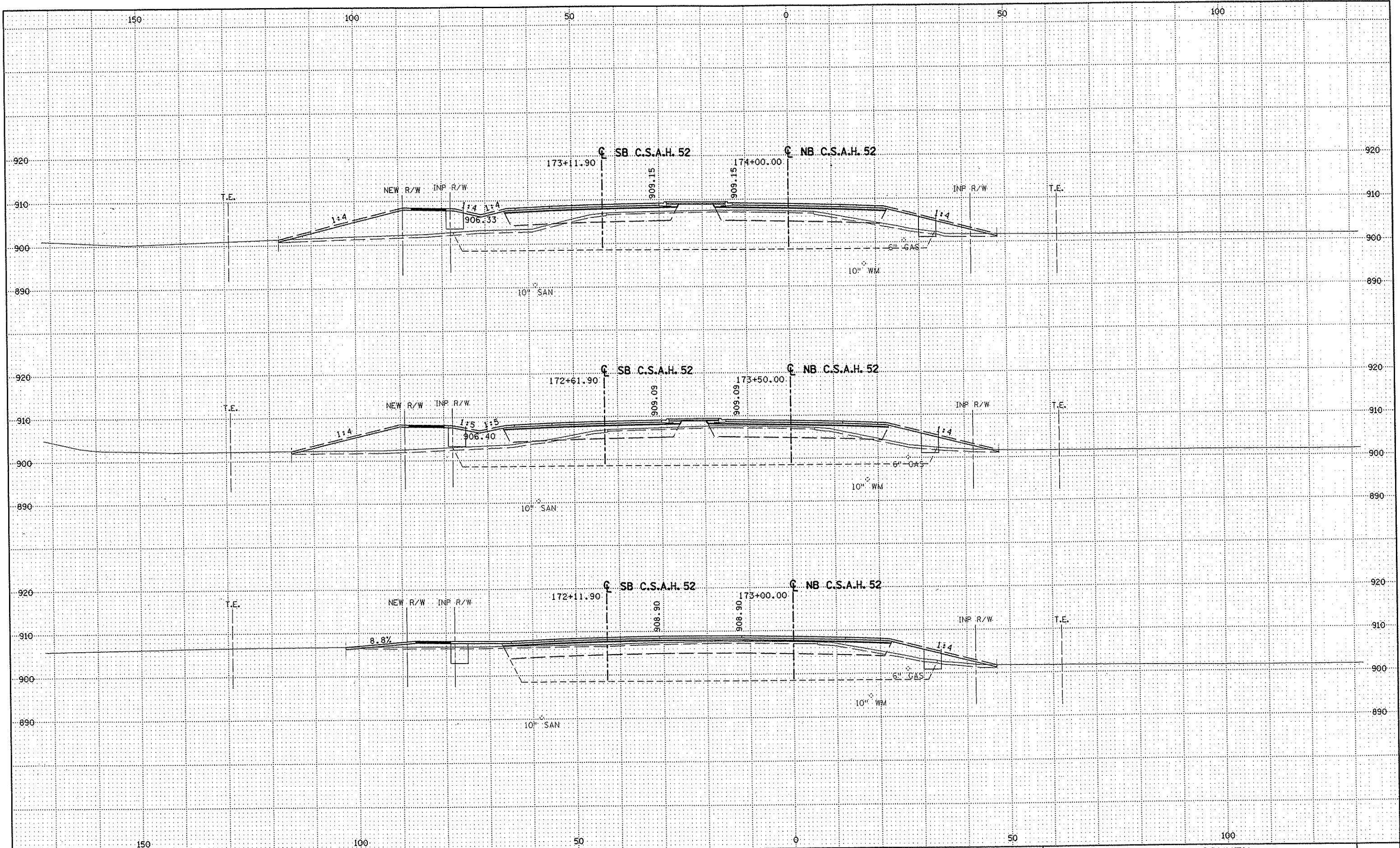
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 TOLTZ, KING, DUVALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 171+50 TO STA. 172+50

SHEET
 417
 OF
 559

NAME: K:\a-f\Anoka Cty\1174901\hwy-brdg\part4\roadway3\drawings\xsec\06#10480.dwg



NO	DATE	BY	CKD	APPR	REVISION

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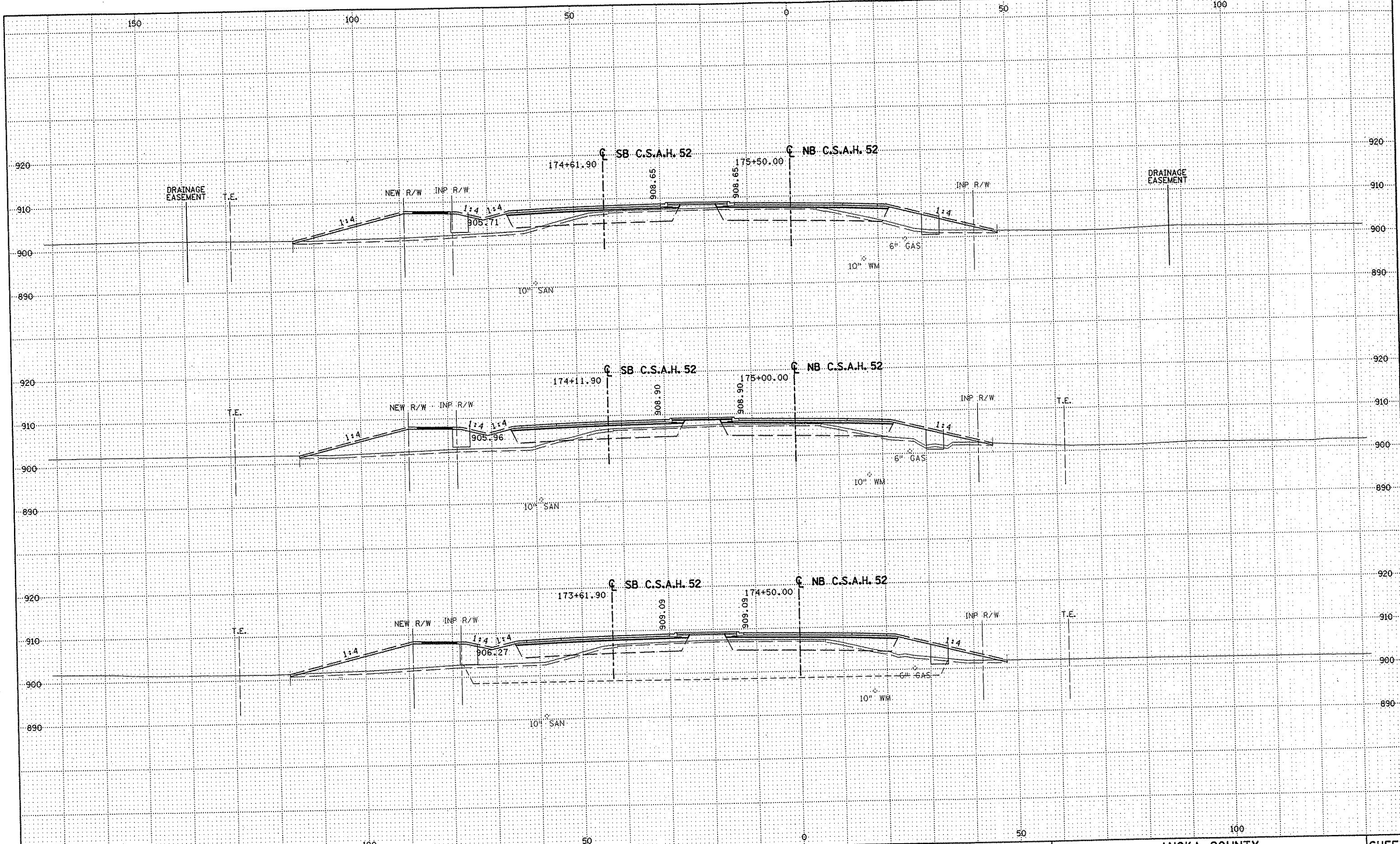
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 S.A.P. 02-652-02
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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 TOLTZ, KING, DUVALL, ANDERSON
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 173+00 TO STA. 174+00

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 OF
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NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
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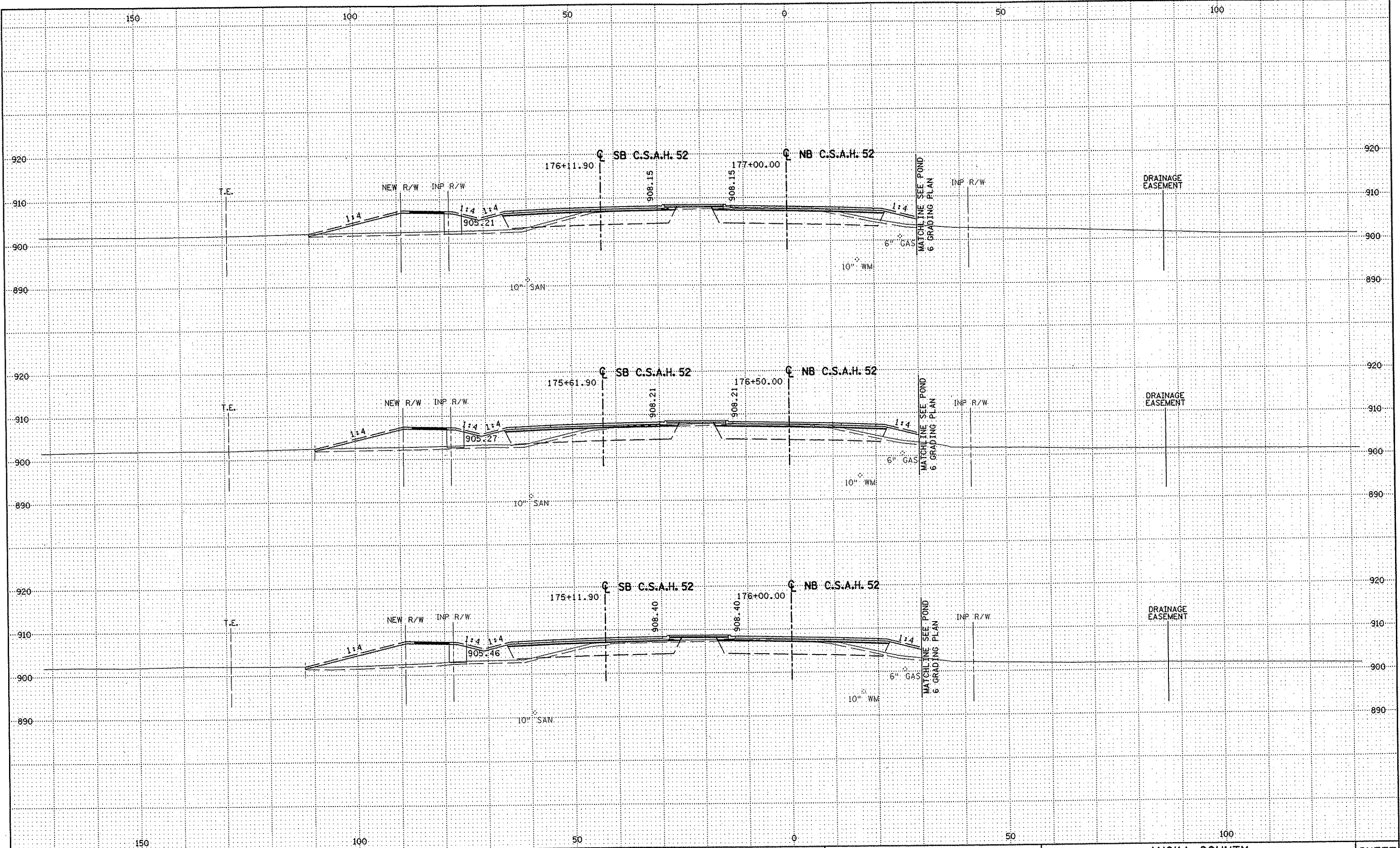
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 TOLTZ, KING, DUVALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 174+50 TO STA. 175+50

SHEET
 419
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\sec\1174901.dwg



NO	DATE	BY	CKD	APPR	REVISION

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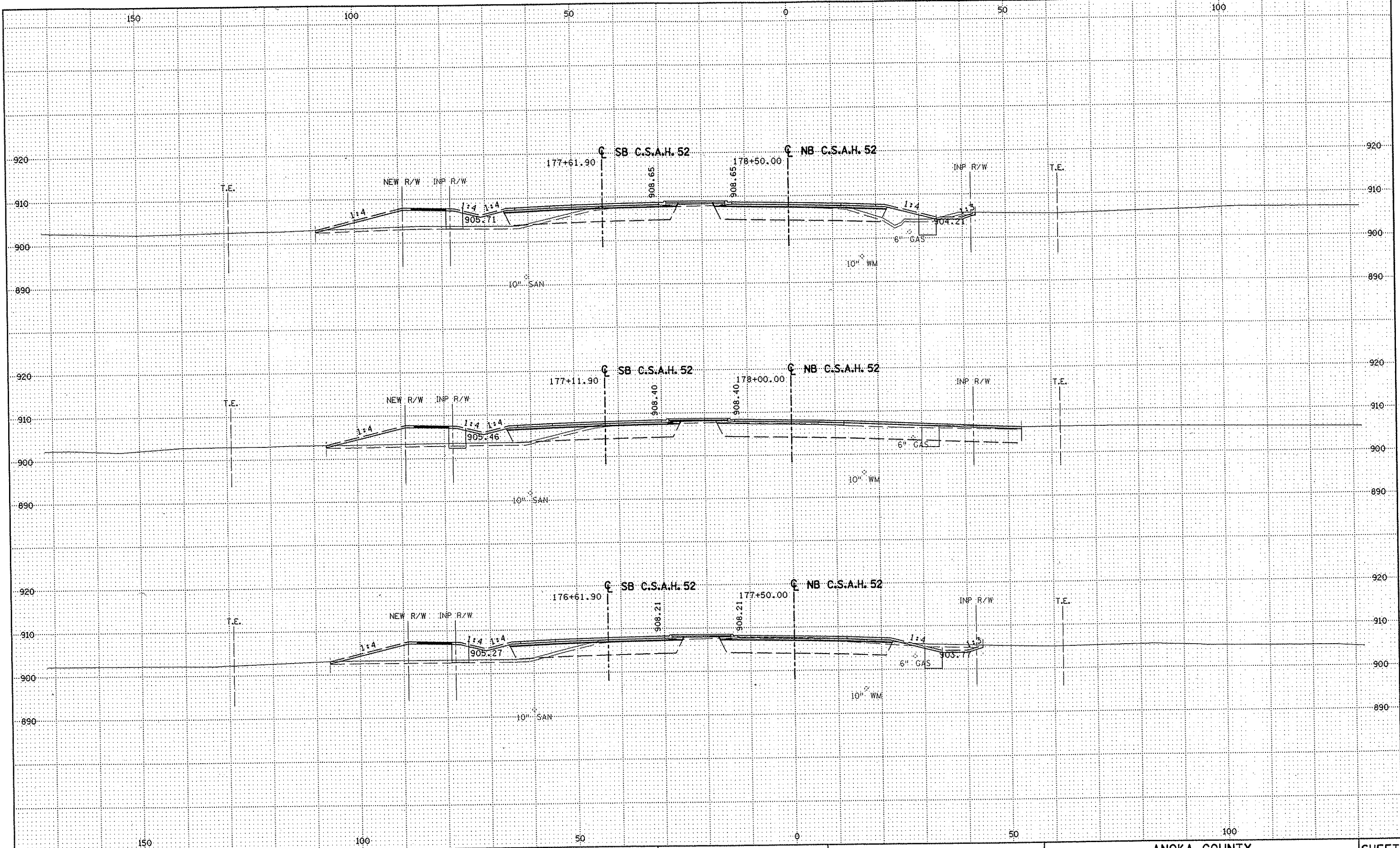
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 176+00 TO STA. 177+00

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 OF
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NO	DATE	BY	CKD	APPR	REVISION

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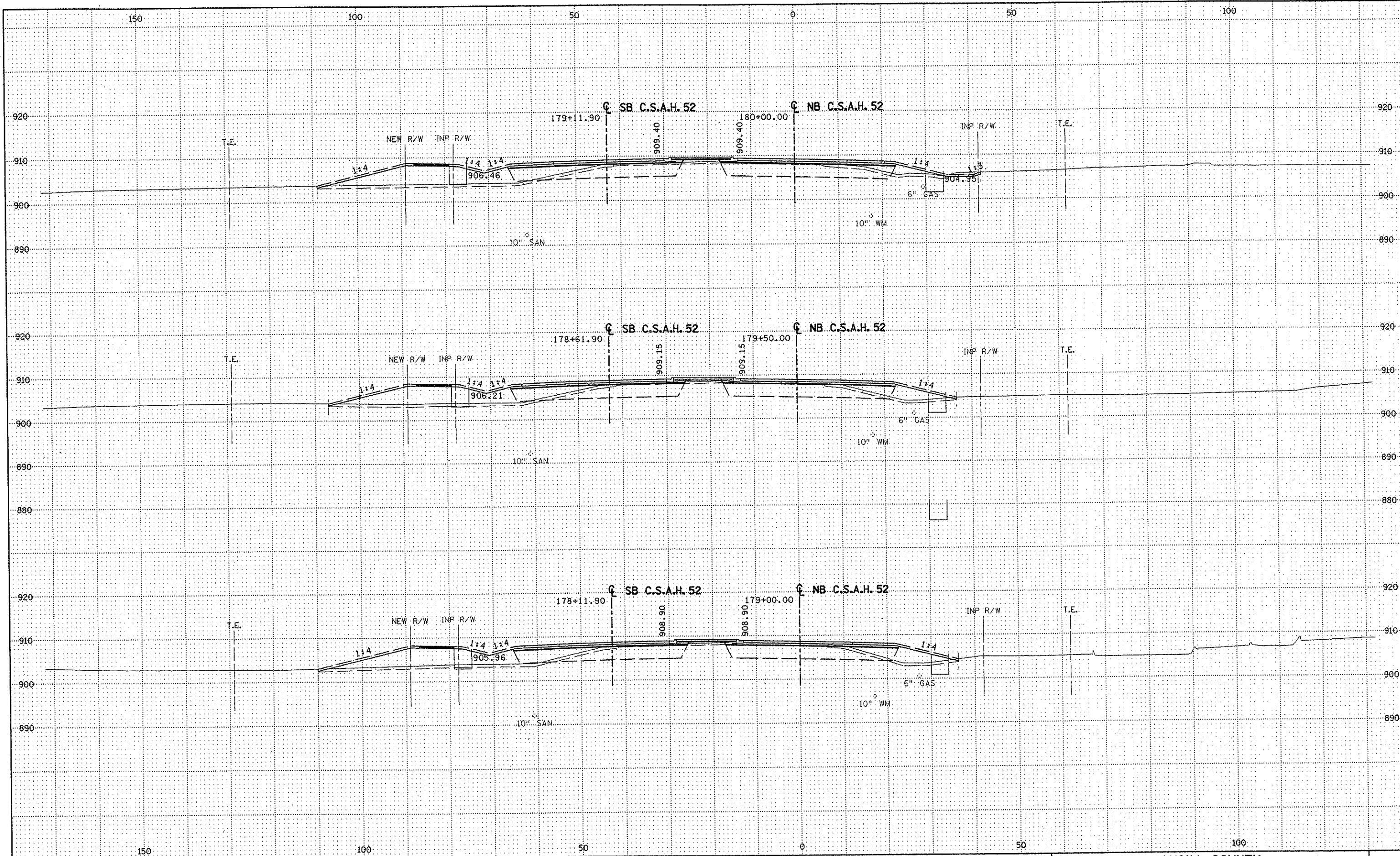
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TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 177+50 TO STA. 178+50

SHEET
 421
 OF
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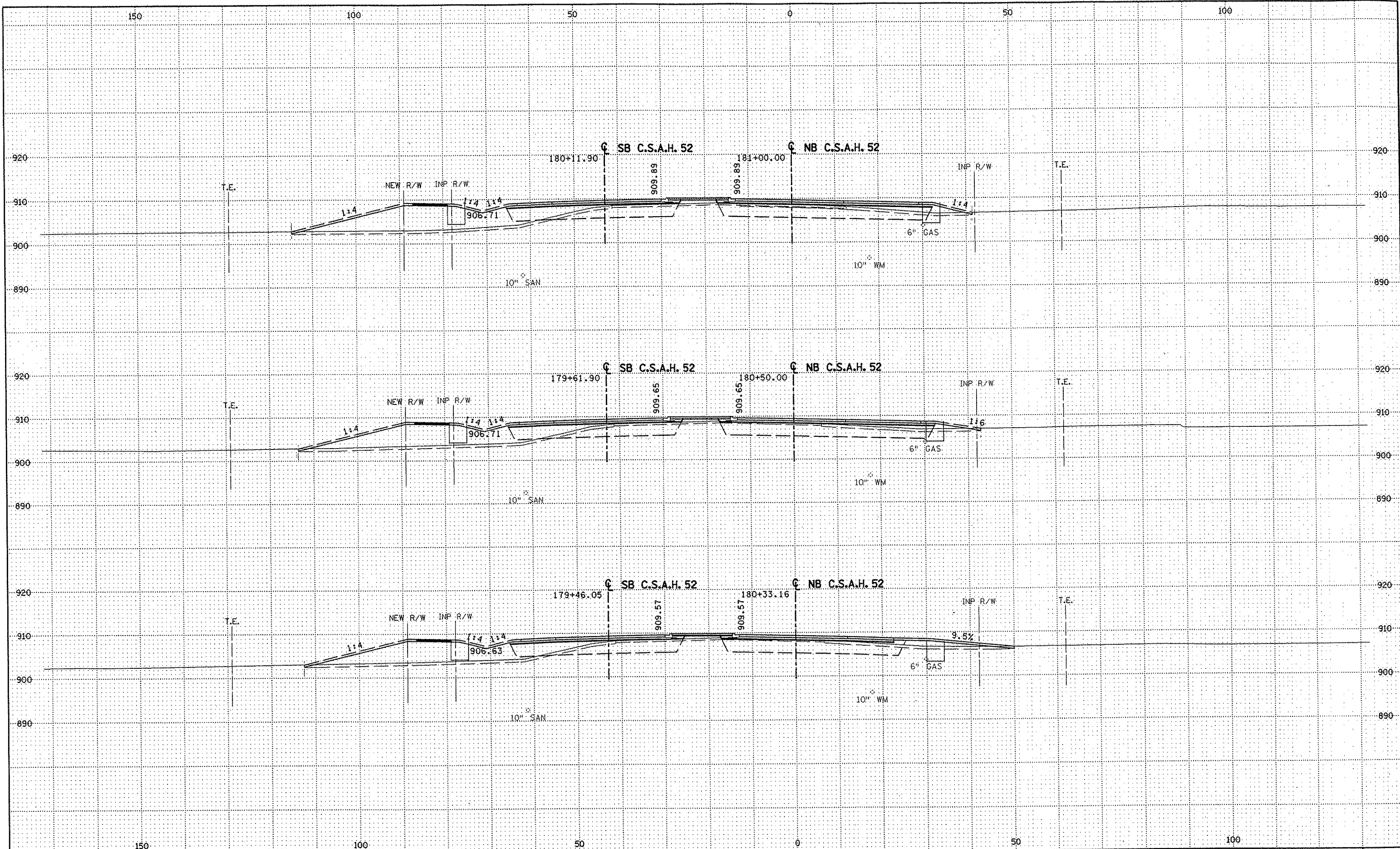
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 179+00 TO STA. 180+00

SHEET
 422
 OF
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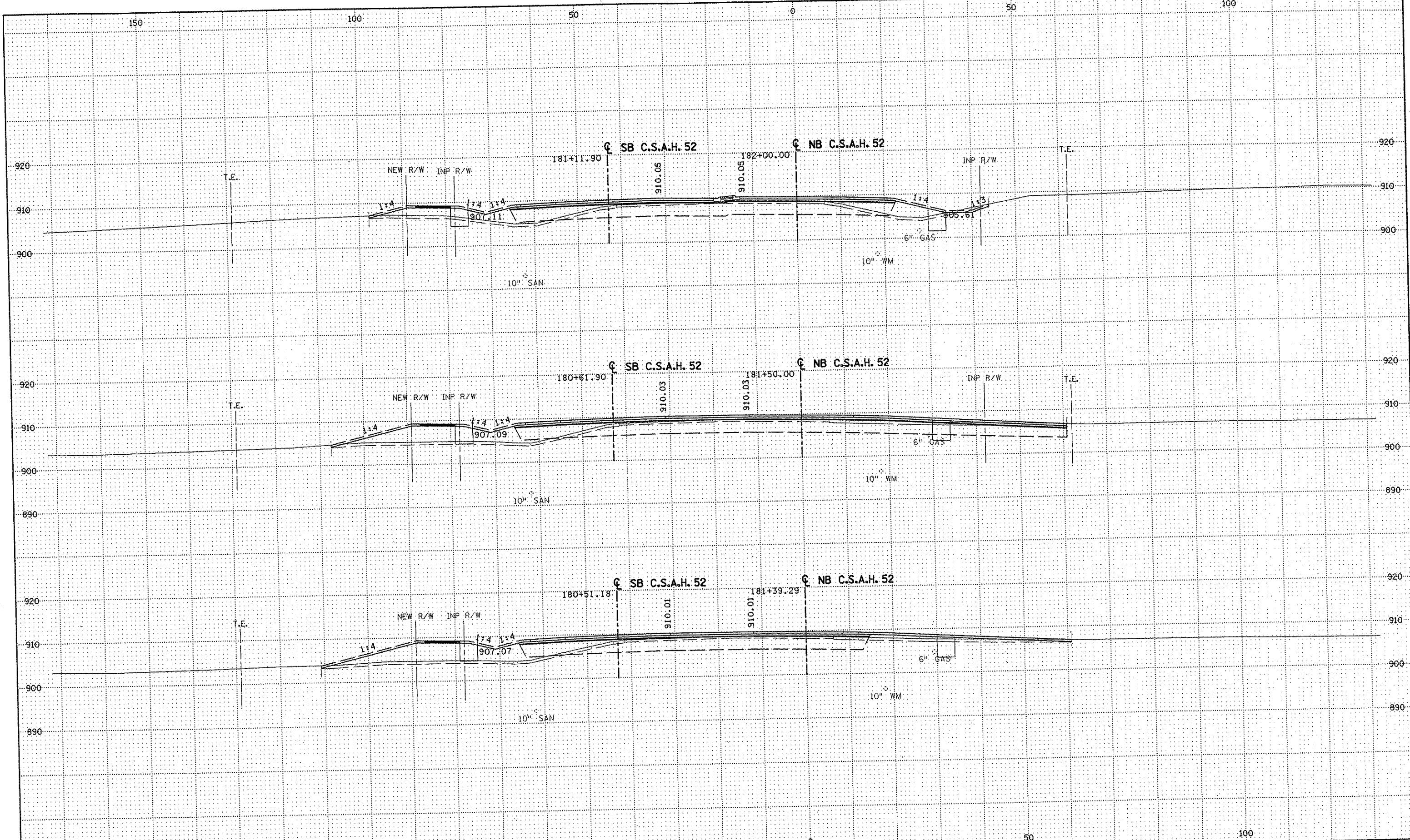
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TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 180+33.16 TO STA. 180+50

SHEET
 423
 OF
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NO	DATE	BY	CKD	APPR	REVISION

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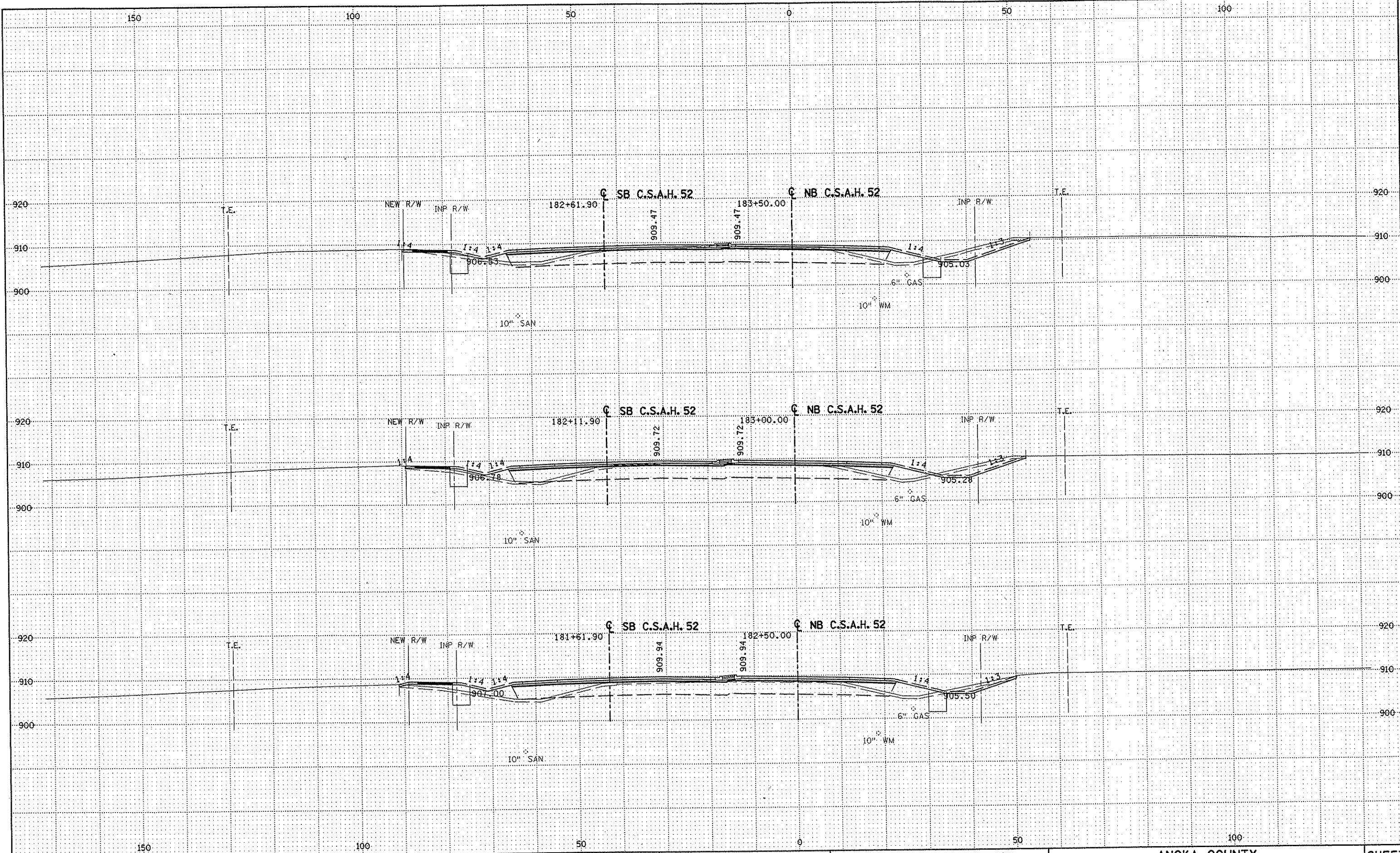
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S.A.P.	106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 181+39.29 TO STA. 182+00

SHEET
 424
 OF
 559

NAME: K:\a-f\AnokaCty\1174901\hwy-brdg\part4\roadway3\drawings\csec\6471490.dwg



NO	DATE	BY	CKD	APPR	REVISION

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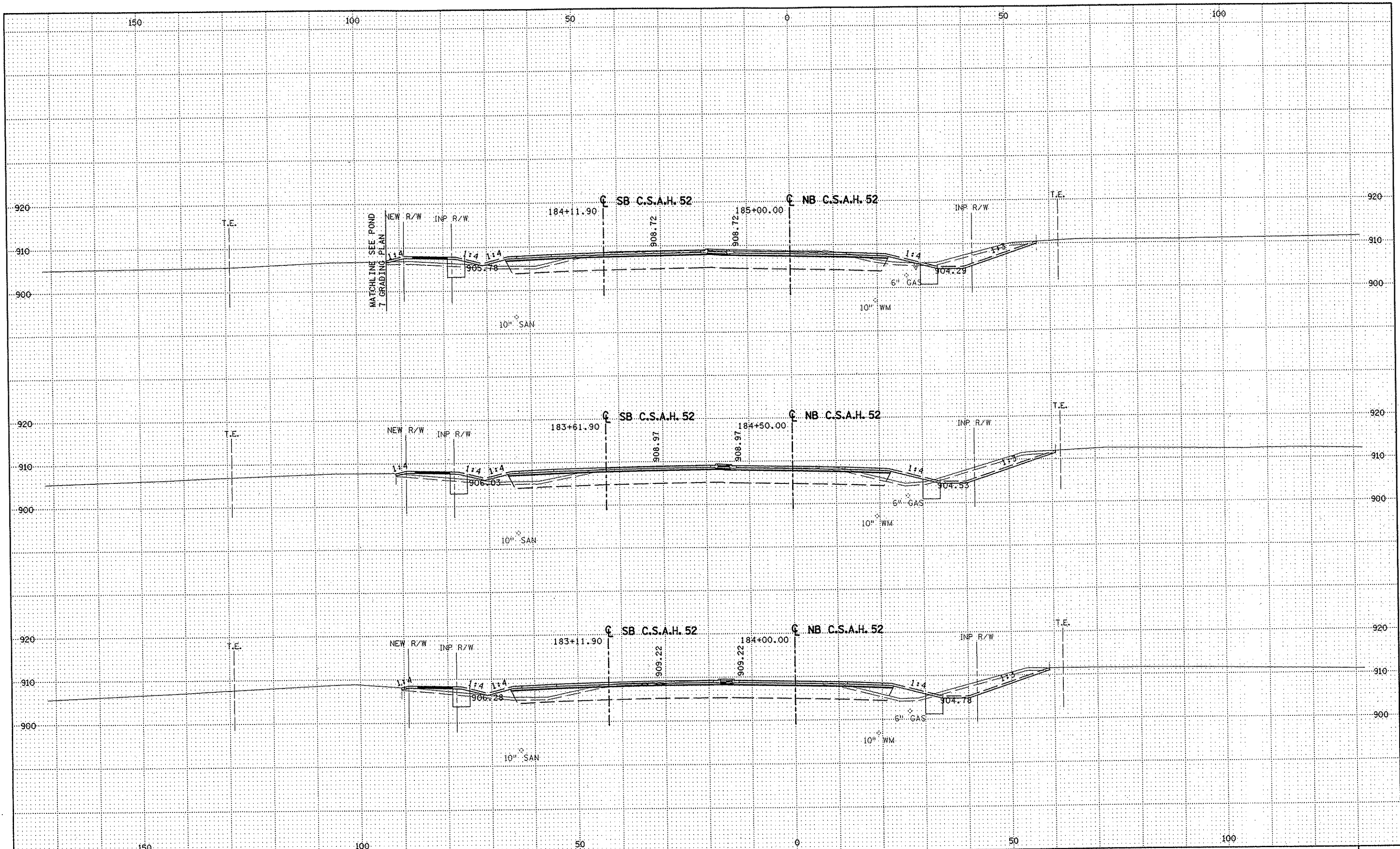
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 182+50 TO STA. 183+50

SHEET
 425
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\sec\88\11800.dwg



NO	DATE	BY	CRD	APPR	REVISION

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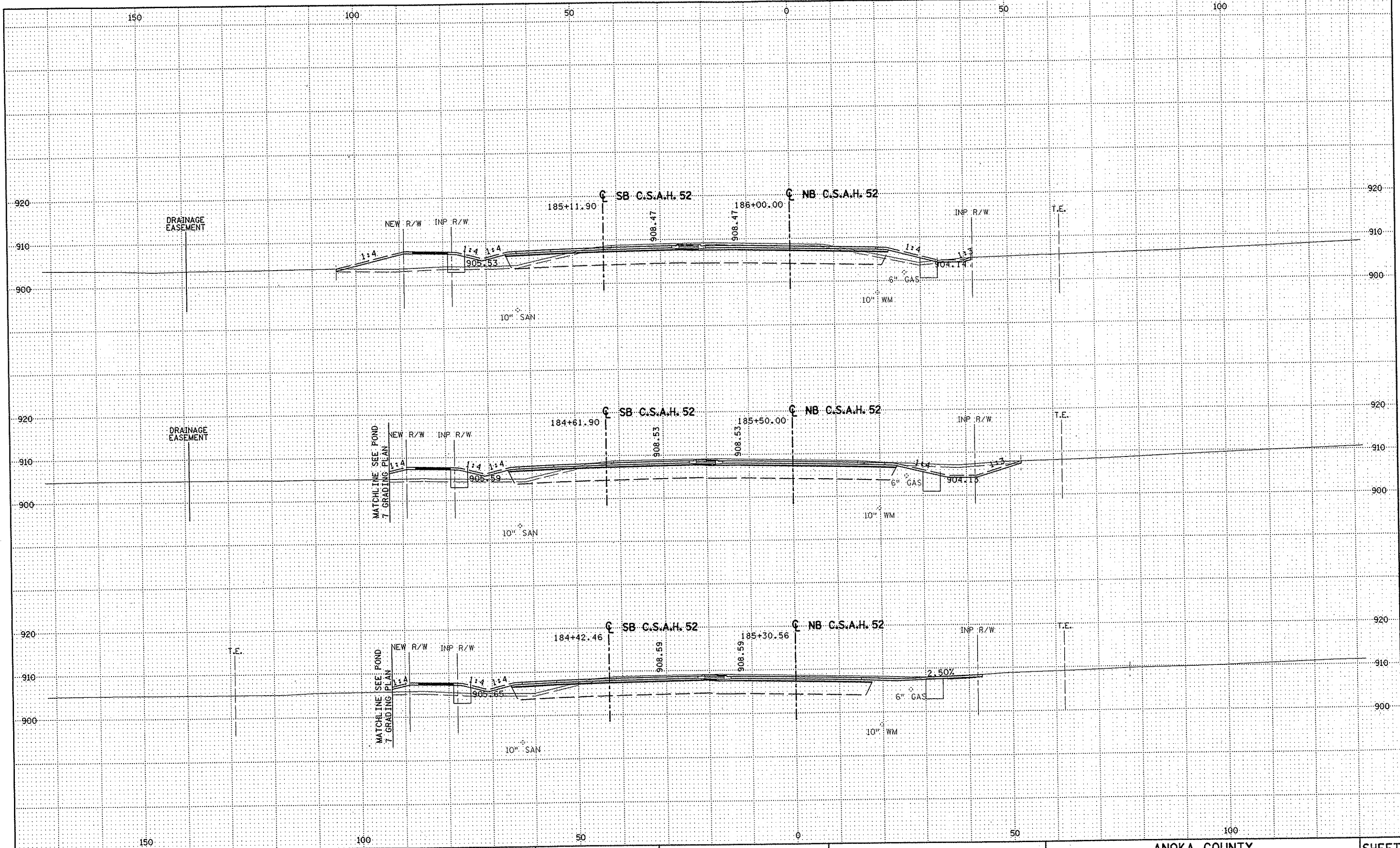
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 184+00 TO STA. 185+00

SHEET
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 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\xsec\0414180.dwg



NO	DATE	BY	CKD	APPR	REVISION

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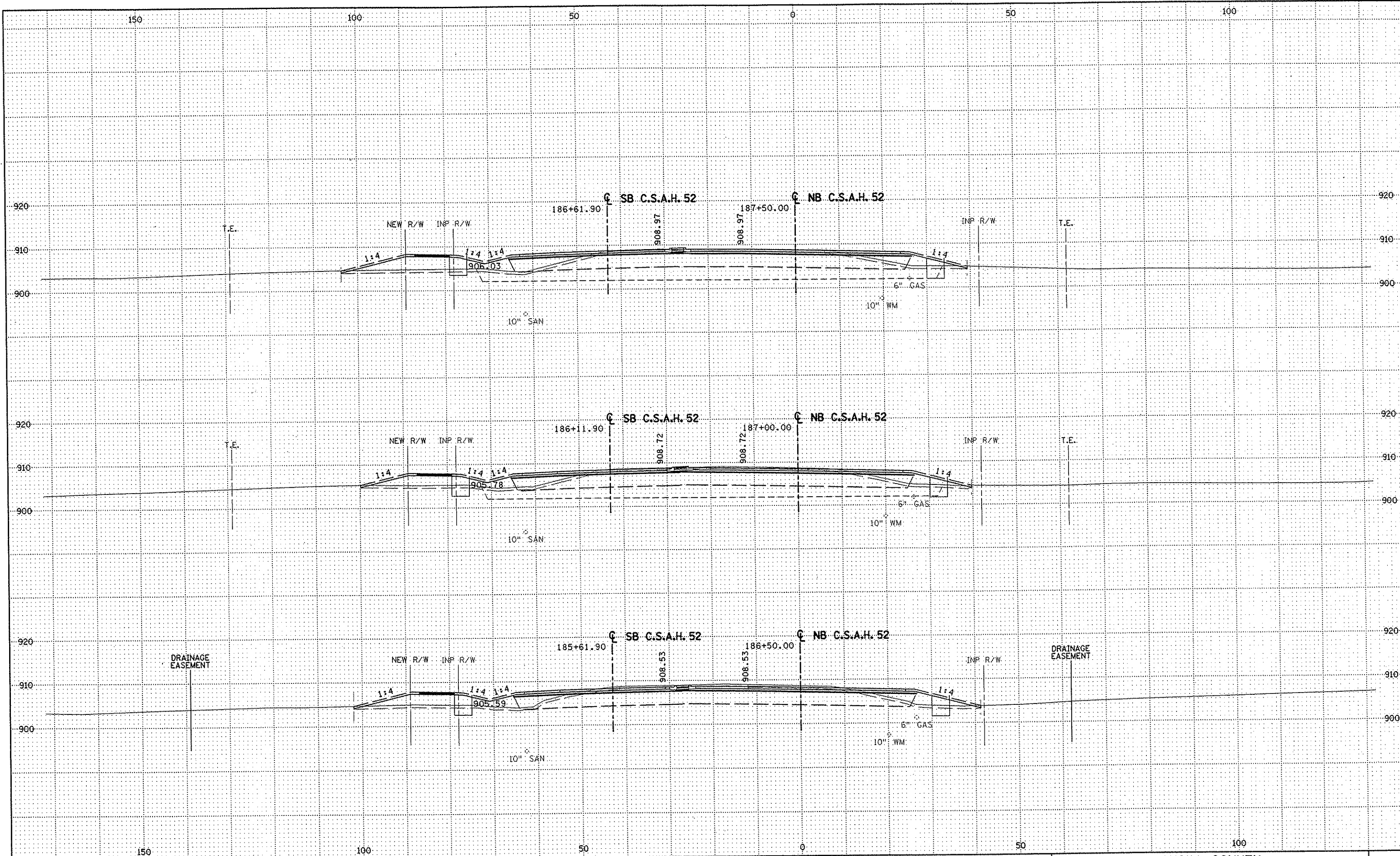
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DIVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 185+30.56 TO STA. 186+00

SHEET
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 OF
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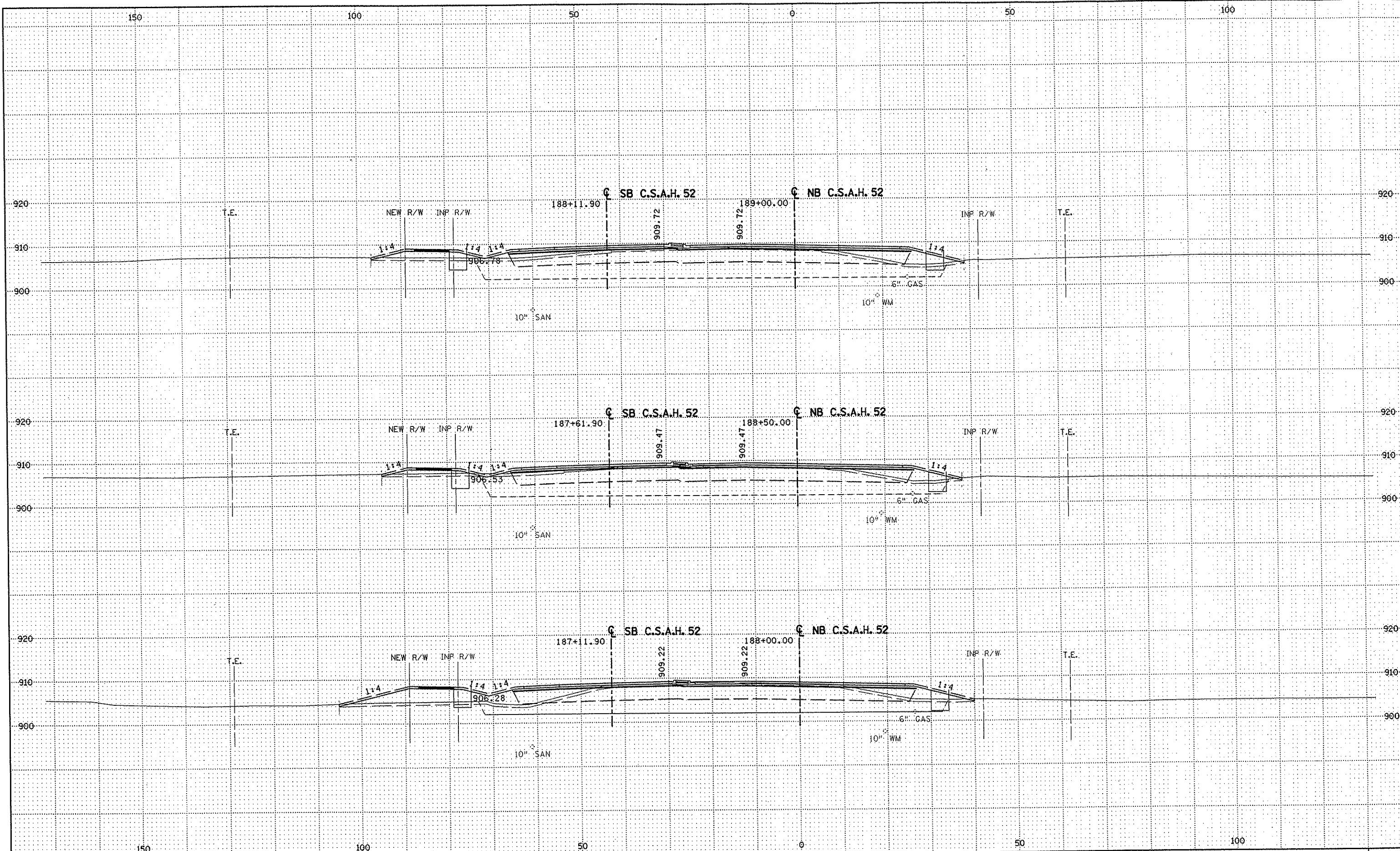
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TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 186+50 TO STA. 187+50

SHEET
 428
 OF
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NO	DATE	BY	CKD	APPR	REVISION

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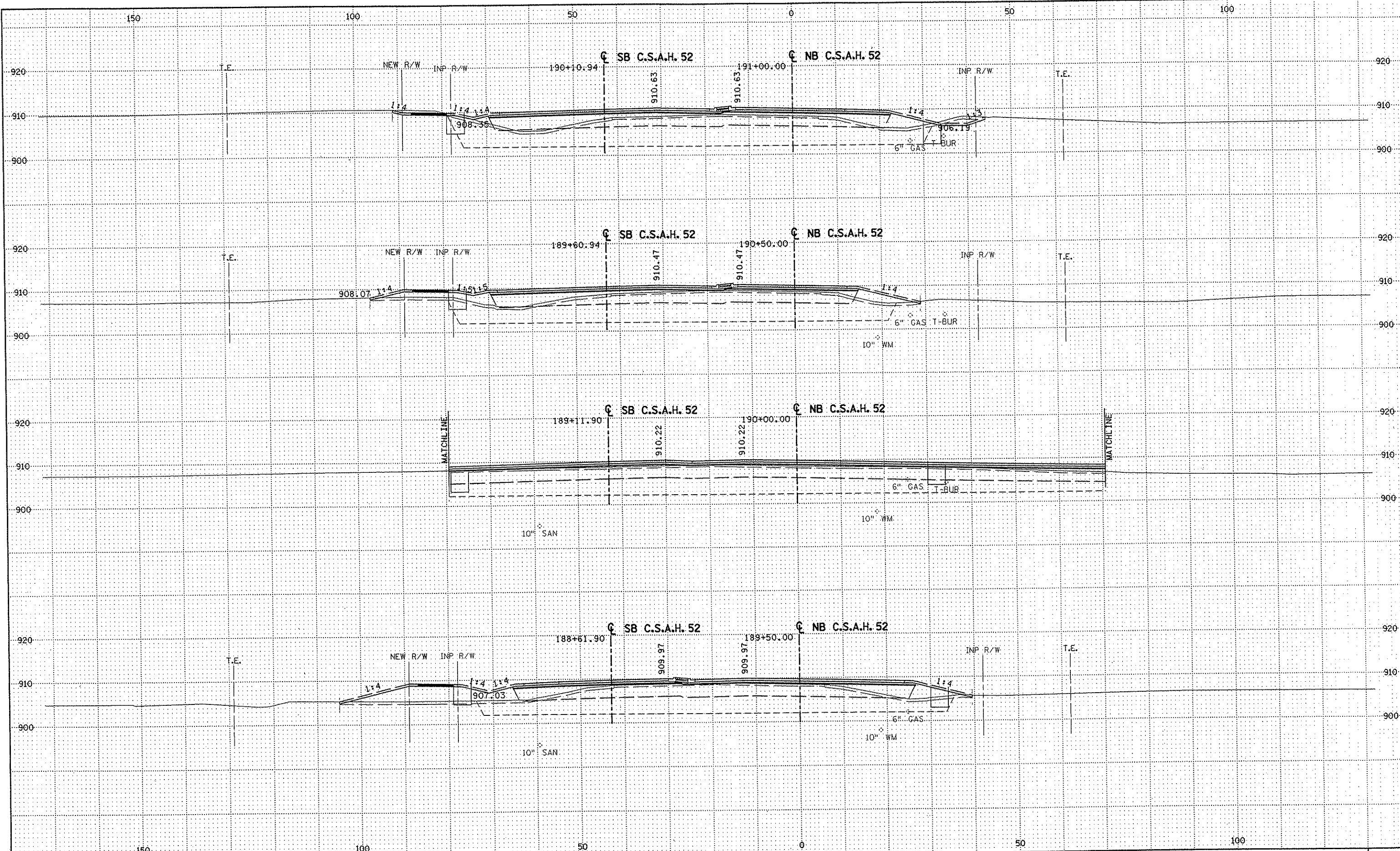
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DESIGN BY	RRC	DATE	11-12-01
CHECKED BY	JMW	DATE	11-12-01

S.P.	0280-50 (TH 35W)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 188+00 TO STA. 189+00

SHEET
 429
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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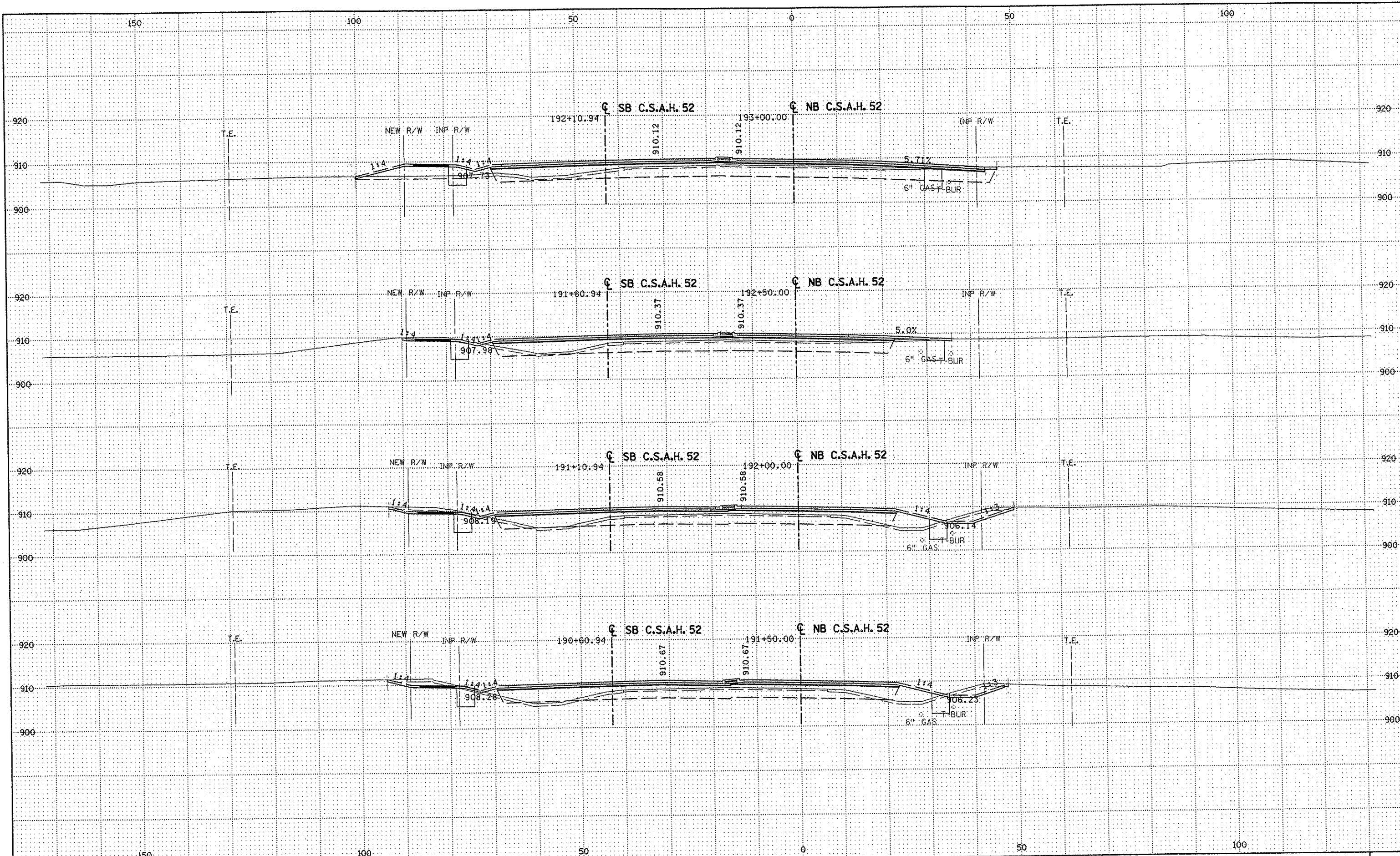
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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 TOLTZ, KING, DUVALL, ANDERSON
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 189+50 TO STA. 191+00

SHEET
 430
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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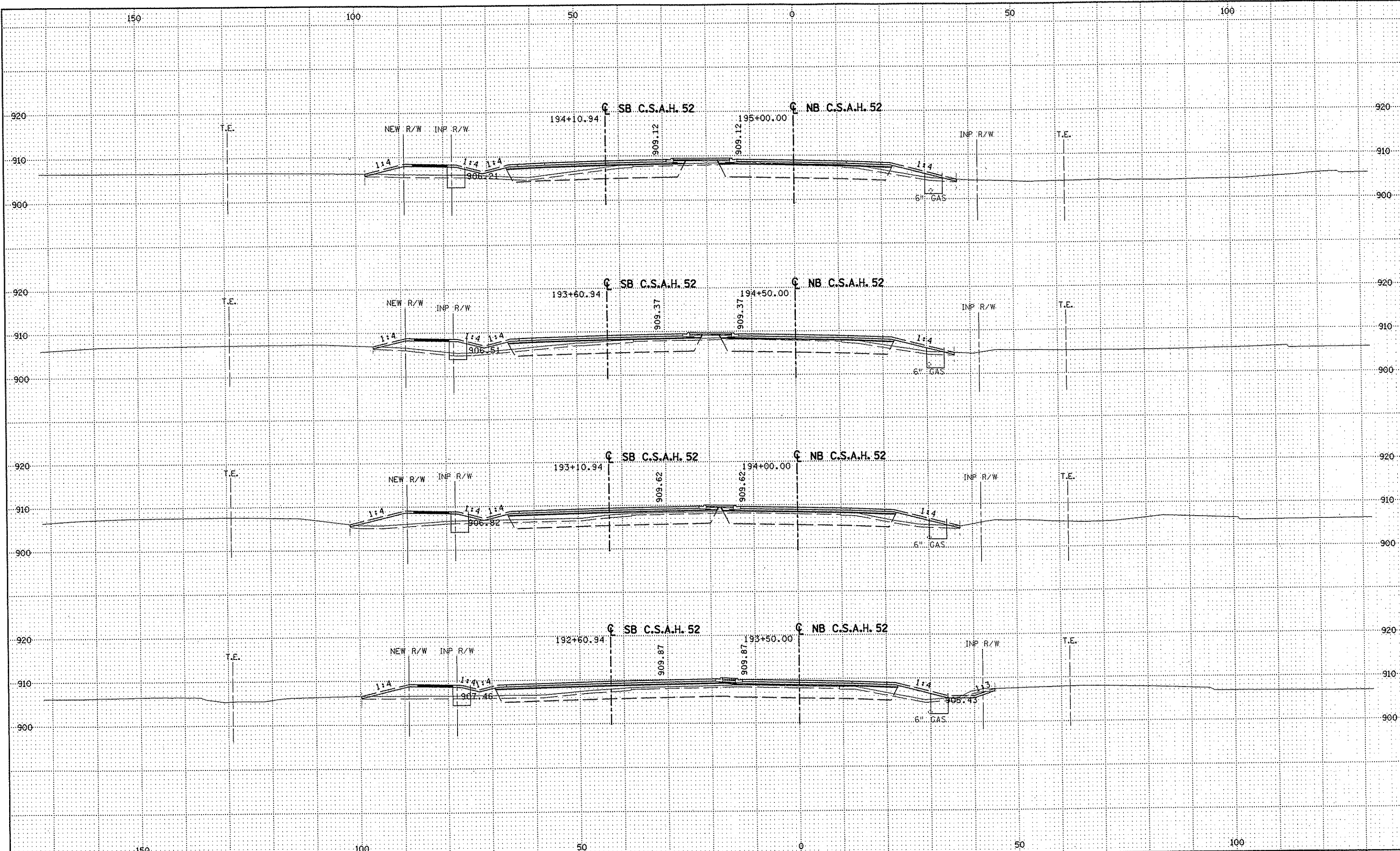
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 S.A.P. 02-652-02
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 191+50 TO STA. 193+00

SHEET
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 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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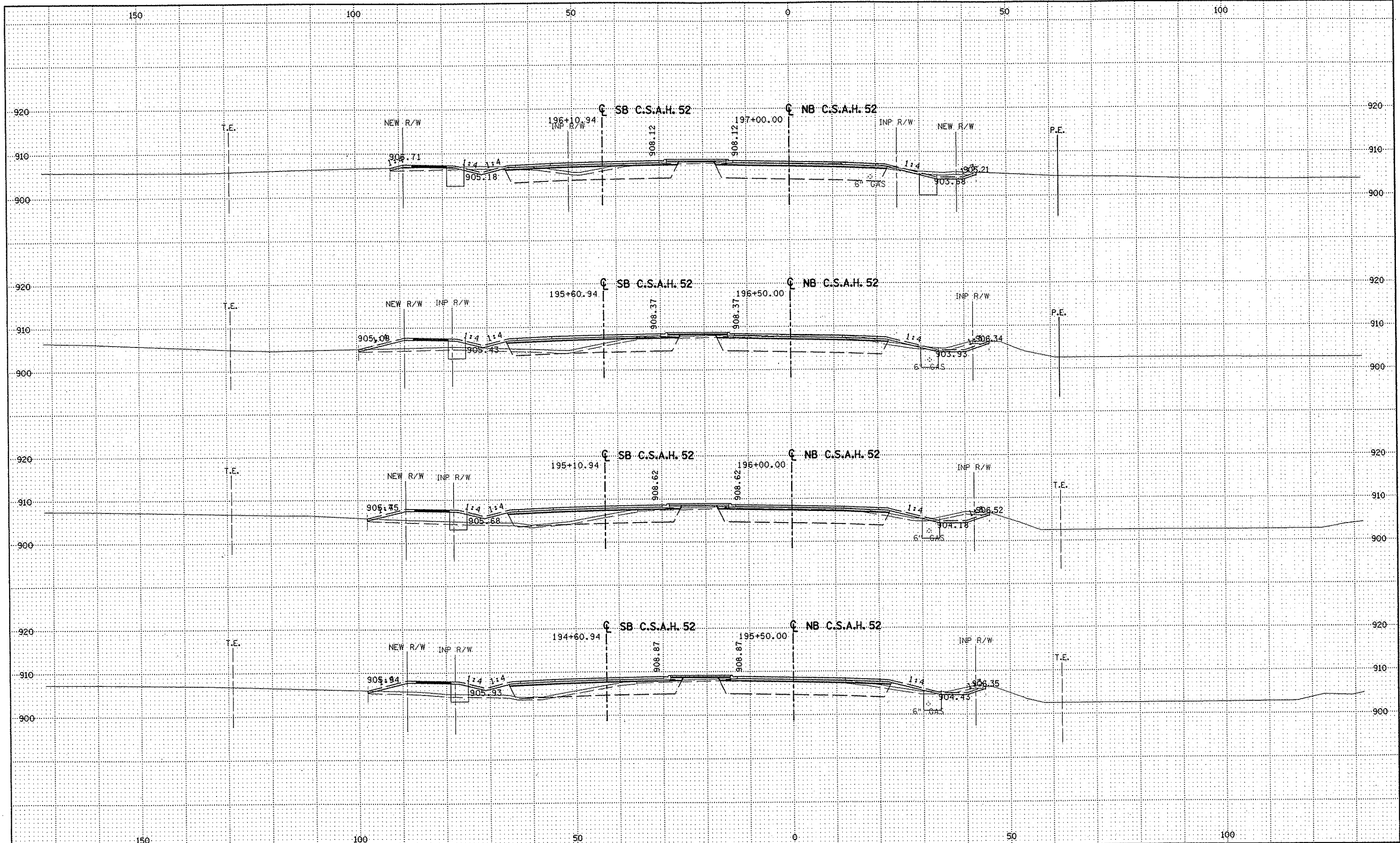
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 S.A.P. 02-652-02
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 193+50 TO STA. 195+00

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 559



NO	DATE	BY	CKD	APPR	REVISION

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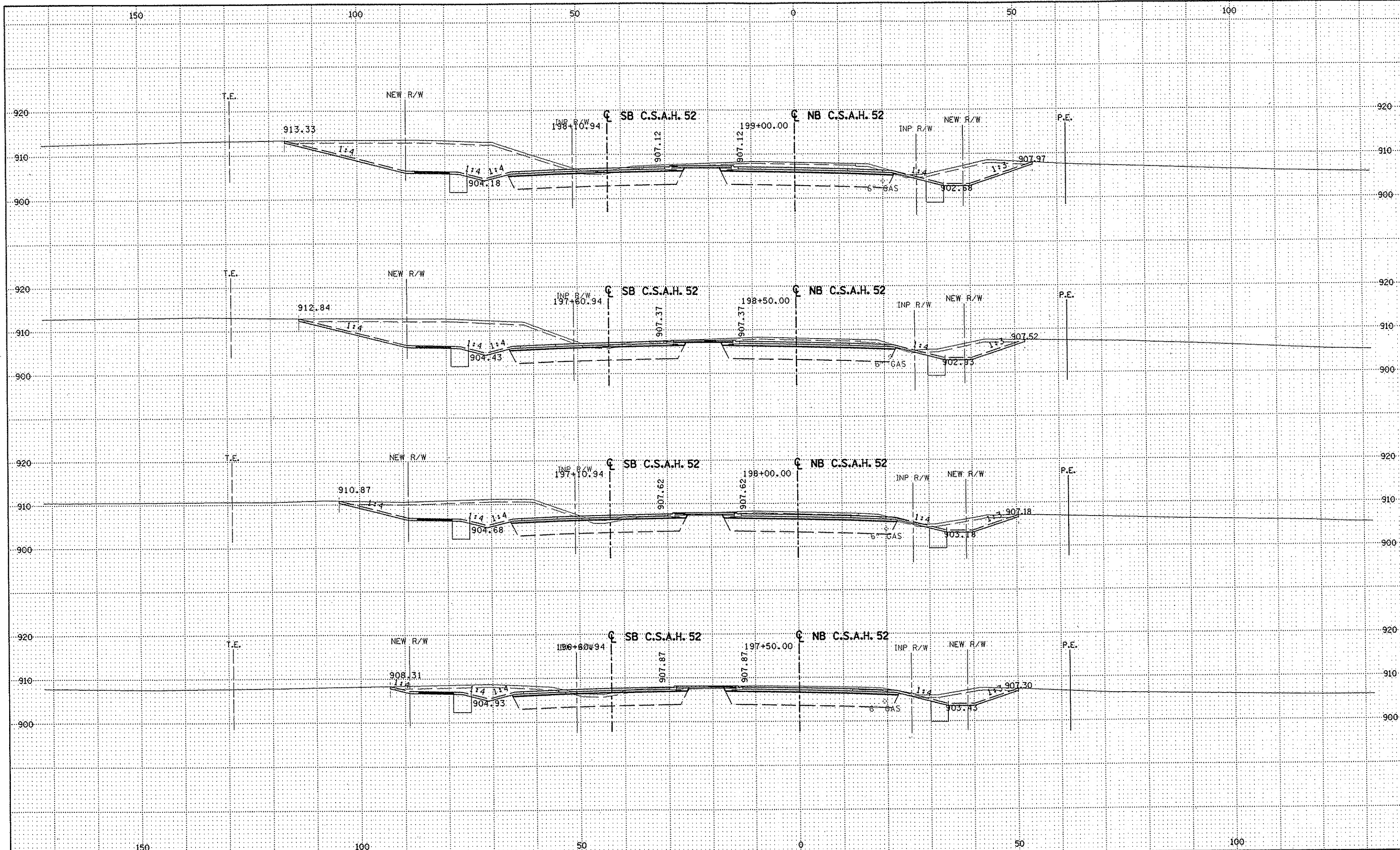
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S.A.P.	106-020-021, 106-020-022

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 TOLTZ, KING, DUVALL, ANDERSON
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 195+50 TO STA. 197+00

SHEET
 433
 OF
 559

NAME: K:\a-f\AnokaCty\1174901\hwy-br dg\par t4\roadway3\drawings\xsec\9261419000.dwg



NO	DATE	BY	CKD	APPR	REVISION

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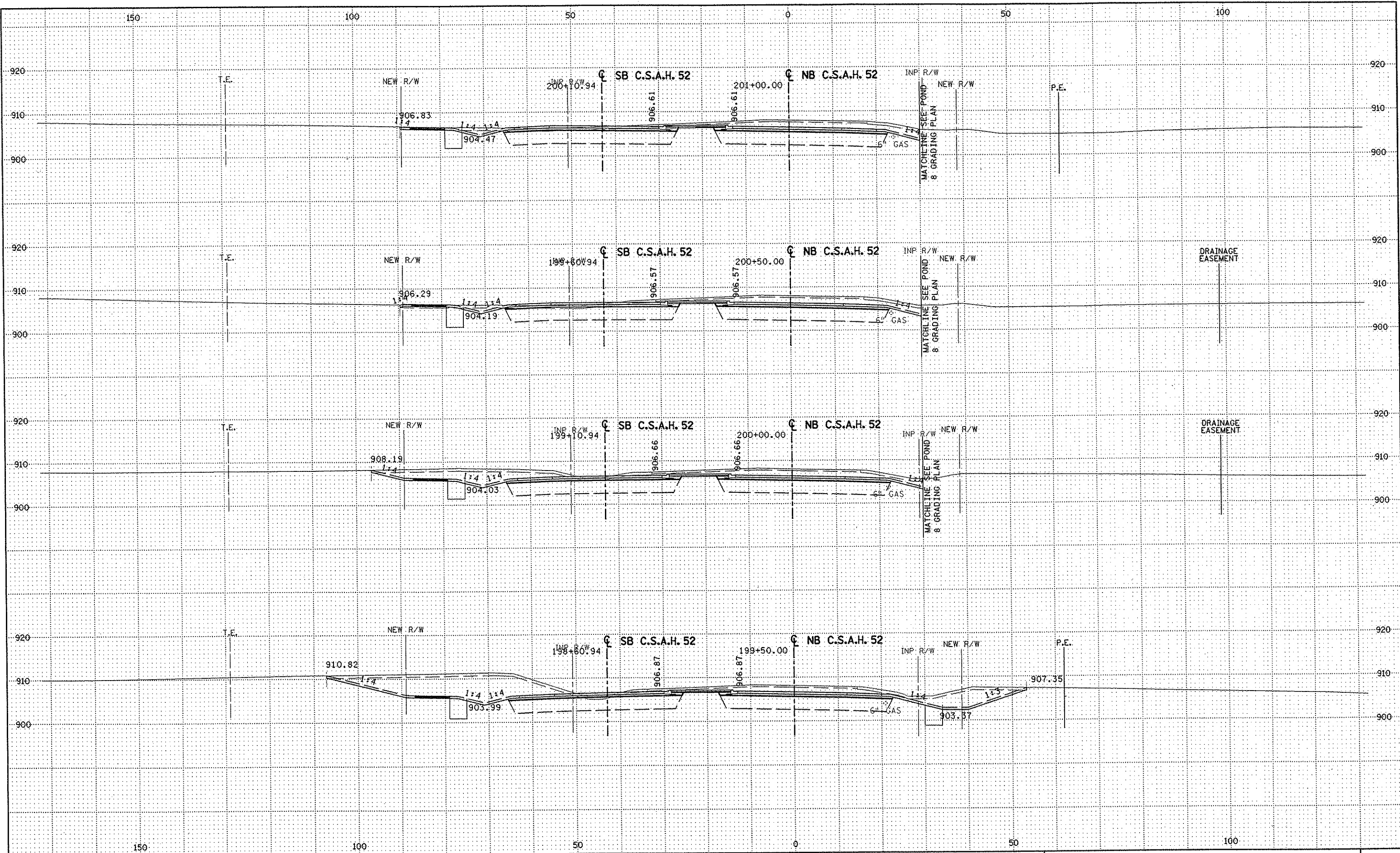
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 S.A.P. 106-020-021, 106-020-022

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 TOLTZ, KING, DUVALL, ANDERSON
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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 197+50 TO STA. 199+00

SHEET
 434
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-br'dg\part4\roadway3\drawings\xsec\0280d480.dwg



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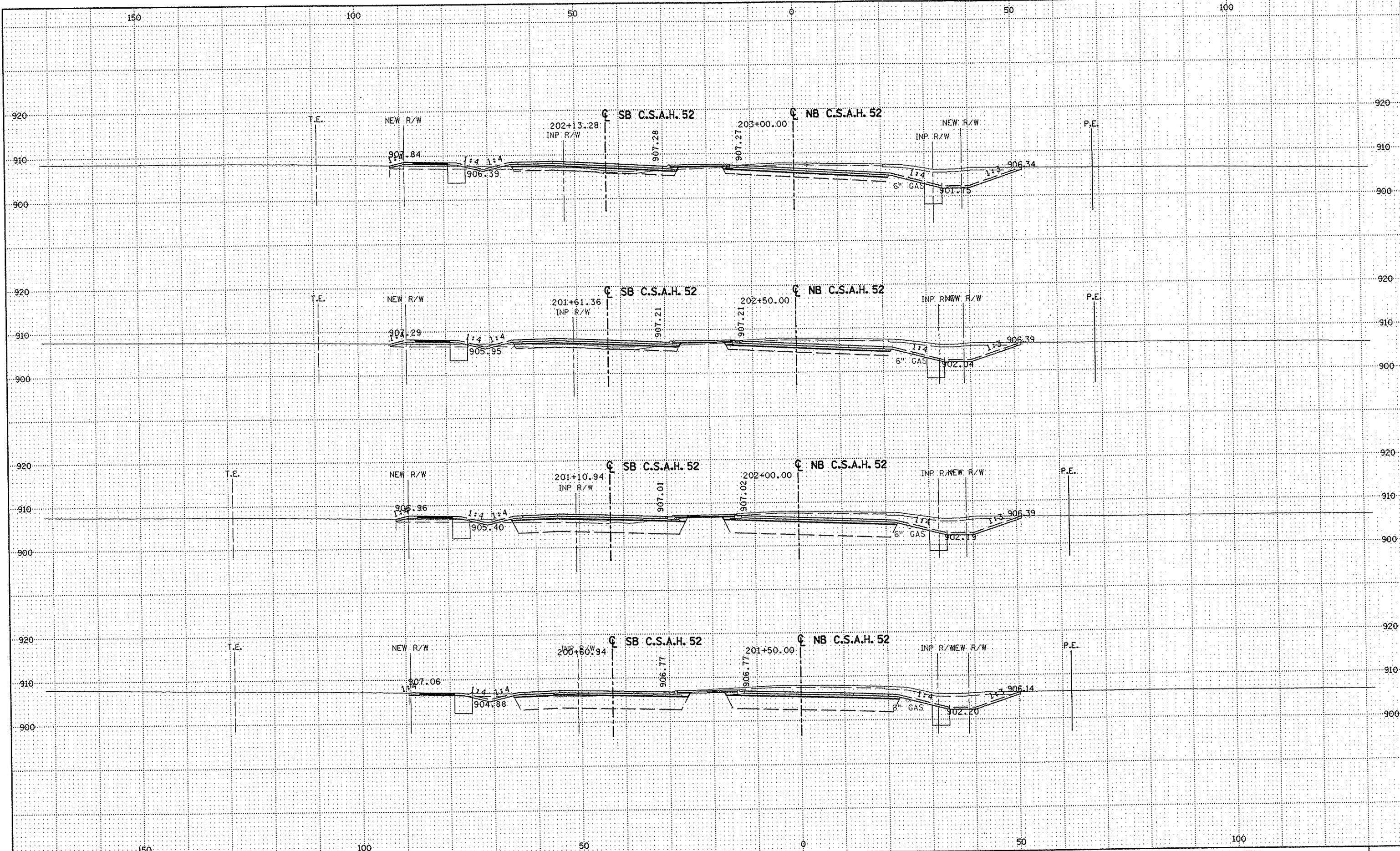
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 S.A.P. 106-020-021, 106-020-022

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 TOLTZ, KING, DUVALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 199+50 TO STA. 201+00

SHEET
 435
 OF
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NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\xsec\02014\8008



NO	DATE	BY	CKD	APPR	REVISION

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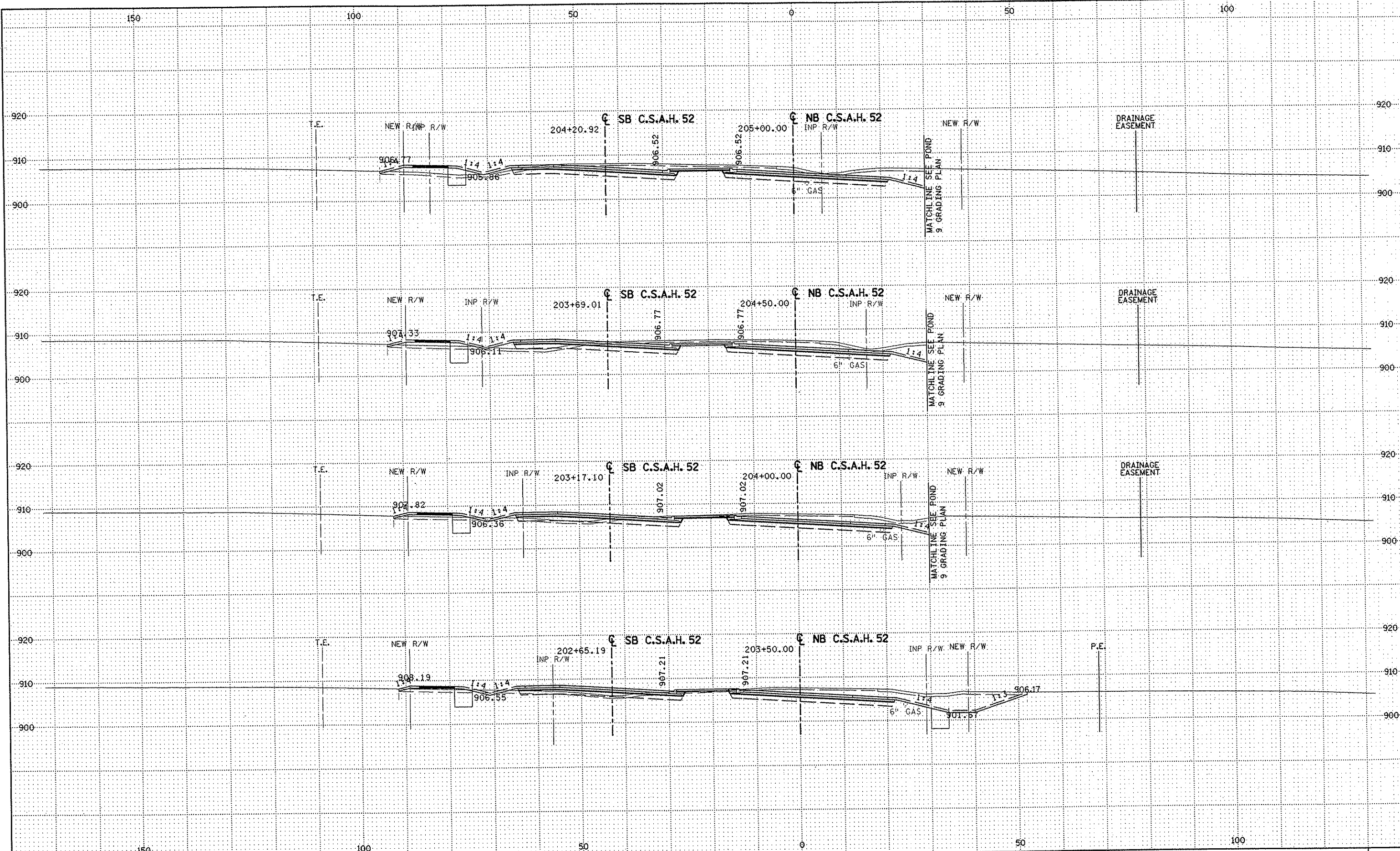
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 S.A.P. 02-652-03
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 201+50 TO STA. 203+00

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NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
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 CHECKED BY JMW DATE 11-12-01

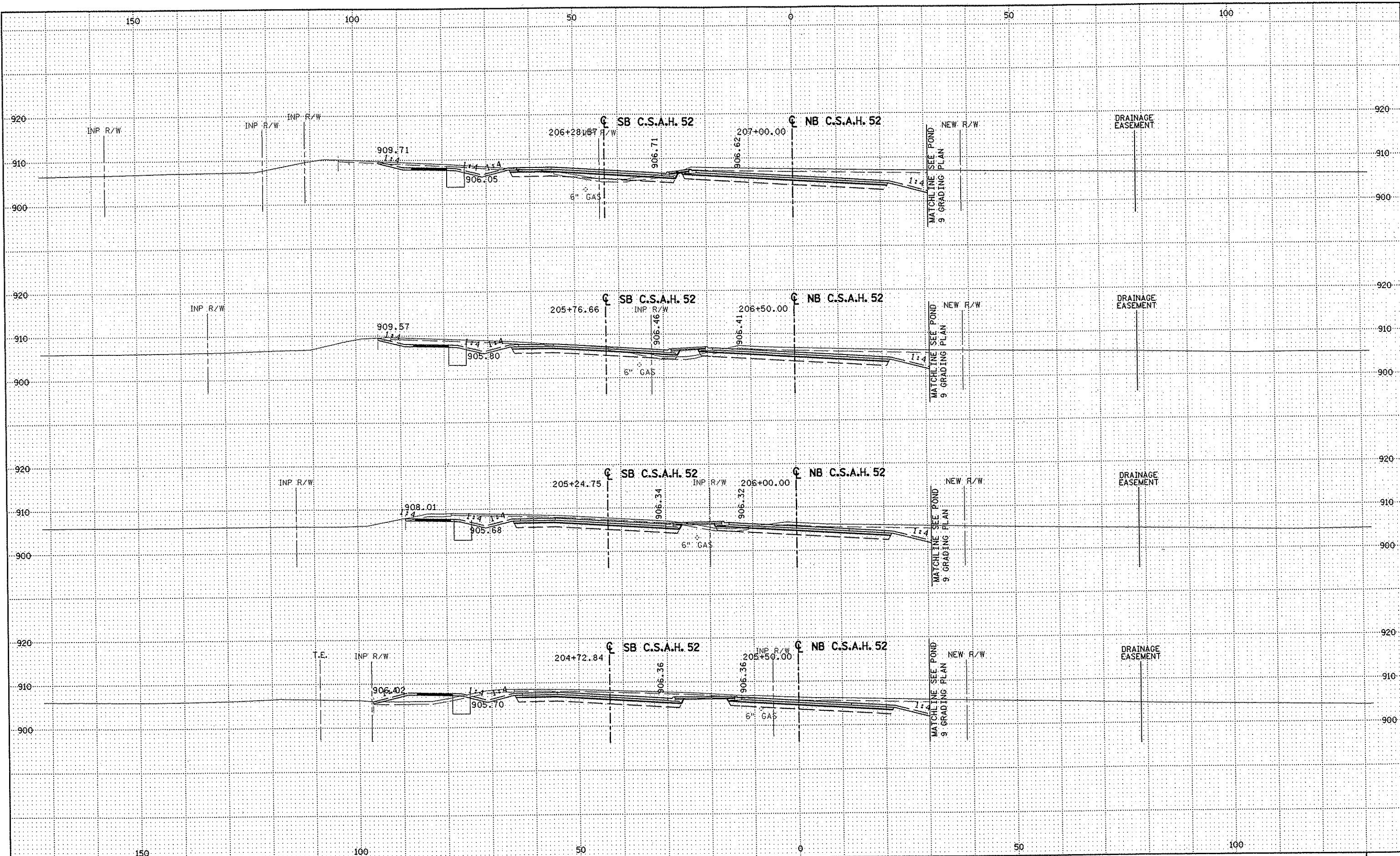
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 203+50 TO STA. 205+00

SHEET
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 OF
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NAME: K:\a-f\AnokaCty\1174901\hwy-brdg\par+4\roadway3\drawings\xsec\020144800.dwg

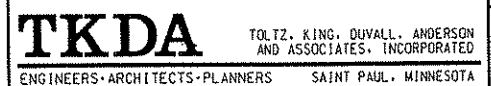


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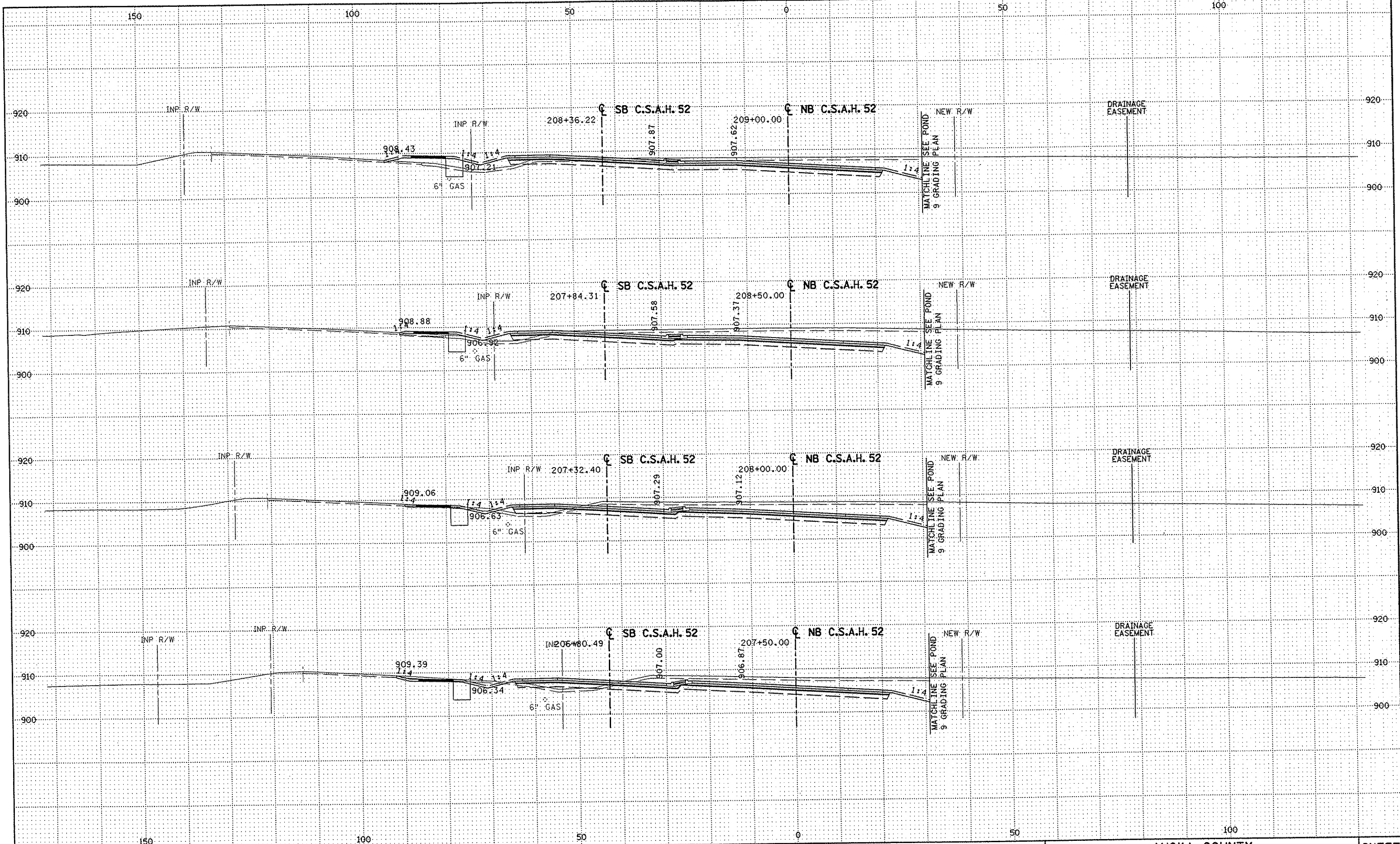
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022



ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 205+50 TO STA. 207+00

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OF
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NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
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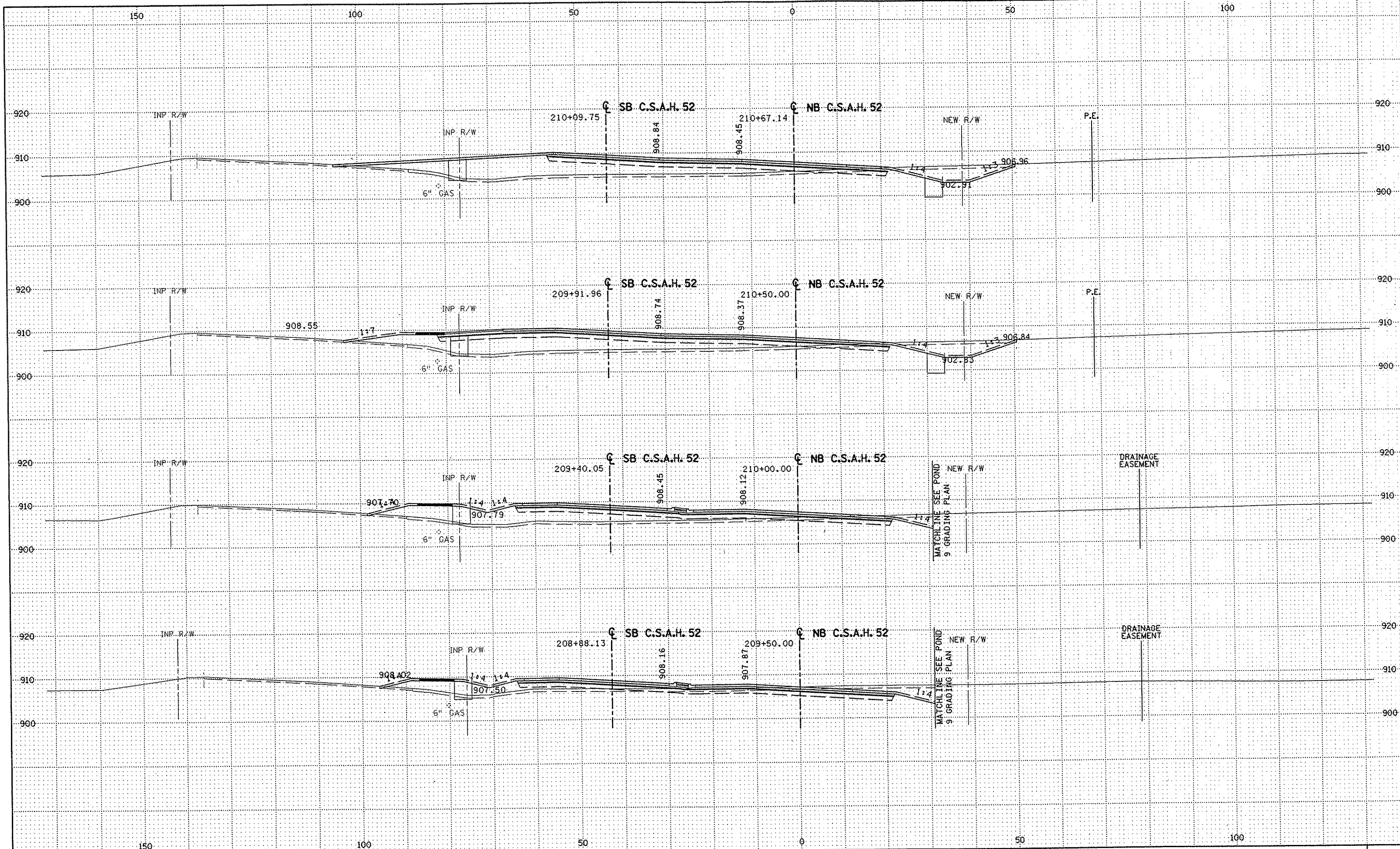
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 207+50 TO STA. 209+00

SHEET
 439
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway\drawings\xsec\02\014\8008.r



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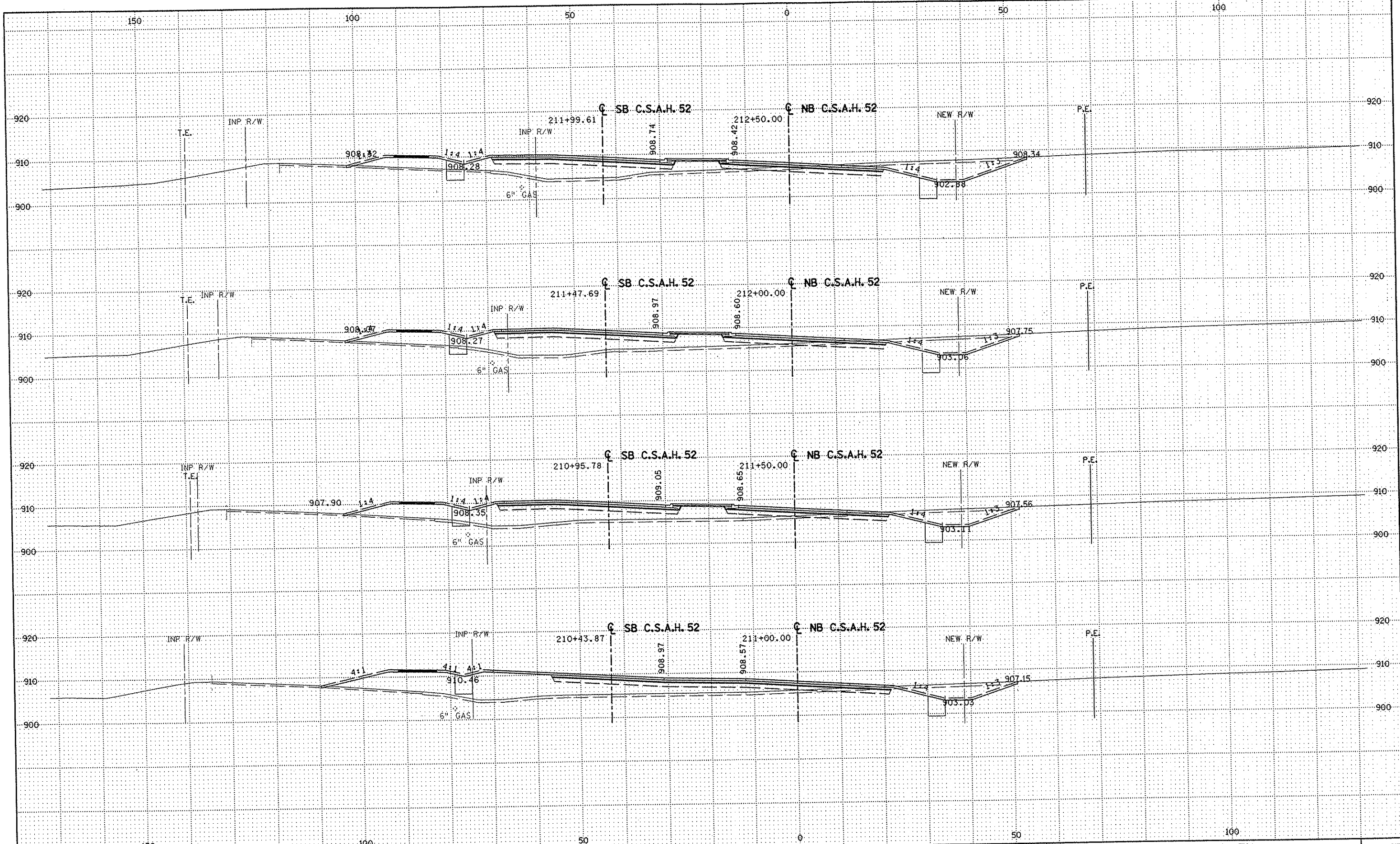
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 209+50 TO STA. 210+67.14

SHEET
 440
 OF
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NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\xsec\92014780.dwg



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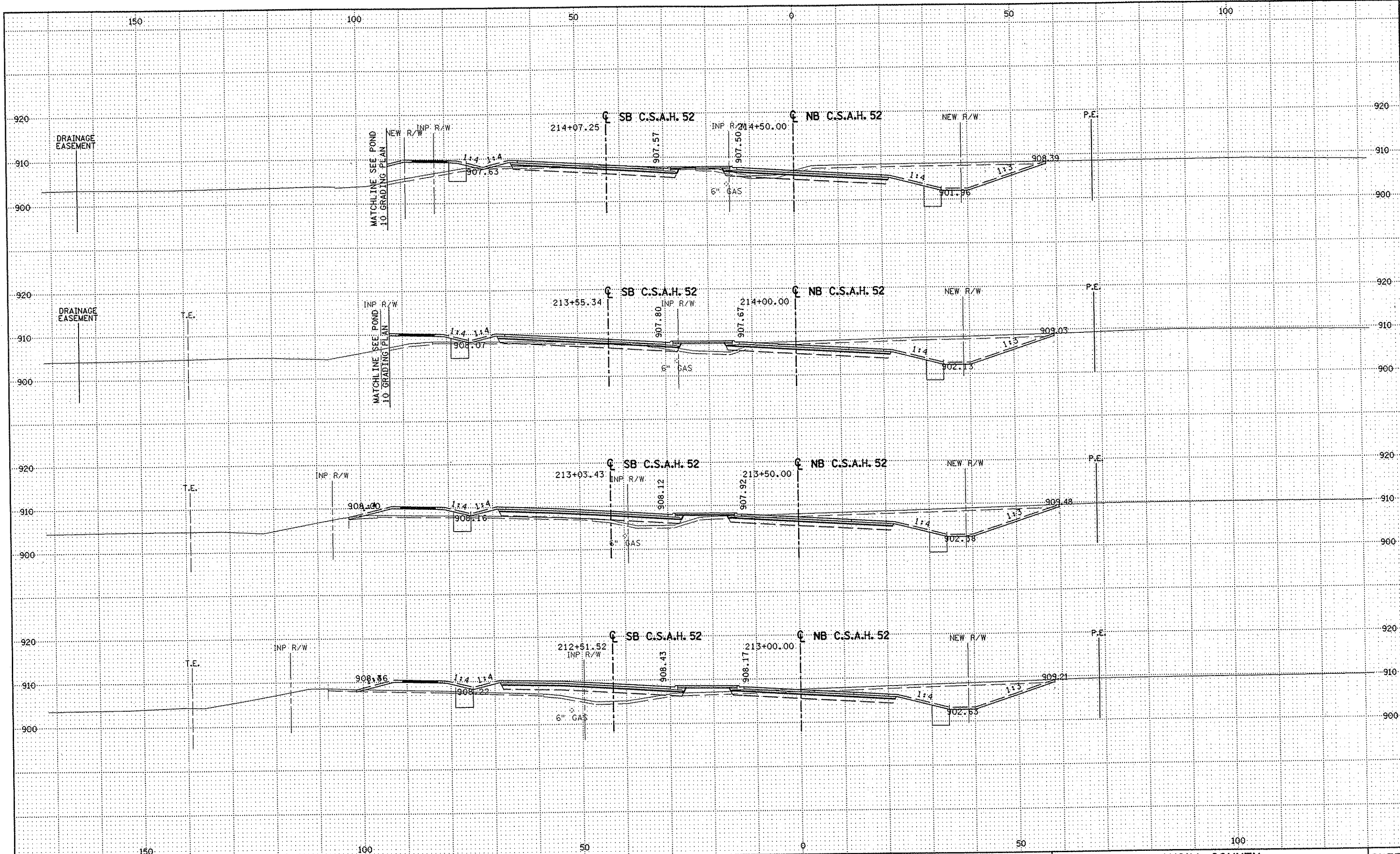
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 211+00 TO STA. 212+50

SHEET
 441
 OF
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NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\sec\0280442002.dwg



NO	DATE	BY	CKD	APPR	REVISION

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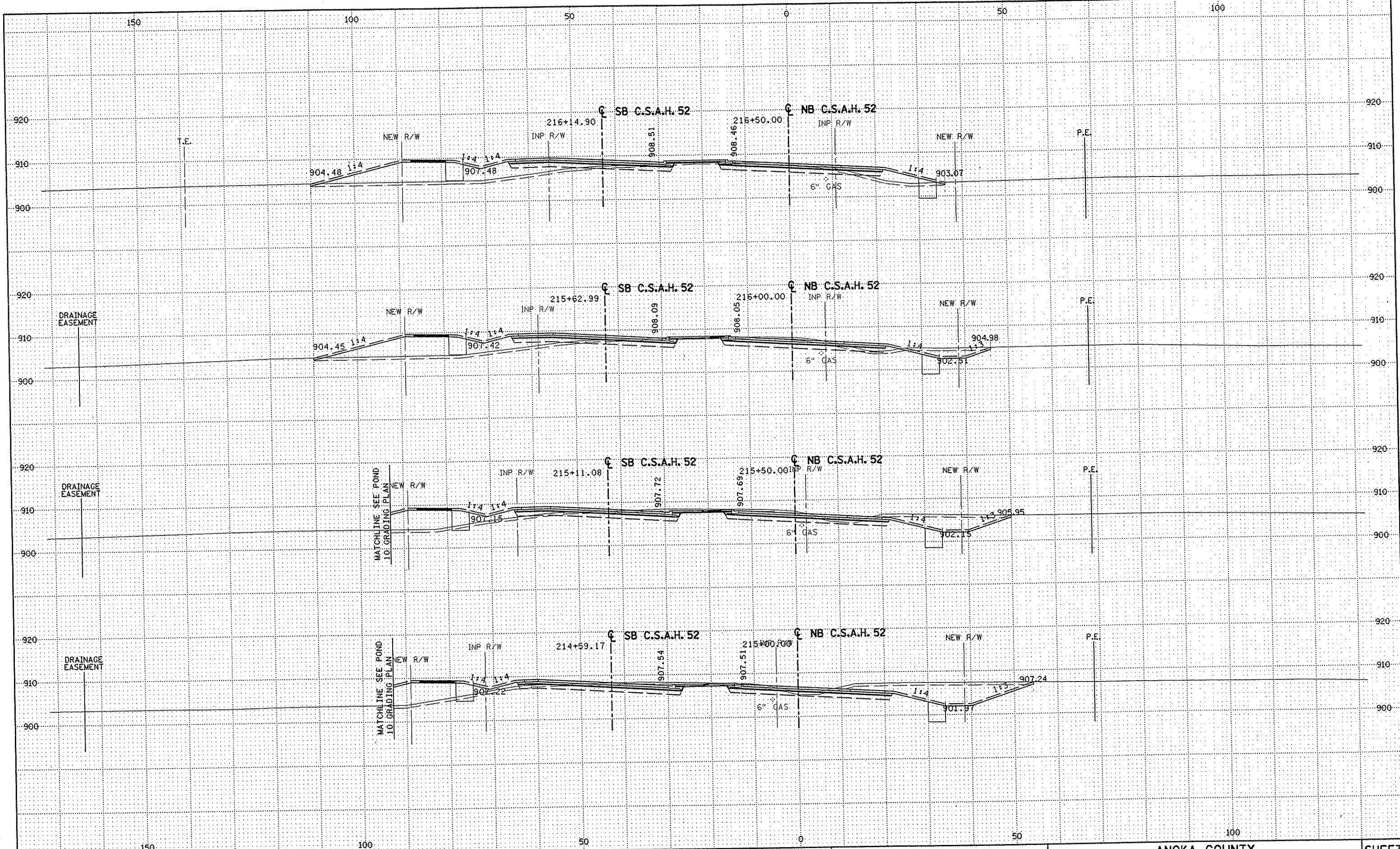
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUWALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 213+00 TO STA. 214+50

SHEET
 442
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\sec\22\144800.dwg



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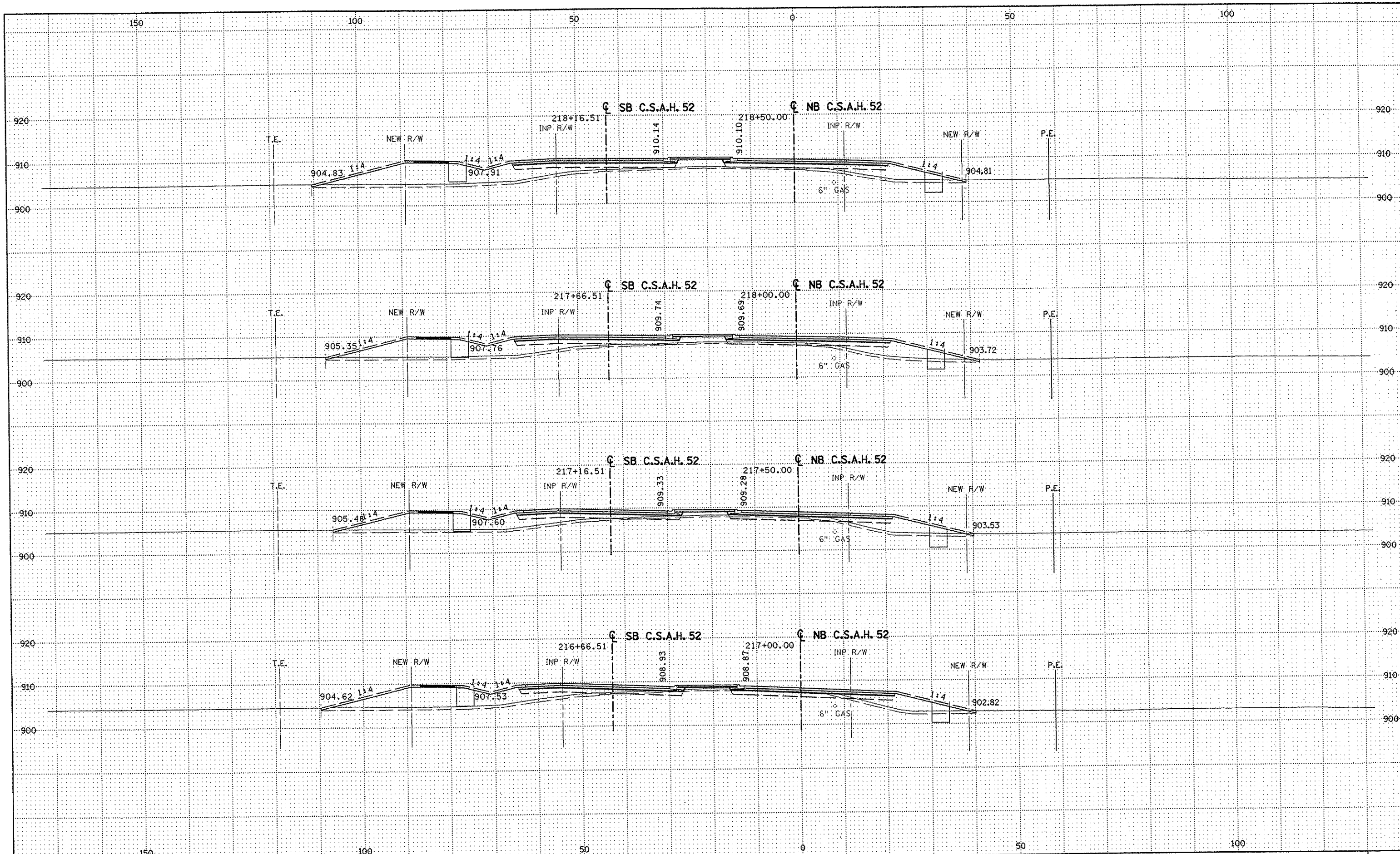
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 215+00 TO STA. 216+50

SHEET
 443
OF
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NAME: K:\a-f\AnokaCty\1174901\hwy-brdg\par t4\roadway3\drawings\sec\02\14\800.dwg



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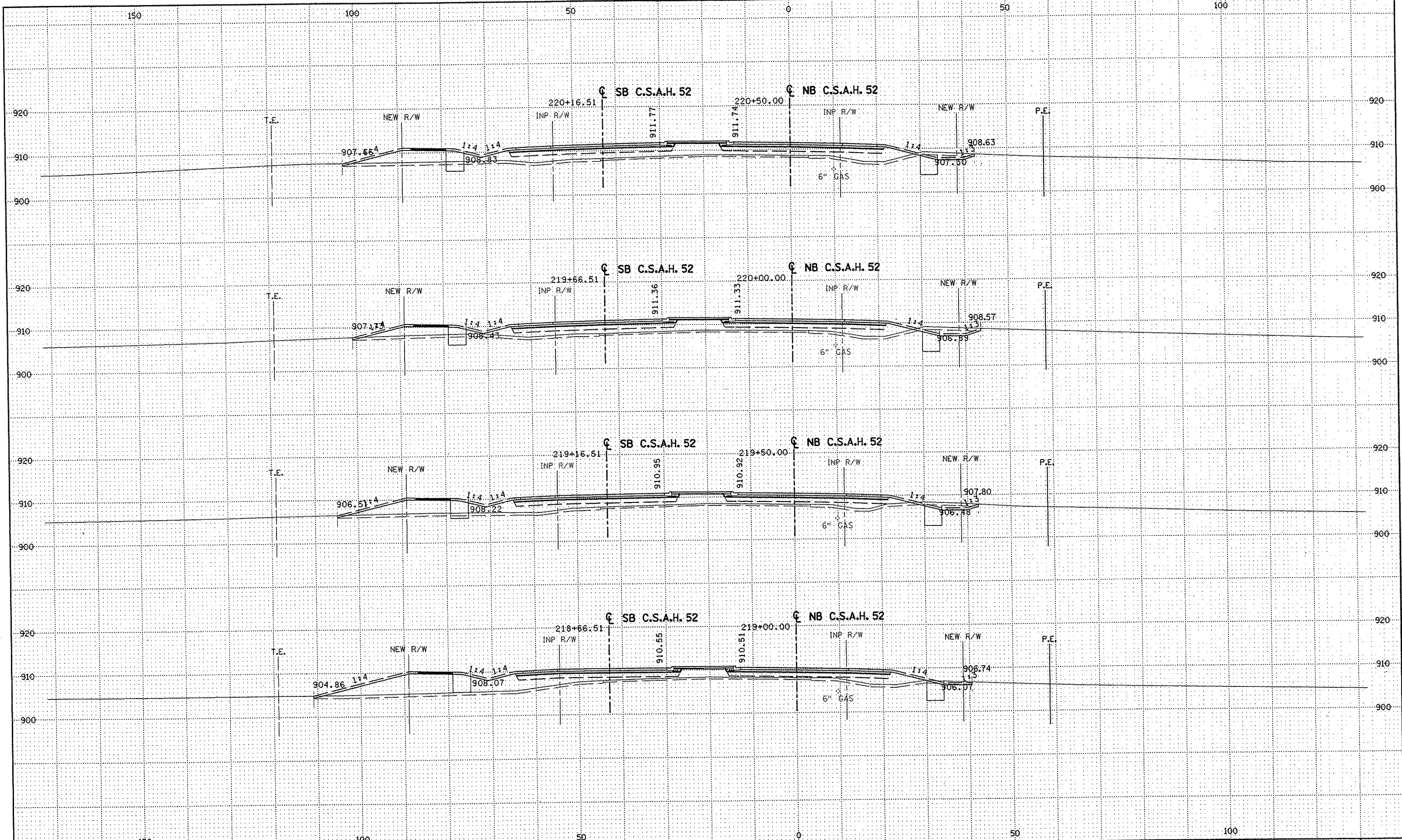
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 217+00 TO STA. 218+50

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OF
 559

NAME: K:\a-f\AnokaCty\1174901\hwy-brdg\part4\roadway3\drawings\sec\0261d180.dgn



NO	DATE	BY	CRD	APPR	REVISION

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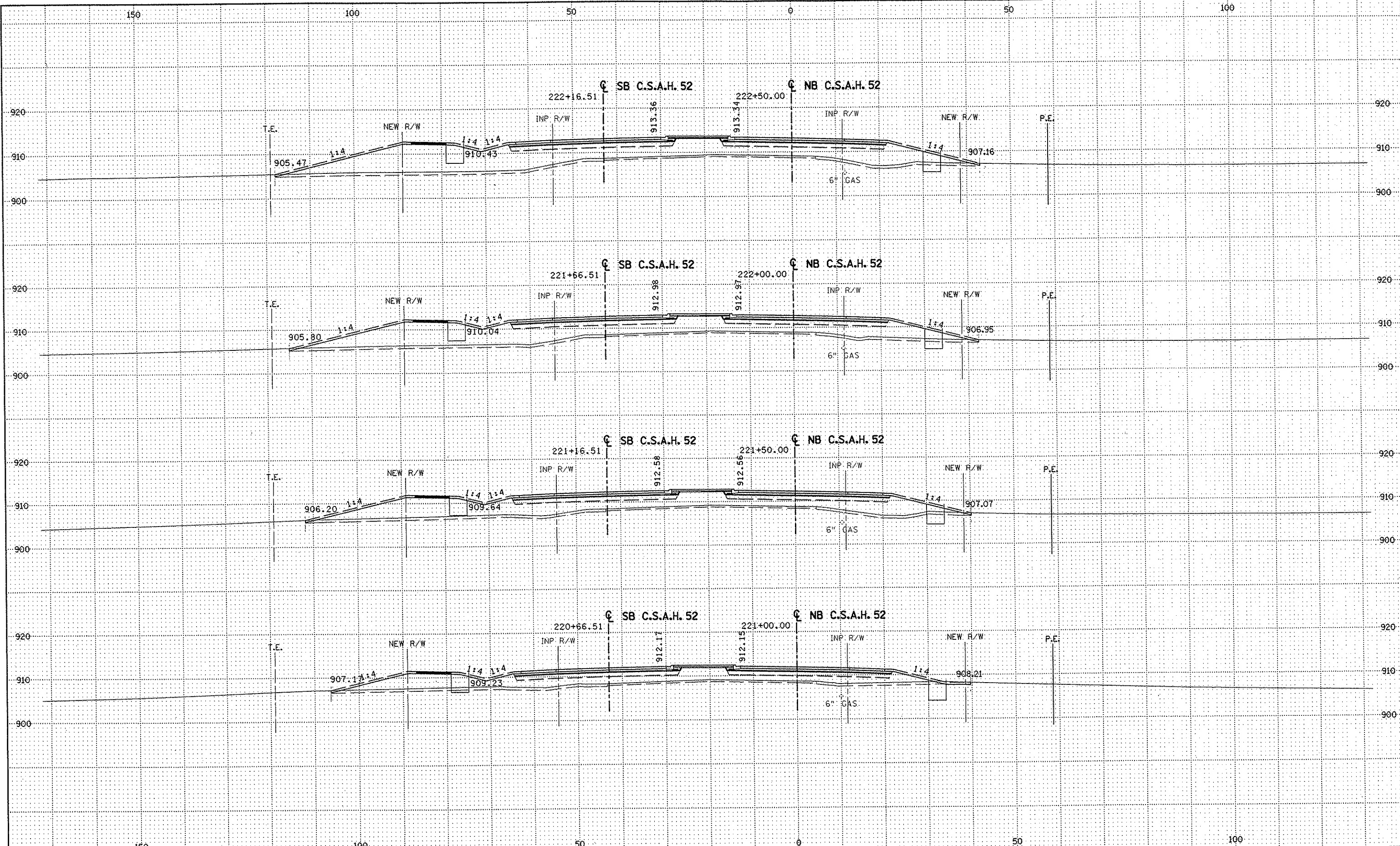
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 219+00 TO STA. 220+50

SHEET
 445
 OF
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NO	DATE	BY	CHKD	APPR	REVISION

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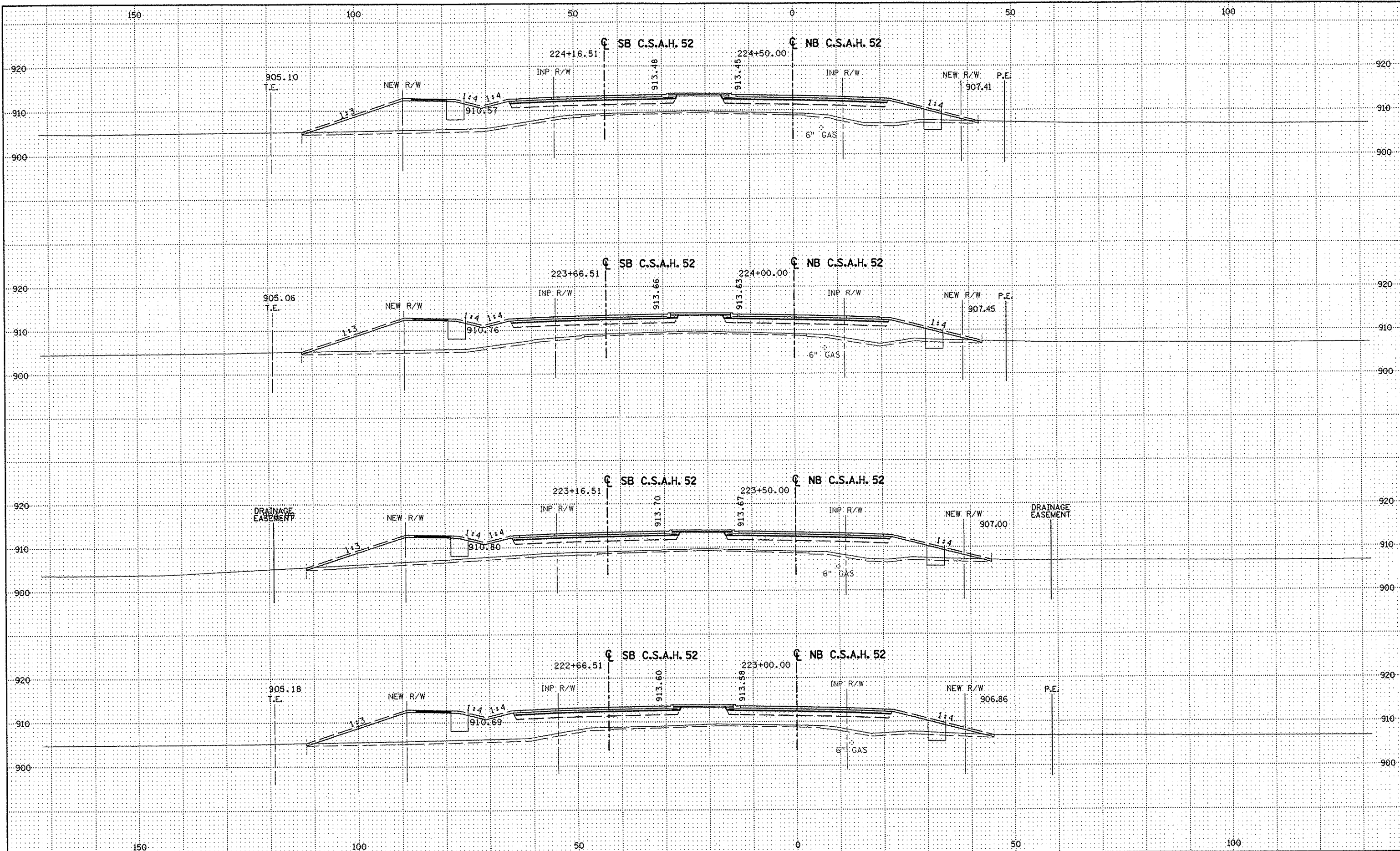
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TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 221+00 TO STA. 222+50

SHEET
 446
 OF
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NAME: K:\a-f\AnokaCty\117490\hwy-brdg\part4\roadway3\drawings\csec\02c14490.dwg



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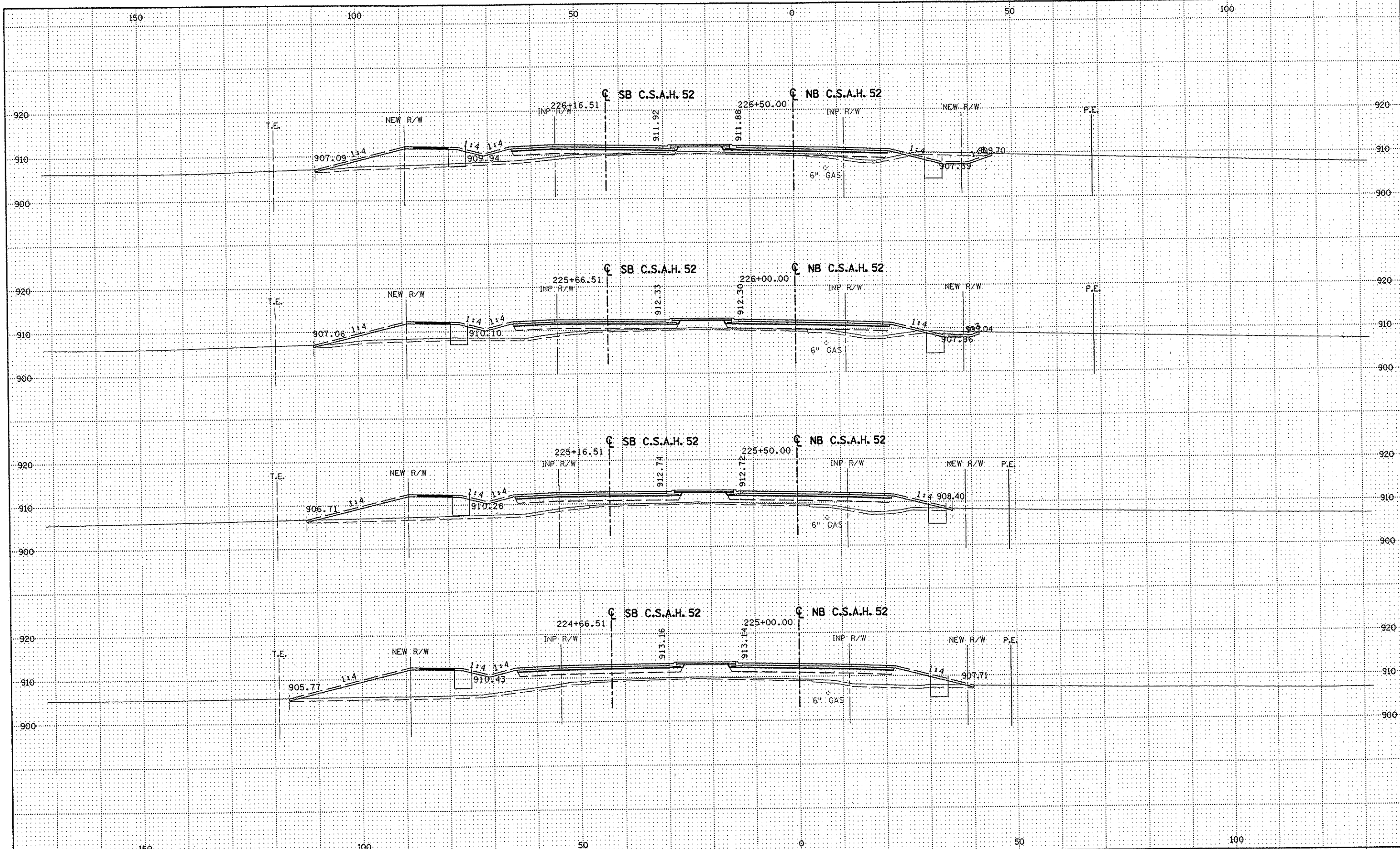
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 223+00 TO STA. 224+50

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 OF
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NAME: K:\a-f\AnokaCty\1174901\hwy-brdg\part4\roadway3\drawings\sec\0261d480.dwg



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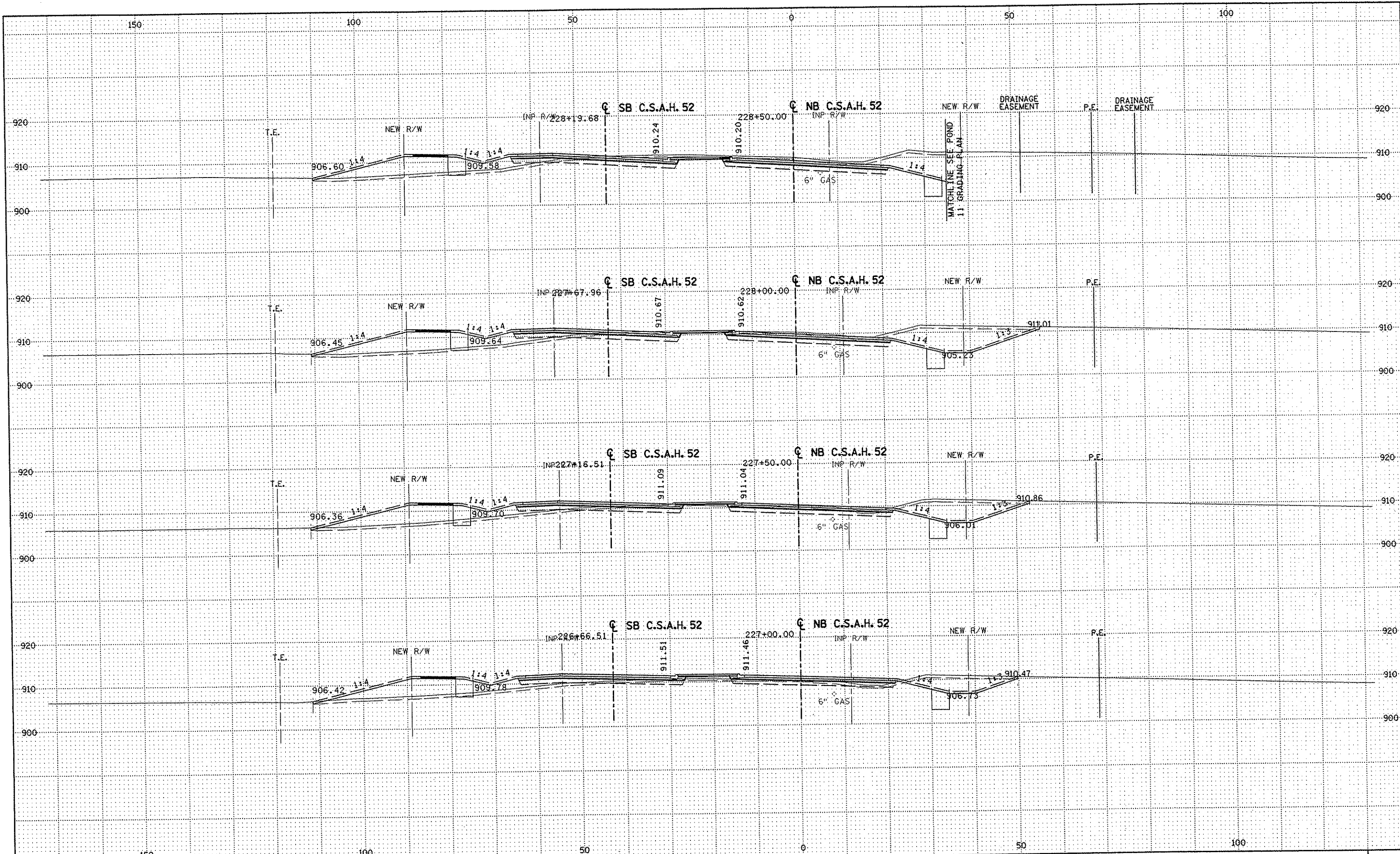
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 225+00 TO STA. 226+50

SHEET
 448
 OF
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NO	DATE	BY	CKD	APPR	REVISION

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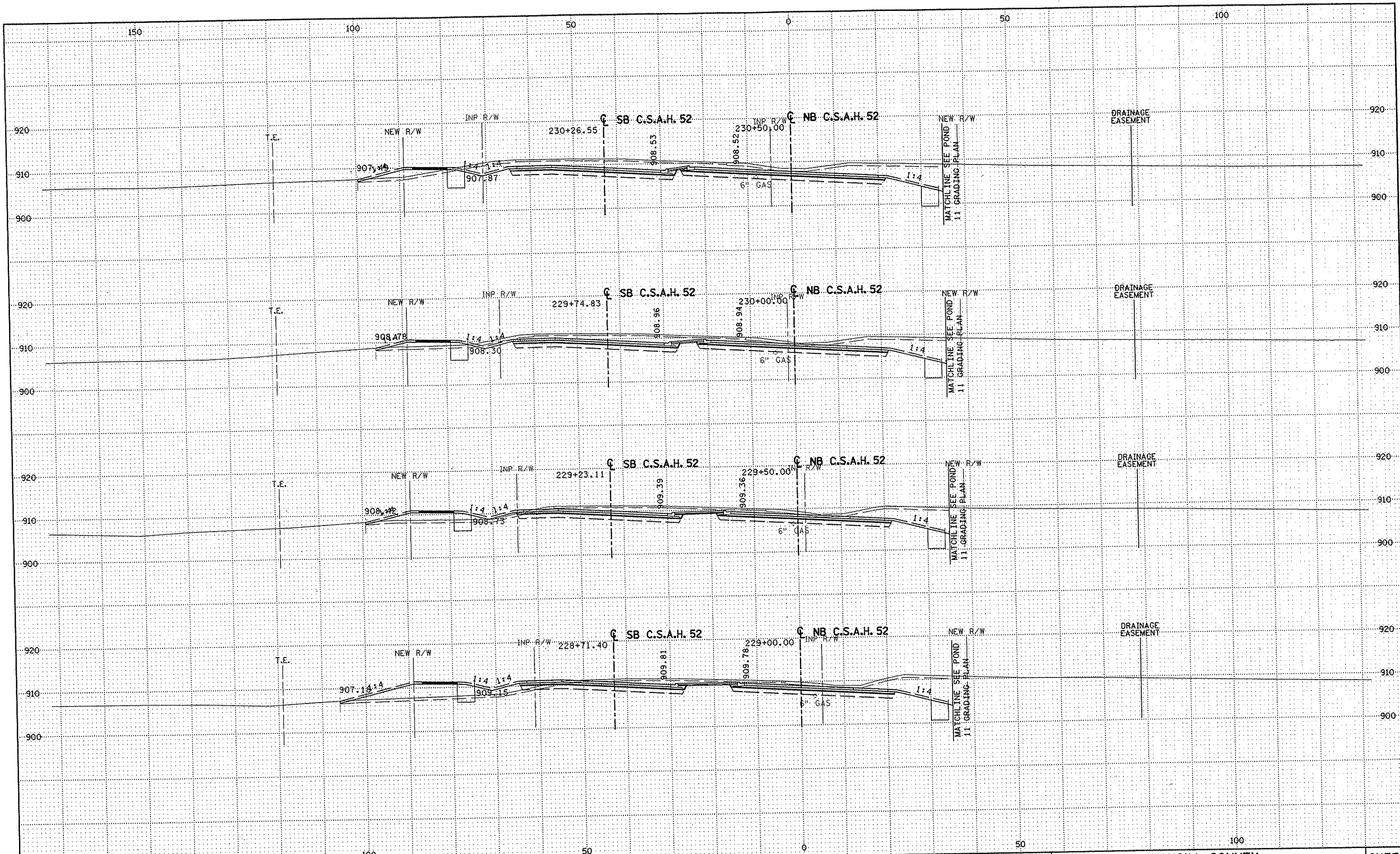
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CHECKED BY	JMW	DATE	11-12-01

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S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

TKDA
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 AND ASSOCIATES, INCORPORATED
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 227+00 TO STA. 228+50

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NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
 DESIGN BY RRC DATE 11-12-01
 CHECKED BY JMW DATE 11-12-01

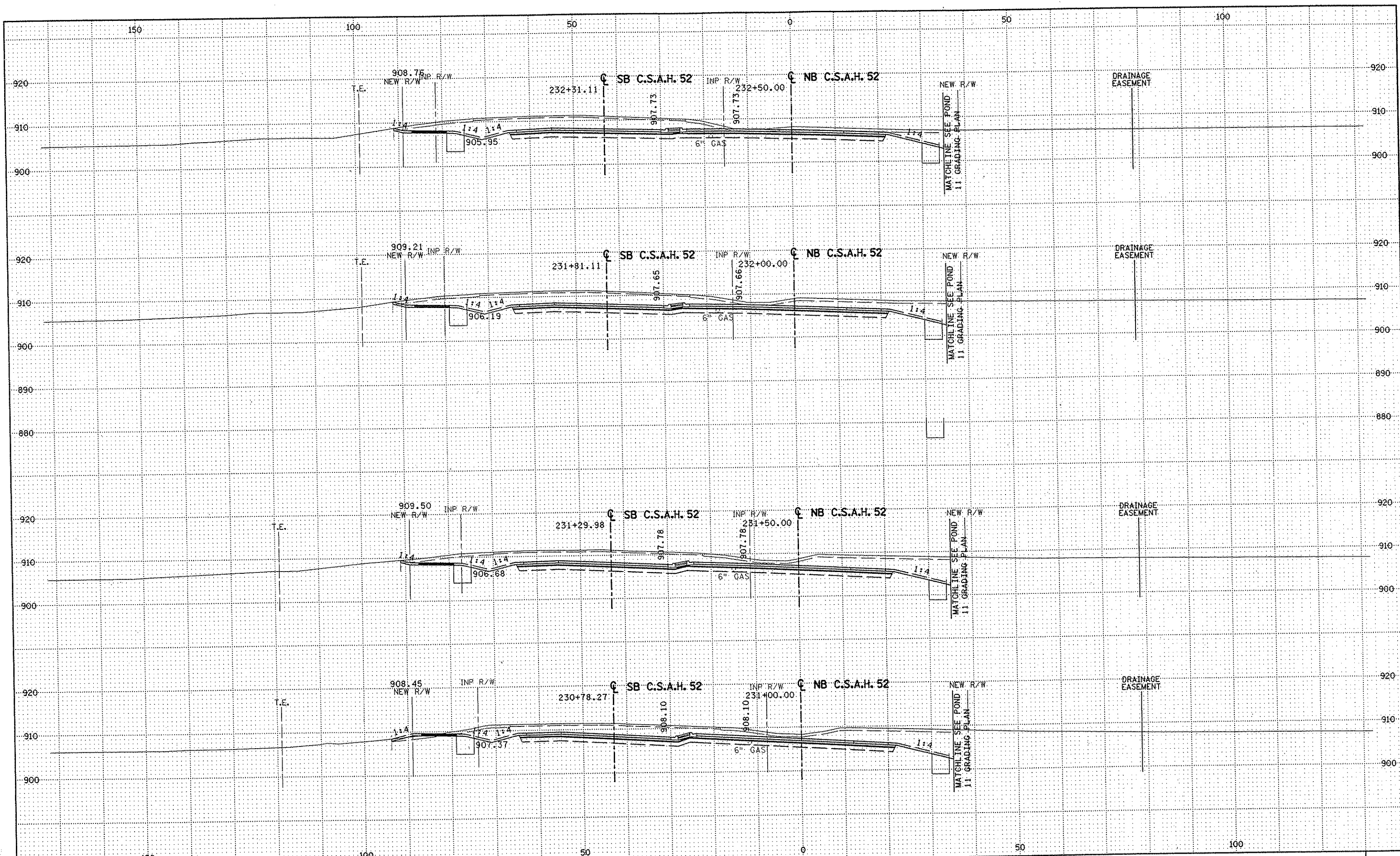
S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUYALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 229+00 TO STA. 230+50

SHEET
 450
 OF
 559

NAME: K:\a-f\Anoka Cty\1174901\hwy-br dg\par f4\roadway3\drawings\xsec\02614\80201



NO	DATE	BY	CRD	APPR	REVISION

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DESIGN BY RRC DATE 11-12-01
CHECKED BY JMW DATE 11-12-01

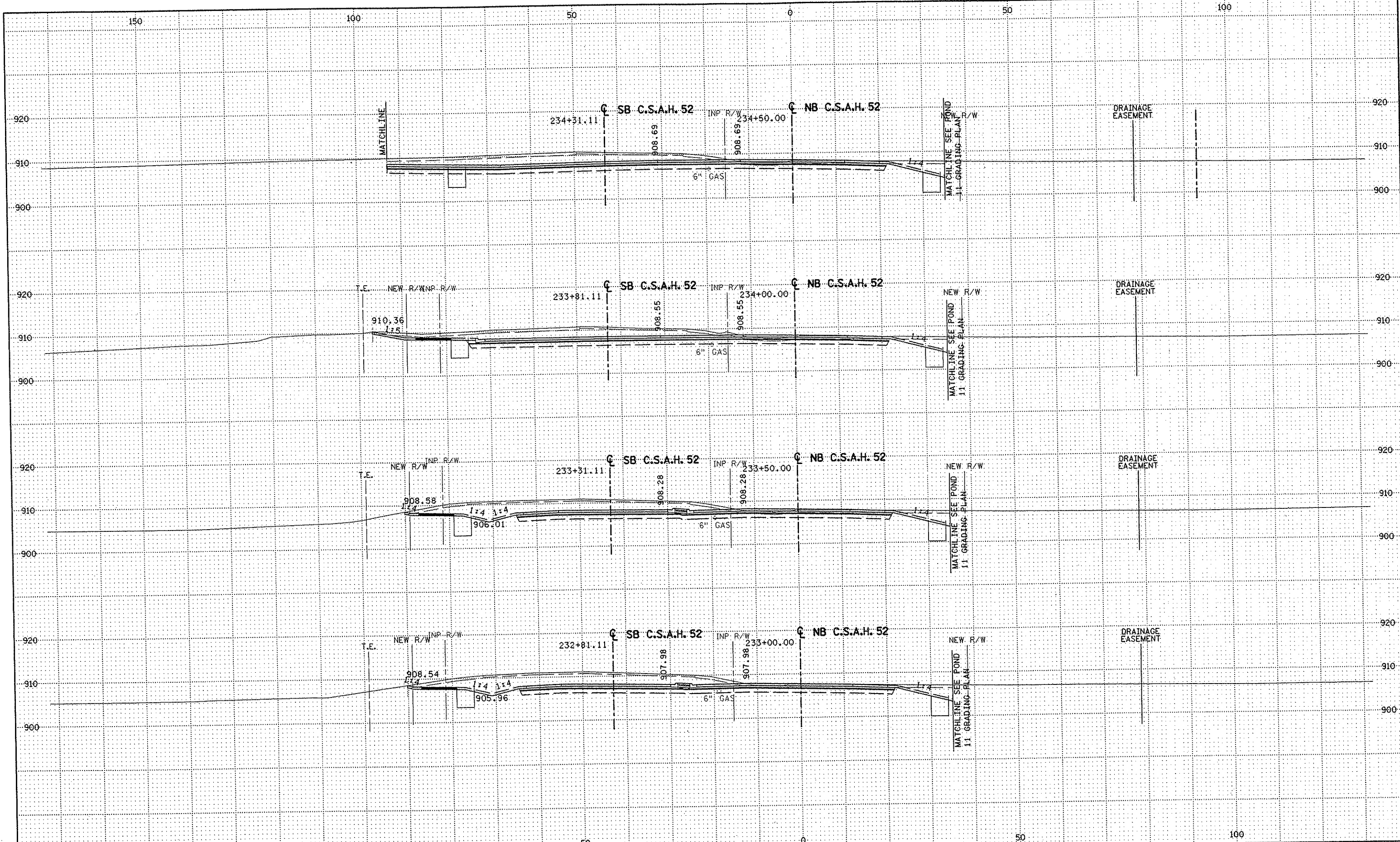
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S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 231+00 TO STA. 232+50

SHEET
451
OF
559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\sec\231450.dwg



NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
DESIGN BY RRC DATE 11-12-01
CHECKED BY JMW DATE 11-12-01

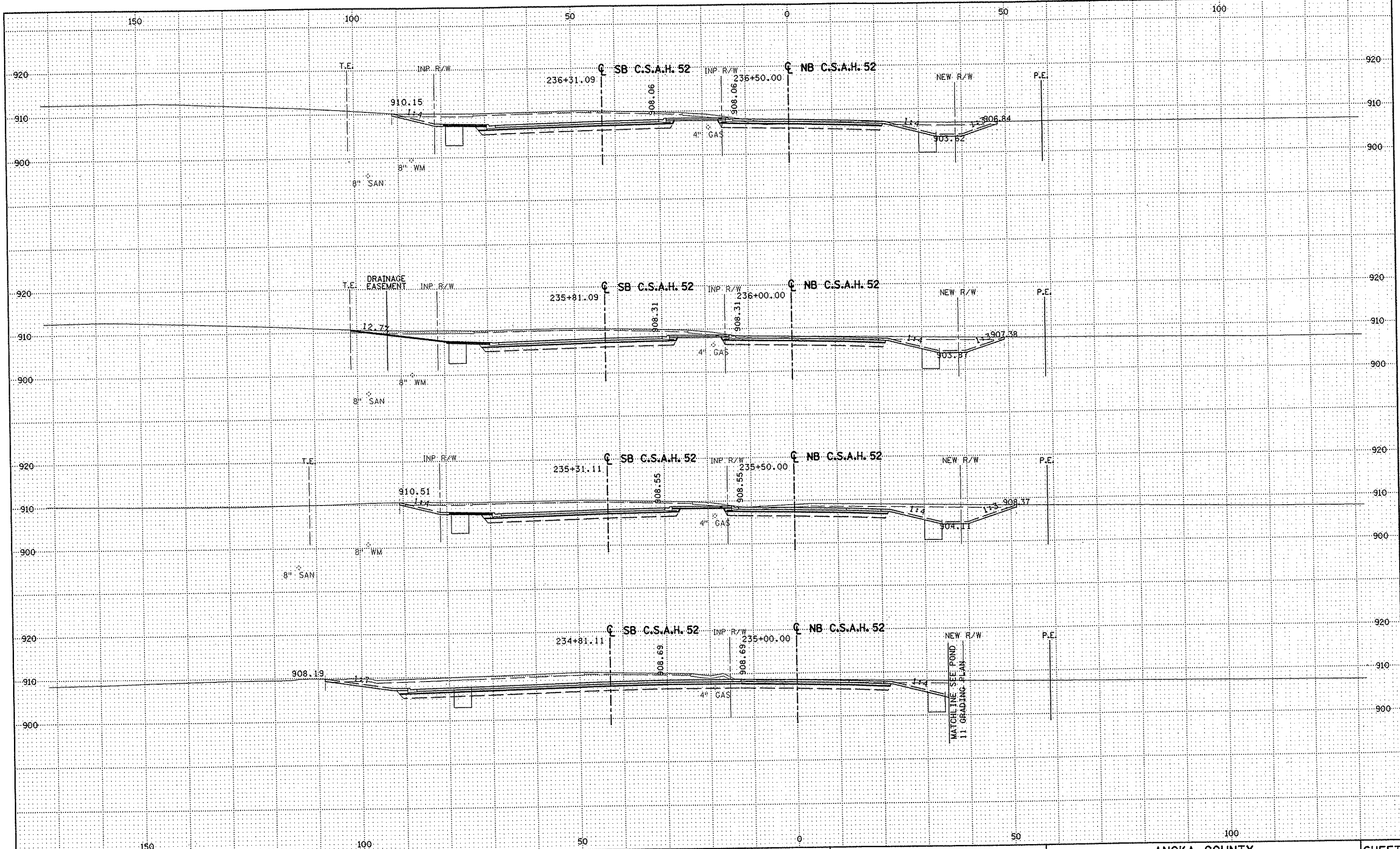
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S.A.P. 106-020-021, 106-020-022

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TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 233+00 TO STA. 234+50

SHEET
452
OF
559

NAME: K:\a-f\Anoka\ty\1174901\hwy-brdg\part4\roadway3\drawings\xsec\232\232.dwg



NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
 DESIGN BY RRC DATE 11-12-01
 CHECKED BY JMM DATE 11-12-01

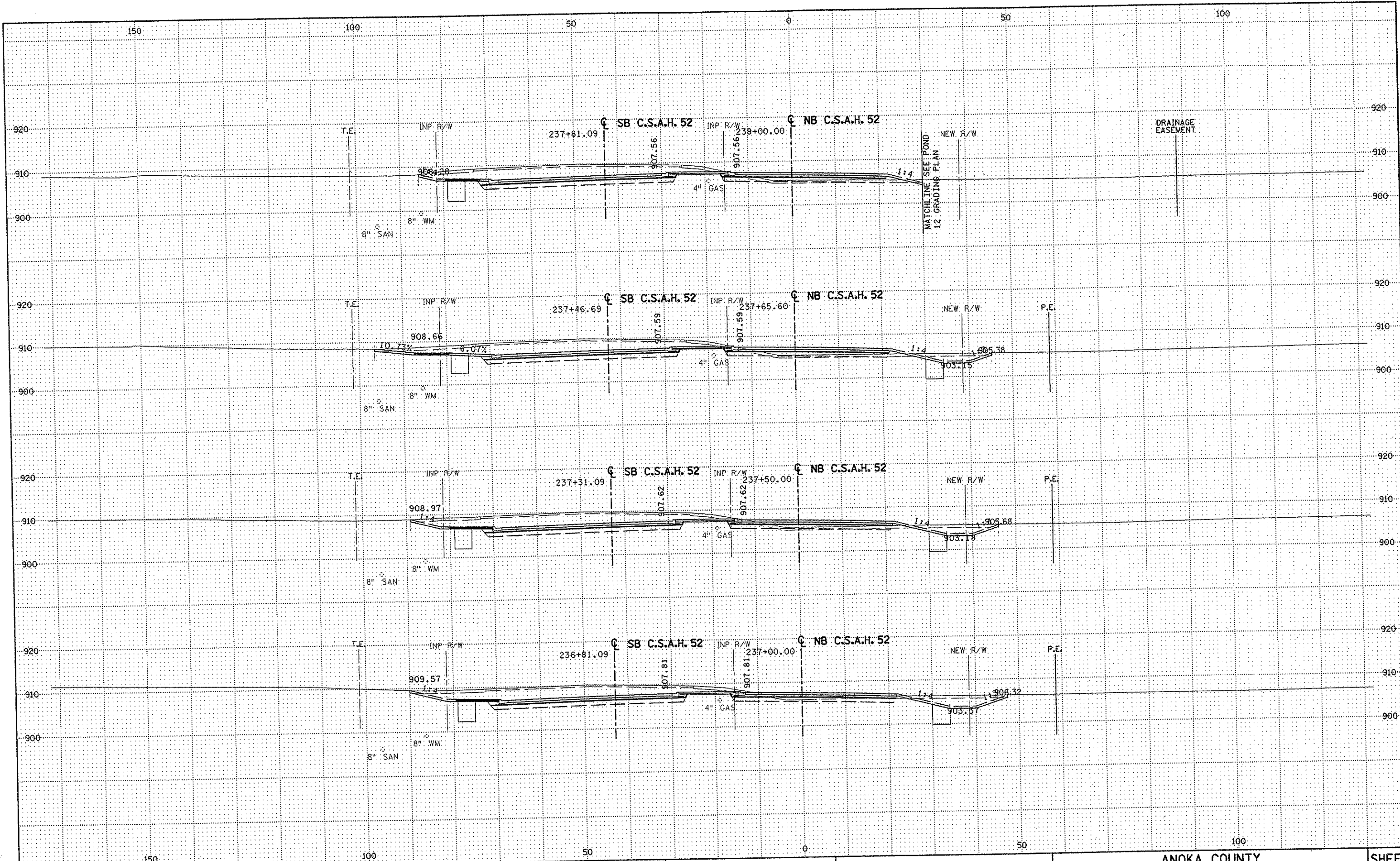
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 235+00 TO STA. 236+50

SHEET
 453
 OF
 559

NAME: K:\a-f\AnokaCty\1174901\hwy-br dg\par t4\roadway3\drawings\xsec\0261448000.dwg



NO	DATE	BY	CKD	APPR	REVISION

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 DESIGN BY RRC DATE 11-12-01
 CHECKED BY JMW DATE 11-12-01

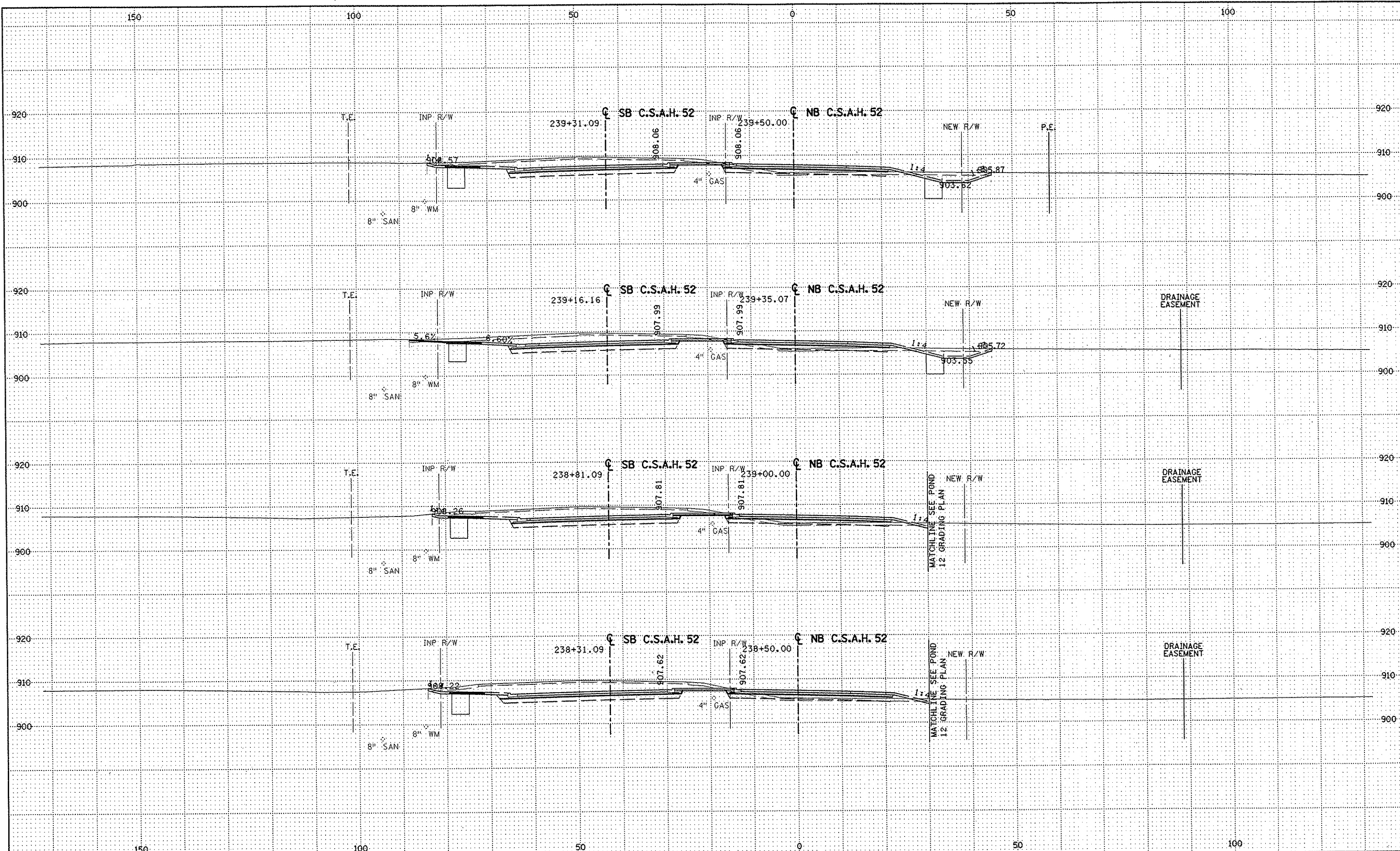
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 S.P. 90-080-11
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 237+00 TO STA. 238+00

SHEET
 454
 OF
 559

NAME: K:\a-f\AnokaCty\1174901\hwy-brdg\par t4\roadway3\drawings\Xsec\0261448008



NO	DATE	BY	CKD	APPR	REVISION

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 DESIGN BY RRC DATE 11-12-01
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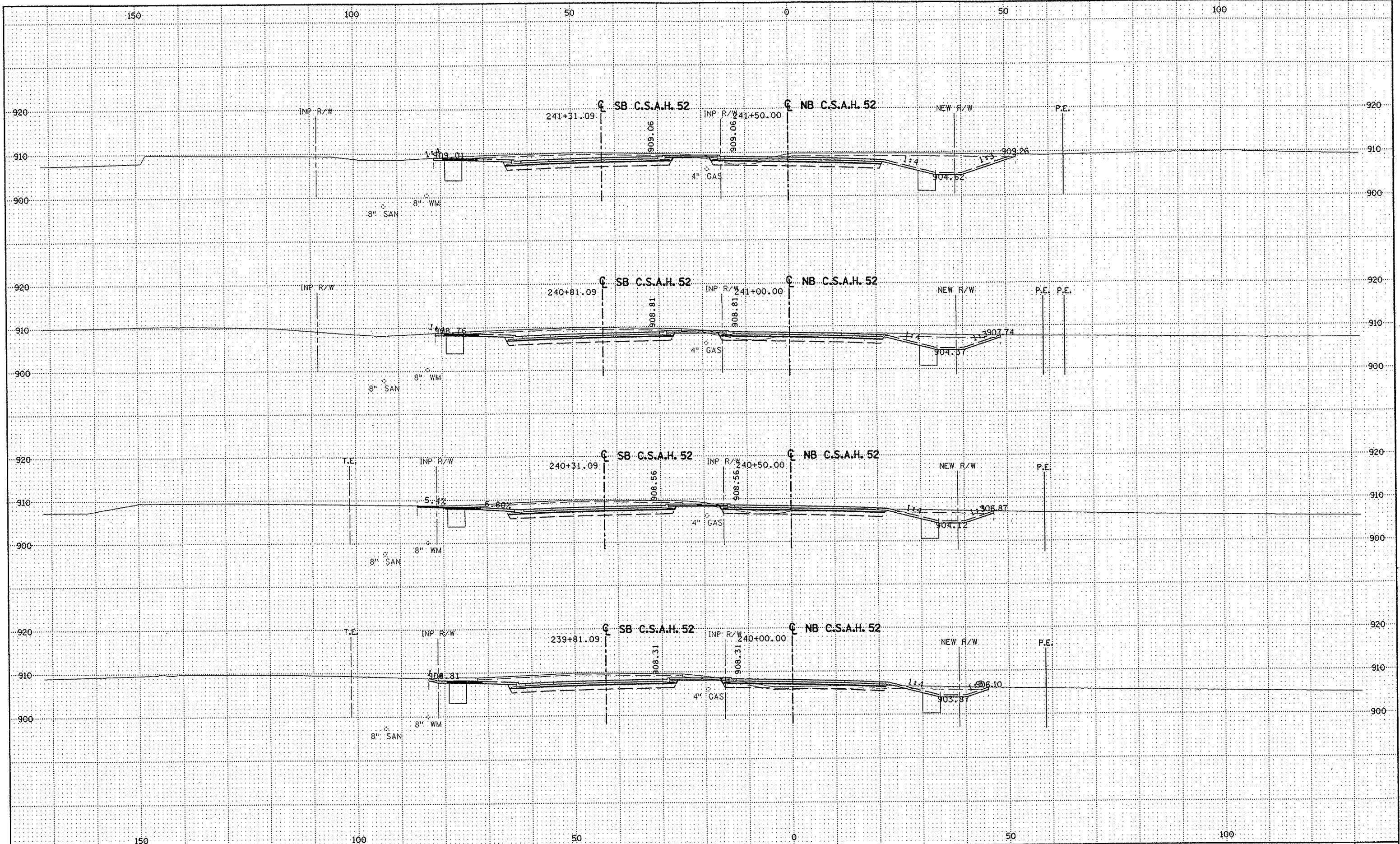
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 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 238+50 TO STA. 239+50

SHEET
 455
 OF
 559

NAME: K:\a-f\Anoka\fy\117490\hwy-brdg\part4\roadway3\drawings\csec\0204480.dwg



NO	DATE	BY	CHKD	APPR	REVISION

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 CHECKED BY JMW DATE 11-12-01

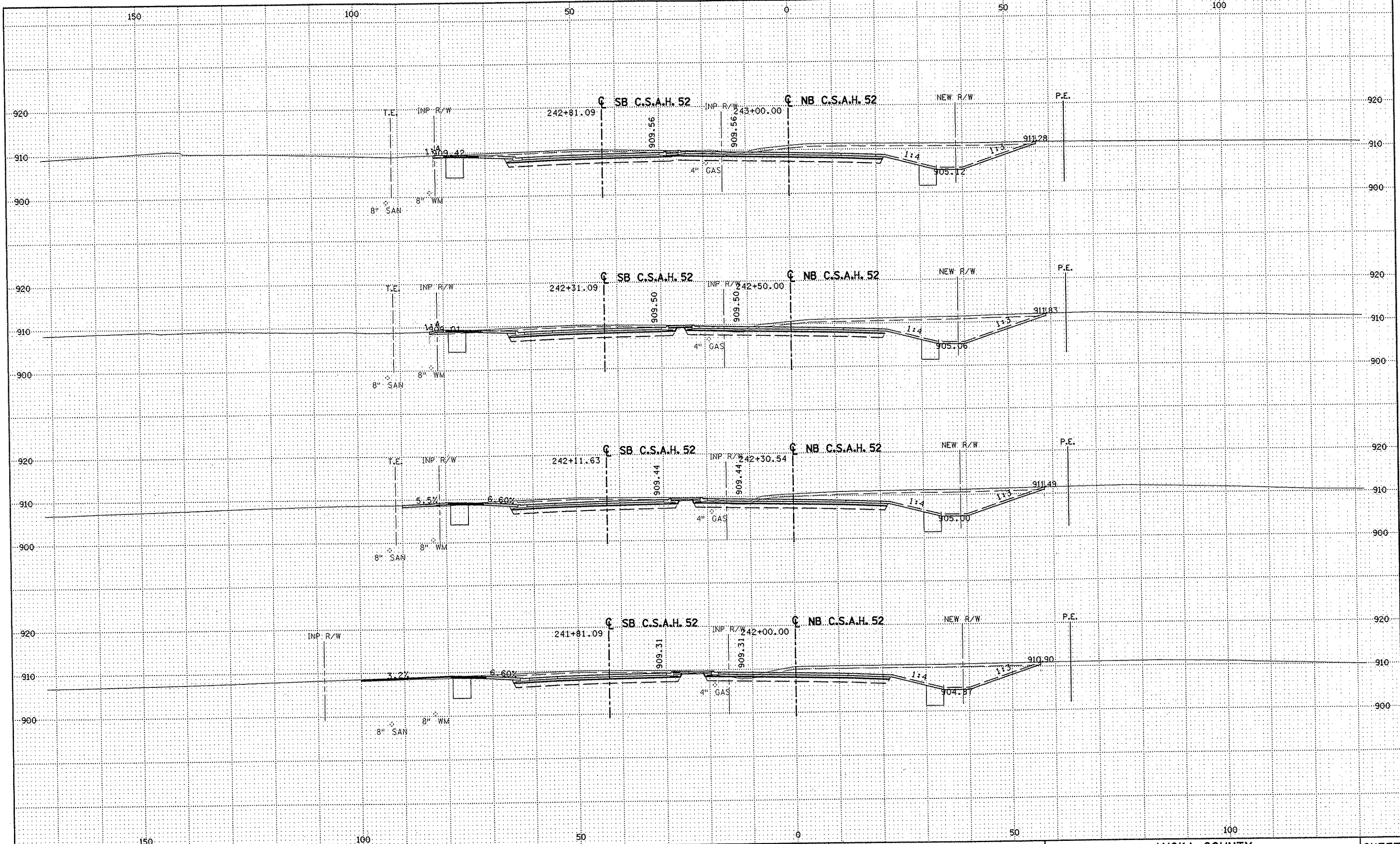
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 S.A.P. 106-020-021, 106-020-022

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 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 240+00 TO STA. 241+50

SHEET
 456
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\xsec\26148002.dwg



NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
 DESIGN BY RRC DATE 11-12-01
 CHECKED BY JMW DATE 11-12-01

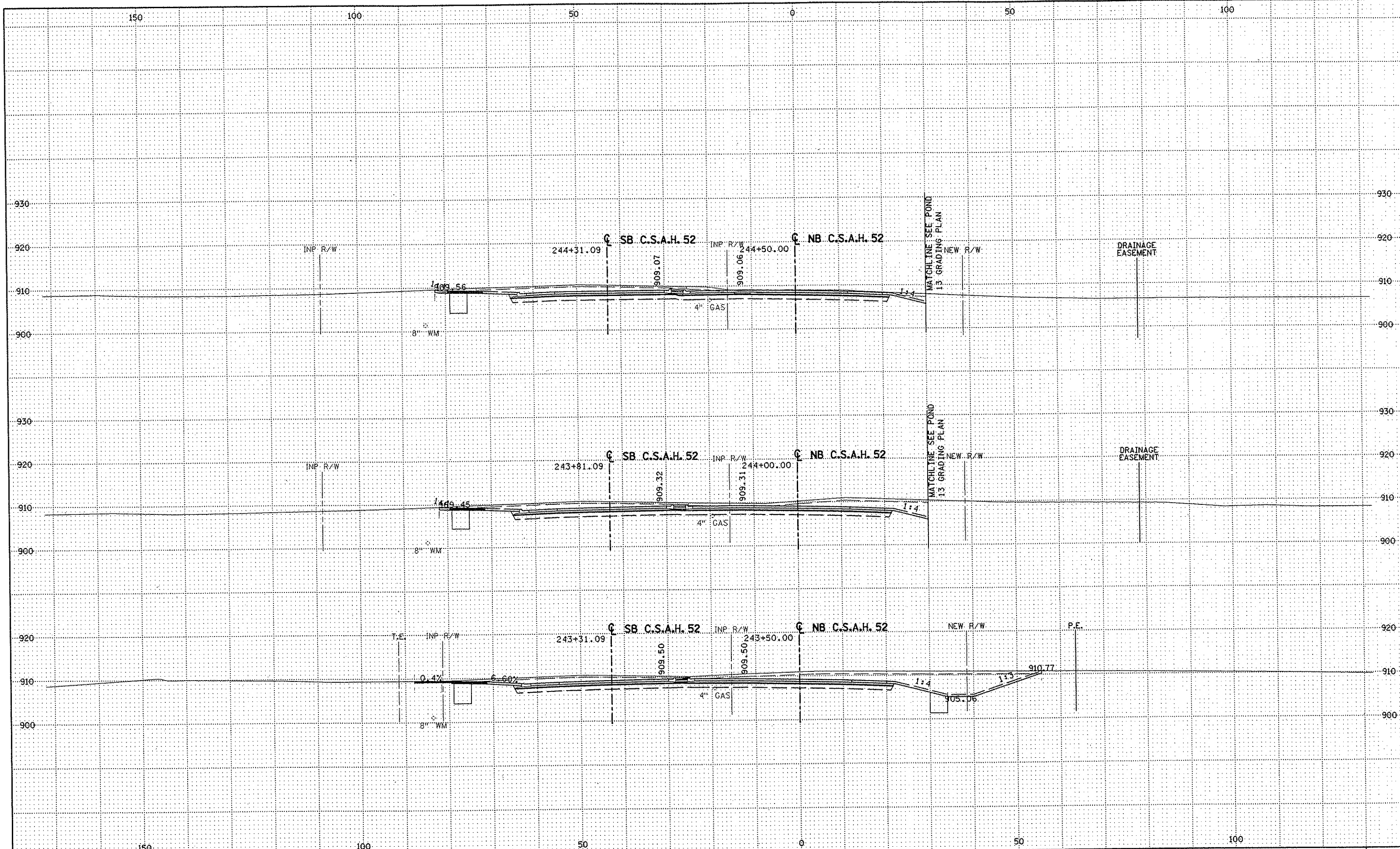
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 S.A.P. 106-020-021, 106-020-022

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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 242+00 TO STA. 243+00

SHEET
 457
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\sec\02\014800.dwg



NO	DATE	BY	CKD	APPR	REVISION

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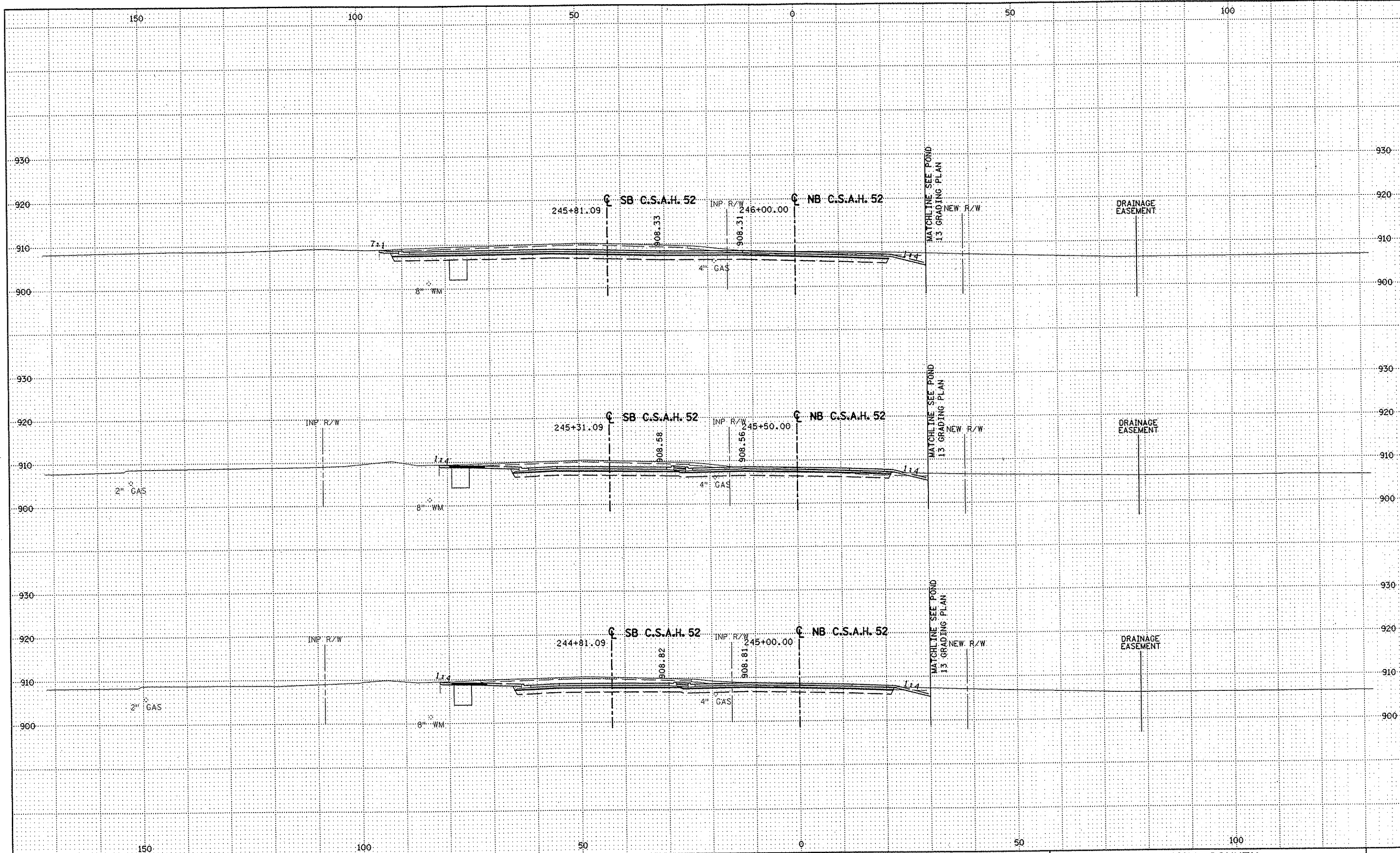
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 S.A.P. 02-652-02
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 243+50 TO STA. 244+50

SHEET
 458
 OF
 559

NAME: K:\a-f\AnokaCty\1174901\hwy-brdg\part4\roadway3\drawings\xsec\02614480.dwg



NO	DATE	BY	CKD	APPR	REVISION

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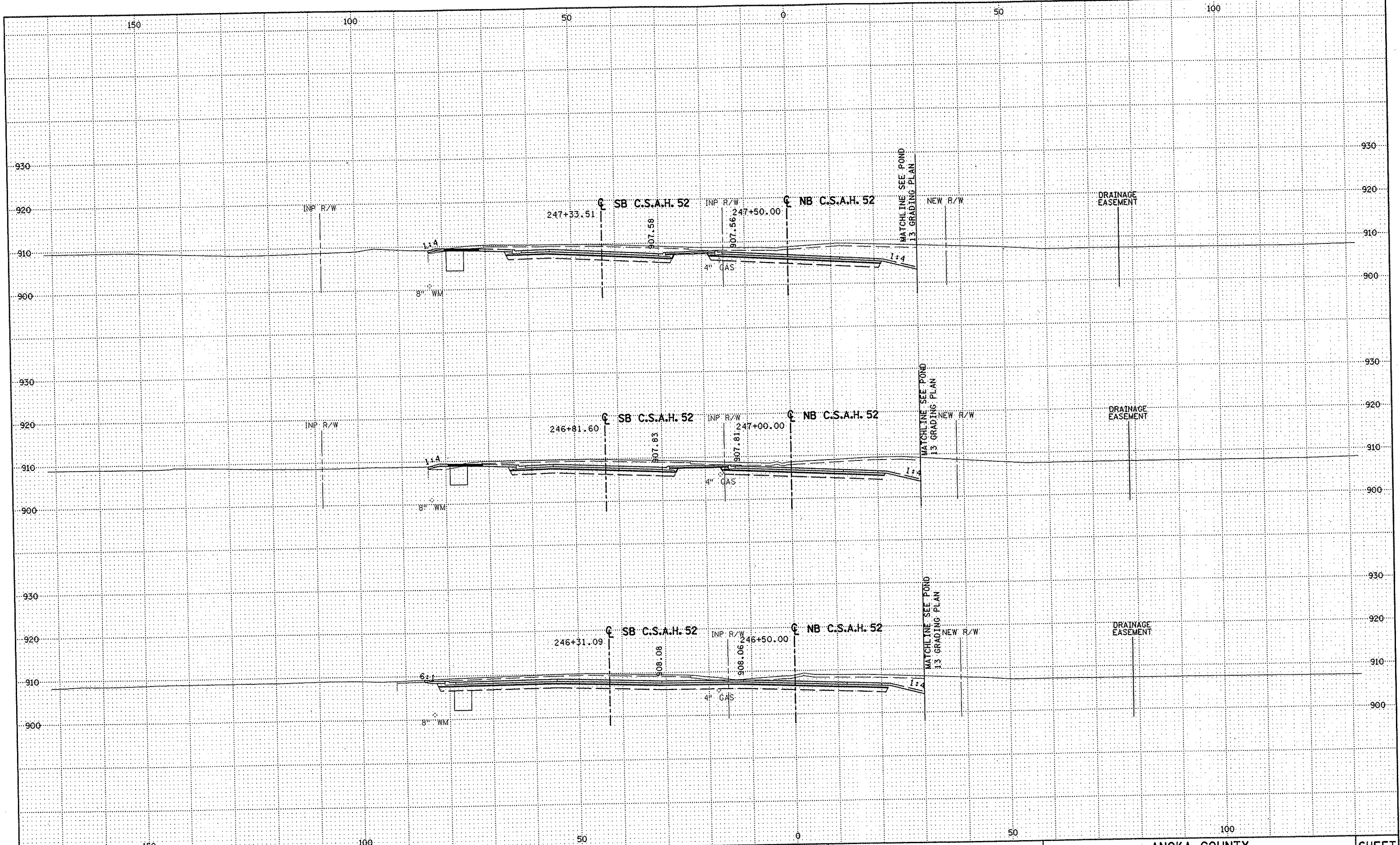
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DESIGN BY	RRC	DATE	11-12-01
CHECKED BY	JMW	DATE	11-12-01

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S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 245+00 TO STA. 246+00

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 OF
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NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
 DESIGN BY RRC DATE 11-12-01
 CHECKED BY JMM DATE 11-12-01

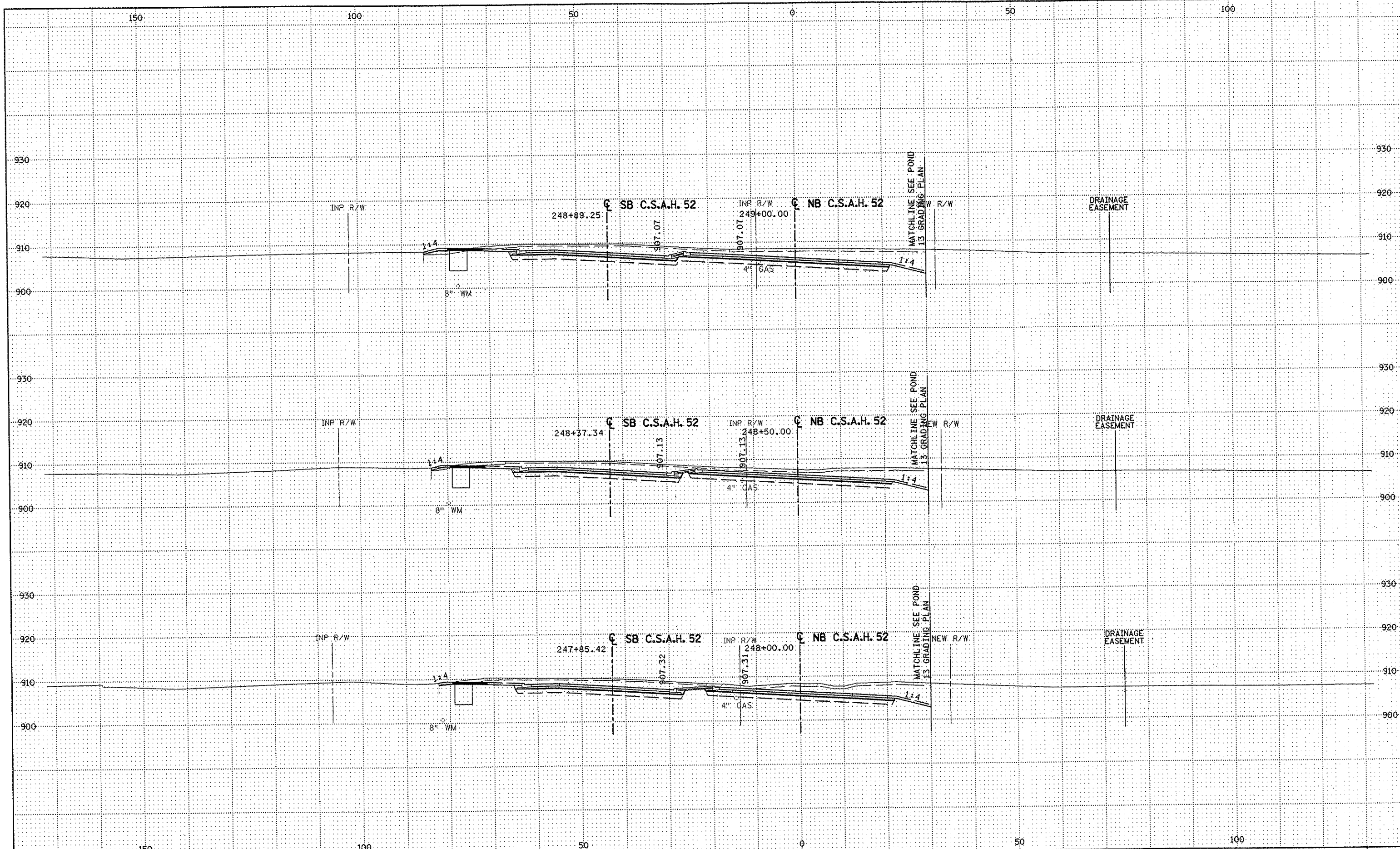
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 246+50 TO STA. 247+50

SHEET
 460
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\xsec\03p141800.dwg



NO	DATE	BY	CKD	APPR	REVISION

INP. R/W	248+89.25	907.07	907.07	249+00.00	907.13	907.13	248+50.00	907.31	907.31	248+00.00	907.32	907.32	247+85.42	907.32	907.32	248+00.00
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DRAWN BY RRC DATE 11-12-01
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 CHECKED BY JMW DATE 11-12-01

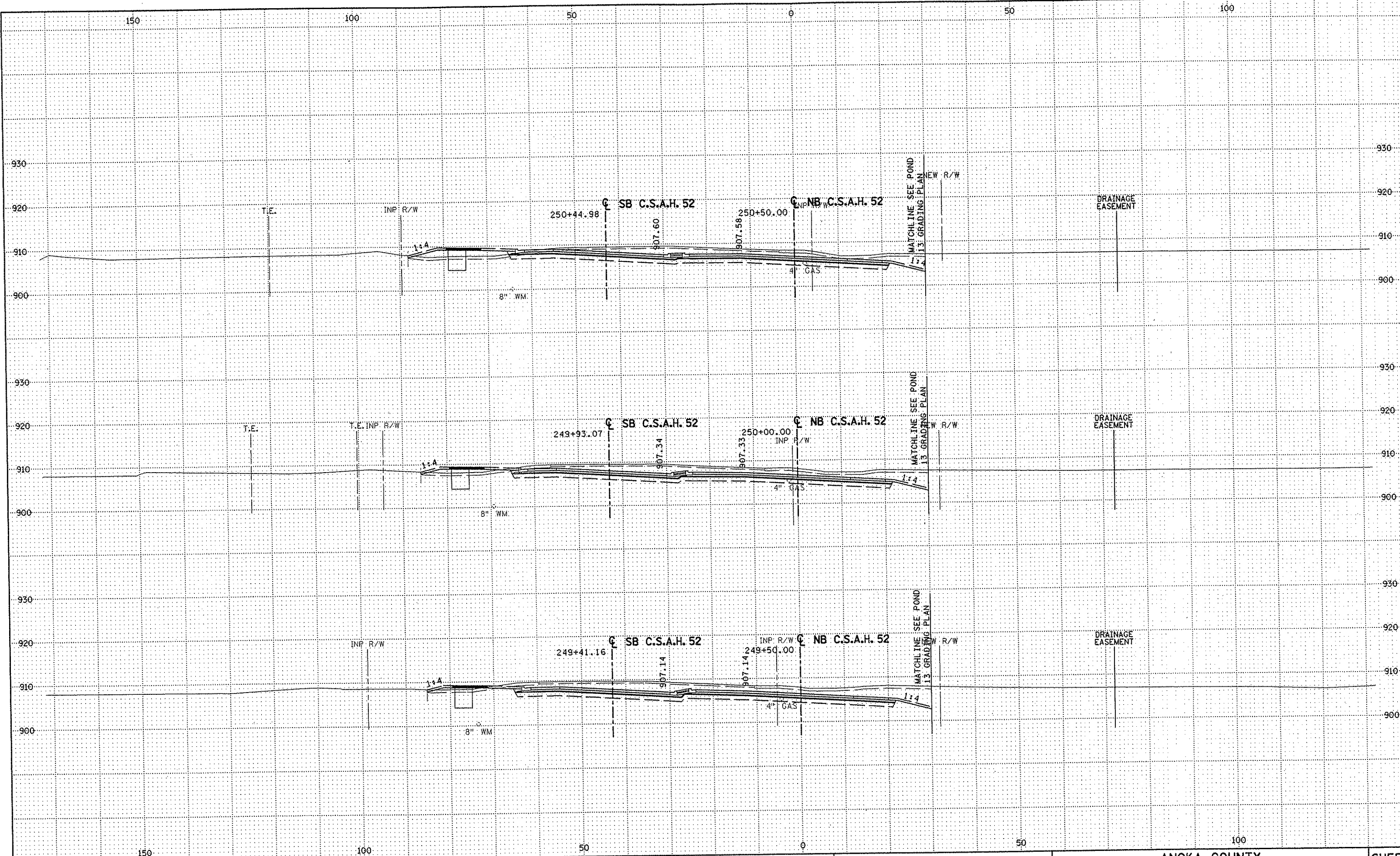
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 S.A.P. 106-020-021; 106-020-022

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 TOLTZ, KING, DUVALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 248+00 TO STA. 249+00

SHEET
 461
 OF
 559

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\sec\88614180.dwg



NO	DATE	BY	CKD	APPR	REVISION

NAME: K:\a-f\AnokaCity\1174901\hwy-brdg\part4\roadway3\drawings\csec\8d\14800.dwg

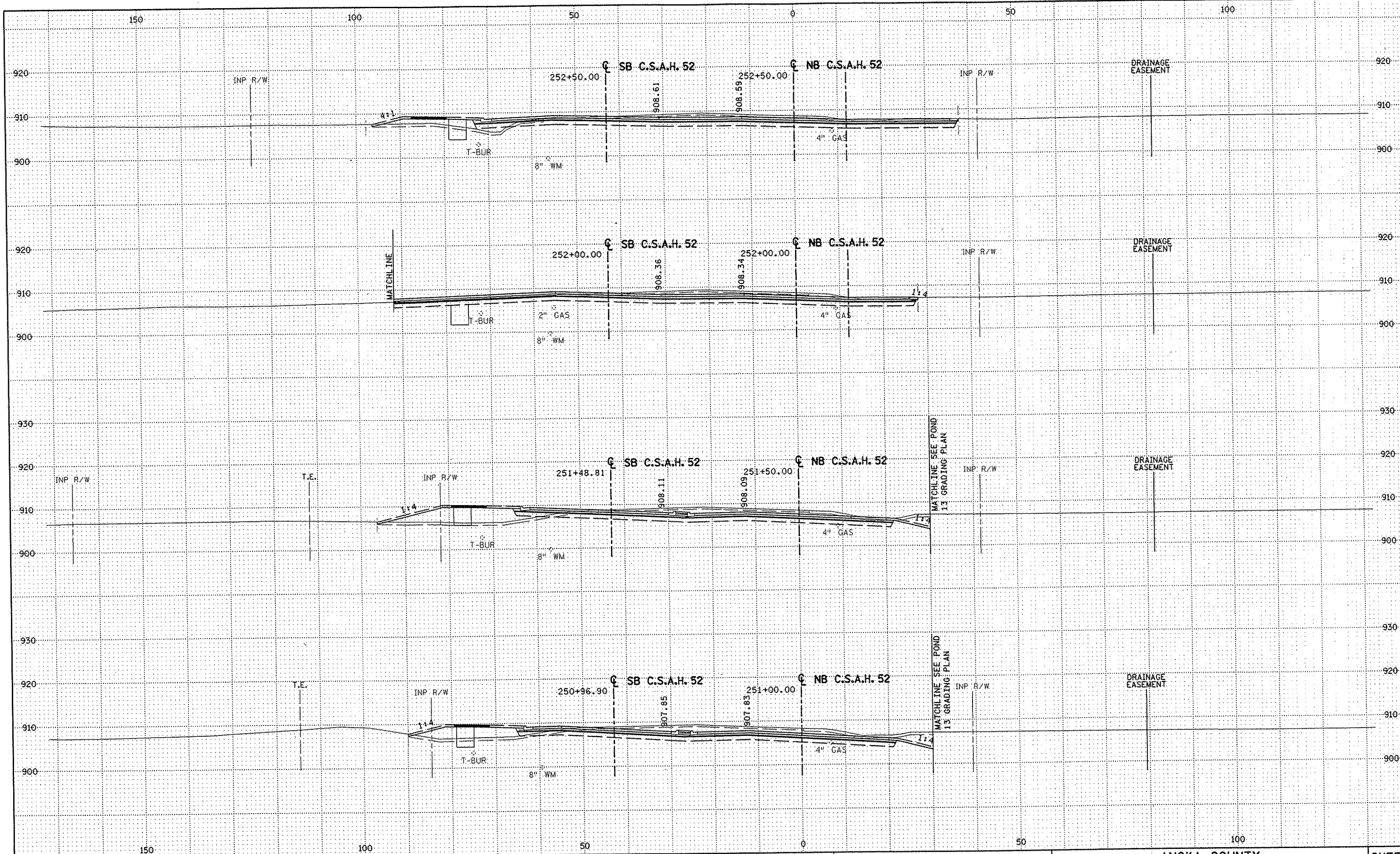
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 249+50 TO STA. 250+50

SHEET
 461A
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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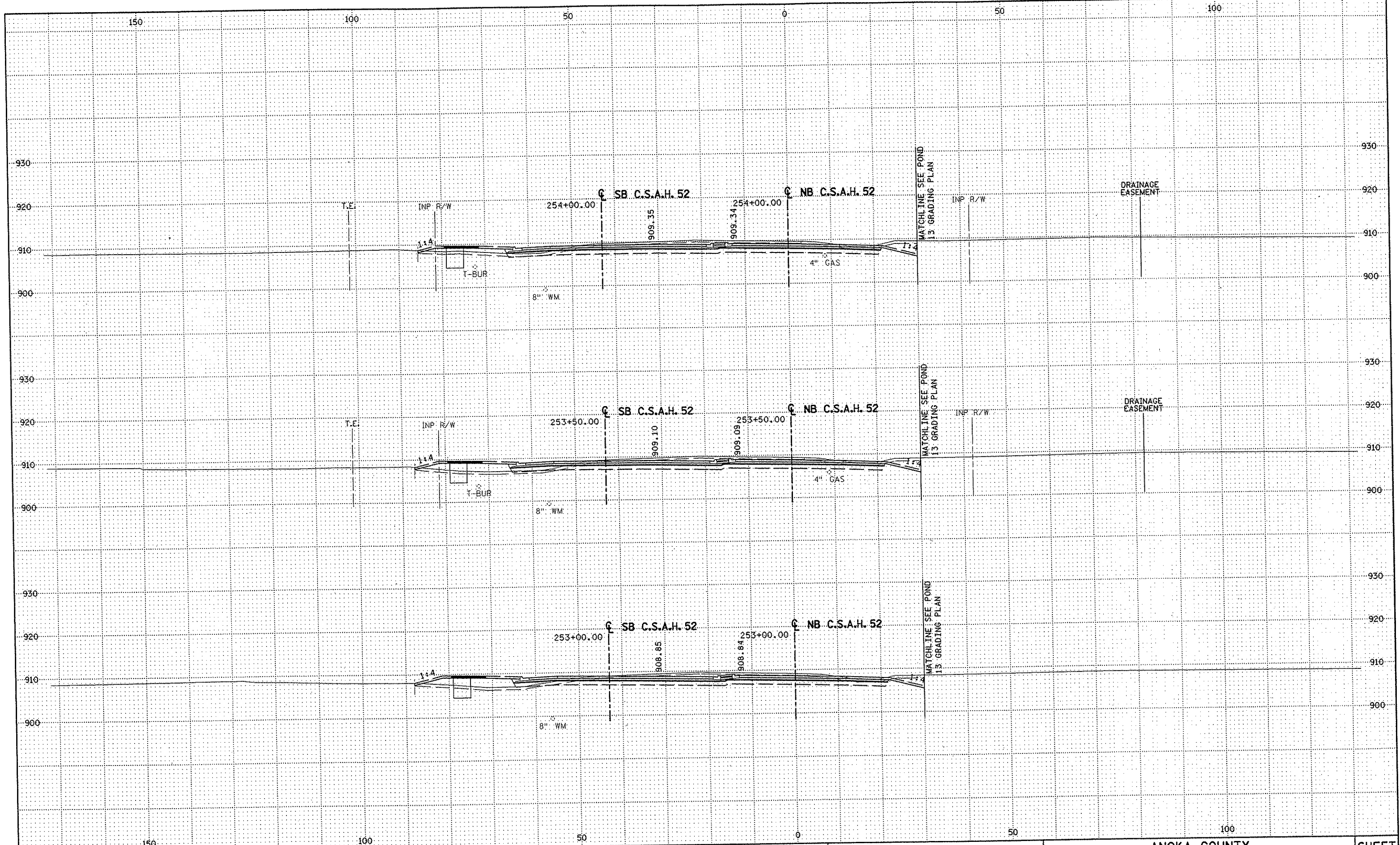
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 S.A.P. 106-020-021, 106-020-022

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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 251+00 TO STA. 252+50

SHEET
 461B
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 11-12-01
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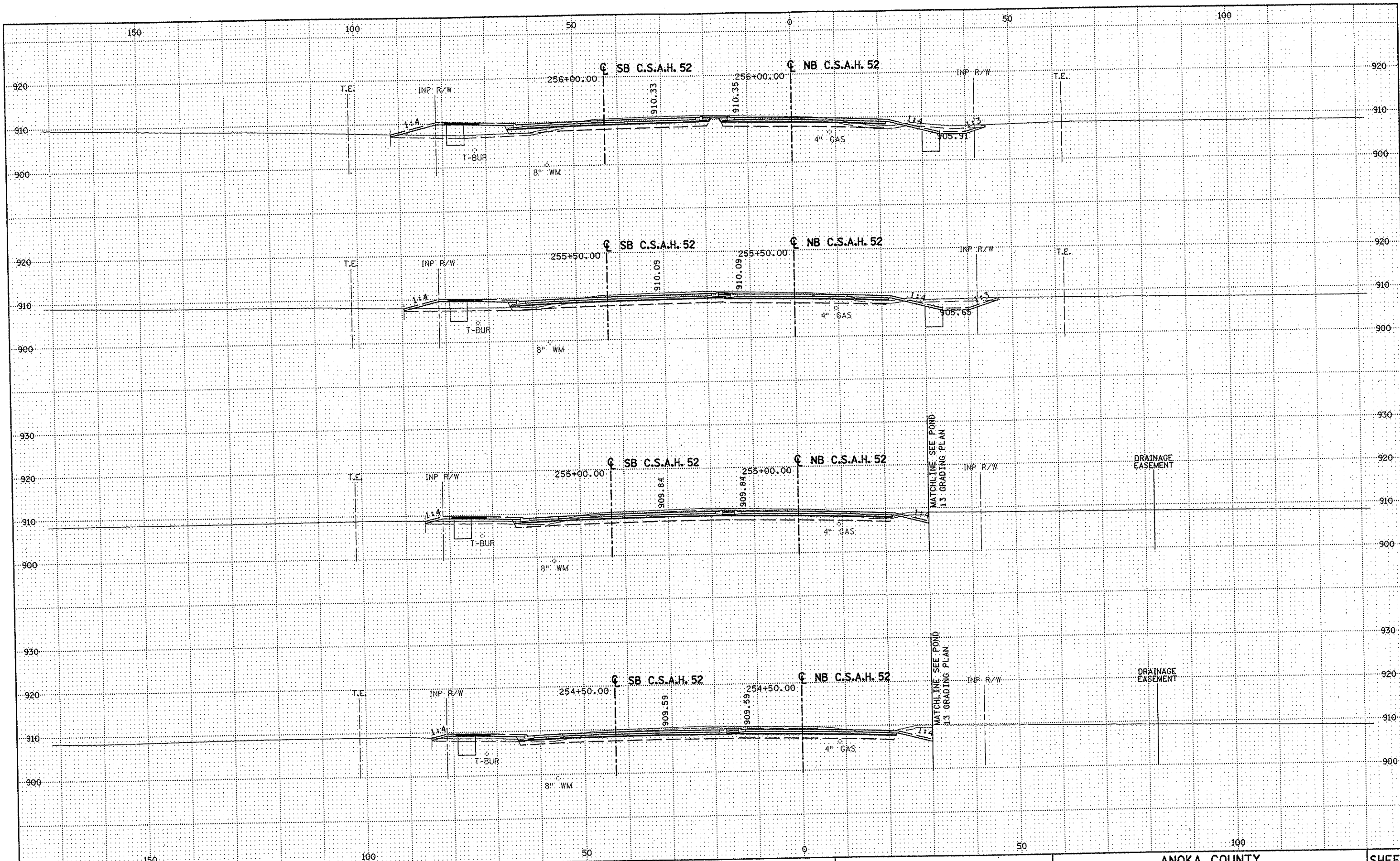
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 S.A.P. 106-020-021, 106-020-022

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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 253+00 TO STA. 254+00

SHEET
 461C
 OF
 559

NAME: K:\a-f\Anoka Cty\1174901\hwy-brdg\par f4\roadway3\drawings\sec\253id4800.dwg



NO	DATE	BY	CKD	APPR	REVISION

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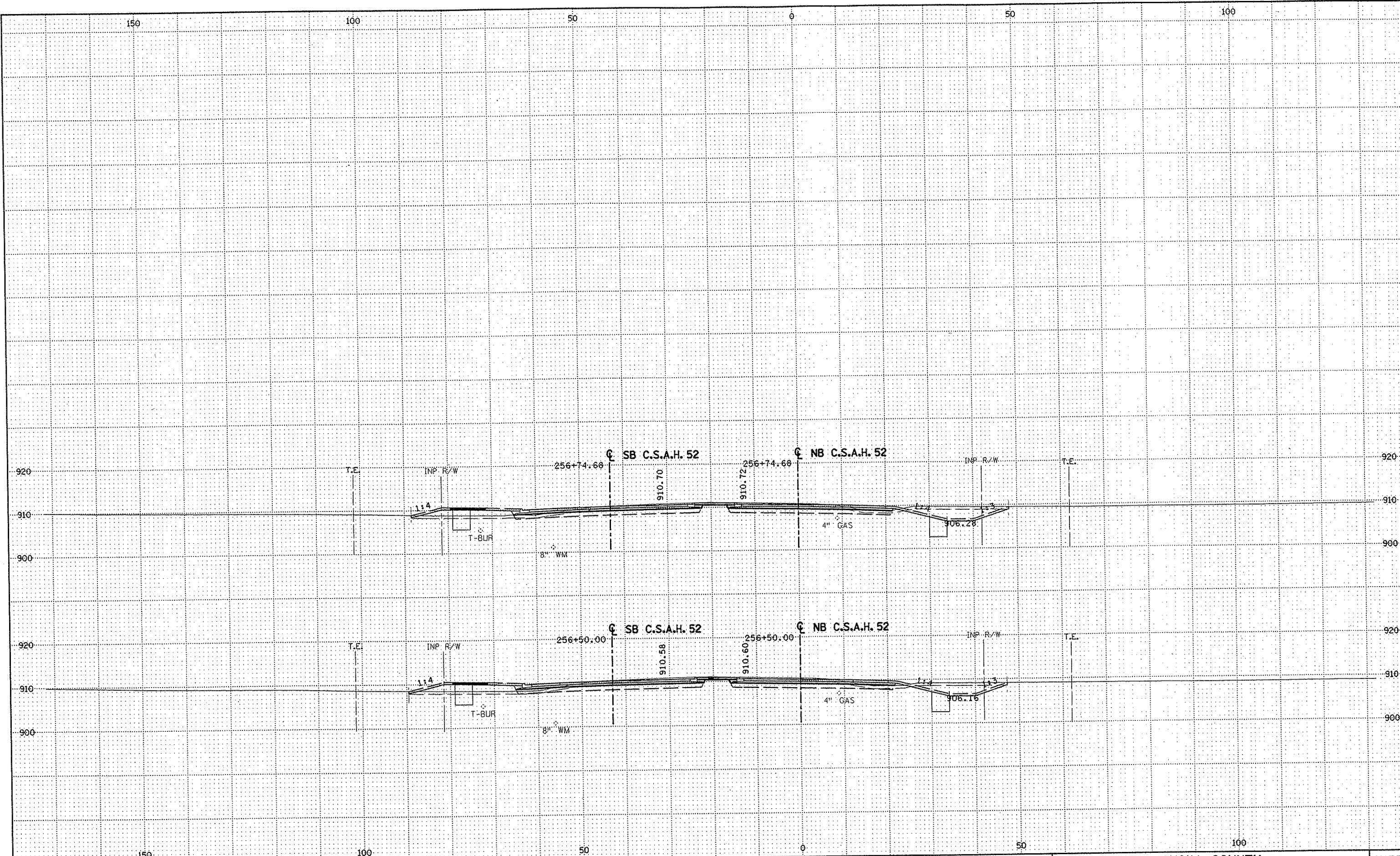
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 254+50 TO STA. 256+00

SHEET
 461D
 OF
 559

NAME: k:\a-f\AnokaCty\1174901\hwy-brdg\par14\roadway3\drawings\sec\02604800.dwg



NO	DATE	BY	CKD	APPR	REVISION

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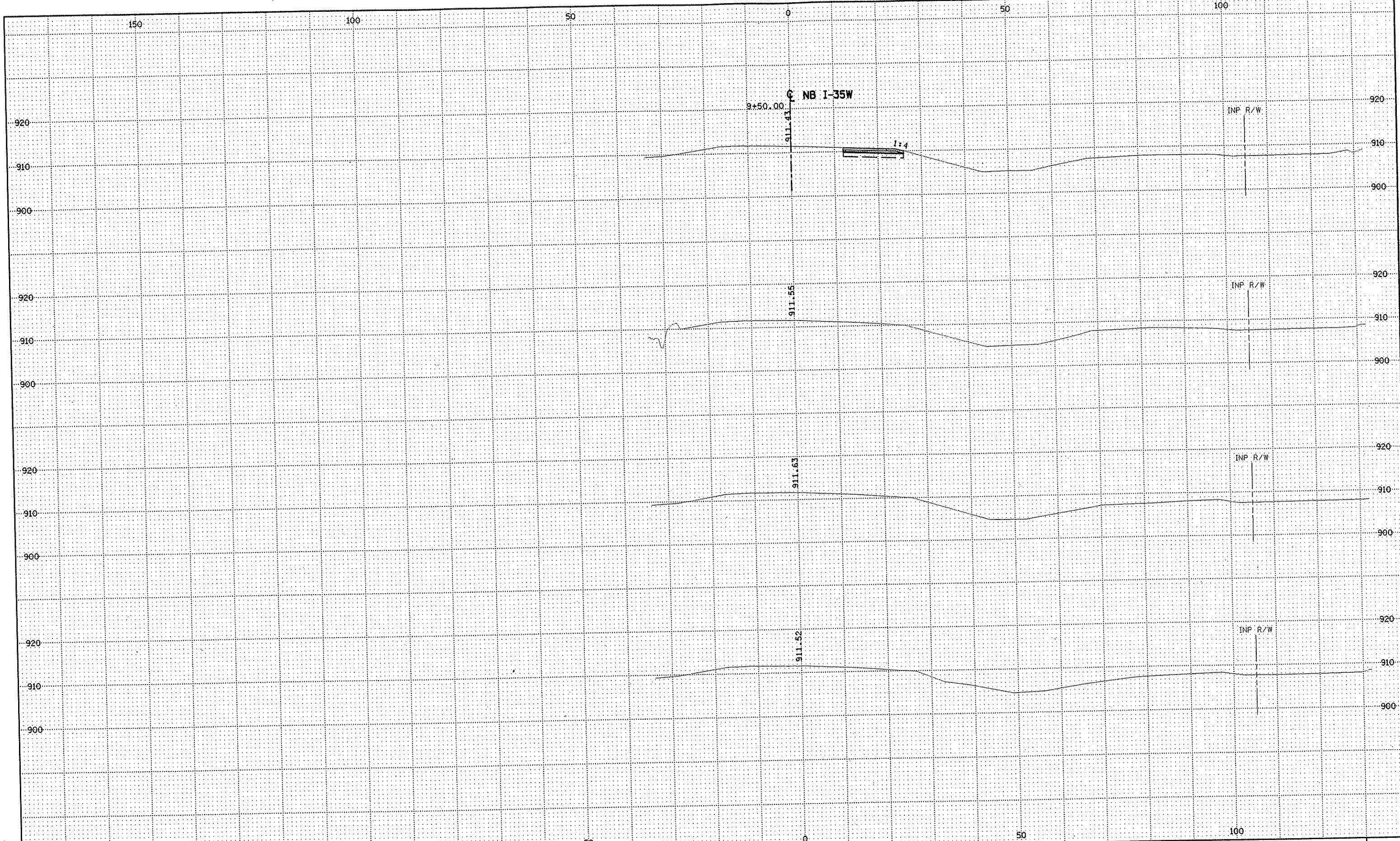
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 256+50 TO STA. 256+74.68

SHEET
 461E
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\sec\plan35n.dgn 11/20/01

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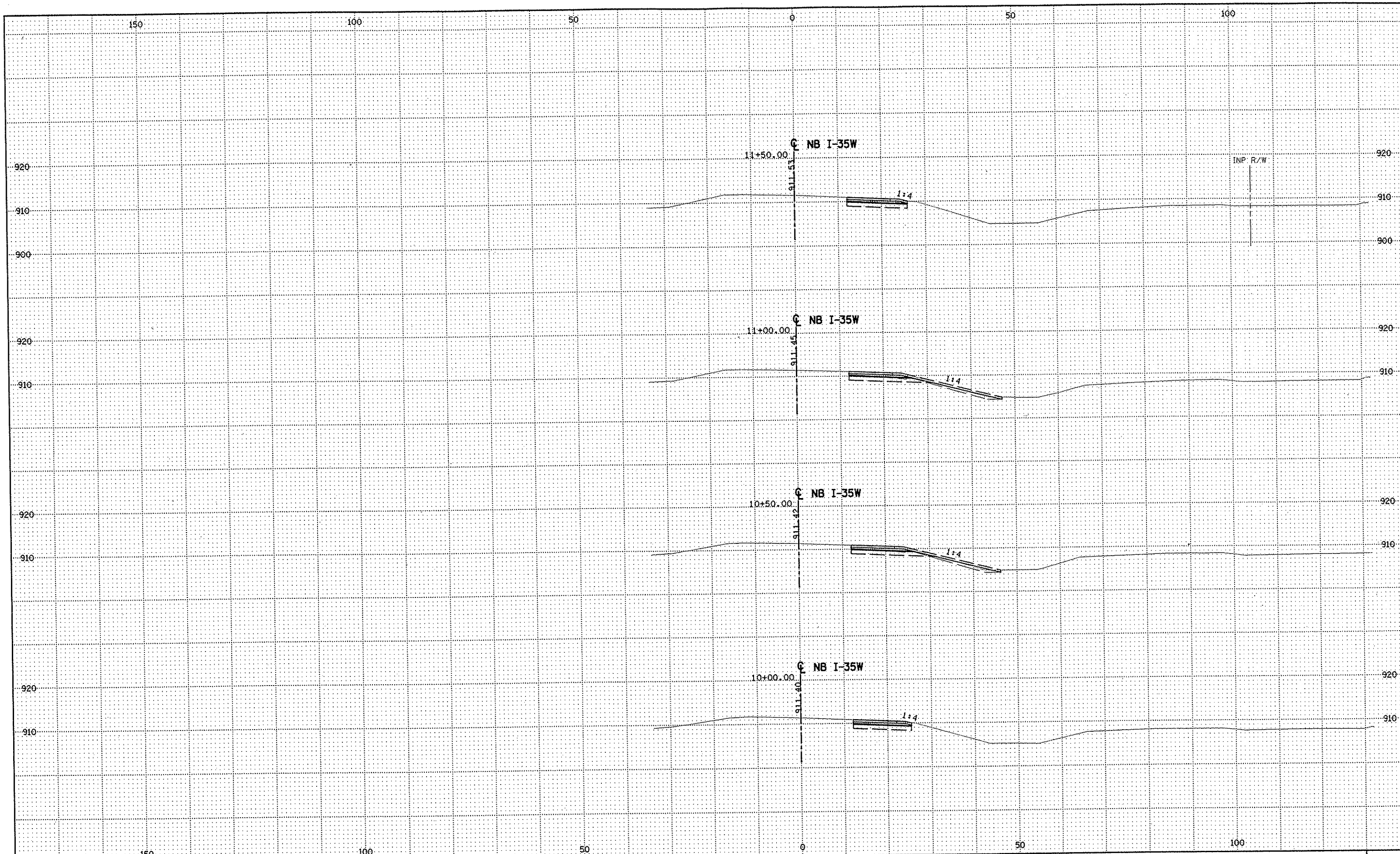
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 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

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 S.A.P. 02-652-02
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 AND ASSOCIATES, INCORPORATED
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 9+50

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 OF
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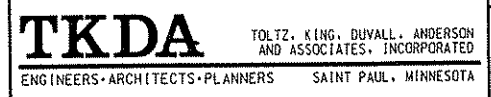


NO	DATE	BY	CKD	APPR	REVISION

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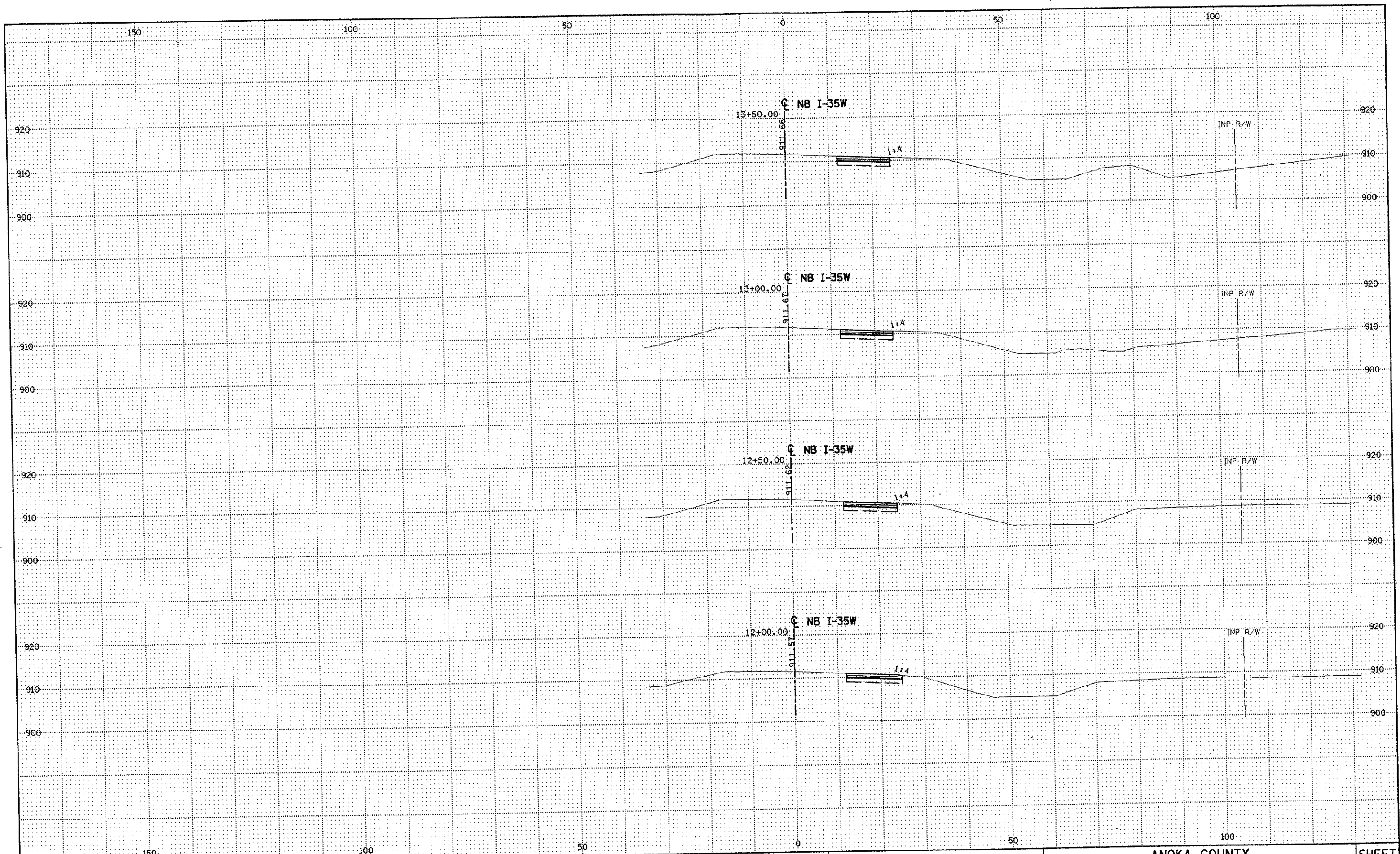
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022



ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 10+00 TO STA. 11+50

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 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\sec\xsplan35n.dgn 11/20/01

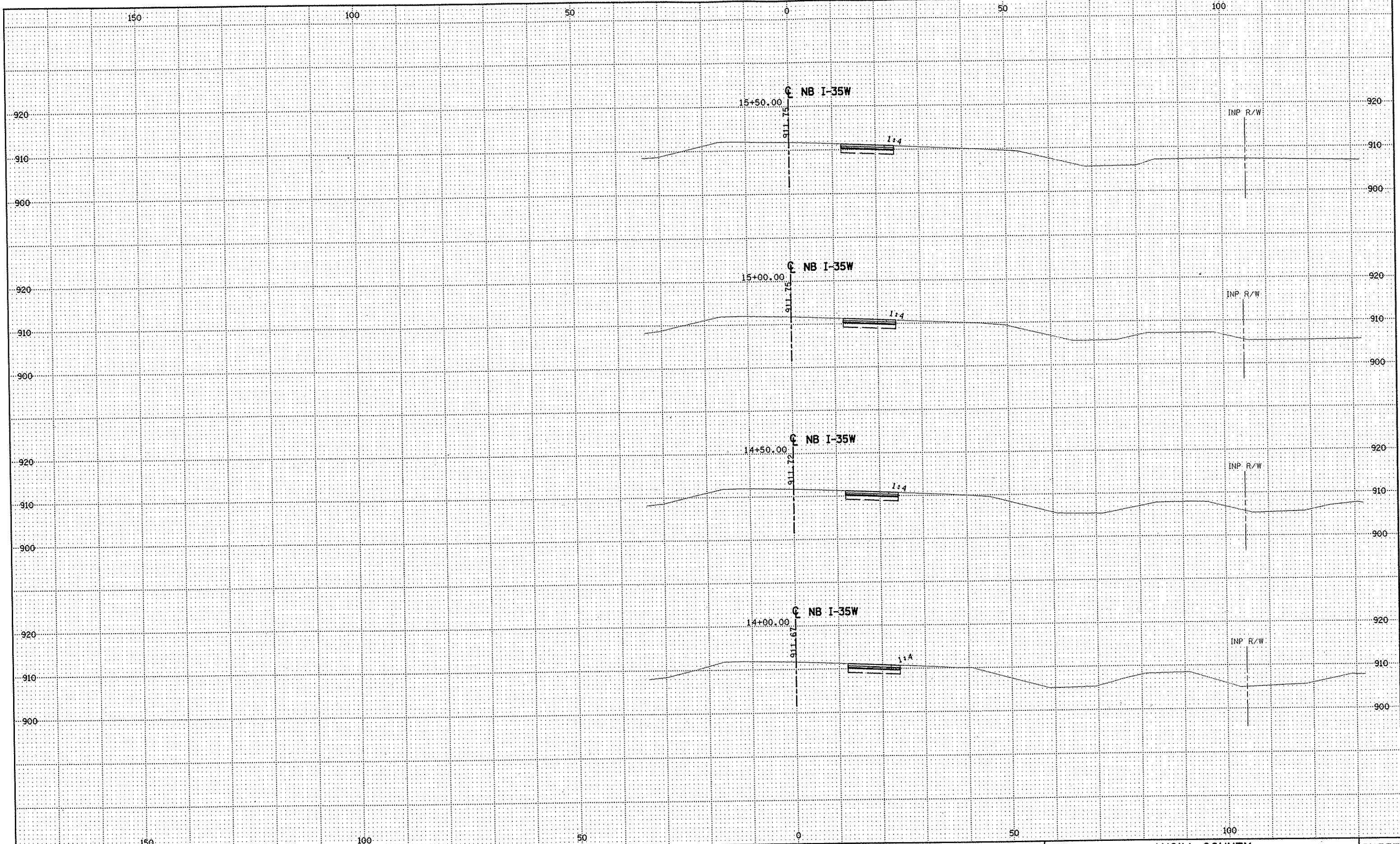
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CHECKED BY	JMW	DATE	9-24-01

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S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 12+00 TO STA. 13+50

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 OF
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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\sec\plan35n.dgn 11/20/01

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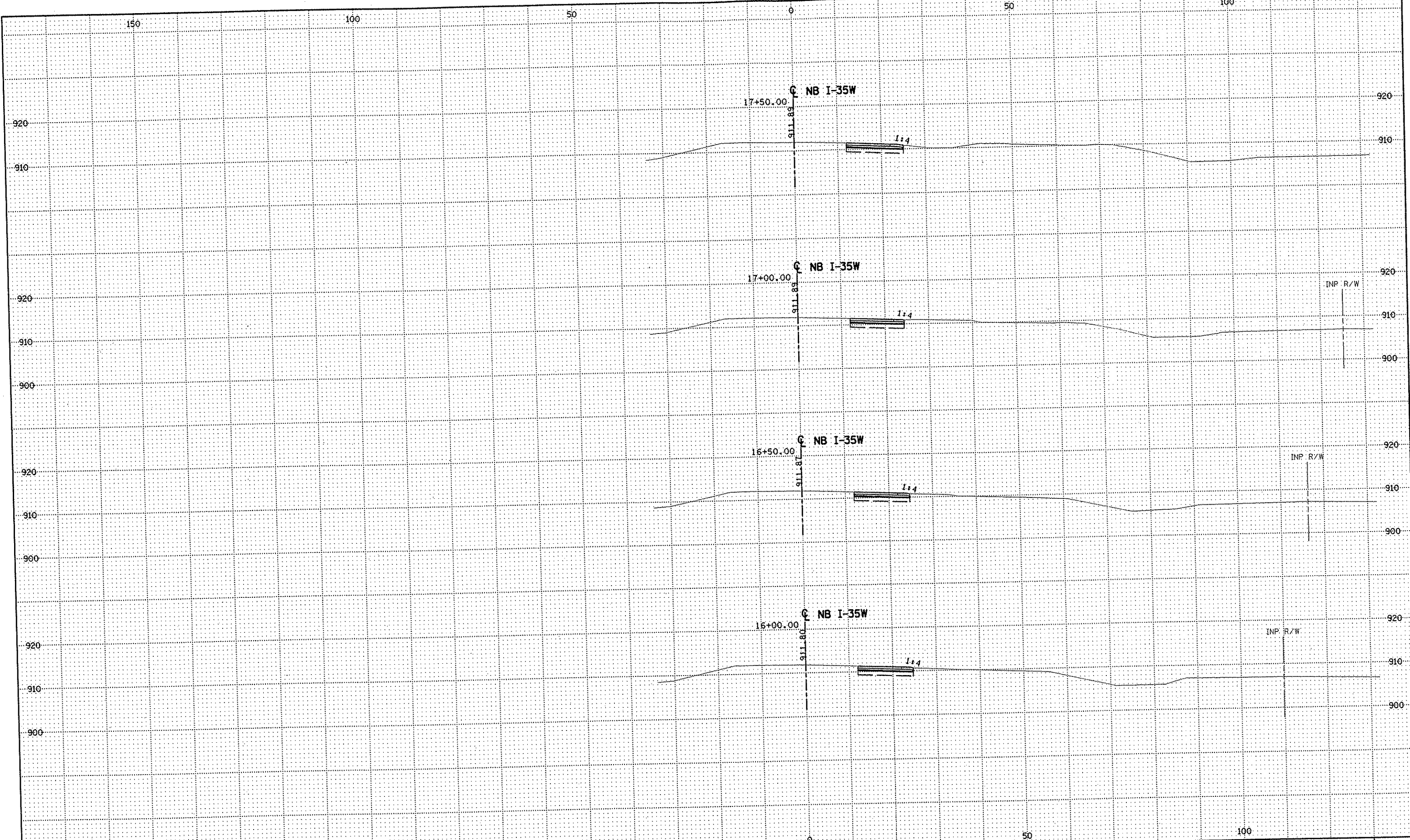
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 14+00 TO STA. 15+50

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NO	DATE	BY	CKD	APPR	REVISION

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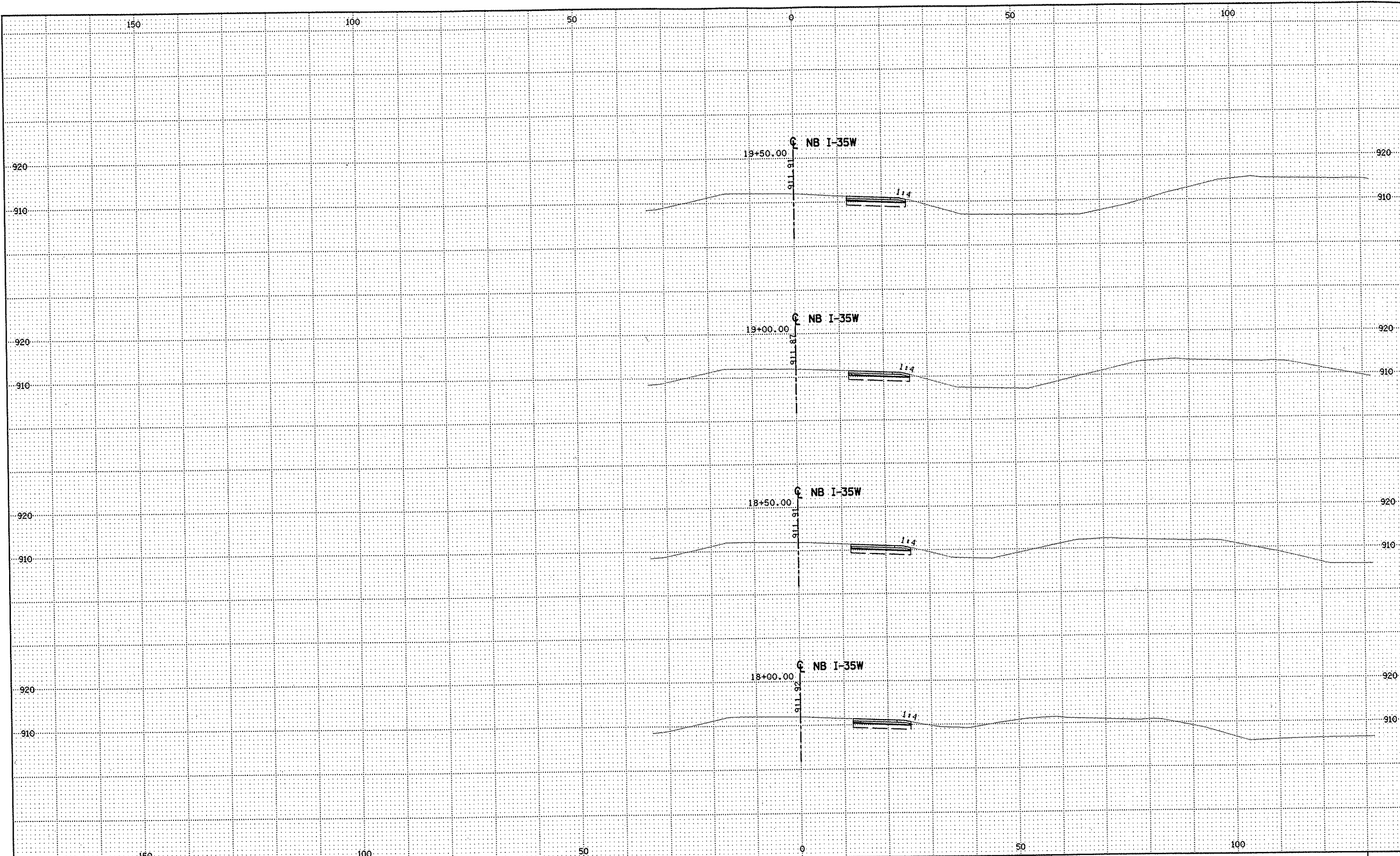
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 16+00 TO STA. 17+50

SHEET
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NO	DATE	BY	CKD	APPR	REVISION

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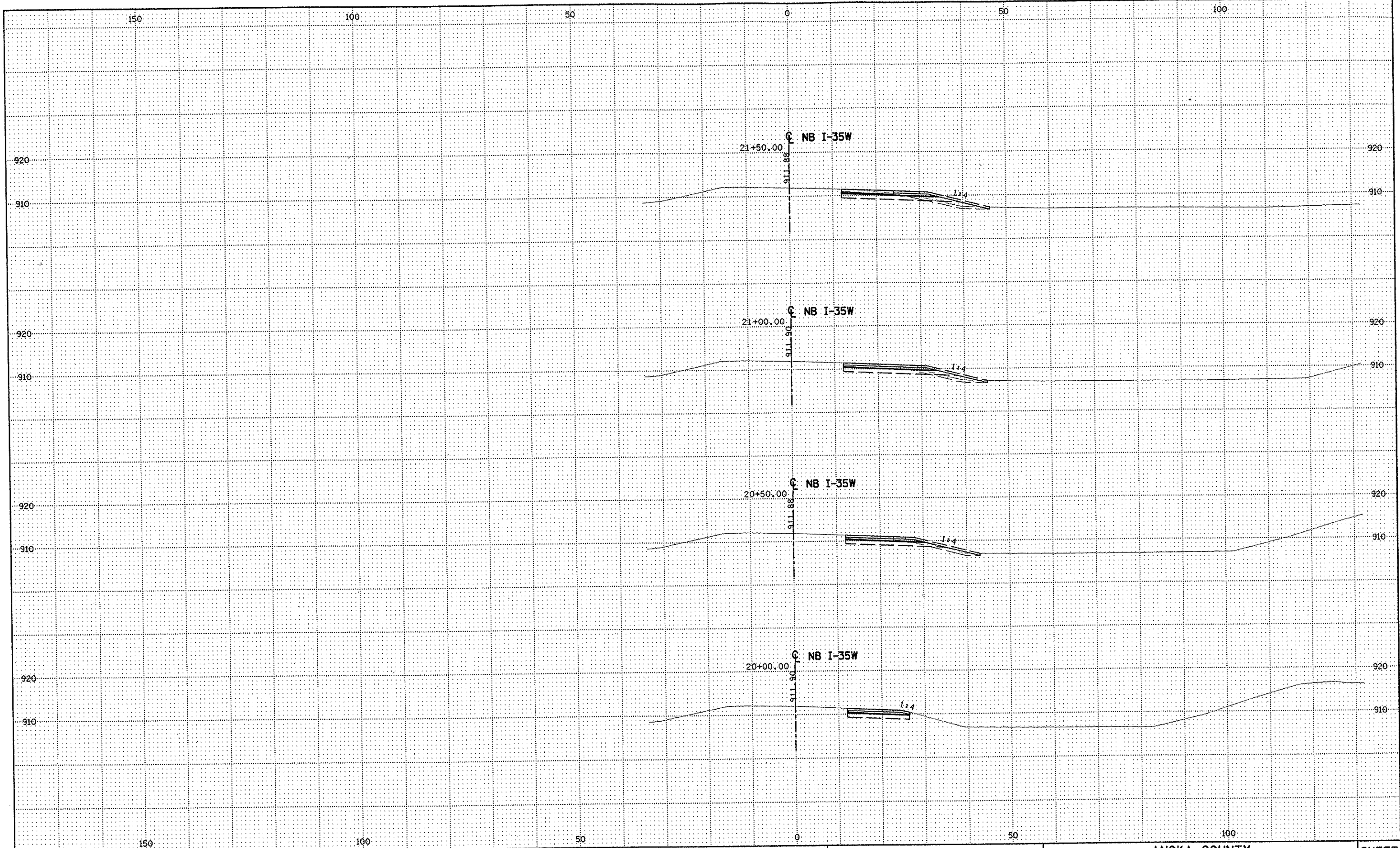
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CHECKED BY	JMW	DATE	9-24-01

S.P.	0280-50 (TH 35W)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 18+00 TO STA. 19+50

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NO	DATE	BY	CKD	APPR	REVISION

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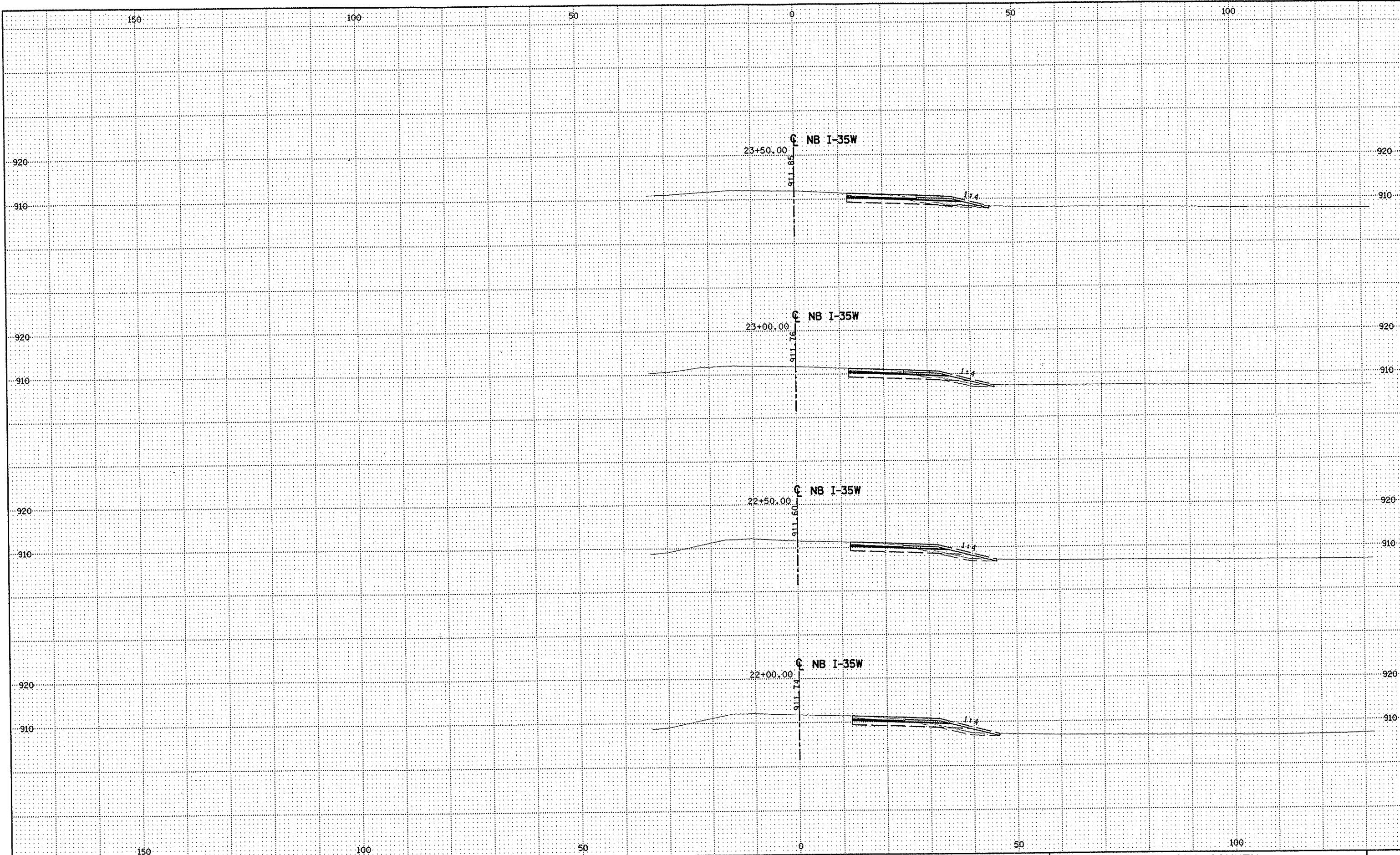
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 20+00 TO STA. 21+50

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NO	DATE	BY	CKD	APPR	REVISION

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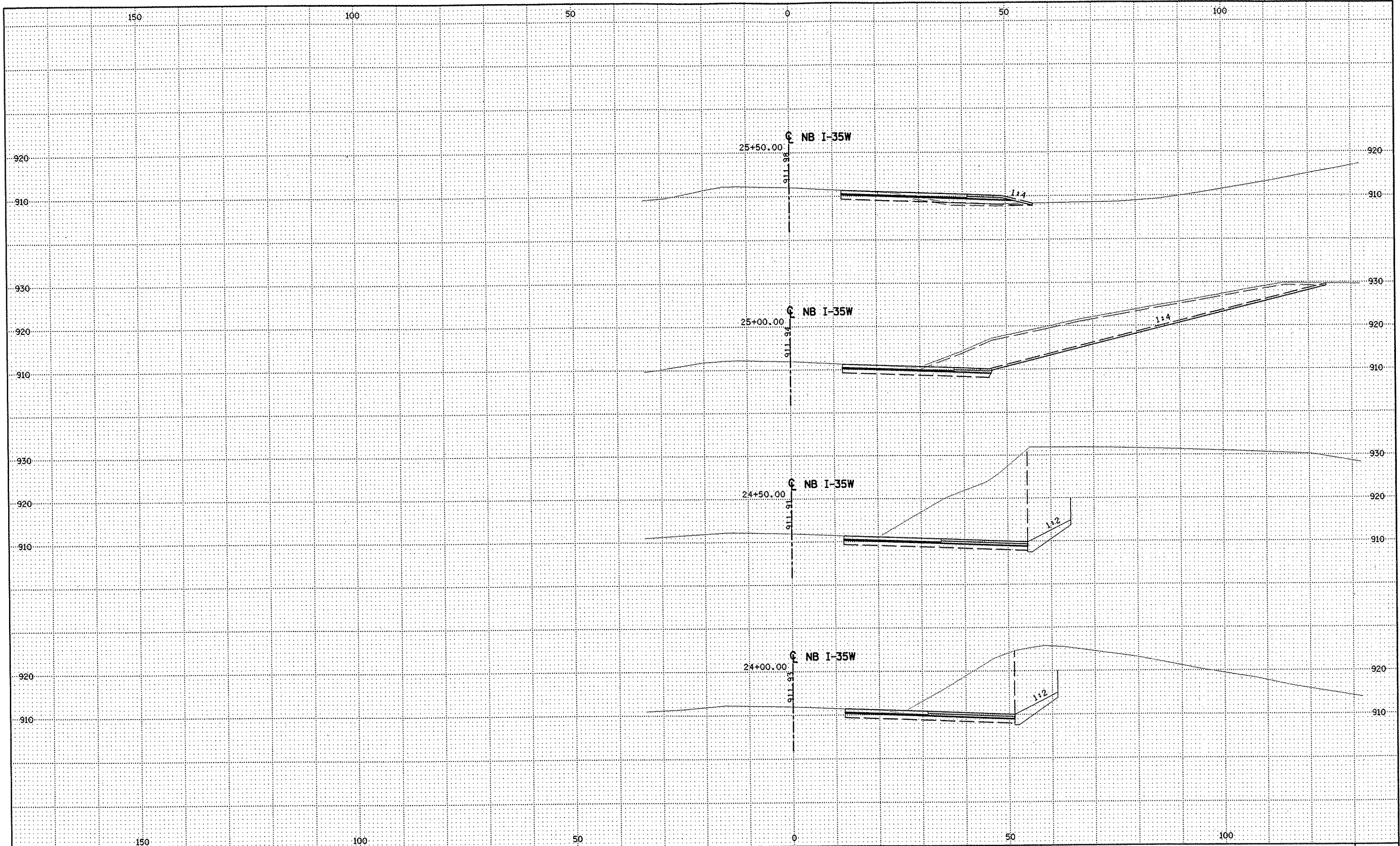
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 22+00 TO STA. 23+50

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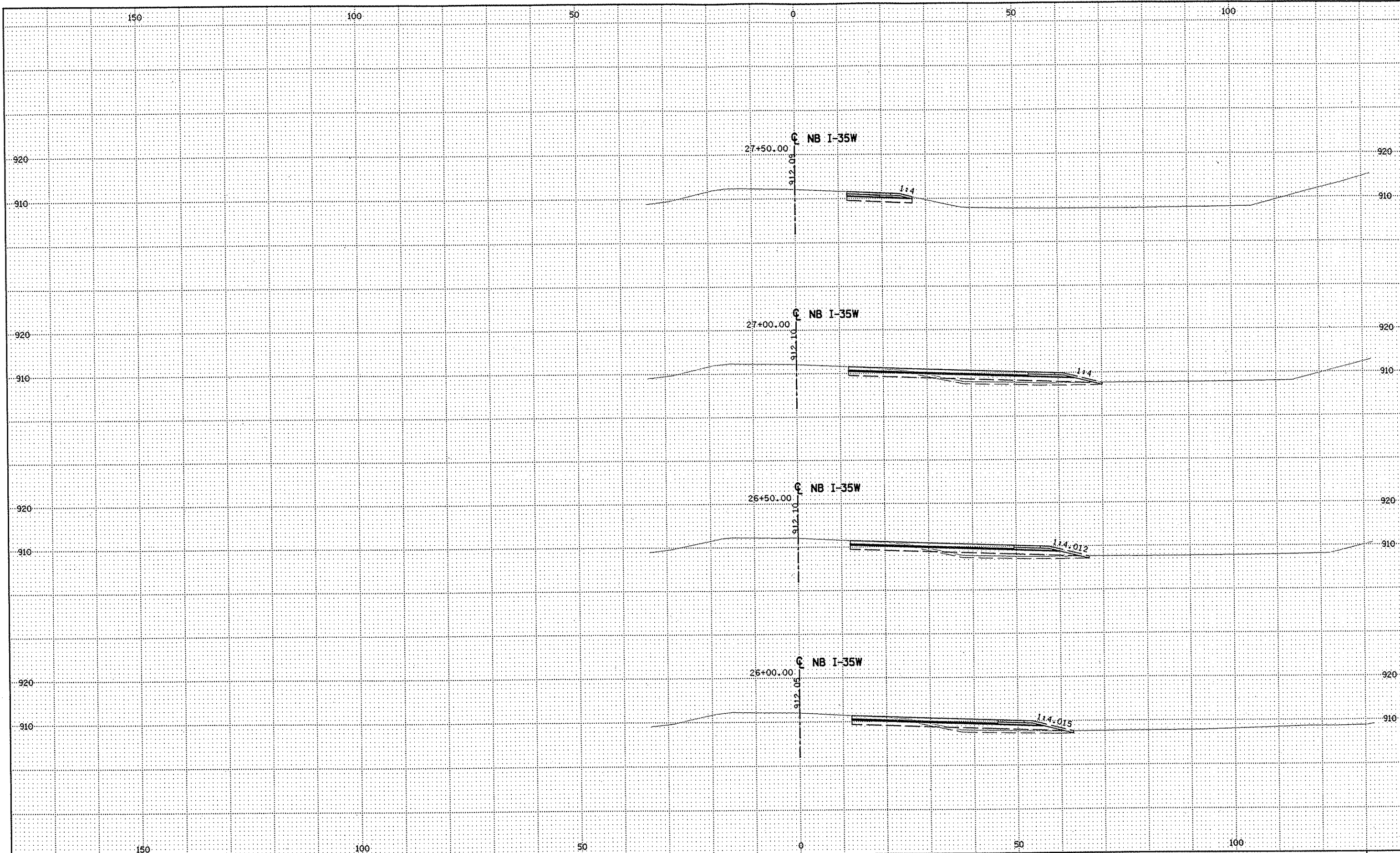
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 24+00 TO STA. 25+50

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NO	DATE	BY	CKD	APPR	REVISION

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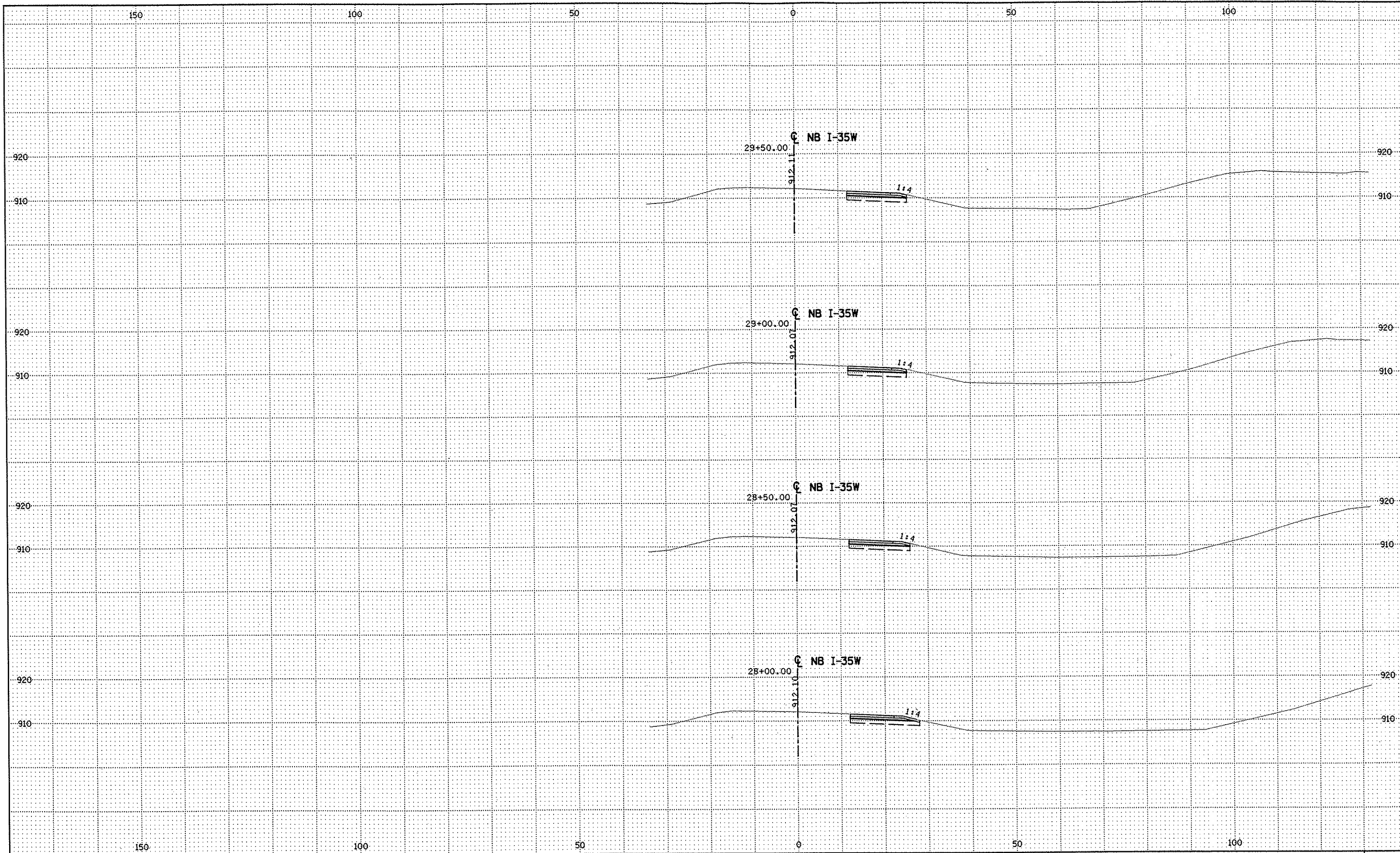
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 26+00 TO STA. 27+50

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NO	DATE	BY	CKD	APPR	REVISION

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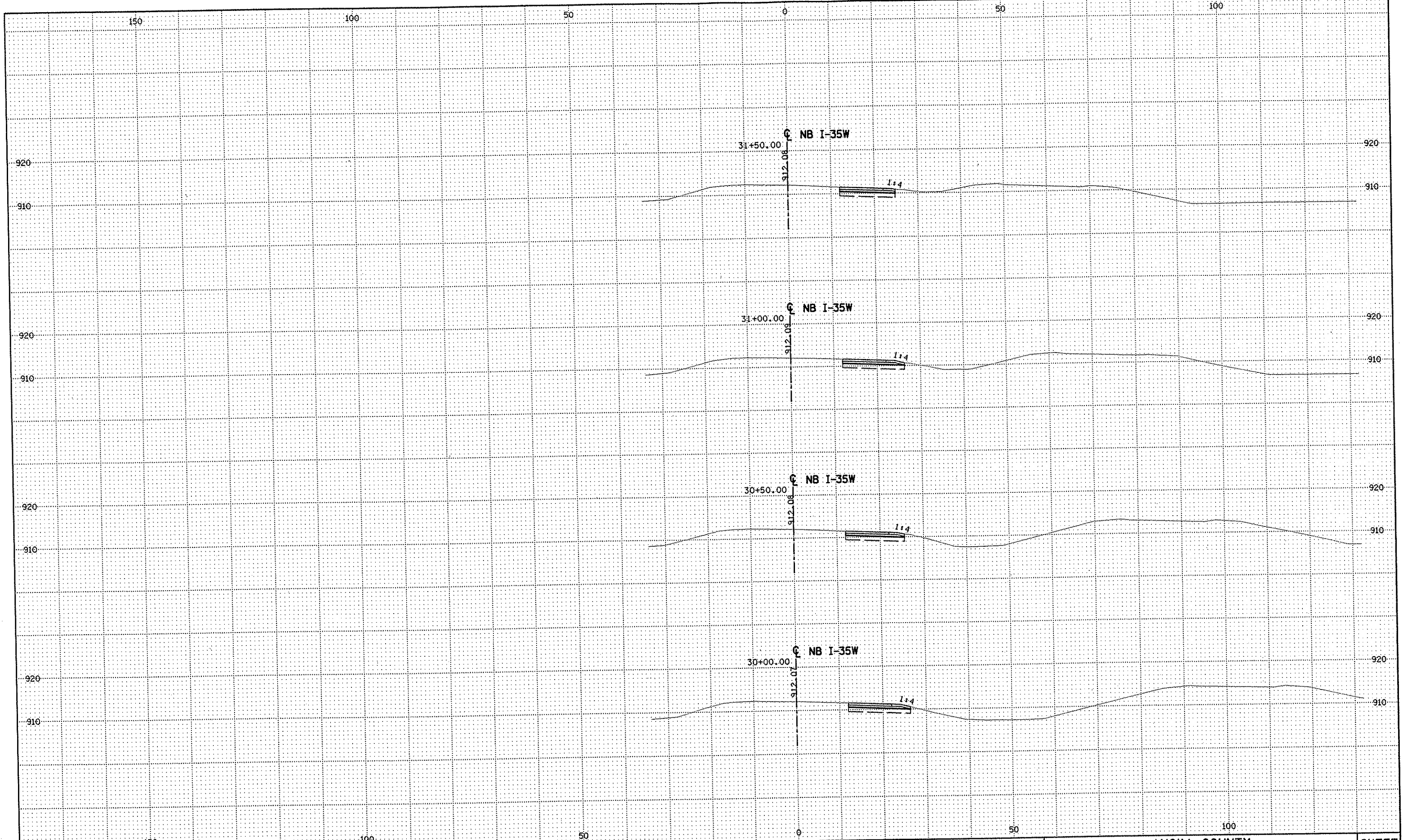
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 28+00 TO STA. 29+50

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NO	DATE	BY	CKD	APPR	REVISION

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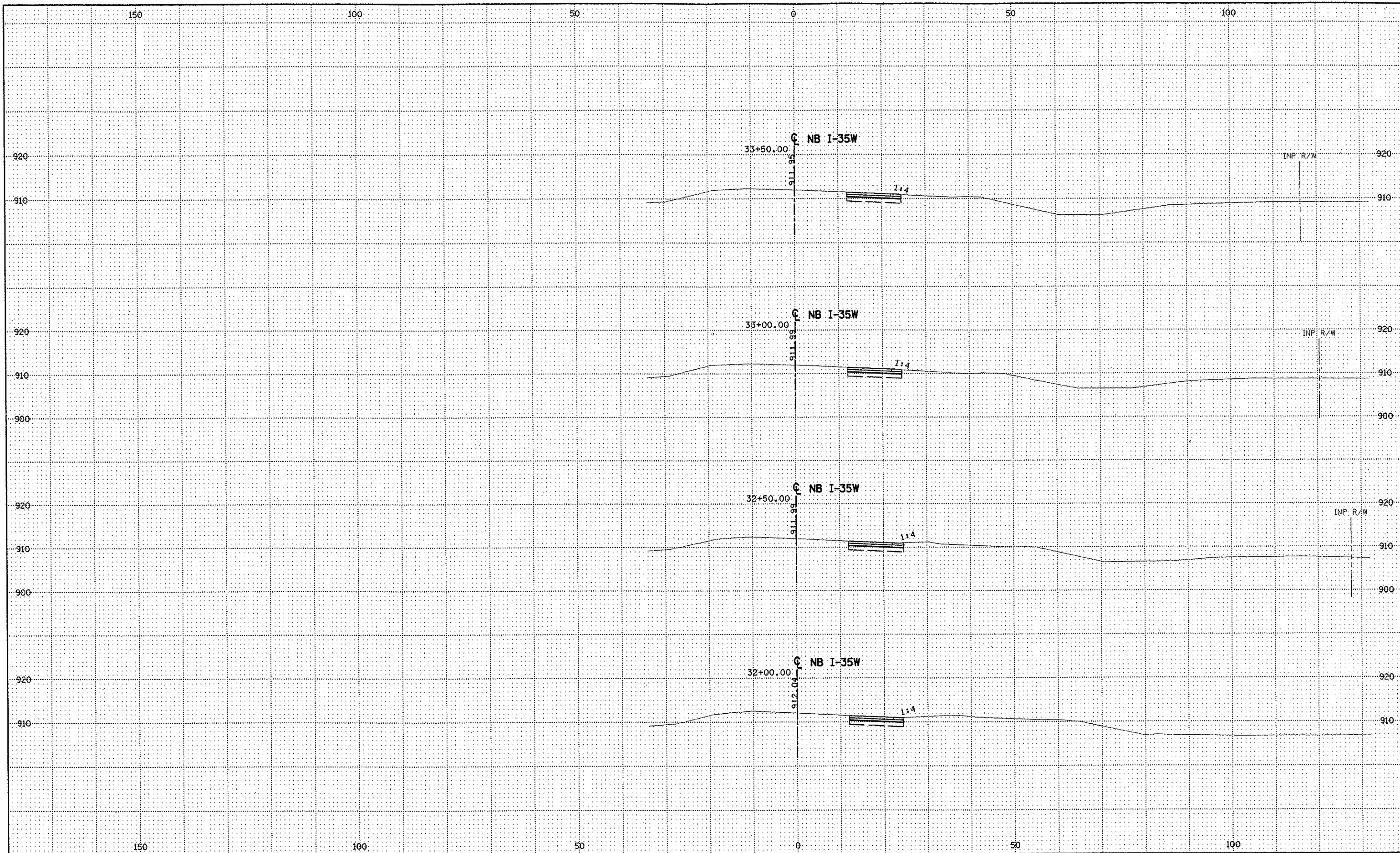
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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 30+00 TO STA. 31+50

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NO	DATE	BY	CHKD	APPR	REVISION

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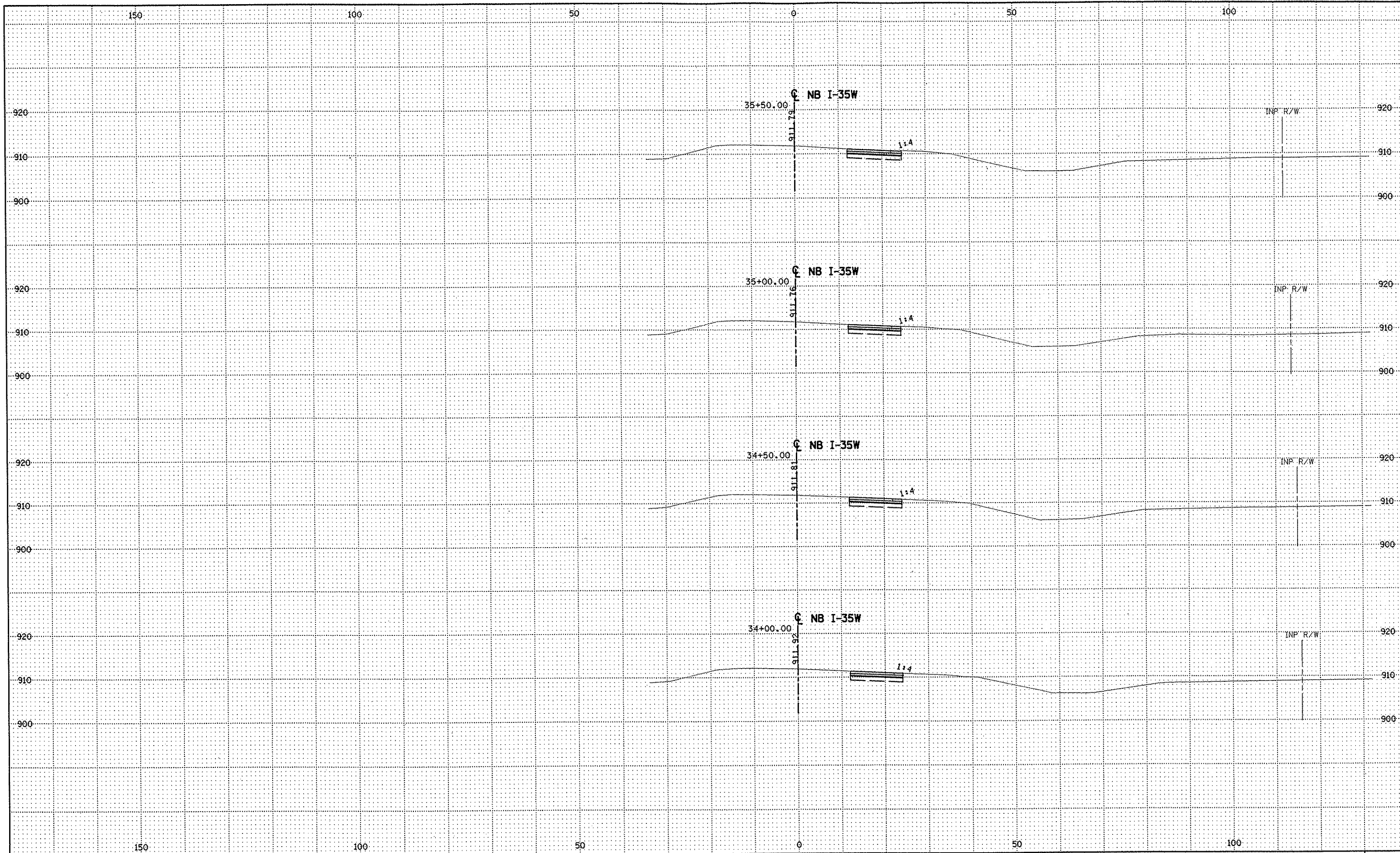
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 32+00 TO STA. 33+50

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan35n.dgn 11/20/01

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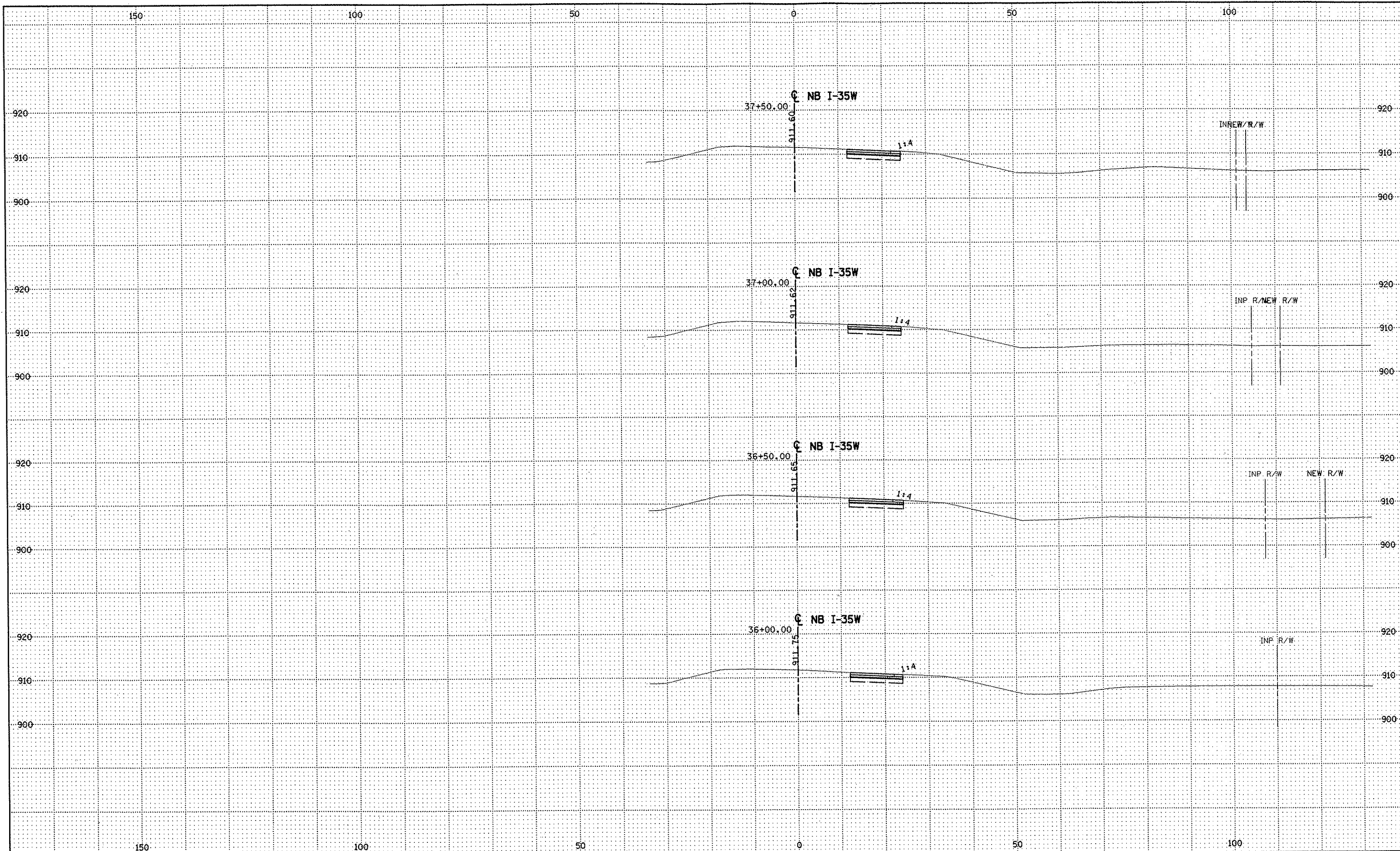
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 34+00 TO STA. 35+50

SHEET
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NO	DATE	BY	CKD	APPR	REVISION

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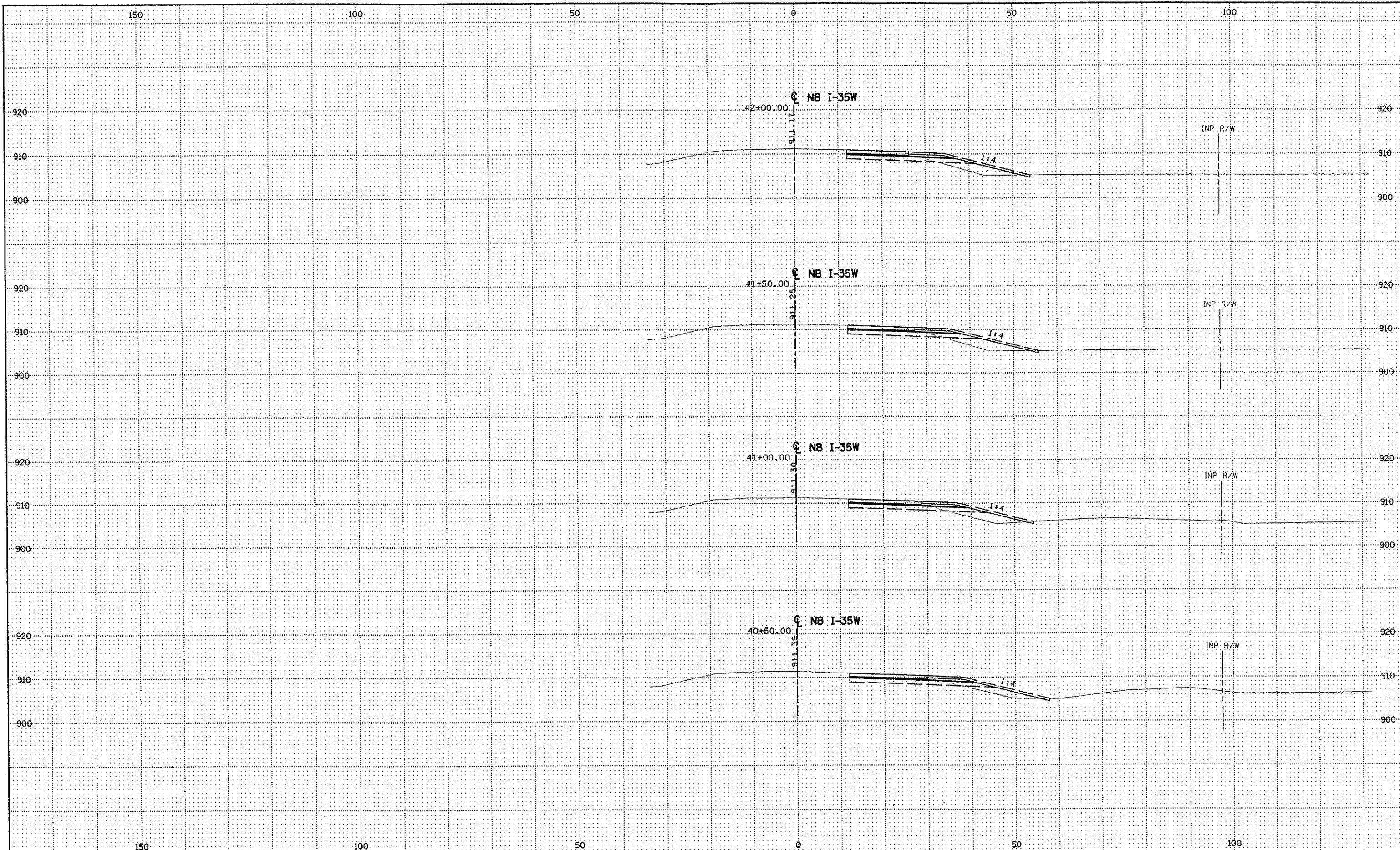
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 S.A.P. 02-652-04
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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 36+00 TO STA. 37+50

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par14\roadway3\drawings\xsec\xsplan35n.dgn 11/20/01

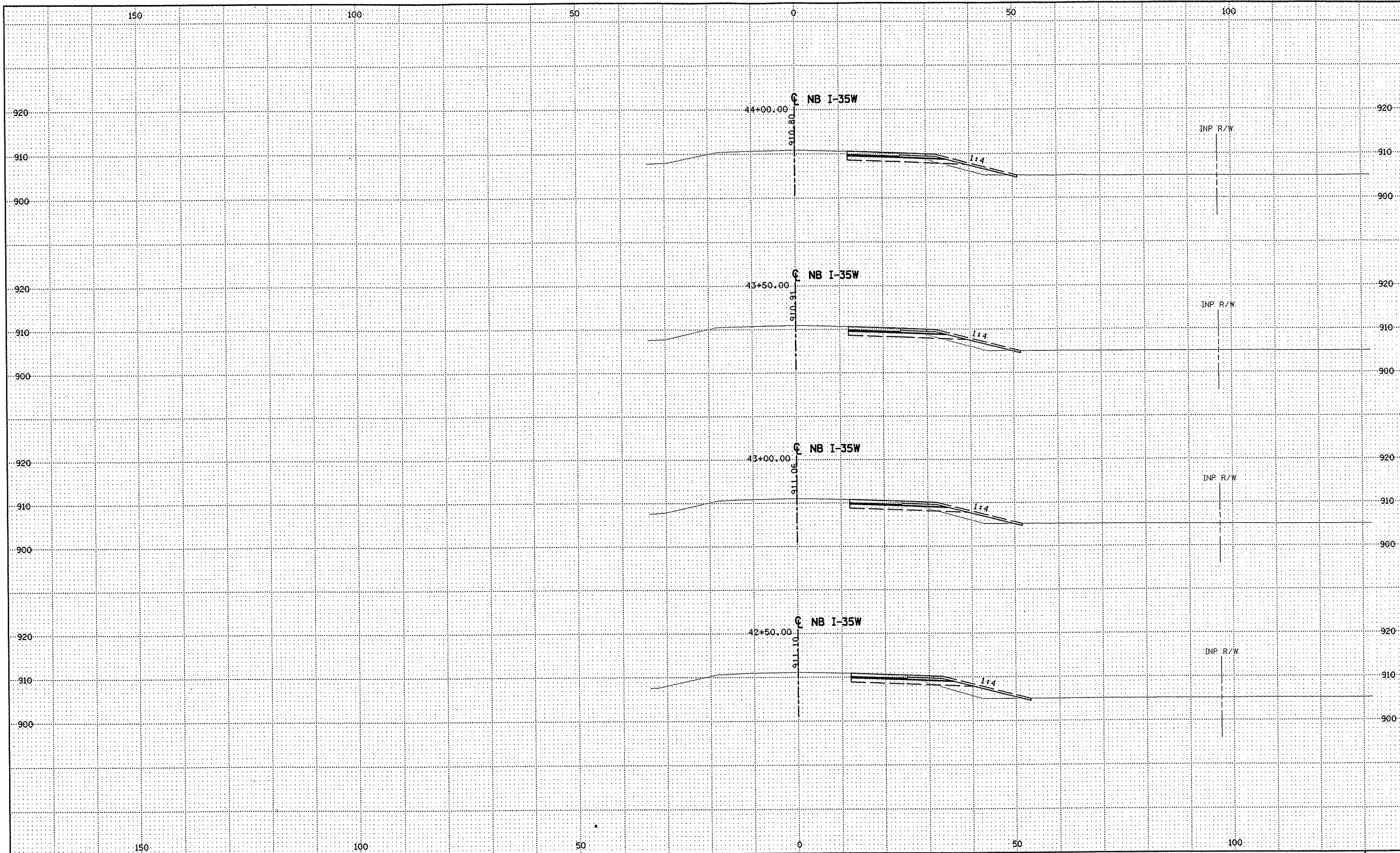
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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 40+50 TO STA. 42+00

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\sec\xsplan35n.dgn 11/20/01

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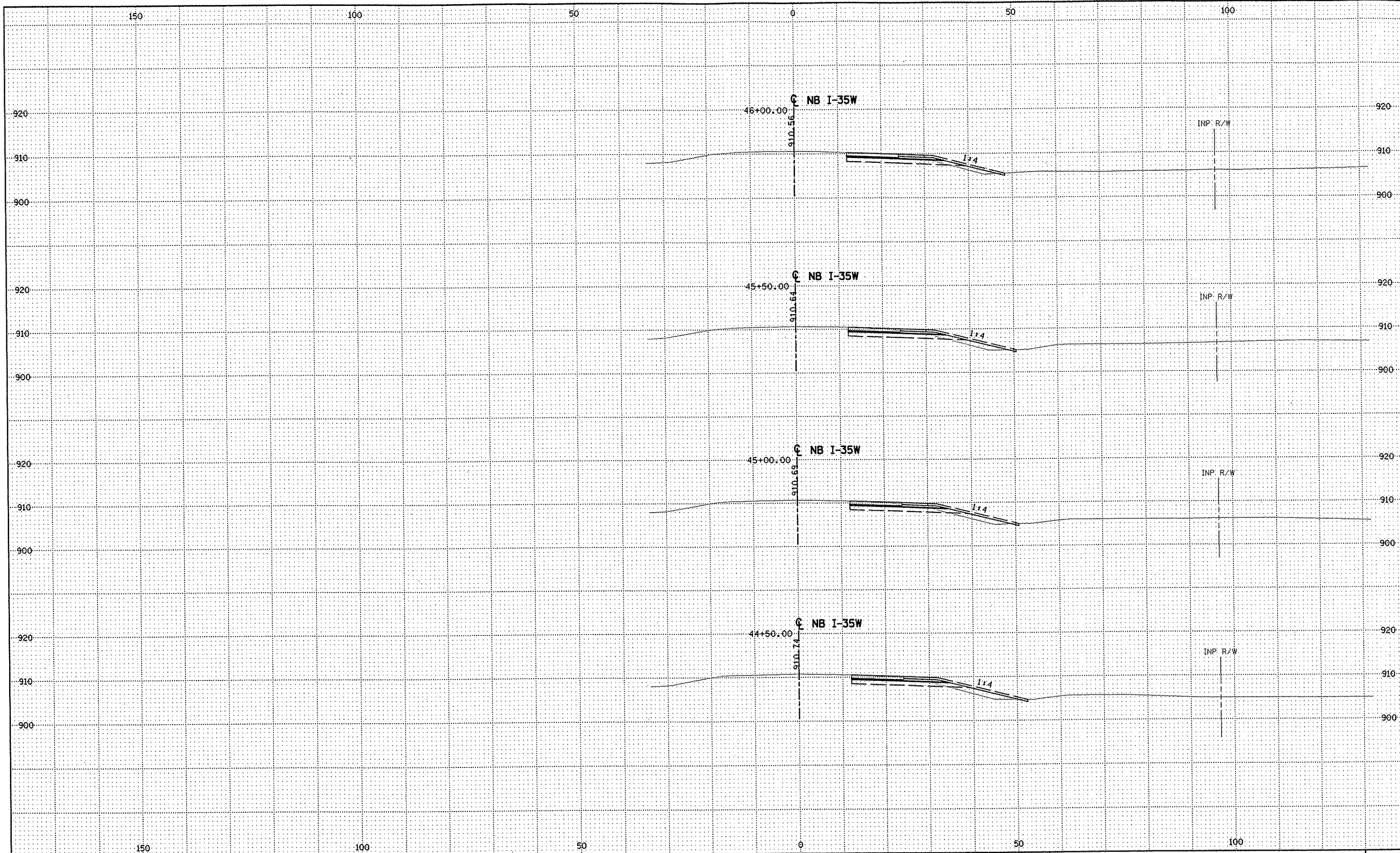
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 42+50 TO STA. 44+00

SHEET
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NO	DATE	BY	CKD	APPR	REVISION

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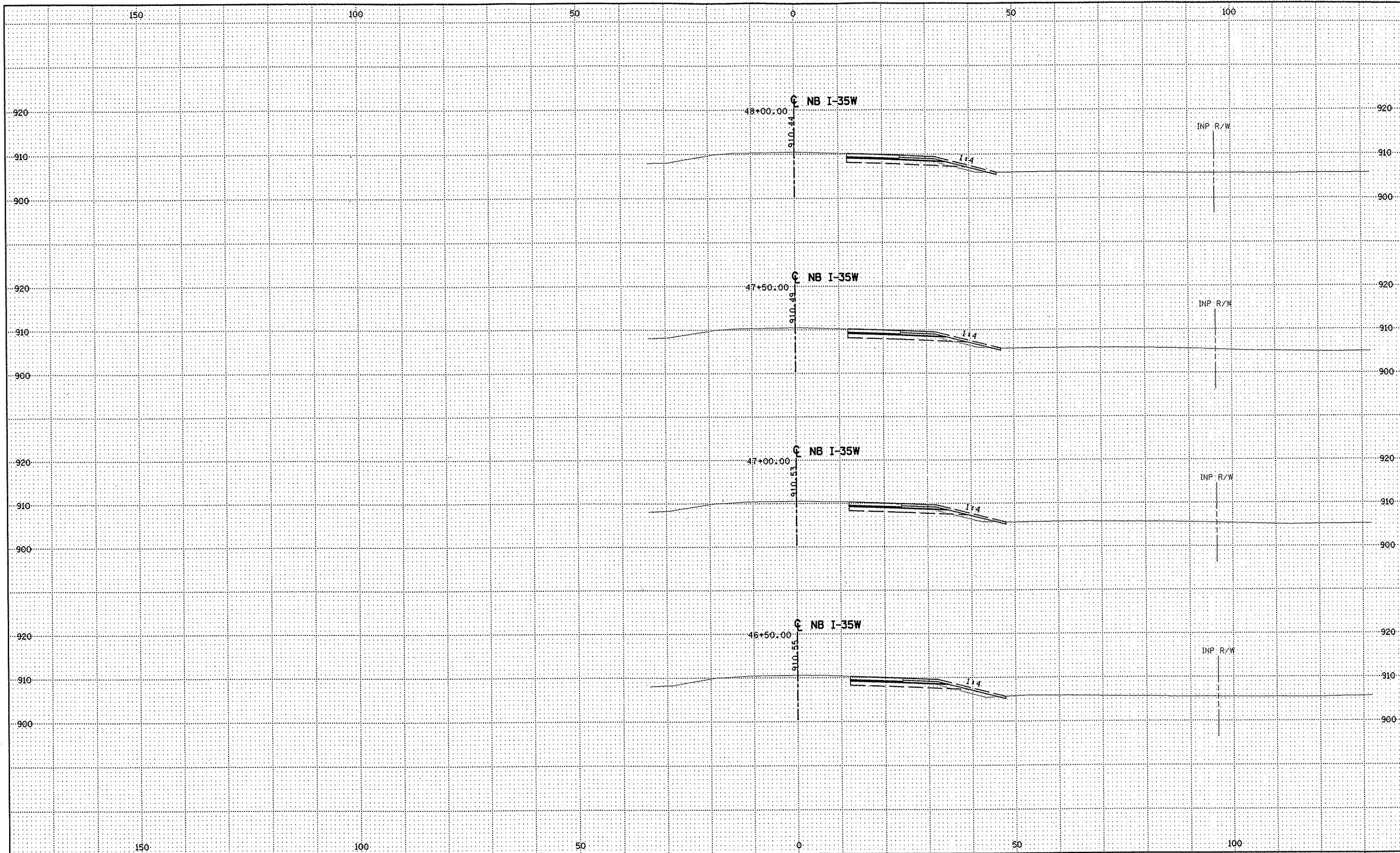
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 44+50 TO STA. 46+00

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 559



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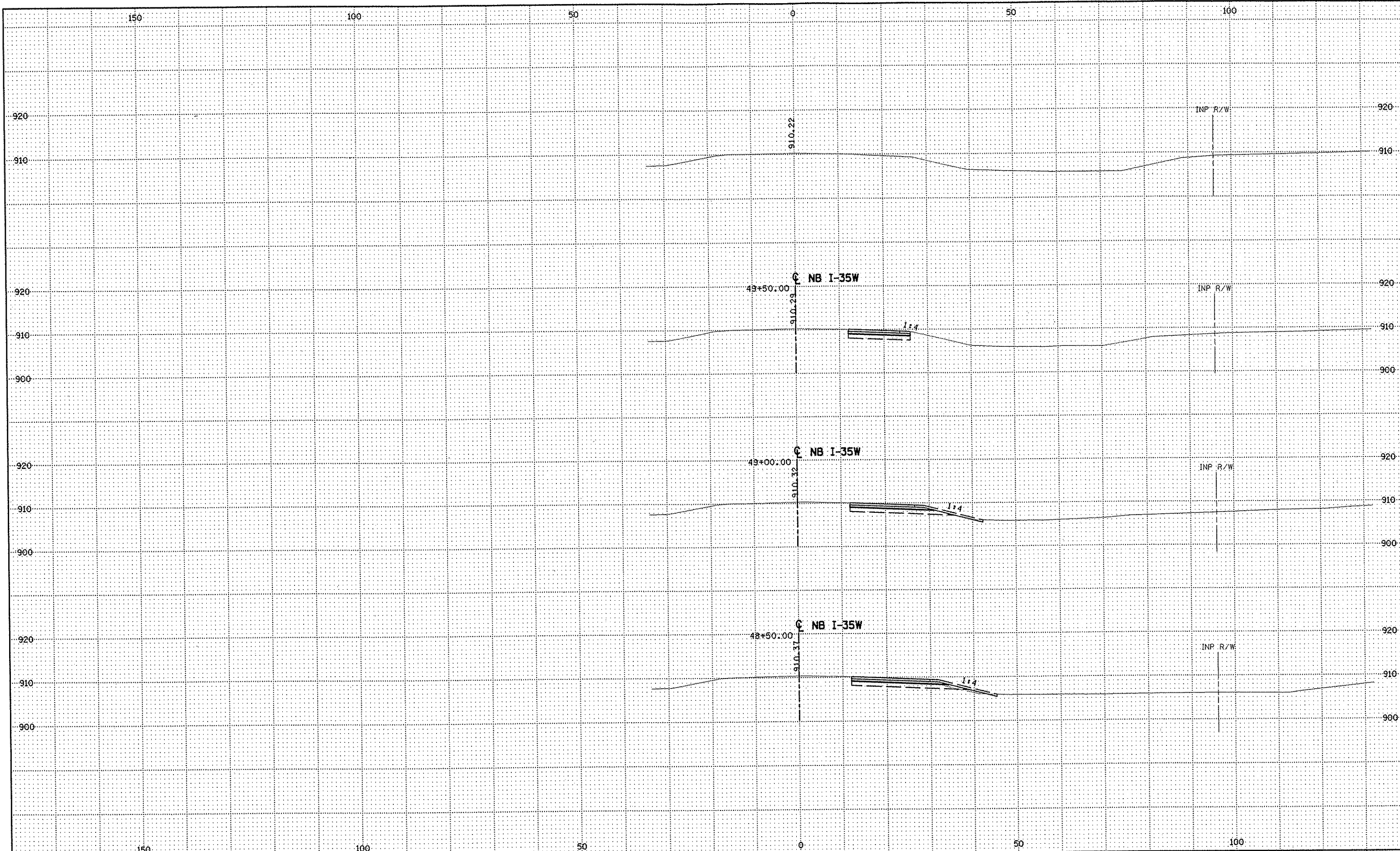
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 46+50 TO STA. 48+00

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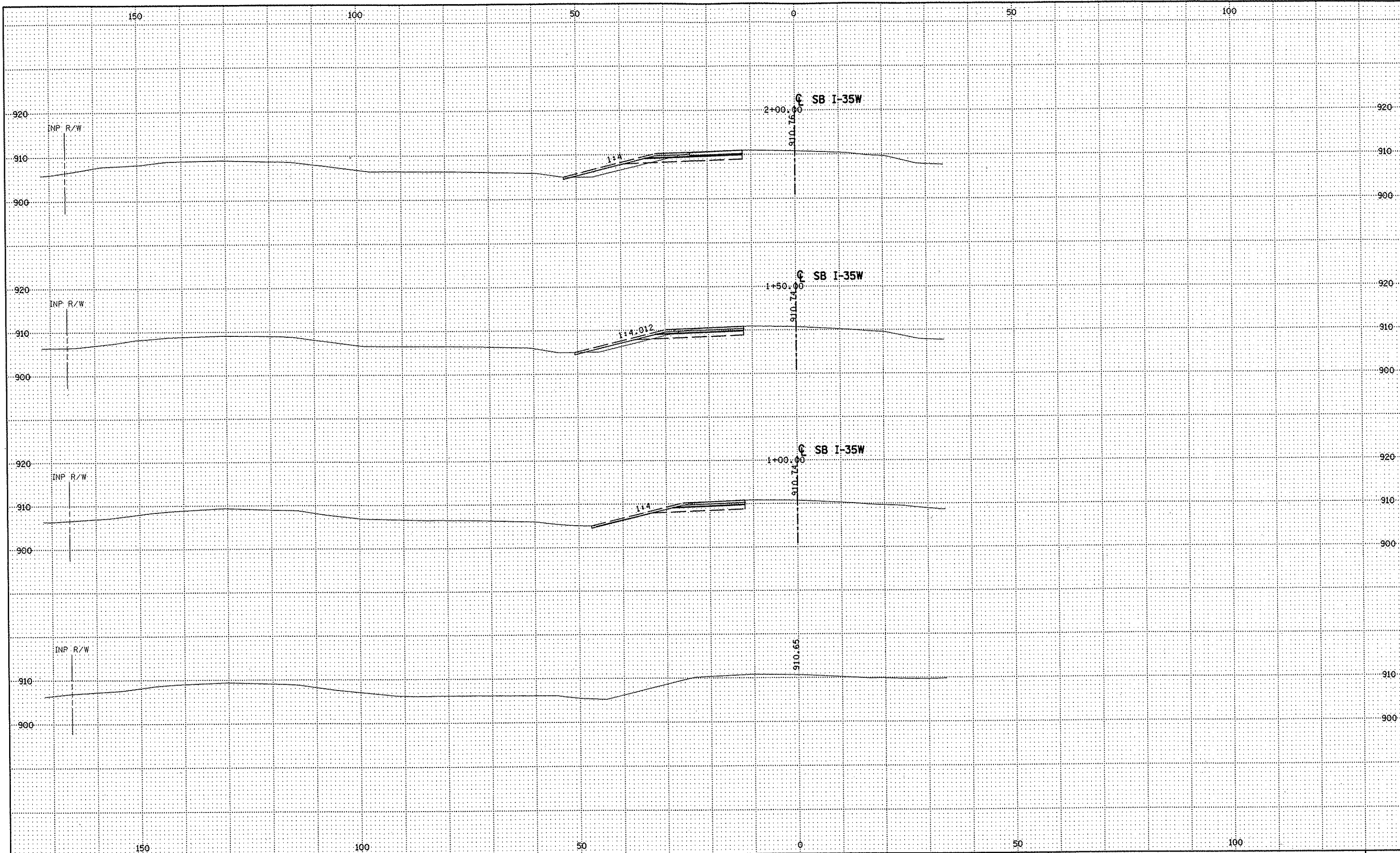
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NB I-35W STA. 48+50 TO STA. 49+50

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NO	DATE	BY	CKD	APPR	REVISION

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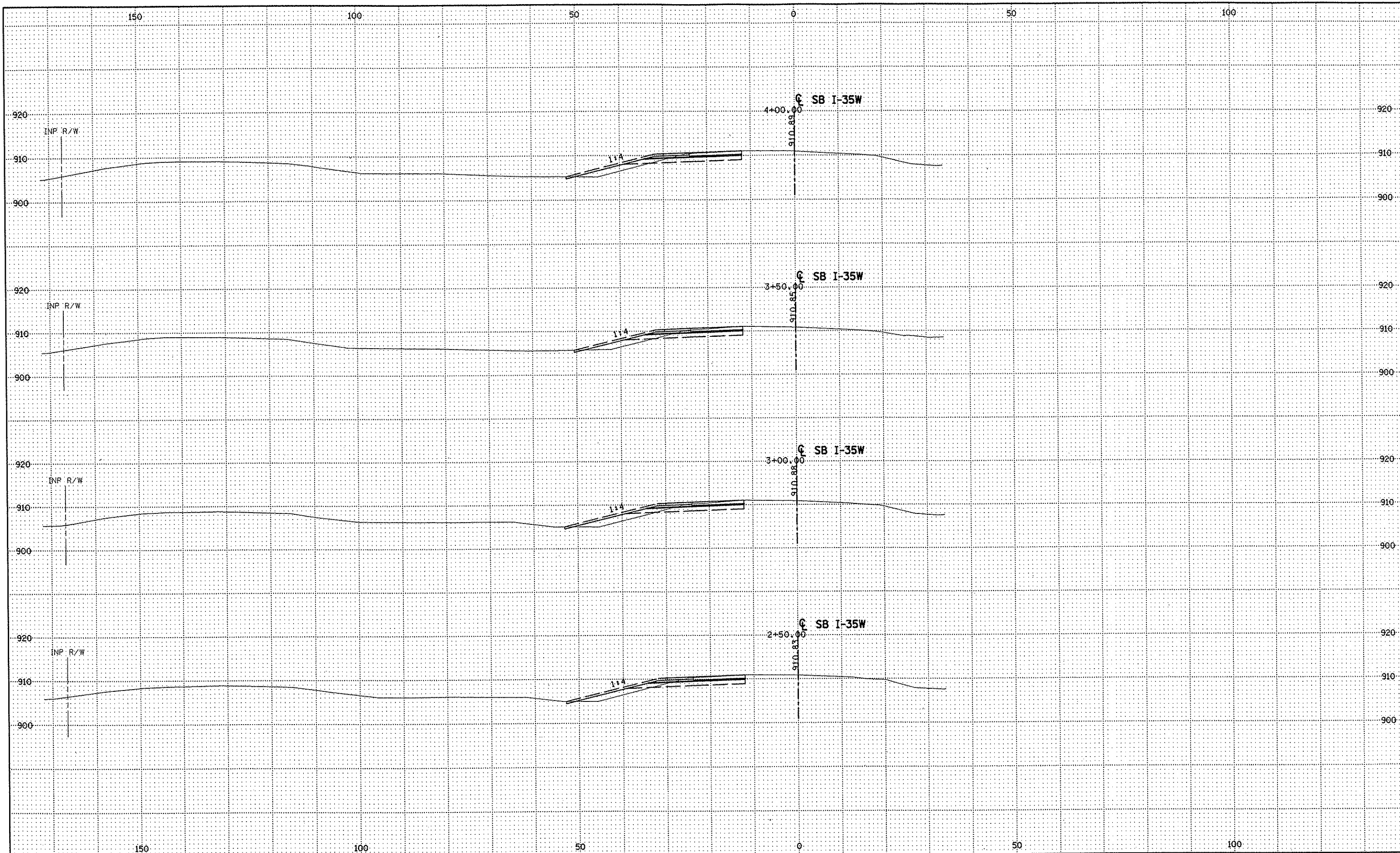
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 1+00 TO STA. 2+00

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NO	DATE	BY	CKD	APPR	REVISION

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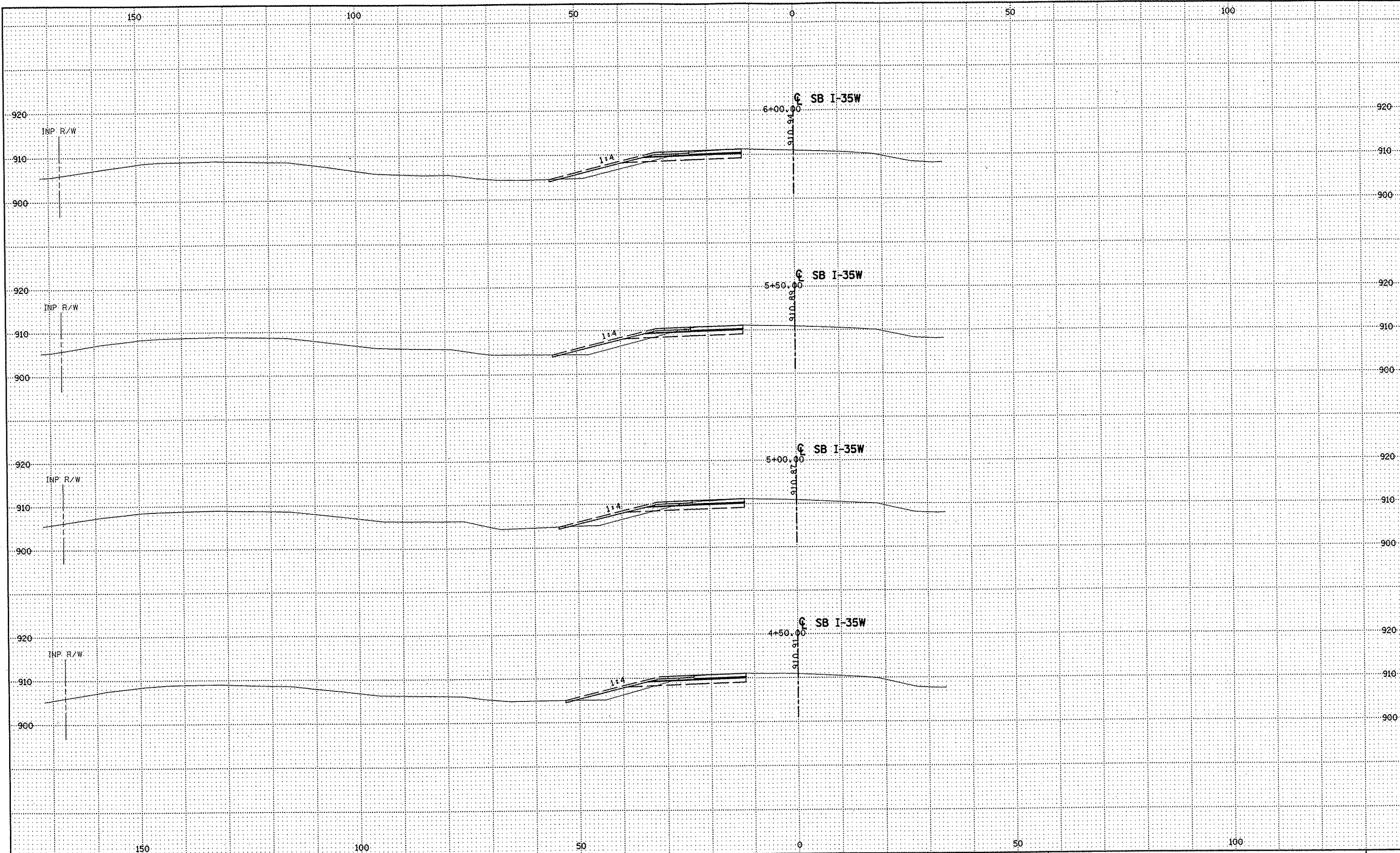
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 2+50 TO STA. 4+00

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan35s.dgn 11/20/01

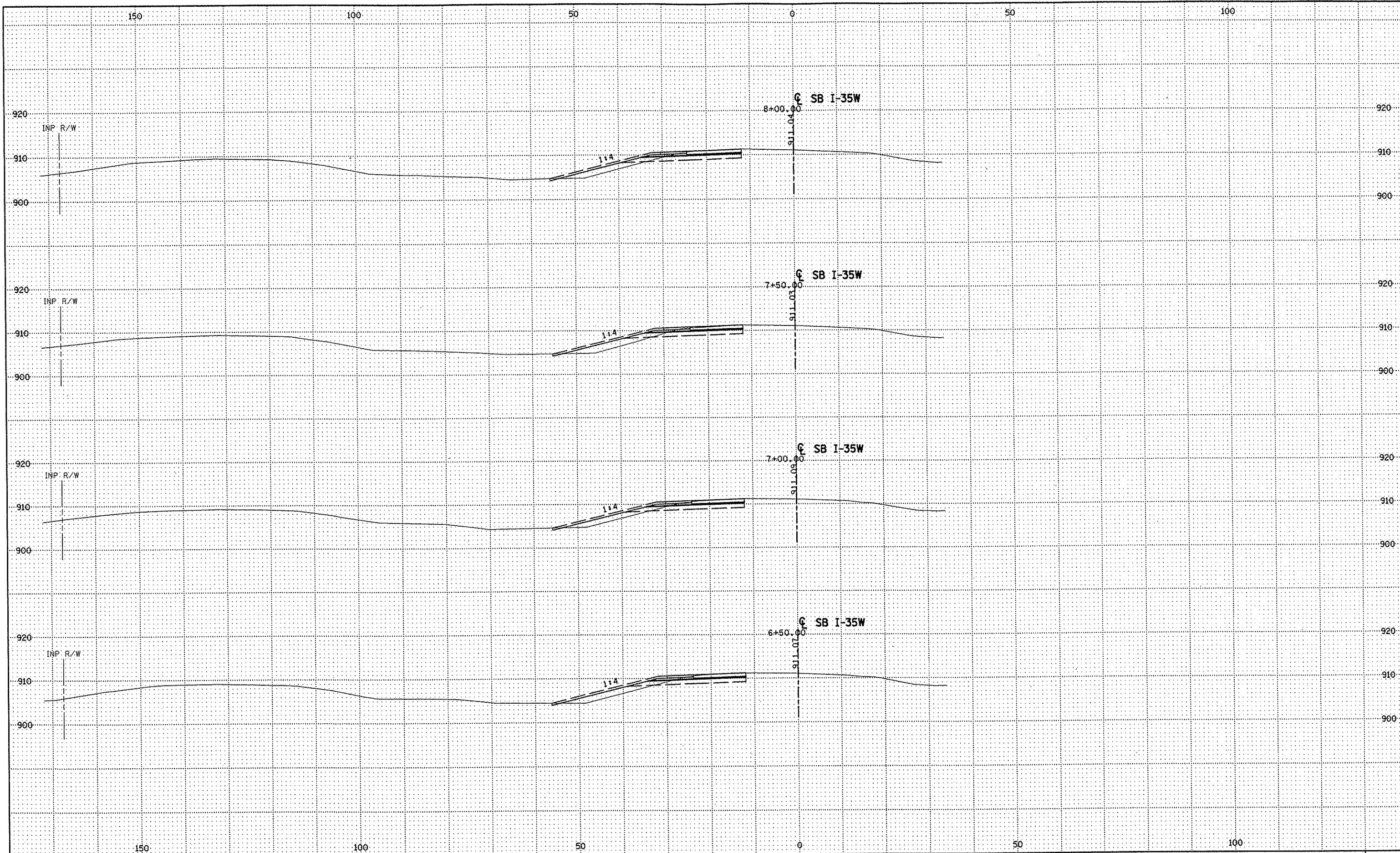
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 4+50 TO STA. 6+00

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NO	DATE	BY	CRD	APPR	REVISION

NAME: K:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan35s.dgn 11/20/01

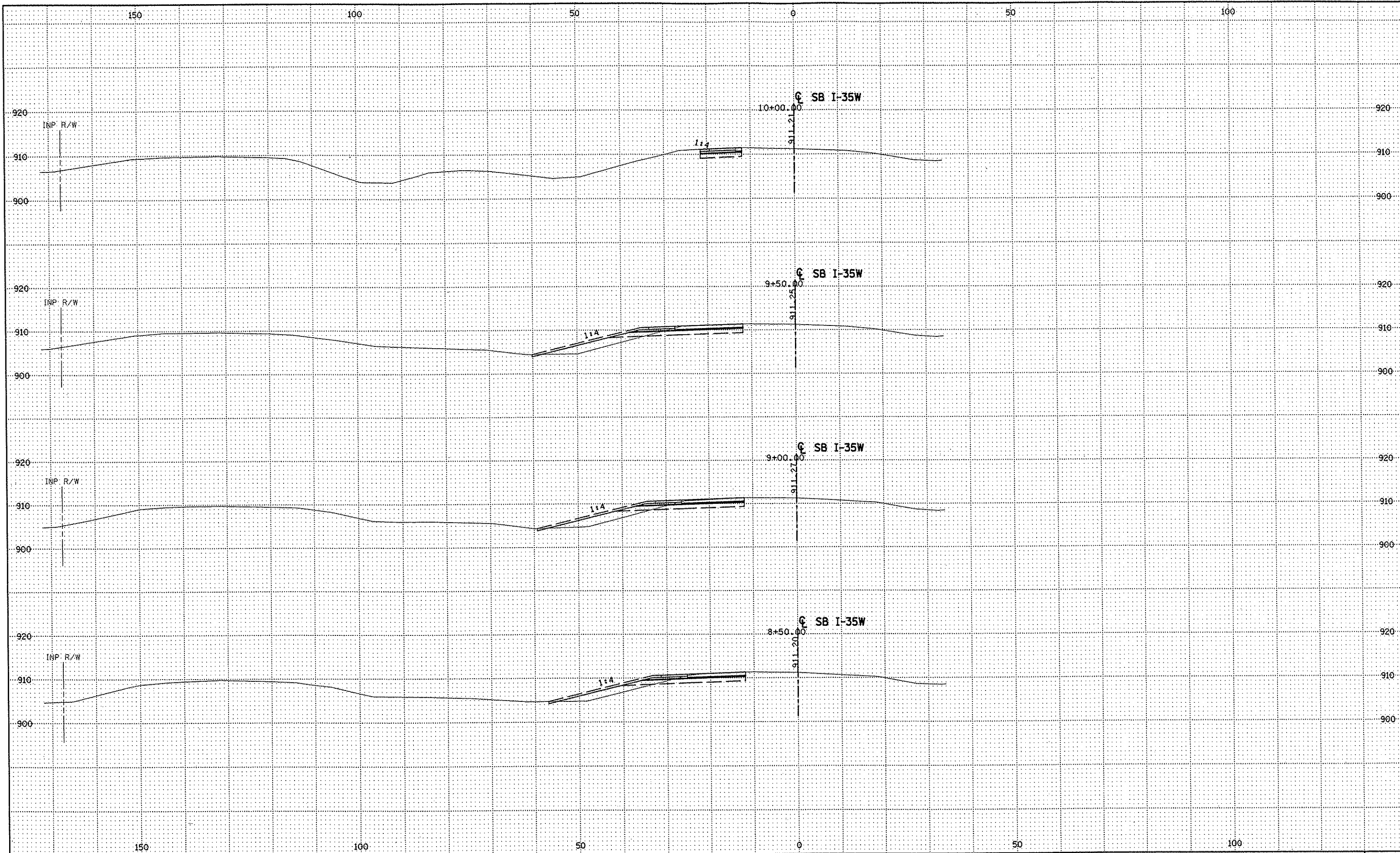
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 6+50 TO STA. 8+00

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NO	DATE	BY	CRD	APPR	REVISION

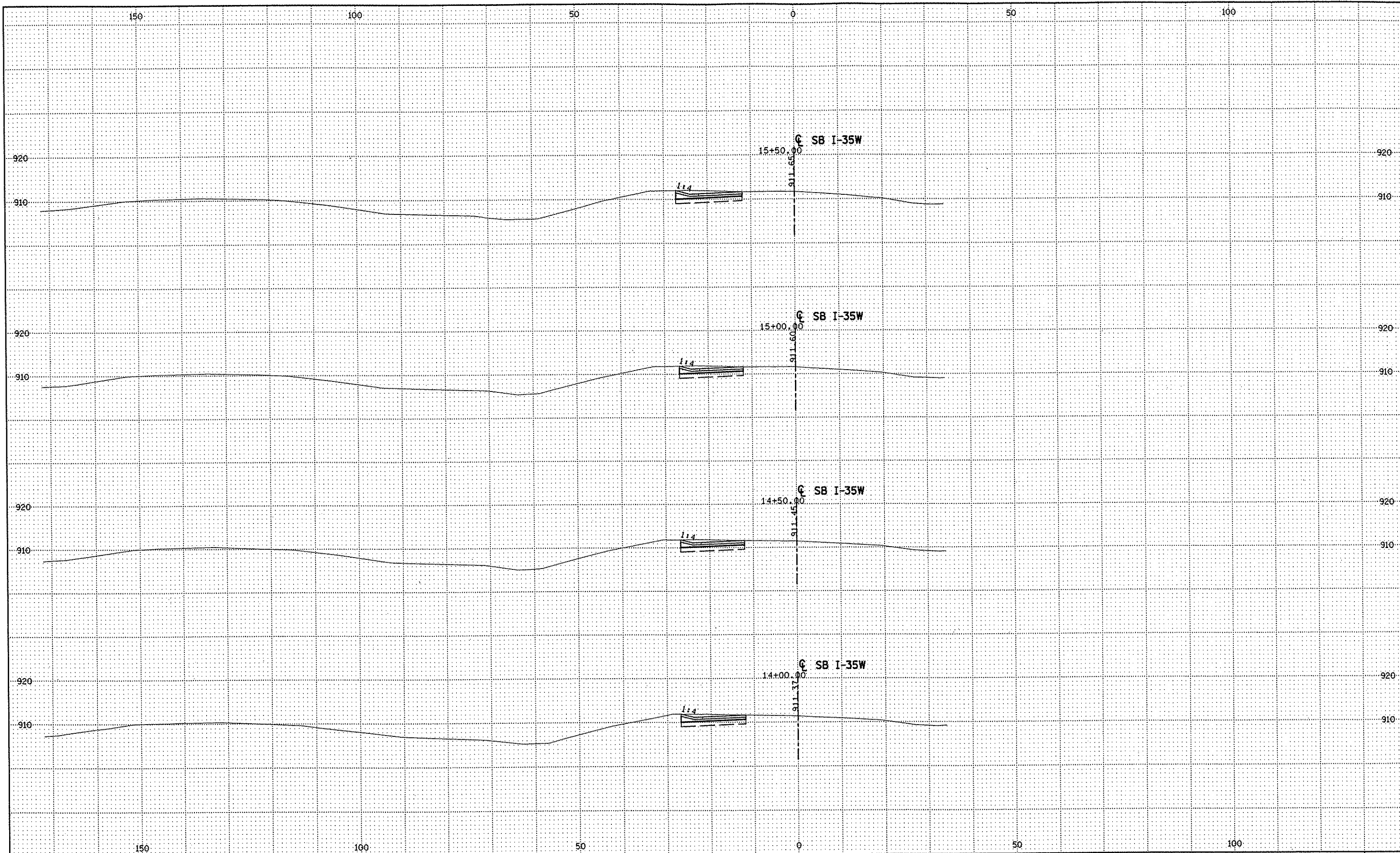
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 8+50 TO STA. 10+00

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NO	DATE	BY	CKD	APPR	REVISION

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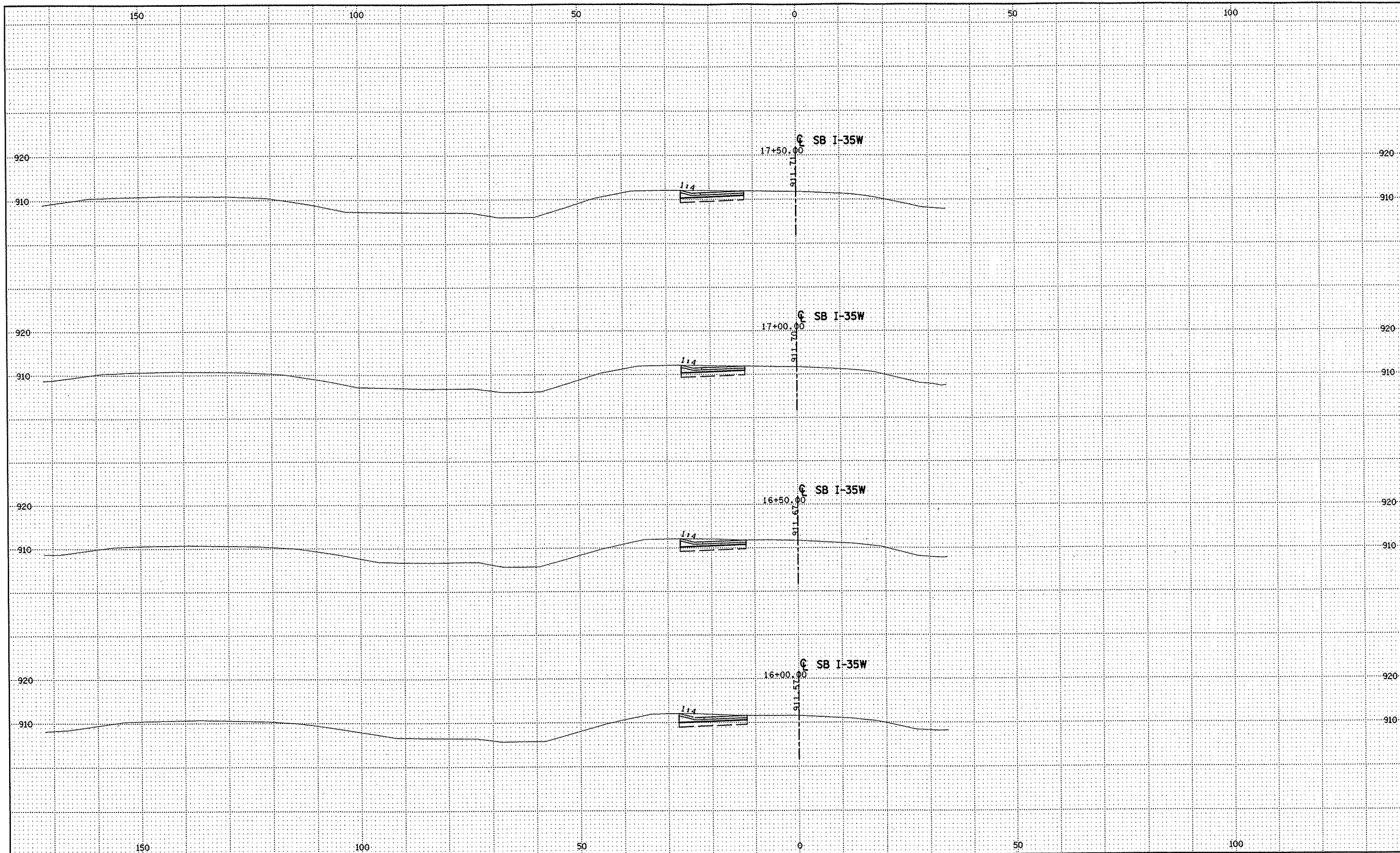
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 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 14+00 TO STA. 15+50

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NO	DATE	BY	CKD	APPR	REVISION

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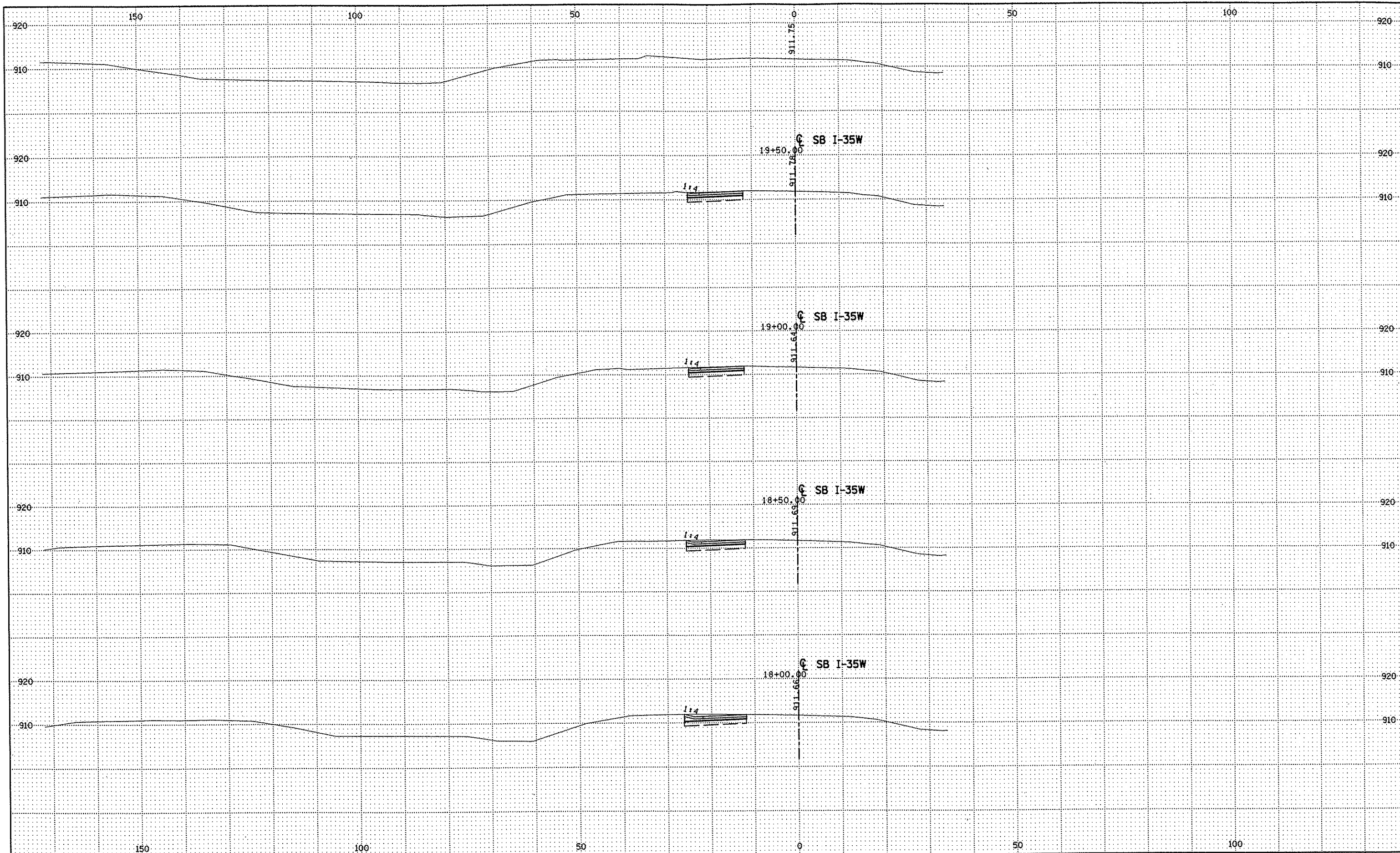
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 16+00 TO STA. 17+50

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan35s.dgn 11/20/01

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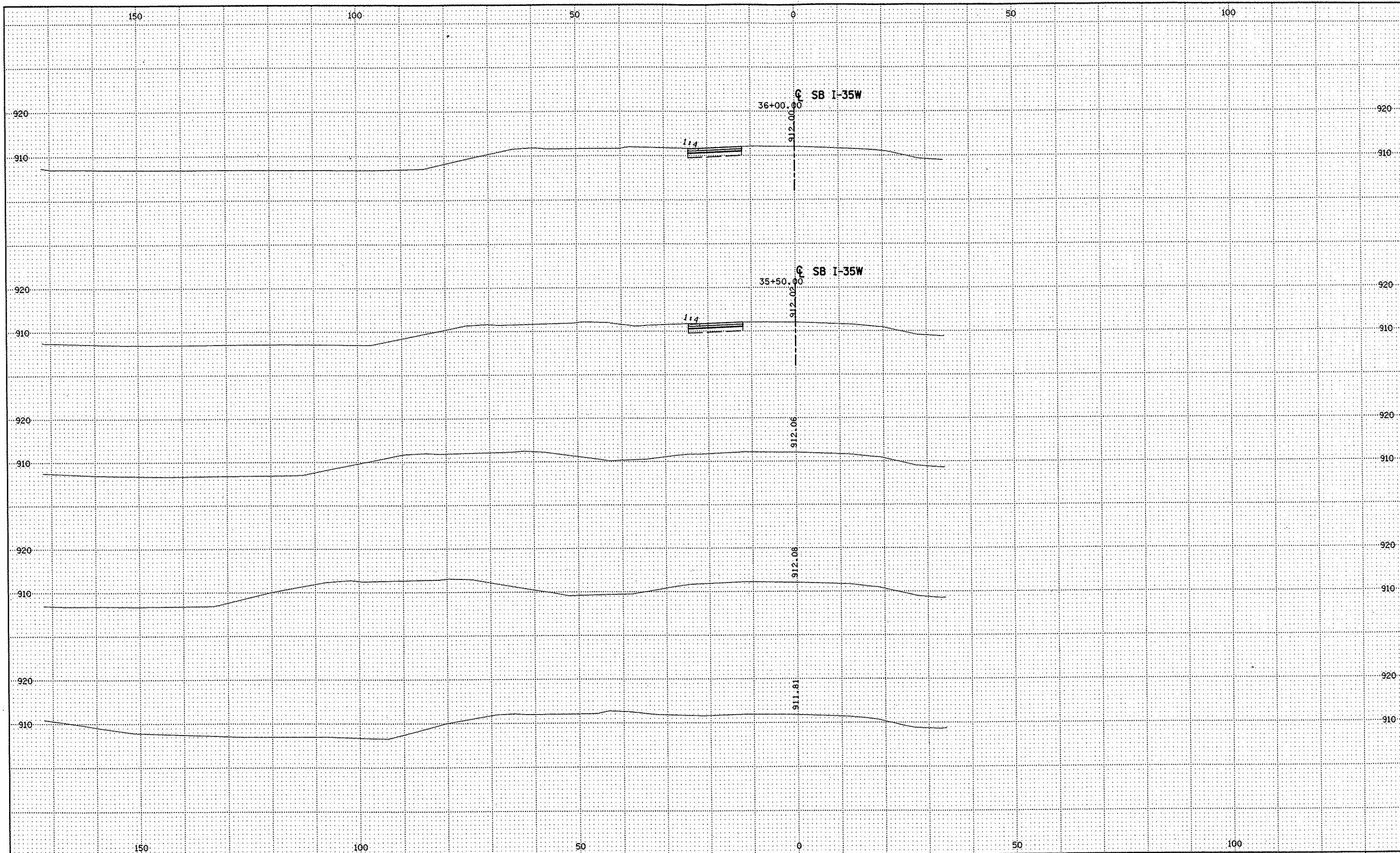
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 18+00 TO STA. 19+50

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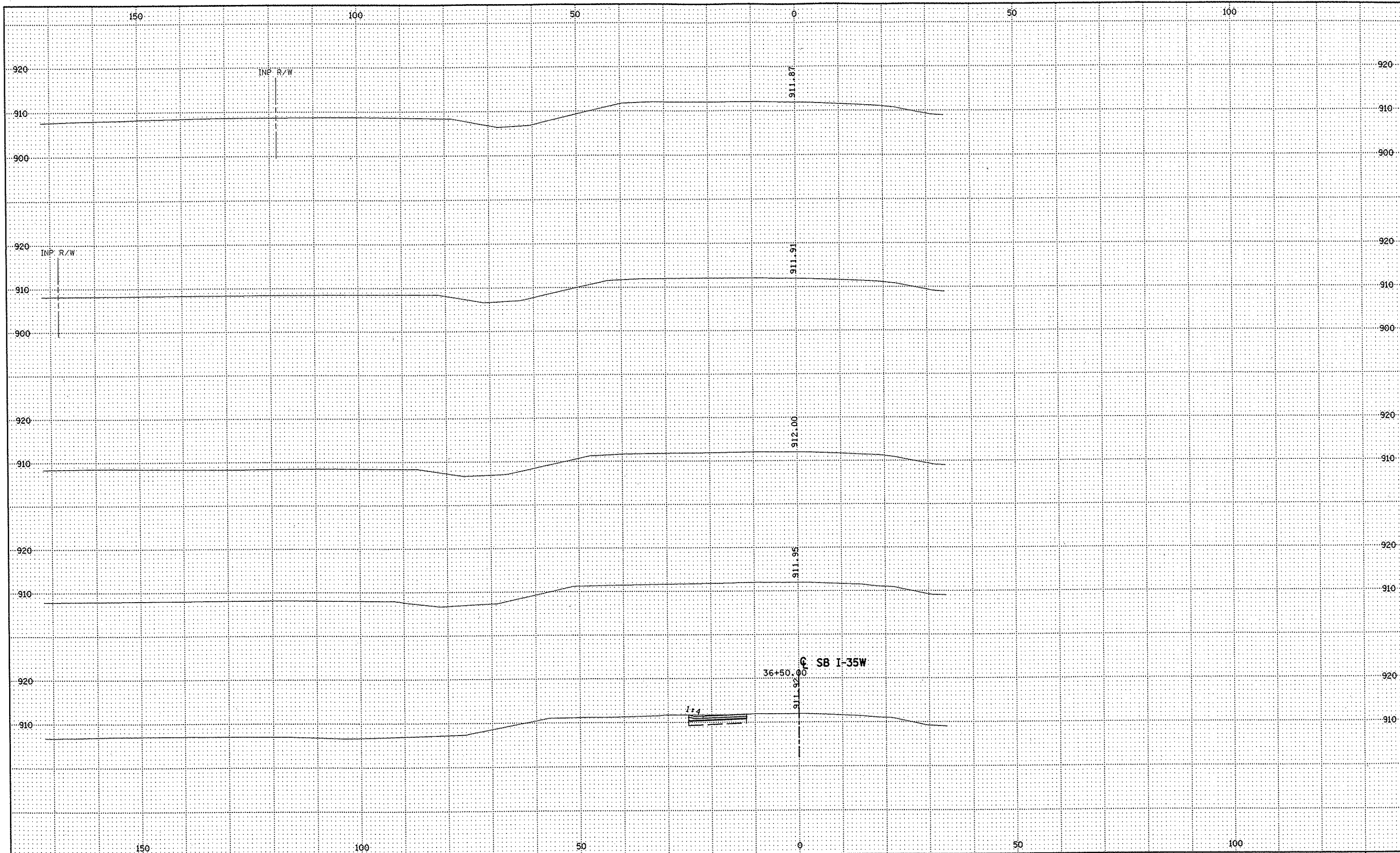
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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 35+50 TO STA. 36+00

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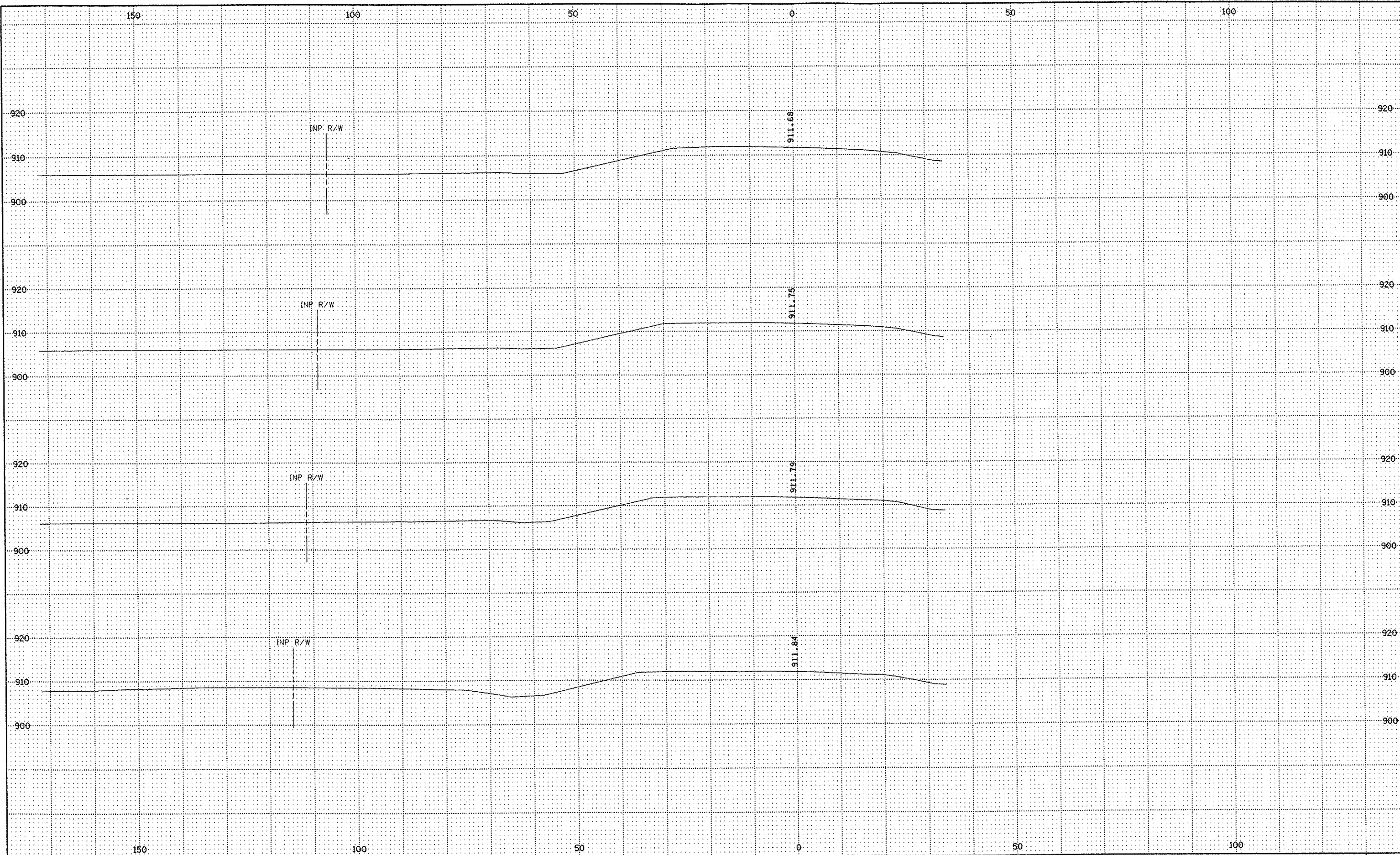
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 36+50 TO STA. 38+50

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NO	DATE	BY	CKD	APPR	REVISION

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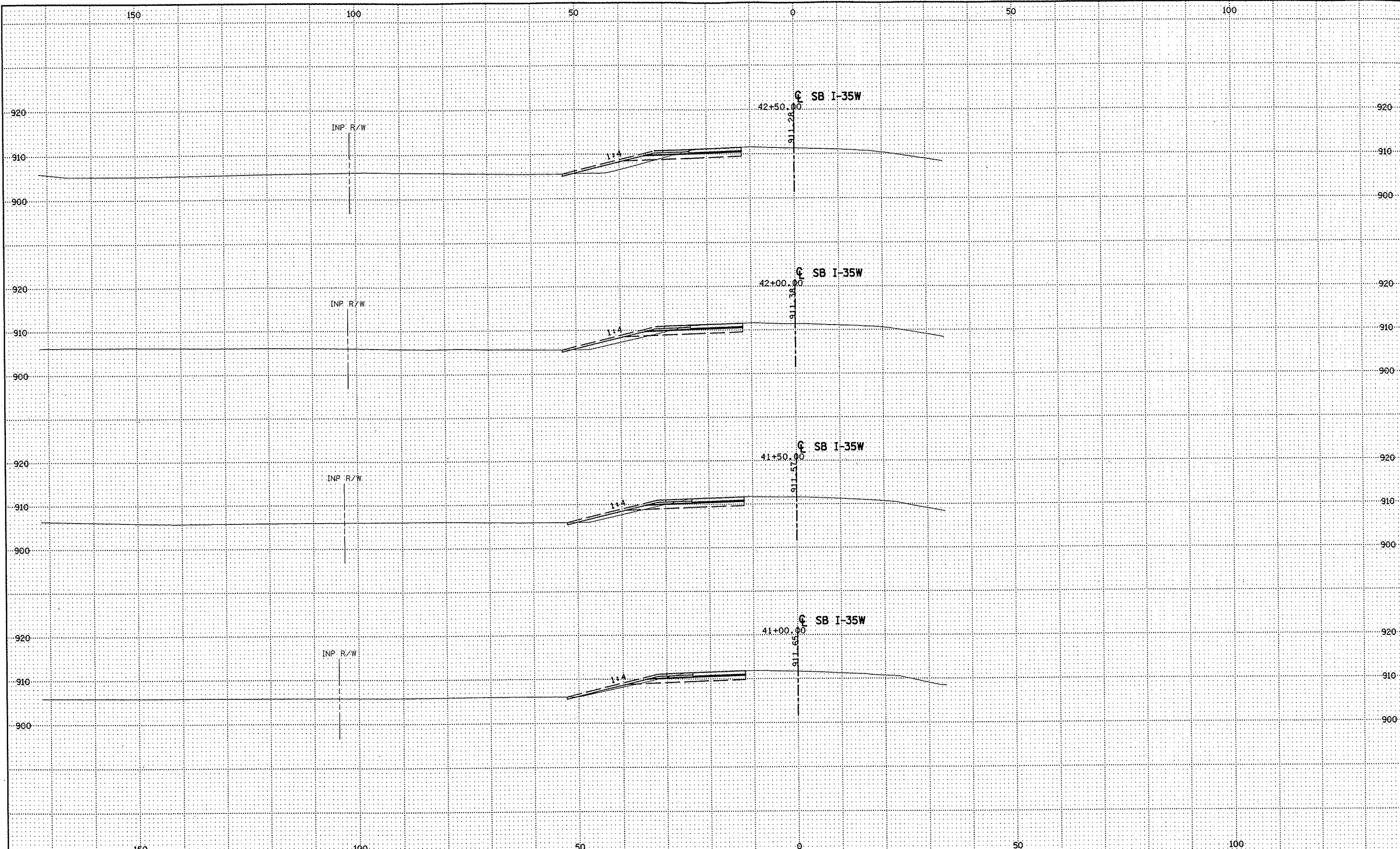
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 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 39+00 TO STA. 40+50

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NO	DATE	BY	CKD	APPR	REVISION

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INP R/W

INP R/W

INP R/W

INP R/W

1:4

1:4

1:4

1:4

42+50.00

42+00.00

41+50.00

41+00.00

911.28

911.38

911.57

911.65

SB I-35W

SB I-35W

SB I-35W

SB I-35W

0280-50 (TH 35W)

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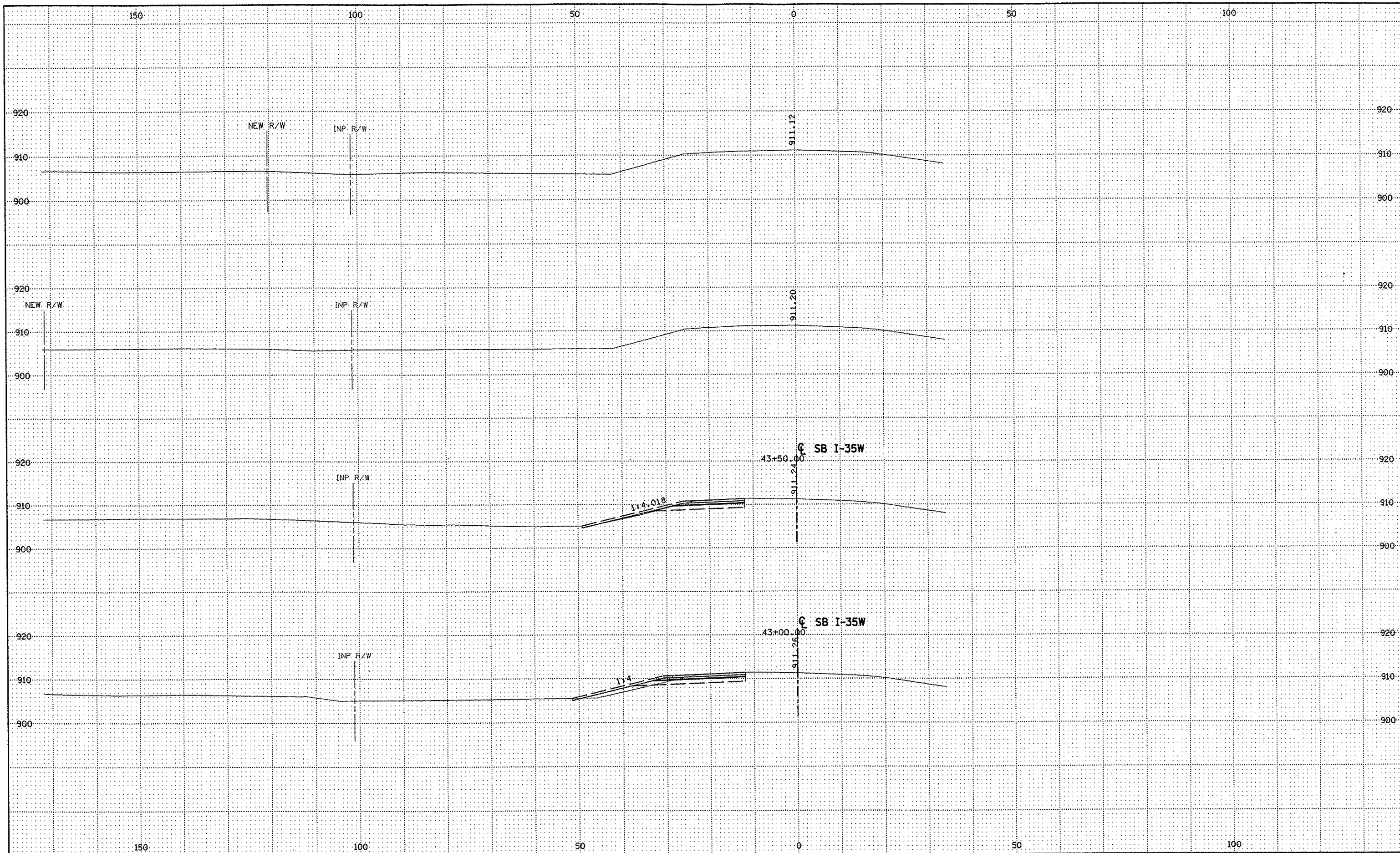
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ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
SB I-35W STA. 41+00 TO STA. 42+50

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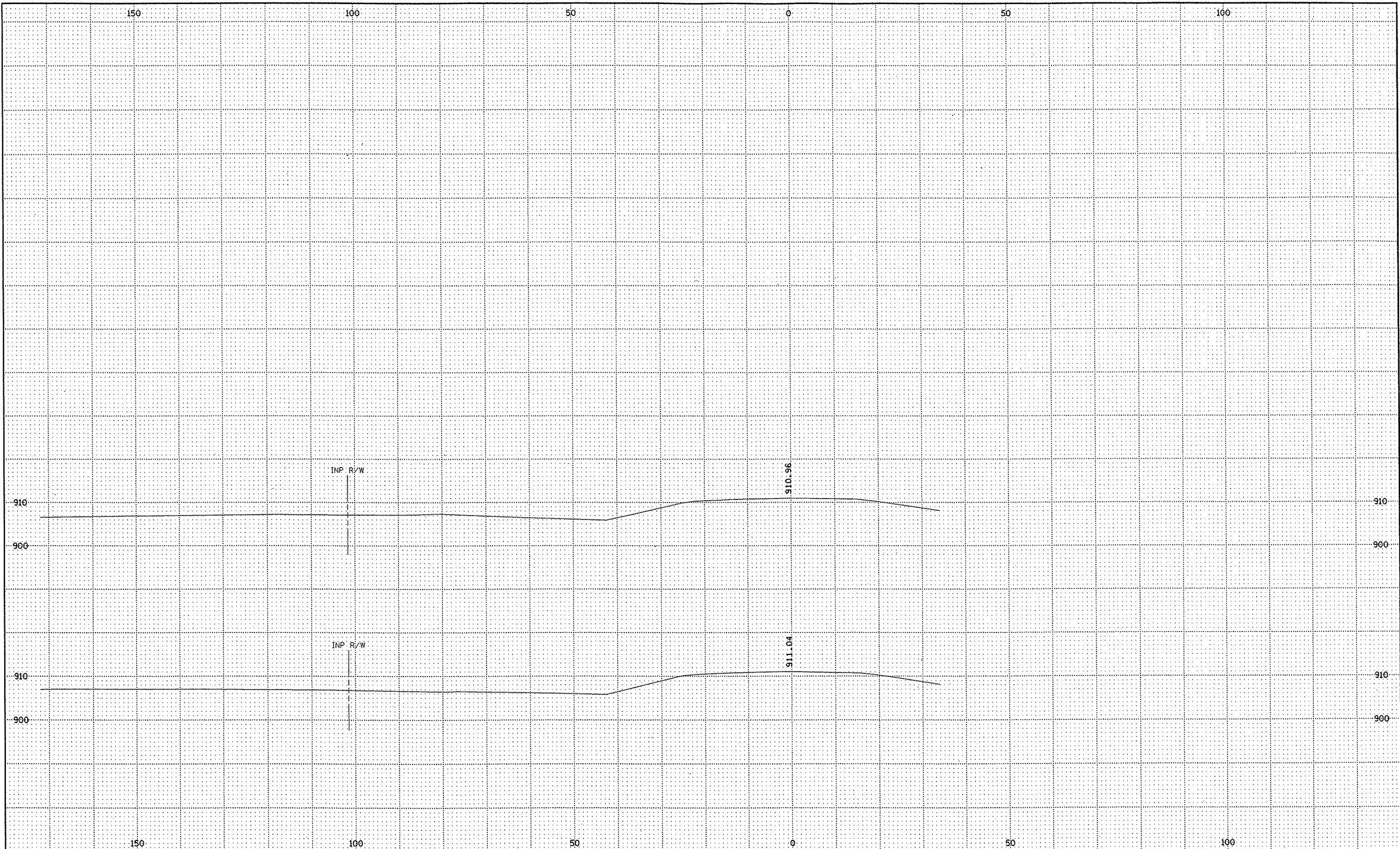
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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 43+00 TO STA. 44+50

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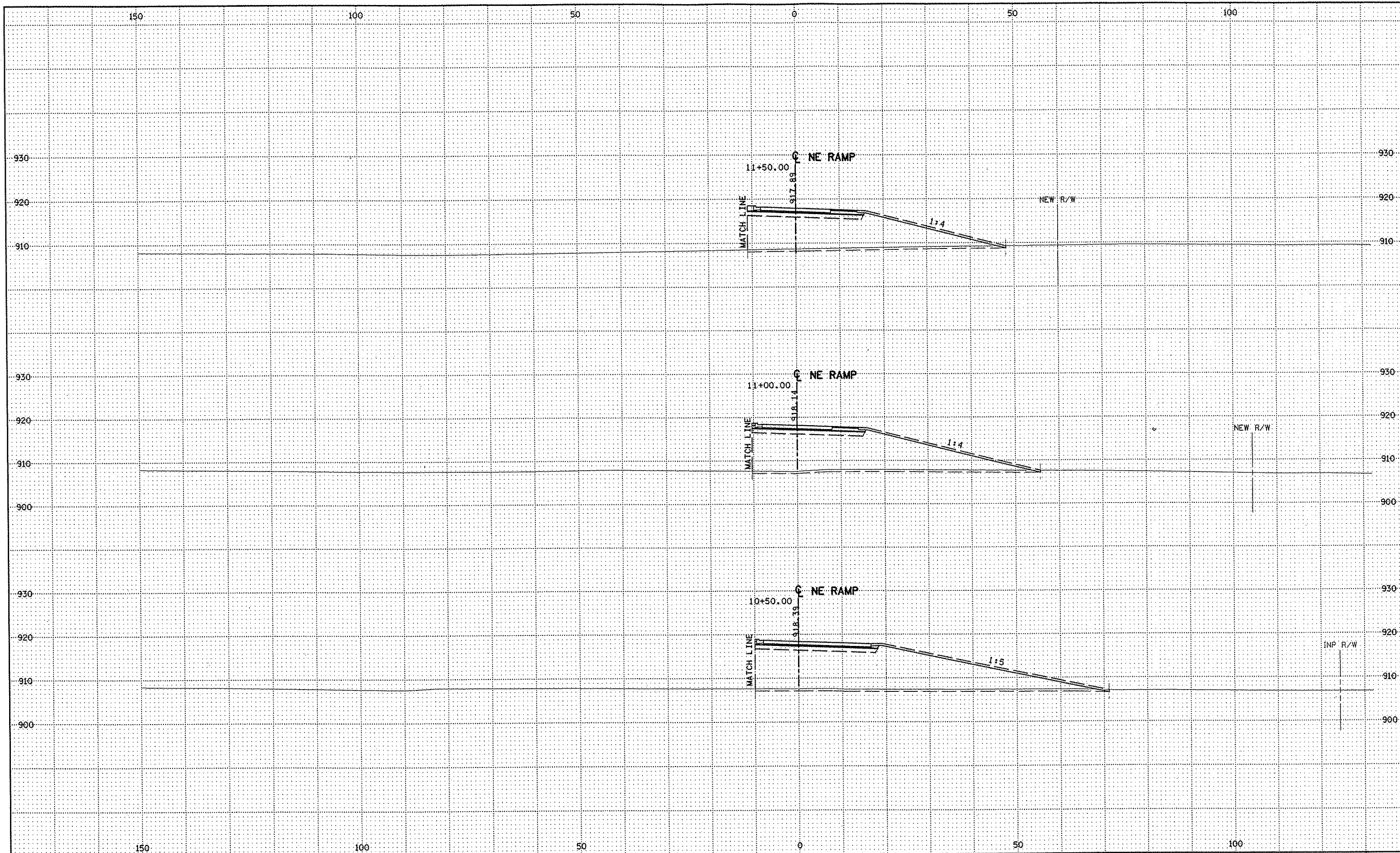
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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 SB I-35W STA. 45+00 TO STA. 45+50

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NO	DATE	BY	CKD	APPR	REVISION

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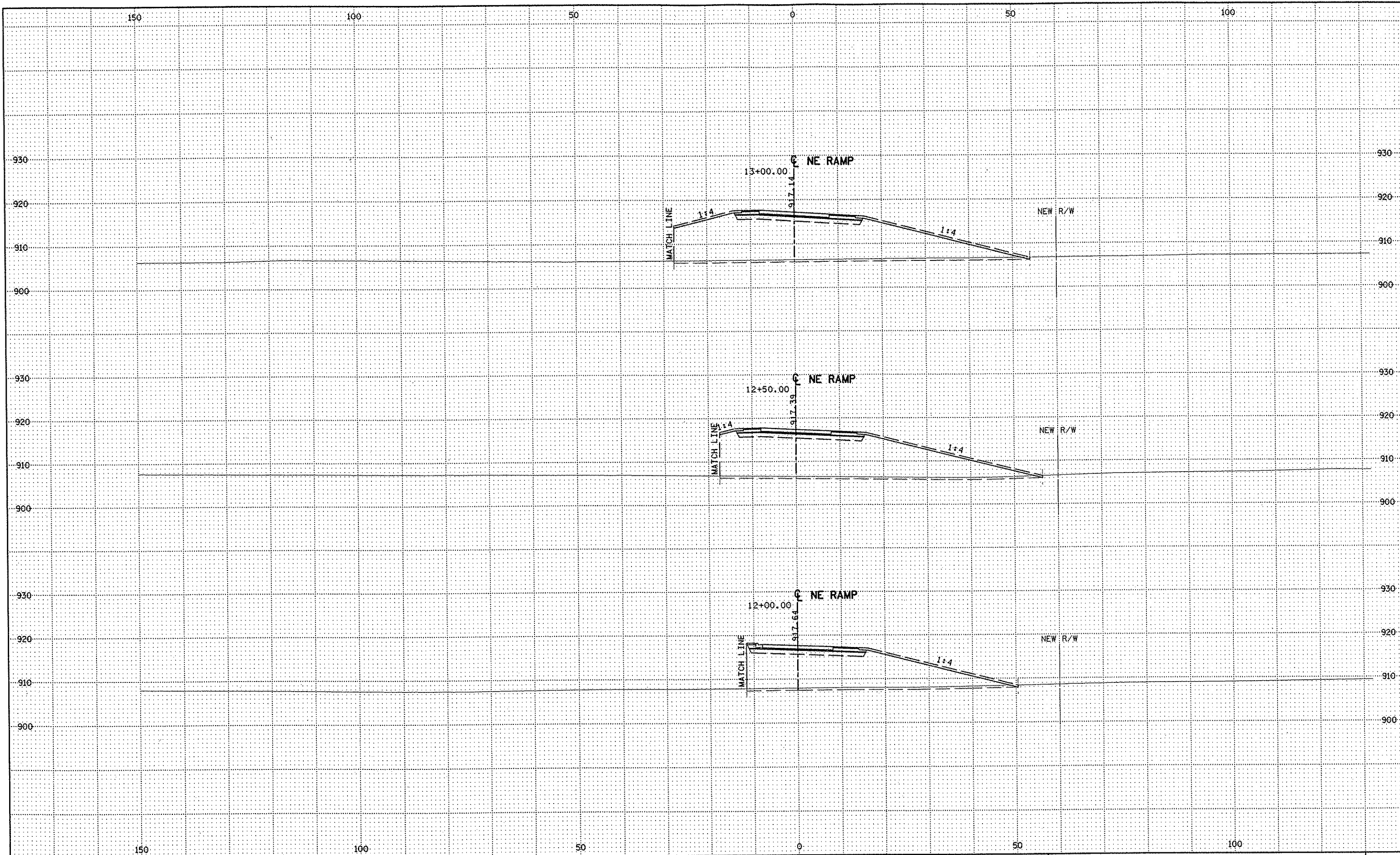
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NE RAMP STA. 10+50 TO STA. 11+50

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NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan5.dgn 11/20/01

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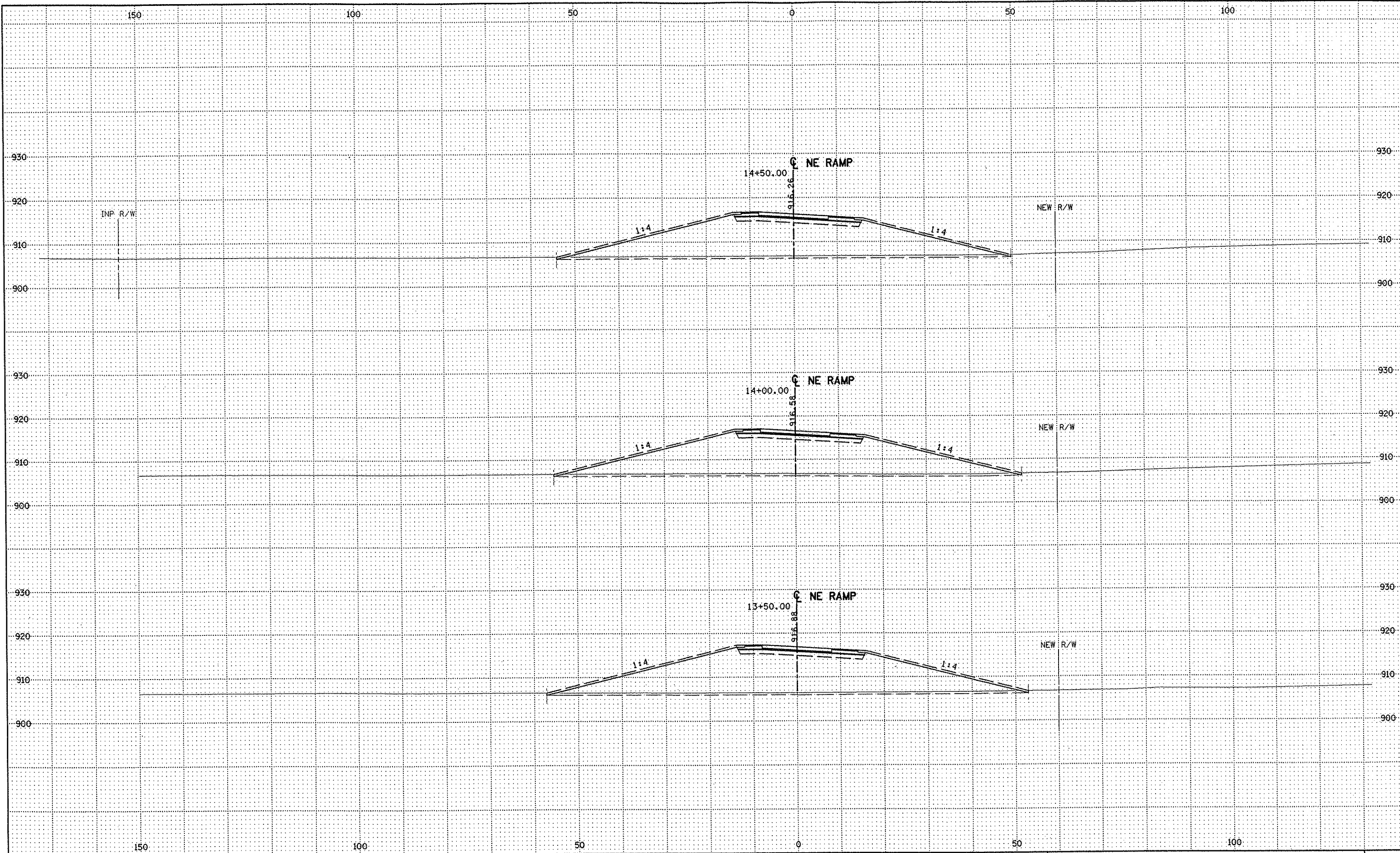
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NE RAMP STA. 12+00 TO STA. 13+00

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NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan5.dgn 11/20/01

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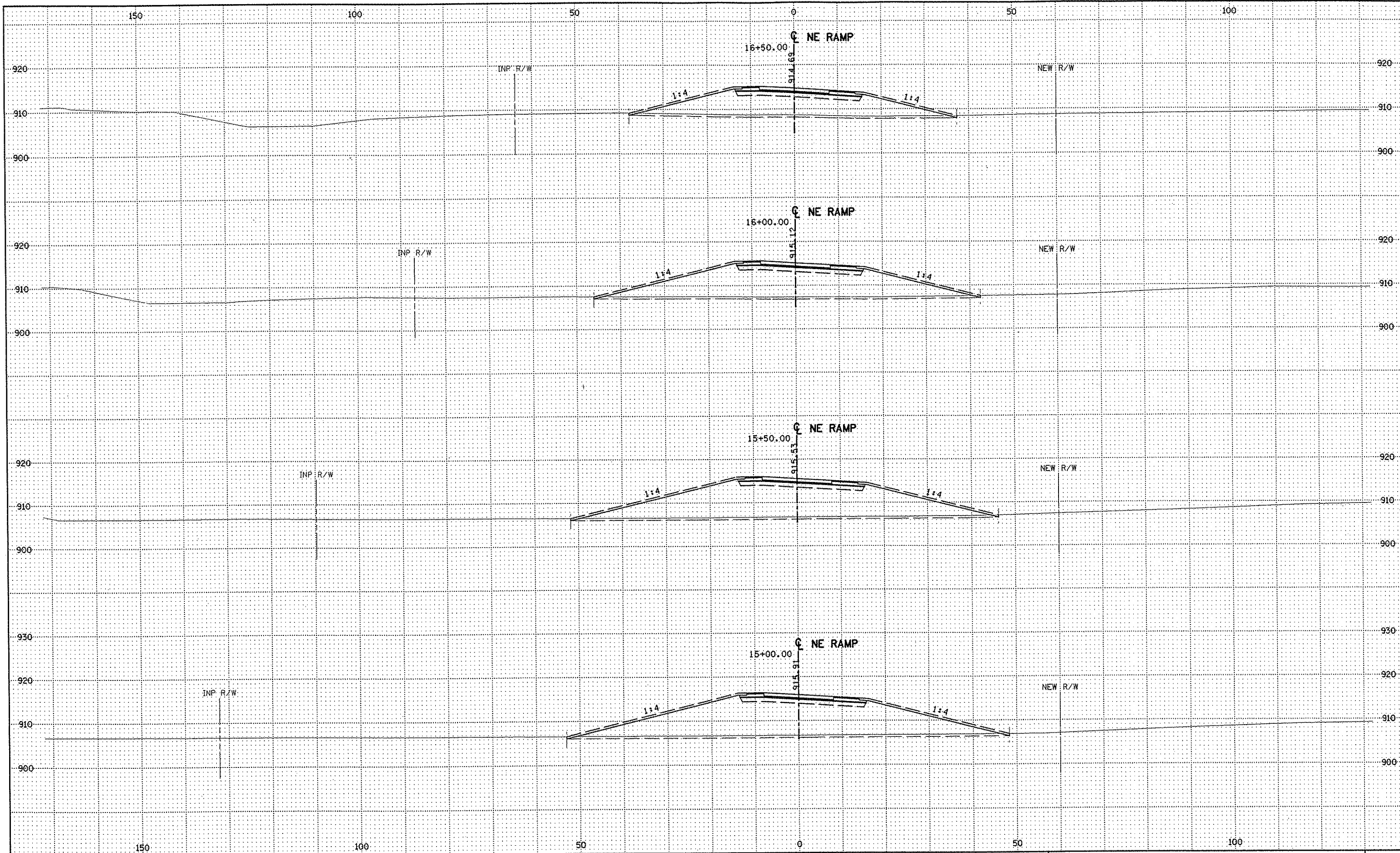
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NE RAMP STA. 13+50 TO STA. 14+50

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NO	DATE	BY	CKD	APPR	REVISION

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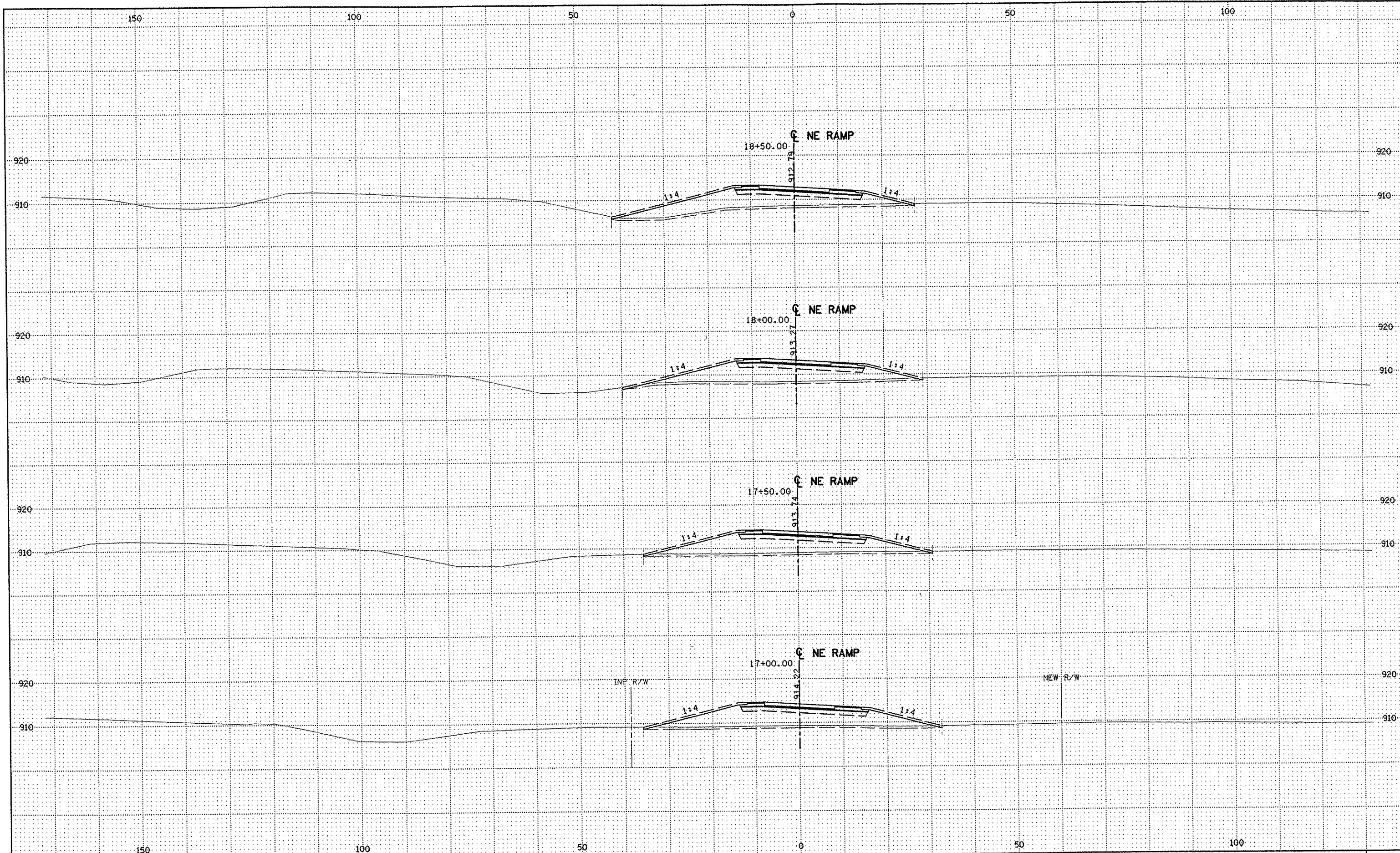
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NE RAMP STA. 15+00 TO STA. 16+50

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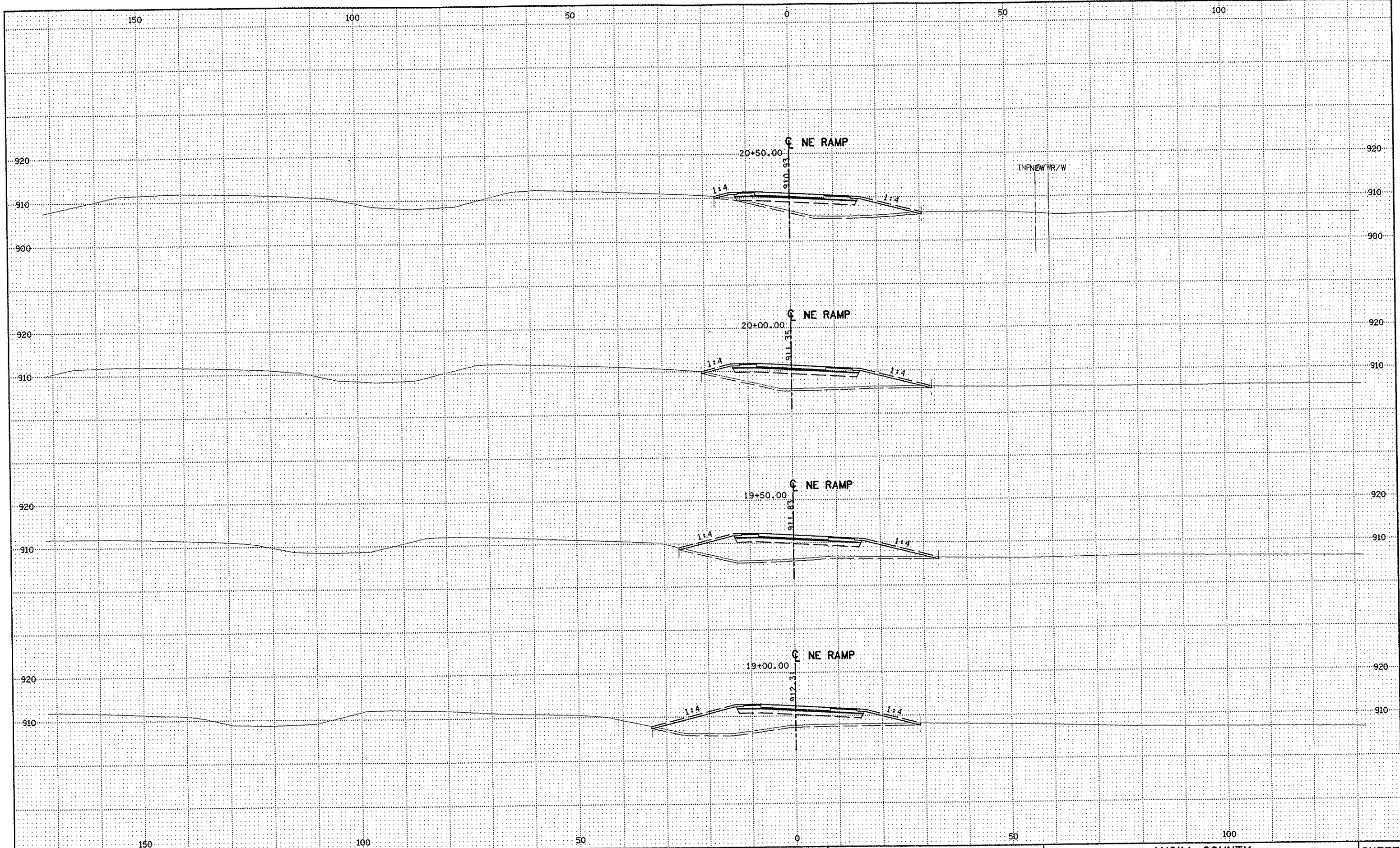
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
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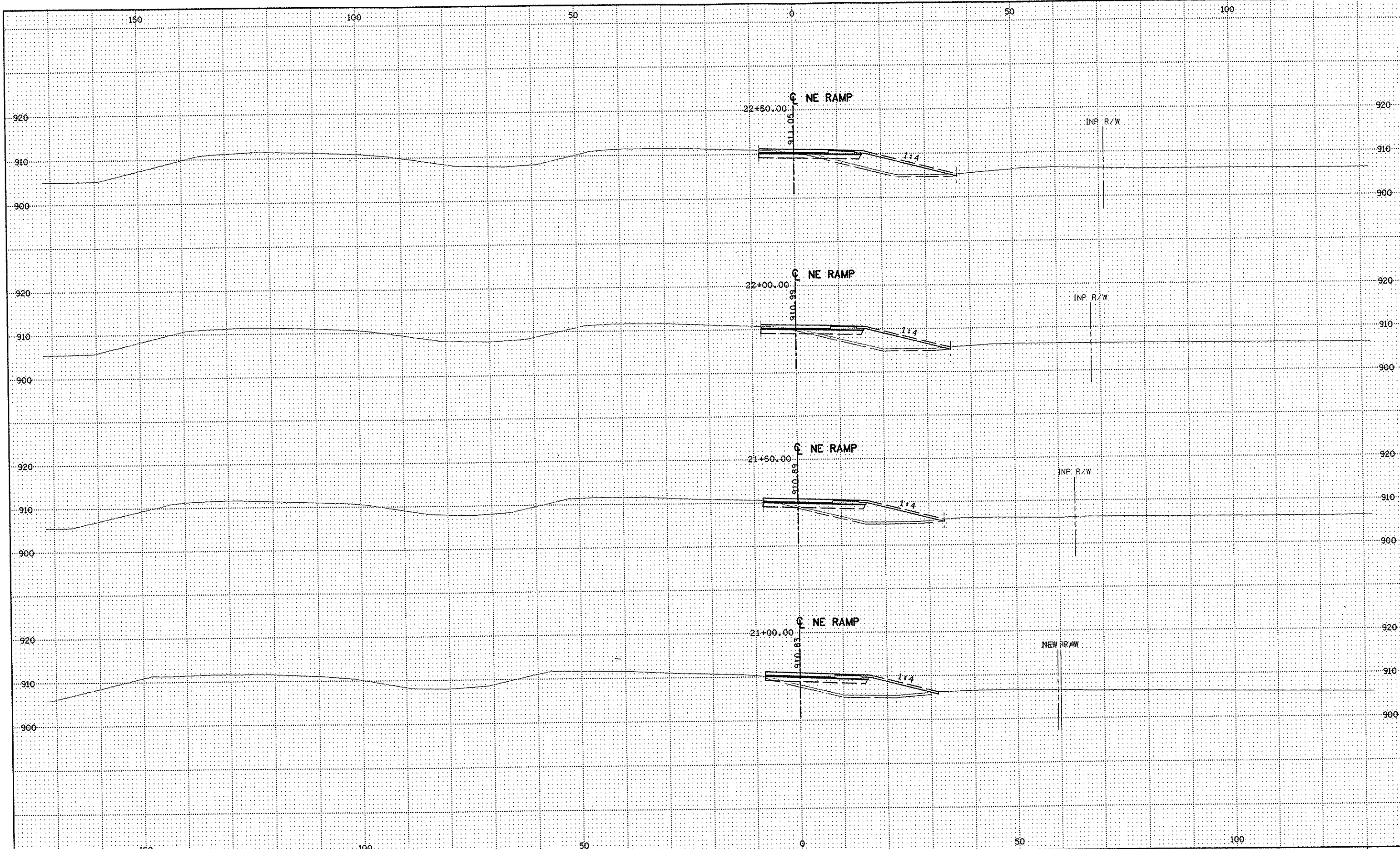
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ANOKA COUNTY
 CROSS SECTIONS
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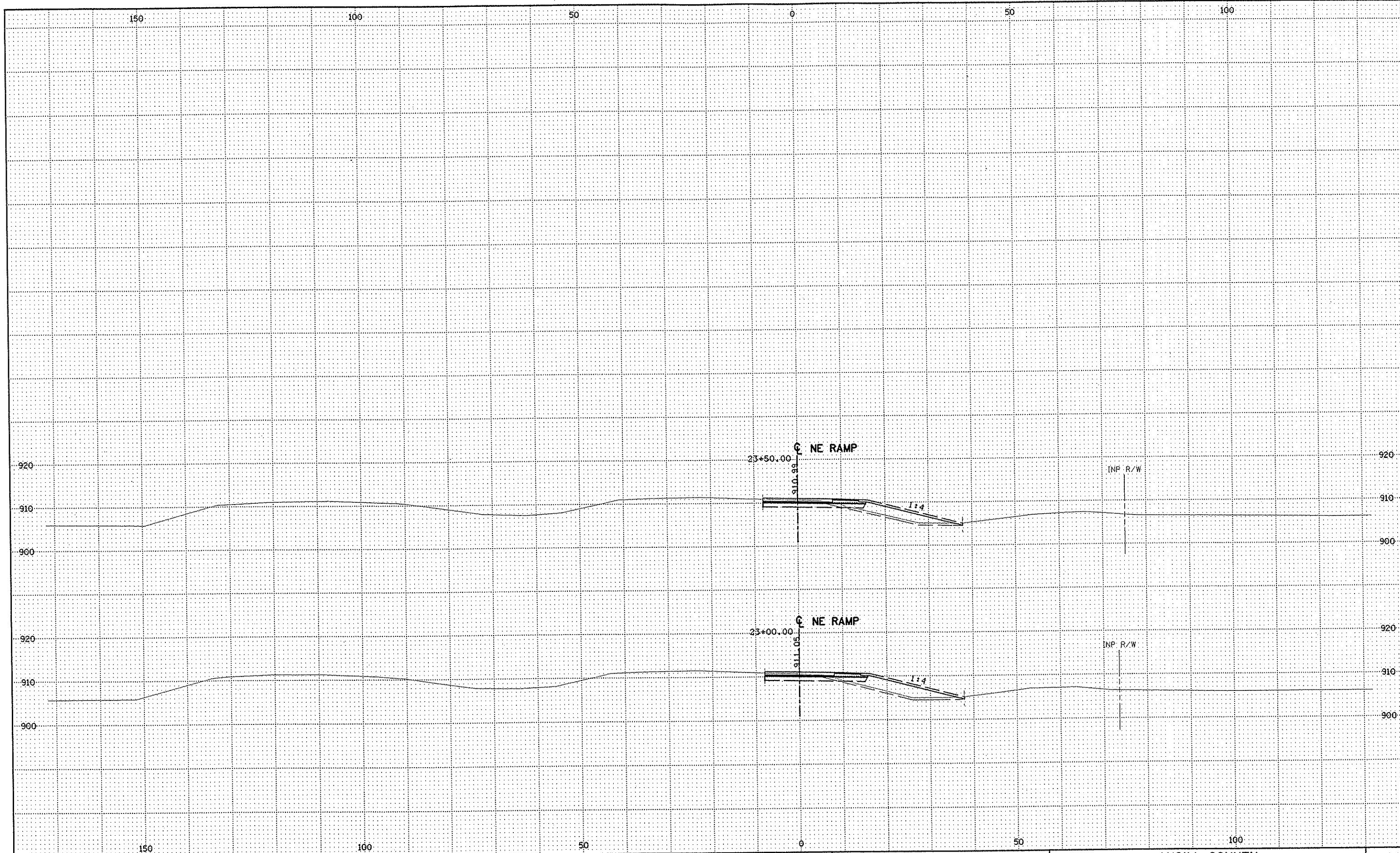
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
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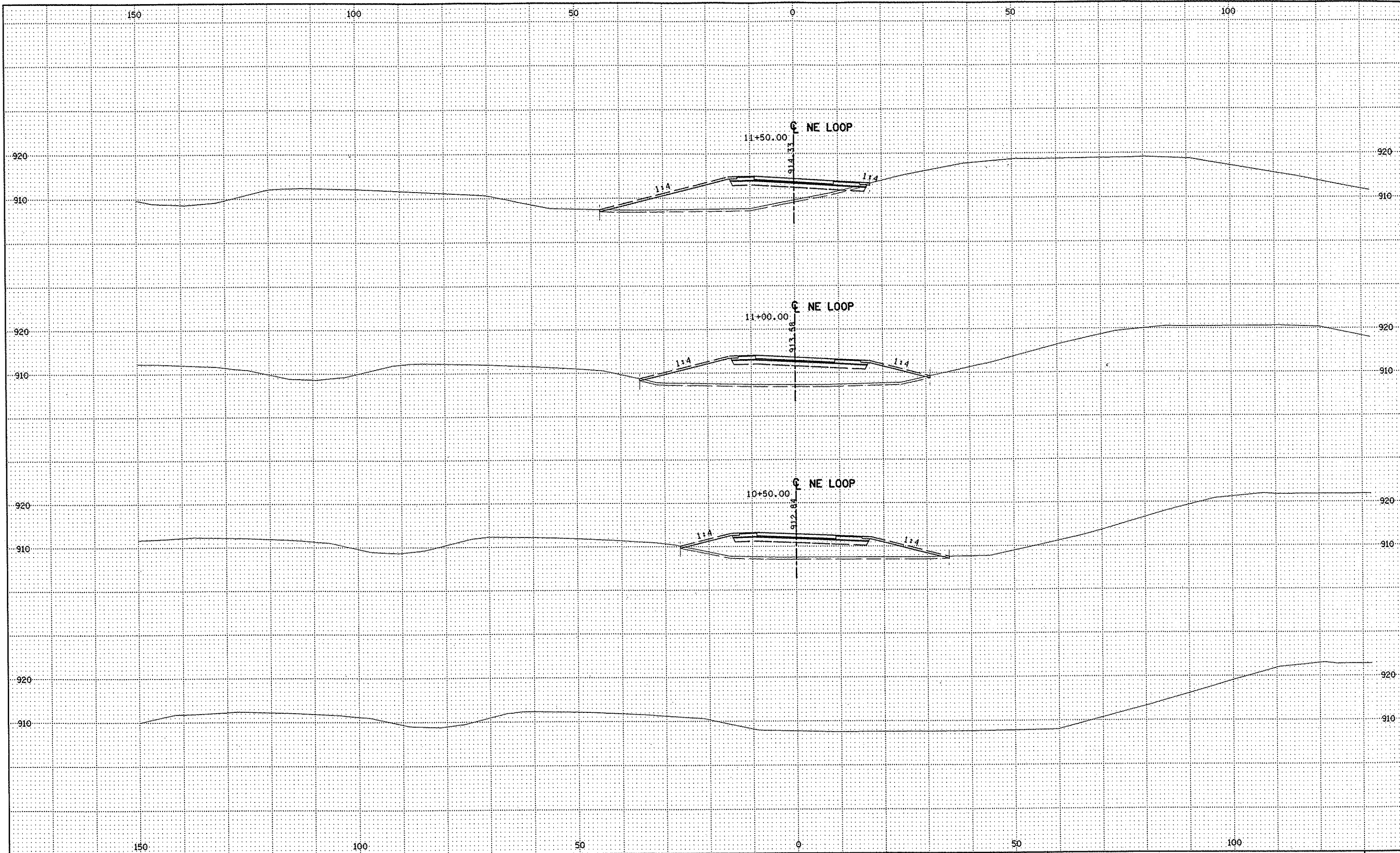
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
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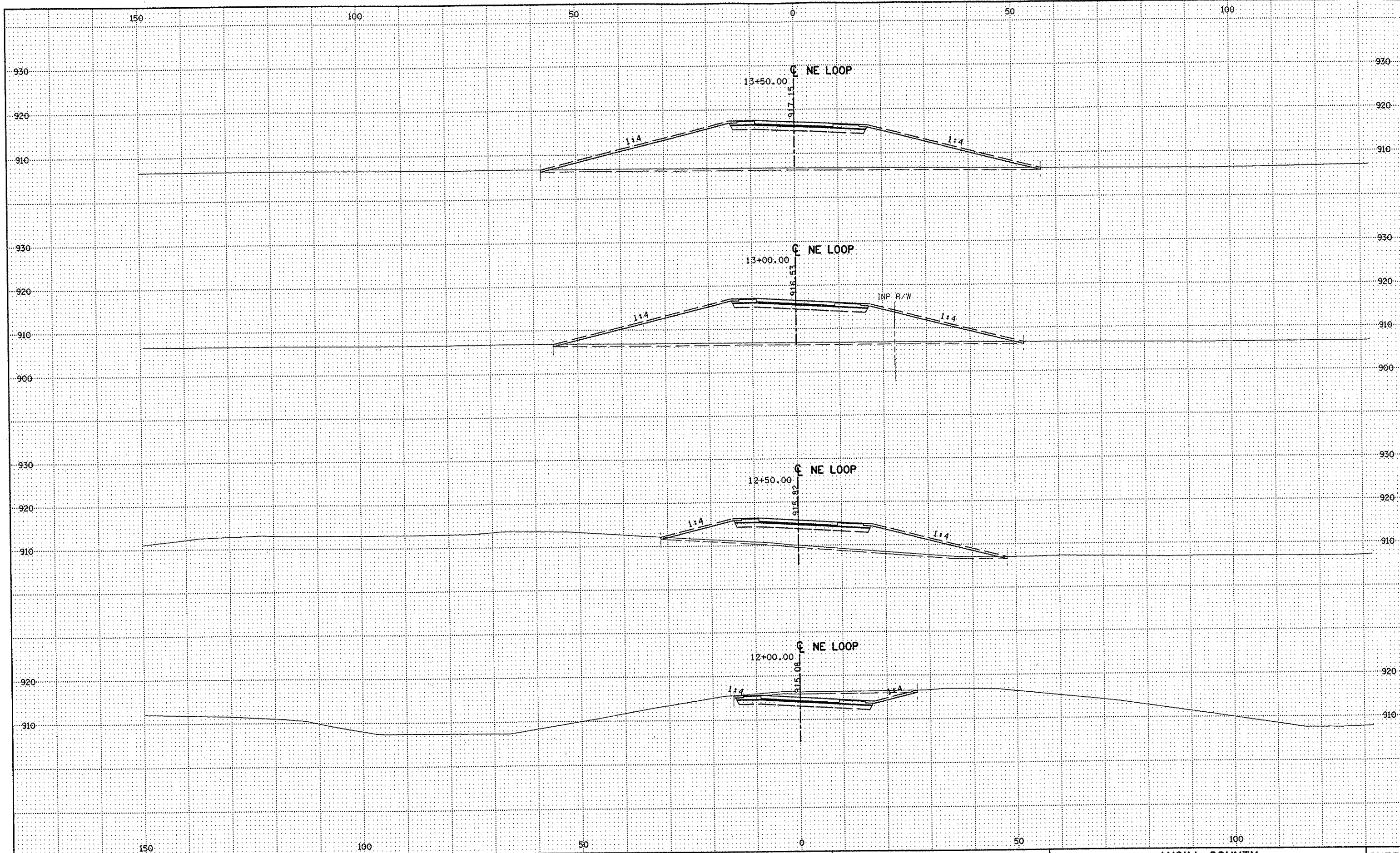
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S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NE LOOP STA. 10+50 TO STA. 11+50

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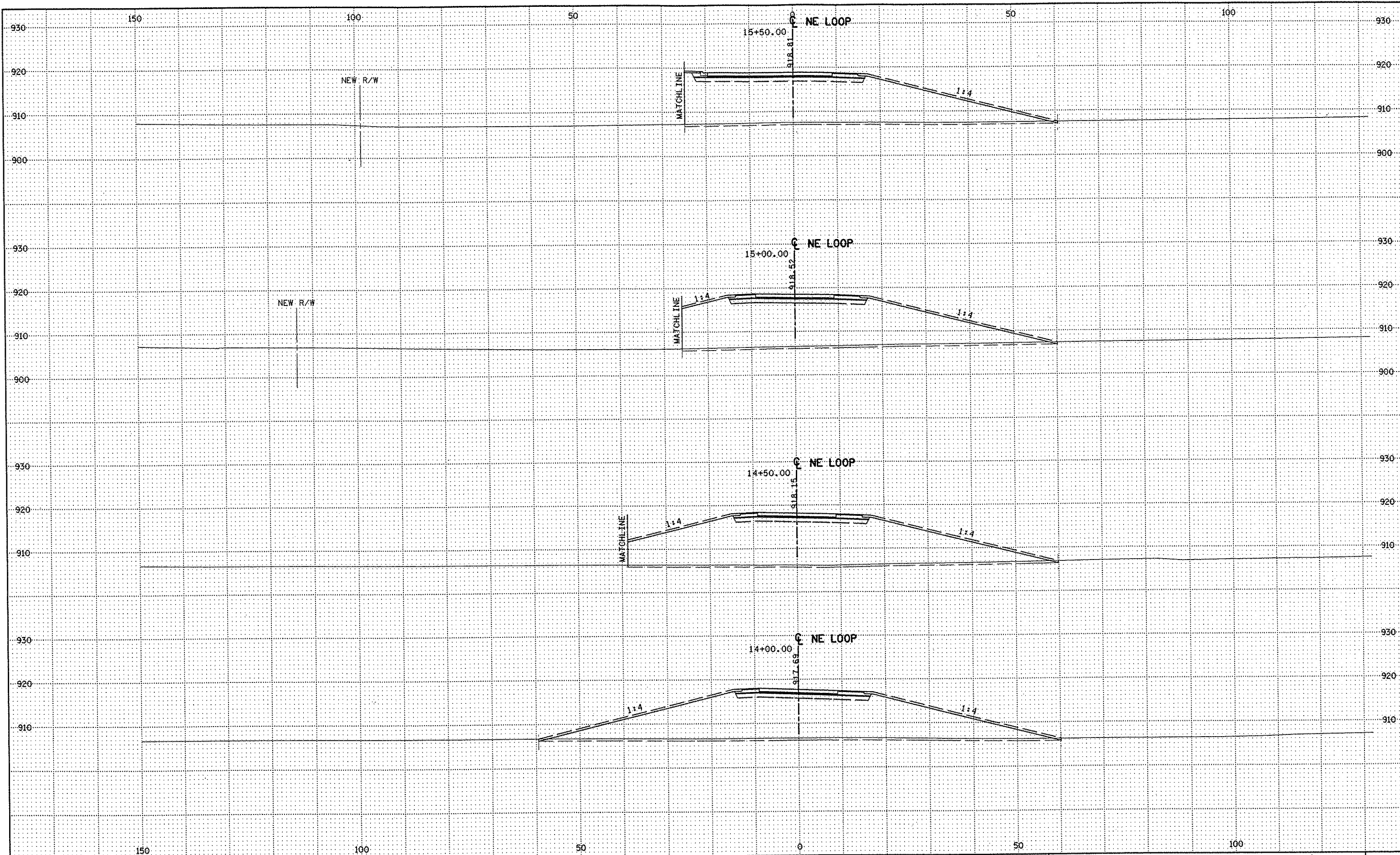
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CROSS SECTIONS
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NE LOOP STA. 12+00 TO STA. 13+50

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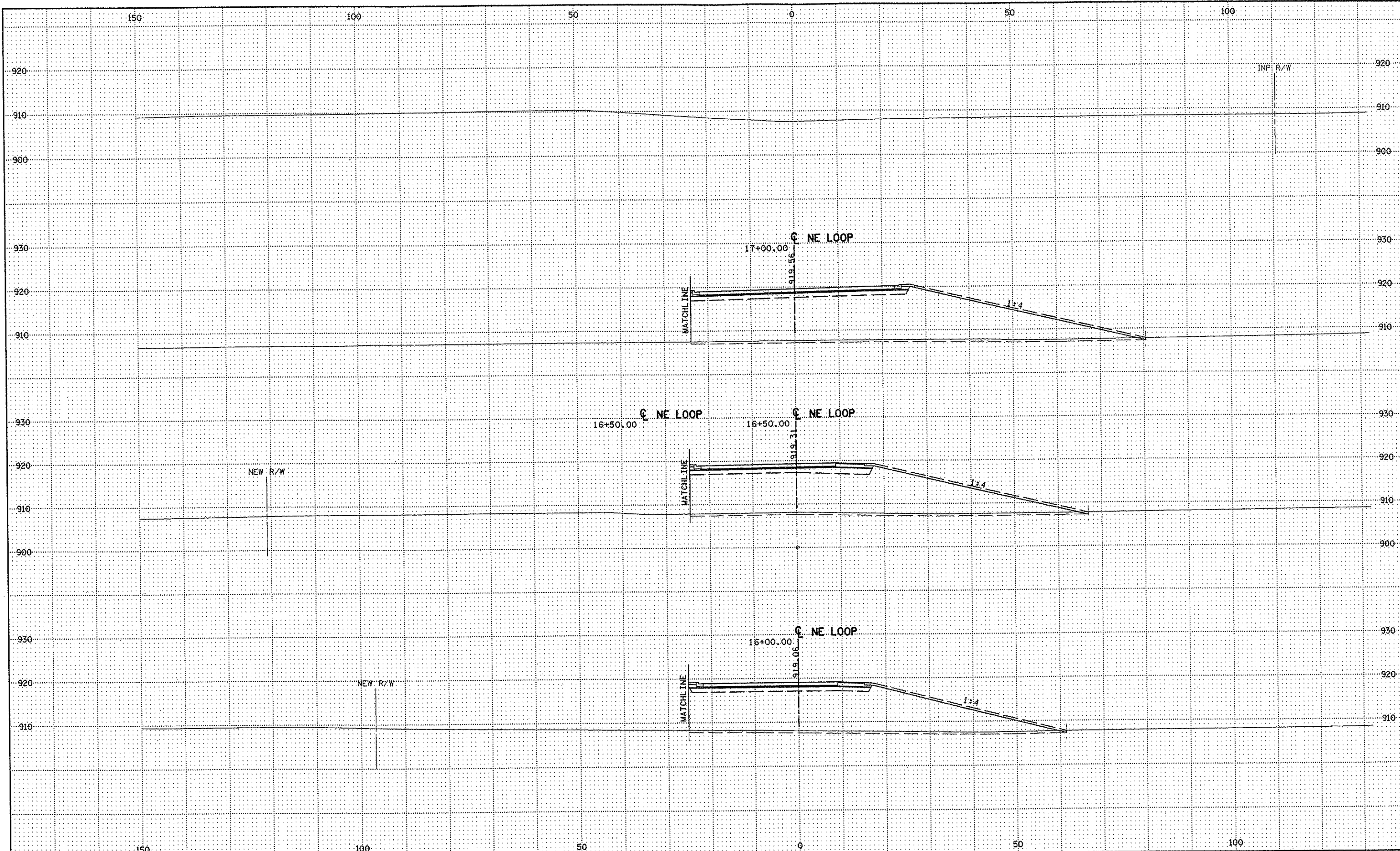
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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NE LOOP STA. 14+00 TO STA. 15+50

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NO	DATE	BY	CKD	APPR	REVISION

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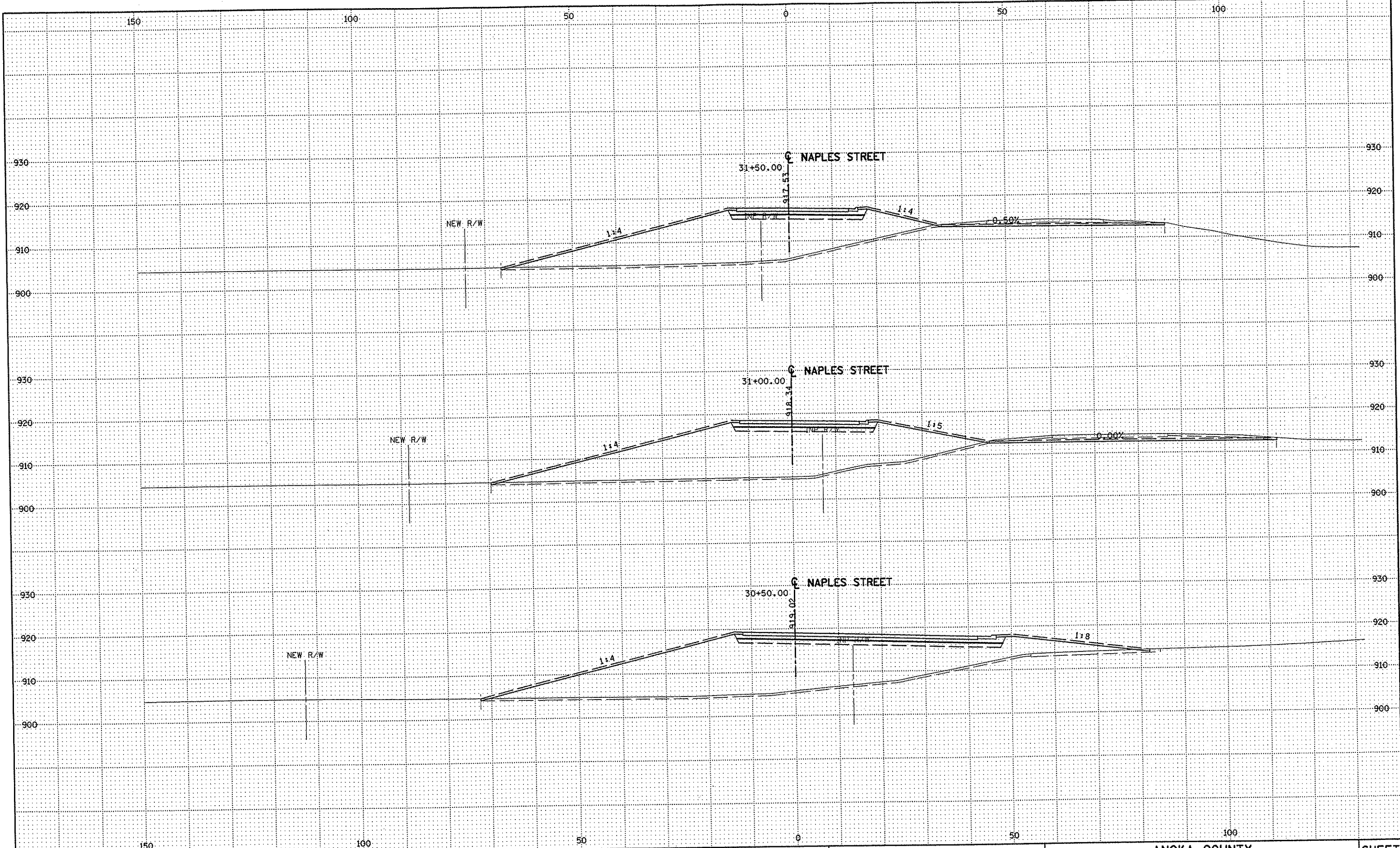
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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NE LOOP STA. 16+00 TO STA. 17+00

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NO	DATE	BY	CKD	APPR	REVISION

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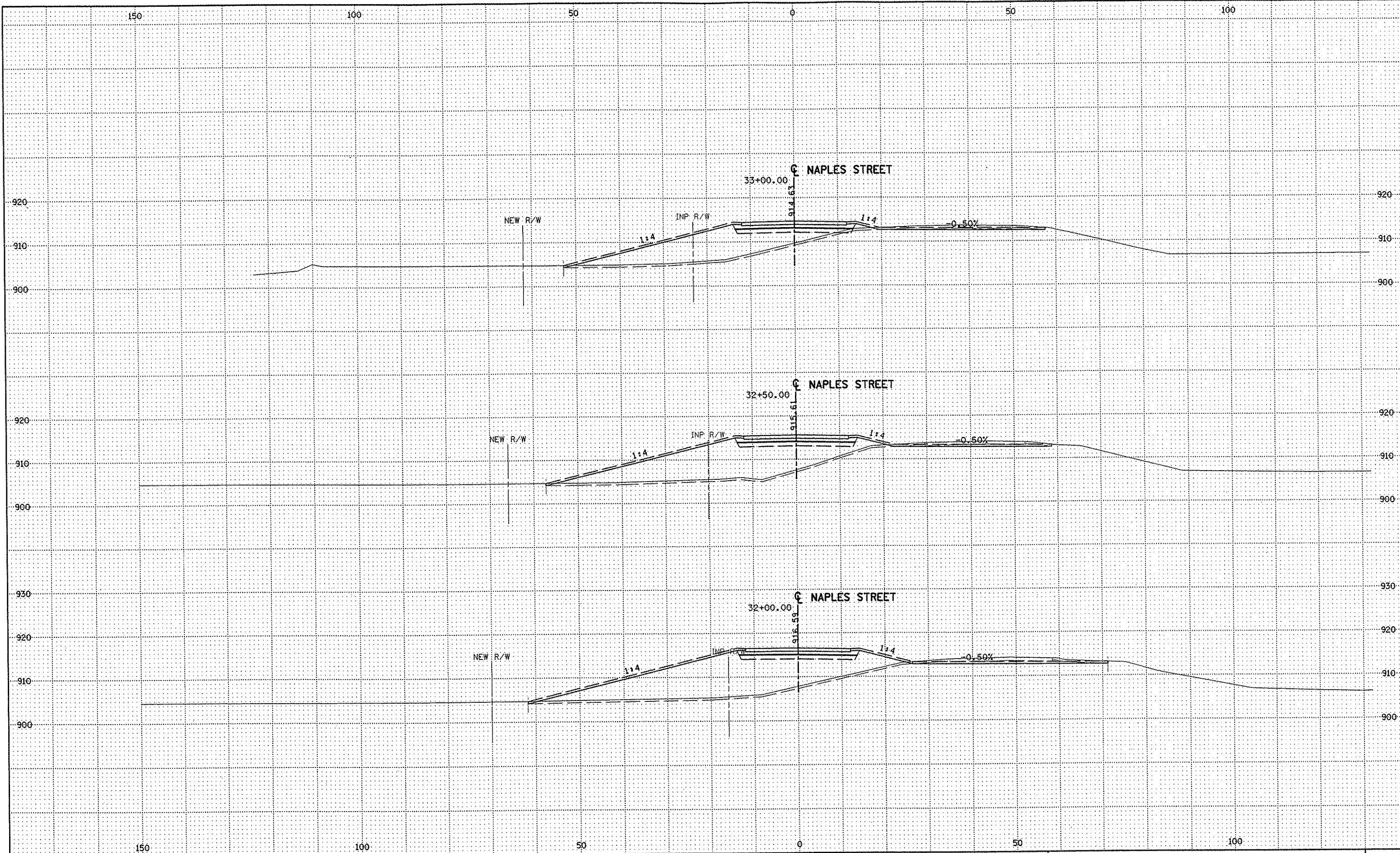
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NAPLES STREET STA. 30+50 TO STA. 31+50

SHEET
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 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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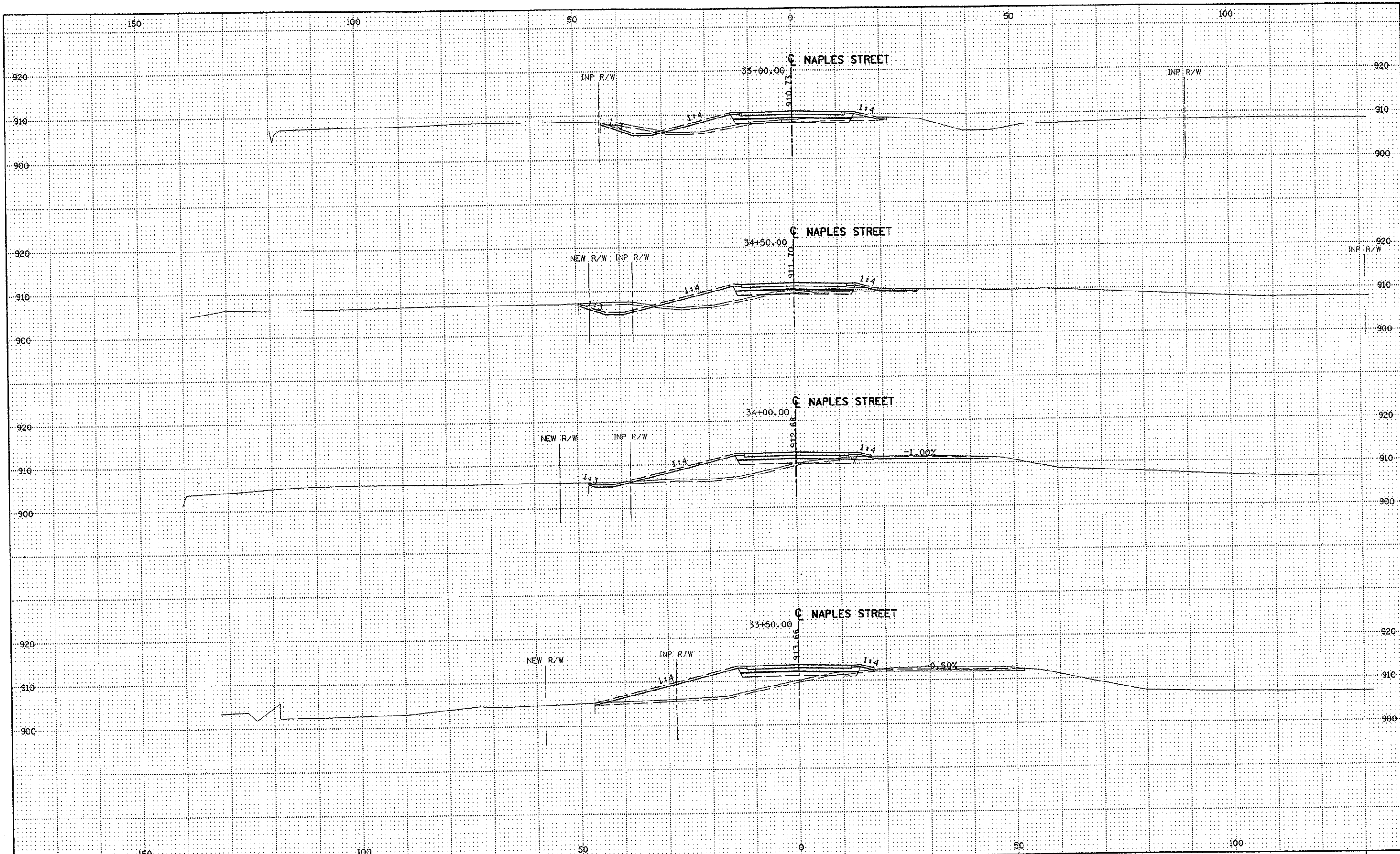
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 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NAPLES STREET STA. 32+00 TO STA. 33+00

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 559



NO	DATE	BY	CKD	APPR	REVISION

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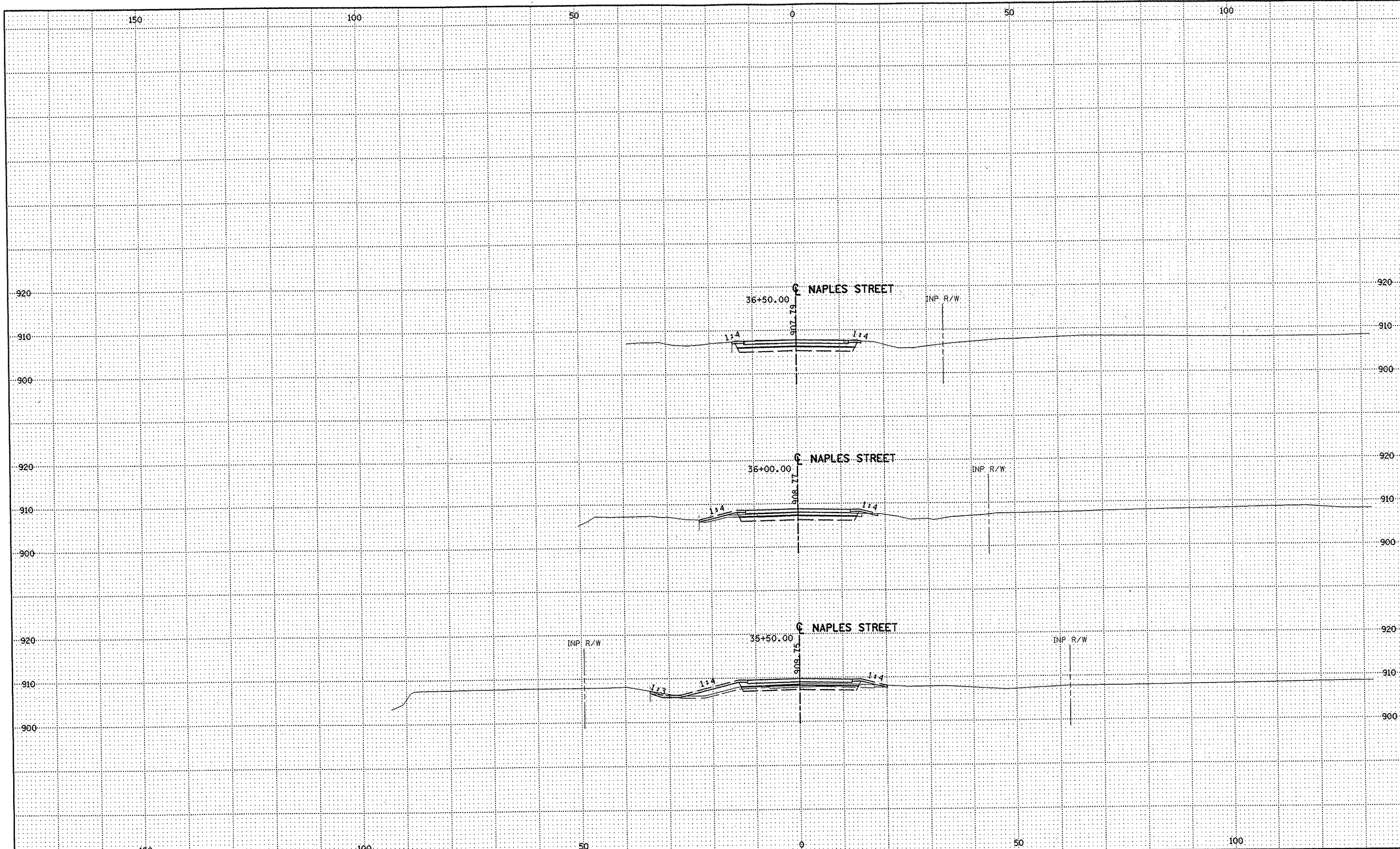
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CHECKED BY	JMW	DATE	9-24-01

S.P.	0280-50 (TH 35W)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES STREET STA. 33+50 TO STA. 35+00

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NO	DATE	BY	CKD	APPR	REVISION

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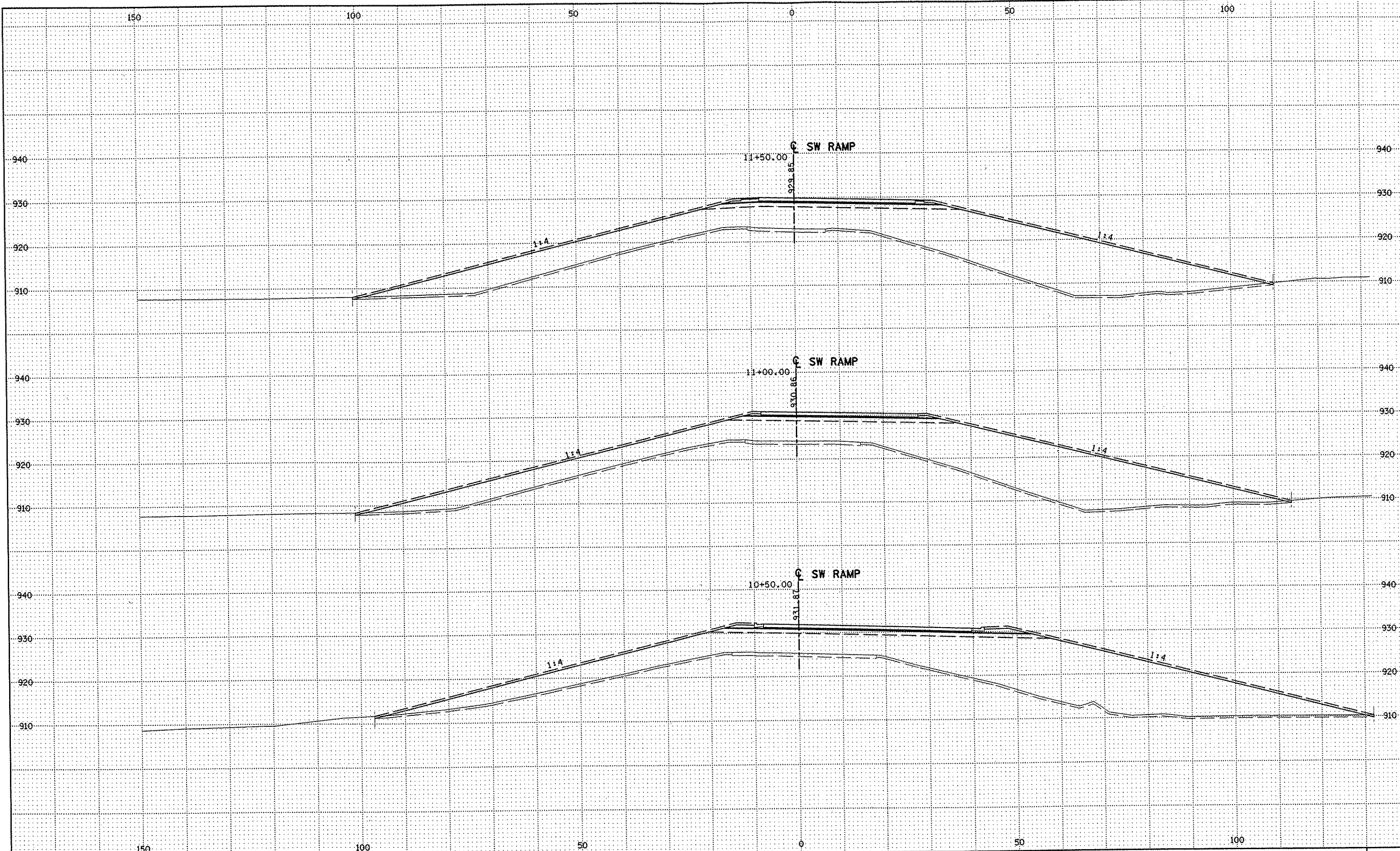
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES STREET STA. 35+50 TO STA. 36+50

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NO	DATE	BY	CKD	APPR	REVISION

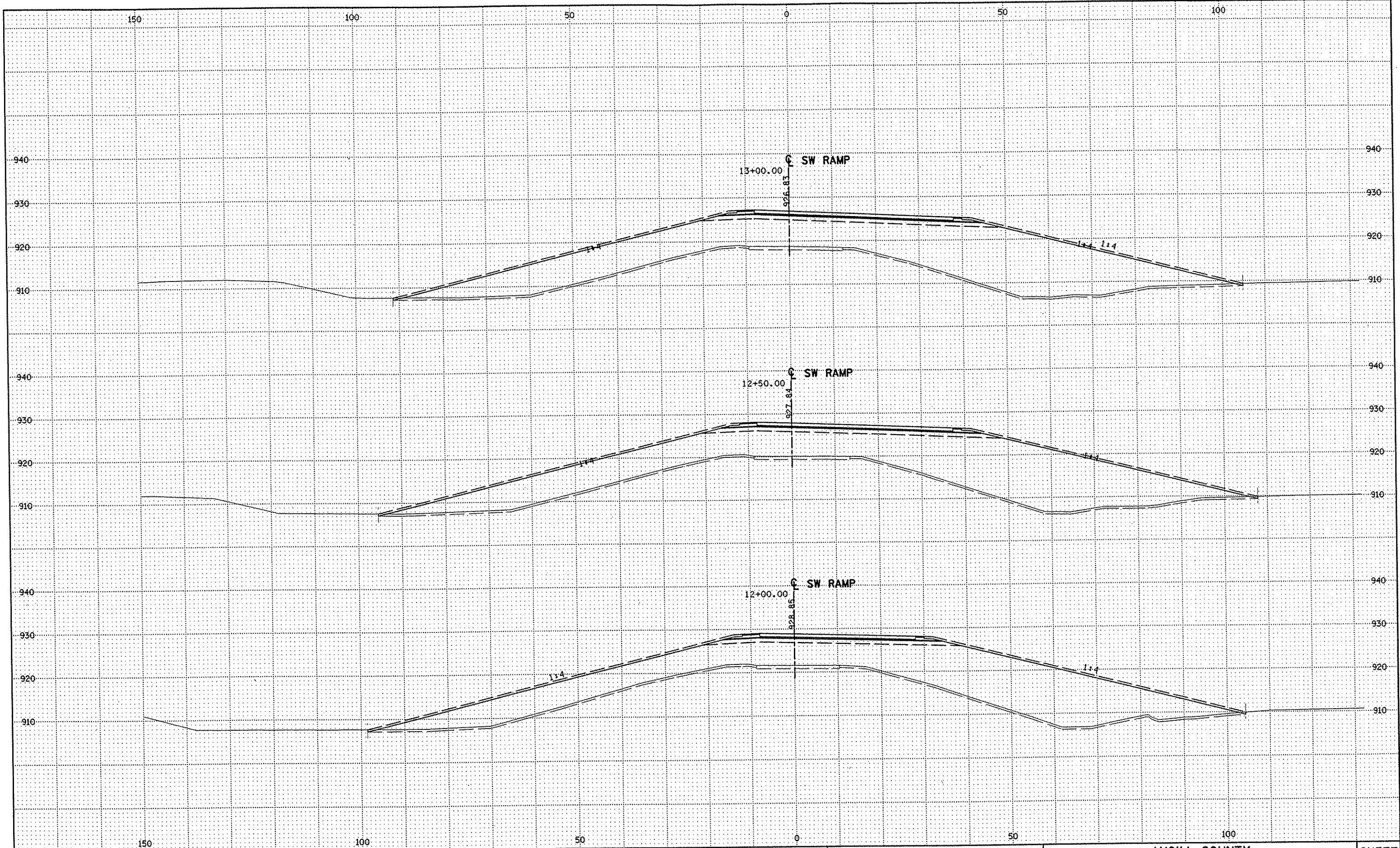
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 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 10+50 TO STA. 11+50

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NO	DATE	BY	CKD	APPR	REVISION

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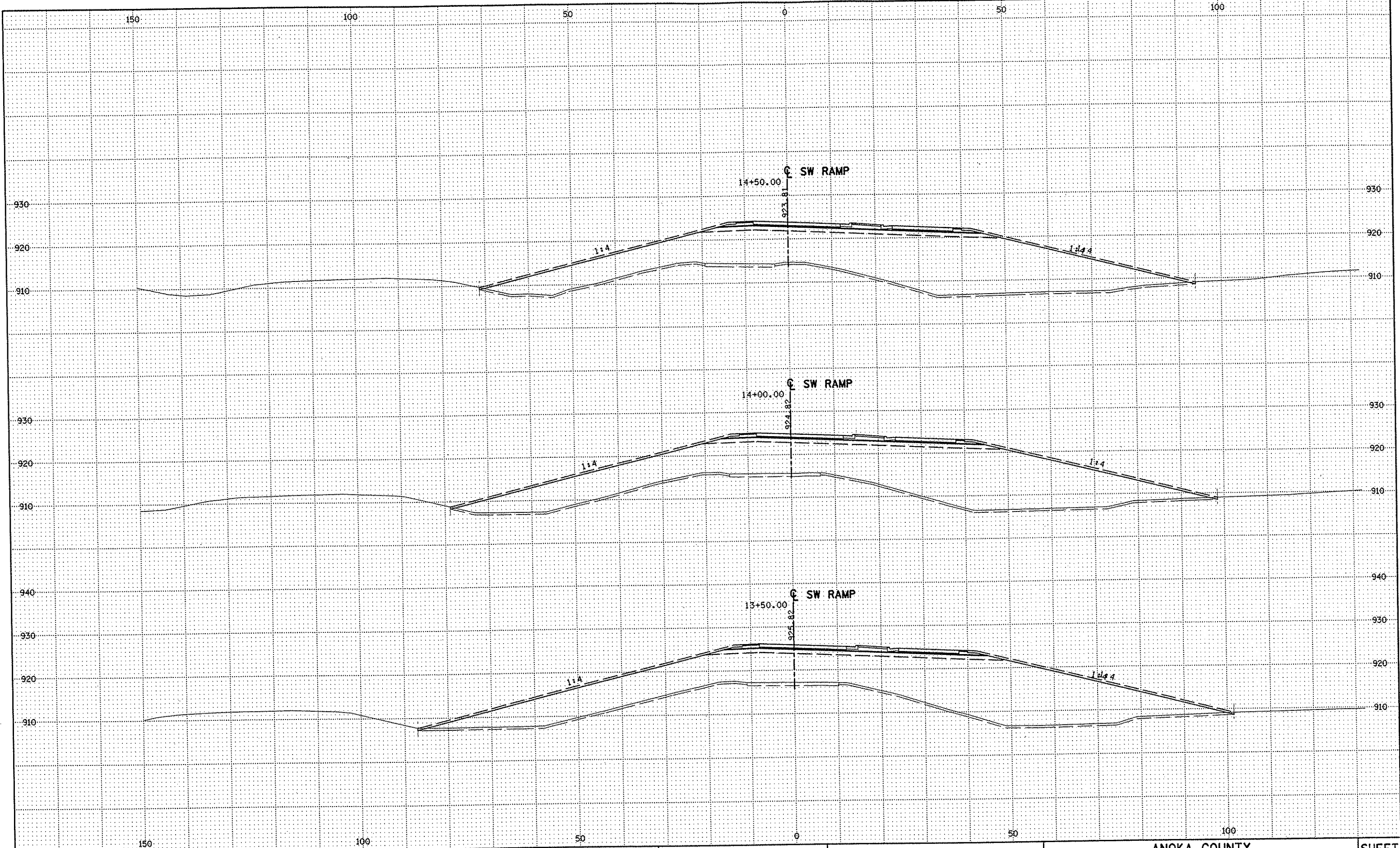
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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 TOLTZ, KING, DUVALL, ANDERSON
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 12+00 TO STA. 13+00

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NO	DATE	BY	CKD	APPR	REVISION

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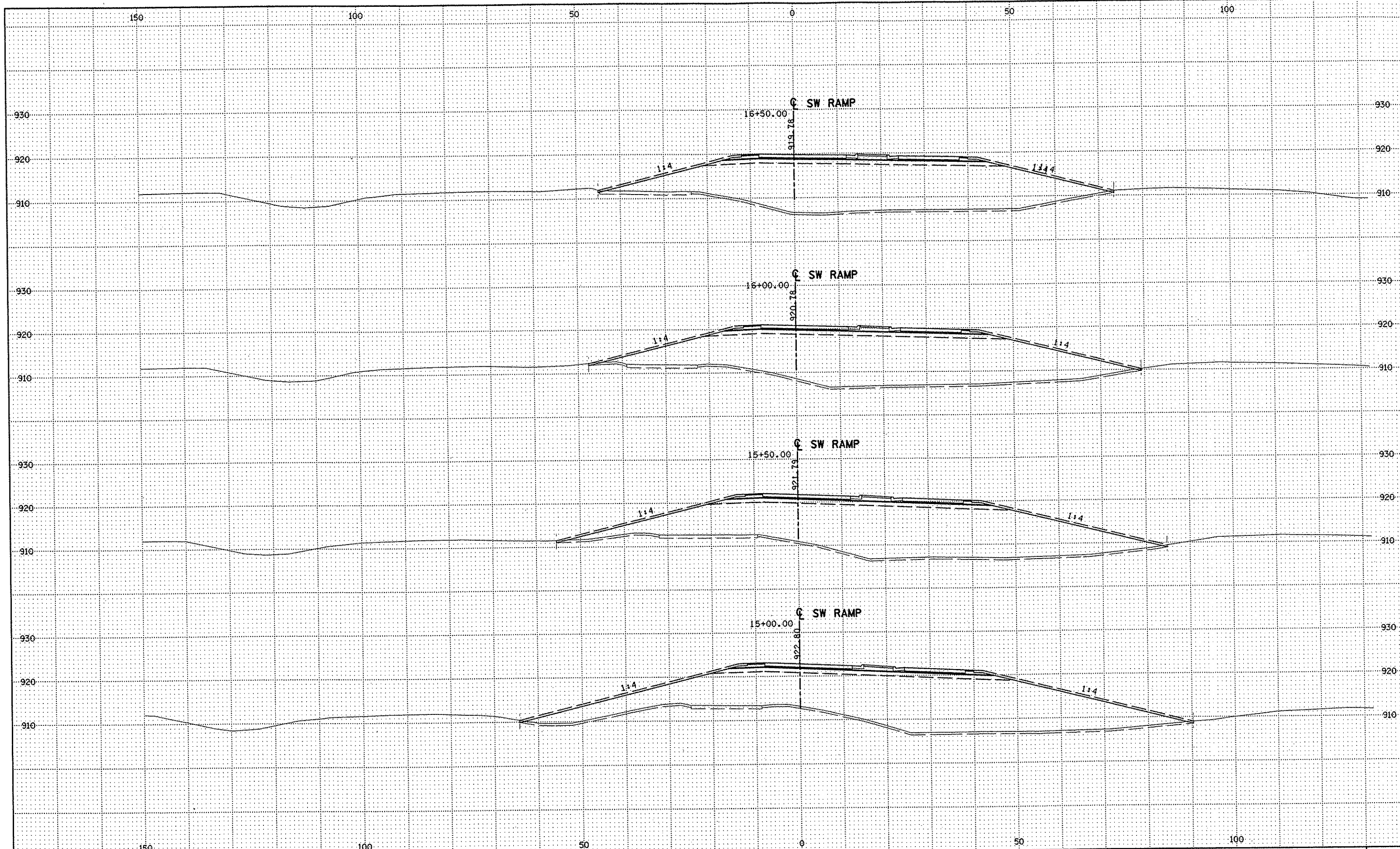
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 13+50 TO STA. 14+50

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\xsec\xsplan7.dgn 11/20/01

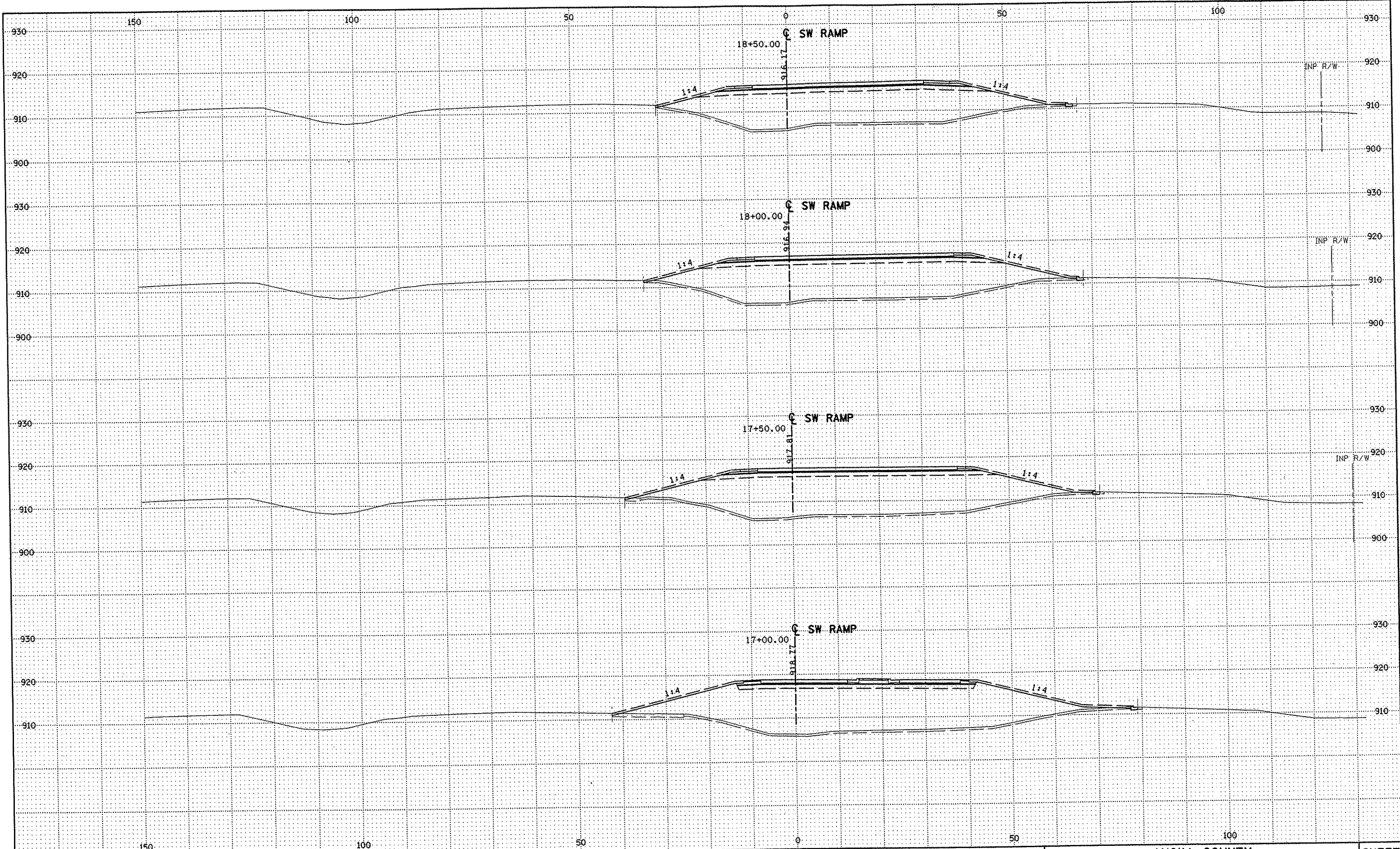
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 15+00 TO STA. 16+50

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan7.dgn 11/20/01

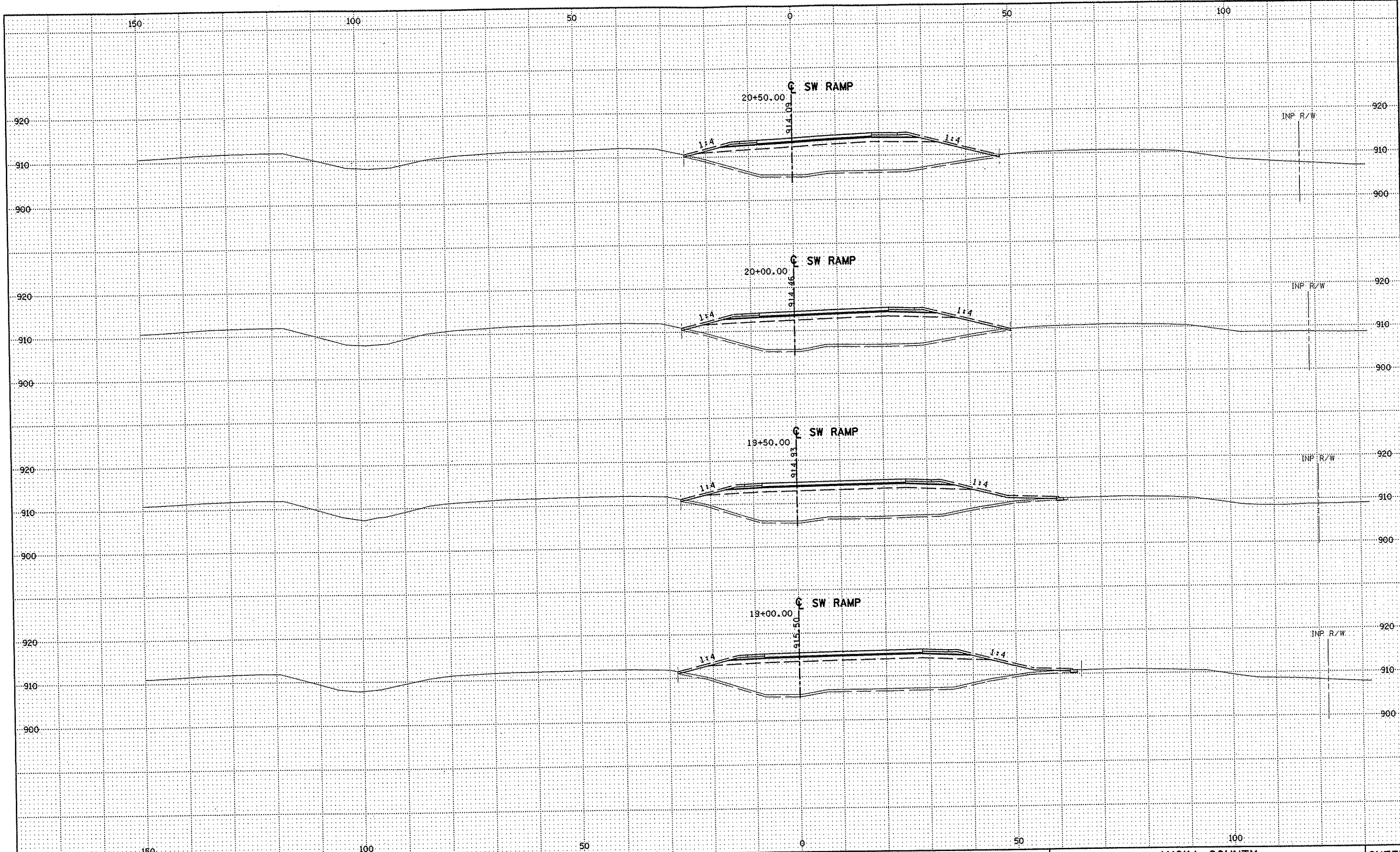
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S.P. 0280-50 (TH 35W)
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 17+00 TO STA. 18+50

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 OF
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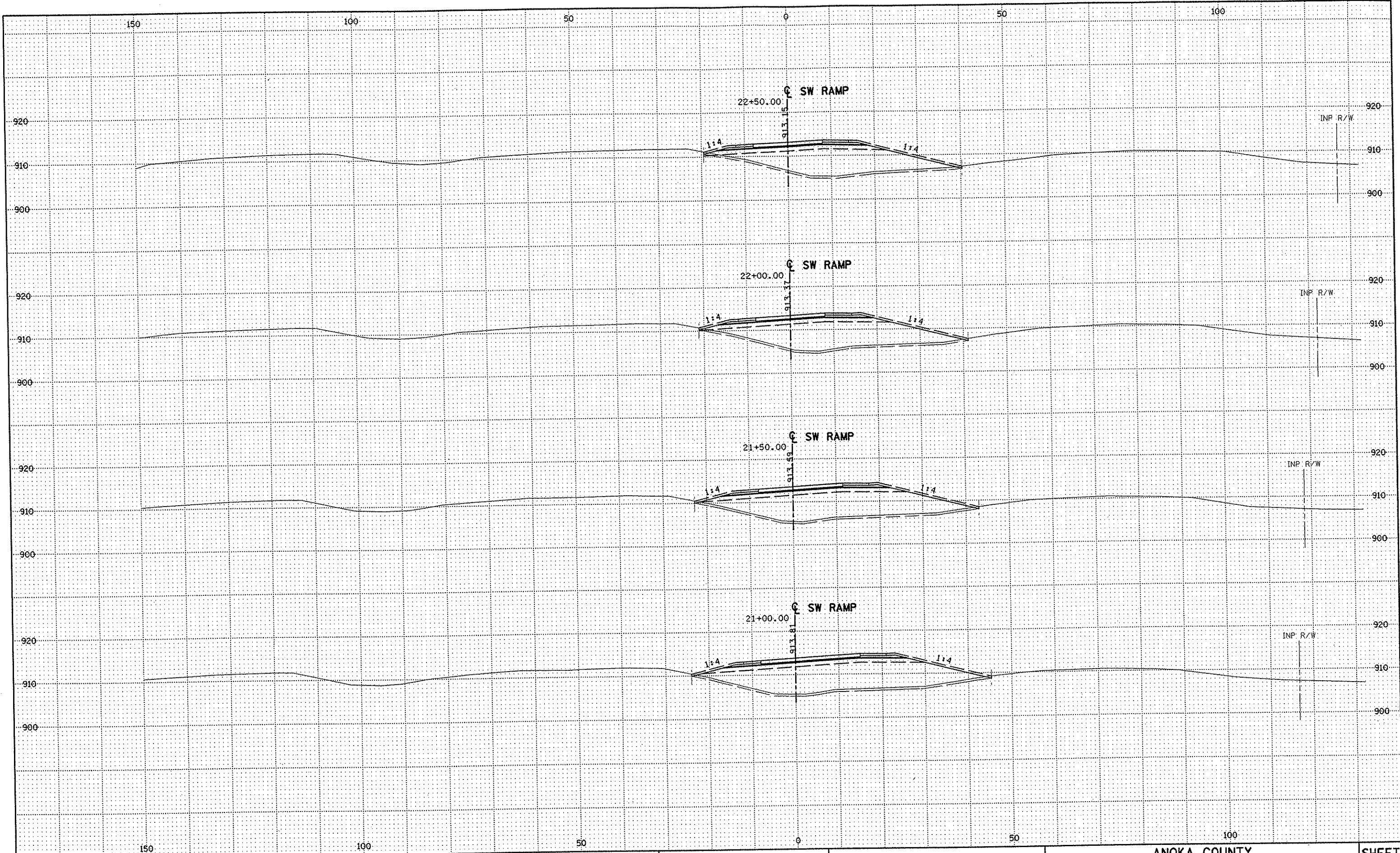
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S.P. 0280-50 (TH 35W)
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 S.A.P. 02-652-04
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 19+00 TO STA. 20+50

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan7.dgn 11/20/01

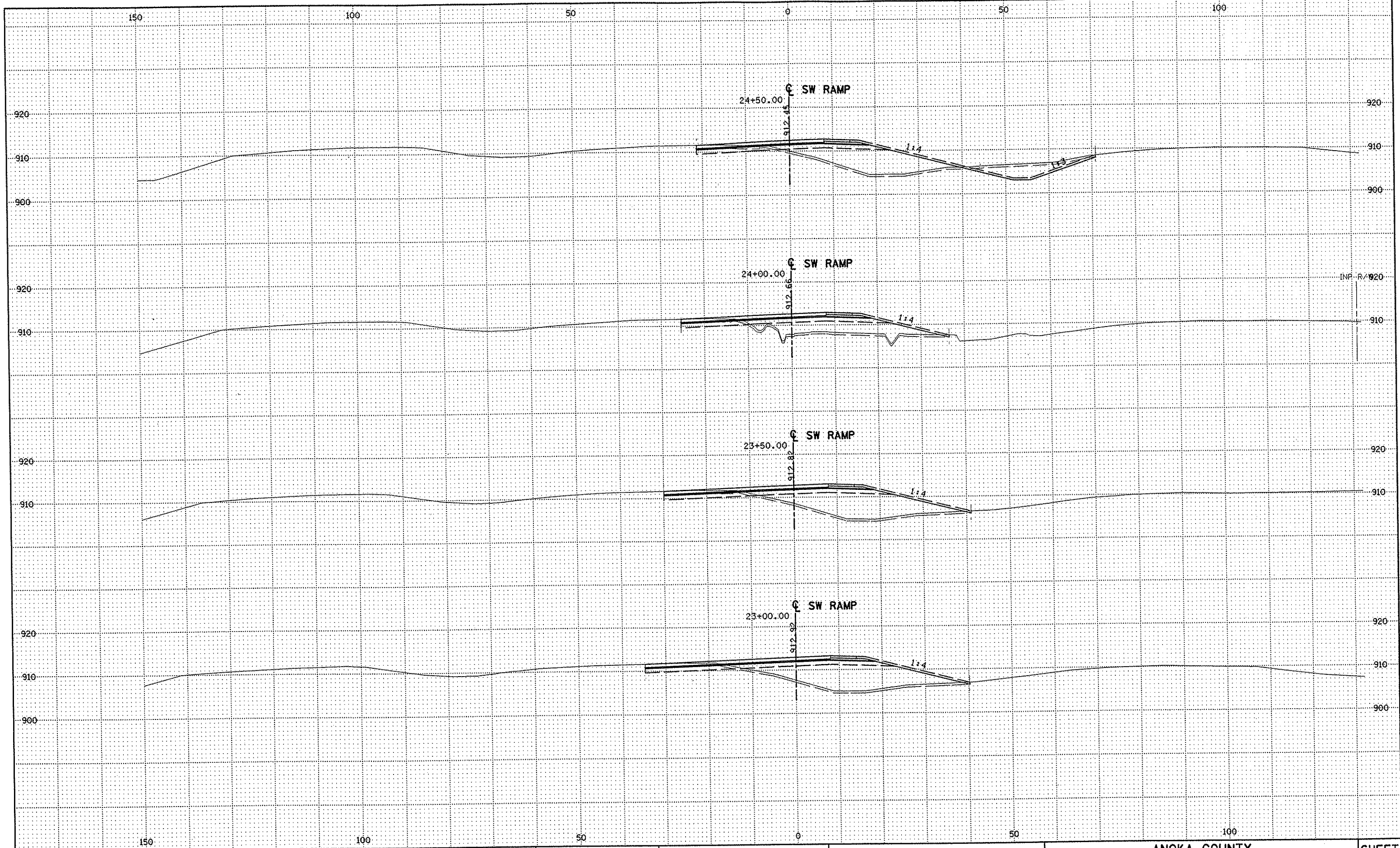
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S.P.	0280-50 (TH 35W)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 21+00 TO STA. 22+50

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan7.dgn 11/20/01

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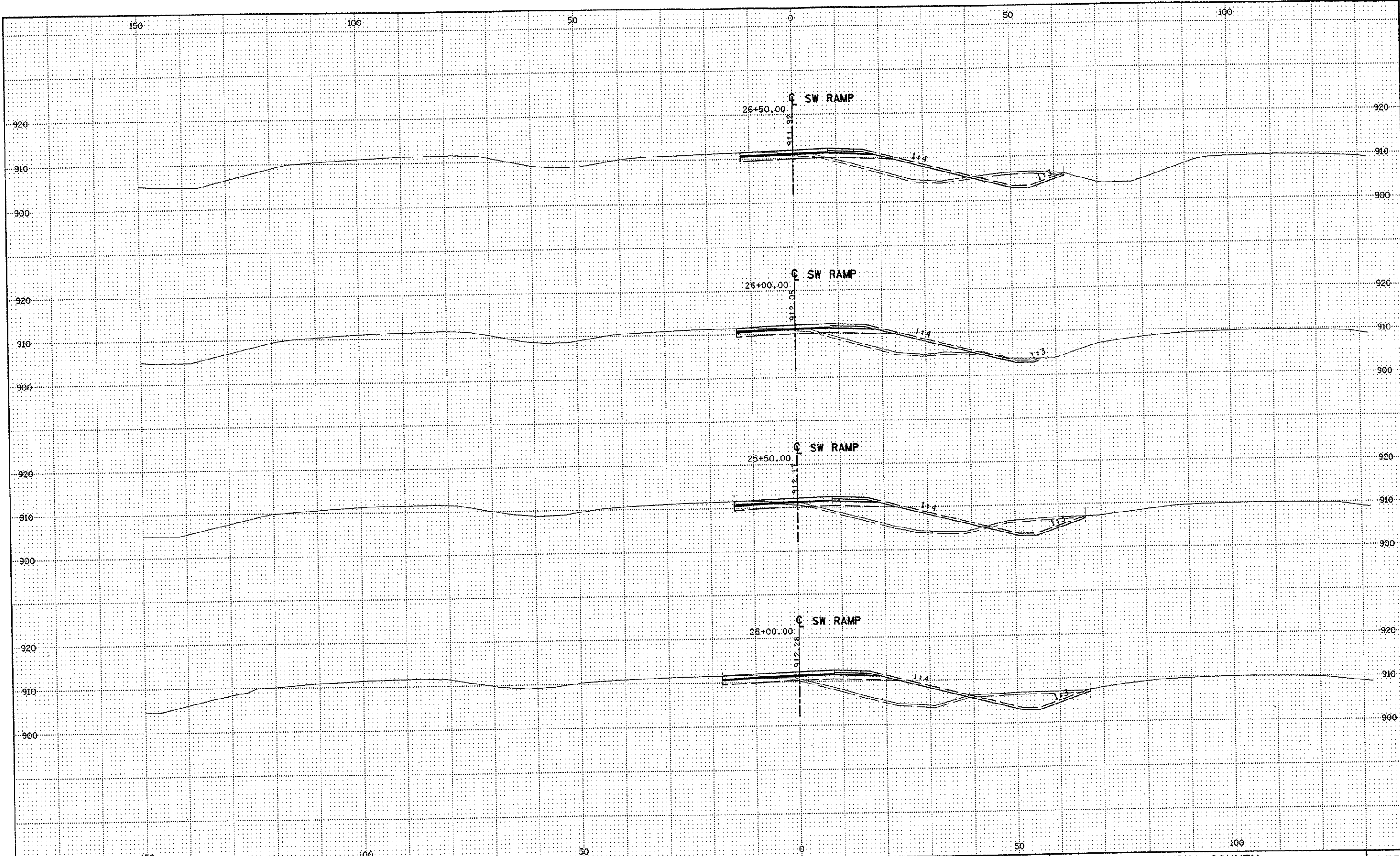
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 23+00 TO STA. 24+50

SHEET
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 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\xsec\xsplan7.dgn 11/20/01

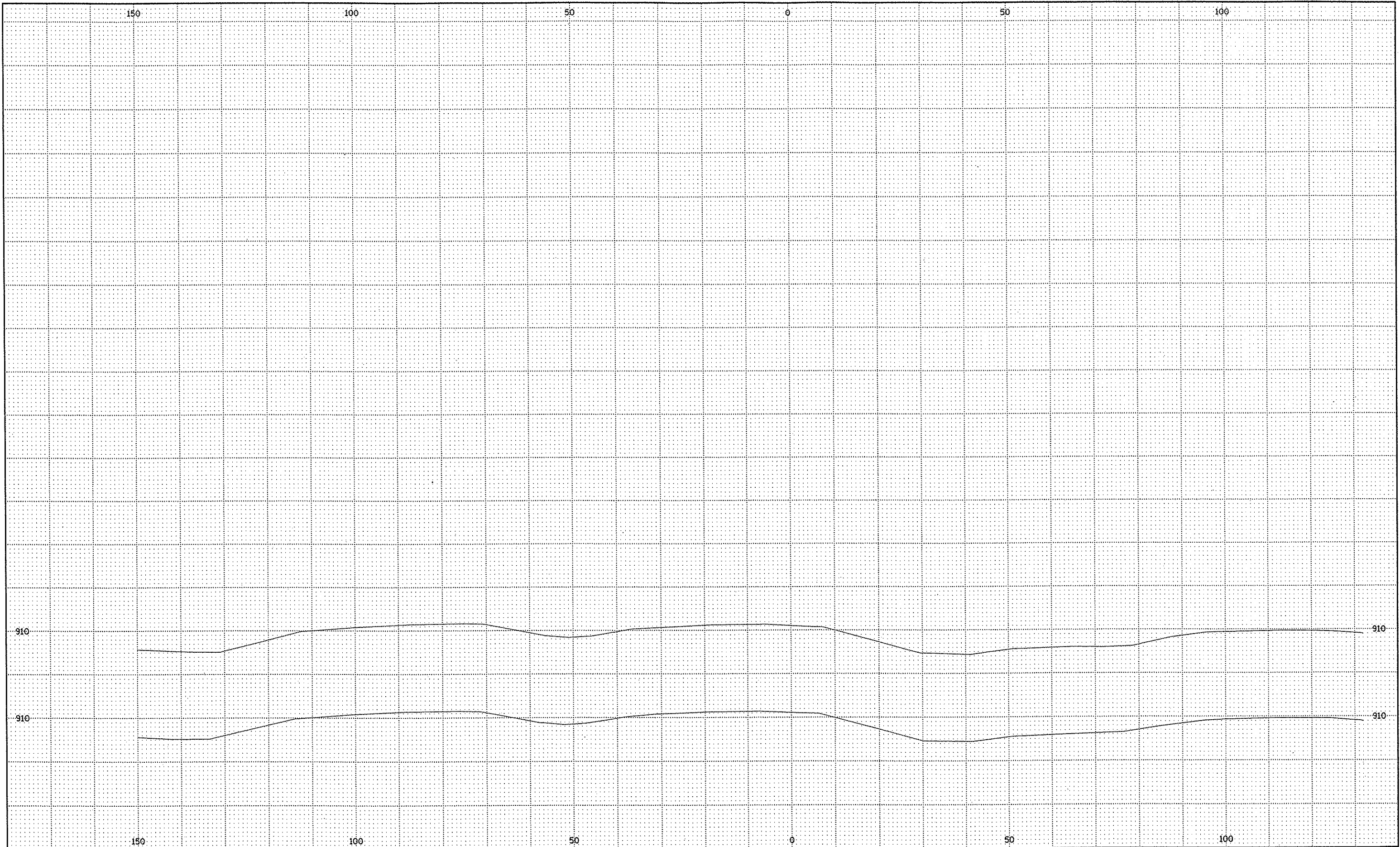
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 25+00 TO STA. 26+50

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NO	DATE	BY	CKD	APPR	REVISION

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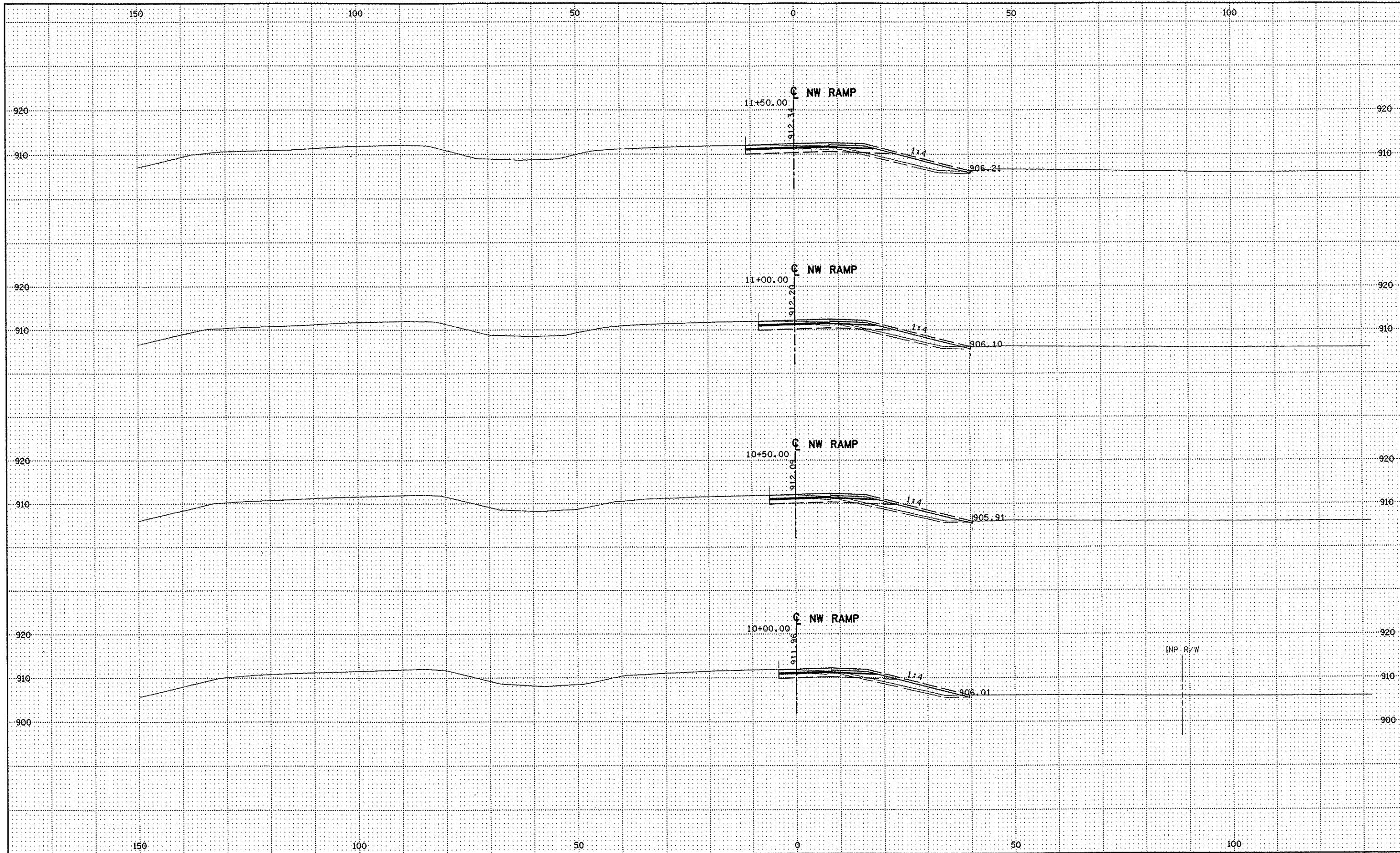
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 S.A.P. 02-652-02
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 SW RAMP STA. 27+00

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NO	DATE	BY	CKD	APPR	REVISION

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DRAWN BY RRC DATE 9-21-01

DESIGN BY RRC DATE 9-20-01

CHECKED BY JMW DATE 9-24-01

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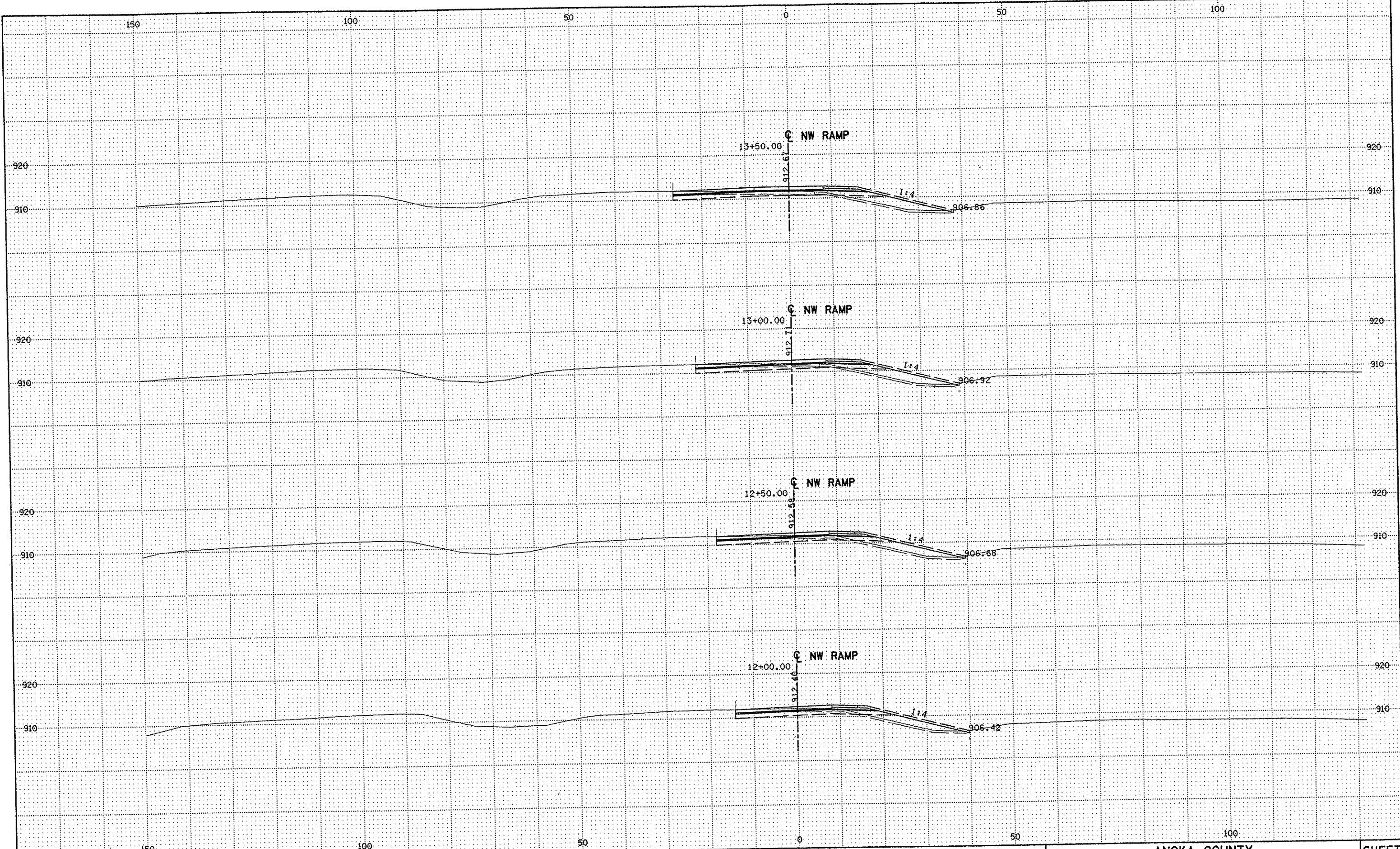
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S.A.P. 106-020-021, 106-020-022

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AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
NW RAMP STA. 10+00 TO STA. 11+50

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OF
559



NO	DATE	BY	CKD	APPR	REVISION

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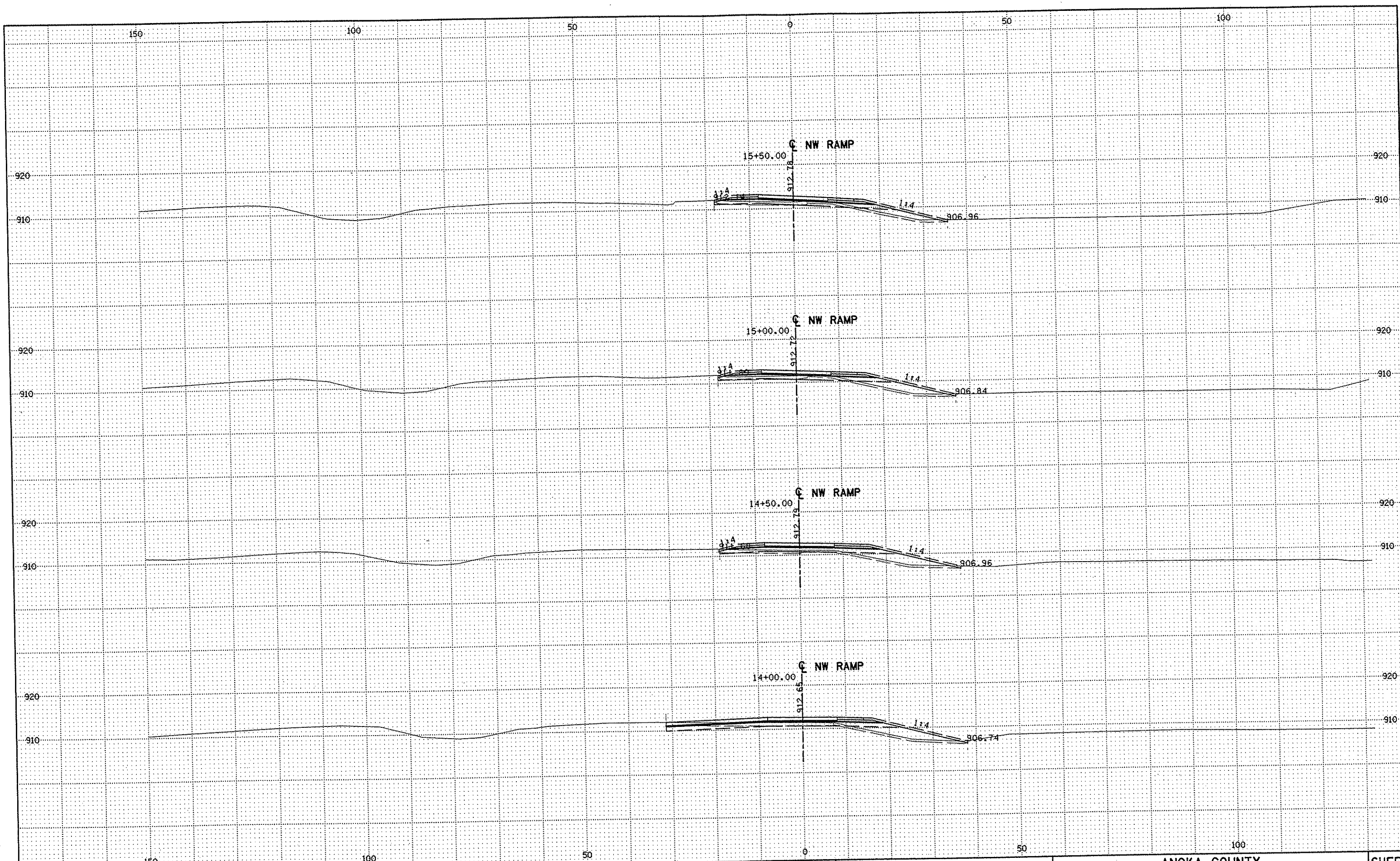
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CHECKED BY	JMW	DATE	9-24-01

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S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
NW RAMP STA. 12+00 TO STA. 13+50

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559



NO	DATE	BY	CKD	APPR	REVISION

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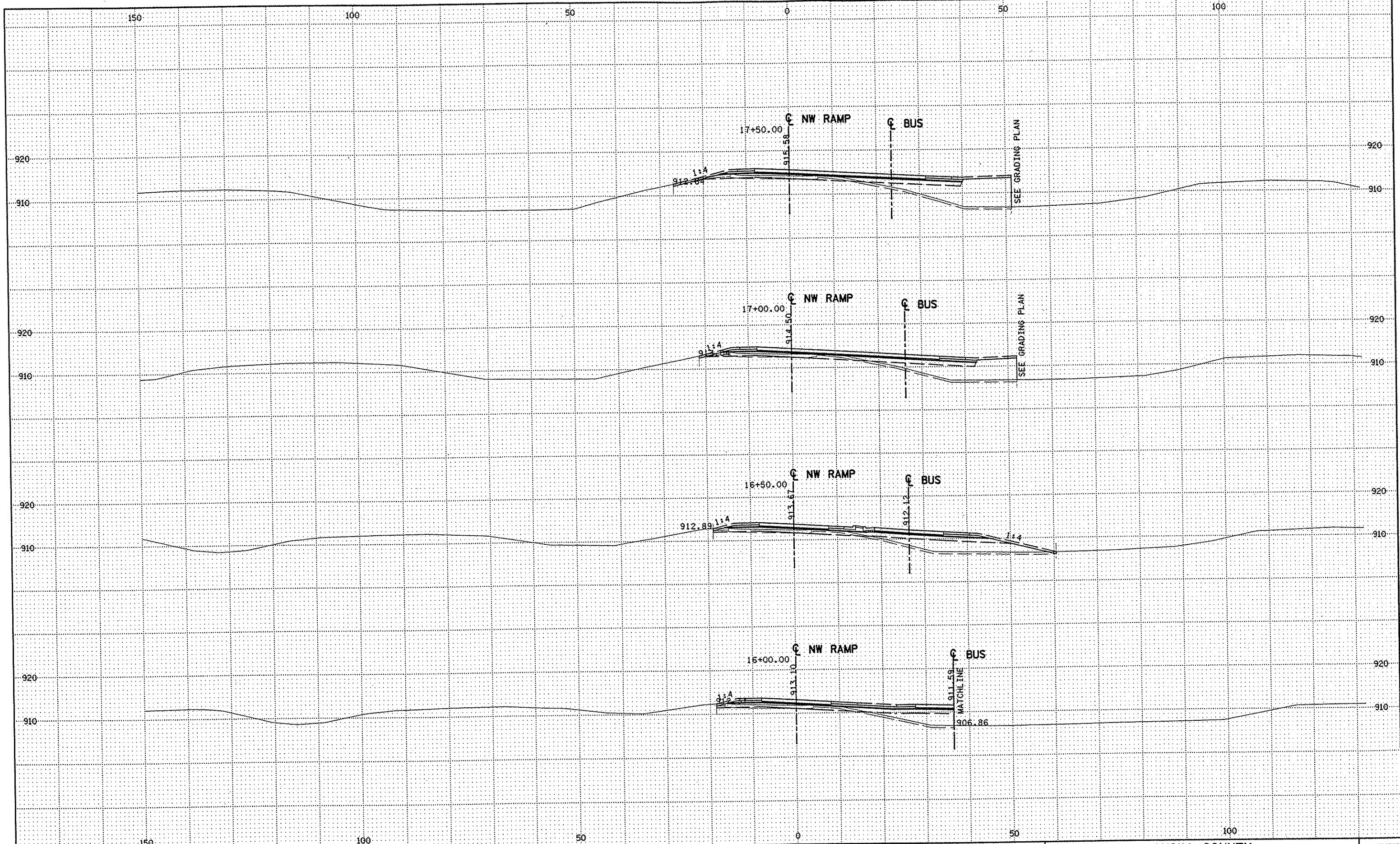
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NW RAMP STA. 14+00 TO STA. 15+50

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 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\sec\xsplan6.dgn 11/20/01

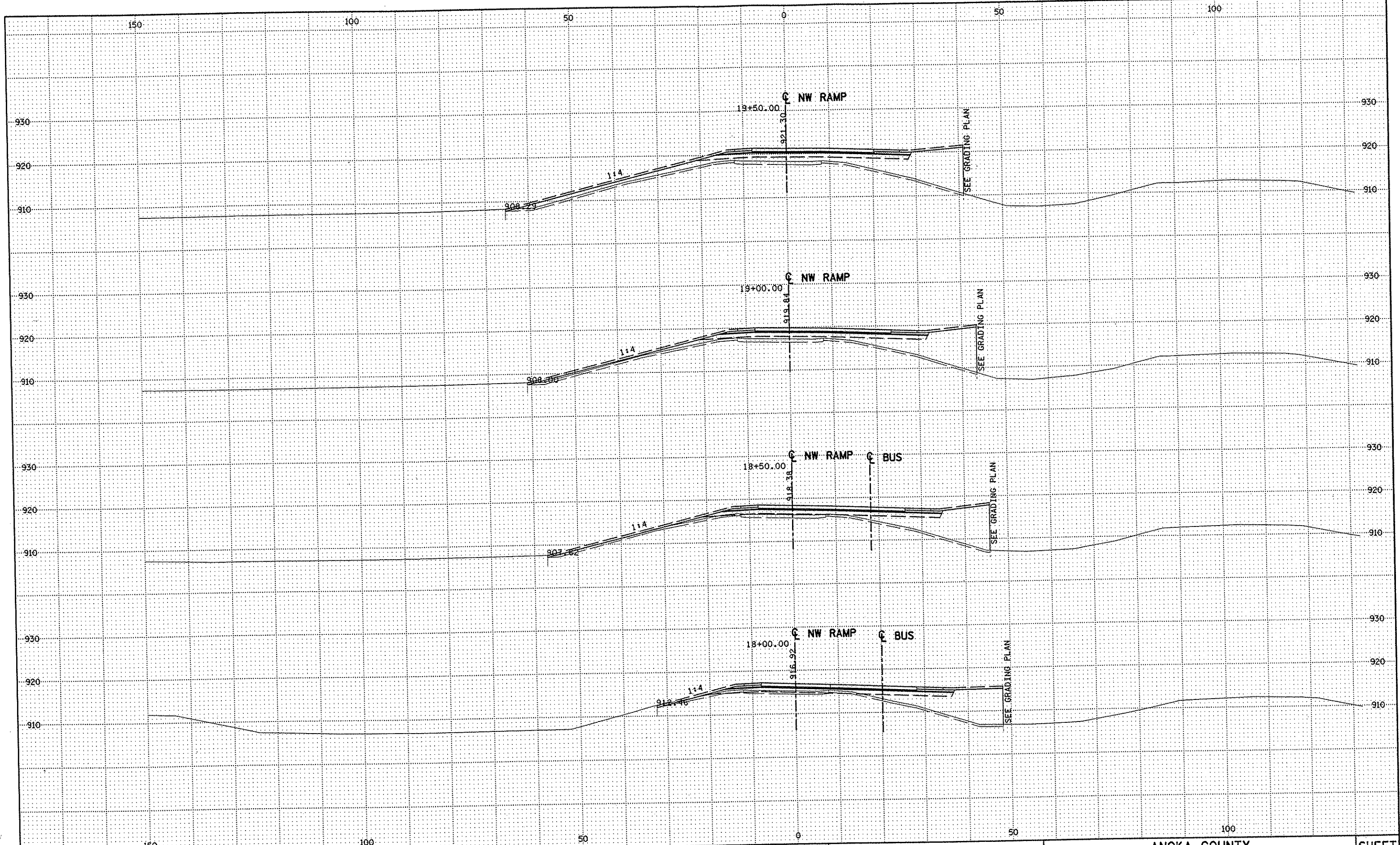
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S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
NW RAMP STA. 16+00 TO STA. 17+50

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NO	DATE	BY	CKD	APPR	REVISION

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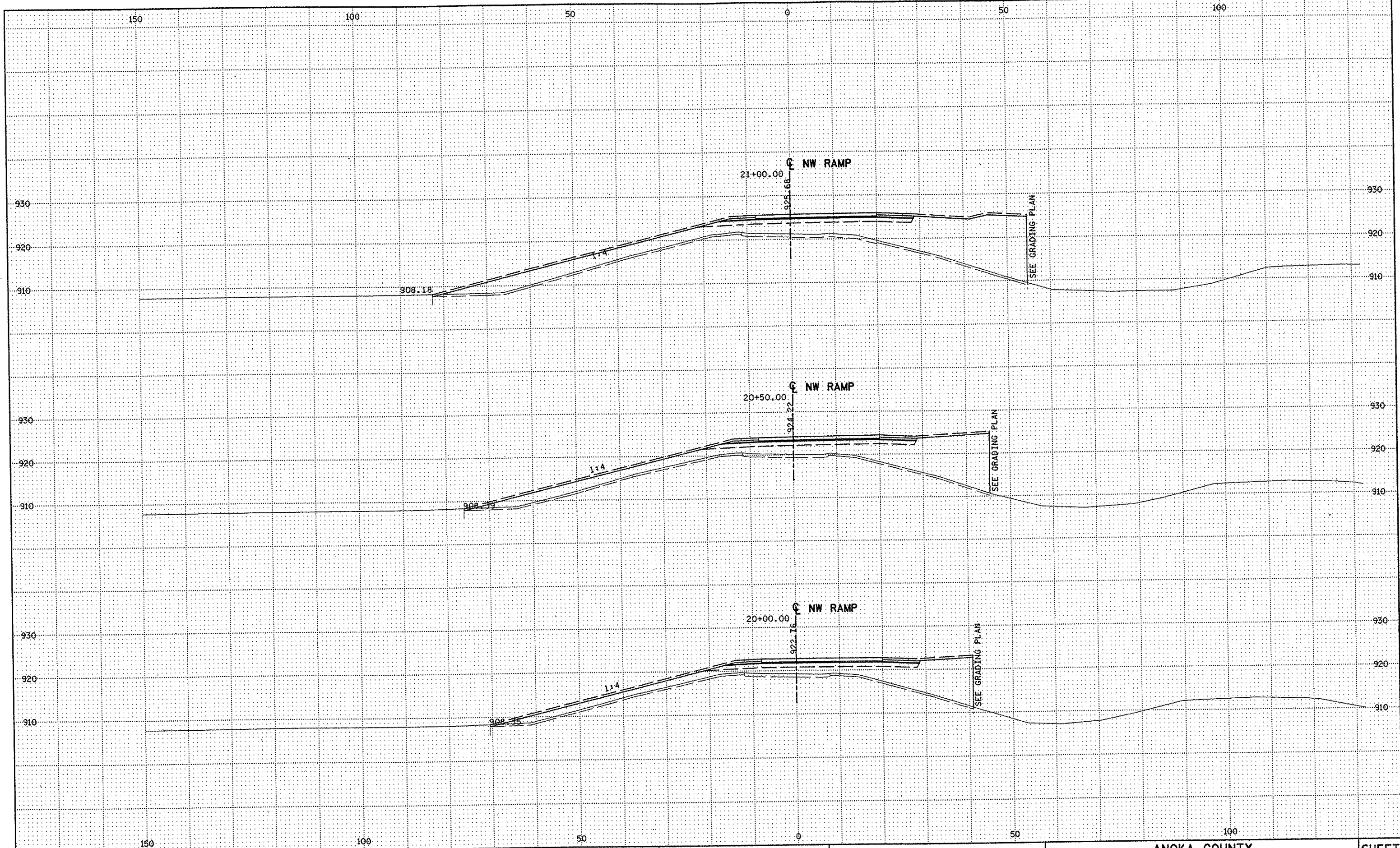
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NW RAMP STA. 18+00 TO STA. 19+50

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NO	DATE	BY	CKD	APPR	REVISION

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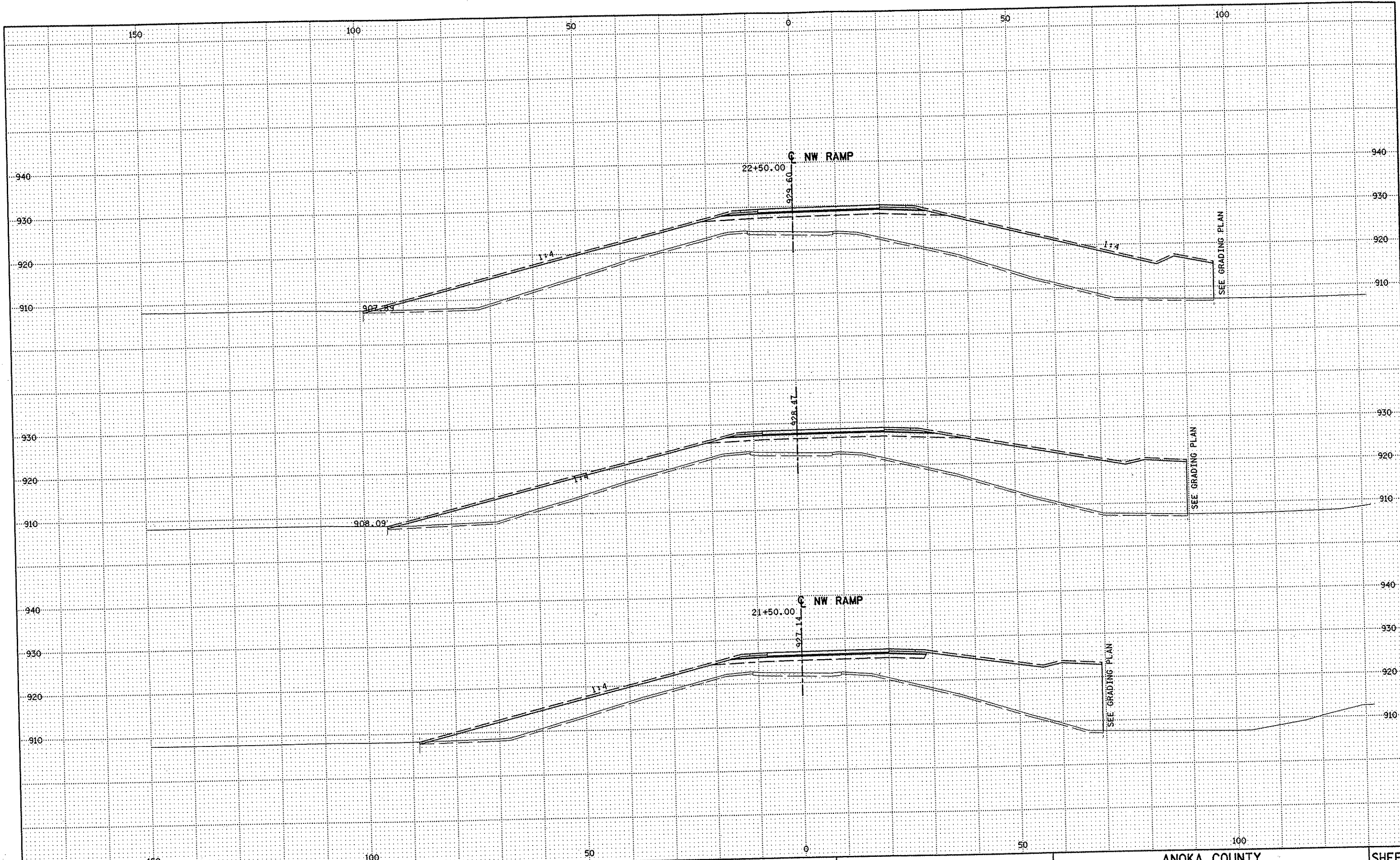
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NW RAMP STA. 20+00 TO STA. 21+00

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan6.dgn 11/20/01

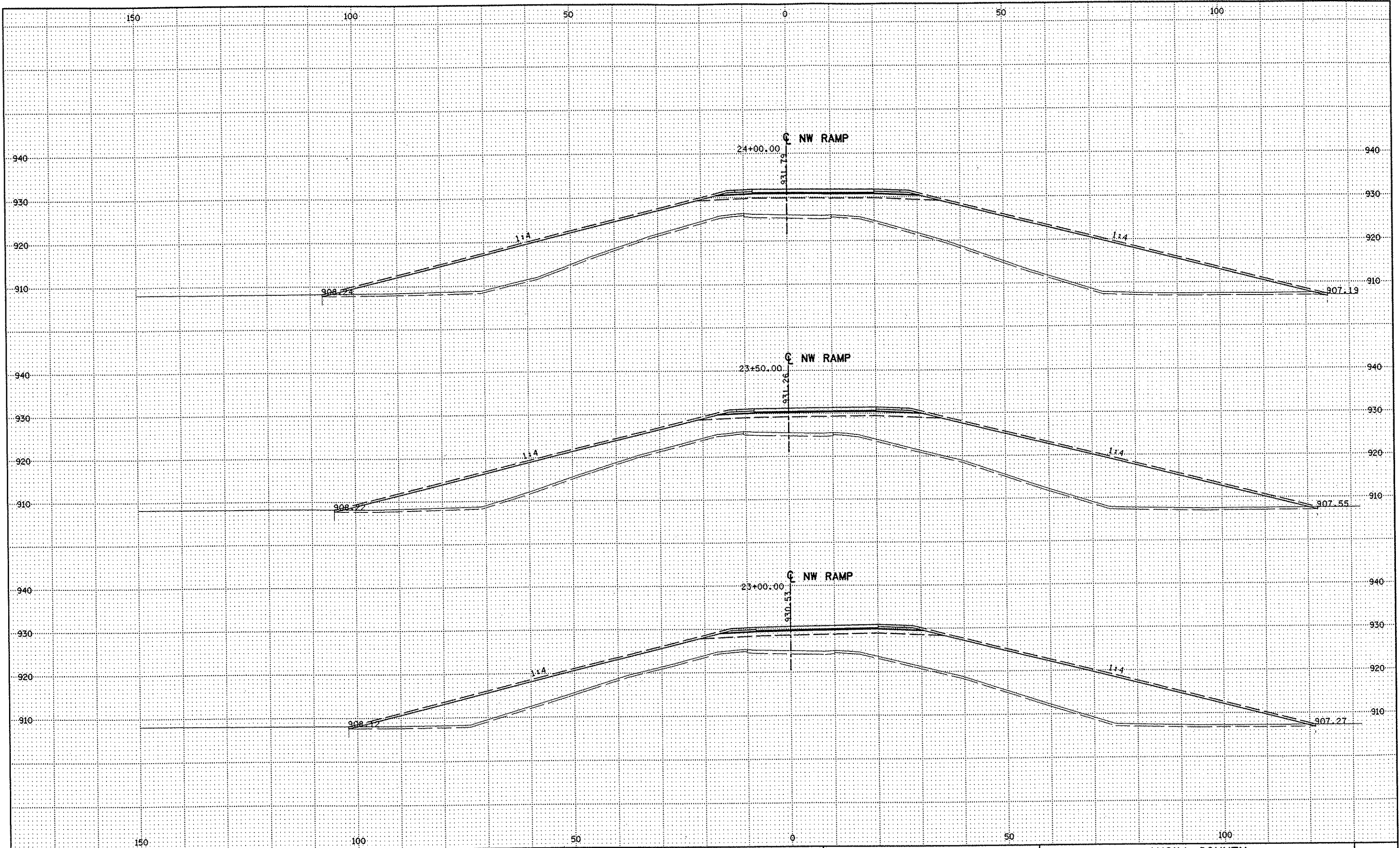
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CHECKED BY	JMW	DATE	9-24-01

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S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NW RAMP STA. 21+50 TO STA. 22+50

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 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\par+4\roadway3\drawings\xsec\xsplan6.dgn 11/20/01

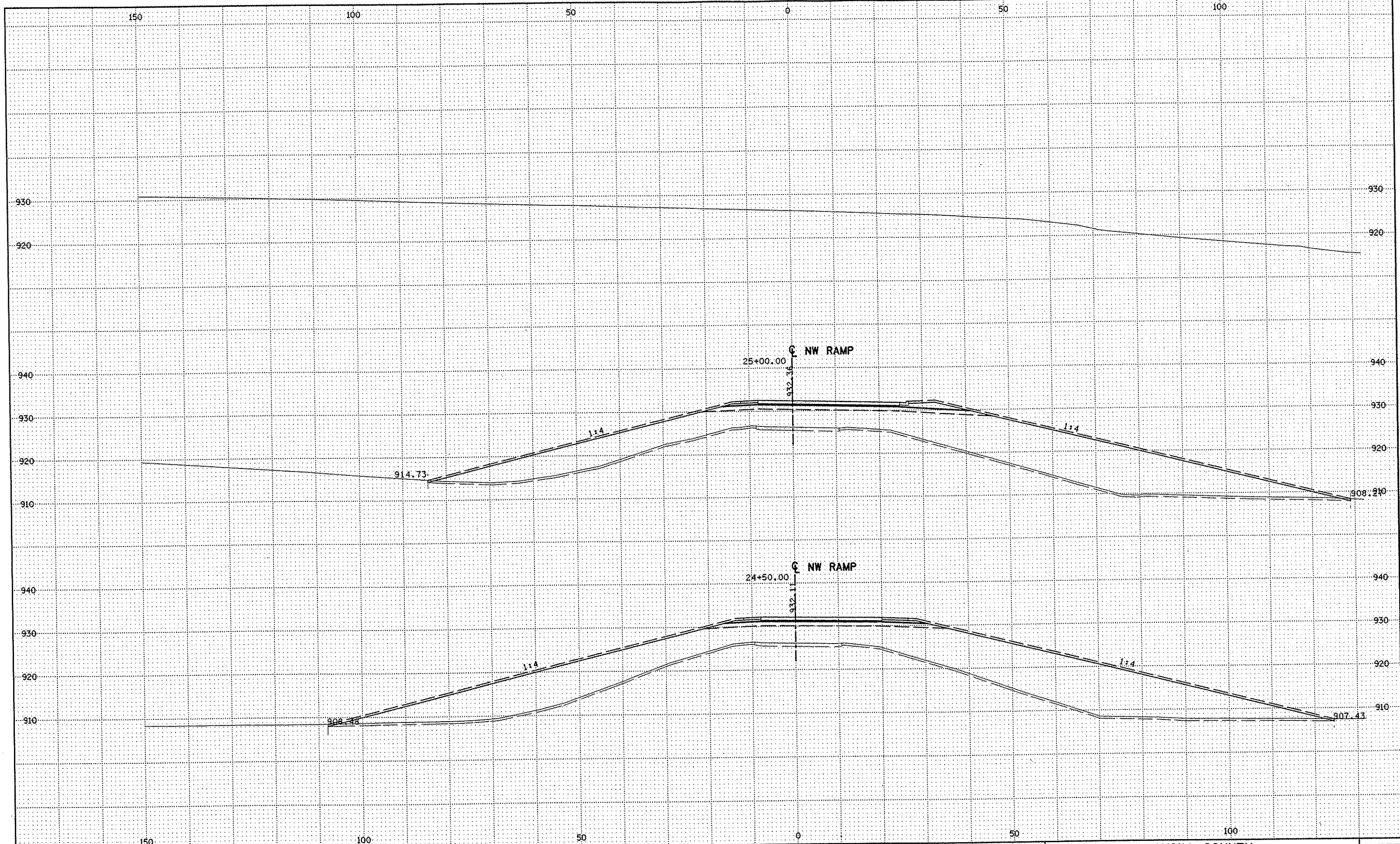
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NW RAMP STA. 23+00 TO STA. 24+00

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan6.dgn 11/20/01

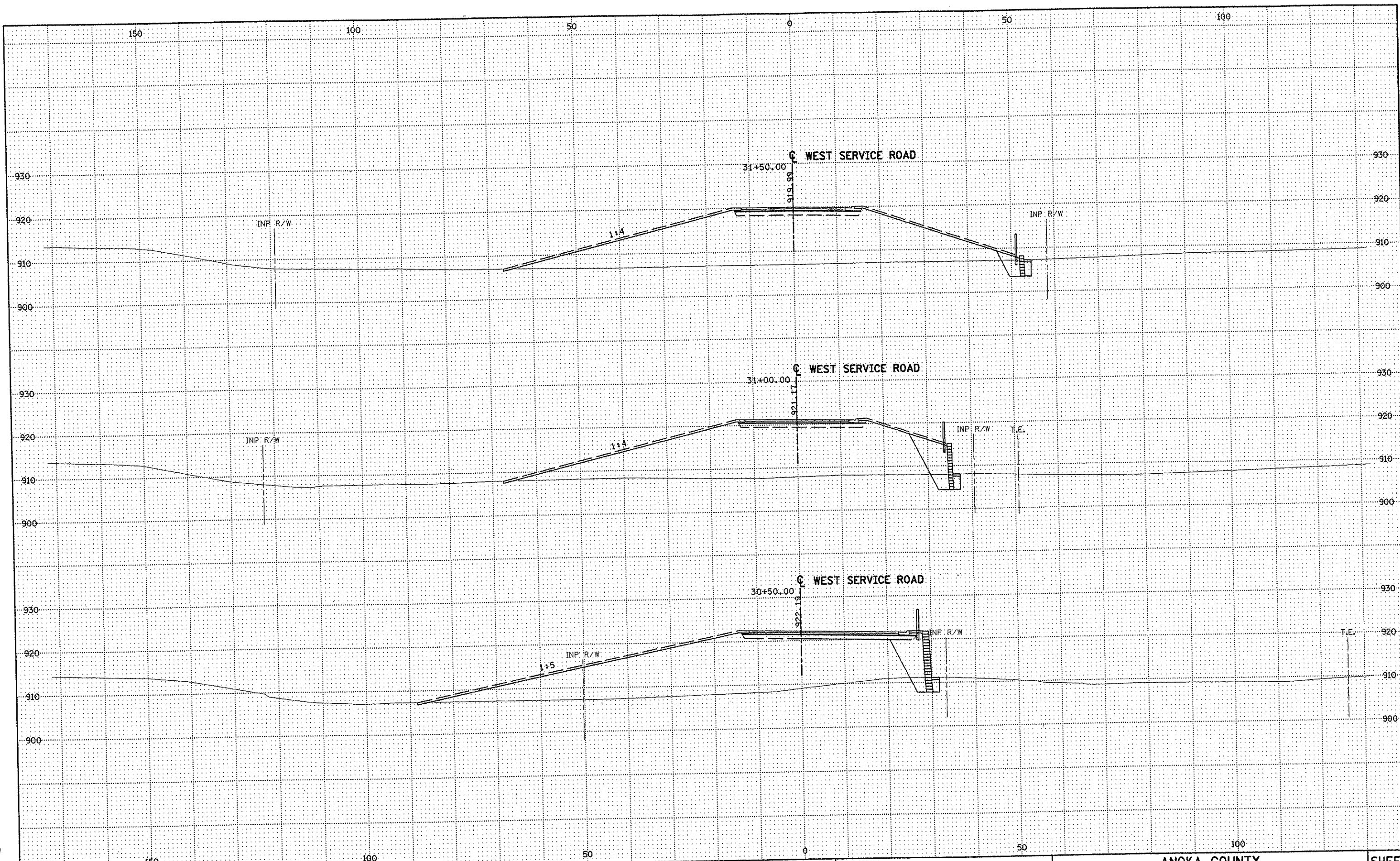
DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
 S.A.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NW RAMP STA. 24+50 TO STA. 25+00

SHEET
 530
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\sec\ssxr452.dgn 11/20/01

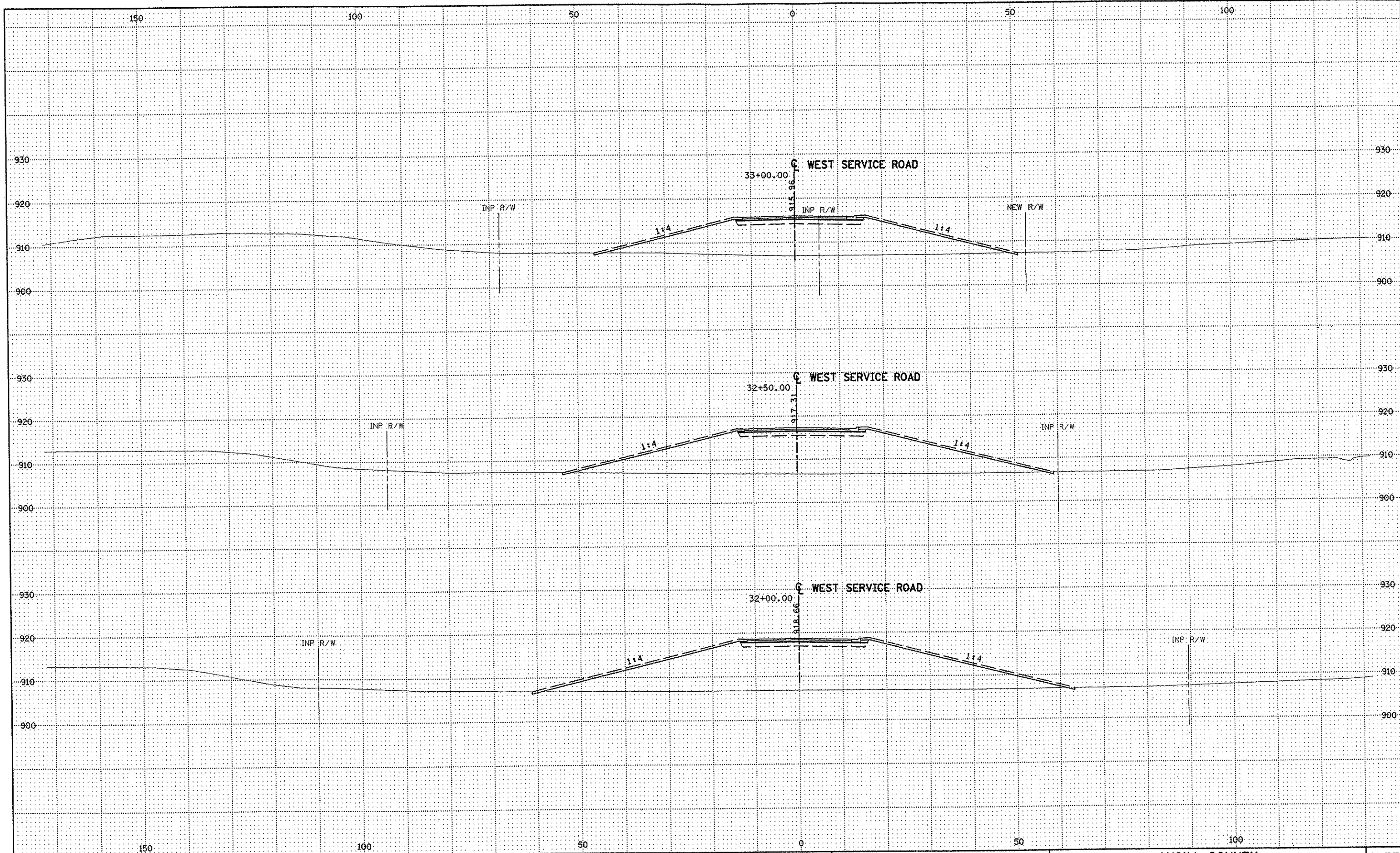
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DESIGN BY	RRC	DATE	9-20-01
CHECKED BY	JMW	DATE	9-24-01

S.P.	0280-50 (TH 35W)
S.P.	90-080-11
S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 WEST SERVICE RD. STA. 30+50 TO STA. 31+50

SHEET
 531
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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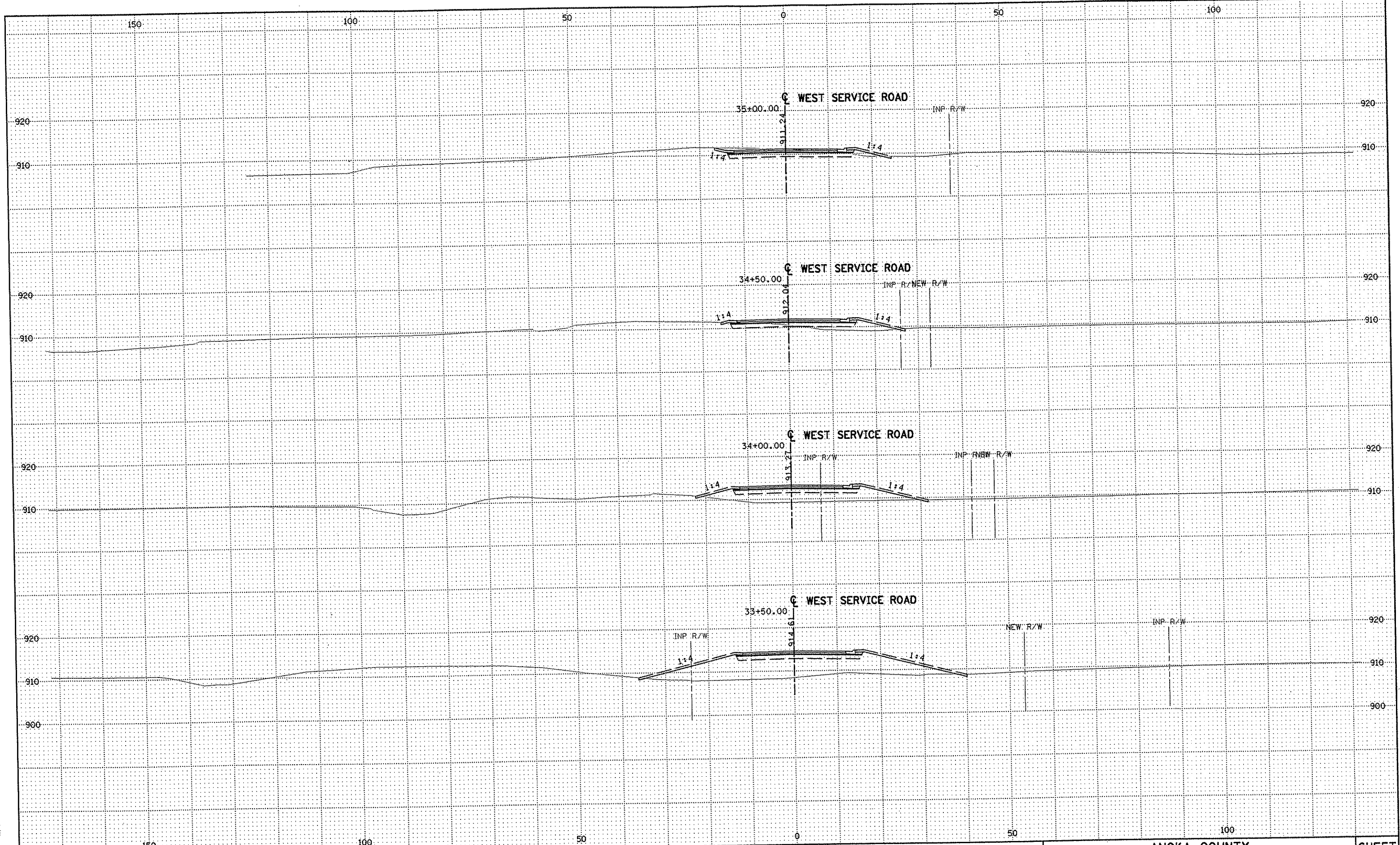
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 WEST SERVICE RD. STA. 32+00 TO STA. 33+00

SHEET
 532
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\011749\part4\roadway3\drawings\sec\ssr452.dgn 11/20/01

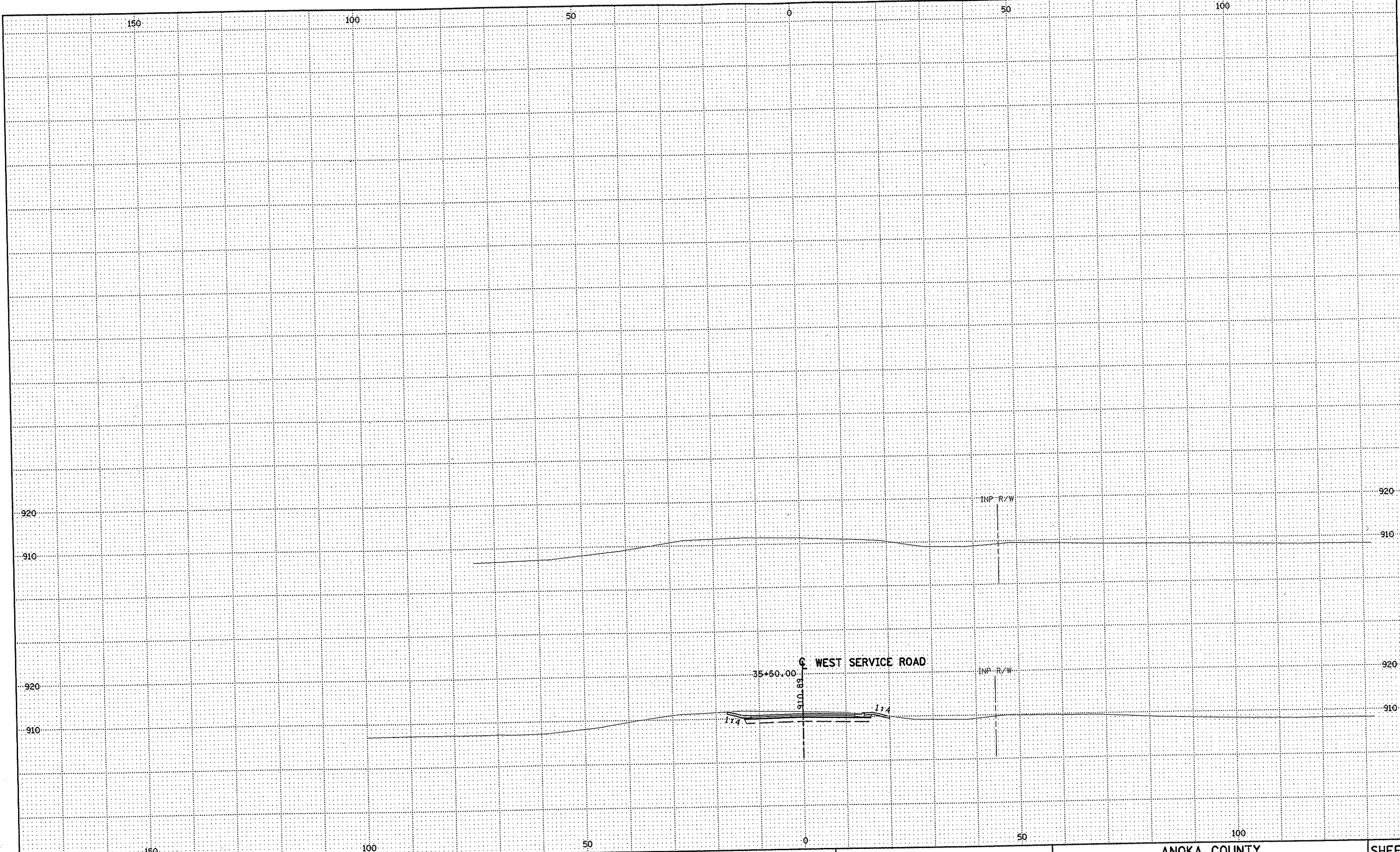
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 WEST SERVICE RD. STA. 33+50 TO STA. 35+00

SHEET
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 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsrxr452.dgn 11/20/01

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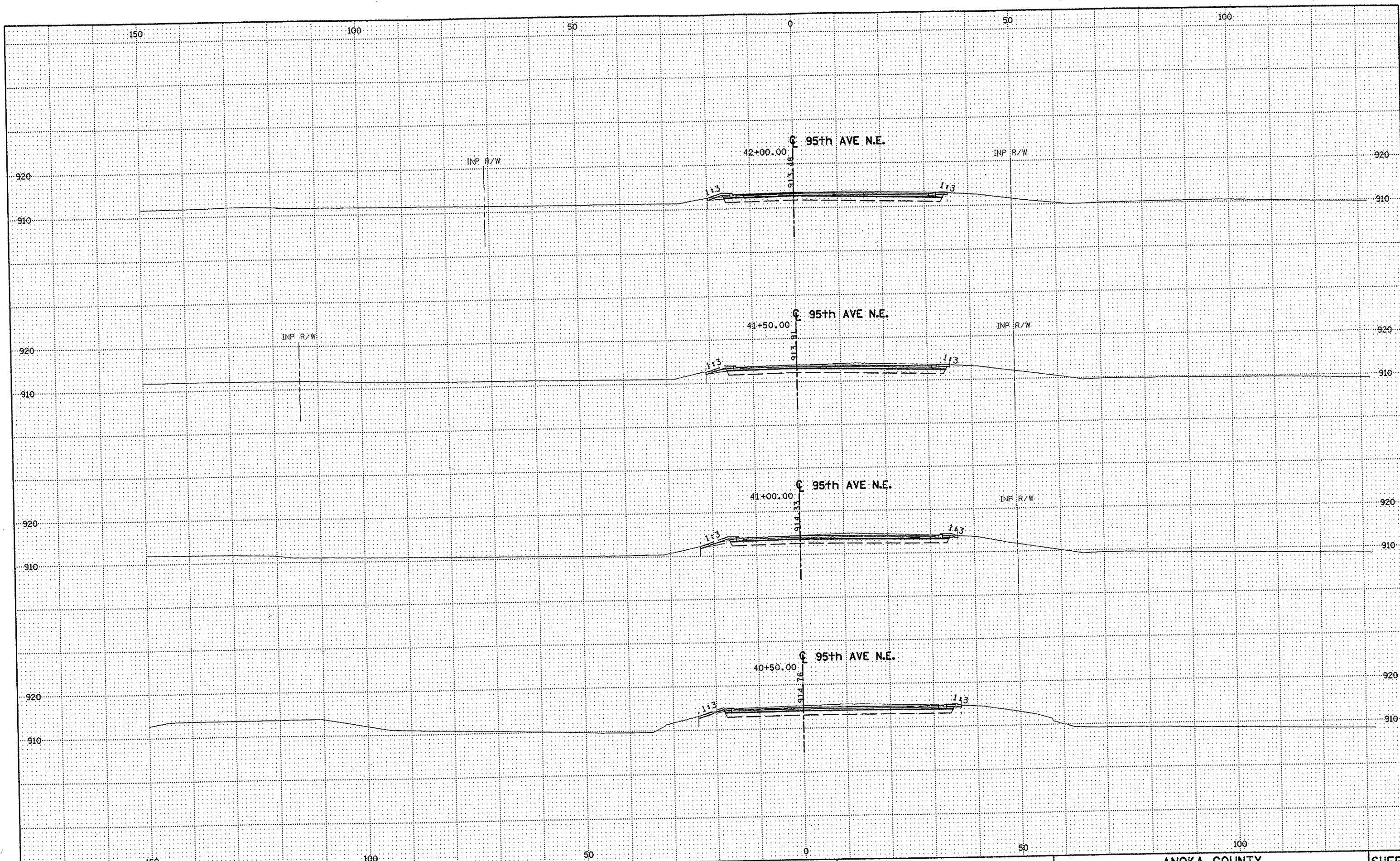
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 WEST SERVICE RD. STA. 35+50

SHEET
 534
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\sec\vspian1.dgn 11/20/01

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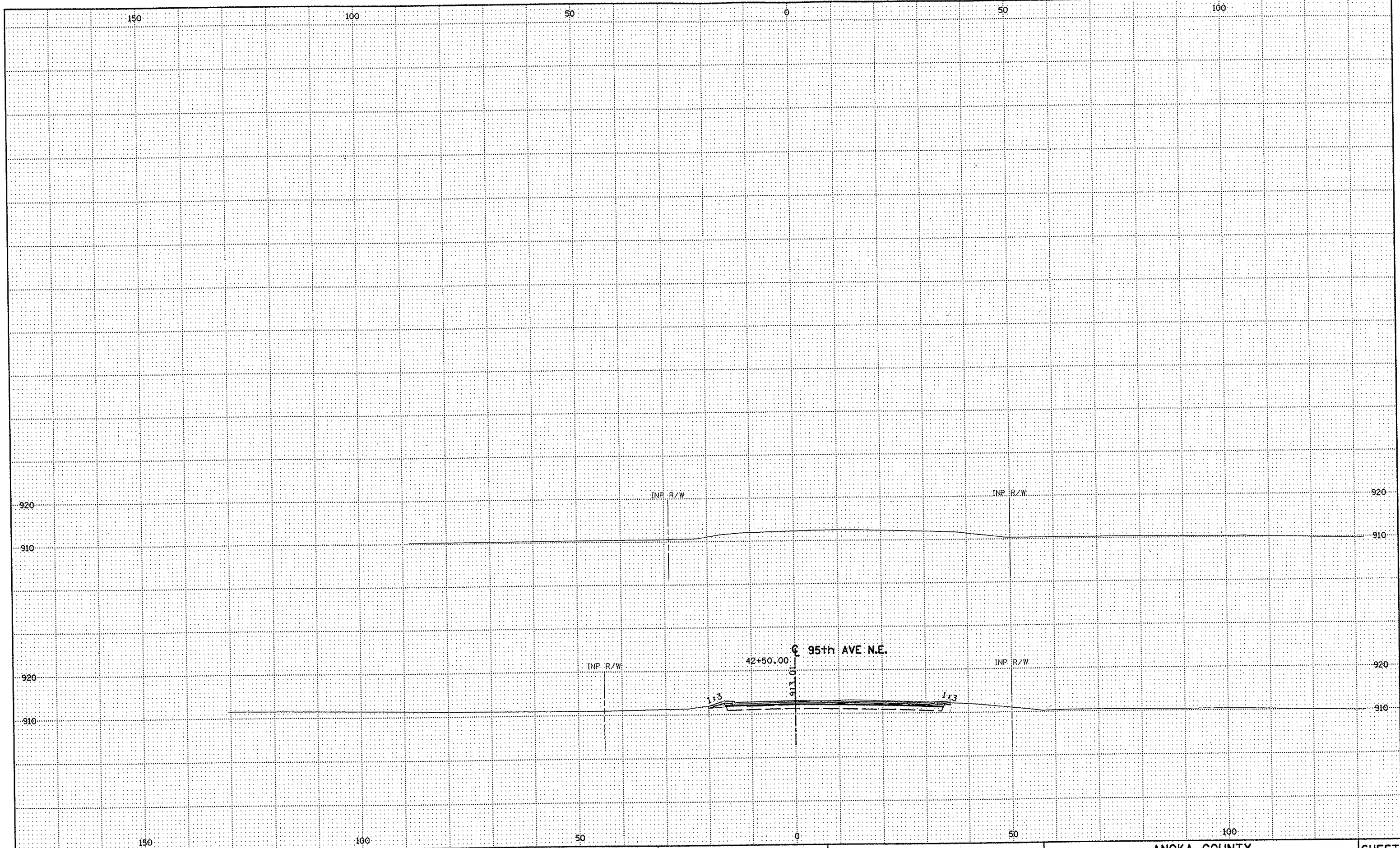
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 95th AVE. N.E. STA. 40+50 TO STA. 42+00

SHEET
 535
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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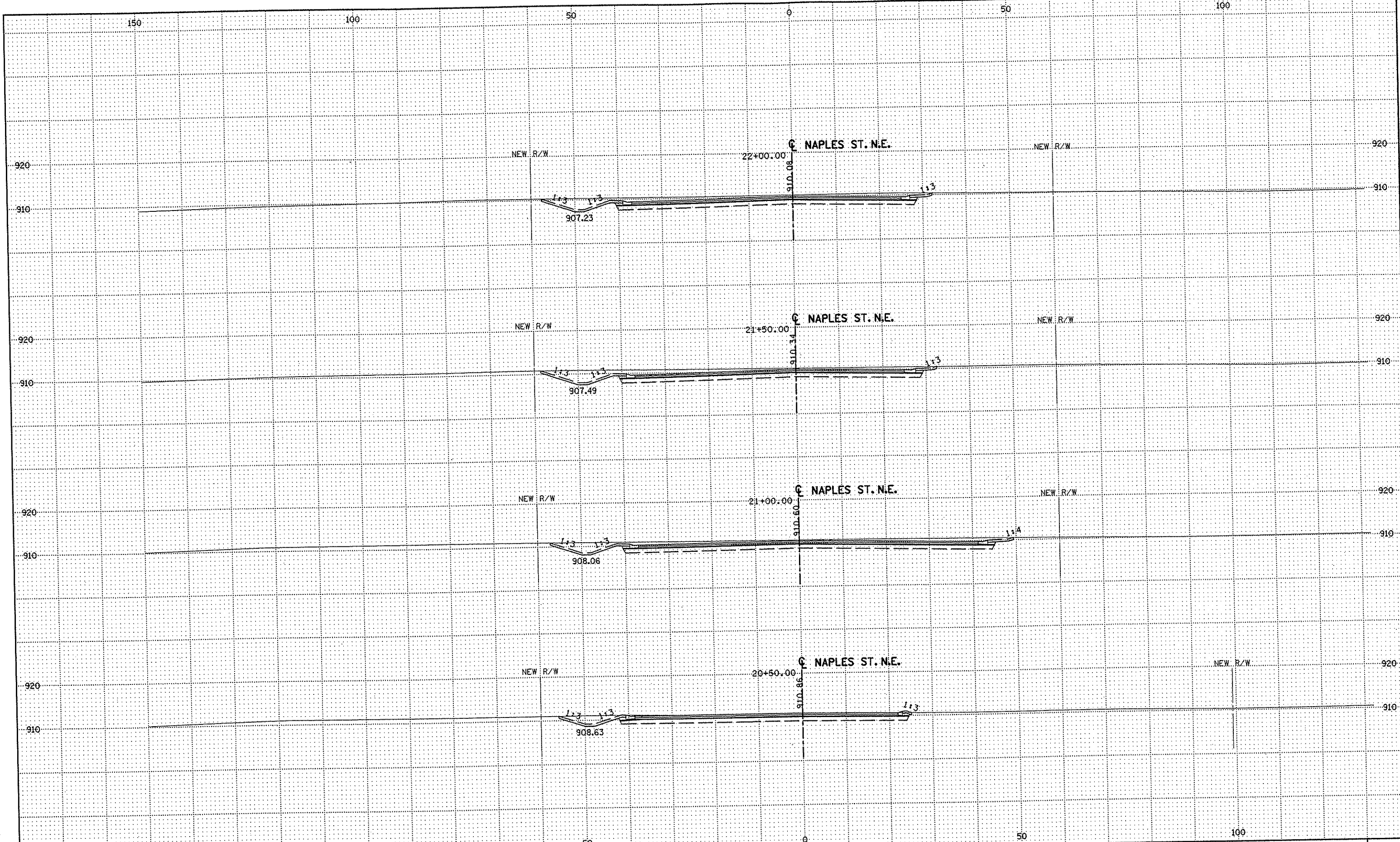
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S.P. 0280-50 (TH 35W)
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 95th AVE. N.E. STA. 42+50

SHEET
 536
 OF
 559



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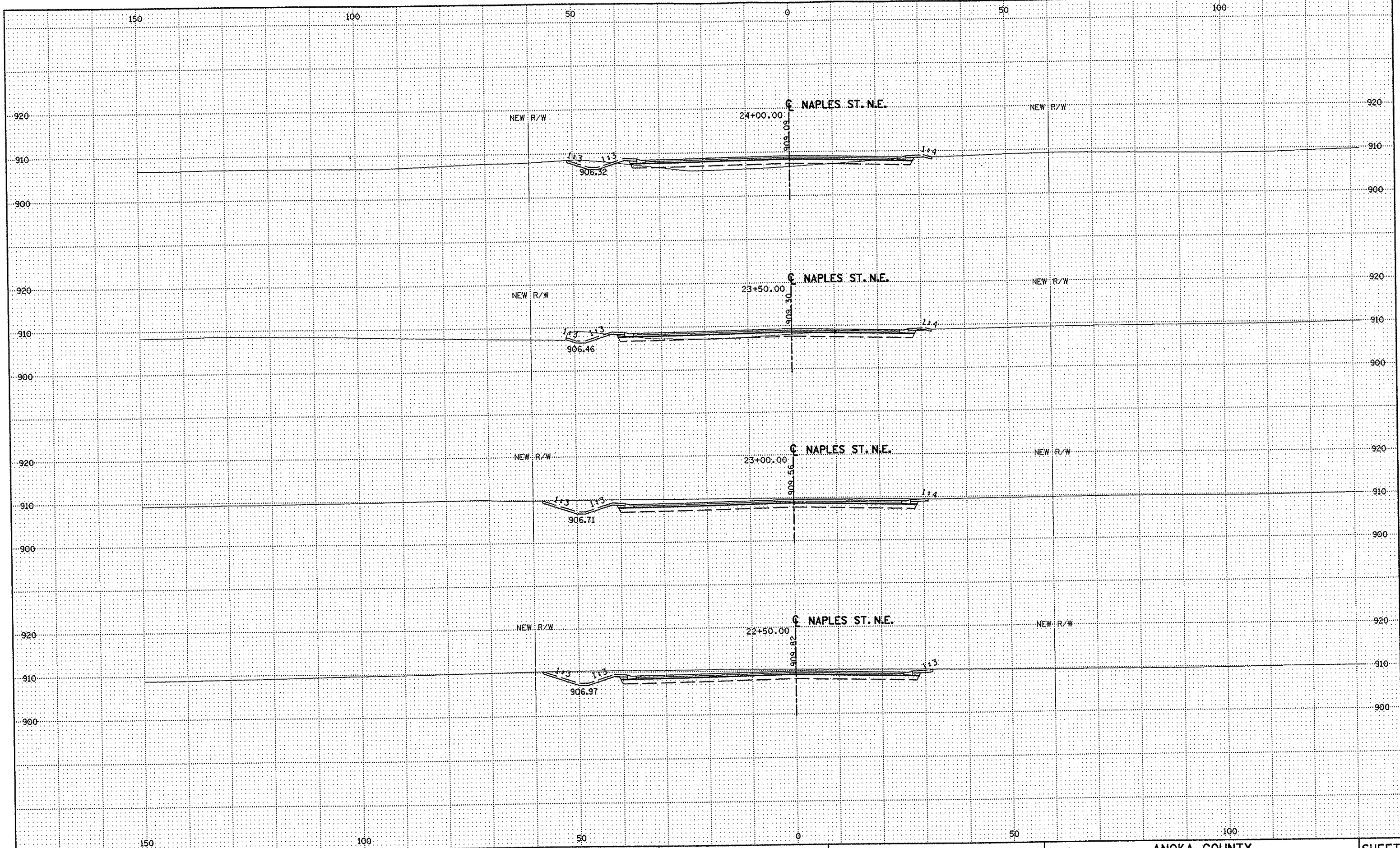
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S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
NAPLES ST. N.E. STA. 20+50 TO STA. 22+00

SHEET
537
OF
559



NO	DATE	BY	CKD	APPR	REVISION

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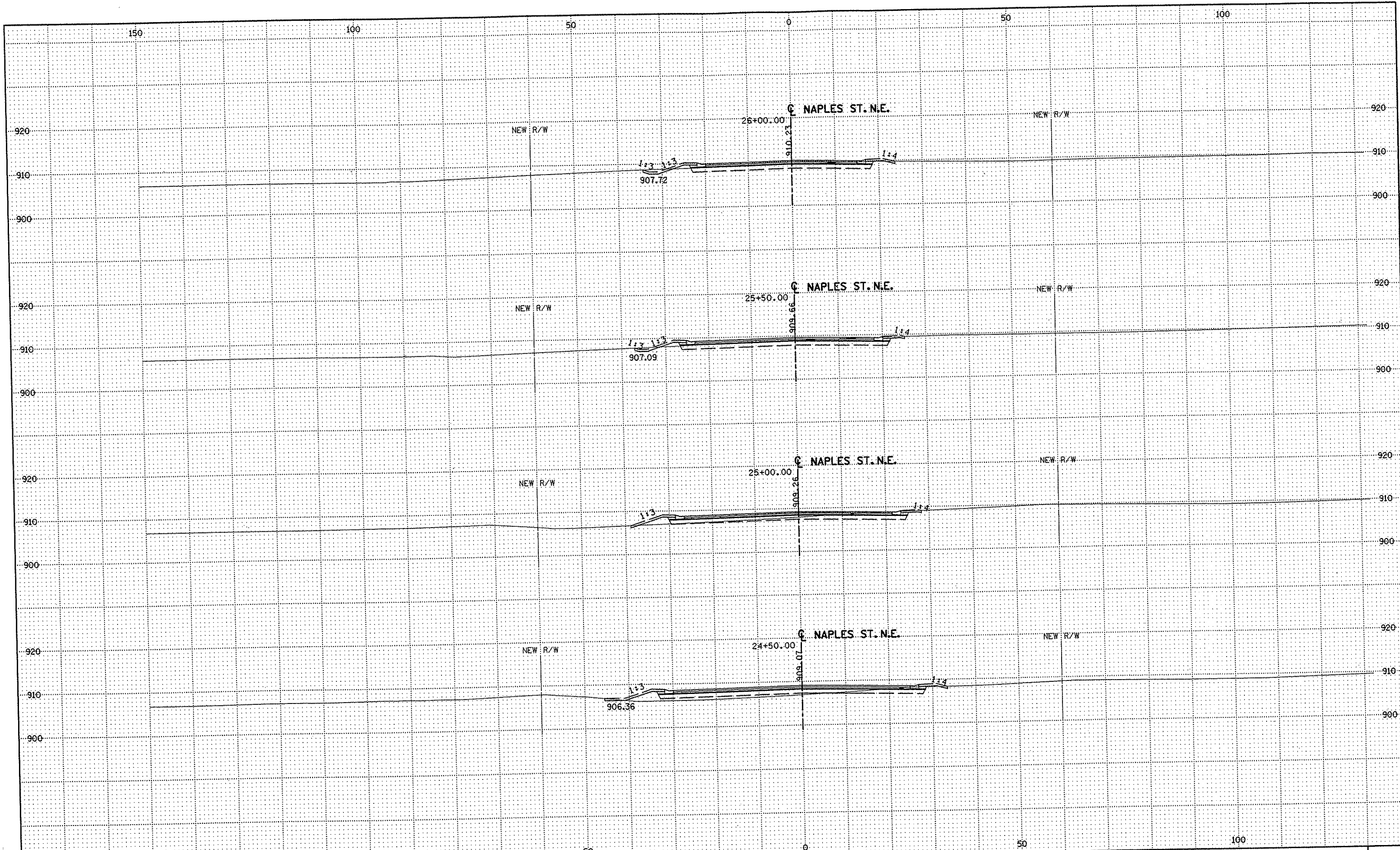
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 S. A. P. 02-652-03
 S. A. P. 02-652-04
 S. A. P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 22+50 TO STA. 24+00

SHEET
 538
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\011749\part4\roadway3\drawings\sec\xsplannap2.dgn 11/20/01

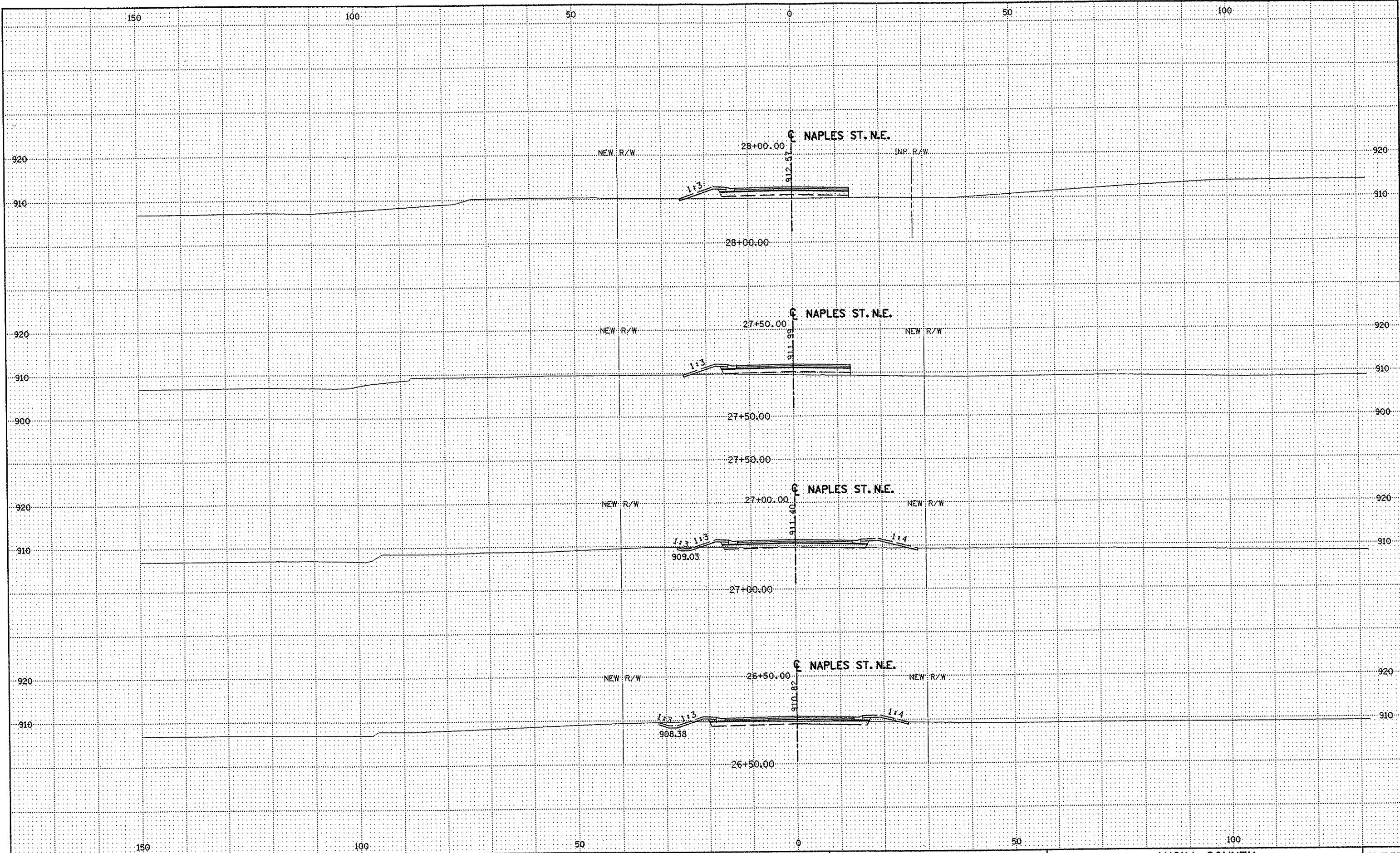
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 24+50 TO STA. 26+00

SHEET
 539
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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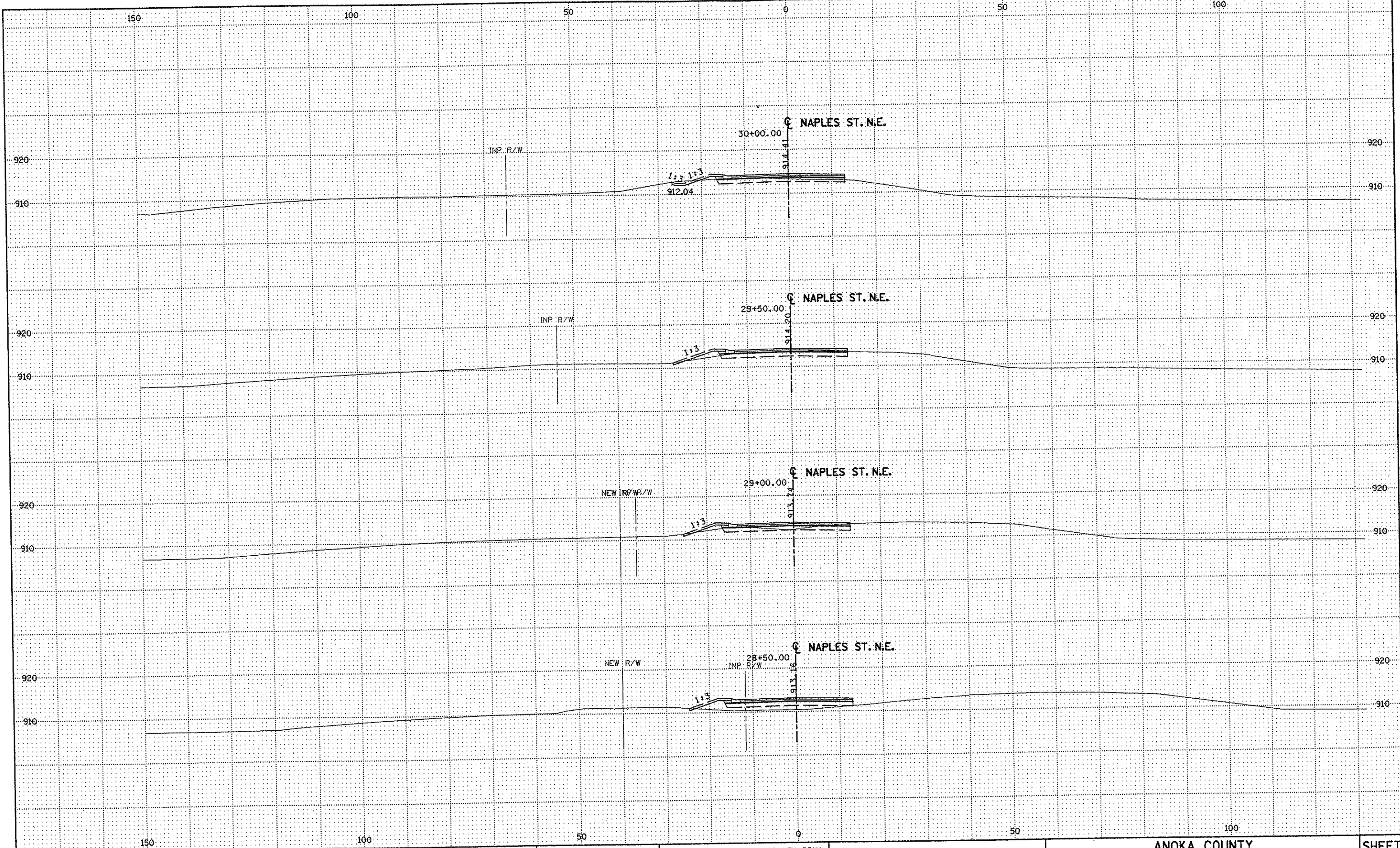
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 26+50 TO STA. 28+00

SHEET
 540
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

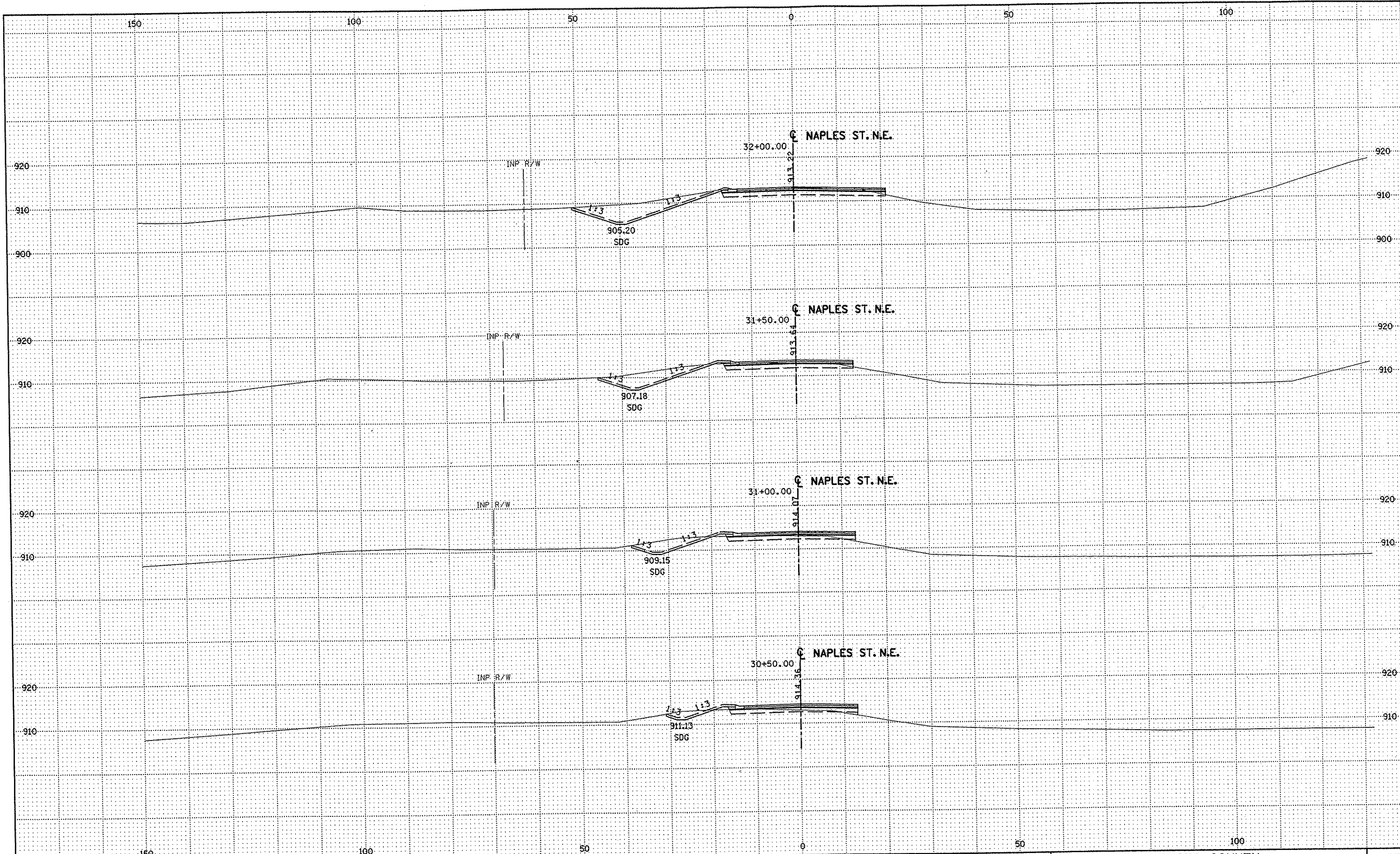
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 28+50 TO STA. 30+00

SHEET
 541
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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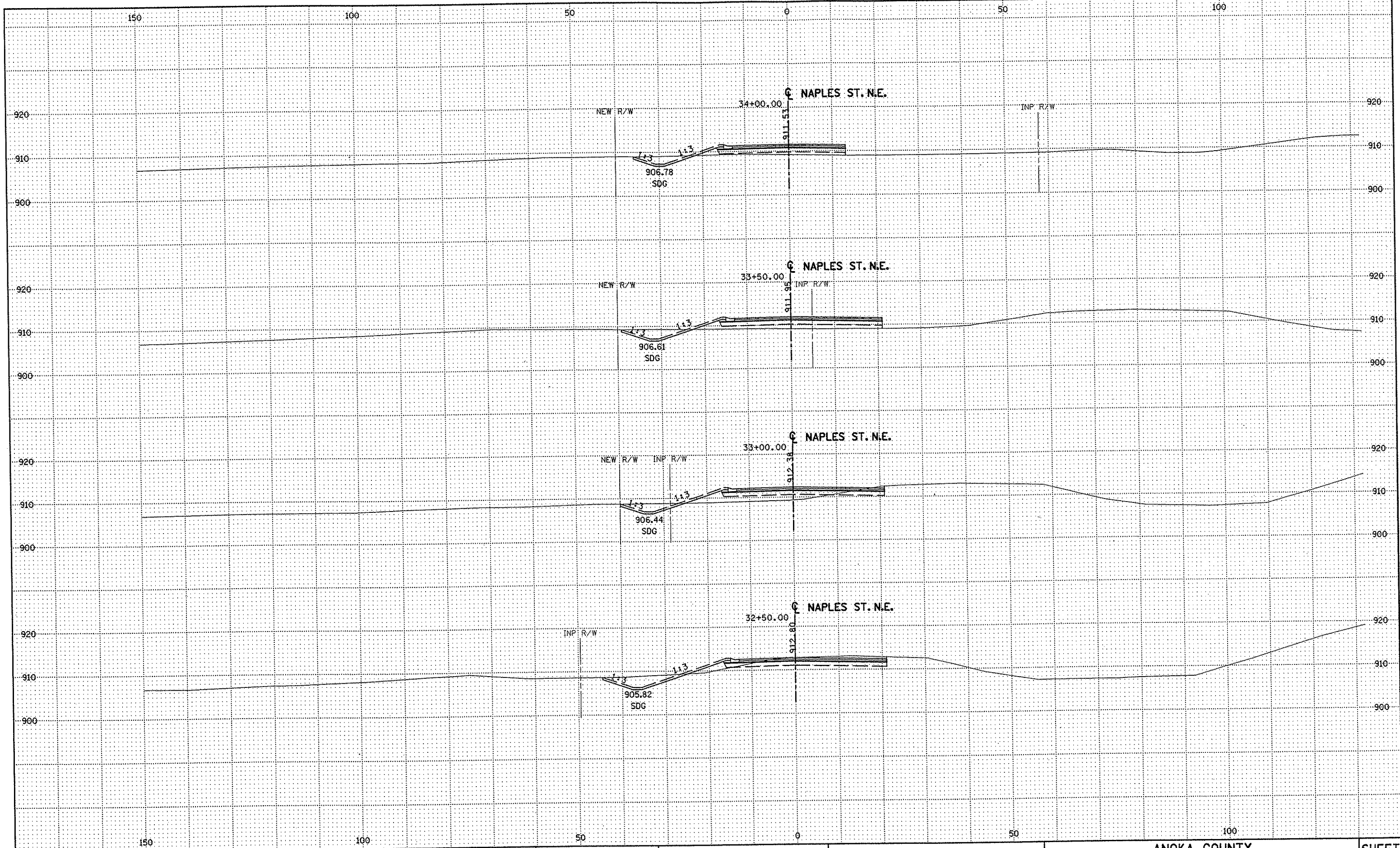
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 30+50 TO STA. 32+00

SHEET
 542
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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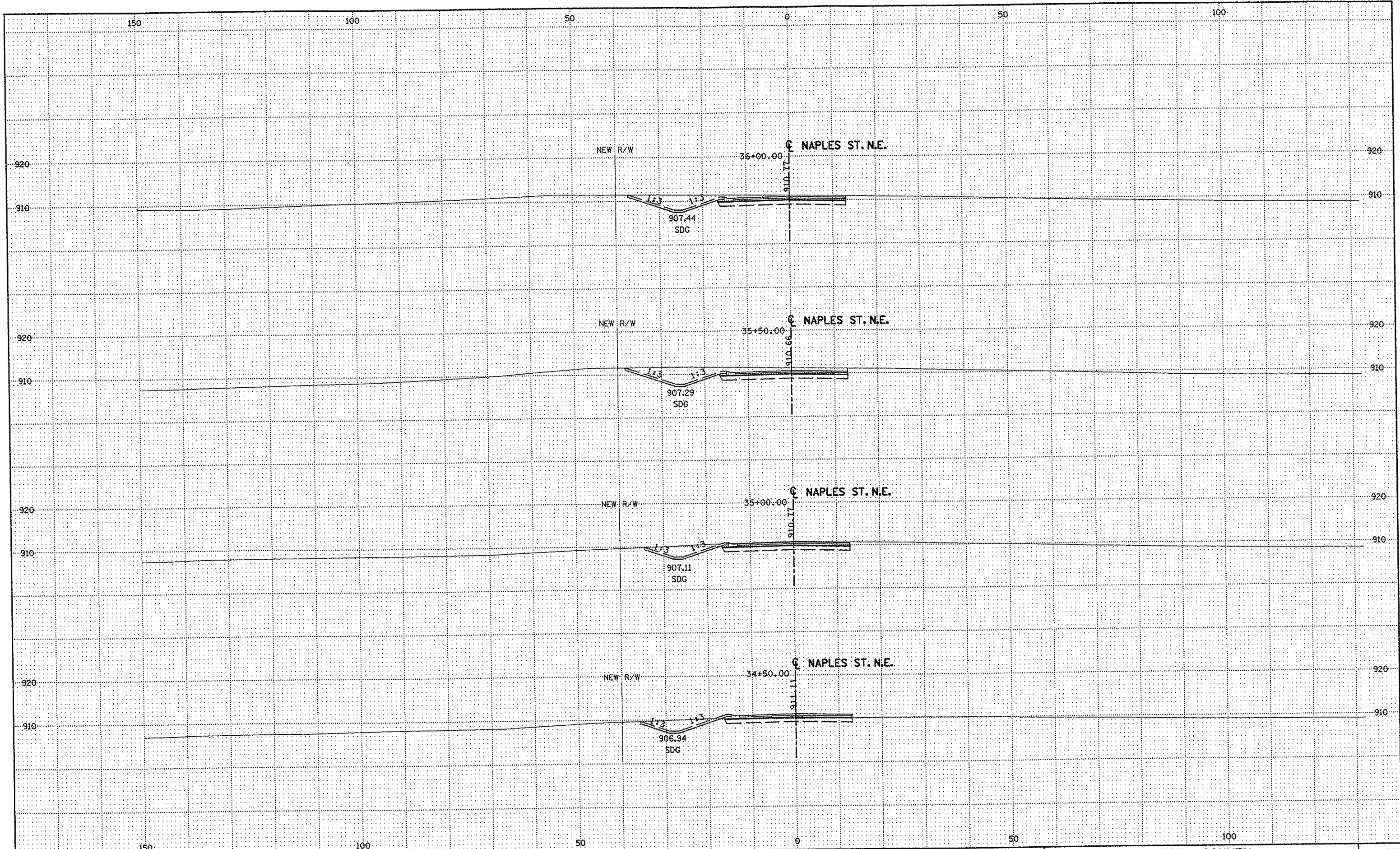
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 32+50 TO STA. 34+00

SHEET
 543
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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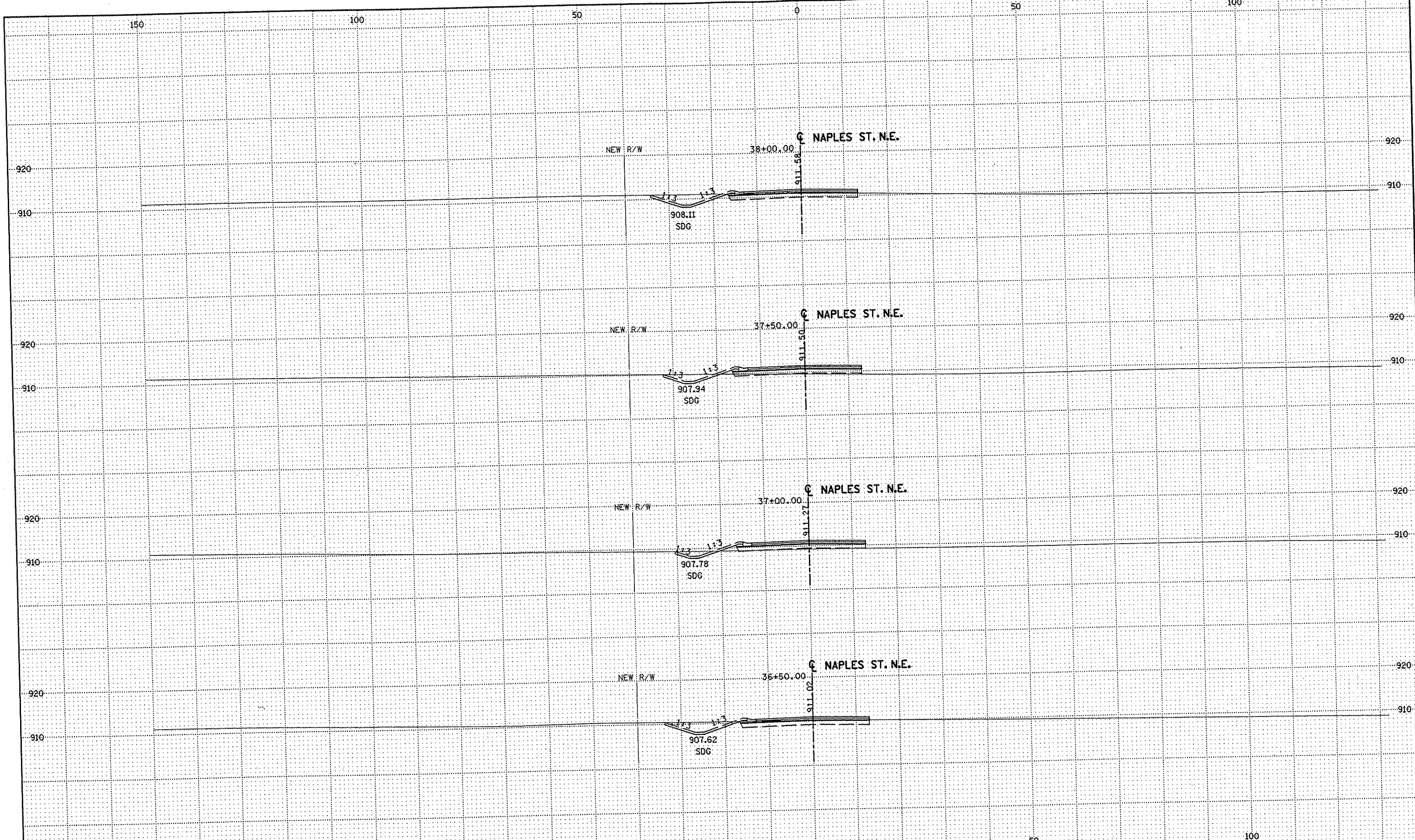
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 34+50 TO STA. 36+00

SHEET
 544
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

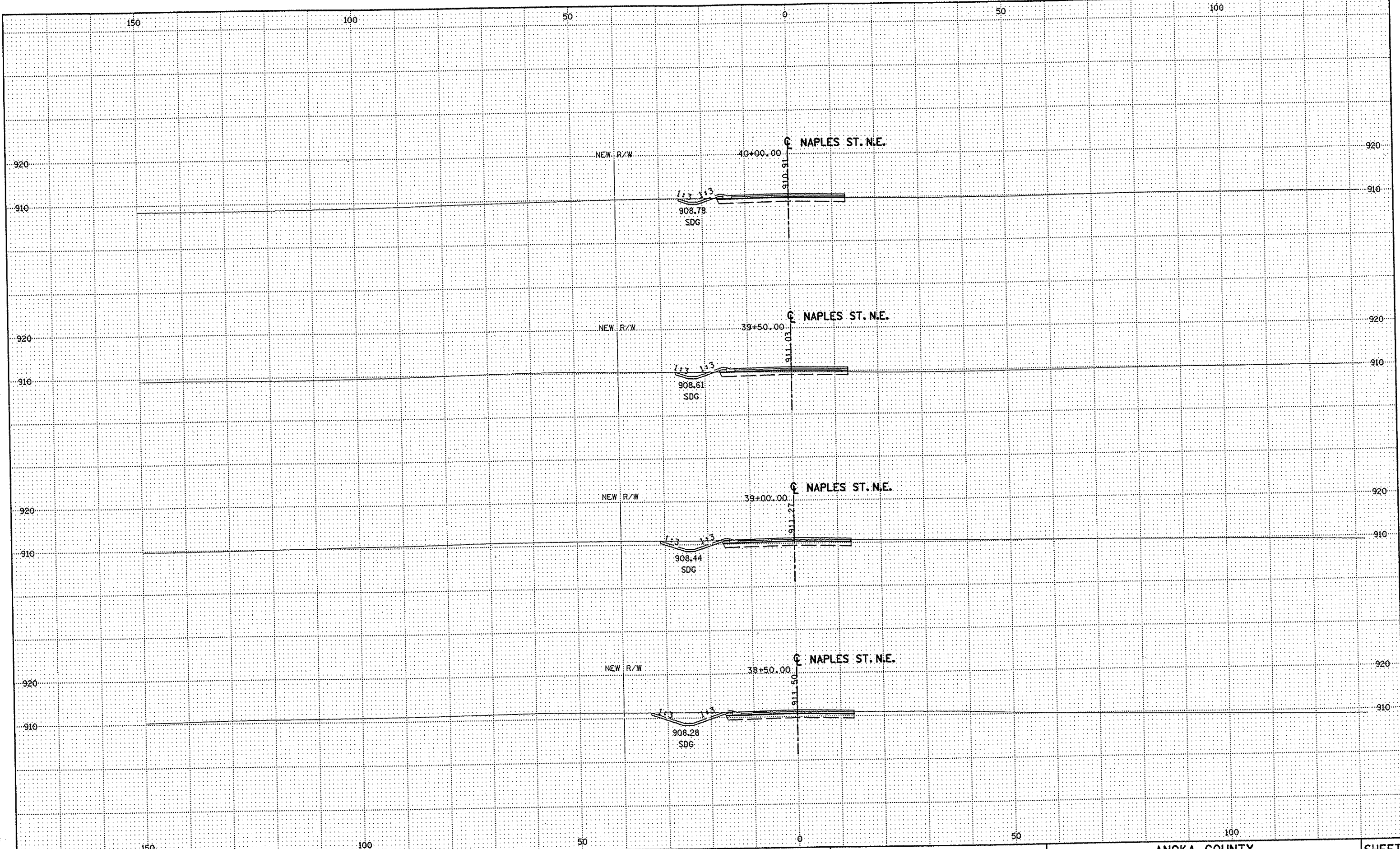
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DESIGN BY		DATE		S.P.	90-080-11
CHECKED BY		DATE		S.A.P.	02-652-02
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				S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 36+50 TO STA. 38+00

SHEET
 545
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

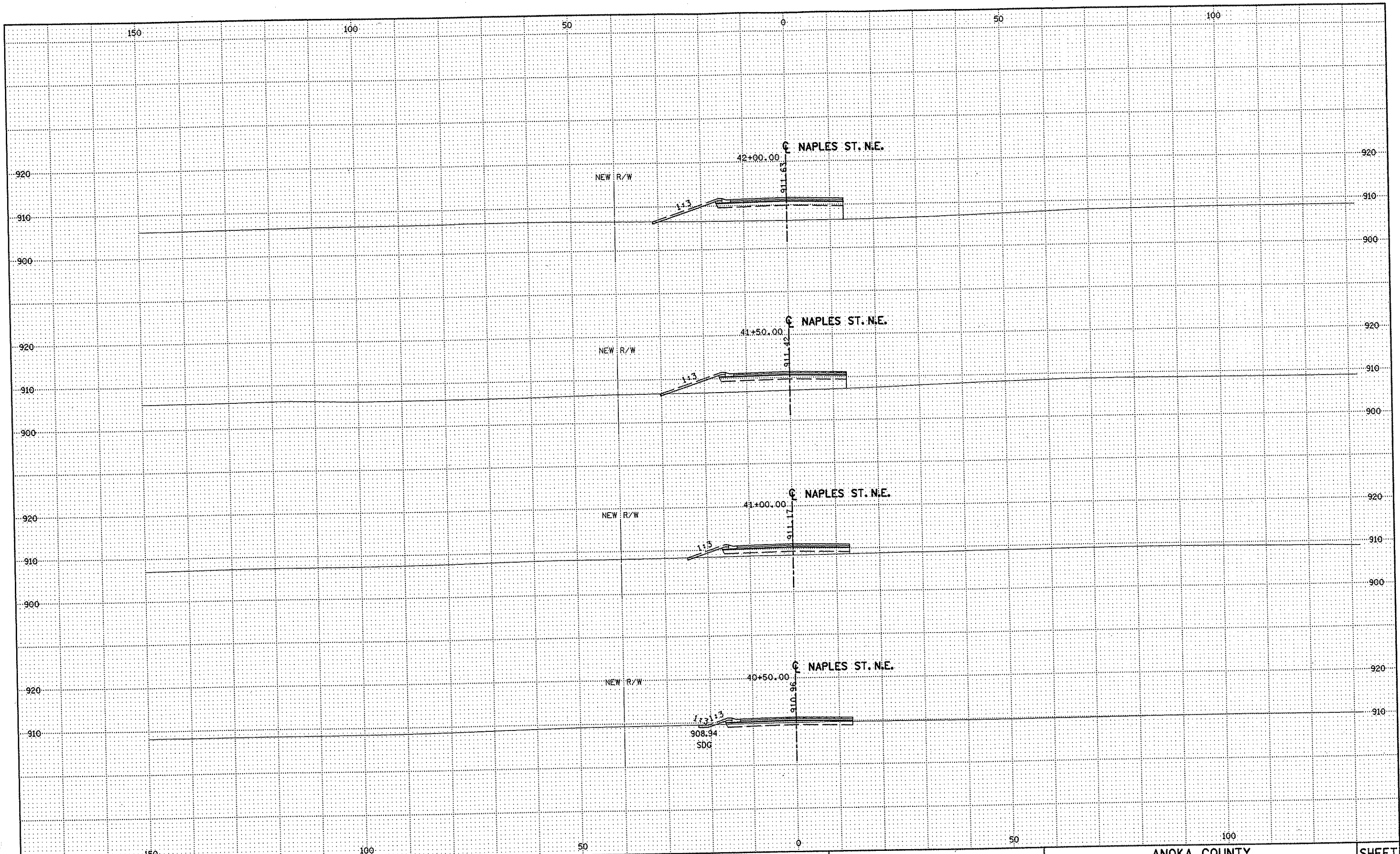
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 38+50 TO STA. 40+00

SHEET
 546
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

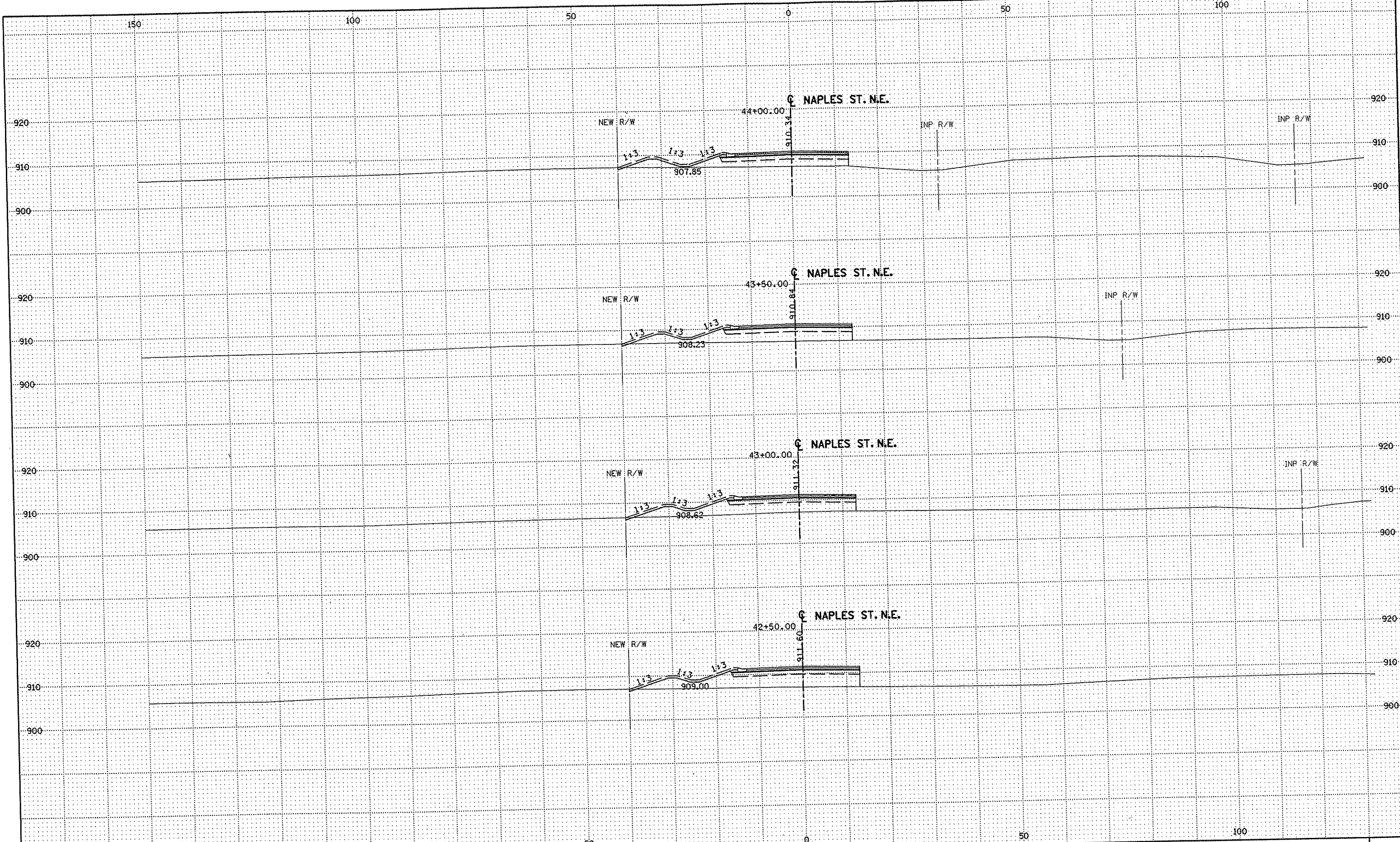
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DESIGN BY	DATE	S.P.	90-080-11
CHECKED BY	DATE	S.A.P.	02-652-02
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		S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
NAPLES ST. N.E. STA. 40+50 TO STA. 42+00

SHEET
547
OF
559



NO	DATE	BY	CKD	APPR	REVISION

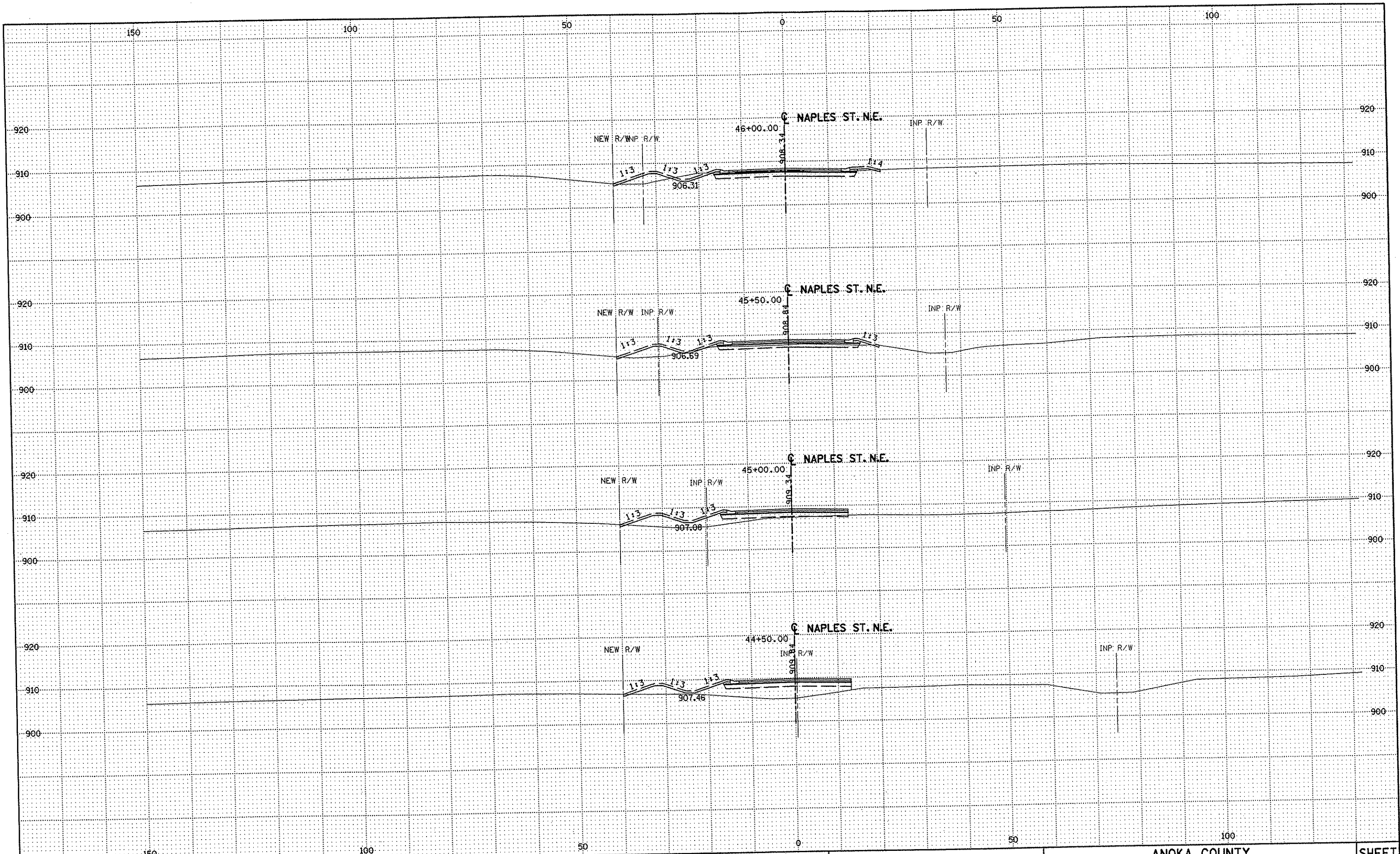
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		S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 42+50 TO STA. 44+00

SHEET
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NO	DATE	BY	CKD	APPR	REVISION

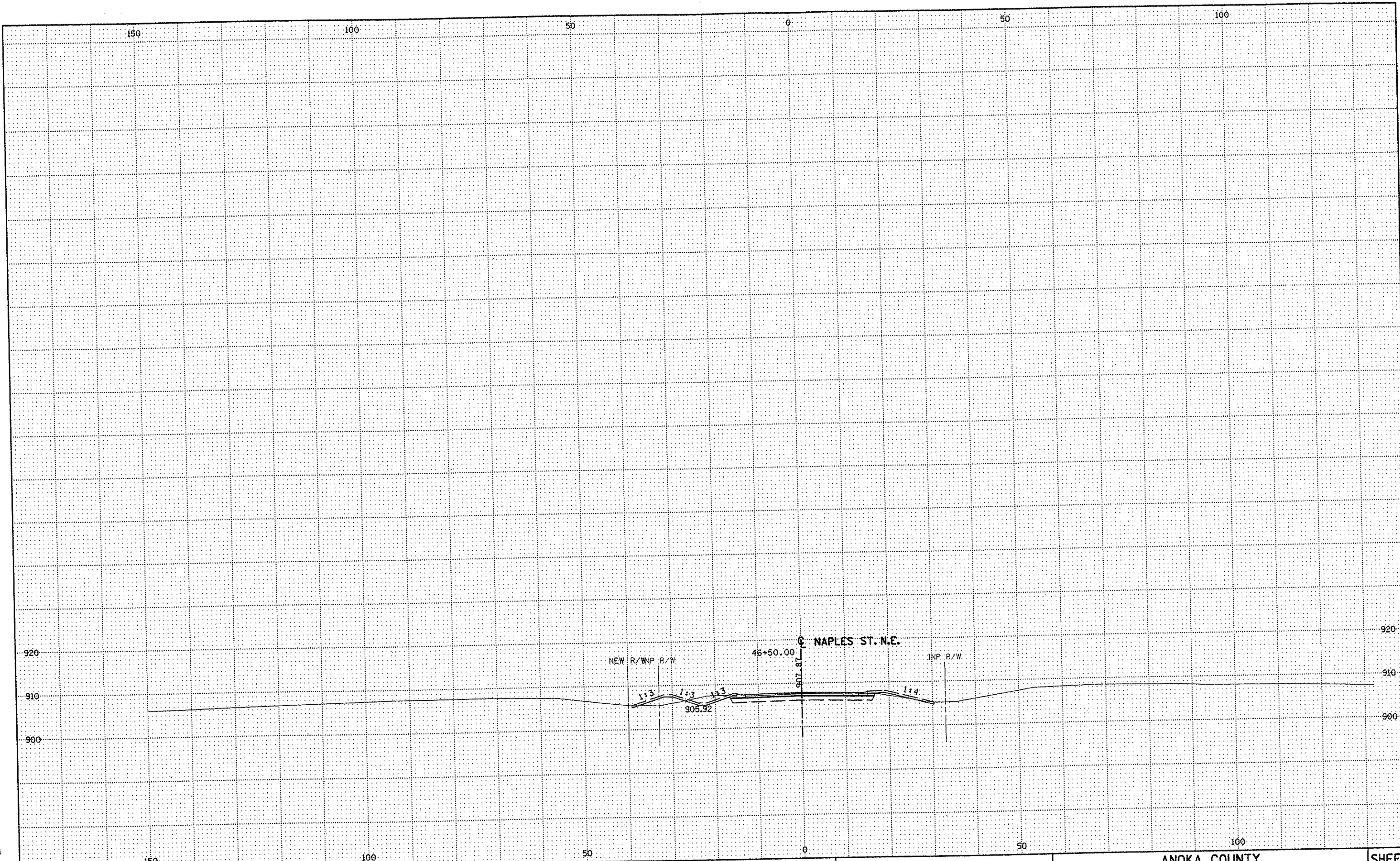
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 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 44+50 TO STA. 46+00

SHEET
 549
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part4\roadway3\drawings\sec\xsplannap2.dgn 11/20/01

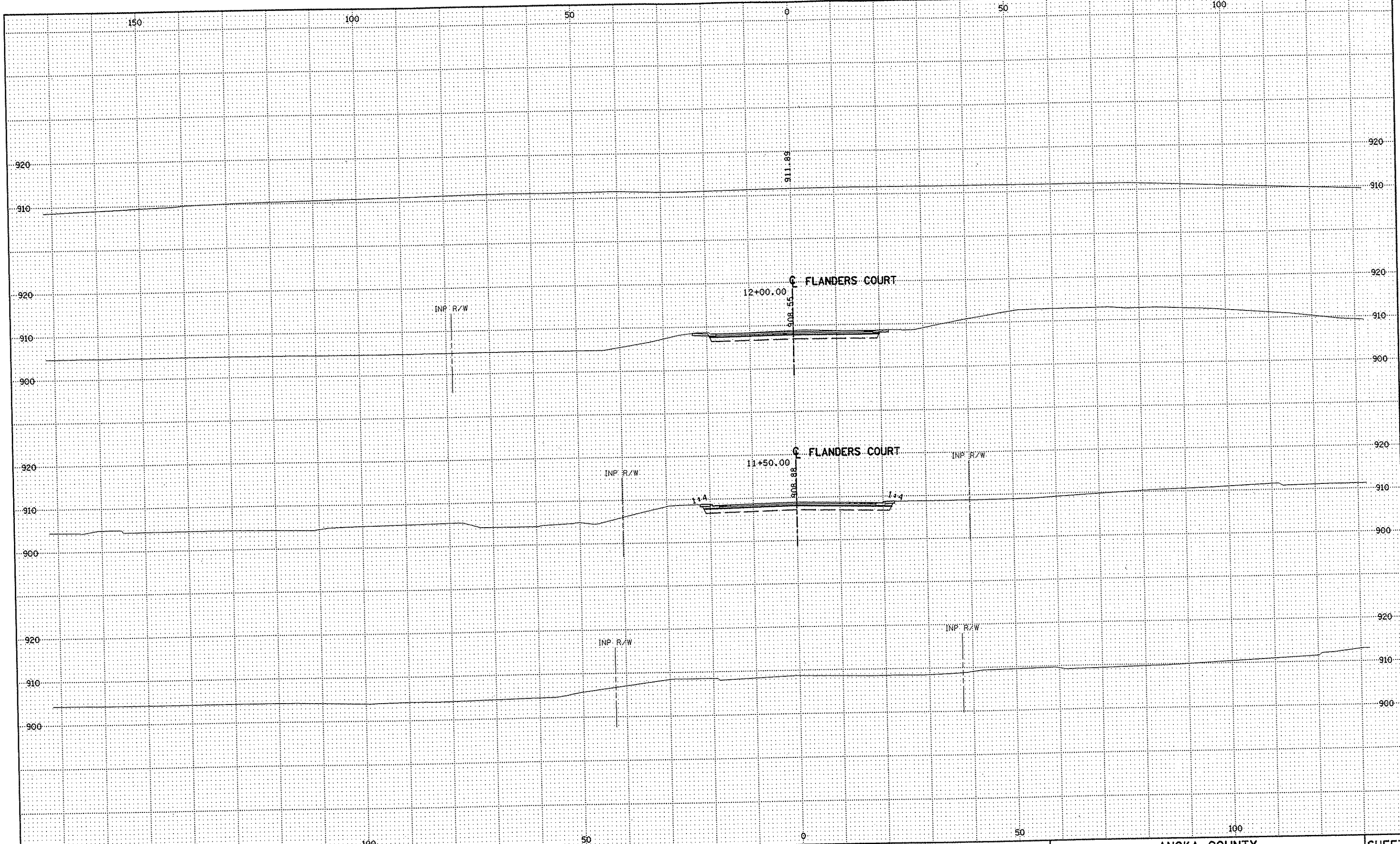
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S.P.	0280-50 (TH 35W)
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S.A.P.	02-652-02
S.A.P.	02-652-03
S.A.P.	02-652-04
S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 NAPLES ST. N.E. STA. 46+50

SHEET
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 OF
 559



NO	DATE	BY	CRD	APPR	REVISION

NAME: k:\site\pre\ca11749\part4\roadway3\drawings\xsec\xsplan8.dgn 11/20/01

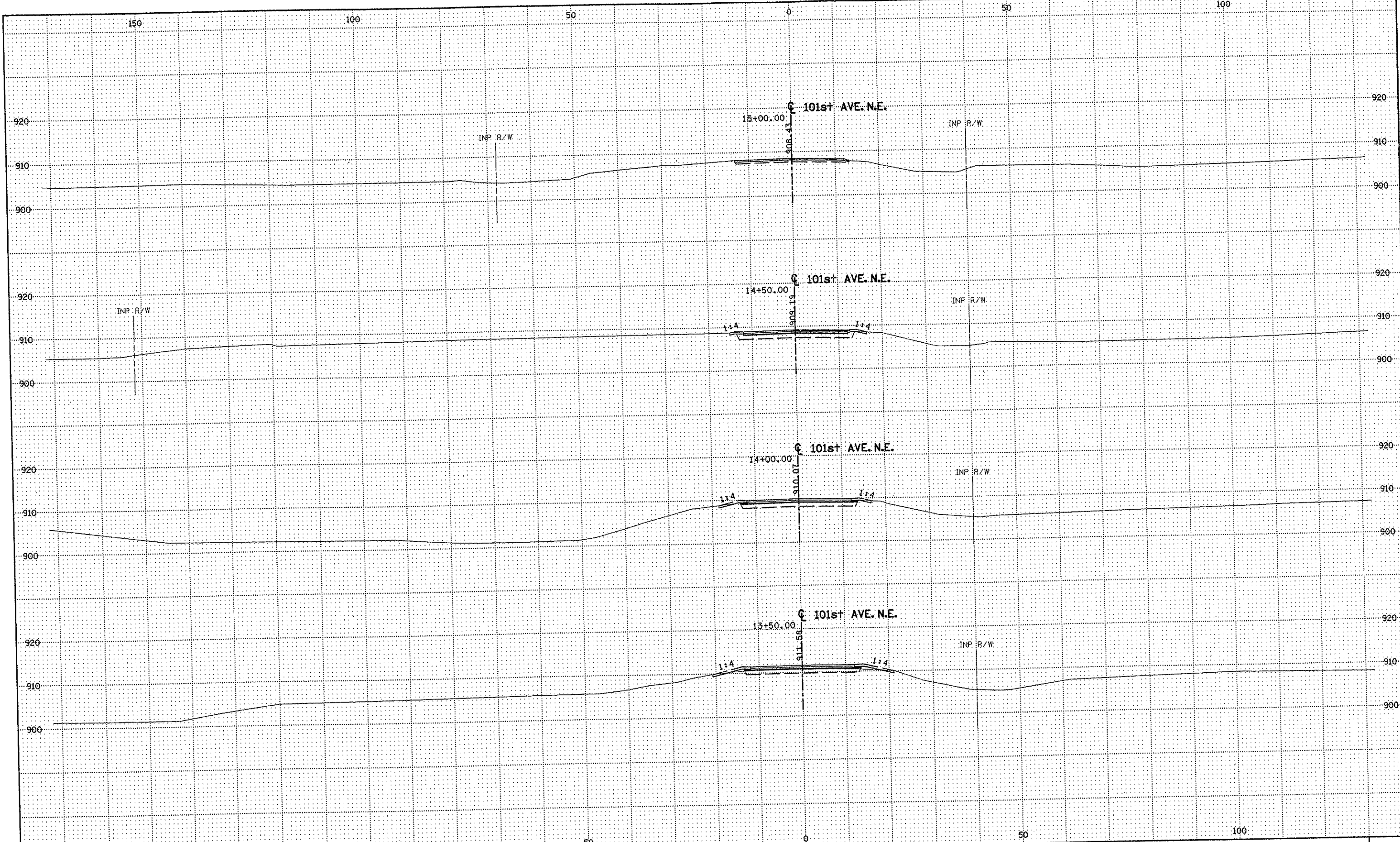
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S.P. 0280-50 (TH 35W)
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 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 FLANDERS CT. STA. 11+50 TO STA. 12+00

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NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part4\roadway3\drawings\sec\xsplan8.dgn 11/20/01

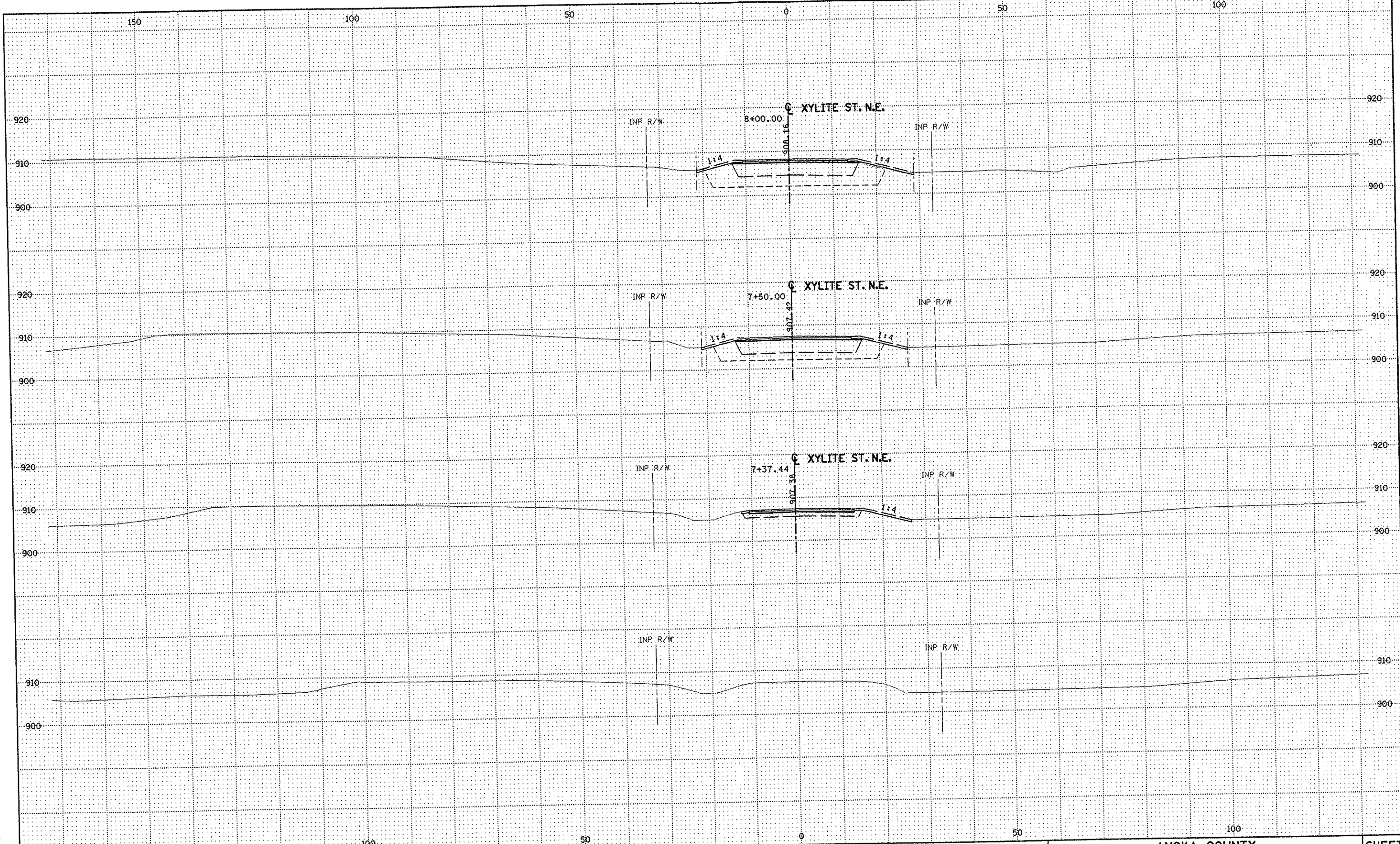
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DESIGN BY RRC DATE 9-20-01
CHECKED BY JMW DATE 9-24-01

S.P. 0280-50 (TH 35W)
S.P. 90-080-11
S.A.P. 02-652-02
S.A.P. 02-652-03
S.A.P. 02-652-04
S.A.P. 106-020-021, 106-020-022

TKDA
TOLTZ, KING, DUVALL, ANDERSON
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ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
101st AVE. N.E. STA. 13+50 TO STA. 15+00

SHEET
552
OF
559



NO	DATE	BY	CKD	APPR	REVISION

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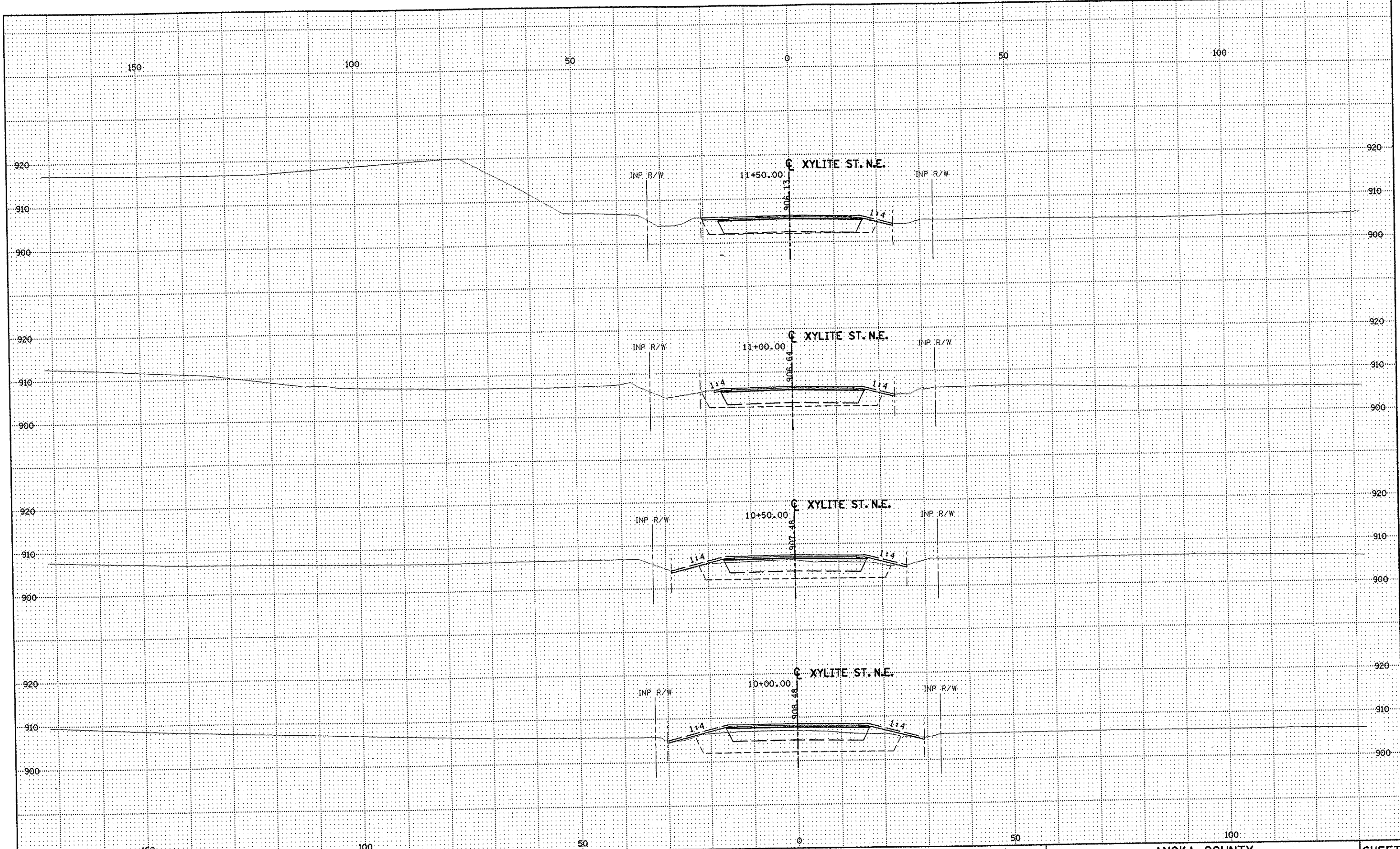
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DESIGN BY	RRC	DATE	9-20-01	S.P.	90-080-11
CHECKED BY	JMW	DATE	9-24-01	S.A.P.	02-652-02
				S.A.P.	02-652-03
				S.A.P.	02-652-04
				S.A.P.	106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 XYLITE ST. N.E. STA. 7+37.44 TO STA. 8+00

SHEET
 553
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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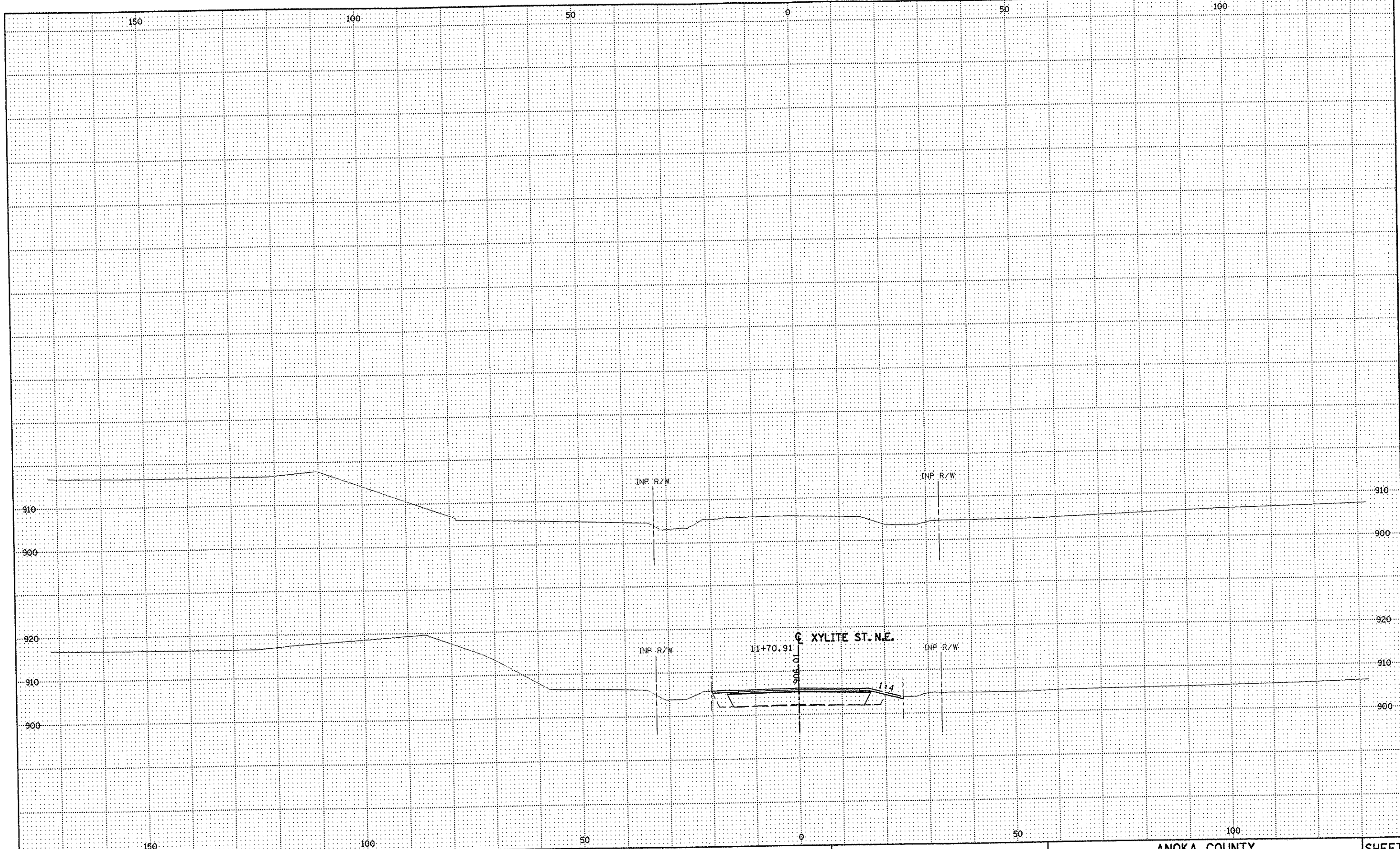
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 XYLITE ST. N.E. STA. 10+00 TO STA. 11+50

SHEET
 554
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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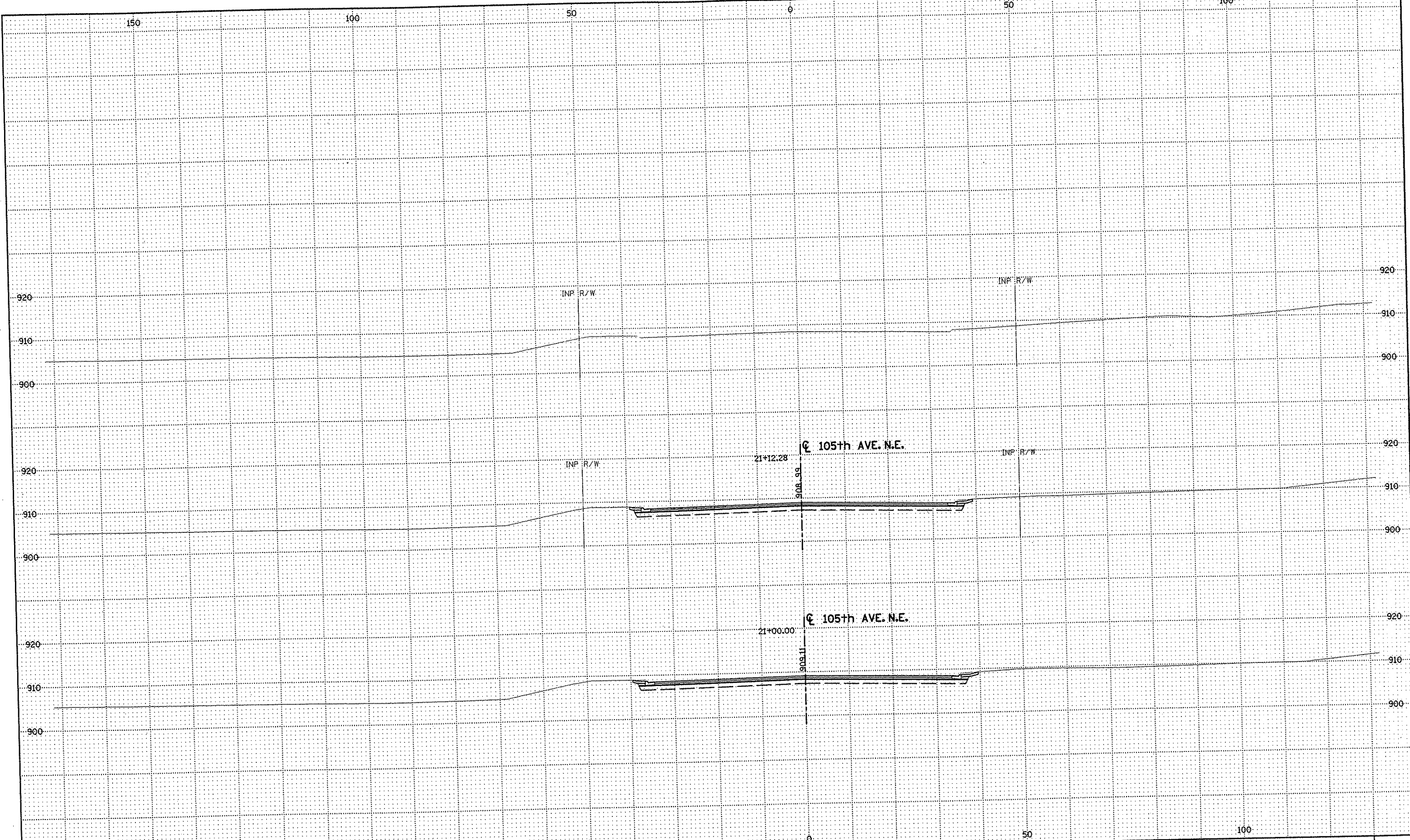
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA TOLTZ, KING, DUVALL, ANDERSON
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 XYLITE ST. N.E. STA. 11+70.91

SHEET
 555
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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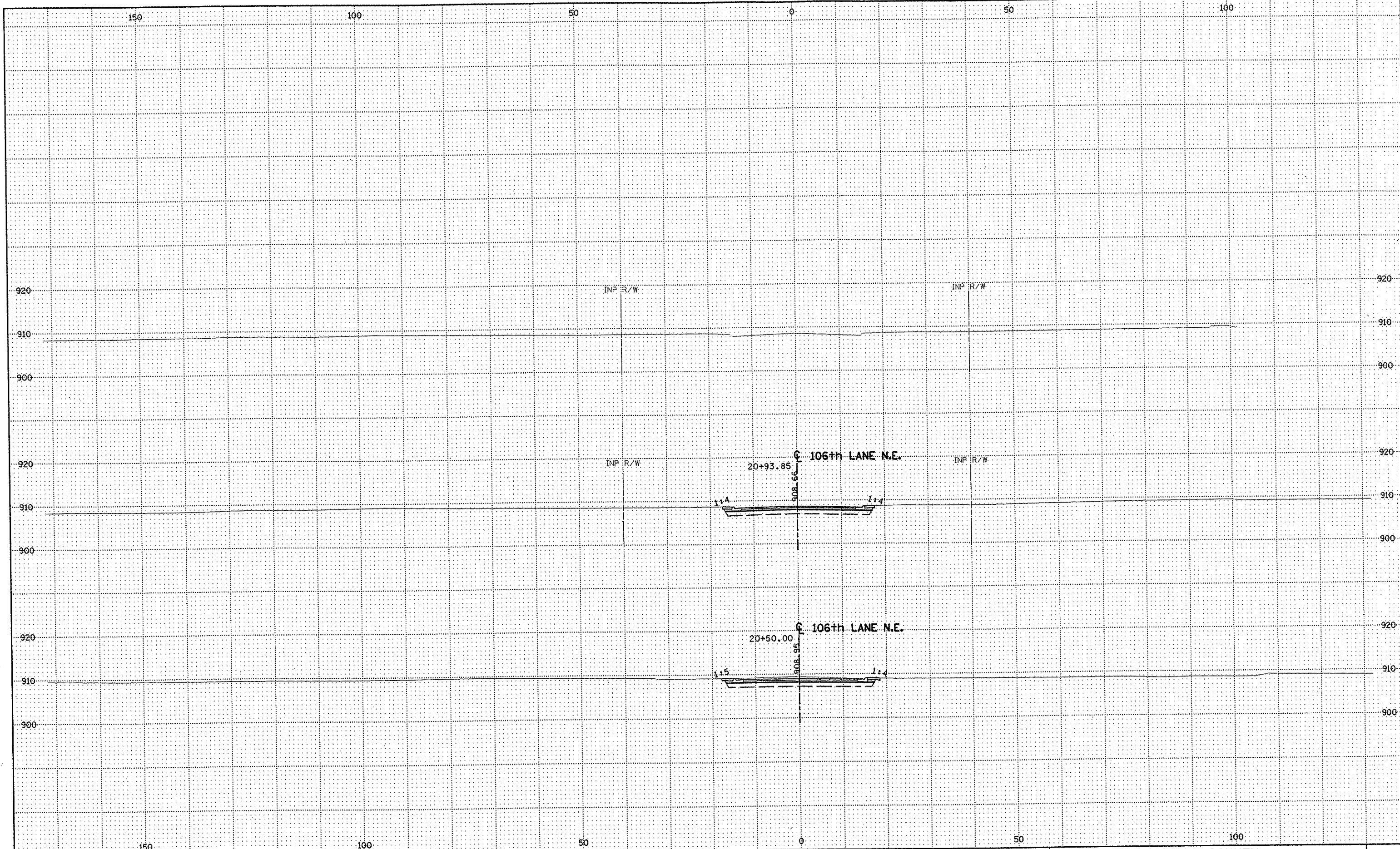
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 105th AVE. N.E. STA. 21+00 TO STA. 21+12.28

SHEET
 556
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

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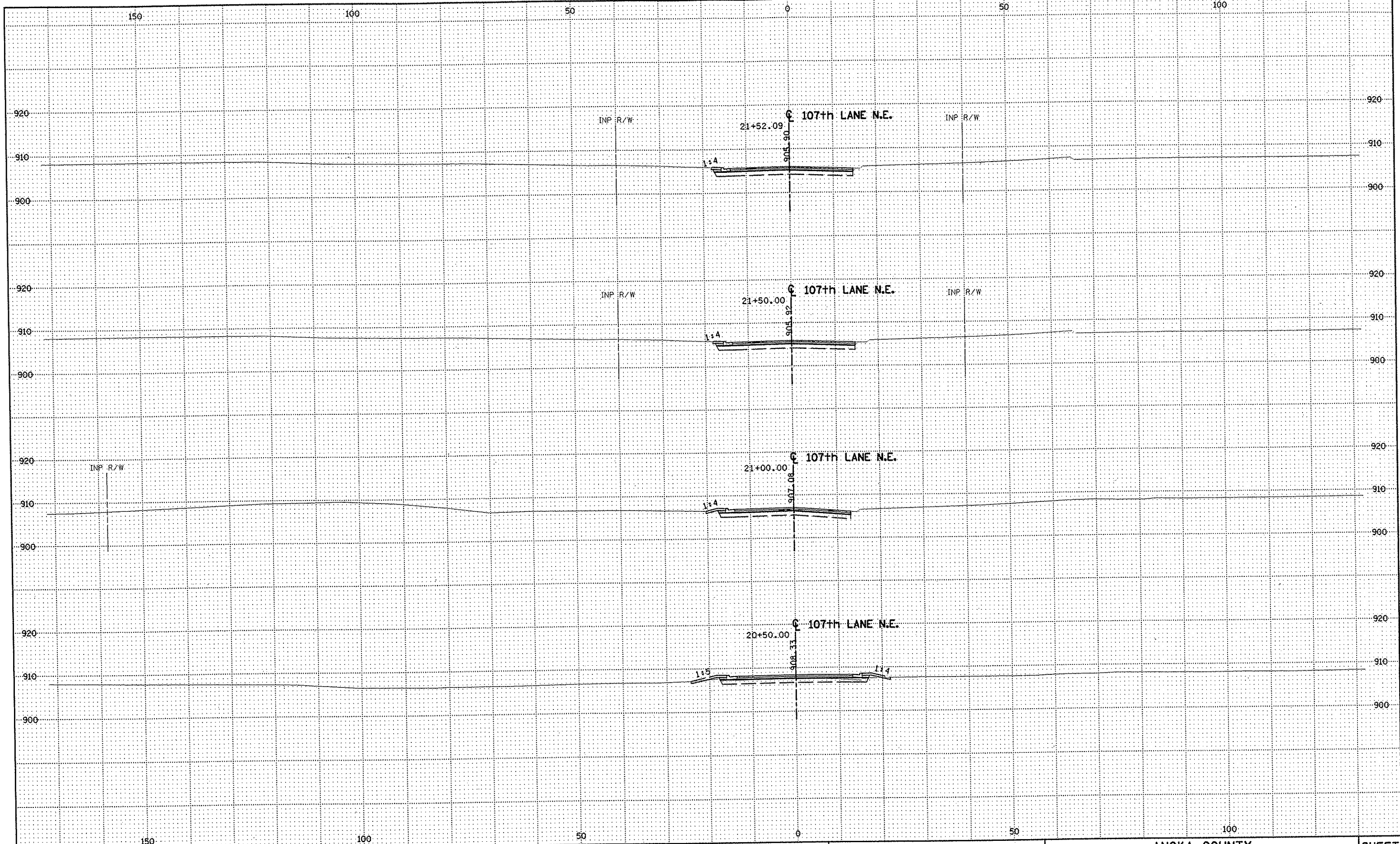
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 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 106th LANE N.E. STA. 20+50 TO STA. 20+93.85

SHEET
 557
 OF
 559



NO	DATE	BY	CKD	APPR	REVISION

DRAWN BY RRC DATE 9-21-01
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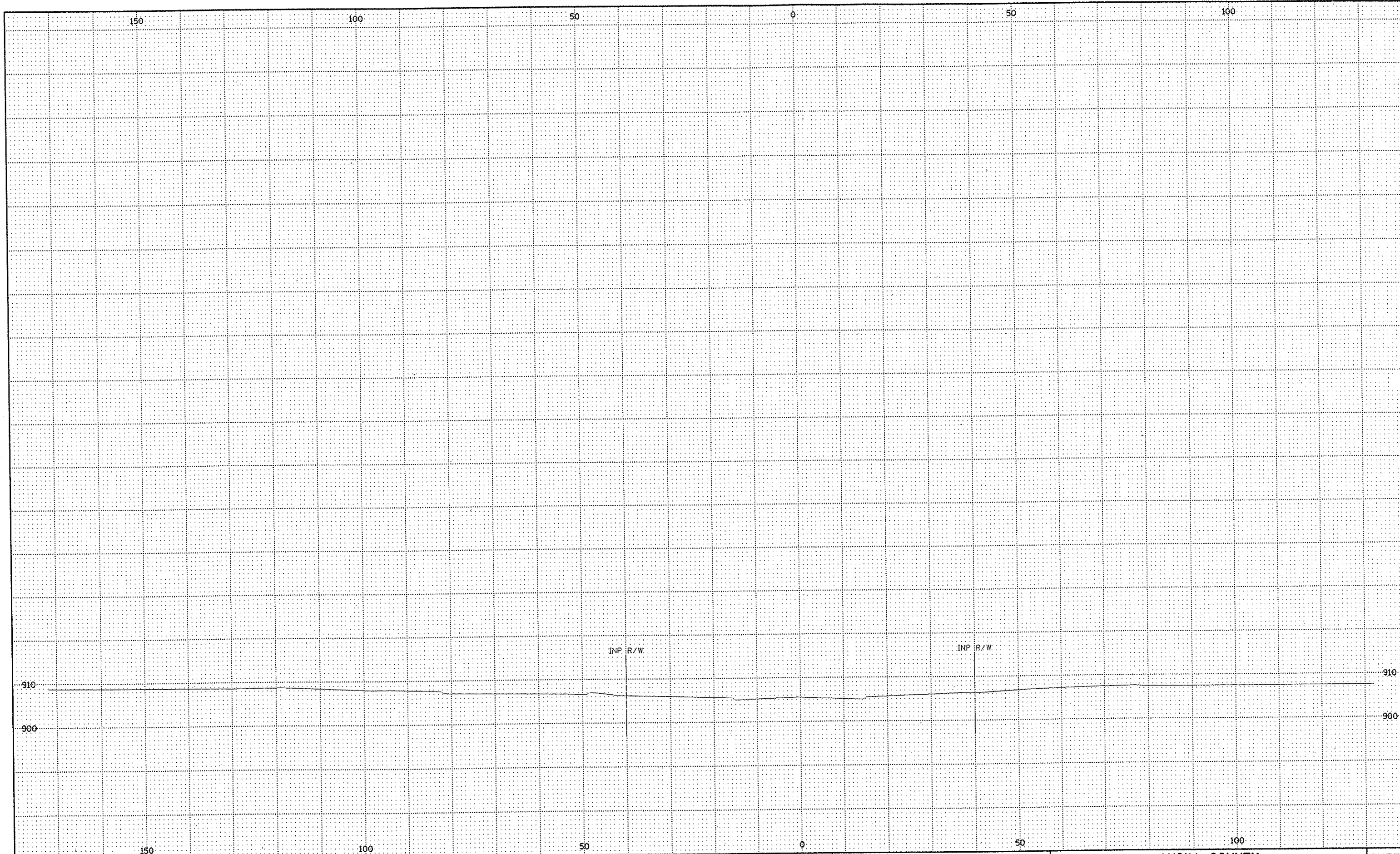
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 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 107th LANE N.E. STA. 20+50 TO STA. 21+52.09

SHEET
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 OF
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NAME: k:\site\proj\c11749\part4\roadway3\drawings\xsec\xsplan12.dgn 11/20/01



NO	DATE	BY	CKD	APPR	REVISION

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DRAWN BY RRC DATE 9-21-01
 DESIGN BY RRC DATE 9-20-01
 CHECKED BY JMW DATE 9-24-01

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 S.P. 90-080-11
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-021, 106-020-022

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 107th LANE N.E. STA. 22+00

SHEET
 559
 OF
 559

DESIGN DATA

1996 AND CURRENT INTERIM A.A.S.H.T.O. DESIGN SPECIFICATIONS. LOAD FACTOR DESIGN METHOD. DESIGN LOADING: HS 25 LOAD DEAD LOAD INCLUDES 17 PSF ALLOWANCE FOR FUTURE WEARING COURSE MODIFICATIONS.

MAXIMUM ALLOWABLE DESIGN STRESSES: REINFORCED CONCRETE: f'c = 4000 psi; n = 8 fy = 60,000 psi; (REINFORCEMENT) PRESTRESSED CONCRETE: f'c = 8500 psi; n = 1 fy = 270,000 psi; FOR 0.6"Ø LOW RELAXATION STRANDS

A.D.T. DATA: 15232 (1999), 25545 (2021) - OVER D.H.V. (2021): 2170 H.C.A.D.T. (2021): 1405 DESIGN SPEED = 50 M.P.H. (OVER) DECK AREA = 23067 SQ. FT. OPERATING RATING = HS-51

FOR 'LIST OF SHEETS' SEE SHEET 2.

CONSTRUCTION NOTES

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

BRIDGE SEAT REINFORCEMENT SHALL BE CAREFULLY PLACED TO AVOID INTERFERENCE WITH DRILLING HOLES FOR ANCHOR RODS. THE BEAMS SHALL BE ERRECTED IN FINAL POSITION PRIOR TO DRILLING HOLES FOR AND PLACING ANCHOR RODS.

THE FIRST TWO DIGITS OF EACH BAR MARK INDICATE THE BAR SIZE. (IN MILLIMETERS) BARS MARKED WITH THE SUFFIX "E" SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301.

NOTES:

THE DESIGN ALIGNMENT DATA FOR EXISTING T.H. 35W DOES NOT AGREE WITH THE AS-BUILT CONDITION. THE ALIGNMENT DATA SHOWN ON THESE PLANS REPRESENTS BEST-FIT CURVES BASED ON SURVEY INFORMATION ON THE EXISTING PAVEMENT. THE FUTURE ALIGNMENT OF T.H. 35W IS TO BE SHIFTED BY 6 FEET, BUT THE EXACT ALIGNMENT WILL HAVE TO BE DETERMINED IN THE CONTEXT OF THE FUTURE T.H. 35W REALIGNMENT PROJECT.

EXISTING BRIDGE NO. 9829 WILL BE REMOVED IN ITS ENTIRETY PRIOR TO THE CONSTRUCTION OF PROPOSED BRIDGE NO. 02566. THE FINAL BRIDGE PLAN SHEETS WILL BE DETAILED SUCH THAT THE BRIDGE CAN BE CONSTRUCTED IN TWO STAGES. THE CONTRACTOR WILL NOT BE REQUIRED TO FOLLOW THE STAGED CONSTRUCTION. THE ONLY REQUIREMENT IS TO HAVE THE NORTH PORTION OF THE BRIDGE OPEN TO TRAFFIC BY A DATE TO BE SPECIFIED IN THE SPECIAL PROVISIONS. AESTHETIC TREATMENT PER E-MAIL CORRESPONDENCE FROM DAVE HALL ON 2/23/2001.

BENCH MARK ELEVATION: EL. 911.008 (M.S.L. 1929 ADJ.)

LOCATION: I.P. 9025 LOCATED ON THE SOUTH SIDE OF C.S.A.H. 52, 93 FEET EAST OF NAPLES.

C.S.A.H. 52 ANOKA COUNTY MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 02566

C.S.A.H. 52 (RADISSON ROAD) OVER T.H. 35W 54' PRESTRESSED CONCRETE BEAM SPANS (109'-FT & 120'-FT), 29'46'07" SKEW, 83'-0" ROADWAY (INCLUDING SHOULDERS) 12'-0" SIDEWALK. BRIDGE I.D. NO. 501

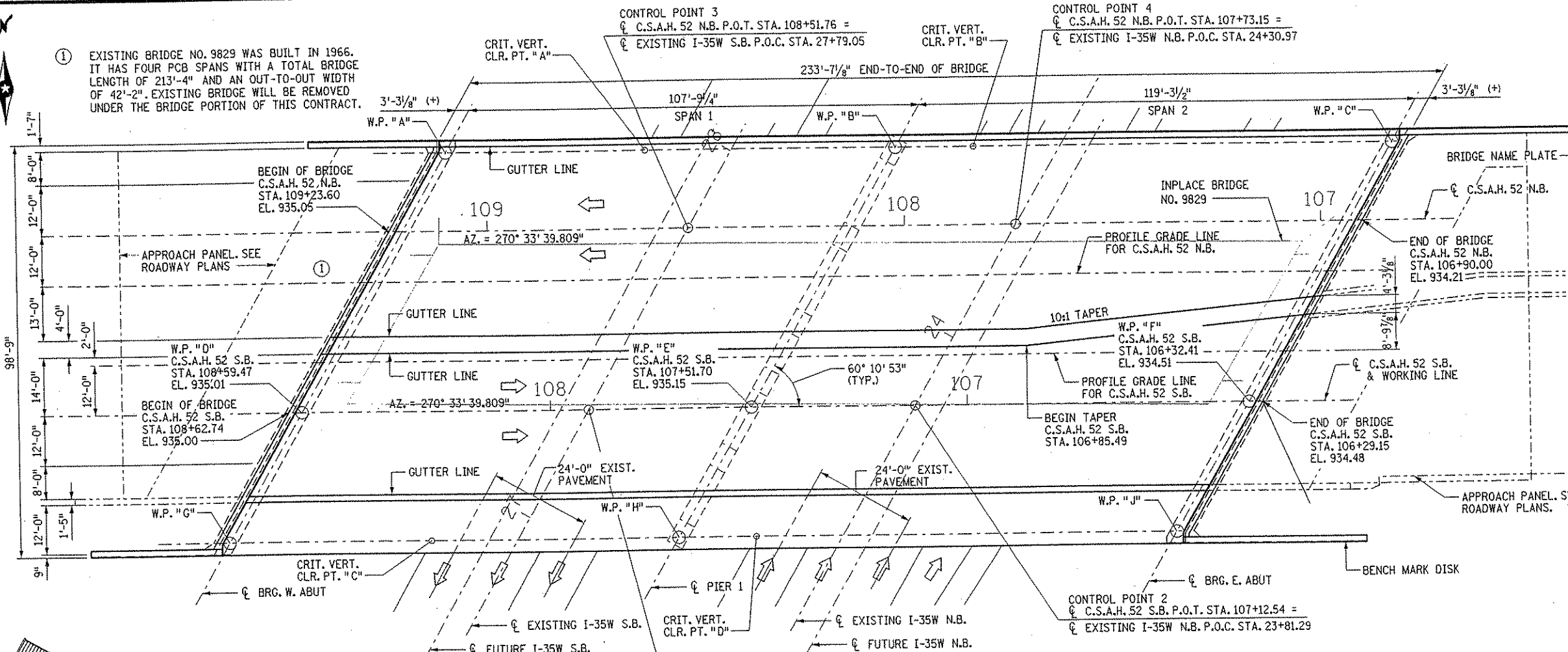
GENERAL PLAN AND ELEVATION

SEC. 27 TWP. 31N R. 23W CITY OF BLAINE ANOKA COUNTY

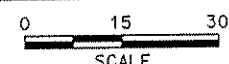
APPROVED: [Signature] 1/24/02 STATE BRIDGE ENGINEER DATE:

DES: GM DR: SJS 02566 CHK: MJC CHK: GM

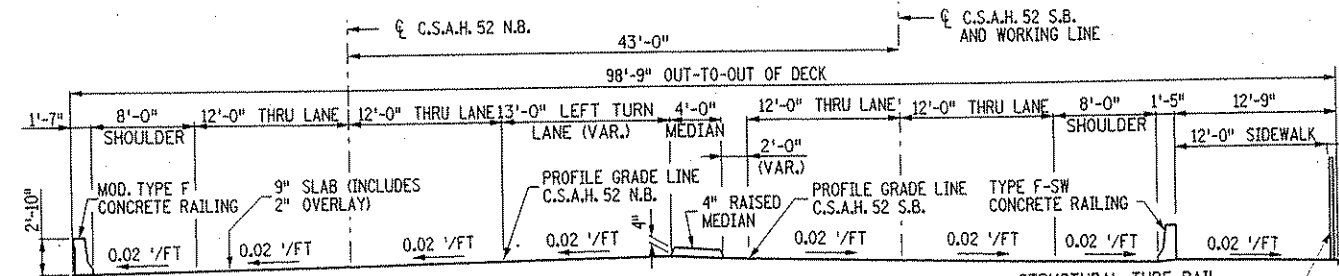
Sheet No. 1 of 56 Sheets



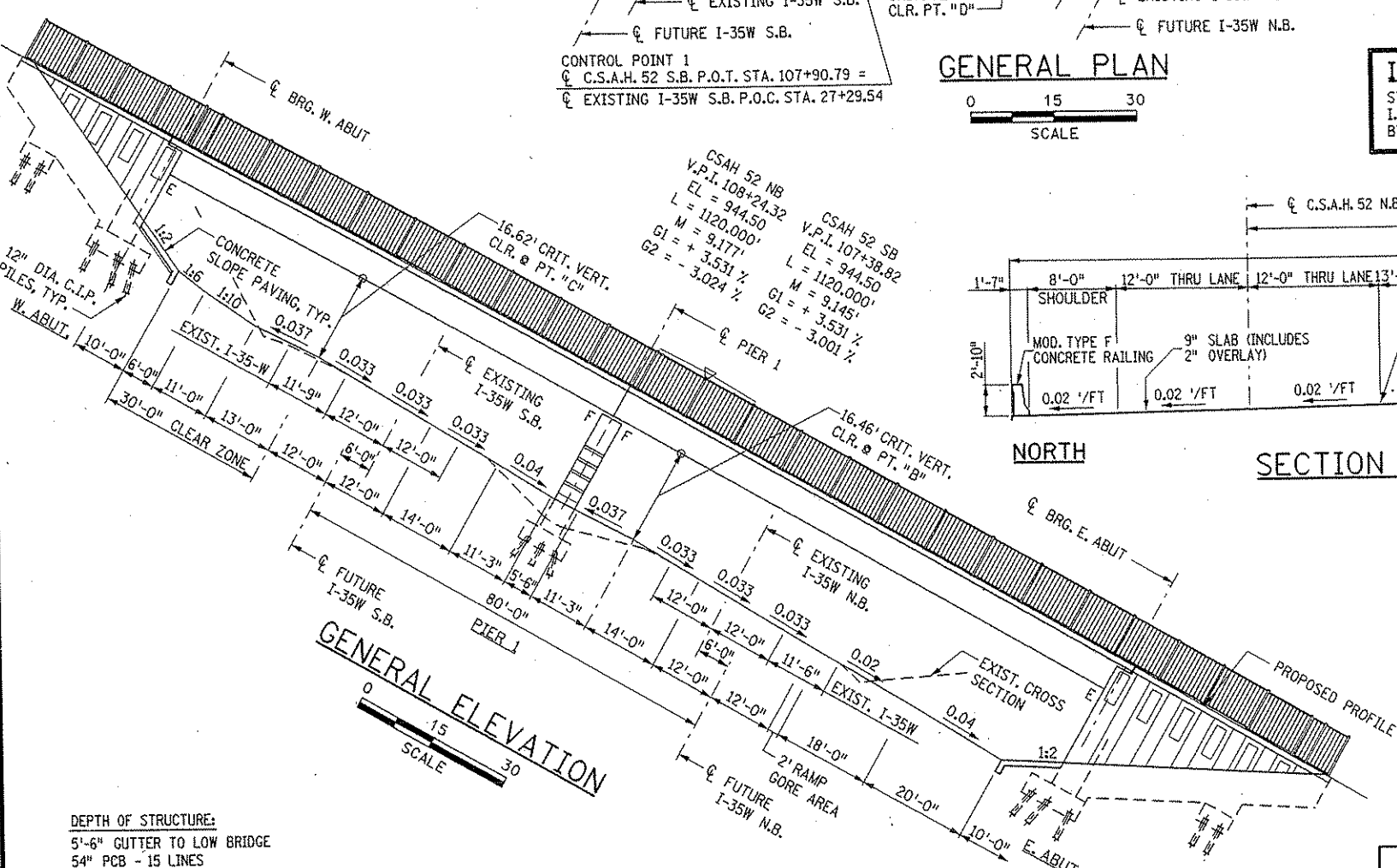
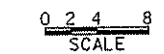
GENERAL PLAN



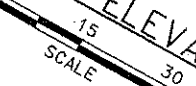
IMPORTANT NOTE: STATIONING FOR BRIDGE RUNS FROM RIGHT TO LEFT, I.E. FROM EAST TO WEST. STATIONING IS GOVERNED BY STATIONING FOR C.S.A.H. 52 (RADISSON ROAD).



SECTION THROUGH FINISHED BRIDGE DECK



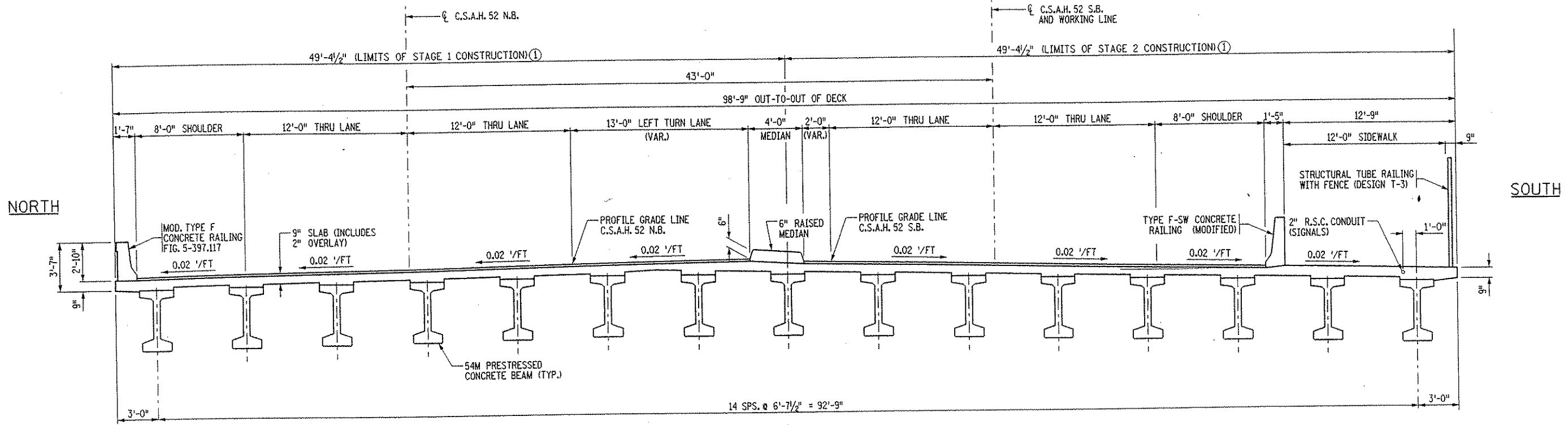
GENERAL ELEVATION



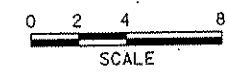
DEPTH OF STRUCTURE: 5'-6" GUTTER TO LOW BRIDGE 54" PCB - 15 LINES

Professional Engineer stamp for TKDA (Toltz, King, O'Connell, Anderson and Associates, Incorporated) with signature of Gottfried Millner, dated 01/22/2002.

DATE: 01/22/2002 TIME: 01:52:44 PM FILENAME: k:\d-f-anokacy\17490\hwy-brdg\part4\brdge\finale.dgn



TYPICAL SECTION



① THESE BRIDGE PLANS HAVE BEEN DEVELOPED FOR THE STAGED CONSTRUCTION LIMITS SHOWN ABOVE. HOWEVER, DUE TO THE PROJECT CONSTRUCTION SCHEDULE, THE CONTRACTOR WILL BE REQUIRED TO COMPLETE BOTH BRIDGE CONSTRUCTION STAGES WITHIN PROJECT STAGE A1 AS SHOWN IN THE ROADWAY STAGING PLAN AND IN THE SPECIAL PROVISIONS, DIVISION S. THE WORK DESCRIBED IN BRIDGE STAGES 1 & 2 MAY PROCEED CONCURRENTLY.

SUMMARY OF QUANTITIES FOR ENTIRE BRIDGE			
ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY
2401.501	STRUCTURAL CONCRETE (1A43)	CU.YD.	483 (P)
2401.501	STRUCTURAL CONCRETE (3Y43)	CU.YD.	1062 (P)
2401.512	BRIDGE SLAB CONCRETE (3Y36)	SQ.FT.	23060 (P)
2401.513	TYPE F MODIFIED RAILING CONCRETE (3Y46)	LIN.FT.	306 (P)
2401.513	TYPE F-SW RAILING CONCRETE (3Y46)	LIN.FT.	234 (P)
2401.516	RAISED MEDIAN CONCRETE (3Y46)	SQ.FT.	950 (P)
2401.541	REINFORCEMENT BARS	POUND	44320 (P)
2401.541	REINFORCEMENT BARS (EPOXY-COATED)	POUND	192670 (P)
2401.601	STRUCTURE EXCAVATION	LUMP SUM	1
2402.591	EXPANSION JOINT DEVICES TYPE 4	LIN.FT.	224 (P)
2402.595	BEARING ASSEMBLY	EACH	60
2402.603	STRUCTURAL TUBE RAILING WITH FENCE (DESIGN T-3)	LIN.FT.	305
2404.501	CONCRETE WEARING COURSE (3U17A)	SQ.FT.	26710 (P)
2405.502	PRESTRESSED CONCRETE BEAMS 54"	LIN.FT.	3423 (P)
2405.511	DIAPHRAGMS FOR TYPE 54" PRESTRESSED BEAMS	LIN.FT.	558 (P)
2442.501	REMOVE OLD BRIDGE	LUMP SUM	1
2452.507	CAST-IN-PLACE CONCRETE PILING DELIVERED 12"	LIN.FT.	12010
2452.508	CAST-IN-PLACE CONCRETE PILING DRIVEN 12"	LIN.FT.	12010
2452.519	CAST-IN-PLACE CONCRETE TEST PILE 90' LONG 12"	EACH	12
2452.802	PILE REDRIVING	EACH	6
2514.501	CONCRETE SLOPE PAVING	SQ.YD.	289 (P)
2545.509	CONDUIT SYSTEM (LIGHTING)	LUMP SUM	1
2545.509	CONDUIT SYSTEM (SIGNALS)	LUMP SUM	1
2502.801	DRAINAGE SYSTEM TYPE (B910)	LUMP SUM	1

② NON-PARTICIPATING ITEM

LIST OF SHEETS			
1	GENERAL PLAN AND ELEVATION	29	FRAMING PLAN - STAGE 2
2	TYPICAL SECTION AND QUANTITIES	30	PRESTRESSED BEAM TYPE 54M-109
3	BRIDGE LAYOUT	31	PRESTRESSED BEAM TYPE 54M-120
4	W. ABUTMENT - STAGE 1 PLAN & ELEVATION	32	SLAB REINFORCEMENT - STAGE 1
5	W. ABUTMENT - STAGE 1 FOOTING PLAN & REINFORCEMENT	33	SLAB REINFORCEMENT - STAGE 2
6	W. ABUTMENT - STAGE 1 REINFORCEMENT	34	SUPERSTRUCTURE DETAILS
7	W. ABUTMENT - STAGE 2 WINGWALL DETAILS	35	ABUTMENT CORNER DETAILS
8	W. ABUTMENT - STAGE 2 PLAN & ELEVATION	36	SUPERSTRUCTURE QUANTITIES
9	W. ABUTMENT - STAGE 2 FOOTING PLAN & REINFORCEMENT	37	SUPERSTRUCTURE BARLIST
10	W. ABUTMENT - STAGE 2 REINFORCEMENT	38	ELEVATION FOR TYPE F MODIFIED CONCRETE RAILING
11	W. ABUTMENT - STAGE 2 WINGWALLS	39	CONCRETE RAILING (TYPE F MODIFIED)
12	E. ABUTMENT - STAGE 1 PLAN & ELEVATION	40	ELEVATION FOR CONCRETE RAILING (TYPE F-SW)
13	E. ABUTMENT - STAGE 1 FOOTING PLAN & REINFORCEMENT	41	CONCRETE RAILING (TYPE F-SW)
14	E. ABUTMENT - STAGE 1 REINFORCEMENT	42	ELEVATION FOR STRUCTURAL TUBE RAILING WITH FENCE (DESIGN T-3)
15	E. ABUTMENT - STAGE 1 WINGWALL DETAILS	43	STRUCTURAL TUBE RAILING WITH FENCE (DESIGN T-3)
16	E. ABUTMENT - STAGE 2 PLAN & ELEVATION	44	WATERPROOF EXPANSION DEVICE WITH TYPE F BARRIER
17	E. ABUTMENT - STAGE 2 FOOTING PLAN & REINFORCEMENT	45	WATERPROOF EXPANSION DEVICE WITH SIDEWALK
18	E. ABUTMENT - STAGE 2 REINFORCEMENT	46	WATERPROOF EXPANSION DEVICE SNOW PLOW PROTECTION
19	E. ABUTMENT - STAGE 2 WINGWALLS ELEVATION & REINFORCEMENT	47	CONDUIT SYSTEM (TRAFFIC LIGHTS)
20	ABUTMENT DETAILS	48	STD. DETAILS B101 & B201
21	PIER 1 - STAGE 1 PLAN & ELEVATION	49	STD. DETAILS B310 & B311
22	PIER 1 - STAGE 1 REINFORCEMENT	50	STD. DETAIL B830
23	PIER 1 - STAGE 2 PLAN & ELEVATION	51	STD. DETAILS B403 & B814
24	PIER 1 - STAGE 2 REINFORCEMENT	52	STD. DETAILS B303 & B910
25	SUBSTRUCTURE QUANTITIES	53	CONCRETE SLOPE PAVING UNDER BRIDGES
26	SUBSTRUCTURE BARLISTS (1 OF 2)	54	AS-BUILT BRIDGE DATA
27	SUBSTRUCTURE BARLISTS (2 OF 2)	55	BRIDGE SURVEY
28	FRAMING PLAN - STAGE 1	56	BRIDGE SURVEY PLAN & PROFILE

DATE: 01/25/2002 TIME: 08:15:58 AM FILENAME: k:\a-f\anokaty\jtr\4901\hwy-brdg\part4\bridge\super\typsec.dgn

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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
 SIGNED: *Gottfried Miller* GOTTFRIED MILLNER
 DATE 01/25/2002 REG. NO. 19879

TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

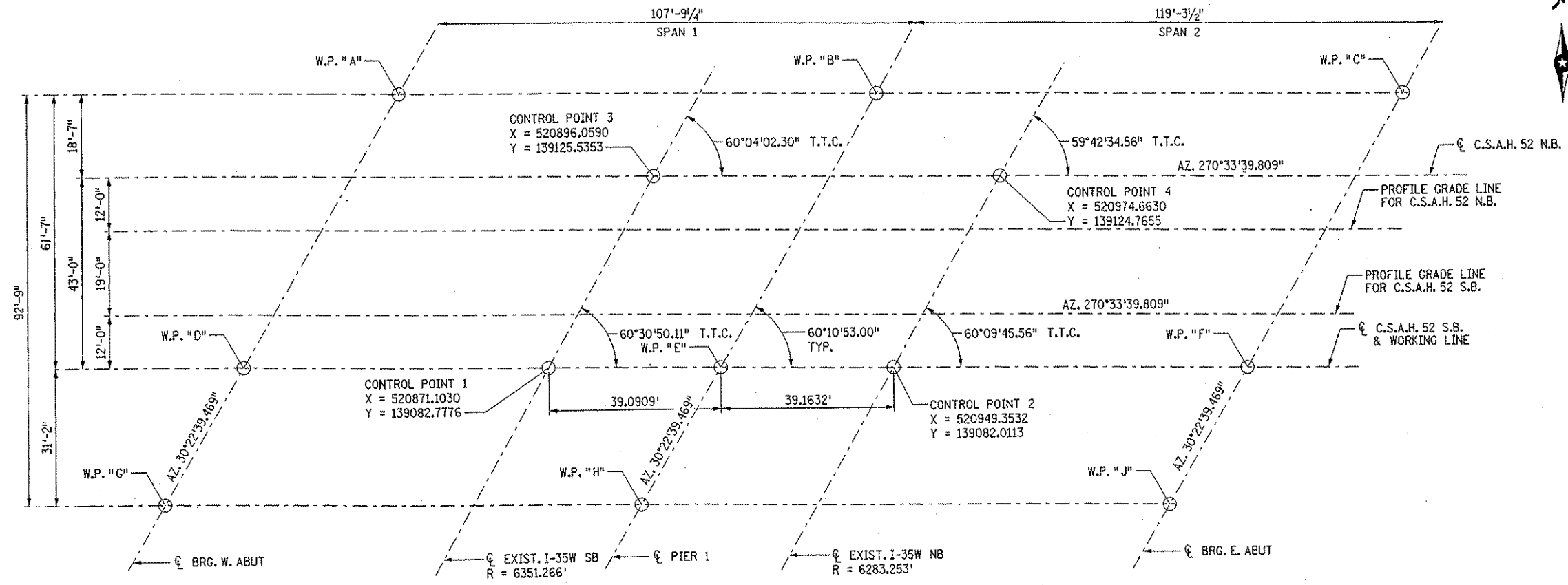
ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE: TYPICAL SECTION AND QUANTITIES

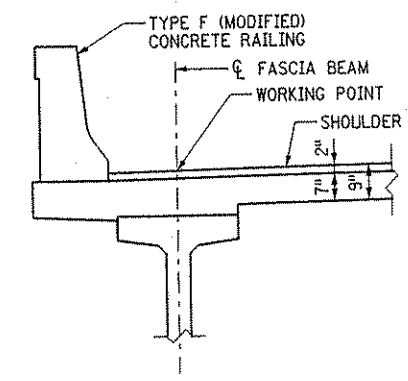
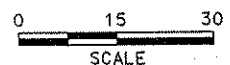
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 CHK: MJC CHK: GM
 Sheet No. 2 of 56 Sheets

Bridge No. 02566

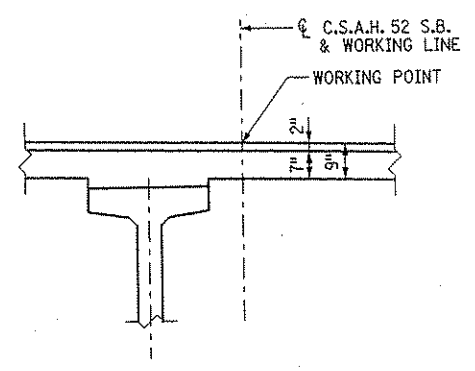
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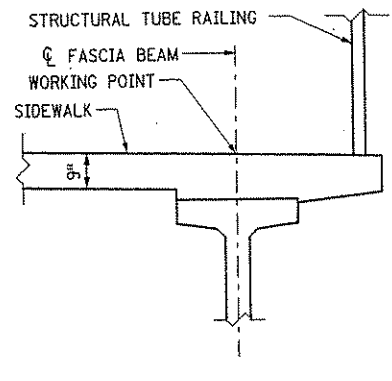
WORKING POINT LAYOUT



NORTH WORKING POINTS



☐ WORKING POINTS



SOUTH WORKING POINTS

WORKING POINT LOCATIONS

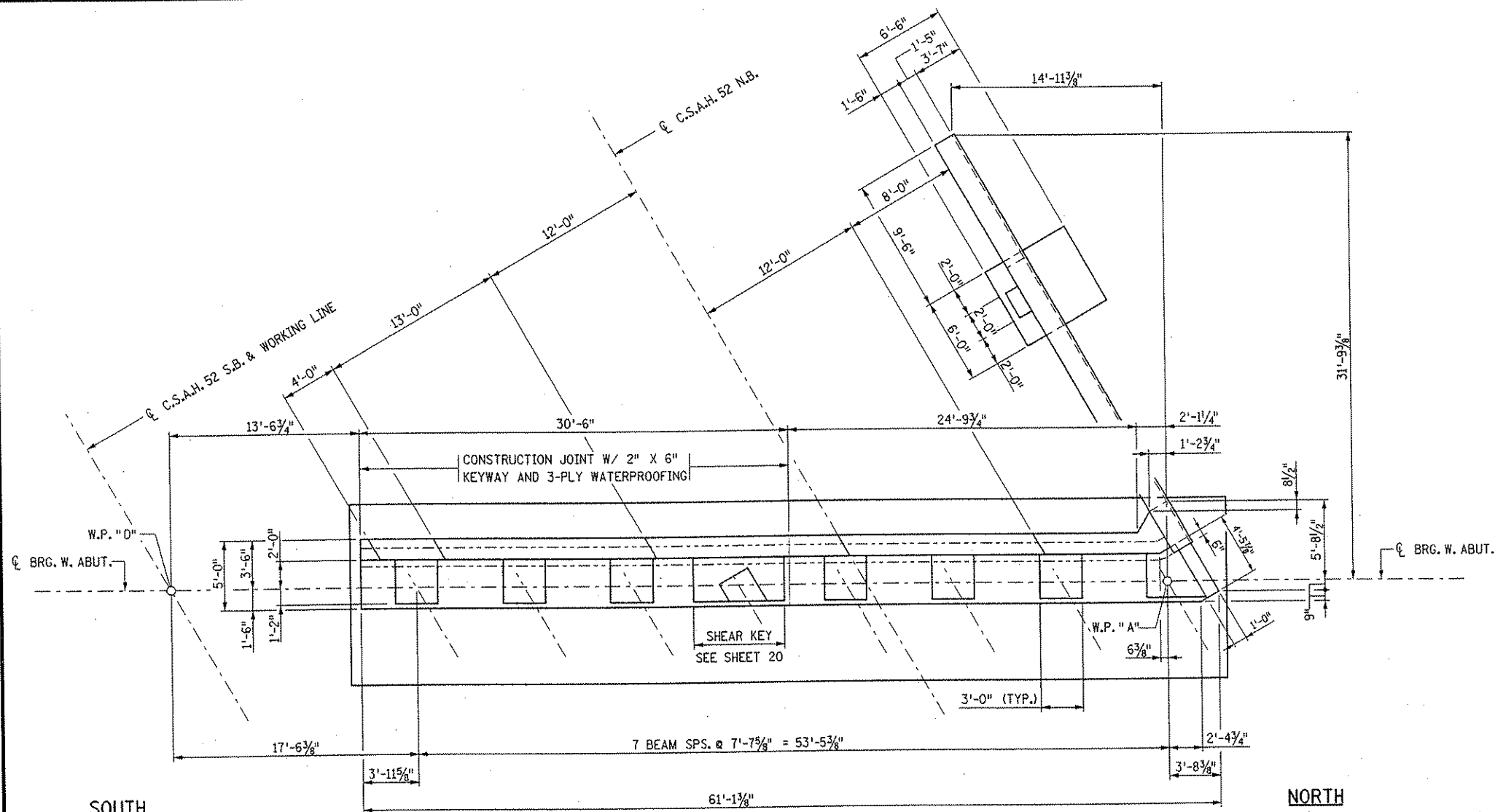
TOP OF RDWY TO BR. SEAT				
	W. ABUT.	PIER 1		E. ABUT.
		EXP.	FIX.	
SLAB THICKNESS	9"	9"	9"	9"
STOOL HEIGHT	3 1/4"	4 1/4"	4 1/4"	4 1/4"
BEAM HEIGHT	54"	54"	54"	54"
BEARING HEIGHT	4 5/8"	3 5/8"	2 3/4"	5 1/8"
TOTAL	70 1/8"	70 1/8"	70"	72 3/8"

IN SPAN 2, THE EIGHTH BEAM FROM THE NORTH REQUIRES A STOOL HEIGHT OF 4 3/4"

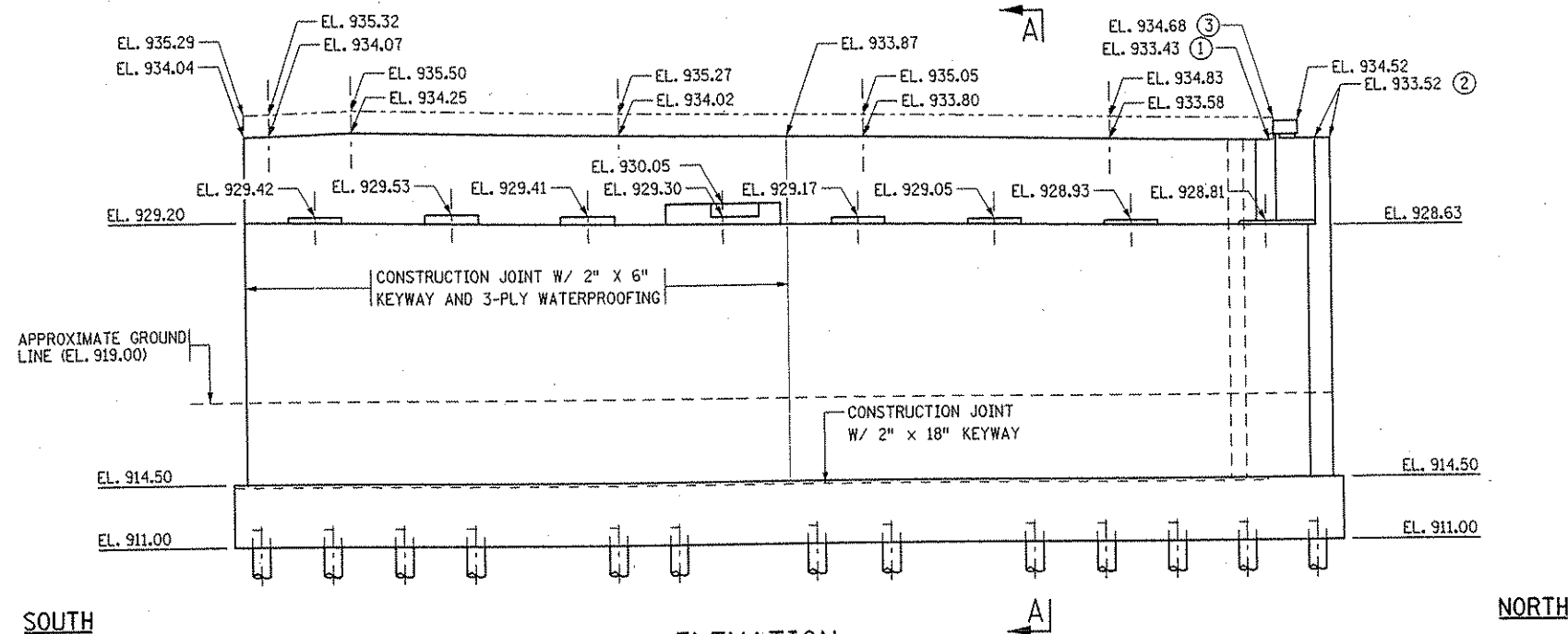
POINT	STATION (N.B.)	STATION (S.B.)	X-COORD.	Y-COORD.	DIMENSIONS BETWEEN WORKING POINTS								ELEVATIONS					
					A	B	C	D	E	F	G	H	J	TOP OF ROADWAY	TOP/RDWAY TO BR. SEAT	BRIDGE SEAT	POINT	
A	109+09.68	108+24.18	520,838.325	139,144.685		107.77		70.98	95.11				107.83	197.09	934.71	5.90	928.81	A
B	108+01.91	107+16.41	520,946.089	139,143.630			119.29		70.98	104.15	185.74		113.91	934.64	5.91	928.73	B	
C	106+82.82	105+97.12	521,085.374	139,142.481						70.98	295.17	95.81		933.76	6.03	927.73	C	
D		108+59.47	520,802.428	139,083.450					107.77		35.92	95.16		935.01	-	-	D	
E		107+51.70	520,910.192	139,082.395								119.29		935.15	-	-	E	
F		106+32.41	521,029.477	139,081.227										934.51	-	-	F	
G		108+77.33	520,784.281	139,052.460									107.77	934.30	5.90	928.40	G	
H		107+69.56	520,892.025	139,051.405										934.55	5.91	928.64	H	
J		106+50.27	521,011.310	139,050.236										934.03	6.03	928.00	J	

ALL WORKING POINT STATIONS ARE AS SHOWN IN THE TABLE. ELEVATIONS OF WORKING POINTS "A", "B" & "C" ARE WITH RESPECT TO P.G.L. OF C.S.A.H. 52 N.B. THE ELEVATIONS FOR ALL OTHER WORKING POINTS ARE DEFINED WITH RESPECT TO THE P.G.L. OF C.S.A.H. 52 S.B.

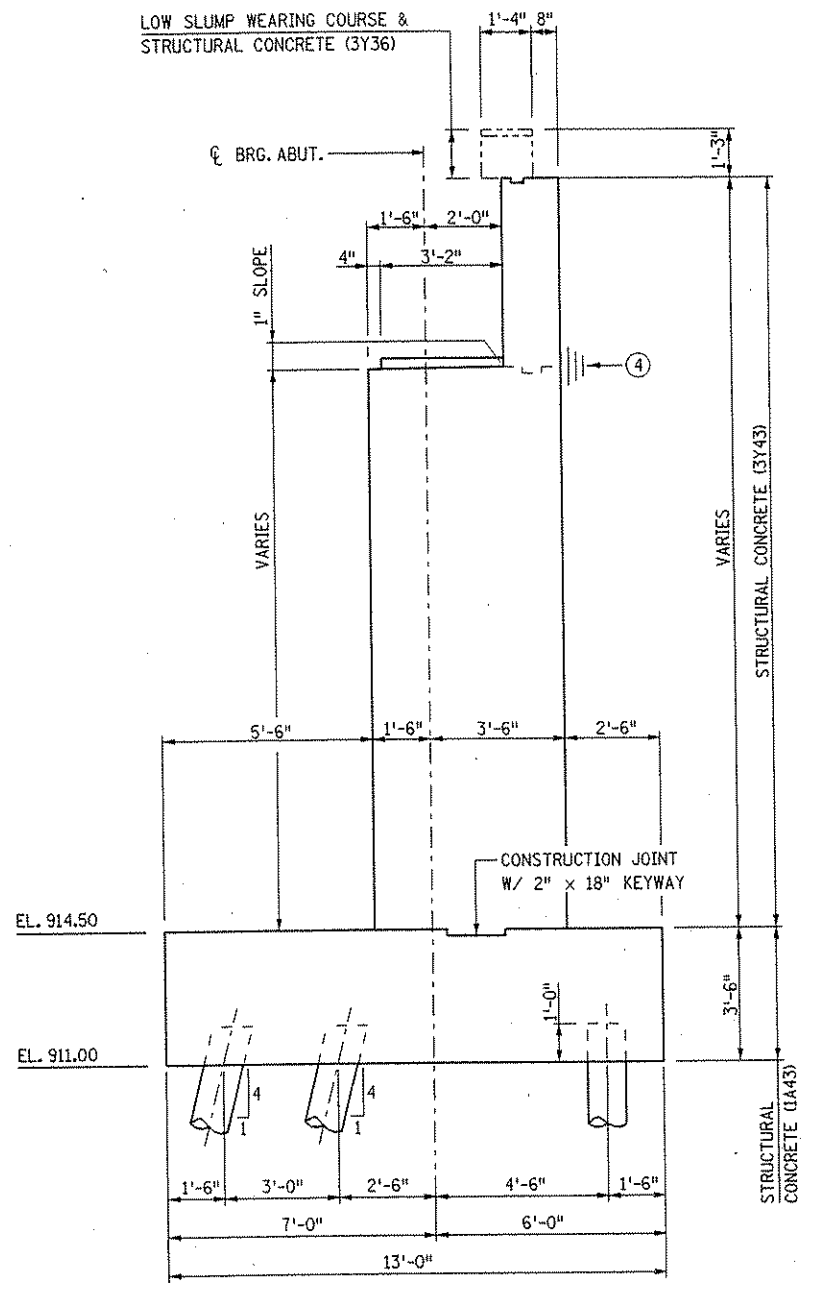
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PLAN



ELEVATION



TYPICAL SECTION A-A

NOTES:

- ① ELEVATION AT FRONT FACE OF BACKWALL
- ② ELEVATION AT TOP OF MASK WALL
- ③ ELEVATION AT FRONT FACE OF END BLOCK
- ④ PERMISSIBLE CONSTRUCTION JOINT W/ 2" x 6" KEYWAY & 3 PLY WATERPROOFING

	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 SIGNED: <i>Gottfried Millner</i> GOTTFRIED MILLNER DATE: 01/22/2002 REG. NO. 19879	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50	TITLE: WEST ABUTMENT - STAGE 1 PLAN AND ELEVATION	DES: SVC DR: SVC APPROVED CHK: MJC CHK: MJC Sheet No. 4 of 56 Sheets	Bridge No. 02566
--	---	---	---	--	--	----------------------------

COMPUTED PILE LOADS

WEST ABUTMENT, STAGE 1 - (TONS PER PILE)

DEAD LOAD	55.3
LIVE LOAD	3.85
TOTAL LOAD	59.15
*DESIGN LOAD	59.15

* 59.15/1.0 REDUCTION PER AASHTO 3.22.1 GROUP 1 LOADING

NOTES:

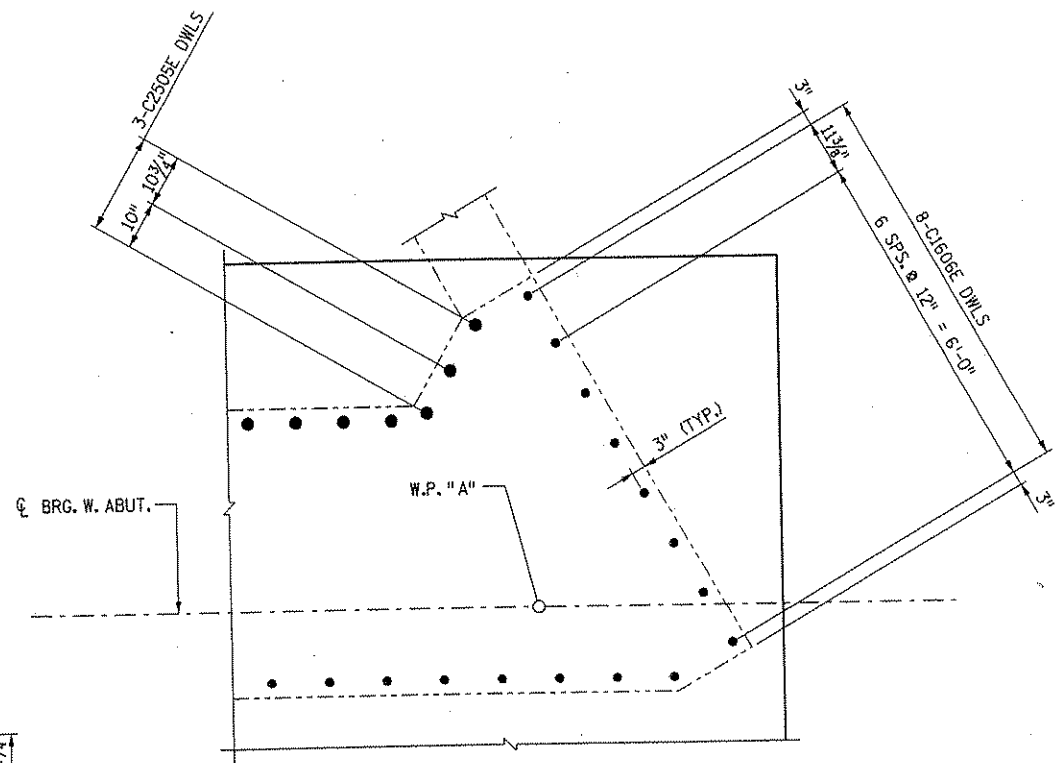
- 7-C3203 @ 6" SPS. = 3'-0" (B)
- PILES MARKED THUS (C) ARE NOT REQUIRED IF STAGED CONSTRUCTION NOT USED.

PILE NOTES:

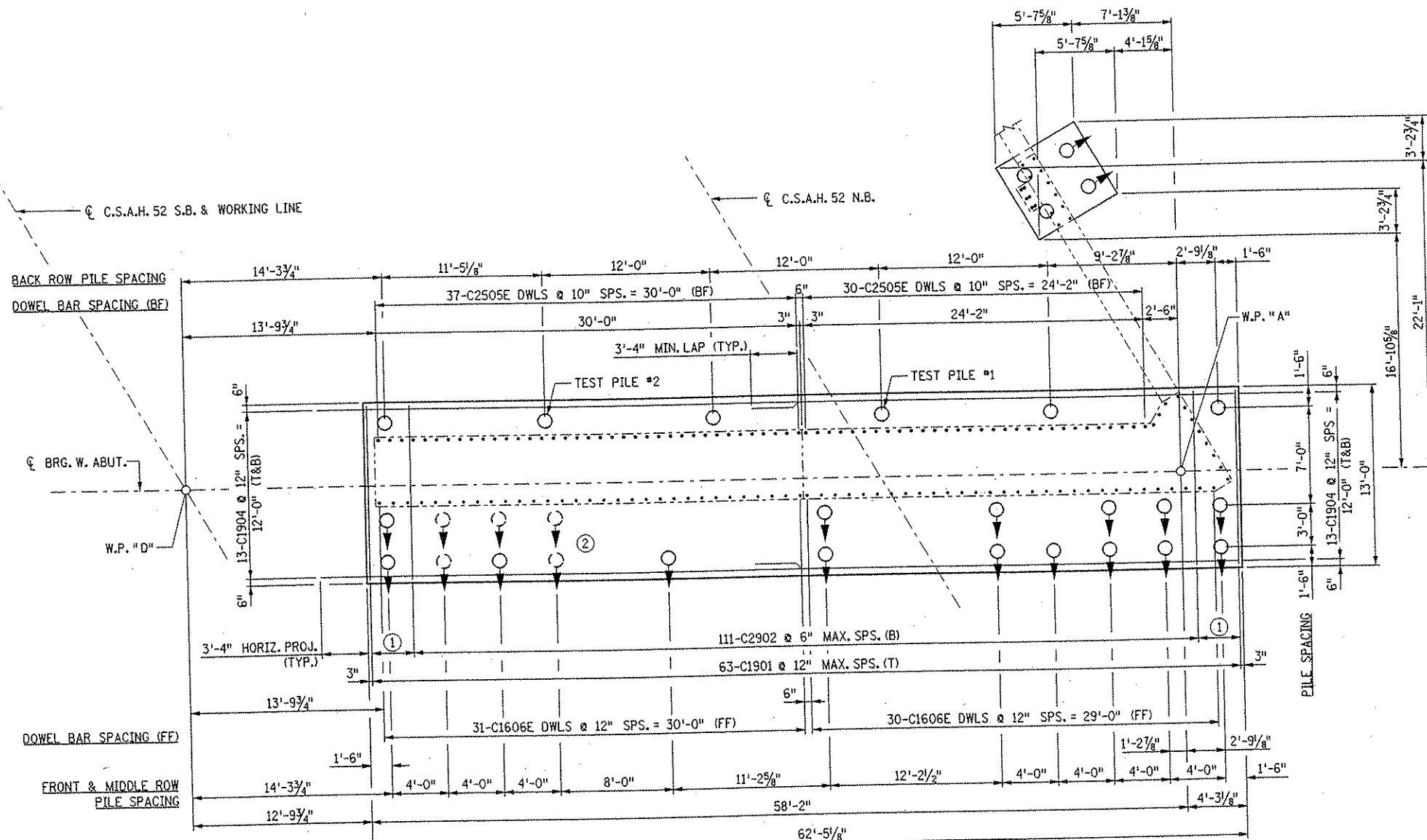
PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.

PILES MARKED THUS (C) TO BE BATTERED 3 INCHES PER FOOT IN DIRECTION SHOWN.

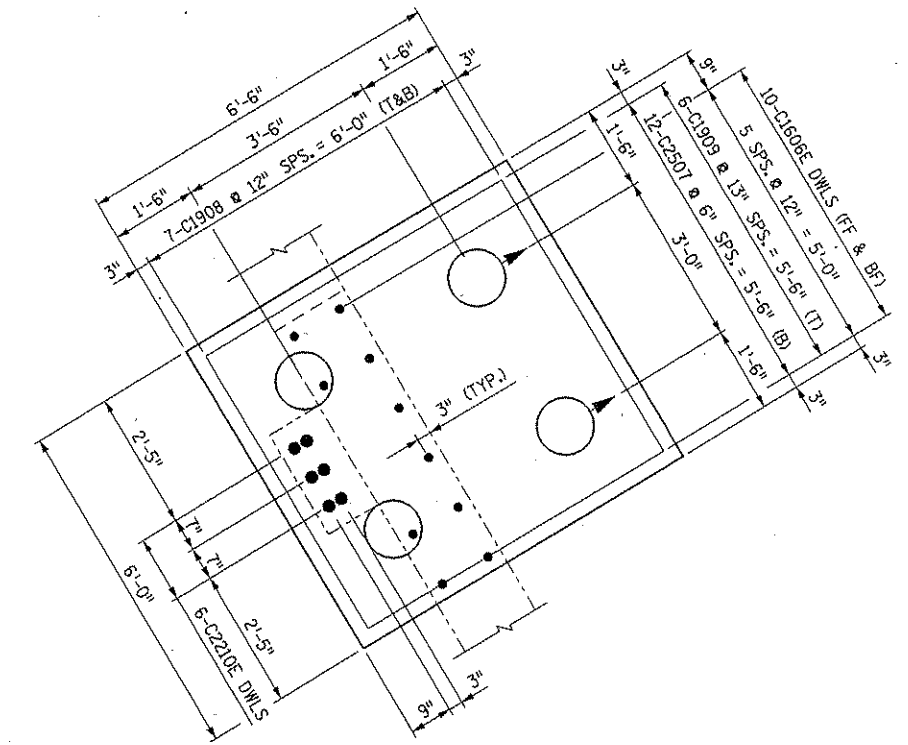
PILES TO HAVE A NOMINAL DIAMETER OF 12 INCHES.
 28 CAST-IN-PLACE PILES EST. LENGTH 80 FEET LONG
 2 CAST-IN-PLACE CONCRETE TEST PILES 90 FEET LONG
 30 CAST-IN-PLACE CONCRETE PILES REQ'D FOR THE WEST ABUTMENT, STAGE 1



NORTH CORNER ABUTMENT DETAIL



PLAN

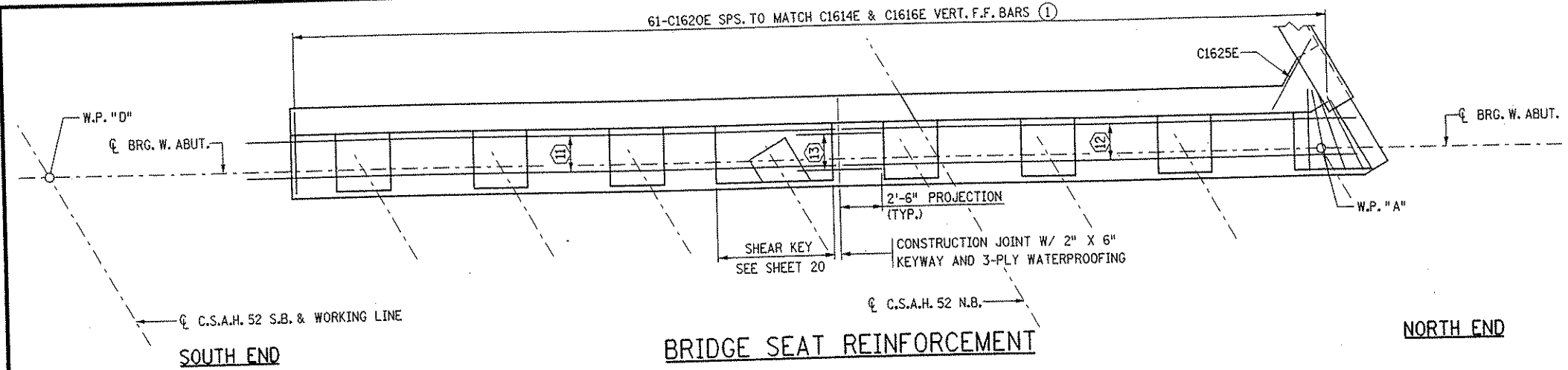


WINGWALL FOOTING PLAN

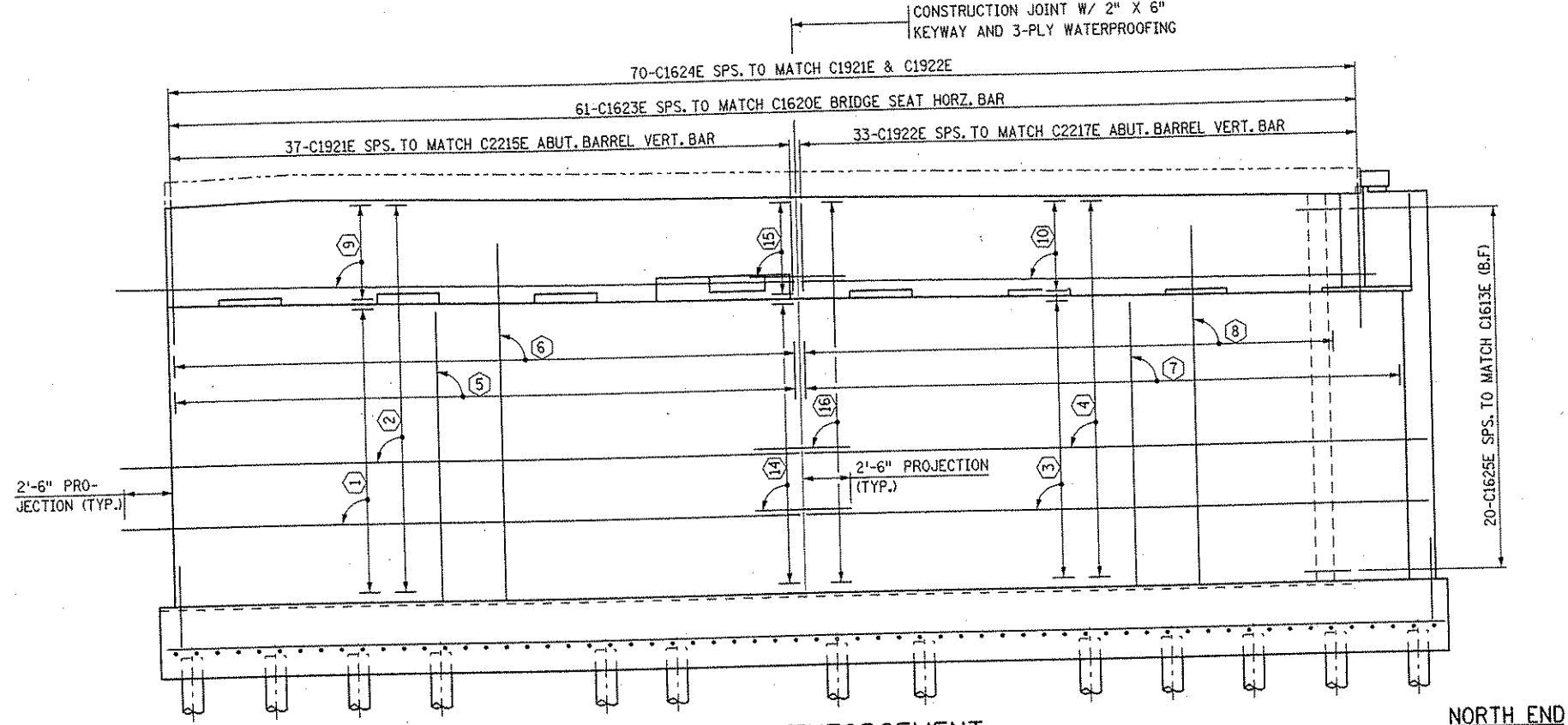
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NO.	DATE	BY	DESCRIPTION OF REVISIONS	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA SIGNED <i>Gottfried Millner</i> GOTTFRIED MILLNER DATE 01/22/2002 REG. NO. 19879	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50	TITLE: WEST ABUTMENT - STAGE 1 FOOTING PLAN & REINFORCEMENT	DES: HLE CHK: MJC	DR: HLE CHK: MJC	APPROVED	Bridge No. 02566
							SHEET NO. 5 OF 56 SHEETS				

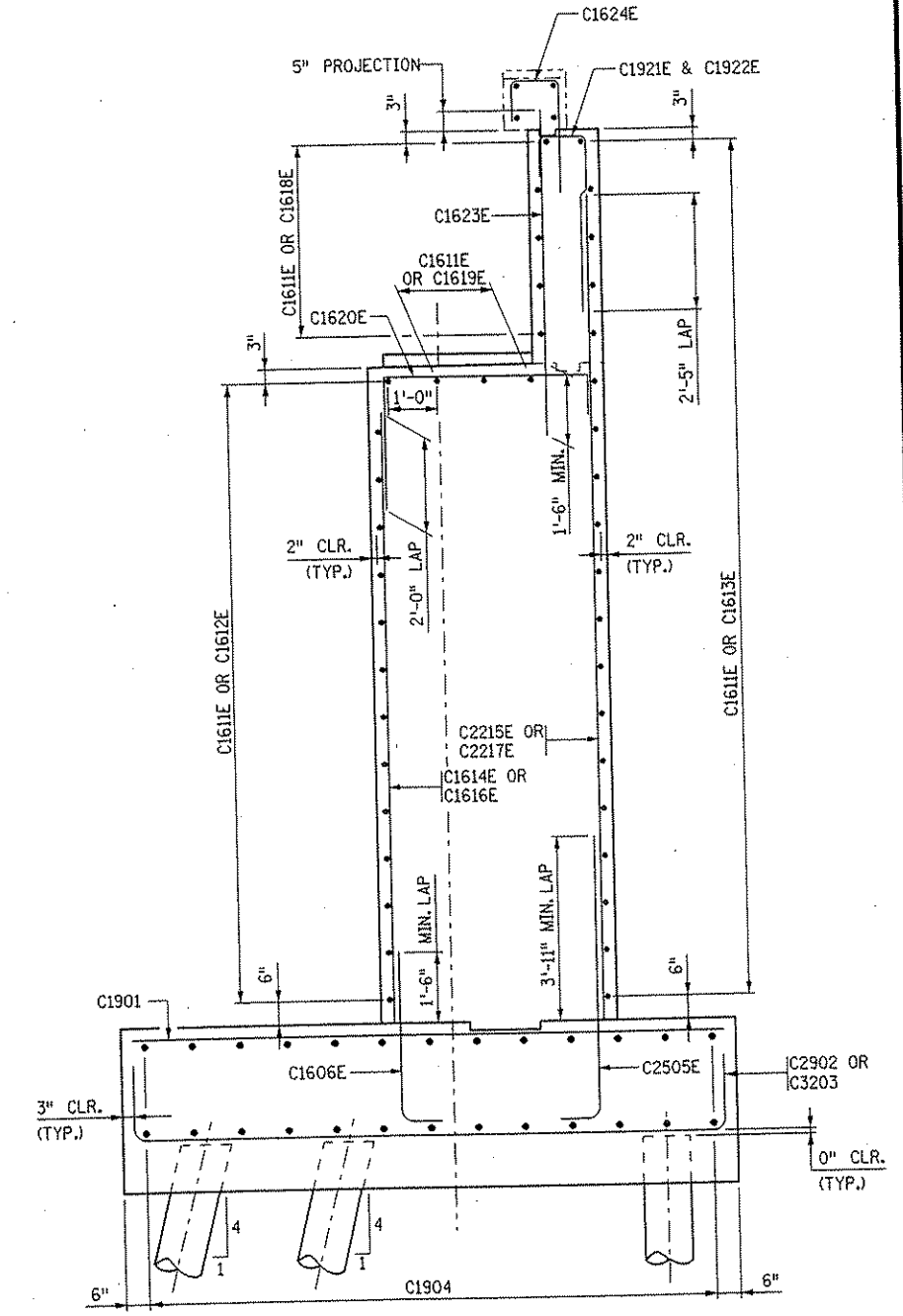
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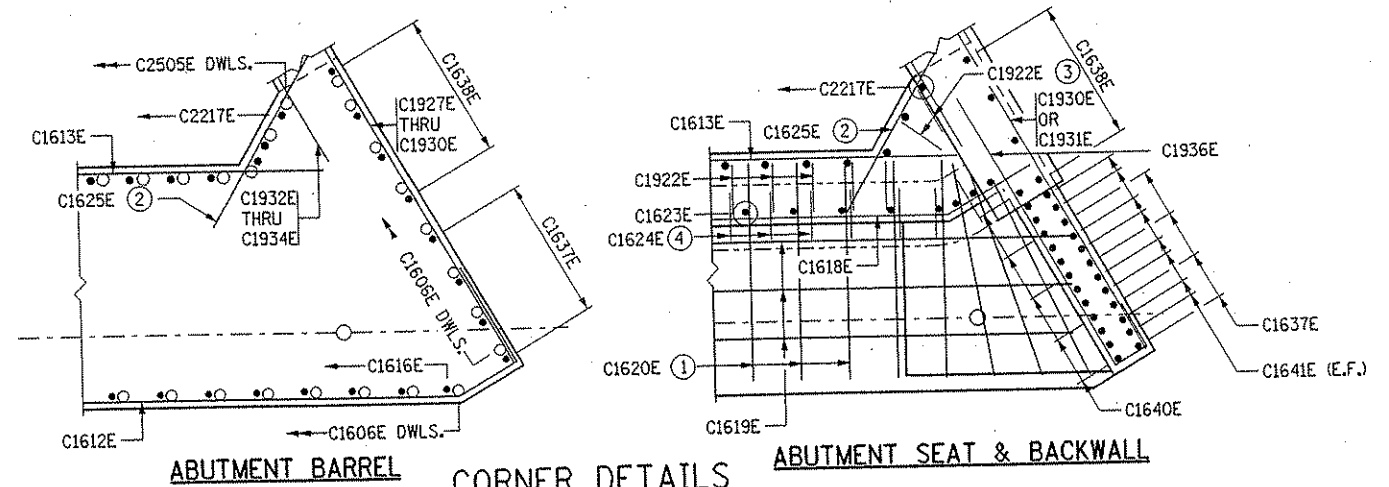
BRIDGE SEAT REINFORCEMENT



ABUTMENT REINFORCEMENT



ABUTMENT REINFORCEMENT



ABUTMENT BARREL

CORNER DETAILS

ABUTMENT SEAT & BACKWALL

NOTES:

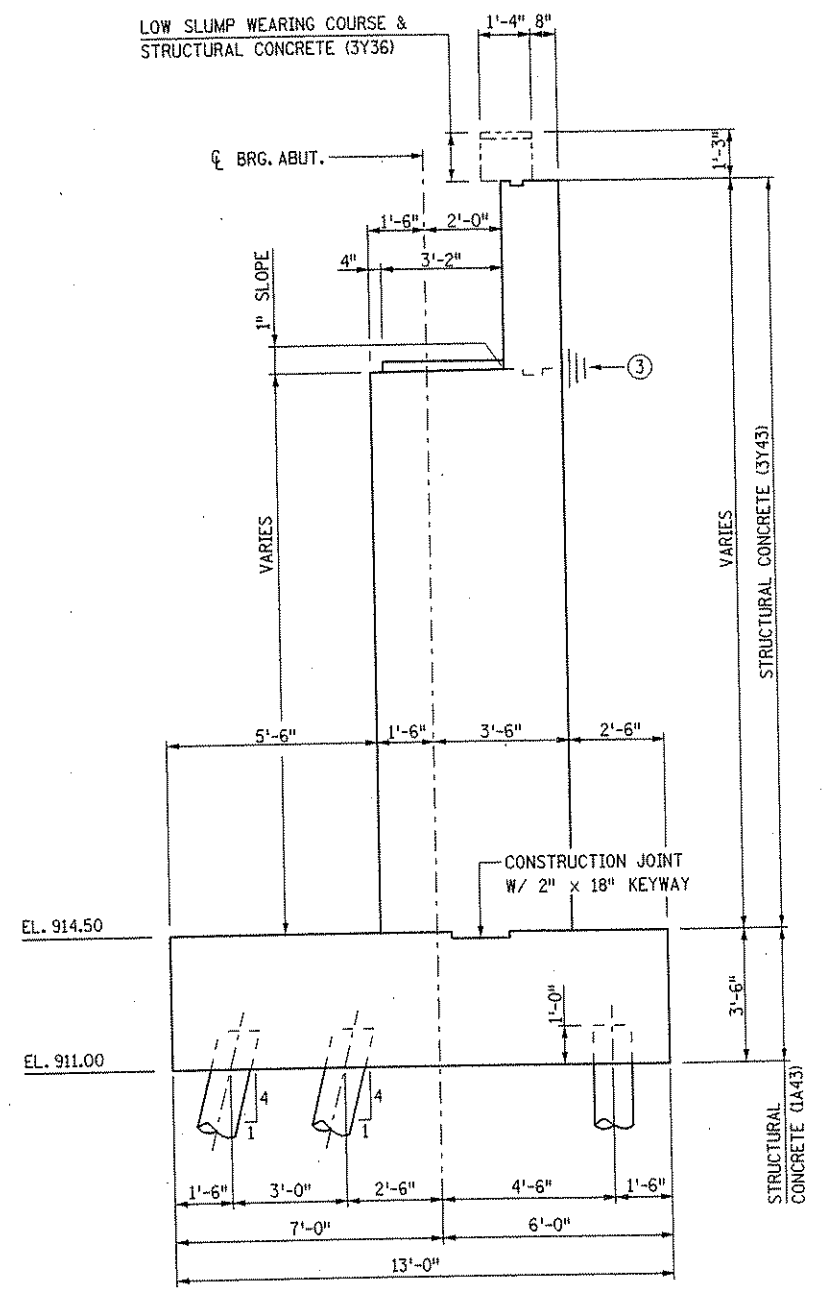
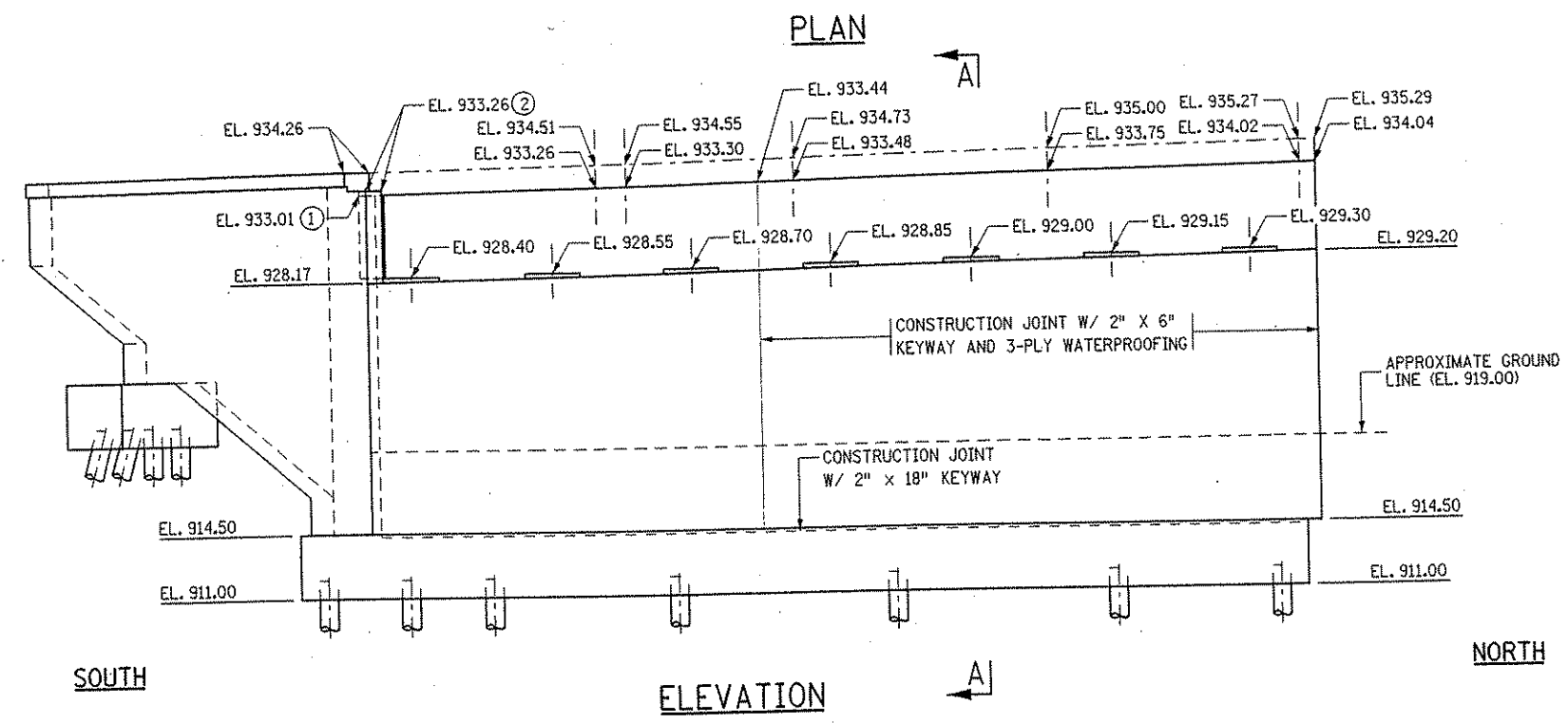
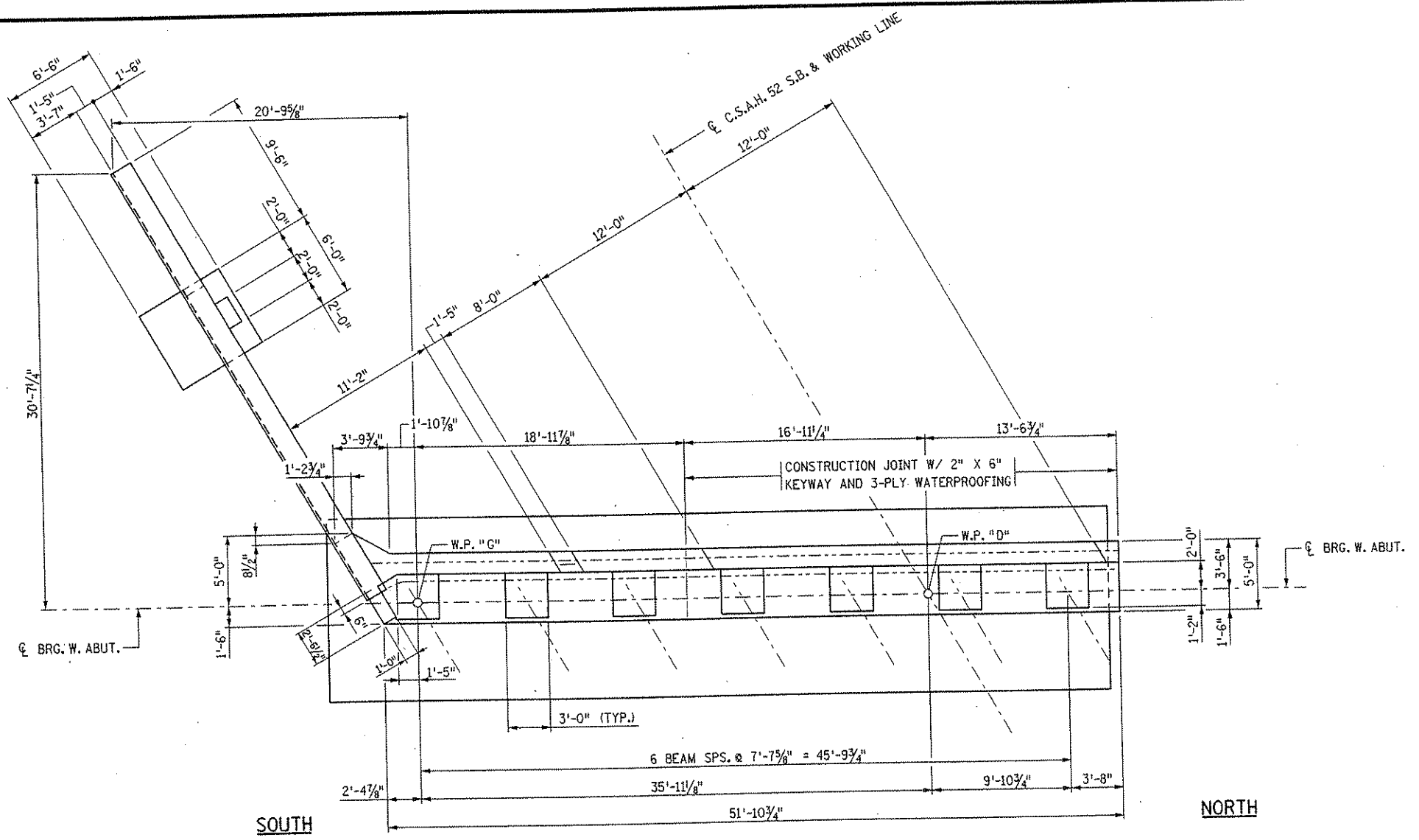
- FOR LONGITUDINAL REINFORCEMENT IN ABUTMENT ENDBLOCK SEE DETAILS ON SHEET 32.
- FOR ADDITIONAL REINFORCEMENT IN CONCRETE PADS SEE DETAILS ON SHEET 20.
- ① ADJUST C1620E BARS AT NORTH END OF BRIDGE SEAT AS SHOWN IN CORNER DETAIL.
- ② ADJUST C1625E NEAR TOP OF FOOTING AS NEEDED TO MAINTAIN 2" CLEARANCE.
- ③ PLACE LAST TWO NORTHERN C1922E IN FILLET AS SHOWN IN CORNER DETAIL.
- ④ PLACE LAST TWO NORTHERN C1624E RADIALLY IN END BLOCK SPS. TO MATCH C1623E AS SHOWN IN CORNER DETAIL.

BAR CALL-OUTS:

- ① 15-C1611E SPS. @ 12" MAX. (F.F.)
- ② 20-C1611E SPS. @ 12" MAX. (B.F.)
- ③ 15-C1612E SPS. @ 12" MAX. (F.F.)
- ④ 20-C1613E SPS. @ 12" MAX. (B.F.)
- ⑤ 31-C1614E SPS. TO MATCH C1606E DWLS. (F.F.)
- ⑥ 37-C2215E SPS. TO MATCH C2505E DWLS. (B.F.)
- ⑦ 30-C1616E SPS. TO MATCH C1606E DWLS. (F.F.)
- ⑧ 33-C2217E SPS. TO MATCH C2505E DWLS. (B.F.)
- ⑨ 5-C1611E SPS. @ 12" MAX. (F.F.)
- ⑩ 5-C1618E SPS. @ 12" MAX. (F.F.)
- ⑪ 3-C1611E SPS. @ 12" MAX.
- ⑫ 3-C1619E SPS. @ 12" MAX.
- ⑬ 3-C1626E SPS. TO MATCH C1611E & C1619E
- ⑭ 15-C1626E SPS. TO MATCH C1611E & C1612E (F.F.)
- ⑮ 5-C1626E SPS. TO MATCH C1611E & C1618E (F.F.)
- ⑯ 20-C1626E SPS. TO MATCH C1611E & C1613E (B.F.)

	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. SIGNED: <i>Gottfried Millner</i> GOTTFRIED MILLNER DATE: 01/22/2002 REG. NO. 19879	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50	TITLE: WEST ABUTMENT - STAGE 1 REINFORCEMENT	DES: MJC DR: MJC APPROVED CHK: GM CHK: GM Sheet No. 6 of 56 Sheets	Bridge No. 02566
NO.	DATE	BY	DESCRIPTION OF REVISIONS			

DATE: 01/22/2002 TIME: 01:54:42 PM
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TYPICAL SECTION A-A

- NOTES:**
- ① ELEVATION AT FRONT FACE OF BACKWALL
 - ② ELEVATION AT TOP OF MASK WALL
 - ③ PERMISSIBLE CONSTRUCTION JOINT W/ 2" X 6" KEYWAY & 3 PLY WATERPROOFING

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION OF REVISIONS</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DATE	BY	DESCRIPTION OF REVISIONS					<p>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</p> <p>SIGNED: <i>Gottfried Willner</i> GOTTFRIED WILLNER DATE: 01/22/2002 REG. NO. 19879</p>	<p>TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</p>	<p>ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50</p>	<p>TITLE: WEST ABUTMENT - STAGE 2 PLAN AND ELEVATION</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DES: SVC</td> <td>DR: SVC</td> <td>APPROVED</td> </tr> <tr> <td>CHK: MJC</td> <td>CHK: MJC</td> <td> </td> </tr> </table>	DES: SVC	DR: SVC	APPROVED	CHK: MJC	CHK: MJC		<p>Bridge No. 02566</p> <p>Sheet No. 8 of 56 Sheets</p>
NO.	DATE	BY	DESCRIPTION OF REVISIONS																	
DES: SVC	DR: SVC	APPROVED																		
CHK: MJC	CHK: MJC																			

COMPUTED PILE LOADS

WEST ABUTMENT, STAGE 2 - (TONS PER PILE)

DEAD LOAD	55.65
LIVE LOAD	4.35
TOTAL LOAD	60.0
*DESIGN LOAD	60.0

* 60.0/1.0 REDUCTION PER AASHTO 3.22.1 GROUP 1 LOADING

NOTES:

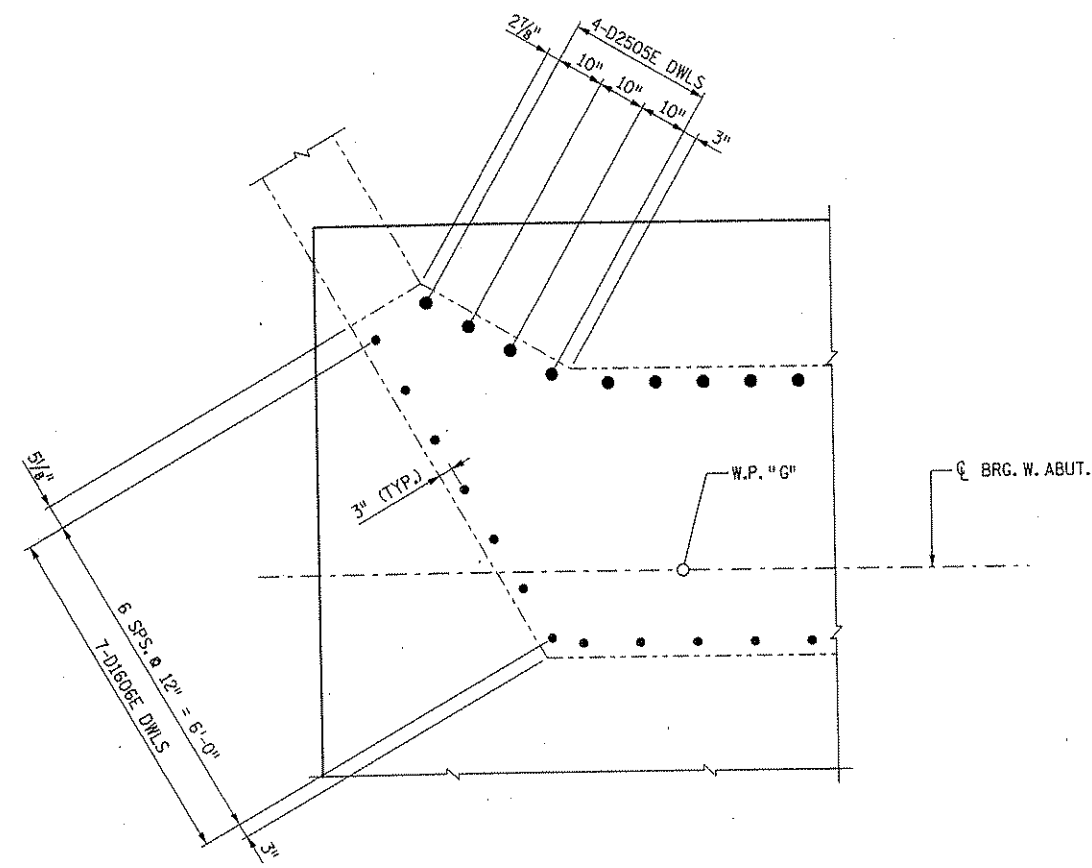
① 7-03203 @ 6" SPS. = 3'-0" (B)

PILE NOTES:

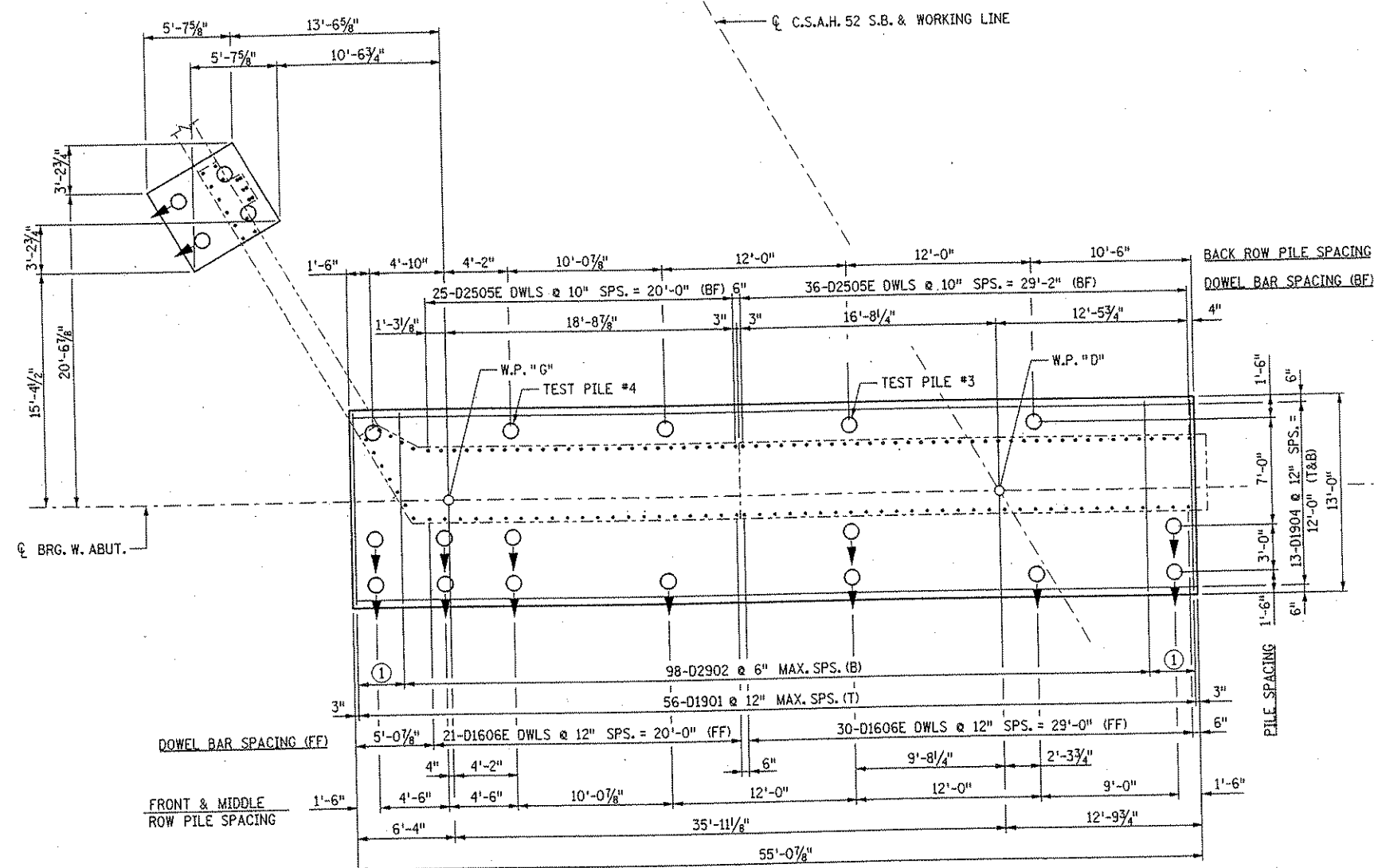
PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.

PILES MARKED THIS  TO BE BATTERED 3 INCHES PER FOOT IN DIRECTION SHOWN.

PILES TO HAVE A NOMINAL DIAMETER OF 12 INCHES
 19 CAST-IN-PLACE PILES EST. LENGTH 80 FEET LONG
 2 CAST-IN-PLACE CONCRETE TEST PILE 90 FEET LONG
 21 CAST-IN-PLACE CONCRETE PILES REQ'D FOR THE WEST ABUTMENT, STAGE 2



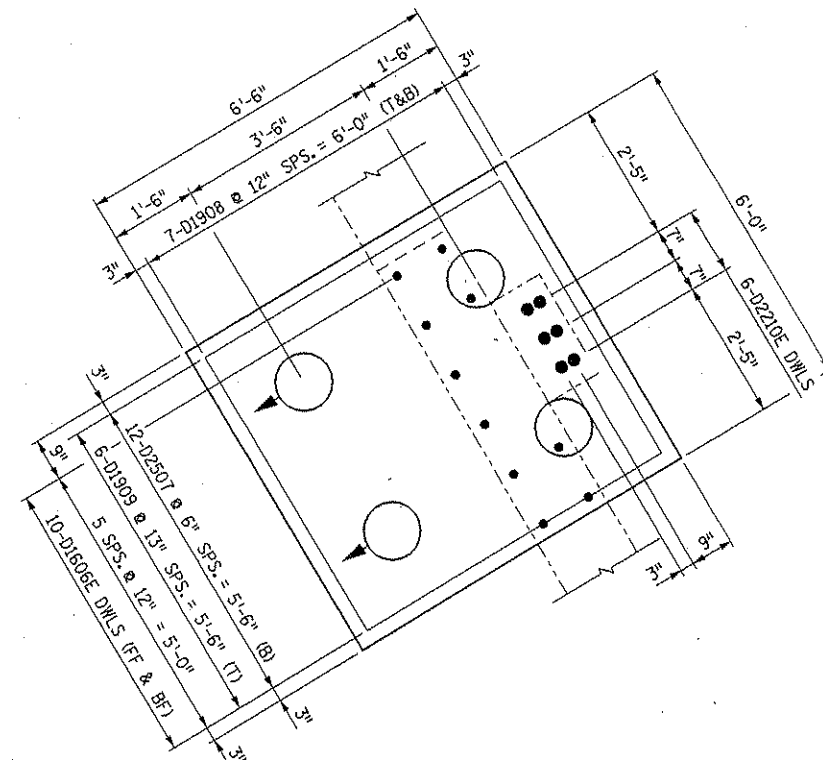
SOUTH CORNER ABUTMENT DETAIL



SOUTH


NORTH

PLAN



WINGWALL FOOTING PLAN

DATE: 01/22/2002 TIME: 01:54:17 PM
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA			
SIGNED 		GOTTFRIED MILLNER	
DATE	01/22/2002	REG. NO.	19879
NO.	DATE	BY	DESCRIPTION OF REVISIONS

TKDA
 TOLTZ, KING, OUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

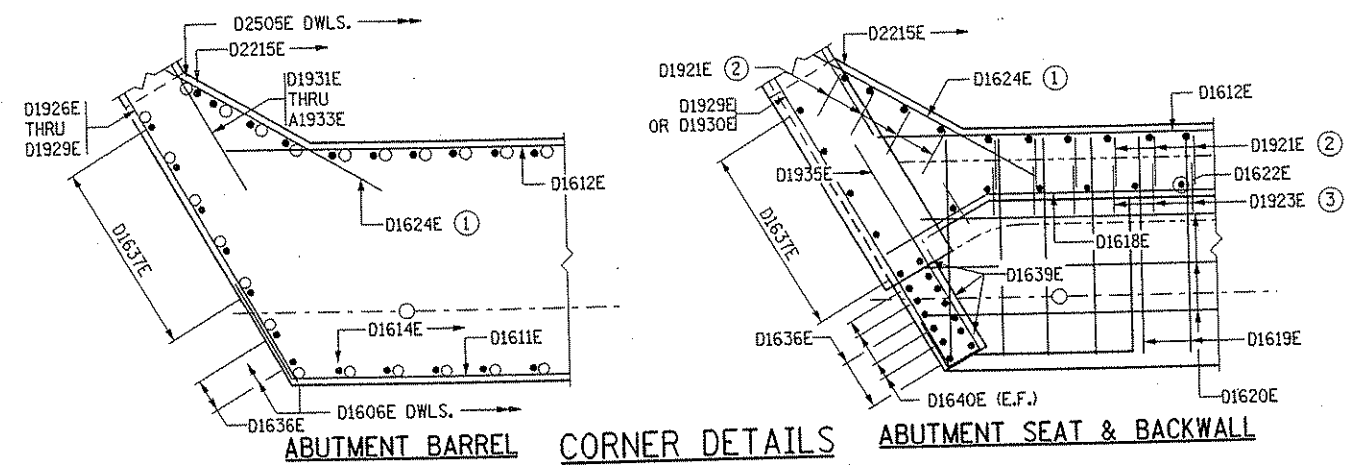
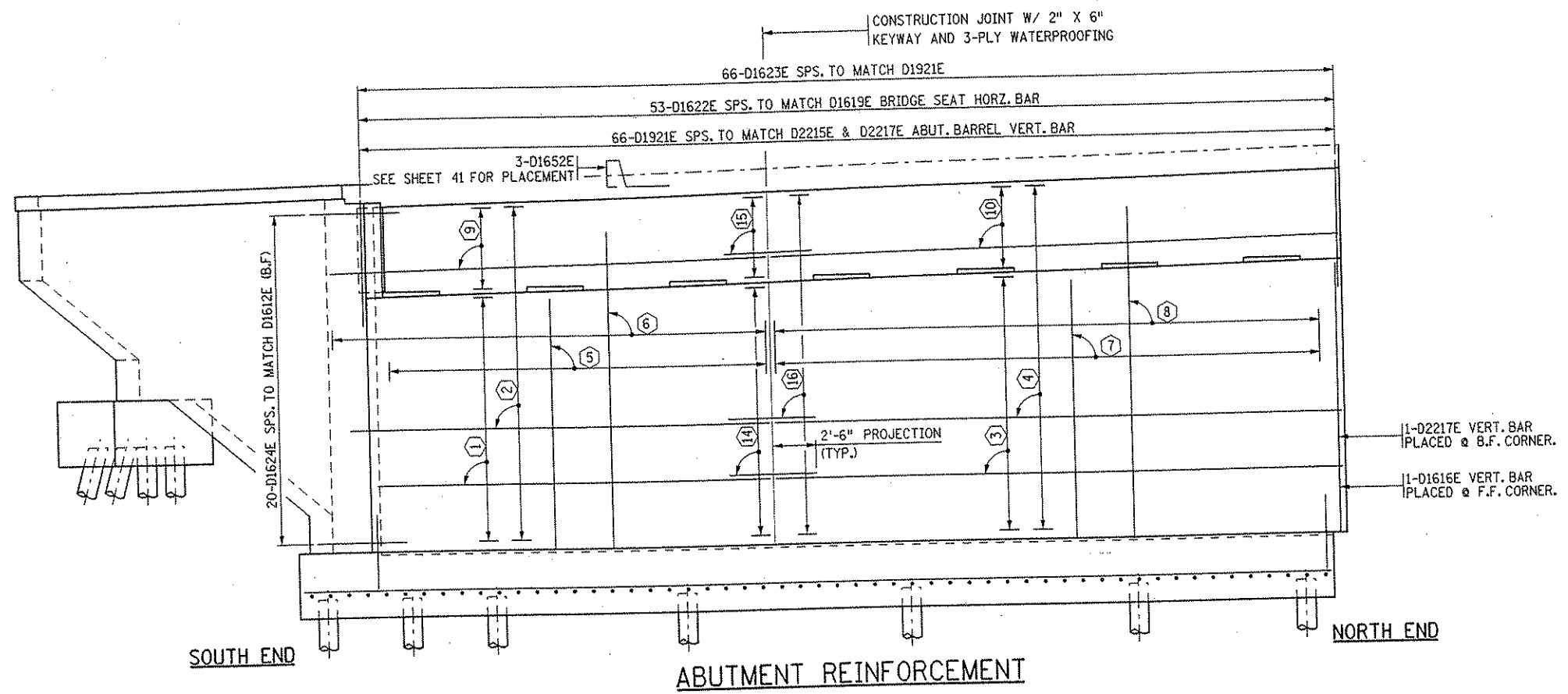
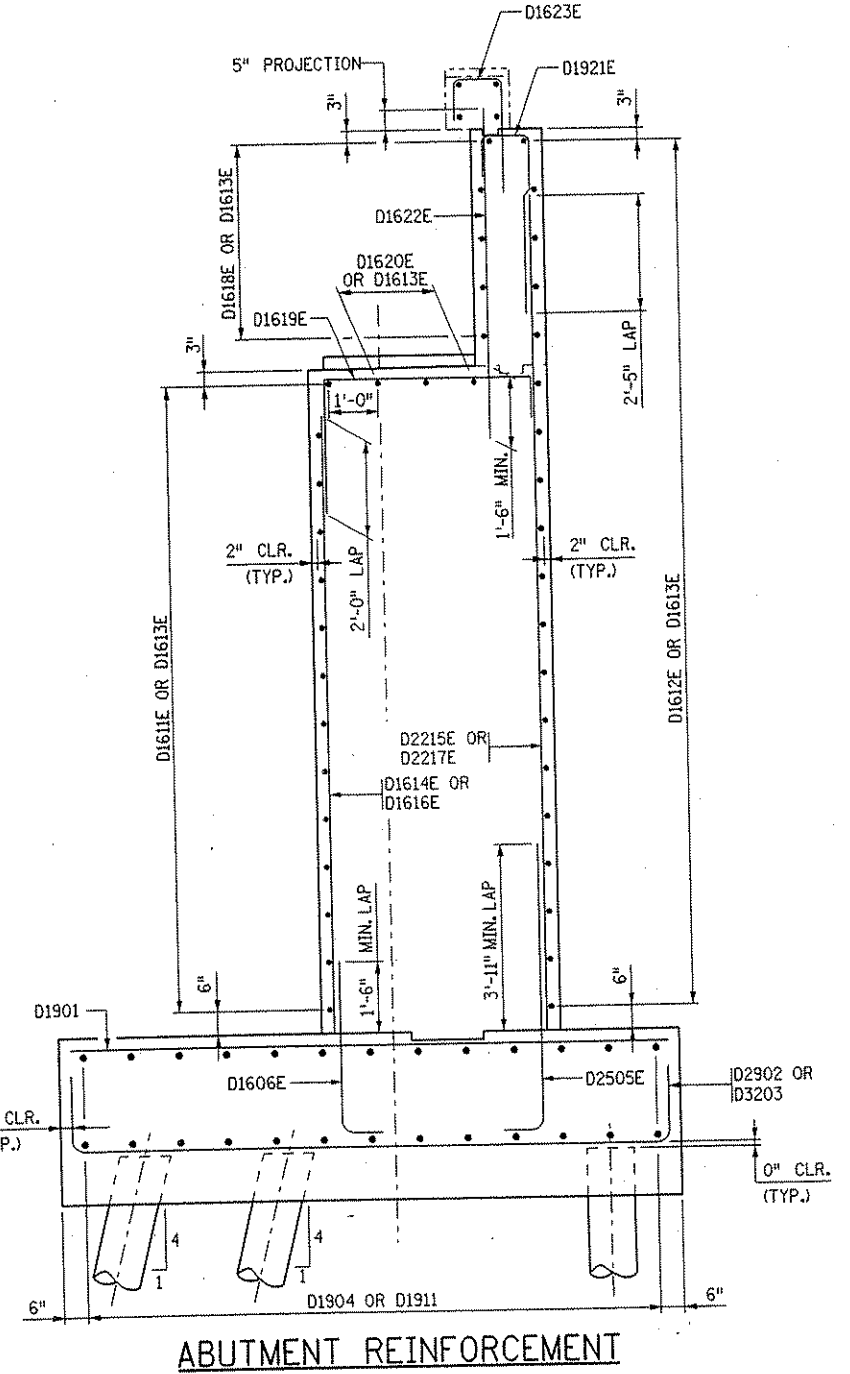
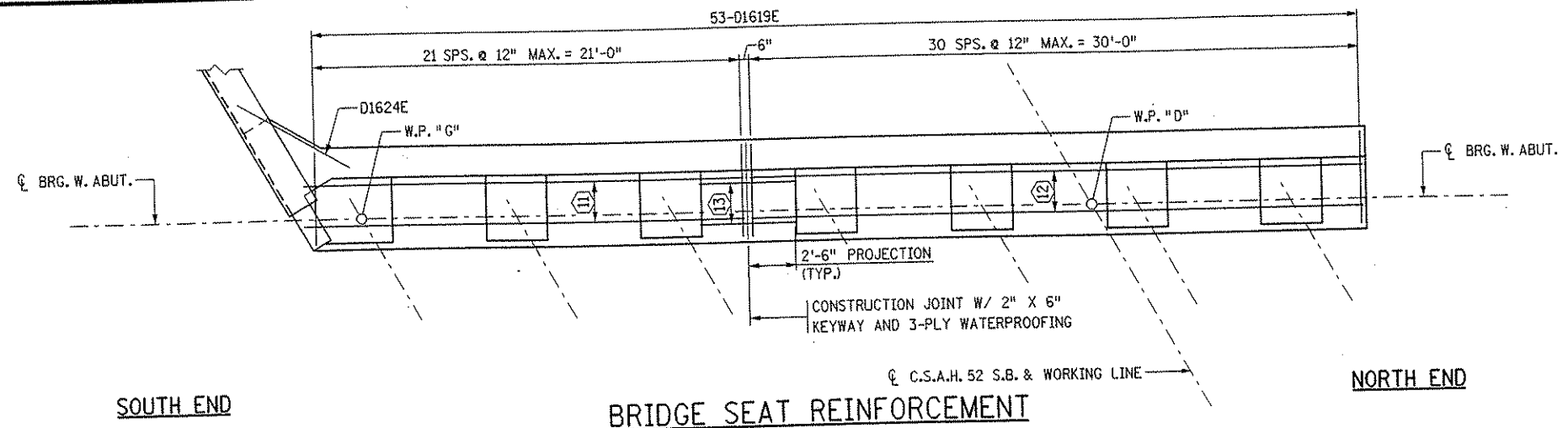
TITLE:
**WEST ABUTMENT - STAGE 2
 FOOTING PLAN & REINFORCEMENT**

DES: HLE	DR: HLE	APPROVED
CHK: MJC	CHK: MJC	

Sheet No. 9 of 56 Sheets

Bridge No.
 02566

DATE: 01/22/2002 TIME: 01:54:24 PM
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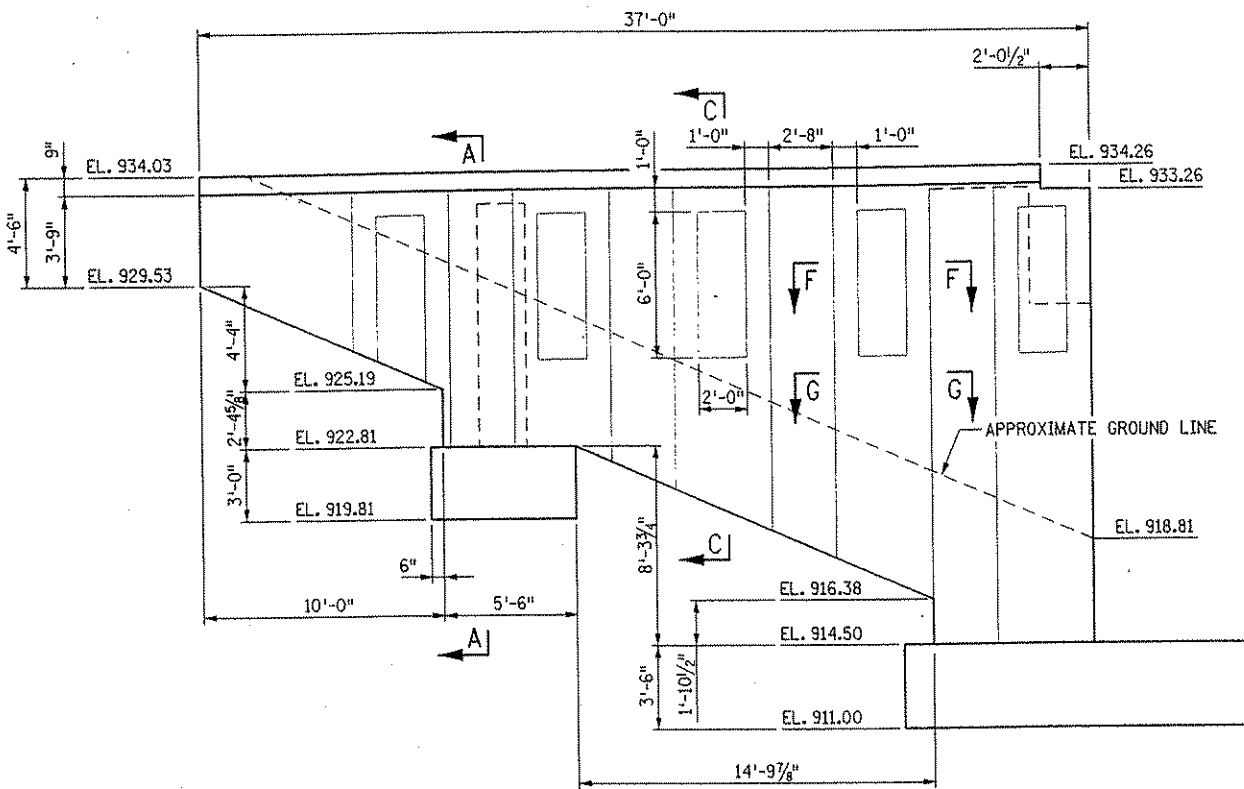
NOTES:

- FOR LONGITUDINAL REINFORCEMENT IN ABUTMENT ENDBLOCK SEE DETAILS ON SHEET 33.
- FOR ADDITIONAL REINFORCEMENT IN CONCRETE PADS SEE DETAILS ON SHEET 20.
- ① ADJUST D1624E NEAR TOP OF FOOTING AS NEEDED TO MAINTAIN 2" CLEARANCE.
- ② PLACE LAST FOUR SOUTHERN D1921E IN FILLET AS SHOWN IN CORNER DETAIL.
- ③ PLACE LAST SOUTHERN D1623E RADIALLY IN END BLOCK SPS. TO MATCH D1622E AS SHOWN IN CORNER DETAIL.

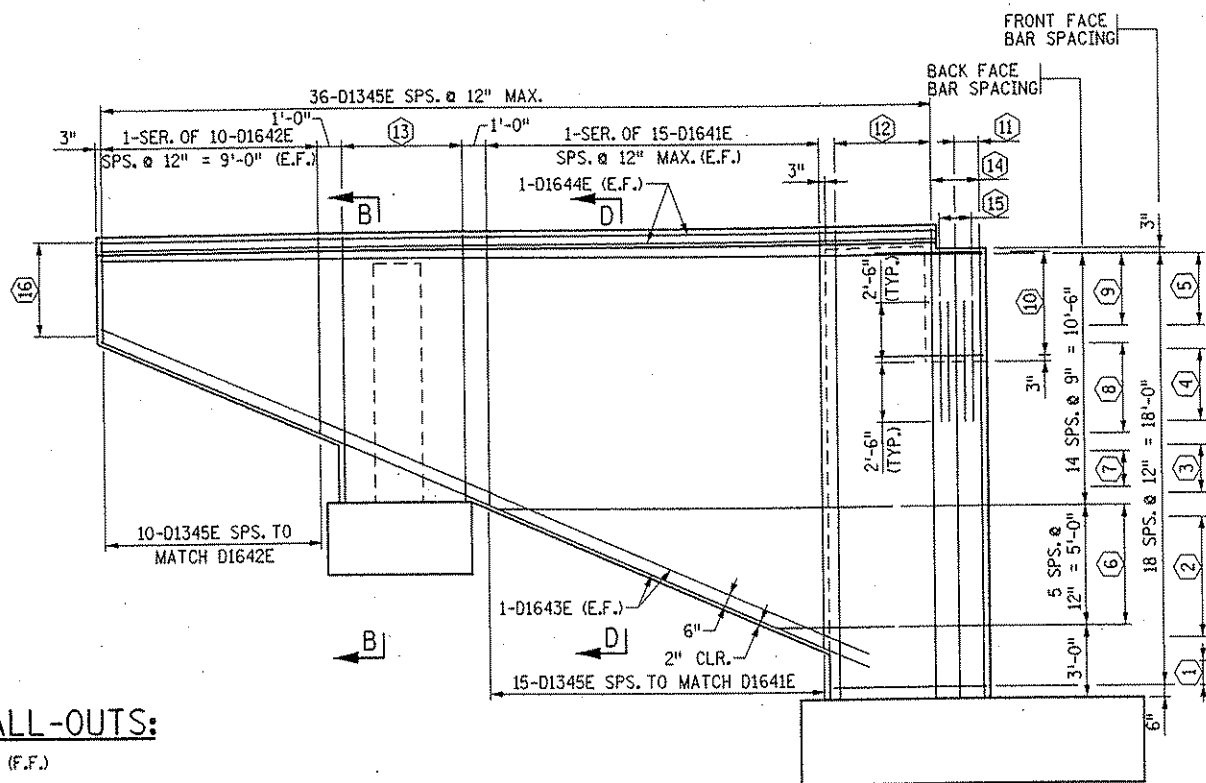
BAR CALL-OUTS:

- ① 14-D1611E SPS. @ 12" MAX. (F.F.)
- ② 19-D1612E SPS. @ 12" MAX. (B.F.)
- ③ 15-D1613E SPS. @ 12" MAX. (F.F.)
- ④ 20-D1613E SPS. @ 12" MAX. (B.F.)
- ⑤ 21-D1614E SPS. TO MATCH D1606E DWLS. (F.F.)
- ⑥ 29-D2215E SPS. TO MATCH D2505E DWLS. (B.F.)
- ⑦ 30-D1616E SPS. TO MATCH D1606E DWLS. (F.F.)
- ⑧ 36-D2217E SPS. TO MATCH D2505E DWLS. (B.F.)
- ⑨ 5-D1618E SPS. @ 12" MAX. (F.F.)
- ⑩ 5-D1613E SPS. @ 12" MAX. (F.F.)
- ⑪ 3-D1620E SPS. @ 12" MAX.
- ⑫ 3-D1613E SPS. @ 12" MAX.
- ⑬ 3-D1625E SPS. TO MATCH D1613E & D1620E
- ⑭ 15-D1625E SPS. TO MATCH D1611E & D1613E (F.F.)
- ⑮ 5-D1625E SPS. TO MATCH D1613E & D1618E (F.F.)
- ⑯ 20-D1625E SPS. TO MATCH D1612E & D1613E (B.F.)

DATE: 01/22/2002 TIME: 01:54:31 PM
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SOUTHWEST WINGWALL ELEVATION 2



SOUTHWEST WINGWALL REINFORCEMENT 2

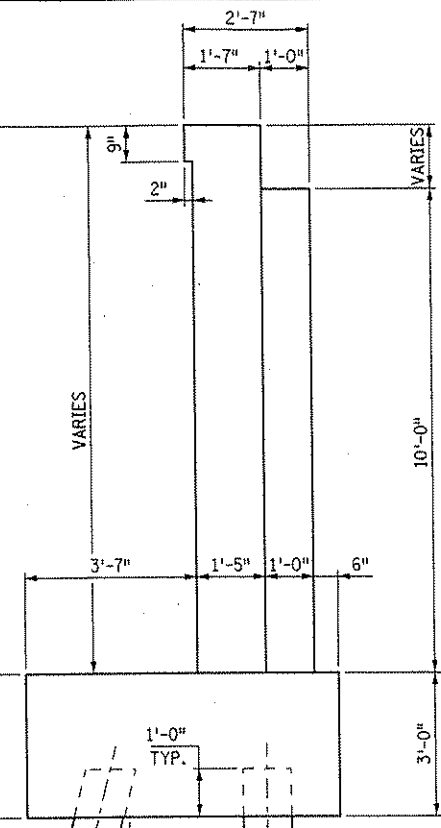
BAR CALL-OUTS:

- 1 2-D1926E (F.F.)
- 2 1-SER. OF 6-D1927E (F.F.)
- 3 3-D1928E (F.F.)
- 4 1-SER. OF 4-D1929E (F.F.)
- 5 4-D1930E (F.F.)
- 6 1-SER. OF 6-D1931E (B.F.)
- 7 3-D1932E (B.F.)
- 8 1-SER. OF 6-D1933E (B.F.)
- 9 5-D1934E (B.F.)
- 10 6-D1935E (B.F.)
- 11 2-D1636E SPS. TO MATCH D1606E DWLS. (F.F.)
- 12 5-D1637E SPS. TO MATCH D1606E DWLS. (F.F.)
- 13 10-D1638E SPS. TO MATCH D1606E (6-F.F., 4-B.F.)
- 14 3-D1639E SPS. @ 12" MAX. (B.F. OF MASK WALL)
- 15 8-D1640E 1
- 16 6-D1346E SPS. TO MATCH D1930E & D1644E

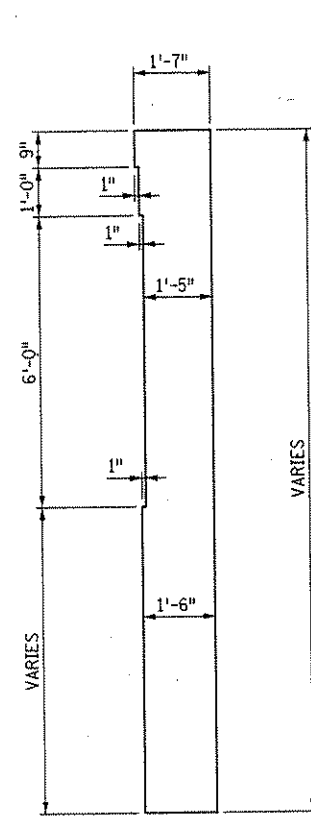
NO.	DATE	BY	DESCRIPTION OF REVISIONS

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.
SIGNED: GOTTFRIED MILLNER
DATE: 01/22/2002 REG. NO. 19879

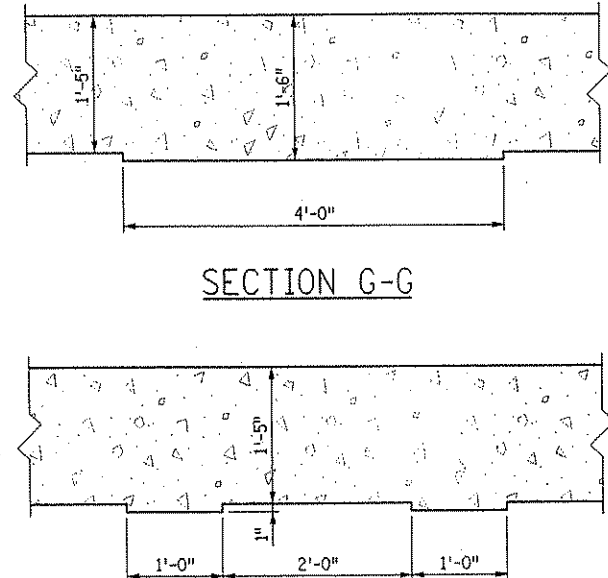
TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA



SECTION A-A

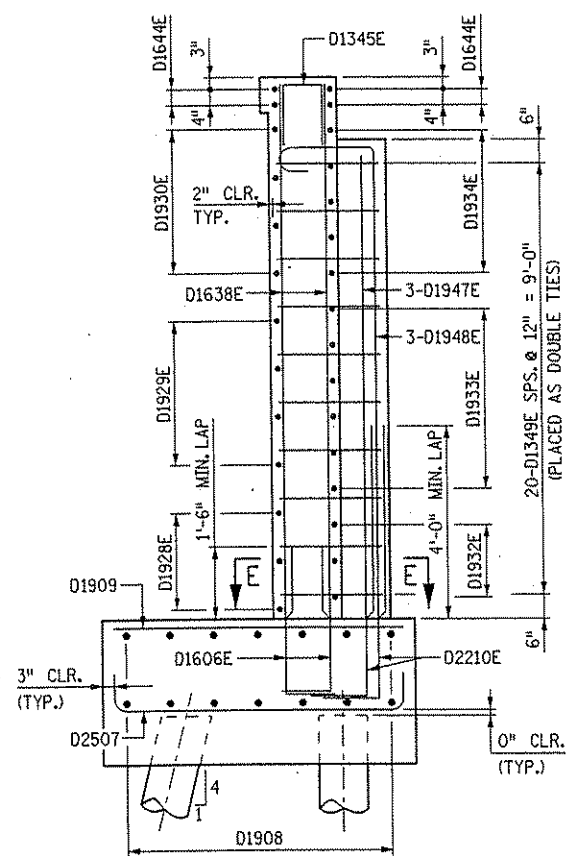


SECTION C-C

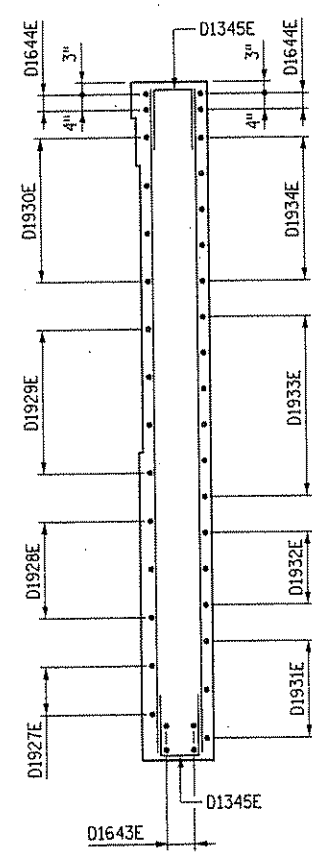


SECTION G-G

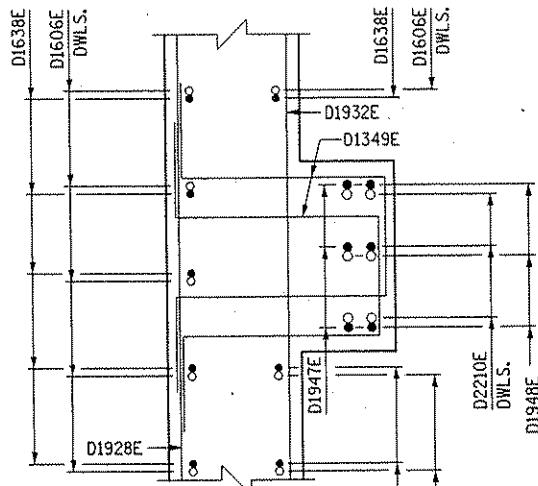
SECTION F-F



SECTION B-B



SECTION D-D



SECTION E-E

NOTES:

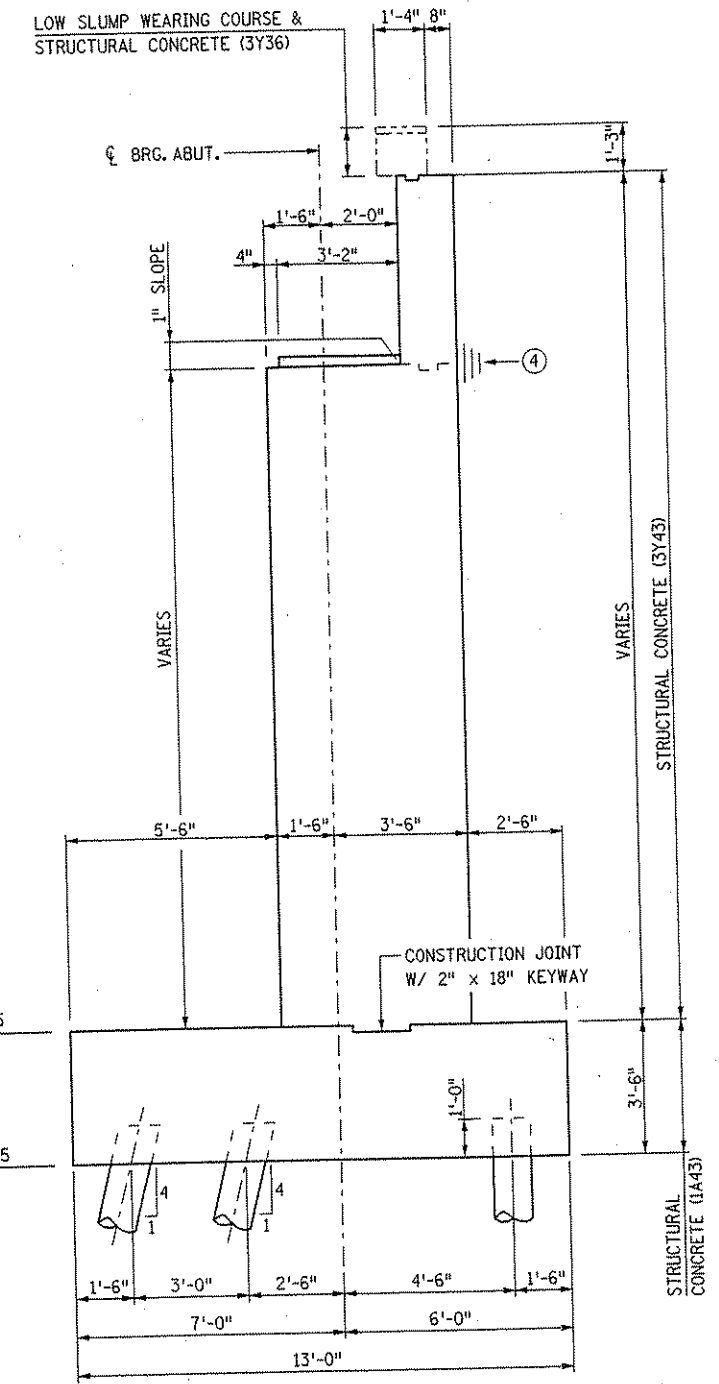
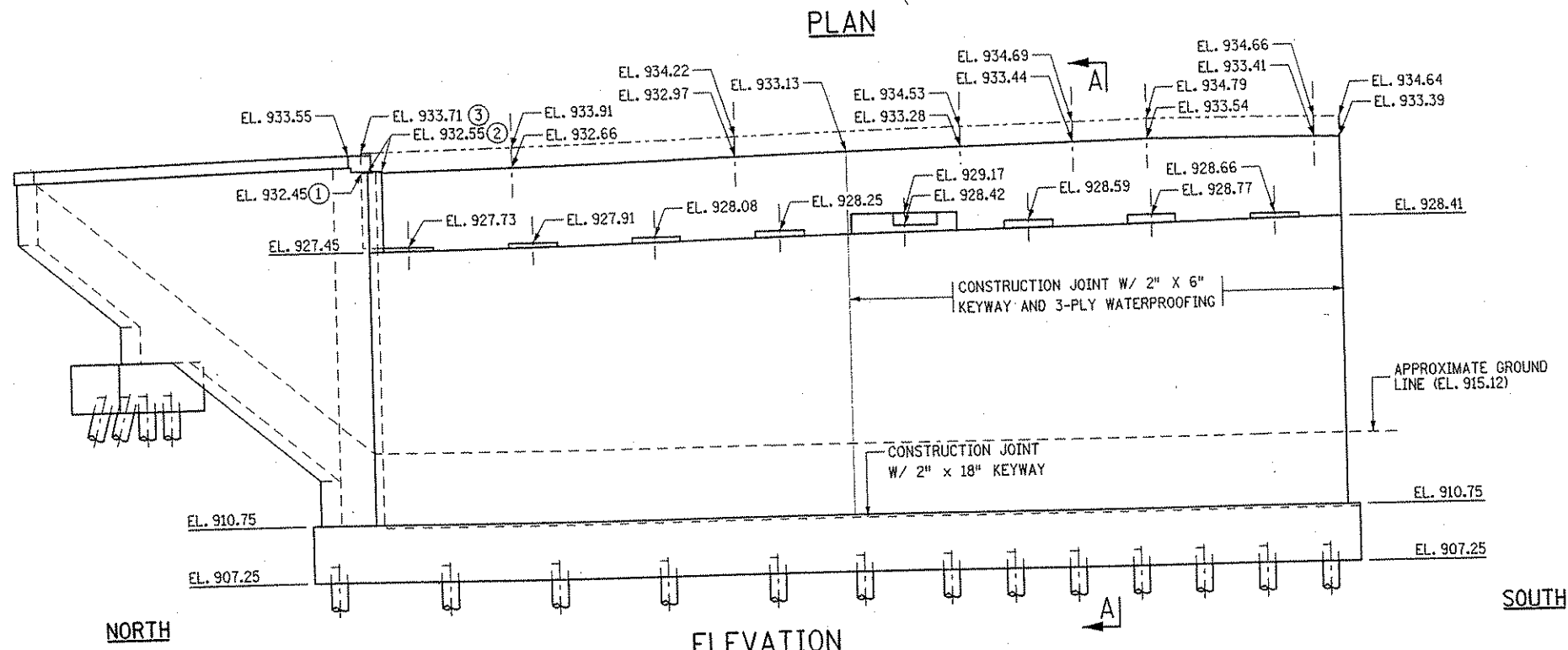
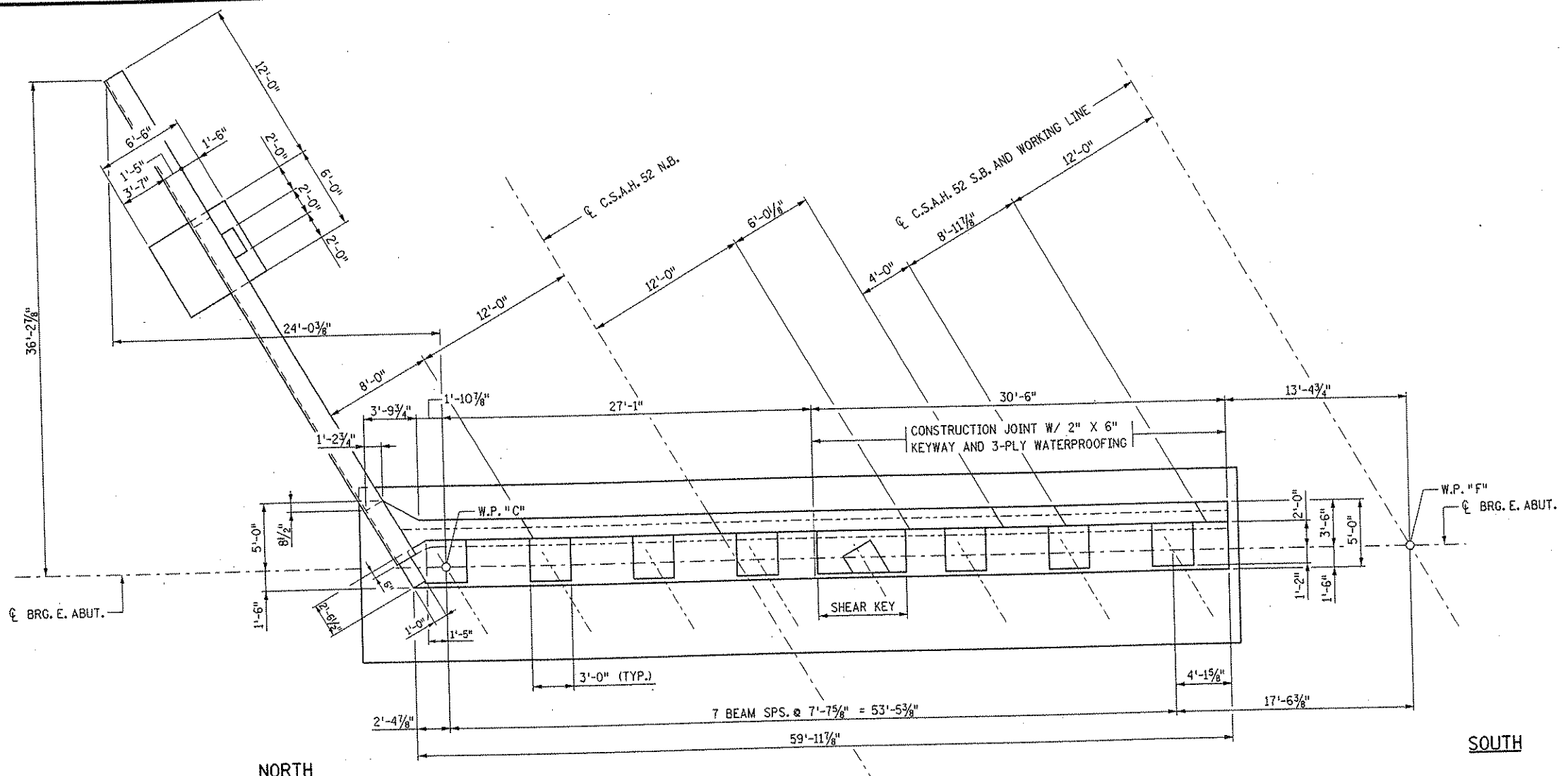
- 1 AS SHOWN IN CORNER DETAIL ON SHEET 10, PLACE 2-D1640E (2 THUS) SPS. EVENLY BETWEEN D1636E AND D1638E IN F.F. OF MASK WALL AND PLACE 2-D1640E (2 THUS) SPS. EVENLY BETWEEN D1639E IN B.F. OF MASK WALL.
- 2 PILES AND FOOTING REINFORCEMENT ARE NOT SHOWN FOR CLARITY.

DES: MJC	DR: MJC	APPROVED	Bridge No.
CHK: GM	CHK: GM		02566
Sheet No. 11 of 56 Sheets			

ANOKA COUNTY
C.S.A.H. 52 OVER I-35W
S.P. 02-652-03 S.P. 0280-50

TITLE
WEST ABUTMENT - STAGE 2
WINGWALL DETAILS

DATE: 01/22/2002 TIME: 01:53:42 PM
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TYPICAL SECTION A-A

- NOTES:**
- ① ELEVATION AT FRONT FACE OF BACKWALL
 - ② ELEVATION AT TOP OF MASK WALL
 - ③ ELEVATION AT FRONT FACE OF END BLOCK
 - ④ PERMISSIBLE CONSTRUCTION JOINT W/ 2" X 6" KEYWAY & 3 PLY WATERPROOFING

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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
 SIGNED: *Gottfried Millner* GOTTFRIED MILLNER
 DATE: 01/22/2002 REG. NO. 19879

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE: EAST ABUTMENT - STAGE 1
 PLAN AND ELEVATION

DES: SVC	DR: SVC	APPROVED
CHK: MJC	CHK: MJC	

Sheet No. 12 of 56 Sheets

Bridge No. 02566

COMPUTED PILE LOADS


EAST ABUTMENT, STAGE 1 - (TONS PER PILE)

DEAD LOAD	55.7
LIVE LOAD	3.8
TOTAL LOAD	59.5
*DESIGN LOAD	59.5

* 59.5/1.0 REDUCTION PER AASHTO 3.22.1 GROUP 1 LOADING

PILE NOTES:

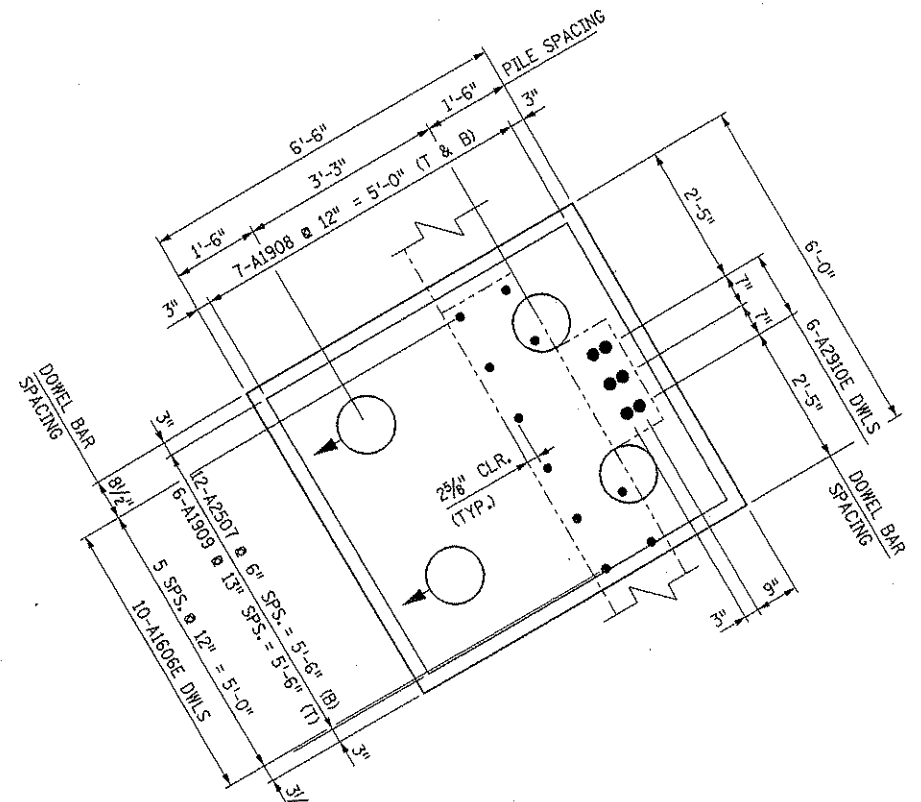
PILE SPACING SHOWN IS AT BOTTOM OF FOOTING

PILES MARKED THUS  TO BE BATTERED 3 INCHES PER FOOT IN DIRECTION SHOWN.

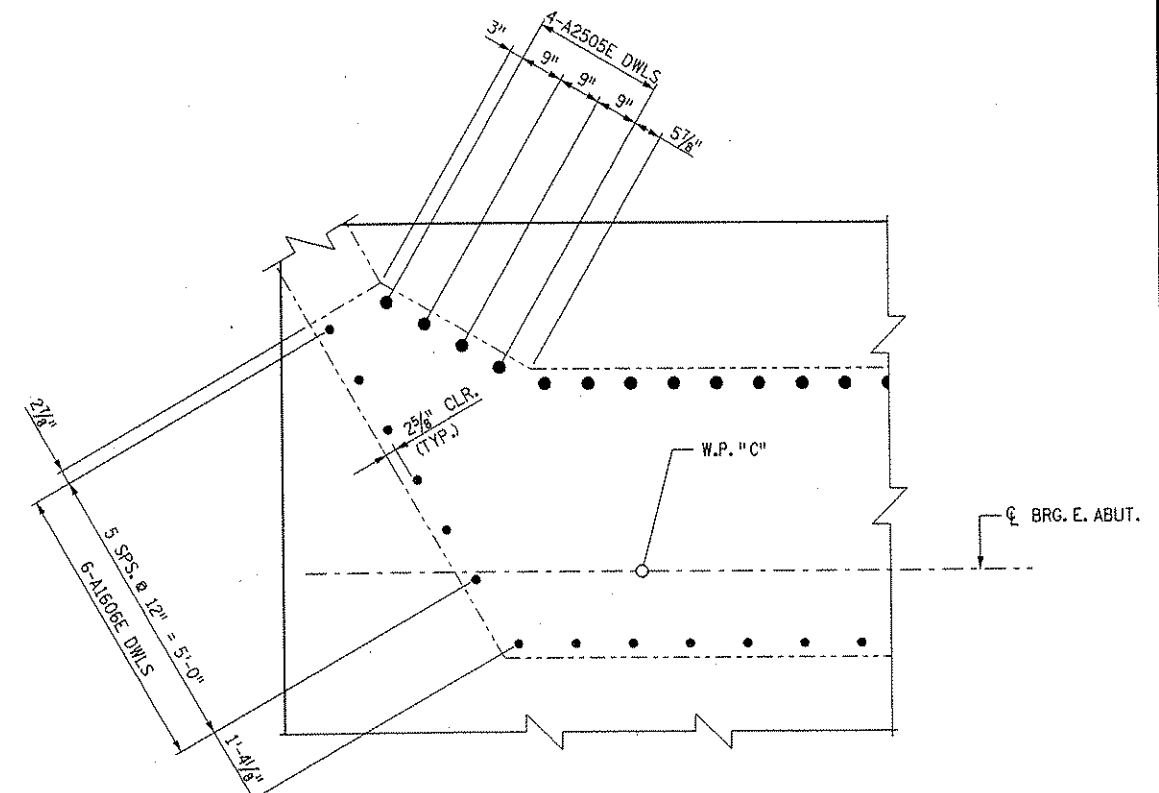
PILES TO HAVE A NOMINAL DIAMETER OF 12 INCHES.
 28 CAST-IN-PLACE PILES EST. LENGTH 80 FEET LONG
 2 CAST-IN-PLACE CONCRETE TEST PILE 90 FEET LONG
 30 CAST-IN-PLACE CONCRETE PILES REQ'D FOR THE EAST ABUTMENT, STAGE 1

NOTES

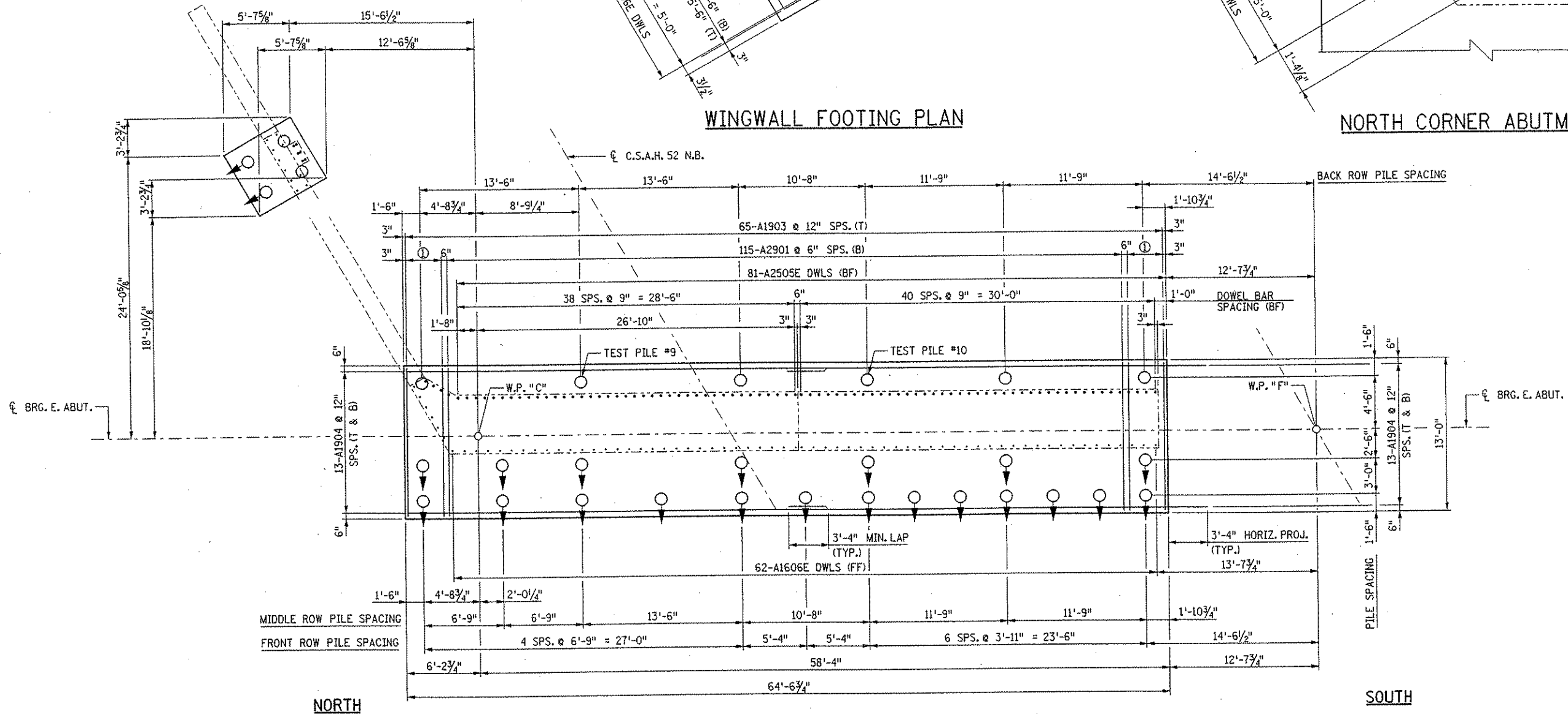
① 7-B3202 @ 6" SPS = 3'-0" (B)



WINGWALL FOOTING PLAN



NORTH CORNER ABUTMENT DETAIL

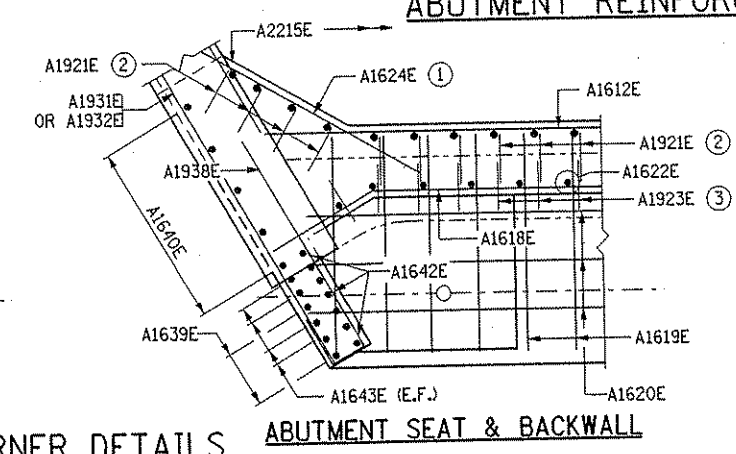
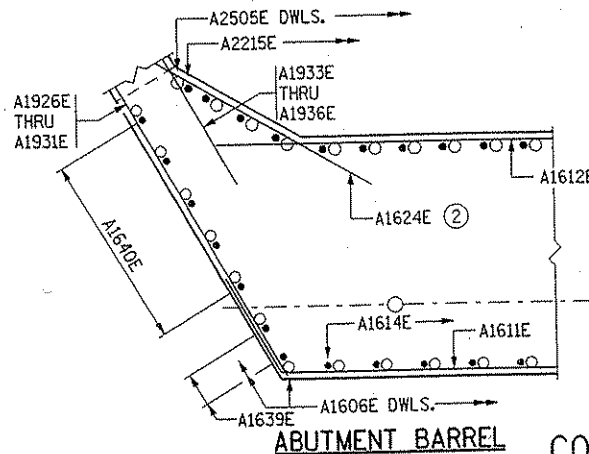
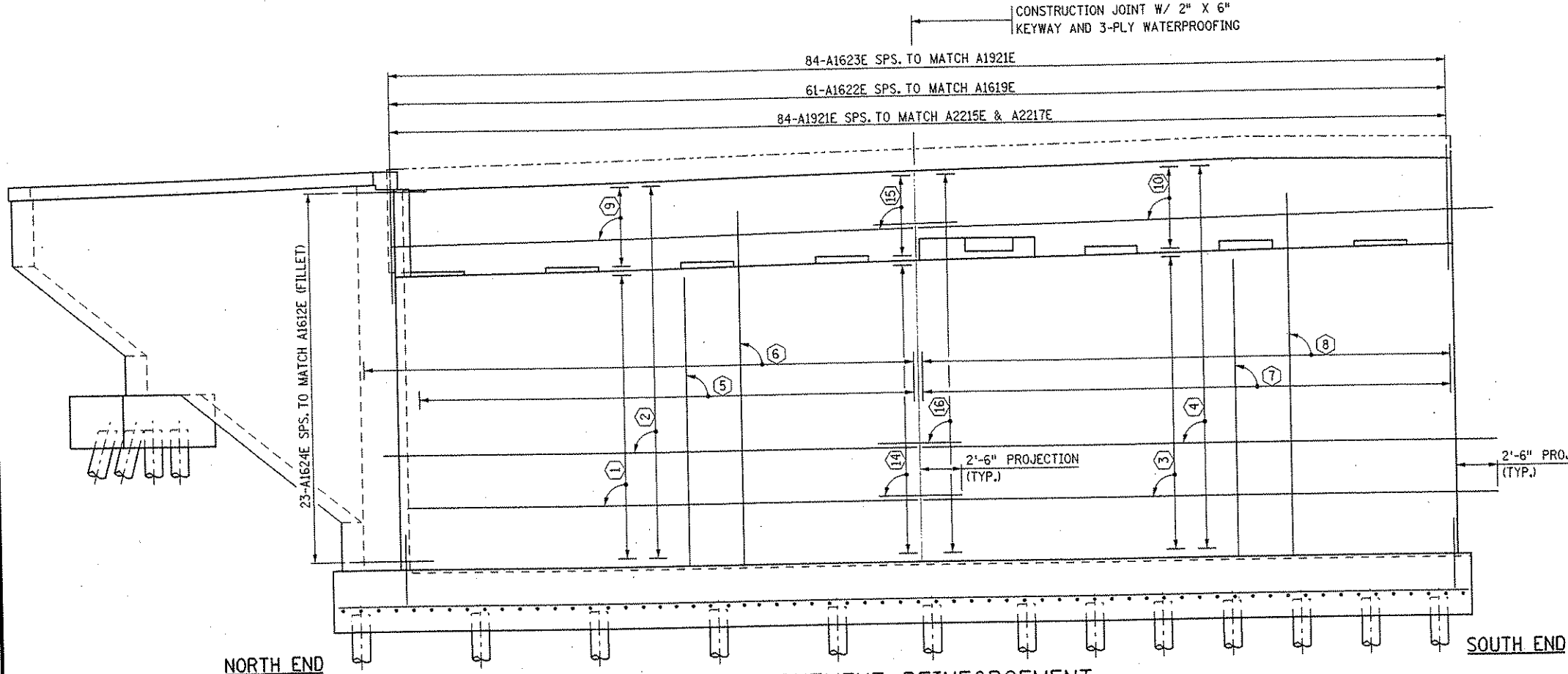
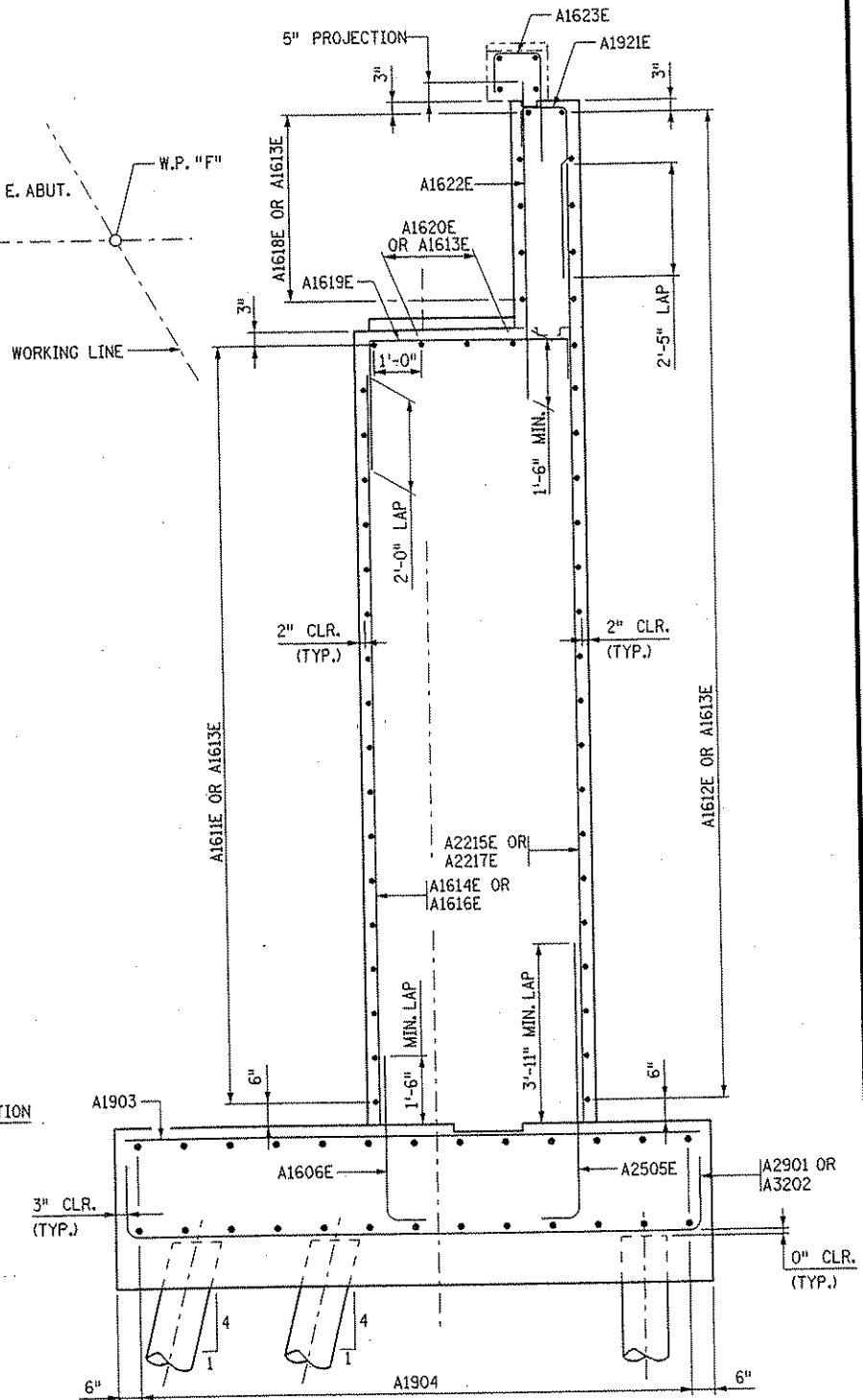
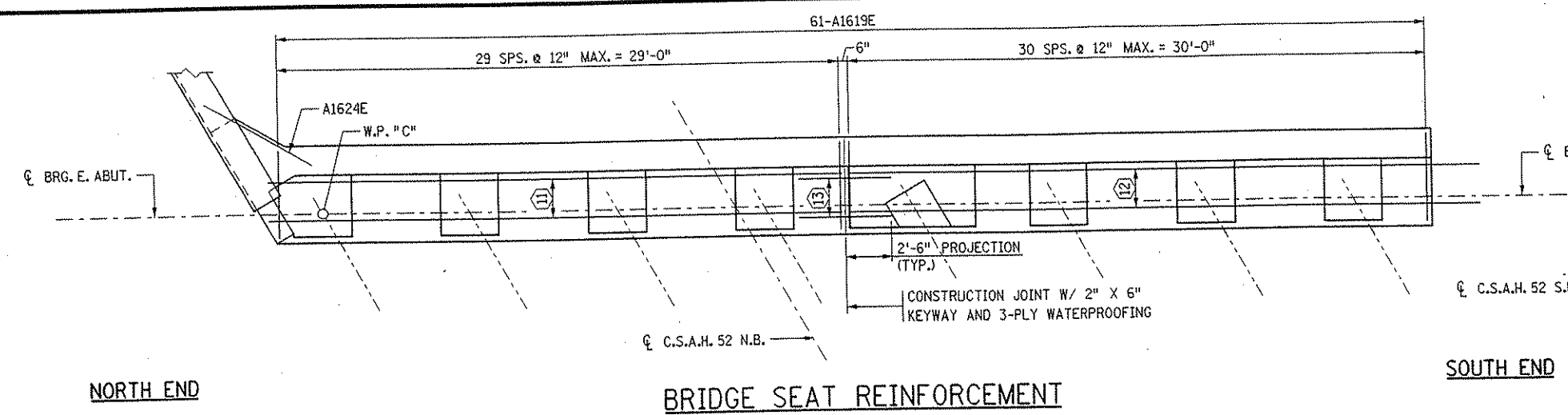


PLAN

DATE: 01/22/2002 TIME: 01:53:47 PM
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NO.	DATE	BY	DESCRIPTION OF REVISIONS	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 SIGNED <i>Gottfried Millner</i> DATE 01/22/2002 REG. NO. 19879	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50	TITLE: EAST ABUTMENT - STAGE 1 FOOTING PLAN & REINFORCEMENT	DES: SVC	DR: SVC	APPROVED	Bridge No. 02566
								CHK: MJC	CHK: MJC	Sheet No. 13 of 56 Sheets	

DATE: 01/22/2002 TIME: 01:53:53 PM
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NOTES:

- FOR LONGITUDINAL REINFORCEMENT IN ABUTMENT ENDBLOCK SEE DETAILS ON SHEET 32.
- FOR ADDITIONAL REINFORCEMENT IN CONCRETE PADS SEE DETAILS ON SHEET 20.
- ① ADJUST A1624E NEAR TOP OF FOOTING AS NEEDED TO MAINTAIN 2" CLEARANCE.
- ② PLACE LAST FOUR NORTHERN A1921E IN FILLET AS SHOWN IN CORNER DETAIL.
- ③ PLACE LAST NORTHERN A1623E RADIALLY IN END BLOCK SPS. TO MATCH A1622E AS SHOWN IN CORNER DETAIL.

BAR CALL-OUTS:

- ① 18-A1611E SPS. @ 12" MAX. (F.F.)
- ② 23-A1612E SPS. @ 12" MAX. (B.F.)
- ③ 18-A1613E SPS. @ 12" MAX. (F.F.)
- ④ 23-A1613E SPS. @ 12" MAX. (B.F.)
- ⑤ 29-A1614E SPS. TO MATCH A1606E DWLS. (F.F.)
- ⑥ 43-A2215E SPS. TO MATCH A2505E DWLS. (B.F.)
- ⑦ 31-A1616E SPS. TO MATCH A1606E DWLS. (F.F.)
- ⑧ 41-A2217E SPS. TO MATCH A2505E DWLS. (B.F.)
- ⑨ 5-A1618E SPS. @ 12" MAX. (F.F.)
- ⑩ 5-A1613E SPS. @ 12" MAX. (F.F.)
- ⑪ 3-A1620E SPS. @ 12" MAX.
- ⑫ 3-A1613E SPS. @ 12" MAX.
- ⑬ 3-A1625E SPS. TO MATCH A1613E & A1620E
- ⑭ 18-A1625E SPS. TO MATCH A1611E & A1613E (F.F.)
- ⑮ 5-A1625E SPS. TO MATCH A1613E & A1618E (F.F.)
- ⑯ 23-A1625E SPS. TO MATCH A1612E & A1613E (B.F.)

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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SIGNED: *Gottfried Millner* GOTTFRIED MILLNER
 DATE: 01/22/2002 REG. NO. 19879

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

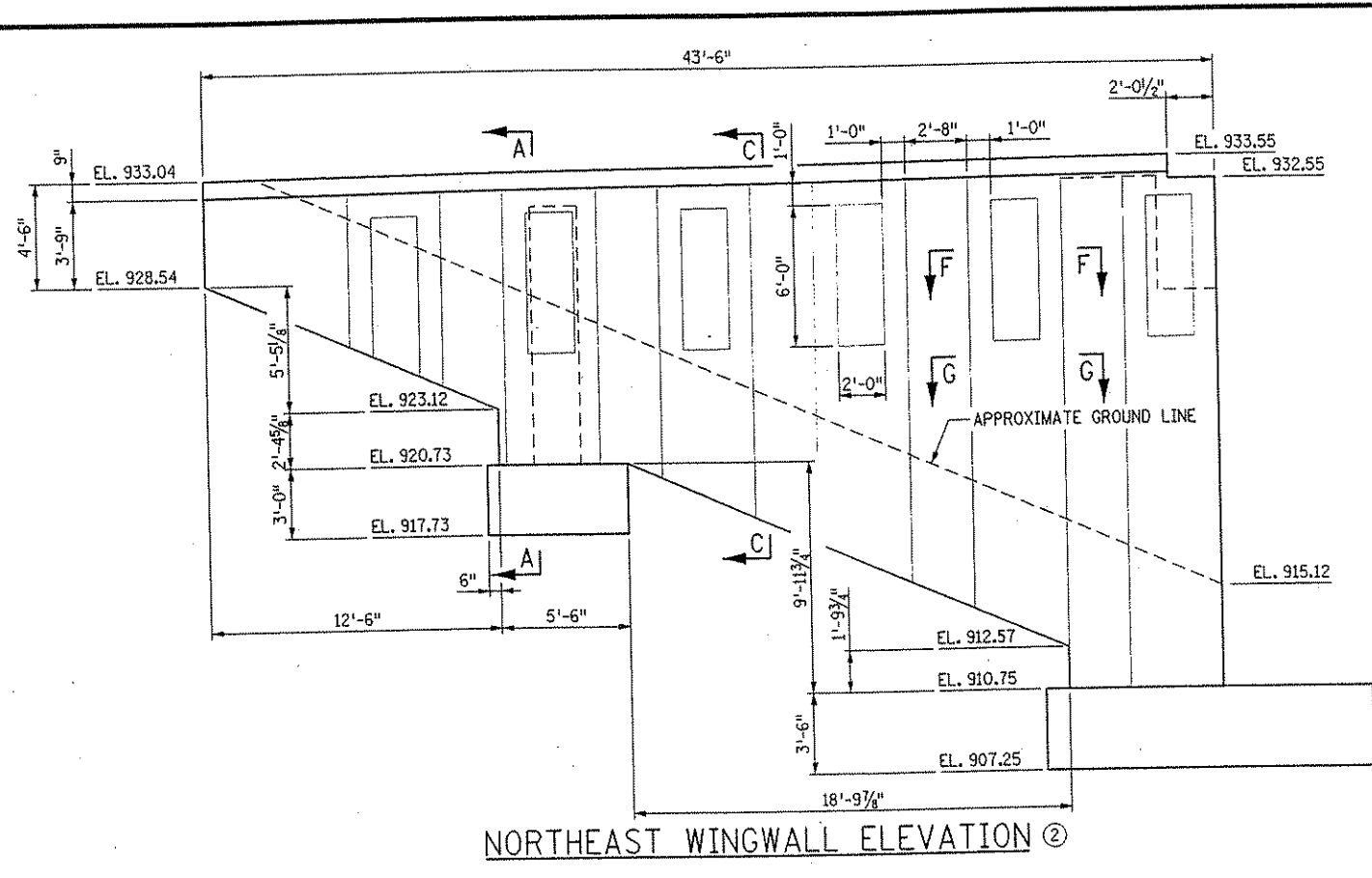
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CHK: GM	CHK: GM	

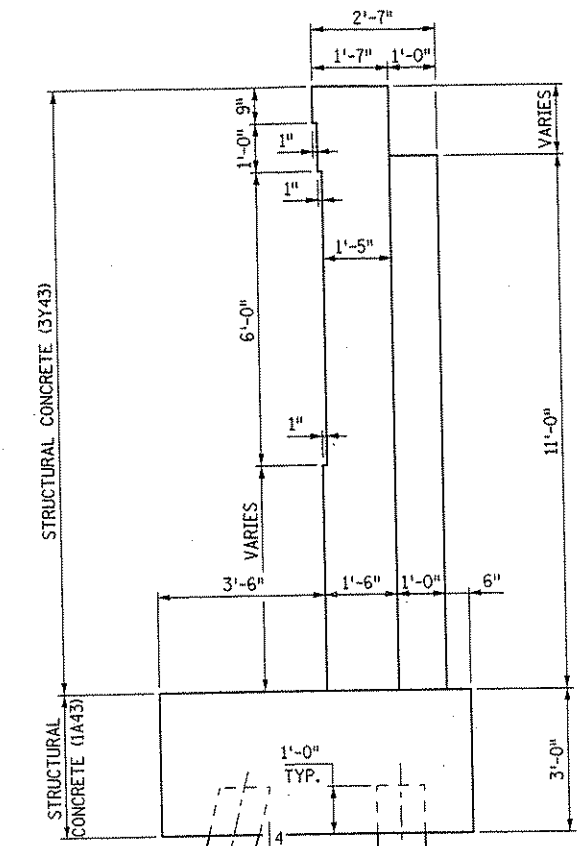
Sheet No. 14 of 56 Sheets

Bridge No. 02566

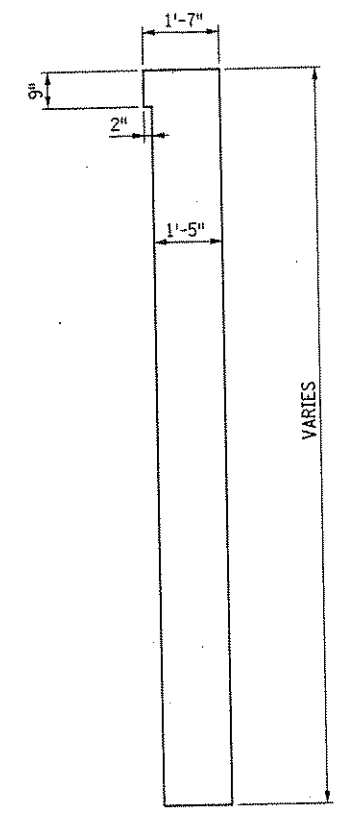
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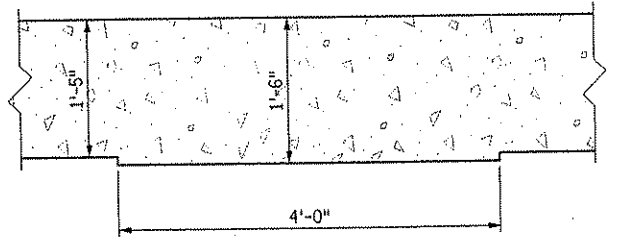
NORTHEAST WINGWALL ELEVATION ②



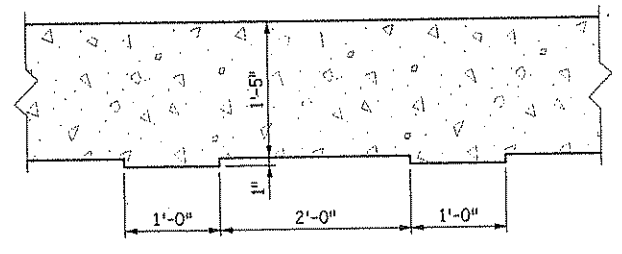
SECTION A-A



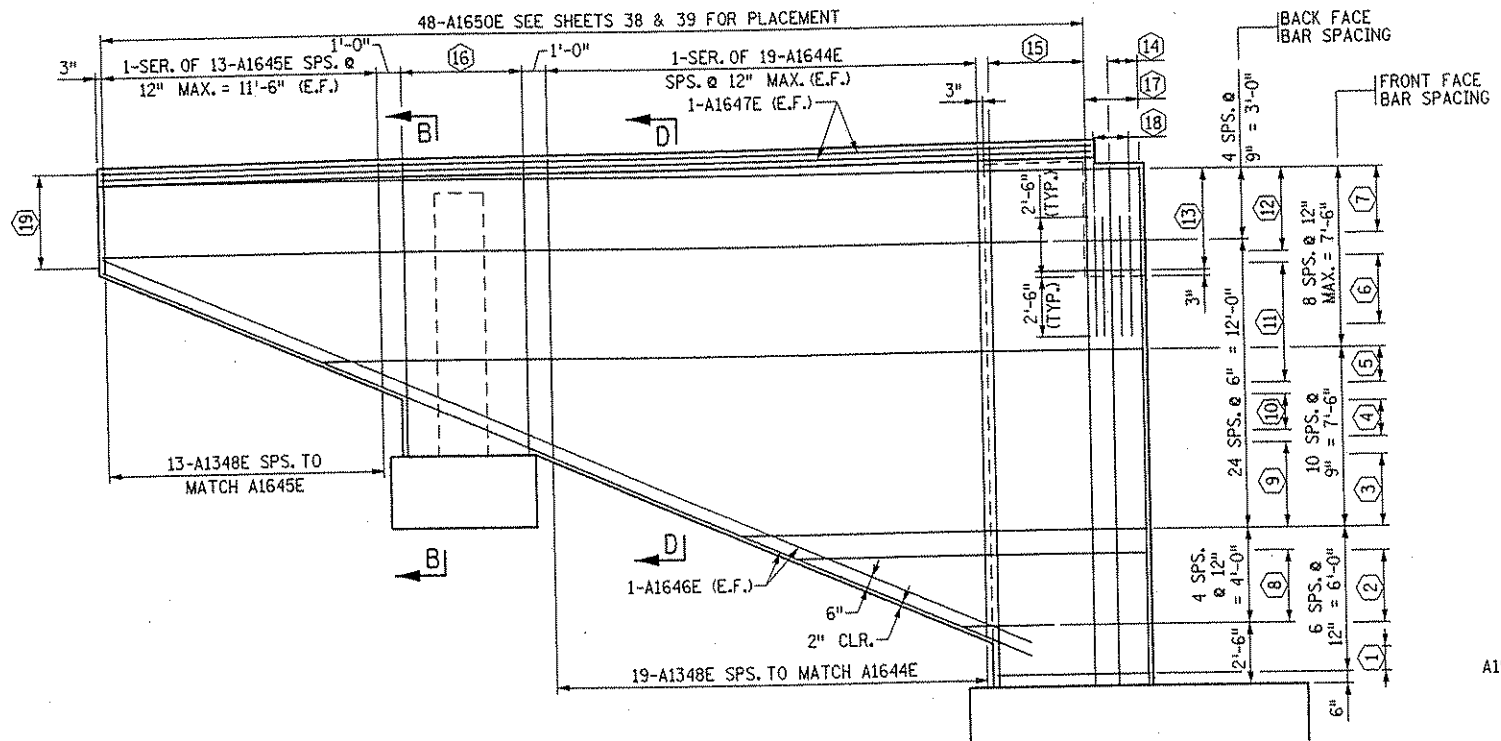
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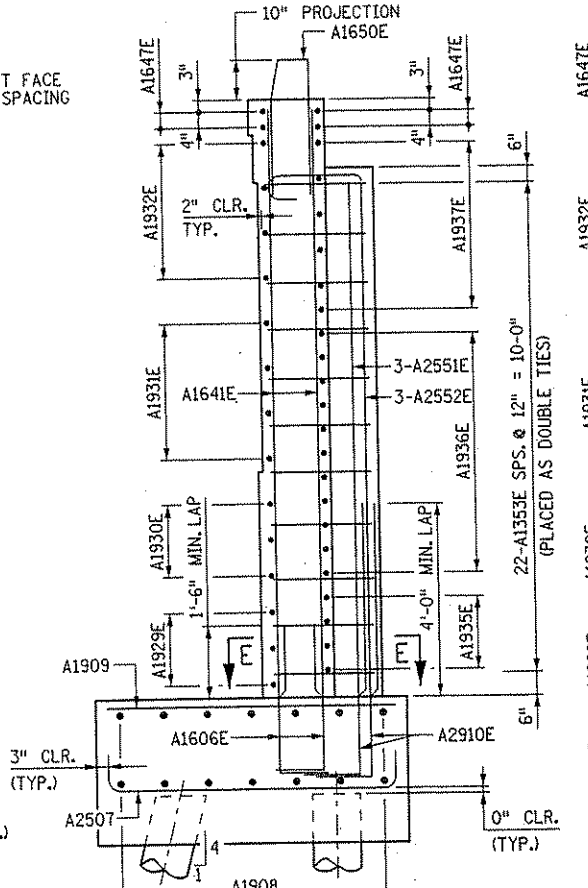
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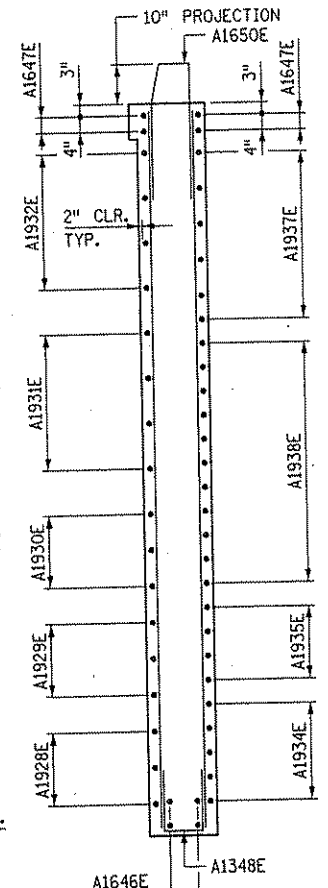
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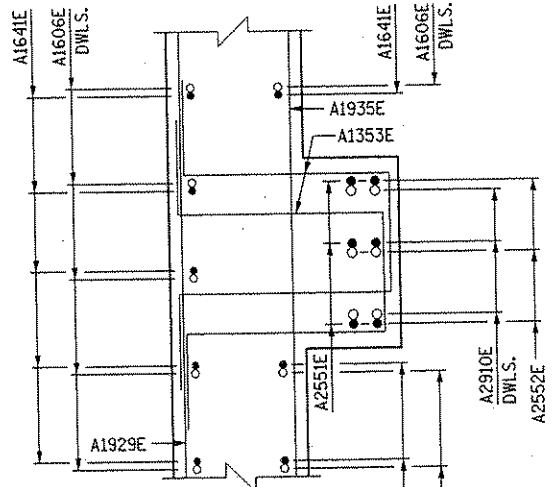
NORTHEAST WINGWALL REINFORCEMENT ②



SECTION B-B



SECTION D-D



SECTION E-E

BAR CALL-OUTS:

- ① 2-A1926E (F.F.)
- ② 1-SER. OF 4-A1927E (F.F.)
- ③ 1-SER. OF 5-A1928E (F.F.)
- ④ 3-A1929E (F.F.)
- ⑤ 1-SER. OF 3-A1930E (F.F.)
- ⑥ 1-SER. OF 4-A1931E (F.F.)
- ⑦ 4-A1932E (F.F.)
- ⑧ 1-SER. OF 4-A1933E (B.F.)
- ⑨ 1-SER. OF 8-A1934E (B.F.)
- ⑩ 4-A1935E (B.F.)
- ⑪ 1-SER. OF 11-A1936E (B.F.)
- ⑫ 6-A1937E (B.F.)
- ⑬ 6-A1938E SPS. @ 12" MAX. (B.F.)
- ⑭ 2-A1639E SPS. TO MATCH A1606E DWLS. (F.F.)
- ⑮ 5-A1640E SPS. TO MATCH A1606E DWLS. (F.F.)
- ⑯ 10-A1641E SPS. TO MATCH A1606E DWLS. (6-F.F., 4-B.F.)
- ⑰ 3-A1642E SPS. EVENLY IN MASK WALL (B.F.)
- ⑱ 8-A1643E ①
- ⑲ 6-A1649E SPS. TO MATCH A1647E & A1932E

- NOTES:**
- ① AS SHOWN IN CORNER DETAIL ON SHEET 14, PLACE 2-A1643E (2 THUS) SPS. EVENLY BETWEEN A1639E AND A1640E IN F.F. OF MASK WALL AND PLACE 2-A1643E (2 THUS) SPS. EVENLY BETWEEN A1642E IN B.F. OF MASK WALL.
 - ② PILES AND FOOTING REINFORCEMENT ARE NOT SHOWN FOR CLARITY.

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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SIGNED *Gottfried Millner* GOTTFRIED MILLNER
DATE 01/22/2002 REG. NO. 19879

TKDA
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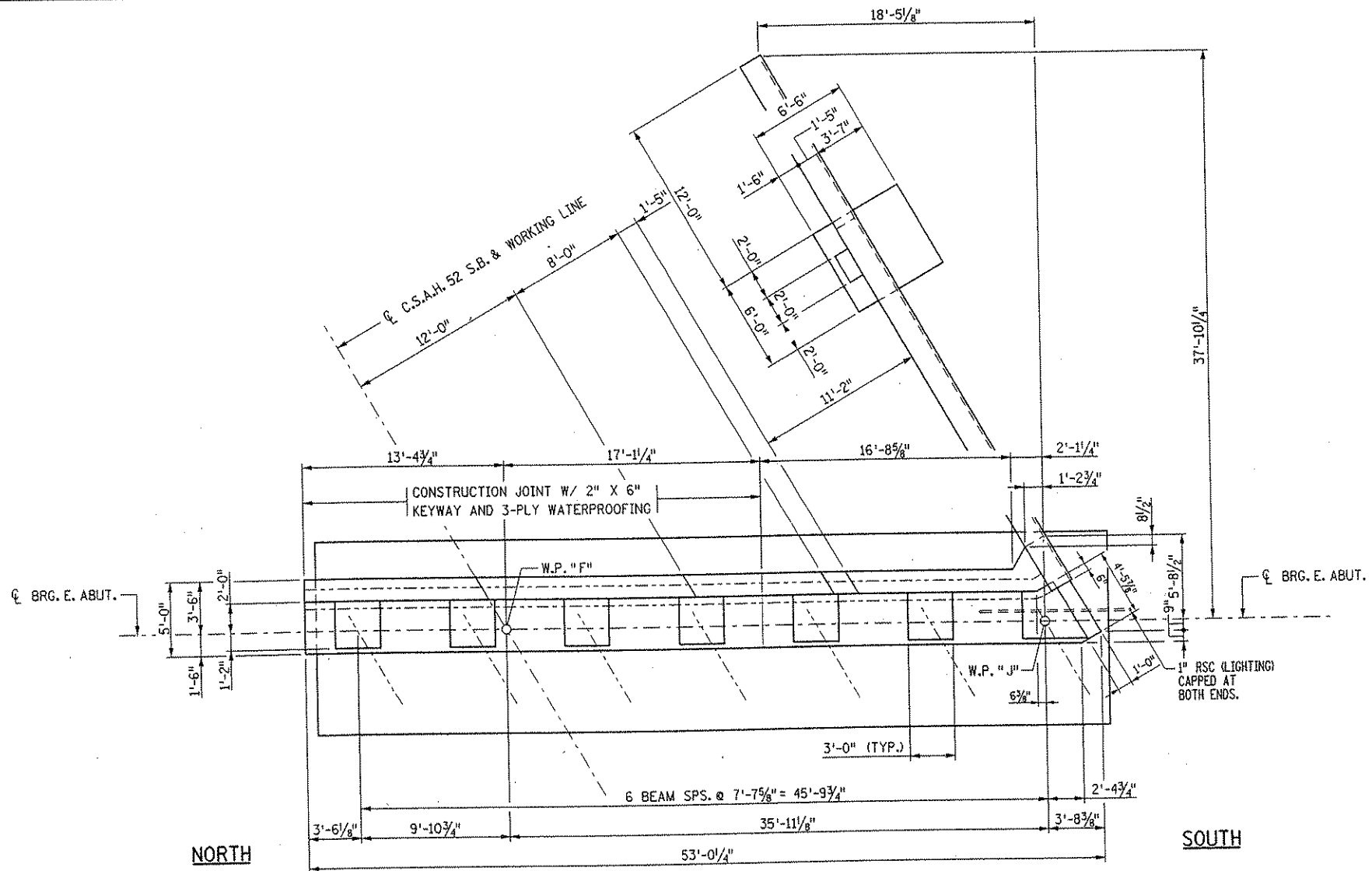
ANOKA COUNTY
C.S.A.H. 52 OVER I-35W
S.P. 02-652-03 S.P. 0280-50

TITLE EAST ABUTMENT - STAGE 1 WINGWALL DETAILS

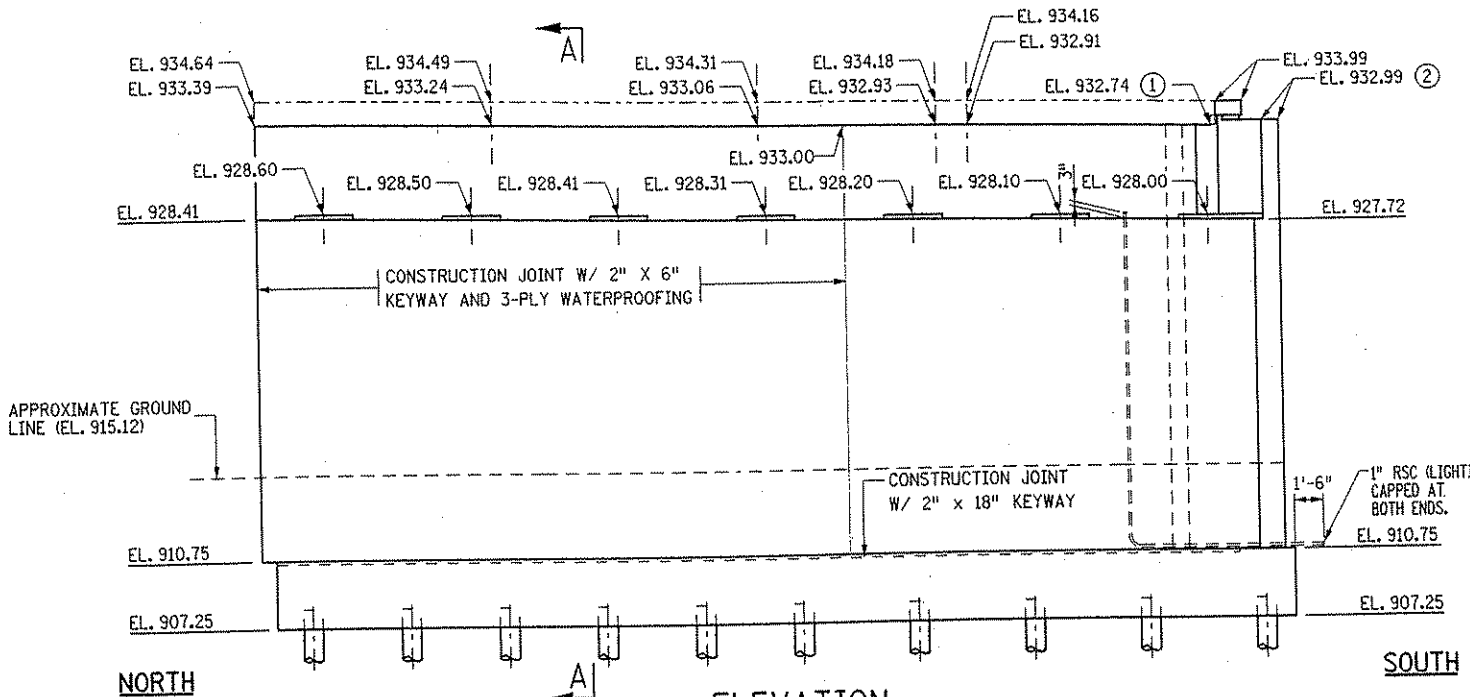
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CHK: GM	CHK: GM	

Bridge No. 02566
Sheet No. 15 of 56 Sheets

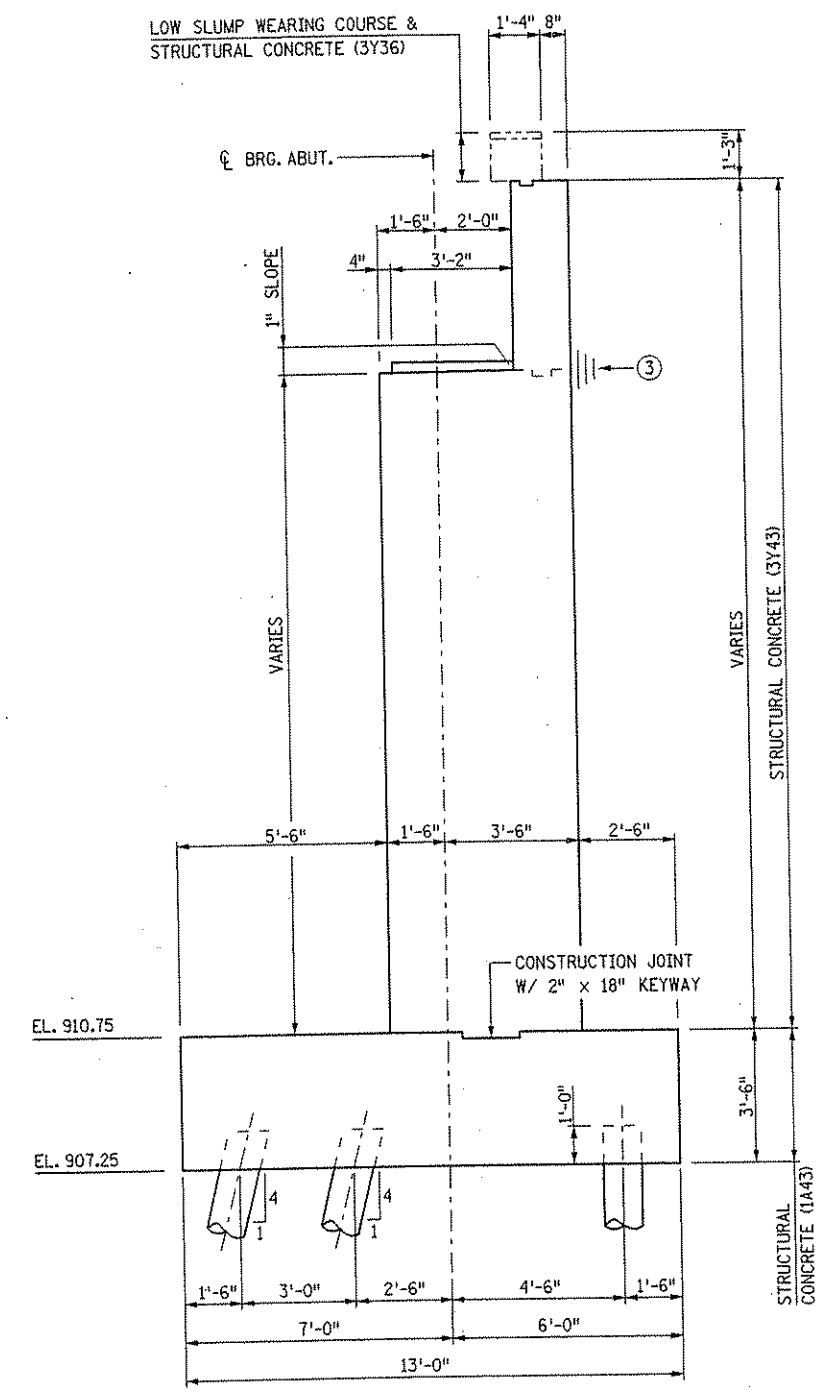
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PLAN



ELEVATION



TYPICAL SECTION A-A

NOTES:

- ① ELEVATION AT FRONT FACE OF BACKWALL
- ② ELEVATION AT TOP OF MASK WALL
- ③ PERMISSIBLE CONSTRUCTION JOINT W/ 2" x 6" KEYWAY & 3 PLY WATERPROOFING

	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. SIGNED: <i>Gottfried Millner</i> DATE: 01/22/2002 REG. NO. 19879	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50	TITLE: EAST ABUTMENT - STAGE 2 PLAN AND ELEVATION	DES: SVC DR: SVC APPROVED CHK: MJC CHK: MJC Sheet No. 16 of 56 Sheets	Bridge No. 02566
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COMPUTED PILE LOADS


EAST ABUTMENT, STAGE 2 - (TONS PER PILE)

DEAD LOAD	55.4
LIVE LOAD	4.6
TOTAL LOAD	60.0
*DESIGN LOAD	60.0

* 60.0/1.0 REDUCTION PER AASHTO 3.22.1
GROUP 1 LOADING

PILE NOTES:

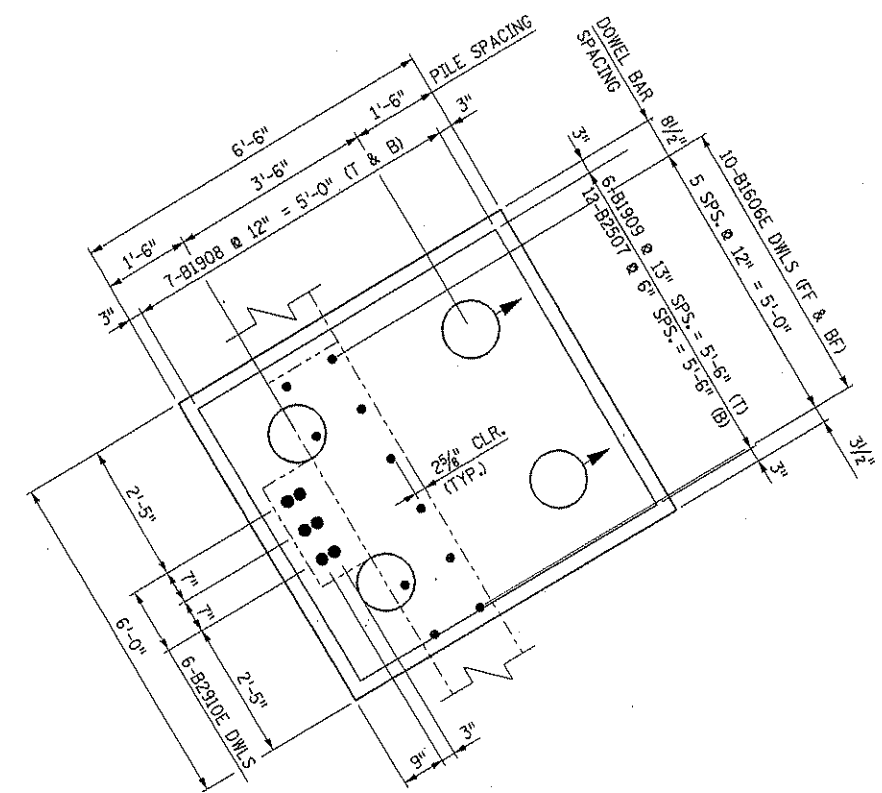
PILE SPACING SHOWN IS AT BOTTOM OF FOOTING

PILES MARKED THIS  TO BE BATTERED
3 INCHES PER FOOT IN DIRECTION SHOWN.

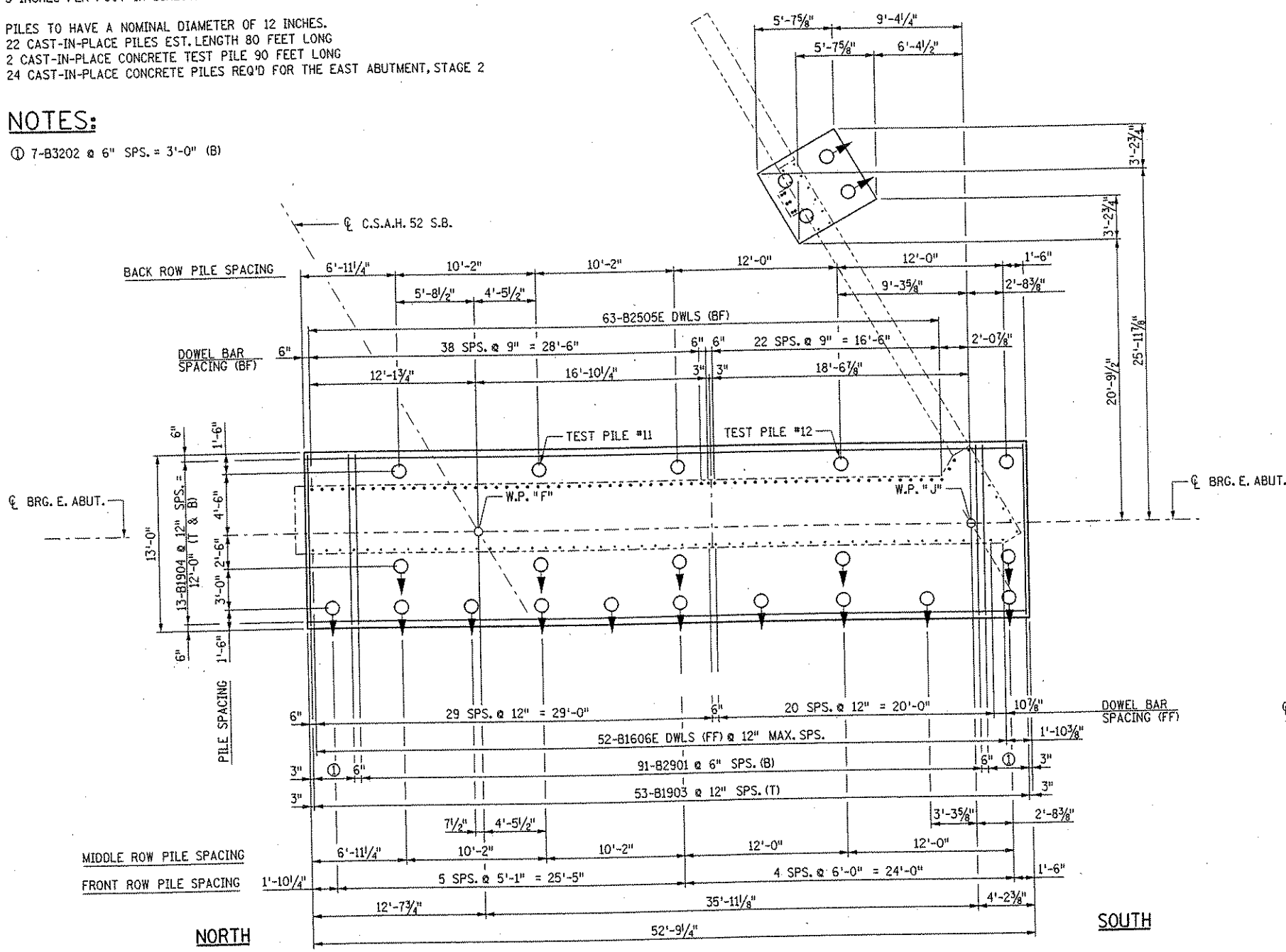
PILES TO HAVE A NOMINAL DIAMETER OF 12 INCHES.
22 CAST-IN-PLACE PILES EST. LENGTH 80 FEET LONG
2 CAST-IN-PLACE CONCRETE TEST PILE 90 FEET LONG
24 CAST-IN-PLACE CONCRETE PILES REQ'D FOR THE EAST ABUTMENT, STAGE 2

NOTES:

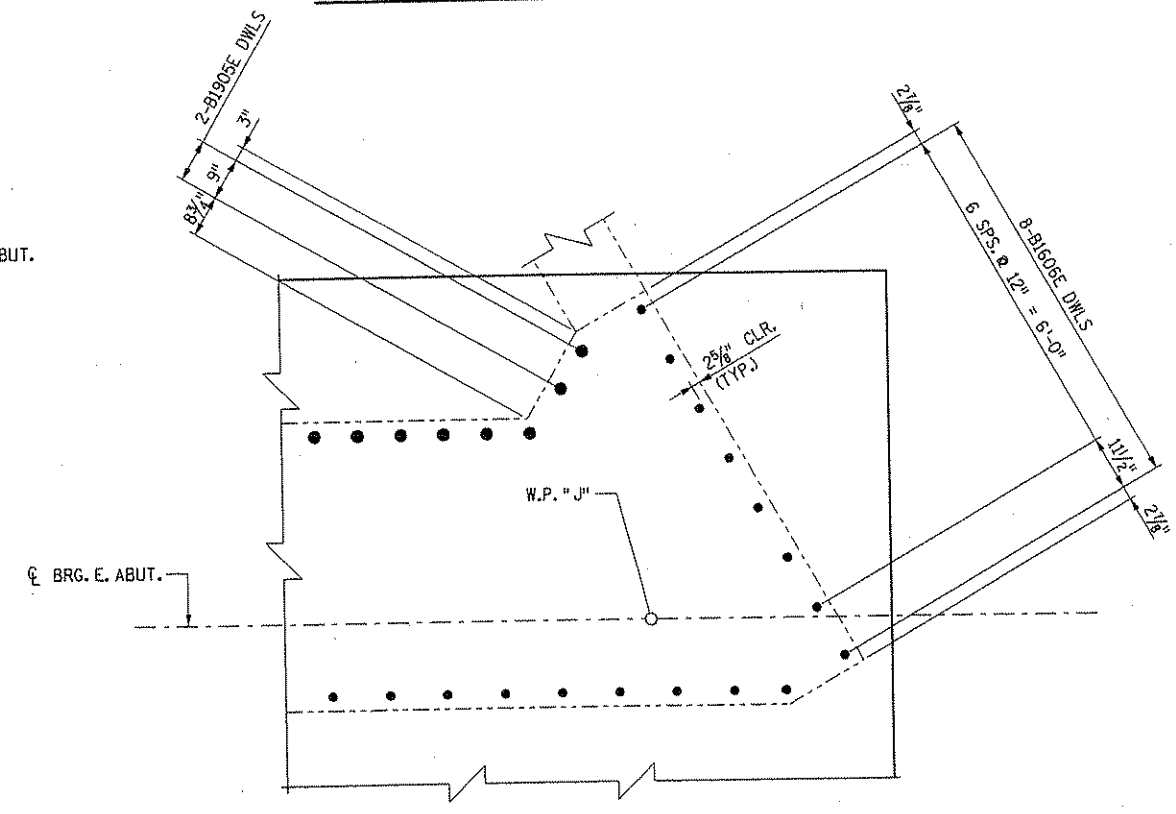
① 7-B3202 @ 6" SPS. = 3'-0" (B)



WINGWALL FOOTING PLAN



PLAN



SOUTH CORNER ABUTMENT DETAIL

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NO.	DATE	BY	DESCRIPTION OF REVISIONS

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DATE 01/22/2002 REG. NO. 19879

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AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
C.S.A.H. 52 OVER I-35W
S.P. 02-652-03 S.P. 0280-50

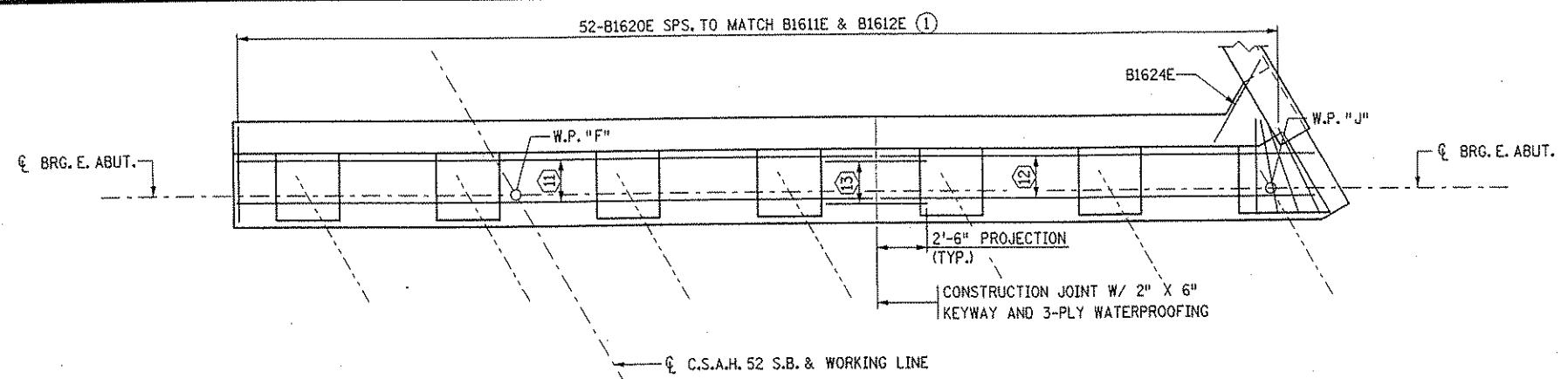
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FOOTING PLAN & REINFORCEMENT

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CHK: MJC	CHK: MJC	

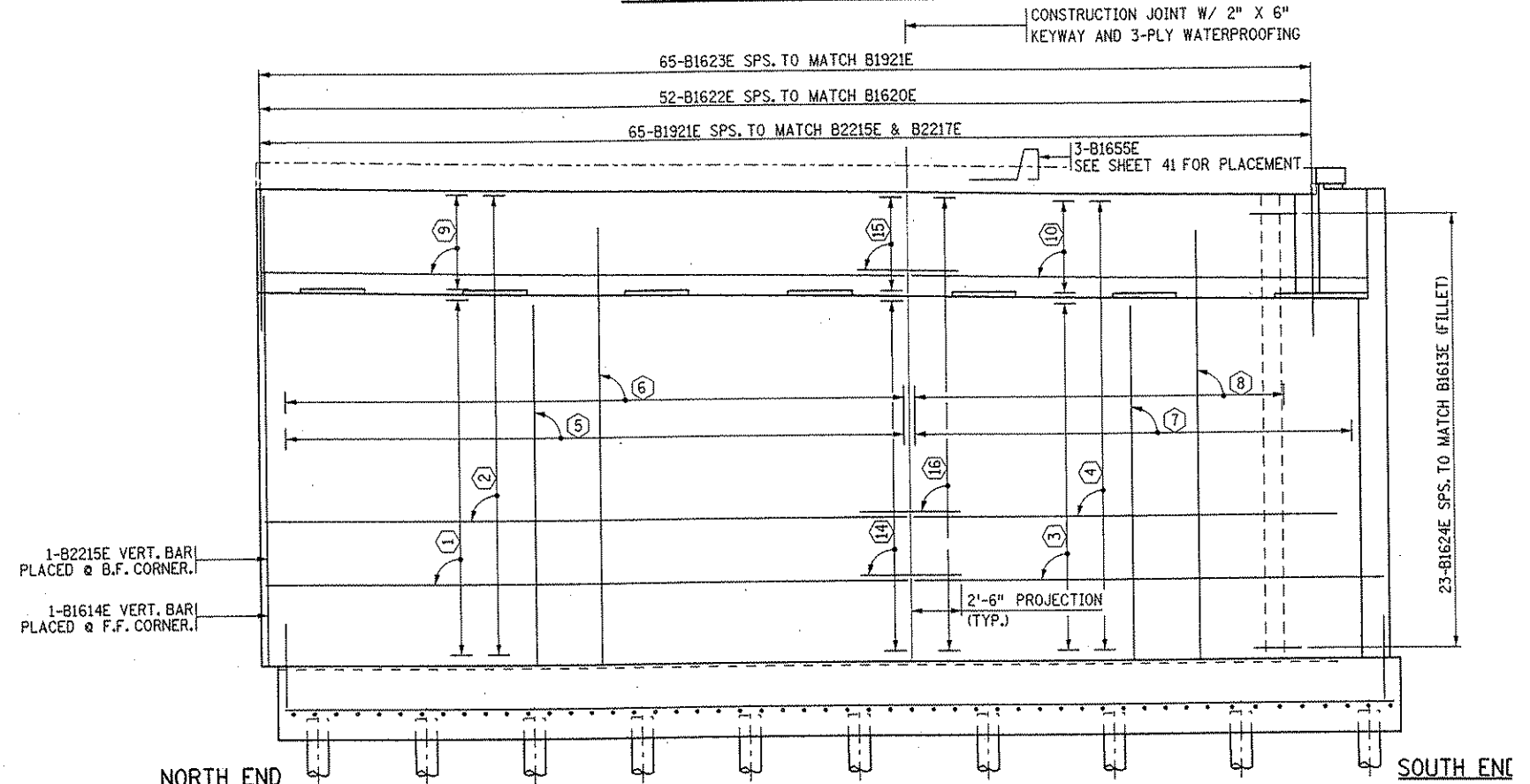
Sheet No. 17 of 56 Sheets

Bridge No.
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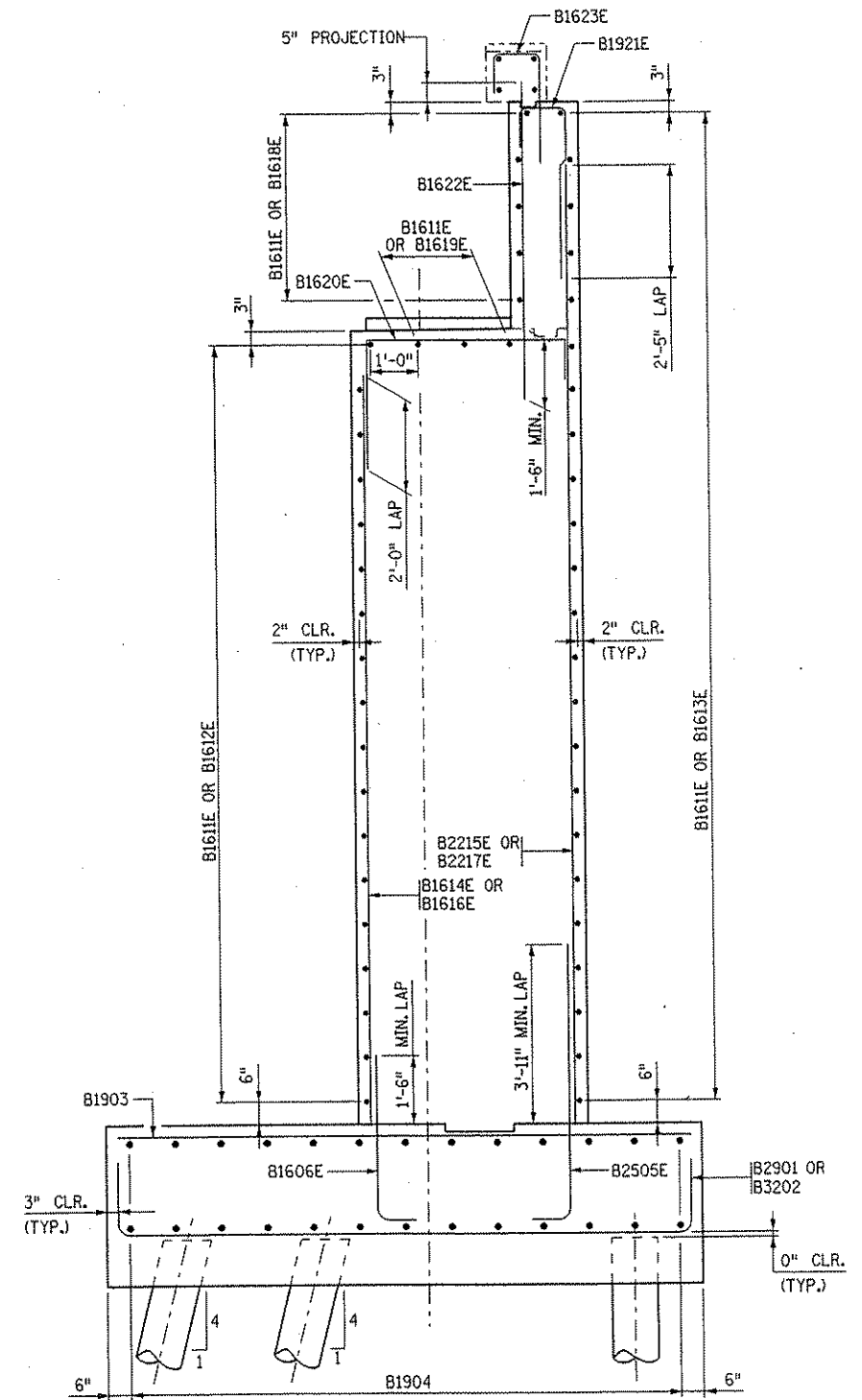
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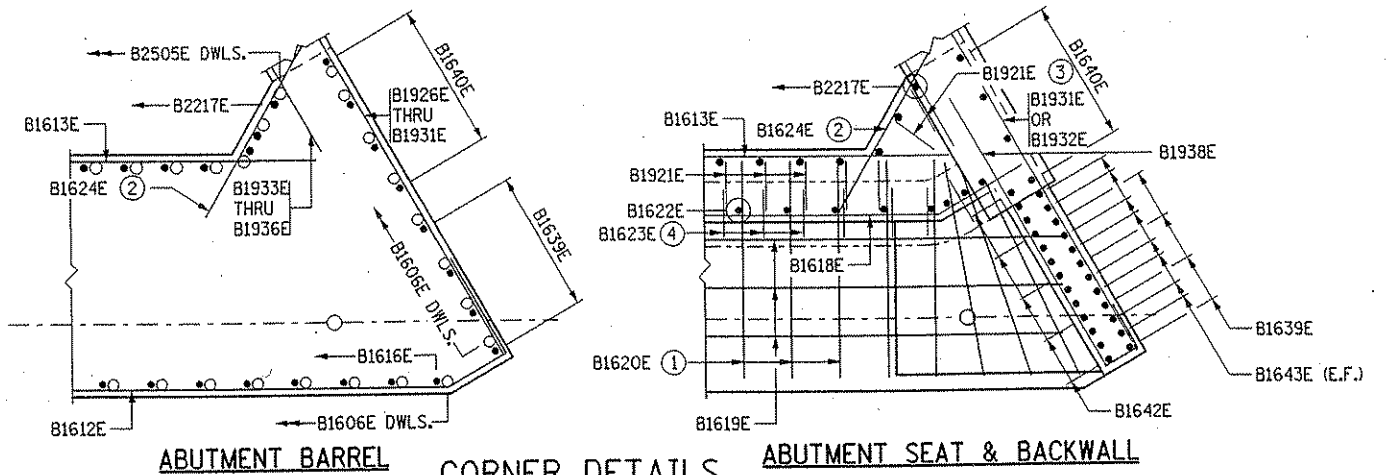
NORTH END BRIDGE SEAT REINFORCEMENT SOUTH END



NORTH END ABUTMENT REINFORCEMENT SOUTH END



ABUTMENT REINFORCEMENT



ABUTMENT BARREL CORNER DETAILS ABUTMENT SEAT & BACKWALL

NOTES:

- FOR LONGITUDINAL REINFORCEMENT IN ABUTMENT ENDBLOCK SEE DETAILS ON SHEET 33.
 FOR ADDITIONAL REINFORCEMENT IN CONCRETE PADS SEE DETAILS ON SHEET 20.
- ① ADJUST B1620E BARS AT SOUTH END OF BRIDGE SEAT AS SHOWN IN CORNER DETAIL.
 - ② ADJUST B1624E NEAR TOP OF FOOTING AS NEEDED TO MAINTAIN 2" CLEARANCE.
 - ③ PLACE LAST TWO SOUTHERN B1921E IN FILLET AS SHOWN IN CORNER DETAIL.
 - ④ PLACE LAST TWO SOUTHERN B1623E RADIALLY IN END BLOCK SPS. TO MATCH B1622E AS SHOWN IN CORNER DETAIL.

BAR CALL-OUTS:

- ① 18-B1611E SPS. @ 12" MAX. (F.F.)
- ② 23-B1611E SPS. @ 12" MAX. (B.F.)
- ③ 18-B1612E SPS. @ 12" MAX. (F.F.)
- ④ 23-B1613E SPS. @ 12" MAX. (B.F.)
- ⑤ 30-B1614E SPS. TO MATCH B1606E DWLS. (F.F.)
- ⑥ 40-B2215E SPS. TO MATCH B2505E DWLS. (B.F.)
- ⑦ 22-B1616E SPS. TO MATCH B1606E DWLS. (F.F.)
- ⑧ 25-B2217E SPS. TO MATCH B2505E DWLS. (B.F.)
- ⑨ 5-B1611E SPS. @ 12" MAX. (F.F.)
- ⑩ 5-B1618E SPS. @ 12" MAX. (F.F.)
- ⑪ 3-B1611E SPS. @ 12" MAX.
- ⑫ 3-B1619E SPS. @ 12" MAX.
- ⑬ 3-B1625E SPS. TO MATCH B1611E & B1619E
- ⑭ 18-B1625E SPS. TO MATCH B1611E & B1612E (F.F.)
- ⑮ 5-B1625E SPS. TO MATCH B1611E & B1618E (F.F.)
- ⑯ 23-B1625E SPS. TO MATCH B1611E & B1613E (B.F.)

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

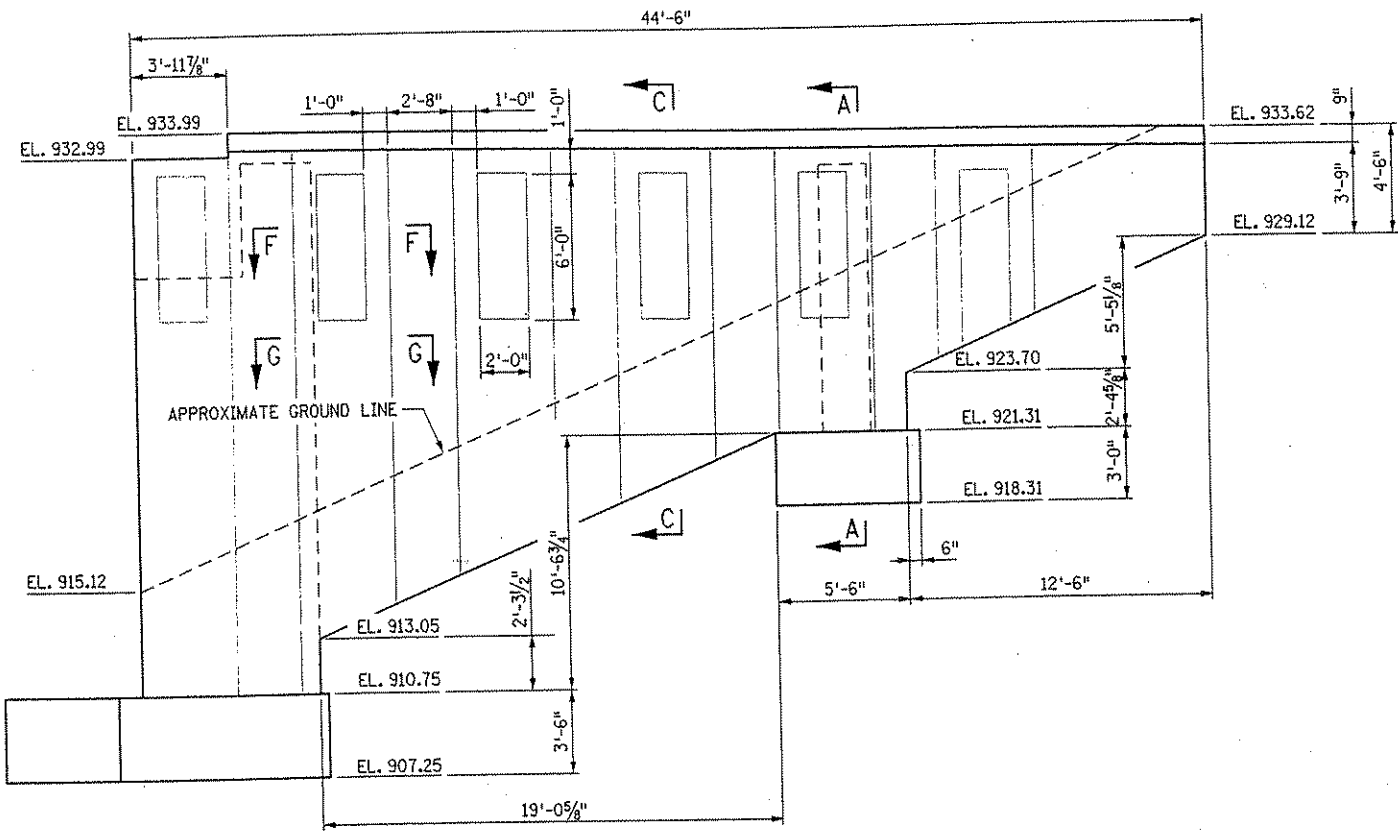
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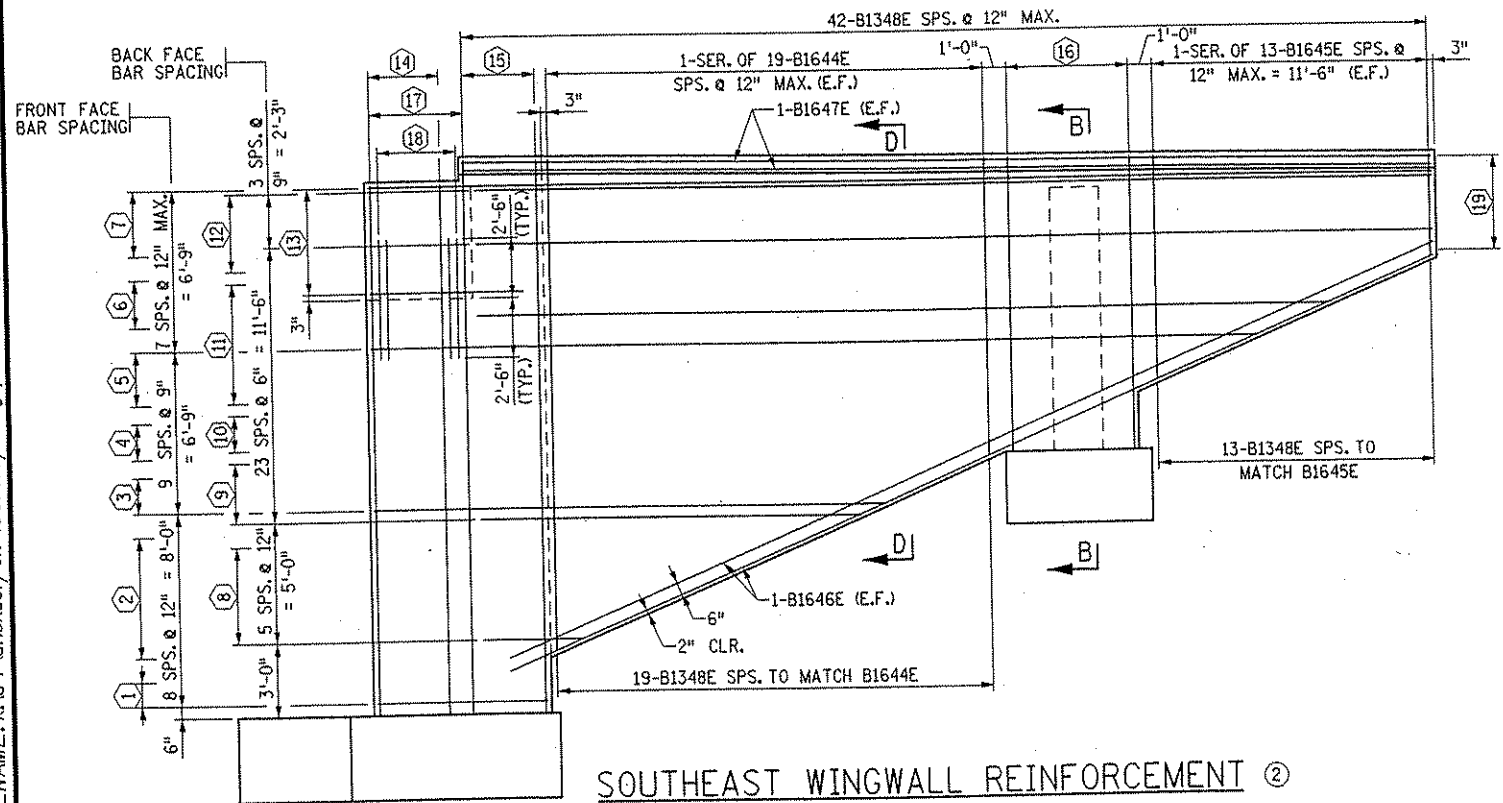
Sheet No. 18 of 56 Sheets

Bridge No.
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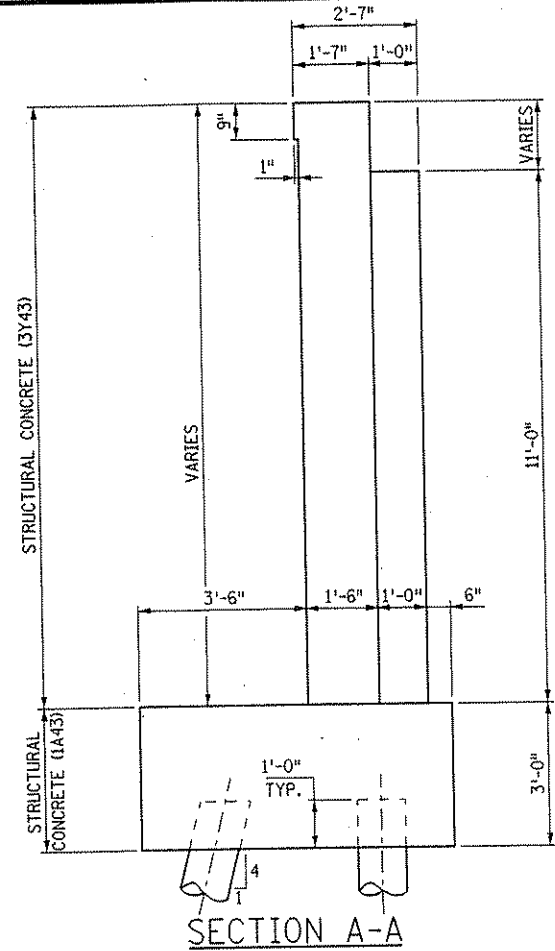
SOUTHEAST WINGWALL ELEVATION ②



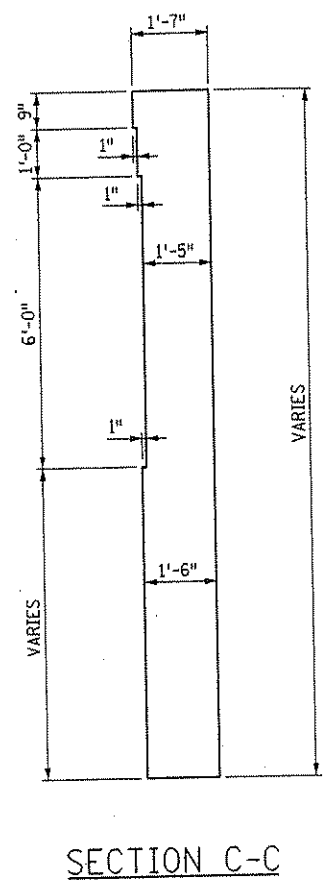
SOUTHEAST WINGWALL REINFORCEMENT ②

BAR CALL-OUTS:

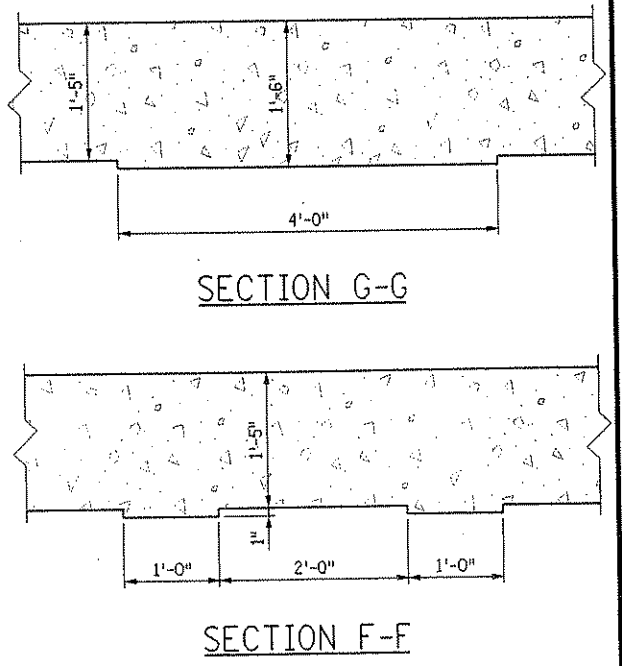
- | | | | |
|-----------------------------|-----------------------------|--|---|
| ① 2-B1926E (F.F.) | ⑥ 1-SER. OF 3-B1931E (F.F.) | ⑪ 1-SER. OF 11-B1936E (B.F.) | ⑱ 10-B1641E SPS. TO MATCH B1606E DWLS. (6-F.F., 4-B.F.) |
| ② 1-SER. OF 6-B1927E (F.F.) | ⑦ 4-B1932E (F.F.) | ⑫ 6-B1937E (B.F.) | ⑳ 5-B1642E SPS. @ 12" MAX (B.F. OF MASKWALL) |
| ③ 1-SER. OF 3-B1928E (F.F.) | ⑧ 1-SER. OF 5-B1933E (B.F.) | ⑬ 6-B1938E SPS. @ 12" MAX. (B.F.) | ㉑ 16-B1643E (1) |
| ④ 3-B1929E (F.F.) | ⑨ 1-SER. OF 6-B1934E (B.F.) | ⑭ 4-B1639E SPS. TO MATCH B1606E DWLS. (F.F.) | ㉒ 6-B1349E SPS. TO MATCH B1647E & B1932E |
| ⑤ 1-SER. OF 4-B1930E (F.F.) | ⑩ 4-B1935E (B.F.) | ⑮ 4-B1640E SPS. TO MATCH B1606E DWLS. (F.F.) | |



SECTION A-A

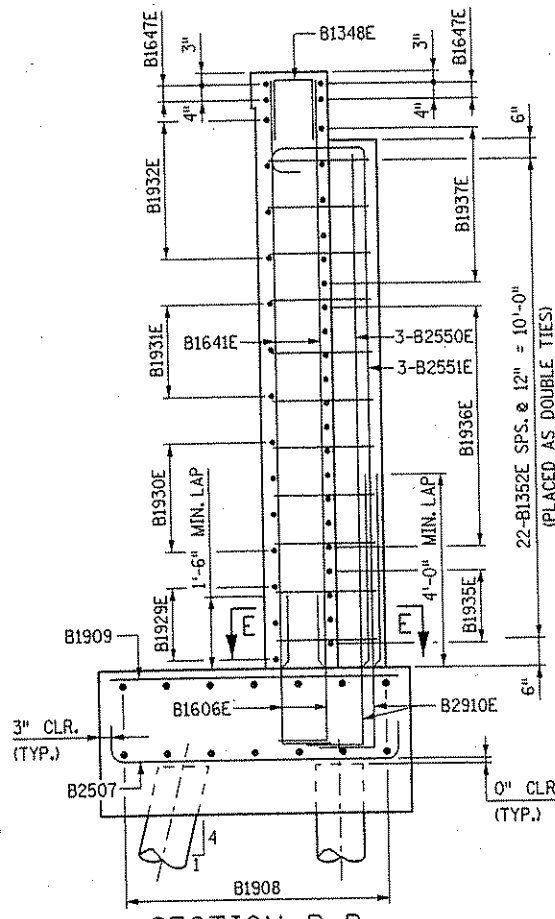


SECTION C-C

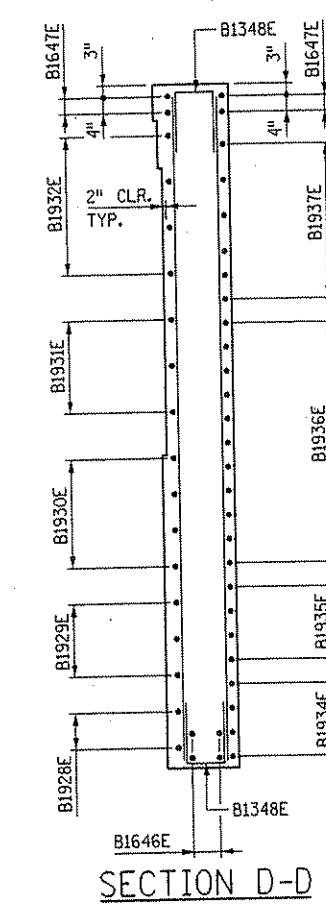


SECTION G-G

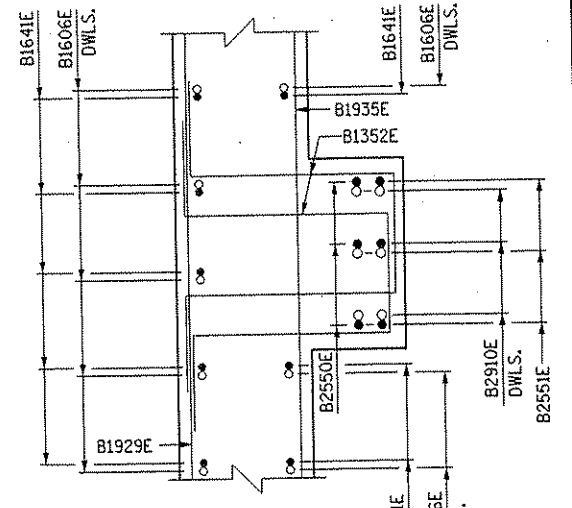
SECTION F-F



SECTION B-B



SECTION D-D



SECTION E-E

- NOTES:
- AS SHOWN IN CORNER DETAIL ON SHEET 18, PLACE 2-B1643E (4 THUS) SPS. EVENLY BETWEEN B1639E IN F.F. OF MASK WALL AND PLACE 2-B1643E (4 THUS) SPS. EVENLY BETWEEN B1642E IN B.F. OF MASK WALL.
 - PILES AND FOOTING REINFORCEMENT ARE NOT SHOWN FOR CLARITY.

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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
 SIGNED *Gottfried Millner* GOTTFRIED MILLNER
 DATE 01/22/2002 REG. NO. 19879

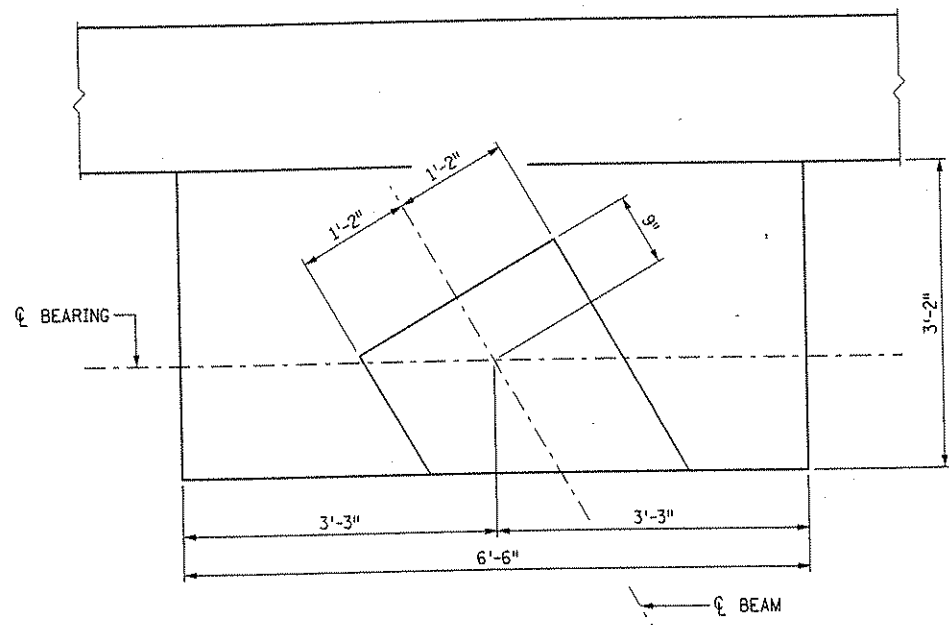
TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

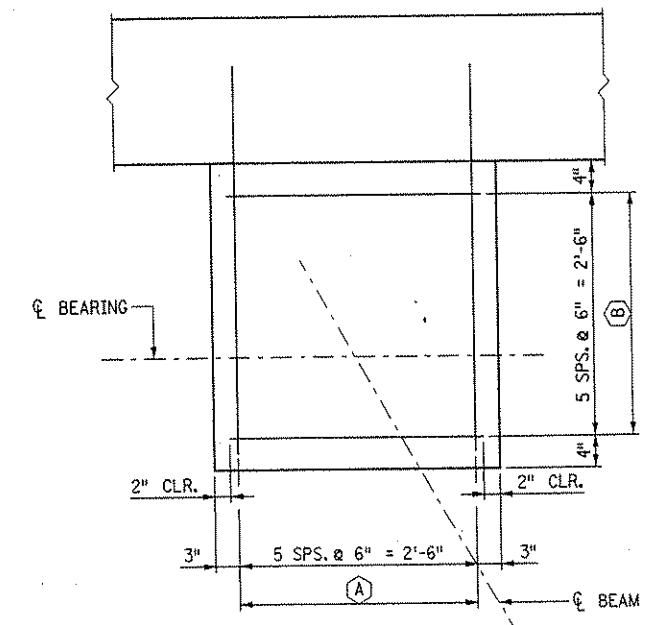
TITLE: EAST ABUTMENT - STAGE 2
 WINGWALL DETAILS

DES: MJC	DR: MJC	APPROVED	Bridge No. 02566
CHK: GM	CHK: GM	Sheet No. 19 of 56 Sheets	

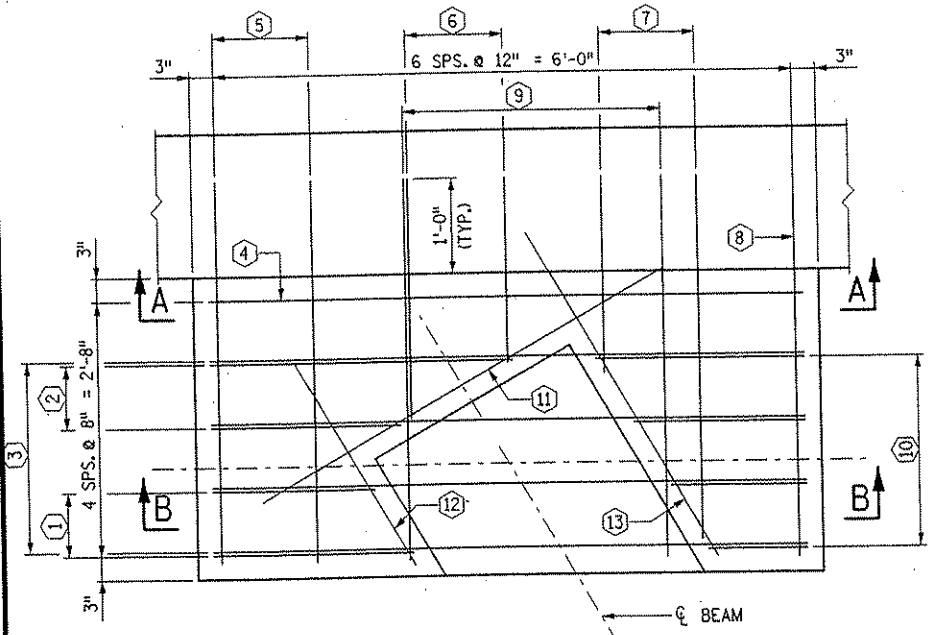
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SHEAR KEY PLAN



TYPICAL PEDESTAL REINFORCEMENT PLAN



SHEAR KEY REINFORCEMENT PLAN

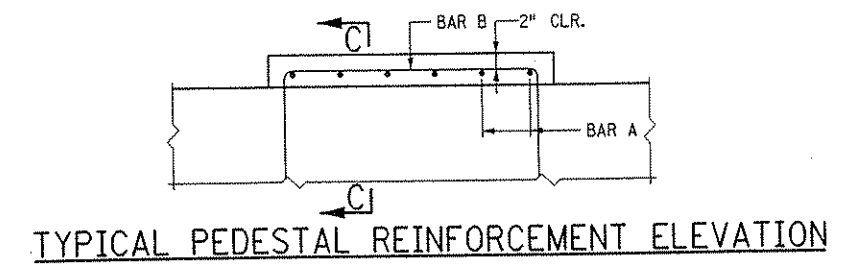
BAR CALL-OUTS:

EAST ABUTMENT

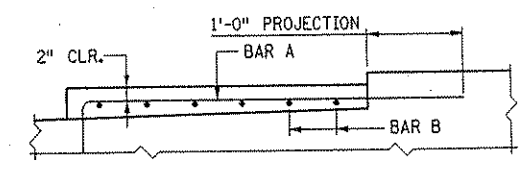
- ① 1-SER. OF 2-A1356E
- ② 1-SER. OF 2-A1357E
- ③ 4-A1358E
- ④ 1-A1359E
- ⑤ 2-A1360E
- ⑥ 1-SER. OF 2-A1361E
- ⑦ 1 SER. OF 2-A1362E
- ⑧ 1-A1363E
- ⑨ 5-A1364E SPS. @ 8" = 2'-8"
- ⑩ 1-SER. OF 4-A1365E
- ⑪ 1-A1366E
- ⑫ 1-A1367E
- ⑬ 1-A1368E

WEST ABUTMENT

- ① 1-SER. OF 2-C1354E
- ② 1-SER. OF 2-C1355E
- ③ 4-C1356E
- ④ 1-C1357E
- ⑤ 2-C1358E
- ⑥ 1-SER. OF 2-C1359E
- ⑦ 1 SER. OF 2-C1360E
- ⑧ 1-C1361E
- ⑨ 5-C1362E SPS. @ 8" = 2'-8"
- ⑩ 1-SER. OF 4-C1363E
- ⑪ 1-C1364E
- ⑫ 1-C1365E
- ⑬ 1-C1366E



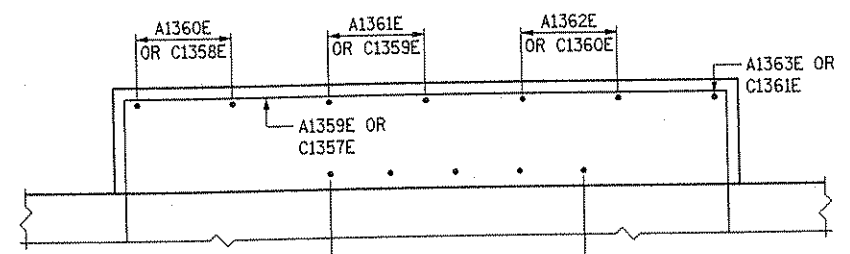
TYPICAL PEDESTAL REINFORCEMENT ELEVATION



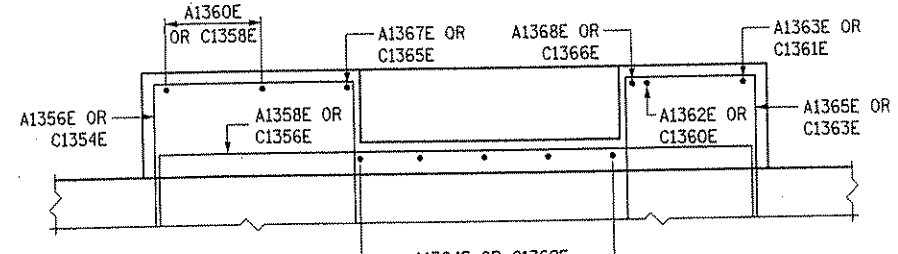
SECTION C-C

BAR CALL-OUTS:

	(A)	(B)
EAST ABUTMENT STAGE 1	6-A1354E	6-A1355E
EAST ABUTMENT STAGE 2	6-B1353E	6-B1354E
WEST ABUTMENT STAGE 1	6-C1352E	6-C1353E
WEST ABUTMENT STAGE 2	6-D1350E	6-D1351E



SECTION A-A



SECTION B-B

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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 SIGNED: *Gottfried Millner* GOTTFRIED MILLNER
 DATE 01/22/2002 REG. NO. 19879

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

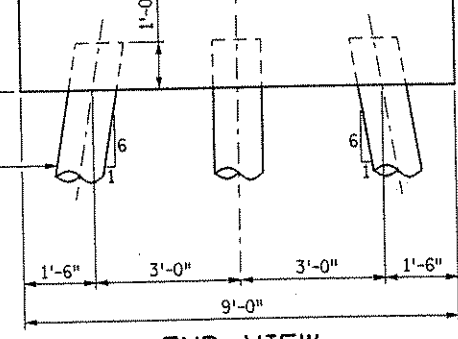
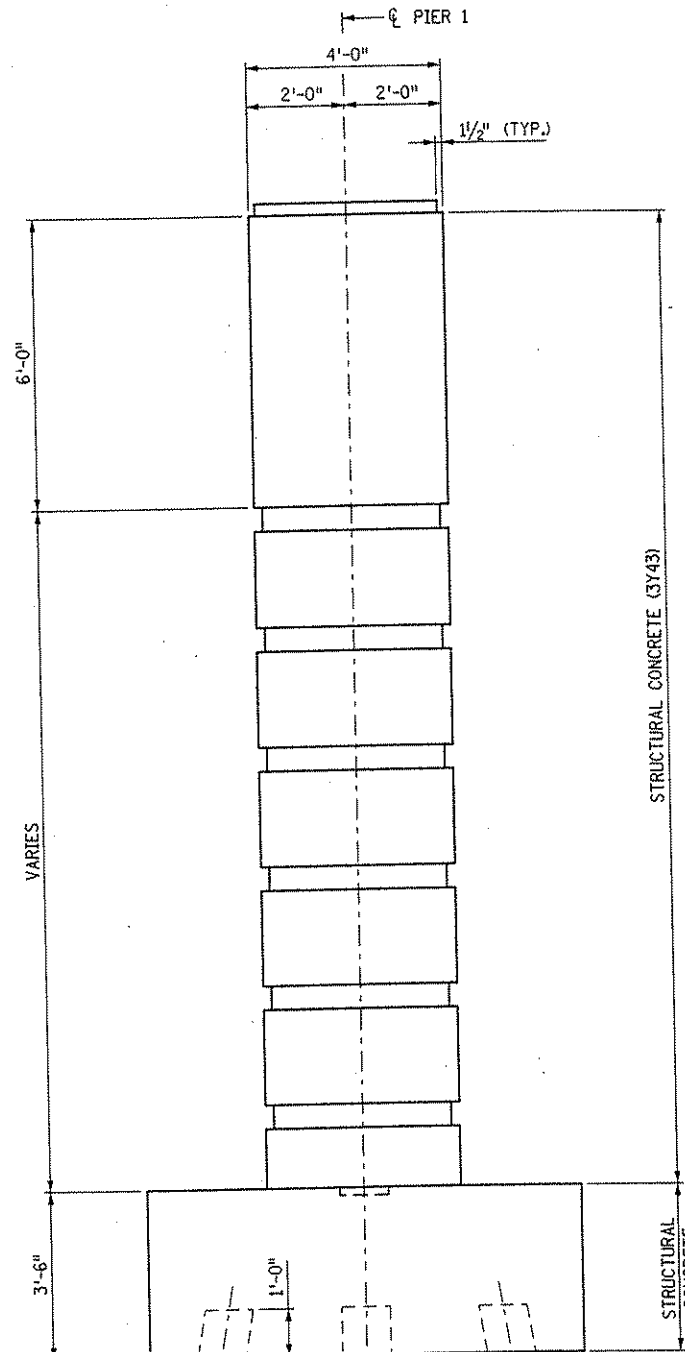
ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE: **ABUTMENT DETAILS**

DES: MJC OR: MJC APPROVED
 CHK: GM CHK: GM
 Sheet No. 20 of 56 Sheets

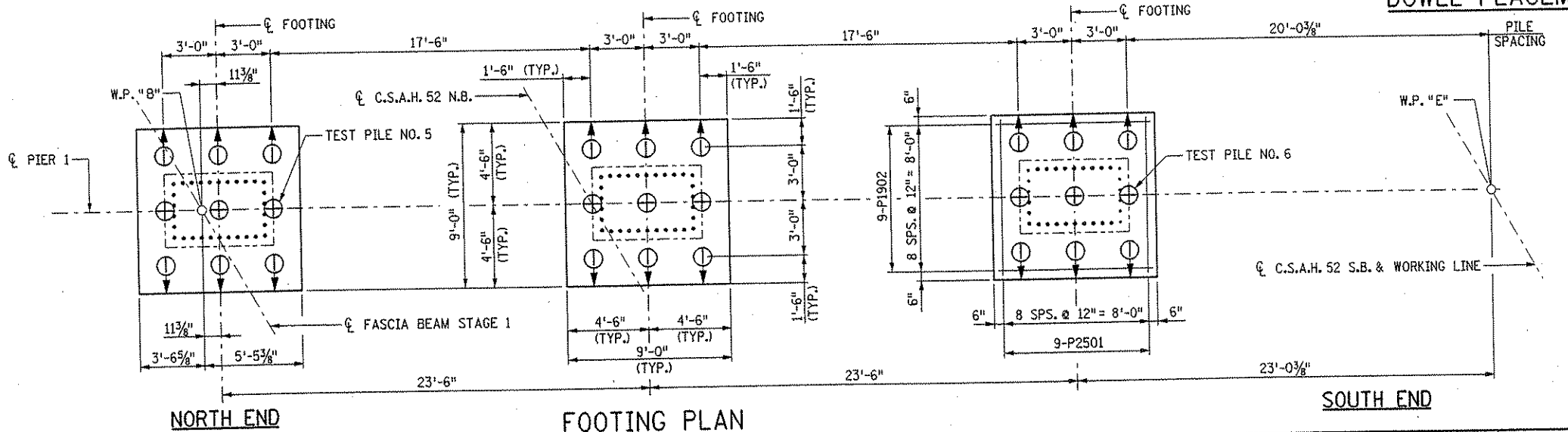
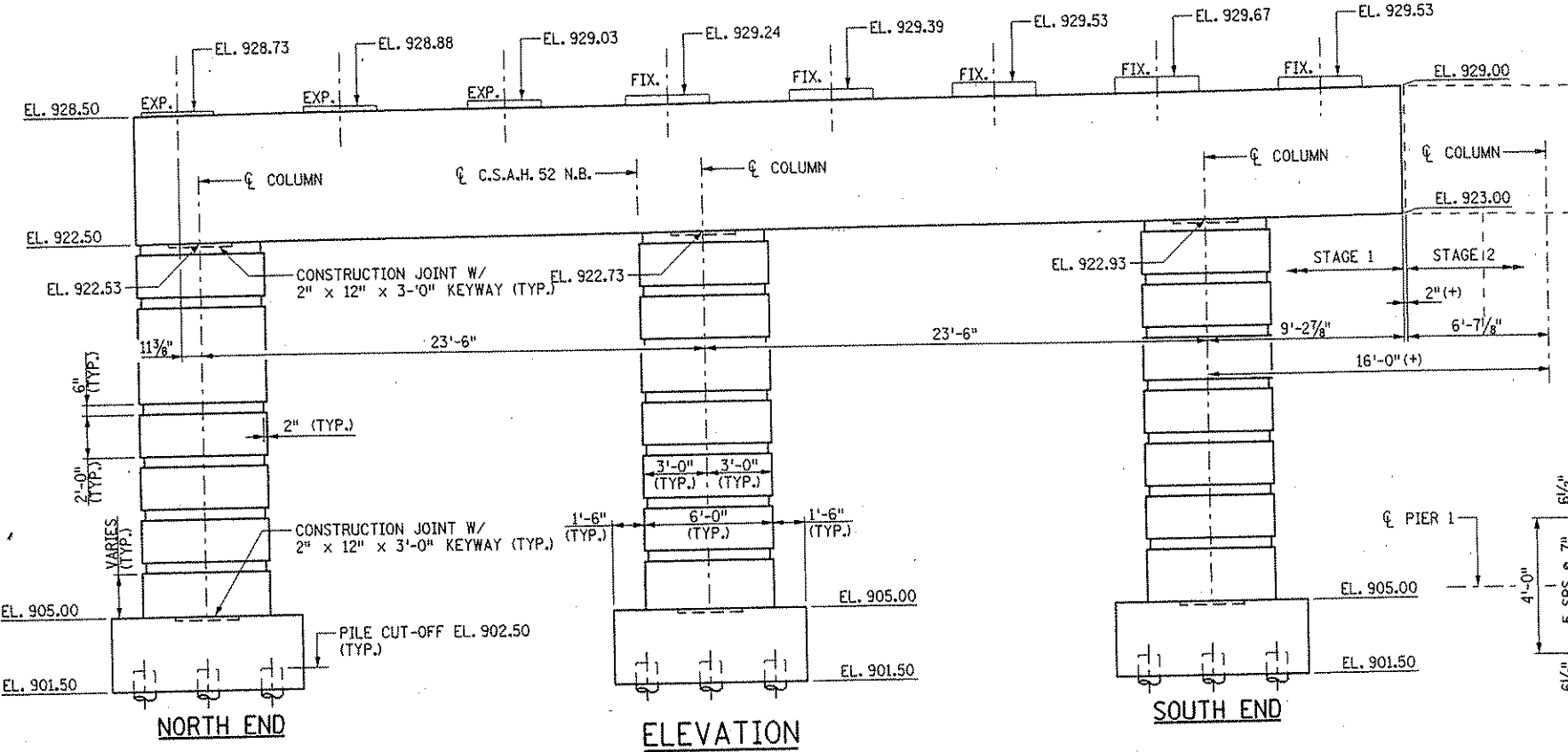
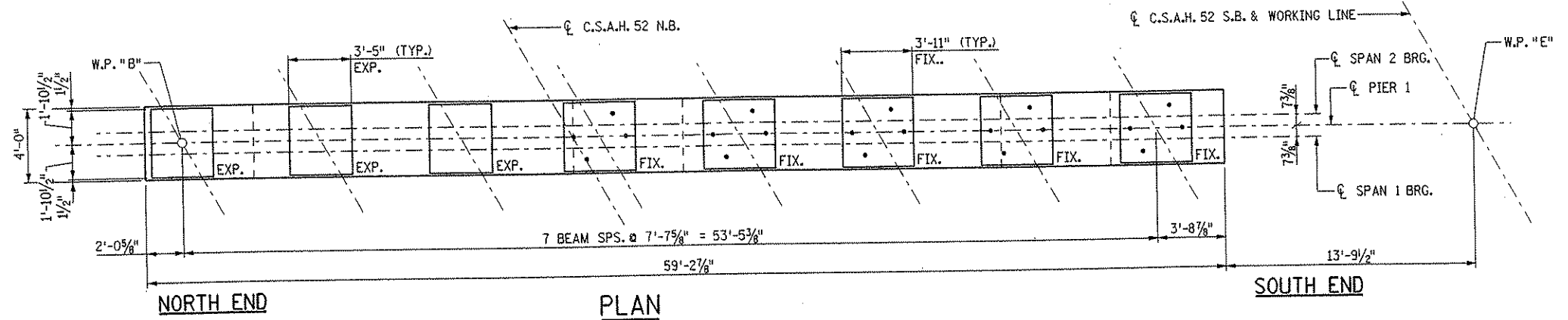
Bridge No. 02566

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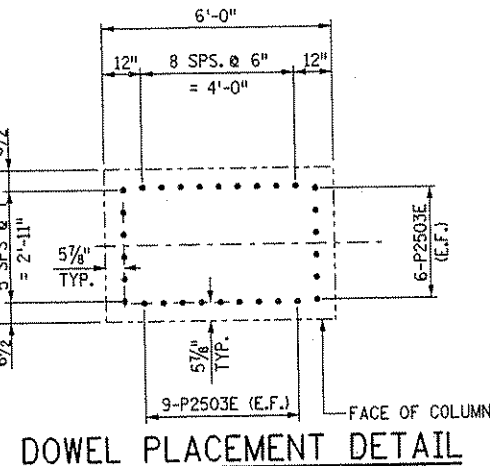


COMPUTED PILE LOADS PIER 1, STAGE 1 - (TONS PER PILE)	
DEAD LOAD + EARTH PRESSURE	49.7
LIVE LOAD	7.9
TOTAL LOAD	57.6
* DESIGN LOAD	57.6

* 57.6/1.0 REDUCTION PER AASHTO 3.22.1 GROUP 1 LOADING



PILE NOTES
 PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.
 PILES MARKED THIS → TO BE BATTERED 2" PER FOOT IN DIRECTION SHOWN.
 PILES TO HAVE A NOMINAL DIAMETER OF 12 INCHES
 25 CAST-IN-PLACE PILES EST. LENGTH 85 FEET LONG
 2 CAST-IN PLACE CONCRETE TEST PILES 95 FEET LONG
 27 CAST-IN-PLACE CONCRETE PILES REQ'D FOR PIER 1, STAGE 1 FOOTING



END VIEW

NORTH END

ELEVATION

SOUTH END

DOWEL PLACEMENT DETAIL

NORTH END

FOOTING PLAN

SOUTH END

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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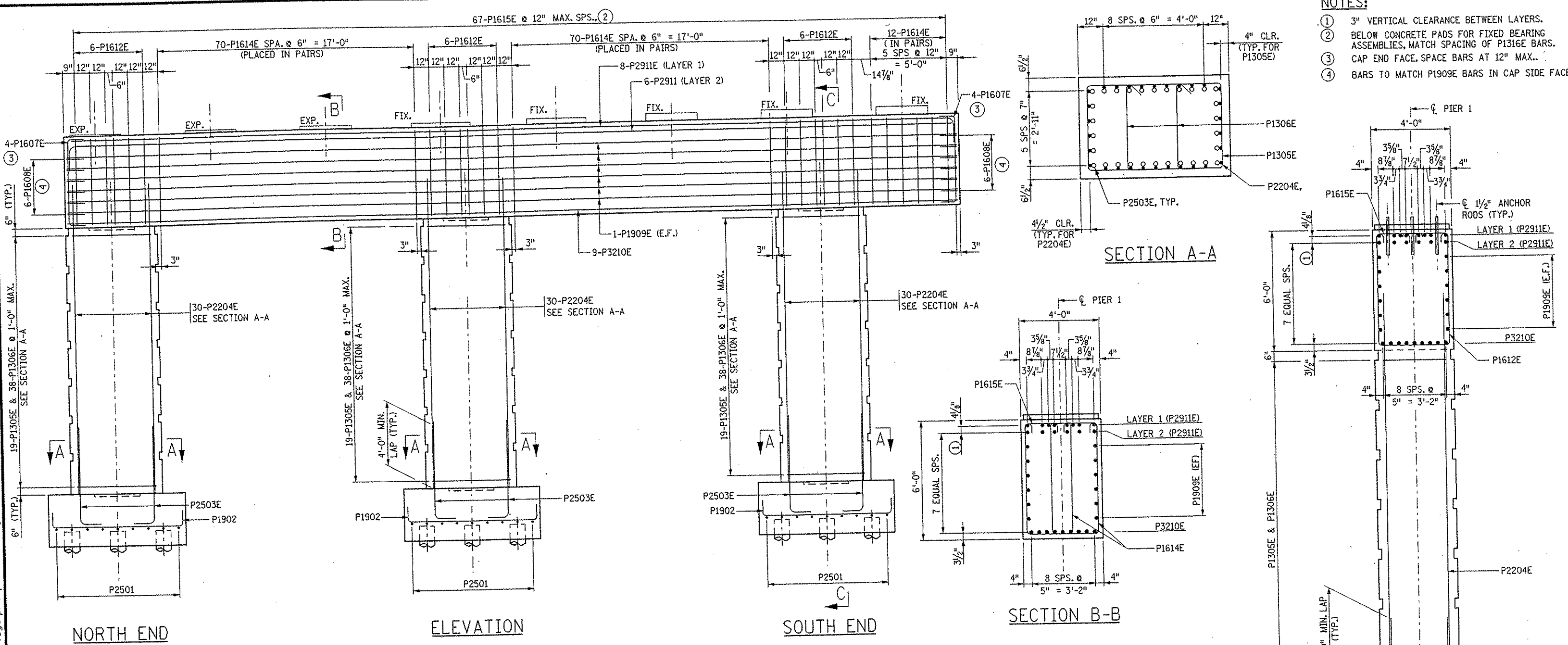
TKDA TOLTZ, KING, DUJVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

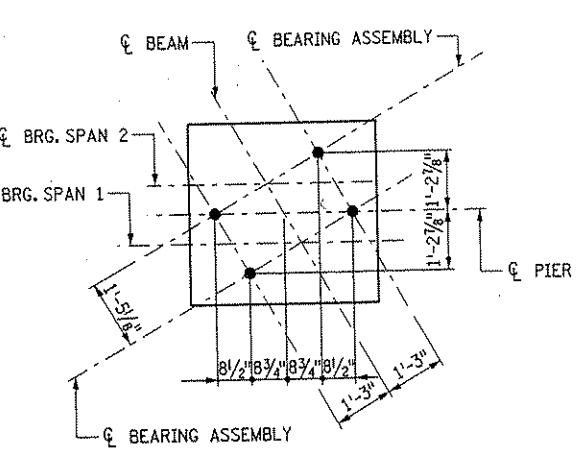
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 DES: HLE DR: HLE APPROVED
 CHK: MJC CHK: MJC
 Sheet No. 21 of 56 Sheets

Bridge No. 02566

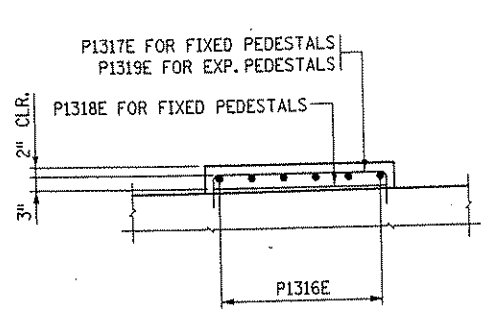
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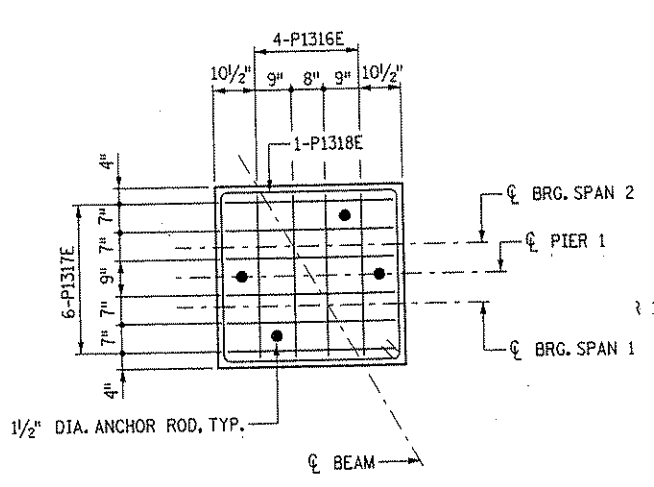
- NOTES:**
- ① 3" VERTICAL CLEARANCE BETWEEN LAYERS.
 - ② BELOW CONCRETE PADS FOR FIXED BEARING ASSEMBLIES, MATCH SPACING OF P1316E BARS. CAP END FACE. SPACE BARS AT 12" MAX..
 - ③ BARS TO MATCH P1909E BARS IN CAP SIDE FACES.



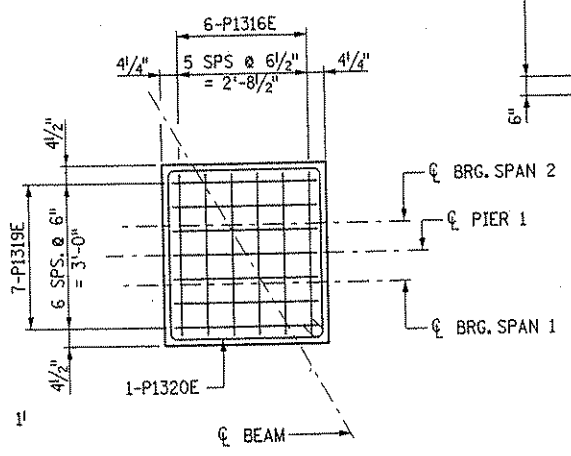
ANCHOR ROD PLACEMENT



ANCHOR ROD PLACEMENT
- ELEVATION VIEW



CONCRETE PEDESTAL FOR
FIXED BEARING ASSEMBLIES



CONCRETE PEDESTAL FOR
EXPANSION BEARING ASSEMBLIES

BRIDGE SEAT REINFORCEMENT

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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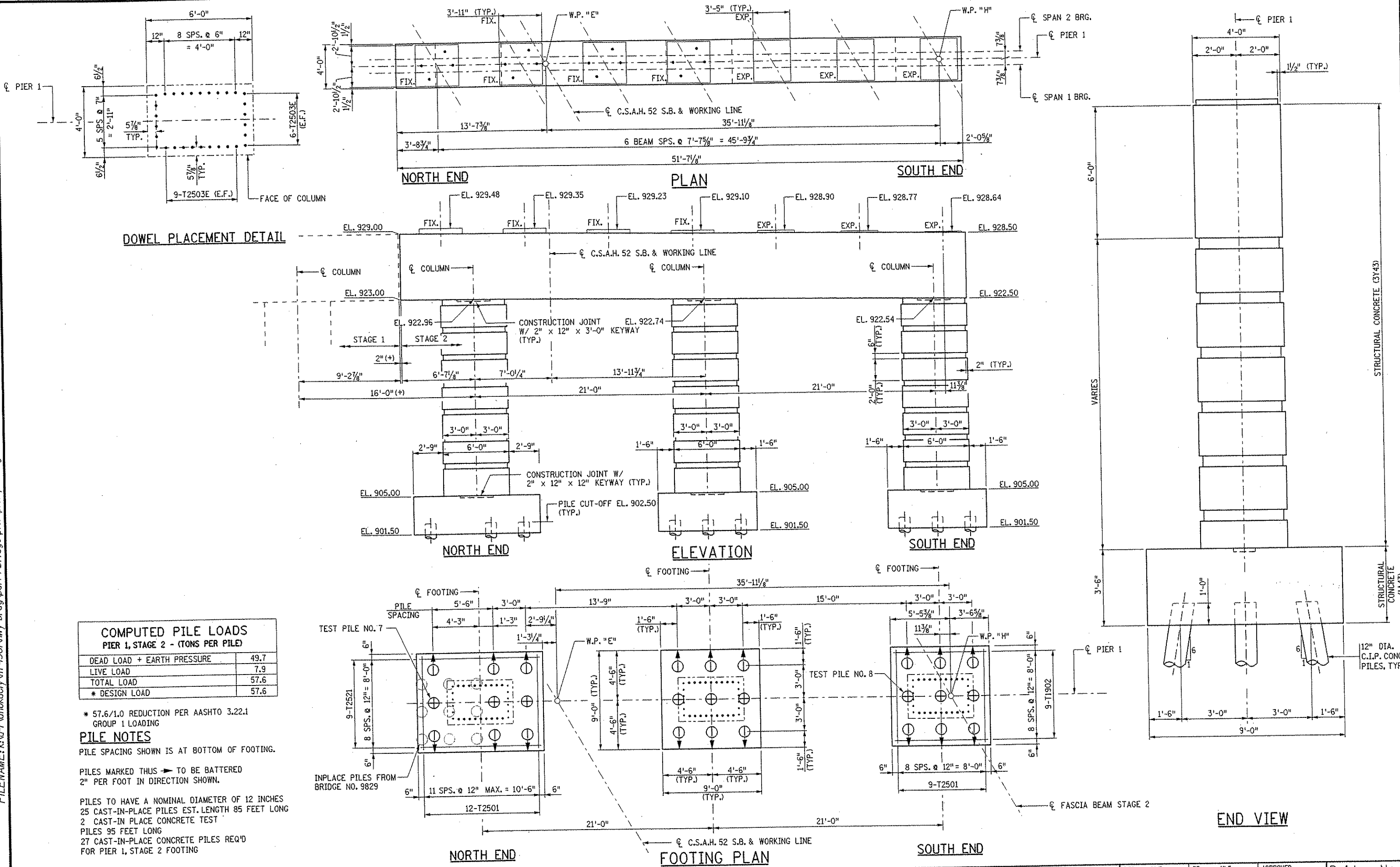
TKDA
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ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE:
PIER 1 - STAGE 1 REINFORCEMENT

DES: HLE	DR: HLE	APPROVED	Bridge No. 02566
CHK: MJC	CHK: MJC		
Sheet No. 22 of 56 Sheets			

DATE: 01/22/2002 TIME: 01:54:38 PM
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DOWEL PLACEMENT DETAIL

COMPUTED PILE LOADS PIER 1, STAGE 2 - (TONS PER PILE)	
DEAD LOAD + EARTH PRESSURE	49.7
LIVE LOAD	7.9
TOTAL LOAD	57.6
* DESIGN LOAD	57.6

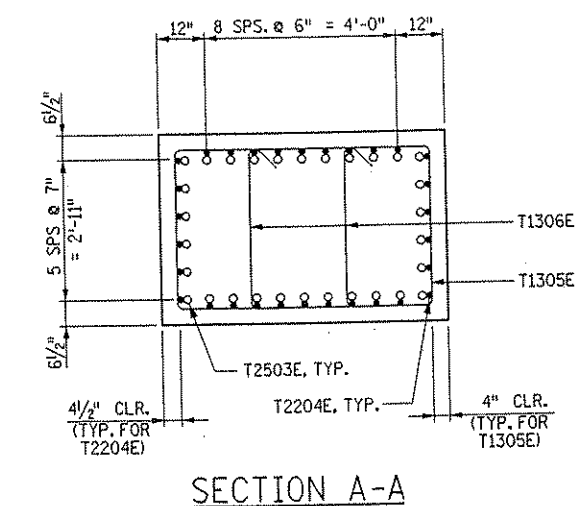
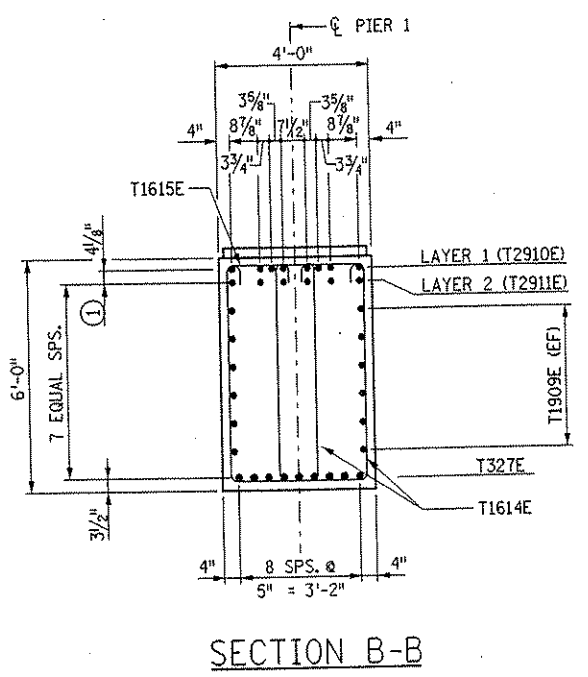
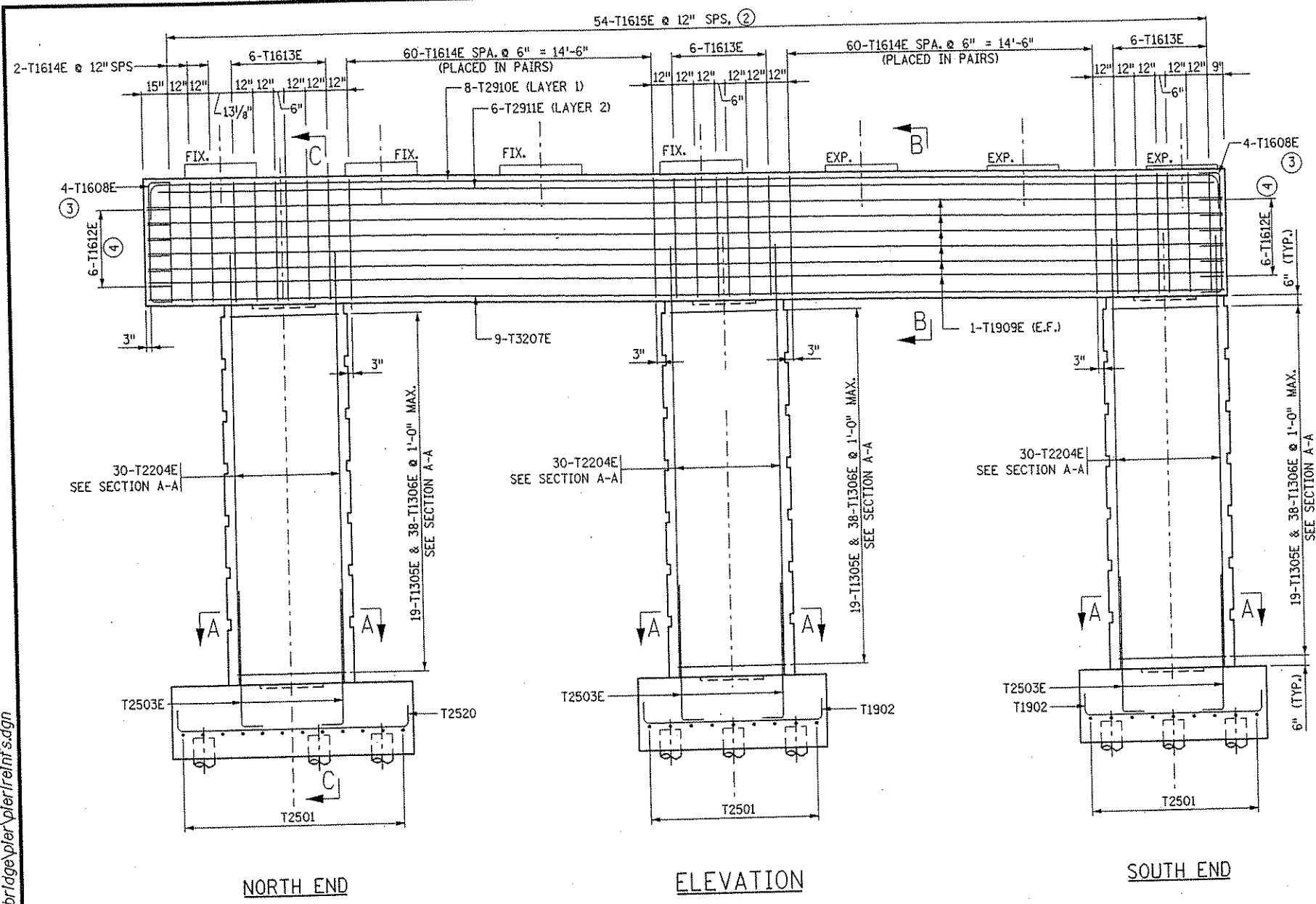
* 57.6/1.0 REDUCTION PER AASHTO 3.22.1
 GROUP 1 LOADING

PILE NOTES
 PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.

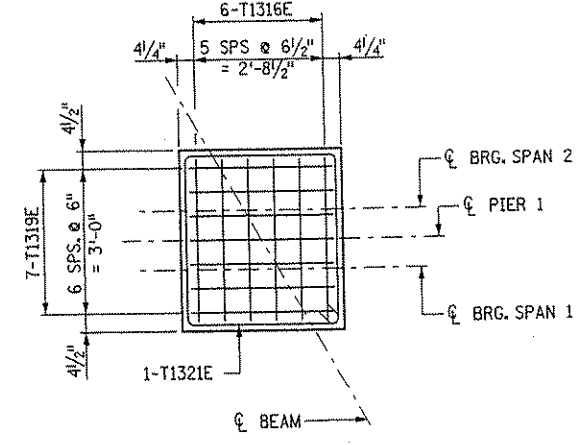
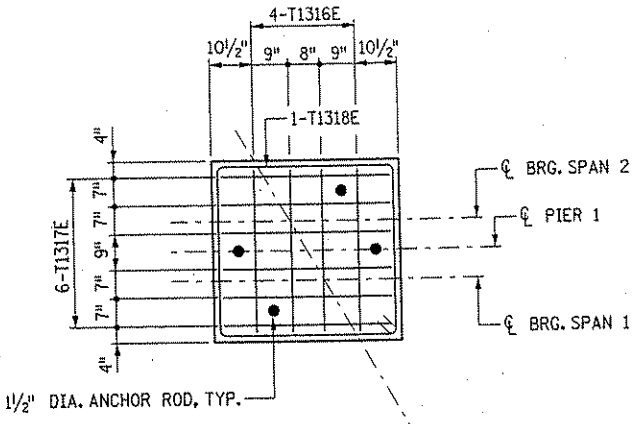
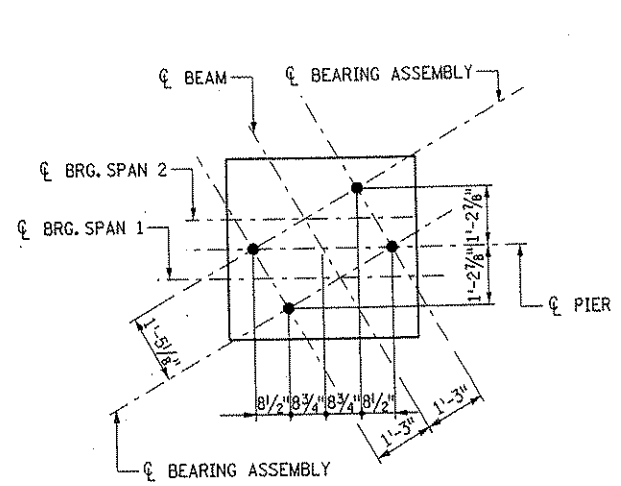
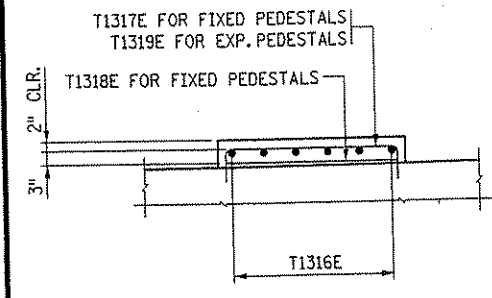
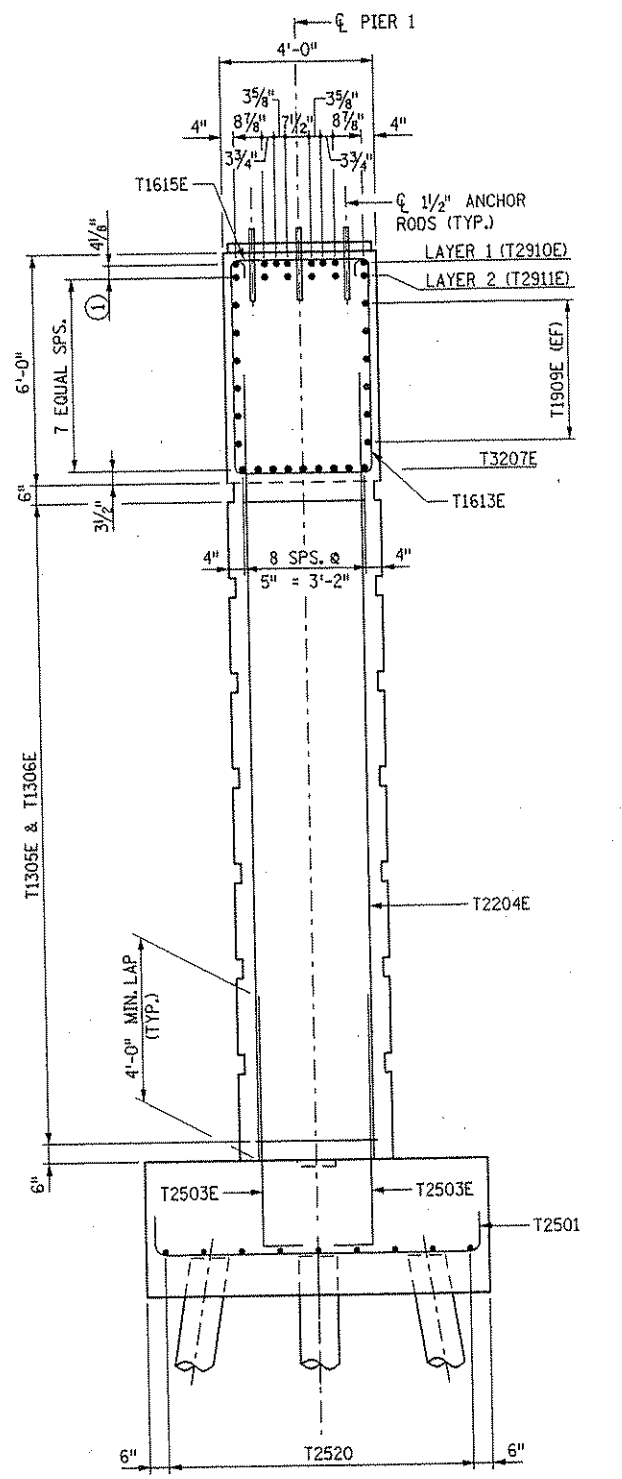
PILES MARKED THIS → TO BE BATTERED
 2" PER FOOT IN DIRECTION SHOWN.

PILES TO HAVE A NOMINAL DIAMETER OF 12 INCHES
 25 CAST-IN-PLACE PILES EST. LENGTH 85 FEET LONG
 2 CAST-IN PLACE CONCRETE TEST
 PILES 95 FEET LONG
 27 CAST-IN-PLACE CONCRETE PILES REQ'D
 FOR PIER 1, STAGE 2 FOOTING

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- NOTES:**
- ① 3" VERTICAL CLEARANCE BETWEEN LAYERS.
 - ② BELOW CONCRETE PADS FOR FIXED BEARING ASSEMBLIES, MATCH SPACING OF T1316E BARS. CAP END FACE. SPACE BARS AT 12" MAX..
 - ③ CAP END FACE. SPACE BARS AT 12" MAX..
 - ④ BARS TO MATCH T1909E BARS IN CAP SIDE FACES.



ANCHOR ROD PLACEMENT - ELEVATION VIEW

ANCHOR ROD PLACEMENT

CONCRETE PEDESTAL FOR FIXED BEARING ASSEMBLIES

CONCRETE PEDESTAL FOR EXPANSION BEARING ASSEMBLIES

BRIDGE SEAT REINFORCEMENT

SECTION C-C

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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 SIGNED: *Gottfried Millner* GOTTFRIED MILLNER
 DATE 01/22/2002 REG. NO. 19879

TKDA
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE: **PIER 1 - STAGE 2 REINFORCEMENT**

DES: HLE	DR: HLE	APPROVED
CHK: MJC	CHK: MJC	

Sheet No. 24 of 56 Sheets

Bridge No. 02566

DATE: 01/22/2002 TIME: 01:53:08 PM
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SUMMARY OF QUANTITIES FOR WEST ABUTMENT, STAGE 1

ITEM	UNIT	QUANTITY
STRUCTURAL CONCRETE (1A43)	CU.YD.	110
STRUCTURAL CONCRETE (3Y43)	CU.YD.	217
REINFORCEMENT BARS	POUND	11220
REINFORCEMENT BARS (EPOXY-COATED)	POUND	14050
STRUCTURE EXCAVATION	LUMP SUM	0.19
CAST-IN-PLACE CONCRETE PILING DELIVERED 12"	LIN.FT.	2240
CAST-IN-PLACE CONCRETE PILING DRIVEN 12"	LIN.FT.	2240
CAST-IN-PLACE CONCRETE TEST PILE 90' LONG 12"	EACH	2
PILE REDRIVING	EACH	1
CONCRETE SLOPE PAVING	SQ.FT.	650
DRAINAGE SYSTEM TYPE (B910)	LUMP SUM	0.27

SUMMARY OF QUANTITIES FOR EAST ABUTMENT, STAGE 1

ITEM	UNIT	QUANTITY
STRUCTURAL CONCRETE (1A43)	CU.YD.	114
STRUCTURAL CONCRETE (3Y43)	CU.YD.	245
REINFORCEMENT BARS	POUND	11520
REINFORCEMENT BARS (EPOXY-COATED)	POUND	18270
STRUCTURE EXCAVATION	LUMP SUM	0.2
CAST-IN-PLACE CONCRETE PILING DELIVERED 12"	LIN.FT.	2240
CAST-IN-PLACE CONCRETE PILING DRIVEN 12"	LIN.FT.	2240
CAST-IN-PLACE CONCRETE TEST PILE 90' LONG 12"	EACH	2
PILE REDRIVING	EACH	1
CONCRETE SLOPE PAVING	SQ.FT.	650
DRAINAGE SYSTEM TYPE (B910)	LUMP SUM	0.27

SUMMARY OF QUANTITIES FOR PIER 1, STAGE 1

ITEM	UNIT	QUANTITY
STRUCTURAL CONCRETE (1A43)	CU.YD.	32
STRUCTURAL CONCRETE (3Y43)	CU.YD.	101
REINFORCEMENT BARS	POUND	1240
REINFORCEMENT BARS (EPOXY-COATED)	POUND	16340
STRUCTURE EXCAVATION	LUMP SUM	0.13
CAST-IN-PLACE CONCRETE PILING DELIVERED 12"	LIN.FT.	2125
CAST-IN-PLACE CONCRETE PILING DRIVEN 12"	LIN.FT.	2125
CAST-IN-PLACE CONCRETE TEST PILE 95' LONG 12"	EACH	2
PILE REDRIVING	EACH	1

SUMMARY OF QUANTITIES FOR WEST ABUTMENT, STAGE 2

ITEM	UNIT	QUANTITY
STRUCTURAL CONCRETE (1A43)	CU.YD.	98
STRUCTURAL CONCRETE (3Y43)	CU.YD.	178
REINFORCEMENT BARS	POUND	9740
REINFORCEMENT BARS (EPOXY-COATED)	POUND	12560
STRUCTURE EXCAVATION	LUMP SUM	0.16
CAST-IN-PLACE CONCRETE PILING DELIVERED 12"	LIN.FT.	1520
CAST-IN-PLACE CONCRETE PILING DRIVEN 12"	LIN.FT.	1520
CAST-IN-PLACE CONCRETE TEST PILE 90' LONG 12"	EACH	2
PILE REDRIVING	EACH	1
CONCRETE SLOPE PAVING	SQ.FT.	650
DRAINAGE SYSTEM TYPE (B910)	LUMP SUM	0.24

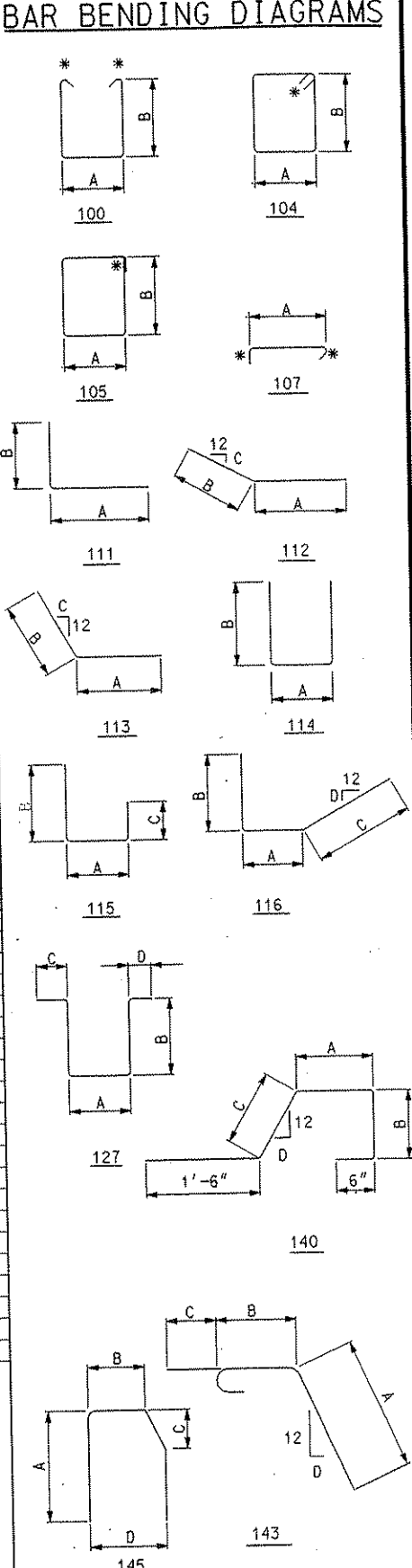
SUMMARY OF QUANTITIES FOR EAST ABUTMENT, STAGE 2

ITEM	UNIT	QUANTITY
STRUCTURAL CONCRETE (1A43)	CU.YD.	94
STRUCTURAL CONCRETE (3Y43)	CU.YD.	213
REINFORCEMENT BARS	POUND	9300
REINFORCEMENT BARS (EPOXY-COATED)	POUND	15260
STRUCTURE EXCAVATION	LUMP SUM	0.15
CAST-IN-PLACE CONCRETE PILING DELIVERED 12"	LIN.FT.	1760
CAST-IN-PLACE CONCRETE PILING DRIVEN 12"	LIN.FT.	1760
CAST-IN-PLACE CONCRETE TEST PILE 90' LONG 12"	EACH	2
PILE REDRIVING	EACH	1
CONCRETE SLOPE PAVING	SQ.FT.	650
DRAINAGE SYSTEM TYPE (B910)	LUMP SUM	0.22

SUMMARY OF QUANTITIES FOR PIER 1, STAGE 2

ITEM	UNIT	QUANTITY
STRUCTURAL CONCRETE (1A43)	CU.YD.	35
STRUCTURAL CONCRETE (3Y43)	CU.YD.	94
REINFORCEMENT BARS	POUND	1300
REINFORCEMENT BARS (EPOXY-COATED)	POUND	15020
STRUCTURE EXCAVATION	LUMP SUM	0.17
CAST-IN-PLACE CONCRETE PILING DELIVERED 12"	LIN.FT.	2125
CAST-IN-PLACE CONCRETE PILING DRIVEN 12"	LIN.FT.	2125
CAST-IN-PLACE CONCRETE TEST PILE 95' LONG 12"	EACH	2
PILE REDRIVING	EACH	1

BAR MARK	NO.	SERIES NO. OF	LENGTH FT IN	SIZE	TYPE	DIMENSIONS				LOCATION
						A	B	C	D	
WEST ABUTMENT REINFORCEMENT, STAGE 1										
C1901	E 63		12 6 19	STR						TOP FOOTING MAIN
C2902	E 111		15 8 29	114	12'-6"	1'-7"				BOTTOM FOOTING MAIN
C3203	E 14		16 2 32	114	12'-6"	1'-10"				BOTTOM FOOTING MAIN
C1904	E 52		34 6 19	STR						T & B FOOTING LONG.
C2505	E 70		7 9 25	111	1'-4"	6'-5"				FOOTING DOWEL
C1606	E 79		5 0 16	111	1'-0"	4'-0"				FOOTING DOWEL
C2507	E 12		8 8 25	114	6'-0"	1'-4"				TOP FOOTING WINGWALL
C1908	E 14		5 6 19	STR						T & B FOOTING LONG.
C1909	E 6		6 0 19	STR						BOTTOM FOOTING WW
C2210	E 6		8 4 22	111	1'-2"	6'-0"				FOOTING DOWEL
C1611	E 43		32 10 16	STR						BARREL HORZ.
C1612	E 15		32 7 16	112	1'-3"	2'-3"	29'-1"	6.88		BARREL HORZ. (F.F.)
C1613	E 20		26 5 16	STR						BARREL HORZ. (B.F.)
C1614	E 31		14 1 16	STR						BARREL VERT. (F.F.)
C2215	E 37		17 6 22	STR						BARREL VERT. (B.F.)
C1616	E 30		13 10 16	STR						BARREL VERT. (F.F.)
C2217	E 33		17 7 22	STR						BARREL VERT. (B.F.)
C1618	E 5		28 1 16	112	26'-1"	2'-0"	6.88			BARREL HORZ. (F.F.)
C1619	E 3		28 8 16	STR						BRIDGE SEAT
C1620	E 61		7 8 16	115	4'-6"	2'-4"	10"			BRIDGE SEAT
C1921	E 37		6 7 19	115	1'-0"	4'-7"	1'-0"			BACKWALL VERT.
C1922	E 33		6 1 19	115	1'-0"	4'-1"	1'-0"			BACKWALL VERT.
C1623	E 61		7 1 16	STR						BACKWALL VERT.
C1624	E 70		4 4 16	115	1'-0"	2'-6"	10"			END BLOCK
C1625	E 20		4 4 16	STR						FILLET HORZ.
C1626	E 43		5 0 16	STR						HORZ. DWL
C1927	E 3		7 1 19	STR						NO. WW. HORZ. (F.F.)
C1928	E	1 SER	9 5 19	STR						NO. WW. HORZ. (F.F.)
		OF 6	20 11							
C1929	E 2		27 1 19	STR						NO. WW. HORZ. (F.F.)
C1930	E	1 SER	27 11 19	STR						NO. WW. HORZ. (F.F.)
		OF 5	37 1							
C1931	E 4		37 1 19	STR						NO. WW. HORZ. (F.F.)
C1932	E	1 SER	4 10 19	STR						NO. WW. HORZ. (B.F.)
		OF 6	16 5							
C1933	E 3		22 7 19	STR						NO. WW. HORZ. (B.F.)
C1934	E	1 SER	23 4 19	STR						NO. WW. HORZ. (B.F.)
		OF 6	31 11							
C1935	E 5		32 7 19	STR						NO. WW. HORZ. (B.F.)
C1936	E 6		8 1 19	115	8"	6'-5"	1'-0"			NO. WW. HORZ. (B.F.)
C1637	E 4		18 10 16	STR						NO. WW. VERT. (F.F.)
C1638	E 4		19 10 16	STR						NO. WW. VERT. (F.F.)
C1639	E 10		11 0 16	STR						NO. WW. VERT.
C1640	E 5		8 10 16	115	6 1/2"	7'-3"	1'-0"			MASK WALL VERT. (B.F.)
C1641	E 16		5 0 16	STR						MASK WALL VERT.
C1642	E	2 SER	11 3 16	STR						NO. WW. VERT.
		OF 15	17 2							
C1643	E	2 SER	4 3 16	STR						NO. WW. VERT.
		OF 10	8 2							
C1644	E 4		34 9 16	STR						NO. WW.
C1645	E 4		33 2 16	STR						NO. WW.
C1346	E 25		3 6 13	114	11 1/2"	1'-3"				END TIE
C1347	E 6		3 7 13	114	1'-1"	1'-3"				END TIE
C1648	E 40		6 6 16	145	2'-10"	8 1/2"	10"	11 1/2"		VERT. BARRIER DOWEL
C1949	E 3		9 7 19	STR						COUNTERFORT VERT.
C1950	E 3		12 4 19	143	9'-9"	1'-11"	8"	0		COUNTERFORT VERT.
C1351	E 20		6 8 13	127	1'-2"	2'-1"	8"	8"		COUNTERFORT TIE
C1352	E 42		5 3 13	111	4'-0"	1'-3"				PEDSTAL
C1353	E 42		5 2 13	114	2'-8"	1'-3"				PEDSTAL



NOTE
 BENT BAR DIMENSIONS GIVEN ARE OUT-TO-OUT. ACTUAL BAR LENGTHS SHALL BE DETERMINED BASED ON THE DETAIL DIMENSIONS SHOWN IN THE BAR BENDING DIAGRAMS. TOTAL BAR LENGTHS ARE SHOWN FOR USE IN COMPUTING REINFORCEMENT BAR WEIGHTS FOR PAYMENT ONLY.

NO.	DATE	BY	DESCRIPTION OF REVISIONS

TKDA
 TOLTZ, KING, DUWALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE:
SUBSTRUCTURE QUANTITIES

DES: HLE	DR: HLE	APPROVED	Bridge No. 02566
CHK: GM	CHK: GM		
Sheet No. 25 of 56 Sheets			

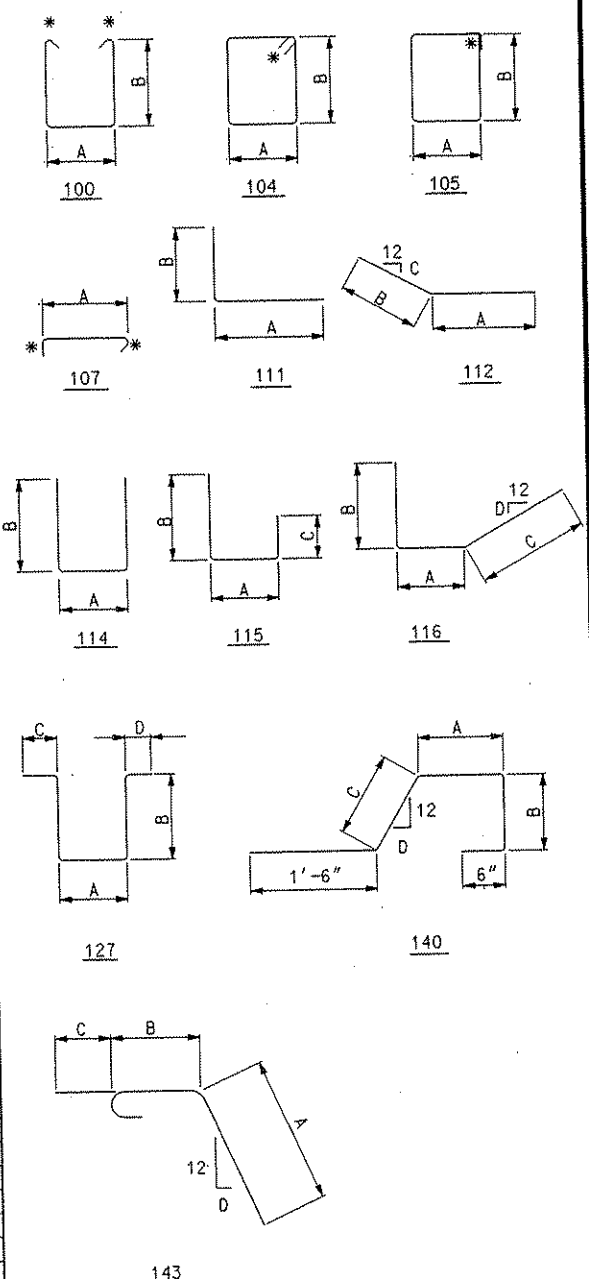
DATE: 01/22/2002 TIME: 01:53:02 PM
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Table with columns: BAR MARK, NO., SERIES NO. OF, LENGTH FT IN, SIZE, TYPE, DIMENSIONS (A, B, C, D), LOCATION. Includes sections for EAST ABUTMENT REINFORCEMENT, STAGE 1 CONTINUED.

Table with columns: BAR MARK, NO., SERIES NO. OF, LENGTH FT IN, SIZE, TYPE, DIMENSIONS (A, B, C, D), LOCATION. Includes sections for EAST ABUTMENT REINFORCEMENT, STAGE 2 and PIER 1 REINFORCEMENT, STAGE 1.

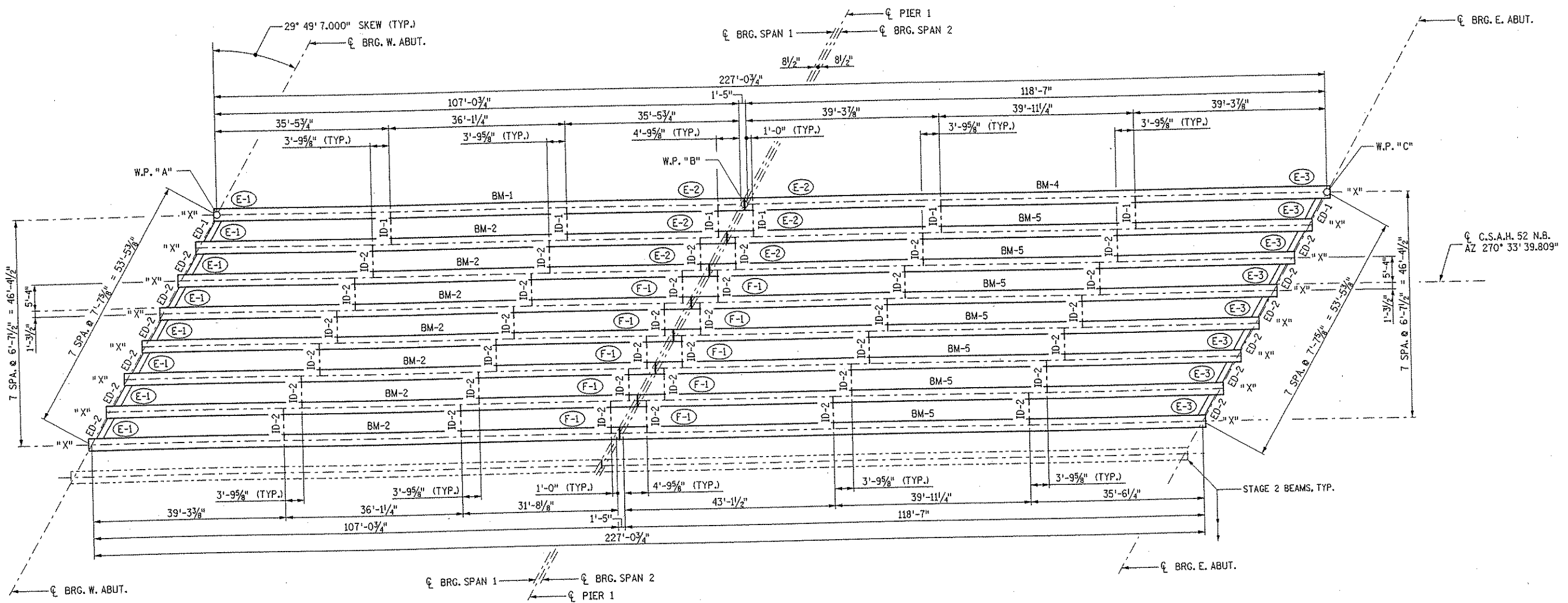
Table with columns: BAR MARK, NO., SERIES NO. OF, LENGTH FT IN, SIZE, TYPE, DIMENSIONS (A, B, C, D), LOCATION. Includes sections for PIER 1 REINFORCEMENT, STAGE 1 and PIER 1 REINFORCEMENT, STAGE 2.

BAR BENDING DIAGRAMS



NOTE
BENT BAR DIMENSIONS GIVEN ARE OUT-TO-OUT. ACTUAL BAR LENGTHS SHALL BE DETERMINED BASED ON THE DETAIL DIMENSIONS SHOWN IN THE BAR BENDING DIAGRAMS. TOTAL BAR LENGTHS ARE SHOWN FOR USE IN COMPUTING REINFORCEMENT BAR WEIGHTS FOR PAYMENT ONLY.

Project information including: I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION... TKDA (TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED), ANOKA COUNTY, C.S.A.H. 52 OVER I-35W, S.P. 02-652-03 S.P. 0280-50, SUBSTRUCTURE BARLISTS (2 OF 2), DESIGNED BY MJC/HLE, CHECKED BY GM, APPROVED, Bridge No. 02566, Sheet No. 27 of 56 Sheets.



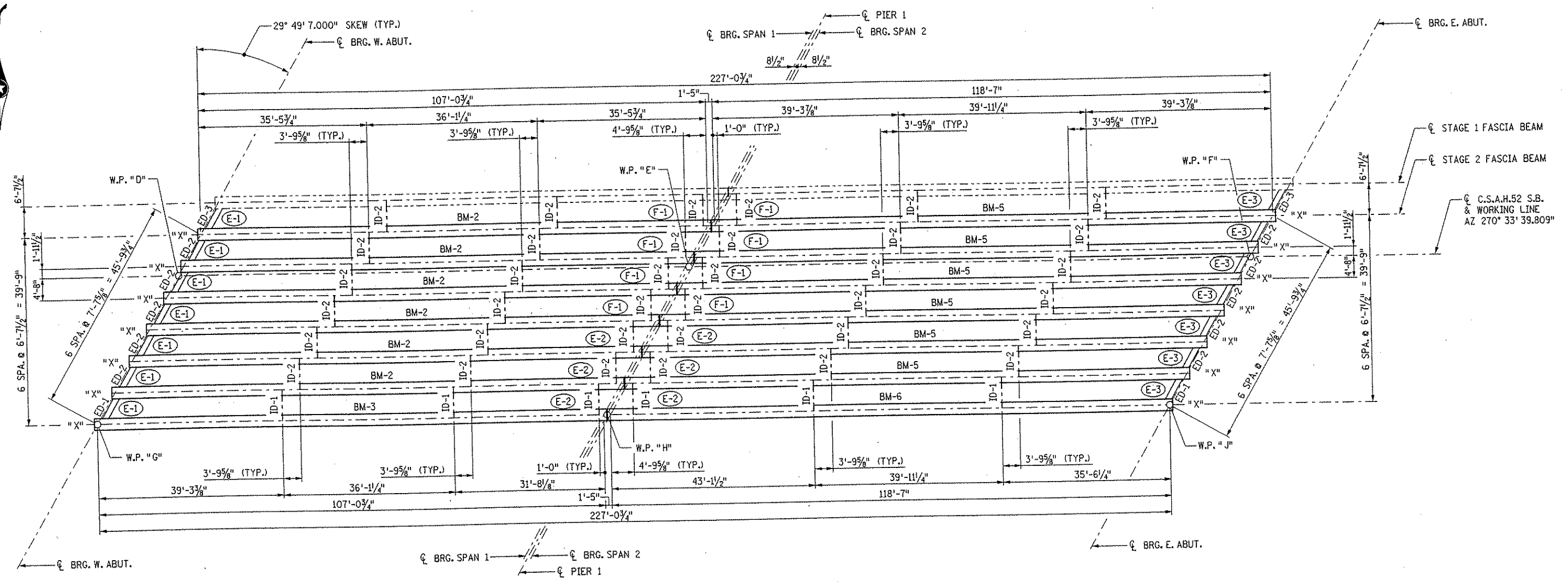
FRAMING PLAN

- LEGEND:**
- (E-1) DENOTES EXPANSION BEARING ASSEMBLY, TYPE 1
 - (E-2) DENOTES EXPANSION BEARING ASSEMBLY, TYPE 2
 - (E-3) DENOTES EXPANSION BEARING ASSEMBLY, TYPE 3
 - (F-1) DENOTES FIXED BEARING ASSEMBLY, TYPE 1
 - ID-1 DENOTES INTERMEDIATE DIAPHRAGM, TYPE 1
 - ID-2 DENOTES INTERMEDIATE DIAPHRAGM, TYPE 2
 - ED-1 DENOTES END DIAPHRAGM, TYPE 1
 - ED-2 DENOTES END DIAPHRAGM, TYPE 2

DATE: 01/22/2002 TIME: 01:54:55 PM
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	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA SIGNED: <i>Gottfried Millner</i> GOTTFRIED MILLNER DATE: 01/22/2002 REG. NO. 19879	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50	TITLE: FRAMING PLAN STAGE 1	DES: HLE DR: HLE CHK: MJC CHK: MJC APPROVED Sheet No. 28 of 56 Sheets	Bridge No. 02566
NO.	DATE	BY	DESCRIPTION OF REVISIONS			

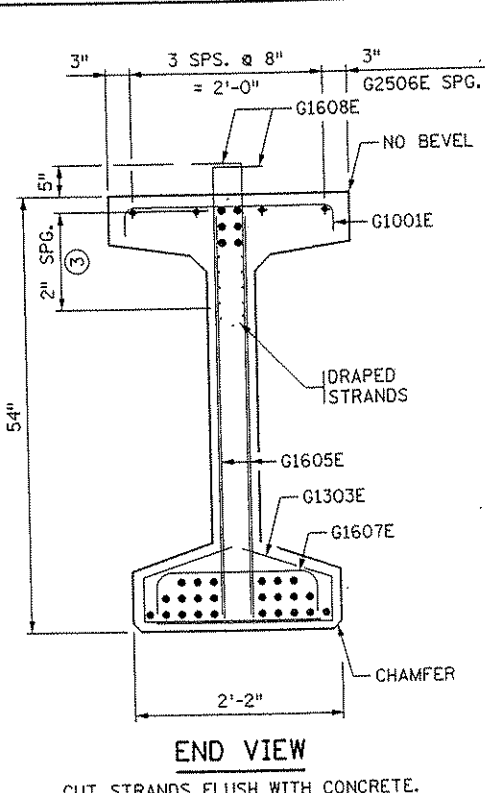
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FRAMING PLAN

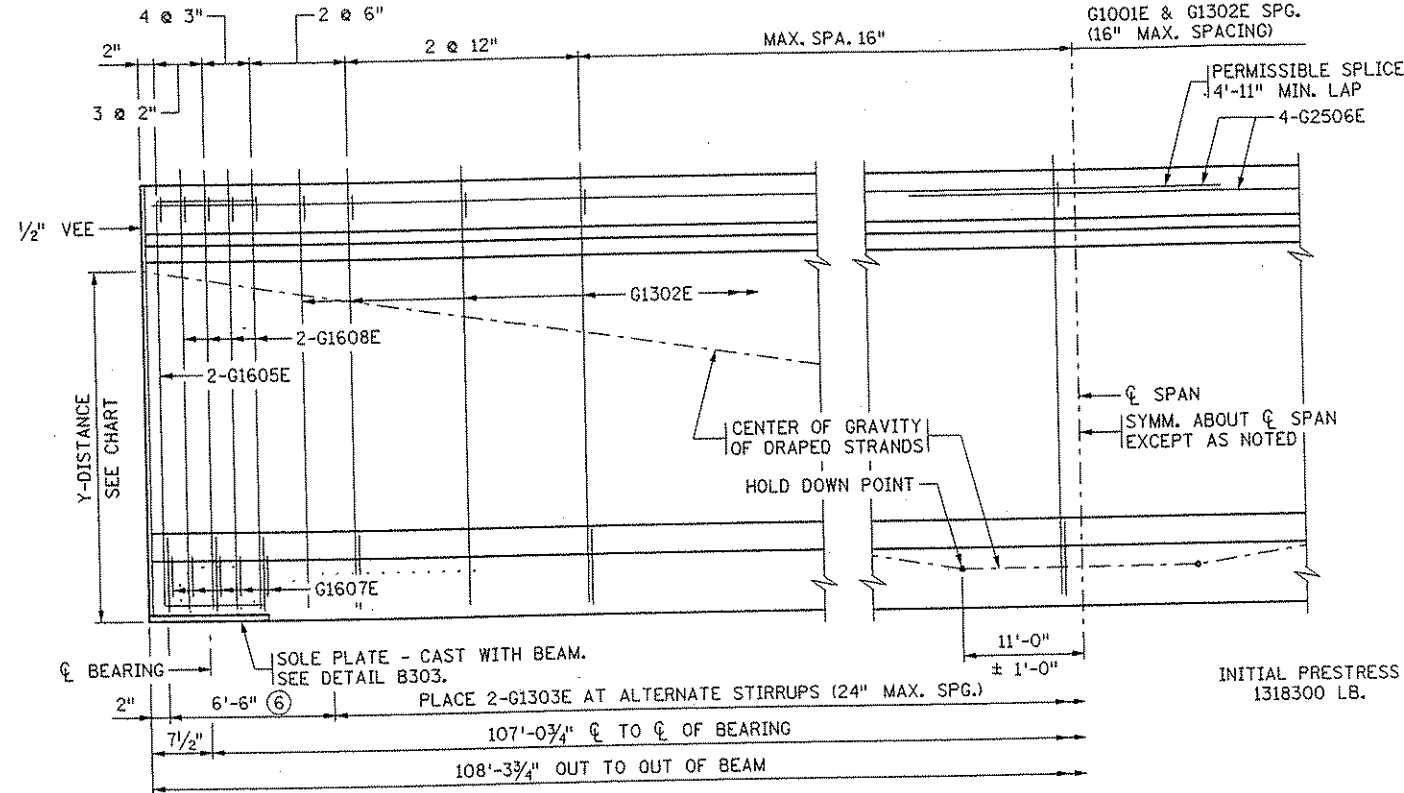
- LEGEND:**
- (E-1) DENOTES EXPANSION BEARING ASSEMBLY, TYPE 1
 - (E-2) DENOTES EXPANSION BEARING ASSEMBLY, TYPE 2
 - (E-3) DENOTES EXPANSION BEARING ASSEMBLY, TYPE 3
 - (F-1) DENOTES FIXED BEARING ASSEMBLY, TYPE 1
 - ID-1 DENOTES INTERMEDIATE DIAPHRAGM, TYPE 1
 - ID-2 DENOTES INTERMEDIATE DIAPHRAGM, TYPE 2
 - ED-1 DENOTES END DIAPHRAGM, TYPE 1
 - ED-2 DENOTES END DIAPHRAGM, TYPE 2
 - ED-3 DENOTES END DIAPHRAGM, TYPE 3

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">NO.</th> <th style="width: 5%;">DATE</th> <th style="width: 90%;">DESCRIPTION OF REVISIONS</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	DESCRIPTION OF REVISIONS				<p>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</p> <p>SIGNED: <i>Gottfried Millner</i> GOTTFRIED MILLNER DATE: 01/22/2002 REG. NO. 19879</p>	<p>TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</p>	<p>ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50</p>	<p>TITLE: FRAMING PLAN STAGE 2</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">DES:</td> <td style="width: 5%;">HLE</td> <td style="width: 5%;">DR:</td> <td style="width: 5%;">HLE</td> <td style="width: 20%;">APPROVED</td> </tr> <tr> <td>CHK:</td> <td>MJC</td> <td>CHK:</td> <td>MJC</td> <td> </td> </tr> </table> <p>Sheet No. 29 of 56 Sheets</p>	DES:	HLE	DR:	HLE	APPROVED	CHK:	MJC	CHK:	MJC		<p>Bridge No. 02566</p>
NO.	DATE	DESCRIPTION OF REVISIONS																				
DES:	HLE	DR:	HLE	APPROVED																		
CHK:	MJC	CHK:	MJC																			

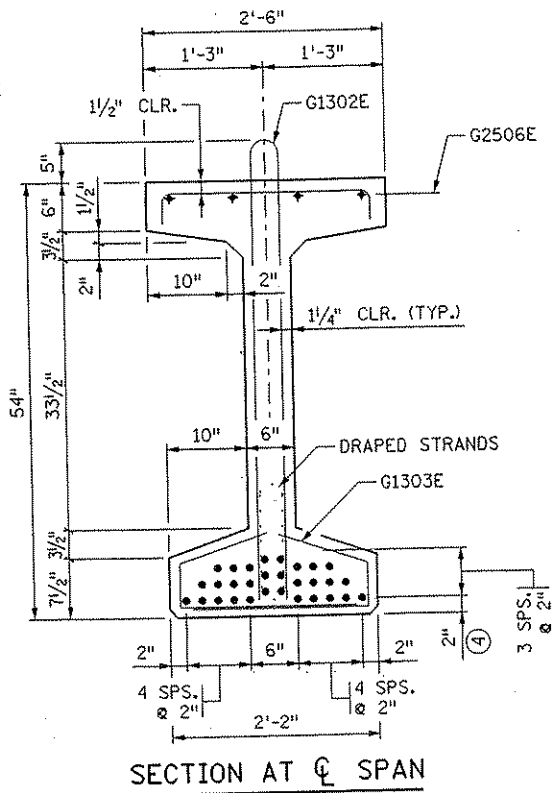


END VIEW

CUT STRANDS FLUSH WITH CONCRETE. PAINT ENDS WITH AN APPROVED GRAY EPOXY EXCEPT AS NOTED.



BEAM ELEVATION

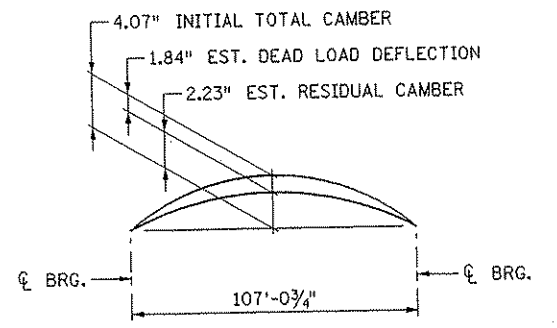


SECTION AT CL SPAN

Y DISTANCES (IN INCHES)			
	NO.	CL SPAN	END
STRAIGHT STRANDS	24	3.67	
DRAPED STRANDS	6	5	49
TOTAL STRANDS	30	3.93	

Y = DISTANCE TO CENTER OF GRAVITY OF STRANDS FROM BOTTOM OF BEAM. ALL STRANDS SPACED 2" CENTER TO CENTER, HORIZONTALLY AND VERTICALLY, EXCEPT AS NOTED.

A TOLERANCE OF ± 1" WILL BE PERMITTED IN THIS DIMENSION.

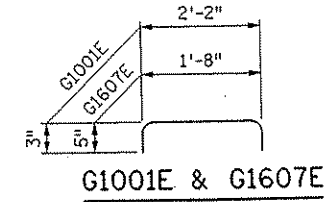


CAMBER DIAGRAM

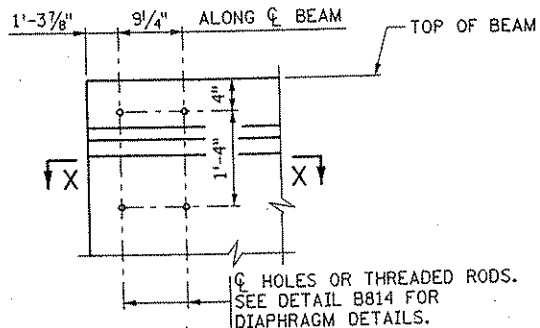
INITIAL CAMBER IS GIVEN AFTER DIAPHRAGMS ARE IN PLACE.

DEAD LOAD DEFLECTION SHOWN IS FOR WEIGHT OF SLAB, WEARING COURSE, RAILING, SIDEWALK AND MEDIAN WHERE APPLICABLE.

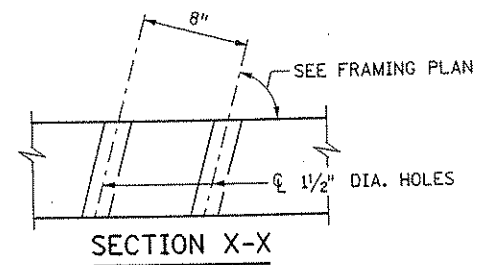
ENGINEER WILL TAKE ELEVATIONS AT TOP OF BEAMS AFTER ERECTION AND WILL ALLOW FOR DEFLECTION SHOWN TO ENABLE CONTRACTOR TO BUILD FORMS TO CORRECT GRADE AND SPECIFIED SLAB THICKNESS.



G1001E & G1607E

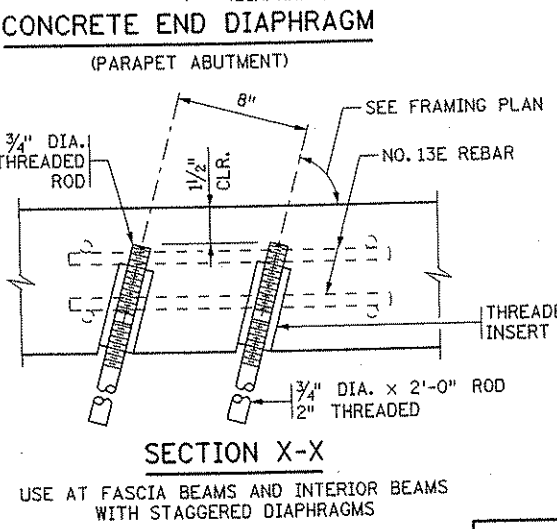


CONCRETE END DIAPHRAGM (PARAPET ABUTMENT)



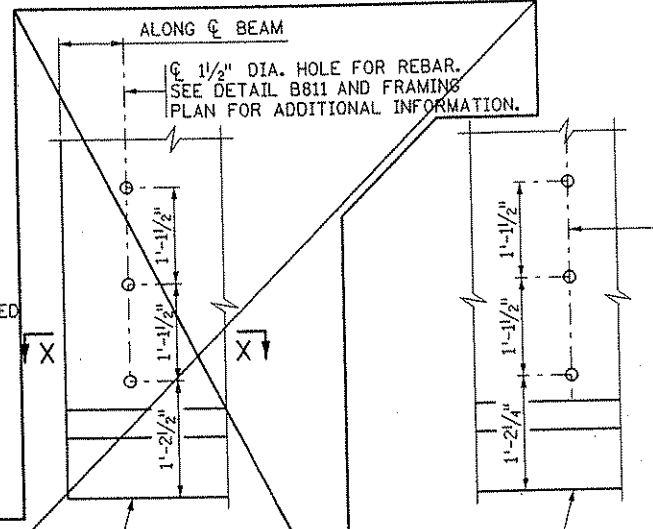
SECTION X-X

USE AT INTERIOR BEAMS WITH CONTINUOUS CONCRETE DIAPHRAGMS



SECTION X-X

USE AT FASCIA BEAMS AND INTERIOR BEAMS WITH STAGGERED DIAPHRAGMS



CONCRETE END DIAPHRAGM (PILE BENT ABUTMENT)

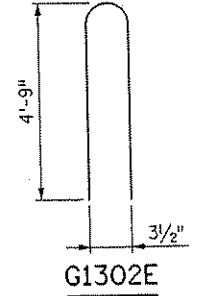
STEEL INTERMEDIATE DIAPHRAGM

MINIMUM CONCRETE STRENGTH - P.S.I.		
	① f'cl	② f'c
REQUIRED MIN. CONCRETE STRENGTH	7000	8500

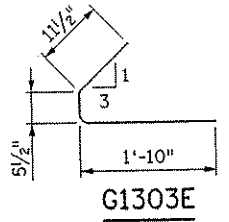
PRESTRESSING STRAND DIAMETER	
⑤	1/2" □
⑥	0.60" ☒

PLACE AN "X" IN THE APPROPRIATE BOX TO INDICATE THE STRAND DIAMETER USED FOR THE DESIGN.

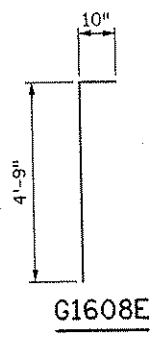
1/2" DIA. HOLE (INTERIOR BEAM, CONTINUOUS DIAPHRAGM) OR 3/8" DIA. BOLT ANCHORAGE (FASCIA BEAM AND STAGGERED DIAPHRAGM). SEE DETAIL B403 FOR DIAPHRAGM DETAILS.



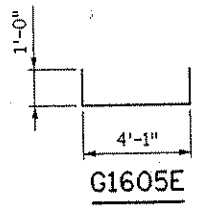
G1302E



G1303E



G1608E



G1605E

GENERAL NOTES

- TOPS OF BEAMS SHALL BE INTENTIONALLY ROUGHENED FOR BOND.
- PROVIDE HANDLING HOOKS OR DEVICES AS REQUIRED BY CONTRACTOR.
- EACH BEAM SHALL BE MARKED, SHOWING BRIDGE NUMBER, CASTING DATE, AND INDIVIDUAL IDENTIFICATION LETTERS AND NUMBERS. MARKINGS SHALL BE MADE ON THE FACE OF THE BEAM, NEAR THE END, SO LOCATED THAT THEY WILL BE EXPOSED AFTER THE END DIAPHRAGMS HAVE BEEN CAST. FASCIA BEAMS SHALL BE MARKED ON THE INSIDE FACE. ALL MARKINGS SHALL BE STENCILLED AND BE CLEARLY LEGIBLE. FOR LOCATION OF BEAMS SEE FRAMING PLAN.
- ALL MATERIAL AND WORK SHOWN OR NOTED ON THIS SHEET SHALL BE INCLUDED IN UNIT PRICE BID FOR PRESTRESSED CONCRETE BEAMS. SEE Mn/DOT SPEC. 2405.
- SEE FRAMING PLAN FOR BEAM END MARKED "X" AND DIAPHRAGM SPACING.
- APPROXIMATE WEIGHT OF BEAM IS 39.5 TONS.
- AS AN ALTERNATE TO THE DIAPHRAGM ANCHORAGES SHOWN, THE CONTRACTOR MAY SUBMIT DETAILS OF A CAST-IN-PLACE ANCHORAGE TO THE ENGINEER FOR APPROVAL. ANCHORAGE MUST PROVIDE AN ULTIMATE PULL OUT STRENGTH OF 15 KIPS PER ANCHORAGE.

- ① MINIMUM CONCRETE STRENGTH AT TIME OF PRESTRESS TRANSFER.
- ② MINIMUM CONCRETE STRENGTH WHEN BEAM CAN BE TRANSPORTED AND INSTALLED.
- ③ DRAPED STRANDS.
- ④ STRAIGHT STRANDS.
- ⑤ PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION STRAND, CONFORMING TO ASTM A 416, GRADE 270.
- ⑥ PLACE 2-G1303E WITH STIRRUPS (6" MAX. SPG.)

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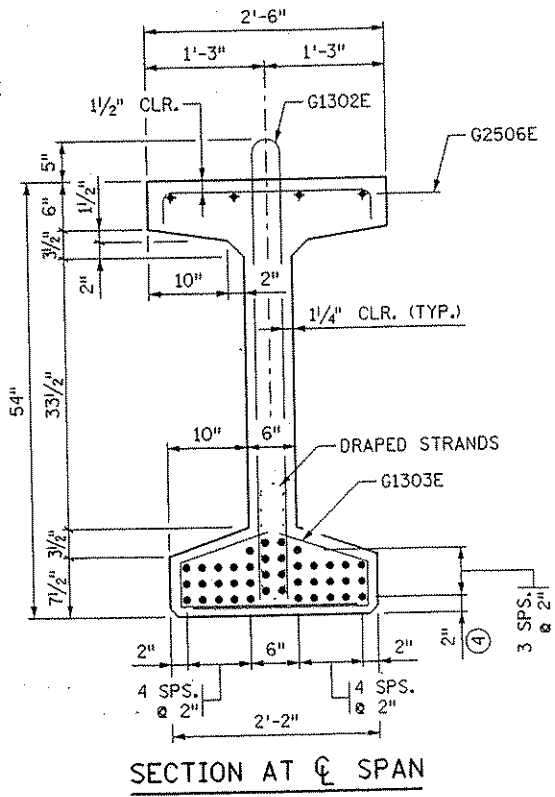
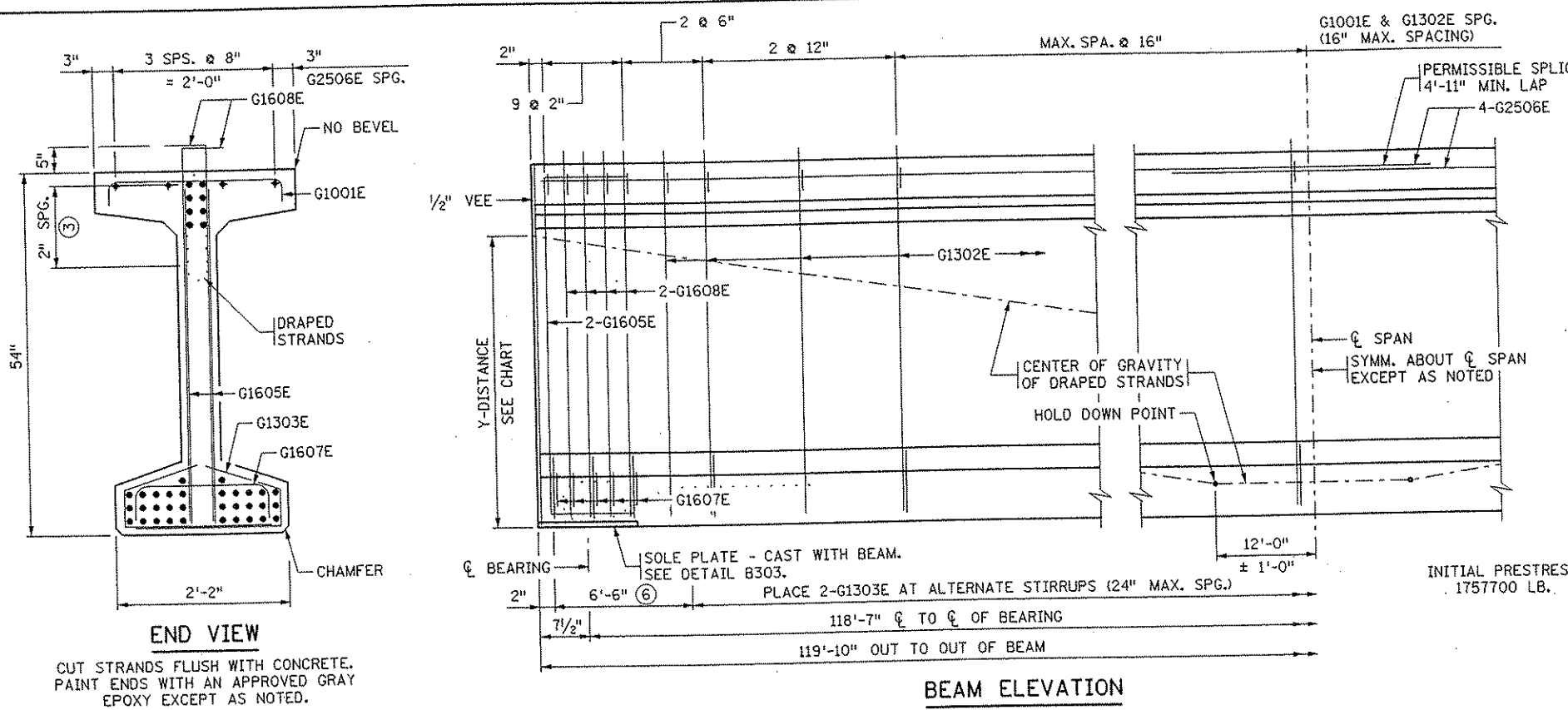
REVISION: 02-11-00
APPROVED: NOVEMBER 6, 1995
D. M. H. M. H.
STATE BRIDGE ENGINEER

CERTIFIED BY *Gottfried Millner* 01/22/2002
LICENSED PROFESSIONAL ENGINEER
NAME: GOTTFRIED MILLNER LIC. NO. 19879

54" PRESTRESSED CONCRETE BEAM (PRETENSIONED) TYPE 54M-109

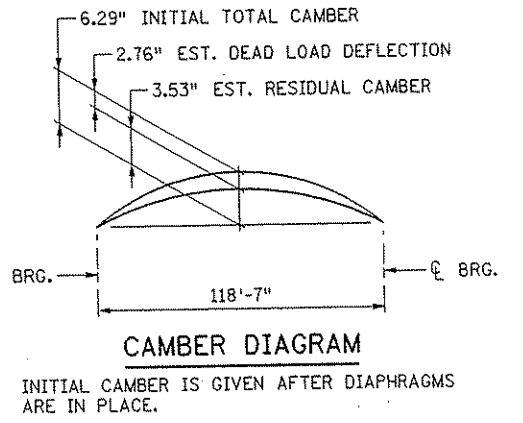
BEAMS B1, B2, B3
DES: SVC DR: SVC
CHK: MJC CHK: MJC
APPROVED: _____
BRIDGE NO. 02566
SHEET NO. 30 OF 56 SHEETS

FIG. 5-397.515



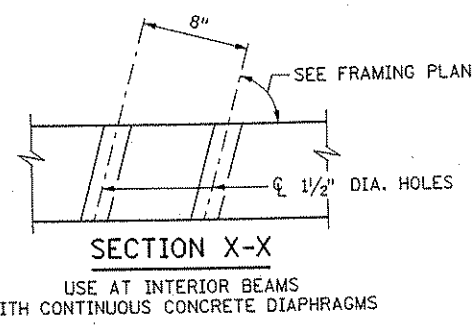
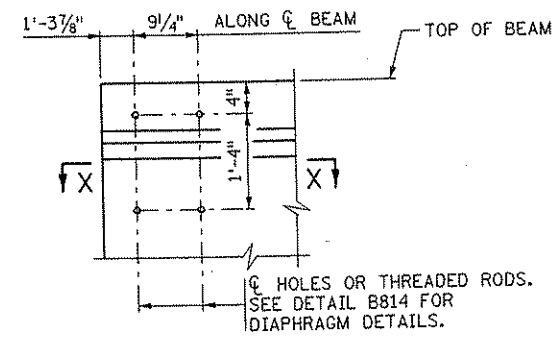
Y DISTANCES (IN INCHES)			
	NO.	@ SPAN	END
STRAIGHT STRANDS	32	4.25	
DRAPED STRANDS	8	6.0	48.0
TOTAL STRANDS	40	4.6	

Y = DISTANCE TO CENTER OF GRAVITY OF STRANDS FROM BOTTOM OF BEAM. ALL STRANDS SPACED 2" CENTER TO CENTER, HORIZONTALLY AND VERTICALLY, EXCEPT AS NOTED.
 ▣ A TOLERANCE OF ± 1" WILL BE PERMITTED IN THIS DIMENSION.



INITIAL CAMBER IS GIVEN AFTER DIAPHRAGMS ARE IN PLACE.
 DEAD LOAD DEFLECTION SHOWN IS FOR WEIGHT OF SLAB, WEARING COURSE, RAILING, SIDEWALK AND MEDIAN WHERE APPLICABLE.

ENGINEER WILL TAKE ELEVATIONS AT TOP OF BEAMS AFTER ERECTION AND WILL ALLOW FOR DEFLECTION SHOWN TO ENABLE CONTRACTOR TO BUILD FORMS TO CORRECT GRADE AND SPECIFIED SLAB THICKNESS.



MINIMUM CONCRETE STRENGTH - P.S.I.

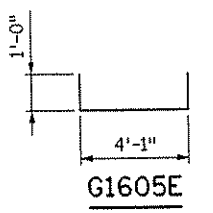
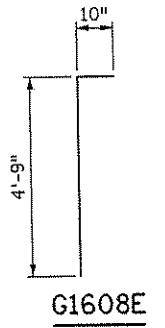
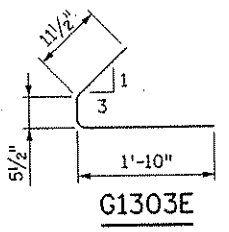
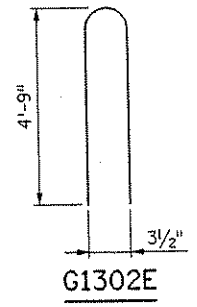
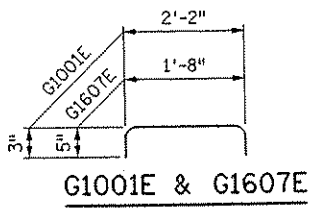
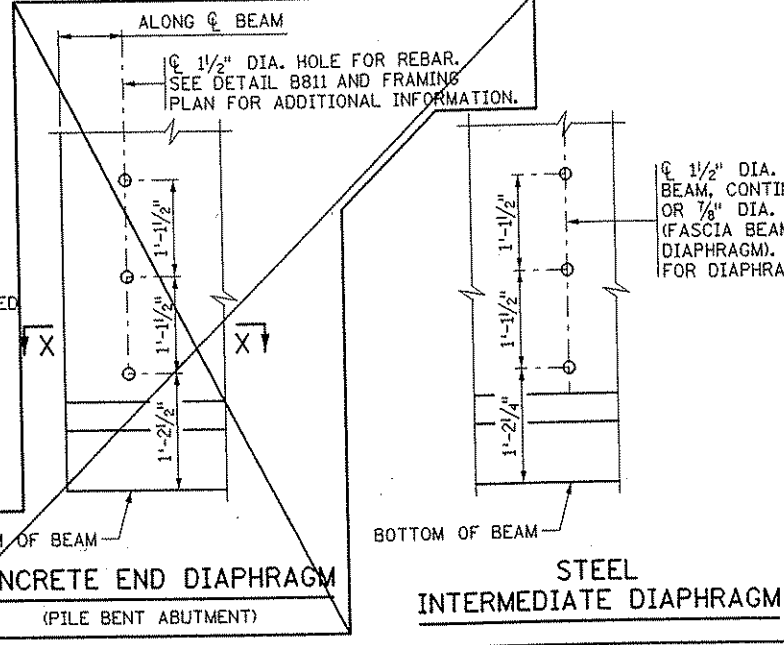
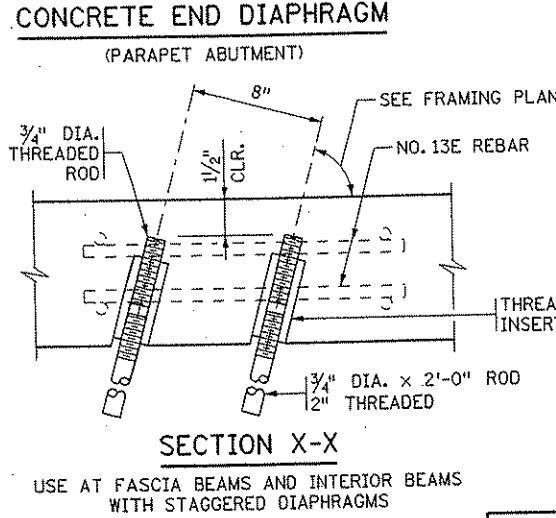
	① f'cl	② f'c
REQUIRED MIN. CONCRETE STRENGTH	7400	8500

PRESTRESSING STRAND DIAMETER

⑤	1/2" □
⑥	0.60" ☒

PLACE AN "X" IN THE APPROPRIATE BOX TO INDICATE THE STRAND DIAMETER USED FOR THE DESIGN.

@ 1/2" DIA. HOLE (INTERIOR BEAM, CONTINUOUS DIAPHRAGM) OR 3/8" DIA. BOLT ANCHORAGE (FASCIA BEAM AND STAGGERED DIAPHRAGM). SEE DETAIL B403 FOR DIAPHRAGM DETAILS.



- GENERAL NOTES**
- TOPS OF BEAMS SHALL BE INTENTIONALLY ROUGHENED FOR BOND.
 - PROVIDE HANDLING HOOKS OR DEVICES AS REQUIRED BY CONTRACTOR.
 - EACH BEAM SHALL BE MARKED, SHOWING BRIDGE NUMBER, CASTING DATE, AND INDIVIDUAL IDENTIFICATION LETTERS AND NUMBERS. MARKINGS SHALL BE MADE ON THE FACE OF THE BEAM, NEAR THE END, SO LOCATED THAT THEY WILL BE EXPOSED AFTER THE END DIAPHRAGMS HAVE BEEN CAST. FASCIA BEAMS SHALL BE MARKED ON THE INSIDE FACE. ALL MARKINGS SHALL BE STENCILLED AND BE CLEARLY LEGIBLE. FOR LOCATION OF BEAMS SEE FRAMING PLAN.
 - ALL MATERIAL AND WORK SHOWN OR NOTED ON THIS SHEET SHALL BE INCLUDED IN UNIT PRICE BID FOR PRESTRESSED CONCRETE BEAMS. SEE Mn/DOT SPEC. 2405.
 - SEE FRAMING PLAN FOR BEAM END MARKED "X" AND DIAPHRAGM SPACING.
 - APPROXIMATE WEIGHT OF BEAM IS 43.7 TONS.
 - AS AN ALTERNATE TO THE DIAPHRAGM ANCHORAGES SHOWN, THE CONTRACTOR MAY SUBMIT DETAILS OF A CAST-IN-PLACE ANCHORAGE TO THE ENGINEER FOR APPROVAL. ANCHORAGE MUST PROVIDE AN ULTIMATE PULL OUT STRENGTH OF 15 KIPS PER ANCHORAGE.
 - ① MINIMUM CONCRETE STRENGTH AT TIME OF PRESTRESS TRANSFER.
 - ② MINIMUM CONCRETE STRENGTH WHEN BEAM CAN BE TRANSPORTED AND INSTALLED.
 - ③ DRAPED STRANDS.
 - ④ STRAIGHT STRANDS.
 - ⑤ PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION STRAND, CONFORMING TO ASTM A 416, GRADE 270.
 - ⑥ PLACE 2-G1303E WITH STIRRUPS (6" MAX. SPG.)

CERTIFIED BY *Gottfried Millner* 01/22/2002 DATE
 LICENSED PROFESSIONAL ENGINEER
 NAME: GOTTFRIED MILLNER LIC. NO. 19879

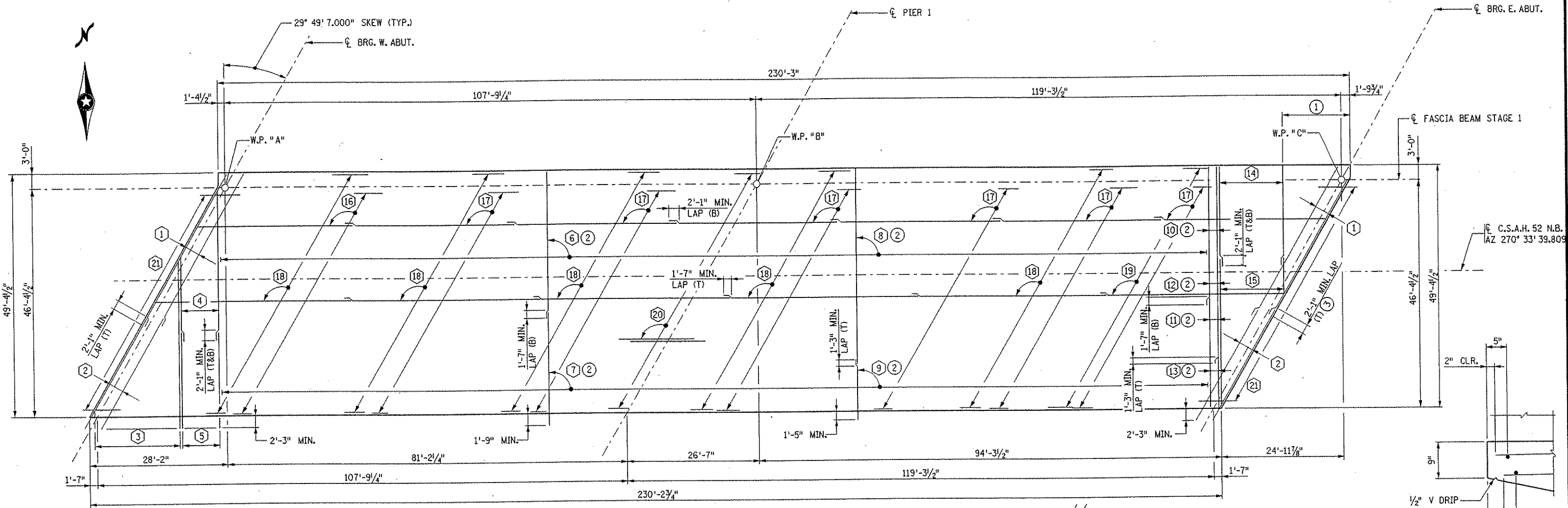
54" PRESTRESSED CONCRETE BEAM (PRETENSIONED) TYPE 54M-120

BEAMS B4, B5, B6
 FIG. 5-397.515
 DES: SVC DR: SVC APPROVED: BRIDGE NO. 02566
 CHK: MJC CHK: MJC SHEET NO. 31 OF 56 SHEETS

DATE: 01/22/2002 TIME: 01:55:44 PM
 FILENAME: k:\c:\mrc\proj\9001\mbr\brdg\part-A\bridgestandards\p02.dgn

REVISION: 02-11-00
 APPROVED: NOVEMBER 6, 1995
D. Milled
 STATE BRIDGE ENGINEER

DATE: 01/25/2002 TIME: 08:15:54 AM
 FILENAME: K:\a-f\Anoka\ch\IT 490\hwy-brdg\part4\brt\slab\super\deck1.dgn



SLAB REINFORCEMENT

BAR CALL-OUTS:

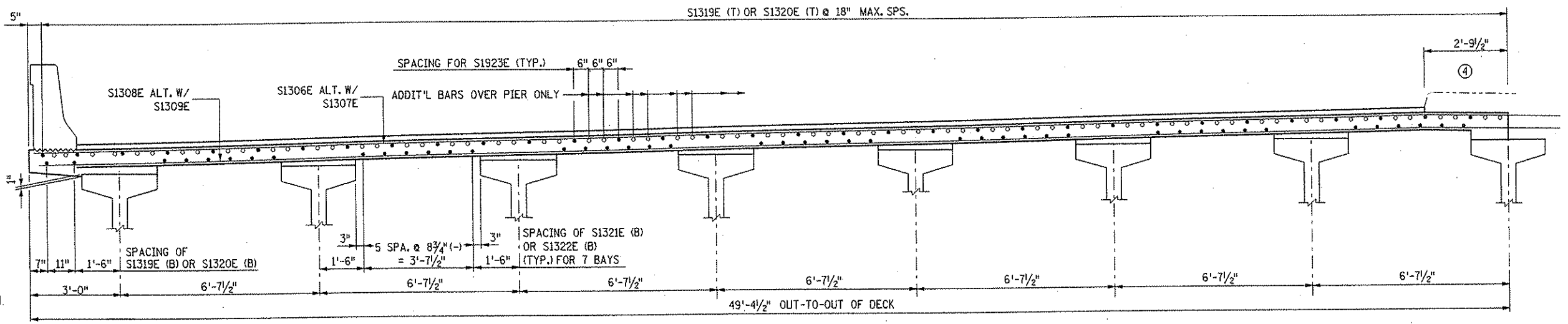
- ① 4-S1301E (T). SEE STAGE 1 SLAB CORNER DETAILS ON SHEET 34 FOR PLACEMENT.
- ② 4-S1302E (T). SEE STAGE 1 SLAB CORNER DETAILS ON SHEET 34 FOR PLACEMENT.
- ③ 1 SER. OF 33-S1303E (T&B) @ 6 1/2" MAX. SEE STAGE 1 SLAB CORNER DETAILS ON SHEET 34 FOR PLACEMENT.
- ④ 1 SER. OF 15-S1304E (T&B) @ 6 1/2" MAX.
- ⑤ 15-S1305E (T&B) @ 6 1/2" MAX.
- ⑥ 371-S1308E (B) @ 6 1/2" MAX.
- ⑦ 371-S1309E (B) @ 6 1/2" MAX.
- ⑧ 371-S1306E (T) @ 6 1/2" MAX.
- ⑨ 371-S1307E (T) @ 6 1/2" MAX.
- ⑩ 4-S1312E (B) @ 6 1/2" MAX.
- ⑪ 4-S1313E (B) @ 6 1/2" MAX.
- ⑫ 4-S1310E (T) @ 6 1/2" MAX.
- ⑬ 4-S1311E (T) @ 6 1/2" MAX.
- ⑭ 25-S1305E (T&B) @ 6 1/2" MAX.
- ⑮ 1 SER. OF 25-S1314E (T&B) @ 6 1/2" MAX.
- ⑯ 42-S1322E (B)
- ⑰ 42-S1321E (B)
- ⑱ 36-S1319E (T) @ 18" MAX. QUANTITY INCLUDES (B) BARS IN CANTILEVER PORTION OF SLAB.
- ⑲ 36-S1320E (T) @ 18" MAX. QUANTITY INCLUDES (B) BARS IN CANTILEVER PORTION OF SLAB.
- ⑳ 66-S1923E (T). SEE BAR STAGGER DETAIL ON SHEET 34 FOR PLACEMENT.
- ㉑ 35-S1624E

NOTES:

- ① SEE DETAIL "A" ON SHEET 34 FOR CORNER REINFORCEMENT.
- ② ALTERNATE (FLIP) BAR MARKS TO PRODUCE STAGGERED SPLICE LOCATIONS.
- ③ INCREASE SPLICE LENGTH FOR BARS IN CORNER SLAB SECTION.

EAST END 1-S1625E (T&B)
 WEST END 1-S1626E (T&B)

END BLOCK REINFORCEMENT



TYPICAL SECTION

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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.
 SIGNED: *Gottfried Millner* GOTTFRIED MILLNER
 DATE 01/25/2002 REG. NO. 19879

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

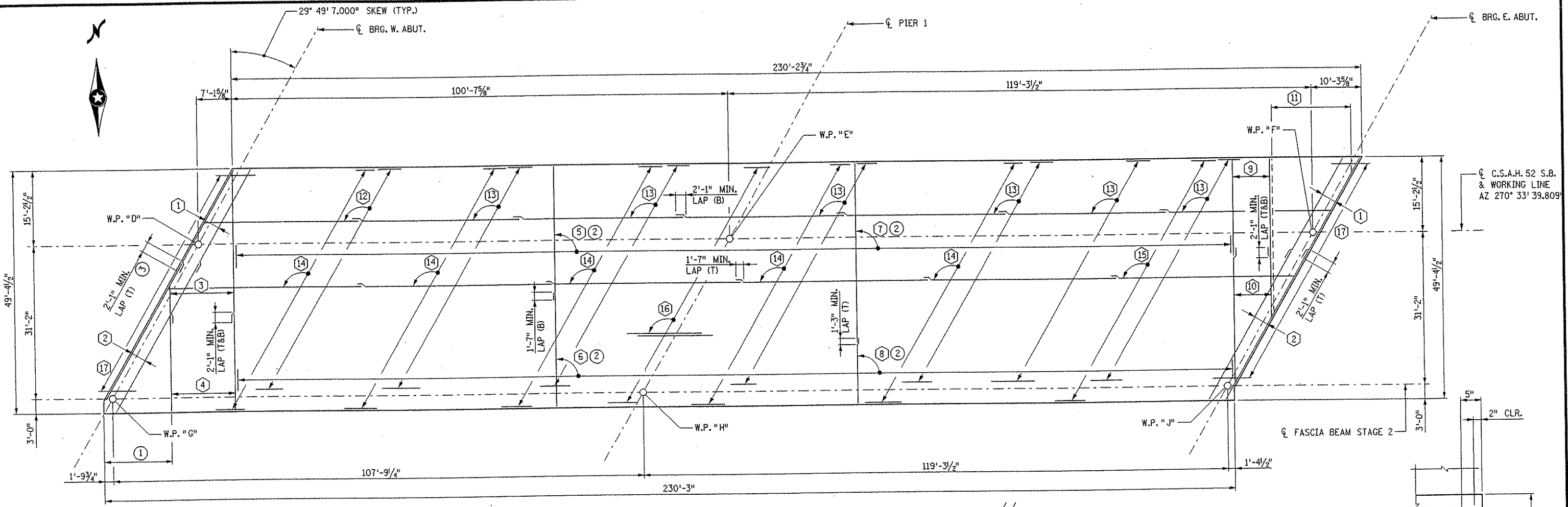
ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE: **SLAB REINFORCEMENT STAGE 1**

DES: HLE OR: HLE APPROVED
 CHK: MJC CHK: MJC
 Sheet No. 32 of 56 Sheets

Bridge No. 02566

DATE: 01/22/2002 TIME: 01:54:53 PM
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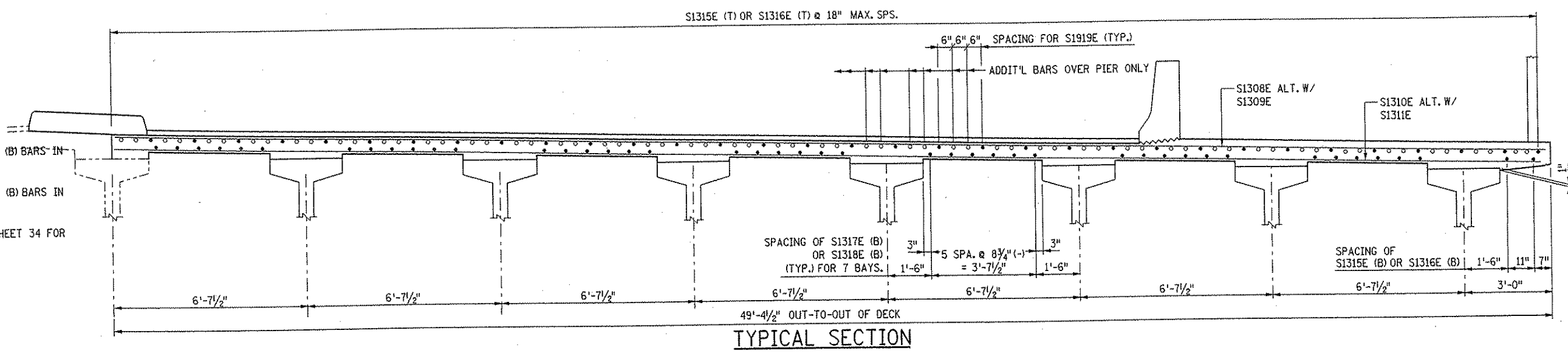
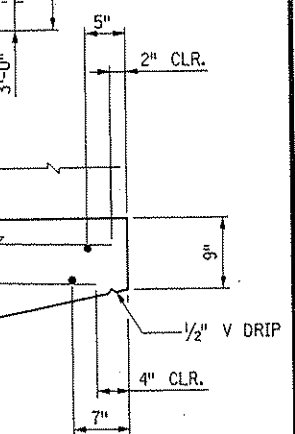
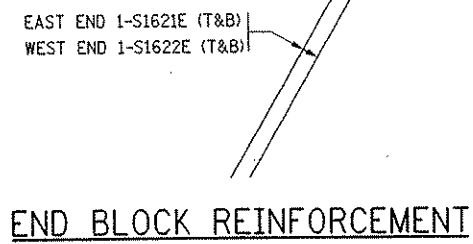
BAR CALL-OUTS:

- ① 4-S1301E (T); SEE STAGE 2 SLAB CORNER DETAILS ON SHEET 34 FOR PLACEMENT.
- ② 4-S1302E (T); SEE STAGE 2 SLAB CORNER DETAILS ON SHEET 34 FOR PLACEMENT.
- ③ 1 SER. OF 25-S1307E (T&B) @ 6/2" MAX.
- ④ 25-S1312E (T&B) @ 6/2" MAX.
- ⑤ 375-S1310E (B) @ 6/2" MAX.
- ⑥ 375-S1311E (B) @ 6/2" MAX.
- ⑦ 375-S1308E (T) @ 6/2" MAX.
- ⑧ 375-S1309E (T) @ 6/2" MAX.
- ⑨ 15-S1312E (T&B) @ 6/2" MAX.
- ⑩ 1 SER. OF 15-S1313E (T&B) @ 6/2" MAX.
- ⑪ 1 SER. OF 31-S1314E (T&B) @ 6/2" MAX.
- ⑫ 42-S1318E (B)
- ⑬ 42-S1317E (B)
- ⑭ 36-S1315E (T) @ 18" MAX. QUANTITY INCLUDES (B) BARS IN CANTILEVER PORTION OF SLAB.
- ⑮ 36-S1316E (T) @ 18" MAX. QUANTITY INCLUDES (B) BARS IN CANTILEVER PORTION OF SLAB.
- ⑯ 66-S1919E (T); SEE BAR STAGGER DETAIL ON SHEET 34 FOR PLACEMENT.
- ⑰ 35-S1620E

NOTES:

- ① SEE DETAIL "A" ON SHEET 34 FOR CORNER REINFORCEMENT.
- ② ALTERNATE (FLIP) BAR MARKS TO PRODUCE STAGGERED SPLICE LOCATIONS.
- ③ INCREASE SPLICE LENGTH FOR BARS IN CORNER SLAB SECTION.

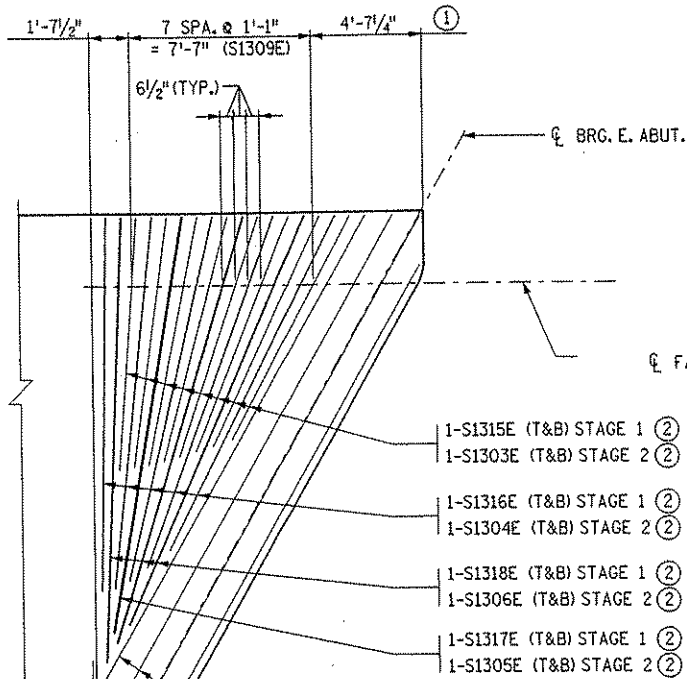
SLAB REINFORCEMENT



<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">NO.</th> <th style="width: 5%;">DATE</th> <th style="width: 5%;">BY</th> <th style="width: 85%;">DESCRIPTION OF REVISIONS</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	BY	DESCRIPTION OF REVISIONS					<p>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</p> <p>SIGNED <i>Gottfried Millner</i> GOTTFRIED MILLNER DATE 01/22/2002 REG. NO. 19879</p>	<p>TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</p>	<p>ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50</p>	<p>TITLE: SLAB REINFORCEMENT STAGE 2</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">DES: HLE</td> <td style="width: 50%;">DR: HLE</td> <td style="width: 50%;">APPROVED</td> </tr> <tr> <td>CHK: MJC</td> <td>CHK: MJC</td> <td> </td> </tr> </table> <p>Sheet No. 33 of 56 Sheets</p>	DES: HLE	DR: HLE	APPROVED	CHK: MJC	CHK: MJC		<p>Bridge No. 02566</p>
NO.	DATE	BY	DESCRIPTION OF REVISIONS																	
DES: HLE	DR: HLE	APPROVED																		
CHK: MJC	CHK: MJC																			

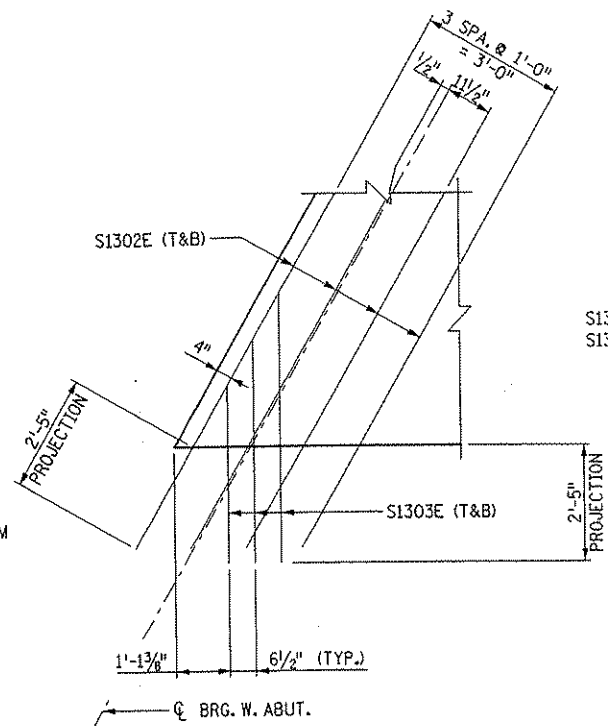
NOTES

- ① DIMENSIONS SHOWN ARE ALONG ϕ FASCIA BEAM.
- ② 2 3/4" MIN. BETWEEN FLARED BARS. PLACE AS SHOWN.



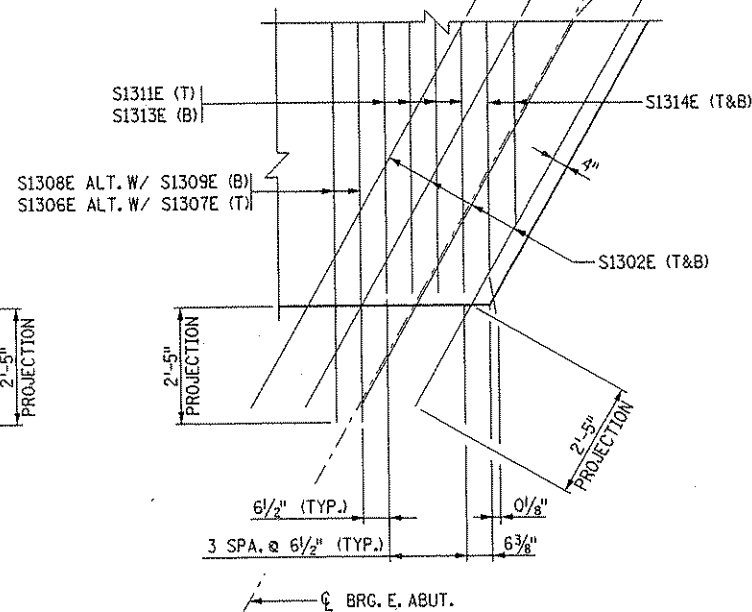
DETAIL "A"

STAGE 1 NORTHEAST CORNER SHOWN,
STAGE 2 SOUTHWEST CORNER SIMILAR.

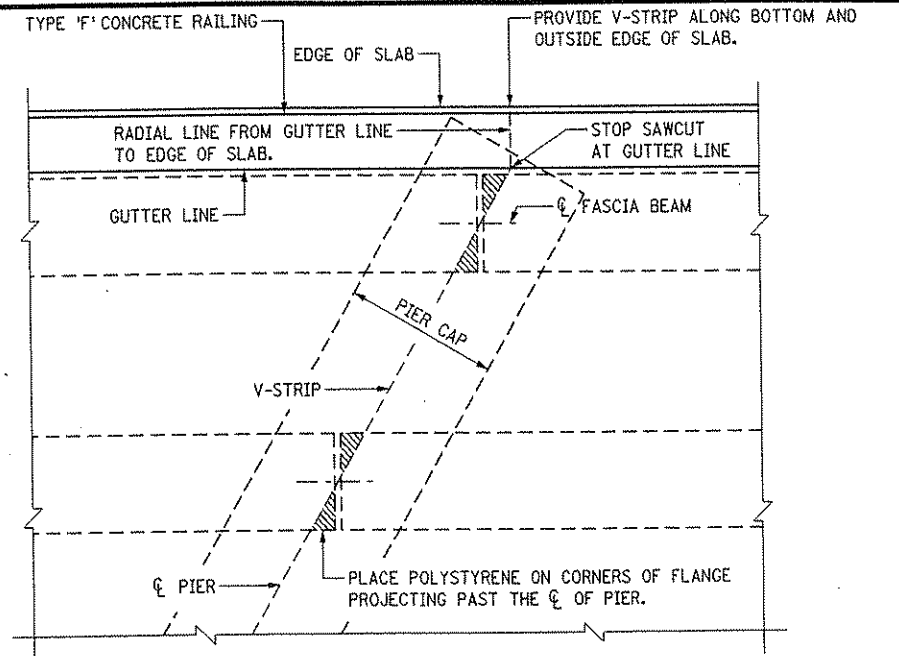


SOUTHWEST CORNER

STAGE 1 SLAB CORNER DETAILS AT LONGITUDINAL CONSTRUCTION JOINT

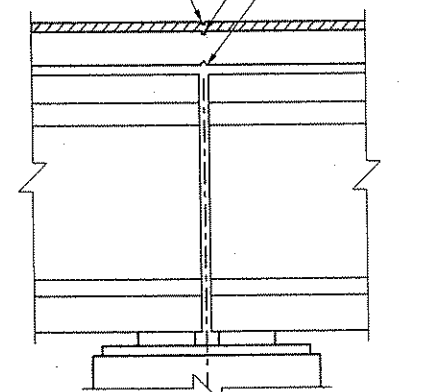


SOUTHEAST CORNER

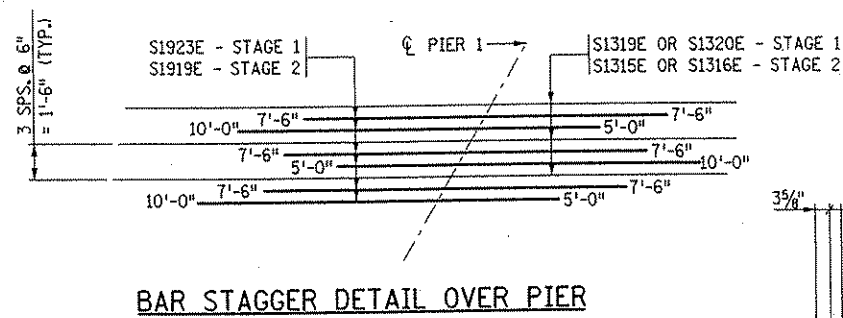


SAW CUT DETAIL - PLAN

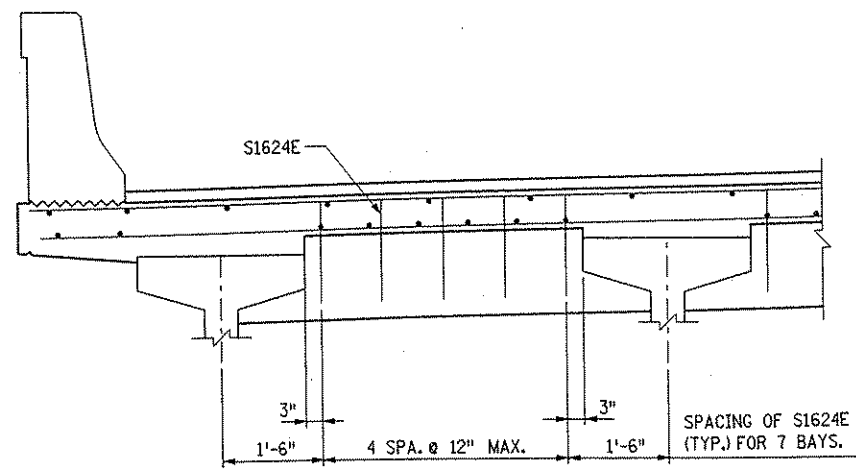
SAWCUT IN OVERLAY DIRECTLY ABOVE V-STRIP AND SAWCUT IN SLAB. SEAL PER SPEC. 3723.



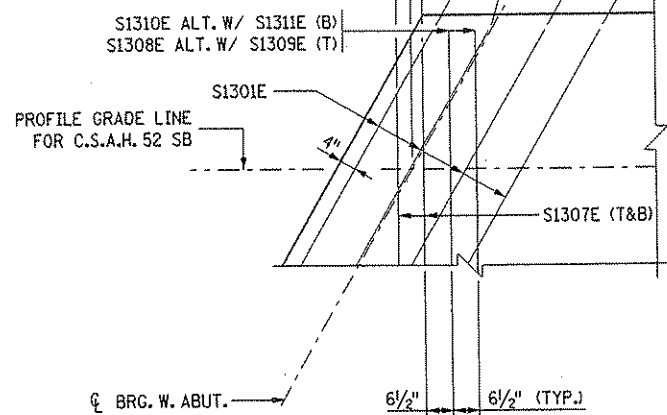
SAW CUT DETAIL - ELEVATION



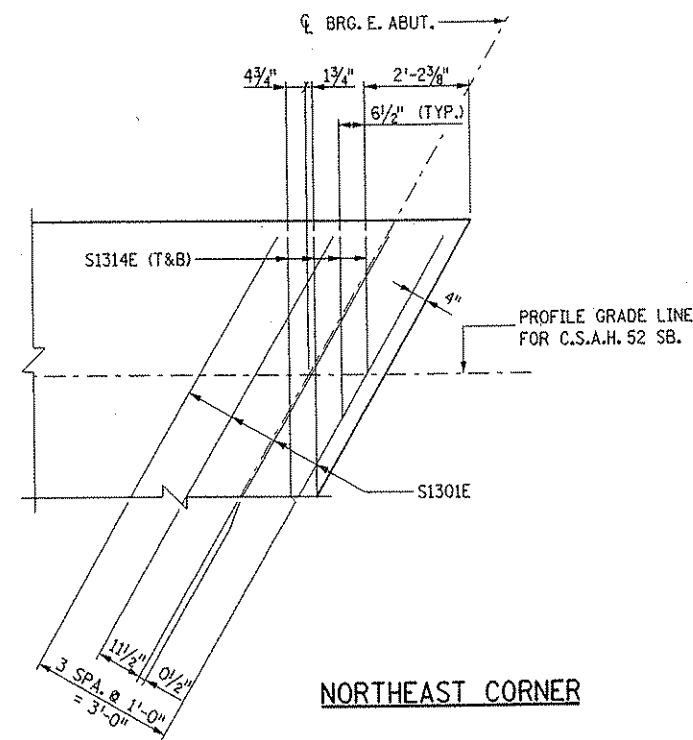
BAR STAGGER DETAIL OVER PIER



TYPICAL SECTION NEAR ABUTMENT END DIAPHRAGM

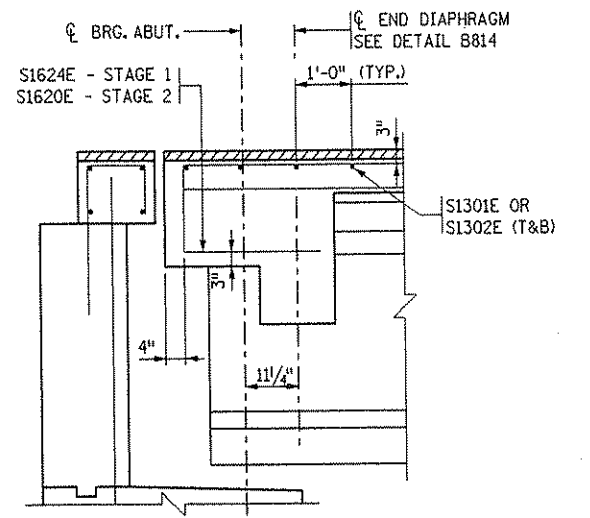


NORTHWEST CORNER



NORTHEAST CORNER

STAGE 2 SLAB CORNER DETAILS AT LONGITUDINAL CONSTRUCTION JOINT



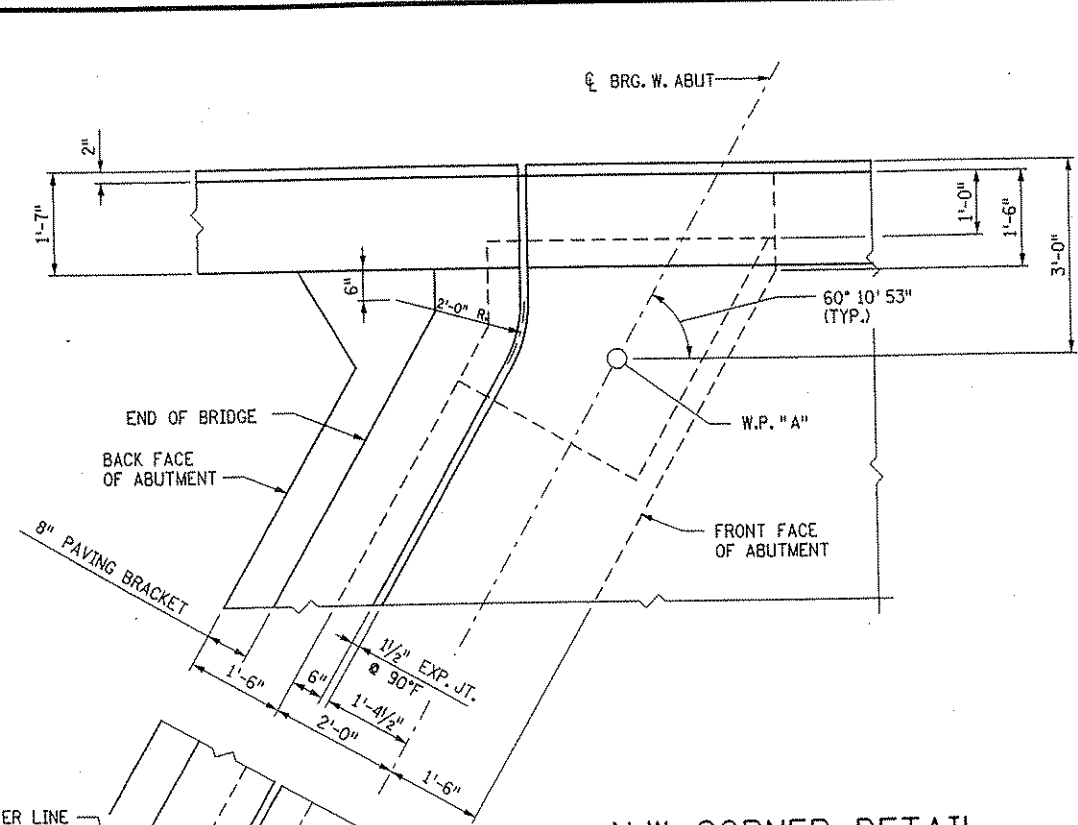
PART LONGITUDINAL SECTION

DATE: 01/23/2002 TIME: 08:32:17 AM FILENAME: k:\g-f\anokaty\IT-490\hwy-brdg\part4\bridge\super\structure_details.dgn

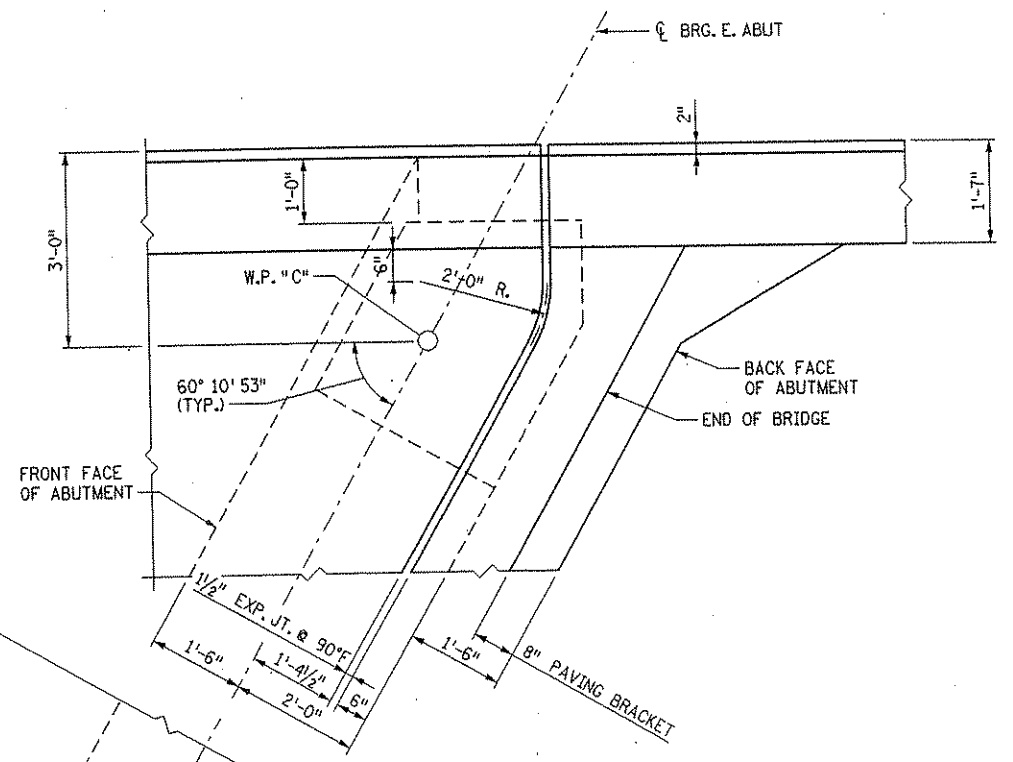
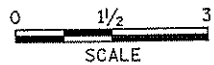
NO.	DATE	BY	DESCRIPTION OF REVISIONS	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA SIGNED <i>Gottfried Millner</i> GOTTFRIED MILLNER DATE 01/22/2002 REG. NO. 19879				 TOLTZ, KING, OUYALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50	TITLE: SUPERSTRUCTURE DETAILS	DES: HLE	DR: HLE	APPROVED	Bridge No. 02566
				CHK: MJC	CHK: MJC		Sheet No. 34 of 56 Sheets							



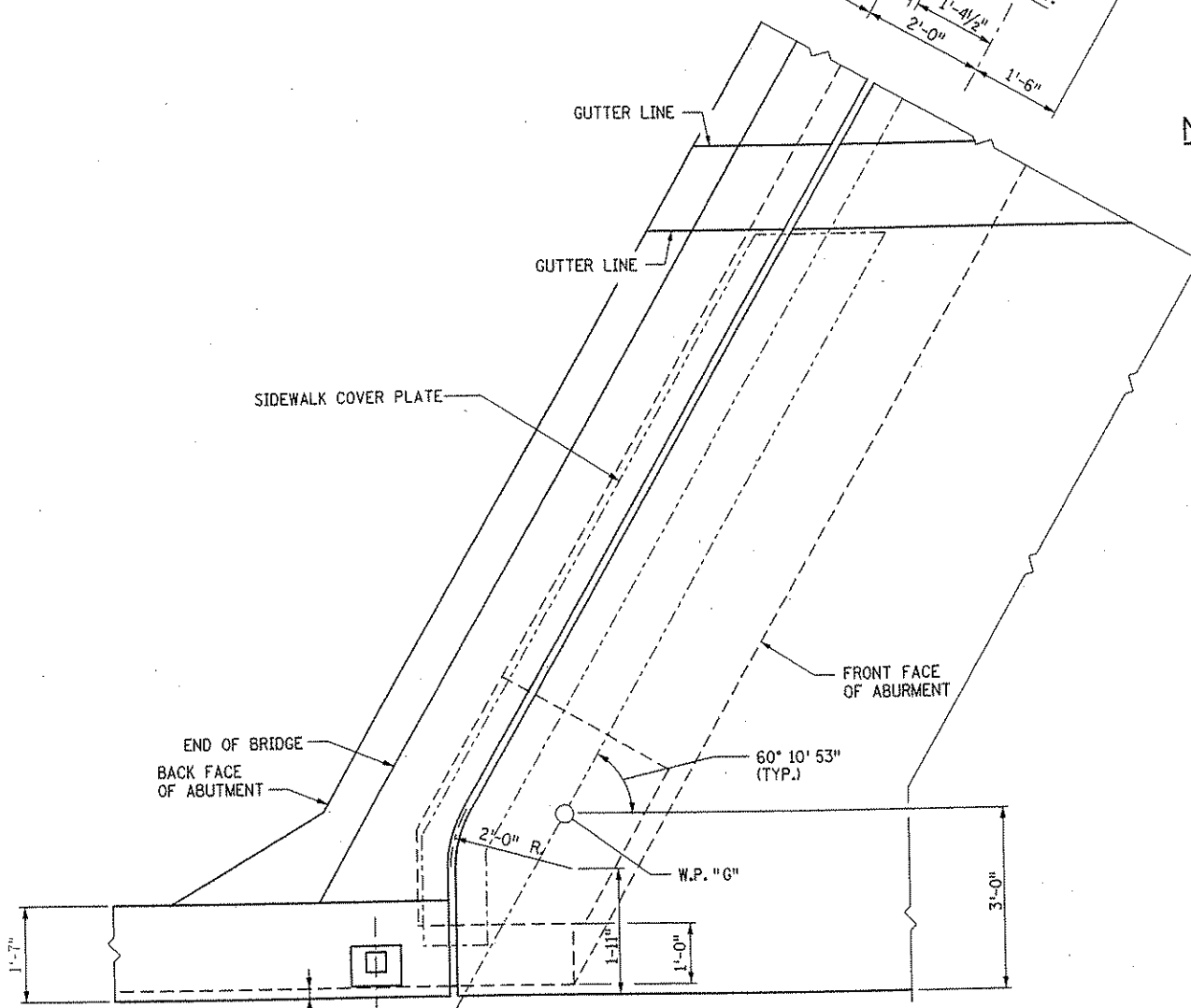
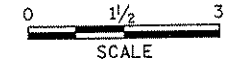
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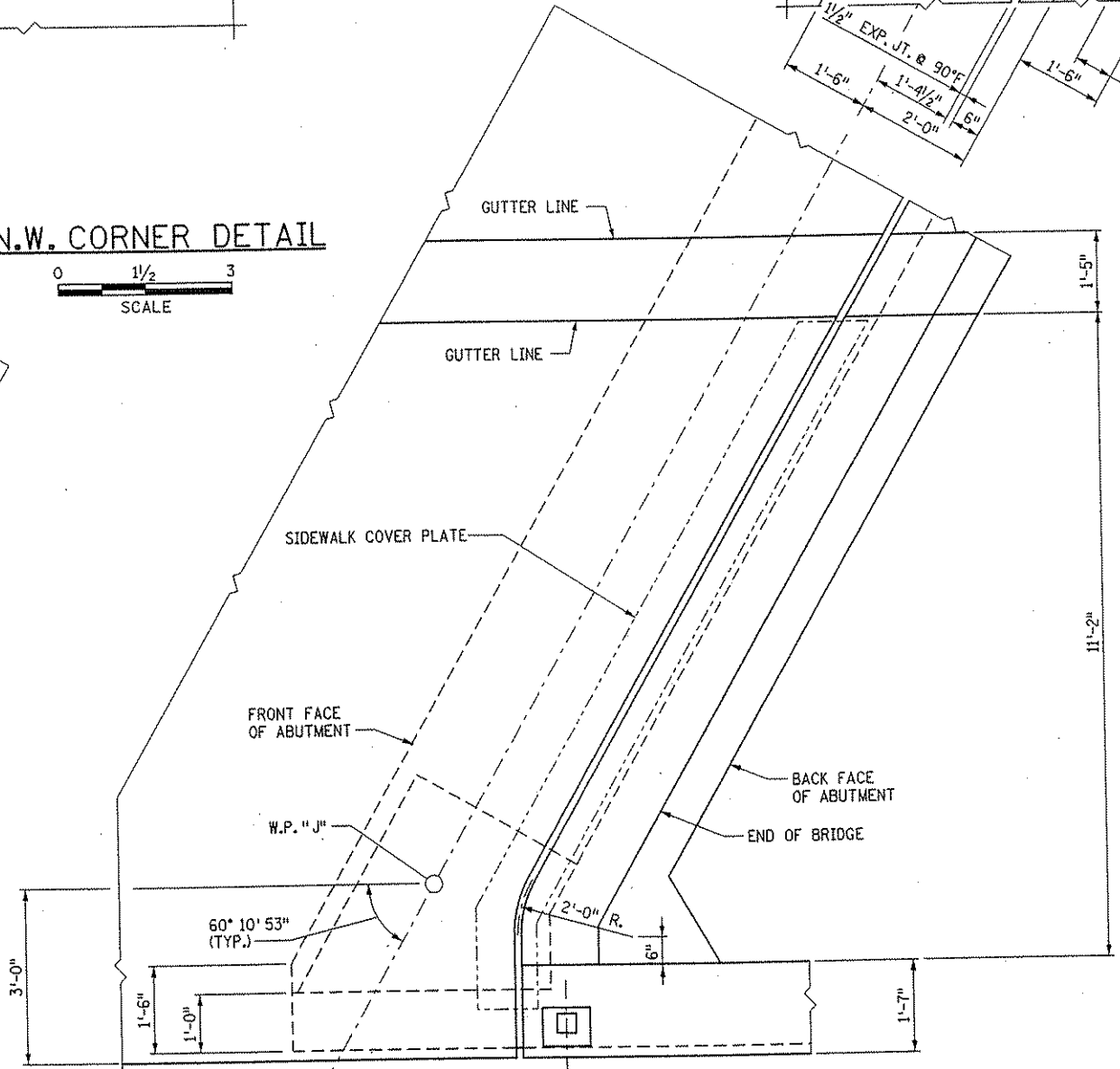
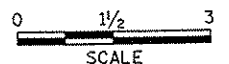
N.W. CORNER DETAIL



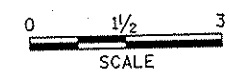
N.E. CORNER DETAIL



S.W. CORNER DETAIL



S.E. CORNER DETAIL



NO.	DATE	BY	DESCRIPTION OF REVISIONS

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 DATE: 01/22/2002 REG. NO. 19879

TKDA
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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE:
ABUTMENT CORNER DETAILS

DES: GM	DR: SJS	APPROVED
CHK: MJC	CHK: GM	

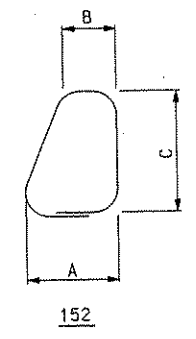
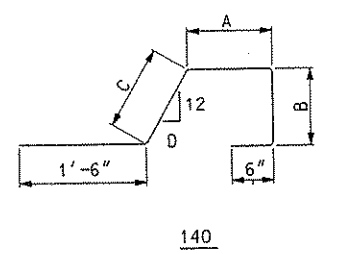
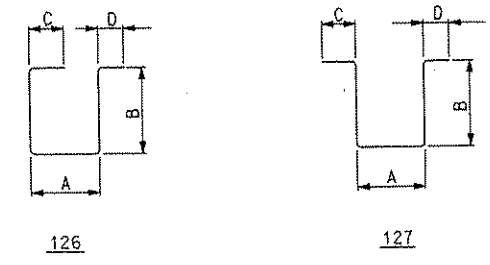
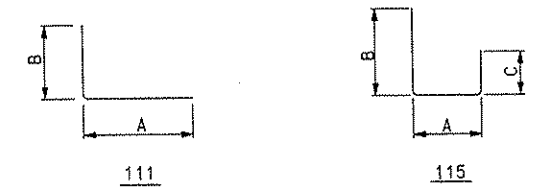
Sheet No. 35 of 56 Sheets

Bridge No.
 02566

DATE: 01/22/2002 TIME: 01:53:11 PM
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BAR MARK	NO.	SERIES NO. OF	LENGTH FT IN	SIZE	TYPE	DIMENSIONS				LOCATION
						A	B	C	D	
DECK REINFORCEMENT, STAGE 2										
S1301	E	8	35 0	13	STR					T&B SLAB EDGE
S1302	E	8	23 4	13	STR					T&B SLAB EDGE
S1303	E	16	10 6	13	STR					"FAN" REGION
S1304	E	10	15 6	13	STR					"FAN" REGION
S1305	E	2	17 6	13	STR					"FAN" REGION
S1306	E	6	18 6	13	STR					"FAN" REGION
S1307	E	2 SER	7 9	13	STR					W. END T&B
		OF 25	30 5	13	STR					
S1308	E	375	36 9	13	STR					T. TRANS.
S1309	E	375	13 3	13	STR					T. TRANS.
S1310	E	375	27 0	13	STR					B. TRANS.
S1311	E	375	23 4	13	STR					B. TRANS.
S1312	E	80	20 0	13	STR					E. & W. END T&B
S1313	E	2 SER	14 3	13	STR					E. END T&B
		OF 15	27 6	13	STR					
S1314	E	2 SER	2 10	13	STR					E. END T&B
		OF 31	31 2	13	STR					
S1315	E	180	40 0	13	STR					T. LONG.
S1316	E	36	37 6	13	STR					T. LONG.
S1317	E	252	35 0	13	STR					B. LONG.
S1318	E	42	32 1	13	STR					B. LONG.
S1919	E	66	15 0	19	STR					T. LONG. OVER PIER
S1620	E	70	9 5	16	115	1'-6"	5'-1"	2'-10"		END TIE LONG.
S1621	E	4	48 10	16	STR					END BLOCK
S1622	E	4	51 9	16	STR					END BLOCK
DIAPHRAGM REINFORCEMENT, STAGE 2										
E1301	E	56	7 6	13	126	1'-0"	2'-6"	9"	9"	STIRRUP
E1602	E	12	17 2	16	127	4'-2"	2'-6"	4'-0"	4'-0"	BENT BAR
E1903	E	28	6 6	19	STR					B. LONG.
E2204	E	24	5 0	22	STR					B. LONG. THROUGH BEAM
E1305	E	28	4 3	13	STR					T. LONG.
E1606	E	2	14 5	16	127	4'-2"	2'-6"	4'-0"	1'-3"	BENT BAR (ED-3)
TYPE F-SW RAILING REINFORCEMENT										
R1601	E	257	5 1	16	140	8"	1'-2"	1'-3"	4	DECK TIE
R1602	E	263	8 2	16	152	7"	4 1/2"	3'-4"		STIRRUP
R1603	E	4	6 5	16	152	6 1/2"	4 1/2"	2'-5"		STIRRUP
R1904	E	8	4 5	19	111	3'-5"	1'-0"			END POST
R1605	E	4	3 5	16	STR					END POST
R1306	E	6	3 1	13	STR					END POST
R1307	E	8	14 3	13	STR					LONGITUDINAL
R1308	E	36	19 7	13	STR					LONGITUDINAL
R1309	E	8	10 0	13	STR					LONGITUDINAL
R1310	E	4	35 6	13	STR					LONGITUDINAL
R1311	E	20	40 0	13	STR					LONGITUDINAL

BAR BENDING DIAGRAMS



NOTE
 BENT BAR DIMENSIONS GIVEN ARE OUT-TO-OUT. ACTUAL BAR LENGTHS SHALL BE DETERMINED BASED ON THE DETAIL DIMENSIONS SHOWN IN THE BAR BENDING DIAGRAMS. TOTAL BAR LENGTHS ARE SHOWN FOR USE IN COMPUTING REINFORCEMENT BAR WEIGHTS FOR PAYMENT ONLY.

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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
 SIGNED: *Gottfried Millner* GOTTFRIED MILLNER
 DATE: 01/22/2002 REG. NO. 19879

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

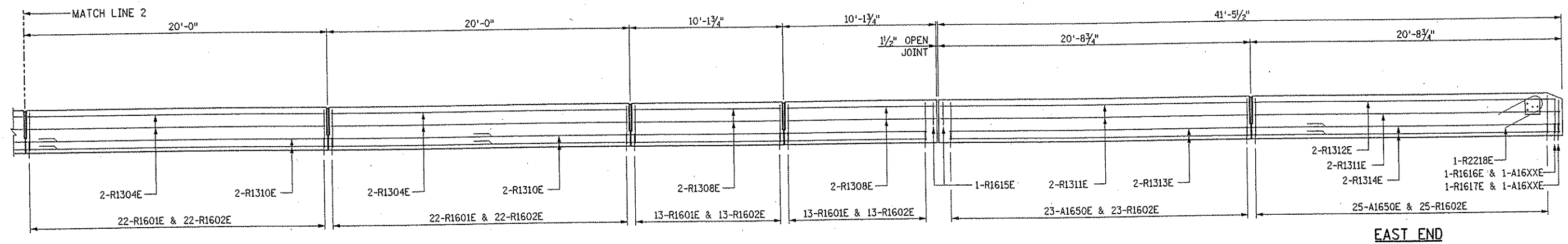
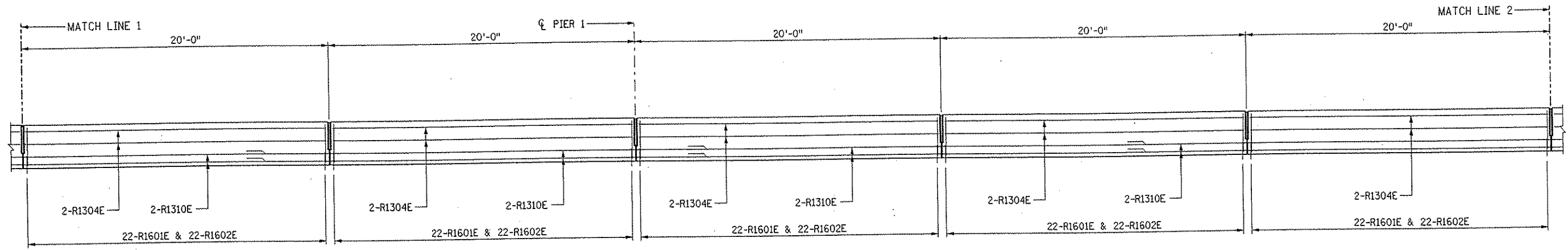
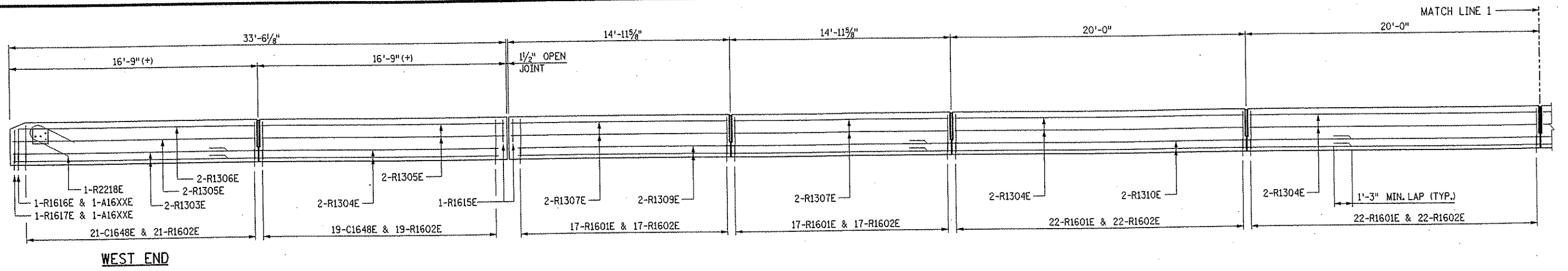
TITLE:
SUPERSTRUCTURE BARLISTS

DES: MJC / HLE	DR: HLE	APPROVED
CHK: GM	CHK: GM	

Sheet No. 37 of 56 Sheets

Bridge No.
 02566

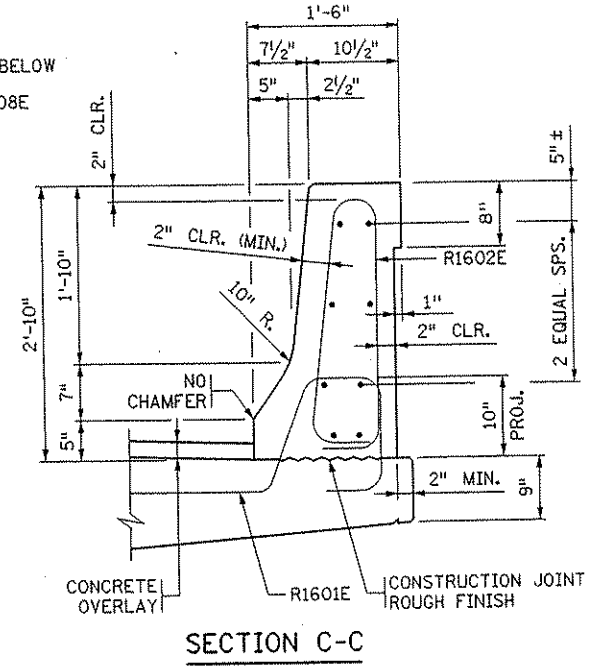
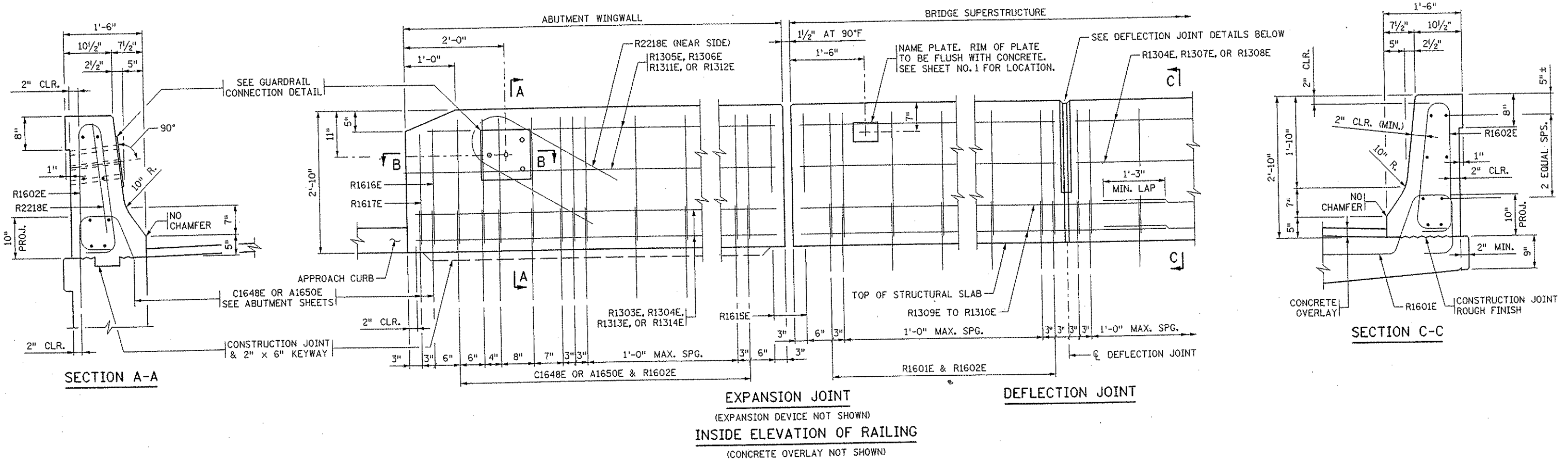
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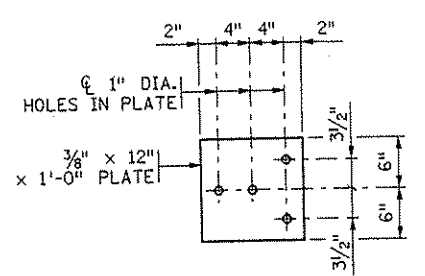
ROADSIDE (FRONT FACE) RAILING ELEVATION - STAGE 1 ①②

- NOTES:**
- ① HORIZONTAL DIMENSIONS ARE MEASURED ALONG SOUTH FACE (GUTTERLINE) OF THE RAIL BASE.
 - ② FOR BAR PLACEMENT AND SPACING, SEE SHEET 39.

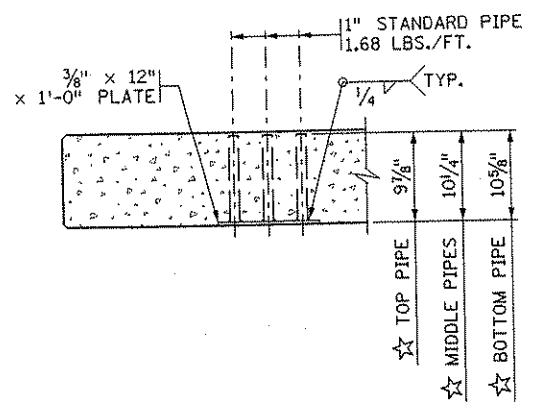
	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA SIGNED: <i>Gottfried Millner</i> GOTTFRIED MILLNER DATE: 01/22/2002 REG. NO. 19879	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50	TITLE: ELEVATION FOR TYPE F MODIFIED CONCRETE RAILING	DES: HLE CHK: MJC	DR: HLE CHK: MJC	APPROVED 	Bridge No. 02566	
Sheet No. 38 of 56 Sheets									
NO. DATE BY DESCRIPTION OF REVISIONS									



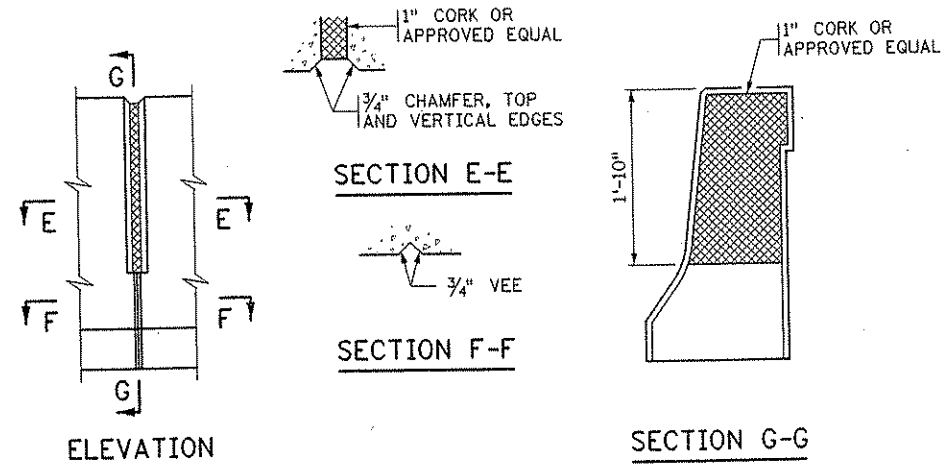
EXPANSION JOINT
(EXPANSION DEVICE NOT SHOWN)
INSIDE ELEVATION OF RAILING
(CONCRETE OVERLAY NOT SHOWN)



GUARDRAIL CONNECTION DETAIL
GALVANIZE AFTER FABRICATION PER Mn/DOT SPEC. 3394
ESTIMATED WEIGHT = 22 LBS



SECTION B-B
(REINFORCEMENT NOT SHOWN)
★ DIMENSIONS INCLUDE 3/8\"/>



DEFLECTION JOINT DETAILS

GENERAL NOTES

LENGTH OF "TYPE F MODIFIED RAILING CONCRETE (3Y46)" FOR PAYMENT SHALL BE MEASURED BETWEEN THE OUTSIDE FACES OF THE CONCRETE RAIL.

CONCRETE RAILING = 441 LBS./FT. (0.109 CU. YDS./FT.)

FINISH ALL EDGES OF RAIL WITH 1/2" VEE, EXCEPT WHERE OTHERWISE NOTED.

MAXIMUM SPACING OF CONCRETE DEFLECTION JOINTS SHALL BE 20 FT.

SEE SUPERSTRUCTURE SHEET FOR JOINT SPACING.

GUARDRAIL CONNECTION TO BE STRUCTURAL STEEL, Mn/DOT SPEC. 3306.

GUARDRAIL CONNECTION TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS.

RAIL QUANTITIES ARE INCLUDED IN SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE.

DATE: 01/22/2002 TIME: 01:55:13 PM FILENAME: \\s01\work\proj\9901\brdg\part-A\bridge_standards\7117.rtf.dgn

REVISION: 11-08-00
APPROVED: AUGUST 31, 1991
Donald J. Manning
STATE BRIDGE ENGINEER

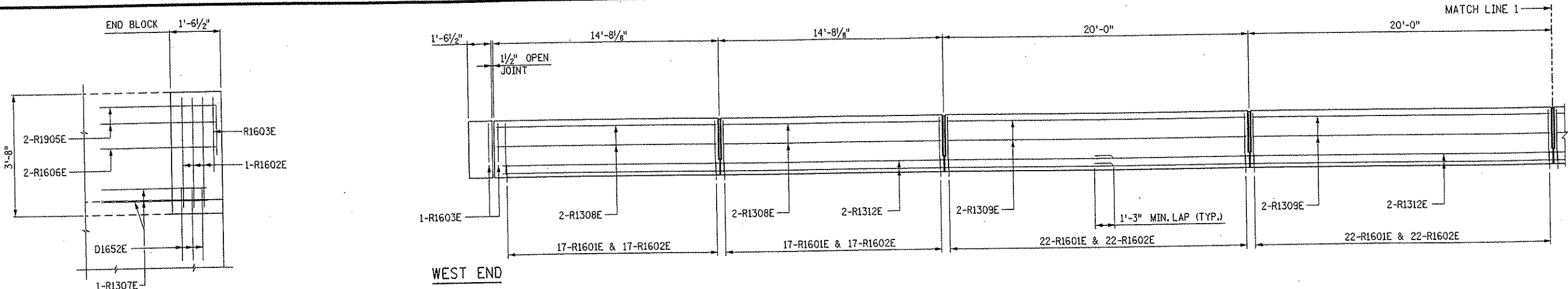
CERTIFIED BY *Gottfried Millner* 10/10/2001
LICENSED PROFESSIONAL ENGINEER DATE
NAME: GOTTFRIED MILLNER LIC. NO. 19879

CONCRETE RAILING
(TYPE F MODIFIED)
WITH INTEGRAL END POST & CONCRETE OVERLAY

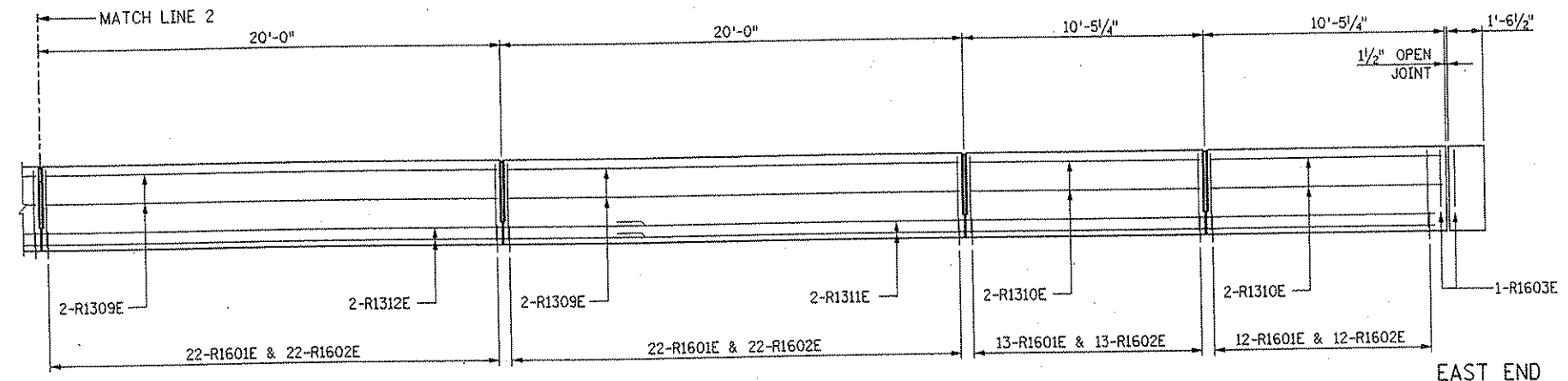
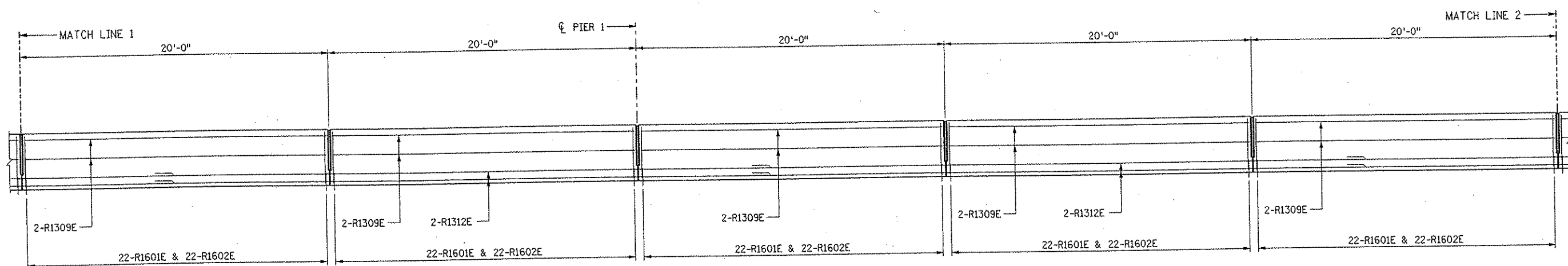
DES: HLE	DR: HLE	APPROVED: HLE	BRIDGE NO. 02566
CHK: MJC	CHK: MJC	MODIFIED	
SHEET NO. 39 OF 56 SHEETS			

MODIFIED FIG. 5-397.117

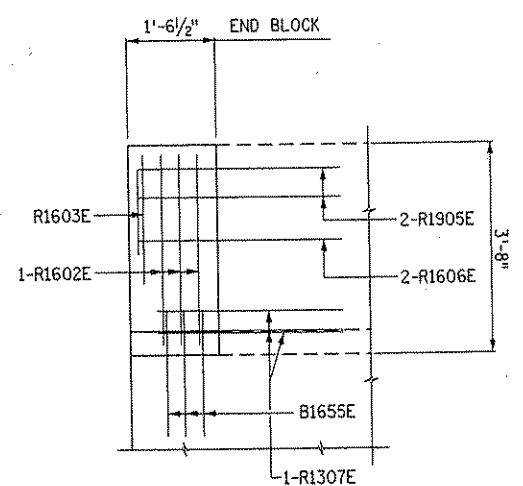
DATE: 01/22/2002 TIME: 01:55:04 PM
 FILENAME: k:\p\anokacy\17490\hwy-brdg\part4\bridge\super\rail2.dgn



WEST END - END POST



EAST END



EAST END - END POST

BACKFACE RAILING ELEVATION - STAGE 2 ①②

NOTES:

- ① HORIZONTAL DIMENSIONS ARE MEASURED ALONG NORTH FACE (GUTTERLINE) OF THE RAIL BASE.
- ② FOR BAR PLACEMENT AND SPACING, SEE SHEET 41.

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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
 SIGNED *Gottfried Millner* GOTTFRIED MILLNER
 DATE 01/22/2002 REG. NO. 19879

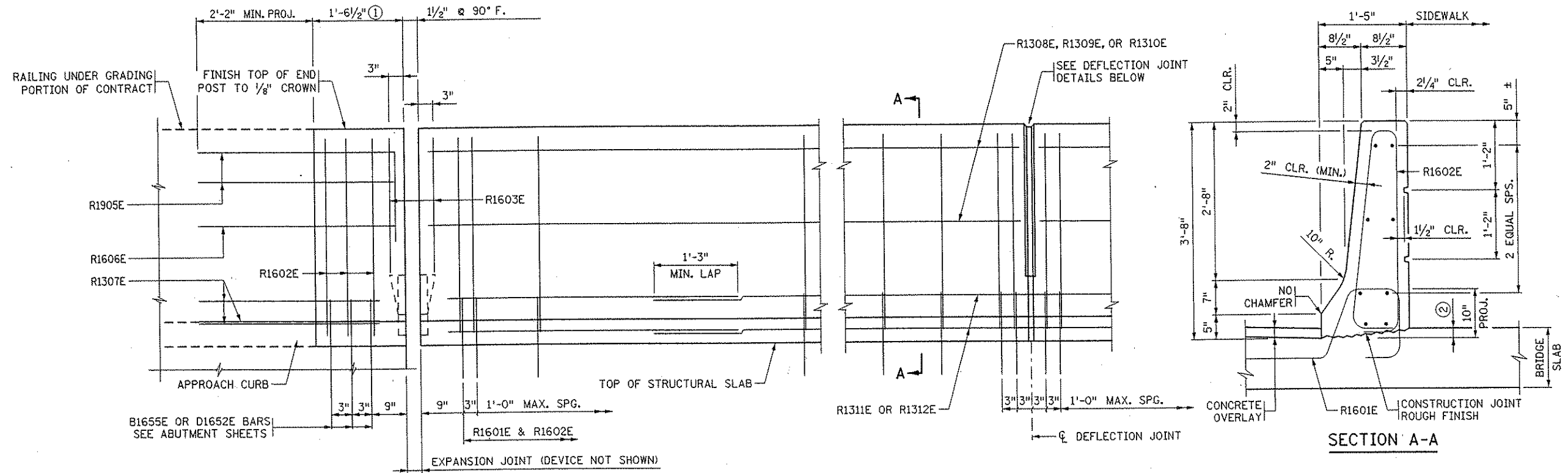
TKDA TGLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE: ELEVATION FOR CONCRETE RAILING (TYPE F-SW)

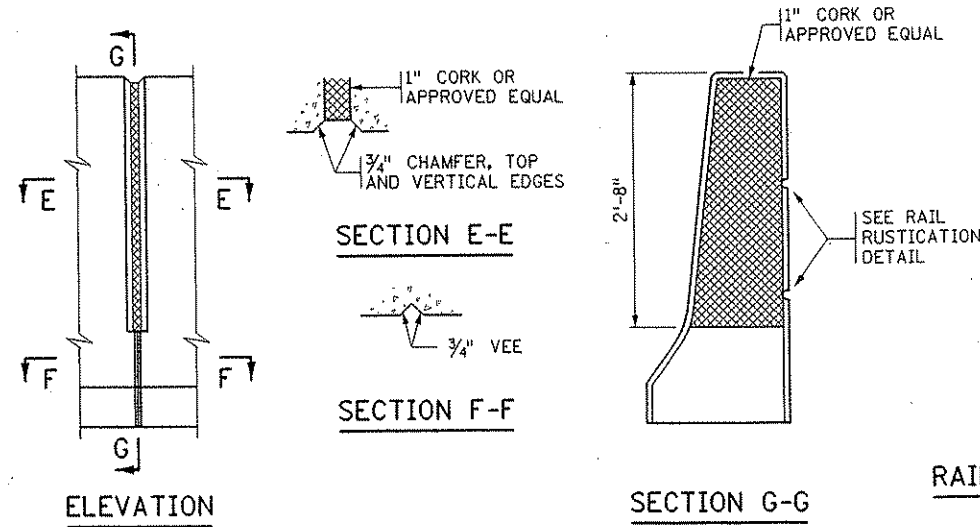
DES: HLE	DR: HLE	APPROVED
CHK: MJC	CHK: MJC	
Sheet No. 40 of 56 Sheets		

Bridge No. 02566



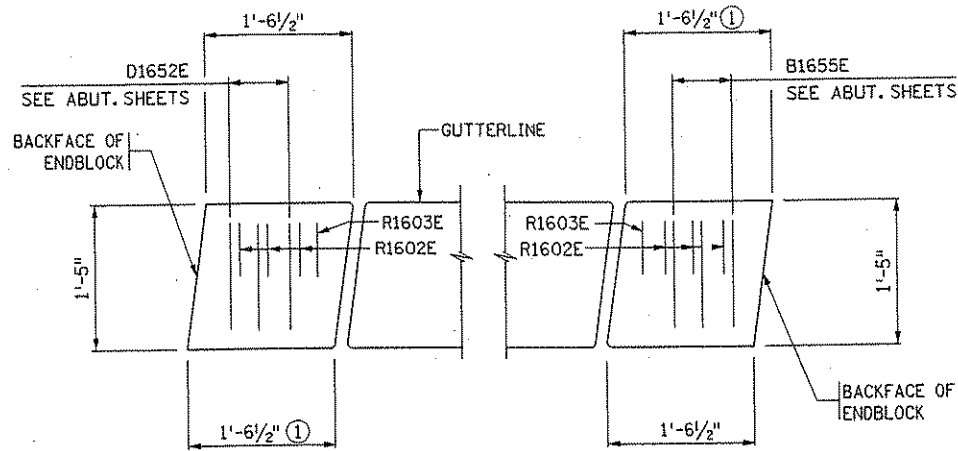
END POST

INSIDE ELEVATION OF RAILING
(CONCRETE OVERLAY NOT SHOWN)



DEFLECTION JOINT DETAILS

RAIL RUSTICATION



PLAN VIEW OF END POSTS

GENERAL NOTES

- LENGTH OF "TYPE F-SW RAILING CONCRETE (3Y46)" FOR PAYMENT SHALL BE MEASURED BETWEEN THE OUTSIDE FACES OF THE CONCRETE RAIL.
- CONCRETE RAILING = 560 LBS./FT. (0.139 CU. YDS./FT.)
- FINISH ALL EDGES OF RAIL WITH 1/2" VEE, EXCEPT WHERE OTHERWISE NOTED.
- MAXIMUM SPACING OF CONCRETE DEFLECTION JOINTS SHALL BE 20 FT.
- SEE SUPERSTRUCTURE SHEET FOR JOINT SPACING.
- RAIL QUANTITIES ARE INCLUDED IN SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE.
- ① END POST DIMENSIONS ARE ALONG GUTTER LINE OR OUTSIDE FACE OF END POST.
- ② DIMENSIONS TO BE DETERMINED BASED ON THE BRIDGE SLAB SLOPE.

DATE: 01/22/2002 TIME: 01:55:38 PM FILENAME: \\sct\anekacy\17490\Newy-bridg\part-A\bridge-standards\fig121e.dgn

REVISION: 10-27-00
APPROVED: NOVEMBER 26, 1985
KEITH V. BENTHIN
STATE BRIDGE ENGINEER

CERTIFIED BY *Gottfried Millner* 01/22/2002
LICENSED PROFESSIONAL ENGINEER DATE
NAME: GOTTFRIED MILLNER LIC. NO. 19879

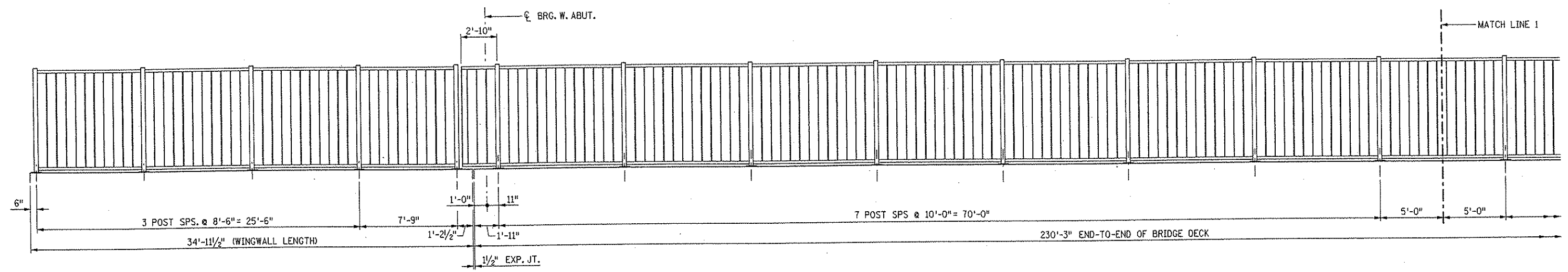
CONCRETE RAILING (TYPE F-SW)
WITH BRIDGE SLAB SIDEWALK AND SEPARATE
END POST (WITH CONCRETE OVERLAY)

DES: HLE DR: HLE APPROVED: MJC
CHK: MJC CHK: MJC MODIFIED
SHEET NO. 41 OF 56 SHEETS

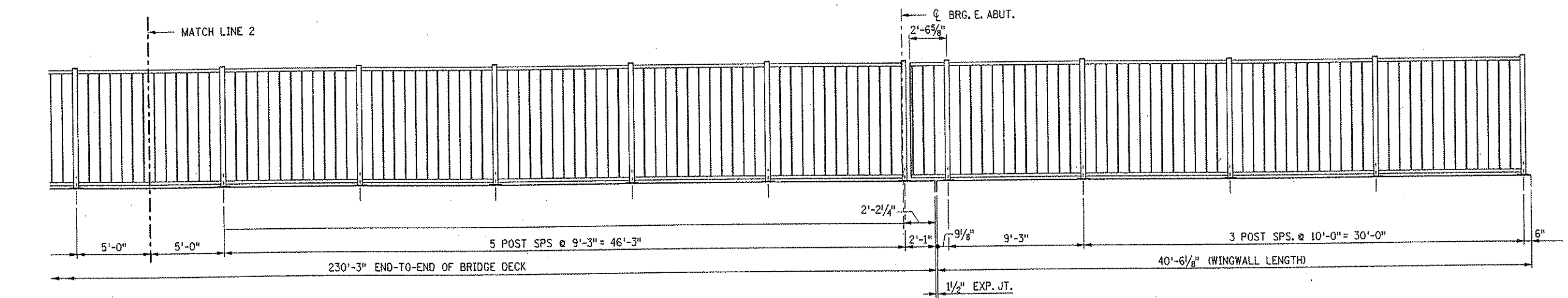
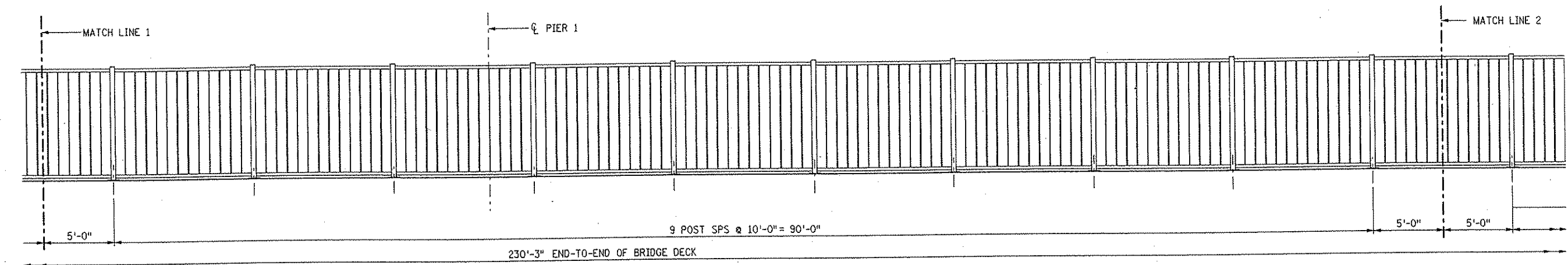
FIG. 5-397.121

BRIDGE NO. 02566

DATE: 01/22/2002 TIME: 01:55:06 PM
 FILENAME: k:\a\anokacy\17490\hwy-brdg\part4\brldge\super\vr114.dgn



WEST END



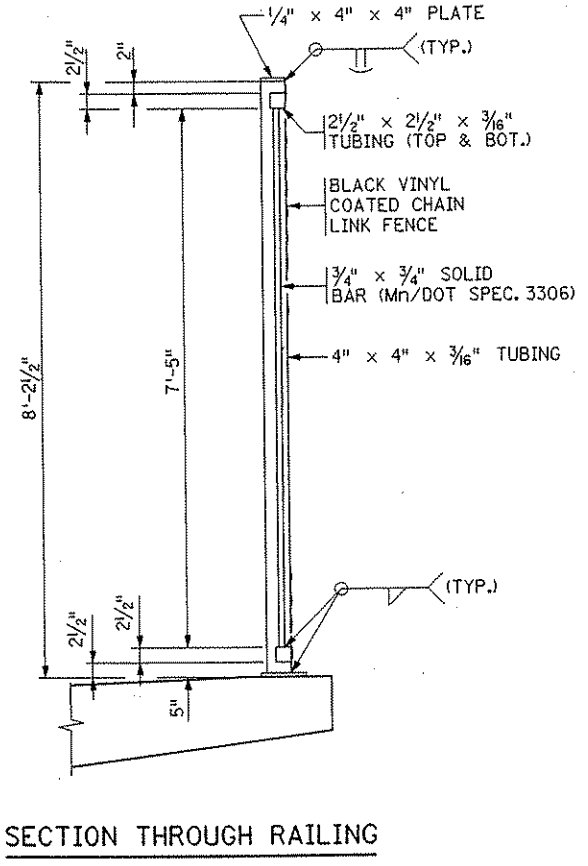
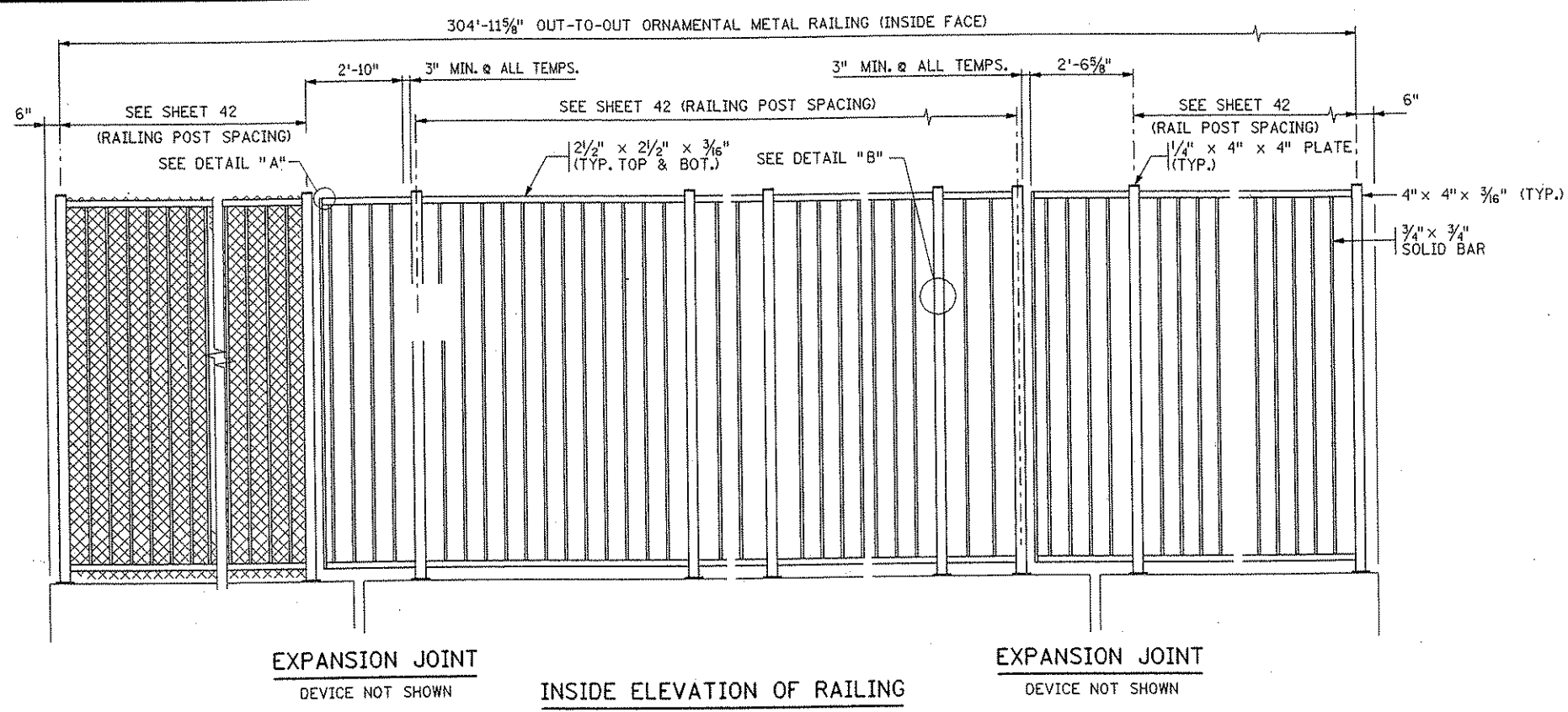
EAST END

NOTES:
 FOR ADDITIONAL DETAILS SEE SHEET 43.

ELEVATION VIEWS FOR STRUCTURAL TUBE RAILING WITH FENCE (DESIGN T-3)- STAGE 2
 (FENCE NOT SHOWN - SEE SHEET 43 FOR DETAILS)

NO.	DATE	BY	DESCRIPTION OF REVISIONS	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 SIGNED <i>Gottfried Millner</i> GOTTFRIED MILLNER DATE 01/22/2002 REG. NO. 19879	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY C.S.A.H. 52 OVER I-35W S.P. 02-652-03 S.P. 0280-50	TITLE: ELEVATION FOR STRUCTURAL TUBE RAILING WITH FENCE (DESIGN T-3)	DES: GM	DR: GM	APPROVED	Bridge No. 02566
								CHK: HLE	CHK: HLE	Sheet No. 42 of 56 Sheets	

DATE: 01/22/2002 TIME: 01:55:36 PM
 FILENAME: k:\o-f\anokacy\17490\hwy-brdg\part-4\bridge\standards\mod\fig.5-397.212e.dgn



GENERAL NOTES

LENGTH OF "STRUCTURAL TUBE RAILING WITH FENCE, DESIGN T-3" FOR PAYMENT SHALL BE MEASURED BETWEEN THE CENTERS OF THE END RAILPOSTS.

ALL STRUCTURAL STEEL TUBING IN THE RAIL SHALL BE A500, GRADE B AND A513, GRADE 2.

MATERIAL FOR CLOSURE PLATES AND BASE PLATES SHALL CONFORM TO Mn/DOT SPEC. 3306.

FOR RAIL ANCHORAGE REQUIREMENTS SEE SPECIAL PROVISIONS.

VENT HOLES SHALL BE DRILLED IN THE RAIL POST BASE AND THE RAIL TUBES AS NECESSARY TO FACILITATE GALVANIZING.

RAIL POSTS AND PICKETS SHALL BE NORMAL TO GRADE. HORIZONTAL RAILS SHALL BE CAMBERED/CURVED WHERE APPLICABLE AND PARALLEL TO THE EDGE OF SIDEWALK PROFILE.

FOR RAIL COATING SEE SPECIAL PROVISIONS.

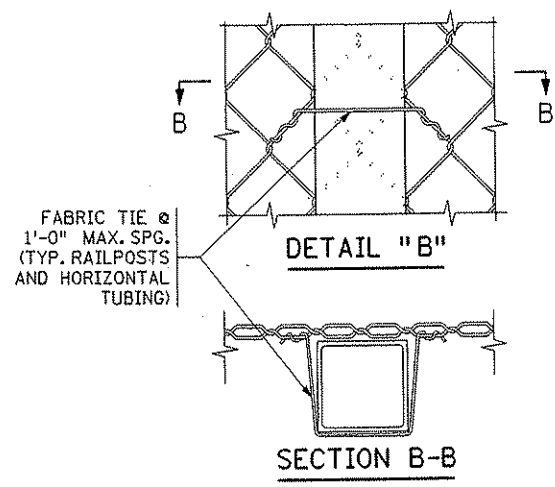
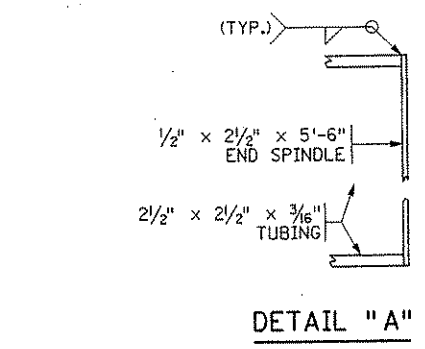
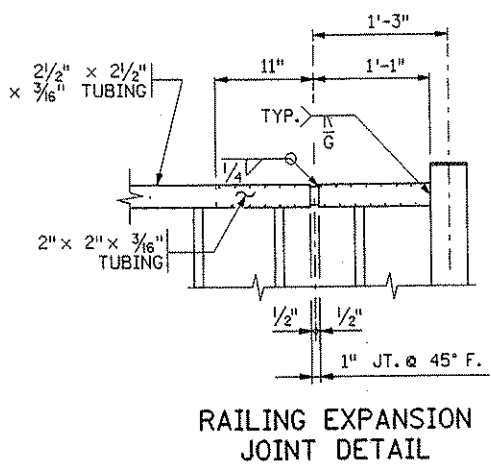
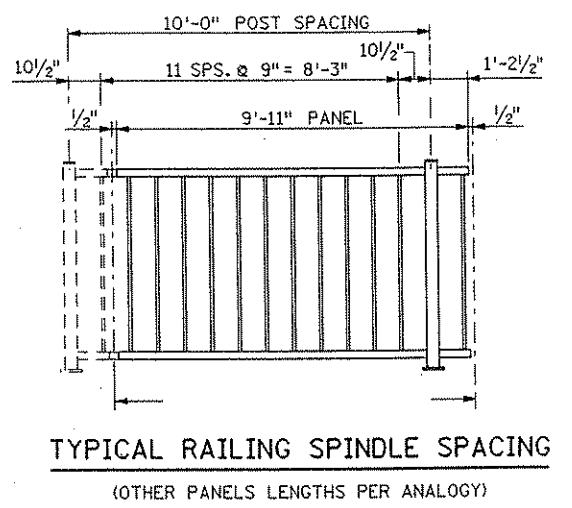
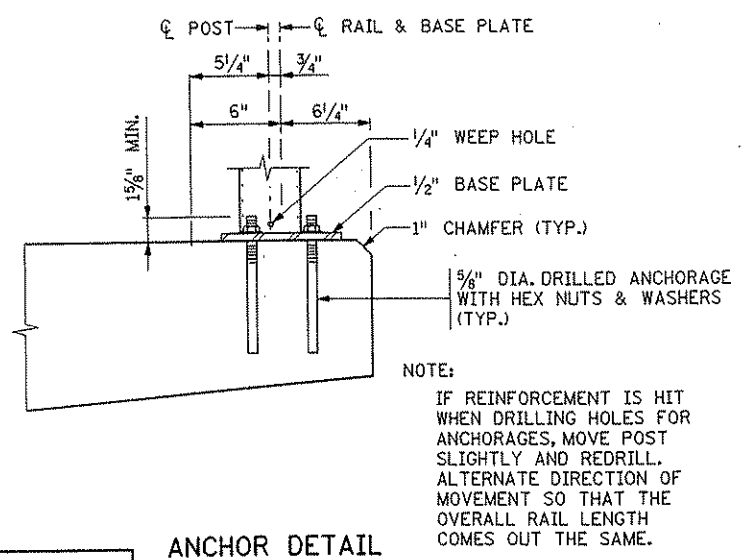
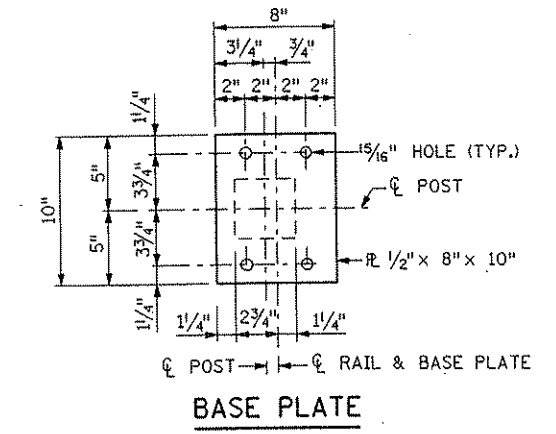
RAILING EXPANSION JOINTS SHALL BE PLACED IN BOTH RAILS AND IN EACH PANEL.

THE RAILING, BASE PLATES, AND PROTRUDING PORTIONS OF BOLTS, NUTS AND WASHERS SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

THE CHAIN LINK FABRIC AND FABRIC TIES SHALL BE VINYL COATED AND CONFORM TO Mn/DOT SPEC. 3376. THE COLOR SHALL BE BLACK.

RAILING SHALL BE GROUNDED WITH 5/8" DIA. COPPER ROD AS PER Mn/DOT SPEC. 2557.

WIRE TIES SHALL BE 9 GAGE GALVANIZED STEEL OR 0.179" MIN. ALUMINUM ALLOY CONFORMING TO A.S.T.M. B211, ALLOY 1100-H18. USE 12 1/2 GAGE GALVANIZED HOG RINGS FOR WIRE TIES.



REVISION: 10-24-00
 APPROVED: _____
 STATE BRIDGE ENGINEER

ANCHOR DETAIL

CERTIFIED BY Gottfried Millner 01/22/2002
 LICENSED PROFESSIONAL ENGINEER DATE
 NAME: GOTTFRIED MILLNER LIC. NO. 19879

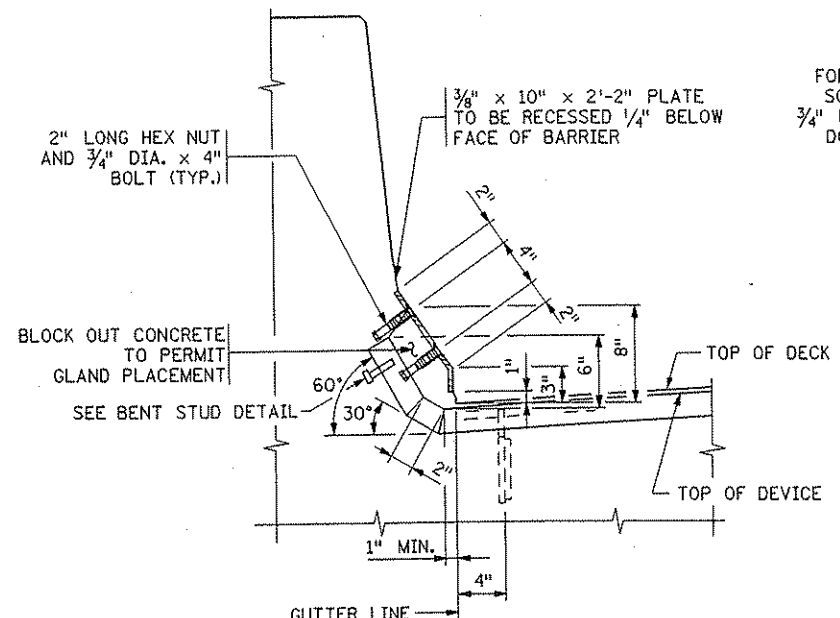
STRUCTURAL TUBE RAILING WITH FENCE (DESIGN T-3)

DES: GM DR: GM
 CHK: HLE CHK: HLE
 SHEET NO. 43 OF 56 SHEETS

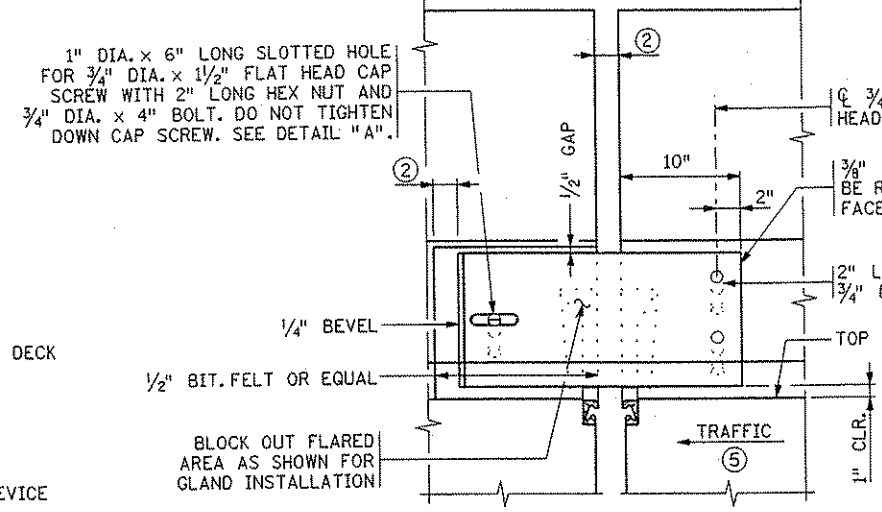
APPROVED: _____
 MODIFIED

BRIDGE NO. 02566

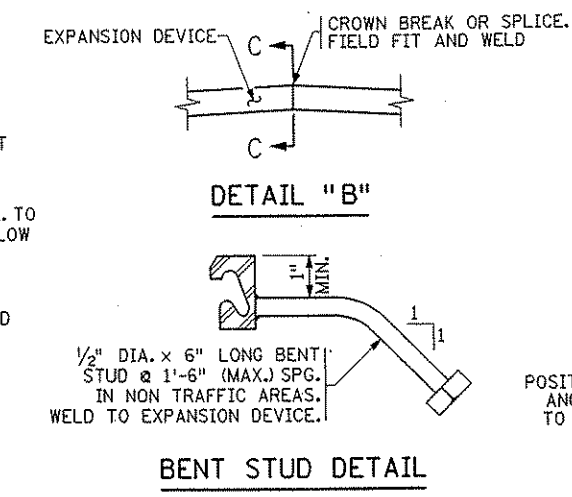
MODIFIED
 FIG. 5-397.212



SECTION THROUGH RAILING
TYPE F RAILING

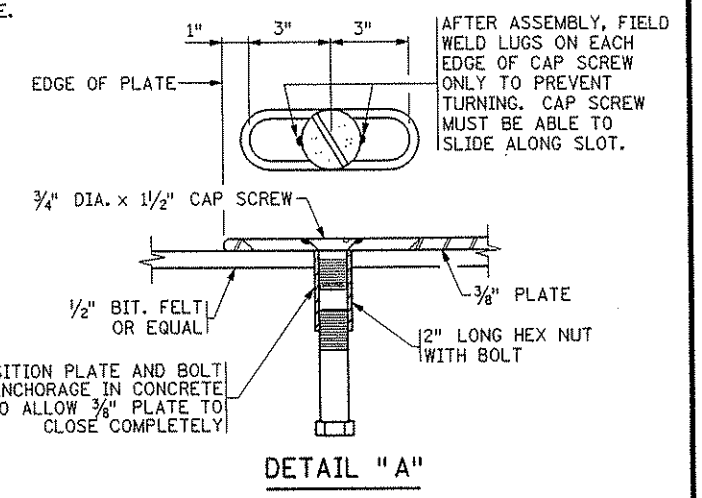


RAILING ELEVATION

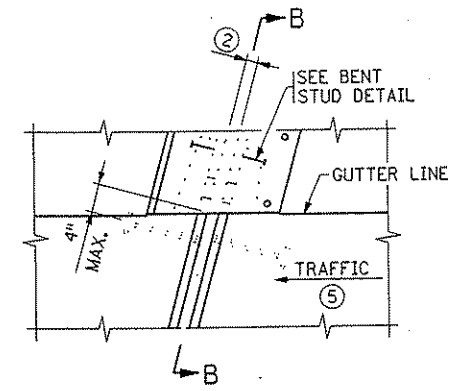


DETAIL "B"

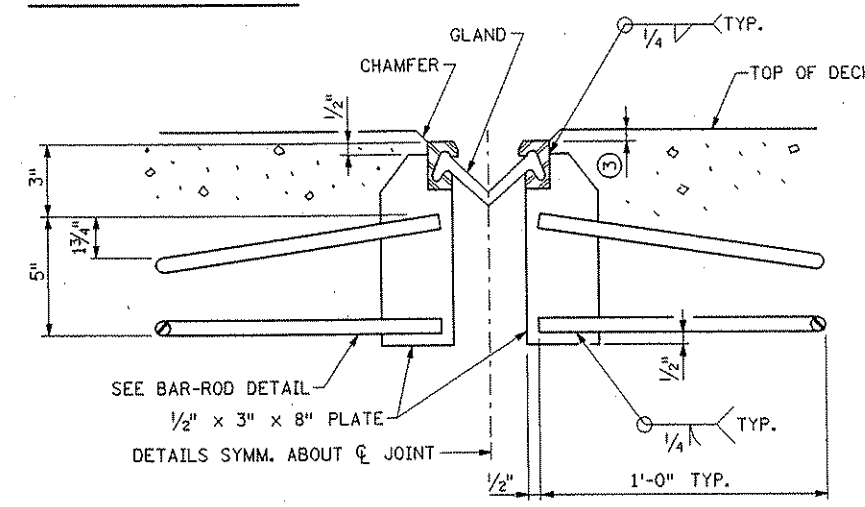
BENT STUD DETAIL



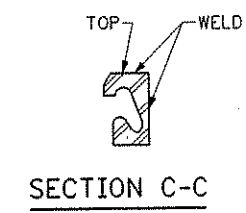
DETAIL "A"



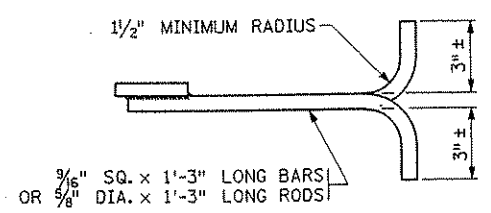
PLAN VIEW @ EXPANSION DEVICE
MEDIAN OR SIDEWALK ALTERNATE



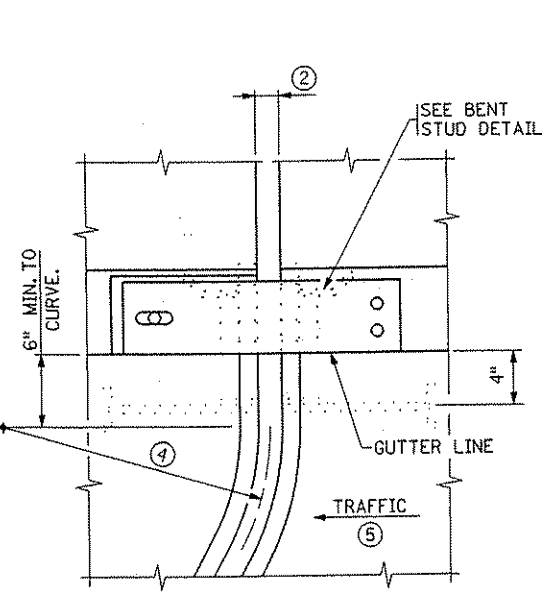
SECTION A-A



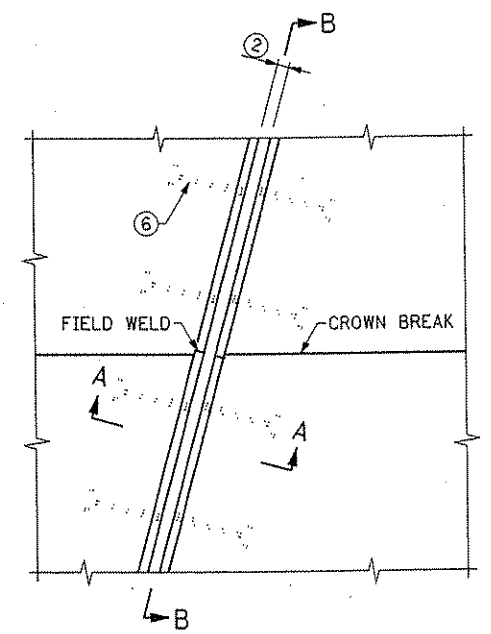
SECTION C-C



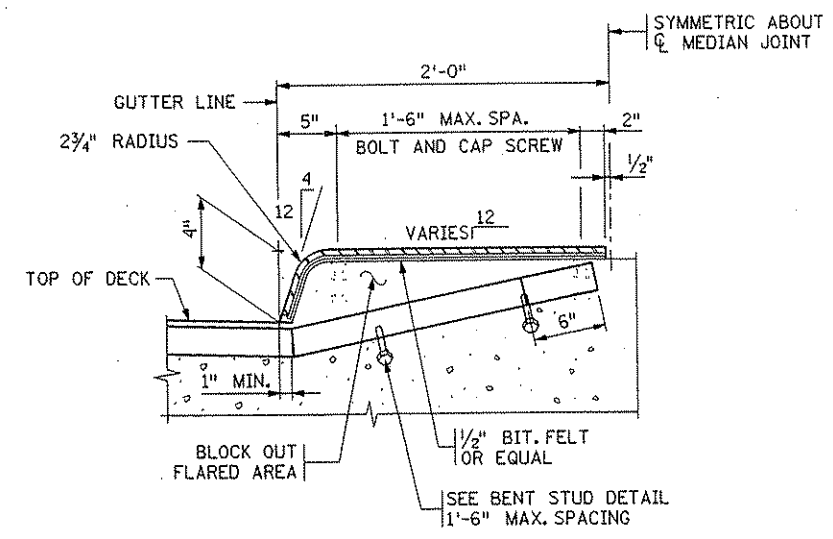
BAR-ROD DETAIL



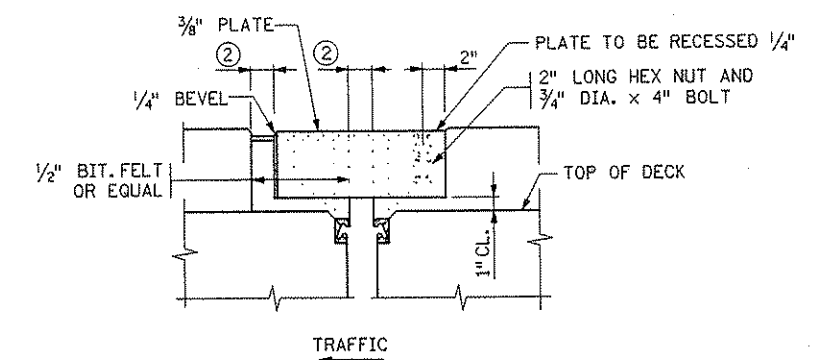
PLAN VIEW @ EXPANSION DEVICE
WITH CURVED DEVICE ALTERNATE



PLAN VIEW @ EXPANSION DEVICE



MEDIAN SECTION



MEDIAN ELEVATION

GENERAL NOTES

- GALVANIZE STRUCTURAL STEEL AFTER FABRICATION AS PER MnDOT SPEC. 3394. GALVANIZE FASTENERS AS PER MnDOT SPEC. 3392.
- JOINTS IN EXTRUSION SHALL BE LOCATED AT BREAKS IN TRANSVERSE PROFILE AND AS OTHERWISE REQUIRED. JOINTS SHALL BE CLOSE FIT AND WELDED. REPAIR AFTER WELDING AS PER MnDOT SPEC. 2471.3L.
- STRUCTURAL STEEL SHALL COMPLY WITH MnDOT SPEC. 3306 OR MnDOT SPEC. 3309.
- EXPANSION DEVICE SHALL BE STRAIGHTENED TO A TOLERANCE OF 1/8" IN 10 FT.
- CAP SCREWS SHALL BE COUNTERSUNK 1/16" BELOW TOP OF PLATE.
- LENGTH OF PAYMENT FOR DEVICE IS FROM OUT TO OUT OF EXTRUSION ALONG CENTERLINE OF JOINT.
- ① DIMENSIONS ARE ALONG CENTERLINE OF JOINT.
 - ② 1/2 AT 90°
 - ③ 1/8" (1/4" MAX.) 1/2" (3/8" MAX.) WHEN SNOWPLOW FINGERS ARE USED. SNOWPLOW FINGERS ARE REQUIRED FOR SKEWS OVER 15° AND LESS THAN 50°.
 - ④ SEE SUPERSTRUCTURE DETAILS FOR RADIUS.
 - ⑤ SEE SHEET NO. 1 FOR DIRECTION OF TRAFFIC.
 - ⑥ PLACE BAR-ROD NORMAL TO JOINT ON NEW BRIDGES AND JOINT REPLACEMENTS. ON JOINT REPLACEMENTS WHEN SKEW IS OVER 15° AND LESS THAN 50° BEND RODS PARALLEL TO CL ROADWAY.

FIG. 5-397.627

REVISION: 05-01-00
APPROVED: NOVEMBER 6, 1995
D. Smith
STATE BRIDGE ENGINEER

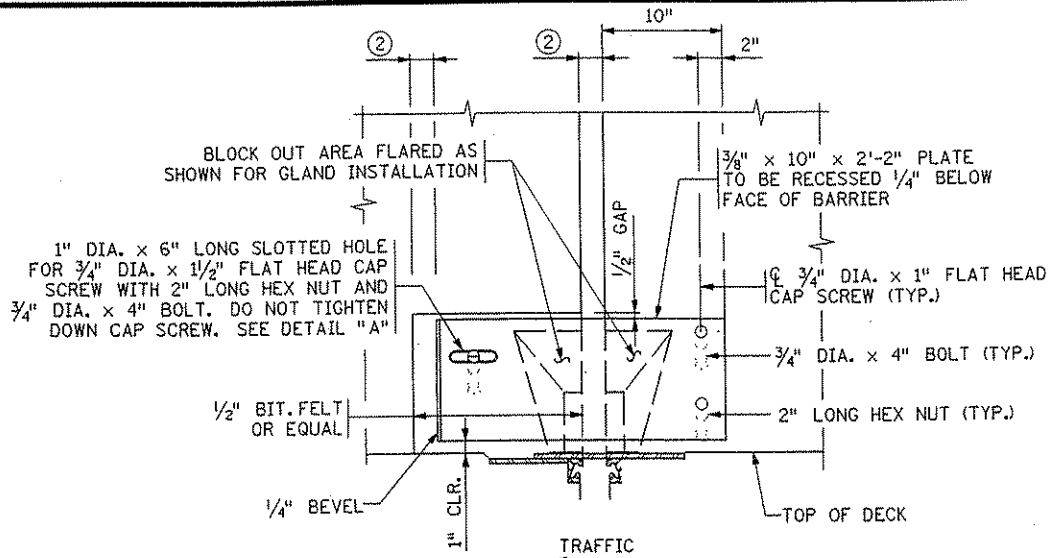
CERTIFIED BY *Gottfried Millner* 01/22/2002
LICENSED PROFESSIONAL ENGINEER DATE
NAME: GOTTFRIED MILLNER LIC. NO. 19879

WATERPROOF EXPANSION DEVICE
WITH TYPE F BARRIER

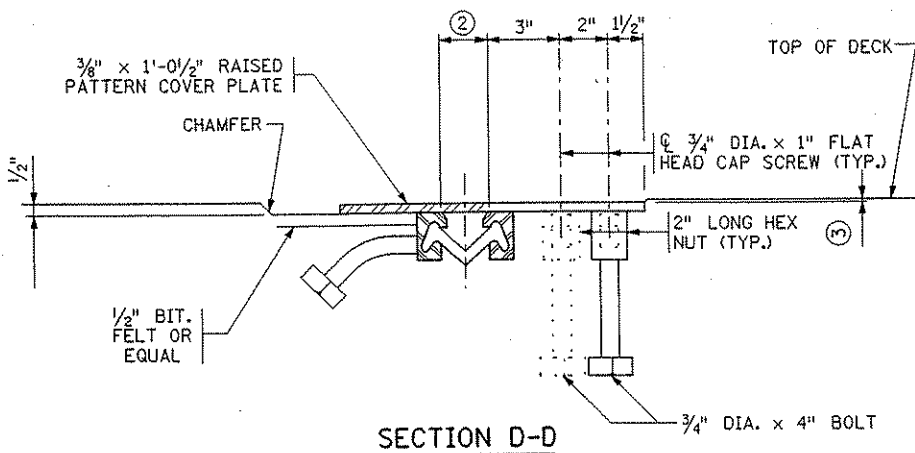
DES: HLE DR: HLE
CHK: MJC CHK: MJC
SHEET NO. 44 OF 56 SHEETS

APPROVED:
MODIFIED
BRIDGE NO. 02566

DATE: 01/22/2002 TIME: 01:55:28 PM
FILENAME: R:\p\com\kch\17\190N\hwy-brdg\part-A\bridge-standards\exp\pf.dgn

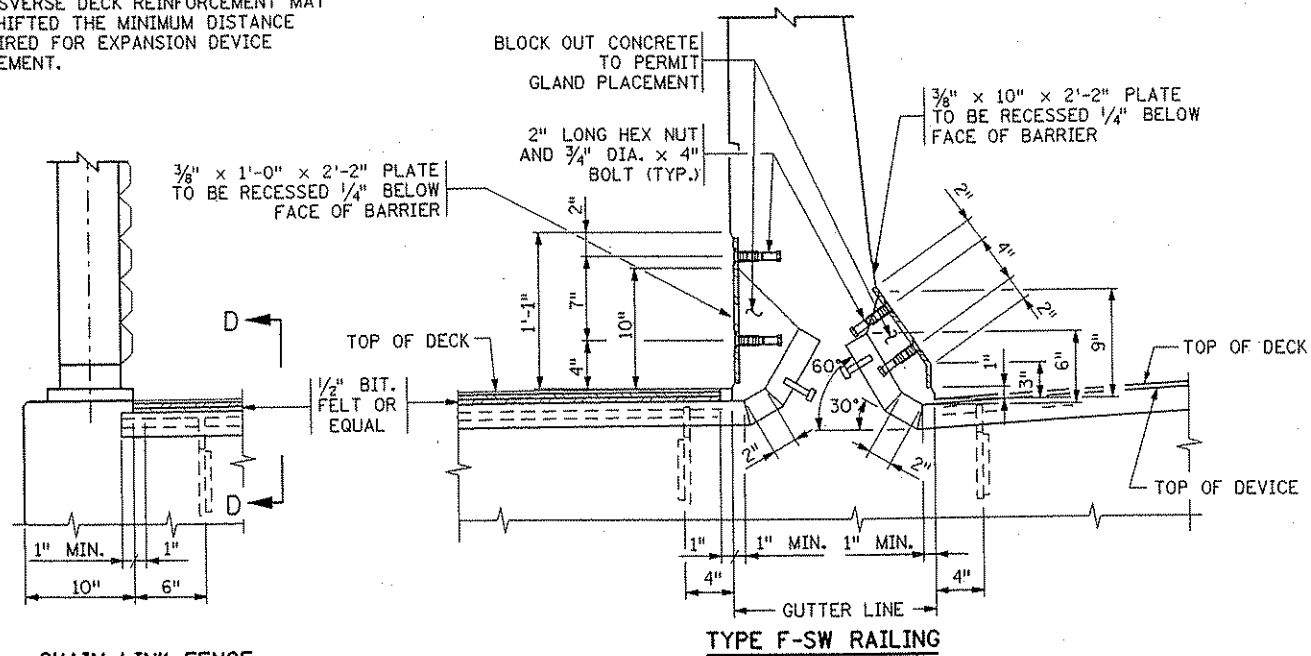


INSIDE ELEVATION
(BACK OF TYPE F-SW RAIL)



SECTION D-D

NOTE:
TRANSVERSE DECK REINFORCEMENT MAY
BE SHIFTED THE MINIMUM DISTANCE
REQUIRED FOR EXPANSION DEVICE
PLACEMENT.



CHAIN LINK FENCE

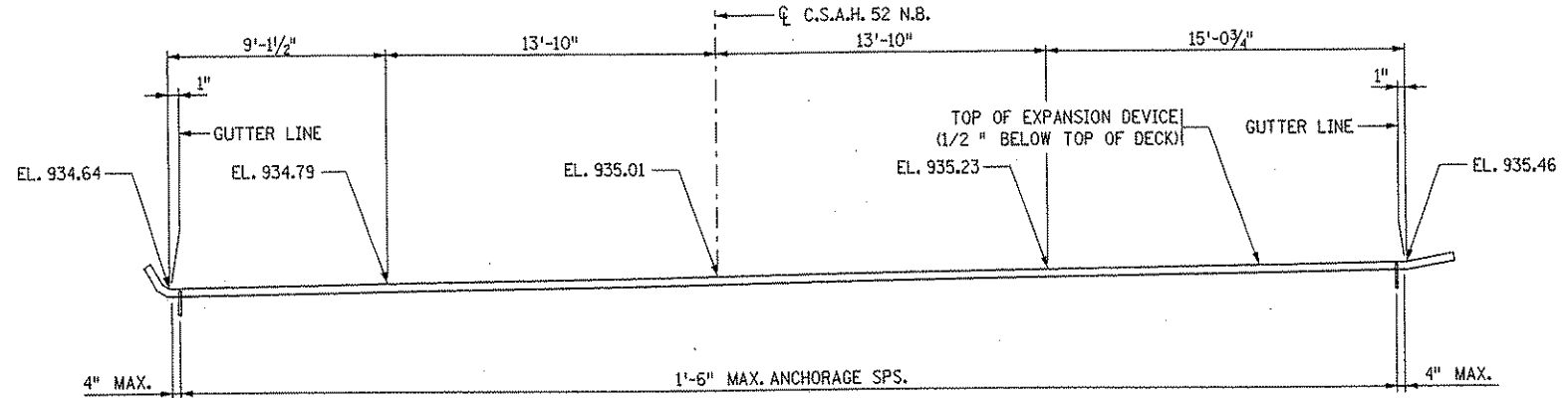
TYPE F-SW RAILING

SECTION THROUGH RAILINGS - INTEGRAL SIDEWALK

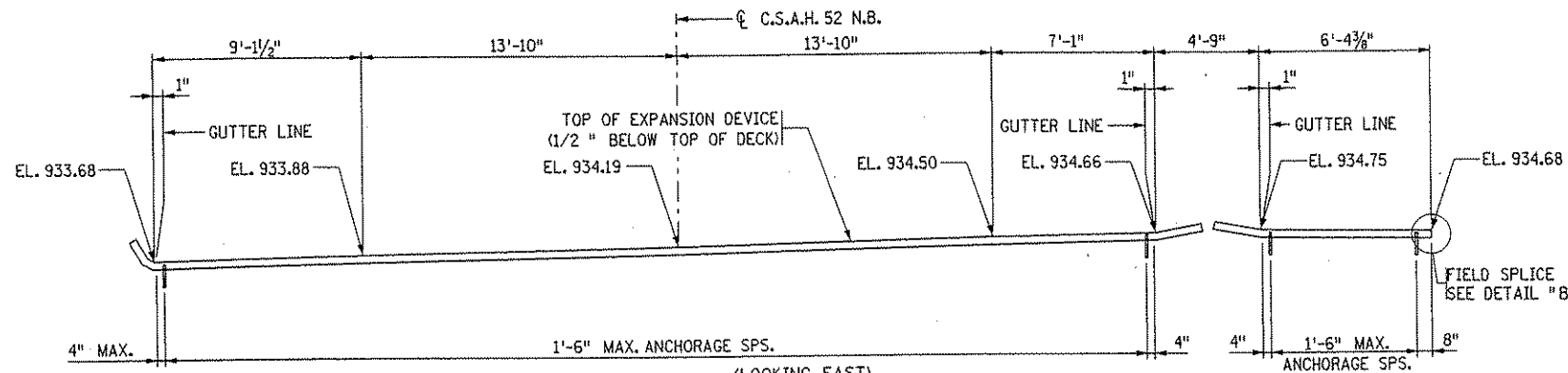
GENERAL NOTES

SEE DETAIL 5-397.627 FOR
ADDITIONAL DETAILS AND NOTES.

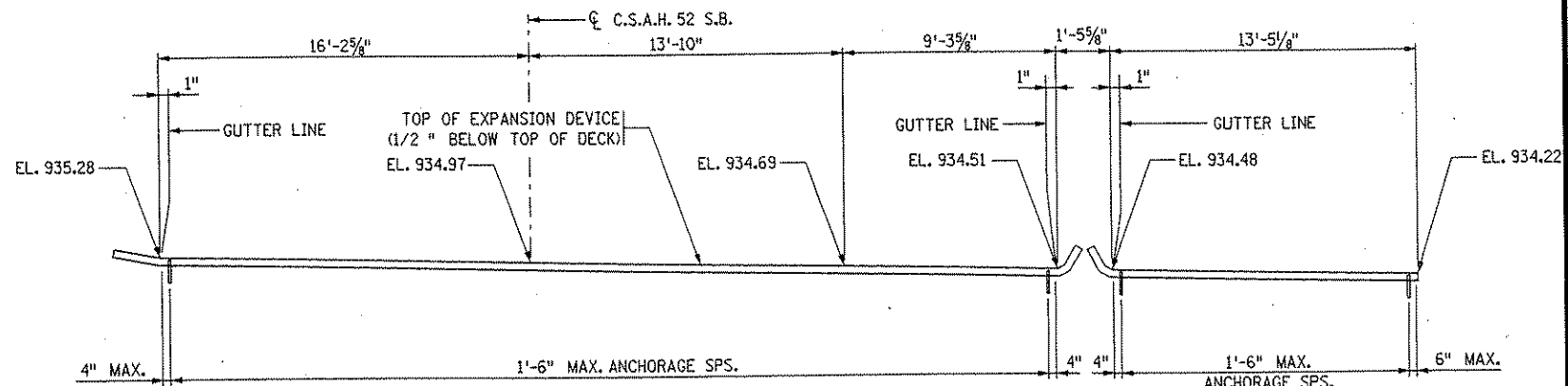
ELEVATIONS SHOWN AT ENDS OF
EXPANSION JOINTS APPLY TO THE
BREAKPOINT LOCATED 1" BEYOND
THE GUTTER LINE. LENGTHS ARE
MEASURED ALONG THE CENTERLINE
OF THE EXPANSION JOINT.



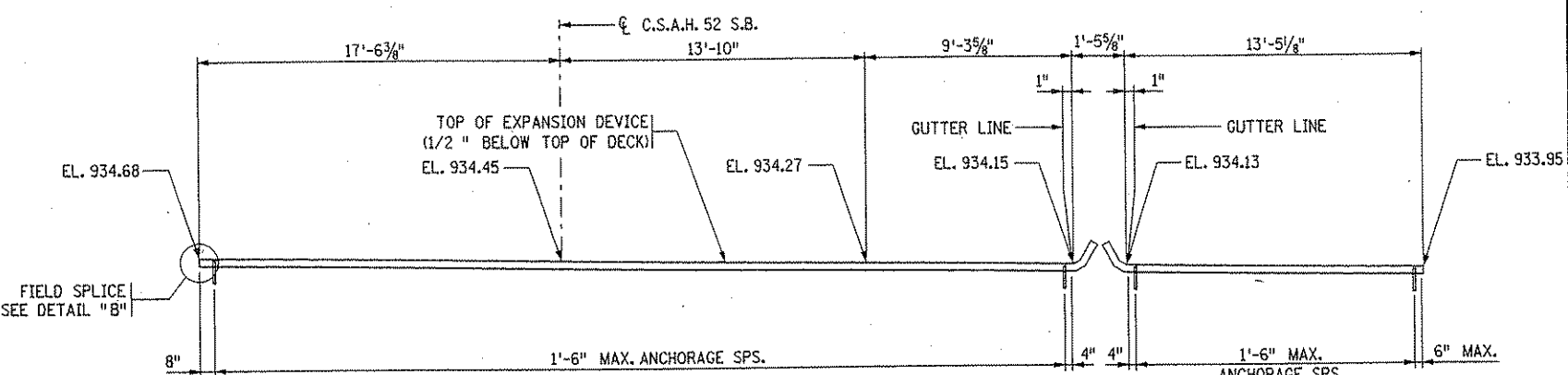
EXPANSION JOINT WEST ABUTMENT - STAGE 1



EXPANSION JOINT EAST ABUTMENT - STAGE 1



EXPANSION JOINT WEST ABUTMENT - STAGE 2



EXPANSION JOINT EAST ABUTMENT - STAGE 2

REVISION: 09-29-00

APPROVED: NOVEMBER 6, 1995

D. Smith
STATE BRIDGE ENGINEER

CERTIFIED BY *Gottfried Millner*
LICENSED PROFESSIONAL ENGINEER
NAME: GOTTFRIED MILLNER LIC. NO. 19879

DATE: 01/22/2002
PROJECT: WATERPROOF EXPANSION
DEVICE
WITH SIDEWALK

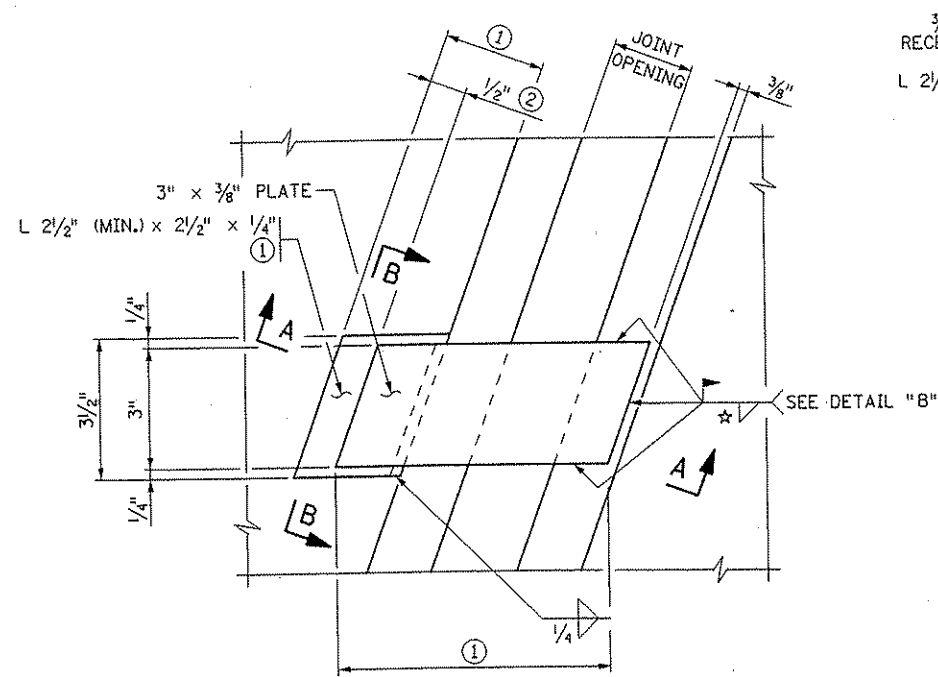
DES: HLE
CHK: MJC
DR: HLE
CHK: MJC
APPROVED:
MODIFIED
SHEET NO. 45 OF 56 SHEETS

BRIDGE NO.
02566

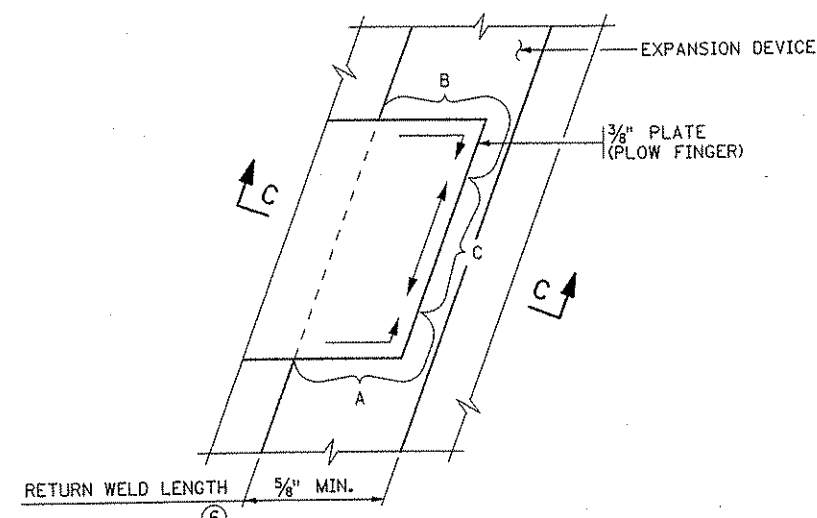
FIG. 5-397.630

DATE: 01/22/2002 TIME: 01:55:31 PM
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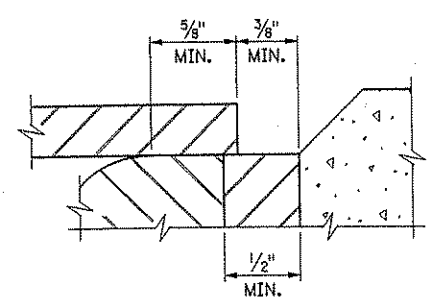
DATE: 01/22/2002 TIME: 01:55:34 PM
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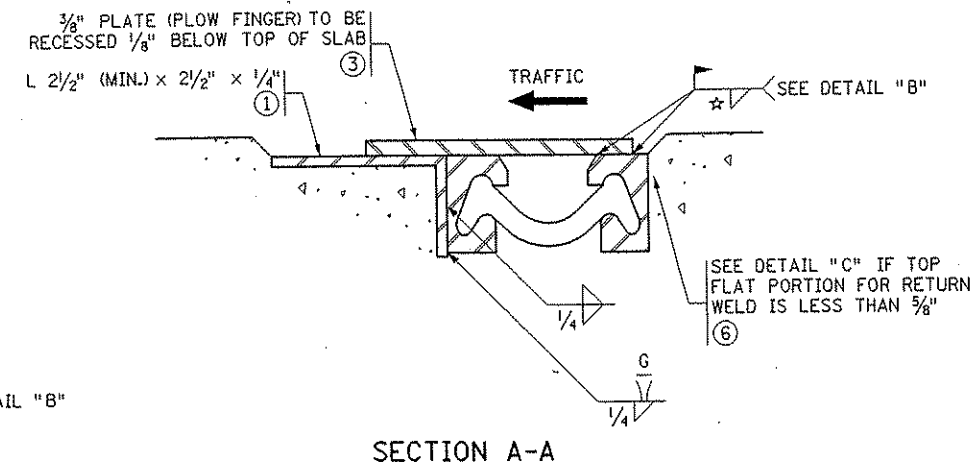
DETAIL "A"



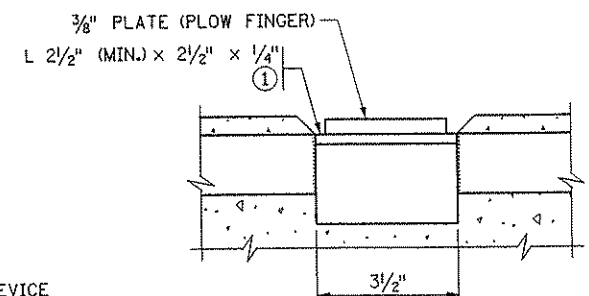
DETAIL "B"



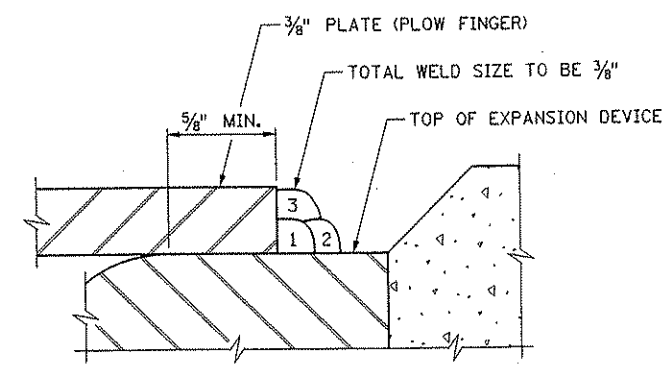
DETAIL "C"



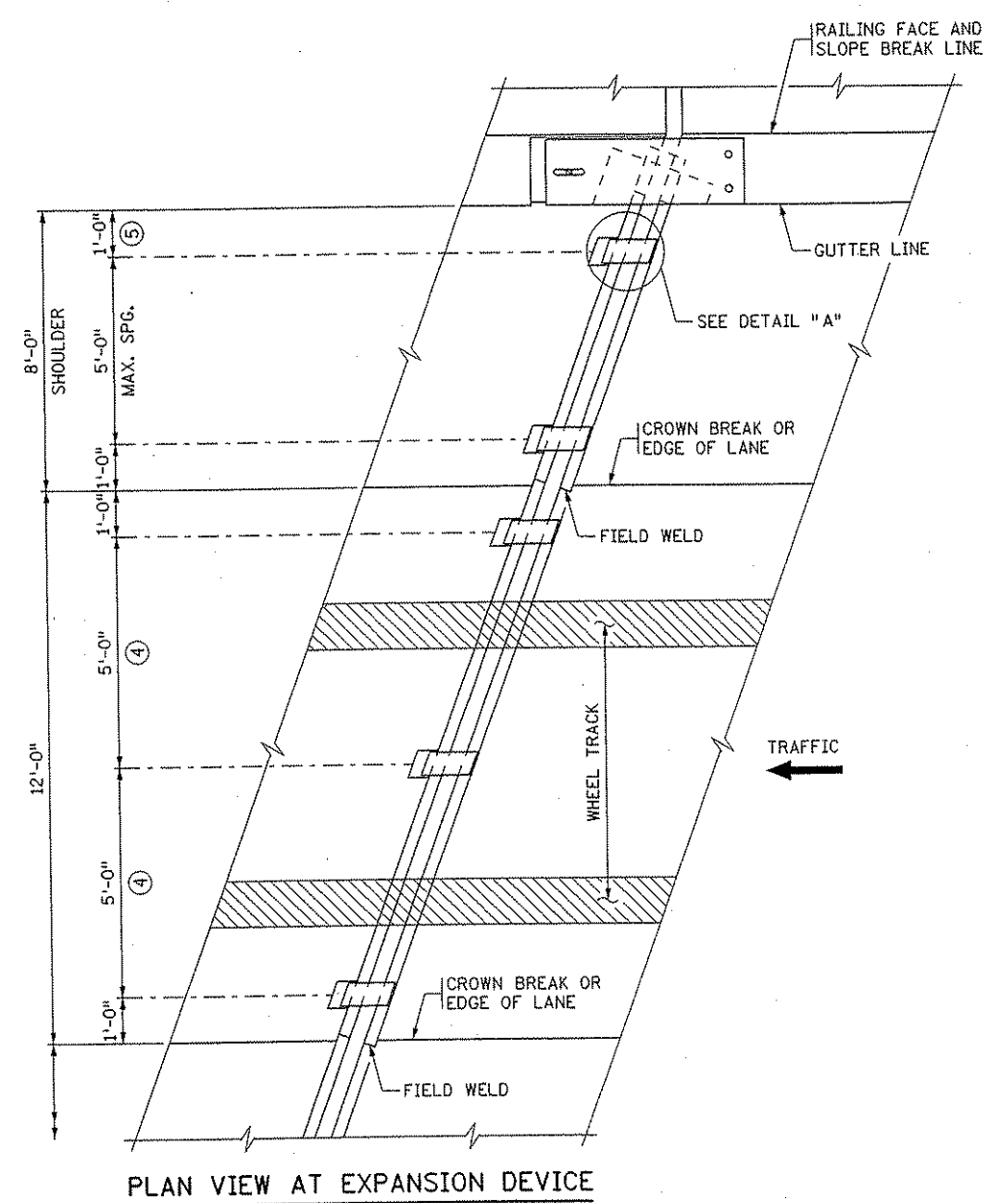
SECTION A-A



SECTION B-B



SECTION C-C



PLAN VIEW AT EXPANSION DEVICE

☆ WELDING PROCEDURE FOR PLOW FINGERS

- A. ALL WELDING SHALL BE DONE WITH 1/8" AWS MNDOT SPEC. 5.1 TYPE E7016 OR E7018 ELECTRODE.
- B. WELD PASS 1 IN AREAS A AND B FIRST, THEN AREA C, FOLLOW WITH PASSES 2 AND 3 IN SAME ORDER AS SHOWN IN DETAIL "B".
- C. REMOVE ALL WELD SLAG AND OTHER RESIDUE BETWEEN PASSES.
- D. ALLOW AT LEAST 5 MINUTES COOLING TIME BETWEEN EACH OF NINE WELD PASSES.
- E. REPAIR ALL GALVANIZING DAMAGED BY REMOVAL AND WELDING, IN ACCORDANCE WITH MNDOT SPEC. 2471.3L

GENERAL NOTES

- DO NOT GALVANIZE PLOW FINGERS.
- ① VARIES WITH SKEW AND EXPANSION OPENING.
- ② MINIMUM IN CLOSED POSITION.
- ③ EVERY SNOW PLOW FINGER SHALL HAVE FULL AND DIRECT BEARING ON THE PLATE THAT IS LOCATED UNDER THE MOVEMENT SIDE OF THE FINGER. NO CLICKING NOISE WILL BE ALLOWED.
- ④ MODIFY IF LANE WIDTH DIFFERS FROM 12 FT.
- ⑤ OMIT LAST PLOW FINGER ON DEVICE WITH CURVED END.
- ⑥ ADD BACKING BAR AS REQUIRED: 1/2" MIN. THICKNESS, 1/2" DEEP.

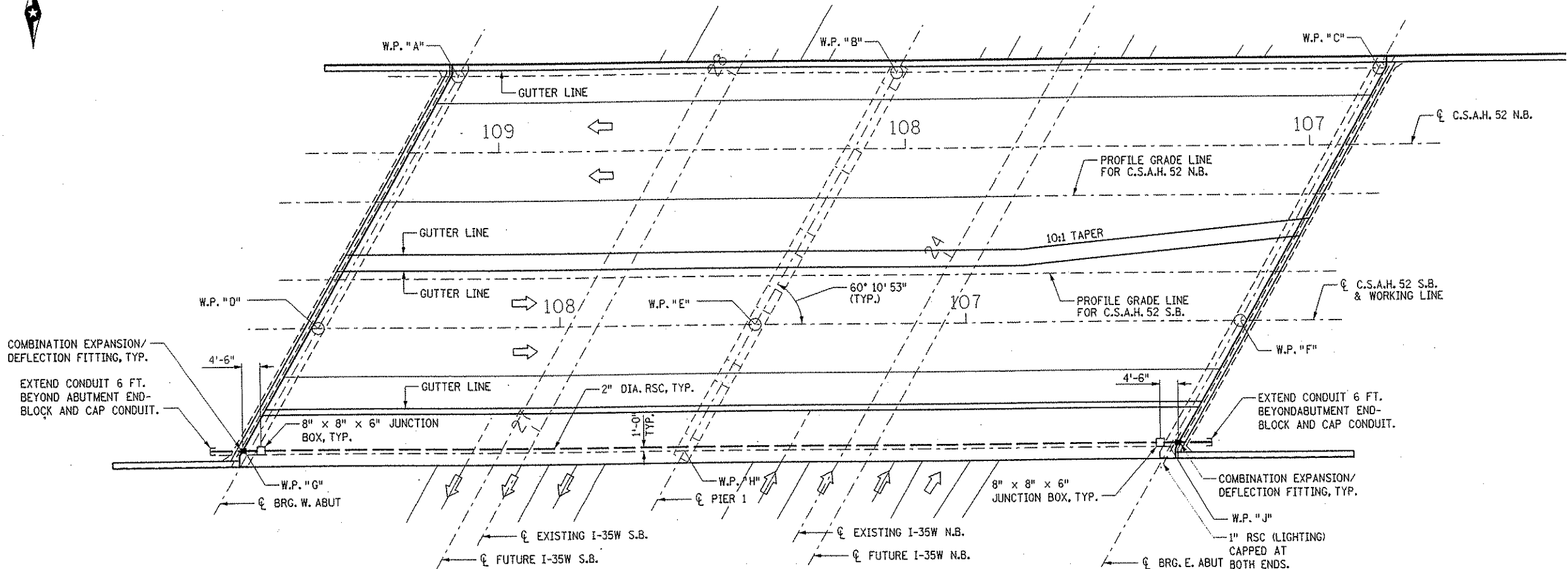
REVISION: 05-01-00
 APPROVED: NOVEMBER 6, 1995
 Donald J. Manning
 STATE BRIDGE ENGINEER

CERTIFIED BY *Gottfried Millner* 01/22/2002
 LICENSED PROFESSIONAL ENGINEER DATE
 NAME: GOTTFRIED MILLNER LIC. NO. 19879

WATERPROOF EXPANSION DEVICE
 SNOW PLOW PROTECTION
 (USE ON SKEWS OVER 15° AND LESS THAN 50°)

DES: HLE DR: HLE APPROVED: MODIFIED
 CHK: MJC CHK: MJC
 SHEET NO. 46 OF 56 SHEETS

FIG. 5-397.628
 BRIDGE NO. 02566



PLAN VIEW
 0 15 30
 SCALE

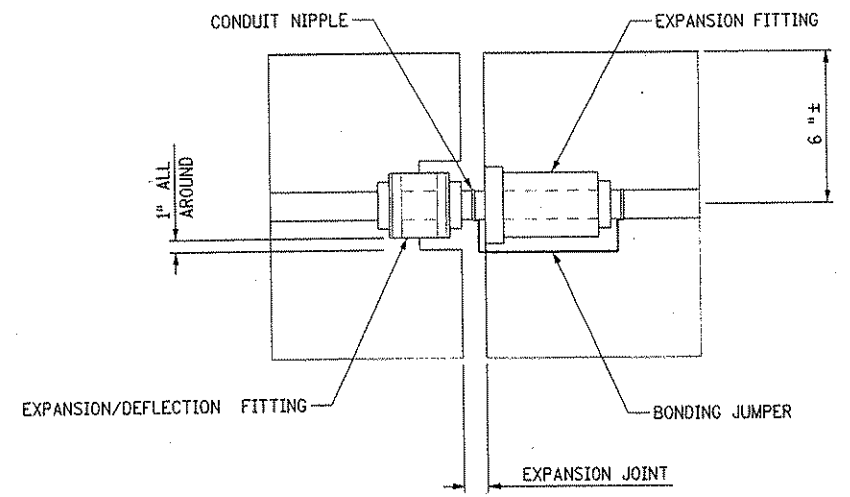
SUMMARY OF QUANTITIES FOR CONDUIT SYSTEM (SIGNALS)	
8" x 8" x 6" CAST IRON JUNCTION BOX	2 UNITS
2" DIA. RIGID STEEL CONDUIT (RSC)	246 LIN. FT.
2" DIA. RIGID STEEL CONDUIT CAPS	2 UNITS
2" DIA. COMBINATION EXPANSION/ DEFLECTION FITTING	2 UNITS

ALL MATERIAL LISTED ABOVE SHALL BE INCLUDED IN PRICE BID FOR ITEM 2545.509 "CONDUIT SYSTEM (SIGNALS)"

SUMMARY OF QUANTITIES FOR CONDUIT SYSTEM (LIGHTING)	
1" DIA. RIGID STEEL CONDUIT (RSC)	30 LIN. FT.
90° ELBOW FOR 1" DIA. RIGID STEEL CONDUIT	1 UNIT
CAPS FOR 1" DIA. RIGID STEEL CONDUIT	2 UNITS

ALL MATERIAL LISTED ABOVE SHALL BE INCLUDED IN PRICE BID FOR ITEM 2545.509 "CONDUIT SYSTEM (LIGHTING)"

FOR FURTHER INFORMATION ON THE LOCATION OF "CONDUIT SYSTEM (LIGHTING)" REFER TO SHEET 16.



COMBINATION EXPANSION/DEFLECTION FITTING

DATE: 01/22/2002 TIME: 01:52:50 PM FILENAME: K:\n\anokacnty\17490N\hwy-brdg\part4\brldge\conduitt.dgn

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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
 SIGNED *Gottfried Millner* GOTTFRIED MILLNER
 DATE 01/22/2002 REG. NO. 19879

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

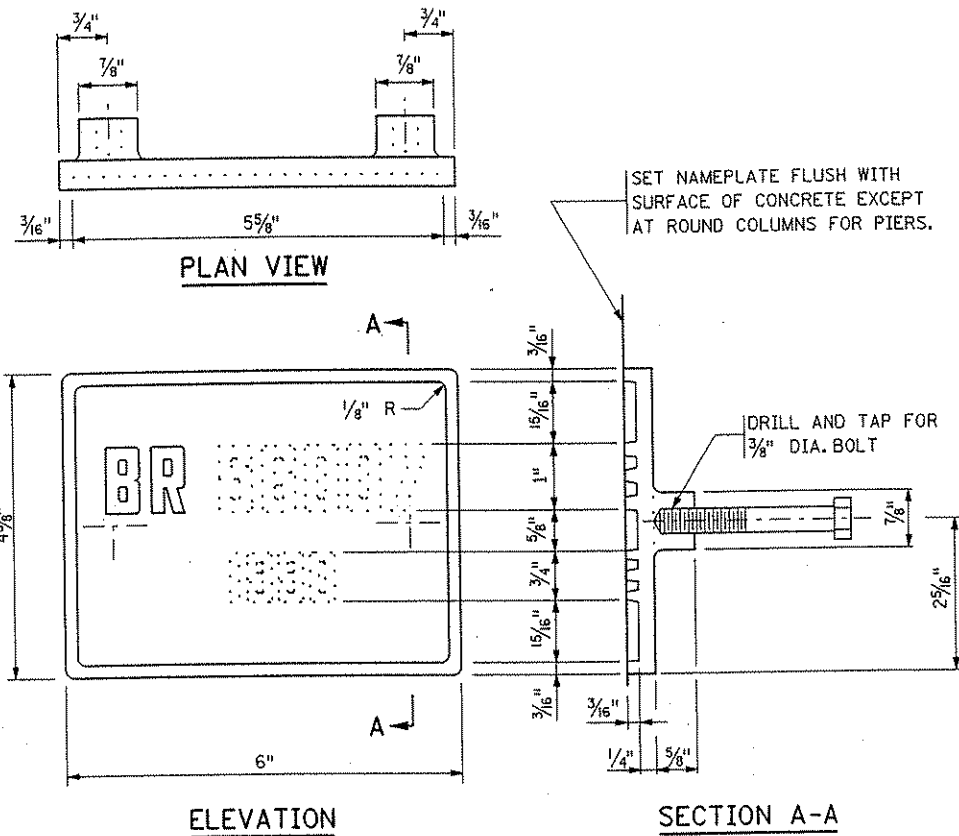
ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE: **CONDUIT SYSTEM (TRAFFIC LIGHTS)**

DES: GM	DR: GM	APPROVED
CHK:	CHK:	
Sheet No. 47 of 56 Sheets		

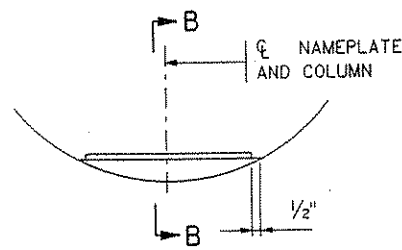
Bridge No. 02566

DATE: 01/22/2002 TIME: 01:55:17 PM
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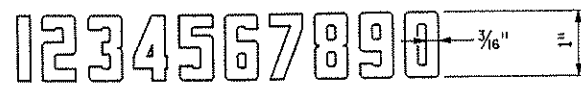


THE DASHED NUMBERS SHOWN ABOVE ARE FOR ILLUSTRATION. DATA TO BE SHOWN ON NAMEPLATE IS AS FOLLOWS:

BRIDGE 02566
 YEAR 2002



NAMEPLATE PLACEMENT
 (ROUND CONCRETE PIER COLUMNS)

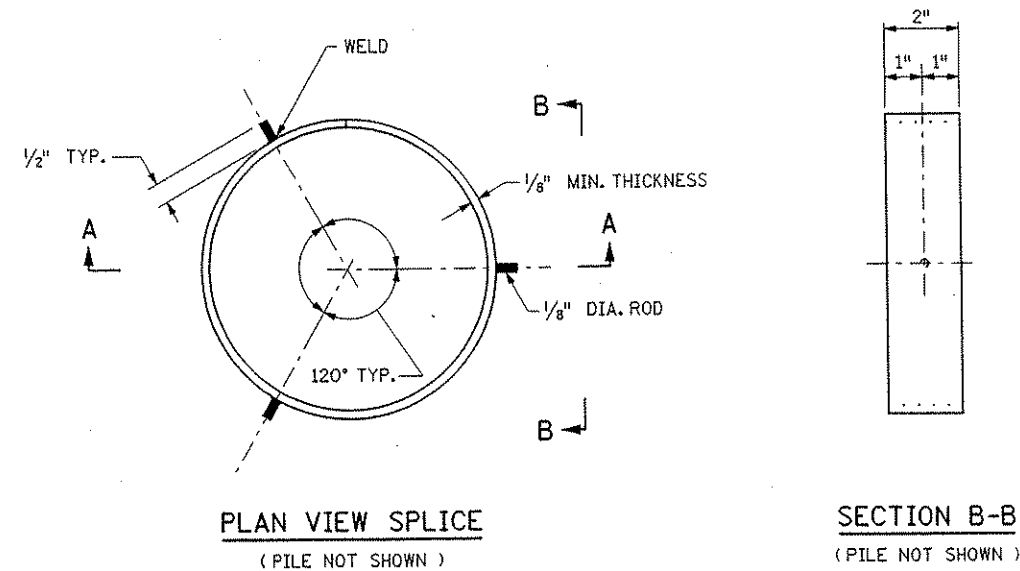
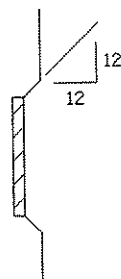


NUMBERS FOR NAMEPLATE

NOTES:

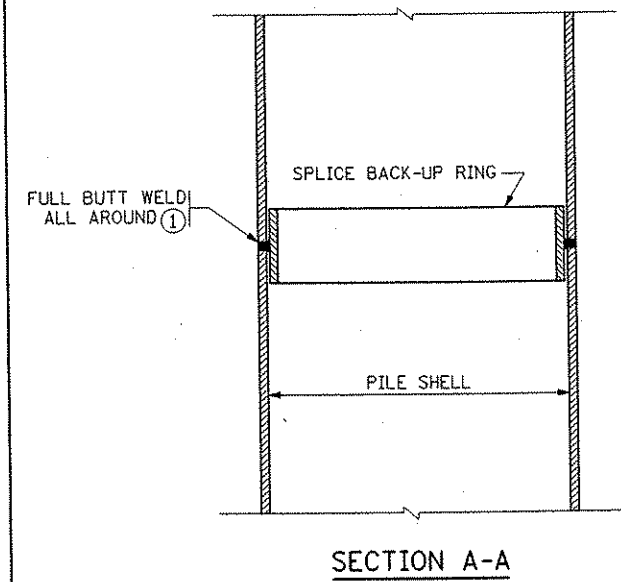
- NO SHOP DRAWING REQUIRED.
- MATERIAL SHALL COMPLY WITH Mn/DOT SPEC. 3327.
- LETTERS AND NUMBERS SHALL CONFORM TO THOSE SHOWN.
- DRAFT ON LETTERS AND NUMBERS SHALL NOT BE MORE THAN 3" IN 12".
- HORIZONTAL SPACING OF LETTERS AND NUMBERS SHALL PRODUCE A BALANCED LAYOUT IN PROPORTION TO SPACING SHOWN.
- TOP SURFACE OF LETTERS, NUMBERS AND FRAMES SHALL BE BURNISHED.
- FURNISH 2 STEEL BOLTS 3/8" DIA. x 3" LONG WITH EACH PLATE.
- ALL DIMENSIONS FOR 3/4" HIGH LETTERS AND NUMBERS SHALL BE IN DIRECT PROPORTION TO THOSE SHOWN FOR THE 1" HIGH LETTERS AND NUMBERS.

SECTION B-B



PLAN VIEW SPLICE
 (PILE NOT SHOWN)

SECTION B-B
 (PILE NOT SHOWN)



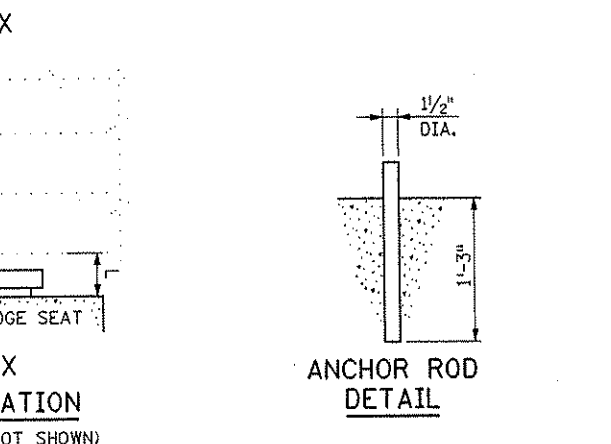
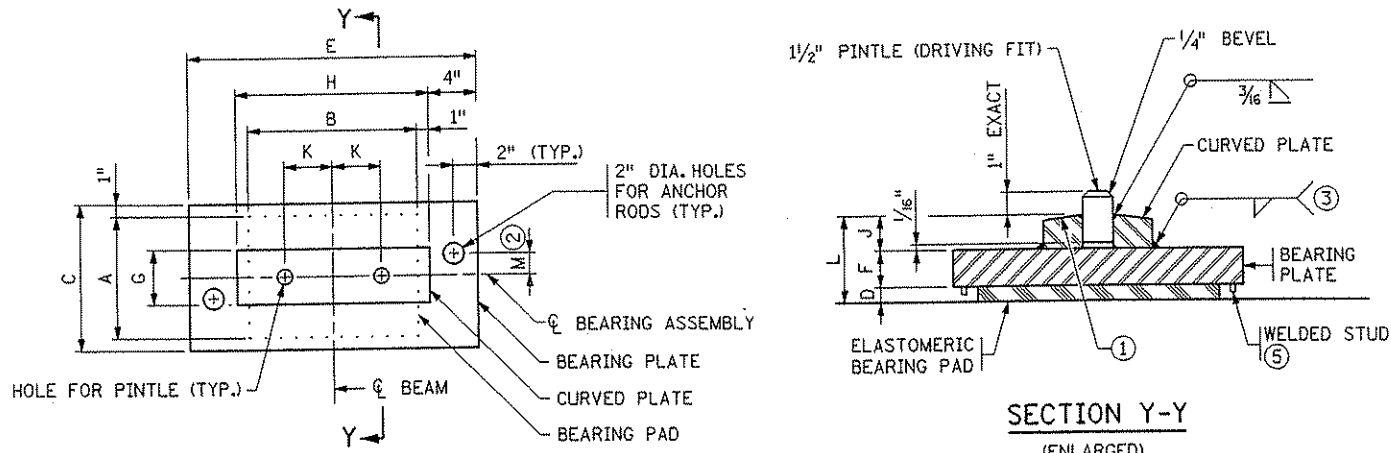
SECTION A-A

NOTES:

- APPROVED COMMERCIAL PILE SPLICE BACK-UP RING MAY BE USED IN LIEU OF THE TYPE DETAILED. BACK-UP RING SHALL HAVE A TIGHT FIT.
- WELDING ELECTRODE SHALL BE A.W.S. TYPE E7016 OR E7018 (LOW-HYDROGEN).
- LOW-HYDROGEN ELECTRODES SHALL BE SUPPLIED IN HERMETICALLY (AIR-TIGHT) SEALED CONTAINERS.
- LOW-HYDROGEN ELECTRODES SHALL BE STORED IN HOLDING OVENS AT A TEMPERATURE OF NOT LESS THAN 250° F.
- LOW-HYDROGEN ELECTRODES SHALL BE PLACED IN A HOLDING OVEN FOR AT LEAST 8 HOURS IF THEY HAVE BEEN EXPOSED TO THE ATMOSPHERE FOR MORE THAN 2 HOURS.
- ELECTRODES WHICH HAVE BECOME WET, SOILED OR DAMAGED SHALL NOT BE USED.
- WELDING SHALL NOT BE DONE WHEN THE AMBIENT TEMPERATURE IS LOWER THAN 0° F. OR WHEN THE PILE IS WET OR EXPOSED TO FALLING RAIN OR SNOW. WHEN THE PILE METAL TEMPERATURE IS BELOW 32° F., THE PILE METAL IN THE AREA OF THE WELD SHALL BE HEATED TO A MINIMUM TEMPERATURE OF 70° F. AND MAINTAINED AT THIS TEMPERATURE DURING WELDING.
- ① FOR PILE SHELL THICKNESSES GREATER THAN 1/2", USE A B-U4g WELD CONFIGURATION.

APPROVED: JULY 30, 1999	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
<i>Donald J. Blumming</i> STATE BRIDGE ENGINEER	BRIDGE NAMEPLATE (FOR NEW BRIDGES)		B101

APPROVED: JULY 30, 1999	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION 12-01-00	DETAIL NO.
<i>Donald J. Blumming</i> STATE BRIDGE ENGINEER	PILE SPLICE (CAST-IN-PLACE CONCRETE PILES)		B201



ASSEMBLY TYPE	LOCATION	BEAM SIZE	BEARING PAD SIZE			SHAPE FACTOR	BEARING PLATE SIZE			CURVED PLATE SIZE			PINTLE DIA.	PINTLE DISTANCE	ANCHOR ROD OFFSET	ASSY. HEIGHT
			A	B	D		C	E	F	G	H	J				
F-1	PIER 1	54M	10"	24"	1/2"	7.1	12"	34"	1"	4 1/2"	26"	1 1/4"	1 1/2"	8"	0"	2.75"

NOTES:

ELASTOMERIC MATERIALS & PAD CONSTRUCTION SHALL COMPLY WITH Mn/DOT SPEC. 3741.

ALL STEEL PLATES SHALL COMPLY WITH Mn/DOT SPEC. 3306.

ANCHOR RODS SHALL COMPLY WITH Mn/DOT SPEC. 3306. GALVANIZE PER Mn/DOT SPEC. 3394.

PINTLES SHALL COMPLY WITH Mn/DOT SPEC. 3309.

GALVANIZE STRUCTURAL STEEL BEARING ASSEMBLY AFTER FABRICATION PER Mn/DOT SPEC. 3394, EXCEPT AS NOTED.

PAYMENT FOR BEARING ASSEMBLY SHALL INCLUDE ALL MATERIAL ON THIS DETAIL.

(1) THE RADIUS OF THE CURVED PLATE SHALL BE 1'-4" MINIMUM AND 2'-0" MAXIMUM. FINISH TO 250 MICRO. THE FINISHED THICKNESS OF THE PLATE MAY BE 1/16" LESS THAN SHOWN.

(2) OFFSET MAY BE OPPOSITE OF THAT SHOWN. SEE ANCHOR ROD LAYOUT FOR DETAILS.

(3) WELDING PER Mn/DOT SPEC. 2471.

(4) SEE DETAIL B303 FOR PINTLE DISTANCE K.

(5) 5/16" DIA. x 3/8" KNOCK-OFF WELD STUDS INSTALLED ON BEARING PLATE AROUND PERIMETER OF BEARING PAD. CENTERLINE STUD TO EDGE OF PAD DIMENSION = 1/2", MAX. STUD SPACING = 4".

DESIGN DATA:
 MAXIMUM HORIZONTAL LOAD IS 70 KIPS FOR 1/2" PINTLES.

APPROVED: JULY 30, 1999

STATE OF MINNESOTA
 DEPARTMENT OF TRANSPORTATION

REVISION

DETAIL NO. B310

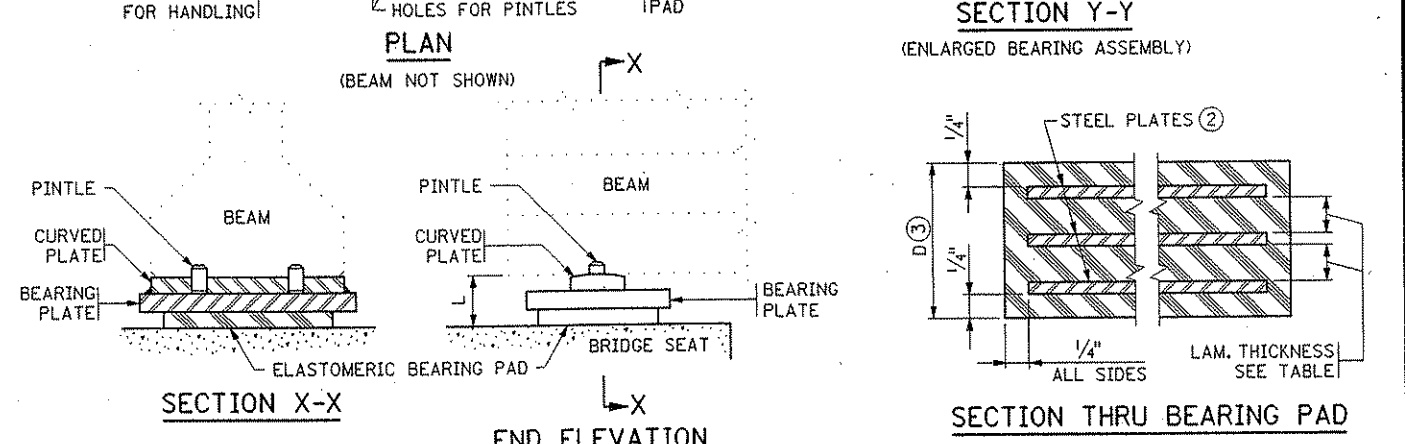
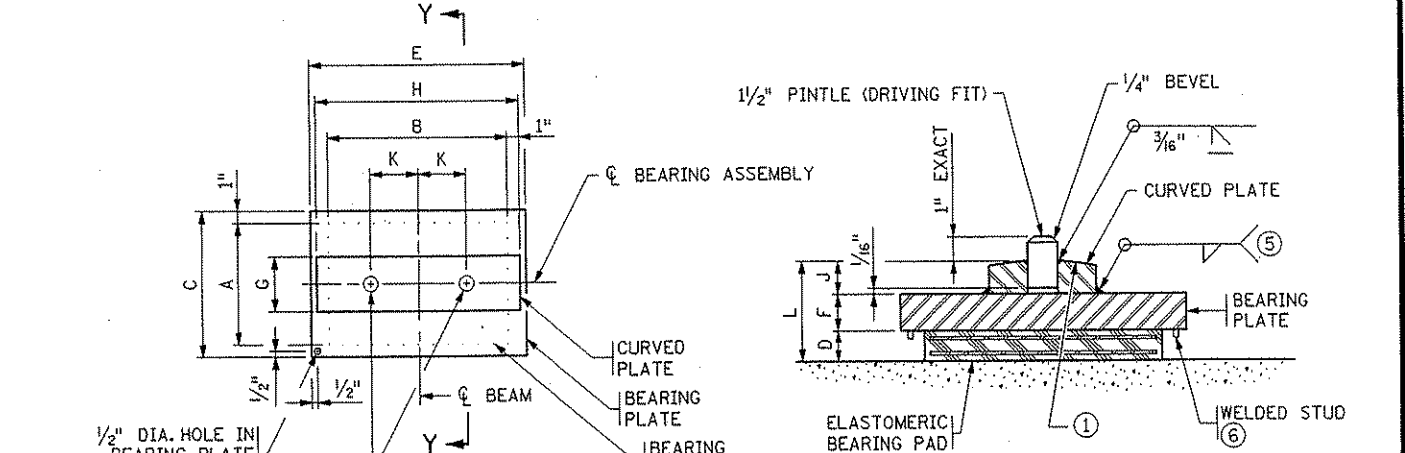
Donald J. Planning
 STATE BRIDGE ENGINEER

CURVED PLATE BEARING ASSEMBLY
 (PRESTRESSED CONCRETE BEAMS)
 (FIXED)

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

SIGNED *Gottfried Millner* GOTTFRIED MILLNER
 DATE 01/22/2002 REG. NO. 19879

TKDA
 TOLTZ, KING, OUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA



ASSEMBLY TYPE	LOCATION	BEAM SIZE	BEARING PAD SIZE			STEEL PLATES		LAMINATES		SHAPE FACTOR	BEARING PLATE SIZE			CURVED PLATE SIZE			PINTLE DIA.	PINTLE DISTANCE	ASSY. HEIGHT
			A	B	D	NO.	THICK.	NO.	THICK.		C	E	F	G	H	J			
E-1	W. ABUT.	54M	10"	24"	2 3/8"	4	1/8"	3	3/8"	9.4	12"	27"	1 1/8"	4 1/2"	26"	13 3/8"	1 1/2"	8"	4.625"
E-2	PIER 1	54M	10"	24"	1 3/8"	2	1/8"	1	3/8"	9.4	12"	27"	1 1/8"	4 1/2"	26"	13 3/8"	1 1/2"	8"	3.625"
E-3	E. ABUT.	54M	10"	24"	2 3/8"	5	1/8"	4	3/8"	9.4	12"	27"	1 1/8"	4 1/2"	26"	13 3/8"	1 1/2"	8"	5.125"

NOTES:

ELASTOMERIC MATERIALS & PAD CONSTRUCTION SHALL COMPLY WITH Mn/DOT SPEC. 3741.

ALL STEEL PLATES SHALL COMPLY WITH Mn/DOT SPEC. 3306.

PINTLES SHALL COMPLY WITH Mn/DOT SPEC. 3309.

GALVANIZE STRUCTURAL STEEL BEARING ASSEMBLY AFTER FABRICATION PER Mn/DOT SPEC. 3394, EXCEPT AS NOTED.

PAYMENT FOR BEARING ASSEMBLY SHALL INCLUDE ALL MATERIAL ON THIS DETAIL.

(1) THE RADIUS OF THE CURVED PLATE SHALL BE 1'-4" MINIMUM AND 2'-0" MAXIMUM. FINISH TO 250 MICRO. THE FINISHED THICKNESS OF THE PLATE MAY BE 1/16" LESS THAN SHOWN.

(2) DO NOT GALVANIZE THESE PLATES.

(3) THE TOTAL THICKNESS SHOWN INCLUDES THE STEEL PLATES.

(4) SEE DETAIL B303 FOR PINTLE DISTANCE K.

(5) WELDING PER Mn/DOT SPEC. 2471.

(6) 5/16" DIA. x 3/8" KNOCK-OFF WELD STUDS INSTALLED ON BEARING PLATE AROUND PERIMETER OF BEARING PAD. CENTERLINE STUD TO EDGE OF PAD DIMENSION = 1/2", MAX. STUD SPACING = 4".

DESIGN DATA:
 MAXIMUM HORIZONTAL LOAD IS 70 KIPS FOR 1/2" PINTLES.

APPROVED: JULY 30, 1999

STATE OF MINNESOTA
 DEPARTMENT OF TRANSPORTATION

REVISION

DETAIL NO. B311

Donald J. Planning
 STATE BRIDGE ENGINEER

CURVED PLATE BEARING ASSEMBLY
 (PRESTRESSED CONCRETE BEAMS)
 (EXPANSION)

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE: STANDARD DETAILS
 B310 & B311

DESIGNED BY: SVC
 CHECKED BY: MJC

APPROVED

Sheet No. 49 of 56 Sheets

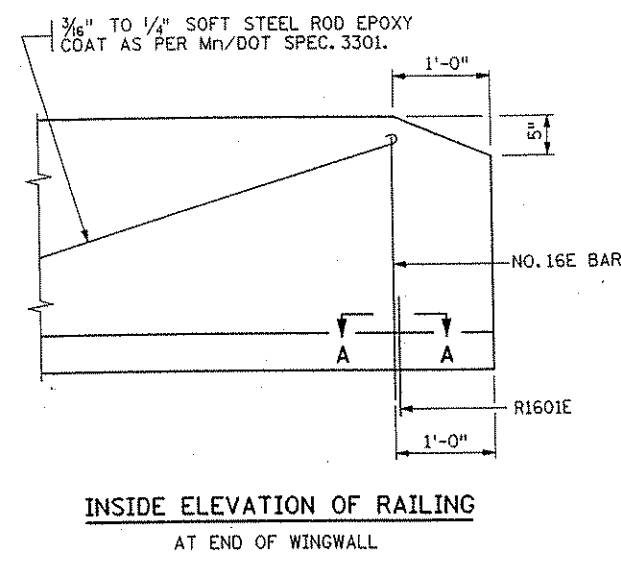
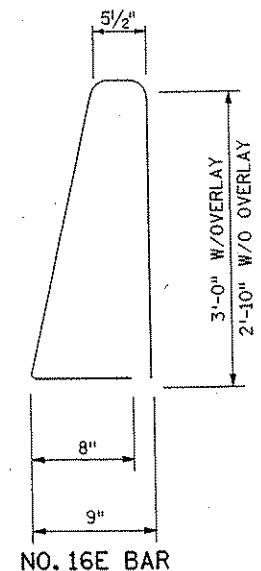
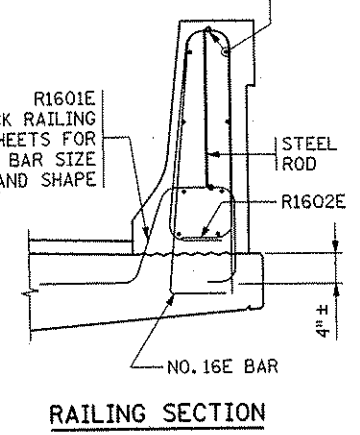
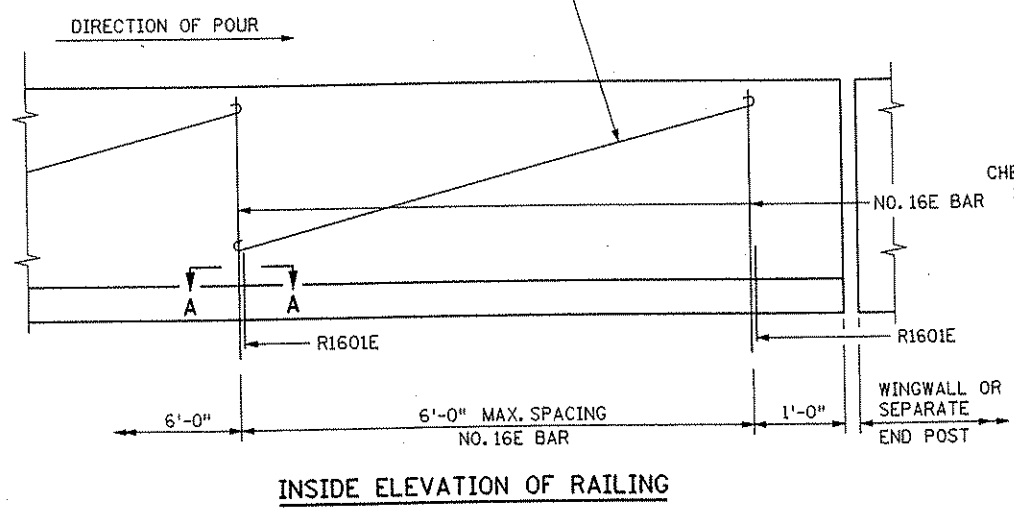
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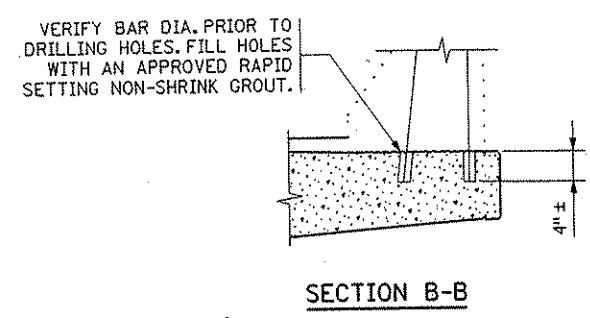
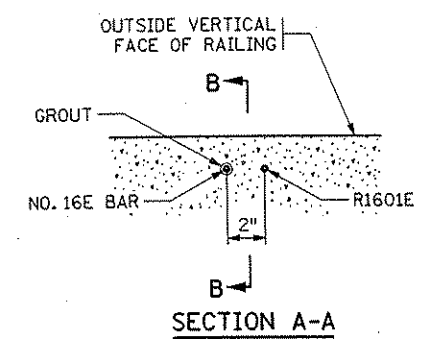
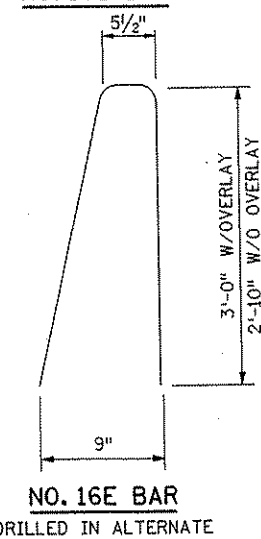
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3/16" TO 1/4" SOFT STEEL ROD, 10 GAGE WIRE OR APPROVED EQUAL ATTACHED TO INSIDE AND OUTSIDE FACE OF RAILING. EPOXY COAT AS PER Mn/DOT SPEC. 3301.

MOVE NO. 13E STRAIGHT BAR FROM SIDE TO TOP FOR SLIPFORMING.



NOTES:
 CONTRACTOR WILL TOOL V-GROOVE AT DEFLECTION JOINTS AT TIME RAIL IS CAST AND SHALL EXTEND V-GROOVE AROUND ENTIRE PERIMETER OF RAIL.
 FOR ADDITIONAL DIMENSIONS, DETAILS, REINFORCEMENT AND NOTES SEE RAILING SHEET.
 FORM RAIL FOR A MINIMUM OF 4' ON EACH SIDE OF EXPANSION DEVICES, LIGHT STANDARDS AND DECK DRAIN BOX OUTS.
 PAY QUANTITIES WILL NOT BE ADJUSTED AS A RESULT OF SELECTING THIS ALTERNATE.
 USE A SIMILAR METHOD FOR TALLER RAILINGS OR MODIFIED VERSIONS OF THIS RAILING.



INSTALLATION DETAILS FOR NO. 16E (DRILLED IN ALTERNATE)

APPROVED: JULY 30, 1999	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISION	DETAIL NO.
<i>Donald J. Manning</i> STATE BRIDGE ENGINEER	CONCRETE RAILING (TYPE F) (SLIPFORM ALTERNATE)		B830

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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
 SIGNED *Gottfried Millner* GOTTFRIED MILLNER
 DATE 01/22/2002 REG. NO. 19879

TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

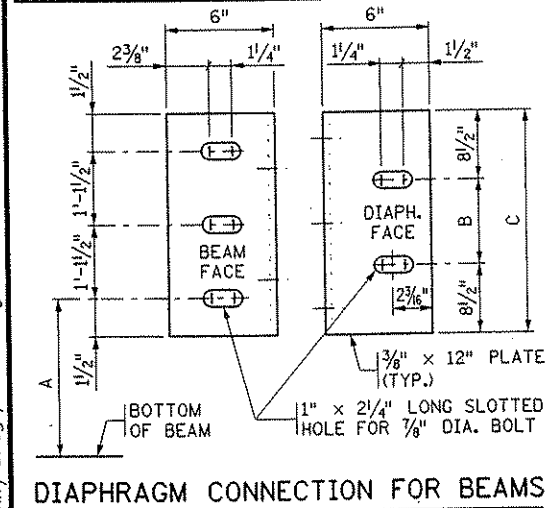
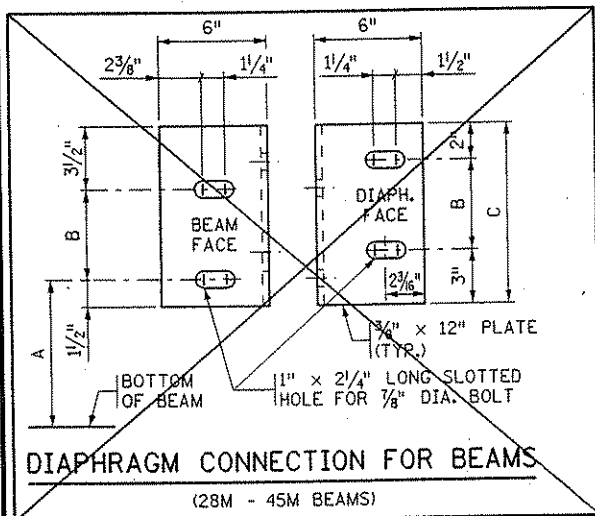
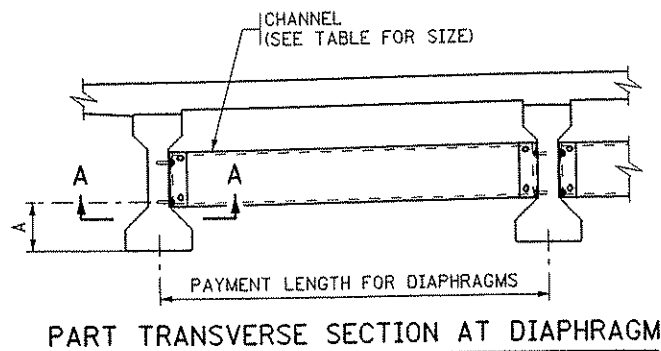
ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE: STANDARD DETAIL B830

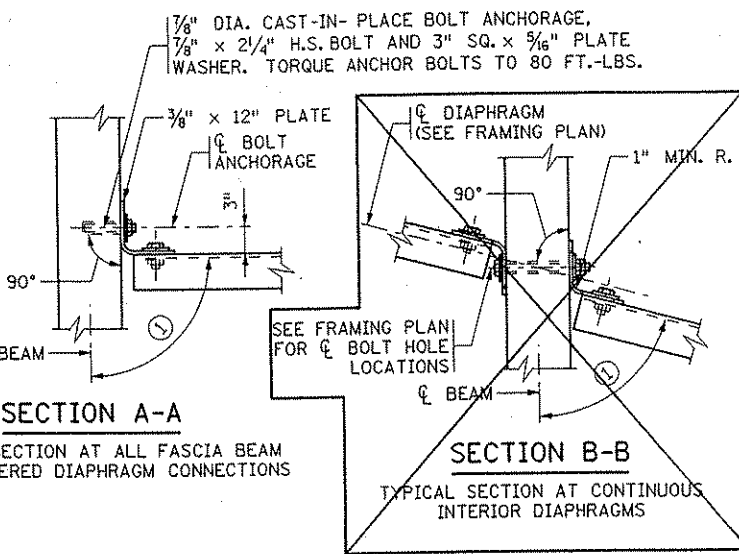
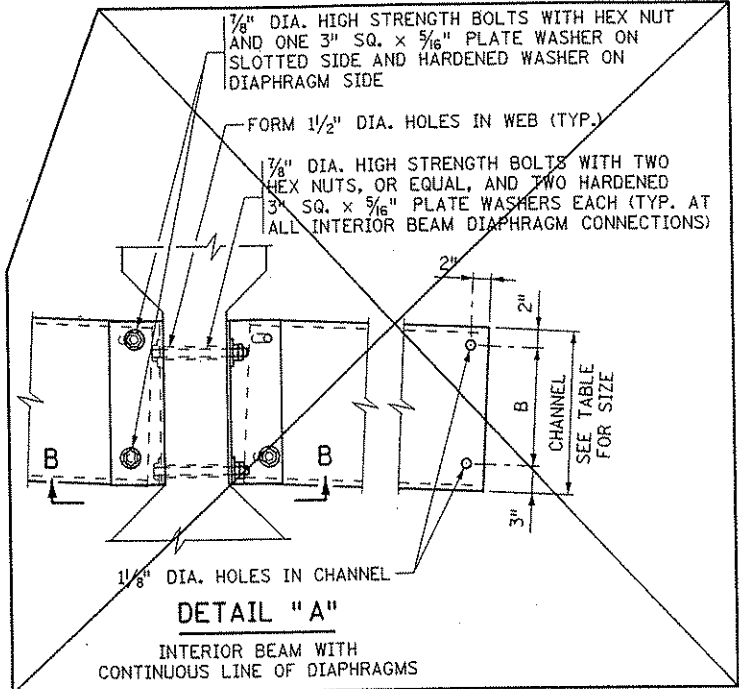
DES: SVC	DR: SVC	APPROVED
CHK: MJC	CHK: MJC	
Sheet No. 50 of 56 Sheets		

Bridge No. 02566

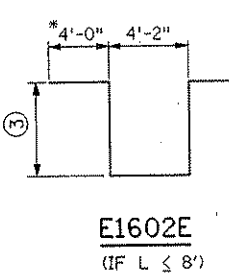
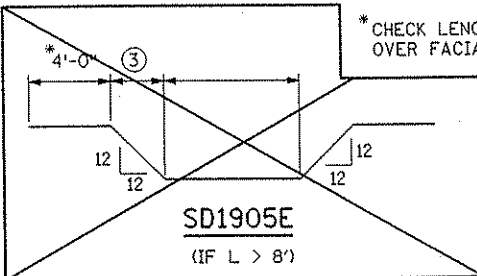
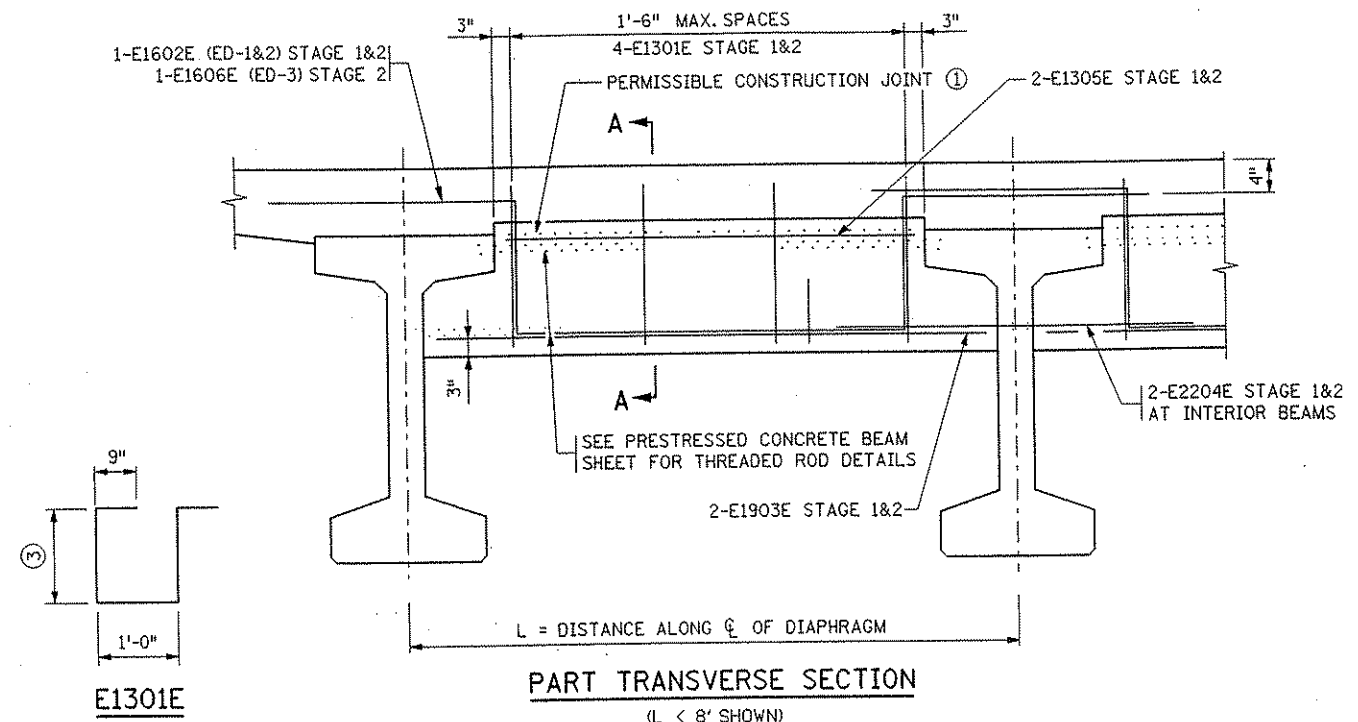
DATE: 01/22/2002 TIME: 01:55:22 PM
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BEAM HEIGHT	DISTANCE			CHANNEL SIZE
	A	B	C	
28M	1'-0"	5"	10"	C10x15.3
36"	1'-3"	7"	1'-0"	C12x20.7
36M	1'-3"	7"	1'-0"	C12x20.7
40"	1'-5"	7"	1'-0"	C12x20.7
45M	1'-3 3/4"	1'-1"	1'-6"	MC18x42.7
54M	1'-2 1/4"	1'-1"	2'-6"	MC18x42.7



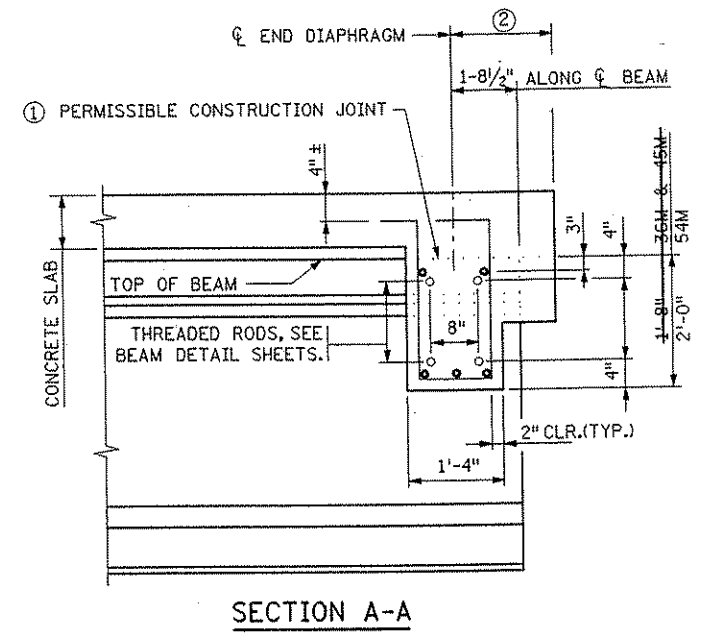
NOTES:
 ALL STEEL SHALL CONFORM TO Mn/DOT SPEC. 3306.
 SEE Mn/DOT SPEC. 2405.3M FOR INSTALLATION
 THE LEG OF THE 12" PLATE SHALL BE SHOP BENT TO CONFORM TO THE DIAPHRAGM. A 3/8" x 6" x 6" ANGLE MAY BE USED FOR DIAPHRAGMS PERPENDICULAR TO BEAMS.
 FOR BOLT LENGTHS GREATER THAN 8 1/2", USE HIGH STRENGTH BOLTS PER Mn/DOT SPEC. SAE GRADE 5 OR BETTER. SEE Mn/DOT SPEC. 2405.3M FOR INSTALLATION
 ALL STRUCTURAL STEEL SHOWN ON THIS DETAIL, INCLUDING BOLTS AND WASHERS, SHALL BE INCLUDED IN THE PAYMENT FOR DIAPHRAGMS FOR PRESTRESSED BEAMS.
 BENT PLATES MAY BE USED IN PLACE OF CHANNELS. THE BENT PLATES MUST BE THE SAME HEIGHT AS THE CHANNELS THEY REPLACE, BE 3/8" IN THICKNESS, AND HAVE LEGS 5" LONG.
 ① FOR SKEW ANGLES UNDER 20°, USE 90° LESS THE SKEW ANGLE. FOR SKEW ANGLES OVER 20°, USE 90°.



DISTANCE "L" ALONG C OF DIAPHRAGM	BARS REQUIRED			
	STRAIGHT NO.	STRAIGHT SIZE	BENT NO.	BENT SIZE
UP TO 8'	2	19E	1	16E
OVER 8' TO 11'	2	22E	1	19E
OVER 11' TO 13'	2	25E	1	25E
OVER 13' TO 15'	2	29E	1	32E
OVER 15' TO 18'	2	36E	1	36E

BILL OF REINFORCEMENT FOR END DIAPHRAGM				
BAR	NO.	LENGTH	SHAPE	LOCATION
SD1301E				VERTICAL TIE
SD2202E		5'-0"		LONG. THRU BEAM
SD1303E				LONG. TOP
SD_04E				LONG. BOTTOM
SD_08E				LONGITUDINAL
SD1606E				LONGITUDINAL

NOTES:
 DIAPHRAGM CONCRETE TO BE MIX NO. 3Y43.
 ALL DIAPHRAGM CONCRETE AND REINFORCEMENT BARS SHOWN ON THIS DETAIL TO BE INCLUDED IN PAYMENT FOR SUPERSTRUCTURE QUANTITIES.
 THREADED RODS ARE INCLUDED IN PAYMENT FOR PRESTRESSED CONCRETE BEAMS.
 ① USE OF CONSTRUCTION JOINT REQUIRES CLEARANCE FOR EXPANSION DEVICE. WHEN CONSTRUCTION JOINT IS USED AT THIS LOCATION, DIAPHRAGM FALSEWORK SHALL REMAIN INPLACE UNTIL COMPLETION OF SLAB CURING PERIOD.
 ② PERPENDICULAR TO CENTERLINE OF DIAPHRAGM. SEE PLANS FOR DIMENSION.
 ③ 2'-2" (45M); 2'-6" (54M) BASED ON 3" STOOL AND 9" DECK.



APPROVED: JULY 30, 1999
Donald J. Manning
 STATE BRIDGE ENGINEER

STATE OF MINNESOTA
 DEPARTMENT OF TRANSPORTATION
STEEL INTERMEDIATE DIAPHRAGM
 (FOR 28M - 54M PRESTRESSED CONCRETE BEAMS)

REVISION
 06-16-00
 DETAIL NO.
 B403

APPROVED: JULY 30, 1999
Donald J. Manning
 STATE BRIDGE ENGINEER

STATE OF MINNESOTA
 DEPARTMENT OF TRANSPORTATION
CONCRETE END DIAPHRAGM
 (36M, 45M - 54M PRESTRESSED CONCRETE BEAMS)
 (PARAPET ABUTMENT)

REVISION
 01-20-00 IJh
 DETAIL NO.
 B814

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
 SIGNED: *Gottfried Millner* GOTTFRIED MILLNER
 DATE: 01/22/2002 REG. NO. 19879

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE
 STANDARD DETAILS
 B403 & B814

DES: HLE DR: HLE APPROVED
 CHK: MJC CRK: MJC
 Sheet No. 51 of 56 Sheets
 Bridge No. 02566

SUMMARY OF QUANTITIES FOR DRAINAGE SYSTEM

4" DIA. PERFORATED PIPE	230 LIN. FT.
4" DIA. NON-PERFORATED PIPE	30 LIN. FT.
90° ELBOW	4 EACH
45° ELBOW	2 EACH
4" DIA. END CAP	2 EACH
① PRECAST CONCRETE HEADWALL	2 EACH

THE SUMMARY OF QUANTITIES FOR DRAINAGE SYSTEM IS AS SHOWN ABOVE. ANY ADDITIONAL MINOR ITEMS OR SLIGHT CHANGES OF QUANTITIES REQUIRED SHALL BE FURNISHED BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION.

PAYMENT WILL BE INCLUDED IN THE SINGLE LUMP SUM PRICE FOR ITEM 2502.603 DRAINAGE SYSTEM, TYPE (B910).

MATERIAL SHALL COMPLY WITH MnDOT SPEC. 3149.2B SELECT GRANULAR BORROW, MODIFIED SO THAT NO MORE THAN 10% PASSES A NO. 200 SIEVE. (UNDER GRADING PORTION OF CONTRACT)

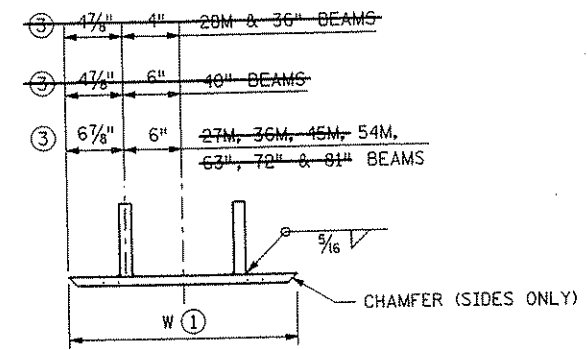
NOTES:

ALL PIPE SHALL BE AS PER MnDOT SPEC. 3245.

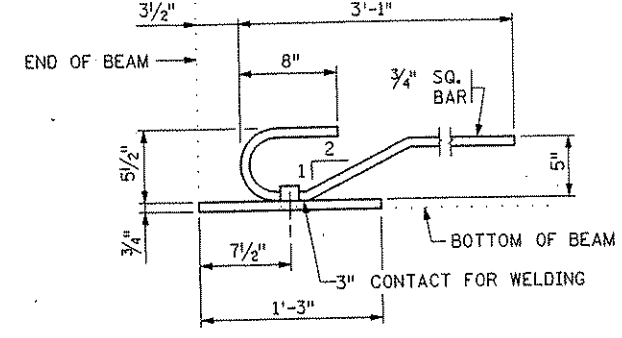
WRAP PERFORATED PIPE WITH GEOTEXTILE AS PER MnDOT SPEC. 3733, TYPE 1. ATTACH TO PIPE AS PER MnDOT SPEC. 2502.

① PRECAST CONCRETE HEADWALL WITH RODENT SCREEN. SEE STANDARD PLATE 3131 FOR DETAILS.

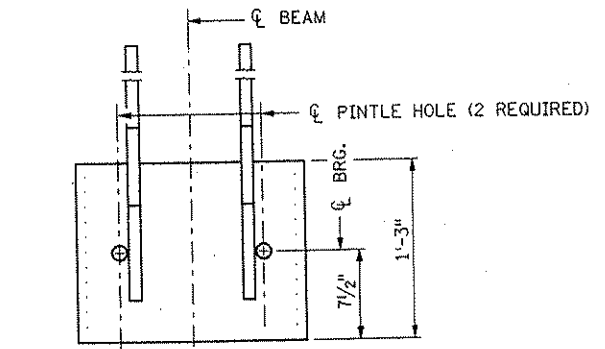
② 1/8" PER FT. MINIMUM SLOPE.



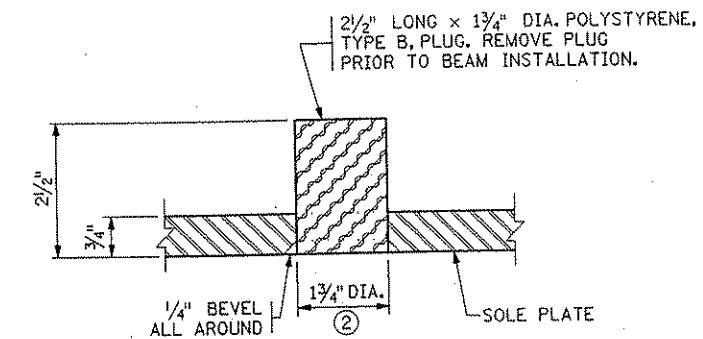
FRONT VIEW



SIDE VIEW



TOP VIEW



PINTLE HOLE DETAIL

NOTES:

MATERIAL TO BE STRUCTURAL STEEL PER MnDOT SPEC. 3306. SOLE PLATE FOR BEARING ASSEMBLY TO BE HOT DIPPED GALVANIZED PER MnDOT SPEC. 3394 AFTER FABRICATION. PINTLE HOLES SHALL BE FREE OF ZINC BUILD UP FROM GALVANIZING.

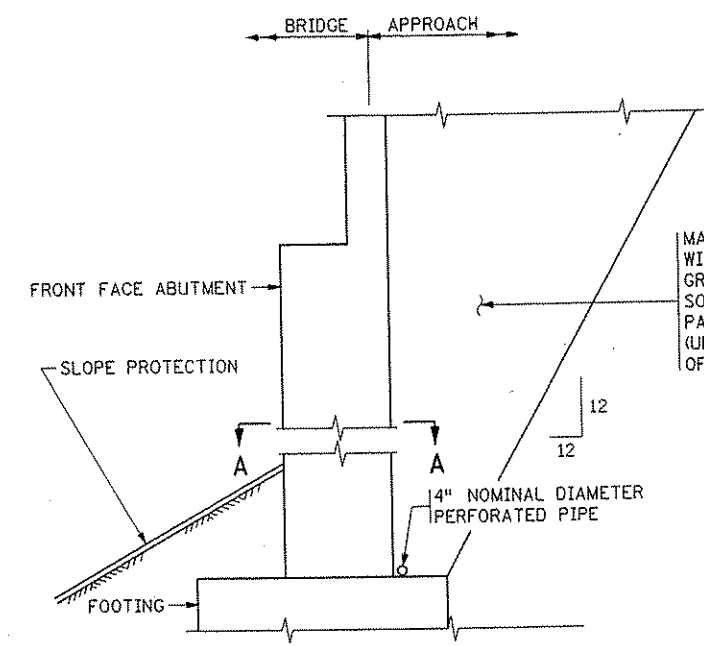
PAYMENT FOR SOLE PLATES TO BE INCLUDED IN PRICE BID FOR PRESTRESSED CONCRETE BEAMS.

① DIMENSION "W" TO BE THE WIDTH AT THE BOTTOM FLANGE OF THE BEAM MINUS 1/4".

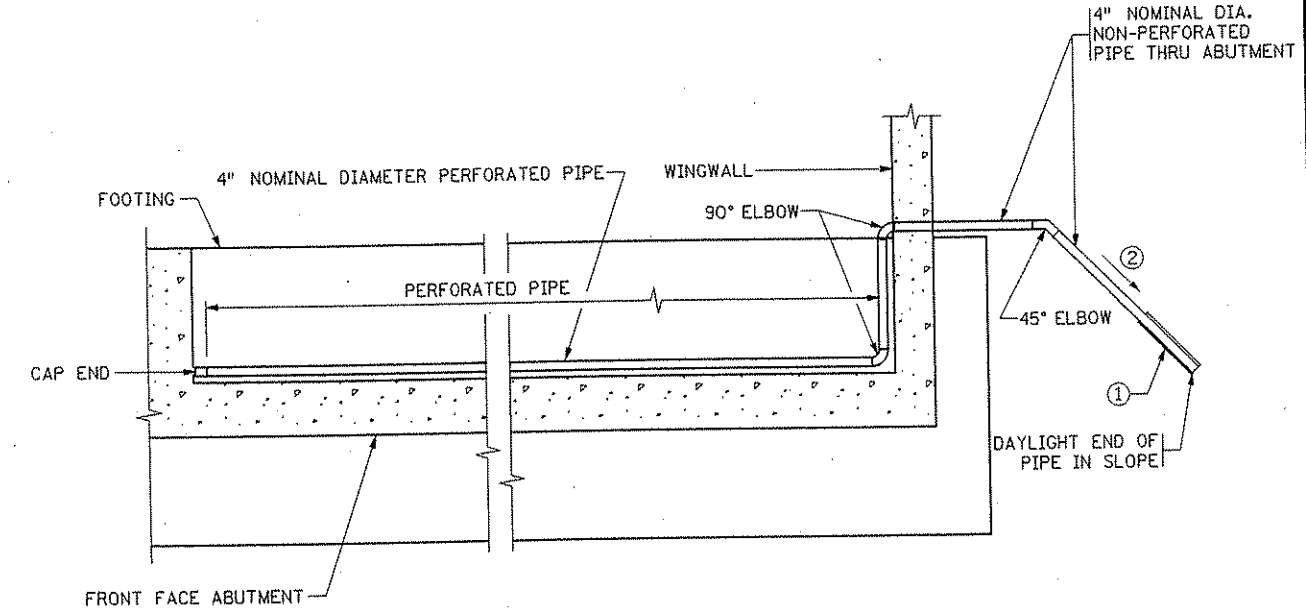
② FOR 1/2" DIA. PINTLES.

③ THESE DIMENSIONS MAY BE MODIFIED TO CLEAR PRESTRESSED STRANDS. HOWEVER, CHANGES MUST BE APPROVED BY THE ENGINEER.

BEAM SIZE	① W VALUE (in.)
28M, 36"	1'-5 3/4"
40"	1'-9 3/4"
27M, 36M, 45M, 54M, 63", 72", 81"	2'-1 3/4"



SECTION THROUGH ABUTMENT



SECTION A-A

APPROVED: JULY 30, 1999

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

REVISION
12-15-00

DETAIL NO.

Donald J. Muenning
STATE BRIDGE ENGINEER

SOLE PLATE
(PRESTRESSED CONCRETE BEAMS)
(FOR BEARINGS WITH PINTLES)

B303

APPROVED: JULY 30, 1999

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

REVISION
04-03-00

DETAIL NO.

Donald J. Muenning
STATE BRIDGE ENGINEER

DRAINAGE SYSTEM
(FOR HIGH ABUTMENTS)

B910

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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
SIGNED *Gottfried Millner* GOTTFRIED MILLNER
DATE 01/22/2002 REG. NO. 19879

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
C.S.A.H. 52 OVER I-35W
S.P. 02-652-03 S.P. 0280-50

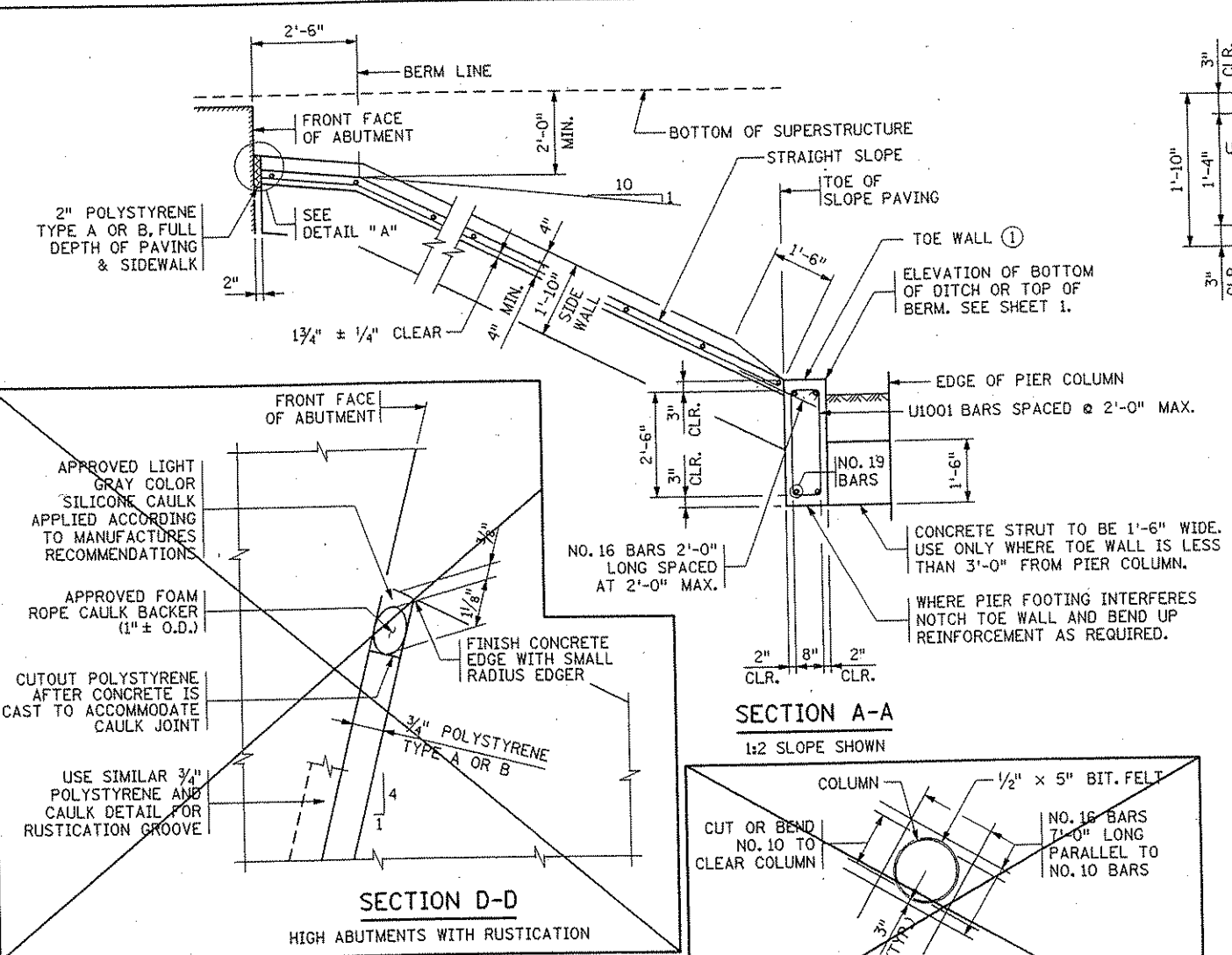
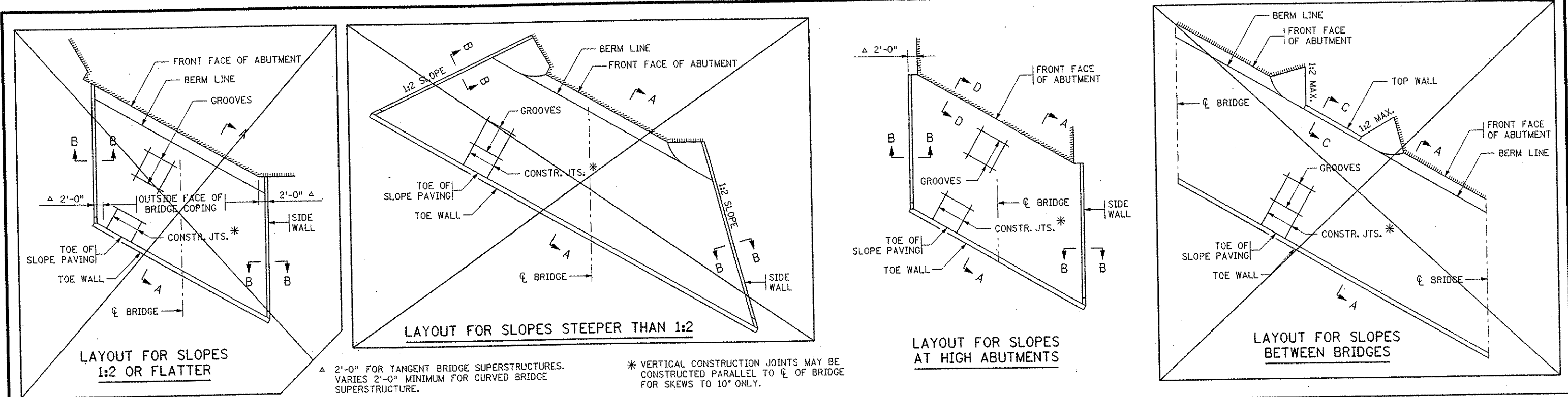
TITLE:
**STANDARD DETAILS
B303 & B910**

DES: HLE	DR: HLE	APPROVED
CHK: MJC	CHK: MJC	

Sheet No. 52 of 56 Sheets

Bridge No.
02566

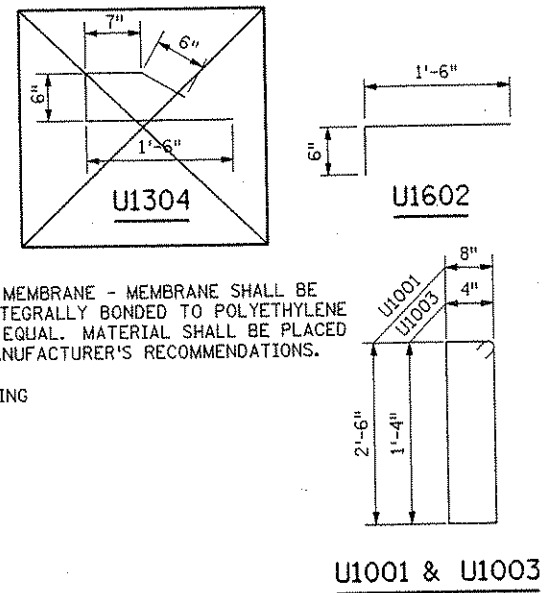
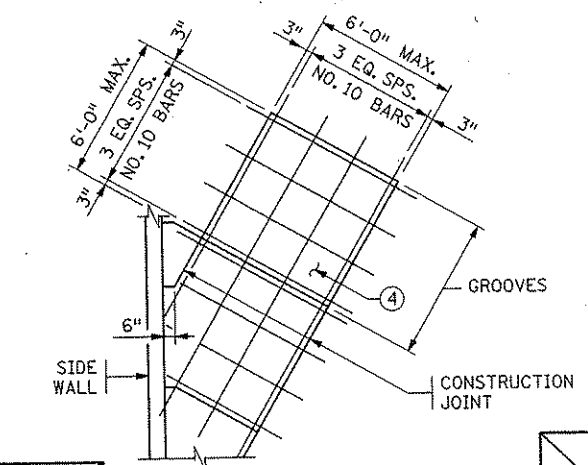
DATE: 01/22/2002 TIME: 01:55:19 PM FILENAME: k:\p\anokakc\j17490N\hwy-brdg\part4\brldge\standard\ds\303&910.dgn



CONCRETE & REINFORCEMENT UNIT QUANTITIES

- ① 0.111 CU. YD. OF CONCRETE/LIN. FT. 8.37 LBS. OF REINFORCEMENT/LIN. FT.
- ② 0.046 CU. YD. OF CONCRETE/LIN. FT. 4.46 LBS. OF REINFORCEMENT/LIN. FT.
- ③ 0.058 CU. YD. OF CONCRETE/LIN. FT. 3.70 LBS. OF REINFORCEMENT/LIN. FT. BASED ON A SLOPE OF 1:2.
- ④ 0.111 CU. YD. OF CONCRETE/SQ. YD. 4.50 LBS. OF REINFORCEMENT/SQ. YD.

GENERAL NOTE
SLOPES ARE EXPRESSED AS A RATIO OF VERTICAL DISTANCE: HORIZONTAL DISTANCE.



CERTIFIED BY <i>Gottfried Millner</i> LICENSED PROFESSIONAL ENGINEER NAME: GOTTFRIED MILLNER LIC. NO. 19879	01/22/2002 DATE	CONCRETE SLOPE PAVING UNDER BRIDGES	DES: HLE	DR: HLE	APPROVED:	BRIDGE NO. 02566
			CHK: MJC	CHK: MJC	MODIFIED	
			SHEET NO. 53 OF 56 SHEETS			

DATE: 01/22/2002 TIME: 01:55:46 PM
 FILENAME: I:\p\work\proj\490\new-bridge\part-A\bridge_standards\slppav.dgn

REVISION: 05-01-00
 APPROVED: APRIL 17, 1985
 KEITH V. BENTHIN
 STATE BRIDGE ENGINEER

FIG. 5-397.301

CONCRETE OVERLAY

LOW SLUMP
 OTHER _____
TYPE OR MANUFACTURER

EXPANSION JOINTS

JOINT MANUFACTURER _____
NAME AND ADDRESS (CITY, STATE)

MANUFACTURER'S IDENTIFICATION _____
MFR'S No. AND/OR LETTER DESIGNATION FOR JOINT USED

GLAND MANUFACTURER _____
NAME AND ADDRESS (CITY, STATE)

SIZE OF GLAND _____

MANUFACTURER'S IDENTIFICATION _____
MFR'S No. AND/OR LETTER DESIGNATION FOR GLAND USED

BEARING PADS

NEOPRENE PAD MANUFACTURER _____
NAME AND ADDRESS (CITY, STATE)

SPECIAL SURFACE TREATMENT

TYPE: _____ COLOR: _____

FINISHING ROADWAY FACES OF BARRIER RAILING

TYPE: _____ COLOR: _____

ANTI-GRAFFITI COATING

MANUFACTURER _____
NAME AND ADDRESS (CITY, STATE)

PRODUCT NAME: _____ LOCATION: _____

PAINT SYSTEM

Mn/DOT CONSTRUCTION SPECIFICATION NUMBER _____
2476 OR 2478 OR 2479

MANUFACTURER _____
NAME AND ADDRESS (CITY, STATE)

PRIME COAT _____
Mn/DOT MATERIAL SPECIFICATION NUMBER

INTERMEDIATE COAT _____
Mn/DOT MATERIAL SPECIFICATION NUMBER

FINISH COAT _____
Mn/DOT MATERIAL SPECIFICATION NUMBER COLOR

PLAN QUALITY

RATE 1 (AGREE), 2 (NEUTRAL), OR 3 (DISAGREE, PLEASE COMMENT BELOW)

DIMENSIONING AND DETAILING ADEQUATELY DESCRIBED REQUIRED CONSTRUCTION. _____

BAR LISTS AND QUANTITIES WERE TYPICALLY COMPLETE AND FREE OF ERRORS. _____

SCALE OF DRAWINGS AND OVERALL LEGIBILITY OF LINES AND TEXT WAS GOOD. _____

(SB) SPECIAL PROVISIONS ADEQUATELY DESCRIBED SPECIAL WORK AND PAYMENT. _____

COMMENTS: _____

NUMBER OF BRIDGE SUPPLEMENTAL AGREEMENTS: _____ COST: \$ _____

LIST SIGNIFICANT ERRORS OR OMISSIONS IN PLAN DETAILS OR PAY QUANTITIES IN THE SPACE PROVIDED AT RIGHT.

OTHER ITEMS ①

① UTILITIES ADDED DURING CONSTRUCTION AND SPECIALTY ITEMS.

FINAL QUANTITIES ENTERED ON SCHEDULE OF QUANTITIES: YES NO

SUMMARY OF SIGNIFICANT AS-BUILT CHANGES

AS-BUILT DETAILS
(AS NEEDED)

THE AS-BUILT INFORMATION WAS ADDED TO THE PLAN BY:

INSPECTOR(S) _____ DATE _____

CHECKED BY: _____ PROJECT ENGINEER / SUPERVISOR _____ DATE _____

SUBMIT THIS FORM WITH THE PROJECT FINAL, AND SUBMIT A COPY TO THE OFFICE OF BRIDGES AND STRUCTURES (MS610).

DATE: 01/22/2002 TIME: 01:52:47 PM
FILENAME: k:\n\anokacy\17490\hwy-brdg\part4\brldge\asbuilt.dgn

REVISION: 10-26-00
APPROVED: _____
STATE BRIDGE ENGINEER

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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
SIGNED: *Gottfried Millner* GOTTFRIED MILLNER
DATE: 01/22/2002 REG. NO. 19879

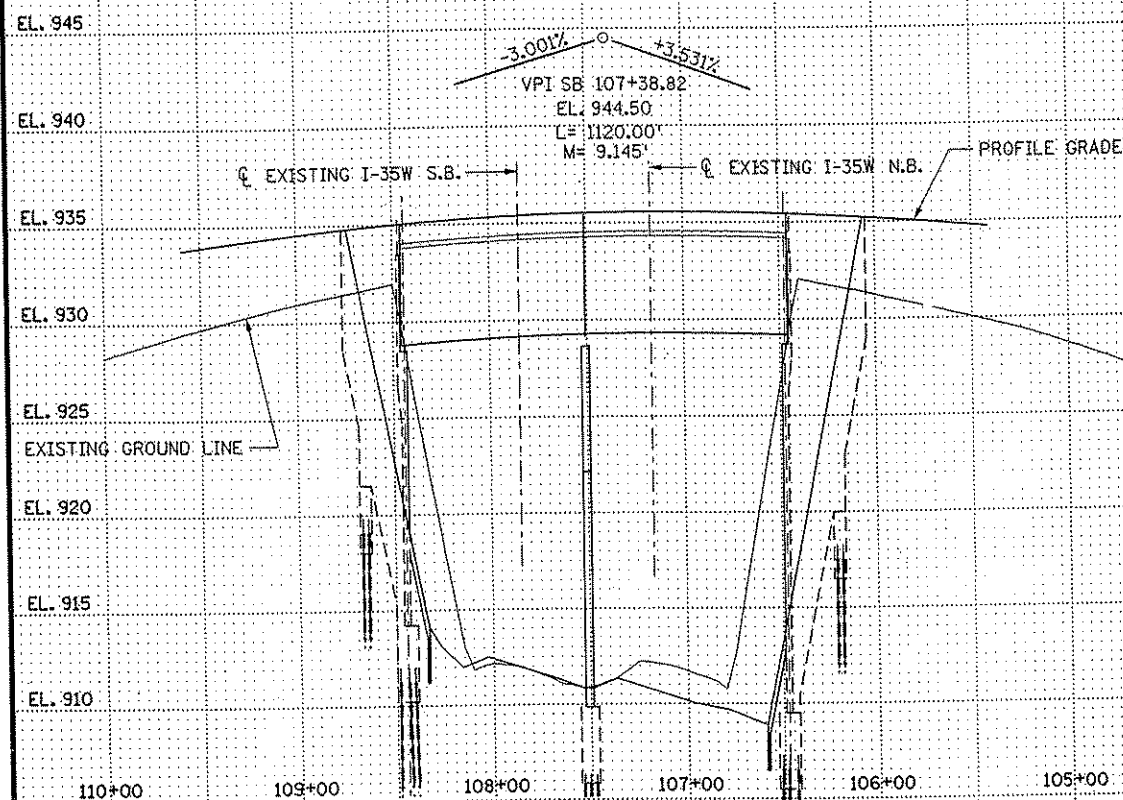
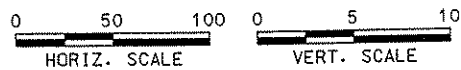
TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
C.S.A.H. 52 OVER I-35W
S.P. 02-652-03 S.P. 0280-50

TITLE: AS-BUILT BRIDGE DATA

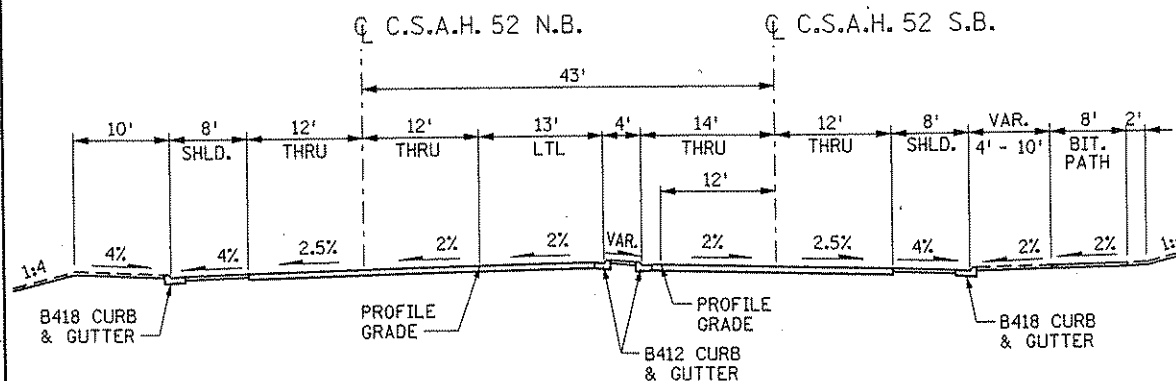
DES: MnDOT	DR: MnDOT	APPROVED	FIG. 5-397.900
CHK: GM	CHK: GM		Bridge No. 02566
Sheet No. 54 of 56 Sheets			

CONTRACTED PROFILE

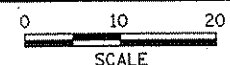


TYPICAL SECTIONS & PERTINENT DATA

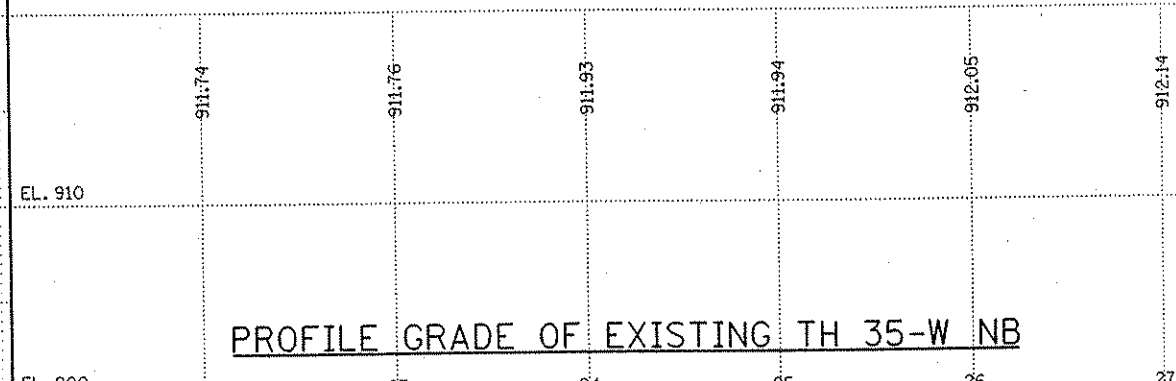
SCALES AS SHOWN



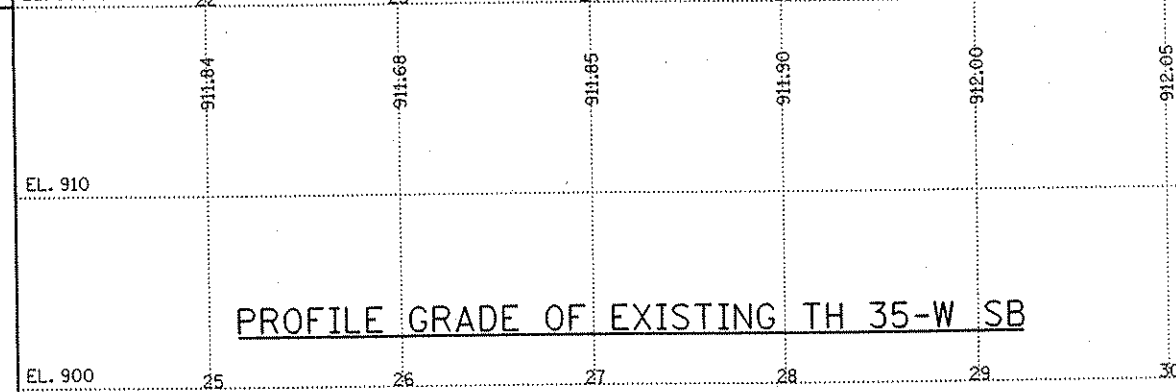
ROADWAY APPROACH SECTION



PROFILE GRADE OF EXISTING TH 35-W NB



PROFILE GRADE OF EXISTING TH 35-W SB



LOCATION ENGINEER'S OBSERVATIONS AT BRIDGE SITE

HYDRAULIC ENGINEER'S RECOMMENDATION

DATE:
Stream or ditch designation:
Drainage area:
Max. flood on record: Design flood:
Max. observed highwater elevations:
Design highwater elevations:
Design mean velocity through structures:
Low superstructure at or above elevation:
Flowline elevation: Skew angle:

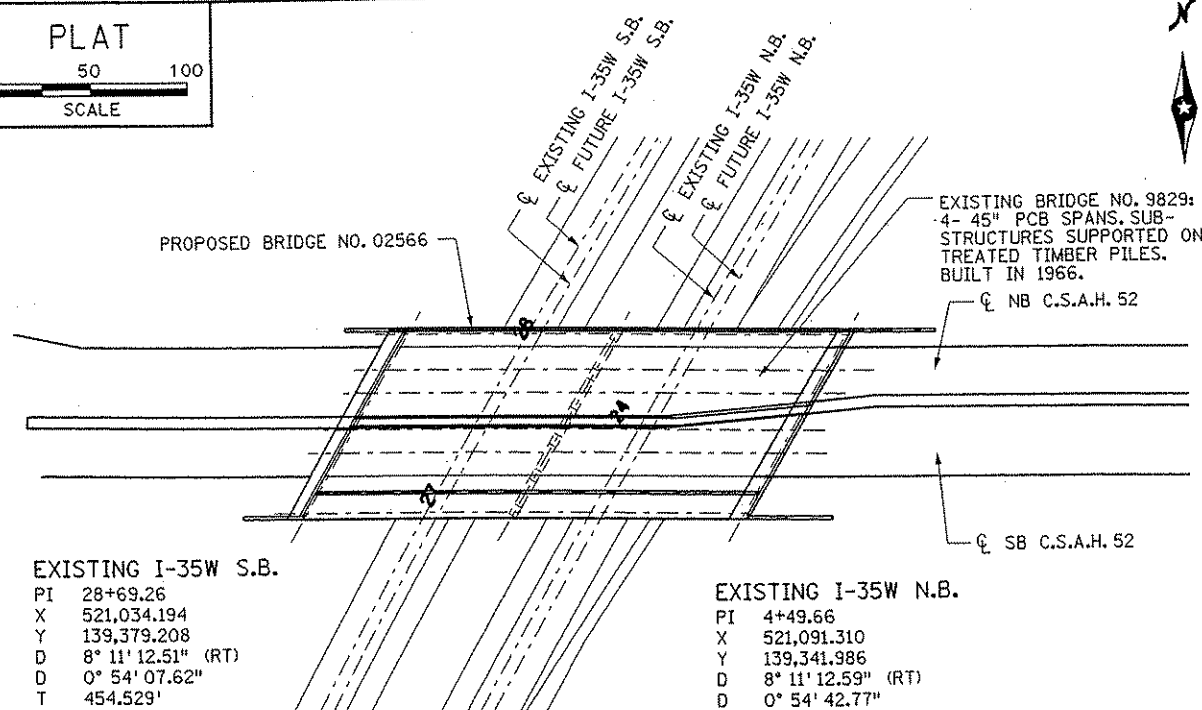
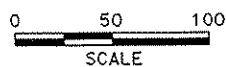
FOUNDATION ENGINEER'S RECOMMENDATION

DATE: NOV. 20, 2000
BRAUN INTERTEC CORPORATION

Bridge survey sheets made from:

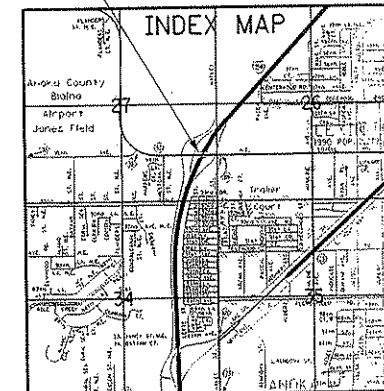
Bench mark elevation: EL. 911.008 (M.S.L. 1929 Adj.)
Location: I.P. 9025 WITH COUNTY COORDINATES
X = 521615.884, Y = 139072.435, LOCATED ON THE SOUTH SIDE OF CSAH 52, 93 FEET EAST OF NAPLES

PLAT



EXISTING I-35W S.B.
PI 28+69.26
X 521,034.194
Y 139,379.208
D 8° 11' 12.51" (RT)
D 0° 54' 07.62"
T 454.529'
L 907.512'
R 6,351.266'
PC 24+14.73
PT 33+22.24

EXISTING I-35W N.B.
PI 4+49.66
X 521,091.310
Y 139,341.986
D 8° 11' 12.59" (RT)
D 0° 54' 42.77"
T 449.663'
L 897.796'
R 6,283.253'
PC 0+00.00
PT 8+97.80



MINNESOTA
DEPARTMENT OF TRANSPORTATION

BRIDGE SURVEY

BRIDGE LOCATED AT THE INTERSECTION OF
OF C.S.A.H. 52 AND I-35W

SEC. 27 TWP 31N R 23W
CITY: BLAINE COUNTY: ANOKA

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
SIGNED: *Gottfried Millner* GOTTFRIED MILLNER
DATE 01/22/2002 REG. NO. 19879

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
C.S.A.H. 52 OVER I-35W
S.P. 02-652-03 S.P. 0280-50

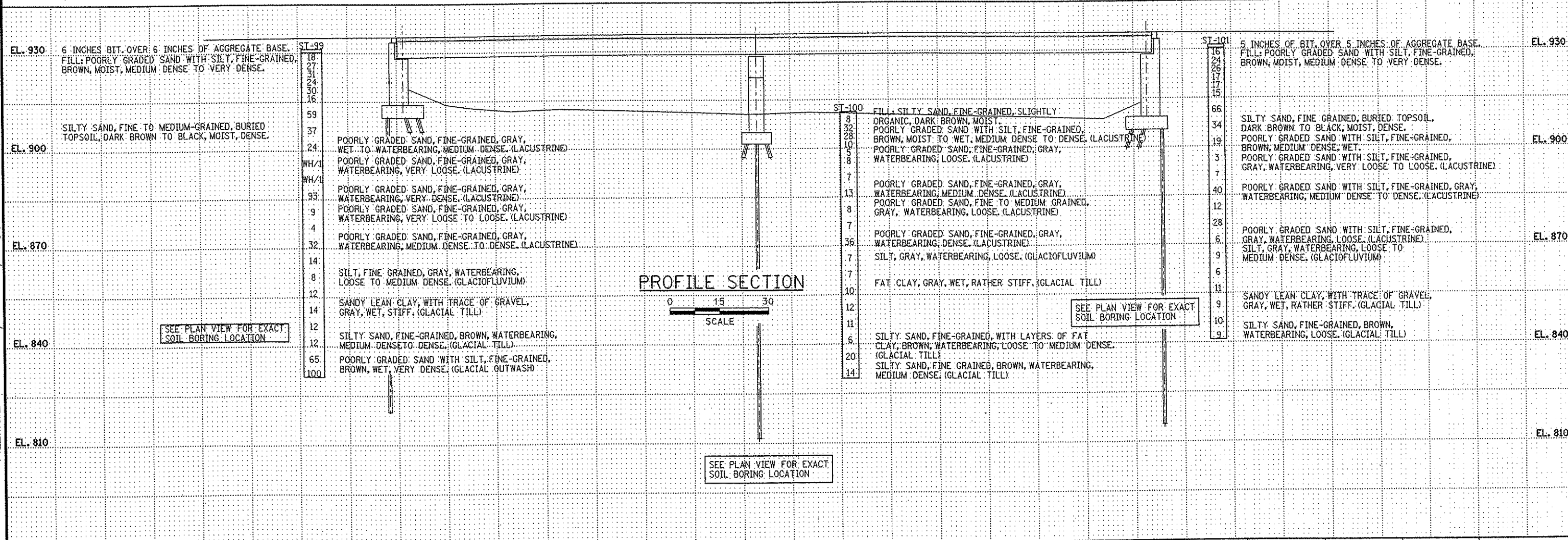
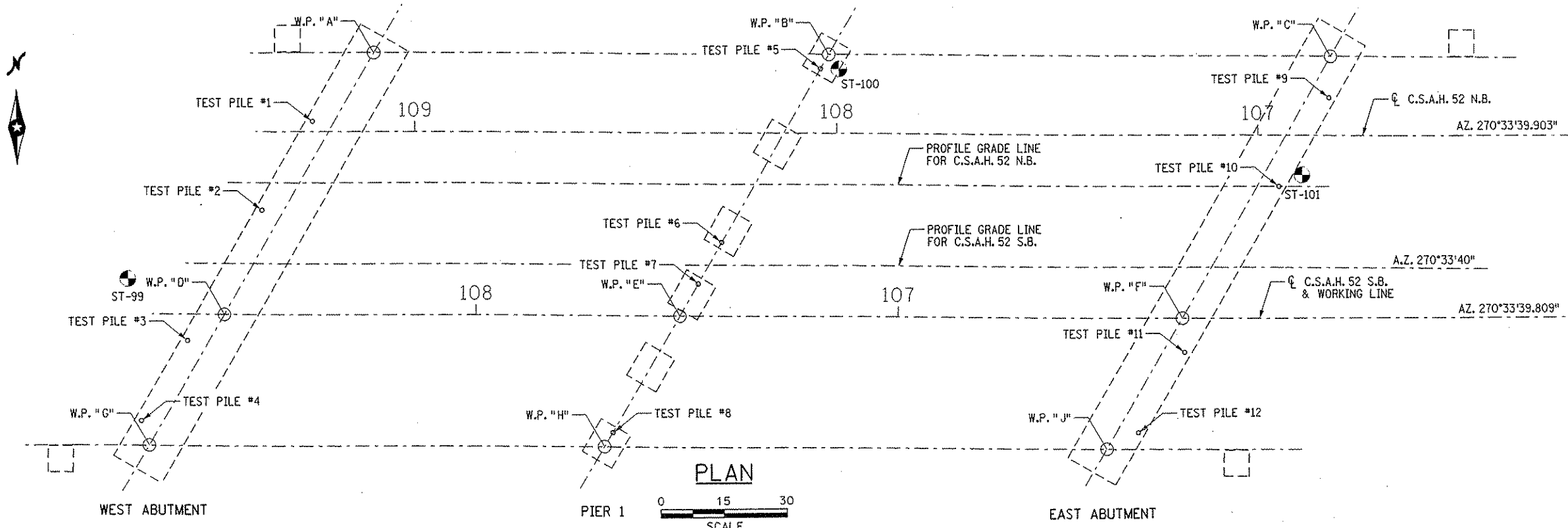
TITLE:
BRIDGE SURVEY

DES: GM DR: SJS APPROVED
CHK: MJC CHK: GM
Sheet No. 55 of 56 Sheets

Bridge No.
02566

DATE: 01/22/2002 TIME: 01:53:20 PM
FILENAME: k:\a\anokacy\17490\hwy-brdg\part4\bridge\survey.dgn

NO. DATE BY DESCRIPTION OF REVISIONS



DATE: 01/22/2002 TIME: 01:53:30 PM
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NO.	DATE	BY	DESCRIPTION OF REVISIONS

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.
 SIGNED: *Gottfried Millner*
 DATE: 01/22/2002 REG. NO. 9879

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 C.S.A.H. 52 OVER I-35W
 S.P. 02-652-03 S.P. 0280-50

TITLE: BRIDGE SURVEY
 PLAN AND PROFILE

DES: GM DR: SJS
 CHK: MJC CHK: GM
 APPROVED
 Sheet No. 56 of 56 Sheets

Bridge No. 02566